Keysight EXM Wireless Test Set E6640A

Software version E.17.07

Released Date:	18 May 2016
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframe work 4.5.2
File Name:	XSA_Installer_E.17.07_Self-extractor_x64.exe

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Software E.17.07 Enhancements

Model	Option	Description
E6640A		Added advisory message "Sample Rate in ARB header exceeds the supportable range" if the selected ARB's sample rate exceeds the maximum supportable sample rate of source. Added support for M9433A TRX module
E6640A	V/Y9077B WLAN	Added V9077B-VFP option for WLAN 11ac 80+80MHz. Added new SCPI SYSTem:COMMunicate:ANALyzer:RELease:WCOMpleted? to query whether all remote analyzers of MIMO have been released completely.
E6640A	V/Y9065B Sequence Analyzer	Added V9065B-3FP option for ZigBee feature. Added V9065B-4FP option for Z-Wave feature. Add BTS measurements into the EXM.

Software E.17.07 Issues Resolved

Model	Option	Description
E6640A		Fix a defect: Fix issue in source that when preload a new mode, source will be sync stopped if it's in sync. Fix a defect: Remove cases distinguish when check master's name using source sync setting on feature. Fix a defect: In the mode that not supports amplitude correction, sends the correction SCPI should return error message.
E6640A	V/Y9077B WLAN	Fix a defect: WLAN EVM FFT SEM trace result is wrong Fix a defect: Added FFT SEM pass/fail, worst margin and trace length results for WLAN EVM and WLAN MIMO EVM Fix a defect: WLAN MIMO EVM FFT SEM results wrong for

Model	Option	Description
		segment 2
E6640A	V/Y9082B LTE-A TDD	Fix a defect: For TDD SEM measurement, update the trigger source to free run and gate source to periodic for TDD uplink SEM measurement.

Software version E.16.09

Released Date:	3 January 2016
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframe work 4.5.1
File Name:	XSA_Installer_E.16.09_Self-extractor_x64.exe

Software E.16.09 Enhancements

Model	Option	Description
E6640A		Allow "Select Waveform" button to display two lines for file name of the selected ARB.
E6640A	V/Y9077B WLAN	Add "Auto Detect" selection in WLAN MIMO EVM "Matrix Type" setting. Add more port allocation supports for WLAN UL MIMO EVM measurement. Newly added port allocations for 2x2 are as follows: TRX2 serves as master and TRX3 serves as slave. TRX2 serves as master and TRX4 serves as slave. Newly added port allocations for 3x3 are as follows: TRX2 serves as master, TRX3 serves as slave1 and TRX4 serves as slave2.

Software E.16.09 Issues Resolved

Model	Option	Description

E6640A		Fix a defect: for source sync control functionality, when "Sync Settings" state is on, ARB is not always loaded into the slave module when the ARB in the master module is changed. Fix a defect: remove inappropriate "Hardware Missing" error message when changing "Sync Settings" state in source sync control.
E6640A	V/Y9077B WLAN	Fix a defect: an intermittent crash issue in 4x4 80MHz MIMO EVM measurement, caused by captured data exceeding available data segment length in some cases. Fix a defect: data rate result always returned NaN for 2x2 80+80 WLAN MIMO EVM measurement.
E6640A	V9065B Sequence Analyzer	Fix a defect: sequencer analyzer can randomly send false internal trigger source list sequencer after switching from LTE-TDD mode.

Software version E.16.08

Released Date:	6 October 2015
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframe work 4.5
File Name:	XSA_Installer_E.16.08_Self-extractor_x64.exe

Software E.16.08 Enhancements

Model	Option	Description
E6640A	V/Y9081B Bluetooth	Added new test results for Delta F1F0 and Max Frequency offset for Bluetooth LE measurement according to standard

