# XCAL-Mobile/Solo/Harmony Release Note

Doc Rev: 8 Product Version: 4.13.651 & 2.01.201 Date: 2017. 07



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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 5 types; **Addition, Change, Bug Fix**, **ETC**, 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
0	XCAL-Mobile/Solo: 4.13.202		
0	XCAL-Harmony:	2015 Oct	
	XCAL-Mobile/Solo: 4.13.366		
1	XCAL-Harmony: 2.01.115	2016 Apr	
2	XCAL-Mobile/Solo: 4.13.390	2016 Ман	
2	XCAL-Harmony: 2.01.121	2016 May	
2	XCAL-Mobile/Solo: 4.13.408	2016.1	
3	XCAL-Harmony: 2.01.129	2016 Jun	
4	XCAL-Mobile/Solo: 4.13.512		
4	XCAL-Harmony: 2.01.154	2016 Sep	
5	XCAL-Mobile: 4.14.014	2017 Feb	

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Rev.	Product Version	Date of Release	Note
-	XCAL-Mobile/Solo: 4.13.605		
6		2017 Mar	
	XCAL-Mobile/Solo: 4.13.616		
7	XCAL-Harmony: 2.01.187	2017 Apr	
-	XCAL-Mobile/Solo: 4.13.651		
8	XCAL-Harmony: 2.01.201	2017 Jul	



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# **Newly Supported Terminals**

Dura durat		Device List
Product	Manufacturer	Device Name
XCAL-Mobile	Samsung	Galaxy S7 Edge+ (SCV33) Galaxy S7 Edge+ (SC-02H) Galaxy S5 (SM-G906S) Galaxy S5 (SM-G906K) Galaxy J5 (SM-J500G) Galaxy J5 (SM-J500F) Galaxy J5 (SM-J510GN) Galaxy S5 (SM-G9006V/) Galaxy S5 (SM-G9008V) Galaxy S5 (SM-G9008V) Galaxy S5 (SM-9009W) Galaxy S5 (SM-9009W) Galaxy S5 (SM-9009W) Galaxy S6 (SM-G920F) Galaxy S6 (SM-G920F) Galaxy S6 (SM-G920B) Galaxy S6 (SM-G920L) Galaxy S6 (SM-G920L) Galaxy S6 (SM-G920L) Galaxy S6 Edge (404SC) Galaxy S6 Edge (SM-G925F) Galaxy S6 Edge (SM-G925F) Galaxy S6 Edge (SM-G925F) Galaxy S6 Edge (SM-G925F) Galaxy S6 Edge (SM-G928F) Galaxy S6 Edge (SM-G928F) Galaxy Note4 (SM-N910V) Galaxy Note4 (SM-N910G) Galaxy Note4 Edge (SM-N915G) Galaxy Note4 Edge (SM-N9150) Galaxy Note5 (SM-N9200) Galaxy Note5 (SM-N9208)
	LG	LG G5 (H850) LG G3 (D855) LG G4 (H815) LG G Flex2 (H955)
	ETC	Sony Xperia X Performance (F8131/F8132) Sony Xperia XZ (F8331) Sony Z5 Compact (E5823) Sony Xperia Z5 Premium (E6853) Sony Xperia Z5 (E6653) HTC One M9 HTC 10 (M10h) Sharp SH-01H Asus ZenFone3 Ultra (Asus_A001)

# **Netflix Call Supported Terminals**

Netflix License Required

Dreduct	Device List				
Product	Manufacturer Device Name				
XCAL-Mobile	LG	LG G5(H850)			
	ONEPLUS	ONEPLUS A3003			

# XCAL-Mobile/Solo Version:4.13.651

Date of Release: JUL 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Solo v4.13.651

### Addition

Title	Addition of EARFCN/Band in Android Summar	y Info	
Product	XCAL-Mobile	Requestor	AJ
Chipset	No Chip	CRM#	NEW_564
Location	[RF] - [Android Summary]		
Description	of Enhancement/Fixes		

- getEarfcn() is added from Android Platform API 24.
- Band is calculated based on Band Mapping of EARFCN.



Title	Addition of Async Mode for Multi Session		
Product	XCAL-Mobile, Solo, Harmony	Requestor	AA
Chipset	No Chip	CRM#	NEW_575
Location	Multi Session	<u>.</u>	
Description	of Enhancement/Fixes		

Added the Async mode for the Multi-Session call.

Async mode processes AutoCall test based on the pre-configured session scenario including timer setting and call count. Async mode does not synchronize all sessions.

EARFCN 2850	Band 7	Cell ID 127	PCI 294	RSRP -86.7 dBm	RSRQ -9.4 dB	EARFCN 2850	Band 7	Cell ID 127	PCI 294	RSRP -85.3 dBm	RSRQ -9.5 dB
Mult	i-Se	ssion s	setti	ngs		Mult	i-Se	ssion	setti	ngs	
MODE		Sync		Asyn	c	MODE		Sync		Async	
1 Ses	sion	FTP DL				Idle 5		etup 10	T.Setup 20	Traffic 300	
2 Ses	sion	FTP UL				Total tim	e		Call cou 100	nt	
3 Ses	sion	PING				1 Ses	sion	FTP DL	100		
4 Ses	sion	WEB				2 Ses	sion	FTP UL			
5 Ses	sion	Youtube				3 Ses	sion	PING	8		
						4 Ses	sion	WEB			
					-	5 Ses	sion	Youtube	2		
				Save	Cancel					Save C	Cancel

Title	Addition of the Selection of Test Resolution of to 4k)	Youtube-Qual	ity Mode Fixed (up
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2545
Location	[Autocall]		
Description	of Enhancement (Eiver		

**Description of Enhancement/Fixes** 

For Youtube-Quality Mode Fixed test, added to select the resolution of the assigned test screen. (In some cases, test screen in 4k resolution are unable to be properly played depending on test UE performance.)

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KCA 74. EA	Youtube Media Select			KCA 74.1 EA	Youtube Media Select
S	Do you want to set this video?			S	Do you want to set this video?
ĸ	Title : Vertical Maze Dubai - 4K Duration : 141 sec	$\bigcirc$		ĸ	Title : Vertical Maze Dubai - 4K Duration : 141 sec
	480p	$\bigcirc$			A YouTube
	720p	٢			If the device performance is poor, you may experience problems playing video at 4K (2160p) resolution. (In this case, please measure by lowering the
	1080p	$\bigcirc$			resolution)
			4K		ОК 4К
	1440p	$\odot$			1440p
I	2160p	٢			2160p
	OK Cancel	Met			OK Cancel

Product XCAL-Mobile/Solo Requestor EMEA	
Chipset Common CRM# BUG_25	51
Location [Autocall]	

#### **Description of Enhancement/Fixes**

The existing SMS call declares reception success event based on only the message contents at the Receive stage. In addition to this, new SMS call pre-configures SNS Number in Receive Type, compares the dialed number with the number pre-configured, and determines to ignore the messages which do not match.



# XCAL-Harmony Version: 2.01.201

Date of Release: JUL 2017

### **Specifications**

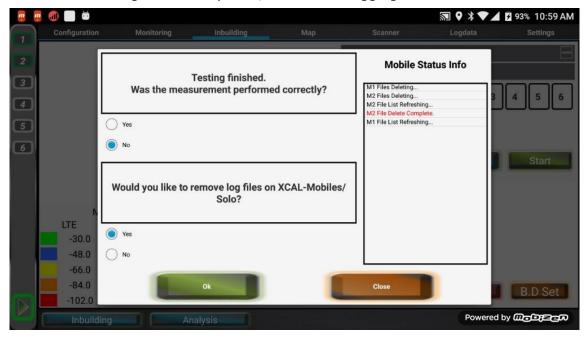
- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Harmony v2.01.201

### Addition

Title	Log File Process for Inbuilding Result			
Product	XCAL-Harmony	Requestor	AE	
Chipset		CRM#	NEW 557	
Location	[Setting] - [Inbuilding]			

**Description of Enhancement/Fixes** 

- Activated only when [Setting] [Inbuilding] [Inbuilding Result Confirm] option is set to [On].
- Once Inbuilding test is completed, the created logging file can be deleted or not.



Title	Location and Upload of Scanner Logging File		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	NEW_558
Location	[Logdata]		

Log file of scanner can be found and uploaded in [Logdata] tab.

<b>m</b>	1						፟ ♥ ≭ ♥ ◢	77% 1:12 PM
1		Configuration	Monitoring	Inbuilding	Мар	Scanner	Logdata	Settings
2		Addres	FTP Server1 s: 59.12.193.12/inno/0	:нј)	<b>o</b> _	FTP Serve (Address: 10.253.		<b>o</b> <sub>o</sub>
3	1	ALL	<u>M1</u>	M2	<u>13</u> <u>M4</u>	<u>M5</u>	<u>M6</u>	Scanner
4		20170627	Refresh					
5		Delete	Inselect All Select	AIL				
6		20170627_ 27BD_DRT	103810_S1_P1_P6_06 4311B.drm 26.08 KB					
	ĺ	20170627_ 27BD_DRT	103659_S1_P1_P2_06 4311B.drm 21.99 KB					
		20170627_ 27BD_DRT4	103437_S1_P1_P3_06 4311B.drm 24.00 KB					
	۱							
	ſ							
			Upload	0%			Powered by	നാലുള്ളം

Title	Inbuilding Route Save			
Product	XCAL-Harmony	Requestor	AE	
Chipset		CRM#	NEW_559	
Location	[Setting] - [Inbuilding]	-		

#### Description of Enhancement/Fixes

- Activated only when [Setting] [Inbuilding] [Inbuilding Route Recording] option is set to [On].
- If selecting [Done] during Inbuilding test, it converts the test routes in gray color and saves until the [Clear] button is selected.

