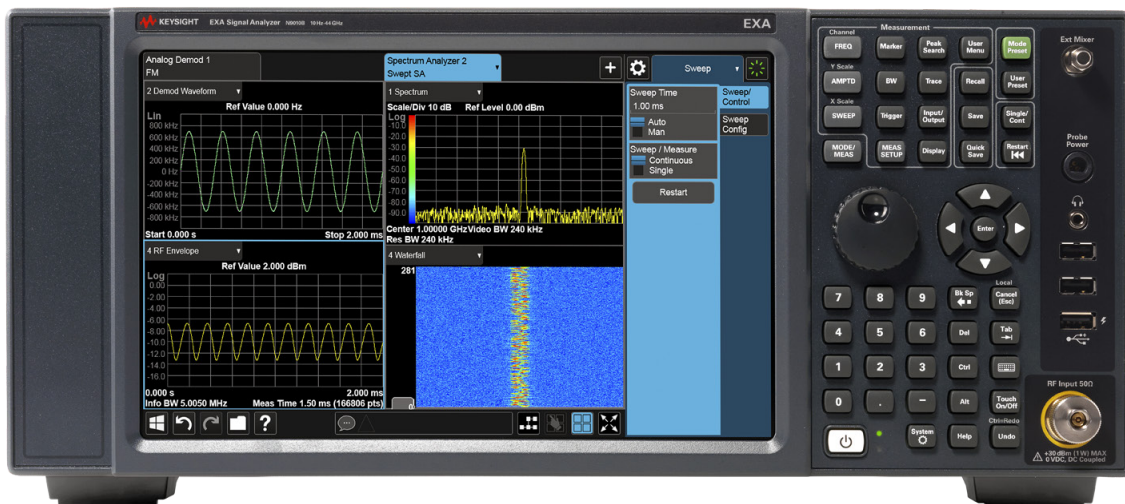# Keysight Technologies
EXA X-Series Signal Analyzer, Multi-touch N9010B

Configuration Guide

This configuration guide will help you determine which performance options, measurement applications, accessories, and services to include with your new multi-touch EXA or to add as upgrades to an existing EXA.

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Configure Your Keysight EXA Signal Analyzer

This step-by-step process will help you configure your new EXA X-Series signal analyzer as well as add millimeter-wave capabilities. Tailor the performance to meet your requirements.

Included in base product

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

– Spectrum analyzer measurement application
– Dual-core, high-performance processor, 8 GB RAM, removable solid-state drive
– Frequency reference
– Mechanical attenuator
– 25 MHz analysis bandwidth
– Windows Embedded Standard 7
– Real-time link for real-time IQ data streaming up to 40 MHz
– Benchtop configuration
– Multi-language user interface
– User guide
– Power cord

Get More Information

For a summary of specifications, refer to the N9010B EXA data sheet (literature number 5992-1256EN).

A full set of specifications are available in the N9010B EXA Signal Analyzer Specification Guide at www.keysight.com/find/exa_specifications.

Step 1. Select maximum frequency range (required option)

Description	Option number	Additional information
Frequency range, 10 Hz to 3.6 GHz	N9010B-503	
Frequency range, 10 Hz to 7 GHz	N9010B-507	
Frequency range, 10 Hz to 13.6 GHz	N9010B-513	
Frequency range, 10 Hz to 26.5 GHz	N9010B-526	
Frequency range, 10 Hz to 32 GHz	N9010B-532	
Frequency range, 10 Hz to 44 GHz	N9010B-544	

Step 2. Add a preamplifier

Description	Option number	Additional information Preamplifiers improve the noise floor for low-level signal detection
Preamplifier, 100 kHz to 3.6 GHz	N9010B-P03	Compatible with frequency range options N9010B-503, N9010B-507, N9010B-513, N9010B-526, N9010B-532, and N9010B-544
Preamplifier, 100 kHz to 7 GHz	N9010B-P07	Compatible with frequency range options N9010B-507, N9010B-513, N9010B-526, N9010B-532, and N9010B-544
Preamplifier, 100 kHz to 13.6 GHz	N9010B-P13	Compatible with frequency range options N9010B-513, N9010B-526
Preamplifier, 100 kHz to 26.5 GHz	N9010B-P26	Compatible with frequency range option N9010B-526
Preamplifier, 100 kHz to 32 GHz	N9010B-P32	Compatible with frequency range option N9010B-532
Preamplifier, 100 kHz to 44 GHz	N9010B-P44	Compatible with frequency range option N9010B-544

Step 3. Choose frequency reference

Description	Option number	Additional information
Frequency reference	Standard	Aging rate: $\pm 1 \times 10^{-6}$/year
Precision frequency reference 10 MHz	N9010B-PFR	Reduces frequency drift for more accurate measurements; aging rate: $\pm 1 \times 10^{-7}$/year

