

XCAL- Mobile/Solo/Harmonizer Release Note

**Doc Rev: 79
2025-05-12**

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About Release Note

This Release Note documentation announces new features, fixed bugs, changes, and removed function of XCAL-Mobile.

This Release Note is provided with 3 types: Added, Changed, and Bug Fixed.

For details of XCAL-Mobile/Solo/Harmonizer usage, refer to *XCAL-Mobile/Solo/Harmonizer User Guide* which is provided upon purchase.

Revision History

Rev.	Product Version	Date of Release	Note
52	XCAL-Mobile/Solo : 5.24.001	2024-01-15	New Version Naming rule
53	XCAL-Mobile/Solo : 5.24.002 XCAL-Harmonizer : 3.00.067	2024-01-30	
54	XCAL-Mobile/Solo : 5.24.003 XCAL-Harmonizer : 3.00.068	2024-02-13	
55	XCAL-Mobile/Solo : 5.24.004 XCAL-Harmonizer : 3.00.070	2024-02-26	
56	XCAL-Mobile/Solo : 5.24.005 XCAL-Harmonizer : 3.00.071	2024-03-11	
57	XCAL-Mobile/Solo : 5.24.007	2024-03-25	
58	XCAL-Mobile/Solo : 5.24.009 XCAL-Harmonizer : 3.00.071	2024-04-08	
59	XCAL-Mobile/Solo : 5.24.013 XCAL-Harmonizer : 3.00.073	2024-04-29	
60	XCAL-Mobile/Solo : 5.24.017 XCAL-Harmonizer : 3.00.074	2024-05-13	
61	XCAL-Mobile/Solo : 5.24.019	2024-05-27	
62	XCAL-Mobile/Solo : 5.24.020	2024-06-10	
63	XCAL-Mobile/Solo : 5.24.022 XCAL-Harmonizer : 3.00.075	2024-06-25	
64	XCAL-Mobile/Solo : 5.24.024 XCAL-Harmonizer : 3.00.076	2024-07-08	
65	XCAL-Mobile/Solo : 5.24.027 XCAL-Harmonizer : 3.00.077	2024-07-22	
66	XCAL-Mobile/Solo : 5.24.029 XCAL-Harmonizer : 3.00.079	2024-08-05	
67	XCAL-Mobile/Solo : 5.24.031 XCAL-Harmonizer : 3.00.081	2024-08-19	
68	XCAL-Mobile/Solo : 5.24.033 XCAL-Harmonizer : 3.00.082	2024-09-02	
69	XCAL-Mobile/Solo : 5.24.036 XCAL-Harmonizer : 3.00.083	2024-09-23	

Rev.	Product Version	Date of Release	Note
70	XCAL-Mobile/Solo : 5.24.037 XCAL-Harmonizer : 3.00.084	2024-10-07	
71	XCAL-Mobile/Solo : 5.24.040 XCAL-Harmonizer : 3.00.085	2024-10-29	
72	XCAL-Mobile/Solo : 5.24.041 XCAL-Harmonizer : 3.00.086	2024-11-18	
73	XCAL-Mobile/Solo : 5.24.043 XCAL-Harmonizer : 3.00.089	2024-12-02	
74	XCAL-Mobile/Solo : 05.24.045.00 XCAL-Harmonizer : 03.00.090	2024-12-16	
75	XCAL-Mobile/Solo : 05.24.048.00 XCAL-Harmonizer : 03.00.094	2025-01-13	
76	XCAL-Mobile/Solo : 05.24.050.00 XCAL-Harmonizer: 03.24.00.00	2025-02-10	
77	XCAL-Mobile/Solo : 05.24.52.00 XCAL-Harmonizer: 03.24.00.00	2025-03-04	
78	XCAL-Mobile/Solo : 05.24.54.00 XCAL-Harmonizer: 03.24.02.00	2025-04-07	
79	XCAL-Mobile/Solo : 05.24.56.00 XCAL-Harmonizer: 03.24.04.00	2025-05-12	

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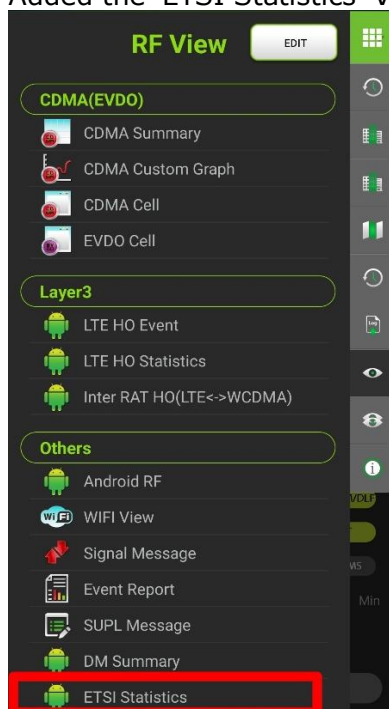
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XCAL-Mobile/Solo.05.24.56.00

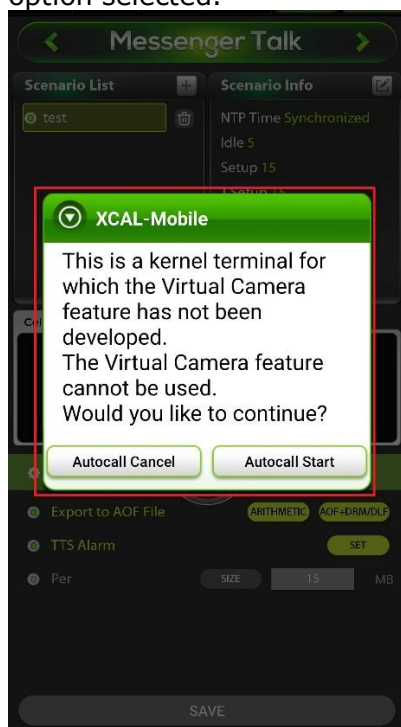
Release Date: 2025-05-12

Added

1. Added the 'ETSI Statistics' Viewer option in the Menu> RF View> Others.



2. [Messenger Talk] Added the conditional pop-up message in Autocall with the Virtual Camera option selected.



3. [XM-1438] [PCTEL] added the 'Start scanning when Autocall Starts' option in the settings menu.

Changed

1. Removed the ETSI KPI button from Autocall Statistics.



2. [PCTEL] Updated the SeeGull Master API 3.7.0.0.

Bug Fixed

1. [MTK] Fixed the phenomenon "Error In Audio Device" pop-up when the MOS is operated by linking the Solo3+BT Module.
2. [Mobile SNS] Fixed the get request token error when selecting the Twitter Login button.
3. [XM-1453] [Accuver Report] Fixed the phenomenon of points not being shown in the report when measuring in-building.
4. [XM-1436] Fixed the corrupted packet message from PCAP files.

XCAL-Harmonizer 03.24.04.00

Release Date: 2025-05-12

Added

Changed

- Updated the latest SMAP Setting and additional function implementation.

Bug Fixed

- [Monitoring] Fixed DL PHY TP is not Displayed

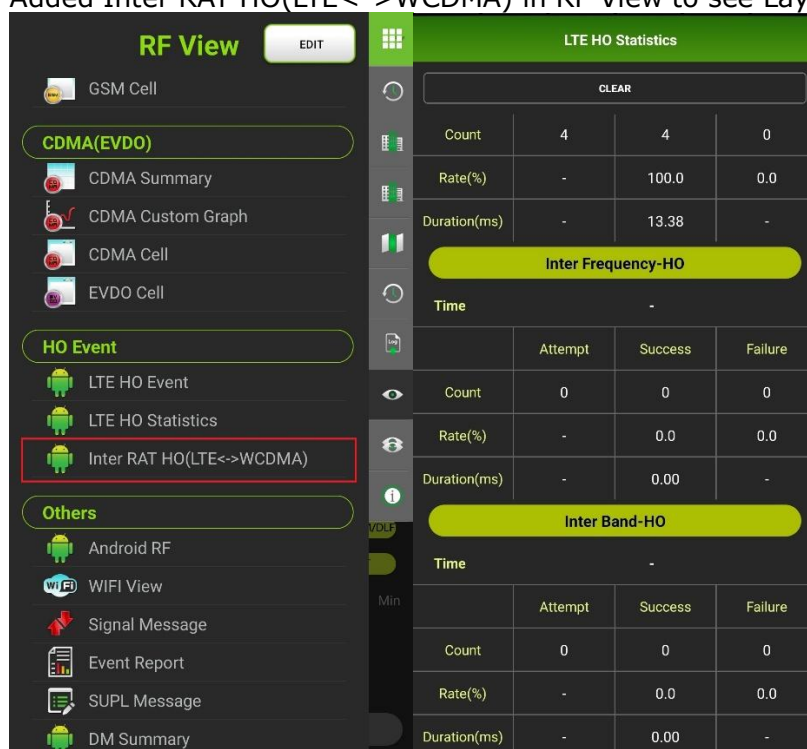
Autocall Stop				Traffic 88		Traffic 89									
M1	8356841006_LTE	Mbps	Edit	Clear Thp	M2	8097960389_LTE	Mbps	Edit	Clear Thp						
Total (DL PHY TP)		5G (DL PHY TP)		LTE (DL PHY TP)		Total (DL PHY TP)		5G (DL PHY TP)		LTE (DL PHY TP)					
9.719 Mbps		0.000 Mbps		9.719 Mbps		4.665 Mbps		0.000 Mbps		4.665 Mbps					
Peak	Avg.	Peak	Avg.	Peak	Avg.	Peak	Avg.	Peak	Avg.	Peak	Avg.				
24.258	0.948	0.000	0.000	24.258	11.038	14.178	0.633	0.000	0.000	14.178	0.530				
5G NR						5G NR									
Set	PCI	TxBeam	NR ARFCN	SCS	SS-RSRP	SS-RSRQ	DL PHY TP	Set	PCI	TxBeam	NR ARFCN	SCS	SS-RSRP	SS-RSRQ	DL PHY TP
P								P							
S1								S1							
S2								S2							
--								--							
LTE						LTE									
Set	PCI	EARFCN	Band	RSRP	RSRQ	SINR	DL PHY TP	Set	PCI	EARFCN	Band	RSRP	RSRQ	SINR	DL PHY TP
P	58	38790	40	-87.3	-15.4	2.1	-	P	343	1484	3	-87.6	-21.0	-7.3	-
S1	-	-	-	-	-	-	-	S1	-	-	-	-	-	-	-
S2	-	-	-	-	-	-	-	S2	-	-	-	-	-	-	-
--								--							
Call Status		RF Summary		DSS		ENDC Summary		LTE CA Summary		Signal Graph		Cell Measurement		Signaling Message	

XCAL-Mobile/Solo.05.24.54.00

Release Date: 2025-04-07

Added

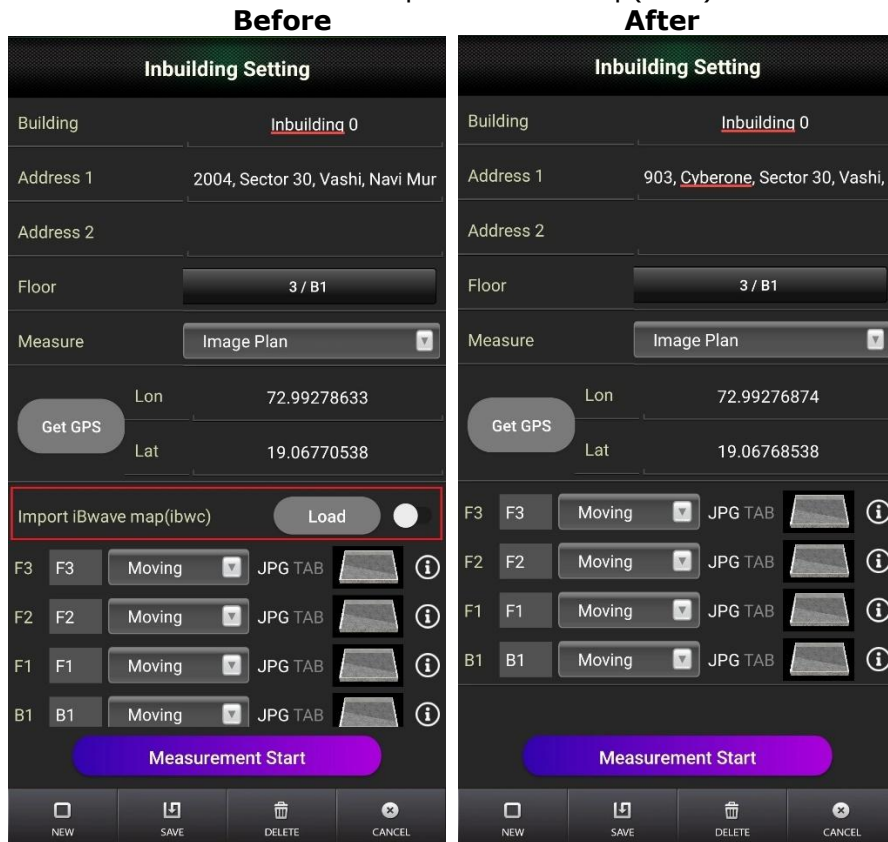
1. Added Inter RAT HO(LTE<->WCDMA) in RF View to see Layer3.



2. Added judgment conditions to LTE HO Statistics among the Layer3 similar to the LTE HO Event and also added units for Rate(%) and Duration(ms).
3. Added Android API judgment conditions in DSDS.
4. Added QTrace mask while importing the DMC file.

Changed

- Deleted the Load Section "Import iBwave map(ibwc)" from the Inbuilding Setting.



Bug Fixed

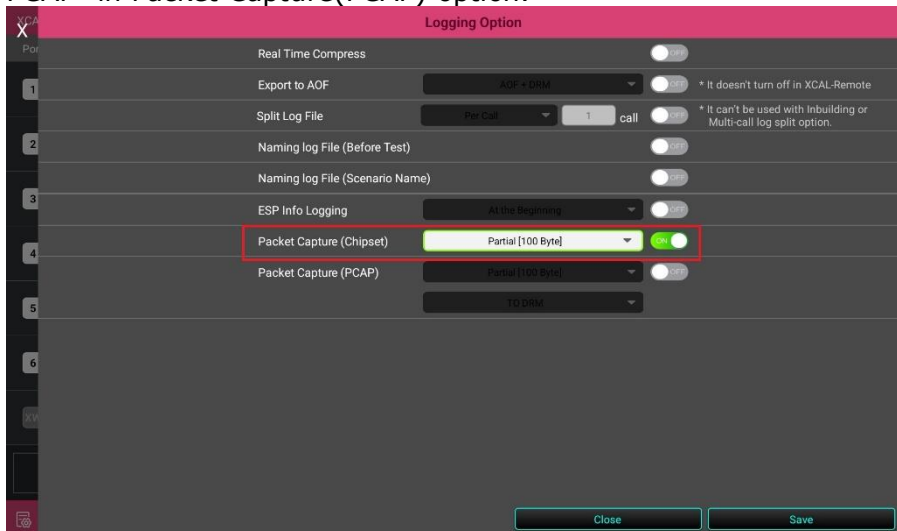
- Packet Capture has been fixed in Samsung for VoLTE and YouTube Autocall.

XCAL-Harmonizer 03.24.02.00

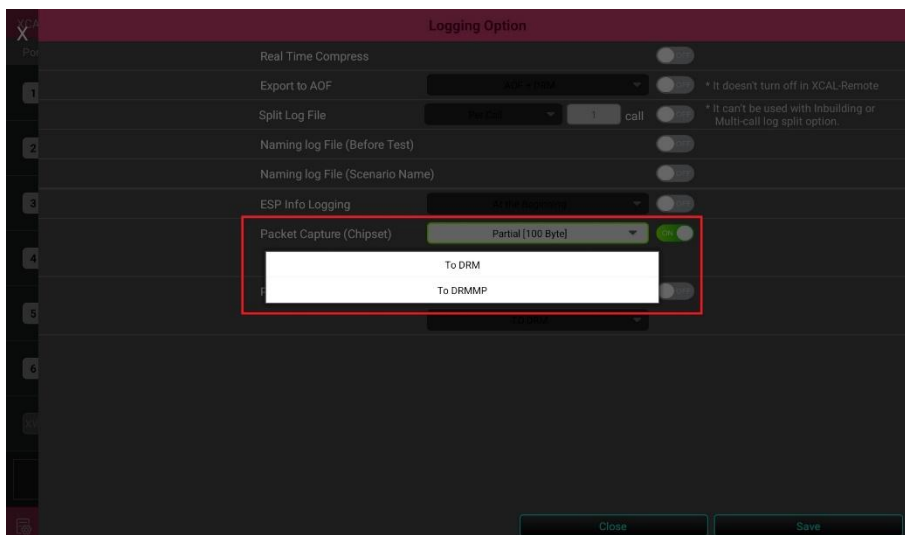
Release Date: 2025-04-07

Added

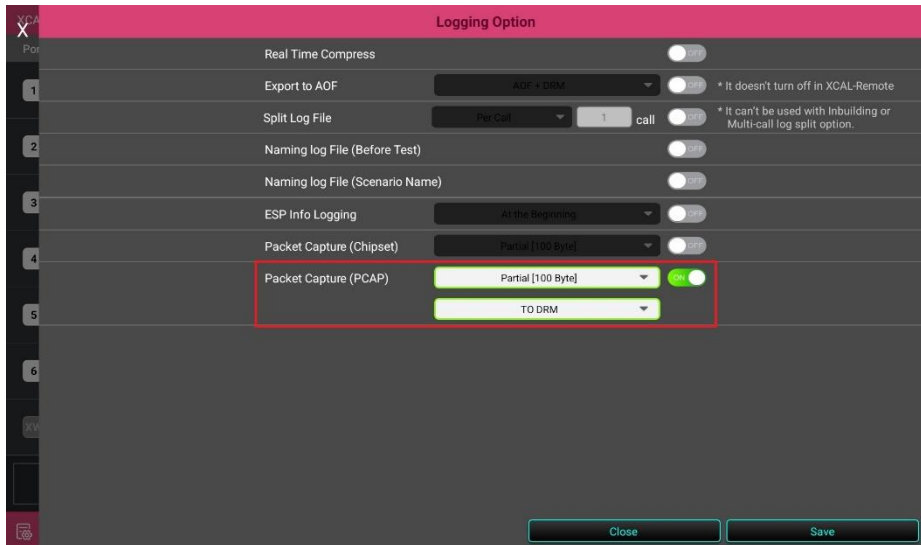
1. Added Sub-option "To DRM" & "To DRMMMP" in Packet Capture(Chipset), and "To DRM" & "To PCAP" in Packet Capture(PCAP) option.



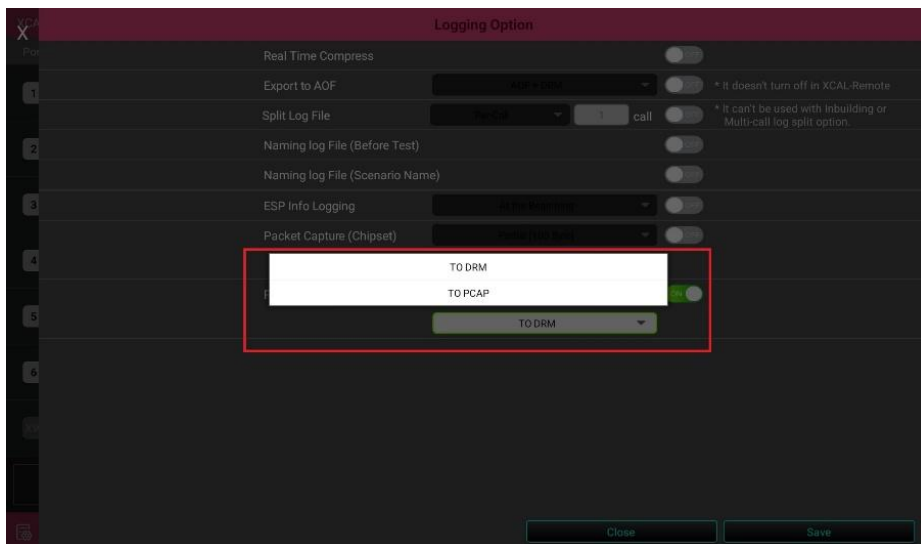
Before



After

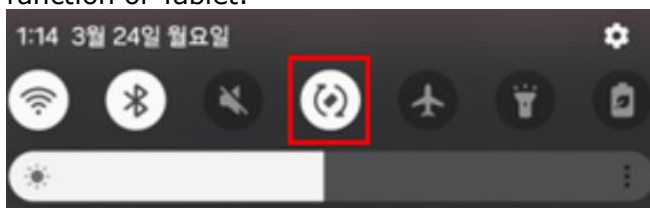


Before



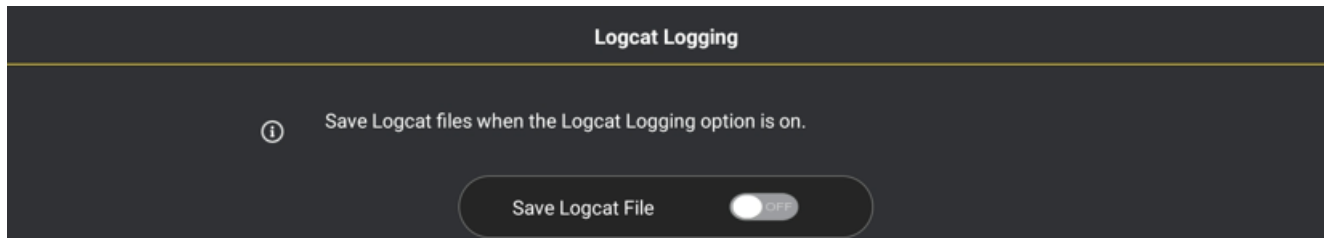
After

2. Added Screen Rotation Function. The app can be rotated according to the screen rotation function of Tablet.



Changed

1. Changed the title to Logcat logging



Bug Fixed

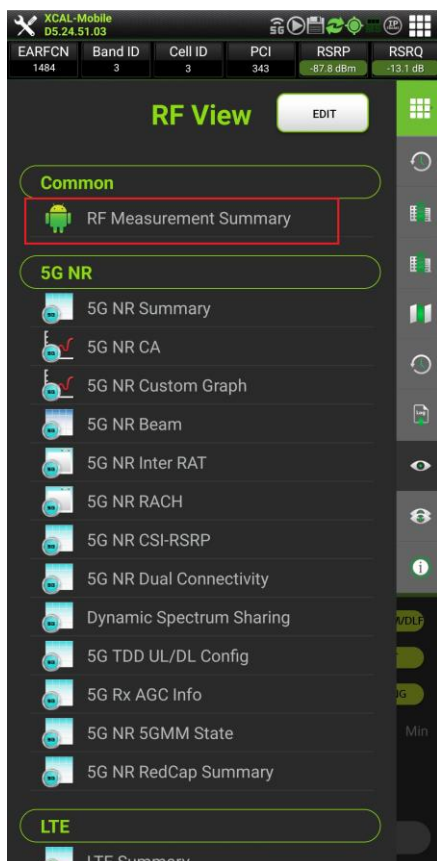
1. Fixed App crash with "load iBwave map(ibwc)"

XCAL-Mobile/Solo.05.24.52.00

Release Date: 2025-03-04

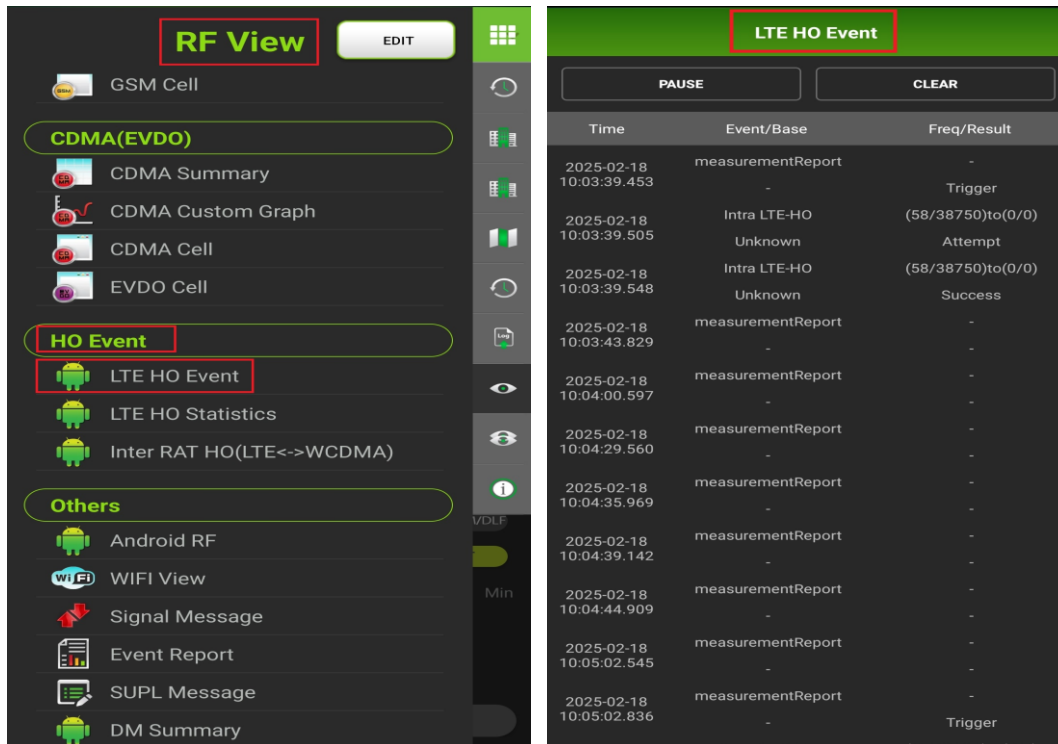
Added

1. Added Qualcomm Logmask
 - [0XB90F] NR5G LL1 FW CSF Full Whitened Channel Matrix
 - [0XB12B] NR5G ML1 SERVICES CBM MD MOTION INFO LOG
 - [3399] EVENT_NR_UL_DATA_INTERRUPTION_V2
 - [3433] EVENT_SNS_NR_RLF_ENHANCEMENT_V2
 - [3447] EVENT_NR_RLF_OPTIMIZATION
 - [3453] EVENT_NR_DL_DATA_INTERRUPTION
2. Added Dual SIM ESP logic in XCAL-Mobile that was supplemented to use the key value of the SIM that initiates the call.
3. Added ability to log SIP message to 0xEF77(53) in SMS.
4. Added RF Measurement Summary tab to RF view.



