

Keysight M90XA X-Series Measurement Applications for Modular Instruments

[View](#) the revision history document for versions prior to 3.0

Software Details

Keysight recommends that you keep your system up to date by installing the most recent software version. Only the most current version, along with update instructions, is accessible via the web and can be downloaded from www.keysight.com/find/M90XA-SW.

To see the version that is currently installed on your system, open Control Panel and find M90XA under installed programs. You can find versions of installed components as follows:

- M9391A and M9393A drivers: Control Panel, Installed Programs
- XSA: Run M90XA. Send the SCPI query *IDN? or from the GUI, select Utilities > System > Show > System and look for the Instrument S/W Revision entry on the display.

Keysight M90XA X-Series Measurement Applications for Modular Instruments

24.0 Version Information

Released Date:	July 2019
Requirements category (e.g., operating system):	Microsoft Windows® 7 Professional, Enterprise, or Ultimate (64-bit) Microsoft Windows® 10 Professional, Enterprise (64-bit)
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.24.50
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

- Updated all X-Series measurement applications to version 24.50.

Issues Resolved

For more detailed and latest information, refer to the latest M90XA Revision History at www.keysight.com/upload/cmc_upload/All/M90XA_RevisionHistory.pdf.

23.0 Version Information

Released Date:	April 2019
Requirements category (e.g., operating system):	Microsoft Windows® 7 Professional, Enterprise, or Ultimate (64-bit) Microsoft Windows® 10 Professional, Enterprise (64-bit)
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.23.00
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

Added support for the following measurement applications:

- N9072EM0E - CDMA2000 Measurement Application (Remote Control Only)
- N9076EM0E - CDMA 1xEV-DO Measurement Application (Remote Control Only)
- N9079EM0E - TD-SCDMA Measurement Application (Remote Control Only)

N9085EM0E - 5G NR Measurement Application

- IQ recording/playback
- PBCH/PDSCH/PUSCH decoding
- CSI-RS demod
- SCP recall
- PRACH
- TAE: DL/UL TAE across multiple CCs
- Further config CC dialog for Max RB setting
- Mod Analysis enh: UI/menu: Support Meas Offset/Interval with Symbol unit
- Mod Analysis enh: Apply "Preset-to-Standard" (mainly CC config)
- Mod Analysis enh: UI/menu: Further enhance to resource map GUI
- Mod Analysis enh: UL Spectral Flatness trace/result
- Mod Analysis enh: UL PUCCH decode
- Mod Analysis enh: DL PDCCH decode

- FR2 OTA: EIRP and TRP averaging scheme support
- Support 3GPP 2018-06 version: ACLR, SEM Mask preset
- Mode/Power/Spectrum meas.: FR2 OTA: EIRP and TRP averaging scheme support: tier2: Tx On/Off power
- Mode/Power/Spectrum meas.: FR2 OTA: EIRP and TRP averaging scheme support: tier2: SEM
- PvT Algorithm Enhancements

N9054EM0E - Flexible Digital Demodulation Application, VMA

- Fixed Equalization recall feature support
- Flexible frame structure support

N9080EM0D/E - LTE-Advanced FDD Measurement Application & N9082EM0D/E - LTE TDD Measurement Application

- R15 1024Q decode, E-TM2b/3.1b
- UL Virtual Cell ID demod
- NB-IoT follow-on: DL NPDSCH decoding

N9077EM1D/E - WLAN 802.11ac/ax Measurement Application

- WLAN 11ax V2.2 enhancements
- Support 11b CCK EVM based on different standard versions

For more detailed and latest information, refer to the latest M90XA Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-23.07.pdf.