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	1										<b>₹ \$ 1</b>	🖬 72% 1:48 PM
1		Configuratio	n	Monito	ring	Inbuilding		Мар	Scanner		Logdata	Settings
2	Γ											0
3												
4									-			
5						•			<b>-</b> 1			
6					_							
							-					
		1	<b>M</b> 1		_			75				
		LTE		(Ant0)	_	•						
		-30.0	~	-48.0	_							
		-48.0	~	-66.0	_							
		-66.0	~	-84.0								
		-84.0	~	-102.0	L L	M1		Parameters	Clea	ar	Done	B.D Set
		-102.0	~	-120.0	L			renameters	Olec		Done	B.B.OCC
		Inbuil	ding		Analysis						Powered I	a modeled

Title	Addition of User Guide in About menu			
Product	XCAL-Harmony	Requestor	EMEA	
Chipset	Common	CRM#	NEW_565	
Location	[Settings] - [About]			
Description of Enhancement/Fixes				

Added XCAL-Harmony User Guide in About menu.



Title	Scan All ID button does not activate all ID on	ly selected ID	
Product	XCAL-Harmony	Requestor	EMEA
Chipset		CRM#	BUG_2510
Location	[Scanner - DRT]		

	Scan List	
Scenario Import/Export	Scan selected IDs Scan all IDs Stop all	Delete all
Deactivate	ID-1 LTE Band E-UTRA 01 (2100) Channel 50 Style AutoDetect	Delete
Deactivate	ID-2 LTE Band E-UTRA 01 (2100) Channel 450 Style AutoDetect	Delete
Deactivate	ID-3 LTE Band E-UTRA 03 (1800) Channel 1350 Style AutoDetect	Delete
Deactivate	ID-21 WCDMA Band UTRA 01 (IMT2100) Channel 10737	Delete
Deactivate	ID-22 WCDMA Band UTRA 01 (IMT2100) Channel 10713	Delete

- Scan selected IDs: Request to scan for the selected SCAN ID only.
- Scan all IDs: Request to scan for all SCAN ID (Existing function has only requested the selected SCAN ID.)

Title	Make XCAL-Harmony able to work with scann	er only for Inb	ouilding and Map	
Product	XCAL-Harmony	Requestor	EMEA	
Chipset		CRM#	BUG 2511	
Location	[Scanner]		·	

#### **Description of Enhancement/Fixes**

Added to crate scanner log data by tapping AutoCall button in XCAL-Harmony.

The color of AutoCall button changes color in accordance with the description table below.

The AutoCall button turns to green color only when the scanner is in RF scanning status. If it is tapped, scanner logdata is generated.

(Existing function uses Logging button in Scanner tab while only scanner is synced.)

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Harmony Button	Mobile Side	Scanner Side
Red	Idle - No device - Connected device	Idle - No device - Connected scanner - Scanning set
Green	Ready - Scenario set	Ready - RF scanning
Yellow 🔳	Play - <u>Autocall</u> start	Play - Manual Logging

Title	Addition of Async Mode for Multi Session			
Product	XCAL-Mobile, Solo, Harmony	Requestor	АА	
Chipset	No Chip	CRM#	NEW_575	
Location	Multi Session		·	
Description of Enhancement/Fixes				

Added the Async mode for the Multi-Session call.

Async mode processes AutoCall test based on the pre-configured session scenario including timer setting and call count. Async mode does not synchronize all sessions.

Scenario Setup							
VOICE	FTP W		EMAIL				
MS_test 🗹	Call Name	MS_test					
	Mode	1 Session FTP DL 🗢					
	MS Mode Async V	2 Session FTP UL 🔽	)				
	Call Time Sync	3 Session PING 🔽	)				
	Idle Async	4 Session WEB 🔽	)				
	Setup 20	5 Session Youtube 🔽	SAVE				
	T.Setup 20						
	Traffic 300						
	Total ()						
	Success		CANCEL				

### Change

Title	XCAL-Harmony should check Scanner license before Scanner H/W Change pop-up			
Product	XCAL-Harmony	Requestor	AE	
Chipset		CRM#	MOD_589	
Location	[Scanner]			
Description of Enhancement/Fixes				

In case if there only exists PCTEL for Scanner License, the Scanner HW selection screen does not pop up.

### **Bug Fix**

Title	XCAL-Harmony stuck with GPS Information U	nknown and A	utocall running			
Product	XCAL-Harmony Requestor AE					
Chipset		CRM#	BUG_2493			
Location						

#### **Description of Enhancement/Fixes**

- Deleted GPS alarm in tablet.
- Amended to terminate XCAL-Mobile by using Call Start command in XCAL-Harmony while it is in Logging status.

Title	Rename of GSM Band of DRT Scanner		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	BUG_2494
Location	[Scanner] - [DRT Setting]		

Renamed R-GSM 900 of GSM Band to GSM 900.

Title	GSM Setting Error in DRT Scanner		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	BUG_2495
Location	[Scanner] - [DRT Setting]		

**Description of Enhancement/Fixes** 

Fixed to properly save the GSM C/I selection result.

Title	WCDMA Setting Error in DRT Scanner		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	BUG_2496
Location	[Scanner] - [DRT Setting]		
Description of Enhancement/Fixes			

Fixed to properly save the selection for WCDMA CPICH SIR, P-SCH Ec/lo, S-SCH Ec/lo.

Title	Scan List Display Error in DRT Scanner			
Product	XCAL-Harmony	Requestor	AE	
Chipset		CRM#	BUG_2497	
Location	[Scanner] - [DRT Setting]			
Description	Location     [Scanner] - [DRT Setting]       Description of Enhancement/Fixes			

Fixed the resolution issue for Lenovo PHAB2 Pro model UE.

Title	Bluetooth Connection Error in DRT Scanner			
Product	XCAL-Harmony	Requestor	AE	
Chipset		CRM#	BUG 2498	
Location	[Scanner] - [DRT Setting]			
Description of Enhancement/Fixes				

Fixed the update information in the connection status of MPS Scanner Service app.

Title	Duplicated Display of Error in DRP Scanner		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	BUG_2499
Location	[Scanner] - [DRT Setting]		
Description of Enhancement/Fixes			

Fixed to display connection error information only once.

Title	GUI in DRT Scanner		
Product	XCAL-Harmony	Requestor	AE
Chipset		CRM#	BUG_2501
Location	[Scanner]		

**Description of Enhancement/Fixes** 

- Fixed the sample string for inputting Channel data.
- Fixed RSSI string in GSM Scan View.
- Fixed the string for Scan ID List.
- Fixed to display RF value in LTE Scan View.
- Amended the Deactivate string font. (for Lenovo PHAB2 Pro)
- Amended the Scanner connection button size. (for Lenovo PHAB2 Pro)
- Amended the Bluetooth connection button size. (for Lenovo PHAB2 Pro)

- Amended the product name which appears at the initialization from XCAL.Harmony to XCAL-Harmony.

Title	Error on the Option of Naming Log File before AutoCall in DRT Scanner				
Product	XCAL-Harmony Requestor AE				
Chipset		CRM#	BUG_2509		
Location	[Setting] - [Logging Option]				
Description of Enhancement/Fixes					

Fixed the error on the option of Naming Log file before AutoCall.

# XCAL-Mobile/Solo Version:4.13.616

Date of Release: Apr 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Solo v4.13.xxx

# Addition

Title	Addition of SCG/LCG Remote Control			
Product	XCAL-Mobile/Solo	Requestor	ACCUVER	
Chipset	SCG Remote	CRM#		
Location	[AutoCall Settings] – [LCG/SCG Server Setting] button			
	[AutoCall Settings] – [Voice] or [VoLTE] tab - [LCG/SCG Remote] option.			

#### **Description of Enhancement/Fixes**

Added to control Voice/VoLTE call in SCG/LCG remotely from XCAL, XCAL-Mobile/Solo, and etc. For example, AutoCall scenario, AutoCall Start/Stop, Call Result, Call Event, MOS Value, RTP Info measured(Only SCG) are controllable and can be monitored.



Title	[Ouldk Guide] LCG/SCG Remote					
작성자	Heuijae Choe	euliae Choe Date 2017-04-10 Mew 5				
Content	Attached Quick Guide of LCG/SCG Remote	Attached Quick Guide of LCG/SCG Remote				
Attached File List	Quick Guide of LCG SCG Remote_ENG_1704	Duick Guide of LCG SCG Remote_ENG_170405.pptx [4051004 byte]				

For details, see the Quick Guide uploaded to <u>http://ncrm.innowireless.co.kr</u> [Document] – [ETC] – [Quick Guide] LCG/SCG Remote.

Title	Addition of Video Streaming – Netflix Call		
Product	XCAL-Mobile/XCAL-Solo	Requestor	
Chipset	Common	CRM#	
Location	[Autocall]		
Description of Enhancement/Fixes			

Added Netflix Call to test Video Streaming of Netflix.

(Activated in accordance with license key, and may not work in some smartphone models which does not support cmd.



Title	TraceRT Autocall		
Product	XCAL-Mobile	Requestor	AP
Chipset	Common	CRM#	

### Location [Autocall]

#### **Description of Enhancement/Fixes**

Added an AutoCall type of TraceRT based on TraceRoute Command for Android Java.