Step 4. Choose an attenuator

Description	Option number	Additional information
Mechanical attenuator	Standard	10 dB steps, 0 to 60 dB
Fine step attenuator	N9010B-FSA	Allows 2 dB steps for the full 60 dB range of the mechanical attenuator
Electronic attenuator up to 3.6 GHz	N9010B-EA3	In addition to the mechanical attenuator; 1 dB steps, 0 to 24 dB

Step 5. Choose analysis bandwidth

Description	Option number	Additional information
25 MHz analysis bandwidth	Standard (N9010B-B25)	Useful for most cellular communications, wireless connectivity, and audio/video broadcasting measurement applications
40 MHz analysis bandwidth	N9010B-B40	Extends the analysis (demod) bandwidth to 40 MHz (Option MPB required for measurements at frequency > 3.6 GHz); also enables fast sweep capability licensed as N9010B-FS1 and N9010B-FS2
Microwave preselector bypass	N9010B-MPB	Required for wide analysis bandwidth measurements with Option B40 at frequency > 3.6 GHz; also enables fast sweep capability licensed as N9010B-FS1 and N9010B-FS2

Step 6. Choose performance

Description	Option number	Additional information
Digital processor with 2 GB capture memory	N9010B-DP2	Comes standard with Option B40; also enables fast sweep capability licensed as N9010B-FS1 and N9010B-FS2
Fast power	N9010B-FP2	Accelerates the power measurements such as ACPR; requires Option B40
Noise floor extension	N9010B-NF2	Improves analyzer's DANL performance (instrument alignment based processes)
Time domain scan	N9010B-TDS	Improves scan speed for EMC pre-compliance tests; requires N6141C EMC pre-compliance measurement application and Option DP2, or B40

Step 7. Add optional features

Description	Option number	Additional information
Enhanced display package	N9010B-EDP	Includes spectrogram, trace zoom, and zone span
Basic precompliance EMI	N9010B-EMC	Perform basic EMI precompliance measurements with CISPR 16-1-1 detectors and bandwidths; tune and listen, and measure at marker are also available
External source control	N9010B-ESC	External source control for Keysight EXG, MXG, and PSG signal generators for scalar stimulus-response measurements; supports external mixing; includes 3 BNC cables and 1 crossover LAN cable
External mixing	N9010B-EXM	Provides external mixing with Keysight and third-party mixers; single port [1] for LO out and IF in (SMA female); compatible with Options 532 and 544 only

Step 8. Select operating system

Description	Option number	Additional information
Windows Embedded Standard 7	Standard	Licensed as N9010B-W7X

Step 9. Add security features

Description	Option number	Additional information
Additional, removable solid-state drive	N9010B-SSD	Provides a fully-imaged, removable solid-state drive in addition to the one installed in the instrument
Security features, exclude launch program	N9010B-SF1	Prevents the launching of Windows programs from the instrument application
Security features, prohibit saving results	N9010B-SF2	Prevents the saving/recall of measurement results or user configurations to/from instrument's data storage

1. When used with the Keysight 11970 Series external mixers, an external diplexer is required. Recommended diplexer can be purchased from Keysight as N9029AE13, or from OML Inc. as DPL.313B.

Step 10. Add rear panel output utilities

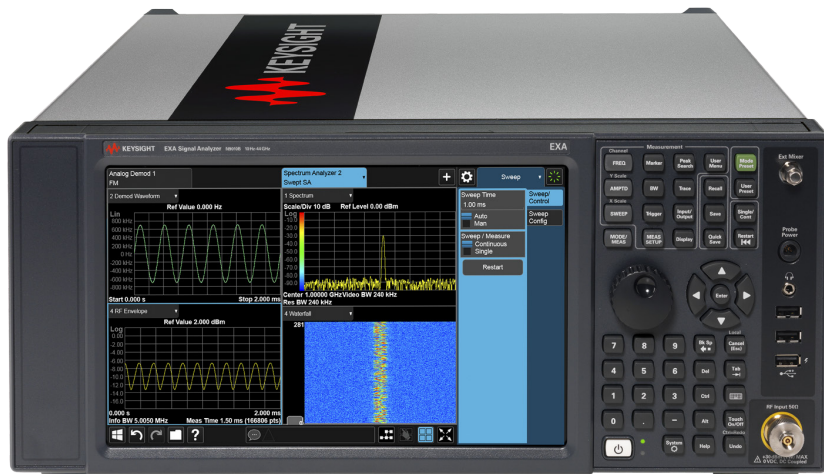| Description	Option number	Additional information
Second IF output	N9010B-CR3	Wideband IF out; output center frequency depends on IF BW option (25/40); output on Aux IF connector at rear panel
Arbitrary IF output	N9010B-CRP	IF out 10 to 75 MHz (in 500 kHz steps); output on Aux IF connector at rear panel
Y-axis screen video output	N9010B-YAS	Screen video (0-1 volt open circuit) on rear panel analog out
Real-time link	Standard	The LVDS connector allows EXA to connect to X-COM data recorder or data streaming (up to 40 MHz BW), and to the N5106A PXB baseband generator and channel emulator; requires Option B40 or DP2; licensed as N9010B-RTL

