XCAL-
Mobile/Solo/Harmony
Release Note

Doc Rev: 29

2021-03-22

Accuver

© 2021 Accuver Co., Ltd., All rights reserved.

This documentation shall not be changed, distributed to the public, and opened to the third person without written permission. Accuver is not responsible for any direct or indirect damages arisen or related to use of this manual. All information included herein may be changed without prior notice.

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 5 types; **Autocall**, **RF view**, **Function**, **Scanner** and **Known Issue**.

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

Revision History

Rev.	Product Version	Date of Release	Note
17	XCAL-Mobile/Solo: 4.15.415 XCAL-Harmony: 2.02.370	2020-05-11	
18	XCAL-Mobile/Solo: 4.15.419 XCAL-Harmony: 2.02.374	2020-05-25	
19	XCAL-Mobile/Solo: 4.15.423 XCAL-Harmony: 2.02.379	2020-06-15	
20	XCAL-Mobile/Solo: 4.15.427 XCAL-Harmony: 2.02.381	2020-06-29	
21	XCAL-Mobile/Solo: 4.15.433 XCAL-Harmony: 2.02.382	2020-07-13	
22	XCAL-Mobile/Solo: 4.15.435 XCAL-Harmony: 2.02.385	2020-07-28	
23	XCAL-Mobile/Solo: 4.15.436 XCAL-Harmony: 2.02.387	2020-08-10	
24	XCAL-Mobile/Solo: 4.15.439 XCAL-Harmony: 2.02.389	2020-08-25	
25	XCAL-Mobile/Solo: 4.15.443 XCAL-Harmony: 2.02.393	2020-09-21	
26	XCAL-Mobile/Solo: 4.15.445 XCAL-Harmony: 2.02.394	2020-10-26	
27	XCAL-Mobile/Solo: 4.15.451 XCAL-Harmony: 2.02.395	2020-11-11	
28	XCAL-Mobile/Solo: 4.15.453 XCAL-Harmony: 2.02.396	2020-12-01	
29	XCAL-Mobile/Solo: 4.15.465 XCAL-Harmony: 2.02.399	2021-03-22	

© Copyright by Accuver Co., Ltd.

Contents

About Release Note **2**
Revision History **3**
Contents **4**
XCAL-Mobile/Solo 4.15.465 & XCAL-Harmony 2.02.399 ..... **7**
Autocall 7
RF View 10
Function 11
Scanner 16
Known Issue 16
XCAL-Mobile/Solo 4.15.453 & XCAL-Harmony 2.02.396 ..... **17**
Autocall 17
RF View 19
Function 20
Scanner 21
Known Issue 21
XCAL-Mobile/Solo 4.15.451 & XCAL-Harmony 2.02.395 ..... **22**
Autocall 22
RF View 23
Function 24
Scanner 24
Known Issue 24
XCAL-Mobile/Solo 4.15.445 & XCAL-Harmony 2.02.394 ..... **25**
Autocall 25
RF View 26
Function 26
Scanner 27

© Copyright by Accuver Co., Ltd.

Known Issue 27
XCAL-Mobile/Solo 4.15.443 & XCAL-Harmony 2.02.393 28
Autocall 28
RF View 29
Function 30
Scanner 32
Known Issue 32
XCAL-Mobile/Solo 4.15.439 & XCAL-Harmony 2.02.389 33
Autocall 33
RF View 33
Function 35
Scanner 37
Known Issue 37
XCAL-Mobile/Solo 4.15.436 & XCAL-Harmony 2.02.387 38
Autocall 38
RF View 42
Function 43
Scanner 46
Known Issue 46
XCAL-Mobile/Solo 4.15.435 & XCAL-Harmony 2.02.385 47
Autocall 47
RF View 49
Function 51
Scanner 51
Known Issue 51
XCAL-Mobile/Solo 4.15.433 & XCAL-Harmony 2.02.382 52
Autocall 52
RF View 54
Function 58
Scanner 58
Known Issue 58
XCAL-Mobile/Solo 4.15.427 & XCAL-Harmony 2.02.381 59
Autocall 59
RF View 59

© Copyright by Accuver Co., Ltd.

Function 63
Scanner 64
Known Issue 64
XCAL-Mobile/Solo 4.15.423 & XCAL-Harmony 2.02.379 65
Autocall 65
RF View 67
Function 71
Scanner 72
Known Issue 72
XCAL-Mobile/Solo 4.15.419 & XCAL-Harmony 2.02.374 73
Autocall 73
RF View 75
Function 78
Scanner 79
Known Issue 79
XCAL-Mobile/Solo 4.15.415 & XCAL-Harmony 2.02.370 80
Autocall 80
RF View 87
Function 89
Scanner 94
Known Issue 94
Technical Support 95

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.465 & XCAL-Harmony 2.02.399

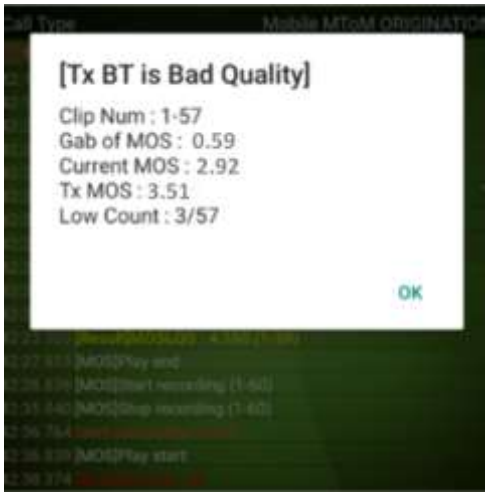
Date of Release : 2021-03-22

Autocall

1. [Vocoder Mode for Solo]

   Added Vocoder Mode for vocoder packet(ADSP Rx) MOS.

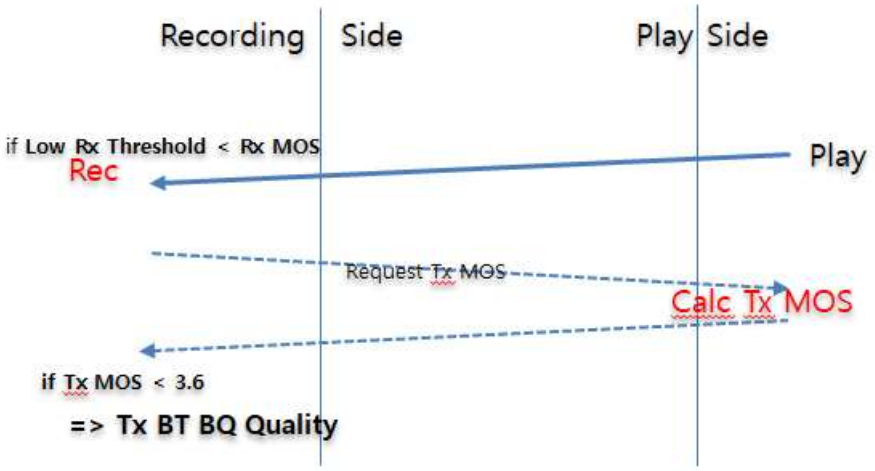
   This function only works on Qualcomm chip Smartphone.



   If the Tx side MOS value is low when using this function, pop-up will notify you.

   But It only works with the MtoM type.

© Copyright by Accuver Co., Ltd.



2. [Ping]

   It supports two Ping modes: DOS mode and Forced Request mode.

   User can select test type in setting.

   - DOS Mode: The time-out response affects the next transmission.
   - Forced Request: The timeout response does not affect the next transmission. Force transfer to user-set interval.
   - RRC Condition: The RRC release affects the ping request (support in LTE/5G NR mode).

© Copyright by Accuver Co., Ltd.

3. [Ping]

   Tab the chart screen then it can monitoring ping command and response. Tab again then it return to the original chart screen.

4. [Multi-Call]

   Added ‘No packet capture required except VoLTE call’ option.

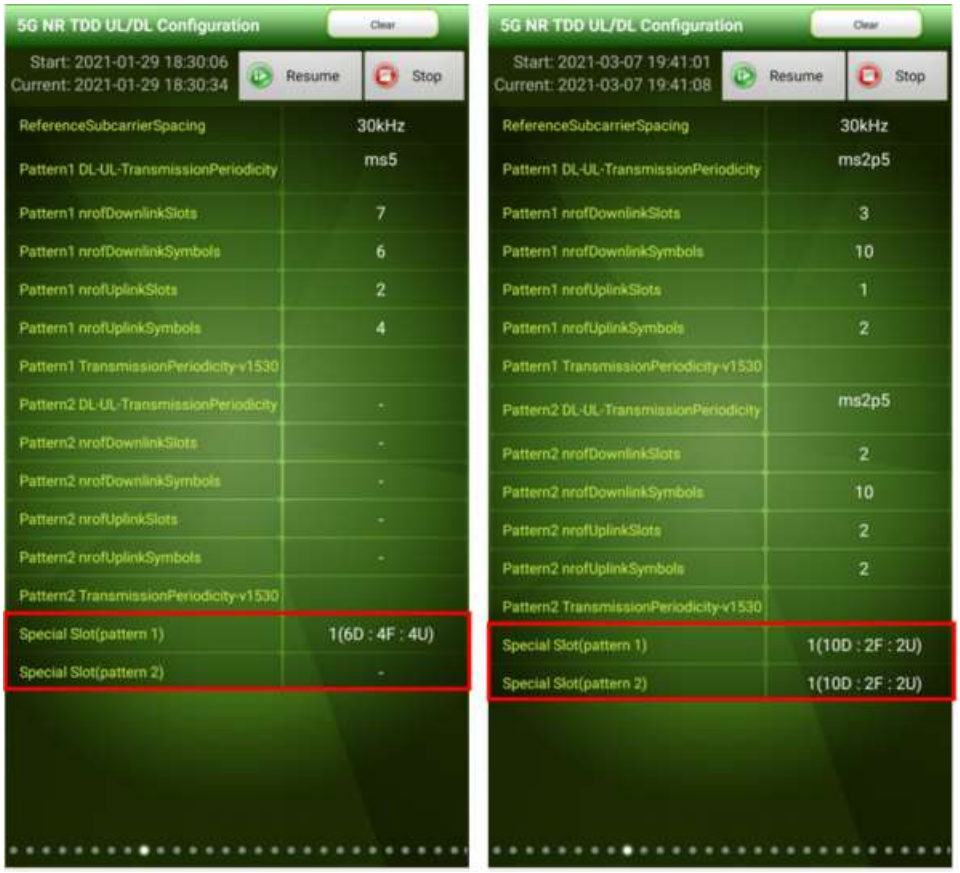
© Copyright by Accuver Co., Ltd.

RF View

1. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]
   Added the TAC in 5GNR Summary Menu

2. [Qualcomm Chipset]
   Special Slot(pattern #) has been added.
   It displays the number of slots with neutral sections not classified as DL or UL slots and the number of DL/Flexible/UL symbols.

© Copyright by Accuver Co., Ltd.



Function

1. [TTS Alarm]

   Added TTS Alarm items for LTE RRC, LTE NAS, NR RRC, NR NAS Signlaing Message and QC 5GNR Event Report(QC Only).

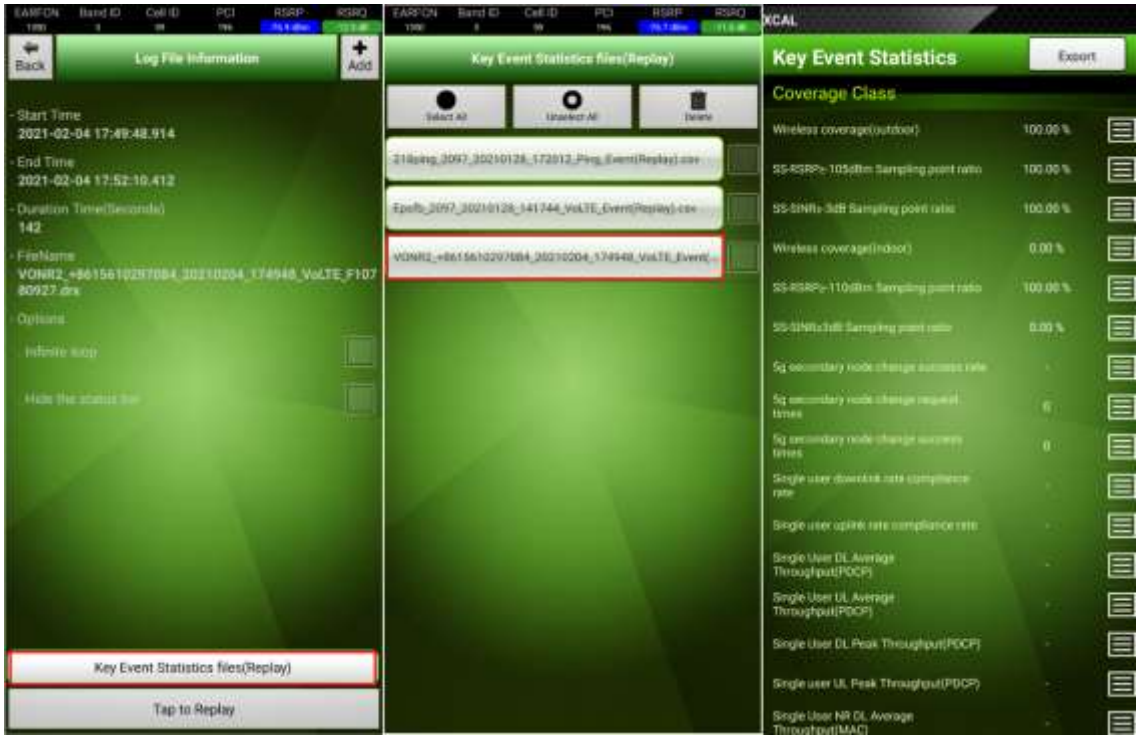
2. [Key Event Statistics Items – Only Ericsson China Customer]

© Copyright by Accuver Co., Ltd.

Added the Key Event Statistics Items Setting menu.

3. [Key Event Statistics files(Replay) – Only Ericsson China Customer]

Added Key Event statistics menu through Replay.



4. [ESP Info Logging & Packet Capture]

Added automatic setting of ESP Info Logging and Packey Capture options.

When you select the ESP info logging option, the packet capture option is set

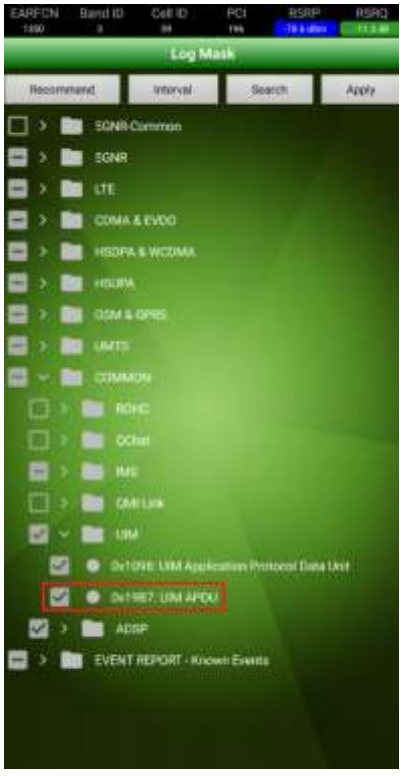
© Copyright by Accuver Co., Ltd.

automatically.

When the Packet Capture option is unchecked, the ESP Info Logging option is automatically turned off.

5. [QC Log Mask]

Added reference Log Mask (0x19B7: UIM APDU) for ESP Decrypt



6. [Ericsson China]

Added 'Autocall Pause[Manual]' option.

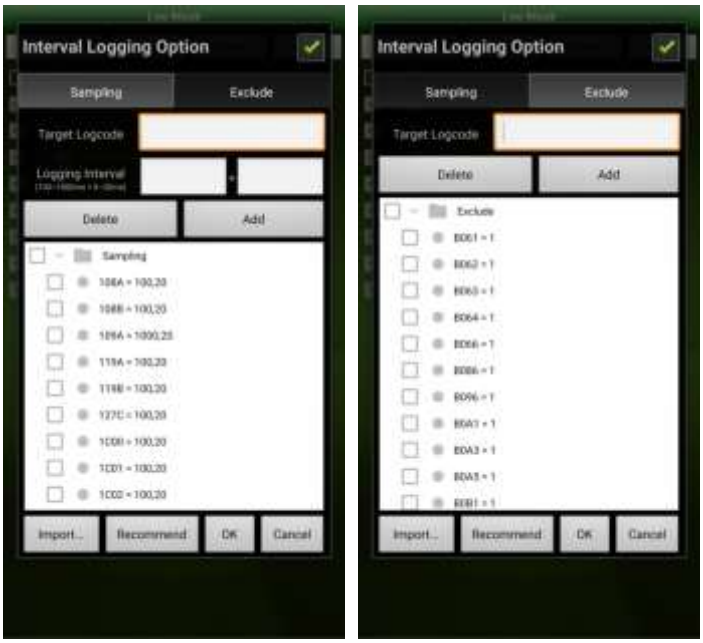
7. [Qualcomm Chipset Logmask]

Interval logging option has been updated.

- Updated the basic Interval logging sampling list for 5GNR/LTE.
- Added logging exclusion function.

[Note] Even if logmask is checked and the value of the item is received, the item added to the Exclude list is excluded from logging.

- Added 'import' button to load ini file.
- Added 'Recommend' button to revert the Sampling / Exclude list to the default recommended list.



© Copyright by Accuver Co., Ltd.

8. [Inbuilding - Autocall]

   Autocall status was added at the bottom of the measurement screen during the Inbuilding Autocall test.

