

Keysight EXM Wireless Test Set E6640A

[Software E28.10 released 20 April 2023](#)

[Software E28.09 released 8 March 2022](#)

[Software E28.07 released 9 December 2021](#)

[Software E27.12 released 9 March 2021](#)

[Software E27.10 released 2 November 2020](#)

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[Software E25.05 released 23 April 2020](#)

[Software E25.04 released 04 March 2020](#)

[Software E24.11 released 18 October 2019](#)

[Software E.24.08 released 26 August 2019](#)

[Software E.24.05 released 16 July 2019](#) (Removed)

[Software E.22.07 released 14 May 2019](#)

[Software E.22.05 released 18 March 2019](#)

[Software E.21.13 released 15 January 2019](#)

[Software E.19.72 released 8 March 2018](#)

[Software E.19.71 released 1 February 2018](#)

[Software E.19.55 released 5-December 2017](#)

[Software E.19.31 released 14-June 2017](#)

[Software E.17.07 released 18-May 2016](#)

[Software E.16.09 released 3-January 2016](#)

[Software E.16.08 released 6-October 2015](#)

[Software E.16.06 released 7-July 2015](#)

[Software E.15.07 released 5-May 2015](#)

[Software E.14.69 released 2-Feb-2015](#)

[Software E.14.55 released 10-Oct-2014](#)

[Software E.14.44 released 2-Sept-2014](#)

[Software E.14.36 released 8-August-2014](#)

[Software E.14.34 released 20-June-2014](#) (removed)

[Software E.14.24 released 6-May-2014](#)

[Software E.14.14 released 8-April-2014](#)

[Software E.14.12 released 3-April-2014](#)

Software version E.28.10

Released Date:	20 April 2023
Requirements category (e.g., operating system):	Microsoft Windows 7 or Windows 10
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 (M9037A) Or Intel (R) CoreTM i3-8100H CPU, 3.0 GHz processor PXI (WES10) 64-bit Operating System (M9035A)
Requirements category (other):	Microsoft .Netframework 4.7.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.28.09_Self-extractor_x64.exe

Software E.28.10 Enhancements

Model	Option	Description
E6640A	COMMON	Updated CCL licensing

Software E.28.10 Issues Resolved

Model	Option	Description
E6640A	COMMON	Fixed the DUT IF startup issue
E6640A	Y9065EM1E Sequence Analyzer	Fixed 5GNR EVM demodulation issue Fixed LTE FDD C-V2X EVM crash issue

E6640A	Y9080EM0E/Y9082EM0E LTE FDD/TDD measurement Application	Fixed LTE FDD C-V2X EVM crash issue
E6640A	Y9085EM0E 5GNR measurement Application	Fixed 5GNR EVM demodulation issue

Software version E.28.09

Released Date:	8 March 2022
Requirements category (e.g., operating system):	Microsoft Windows 7 or Windows 10
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 (M9037A) Or Intel (R) CoreTM i3-8100H CPU, 3.0 GHz processor PXi (WES10) 64-bit Operating System (M9035A)
Requirements category (other):	Microsoft .Netframework 4.7.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.28.09_Self-extractor_x64.exe

Software E.28.09 Enhancements

Model	Option	Description
E6640A	COMMON	Added support for M9019A Chassis and the M9035A Controller

Software E.28.09 Issues Resolved

Model	Option	Description
E6640A	COMMON	Fixed the M9300A reference searching exception Fixed the issue that ":SOURce:LIST:TRIGger:OUTPut:TYPE?" cannot be queried on EXM
E6640A	Y9065EM1E Sequence Analyzer	Fixed 5GNR EVM demodulation issue
E6640A	Y9085EM0E 5GNR measurement Application	Fixed 5GNR EVM demodulation issue Fixed 5GNR EVM crash when generating spectrum trace

Software version E.28.07

Released Date:	9 December 2021
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 .Netframework 4.7.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.28.07_Self-extractor_x64.exe

Software E.28.07 Enhancements

Model	Option	Description
E6640A	COMMON	Enabled mmW frequency hopping for both source list and sequence analyzer Enabled DUT IF Cable Alignment FFT speed improvement when Gate is On and Gate

		Length is short
E6640A	Y9065EM1E Sequence Analyzer	Added new results for 5G NR EVM in sequence mode: Magnitude Error, Phase Error, Gain Imbalance and Quadrature Error Added antenna port auto detection for uplink SISO when antenna port was rank 2
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	Added support for WLAN 11BE