Software E.16.08 Issues Resolved

Model	Option	Description
E6640A	V9065B Sequence Analyzer	Fixed defect: LSEQ Edge EVM returned similar results of different acquisitions in some cases. Fixed defect: cannot recall sequencer analyzer sequence file and source list sequence file by means of user interface. Fixed defect: random crashes occur when exiting sequence analyzer mode. Fixed defect: Demodulation of LTE FDD EVM sometimes occurred in Sequencer Analyzer mode.
E6640A	V/Y9077B WLAN	Fixed defect: FFT SEM trace provided with WLAN MIMO Mod Analysis was incorrect. Fixed defect: could not release remote analyzers when deleting all remote analyzers for MIMO. Fixed defect: WLAN 11af EVM cannot demodulated successfully.
E6640A		Fixed defect: random crashes when editing source ARB sequence file. Fixed defect: License-checking errors occurred with Signal Studio waveform MEU licenses. Fixed defect: Loading Signal Studio waveforms into ARB memory sometimes caused SW crash. Fixed defect: Application can't recognize old configuration file after upgrade to new version.
E6640A	V/Y9080B LTE FDD /LTE-Adv FDD	Fixed defect: Performing auto range for LTE measurement was causing SW crashes. Fixed defect: LTE/LTE-A mode cannot be pre-loaded at startup.

Software version E.16.06

Released Date: 7 July 2015

Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframe work 4.5
File Name:	XSA_Installer_E.16.06_Self-extractor_x64.exe

Software E.16.06 Enhancements

Model	Option	Description
E6640A		Microsoft .Net 4.5 is required for this release. (.Net 4.5 should be manually uninstalled if you want to downgrade to an older release / previous version.) Adds trigger type to DL MIMO single entry control list
E6640A		Added weekly alignments buttons: RF, IF and Source the user interface
E6640A	V/Y9077B WLAN	Added new feature to support WLAN 802.11ah. Added new feature to support WLAN 802.11af. Added WLAN measurement ACLR for 802.11af. Added support for M9432A TRX module to provide 802.11af /ah measurement capability

Software E.16.06 Issues Resolved

Model	Option	Description
E6640A	V9065B Sequence Analyzer	Fixed an application crash when Basic IQ is queried in an unsupported mode Fixed a defect: correct help link of WCDMA Band 19 and LTE Band 30 Fixed a defect: added WLAN EVM "Track Timing" in Sequence Analyzer

		Fixed a defect: LTE EVM reports error in Sequence mode when signal has large IQ offsets
E6640A	V/Y9077B WLAN	Fixed a defect: EXM WLAN supports negative Gate Delay Fixed a defect: WLAN FFT SEM Detector should be Average
E6650A	V/Y9081B Bluetooth	Fixed a defect: Sometimes, Bluetooth results were NaN. Fixed a defect: Bluetooth LE Trigger Hold off Type sometimes cannot be adjusted correctly. Fixed a defect: BER is not zero when frequency offset is big.

Software Version E.15.07

Released Date:	5 May 2015
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframe work 4.5
File Name:	XSA_Installer_E.15.07_Self-extractor_x64.exe

Software E.15.07 Enhancements

Model	Option	Description
E6640A		Microsoft .Net 4.5 is required for this release. (.Net 4.5 should be manually uninstalled if you want to downgrade to an older release / previous version.) Introduced "Y" license for several applications (for example, the V9077B WLAN app is also available as Y9077B). The "Y" version supports unlimited waveform playback. Added new feature to support LTE Band30.

Model	Option	Description
		Added a trigger polarity to the source external trigger.
E6640A	V/Y9077B WLAN	Added new feature to support 1024QAM for 802.11ac. Added new feature to support 802.11p and 802.11j. Added new feature to support WLAN 2x2 80+80MHz. Added new SCPI command for "Frequency Sync" to improve EVM results. [:SENSe]:EVM:FREQuency:SYNC PPILot | PPData | PREamble Added new softkey "User Select Field" for EVM. Added new SCPI commands to change trace. :DISPlay:EVMMimo:TRACe[1]|2|3|4:STReam <integer> :DISPlay:EVMMimo:TRACe[1]|2|3|4:CHANnel <integer>
E6640A	V/Y9081B Bluetooth	Added Bluetooth v4.2 packet data length extension support
E6640A	V/Y9080B LTE FDD/LTE-Adv FDD	Added new feature to support LTE-Advanced FDD.
E6640A	V/Y9082B LTE TDD/LTE-Adv TDD	Added new feature to support LTE-Advanced TDD.
E6640A	V/Y9065B Sequence Analyzer	Added new feature to support LTE Band30.