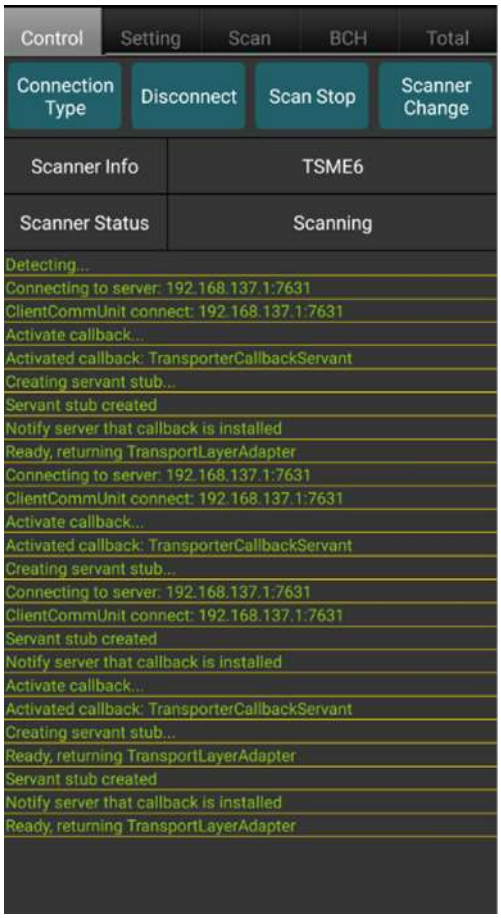
© Copyright by Accuver Co., Ltd.

Scanner

1. [R&S TSMA6 Scanner]

   Scanner connection and scan request button has been simplified.

   Scanner information and scanner connection status are displayed in table.



Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.453 & XCAL-Harmony 2.02.396

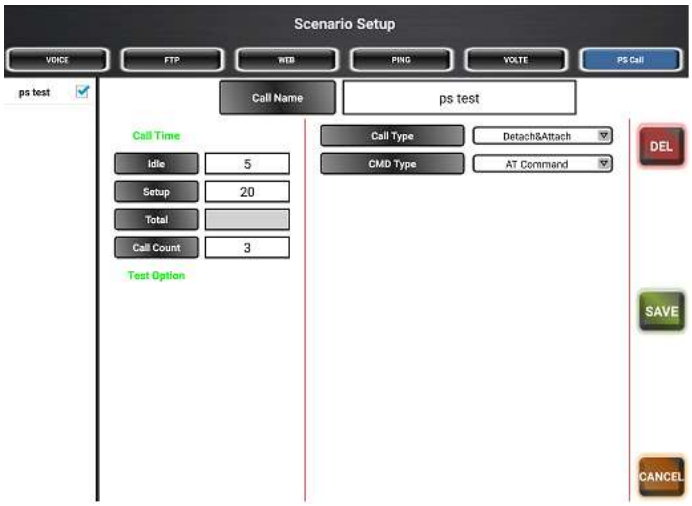
Date of Release : 2020-12-01

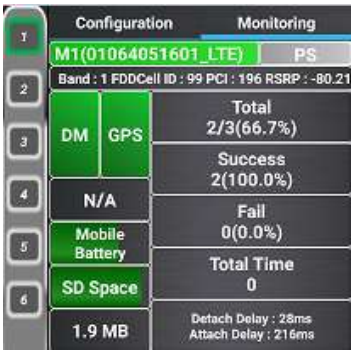
Autocall

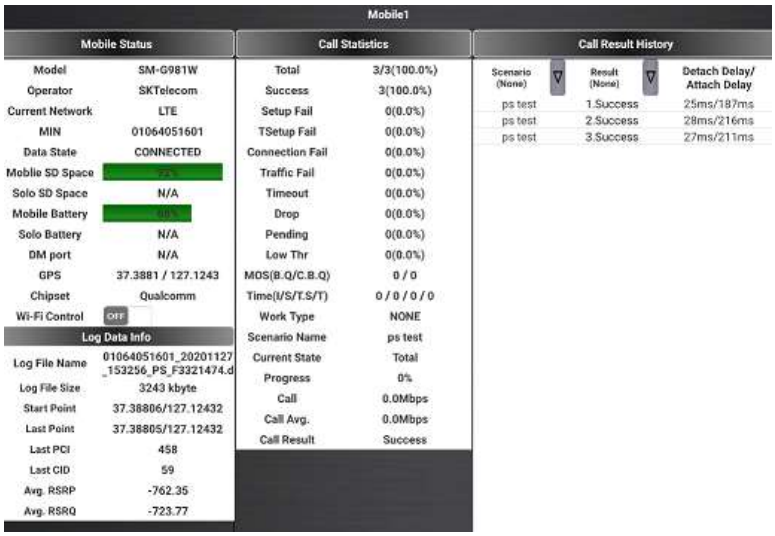
1. [XCAL-Harmony – PS Call]

   Added PS Call Type for Detach & Attach Test in XCAL-Harmony.

   - Support CMD Type : CP Command, AT Command
   - Support Call Type : Detach & Attach, Attach







2. [XCAL-Harmony - Youtube PEVQ-S]

© Copyright by Accuver Co., Ltd.

1) Added MOS CVQ(Currently Viewed Quality) in Monitoring screen.

2) Added MOS AVG to be displayed in the Call Result History.

3. [XCAL-Mobile/Solo – Docomo speed test]

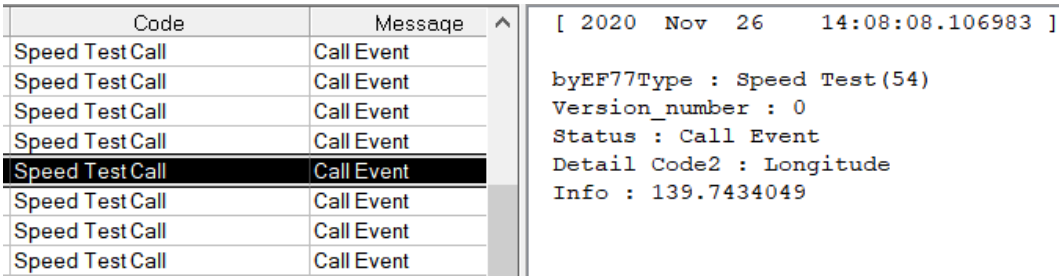
1) Added Latitude/Longitude logging and displaying

Code	Message
Speed Test Call	Traffic Setup
Speed Test Call	Traffic
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event

```
[ 2020  Nov  26    14:08:08.106931 ]

byEF77Type : Speed Test(54)
Version_number : 0
Status : Call Event
Detail Code2 : Latitude
Info : 35.6646191
```

© Copyright by Accuver Co., Ltd.

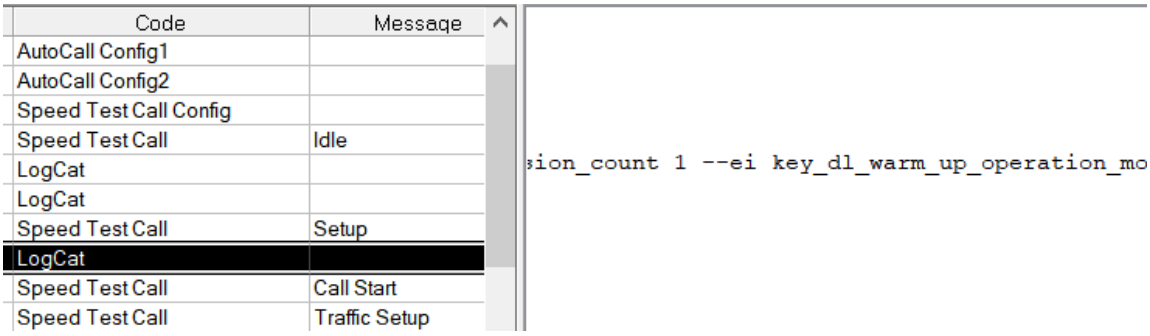


Code	Message
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event
Speed Test Call	Call Event

```
[ 2020  Nov  26    14:08:08.106983 ]

byEF77Type : Speed Test(54)
Version_number : 0
Status : Call Event
Detail Code2 : Longitude
Info : 139.7434049
```

2) Added adb command logging of Docomo speed test app.



Code	Message
AutoCall Config1	
AutoCall Config2	
Speed Test Call Config	
Speed Test Call	Idle
LogCat	
LogCat	
Speed Test Call	Setup
LogCat	
Speed Test Call	Call Start
Speed Test Call	Traffic Setup

```
sion_count 1 --ei key_dl_warm_up_operation_mo
```

RF View

1) [XCAL-Harmony]

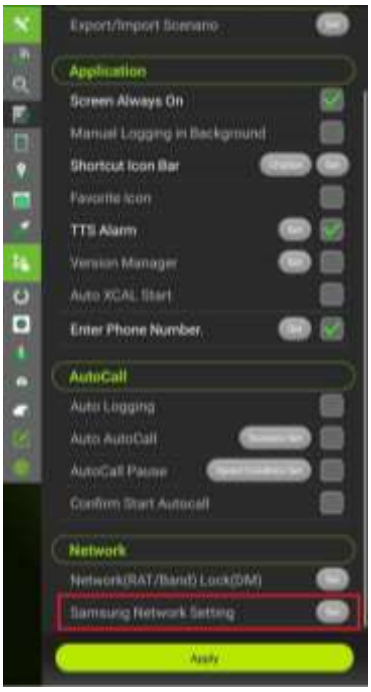
- Bug fixed

- The bug that does not displayed UARFCN values in Cell measurements have been fixed.

© Copyright by Accuver Co., Ltd.

Function

2. [Samsung Network Lock]
   1) Delete Samsung Network Lock option.



3. [Setting list - Softbank]
   1) Added NR Band lock in setting list used by Accuver Japan. Setting list is activate when the license is AJ or Softbank.

© Copyright by Accuver Co., Ltd.

Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.451 & XCAL-Harmony 2.02.395

Date of Release : 2020-11-11

Autocall

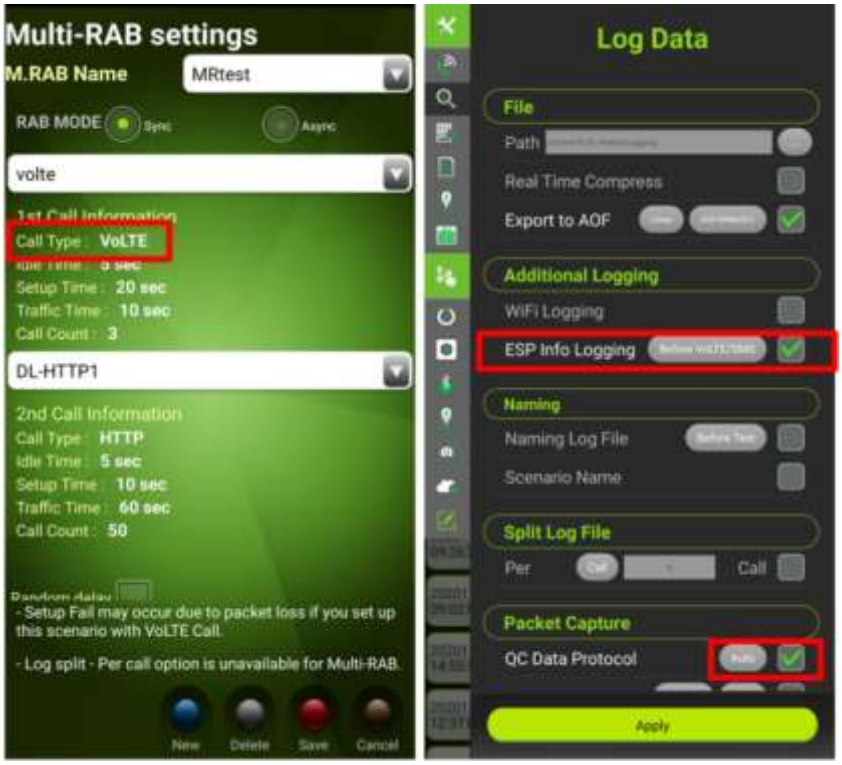
1. [Multi-RAB]

   If a VoLTE Call is included in the scenario configuration,

   1) [Log Data]-[Packet capture] [size – Auto] has been changed to automatically log to 1500.

   2) [Log Data]-[ESP Info Logging]-[Before VoLTE/SMS] options have been changed to work.

   [Caution!] If packet capture size is set to 1500, some data call(FTP) packets maight be lost.



© Copyright by Accuver Co., Ltd.

RF View

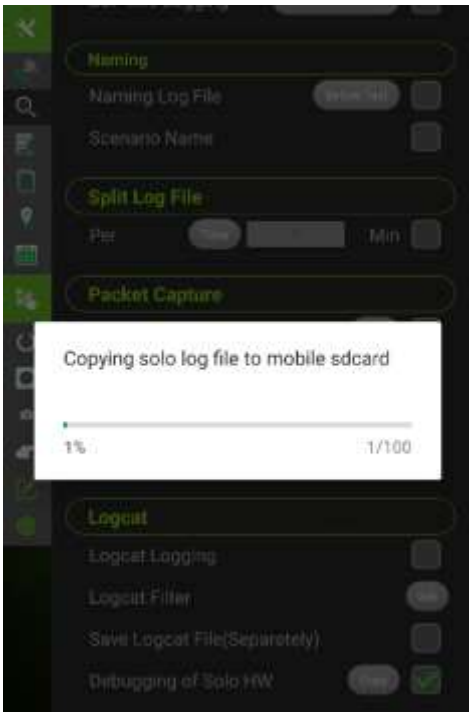
1. [Qualcomm Chipset]
   1) The PUSCH RI and PUCCH RI items are integrated and displayed in the Rank Index.
   2) The Item names and units of Rank Index for LTE and 5G NR have been unified.

© Copyright by Accuver Co., Ltd.

Function

1. [AOF]
   Fixed a problem where headers of items supported by the split AOF file were not logged when the [Log Data]- [Split Log File] option was enabled.

2. [Common]
   1) Added debugging of SOLO HW. Please turn off the function when you don’t need it.
   2) You can Copy debug file to Mobile with Copy button.
      (File Path on Mobile : /SDCARD/XCAL-Mobile/SoloDebug)



Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.445 & XCAL-Harmony 2.02.394

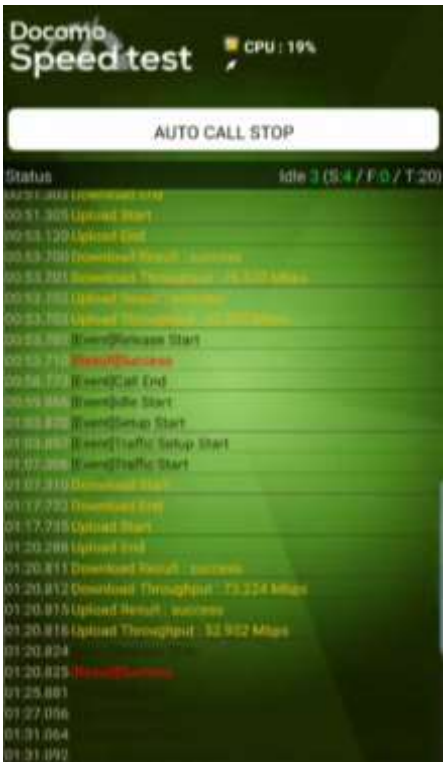
Date of Release : 2020-10-26

Autocall

1. [Docomo Speed Test]

   Docomo speed test autocall has been newly added.

   This autocall automates the speedtest app provided by Docomo. The decision condition of the call event is based on the *.alc file. The [Autocall]-[Docomo speed test] license key is required.



2. [HTTP] – [DL/UL]

   Bug Fixed

   1) Fixed an HTTP status display error that occurred when the call result was low throughput.

© Copyright by Accuver Co., Ltd.

RF View

1. [Common]
   1) Item names shown as 4G / LTE are unified as LTE.
   2) The item name shown as 5G / 5G NR has been unified as NR (Excluding screen title).

Function

9. [Qualcomm Chipset Logmask]
   1) Added an NR Logmask item.

   * MAC Layer
      - NR5G MAC Timing Advance(0xB89D)

   2) Added multiple LTE Logmask items.

   * [Lower Layer1] - [Lower Layer1(Searcher & Measurement)]
      - LTE LL1 Serving Cell FTL Results (0xB11B)

   * [Management Layer1] - [Management Layer1(Measurements/Idle Mode)]
      - LTE ML1 Multisim Packet (0xB182)
      - LTE ML1 CA Metrics Log Packet (0xB184)
      - LTE ML1 Coex Tx Power (0xB19F)
      - LTE ML1 Flow Control (0xB1E5)
      - LTE ML1 MPTL Flow Control (0xB1FB)

   * [RRC/NAS/MDT Layer] – [LTE RRC Layer]
      - LTE RRC Cap Releated Info (0xB0D1)
      - LTE RRC connection Release Info (0xB0D3)

© Copyright by Accuver Co., Ltd.

Scanner

1. [R&S Scanner]
   Added LTE BCH View. BCH View only supports R&S Scanner (LTE) license.

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.443 & XCAL-Harmony 2.02.393

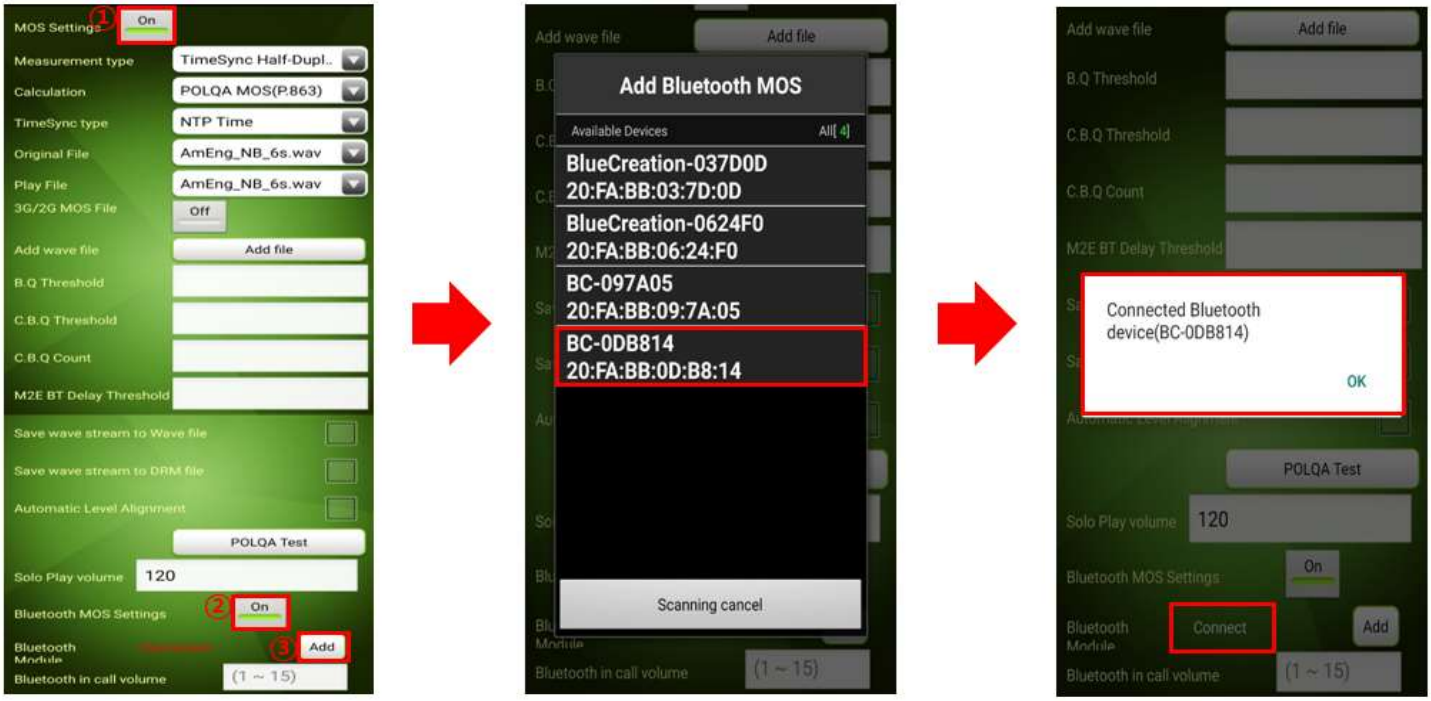
Date of Release : 2020-09-21

Autocall

1. [Voice/VoLTE – Bluetooth Module]

   Change option to measure using Bluetooth Module(only Solo).