Step 11. Choose measurement application or 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; visit www.keysight.com/find/X-Series_transportable for more information about transportable licenses

Description	Fixed license	Transportable license	Additional information
Cellular communications			
LTE/LTE-Advanced FDD	N9080C-1FP	N9080C-1TP	Standard-based, one-button LTE-FDD measurements
	N9080C-2FP	N9080C-2TP	Standard-based, one-button LTE-Advanced FDD measurements N9080C-1FP/1TP
NB-IoT/eMTC	N9080C-3FP	N9080C-3TP	Standard-based, one-button NB-IoT/eMTC measurements; requires N9080C- 2FP/2TP
LTE/LTE-Advanced TDD	N9082C-1FP	N9082C-1TP	Standard-based, one-button LTE-TDD measurements
	N9082C-2FP	N9082C-2TP	Standard-based, one-button LTE-Advanced TDD measurements; requires N9082C-1FP/1TP
GSM/EDGE/EVO	N9071C-1FP	N9071C-1TP	Licensed as N9071C-2FP or -2TP and N9071C-3FP or -3TP. Standard-based, one-button GSM/EDGE/EDGE Evolution measurements
	N9071C-XFP	N9071C-XTP	Adds single acquisition combined measurement, a SCPI-command-based measurement optimized for high-volume, high-throughput manufacturing; requires N9071C-1FP/1TP (licensed as N9071C-2FP/2TP and 3FP/3TP); not compatible with Options DP2, B40, MPB, 532 or 544
W-CDMA/HSPA+	N9073C-1FP	N9073C-1TP	Standard-based, one-button W-CDMA measurements
	N9073C-2FP	N9073C-2TP	Adds HSPA measurements; requires 1FP/1TP
	N9073C-3FP	N9073C-3TP	Adds HSPA+ measurements; requires 1FP/1TP, 2FP/2TP
	N9073C-XFP	N9073C-XTP	Adds single acquisition combined measurement, a SCPI-command-based measurement optimized for high-volume, high-throughput manufacturing; requires 1FP/1TP; not compatible with Options DP2, B40, or MPB; not compatible with Options 532 or 544
General purpose			
Spectrum analyzer	Standard	Not available	Traditional spectrum analysis plus many new and enhanced functions; power measurements based on industry specifications
Analog demodulation	N9063C-1FP	N9063C-1TP	Licensed as N9063C-2FP or -2TP and N9063C-3FP or -3TP. Adds one-button measurement for AM/FM/PM demodulation with metrics, tune and listen, and AF spectrum; supports audio output (output voltage proportional to frequency deviation). FM Stereo and RDS are included.
Phase noise	N9068C-2FP	N9068C-2TP	Adds one-button measurements for analyzing phase noise in frequency domain (log plot) and time domain (spot frequency)
Noise figure	N9069C-3FP (requires preamplifier to meet specifications)	N9069C-3TP (requires preamplifier to meet specifications)	Licensed as N9069C-1FP or -1TP and N9069C-2FP or -2TP. Adds one-button measurements for noise figure, gain, and related metrics; requires preamplifier to meet specifications; works with Keysight N400xA Series smart noise sources and 346 Series noise sources; supports U7227 USB external preamplifiers Includes the advanced NF measurement features including external LO control over GPIB/LAN/USB, multi-stage converter tests with system LO, and manual mode to simulate the legacy NF meter
Vector modulation analysis	N9054C-1FP	N9054C-1TP	One-button vector modulation analysis measurements
EMI	N6141C-2FP	N6141C-2TP	Pre-compliance conducted and radiated emission measurements
Remote language analyzers	N9061C-1FP	Not available	Add capability to emulate HP/Agilent 8566/68 and 856xE/EC spectrum analyzers; licensed as N9061C-1FP and N9061C-2FP
SCPI command language	N9062C-2FP	Not available	Adds capability to emulate the R&S FSP/FSU/FSE spectrum analyzers or ESU EMI receiver.
Pulse	N9067C-1FP	N9067C-1TP	Characterize pulsed RF signals in the time domain, with phase, frequency and statistical analysis of large pulse sets.