Software E.15.07 Issues Resolved

Model	Option	Description

Model	Option	Description
E6640A		Fixed a defect: External trigger level range is not correct. Fixed a defect: Source sync operation occasionally causes inconsistence status.
E6640A	V/Y9065B Sequence Analyzer	Fixed a defect: Some 802.11 results are not displayed occasionally. Fixed a defect: Switch MIMO cannot display results occasionally.
E6640A	V/Y9077B WLAN	Fixed a defect: 2x2 MIMO doesn't work correctly with TRX3 and TRX4.
E6640A	V/Y9082B LTE TDD/LTE-Adv TDD	Fixed a defect: When no RF burst signal presents, application completes measurements immediately without showing "Waiting for Trigger".

Software Version E.14.69

Released Date:	2 February 2015
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.69_Self-extractor_x64.exe

Software E.14.69 Enhancements

Model	Option	Description
E6640A		Added a new feature to support "External Trigger Delay" for source input trigger. Added a new feature in downlink MIMO: the source setting changes can be automatically applied to the other TRXs.

Model	Option	Description
E6640A	V9077B WLAN	Added Spectrum Emission Mask in MIMO EVM measurement. Enhanced and optimized user-interface display for 4x4 MIMO EVM measurement.
E6640A	V9065B Sequence Analyzer	In Sequence Analyzer mode, reduced minimum transition time between acquisition steps for some configurations.

Software E.14.69 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect: LAN ports 1and 2 the IP addresses incorrectly reported in system display. Fixed a defect: Source sequence initialization occasionally causes operation time-out. Fixed a defect: Source sync operation occasionally times out. Fixed a defect: TRX Configurator launch failed occasionally. Must refresh connection with IO libraries. Fixed a defect: Intermittent "Source Synthesizer Unlocked – DETECTED" errors when executing a source list sequence.
E6640A	V9065B Sequence Analyzer	Fixed a defect: Sequence file cannot be recalled occasionally. Fixed a defect: Bluetooth result displayed incorrectly. Fixed a defect: Intermittent timeout errors during sequence execution or when fetching sequence results.
E6640A	V9077B WLAN	Fixed a defect: Incorrect trace indicator in MIMO EVM display.

Software Version E.14.55

Released Date:	10 October 2014
Requirements category (e.g., operating system):	Microsoft Windows 7

Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.55_Self-extractor_x64.exe

Software E.14.55 Enhancements

Model	Option	Description
E6640A		Added new feature RMS Calculation Mode according to waveform IQ sample or waveform marker. Added new feature to support WLAN 4x4 MIMO ARB playing Improvements in Error reporting and handling Keysight branding related changes
E6640A	V9077B WLAN	Burst searching in PvT is improved by optimizing the algorithm. Added new feature: WLAN 4x4 MIMO measurements are supported.
E6640A	V9065B Sequence Analyzer	Added "Pilot Tracking Mode" setting into Sequencer Analyzer for WLAN Switch MIMO EVM measurement. Added new feature: Multiple WLAN radio standards are supported in single sequence. Added new SCPI command to improve and simplify the sequence setup.

Software E.14.55 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect: Incorrect source list sequence output power when waveform does not specify RMS in waveform header. Fixed defect: all zero IQ sample waveforms are not allowed to play. Minor improvements and defect Fixes related to Sequence

		setup, Sequence acquisition completion.
E6640A	V9077B WLAN	Fixed a defect: WLAN true MIMO EVM pass/fail checking malfunction. Fixed a defect: WLAN 80+80 SEM mask is not updated correctly. Fixed a defect: WLAN Combined SEM does not work occasionally.
E6640A	V9065B Sequence Analyzer	Fixed a defect: Switch MIMO failed in some corner case. Fixed a defect: Incorrect limit checking in WLAN 802.11n EVM measurement. Fixed a defect: Incorrect limit checking in WLAN SEM measurement.