   1) Voice/VoLTE Scenario Add/Edit check and save the [Bluetooth MOS Settings] value.
   2) Press Autocall Start button and proceed with Voice, VoLTE MOS Test.



RF View

1. [Signal Message]
   1) Bug fixed

      The malfunction of Pause option in Signaling message when the scenario is moved to the next scenario during the measurement of multi-call has been fixed.

      [Note] When starting a new auto call scenario or starting/stopping a log file replay, the 'Pause' button setting on the signaling message screen is initialized.

2. [Qualcomm chipset]
   1) 5G NR Beam Measurement

      The units(to 3 decimal places) have been unified.

      - BRSRP/BRSRQ/SNR

   2) 5G NR Summary View/Signal View/Inter RAT

      The issue SS-RSRP value was shown incorrectly has been corrected.

   3) ENDC Summary

      The issue not showing SCell(s) information according to the ICD version update has been fixed.

© Copyright by Accuver Co., Ltd.

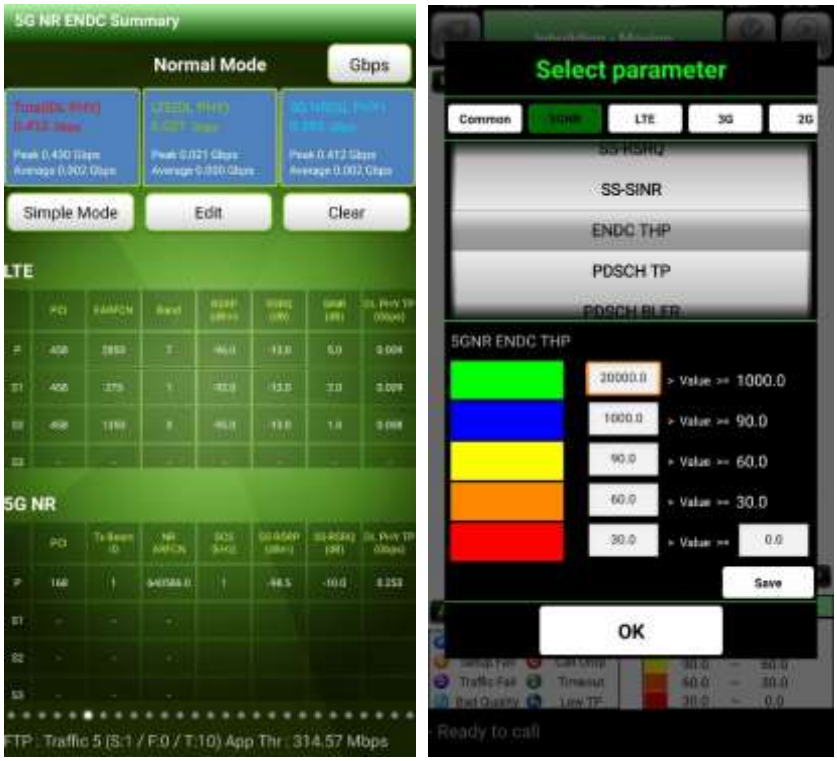
Function

3. [Common]
   3) The XCAL-Format option has been removed from the UI. Even after the option is deleted on UI, logs are collected in XCAL-Format as before.

   4) The button name of Export AOF has been changed.

[Caution] If 'Export to AOF' option is set 'AOF Only' and the option is checked (Enable), (.drm)/(.dlf) files are not created even if QC Packet capture option/DLF logging option are set.

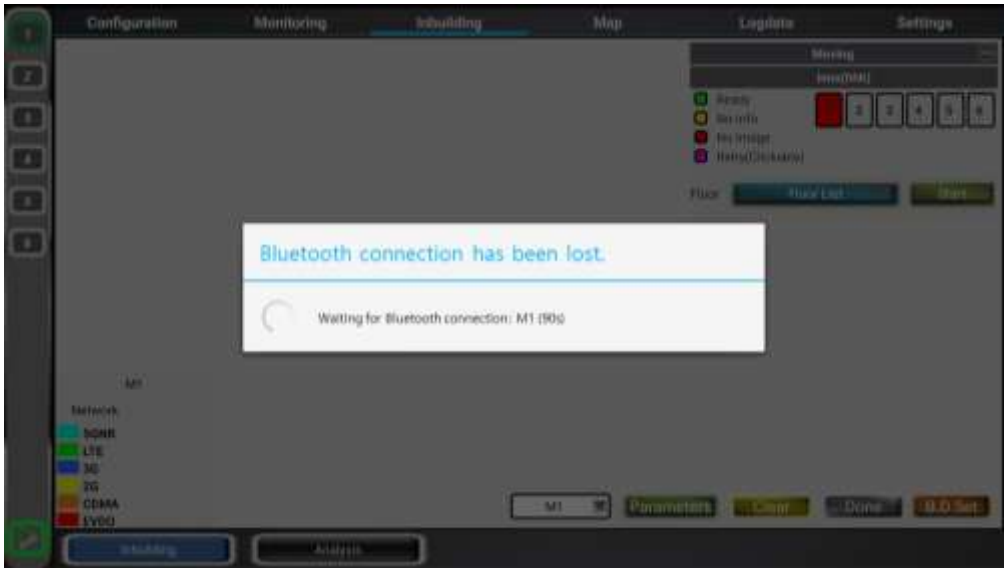
4. [Inbuilding]
   1) Added "ENDC Thp" parameter to 5GNR. This parameter gets the Total value that located in the 5G NR ENDC Summary. Also applied to harmony.



   2) Added pause function when Bluetooth is disconnected during the test. When the

© Copyright by Accuver Co., Ltd.

pause starts, the retry timer runs. If Bluetooth is not connected until the timer expires, the test ends. The timer time can be set in the Bluetooth retry setting option of settings.



5. [XCAL-Harmony]

1) Deleted XCAL Format in Logging Option (Default is ON)

6. [Logcat]

1) Fixed app termination phenomenon due to Logcat option.

© Copyright by Accuver Co., Ltd.

Scanner

1. [R&S Scanner]

   Added LTE BCH View. BCH View only supports R&S Scanner (LTE) license.

   SIB and MIB messages are showing in the BCH view. Tap a message from Message list, and corresponding code will be shown.

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.439 & XCAL-Harmony 2.02.389

Date of Release : 2020-08-25

Autocall

1. [Multi-call]

   Bug Fixed

   1) When multi-call is made up of YouTube or Web browsing, prevent Call start without WebView.

   2) When multi-call is not made up of YouTube or Web browsing, launch Multi-Call start without WebView.

RF View

1. [Samsung Chipset - 5G NR Summary]
   Added DL PRB Num(Including 0) KPI on 5G NR Summary View.

© Copyright by Accuver Co., Ltd.

2. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]

- DM Interface is supported from the P40 model. (Mate model is not supported)
- Requires ENG Firmware with AIDL Interface applied.

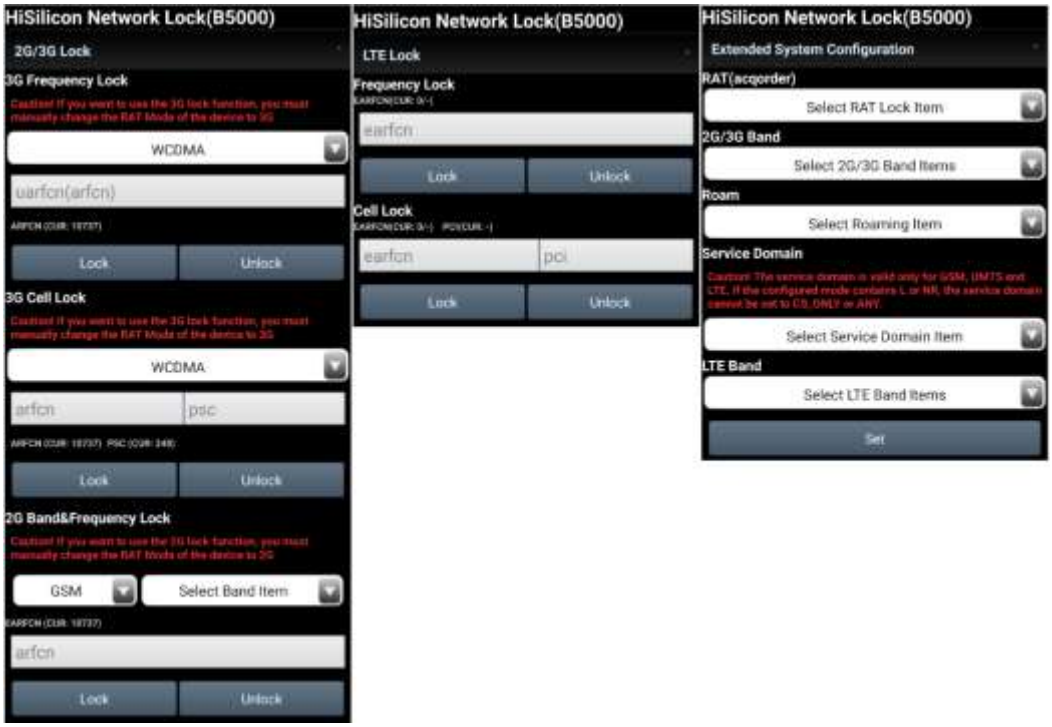
1) Added 5GNR ENDC Summary Viewer in RF View Menu

© Copyright by Accuver Co., Ltd.

Function

1. [Network Lock for Hisilicon(Balong5000) – Only Support XCAL-Mobile version]

Added 2G/3G/LTE Lock and Exdended System Configuration Function for Hisilicon



2. [Export to AOF Function for Hisilicon(Balong5000) – Only Support XCAL-Mobile version]

Added 5GNR/LTE AOF Export Function for Hisilicon

5GNR Items		LTE Items	
HiSi5GNR_SSBMRslt_P	HiSi5GNR_PUSCH_Layer_S#	HiSiLTE_CellMRslt_P	HiSiLTE_PUSCH_Mod
HiSi5GNR_SSBMRslt_S#	HiSi5GNR_PUSCH_Mod_P	HiSiLTE_CellMRslt_S#	HiSiLTE_PUSCH_MCS
HiSi5GNR_L1CellInfo_P	HiSi5GNR_PUSCH_Mod_S#	HiSiLTE_CellMRslt_N	HiSiLTE_PDSCH_BLER_P
HiSi5GNR_L1CellInfo_S#	HiSi5GNR_PDSCH_BLER_Total_P	HiSiLTE_RI_P	HiSiLTE_PDSCH_BLER_S#
HiSi5GNR_CSIRPT_Gen_P	HiSi5GNR_PDSCH_BLER_CW0_P	HiSiLTE_RI_S#	HiSiLTE_PDSCH_BLER_Total
HiSi5GNR_CSIRPT_Gen_S#	HiSi5GNR_PDSCH_BLER_CW1_P	HiSiLTE_CQI_WB_P	HiSiLTE_PDCCH_BLER_P
HiSi5GNR_CSIRPT_PD_P	HiSi5GNR_PDSCH_BLER_Total_S#	HiSiLTE_CQI_WB_S#	HiSiLTE_PDCCH_BLER_S#
HiSi5GNR_CSIRPT_PD_S#	HiSi5GNR_PDSCH_BLER_CW0_S#	HiSiLTE_DLPHY_TP_P	HiSiLTE_PDCCH_BLER_Total
HiSi5GNR_CSIRPT_AD_P	HiSi5GNR_PDSCH_BLER_CW1_S#	HiSiLTE_DLPHY_TP_S#	HiSiLTE_PHICH_BLER
HiSi5GNR_CSIRPT_AD_S#	HiSi5GNR_PUSCH_BLER_P	HiSiLTE_ULPHY_TP	HiSiLTE_PUSCH_BLER
HiSi5GNR_PDSCH_PRB_P	HiSi5GNR_PUSCH_BLER_S#	HiSiLTE_Tx Power	HiSiLTE_RA
HiSi5GNR_PDSCH_PRB_S#	HiSi5GNR_DCI_P	HiSiLTE_Cell_Info_P	HisiLTE_RRCMSG
HiSi5GNR_PDSCH_Layer_P	HiSi5GNR_DCI_S#	HiSiLTE_Cell_Info_S#	HisiLTE_NASMSG
HiSi5GNR_PDSCH_Layer_S#	HiSi5GNR_Txpwr_P	HiSiLTE_PDCCH_CFI_P	
HiSi5GNR_PDSCH_Mod_P	HiSi5GNR_Txpwr_S#	HiSiLTE_PDCCH_CFI_S#	
HiSi5GNR_PDSCH_Mod_S#	HiSi5GNR_L1_TP_P	HiSiLTE_PDCCH_DCI_P	
HiSi5GNR_PDSCH_MCS_P	HiSi5GNR_L1_TP_S#	HiSiLTE_PDCCH_DCI_S#	
HiSi5GNR_PDSCH_MCS_S#	HiSi5GNR_L1_TP_Total	HiSiLTE_PDCCH_CCE_P	
HiSi5GNR_PUSCH_MCS_P	HiSi5GNR_L2_TP	HiSiLTE_PDCCH_CCE_S#	
HiSi5GNR_PUSCH_MCS_S#	HiSi5GNR_L2_RA	HiSiLTE_PDSCH_Mod_P	
HiSi5GNR_PUSCH_PRB_P	HiSi5GNR_IntraFreq_MeasRslt	HiSiLTE_PDSCH_Mod_S#	
HiSi5GNR_PUSCH_PRB_S#	Hisi5GNR_RRCMSG	HiSiLTE_PDSCH_MCS_P	
HiSi5GNR_PUSCH_Layer_P	Hisi5GNR_NASMSG	HiSiLTE_PDSCH_MCS_S#	

© Copyright by Accuver Co., Ltd.

3. [Samsung chipset - Logmask]
   NR PHY ISR HBF BM (0x24) and LL1 RF Blackout Time Message (0x20) were added in Logmask setting.

4. [Qualcomm chipset - Logmask]
   NR5G RRC Blacklist Update BM (0xB2C) had been added in Logmask setting.

© Copyright by Accuver Co., Ltd.

Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.436 & XCAL-Harmony 2.02.387

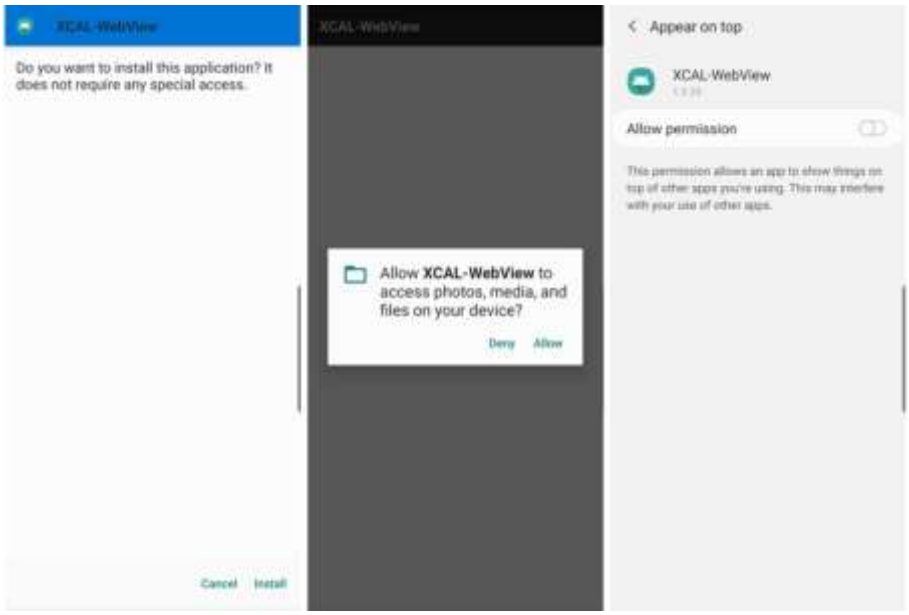
Date of Release : 2020-08-10

Autocall

1. [HTTP/Youtube]

   When installing XCAL-Solo (or Mobile) for the first time, the XCAL-WebView installation and authorization window does not open.

   [Note] Installation and authorization can be obtained in each AutoCall scenario window requiring XCAL-WebView installation.



© Copyright by Accuver Co., Ltd.

2. [Voice/VoLTE]

Added option to measure using Bluetooth Module(only Solo)

1) Control → Auto call → Activate Bluetooth module option

2) Voice/VoLTE Scenario Add/Edit check and save the [Bluetooth in call volume] value.