5. [VoLTE] Development of SIM-specific dial function without basic phone settings on Dual SIM terminals added.

6. Added LTE HO Event in RF View to see Layer3 messages.



RF View **EDIT**

GSM Cell

CDMA(EVDO)

- CDMA Summary
- CDMA Custom Graph
- CDMA Cell
- EVDO Cell

HO Event

- LTE HO Event**
- LTE HO Statistics
- Inter RAT HO(LTE<->WCDMA)

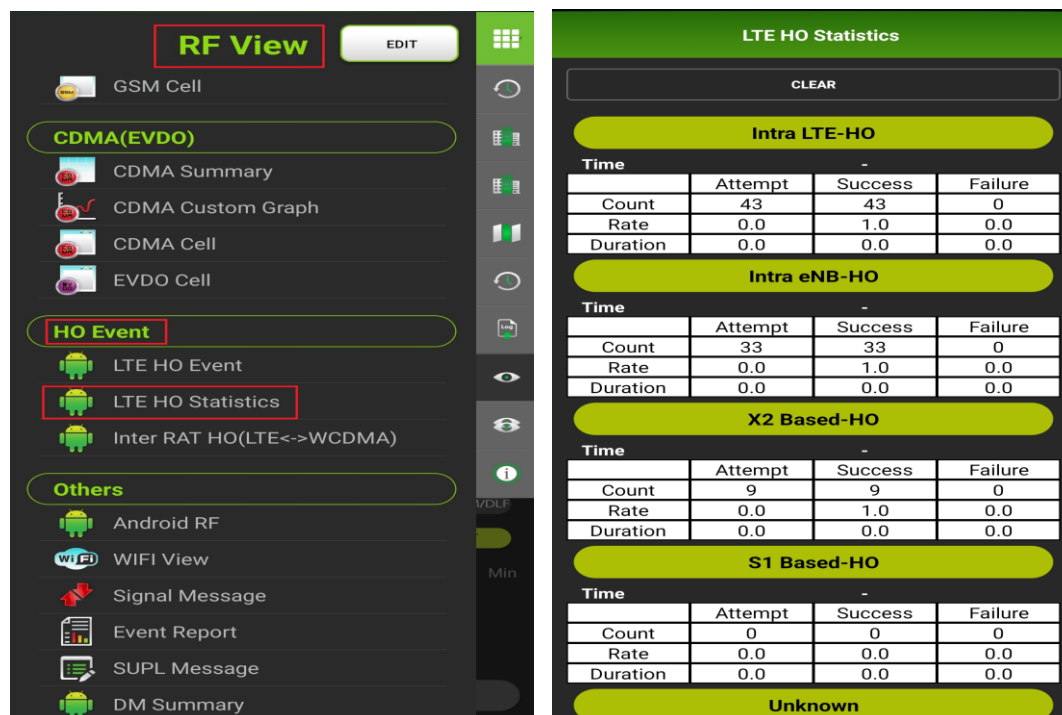
Others

- Android RF
- WIFI View
- Signal Message
- Event Report
- SUPL Message
- DM Summary

LTE HO Event **PAUSE** **CLEAR**

Time	Event/Base	Freq/Result
2025-02-18 10:03:39.453	measurementReport	-
	-	Trigger
2025-02-18 10:03:39.505	Intra LTE-HO	(58/38750)to(0/0)
	Unknown	Attempt
2025-02-18 10:03:39.548	Intra LTE-HO	(58/38750)to(0/0)
	Unknown	Success
2025-02-18 10:03:43.829	measurementReport	-
	-	-
2025-02-18 10:04:00.597	measurementReport	-
	-	-
2025-02-18 10:04:29.560	measurementReport	-
	-	-
2025-02-18 10:04:35.969	measurementReport	-
	-	-
2025-02-18 10:04:39.142	measurementReport	-
	-	-
2025-02-18 10:04:44.909	measurementReport	-
	-	-
2025-02-18 10:05:02.545	measurementReport	-
	-	-
2025-02-18 10:05:02.836	measurementReport	-
	-	Trigger

7. Added LTE HO Statistics in HO Event in RF View for Layer3.



RF View **EDIT**

GSM Cell

CDMA(EVDO)

- CDMA Summary
- CDMA Custom Graph
- CDMA Cell
- EVDO Cell

HO Event

- LTE HO Event
- LTE HO Statistics**
- Inter RAT HO(LTE<->WCDMA)

Others

- Android RF
- WIFI View
- Signal Message
- Event Report
- SUPL Message
- DM Summary

LTE HO Statistics **CLEAR**

Intra LTE-HO

Time	Attempt	Success	Failure
Count	43	43	0
Rate	0.0	1.0	0.0
Duration	0.0	0.0	0.0

Intra eNB-HO

Time	Attempt	Success	Failure
Count	33	33	0
Rate	0.0	1.0	0.0
Duration	0.0	0.0	0.0

X2 Based-HO

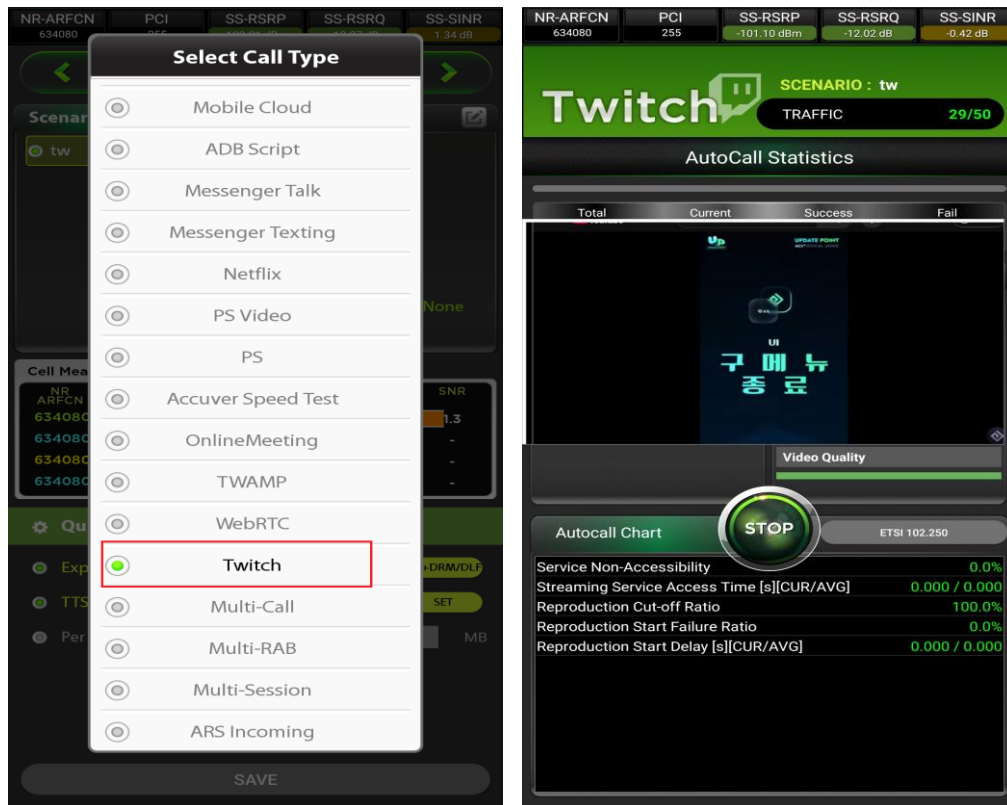
Time	Attempt	Success	Failure
Count	9	9	0
Rate	0.0	1.0	0.0
Duration	0.0	0.0	0.0

S1 Based-HO

Time	Attempt	Success	Failure
Count	0	0	0
Rate	0.0	0.0	0.0
Duration	0.0	0.0	0.0

Unknown

8. Added Twitch autocall in XCAL-Mobile & XCAL-Solo.



Changed

Bug Fixed

1. DM disconnects when connecting to OpenAPI in Pixel 9 Pro XL [XCAL-Solo] [XM-1396]

XCAL-Harmonizer 03.24.00.00

Release Date: 2025-03-04

Added

Changed

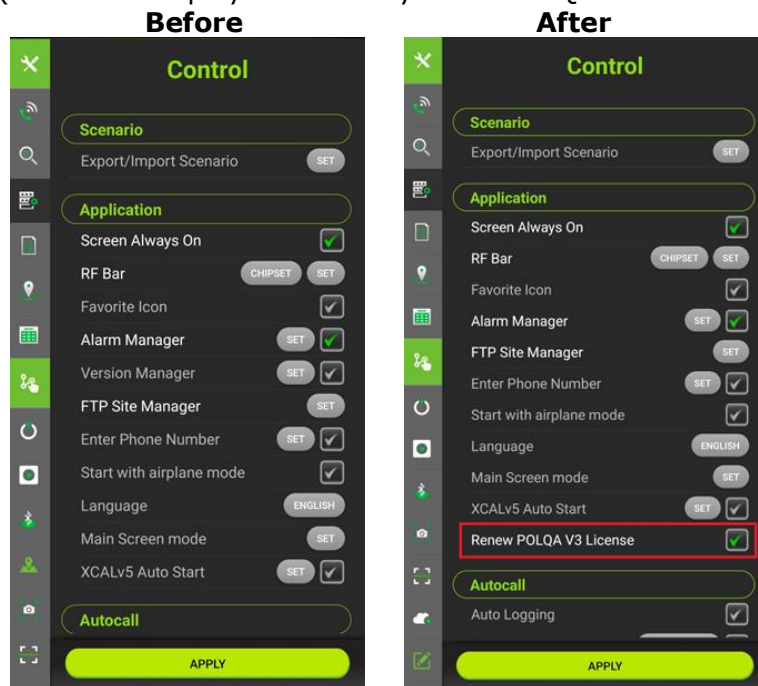
BugFixed

XCAL-Mobile/Solo.05.24.50.00

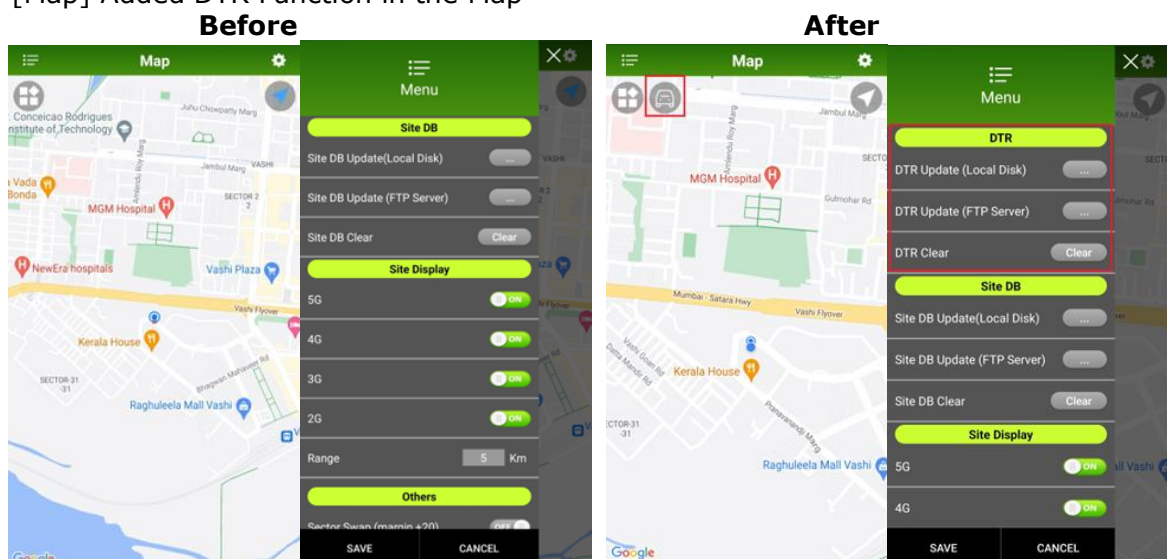
Release Date: 2025-02-10

Added

1. Added [POLQA V3] Renew operation option
(Function: Displayed in UI only when POLQA V3 license is held).



2. Changed to connect to Samsung chipset when connecting Pixel 9 Pro Solo3.
3. [VoLTE] Added ETSI KPI and changed to log event criteria.
4. [PS Video] ETSI 102.205-2 KPI Updated.
5. [Multi-RAB] Added Youtube to the Multi-RAB Combination.
6. [Map] Added DTR Function in the Map



Changed

1. [QC] Changed SCell name to uppercase in SCell Event Viewer.

SCell Event Info							
SCell Event Table							
SCell	Event	Act	Dea	Add	Rec	TE.	Rel
SCell1	Add						
SCell2	Unknown						
SCell3	Unknown						
SCell4	Unknown						
SCell5	Unknown						
SCell6	Unknown						
SCell Event Graph							
Unknown							
Release							
Timer Expired							
Reconfig							
Add							
Deactivate							
Activate							

2. [QC] Changed some parameter names in 5G NR CSI-RSRP.

SCG 5G NR CSI-RSRP	
Resource Type	SSBRI
CSI-RSRP 1	-
CSI-RSRP 2	-
CSI-RSRP 3	-
CSI-RSRP 4	-
Resource 1	-
Resource 2	-
Resource 3	-
Resource 4	-
Resource Type	CRI
CSI-RSRP 1	0.0
CSI-RSRP 2	0.0
CSI-RSRP 3	0.0
CSI-RSRP 4	0.0
Resource 1	0

SCG 5G NR CSI-RSRP	
Resource Type	SSBRI
SSBRI-RSRP 1	-
SSBRI-RSRP 2	-
SSBRI-RSRP 3	-
SSBRI-RSRP 4	-
Resource 1	-
Resource 2	-
Resource 3	-
Resource 4	-
Resource Type	CRI
CRI-RSRP 1	0.0
CRI-RSRP 2	0.0
CRI-RSRP 3	0.0
CRI-RSRP 4	0.0
Resource 1	0
Resource 2	0

- Changed the reference value of CQI WB in 5G NR Summary to unitless, ranges from 0 to 15, and must be expressed as an integer.

Before		After	
SCG 5G NR Summary		SCG 5G NR Summary	
NSA RRC State	NSA RRC Connected	Duplex Mode	TDD
NR RRC State	-	PCI	509
PCI	699	SSB Index	2
SSB Index	1	SS-RSRP	-90.59 dBm
SS-RSRP	-92.62 dBm	SS-RSRQ	-12.10 dB
SS-RSRQ	-11.50 dB	CQI WB	9
CQI WB	9.50 dB	SS-SINR	3.71 dB
SS-SINR	5.25 dB	Frequency Offset	4.415039 ppm
DMRS SNR	-	Time Offset	26
Frequency Offset	3.952148 ppm	Subcarrier Spacing	30 kHz
Time Offset	-	Pathloss	111.23 dB
Subcarrier Spacing	30 kHz	Band	78
Pathloss	113.03 dB	CarrierBandwidth(MHz)	100 Mhz
Band	78	Rank Index	1
CarrierBandwidth(MHz)	100 Mhz	TB Size[Avg]	29.67
Rank Index	2	Total Tx Power	22.25
TB Size[Avg]	89.60	SRS Tx Power	-

- [QC] Changed the function to enable/disable items with the setting function of NV Lock was deleted and Improved logic related to NV Lock command processing.
[XCAL(Mobile)-Tech-Support/155]

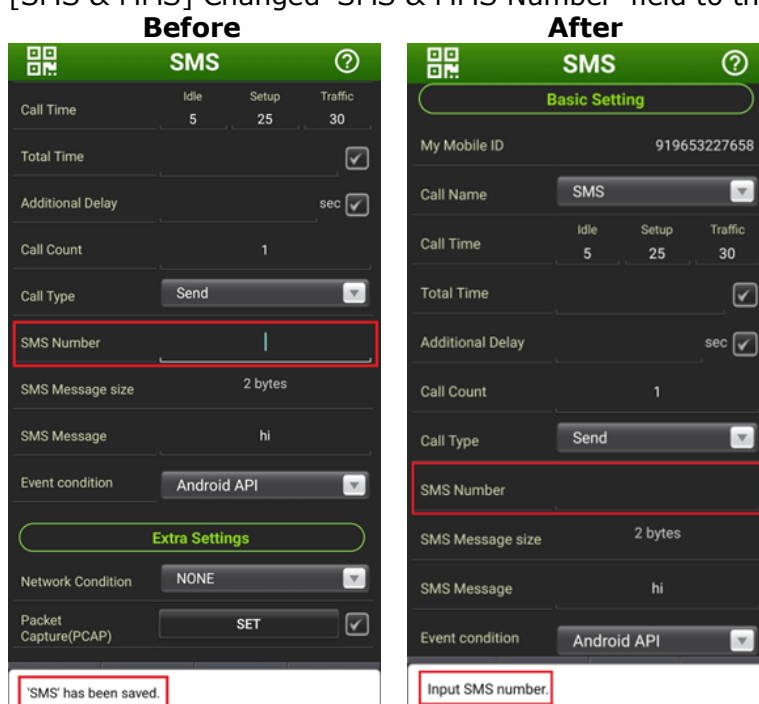
Before		After
Network Lock (Qualcomm N/V Command)		Network Lock (Qualcomm N/V Command)
LTE CA LOCK		LTE CA LOCK
LTE CA COMBINATION		LTE CA COMBINATION
RAT LOCK		RAT LOCK
RAT LOCK (ITEM 80000 FOR X52 OR ABOVE)		RAT LOCK (ITEM 80000 FOR X52 OR ABOVE)
BAND LOCK		BAND LOCK
CHANNEL LOCK		CHANNEL LOCK
CELL LOCK		CELL LOCK
AMR CONTROL LOCK		AMR CONTROL LOCK
EXPORT/IMPORT		EXPORT/IMPORT
CANCEL		CANCEL

Before		After
ITEM FILTER		
RAT	BAND	
CDMA BC0 A (Cellular 800MHz)	Enable	
CDMA BC0 B (Cellular 800MHz)	Enable	
CDMA BC1 (PCS 800MHz)	Enable	
CDMA BC2 (TACS)	Enable	
CDMA BC3 (JTACS)	Enable	
CDMA BC4 (Korean PCS)	Enable	
CDMA BC5 (450MHz)	Enable	
GSM DCS 1800	Enable	
Extended GSM 900	Enable	
Primary GSM 900	Enable	
CDMA BC6 (2GHz)	Enable	
Enable ALL	Disable ALL	
NV-Filter	Save	Cancel

5. [QC] Changed & Improved '5G NR Summary' Viewer.
 - I. Changed the 'Common' title at the bottom to the top.
 - II. Mixed the parameters provided within the existing Common Title and the parameters provided without a title.
 - III. Deleted DMRS SNR
 - IV. Moved 'Azimuth' and 'Elevation' items to 'Android RF View'.
 - V. Changed the names of DL RB Num(Including 0)(Consider) and UL RB Num(Inc0)(Consider).
 - VI. New additions of DL MCS1 Index (Avg) and DL MCS1 Mod. Rate (Q/16/64/256/1024).
 - VII. 5G NR Summary (SCG) also changed according to the similar contents I-VI.
6. Change in Set notation method for 'LTE Cell Measurement'.
 - A (Active Set) > S (Serving Cell)
 - M (Monitored Set) > N(Neighbor Cell)



7. [SMS & MMS] Changed 'SMS & MMS Number' field to the required input condition.



Bug Fixed

1. Fixed [FLS] When registering an Android ID license, the Key Value contains the phrase "idID".
[XCAL(Mobile)-Tech-Support/184]
2. [SMS] Fixed error in first call operation when measuring after setting ESP Logging (Before VoLTE).

XCAL-Harmonizer 03.24.00.00

Release Date: 2025-02-10

Added

Changed

1. [Inbuilding] Changed different images can be set for each floor when it is the image real location type.

BugFixed

1. [Inbuilding] Modified that the Inbuilding Building list and Floor list are not deleted when moving other Menu.
2. [Add Wave File] The Bluetooth-connected Mobile Port Number has modified the Port Number in Add wave file popup to match the difference.

XCAL-Mobile/Solo.05.24.48.00

Release Date: 2025-01-13

Added

1. Added Qualcomm Logmask
 - [0XB11C] LTE LL1 FAP UL Timing
 - [0XB12B] LTE LL1 VPE Scheduler
 - [0XB136] LTE LL1 Rx On Toggle Info
 - [0XB13E] LTE LL1 uSleep Information
 - [0XB31E] LTE LL1 FSCAN UNDROOP COEFFICIENTS
 - [0XB1AD] LTE ML1 DLM Page
 - [0XB1C5] LTE ML1 NR Mea Results Enhanced
 - [0XB1F3] LTE ML1 Traffic Monitor
 - [0XB1F9] LTE ML1 ENDC Log
 - [0XB36B] LTE ML1 Ded Config Tune Log
 - [0XB36F] LTE ML1 Sleep Extn
 - [0XB255] LTE NB1 ML1 ASDIV INFO
2. Added [PCAP] RRC/NAS Message option in PCAP Setting on both XCAL-Mobile and Solo.

Before	After
--------	-------

The image displays four screenshots of the 'PCAP Setting' dialog box, arranged in a 2x2 grid. Each screenshot shows a different configuration of the dialog's options, with the 'RRC/NAS Message' checkbox highlighted by a red rectangle in the right-hand screenshots.