Software Version E.14.44

Released Date:	2 September 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.44_Self-extractor_x64.exe

Software E.14.44 Enhancements

Model	Option	Description
E6640A		Adds the capability for Source List to play continuously. IQ points are shown in source arb memory in user interface view. Adds a new SCPI command to query if a specific waveform is available in ARB memory. Adds WCDMA Band19 to the internal source

Model	Option	Description
E6640A	V9077B WLAN	Adds Spectral Flatness trace and Data Rate for MIMO WLAN EVM measurement. Adds a new WLAN EVM parameter [:SENSe]:EVM:USELect SU | MU | SIG. EVM results are improved by optimizing the algorithm and providing more parameter options.
E6640A	V9065B Sequence Analyzer	Adds Data Rate, Average Burst Power, and Peak Burst Power to List Sequence WLAN measurement. Adds WCDMA Band19.

Software E.14.44 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect: internal source could not correctly play ARB waveforms with all zero samples. Fixed a defect: internal source couldn't play correctly play ARB waveforms with bursts having different power levels. Fixed a defect: multi-pack license operations should only be allowed on the default TRX. Fixed a defect: Range and Trigger Level didn't include Amplitude Correction at the first run after being changed. Fixed a defect: multi-pack license needed to be unlocked occasionally due to a slower startup of common services. Fixed a spurious "Source Synthesizer Unlock" event that was typically followed by an "Unlock Cleared" event. Fixed a frequency Synch error which occurred after a large (~200) number of transitions between Sequence Analyzer mode and the native measurement mode.
E6640A	V9064B VXA Mode	Fixed a defect: IF path selection wasn't shown correctly according to the available IF path.

E6640A	V9077B WLAN	Fixed a defect: MIMO Mod Acc pass/fail results in the user interface were not consistent with limitation. Fixed a defect: Tx BF measurement sometimes reported a "Data too short" error.
E6640A	V9081B Bluetooth	Fixed a defect: screen update was slow with the radio standard set to EDR, and the trigger set to Free Run.
E6640A	V9065B Sequence Analyzer	Fixed a defect: number of Phase Discontinuity results was missed. Fixed a defect: WCDMA BER sometimes reported an "Insufficient Data" error

Software Version E.14.36

Released Date:	8 August 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.36_Self-extractor_x64.exe

Software E.14.36 Enhancements

Model	Option	Description
E6640A		Added a service to monitor the chassis backplane fan for proper functioning.
E6640A		Added support of M9037A Quad core controller.

Software E.14.36 Issues Resolved

Model	Option	Description

E6640A		Fixed a defect – Field upgrade issue for HW license option.

Software Version E.14.34

Released Date:	20 June 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.34_Self-extractor_x64.exe

Software E.14.34 (Not recommended for customers because, it disables Field HW upgrade licenses)

Software E.14.34 Enhancements

Model	Option	Description
E6640A		Adds support for fully independent Source and Analyzer Adds auto adjustment to Gate View Sweep Time value on EXM. SCPI command has been added for Cal Date query Controller information added in show hardware screen Continuous Abort is supported as a new source list step playing mode. Adds support for V9075B WiMax Adds support for V9064B PHS
E6640A	V9077B WLAN	Adds support for 3x3 MIMO
E6640A	V9065B Sequence Analyzer	"Matrix Type" is added for WLAN switched MIMO EVM under SEQAN mode