SKT	<b>⊘</b> ≈ ′	TE 100%	
v4.13.611_T9 Cell ID PCI	SINR	RSRP	the second s
75 199	-6.4	-84	RSRQ -14
TraceRT		CPU : 35% Destination w.innowireles:	s.com
	AUTO CALL	STOP	
TraceRT Status		TRREFIC 10	5:0 / F:0 / T:S)
22:09.282 traceroute to	o 59.12.193.62	(59.12.193.62),	20 hops ma
22:09.285 1 ***			
	7.122 152.796		
	3.145 151.700		
22:09.294 4 172.28.5		ms 153.678 m	
22:09.373 5 172.25.2		) ms 152.900 r	
22:09:422 6 172.27.2		1s 172.27.250.2	
22.09.427 7 59.18.61.		s 47.999 ms 59	.18.60.145 4
22:09.429 8 112.174;		ms 112.174.51	
	114.82 43.058	ms 112.174.11	4.30 39.554
22:09.43413 ***			
Main Call St	at. RF	کی Map	Menu

Title	Mobile MMS AutoCall		
Product	XCAL-Mobile	Requestor	
Chipset	Common	CRM#	
Location	[Autocall]		

#### **Description of Enhancement/Fixes**

Added an AutoCall type of Mobile MMS to transmit image and text by using the smartphone basic application.

As of now, Success is declared for Receive type if any message is received properly.

By May, Success will be declared only when "MMM Message content + space + Call Count Number" is received.

MMS in XCAP is currently under development.

MMS Type	Send	Receive
MMS Number		
MMS Message	0 bytes	A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWN
MMS Message		
MMS Image	Select	

Title	Addition of function to split logfile per repeat	count.	
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	All	CRM#	NEW_546
Location	[Scenario] – [Split log file] – [per repeat]		
Description of Enhancement/Fixes			

Added to function to split logfile per repeat count for Multi-Call.

Title	Addition of a Warning Message for the Chipset which does not support		
	Vocoder Packet		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Qualcomm chipset	CRM#	MOD_570
Location	[Main] – [Classic]		

Description of Enhancement/Fixes

Added to pop up a warning message of 'Not Supported' for Snapdragon 820 chipset which does not support Vocoder packet.

### Change

Title	Consistent Font Size in Call Name		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	MOD_569
Location	[Main] – [Classic]	<u>.</u>	
Description of Enhancement/Fixes			

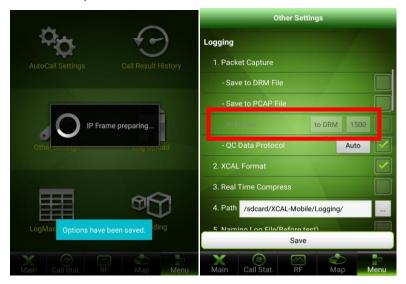
Changed to apply consistent string size in Call Name.

Title		Only One GPS Type Selectable between Internal or Outer GPS		
_				
Produc	ct	XCAL-Mobile/Solo	Requestor	EMEA
Chipse	t	Common	CRM#	QUE_1564
Locatio	on	[Other Settings] – [GPS]		
Description of Enhancement/Fixes				

Changed to select only one GPS type between internal GPS or outer GPS.

Title	Inactivation of IP Frame for unsupported UE		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	NEW_542
Location	[Other Settings] – [Logging] – [Packet Captu	re]	
Description of Enhancement/Fixes			

In case [IP Frame] for Packet Capture is selected, if the UE does not support IP Frame capture, IP Frame option is inactivated.



Product	XCAL-Mobile/XCAL-Harmony	Requestor	AA
Chipset	Common	CRM#	
Location	[Autocall]		

Changed Iperf call setting as follows.

- Addition of Parallel option.
- Option name change to Iperf command.
- Addition of Iperf version.

Title	Addition of Warning Screen for XCAL Format	Uncheck	
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2466
Location	[Other Settings]		
Description of Enhancement/Fixes			

Added to pop up a warning screen if AutoCall or Manual logging is started while XCAL Format is unchecked.

"XCAL Format is unchecked. This can result in timestamp problems. Do you wish to continue measurement? To check XCAL Format, move to [Other Settings] – [Logging] – [XCAL Format]"

### **Bug Fix**

Title	Application of Naming Log File(Before/After A	utoCall)	
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2435
Location	[Other Settings] – [Logging]		

Fixed to properly apply Naming Log File(Before/After AutoCall).

Changed this function name from [Before/After AutoCall] to [Before/After Test].

Title	Missing GPS Altitude		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2443
Location	[RF] – [Android RF View]		
Description of Enhancement/Fixes			

Fixed not to miss GPS altitude information.

Title	XCAL-Harmony crash while turning OFF scree	n	
Product	XCAL-Harmony	Requestor	EMEA
Chipset	common	CRM#	BUG_2451
Location			·
Description of Enhancement/Fixes			

Fixed not to convert the screen vertically and terminated forcibly when clicking power button while XCAL-Harmony application is executed.

Title	Naming Log File Before Autocall for Inbuilding	]	
Product	XCAL-Harmony	Requestor	EMEA
Chipset	common	CRM#	BUG_2453
Location	[Setting] – [Logdata] – [Naming Log file(befo	ore Autocall)]	

#### **Description of Enhancement/Fixes**

Fixed to pop up a screen for Naming Log File when Inbuilding call is started.

Title	XCAL Mobile freezing on Voice Termination		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	common	CRM#	BUG 2454
Location			
	of Enhancement/Fixes		

Fixed not to terminate the application forcibly while MOS test is in progress by syncing XCAL-Mobile and Harmony via Bluetooth.

Title	Some POLQA Parameter Logging Missing		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2463
Location	[Autocall] – [Voice or VoLTE]		

Description of Enhancement/Fixes

Fixed not to miss some POLQA parameters (Delay, Delta Delay, LQO/sec, LQO/frame) for logging.

# XCAL-Harmony Version: 2.01.187

Date of Release: Apr 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Harmony v2.01.xxx

### Addition

Title	Add Export/Import Scan ID		
Product	XCAL-Harmony	Requestor	AE
Chipset	Common	CRM#	NEW_556
Location	[Scanner]		
<b>D</b>			

#### **Description of Enhancement/Fixes**

Added Scenario Import/Export button in SCAN Setting tab.

Import/Export button imports/exports Scan scenario file to FTP server.

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Configuration	XiBS Mode	Monitoring	Inbuilding	Мар	Scanner	Logdata	Setting
Scan	Туре			Scan I	List		
LTE Enhanced	Top N Signal	Scenario Import/Export			Scan all IDs	Stop all	Delete all
WCDMA T	op N Pilot	Deactivate	ID-1 LTE Sig	nal/FD Band 28 Chann	nel 0 Style 10MHz	s	ican Dele
GSM Col	or Code	Deactivate	ID-2 LTE Signa	i/FD Band 03 Channel	l 1550 Style 20MHz	S	ican Dele
CDMA To	p N Pilot	Deactivate	ID-4 LTE Signa	l/FD Band 28 Channel	l 9410 Style 10MHz	S	ican Dele
EVDO To	o N Pilot	Deactivate	ID-5 LTE Signa	l/FD Band 03 Channel	l 1350 Style 10MHz	S	can Dele
RSSI	Scan	Deactivate	ID-6 LTE Signa	l/FD Band 03 Channel	l 1550 Style 20MHz	S	can Dele
Blind	Scan	Deactivate	ID-13 LTE Sigr	al/FD Band 01 Channe	el 450 Style 10MHz	s	can
Enhance	d Power	Deactivate	ID-14 LTE Sigr	al/FD Band 01 Channe	el 100 Style 20MHz	s	ican Dele
		Deactivate	ID-15 LTE Sign	al/FD Band 28 Channe	l 9410 Style 20MHz	S	ican Dele
		Deactivate	ID-21 WCDMA	Pilot Band 01 Channe	l 10737 Style 5MHz	s	ican Dele
		Deactivate	ID-41 GSM F	ilot Band 08 Channel	987 Style 200kHz	s	ican Dele
		Deactivate	ID-111 RSSI/FI	)-LTE Band 03 Channe	el 1350 Style 20MHz	s	ican Dele
		Deactivate	ID-112 RSSI/FI	D-LTE Band 03 Channe	el 1550 Style 20MHz	s	can Dele
		Deactivate	ID-113 RSSI/W	CDMA Band 01 Channe	el 10737 Style 5MHz	s	ican Dele
		Deactivate	ID-114 RSSI/GS	M Band 08 Channel 9	76-998 Style 200kHz	s	can Dele
Scanner	view : 2	Deactivate	ID-161 Bli	nd Scan/FD-LTE Band	03 Style 10MHz	s	can Dele

Title	Inbuilding should have option to update Map info only on selected smartphone			
Product	XCAL-Harmony	Requestor	AE	
Chipset	Common	CRM#	NEW_560	
Location	[Inbuilding]			

Added to update the building info and image map to the corresponding UE if BT is disconnected in the middle of Inbuilding test.

If selecting the number marked with Retry color in the icon box at the top left, the test information will be retransmitted.