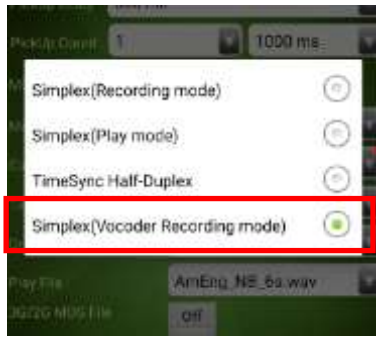
3) Press Autocall Start button and proceed with Voice, VoLTE MOS Test.

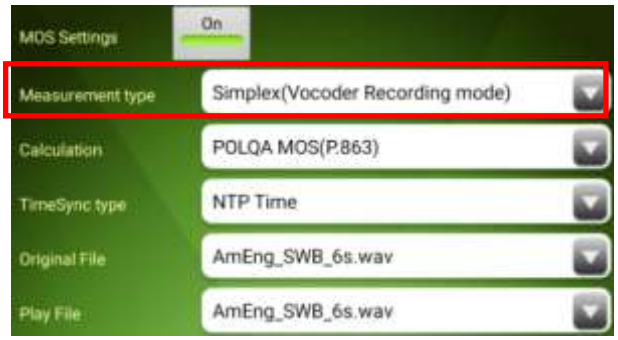
3. [Simplex(Vocoder Recording mode)]

   This function can be seen on only Qualcomm chip mobile.

   Qualcomm Vocoder Rx Packet (0x1805) must be collected.

   1) Added Qualcomm Vocoder recording mode





   2) This function can only be recorded.

4. [Multi-Call]

   Added Airplane mode (Before Multi-Call) option

   - Proceed to airplane mode only before the first call of Multi-call.

© Copyright by Accuver Co., Ltd.

© Copyright by Accuver Co., Ltd.

RF View

1. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]
   - DM Interface is supported from the P40 model. (Mate model is not supported)
   - Requires ENG Firmware with AIDL Interface applied.

   1) Added the 3G Summary, 3G Signal, 3G Cell Viewer in RF View Menu

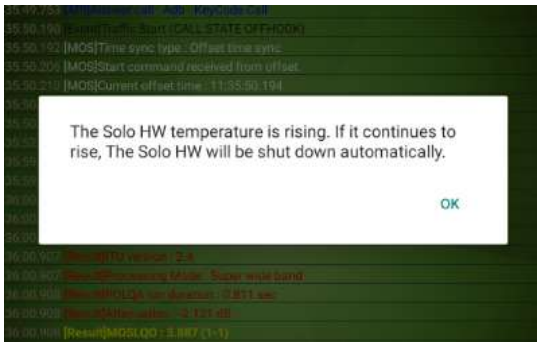
   2) Added the GSM Summary, GSM Signal, GSM Cell Viewer in RF View Menu

© Copyright by Accuver Co., Ltd.

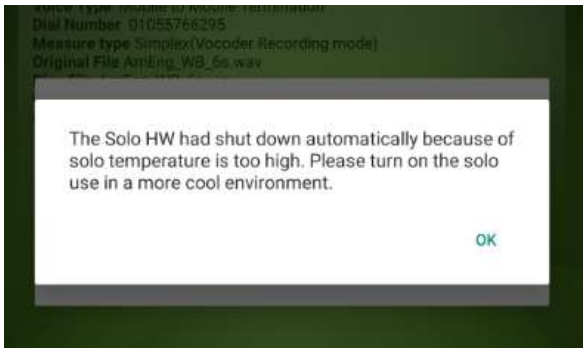
Function

1. [High Temperature Warning]

   1) Added Warning popup for Solo HW high temperature.



   2) If the Solo internal temperature rises above 100 degrees, the System is automatically shut down.



© Copyright by Accuver Co., Ltd.

2. [5G NR Network lock for Samsung Deivce]

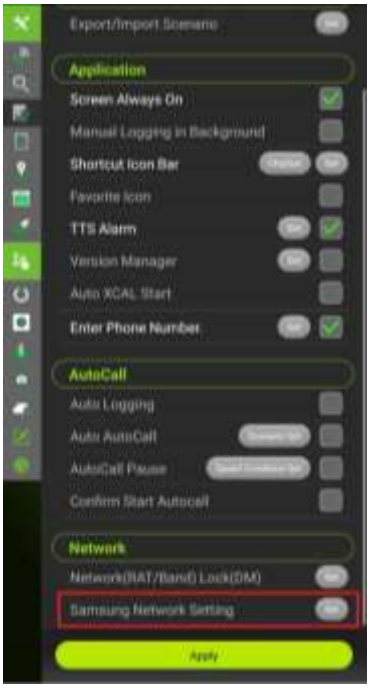
   Added Samsung Network Lock option.

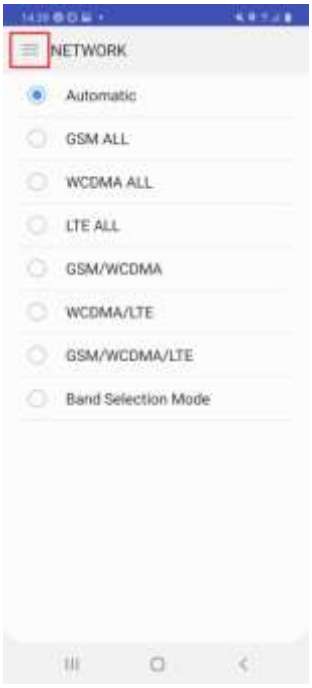
   * Samsung devices - not related to chipsets

   *Galaxy S20 sample image

   If "Network Mode(=RAT Lock)" license is exists, this option is activated.

   *Galaxy S20 sample image

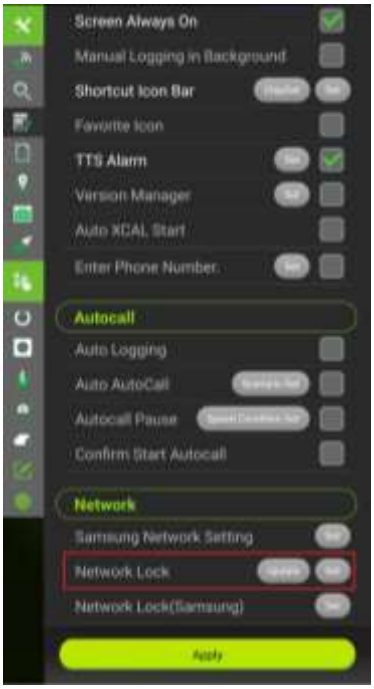


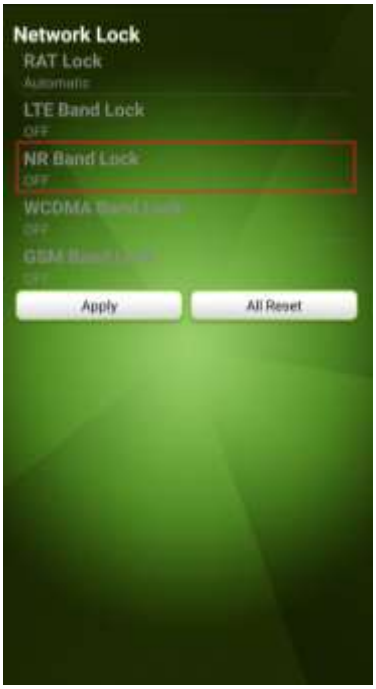


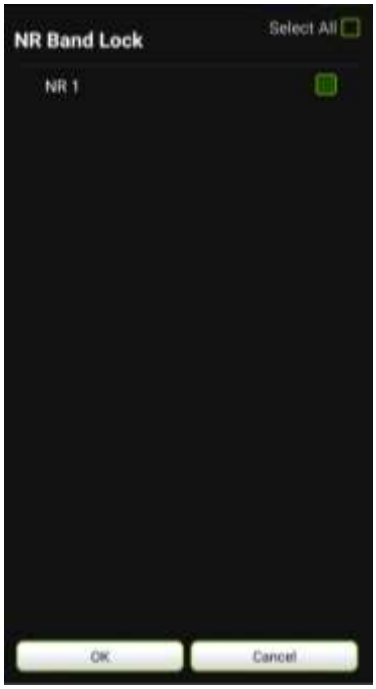
© Copyright by Accuver Co., Ltd.

3. [Common]

   Added Network Lock option that operates in XML for 5G NR Band Lock.







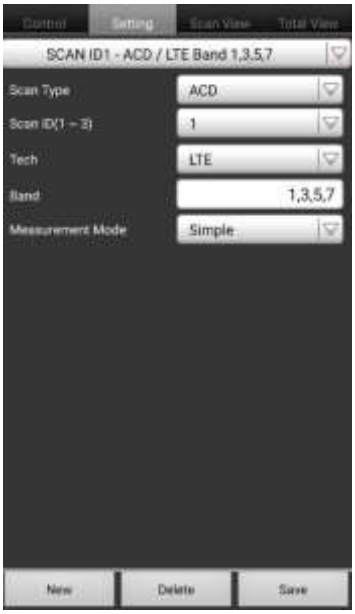
© Copyright by Accuver Co., Ltd.

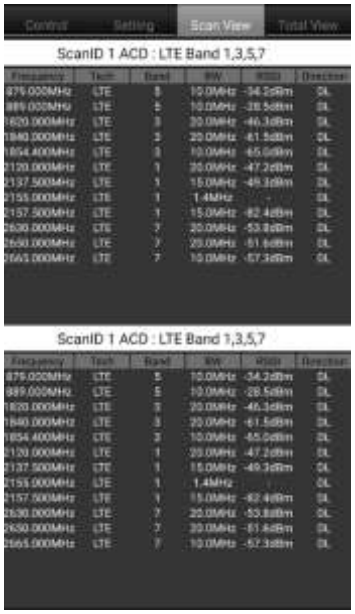
Scanner

1. [R&S TSMA6]

   Added LTE ACD feature

   LTE ACD feature has added. Numerous bands can be scanned per technology by comma symbol.





Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.435 & XCAL-Harmony 2.02.385

Date of Release : 2020-07-28

Autocall

1. [SPEEDTEST by Ookla]

   1) Added KPIs logging on CSV file and Detail Info screen.

No.	Type	DL Thr.	UL Thr.	Ping	Result
1	Ookla	445.691	42.100	31.0	Success
2	Ookla	442.902	55.623	64.0	Success
3	Ookla	414.574	54.954	25.0	Success
4	Ookla	449.262	68.616	40.0	Success
5	Ookla	336.266	51.894	41.0	Success
6	Ookla	421.880	79.787	91.0	Success
7	Ookla	462.981	54.731	73.0	Success
8	Ookla	0.000	0.000	0.0	EndByUser

   2) Added default Setup/T.Setup/Traffic time in scenario.

   3) An issue has been fixed where results were not shared.

   4) When measuring Test Again mode, the problem that cannot be measured normally from the second call has been fixed.

© Copyright by Accuver Co., Ltd.

2. [Multi-Session]

   Bug Fixed

   - During the Multi-Session measurement, the bug that determines success without fully uploading/downloading files has been corrected.

3. [Multi-Call]

   Bug Fixed

   - During the Multi-Call measurement, the RF view corrected the invisible bug each time it went over to the next call.

© Copyright by Accuver Co., Ltd.

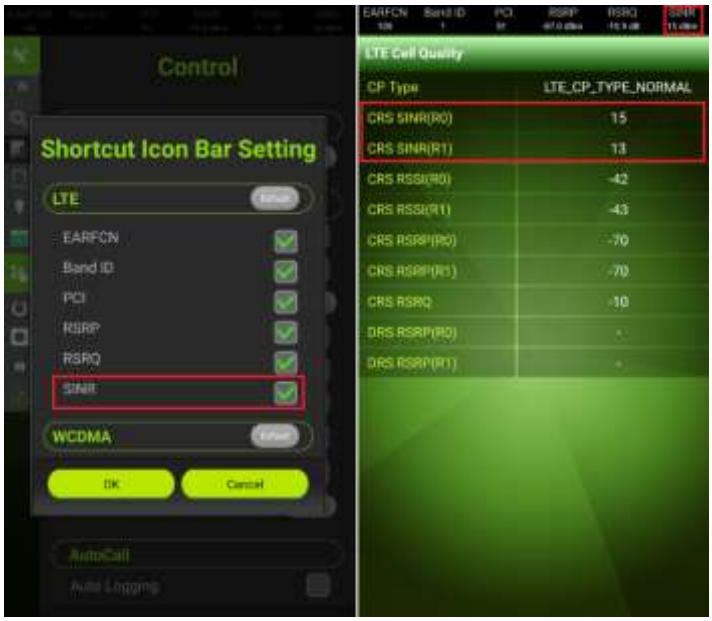
RF View

1. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]
   - DM Interface is supported from the P40 model. (Mate model is not supported)
   - Requires ENG Firmware with AIDL Interface applied.

   1) Added RF KPIs(DL Rank, PDCCH DCI FMT, UL Rank) in 5G NR Summary Menu

   2) Added the LTE SINR KPI in RF shortcut Bar of Top

      * It handles the best value of CRS SINR(R0) and CRS SINR(R1)



   3) Added the eNB ID and Cell ID KPIs in LTE Summary Menu

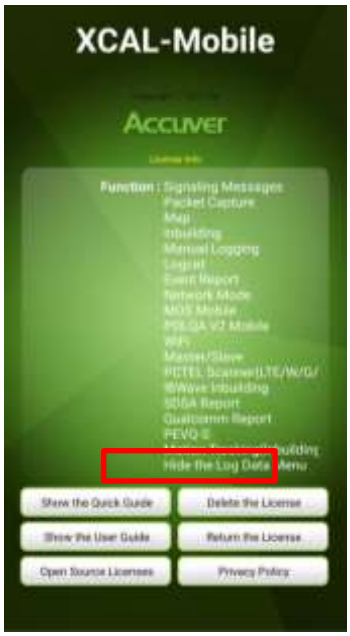
© Copyright by Accuver Co., Ltd.

4) Added the gNB Tx Antenna Num and UE Rx Antenna Num KPIs in 5G NR Summary Menu

© Copyright by Accuver Co., Ltd.

Function

1. [Common]
   Add “Hide the Log Data Menu” license option.
   If the option exists,
   1) the Log Data menu of Settings is not displayed.
   2) Logging file(drm) is not create.



Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.433 & XCAL-Harmony 2.02.382

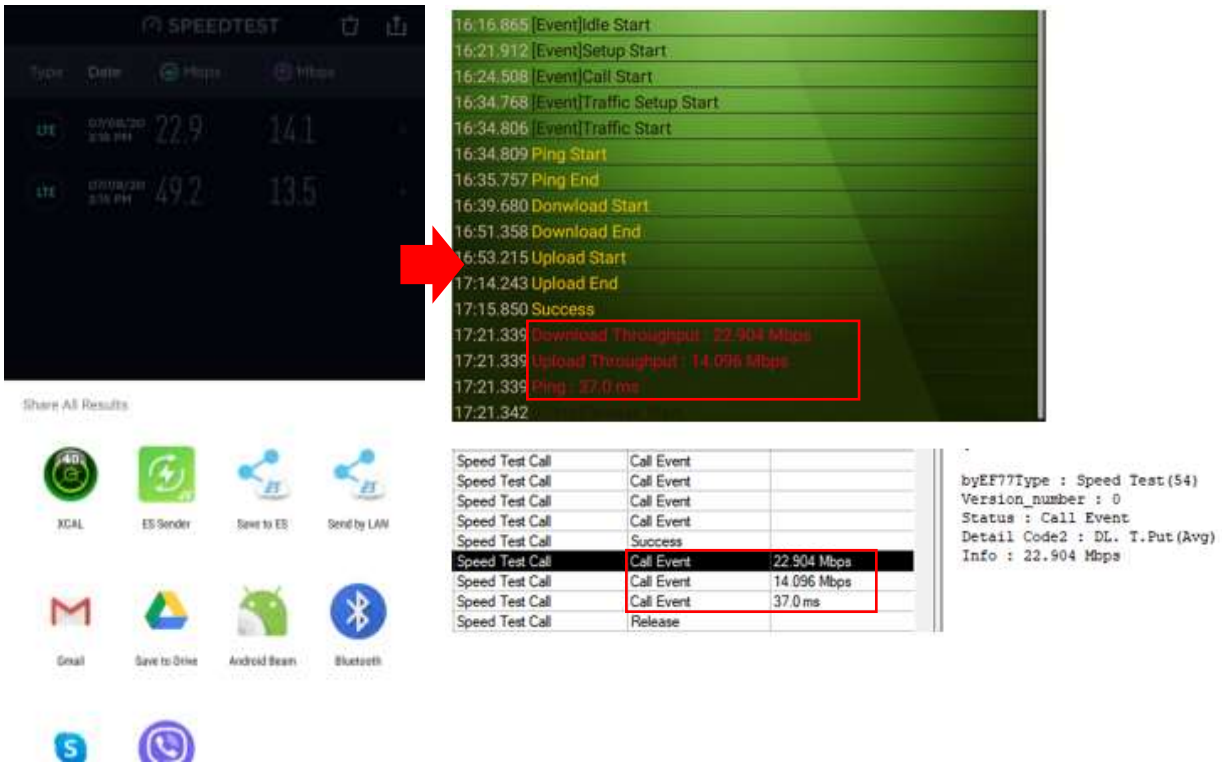
Date of Release : 2020-07-13

Autocall

1. [SPEEDTEST by Ookla]

   Added KPIs logging on SPEEDTEST by Ookla autocall.