7.0 Version Information

Released Date:	July 2018
Requirements category (e.g., operating system):	Microsoft Windows® 7 Professional, Enterprise, or Ultimate (64-bit) Microsoft Windows® 10 Professional, Enterprise (64-bit)
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.21.00

Requirements category (other):

Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

Added support for the following measurement application:

- N9085EM0E - 5G NR measurement Application

Issues Resolved

Issues fixed in X-Series measurement applications are described in the X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

6.0 Version Information

Released Date:	April 2018
Requirements category (e.g., operating system):	Microsoft Windows® 7 Professional, Enterprise, or Ultimate (64-bit) Microsoft Windows® 10 Professional, Enterprise (64-bit)
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.20.10
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

- Added support for Windows 10 operating system
- First release supports the following new, traditional UI X-Series measurement application models:
 - N9063EM0D - Analog Demodulation Measurement Application
 - N9064EM0D - Vector Signal Analysis Measurement Application, VXA
 - N9068EM0D - Phase Noise Measurement Application
 - N9069EM0D - Noise Figure Measurement Application
 - N9071EM0D - GSM/EDGE Measurement Application
 - N9072EM0D - CDMA2000 Measurement Application
 - N9073EM0D - W-CDMA Measurement Application
 - N9076EM0D - CDMA 1xEV-DO Measurement Application
 - N9077EM0D - WLAN 802.11 Measurement Application
 - N9077EM1D - WLAN 802.11ac/ax Measurement Application
 - N9079EM0D - TD-SCDMA Measurement Application
 - N9080EM0D - LTE-Advanced FDD Measurement Application
 - N9081EM0D - Bluetooth® Measurement Application
 - N9082EM0D - LTE TDD Measurement Application

Added support for the following new, multi-touch UI X-Series measurement applications:

- N9054EM0E - Flexible Digital Demodulation Application, VMA
- N9054EM1E - Custom OFDM Measurement Application, VMA

- N9063EM0E - Analog Demodulation Measurement Application
- N9068EM0E - Phase Noise Measurement Application
- N9069EM0E - Noise Figure Measurement Application
- N9071EM0E - GSM/EDGE Measurement Application
- N9073EM0E - W-CDMA Measurement Application
- N9077EM0E - WLAN 802.11 Measurement Application
- N9077EM1E - WLAN 802.11ac/ax Measurement Application
- N9080EM0E - LTE-Advanced FDD Measurement Application
- N9080EM3E - NB-IoT and eMTC Measurements Application
- N9081EM0E - Bluetooth® Measurement Application
- N9082EM0E - LTE TDD Measurement Application

Added support for the following measurement applications:

- N9054EM0E - Flexible Digital Demodulation Application, VMA
- N9054EM1E - Custom OFDM Measurement Application, VMA
- N9080EM3E - NB-IoT and eMTC Measurements Application

N9077EM0E - WLAN Measurement Application

- L-SIG symbol (4-bit rate & 12-bit length) support to Single Info trace
- CPE degree result in IQ polar numeric result trace
- Packet Extension duration into SIG-A window in Burst Info view

Issues Resolved

Issues fixed in X-Series measurement applications are described in the X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

5.0 Version Information

Released Date:	March 2017
Requirements category (e.g., operating system):	Microsoft Windows® 7
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.19.00

Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2
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New Features and Enhancements

N9077A - WLAN Measurement Application

- Added multi-carrier filter to 802.11n and 802.11ac standards

Issues Resolved

Issues fixed in X-Series measurement applications are described in the X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

4.0 Version Information

Released Date:	September 2016
Requirements category (e.g., operating system):	Microsoft Windows® 7
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver (9KHz to 27GHz): 2.0.225.1 or higher Recommended M9393A driver (3.6GHz to 50GHz): 2.1.875.1 or higher XSA version: M.18.00
Requirements category (other):	Recommended Microsoft .NET Framework: 4.5.2

New Features and Enhancements

N9064A - VXA Vector Signal Analysis Measurement Application

- Updated the input ranging information for the VSA algorithm

N9068A - Phase Noise Measurement Application

- Added Spur Table, where the readout is dBc instead of dBc/Hz, in the Log Plot measurement