SKT 🖾 💢 🐻 🛇 🌵 💷 🛲 🖨 🛍	2 📀				* 3 <b>×</b> 3 ∰ ?	้ 📶 71% 🖻 3:05 PM
Configuration	Monitoring	Inbuilding	Мар	Scanner	Logdata	Settings
2					TAB+JPC Ready No Info No Image Retry(Clickable)	2 3 4 5 6
4 5 6	······································	385			Floor List	Start
M1 App.DL Thp 70.0 ~ 50.0 50.0 ~ 30.0 30.0 ~ 10.0 10.0 ~ 1.0 1.0 ~ 0.0				M1 🔽 Parame	ters Clear D	one B.D Set
	Ana	ysis			and the second	

Title	Disable popup 'GPS information unknown' when measuring without GPS and
	Location on Android disabled

#### Proprietary & Confidential

Product	XCAL-Harmony	Requestor	AE
Chipset	Common	CRM#	NEW_561
Location	[Inbuilding]		

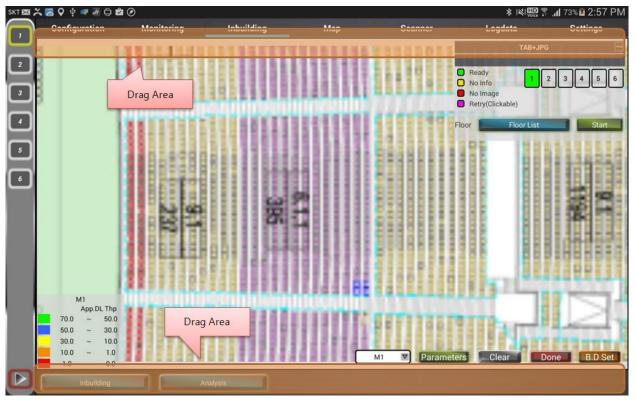
#### **Description of Enhancement/Fixes**

Fixed not to appear 'GPS Information Unknown' pop up in UE while inbuilding test.

Title	Fix new Inbuilding view when zooming in it is too easy to slide through the menus			
Product	XCAL-Harmony	Requestor	AE	
Chipset	Common	CRM#	NEW_562	
Location	[Inbuilding]			
	· · · · · · · · · · · · · · · · · · ·			

#### **Description of Enhancement/Fixes**

Changed to slide GUI within the Drag Area not to bother zoom in and image map.



# Change

Title	Split Scan view screen into 4 windows			
Product	XCAL-Harmony	Requestor	AA	
Chipset	Common	CRM#	MOD_573	
Location	[PCTEL IBflex] – [Scanner]			

#### **Description of Enhancement/Fixes**

Changed to select SCAN VIEW - 2/4 window view in SCAN SETTING tab.

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Configuration	Monitoring	Inbuilding	Мар	Scan	ner	Logdata	Settings
Scan Viev	N			Scan V	iew		
SCAN ID :	2 - LTE Enhanced Top N \$	Signal / 1550		SCAN	ID 13 - LTE Enhanc	ed Top N Signa	l / 450
Protocol : FD-LTE/10 Channel/Style : 1550/20MHz Band : DL 03-DCS 1800(1805~1880)		ISSI : -52.3	Chann	ol : FD-LTE/10 el/Style : 450/10MHz DL 01-IMT 2000(2110~21	70MHz)/768	Carrier RSSI : -53.	12
Sync Re	f MIMO	SubBa		ync	Ref	MIMO BestRCI - 70	SubBand
-50 -70 -110 -130 -150 -150 -150 -150 -150 -150 -150 -15	PCI		-50 -70 -90 -110 -130 -150	70 391 161 385 3	PCI		
	14 - LTE Enhanced Top N	Signal / 100			N ID 21 - WCDMA	Top N Pilot / 10	1737
Protocol : FD-LTE/10 Channel/Style : 100/20MHz Band : DL 01-IMT 2000(2110~2170M		SSI : -49.76	Chann	ol : 3GPP WCDMA/4 el/Style : 10737/5MHz DL 01-IMT 2000(2110~21	70MHz)/768	Total Energy IO : -5	8.51
Sync 💿 Re	f MIMO	SubBa	nd Ec/	o Status : Success		Best : 196	
RS_RP Status : Success -50 -70 -10 -130 -150 -17 154 -285 454	Bos		0 -10 -20 -30	196 138 311 313 1	95 488 25 PSC 488 25		

Title	Requesting to have additional Analysis KPIs ir	n Inbuilding Te	st
Product	XCAL-Harmony	Requestor	AA
Chipset	Common	CRM#	MOD_574
Location	[Inbuilding] – [Analysis]		

\* ¥₩ 🕮 🗊 📶 75% 🖻 3:47 PM skt 🜵 Q 🖨 🗐 💷 🚈 🛍 🙆 Configuration Monitoring Inbuilding Logdata Мар Scanner Settings 2 3 4 Network 5 LTE PCI LTE RSRP 6 LTE RSRQ LTE CQI LTE DL PATH LOSS LTE PUSCH TX LTE PUCCH TX 3G PSC M1 3G RSCP LTE PUSCH Tx 23.0 6.0 3G Ec/No 6.0 -8.0 2G Rx Power -8.0 -22.0 2G Rx Level Full -22.0 -36.0 -36.0 -50.0 2G Rx Qual Full M1  $\nabla$ LTE PUSCH TX **RF** Setting Analysis File  $\nabla$ Analysis

Added LTE Parameter CQI/DL PATH LOSS/PUSCH TX/PUCCH TX in Inbuilding Analysis.

Title	TAB+JPG - JPG size issue			
Product	XCAL-Harmony	Requestor	AA	
Chipset	Common	CRM#	MOD_575	
Location	[Inbuilding]			
Description of Enhancement/Fixes				

Changed the inbuilding image in  $4096 \sim 16384$  pixel to be 1/4 resized. For the image in 4096 pixel or under will be 1/2 resized.

Title	Warning Message for XCAL Format Uncheck		
Product	XCAL-Harmony	Requestor	EMEA
Chipset	Common	CRM#	BUG_2466

**Location** [Settings]

#### Description of Enhancement/Fixes

Added to appear warning screen if AutoCall or Manual logging is started while XCAL Format is unchecked.

"XCAL Format is unchecked. This can result in timestamp problems. Do you wish to continue measurement? To check XCAL Format, move to [Settings] – [Logdata] – [Logging Option] – [XCAL Format]"

### **Bug Fix**

Title	Image Real location on Harmony					
Product	XCAL-Harmony	Requestor	АА			
Chipset	Common	CRM#	BUG_2438			
Location	[Inbuilding] – [Image Real location]					
Description of Enhancement/Fixes						

Fixed to properly save GPS info in DRM file for Image Real location - Inbuilding test.

Title	Increase zoom in for Inbuilding for detailed indoor map				
Product	XCAL-Harmony	Requestor	AE		
Chipset	Common	CRM#	BUG_2439		
Location	[Inbuilding]				
Description of Enhancement/Fixes					

Fixed the Zoom-In in the image map for inbuilding to be unlimited.

Title	Fix pointer size

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Product	XCAL-Harmony	Requestor	AE
Chipset	Common	CRM#	BUG_2440
Location	[Inbuilding]	-	

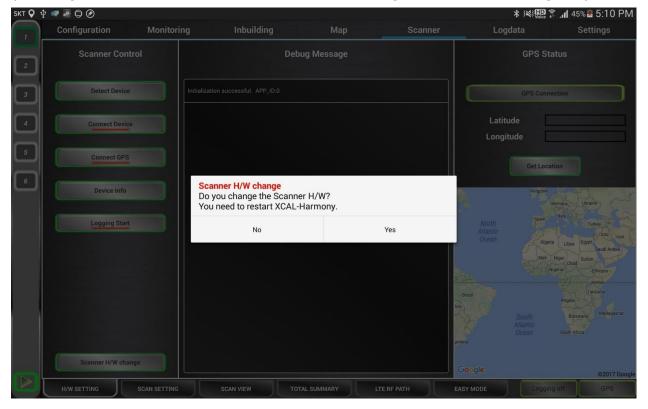
**Description of Enhancement/Fixes** 

Fixed the pointer size in image for inbuilding to be changeable in pixel unit.

Title	Scanner license pop-up ruins "one click and ready to go" feeling				
Product	XCAL-Harmony	Requestor	AE		
Chipset	Common	CRM#	BUG_2442		
Location	[Scanner]				
Description of Enhancement/Fixes					

Fixed to appear Scanner HW selection pop up screen at XCAL-Harmony launch only once.

(To change to another Scanner, select Scanner HW Change button in HW Setting tab.)



Title	Lots of GUI Problems on Lenovo Phab 2 Pro			
Product	XCAL-Harmony	Requestor	EMEA	
Chipset	Common	CRM#	BUG_2450	
Location			·	
Description of Enhancement/Fixes				

Fixed GUI I n accordance with the resolution of Lenovo Phab 2 Pro UE.

Title	Crash for Legend Set in Map View			
Product	XCAL-Harmony	Requestor	EMEA	
Chipset	Common	CRM#	BUG_2452	
Location	[Map] – [Legend Set]			
Description of Enhancement/Fixes				

Fixed not to crash if clicking Legend Set in Map view.

# XCAL-Mobile/Solo Version: 4.13.610 and 4.15.21

Date of Release: April 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Mobile/Solo v4.13.610 and v4.15.21

# Addition

Title	Addition of Version Manager			
Product	XCAL-Mobile/Solo	Requestor	АА	
Chipset	Common	CRM#		
Location	[Other Settings]- [1. App]			
Description of Enhancement/Fixes				

Added Version Manager in Other Settings to alert XCAL version update and Download via FTP Server.





# XCAL-Mobile/Solo Version: 4.13.605

Date of Release: Mar 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Mobile/Solo v4.13.605

### **Addition**

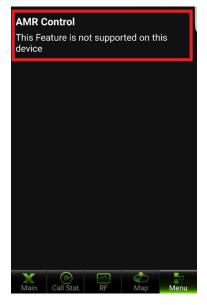
Title	Addition of Alarm Message on Wifi RF Screen			
Product	XCAL-Mobile/Solo	Requestor	EMEA	
Chipset	Common	CRM#	BUG 2404	
Location	[RF]-[Wifi View]		·	
Description of Enhancement/Fixes				

Added an alarm message on Wifi RF Screen when [WiFi Logging] option in Setting menu is not checked.