   - Download Throughput (Mbps) / Upload Throughput (Mbps) / Ping (ms)



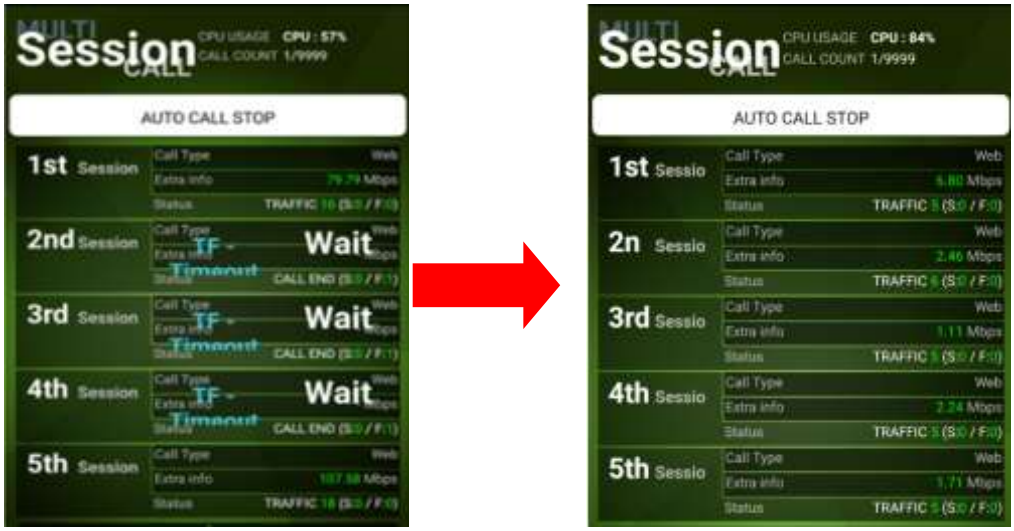
2. [Multi-Session]

   Bug Fixed

   1) Traffic fail issue in the first call has been fixed.

   2) Issue that changed the order of each session in Call result history has been fixed.

© Copyright by Accuver Co., Ltd.

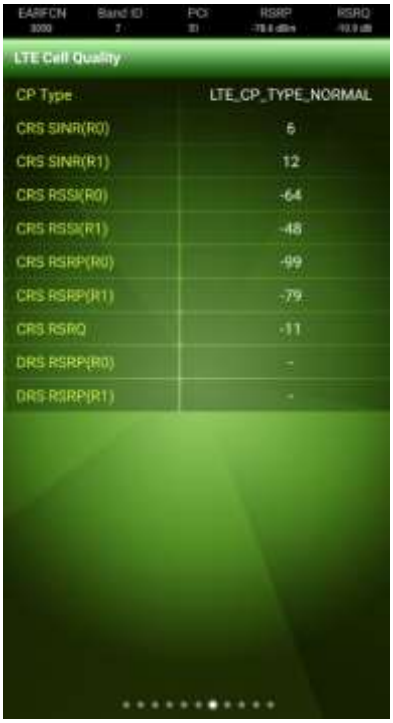


© Copyright by Accuver Co., Ltd.

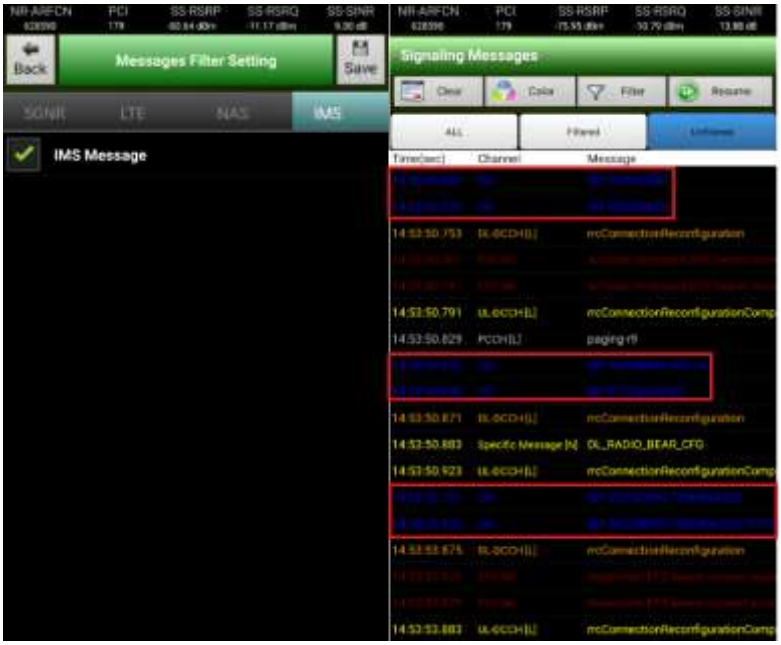
RF View

1. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]
   - DM Interface is supported from the P40 model. (Mate model is not supported)
   - Requires ENG Firmware with AIDL Interface applied.

3) Added the LTE Cell Quality Viewer in RF View Menu



4) Added the IMS message in Signal Message Viewer



© Copyright by Accuver Co., Ltd.

2. [Qualcomm]

1) 5G NR inter RAT and LTE CA View

- Display up to SCell 7

[Note] It may differ depending on your license.

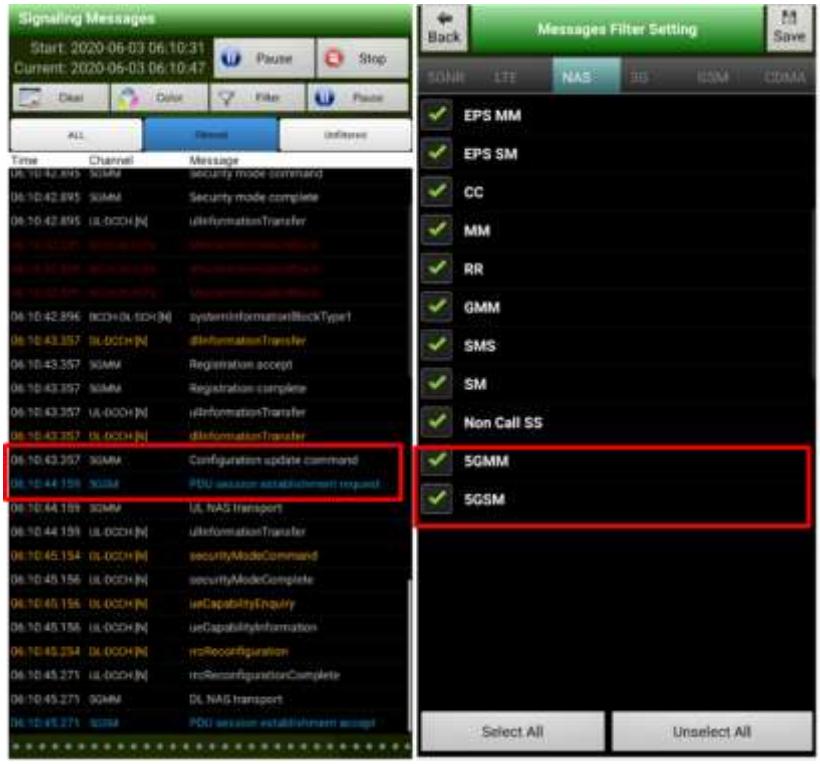
2) 5G NR Summary – NR RRC State

- Added an item to display 5G NR RRC State for SA

3) NAS Signaling Message

- Added an item to display 5G MM and 5G SM messages

© Copyright by Accuver Co., Ltd.



4) Enhanced stability for RF View

Fixed the problem that the app is closed

- when you entering the screen(LTE Summary / LTE CA / LTE Signal).

- when you using the button in the LTE SIB Information screen.

5) 5G NR Beam information

- Added tabs to display information for SCells.

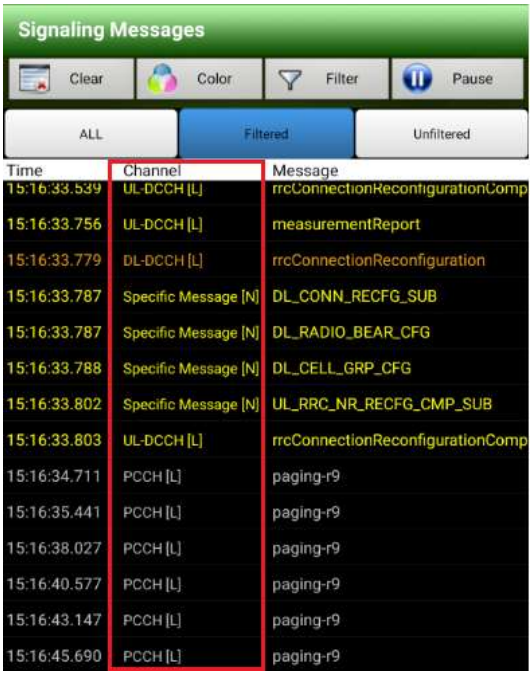
© Copyright by Accuver Co., Ltd.

6) 5G NR NAS 5G MM State

- Added a Screen to display 5G NR NAS 5G MM State

3. [Common]

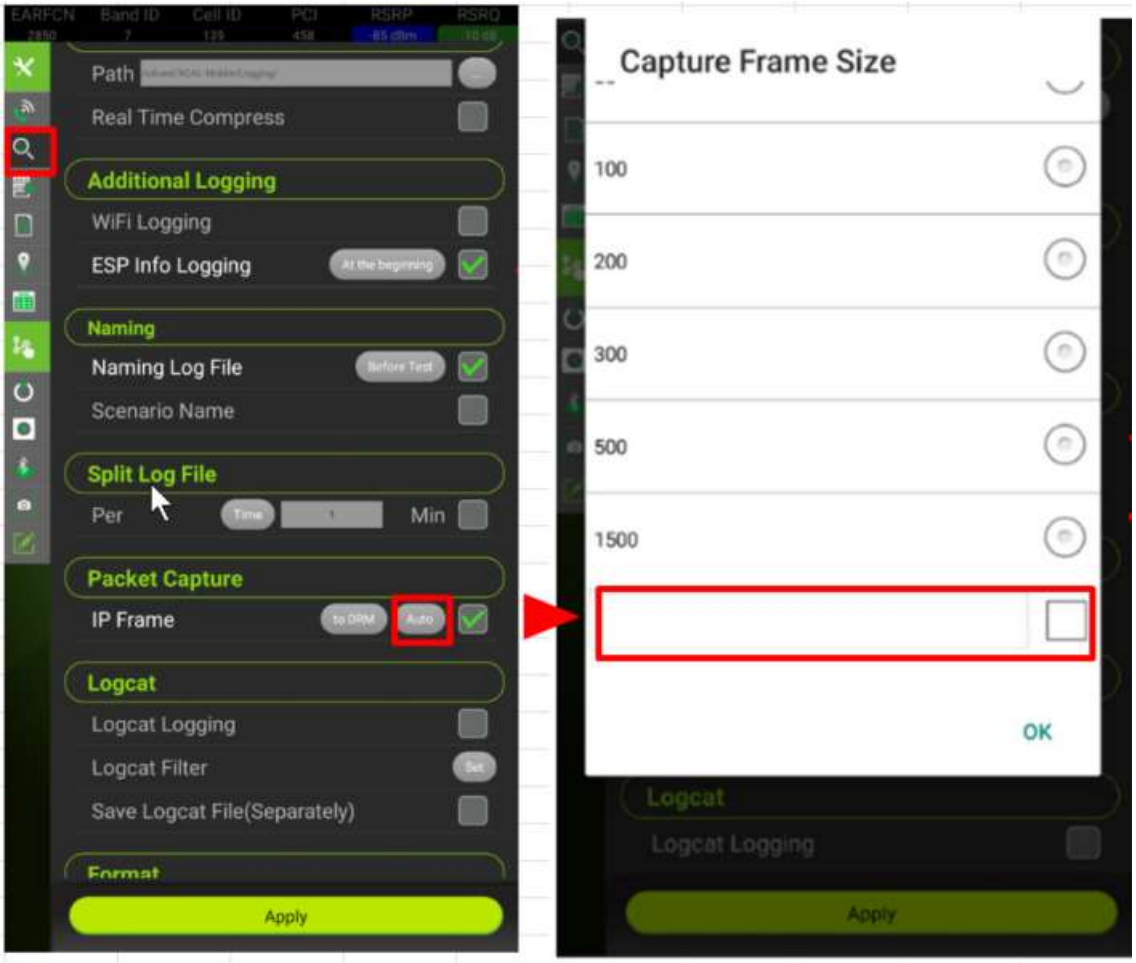
Added LTE/5GNR RRC Signaling Message identifier to Channel information of Signaling Message Viewer * LTE = [L] / 5GNR = [N]



© Copyright by Accuver Co., Ltd.

Function

1. [Packet Capture]
   Added the Size (Range is from 80 to 1500) option for Samsung chip.



Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.427 & XCAL-Harmony 2.02.381

Date of Release : 2020-06-29

Autocall

None

RF View

1. [Common]
   1) Display Azimuth using Gyro sensor.
      - Orientation Yaw, Pitch and Roll values have been added to Android RF View.
      - Azimuth, Elevation values has been added to 5G NR Summary.

© Copyright by Accuver Co., Ltd.

2) Added 5G NR State

3) ENDC Summary – UI improvement

A box button has been added to allow the top box, which used to provide only DL PHY values, to provide TP values for other layers (PDCP/RLC/MAC).

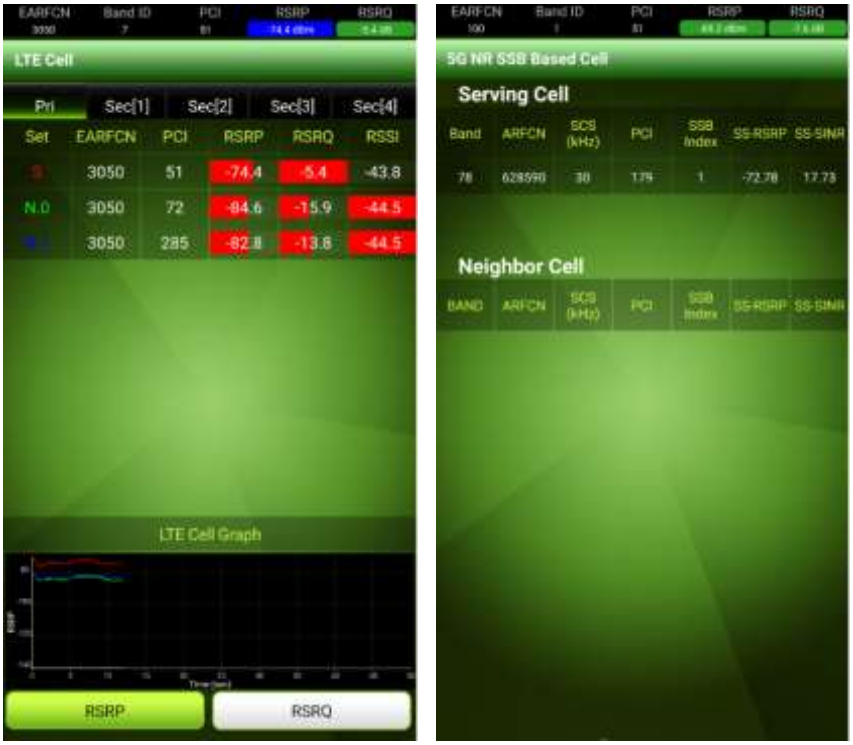
2. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]

- DM Interface is supported from the P40 model. (Mate model is not supported)
- Requires ENG Firmware with AIDL Interface applied.

1) Added the LTE and 5G NR Signal Viewer in RF View Menu

© Copyright by Accuver Co., Ltd.

2) Added the LTE Cell and 5G NR SSB Based Cell Viewer in RF View Menu



3) Added the 5G RF Parameter based on BTS DB in 5G NR Summary menu.

-. NR gNB ID / NR Sector ID / NCI(36Bit) / NR TAC

* These parameters appear only when 5G BTS DB is loaded.

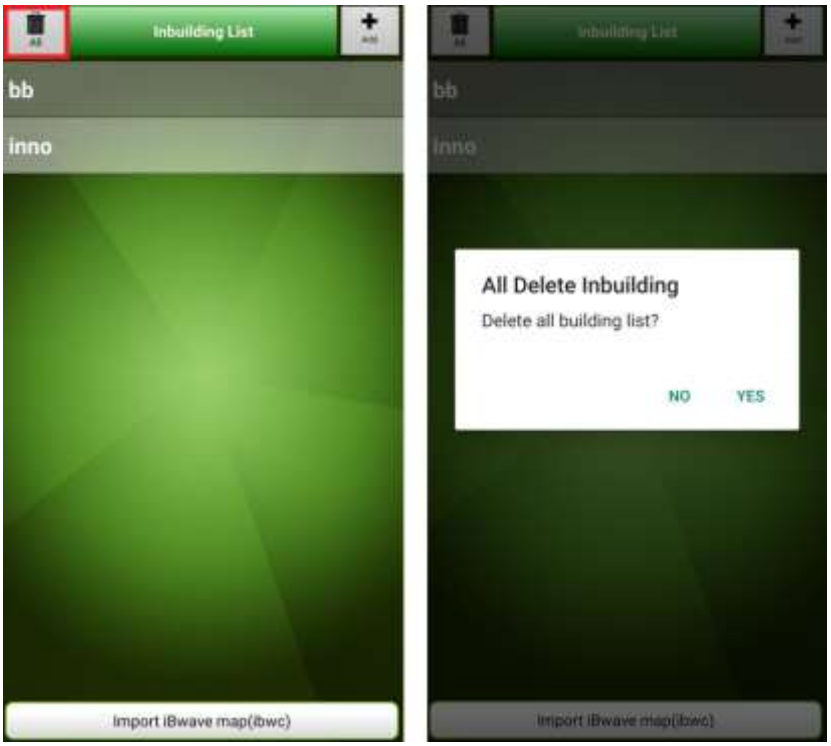
© Copyright by Accuver Co., Ltd.

© Copyright by Accuver Co., Ltd.

Function

2) [Inbuilding]

3) Added "All Delete" button to delete the all building list.



