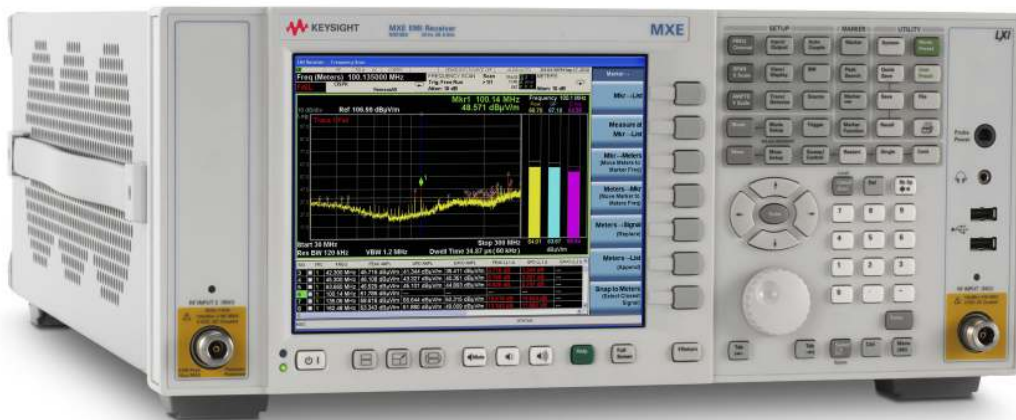


Keysight N9038A MXE EMI Receiver

Configuration Guide

The MXE configuration guide will help you determine which performance options, measurement applications, accessories, and services to include with your new MXE or to add as upgrades to an existing MXE.



Configure Your Keysight MXE EMI Receiver

This step-by-step process will help you configure your new MXE EMI receiver. Tailor the performance to meet your requirements. For detailed specifications, refer to the MXE specification guide (N9038-90010). For a summary of specifications, refer to the MXE EMI receiver data sheet (5990-7421EN).

Included in base product

Standard options and accessories come with the MXE base model at no additional charge and do not need to be ordered. They include:

- EMI measurement application
- Built-in preamplifier
- Precision frequency reference
- External LISN control
- 10 MHz analysis bandwidth
- Enhanced display package
- Wideband IF out
- SCPI language compatibility
- USB mouse and keyboard
- User guide
- 3 year return-to-Keysight warranty

Step 1. Select maximum frequency range (required option; frequency range not upgradeable)		
Description	Option number	Additional information
Frequency range, 20 Hz to 3.6 GHz	N9038A-503	
Frequency range, 20 Hz to 8.4 GHz	N9038A-508	
Frequency range, 20 Hz to 26.5 GHz	N9038A-526	
Frequency range, 20 Hz to 44 GHz	N9038A-544	

Step 2. Choose a preamplifier		
Description	Option number	Additional information
Preamplifier 100kHz to 3.6 GHz	Standard (N9038A-P03)	Standard with frequency range Option N9038A-503
Preamplifier, 100 kHz to 8.4 GHz	Standard (N9038A-P08)	Standard with frequency range Option N9038A-508
Preamplifier, 100 kHz to 26.5 GHz	Standard (N9038A-P26)	Standard with frequency range Option N9038A-526
Preamplifier, 100 kHz to 44 GHz	Standard (N9038A-P44)	Standard with frequency range Option N9038A-544

Step 3. Frequency reference		
Description	Option number	Additional information
Precision frequency reference	Standard (N9038A-PFR)	Aging rate $\pm x 10^{-7}$ /year

Step 4. Attenuator		
Description	Option number	Additional information
Mechanical attenuator	Standard	2 dB steps, 0 to 70 dB

Step 5. Choose analysis bandwidth		
Description	Option number	Additional information
10 MHz analysis bandwidth	Standard	
25 MHz analysis bandwidth	N9038A-B25	Optional

Step 6. Choose optional features		
Description	Option number	Additional information
Enhanced display package	Standard (N9038A-EDP)	Includes spectrogram, trace zoom, and zone span
External LISN control	Standard (N9038A-LSN)	Adds front panel control for two automatic external line impedance stabilization networks
Wideband IF output	Standard (N9038A-CR3)	Second IF output on rear-panel Aux IF connector
Digital processor	Standard (N9038A-DP2)	High-performance digital signal processing with 2 GB capture memory
Type-N RF connector, female	N9038A-CNF	Type-N RF connector, female
3.5 mm connector, male	N9038A-C35	Choose 3.5 mm connector for input 1 on Option 526 only (input 2 remains type-N)
External source control	N9038A-ESC	Control MXG sources from the front panel of the MXE
Time domain scan	N9038A-TDS	Provides high-overlap FFT scanning for fast signal capture

