



# Link Master™ LML

Revision History

Version 3.26.0509



WirelessMETRIX Inc. Proprietary



### Ver 3.6.1219

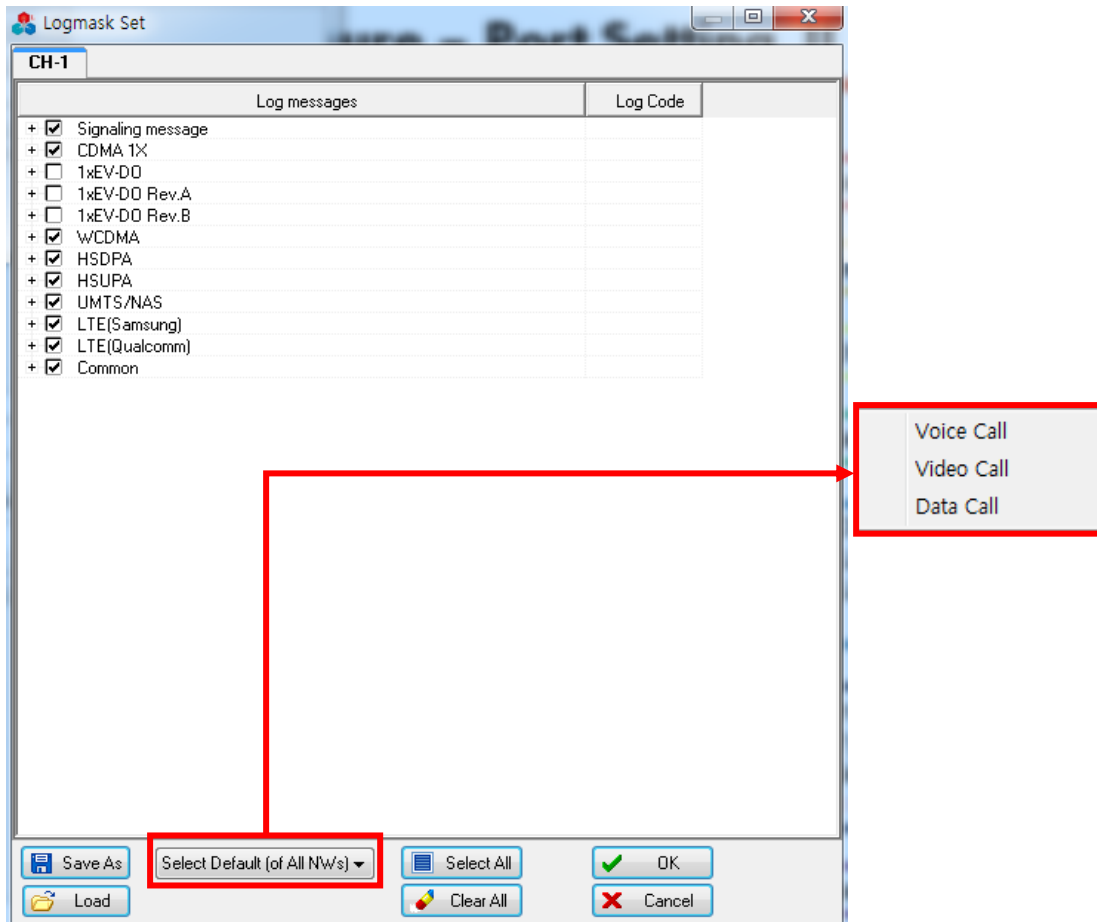
- [Map] Default folder of Map data was changed from "MapData" in program folder to "Maps" folder
- GCT 7243M relevant LogParser supports 0xEF30,0xEF31,0xEF33
- Addition of Japanese Sound Source

### Ver 3.7.0103

- Addition of feature for locking RAT and UARFCN for Qualcomm chip.
- Addition of feature : GCT 7243M relevant "TCP/IP Reconnect"
- Addition of feature for selecting the reference sound source in MOS Manual Test
- Addition of feature for call control(Receiving, End) on ADB Command

### Ver 3.7.0110

- Addition of feature "Minimum Default LogMas" in LogMask Setting.



### Ver 3.7.0117

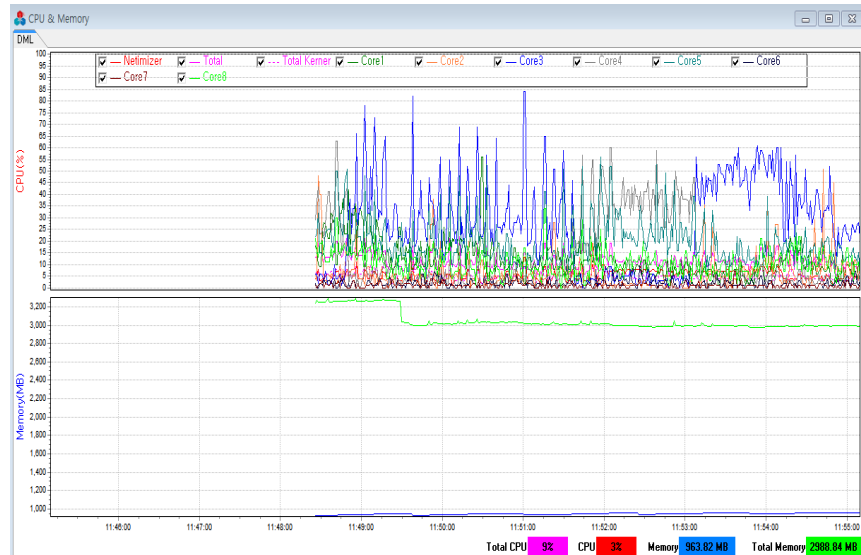
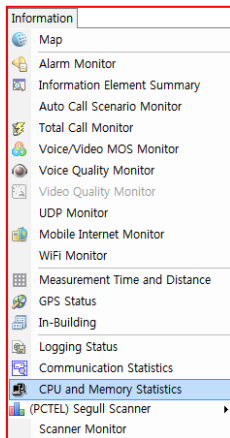
- [Changed] When Voice Quality measure, Event "Plat End" is recorded with Event "Play Start" by DML (With this process DML can provide the duration from Play Start to Play End)
- [Modified] Breaking the Sign of "Direction" in "Log Message", when user uses on English OS
- [Modified] Being to the Offline Service Status on Samsung chip, when FTP test is measured
- Optimasation the DM connectivity of Galaxy Note2

### Ver 3.7.0122

- [Bug Fix] Overwrite problem of installing patch(when GMCTool is in processing)

### Ver 3.7.0211

- Activate the feature "CPU and Memory Statistics"

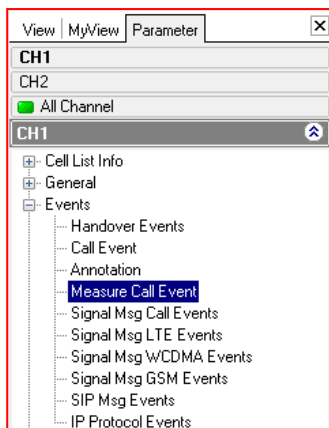


- [Map] Providing Default Map in World Map Mode, when UI loading
- [Map] Providing Install function, when New version map is released
- [Map] providing the option whether user use Online google map.
- vcredist\_x64.exe is installed for 64bit OS, when the DML is installed (the program is required for activation of POLQA Algorithm.)
- [VoLTE] Addition of RTP based calculation/indication feature for "R-Value" and "Estimated MOS"
- [Modified]Negative number indication of item "Delay" in "Voice Quality Monitor"
- Addition of Germany sound source in MOS Sound Source
- [Changed] MOS Algorithm cannot use 1st CPU Core.

- [Changed] Calculation method of MOS was changed  
(If a error occur on POLQA Module, the module will be shut down by DML for next calculation of next sound source)
- [Modified] Result Indication method of Voice Quality was modified  
Before : In case of silence, DML indicated not any other information e.g. Waveform and Result etc.  
After : DML indicate the MOS 1.01(Calculation Fail) and Waveform.
- [MOS] The Event " Play start/end, record start/end" will be recorded also at Log-File of paired Channel (It makes able to analyse the play and duration time at each opponent Channel)
- [Modified] Low sound source volume problem on Windows 8
- [POLQA] DLL Version update (Ver. 1.10 -> Ver. 1.12)
  - ✓ Description of POLQA Ver. 1.12
    - Release date: 2013-12-24
    - New: Implementation of the POLQA High Accuracy mode, which averages MOS values from four single POLQA runs on slightly shifted degraded signals (for details see chapter 9.14 and [ITU TG12Cont84], chapter 4.2.1 Proposed High Accuracy Mode).
    - Change: Improved sample rate conversion. In case the sample rates of reference and degraded signal differ, the improved sample rate conversion leads to different MOS values.
- FTDI VCP Driver version up
- [Modified] Graph Drawing problem was fixed at Qualcomm LTE Cell List UI  
(the problem was that if some of log had loss, the graph was not drawn)
- GCT 7243 (ROHC) Menu tree Update

### Ver 3.7.0215

- [Bug Fix] In case of linkage with Wireshark there was a occurrence of error and shut-down
- [Modified] SIP Parsing problem (Problem was a error at IP Fragment Packet Parsing)
- Addition of "Measure Call Event" at Events in Parameter category (It supports "Alarm")



- Addition of indication at SIB11 Cell ID detail Info in Message view.

(indicate both of 3GPP Standard & Network Provider requirement)

WCDMA RRC/C	Complete SIB List	
WCDMA RRC/B	System Information Block	ul-Interference -100
WCDMA RRC/C	Complete SIB List	
WCDMA RRC/B	System Information Block	ura_idt=3200
WCDMA RRC/C	Complete SIB List	
WCDMA RRC/B	System Information Block	uc-id=0ED1220[rnc-id=0ED,c-id=1220][msc=7,rnc=13,bts=18,sector=2,fa=0]
WCDMA RRC/C	Complete SIB List	
WCDMA RRC/B	Master Information Block	450/05
WCDMA RRC/C	Complete SIB List	
WCDMA RRC/C	First Segment	
WCDMA RRC/C	Subsequent Segment	
WCDMA RRC/C	Subsequent Segment	
WCDMA RRC/B	Master Information Block	450/05
WCDMA RRC/C	Complete SIB List	
WCDMA RRC/B	System Information Block	ul-Interference -100

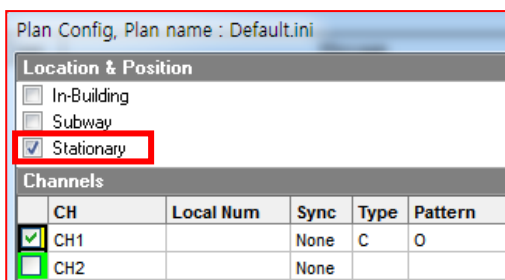
- Modification of indication error of "Message Type" in Stream 1/2/3 Protocol of EVDO Signal Message.
- Scanner relevant VDR\_MGR update
- Modification of increasing problem of Memory usage
- [Map] Deletion the Default Map supply feature of World Map.  
- Reason : Because of too long loading time of browser
- RMA Update (Ver.1.56)

### Ver 3.7.0225

- Addition of DLL Module for activating SAPI Module also in Windows XP

### Ver 3.7.0303

- [Bug Fix] L2000 Debug Message Display bug was modified.
- [Bug Fix] Connectivity Bug of UE which GCT 7205 Wibro Chipset based
- Reformed the Log Message UI Tree structure
- Addition of function for detail configuration of QMICM
- Addition of feature "Stationary" for measurement configuration.

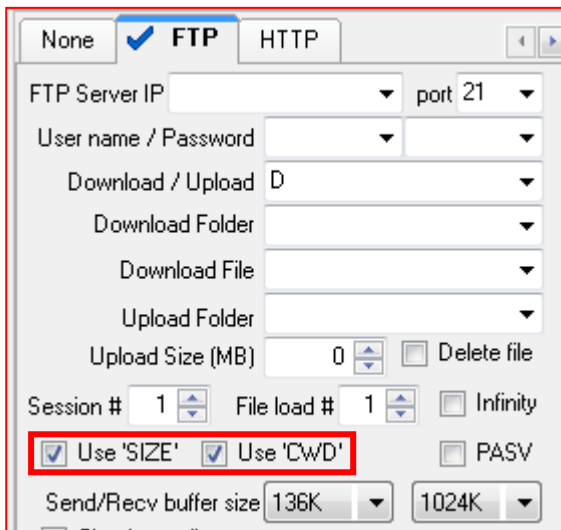


- Addition of Logging feature : Logging on Trace File, if it occurs in Power or Log etc. calculation
- RMA upgrade (v1.57)

- In case of incoming the Packet which is abnormal length , the abnormal packet will be handled to the Drop
  - ✓ In case of abnormal volume of 0x4166 packet(e.g. 65510 Byte etc.), it required to handle
- Addition of Filter tree for Qualcomm Event Report.

### Ver 3.7.0305

- Addition of feature for controlling the "SIZE" and "CWD" command flow On/Off  
(This feature is triggered, when measured with RMA)



- RMA upgrade (Ver.1.58)

### Ver 3.7.0306

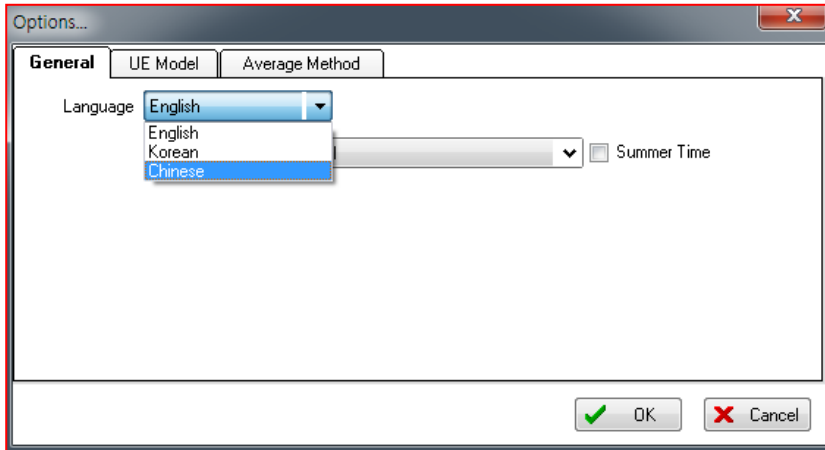
- Default Alarm configure file update, when DML installs(include Applying the patch)

### Ver 3.7.0307

- Changed the re-connection timer(3 Sec. -> 20 Sec.) for GCT 7240 & L2000 chip  
(This Timer is triggered, when DML has not received the packet from UE)
- Supplementation of function "TCP/IP Reconnection" for GCT 7240 & L2000 chip
- Tightened the exception handling of DM Log, when GCT 7240 TCP/IP is connected
- The Logmask will be delivered to chip excluding item "MAC HARQ ACK-NACK INFO", When GCT 7240 Logmask was configured.

### Ver 3.7.0311

- supporting the Chinese - Configuration/Option/General/Language



- [Modified] Error occurrence, when user uses manual MOS
- Addition of feature for measurement also with Scanner without UE
- [Modified] Handling of Call Drop.
  - (After sending the command "Termination Answer" via Blue Tooth)  
DML handles the Call as a Call drop, If DML receives the message "Incoming Call" from UE

### Ver 3.7.0312

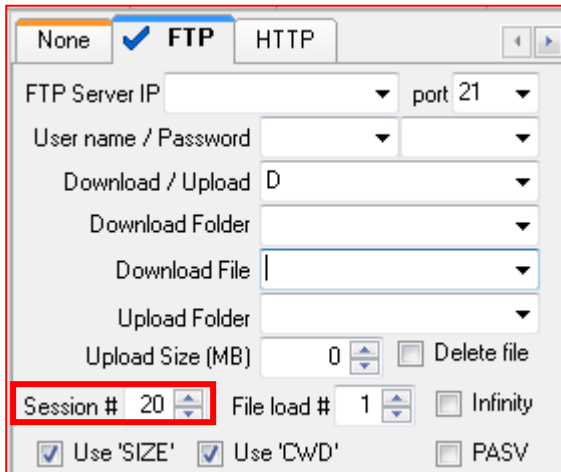
- Restored the feature that the combo-box at Plan setting window remember the value which used already
- RMA upgrade (Ver.1.59)

### Ver 3.7.0314

- The Samsung USB device driver setup file is included at DML Install version(the file is in Misc folder)
- [Bug fix] "Receive and Save TCP/IP Payload" option problem.
  - ✓ Even if the option "Receive and Save TCP/IP Payload" checked, it was not reflected
- Modified the control/debug code of LTE L2000 & GCT 7243 (CD00->EF00, CD01->EF01, CExx->EF03 sud code's)

### Ver 3.7.0319

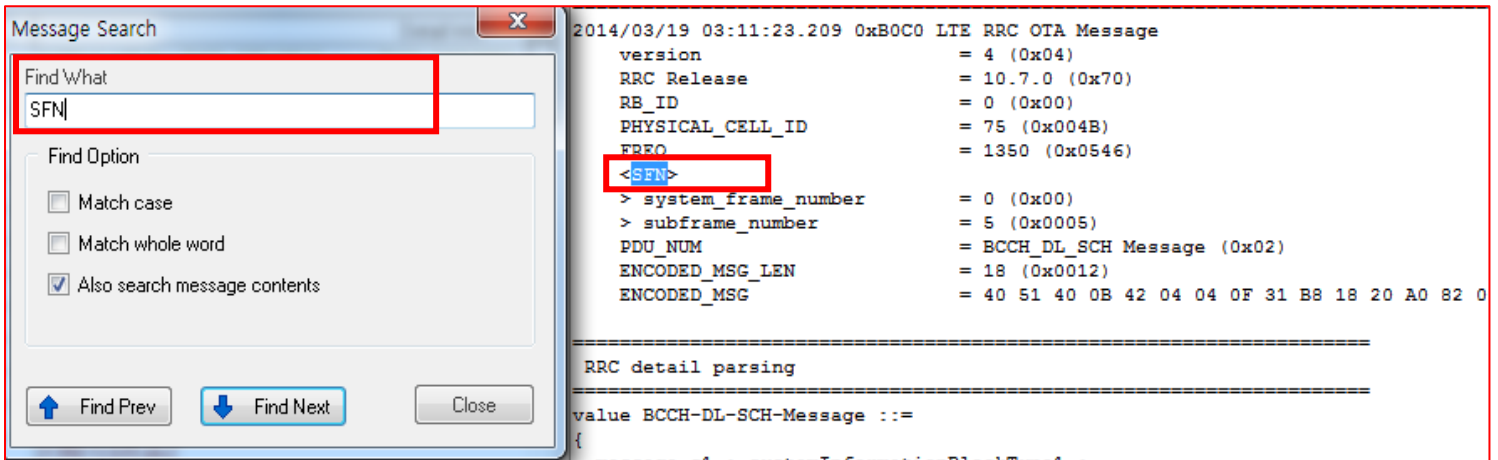
- Changed Configurable Max. session count at FTP DL/UL Test( Count 8 -> Count 20)  
(RMA update is required)



- Modification & addition of feature "Multi-RAB" (via using the RMA and Only for WCDMA)
- Modified the problem that Default logfile name is changed when FTP is measured via using the RMA

### Ver 3.7.0321

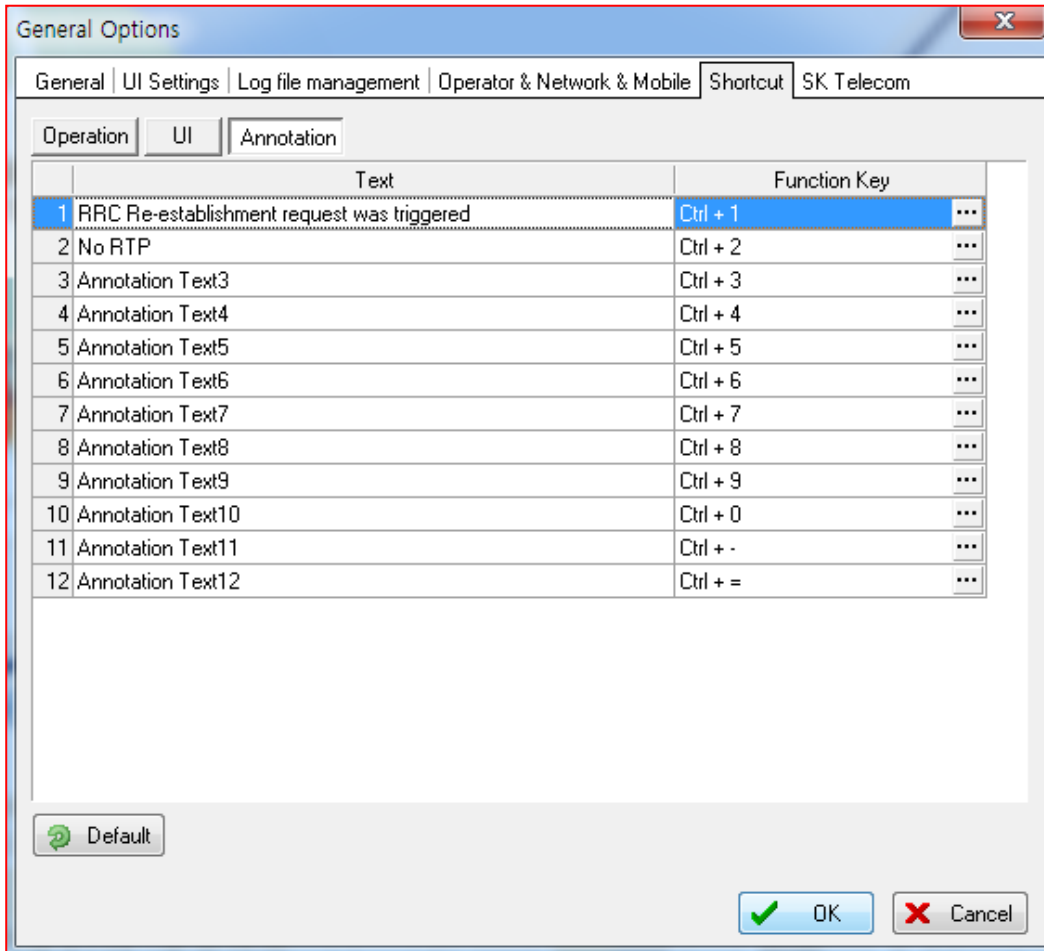
- Addition of function for Highlight at Log Message/Find-Base filter



- Changed the method of opening the Detail Message in Log Message  
(To open the pop-up menu via right mouse button click on the message screen -> Select the "Open detail window")
- Addition of feature for editing & configuring of Annotation. And relevant item was added to Parameter.

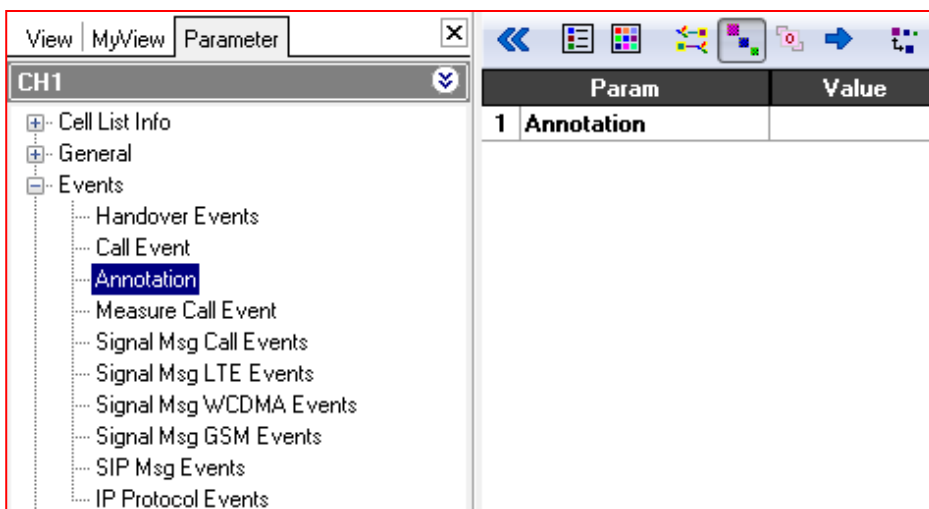
[Guide for Annotation feature]

1. Setup -> Click "General" -> Click "Shortcut" category -> Select the button "Annotation"
2. Define the annotation which you want to configure.  
(You can define the Text and Function Key)

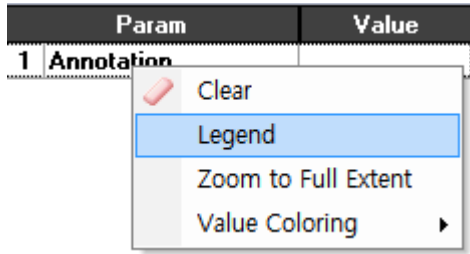


3. You can indicate the defined annotation also on Map.

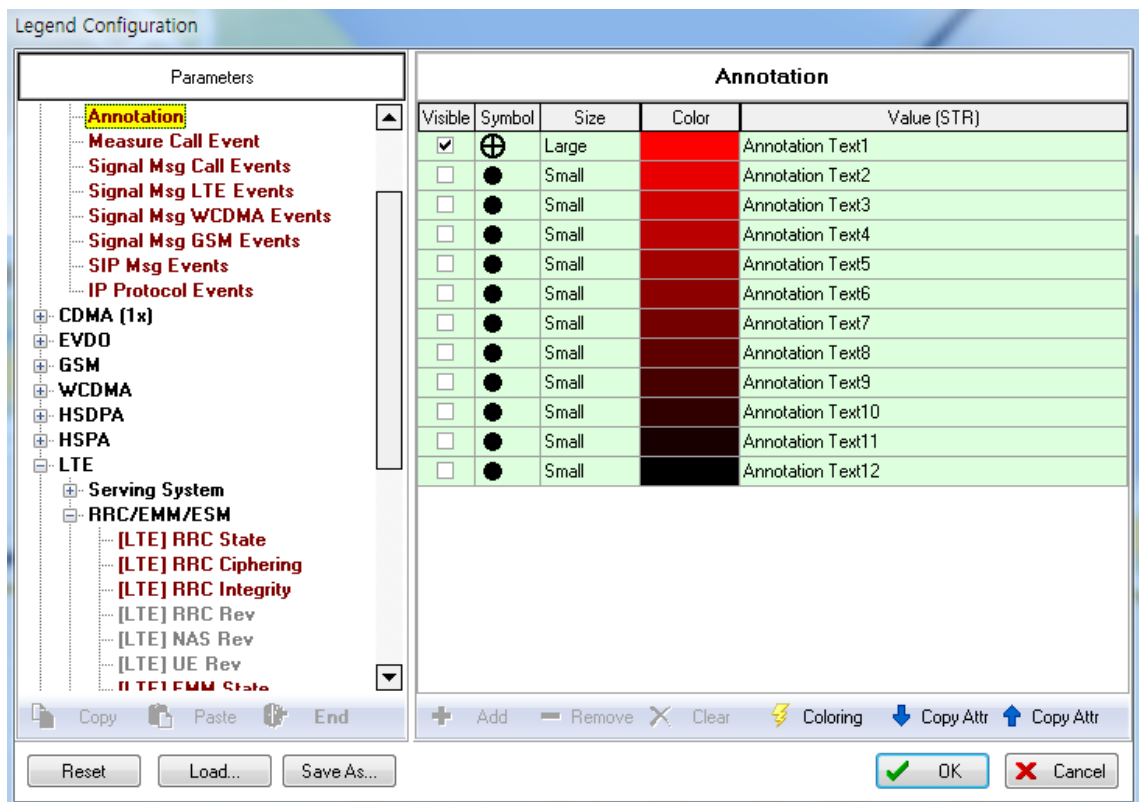
To use this feature, open the map and drag & drop the annotation from the parameter.



4. After addition of annotation on map parameter list, click the mouse right button to open the legend.



5. Click the "legend" and configure the each item e.g. "Symbol", Color" and Size so on.




6. After finishing the configuration, press the keys which was defined by you at Annotation in General Setting(e.g. Ctrl+1)

7. You can see the defined & configured symbol and annotation on the map

Param	Value
1 [LTE] SINR	11.5
1 Annotation	



Annotation
<input checked="" type="checkbox"/>  Annotation Text1

- Addition of the function button "Default" at ShortCut in General options
- Addition of Information Element Table & pop-up menu for Cell List Visible on Network & Cell

IE	Value	PCI	EARFCN	Bandwidth	Network
RSRQ	-11.7	41	2500	10M	LTE
RSRP	-80.1	41	2500	10M	LTE
RSSI	-51.4	41	2500	10M	LTE
SINR	2.7	41	2500	10M	LTE

### Ver 3.7.0331

- Addition of New Korean sound source for TTA 2014 in MOS Sound Source
- RMA upgrade (Ver.1.61)  
(Turn off the BlueTooth, when the ADB is in processing / The screen will not turn off during the use)
- Applied the changed packet structure on Qualcomm LTE Log UI  
(at Signal Graph UI / User-defined Table)
  - ✓ LTE OTA Message 0xB0C0 - v7
  - ✓ LTE LL1 PDSCH Demapper Configuration (0xB126)- v23
  - ✓ LTE LL1 PCFICH Decoding Results (0xB12A)- v23
  - ✓ LTE LL1 PUSCH Tx Report (0xB139) – v23
  - ✓ LTE LL1 PUCCH CSF (0xB14D)- v22
  - ✓ LTE ML1 Sleep (LOG\_CODE 0xB18B)- v2
- Modified the SFN/SubFN value indication of Q-LTE PDCCH Decoding Result (0xB130) Packet

### Ver 3.7.0415

- Addition of the function button "Default" at UI of ShortCut in General options
- Addition the parameter "0xB0B1LTE PDCP – UL Data PDU" on Log Mask
- Indication of Ping Test Result was changed.
  - ✓ Before : If there is no response even for one time, DMA indicated "0" on RTT Value etc.
  - ✓ After : DMA indicated just blank
- Modified the bug of CDMA Voice Call test
  - ✓ Bug : If the MOS was not measured, the call switched not conversation state (In case of CDMA "Call by Call" Voice test)
  - ✓ This bug triggered when CDMA Voice call without Pair call configuration or uses not BlueTooth
  - ✓ In situation of above, DML recognized not the Ring as a traffic
- The problem that some packet which has wrong timestamp saves. (The packet is some of Qualcomm Event Packet(0x1FFB))
  - ✓ It occurs, when HS\_USB relevant packet has wrong timestamp. ( kind of relevant packet is excepted)
- Modified the DCI Format Parsing value error of Qualcomm LTE PDCCH Decoding Result (0xB130)
- Supplementation of feature for summary & parsing the Qualcomm Serving System(0x134F) relevant packet
  - ✓ The information indication of LTE/WCDMA Cell-DL
- Addition of QMI relevant log in default Logmask(Voice/Data)

### Ver 3.7.0417

- Modified the configuration of PCTEL Scanner.
  - ✓ Measurement threshold ( before : 0 -> After : -150)
  - ✓ Signal count (before : 8 -> After : 16)
  - ✓ OperationalMode (before : 4 -> After : 9)
  - ✓ ChannelStyleCode (before :0 -> After : 4)

### Ver 3.7.0421

- Support the Qualcomm TDSCDMA (it supports only the Logging)
  - ✓ Logmask (0xD000 ~ 0xD1xx)
  - ✓ Diag Command (TDSCDMA Diag Command)
- changed internal the code for Netimizer Mobile Pro In-building Packet(0xD1xx)
  - ✓ the Log-Code 0xD3xx was recognized as a code 0xD1xx

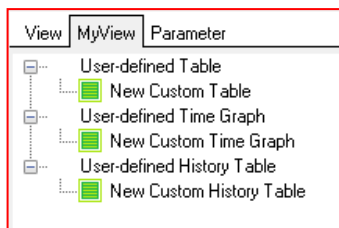
- Addition of TDSCDMA & LTE on Qualcomm UMTS Packet(0x7xxx) relevant license
  - ✓ Before : Activated when WCDMA or GSM/GPRS license has
  - ✓ After : Activated, if user has one of licenses(WCDMA, GSM, TDSCDMA or LTE)

### Ver 3.7.0424

- Modified the LTE Bandwidth indication bug on Network & Cell window
- Addition of handling the PCH/FTCH General Extension Message(GEM) in CDMA 1X Message (Filter Tree / Parser / Summary)
- Modified the message parsing error of EUTRAN-CDMA2000 Handover relevant message “UL HandoverPreparationTransfer” & “EUTRA CDMA2000-1XRRTT Contain” (1xProtocolRevision value applied as a use\_p\_rev)
- Addition of parsing feature for TDSCDMA RRC Signal Message (Log Message UI / Signal Message UI)
  - ✓ The parameter name of "WCDMA" changed to "WCDMA/TDSCDMA" in OTA Signal Message Filter Tree
  - ✓ "WCDMA/TDSCDMA" of "RRC" item was handled as a TDSCDMA RRC Filter
  - ✓ Feature for TDSCDMA RRC Parsing (Applied 3GPP TS24.331 Rel.9 )
- [Modified] GPS raw Data will be not stored any more

### Ver 3.7.0501

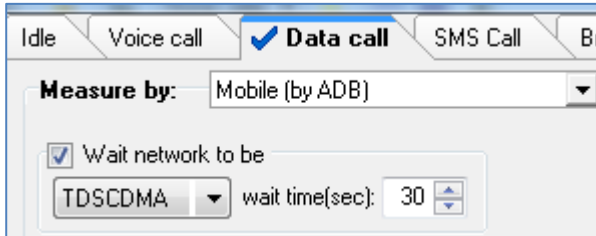
- [PCTEL Scanner] Addition of Scan option for subband on Reference signal (It needs not the extra configuration)
- [Map] Build Map of Google Map bug was fixed
  - ✓ The problem was occurred in build map, if the language setting of Google map options uncheck "Use the Local language"
- Combination of 3UK Project feature on DML
  - ✓ Parameter Manager Renewal
  - ✓ Addition of features(Custom History Table, Custom Time Graph UI)



- ✓ [Modified] The re-using of same Index file from DML,DMA and LogParser is allowed (The index file is created in System Temp folder)
- ✓ Addition of feature for Replay Sync

### Ver 3.7.0509

- Added 'wait network to be' option for RMA-based data call test



- TDSCDMA update
  - ✓ New UIs for TDSCDMA
  - ✓ Parameter items for TDSCDMA
  - ✓ Network & Cell UI supports TDSCDMA
- Log Message UI update
  - ✓ New columns(AckSN, SFN/SubFN, PDU Size) added for LTE RLC, MAC, PDCP packets
- Added CDMA frequency lock, CDMA band preference to NV Item Control UI
- Network & Cell UI update
  - ✓ Visibility option supported as popup menu
- PCTEL scanner update
  - ✓ Internal configuration changed following PCTEL recommendation
- MDM : GPS data is directly saved in CCU, and not sent to DCU
- GCT 7243 WiMAX update
  - ✓ GCT 7243 WiMAX DM interface updated
  - ✓ Added 'Log Enable' check box to port setting dialog
- GCT 7243C update
  - ✓ Bug fix for Cell Reselection UI, (Serving) Cell Information UI, and MAC Configuration Info UI
  - ✓ Added exception conditions : "ERROR FILE NOT FOUND" or "ERROR DEVICE NOT CONNECTED"
  - ✓ LTE UI L1 - Cell Information - Cell type display error bug fix
  - ✓ LTE UI MenuTree Code updated
  - ✓ Logmask Code updated

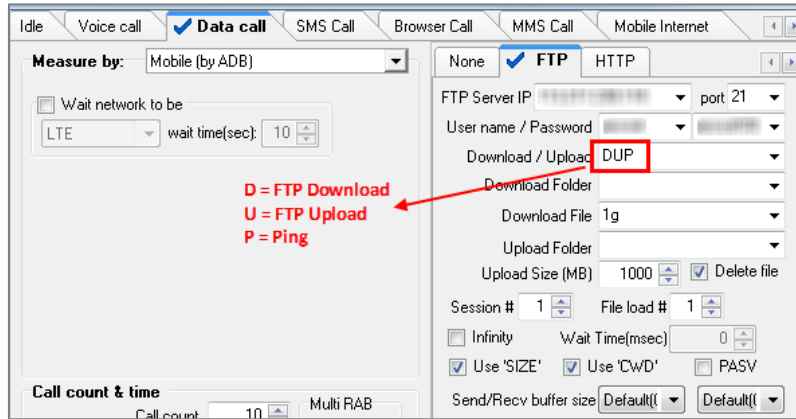
### Ver 3.7.0527

- **Upgrade**
  - ✓ RMA upgrade to v1.64
  - ✓ Qualcomm DM update : LTE LL1 PUSCH CSF log (0xB14E) – ver22
- **New feature**

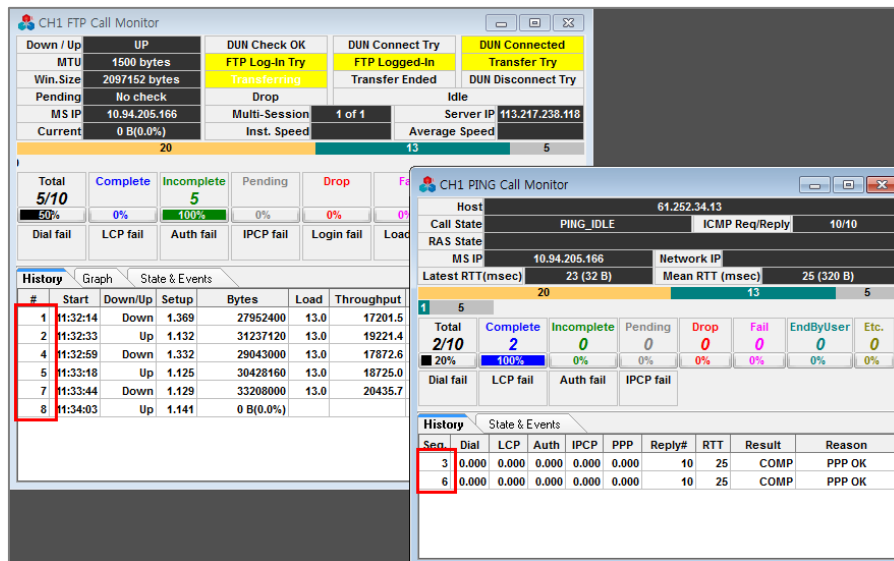
- ✓ FTP DL, FTP UL, Ping repeat test supported

- Configure plan as below sample

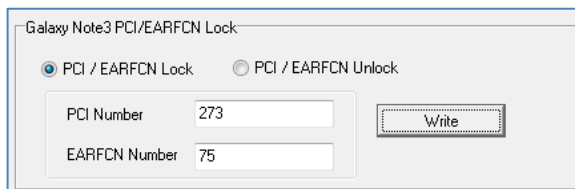
(Detail plan for "Ping" test should be configured in "Ping" plan tab)



- Start measurement. Then FTP download, FTP upload, and Ping test will be repeated as below.



- ✓ Added LTE EARFCN Lock, PCI Lock feature in NVItem UI (This feature is supported for China Samsung Galaxy NOTE3 model only)



- ✓ GCT 7243 Tcp/Ip dump item 추가 0xB807, 0xB808

- **Bug fix**

- ✓ LTE SINR (in parameter list) : unit changed to dB
- ✓ MMS test bug fix

- ✓ AlarmCofig, Legend – save/load bug fix
- ✓ Network and Cell UI – EARFCN 65535 display bug fix
- ✓ Log Message UI filtering/display bug fix (different log file index was used in DML, DMA, and LogParser, and it caused problem to DML replay, Log Message UI, etc. This bug is fixed)
- ✓ Inbuilding pre-route feature is recovered

### Ver 3.7.0527

- **Upgrade**

- ✓ RMA upgrade to v1.65
- ✓ Qualcomm DM update
  - B119 - ver 41 (LL1 - Neighbor cell measurement and tracking)
  - B123 - ver 41 (LL1 - Neighbor cell CER)
  - B12A - ver 41 (LL1 - PCFICH decoding results)
  - B130 - ver 41 (LL1 - PDCCH decoding results)
  - B139 - ver 41 (LL1 - PUSCH Tx report)
  - B13C - ver 41 (LL1 - PUCCH Tx report)
  - B146 - ver 41 (LL1 - AGC Tx report)
  - B14D - ver 42 (LL1 - PUCCH CSF log)
  - B16C - ver 6 (ML1 - DCI information report)
  - B16D - ver 8 (ML1 - GM Tx report)
  - B16E - ver 5 (ML1 - PUSCH power control)
  - B170 - ver 4 (ML1 - SRS Tx report)
  - B1BD - ver 2 (ML1 - All DL channels decode results)
  - B193 - Subpacket\_ID 0x19 – ver 6 (ML1 - Serving cell measurement result)
  - B193 - Subpacket\_ID 0x19 - ver 16 (ML1 - Serving cell measurement result)

### Ver 3.7.0610

- Update
  - ✓ RMA upgrade (v1.66)
- New feature
  - ✓ Replay only license supported (DML license should have “REPLAYONLY” license option)
  - ✓ Replay works with two modes; Replay mode and Load mode
    - Replay mode : UIs are displayed similar with real-time (no data drawn in the beginning)
    - Load mode : UIs will display all data in log file, and current position(of log file) will be highlighted in each UI

- New feature
  - ✓ New utility “Clear Cache” is provided in the program group. This utility will clear all temporary files used for log file analysis.
- Bug fix
  - ✓ Signal Message View bug fix – Filter option “Reverse” and “No Filter” works correctly

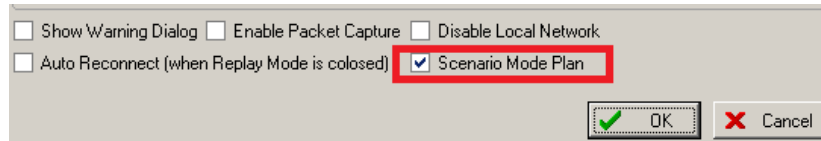
### Ver 3.7.0625

- Update
  - ✓ Alarms if log file creation fails because of disk error
  - ✓ Mobile phone information retrieved and saved through ADB
  - ✓ Quits RMA when DML terminates
  - ✓ Save Total Call Monitor UI as an image file, when the UI is opened
- Qualcomm DM update
  - ✓ B113 - ver 22 (LL1 - PSS results)
  - ✓ B1BD - ver3 (ML1 - All DL channels decode results)
  - ✓ MAC log subpacket - MAC buf status/MAC EMBMS stats/MAC EMBMS cfg
  - ✓ PDCP log subpacket - DL Config Ver2/UL Config Ver2
  - ✓ 4027 - ver 3 (Absolute Priority Cell Reselection)
  - ✓ B087 - Subpacket\_ID 0x42 ver 3 (LTE RLC DL statistics)
  - ✓ B146 – ver42 (LTE L1 AGC Tx report)
- Bug fix
  - ✓ Some UI errors during replay are fixed
  - ✓ Log file flushing disabled due to system performance degrade on old laptops or slow HDD
  - ✓ Parameter Item – Handover event covers LTE
  - ✓ Inbuilding plan bug fix – When multi floor option is selected and each floor’s image files are pre-defined, image filename was not saved to log file during logging. This bug is fixed

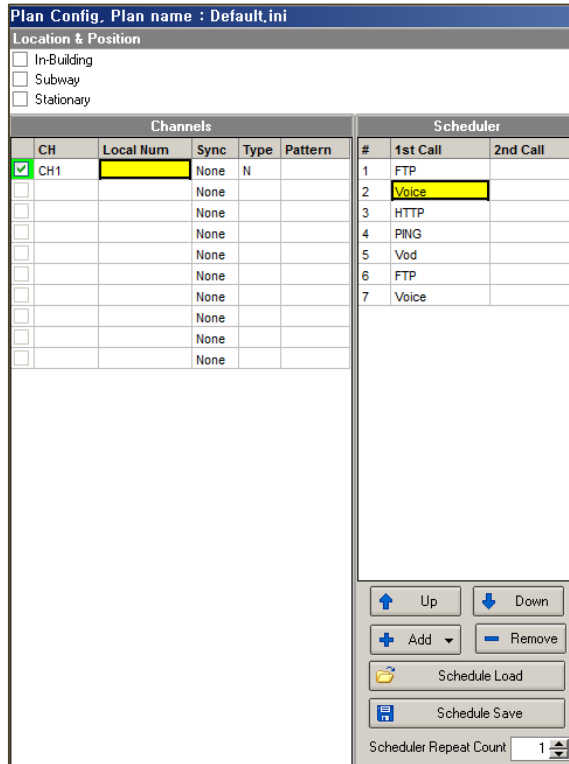
### Ver 3.7.0731

- New feature
  - ✓ GCT 7243 features added
    - TCP/IP Dump feature added
    - Signal Message summary parsing added
  - ✓ Scenario Mode added: you can make sequential test for various type of calls (ex: voice – FTP down – FTP up – Ping)
    - To use scenario mode, open “General Option” dialog, select “General” tab, and check

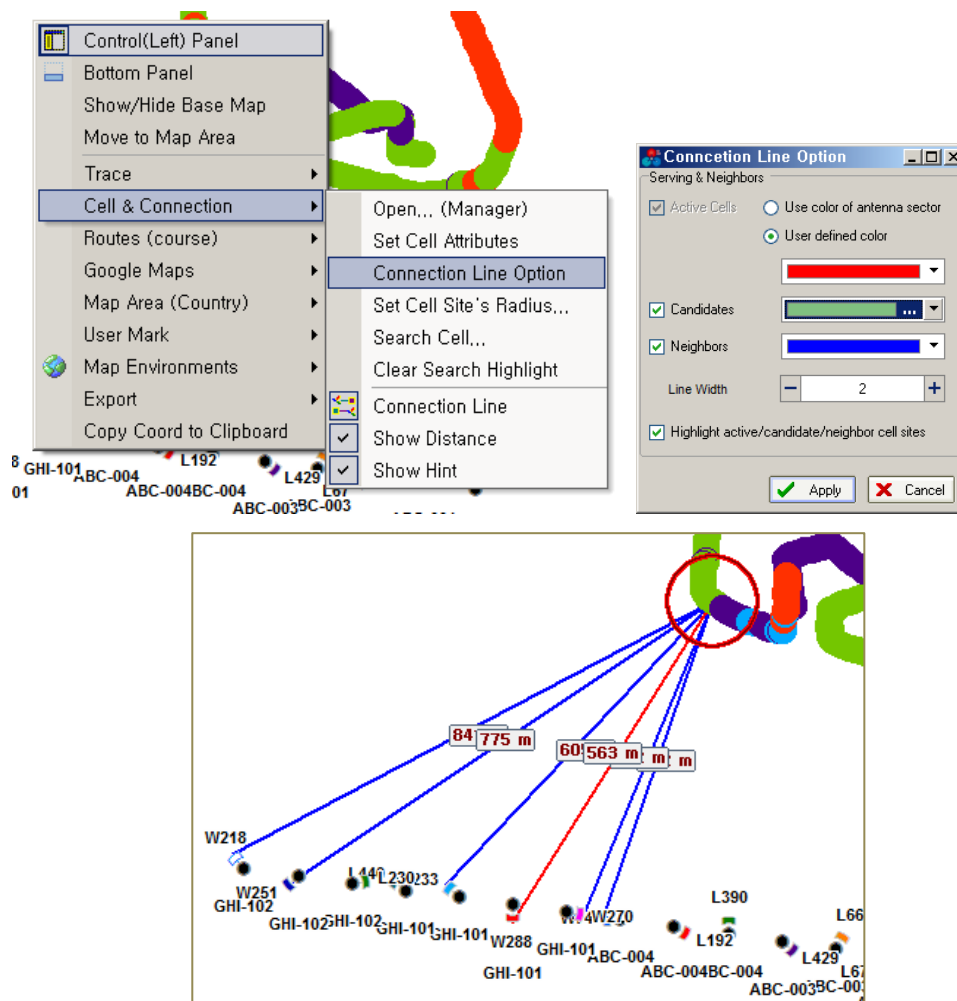
“Scenario mode plan” option as below figure.



- With scenario mode, plan setting dialog will show “Scenario” list as below figure.



- ✓ User can type-in “Annotation Manual Label”
- ✓ Log file auto compression and decompression function added
- ✓ MAP UI supports cell site sync function
  - Replay dialog provides new function buttons; Prev, Next Step, Go to specific call
- ✓ “Voice Quality Measurement Configuration” dialog supports new options
  - “Wait time (msec)” option
  - “Start play from termination UE” option (default = checked)
- ✓ User can click current position in the map UI, if GPS doesn’t lock to the correct position
- ✓ LTE Inter-Cell/Intra-Cell Handover Event added
- ✓ Parameter IE - Cell Site Name added
- ✓ During replay with “Load Mode”, Cell Site Connection Line is displayed in the map UI as below figure.



- Update
  - ✓ Qualcomm Event Report(0x1FFB) parser updated
  - ✓ CDMA Signal Message parser update
  - ✓ RMA upgrade (v1.69)
  - ✓ DM Statistic Packet (0xF029) Version 2 Update
  - ✓ LTE CQI Value calculation method updated
  - ✓ LTE MAC Frame Parsing supports Scell Active/Deactive Frame
  - ✓ Qualcomm DM update: B14E - ver 41 (LTE LL1 PUSCH CSF)
  - ✓ IPv6 Fragment Packet Parsing update
  - ✓ IPv6 Fragment Packet - SIP Call State, SIP Event processing update
  - ✓ Log View Filter Color setting bug fix. Also filter supports "Reset all colors to default" menu
  - ✓ You can change color of Signaling Messages in the log filter dialog
  - ✓ PDSCH throughput, PUSCH throughput calculation method updated
  - ✓ iPerf ABM measurement mode supports "Sample Count" setting in the plan setting UI

- ✓ Log message tree filter supports detailed filtering for the Bluetooth message log
- Bug fix
  - ✓ GCT 7243 signal message code mapping bug fix
  - ✓ Bluetooth Rx log timestamp bug fix
  - ✓ LTE B1/B2 Event display bug fix (however, replay with old version of DML log files doesn't show B1/B2. You should log with new DML to analyze B1/B2 event in the UI)
  - ✓ Installation software's font installation bug fix

### **Ver 3.7.0801**

- New feature
  - ✓ Auto Upgrade feature added:
    - Select "Check for update on startup" option in the General Option UI, or
    - Select "Check for Updates..." in the Help menu, or
    - Run "Check Update" in the Windows startup menu
  - ✓ Added "Wait" function in the scenario editor
- Bug fix
  - ✓ Scenario scheduler bug fix
  - ✓ LTE NAS – Attach Accept detail decoding bug fix

### **Ver 3.7.0802**

- Update
  - ✓ "NV Items Control" UI supports all items provided from Qualcomm chipset now.

### **Ver 3.7.0804**

- Update
  - ✓ RMA upgrade (v1.70)
- Bug fix
  - ✓ Qualcomm LTE Signal Graph – PUSCH throughput display bug fix

### **Ver 3.7.0812**

- Update
  - ✓ RMA upgrade (v1.71)
    - IMEI inspection is performed from RMA v1.71

- ✓ DNS of TCP/IP packet shows DNS name and IP address in the detail summary column as below;

↑ [TCP/IP]	Protocol Services Data	[TX:13543] UDP DNS:10.129.213.50[17032] -> 223.62.230.7[ 53] [57B]: m.naver.com
↓ [TCP/IP]	Protocol Services Data	[RX:12354] UDP DNS:223.62.230.7[ 53] -> 10.129.213.50[17032] (169B): m.naver.com (202.131.29.100)

- ✓ Plan UI – For HTTP setting, “Replace”, “Up”, and “Down” button is provided
- ✓ Plan UI – When user click OK button, plan contents validity check is performed. This validity check logic is improved.
- ✓ Install version includes default plan file again.
- ✓ Plan UI - “Voice Quality” configuration dialog uses default value for below two options, to prevent user’s mis-configuration.

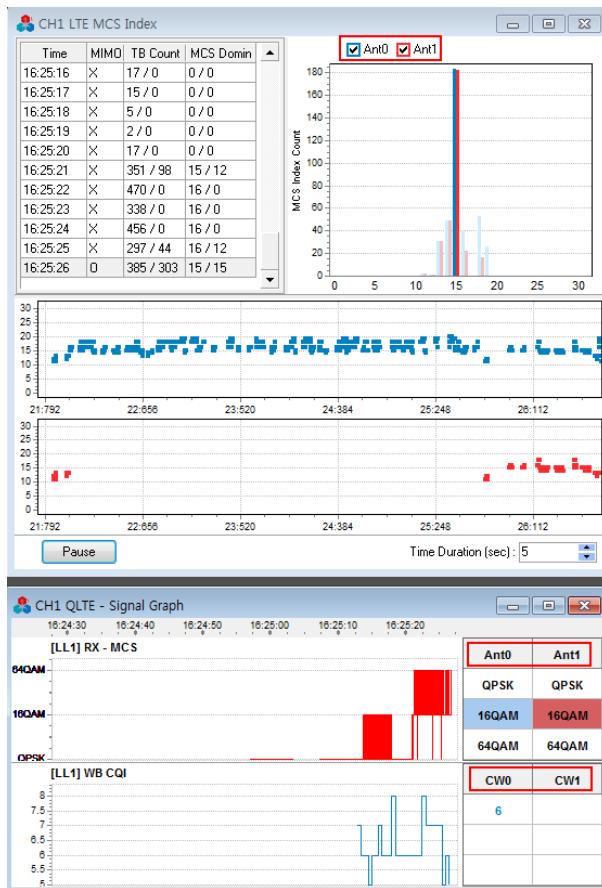
Wait time (msec)	2000
Start play from termination UE	<input checked="" type="checkbox"/>

### Ver 3.7.0814

- New feature
  - ✓ Netimizer MDM3 supports Scenario-based call scheduling
- Update
  - ✓ Doesn’t support VIA chip anymore, because no recent mobiles use VIA chip
- Bug fix
  - ✓ LTE NAS – Attach Accept detail decoding bug fix
  - ✓ Map UI – cell connection line cleared now when IRAT handover occurs
  - ✓ MOS – If DML doesn’t have PESQ license, but has POLQA license only, MOS calculation was failed. This bug is fixed.

### Ver 3.7.0821

- New feature
  - ✓ “User Defined Parameter” feature is added, where you can define various conditions combining multiple parameters and value conditions, and display the results in UI.
- Update
  - ✓ RMA upgrade (v1.72) : IMEI check feature disabled
  - ✓ In the general option dialog, you can select encryption type and password for the log file compression
  - ✓ “LTE MCS Index” UI and “Qualcomm LTE Signal Graph” UI change – Ant0,Ant1 and CW0,CW1 is displayed as below figure

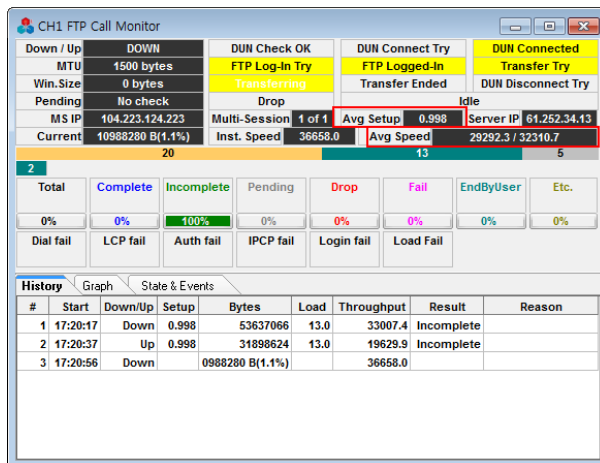


- Bug fix
  - ✓ Netimizer Auto Upgrade failure (due to ADB.exe process running in background) problem is fixed

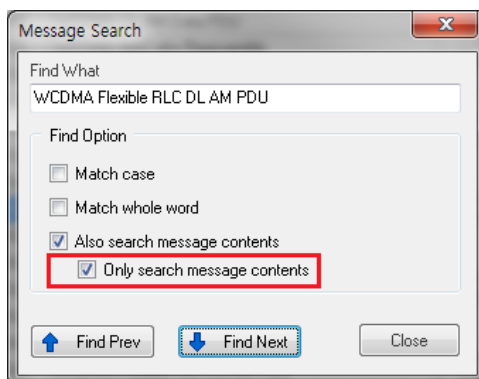
### Ver 3.7.0903

- New feature
  - ✓ User's guide PDF file is opened when you click Help menu
  - ✓ Scanner Cell Info – Added scanner group to parameters, and MAP cell connection line supports scanner cell info
  - ✓ LTE RRC - EUTRA UE Capability RAT-Container featureGroupIndicators Definition Parsing added
  - ✓ PCTEL Scanner – Enhanced Power Scan (EPS) is added
  - ✓ PCTEL Scanner – Signaling message decoding and MIMO support for LTE is added
- Update
  - ✓ RMA upgrade (v1.74)
  - ✓ “Network & Cell” update – Multiple carrier LTE, Dual carrier WCDMA is supported
  - ✓ “Network & Cell” update – Network type is shown or hidden automatically
- Bug fix

- ✓ MDM3 – scenario mode call scheduling bug fix
- ✓ Log Message UI Search function – multiple texts in detail message are handled properly
- ✓ User Defined Parameter – Range On/Off process bug fix
- ✓ Netimizer Upgrade Tool – upgrade fail due to background running GMCTool is fixed
- ✓ WorkSheet – bug fix
  
- ✓ Parameter/LTE items added – CRS SINR, DRS SINR, CQI Avg, SB CQI, PSS Power, SSS Power, Pathloss
- ✓ Parameter/HSPA items added – HS SCCH CQI, HS SCCH CQI > 16 Rate(%), HS SCCH CQI > 25 Rate(%)
- ✓ Parameter/General/Data Throughput items added – FTP Rx/Tx Call Avg Throughput, FTP Rx/Tx Measure Avg Throughput
- ✓ FTP Call Monitor UI – added “Avg Setup” and “Avg Speed” display



- ✓ Message Search dialog – new option “Only search message contents” is added



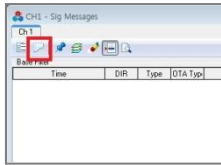
- ✓ Log Message UI – AutoDetailParsing Option is disabled when user click any row in the list, so that user can analyze message details
- Bug fix
  - ✓ Detail Summary Parsing bug fix - LTE LL1 PUCCH CSF Log (0xB14D), LTE LL1 PUSCH CSF

Log(0xB14E)

- ✓ “Network & Cell” – WCDMA DL Throughput for Dual Carrier case was displayed as HALF of real speed – this bug is fixed
- ✓ Throughput Graph – WCDMA Physical, MAC, RLC UL Throughput was not displayed – this bug is fixed

### Ver 3.7.0925

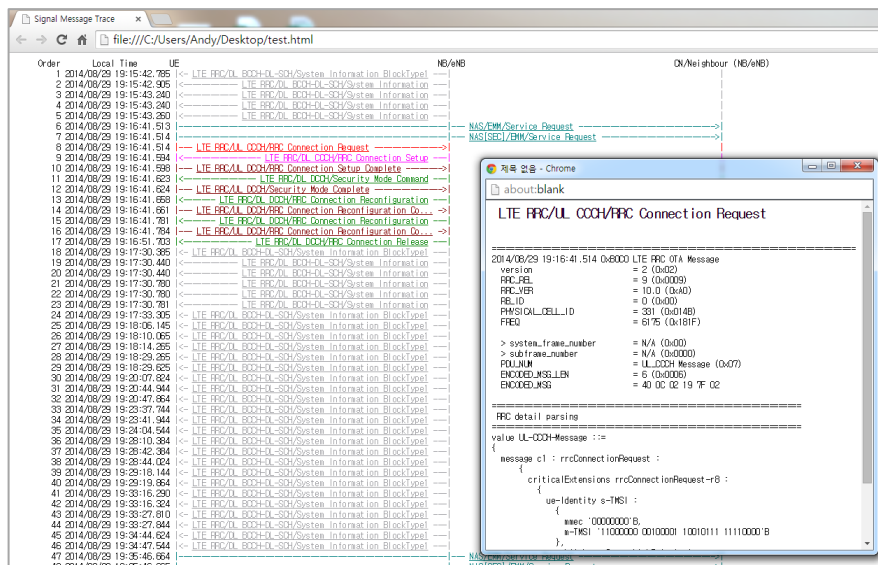
- New feature
  - ✓ MOS – Added “BrEnglish” for reference speech samples
  - ✓ Added Summary filter button in the Signal Log View UI



- ✓ Log Message UI provides new popup menu “Export (All Logs) – Signal Messages to HTML”. When clicked, all signaling messages(RRC, NAS, etc.) in the log file will be saved to HTML file, embedding message details into the HTML file itself.

Message	Detail Info.
LTE RRC MIB Message	[175:331] bw 5 MHz, bwAnt 2, sfn 208
LTE RRC MIB Message	[175:331] bw 5 MHz, bwAnt 2, sfn 212
LTE RRC/DL BCCH-DL-SC	[175:331] 212/5 mnc 234, mnc 20, tac 5013, cell_id
LTE RRC/DL BCCH-DL-SC	[175:331] 224/6 Sib2
LTE RRC/DL BCCH-DL-SC	[175:331] 260/0 Sib4
LTE RRC/DL BCCH-DL-SC	[175:331] 260/0 Sib4
NAS/EMM/Service Request	[175:331] 0/0 m-TMSI: C02197F0, highPriorityAcce
NAS[SEC]/EMM/Service Request	[175:331] 973/4 id=0
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=0, PLMN-Id: 1
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=1, eea2, eia2
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=1
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=2, fa=[175][1]=A3]
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=2
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=3
LTE RRC/UL DCCH/RRC	[175:331] 0/0 id=3
LTE RRC/DL DCCH/RRC	[175:331] 0/0 id=0, release: other
LTE RRC MIB Message	[175:332] bw 5 MHz, bwAnt 2, sfn 728
LTE RRC MIB Message	[175:332] bw 5 MHz, bwAnt 2, sfn 728

If you open HTML file in the browser, it's displayed as below figure. Click specific message in the browser, then message details will be displayed in the popup window.



This feature reads log file and save to HTML file, therefore this feature is available only in during replay, and not available in real-time mode.

- Update
  - ✓ New version of Samsung mobile USB driver is included in the “Misc” folder. (SAMSUNG\_USB\_Driver\_for\_Mobile\_Phones\_v1.5.47.0)
  - ✓ WCDMA times in the voice call monitor – values were not displayed, and this bug is fixed
  - ✓ VDR\_MGR update

### Ver 3.7.0930

- Bug Fix
  - ✓ PCTEL\_MGR bug fix – LTE bandwidth, RSSI minimum threshold(-120) is fixed

### Ver 3.7.1001

- Update
  - ✓ PCTEL Scanner – User can define threshold for each of “Carrier RSSI threshold”, “Sync Signal threshold”, and “Reference Signal threshold”
  - ✓ RMA upgrade (v1.76) – new RMA requires Android OS version 4.0.3 or later.
  - ✓ “Network&Cell” – GSM Cell List is displayed even during idle state

### Ver 3.7.1002

- Update
  - ✓ RMA upgrade (v1.77) – new RMA requires Android OS version 4.1.2 or later

- ✓ UMTS Vocoder Information UI – displays AMR-WB codec information also
- ✓ GSM(GPRS) RLC DL/UL throughput – Supports updated Qualcomm packets(0x520A, 0x5202)
- ✓ RRC parser displays dBm values for below messages
  - LTE Measurement Report
  - WCDMA Measurement Report
  - WCDMA Cell Update

### **Ver 3.7.1009**

- New feature
  - ✓ Supports Anite FSR scanner (LTE, UMTS, GSM, CDMA/EVDO, RSSI, Spectrum)
    - Laptop and Anite FSR scanner is connected by LAN, and laptop should have IP address 192.168.3.1 (subnet mask 255.255.255.0). For details, please refer Anite FSR user's manual.
  - ✓ "Help – Revision History" menu is provided (revision history is provided as PDF file)
- Update
  - ✓ RMA downgrade (v1.77) – Android OS version 4.1.2 or later cause problem in v1.77

### **Ver 3.7.1010**

- Update
  - ✓ RMA upgrade (v1.77) – new RMA requires Android OS version 4.1.2 or later
- Bug Fix
  - ✓ Samsung chip LTE – Cell ID was used for the PCI display. This bug is fixed

### **Ver 3.7.1014**

- Update
  - ✓ RMA upgrade (v1.78) – Improved stability

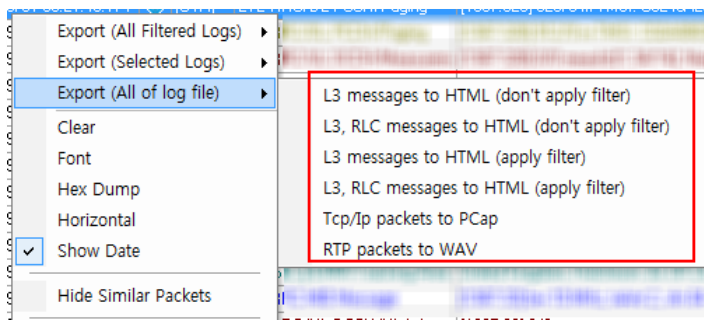
### **Ver 3.7.1022**

- New Feature
  - ✓ "Misc\ABM" folder added. It includes;
    - ABM Server - Installation and User Guide (Solaris).docx
    - ABM Server - Installation and User Guide.docx
    - ABM\_Linux\_Server.tar.gz
- Update

- ✓ Map engine update
- ✓ Log Message UI - “Export (All Logs) – Signal Messages to HTML” menu feature updated.  
L2 messages are also exported to HTML, as well as RRC and NAS messages.
- ✓ Parameters - Scanner Info – LTE, WCDMA frequency groups are increased to 10
- ✓ VDR scanner interface update (new Stream API is applied)
- ✓ “Misc” folder includes “iperf-2.0.5\_Linux Server.tar.gz” file. This is Linux version of modified iPerf server for automatic operation.

### Ver 3.7.1024

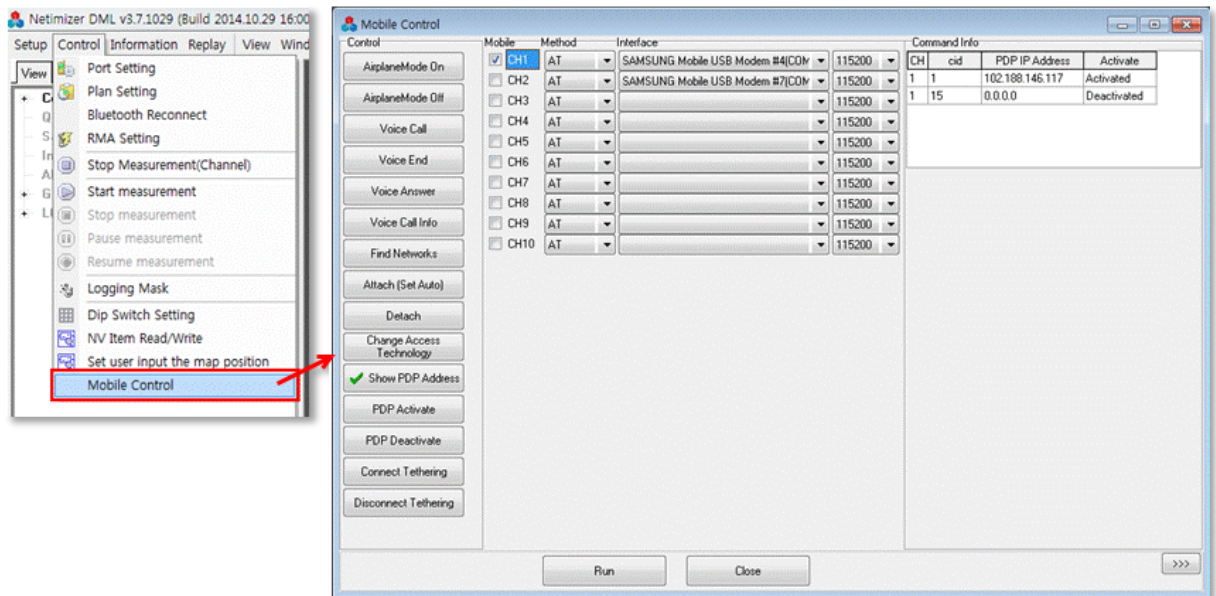
- New Feature
  - ✓ Log Message UI provides new popup menus as below. (These features read whole log file and export to appropriate format. Therefore, it’s not usable during real-time, but works during replay mode)



- Update
  - ✓ RMA upgrade (v1.79) – Improved stability

### Ver 3.7.1030

- New feature
  - ✓ Added “Mobile Control” menu, where you can control mobiles based on AT command, ADB, or QMICM interface.  
(Your mobile might not support some features, depending on the mobile model, firmware version, and Android version, etc.)

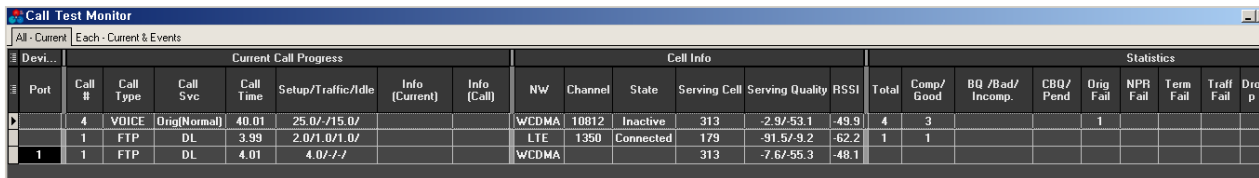
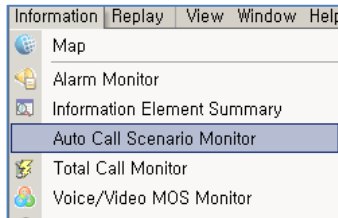


## Ver 3.7.11102

- New Feature
  - ✓ Qualcomm Diag Subcmd (CDMA 1x Call Processing/MC Log State Response) 처리 추가
  - ✓ WCDMA RLC AM PDU Parser 수정 - 0x4134, 0x4135, 0x413B, 0x413C 0x4143 0x4144 0x4145 0x4146 0x414B 0x418B
  - ✓ WCDMA RLC AM PDU Detail Info 수정 - 0x4138, 0x4139, 0x4141, 0x4142, 0x4149, 0x414A
  - ✓ WCDMA/HSPA Log Parser 수정 - 0x4222, 0x4305, 0x4307, 0x4309, 0x4321, 0x4322
  - ✓ WCDMA/HSPA Log Detail Info 수정 - 0x4221, 0x4222, 0x4186, 0x4301, 0x4303, 0x4311
  - ✓ GSM Log Parser 수정 - 0x5232, 0x5234, 0x5249, 0x524A, 0x524B, 0x524C
  - ✓ GSM Log Detail Parser 추가- 0x506C, 0x5072, 0x5079, 0x512C, 0x5134, 0x51FA, 0x5202, 0x5205, 0x5206, 0x520A, 0x5227, 0x5231, 0x5232, 0x5234, 0x5235, 0x5245, 0x5249, 0x524D
- Bug Fix
  - ✓ Parameters – various bug fix
    - [WCDMA] DPCCH Tx Power, DPDCH Tx Power, HSDPCCH Tx Power, HSDPCCH Tx Power, EDPDCH Tx Power, DRX Cycle, Target SIR are removed (they are supported from Samsung Chip only)
    - [WCDMA] USet (PSC) removed
    - [WCDMA] Inst Rx RLC Thr, Inst Tx RLC Thr, Avg Rx RLC Thr, Avg Tx RLC Thr calculation bug fix
    - [HSUPA] MAC Throughput, Phy Throughput. (Raw), Phy Throughput. (Scheduled), Phy Re-Transmission Ratio calculation bug fix
    - [WCDMA] ASet Ec/Io, ASet RSCP, BLER (Sig. ch), BLER (Traffic ch) display bug fix

### Ver 3.7.1103

- New Feature
  - ✓ New “Auto Call Scenario Monitor” is added



All - Current		Each - Current & Events		Current Call Progress				Call Info					Statistics									
Port	Call #	Call Type	Call Svc	Call Time	Setup/Traffic/Idle	Info (Current)	Info (Call)	NW	Channel	State	Serving Cell	Serving Quality	RSRP	Total	Comp/Good	BQ /Bad/Incomp.	CBQ/ Pend	Orig Fail	NPR Fail	Term Fail	Traff Fail	Drop
	4	VOICE	[Orig(Normal)]	40.01	25.0/-/15.0/			WCDMA	10812	Inactive	313	-2.9/-53.1	-49.9	4	3			1				
	1	FTP	DL	3.99	2.0/1.0/1.0/			LTE	1350	Connected	179	-91.5/-9.2	-62.2	1	1							
1	1	FTP	DL	4.01	4.0/-/-/			WCDMA			313	-7.6/-55.3	-48.1									

### Ver 3.7.1106

- Update
  - ✓ China map GPS position auto-adjust feature added
- Bug fix
  - ✓ Bug fix of “Auto Call Scenario Monitor”

### Ver 3.7.1107

- Update
  - ✓ RMA upgrade (v1.80) – Added handling for unexpected Android events
- Bug Fix
  - ✓ FTP test (by RMA) bug fix
    - Last throughput packet of DL test contains value 0 – it’s fixed
    - Last throughput packet of UL test contains value 10GB, because of unexpected event from Android – it’s fixed
    - Updated FTP call monitor to skip above cases

### Ver 3.7.1110

- Update & Bug Fix
  - ✓ Parameters – various bug fix and update
    - RSCP unit change to dBm
    - [WCDMA] RRC Release - removed (Not provided from Qualcomm chip)

- [WCDMA] CN Domain - removed
- [WCDMA] MAC Avg Throughput, MAC Trans Bits, etc - removed (Same with HSDPA Physical Throughput)
- [HSDPA] PHY Throughput, MAC Throughput, etc – calculation bug fix
- [WCDMA] Tx Power Limit – updated for new Qualcomm log version
- [WCDMA] RRC State – updated for new Qualcomm log version
- [WCDMA] Cell Type – updated for new Qualcomm log version
- ✓ HSDPA UI – updated for new Qualcomm log version
  - HSDPA\_Channel Config Information
  - HSDPA\_SCCH HARQ Information
  - HSDPA Decoding Statistics
  - HSDPA Harq Tx Statistic
  - HSDPA UL DPCH Information

### Ver 3.7.1111

- Update
  - ✓ Support iPhone for “auto call test” and “MOS measurement” using VoLT or PM-10
  - ✓ Map UI – support cell site with more than thousands of cells
  - ✓ Map – improved cell site draw speed
  - ✓ LogMask Item Add - HSUPA Items (WCDMA Multi Carrier EUL)
- Bug Fix
  - ✓ Custom UI (Table, History Table, Call History, Graph) – Setup dialog title display bug fix
  - ✓ Manual MOS test – when you have POLQA license only, not PESQ also, manual MOS test failed for the MOS calculation. This bug is fixed.
  - ✓ WCDMA Signal Graph bug fix
    - Samsung GS5 Case - WCDMA RSSI/Tx Pwr/Tx Limit
  - ✓ Packet Update - WCDMA Uplink And Downlink Power Control Edition 2(0x4023) – Parser
  - ✓ Parameter bug fix
    - [WCDMA] BLER (Traffic ch)

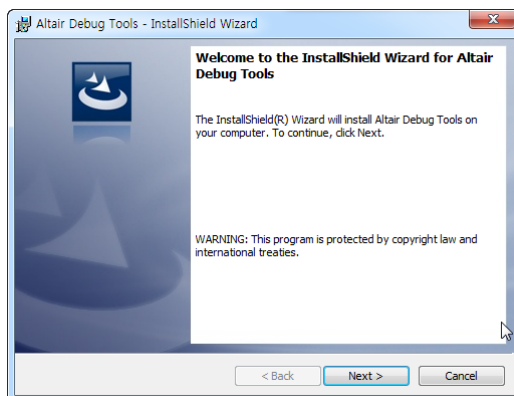
### Ver 3.7.1114

- New Feature
  - ✓ Map – cell site display engine upgrade (you can choose antenna display style among 4 types)
  - ✓ Supports ALT3800 (Altair 3800) chipset
- Update

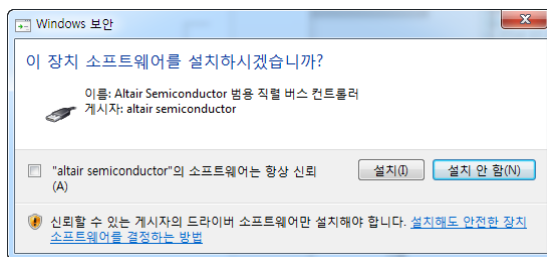
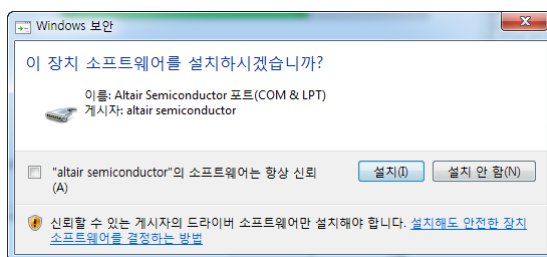
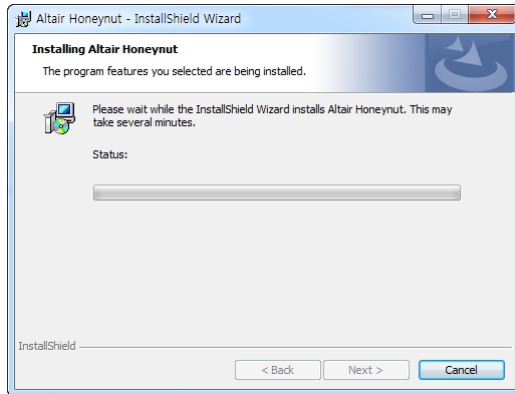
- ✓ Discontinued support for VIA CDMA chipset
- ✓ Qualcomm LTE – RRC/NAS state UI – RRC state display is updated following new Qualcomm log version
- ✓ VDR – changed configuration UI items and default values
- ✓ VoLTE – Decodes NULL encrypted ESP packets
- ✓ VoLTE – Can detect and process non-standard SIP port numbers
- ✓ Parameters – update for new packet (Samsung GS5)
  - [WCDMA] SIR, SF, Pilot Bits
  - [HSUPA] Phy Throughput (Raw/ Scheduled), MAC Throughput
  - [HSUPA] Phy Re-Transmission Ratio,
- ✓ HSUPA Signal Graph/L1 DL Config Info/L1 UL Config Info/E-TFCI Usage UI update for new packet (Samsung GS5)
- Bug Fix
  - ✓ Inbuilding UI – error message during replay has been fixed
  - ✓ WCDMA Signal Graph – update for new packet
    - [WCDMA] SIR, SF, Pilot Bits
  - ✓ HSDPA Signal Graph – wrong value fix (e.g: HSDPA Physical Throughput..)

### Altair ALT3800 chipset – how to use

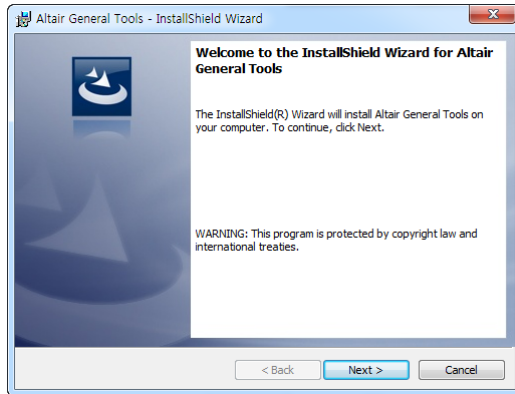
- You need ALTAIR chipset license option to use Netimizer DML with Altair chipset.
- ALT3800 – how to use
  - ✓ Install “DebugTools\_02.00.00.15\_setup.exe” (software might be different depending on the mobile vendor)



- ✓ Install “Honeynut\_HN\_01\_02\_00\_00\_08\_setup.exe” (software might be different depending on the mobile vendor)

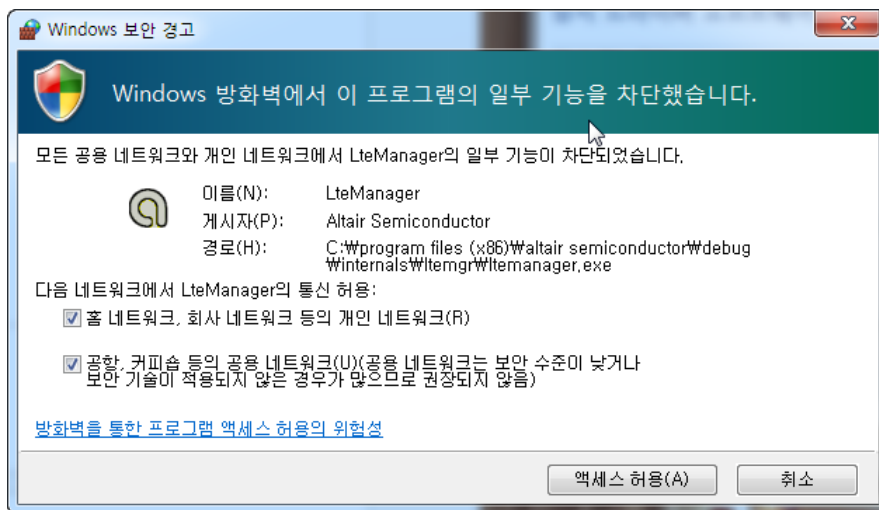
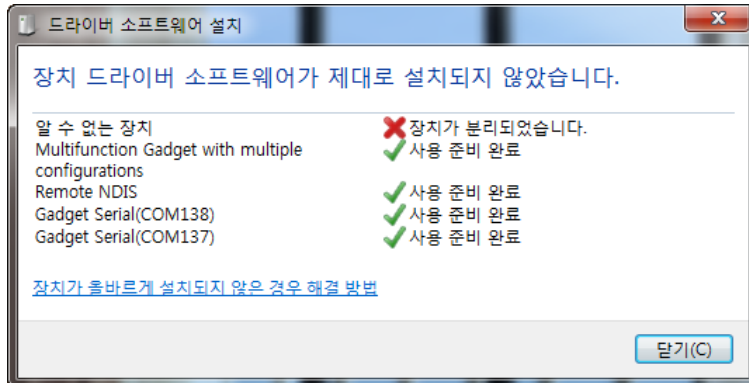


After install finishes, “Altair General Tools” will be installed as below.

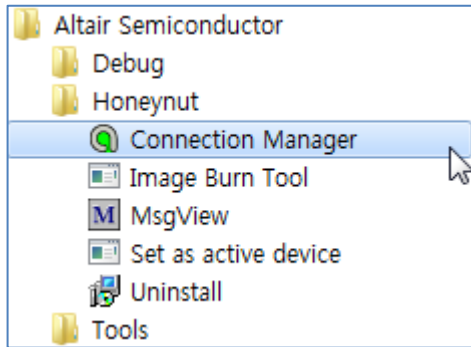


- ✓ Plug in Altair device – device driver will be installed automatically.

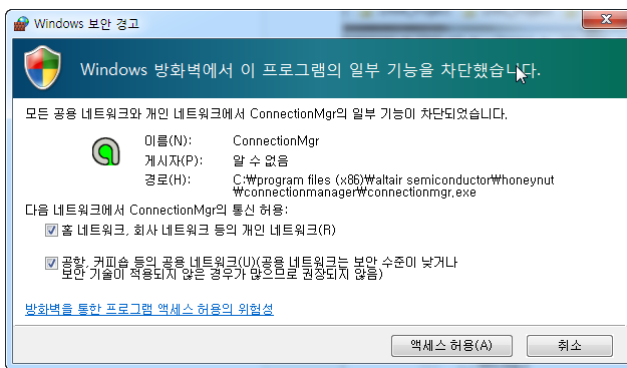
During installation, permit all communication of Altair software in the firewall setting as below.