Software E.28.07 Issues Resolved

Model	Option	Description
E6640A	COMMON	Fixed the minor mmW power difference issue Fixed the crash issue for spectrum trace generation when capture data was too short Fixed the issue that mmW frequency cannot be set and query by source list SCPIs
E6640A	Y9065EM1E Sequence Analyzer	Fixed 5G NR EVM demodulation issue Fixed correction compensation issue for EVM channel power active Fixed the invalid SEM offsetRelPeakPwr result Fixed the 5G NR spectrum flatness results for the failure case Fixed 5G NR spectrum flatness exception when center

		frequency fell out of band Fixed the issue for 5GNR in-band emission in average mode Fixed invalid PvT Off Power
E6640A	Y9080EM0E/Y9082EM0E LTE FDD/TDD measurement Application	Fixed the invalid error message "insufficient data" when sync error happened
E6640A	Y9085EM0E 5GNR measurement Application	Fixed 5GNR EVM demodulation issue Fixed EVM crash while generating spectrum trace with short meas interval Fixed invalid DispCenter and X Ref Value for SEM at start up

Software version E.27.12

Released Date:	9 March 2021
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.27.12_Self-extractor_x64.exe

Software E.27.12 Enhancements

Model	Option	Description
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E6640A	COMMON	Enhanced 11ax trigger frame generation to WLAN waveform generation Added support for 11ax 160M MU RU allocations to WLAN waveform generation Added support to query RF burst length and sample points number of generated waveforms
E6640A	Y9065EM1E Sequence Analyzer	Added support for basic IQ Data decimation type Added support for NR5G EVM in-band emissions results in sequence mode
E6640A	Y9081EM0E Bluetooth Measurement Application	Added delta-f1/f2 results for Advertiser Packet in Tx Analysis measurement

Software E.27.12 Issues Resolved

Model	Option	Description
E6640A	Y9065EM1E Sequence Analyzer	Fixed the power-based auto detection failure for NR5G DFT mode Fixed the issue that SEM Lower/Upper Rel Peak Power does not work when measurement type is PSD Reference or Spectrum Peak Reference Fixed the incorrect off power for NR5G transmit on/off power measurement
E6640A	Y9080EM4E LTE V2X measurement Application	Fixed the sync issue with large frequency offset

E6640A	Y9085EM0E 5G NR measurement Application	Fixed the EVM demodulation issue for 1RB case with low DUT power Fixed the EVM demodulation issue for 1RB case with big symbol clock error
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Software version E.27.10

Released Date:	2 November 2020
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 .Netframework 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.27.10_Self-extractor_x64.exe

Software E.27.10 Enhancements

Model	Option	Description
E6640A	COMMON	Added the function to export EXM logs in TRX configurator
E6640A	Y9084EM0E Short Range Comms and IoT Measurement Application	Added the new measurement application for Short Range Communications and IoT

Software E.27.10 Issues Resolved

Model	Option	Description
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E6640A	COMMON	Fixed the issue that basic tx power is not updated by sending scpi to change BW in sequence analyzer
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Software version E.27.07

Released Date:	30 September 2020
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.27.07_Self-extractor_x64.exe

Software E.27.07 Enhancements

Model	Option	Description
E6640A	COMMON	<p>Increased the maximum step number to 2500 for source list</p> <p>Improved the hardware setup time for mmW</p> <p>Added the support for EXM CIU+RRH system calibration utility</p>
E6640A	Y9065EM1E Sequence Analyzer	<p>Added the support for 5G NR multi format in sequence</p> <p>Added PSSCH Decoding to support C-V2X EVM in sequence</p> <p>Added NR5G Transmit On Off power measurement in sequence</p>
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	<p>Added Power over Time/Symbol to EVM measurement in WLAN measurement application</p> <p>Added support for 4096QAM demodulation for</p>

		802.11ax in WLAN measurement application
E6640A	Y9085EM0E 5G NR measurement Application	Updated preset-to-standard for ACP, SEM, and PvT measurements Allowed greater than 8 MHz Meas BW for Spurious Emissions measurement Added EVM metrics per slot for Modulation Analysis measurement (Slot Summary Table)

Software E.27.07 Issues Resolved

Model	Option	Description
E6640A	Y9065EM1E Sequence Analyzer	Improved 5G NR EVM demodulation algorithm
E6640A	Y9081EM0E Bluetooth Measurement Application	Improved Bluetooth burst search algorithm to fix sync error issue
E6640A	Y9085EM0E 5G NR measurement Application	Improved 5G NR EVM demodulation algorithm Updated UE In-Band Emissions General Limit definition In PvT measurement, changed default values for UL Meas Offset to -2 and for UL Meas Interval to 6