Title	ARM Control on LG G5-H850 Device		
Product	XCAL-Mobile/Solo Requestor EMEA		
Chipset	Samsung Chipset	CRM#	BUG_2389
Location	[Other Settings]-[Phone Set Mode]-[AMR Control]		
Description of Enhancement/Fixes			

Added an alarm message on a Setting screen when AMR Control is not supported on a device.



Title	Addition of Network Lock(hidden) feature on G5/XP		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	
Location	[Other Settings]-[Network Lock]		
Description of Enhancement/Fixes			

Added Network Lock(hidden) feature on LG G5(H850) and Sony Xperia X Performance(F8131) device.

## **Bug Fix**

Title	Ring Buffer Full Issue		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Common	CRM#	BUG_2390
Location	[RF]		
Description of Enhancement/Fixes			

Fixed Ring Buffer Full issue.

Title	DM Router Error After Couple Hours of Idle State & Restart Message			
Product	XCAL-Mobile	Requestor	EMEA	
Chipset	Common	CRM#	BUG_2391	
Location				
Description of Enhancement/Fixes				

Fixed the bug that DM Router error occurs.

Title	Youtube Player – Play Start Problem		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Samsung Chipset	CRM#	BUG_2397
Location	[RF] –[4G Summary]		

#### Description of Enhancement/Fixes

Fixed to start without delay when Youtube call starting.

Title	Crash in No Coverage on Developer Version		
Product	XCAL-Mobile	Requestor	EMEA

Chipset	Common	CRM#	BUG_2400
Location			

**Description of Enhancement/Fixes** 

Fixed not to close the application when there is no network coverage on a device.

Title	GSM Parameter is Unreliable		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Samsung Chipset	CRM#	BUG_2402
Location	[RF]-[GSM Summary/GSM Cell Measurement], [RF info on top]		
Description of Enhancement/Fixes			

Fixed to display proper GSM parameters' values on a Samsung Chipset device.

Title	Cannot Filter Single Message But Group of Messages		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Common	CRM#	BUG_2405
Location	[RF]-[Signaling Messages]		

**Description of Enhancement/Fixes** 

Fixed to properly filter a single message among group of messages.

Title	Upload Progress Bar Error		
Product	XCAL-Mobile/solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2406
Location	[Menu]-[Set]-[DRM Auto Upload]		
Description of Enhancement/Fixes			

Fixed to match 'XCAL Progress Status : LOG UPLOAD' on a device and Upload Progress Bar

when DRM Auto Upload turns on.

Title	Email Notification Error		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Samsung-chip	CRM#	BUG_2407
Location	[Log Upload]-[Set]-[E-mail Notification]		

Description of Enhancement/Fixes

Fixed to properly send an email notification.

Title	Problem with Airplane Mode Stuck		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Common	CRM#	BUG_2410
Location			
Description of Enhancement/Fixes			

Fixed not to stuck in Airplane mode in FTP, HTTP, Ping calls.

Title	RF/GSM Cell Measurement Black Bars		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2412
Location	[RF]-[Cell Measurement]		
Description of Enhancement/Fixes			

Fixed not to display Serving Cell Color in black.

Title	RF/GSM Cell Graph Not Scrolling Down Error

Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2412
Location	[RF]-[Cell Measurement]		

Description of Enhancement/Fixes

Fixed to scroll up and down and check all the listed information in GSM Cell Measurement.

Title	Connecting Internal GPS Error		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2413
Location	[Other Settings]		
Description of Enhancement/Fixes			

Fixed to connect Internal GPS automatically when External GPS turned off.

Title	Randomly Android displays Airplane mode ON			
Product	XCAL-Mobile Requestor EMEA			
Chipset	Common	CRM#	BUG 2414	
Location				
Description of Enhancement/Fixes				

Fixed not to randomly change Airplane mode on LG G5(H850) device.

Title	Delete Button in Scenario Edit Tab Error		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	BUG_2415
Location	[Main]-[Add/Edit]		
Description of Enhancement/Fixes			

Fixed to properly active Delete Button in scenario edit tab.

Title	Long Data Protocol Preparing with Airplane Mode On					
Product	XCAL-Mobile Requestor EMEA					
Chipset	Common	CRM#	BUG_2417			
Location						

**Description of Enhancement/Fixes** 

Fixed not to stuck/delay in Airplane mode when Data Protocol processing.

Title	Ping plus Airplane Mode in Inbuilding Mode Does Not Work Properly				
Product	XCAL-Mobile Requestor EMEA				
Chipset	Samsung-chip	CRM#	BUG_2418		
Location					
Description of Enhancement/Fixes					

Fixed to properly do Ping Inbuilding test with Airplane mode option.

# XCAL-Mobile/Solo Version: 4.15.014

Date of Release: Feb 2017

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Nougat v7.0
- Compatibility: XCAL-Mobile/Solo v4.15.014

## Addition

Title	Addition of a Warning Message when Saving after selecting WiFi Logging			
	Option	Option		
Product	XCAL-Mobile/Solo Requestor			
Chipset	Common	CRM#		
Location	[Menu]-[Other Settings]-[Wifi logging]-[Save]			
Description of Enhancement/Fixes				

Added to pop up an warning message when saving after selecting the checkbox of [WiFi Logging] option. WiFi Logging may effect on throughput.



Title	Addition of All Selection/Unselection option for TTS Alarm			
Product	XCAL-Mobile/Solo Reguestor			
Chipset	Common	CRM#		
Location				
Description of Enhancement/Fixes				

Added an option to select or unselect all TTS alarm items in the list.

EARFCN Band Cell ID PCI 250 1 35 199	RSRP RSRQ	Voice Alarm	SFT	Voice Alarr	n SET
Other Settings		TTS Alarm ON/OFF 🛛 🗹		TTS Alarm ON/OFF	
TTS Alarm		Category	TTS / Toast	Category	TTS / Toast
		1. System		1. System	
1. TTS Alarm Manager	SET	GPS Status		GPS Status	
Split log file(with PCAP)	0	DM Status	<ul> <li></li> </ul>	S DM Status	
2. Per size		7 PCI Overlapping (MODS) > 0.0		PCI Overlapping (MOD3) > 0.0	
3. Per call	0 651	2. Transition	6	2. Transition	
Shortcut icon bar	U Gan	e Network Type		Network Type	
1. Chipset RF		LTE-PCI		S LTE-PCI	
2. Android RF		LTE-TAC		LTE-TAC	
Autocall Pause		WCDMA-LAC		A WCDMA-LAC	
Save		WCDMA-RAC		WCDMA-RAC	
	2 III	ок		ок	
Main Call Stat. RF	Map Menu				

Title	Addition of Warning Message when both Save to DRM File and IP Frame are selected at the same time			
Product	XCAL-Mobile/Solo	Requestor		
Chipset	Common	CRM#		
Location	[Menu]-[Other Settings]-[Save to DRM]&[IP Frame]			
Description of Enhancement/Fixes				

Added to pop up an warning message when both [Save to DRM] and [IP Frame] are selected at the same time. [Cancel] button unselects the lately selected option.



Title	Addition of Alarm Message for Unsupportable Hidden Lock								
Product	XCAL-Mobile/Solo	Requestor							
Chipset	Common CRM#								
Location	[Menu]-[Other Settings]-[Network Lock]-[Set]								
Description of Enhancement/Fixes									

Added to pop up an alarm message when the network selected in [Network Lock] option is unsupportable for the test mobile.

EARFCN 290	Band 1	Cell ID 35	PCI 199	RSRP 83 dBm	RSRQ 10 dB	EARFCN 250	Band 1	Cell ID 87	PCI 294	RSRP 181 dBr		EARFON 250	Band 1	Cell ID 87	PCI 294	RSRP -80 dBm	RSRQ -12 dB
		Other S	ettings			Netwo	ork Lo	ck				Band	Lock				
13. Sir	mple Log	jing (AOF)	6			RAT Autom						This N	letwor	k is no	t supp	orted o	on this
14. ES	P Informa	ation Logg	jing (Only	VoLTE)		LTE E	Band Lo	ock				devic	e.				
Phone S	et Mode					Off WCD	MA Ba	nd Lock									
1. RAT	F/Band Lo				SET	Off											
2. Net	work Loci	×	UPDAT	E	SET	GSM Off	Band L	.ock									
3. AM	R Control		UPDAT	E	SET	-		All R	eset								
Logcat																	
1. Log	icat Loggi																
2. Log	icat Filter				SET												
3. Sav	e Logcat i	file(Separa	ately)														
GPS				1													
		Sa	ve														
Main	Call St	at B		Man	enu .	Main	Call S			et al. Man	Menu	Main	Call S	) 🖉		An Man	Menu

Title	Addition of more functions for ADB Script Call	test	
Product	XCAL-Mobile/XCAL-Solo	Requestor	AA

Chipset	Common	CRM#	
Location	[Autocall]		
Description	of Enhancement/Fixes		

Added to support \*.xas file (the encrypted file of scenario file in \*.asc format) for all ADB Script AutoCall test.

Added [User Defined Text] function to edit particular text of User Custom Call for ADB Script call.