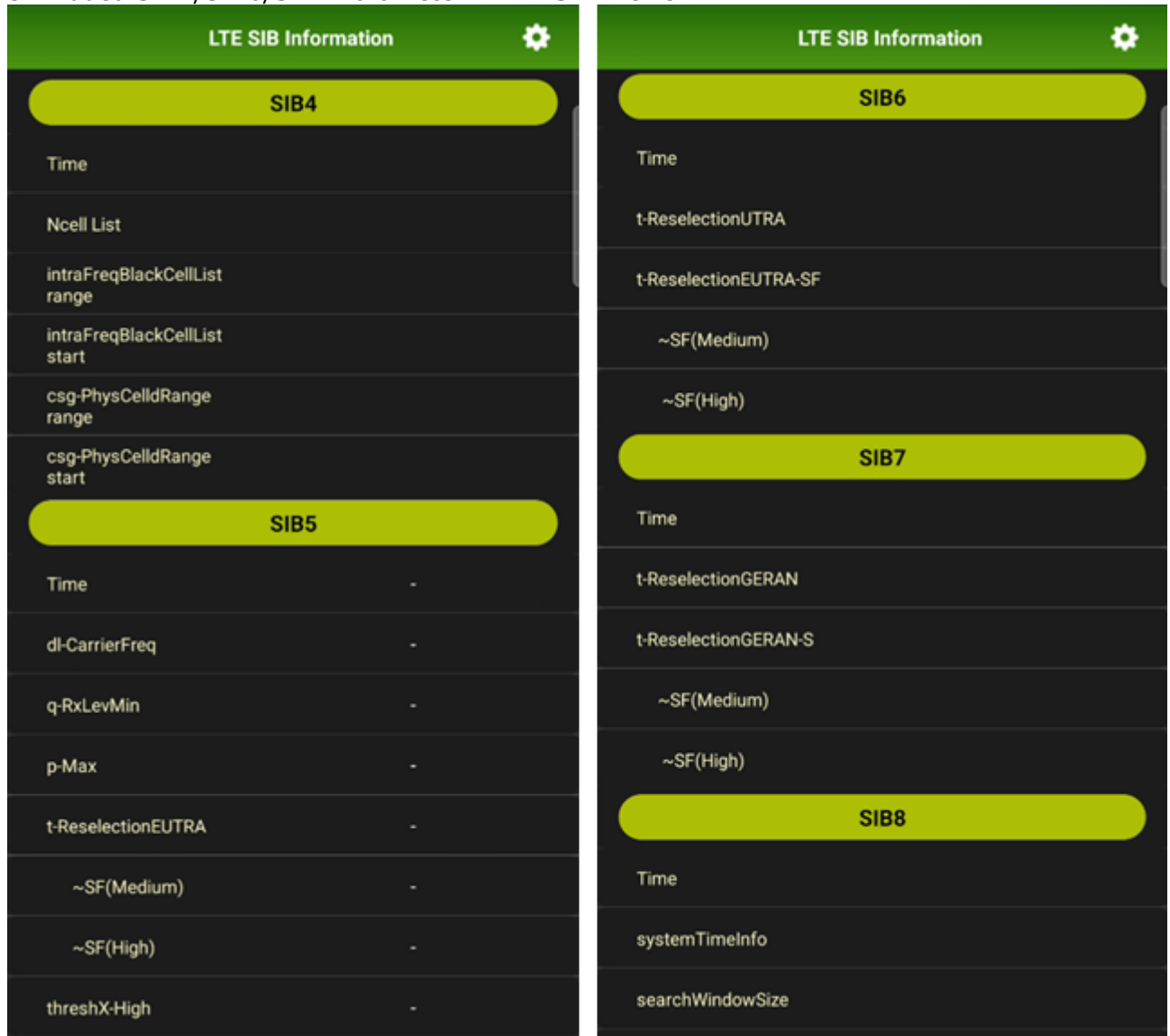
Top Left Screenshot: The dialog is titled 'PCAP Setting'. It contains three dropdown menus: 'Packet Capture' set to '6566 Byte', 'Protocol Filter' set to 'None', and 'Network Adapter' set to 'any'. At the bottom are 'CANCEL' and 'OK' buttons.

Top Right Screenshot: The dialog is titled 'PCAP Setting'. It contains four dropdown menus: 'Packet Capture' set to '6566 Byte', 'Protocol Filter' set to 'None', 'Network Adapter' set to 'any', and 'RRC/NAS Message' which is checked. A red rectangle highlights the 'RRC/NAS Message' checkbox. At the bottom are 'CANCEL' and 'OK' buttons.

Bottom Left Screenshot: The dialog is titled 'PCAP Setting'. It contains two dropdown menus: 'Packet Capture' set to '6566 Byte' and 'XCAL-VPCAP' set to 'INSTALL'. At the bottom are 'CANCEL' and 'OK' buttons.

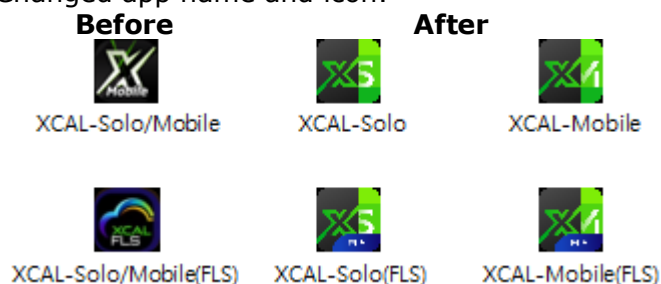
Bottom Right Screenshot: The dialog is titled 'PCAP Setting'. It contains three dropdown menus: 'Packet Capture' set to '6566 Byte', 'XCAL-VPCAP' set to 'INSTALL', and 'RRC/NAS Message' which is checked. A red rectangle highlights the 'RRC/NAS Message' checkbox. At the bottom are 'CANCEL' and 'OK' buttons.

3. Added SIB4/SIB6/SIB7 Parameter in LTE SIB Viewer.



Changed

- 0xEF74(51) Changed Android Dual SIM info logging conditions are changed, so that logging is not performed in case of Single SIM.
- Changed in PCAP functionality when saving packets as TO PCAP using the VPN PCAP function, changed to be saved in the Solo internal storage (same path as DRM), and when saving packets from Dual SIM to TO PCAP, changed the names to SIM1, SIM2, and it creates the same files as the DRM file.
- Changed app name and icon.



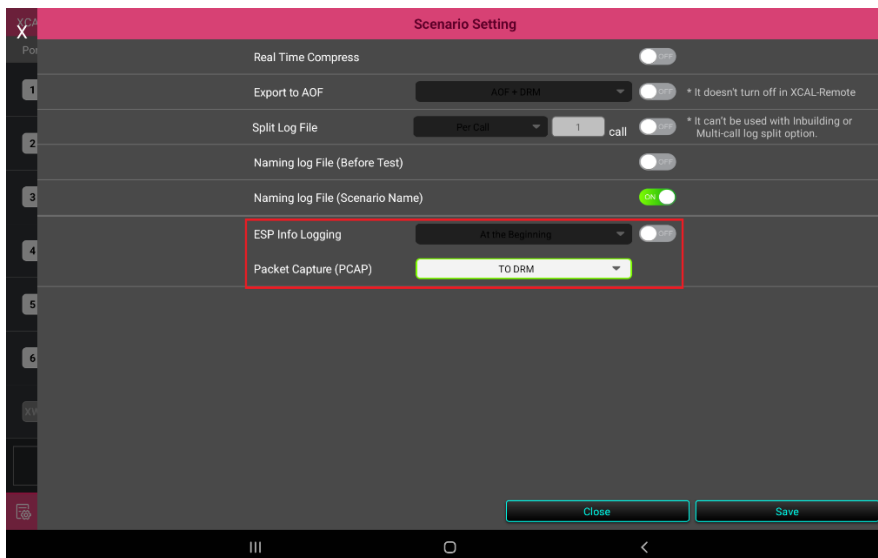
Bug Fixed

XCAL-Harmonizer 03.00.094

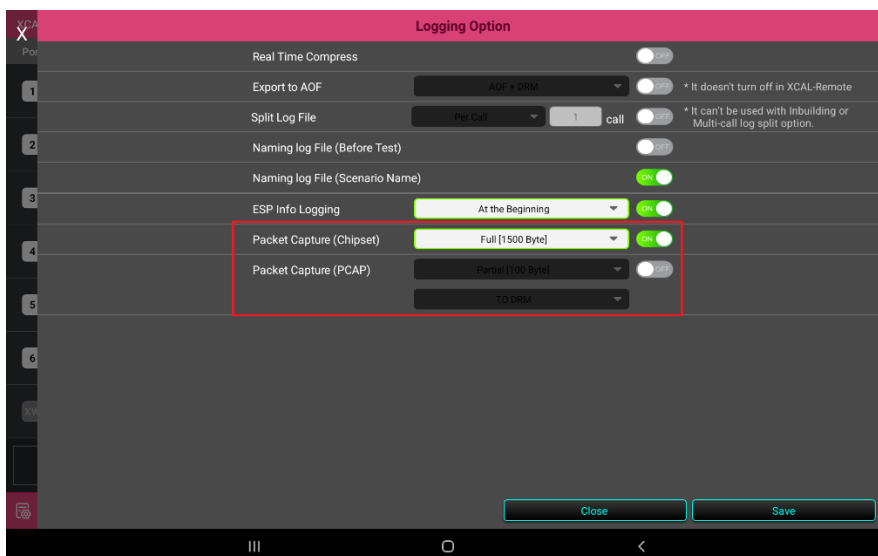
Release Date: 2025-01-13

Added

1. Added the Logging Option > Packet Capture (Chipset) and the Packet Capture (PCAP) On/Off button. (Packet Capture (Chipset) and Packet Capture (PCAP) cannot be selected at the same time).



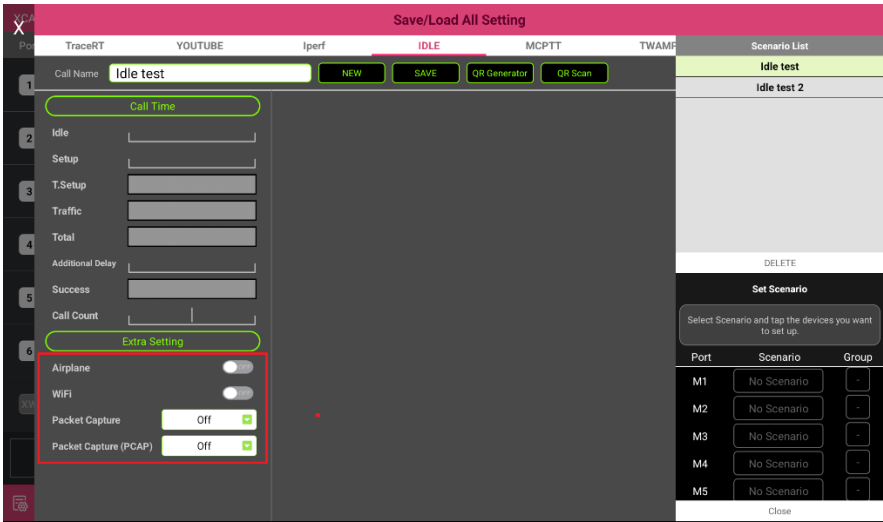
Before



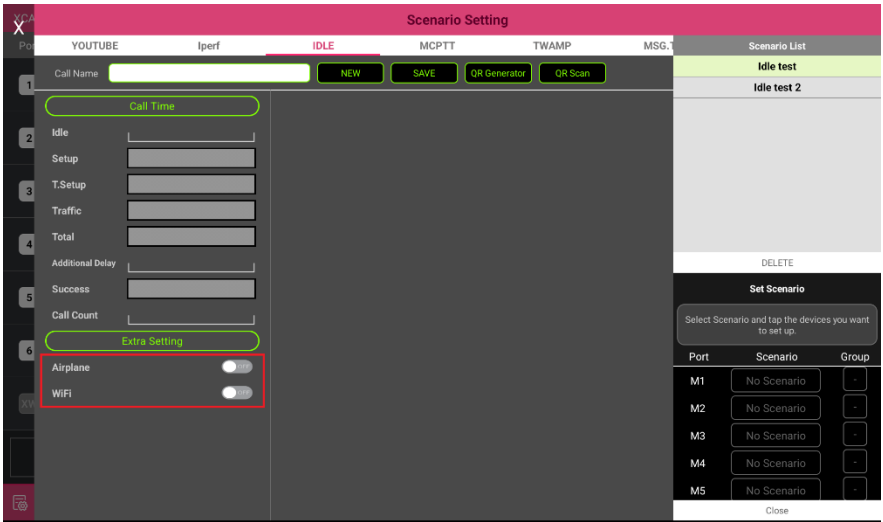
After

Changed

1. Removed Packet Capture(Chipset) and Packet Capture (PCAP) settings UI option from Idle, VoLTE, PS Video scenario editing screen.



Before



After

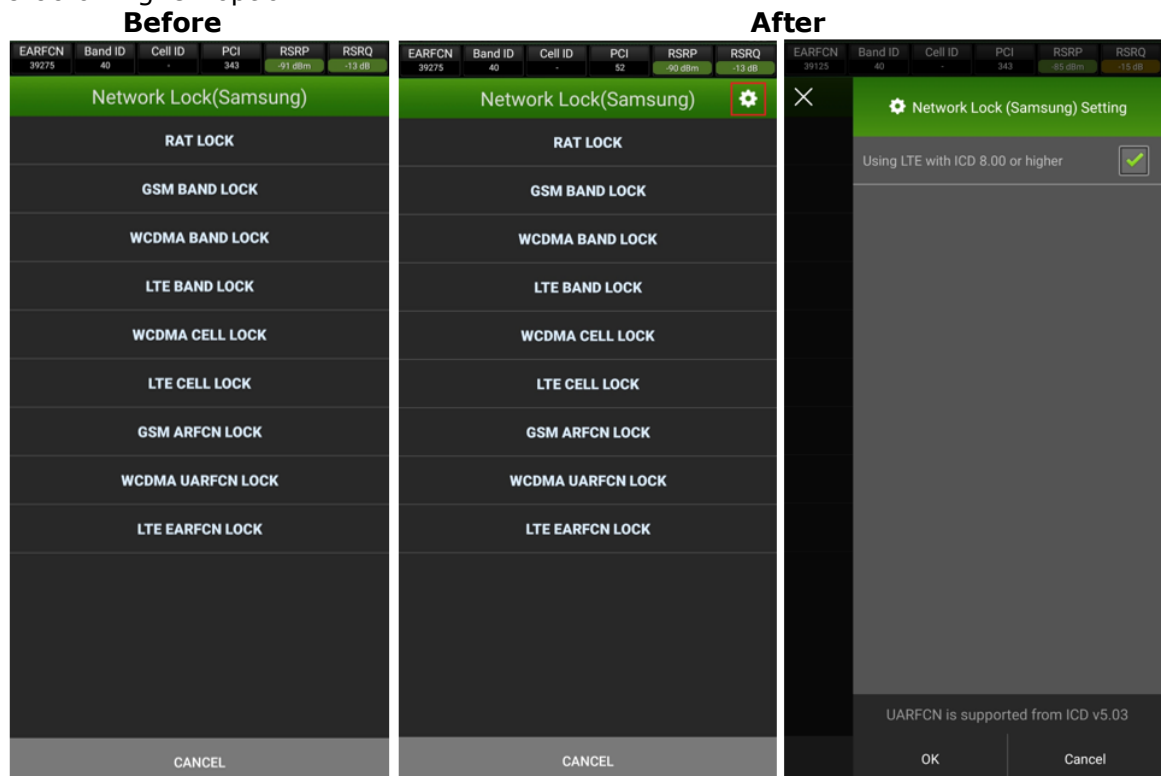
Bug Fixed

XCAL-Mobile/Solo.05.24.045

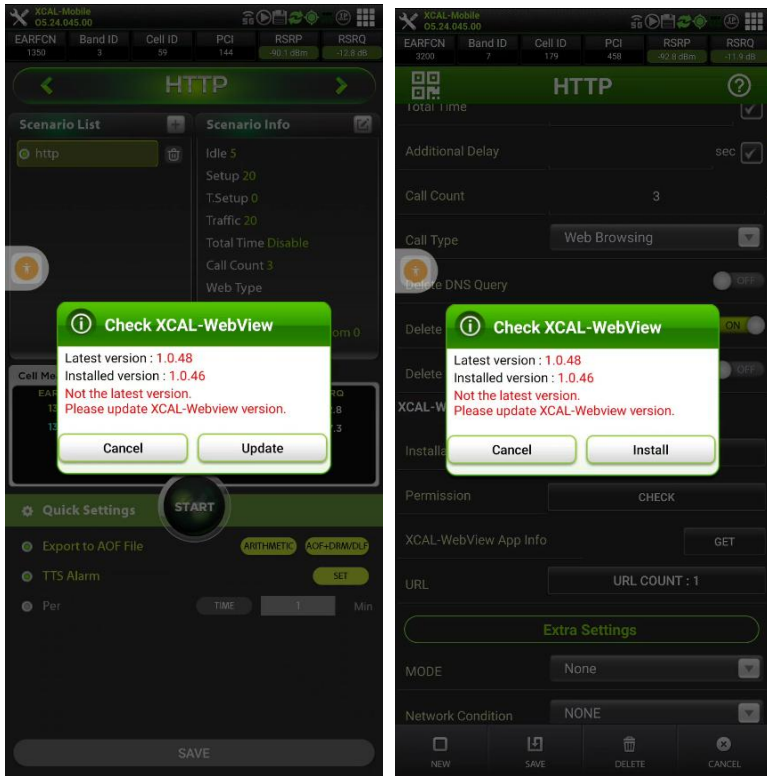
Release Date: 2024-12-16

Added

1. In Network Lock(Samsung) added a Network Lock Setting button for 'Using LTE with ICD 8.00 or higher' option.



2. Added a popup to update the version if the WebView version is out of date when starting an Autocall or checking for permissions.



3. Added Qualcomm Logmask.
[XCAL(Mobile)-Tech-Support/160]
 - [0xB36C] LTE ML1 SNS Mitigation Info
 - [0xB0DA] LTE RRC SNS Mitigation Info
 - [0x1E32] MMODE HLOS DEEP OOS INFO LOG
 - [0x1E5B] PM Context Generic
 - [0x1E5A] CAFI SNS Mitigation Info
4. Add Parameter in legend setting.
[XCAL(Mobile)-Tech-Support/141]

Parameter Legend Setting			Parameter Legend Setting			Parameter Legend Setting		
Mobile			Mobile			Mobile		
COMMON	5G	4G	COMMON	5G	4G	4G	3G	CDMA
PCI			CQI(Ant1)			PSC		
SSB Index			PDSCH TP			Rx Power		
SS-RSRP			PUSCH TP			Tx Power		
SS-RSRQ			PUSCH Tx Power			SIR		
SS-SINR			PUCCH Tx Power			Best Active set Ec/Io		
PDSCH TP			PDSCH PRB Num(Avg.)			Best Active set RSCP		
PDSCH BLER			PUSCH PRB Num(Avg.)			CQI		
CQI			PDSCH BLER			UARFCN		
5G Mode			Rank Index			3G Band		
Duplex Mode			EARFCN			LAC		
NR-ARFCN			4G Band			Cell ID		
5G Band			Cell ID					
Bandwidth			eNB ID					
			DL bandwidth [Mhz]					

5. Add Antenna setting.(Only use in Imageplan with TAB file)



Changed

1. Changed the names of 5G KPIs(BRSRP, BRSRQ, SNR TO SS-RSRP, SS-RSRQ, SS-SINR) in 'RF View', 'Top Shortcut Bar', 'Map Legend Setting', and Inbuilding Replay Legend Setting, and deleted duplicate SS-RSRP (SS-RSRP changed from BRSRP, so existing SS-RSRP is deleted).

Before

NR-ARFCN	PCI	BRSRP	BRSRQ	SNR
634080	293	-96.64 dBm	-16.89 dB	-4.22 dB

After

NR-ARFCN	PCI	SS-RSRP	SS-RSRQ	SS-SINR
634080	256	-101.14 dBm	-15.45 dB	-2.58 dB

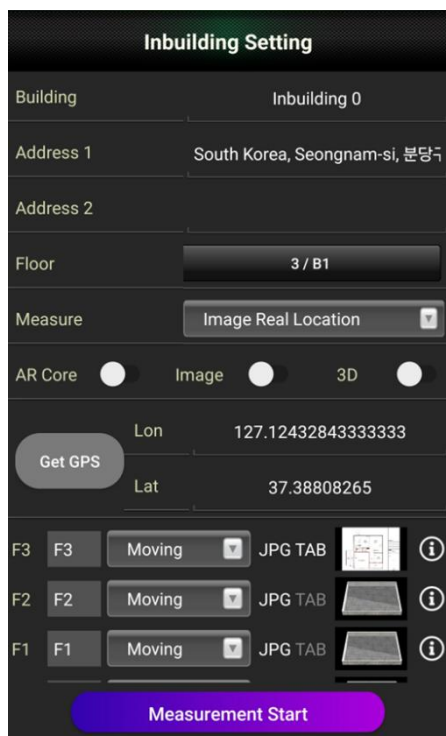
Before

NR-ARFCN	PCI	BRSRP	BRSRQ	SNR
634080	256	-90.19 dBm	-11.97 dB	4.62 dB
Parameter Legend Setting				
Mobile				
COMMON				
5G				
PCI				
SSB Index				
BRSRP				
BRSRQ				
SNR				
PDSCH TP				
PDSCH BLER				
CQI				
OK				
EDIT				

After

NR-ARFCN	PCI	SS-RSRP	SS-RSRQ	SS-SINR
634080	256	-100.43 dBm	-12.50 dB	0.07 dB
Parameter Legend Setting				
Mobile				
Scanner				
COMMON				
5G				
PCI				
SSB Index				
SS-RSRP				
SS-RSRQ				
SS-SINR				
PDSCH TP				
PDSCH BLER				
CQI				
OK				
EDIT				

2. Changed in PCTEL, NR Top N Signal channel style to one type.
3. Changed ESP Info to logging SIP Register and 401 unauthorized packets whenever they occur.
4. Changed the SIM Change judgment condition using the 0x1D8A log in Dual SIM.
5. Changed Inbuilding "Measure"
Tracking, Motion tracking deleted and integrated into Image real location.
AR on - using AR core to measure
AR on , Image on - 2D Floor Mapping
AR on, 3D on - 3D Mapping



Bug Fixed

3. A Bug fixed for MOS Settings, The Save stream to Wave file option is disabled when saving a scenario.
4. A bug has been fixed in the Text Report that was causing some of the 5G KPI data to be missing.
5. A Bug has been fixed for the C-RNTI city value in 5G NR RACH if the value is outside the range it will show null.
6. Fixed an issue with the Qualcomm NV Lock menu not working properly for 2G/3G Bands. [XCAL(Mobile)-Tech-Support/155]
7. Fixed crash issue with inbuilding setting.

XCAL-Harmonizer 03.00.090

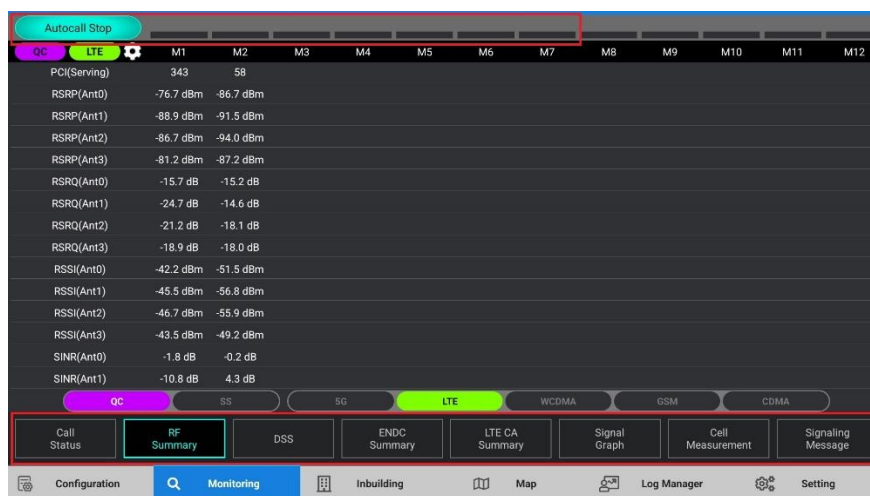
Release Date: 2024-12-16

Added

Changed

Bug Fixed

1. Fixed the Save All Setting option in Configuration, the Save button was not working.
2. Fixed Traffic Time of Autocall in RF Summary for autocall without Traffic Time.
3. Fixed the Autocall status, which was not updating Traffic Time while changing to different menus.