Software version E.25.05

Released Date:

23 April 2020

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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.25.05_Self-extractor_x64.exe

Software E.25.05 Enhancements

Model	Option	Description
E6640A	COMMON	<p>Increased the maximum step number to 2000 for source list</p> <p>Added support for mmW and IF in source list</p> <p>Added support for mmW frequency sequencing</p> <p>Added support for RRH Triggered TDD mode</p> <p>Remove hardware resource conflict checking on RRH HD ports</p> <p>Improved error reporting for CIU startup</p> <p>Improved TX isolation for mmW</p> <p>Reordered the DUT IF ports for both the front and rear panels</p>
E6640A	Y9065EM1E Sequence Analyzer	Added OBW Power Integration method

Software E.25.05 Issues Resolved

Model	Option	Description
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E6640A	COMMON	<p>Fixed scroll bar issue for source list</p> <p>Fixed the issue that "Waiting for trigger" error status is not reported for the case of Gate</p> <p>Fixed the Amplitude Port Direction incorrect issue after doing User Preset</p> <p>Fixed the issue that CW does not take effect in source list for multi-touch UI</p> <p>Fixed CIU HW auto detection issue</p>
E6640A	Y9085EM0E 5G NR measurement Application	<p>Fixed 5G NR EVM demod issue in 5G NR mode</p> <p>Fixed the issue that 5G NR channel power returns incorrect result "-999"</p>
E6640A	Y9065EM1E Sequence Analyzer	<p>Fixed 5G NR EVM demod issue in sequence mode</p> <p>Fixed sequence analyzer trigger offset issue</p>
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	For 11n 5G band, changed FFT SEM relAmpLimit to -40.0dBr when offset index is 4
E6640A	Y9081EM0E Bluetooth Measurement Application	Fixed Bluetooth demodulation issue on PRBS9 payload
E6640A	Y9080EM4E LTE V2X measurement Application	Fixed application exceptions when EVM gets sync error

Software version E.25.04

Released Date:

03 March 2020

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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.25.04_Self-extractor_x64.exe

Software E.25.04 Enhancements

Model	Option	Description
E6640A	COMMON	Enabled scpi command FEED:RF:PORT:CONNECTED? to query the available ports Added support for power acquisition for mmW Added support for DUT IF on channel card segment B
E6640A	Y9065EM1E Sequence Analyzer	Added software power in sequence mode Added support for amplitude sequence for mmW Improved measurement speed for 5G NR EVM in sequence mode
E6640A	Y9080EM4E LTE V2X measurement Application	Added band47 for c-v2x in sequence and source

Software E.25.04 Issues Resolved

Model	Option	Description
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E6640A	COMMON	<p>Fixed output frequency incorrect issue for port switching</p> <p>Fixed issue on amplitude correction</p> <p>Enabled auto range in 5G NR IQ waveform</p> <p>Fixed the automatic detection issue on RRH and DUT IF ports</p>
E6640A	Y9085EM0E 5G NR measurement Application	<p>Fixed 5G NR EVM demod issue in 5G NR mode</p> <p>Fixed application crash when PAVT is initiated with Meas Interval = 200ns</p>
E6640A	Y9065EM1E Sequence Analyzer	<p>Fixed 5G NR EVM demod issue in sequence mode</p>
E6640A	Y9080EM4E LTE V2X measurement Application	<p>Sync v2x measure interval slot with cevm setting</p>

Software version E.24.11

Released Date:	18 October 2019
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 .Netframework 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.24.11_Self-extractor_x64.exe

Software E.24.11 Enhancements

Model	Option	Description
E6640A	COMMON	Added support to allow system to startup and continue to work with one or more failed M1740A radio heads.
E6640A	Y9065EM1E Sequence Analyzer	Added the support for 5GNR mode SCPIs under CCARrier node in sequence mode. Added the support of amplitude correction for port RRH2 RFHD1 2.

Software E.24.11 Issues Resolved

Model	Option	Description
E6640A	COMMON	Added more handlings for the mmW Up/Down Conversion exceptions. Fixed the EXM bootup failure due to E7770A and M1740A communication issue. Fixed the issue that Amplitude correction works incorrectly when changing correction direction from output to input. Fixed the issue that the max source Frequency is limited to 3.6GHz for the HW option 504.
E6640A	Y9085EM0E 5GNR measurement Application	Fixed the synchronization issue when the RB length is small. Fix the issue that 5GNR EVM measurement does not work stably.