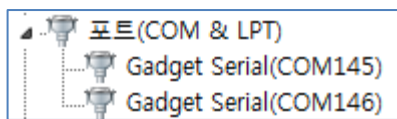
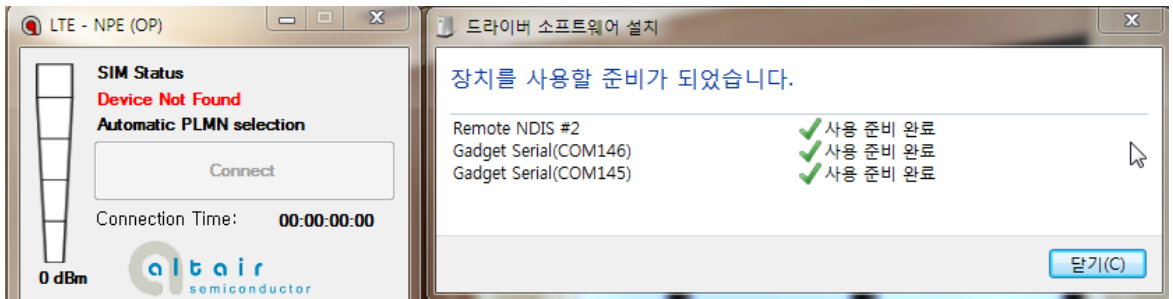
- ✓ Run Altair CM



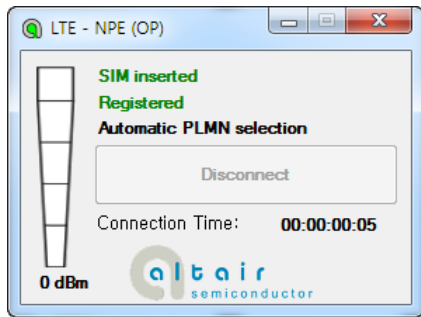
Permit communication in the firewall setting.



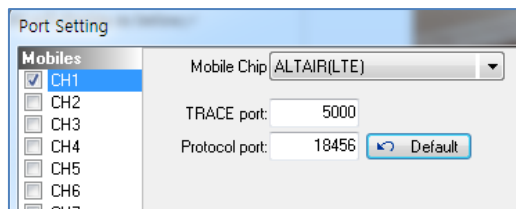
New device will be detected, and drivers will be installed automatically as below;



If you see “Device Not Found” as above, unplug device and plug in again. Then, Altair CM will display as below;



- ✓ Enable DM logging option in your Altair CM  
Please refer your Altair device user's guide for details.
- ✓ Run Netimizer DML
  - Port setting – select "ALTAIR(LTE)" chipset and configure "TRACE port" and "Protocol Port". (port number for both should be configured correctly following your device configuration – please refer your device user's guide)



- If DML doesn't show any received messages from Altair chipset, please contact your device manufacturer for the configuration.

### Ver 3.7.1118

- Update
  - ✓ RMA upgrade (v1.81) – Enhancement of stability for web test, YouTube test
- Bug Fix
  - ✓ Map UI – cell site hint display bug fix

### Ver 3.7.1120

- Update
  - ✓ Updated automatic port & device search logic for VoLT and PM-10
  - ✓ Updated audio device control logic

### Ver 3.7.1121

- Update
  - ✓ "Network & Cell" UI – 'Cell Site Name' is displayed in the table

### Ver 3.7.1126

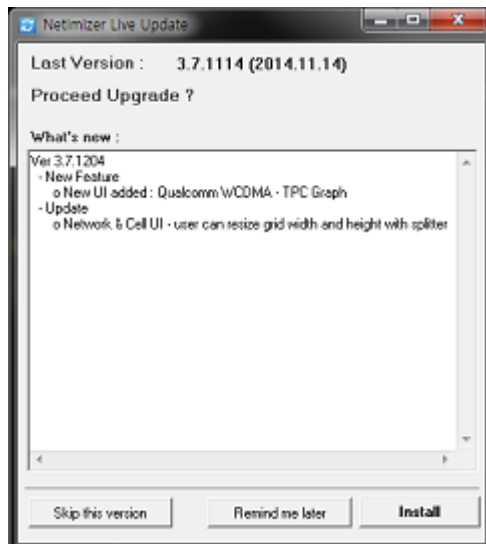
- Update
  - ✓ MosCalc folder (temporary folder for WAV file recording) is fixed to C drive (previous version used R drive if it exists)
- Bug Fix
  - ✓ NAS text parser – ‘Attach Reject’ 3402 Timer, ‘Attach Accept’ Emergency Number List – bug fix

### Ver 3.7.1204

- New Feature
  - ✓ New UI added : Qualcomm – WCDMA – TPC Graph
- Update
  - ✓ RMA upgrade (v1.82) – Enhancement of YouTube test
  - ✓ Network & Cell UI – user can resize grid width and height with splitter

### Ver 3.7.1208

- Update
  - ✓ RMA upgrade (v1.83) – Enhancement of YouTube test
  - ✓ Netimizer Online Update – displays “What’s new” information



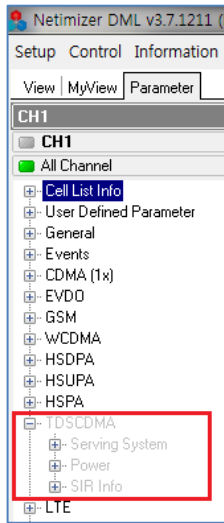
### Ver 3.7.1211

- New Feature

- ✓ Added “Help – Remote Support” menu (usable in Netimizer DML and Netimizer MDM3 CCU only). It launches Teamviewer client.
- ✓ Added “Help – Submit a question” menu (usable in Netimizer DML and Netimizer MDM3 CCU only). It opens web browser with Netimizer technical support site (<http://netimizersupport.com/>).
- Update
  - ✓ RMA upgrade (v1.84) – new RMA requires Android OS version 4.0.3 or later
  - ✓ Log Parser – update for new version Log Packet
    - WCDMA Cell ID (0x4127)
    - LTE ML1 UE Mobility State change (0xB17E)
    - LTE ML1 Coex State Info (0xB1B9)
    - LTE ML1 Connected Mode LTE Intra-Frequency Measurement Results (0xB179)
    - LTE PDCP UL Statistics (0xB0B4)
    - LTE Idle Subpacket - LTE ML1 Idle Meas Cell Select Request (0x04)
    - LTE Idle Subpacket - LTE ML1 HRPD CDMA System Time (0x0F)
    - LTE Idle Subpacket - LTE MI1 Serving Cell Measurement Results (0x19)
    - LTE Idle Subpacket - LTE ML1 Connected Neighbor measurement request (0x1E)
    - LTE Idle Subpacket - LTE ML1 Connected Neighbor measurement response (0x1F)
  - ✓ Log Parser – update for new version Subsys Diag Packet
    - LTE/RSSI Query Respones (68/0x4002)
    - LTE/RRC Respones (68/0x8001)
  - ✓ Log Parser/Filter/Detail Parser – update for log Bluetooth HF,ADB,APP Message (0xF0EA) (old name “Bluetooth Info”)
  - ✓ Parameters – update for more refer to log packet
    - [WCDMA] DL UARFCN
    - WCDMA Serving Cell – channel(UARFCN)
- Bug Fix
  - ✓ WCDMA UARFCN mismatch “Network & Cell UI” and “Parameters UI” bug fix
  - ✓ Memory leakage because of USB device driver is fixed

### Ver 3.7.1216

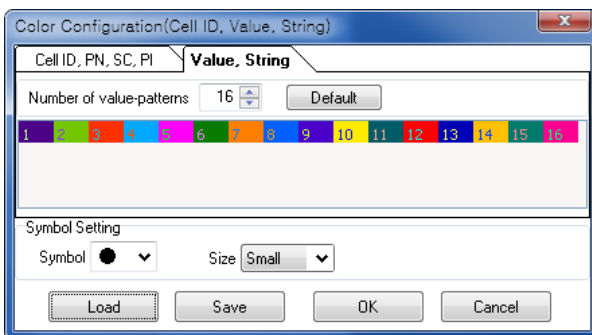
- Update
  - ✓ RMA upgrade (v1.85) – Youtube test function update
  - ✓ Parameter Tree – Parameters are disabled if the corresponding license doesn’t exist.



✓ Map UI – String type parameters can be displayed on Map UI



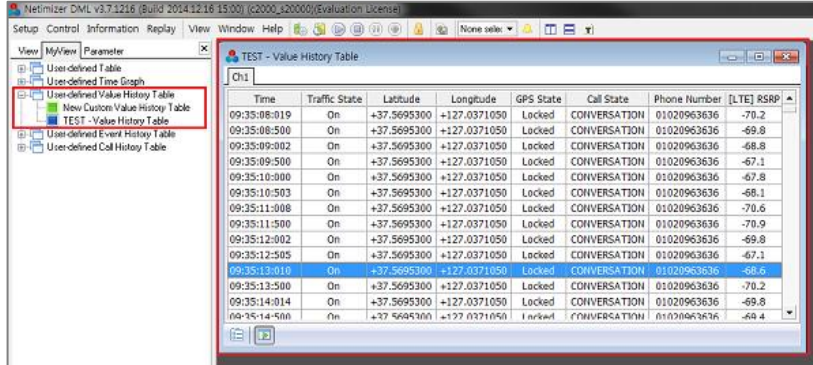
Legend for String type parameters are selected automatically by system, and can't be configured by user. However, color setting for String type parameters should be configured in below dialog.



✓ Offline map manager UI and function updated

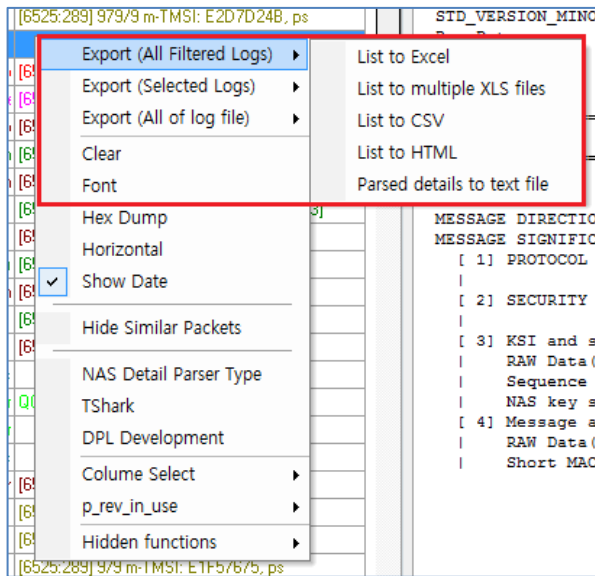
## Ver 3.7.1218

- New Feature
  - ✓ New UI – “User-defined Value History Table”

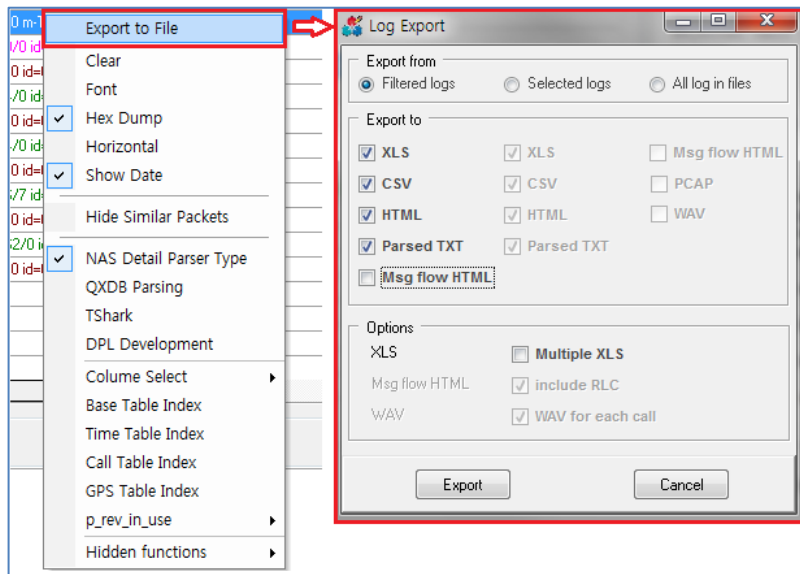


- Update
  - ✓ Simplified “export” features in the log message UI

<before>



<after>

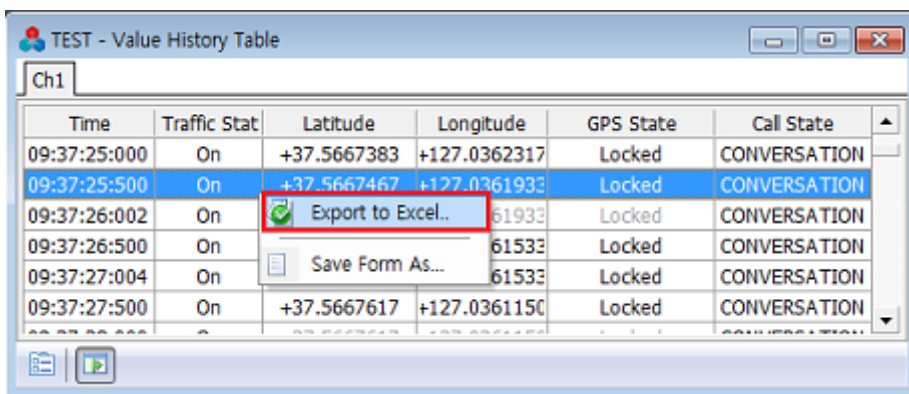


### Ver 3.7.1227

- Update
  - ✓ Samsung DM spec update (v4.60)
  - ✓ Custom History Table UI – Dim color is applied
  - ✓ Custom Table UI – Dim color is updated

### Ver 3.7.1230

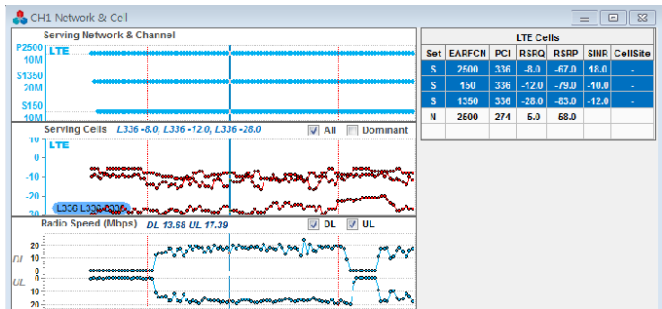
- Update
  - ✓ Custom History Table UI – “Export to excel” function added



- ✓ Log Parser – ‘Sequence Number’ Column added

Type	Message	Seq Num	Ack SN
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:0	
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 33] SN 0	
[LOG]	LTE PDCP DL Data PDU with Ciphering	[RB Idx0] SN:0	
[LOG]	LTE PDCP DL Data PDU with Ciphering	[RB Idx0] SN:1	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:1	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:2	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:0,1	
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 33] SN 1	AckSN 1
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 11] SN 0,1,2,3,4	

✓ Samsung LTE 3CA is supported – ‘Network&Cell’, ‘LTE CA Status’, ‘Parameter Tree’



The screenshot shows the 'CH1 LTE CA Status' window. It displays 'Network Revision' and 'Mobile Category, Rev'. The 'Serving RAT, Channel, PCI' is L 2500\_0 -> L 2500\_336 1350\_336 150\_336.

Current	PCell	SCell	SCell2	PCell + SCell	PCell - SCell
EARFCN	2500	1350	150	-	-
PCI	336	336	336	-	-
Bandwidth	10MHz (50 RBs)	20MHz (100 RBs)	10MHz (50 RBs)	-	-
RSRP (Ant1, Ant2)	-67.0	-77.0	-78.0	-	-
RSRQ (Ant1, Ant2)	-8.0	-27.0	-12.0	-	-
SINR - RSRP (Ant1, Ant2)	-20.0	-36.0	-26.0	-	-
SINR (Ant1, Ant2)	16.0	-12.0	-14.0	-	-

✓ Samsung chip 4.60 3CA related UI Update (Cell\_List, L1\_Graph)



## Ver 3.8.0108

- Update
  - ✓ Update for new Qualcomm log version
    - LTE ML1 Serving Cell Measurement Result - Idle mode log subpackets (0xB193)
      - 0x19 ML1 Serving Cell Measurement Results - ver18
    - LTE ML1 Search Request/Response - Idle mode log subpackets (0xB194)
      - 0x1C ML1 Neighbour cell search request - ver16
      - 0x1D ML1 Neighbour Cell Search Response - ver16
    - LTE ML1 Cell Reselection Packet - Idle mode log subpackets (0xB181)
      - 0x0B LTE\_ML1 Idle Mode Reselection Measurements LTE Frequency - ver2, ver3
    - LTE ML1 Idle Neighbor Cell Measurement Req/Resp - Idle mode log subpackets (0xB192)
      - 0x1A ML1 Idle Mode Neighbour Cell Measurement Request - ver2
      - 0x1B ML1 Neighbour cell Measurement result - ver4
    - LTE LL1 Serving Cell Frame Timing - ver43 (0xB114)
    - LTE LL1 PUCCH CSF Log - ver43 (0xB14D)
    - LTE LL1 AGC Tx Report - ver43 (0xB146)
    - LTE LL1 SSS Results - ver41 (0xB115)
    - LTE ML1 DCI Information Report - ver7 (0xB16C)
    - LTE ML1 Idle DRX Request - ver2 (0xB17C)
    - LTE ML1 Sleep - ver3, ver32 (0xB18B)
    - LTE ML1 Neighbor Measurements Packet - ver5 (0xB180)
    - LTE RRC idle meas config info - ver1, 2 (0xB0C8)
    - LTE RRC OTA Message - ver9 (0xB0C0)
    - LTE LL1 Serving Cell CER - ver42 (0xB122)
    - LTE ML1 Initial Acquisition Results - ver3 (0xB176)
    - LTE LL1 PUSCH CSF Log - ver42 (0xB14E)
    - LTE ML1 Connected Mode Measurement Configuration (0xB177)
      - 0x10 - Serving Cell Info - ver1(packet structure change)
      - 0x12 - Measurement Object Configuration - ver2
      - 0x13 - Reporting Configuration - ver5
    - LTE ML1 CDRX Events Info - ver2 (0xB198)

## Ver 3.8.0109

- Update

- ✓ Qualcomm LTE 3CA is supported – ‘Network&Cell’, ‘LTE CA Status’, ‘LTE MCS Index’, ‘Parameter Tree’, ‘QLTE-A Signal Graph’, ‘QLTE-A Cell List’
- ✓ VoLTE Throughput calculation method changed
  - Invalid packet is not counted for the throughput calculation
  - RTP header is not counted for the throughput calculation

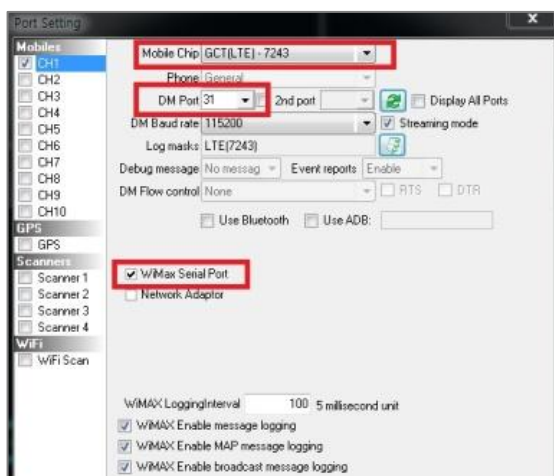
### Ver 3.8.0115

- Update
- Supports 3-band LTE CA for Qualcomm chip
- Update for new Qualcomm log packet versions
  - ✓ Qualcomm LTE – (MSM8974) UI Log version update (0xB179 ver7, 0xB111 ver22, 0xB0B4 ver2)
  - ✓ Qualcomm EVDO – Signal Graph UI update
    - 0x127A 1xEV-DO Equalizer C/I
  - ✓ Qualcomm EVDO Parser
    - 0x1184 1xEV-DO Tune Away Information
    - 0x1185 1xEV-DO Tune Away RRI Information
    - 0x1186 1xEV-DO Connection Termination Statistics
    - 0x1187 1xEV-DO Connected State Protocol Stack Statistics
    - 0x1188 1xEV-DO Connected State Transmit Statistics
    - 0x1189 1xEV-DO Connected State RMAC Statistics
    - 0x118A 1xEV-DO Connected State Search Statistics
    - 0x127A 1xEV-DO Equalizer C/I
    - 0x1284 1xEV-DO Forward Link Packet Header Information
    - 0x128E 1xEV-DO Enhanced MultiRLP RX Partial Frames
    - 0x128F 1xEV-DO Enhanced MultiRLP TX Partial Frames
    - 0x1294 1xEV-DO Multi Carrier Forward Link Packet Header Info
    - 0x12B0 1xEV-DO Multi Carrier Forward Link Physical Layer Packet
    - 0x12B1 1xEV-DO Multi Carrier Reverse Link Physical Layer Packet
    - 0x12B5 1xEV-DO Overhead Cache Summary
  - ✓ New parameters
    - [LTE] RLC Rx Throughput (Avg)
    - [LTE] RLC Tx Throughput (Avg)
    - [LTE] PDCP DL Throughput (Avg)
    - [LTE] PDCP UL Throughput (Avg)
    - [LTE] RLC DL BLER
    - [LTE] RLC UL ReTx Rate

- ✓ Parameter calculation method update
  - [LTE] RLC Rx Throughput
  - [LTE] RLC Tx Throughput
  - [LTE] PDCP DL Throughput
  - [LTE] PDCP UL Throughput
- Bug Fix
  - ✓ 3CA UI bug fix – ‘Network&Cell (SCell2 display bug)’ and ‘LTE CA Status (Throughput display bug)’ UIs
  - ✓ Replay – minor bug fix
  - ✓ Cell site font installation problem solved
  - ✓ GMCTool – Wrong interpretation of map coordination due to decimal point problem is fixed
  - ✓ Memory leakage because of USB device driver is updated

### Ver 3.8.0116

- Update
  - ✓ GCT 7243M chip – Support “WiMAX Serial connect” function for 7243M WiMAX DM



### Ver 3.8.0119

- Update
  - ✓ RMA upgrade (v1.86) – Improved exception handling for some mobiles

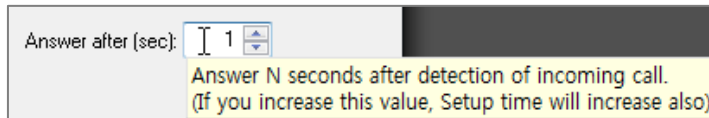
### Ver 3.8.0122

- Update
  - ✓ Updated mrxapi.jar.
  - ✓ Memory leakage because of USB device driver is updated

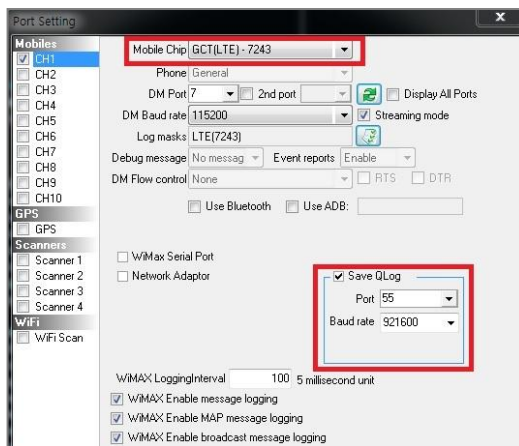
- ✓ RMA upgrade (v1.87) – Improved exception handling
- ✓ Qualcomm WCDMA log update for MSM8994 or later

### Ver 3.8.0123

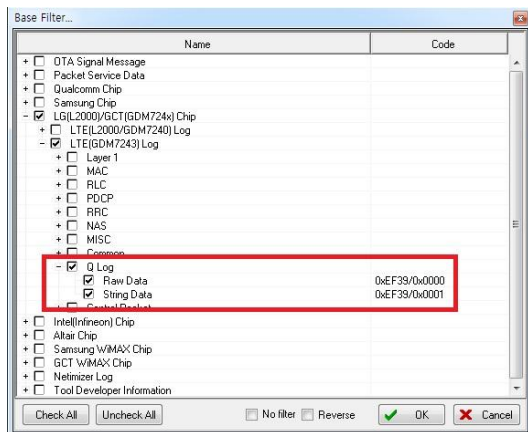
- Update
  - ✓ New version answers for incoming voice(or video) call immediately.
    - Previous version : If there is incoming call, DML waited 1sec and answered. This was because earlier version of slows speed smartphones become unstable if DML sends “answer command” to smartphone immediately after detecting there is incoming call (ex: from RRC signaling message, etc.) before smartphone LCD changes to display incoming call alarm.
    - New version : Now doesn't wait 1sec anymore, and sends “Answer command” to smartphone immediately. Recent models of smartphones are quite fast, so above issue will not appear anymore.
    - If you are using slow speed smartphone, though, you can use “Answer after” option in the plan setting UI as below figure.



- ✓ GCT 7243 – Supports “Save QLog” option for GCT 7243Q chipset

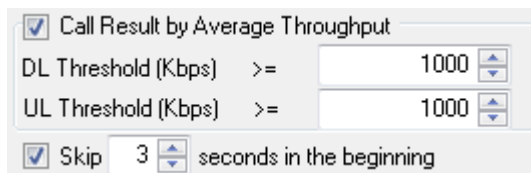


and



✓ FTP Call Result decision rule changed

- If "Skip" option is checked, skipped duration is not counted for the call average throughput calculation



### Ver 3.8.0128

- Update
  - ✓ "NV Items Control" UI – Added DM reset button and function
  - ✓ GCT 7243 chip – "Version Information" UI – Doesn't check data validity, and displays all values from chipset

### Ver 3.8.0129

- New Feature
  - ✓ If ESP is applied to VoLTE, thus DML can't decode SIP packets, DML refers RoHC to calculate mVoIP QoS values.  
This feature is available only when you use Qualcomm chip and it provides RoHC packet.  
This feature is under beta test, therefore might have compatibility issue with your mobile.

### Ver 3.8.0130

- Update
  - ✓ RMA upgrade (v1.88)
    - Update for Android Lollipop (Android 5.0)
    - RMA retrieves WiFi information on the smart phone, and sends to DML

- ✓ MMS test didn't work when the mobile screen is turned off – new version turns on the screen during MMS test
- Bug Fix
  - ✓ SMS send & receive to itself - bug fix
  - ✓ SMS Orig, Term – Changed to be scheduled with setup time configuration in the plan setting
  - ✓ Ping Plan setting – UI bug fix
  - ✓ HTTP call test – When “Browse all sites per each call” option is unchecked, there were invalid call results sometimes. This bug is fixed
  - ✓ Scenario Mode – After HTTP DL/UL test, call scheduling was stopped. This bug is fixed.

### **Ver 3.8.0203**

- Bug Fix
  - ✓ Samsung chip – 3-band LTE CA – Some PCell info in the parameter tree was not refreshed. This bug is fixed.

### **Ver 3.8.0204**

- Update
  - ✓ Qualcomm chip – Log mask updated

### **Ver 3.8.0205**

- Update
  - ✓ Network&Cell UI – EVDO display update
  - ✓ EVDO Rev.A SignalGraph UI – Added RTP Throughput

### **Ver 3.8.0210**

- Update
  - ✓ Log Message UI – Qualcomm LTE MAC Buffer Status (0xB066) – filter tree added, and parser updated
  - ✓ Log Message UI – Qualcomm QMI Service Filter – filter tree added
  - ✓ Qualcomm log parser update
    - LTE RRC idle meas config info (0xB0C8)
    - LTE ML1 PUCCH Power Control (0xB16F)
    - 1xEV-DO Air Link Summary (0x1068)
    - WCDMA HSDPA configuration V2 (0x4225)

- QMI Link RX/TX PDU (0x138E~0x13AD, 0x180B~0x1812)
- 1xEV-DO Signaling Control Channel Directed (0x1078)
- ✓ Parameter update - Tool measurement group added
  - Device Status Group Items, Call Status, Call Statistics
- Bug Fix
  - ✓ Auto Call Scenario Monitor UI Display bug fix
  - ✓ During Bluetooth-based voice call test, end by user was treated as drop. This bug is fixed.

### **Ver 3.8.0211**

- Bug Fix
  - ✓ LTE CA Status UI – Bandwidth display bug fix

### **Ver 3.8.0217**

- Update
  - ✓ RMA upgrade (v1.89) – Youtube measurement update, mobile signal strength information gathering

### **Ver 3.8.0221**

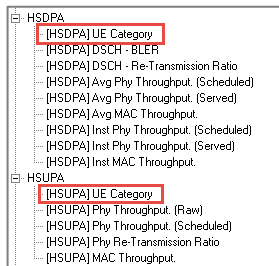
- Update
  - ✓ Qualcomm log 0x4179 ver2 (WCDMA PN Search Edition 2) – update
  - ✓ Qualcomm log 0xB139 ver25 (LTE LL1 PUSCH Tx report) – update

### **Ver 3.8.0226**

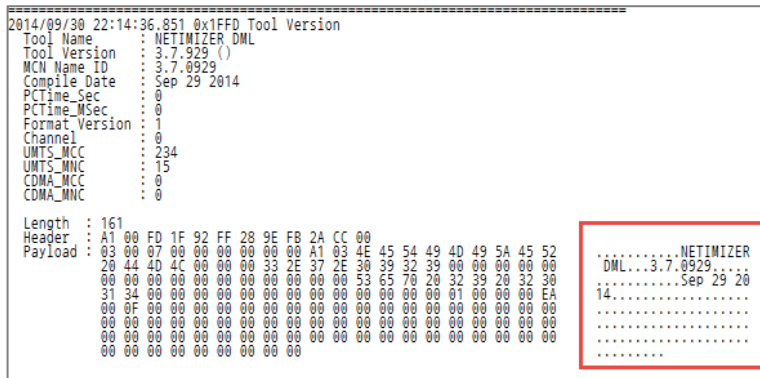
- Bug Fix
  - ✓ VoLTE call result decision but fix – If there is “Resister 200OK” during VoLTE conversation state, this call was decided as “drop” call. This bug is fixed.
  - ✓ NAS Parsing bug fix - GMM Attach Request/Mobile Identity(IMSI)/Identity digits

### **Ver 3.8.0227**

- Update
  - ✓ Parameter – [HSDPA] UE Category, [HSUPA] UE Category



✓ Log Message UI – Hexa & ASCII View



- Bug Fix
  - ✓ Qualcomm WCDMA EUL Combined L1/MAC (0x4309) - Parser bug fix
  - ✓ Auto Call Scenario Monitor UI – bug fix
  - ✓ Multiple program instance running protection - enhanced

**Ver 3.8.0302**

- Update
  - ✓ RMA upgrade (v1.90)
    - Incoming call answer problem on the latest version of Android - fixed
    - Abnormal RMA termination during VOD test - fixed
  - ✓ Scenario mode auto call test – “Repeat” function didn’t work in scenario mode – bug fixed
  - ✓ Main status bar – Status of DM, Bluetooth, RMA interface was not refreshed sometimes. This bug is fixed.

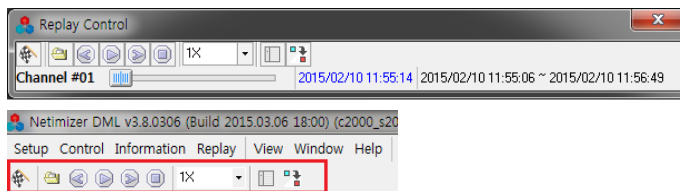
**Ver 3.8.0306**

- Update
  - ✓ RMA upgrade (v1.91) – File transfer complete detection problem with specific type of FTP server (which doesn’t provide file size when transfer completes) – fixed.
  - ✓ Port setting UI – “Load” and “Save As” button supports scanner configuration load/save also
  - ✓ Samsung chip – Log details display for 3CA is updated

- ✓ GMCTool update
- ✓ Google map and Baidu map display method update
- Bug Fix
  - ✓ “LTE MCS Index” UI – High CPU usage problem in 3CA environment is fixed
  - ✓ TotalCallMonitor UI – FA value display bug fix
  - ✓ TotalCallMonitor UI – SMS, MMS call progress status display bug fix

### Ver 3.8.0309

- Update
  - ✓ Replay Control UI – last docking on/off state is saved, and loaded next time you use replay control



### Ver 3.8.0311

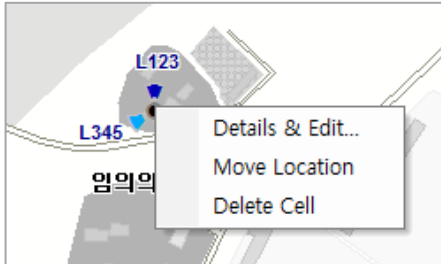
- Update
  - ✓ “NV Item Control” UI – “LTE Band Preference” is enhanced

### Ver 3.8.0313

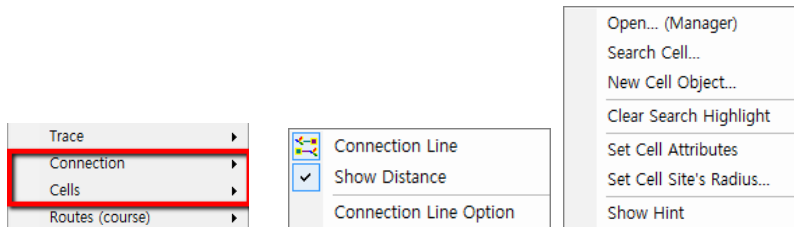
- Update
  - ✓ RMA upgrade (v1.92) – Enhanced stability for web test and MMS test. Incoming call number is logged.
  - ✓ Parameters – Added LTE-A group
    - [LTE-A] CA, [LTE-A] CA Active
- Bug Fix
  - ✓ MMS auto call test – Call result decision as “Incomplete” even when MMS is received is bug fixed
  - ✓ Total call monitor UI – HTTP DL/UL and VOD call progress display bug fix
  - ✓ Scenario monitor UI – MMS, SMS call progress update problem fixed
  - ✓ For LTE 3CA environment, excessively bulk TCP/IP log packets caused problem of log missing. This problem is fixed by discarding TCP/IP packets when there is excessive amounts of TCP/IP packets.

**Ver 3.8.0318**

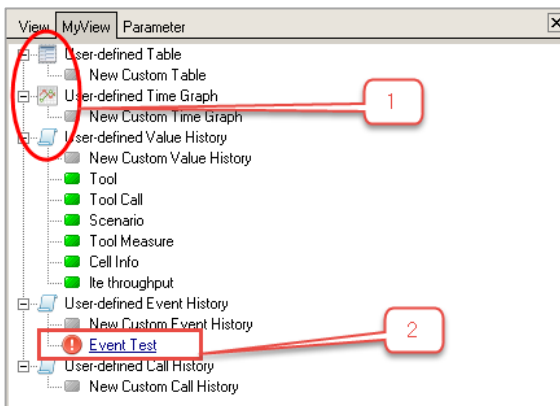
- Update
  - ✓ Samsung chip – Enhanced abnormal chip timestamp value handling
  - ✓ Cell Site edit function added (Right-click on cell site, then popup menu will be shown)



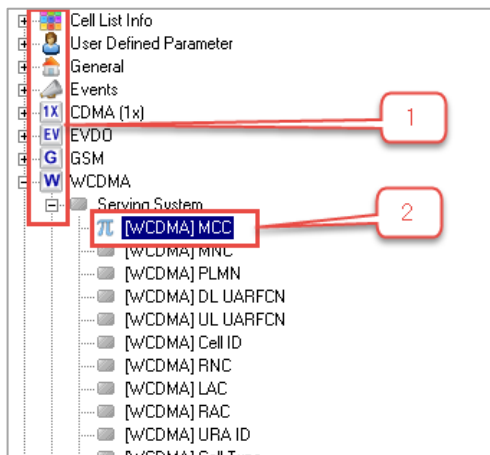
- ✓ MAP UI - Popup Menu modified (Connection, Cells)



- ✓ MyView (User-defined UI) Menu Tree Icon Update



- Categorized UI types (Table/Graph/History) with icon
- Categorized Parameter types (Value/Event/Call) with icon
- ✓ Parameter Menu Tree Icon Add



- Displays different icon depending on Parameter Group
- Displays different icon depending on Parameter Type (Value/Event/Call)

✓ MyView (User-defined UI) Window Icon Update

Parameter	Ch1
[WCDMA] PLMN	45008
[WCDMA] RSSI	-66.5 dBm
[WCDMA] RRC State	URA_PCH
[MA] Finger Dominant	95

Call Indx	TS Start	Call Result
1	06:20:14:947	GOOD
2	06:20:52:975	GOOD
3	06:21:30:874	GOOD
4	06:22:08:887	GOOD

Time	Signal Msg WCDMA Events
15:22:34.935	Cell Reselection
15:22:54.520	Measurement Report 2
15:22:54.538	Measurement Report 2
15:22:59.340	Measurement Report 1
15:22:59.554	Radio Link Addition
15:22:59.554	SHO Procedure Complete Without Measurement Cor
15:23:06.018	Measurement Report 1
15:23:06.208	Radio Link Removal
15:23:06.208	SHO Procedure Complete Without Measurement Cor
15:23:07.959	Measurement Report 1
15:23:08.193	Radio Link Addition
15:23:08.193	SHO Procedure Complete Without Measurement Cor
15:23:09.508	Measurement Report 1
15:23:09.698	Radio Link Removal
15:23:09.698	SHO Procedure Complete Without Measurement Cor
15:23:11.725	Cell Reselection
15:23:28.815	Cell Reselection
15:23:33.063	Cell Reselection

Time	[WCDMA] Finger Dominant PSC	[WCDMA] RSSI
15:23:19:042	508	-49.1
15:23:19:553	508	-51.5
15:23:20:175	95	-59.9
15:23:20:672	508	-60.0
15:23:21:072	508	-60.4
15:23:21:604	95	-60.4
15:23:22:069	95	-58.5
15:23:22:517	95	-62.8
15:23:23:003	95	-63.4
15:23:23:602	95	-63.4
15:23:24:057	95	-61.8
15:23:24:559	95	-66.4
15:23:25:074	95	-66.5
15:23:25:503	95	-66.9
15:23:26:014	95	-68.6
15:23:26:502	95	-68.6
15:23:27:012	95	-70.3
15:23:27:512	95	-70.0

- Bug Fix
  - ✓ Worksheet – Same UI display on multiple worksheets had problem – this bug is fixed

### Ver 3.8.0320

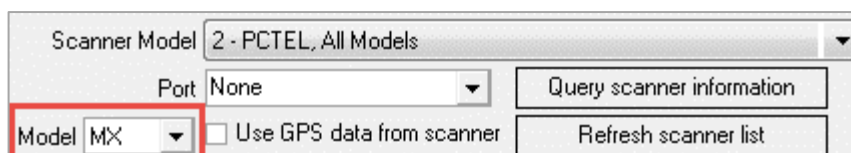
- Bug Fix
  - ✓ TotalCall Monitor – FA, MMS call display bug fix
  - ✓ Scenario scheduling – Voice call didn't proceed after 1<sup>st</sup> call. This bug is fixed.
  - ✓ Plan setting dialog – Load/Save works for each channel in case of scenario mode
  - ✓ VoLTE abnormal call fail phenomenon fixed – DML doesn't press "END" button at the call end
  - ✓ Access violation during program launch is fixed

### Ver 3.8.0324

- Update
  - ✓ Parameter "[LTE-A] CA", "[LTE-A] CA Active" display update
  - ✓ Log View UI - (Ctrl + Mouse Left) click → Previous detail parsed text is not cleared, and new item's detail parsed text is appended
  - ✓ Parameter – General Group "Call State" is renamed to "Voice Call State"
  - ✓ Parameter – Call History Group's RF related parameters can be displayed as call average
    - LTE RSSI, LTE RSRP, LTE RSRQ, LTE SINR
    - WCDMA RSSI, WCDMA RSCP, WCDMA ECIO
- Bug Fix
  - ✓ Replay in "Load mode" – "User defined Call History" UI Error(which occurred when there is no call test information) bug fix

### Ver 3.8.0401

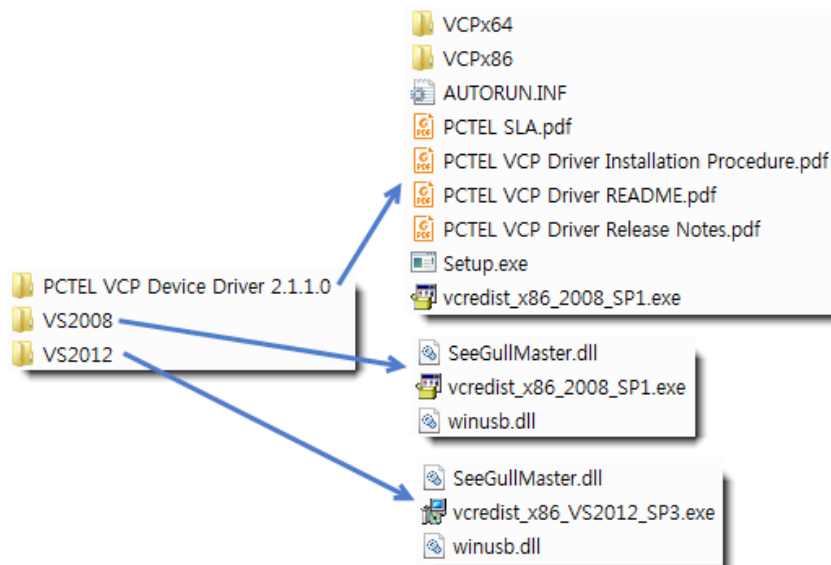
- Installer update for PCTEL scanner
  - ✓ Removed old PCTEL scanners models (LX, EX, ExNew) in the port setting dialog
  - ✓ You should choose exact model as below;



- ✓ PCTEL scanner DLL version update (1.6.0.1 -> 1.7.3.2)
- ✓ Status bar scanner status display – bug fix
- ✓ If any of scan list fails to start, error events are displayed in the message window as below.

```
2015/04/01 15:22:13.371 : Channel 10 Not Used
2015/04/01 15:22:19.474 : Scanner #3 : Start Scan Fail : RunScan() failed with -7 (OptionRequired)
```

- ✓ Installer copies "PCTEL" subfolder under "Misc" folder. This folder consists as below;

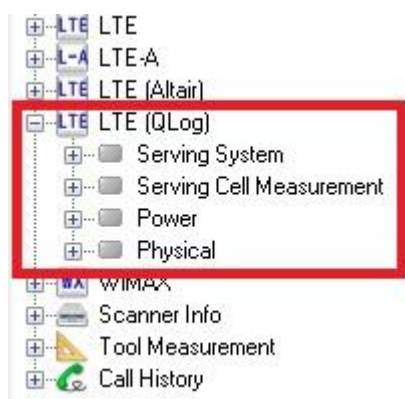


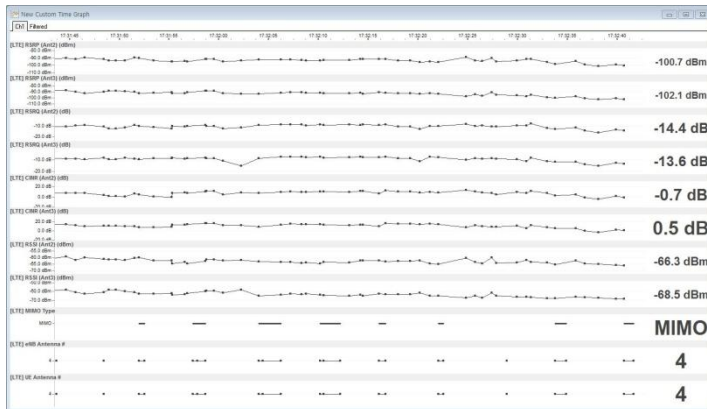
If you see error dialog "missing msvp110.dll" when you try to connect PCTEL scanner, or other errors, follow below steps.

1. Install PCTEL device driver – If you have MX scanner, please contact PCTEL about how to get and install device driver.  
Of course, you are recommended to get the latest version of device driver from PCTEL, even for other models.
2. Install "vcredist\_x86\_VS2012\_SP3.exe".
3. Copy DLL files under VS2012 folder to Netimizer DML installation folder.

- Update

- ✓ Qualcomm "LTE ML1 PDCCH-PHICH Indication Report (0xB16B) Ver2" - Parser/Detail Update
- ✓ Parameter Manager – 'LTE (QLog)' 4Rx:4Rx related parameters added
  - RSRP, RSRQ, CINR, RSSI, Layer Map count
- ✓ SMS call monitor – Duration Time Tab – Grid value display bug fix





- Bug Fix
  - ✓ MOS measurement – “play/record mismatch” and “measure doesn’t start” problems bug fix
  - ✓ Parameter – Tool Measurement / "[Device] Network", "[Device] Network(3GPP)" – LTE-A display bug fix
  - ✓ Scenario Mode – Some log packets (Call END, Measurement Stop Event, etc.) missing bug fix
  - ✓ Scenario Mode – If there are two or more continuous Idle(Wait) plan, second plan was not performed. This bug is fixed.
  - ✓ PCTEL scanner – socket error message when DML exit – bug fixed

### Ver 3.8.0402

- Update
  - ✓ Altair chip – You can specify device’s IP address in the port setting dialog.

- Bug Fix
  - ✓ PCTEL scanner – socket error message when DML starts – bug fixed

### Ver 3.8.0403

- Update
  - ✓ MOS – Audio codec configuration enhanced for Windows 10
  - ✓ Mobile Control UI – Added "UE Reset" (AT/ADB) feature and button
- Bug Fix

- ✓ Qualcomm HSUPA Signal Graph UI – Setup dialog title changed
- ✓ Scenario Call Monitor UI – “Each – Current & Events” tab – Setup/Traffic time display bug fix
- ✓ Voice Quality Monitor UI – Plan modification didn’t apply to voice quality monitor UI. This bug is fixed

## Ver 3.8.0409

- Update
  - ✓ RMA upgrade (v1.93)
    - FTP multi-session stability enhanced
    - Scenario mode – Youtube measurement stability enhanced
    - SNS measurement stability enhanced
- Update
  - ✓ R&S TSMW scanner interface – API version update to ViCom 15.40.

Below are ViCom 15.40 changelog from R&S.

(refer

<http://cdn.rohde->

[schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1540.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1540.txt))

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 ViCom Changelog  
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Version 15.40  
 31.03.2015

- New: TSME: Add support for WIMAX.
- New: Add flag for EVDO scanning in available measurement mask, see SReceiver::dwFlagForEvdoScanner.
- New: TSME: Added disconnect detection for TSME receivers (error code: VICEC\_CONNECTION\_LOST).
- Fixed: TSME: Further optimizations to enhance the RF performance.
- New: VICOM WCDMA: Increased maximum measurement rate limit to 70 Hz for high dynamic measurement mode on TSMW.
- New: VICOM TDSCDMA: Joint detection for cell search and analysis in order to compensate the influence of weak signals on a strong signal measurement. This is done to achieve a reliable dynamic range of 15 dB.
- New: VICOM LTE: Add RSSI measurement for TS0...19 see SRssiSettings::wRSSI\_DL\_ALL\_TS\_MODE.
- Fixed: VICOM LTE: Add parameter for special subframe 1 and 6 configuration, see SFrequencySetting::wSpecialSubframe1ConfigurationMask and SFrequencySetting::wSpecialSubframe6ConfigurationMask.
- Fixed: VICOM LTE: Support for SIBs with length >32 Byte.
- Fixed: VICOM LTE: Changed special subframe configuration 7 for extended cyclic prefix.
- Fixed: VICOM LTE: Fixed missing RS CINR results for some TDD configurations.
- Fixed: VICOM LTE: Fixed STddInterference::fKPIinPct 1e6 times too big.
- Fixed: VICOM LTE: Fixed problem that disabled wideband R2 and R3 reference signal

- measurements.
- Fixed: VICOM ACD: Fixed an issue leading to crashes when having multiple start / stops.
  - Note: Added tsme\_02010107.bin.
  - Note: Added tsme\_02010307.bin.
  - Note: Added tsme\_02010507.bin.
  - Note: Added tsme\_02010607.bin.
  - Note: Removed FFTW.dll.
  - Note: R&S TSME tools updated to version 1.3.3.6.
  - **Note: Please update your TSMW device to Firmware 2.01.**

### Ver 3.8.0414

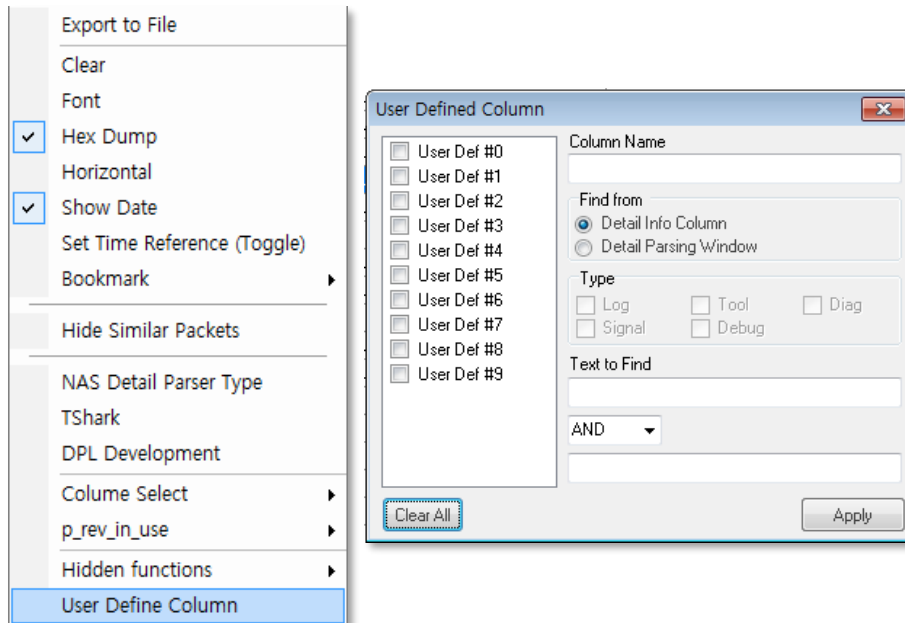
- Bug Fix
  - ✓ Measurement stop didn't work sometimes. This bug is fixed.

### Ver 3.8.0415

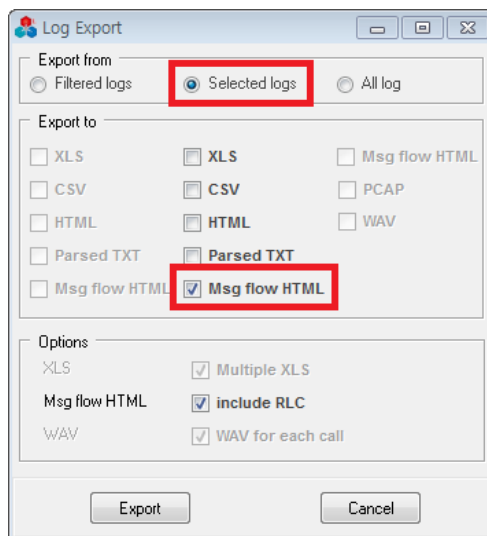
- Update
  - ✓ DM interface – Serial data reception logic update
  - ✓ RMA upgrade (v1.94) – WiFi test enhanced

### Ver 3.8.0416

- Update
  - ✓ RoHC packet parser update
  - ✓ RMA upgrade (v1.95) – WiFi test enhanced
- New Feature
  - ✓ Log Messages UI – Supports 'User Define Column' – you can define text to filter out and display in a separate column



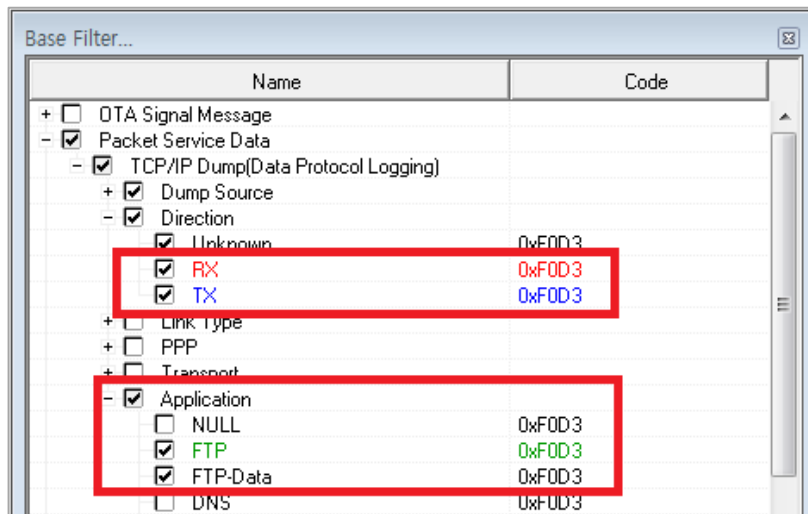
- Update
  - ✓ Log Messages UI – Added ‘Msg flow HTML’ in the case of ‘Selected logs’



- ✓ Can uninstall from “Control Panel – Add/Remove Program”
- Bug Fix
  - ✓ Log message UI – Export to ‘Msg flow HTML’ – Arrow font problem fix

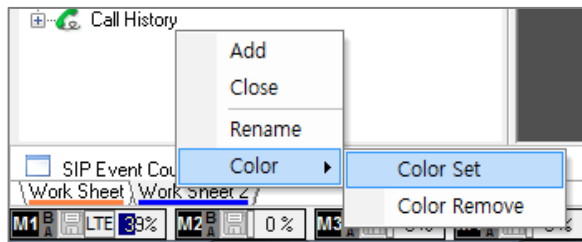
### Ver 3.8.0430

- Update
  - ✓ Scenario mode – Flight mode on/off control added to the scenario types
  - ✓ Log message UI – Filter – Packet Service Data – Coloring for each classification is supported now

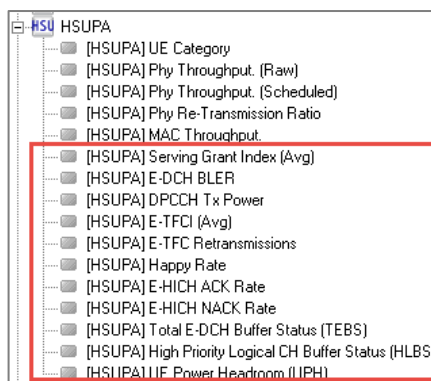


### Ver 3.8.0511

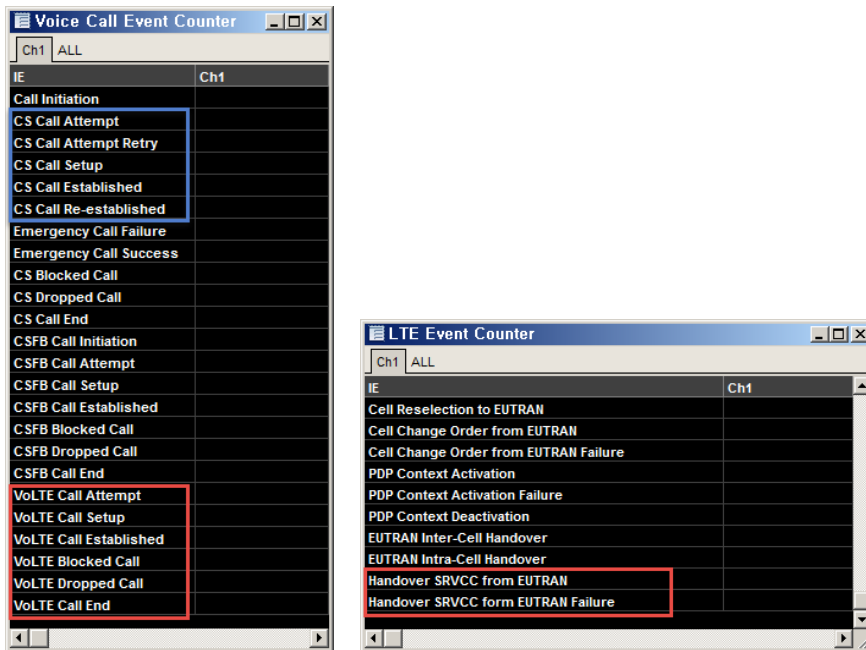
- Update
  - ✓ Worksheet supports re-ordering with drag & drop between worksheet tabs
  - ✓ Worksheet supports coloring



- ✓ MOS measurement – maximum MOS measurement count per single call is increased to 10,000 (old limit was 100)
- ✓ Parameter Update - HSUPA Params add



- ✓ Voice Call Event Counter Update – VoLTE added, CS Call Name changed
- LTE Event Counter Update - SRVCC Handover Added

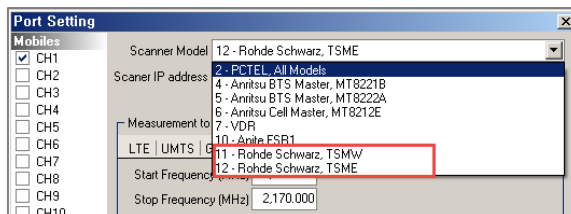


### Ver 3.8.0514

- Update
  - ✓ GCT 7243Q chip – Support 4x4 display from mobile debug text message
  - ✓ Samsung mobile USB device driver update (v1.5.51.0 → v1.5.53.0)

### Ver 3.8.0522

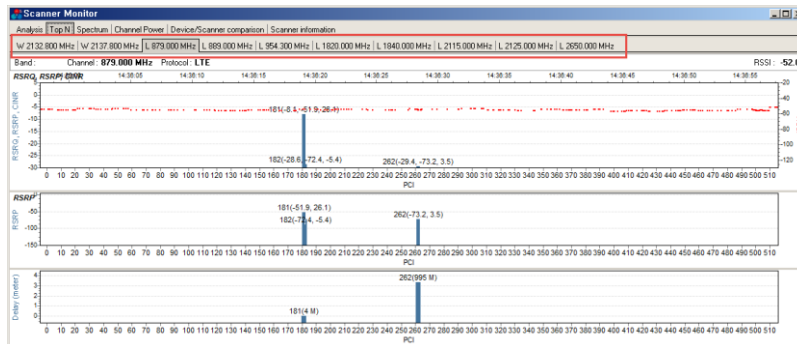
- Update
  - ✓ License Manager -- Rohde & Schwarz TSMW, TSME scanner license is added for management
  - ✓ Rohde & Schwarz Scanner – Support TSMW/TSME Scanner
    - Port Setting UI / Scanner Model – Support Rohde & Schwarz TSMW/TSME Scanner



- Scanner Monitor UI – Support LTE/WCDMA/Spectrum Data of Rohde & Schwarz TSMW/TSME scanner  
(Spectrum View UI of Rohde & Schwarz TSMW/TSME)



(LTE, WCDMA View UI of Rohde & Schwarz TSMW/TSME)



Tech	Chan	RSRP	N1	Q1	D1	N2	Q2	D2	N3	Q3	D3
W	2132.800 MHz	-32.5	20	-5.5	1	-	-	-	-	-	-
W	2137.800 MHz	-33.2	20	-5.2	1	-	-	-	-	-	-
L	879.000 MHz	-57.6	181 (SO)	-8.1	0	182 (SO)	-23.7	-	262 (SO)	-27.4	3
L	889.000 MHz	-44.4	346 (SO)	-999.0	0	436 (SO)	-999.0	0	494 (SO)	-10.3	-
L	954.300 MHz	-72.8	222 (SO)	-17.8	2	285 (SO)	-19.7	1	287 (SO)	-11.4	0
L	1820.000 MHz	-30.7	181 (SO)	-12.6	0	-	-	-	-	-	-
L	1840.000 MHz	-47.1	186 (SO)	-10.0	0	222 (SO)	-30.7	-	287 (SO)	-999.0	-
L	2115.000 MHz	-82.9	28 (SO)	-17.9	0	338 (SO)	-20.7	-	339 (SO)	-18.1	0
L	2125.000 MHz	-78.0	182 (SO)	-30.4	1	262 (SO)	-16.9	1	468 (SO)	-26.6	1
L	2650.000 MHz	-75.5	19 (SO)	-20.5	0	338 (SO)	-999.0	0	339 (SO)	-999.0	0

- Known problem : Too many channel/spectrum scanning command to TSME scanner might cause TSME scanner unstable. (ex: Many combination of LTE + WCDMA + Spectrum scanning) It's not Netimizer DML problem, but known problem of TSME scanner itself.

### Ver 3.8.0529

- Update
  - ✓ Log Parser – update for LG L5000 chip
  - ✓ R&S TSMW scanner interface – API version update to ViCom 15.45.

Below are ViCom 15.45 changelog from R&S.

(refer

[http://cdn.rohde-schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1545.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1545.txt))

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ViCom Changelog

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Version 15.45

27.04.2015

- Fixed: TSME: Further optimizations to enhance the performance.
- Fixed: TSMW: Fixed an issue leading to a failed device detection in case of multiple interfaces in parallel.
- Note: Added tsme\_02020105.bin.
- Note: Added tsme\_02020305.bin.
- Note: Added tsme\_02020505.bin.
- Note: Added tsme\_02020605.bin.
- Note: R&S TSME tools updated to version 1.3.3.6.
- Note: Please update your TSMW device to Firmware 2.02.

### Ver 3.8.0615

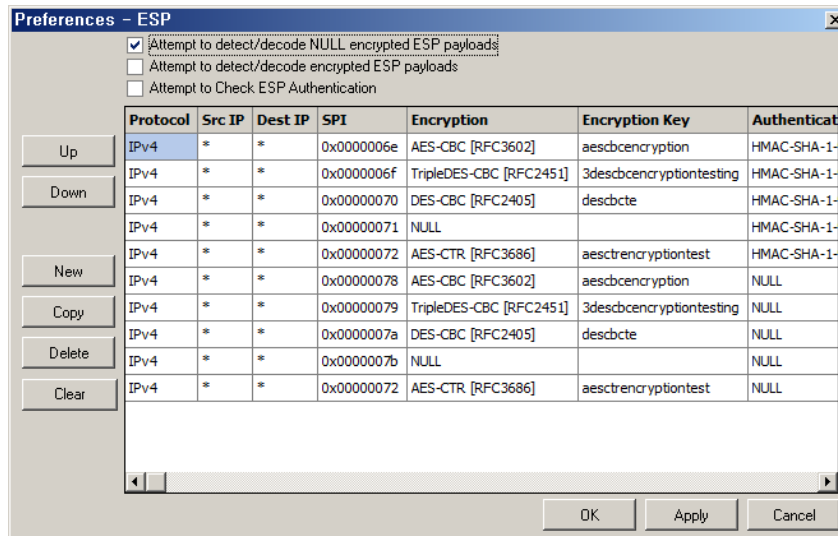
- New Feature
  - ✓ DML now supports 12 mobiles
  - ✓ RMA upgrade (v1.96) – HTTP download test enhanced
  - ✓ Enhanced processing for fragmented IP and fragmented TCP packets

### Ver 3.8.0617

- Update
  - ✓ Log Parser – Samsung Log LRRR State (0xEB51) – rrc state field update
  - ✓ Log Message UI – TCP/IP ESP Parsing을 위한 ESP Option 제공

The screenshot shows a software interface titled "CH1 - Log Messages". It features a table with columns for "#", "Time", "Type", "OTA#", "Message #2", and "Detail Info.". The table contains 16 rows of log data. A context menu is open over the 11th row, which is highlighted. The menu options are "Export to File", "TCP/IP ESP Option" (highlighted with a red box), "Pause", and "Font".

#	Time	Type	OTA#	Message #2	Detail Info.
5	2015/06/17 12:33:39.183	[OTA]	LTE	RRC Connection Setup	[1350:22] 331/9, id=0
6	2015/06/17 12:33:39.185	[OTA]	LTE	RRC Connection Setup Cor	[1350:22] 0/0, id=0, PLMNId: 1
7	2015/06/17 12:33:39.226	[OTA]	LTE	Security Mode Command	[1350:22] 336/3, id=0, eea0, eia2
8	2015/06/17 12:33:39.226	[OTA]	LTE	Security Mode Complete	[1350:22] 0/0, id=0
9	2015/06/17 12:33:39.271	[OTA]	LTE	RRC Connection Reconfigu	[1350:22] 340/7, id=0, fa=[1350][1=A3,2=A2]
10	2015/06/17 12:33:39.274	[OTA]	LTE	RRC Connection Reconfigu	[1350:22] 0/0, id=0
11	2015/06/17 12:33:39.310	[TCPIF]		Protocol Services Data	[57:TX:56163] TCP,HTTP (529) 10.123.27.192(50299) ~ 211
12	2015/06/17 12:33:39.316	[TCPIF]		Protocol Services Data	[57:TX:56164]
13	2015/06/17 12:33:39.350	[TCPIF]		Protocol Services Data	[57:TX:56165]
14	2015/06/17 12:33:39.364	[TCPIF]		Protocol Services Data	[57:TX:56166]
15	2015/06/17 12:33:39.400	[TCPIF]		Protocol Services Data	[57:TX:56167]
16	2015/06/17 12:33:39.400	[TCPIF]		Protocol Services Data	[57:TX:56168]



- Bug Fix
  - ✓ Event Count(SIP, TCP/IP, LTE, etc) UI – display bug fix
  - ✓ Measure Stop problem bug fix

### Ver 3.8.0618

- Update
  - ✓ GCT7243 chip - QLog 4x4 - RI Parameter added
- Bug Fix
  - ✓ Measure Stop bug fix
    - If measure is started during the RMA disconnected state, measure stop button was disabled. This bug is fixed
  - ✓ RMA state display bug fix
    - If you choose to use RMA in the port setting, but RMA is not running on mobile, RMA state LED in the status bar was displayed as gray, not red. This bug is fixed
    - If you change not to use RMA in the port setting, and RMA quits on the mobile, RMA state LED was displayed as red, not gray. This bug is fixed.

### Ver 3.8.0619

- Update
  - ✓ Log View – Filter – Provides IPv4/IPv6 selection filter

### Ver 3.8.0623

- Update

- ✓ Voice Quality Measurement Config dialog – Enabled “Wait Time” option

### **Ver 3.8.0626**

- Update
  - ✓ RMA upgrade (v1.97) – Voice call answer feature update  
This update is applied when you test voice(or VoLTE) call with “Answer with ADB (RMA)” configuration in the plan setting.
    - Before: If there is incoming call, RMA compared caller ID with pre-defined phone number in DML plan setting. If it’s not same, RMA didn’t answer.
    - Update: RMA now answers for all incoming call, regardless of caller ID.

### **Ver 3.8.0630**

- Update
  - ✓ LTE RRC upgrade (10.7.0 → 11.11.0) – Supports parsing for SIB14, SIB15, SIB16
  - ✓ RMA upgrade (v1.98) – RMA connection state display bug fix
- Bug Fix
  - ✓ Scenario mode – When FTP call is finished, next FTP call was not started. This bug is fixed.
  - ✓ FTP call – When RMA is configured with “infinity” option checked, throughput calculation was wrong. This bug is fixed.

### **Ver 3.8.0701**

- Update
  - ✓ PL\_MGR update
  - ✓ POLQA update – DLL v1.18. POLQA standard v1.1.

### **Ver 3.8.0703**

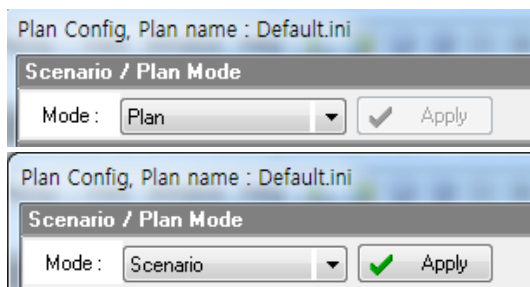
- Update
  - ✓ Qualcomm LTE Signal Graph – added “DL/UL MCS Index”, “DL DTX Rate (%)”, “DL/UL Num of RB (including 0)”
- Bug Fix
  - ✓ HTTP Download/Upload – Bug fix when download file’s original size is unknown
  - ✓ DM port and ADB name match – bug fix

### Ver 3.8.0706

- Bug Fix
  - ✓ MOS measurement – POLQA NB – calculation bug fix

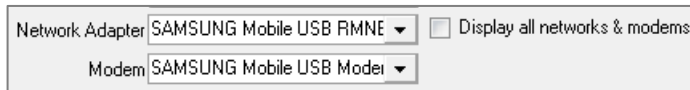
### Ver 3.8.0710

- Update
  - ✓ Plan setting UI – You can toggle “Scenario mode” or “Plan mode” in this UI.



### Ver 3.8.0803

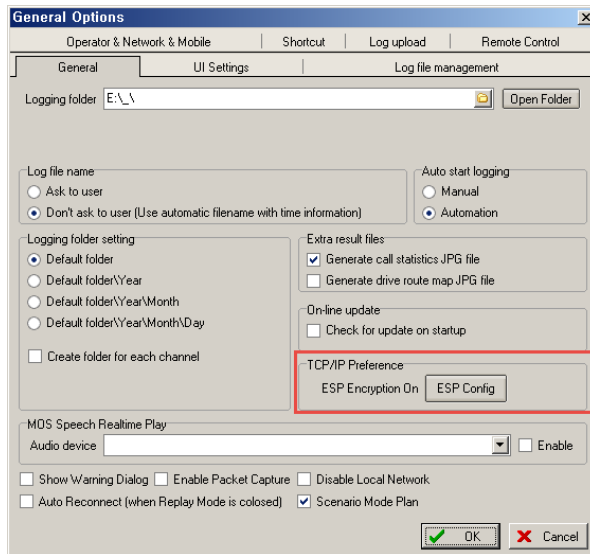
- Update
  - ✓ Port setting UI – Network adaptor and modem selection is moved to port setting UI



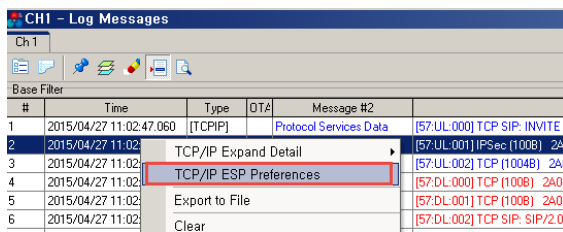
- ✓ Updated for new Qualcomm log versions
  - Qualcomm log 0x4179 ver5 (WCDMA PN Search Edition 2)
  - Qualcomm log 0x4186 ver10 (WCDMA Finger Temporal Analysis V2)
  - Qualcomm log 0x421C ver3 (WCDMA UL HS DPCCH Information V2)
  - Qualcomm log 0x4222 ver13 (WCDMA HS Decode Status With Data V3)
  - Qualcomm log 0xB17E ver16 (LTE ML1 UE Mobility state change)

### Ver 3.8.0805

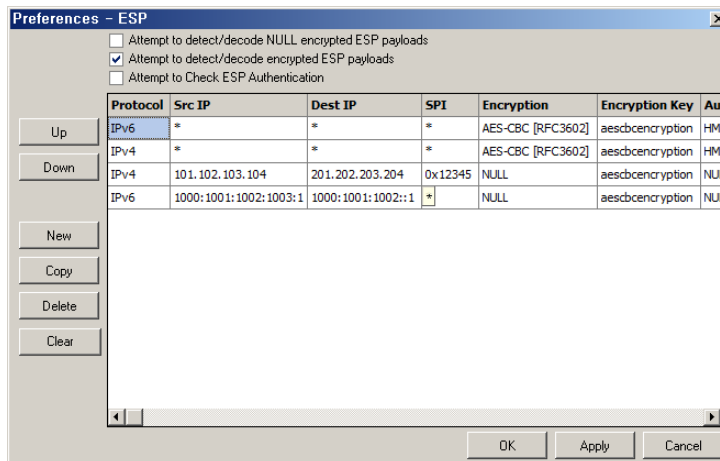
- New Feature
  - ✓ TCP/IP IPSec (ESP) decoding function for VoLTE is added
    - To use real-time ESP decoding and text parsing, below setting should be configured correctly.
    - ESP Configuration method 1 : Main Menu : Setup – General Option – ESP Config Button



- ESP Configuration method 2 : Log Message UI : Right Button Popup Menu - ESP Config Button



- Preference - ESP Dialog UI



Protocol : IPv4 or IPv6

Src IP : IP's Source Address for ESP decoding (\* for any address)

Dest IP : IP's Destination Address for ESP decoding (\* for any address)

ESP SPI : ESP SPI for ESP decoding (\* for any address)

Encryption : Encryption algorithm for ESP decoding

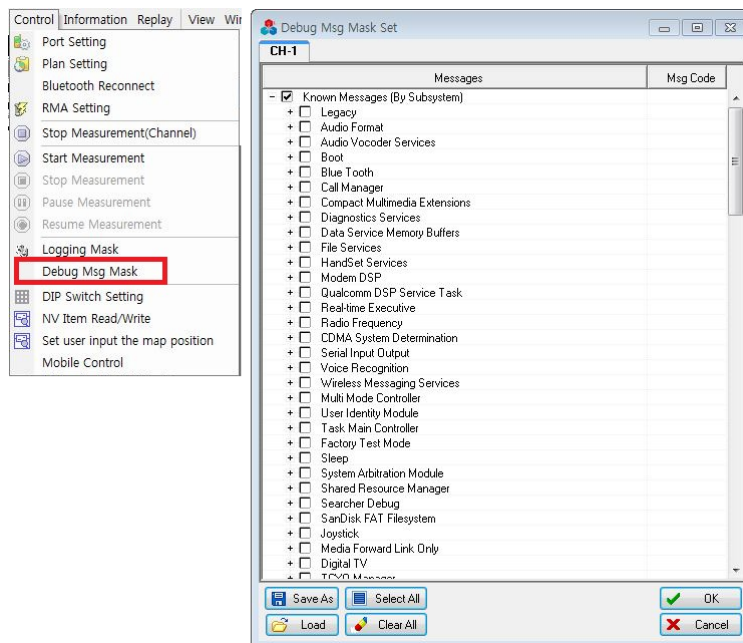
Encryption Key : Encryption Key for ESP decoding

### Ver 3.8.0811

- New Feature
  - ✓ “GPS location from the phone” is saved to log file, together with USB GPS data.
    - You can compare USB GPS location and mobile phone’s location.
  - ✓ Scenario mode – Supports “Airplane mode on/off” control
  - ✓ Scenario mode – Supports “WiFi on/off” control
- Update
  - ✓ RMA upgrade (v2.00) – WiFi on/off control

### Ver 3.8.0818

- New Feature
  - ✓ Added “Control - Debug Msg Mask” menu, which supports Qualcomm chip debug message masking for categories.



- Update
  - ✓ RMA upgrade (v2.01) – supports SPP-based communication with DML
  - ✓ You can use RMA through Bluetooth SPP interface, as well as conventional ADB interface.  
(Warning: To use RMA through Bluetooth SPP interface, you should enable “Use Bluetooth” option)

ADB	ad2a064e
Use RMA	Use(Bluetooth-SPP)
Use Bluetooth	Use
Bluetooth Name Prefix	

- ✓ VolTE call state decision – Changed criteria
  - “VolTE” case : If SIP ACK is received, and there are more than three RTP packets received, VolTE call state is decided as conversation state by force
  - “Pair Call” case : When MT UE answers incoming call, MO UE call state is decided as conversation state by force

These modifications will help below cases;

- Occasionally, Qualcomm chip provides corrupted SIP message through DM port. In this case, VolTE call state couldn't be decided correctly due to modem chip bug. Above methods will help this case.
- Occasionally, Qualcomm chip doesn't provide DL(or UL, or both of DL/UL) data packets due to it's well-known bug. In this case, VolTE call state couldn't be decided correctly due to modem chip bug. Above methods will help this case.

### Ver 3.8.0819

- Update
  - ✓ RCS interworking – DML supports real-time L3 message transfer to Netimizer RCS (optional)
  - ✓ Log Message UI - TCP/IP packet's “Detail Info” display – If IP packet length is different from real received packet length, log message UI displays “## CORRUPT ##” string in front of detail column as below.

2015/08/18 20:37:44.652	[TCPIP]	Protocol Services [57:DL:2071] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.652	[TCPIP]	Protocol Services [57:DL:2072] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.674	[TCPIP]	Protocol Services [57:DL:2073] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.674	[TCPIP]	Protocol Services [57:DL:2074] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.680	[TCPIP]	Protocol Services ## CORRUPT ## [57:DL:2075] UDP (104B) 2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.680	[TCPIP]	Protocol Services ## CORRUPT ## [57:DL:2076] UDP (104B) 2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.682	[TCPIP]	Protocol Services ## CORRUPT ## [57:DL:2077] UDP (108B) 2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.682	[TCPIP]	Protocol Services ## CORRUPT ## [57:DL:2078] UDP (108B) 2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.692	[TCPIP]	Protocol Services [57:DL:2079] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.692	[TCPIP]	Protocol Services [57:DL:2080] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services [57:UL:657] UDP RTP (678) 2001.02D8.0932.3739.0000.0000.0151:C915(7010) -> 2001.02D8.00E0.0171.0000.0000.0000	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services [57:DL:2081] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services [57:DL:2082] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.734	[TCPIP]	Protocol Services Data[L:2083] UDP RTP (938) 2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11

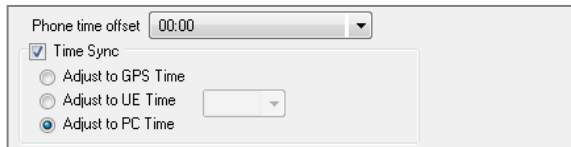
### Ver 3.8.0820

- Update
  - ✓ “Null ESP decoding” is applied for the call state detection, regardless of user configuration in the log message UI.
  - ✓ Voice Quality Monitor UI – In scenario mode, this UI is not initialized on each call, and keeps the

history

### Ver 3.8.0824

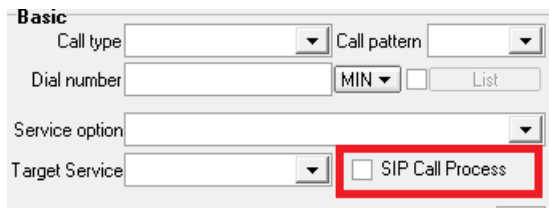
- Bug Fix
  - ✓ Port Setting – “Time Sync” bug fix



- ✓ “Network & Cell” UI – Time sync related bug fix

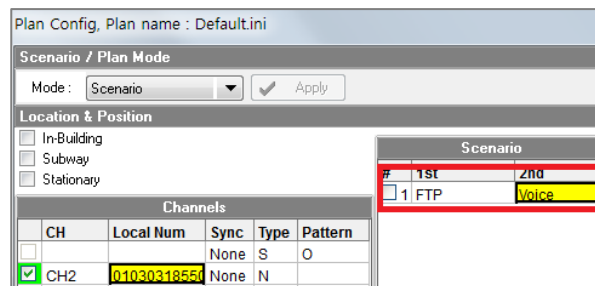
### Ver 3.8.0827

- Update
  - ✓ Plan setting dialog – Added “SIP Call Process” option – you should select this option to enable DML decode SIP messages and reflect to call state detection.



### Ver 3.8.0831

- New Feature
  - ✓ Scenario Mode – Supports Multi RAB for LTE network
    - To use Multi-RAB (simultaneous active call test for data service and voice service), you should;
      - use “Scenario” mode
      - Add data call (ex: FTP) first, and select “Voice” service in the 2<sup>nd</sup> service as below



### Ver 3.8.0902

- Update
  - ✓ RMA upgrade (v2.02) – Retrieves information from Android OS always
  - ✓ License Manager update

### Ver 3.8.0903

- Update
  - ✓ License Manager update – Check LIF file, if the installed floating license doesn't support product license
  - ✓ MOS measurement – Unmutes play/record codecs automatically before MOS measurement start

### Ver 3.8.0904

- Update
  - ✓ RMA upgrade (v2.03) – Crash on specific model is fixed
  - ✓ Fast RMA termination on DML exit

### Ver 3.8.0909

- Update
  - ✓ HSDPA Channel Config Information UI – CQI feedback cycle display format updated
    - Before: Index number (0,1,2,...)
    - After: msec value

RB Re-config.	fc0	fc2	fc4	fc8	fc10
HSDPA Config. V2	0 sub frame	1 sub frame	2 sub frame	4 sub frame	5 sub frame
msec	0ms	2ms	4ms	8ms	10ms

### Ver 3.8.0915

- Bug Fix
  - ✓ Plan setting UI – Inbuilding configuration bug fix
  - ✓ Inbuilding UI bug fix

### Ver 3.8.0917

- Update
  - ✓ RMA upgrade (v2.04) – Save action log whenever RMA tries to release voice call.
    - When RMA tries to answer incoming call: “recvIncommingCall : AcceptCall” or “recvIncommingCall : HEADSETHOOK”
    - When RMA tries to release call : “try: VoiceEndCall”

Time	DIR	Type	Message	
2015/09/17 14:15:38.316		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:38.502		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:40.792		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:41.317		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:47.571		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:52.803		[TOOL]	Voice Call Result	Call 1 / Orig. / COMPLETE
2015/09/17 14:15:52.815		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / Debug Msg - #DB:try VoiceEndCall
2015/09/17 14:15:53.188		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / Voice State - #VOICE:ST:0
2015/09/17 14:15:54.548		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:54.932		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / Android Battery Level - #E:BATTERY:97
2015/09/17 14:15:56.746		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:56.960		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:58.250		[TOOL]	Voice Call End	Call 1 End / Tick 135705113
2015/09/17 14:15:58.265		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / Debug Msg - #DB:try VoiceEndCall
2015/09/17 14:15:58.791		[TOOL]	Voice Call Start	Call 2 / Origination / Tick 135705612
2015/09/17 14:15:59.121		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:59.181		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:59.305		[TOOL]	Bluetooth HF,ADB_APP Message	(Rx) APP / Voice State - #VOICE:ST:2

### Ver 3.8.0921

- Update
  - ✓ During SIP call, Netimizer’s call state detection is reset to IDLE, when call state remains in SETUP state at the call end.
  - ✓ If there is any fail events in SIP(ex: Registration fail, etc.), Netimizer’s call state detection is reset to IDLE if SIP state is in IDLE state.
  - ✓ Update for call status judgement (For the fragmented TCP packet processing DML refer the additional packet flow to judge the call status.)
- Bug Fix
  - ✓ Bug fix for DM port number larger than 255
  - ✓ Bug fix for GPS data source from multiple RMAs

### Ver 3.8.0922

- Bug Fix
  - ✓ VoLTE SIP process – bug fix (Using Bluetooth case)
    - When “SIP Call Process” option is unchecked, DML doesn’t refer SIP message for the call state decision. However, DML sent HANGUP command through Bluetooth (when

Bluetooth is used) when there is SIP BYE message. New DML doesn't send this HANGUP command to BT anymore if "SIP Call Process" is unselected.

### Ver 3.8.0923

- Update
  - ✓ DML receives location information from Android (RMA), and saves to the log file always

### Ver 3.8.0924

- Update
  - ✓ RMA log length – New version truncates trailing NULL characters from RMA log, and saves real string only. Thus log packet size is variable length, and consumes less capacity.
  - ✓ Samsung chip DM interface update following new ICD v4.90.
  - ✓ Update for abnormal Qualcomm log
    - Parameter – "[LTE] RLC DL Throughput.", "[LTE] RLC UL Throughput." – update for abnormal Qualcomm log
    - Parameter – "[LTE] PUSCH Throughput.", "[LTE] MAC UL Throughput" – update for abnormal Qualcomm log
    - Data Throughput Graph UI – [LTE Physical Throughput (Mbps) UL Graph
    - Network & Cell UI – "Radio Speed(Mbps)" UL Graph
    - Qualcomm LTE Signal Graph – PDSCH Throughput, PUSCH Throughput, RLC DL Throughput, RLC UL Throughput

### Ver 3.8.0930

- Update
  - ✓ iPerf server package update – "<DML\_Install\_Folder>\misc\iperf\_2.0.5\_Linux\_Server.zip"

### Ver 3.8.1001

- Update
  - ✓ "Voice Call Plan" – Added "SIP Call ID Detect" option
    - When checked, "Call-ID" contents of SIP messages(ex: INVITE, BYE, etc.) are compared, and discarded if not match for the current call
    - Default = off
    - If this option is selected, and there is BYE message, DML tries to decode "Call-ID".
      - If it matches with INVITE's "Call-ID", BYE is referred and call state is detected as IDLE

- If it doesn't match with INVITE's "Call-ID", BYE is discarded
- If "Call-ID" of BYE message is unknown (because of ESP, etc.), BYE message is referred to decide call state

**Basic**

Call type: Pair call with other CH | Call pattern: T

Dial number: [redacted] | MIN | List

Service option: 105. ADB(RMA) - Voice with Dial Number

Target Service: None

Refer SIP messages  
 Check SIP Call-ID

### Ver 3.8.1006

- Bug Fix
  - ✓ Inbuilding UI – bug fix

### Ver 3.8.1016

- Update
  - ✓ Custom Event History – SIP 4xx, 5xx, 6xx messages are displayed in detail
  - ✓ SMS Call Monitor UI – Added columns (Ori. RAT, Term. RAT, Ori. via, Term. via)

CH2 SMS Monitor

Call Pattern	App Orig-Term	Teleservice ID	Default
Called Number	01031964079	Callback Number	01031964079
Setup Time	4 / 40 sec	Idle Time	10 / 10 sec
Call State	SMS Idle	Call Event	SMS MO
Total	4/10		40%
Complete	4		100%
Fail	0		0%

#	Result	A ~ B	A ~ D	Ori. RAT	Term. RAT	Ori. via	Term. via
1	Complete	00:01.669	00:08.377	WCDMA	WCDMA	NAS	NAS
2	Complete	00:01.732	00:04.322	WCDMA	WCDMA	NAS	NAS
3	Complete	00:01.560	00:08.627	WCDMA	WCDMA	NAS	NAS
4	Complete	00:01.498	00:04.368	WCDMA	WCDMA	NAS	NAS

- ✓ Voice Quality Monitor UI – Call Results Table updated to display more information

Voice Quality Monitor

Call	CH2					
	MOS			Call Result		
	MOS values	Avg.	QoE	Type	Result	
1	1.01 1.01 1.01 1.01	1.01	-CBQ-	3G	C	

### Ver 3.8.1020

- Update
  - ✓ Qualcomm Log “LTE ML1 PDSCH Stat Indication(0xB173)” – Parser update for “ACK/NACK Decision” field
  - ✓ Layer-3 message parsing – NAS/CC/SETUP – “Supported codec” detail parsing is added

### Ver 3.8.1027

- Update
  - ✓ R&S TSMW/TSME Scanner Interface update to ViCom 15.51.
    - Finished test with R&S TSME Scanner FPGA Version 02.02.01.08 – you can check FPGA version with “R&S TSME Device Manager” utility.