EARFCN 1550	Band 3	Cell ID	PCI 121	RSRP	RSRQ	EAR!		Band	Cell ID	PCI 121	RSRP 45.7 dbm	RSR0
Call Nam	1e					Cal		1ė				
		Idle	Setup	T.Setup	Traffic				Idle.	Setup	T,Setup	Traffic
Call Time	e					Cal						
Call Cou	nt					Cal						
Network	Conditio	NONE				Net	work	Conditio	NON			
$\odot$	None		Airplane Mode	Ow	fi		#1	5668				
Call Type	ADB	(User cu	stom)	and a state		c	#2	777				D
AA_SM	G930P	_BAND41	_User de	efined.xa	s 🔽			Save			Cancel	
User Def	ined Text		Set	ting		Use	er Def	ined Tex	1 <b>1</b>	S	etting	
	A	SC File Imp	port/Expo	rt				A	SC File In	nport/Exp	ort	
						App		ne				
								_				
	New	Save	Delete	Cancel								
Main	Call St	tat. Ri	E S	Map	Menu							Menu

Title	Addition of more functions for Messenger Talk	test	
Product	XCAL-Mobile/XCAL-Solo	Requestor	EMEA
Chipset	Common	CRM#	
Location	[Autocall]		

#### **Description of Enhancement/Fixes**

Added a call test type of Messenger Talk to measure quality of voice call through the applications of Skype, Facebook Messenger, WhatsApp.

(Activated and supported depending on License type. Smart phone model which does not support Shell cmd may not work.)



Title	Addition of AMR Control		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Common	CRM#	
Location	[Menu] – [Other Settings]		
Description	of Enhancement/Fixes		

Added [AMR Control] function to configure per audio speech codec. [Update] button downloads xml file for mobile, fixes to set a desired tech, and reboot the test mobile to apply the configured AMR speech codec. (Supportable mobile model: SM-G928F)

Other S	Other Settings						AMR	Control	AMR Control							
12. Text Report (RF/L3/C	all Event)		AMR Control Default					D	efault							
13. Simple Logging (AOF)							3G(N	B) 2G(NB)								
14. ESP Information Logg	ing (Only VoL							3G(W	B) 2G(NB)							
Phone Set Mode								3G(NI	3) 2G(WB)			$\odot$	XCAL-M	obile		
1. RAT/Band Lock(Hidder		SET						3G(W	B) 2G(WB	)			u Mobile		?	
2. Network Lock	UPDATE	SET											Maa		Na	
3. AMR Control	UPDATE	SET											Yes		No	
Logcat																
1. Logcat Logging																
2. Logcat Filter		SET														
3. Save Logo Update C	itely)								_							
Opuate C								Apply		Cancel						
Main Call Stat. R		Menu	Main Call S		Страна Мар	Menu	X Main	Call Stat.	RF	<del>ф</del> Мар	Menu	X Main (	Call Stat.	RF	С Мар	Mer

Title	Addition of Accuver Simple logdata							
Product	CAL-Mobile Requestor							
Chipset	Qualcomm, Samsung CRM#							
Location	[Menu]-[Other Settings]-[Logging]-[Simple Logging(AOF)]							
Description of Enhancement/Fixes								

Added open text based simple logging function.

(XCAL-Mobile license : [Function] Simple log)



Title	Channel/Cell Lock							
Product	CAL-Mobile/XCAL-Solo Requestor							
Chipset	Common CRM#							
Location	[XM Menu]-[Network Lock]							
	[Menu]-[Other Settings]-[Phone Set Mode]-[Network Lock]							
		_						

### **Description of Enhancement/Fixes**

Added to support Channel/Cell Locking withoug mobile reboot process.

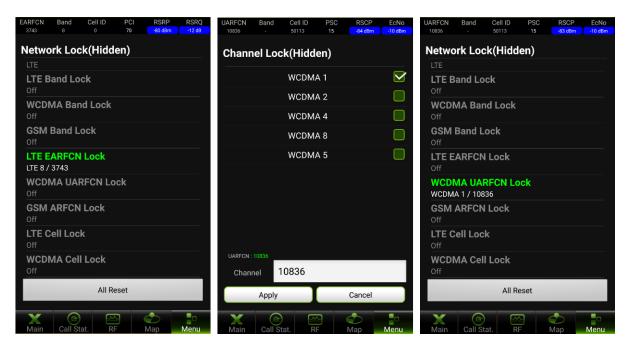
(Supportable mobile models are specified in the Device List provided separately.)



#### LTE EARFCN & PCI Lock

EARFCN 450	Band 1	Cell ID 6	PCI 70	RSRP -86 dBm	RSRQ -12 dB	EARFCN 450	Band 1	Cell ID 6	PCI 70	RSRP -94 dBm	RSRQ -12 dB	EARFCN 3743	Band 8	Cell ID 0	PCI 70	RSRP -80 dBm	RSRQ -12 dB	
Network Lock(Hidden)						Chanr	iel Loc	k(Hidd			Network Lock(Hidden)							
LTE												LTE						
LTE B	and Lo	ck						LTE 1				LTE E	Band Lo	ck				
	A Dor	d Lock						LTE 2				WCD	MA Rar	nd Lock				
Off	A Bar	Ia Lock						LTE 3				Off	WIA Dai					
GSM Off	Band L	ock						LTE 4				GSM Off	Band L	ock				
LTE E	ARFCN	Lock						LTE 5				LTE E	ARFCN	l Lock				
Off								LTE 7				LTE 8 /	3743					
	/A UAI	RFCN Lo	ock										MA UAI	RFCN Lo	ck			
Off								LTE 8			$\checkmark$	Off						
GSM . Off	ARFCN	Lock						LTE 1	7			GSM Off	ARFCN	l Lock				
LTE C	ell Loc	k						LTE 2	0			LTE C	ell Loc	k				
Off												Off						
WCDN	/IA Cel	Lock				EARFCN :						WCD	MA Cel	l Lock				
Off						Chan	nel 3	743				Off						
		All R	eset				Apply			Cancel				All R	eset			
X Main	Call St	at. R		ф Мар	Menu	X Main	Call St	at. R	Z.	ф Мар	Menu	X Main	Call St	tat. R		ф Мар	Menu	

WCDMA UARFCN & PSC Lock



#### GSM ARFCN Locking

UARFCN Band Cell ID PSC RSCP EcNo 10836 - 50113 15 -83 dBm -10 dBm	UARFCN Band Cell ID PSC RSCP EcNo 10136 1 49921 15 74.dbm 6.ddm	EARFCN Band Cell ID PCI RSRP RSRQ 1550 3 3 70
Network Lock(Hidden)	Channel Lock(Hidden)	Network Lock(Hidden)
LTE LTE Band Lock Off	GSM 850	LTE LTE Band Lock Off
WCDMA Band Lock	GSM 900 GSM 1800	WCDMA Band Lock
GSM Band Lock	GSM 1900	GSM Band Lock
LTE EARFCN Lock		LTE EARFCN Lock GSM 850 / 200
WCDMA UARFCN Lock WCDMA 1 / 10836		WCDMA UARFCN Lock
GSM ARFCN Lock		GSM ARFCN Lock
LTE Cell Lock		LTE Cell Lock Off
WCDMA Cell Lock	ARECN :- Channel 400	WCDMA Cell Lock
All Reset	Apply Cancel	All Reset
Main Call Stat. RF Map	Main Call Stat. RF Map Menu	Main Call Stat. RF Map Menu

Title	Addition of Channel/Cell Locking Scenario for Multi-Call				
Product	XCAL-Mobile/XCAL-Solo	Requestor			
Chipset	Common	CRM#			
Location	[Menu]-[Autocall Settings]-[Multi-Call]-[Netw	vork Locking]			
Description of Enhancement/Fixes					

Added the call scenario of [Channel/Cell Locking] under Multi Call test.

EARFCN Band Cell ID PCI RSRP 450 1 6 70 -88 dBm	RSRQ -10 dB	EARFCN Band 1550 3	Cell ID 5	SRP RSRQ 00 dBm -16 dB	EARFCN Band 3743 8	Cell ID	PCI RSRP 70 -78 dBr	
we		Network Locking	name		we			
Call Name	Delete	NL_lte 1550 70		lew Delete	Call Name			Delete
Network Locking	Edit	Cell Lock			NL_lte 1550 70			Edit
Repeat Count	1		LTE	-	Repeat Count			1
Create logging file for each scenario	Off		LTE 1		Create logging f	file for ea	ch scenario	Off
Select All			LTE 2		Select All			
1.NL_wcdma cell					1.NL_wcdma cell			
2.FTPDL			LTE 3		2.FTPDL			
		Channel 1	550		3.NL_lte 1550 70			
000		Cell 7	0			-		-
New Delete Save	Cancel					New	Delete Save	
Main Call Stat. RF Map	Menu	Main Call St	at. RF	Menu	Main Call Sta	at. RF	) 🖒	Menu

Title	Addition of Numbering Rule in MOS Info		
Product	XCAL-Mobile/Solo	Requestor	EMEA
Chipset	Common	CRM#	NEW_521,
-			BUG_2293
Location	[Autocall]-[voice/VoLTE]-[MOS]		

### Description of Enhancement/Fixes

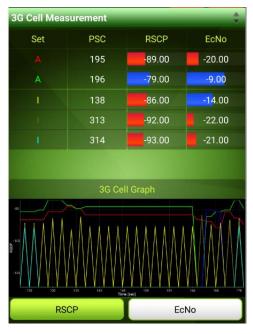
Added to give MOS numbers per Recording and Play in MOS Information.

Discrepant MOS numbering is fixed.