Before



After

4. Fixed HMTOM Destination not able to set in VoLTE.

Call Type	HMTOM ORG	55
Destination	None	66
Dial Number	Automatic	

Before

Call Type	HMTOM ORG	33
Destination	M6	44
Dial Number	Automatic	55
		66

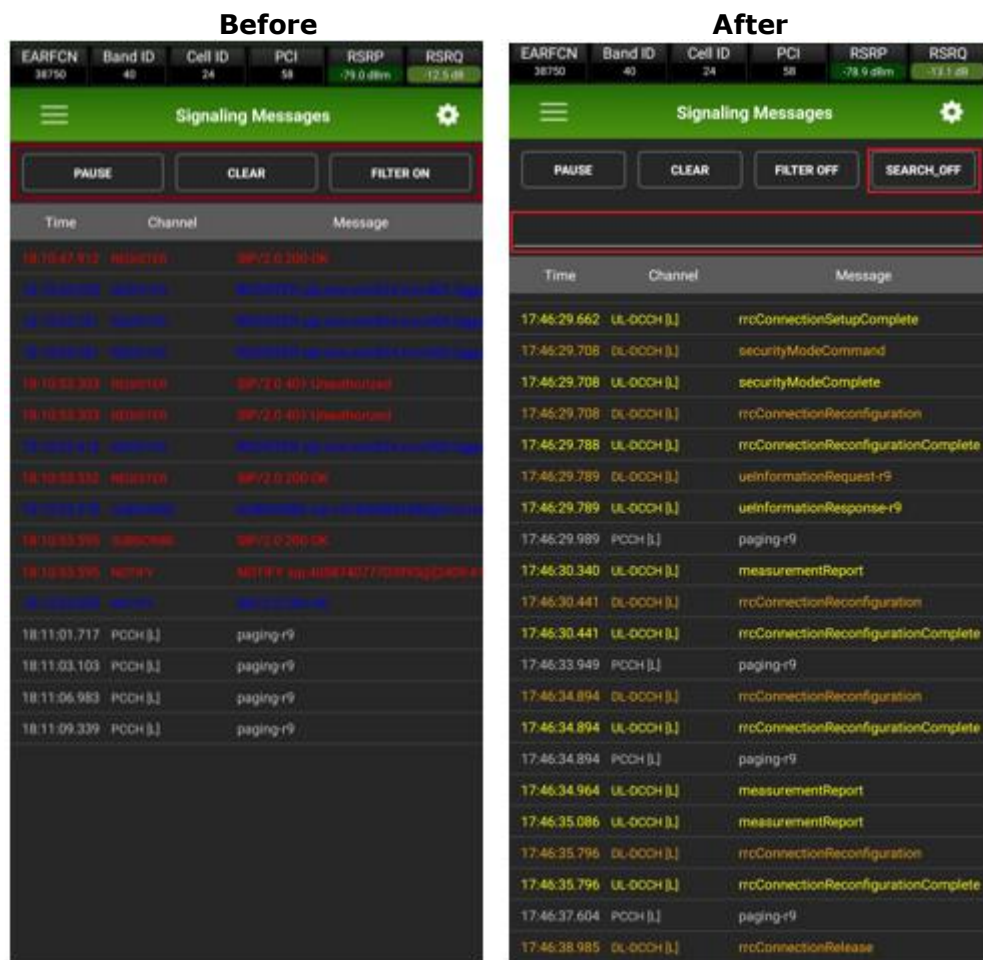
After

XCAL-Mobile/Solo.D5.24.043

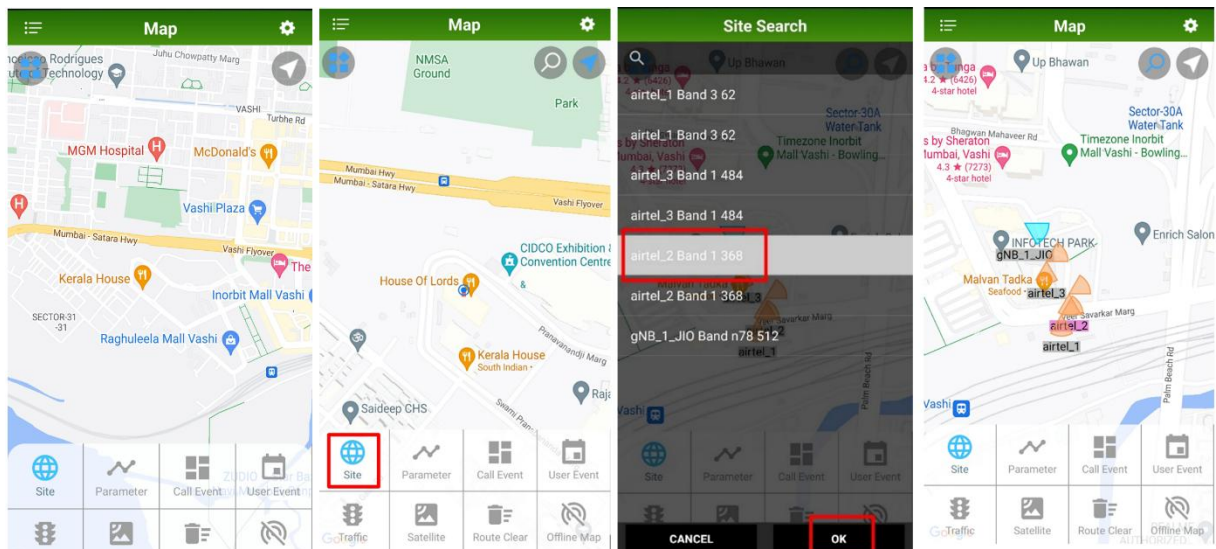
Release Date: 2024-12-02

Added

1. Added Search_On and Search_Off function for Signaling Message. When you click Search_On and type the Message in the search box the auto-scroll function gets turned off(in real time).

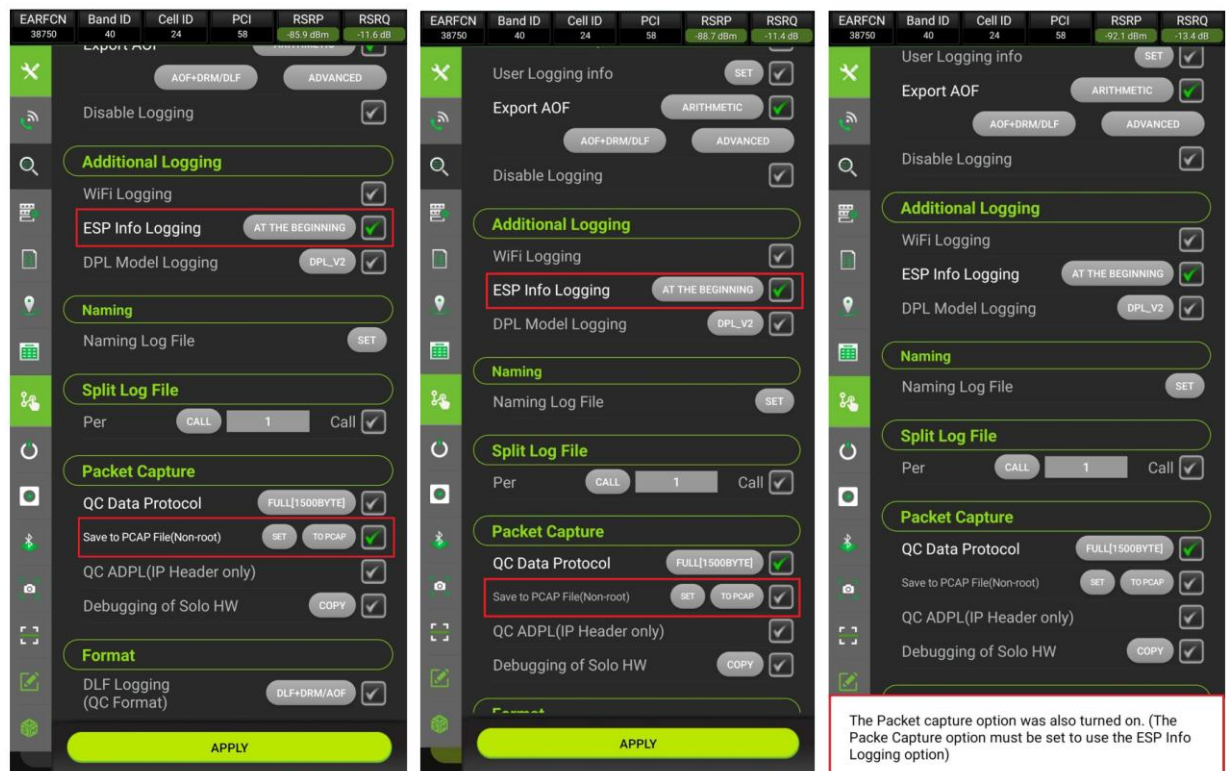


- Added Site Search function for Map. Click on the Side Menu and select the Site icon a Site Search(**Magnifying Glass**) option is displayed, While selecting you will get the list of sites. After selecting a site it will highlight the site on the Map.

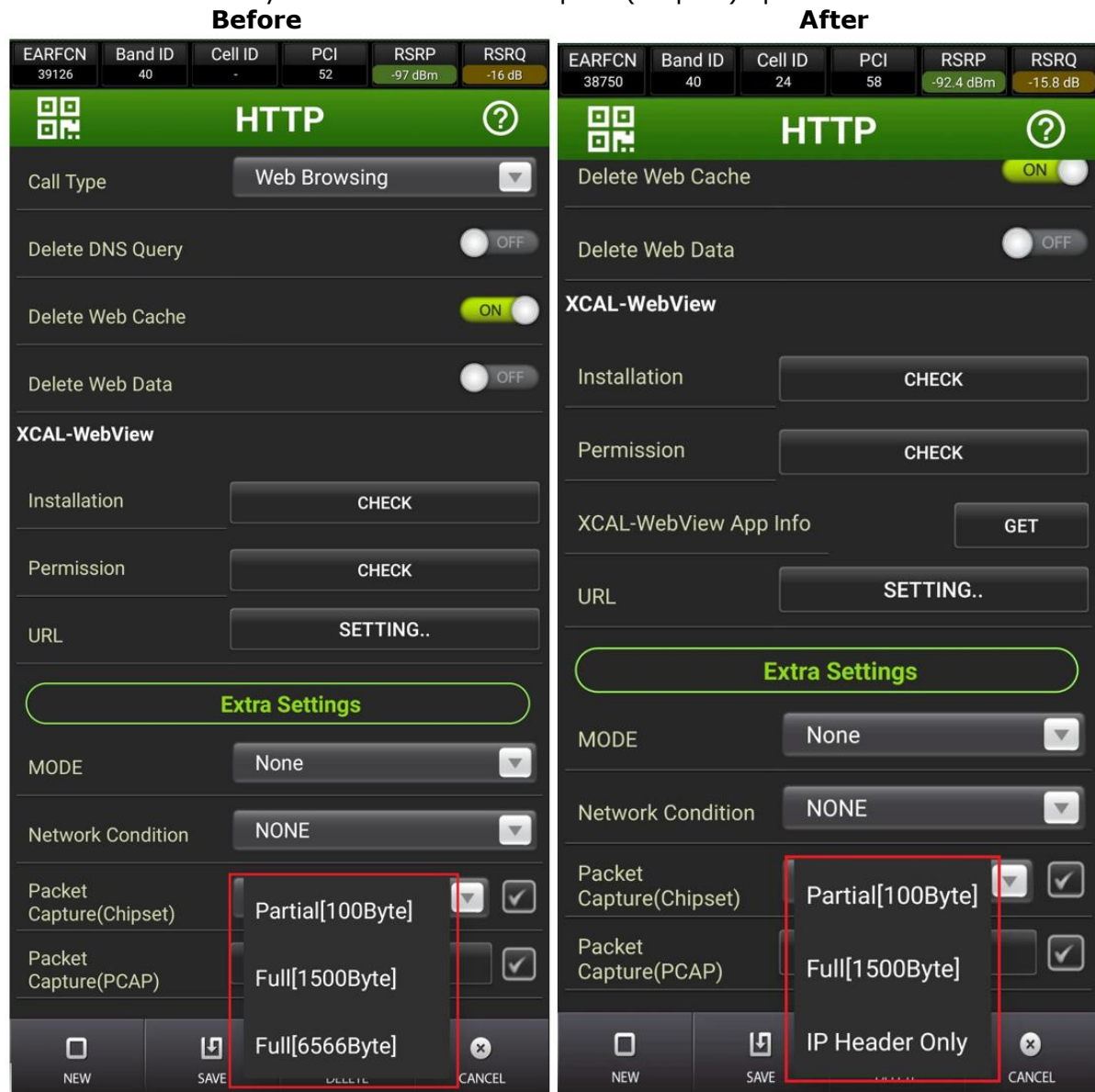
Before**After**

Changed

- Changed the ESP Logging option to not work with the Save to PCAP File(Non-root). Also in Quick Setting if try to save Packet Capture and ESP we get a pop-up that is not applied.

Before**After**

7. Removed the 6566 Bytes from the Packet Capture(Chipset) option.



8. Changed where 401 unauthorized packets are received instead of SIP response when SIP is registered.

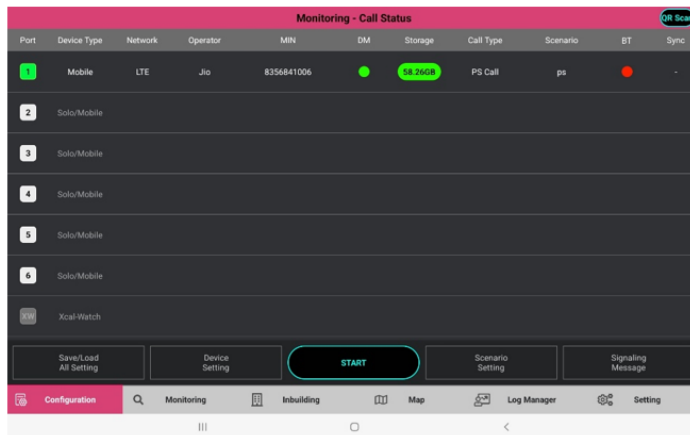
Bug Fixed

XCAL-Harmonizer 3.00.089

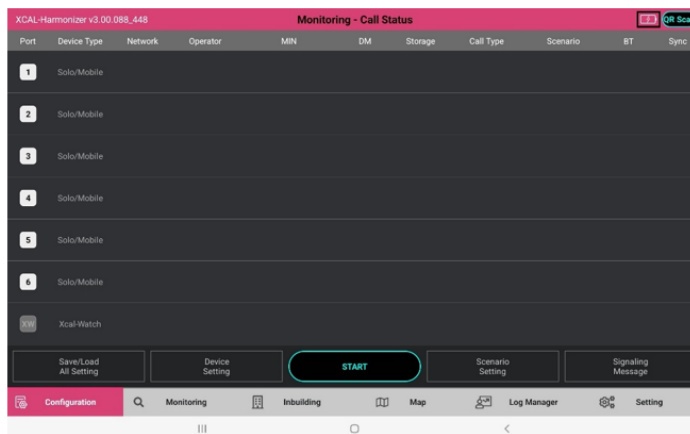
Release Date: 2024-12-02

Added

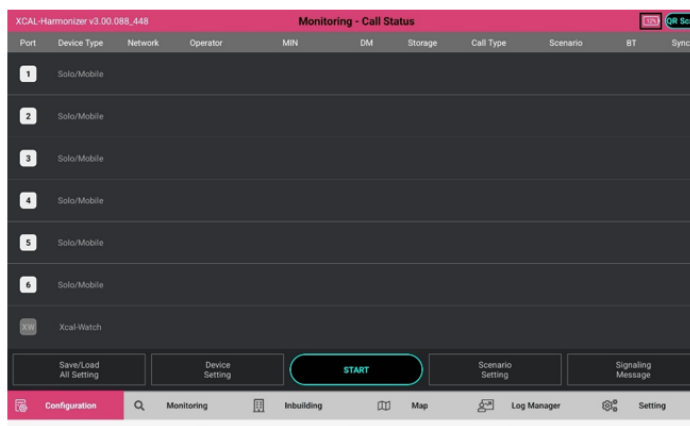
1. Added the battery icon on the top bar of the Harmonizer.



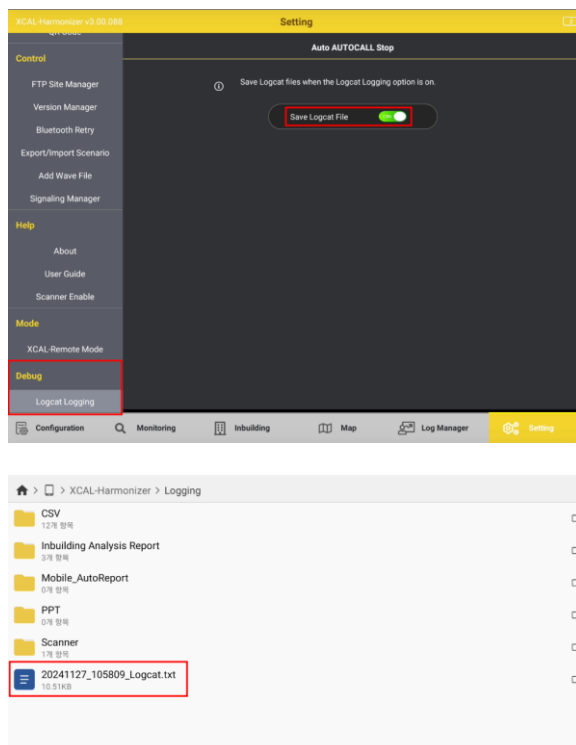
Before



After

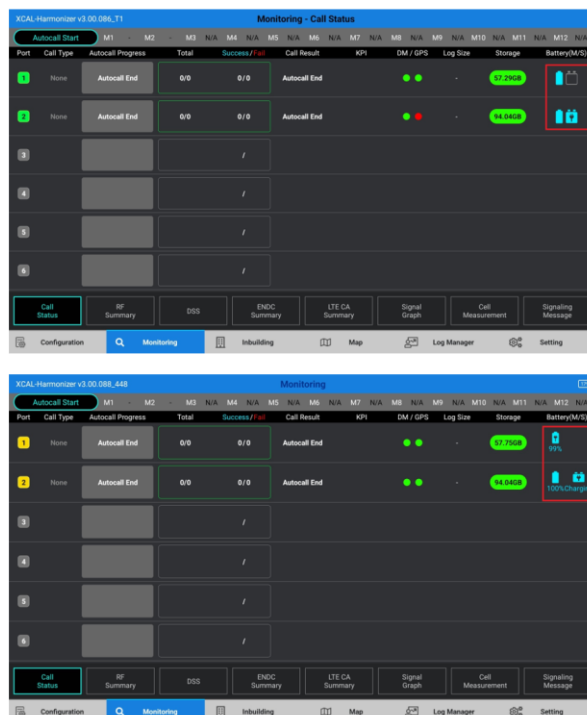


- Added Logcat Logging option to save debug files for debugging Harmonizer.



Changed

- Changed the Battery display format in the Monitoring option.

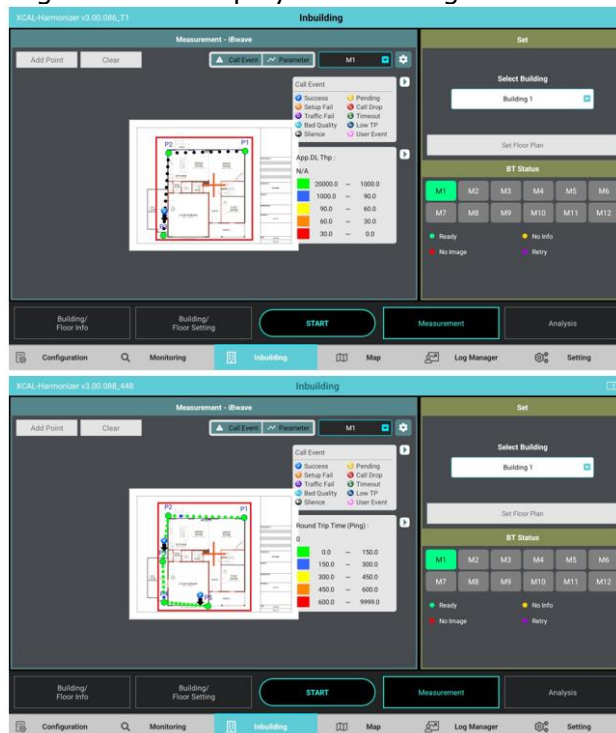


Before

After

Bug Fixed

1. Skip call occurs when proceeding with auto call after connecting to Harmonizer.
2. Legend is not displayed according to the RF value when measuring iBwave.