E6640A	Y9065EM1E Sequence Analyzer	Fixed the occasional measurement test speed slowdown issue in sequence analyzer.
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Software version E.24.08

Released Date:	26 August 2019
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.24.08_Self-extractor_x64.exe

Software E.24.08 Enhancements

Model	Option	Description
E6640A	COMMON	Updated TrxConfigurator utility to support CIU connection. Added the support for multiple heads which are connected to a single TRX module. Added ARB sequence file with 100 segments using SCPI command.
E6640A	Y9085EM0E 5G NR measurement Application	Improved DFT-s demodulation algorithm.
E6640A	Y9085EM1E 5G NR PAVT	Support PAVT measurement in 5G NR measurement application.

Software E.24.08 Issues Resolved

Model	Option	Description
E6640A	COMMON	Fixed the TrxUpgrade utility cannot get host id issue.
E6640A	Y9085EM0E 5G NR measurement Application	Fixed DMRS additional position coupling issue. Fixed 5G NR In-band emission and spectral flatness not working issue. Fixed the Spectral flatness limit issue. Fixed the Phase Compensation issue, the compensated frequency is incorrect when there is frequency offset.
E6640A	Y9065EM1E Sequence Analyzer	Fixed the issue that In-band Emission for low UE power case is not valid. Fixed the issue that auto detection does not work sometimes. Fixed the issue that UL frame summary results cannot be queried by group name. Fixed the issue that spectrum flatness cannot work in sequence mode when frequency is hopping.
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	Fixed WLAN EVM issue that Fast Channel Calibration Power result always returns -999.0 even with N7699A-D24. Fixed the issue that Channel Power per RU value should be compensated with path loss.

Software version E.24.05

Released Date:	16 July 2019
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.24.05_Self-extractor_x64.exe

Hardware E.24.05 Enhancements

Model	Option	Description
E6640A		Added automatic detection for E7770A (CIU) and M1740A (RRH). Improved the bootup speed when RRH is connected. Added bootup logs for CIU and RRH.

Software E.24.05 Enhancements

Model	Option	Description
E6640A	Y9072EM0E CDMA2000 Measurement Application	Added Multi-Touch UI support for CDMA2000 measurements (Remote Control Only).
E6640A	Y9076EM0E 1xEV-DO Measurement Application	Added Multi-Touch UI support for 1xEV-DO measurements (Remote Control Only).
E6640A	Y9079EM0E TD-SCDMA/HSPA Measurement Application	Added Multi-Touch UI support for TD-SCDMA/HSPA measurements (Remote Control Only).

E6640A	Y9081EM0E Bluetooth Measurement Application	Added Multi-Touch UI support for Bluetooth measurements. Added new result of initial frequency drift rate. Added new limit settings.
E6640A	Y9065EM1E Sequence Analyzer	Added 5GNR Spectral Flatness results in list sequencer. Added 5GNR In-band Emission results in list sequencer. Added UL Frame Summary results in Modulation Analysis measurement.

E6640A	Y9085EM0E 5GNR measurement Application	Added Spectral Flatness in Modulation Analysis measurement. Added In-band Emission in Modulation Analysis measurement. Added UL Frame Summary results in Modulation Analysis measurement.
E6640A	Y9080EM4E LTE V2X measurement Application	Added V2X measurement support.
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	Added decoded bits for 802.11 a/b/ac/ax. Added standard selection for 802.11b CCK EVM. Added preamble puncturing for 802.11ax. Added IQ data recording and playback.

Software E.24.05 Issues Resolved

Model	Option	Description
E6640A	Y9081EM0E Bluetooth Measurement Application	Fixed the incorrect BLE max drift rate.

Software version E.22.07

Released Date:	14 May 2019
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.22.07_Self-extractor_x64.exe

Software E. 22.07 Enhancements

Model	Option	Description
E6640A	COMMON	Added DUT IF property in TRX configurator utility.

Software E.22.07 Issues Resolved

Model	Option	Description
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E6640A	COMMON	Fixed the Infrequent EXM lockup issue. Fixed the issue that delete all corrections cost ~8 seconds which is too long.
E6640A	Y9081EM0E Bluetooth Measurement Application	Fixed the incorrect BLE max drift rate.
E6640A	Y9065EM1E Sequence Analyzer	Fix the issue that Amplitude Correction doesn't take effect for 5GNR in Sequence analyzer.