Software E.14.34 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect – Duration Time not set from RUI when duration type is set to Continuous Abort. Fixed a defect - Internal source hang up issue after setting the Input/Output settings to default value. Fixed a defect - FW startup may fail occasionally due to a slower startup of common services. Fixed a defect - Source power level error may be incorrect after startup Fixed a defect - Source output triggers might not occur in some cases Fixed a defect – Source output level is incorrect when ARB waveform RMS > 1 Fix a defect - Intermittent incorrect source list timing
E6640A	V9071A GSM/EDGE/ EDGE Evo	Fixed a defect - Carrier not correctly displayed with Reference power calculation in EDGE ORFS.
E6640A	V9077B WLAN	Fixed a defect - "Auto Power Range" function is not supported for WLAN MIMO EVM measurement. Fixed a defect - Marker not shown correctly on Equalization. Impulse Response view. Fixed a defect - Marker issue in the MIMO EVM vs Symbol graph. Fixed a defect - WLAN EVM constellation reference point disappears at first run. Fixed a defect - MIMO EVM failure because of unsynchronized single capture Fixed a defect - FETCh:EVMM0? - should return raw IQ values for channel one channel, not all channels.

		Fixed a defect - In any Grid 2x2 view of WLAN MIMO Modulation Analysis measurement, Marker > Properties > Marker Trace 2 refers to lower left one, Trace 3 refers to upper right one Fixed a defect - When MIMO Type is 2x2, the IQ Polar view does not show the Peak/Avg. Burst Power
E6640A	V9081B	Fixed a defect - Invalid Gate View Zero Span BW for Bluetooth ACP measurement. Fixed a defect – with results of DPSK Avg. Pwr and Rel Avg. Pwr for EDR 3DH5 multiple packet
E6640A	V9065B Sequence Analyzer	Fixed a defect – Setting conflict not reported when measurement step exceeds the limitation for a sequence with only Basic Transmit Power. Fixed a defect – Random Phase Error result variation in LTE EVM measurement. Fixed a defect - Inaccurate DPE estimation will lead to the large frequency error if there is only one RB. Fixed a defect - Bluetooth sequence may crash while switching signal format between LE and EDR

Software Version E.14.24

Released Date:	6 May 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.24_Self-extractor_x64.exe

Software E.14.24 Enhancements

Model	Option	Description
E6640A		Added support for M9431A (4 FD) TRX module

E6640A		Added robust alignment data storage mechanism to prevent vulnerability/data loss during power shutdowns/hard power off
E6640A		Self-test additions - PLL Test and Source detector test
E6640A		Improved IF Response Alignment performance
E6640A		General error checking improvements with Sequencer Analyzer application

Software E.14.24 Issues Resolved

Model	Option	Description
E6640A		RUI source list initiate operation not blocked while "Include Source" is turned on. FPGA update tool did not indicate which sub-instrument had errors (in log file).
E6640A	V9065A Sequence Analyzer	Analyzer Sequence doesn't checking transition time internal limitation correctly Latency issue in source set up on GSM waveform sequence fixed.
E6640A	V9077A	WLAN Mod Acc random crash because of internal parameter mismatch.

Software Version E.14.14

Released Date:	8 April 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System

Requirements category (other):	none
File Name:	XSA_Installer_E.14.14_Self-extractor_x64.exe

Software E.14.14 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect in system initialize to avoid any occasional TRX module boot failure.

Software Version E.14.12

Released Date:	3 April 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	none
File Name:	XSA_Installer_E.14.12_Self-extractor_x64.exe

Software E.14.12 Enhancements

Model	Option	Description
E6640A		Added support for 5FM option (Option E6640A-5FM - Lower frequency extension).

Software E.14.12 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect – Running alignments or self-tests could result in accidental over-writing of arbitrary waveform data already loaded into waveform memory. Fixed a defect – "Align All" was improperly adding amplitude correction factors to internal alignment data. Fixed a defect – At times the Source user interface became unresponsive when configuring a new waveform while another waveform was playing.

E6640A	V9065A Sequence Analyzer	Fixed a defect – LTE demodulation wasn't working correctly when EXCLusive time setting was active.

(First)Software Version E.14.02

Released Date:	3 April 2014
Requirements category (e.g., operating system):	Microsoft Windows 7
Requirements category (e.g., instrument software version):	CoreTM i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	None
File Name:	XSA_Installer_F.14.02_Selft-extractor_x64.exe

Initial Release for E6640A, Keysight EXM Wireless Test Set

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