Before

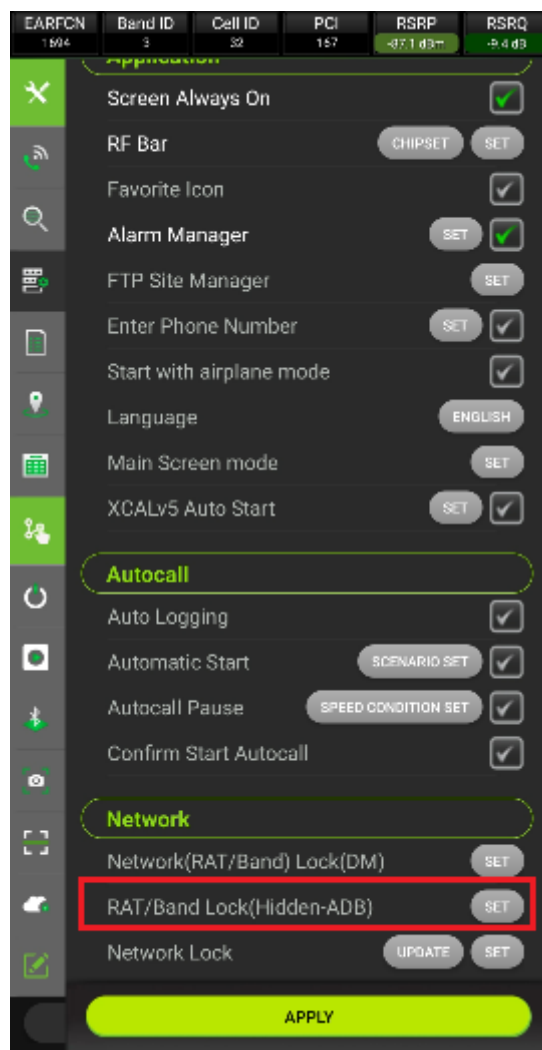
After

XCAL-Mobile/Solo 5.24.041

Release Date: 2024-11-18

Added

1. Modified to open all of the Control - Hidden-ADB menu through XML file.



Changed

1. Changed to log * when ESP key value is not obtained.

```

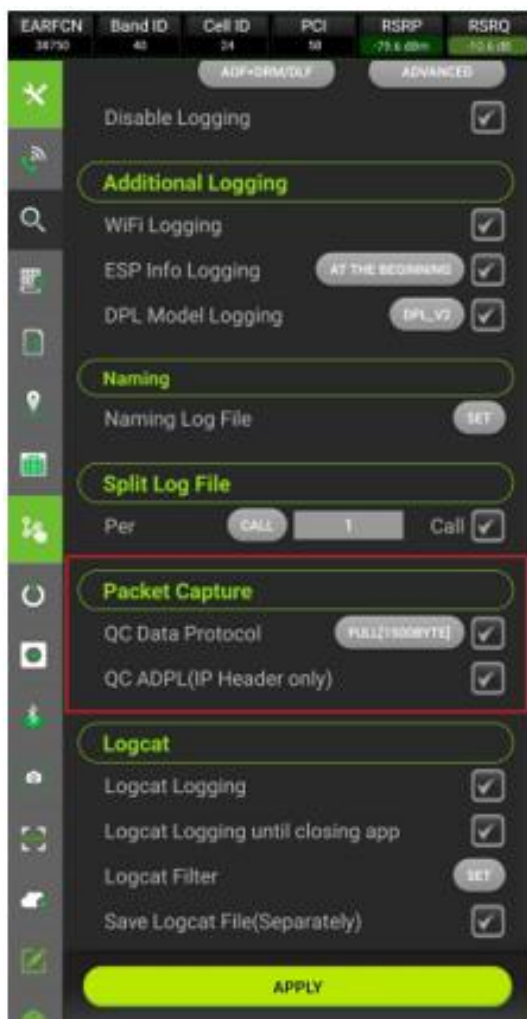
byEF74Type : ESP Information(19)
Version_number : 6
ESP Type : VoLTE(0)
HistoryIndex : 0
Protocol : 1
Src_IP : *
Dst_IP : *
SPI : *
Encryption : AES-CBC [RFC3602](2)
Encrypt_Key : 0x9354B2287A0E4201122DD5B881FB934E
Auth : HMAC-SHA-1-96 [RFC2404](1)
Auth_Key : 0x230DC4919CD8A9E2F76949BD11D85BF4
VOLTE_Call_Flow : Packet Message(0)
IP_SEC_Type : SMP(1)
NULL_ESP : FALSE(0)
Decode_ESP : FALSE(0)
Check_ESP_Auth : FALSE(0)
SPI_RX_C : *
SPI_TX_S : *
SPI_TX_C : *
Automatic : TRUE(1)

```

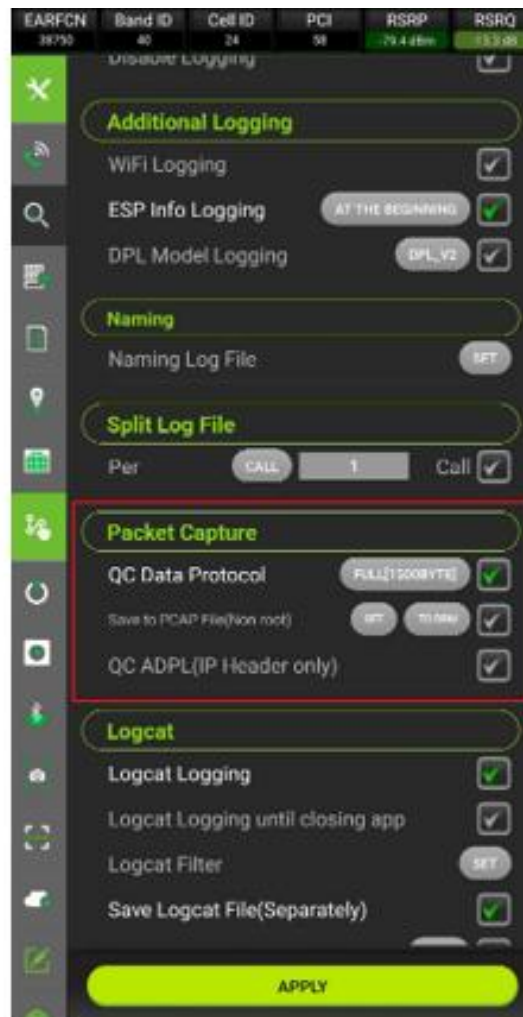
Bug Fixed

1. Fixed the issue where the browser does not close when the last call ends in HTTP Web (Chromium) type.
2. Fixed the phenomenon where the Save to PCAP File (Non-root) option in Setting> Log Data was disabled.

Before



After



XCAL-Harmonizer 3.00.086

Release Date: 2024-11-18

Added

Changed

Bug Fixed

XCAL-Mobile/Solo 5.24.040

Release Date: 2024-10-28

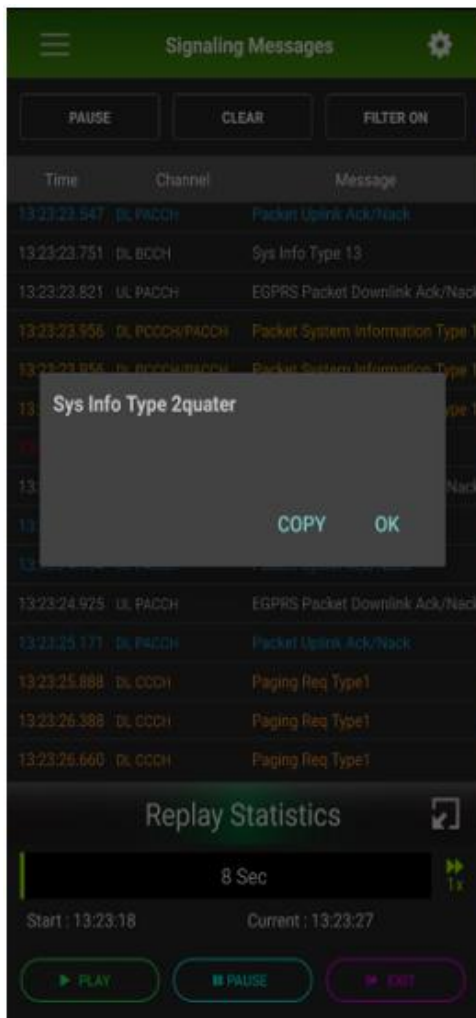
Added

1. Added name to X-axis and Y-axis at the bottom of the graph of WiFi View.

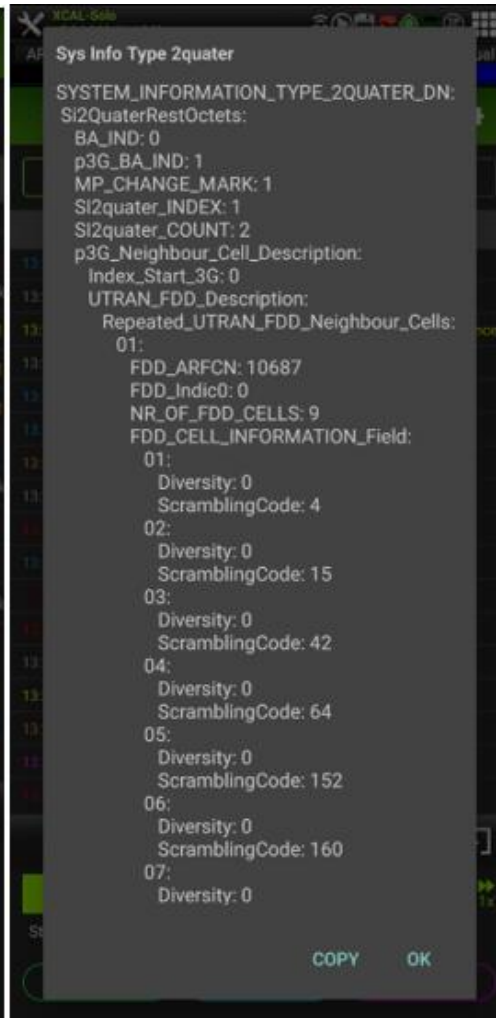


- Added Detailed information about GSM RR Signaling Messages for QC Chipset.

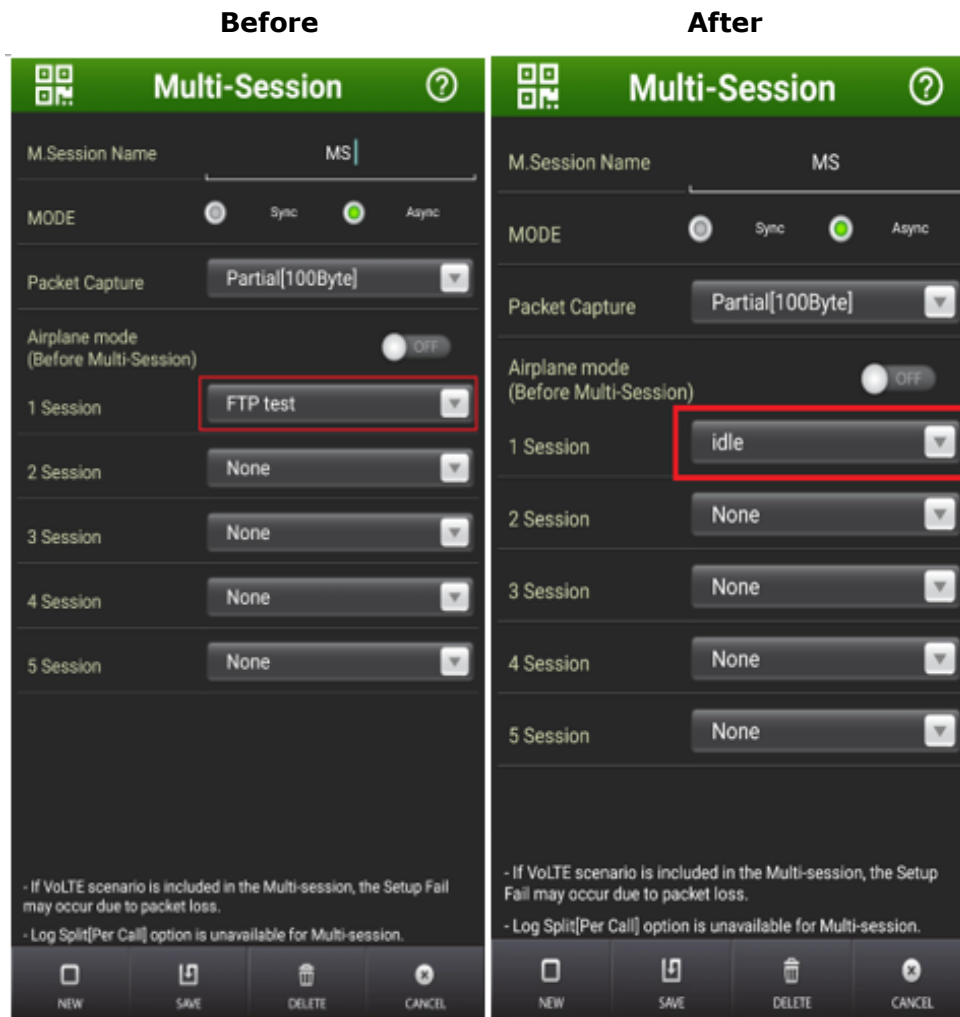
Before



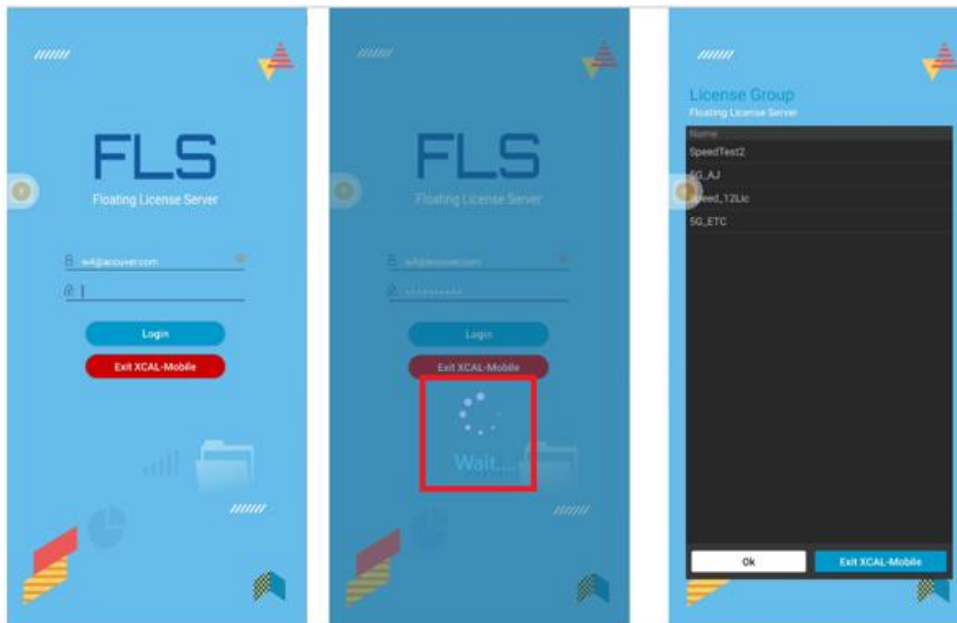
After



3. Added ability to select idle calls in Multi-Session scenarios.



- Added a Wait popup message during FLS login when we select the Login button.



- In PCTEL Seagull Master API 3.6.0.0 has been updated.
- Added empty value to Channel style in PCTEL.



Changed

- 1. Changed in the Network Lock(Band Lock) has been applied from ICD v9.0 and reflected in the ICD v9.04 document.
- 2. Changed name in 5G NR channel-style item in PCTEL.



3. Changed in some parameters of HTTP ETSI 102.240-2. Removed Parameters (HTTP Service Non-Accessibility [%], HTTP Setup Time[s]).

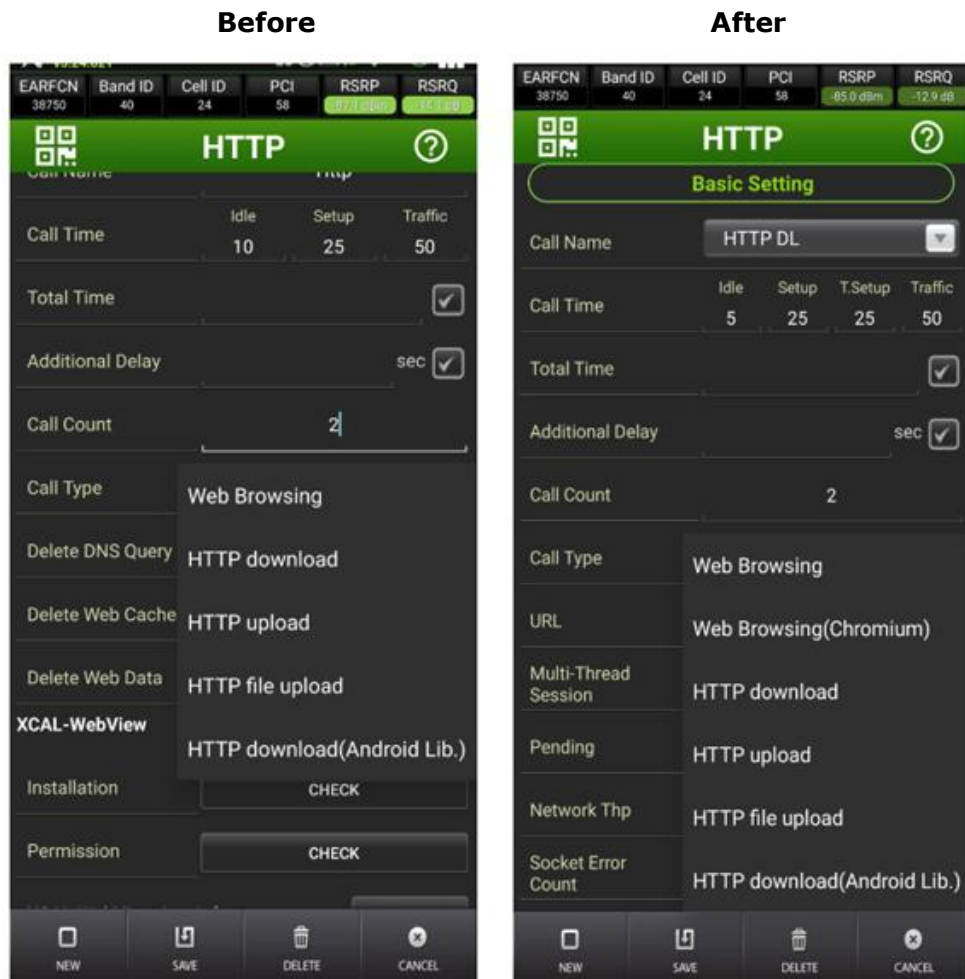
Before



After



- Changed the sub-call type in the index number of HTTP Web to the end.



- Changed the logic to be able to decode ESP packets collected by PCAP in VoLTE, Idle, PS Video, and Manual Logging.

Bug Fixed

- 1. Fixed the issue of SM-A156L terminal GSM/GPRS L3 Signaling Message logging failure.

Before

EARFCN
275

Band ID
1

Cell ID
99

PCI
458

RSRP
-82.3 dBm

RSRQ
-13.6 dB

Signaling Messages

PAUSE

CLEAR

FILTER ON

Time

Channel

Message

After

Signaling Messages

PAUSE

CLEAR

FILTER ON

Time

Channel

Message

14:56:21.566

CC

Setup

14:56:21.566

CC

Setup

14:56:21.666

CC

Call Proceeding

14:56:21.666

CC

Call Proceeding

14:56:22.217

GMM

Service Request

14:56:22.217

GMM

Service Request

14:56:23.468

CC

Alerting

14:56:23.468

CC

Alerting

14:56:23.505

CC

Connect

14:56:23.505

CC

Connect Acknowledge

14:56:23.505

CC

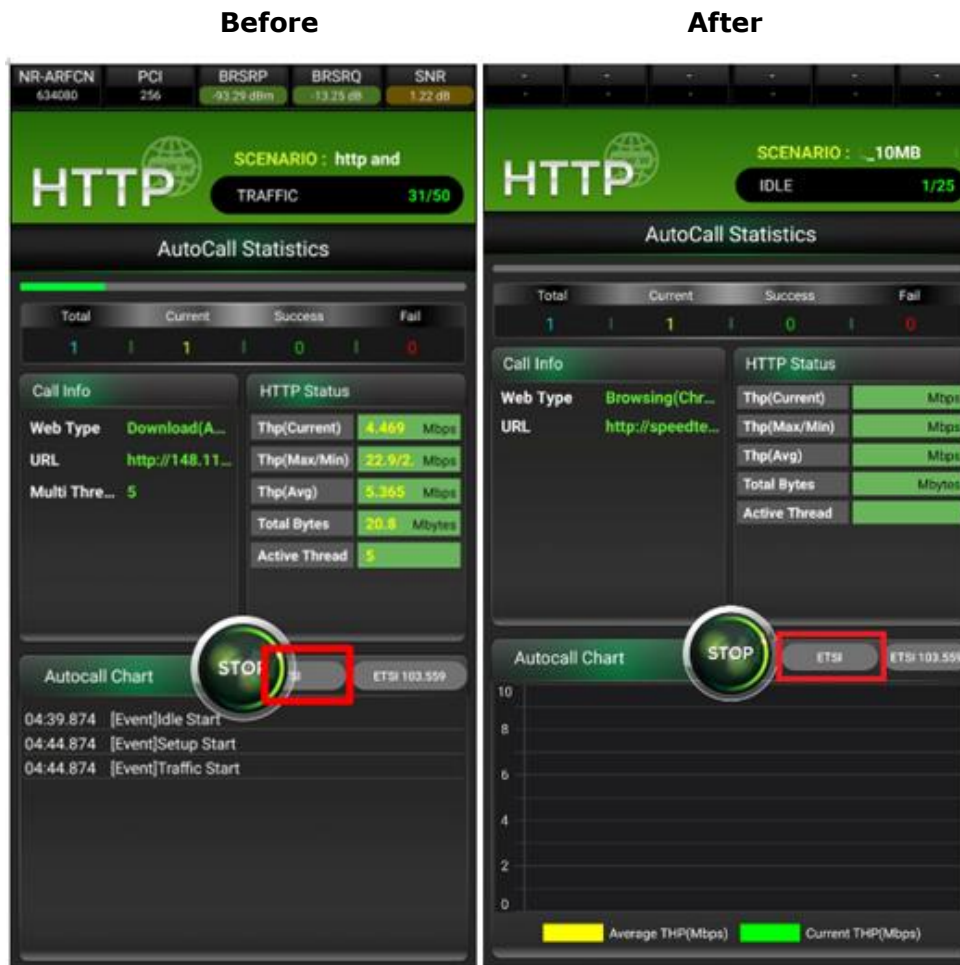
Connect

14:56:23.505

CC

Connect Acknowledge

- Fixed the ETSI button which is hidden behind the STOP button.



- Fixed App crash issue after saving the ESP Logging (At The Beginning) option.

XCAL-Harmonizer 3.00.085

Release Date: 2024-10-28

Added

Changed

Bug Fixed

1. Fixed app crash issue for tablets when the OS language is changed to French.
2. Fixed app crash issue for tablets When linking two or more devices simultaneously with Harmonizer kit or XCAL-Duo H/W.

XCAL-Mobile/Solo 5.24.037

Release Date: 2024-10-07

Resolved Ticket

- [XCAL-(Mobile)-Tech Support/ 5] HTTP Web browser TTFB

Autocall

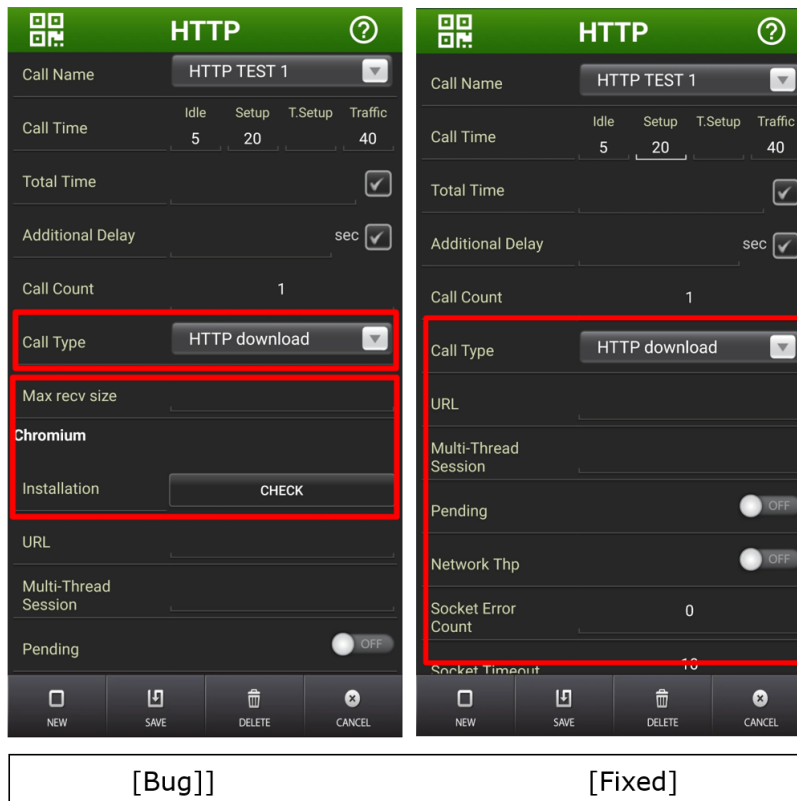
- [HTTP] Web Type

In the HTTP Web type, DNS Time has been removed from the contents displayed in the Autocall Chart.