Traffic	Start	
Recording Info		MOS Start 1
MOS Status		r1-1
Recording Info	record start	New_Korean_WB_6s.v
Recording Start		r1-1
MOS Status		r1-1
Recording Info	record end	r1-1
Recording End		r1-1
MOS Status		p1-1
Recording Info	play start	New_Korean_WB_6s.v
Play Start		
MOS		01096451672_201702
MOS Status		p1-1
Recording Info	play end	Play End
MOS Status		r1-2
Recording Info	record start	New_Korean_WB_6s.v
Recording Start		r1-2
MOS Status		r1-2
Recording Info	record end	r1-2
Recording End		r1-2
MOS Status		p1-2
Recording Info	play start	New_Korean_WB_6s.v
Play Start		
MOS		01096451672_201702
MOS Status		<u>p1-2</u>
Recording Info	play end	Play End
MOS Status		r1-3
Recording Info	record start	New_Korean_WB_6s.v
Recording Start		r1-3
MOS Status		r1-3

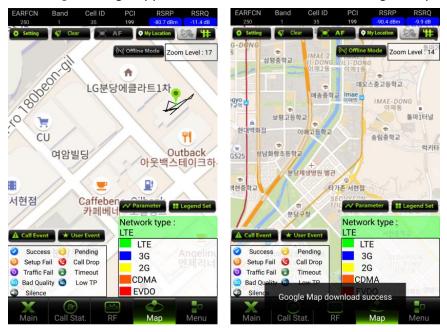
Title	More Monitoring Items in 3G Cell Measurement				
Product	XCAL-Mobile/Solo Requestor EMEA				
Chipset	Samsung	CRM#	BUG_2366		
Location	[Autocall]-[voice/VoLTE]-[MOS]	-			
Description of Enhancement/Fixes					

Added to display more monitoring items of [Active Cell] and [Identified Cell] in [3G Cell Measurement] screen.



Title	Addition of Offline Map		
Product	XCAL-Mobile	Requestor	AA-EMEA
Chipset	Common	CRM#	
Location	[MAP] – [Offline MAP]		
Description	of Enhancement/Fixes		

Added the [Offline Mode] button in the top right corner of map screen to download Google Map and display map even in the Idle state. When map is used in Offline Mode, data consuming is very little. When [Offline Mode] button is tapped, [Google Map Download Success] message appears and starts to download Google map file.



Title	ESP Information Logging (Only VoLTE)		
Product	XCAL-Mobile/XCAL-Solo	Requestor	
Chipset	Common	CRM#	
Location			

### **Description of Enhancement/Fixes**

Added [ESP Information Logging(Only VoLTE)] option to collect log of Authentication Key(IK), Encryption Key(CK), and algorithm information to decode ESP packet of the test mobile applying IPSec while conducting VoLTE call test. When this option is selected and start VoLTE AutoCall test, ESP Information logging section (25sec) is proceeded.



Title	Addition of YouTube KPI for PEVQ-S Call		
Product	XCAL-Mobile/Solo	Requestor	АА
Chipset	Common	CRM#	
Location	[Main]-[Youtube]-[pevq-s]		

#### **Description of Enhancement/Fixes**

Added YouTube KPI(Streaming Service Access Time/ Streaming Reproduction Start Delay) in addition to the existing PEVQ-S KPI.

You Tube	ind Cell ID 3 3		94 dBm	RSRQ -12 dB
	AUTO CA	ALL STOP		
Plav Status MOS (Min/Ma Video Codec Bitrate (kbps) Resolution (Pi Quality Level (	xel)	TRAFFIC		
And a second sec	vice Access T production Sta			368 SEC 305 SEC
PEVQS Results	MOS Distribution MOS CVQ 3.90	Frequency of Stalling Events	Ca Stati	stics
Differ fill Levelo	×	23	22	
Main Call	Stat. RF	a Map N	* Ienu So	r <sub>(1)</sub> , canner

## Change

Title	Change on RF Information Display in the Status Bar at the top				
Product	XCAL-Mobile	Requestor	AE		
Chipset	Samsung-chip	CRM#	BUG 2305		
Location	[Status bar]				
Description of Enhancement/Fixes					

Changed to display the status bar at the top as like the A set of Cell Measurement.

## **Bug Fix**

Title	App Close when entering to 3G RF		
Product	XCAL-Mobile	Requestor	EMEA

Chipset	Samsung Chipset	CRM#	BUG_2279
Location	[RF] – [3G Summary]		

#### Description of Enhancement/Fixes

Fixed not to close the application when browsing to 3G Summary page in particular mobile model(Galaxy S6 Edge+).

Title	App Close when entering to RF		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Samsung Chipset	CRM#	BUG_2332
Location	[RF]		·
Description of Enhancement/Fixes			

Fixed not to close the application when browsing to RF page in particular mobile model(GT-I9505).

Title	Activation of Auto View Icon		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Common	CRM#	BUG_2286
Location	[RF] –[Edit]		

**Description of Enhancement/Fixes** 

Fixed to properly activate corresponding network icon when RF Auto View is selected.

Title	RRC State Display Error			
Product	XCAL-Mobile	Requestor	EMEA	
Chipset	Samsung Chipset	CRM#		
Location	[RF] –[4G Summary]			
Location     [RF] -[4G Summary]       Description of Enhancement/Fixes				

Fixed to properly update and display RRC State in real time.

Title	Display Error on ICD and Relevant Parameters	5	
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Samsung Chipset	CRM#	
Location	[RF]-[4G Summary]/[3G Summary]		
Description	of Enhancement / Eines		

Description of Enhancement/Fixes

Fixed not to miss ICD version and relevant parameters.

Title	GSM Parameter Display Error		
Product	XCAL-Mobile	Requestor	EMEA
Chipset	Samsung Chipset	CRM#	
Location	[RF]-[GSM Summary]/[3G Cell]		

Description of Enhancement/Fixes

Fixed not to display fixed Rx level and miss data in Cell Measurement.

Title	BTS Serving Line Display Error			
Product	XCAL-Mobile	Requestor	AE	
Chipset	Samsung-chip	CRM#	BUG 2306	
Location	[Map]			
Description of Enhancement/Fixes				

Fixed to properly display BTS line in map.

# ETC

Title	E-mail UI			
Product	XCAL-Mobile	Requestor	EMEA	
Chipset	Common	CRM#	MOD_565	
Location	[Main]-[Email]			
Description of Enhancement/Fixes				

Amended to show the UI of [Email ID] instead of [Gmail ID] in [Email Scenario Info] screen.

# XCAL-Mobile/Solo Version: 4.13.512

Date of Release: Sep 2016

### **Specifications**

- Technology: CDMA/EVDO, WCDMA, LTE , GSM, TD-SCDMA
- Operating System Supported: Android OS up to Marshmallow v6.0.1
- Compatibility: XCAL-Mobile/Solo v4.13.512

## Addition

Title Edition of Call Name

Product	XCAL-Mobile/XCAL-Solo	Requestor	EMEA
Chipset	Common	CRM#	MOD_522
Location	[Autocall]		

#### **Description of Enhancement/Fixes**

Added to edit and copy of AutoCall setting by tapping Call Name for more than 3 seconds. For copy, the call name is saved with the edited nameor original name#n.

EARFCN Band 200 1	Cell ID PCI RSRP RSRQ 71 363 -85 dBm -10 dB	EARFCN Band Cell ID PCI RSRP RSRQ 200 1 71 363 -96 dBm -10 dB	EARFCN Band Cell ID PCI RSRP RSRQ 200 1 71 363 90 dBm 14 dB
Call Name	Autocall Name Edition	Call Name Autocall Name Edition	Call Name Autocall Name Edition#1
	Idle Setup Traffic	Idle Setup Traffic	Idle Setup Traffic
Call Time	5 10 20	Call Time 5 10 20	Call Time 5 10 20
Total Time		Total Time	Total Time
Call Count	1		Call Count 1
Network Condition	NONE	Name (NONE )	Network Condition NONE
Call Type	Origination	Autocall Name Edition	Call Type Origination
End Type	API - End	E Edit Copy Cancel	End Type API - End
My Mobile ID	01040131601	Lefit Copy Cancel	My Mobile ID 01040131601
System Transitio Drop	n Off	System Transition Off Drop	System Transition Off Drop
Dial Number	02131	Dial Number 02131	Dial Number 02131
-			
New	Save Delete Cancel	New Save Delete Cancel	New Save Delete Cancel
Main Call S	) 🗠 🧼 📭		

Title	Select All option for RF Setting		
Product	XCAL-Harmony	Requestor	AJ
Chipset	Common	CRM#	MOD_515
Location	[RF Summary] – [Parameter]		
Description of Enhancement/Fixes			

Added [All] to select or delete all parameters in RF summary setting. [All] button selects or unselects all parameters.

MI Current V M2 Current V M3 Current V M4 Current V M5 Current V M6 Cu	rrent 🔽
LTE All WCDMA All GSM All CDMA	
Param Param Param Param Param	All
PCI(Serving) MCC App.DL Throughput	
RSRP(Ant0) MNC MNC App.UL Throughput	
RSRP(Ant1) LAC LAC CDMA	
RSRQ(Ant0) RAC App.DL Throughput CDMA Rx Power	
RSRQ(Ant1) RRC State App.UL Throughput CDMA Tx Power	
RSSI(Ant0) RB Assignment Band CDMA PN	
Ho Assignment Dano	
RSSI(Ant1) DL UARFCN(Freq) BSIC (NCC/BCC) CDMA Ec/lo	
RSRQ(Ant0) RAC App.DL Throughput CDMA Rx Power RSRQ(Ant1) RRC State App.UL Throughput CDMA Tx Power	] ] ]

Title	PEVQ-S		
Product	XCAL-Mobile/XCAL-Solo	Requestor	EMEA
Chipset	Common	CRM#	
Location	[Main]-[Youtube]-[Add/Edit]-[PEVQ-S]	-	
Description of Enhancement/Fixes			

Added [PEVQ-S] for YouTube AutoCall to conduct Video MOS score. It works only with rooting smart phones. For details, refer to User Guide and Introduction material for PEVQ-S separately provided.