Software version E.22.05

Released Date:	18 March 2019
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.22.05_Self-extractor_x64.exe

Hardware E.22.05 Enhancements

Model	Option	Description
E6640A		Added TDD-LTE band 48 and band 49 support
E6640A		Add support for E7770A common interface unit and the M1740A remote radio head. This is for mmWave 5GNR Frequency Ranges,

		with option 5B1,5B5 and 5B6
E6640A	E6640A-5B1	Added new hardware option for Frequency Range, 24.25 to 29.5 GHz
E6640A	E6640A-5B5	Added new hardware option for Frequency Range, 37 to 40 GHz
E6640A	E6640A-5B6	Added new hardware option for Frequency Range, 40 to 43.5 GHz

Software E.22.05 Enhancements

Model	Option	Description
E6640A	Y9071EM0E GSM Measurement Application	Added Multi-Touch UI support for GSM/EDGE/Evo measurements.
E6640A	Y9073EM0E WCDMA Measurement Application	Added Multi-Touch UI support for WCDMA/HSPA/HSPA+ measurements.
E6640A	Y9080EM0E LTE-FDD Measurement Application	Added Multi-Touch UI support for LTE/LTE-Advanced FDD measurements.
E6640A	Y9080EM3E NB-IoT and eMTC Measurement Application	Added Multi-Touch UI support for NB-IoT and eMTC measurements.
E6640A	Y9082EM0E LTE-TDD Measurement Application	Added Multi-Touch UI support for LTE/LTE-Advanced TDD measurements.

E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	Added Multi-Touch UI support for WLAN 802.11 a/b/g/n/ac/ax measurements. Added new 802.11b EVM results for 3 standards - standard 1999/2007/2016.
E6640A	Y9065EM1E Sequence Analyzer	Added TDD-LTE band 48 and band49 support.

Software E.22.05 Issues Resolved

Model	Option	Description
E6640A	Y9065EM1E Sequence Analyzer	Fixed the 5GNR EVM demodulation error in Sequence.
E6640A	Y9085EM0E 5GNR Measurement Application	Fixed the issue that SEM integration bandwidth is clipped incorrectly. Fixed the EVM display issue when average number is 1. Fixed OBW Center Frequency issue while changing RF input port.
E6640A	Y9077EM0E/Y9077EM1E WLAN Measurement Application	Fixed display frozen issue when demodulation is failure in MIMO measurement.

Software version E.21.13

Released Date:	15 January 2019
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 4.6.1 Keysight IO libraries 18.1.2
File Name:	XSA_Installer_E.21.13_Self-extractor_x64.exe

Hardware E.21.13 Enhancements

Model	Option	Description
E6640A	E6640A-5B0	Added new hardware option for Frequency Range, 380 MHz to 6 GHz with 5G NR bands

Software E.21.13 Enhancements

Model	Option	Description
E6640A		Added Multi-Touch UI support on EXM platform. Added new feature to support 5G NR downlink (Sub 6GHz). Added “Source Trigger out” parameter into Source synchronization list.
E6640A	V9060EM0E IQ Analyzer	Added Multi-Touch UI support for IQ Analyzer mode.
E6640A	Y9085EM0E 5G NR Measurement	Added new mode to support 5G NR (Sub 6GHz) measurements.

	Application	
E6640A	Y9065EM0E/ Y9065EM1E Sequence Analyzer	Added Multi-Touch UI support for Sequence Analyzer mode. Added new feature to support 5G NR measurements in sequence. Added new parameter for basic EVM measurement.
E6640A	Y9077B WLAN	Added new feature to support Matrix 3D parameter for 802.11ac. Added new feature to support Auto Detection in WLAN MIMO

Software E.21.13 Issues Resolved

Model	Option	Description
E6640A		Fixed the issue that RMS value is wrong when playing waveform sequence.
E6640A	Y9065EM1E Sequence Analyzer	Fixed the issue that ORFS measurement reports incorrect errors when analysis offset is 0.099ms. Fixed the issue that Power Rms/Min/Max in WLAN EVM sequence didn't compensate the Amplitude correction. Fixed the issue that Data rate result is not reported in of 802.11n 20MHz EVM measurement
E6640A	Y9077B WLAN	Fixed the date rate issue in 802.11n MIMO results.

E6640A	Y9081B Bluetooth	Fixed the crash of TX Analysis measurement when searching the burst. Fixed the Symbol rate issue when radio standard is LE and LE Phy is 2M.
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Software version E.19.72

Released Date:	8 March 2018
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 .Netframework 4.6.1 Keysight IO libraries 17.2
File Name:	XSA_Installer_E.19.72_Self-extractor_x64.exe

Software E.19.72 Enhancements

Model	Option	Description
E6640A	Y9077B WLAN	Added new SCPI to query Burst Info results.

