Release Notes

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 TECHNOLOGIES

Keysight M90XA X-Series Measurement Applications for Modular Instruments

35.0 Version Information

Release Date:	April 2023
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.35.00~~
Requirements category (other):	Recommended Microsoft .NET Framework : 4.8

New Features and Enhancements

- Updated all X-Series measurement applications to version 35.00.

Issues Resolved

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

32.0 Version Information

Release Date:	December 2021
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.32.00

Requirements category (other):	Recommended Microsoft .NET Framework : 4.8

New Features and Enhancements

- Updated all X-Series measurement applications to version 32.00.

Issues Resolved

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

28.0 Version Information

Release Date:	December 2020
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.28.00
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

N9085EM0E - 5G NR Measurement Application

- PRACH 5GNR Auto Detect Internal Parameters: Cyclic Shift Index, Root Sequence Index and Occasion Index
- Modulation Analysis Enhancements: Slot Summary Table
- Modulation Analysis Enhancements: Select frame # when recalling .scp file with Multi-frame Configurations
- Modulation Analysis Enhancements: Tx DC Offset Location "Auto" Mode Support
- Modulation Analysis Enhancements: NR-TM1.1 for TxAnt1 (port 1001) Preset Support
- Modulation Analysis Enhancements: Support 3x4 or 4x3 view (up to 16 Trace Windows)

- Modulation Analysis Enhancements: Support RMS Demodulation Power vs Time and Demodulation Power vs Spectrum Traces
- Updated Sgen Recall for M9383B/M9384B Instrument
- Multi-Measurement in Modulation Analysis: OBW Support
- Multi-Measurement in Modulation Analysis: SEM Support
- Multi-Measurement in Modulation Analysis: ACP Support
- Modulation Analysis Enhancements: Support Dynamic Spectrum Sharing (DSS) with LTE carrier
- New 1024 QAM Demodulation in Manual Mode
- Tx On/Off Power Trace/Display Graphical Annotations Support
- Power vs Time: Added UL On Power Reference and Tol Limit Settings
- Measurement Preset Follow-on: FR2 UL Channel Type for Power vs Time

Preset

- Measurement Preset Follow-on: UE Power Class for UL ACP Preset
- Measurement Preset Follow-on: Adjusted Limit Mask for Frequency Range for ACP/SEM/PvT Preset
- Measurement Preset Follow-on: Updated Limits Based on TS38.141/521 v.2019-12
- Measurement Preset Follow-on: Apply Presets to Spur Emissions
- Measurement Preset Follow-on: Added FR1 BS Type 1-O for ACP/SEM/PvT Preset
- OTA Averaging across Multiple Measurements Follow-on: Added Power vs Time feature
- Updated RB Allocation Preset to add new NR-TM Selections (3GPP TS38.141- 1/2 v.2020-03 and 06)

N9054EM0E VMA Flexible Digital Demodulation Application

- Digital Demodulation: Support IQ Symbol Group Delay vs Time Trace
- Digital Demodulation: Support Wi-SUN MR-OQPSK Presets
- Support Additional Custom IQ Parameters to align with N7608C Application N9080EM4E - LTE V2X Measurement Application
- CEVM Copy from EVM
- Preset to Standard View
- PSSCH Decoding Support
- Tx On/Off Power: Added SCPI command to return Pass/Fail for each Measured Metric
- Power Vs Time: Added UL On Power Reference and Tol Limit Settings N9080EM3E - NB-IoT/eMTC Measurement Application
- NB-IoT Follow-on: Support NPDCCH Decoding

N9080EM0E - LTE-Advanced FDD Measurement Application & N9082EM0E - LTE TDD Measurement Application

- Support PDSCH decoding when RB Auto-Detect Mode = Power Based

Issues Resolved

For more detailed and latest information, refer to the latest X-Series Revision History at https://www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-27_07.pdf.