FPGA				
Available FPGA Bit File Versions	02,02,01,08	02,01,01,03	02,02,01,08	unused
Current FPGA Bit File Version	02,02,01,08			

- Bug Fix
  - ✓ Alarm – bug fix

### Ver 3.8.1029

- Update
  - ✓ R&S TSMW/TSME scanner interface – API version update to ViCom 15.55.

Below are ViCom 15.55 changelog from R&S.

(refer

[http://cdn.rohde-schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1555.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1555.txt))

----- ViCom Changelog -----	
Version 15.55	22.10.2015
- New:	VICOM ACD: Add support for automatic channel detection for CDMA on TSME (beta state).
- New:	VICOM ACD: Add parameter for channel bandwidth detection status, see SMeasResult::bBandwidthConfirmed.
- Fixed:	VICOM ACD: Fixed channel power not being updated for found channels, see SChannel::pFRssiInDBm.
- Fixed:	VICOM ACD: Fixed restarting measurements resulting in a blocked interface.
- Fixed:	VICOM ACD: Fixed issue with receiver selection pop-up window coming up in case of two connected TSME receivers.
- Fixed:	VICOM ACD: Fixed incorrect band id being reported for WCDMA measurements.

- Fixed:	VICOM ACD: Fixed crash for ACD being started parallel to a running R&S ROMES.
- New:	TSME: Add detection for insufficient MTU size by network path to receiver (error code: VICEC_INSUFFICIENT_PATH_MTU_SIZE).
- Fixed:	TSME: Fixed issue with measurements randomly stop to deliver any data in case of two connected receivers.
- Fixed:	TSME: Fixed issue with detection of incorrect network mask settings(error code: VICEC_INSUFFICIENT_NETMASK).
- New:	VICOM LTE: Add eMBMS hardening. This allows to do NB RS-CINR measurements in eMBMS enabled areas.
- New:	VICOM LTE: Optimizations to improve the speed of parallel NB and WB measurements for TSME.
- New:	VICOM LTE: Add support for 1ms time resolution for MIMO measurements, see SMimoSettings::wTimeResolutionInMs.
- Fixed:	VICOM LTE: Fixed check for configuration errors in SFrequencySettings::wSpecialSubframe{1,6} configuration mask parameter.
- Fixed:	VICOM LTE: Fixed issues with extensive memory consumption of RS-CINR algorithms for eMBMS channels.
- Fixed:	LTE Demodulator: Fixed crash for signals with TDD special subframe configuration 9.
- Fixed:	WCDMA Demodulator: Fixed demodulation not possible or less successful in certain situations.
- Fixed:	VICOM GPS: Fixed VICEC_GPS_INTERNAL error being returned when two TSME receivers are connected depending on which device is detected first.
- Fixed:	VICOM GPS: Fixed missing decoding of validity flags for NAV-STATUS, NAV-TIME-UTC, NAV-TIME-GPS, NAV-SOL UBX messages. Thus it was possible that old and invalid positions, timestamps and position fix values are reported when the GPS measurements have been started in places with no signal reception, e.g. inside buildings.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	R&S TSME tools updated to version 1.3.4.5.
Version 15.54	17.08.2015
- New:	VICOM ACD: Add support for automatic channel detection for GSM and WCDMA on TSME. See RohdeSchwarz::ViCom::ACD::CViComAcdInterface. Please note the additional files and folders in .\bin folder.
- Fixed:	VICOM LTE: Fixed incorrect demodulation settings being returned by GetSettings().
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	R&S TSME tools updated to version 1.3.4.1.
Version 15.53	20.07.2015
- Fixed:	TSME: Fixed frontend selection check for multiple devices running in parallel.
- Fixed:	LTE Demodulator: Use MIB information for eNodeB Tx Antenna configuration if available. This is required for eMBMS channels and may be helpful for weak eNodeB cells.
- Fixed:	VICOM GPS: Fixed rarely occurring pure virtual function call error.
- Fixed:	VICOM GPS: Fixed rarely occurring access violation for TSMW receivers.
- Fixed:	TSMW: Fixed VICEC_DEVICE_RESPONSE_MISSING error being returned when restarting measurements with exactly one active technology.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Added ./doc/TSMA getting started.pdf

- Note:	Added ./doc/TSMA-BP getting started.pdf
- Note:	Added ./doc/TSMA User Manual.pdf
Version 15.52	17.06.2015
- Fixed:	TSMW: Fixed VICEC_DEVICE_RESPONSE_MISSING error being returned when restarting measurements with exactly one active technology.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.
Version 15.51	08.06.2015
- Fixed:	VICOM LTE: Fixed VICEC_NOT_IMPLEMENTED error being returned on SetFrequencies() for TSMW.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.
Version 15.50	03.06.2015
- New:	Add support for R&S TSMA.
- New:	VICOM LTE: Add MIMO 2x2 and 2x4 measurements for TSME.
- New:	TSME: Add detection for subnetmask mismatch in network configuration (error code: VICEC_INSUFFICIENT_NETMASK).
- New:	VICOM RF POWER SCAN: Increased maximum measurement rate limit to 5000 Hz on TSME.
- Fixed:	VICOM RF POWER SCAN: Fixed channel filter not being processed correctly in SetSweepSettings().
- Fixed:	VICOM LTE: Fixed invalid CINR subband size computed in bandwidth tracking mode for wideband measurements.
- Fixed:	TSMx: RohdeSchwarz::ViCom::CviComLoader::Connect() now returns error code VICEC_NO_DEVICE for disconnected TSMx receivers.
- Fixed:	TSME: Increased stability of the communication link to the receiver by adding basic load balancing.
- Fixed:	VICOM TD-SCDMA: Fixed timing check for TSME.
- Note:	Added tsme_2020108.bin.
- Note:	Added tsme_2020308.bin.
- Note:	Added tsme_2020508.bin.
- Note:	Added tsme_2020608.bin.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.

✓ Supports new Qualcomm log packets

- 0x119B – id2 – ver2 (Srchr TNG 1x Searcher Dump, RF subpacket, ver2)

- Bug Fix

✓ DM Log time mismatch in display – fix time zone and daylight problem

✓ Fix problem of “Time Sync” and “Phone Time offset” are not operated at time same time in “Port Config UI”

✓ Fix “time offset” and “time sync” fields in “DM Port Config (0xF01D)” packet

- ✓ Fix “PC time in GMT time” field in “PC Time Info (0xF027)” packet

### **Ver 3.8.1102**

- Update
  - ✓ R&S TSMW/TSME scanner interface – Added “SocketLinkWorkerDll.dll” file
- Bug Fix
  - ✓ Inbuilding plan – Save/load bug fix
  - ✓ HTTP DL/UL – Call scheduling bug fix

### **Ver 3.8.1103**

- Update
  - ✓ Voice Call Test – If RMA detect Android “call end” event and provide to DML, DML refers this event to decide call drop event. Previous version of DML didn’t refer this event.
  - ✓ RMA upgrade (v2.06)
    - SMS test – After call fail, message contents was not displayed. New RMA displays message contents even after call fail result was decided.
    - FTP test – In some cases, result was decided as “Incomplete” even though data transfer was not performed. This bug is fixed.

### **Ver 3.8.1104**

- Bug Fix
  - ✓ e-License management – Summer time related bug fix.

### **Ver 3.8.1106**

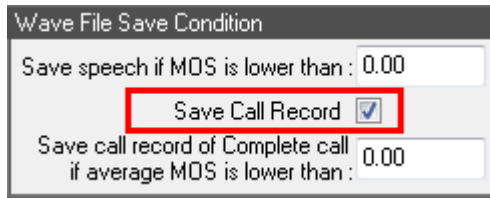
- Bug Fix
  - ✓ Logging Stop – Occasionally, log file was not closed during measurement stop, in the case of scenario mode. This bug is fixed.

### **Ver 3.8.1108**

- Update
  - ✓ License manager update
  - ✓ Samsung chip – enhanced for invalid data handling

### Ver 3.8.1112

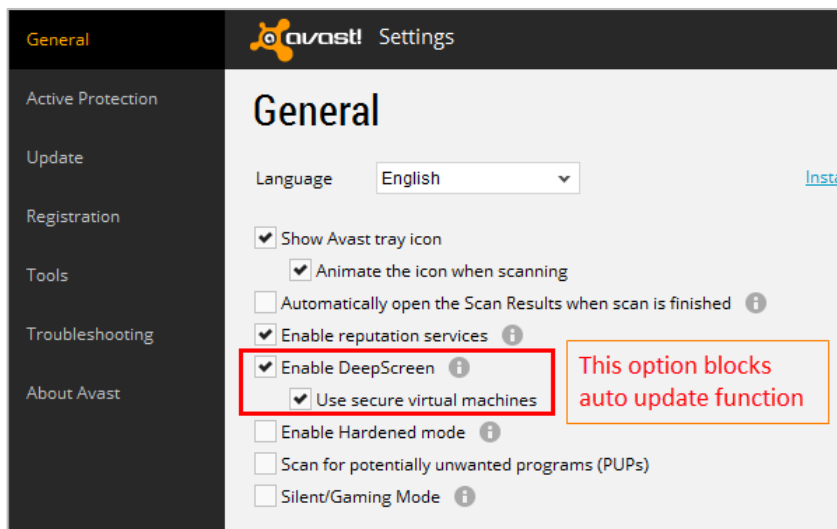
- New Feature
  - ✓ “Voice Quality Config” dialog provides new “Save Call Record” option (default = check)



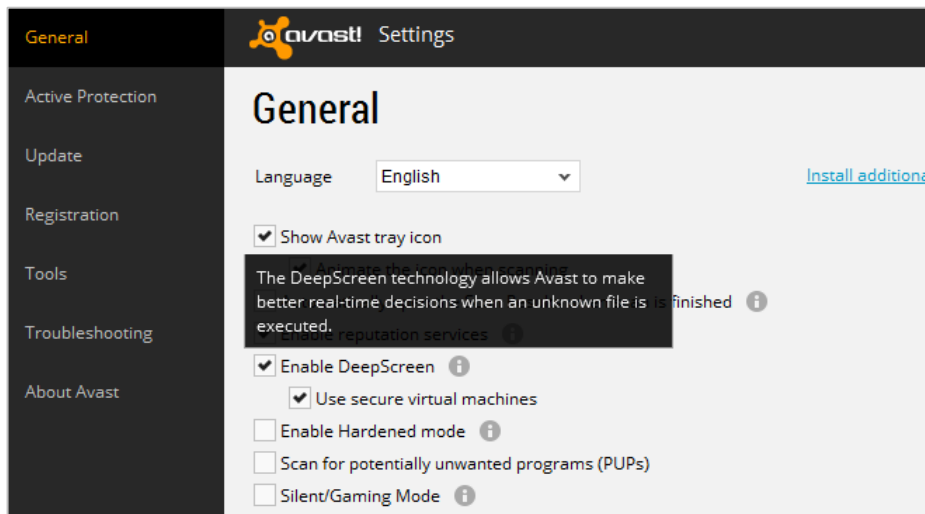
- If you uncheck this option, you can't listen real-time speech on your laptop.
- If you uncheck this option, call record wave files are not saved.
- Update
  - ✓ ADB update to recent version

### Ver 3.8.1113

- Update
  - ✓ Added log masks for Qualcomm chipset – GSM, GPRS, EDGE log masks
- Information
  - ✓ If you are running Avast, it's default configuration blocks Auto Update not to executed. To use auto update function, go to Setting, and disable “Enable DeepScreen” option.

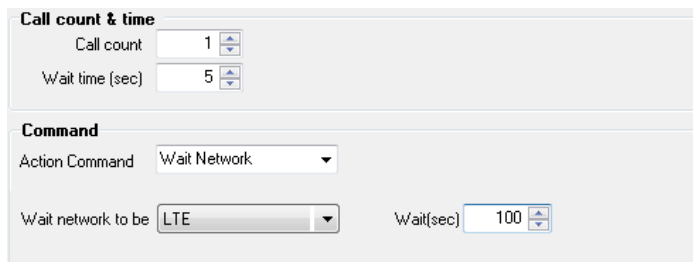


- ✓ As described in below figure, “DeepScreen” function prevents auto update utility from execution.

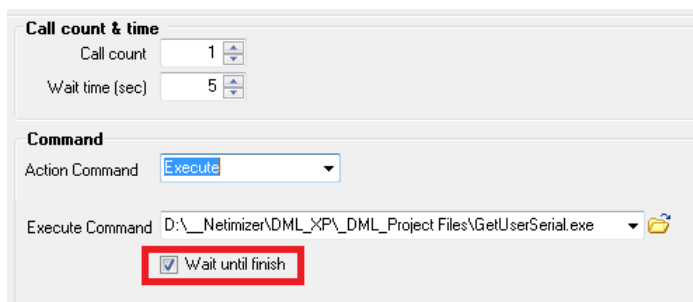


### Ver 3.8.1119

- Update
  - ✓ RMA upgrade (v2.07) – VOD test update, LTE/WiFi throughput monitoring update, etc.
  - ✓ Scenario mode – feature update
    - New function – “Wait for network” function is added



- Execute function – “wait until finish” option is added

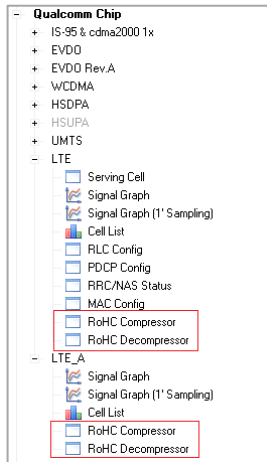


- ✓ VOD test – Added KPIs (access time, freeze count, Buffering count, etc.)

### Ver 3.8.1120

- New Feature

- ✓ Qualcomm chip – ROHC related UIs are added



INDEX	TIME	Index	Time	Received Timestamp	RoHC Instance	CID	Profile	Mode	Compress or State	Error	Packet Type	Compressed Header Size	Original Header Size	RTP SN	RTP SN Window Size	RTP Minimum SN	RTP Maximum SN
1	10 15:59:02.911	1	10 15:58:51.808	19320344	200170224	0	RTP	O	SO	0	UO0	3	60	25	16	20	25
2	10 15:59:05.791	2	10 15:58:51.968	19320504	200170224	0	RTP	O	SO	0	UO0	3	60	26	16	21	26
3	10 15:59:10.448	3	10 15:58:52.128	19320664	200170224	0	RTP	O	SO	0	UO0	3	60	27	16	22	27
4	10 15:59:12.448	4	10 15:58:52.288	19320824	200170224	0	RTP	O	SO	0	UO0	3	60	28	16	23	28
5	10 15:59:14.835	5	10 15:58:52.448	19320984	200170224	0	RTP	U	IR	0	IR S D P	62	60	29	0	0	0
6	10 15:59:17.196	6	10 15:58:52.608	19321144	200170224	0	RTP	O	IR	0	IR S D P	64	60	30	0	0	0
7	10 15:59:19.236	7	10 15:58:52.768	19321304	200170224	0	RTP	O	SO	0	BDYN	20	60	31	16	31	31
8	10 15:59:21.874	8	10 15:58:52.928	19321464	200170224	0	RTP	O	SO	0	UO0	3	60	32	16	32	32
9	10 15:59:26.334	9	10 15:58:53.088	19321624	200170224	0	RTP	O	SO	0	UO0	3	60	33	16	32	33
10	10 15:59:28.654	10	10 15:58:53.248	19321784	200170224	0	RTP	O	SO	0	UO0	3	60	34	16	32	34
11	10 15:59:32.294	11	10 15:58:53.409	19321944	200170224	0	RTP	O	SO	0	UO0	3	60	35	16	32	35
12	10 15:59:36.294	12	10 15:58:53.568	19322104	200170224	0	RTP	O	SO	0	UO0	3	60	36	16	32	36
13	10 15:59:39.114	13	10 15:58:53.728	19322264	200170224	0	RTP	O	SO	0	UO0	3	60	37	16	32	37
14	10 15:59:42.234	14	10 15:58:53.888	19322424	200170224	0	RTP	O	SO	0	UO0	3	60	38	16	33	38
15	10 15:59:45.174	15	10 15:58:54.048	19322584	200170224	0	RTP	O	SO	0	UO0	3	60	39	16	34	39
16	10 15:59:49.994	16	10 15:58:54.208	19322744	200170224	0	RTP	O	SO	0	UO0	3	60	40	16	35	40
17	10 15:59:52.674	17	10 15:58:54.368	19322904	200170224	0	RTP	O	SO	0	UO0	3	60	41	16	36	41
18	10 15:59:54.996	18															
19		19															

### Ver 3.8.1121

- Update
  - ✓ Log Mask update
    - “Common(Qualcomm) – IMS” group logmasks added

### Ver 3.8.1124

- Bug Fix
  - ✓ ADB port match – bug fix

### Ver 3.8.1126

- Update
  - ✓ Mobile Control
    - Updated ADB-based mobile control features for recent Android versions
    - Added RMA-based mobile control features
  - ✓ Scenario mode

- Supports more mobile control features
- Supports more features on “Wait” plan

### **Ver 3.8.1202**

- New Feature
  - ✓ Added “ADB log” option in the port setting
- Update
  - ✓ Voice Quality Test Configuration dialog – Supports “Full Duplex”

### **Ver 3.8.1207**

- Update
  - ✓ Log Message UI – DL/UL direction display update
  - ✓ RCS Communication – Update

### **Ver 3.8.1210**

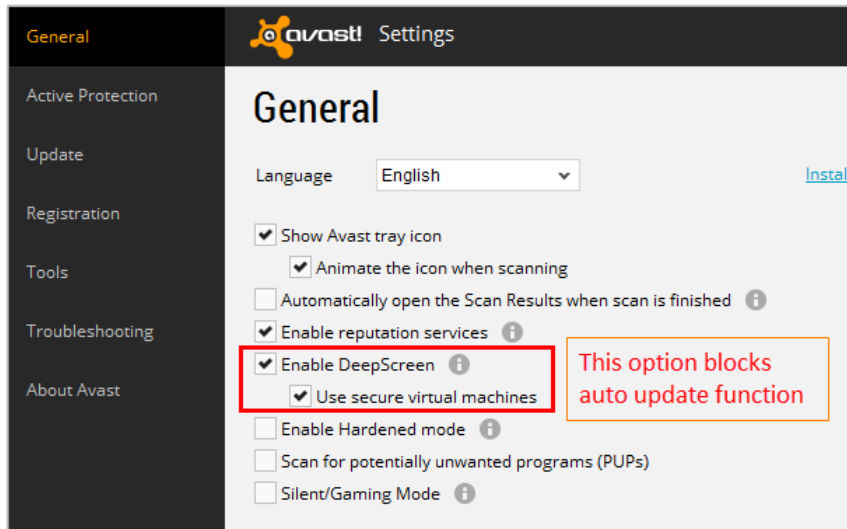
- Update
  - ✓ Log Mask update

### **Ver 3.8.1212**

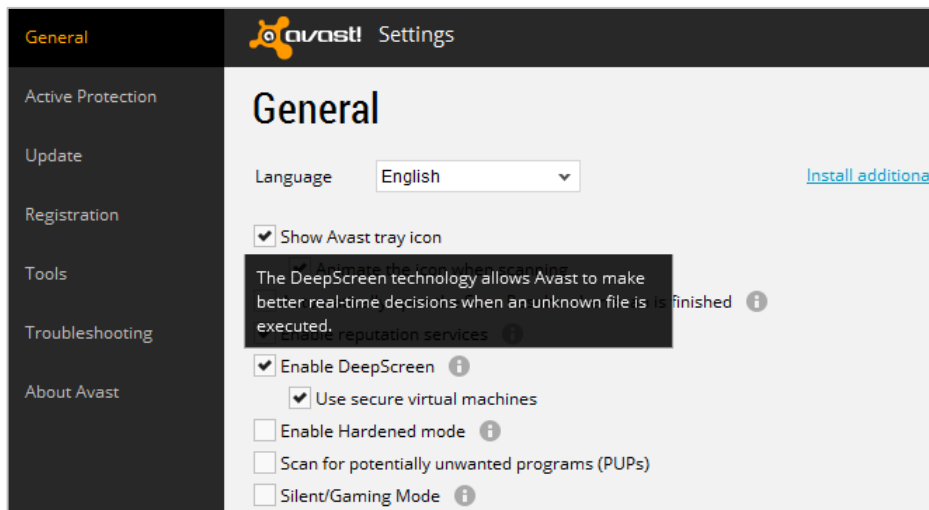
- Bug Fix
  - ✓ Voice Quality Test – WAV file save didn’t work in case of Multi-RAB test. This bug is fixed.

### **Ver 3.8.1113**

- Update
  - ✓ Added log masks for Qualcomm chipset – GSM, GPRS, EDGE log masks
- Information
  - ✓ If you are running Avast, it’s default configuration blocks Auto Update not to executed. To use auto update function, go to Setting, and disable “Enable DeepScreen” option.



- ✓ As described in below figure, “DeepScreen” function prevents auto update utility from execution.



### Ver 3.8.1119

- Update
  - ✓ RMA upgrade (v2.07) – VOD test update, LTE/WiFi throughput monitoring update, etc.
  - ✓ Scenario mode – feature update
    - New function – “Wait for network” function is added

**Call count & time**

Call count

Wait time (sec)

---

**Command**

Action Command

Wait network to be  Wait(sec)

- Execute function – “wait until finish” option is added

**Call count & time**

Call count

Wait time (sec)

---

**Command**

Action Command

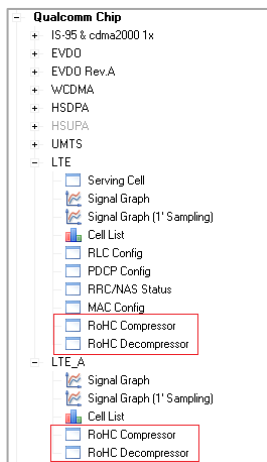
Execute Command

Wait until finish

- ✓ VOD test – Added KPIs (access time, freeze count, Buffering count, etc.)

### Ver 3.8.1120

- New Feature
  - ✓ Qualcomm chip – ROHC related UIs are added



INDEX	TIME	Index	Time	Received Timestamp	RoHC Instance	CID	Profile	Mode	Compress or State	Error	Packet Type	Compressed Header Size	Original Header Size	RTP SN	RTP SN Window Size	RTP Minimum SN	RTP Maximum SN
1	10 15:58:51.808	1	10 15:58:51.808	19320344	200170224	0	RTP	O	SO	0	UO0	3	60	25	16	20	25
2	10 15:59:02.911	2	10 15:58:51.968	19320504	200170224	0	RTP	O	SO	0	UO0	3	60	26	16	21	26
3	10 15:59:05.791	3	10 15:58:52.128	19320664	200170224	0	RTP	O	SO	0	UO0	3	60	27	16	22	27
4	10 15:59:10.448	4	10 15:58:52.288	19320824	200170224	0	RTP	O	SO	0	UO0	3	60	28	16	23	28
5	10 15:59:12.448	5	10 15:58:52.448	19320984	200170224	0	RTP	U	IR	0	IR S D P	62	60	29	0	0	0
6	10 15:59:14.835	6	10 15:58:52.608	19321144	200170224	0	RTP	O	IR	0	IR S D P	64	60	30	0	0	0
7	10 15:59:17.196	7	10 15:58:52.768	19321304	200170224	0	RTP	O	SO	0	IRBYN	20	60	31	16	31	31
8	10 15:59:19.236	8	10 15:58:52.928	19321464	200170224	0	RTP	O	SO	0	UO0	3	60	32	16	32	32
9	10 15:59:21.874	9	10 15:58:53.088	19321624	200170224	0	RTP	O	SO	0	UO0	3	60	33	16	32	33
10	10 15:59:26.334	10	10 15:58:53.248	19321784	200170224	0	RTP	O	SO	0	UO0	3	60	34	16	32	34
11	10 15:59:28.654	11	10 15:58:53.409	19321944	200170224	0	RTP	O	SO	0	UO0	3	60	35	16	32	35
12	10 15:59:32.294	12	10 15:58:53.568	19322104	200170224	0	RTP	O	SO	0	UO0	3	60	36	16	32	36
13	10 15:59:36.294	13	10 15:58:53.728	19322264	200170224	0	RTP	O	SO	0	UO0	3	60	37	16	32	37
14	10 15:59:39.114	14	10 15:58:53.888	19322424	200170224	0	RTP	O	SO	0	UO0	3	60	38	16	33	38
15	10 15:59:42.234	15	10 15:58:54.048	19322584	200170224	0	RTP	O	SO	0	UO0	3	60	39	16	34	39
16	10 15:59:45.174	16	10 15:58:54.208	19322744	200170224	0	RTP	O	SO	0	UO0	3	60	40	16	35	40
17	10 15:59:49.994	17	10 15:58:54.368	19322904	200170224	0	RTP	O	SO	0	UO0	3	60	41	16	36	41
18	10 15:59:52.674																
19	10 15:59:54.996																

### Ver 3.8.1121

- Update
  - ✓ Log Mask update
    - “Common(Qualcomm) – IMS” group logmasks added

### Ver 3.8.1124

- Bug Fix
  - ✓ ADB port match – bug fix

### Ver 3.8.1126

- Update
  - ✓ Mobile Control
    - Updated ADB-based mobile control features for recent Android versions
    - Added RMA-based mobile control features
  - ✓ Scenario mode
    - Supports more mobile control features
    - Supports more features on “Wait” plan

### Ver 3.8.1202

- New Feature
  - ✓ Added “ADB log” option in the port setting
- Update
  - ✓ Voice Quality Test Configuration dialog – Supports “Full Duplex”

### **Ver 3.8.1207**

- Update
  - ✓ Log Message UI – DL/UL direction display update
  - ✓ RCS Communication – Update

### **Ver 3.8.1210**

- Update
  - ✓ Log Mask update

### **Ver 3.8.1212**

- Bug Fix
  - ✓ Voice Quality Test – WAV file save didn't work in case of Multi-RAB test. This bug is fixed.

### **Ver 3.8.1217**

- Bug Fix
  - ✓ Parsing Bug Fix. 0xB177 Serving Cell Info (Ver1)
  - ✓ License management – bug fix

### **Ver 3.8.1218**

- New Feature
  - ✓ ESP Auto Deciphering function is added (Qualcomm chip only for now)
- Update
  - ✓ ADB control module - Enhanced

### **Ver 3.8.1229**

- Bug Fix
  - ✓ Scenario mode – Group synchronization function – bug fix

### **Ver 3.9.0108**

- Bug Fix
  - ✓ Communication with RMA – Slow information processing bug is fixed

### Ver 3.9.0111

- Update
  - ✓ LTE RRC parser update
- Bug Fix
  - ✓ GCT WiMAX – Device DM connection problem fix

### Ver 3.9.0122

- Update
  - ✓ Parameter - "[LTE] Duplex Mode", "[LTE] TDD UL-DL Config" added (in Qualcomm chip)
  - ✓ Qualcomm LTE Signal Graph
    - "DL DRX Rate (%)" Graph is renamed to "DL Non-scheduled Rate (%)"
    - Added "UL Non-scheduled Rate (%)" Graph
  - ✓ Qualcomm LTE-A Signal Graph
    - Added "(PCell) DL - Num of RB (Include 0)" Graph
    - Added "(SCells) DL - Num of RB (Include 0)" Graph
    - Added "UL - Num of RB (Include 0)" Graph
    - Added "(PCell) DL - MCS Index" Graph
    - Added "(SCells) DL - MCS Index" Graph
    - Added "UL - MCS Index" Graph
    - Added "(PCell) DL - Non-scheduled Rate (%)" Graph
    - Added "(SCells) DL - Non-scheduled Rate (%)" Graph
    - Added "UL - Non-scheduled Rate (%)" Graph
  - ✓ Qualcomm LTE ML1 GM TX Report(0xB16D)Parser update – added "TBS Index", "MCS Index" field
  - ✓ Generate Map JPG file for all licenses, if option is selected
- Bug Fix
  - ✓ Qualcomm LTE-A Signal Graph – display problem bug fix

### Ver 3.9.0126

- Update
  - ✓ RMA upgrade (v2.08) – SMS termination call result decision bug fix
- Bug Fix
  - ✓ Logging – Plan packet was saved with wrong phone number field in case of scenario mode.  
This bug is fixed.

### **Ver 3.9.0205**

- New Feature
  - ✓ You can load QXDM's .dmc file in the log mask configuration dialog

### **Ver 3.9.0217**

- Update
  - ✓ In the “/Common/General/LTE (Common)/” group, below UIs are provided to all licenses
    - “mVoIP QoS Signal Graph”
    - “mVoIP QoS Info”

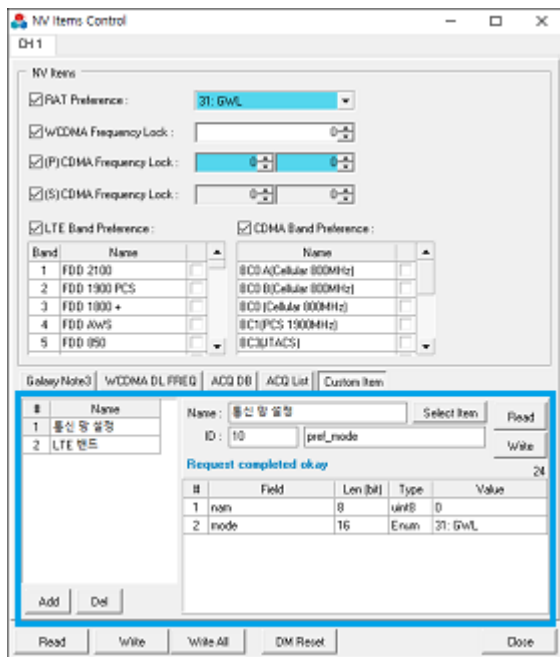
In the previous versions, these UIs were provided only when license has PESQ or POLQA license option. However, from this release, these UIs are provided even if PESQ or POLQA license is not active.

### **Ver 3.9.0218**

- Update
  - ✓ RMA upgrade (v2.10) – SMS termination call result decision bug fix
    - Streaming(Youtube) URL format “https://youtu.be/” is supported
    - SNS(facebook) session handling bug fix
    - When FTP setup timeout occurs, transmission was started in some cases. This bug is fixed

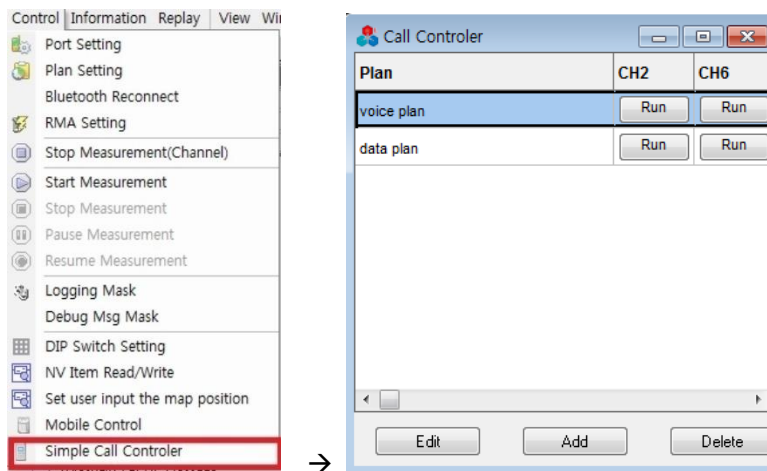
### **Ver 3.9.0226**

- New Feature
  - ✓ “NV Item Control” provides QCom NV item list, and you can select from it. Also you can add custom NV item.



### Ver 3.9.0229

- New Feature
  - ✓ Added “Simple Call Test” UI – You can use “instant run” of pre-defined plan for each mobile.

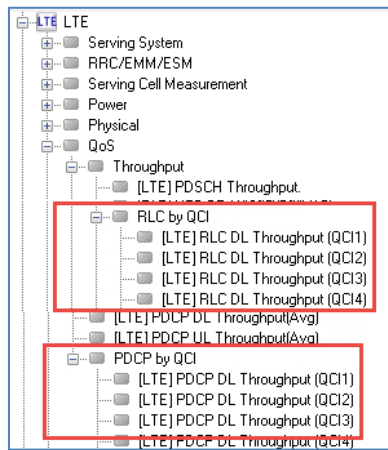


- Update
  - ✓ Updated for new Qualcomm log versions;
- Bug Fix
  - ✓ IPsec – decoding bug fix

### Ver 3.9.0303

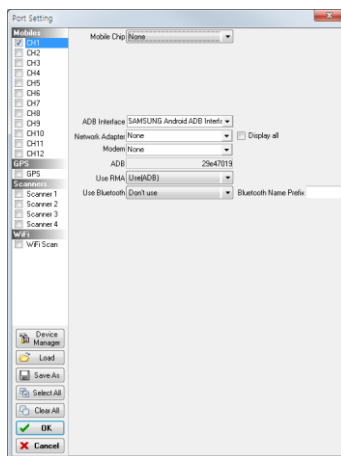
- Update

- ✓ Parameter Update – add Throughput per QCI
  - [LTE] RLC DL Throughput (QCI1~9), [LTE] RLC UL Throughput (QCI1~9),
  - [LTE] PDCP DL Throughput (QCI1~9), [LTE] PDCP UL Throughput (QCI1~9)



### Ver 3.9.0314

- Update
  - ✓ Auto call test is possible even when device “None” is selected in the port setting window.



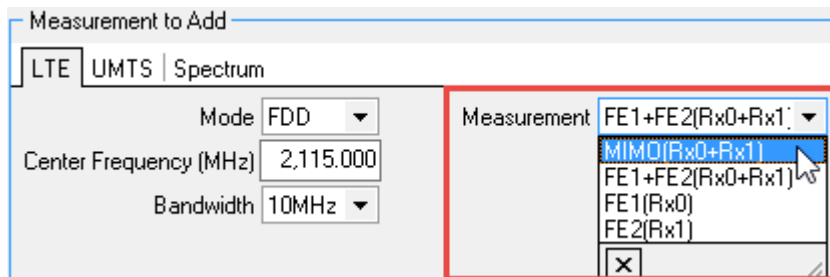
- ✓ Parameter Update – for Samsung Modem chip
  - LTE/QoS/Samsung Common - [LTE(S)] Common DL Throughput
  - LTE/QoS/Samsung Common - [LTE(S)] Common UL Throughput
  - LTE/QoS/Samsung Common - [LTE(S)] Common DL BLER
  - LTE/QoS/Samsung Common - [LTE(S)] Common UL BLER
  - WCDMA/Samsung Common QoS - [WCDMA(S)] Common DL Throughput
  - WCDMA/Samsung Common QoS - [WCDMA(S)] Common UL Throughput
  - WCDMA/Samsung Common QoS - [WCDMA(S)] Common DL BLER
  - WCDMA/Samsung Common QoS - [WCDMA(S)] Common UL BLER

### Ver 3.9.0319

- Update
  - ✓ Disabled file flush during logging – LML only
- Bug Fix
  - ✓ Text parser – CDMA OTA FTCH message handling bug fix
  - ✓ Memory overwrite bug fix

### Ver 3.9.0325

- Update
  - ✓ License management – DML works with “no chipset support” license also
  - ✓ Enhanced handling for the QCom chipset timestamp problems
  - ✓ Rohde Schwarz, TSME/TSMW Scanner LTE Config – Measurement item changed



- Bug Fix
  - ✓ Status bar – Bluetooth connection status refresh bug fix
  - ✓ Rohde Schwarz, TSME/TSMW Scanner 's memory leak bug fixed - RSDLL.DLL update

### Ver 3.9.0329

- Update
  - ✓ RMA upgrade (v2.11) – Enhanced exception for Galaxy S7
  - ✓ Parameters – Samsung LTE parameter display update

### Ver 3.9.0407

- New Feature
  - ✓ Supports automatic key detection and real-time IPSec deciphering for Samsung modem chipset, as well as Qualcomm Snapdragon 820 chipset
- Update
  - ✓ RMA upgrade (v2.12) – bug fix for call start and call end logging

### Ver 3.9.0411

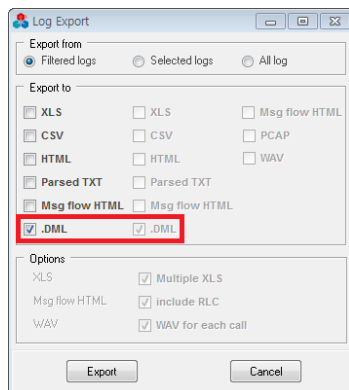
- Update
  - ✓ Enhanced handling for abnormal (jumping) timestamp from modem chip
  - ✓ Enhanced communication speed between MDM3 CCU and DCU

### Ver 3.9.0415

- Update
  - ✓ Log file flushing to disk – enhanced performance
  - ✓ Update for iPhone - IPSec
- Bug Fix
  - ✓ POLQA MOS Result log packet writing – wrong size of logging – bug fix
  - ✓ Logging status UI – displays both of written size and file size

### Ver 3.9.0421

- Update
  - ✓ iPerf – Simultaneous download/upload throughput measurement (dualtest) is added
  - ✓ Log Export - "Filtered logs", "Selected logs" option – Added “export to new dml log file” feature



### Ver 3.9.0504

- Update
  - ✓ MAP– Detect Map-Area automatically
- Bug Fix
  - ✓ “Parameters – LTE – Serving Cell Measurement – RSRP (Ant0) and RSRP (Ant1)” calculation bug fix
  - ✓ Scenario Monitor – UI freeze bug fix

### **Ver 3.9.0505**

- Update
  - ✓ Supports new log versions of Qualcomm chipset

### **Ver 3.9.0509**

- Update
  - ✓ “Parameters – LTE – Serving Cell Measurement” group includes ant0 ~ ant3 of RSSI, RSRP, RSRQ, and SINR for Qualcomm chipset
  - ✓ “Qualcomm LTE Signal Graph” displays ant0 ~ ant3 values of RSSI, RSRP, RSRQ, and SINR for Qualcomm chipset

### **Ver 3.9.0510**

- Update
  - ✓ RMA upgrade (v2.15) – Log Android CPU temperature information

### **Ver 3.9.0514**

- Update
  - ✓ RMA upgrade (v2.16) – UI update
- Bug Fix
  - ✓ Parameter manager – Qualcomm log 0x1192 exception handling bug fix

### **Ver 3.9.0517**

- Bug Fix
  - ✓ RMA upgrade (v2.17) – FTP test bug fix

### **Ver 3.9.0518**

- Update
  - ✓ “General Option” – “Log Upload” option tab is now opened for all customers

### **Ver 3.9.0526**

- Update
  - ✓ Log file write – If log file close fails, trace string is written to trace file and log file. Also tries file

close multiple times.

- ✓ Samsung mobile USB device driver update (v1.5.59.0 → v1.5.60.0)
- Update
- ✓ License Manager update
- Bug Fix
- ✓ Map UI – During start up, map related error has occurred (but not frequently). This bug is fixed.

### **Ver 3.9.0601**

- Update
- ✓ FileFlushC update
- Bug Fix
- ✓ Map – When RMA is used as a source of GPS data, blinking was occurred. This bug is fixed.
- ✓ Map – When map area is changed, coordination display had problem. This bug is fixed.

### **Ver 3.9.0608**

- Update
- ✓ LTE RRC parser update – Now supports 3GPP 12.8.0
- ✓ Mobile information – Retrieves more of mobile information (vendor, chip version, base board version, etc.) through ADB interface
- ✓ HTTP download – Supports multi session
- ✓ RMA upgrade (v2.18) – Supports multi session HTTP download
- Bug Fix
- ✓ Map resource increment after long-term test – bug fixed

### **Ver 3.9.0614**

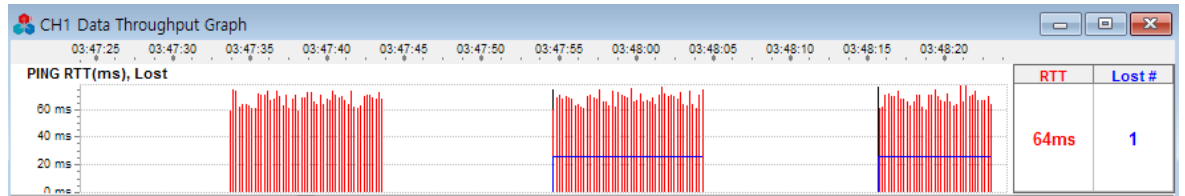
- Update
- ✓ RMA upgrade (v2.19) – Enhanced stability for Youtube test and iPerf test
- ✓ Logging – Enhanced stability for log file management
- Bug Fix
- ✓ iPerf UL test – Connection fail occurred a lot in 3G network environment – this bug is fixed

### **Ver 3.9.0616**

- Update
- ✓ Samsung Chip – 0xEB19\_v503 is supported

### Ver 3.9.0621

- Update
  - ✓ Data Throughput Graph UI – PING RTT, loss count is added



### Ver 3.9.0627

- Update
  - ✓ Voice call answer – Enhanced “answer with ADB” function for the incoming call.

### Ver 3.9.0629

- Update
  - ✓ RMA upgrade (v2.20) – Added K.Web measurement feature
  - ✓ HTTP (Web) test – K.Web option is added to plan configuration

### Ver 3.9.0708

- Update
  - ✓ RMA upgrade (v2.21) – Updated FTP timeout duration from 3sec to “setup time”

### Ver 3.9.0711

- Update
  - ✓ VDR scanner interface – increased buffer size to store scan data

### Ver 3.9.0714

- Update
  - ✓ RMA upgrade (v2.22) – HTTP DL/UL update (changed default buffer size from 8KB to 128KB for both of send buffer size and receive buffer size)

### Ver 3.9.0718

- Update

- ✓ “Critical Warning” UI update – added below events to the critical warning UI
  - “VoLTE SIP Missing” event – when there is no SIP message during some duration
  - “Missing Qualcomm LTE ML1 group log” event – when there is no ML1 group logs during some duration, even though user selected ML1 group logs
- ✓ “Parameters” tab – addition of parameters
  - “Parameters – Events – VoLTE Call Waring Events”
  - “Parameters – Events – Log Packet Missing Events”
- ✓ “Qualcomm / LTE-A Signal Graph” UI update
  - Supports LTE-A Signal graph LTE EARFCN of RF KPI (RSSI, RSRP, RSRQ, SINR) of Qualcomm chipset
  - “[ML1] Serving Cell Measurement - RSSI” graph update
  - “[ML1] Serving Cell Measurement - RSRP” graph update
  - “[ML1] Serving Cell Measurement - RSRQ” graph update
  - “[ML1] Serving Cell Measurement - SINR” graph update

### Ver 3.9.0801

- Update
  - ✓ RMA upgrade (v2.23) – Youtube test update
  - ✓ Youtube test – Feature update and UI update

### Ver 3.9.0802

- Update
  - ✓ “Time Sync – Adjust to GPS Time” update: If GPS is not locked or connected, time sync mode works as “Time Sync – Adjust to PC Time” instead.

### Ver 3.9.0804

- Bug Fix
  - ✓ Samsung chip – Bug fix for interpretation of “0xEB12 LL1 Downlink Info – v503” log packet

### Ver 3.9.0808

- Update
  - ✓ License manager update
  - ✓ **Samsung chip – All Samsung chip log packets are saved as encrypted packet for the security**  
**→ LMA version 3.9.0808 or later should be used to analyze log file**

- Bug Fix
  - ✓ FIT Mode – bug fix

### **Ver 3.9.0810**

- New Feature
  - ✓ “Voice Quality Monitor” UI – In the “Manual Test” tab, “Play Sound to selected channels” button is added. You can select WAV file to be played through select mobile. Play will be done only once, not repeated.

### **Ver 3.9.0811**

- New Feature
  - ✓ “Bluetooth Reconnect” menu – You can make pairing between mobile and PM12 with this option. If you can’t see PM12 BT device from your mobile, you can use this menu for easy operation.

### **Ver 3.9.0812**

- Update
  - ✓ Port Setting – If you select Bluetooth connection in the port setting, and click “OK” button, DML will try Bluetooth HFP connection automatically.

### **Ver 3.9.0823**

- New Feature
  - ✓ “Parameters” tab – Added “/Packet Data/RTP/Rx Audio Frame Type” and “/Packet Data/RTP/Tx Audio Frame Type”
- Update
  - ✓ RMA upgrade (v2.24) – Youtube test update
- Bug Fix
  - ✓ Log Message UI – Export To PCAP bug fix

### **Ver 3.9.0826**

- Update
  - ✓ Bluetooth Interface Audio Control (with VoLT, PM12, etc.)– Updated to support iPhone

### Ver 3.9.0829

- Update
  - ✓ RMA upgrade (v2.25) – Youtube test update
  - ✓ Port Setting UI – updated Bluetooth Interface configuration
    - Don't Use : Don't use BT HFP interface with mobile
    - Use (Android) : Use BT HFP interface with mobile, and works with compatibility with Android mobiles
    - Use (iPhone) : Use BT HFP interface with mobile, and works with compatibility with iPhone mobiles

### Ver 3.9.0831

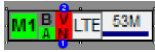
- Update
  - ✓ License manager update
  - ✓ Qualcomm LTE Signal Graph UI – Update for DL 256QAM
  - ✓ Qualcomm LTE-A Signal Graph UI – Update for DL 256QAM
    - “[LL1] DL – Modulation Order” - LTE Signal Graph update
    - “[LL1] DL – Modulation Order (per sec)” - LTE Signal Graph (1' Sampling) update
    - “[LL1] (PCell) DL – Modulation Order” – LTE-A Signal Graph update
    - “[LL1] (SCells) DL – Modulation Order” – LTE-A Signal Graph update
    - “[LL1] (PCell) DL – Modulation Order (per sec)” – LTE-A Signal Graph (1' Sampling) update
    - “[LL1] (SCells) DL – Modulation Order (per sec)” – LTE-A Signal Graph (1' Sampling) update

### Ver 3.9.0908

- New Feature
  - ✓ New Menu – “Message Details of Specific Log” menu is added. This UI will show detail parsing text of specific log type.
- Update
  - ✓ SRVCC process update in SIP call process
  - ✓ Adv Call State (0xF02B) – “CS RAT, PS RAT” field and parser update
  - ✓ Parameter Update – change name “[LTE] Modulation” to “[LTE] Modulation Order”
  - ✓ Parameter Update – for PDSCH Modulation Order 256QAM
  - ✓ Parameter Update – for Network(RAT) of Dual Modem(Qualcomm)
  - ✓ Log Filter in Log Message UI Update

## Ver 3.9.0909

- Update
  - ✓ Adv Call State log packet – “IPSec” field and parser update
  - ✓ Main UI Update – Status bar for “ESP Key Status” and “VoLTE Call Warning Status” is added as below



- (1) ESP Key Status – Caption
  - N – Key is not detected
  - K – Key is detected, but not confirmed yet whether it's correct key
  - X – Key detected but it's incorrect (can't decode ESP packet)
- (1) ESP Key Status – Color
  - Lime – ESP packet was received, and decoding was successful with obtained key
  - Red – Can't decode ESP packet
  - Gray – ESP packet is not received yet, therefore can't decide whether key (if detected) is correct
- (2) VoLTE Call Warning Status – Caption
  - V – Voice(or Video) call
  - D – Data call
  - S – SMS call
- (2) VoLTE Call Warning Status – Color
  - Lime – Successful call measure
  - Red – There is warning state during call measure (ex: SIP packets not received during VoLTE call, TCP/IP packet is not received during call, etc.)
  - Gray – Unknown status
- ✓ Parameter Update
  - General – ESP Key State – enumeration value update
  - Events – VoLTE Call Warning Events – enumeration value update

## Ver 3.9.0913

- Update
  - ✓ Updated for new Qualcomm log version

## Ver 3.9.0926

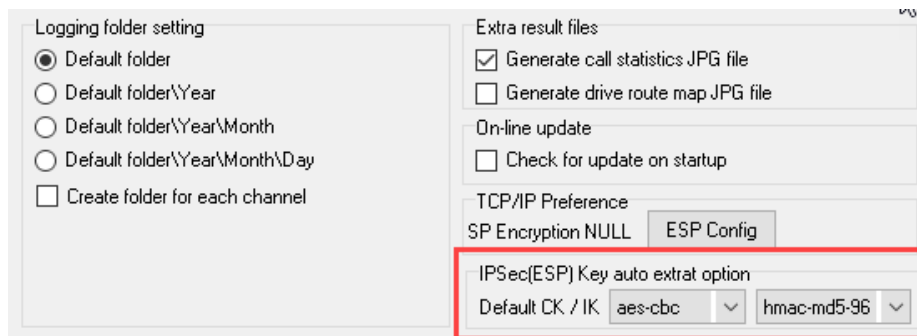
- Update
  - ✓ PCTEL Scanner – Supports CDMA
  - ✓ R&S TSMW/TSME Scanner Interface update to ViCom 15.75

### Ver 3.9.0926

- Update
  - ✓ PCTEL Scanner – Supports Blind Scan
  - ✓ Port Config UI – “Time Sync” , “Phone time offset” feature removed
    - All mobile’s timestamp will be automatically adjusted to PC time.
    - Therefore, you should check PC time zone before measurement.
  - ✓ RMA-based FTP – Supports FTPs

### Ver 3.9.0927

- New Feature
  - ✓ General Option – “IPSec(ESP) Key auto extract option” is added



- If there is no IPSec encryption method information in the packet data, above algorithms will be used as a default algorithm
- Update
  - ✓ IPSec key auto extract method improve
    - Samsung chip – IPSec auto key extract update (ex: Samsung G890A, G925A support)
- Bug Fix
  - ✓ Log Message UI – Direction icon of incorrect bug fix about Samsung TCP/IP packet
  - ✓ TCP fragmented SIP message parsing bug fix
  - ✓ Qualcomm chip timestamp adjust bug fix for abnormal UE – It happens when log 0x1xxx or 0x7xxx missing.

### Ver 3.9.0927

- Bug Fix
  - ✓ Fixed a bug that warning dialog( “Missing Qualcomm LTE ML1 Log” had incorrectly occurred

### **Ver 3.9.0930**

- Update
  - ✓ RMA upgrade (v2.26) – Supports Android 7.0 Nougat
- Bug Fix
  - ✓ iPerf – DLL file version mismatch bug fix

### **Ver 3.9.1004**

- Update
  - ✓ Scenario mode – Sync call – Voice call can be used with sync mode, in the scenario call

### **Ver 3.9.1005**

- Bug Fix
  - ✓ iPerf – DLL file version mismatch bug fix

### **Ver 3.9.1013**

- Bug Fix
  - ✓ Ping Test – Wrong timestamp problem bug fix

### **Ver 3.9.1014**

- Update
  - ✓ Scenario mode – Sync call – update

### **Ver 3.9.1017**

- Bug Fix
  - ✓ Alarm – Packet data payload alarm in the non-scenario mode – bug fix

### **Ver 3.9.1019**

- Update
  - ✓ Packet data payload logging – Automatically configured depending on the active test type
    - Voice Call – Full Payload (1500 Byte)
    - Multi-RAB - Full Payload (1500 Byte)
    - FTP Call – No Packet data
    - iPerf Call – No Packet data
    - HTTP DL/UL – No Packet data

- NIA App Call - No Packet data
- Other Call – Follows user configuration in the “Port Setting” dialog

### **Ver 3.9.1027**

- Bug Fix
  - ✓ Samsung Chip – Bug fix for discarding unknown sub\_cmd

### **Ver 3.9.1028**

- New Feature
  - ✓ Reference Speech for MOS test – Added below reference speeches
    - White Noise NB IRS, White Noise NB, White Noise WB, White Noise SWB

### **Ver 3.9.1031**

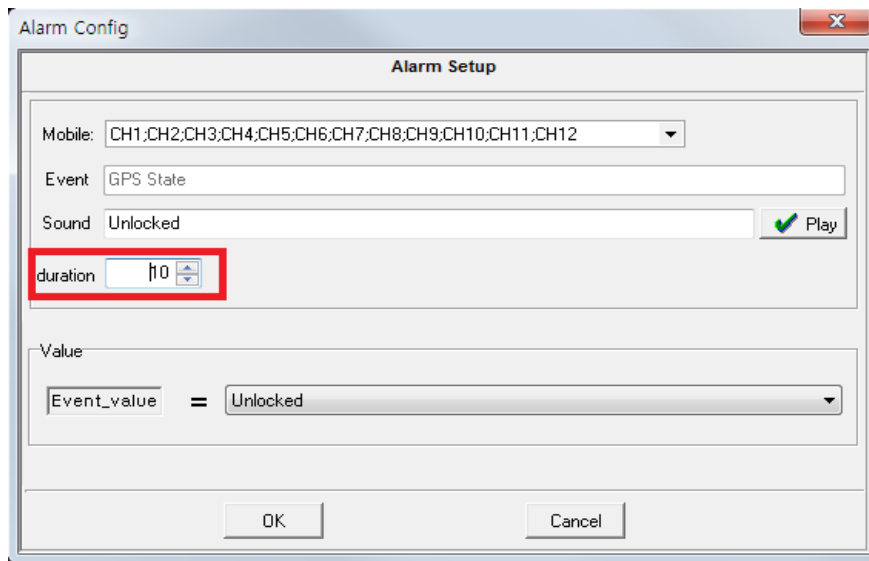
- Update
  - ✓ Samsung Chip – Data processing update
  - ✓ Samsung Chip – UMTS Signal Graph UI update

### **Ver 3.9.1102**

- Update
  - ✓ Log Message UI – Export to File – Msg Flow HTML - update

### **Ver 3.9.1115**

- Update
  - ✓ Alarm function and UI update – User can define “duration” for specific event.  
For example, if GPS is unlocked, and kept in unlocked state for 10 seconds, you’ll get alarm.



### Ver 3.9.1121

- Update
  - ✓ Port Config UI – “ADB Enable log” removed.
  - ✓ Samsung chip IPsec processing update
  - ✓ Qualcomm “LTE MAC UL Transport Block (0xB064)’ MAC Header decoding updated
  - ✓ Qualcomm “LTE ML1 PBCH Decode Packet (0xB183)” parsing updated
  - ✓ Qualcomm “Optimized Extended Message” Diag packet changed to discard
  - ✓ Custom Item of “NV Item Control” UI new DB added
- Bug Fix
  - ✓ ADB Logcat – Crash bug fix
  - ✓ When “Debug msg” enabled, “stop measurement” no action problem bug fixed
  - ✓ NV Item Control UI - “Custom Item” wrong “read/write” bug fixed
  - ✓ Log Message UI - “Pkt Len” and “Packet ID” column’s wrong display bug fixed
  - ✓ Port Config UI – Pair channel’s Dial Number of “pair call with other CH” wrong display bug fixed

### Ver 3.9.1123

- Update
  - ✓ RMA upgrade (v2.28) – Update for Android 7.0 Nougat
- Bug Fix
  - ✓ Freezing on receiving LTE rrcConnectionReconfiguration with mac-MainConfig explicitValue / stag-ToAddModList-r11 – bug fix

### **Ver 3.9.1125**

- Update
  - ✓ RMA upgrade (v2.29) – Update for Android 7.0 Nougat
  - ✓ GPS interface update

### **Ver 3.9.1213**

- Update
  - ✓ Parameter Update – “[LTE] UL CA”, “[LTE] UL CA Active” added
- Bug Fix
  - ✓ Youtube Test – Call result decision bug fix (case: Media playback error in Android OS)
  - ✓ Communication problem with RMA on some laptops – bug fix
  - ✓ “Bluetooth HF,ADB,APP Message” - “YouTube End”, “YouTube Error” filter and parser bug fix

### **Ver 3.9.1214**

- Bug Fix
  - ✓ Youtube Test – Timestamp bug fix for some Youtube events – bug fix

### **Ver 3.9.1215**

- Update
  - ✓ ADB – Supports Android 7.0 Nougat

### **Ver 3.9.1219**

- Bug Fix
  - ✓ Voice call(Pair call mode) – When group sync mode is enabled, call scheduler worked wrong.  
This bug is fixed.
  - ✓ FIT mode – plan setting UI display bug fix

### **Ver 3.9.1221**

- Update
  - ✓ RMA upgrade (v2.30) – Update for YouTube test
- Bug Fix
  - ✓ YouTube test – Call scheduling with short setup time – bug fixed

### **Ver 3.9.1222**

- Update

- ✓ General Option – “Log Upload” tab – UI update
- ✓ “Critical Warning” UI update – “VoLTE SIP Missing” message ignore (Only LinkMaster)
  - “VoLTE SIP Missing” event ignore – when voice plan’s “Target Service” is CS, CSFB, VoWiFi
- Bug Fix
  - ✓ DM Status Bar is yellow – Qualcomm “CM/Get Call Info List” Diag request packet fail problem fixed

### Ver 3.9.1226

- Update
  - ✓ “Mobile Control” UI – User selection is saved/loaded for each control types

### Ver 3.10.0110

- Update
  - ✓ RMA data handling – Enhanced error handling for invalid date/time coming from RMA
- Bug Fix
  - ✓ YouTube Test – Call scheduler bug fix

### Ver 3.10.0117

- Update
  - ✓ RMA upgrade (v2.31) – Update for TraceRoute test
- Bug Fix
  - ✓ Port Setting UI
    - If user click “Check All”, ADB device name for all channels were set to same name also - bug fixed
    - If user click “Select All”, check/uncheck state was not changed to CHECK state – buf fixed

### Ver 3.10.0125

- Update
  - ✓ RMA upgrade (v2.33) – Update to save battery consumption
    - Before
      - RMA disabled “screen off” by force during launch.
      - RMA enabled “positioning service” by force during launch.
    - After
      - RMA doesn’t disable “screen off” during launch. During idle mode or non-data call,

“screen off” will be kept as user configured in Android. However, during data call test, RMA will disable “screen off” by force, to get the maximum possible throughput (by preventing sleep mode effects of Android mobile).

- RMA doesn't enable “positioning service” by force during launch, and leaves as user configured in the Android setting. However, if user configured port setting to get GPS data from RMA, RMA will enable “positioning service” by force.
- ✓ WCDMA Finger Temporal Analysis V2(0x4186) version 11 update
- ✓ Phone Information(0xF054) - PC Info(3) Packet is added
  - Window “USER Login ID”, PC Name, OS version, etc
- Bug Fix
  - ✓ During Qualcomm WiFi Only(VoWiFi) test, timestamp problem occurred on some mobile models – Qualcomm Event Report Packet(WiFi) timestamp problem. This bug is fixed.
  - ✓ Port setting UI – Text display for the log mask status – bug fixed
  - ✓ BT port open problem on FIT mode – bug fixed
  - ✓ Youtube test – negative values were displayed sometimes, after each call test. Bug fixed.

### Ver 3.10.0206

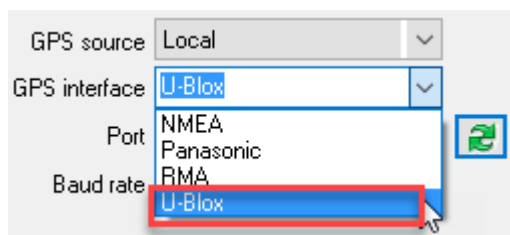
- Bug Fix
  - ✓ FTP call monitor UI – Abnormal value displayed during active test – bug fixed.
  - ✓ RMA was launched before user click OK button in the port setting dialog – bug fixed
  - ✓ HTTP download test – session count 0 problem – bug fixed

### Ver 3.10.0207

- Update
  - ✓ Samsung chip ICD rev5, IPSec, UL\_CA is supported by default without license option
  - ✓ GPS NMEA interface update – supports Ublox

### Ver 3.10.0210

- Update
  - ✓ GPS Interface in “Port Config UI”– add U-Blox (Separate NMEA and U-Blox)



- ✓ GPS Status UI update – added fix mode

GPS Status	
Interface	NMEA-0183
Valid (Locked)	Locked
Latitude (N)	37.4019127
Longitude (E)	127.1004775
Lat. (dec)	134646885
Lon. (dec)	457561718
Date	2017-02-10
Time	16:21:22.000
Height (m)	60.000
Velocity (Km/h)	0.000
Heading	
DOP	9.8
DOP Type	1
Visible Sat. #	
Tracked Sat. #	11
Fix Mode	3D/DGPS

- ✓ RMA upgrade (v2.35) – To support Android v4.x.x

### Ver 3.10.0213

- Update
  - ✓ Qualcomm WCDMA Signal Message(0x412F) “BCCH-BCH SIB Decode” packet’s timestamp mismatch bug fixed
  - ✓ Qualcomm WCDMA Signal Message(0x412F) “DL BCCH-BCH” message format parser update

### Ver 3.10.0214

- Update
  - ✓ User guide update
- Bug Fix
  - ✓ RMA Control UI – RMA version display error bug fix

### Ver 3.10.0217

- Update
  - ✓ MOS Test Plan error check
    - Plan Setting – Voice Quality Test Configuration UI – Updated to show error dialog(in the voice quality test option setting dialog), when user select PESQ(or POLQA) even though he doesn’t have PESQ(or POLQA) license option.
    - Plan Setting – Voice Quality Test Configuration UI – Updated to use “Interval = 7sec” as a default value, instead of 0 value.

- However, user should configure voice quality test option details – Algorithm, Direction, Rx Speech, Tx Speech, Interval, Wait Time, etc.

### **Ver 3.10.0220**

- Update
  - ✓ Updated for new Qualcomm LTE log version – Parser, UI
- Bug Fix
  - ✓ Time Sync Info(0xF062) Packet timestamp incorrect bug fixed
  - ✓ “Missing Qualcomm LTE ML 1 Log” Warning mismatch bug fixed
  - ✓ WCDMA SIB Packet not decoded form “BCH LastAndFirst” message bug fixed
  - ✓ When execute “User Defined Column” dialog box, “Creating “FORM.ini” file bug fixed

### **Ver 3.10.0221**

- Update
  - ✓ Samsung mobile USB device driver update (v1.5.62.0 → v1.5.63.0)
  - ✓ General Option UI – Added “TCPIP No Logging” option
  - ✓ Supports “debug message” and “LogCat” if there are corresponding e-License options
- Bug Fix
  - ✓ Voice Quality Monitor UI – Scenario mode test result display bug fix
  - ✓ Data call plan initialization problem (of 3.10.0220) bug fix

### **Ver 3.10.0222**

- Update
  - ✓ License manager update
- Bug Fix
  - ✓ LTE CA Status UI – MIMO State (antenna M X N) display bug fix
  - ✓ Parameter LTE/LTE-A “eNB Antenna #”, “UE Antenna #” display bug fix

### **Ver 3.10.0223**

- Bug Fix
  - ✓ Exception error during FTP test – bug fixed

### **Ver 3.10.0224**

- Update

- ✓ Log Message UI – Export to HTML – Supports GSM messages (WCDMA RRC DL-DCCH gsm-MessageList)

### **Ver 3.10.0225**

- Update
  - ✓ Supports '+' in the phone number – in main UI, plan setting UI, port configuration UI, etc.

### **Ver 3.10.0228**

- Update
  - ✓ Update for Samsung chip GSM log

### **Ver 3.10.0303**

- Update
  - ✓ Supports '+' in the phone number – in plan setting UI
  - ✓ Update for Samsung chip GSM RR, GSM RLC/MAC
  - ✓ Update for Samsung Exynos 9
- Bug Fix
  - ✓ Multiple voice call end log in scenario mode – Bug fixed

### **Ver 3.10.0306**

- Update
  - ✓ “Bluetooth Reconnect” menu – User can change BT MAC address of each UE, and try connect

### **Ver 3.10.0307**

- Update
  - ✓ Added UE volume control(up/down) function to “Mobile Control” UI
  - ✓ FIT Mode – “Use(Bluetooth-SPP)” is added for RMA, in the port setting UI

### **Ver 3.10.0317**

- Update
  - ✓ WCDMA RRC parser update – Now supports 3GPP 12.9.0
  - ✓ Port setting UI – If there is any confliction in the COM port list, warning dialog is popped up
  - ✓ Plan setting UI – Voice – Added “Video Call (ViLTE)”. Currently it works for Samsung mobile

only

- ✓ Added LogUploader, which performs compression and background log uploading to FTP server.
- ✓ R&S TSMW/TSME scanner interface – API version update to ViCom 15.85.

Below are ViCom 15.85 changelog from R&S.

(refer

<https://cdn.rohde->

[schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1585.txt](https://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1585.txt))

```
-----  
ViCom Changelog  
-----  
  
Version 15.85  
    31.01.2017  
  
- New:    TSMx-PPS2: Added disconnect detection for TSMx-PPS2 receivers (error code:  
VICEC_CONNECTION_LOST).  
- Fixed:  Fixed an incorrect error message for front end selection parameter checks.  
- Fixed:  VICOM ACD: Fixed issues with an internal component sometimes not being shutdown  
properly on Disconnect().  
- Fixed:  VICOM CWScan: Fixed issue with Connect() not returning on TSMW receivers.  
- Fixed:  VICOM GPS: Fixed VICEC_NO_DEVICE error being reported when using NMEA only mode  
on TSMW receivers.  
- Fixed:  VICOM GPS: Removed SGPSMessage::ul64DeviceTimeInNs parameter. Please use  
SGPSMessage::dwPcTimeStampInMs  
                for correlation of position information with other scanner results such as  
LTE.  
- Fixed:  VICOM LTE: Fixed VICEC_LTE_FREQ_OUT_OF_RANGE error being reported in TSME  
MIMO setups when  
                the second TSME does not have a valid TSME-K30 option.  
- Fixed:  VICOM LTE: Fixed P-SCH quality paramter sometimes having positive values, see  
SPowerValue::pfPSyncQualityInDB.  
- Fixed:  L3 Decoding: Fixed issue with CDMA channel list message decoding leading to a missing  
channel.  
- Fixed:  L3 Decoding: Fixed issue with EVDO sync message decoding leading to a missing  
SystemTime_Lower parameter.  
  
- Note:   Removed CMSBase.dll.  
  
Version 15.81  
    16.11.2016  
  
- Fixed:  VICOM ACD: Fixed VICEC_TIME_OUT sometimes being reported during  
StartMeasurement() calls.  
- Fixed:  VICOM LTE: Fixed crash for wideband measurements in unsynchronized networks.  
- Fixed:  VICOM LTE: Reduced number of false RNTI decodes for PDCCH Format 0.  
- Fixed:  VICOM LTE: Fixed missing WB measurements in MBMS mode when no MBMS cells were  
detected.  
- Fixed:  VICOM GSM: Minimum possible total power offset parameter increased to 2 dB.  
                If set, the former limit of 0 dB prevents to get demodulations at all.  
  
- Note:   Manual not updated yet!
```

Version 15.80  
31.10.2016

- New: Enhanced error reporting. ViCom now has more detailed error messages, e.g. including limits and current value of incorrectly set parameters which helps to identify issues without debugging effort.
- New: Add support for transducer tables to take antenna specific parameters into account during measurement on TSME receivers.
- New: Disconnecting multiple TSME receivers in a MIMO setup works faster now.
- New: VICOM RF POWER SCAN: Updated measurement rate limits for TSMW and TSME receivers. Minimum is 0.1 Hz now.
- New: VICOM LTE: Add support for reference signal based channel impulse response measurements,  
see `SSignals::SReferenceSignal::pRefSignalCirResults`.
- New: VICOM LTE: Add bitmasks to report the used front end / measured transmit antenna port for MIMO results,  
see `SMimoResult::bReceiveAntennaMask` and `SMimoResult::bTransmitAntennaMask`.
- New: VICOM LTE: Throughput estimation measurements support 4x4 MIMO configurations now.
- New: VICOM LTE: Downlink allocation analyser measurements support 4x4 MIMO configurations now.
- New: VICOM LTE: Add modulation and transport block size parameters to DLAA RNTI information results,  
see `SDLaaResult::SBtsResult::SRntiResult`.
- New: VICOM LTE: Updated parameters for DLAA and RNTI statistics result, see `SDLaaResult::SBtsResult::SStatisticResult`.
- New: VICOM WCDMA: Add interface definitions for SIB23 message. Full support will be added in a future release.
- New: VICOM CDMA: Add interface definitions for ATIM message. Full support will be added in a future release.
- Fixed: VICOM LTE: Fixed reference signal RSRP and RSRQ values being reported with incorrect 0 dBm values.  
see `SSignals::SReferenceSignal::sPBCHbasedRSRPinDBm100` and `Signals::SReferenceSignal::sPBCHbasedRSRQinDB100`.
- Fixed: VICOM LTE: Fixed several DLAA issues leading to incorrect or duplicate RNTI and statistic results.
- Fixed: VICOM LTE: Fixed issue with calculation of ToA to PPS offset parameter.
- Fixed: VICOM LTE: Fixed crash when multiple MBSFN areas are measured.
- Fixed: LTE Demodulator: Fixed crash when partially decoding false SIB1 messages.
- Fixed: LTE Demodulator: Fixed crash when decoding MBSFN frames.
- Fixed: LTE Demodulator: Fixed issue for SIB2 and SIB3 decoding for MBMS networks using more than 1 MBSFN area.
- Fixed: Fixed naming inconsistencies for demodulation requests.
- Fixed: Fixed issue with `CViComBasicInterface::HasMeasurementStopped()` not returning when called in idle state.
- Fixed: Fixed issue with `CViComBasicInterface::HasMeasurementStopped()` not returning when `CViComBasicInterface::StopMeasurement()` hasn't been called before.
- Fixed: VICOM ACD: Fixed occasional "Waiting for PhylisRR/Romes.exe to start" errors being reported as message box.
- Fixed: VICOM ACD: Fixed calls to `StartMeasurement()` blocking other interfaces.
- Fixed: VICOM ACD: Fixed uplink channels wrongly reported as downlink.
- Fixed: VICOM GPS: Fixed synchronization issue leading to parallel read and write requests to the

GPS receiver.

- Fixed: VICOM GPS: Fixed issue with result PC timestamp does not match raw message reception time.

- Note: Removed mfc71.dll.

- Note: Removed msvcp71.dll.

- Note: Removed msucr71.dll.

- Note: Removed LteMimoScannerRsCinrEstimators.hex.

- Note: R&S TSME tools updated to version 1.3.5.3.

- Bug Fix
  - ✓ Total Call Monitor UI – Port state display bug fix

### Ver 3.10.0321

- Update
  - ✓ PCTEL scanner feature update
    - “Blind Scan” is supported
    - “BW auto detect” is supported for LTE scan. Scanner UI now shows BW for each EARFCN.
    - GPS data is retrieved from PCTEL scanner
    - Updated PCTEL\_MGR

### Ver 3.10.0324

- Update
  - ✓ Default plan – Default value of “Voice Quality Measurement” is OFF, while previous version had ON
  - ✓ Samsung chip – Log version 5.15 support update
  - ✓ RMA upgrade (v2.37) – Supports DNS for FTP server address
  - ✓ FIT Mode – Data Test is added
  - ✓ Voice Call Result decision – If caller ID is different from phone number defined in plan, call result is decided as “ETC”

### Ver 3.10.0402

- Update
  - ✓ Samsung chip – supports 5CA display
- Bug Fix
  - ✓ License manager bug fix

### **Ver 3.10.0406**

- Update
  - ✓ Airplane on/off control in RMA – Supports Android Nougat 7.0, using KeyEvent
  - ✓ Qualcomm LTE Signal Graph UI – Show same value with parameter manager for PDSCH throughput.

### **Ver 3.10.0410**

- Update
  - ✓ RMA upgrade (v2.38) – Supports DNS for FTP server address
    - Updated for SMS test – Supports 200B SMS, and user-defined text for SMS
    - Updated for HTTP download/upload test
  - ✓ SMS text update – Supports 200B SMS, and user-defined text for SMS

### **Ver 3.10.0411**

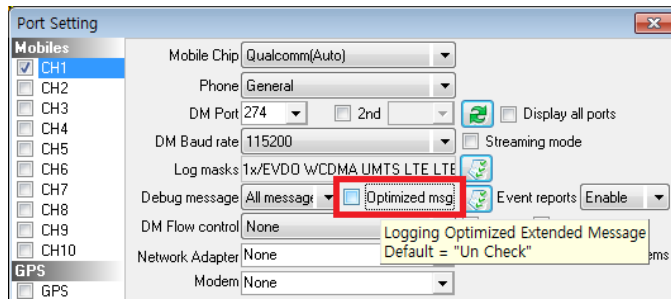
- Update
  - ✓ RMA upgrade (v2.39) – Updated for LMS test
  - ✓ HTTP Upload Test – Supports multi-session
  - ✓ Port Setting UI – Critical warning dialog is not displayed for 15seconds, when you click OK button in port setting UI, while DM ports are already connected
- Bug Fix
  - ✓ cdma2000 SMS over 80 byte sizes bug fixed
  - ✓ cdma2000 SMS(TIA/EIA-637-A) “GSM 7-bit default alphabet” user data parser bug fixed

### **Ver 3.10.0413**

- Update
  - ✓ Plan Setting UI – SMS – User don't need to define text, and only need to define “SMS text length”
  - ✓ SMS test – Supports split SMS message

### **Ver 3.10.0414**

- Update
  - ✓ Port Setting UI – Added configuration option “Optimized msg” for Debug Messages



- You should copy "QSRMessageHash.qsr" file on the "\MessageHash" subfolder. Otherwise, message will not be parsed

✓ Log Message UI – UL/DL direction is displayed for mobile chip log packets also

• Bug Fix

✓ Parameter "[WCDMA] RNC" with Samsung chipset not display bug fixed

**Ver 3.10.0424**

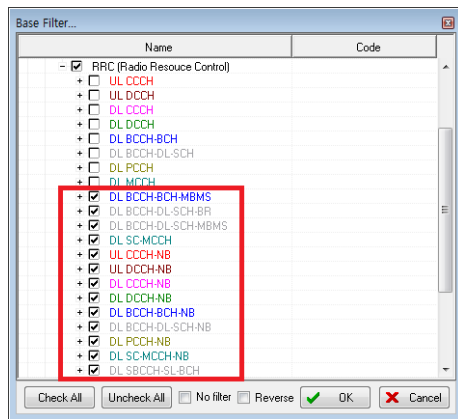
• New Feature

✓ Supports new INTEL chip

• Update

✓ Supports LTE RRC d50

✓ Log Message UI – Added LTE RRC Rel D50 messages



✓ Supports new Qualcomm log packet version

**Ver 3.10.0426**

• Update

✓ MOS\_MGR update. Also "Samples" folder has "MOS\_MGR.ini" file

**Ver 3.10.0502**

• Update

- ✓ User can define logcat option
- ✓ SMS test update – User can directly specify SMS text length.

### Ver 3.10.0509

- Update
- ✓ VDR scanner – interface update

### Ver 3.10.0517

- Update
- ✓ Samsung chip – Updated no service detection logic

### Ver 3.10.0518

- Update
- ✓ Supports TCP/IP logging control for Scout

### Ver 3.10.0519

- Update
- ✓ Qualcomm chip – LogMask – Added new LTE log packets to the logmask for Qualcomm chip.  
**WARNING – You should configure log mask again, before using new version.**

### Ver 3.10.0522

- Update
- ✓ Qualcomm chip Update
- Qualcomm LTE Log Update (MAC, RLC, PDCP)
- Qualcomm CM Call Event(0x12C1) - update
- ✓ R&S TSMx Scanner Packet Update
- MIMO TPut & CQI
- R&S TSMx Scanner DLL (RSDLL.dll - 1.0.9.0) update

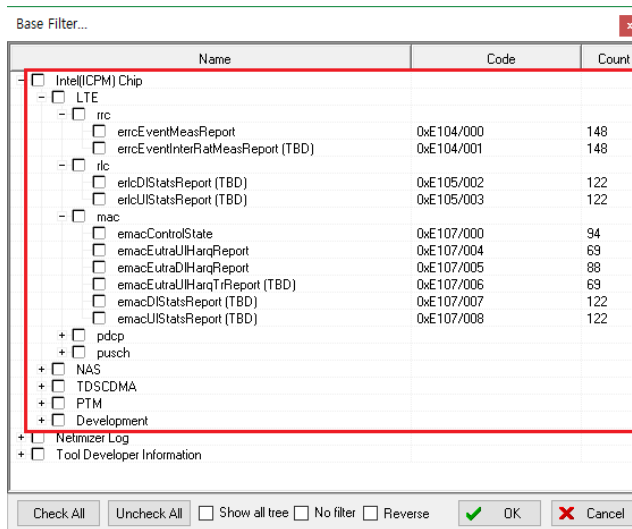
### Ver 3.10.0526

- Update
- ✓ MOS\_MGR update – Default volume configuration is changed.
- Before: Play=90, Record=7(Win7) or 40(Win10)

- After: Play=80, Record=99
- ✓ VDR scanner – User can select firmware version between “Old Firmware” and “New Firmware”

### Ver 3.10.0530

- Update
- ✓ Qualcomm Log NB-IOT FW (0xB200 ~ 0xB229) – Log Tree(NB1 FW) filter update
- ✓ Qualcomm Log NB-IOT SW (0xB240 ~ 0xB24E) – Log Tree(NB1 SW) filter update
- ✓ LTE NAS(EMM,ESM) parser update – Now supports 3GPP TS 24.301 V14.3.0
- ✓ ICPM – add message filter (all message)



- ✓ ICPM - add packet header / parsing
- emacControlState
- emacEutraUIHarqReport
- emacEutraDIHarqReport
- eventPuschTransmissionStatus
- ptmNsapiDelayStats

### Ver 3.10.0608

- Update
- ✓ MOS\_MGR update – Default volume configuration is changed.
- Before: Play=80, Record=99
- After: Play=80, Record=70

### Ver 3.10.0609

- Update

- ✓ Scenario scheduler feature update

### Ver 3.10.0612

- Update
- ✓ Scenario scheduler update

### Ver 3.10.0614

- Update
- ✓ RMA upgrade (v2.43) – Enhanced communication stability with DML
- Bug Fix
- ✓ Scenario mode call test – Voice quality test didn't start sometimes during scenario mode – bug fixed.

### Ver 3.10.0621

- Update
- ✓ Samsung chip – UMTS – “UL Power Information” UI – updated for the recent Samsung chipset
- ✓ RM App interface update

### Ver 3.10.0626

- Update
- ✓ Parameter Update – updated for LTE 5CA (SCell3, SCell4)
- “Serving Cell Measurement” for SCell3, SCell4 – PCI, DL/UL EARFCN, DL/UL Bandwidth, Band, Duplex, eNB/UE Ant#, RSSI, RSRP, SINR
- “RB & TB” for SCell3, SCell4 – DL RB Num, DL RB NUm (1’)
- “CQI/PMI/RI” for SCell3, SCell4 – WB CQI CW0/CW1, RI, RI Rank1/Rank2/Rank3/Rank4 Count
- “Modulation” for SCell3, SCell4 – DL MCS (CW0/CW1), DL Modulation Order (CW0/CW1)
- “Throughput”/“BLER”/ for SCell3, SCell4 – PDSCH Thr, DL BLER
- “Residual BLER” for SCell3, SCell4 – DL iBLER, DL rBLER, DL New Tx Count, DL ReTx Fail Count
- ✓ LTE CA Status UI – updated for LTE 5CA
- 5 CA(SCell3, SCell4) added
- “Band” added
- PCell – SCell(best) changed
- ✓ Network & Cell UI - updated for LTE 5 CA

- Bug Fix
- ✓ Parameter “[LTE-A] CA”, “[LTE-A] UL CA” updated.

### **Ver 3.10.0705**

- Update
- ✓ Added “LTE PCI Lock (for Qualcomm chip)”
- ✓ Parser Update - WCDMA Multi Carrier EUL Link Statistics(0x4345) – “PDDCH, HS-DPCCH, E-DPCCH, E-DPDCH T/P”

### **Ver 3.10.0714**

- Update
- ✓ Qualcomm LTE-A Signal Graph for 5CA (SCC3/SCC4)
- ✓ Qualcomm LTE-A Cell List for 5CA (SCC3/SCC4)

### **Ver 3.10.0720**

- Update
- ✓ Mobile Control UI - update

### **Ver 3.10.0724**

- Bug Fix
- ✓ R&S TSME/TSMW Scanner exception error during for WCDMA – bug fixed (RSDLL.DLL v1.0.9.1)
- ✓ R&S TSME/TSMW Scanner no display error during for Spectrum – bug fixed

### **Ver 3.10.0727**

- Bug Fix
- ✓ R&S TSME/TSMW Scanner exception error during for WCDMA/LTE – bug fixed (RSDLL.DLL v1.0.9.2)
- ✓ R&S TSME/TSMW Scanner no display error during for Spectrum – bug fixed

### **Ver 3.10.0803**

- Bug Fix
- ✓ Voice Quality Measurement Configuration – “WaitMSec” didn’t work correctly on scenario mode – bug fixed

### **Ver 3.10.0804**

- Update
  - ✓ ADB update to recent version

### **Ver 3.10.0808**

- Update
  - ✓ Logmask will be recovered to user-defined one, when measurement is stopped

### **Ver 3.10.0817**

- Update
  - ✓ Supports new Qualcomm log version

### **Ver 3.10.0828**

- Update
  - ✓ Samsung chip log update

### **Ver 3.10.0829**

- Update
  - ✓ LicenseChecker update

### **Ver 3.10.0904**

- Update
  - ✓ FIT mode – Default logmask changed (“Voice call default“ to “All logmask”)

### **Ver 3.10.0912**

- Update
  - ✓ Supports new Qualcomm log version – Parser and UI (Signal Graph, Parameter)
  - ✓ Qualcomm LTE Parameter modify calculation method of “[LTE] DL Trans Mode”, “MIMO Type”, “Antenna #”, RI”, etc
  - ✓ Samsung chip log is not encrypted in case of KT license

### **Ver 3.10.0920**

- Update
  - ✓ Supports Qualcomm NB-IoT (LTE Cat NB1) – Log Mask, Parameter Manager KPI

### **Ver 3.10.0921**

- Update
  - ✓ Supports new Qualcomm log version – 0x4186 v12

### **Ver 3.10.0926**

- Update
  - ✓ PCTEL EPS – Result is displayed in ‘Channel Power’ tab
- Bug Fix
  - ✓ PCTEL EPS configuration – Big frequency value had problem for save/load. It’s bug fixed.

### **Ver 3.10.0928**

- Update
  - ✓ Qualcomm WCDMA RRC Log version update
  - ✓ Qualcomm LTE RRC Log version update
  - ✓ Time Adjust for Qualcomm LTE Cat NB1
  - ✓ IPsec key auto extract method improve
    - Qualcomm UE’s IPsec auto key extract update (ex: LG-V30 support)
  - ✓ IPsec key auto save/load at program restart

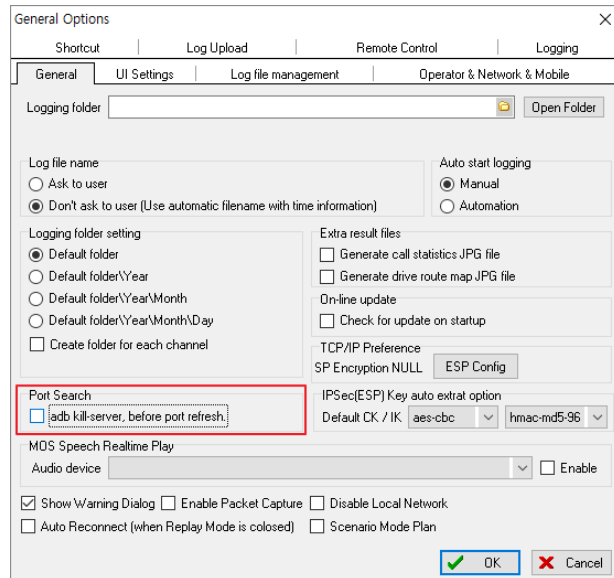
### **Ver 3.10.1019**

- Update
  - ✓ RMA upgrade (v2.44) – Fixed with below cases.
    - Even after call result “Setup Fail”, VOD play was not stopped on some cases. This bug is fixed.
    - Enhanced error handling for the case when VOD screen is overlapped by other app, or minimized by user.