Software E.19.72 Issues Resolved

Model	Option	Description
E6640A		Fixed the installation issue that Active Resource Manager and Default Trigger Manager of PXI system are not properly configured in chassis with older PXIe controller installed.

E6640A	Y9077B WLAN	Fixed an issue that when STBC is on, the data rate per user is not correct.
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Software version E.19.71

Released Date:	1 February 2018
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 4.6.1 Keysight IO libraries 17.2
File Name:	XSA_Installer_E.19.71_Self-extractor_x64.exe

Software E.19.71 Enhancements

Model	Option	Description
E6640A		Add support for new Keysight M9300A Reference Module with Micron Flash Memory MNID serial number is 1E5743xxxx and greater
E6640A	Y9077B WLAN	Added new results of Unused Tone Error. Added multi-user information for 802.11ac.

Software E.19.71 Issues Resolved

Model	Option	Description
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E6640A	Y9077B WLAN	<p>Fixed an issue that MIMO EVM was crash in some corner cases, when trigger delay was positive.</p> <p>Fixed a defect that results were not updated in 802.11 af 6MHz ACLR measurement.</p> <p>Fixed a display issue that some results were not disabled in channel matrix view.</p>
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Software version E.19.55

Released Date:	13 December 2017
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 4.6.1 Keysight IO libraries 17.2
File Name:	XSA_Installer_E.19.55_Self-extractor_x64.exe

Software E.19.55 Enhancements

Model	Option	Description
E6640A		<p>Added new feature to support BAND71 in LTE-FDD</p> <p>Extended Correction table count to 64.</p>
E6640A	Y9077B WLAN	<p>Added new feature to support auto-detection.</p> <p>Added new result CPE degree result in 802.11ac and 802.11ax</p> <p>Added new result time offset for MIMO in 802.11ac and 802.11ax</p> <p>Added new results PE duration in 802.11ax.</p> <p>Added L-SIG info in burst information view of 802.11ax</p>

E6640A	Y9080B LTE FDD /LTE-Adv FDD	Added NPRACH demodulation in NB-IoT. Added NPRACH transmit On Off support in NB-IoT. Added MPDCCH demodulation in eMTC
E6640A	Y9065B Sequence Analyzer	Added new feature to support WLAN 11ax. Supported new BAND71 of LTE FDD

Software E.19.55 Issues Resolved

Model	Option	Description
E6640A		Fixed the crash of TRxUpdate Utility. Fixed the incorrect SN in TRxUpdate Utility Added IF Alignment key back in Alignment menu.
E6640A	Y9080B LTE FDD /LTE-Adv FDD	Fixed a crash when only Y9080B-3FP is installed. Fixed an auto-detection issue in NB-IoT.
E6640A	Y9081B Bluetooth	Fixed a crash in Bluetooth transmit analysis measurement.
E6640A	Y9077B WLAN	Fixed the channel number mismatch issue in ACLR of 802.11af.

Software version E.19.31

Released Date:	14 June 2017
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 4.6.1 Keysight IO libraries 17.2
File Name:	XSA_Installer_E.19.31_Self-extractor_x64.exe

Software E.19.31 Enhancements

Model	Option	Description
E6640A		<p>Added new feature to support 8x8 MIMO ARB playing.</p> <p>Added new feature to support 4x4+4x4 MIMO ARB playing.</p> <p>Added new feature to support BAND 65, BAND 66, BAND 67 BAND 68, BAND 252 and BAND 255 for LTE-FDD ARB playing.</p> <p>Added new feature to support BAND 45, BAND 46 for LTE-TDD ARB playing</p>
E6640A	Y/V9077B WLAN	<p>Added new feature to support WLAN 11ax (Single user and Multiuser).</p> <p>Added new feature to support 8x8 MIMO measurements.</p> <p>Added new feature to support 4x4 + 4x4 MIMO measurements.</p> <p>Extended the span of combined SEM.</p>
E6640A	Y/V9081B Bluetooth	Added new feature to support BT5.0.
E6640A	Y/V9080B LTE FDD /LTE-Adv FDD	<p>Added new feature to support NB-IoT measurements.</p> <p>Added new feature to support eMTC measurements.</p>

		Added new feature to support 256QAM on uplink measurements.
E6640A	Y/V9082B LTE TDD /LTE-Adv TDD	Added new feature to support 256QAM on uplink measurements.
E6640A	Y/V9065B Sequence Analyzer	Added new feature to support WLAN 11ax. Supported new bands of LTE FDD and LTE-TDD.
E6640A		Added support for the M9018B chassis Update to use PXIe Chassis family driver software

Software E.19.31 Issues Resolved

Model	Option	Description
E6640A		Fixed an issue: software could not boot up correctly if the TRX1 through TRX4 files were missing from the instrument folder.
E6640A	Y9065B Sequence Analyzer	Fixed these issues: WLAN SEM limits could not be set correctly. SEQAN sometimes crashed when running very long sequences with multiple measurements on each step.