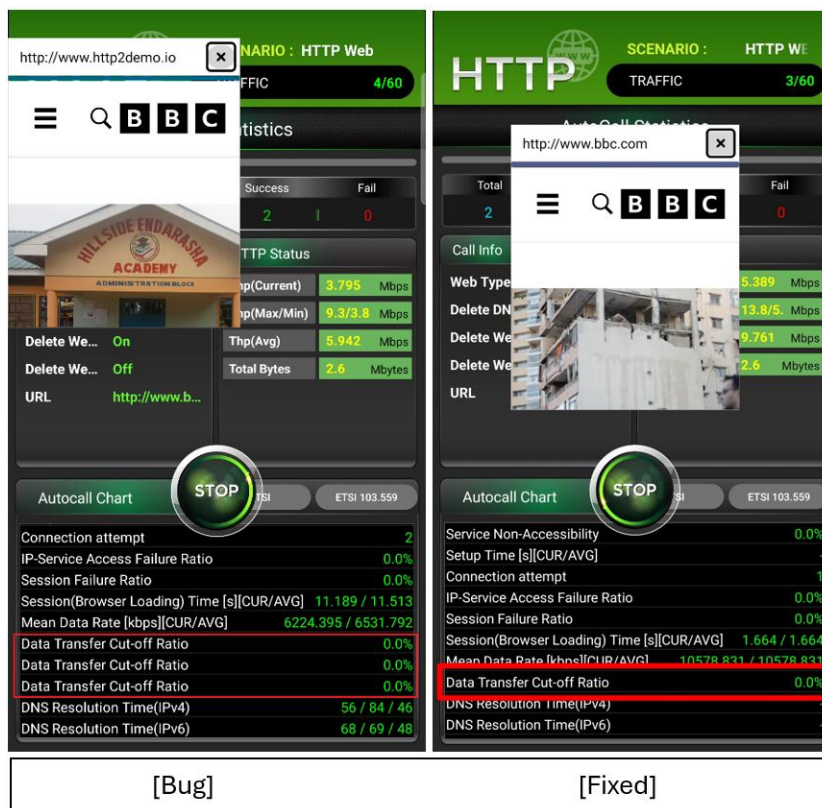
- [HTTP] Web Type

Fixed an issue where options that were only supported in Web Browsing (Chromium) in HTTP were also activated in other call types.



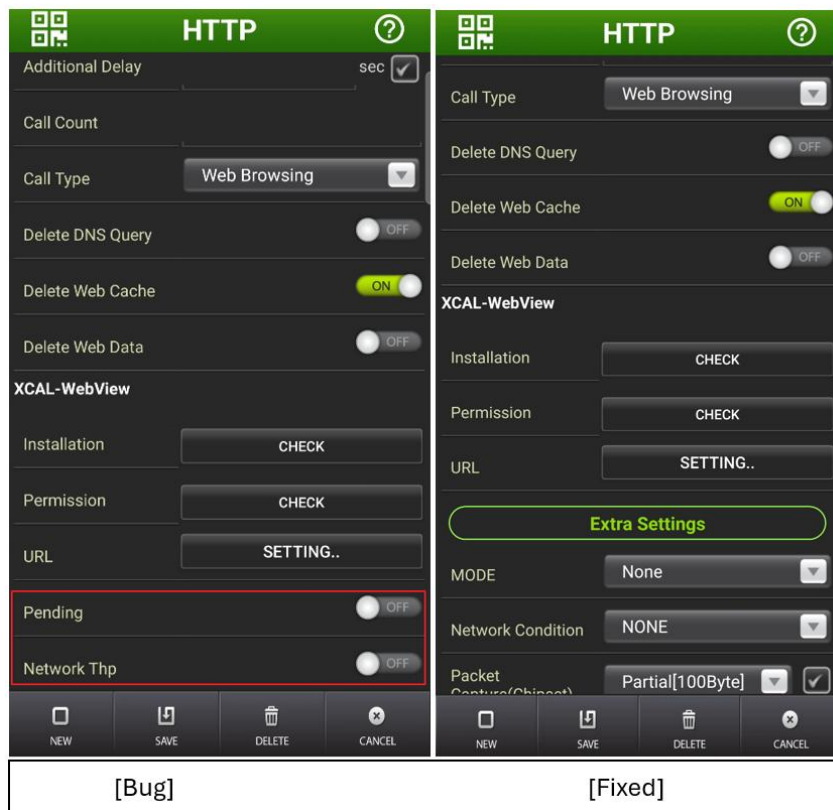
3. [HTTP]

Fixed the issue where the Data Transfer Cut-off Ratio in the ETSI KPI of HTTP was displayed in 3 lines.



4. [HTTP]

Fixed an issue where options supported only in Download Type were activated in other HTTP call type scenarios.



5. [HTTP]

Added ability to log events per section in HTTP Web type.

Events are DNS, TCP Connection, TTFB, and SSL Handshake sections.

RF View

1. [Chipset (SS)]

Changed to connect to the Samsung chipset when connecting Pixel 9 Pro Solo3.

Function

1. [Common]

Updated the Target SDK level of XCAL-Solo/Mobile from 31 to 34.

2. [Scanner]

[TSMA6B] ViCom 24.1 has been updated.

3. [Scanner]

[PCTEL] Seagull Master API 3.5.0.0 has been Updated.

Known Issue

XCAL-Harmonizer 3.00.084

Release Date: 2024-10-07

Autocall

RF View

Function

1. [Scanner] PCTEL
Seagull Master API 3.5.0.0 has been Updated.
2. [Scanner] PCTEL
Fixed the Scan view set configuration is not visible.

Known Issue

XCAL-Mobile/Solo 5.24.036

Release Date: 2024-09-23

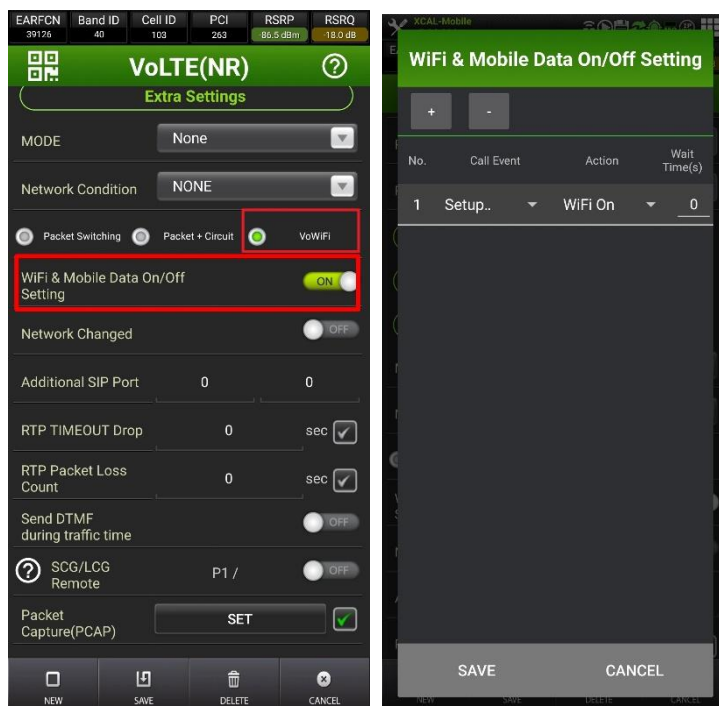
Resolved Ticket

1. [XCAL-(Mobile)-Tech Support/27] Samsung Lock Command update.
2. [XCAL-(Mobile)-Tech Support/21] No sound on S21 Ultra.
3. [XCAL-(Mobile)-Tech Support/15] Wifi On/Off feature in scenario
4. [XCAL-(Mobile)-Tech Support/ 3] Unknown Dialing during VoLTE call
5. [XCAL-(Mobile)-Tech Support/ 22] Numbers are hard to see when displayed on a light green or yellow background.
6. [XCAL-(Mobile)-Tech Support/ 12] Option for XCAL-Mobile Lite Android TCP Dump/ Packet Capture.

Autocall

1. [VoLTE]

Added WiFi and Mobile Data On/Off Setting option when using VoWiFi.



2. [VoLTE]

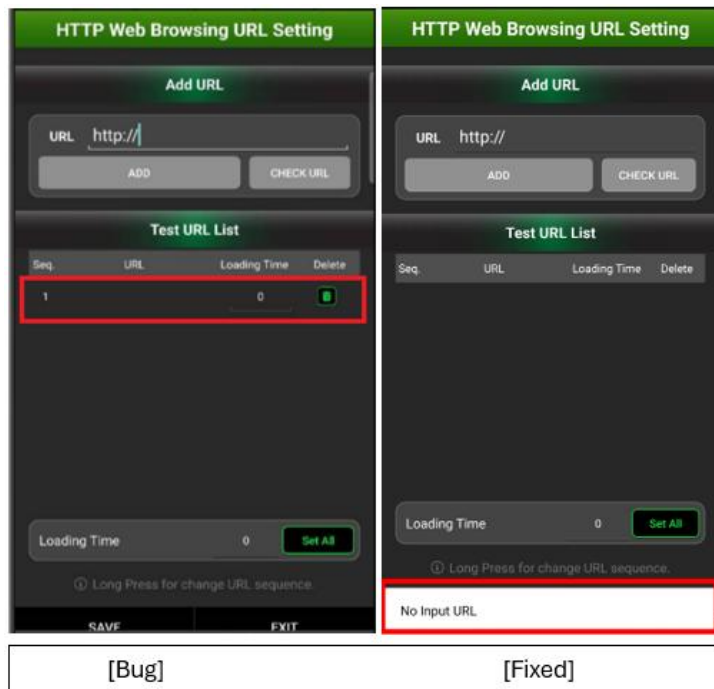
Fixed an issue where Traffic Start would be intermittently checked when the VoWiFi option was turned on.

3. [VoLTE]

Modified to force the app to wake up via WakeLock function to prioritize app tasks on CPU.

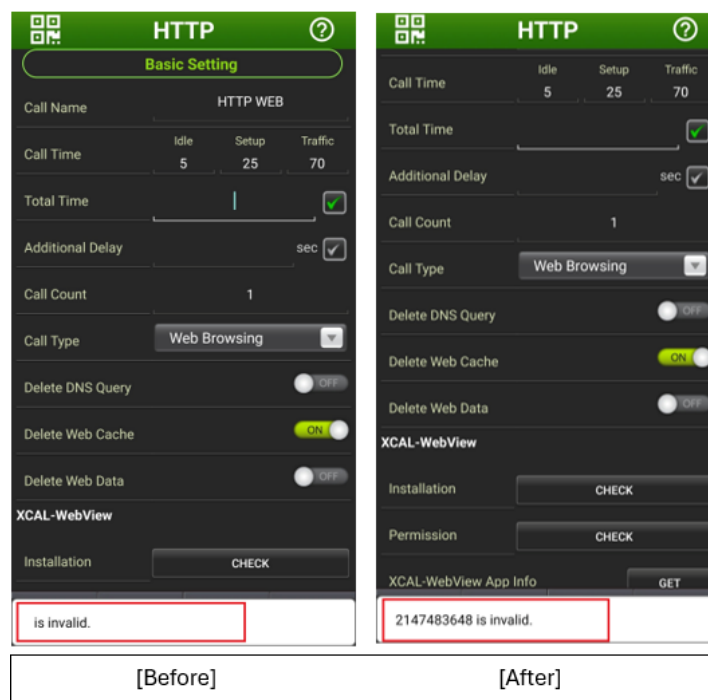
4. [HTTP]

Fixed an error where a URL would be added when clicking the Add button even if the URL value was empty in the URL Setting of the HTTP Web type.



5. [Autocall Common]

Fixed a display error in the pop-up that appears when entering a value outside the range of Total time.



6. [HTTP]

Added DNS Query Request and Response collected using Packet in HTTP Web type as events.

RF View

1. [RF Color]

Changed the color code displayed differently depending on the parameter value range in RF View.

Function

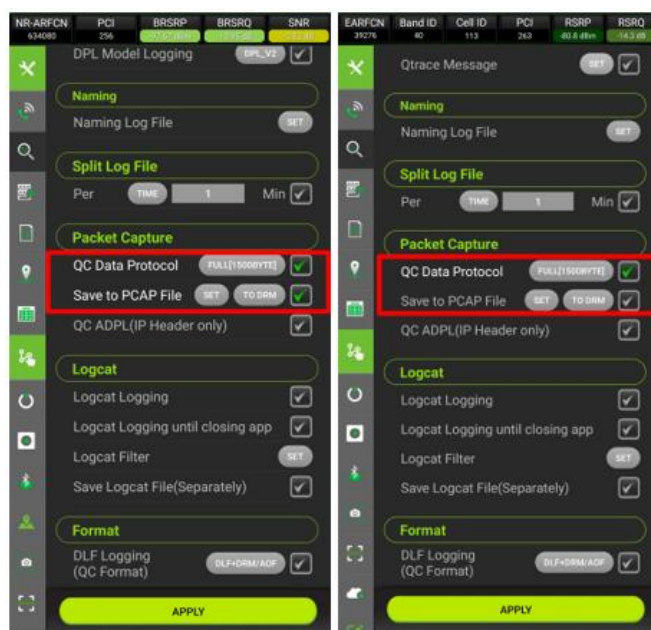
1. [Lite Version]

Changed in XCAL-Mobile Lite Version, the Packet Capture option has been changed to be enabled only if a license exists.

Changed When running the XCAL-Mobile Lite version, if the terminal does not have su authority even if a Packet Capture license exists, the Save to PCAP File option in Setting and the Packet Capture (PCAP) function in Scenario are changed to be disabled.

2. [Packet Capture]

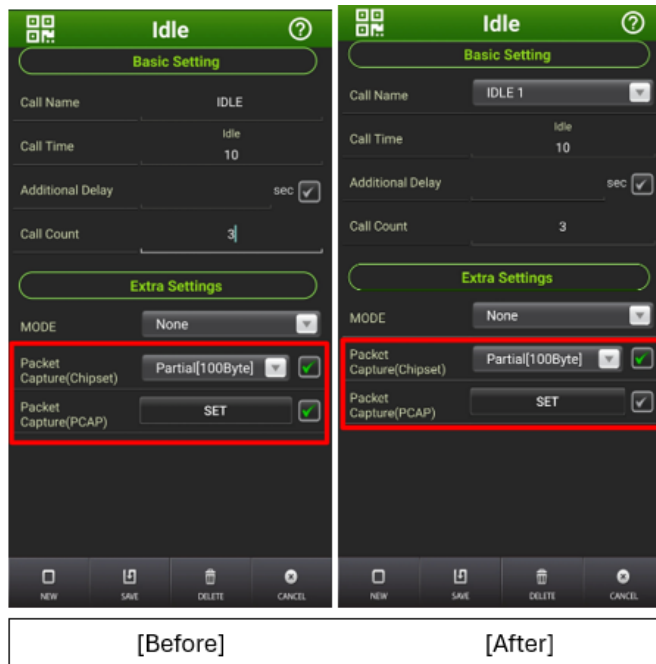
Changed the logic QC Data Protocol (or QC ADPL (IP Header Only)) option and the Save to PCAP File option cannot be turned on simultaneously in Setting-Log Data-Packet Capture.



[Before]

[After]

Changed the logic in the scenario: Packet Capture (Chipset) and Packet Capture (PCAP) cannot be turned on simultaneously.



3. [Network lock]

Changed according to the ICD v9.04 version update, the command has been updated to operate Network Lock on the latest Samsung Chipset terminals.

Known Issue

Known Issue

1. [Inbuilding]
Fixed an issue where the building list was not being deleted.
Fixed an issue that was preventing file types other than ibwc files from being displayed.
2. [Common]
Fixed Bluetooth connection between 6 devices not working properly.
3. [LogUpload]
Fixed APP Crash while uploading device logfile in log manager.
4. [Common]
Fixed the App crash phenomenon when selecting Enable Scanner on the initial screen.
5. [Common]
Fixed the issue where the Call Status window was not updated.

XCAL-Mobile/Solo 5.24.033

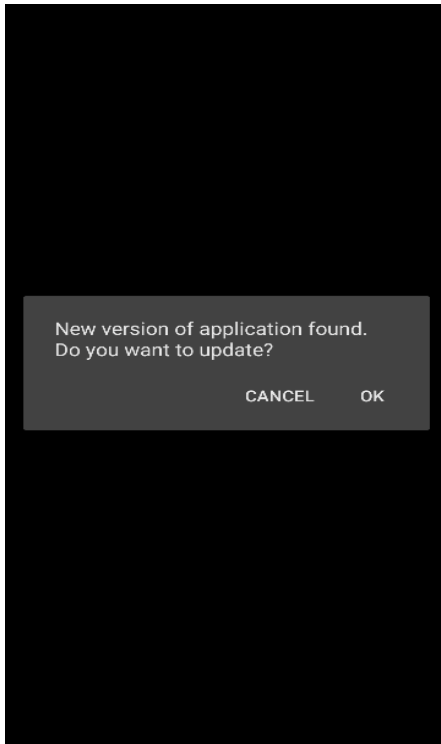
Release Date: 2024-09-02

Resolved Ticket

1. [XM-1214] Question about Wave file Logging to drm file using XCAL-Solo3 (20240808)
2. [XM-1217] Viber shuts down at call count:2

Autocall

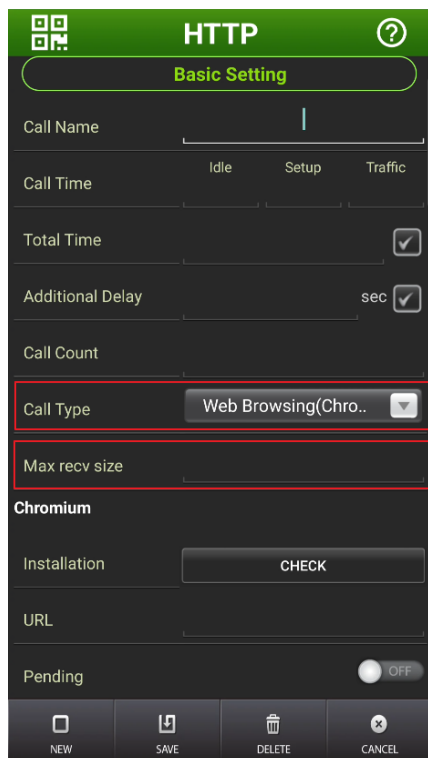
1. [Messenger Talk]
Fixed an issue where the waveform could not be confirmed on the analyzer when saving the MOS wave to a drm file in Messenger Talk.
2. [Messenger Talk/ Online Meeting]
Change When starting a call (Traffic start) in Messenger Talk or Online Meeting, the XCAL-Mobile/Solo app screen has been modified to be displayed on the front.
3. [YouTube]
Change Autocall Traffic Time Auto calculation formula.
Before: Video Duration + 10 sec
After: Video Duration + 60 sec
4. [Netflix]
Added the ability to automatically reject a version update pop-up.



5. [HTTP Call type > HTTP Web Browsing (Chromium)]

Added the Web Browser(Chromium) type in HTTP.

This type supports an option (Max recv size) that terminates the session when the specified number of bytes is received.



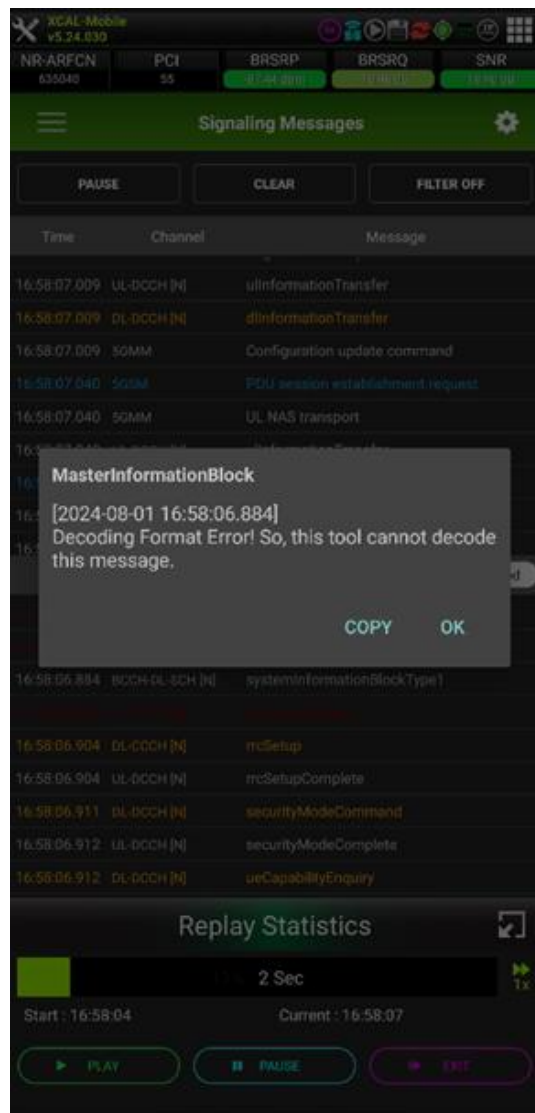
6. [HTTP Upload]

Changed the logic so that if the Http File Size is entered incorrectly, the scenario will not be saved and a pop-up will occur.

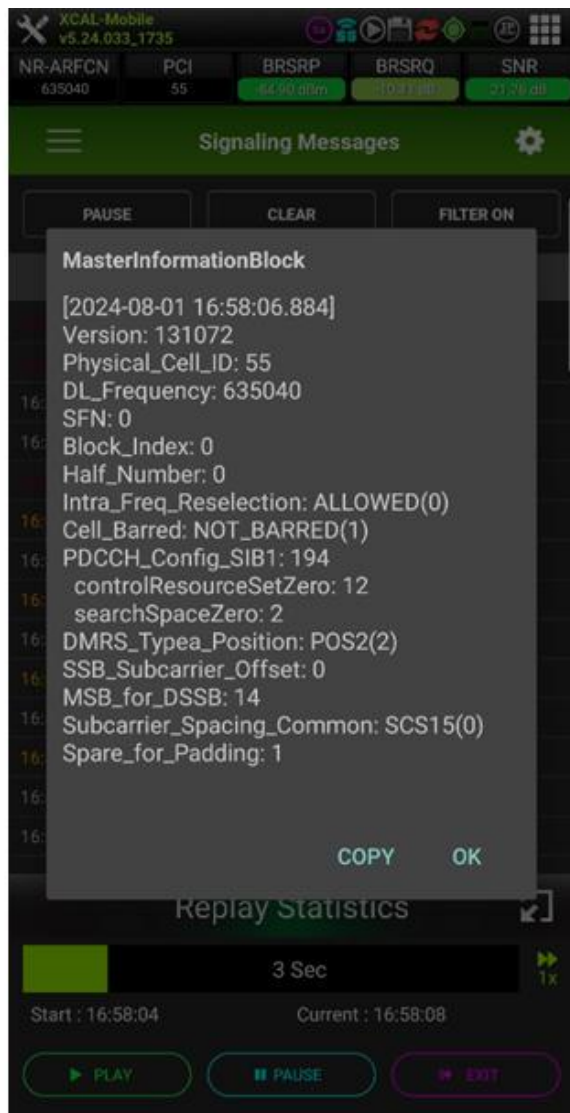
RF View

1. [Qualcomm]

Added ability to decode 0xB821 (Version 24) in the Signaling message view.



[Before]



[After]

Function

1. [Inbuilding]

Fixed app crashes when clicking the Info icon in Settings.

2. [Inbuilding]

Fixed an issue where drawing information and floor settings would be reset when exiting the Floor Setting screen.

3. [inbuilding]

Fixed an issue where changing the image in Floor Setting would not be applied when there are more than 10 floors.

4. [inbuilding]

Fixed an issue where an ibwc file would be additionally created in the Logging folder when measuring by loading an ibwc file.

5. [Harmonizer Mode]

Fixed an issue where Solo would not display Device name and Phone number after losing connection to XCAL-Harmonizer.

Known Issue

XCAL-Harmonizer 3.00.082

Release Date: 2024-09-02

Autocall

1. [Inbuilding-Autocall]
Fixed an issue where the device would not perform Autocall when measuring Autocall in Inbuilding.
2. [Inbuilding-Autocall]
fixed an issue where Autocall would be displayed as in progress when connecting a terminal that is measuring Autocall, ending it, and moving to the Inbuilding measurement screen.

RF View

1. [Monitoring]
Fixed app crash issue when moving to Monitoring tab.