### **Ver 3.10.1020**

- Update
  - ✓ General option – added ‘adb kill-server’ option (default is uncheck). If you select this option,

ADB communication will be disconnected with all RMAs when you click refresh button in the port setting dialog, and ADB device list will be refreshed by force every time.



- Bug Fix
  - ✓ GCT Chip - GDM7243QA chip UI bug fix

### Ver 3.10.1023

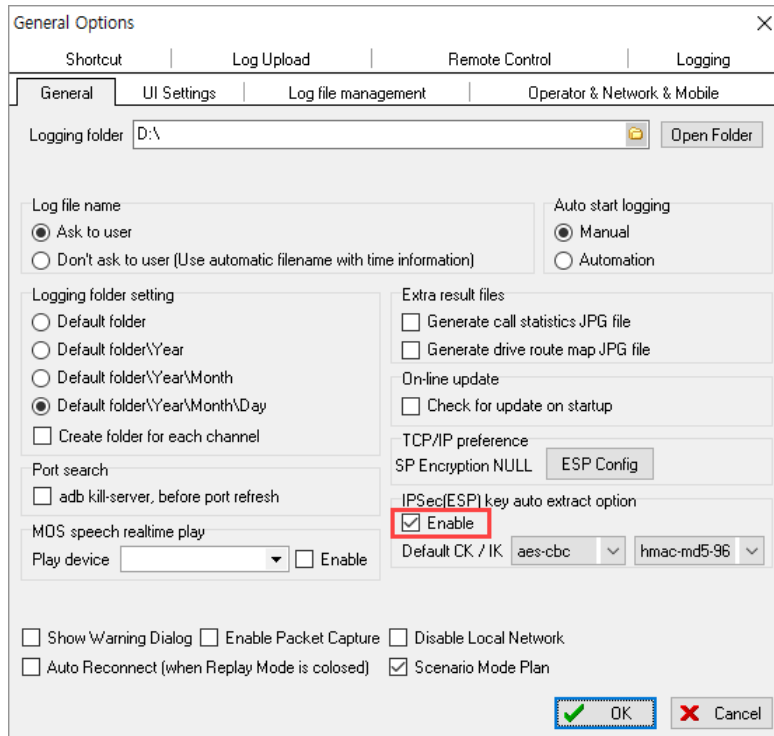
- Update
  - ✓ Port Search – Support 'Intel NUC + 3 VoLT'

### Ver 3.10.1027

- New Feature
  - ✓ Supports new Hisilicon chip

### Ver 3.10.1102

- Update
  - ✓ IPsec ESP key auto detection - Added "Enable" option in the general option UI (Default = checked).  
When this option is not selected, auto detection will be disabled.



### Ver 3.10.1108

- Update
  - ✓ Supports new Qualcomm log version
    - 0xB111 ver122
  - ✓ Samsung UE's IPSec auto key extract update (for Galaxy S8/S8+ Android 8.0 Oreo)
- Bug Fix
  - ✓ Qualcomm LTE-A Parameter modify calculation method
    - "[LTE-A] (P)DL Spatial Rank (1)"
    - "[LTE-A] (P)RI", "[LTE-A] (S1)RI", "[LTE-A] (S2)RI", "[LTE-A] (S3)RI", "[LTE-A] (S4)RI"
  - ✓ Qualcomm LTE-A Signal Graph (1' Sampling) modify calculation method
    - "[LL1] (PCell) DL - Spatial Rank (per sec)"
    - "[LL1] (SCell1/2) DL - Spatial Rank (per sec)"
    - "[LL1] (SCell3/4) DL - Spatial Rank (per sec)"

### Ver 3.10.1117

- Update
  - ✓ Port setting – PCTEL scanner: Added new band codes.
  - ✓ Supports new Qualcomm log version

- 0xB0B4\_0xC5 v26, 0xB0C0 v16
- 0xB111 v122, 0xB113 v121, 0xB115 v122, 0xB12E v121, 0xB132 v126, 0xB139 v124, 0xB14D v102, 0xB14E v102
- 0xB177\_16,17,18,19,20,21,22,23,24,37 v32,32,36,34,32,32,32,32,32,32
- 0xB181\_11 v32, 0xB194\_28 v32
- 0xB195\_30,31 v32,24

### **Ver 3.10.1120**

- Update
  - ✓ Supports new Qualcomm log version
    - 0xB119 v121, 0xB1BD v32,33,34,35,36

### **Ver 3.10.1123**

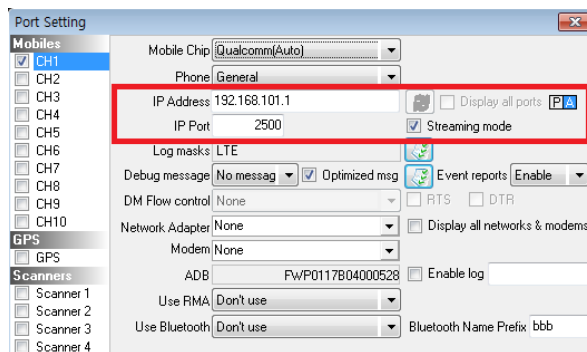
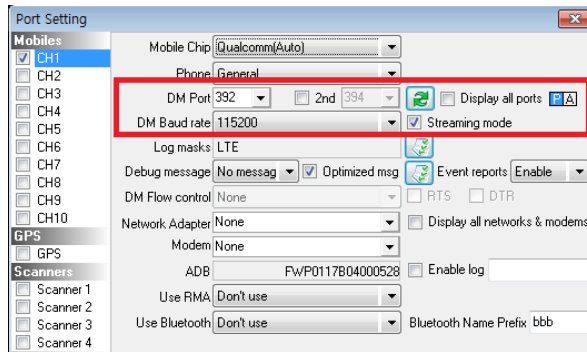
- Update
  - ✓ CDMA OTA parser update

### **Ver 3.10.1128**

- New Feature
  - ✓ Supports client mode LML
- Update
  - ✓ CDMA OTA parser update
  - ✓ RMA upgrade (v2.45)
    - YouTube player is launched as landscape mode by force on video load, and returns to portrait mode after play stops.
    - App name changed from "Netimizer RMA v2.xx" to "RMA v2.xx"
    - App icon changed
  - ✓ License manager update

### **Ver 3.10.1206**

- New Feature
  - ✓ DM IP Connection Support (for LAN-to-Serial)



- ✓ H chip – ICD v20171122 is applied – 3G RRC/NAS, PHY messages are added
- Update
  - ✓ Total Call Monitor UI – Supports scenario mode

### Ver 3.10.1208

- Update
  - ✓ H chip – applied ICD-20171207
  - ✓ Support Log Message Filter Tree for Qualcomm GSM DSDS log packets
  - ✓ Support Qualcomm GSM DSDS Signal Messages
    - GSM DSDS RR Signaling Message (0x5B2F)
    - GPRS DSDS MAC Signaling Messages (0x5C26)
    - GPRS DSDS SM/GMM OTA Signaling Messages (0x5C30)
  - ✓ Support Qualcomm GSM DSDS log packets
    - GSM DSDS L1 Monitor Bursts (0x5A82)
    - GPRS DSDS MAC UL Ack/Nack (0x5C2C)
    - GPRS DSDS MAC DL Ack/Nack (0x5C2D)
- Bug Fix
  - ✓ Scenario scheduling – Bug fix
  - ✓ RMA upgrade (v2.46) – YouTube test event recording bug fix

### **Ver 3.10.1211**

- Update
  - ✓ H chip – applied ICD-20171207v2
  - ✓ H chip – Supported in FIT mode

### **Ver 3.10.1220**

- Update
  - ✓ H chip – applied ICD-20171215
  - ✓ H chip – Supported in Parameters

### **Ver 3.10.1227**

- Update
  - ✓ Total Call Monitor UI – Call Result tab displays data call type(Ping, FTP, HTTP, etc.) together with call result, for the data call types
  - ✓ Port Setting UI – If there is any confliction in the COM port list, warning dialog is popped up when the Port Setting UI is popped up first time after program launch. In the previous version, this popup message was displayed when you click “OK” button in the port setting UI.

### **Ver 3.11.0104**

- Update
  - ✓ Samsung chip – Supports ICD v5.21

### **Ver 3.11.0105**

- Update
  - ✓ eLicense manager update

### **Ver 3.11.0108**

- Update
  - ✓ eLicense manager update
  - ✓ Log View parser update
    - Supports Qualcomm GSM DSDS Log packets (0x5A6A ~ 0x5B91)
    - Supports Qualcomm GPRS DSDS Log packets (0x5BF4 ~ 0x5C73)

### Ver 3.11.0111

- Update
  - ✓ GSM/GPRS UIs support Qualcomm GSM/GPRS DSDS log packets

### Ver 3.11.0112

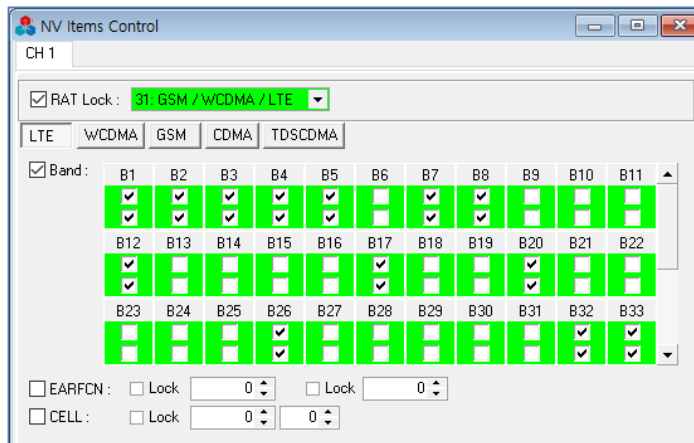
- Update
  - ✓ Supports new Qualcomm log version
    - LTE RRC Signal Messages ver20 (0xB0C0 v20)
    - LTE ML1 Serving Cell Measurement Result (0xB193 0x19 - ver26)

### Ver 3.11.0119

- Bug Fix
  - ✓ LAN-interfaced GCT chip – DM communication bug fix

### Ver 3.11.0124

- Update
  - ✓ “NV Items Control” UI renewal and updated



### Ver 3.11.0125

- Bug Fix
  - ✓ Qualcomm (SDM545) DM connection problem, during airplane mode on/off or reset – bug fixed

### Ver 3.11.0131

- Update
  - ✓ RMA upgrade (v2.47)
    - Retrieves UTC and local date/time from Android mobile
- Bug Fix
  - ✓ “NV Items Control” UI bug fixed
    - **Warning: Before writing NV items, you SHOULD “READ” NV items first**

### Ver 3.11.0201

- Update
  - ✓ Supports remote client mode with RCS, in LML version also

### Ver 3.11.0202

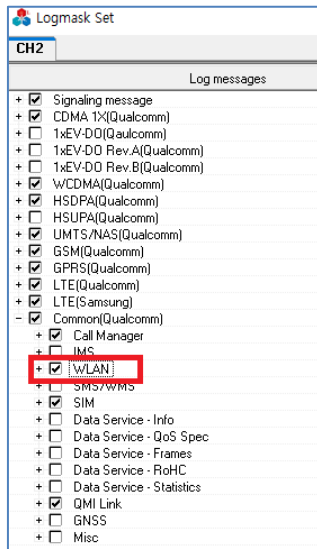
- Update
  - ✓ RMA upgrade (v2.48)
    - Support CPU usage retrieval on Android 8.0

### Ver 3.11.0206

- Update
  - ✓ Supports new Qualcomm log 0xB246 v2
- Bug Fix
  - ✓ Problem with incorrect timestamp(local time) in replay – bug fixed

### Ver 3.11.0213

- Update
  - ✓ “General Option – Log Upload” tab update
  - ✓ Log\_Uploader update
- Update
  - ✓ Supports new Qualcomm log - 0xB119 v101, 0xB17C v3, 0xB183 v24
  - ✓ Supports Qualcomm WLAN log
    - Qualcomm WLAN logmask



- WLAN OTA (IEEE 802.11 Std) message parser

```

04:25:21.068 SID(0)/T(15.759) 0x1940 WLAN OTA RX
version = 1
MAC ID = 1
Channel ID = 13
RSSI = 25 dBm
VDEV ID = 255
OP Type = 255
Payload Size = 145

IEEE 802.11 Beacon frame, Flags: .....
Type/Subtype: Beacon frame (0x0000)
Frame Control Field: 0x8000
.....00 = Version: 0
...00.. = Type: Management frame (0)
1000.... = Subtype: 0
Flags: 0x00
....00 = DS status: Not leaving DS or network is operating in AD-HOC mode
....0.. = More Fragments: This is the last fragment
...0... = Retry: Frame is not being retransmitted
...0.... = PWR MGT: STA will stay up
..0..... = More Data: No data buffered
.0..... = Protected flag: Data is not protected
0..... = Order flag: Not strictly ordered
.000 0000 0000 0000 = Duration: 0 microseconds
Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
Transmitter address: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
Source address: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
BSS Id: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
....0000 = Fragment number: 0
1100 0110 1110 .... = Sequence number: 3182
IEEE 802.11 wireless LAN
Fixed parameters (12 bytes)
Timestamp: 0x00001070b3713a1
Beacon Interval: 0.102400 [Seconds]
Capabilities Information: 0x0411
....1 = ESS capabilities: Transmitter is an AP
....0.. = IBSS status: Transmitter belongs to a BSS
....00.. = CFP participation capabilities: No point coordinator
....1.... = Privacy: AP/STA can support WEP
....0.... = Short Preambles: Not Allowed
....0.... = PBCC: Not Allowed
....0... = Channel Agility: Not in use
....0.... = Spectrum Management: Not Implemented
....1... = Short Slot Time: In use
....0... = Automatic Power Save Delivery: Not Implemented
...0.... = Radio Measurement: Not Implemented
..0.... = DSSS-OFDM: Not Allowed
.0.... = Delayed Block Ack: Not Implemented
0... = Immediate Block Ack: Not Implemented
Tagged parameters (100 bytes)

```

**Ver 3.11.0219**

- Update
  - ✓ Supports POLQA 2.4. User can choose POLQA version (1.1 or 2.4) in the plan setting UI.
  - ✓ Updated POLQA OEM DLL to v 1.29
- Bug Fix
  - ✓ Scanner UI – SINR value display bug fix

### Ver 3.11.0227

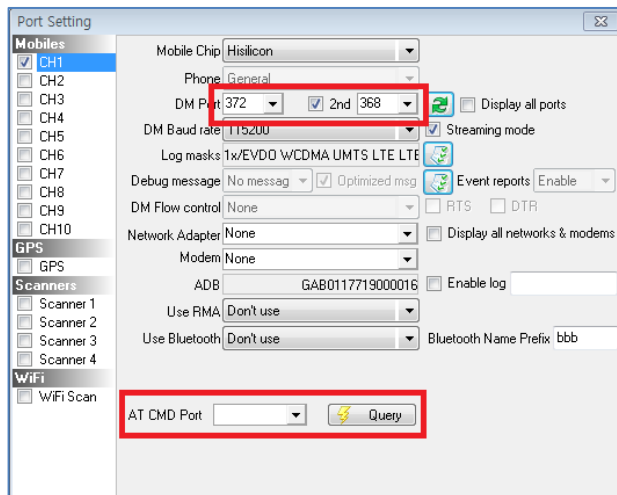
- Update
  - ✓ PCTEL scanner updates
    - PCTEL GPS is now used as GPS source for map display
    - LTE measure collects quality information for each path of TxN\_RxM
  - ✓ LTE RRC parser update

### Ver 3.11.0306

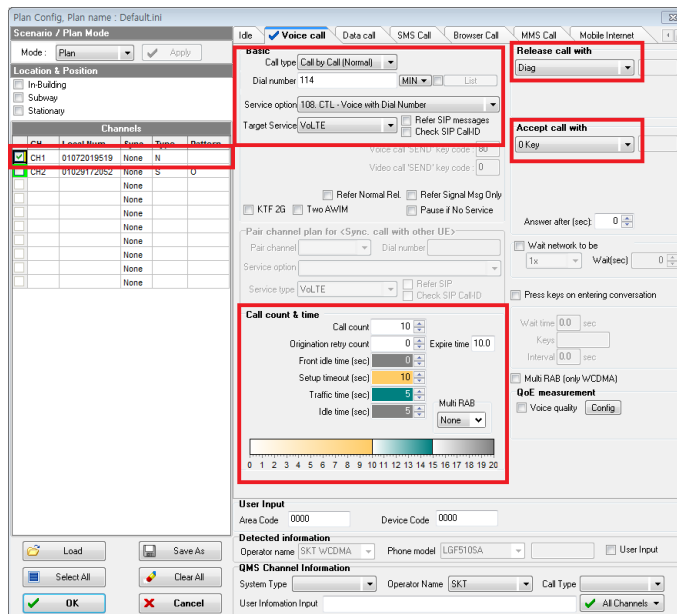
- Update
  - ✓ Total Call Monitor, Voice Call Monitor – Accumulated call counts are displayed in the case of scenario mode test

### Ver 3.11.0307

- Update
  - ✓ IPsec key detection update



- 2nd port should be defined
- DM port – Please select “GPS interface”
- 2nd port – Please select “Application interface/AT CMD Port - PCUI interface”
- Update
  - ✓ GCT Voice auto call function is added



- Plan setting – Service option should be configured to “108. CTL - Voice with Dial Number”

### Ver 3.11.0319

- Update
  - ✓ Altair chip interface update
    - Added communication type – UDP, TCP

### Ver 3.11.0323

- Update
  - ✓ LogUploader update
  - ✓ Altair chip – Added “RSSI” and “SINR” to parameters list
- Bug Fix
  - ✓ Scenario editor, Scenario scheduler – bug fix
  - ✓ Remote control with RCV – Measure start didn’t work correctly – bug fix
  - ✓ GPS UI – bug fix
  - ✓ RMA update (v2.49)
    - Crash on incoming call with unknown caller ID – bug fix
    - Exception in handling HTTP plan command – bug fix

### Ver 3.11.0326

- Update
  - ✓ RMA update (v2.50)

- When location information was not updated from Android, GPS information had same time value – bug fix
- ✓ Parameter “[LTE] Pathloss (RefSigPwr-RSRP)”, “[LTE] Open Loop PUCCH Estimate” added.

### Ver 3.11.0329

- Update
  - ✓ LMDM update for LG chipset
    - CT18(0xC416) group: 0x16xx
    - 5G(0xC417, 0xC418) group: 0x17xx, 0x18xx

### Ver 3.11.0330

- Update
  - ✓ RMA update (v2.51)
    - Requires Android version higher than 5.0.1
    - Saves WiFi status even during "WiFi Off" state and "Not Connected to AP" state
    - Collects WiFi connection information in more detail for the current serving AP. (FrequencyMHz, MAC Address, Supplicant State)

### Ver 3.11.0402

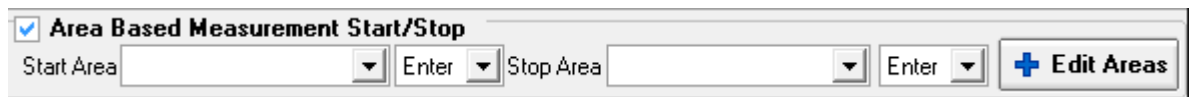
- Update
  - ✓ Parameter “[LTE] Open Loop PUCCH Delta” added.

### Ver 3.11.0403

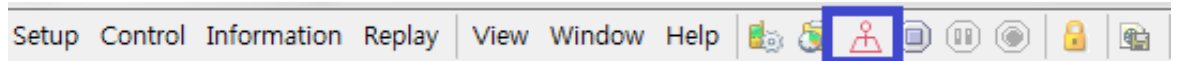
- Update
  - ✓ Supports ULP(SUPL 2.0) over IP packet data
    - ULP/LPP, ULP/RRLP messages parser
  - ✓ TIA/EIA-801-A(Position Determination Services) over CDMA message
    - TIA/EIA-801-A(Position Determination Services) message parser

### Ver 3.11.0412

- New Feature
  - ✓ Added “Area Based Measurement Start/Stop” option in the Plan setting UI
    - You can define conditions for “automatic measurement start” and “automatic measurement stop”



- When this option is enabled, “Measure Start” button in toolbar is changed as below.



- Update
  - ✓ UI Log View Filter –Added Location LPP(0xFD03), RRLP(0xFD04)
  - ✓ User Def Column - 'Text to Find' is increased to 4 text fields
  - ✓ Supports Qualcomm CDMA IRAT Handover Message log (0x1388, 0x1389, 0x138B, 0x138C, 0x138D)
  - ✓ Parameter “WiFi” group added
    - “[WiFi] MAC ID”, “[WiFi] Channel ID”, “[WiFi] RSSI”
    - “[WiFi-RMA] SSID”, “[WiFi-RMA] Channel ID”, “[WiFi-RMA] RSSI”
- Bug Fix
  - ✓ QXDM log mask(.dmc) load – bug fix

### Ver 3.11.0417

- Update
  - ✓ You need Qualcomm NB-IOT chipset license option to use with NB-IOT chipset
  - ✓ RMA update (v2.52)
  - Exception enhanced for Android WiFi API exception

### Ver 3.11.0508

- Update
  - ✓ “ESP Key Status” in the main form status bar is changed to gray upon airplane mode on
- Bug Fix
  - ✓ Samsung chip 0xEB04 LPHY System Info - Transmission Mode 0x12 (SIMO) bug fix
  - ✓ Markov Frame Rate Statistics (0x100E) parser bug fixed

### Ver 3.11.0510

- Bug Fix
  - ✓ Port setting UI – R&S scanner IP address was not editable – bug fixed
  - ✓ “NV Items Control” UI – CDMA (S)Frequency was not written – bug fixed

### Ver 3.11.0530

- Update
  - ✓ RMA update (v2.53)
    - FTP over IPv6 – Retries connection in case of connection error
- Bug Fix
  - ✓ If LTE RRC rrcConnectionReconfiguration has SCell EARFCN value larger than 65535, it's not processed anymore (dl\_CarrierFreq\_v1090 mapping)

### Ver 3.11.0601

- New Feature
  - ✓ Auto Call Test for Samsung NB-IoT Device
    - Model: Samsung SM-V110K (SM-V110KZWAKTC :  
<http://www.samsung.com/sec/iot/connect-tag-v110/>)
    - Feature: DML makes device to perform Ping test, and monitors Ping results and statistics. It's displayed in Ping call monitor, and results are saved to log file.

### Ver 3.11.0605

- Update
  - ✓ Supports multiple Altair chipset devices
- Bug Fix
  - ✓ Mobile Control UI – Enhanced for the access violation problem

### Ver 3.11.0607

- Update
  - ✓ Update for multiple Altair chipset devices support

### Ver 3.11.0609

- Update
  - ✓ PCTEL\_MGR update – displays scanner information for IBFlex and MxFlex

### Ver 3.11.0612

- New Feature
  - ✓ E911 support

### Ver 3.11.0618

- Update
  - ✓ Qualcomm NB-IoT (LTE Cat NB1) –Parameter Manager KPI update
    - [LTE-NB] NPDSCH Throughput calculation bug fixed
    - [LTE-NB] NPDSCH MCS, SF# added
    - [LTE-NB] NPUSCH Tx Pwr, Throughput, MCS, RU#, ReTx Rate added
  - ✓ RMA update (v2.54)
    - During multi session HTTP download and upload, total transfer size decreased when a session completes transfer. This bug is fixed.

### Ver 3.11.0625

- Update
  - ✓ PCTEL scanner interface update
    - Added new band codes to configuration UI
  - ✓ Qualcomm chip – Log mask updated (remove unnecessary log)
- Bug Fix
  - ✓ Main Status Bar – “VoLTE Call Waring Status” color bug fixed

### Ver 3.11.0626

- Update
  - ✓ For the unused channels, BT connection will be released
  - ✓ Altair chip UI update for unstable devices
    - Signal graphs - RSRP display method updated
    - Signal graphs - Added line pointer
    - Signal graphs - Table width value accepts keyboard input
    - Device reconnection timer is changed from 25sec to 60sec, for unstable devices
    - On device reconnection, call states are initialized, so that plan UI can be edited

### Ver 3.11.0627

- Bug Fix
  - ✓ Qualcomm LTE BLER calculation from “LTE ML1 PDSCH Stat Indication (0xB173 v36)” - bug fixed

### **Ver 3.11.0703**

- Update
  - ✓ Parameter manager update (calculation method, sampling rule)
- Bug Fix
  - ✓ LTE CA UI – EARFCN, Band display bug fix

### **Ver 3.11.0709**

- Update
  - ✓ Altair chip – Signal Graph UI update
    - Displays MAC/RLC/PDCP Throughput for each bearer (Parameter manage shows Total throughput only)

### **Ver 3.11.0724**

- Update
  - ✓ Updated for Qualcomm Modem Bug – Samsung Galaxy S9(SDM845) shows problem with roaming service to EVDO in EVDO/LTE dual network environment. Updated DM interface logic to prevent this Qualcomm modem bug.

### **Ver 3.11.0726**

- Update
  - ✓ Inbuilding UI – When image load fails, there was no error message displayed. New version will display error message: "Can't load image. Please try to convert image into other format and load it."

### **Ver 3.11.0727**

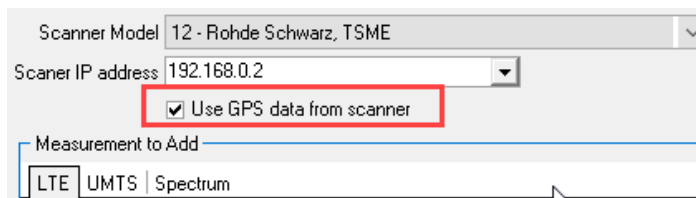
- Bug Fix
  - ✓ HTTP Upload with multi session
    - Call result decision bug fix
    - Total planned bytes calculation bug fix
  - ✓ RMA update (v2.55)
    - HTTP Upload with multi session had call result decision bug – fixed.

### Ver 3.11.0807

- Update
  - ✓ LogMask UI – Add “Qualcomm Developer” items for engineering test
    - “Common (Qualcomm) – Developer” added
    - “CDMA 1X (Qualcomm) – Developer” added
    - “LTE (Qualcomm) – Developer” added
  - ✓ Qualcomm LTE Log detail info display update (SCell Index, SFN/SubFN, etc)

### Ver 3.11.0810

- Update
  - ✓ For Rohde Schwarz scanners(TSME,TSMW), you can collect GPS data from scanner, when “Use GPS data from scanner” option is selected in the port setting dialog



- Bug Fix
  - ✓ GPS UI – incorrect DOP value display bug fixed

### Ver 3.11.0817

- Update
  - ✓ FIT mode – Changed default setting of MOS standard to “POLQA 2.4 SWB” and default reference speech to “swb\_ref\_48kHz.wav”

### Ver 3.11.0831

- Update
  - ✓ Log Parser Tool - QMDL(Qualcomm Memory-Device Log) Format update – support “extend diag” packet
  - ✓ Supports new Qualcomm log
    - TRM(Transceiver Resource Manager) (0x12E8 v16)
    - LTE ML1 Multisim Packet (0xB182 v25,v26,v27)
  - ✓ Grid UI – Non-existing scanner attributes are supported for Favorite and drag & drop to Grid UI

### Ver 3.11.0906

- Bug Fix
  - ✓ Port Setting – PM12 ports auto detection had problem when “show all port” option is enabled – bug fixed
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### Ver 3.11.0907

- Update
  - ✓ IPSec(ESP) Key detect method update – example “LG-V35” UE
  - ✓ Qualcomm Log “LTE LL1 RS Signal Correlation (0xB120)” parser update
  - ✓ If UE does not “idle state” at the “Call Start” or “Call End”, forcibly terminate the call (use ADB command)
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### Ver 3.11.0919

- Update
  - ✓ NB-IoT device wake-up feature is added

### Ver 3.11.1004

- New Feature
  - ✓ Supports Datum control and monitoring
- Update
  - ✓ Qualcomm parser update
    - 0xB184 LTE ML1 CA Metrics - ver24

### Ver 3.11.1019

- Update
  - ✓ Logmask added with Qualcomm GNSS items
    - GNSS Position Report (0x1476)
    - GNSS PDSM Position Report Callback (0x1482)
    - GNSS PDSM EXT Status Best Available Position Info (0x15B2)
  - ✓ Qualcomm parser update
    - GNSS Position Report (0x1476) – ver7,ver8,ver10
    - GNSS PDSM Position Report Callback (0x1482) – ver0

- GNSS PDSM EXT Status Best Available Position Info (0x15B2) – ver1

### **Ver 3.11.1030**

- Update
  - ✓ ICPM – Support Phase2 (XMM7480)
  - ✓ UI update – Voice Quality Monitor
  - ✓ UI update – Plan Setting – Voice Quality Configuration
  - ✓ ADB command dial method update
  - ✓ RMA update (v2.56)

### **Ver 3.11.1105**

- Update
  - ✓ KR – Subway information update

### **Ver 3.11.1109**

- New Feature
  - ✓ 5G support for Samsung chip
    - Samsung ICD v6.00 (NR 5G log and TS 38.331-f30)
- Update
  - ✓ LTE RRC parser update (release d50 to f22)
  - ✓ LMDM NR 5G update
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### **Ver 3.11.1113**

- Update
  - ✓ RMA update (v2.57)
  - ✓ Log file compression doesn't use '#' character in the file name

### **Ver 3.11.1121**

- Update
  - ✓ Samsung 5G chip
    - ICD version update
    - Filters out non-necessary log packets

### **Ver 3.11.1128**

- Update
  - ✓ NR5G RRC parser update
    - NR5G RRC spec downgrade (F30 -> F21) for UE EUTRA-NR Capability, UE NR Capability parsing
    - Secondary parsing addition for NR SecondaryCellGroupConfig, NR RadioBearerConfig1, NR RadioBearerConfig2
  - ✓ Supports IBWave's IBWC file (.zip, .ibwc) Import in In-Building feature
  - ✓ Supports new Qualcomm log – Parser update
  - ✓ Doesn't install FTDI VCP driver during installation

### **Ver 3.11.1203**

- Update
  - ✓ Port Setting Dialog – Removed “Clear All” button
  - ✓ Port Setting Dialog – Added “Identify” button, which will display channel number on AIM's 7-segment

### **Ver 3.11.1205**

- Update
  - ✓ BT – pairing list management update

### **Ver 3.11.1206**

- Bug Fix
  - ✓ Port setting – BT COM port management bug fix

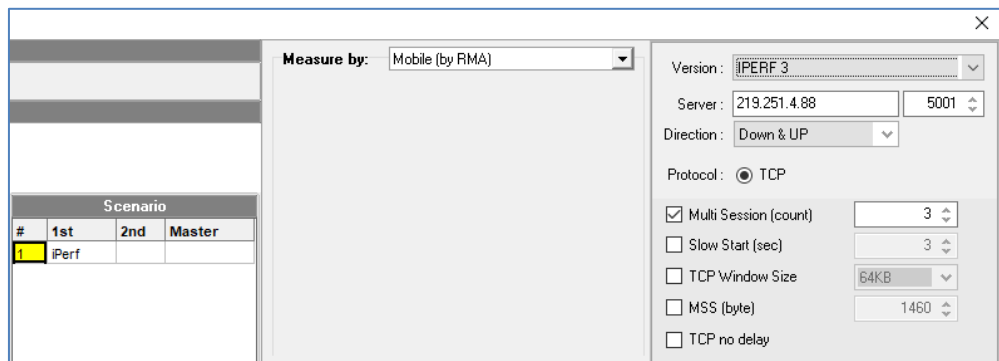
### **Ver 3.11.1213**

- Update
  - ✓ Supports new Qualcomm log – UI update
    - Parameter manager update
    - UI update - Network & Cell, LTE/LTE-A Signal Graph, LTE CA Status, etc

### **Ver 3.11.1214**

- New Feature

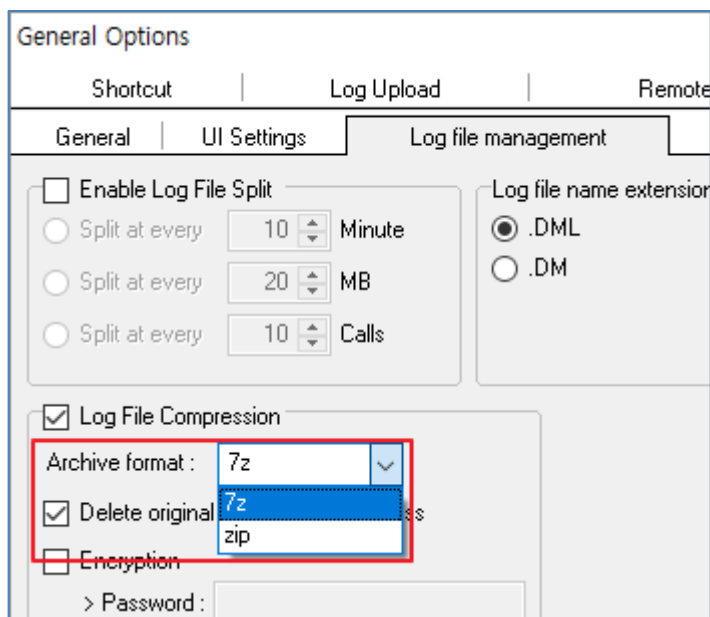
- ✓ RMA update to v2.58
  - Supports iPerf3
  - Supports SFTP
- ✓ New measurement type
  - iPerf3 (using RMA)



- SFTP
- Update
  - ✓ Update for Samsung 5G chip

### Ver 3.11.1217

- Update
  - ✓ Log file compression – Supports 7z format, as well as zip format. You can choose compression format from General Option.



- Bug Fix
  - ✓ When ADB name is not configured in the plan setting UI, error occurred in some case – bug fixed

### **Ver 3.11.1218**

- New Feature
  - ✓ RMA update to v2.59

### **Ver 3.11.1220**

- Update
  - ✓ Samsung NR5G – DL RB is added
  - ✓ Supports new Qualcomm log – Parser, UI, Parameters update

### **Ver 3.12.0104**

- Update
  - ✓ Map engine license update
  - ✓ BT connection management method update

### **Ver 3.12.0112**

- Bug Fix
  - ✓ EARFCN to Frequency conversion bug fix (Band class 12)
  - ✓ Scanner configuration save/load and control didn't from v3.11.1127. This bug is fixed
  - ✓ Memory leak during MOS test with AIM – bug fixed

### **Ver 3.12.0116**

- Bug Fix
  - ✓ ESP key save/load bug fix
  - ✓ Codec search bug fix

### **Ver 3.12.0123**

- Update
  - ✓ Bluetooth Control UI – Added “Refresh UE BT MAC address” button

### **Ver 3.12.0210**

- Update
  - ✓ PCTEL scanner – CDMA topN scan control update

### **Ver 3.12.0213**

- Update
- ✓ RMA update to v2.60
- Connection problem for "IPv6 based UE to IPv4 FTP server" - fixed

### **Ver 3.12.0220**

- Update
- ✓ NR 5G RRC parser update (TS38.331 v15.2.1 -> v15.4.0)

### **Ver 3.12.0221**

- New Feature
- ✓ Added "Audio Tunes" in the program group

### **Ver 3.12.0225**

- Bug Fix
- ✓ LTE CA Status UI blink display bug fix

### **Ver 3.12.0308**

- New Feature
- ✓ Supports GCT 7243i chipset

### **Ver 3.12.0313**

- Update
- ✓ HTTP Call Monitor UI – Added popup menu "Save as CSV"

### **Ver 3.12.0319**

- Update
- ✓ RMA update to v2.61
- Supports IPv6 address for Ping test
- Crash on Android 9.0 during FTP test - fixed

### Ver 3.12.0322

- New Feature
- ✓ Supports Mediatek chipset

### Ver 3.12.0326

- Update
- ✓ License driver update

### Ver 3.12.0408

- New Feature
  - ✓ Supports Mediatek chipset
    - MAPI, and ICD v2.0
  - ✓ PCTEL scanner NR5G TopN scan feature added
  - ✓ Rohde & Schwarz scanner NR5G TopN scan feature added (Caution: SINR value error in 5G NR – R&S ViCom 18.30 issue)
  - ✓ Scanner monitor UI supports NR5G TopN display
- Update
  - ✓ PCTEL scanner interface update to API v2.1.0.0
  - ✓ Rohde & Schwarz scanner interface update to ViCom 18.30

### Ver 3.12.0409

- Update
  - ✓ Qualcomm Log “LTE ML1 PUSCH Power Control (0xB16E)” update - Parser, UI, Parameters update
  - ✓ Samsung ICD v6.03
    - Added 0xEA09 NR NAS Message
    - Added 0xEAF1(0x0014) NR Rach Result

### Ver 3.12.0410

- Bug Fix
  - ✓ Scanner UI – NR 5G display bug fixed
  - ✓ Parameter - NR5G Scanner incorrect value bug fixed
  - ✓ Port Config UI – misprint bug fixed

### **Ver 3.12.0413**

- Update
  - ✓ Disabled phone number detection by ADB interface
  - ✓ AIM\_MGR update – digital record gain configured to 12dB
  - ✓ ADB DLL update
  - ✓ Parameter Manager – Exception while processing Samsung NR5G debug statistics – bug fixed

### **Ver 3.12.0415**

- Update
  - ✓ AIM\_MGR update – digital record gain configured to 12dB
  - ✓ MOS\_MGR update – default analog record volume is changed (92 -> 50)
- Bug Fix
  - ✓ BT port and ADB socket exceptions – bug fixed

### **Ver 3.12.0416**

- Update
  - ✓ NR RRC parser update – “Measurement Report” shows dBm or dB values
  - ✓ Default plan update to include full logmask

### **Ver 3.12.0418**

- New Feature
  - ✓ Supports TWAMP for RMA-based Ping test
- Update
  - ✓ AudioTunes update
  - ✓ RMA update to v2.62
    - Supports TWAMP for Ping test

### **Ver 3.12.0422**

- Update
  - ✓ RMA update to v2.63 – ICMP based Ping test bug fix

### **Ver 3.12.0423**

- Update

- ✓ RMA update to v2.64 – IPv6 TWAMP test bug fix

### **Ver 3.12.0426**

- Update
  - ✓ FlushFileC update
  - ✓ Samsung LTE chip – Updated fragmented log processing

### **Ver 3.12.0429**

- Update
  - ✓ RMA update to v2.65 – iPerf/iPerf3 IPv6 processing bug fix
  - ✓ Data packet capture on/off control is applied to 2<sup>nd</sup> port also, as well as 1<sup>st</sup> port

### **Ver 3.12.0502**

- Update
  - ✓ “NV Items Control” UI – Band check/uncheck all button added
  - ✓ Samsung LTE chip – Updated fragmented log processing
  - ✓ Parameter manager update – "PING Inst. RTT", "PING Call Avg RTT", "[UE] Operator" added and fixed
  - ✓ Parameter manager update – “Serving Network” could display “LTE+NR” or “NR” (feat.: Main UI)

### **Ver 3.12.0522**

- Update
  - ✓ Rohde & Schwarz scanner interface update to ViCom 18.30 SINR value error patch
  - ✓ Samsung ICD v6.05 support
  - ✓ Total call monitor update
  - ✓ LG mobile driver v4.4.2 is updated in Misc folder – should update to this version to use LG V50
- Bug Fix
  - ✓ Samsung chip logging – Except 0xExxx log, all other log packets from Samsung chip are saved as “Unknown SubCmd Packet(0xEF21)”

### **Ver 3.12.0524**

- Update
  - ✓ Network & Cell UI – Support NR Network

### **Ver 3.12.0528**

- Update
  - ✓ RMA update to v2.66 – TWAMP update

### **Ver 3.12.0603**

- Update
  - ✓ QCom 5G – logmask update, packet version update

### **Ver 3.12.0611**

- Update
  - ✓ Voice call – Answer for incoming call update when BT event “incoming call” is received
  - ✓ Voice call group sync update
  - ✓ RMA update to v2.68 – Youtube update for Playback quality detection

### **Ver 3.12.0618**

- Update
  - ✓ RMA update to v2.69 – FTP over IPv6 update for port issue

### **Ver 3.12.0619**

- Update
  - ✓ Samsung ICD update to v6.06
    - Added: RSSI, RSRP, RSRQ, SINR ant0-ant3 in “NR\_Serving\_Cell\_Info”
  - ✓ Samsung chip interface stability enhanced

### **Ver 3.12.0625**

- Update
  - ✓ Rohde & Schwarz scanner interface update to ViCom 19.00

### **Ver 3.12.0702**

- Update
  - ✓ RMA update to v2.70 – Displays channel number in the title bar
  - ✓ Q1/AIM BT firmware update to v1134 – fixed for \$T message

### **Ver 3.12.0703**

- Update
  - ✓ Qualcomm log parser update
- Bug Fix
  - ✓ Alarm manager – bug fix

### **Ver 3.12.0706**

- Update
  - ✓ Added “Flight mode on/off” button in the toolbar
  - ✓ Samsung ICD update to v6.08

### **Ver 3.12.0709**

- Update
  - ✓ Parameter manager added – “App DL 5s Avg Speed”, “APP UL 5s Avg Speed”

### **Ver 3.12.0712**

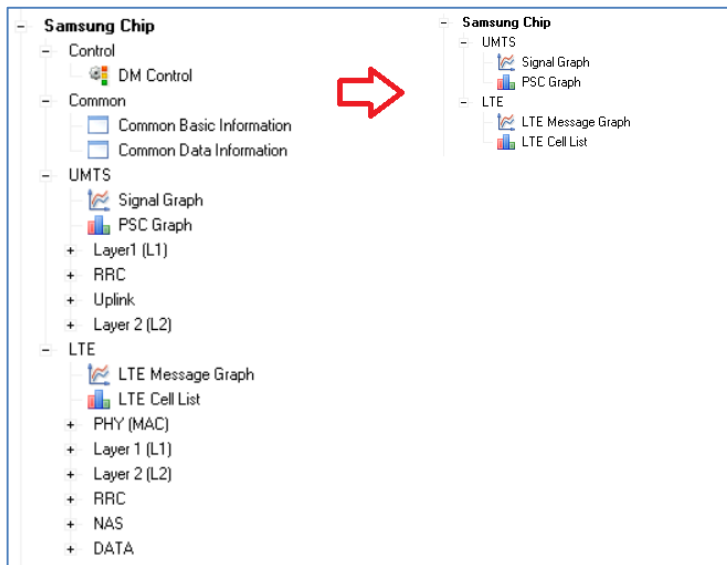
- Update
  - ✓ Custom Table UI – supports font size control for fixed font size mode
  - ✓ Custom Time Graph – supports font size control and dark mode
  - ✓ Log Message UI – supports dark mode

### **Ver 3.12.0717**

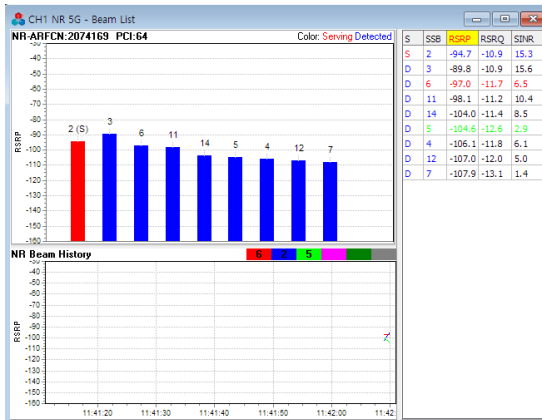
- Update
  - ✓ Custom Table UI – Supports font color setting for each channel
  - ✓ Custom Time Graph – Supports font color setting for each channel
  - ✓ Inbuilding Setting – Added “load from ibwc file” function

### **Ver 3.12.0722**

- Update
  - ✓ Samsung chip UIs – removed non-used UIs



- ✓ Parameter Manager update
  - New parameters – “/NR5G/Beam Info/” group added
  - Added “NR 5G CA” and “NR 5G Beam Management” Parameters
  - Renewal Qualcomm and Samsung chip
- ✓ New UIs
  - /General/NR 5G (Common)/NR5G Beam List
  - /General/NR 5G (Common)/NR5G CA Status



	PCC	SCC1	SCC2	SCC3	SCC4
Band	261	261	261	261	
NR_Azimuth	2074189	2075837	2081089	2083337	
SR	100 MHz	100 MHz	100 MHz	100 MHz	
SCS	120 kHz	120 kHz	120 kHz	120 kHz	
PCI	186	186	186	186	
SSB	4				
RSSP	-95.6				
RSRQ	-10.9				
SINR	17.7				
RSSI					
PRACH Power	1.1				
PUSCH Power	1.1				
PUSCH Power	1.1				
CGI					
RI					
RI [N]					
PDSCH Layer	2	2	2	2	
PDSCH Layer [C]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	
PDSCH RB (Avg)	66	66	66	66	
PDSCH MCS	10	8	8	10	
PDSCH Modul	16QAM	16QAM	16QAM	16QAM	
PDSCH Modul [C]	[26.9 / 72.3 / 0.8 / 0.0]	[36.9 / 62.8 / 0.3 / 0.0]	[43.0 / 53.6 / 3.3 / 0.0]	[24.6 / 75.4 / 0.0 / 0.0]	
PDSCH BLE	9.1	8.5	9.1	8.7	
PUSCH RB (Avg)					
PUSCH MCS					
PUSCH Modul					
PUSCH Modul [C]					
PDSCH TP (Mbps)	133.95	128.87	128.38	131.65	
PUSCH TP (Mbps)	2.35				
APP DL TP (Mbps)					
APP UL TP (Mbps)					

- ✓ Q1/AIM BT firmware update to v1135

### Ver 3.12.0723

- Update
  - ✓ PCTEL\_MGR update
- Bug Fix
  - ✓ Port setting UI – PCTEL EPS frequency over 5GHz configuration bug fix
  - ✓ LTE RRC (UE Capability Info) parsing – memory overflow bug fix

### Ver 3.12.0802

- Update
  - ✓ IPSec(ESP) Key detect method update
  - ✓ Logmask added with Qualcomm items
  - ✓ Qualcomm LTE - packet version update
  - ✓ Qualcomm WCDMA - packet version update

### Ver 3.12.0813

- Update
  - ✓ Port setting and Plan setting – Managed as binary file, instead of text file, for quick response

### Ver 3.12.0821

- Update
  - ✓ Qualcomm WCDMA RRC Signaling (0x412F) – SIB Message Parser & Filter Tree update
  - ✓ Qualcomm WCDMA – packet version update
  - ✓ Added “NR 5G RACH” and “NR 5G MAC CE” Parameters

- RACH Result, RACH Reason, RACH Contention, RACH Attempt #
- MAC TA CMD – MAC TA Command
- MAC CC Act/Deact – MAC
- Bug Fix
  - ✓ Fixed the incorrect calculation of handover events in “LTE Event Counter”
  - ✓ Fixed the incorrect display of handover events in Parameter “Signal Msg LTE Events”
    - EUTRAN Inter-frequency Handover
    - EUTRAN Intra-frequency Handover
    - EUTRAN Inter-Cell Handover
    - EUTRAN Intra-Cell Handover

### **Ver 3.12.0823**

- Update
  - ✓ Port setting – added “manual scanner start/stop” feature for PCTEL scanner
- Bug Fix
  - ✓ Port & plan setting – save/load bug fix

### **Ver 3.12.0826**

- Bug Fix
  - ✓ NetimizerZipTool – Fixed the problem when multiple channel’s compresses are required almost simultaneously (within 50 msec), which causes CH1 ZIP file has CH2 DML file. This problem happened when log split by time is used.

### **Ver 3.12.0829**

- Update
  - ✓ Parameters – Scanner group is enabled regardless of chipset and technology license option
  - ✓ Floating license – Remaining days or hours are displayed in the splash screen
  - ✓ License manager update
- Bug Fix
  - ✓ FTP plan – infinity didn’t work. Bug fixed

### **Ver 3.12.0904**

- Bug Fix
  - ✓ “Voice Call End” log packet was not saved occasionally, when scenario mode with group sync

was used for active call test. This bug is fixed.

### **Ver 3.12.0917**

- Update
  - ✓ RMA update to v2.71 – Location refreshed faster than previous version
  - ✓ Q1/AIM BT firmware update to v1137 – updated to support “Transmit DTMF codes”
  - ✓ Default logging folder is changed to “My Document”
  - ✓ Supports new Qualcomm log version
  - ✓ Log Filter - Altair chip filter tree provides detailed sub filters

### **Ver 3.12.0919**

- Update
  - ✓ RMA update to v2.72 – Communication with audio server
  - ✓ Inter-working with audio server
  - ✓ LTE Event Counter Update - “Cell reselection” updated
  - ✓ Samsung chip - CDMA items are added in logmask and log filter tree

### **Ver 3.12.0928**

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ Update NR5G Beam List UI (/General/NR 5G (Common)/NR5G Beam List)
    - “SSB Index & Rx Beam ID” UI added
- Bug Fix
  - ✓ “LTE PDCP UL Cipher Data PDU” 0xB0B3 “SN” value incorrect bug fixed
  - ✓ Qualcomm DM log gathering bug fix

### **Ver 3.12.0930**

- Update
  - ✓ GCT chipset – update for eMTC support

### **Ver 3.12.1004**

- Update
  - ✓ IPSec(ESP) Key detect update
    - Dual IPSec(ESP) Key management update – ex) PS-LTE UE (VoLTE IPSec + PS-LTE IPSec)

- IPSec(ESP) Key detect method improve – ex) if “ESP Key Information” is delayed, it’s can be detected
- Bug Fix
  - ✓ IP Fragment processing method update – ex) Occasionally “INVITE message” missing
  - ✓ Fixed bug that TCP/IP filter behavior error in “Log Filter Tree” – ex) Occasionally failed to filter “ESP/UDP/SIP” message

### Ver 3.12.1018

- New Feature
  - ✓ Android ADB – Screen Control
- Update
  - ✓ Log View UI – Updated SIP packet defragment logic

### Ver 3.12.1018

- Update
  - ✓ Port setting – LAN interface supports client mode and server mode both



### Ver 3.12.1102

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ RMA update to v2.73
    - Video call origination method update
    - FTP infinity call bug fix

### Ver 3.12.1105

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ IBWC load – alert message box is popped up showing “Floor number should be checked & modified (if required) by manual”
- Bug Fix
  - ✓ IBWC load – floor number detection bug fix

### Ver 3.12.1107

- Update
  - ✓ Supports new Qualcomm LTE log version
- Bug Fix
  - ✓ GCT 7243Q – IP packet save bug fix

### Ver 3.12.1110

- New Feature
  - ✓ ETRI LTE Analyzer Scanner support

### Ver 3.12.1114

- Update
  - ✓ Map UI – CellSite Trace Connection Line function
    - Support dual network (ex: LTE + CDMA)
    - Fixed bug that “Neighbor Set” does not display connection lines
  - ✓ Supports new Qualcomm log version
- Bug Fix
  - ✓ Plan Config UI – fixed that "User Defined IP address" doesn't display
  - ✓ Log Filter – fixed that sometimes, RTCP or SIP filter does not working.

### Ver 3.12.1116

- Update
  - ✓ IPSec(ESP) Key detect update
    - Complex dual IPSec(ESP) Key management update – ex) PS-LTE UE (VoLTE IPSec + PS-LTE IPSec)
    - IPSec(ESP) Key detect method improve – ex) if “ESP Key Information” is delayed, it's can be detected
  - ✓ TCP/IP Filter Tree update
    - Qualcomm TCP/IP(0x11EB) filter function update – “IP Frag” and “ESP” original packet filter

### Ver 3.12.1118

- New Feature
  - ✓ Added “General option – Device Control”
    - “Prevent Full Charge” option is added (default=ON). When Q1/AIM is used and option is

enabled, charging voltage and current is controlled dynamically to prevent full charge.

This feature works on USB type-C port of Q1/AIM only.

4.55V 0.5A, if > 90%

5.09V 0.5A, if > 50% and <= 80%

5.09V 0.5A, if <= 30%

- When DML quit, Q1/AIM is configured to 4.91V 0.5A

- Update
  - ✓ Voice Call & Video Call – When there is BT HFP “Released” event, call state detection logic processes it as IDLE state, even if “Service Option” is not based on BT HFP.

### Ver 3.12.1120

- Update
  - ✓ KR PS-LTE Samsung UE – voice call control logic update
  - ✓ GPS status display in the statusbar – updated for “GPS from scanner”
  - ✓ Qualcomm chip – parser update

### Ver 3.12.1121

- Update
  - ✓ Changed operation of “Prevent Full Charge” option in the “General option – Device Control”  
Default = OFF  
4.55V 1.5A, if > 90%  
5.09V 1.5A, if < 80%

### Ver 3.12.1122

- Update
  - ✓ Add a Keyboard shortcut item – Mobile Control UI (Ctrl + N)
  - ✓ (Samsung chip) MCPTT –Timestamp of TCP/IP packet refers Samsung chip time tick, instead of local tick

### Ver 3.12.1123

- Bug Fix
  - ✓ ADB status icon in the statusbar was changed to green->red->green even though ADB status is ok. This bug is fixed.
  - ✓ During measurement stop and log file close, “Logging write error!! WriteFile Error Code = 6” was

popped up sometimes. This bug is fixed.

### **Ver 3.12.1124**

- Update
  - ✓ Changed operation of “Prevent Full Charge” option in the “General option – Device Control”  
Default = OFF  
4.55V 1.5A, if > 90%  
4.91V 1.5A, if < 80%  
4.91V 1.5A, on terminate

### **Ver 3.12.1128**

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ Samsung chip DM interface – Added trace logging for DM communication problem tracking
- Bug Fix
  - ✓ Plan setting UI – Scenario save bug fix

### **Ver 3.12.1203**

- Update
  - ✓ BT connection – Supports manual UE BT MAC address input and connection, and save/load
  - ✓ Supports new Qualcomm LTE log version
  - ✓ Samsung chip – Doesn’t encrypt Samsung log packets anymore

### **Ver 3.12.1205**

- Update
  - ✓ Altair chip – RSRP, RSRQ, SINR calculation method update following Altair ICD update

### **Ver 3.12.1206**

- Update
  - ✓ IPSec(ESP) Key detect update
    - IPSec(ESP) Key management update for TCP fragmented SIP REGISTER message
  - ✓ Warning added – “DM Port Config(1st/2nd) mismatch for dual modem (LTE+5G)” warning message will be displayed, when master(1<sup>st</sup>) port and slave(2<sup>nd</sup>) port is configured wrong in the port setting. Master(1<sup>st</sup>) port should be LTE port, and slave(2<sup>nd</sup>) port should be 5G(or CDMA)

port.

- ✓ License driver update to v7.102

### **Ver 3.12.1207**

- Update
  - ✓ Enhanced processing of wrong QCom log field

### **Ver 3.12.1209**

- Update
  - ✓ iPerf3 active call test – support UDP test
  - ✓ RMA update to v2.74 – supports iPerf3 UDP test
- Bug Fix
  - ✓ Access violation during Bluetooth port close – bug fix

### **Ver 3.12.1210**

- New Feature
  - ✓ Samsung chip through LAN is supported
  - ✓ Moved “Qualcomm LTE – L1 RX AGC (0xB111)” logmask to developer’s group

### **Ver 3.12.1211**

- Update
  - ✓ Changed payload on/off control
    - Before:
      - payload off = logmask ON, max payload size 80B
      - payload on = follow user configuration (logmask, max payload size)
    - After:
      - payload off = logmask OFF
      - payload on = follow user configuration (logmask, max payload size)

### **Ver 3.12.1213**

- New Feature
  - ✓ Moved “RX AGC” logmask to developer’s group
  - ✓ Qualcomm chip – Added new log types to logmask and logfilter
- Bug Fix

- ✓ Fixed infinite loop for some log packet

### **Ver 3.12.1217**

- Update
  - ✓ Samsung chip – RTP event timestamp generation logic update based on Samsung TCP/IP packets

### **Ver 3.12.1220**

- Update
  - ✓ Qualcomm chip – supports new QCom chip log version
  - ✓ Idle test – added “Seezn Test” item

### **Ver 3.12.1223**

- Update
  - ✓ Q36 DCU – Bluetooth Control UI is now enabled on Q36 DCU

### **Ver 3.12.1224**

- Update
  - ✓ Bluetooth COM port – close method changed from Close() to ForceClose()
  - ✓ RMA update to v2.75 – Enhanced exception handling on FTP connection problem
- Bug Fix
  - ✓ Bluetooth Control UI – Exception when BT MAC address is blank – bug fixed

### **Ver 3.12.1228**

- Update
  - ✓ Voice call plan – You can use ‘#’ character in the dial number edit UI
- Bug Fix
  - ✓ HTTP call test – Call didn’t progress for next call sometimes. This bug is fixed.

### **Ver 3.20.0106**

- Update
  - ✓ Port Setting UI – PCTEL scanner – You can configure “4 Rx Antenna” for MX/MXflex

### **Ver 3.20.0108**

- Bug Fix
  - ✓ Voice Quality Monitor UI – Fixed bug displaying atten as a MOS value

### **Ver 3.20.0109**

- Update
  - ✓ Port Setting UI – Disabled some setting items and fixed to default setting, for specific customer's license

### **Ver 3.20.0110**

- Update
  - ✓ Samsung chip –TCP/IP packet timestamp calculation refers Samsung chip tick also

### **Ver 3.20.0114**

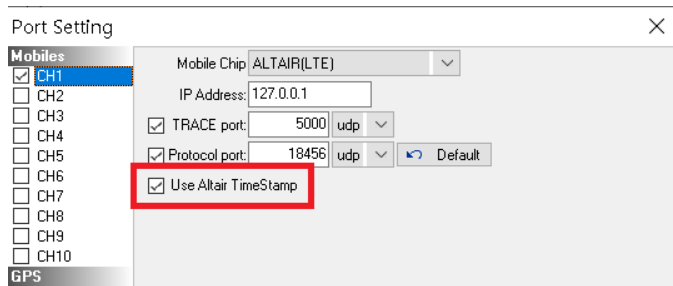
- Update
  - ✓ Qualcomm TCP/IP payload size control method update
  - ✓ NV Items Control UI – “Custom NV Item” feature update

### **Ver 3.20.0116**

- Update
  - ✓ SMS - Plan and Active Call Test – Added “front idle” for SMS test between two DML systems
  - ✓ License Manager update to v3.20.0115

### **Ver 3.20.0117**

- Update
  - ✓ Altair chip – Added new function “Use Altair Timestamp” (default = OFF). When selected, log timestamp will be adjusted to time information received from Altair chip. If not selected, log timestamp will refer received time.



- ✓ Qualcomm chip – Supports new log versions
- ✓ Qualcomm NV DB update

### Ver 3.20.0120

- Update
  - ✓ Qualcomm NV DB update

### Ver 3.20.0121

- Update
  - ✓ Qualcomm chip – Supports new log versions

### Ver 3.20.0123

- Update
  - ✓ RMA update to v2.76 – updated for Android 10
  - ✓ LTE RRC parser update (TS36.331 v15.2.2 to v15.8.0)
  - ✓ NR 5G RRC parser update (TS38.331 v15.4.0 to v15.8.0)
  - ✓ Qualcomm chip – Supports new log versions
- Bug Fix
  - ✓ SIP packet processing bug fix

### Ver 3.20.0128

- Update
  - ✓ Updated “payload off” command control
    - up to v3.12.1210: TCP/IP packets were received (header only) on “payload off”
    - v3.12.1211 to v3.20.0123: TCP/IP packets were not received on “payload off”
    - from v3.20.0128: TCP/IP packets were received (header only) on “payload off”
  - ✓ RMA update to v2.78 – updated for Android 10
- Bug Fix

- ✓ QCom NR log parsing bug fix

### **Ver 3.20.0129**

- Update
  - ✓ RMA update to v2.78 – Fixed to supported Android 7
  - ✓ QCom logmask update
  - ✓ QCom NR log parsing update
  - ✓ Altair logging function update

### **Ver 3.20.0131**

- Update
  - ✓ RMA update to v2.79 – Fixed for web test
  - ✓ QCom chip – Supports new NR log version

### **Ver 3.20.0203**

- Update
  - ✓ USB lock key management module update
  - ✓ Installation packet default port setting – logmask update
  - ✓ Voice Call Monitor – Updated to simple UI to reduce required screen size

### **Ver 3.20.0205**

- Update
  - ✓ FTP Call Monitor - Updated to simple UI to reduce required screen size
  - ✓ Screen off state check, and screen on control – updated for Android 10

### **Ver 3.20.0207**

- Update
  - ✓ “Log Export - Msg flow HTML” output format updated, and includes “detail info”
  - ✓ FTP Call Monitor update
  - ✓ Updated to save WCDMA diag log, if there is now WCDMA license but LTE license exist
- Bug Fix
  - ✓ Samsung NR Neighbor Cell Info – log parsing bug fix

### Ver 3.20.0212

- Update
  - ✓ Mediatek chip – Supports CS Auto Call (Mobile should support MAPI v3.1 or later)

### Ver 3.20.0213

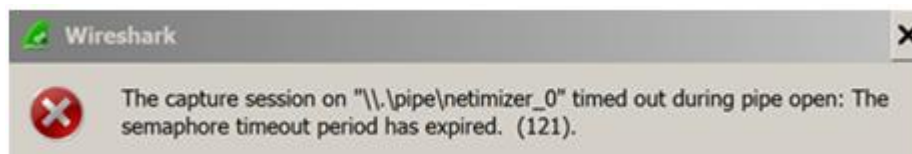
- Update
  - ✓ “UE Capability Information” 2<sup>nd</sup> parsing update

### Ver 3.20.0221

- Update
  - ✓ ADB update to v29.0.5(Oct. 2019)
    - Refer - [https://developer.android.com/studio/releases/platform-tools#2905\\_october\\_2019](https://developer.android.com/studio/releases/platform-tools#2905_october_2019)
  - ✓ “UE Capability Information” 2<sup>nd</sup> parsing update
  - ✓ Updated for LTE-R UE

### Ver 3.20.0225

- Update
  - ✓ Memory overrun bug fix
  - ✓ Updated Wireshark interface to support recent version of Wireshark



### Ver 3.20.0226

- Update
  - ✓ HTTP Call Monitor UI update
  - ✓ NAS EMM Location(LPP) – 2<sup>nd</sup> parsing is added
  - ✓ ADB update to v29.0.6(Feb. 2020)
  - ✓ RMA update to v2.80 – Fixed for Android 10

### **Ver 3.20.0227**

- Update
  - ✓ Qualcomm chip – Supports new network interface ID for TCP/IP packet
  - ✓ RMA update to v2.81 – Fixed for Android 10

### **Ver 3.20.0228**

- Update
  - ✓ Plan structure update – Port setting and Plan setting file update
  - ✓ USB key management update
  - ✓ HiSC – Supports CPE, and added AT command UI
  - ✓ RMA update to v2.82 – Fixed for Android 10

### **Ver 3.20.0301**

- Bug Fix
  - ✓ RMA update to v2.83 – Unstable on Android 10 – bug fixed

### **Ver 3.20.0302**

- Update
  - ✓ RMA update to v2.84
    - Minimum required Android OS is changed from Android 4.2.2 to Android 6.0
    - Bug fix for WiFi information detection
- Bug Fix
  - ✓ Replay bug fix – error message error
  - ✓ Qualcomm chip – “ NR5G PDSCH Throughput” parameter calculation bug fix (round reset handling bug fix)

### **Ver 3.20.0303**

- Bug Fix
  - ✓ WCDMA RRC parsing – SIB type detection bug fix

### **Ver 3.20.0304**

- Bug Fix
  - ✓ RMA update to v2.85 – Bug fix for occasional crash

### **Ver 3.20.0306**

- Update
  - ✓ QCom NR logmask update

### **Ver 3.20.0311**

- Update
  - ✓ QCom NR logmask update

### **Ver 3.20.0312**

- Update
  - ✓ PCTEL\_MGR update to show “protocol” and “license option” as text as well in the “Installed Options” list
- Bug Fix
  - ✓ Port setting and Plan setting file load problem after v3.20.0228 – bug fix

### **Ver 3.20.0318**

- Update
  - ✓ PCTEL\_MGR update to save scanner device information to log file
  - ✓ Log Message UI – Log filter tree update
- Bug Fix
  - ✓ RMA update to v2.86 – UE temperature was not collected in v2.85 – bug fixed

### **Ver 3.20.0320**

- Bug Fix
  - ✓ Default logmask setting bug fix for FIT mode
  - ✓ Voice Quality Monitor UI bug fix

### **Ver 3.20.0403**

- Update
  - ✓ QCom NR log parsing update
  - ✓ Altair chip - “Use Altair Timestamp” feature update

### **Ver 3.20.0406**

- Update
  - ✓ Qualcomm chip – supports new LTE and NR5G log versions

### **Ver 3.20.0408**

- Update
  - ✓ LPP ASN.1 decoder update (3GPP TS 36.355 V10.11.0 -> 3GPP TS 36.355 V15.5.0)

### **Ver 3.20.0410**

- Update
  - ✓ Samsung ICD update to v6.11

### **Ver 3.20.0414**

- Update
  - ✓ License Manager update – for KR PSNet
  - ✓ RMA update to v2.88 – Bug fix for file deletion after FTP upload test
  - ✓ IPSec(ESP) Key detect update
    - Key management update for Korea PS-LTE UE (S-Traffic UE)
    - Key management update for Korea PS-LTE UE (CyberTel UE)
- Bug Fix
  - ✓ Plan UI – FTP “check result by average throughput” option UI activation bug fix

### **Ver 3.20.0417**

- Update
  - ✓ RMA update to v2.89 – crash during FTP test bug fix

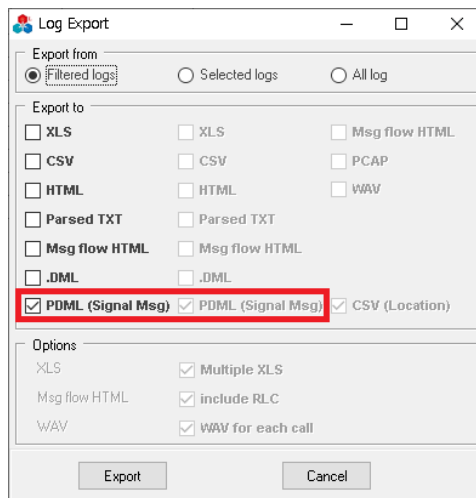
### **Ver 3.20.0420**

- Update
  - ✓ RMA update to v2.90 – occasional FTP upload fail bug fix
  - ✓ License Manager update – for FIT

### **Ver 3.20.0424**

- Update

- ✓ Qualcomm chip – supports new NR5G log versions
- ✓ Log Message UI – Added “PDML (Signal msg)” in the Export function



### Ver 3.20.0427

- Update
  - ✓ Qualcomm chip – supports new LTE log versions

### Ver 3.20.0507

- Update
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ RMA update to v2.91 – FTP bug fix

### Ver 3.20.0509

- Update
  - ✓ Qualcomm chip – supports new NR log versions
  - ✓ Qualcomm chip - logmask update
  - ✓ Added “General option – Wireshark Environment”
  - ✓ Removed “DM Baud rate, DM Flow control, RTS, DTS” from the port setting dialog
  - ✓ GCT chip UI display update

### Ver 3.20.0511

- Update
  - ✓ RMA update to v2.92 – FTP bug fix

- Bug Fix
  - ✓ QCom chip - Time mismatch fixed

### **Ver 3.20.0514**

- Update
  - ✓ Removed LMDM related features

### **Ver 3.20.0515**

- New Feature
  - ✓ Added "Favorite Editor" and "DML2CSV"

### **Ver 3.20.0519**

- Update
  - ✓ Port Setting UI – display "Dev/Undef" of Qualcomm, in Logmask status
  - ✓ Ping test - Local IP address of ping test is supported in "Measure by - PC (by User-defined IP address)" environment

### **Ver 3.20.0520**

- Update
  - ✓ RMA update to v2.93 – FTP bug fix

### **Ver 3.20.0521**

- Bug Fix
  - ✓ Frequent "Data Call Status" log packet saving during idle call – bug fixed

### **Ver 3.20.0526**

- Update
  - ✓ Qualcomm chip – supports GNSS log (Location protocol) and contained LPP
    - 0x1386 CGPS Report Server Tx Packet
    - 0x1387 CGPS Report Server Rx Packet
  - ✓ Parser update - 3GPP TS 36.355 V15.5.0 (2019-09) LTE Positioning Protocol (LPP)
  - ✓ Updated LPP PDU reassembling process (CGPS Report Server TX/RX Packet log)
  - ✓ RMA update to v2.94 – FTP bug fix

### **Ver 3.20.0528**

- Update
  - ✓ DM interface core update
  - ✓ AudioTunes update
    - supports both of analog and BT
    - check license for POLQA MOS score calculation

### **Ver 3.20.0529**

- Update
  - ✓ Qualcomm chip - logmask update

### **Ver 3.20.0604**

- Update
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0608**

- Update
  - ✓ Supports Samsung ICD v6.11 and 6.12
    - Important: Log codes are changed in ICD

### **Ver 3.20.0610**

- New Feature
  - ✓ Added new UI: “/General/NR 5G (Common)/NR5G ENDC Status”

CH1 ENDC(SG + LTE) Status					
CC#	PCC	SCC1	SCC2	SCC3	SCC4
LTE	Band	30			
	EARFCN	5820			
	Bandwidth	10MHz (50 RBs)			
	PCI	236			
	RSRP(dBm)	-84.7			
	RSRQ(dB)	-14.8			
	SINR(dB)	3.4			
	PD SCH Modul	64QAM			
	PUSCH Modul	64QAM			
	PD SCH TP(Mbps)	44.8			
	PUSCH TP(Mbps)	0.0			
NR 5G	Band	260	260	260	
	NR-ARFCN	2249847	2251675	2253403	2255131
	Bandwidth	100 MHz	100 MHz	100 MHz	100 MHz
	SCS	120 kHz	120 kHz	120 kHz	120 kHz
	PCI	234	234	234	234
	SSB	53	53	53	53
	RSRP(dBm)	-92.3	-89.9	-87.5	-89.0
	RSRQ(dB)	-10.4	-10.4	-10.3	-10.4
	SINR(dB)	14.7			
	PD SCH Modul	64QAM	64QAM	16QAM	64QAM
	PUSCH Modul	QP3K			
	PD SCH TP(Mbps)	169.7	146.2	148.8	218.1
	PUSCH TP(Mbps)	291.3			
	APP/ENDC DL TP (Mbps)	--- / PD SCH [727.68 Mbps (5G:682.89 + LTE:44.79)]			
APP/ENDC UL TP(Mbps)	--- / PUSCH [0.04 Mbps (5G:0.02 + LTE:0.02)]				
Serving Network	5G				

- Bug Fix
  - ✓ BT event was not referred when voice call is configured as 2<sup>nd</sup> service in scenario mode. This bug is fixed.

### Ver 3.20.0612

- Bug Fix
  - ✓ Scanner data processing exception – bug fix

### Ver 3.20.0616

- Update
  - ✓ HiSC – RSRP, RSRQ, RSSI display update
- Bug Fix
  - ✓ HiSC - PUSCH MCS display bug fix

### Ver 3.20.0618

- Update
  - ✓ ESP key detection update
  - ✓ RMA update to v2.95 – FTP bug fix
  - ✓ License driver update to v8.11

### **Ver 3.20.0624**

- Update
  - ✓ “Network and Cell” UI update
  - ✓ “LTE CA Status” UI update

### **Ver 3.20.0625**

- Update
  - ✓ Qualcomm DM update for iPhone 7

### **Ver 3.20.0703**

- Update
  - ✓ Voice Quality Test – Supports different voice quality test plan in the scenario mode

### **Ver 3.20.0707**

- Update
  - ✓ PCTEL – enhanced exception handling of invalid data in PCTEL NR TopN results

### **Ver 3.20.0708**

- Update
  - ✓ NR5G SA – RRC and NAS update (1<sup>st</sup> phase)
  - ✓ KR PS-NET update

### **Ver 3.20.0709**

- Update
  - ✓ RMA update to v2.96 – Enhance FTP stability during connection clearance
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0710**

- Update
  - ✓ Voice Call – “Term. call for L->M”
    - VoLTE call flow error detection logic update

### **Ver 3.20.0714**

- Update
  - ✓ RMA update to v2.97 – Checks battery temperature only, and doesn't investigate CPU temperature information in the Android kernel system files
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0716**

- Update
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0717**

- Update
  - ✓ RMA update to v2.98 – FTP stability update for slow response FTP server
  - ✓ Qualcomm chip – supports new LTE log versions
- Bug Fix
  - ✓ MOS test for KR-PS-LTE – Record time too short bug fix

### **Ver 3.20.0720**

- Update
  - ✓ Qualcomm log – supports new log versions

### **Ver 3.20.0722**

- Update
  - ✓ RMA update to v2.99 – FTP stability update for slow response FTP server
  - ✓ Qualcomm chip – supports network status to be 5G NR(SA)
- Bug Fix
  - ✓ Simple Call Control UI – bug fix

### **Ver 3.20.0723**

- Bug Fix
  - ✓ MOS test bug in v3.20.0721 and v3.20.0722 – bug fix
  - ✓ NR5G ENDC Status UI – bug fix

### **Ver 3.20.0724**

- New Feature
- ✓ Mediatek chip – Support 5G chip (Requires Mediatek 5G license option)

### **Ver 3.20.0731**

- Update
- ✓ RMA update to v3.00 – FTP stability update for slow response FTP server
- ✓ Supports Samsung ICD v6.13 and 6.14

### **Ver 3.20.0805**

- Update
- ✓ ADB update to recent version
- ✓ Stopped support for INFINEON chipset
- Bug Fix
- ✓ Log Message UI - HTML export bug fix (UMTS Signaling Message)

### **Ver 3.20.0806**

- Update
- ✓ Supports new version of Qualcomm logs
- Bug Fix
- ✓ Qualcomm chip – “5G:SCC PDSCH Throughput” parameter calculation bug fix (round reset handling bug fix)

### **Ver 3.20.0815**

- Update
- ✓ RMA update to v3.01 – Bug fix for Ping by ICMP
- ✓ Can use more than 1GB RAM
- ✓ Stability enhanced
- ✓ NR5G NAS parser update
- Bug Fix
- ✓ Fixed handle leak bug

### **Ver 3.20.0818**

- Update
- ✓ RMA update to v3.02 – Supports “UDP Echo (NIA)” method
- ✓ Plan UI – Ping test options update

### **Ver 3.20.0819**

- Update
- ✓ RMA update to v3.03 – Updated “UDP Echo (NIA)” to repeat during traffic time
- ✓ Ping UI update – show Req#, Rsp#, Timeout#, Loss#
- Bug Fix
- ✓ Qualcomm chip – “NR5G MAC DL TB Report (0xB886)” log parser bug fixed
- ✓ Qualcomm chip – “[UE] Network”, “[UE] Network(3GPP)” parameter display bug fixed. (ex: 5G SA)

### **Ver 3.20.0820**

- Update
- ✓ Qualcomm Logmask – added B8DD (NR5G LL1 FW Serving FTL)

### **Ver 3.20.0826**

- Update
- ✓ RMA update to v3.04 – Ping didn’t save log when timeout occurs – bug fixed
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0827**

- Update
- ✓ NV Items Control UI – “Custom NV Item” feature update

### **Ver 3.20.0831**

- Bug Fix
- ✓ Fixed malfunction bug (Voice Call, Port reconnection, Exception Error) – Occurring intermittently in the Qualcomm chip based UE

### **Ver 3.20.0901**

- Update
- ✓ MTK ICD version update
- ✓ MOS sync server interface update
- Bug Fix
- ✓ Plan UI – bug fix in scenario mode

### **Ver 3.20.0903**

- Bug Fix
- ✓ Ping active call test bug fix
- ✓ “NR 5G CA Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value
- ✓ “NR 5G ENDC Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value
- ✓ “LTE CA Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value

### **Ver 3.20.0908**

- Update
- ✓ Qualcomm chip – Enhanced exception handling in the case of no log packet received from QCom chip

### **Ver 3.20.0911**

- Update
- ✓ MTK chip – shows warning message if there is no log packet from MTK chip during more than 5 sec
- ✓ Flight mode on/off control method update for recent Android OS version

### **Ver 3.20.0914**

- Update
- ✓ RMA update to v3.05 – NIA UDP Echo test update

### **Ver 3.20.0915**

- New Feature
- ✓ MOS Sync Server – Supports synchronized MOS test among multiple laptops. RCS is required to use this feature.

- ✓ SST call monitor is added
- ✓ RMA update to v3.06 – FTP test bug fix
- Bug Fix
- ✓ Flight mode on/off control method bug fix for old version of Android OS

### **Ver 3.20.0918**

- Update
- ✓ RMA update to v3.07 – FTP test bug fix

### **Ver 3.20.0922**

- Update
- ✓ ETRI Scanner feature update
- ✓ RMA update to v3.08 – FTP test bug fix
- ✓ Ping Call monitor – Shows Ping history in scenario mode

### **Ver 3.20.0923**

- Update
- ✓ If “payload off” command is received, configures to receive no TCP/IP packets (even header) anymore
- Bug Fix
- ✓ Voice Quality Monitor table display bug fix

### **Ver 3.20.0925**

- Update
- ✓ RMA update to v3.09
- Changed SDK target SDK version to 29 (Android 10)
- FTP test bug fix
- ✓ Qualcomm chip – supports new LTE log versions

### **Ver 3.20.0930**

- Update
- ✓ RMA update to v3.10 – crash on Android 10 bug fixed
- ✓ Added “Call Monitor”
- ✓ Added “AT command” to Mobile Control UI

### **Ver 3.20.1007**

- Update
- ✓ RMA update to v3.11
- fixed iPerf3 test bug
- targetSdkVersion changed from 29 to 28 for iPerf3 test

### **Ver 3.7.1009**

- New feature
  - ✓ Supports Anite FSR scanner (LTE, UMTS, GSM, CDMA/EVDO, RSSI, Spectrum)
    - Laptop and Anite FSR scanner is connected by LAN, and laptop should have IP address 192.168.3.1 (subnet mask 255.255.255.0). For details, please refer Anite FSR user's manual.
  - ✓ "Help – Revision History" menu is provided (revision history is provided as PDF file)
- Update
  - ✓ RMA downgrade (v1.77) – Android OS version 4.1.2 or later cause problem in v1.77

### **Ver 3.7.1010**

- Update
  - ✓ RMA upgrade (v1.77) – new RMA requires Android OS version 4.1.2 or later
- Bug Fix
  - ✓ Samsung chip LTE – Cell ID was used for the PCI display. This bug is fixed

### **Ver 3.7.1014**

- Update
  - ✓ RMA upgrade (v1.78) – Improved stability

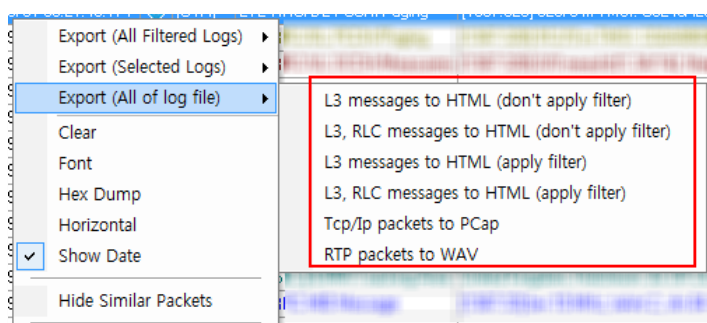
### **Ver 3.7.1022**

- New Feature
  - ✓ "Misc\ABM" folder added. It includes;
    - ABM Server - Installation and User Guide (Solaris).docx
    - ABM Server - Installation and User Guide.docx
    - ABM\_Linux\_Server.tar.gz
- Update

- ✓ Map engine update
- ✓ Log Message UI - “Export (All Logs) – Signal Messages to HTML” menu feature updated.  
L2 messages are also exported to HTML, as well as RRC and NAS messages.
- ✓ Parameters - Scanner Info – LTE, WCDMA frequency groups are increased to 10
- ✓ VDR scanner interface update (new Stream API is applied)
- ✓ “Misc” folder includes “iperf-2.0.5\_Linux Server.tar.gz” file. This is Linux version of modified iPerf server for automatic operation.

### Ver 3.7.1024

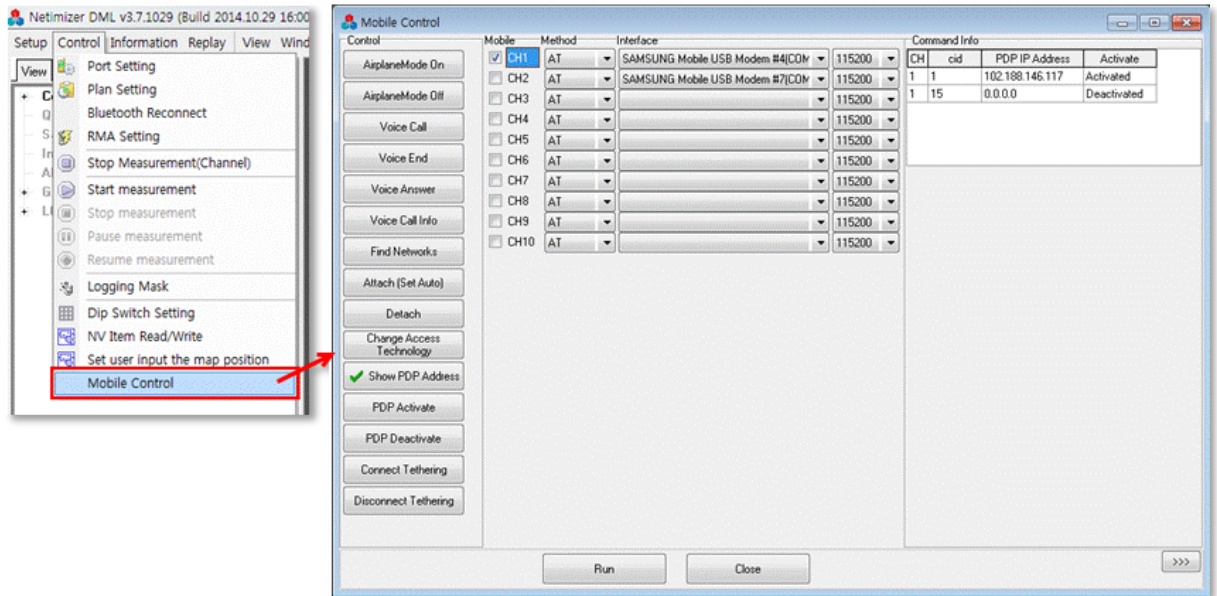
- New Feature
  - ✓ Log Message UI provides new popup menus as below. (These features read whole log file and export to appropriate format. Therefore, it’s not usable during real-time, but works during replay mode)



- Update
  - ✓ RMA upgrade (v1.79) – Improved stability

### Ver 3.7.1030

- New feature
  - ✓ Added “Mobile Control” menu, where you can control mobiles based on AT command, ADB, or QMICM interface.  
(Your mobile might not support some features, depending on the mobile model, firmware version, and Android version, etc.)