26.0 Version Information

Release Date:	May 2020
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.26.00
Requirements category (other):	Recommended Microsoft .NET Framework : 4.5.2

New Features and Enhancements

N9085EM0E - 5G NR Measurement Application

- Display Speed Optimization with Open GL
- Modulation Analysis Enhancements: UI/menu: Each PHY Channel Include/Exclude
- Modulation Analysis Enhancements: UL PRACH Demodulation Support Multiple Bursts
- Modulation Analysis Enhancements: Preset Update and EVM Calculation Algorithm Annexure F Update in TS38.141-1/2 v.2019-06TAE: DL/UL TAE across Multiple CCs
- Preset-to-Standard Enhancements for XA25
- ACLR/SEM Speed Enhancement for XA25
- Support USB Preamp
- Mag Error and Phase Error Reporting
- Hardware Platform Support: UXA Hyrax pt2
- More IQ Impairment Results: Timing Skew, Gain Imbalance, Quad Error
- Uplink EVM: TS38.521 v.2019-06 Added IQ Offset location Setting in Frequency Domain
- Modulation Scheme Manual Setting
- Modulation Analysis Enhancement: Support DL Initial BWP
- Modulation Analysis Enhancement: UL SRS Demodulation

- Modulation Analysis Enhancement.: DL Auto detection: DCI decoding
- Modulation Analysis Enhancement: UL PUSCH & PUCCH Demodulation Excluding SRS Symbol(s)
- ACP, SEM, PvT FR2 Test Limit Update Based on TS38.141-1/2 & TS38.521-1/2 v.2019-09(/12)
- Change 'Meas Standard' Menu to Dialog Menu
- Preset-to-Standard Enhancements for XA26
- Support U7227/U7228 Series USB Smart Preamps
- OTA Averaging Across Multiple Measurements: for example, ACP+OBW+SEM
- ACP to Support Power Reference = "Min Power Carrier"

N9054EM0E VMA Flexible Digital Demodulation Application

- Eye Diagram Metrics in Digital Demodulation
- General Tx BER for Digital Demodulation
- Custom OFDM Enhancement: Support DRM Presets
- Digital Demodulation DVB-S2X Preset for 128/256 APSK
- Digital Demodulation OQPSK IQ Alignment for Constellation Display
- Digital Demodulation Custom IQ Constellation Save/Recall N9080EM4E - LTE V2X Measurement Application
- PSCCH Decoding Support
- Tx On/Off Power Preset-to-Standard for Side Link
- C-V2X EVM/CEVM: Manual Detection - Manual RB Mapping Setup
- C-V2X EVM/CEVM: PSCCH Decoding-Based PSSCH Map Auto Detection

N9080EM3E - NB-IoT/eMTC Measurement Application

- Support EUTRA Carrier Cell ID in In-Band Different PCI Mode N9077EM1D/E - WLAN Measurement Application
- A-MPDU Data Decoding with per-subframe CRC Check
- Correct CRC result for Inactive User (from "failure" to NAN")

- Support 80M+80M Decoding
- Spectrum Flatness Measurement: Evaluating Spectrum Flatness using Subcarrier Received Values
- Add Mean PSD to WLAN CHP
- 11ax EVM: Support Power over symbol trace
- 4096 QAM Demodulation
- Support H1G Spur Dodging in WLAN EVM
- Analysis of 11ax PPDU of NDP Feedback

11n/11ah: Support Common Pilot Error in EVM metrics

N9081EM0E Bluetooth Measurement Application

- Add initial frequency drift for BT 5.0
- BT5.1 Support - Detect CTE Field

N9068EM0D/E Phase Noise Measurement Application

- Add SSB vs DSB Annotation to Traces, Results, and Controls
- Allow SSB at the Lower Frequency Side from the CF for Securing Wider PN Measurement Span when CF is High at mmWave Range Power Suite
- Added M9393A and VXT2 Power Suite Support
- ACP: ACP Calculation by Selecting Trace, either 1, 2, or 3
- Spur Emissions: Support Max/Min Hold traces

Issues Resolved

For more detailed and latest information, refer to the latest X-Series Revision History at https://www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-27_07.pdf.