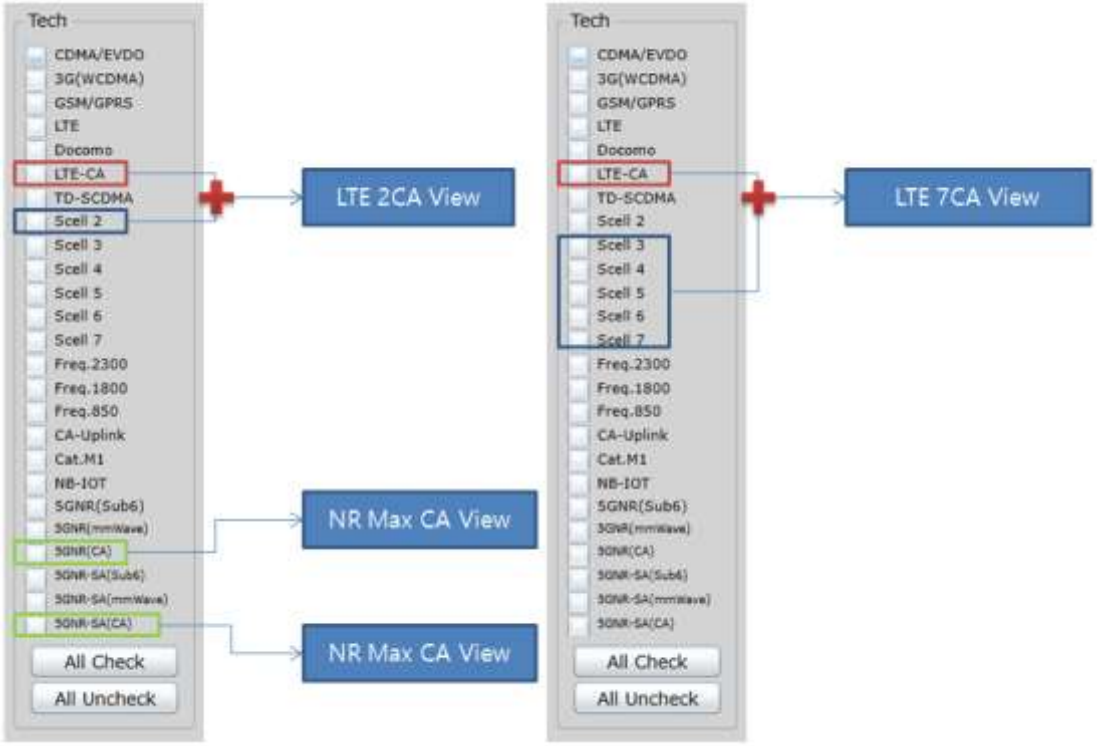
4) If the "Delete" button is pressed without saving, the information is reset.

3) [License]

© Copyright by Accuver Co., Ltd.

Changed the CA License Combination of LTE/NR.

- LTE-CA = Pcell/Scell1
- LTE-CA + Scell2 = Pcell/Scell1/Sell2
- LTE-CA + Scell3(~7) = Pcell/Sell1~7
- 5GNR(CA) = NR Pcell/Sell1~(Max)
- 5GNR-SA(CA) = NR Pcell/Sell1~(Max)



Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.423 & XCAL-Harmony 2.02.379

Date of Release : 2020-06-15

Autocall

1. [Voice/VoLTE]

   Added measurement function option using POLQA V3 for MOS measurement.

   - Due to OPTICOM Library issue, it is not supported on Android OS Version 10 devices.
   - Opticom has plan to release new library version after improvement by the end of June.

Setting menu of POLQA V3 in XCAL-Mobile

Setting menu of POLQA V3 in XCAL-Solo

POLQA V3 Results in XCAL-Mobile(Solo)

© Copyright by Accuver Co., Ltd.

2. [Multi-RAB]

Changed to not perform interface ID verification to enable VoLTE testing in Multi-RAB.

[Caution!] Please note that packet loss may occur if test VoLTE in Multi-RAB.

Please change the app's setting as below before the test.

Enable the [Settings]-[Log Data]-[ESP Info Logging] option, and change Packet Capture size Auto to 1500 then Apply.

[Note] It is not necessary to change the above settings on specific devices (ex. Sonny XZ2) which can logging IMS SIP Message (0x156E) does not require separate ESP Info Logging settings and adjusting Packet Capture size.

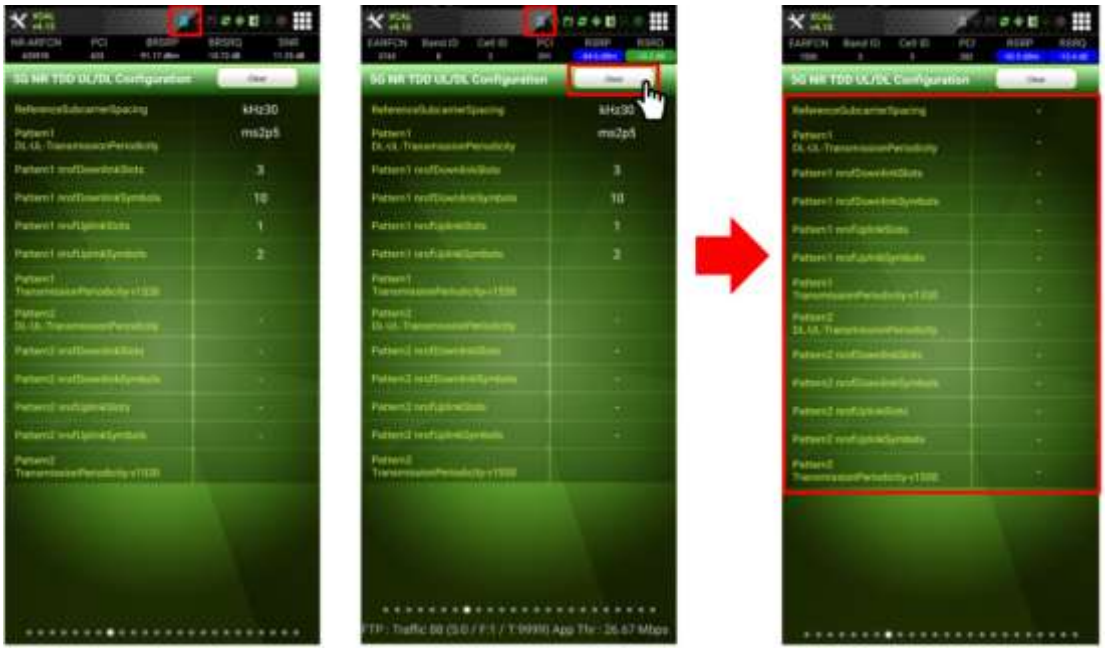
© Copyright by Accuver Co., Ltd.

RF View

1. [Common]

   'Clear' button has been added to manually reset the values shown.

   - Changed to show without initializing until next value comes in.

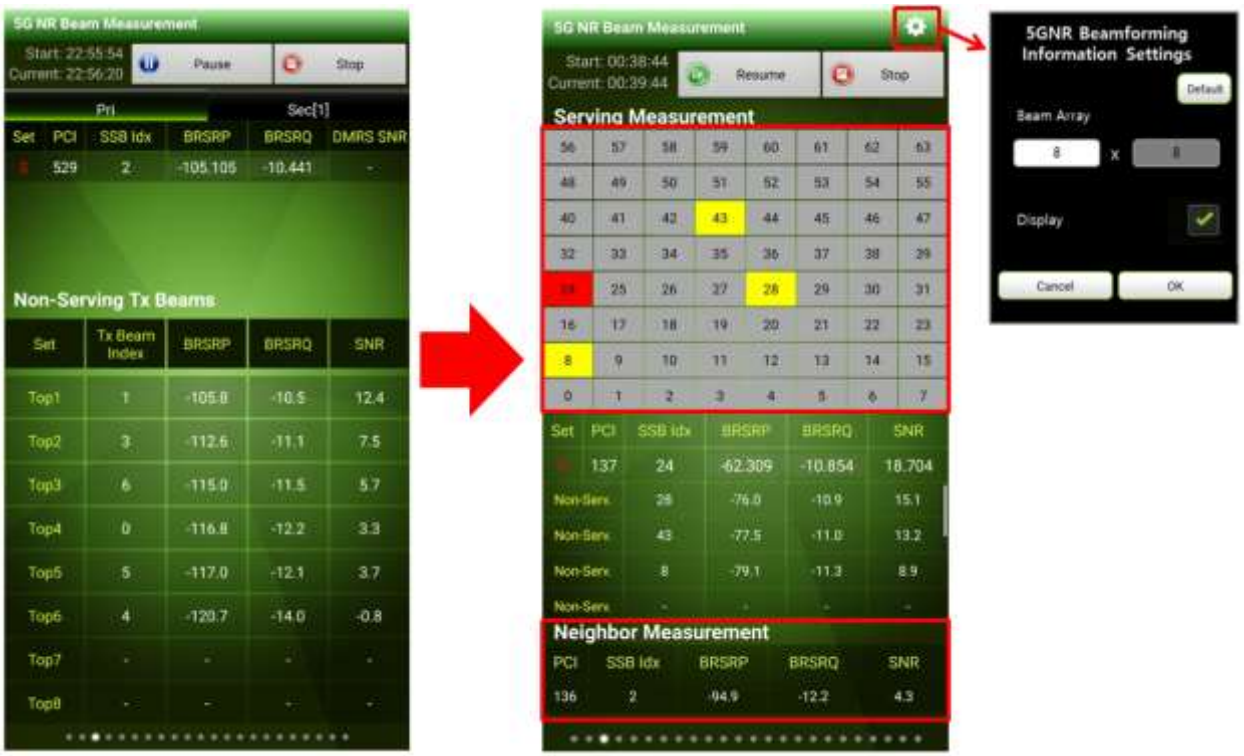


2. [Qualcomm Chipset]

   1) It has been modified to display all three types of SSB patterns that depending on the frequency band of 5G-NR.

© Copyright by Accuver Co., Ltd.

2) 5G Beam Measurement
   - Added Neighbor Measurement.
   - Added beam array based on SSB Idx.



3. [XCAL-Harmony]
   1) Added Uplink throughput information in 5G NR ENDC Summary screen. (Only Qualcomm chip)
      Down-Link / Up-Link Throughput information conversion is possible through a button

4. [Hisilicon(Balong5000) Chipset – Only Support XCAL-Mobile version]
   - DM Interface is supported from the P40 model. (Mate model is not supported)
   - Requires ENG Firmware with AIDL Interface applied.

© Copyright by Accuver Co., Ltd.

4) Added the 5G NR Summary Viewer in RF View Menu

5) Added the LTE Summary Viewer in RF View Menu

6) Added the Signaling Message Viewer in RF View Menu

© Copyright by Accuver Co., Ltd.

© Copyright by Accuver Co., Ltd.

Function

2. [Qualcomm Chipset Logmask]
   Added 5G NR Logmask
   * Management Layer1(ML1)
     - NR5G ML1 RLM Stats
     - NR5G ML1 Searcher Idle S Criteria
     - NR5G ML1 Antenna Switch Diversity
     - NR5G ML1 DLM2 CA Metrics Request
   * NAS Layer
     - NR5G NAS MM5G Service Request
   * FW
     - NR5G LL1 FW Serving FTL

3. [Qualcomm Chipset]- [Settings]- [Log Data]-[Format]
   Changed logging format setting option
   1) XCAL-Format is always Enable. It cannot be disabled.
   2) DLF Logging (QC Format) can be set to 'DLF+DRM' or 'DLFOnly'.

© Copyright by Accuver Co., Ltd.

Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

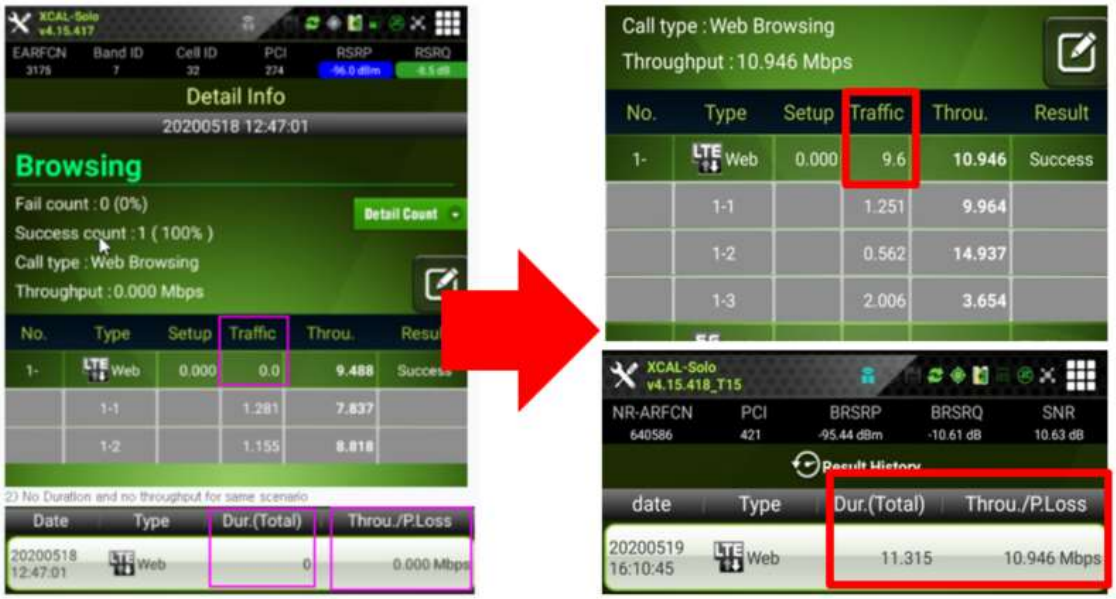
XCAL-Mobile/Solo 4.15.419 & XCAL-Harmony 2.02.374

Date of Release : 2020-05-25

Autocall

1. [HTTP]

   Traffic time and throughput display issue in HTTP Web Browsing Call has been fixed.



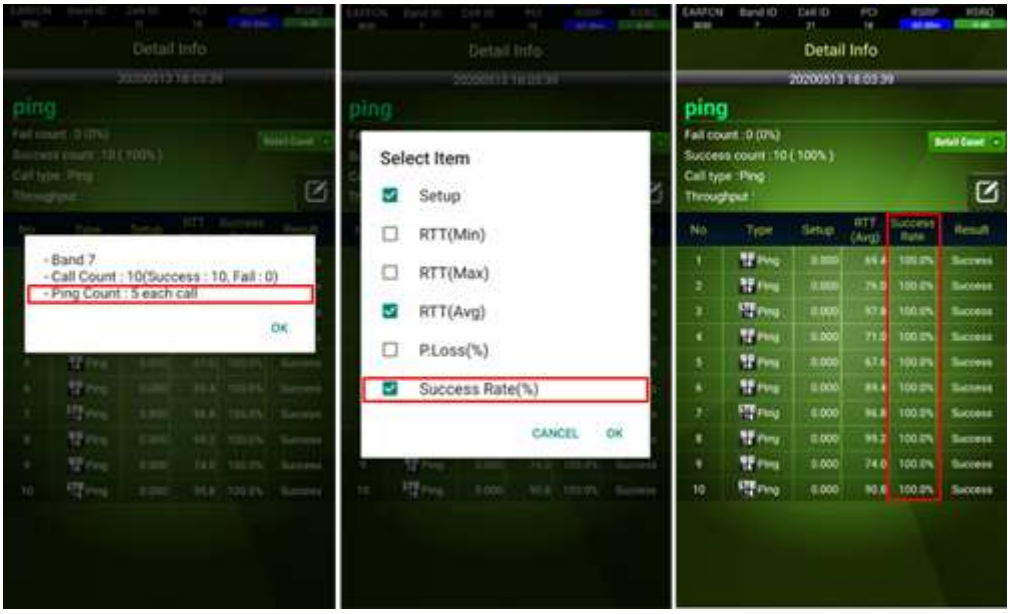
2. [Ping]

   Added ping count and success rate item on Result History of Ping autocall. User can change the result of autocall item flexibly.

   1) Detail Count – added Ping Count item

   2) Edit – added Success Rate item

© Copyright by Accuver Co., Ltd.



© Copyright by Accuver Co., Ltd.

RF View

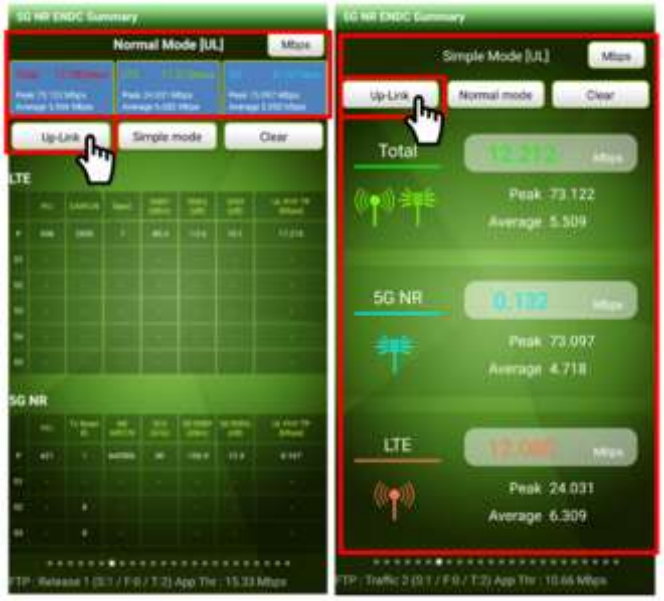
4. [Common]

   Dynamic Spectrum Sharing(DSS) for 4G and 5G NR has been added.

5. [Qualcomm Chipset]

   1) Added Uplink throughput information in 5G NR ENDC Summary screen.

      Down-Link / Up-Link Throughput information conversion is possible through a button.

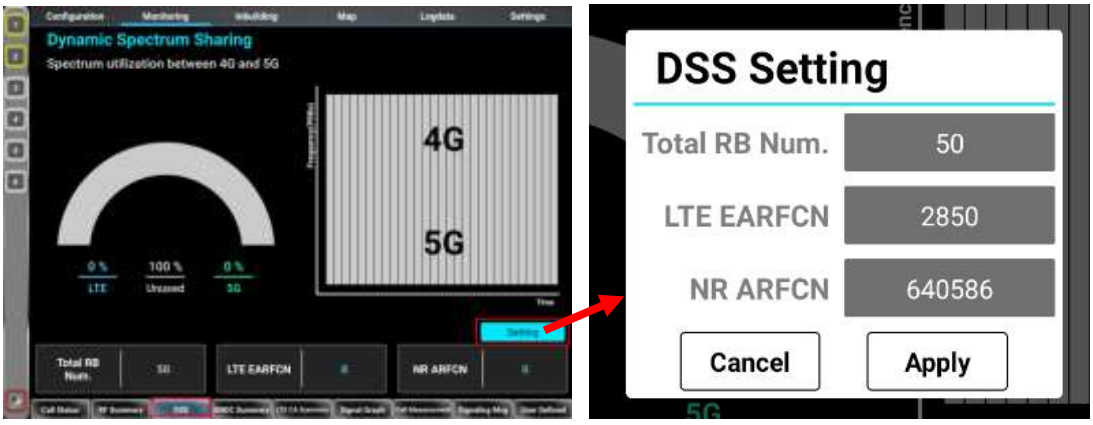


   2) Added 5G RF information in 5G Summary screen.