## Ver 3.7.11102

- New Feature

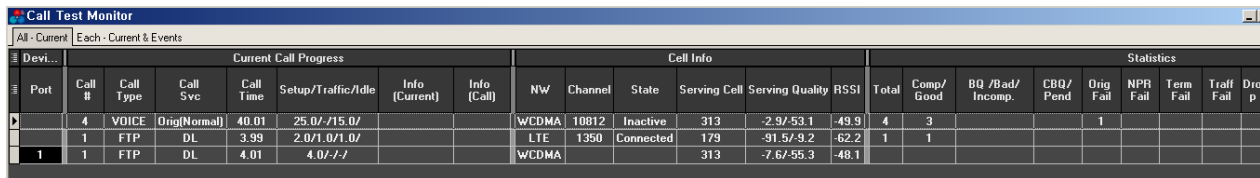
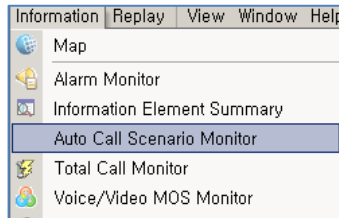
- ✓ Qualcomm Diag Subcmd (CDMA 1x Call Processing/MC Log State Response) 처리 추가
- ✓ WCDMA RLC AM PDU Parser 수정 - 0x4134, 0x4135, 0x413B, 0x413C 0x4143 0x4144 0x4145 0x4146 0x414B 0x418B
- ✓ WCDMA RLC AM PDU Detail Info 수정 - 0x4138, 0x4139, 0x4141, 0x4142, 0x4149, 0x414A
- ✓ WCDMA/HSPA Log Parser 수정 - 0x4222, 0x4305, 0x4307, 0x4309, 0x4321, 0x4322
- ✓ WCDMA/HSPA Log Detail Info 수정 - 0x4221, 0x4222, 0x4186, 0x4301, 0x4303, 0x4311
- ✓ GSM Log Parser 수정 - 0x5232, 0x5234, 0x5249, 0x524A, 0x524B, 0x524C
- ✓ GSM Log Detail Parser 추가- 0x506C, 0x5072, 0x5079, 0x512C, 0x5134, 0x51FA, 0x5202, 0x5205, 0x5206, 0x520A, 0x5227, 0x5231, 0x5232, 0x5234, 0x5235, 0x5245, 0x5249, 0x524D

- Bug Fix

- ✓ Parameters – various bug fix
  - [WCDMA] DPCCH Tx Power, DPDCH Tx Power, HSDPCCH Tx Power, HSDPCCH Tx Power, EDPDCH Tx Power, DRX Cycle, Target SIR are removed (they are supported from Samsung Chip only)
  - [WCDMA] USet (PSC) removed
  - [WCDMA] Inst Rx RLC Thr, Inst Tx RLC Thr, Avg Rx RLC Thr, Avg Tx RLC Thr calculation bug fix
  - [HSUPA] MAC Throughput, Phy Throughput. (Raw), Phy Throughput. (Scheduled), Phy Re-Transmission Ratio calculation bug fix
  - [WCDMA] ASet Ec/Io, ASet RSCP, BLER (Sig. ch), BLER (Traffic ch) display bug fix

### Ver 3.7.1103

- New Feature
  - ✓ New “Auto Call Scenario Monitor” is added



Dev...		Current Call Progress					Call Info					Statistics										
Port	Call #	Call Type	Call Svc	Call Time	Setup/Traffic/Idle	Info (Current)	Info (Call)	NW	Channel	State	Serving Cell	Serving Quality	RSSI	Total	Comp/Good	BQ /Bad/Incomp.	CBQ/ Pend	Orig Fail	NPR Fail	Term Fail	Traff Fail	Drop
	4	VOICE	(Orig(Normal))	40.01	25.0/-/15.0/			WCDMA	10812	Inactive	313	-2.9/-53.1	-49.9	4	3			1				
	1	FTP	DL	3.99	2.0/1.0/1.0/			LTE	1350	Connected	179	-91.5/-9.2	-62.2	1	1							
1	1	FTP	DL	4.01	4.0/-/-/			WCDMA			313	-7.6/-55.3	-48.1									

### Ver 3.7.1106

- Update
  - ✓ China map GPS position auto-adjust feature added
- Bug fix
  - ✓ Bug fix of “Auto Call Scenario Monitor”

### Ver 3.7.1107

- Update
  - ✓ RMA upgrade (v1.80) – Added handling for unexpected Android events
- Bug Fix
  - ✓ FTP test (by RMA) bug fix
    - Last throughput packet of DL test contains value 0 – it’s fixed
    - Last throughput packet of UL test contains value 10GB, because of unexpected event from Android – it’s fixed
    - Updated FTP call monitor to skip above cases

### Ver 3.7.1110

- Update & Bug Fix
  - ✓ Parameters – various bug fix and update
    - RSCP unit change to dBm
    - [WCDMA] RRC Release - removed (Not provided from Qualcomm chip)

- [WCDMA] CN Domain - removed
- [WCDMA] MAC Avg Throughput, MAC Trans Bits, etc - removed (Same with HSDPA Physical Throughput)
- [HSDPA] PHY Throughput, MAC Throughput, etc – calculation bug fix
- [WCDMA] Tx Power Limit – updated for new Qualcomm log version
- [WCDMA] RRC State – updated for new Qualcomm log version
- [WCDMA] Cell Type – updated for new Qualcomm log version
- ✓ HSDPA UI – updated for new Qualcomm log version
  - HSDPA\_Channel Config Information
  - HSDPA\_SCCH HARQ Information
  - HSDPA Decoding Statistics
  - HSDPA Harq Tx Statistic
  - HSDPA UL DPCH Information

### Ver 3.7.1111

- Update
  - ✓ Support iPhone for “auto call test” and “MOS measurement” using VoLT or PM-10
  - ✓ Map UI – support cell site with more than thousands of cells
  - ✓ Map – improved cell site draw speed
  - ✓ LogMask Item Add - HSUPA Items (WCDMA Multi Carrier EUL)
- Bug Fix
  - ✓ Custom UI (Table, History Table, Call History, Graph) – Setup dialog title display bug fix
  - ✓ Manual MOS test – when you have POLQA license only, not PESQ also, manual MOS test failed for the MOS calculation. This bug is fixed.
  - ✓ WCDMA Signal Graph bug fix
    - Samsung GS5 Case - WCDMA RSSI/Tx Pwr/Tx Limit
  - ✓ Packet Update - WCDMA Uplink And Downlink Power Control Edition 2(0x4023) – Parser
  - ✓ Parameter bug fix
    - [WCDMA] BLER (Traffic ch)

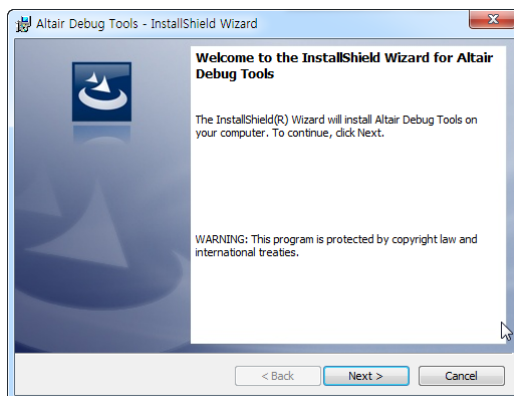
### Ver 3.7.1114

- New Feature
  - ✓ Map – cell site display engine upgrade (you can choose antenna display style among 4 types)
  - ✓ Supports ALT3800 (Altair 3800) chipset
- Update

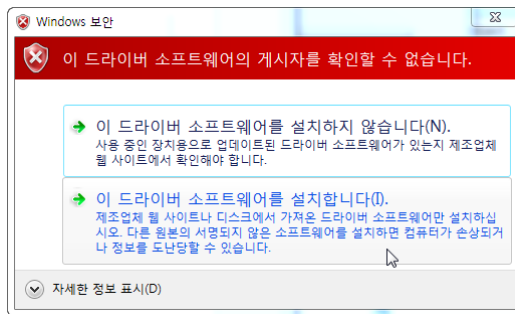
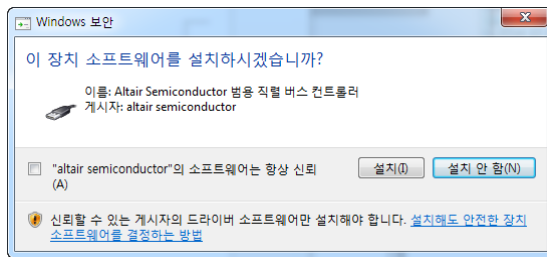
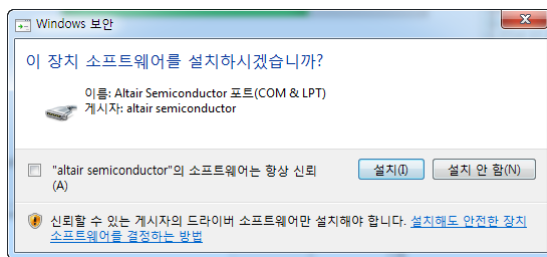
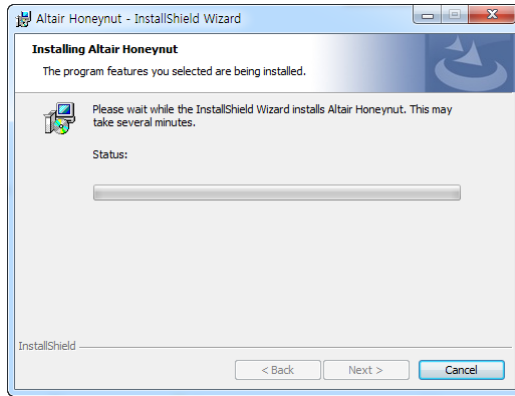
- ✓ Discontinued support for VIA CDMA chipset
- ✓ Qualcomm LTE – RRC/NAS state UI – RRC state display is updated following new Qualcomm log version
- ✓ VDR – changed configuration UI items and default values
- ✓ VoLTE – Decodes NULL encrypted ESP packets
- ✓ VoLTE – Can detect and process non-standard SIP port numbers
- ✓ Parameters – update for new packet (Samsung GS5)
  - [WCDMA] SIR, SF, Pilot Bits
  - [HSUPA] Phy Throughput (Raw/ Scheduled), MAC Throughput
  - [HSUPA] Phy Re-Transmission Ratio,
- ✓ HSUPA Signal Graph/L1 DL Config Info/L1 UL Config Info/E-TFCI Usage UI update for new packet (Samsung GS5)
- Bug Fix
  - ✓ Inbuilding UI – error message during replay has been fixed
  - ✓ WCDMA Signal Graph – update for new packet
    - [WCDMA] SIR, SF, Pilot Bits
  - ✓ HSDPA Signal Graph – wrong value fix (e.g: HSDPA Physical Throughput..)

### Altair ALT3800 chipset – how to use

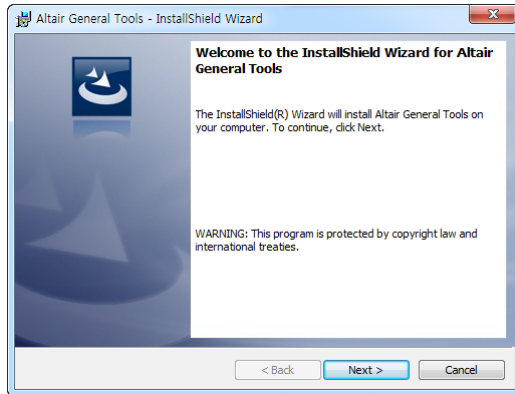
- You need ALTAIR chipset license option to use Netimizer DML with Altair chipset.
- ALT3800 – how to use
  - ✓ Install “DebugTools\_02.00.00.15\_setup.exe” (software might be different depending on the mobile vendor)



- ✓ Install “Honeynut\_HN\_01\_02\_00\_00\_08\_setup.exe” (software might be different depending on the mobile vendor)

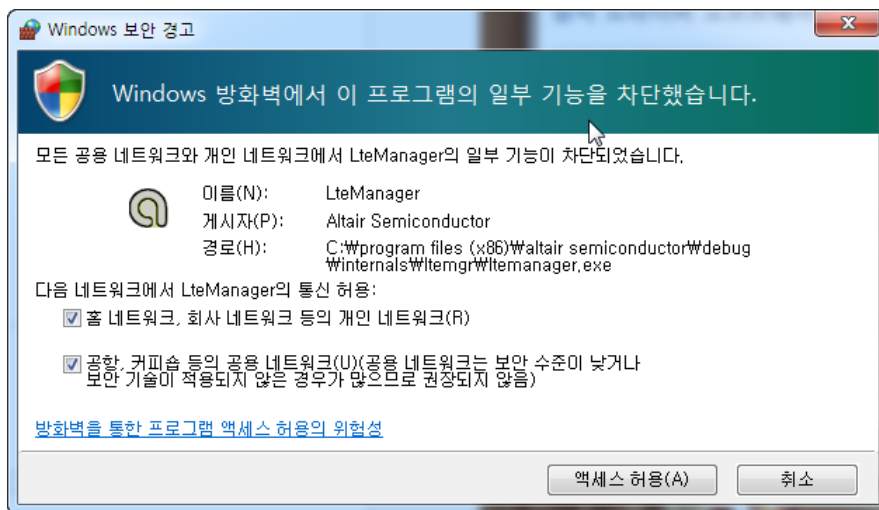
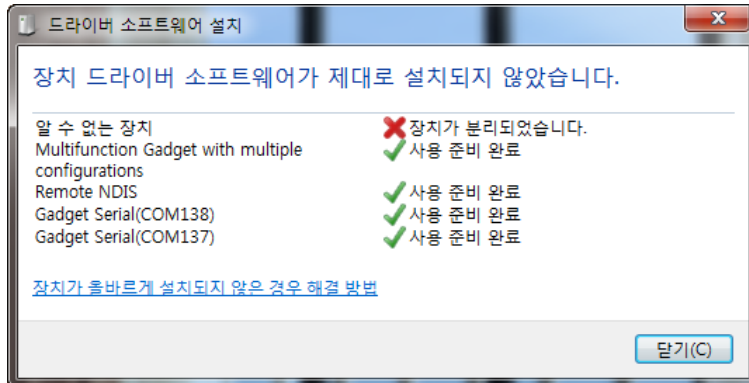


After install finishes, “Altair General Tools” will be installed as below.

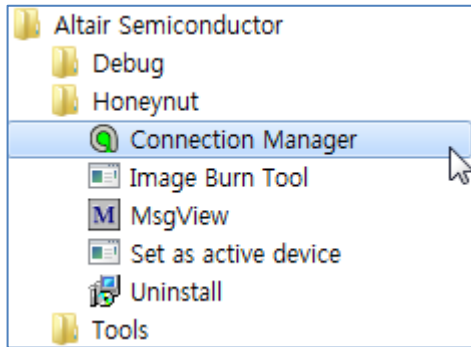


- ✓ Plug in Altair device – device driver will be installed automatically.

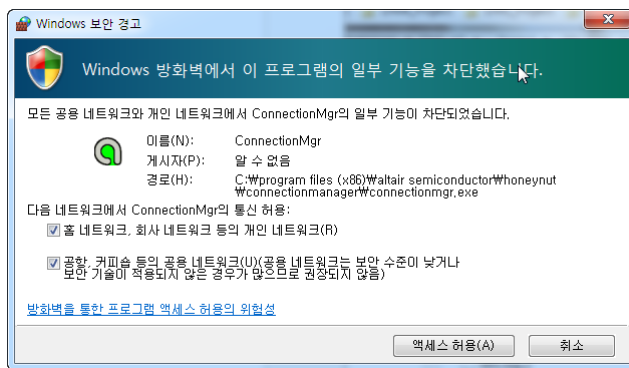
During installation, permit all communication of Altair software in the firewall setting as below.



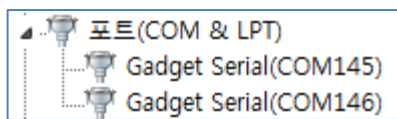
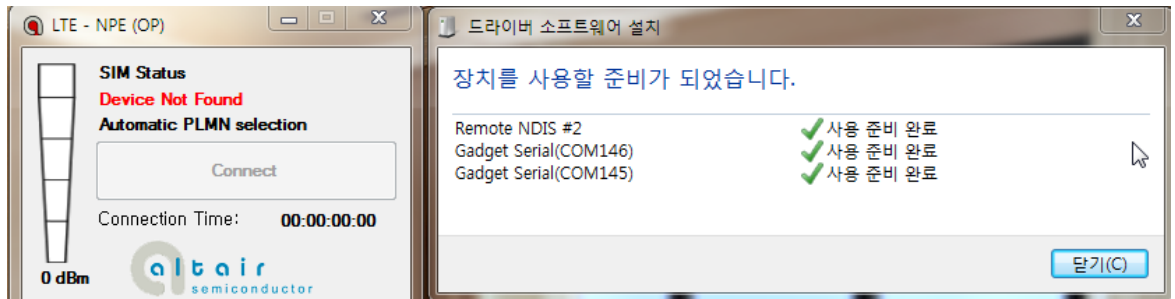
- ✓ Run Altair CM



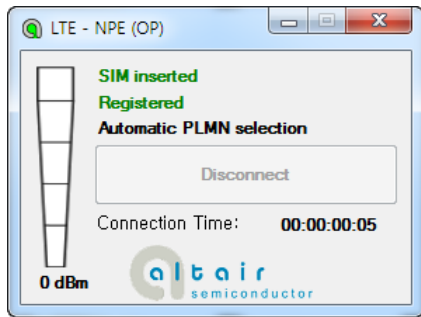
Permit communication in the firewall setting.



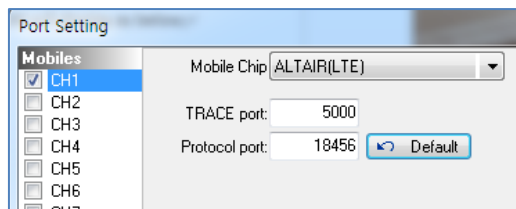
New device will be detected, and drivers will be installed automatically as below;



If you see “Device Not Found” as above, unplug device and plug in again. Then, Altair CM will display as below;



- ✓ Enable DM logging option in your Altair CM  
Please refer your Altair device user's guide for details.
- ✓ Run Netimizer DML
  - Port setting – select "ALTAIR(LTE)" chipset and configure "TRACE port" and "Protocol Port".  
(port number for both should be configured correctly following your device configuration – please refer your device user's guide)



- If DML doesn't show any received messages from Altair chipset, please contact your device manufacturer for the configuration.

### Ver 3.7.1118

- Update
  - ✓ RMA upgrade (v1.81) – Enhancement of stability for web test, YouTube test
- Bug Fix
  - ✓ Map UI – cell site hint display bug fix

### Ver 3.7.1120

- Update
  - ✓ Updated automatic port & device search logic for VoLT and PM-10
  - ✓ Updated audio device control logic

### Ver 3.7.1121

- Update
  - ✓ "Network & Cell" UI – 'Cell Site Name' is displayed in the table

### Ver 3.7.1126

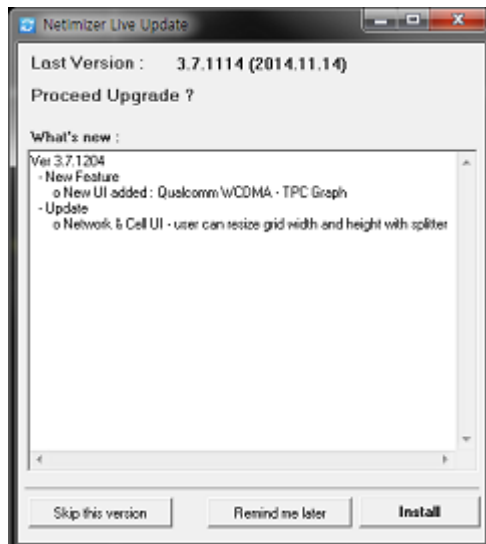
- Update
  - ✓ MosCalc folder (temporary folder for WAV file recording) is fixed to C drive (previous version used R drive if it exists)
- Bug Fix
  - ✓ NAS text parser – ‘Attach Reject’ 3402 Timer, ‘Attach Accept’ Emergency Number List – bug fix

### Ver 3.7.1204

- New Feature
  - ✓ New UI added : Qualcomm – WCDMA – TPC Graph
- Update
  - ✓ RMA upgrade (v1.82) – Enhancement of YouTube test
  - ✓ Network & Cell UI – user can resize grid width and height with splitter

### Ver 3.7.1208

- Update
  - ✓ RMA upgrade (v1.83) – Enhancement of YouTube test
  - ✓ Netimizer Online Update – displays “What’s new” information



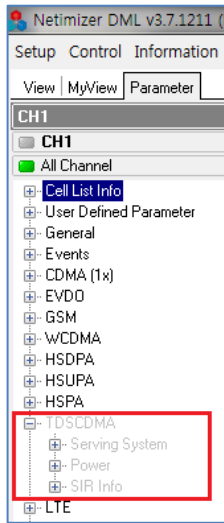
### Ver 3.7.1211

- New Feature

- ✓ Added “Help – Remote Support” menu (usable in Netimizer DML and Netimizer MDM3 CCU only). It launches Teamviewer client.
- ✓ Added “Help – Submit a question” menu (usable in Netimizer DML and Netimizer MDM3 CCU only). It opens web browser with Netimizer technical support site (<http://netimizersupport.com/>).
- Update
  - ✓ RMA upgrade (v1.84) – new RMA requires Android OS version 4.0.3 or later
  - ✓ Log Parser – update for new version Log Packet
    - WCDMA Cell ID (0x4127)
    - LTE ML1 UE Mobility State change (0xB17E)
    - LTE ML1 Coex State Info (0xB1B9)
    - LTE ML1 Connected Mode LTE Intra-Frequency Measurement Results (0xB179)
    - LTE PDCP UL Statistics (0xB0B4)
    - LTE Idle Subpacket - LTE ML1 Idle Meas Cell Select Request (0x04)
    - LTE Idle Subpacket - LTE ML1 HRPD CDMA System Time (0x0F)
    - LTE Idle Subpacket - LTE MI1 Serving Cell Measurement Results (0x19)
    - LTE Idle Subpacket - LTE ML1 Connected Neighbor measurement request (0x1E)
    - LTE Idle Subpacket - LTE ML1 Connected Neighbor measurement response (0x1F)
  - ✓ Log Parser – update for new version Subsys Diag Packet
    - LTE/RSSI Query Respones (68/0x4002)
    - LTE/RRC Respones (68/0x8001)
  - ✓ Log Parser/Filter/Detail Parser – update for log Bluetooth HF,ADB,APP Message (0xF0EA) (old name “Bluetooth Info”)
  - ✓ Parameters – update for more refer to log packet
    - [WCDMA] DL UARFCN
    - WCDMA Serving Cell – channel(UARFCN)
- Bug Fix
  - ✓ WCDMA UARFCN mismatch “Network & Cell UI” and “Parameters UI” bug fix
  - ✓ Memory leakage because of USB device driver is fixed

### Ver 3.7.1216

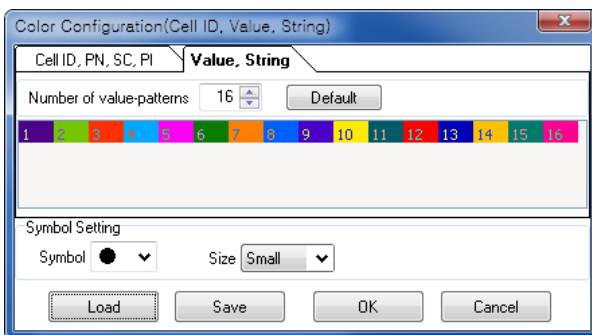
- Update
  - ✓ RMA upgrade (v1.85) – Youtube test function update
  - ✓ Parameter Tree – Parameters are disabled if the corresponding license doesn’t exist.



✓ Map UI – String type parameters can be displayed on Map UI



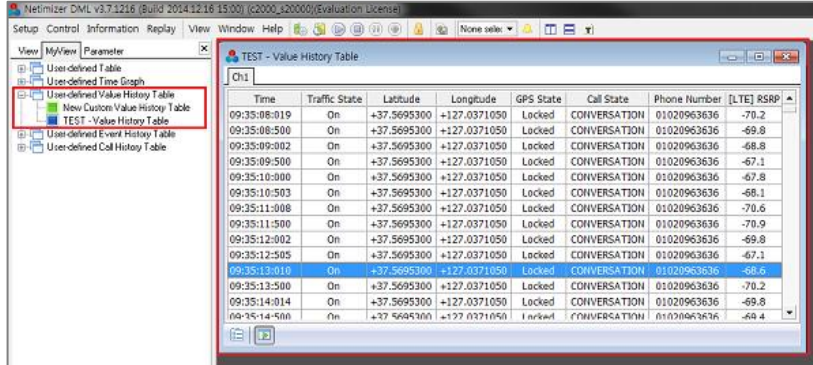
Legend for String type parameters are selected automatically by system, and can't be configured by user. However, color setting for String type parameters should be configured in below dialog.



✓ Offline map manager UI and function updated

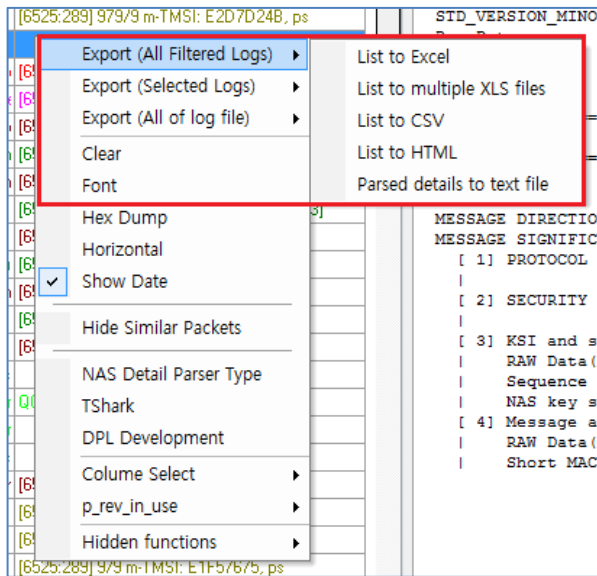
## Ver 3.7.1218

- New Feature
  - ✓ New UI – “User-defined Value History Table”

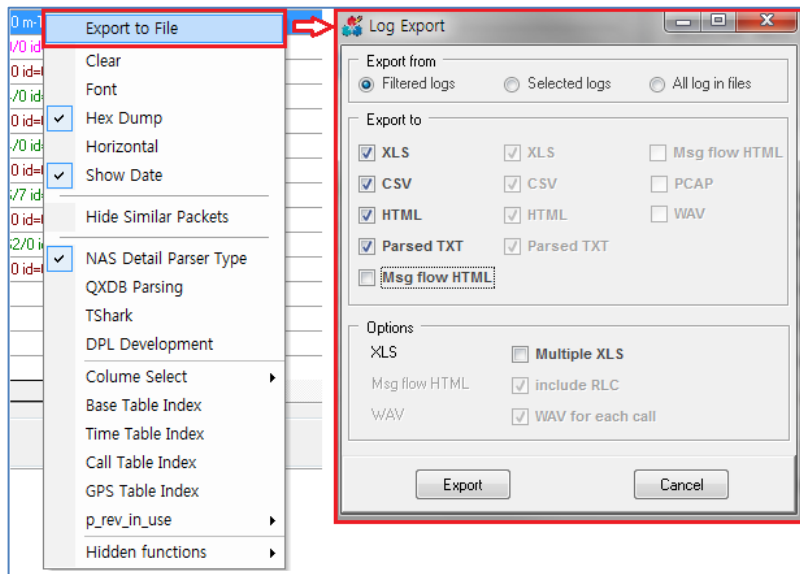


- Update
  - ✓ Simplified “export” features in the log message UI

<before>



<after>

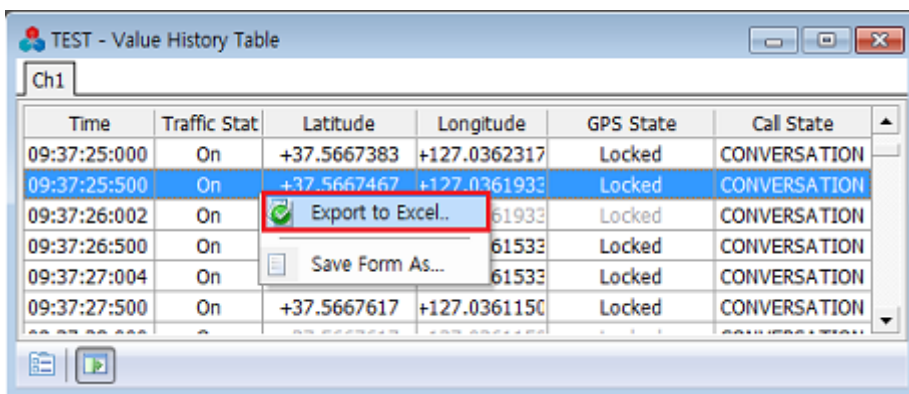


### Ver 3.7.1227

- Update
  - ✓ Samsung DM spec update (v4.60)
  - ✓ Custom History Table UI – Dim color is applied
  - ✓ Custom Table UI – Dim color is updated

### Ver 3.7.1230

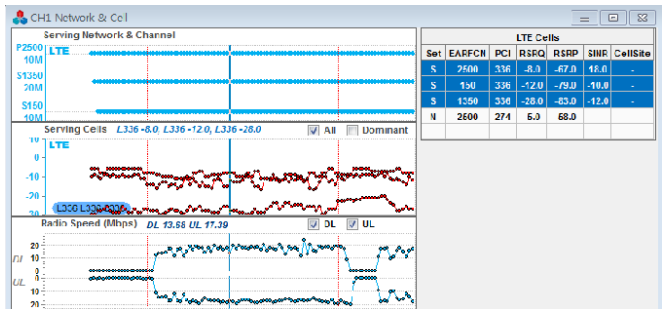
- Update
  - ✓ Custom History Table UI – “Export to excel” function added



- ✓ Log Parser – ‘Sequence Number’ Column added

Type	Message	Seq Num	Ack SN
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:0	
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 33] SN 0	
[LOG]	LTE PDCP DL Data PDU with Ciphering	[RB Idx0] SN:0	
[LOG]	LTE PDCP DL Data PDU with Ciphering	[RB Idx0] SN:1	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:1	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:2	
[LOG]	LTE PDCP UL Data PDU with Ciphering	[RB Idx0] SN:0,1	
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 33] SN 1	AckSN 1
[LOG]	LTE RLC UL AM All PDU	[RB Cfg Idx 11] SN 0,1,2,3,4	

✓ Samsung LTE 3CA is supported – ‘Network&Cell’, ‘LTE CA Status’, ‘Parameter Tree’



CH1 LTE CA Status

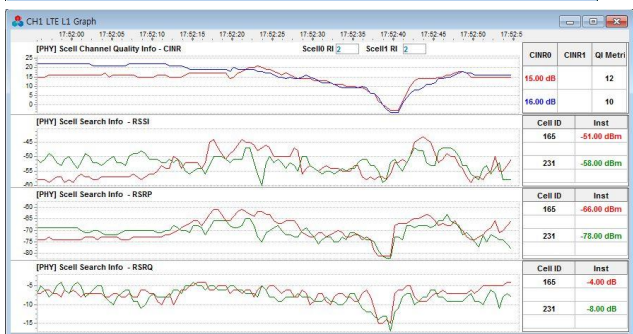
Network Revision

Mobile Category, Rev

Serving RAT, Channel, PCI: L 2500\_0 -> L 2500\_336 1350\_336 150\_336

Current	PCell	SCell	SCell2	PCell + SCell	PCell - SCell
EARFCN	2500	1350	150	-	-
PCI	336	336	336	-	-
Bandwidth	10MHz (50 RBs)	20MHz (100 RBs)	10MHz (50 RBs)	-	-
RSRP (Ant1, Ant2)	-67.0	-77.0	-78.0	-	-
RSRQ (Ant1, Ant2)	-8.0	-27.0	-12.0	-	-
SINR - RSRQ (Ant1, Ant2)	-28.0	-36.0	-26.0	-	-
SINR (Ant1, Ant2)	16.0	-12.0	-14.0	-	-

✓ Samsung chip 4.60 3CA related UI Update (Cell\_List, L1\_Graph)



### Ver 3.8.0108

- Update
  - ✓ Update for new Qualcomm log version

### Ver 3.8.0109

- Update
  - ✓ Qualcomm LTE 3CA is supported – 'Network&Cell', 'LTE CA Status', 'LTE MCS Index', 'Parameter Tree', 'QLTE-A Signal Graph', 'QLTE-A Cell List'
  - ✓ VoLTE Throughput calculation method changed
    - Invalid packet is not counted for the throughput calculation
    - RTP header is not counted for the throughput calculation

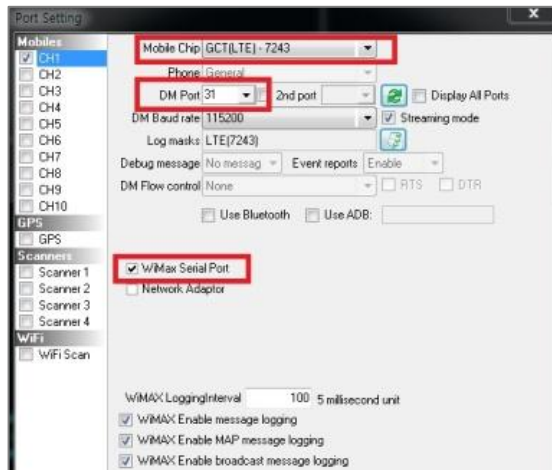
### Ver 3.8.0115

- Update
  - ✓ Supports 3-band LTE CA for Qualcomm chip
  - ✓ Update for new Qualcomm log packet versions
  - ✓ New parameters
    - [LTE] RLC Rx Throughput(Avg)
    - [LTE] RLC Tx Throughput(Avg)
    - [LTE] PDCP DL Throughput(Avg)
    - [LTE] PDCP UL Throughput(Avg)
    - [LTE] RLC DL BLER
    - [LTE] RLC UL ReTx Rate
  - ✓ Parameter calculation method update
    - [LTE] RLC Rx Throughput
    - [LTE] RLC Tx Throughput
    - [LTE] PDCP DL Throughput
    - [LTE] PDCP UL Throughput
- Bug Fix
  - ✓ 3CA UI bug fix – 'Network&Cell (SCell2 display bug)' and 'LTE CA Status (Throughput display bug)' UIs
  - ✓ Replay – minor bug fix
  - ✓ Cell site font installation problem solved
  - ✓ GMCTool – Wrong interpretation of map coordination due to decimal point problem is fixed

- ✓ Memory leakage because of USB device driver is updated

### Ver 3.8.0116

- Update
  - ✓ GCT 7243M chip – Support “WiMAX Serial connect” function for 7243M WiMAX DM



### Ver 3.8.0119

- Update
  - ✓ RMA upgrade (v1.86) – Improved exception handling for some mobiles

### Ver 3.8.0122

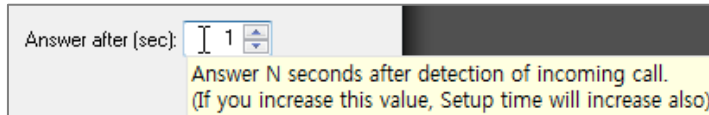
- Update
  - ✓ Updated mrxapi.jar.
  - ✓ Memory leakage because of USB device driver is updated
  - ✓ RMA upgrade (v1.87) – Improved exception handling
  - ✓ Qualcomm WCDMA log update for MSM8994 or later

### Ver 3.8.0123

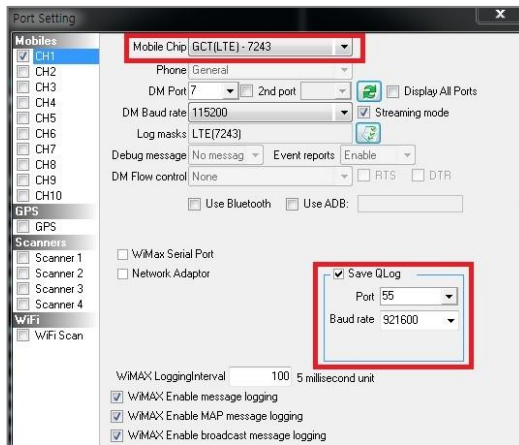
- Update
  - ✓ New version answers for incoming voice(or video) call immediately.
    - Previous version : If there is incoming call, DML waited 1sec and answered. This was because earlier version of slows speed smartphones become unstable if DML sends “answer command” to smartphone immediately after detecting there is incoming call (ex: from RRC signaling message, etc.) before smartphone LCD changes to display incoming call

alarm.

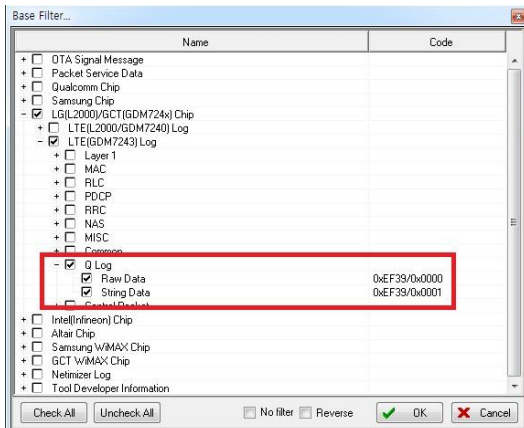
- New version : Now doesn't wait 1sec anymore, and sends "Answer command" to smartphone immediately. Recent models of smartphones are quite fast, so above issue will not appear anymore.
- If you are using slow speed smartphone, though, you can use "Answer after" option in the plan setting UI as below figure.



- ✓ GCT 7243 – Supports "Save QLog" option for GCT 7243Q chipset

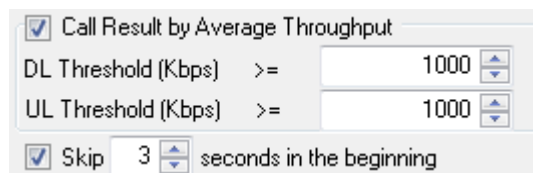


and



- ✓ FTP Call Result decision rule changed

- If "Skip" option is checked, skipped duration is not counted for the call average throughput calculation



### Ver 3.8.0128

- Update
  - ✓ "NV Items Control" UI – Added DM reset button and function
  - ✓ GCT 7243 chip – “Version Information” UI – Doesn’t check data validity, and displays all values from chipset

### Ver 3.8.0129

- New Feature
  - ✓ If ESP is applied to VoLTE, thus DML can’t decode SIP packets, DML refers RoHC to calculate mVoIP QoS values.  
This feature is available only when you use Qualcomm chip and it provides RoHC packet.  
This feature is under beta test, therefore might have compatibility issue with your mobile.

### Ver 3.8.0130

- Update
  - ✓ RMA upgrade (v1.88)
    - Update for Android Lollipop (Android 5.0)
    - RMA retrieves WiFi information on the smart phone, and sends to DML
  - ✓ MMS test didn’t work when the mobile screen is turned off – new version turns on the screen during MMS test
- Bug Fix
  - ✓ SMS send & receive to itself - bug fix
  - ✓ SMS Orig, Term – Changed to be scheduled with setup time configuration in the plan setting
  - ✓ Ping Plan setting – UI bug fix
  - ✓ HTTP call test – When “Browse all sites per each call” option is unchecked, there were invalid call results sometimes. This bug is fixed
  - ✓ Scenario Mode – After HTTP DL/UL test, call scheduling was stopped. This bug is fixed.

### Ver 3.8.0203

- Bug Fix
  - ✓ Samsung chip – 3-band LTE CA – Some PCell info in the parameter tree was not refreshed. This bug is fixed.

### Ver 3.8.0204

- Update
  - ✓ Qualcomm chip – Log mask updated

### Ver 3.8.0205

- Update
  - ✓ Network&Cell UI – EVDO display update
  - ✓ EVDO Rev.A SignalGraph UI – Added RTP Throughput

### Ver 3.8.0210

- Update
  - ✓ Log Message UI – Qualcomm LTE MAC Buffer Status (0xB066) – filter tree added, and parser updated
  - ✓ Log Message UI – Qualcomm QMI Service Filter – filter tree added
  - ✓ Qualcomm log parser update
    - LTE RRC idle meas config info (0xB0C8)
    - LTE ML1 PUCCH Power Control (0xB16F)
    - 1xEV-DO Air Link Summary (0x1068)
    - WCDMA HSDPA configuration V2 (0x4225)
    - QMI Link RX/TX PDU (0x138E~0x13AD, 0x180B~0x1812)
    - 1xEV-DO Signaling Control Channel Directed (0x1078)
  - ✓ Parameter update - Tool measurement group added
    - Device Status Group Items, Call Status, Call Statistics
- Bug Fix
  - ✓ Auto Call Scenario Monitor UI Display bug fix
  - ✓ During Bluetooth-based voice call test, end by user was treated as drop. This bug is fixed.

### Ver 3.8.0211

- Bug Fix
  - ✓ LTE CA Status UI – Bandwidth display bug fix

### Ver 3.8.0217

- Update
  - ✓ RMA upgrade (v1.89) – Youtube measurement update, mobile signal strength information

gathering

### Ver 3.8.0221

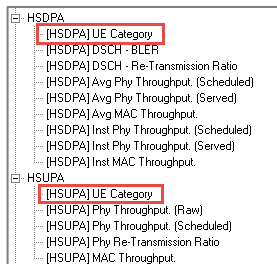
- Update
  - ✓ Qualcomm log 0x4179 ver2 (WCDMA PN Search Edition 2) – update
  - ✓ Qualcomm log 0xB139 ver25 (LTE LL1 PUSCH Tx report) – update

### Ver 3.8.0226

- Bug Fix
  - ✓ VoLTE call result decision but fix – If there is “Resister 200OK” during VoLTE conversation state, this call was decided as “drop” call. This bug is fixed.
  - ✓ NAS Parsing bug fix - GMM Attach Request/Mobile Identity(IMSI)/Identity digits

### Ver 3.8.0227

- Update
  - ✓ Parameter – [HSDPA] UE Category, [HSUPA] UE Category



- ✓ Log Message UI – Hexa & ASCII View

```
=====
2014/09/30 22:14:36.851 0x1FFD Tool Version
Tool Name      : NETIMIZER DML
Tool Version   : 3.7.929 ( )
MCN Name ID    : 3.7.0929
Compile Date   : Sep 29 2014
PCTime_Sec     : 0
PCTime_MSec   : 0
Format_Version : 1
Channel        : 0
UMTS_MCC      : 234
UMTS_MNC      : 15
CDMA_MCC      : 0
CDMA_MNC      : 0

Length : 161
Header : A1 00 FD 1F 92 FF 28 9E FB 2A CC 00
Payload: 03 00 07 00 00 00 00 00 00 00 A1 03 4E 45 54 49 4D 49 5A 45 52
          20 44 4D 4C 00 00 33 2E 37 2E 30 39 32 39 00 00 00 00 00
          00 00 00 00 00 00 00 00 00 00 53 65 70 20 32 39 20 32 30
          31 34 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 EA
          00 0F 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
          00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
          00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

          .....NETIMIZER
          DML..3.7.0929.....
          14.....Sep 29 20
          .....
```

- Bug Fix
  - ✓ Qualcomm WCDMA EUL Combined L1/MAC (0x4309) - Parser bug fix
  - ✓ Auto Call Scenario Monitor UI – bug fix
  - ✓ Multiple program instance running protection - enhanced

### Ver 3.8.0302

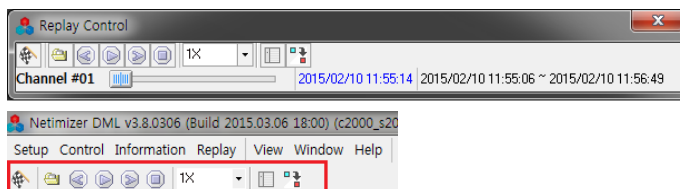
- Update
  - ✓ RMA upgrade (v1.90)
    - Incoming call answer problem on the latest version of Android - fixed
    - Abnormal RMA termination during VOD test - fixed
  - ✓ Scenario mode auto call test – “Repeat” function didn’t work in scenario mode – bug fixed
  - ✓ Main status bar – Status of DM, Bluetooth, RMA interface was not refreshed sometimes. This bug is fixed.

### Ver 3.8.0306

- Update
  - ✓ RMA upgrade (v1.91) – File transfer complete detection problem with specific type of FTP server (which doesn’t provide file size when transfer completes) – fixed.
  - ✓ Port setting UI – “Load” and “Save As” button supports scanner configuration load/save also
  - ✓ Samsung chip – Log details display for 3CA is updated
  - ✓ GMCTool update
  - ✓ Google map and Baidu map display method update
- Bug Fix
  - ✓ “LTE MCS Index” UI – High CPU usage problem in 3CA environment is fixed
  - ✓ TotalCallMonitor UI – FA value display bug fix
  - ✓ TotalCallMonitor UI – SMS, MMS call progress status display bug fix

### Ver 3.8.0309

- Update
  - ✓ Replay Control UI – last docking on/off state is saved, and loaded next time you use replay control



### Ver 3.8.0311

- Update
  - ✓ “NV Item Control” UI – “LTE Band Preference” is enhanced (for Qualcomm chip only)

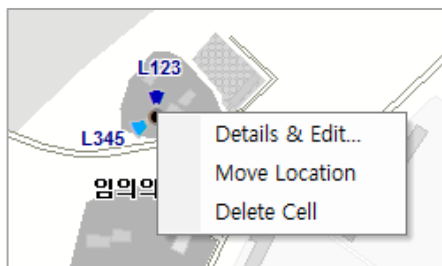
- ✓ Qualcomm LTE PDCP Config UI – supports updated Qualcomm log version

### Ver 3.8.0313

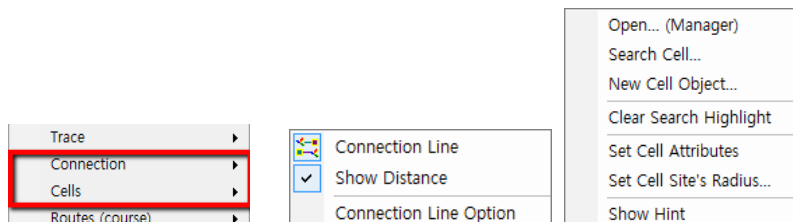
- Update
  - ✓ RMA upgrade (v1.92) – Enhanced stability for web test and MMS test. Incoming call number is logged.
  - ✓ Parameters – Added LTE-A group
    - [LTE-A] CA, [LTE-A] CA Active
- Bug Fix
  - ✓ MMS auto call test – Call result decision as “Incomplete” even when MMS is received is bug fixed
  - ✓ Total call monitor UI – HTTP DL/UL and VOD call progress display bug fix
  - ✓ Scenario monitor UI – MMS, SMS call progress update problem fixed
  - ✓ For LTE 3CA environment, excessively bulk TCP/IP log packets caused problem of log missing. This problem is fixed by discarding TCP/IP packets when there is excessive amounts of TCP/IP packets.

### Ver 3.8.0318

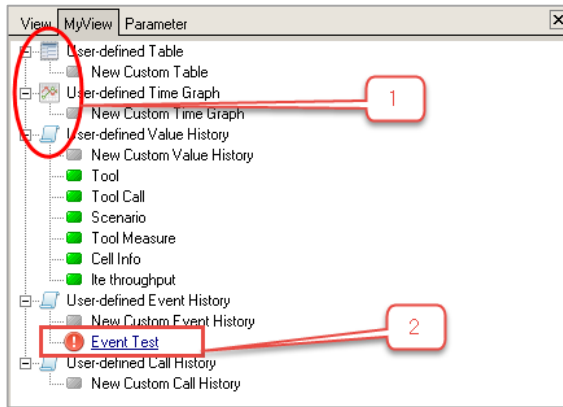
- Update
  - ✓ Samsung chip – Enhanced abnormal chip timestamp value handling
  - ✓ Cell Site edit function added (Right-click on cell site, then popup menu will be shown)



- ✓ MAP UI - Popup Menu modified (Connection, Cells)

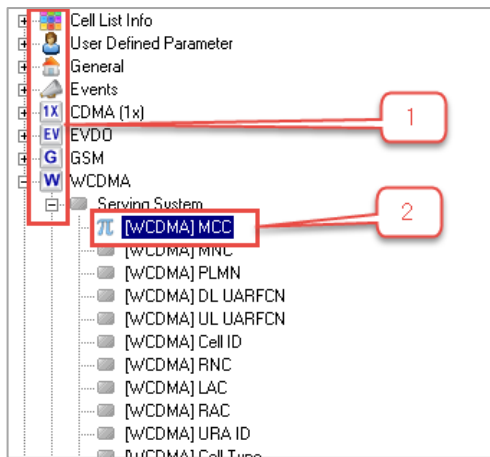


- ✓ MyView (User-defined UI) Menu Tree Icon Update



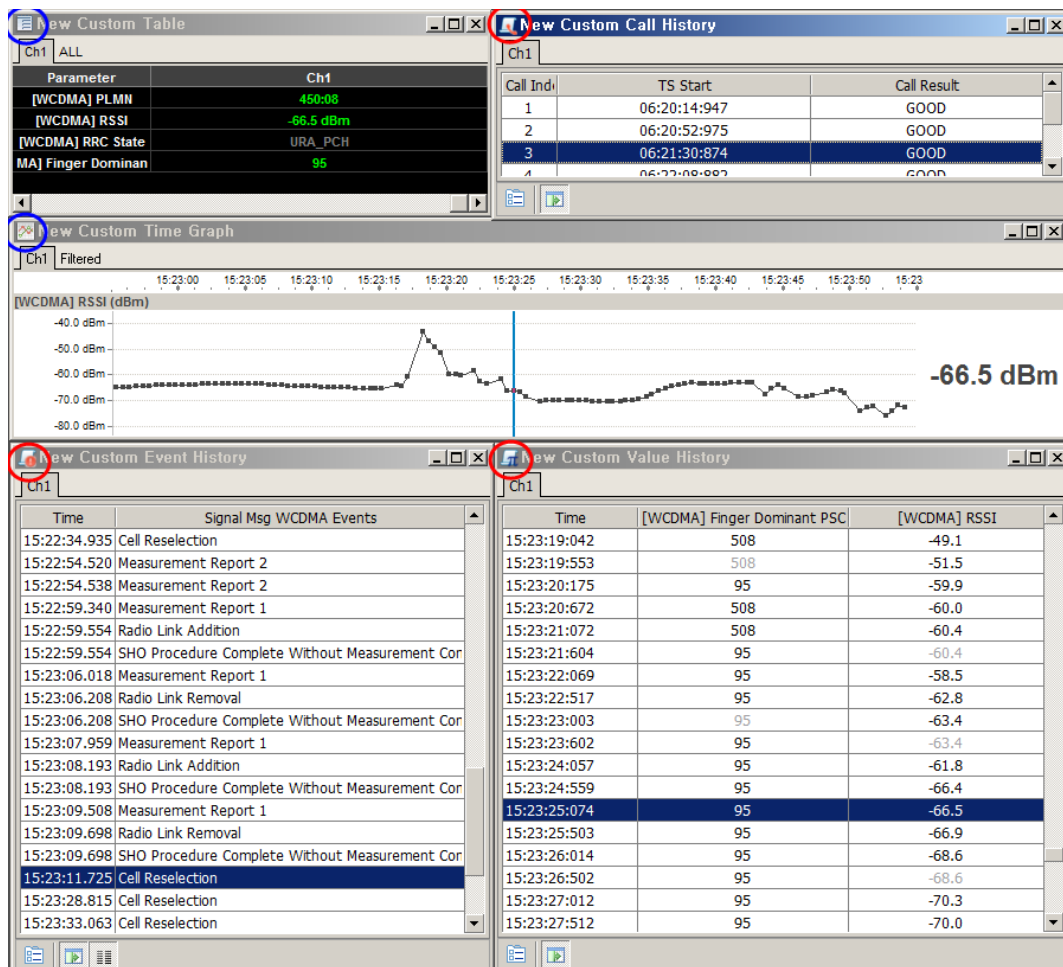
- Categorized UI types (Table/Graph/History) with icon
- Categorized Parameter types (Value/Event/Call) with icon

✓ Parameter Menu Tree Icon Add



- Displays different icon depending on Parameter Group
- Displays different icon depending on Parameter Type (Value/Event/Call)

✓ MyView (User-defined UI) Window Icon Update



- Bug Fix
  - ✓ Worksheet – Same UI display on multiple worksheets had problem – this bug is fixed

### Ver 3.8.0320

- Bug Fix
  - ✓ TotalCall Monitor – FA, MMS call display bug fix
  - ✓ Scenario scheduling – Voice call didn't proceed after 1<sup>st</sup> call. This bug is fixed.
  - ✓ Plan setting dialog – Load/Save works for each channel in case of scenario mode
  - ✓ VoLTE abnormal call fail phenomenon fixed – DML doesn't press "END" button at the call end
  - ✓ Access violation during program launch is fixed

### Ver 3.8.0324

- Update
  - ✓ Parameter "[LTE-A] CA", "[LTE-A] CA Active" display update
  - ✓ Log View UI - (Ctrl + Mouse Left) click → Previous detail parsed text is not cleared, and new

item's detail parsed text is appended

- ✓ Parameter – General Group “Call State” is renamed to “Voice Call State”
- ✓ Parameter – Call History Group’s RF related parameters can be displayed as call average
  - LTE RSSI, LTE RSRP, LTE RSRQ, LTE SINR
  - WCDMA RSSI, WCDMA RSCP, WCDMA ECIO

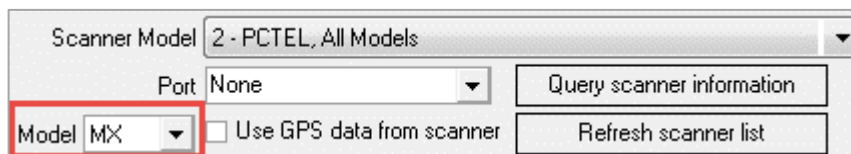
- Bug Fix

- ✓ Replay in “Load mode” – “User defined Call History” UI Error(which occurred when there is no call test information) bug fix

### Ver 3.8.0401

- Installer update for PCTEL scanner

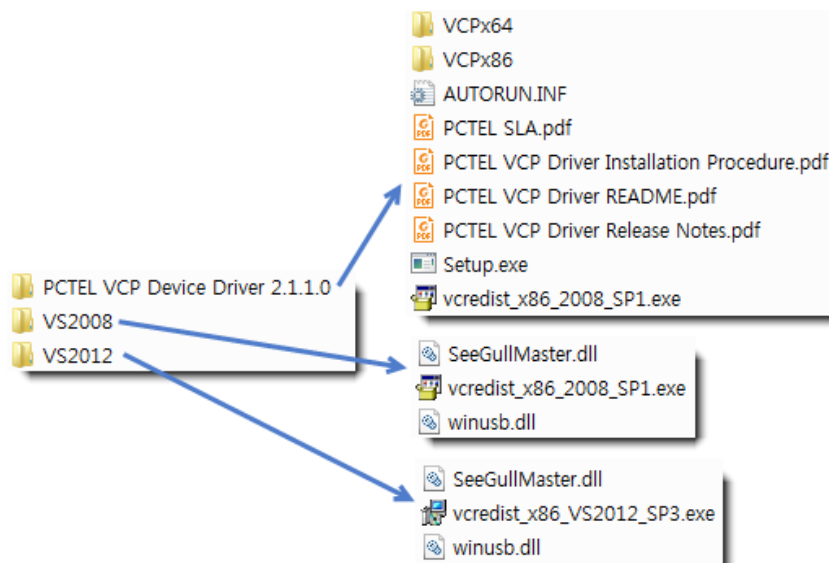
- ✓ Removed old PCTEL scanners models (LX, EX, ExNew) in the port setting dialog
- ✓ You should choose exact model as below;



- ✓ PCTEL scanner DLL version update (1.6.0.1 -> 1.7.3.2)
- ✓ Status bar scanner status display – bug fix
- ✓ If any of scan list fails to start, error events are displayed in the message window as below.

```
2015/04/01 15:22:13.371 : Channel 10 Not Used
2015/04/01 15:22:19.474 : Scanner #3 : Start Scan Fail : RunScan() failed with -7 (OptionRequired)
```

- ✓ Installer copies “PCTEL” subfolder under “Misc” folder. This folder consists as below;



If you see error dialog “missing msvp110.dll” when you try to connect PCTEL scanner, or other errors, follow below steps.

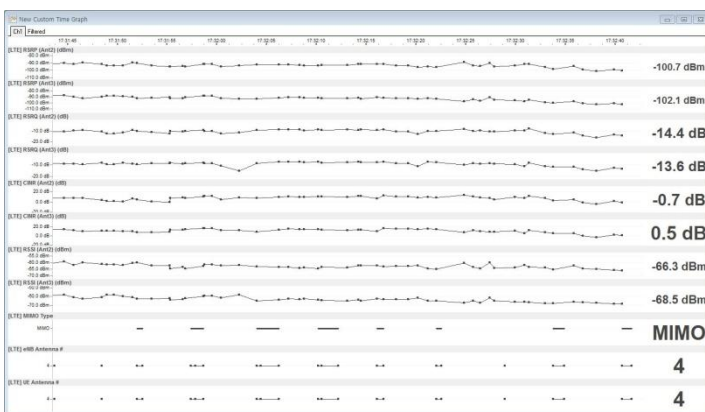
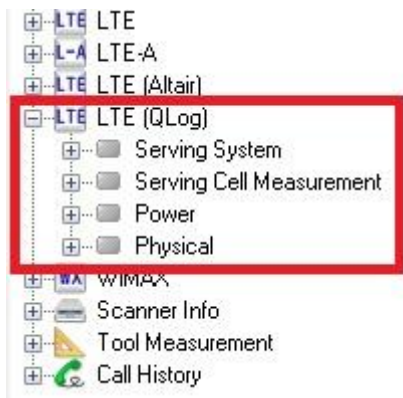
4. Install PCTEL device driver – If you have MX scanner, please contact PCTEL about how to get and install device driver.

Of course, you are recommended to get the latest version of device driver from PCTEL, even for other models.

5. Install “vcredist\_x86\_VS2012\_SP3.exe”.
6. Copy DLL files under VS2012 folder to Netimizer DML installation folder.

- Update

- ✓ Qualcomm "LTE ML1 PDCCH-PHICH Indication Report (0xB16B) Ver2" - Parser/Detail Update
- ✓ Parameter Manager – 'LTE (QLog)' 4Rx:4Rx related parameters added
  - RSRP, RSRQ, CINR, RSSI, Layer Map count
- ✓ SMS call monitor – Duration Time Tab – Grid value display bug fix



- Bug Fix

- ✓ MOS measurement – “play/record mismatch” and “measure doesn’t start” problems bug fix
- ✓ Parameter – Tool Measurement / "[Device] Network", "[Device] Network(3GPP)" – LTE-A display

bug fix

- ✓ Scenario Mode – Some log packets (Call END, Measurement Stop Event, etc.) missing bug fix
- ✓ Scenario Mode – If there are two or more continuous Idle(Wait) plan, second plan was not performed. This bug is fixed.
- ✓ PCTEL scanner – socket error message when DML exit – bug fixed

### Ver 3.8.0402

- Update
  - ✓ Altair chip – You can specify device's IP address in the port setting dialog.



Mobile Chip: ALTAIR(LTE)  
IP Address: 127.0.0.1  
TRACE port: 5000  
Protocol port: 18456 [Default]

- Bug Fix
  - ✓ PCTEL scanner – socket error message when DML starts – bug fixed

### Ver 3.8.0403

- Update
  - ✓ MOS – Audio codec configuration enhanced for Windows 10
  - ✓ Mobile Control UI – Added "UE Reset" (AT/ADB) feature and button
- Bug Fix
  - ✓ Qualcomm HSUPA Signal Graph UI – Setup dialog title changed
  - ✓ Scenario Call Monitor UI – "Each – Current & Events" tab – Setup/Traffic time display bug fix
  - ✓ Voice Quality Monitor UI – Plan modification didn't apply to voice quality monitor UI. This bug is fixed

### Ver 3.8.0409

- Update
  - ✓ RMA upgrade (v1.93)
    - FTP multi-session stability enhanced
    - Scenario mode – Youtube measurement stability enhanced
    - SNS measurement stability enhanced
- Update
  - ✓ R&S TSMW scanner interface – API version update to ViCom 15.40.

Below are ViCom 15.40 changelog from R&S.

(refer

[http://cdn.rohde-](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1540.txt)

[schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1540.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1540.txt))

-----  
ViCom Changelog  
-----

Version 15.40  
31.03.2015

- New: TSME: Add support for WIMAX.
- New: Add flag for EVDO scanning in available measurement mask, see SReceiver::dwFlagForEvdoScanner.
- New: TSME: Added disconnect detection for TSME receivers (error code: VICEC\_CONNECTION\_LOST).
- Fixed: TSME: Further optimizations to enhance the RF performance.
- New: VICOM WCDMA: Increased maximum measurement rate limit to 70 Hz for high dynamic measurement mode on TSMW.
- New: VICOM TDSCDMA: Joint detection for cell search and analysis in order to compensate the influence of weak signals on a strong signal measurement. This is done to achieve a reliable dynamic range of 15 dB.
- New: VICOM LTE: Add RSSI measurement for TS0...19 see SRssiSettings::wRSSI\_DL\_ALL\_TS\_MODE.
- Fixed: VICOM LTE: Add parameter for special subframe 1 and 6 configuration, see SFrequencySetting::wSpecialSubframe1ConfigurationMask and SFrequencySetting::wSpecialSubframe6ConfigurationMask.
- Fixed: VICOM LTE: Support for SIBs with length >32 Byte.
- Fixed: VICOM LTE: Changed special subframe configuration 7 for extended cyclic prefix.
- Fixed: VICOM LTE: Fixed missing RS CINR results for some TDD configurations.
- Fixed: VICOM LTE: Fixed STddInterference::fKPlinPct 1e6 times too big.
- Fixed: VICOM LTE: Fixed problem that disabled wideband R2 and R3 reference signal measurements.
- Fixed: VICOM ACD: Fixed an issue leading to crashes when having multiple start / stops.
  
- Note: Added tsme\_02010107.bin.
- Note: Added tsme\_02010307.bin.
- Note: Added tsme\_02010507.bin.
- Note: Added tsme\_02010607.bin.
- Note: Removed FFTW.dll.
- Note: R&S TSME tools updated to version 1.3.3.6.
- **Note: Please update your TSMW device to Firmware 2.01.**

### Ver 3.8.0414

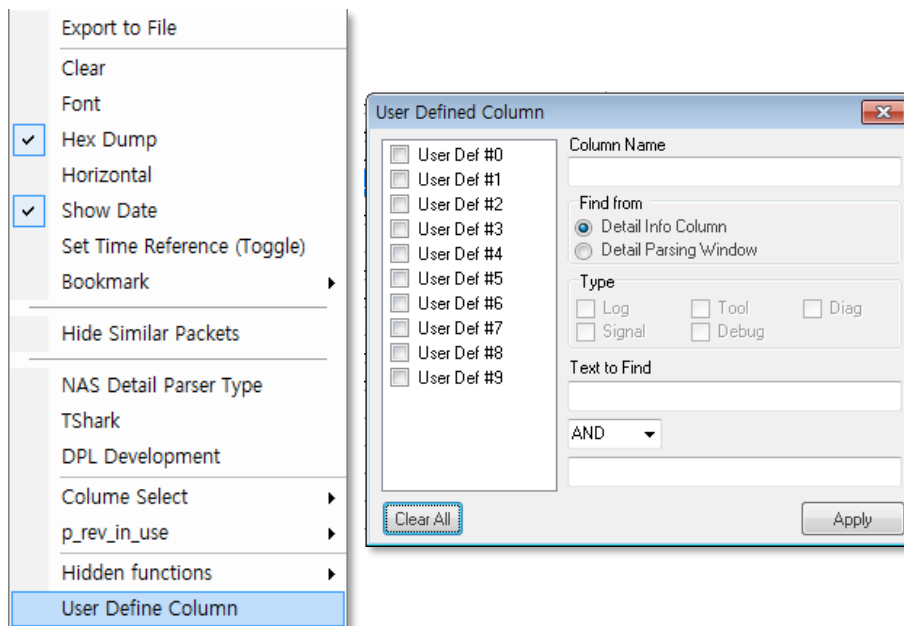
- Bug Fix
  - ✓ Measurement stop didn't work sometimes. This bug is fixed.

### Ver 3.8.0415

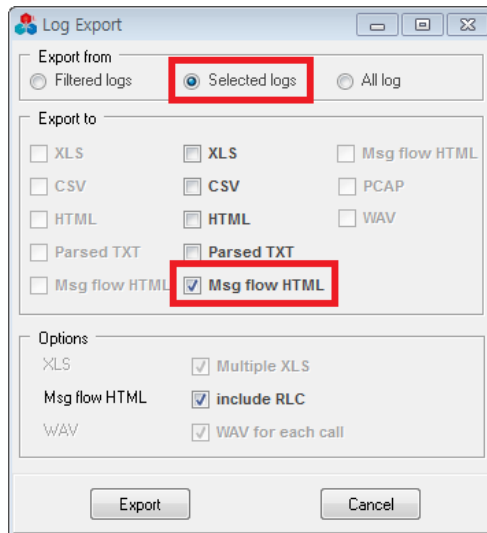
- Update
  - ✓ DM interface – Serial data reception logic update
  - ✓ RMA upgrade (v1.94) – WiFi test enhanced

### Ver 3.8.0416

- Update
  - ✓ RoHC packet parser update
  - ✓ RMA upgrade (v1.95) – WiFi test enhanced
- New Feature
  - ✓ Log Messages UI – Supports 'User Define Column' – you can define text to filter out and display in a separate column



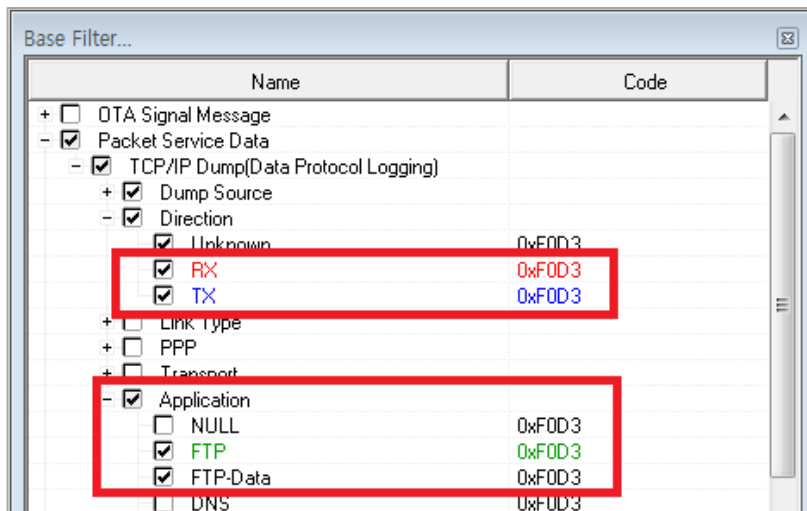
- Update
  - ✓ Log Messages UI – Added 'Msg flow HTML' in the case of 'Selected logs'



- ✓ Can uninstall from “Control Panel – Add/Remove Program”
- Bug Fix
  - ✓ Log message UI – Export to ‘Msg flow HTML’ – Arrow font problem fix

### Ver 3.8.0430

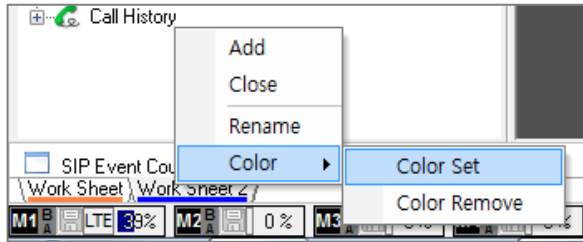
- Update
  - ✓ Scenario mode – Flight mode on/off control added to the scenario types
  - ✓ Log message UI – Filter – Packet Service Data – Coloring for each classification is supported now



### Ver 3.8.0511

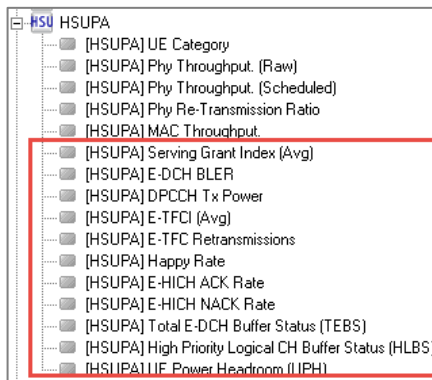
- Update
  - ✓ Worksheet supports re-ordering with drag & drop between worksheet tabs

- ✓ Worksheet supports coloring



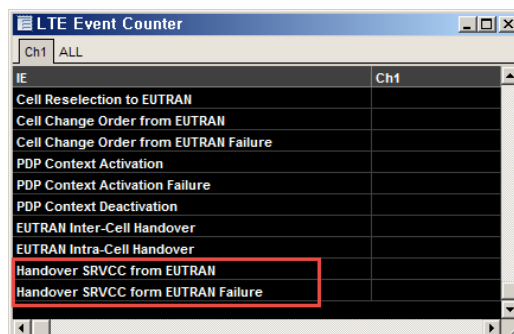
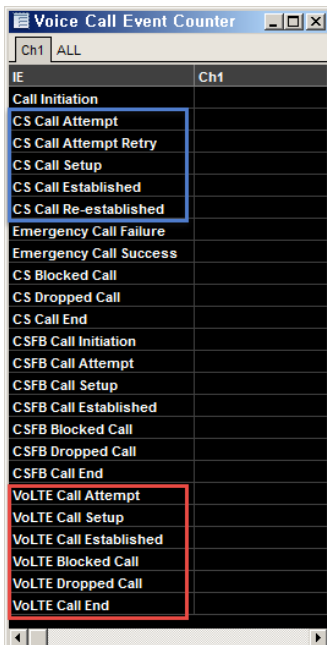
- ✓ MOS measurement – maximum MOS measurement count per single call is increased to 10,000 (old limit was 100)

- ✓ Parameter Update - HSUPA Params add



- ✓ Voice Call Event Counter Update – VoLTE added, CS Call Name changed

LTE Event Counter Update - SRVCC Handover Added



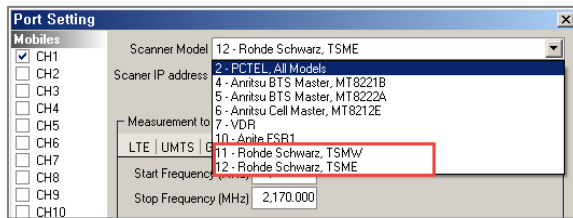
## Ver 3.8.0514

- Update

- ✓ GCT 7243Q chip – Support 4x4 display from mobile debug text message
- ✓ Samsung mobile USB device driver update (v1.5.51.0 → v1.5.53.0)

### Ver 3.8.0522

- Update
  - ✓ License Manager -- Rohde & Schwarz TSMW, TSME scanner license is added for management
  - ✓ Rohde & Schwarz Scanner – Support TSMW/TSME Scanner
    - Port Setting UI / Scanner Model – Support Rohde & Schwarz TSMW/TSME Scanner

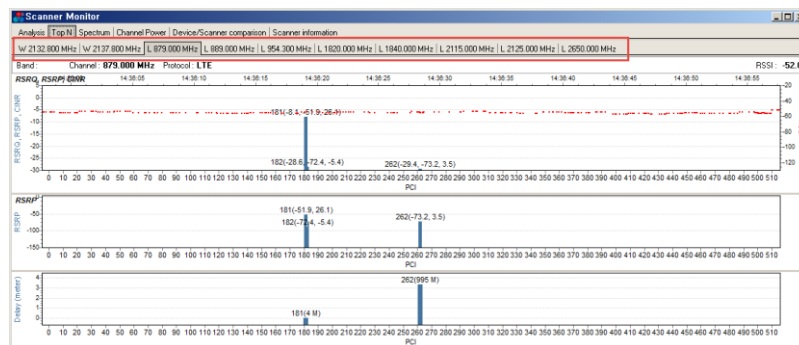


- Scanner Monitor UI – Support LTE/WCDMA/Spectrum Data of Rohde & Schwarz TSMW/TSME scanner

(Spectrum View UI of Rohde & Schwarz TSMW/TSME)



(LTE, WCDMA View UI of Rohde & Schwarz TSMW/TSME)



Scanner Monitor												
Summary   W 2132.800 MHz   W 2137.800 MHz   L 879.000 MHz   L 889.000 MHz   L 954.300 MHz   L 1820.000 MHz   L 1840.000 MHz   L 2115.000 MHz   L 2125.000 MHz   L 2650.000 MHz												
Tech	Chan	RSSI	N1	Q1	D1	N2	Q2	D2	N3	Q3	D3	
W	2132.800 MHz	-32.5	20	-5.5	1	-	-	-	-	-	-	-
W	2137.800 MHz	-33.2	20	-5.2	1	-	-	-	-	-	-	-
L	879.000 MHz	-57.6	181 (SO)	-8.1	0	182 (SO)	-23.7	-	262 (SO)	-27.4	-	3
L	889.000 MHz	-44.4	346 (SO)	-999.0	0	436 (SO)	-999.0	0	494 (SO)	-10.3	-	-
L	954.300 MHz	-72.8	222 (SO)	-17.8	2	285 (SO)	-19.7	1	287 (SO)	-11.4	-	0
L	1820.000 MHz	-30.7	181 (SO)	-12.6	0	-	-	-	-	-	-	-
L	1840.000 MHz	-47.1	186 (SO)	-10.0	0	222 (SO)	-30.7	-	287 (SO)	-999.0	-	-
L	2115.000 MHz	-82.9	28 (SO)	-17.9	0	338 (SO)	-20.7	-	339 (SO)	-18.1	-	0
L	2125.000 MHz	-78.0	182 (SO)	-30.4	1	262 (SO)	-16.9	1	468 (SO)	-26.6	-	1
L	2650.000 MHz	-75.5	19 (SO)	-20.5	0	338 (SO)	-999.0	0	339 (SO)	-999.0	-	0

- Known problem : Too many channel/spectrum scanning command to TSME scanner might cause TSME scanner unstable. (ex: Many combination of LTE + WCDMA + Spectrum scanning) It's not Netimizer DML problem, but known problem of TSME scanner itself.

### Ver 3.8.0529

- Update
  - ✓ Log Parser – update for LG L5000 chip
  - ✓ R&S TSMW scanner interface – API version update to ViCom 15.45.

Below are ViCom 15.45 changelog from R&S.

(refer

[http://cdn.rohde-](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1545.txt)

[schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1545.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1545.txt))

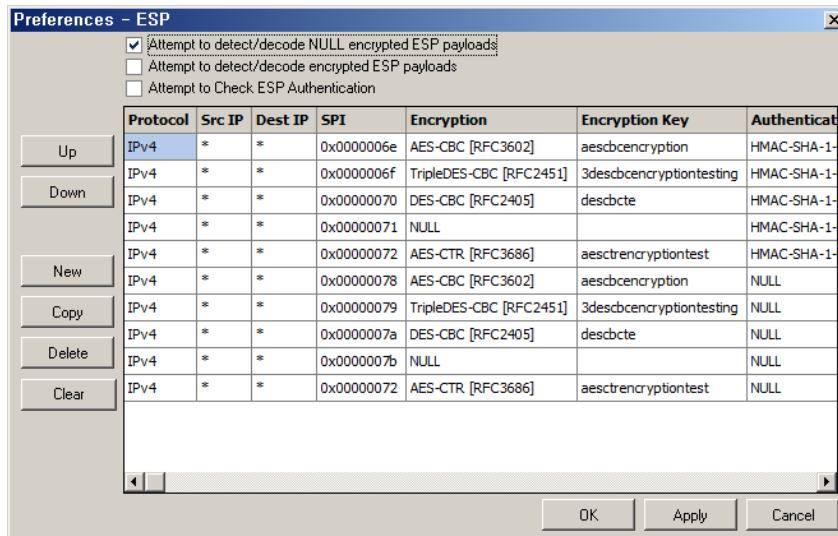
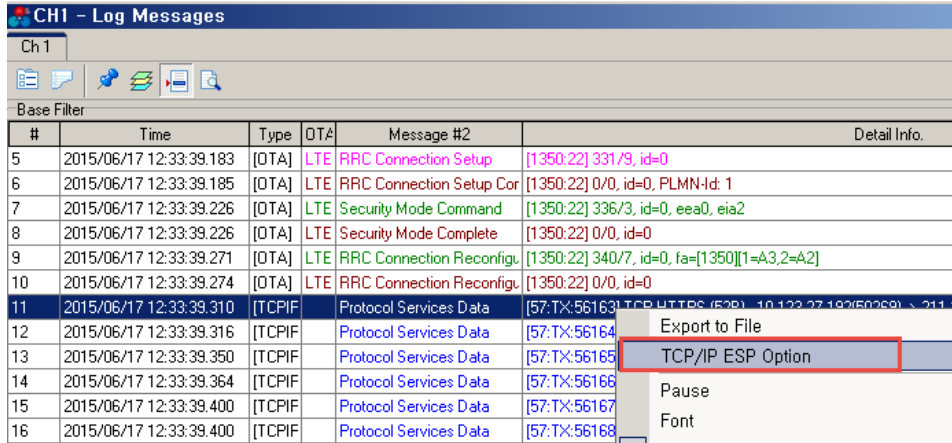
----- ViCom Changelog -----
Version 15.45 27.04.2015
- Fixed: TSME: Further optimizations to enhance the performance.
- Fixed: TSMW: Fixed an issue leading to a failed device detection in case of multiple interfaces in parallel.
- Note: Added tsme_02020105.bin.
- Note: Added tsme_02020305.bin.
- Note: Added tsme_02020505.bin.
- Note: Added tsme_02020605.bin.
- Note: R&S TSME tools updated to version 1.3.3.6.
- Note: Please update your TSMW device to Firmware 2.02.

### Ver 3.8.0615

- New Feature
  - ✓ DML now supports 12 mobiles
  - ✓ RMA upgrade (v1.96) – HTTP download test enhanced
  - ✓ Enhanced processing for fragmented IP and fragmented TCP packets

### Ver 3.8.0617

- Update
  - ✓ Log Parser – Samsung Log LRRC State (0xEB51) – rrc state field update
  - ✓ Log Message UI – TCP/IP ESP Parsing을 위한 ESP Option 제공



- Bug Fix
  - ✓ Event Count(SIP, TCP/IP, LTE, etc) UI – display bug fix
  - ✓ Measure Stop problem bug fix

### Ver 3.8.0618

- Update
  - ✓ GCT7243 chip - QLog 4x4 - RI Parameter added
- Bug Fix
  - ✓ Measure Stop bug fix

- If measure is started during the RMA disconnected state, measure stop button was disabled. This bug is fixed
- ✓ RMA state display bug fix
  - If you choose to use RMA in the port setting, but RMA is not running on mobile, RMA state LED in the status bar was displayed as gray, not red. This bug is fixed
  - If you change not to use RMA in the port setting, and RMA quits on the mobile, RMA state LED was displayed as red, not gray. This bug is fixed.

### Ver 3.8.0619

- Update
  - ✓ Log View – Filter – Provides IPv4/IPv6 selection filter

### Ver 3.8.0623

- Update
  - ✓ Voice Quality Measurement Config dialog – Enabled “Wait Time” option

### Ver 3.8.0626

- Update
  - ✓ RMA upgrade (v1.97) – Voice call answer feature update  
This update is applied when you test voice(or VoLTE) call with “Answer with ADB (RMA)” configuration in the plan setting.
    - Before: If there is incoming call, RMA compared caller ID with pre-defined phone number in DML plan setting. If it’s not same, RMA didn’t answer.
    - Update: RMA now answers for all incoming call, regardless of caller ID.

### Ver 3.8.0630

- Update
  - ✓ LTE RRC upgrade (10.7.0 → 11.11.0) – Supports parsing for SIB14, SIB15, SIB16
  - ✓ RMA upgrade (v1.98) – RMA connection state display bug fix
- Bug Fix
  - ✓ Scenario mode – When FTP call is finished, next FTP call was not started. This bug is fixed.
  - ✓ FTP call – When RMA is configured with “infinity” option checked, throughput calculation was wrong. This bug is fixed.

### Ver 3.8.0701

- Update
  - ✓ PL\_MGR update
  - ✓ POLQA update – DLL v1.18. POLQA standard v1.1.

### Ver 3.8.0703

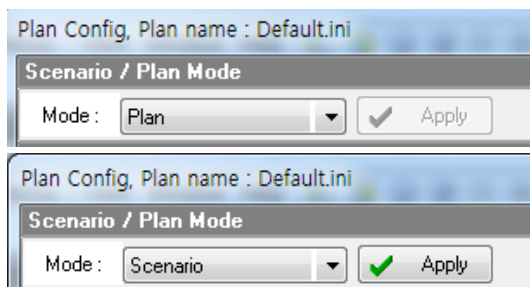
- Update
  - ✓ Qualcomm LTE Signal Graph – added “DL/UL MCS Index”, “DL DTX Rate (%)”, “DL/UL Num of RB (including 0)”
- Bug Fix
  - ✓ HTTP Download/Upload – Bug fix when download file’s original size is unknown
  - ✓ DM port and ADB name match – bug fix

### Ver 3.8.0706

- Bug Fix
  - ✓ MOS measurement – POLQA NB – calculation bug fix

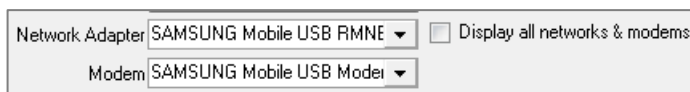
### Ver 3.8.0710

- Update
  - ✓ Plan setting UI – You can toggle “Scenario mode” or “Plan mode” in this UI.



### Ver 3.8.0803

- Update
  - ✓ Port setting UI – Network adaptor and modem selection is moved to port setting UI
- ✓ Updated for new Qualcomm log versions
  - Qualcomm log 0x4179 ver5 (WCDMA PN Search Edition 2)



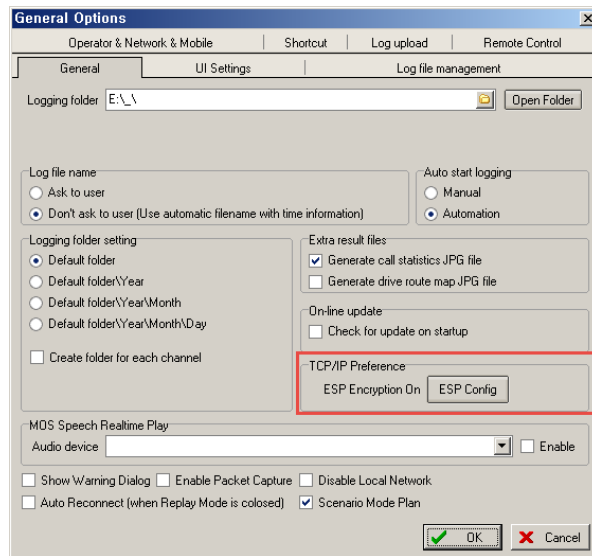
- Qualcomm log 0x4186 ver10 (WCDMA Finger Temporal Analysis V2)
- Qualcomm log 0x421C ver3 (WCDMA UL HS DPCCH Information V2)
- Qualcomm log 0x4222 ver13 (WCDMA HS Decode Status With Data V3)
- Qualcomm log 0xB17E ver16 (LTE ML1 UE Mobility state change)

## Ver 3.8.0805

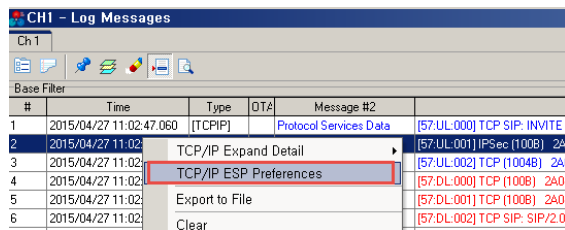
- New Feature
  - ✓ TCP/IP IPsec (ESP) decoding function for VoLTE is added

To use real-time ESP decoding and text parsing, below setting should be configured correctly.