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 .Netframework 4.5.2 Keysight IO libraries 17.2

File Name:

XSA_Installer_E.17.07_Self-extractor_x64.exe

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 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):	Core™ i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframework 4.5.1 Keysight IO libraries 16.3
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	<p>Add “Auto Detect” selection in WLAN MIMO EVM “Matrix Type” setting.</p> <p>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.</p> <p>Newly added port allocations for 3x3 are as follows: TRX2 serves as master, TRX3 serves as slave1 and TRX4 serves as slave2.</p>

Software E.16.09 Issues Resolved

Model	Option	Description
E6640A		<p>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.</p> <p>Fix a defect: remove inappropriate “Hardware Missing” error message when changing “Sync Settings” state in source sync control.</p>
E6640A	V/Y9077B WLAN	<p>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.</p> <p>Fix a defect: data rate result always returned NaN for 2x2 80+80 WLAN MIMO EVM measurement.</p>
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):	Core™ i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframework 4.5 Keysight IO libraries 16.3
File Name:	XSA_Installer_E.16.08_Self-extractor_x64.exe

Software E.16.08 Enhancements

Model	Option	Description
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E6640A	V/Y9081B Bluetooth	Added new test results for Delta F1F0 and Max Frequency offset for Bluetooth LE measurement according to standard
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Software E.16.08 Issues Resolved

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

	/LTE-Adv FDD	
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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):	Core™ 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	<p>Fixed an application crash when Basic IQ is queried in an unsupported mode</p> <p>Fixed a defect: correct help link of WCDMA Band 19 and LTE Band 30</p> <p>Fixed a defect: added WLAN EVM “Track Timing” in Sequence Analyzer</p> <p>Fixed a defect: LTE EVM reports error in Sequence mode when signal has large IQ offsets</p>
E6640A	V/Y9077B WLAN	<p>Fixed a defect: EXM WLAN supports negative Gate Delay</p> <p>Fixed a defect: WLAN FFT SEM Detector should be Average</p>
E6650A	V/Y9081B Bluetooth	<p>Fixed a defect: Sometimes, Bluetooth results were NaN.</p> <p>Fixed a defect: Bluetooth LE Trigger Hold off Type sometimes cannot be adjusted correctly.</p> <p>Fixed a defect: BER is not zero when frequency offset is big.</p>

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):	Core™ i7-4700EQ quad-core, 2.4 GHz processor Windows Embedded Standard 7 (WES7) 32-bit or 64-bit Operating System
Requirements category (other):	Microsoft .Netframework 4.5
File Name:	XSA_Installer_E.15.07_Self-extractor_x64.exe

Software E.15.07 Enhancements

Model	Option	Description
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E6640A		<p>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.)</p> <p>Introduced “Y” license for several applications (for example, the V9077B WLAN app is also available as Y9077B). The “Y” version supports unlimited waveform playback.</p> <p>Added new feature to support LTE Band30.</p> <p>Added a trigger polarity to the source external trigger.</p>
E6640A	V/Y9077B WLAN	<p>Added new feature to support 1024QAM for 802.11ac.</p> <p>Added new feature to support 802.11p and 802.11j.</p> <p>Added new feature to support WLAN 2x2 80+80MHz.</p> <p>Added new SCPI command for “Frequency Sync” to improve EVM results. [:SENSe]:EVM:FREQuency:SYNC PPILot PPData PREamble</p> <p>Added new softkey “User Select Field” for EVM.</p> <p>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></p>
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.
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Software E.15.07 Issues Resolved