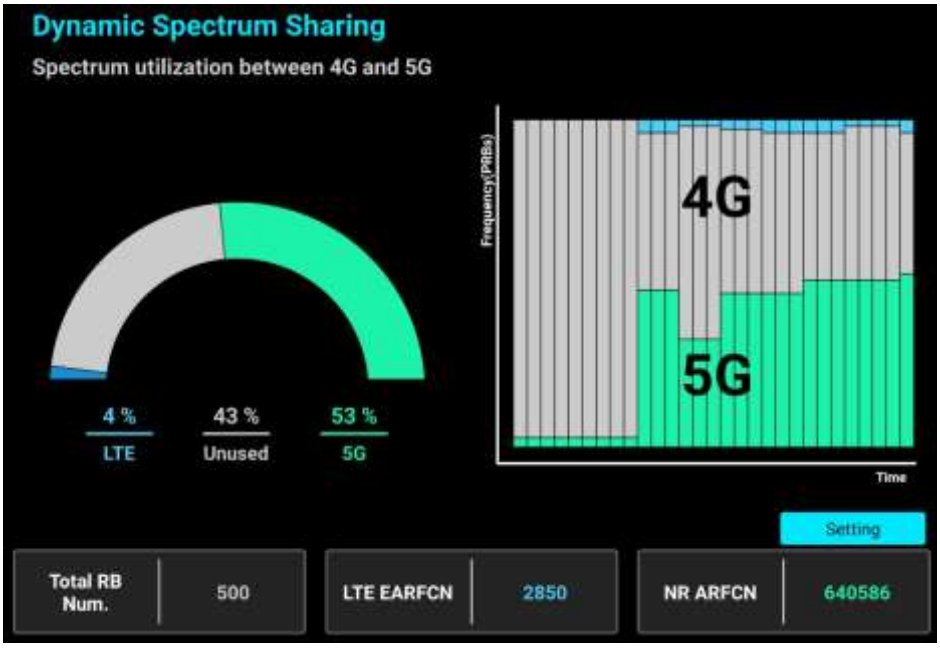
      - UL MCS Mod.Rate of 1024QAM
      - PDCCH DCI Format[UL] Count / PDCCH DCI Format[DL] Count

© Copyright by Accuver Co., Ltd.

6. [XCAL-Harmony]
   2) Dynamic Spectrum Sharing(DSS) for 4G and 5G NR has been added. [Monitoring – DSS]



© Copyright by Accuver Co., Ltd.



3) User defined - Signal graph bug fix
   - Correct bug that don’t display RF values stored in Signal Graph in User defined.

© Copyright by Accuver Co., Ltd.

Function

1. [Log upload]

   Added 'DRM Auto Move' option in Log upload set.

   At the end of logging, the log file saved in solo is moved to the smart phone.

2. [Open API]

   Added 'Open API' Function list and Callback function.
   - Function list
     Set / Get User Defined log name
     Set / Get phone log path
     Set / Get log auto move
   - Callback function
     Log file copy status

3. [Replay]

   The problem of suddenly reaching 100% of the Replay progress has been fixed.

   Changed to prevent Inbuilding measurements from starting during Replay.

4. [Logmask]

   Added Logmask items for Qualcomm chipset devices.

   - RLC Layer : NR5G RLC DL Status PDU (0xB84E)

   - PDCP Layer : NR5G PDCP DL COM Stats (0xB843)

© Copyright by Accuver Co., Ltd.

5. [XCAL-Harmony]
   Delete Replay mode.

Scanner

None

Known Issue

None

© Copyright by Accuver Co., Ltd.

XCAL-Mobile/Solo 4.15.415 & XCAL-Harmony 2.02.370

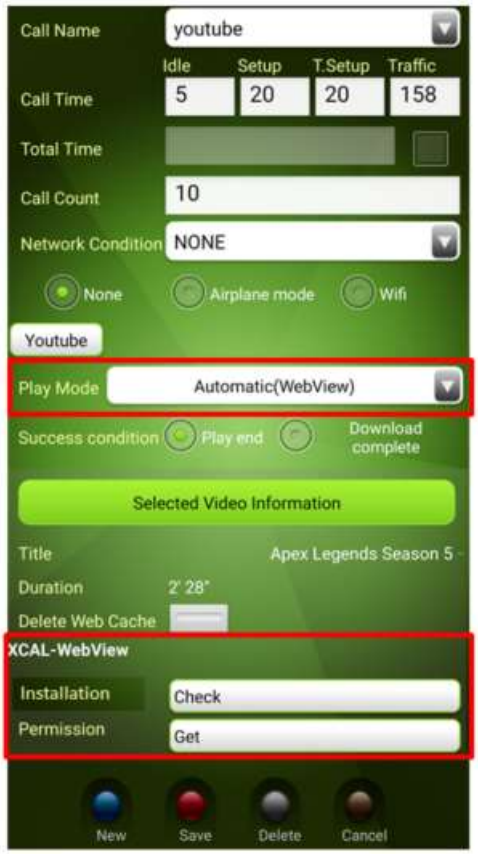
Date of Release : 2020-05-11

Autocall

1. [HTTP]

   1) A feature to check the status of XCAL-WebView installation and permission has been added. Press [Check] button next to Installation to check if XCAL-Webview.apk is installed, and proceed with installing it if not. Also, press [Get] button next to Permission to get the accessibility permission of XCAL-Webview.

      If XCAL-WebView.apk is not installed or no permission given, Autocall would not properly run.



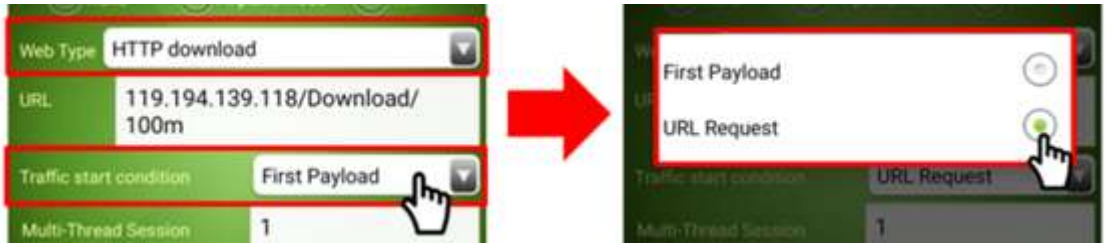
   2) If [Delete Web data] option is activated and the configured idle time is under 5secs,

© Copyright by Accuver Co., Ltd.

pop-up recommends to extend idle time. If idle time is under 5secs, the scenario would not be saved.

3) Added 'Traffic Start Condition' option in HTTP call scenario screen. Default set is First Payload.

- First payload: After receiving a response from the test web server, check the first payload to start traffic time.
- URL Request : After sending the request to the web server, traffic starts without checking the response to the request.



2. [Voice/VoLTE]

M2E Delay measurement function using NTP Time has been added.

This function was added to measure voice M2E Delay between devices in different locations.

© Copyright by Accuver Co., Ltd.

* This function may cause an error in Delay value due to NTP time delay and equipment delay(recording and play delay)

* Only origination and termination call types are supported.

3. [PS Call]

PS Call added for Detach & Attach Test.

- Support CMD Type : CP Command, AT Command
- Support Call Type : Detach & Attach, Attach

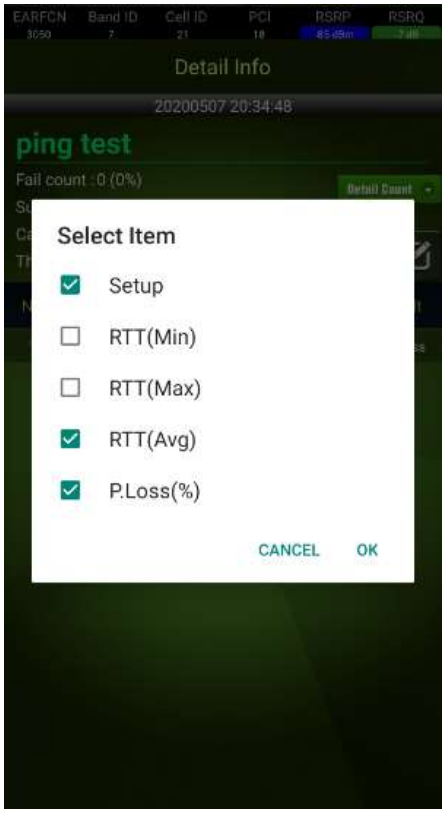
4. [SMS]

© Copyright by Accuver Co., Ltd.

Supported SMS of IMS : ESP Information log event in SMS Call is saved with ESP Info Logging option. Both [Before SMS call] and [At the beginning] options are supported.

5. [Ping]

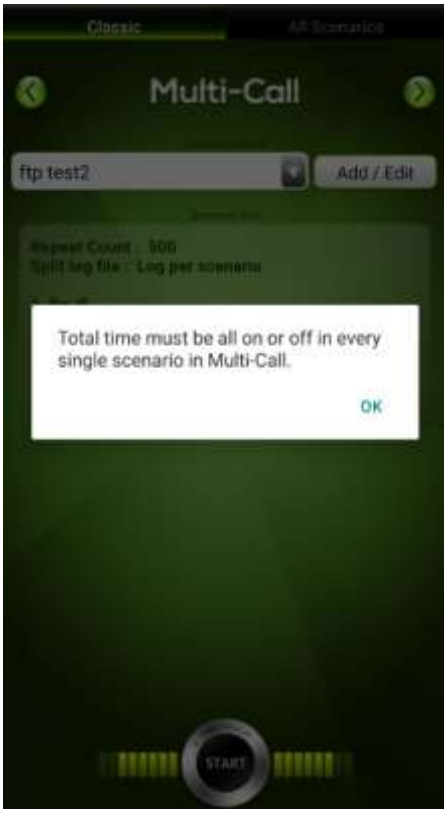
Added RTT(Min)/RTT(Max) items on Result History of Ping autocall. User can select what they show on call result history.



6. [Multi-Call]

Multi-call is only possible if all of Autocall's Total time applied in the Multi-call scenario is ON or OFF. Otherwise, the "Total time must be all on or off in every single scan in Multi-Call" pop-up will occur and will not start the call.

© Copyright by Accuver Co., Ltd.



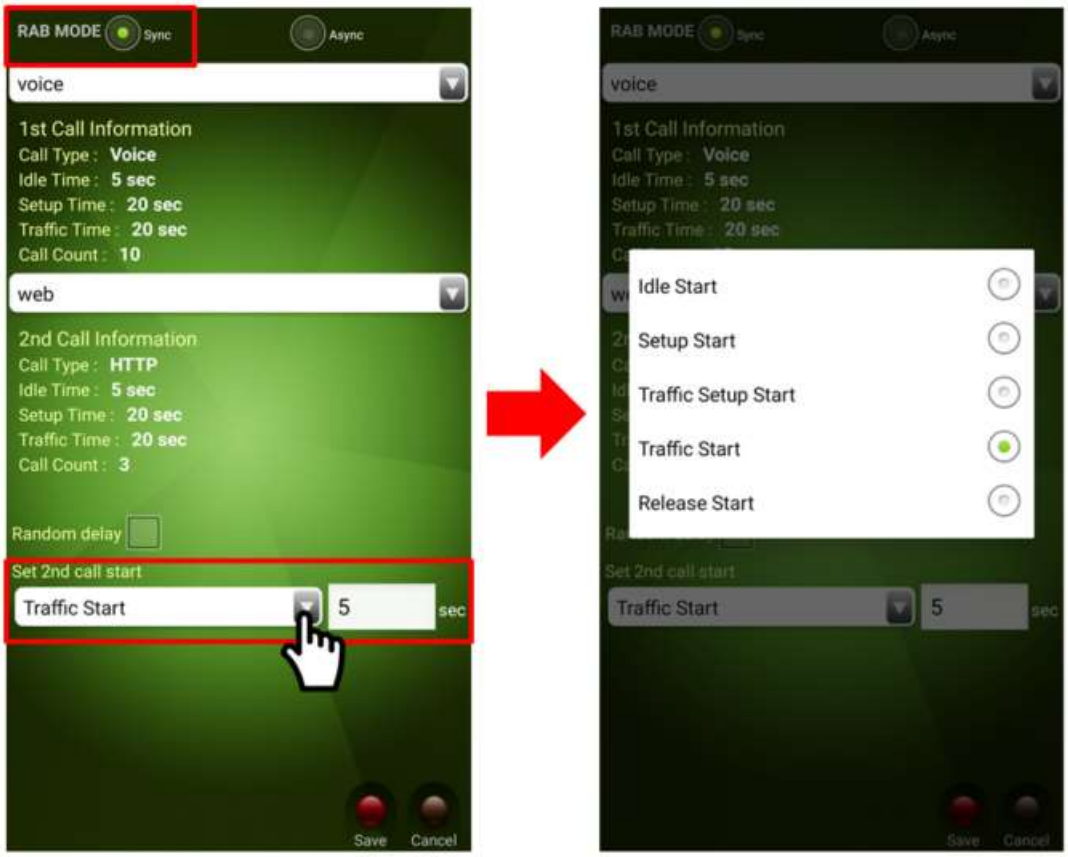
7. [Multi-RAB]

   1) [Random Delay] and [Set 2nd Call Start] options are added when RAB Mode of Multi-RAB is selected as Sync. Only one option can be selected.

   * Random delay : guard period of Random delay is 5 seconds(fixed)

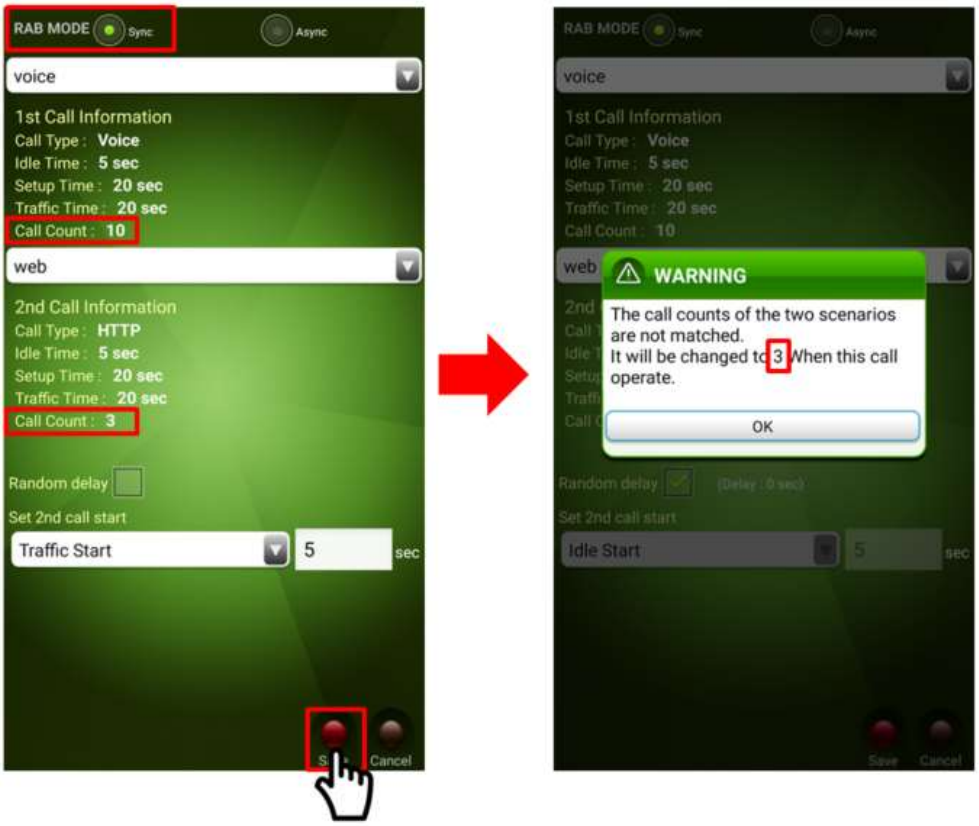
© Copyright by Accuver Co., Ltd.

* Set 2nd call start : User can configure the start time(sec) of 2nd call based on the running time of the 1st call.



2) If the mode is Sync in Multi-RAB, two different calls will run for the same counts which is configured more less than the other.

© Copyright by Accuver Co., Ltd.



8. [XCAL-Harmony]

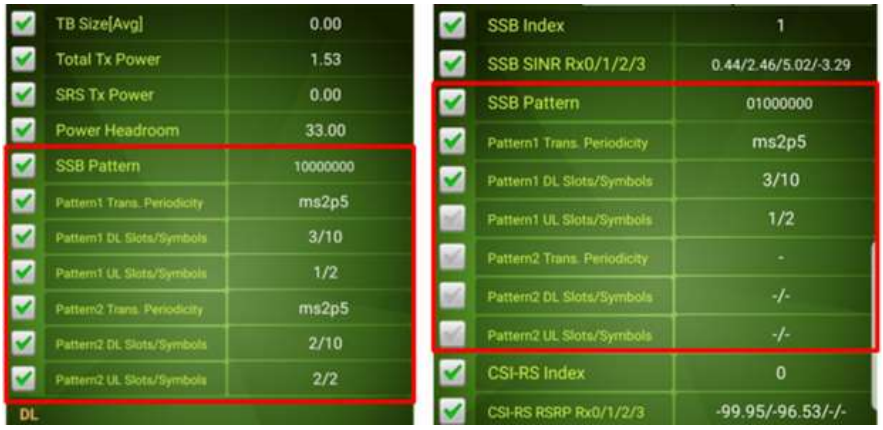
Added MOS Timesync in MCPTT Autocall

* MOS Timesync : Harmony time, Traffic time option added to MCPTT Autocall. (For Harmony time option, it is available only in Harmony)

© Copyright by Accuver Co., Ltd.