Step 7. Add data storage		
Description	Option number	Additional information
Additional removable solid-state drive	N9038A-SSD	Provides a fully-imaged removable solid-state drive in addition to the one installed in the instrument

Step 8. Add rear panel output utility		
Description	Option number	Additional information
Y-axis screen video output	N9038A-YAS	Screen video (0-1 volt open circuit) on rear panel analog out

Step 9. Choose measurement application software and license type

Note: The last two letters of the ordering numbers indicate the license type—FP stands for fixed perpetual, TP for transportable perpetual; it is recommended that you configure each application with the same license type; for more information about transportable licenses visit www.keysight.com/find/X-Series_transportable

Description	Fixed license	Transportable license	Additional information
General purpose			
Spectrum analyzer	Standard	Not available	Traditional spectrum analysis plus many new and enhanced functions; power measurements based on industry specifications
Analog demodulation	N9063A-2FP	N9063A-2TP	Adds one-button measurement for AM/FM/PM demodulation with metrics, tune and listen, and AF spectrum
	N9063A-3FP	N9063A-3TP	Adds FM Stereo and RDS; requires 2FP/2TP
EMI measurement application	Standard (N6141A)	Not available	Compliance conducted and radiated emission measurements
Noise figure	N9069A-1FP (requires preamplifier to meet specifications)	N9069A-1TP (requires preamplifier to meet specifications)	Adds one-button measurements for noise figure, gain, and related metrics; requires preamplifier to meet specifications; works with Keysight Technologies, Inc. N400xA Series smart noise sources and 346 Series noise sources
Phase noise	N9068A-2FP	N9068A-2TP	Adds one-button measurements for analyzing phase noise in frequency domain (log plot) and time domain (spot frequency)
SCPI command language compatibility	Standard (N9062A-2FP)	Not available	Adds capability to emulate the R&S FSP/FSU/FSE spectrum analyzers
89600 VSA software	89601 VSA	Not available	Industry-leading measurement software for evaluating and troubleshooting signals in R&D; PC-based software supporting more than 30 measurement platforms, plus more than 75 signal standards and modulation types including MIMO analysis; www.keysight.com/find/89600_VSA

Step 10. Choose accessories and documentation

Description	Option number	Additional information
Mouse, USB interface	Standard	Every MXE is shipped with a USB mouse, which enhances the usability of the Windows XP Professional operating system
Keyboard, USB interface	Standard	Enhances the usability of the Windows XP Professional operating system
User and Getting Started guides	Standard	<ul style="list-style-type: none"> – US English localization – All user documentation is included in the MXE embedded context-sensitive help system and on a CD that is shipped with the instrument – User documentation can be downloaded from: www.keysight.com/find/mxe_manuals
Rack mount	N9038A-1CM	Adds rack mount flanges to the MXE
Front handles	N9038A-1CN	Adds front handles to the MXE
Rack mount with handles	N9038A-1CP	Adds rack mount and handles to MXE
USB DVD-ROM/CD-R/RW	N9038A-DVR	Enhances the usability of the Windows XP professional operating system
US 65-key USB keyboard	N9038A-KB2	Compact design for easy storage
Service documentation	N9038A-OBW	Adds service documentation assembly level

Step 11. Choose warranty length

Description	Option number	Additional information
Return-to-Keysight warranty, 3 years	Standard	Standard 3-year warranty is included at no additional charge
Return-to-Keysight warranty, 5 years	R-51B-001-5C	

Step 12. Add calibration, technical training, support, and upgrade services

Description	Option number	Additional information
ANSI Z540-1-1994 calibration	N9038A-A6J	
Commercial calibration certificate with test data	N9038A-UK6	Calibration certificate only available at time of purchase; only provides measurement results
Accredited calibration plus uncertainties plus guardbanding, at time of purchase	N9038A-AMG	ISO 17025 accredited calibration at time of purchase
Service: 1-day start-up assistance	PS-S20-01	Training on how to operate your instrument effectively (recommended)
Keysight calibration, 3 years	R-50C-011-3	
Keysight calibration, 5 years	R-50C-011-5	
Keysight calibration + uncertainties + guardbanding, 3 years	R-50C-016-3	ISO 17025 accredited calibration
Keysight calibration + uncertainties + guardbanding, 5 years	R-50C-016-5	ISO 17025 accredited calibration
ANSI Z540-1-1994 calibration - 3 years	R-50C-021-3	
ANSI Z540-1-1994 calibration - 5 years	R-50C-021-5	