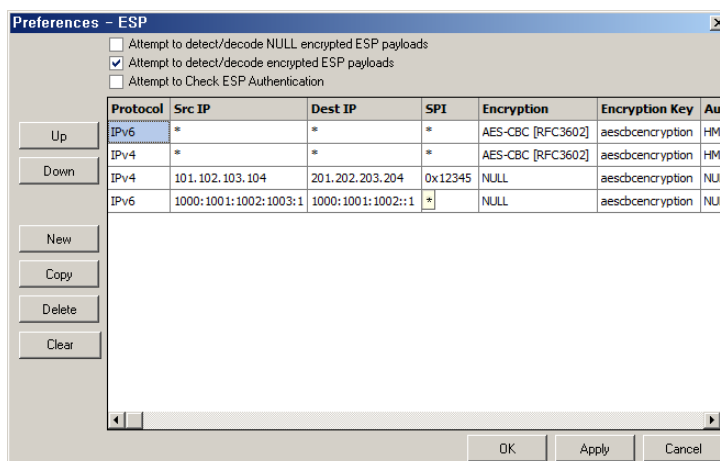
- ESP Configuration method 1 : Main Menu : Setup – General Option – ESP Config Button



- ESP Configuration method 2 : Log Message UI : Right Button Popup Menu - ESP Config Button



- Preference - ESP Dialog UI



Protocol : IPv4 or IPv6

Src IP : IP's Source Address for ESP decoding (\* for any address)

Dest IP : IP's Destination Address for ESP decoding (\* for any address)

ESP SPI : ESP SPI for ESP decoding (\* for any address)

Encryption : Encryption algorithm for ESP decoding

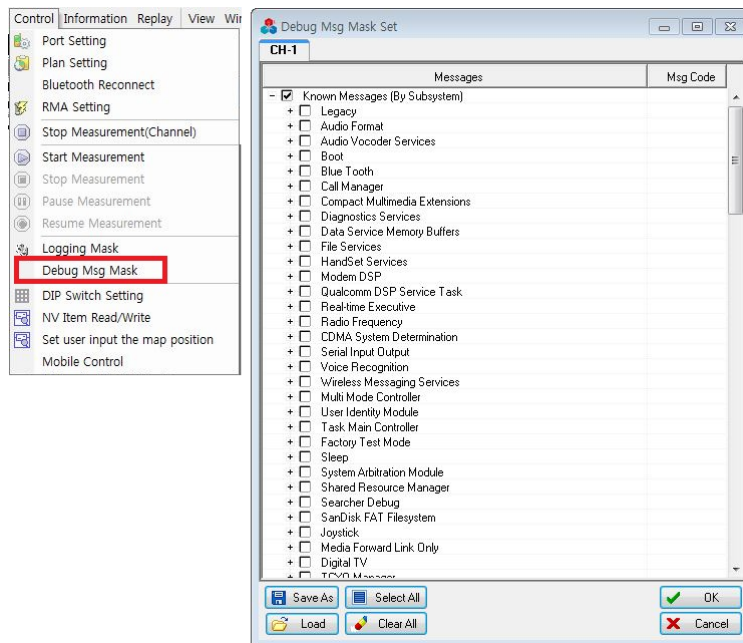
Encryption Key : Encryption Key for ESP decoding

### Ver 3.8.0811

- New Feature
  - ✓ “GPS location from the phone” is saved to log file, together with USB GPS data.
    - You can compare USB GPS location and mobile phone's location.
  - ✓ Scenario mode – Supports “Airplane mode on/off” control
  - ✓ Scenario mode – Supports “WiFi on/off” control
- Update
  - ✓ RMA upgrade (v2.00) – WiFi on/off control

### Ver 3.8.0818

- New Feature
  - ✓ Added “Control - Debug Msg Mask” menu, which supports Qualcomm chip debug message masking for categories.



- Update
  - ✓ RMA upgrade (v2.01) – supports SPP-based communication with DML
  - ✓ You can use RMA through Bluetooth SPP interface, as well as conventional ADB interface.  
(Warning: To use RMA through Bluetooth SPP interface, you should enable “Use Bluetooth” option)

ADB	<input type="text" value="ad2a064e"/>
Use RMA	<input type="text" value="Use(Bluetooth-SPP)"/>
Use Bluetooth	<input type="text" value="Use"/> Bluetooth Name Prefix <input type="text"/>

- ✓ VoLTE call state decision – Changed criteria
  - “VoLTE” case : If SIP ACK is received, and there are more than three RTP packets received, VoLTE call state is decided as conversation state by force
  - “Pair Call” case : When MT UE answers incoming call, MO UE call state is decided as conversation state by force

These modifications will help below cases;

- Occasionally, Qualcomm chip provides corrupted SIP message through DM port. In this case, VoLTE call state couldn't be decided correctly due to modem chip bug. Above methods will help this case.
- Occasionally, Qualcomm chip doesn't provide DL(or UL, or both of DL/UL) data packets due to it's well-known bug. In this case, VoLTE call state couldn't be decided correctly due to modem chip bug. Above methods will help this case.

### Ver 3.8.0819

- Update
  - ✓ RCS interworking – DML supports real-time L3 message transfer to Netimizer RCS (optional)
  - ✓ Log Message UI - TCP/IP packet's "Detail Info" display – If IP packet length is different from real received packet length, log message UI displays "## CORRUPT ##" string in front of detail column as below.

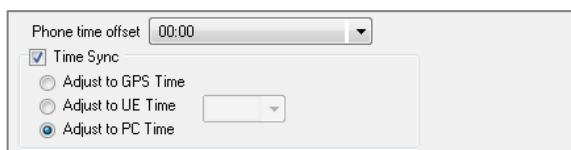
2015/08/18 20:37:44.692	[TCPIP]	Protocol Services	[57-DL:2071] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.652	[TCPIP]	Protocol Services	[57-DL:2072] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.674	[TCPIP]	Protocol Services	[57-DL:2073] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.674	[TCPIP]	Protocol Services	[57-DL:2074] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.680	[TCPIP]	Protocol Services	## CORRUPT ##[57-DL:2075] UDP (104B)	2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.682	[TCPIP]	Protocol Services	## CORRUPT ##[57-DL:2077] UDP (108B)	2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.682	[TCPIP]	Protocol Services	## CORRUPT ##[57-DL:2078] UDP (108B)	2001.02D8.00E0.0171.0000.0000.0000.0144(49903) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.692	[TCPIP]	Protocol Services	[57-DL:2079] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.692	[TCPIP]	Protocol Services	[57-DL:2080] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services	[57-UL:657] UDP RTP (67B)	2001.02D8.0932.3739.0000.0000.0151:C915, 7010) -> 2001.02D8.00E0.0171.0000.0000.0000	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services	[57-DL:2081] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.713	[TCPIP]	Protocol Services	[57-DL:2082] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11
2015/08/18 20:37:44.734	[TCPIP]	Protocol Services	Data[L:2083] UDP RTP (938)	2001.02D8.00E0.0171.0000.0000.0000.0144(49902) -> 2001.02D8.0932.3739.0000.0000.015	0x11

### Ver 3.8.0820

- Update
  - ✓ "Null ESP decoding" is applied for the call state detection, regardless of user configuration in the log message UI.
  - ✓ Voice Quality Monitor UI – In scenario mode, this UI is not initialized on each call, and keeps the history

### Ver 3.8.0824

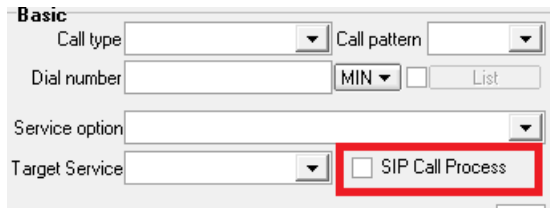
- Bug Fix
  - ✓ Port Setting – "Time Sync" bug fix



- ✓ "Network & Cell" UI – Time sync related bug fix

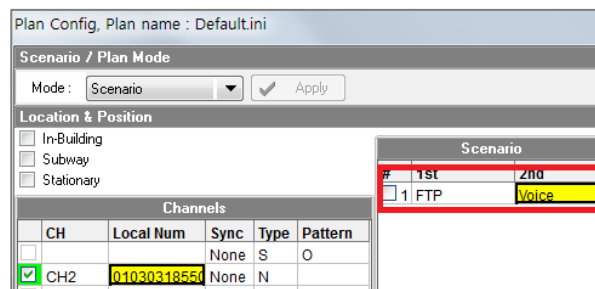
### Ver 3.8.0827

- Update
  - ✓ Plan setting dialog – Added "SIP Call Process" option – you should select this option to enable DML decode SIP messages and reflect to call state detection.



### Ver 3.8.0831

- New Feature
  - ✓ Scenario Mode – Supports Multi RAB for LTE network
    - To use Multi-RAB (simultaneous active call test for data service and voice service), you should;
      - use “Scenario” mode
      - Add data call (ex: FTP) first, and select “Voice” service in the 2<sup>nd</sup> service as below



### Ver 3.8.0902

- Update
  - ✓ RMA upgrade (v2.02) – Retrieves information from Android OS always
  - ✓ License Manager update

### Ver 3.8.0903

- Update
  - ✓ License Manager update – Check LIF file, if the installed floating license doesn't support product license
  - ✓ MOS measurement – Unmutes play/record codecs automatically before MOS measurement start

### Ver 3.8.0904

- Update

- ✓ RMA upgrade (v2.03) – Crash on specific model is fixed
- ✓ Fast RMA termination on DML exit

### Ver 3.8.0909

- Update
  - ✓ HSDPA Channel Config Information UI – CQI feedback cycle display format updated
    - Before: Index number (0,1,2,...)
    - After: msec value

RB Re-config.	fc0	fc2	fc4	fc8	fc10
HSDPA Config. V2	0	1	2	4	5
	sub frame	sub frame	sub frame	sub frame	sub frame
msec	0ms	2ms	4ms	8ms	10ms

### Ver 3.8.0915

- Bug Fix
  - ✓ Plan setting UI – Inbuilding configuration bug fix
  - ✓ Inbuilding UI bug fix

### Ver 3.8.0917

- Update
  - ✓ RMA upgrade (v2.04) – Save action log whenever RMA tries to release voice call.
    - When RMA tries to answer incoming call: “recvIncommingCall : AcceptCall” or “recvIncommingCall : HEADSETHOOK”
    - When RMA tries to release call : “try: VoiceEndCall”

Time	DIR	Type	Message	
2015/09/17 14:15:38.316		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:38.502		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:40.792		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:41.317		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:47.571		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:52.803		[TOOL]	Voice Call Result	Call 1 / Orig. / COMPLETE
2015/09/17 14:15:52.815		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / Debug Msg - #DB:try VoiceEndCall
2015/09/17 14:15:53.188		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / Voice State - #VOICE:ST:0
2015/09/17 14:15:54.548		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:54.992		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / Android Battery Level - #E:BATTERY:97
2015/09/17 14:15:56.746		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:56.960		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:58.250		[TOOL]	Voice Call End	Call 1 End / Tick:135705113
2015/09/17 14:15:58.265		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / Debug Msg - #DB:try VoiceEndCall
2015/09/17 14:15:58.791		[TOOL]	Voice Call Start	Call 2 / Origination / Tick:135705612
2015/09/17 14:15:59.121		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:59.181		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / SignalStrength - #E:QOS_SS:SignalStrength: :
2015/09/17 14:15:59.305		[TOOL]	Bluetooth HF.ADB_APP Message	(Rx) APP / Voice State - #VOICE:ST:2

### Ver 3.8.0921

- Update
  - ✓ During SIP call, Netimizer's call state detection is reset to IDLE, when call state remains in SETUP state at the call end.
  - ✓ If there is any fail events in SIP(ex: Registration fail, etc.), Netimizer's call state detection is reset to IDLE if SIP state is in IDLE state.
  - ✓ Update for call status judgement (For the fragmented TCP packet processing DML refer the additional packet flow to judge the call status.)
- Bug Fix
  - ✓ Bug fix for DM port number larger than 255
  - ✓ Bug fix for GPS data source from multiple RMAs

### Ver 3.8.0922

- Bug Fix
  - ✓ VoLTE SIP process – bug fix (Using Bluetooth case)
    - When "SIP Call Process" option is unchecked, DML doesn't refer SIP message for the call state decision. However, DML sent HANGUP command through Bluetooth (when Bluetooth is used) when there is SIP BYE message. New DML doesn't send this HANGUP command to BT anymore if "SIP Call Process" is unselected.

### Ver 3.8.0923

- Update
  - ✓ DML receives location information from Android (RMA), and saves to the log file always

### Ver 3.8.0924

- Update
  - ✓ RMA log length – New version truncates trailing NULL characters from RMA log, and saves real string only. Thus log packet size is variable length, and consumes less capacity.
  - ✓ Samsung chip DM interface update following new ICD v4.90.
  - ✓ Update for abnormal Qualcomm log
    - Parameter – "[LTE] RLC DL Throughput.", "[LTE] RLC UL Throughput." – update for abnormal Qualcomm log
    - Parameter – "[LTE] PUSCH Throughput.", "[LTE] MAC UL Throughput" – update for abnormal Qualcomm log
    - Data Throughput Graph UI – [LTE Physical Throughput (Mbps) UL Graph
    - Network & Cell UI – "Radio Speed(Mbps)" UL Graph
    - Qualcomm LTE Signal Graph – PDSCH Throughput, PUSCH Throughput, RLC DL Throughput, RLC UL Throughput

### Ver 3.8.0930

- Update
  - ✓ iPerf server package update – "<DML\_Install\_Folder>\misc\iperf\_2.0.5\_Linux\_Server.zip"

### Ver 3.8.1001

- Update
  - ✓ "Voice Call Plan" – Added "SIP Call ID Detect" option
    - When checked, "Call-ID" contents of SIP messages(ex: INVITE, BYE, etc.) are compared, and discarded if not match for the current call
    - Default = off
    - If this option is selected, and there is BYE message, DML tries to decode "Call-ID".
      - If it matches with INVITE's "Call-ID", BYE is referred and call state is detected as IDLE
      - If it doesn't match with INVITE's "Call-ID", BYE is discarded
      - If "Call-ID" of BYE message is unknown (because of ESP, etc.), BYE message is referred to decide call state

**Basic**

Call type: Pair call with other CH | Call pattern: T

Dial number: [redacted] | MIN | List

Service option: 105. ADB(RMA) - Voice with Dial Number

Target Service: None

Refer SIP messages  
 Check SIP Call-ID

### Ver 3.8.1006

- Bug Fix
  - ✓ Inbuilding UI – bug fix

### Ver 3.8.1016

- Update
  - ✓ Custom Event History – SIP 4xx, 5xx, 6xx messages are displayed in detail
  - ✓ SMS Call Monitor UI – Added columns (Ori. RAT, Term. RAT, Ori. via, Term. via)

CH2 SMS Monitor

Call Pattern	App Orig-Term	Teleservice ID	Default
Called Number	01031964079	Callback Number	01031964079
Setup Time	4 / 40 sec	Idle Time	10 / 10 sec
Call State	SMS Idle	Call Event	SMS MO
Total	4/10		40%
Complete	4		100%
Fail	0		0%

History | Graph | **Statistics** | Help

#	Result	A ~ B	A ~ D	Ori. RAT	Term. RAT	Ori. via	Term. via
1	Complete	00:01.669	00:08.377	WCDMA	WCDMA	NAS	NAS
2	Complete	00:01.732	00:04.322	WCDMA	WCDMA	NAS	NAS
3	Complete	00:01.560	00:08.627	WCDMA	WCDMA	NAS	NAS
4	Complete	00:01.498	00:04.368	WCDMA	WCDMA	NAS	NAS

- ✓ Voice Quality Monitor UI – Call Results Table updated to display more information

Voice Quality Monitor

Wave Form | **Results (Table)** | Results (Graph) | PESQ Details | POLQA Details | Events | Manual Test

Call	CH2						
	MOS				Call Result		
	MOS values		Avg.	QoE	Type	Result	
1	1.01	1.01	1.01	1.01	1.01	-CBQ-	3G C

### Ver 3.8.1020

- Update
  - ✓ Qualcomm Log “LTE ML1 PDSCH Stat Indication(0xB173)” – Parser update for “ACK/NACK Decision” field

- ✓ Layer-3 message parsing – NAS/CC/SETUP – “Supported codec” detail parsing is added

### Ver 3.8.1027

- Update
  - ✓ R&S TSMW/TSME Scanner Interface update to ViCom 15.51.
    - Finished test with R&S TSME Scanner FPGA Version 02.02.01.08 – you can check FPGA version with “R&S TSME Device Manager” utility.

<b>FPGA</b>				
Available FPGA Bit File Versions	02,02,01,08	02,01,01,03	02,02,01,08	unused
Current FPGA Bit File Version	02,02,01,08			

- Bug Fix
  - ✓ Alarm – bug fix

### Ver 3.8.1029

- Update
  - ✓ R&S TSMW/TSME scanner interface – API version update to ViCom 15.55.

Below are ViCom 15.55 changelog from R&S.

(refer

[http://cdn.rohde-](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1555.txt)

[schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1555.txt](http://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1555.txt))

----- ViCom Changelog -----	
Version 15.55	22.10.2015
- New:	VICOM ACD: Add support for automatic channel detection for CDMA on TSME (beta state).
- New:	VICOM ACD: Add parameter for channel bandwidth detection status, see SMeasResult::bBandwidthConfirmed.
- Fixed:	VICOM ACD: Fixed channel power not being updated for found channels, see SChannel::pfRssiInDBm.
- Fixed:	VICOM ACD: Fixed restarting measurements resulting in a blocked interface.
- Fixed:	VICOM ACD: Fixed issue with receiver selection pop-up window coming up in case of two connected TSME receivers.
- Fixed:	VICOM ACD: Fixed incorrect band id being reported for WCDMA measurements.
- Fixed:	VICOM ACD: Fixed crash for ACD being started parallel to a running R&S ROMES.
- New:	TSME: Add detection for insufficient MTU size by network path to receiver (error code: VICEC_INSUFFICIENT_PATH_MTU_SIZE).
- Fixed:	TSME: Fixed issue with measurements randomly stop to deliver any data in case of two connected receivers.
- Fixed:	TSME: Fixed issue with detection of incorrect network mask settings(error

	code: VICEC_INSUFFICIENT_NETMASK).
- New:	VICOM LTE: Add eMBMS hardening. This allows to do NB RS-CINR measurements in eMBMS enabled areas.
- New:	VICOM LTE: Optimizations to improve the speed of parallel NB and WB measurements for TSME.
- New:	VICOM LTE: Add support for 1ms time resolution for MIMO measurements, see SMimoSettings::wTimeResolutionInMs.
- Fixed:	VICOM LTE: Fixed check for configuration errors in SFrequencySettings::wSpecialSubframe{1,6} configuration mask parameter.
- Fixed:	VICOM LTE: Fixed issues with extensive memory consumption of RS-CINR algorithms for eMBMS channels.
- Fixed:	LTE Demodulator: Fixed crash for signals with TDD special subframe configuration 9.
- Fixed:	WCDMA Demodulator: Fixed demodulation not possible or less successful in certain situations.
- Fixed:	VICOM GPS: Fixed VICEC_GPS_INTERNAL error being returned when two TSME receivers are connected depending on which device is detected first.
- Fixed:	VICOM GPS: Fixed missing decoding of validity flags for NAV-STATUS, NAV-TIME-UTC, NAV-TIME-GPS, NAV-SOL UBX messages. Thus it was possible that old and invalid positions, timestamps and position fix values are reported when the GPS measurements have been started in places with no signal reception, e.g. inside buildings.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	R&S TSME tools updated to version 1.3.4.5.
Version 15.54	17.08.2015
- New:	VICOM ACD: Add support for automatic channel detection for GSM and WCDMA on TSME. See RohdeSchwarz::ViCom::ACD::CViComAcidInterface. Please note the additional files and folders in .\bin folder.
- Fixed:	VICOM LTE: Fixed incorrect demodulation settings being returned by GetSettings().
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	R&S TSME tools updated to version 1.3.4.1.
Version 15.53	20.07.2015
- Fixed:	TSME: Fixed frontend selection check for multiple devices running in parallel.
- Fixed:	LTE Demodulator: Use MIB information for eNodeB Tx Antenna configuration if available. This is required for eMBMS channels and may be helpful for weak eNodeB cells.
- Fixed:	VICOM GPS: Fixed rarely occurring pure virtual function call error.
- Fixed:	VICOM GPS: Fixed rarely occurring access violation for TSMW receivers.
- Fixed:	TSMW: Fixed VICEC_DEVICE_RESPONSE_MISSING error being returned when restarting measurements with exactly one active technology.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Added ./doc/TSMA getting started.pdf
- Note:	Added ./doc/TSMA-BP getting started.pdf
- Note:	Added ./doc/TSMA User Manual.pdf
Version 15.52	17.06.2015
- Fixed:	TSMW: Fixed VICEC_DEVICE_RESPONSE_MISSING error being returned when restarting measurements with exactly one active technology.
- Note:	Please update your TSMW device to Firmware 2.02.

- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.
Version 15.51	08.06.2015
- Fixed:	VICOM LTE: Fixed VICEC_NOT_IMPLEMENTED error being returned on SetFrequencies() for TSMW.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.
Version 15.50	03.06.2015
- New:	Add support for R&S TSMA.
- New:	VICOM LTE: Add MIMO 2x2 and 2x4 measurements for TSME.
- New:	TSME: Add detection for subnetmask mismatch in network configuration (error code: VICEC_INSUFFICIENT_NETMASK).
- New:	VICOM RF POWER SCAN: Increased maximum measurement rate limit to 5000 Hz on TSME.
- Fixed:	VICOM RF POWER SCAN: Fixed channel filter not being processed correctly in SetSweepSettings().
- Fixed:	VICOM LTE: Fixed invalid CINR subband size computed in bandwidth tracking mode for wideband measurements.
- Fixed:	TSMx: RohdeSchwarz::ViCom::CViComLoader::Connect() now returns error code VICEC_NO_DEVICE for disconnected TSMx receivers.
- Fixed:	TSME: Increased stability of the communication link to the receiver by adding basic load balancing.
- Fixed:	VICOM TD-SCDMA: Fixed timing check for TSME.
- Note:	Added tsme_2020108.bin.
- Note:	Added tsme_2020308.bin.
- Note:	Added tsme_2020508.bin.
- Note:	Added tsme_2020608.bin.
- Note:	Please update your TSMW device to Firmware 2.02.
- Note:	Please see ./doc/Getting started with TSME MIMO.pdf
- Note:	Many components have been recompiled with MS Visual Studio 2013 Update 4.

- ✓ Supports new Qualcomm log packets
  - 0x119B – id2 – ver2 (Srchr TNG 1x Searcher Dump, RF subpacket, ver2)

- Bug Fix

- ✓ DM Log time mismatch in display – fix time zone and daylight problem
- ✓ Fix problem of “Time Sync” and “Phone Time offset” are not operated at time same time in “Port Config UI”
- ✓ Fix “time offset” and “time sync” fields in “DM Port Config (0xF01D)” packet
- ✓ Fix “PC time in GMT time” field in “PC Time Info (0xF027)” packet

### Ver 3.8.1102

- Update
  - ✓ R&S TSMW/TSME scanner interface – Added “SocketLinkWorkerDII.dll” file

- Bug Fix
  - ✓ Inbuilding plan – Save/load bug fix
  - ✓ HTTP DL/UL – Call scheduling bug fix

### **Ver 3.8.1103**

- Update
  - ✓ Voice Call Test – If RMA detect Android “call end” event and provide to DML, DML refers this event to decide call drop event. Previous version of DML didn’t refer this event.
  - ✓ RMA upgrade (v2.06)
    - SMS test – After call fail, message contents was not displayed. New RMA displays message contents even after call fail result was decided.
    - FTP test – In some cases, result was decided as “Incomplete” even though data transfer was not performed. This bug is fixed.

### **Ver 3.8.1104**

- Bug Fix
  - ✓ e-License management – Summer time related bug fix.

### **Ver 3.8.1106**

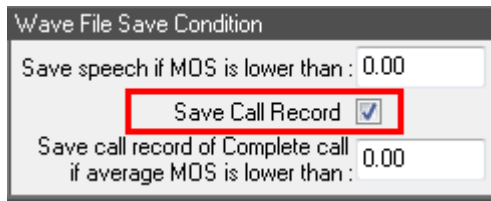
- Bug Fix
  - ✓ Logging Stop – Occasionally, log file was not closed during measurement stop, in the case of scenario mode. This bug is fixed.

### **Ver 3.8.1108**

- Update
  - ✓ License manager update
  - ✓ Samsung chip – enhanced for invalid data handling

### **Ver 3.8.1112**

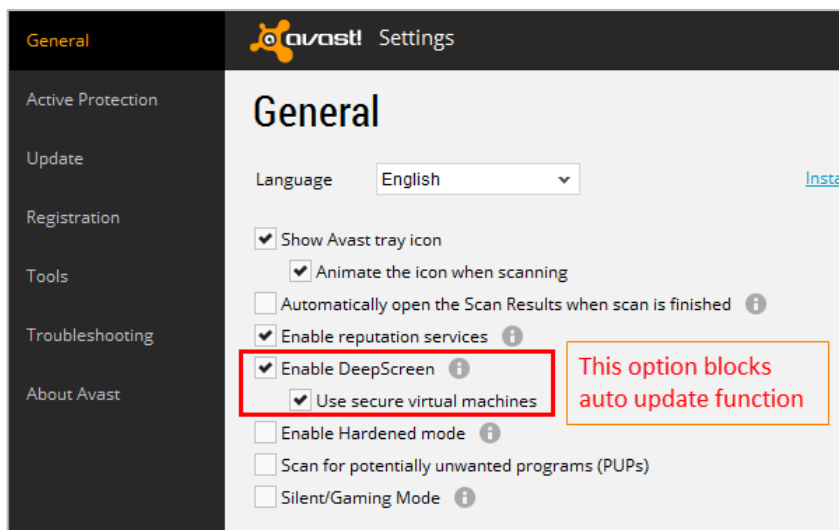
- New Feature
  - ✓ “Voice Quality Config” dialog provides new “Save Call Record” option (default = check)



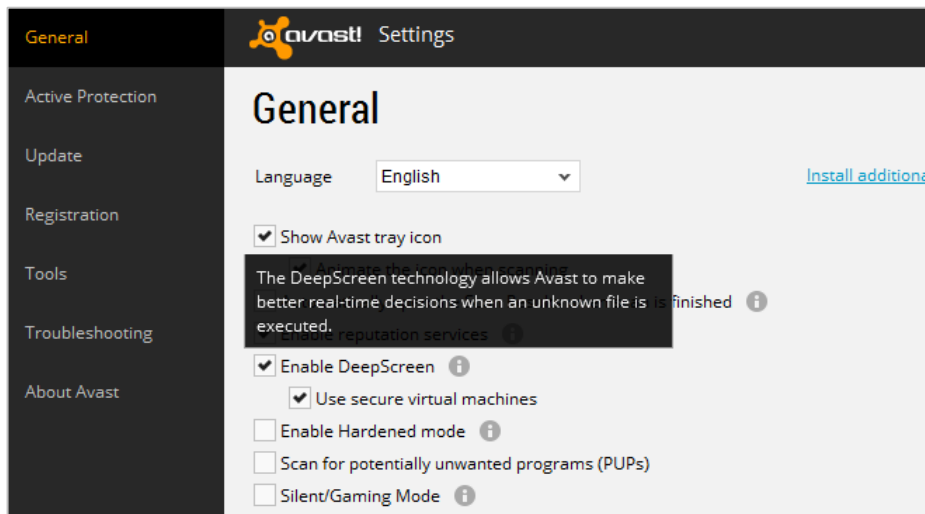
- If you uncheck this option, you can't listen real-time speech on your laptop.
- If you uncheck this option, call record wave files are not saved.
- Update
  - ✓ ADB update to recent version

### Ver 3.8.1113

- Update
  - ✓ Added log masks for Qualcomm chipset – GSM, GPRS, EDGE log masks
- Information
  - ✓ If you are running Avast, its default configuration blocks Auto Update not to executed. To use auto update function, go to Setting, and disable “Enable DeepScreen” option.

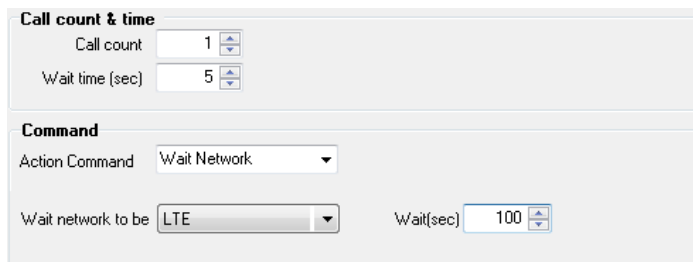


- ✓ As described in below figure, “DeepScreen” function prevents auto update utility from execution.

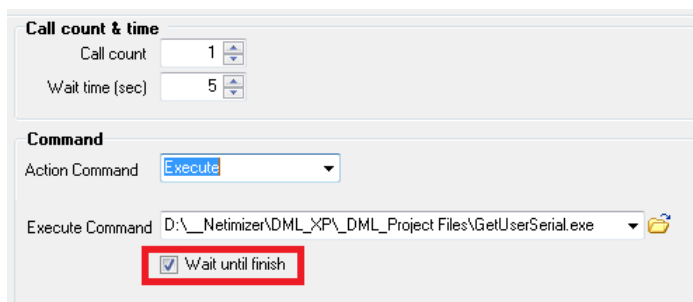


### Ver 3.8.1119

- Update
  - ✓ RMA upgrade (v2.07) – VOD test update, LTE/WiFi throughput monitoring update, etc.
  - ✓ Scenario mode – feature update
    - New function – “Wait for network” function is added



- Execute function – “wait until finish” option is added

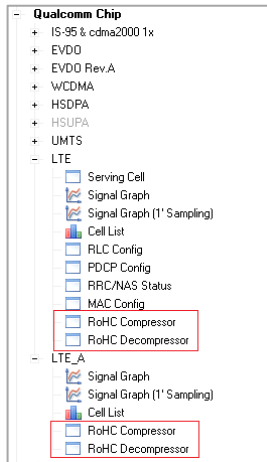


- ✓ VOD test – Added KPIs (access time, freeze count, Buffering count, etc.)

### Ver 3.8.1120

- New Feature

- ✓ Qualcomm chip – ROHC related UIs are added



INDEX	TIME	Index	Time	Received Timestamp	RoHC Instance	CID	Profile	Mode	Compress or State	Error	Packet Type	Compressed Header Size	Original Header Size	RTP SN	RTP SN Window Size	RTP Minimum SN	RTP Maximum SN
1	10 15:59:02.911	1	10 15:58:51.808	19320344	200170224	0	RTP	O	SO	0	UO0	3	60	25	16	20	25
2	10 15:59:05.791	2	10 15:58:51.968	19320504	200170224	0	RTP	O	SO	0	UO0	3	60	26	16	21	26
3	10 15:59:10.448	3	10 15:58:52.128	19320664	200170224	0	RTP	O	SO	0	UO0	3	60	27	16	22	27
4	10 15:59:12.448	4	10 15:58:52.288	19320824	200170224	0	RTP	O	SO	0	UO0	3	60	28	16	23	28
5	10 15:59:14.835	5	10 15:58:52.448	19320984	200170224	0	RTP	U	IR	0	IR S D P	62	60	29	0	0	0
6	10 15:59:17.196	6	10 15:58:52.608	19321144	200170224	0	RTP	O	IR	0	IR S D P	64	60	30	0	0	0
7	10 15:59:19.236	7	10 15:58:52.768	19321304	200170224	0	RTP	O	SO	0	BDYN	20	60	31	16	31	31
8	10 15:59:21.874	8	10 15:58:52.928	19321464	200170224	0	RTP	O	SO	0	UO0	3	60	32	16	32	32
9	10 15:59:26.334	9	10 15:58:53.088	19321624	200170224	0	RTP	O	SO	0	UO0	3	60	33	16	32	33
10	10 15:59:28.654	10	10 15:58:53.248	19321784	200170224	0	RTP	O	SO	0	UO0	3	60	34	16	32	34
11	10 15:59:32.294	11	10 15:58:53.409	19321944	200170224	0	RTP	O	SO	0	UO0	3	60	35	16	32	35
12	10 15:59:36.294	12	10 15:58:53.568	19322104	200170224	0	RTP	O	SO	0	UO0	3	60	36	16	32	36
13	10 15:59:39.114	13	10 15:58:53.728	19322264	200170224	0	RTP	O	SO	0	UO0	3	60	37	16	32	37
14	10 15:59:42.234	14	10 15:58:53.888	19322424	200170224	0	RTP	O	SO	0	UO0	3	60	38	16	33	38
15	10 15:59:45.174	15	10 15:58:54.048	19322584	200170224	0	RTP	O	SO	0	UO0	3	60	39	16	34	39
16	10 15:59:49.994	16	10 15:58:54.208	19322744	200170224	0	RTP	O	SO	0	UO0	3	60	40	16	35	40
17	10 15:59:52.674	17	10 15:58:54.368	19322904	200170224	0	RTP	O	SO	0	UO0	3	60	41	16	36	41
18	10 15:59:54.996	18															
19		19															

### Ver 3.8.1121

- Update
  - ✓ Log Mask update
    - “Common(Qualcomm) – IMS” group logmasks added

### Ver 3.8.1124

- Bug Fix
  - ✓ ADB port match – bug fix

### Ver 3.8.1126

- Update
  - ✓ Mobile Control
    - Updated ADB-based mobile control features for recent Android versions
    - Added RMA-based mobile control features
  - ✓ Scenario mode

- Supports more mobile control features
- Supports more features on “Wait” plan

### **Ver 3.8.1202**

- New Feature
  - ✓ Added “ADB log” option in the port setting
- Update
  - ✓ Voice Quality Test Configuration dialog – Supports “Full Duplex”

### **Ver 3.8.1207**

- Update
  - ✓ Log Message UI – DL/UL direction display update
  - ✓ RCS Communication – Update

### **Ver 3.8.1210**

- Update
  - ✓ Log Mask update

### **Ver 3.8.1212**

- Bug Fix
  - ✓ Voice Quality Test – WAV file save didn’t work in case of Multi-RAB test. This bug is fixed.

### **Ver 3.8.1217**

- Bug Fix
  - ✓ Parsing Bug Fix. 0xB177 Serving Cell Info (Ver1)
  - ✓ License management – bug fix

### **Ver 3.8.1218**

- New Feature
  - ✓ ESP Auto Deciphering function is added (Qualcomm chip only for now)
- Update
  - ✓ ADB control module - Enhanced

### Ver 3.8.1229

- Bug Fix
  - ✓ Scenario mode – Group synchronization function – bug fix

### Ver 3.9.0108

- Bug Fix
  - ✓ Communication with RMA – Slow information processing bug is fixed

### Ver 3.9.0111

- Update
  - ✓ LTE RRC parser update
- Bug Fix
  - ✓ GCT WiMAX – Device DM connection problem fix

### Ver 3.9.0122

- Update
  - ✓ Parameter - "[LTE] Duplex Mode", "[LTE] TDD UL-DL Config" added (in Qualcomm chip)
  - ✓ Qualcomm LTE Signal Graph
    - "DL DRX Rate (%)" Graph is renamed to "DL Non-scheduled Rate (%)"
    - Added "UL Non-scheduled Rate (%)" Graph
  - ✓ Qualcomm LTE-A Signal Graph
    - Added "(PCell) DL - Num of RB (Include 0)" Graph
    - Added "(SCells) DL - Num of RB (Include 0)" Graph
    - Added "UL - Num of RB (Include 0)" Graph
    - Added "(PCell) DL - MCS Index" Graph
    - Added "(SCells) DL - MCS Index" Graph
    - Added "UL - MCS Index" Graph
    - Added "(PCell) DL - Non-scheduled Rate (%)" Graph
    - Added "(SCells) DL - Non-scheduled Rate (%)" Graph
    - Added "UL - Non-scheduled Rate (%)" Graph
  - ✓ Qualcomm LTE ML1 GM TX Report(0xB16D)Parser update – added "TBS Index", "MCS Index" field
  - ✓ Generate Map JPG file for all licenses, if option is selected
- Bug Fix

- ✓ Qualcomm LTE-A Signal Graph – display problem bug fix

### Ver 3.9.0126

- Update
  - ✓ RMA upgrade (v2.08) – SMS termination call result decision bug fix
- Bug Fix
  - ✓ Logging – Plan packet was saved with wrong phone number field in case of scenario mode. This bug is fixed.

### Ver 3.9.0205

- New Feature
  - ✓ You can load QXDM's .dmc file in the log mask configuration dialog
- Update
  - ✓ RMA upgrade (v2.09) – Enhanced Ping timeout handling

### Ver 3.9.0217

- Update
  - ✓ In the “/Common/General/LTE (Common)/” group, below UIs are provided to all licenses
    - “mVoIP QoS Signal Graph”
    - “mVoIP QoS Info”In the previous versions, these UIs were provided only when license has PESQ or POLQA license option. However, from this release, these UIs are provided even if PESQ or POLQA license is not active.

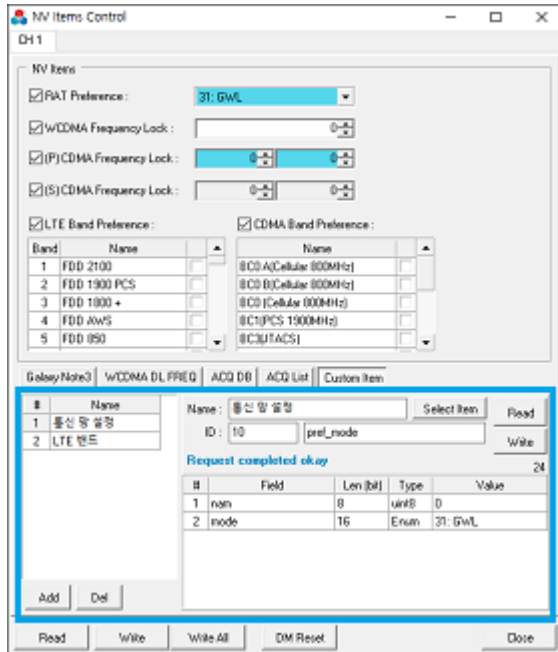
### Ver 3.9.0218

- Update
  - ✓ RMA upgrade (v2.10) – SMS termination call result decision bug fix
    - Streaming(Youtube) URL format “https://youtu.be/” is supported
    - SNS(facebook) session handling bug fix
    - When FTP setup timeout occurs, transmission was started in some cases. This bug is fixed

### Ver 3.9.0226

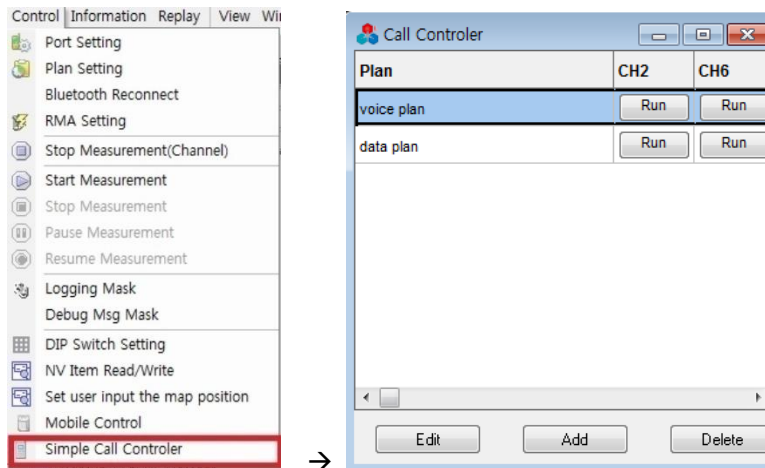
- New Feature
  - ✓ “NV Item Control” provides QCom NV item list, and you can select from it. Also you can add

custom NV item.



### Ver 3.9.0229

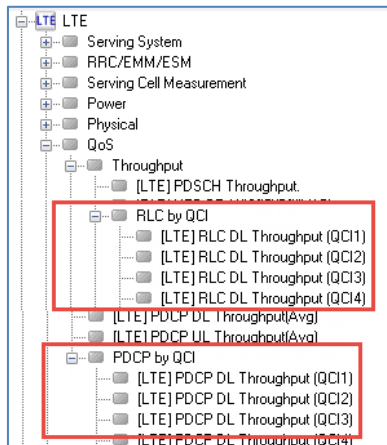
- New Feature
  - ✓ Added “Simple Call Test” UI – You can use “instant run” of pre-defined plan for each mobile.



- Update
  - ✓ Updated for new Qualcomm log versions;
- Bug Fix
  - ✓ IPsec – decoding bug fix

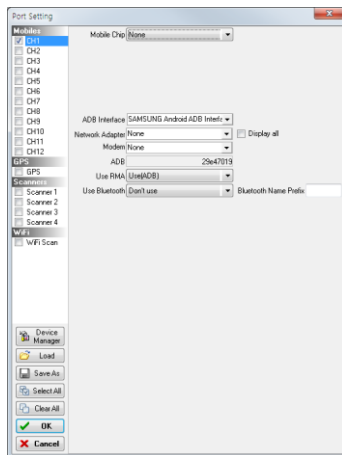
### Ver 3.9.0303

- Update
  - ✓ Parameter Update – add Throughput per QCI
    - [LTE] RLC DL Throughput (QCI1~9), [LTE] RLC UL Throughput (QCI1~9),
    - [LTE] PDCP DL Throughput (QCI1~9), [LTE] PDCP UL Throughput (QCI1~9)



### Ver 3.9.0314

- Update
  - ✓ Auto call test is possible even when device "None" is selected in the port setting window.



- ✓ Parameter Update – for Samsung Modem chip
  - LTE/QoS/Samsung Common - [LTE(S)] Common DL Throughput
  - LTE/QoS/Samsung Common - [LTE(S)] Common UL Throughput
  - LTE/QoS/Samsung Common - [LTE(S)] Common DL BLER
  - LTE/QoS/Samsung Common - [LTE(S)] Common UL BLER
  - WCDMA/Samsung Common QoS - [WCDMA(S)] Common DL Throughput

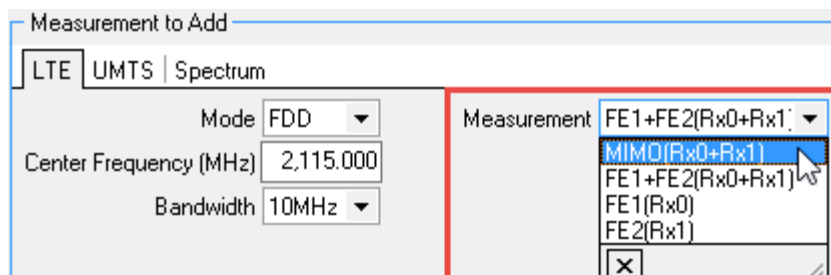
- WCDMA/Samsung Common QoS - [WCDMA(S)] Common UL Throughput
- WCDMA/Samsung Common QoS - [WCDMA(S)] Common DL BLER
- WCDMA/Samsung Common QoS - [WCDMA(S)] Common UL BLER

### Ver 3.9.0319

- Update
  - ✓ Disabled file flush during logging – LML only
- Bug Fix
  - ✓ Text parser – CDMA OTA FTCH message handling bug fix
  - ✓ Memory overwrite bug fix

### Ver 3.9.0325

- Update
  - ✓ License management – DML works with “no chipset support” license also
  - ✓ Enhanced handling for the QCom chipset timestamp problems
  - ✓ Rohde Schwarz, TSME/TSMW Scanner LTE Config – Measurement item changed



- Bug Fix
  - ✓ Status bar – Bluetooth connection status refresh bug fix
  - ✓ Rohde Schwarz, TSME/TSMW Scanner ‘s memory leak bug fixed - RSDLL.DLL update

### Ver 3.9.0329

- Update
  - ✓ RMA upgrade (v2.11) – Enhanced exception for Galaxy S7
  - ✓ Parameters – Samsung LTE parameter display update

### Ver 3.9.0407

- New Feature
  - ✓ Supports automatic key detection and real-time IPSec deciphering for Samsung modem chipset, as well as Qualcomm Snapdragon 820 chipset

- Update
  - ✓ RMA upgrade (v2.12) – bug fix for call start and call end logging

### Ver 3.9.0411

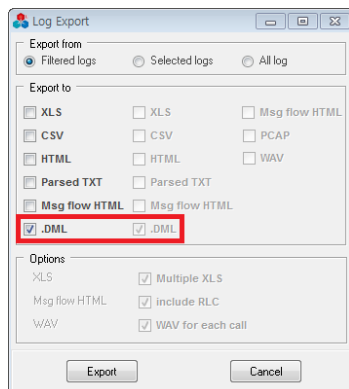
- Update
  - ✓ Enhanced handling for abnormal (jumping) timestamp from modem chip
  - ✓ Enhanced communication speed between MDM3 CCU and DCU

### Ver 3.9.0415

- Update
  - ✓ Log file flushing to disk – enhanced performance
  - ✓ Update for iPhone - IPsec
- Bug Fix
  - ✓ POLQA MOS Result log packet writing – wrong size of logging – bug fix
  - ✓ Logging status UI – displays both of written size and file size

### Ver 3.9.0421

- Update
  - ✓ iPerf – Simultaneous download/upload throughput measurement (dualtest) is added
  - ✓ Log Export - "Filtered logs", "Selected logs" option – Added “export to new dml log file” feature



### Ver 3.9.0504

- Update
  - ✓ MAP– Detect Map-Area automatically
- Bug Fix

- ✓ “Parameters – LTE – Serving Cell Measurement – RSRP (Ant0) and RSRP (Ant1)” calculation bug fix
- ✓ Scenario Monitor – UI freeze bug fix

### **Ver 3.9.0505**

- Update
  - ✓ Supports new log versions of Qualcomm chipset

### **Ver 3.9.0509**

- Update
  - ✓ “Parameters – LTE – Serving Cell Measurement” group includes ant0 ~ ant3 of RSSI, RSRP, RSRQ, and SINR for Qualcomm chipset
  - ✓ “Qualcomm LTE Signal Graph” displays ant0 ~ ant3 values of RSSI, RSRP, RSRQ, and SINR for Qualcomm chipset

### **Ver 3.9.0510**

- Update
  - ✓ RMA upgrade (v2.15) – Log Android CPU temperature information

### **Ver 3.9.0514**

- Update
  - ✓ RMA upgrade (v2.16) – UI update
- Bug Fix
  - ✓ Parameter manager – Qualcomm log 0x1192 exception handling bug fix

### **Ver 3.9.0517**

- Bug Fix
  - ✓ RMA upgrade (v2.17) – FTP test bug fix

### **Ver 3.9.0518**

- Update
  - ✓ “General Option” – “Log Upload” option tab is now opened for all customers

### Ver 3.9.0526

- Update
  - ✓ Log file write – If log file close fails, trace string is written to trace file and log file. Also tries file close multiple times.
  - ✓ Samsung mobile USB device driver update (v1.5.59.0 → v1.5.60.0)
- Update
  - ✓ License Manager update
- Bug Fix
  - ✓ Map UI – During start up, map related error has occurred (but not frequently). This bug is fixed.

### Ver 3.9.0601

- Update
  - ✓ FileFlushC update
- Bug Fix
  - ✓ Map – When RMA is used as a source of GPS data, blinking was occurred. This bug is fixed.
  - ✓ Map – When map area is changed, coordination display had problem. This bug is fixed.

### Ver 3.9.0608

- Update
  - ✓ LTE RRC parser update – Now supports 3GPP 12.8.0
  - ✓ Mobile information – Retrieves more of mobile information (vendor, chip version, base board version, etc.) through ADB interface
  - ✓ HTTP download – Supports multi session
  - ✓ RMA upgrade (v2.18) – Supports multi session HTTP download
- Bug Fix
  - ✓ Map resource increment after long-term test – bug fixed

### Ver 3.9.0614

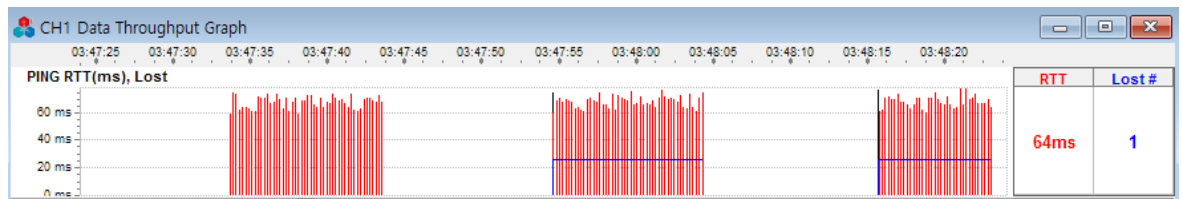
- Update
  - ✓ RMA upgrade (v2.19) – Enhanced stability for Youtube test and iPerf test
  - ✓ Logging – Enhanced stability for log file management
- Bug Fix
  - ✓ iPerf UL test – Connection fail occurred a lot in 3G network environment – this bug is fixed

### Ver 3.9.0616

- Update
  - ✓ Samsung Chip – 0xEB19\_v503 is supported

### Ver 3.9.0621

- Update
  - ✓ Data Throughput Graph UI – PING RTT, loss count is added



### Ver 3.9.0627

- Update
  - ✓ Voice call answer – Enhanced “answer with ADB” function for the incoming call.

### Ver 3.9.0629

- Update
  - ✓ RMA upgrade (v2.20) – Added K.Web measurement feature
  - ✓ HTTP (Web) test – K.Web option is added to plan configuration

### Ver 3.9.0708

- Update
  - ✓ RMA upgrade (v2.21) – Updated FTP timeout duration from 3sec to “setup time”

### Ver 3.9.0711

- Update
  - ✓ VDR scanner interface – increased buffer size to store scan data

### Ver 3.9.0714

- Update
  - ✓ RMA upgrade (v2.22) – HTTP DL/UL update (changed default buffer size from 8KB to 128KB for

both of send buffer size and receive buffer size)

### Ver 3.9.0718

- Update
  - ✓ “Critical Warning” UI update – added below events to the critical warning UI
    - “VoLTE SIP Missing” event – when there is no SIP message during some duration
    - “Missing Qualcomm LTE ML1 group log” event – when there is no ML1 group logs during some duration, even though user selected ML1 group logs
  - ✓ “Parameters” tab – addition of parameters
    - “Parameters – Events – VoLTE Call Waring Events”
    - “Parameters – Events – Log Packet Missing Events”
  - ✓ “Qualcomm / LTE-A Signal Graph” UI update
    - Supports LTE-A Signal graph LTE EARFCN of RF KPI (RSSI, RSRP, RSRQ, SINR) of Qualcomm chipset
    - “[ML1] Serving Cell Measurement - RSSI” graph update
    - “[ML1] Serving Cell Measurement - RSRP” graph update
    - “[ML1] Serving Cell Measurement - RSRQ” graph update
    - “[ML1] Serving Cell Measurement - SINR” graph update

### Ver 3.9.0801

- Update
  - ✓ RMA upgrade (v2.23) – Youtube test update
  - ✓ Youtube test – Feature update and UI update

### Ver 3.9.0802

- Update
  - ✓ “Time Sync – Adjust to GPS Time” update: If GPS is not locked or connected, time sync mode works as “Time Sync – Adjust to PC Time” instead.

### Ver 3.9.0804

- Bug Fix
  - ✓ Samsung chip – Bug fix for interpretation of “0xEB12 LL1 Downlink Info – v503” log packet

### Ver 3.9.0808

- Update
  - ✓ License manager update
  - ✓ **Samsung chip – All Samsung chip log packets are saved as encrypted packet for the security**  
→ **LMA version 3.9.0808 or later should be used to analyze log file**
- Bug Fix
  - ✓ FIT Mode – bug fix

### Ver 3.9.0810

- New Feature
  - ✓ “Voice Quality Monitor” UI – In the “Manual Test” tab, “Play Sound to selected channels” button is added. You can select WAV file to be played through select mobile. Play will be done only once, not repeated.

### Ver 3.9.0811

- New Feature
  - ✓ “Bluetooth Reconnect” menu – You can make pairing between mobile and PM12 with this option. If you can’t see PM12 BT device from your mobile, you can use this menu for easy operation.

### Ver 3.9.0812

- Update
  - ✓ Port Setting – If you select Bluetooth connection in the port setting, and click “OK” button, DML will try Bluetooth HFP connection automatically.

### Ver 3.9.0823

- New Feature
  - ✓ “Parameters” tab – Added “/Packet Data/RTP/Rx Audio Frame Type” and “/Packet Data/RTP/Tx Audio Frame Type”
- Update
  - ✓ RMA upgrade (v2.24) – Youtube test update
- Bug Fix
  - ✓ Log Message UI – Export To PCAP bug fix

### Ver 3.9.0826

- Update
  - ✓ Bluetooth Interface Audio Control (with VoLT, PM12, etc.)– Updated to support iPhone

### Ver 3.9.0829

- Update
  - ✓ RMA upgrade (v2.25) – Youtube test update
  - ✓ Port Setting UI – updated Bluetooth Interface configuration
    - Don't Use : Don't use BT HFP interface with mobile
    - Use (Android) : Use BT HFP interface with mobile, and works with compatibility with Android mobiles
    - Use (iPhone) : Use BT HFP interface with mobile, and works with compatibility with iPhone mobiles

### Ver 3.9.0831

- Update
  - ✓ License manager update
  - ✓ Qualcomm LTE Signal Graph UI – Update for DL 256QAM
  - ✓ Qualcomm LTE-A Signal Graph UI – Update for DL 256QAM
    - “[LL1] DL – Modulation Order” - LTE Signal Graph update
    - “[LL1] DL – Modulation Order (per sec)” - LTE Signal Graph (1' Sampling) update
    - “[LL1] (PCell) DL – Modulation Order” – LTE-A Signal Graph update
    - “[LL1] (SCells) DL – Modulation Order” – LTE-A Signal Graph update
    - “[LL1] (PCell) DL – Modulation Order (per sec)” – LTE-A Signal Graph (1' Sampling) update
    - “[LL1] (SCells) DL – Modulation Order (per sec)” – LTE-A Signal Graph (1' Sampling) update

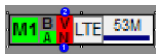
### Ver 3.9.0908

- New Feature
  - ✓ New Menu – “Message Details of Specific Log” menu is added. This UI will show detail parsing text of specific log type.
- Update
  - ✓ SRVCC process update in SIP call process
  - ✓ Adv Call State (0xF02B) – “CS RAT, PS RAT” field and parser update
  - ✓ Parameter Update – change name “[LTE] Modulation” to “[LTE] Modulation Order”

- ✓ Parameter Update – for PDSCH Modulation Order 256QAM
- ✓ Parameter Update – for Network(RAT) of Dual Modem(Qualcomm)
- ✓ Log Filter in Log Message UI Update

### Ver 3.9.0909

- Update
  - ✓ Adv Call State log packet – “IPSec” field and parser update
  - ✓ Main UI Update – Status bar for “ESP Key Status” and “VoLTE Call Warning Status” is added as below



- (1) ESP Key Status – Caption
  - N – Key is not detected
  - K – Key is detected, but not confirmed yet whether it's correct key
  - X – Key detected but it's incorrect (can't decode ESP packet)
- (1) ESP Key Status – Color
  - Lime – ESP packet was received, and decoding was successful with obtained key
  - Red – Can't decode ESP packet
  - Gray – ESP packet is not received yet, therefore can't decide whether key (if detected) is correct
- (2) VoLTE Call Warning Status – Caption
  - V – Voice(or Video) call
  - D – Data call
  - S – SMS call
- (2) VoLTE Call Warning Status – Color
  - Lime – Successful call measure
  - Red – There is warning state during call measure (ex: SIP packets not received during VoLTE call, TCP/IP packet is not received during call, etc.)
  - Gray – Unknown status
- ✓ Parameter Update
  - General – ESP Key State – enumeration value update
  - Events – VoLTE Call Warning Events – enumeration value update

### Ver 3.9.0913

- Update
  - ✓ Updated for new Qualcomm log version

### Ver 3.9.0926

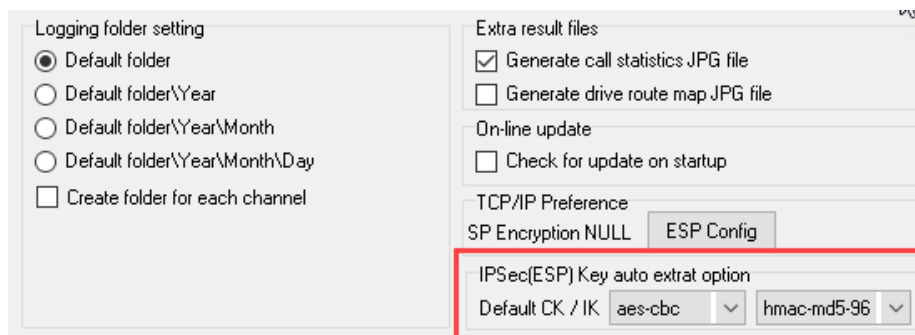
- Update
  - ✓ PCTEL Scanner – Supports CDMA
  - ✓ R&S TSMW/TSME Scanner Interface update to ViCom 15.75

### Ver 3.9.0926

- Update
  - ✓ PCTEL Scanner – Supports Blind Scan
  - ✓ Port Config UI – “Time Sync” , “Phone time offset” feature removed
    - All mobile’s timestamp will be automatically adjusted to PC time.
    - Therefore, you should check PC time zone before measurement.
  - ✓ RMA-based FTP – Supports FTPs

### Ver 3.9.0927

- New Feature
  - ✓ General Option – “IPSec(ESP) Key auto extract option” is added



- If there is no IPSec encryption method information in the packet data, above algorithms will be used as a default algorithm
- Update
  - ✓ IPSec key auto extract method improve
    - Samsung chip – IPSec auto key extract update (ex: Samsung G890A, G925A support)
- Bug Fix
  - ✓ Log Message UI – Direction icon of incorrect bug fix about Samsung TCP/IP packet
  - ✓ TCP fragmented SIP message parsing bug fix
  - ✓ Qualcomm chip timestamp adjust bug fix for abnormal UE – It happens when log 0x1xxx or 0x7xxx missing.

### **Ver 3.9.0927**

- Bug Fix
  - ✓ Fixed a bug that warning dialog( "Missing Qualcomm LTE ML1 Log" had incorrectly occurred

### **Ver 3.9.0930**

- Update
  - ✓ RMA upgrade (v2.26) – Supports Android 7.0 Nougat
- Bug Fix
  - ✓ iPerf – DLL file version mismatch bug fix

### **Ver 3.9.1004**

- Update
  - ✓ Scenario mode – Sync call – Voice call can be used with sync mode, in the scenario call

### **Ver 3.9.1005**

- Bug Fix
  - ✓ iPerf – DLL file version mismatch bug fix

### **Ver 3.9.1013**

- Bug Fix
  - ✓ Ping Test – Wrong timestamp problem bug fix

### **Ver 3.9.1014**

- Update
  - ✓ Scenario mode – Sync call – update

### **Ver 3.9.1017**

- Bug Fix
  - ✓ Alarm – Packet data payload alarm in the non-scenario mode – bug fix

### **Ver 3.9.1019**

- Update

- ✓ Packet data payload logging – Automatically configured depending on the active test type
  - Voice Call – Full Payload (1500 Byte)
  - Multi-RAB - Full Payload (1500 Byte)
  - FTP Call – No Packet data
  - iPerf Call – No Packet data
  - HTTP DL/UL – No Packet data
  - NIA App Call - No Packet data
  - Other Call – Follows user configuration in the “Port Setting” dialog

### **Ver 3.9.1027**

- Bug Fix
  - ✓ Samsung Chip – Bug fix for discarding unknown sub\_cmd

### **Ver 3.9.1028**

- New Feature
  - ✓ Reference Speech for MOS test – Added below reference speeches
    - White Noise NB IRS, White Noise NB, White Noise WB, White Noise SWB

### **Ver 3.9.1031**

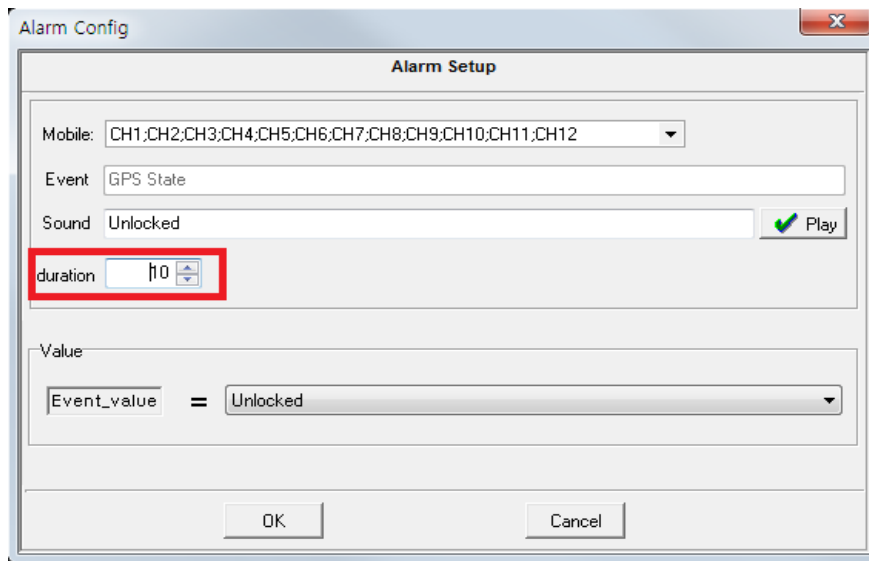
- Update
  - ✓ Samsung Chip – Data processing update
  - ✓ Samsung Chip – UMTS Signal Graph UI update

### **Ver 3.9.1102**

- Update
  - ✓ Log Message UI – Export to File – Msg Flow HTML - update

### **Ver 3.9.1115**

- Update
  - ✓ Alarm function and UI update – User can define “duration” for specific event.  
For example, if GPS is unlocked, and kept in unlocked state for 10 seconds, you’ll get alarm.



### Ver 3.9.1121

- Update
  - ✓ Port Config UI – “ADB Enable log” removed.
  - ✓ Samsung chip IPsec processing update
  - ✓ Qualcomm “LTE MAC UL Transport Block (0xB064)’ MAC Header decoding updated
  - ✓ Qualcomm “LTE ML1 PBCH Decode Packet (0xB183)” parsing updated
  - ✓ Qualcomm “Optimized Extended Message” Diag packet changed to discard
  - ✓ Custom Item of “NV Item Control” UI new DB added
- Bug Fix
  - ✓ ADB Logcat – Crash bug fix
  - ✓ When “Debug msg” enabled, “stop measurement” no action problem bug fixed
  - ✓ NV Item Control UI - “Custom Item” wrong “read/write” bug fixed
  - ✓ Log Message UI - “Pkt Len” and “Packet ID” column’s wrong display bug fixed
  - ✓ Port Config UI – Pair channel’s Dial Number of “pair call with other CH” wrong display bug fixed

### Ver 3.9.1123

- Update
  - ✓ RMA upgrade (v2.28) – Update for Android 7.0 Nougat
- Bug Fix
  - ✓ Freezing on receiving LTE rrcConnectionReconfiguration with mac-MainConfig explicitValue / stag-ToAddModList-r11 – bug fix

### Ver 3.9.1125

- Update
  - ✓ RMA upgrade (v2.29) – Update for Android 7.0 Nougat
  - ✓ GPS interface update

### Ver 3.9.1213

- Update
  - ✓ Parameter Update – “[LTE] UL CA”, “[LTE] UL CA Active” added
- Bug Fix
  - ✓ Youtube Test – Call result decision bug fix (case: Media playback error in Android OS)
  - ✓ Communication problem with RMA on some laptops – bug fix
  - ✓ “Bluetooth HF,ADB,APP Message” - “YouTube End”, “YouTube Error” filter and parser bug fix

### Ver 3.9.1214

- Bug Fix
  - ✓ Youtube Test – Timestamp bug fix for some Youtube events – bug fix

### Ver 3.9.1215

- Update
  - ✓ ADB – Supports Android 7.0 Nougat

### Ver 3.9.1219

- Bug Fix
  - ✓ Voice call(Pair call mode) – When group sync mode is enabled, call scheduler worked wrong.  
This bug is fixed.
  - ✓ FIT mode – plan setting UI display bug fix

### Ver 3.9.1221

- Update
  - ✓ RMA upgrade (v2.30) – Update for YouTube test
- Bug Fix
  - ✓ YouTube test – Call scheduling with short setup time – bug fixed

### Ver 3.9.1222

- Update
  - ✓ General Option – “Log Upload” tab – UI update
  - ✓ “Critical Warning” UI update – “VoLTE SIP Missing” message ignore (Only LinkMaster)
    - “VoLTE SIP Missing” event ignore – when voice plan’s “Target Service” is CS, CSFB, VoWiFi
- Bug Fix
  - ✓ DM Status Bar is yellow – Qualcomm “CM/Get Call Info List” Diag request packet fail problem fixed

### Ver 3.9.1226

- Update
  - ✓ “Mobile Control” UI – User selection is saved/loaded for each control types

### Ver 3.10.0110

- Update
  - ✓ RMA data handling – Enhanced error handling for invalid date/time coming from RMA
- Bug Fix
  - ✓ YouTube Test – Call scheduler bug fix

### Ver 3.10.0117

- Update
  - ✓ RMA upgrade (v2.31) – Update for TraceRoute test
- Bug Fix
  - ✓ Port Setting UI
    - If user click “Check All”, ADB device name for all channels were set to same name also - bug fixed
    - If user click “Select All”, check/uncheck state was not changed to CHECK state – buf fixed

### Ver 3.10.0125

- Update
  - ✓ RMA upgrade (v2.33) – Update to save battery consumption
    - Before
      - RMA disabled “screen off” by force during launch.
      - RMA enabled “positioning service” by force during launch.

- After
  - RMA doesn't disable "screen off" during launch. During idle mode or non-data call, "screen off" will be kept as user configured in Android. However, during data call test, RMA will disable "screen off" by force, to get the maximum possible throughput (by preventing sleep mode effects of Android mobile).
  - RMA doesn't enable "positioning service" by force during launch, and leaves as user configured in the Android setting. However, if user configured port setting to get GPS data from RMA, RMA will enable "positioning service" by force.
- ✓ WCDMA Finger Temporal Analysis V2(0x4186) version 11 update
- ✓ Phone Information(0xF054) - PC Info(3) Packet is added
  - Window "USER Login ID", PC Name, OS version, etc
- Bug Fix
  - ✓ During Qualcomm WiFi Only(VoWiFi) test, timestamp problem occurred on some mobile models – Qualcomm Event Report Packet(WiFi) timestamp problem. This bug is fixed.
  - ✓ Port setting UI – Text display for the log mask status – bug fixed
  - ✓ BT port open problem on FIT mode – bug fixed
  - ✓ Youtube test – negative values were displayed sometimes, after each call test. Bug fixed.

### Ver 3.10.0206

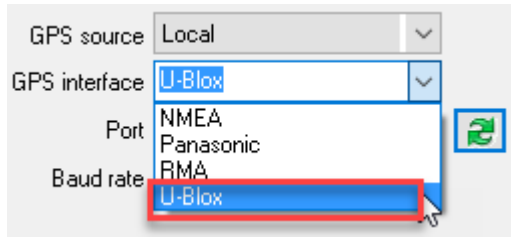
- Bug Fix
  - ✓ FTP call monitor UI – Abnormal value displayed during active test – bug fixed.
  - ✓ RMA was launched before user click OK button in the port setting dialog – bug fixed
  - ✓ HTTP download test – session count 0 problem – bug fixed

### Ver 3.10.0207

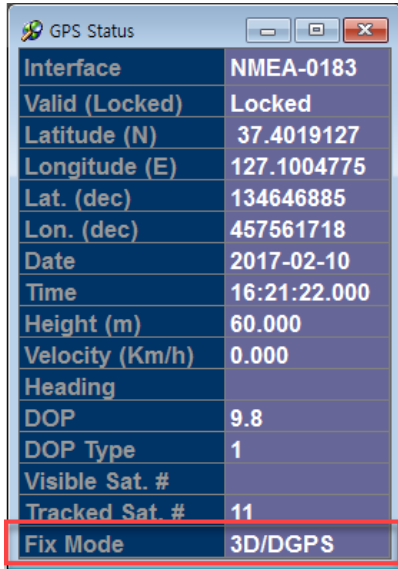
- Update
  - ✓ Samsung chip ICD rev5, IPSec, UL\_CA is supported by default without license option
  - ✓ GPS NMEA interface update – supports Ublox

### Ver 3.10.0210

- Update
  - ✓ GPS Interface in "Port Config UI" – add U-Blox (Separate NMEA and U-Blox)



- ✓ GPS Status UI update – added fix mode



- ✓ RMA upgrade (v2.35) – To support Android v4.x.x

### Ver 3.10.0213

- Update
  - ✓ Qualcomm WCDMA Signal Message(0x412F) “BCCH-BCH SIB Decode” packet’s timestamp mismatch bug fixed
  - ✓ Qualcomm WCDMA Signal Message(0x412F) “DL BCCH-BCH” message format parser update

### Ver 3.10.0214

- Update
  - ✓ User guide update
- Bug Fix
  - ✓ RMA Control UI – RMA version display error bug fix

### Ver 3.10.0217

- Update
  - ✓ MOS Test Plan error check

- Plan Setting – Voice Quality Test Configuration UI – Updated to show error dialog(in the voice quality test option setting dialog), when user select PESQ(or POLQA) even though he doesn't have PESQ(or POLQA) license option.
- Plan Setting – Voice Quality Test Configuration UI – Updated to use “Interval = 7sec” as a default value, instead of 0 value.
- However, user should configure voice quality test option details – Algorithm, Direction, Rx Speech, Tx Speech, Interval, Wait Time, etc.

### **Ver 3.10.0220**

- Update
  - ✓ Updated for new Qualcomm LTE log version – Parser, UI
- Bug Fix
  - ✓ Time Sync Info(0xF062) Packet timestamp incorrect bug fixed
  - ✓ “Missing Qualcomm LTE ML 1 Log” Warning mismatch bug fixed
  - ✓ WCDMA SIB Packet not decoded form “BCH LastAndFirst” message bug fixed
  - ✓ When execute “User Defined Column” dialog box, “Creating “FORM.ini” file bug fixed

### **Ver 3.10.0221**

- Update
  - ✓ Samsung mobile USB device driver update (v1.5.62.0 → v1.5.63.0)
  - ✓ General Option UI – Added “TCPIP No Logging” option
  - ✓ Supports “debug message” and “LogCat” if there are corresponding e-License options
- Bug Fix
  - ✓ Voice Quality Monitor UI – Scenario mode test result display bug fix
  - ✓ Data call plan initialization problem (of 3.10.0220) bug fix

### **Ver 3.10.0222**

- Update
  - ✓ License manager update
- Bug Fix
  - ✓ LTE CA Status UI – MIMO State (antenna M X N) display bug fix
  - ✓ Parameter LTE/LTE-A “eNB Antenna #”, “UE Antenna #” display bug fix

### **Ver 3.10.0223**

- Bug Fix
  - ✓ Exception error during FTP test – bug fixed

### **Ver 3.10.0224**

- Update
  - ✓ Log Message UI – Export to HTML – Supports GSM messages (WCDMA RRC DL-DCCH gsm-MessageList)

### **Ver 3.10.0225**

- Update
  - ✓ Supports '+' in the phone number – in main UI, plan setting UI, port configuration UI, etc.

### **Ver 3.10.0228**

- Update
  - ✓ Update for Samsung chip GSM log

### **Ver 3.10.0303**

- Update
  - ✓ Supports '+' in the phone number – in plan setting UI
  - ✓ Update for Samsung chip GSM RR, GSM RLC/MAC
  - ✓ Update for Samsung Exynos 9
- Bug Fix
  - ✓ Multiple voice call end log in scenario mode – Bug fixed

### **Ver 3.10.0306**

- Update
  - ✓ “Bluetooth Reconnect” menu – User can change BT MAC address of each UE, and try connect

### **Ver 3.10.0307**

- Update
  - ✓ Added UE volume control(up/down) function to “Mobile Control” UI
  - ✓ FIT Mode – “Use(Bluetooth-SPP)” is added for RMA, in the port setting UI

## Ver 3.10.0317

- Update
  - ✓ WCDMA RRC parser update – Now supports 3GPP 12.9.0
  - ✓ Port setting UI – If there is any confliction in the COM port list, warning dialog is popped up
  - ✓ Plan setting UI – Voice – Added “Video Call (ViLTE)”. Currently it works for Samsung mobile only
  - ✓ Added LogUploader, which performs compression and background log uploading to FTP server.
  - ✓ R&S TSMW/TSME scanner interface – API version update to ViCom 15.85.

Below are ViCom 15.85 changelog from R&S.

(refer

[https://cdn.rohde-schwarz.com/pws/dl\\_downloads/dl\\_software/txt/ViComChangelog\\_1585.txt](https://cdn.rohde-schwarz.com/pws/dl_downloads/dl_software/txt/ViComChangelog_1585.txt))

```
-----  
ViCom Changelog  
-----  
  
Version 15.85  
    31.01.2017  
  
- New:    TSMx-PPS2: Added disconnect detection for TSMx-PPS2 receivers (error code:  
VICEC_CONNECTION_LOST).  
- Fixed:  Fixed an incorrect error message for front end selection parameter checks.  
- Fixed:  VICOM ACD: Fixed issues with an internal component sometimes not being shutdown  
properly on Disconnect().  
- Fixed:  VICOM CWScan: Fixed issue with Connect() not returning on TSMW receivers.  
- Fixed:  VICOM GPS: Fixed VICEC_NO_DEVICE error being reported when using NMEA only mode  
on TSMW receivers.  
- Fixed:  VICOM GPS: Removed SGPSMessage::ul64DeviceTimeInNs parameter. Please use  
SGPSMessage::dwPcTimeStampInMs  
                for correlation of position information with other scanner results such as  
LTE.  
- Fixed:  VICOM LTE: Fixed VICEC_LTE_FREQ_OUT_OF_RANGE error being reported in TSME  
MIMO setups when  
                the second TSME does not have a valid TSME-K30 option.  
- Fixed:  VICOM LTE: Fixed P-SCH quality paramter sometimes having positive values, see  
SPowerValue::pfPSyncQualityInDB.  
- Fixed:  L3 Decoding: Fixed issue with CDMA channel list message decoding leading to a missing  
channel.  
- Fixed:  L3 Decoding: Fixed issue with EVDO sync message decoding leading to a missing  
SystemTime_Lower parameter.  
  
- Note:   Removed CMSBase.dll.  
  
Version 15.81  
    16.11.2016
```

- Fixed: VICOM ACD: Fixed VICEC\_TIME\_OUT sometimes being reported during StartMeasurement() calls.
- Fixed: VICOM LTE: Fixed crash for wideband measurements in unsynchronized networks.
- Fixed: VICOM LTE: Reduced number of false RNTI decodes for PDCCH Format 0.
- Fixed: VICOM LTE: Fixed missing WB measurements in MBMS mode when no MBMS cells were detected.
- Fixed: VICOM GSM: Minimum possible total power offset parameter increased to 2 dB. If set, the former limit of 0 dB prevents to get demodulations at all.
- Note: Manual not updated yet!

Version 15.80  
31.10.2016

- New: Enhanced error reporting. ViCom now has more detailed error messages, e.g. including limits and current value of incorrectly set parameters which helps to identify issues without debugging effort.
- New: Add support for transducer tables to take antenna specific parameters into account during measurement on TSME receivers.
- New: Disconnecting multiple TSME receivers in a MIMO setup works faster now.
- New: VICOM RF POWER SCAN: Updated measurement rate limits for TSMW and TSME receivers. Minimum is 0.1 Hz now.
- New: VICOM LTE: Add support for reference signal based channel impulse response measurements,  
see SSignals::SReferenceSignal::pRefSignalCirResults.
- New: VICOM LTE: Add bitmasks to report the used front end / measured transmit antenna port for MIMO results,  
see SMimoResult::bReceiveAntennaMask and SMimoResult::bTransmitAntennaMask.
- New: VICOM LTE: Throughput estimation measurements support 4x4 MIMO configurations now.
- New: VICOM LTE: Downlink allocation analyser measurements support 4x4 MIMO configurations now.
- New: VICOM LTE: Add modulation and transport block size parameters to DLAA RNTI information results,  
see SDlaaResult::SBtsResult::SRntiResult.
- New: VICOM LTE: Updated parameters for DLAA and RNTI statistics result, see SDlaaResult::SBtsResult::SStatisticResult.
- New: VICOM WCDMA: Add interface definitions for SIB23 message. Full support will be added in a future release.
- New: VICOM CDMA: Add interface definitions for ATIM message. Full support will be added in a future release.
- Fixed: VICOM LTE: Fixed reference signal RSRP and RSRQ values being reported with incorrect 0 dBm values.  
see SSignals::SReferenceSignal::sPBCHbasedRSRPinDBm100 and SSignals::SReferenceSignal::sPBCHbasedRSRQinDB100.
- Fixed: VICOM LTE: Fixed several DLAA issues leading to incorrect or duplicate RNTI and statistic results.
- Fixed: VICOM LTE: Fixed issue with calculation of ToA to PPS offset parameter.
- Fixed: VICOM LTE: Fixed crash when multiple MBSFN areas are measured.
- Fixed: LTE Demodulator: Fixed crash when partially decoding false SIB1 messages.
- Fixed: LTE Demodulator: Fixed crash when decoding MBSFN frames.
- Fixed: LTE Demodulator: Fixed issue for SIB2 and SIB3 decoding for MBMS networks using more than 1 MBSFN area.

- Fixed: Fixed naming inconsistencies for demodulation requests.
- Fixed: Fixed issue with CViComBasicInterface::HasMeasurementStopped() not returning when called in idle state.
- Fixed: Fixed issue with CViComBasicInterface::HasMeasurementStopped() not returning when CViComBasicInterface::StopMeasurement() hasn't been called before.
- Fixed: VICOM ACD: Fixed occasional "Waiting for PhylisRR/Romes.exe to start" errors being reported as message box.
- Fixed: VICOM ACD: Fixed calls to StartMeasurement() blocking other interfaces.
- Fixed: VICOM ACD: Fixed uplink channels wrongly reported as downlink.
- Fixed: VICOM GPS: Fixed synchronization issue leading to parallel read and write requests to the GPS receiver.
- Fixed: VICOM GPS: Fixed issue with result PC timestamp does not match raw message reception time.
  
- Note: Removed mfc71.dll.
- Note: Removed msvcp71.dll.
- Note: Removed msucr71.dll.
- Note: Removed LteMimoScannerRsCinrEstimators.hex.
- Note: R&S TSME tools updated to version 1.3.5.3.

- Bug Fix
  - ✓ Total Call Monitor UI – Port state display bug fix

### Ver 3.10.0321

- Update
  - ✓ PCTEL scanner feature update
    - “Blind Scan” is supported
    - “BW auto detect” is supported for LTE scan. Scanner UI now shows BW for each EARFCN.
    - GPS data is retrieved from PCTEL scanner
    - Updated PCTEL\_MGR

### Ver 3.10.0324

- Update
  - ✓ Default plan – Default value of “Voice Quality Measurement” is OFF, while previous version had ON
  - ✓ Samsung chip – Log version 5.15 support update
  - ✓ RMA upgrade (v2.37) – Supports DNS for FTP server address
  - ✓ FIT Mode – Data Test is added
  - ✓ Voice Call Result decision – If caller ID is different from phone number defined in plan, call result is decided as “ETC”

### **Ver 3.10.0402**

- Update
  - ✓ Samsung chip – supports 5CA display
- Bug Fix
  - ✓ License manager bug fix

### **Ver 3.10.0406**

- Update
  - ✓ Airplane on/off control in RMA – Supports Android Nougat 7.0, using KeyEvent
  - ✓ Qualcomm LTE Signal Graph UI – Show same value with parameter manager for PDSCH throughput.

### **Ver 3.10.0410**

- Update
  - ✓ RMA upgrade (v2.38) – Supports DNS for FTP server address
    - Updated for SMS test – Supports 200B SMS, and user-defined text for SMS
    - Updated for HTTP download/upload test
  - ✓ SMS test update – Supports 200B SMS, and user-defined text for SMS

### **Ver 3.10.0411**

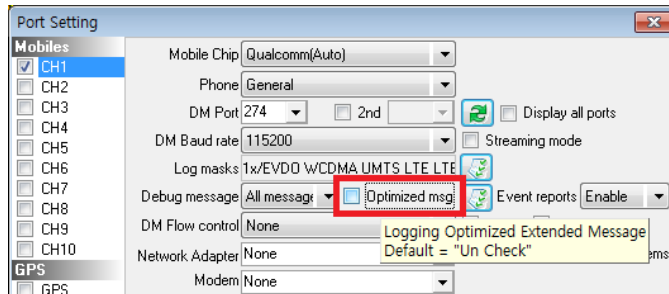
- Update
  - ✓ RMA upgrade (v2.39) – Updated for LMS test
  - ✓ HTTP Upload Test – Supports multi-session
  - ✓ Port Setting UI – Critical warning dialog is not displayed for 15seconds, when you click OK button in port setting UI, while DM ports are already connected
- Bug Fix
  - ✓ cdma2000 SMS over 80 byte sizes bug fixed
  - ✓ cdma2000 SMS(TIA/EIA-637-A) “GSM 7-bit default alphabet” user data parser bug fixed

### **Ver 3.10.0413**

- Update
  - ✓ Plan Setting UI – SMS – User don't need to define text, and only need to define “SMS text length”
  - ✓ SMS test – Supports split SMS message

### Ver 3.10.0414

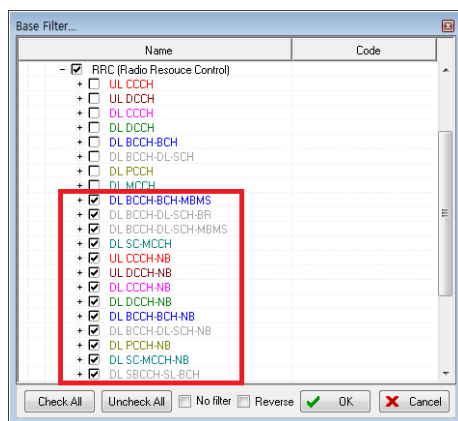
- Update
  - ✓ Port Setting UI – Added configuration option “Optimized msg” for Debug Messages



- You should copy “QSRMessageHash.qsr” file on the “\MessageHash” subfolder. Otherwise, message will not be parsed
- ✓ Log Message UI – UL/DL direction is displayed for mobile chip log packets also
- Bug Fix
  - ✓ Parameter “[WCDMA] RNC” with Samsung chipset not display bug fixed

### Ver 3.10.0424

- New Feature
  - ✓ Supports new INTEL chip
- Update
  - ✓ Supports LTE RRC d50
  - ✓ Log Message UI – Added LTE RRC Rel D50 messages



- ✓ Supports new Qualcomm log packet version

### Ver 3.10.0426

- Update

- ✓ MOS\_MGR update. Also "Samples" folder has "MOS\_MGR.ini" file

### Ver 3.10.0502

- Update
  - ✓ User can define logcat option
  - ✓ SMS test update – User can directly specify SMS text length.

### Ver 3.10.0509

- Update
  - ✓ VDR scanner – interface update

### Ver 3.10.0517

- Update
  - ✓ Samsung chip – Updated no service detection logic

### Ver 3.10.0518

- Update
  - ✓ Supports TCP/IP logging control for Scout

### Ver 3.10.0519

- Update
  - ✓ Qualcomm chip – LogMask – Added new LTE log packets to the logmask for Qualcomm chip.  
**WARNING – You should configure log mask again, before using new version.**

### Ver 3.10.0522

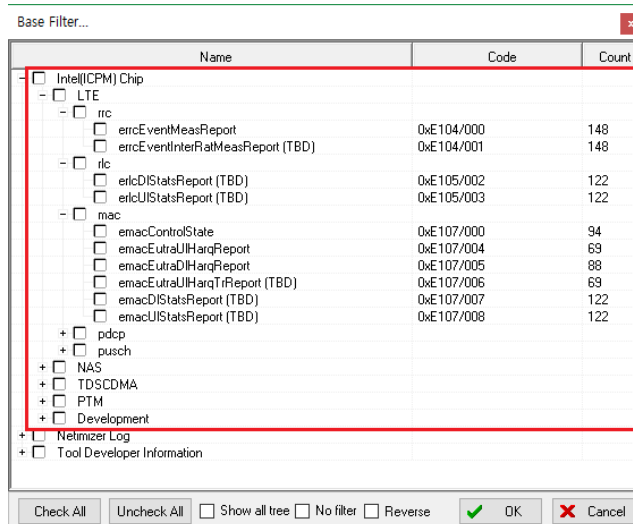
- Update
  - ✓ Qualcomm chip Update
    - Qualcomm LTE Log Update (MAC, RLC, PDCP)
    - Qualcomm CM Call Event(0x12C1) - update
  - ✓ R&S TSMx Scanner Packet Update
    - MIMO TPut & CQI
    - R&S TSMx Scanner DLL (RSDLL.dll - 1.0.9.0) update

### Ver 3.10.0526

- Update
  - ✓ MOS\_MGR update – Default volume configuration is changed.
    - Before: Play=90, Record=7(Win7) or 40(Win10)
    - After: Play=80, Record=99
  - ✓ VDR scanner – User can select firmware version between “Old Firmware” and “New Firmware”

### Ver 3.10.0530

- Update
  - ✓ Qualcomm Log NB-IOT FW (0xB200 ~ 0xB229) – Log Tree(NB1 FW) filter update
  - ✓ Qualcomm Log NB-IOT SW (0xB240 ~ 0xB24E) – Log Tree(NB1 SW) filter update
  - ✓ LTE NAS(EMM,ESM) parser update – Now supports 3GPP TS 24.301 V14.3.0
  - ✓ ICPM – add message filter (all message)



- ✓ ICPM - add packet header / parsing
  - emacControlState
  - emacEutraUlHarqReport
  - emacEutraDlHarqReport
  - eventPuschTransmissionStatus
  - ptmNsapiDelayStats

### Ver 3.10.0608

- Update
  - ✓ MOS\_MGR update – Default volume configuration is changed.
    - Before: Play=80, Record=99

- After: Play=80, Record=70

### Ver 3.10.0609

- Update
  - ✓ Scenario scheduler feature update

### Ver 3.10.0612

- Update
  - ✓ Scenario scheduler update

### Ver 3.10.0614

- Update
  - ✓ RMA upgrade (v2.43) – Enhanced communication stability with DML
- Bug Fix
  - ✓ Scenario mode call test – Voice quality test didn't start sometimes during scenario mode – bug fixed.