Function

1. [Map]
Fixed an issue where Call Status would not be updated.
2. [Call Status]
Fixed an issue where terminal information was not displayed when re-entering the Monitoring tab after moving to another menu.
3. [Inbuilding-ibwc]
Changed the Import iBwave map function so that only ibwc files are listed.
4. [Bluetooth pairing]
Improved the phenomenon of Bluetooth pairing failing. RF related messages are not transmitted in the connecting pop-up when connecting Bluetooth.
5. [Inbuilding-ibwc]
Fixed an issue where the cancel button in the Import iBwave map feature would intermittently not work.
6. [Inbuilding]
Fixed an issue where the Building list would not be deleted.

XCAL-Mobile/Solo 5.24.031

Release Date : 2024-08-19

JIRA Resolved

1. [XM-1207] I can't the scenario with the QR code scan
2. [XM-1215] Interface Xiaomi 13T Pro (23078PND5G) with XCAL-Solo
3. [XM-1206] Inbuilding Google Map (Real Time Map) Does Not Support Satellite View

Autocall

1. [inbuilding]
Fix 0x30E1 logging while Real time map
2. [Online Meeting]
Added feature support for Webex.
3. [inbuilding]
Change Pre-moving point time between Point start/stop and Floor stop
4. [inbuilding]
fix Motion tracking Modifying viewpoint expansion
5. [inbuilding]
Add satellite map mode to real-time map

RF View

1. [Qualcomm Log Mask]
Updated the Log Mask
 - Common - UIM : Check/Uncheck updated
 - LTE - Lower Layer1_1 : Delete item
 - LTE - Management Layer1 : Check/Uncheck updated
 - LTE - NB1 FW : Added item
 - Event Report_Common - Common-DS : Added item
 - Event Report_Common : Added item
 - Event Report_LTE - LTE-LTE-RRC : Added item
 - Event Report_5G NR - 5G NR-RRC : Added item
 - Event Report_5G NR - 5G NR-ML1 : Added item

Function

1. [RAT/Band Lock(Hidden-adb)]
Add model SC-52E,SCG26
2. [inbuilding]
Fixed an issue where the vertical image was changed to horizontal.

Known Issue

XCAL-Harmonizer 3.00.081

Release Date : 2024-08-19

Autocall

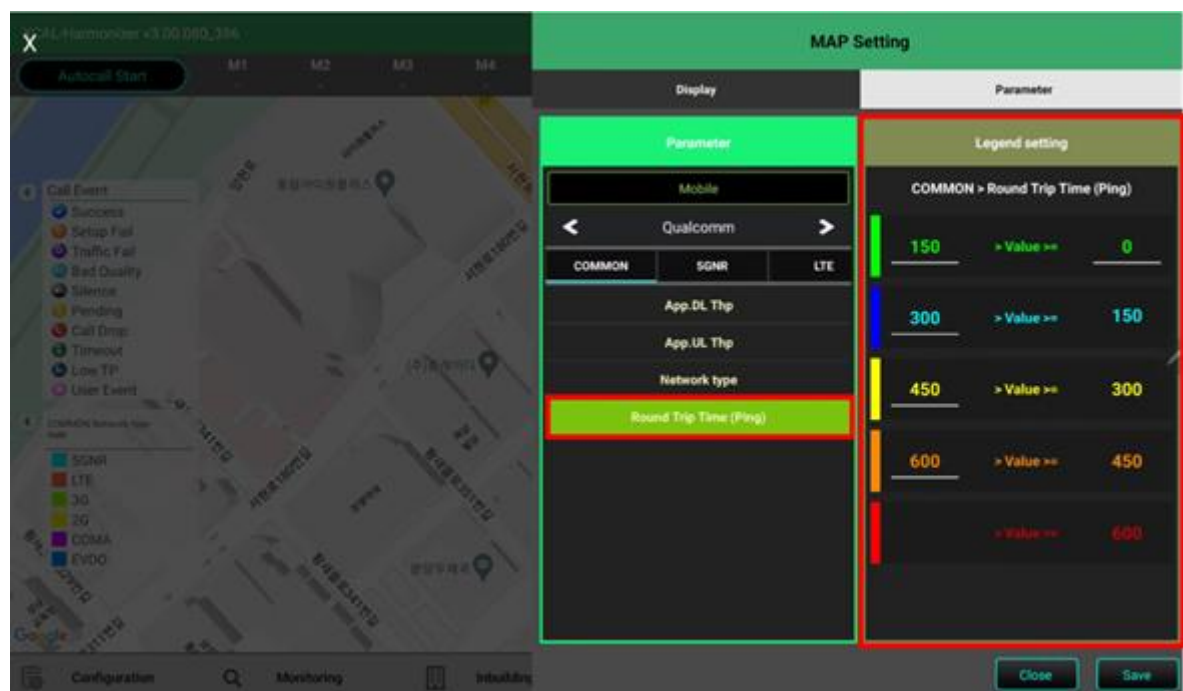
RF View

Function

1. [MAP]

Add the ping RTT Parameter

- This feature takes a ping RTT value as a parameter and plots it on a map.



XCAL-Mobile/Solo 5.24.029

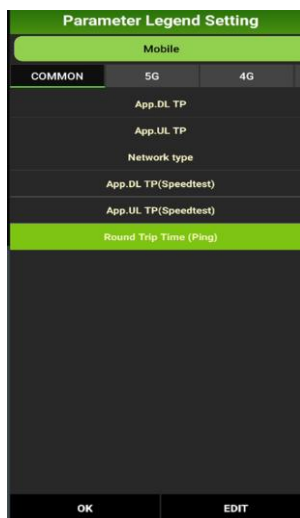
Release Date : 2024-08-05

JIRA Resolved

1. [XM-1172] Inbuilding. Option to disable confirmation window
2. [XM-1187] No SIP messages on S23
3. [XM-1204] Crashing slolo app with Xiaomi 14
4. [XM-1186] Conflict between versions of XCAL Netutils
5. [XM-1173] Inbuilding - Ping RTT parameter on map
6. [XM-1191] CLONE - [T-Mobile CZ] Wrong Time in GPS Status window
7. [XM-1142] Add applications for VQML testing

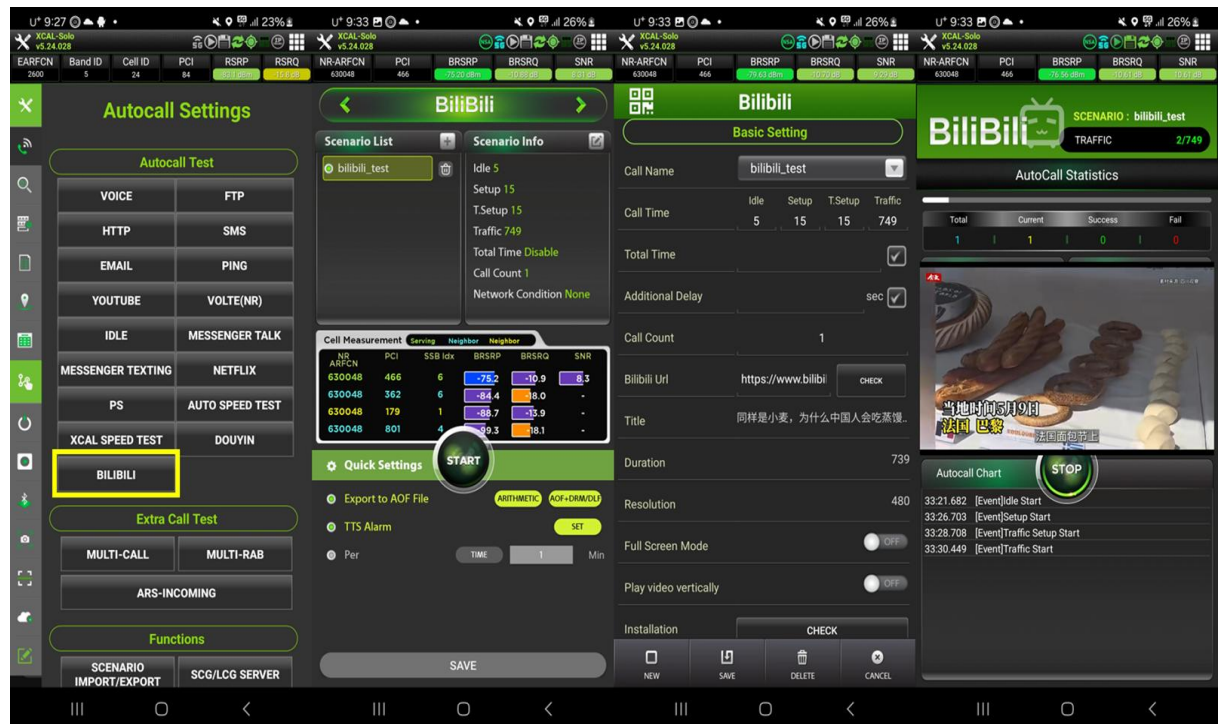
Autocall

1. [Messenger Talk/Texting]
Added support for Zalo Messenger app in Messenger Talk/Texting.
2. [Online Meeting]
Add Send type, Traffic start condition notation to Call Info in Autocall Statistics screen of Online Meeting.
3. [Mobile SNS]
Fixed an issue where it was not possible to determine if a mobile SNS-Instagram autocall was successful.
4. [MAP] Add the ping RTT Parameter
This feature takes a ping RTT value as a parameter and plots it on a map.



5. [BiliBili]

Add to Bilibili Autocall



6. [Youtube]

Completed and added Chromium 64bit development

Apps developed in 32-bit are not recommended or supported on modern devices. We've redeveloped Chromium to 64-bit so that it can be used on modern devices.

7. [inbuilding]

Pre-Moving, Add first Point start logging, Change Floor end X,Y Coordinate.

Inbuilding Statistics Measurement Position Info Measure Type	Inbuilding Statistics Measurement Position Info Event	Inbuilding Statistics Measurement Position Info Pos Idx	Inbuilding Statistics Measurement Position Info X Pos	Inbuilding Statistics Measurement Position Info Y Pos
Moving	floor start	0	434	934
Moving	point start	0	434	934
Moving	point end	0	638	205
Moving	point start	1	638	205
Moving	point end	1	1415	101
Moving	point start	2	1415	101
Moving	point end	2	1674	795
Moving	floor end	0	1674	795

RF View

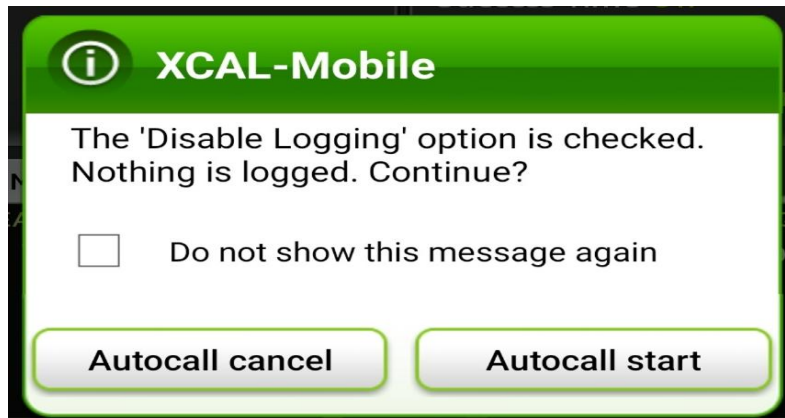
1. [3G Summary/3G Custom Graph]

Fixed an issue where values were remaining in 3G Summary and 3G Custom Graph.

Function

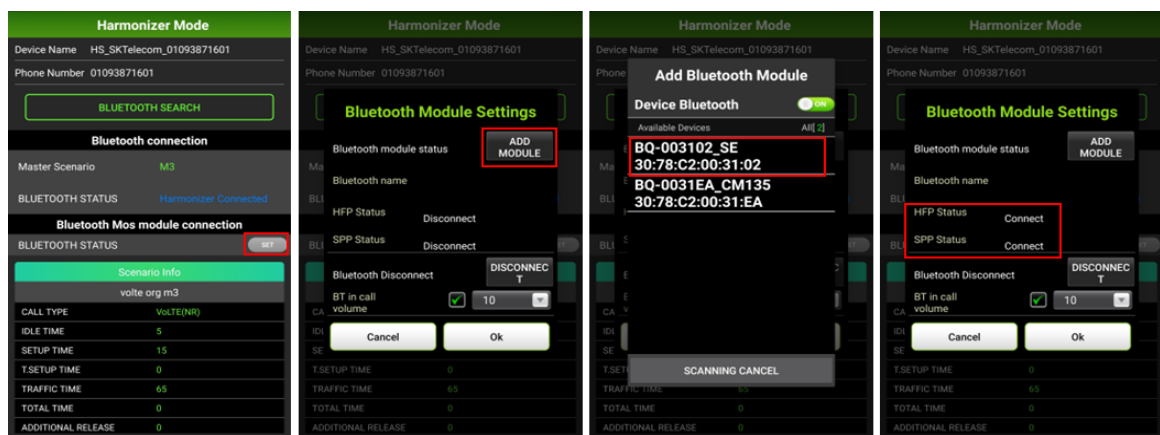
1. [Disable Logging]

When Autocall starts where the 'Disable Logging' option is turned on, a pop-up window is added to confirm application of the option.



2. [Harmonizer Mode-Bluetooth Module Setting]

An option to set the Bluetooth module has been added to Harmonizer Mode.



3. [Inbuilding]

Fixed an issue where Image name was not logged when measured with Pre-Moving type.

Known Issue

1. [Installation]

The exception was made by asking Samsung Electronics for the part that 'judged as a malicious app' that occurred when installing APK on Samsung smartphones. Samsung Electronics' F/W exception handling version is from ASKS v8.1 Release 20240723. Settings > Mobile Phone Information > Software Information > Security Software Version

XCAL-Harmonizer 3.00.079

Release Date : 2024-08-05

Autocall

1. [MOS Setting]

The Solo Play Volume range value has been deleted, so I added it again.were remaining in 3G Summary and 3G Custom Graph.

2. [MOS Setting] The Bluetooth MOS Test option was added.

* Turned on, it is Bluetooth MOS.

* Turned off, it is Audio MOS.

RF View

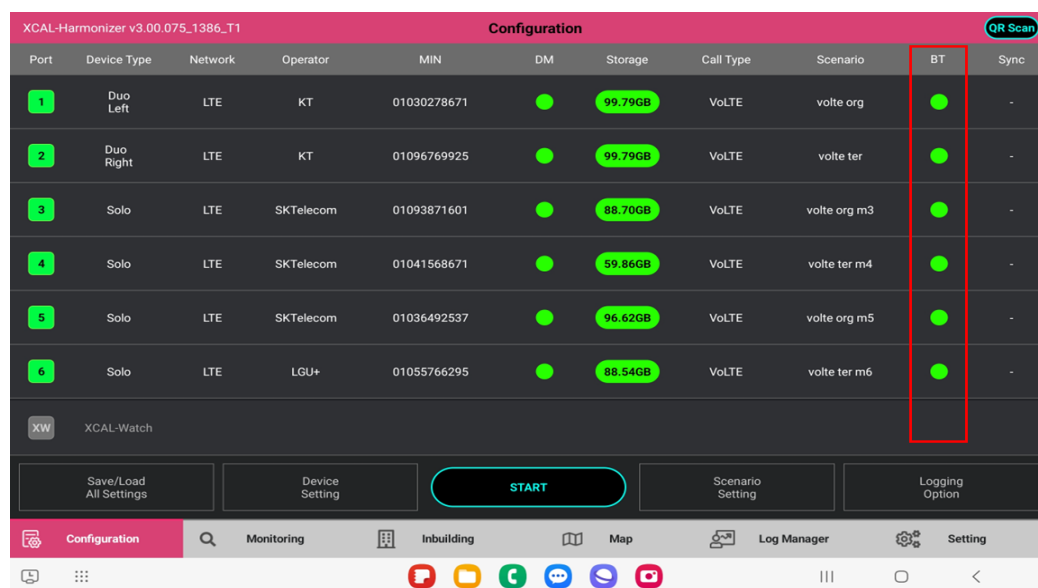
Function

1. [Bluetooth module setting]

The Bluetooth module setting menu provided in Setting has been deleted. This is because the BT module is connected by the device and is no longer manipulated by the Harmonizer.

2. [Configuration]

A UI has been added to check the status of Bluetooth module connection.



XCAL-Mobile/Solo 5.24.027

Release Date : 2024-07-22

JIRA Resolved

1. [XM-1186] Conflict between versions of XCAL Netutils
2. [XM-1190] XCAL0SOLO: Youtube fixed quality play issue.
3. [XM-1194] What is Media Quality: Default in YouTube Call?
4. [XM-1195] The app crashes (240717)

Autocall

1. [Inbuilding]
 - fix Premoving second idx 0x30E1 logging
2. [Inbuilding]
 - fix loading ibwc file
3. [Douyin]
 - Add to Douyin Autocall



4. [Simple EMOS]
 - Changed the traffic start condition UI to be activated when the VoLTE logo is long pressed in the Simple EMOS scenario.
5. [Multi-Session]

Fixed an issue where the info separator for each session was being logged incorrectly in the Multi-Session type.

6. [MOS]

Fixed an issue where MOS information was missing in the 0xA0FF Autocall Status log.

RF View

1. [SUPL Message]

Added a reference message to the parser so that the values can be displayed in the SUPL message view.

Function

1. [Bluetooth module]

Fixed an issue where the app crashes when connecting the Bluetooth module of the XCAL-Solo app in the Harmonizer kit.

XCAL-Harmonizer 3.00.077

Release Date : 2024-07-22

Autocall

RF View

Function

Known Issue

XCAL-Mobile/Solo 5.24.024

Release Date : 2024-07-08

JIRA Resolved

1. [XM-1163] (n/a) Inbuilding Plotting issue on XCAL-Mobile 'pre-moving' and 'DRM '
2. [XM-1175] (n/a) Inbuilding: any type does not work perfectly
3. [XM-1180] No response to commands in XCAL-IoT

Autocall

1. [HTTP]

DNS Resolution time has been added to the ETSI KPI of HTTP Web type.



Autocall Chart	
Service Non-Accessibility	0.0%
Setup Time [s][CUR/AVG]	-
Connection attempt	1
IP-Service Access Failure Ratio	0.0%
Session Failure Ratio	0.0%
Session(Browser Loading) Time [s][CUR/AVG]	8.403 / 8.403
Mean Data Rate [kbps][CUR/AVG]	17285.835 / 17285.835
Data Transfer Cut-off Ratio	0.0%
Data Transfer Cut-off Ratio	0.0%
Data Transfer Cut-off Ratio	0.0%
DNS Resolution Time(IPv4)	184/17/28
DNS Resolution Time(IPv6)	

2. [inbuilding]

Change the Horizontal image to apply normally

3. [inbuilding]

Change the floor end value to the X, Y value coordinates of the last point when pre-moving is measured

4. [inbuilding]

Change version 0 to 1 Pre-Moving.

5. [inbuilding]

fix the issue of 0x30E1 logging when measuring the real location of real timemap, image

6. [inbuilding]

Add pop-up when loading 0x30E2 to log inbuilding replay without 0x30E2

7. [inbuilding]

No Image file load button when entering floor setting

8. **[inbuilding]**

A problem that is set in Default mode on the measurement screen after TAB, JPG File is applied

9. **[inbuilding]**

The problem of disappearing between points after Autocall measurement

Function

1. **[AOF]**

Image name field has been added to AOF Inbuilding Parameter

2. **[AOF]**

Add version field in indoor measurement info

3. **[TSMA6B]**

Request to add LTE DL/UL option and update Frequency/Band

4. **[PCTEL]**

Fix BlindScan Status: wait

XCAL-Harmonizer 3.00.076

Release Date : 2024-07-08

Autocall

1. [Iperf]

Added to prevent scenario from being applied if the XCAL-Iperf APK of the linked Client is not installed

RF View

Function

1. [Log file manager]

Fixed it so that the log file is visible and refreshed to be updated in log file manager

Known Issue

XCAL-Mobile/Solo 5.24.022

Release Date : 2024-06-25

JIRA Resolved

- 1. [XM-1137] Autocall with no logging**
- 2. [XM-1145] Swapped BTS sectors on the map**
- 3. [XM-1152] (n/a) parameter is not visible if bar is yellow**
- 4. [XM-1150] RCS-Link autocall does not work on Solo v5.24.019_1329**

Autocall

1. [MessengerTalk]

The WeChat messenger app has been added to Messenger Talk.

2. [Iperf]

separated Iperf Autocall into a separate app. fixed to prevent autocall start if XCAL-Iperf is not installed.

Function

1. [RF View]

Changed the RGB color code for yellow of RF Value to a darker shade.

2. [5GNR-ML1 Parameter]

Added 5GNR-ML1 Parameter in Qualcomm Event Report only.

3. [Disable Logging]

Added "Disable logging" option in the Log data settings.

4. [Map]

Fixed an error in the sector direction display of base stations.

5. [Inbuilding]

Added logging of Inbuilding's Image name.

6. [Inbuilding]

Fixed inbuilding autocall point logging error, add delay during point 1 ~ 2.

XCAL-Harmonizer 3.00.075

Release Date : 2024-06-25

Autocall

1. [Youtube]
2. Fixed an issue where YouTube fixed mode does not start

RF View

Function

Known Issue

1. [Iperf]
Client XCAL-Iperf does not include exception handling for not installing a separate APP.

XCAL-Mobile/Solo 5.24.020

Release Date : 2024-06-10

JIRA Resolved

- 5. **[XM-1121] Solo Logging not stopping**
- 6.

Autocall

- 3. **[TWAMP]**
Modified the Session Range value from (1~5) to only 1 when measuring ETSI Traffic Pattern.
- 4. **[Speed Test]**
Modified the success criteria for XCAL Speed Test.

Function

- 7. **[Qualcomm Diag Request]**
Fixed an issue where there was an error in AOF naming when using the Split function.
- 8. **[Solo2 / AOF]**
Fixed an issue where the app would crash when measuring HTTP with the AOF option turned on in Solo2.

Known Issue

1. **[MediaTek chipset]**

fix issues that failed to display RF data from XCAL-Solo on SM-A156(A15 device)

XCAL-Mobile/Solo 5.24.019

Release Date : 2024-05-27

JIRA Resolved

- 7. [XM-1121] Solo Logging not stopping**
- 8. [XM-1128] The converted dlf file cannot be opened with QCAT**
- 9. [XM-1112] TWAMP Summary on Main Screen**
- 10.[XM-1114] LICENSE Cannot Recognize IMEI**
- 11.[XM-1123] Samsung A34 DM port not connecting to solo box**
- 12.[XM-1127] A15 does no display any RF data in XCAL-Solo**

Autocall

5. [TWAMP]

Modified the Session Range value from (1~5) to only 1 when measuring ETSI Traffic Pattern.

6. [Speed Test]

Modified the success criteria for XCAL Speed Test.

- Existing: If any of DL, UL, or Ping succeeds, it is considered successful.
- Changed: DL, UL, and Ping must all succeed to declare success

7. [Speed Test]

Fixed to automatically calculate the 'XCAL-Speed Test' Traffic time.