N9080B - LTE/LTE-Advanced FDD Measurement Application

- Added the ability to recall E-TM preset files in Tx On/Off Power measurement
- Added support for nine windows in EVM user view

N9082B - LTE/LTE-Advanced TDD Measurement Application

- Added the ability to recall E-TM preset files in Tx On/Off Power measurement
- Added support for nine windows in EVM user view
- Occupied Bandwidth:
 - Added "Trace" selection in the Save menu
- Spurious Emissions:
 - Added annotation for start/stop frequencies when the range is in FFT mode

Issues Resolved

Issues fixed in X-Series measurement applications are described in the X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

3.1 Version Information

Released Date:	January 2016
Requirements category (e.g., operating system):	Microsoft Windows® 7
Requirements category (e.g., instrument software version):	Recommended M9391A driver: 2.1.230.1 or higher Recommended M9393A driver: 2.0.219.1 or higher XSA version: M.17.00
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

- Updated all X-Series measurement applications to version 17.0.

M9069A - Noise Figure Measurement Application

- Multiple data views: Graph, Meter and Table
- Added support for DUT types including amplifier, downconverter, upconverter, and multi-stage converter
- Added support for traditional 346x Series Noise Sources (requires USB Adapter)
- Added support for external source control using LAN, USB and GPIB

M9068A - Phase Noise Measurement Application

- Added Minimum Carrier Level setting - Requires M9068A-BTP
- Log Plot Measurement:
 - Added support for Gate functionality - Requires M9068A-BTP
- Added support for 4801 trace points per sweep (601 default) - Requires M9068A-BTP
- Added the ability to Export the Marker Table data - Requires M9068A-BTP

M9071A - GSM/EDGE/Evo Measurement Application

- Added support for multi-carrier test line exception (non-contiguous) - Requires M9071A-BTP

M9064A - VXA Vector Signal Analysis Measurement Application

- Added support for APCO P25 in analog demodulation measurement

M9077A - WLAN 802.11 a/b/g/n/ac/ah Measurement Application

- Added M9077A-6TP that adds power and modulation analysis support for WLAN 11ah
- Added preset for 11p and 11j into radio format
- Added support for 1024QAM modulation analysis in WLAN 11ac

M9079A - TD-SCDMA/HSPA Measurement Application

- Added support for E-DCH Fixed reference channel configuration - Requires M9079A-CTP

M9080B- LTE/LTE-Advanced FDD Measurement Application

- Modulation analysis and conformance EVM updates
- Simultaneous acquisition of up to 5 component carriers
- Auto detection of DL CA carrier cross scheduling
- UE in band emissions for carrier aggregation
- Spectrum Emission Mask (SEM) updates for Non-contiguous carrier aggregation
- ACLR for Non-Contiguous CA
- Inner and outer offset measurements in one measurement sequence
- Inner-offset CACLR On/Off Auto setup based on Carrier Configuration
- Occupied bandwidth updates
- Mode setup updates
- Added Span softkeys in Channel Power measurement

M9082B- LTE/LTE-Advanced TDD Measurement Application

- Modulation analysis and conformance EVM updates
- Simultaneous acquisition of up to 5 component carriers
- Auto detection of DL CA carrier cross scheduling
- UE in band emissions for carrier aggregation
- Spectrum Emission Mask (SEM) updates for Non-contiguous carrier aggregation
- ACLR for Non-Contiguous CA
- Inner and outer offset measurements in one measurement sequence

- Inner-offset CA CLR On/Off Auto setup based on Carrier Configuration
- Occupied bandwidth updates
- Mode setup updates
- Added Span softkeys in Channel Power measurement

M9081A - Bluetooth Measurement Application

- Added support to Bluetooth 4.2 for LE data packet length extension, requires M9081A-BTP

Issues Resolved

Issues fixed in X-Series measurement applications are described in the X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

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