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24.0 Version Information

Release 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

N9085EM0E - 5G NR Measurement Application

- Support 3GPP 2018-12 Specification Version
- Preset to Standard Enhancement with NR-TM Support
- UL/DL Tx On/Off Time Mask: Support of 3GPP 2018-12
- New UE OBW Algorithm Aupport for Asymmetric Power Distribution Case
- TAE: DL/UL TAE across Multiple CCs
- M9384B/M9383B Configuration File Recall Function
- OSTP (OFDM Symbol Tx Power) Result in Error Summary
- UE In-Band Emission - 3 Numeric Results
- RSRP, RSRQ, RSSI results in BWP Summary
- UI/menu: Auto-Range Adjust for EVM Optimization
- DL NR-TM Preset Recall
- UL/DL Power-Based Auto RB Detection
- Resource Grid Tab (in Config CC menu) Duplication to Channel Profile Menu
- UL/UL MIMO (with Multi-Port) Demodulation - based on Multiple IQ Data Recall

- DL and UL TAE among Antennas with Mixed 1-port Input N9080EM4E - LTE V2X Measurement Application
- Cellular V2X (based on LTE-A FDD) with Touch UI only
- Mod Analysis (Demodulation and EVM for SideLink Channel)
- Conformance EVM

Power Suite without Preset Masks (CHP/OBW/ACLR/SEM)

- EVM/CEVM (PSCCH, PSBCH, PSDCHl, Full EVM traces)
- Transmit On/Off
- EVM/CEVM Enhancements (Add In-Band Emission and Spectrum Flatness)

N9080EM3E - NB-IoT/eMTC Measurement Application

- NB-IoT Non-anchor Carrier Demodulation

N9080EM0E - LTE-Advanced FDD Measurement Application & N9082EM0E - LTE TDD Measurement Application

- IQ data Capture/Playback

N9077EM1D - WLAN Measurement Application

- IQ Data Capture/Playback in WLAN
- Preamble Punctuation to make 11ax co-exist with Legacy WLAN Formats

N9081EM0E Bluetooth Measurement Application

- Add Coding Scheme Information in Metric Results
- IQ Data Capture/Playback

N9063EM0E Analog Demodulation Measurement Application

- PEP Result for AM DSB Signal
- IQ Data Capture/Playback

Issues Resolved

For more detailed and latest information, refer to the latest X-Series Revision History at https://www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win10_25.08.pdf.

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23.0 Version Information

Release 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 Demodulation
- SCP Recall
- PRACH
- TAE: DL/UL TAE across Multiple CCs
- Further config CC dialog for Max RB setting
- Mod Analysis Enhancement: UI/menu: Support Measurement Offset/Interval with Symbol Unit
- Mod Analysis Enhancement: Apply "Preset-to-Standard" (mainly CC Configuration)
- Mod Analysis Enhancement: UI/menu: Further Enhance to Resource Map GUI
- Mod Analysis Enhancement: UL Spectral Flatness Trace/Result
- Mod Analysis Enhancement: UL PUCCH Decode

Mod Analysis Enhancement: DL PDCCH Decode

- FR2 OTA: EIRP and TRP Averaging Scheme Support
- Support 3GPP 2018-06 version: ACLR, SEM Mask Preset
- Mode/Power/Spectrum Measurement: FR2 OTA: EIRP and TRP Averaging Scheme Support: Tier2: Tx On/Off power
- Mode/Power/Spectrum Measurement: 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 Demodulation
- 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 X-Series Revision History at https://www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-23.07.pdf.

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7.0 Version Information

Release 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 latest X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

6.0 Version Information

Release 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 Measurement 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 Measurement Application N9077EM0E - WLAN Measurement Application
- L-SIG symbol (4-bit rate and 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 latest X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

5.0 Version Information

Release 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

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 latest X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

4.0 Version Information

Release 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 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 latest X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf.

3.0 Version Information

Release 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 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 CACLR 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 latest X-Series Revision History at www.keysight.com/upload/cmc_upload/All/XSA_SWReleaseNotes-Win7.pdf. © Keysight Technologies 2013-2021