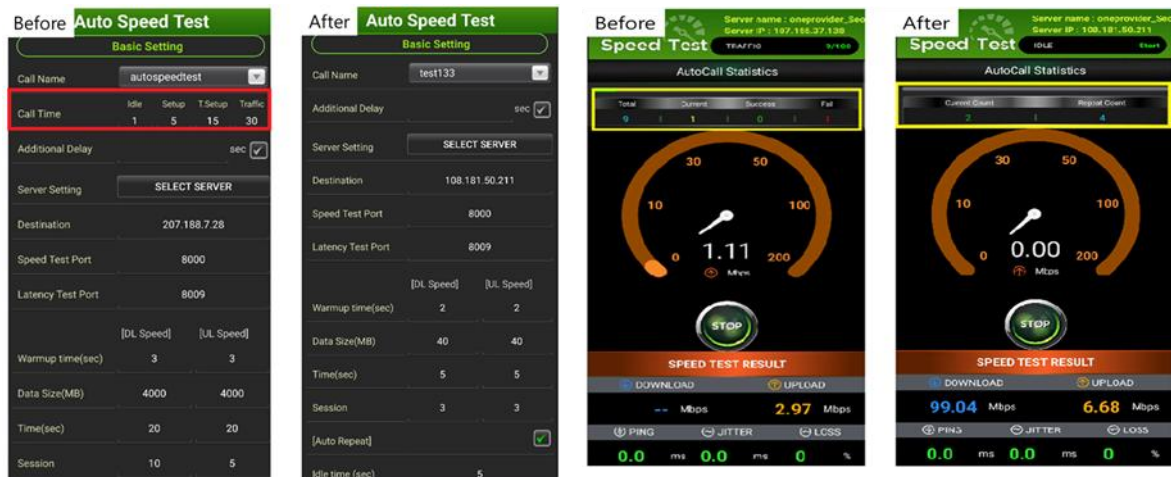
Traffic Time = DL Warm up + DL Speed Time + UL warm up + UL Speed Time + Ping Test time (10 sec) + 5 sec

8. [TWAMP]

Fixed an issue where the call name was displayed incorrectly when TWAMP Autocall in Main Screen Mode 2 to display correctly.

9. [Speed Test]

Changed the way AutoCall Statistics is represented in 'Auto Speed Test' and removed the Call Time item from the Autocall Scenario Setting window accordingly.



Function

9. [Qualcomm Diag Request]

Fixed the data length error of 0xAFF1.

10.[Smart Throughput]

Added 0xEF74(97) Mobile Total (Interface) Throughput.

Uses an API that collects throughput by interface.

11.[Autocall Status]]

The strInfo value of 0xA0FF (2) has been changed to be logged the same as the Info value of Call Event.

12.[Log Naming / AOF]

Fixed an issue where there was an error in AOF naming when using the Split function.

13.[Solo2 / AOF]

Fixed an issue where the app would crash when measuring HTTP with the AOF option turned on in Solo2.

Known Issue

2. [MediaTek chipset]

fix issues that failed to display RF data from XCAL-Solo on SM-A156(A15 device)

XCAL-Mobile/Solo 5.24.017

Release Date : 2024-05-13

JIRA Resolved

1. [XM-1118] Solo crashes with Xiaomi 12 and Xiaomi 13

2. [XM-1105] XCAL-Mobile autostart time

Autocall

1. [Voice/VoLTE/PS Video]

In the MOS Setting options, the default value of the Save wave stream to DRM file option has been changed to be checked.

Function

1. [Log Naming]

Fixed an issue where the OK button in the pop-up was deactivated when using the After-test option.

2. [Qualcomm / LogMask]

The Log Mask has been changed to provide a recommend value below.

- 1685 EVENT_LTE_ML1_STATE_CHANGE
- 1501 EVENT_LTE_RACH_ACCESS_START
- 2690 EVENT_LTE_RACH_ACCESS_RESULT_V2
- 2689 EVENT_LTE_RACH_ACCESS_START_V2
- 3291 EVENT_LTE_RACH_ACCESS_RESULT_V3
- 3292 EVENT_LTE_RACH_ACCESS_START_V3

3. [Solo2 / Measuring]

Fixed an error where DM disconnected after logging ended.

4. [XCAL-Mobile / Bluetooth Module Auto Connect]

Fixing the phenomenon of incorrectly displaying dedicated options that should be displayed in XCAL-SOLO with MC-CM135 configuration.

5. [AOF Logging]

Fixed an issue where entries for the Application Info packet group were missing from logging.

XCAL-Harmonizer 3.00.074

Release Date : 2024-05-13

There is no revision history. Just updated version code for XCAL-Mobile/Solo connection.

XCAL-Mobile/Solo 5.24.013

Release Date : 2024-04-29

JIRA Resolved

1. [XM-1077] Improvements for CA View and Accessibility notification
2. [XM-1078] Favorite icon
3. [XM-1091] XCAL-Solo.v5.24.009 crashes when starting Manual Logging
4. [XM-1092] Colour configuration
5. [XM-1093] Graph Synchronization in RF View
6. [XM-1101] Empty WiFi Parameter

Autocall

1. [VoLTE/FTP/PS Video - Network Changed]

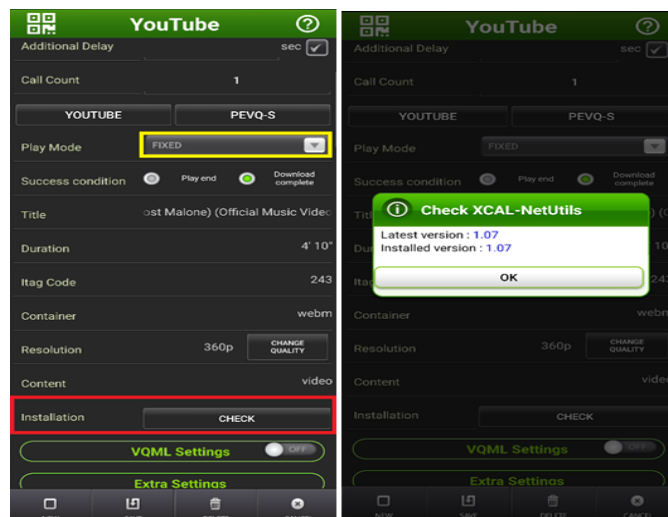
When the Network Changed condition is met, the text has been changed to show Success-RAT Change in the Autocall Chart.

37:56.794	[Event]Release Start
38:01.917	[Result]Success - RAT Change
38:01.918	[Event]Call End

2. [Youtube]

Changed to require Net-Utils to be installed to run YouTube Fixed Mode.

After selecting Fixed mode in Play Mode, it is implemented to install automatically when the video is such, and by touching the Installation button, you can check the supported version and installed version.



RF View

1. [Common]

Color display according to RF value has been modified to be more intuitive.

BRSRP
-48.86 < value
-66.71 < value <=-48.86
-84.57 < value <=-66.71
-102.43 < value <=-84.57
-120.29 < value <=-102.43
-138.14 < value <=-120.29
value <= -138.14

2. [PCTel Scanner]

Fixed a bug where scanner information was not recorded in AOF.

Function

6. [Favorite Icon]

Modified so that the Favorite Icon function can be used during Autocall execution.

7. [Manual Logging]

The app death phenomenon has been corrected when starting manual logging.

8. [Dual SIM – AOF]

Fixed app crash bug when creating AOF file with Dual SIM in XCAL-Mobile.

9. [Scanner]

create AOF with scanner Parameter when Replay DRM file.

10. [Inbuilding]

App crash when set Image real location to Image plan

XCAL-Harmonizer 3.00.073

Release Date : 2024-04-22

Autocall

3. [VoLTE]

Fix Voice/VoLTE - Pick up count

RF View

2. [Monitoring]

Monitoring screen transition speed has been improved.

Function

XCAL-Mobile/Solo 5.24.009

Release Date : 2024-04-08

JIRA Resolved

1. [XM-1023] Cause of shutdown during measurement on train
2. [XM-1066] SIM Index (13880)
3. [XM-1053] (n/a) VoWiFi scenario cannot detect 2G call.
4. [XM-1052] (n/a) VoWiFi call is not smoothly working.
5. [XM-839] System Transition Drop (For 5GNR)
6. [XM-1077] Improvements for CA View and Accessibility notification
7. [XM-1078] Favorite icon
8. [XM-1079] VoLTE call information disappear after dual view

Autocall

1. [Bluetooth MOS Settings]

The Bluetooth in call volume setting has been changed to a drop-down list format.

(Bluetooth in call Volume Default setting: 10)

2. Fixed an issue where it was not possible to determine if the network changed from 5G NR (NSA) > LTE when using the Network Change option.
3. The traffic determination conditions for LTE and 2G/3G have also been changed to be used in VoWiFi mode.

RF View

1. Changed SIM Index logging to 1 or 2 for Single SIM as well.

2. [5G NR CA]

In RF View > 5G NR CA, an option has been added to allow users to select and view Pcell and Scell through the Setting icon at the top right.

Function

1. [Favorite Icon]

A pop-up message has been added informing you that 'the Favorite Icon button cannot be used during Autocall operation'.

"The Favorite Icon feature cannot be used while Autocall is running."

2. [Accessibility]

The content of the Accessibility permission request pop-up message has been modified in more detail.

Before change: "For comfortable Autocall use, please activate XCALv5 option in Accessibility."

After change: "For comfortable Autocall use, Please activate Accessibility.

After selecting 'Go to Settings', activate.

the options in the order below.

(Installed apps > XCALv5 > ON)"

XCAL-Harmonizer 3.00.072

Release Date : 2024-04-08

There is no revision history. Just updated version code for XCAL-Mobile/Solo connection.

XCAL-Mobile/Solo 5.24.007

Release Date : 2024-03-25

JIRA Resolved

1. [XM-1064] Log Scenario Naming

Autocall

1. [Common Solo logging]
Fixed the phenomenon of 'Solo Logging Error' occurring when performing autocall measurement for a long time.

RF View

1. [5G NR Dual Connectivity]
Changed the Throughput reference value to Total Throughput, which includes not only PCells but also SCells.
2. [AOF]
Added Smart Throughput Parameter.

Function

1. [RF View]
Fixed an issue where the Edit function was automatically activated in Menu > RF View.

XCAL-Mobile/Solo 5.24.005

Release Date : 2024-03-11

JIRA Resolved

1. [XM-1054] IBWC file not loading for inbuilding. JPG file does not exist

Autocall

1. [XCAL-Daemon]
XCAL-Daemon AUDIO Mode automatically changes according to VoLTE/VoWif/Messenger EMOS.
2. [Messenger Talk]
Messenger Talk adds support for the autocall function for Signal messenger. (Signal messenger license required)

RF View

- 1.

Function

1. [DSDS]
Added SIM Change condition using 0x1D8A Log.
2. [ESP Info]
Added the ability to save previous ESP Info as well.

[2024 Mar 11 10:17:25.220] ESP Information	[2024 Mar 11 10:17:25.220] ESP Information
byEF74Type : ESP Information(19) Version_number : 6 ESP_Type : VoLTE(0) HistoryIndex : 0	byEF74Type : ESP Information(19) Version_number : 6 ESP_Type : VoLTE(0) HistoryIndex : 1
Protocol : 1 Src_IP : fd00:e15:301:5:0:0:0:92 Dst_IP : 2001:2d8:670f:4a8c:0:0:0:237:85e SPI : 1624533 Encryption : AES-CBC [RFC3602] (2) Encrypt_Key : 0xD90600DE5D9C09A8F7EF10CF850EE819 Auth : HMAC-SHA-1-96 [RFC2404] (1) Auth_Key : 0xDFF23B21503BB1E62FD96749992C1440 VOLTE_Call_Flow : Packet Message(0) IP_SEC_Type : SHP(1) NULL_ESP : FALSE(0) Decode_ESP : FALSE(0) Check_ESP_Auth : FALSE(0) SPI_RX_C : 1624534 SPI_TX_S : 26368 SPI_TX_C : 26367 Automatic : TRUE(1)	Protocol : 1 Src_IP : fd00:e15:301:5:0:0:0:92 Dst_IP : 2001:2d8:6e48:29d9:0:0:0:d9:85e SPI : 1624521 Encryption : AES-CBC [RFC3602] (2) Encrypt_Key : 0x2CB48AA7B9A5080E707BCE3F7E9B84 Auth : HMAC-SHA-1-96 [RFC2404] (1) Auth_Key : 0x9BEF0721012A83542FFE7E2004C94017 VOLTE_Call_Flow : Packet Message(0) IP_SEC_Type : SHP(1) NULL_ESP : FALSE(0) Decode_ESP : FALSE(0) Check_ESP_Auth : FALSE(0) SPI_RX_C : 1624522 SPI_TX_S : 37170 SPI_TX_C : 37169 Automatic : TRUE(1)

<Current Info>

<Previous Info>

3. [R&S Scanner]
update [TSMA6B] ViCom 23.3

XCAL-Harmonizer 3.00.071

Release Date : 2024-03-11

Autocall

1.

RF View

Function

1. [Setting]

Changing the setting Confirm popup to not appear when Changing Autocall item

2. [UI]

Provide version excluding debug logs

XCAL-Mobile/Solo 5.24.004

Release Date : 2024-02-26

JIRA Resolved

1. [XM-1040] Question about the positioning accuracy of External GPS (

Autocall

RF View

1. [EF75(50)-5G NR ReconfigurationInfo]
Added the Serving PCI/NR-ARFCN parameter in 0xEF74(50)-5G NR ReconfigurationInfo.
2. [Extended Mobile Message]
Fixed a bug where 0x1FEB was logged even when the Extended Mobile Message option was turned off in Solo.

Function

1. [Dual SIM]
Fixed a bug that caused the app to freeze on Dual SIM devices.
2. [XCAL-Remote]
Added XCAL-Remote GUI improvements to match the display size of Kyocera K5G.

XCAL-Harmonizer 3.00.070

Release Date : 2024-02-26

Autocall

1. [Iperf]

Iperf Scenario Settings - UI does not change even when Iperf Daemon option is set to On

RF View

Function

XCAL-Mobile/Solo 5.24.003

Release Date : 2024-02-13

JIRA Resolved

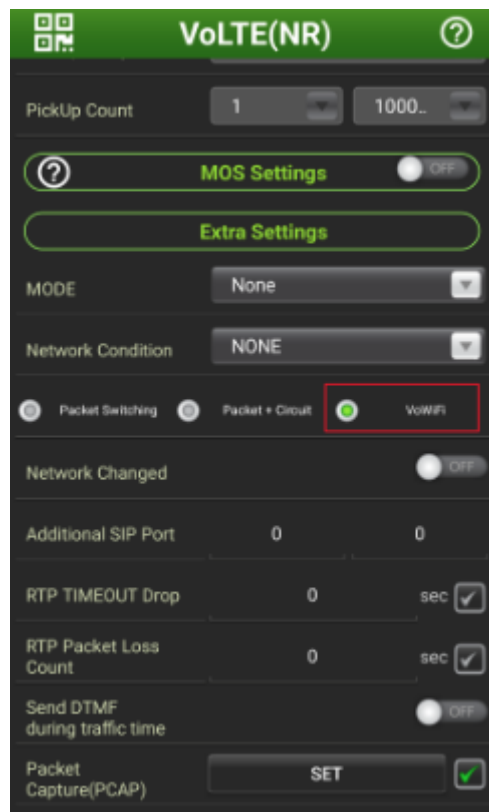
1. [XM-1018] VoWiFi on XCAL-Mobile
2. [XM-1030] Question about NTP Time Not Synchronized (240116)
3. [XM-1041] SOLO3 doesn't have samsung s23 FE (SM-S711U1) model and forced closed

Autocall

1. [VoLTE]

Added VoWiFi mode in VoLTE call.

VoWiFi determines the SIP message of the packet received through PCAP.



2. [Rakuten]
Changed the Rakuten's NTP server IP.
3. [Voice/VoLTE]
EMOS can be measured normally by changing Daemon Auth key.

RF View

1. [Dual SIM]]

Added DSDS KPI Info(0xEF74[Type=96]) log.

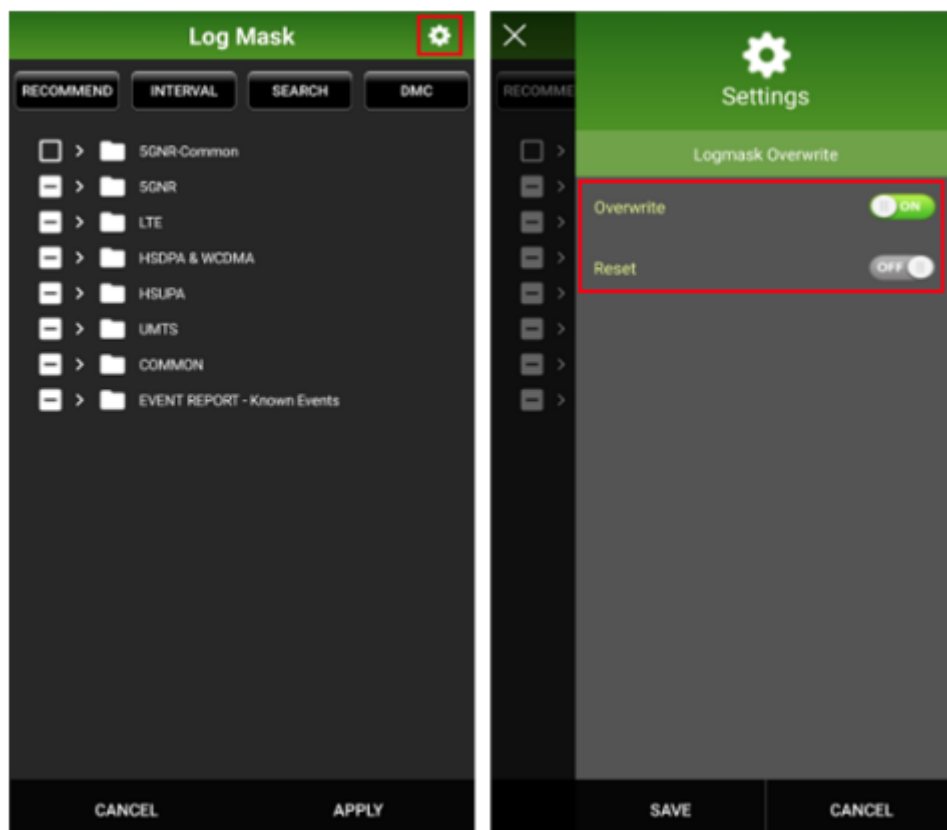
Function

1. [LogMask]

Added the Option to select the method of setting the Log Mask.

Change this option when Log Mask behaves differently from the value you set.

- Overwrite: Overwrite the Log Mask.
- Reset: Reset and set the Log Mask.



2. [Dual SIM]

Added the ability to save ESP Information for each SIM on Dual SIM devices.

XCAL-Harmonizer 3.00.068

Release Date : 2024-02-13

Autocall

2. [Inbuilding]

Modify the phenomenon of BT disconnected when Autocall starts after the inbuilding setting,

RF View

Function

XCAL-Mobile/Solo 5.24.002

Release Date : 2024-01-30

JIRA Resolved

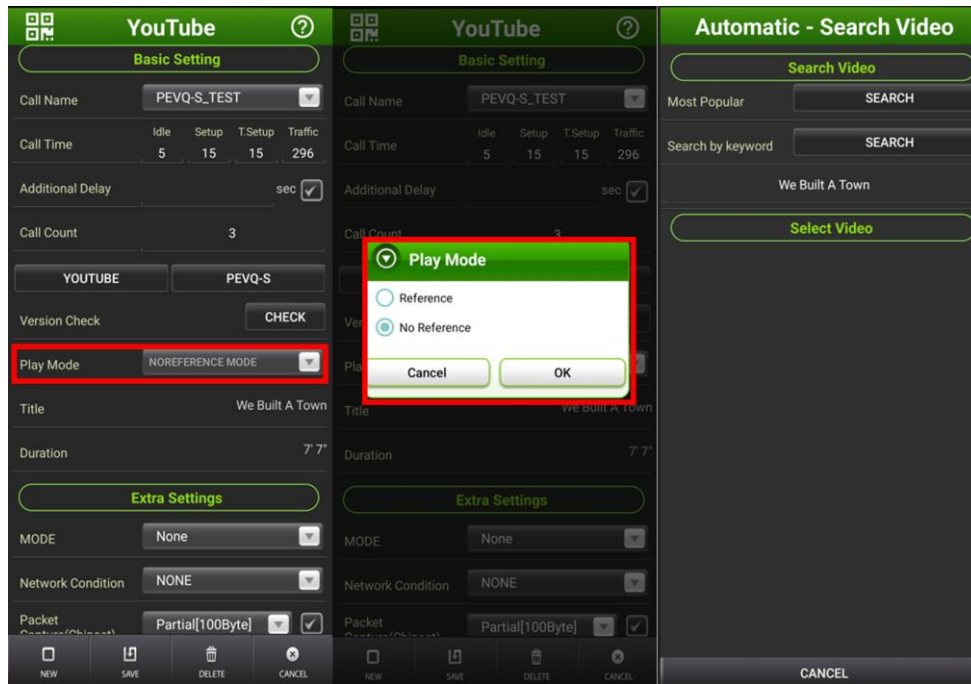
1. [XM-1025] Youtube Reproduction delay is too long.
2. [XM-1031] Add Chip Type to Naming Log File setting (13822)

Autocall

1. [Voice/VoLTE/PS Video]
Changed the code for Call Setup Status during Voice Call Event (from 46 to 20).
2. [TWAMP]
Add an interactive score for a traffic pattern.



3. [Youtube]
Add YouTube PEVQ-S No Reference Mode.

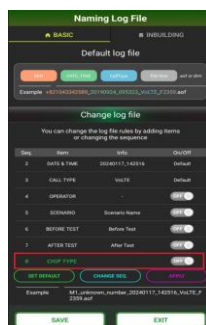


RF View

- [Qualcomm Log Mask]
Updated the Qualcomm Log Mask.
 - 0x1D8A : DS TRM MGR INFO
 - 0x1C6E : IPA Common Stats
 - 0x1C6F : IPA DL Common Stats
 - 0x1C71 : IPA UL Common Stats

Function

- [Save to PCAP File(Non-root)]
Fixed an app crash bug when measuring Autocall after setting up VPN PCAP.
- [Log Naming Option]
Fixed an issue where Save to PCAP file did not work.



XCAL-Harmonizer 3.00.067

Release Date : 2024-01-30

Autocall

RF View

Function

1. [Inbuilding]

Fixed the inbuilding Floor setting (Can't Image save and select Image).

XCAL-Mobile/Solo 5.24.001

Release Date : 2024-01-15

JIRA Resolved

1. [XM-999] XCAL-Mobile is unable to Setup China Telecom customer service calls.
2. [XM-867] Solo, causing DSDS Device to have dead modem.

Autocall

1. [VoLTE SIP]
Even if two SIP Statuses exist in one packet during VoNR measurement, both SIP Statuses have been modified to be processed.

RF View

1. [DM Summary]
Fixed an issue where the Qualcomm Diag Response message Drop Count and Allocation Count cycles were out of sync.

Function

1. [Log Split]
Fixed an issue where there was an error in SIM2's log file naming when using Log Split.
2. [Save to PCAP file]
Fixed an issue where Save to PCAP file did not work.
3. [Alarm Setting]
"No DM message option" has been added to Alarm Setting. A pop-up occurs when in No DM status, and if it is not restored within 60 seconds, it will reboot.

Alarm Setting

System	Transition	Call State	RF Condition	QC Event Report
SELECT ALL		UNSELECT ALL		
Category	TTS	Toast		
GPS Status	☒	☒		
DM Status	☒	☒		
Temperature Status	☒	☒		
Temperature > 70 °C				
RRE Request	☐	☐		
PCI OverLapping (MOD3)	☐	☐		
RSRP > 0.0 dBm				
PCI Collision	☐	☐		
☒ Best Neighbor RSRP – Serving RSRP > 3.0				
☐ Best Neighbor RSRQ – Serving RSRQ > 0.0				
Modem processor log missing	☒	☒		
> 0 %				
No DM message	☒			
OK		CANCEL		

DM Summary View

Mobile Status Count	
Total Message Count(1 sec)	1
Log Allocation Count(10 sec)	0
Dropped Message Count(10 sec)	301
Drop Rate	100.00

XCAL-Mobile

No DM Message
 Total Message Count : 100
 DM message is low.
 You must reboot the device.
 The device reboots after about **39 seconds**.

Technical Support

If you have any further queries while using XCAL-Mobile, visit our support page

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