RF View

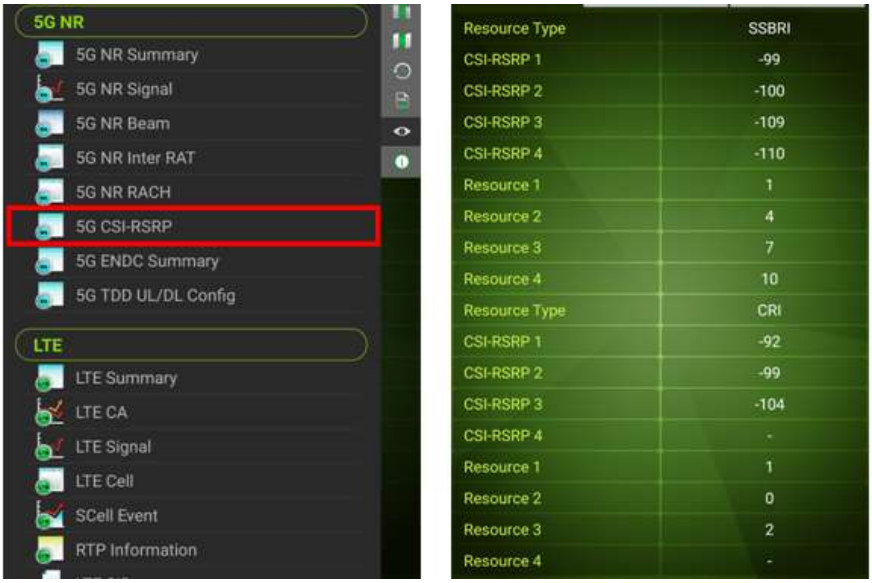
1. [Common]
   1) SSB Pattern, and Transmission Periodicity, DL/UL Slots, DL/UL Symbols regarding Pattern 1/2 information have been added in 5G NR Summary View.



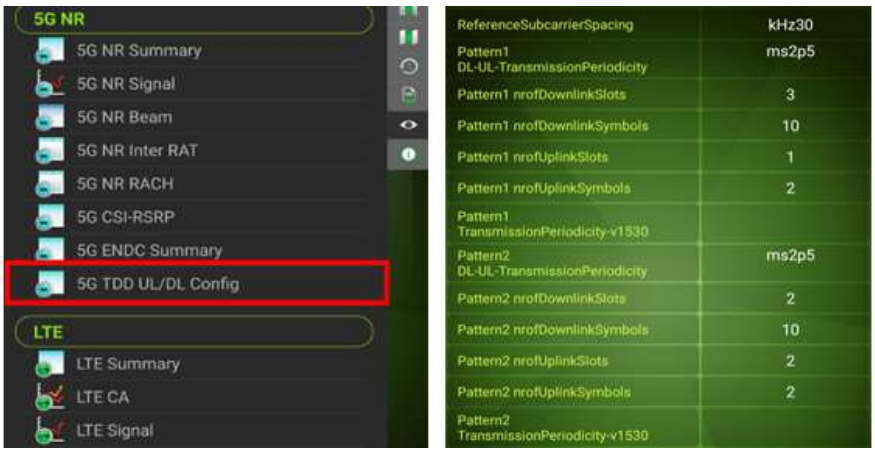
   2) Simple Mode in 5G NR ENDC Summary Menu added.

2. [Qualcomm Chipset]
   1) Added the 5G CSI-RSRP View.

© Copyright by Accuver Co., Ltd.

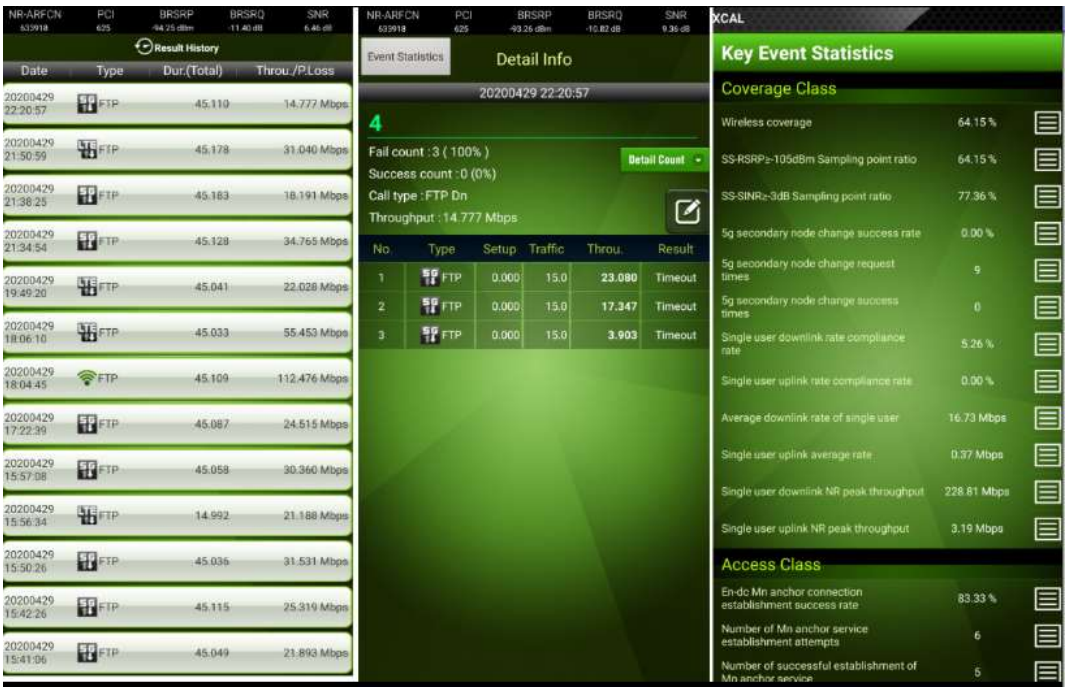


2) Added the 5G TDD UL/DL Config View.



3. [Qualcomm – Only Support Ericsson China]
   Key Event Statistics added in Call Result Menu.

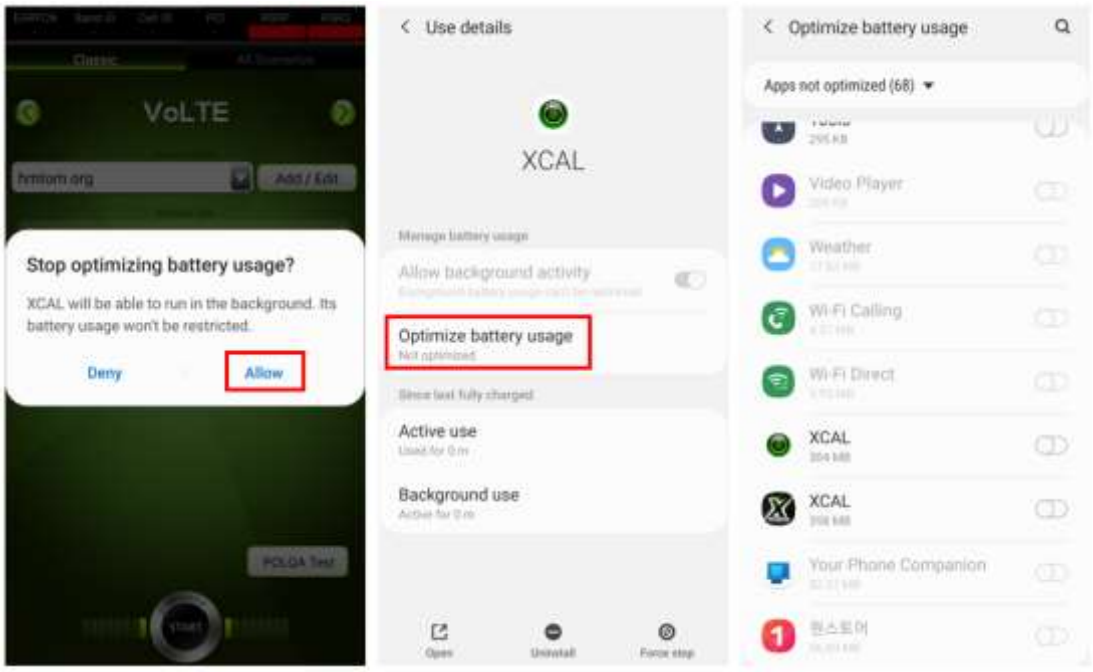
© Copyright by Accuver Co., Ltd.



Function

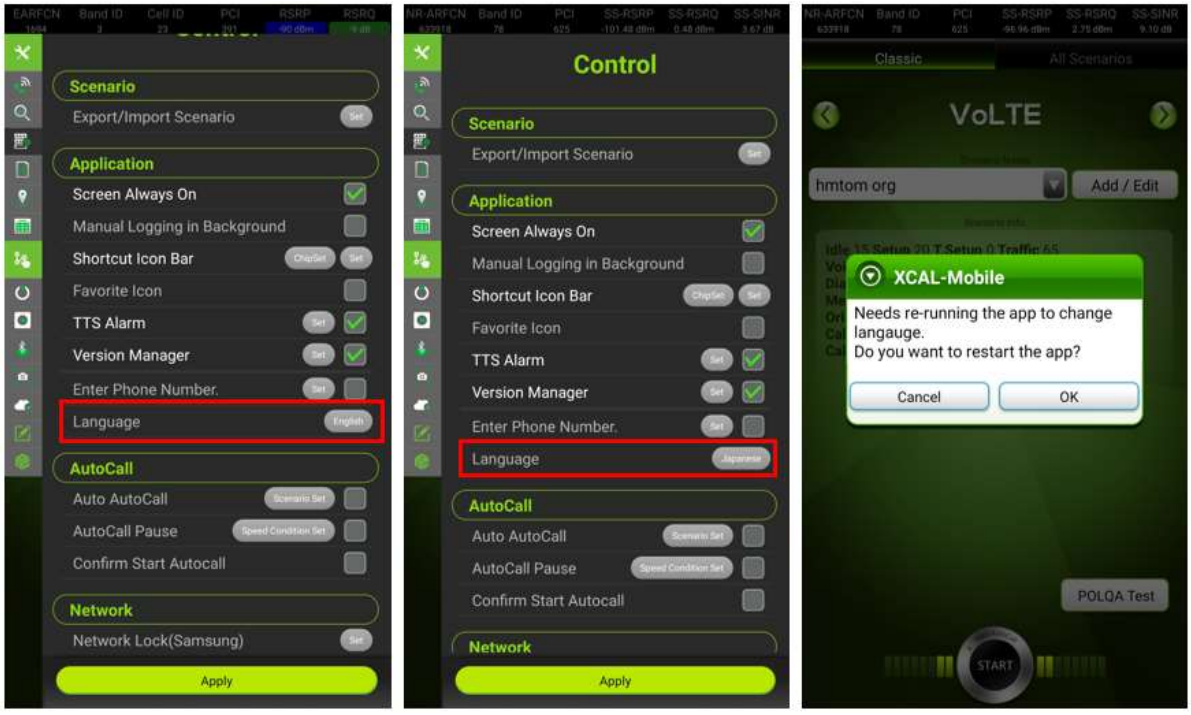
1. [Android OS]
   Because of Power-saving feature in Android setting, Accessibility service is sometimes turned off when running a long call test, therefore, the option to select XCAL-Mobile/Solo as a Power-saving exceptions has been added.
   Select [Allow] on the popup message appearing when the app runs for Accessibility feature. If [Allow] is selected, XCAL is registered in Power-saving exceptions. Once it is registered, no more pop-up shows up.

© Copyright by Accuver Co., Ltd.



2. [Languege]

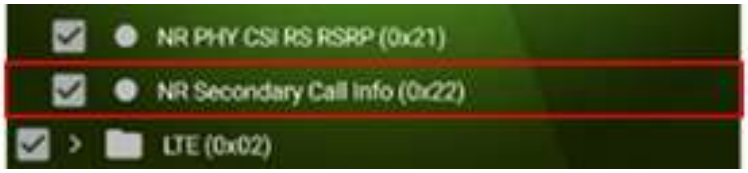
   The language option to keep its setting in the application no matter of system language setting. This option is only available when Sales Region of License is AJ or Ericsson China. App rebooting is required after changing language setting with a pop-up.



3. [Samsung Chipset Logmask]

   Added NR Secondary Cell Info Logcode

© Copyright by Accuver Co., Ltd.



4. [Qualcomm Chipset Logmaks]
   Added 5G NR Logmask
   * Management Layer1(ML1)
      - NR5G ML1 AFC Services
      - NR 5G ML1 DLM2 CA Metrics Request
   * RRC Layer
      - NR5G RRC Configuration info
      - NR5G RRC Supported CA Combos
      - NR5G RRC PLMN Search Request
      - NR5G RRC PLMN Search Response
      - NR5G RRC Detected Cell Info
   * NAS Layer
      - NR5G NAS MM5G NSSAI Info
   * FW
      - NR5G LL1 FW RX Control AGC
      - NR5G LL1 FW TX IU RFs
      - NR5G LL1 FW CSF Reports

5. [Packet Capture]
   Changed the default value of Packet Capture (IP Frame, QC Data Protocol) to be saved as Off when Sales Region: AA, Function: Open API. (Only the default setting value is changed)

6. [Packet Capture]
   Added the Packet Capture Option - Qualcomm ADPL(IP Header only) option. This would not run with QC Data Protocol, IP Frame options at the same time.

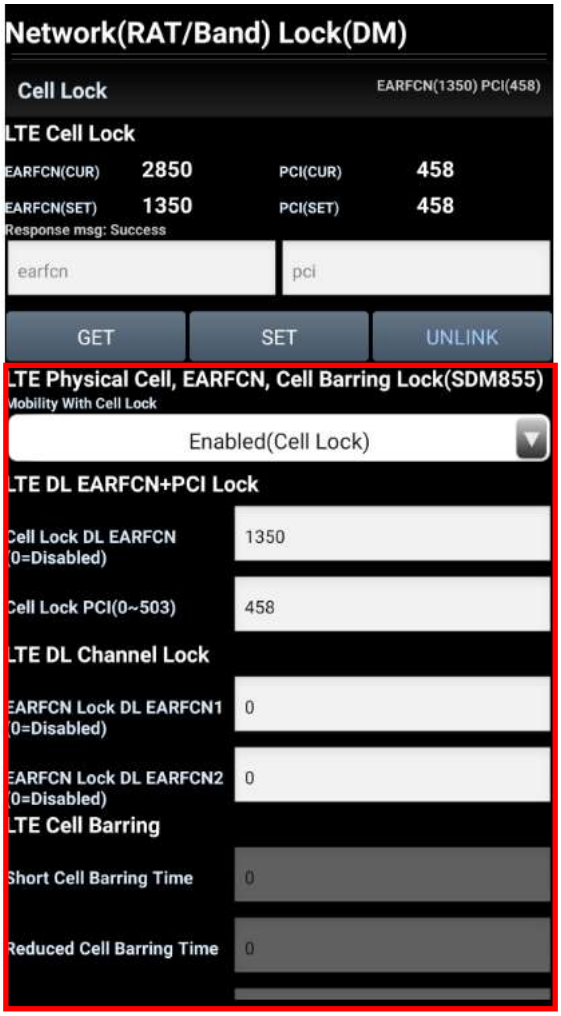
7. [SDSA Report]
   Fixed an issue the SDSA Report was not generated during in-building test and fixed

© Copyright by Accuver Co., Ltd.

parameter issue in 5G NR test.

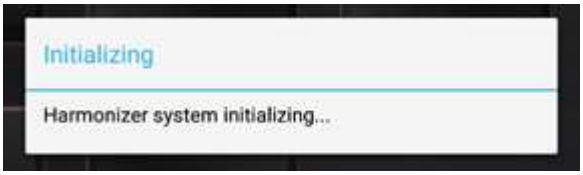
8. [Network Lock]

   Added LTE Cell Lock feature for use with Qualcomm SDM855 chips and higher.



9. [XCAL-Harmony]

   1) Added a pop-up indicating that the Harmony screen is loading



   2) XCAL-Harmony License/Non-License version has been integrated. You can add a license by clicking the Scanner Enable button at the bottom of the center of the initial screen, and the Scanner Enable button changes to the License Update button. To change a registered license, you can reboot Harmony by clicking the License Update button, and then register a new license.

© Copyright by Accuver Co., Ltd.

© Copyright by Accuver Co., Ltd.

Scanner

1. [PCTEL IBflex/HBflex]
   5GNR related Band code has been added in PCTEL Scanner Enhanced Power.

Known Issue

None

© Copyright by Accuver Co., Ltd.

Technical Support

If you have any further queries while using XCAL-Mobile, visit our support page www.accuver.com or contact Technical Support via sales@accuver.com.

Regional offices

• Hong Kong (Head Office)
Accuver APAC
Unit 206, 2/F., No. 8 Science Park West Avenue
Hong Kong Science Park
Shatin, NT, HONG KONG
Tel : +852 2210 7004
Fax : +852 2210 7017
Enquiries :
sales.apac@accuver.com
support.apac@accuver.com
www.accuver.com

• Japan
Accuver Japan
29F Shiroyama Trust Tower,
4-3-1 Toranomon,
Minato-ku, Tokyo,
105-6029, Japan
Tel : +81-3-6430-2580
Enquiries :
sales@accuver.jp
support_aj_1@accuver.com
http://www.accuver.jp/login.html
www.accuver.com

• United Kingdom
Accuver England
Suite Two I/F
Congress House
14 Lyon Road, Harrow
Middlesex, HA1 2EN
Tel : +44 20 8863 1118
Fax : +44 20 8863 1688
Enquiries :
sales.emea@accuver.com
support.emea@accuver.com
http://support2.accuver-emea.com
www.accuver.com

• Korea
Innowireless B/D
190, Seohyeon-ro,
Bundang-gu,
Seongnam-si,
Gyeonggi-do, Korea
Tel : +82 31 788 1700
Fax : +82 31 705 0712
Enquiries :
sales@accuver.com
www.innowireless.co.kr

• Poland
Accuver Poland
Domaniewska 37 street
02-672 Warsaw, Poland
Tel:+48 22 3702518
Enquiries :
sales.emea@accuver.com
support.emea@accuver.com
http://support2.accuver-emea.com
www.accuver.com

• USA
Accuver Americas
500 N. Central Expressway
Suite 210 Plano
TX, 75074, USA
Tel : +1 469 241 6100
Fax : +1 469 241 6199
Enquiries :
sales.usa@accuver.com
support.usa@accuver.com
http://help.usa.accuver.com/helpdesk
www.accuver.com