EARFCN         Band         Cell ID         PCI         RSRP         RSRQ           200         1         71         363         -88 dBm         -9 dB	EARFCN Band Cell ID PCI RSRP RSRQ 200 1 71 363 -87 dBm -10 dB	C file:///sdcard/XCAL-Mobile/Se 🗌 🗄
You Tube CPU: 25% VIDEO Title tos_test003c	Call Name     download       Idle     Setup     T.Setup     Traffic       Call Time     5     15     15     296	
AUTO CALL STOP	Total Time	
Play Status TRRFFIC 23 (S:0 / F:0 / T:i)	Call Count 1	
MOS (Min/Max/Avg) 3.33 / 3.79 / 3.66		Contraction of the second second
Video Codec VP9	Network Condition NONE	Martin Contractor Contractor
Bitrate (kbps) 742.00	None Airplane Wifi	
Resolution (Pixel) 854X480	Mode	
Quality Level (kbps) II(718.000)	Youtube PEVQ-S	
PEVQS MOS Prequency of Call Results Distribution Stalling Events Statistics MOS CVQ 3.33 MOS BVQ 3.83	HTML File yt_bbb_test002_v10_s03.sqlite	
	Network Adapter 1 : Other Interface rmnet0	
2 1 1 19 13 22 15	Get PEVQS Data	
	New Save Delete Cancel	
Main Call Stat. RF Map Menu	Main Call Stat. RF Map Menu	

Title	Network Lock		
Product	XCAL-Mobile/XCAL-Solo	Requestor	EMEA
Chipset	Common	CRM#	MOD_522
Lection			
Location	[Main]-[Multicall]		
	[Menu]-[Other Settings]-[Phone Set Mode]-[Band Lock(Hidden)]		
Description	Description of Enhancement (Fines		

**Description of Enhancement/Fixes** 

Added Network Lock(NL) feature by using Android hidden menu. Particular call scenario can be measured in selected network condition by allocating scenario after configuring Network Lock for MultiCall setting.

EARFCN         Band         Cell ID         PCI         RSRP         RSRQ           200         1         71         363         -88 dBm         -11 dB	EARFCN         Band         Cell ID         PCI         RSRP           200         1         35         363         -93 dBm	RSRQ -11 dB	EARFCN Band Cell ID PCI RSRP 200 1 35 172 -79 dBm	RSRQ -13 dB
Classic All Scenarios			Multicallscenario	
🔇 Multi-Call 📎	Call Name	Delete	youtube	Delete
Scenario Name	Network Locking	Edit	NL_WCDMA lock	Edit
multicallscenario Add / Edit	Repeat Count	1	Repeat Count	þ
Scenario Info	Create logging file for each scenario	Off	Create logging file for each scenario	Off
1. NL_LTE 2. ftp 3. NL_WCDMA lock 4. youtube	Select All		Select All	
		2	2.ftp	
		8	B.NL_WCDMA lock	
and Autocan		2	1.youtube	
				0
	New Delete Save	Cancel	New Delete Save	Cancel
Main Call Stat. RF Map Menu	Main Call Stat. RF Map	Menu	Main Call Stat. RF Map	Menu

The other way for configuring Network Lock is through [Menu] – [Other Settings].

Conduct call test after configuring Network Lock by using [Other Setting] – [Phone Set Mode] – [1. Band Loc(Hidden)] menu].

NL feature works only with corresponding license along with special smart phones which available for NL.

\* No need of mobile reboot after configuring NL setting.

EARFCN         Band         Cell ID         PCI         RSRP         RSRQ           200         1         35         172         -86 dBm         -14 dB	EARFCN Band Cell ID PCI RSRP RSRQ X	BAND LOCK	
Other Settings	BAND LOCK		
	Automatic	Automatic	
11. WiFi logging		GSM -	
12. Text Report (RF/L3/Call Event)	GSM + -		
13. ESP Information Logging (Only VoLTE)		GSM ALL	
Phone Set Mode	WCDMA + -	GSM 850	
1. Band Lock(Hidden) SET	LTE +		
2. RAT/Band Lock(Hidden-ADB) SET		GSM 900	
Logcat	HEDGE ALL	GSM 1800	
1. Logcat Logging			
		GSM 1900	
2. Logcat Filter			
3. Save Logcat file(Separately)		GSM 850-900	
Save	Set Cancel	GSM 1800-1900	
Main Call Stat. RF Map Menu	Main Call Stat. RF Map Menu	Set Cancel	

Title

ADB User Custom Call

Product	XCAL-Mobile/XCAL-Solo	Requestor	
Chipset	Common	CRM#	
Location	[Main]-[ADB Script]		
Description of Enhancement/Fixes			

Added a AutoCall type of ADB (User Custom) by using touch event. Call scenario (\*.asc) for ADB user custom is created to test various network locking and automation. (The call scenario is created by using a speciel tool of Scenario Editor. For details of scenario, refer to ADB User Custom Guide provided separately.)



Title	Samsung Chip – Network Lock		
Product	XCAL-Mobile	Requestor	
Chipset	Samsung Chipset ICD 5.13 or above	CRM#	
Location	[Menu] – [Other settings]		
Description of Enhancement / Eives			

#### **Description of Enhancement/Fixes**

Added to support Band/Channel/Cell Lock features for the smart phones (Galaxy Note7) with the application of Samsung Chip ICD 5.13.

#### \* No need of mobile reboot for the NL setting.

Network Lock(Samsung)		
Band Lock		
Channel Lock		
Cell Lock		

Title	Samsung Chip – Autocall Band Lock in Multi-	call	
Product	XCAL-Mobile	Requestor	
Chipset	Samsung Chipset ICD 5.13 or above	CRM#	
Location	[Menu] – [Autocall Settings]		
Description of Enhancement/Fixes			

Added to support AutoCall Band Lock for the smart phones (Galaxy Note7) with the

application of Samsung chip ICD 5.13. Band Lock Alias is configured by selecting [Network Locking] – [Edit] in Multi-Call setting

screen.

Multi-Call scenario is configured by combining AutoCall Sceanrio and Network Locking Alias configured.



While processing Multi-Call test, [Network Locking] shows the status of Band Lock.



Title	PCTEL Scanner – MAP/Inbuilding Display of RF Parameter		
Product	XCAL-Mobile/XCAL-Harmony	Requestor	AA
Chipset	Common	CRM#	
Chippet			L
Location	on [Menu] – [Autocall Settings]		

#### **Description of Enhancement/Fixes**

Added to display RF parameter of each tech in the legend of Map and Inbuilding.

- Supported RF Parameter
  - LTE RSRP, RSRQ, RS\_CINR, PCI
  - WCDMA RSCP, Ec/Io, PSC
  - CDMA Ec/Io, Ec, PN
  - EVDO Ec/Io, Ec, PN
  - GSM RSSI

Setting Clear AF OMy Location	Select Parameter
Denmark	Common
United Kingdom	IBflex IBflex IBflex IBflex IBflex IBflex EVDO
Ireland Germany	
The second	1 RSRP 2 RSRQ
France France	3 RS CINR
taly	IBflex-LTE_RSRP
	-30 > Value >= -54
Spain	-54 > Value >= -78
Portugal Parameter Elegend Set	-78 > Value >= -102
A Call Event ★ User Event	-102 > Value >= -126
Success Pending 3G Igeria	-126 > Value >= -150
Setup Fail      Call Drop     2G     Traffic Fail      Timeout	Save
Bad Quality      Low TP     CDMA     EVDO	ок
Main Call Stat. RF Map Menu Scanner	Main Call Stat. RF Map Menu Scanner

Title	Silence Detection Option in Voice/VoLTE Call			
Product	XCAL-Mobile/XCAL-Solo/XCAL-Harmony	Requestor	AJ/AA	
Chipset	Common	CRM#		
Location	[Menu] – [Autocall Settings]			
Description of Enhancement/Fixes				

For Voice/VoLTE calls,

Added to save [Call Info] by detecting mute of current sound using Wave Recording feature.

Wave Play and Wave Recording features are supported.

Silence Detection is supported for the range of 100ms~5000ms.

Silence Detection License is required.

Silence Detection	on Settings		Silence Detectio	n Settings
Play Sound	Recording Only	Add Wave	Play Sound	loop1_2_8000_2.w Add Wave
Silence Check	100ms		Silence Check	500ms
Play volume		50%	Play volume	50%

100ms		٦
200ms		J
Pic 300ms		٦
400ms		
Sile 500ms		
1000ms		
Play 2000ms	ave	
3000ms		
Sile 4000ms	T	J
5000ms	50%	×.
3000ms Sile 4000ms	ave	

## Change

Title	iBwave Survey Data Update			
Product	XCAL-Mobile/XCAL-Harmony	Requestor	AA	
Chipset	Common	CRM#		
Location	[Map]			
Description of Enhancement/Fixes				

Added the collected RF information and survey data for iBwave synchronization.

- Updated RF Parameter
  - LTE SNIR, MobileTxPower

# **Technical Support**

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



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