### Ver 3.10.0621

- Update
  - ✓ Samsung chip – UMTS – “UL Power Information” UI – updated for the recent Samsung chipset
  - ✓ RM App interface update

### Ver 3.10.0626

- Update
  - ✓ Parameter Update – updated for LTE 5CA (SCell3, SCell4)
    - “Serving Cell Measurement” for SCell3, SCell4 – PCI, DL/UL EARFCN, DL/UL Bandwidth, Band, Duplex, eNB/UE Ant#, RSSI, RSRP, SINR
    - “RB & TB” for SCell3, SCell4 – DL RB Num, DL RB Num (1’)
    - “CQI/PMI/RI” for SCell3, SCell4 – WB CQI CW0/CW1, RI, RI Rank1/Rank2/Rank3/Rank4 Count
    - “Modulation” for SCell3, SCell4 – DL MCS (CW0/CW1), DL Modulation Order (CW0/CW1)
    - “Throughput”/“BLER”/ for SCell3, SCell4 – PDSCH Thr, DL BLER
    - “Residual BLER” for SCell3, SCell4 – DL iBLER, DL rBLER, DL New Tx Count, DL ReTx Fail Count
  - ✓ LTE CA Status UI – updated for LTE 5CA

- 5 CA(SCell3, SCell4) added
- "Band" added
- PCell – SCell(best) changed
- ✓ Network & Cell UI - updated for LTE 5 CA
- Bug Fix
  - ✓ Parameter "[LTE-A] CA", "[LTE-A] UL CA" updated.

### **Ver 3.10.0705**

- Update
  - ✓ Added "LTE PCI Lock (for Qualcomm chip)"
  - ✓ Parser Update - WCDMA Multi Carrier EUL Link Statistics(0x4345) – "PDDCH, HS-DPCCH, E-DPCCH, E-DPDCH T/P"

### **Ver 3.10.0714**

- Update
  - ✓ Qualcomm LTE-A Signal Graph for 5CA (SCC3/SCC4)
  - ✓ Qualcomm LTE-A Cell List for 5CA (SCC3/SCC4)

### **Ver 3.10.0720**

- Update
  - ✓ Mobile Control UI - update

### **Ver 3.10.0724**

- Bug Fix
  - ✓ R&S TSME/TSMW Scanner exception error during for WCDMA – bug fixed (RSDLL.DLL v1.0.9.1)
  - ✓ R&S TSME/TSMW Scanner no display error during for Spectrum – bug fixed

### **Ver 3.10.0727**

- Bug Fix
  - ✓ R&S TSME/TSMW Scanner exception error during for WCDMA/LTE – bug fixed (RSDLL.DLL v1.0.9.2)
  - ✓ R&S TSME/TSMW Scanner no display error during for Spectrum – bug fixed

### **Ver 3.10.0803**

- Bug Fix
  - ✓ Voice Quality Measurement Configuration – “WaitMSec” didn’t work correctly on scenario mode – bug fixed

### **Ver 3.10.0804**

- Update
  - ✓ ADB update to recent version

### **Ver 3.10.0808**

- Update
  - ✓ Logmask will be recovered to user-defined one, when measurement is stopped

### **Ver 3.10.0817**

- Update
  - ✓ Supports new Qualcomm log version

### **Ver 3.10.0828**

- Update
  - ✓ Samsung chip log update

### **Ver 3.10.0829**

- Update
  - ✓ LicenseChecker update

### **Ver 3.10.0904**

- Update
  - ✓ FIT mode – Default logmask changed (“Voice call default” to “All logmask”)

### **Ver 3.10.0912**

- Update
  - ✓ Supports new Qualcomm log version – Parser and UI (Signal Graph, Parameter)

- ✓ Qualcomm LTE Parameter modify calculation method of “[LTE] DL Trans Mode”, “MIMO Type”, “Antenna #”, RI”, etc
- ✓ Samsung chip log is not encrypted in case of KT license

### **Ver 3.10.0920**

- Update
  - ✓ Supports Qualcomm NB-IoT (LTE Cat NB1) – Log Mask, Parameter Manager KPI

### **Ver 3.10.0921**

- Update
  - ✓ Supports new Qualcomm log version – 0x4186 v12

### **Ver 3.10.0926**

- Update
  - ✓ PCTEL EPS – Result is displayed in ‘Channel Power’ tab
- Bug Fix
  - ✓ PCTEL EPS configuration – Big frequency value had problem for save/load. It’s bug fixed.

### **Ver 3.10.0928**

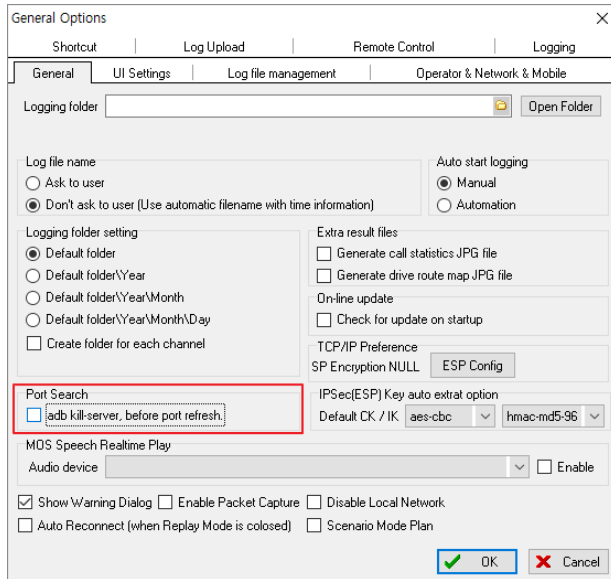
- Update
  - ✓ Qualcomm WCDMA RRC Log version update
  - ✓ Qualcomm LTE RRC Log version update
  - ✓ Time Adjust for Qualcomm LTE Cat NB1
  - ✓ IPsec key auto extract method improve
    - Qualcomm UE’s IPsec auto key extract update (ex: LG-V30 support)
  - ✓ IPsec key auto save/load at program restart

### **Ver 3.10.1019**

- Update
  - ✓ RMA upgrade (v2.44) – Fixed with below cases.
    - Even after call result “Setup Fail”, VOD play was not stopped on some cases. This bug is fixed.
    - Enhanced error handling for the case when VOD screen is overlapped by other app, or minimized by user.

### Ver 3.10.1020

- Update
  - ✓ General option – added ‘adb kill-server’ option (default is uncheck). If you select this option, ADB communication will be disconnected with all RMAs when you click refresh button in the port setting dialog, and ADB device list will be refreshed by force every time.



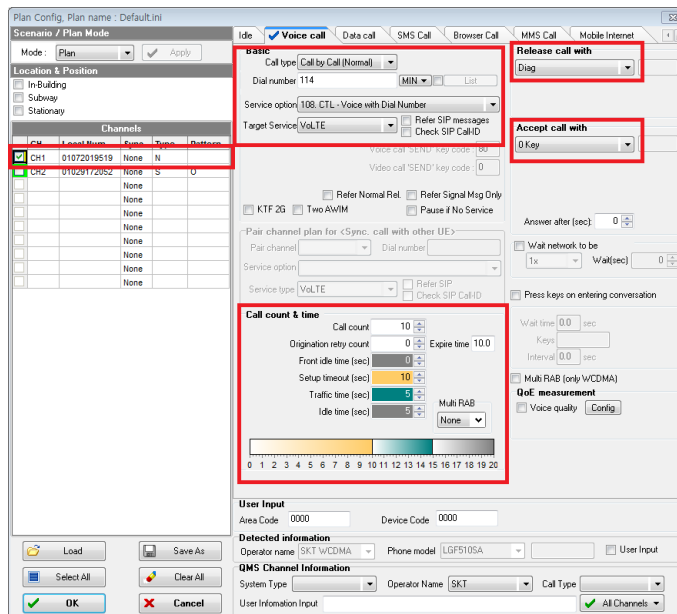
- Bug Fix
  - ✓ GCT Chip - GDM7243QA chip UI bug fix

### Ver 3.10.1023

- Update
  - ✓ Port Search – Support ‘Intel NUC + 3 VoLT’

### Ver 3.10.1031

- Update
  - ✓ GCT Voice auto call function is added

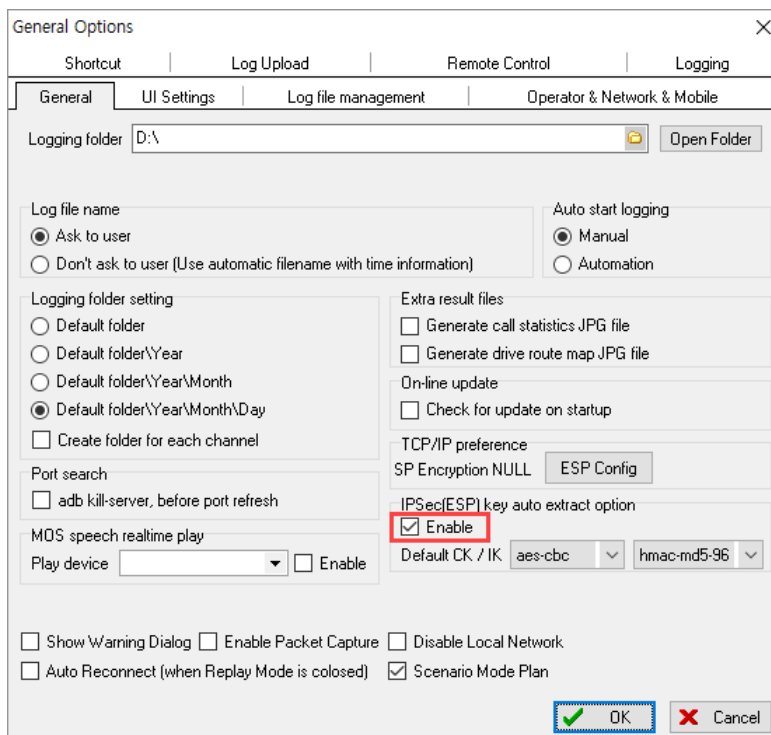


- Plan setting – Service option should be configured to “108. CTL - Voice with Dial Number”

### Ver 3.10.1102

- Update
  - ✓ IPsec ESP key auto detection - Added “Enable” option in the general option UI (Default = checked).

When this option is not selected, auto detection will be disabled.



### Ver 3.10.1108

- Update
  - ✓ Supports new Qualcomm log version
    - 0xB111 ver122
  - ✓ Samsung UE's IPSec auto key extract update (for Galaxy S8/S8+ Android 8.0 Oreo)
- Bug Fix
  - ✓ Qualcomm LTE-A Parameter modify calculation method
    - "[LTE-A] (P)DL Spatial Rank (1)"
    - "[LTE-A] (P)RI", "[LTE-A] (S1)RI", "[LTE-A] (S2)RI", "[LTE-A] (S3)RI", "[LTE-A] (S4)RI"
  - ✓ Qualcomm LTE-A Signal Graph (1' Sampling) modify calculation method
    - "[LL1] (PCell) DL - Spatial Rank (per sec)"
    - "[LL1] (SCell1/2) DL - Spatial Rank (per sec)"
    - "[LL1] (SCell3/4) DL - Spatial Rank (per sec)"

### Ver 3.10.1117

- Update
  - ✓ Port setting – PCTEL scanner: Added new band codes.
  - ✓ Supports new Qualcomm log version
    - 0xB0B4\_0xC5 v26, 0xB0C0 v16
    - 0xB111 v122, 0xB113 v121, 0xB115 v122, 0xB12E v121, 0xB132 v126, 0xB139 v124, 0xB14D v102, 0xB14E v102
    - 0xB177\_16,17,18,19,20,21,22,23,24,37 v32,32,36,34,32,32,32,32,32
    - 0xB181\_11 v32, 0xB194\_28 v32
    - 0xB195\_30,31 v32,24

### Ver 3.10.1120

- Update
  - ✓ Supports new Qualcomm log version
    - 0xB119 v121, 0xB1BD v32,33,34,35,36

### Ver 3.10.1123

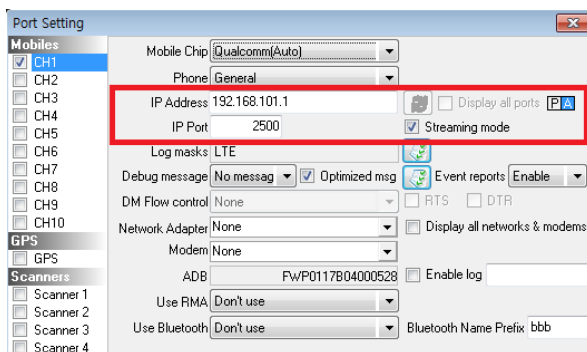
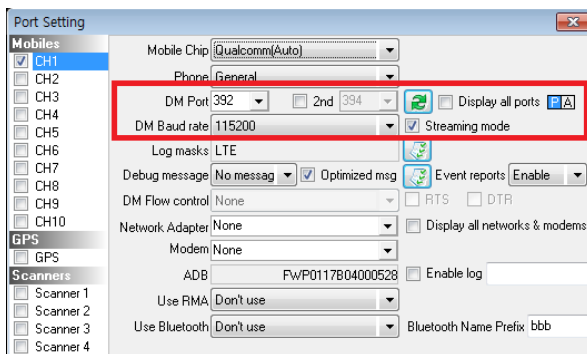
- Update
  - ✓ CDMA OTA parser update

### Ver 3.10.1128

- New Feature
  - ✓ Supports client mode LML
- Update
  - ✓ CDMA OTA parser update
  - ✓ RMA upgrade (v2.45)
    - YouTube player is launched as landscape mode by force on video load, and returns to portrait mode after play stops.
    - App name changed from "Netimizer RMA v2.xx" to "RMA v2.xx"
    - App icon changed
  - ✓ License manager update

### Ver 3.10.1206

- New Feature
  - ✓ DM IP Connection Support (for LAN-to-Serial)



- ✓ H chip – ICD v20171122 is applied – 3G RRC/NAS, PHY messages are added
- Update
  - ✓ Total Call Monitor UI – Supports scenario mode

### **Ver 3.10.1208**

- Update
  - ✓ H chip – applied ICD-20171207
  - ✓ Support Log Message Filter Tree for Qualcomm GSM DSDS log packets
  - ✓ Support Qualcomm GSM DSDS Signal Messages
    - GSM DSDS RR Signaling Message (0x5B2F)
    - GPRS DSDS MAC Signaling Messages (0x5C26)
    - GPRS DSDS SM/GMM OTA Signaling Messages (0x5C30)
  - ✓ Support Qualcomm GSM DSDS log packets
    - GSM DSDS L1 Monitor Bursts (0x5A82)
    - GPRS DSDS MAC UL Ack/Nack (0x5C2C)
    - GPRS DSDS MAC DL Ack/Nack (0x5C2D)
- Bug Fix
  - ✓ Scenario scheduling – Bug fix
  - ✓ RMA upgrade (v2.46) – YouTube test event recording bug fix

### **Ver 3.10.1211**

- Update
  - ✓ H chip – applied ICD-20171207v2
  - ✓ H chip – Supported in FIT mode

### **Ver 3.10.1220**

- Update
  - ✓ H chip – applied ICD-20171215
  - ✓ H chip – Supported in Parameters

### **Ver 3.10.1227**

- Update
  - ✓ Total Call Monitor UI – Call Result tab displays data call type(Ping, FTP, HTTP, etc.) together with call result, for the data call types
  - ✓ Port Setting UI – If there is any confliction in the COM port list, warning dialog is popped up when the Port Setting UI is popped up first time after program launch. In the previous version, this popup message was displayed when you click “OK” button in the port setting UI.

### **Ver 3.11.0104**

- Update
  - ✓ Samsung chip – Supports ICD v5.21

### **Ver 3.11.0105**

- Update
  - ✓ eLicense manager update

### **Ver 3.11.0108**

- Update
  - ✓ eLicense manager update
  - ✓ Log View parser update
    - Supports Qualcomm GSM DSDS Log packets (0x5A6A ~ 0x5B91)
    - Supports Qualcomm GPRS DSDS Log packets (0x5BF4 ~ 0x5C73)

### **Ver 3.11.0111**

- Update
  - ✓ GSM/GPRS UIs support Qualcomm GSM/GPRS DSDS log packets

### **Ver 3.11.0112**

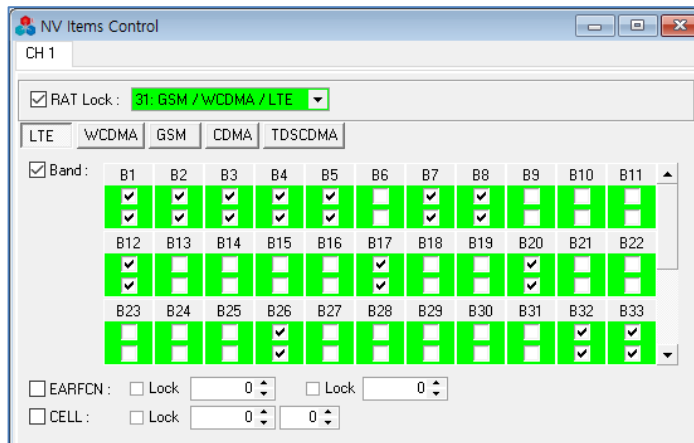
- Update
  - ✓ Supports new Qualcomm log version
    - LTE RRC Signal Messages ver20 (0xB0C0 v20)
    - LTE ML1 Serving Cell Measurement Result (0xB193 0x19 - ver26)

### **Ver 3.11.0119**

- Bug Fix
  - ✓ LAN-interfaced GCT chip – DM communication bug fix

### **Ver 3.11.0124**

- Update
  - ✓ “NV Items Control” UI renewal and updated



### Ver 3.11.0125

- Bug Fix
  - ✓ Qualcomm (SDM545) DM connection problem, during airplane mode on/off or reset – bug fixed

### Ver 3.11.0131

- Update
  - ✓ RMA upgrade (v2.47)
    - Retrieves UTC and local date/time from Android mobile
- Bug Fix
  - ✓ “NV Items Control” UI bug fixed
    - **Warning: Before writing NV items, you SHOULD “READ” NV items first**

### Ver 3.11.0201

- Update
  - ✓ Supports remote client mode with RCS, in LML version also

### Ver 3.11.0202

- Update
  - ✓ RMA upgrade (v2.48)
    - Support CPU usage retrieval on Android 8.0

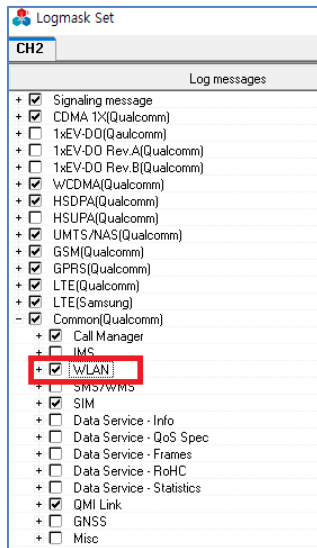
### Ver 3.11.0206

- Update

- ✓ Supports new Qualcomm log 0xB246 v2
- Bug Fix
  - ✓ Problem with incorrect timestamp(local time) in replay – bug fixed

### Ver 3.11.0213

- Update
  - ✓ “General Option – Log Upload” tab update
  - ✓ Log\_Uploader update
- Update
  - ✓ Supports new Qualcomm log - 0xB119 v101, 0xB17C v3, 0xB183 v24
  - ✓ Supports Qualcomm WLAN log
    - Qualcomm WLAN logmask



- WLAN OTA (IEEE 802.11 Std) message parser

```

04:25:21.068 SID(0)/T(15.759) 0x1940 WLAN OTA RX
version = 1
MAC ID = 1
Channel ID = 13
RSSI = 25 dBm
VDEV ID = 255
OP Type = 255
Payload Size = 145

IEEE 802.11 Beacon frame, Flags: .....
Type/Subtype: Beacon frame (0x0000)
Frame Control Field: 0x0000
.... ..00 = Version: 0
.... ..00 = Type: Management frame (0)
1000 .... = Subtype: 0
Flags: 0x00
.... ..00 = DS status: Not leaving DS or network is operating in AD-HOC mode
.... ..0.. = More Fragments: This is the last fragment
.... 0... = Retry: Frame is not being retransmitted
... 0 .... = PWR MGT: STA will stay up
..0. .... = More Data: No data buffered
-0... .... = Protected flag: Data is not protected
0... .... = Order flag: Not strictly ordered
..000 0000 0000 0000 = Duration: 0 microseconds
Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
Transmitter address: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
Source address: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
BSS Id: EfmNetwo_6a:3a:3e (00:08:9f:6a:3a:3e)
.... ..0000 = Fragment number: 0
1100 0110 1110 .... = Sequence number: 3182
IEEE 802.11 wireless LAN
Fixed parameters (12 bytes)
Timestamp: 0x000001070b3713a1
Beacon Interval: 0.102400 [Seconds]
Capabilities Information: 0x0411
.... ..0000 0001 = ESS capabilities: Transmitter is an AP
.... ..0000 0010 = IBSS status: Transmitter belongs to a BSS
.... ..0000 0000 = CFP participation capabilities: No point coordinator
.... ..0000 0011 = Privacy: AP/STA can support WEP
.... ..0000 0001 = Short Preamble: Not Allowed
.... ..0000 0000 = PBCC: Not Allowed
.... ..0000 0000 = Channel Agility: Not in use
.... ..0000 0000 = Spectrum Management: Not Implemented
.... ..1000 0000 = Short Slot Time: In use
.... ..0000 0000 = Automatic Power Save Delivery: Not Implemented
.... ..0000 0000 = Radio Measurement: Not Implemented
.... ..0000 0000 = DSSS-OFDM: Not Allowed
.... ..0000 0000 = Delayed Block Ack: Not Implemented
.... ..0000 0000 = Immediate Block Ack: Not Implemented
Truncated parameters (100 bytes)

```

### Ver 3.11.0219

- Update
  - ✓ Supports POLQA 2.4. User can choose POLQA version (1.1 or 2.4) in the plan setting UI.
  - ✓ Updated POLQA OEM DLL to v 1.29
- Bug Fix
  - ✓ Scanner UI – SINR value display bug fix

### Ver 3.11.0227

- Update
  - ✓ PCTEL scanner updates
    - PCTEL GPS is now used as GPS source for map display
    - LTE measure collects quality information for each path of TxN\_RxM
  - ✓ LTE RRC parser update

### Ver 3.11.0306

- Update
  - ✓ Total Call Monitor, Voice Call Monitor – Accumulated call counts are displayed in the case of scenario mode test

### Ver 3.11.0319

- Update
  - ✓ Altair chip interface update
    - Added communication type – UDP, TCP

### Ver 3.11.0323

- Update
  - ✓ LogUploader update
  - ✓ Altair chip – Added “RSSI” and “SINR” to parameters list
- Bug Fix
  - ✓ Scenario editor, Scenario scheduler – bug fix
  - ✓ Remote control with RCV – Measure start didn’t work correctly – bug fix
  - ✓ GPS UI – bug fix
  - ✓ RMA update (v2.49)
    - Crash on incoming call with unknown caller ID – bug fix
    - Exception in handling HTTP plan command – bug fix

### Ver 3.11.0326

- Update
  - ✓ RMA update (v2.50)
    - When location information was not updated from Android, GPS information had same time value – bug fix
  - ✓ Parameter “[LTE] Pathloss (RefSigPwr-RSRP)”, “[LTE] Open Loop PUCCH Estimate” added.

### Ver 3.11.0329

- Update
  - ✓ LMDM update for LG chipset
    - CT18(0xC416) group: 0x16xx
    - 5G(0xC417, 0xC418) group: 0x17xx, 0x18xx

### Ver 3.11.0330

- Update
  - ✓ RMA update (v2.51)

- Requires Android version higher than 5.0.1
- Saves WiFi status even during "WiFi Off" state and "Not Connected to AP" state
- Collects WiFi connection information in more detail for the current serving AP. (FrequencyMHz, MAC Address, Supplicant State)

### Ver 3.11.0402

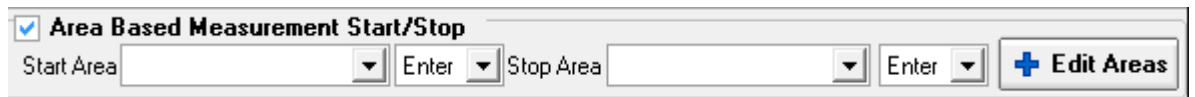
- Update
  - ✓ Parameter "[LTE] Open Loop PUCCH Delta" added.

### Ver 3.11.0403

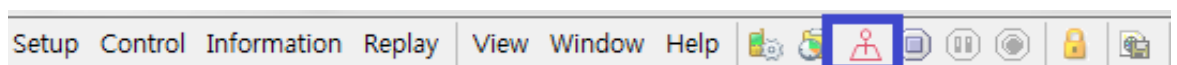
- Update
  - ✓ Supports ULP(SUPL 2.0) over IP packet data
    - ULP/LPP, ULP/RRLP messages parser
  - ✓ TIA/EIA-801-A(Position Determination Services) over CDMA message
    - TIA/EIA-801-A(Position Determination Services) message parser

### Ver 3.11.0412

- New Feature
  - ✓ Added "Area Based Measurement Start/Stop" option in the Plan setting UI
    - You can define conditions for "automatic measurement start" and "automatic measurement stop"



- When this option is enabled, "Measure Start" button in toolbar is changed as below.



- Update
  - ✓ UI Log View Filter –Added Location LPP(0xFD03), RRLP(0xFD04)
  - ✓ User Def Column - 'Text to Find' is increased to 4 text fields
  - ✓ Supports Qualcomm CDMA IRAT Handover Message log (0x1388, 0x1389, 0x138B, 0x138C, 0x138D)
  - ✓ Parameter "WiFi" group added
    - "[WiFi] MAC ID", "[WiFi] Channel ID", "[WiFi] RSSI"
    - "[WiFi-RMA] SSID", "[WiFi-RMA] Channel ID", "[WiFi-RMA] RSSI"
- Bug Fix

- ✓ QXDM log mask(.dmc) load – bug fix

### Ver 3.11.0417

- Update
  - ✓ You need Qualcomm NB-IOT chipset license option to use with NB-IOT chipset
  - ✓ RMA update (v2.52)
    - Exception enhanced for Android WiFi API exception

### Ver 3.11.0508

- Update
  - ✓ “ESP Key Status” in the main form status bar is changed to gray upon airplane mode on
- Bug Fix
  - ✓ Samsung chip 0xEB04 LPHY System Info - Transmission Mode 0x12 (SIMO) bug fix
  - ✓ Markov Frame Rate Statistics (0x100E) parser bug fixed

### Ver 3.11.0510

- Bug Fix
  - ✓ Port setting UI – R&S scanner IP address was not editable – bug fixed
  - ✓ “NV Items Control” UI – CDMA (S)Frequency was not written – bug fixed

### Ver 3.11.0530

- Update
  - ✓ RMA update (v2.53)
    - FTP over IPv6 – Retries connection in case of connection error
- Bug Fix
  - ✓ If LTE RRC rrcConnectionReconfiguration has SCell EARFCN value larger than 65535, it's not processed anymore (dl\_CarrierFreq\_v1090 mapping)

### Ver 3.11.0601

- New Feature
  - ✓ Auto Call Test for Samsung NB-IoT Device
    - Model: Samsung SM-V110K (SM-V110KZWAKTC) :  
<http://www.samsung.com/sec/iot/connect-tag-v110/>
    - Feature: DML makes device to perform Ping test, and monitors Ping results and statistics.

It's displayed in Ping call monitor, and results are saved to log file.

### **Ver 3.11.0605**

- Update
  - ✓ Supports multiple Altair chipset devices
- Bug Fix
  - ✓ Mobile Control UI – Enhanced for the access violation problem

### **Ver 3.11.0607**

- Update
  - ✓ Update for multiple Altair chipset devices support

### **Ver 3.11.0609**

- Update
  - ✓ PCTEL\_MGR update – displays scanner information for IBFlex and MxFlex

### **Ver 3.11.0612**

- New Feature
  - ✓ E911 support

### **Ver 3.11.0618**

- Update
  - ✓ Qualcomm NB-IoT (LTE Cat NB1) –Parameter Manager KPI update
    - [LTE-NB] NPDSCH Throughput calculation bug fixed
    - [LTE-NB] NPDSCH MCS, SF# added
    - [LTE-NB] NPUSCH Tx Pwr, Throughput, MCS, RU#, ReTx Rate added
  - ✓ RMA update (v2.54)
    - During multi session HTTP download and upload, total transfer size decreased when a session completes transfer. This bug is fixed.

### **Ver 3.11.0625**

- Update
  - ✓ PCTEL scanner interface update

- Added new band codes to configuration UI
- ✓ Qualcomm chip – Log mask updated (remove unnecessary log)
- Bug Fix
  - ✓ Main Status Bar – “VoLTE Call Waring Status” color bug fixed

### **Ver 3.11.0626**

- Update
  - ✓ For the unused channels, BT connection will be released
  - ✓ Altair chip UI update for unstable devices
    - Signal graphs - RSRP display method updated
    - Signal graphs - Added line pointer
    - Signal graphs - Table width value accepts keyboard input
    - Device reconnection timer is changed from 25sec to 60sec, for unstable devices
    - On device reconnection, call states are initialized, so that plan UI can be edited

### **Ver 3.11.0627**

- Bug Fix
  - ✓ Qualcomm LTE BLER calculation from “LTE ML1 PDSCH Stat Indication (0xB173 v36)” - bug fixed

### **Ver 3.11.0703**

- Update
  - ✓ Parameter manager update (calculation method, sampling rule)
- Bug Fix
  - ✓ LTE CA UI – EARFCN, Band display bug fix

### **Ver 3.11.0709**

- Update
  - ✓ Altair chip – Signal Graph UI update
    - Displays MAC/RLC/PDCP Throughput for each bearer (Parameter manage shows Total throughput only)

### **Ver 3.11.0724**

- Update
  - ✓ Updated for Qualcomm Modem Bug – Samsung Galaxy S9(SDM845) shows problem with

roaming service to EVDO in EVDO/LTE dual network environment. Updated DM interface logic to prevent this Qualcomm modem bug.

### Ver 3.11.0726

- Update
  - ✓ Inbuilding UI – When image load fails, there was no error message displayed. New version will display error message: "Can't load image. Please try to convert image into other format and load it."

### Ver 3.11.0727

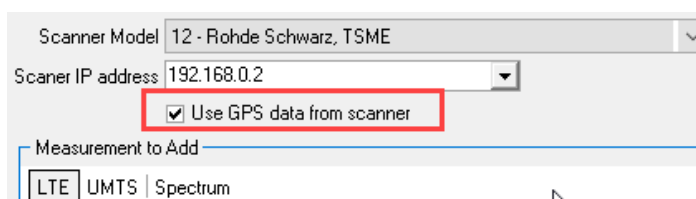
- Bug Fix
  - ✓ HTTP Upload with multi session
    - Call result decision bug fix
    - Total planned bytes calculation bug fix
  - ✓ RMA update (v2.55)
    - HTTP Upload with multi session had call result decision bug – fixed.

### Ver 3.11.0807

- Update
  - ✓ LogMask UI – Add “Qualcomm Developer” items for engineering test
    - “Common (Qualcomm) – Developer” added
    - “CDMA 1X (Qualcomm) – Developer” added
    - “LTE (Qualcomm) – Developer” added
  - ✓ Qualcomm LTE Log detail info display update (SCell Index, SFN/SubFN, etc)

### Ver 3.11.0810

- Update
  - ✓ For Rohde Schwarz scanners(TSME,TSMW), you can collect GPS data from scanner, when “Use GPS data from scanner” option is selected in the port setting dialog



- Bug Fix
  - ✓ GPS UI – incorrect DOP value display bug fixed

### **Ver 3.11.0817**

- Update
  - ✓ FIT mode – Changed default setting of MOS standard to “POLQA 2.4 SWB” and default reference speech to “swb\_ref\_48kHz.wav”
  - ✓ PCTEL scanner manager(PCTEL\_MGR) update for TD-LTE

### **Ver 3.11.0831**

- Update
  - ✓ Log Parser Tool - QMDL(Qualcomm Memory-Device Log) Format update – support “extend diag” packet
  - ✓ Supports new Qualcomm log
    - TRM(Transceiver Resource Manager) (0x12E8 v16)
    - LTE ML1 Multisim Packet (0xB182 v25,v26,v27)
  - ✓ Grid UI – Non-existing scanner attributes are supported for Favorite and drag & drop to Grid UI

### **Ver 3.11.0906**

- Bug Fix
  - ✓ Port Setting – PM12 ports auto detection had problem when “show all port” option is enabled – bug fixed
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### **Ver 3.11.0907**

- Update
  - ✓ IPsec(ESP) Key detect method update – example “LG-V35” UE
  - ✓ Qualcomm Log “LTE LL1 RS Signal Correlation (0xB120)” parser update
  - ✓ If UE does not “idle state” at the “Call Start” or “Call End”, forcibly terminate the call (use ADB command)
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### **Ver 3.11.0919**

- Update

- ✓ NB-IoT device wake-up feature is added

### **Ver 3.11.1004**

- New Feature
  - ✓ Supports Datum control and monitoring
- Update
  - ✓ Qualcomm parser update
    - 0xB184 LTE ML1 CA Metrics - ver24

### **Ver 3.11.1019**

- Update
  - ✓ Logmask added with Qualcomm GNSS items
    - GNSS Position Report (0x1476)
    - GNSS PDSM Position Report Callback (0x1482)
    - GNSS PDSM EXT Status Best Available Position Info (0x15B2)
  - ✓ Qualcomm parser update
    - GNSS Position Report (0x1476) – ver7,ver8,ver10
    - GNSS PDSM Position Report Callback (0x1482) – ver0
    - GNSS PDSM EXT Status Best Available Position Info (0x15B2) – ver1

### **Ver 3.11.1030**

- Update
  - ✓ ICPM – Support Phase2 (XMM7480)
  - ✓ UI update – Voice Quality Monitor
  - ✓ UI update – Plan Setting – Voice Quality Configuration
  - ✓ ADB command dial method update
  - ✓ RMA update (v2.56)

### **Ver 3.11.1105**

- Update
  - ✓ KR – Subway information update

### **Ver 3.11.1109**

- New Feature

- ✓ 5G support for Samsung chip
  - Samsung ICD v6.00 (NR 5G log and TS 38.331-f30)
- Update
  - ✓ LTE RRC parser update (release d50 to f22)
  - ✓ LMDM NR 5G update
  - ✓ Voice Call Plan – Service Option – “ADB Command with Dial Number” is updated

### **Ver 3.11.1113**

- Update
  - ✓ RMA update (v2.57)
  - ✓ Log file compression doesn't use '#' character in the file name

### **Ver 3.11.1121**

- Update
  - ✓ Samsung 5G chip
    - ICD version update
    - Filters out non-necessary log packets

### **Ver 3.11.1128**

- Update
  - ✓ NR5G RRC parser update
    - NR5G RRC spec downgrade (F30 -> F21) for UE EUTRA-NR Capability, UE NR Capability parsing
    - Secondary parsing addition for NR SecondaryCellGroupConfig, NR RadioBearerConfig1, NR RadioBearerConfig2
  - ✓ Supports IBWave's IBWC file (.zip, .ibwc) Import in In-Building feature
  - ✓ Supports new Qualcomm log – Parser update
  - ✓ Doesn't install FTDI VCP driver during installation

### **Ver 3.11.1203**

- Update
  - ✓ Port Setting Dialog – Removed “Clear All” button
  - ✓ Port Setting Dialog – Added “Identify” button, which will display channel number on AIM's 7-segment

### Ver 3.11.1205

- Update
  - ✓ BT – pairing list management update

### Ver 3.11.1206

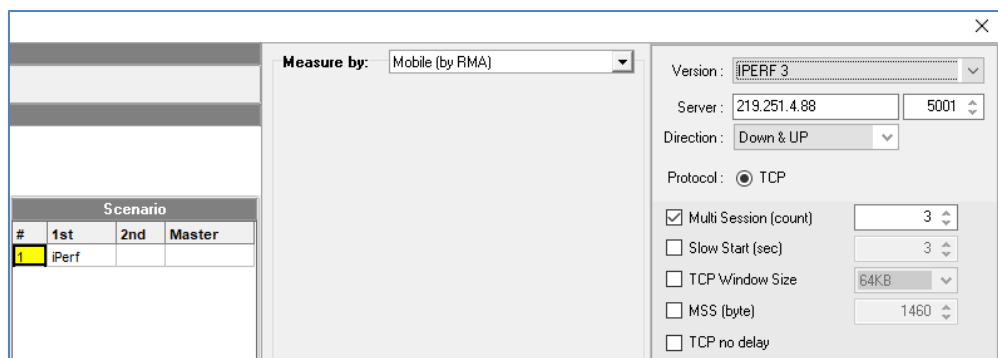
- Bug Fix
  - ✓ Port setting – BT COM port management bug fix

### Ver 3.11.1213

- Update
  - ✓ Supports new Qualcomm log – UI update
    - Parameter manager update
    - UI update - Network & Cell, LTE/LTE-A Signal Graph, LTE CA Status, etc

### Ver 3.11.1214

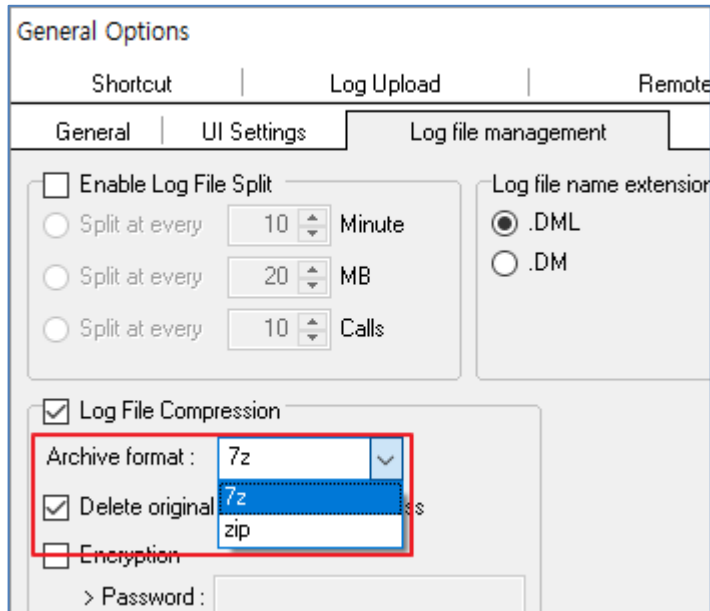
- New Feature
  - ✓ RMA update to v2.58
    - Supports iPerf3
    - Supports SFTP
  - ✓ New measurement type
    - iPerf3 (using RMA)



- SFTP
- Update
  - ✓ Update for Samsung 5G chip

### Ver 3.11.1217

- Update
  - ✓ Log file compression – Supports 7z format, as well as zip format. You can choose compression format from General Option.



- Bug Fix
  - ✓ When ADB name is not configured in the plan setting UI, error occurred in some case – bug fixed

### Ver 3.11.1218

- New Feature
  - ✓ RMA update to v2.59

### Ver 3.11.1220

- Update
  - ✓ Samsung NR5G – DL RB is added
  - ✓ Supports new Qualcomm log – Parser, UI, Parameters update

### Ver 3.12.0104

- Update
  - ✓ Map engine license update
  - ✓ BT connection management method update

### **Ver 3.12.0112**

- Bug Fix
  - ✓ EARFCN to Frequency conversion bug fix (Band class 12)
  - ✓ Scanner configuration save/load and control didn't from v3.11.1127. This bug is fixed
  - ✓ Memory leak during MOS test with AIM – bug fixed

### **Ver 3.12.0116**

- Bug Fix
  - ✓ ESP key save/load bug fix
  - ✓ Codec search bug fix

### **Ver 3.12.0123**

- Update
  - ✓ Bluetooth Control UI – Added “Refresh UE BT MAC address” button

### **Ver 3.12.0210**

- Update
  - ✓ PCTEL scanner – CDMA topN scan control update

### **Ver 3.12.0213**

- Update
  - ✓ RMA update to v2.60
    - Connection problem for "IPv6 based UE to IPv4 FTP server" - fixed

### **Ver 3.12.0220**

- Update
  - ✓ NR 5G RRC parser update (TS38.331 v15.2.1 -> v15.4.0)

### **Ver 3.12.0221**

- New Feature
  - ✓ Added “Audio Tunes” in the program group

### Ver 3.12.0225

- Bug Fix
  - ✓ LTE CA Status UI blink display bug fix

### Ver 3.12.0308

- New Feature
  - ✓ Supports GCT 7243i chipset

### Ver 3.12.0313

- Update
  - ✓ HTTP Call Monitor UI – Added popup menu “Save as CSV”

### Ver 3.12.0322

- Update
  - ✓ RMA update to v2.61
    - Supports IPv6 address for Ping test
    - Crash on Android 9.0 during FTP test - fixed

### Ver 3.12.0326

- Update
  - ✓ License driver update

### Ver 3.12.0408

- New Feature
  - ✓ Supports Mediatek chipset
    - MAPI, and ICD v2.0
  - ✓ PCTEL scanner NR5G TopN scan feature added
  - ✓ Rohde & Schwarz scanner NR5G TopN scan feature added (Caution: SINR value error in 5G NR – R&S ViCom 18.30 issue)
  - ✓ Scanner monitor UI supports NR5G TopN display
- Update
  - ✓ PCTEL scanner interface update to API v2.1.0.0
  - ✓ Rohde & Schwarz scanner interface update to ViCom 18.30

### **Ver 3.12.0409**

- Update
  - ✓ Qualcomm Log “LTE ML1 PUSCH Power Control (0xB16E)” update - Parser, UI, Parameters update
  - ✓ Samsung ICD v6.03
    - Added 0xEA09 NR NAS Message
    - Added 0xEAF1(0x0014) NR Rach Result

### **Ver 3.12.0410**

- Bug Fix
  - ✓ Scanner UI – NR 5G display bug fixed
  - ✓ Parameter - NR5G Scanner incorrect value bug fixed
  - ✓ Port Config UI – misprint bug fixed

### **Ver 3.12.0413**

- Update
  - ✓ Disabled phone number detection by ADB interface
  - ✓ AIM\_MGR update – digital record gain configured to 12dB
  - ✓ ADB DLL update
  - ✓ Parameter Manager – Exception while processing Samsung NR5G debug statistics – bug fixed

### **Ver 3.12.0415**

- Update
  - ✓ AIM\_MGR update – digital record gain configured to 12dB
  - ✓ MOS\_MGR update – default analog record volume is changed (92 -> 50)
- Bug Fix
  - ✓ BT port and ADB socket exceptions – bug fixed

### **Ver 3.12.0416**

- Update
  - ✓ NR RRC parser update – “Measurement Report” shows dBm or dB values
  - ✓ Default plan update to include full logmask

### **Ver 3.12.0418**

- New Feature
  - ✓ Supports TWAMP for RMA-based Ping test
- Update
  - ✓ AudioTunes update
  - ✓ RMA update to v2.62
    - Supports TWAMP for Ping test

### **Ver 3.12.0422**

- Update
  - ✓ RMA update to v2.63 – ICMP based Ping test bug fix

### **Ver 3.12.0423**

- Update
  - ✓ RMA update to v2.64 – IPv6 TWAMP test bug fix

### **Ver 3.12.0426**

- Update
  - ✓ FlushFileC update
  - ✓ Samsung LTE chip – Updated fragmented log processing

### **Ver 3.12.0429**

- Update
  - ✓ RMA update to v2.65 – iPerf/iPerf3 IPv6 processing bug fix
  - ✓ Data packet capture on/off control is applied to 2<sup>nd</sup> port also, as well as 1<sup>st</sup> port

### **Ver 3.12.0502**

- Update
  - ✓ “NV Items Control” UI – Band check/uncheck all button added
  - ✓ Samsung LTE chip – Updated fragmented log processing
  - ✓ Parameter manager update – “PING Inst. RTT”, “PING Call Avg RTT”, “[UE] Operator” added and fixed
  - ✓ Parameter manager update – “Serving Network” could display “LTE+NR” or “NR” (feat.: Main UI)

### **Ver 3.12.0522**

- Update
  - ✓ Rohde & Schwarz scanner interface update to ViCom 18.30 SINR value error patch
  - ✓ Samsung ICD v6.05 support
  - ✓ Total call monitor update
  - ✓ LG mobile driver v4.4.2 is updated in Misc folder – should update to this version to use LG V50
- Bug Fix
  - ✓ Samsung chip logging – Except 0xExxx log, all other log packets from Samsung chip are saved as “Unknown SubCmd Packet(0xEF21)”

### **Ver 3.12.0524**

- Update
  - ✓ Network & Cell UI – Support NR Network

### **Ver 3.12.0528**

- Update
  - ✓ RMA update to v2.66 – TWAMP update

### **Ver 3.12.0603**

- Update
  - ✓ QCom 5G – logmask update, packet version update

### **Ver 3.12.0611**

- Update
  - ✓ Voice call – Answer for incoming call update when BT event “incoming call” is received
  - ✓ Voice call group sync update
  - ✓ RMA update to v2.68 – Youtube update for Playback quality detection

### **Ver 3.12.0618**

- Update
  - ✓ RMA update to v2.69 – FTP over IPv6 update for port issue

### **Ver 3.12.0619**

- Update
  - ✓ Samsung ICD update to v6.06
    - Added: RSSI, RSRP, RSRQ, SINR ant0-ant3 in “NR\_Serving\_Cell\_Info”
  - ✓ Samsung chip interface stability enhanced

### **Ver 3.12.0625**

- Update
  - ✓ Rohde & Schwarz scanner interface update to ViCom 19.00

### **Ver 3.12.0702**

- Update
  - ✓ RMA update to v2.70 – Displays channel number in the title bar
  - ✓ Q1/AIM BT firmware update to v1134 – fixed for \$T message

### **Ver 3.12.0703**

- Update
  - ✓ Qualcomm log parser update
- Bug Fix
  - ✓ Alarm manager – bug fix

### **Ver 3.12.0706**

- Update
  - ✓ Added “Flight mode on/off” button in the toolbar
  - ✓ Samsung ICD update to v6.08

### **Ver 3.12.0709**

- Update
  - ✓ Parameter manager added – “App DL 5s Avg Speed”, “APP UL 5s Avg Speed”

### **Ver 3.12.0712**

- Update
  - ✓ Custom Table UI – supports font size control for fixed font size mode

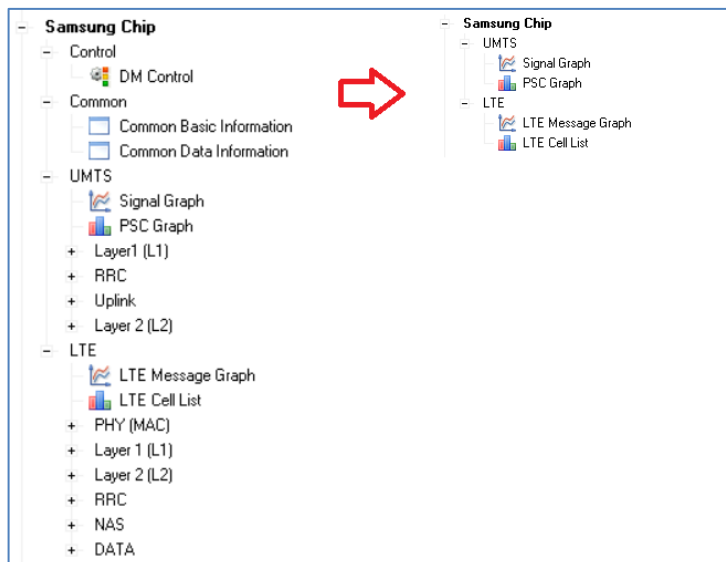
- ✓ Custom Time Graph – supports font size control and dark mode
- ✓ Log Message UI – supports dark mode

### Ver 3.12.0717

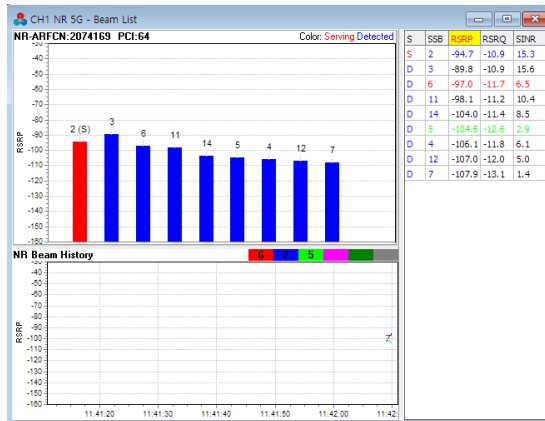
- Update
  - ✓ Custom Table UI – Supports font color setting for each channel
  - ✓ Custom Time Graph – Supports font color setting for each channel
  - ✓ Inbuilding Setting – Added “load from ibwc file” function

### Ver 3.12.0722

- Update
  - ✓ Samsung chip UIs – removed non-used UIs



- ✓ Parameter Manager update
  - New parameters – “/NR5G/Beam Info/” group added
  - Added “NR 5G CA” and “NR 5G Beam Management” Parameters
  - Renewal Qualcomm and Samsung chip
- ✓ New UIs
  - /General/NR 5G (Common)/NR5G Beam List
  - /General/NR 5G (Common)/NR5G CA Status



CH1 NR 5G CA Status

	PCC	SCC1	SCC2	SCC3	SCC4
Band	201	201	201	201	
NR-ARFCN	2074169	2075037	2081669	2083337	
RB	100 MHz	100 MHz	100 MHz	100 MHz	
SCS	120 kHz	120 kHz	120 kHz	120 kHz	
PCI	186	186	186	186	
SSB	4				
RSRP	-95.6				
RSRQ	-10.9				
SINR	17.7				
RSI					
PRACH Power	1.1				
PUCCH Power	1.1				
PUSCH Power	1.1				
CGI					
RI					
RI [%]					
PDSCH Layer	2	2	2	2	
PDSCH Layer [%]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	[0.0 / 100.0 / 0.0 / 0.0]	
PDSCH RB (Avg)	66	66	66	66	
PDSCH MCS	10	8	8	10	
PDSCH Moduli	16QAM	16QAM	16QAM	16QAM	
PDSCH Moduli [%]	[26.9 / 12.3 / 0.8 / 0.0]	[36.9 / 62.8 / 0.3 / 0.0]	[43.0 / 53.6 / 3.3 / 0.0]	[24.6 / 15.4 / 0.0 / 0.0]	
PDSCH BLEB	9.1	8.5	9.1	8.7	
PUSCH RB (Avg)					
PUSCH MCS					
PUSCH Moduli					
PUSCH Moduli [%]					
PUSCH TP (Mbps)	133.95	128.87	128.38	131.65	
APP DL TP (Mbps)	2.35				
APP UL TP (Mbps)					

✓ Q1/AIM BT firmware update to v1135

### Ver 3.12.0723

- Update
  - ✓ PCTEL\_MGR update
- Bug Fix
  - ✓ Port setting UI – PCTEL EPS frequency over 5GHz configuration bug fix
  - ✓ LTE RRC (UE Capability Info) parsing – memory overflow bug fix

### Ver 3.12.0802

- Update
  - ✓ IPsec(ESP) Key detect method update
  - ✓ Logmask added with Qualcomm items
  - ✓ Qualcomm LTE - packet version update
  - ✓ Qualcomm WCDMA - packet version update

### Ver 3.12.0813

- Update
  - ✓ Port setting and Plan setting – Managed as binary file, instead of text file, for quick response

### Ver 3.12.0821

- Update
  - ✓ Qualcomm WCDMA RRC Signaling (0x412F) – SIB Message Parser & Filter Tree update
  - ✓ Qualcomm WCDMA – packet version update
  - ✓ Added “NR 5G RACH” and “NR 5G MAC CE” Parameters
    - RACH Result, RACH Reason, RACH Contention, RACH Attempt #
    - MAC TA CMD – MAC TA Command
    - MAC CC Act/Deact – MAC
- Bug Fix
  - ✓ Fixed the incorrect calculation of handover events in “LTE Event Counter”
  - ✓ Fixed the incorrect display of handover events in Parameter “Signal Msg LTE Events”
    - EUTRAN Inter-frequency Handover
    - EUTRAN Intra-frequency Handover
    - EUTRAN Inter-Cell Handover
    - EUTRAN Intra-Cell Handover

### Ver 3.12.0823

- Update
  - ✓ Port setting – added “manual scanner start/stop” feature for PCTEL scanner
- Bug Fix
  - ✓ Port & plan setting – save/load bug fix

### Ver 3.12.0826

- Bug Fix
  - ✓ NetimizerZipTool – Fixed the problem when multiple channel’s compresses are required almost simultaneously (within 50 msec), which causes CH1 ZIP file has CH2 DML file. This problem happened when log split by time is used.

### Ver 3.12.0829

- Update

- ✓ Parameters – Scanner group is enabled regardless of chipset and technology license option
- ✓ Floating license – Remaining days or hours are displayed in the splash screen
- ✓ License manager update
- Bug Fix
  - ✓ FTP plan – infinity didn't work. Bug fixed

### **Ver 3.12.0904**

- Bug Fix
  - ✓ "Voice Call End" log packet was not saved occasionally, when scenario mode with group sync was used for active call test. This bug is fixed.

### **Ver 3.12.0917**

- Update
  - ✓ RMA update to v2.71 – Location refreshed faster than previous version
  - ✓ Q1/AIM BT firmware update to v1137 – updated to support "Transmit DTMF codes"
  - ✓ Default logging folder is changed to "My Document"
  - ✓ Supports new Qualcomm log version
  - ✓ Log Filter - Altair chip filter tree provides detailed sub filters

### **Ver 3.12.0919**

- Update
  - ✓ RMA update to v2.72 – Communication with audio server
  - ✓ Inter-working with audio server
  - ✓ LTE Event Counter Update - "Cell reselection" updated
  - ✓ Samsung chip - CDMA items are added in logmask and log filter tree

### **Ver 3.12.0928**

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ Update NR5G Beam List UI (/General/NR 5G (Common)/NR5G Beam List)
    - "SSB Index & Rx Beam ID" UI added
- Bug Fix
  - ✓ "LTE PDCP UL Cipher Data PDU" 0xB0B3 "SN" value incorrect bug fixed
  - ✓ Qualcomm DM log gathering bug fix

### Ver 3.12.0930

- Update
  - ✓ GCT chipset – update for eMTC support

### Ver 3.12.1004

- Update
  - ✓ IPSec(ESP) Key detect update
    - Dual IPSec(ESP) Key management update – ex) PS-LTE UE (VoLTE IPSec + PS-LTE IPSec)
    - IPSec(ESP) Key detect method improve – ex) if “ESP Key Information” is delayed, it’s can be detected
- Bug Fix
  - ✓ IP Fragment processing method update – ex) Occasionally “INVITE message” missing
  - ✓ Fixed bug that TCP/IP filter behavior error in “Log Filter Tree” – ex) Occasionally failed to filter “ESP/UDP/SIP” message

### Ver 3.12.1018

- New Feature
  - ✓ Android ADB – Screen Control
- Update
  - ✓ Log View UI – Updated SIP packet defragment logic

### Ver 3.12.1018

- Update
  - ✓ Port setting – LAN interface supports client mode and server mode both



### Ver 3.12.1102

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ RMA update to v2.73
    - Video call origination method update
    - FTP infinity call bug fix

### Ver 3.12.1105

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ IBWC load – alert message box is popped up showing “Floor number should be checked & modified (if required) by manual”
- Bug Fix
  - ✓ IBWC load – floor number detection bug fix

### Ver 3.12.1107

- Update
  - ✓ Supports new Qualcomm LTE log version
- Bug Fix
  - ✓ GCT 7243Q – IP packet save bug fix

### Ver 3.12.1110

- New Feature
  - ✓ ETRI LTE Analyzer Scanner support

### Ver 3.12.1114

- Update
  - ✓ Map UI – CellSite Trace Connection Line function
    - Support dual network (ex: LTE + CDMA)
    - Fixed bug that “Neighbor Set” does not display connection lines
  - ✓ Supports new Qualcomm log version
- Bug Fix
  - ✓ Plan Config UI – fixed that "User Defined IP address" doesn't display
  - ✓ Log Filter – fixed that sometimes, RTCP or SIP filter does not working.

### Ver 3.12.1116

- Update
  - ✓ IPSec(ESP) Key detect update
    - Complex dual IPSec(ESP) Key management update – ex) PS-LTE UE (VoLTE IPSec + PS-LTE IPSec)
    - IPSec(ESP) Key detect method improve – ex) if “ESP Key Information” is delayed, it's can be

detected

- ✓ TCP/IP Filter Tree update
  - Qualcomm TCP/IP(0x11EB) filter function update – “IP Frag” and “ESP” original packet filter

### Ver 3.12.1118

- New Feature
  - ✓ Added “General option – Device Control”
    - “Prevent Full Charge” option is added (default=ON). When Q1/AIM is used and option is enabled, charging voltage and current is controlled dynamically to prevent full charge. This feature works on USB type-C port of Q1/AIM only.
      - 4.55V 0.5A, if > 90%
      - 5.09V 0.5A, if > 50% and <= 80%
      - 5.09V 0.5A, if <= 30%
    - When DML quit, Q1/AIM is configured to 4.91V 0.5A
- Update
  - ✓ Voice Call & Video Call – When there is BT HFP “Released” event, call state detection logic processes it as IDLE state, even if “Service Option” is not based on BT HFP.

### Ver 3.12.1120

- Update
  - ✓ KR PS-LTE Samsung UE – voice call control logic update
  - ✓ GPS status display in the statusbar – updated for “GPS from scanner”
  - ✓ Qualcomm chip – parser update

### Ver 3.12.1121

- Update
  - ✓ Changed operation of “Prevent Full Charge” option in the “General option – Device Control”
    - Default = OFF
    - 4.55V 1.5A, if > 90%
    - 5.09V 1.5A, if < 80%

### Ver 3.12.1122

- Update
  - ✓ Add a Keyboard shortcut item – Mobile Control UI (Ctrl + N)

- ✓ (Samsung chip) MCPTT –Timestamp of TCP/IP packet refers Samsung chip time tick, instead of local tick

### **Ver 3.12.1123**

- Bug Fix
  - ✓ ADB status icon in the statusbar was changed to green->red->green even though ADB status is ok. This bug is fixed.
  - ✓ During measurement stop and log file close, “Logging write error!! WriteFile Error Code = 6” was popped up sometimes. This bug is fixed.

### **Ver 3.12.1124**

- Update
  - ✓ Changed operation of “Prevent Full Charge” option in the “General option – Device Control”  
Default = OFF  
4.55V 1.5A, if > 90%  
4.91V 1.5A, if < 80%  
4.91V 1.5A, on terminate

### **Ver 3.12.1128**

- Update
  - ✓ Supports new Qualcomm log version
  - ✓ Samsung chip DM interface – Added trace logging for DM communication problem tracking
- Bug Fix
  - ✓ Plan setting UI – Scenario save bug fix

### **Ver 3.12.1203**

- Update
  - ✓ BT connection – Supports manual UE BT MAC address input and connection, and save/load
  - ✓ Supports new Qualcomm LTE log version
  - ✓ Samsung chip – Doesn’t encrypt Samsung log packets anymore

### **Ver 3.12.1205**

- Update
  - ✓ Altair chip – RSRP, RSRQ, SINR calculation method update following Altair ICD update

### Ver 3.12.1206

- Update
  - ✓ IPsec(ESP) Key detect update
    - IPsec(ESP) Key management update for TCP fragmented SIP REGISTER message
  - ✓ Warning added – “DM Port Config(1st/2nd) mismatch for dual modem (LTE+5G)” warning message will be displayed, when master(1<sup>st</sup>) port and slave(2<sup>nd</sup>) port is configured wrong in the port setting. Master(1<sup>st</sup>) port should be LTE port, and slave(2<sup>nd</sup>) port should be 5G(or CDMA) port.
  - ✓ License driver update to v7.102

### Ver 3.12.1207

- Update
  - ✓ Enhanced processing of wrong QCom log field

### Ver 3.12.1209

- Update
  - ✓ iPerf3 active call test – support UDP test
  - ✓ RMA update to v2.74 – supports iPerf3 UDP test
- Bug Fix
  - ✓ Access violation during Bluetooth port close – bug fix

### Ver 3.12.1210

- New Feature
  - ✓ Samsung chip through LAN is supported
  - ✓ Moved “Qualcomm LTE – L1 RX AGC (0xB111)” logmask to developer’s group

### Ver 3.12.1211

- Update
  - ✓ Changed payload on/off control
    - Before:
      - payload off = logmask ON, max payload size 80B
      - payload on = follow user configuration (logmask, max payload size)
    - After:

payload off = logmask OFF

payload on = follow user configuration (logmask, max payload size)

### **Ver 3.12.1213**

- New Feature
  - ✓ Moved “RX AGC” logmask to developer’s group
  - ✓ Qualcomm chip – Added new log types to logmask and logfilter
- Bug Fix
  - ✓ Fixed infinite loop for some log packet

### **Ver 3.12.1217**

- Update
  - ✓ Samsung chip – RTP event timestamp generation logic update based on Samsung TCP/IP packets

### **Ver 3.12.1220**

- Update
  - ✓ Qualcomm chip – supports new QCom chip log version
  - ✓ Idle test – added “Seezn Test” item

### **Ver 3.12.1223**

- Update
  - ✓ Q36 DCU – Bluetooth Control UI is now enabled on Q36 DCU

### **Ver 3.12.1224**

- Update
  - ✓ Bluetooth COM port – close method changed from Close() to ForceClose()
  - ✓ RMA update to v2.75 – Enhanced exception handling on FTP connection problem
- Bug Fix
  - ✓ Bluetooth Control UI – Exception when BT MAC address is blank – bug fixed

### **Ver 3.12.1228**

- Update
  - ✓ Voice call plan – You can use ‘#’ character in the dial number edit UI

- Bug Fix
  - ✓ HTTP call test – Call didn't progress for next call sometimes. This bug is fixed.

### **Ver 3.20.0106**

- Update
  - ✓ Port Setting UI – PCTEL scanner – You can configure “4 Rx Antenna” for MX/MXflex

### **Ver 3.20.0108**

- Bug Fix
  - ✓ Voice Quality Monitor UI – Fixed bug displaying atten as a MOS value

### **Ver 3.20.0109**

- Update
  - ✓ Port Setting UI – Disabled some setting items and fixed to default setting, for specific customer's license

### **Ver 3.20.0110**

- Update
  - ✓ Samsung chip –TCP/IP packet timestamp calculation refers Samsung chip tick also

### **Ver 3.20.0114**

- Update
  - ✓ Qualcomm TCP/IP payload size control method update
  - ✓ NV Items Control UI – “Custom NV Item” feature update

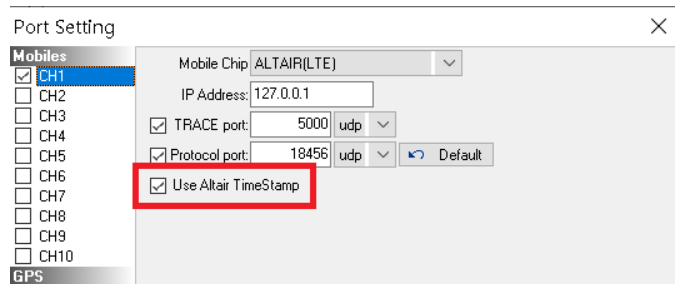
### **Ver 3.20.0116**

- Update
  - ✓ SMS - Plan and Active Call Test – Added “front idle” for SMS test between two DML systems
  - ✓ License Manager update to v3.20.0115

### **Ver 3.20.0117**

- Update
  - ✓ Altair chip – Added new function “Use Altair Timestamp” (default = OFF). When selected, log

timestamp will be adjusted to time information received from Altair chip. If not selected, log timestamp will refer received time.



- ✓ Qualcomm chip – Supports new log versions
- ✓ Qualcomm NV DB update

### Ver 3.20.0120

- Update
  - ✓ Qualcomm NV DB update

### Ver 3.20.0121

- Update
  - ✓ Qualcomm chip – Supports new log versions

### Ver 3.20.0123

- Update
  - ✓ RMA update to v2.76 – updated for Android 10
  - ✓ LTE RRC parser update (TS36.331 v15.2.2 to v15.8.0)
  - ✓ NR 5G RRC parser update (TS38.331 v15.4.0 to v15.8.0)
  - ✓ Qualcomm chip – Supports new log versions
- Bug Fix
  - ✓ SIP packet processing bug fix

### Ver 3.20.0128

- Update
  - ✓ Updated “payload off” command control
    - up to v3.12.1210: TCP/IP packets were received (header only) on “payload off”
    - v3.12.1211 to v3.20.0123: TCP/IP packets were not received on “payload off”
    - from v3.20.0128: TCP/IP packets were received (header only) on “payload off”

- ✓ RMA update to v2.78 – updated for Android 10
- Bug Fix
  - ✓ QCom NR log parsing bug fix

### **Ver 3.20.0129**

- Update
  - ✓ RMA update to v2.78 – Fixed to supported Android 7
  - ✓ QCom logmask update
  - ✓ QCom NR log parsing update
  - ✓ Altair logging function update

### **Ver 3.20.0131**

- Update
  - ✓ RMA update to v2.79 – Fixed for web test
  - ✓ QCom chip – Supports new NR log version

### **Ver 3.20.0203**

- Update
  - ✓ USB lock key management module update
  - ✓ Installation packet default port setting – logmask update
  - ✓ Voice Call Monitor – Updated to simple UI to reduce required screen size

### **Ver 3.20.0205**

- Update
  - ✓ FTP Call Monitor - Updated to simple UI to reduce required screen size
  - ✓ Screen off state check, and screen on control – updated for Android 10

### **Ver 3.20.0207**

- Update
  - ✓ “Log Export - Msg flow HTML” output format updated, and includes “detail info”
  - ✓ FTP Call Monitor update
  - ✓ Updated to save WCDMA diag log, if there is now WCDMA license but LTE license exist
- Bug Fix
  - ✓ Samsung NR Neighbor Cell Info – log parsing bug fix

### Ver 3.20.0212

- Update
  - ✓ Mediatek chip – Supports CS Auto Call (Mobile should support MAPI v3.1 or later)

### Ver 3.20.0213

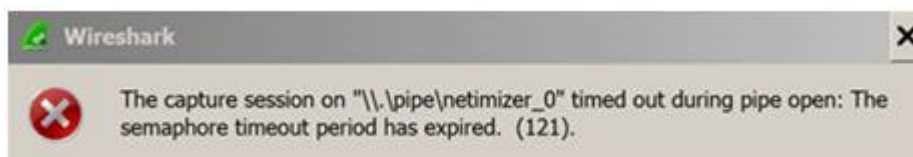
- Update
  - ✓ “UE Capability Information” 2<sup>nd</sup> parsing update

### Ver 3.20.0221

- Update
  - ✓ ADB update to v29.0.5(Oct. 2019)
    - Refer - [https://developer.android.com/studio/releases/platform-tools#2905\\_october\\_2019](https://developer.android.com/studio/releases/platform-tools#2905_october_2019)
  - ✓ “UE Capability Information” 2<sup>nd</sup> parsing update
  - ✓ Updated for LTE-R UE

### Ver 3.20.0225

- Update
  - ✓ Memory overrun bug fix
  - ✓ Updated Wireshark interface to support recent version of Wireshark



### Ver 3.20.0226

- Update
  - ✓ HTTP Call Monitor UI update
  - ✓ NAS EMM Location(LPP) – 2<sup>nd</sup> parsing is added
  - ✓ ADB update to v29.0.6(Feb. 2020)
  - ✓ RMA update to v2.80 – Fixed for Android 10

### **Ver 3.20.0227**

- Update
  - ✓ Qualcomm chip – Supports new network interface ID for TCP/IP packet
  - ✓ RMA update to v2.81 – Fixed for Android 10

### **Ver 3.20.0228**

- Update
  - ✓ Plan structure update – Port setting and Plan setting file update
  - ✓ USB key management update
  - ✓ HiSC – Supports CPE, and added AT command UI
  - ✓ RMA update to v2.82 – Fixed for Android 10

### **Ver 3.20.0301**

- Bug Fix
  - ✓ RMA update to v2.83 – Unstable on Android 10 – bug fixed

### **Ver 3.20.0302**

- Update
  - ✓ RMA update to v2.84
    - Minimum required Android OS is changed from Android 4.2.2 to Android 6.0
    - Bug fix for WiFi information detection
- Bug Fix
  - ✓ Replay bug fix – error message error
  - ✓ Qualcomm chip – “ NR5G PDSCH Throughput” parameter calculation bug fix (round reset handling bug fix)

### **Ver 3.20.0303**

- Bug Fix
  - ✓ WCDMA RRC parsing – SIB type detection bug fix

### **Ver 3.20.0304**

- Bug Fix
  - ✓ RMA update to v2.85 – Bug fix for occasional crash

### **Ver 3.20.0306**

- Update
  - ✓ QCom NR logmask update

### **Ver 3.20.0311**

- Update
  - ✓ QCom NR logmask update

### **Ver 3.20.0312**

- Update
  - ✓ PCTEL\_MGR update to show “protocol” and “license option” as text as well in the “Installed Options” list
- Bug Fix
  - ✓ Port setting and Plan setting file load problem after v3.20.0228 – bug fix

### **Ver 3.20.0318**

- Update
  - ✓ PCTEL\_MGR update to save scanner device information to log file
  - ✓ Log Message UI – Log filter tree update
- Bug Fix
  - ✓ RMA update to v2.86 – UE temperature was not collected in v2.85 – bug fixed

### **Ver 3.20.0320**

- Bug Fix
  - ✓ Default logmask setting bug fix for FIT mode
  - ✓ Voice Quality Monitor UI bug fix

### **Ver 3.20.0403**

- Update
  - ✓ QCom NR log parsing update
  - ✓ Altair chip - “Use Altair Timestamp” feature update

### **Ver 3.20.0406**

- Update
  - ✓ Qualcomm chip – supports new LTE and NR5G log versions

### **Ver 3.20.0408**

- Update
  - ✓ LPP ASN.1 decoder update (3GPP TS 36.355 V10.11.0 -> 3GPP TS 36.355 V15.5.0)

### **Ver 3.20.0410**

- Update
  - ✓ Samsung ICD update to v6.11

### **Ver 3.20.0414**

- Update
  - ✓ License Manager update – for KR PSNet
  - ✓ RMA update to v2.88 – Bug fix for file deletion after FTP upload test
  - ✓ IPSec(ESP) Key detect update
    - Key management update for Korea PS-LTE UE (S-Traffic UE)
    - Key management update for Korea PS-LTE UE (CyberTel UE)
- Bug Fix
  - ✓ Plan UI – FTP “check result by average throughput” option UI activation bug fix

### **Ver 3.20.0417**

- Update
  - ✓ RMA update to v2.89 – crash during FTP test bug fix

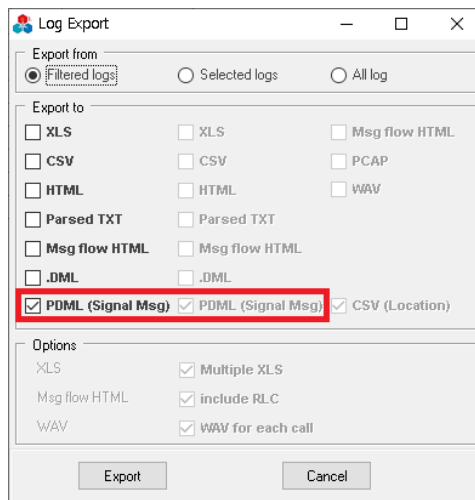
### **Ver 3.20.0420**

- Update
  - ✓ RMA update to v2.90 – occasional FTP upload fail bug fix
  - ✓ License Manager update – for FIT

### **Ver 3.20.0424**

- Update

- ✓ Qualcomm chip – supports new NR5G log versions
- ✓ Log Message UI – Added “PDML (Signal msg)” in the Export function



### Ver 3.20.0427

- Update
  - ✓ Qualcomm chip – supports new LTE log versions

### Ver 3.20.0507

- Update
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ RMA update to v2.91 – FTP bug fix

### Ver 3.20.0509

- Update
  - ✓ Qualcomm chip – supports new NR log versions
  - ✓ Qualcomm chip - logmask update
  - ✓ Added “General option – Wireshark Environment”
  - ✓ Removed “DM Baud rate, DM Flow control, RTS, DTS” from the port setting dialog
  - ✓ GCT chip UI display update

### Ver 3.20.0511

- Update
  - ✓ RMA update to v2.92 – FTP bug fix

- Bug Fix
  - ✓ QCom chip - Time mismatch fixed

### **Ver 3.20.0514**

- Update
  - ✓ Removed LMDM related features

### **Ver 3.20.0515**

- New Feature
  - ✓ Added "Favorite Editor" and "DML2CSV"

### **Ver 3.20.0519**

- Update
  - ✓ Port Setting UI – display "Dev/Undef" of Qualcomm, in Logmask status
  - ✓ Ping test - Local IP address of ping test is supported in "Measure by - PC (by User-defined IP address)" environment

### **Ver 3.20.0520**

- Update
  - ✓ RMA update to v2.93 – FTP bug fix

### **Ver 3.20.0521**

- Bug Fix
  - ✓ Frequent "Data Call Status" log packet saving during idle call – bug fixed

### **Ver 3.20.0526**

- Update
  - ✓ Qualcomm chip – supports GNSS log (Location protocol) and contained LPP
    - 0x1386 CGPS Report Server Tx Packet
    - 0x1387 CGPS Report Server Rx Packet
  - ✓ Parser update - 3GPP TS 36.355 V15.5.0 (2019-09) LTE Positioning Protocol (LPP)
  - ✓ Updated LPP PDU reassembling process (CGPS Report Server TX/RX Packet log)
  - ✓ RMA update to v2.94 – FTP bug fix

### **Ver 3.20.0528**

- Update
  - ✓ DM interface core update
  - ✓ AudioTunes update
    - supports both of analog and BT
    - check license for POLQA MOS score calculation

### **Ver 3.20.0529**

- Update
  - ✓ Qualcomm chip - logmask update

### **Ver 3.20.0604**

- Update
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0608**

- Update
  - ✓ Supports Samsung ICD v6.11 and 6.12
    - Important: Log codes are changed in ICD

### **Ver 3.20.0610**

- New Feature
  - ✓ Added new UI: “/General/NR 5G (Common)/NR5G ENDC Status”

CH1 ENDC(SG + LTE) Status						
CC#	PCC	SCC1	SCC2	SCC3	SCC4	
LTE	Band	30				
	EARFCN	5820				
	Bandwidth	10MHz (50 RBs)				
	PCI	236				
	RSRP(dBm)	-84.7				
	RSRQ(dB)	-14.8				
	SINR(dB)	3.4				
	PD SCH Modul	64QAM				
	PUSCH Modul	64QAM				
	PD SCH TP(Mbps)	44.8				
	PUSCH TP(Mbps)	0.0				
NR 5G	Band	260	260	260	260	
	NR-ARFCN	2249847	2251675	2253403	2255131	
	Bandwidth	100 MHz	100 MHz	100 MHz	100 MHz	
	SCS	120 kHz	120 kHz	120 kHz	120 kHz	
	PCI	234	234	234	234	
	SSB	53	53	53	53	
	RSRP(dBm)	-92.3	-89.9	-87.5	-89.0	
	RSRQ(dB)	-10.4	-10.4	-10.3	-10.4	
	SINR(dB)	14.7				
	PD SCH Modul	64QAM	64QAM	16QAM	64QAM	
	PUSCH Modul	QP3K				
	PD SCH TP(Mbps)	169.7	146.2	148.8	218.1	
	PUSCH TP(Mbps)	291.3				
	APP/ENDC DL TP (Mbps)	--- / PD SCH [727.68 Mbps (5G:682.89 + LTE:44.79)]				
APP/ENDC UL TP(Mbps)	--- / PUSCH [0.04 Mbps (5G:0.02 + LTE:0.02)]					
Serving Network	5G					

- Bug Fix
  - ✓ BT event was not referred when voice call is configured as 2<sup>nd</sup> service in scenario mode. This bug is fixed.

### Ver 3.20.0612

- Bug Fix
  - ✓ Scanner data processing exception – bug fix

### Ver 3.20.0616

- Update
  - ✓ HiSC – RSRP, RSRQ, RSSI display update
- Bug Fix
  - ✓ HiSC - PUSCH MCS display bug fix

### Ver 3.20.0618

- Update
  - ✓ ESP key detection update
  - ✓ RMA update to v2.95 – FTP bug fix
  - ✓ License driver update to v8.11

### **Ver 3.20.0624**

- Update
  - ✓ “Network and Cell” UI update
  - ✓ “LTE CA Status” UI update

### **Ver 3.20.0625**

- Update
  - ✓ Qualcomm DM update for iPhone 7

### **Ver 3.20.0703**

- Update
  - ✓ Voice Quality Test – Supports different voice quality test plan in the scenario mode

### **Ver 3.20.0707**

- Update
  - ✓ PCTEL – enhanced exception handling of invalid data in PCTEL NR TopN results

### **Ver 3.20.0708**

- Update
  - ✓ NR5G SA – RRC and NAS update (1<sup>st</sup> phase)
  - ✓ KR PS-NET update

### **Ver 3.20.0709**

- Update
  - ✓ RMA update to v2.96 – Enhance FTP stability during connection clearance
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0710**

- Update
  - ✓ Voice Call – “Term. call for L->M”
    - VoLTE call flow error detection logic update

### **Ver 3.20.0714**

- Update
  - ✓ RMA update to v2.97 – Checks battery temperature only, and doesn't investigate CPU temperature information in the Android kernel system files
  - ✓ Qualcomm chip – supports new LTE log versions
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0716**

- Update
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0717**

- Update
  - ✓ RMA update to v2.98 – FTP stability update for slow response FTP server
  - ✓ Qualcomm chip – supports new LTE log versions
- Bug Fix
  - ✓ MOS test for KR-PS-LTE – Record time too short bug fix

### **Ver 3.20.0720**

- Update
  - ✓ Qualcomm log – supports new log versions

### **Ver 3.20.0722**

- Update
  - ✓ RMA update to v2.99 – FTP stability update for slow response FTP server
  - ✓ Qualcomm chip – supports network status to be 5G NR(SA)
- Bug Fix
  - ✓ Simple Call Control UI – bug fix

### **Ver 3.20.0723**

- Bug Fix
  - ✓ MOS test bug in v3.20.0721 and v3.20.0722 – bug fix
  - ✓ NR5G ENDC Status UI – bug fix

### **Ver 3.20.0724**

- New Feature
  - ✓ Mediatek chip – Support 5G chip (Requires Mediatek 5G license option)

### **Ver 3.20.0731**

- Update
  - ✓ RMA update to v3.00 – FTP stability update for slow response FTP server
  - ✓ Supports Samsung ICD v6.13 and 6.14

### **Ver 3.20.0805**

- Update
  - ✓ ADB update to recent version
  - ✓ Stopped support for INFINEON chipset
- Bug Fix
  - ✓ Log Message UI - HTML export bug fix (UMTS Signaling Message)

### **Ver 3.20.0806**

- Update
  - ✓ Supports new version of Qualcomm logs
- Bug Fix
  - ✓ Qualcomm chip – “5G:SCC PDSCH Throughput” parameter calculation bug fix (round reset handling bug fix)

### **Ver 3.20.0815**

- Update
  - ✓ RMA update to v3.01 – Bug fix for Ping by ICMP
  - ✓ Can use more than 1GB RAM
  - ✓ Stability enhanced
  - ✓ NR5G NAS parser update
- Bug Fix
  - ✓ Fixed handle leak bug

### **Ver 3.20.0818**

- Update
  - ✓ RMA update to v3.02 – Supports “UDP Echo (NIA)” method
  - ✓ Plan UI – Ping test options update

### **Ver 3.20.0819**

- Update
  - ✓ RMA update to v3.03 – Updated “UDP Echo (NIA)” to repeat during traffic time
  - ✓ Ping UI update – show Req#, Rsp#, Timeout#, Loss#
- Bug Fix
  - ✓ Qualcomm chip – “NR5G MAC DL TB Report (0xB886)” log parser bug fixed
  - ✓ Qualcomm chip – “[UE] Network”, “[UE] Network(3GPP)” parameter display bug fixed. (ex: 5G SA)

### **Ver 3.20.0820**

- Update
  - ✓ Qualcomm Logmask – added B8DD (NR5G LL1 FW Serving FTL)

### **Ver 3.20.0826**

- Update
  - ✓ RMA update to v3.04 – Ping didn’t save log when timeout occurs – bug fixed
  - ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.20.0827**

- Update
  - ✓ NV Items Control UI – “Custom NV Item” feature update

### **Ver 3.20.0831**

- Bug Fix
  - ✓ Fixed malfunction bug (Voice Call, Port reconnection, Exception Error) – Occurring intermittently in the Qualcomm chip based UE

### **Ver 3.20.0901**

- Update
  - ✓ MTK ICD version update
  - ✓ MOS sync server interface update
- Bug Fix
  - ✓ Plan UI – bug fix in scenario mode

### **Ver 3.20.0903**

- Bug Fix
  - ✓ Ping active call test bug fix
  - ✓ “NR 5G CA Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value
  - ✓ “NR 5G ENDC Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value
  - ✓ “LTE CA Status” UI bug fixed – incorrect SCC# PDSCH/PUSCH TP value

### **Ver 3.20.0908**

- Update
  - ✓ Qualcomm chip – Enhanced exception handling in the case of no log packet received from QCom chip

### **Ver 3.20.0911**

- Update
  - ✓ MTK chip – shows warning message if there is no log packet from MTK chip during more than 5 sec
  - ✓ Flight mode on/off control method update for recent Android OS version

### **Ver 3.20.0914**

- Update
  - ✓ RMA update to v3.05 – NIA UDP Echo test update

### **Ver 3.20.0915**

- New Feature
  - ✓ MOS Sync Server – Supports synchronized MOS test among multiple laptops. RCS is required to use this feature.