Instrument Upgrades

Upgrade your existing MXE

Fast license-key upgrades for performance options that do not require additional hardware: ¹

1. Place an order for the upgrade with Keysight and request to receive the software entitlement certificate through email
2. Redeem the certificate through the Web by following the instructions on the certificate
3. Install the license file and latest software in the MXE
4. Begin using the new capability ^{2,3}

Installation and testing information is available at:
www.keysight.com/find/mxe_upgrades

You Can Upgrade!

Options can be added after your initial purchase.



Most X-Series options are license-key upgradeable.

Description	Upgrade number	Additional information
Increase analysis bandwidth from 10 MHz to 25 MHz	N9038AK-B25	
Additional removable solid-state drive	N9038AK-SSD	
Add Y-axis screen video output	N9038AK-YAS	
USB DVD-ROM/CD-R/RW drive	N9038AK-DVR	
Keyboard, USB interface	N9038AK-KYB	
US 65 key USB keyboard	N9038AK-KB2	
Rack mount and handle kit	N9038AK-1CP	Not compatible with Options 1CM and 1CN
Front handle kit	N9038AK-1CN	Not compatible with Options 1CM and 1CP
Rack mount kit	N9038AK-1CM	Not compatible with Options 1CP and 1CN
External source control kit	N9038AK-ESC	
Type "N" connector for input ¹	N9038AK-CNF	Makes both inputs 1 and 2 type-N connectors
3.5 mm connector for input ¹	N9038AK-C35	Input 2 remains type-N
Hardware to enable monitor spectrum, APD, and time domain scan	N9038AK-HL4	
Time domain software	N9038AK-TDS	
LISN control hardware	N9038AK-LSN	

1. Applies to Options B25 and YAS only.

2. At the time of manufacture, the hardware related to many of these options was fully adjusted and the option performance was verified to be within its warranted specifications. Within one year of the initial calibration date of the analyzer, this option is fully calibrated with no further adjustment or verification testing.

3. If this analyzer has been adjusted as part of a repair or calibration during its first year, or if the analyzer is more than one year old, additional adjustment and performance verification tests are required to ensure that some newly installed options are functioning properly. However, the completion of these tests does not guarantee that the analyzer meets all warranted specifications.

Related Literature

Keysight MXE EMI receiver

Publication title	Publication number
MXE EMI Receiver, Data Sheet	5990-7421EN
MXE EMI Receiver, Brochure	5990-7422EN

myKeysight

myKeysight

www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.



www.axiestandard.org

AdvancedTCA® Extensions for Instrumentation and Test (AXIe) is an open standard that extends the AdvancedTCA for general purpose and semiconductor test. Keysight is a founding member of the AXIe consortium. ATCA®, AdvancedTCA®, and the ATCA logo are registered US trademarks of the PCI Industrial Computer Manufacturers Group.



www.lxistandard.org

LAN eXtensions for Instruments puts the power of Ethernet and the Web inside your test systems. Keysight is a founding member of the LXI consortium.



www.pxisa.org

PCI eXtensions for Instrumentation (PXI) modular instrumentation delivers a rugged, PC-based high-performance measurement and automation system.



Three-Year Warranty

www.keysight.com/find/ThreeYearWarranty

Keysight's commitment to superior product quality and lower total cost of ownership. The only test and measurement company with three-year warranty standard on all instruments, worldwide.



Keysight Assurance Plans

www.keysight.com/find/AssurancePlans

Up to five years of protection and no budgetary surprises to ensure your instruments are operating to specification so you can rely on accurate measurements.



www.keysight.com/go/quality

Keysight Technologies, Inc.
DEKRA Certified ISO 9001:2008
Quality Management System

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/mxe

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
(BP-09-23-14)

This information is subject to change without notice.
© Keysight Technologies, 2013 - 2014
Published in USA, December 19, 2014
5990-7419EN
www.keysight.com