Model	Option	Description
E6640A		Fixed a defect: External trigger level range is not correct. Fixed a defect: Source sync operation occasionally causes inconsistency 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		<p>Added a new feature to support “External Trigger Delay” for source input trigger.</p> <p>Added a new feature in downlink MIMO: the source setting changes can be automatically applied to the other TRXs.</p>
E6640A	V9077B WLAN	<p>Added Spectrum Emission Mask in MIMO EVM measurement.</p> <p>Enhanced and optimized user-interface display for 4x4 MIMO EVM measurement.</p>
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		<p>Fixed a defect: LAN ports 1 and 2 the IP addresses incorrectly reported in system display.</p> <p>Fixed a defect: Source sequence initialization occasionally causes operation time-out.</p> <p>Fixed a defect: Source sync operation occasionally times out.</p> <p>Fixed a defect: TRX Configurator launch failed occasionally. Must refresh connection with IO libraries.</p> <p>Fixed a defect: Intermittent “Source Synthesizer Unlocked – DETECTED” errors when executing a source list sequence.</p>
E6640A	V9065B Sequence Analyzer	<p>Fixed a defect: Sequence file cannot be recalled occasionally.</p> <p>Fixed a defect: Bluetooth result displayed incorrectly.</p> <p>Fixed a defect: Intermittent timeout errors during sequence execution or when fetching sequence results.</p>

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

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):	Core™ 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		<p>Adds the capability for Source List to play continuously.</p> <p>IQ points are shown in source arb memory in user interface view.</p> <p>Adds a new SCPI command to query if a specific waveform is available in ARB memory.</p> <p>Adds WCDMA Band19 to the internal source</p>
E6640A	V9077B WLAN	<p>Adds Spectral Flatness trace and Data Rate for MIMO WLAN EVM measurement.</p> <p>Adds a new WLAN EVM parameter [:SENSe]:EVM:USElect SU MU SIG.</p> <p>EVM results are improved by optimizing the algorithm and providing more parameter options.</p>
E6640A	V9065B Sequence Analyzer	<p>Adds Data Rate, Average Burst Power, and Peak Burst Power to List Sequence WLAN measurement.</p> <p>Adds WCDMA Band19.</p>

Software E.14.44 Issues Resolved

Model	Option	Description
E6640A		<p>Fixed a defect: internal source could not correctly play ARB waveforms with all zero samples.</p> <p>Fixed a defect: internal source couldn't play correctly play ARB waveforms with bursts having different power levels.</p> <p>Fixed a defect: multi-pack license operations should only be allowed on the default TRX.</p> <p>Fixed a defect: Range and Trigger Level didn't include Amplitude Correction at the first run after being changed.</p> <p>Fixed a defect: multi-pack license needed to be unlocked occasionally due to a slower startup of common services.</p> <p>Fixed a spurious "Source Synthesizer Unlock" event that was</p>

		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):	Core™ 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.
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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):	Core™ 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		<p>Adds support for fully independent Source and Analyzer</p> <p>Adds auto adjustment to Gate View Sweep Time value on EXM.</p> <p>SCPI command has been added for Cal Date query</p> <p>Controller information added in show hardware screen</p> <p>Continuous Abort is supported as a new source list step playing mode.</p> <p>Adds support for V9075B WiMax</p> <p>Adds support for V9064B PHS</p>

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

		<p>first run.</p> <p>Fixed a defect - MIMO EVM failure because of unsynchronized single capture</p> <p>Fixed a defect - FETCh:EVMMO? - should return raw IQ values for channel one channel, not all channels.</p> <p>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</p> <p>Fixed a defect - When MIMO Type is 2x2, the IQ Polar view does not show the Peak/Avg. Burst Power</p>
E6640A	V9081B	<p>Fixed a defect - Invalid Gate View Zero Span BW for Bluetooth ACP measurement.</p> <p>Fixed a defect – with results of DPSK Avg. Pwr and Rel Avg. Pwr for EDR 3DH5 multiple packet</p>
E6640A	V9065B Sequence Analyzer	<p>Fixed a defect – Setting conflict not reported when measurement step exceeds the limitation for a sequence with only Basic Transmit Power.</p> <p>Fixed a defect – Random Phase Error result variation in LTE EVM measurement.</p> <p>Fixed a defect - Inaccurate DPE estimation will lead to the large frequency error if there is only one RB.</p> <p>Fixed a defect - Bluetooth sequence may crash while switching signal format between LE and EDR</p>

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):	Core™ 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):	Core™ 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
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E6640A		<p>Fixed a defect – Running alignments or self-tests could result in accidental over-writing of arbitrary waveform data already loaded into waveform memory.</p> <p>Fixed a defect – “Align All” was improperly adding amplitude correction factors to internal alignment data.</p> <p>Fixed a defect – At times the Source user interface became unresponsive when configuring a new waveform while another waveform was playing.</p>
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):	Core™ 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_Self-extractor_x64.exe

Initial Release for E6640A, Keysight EXM Wireless Test Set

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