- ✓ SST call monitor is added
- ✓ RMA update to v3.06 – FTP test bug fix
- Bug Fix
  - ✓ Flight mode on/off control method bug fix for old version of Android OS

### **Ver 3.20.0918**

- Update
  - ✓ RMA update to v3.07 – FTP test bug fix

### **Ver 3.20.0922**

- Update
  - ✓ ETRI Scanner feature update
  - ✓ RMA update to v3.08 – FTP test bug fix
  - ✓ Ping Call monitor – Shows Ping history in scenario mode

### **Ver 3.20.0923**

- Update
  - ✓ If “payload off” command is received, configures to receive no TCP/IP packets (even header) anymore
- Bug Fix
  - ✓ Voice Quality Monitor table display bug fix

### **Ver 3.20.0925**

- Update
  - ✓ RMA update to v3.09
    - Changed SDK target SDK version to 29 (Android 10)
    - FTP test bug fix
  - ✓ Qualcomm chip – supports new LTE log versions

### **Ver 3.20.0930**

- Update
  - ✓ RMA update to v3.10 – crash on Android 10 bug fixed
  - ✓ Added “Call Monitor”
  - ✓ Added “AT command” to Mobile Control UI

### **Ver 3.20.1008**

- Update
  - ✓ RMA update to v3.11
    - fixed iPerf3 test bug
    - targetSdkVersion changed from 29 to 28 for iPerf3 test

### **Ver 3.20.1012**

- Update
  - ✓ Updated Android UE screen ON method during DM connection

### **Ver 3.20.1015**

- Update
  - ✓ RMA update to v3.12 – updated for thermal information gathering from Android 10
- Bug Fix
  - ✓ FTP test – Call result decision as “Drop” bug fix

### **Ver 3.20.1019**

- Update
  - ✓ Qualcomm chip – supports new LTE and NR log versions
- Bug Fix
  - ✓ Bug fix of saving Plan log twice when logging starts

### **Ver 3.20.1021**

- Update
  - ✓ Update NR5G Beam List UI (/General/NR 5G (Common)/NR5G Beam List)
    - Colors based on SSB instead of Active/Detected

### **Ver 3.20.1023**

- Update
  - ✓ MTK raw data dump
  - ✓ Qualcomm chip – supports new LTE and NR log versions

### **Ver 3.20.1027**

- Update
  - ✓ License driver update to v8.13
  - ✓ Windows DPI setting adjust method update
  - ✓ Parameter Manager update
    - Update “NR 5G CA” up to “8CA” parameters –SCC5, SCC6, SCC7 group added (only Qualcomm chip supported)
  - ✓ Update “NR 5G CA Status” UI – support NR 5G up to 8CC
  - ✓ Update “NR 5G ENDC Status” UI – support NR 5G up to 8CC

### **Ver 3.20.1029**

- Update
  - ✓ License driver update to v8.13 with patch
  - ✓ Windows DPI setting adjust method update to previous method
  - ✓ Supports Samsung ICD v6.18 (2020-10-12)

### **Ver 3.20.1103**

- Update
  - ✓ QCom DM interface method update
  - ✓ NR 5G - Beam List UI – update for new QCom log version
  - ✓ Added “AT Command” tab in the “Mobile Control” UI
- Bug Fix
  - ✓ Bluetooth control UI – AIM control bug fix

### **Ver 3.20.1106**

- Update
  - ✓ QCom 5G SA license manager update
  - ✓ License Manager update

### **Ver 3.20.1116**

- Update
  - ✓ License management module update

### **Ver 3.20.1117**

- Update
  - ✓ PCTEL\_MGR and PCTEL DLL files update

### **Ver 3.20.1119**

- Parameter Manager update
  - ✓ Parameter "[5G] MAC TCI State Id" added (only Qualcomm chip supported)

### **Ver 3.20.1201**

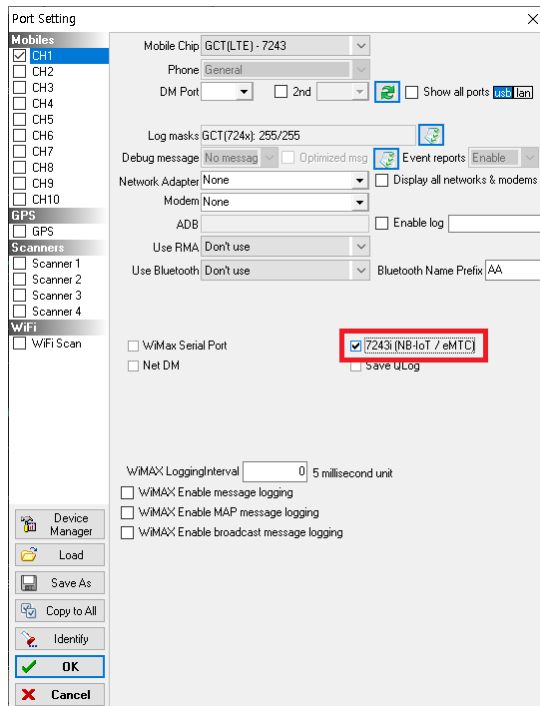
- Update
  - ✓ Discontinued support for Samsung WiMAX

### **Ver 3.20.1211**

- Update
  - ✓ R&S scanner interface version update
- Bug Fix
  - ✓ Plan UI bug fix

### **Ver 3.20.1217**

- Update
  - ✓ ADB version update
  - ✓ GCT chip – added "GCT7243i" selection checkbox in the port setting UI



### Ver 3.20.1222

- Update
  - ✓ Supports Samsung ICD v6.19 (2020-11-27)

### Ver 3.20.1223

- Update
  - ✓ MOS test configuration UI - Added "Use MOS Sync Server" option

### Ver 3.21.0119

- Update
  - ✓ iPerf & NIA TCP test – Updated to send stop command after call result decision

### Ver 3.21.0125

- New Feature
  - ✓ Supports OpenStreetMap in the Map UI

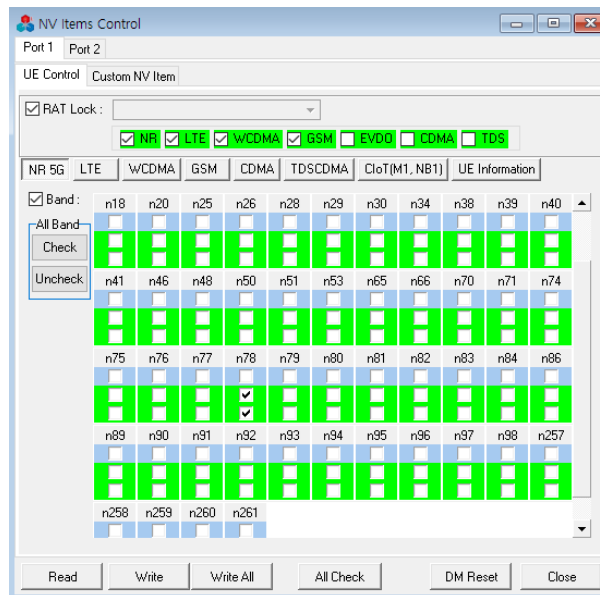
### Ver 3.21.0205

- Update

- ✓ License driver update to v8.15
- ✓ Supports for Mediatek ICD update
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ Change display “5G” to “5G (NSA)” in “Serving Network” of Parameter
- ✓ Fixed an issue that don’t display “Warning Dialog” (ex: Missing Log) in Netimizer Q36(MDM3)
- ✓ Fixed an issue that don’t display “5G” menu UI if Mediatek chip license only was present

### Ver 3.21.0216

- Update
  - ✓ “NV Items Control” updated
    - New “RAT Lock” NV Item added
    - 5G NR Band Lock added
    - Clot(LTE-M1, LTE-NB1) Band Lock added (only Qualcomm chip supported)
    - UE ID Information (ESN, MEID, IMEI, IMSI, Dial)



- ✓ Qualcomm chip – supports new Common log

### Ver 3.21.0223

- Update
  - ✓ Android UE Info (0xF00D) packet added for Android(ADB) getprop items (for CP/AP, etc)

### Ver 3.21.0225

- New Feature

- ✓ “Auto Detect” button is added in Port Setting UI. It provides automatic port detection and mobile chip decision.
- Update
  - ✓ RMA update to v3.13

### Ver 3.21.0302

- New Feature
  - ✓ Map UI – Supports KML to import as route
- Update
  - ✓ Mediatek chip – Supports updated ICD
  - ✓ Qualcomm chip – supports new NR log versions

### Ver 3.21.0308

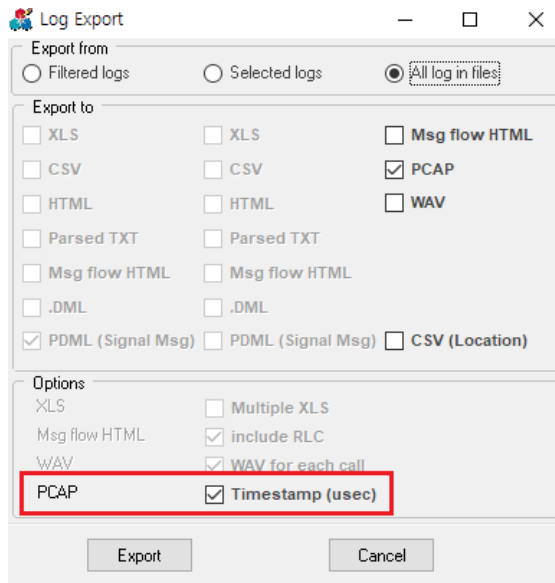
- Update
  - ✓ RMA update to v3.14
  - iPerf3 on Android 11 – bug fix

### Ver 3.21.0311

- Update
  - ✓ Qualcomm “Protocol Service Data” Log (0x11EB TCP/IP Dump packet) – changed timestamp resolution in usec (microsec).
  - ✓ Log Message UI – added option that shows “Time” as usec.

3436	2021-03-09 02:31:33.320684	TCP/IP	Protocol Service Data
3437	2021-03-09 02:31:33.320707		Data
3438	2021-03-09 02:31:33.320712		Data
3439	2021-03-09 02:31:33.320723		Data
3440	2021-03-09 02:31:33.320735		Data
3441	2021-03-09 02:31:33.320745		Data
3442	2021-03-09 02:31:33.320754		Data
3443	2021-03-09 02:31:33.320768		Data
3444	2021-03-09 02:31:33.320779		Data
3445	2021-03-09 02:31:33.320788		Data
3446	2021-03-09 02:31:33.320796		Data
3447	2021-03-09 02:31:33.320809		Data
3448	2021-03-09 02:31:33.320818		Data
3449	2021-03-09 02:31:33.320834		Data

- ✓ Export to File – added option that export to usec resolution.



- ✓ Voice call for “Chip type = None” and “Call type = Call by Call (Periodic)” and “Service Option = McPTT”
- Before: MOS test was performed, but Call Result was decided as FAIL (because there is no SIP or BT event from mobile)
- After: MOS test is performed, and Call Result is decided as Complete (even if there is no paging in real)
- Bug Fix
- ✓ Log Converter - License check bug fix
- ✓ MTK - NR5G RRC 0xE513 parsing bug Fixed

### Ver 3.21.0317

- Update
- ✓ ADB update to version 31.0.0-7110759
- ✓ Auto port detection – feature update

### Ver 3.21.0318

- Update
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.21.0322

- Update
- ✓ ADB update to version 31.0.1-7187441

- Bug Fix
- ✓ Critical bug fix – Logs were not saved during QCom chip DM reconnection. This bug is fixed.

### **Ver 3.21.0330**

- Update
- ✓ Auto port detection – support Mediatek chipset
- ✓ Parameter Manager – Added new parameters
- [5G] SA/NSA
- [5G] MCC, MNC, PLMN, TAC, Cell ID, 5GMM State, 5GMM Substate (for 5G SA only)
- Bug Fix
- ✓ “NR 5G Beam List” UI was grayed out during replay - bug fixed

### **Ver 3.21.0402**

- Update
- ✓ Update for Samsung ICD v6.20 (2021-03-31)

### **Ver 3.21.0406**

- Update
- ✓ Mediatek chip – DM alive check method update

### **Ver 3.21.0409**

- Update
- ✓ Datum interface – supports log file monitoring, as well as logcat
- Bug Fix
- ✓ MOS test – Periodic call with front idle > 0 had play/record sync problem. This bug is fixed.

### **Ver 3.21.0415**

- Update
- ✓ iPerf3 - option update in plan setting UI and call module
- ✓ RMA update to v3.15 – iPerf3 update

### **Ver 3.21.0429**

- Update

- ✓ ADB update to version 31.0.2-7242960
- ✓ 5G RRC parser version update: TS38.331 15.8.0 to 15.10.0

### **Ver 3.21.0503**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.0504**

- New Feature
- ✓ WAVVE measurement function added
- Update
- ✓ Qualcomm chip – supports new LTE log versions – update Parser

### **Ver 3.21.0505**

- Update
- ✓ RMA update to v3.16 – Supports TWAMP “Standard Mode” and “Light Mode”

### **Ver 3.21.0510**

- Update
- ✓ ESP key detection logic update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.0512**

- Update
- ✓ Qualcomm chip – added logmask items

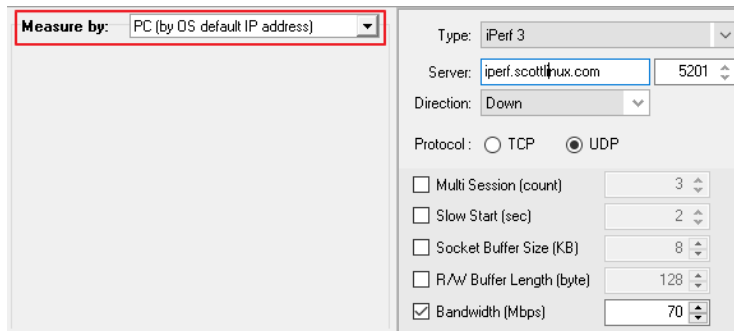
### **Ver 3.21.0514**

- Update
- ✓ Port Setting UI – PCTEL Blind Scan – Band list UI update for speed up

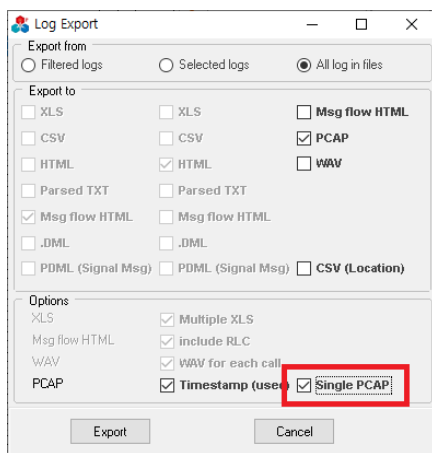
### **Ver 3.21.0521**

- Update
- ✓ RMA update to v3.18 – iPerf3 update, Data usage check update

- ✓ iPerf3 update
- Supports iPerf3 on laptop



- Supports iperf3 UDP Multi Session (note: iPerf3 server running on Windows doesn't support multi session)
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Log View UI – Log Export to PCAP – added "Single PCAP" option



### Ver 3.21.0528

- Update
- ✓ LicenseManager update
- ✓ Client mode update

### Ver 3.21.0601

- Update
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.21.0602

- Update

- ✓ Updated for RCS (Remote Control Server)

### **Ver 3.21.0609**

- Update
- ✓ Qualcomm chip – General update
- Bug Fix
- ✓ Port Auto Detection – bug fix

### **Ver 3.21.0614**

- Update
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ Qualcomm chip – “LTE SSS Peak Value” calculation update (ver2 ~ ver41)

### **Ver 3.21.0615**

- Update
- ✓ Qualcomm chip – Logmask update
- ✓ GCT chip – Improved for exceptional case of log version notification packet

### **Ver 3.21.0616**

- Update
- ✓ E911 Call update – support LTE SUPL(Secure User Plane Location)
- ✓ “NV Items Control” updated
- Service Program Code (Password) added
- 5G NR Band Lock updated
- CIoT(LTE-M1, LTE-NB1) Band Lock updated

### **Ver 3.21.0624**

- Update
- ✓ Update for Samsung ICD v6.21 (2021-06-02)
- ✓ Update for Mediatek Log Mask

### **Ver 3.21.0625**

- Update

- ✓ General option, and Log filename dialog – Added “Tester” and “Market” input, to save into log file
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ iPerf3 by PC network – bug fix

### **Ver 3.21.0701**

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE(V2.8) / NR (V1.4-V1.5)
- Bug Fix
- ✓ Parameter manager – exception handling bug fix

### **Ver 3.21.0705**

- Bug Fix
- ✓ Mediatek chip – Muxraw file save for LTE interface bug fix

### **Ver 3.21.0708**

- Update
- ✓ NR 5G CA Status UI – update for Samsung chip

### **Ver 3.21.0716**

- Update
- ✓ RMA update to v3.19 – Location reception in background
- ✓ Mediatek chip – Supports updated ICD : LTE v2.9, NR v1.6

### **Ver 3.21.0720**

- Update
- ✓ RMA update to v3.20 – TWAMP update
- ✓ Update NR5G Beam List UI (/General/NR 5G (Common)/NR5G Beam List)
- supports beam by CC#(PCC, SCC1..)
- ✓ Added NR5G Cell List UI (/General/NR 5G (Common)/NR5G Cell List)

### **Ver 3.21.0727**

- Update
- ✓ QCom chip – removed “0x194E RT-SAR” from logmask

### **Ver 3.21.0802**

- Update
- ✓ RMA update to v3.21 – GPS time update bug fix

### **Ver 3.21.0812**

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE v2.9(2021-08-02), NR v1.6(2021-08-02)
- ✓ E911 Call update – support LPP and OMA LPPe over LTE/5G
- ✓ Qualcomm chip – Event Report filter update – NR 5G and others
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.0824**

- Update
- ✓ RMA update to v3.22 – YouTube setup timeout handling update
- ✓ Mediatek chip – Supports updated ICD : IMS v1.2(2021-08-02)

### **Ver 3.21.0825**

- Update
- ✓ LTE RRC parser update (TS36.331 v15.8.0 to v15.14.0)

### **Ver 3.21.0826**

- Update
- ✓ Voice call event handling
- Before: When service option “105. ADB(RMA) – Voice with Dial Number” is selected, voice call state change event from Android OS was referred to decide voice call state
- After: Voice call state change event from Android OS is not referred (Reason: some mobiles show delayed event report from Android, and it affects call state decision)

### **Ver 3.21.0831**

- Update
- ✓ ADB update to version 31.0.3-7562133
- ✓ RMA update to v3.23
- Updated “answer incoming call” method for Android 10 or later
- Repeat “answer incoming call” (1sec interval) if UE doesn’t change into conversation state even though RMA asked UE to answer incoming call
- ✓ Voice call – BT HFP events (Ring, Conversation, Release) are referred to decide voice call state, even if service option is not selected to use BT-based control
- Bug Fix
- ✓ Voice call state decision bug when service option is not selected to use Bluetooth control – bug fixed
- ✓ Voice call test (with non McPTT mobile) bug when the license includes McPTT option – bug fixed

### **Ver 3.21.0901**

- Bug Fix
- ✓ Port setting – when “modem chip = none” is selected, ADB device selection is enabled now

### **Ver 3.21.0917**

- Update
- ✓ NR SA multi carrier – updated to support SA CA mode
- Bug Fix
- ✓ .ibwc file import bug fix

### **Ver 3.21.0928**

- Update
- ✓ VOD call test (Youtube) - configures to receive no TCP/IP packets (even header) anymore

### **Ver 3.21.0930**

- Update
- ✓ Supports Samsung chip ICD v6.22
- Bug Fix
- ✓ Parameter Manager – updated with new calculation method due to incorrect TP value , when support multi-band CC (only Qualcomm chip)

- [5G] MAC DL TP.
- [5G] MAC UL TP.
- [5G] MAC UL TB Bytes
- [5G] PDSCH TP.
- [5G] PUSCH TP.
- [5G:PCC] PDSCH TP., [5G:SCC1] PDSCH TP., ... [5G:SCC7] PDSCH TP.
- [5G:PCC] PUSCH TP.

### **Ver 3.21.1005**

- Update
- ✓ RMA update to v3.24
- FTP throughput report count update
- iPerf update
- ✓ MOS test with AIM update

### **Ver 3.21.1006**

- Update
- ✓ RMA update to v3.25 – bug fix of FTP throughput report in v3.24

### **Ver 3.21.1018**

- Update
- ✓ LogView UI – added “Display TCP/IP in TreeView” option
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.1020**

- Update
- ✓ MOS – audio device initialization (on measurement start) order changed to enhance stability

### **Ver 3.21.1021**

- Bug Fix
- ✓ Plan Setting UI – Scenario mode edit bug fix
- ✓ iPerf test – throughput data count missing bug fix

### **Ver 3.21.1022**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.1025**

- Update
- ✓ R&S TSMx Scanner DLL (RSDLL.dll - 1.20.2.2) update -
  - for TSME6 mmWave (ViCom v20.2.2002)
  - R&S Scanner Log (0xF0E6) version 4
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Qualcomm chip – supports new LTE log versions

### **Ver 3.21.1026**

- Update
- ✓ Qualcomm chip – supports new Common log versions

### **Ver 3.21.1101**

- Update
- ✓ License driver update to v8.23
- ✓ Added “Open Windows Audio Control Panel” button in toolbar
- ✓ MOS\_MGR update (doesn't mute line and mic for AIM speaker device)

### **Ver 3.21.1102**

- Update
- ✓ R&S Scanner – ViCom update to v21.1.0.105 (support TSME6 mmWave)
- ✓ R&S TSMx Scanner DLL (RSDLL.dll - 1.21.1.0) update
- ✓ Scanner UI – enhanced data processing

### **Ver 3.21.1105**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.21.1109**

- Bug Fix
- ✓ HTTP transfer over default IP address – bug fix

### **Ver 3.21.1122**

- Update
- ✓ Main UI – Search feature added to Parameter tree

### **Ver 3.21.1123**

- Update
- ✓ RMA update to v3.26 – Monitor and relay Datum log
- ✓ Updated to receive Datum log through RMA

### **Ver 3.21.1206**

- Update
- ✓ AIM\_MGR update – Enhanced stability on Intel 11<sup>th</sup> Gen CPU
- ✓ R&S TSMx Scanner DLL (RSDLL.dll - 1.21.1.4) update
- ACD(automatically detect channels) function added
- IOT(NB-IOT) measure function added
- ✓ R&S Scanner configuration update – Port Setting UI
- NR/LTE/IOT/WCDMA/Spectrum/ACD support detailed setting

Scanner Model 12 - Rohde Schwarz, TSME

Scanner IP address 192.168.0.2

Use GPS data from scanner

Measurement to Add

NR5G | LTE | NB-IOT | UMTS | Spectrum | ACD

NR-ARFCN 640586  Freq 3,608.790 MHz Band 48 Duplex TDD

SSB Pattern Case C (SCS 3) SSB Period 20ms

Advance

CH Model Outdoor Measure Rate 1500  High Efficiency Mode

SIB MIB;SIB1  TAE

Add Replace

Measurement list

Use	Type	Config
<input checked="" type="checkbox"/>	LTE	b7: EARFCN(3050) FDD Bw:Auto(each) MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b5: EARFCN(2600) FDD Bw:10MHz MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b1: EARFCN(100) FDD Bw:20MHz MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b1: EARFCN(275) FDD Bw:15MHz MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b1: EARFCN(475) FDD Bw:15MHz MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b7: EARFCN(2850) FDD Bw:20MHz MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b7: EARFCN(3050) FDD Bw:Auto(each) MIMO:FE1
<input checked="" type="checkbox"/>	LTE	b7: EARFCN(3200) FDD Bw:10MHz MIMO:FE1
<input checked="" type="checkbox"/>	NB-IOT	b5: EARFCN(2554) Mode:Guard-Band
<input checked="" type="checkbox"/>	NB-IOT	b5: EARFCN(2590) Mode:In-Band
<input checked="" type="checkbox"/>	NB-IOT	b3: EARFCN(1641) Mode:Guard-Band
<input checked="" type="checkbox"/>	WCDMA	b1: UARFCN(10737)
<input checked="" type="checkbox"/>	WCDMA	b1: UARFCN(10836)
<input checked="" type="checkbox"/>	SPECTRUM	Freq: 700.0 ~ 1000.0 MHz
<input checked="" type="checkbox"/>	ACD	LTE[1 3 5 7 8 28 ] IOT[5 7 ] WCDMA[1 3 5 ] CDMA[0 ]
<input checked="" type="checkbox"/>	NR5G	n48: NR-ARFCN(640586)

Delete Clear

✓ R&S Scanner ACD(automatically detect channels) added – Scanner Monitor UI

Tech	Dir	Band	Freq (Hz)	Freq (MHz)	Channel	BW (kHz)	MCC/MNC	Country	Network Operator	Additional Config
LTE	DL	28	778000000	778.0000	9410	10.0M	450/30	kr	PS-LTE	FDD, BW=10 MHz, MIMO=RF1
LTE	DL	5	879000000	879.0000	2500	10.0M	450/05	kr	SK Telecom	FDD, BW=10 MHz, MIMO=RF1
LTE	DL	5	889000000	889.0000	2600	10.0M	450/06	kr	LG U+	FDD, BW=10 MHz, MIMO=RF1
LTE	DL	8	954300000	954.3000	3743	10.0M	450/08	kr	KT	FDD, BW=10 MHz, MIMO=RF1
LTE	DL	3	1840000000	1840.0000	1550	20.0M	450/08	kr	KT	FDD, BW=20 MHz, MIMO=RF1
LTE	DL	3	1854400000	1854.4000	1694	10.0M	450/08	kr	KT	FDD, BW=10 MHz, MIMO=RF1
LTE	DL	1	2120000000	2120.0000	100	20.0M	450/06	kr	LG U+	FDD, BW=20 MHz, MIMO=RF1
LTE	DL	1	2137500000	2137.5000	275	15.0M	450/05	kr	SK Telecom	FDD, BW=15 MHz, MIMO=RF1
LTE	DL	1	215750000							FDD, BW=15 MHz, MIMO=RF1
LTE	DL	7	263000000							FDD, BW=20 MHz, MIMO=RF1
LTE	DL	7	2650000000	2650.0000	3050	20.0M	450/06	kr	LG U+	FDD, BW=20 MHz, MIMO=RF1
LTE	DL	7	2665000000	2665.0000	3200	10.0M	450/05	kr	SK Telecom	FDD, BW=10 MHz, MIMO=RF1
WCDMA	?	1	2147400000	2147.4000	10737	5.0M	450/05	kr	SK Telecom	
WCDMA	?	1	2147400000	2147.4000	10737	5.0M	450/05	kr	SK Telecom	
WCDMA	?	1	2167200000	2167.2000	10836	5.0M	450/08	kr	KT	

### Ver 3.21.1210

- Update
- ✓ Mediatek chip – updated MAPI interface check method

### Ver 3.21.1215

- Bug Fix
- ✓ Auto call test – YouTube and HTTP Transfer bug fix
- ✓ Logging – displays error message if logging couldn't start when measurement starts

### Ver 3.21.1216

- Update
- ✓ F071 (FTP Call Event) log update
- Download/Upload information is saved in case of "Call Start" and "Call End" event

### Ver 3.21.1224

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Mediatek chip – Supports updated ICD : LTE V3.0(2021-11-03), NR V1.71(2021-11-18), IMS V1.3(2021-11-03)
- ✓ RMA update to v3.27 – Fixed crash when WiFi is enabled

### **Ver 3.22.0104**

- Update
- ✓ License management module update for Q5GSA and S5GSA (for LIF)
- ✓ LTE RRC parser update (TS36.331 v15.14.0 to v16.6.0)
- ✓ 5G RRC parser update (TS38.331 v15.10.0 to v16.6.0)

### **Ver 3.22.0112**

- Update
- ✓ Supports Samsung chip ICD v7.00
- ✓ Qualcomm chip – support new WCDMA log version and old version renewal
- ✓ Qualcomm WCDMA – Ec/Io calculation method update for log code 4179, 4186

### **Ver 3.22.0114**

- Update
- ✓ License Manager update
- Bug Fix
- ✓ Voice call state decision logic bug fix

### **Ver 3.22.0117**

- Update
- ✓ License Manager update

### **Ver 3.22.0120**

- Update
- ✓ MTK chip – Serving network detection for “5G SA” update
- ✓ MTK chip – Tx power parameter management update

### **Ver 3.22.0126**

- Update
- ✓ Umetrix Data – Stopped support for logcat processing from Umetrix Data
- Bug Fix
- ✓ Scenario – New scenario had area-based measure start/stop feature bit by default – bug fixed

### **Ver 3.22.0128**

- Update
- ✓ Port setting UI – Logcat UI update

### **Ver 3.22.0203**

- Update
- ✓ Samsung chip – Serving network detection for “5G SA” update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Call Campaign Server interface – Updated call scheduling method for Async mode

### **Ver 3.22.0209**

- Update
- ✓ QCom chip – move “NR5G LL1 FW RX Control AGC (0xB8C9)” to development logmask

### **Ver 3.22.0210**

- Update
- ✓ GPS – Saves HDOP, PDOP, VDOP information received from GPS
- ✓ QCom chip – log version update for B950, B951, B952 – v2.6, v2.8, v2.9

### **Ver 3.22.0218**

- Update
- ✓ QCom chip – updated to support new LTE and NR log versions

### **Ver 3.22.0223**

- Update
- ✓ “UE Capability Information” 2<sup>nd</sup> parsing ‘SupportedBandCombination(EN-DC, NR CA)’ update

### **Ver 3.22.0311**

- Update
- ✓ QCom chip – added more log codes in “developer” group of logmask

### Ver 3.22.0315

- Update
- ✓ ADB update to version 33.0.0-8141338
- Bug Fix
- ✓ Scenario mode active call test – Group sync bug fix

### Ver 3.22.0316

- New Feature
- ✓ You can design ‘Gesture’ to control voice call service (origination, release, answer, etc.) and use it for voice call
  - Gesture-based control can be used for;
    - Normal voice call (CS, CSFB, VoLTE, VoNR, etc.) service
    - McPTT service
    - Other VoIP service
  - Find menu “Setup – Gesture”. You can manage your own gestures.
  - In the voice call plan setting UI, find “ADB (Gesture)” in “Dial call with”, “Release call with”, “Accept call with” group.
- Update
- ✓ Update for Samsung ICD v7.01
- ✓ Umetrix Data – Group sync, and abnormal status handling update for Umetrix Data

### Ver 3.22.0321

- Update
- ✓ License Manager update to v3.22.0321
- ✓ ADB update to version 33.0.1-8253317

### Ver 3.22.0322

- Update
- ✓ License Manager update to v3.22.0322
- ✓ Qualcomm chip – supports new NR log versions in parser

### Ver 3.22.0325

- Update
- ✓ RMA update to v3.28

- Update for Android 12
- Datum log monitoring update
- Ping test update
- Web page test bug fix for wrong URL
- ✓ Datum test bug fix

### **Ver 3.22.0328**

- Update
- ✓ Call Monitor, FTP Call Monitor – displays throughput excluding slowstart
- ✓ Gesture script editor update – added description UI
- ✓ Qualcomm chip – supports new LTE log versions in parser

### **Ver 3.22.0331**

- Update
- ✓ RMA update to v3.29 - Web page test bug fix

### **Ver 3.22.0406**

- Update
- ✓ RMA update to v3.30 – Supports Android 64bit
- ✓ Log Message UI - “Log Export - Msg flow HTML” update (Qualcomm NR RRC SIB / NR NAS Signaling Message)

### **Ver 3.22.0408**

- Update
- ✓ QCom chip – PUSCH log handling update in Parameter manager
- ✓ Mediatek chip – MAPI log timestamp processing update
- ✓ Inbuilding UI update

### **Ver 3.22.0411**

- Update
- ✓ LicenseManager update
- Bug Fix
- ✓ Inbuilding UI – Route undo bug fix, etc.

### Ver 3.22.0418

- New Feature
- ✓ Scanner – scanner settings are saved to log file
- Update
- ✓ Qualcomm chip – supports new NR log versions in parser

### Ver 3.22.0419

- Update
- ✓ Plan setting – Inbuilding Configuration – added “Use IBWC” option
- ✓ Inbuilding UI – Updated not to permit building name change, when “Use IBWC” option is selected

### Ver 3.22.0425

- Update
- ✓ Parameter Manager – Added new parameters
  - [5G] DL Max MIMO
  - [5G] UL Max MIMO
  - [5G] PDSCH MIMO
  - [5G] PDSCH TP.
- ✓ Parameter Manager – Updated “UE Status” group parameters
  - [UE] DeviceID
  - [UE] IMSI
- ✓ Parameter Manager – GSM, WCDMA, LTE Event Counter Update (Items renewal)
  - LTE Event Counter UI
  - WCDMA Event Counter UI

### Ver 3.22.0427

- Update
- ✓ Parameter Manager – updated with new calculation method, when new version log (only Qualcomm chip)
  - [5G] BW
  - [5G] RLC DL TP.
  - [5G] PDSCH TB Bytes
- ✓ Parameter Manager – added new parameters

- [5G] [PCC..SCC] [CSI-RS] group

### **Ver 3.22.0509**

- Update
- ✓ RMA update to v3.31 – Retrieves pressure altitude
- ✓ General option – added new option
- Device Control tab – “Get Pressure Altitude” option is added to control RMA behavior
- ✓ Logging – saves scanner setting in log file

### **Ver 3.22.0512**

- Bug Fix
- ✓ Plan UI bug fix

### **Ver 3.22.0520**

- Update
- ✓ Parameter Manager – added new parameters
- [5G:CC] PDSCH Slot Alloc. [%]
- [5G:CC] PDSCH RB Usage [%]

### **Ver 3.22.0523**

- Update
- ✓ Parameter Manager – added new parameter “[Call] Wait RAT Time”

### **Ver 3.22.0524**

- Update
- ✓ Port setting UI – LogMask is displayed with red color, if there is any unselected log item in the logmask

### **Ver 3.22.0526**

- Update
- ✓ Total Call Monitor UI update

### Ver 3.22.0526

- Update
- ✓ Total Call Monitor UI update
- ✓ ADB update to version 33.0.2-8557947
- ✓ Qualcomm chip – DIAG module update

### Ver 3.22.0603

- Update
- ✓ Qualcomm chip – supports new LTE and NR log versions
- Bug Fix
- ✓ Parameter Manager – fixed a wrong band, EARFCN, PCI and others of LTE indication bug. (Only Qualcomm chip)
- LTE CA Status UI
- NR 5G ENDC Status UI (LTE part)

### Ver 3.22.0616

- Update
- ✓ Qualcomm chip – supports new LTE and NR log versions
- ✓ Scanner UI – 5G band display

### Ver 3.22.0624

- Bug Fix
- ✓ Plan setting – Inbuilding setting save bug fix

### Ver 3.22.0707

- Update
- ✓ Parameter Manager – added new parameter “[3GPP] APN #1”, “[3GPP] APN #2”, “[3GPP] APN #3”



- Bug Fix
- ✓ UE Screen View - Fixed an issue where commands sometimes didn't work.

- ✓ Samsung S22 UE(Qualcomm chip) - Fixed a bug where the DM connection is successful if the S22 UE does not receive a Log packet (Samsung S22 sometimes becomes unable to receive a DM Log. To solve this problem, the UE needs to be reset.)

### **Ver 3.22.0711**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.22.0713**

- Update
- ✓ PCTEL\_MGR update for API v3.1.0.0 – to support Gflex

### **Ver 3.22.0718**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.22.0721**

- New Feature
- ✓ Added Android screen capture feature
- “Capture Screen” option is added in the port setting dialog
- Capture status bar (notification bar) on top area, and save to log file

### **Ver 3.22.0725**

- Update
- ✓ RMA update to v3.32
- Inspects additional Android information – Network type, Network IP addresses, etc.
- ✓ New items on Parameters
- “Parameters/Tool Measurement/UE Status/[UE] Network (Android)”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf Count”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf[0] IP Address”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf[1] IP Address”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf[2] IP Address”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf[3] IP Address”
- “Parameters/Tool Measurement/UE Status/[UE] Network Intf[4] IP Address”

### Ver 3.22.0725

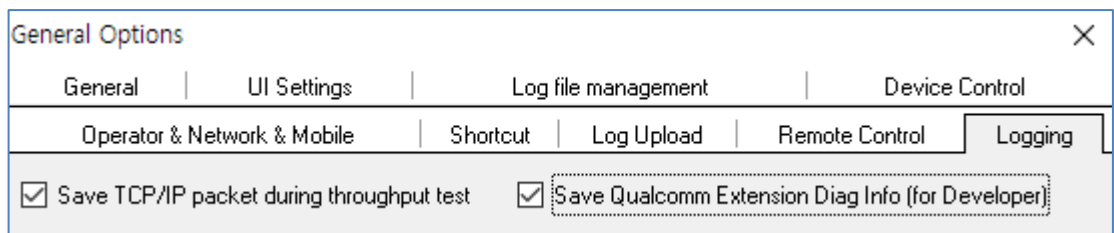
- Update
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.22.0727

- Update
- ✓ RMA update to v3.33
- Campaign Server interface update – Save last record only among call result lists received from server
- ✓ PCTEL\_MGR update for API v3.2.0.0 – to support Gflex
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.22.0811

- Update
- ✓ Log Message UI – shows “tick”, “modem ID”, “subscription ID” in timestamp column
- ✓ log file format update (to version 2)
- The timestamp was upgrade with sub\_id(Subscribe ID)
- Qualcomm Chip : support log with sub\_id
- Samsung Chip : T.B.D (currently sub\_id value is 0)
- Mediatek Chip : T.B.D (currently sub\_id value is 0)
- Etc Chip : not support (currently sub\_id value is 0)
- ✓ 2. Tool Version(0x1FFD) log update
- format version value is 2
- ✓ 3. Qualcomm Ext. Diag (0xF061) logging (Option)
- General Option UI – “Save Qualcomm Extension Diag Info (for Developer)”
- default = false (unchecked)



- ✓ 4. Qualcomm Diag update
- CM/MultiSim State Info
- CM/State Info Of Current Subscription

- CM/Get Call Information List Of Current Subscription
- ✓ 5. Qualcomm log update
- MCS CFCM Monitor Info (0x18A7)

### **Ver 3.22.0817**

- Update
- ✓ Qualcomm chip – supports new LTE log versions in parser
- ✓ Qualcomm chip – supports new Common log versions in parser

### **Ver 3.22.0821**

- Update
- ✓ PCTEL scanner – supports Gxflex, and NR blind scan

### **Ver 3.22.0904**

- Update
- ✓ License Manager update to v3.22.0904
- ✓ ADB update to version 33.0.3-8952118

### **Ver 3.22.0907**

- Update
- ✓ Screen Monitor - update

### **Ver 3.22.0914**

- Update
- ✓ Port setting UI – Logmask dialog
- added “Common(MediaTek)” group
- added “TCP/IP Dump” item under “Common(MediaTek)” group
- ✓ Scanner Monitor UI – update for NR5G scan result
- Bug Fix
- ✓ Mediatek chip – Serving network decision bug fix

### **Ver 3.22.0916**

- Update

- ✓ Mediatek chip
- callEvent log processing update to discard abnormal call event report
- TCP/IP logmask control update

### **Ver 3.22.0922**

- Update
- ✓ log file format update (to version 2) for In-House log (0xFxxx)
- ✓ Qualcomm chip – supports new UMTS log
- ✓ Qualcomm chip – supports new UMTS DSDS log (for DSDS UE)
- ✓ Qualcomm chip – supports new NR log versions
- ✓ UE screen capture – changed to save 10% of top area

### **Ver 3.22.0923**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ UE screen capture – bug fix for multiple mobile's screen capture problem

### **Ver 3.22.0926**

- Bug Fix
- ✓ UE screen capture bug fix

### **Ver 3.22.0928**

- New Feature
- ✓ Intel Smart Sound devices are disabled automatically, for stability & compatibility with MOS device
- Update
- ✓ Mobile Control UI – AT Command – command sending method updated
- Bug Fix
- ✓ Network&Cell – NR SA SINR Display bug fix

### **Ver 3.22.1005**

- Bug Fix
- ✓ TAB file load bug fix

### **Ver 3.22.1012**

- Update
- ✓ RMA update to v3.34 – Retrieves Android SignalBarInfo

### **Ver 3.22.1016**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ Scanner Monitor UI bug fix

### **Ver 3.22.1019**

- Bug Fix
- ✓ Active Call Test – Scenario Mode – Multi RAB call scheduling bug fix

### **Ver 3.22.1026**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ Active Call Test – Scenario mode group sync bug fix

### **Ver 3.22.1028**

- Update
- ✓ Removed unnecessary features and files

### **Ver 3.22.1107**

- Update
- ✓ Performance enhancements for processing data from RMA

### **Ver 3.22.1110**

- Update
- ✓ RMA update to v3.35 – Transmission of long(> 60KB) string is discarded
- ✓ RMA data reception buffer size is increased

### **Ver 3.22.1111**

- Bug Fix
- ✓ Active call test bug fix
- HTTP transfer test – data call end log was not saved in plan mode - bug fixed

### **Ver 3.22.1116**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ MOS test in plan mode – call record bug fix

### **Ver 3.22.1124**

- Bug Fix
- ✓ RMA data processing – bug fix

### **Ver 3.22.1129**

- Update
- ✓ Samsung NR – supports new log versions

### **Ver 3.22.1206**

- Update
- ✓ Voice Call major update
- Added new service option: “100. Custom” – where you can define methods for Dial, Release, and Answer
- Other service options don’t refer dial/release/answer method. They will work based on single selection of “service option”
- Removed non-used old setting items from plan setting dialog

### **Ver 3.22.1213**

- New Feature
- ✓ Supports New Call Server
- ✓ In scenario mode, saves other channel’s call result to log file – for further analysis with other

channel's result

#### **Ver 3.22.1214**

- Update
- ✓ Lock key management module update

#### **Ver 3.22.1215**

- Bug Fix
- ✓ FTP call event string (F0B2) was not saved – bug fixed

#### **Ver 3.22.1220**

- Update
- ✓ RMA update to v3.36 – FTP bug fix for small size file download

#### **Ver 3.22.1221**

- Update
- ✓ Qualcomm chip – supports new Common/LTE log versions
- ✓ Samsung chip – 5G NSA/SA decision rule update

#### **Ver 3.23.0104**

- Update
- ✓ RMA update to v3.37 – SMS test bug fix
- ✓ SMS test plan – changed default length (80 to 60)

#### **Ver 3.23.0109**

- Update
- ✓ In plan mode, saves other channel's call result to log file – for further analysis with other channel's result
- ✓ Qualcomm chip – Logmask update

#### **Ver 3.23.0116**

- Update
- ✓ RMA update to v3.38 – Communication with CSA update

- ✓ CSA communication and abnormal case handling enhancement

### **Ver 3.23.0118**

- Update
- ✓ PCTEL\_MGR update – NR TopN scan configuration refers NR-ARFCN, instead of center frequency
- ✓ PCTEL scanner setting – NR TopN scan – added new SCS types;
  - 15 kHz Polarized
  - 30 kHz polarized
  - 120 kHz single RF
  - 240 kHz single RF

### **Ver 3.23.0119**

- New UI
- ✓ “/Common/General/RTP Codec Statistics” UI added
- Update
- ✓ Log F01C (RTP QoS) update to v3 – saves codec statistics during each call

### **Ver 3.23.0120**

- Update
- ✓ RMA update to v3.39
- Communication with CSA update
- iPerf BW control interface update
- ✓ Parameter Qualcomm chip - support that do show “Band”, “Duplex”, “BW”, “NR-ARFCN” of “[5G SCC]” (occurs on the latest UE)

### **Ver 3.23.0127**

- Update
- ✓ RMA update to v3.40 – added iPerf UL BW value validity check
- ✓ VoLTE RTP codec statistics calculation update
- Bug Fix
- ✓ MOS test bug fix when “Mobile Chip = None”

### **Ver 3.23.0203**

- Update

- ✓ PCTEL scanner – Blind scan update
- Added “Mobile Blind Scan” option (requires PCTEL scanner option)
- Retrieve & save L3 msg (MIB, SIB1) for NR and LTE blind scan

### **Ver 3.23.0210**

- Bug Fix
- ✓ Datum interface – tasks number processing bug fix
- ✓ Voice call control by Gesture – bug fix

### **Ver 3.23.0214**

- Update
- ✓ PCTEL scanner – Blind scan update

### **Ver 3.23.0220**

- Update
- ✓ iPerf – supports bidirectional test (simultaneous DL and UL throughput test)
- ✓ RMA update to v3.41 – supports iPerf bidirectional test
- ✓ Removed iPerf2.0 support
- ✓ Audio device name check – shows warning message if there are same name of audio devices

### **Ver 3.23.0221**

- Bug Fix
- ✓ Voice Quality Monitor UI – “Results (Sequence)” tab display bug fix

### **Ver 3.23.0222**

- Update
- ✓ Parameters – 5G SINR display – updated to display best value among each antenna’s SINR
- ✓ Qualcomm DM interface update
- ESP key detection update
- Duplicated TCP/IP packet processing update

### **Ver 3.23.0223**

- Update

- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.23.0315**

- Update
- ✓ RMA update to v3.42 – bug fix for crash
- ✓ NV Items Control – “Custom NV Item” update – added “Delete” (for EFS-style NV Item)
- Bug Fix
- ✓ Port Auto Detection – bug fixed to incorrect channel mapping

### **Ver 3.23.0323**

- Update
- ✓ CSA interface update
- ✓ MOS sync server – feature update
- ✓ Voice Quality Monitor UI – UL MOS display bug fix

### **Ver 3.23.0328**

- Update
- ✓ GCT chip – parser moved to DLL
- Bug Fix
- ✓ Voice call – confliction between “periodic call” and “group call sync” problem caused two “voice call start” log. Bug fixed.

### **Ver 3.23.0330**

- Bug Fix
- ✓ Samsung chip – NR5G Power value display bug fix
- ✓ Youtube test – bug fix for play fail case

### **Ver 3.23.0406**

- Update
- ✓ MTA package update, and interface control update for activation result check
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.23.0419

- Bug Fix
- ✓ HTTP test – call indexing bug fix

### Ver 3.23.0421

- Update
- ✓ “0xF052 OS System Information” log update to save audiodg.exe, and top10 CPU, and top10 memory usage process list
- Bug Fix
- ✓ Parameter manager – memory access violation bug fix

### Ver 3.23.0502

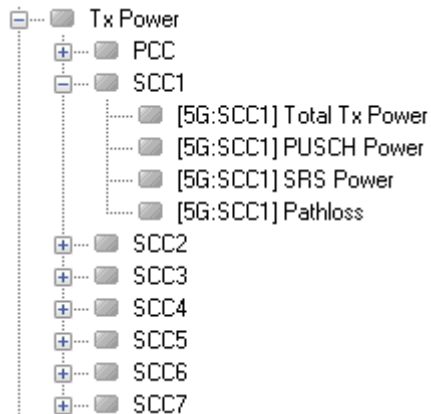
- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Parameter Manager – applies “Slow Start” option in FTP measurements
- General / Data Throughput / "APP DL Call Avg Speed"
- General / Data Throughput / "APP UL Call Avg Speed"
- General / Data Throughput / " FTP DL Call Avg Speed"
- General / Data Throughput / " FTP UL Call Avg Speed"
- Call History / "Data Throughput"
- ✓ Parameter Manager – added ParamIE to separate 5G NSA naming indication
- Tool Measurement / "[UE] Network" – “5G(NSA)”
- Tool Measurement / "[UE] Network (2)" – “5G + LTE”

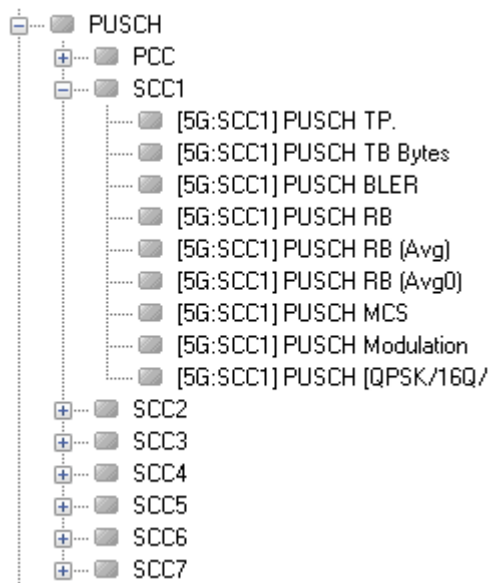
### Ver 3.23.0508

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Parameter Manager – applies “Slow Start” option in FTP measurements
- General/Data Throughput/APP DL Measure Avg Speed
- General/Data Throughput/APP UL Measure Avg Speed
- General/Data Throughput/FTP DL Measure Avg Speed
- General/Data Throughput/FTP UL Measure Avg Speed

## Ver 3.23.0517

- New Feature
  - ✓ Measure DB & Map Grid display feature is added. You can see 'measured area' in Map UI with KML grid, during multiple drive test during weeks. With this feature, you can manage your drive test route to prevent missing area.  
  
KPIs of measurement data will be saved to DB, and displayed on Map Grid. You can clear whole or partial data from database, or load log files to database as you want.
- Update
  - ✓ RMA update to v3.43 – iPerf module update
  - ✓ Parameter Manager – update Parameter 5G PUSCH per SCC# for 5G NR UL CA.(Currently Qualcomm chip)
  - NR 5G CA Status UI
  - NR 5G ENDC Status UI (LTE part)
  - ✓ Parameter Manager – added new parameter “[5G:SCC#] Total Tx Power”, “[5G:SCC#] PUSCH TP”, “[5G:SCC#] PUSCH RB”, etc





- NR 5G / Tx Power / SCC# / [5G:SCC#] Total Tx Power
- NR 5G / Tx Power / SCC# / [5G:SCC#] PUSCH Power
- NR 5G / Tx Power / SCC# / [5G:SCC#] SRS Power
- NR 5G / Tx Power / SCC# / [5G:SCC#] Pathloss
- NR 5G / PUSCH / SCC# / [5G:SCC#] PUSCH TP
- NR 5G / PUSCH / SCC# / [5G:SCC#] PUSCH TP Bytes
- NR 5G / PUSCH / SCC# / [5G:SCC#] PUSCH RB
- NR 5G / PUSCH / SCC# / [5G:SCC#] PUSCH MCS
- NR 5G / PUSCH / SCC# / [5G:SCC#] PUSCH Modulation

### Ver 3.23.0519

- Bug Fix
- ✓ Group Sync for voice call – bug fix
- ✓ Missing 'Voice Call End' log – bug fix

### Ver 3.23.0522

- Bug Fix
- ✓ Group Sync for voice call – non-used channel caused not to start next call – bug fix

### Ver 3.23.0530

- Update
- ✓ Main UI status bar – “DB” and “RCS” status is displayed at the most left side of the statusbar

- ✓ Qualcomm chip – supports new log versions

### **Ver 3.23.0531**

- Bug Fix
- ✓ Replay file open fail for “log files created after May.25, 2023” – bug fix

### **Ver 3.23.0602**

- Update
- ✓ RMA update to v3.44 – updated iPerf log display on UI
- ✓ ADB update to version 1.0.41 (34.0.3-10161052)

### **Ver 3.23.0612**

- Bug Fix
- ✓ Plan mode multi-RAB test – HTTP call result as ‘UserEnd’ bug fixed

### **Ver 3.23.0613**

- Update
- ✓ AudioTunes update
- ✓ Parameter Manager – updated parameter group “LTE”
  - “LTE” and “LTE-A” combined
  - renamed parameter in the “LTE”
  - increased the number of CAs to 8 in the “LTE”
  - LTE-A CA Status UI – about 8 CAs
  - NR 5G ENDC Status UI (LTE part) – about 8 Cas
- ✓ Parameter Manager – added new parameter group “Measure. Average”

### **Ver 3.23.0718**

- Update
- ✓ NR5G CA Status UI update
- Bug Fix
- ✓ MTK chip parameter display bug (in v3.23.0609 to v3.23.0613) fixed

### Ver 3.23.0720

- New Feature
- ✓ Supports EPIQ PRISM scanner (requires license option)

### Ver 3.23.0727

- Update
- ✓ ADB update to v1.0.41(34.0.4-10411341)
- Bug Fix
- ✓ Command to RMA log save bug fix

### Ver 3.23.0808

- Update
- ✓ Parameter – added “/NR5G/PDSCH/PCC..SCC7/DL BWP ID”

### Ver 3.23.0823

- Update
- ✓ Parameters – added new items
- /General/VOD/[VOD] DL TPut
- /General/VOD/[VOD] DL Bytes
- /General/VOD/[VOD] Quality
- /General/VOD/[VOD] Event
- /General/VOD/[VOD] Freeze #
- /General/VOD/[VOD] Freeze Duration

### Ver 3.23.0829

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ EPIQ PRISM scanner – added rx\_port setting in the port setting dialog
- ✓ Log Message UI – message and detail info columns are displayed indented when sub\_id (SIM ID) is 2

### Ver 3.23.0831

- Bug Fix

- ✓ HTTP Download/Upload – Event log timestamp bug fix

#### **Ver 3.23.0906**

- Update
- ✓ PCTEL Scanner – PCTEL\_MGR updated for NR/LTE Blind Scan with IBflex
- ✓ License Manager update

#### **Ver 3.23.0911**

- New Feature
- ✓ “Communication with Configuration Server” is added

#### **Ver 3.23.0920**

- Update
- ✓ EPIQ PRISM scanner - Add settings (sib decoding on/off, measure stop policy and failures limit count)

#### **Ver 3.23.0921**

- Update
- ✓ PCTEL Scanner – PCTEL\_MGR updated for LTE Blind Scan

#### **Ver 3.23.0926**

- Update
- ✓ Qualcomm chip – supports new NR log versions

#### **Ver 3.23.1004**

- Update
- ✓ Scanner UI – Blind scan result display bug fix

#### **Ver 3.23.1006**

- New Feature
- ✓ General option UI – Added “Communication” tab, where you can select communication path with server. You can select between “RMA first (default)” or “Hotspot first”.

### **Ver 3.23.1011**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ PCTEL LTE Blind Scan – added “Data Modes” option, where you can select scanning option

### **Ver 3.23.1025**

- Update
- ✓ Qualcomm chip – supports new NR and LTE log versions
- ✓ Qualcomm chip – supports new Common log versions
- ✓ Logmask update - Qualcomm LTE/NR5G
- ✓ Log Message UI – Log filter tree update (Qualcomm LTE/NR5G)
- ✓ Qualcomm Diag Log Security (CMD:158) – not logging

### **Ver 3.23.1027**

- Update
- ✓ Qualcomm chip – supports new Common log versions (IMS log)

### **Ver 3.23.1102**

- Update
- ✓ ADB update to version 1.0.41 (34.0.5-10900879)
- ✓ RMA update to version 3.46
- Enhanced HTTP download/upload throughput test stability when multi session connection takes time and setup timeout happens
- ✓ HTTP download/upload test – updated to send plan before each call start. If RMA is restarted during measurement, next HTTP download/upload test can continue with this plan information

### **Ver 3.23.1107**

- Bug Fix
- ✓ Idle Wait(Exec) – Execute, User Command – Bug fix

### **Ver 3.23.1108**

- Update
- ✓ License driver update to v9.14

### **Ver 3.23.1110**

- Update
- ✓ LTE RRC parser update (TS36.331 v16.6.0 to v17.6.0)
- ✓ 5G RRC parser update (TS38.331 v16.6.0 to v17.6.0)
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.23.1113**

- Update
- ✓ RMA update to version 3.47 - iPerf3 test stability update
- ✓ Updated to send plan at the beginning of each call – for Ping, iPerf
- ✓ Android UE “show screen” feature update

### **Ver 3.23.1114**

- Update
- ✓ RMA update to version 3.48 - iPerf3 test stability update

### **Ver 3.23.1117**

- Update
- ✓ RMA update to version 3.49 - iPerf3 test stability update

### **Ver 3.23.1123**

- Update
- ✓ Samsung chip – supports log v7.04, v7.05, and v8.04

### **Ver 3.23.1127**

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE(V3.5) / NR (V2.2)

### **Ver 3.23.1207**

- Update
- ✓ Samsung chip – supports log v8.05, v8.06, and v9.00

### **Ver 3.23.1213**

- Update
- ✓ UL MOS score retrieved from server is saved in log file, so that it can be referred in the case of abnormal termination during logging
- Bug Fix
- ✓ HTTP DL/UL Call Monitor – Throughput display bug fix

### **Ver 3.23.1222**

- Update
- ✓ Samsung chip – supports new log version
- ✓ HTTP DL/UL from laptop – updated for HTTP UL support

### **Ver 3.24.0109**

- New Feature
- ✓ “Advanced Lock” feature added (“/Control/Advanced Lock” menu)

### **Ver 3.24.0119**

- Update
- ✓ Samsung chip – supports new log version

### **Ver 3.24.0122**

- New Feature
- ✓ Advanced Lock
  - RAT/Band Lock : RAT lock, 5G NR band lock and LTE band lock (No need to reset UE)
  - 5G NR Lock : SA ARFCN & PCI lock, SA/NSA mode, NR-DC on/off and VoNR or EPS-FB
  - LTE Lock : EARFCN & PCI lock
  - UE Control : Attach, Detach, get PLMN list and PLMN select (auto, manual)

### **Ver 3.24.0131**

- Update
- ✓ Advanced Lock – added “WCDMA/GSM band lock”
- ✓ Advanced Lock – improved “5G NR SA ARFCN & PCI lock”
- ✓ Samsung chip – version check update

### **Ver 3.24.0202**

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE(V3.6- V3.8) / NR (V2.3- V2.5)

### **Ver 3.24.0222**

- Update
- ✓ Samsung mobile USB device driver update (v1.7.59.0 to v1.7.61.0)
- ✓ ADB update to version 1.0.41 (35.0.0-11411520)
- ✓ RMA update to v3.50 – launch fail on Watch update
- Bug Fix
- ✓ Umetrix Data – test stopped before call count reaches – bug fixed
- ✓ Voice Call Server – UL WAV file download bug when laptop WiFi is used – bug fixed

### **Ver 3.24.0223**

- Update
- ✓ RMA update to v3.51 – launch fail on Watch update

### **Ver 3.24.0229**

- Update
- ✓ Qualcomm chip – logmask update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.24.0305**

- Update
- ✓ Perfecto interface update to v1.3
- Bug Fix
- ✓ Display error of LTE CC – fixed processing bug in Parameter for Log LTE RRC OTA Message(0xB0C0 ver30)

### **Ver 3.24.0308**

- Update
- ✓ PCTEL interface update to API v3.4.0.0

- ✓ RMA update to v3.52 – crash bug fix

### Ver 3.24.0311

- Update
- ✓ **[IMPORTANT]** Port Setting - TCP/IP payload save method change
  - Before: LogMask + TCP/IP save option
  - After: Combobox (None/Full/Header only)
- ✓ Qualcomm chip – supports new NR log versions

### Ver 3.24.0312

- Bug Fix
- ✓ PCTEL scanner - scan result processing bug fix

### Ver 3.24.0319

- Bug Fix
- ✓ RCS scenario setting bug fix

### Ver 3.24.0403

- Update
- ✓ ADB update to version 1.0.41 (35.0.1-11580240)
- ✓ Group Sync – supports Umetrix Data

### Ver 3.24.0404

- New Feature
- ✓ Easy mode button added in Port Setting dialog
- Update
- ✓ Umetrix Data – Monitor UI update
- ✓ LogUploader update

### Ver 3.24.0412

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE(V3.9) / NR (V2.6) / IMS (V1.7- V1.8)
- ✓ Samsung chip – supports ICD v9.02

### **Ver 3.24.0419**

- Update
- ✓ Map UI – Cell site management and display method update
- ✓ Fragmented SIP packet reassembly in real-time update

### **Ver 3.24.0425**

- Update
- ✓ PCTEL\_MGR update – LTE blind scan data modes update
- ✓ RMA update to v3.53 – Call campaign server interface update

### **Ver 3.24.0516**

- Update
- ✓ Samsung ICD update – fixed log versions

### **Ver 3.24.0523**

- Bug Fix
- ✓ “Group sync” should have priority over “Pair call with other CH”. But it wasn’t, when both UE (in pair call) has “call result = ETC” (because of DM disconnection, etc.). This bug is fixed

### **Ver 3.24.0524**

- Update
- ✓ NR CA UI update – supports NRDC
- Bug Fix
- ✓ PCTEL\_MGR update to v3.24.0523 – “EAccessViolation” while processing LTE SIB2 data – bug fix

### **Ver 3.24.0531**

- Update
- ✓ Qualcomm chip logmask – added new log codes
- ✓ Parameters – added new items
  - /General/Voice Quality/MOS
  - /General/Voice Quality/Attenuation
- ✓ ASM update to v2.31
- Bug Fix

- ✓ Umetrix Data – “Data Call Start” log generation bug fix

### **Ver 3.24.0605**

- Update
- ✓ PCTEL\_MGR update for “NR TopN” and “Blind Scan”
- ✓ Scanner UI update – displays “Band” in summary, and “Network” in blind scan results
- ✓ Removed unused features for old scanner models (PCTEL LX, EX, etc.)

### **Ver 3.24.0610**

- Update
- ✓ Updated Critical Warning dialog to be popped up even if “Show Warning Dialog” option is unchecked in general option, when the error message begins with “Error”

### **Ver 3.24.0613**

- Update
- ✓ PCTEL interface update to API v3.6.0.0
- ✓ CSA logs are saved (received after voice call end)

### **Ver 3.24.0618**

- New Feature
- ✓ Added “Tool – Grid KML Converter” menu. You can use to prepare Grid KML to use on Map UI.
- Update
- ✓ Datum Call Monitor UI update

### **Ver 3.24.0624**

- Bug Fix
- ✓ Voice call scheduling bug in case of mobile error – bug fix

### **Ver 3.24.0626**

- Update
- ✓ PCTEL NR TopN scan update

### **Ver 3.24.0627**

- Update
- ✓ Samsung chip – supports new log version
- Bug Fix
- ✓ Datum Call Monitor UI bug fix

### **Ver 3.24.0628**

- Update
- ✓ Qualcomm chip – logmask item added

### **Ver 3.24.0701**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.24.0704**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Mediatek chip – RAT display update

### **Ver 3.24.0709**

- Update
- ✓ Parameter Manager – “5G PUSCH MIMO(Currently Qualcomm chip)” update
- change “[5G:CC] PUSCH TX Mode” to “[5G:CC] PUSCH MIMO”
- added “[5G:CC] PUSCH Layer”, “[5G:CC] PUSCH Layer[1/2] Rate”
- ✓ NR 5G CA Status UI – added MIMO Feature
- PDSCH MIMO, PUSCH MIMO, PUSCH Layer, PUSCH Layer [%]
- ✓ Gesture control
- Added HID interface, in addition to ADB command for Gesture control

### **Ver 3.24.0712**

- Update
- ✓ Umetrix Data UI - update

### **Ver 3.24.0717**

- Update
- ✓ Qualcomm chip – supports new NR, LTE, Common log versions
- Bug Fix
- ✓ PCTEL scanner control bug fix

### **Ver 3.24.0718**

- Update
- ✓ Mediatek chip – supports new log version
- ✓ Critical warning dialog – sound alarm feature update

### **Ver 3.24.0725**

- Bug Fix
- ✓ Log Converter, DML2CSV - Samsung chip – Some NR RRC messages were not processed. Fixed this bug.

### **Ver 3.24.0802**

- Update
- ✓ Umetrix Data – updated to show critical warning dialog with “App(MTA) not working”, if there is no response from MTA for 20 sec.

### **Ver 3.24.0805**

- Bug Fix
- ✓ v3.24.0802 had bug saving corrupt log. Fixed this bug.

### **Ver 3.24.0813**

- New Features
- ✓ “LogFileChecker” is added to package
- Update
- ✓ Discontinued support for HiSilicon chip, GCT WiMAX chip, and Samsung WiMAX chip
- ✓ Scanner UI – PCTEL NR TopN result display is updated to work similar with PCTEL LTE TopN display

### Ver 3.24.0821

- New Features
- ✓ RM – “TCP Dump” control automation, and TCP dump file download feature are added
- Bug Fix
- ✓ “Show Screen” didn’t work on some UE – bug fixed

### Ver 3.24.0823

- Bug Fix
- ✓ HTTP download/upload – Negative value in Throughput and transferred bytes – bug fixed

### Ver 3.24.0824

- Bug Fix
- ✓ HTTP download/upload – Exception occurred on PC-based measurement – bug fixed

### Ver 3.24.0828

- New Features
- ✓ Parameters – added group “UE-ID” and item “Real Service”
- UE-ID items: MSISDN, IMEI, IMSI, [SIM1]MSISDN, [SIM1]IMEI, [SIM1]IMSI, [SIM2]MSISDN, [SIM2]IMEI, [SIM2]IMSI
- /General/Voice Quality/Real Service
- Update
- ✓ RMA update to v3.54 – updated to provide DSDS information
- ✓ Update for DSDS with SIM + e-SIM

### Ver 3.24.0829

- Bug Fix
- ✓ Log packet corruption bug fix

### Ver 3.24.0924

- Update
- ✓ iPerf test – updated “server report wait timeout”
- ✓ RMA update to v3.55 – iPerf “server report wait timeout” update

### **Ver 3.24.0925**

- Update
- ✓ Qualcomm chip – supports new LTE, NR log versions

### **Ver 3.24.0926**

- Update
- ✓ Qualcomm chip – supports new log versions

### **Ver 3.24.0930**

- Bug Fix
- ✓ Voice pair call with group sync – Call End was generated right after Call Result. Bug fixed.

### **Ver 3.24.1007**

- Bug Fix
- ✓ MTK chip - NL1 PUCCH Power Control v10 log parsing bug fix
- ✓ MOS test with “no chipset” – bug fix
- ✓ McPTT RTCP port determination bug (which occurred after v3.24.0419) fix

### **Ver 3.24.1014**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ BT Tx log – some garbage string was saved as appended to the real BT Tx msg. Bug fixed,
- ✓ Multi-RAB test - Measurement stop event was saved prior to the “Voice Call End” or “Data Call End”. Bug fixed.

### **Ver 3.24.1015**

- Update
- ✓ QCom chip - Serving Network – updated to discard old QCom DIAG log, which includes invalid network value

### **Ver 3.24.1016**

- Update

- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.24.1028**

- Update
- ✓ Mediatek chip – Supports updated ICD : LTE(V4.1) / NR (V2.8) / IMS (V2.0)
- ✓ R&S TSMx Scanner DLL (RSDLL.dll - 1.21.1.6) update – GPS Message Decoding for UBLOX (currently NMEA+UBLOX)
- Bug Fix
- ✓ VoLTE and VoNR call – SIP processing exception bug fix

### **Ver 3.24.1030**

- Update
- ✓ Updated to handle Samsung chip NAS log “direction = 2” bug

### **Ver 3.24.1108**

- Update
- ✓ Supports inbuilding test display on RCS

### **Ver 3.24.1120**

- Update
- ✓ Gesture control based on HID update
- Supports mouse wheel control
- Supports keyboard input

### **Ver 3.24.1127**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ Samsung chip – updated to save SIM ID in each log packet for DSDS

### **Ver 3.24.1205**

- Update
- ✓ Parameter 5G SA for Qualcomm chip update

- Update to handle when 5G RRC Log(0xB825 NR5G RRC Configuration Info/0xB9A7 NR5G ML1 DLM2 CA Metrics Request) is not received yet or old version

### **Ver 3.24.1216**

- Update
- ✓ Qualcomm chip – supports new LTE and NR log versions

### **Ver 3.24.1217**

- Update
- ✓ PCTEL\_MGR update for API v3.7.0.0 – for FR2 mmWave TopN and BlindScan

### **Ver 3.24.1223**

- Update
- ✓ Samsung chip – supports ICD rev 9.05
- ✓ MTK chip – updated not to refer MAPI callEvent log, when BT is used

### **Ver 3.24.1227**

- Update
- ✓ RCS – updated to save trace log in the log file
- ✓ Added EasyMode UIs (left panel, port setting, plan setting, UE monitoring, scanner setting, scanner monitoring)

### **Ver 3.24.0107**

- Bug Fix
- ✓ Voice call – periodic scheduling bug fix

### **Ver 3.24.0113**

- Update
- ✓ Samsung chip – supports ‘Advanced Locking’ for 3G and LTE (chip doesn’t support NR locking)
- Note: if you lock to LTE with specific band, Samsung chip might use NR when NR network is available. This is because Samsung chip doesn’t support NR lock, and it’s not a bug.
- Note: if you lock to LTE with specific E-ARFCN and PCI, Samsung chip will not use NR even if NR network is available.

### **Ver 3.25.0120**

- Update
- ✓ “Critical Warning” UI update – “VoLTE SIP Missing” message reconfirm
- “VoLTE SIP Missing” event reconfirm – for the TCP fragmented SIP ACK message

### **Ver 3.25.0123**

- Update
- ✓ Samsung chip – supports ICD rev 9.06

### **Ver 3.25.0203**

- Update
- ✓ PCTEL scanner NR TopN scan setting – removed “BW” option, and added “Data Mode” option

### **Ver 3.25.0205**

- Update
- ✓ RMA update to v3.56 – WiFi RxBytes, TxBytes retrieval from Android is updated

### **Ver 3.25.0206**

- Bug Fix
- ✓ HTTP DL/UL test on PC – bug fix

### **Ver 3.25.0208**

- Update
- ✓ RM automation update
- ✓ Qualcomm chip – supports new LTE, NR log versions

### **Ver 3.25.0213**

- New Feature
- ✓ Added “Control – Delete dumpstate” menu
- Update
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ Parser moved to DLL – GCT7240, Altair, Hisc chip

### **Ver 3.25.0214**

- Update
- ✓ Samsung chip – supports ICD v9.06 rev1

### **Ver 3.25.0221**

- Update
- ✓ Qualcomm chip – logmask and logtree update to support additional new log codes
- supports Snapdragon X80 5G Modem (Log/Event Report – Name/Filter Tree/Logmask)
- Bug Fix
- ✓ Parameter: fixed about incorrect value of "[LTE:PCC] SINR"

### **Ver 3.25.0224**

- Update
- ✓ Easy Mode UI update

### **Ver 3.25.0226**

- New Features
- ✓ Supports Rest API

### **Ver 3.25.0310**

- Update
- ✓ Samsung chip – supports ICD rev 9.07
- ✓ RMA update to v3.57 – Added Android sensor data retrieval feature
- ✓ General Option UI - Added 'Retrieve Android Sensor Data' option to 'Device Control' Tab
- ✓ Inbuilding UI – Change the mouse wheel function (to Zoom In/Out)
- ✓ Inbuilding - Save floor images in the log file
- ✓ ASM update to support Android 15

### **Ver 3.25.0314**

- Update
- ✓ MTK chip – 'SIP flow error' and 'MAPI log missing' error message is not displayed anymore for

MTK chip

### **Ver 3.25.0315**

- Update
- ✓ Easy Mode update – Scanner setup and monitor

### **Ver 3.25.0317**

- New Feature
- ✓ “UE DSDA(Dual-SIM Dual-Activity) Status” UI added – support DSDA(SIM1, SIM2) status

### **Ver 3.25.0320**

- Update
- ✓ Qualcomm chip – critical warning message “Missing Qualcomm Log” is displayed when QCom chip doesn’t provide log because of chip problem.
- ✓ iPerf3 PC version update to v3.18+
- ✓ RMA update to v3.58 – iPerf3 APP version update to v3.18+

### **Ver 3.25.0325**

- Update
- ✓ Port Setting UI – added “Options – LogMask – Recommended LogMask” menu – applied for all UEs
- ✓ LogMask dialog – added “Options – LogMask - Recommended LogMask” menu – applied for selected UE only

### **Ver 3.25.0327**

- Update
- ✓ FIT Mode – logmask setting update
- Full Logmask will include new log codes also automatically
- LG H931 special(minimized) logmask setting is discontinued

### **Ver 3.25.0328**

- Update
- ✓ iPerf3 by laptop

- If user select 'measure by PC' and specify 'PC IP Address to bind', configures iPerf3 to bind to specified IP address

#### **Ver 3.25.0404**

- Bug Fix
- ✓ Inbuilding – “Floor Start” was not saved when large image file is used. Bug fixed.

#### **Ver 3.25.0407**

- Bug Fix
- ✓ Multi-RAB – HTTP transfer and Voice call Multi-RAB had problem (HTTP transfer stops somewhere) – bug fixed

#### **Ver 3.25.0408**

- Update
- ✓ HTTP DL/UL (by PC with specific IP) - supports local IP binding

#### **Ver 3.25.0416**

- Bug Fix
- ✓ Port Search – “Q12 USB3.0 Super Speed Connection” channel mapping bug fix

#### **Ver 3.25.0418**

- Update
- ✓ Mediatek chip – Supports new ICD LTE (V4.2-4.3), NR (V2.9-3.0), IMS (V2.1-2.2)
- ✓ Mediatek chip – Supports LAN interface

#### **Ver 3.25.0507**

- Update
- ✓ HTTP DL/UL and iPerf (by PC with specific IP) – updated for local IP binding

#### **Ver 3.25.0508**

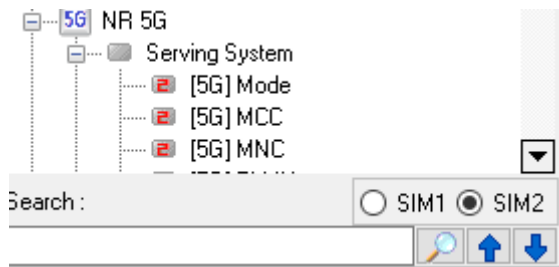
- Update
- ✓ Samsung chip – supports ICD v9.08

**Ver 3.25.0511**

- Bug Fix
- ✓ Alarm (text to speech) caused UI freeze – bug fixed

**Ver 3.25.0512**

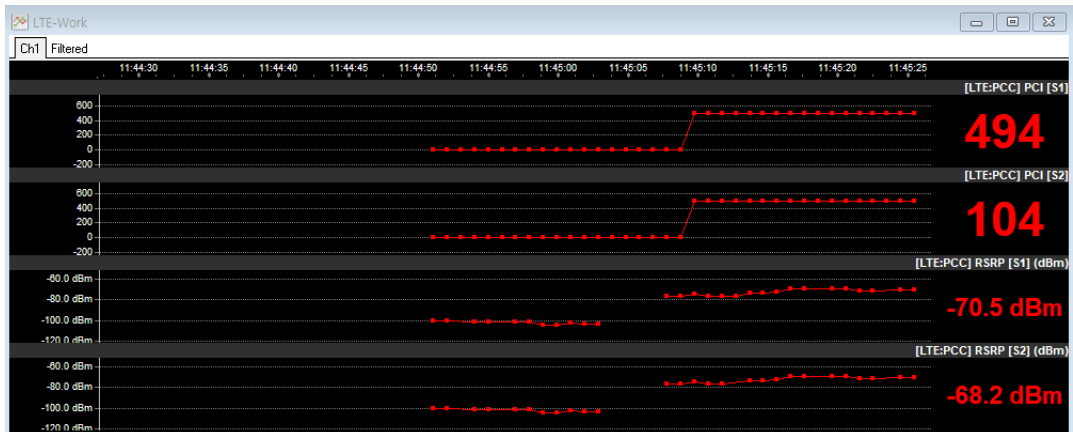
- New Feature
- ✓ DSDA(Dual-SIM Dual-Activity) feature added
- Select parameter by SIM



- Custom Table UI – Supports DSDA(Dual-SIM Dual-Activity) of WDMA, LTE, 5G NR

Parameter	CH1
[UE] Network [S1]	LTE
[UE] Network [S2]	5G(NSA)
[LTE] CA # [S1]	No CA
[LTE] CA # [S2]	3CA
[LTE:PCC] DL EARFCN [S1]	2600
[LTE:PCC] DL EARFCN [S2]	1350
[LTE:PCC] PCI [S1]	494
[LTE:PCC] PCI [S2]	104
[LTE:PCC] RSRP [S1]	-70.5 dBm
[LTE:PCC] RSRP [S2]	-68.2 dBm

- Custom Time Graph UI – Supports DSDA(Dual-SIM Dual-Activity) of WDMA, LTE, 5G NR



- Custom Value History UI – Supports DSDA(Dual-SIM Dual-Activity) of WDMA, LTE, 5G NR

Time	Index	[UE] Network [S1]	[UE] Network [S2]	[LTE] CA # [S1]	[LTE] CA # [S2]	[LTE:PCC] DL EARFON [S1]	[LTE:PCC] DL EARFON [S2]	[LTE:PCC] PCI [S1]	[LTE:PCC] PCI [S2]	[LTE:PCC] RSRP [S1]	[LTE:PCC] RSRP [S2]
11:45:11:000	22	LTE-CA	LTE	2CA	3CA	2600	1350	494	104	-76.9	-66.2
11:45:12:000	23	LTE-CA	LTE	2CA	3CA	2600	1350	494	104	-76.8	-66.2
11:45:13:000	24	LTE-CA	LTE	2CA	3CA	2600	1350	494	104	-76.2	-66.2
11:45:14:000	25	LTE-CA	5G(NSA)	2CA	3CA	2600	1350	494	104	-74.1	-67.8
11:45:15:000	26	LTE-CA	5G(NSA)	2CA	3CA	2600	1350	494	104	-73.2	-68.4
11:45:16:000	27	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-72.7	-67.7
11:45:17:000	28	LTE	LTE	No CA	3CA	2600	1350	494	104	-69.5	-65.1
11:45:18:000	29	LTE	LTE	No CA	No CA	2600	1350	494	104	-69.5	-67.8
11:45:19:000	30	LTE	LTE	No CA	No CA	2600	1350	494	104	-69.5	-64.9
11:45:20:000	31	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-69.9	-67.1
11:45:21:000	32	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-69.9	-69.1
11:45:22:000	33	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-71.6	-69.2
11:45:23:000	34	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-71.6	-67.1
11:45:24:000	35	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-71.6	-67.1
11:45:25:000	36	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-70.5	-68.6
11:45:26:000	37	LTE	5G(NSA)	No CA	3CA	2600	1350	494	104	-70.5	-68.2

- Support DSDA(Dual-SIM Dual-Activity) Qualcomm chip
- Update
- ✓ Samsung chip – is Samsung chip doesn't provide log packets for more than 5sec, alarm will be displayed

**Ver 3.25.0513**

- Update
- ✓ Gesture control update

**Ver 3.25.0516**

- Update
- ✓ Samsung chip – NR CC Index mapping method update, and MAC\_DL\_TP, MAC\_UL\_TP, PDSCH\_TP calculation update
- ✓ Total call monitor UI update

### Ver 3.25.0529

- New Feature
- ✓ DSDA(Dual-SIM Dual-Activity) feature added
- Load Mode (Replay Sync Mode)
- Cell List Info Parameter update

### Ver 3.25.0611

- Update
- ✓ General UI – Log Upload tab – added “FTP/SFTP” option
- ✓ LogUploader update to refer “FTP/SFTP” setting

### Ver 3.25.0616

- Update
- ✓ DSDA support in UIs
- Network & Cell UI – Support DSDA(Dual-SIM Dual-Activity)
- LTE CA Status UI – Support DSDA(Dual-SIM Dual-Activity)
- NR 5G CA Status UI – Support DSDA(Dual-SIM Dual-Activity)
- NR 5G ENDC Status UI – Support DSDA(Dual-SIM Dual-Activity)
- ✓ HTTP DL/UL (by PC) – supports bi-directional

### Ver 3.25.0619

- Bug Fix
- ✓ Parameter: fixed about incorrect value of " [5G] PDSCH TP.", “[5G] MAC DL TP.”

### Ver 3.25.0701

- Update
- ✓ Added “Stop at the end of the current cycle” button in toolbar. If you click, scenario(or plan) will be stopped after end of the current cycle.
- ✓ Discontinued support for GCT 7240 chipset (DML)

### Ver 3.25.0702

- Bug Fix
- ✓ HTTP DL/UL by RMA – log save bug fix

### **Ver 3.25.0707**

- Update
- ✓ RMA update to v3.60 – UI update for Android 15

### **Ver 3.25.0715**

- Update
- ✓ TCP Dump control update

### **Ver 3.25.0716**

- Update
- ✓ RMA update to v3.61 – Display Android RF information on top, and updated iPerf UI

### **Ver 3.25.0717**

- Update
- ✓ PCTEL scanner – updated to show warning UI when there is no channel to save PCTEL log
- ✓ PCTEL\_MGR update – saves log when “StopScan” is called

### **Ver 3.25.0721**

- Update
- ✓ “Critical Warning” UI - updated not to show “VoLTE SIP Missing” message for WCDMA CS Call

### **Ver 3.25.0815**

- Update
- ✓ MTK chip – supports new ICD – NR v3.1, LTE v4.4, IMS v2.3

### **Ver 3.25.0818**

- Update
- ✓ Scanner Monitor UI – PCTEL LTE TopN – updated to refer representative RSRP,RSRQ,CINR and don't refer each RF Path values.

### **Ver 3.25.0819**

- Bug Fix
- ✓ Data call test – Call start variable delay (max 1sec) – bug fix

### **Ver 3.25.0908**

- Update
- ✓ RMA update to v3.63 – updated YouTube fullscreen mode
- ✓ Samsung chip – supports ICD v9.09

### **Ver 3.25.0915**

- Update
- ✓ Qualcomm chip – supports new NR log versions

### **Ver 3.25.0917**

- Update
- ✓ Log Parser – updated to allow log file drag & drop from explorer

### **Ver 3.25.1001**

- Update
- ✓ Qualcomm chip – supports new Common log, NR, LTE log versions

### **Ver 3.25.1004**

- Update
- ✓ Qualcomm chip – supports new LTE log versions

### **Ver 3.25.1016**

- Update
- ✓ Samsung chip – supports ESP retrieval interface
- Bug Fix
- ✓ Active call test – Scenario scheduler bug fix

### **Ver 3.25.1017**

- Update
- ✓ Mediatek chip – supports new log versions

### **Ver 3.25.1020**

- Update
- ✓ Mediatek chip – supports new log versions

### **Ver 3.25.1024**

- Update
- ✓ RMA update to v3.64 – update for YouTube
- ✓ Samsung chip – ESP retrieval interface update

### **Ver 3.25.1027**

- Update
- ✓ QCom chip interface update

### **Ver 3.25.1031**

- Update
- ✓ MTK chip interface update for LTE(v4.5), NR(v3.2), IMS(v2.4)
- Added new log items in logmask & logview

### **Ver 3.25.1104**

- Update
- ✓ Samsung chip - ESP key detection update
- ✓ Samsung chip – Added “Trace Enable/Disable” control in UE specific popup menu
- ✓ Qualcomm chip – “LTE ML1 log msssing” warning dialog display logic update

### **Ver 3.25.1107**

- Update
- ✓ Samsung chip – ESP retrieval interface update

### **Ver 3.25.1112**

- Update
- ✓ Samsung chip – ESP retrieval interface update

### **Ver 3.25.1113**

- Update
- ✓ MOS test with Multi-RAB through sync server – update

### **Ver 3.25.1121**

- Update
- ✓ Voice Quality Test configuration – Initial default audio path is changed to “Air”, instead of “Ear-jack”

### **Ver 3.25.1125**

- Update
- ✓ Qualcomm chip - ESP key detection update
- ✓ TMOFIT feature added

### **Ver 3.25.1216**

- Update
- ✓ Warning dialog – warning message will be displayed when Scout is started while logging is not activated

### **Ver 3.25.1220**

- Update
- ✓ ADB update to v34.0.5-10900879 – to fix problems with latest version of ADB

### **Ver 3.25.1229**

- Update
- ✓ ADB update to v36.0.0-13206524
- ✓ ADB connection method update
- ✓ RMA update to v3.65 – updated for FTP

### **Ver 3.26.0116**

- Update
- ✓ Mediatek chip – supports new log versions

### **Ver 3.26.0116**

- Update
- ✓ Mediatek chip – supports new log versions

### **Ver 3.26.0129**

- Update
- ✓ Port setting UI – ADB device name is displayed in red when ADB device is not authenticated yet

### **Ver 3.26.0206**

- Update
- ✓ Mediatek chip – Added new log items in the logmask and log filter
- ✓ Qualcomm chip – supports new NR log versions
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ RMA update to v3.66 – saves Datum log file open events again

### **Ver 3.26.0210**

- Update
- ✓ Mediatek chip – updated to process 'eSIM only' case

### **Ver 3.26.0213**

- Update
- ✓ Total Call Monitor UI – Support DSDA(Dual-SIM Dual-Activity) via mouse right-click

### **Ver 3.26.0225**

- Update
- ✓ RMA update to v3.67 – bug fix for SFTP multi-session upload

### **Ver 3.26.0312**

- Update
- ✓ Mediatek chip – updated to store SIM ID in log header
- ✓ ADB update to v37.0.0-14910828
- ✓ RMA update to v3.68 – update for HTTP DL/UL throughput test

### **Ver 3.26.0318**

- Update
- ✓ RMA update to v3.69 – update for SFTP authentication

### **Ver 3.26.0330**

- Update
- ✓ Qualcomm chip – supports new NR log versions
- Bug Fix
- ✓ Voice call – fixed bug that Drop/Fail on the next call (not try call release using ADB in IDLE State)

### **Ver 3.26.0331**

- Update
- ✓ Samsung chip – supports ICD v9.11

### **Ver 3.26.0410**

- Update
- ✓ Samsung chip – supports ICD v9.11
- ✓ Qualcomm chip – supports new Common log versions
- ✓ Qualcomm chip – supports new LTE log versions
- ✓ RMA update to v3.70 – update for FTP throughput calculations
- Bug Fix
- ✓ Voice call – Value errors occurred in Voice Call Result (0xF022) and Adv Call Event (0xF02A) logs
  - Cause 1: CM Call List DIAG shows 'Voice' when VoLTE/VoNR call on specific UE(QCOM chip)
  - Cause 2: Occurred in a function designed to handle SRVCC

### **Ver 3.26.0415**

- Update
- ✓ Total Call Monitor UI – Support load/save SIM selection for DSDA(Dual-SIM Dual-Activity)

### **Ver 3.26.0417**

- New Feature
- ✓ Added DAQ UI & function

### **Ver 3.26.0424**

- Update
- ✓ Plan setting UI – Voice call plan setting UI changed (moved some items to “Advanced” tab)

**Ver 3.26.0430**

- Update
- ✓ Mediatek chip – Supports new ICD version

**Ver 3.26.0507**

- Update
- ✓ Qualcomm chip – supports new NR log versions

**Ver 3.26.0508**

- Update
- ✓ RMA update to v3.71
- ✓ Supports MOS test for “Call by Call (Normal)”
- Bug Fix
- ✓ Qualcomm’s time adjust bug fix of DSDA UE – It happens time error 1~2 seconds when DSDA UE