Wireless connectivity			
WLAN 802.11a/b/g/j/p/n/ ac/af/ah/ax	N9077C-1FP	N9077C-1TP	Licensed as N9077C-2FP or -2TP and N9077C-3FP or -3TP; standard-based, one-button 802.11a/b/g/j/p/n measurement
	N9077C-4FP	N9077C-4TP	Adds 802.11ac; requires N9077C-1FP (licensed as N9077C-2FP/2TP and 3FP/3TP)
	N9077C-6FP	N9077C-6TP	Standard-based, one-button 802.11ah measurement
	N9077C-7FP	N9077C-7TP	Standard-based, one-button 802.11af measurement
	N9077C-8FP	N9077C-8TP	Standard-based, one-button 802.11ax single user PPDU measurement
	N9077C-MFP	N9077C-MTP	Standard-based, one-button 802.11ax multi-user PPDU measurement
Bluetooth®	N9081C-2FP	N9081C-2TP	Standard-based, one-button *Bluetooth* version 2.1+ EDR and Low Energy (BR/EDR/LE 4.0/4.2) measurements
	N9081C-3FP	N9081C-3TP	Standard-based, one-button *Bluetooth* version 5.0 measurement; requires N9081C-2FP/2TP
Short range communications	N9084C-1FP	N9084C-1TP	Standard-based, one-button 802.15.4 for ZigBee measurement
	N9084C-2FP	N9084C-2TP	Standard-based, one-button G.9959 for Z-Wave measurement
Other			
MATLAB software	N6171A-M01	Not available	Instrument Control Toolbox
	N6171A-M02	Not available	Instrument Control Toolbox Communications System Toolbox DSP System Toolbox Signal Processing Toolbox
	N6171A-M03	Not available	Instrument Control Toolbox Communications System Toolbox DSP System Toolbox Signal Processing Toolbox RF Toolbox
89600 VSA software	Not available	89601B (transportable license is standard)	Industry-leading measurement software for evaluating and troubleshooting signals in R&D; PC-based software supporting more than 40 measurement platforms, plus more than 75 signal standards and modulation types including MIMO analysis; www.keysight.com/find/89600vsa

Step 12. Choose physical instrument configuration

Description	Option number	Additional information
Bench top configuration	Standard	Provides two side carrying straps, four rear feet, and four bottom feet with a tilt stand; a front panel protective cover is included
Portable configuration	N9010B-PRC	Provides a convenient, pivoting carrying handle as well as rubber protective corners and end guards; this configuration is intended for applications requiring more rugged packaging, such as in the field

EXA bench top configuration

Step 13. Choose accessories

Description	Option number	Additional information
User guide	Standard	– US – English localization – All user documentation is included in the EXA's embedded help system and on a DVD that is shipped with the instrument – User documentation can be downloaded from: www.keysight.com/find/exa_manuals
Power cord	Standard	Dependent upon region of use
Adapter, 2.4 mm (F) to 2.9 mm (F)	Standard	Ship standard only for Option 532
Adapter, 2.4 mm (F) to 2.4 mm (F)	Standard	Ship standard only for Option 544
Rack mount	1CM113A	Adds rack mount flanges to the EXA
Front handles	1CN103A	Adds front handles to the EXA
Rack mount with handles	1CP105A	Adds rack mount flanges and handles to the EXA
Rack slide	1CR013A	Adds a non-tilting rack slide to the EXA
USB DVD-ROM/CD-R/RW drive	1DVR001A	Enhances the usability of the Windows operating system
US 65-key USB keyboard	1KBD001A	Smaller keyboard
Mouse, USB interface	1MSE001A	
Front panel cover	N9020B-CVR	
Minimum loss pad, 50 to 75 Ω (type-N to BNC)	MLP001A	– 50 Ω type-N male to 75 Ω BNC female adapter – Frequency range: 9 MHz to 2 GHz – Input/output return loss: 20 and 11 dB – Insertion loss: 5.7 dB
V-Band waveguide Harmonic Mixers, 50 to 75 GHz	M1970V-001	Requires Option EXM and Option 532 or 544; USB mixer with smart features
Extended V-Band waveguide Harmonic Mixers, 50 to 80 GHz	M1970V-002	Requires Option EXM and Option 532 or 544; USB mixer with smart features
E-Band waveguide Harmonic Mixers, 60 to 90 GHz	M1970E	Requires Option EXM and Option 532 or 544; USB mixer with smart features
W-Band waveguide Harmonic Mixers, 75 to 110 GHz	M1970W	Requires Option EXM and Option 532 or 544; USB mixer with smart features
E-band waveguide harmonic mixer, 60 to 90 GHz	M1971E-001	Requires Option EXM and Option 532 or 544; USB mixer with smart features and 3 signal paths
Extended E-band waveguide harmonic mixer, 55 to 90 GHz	M1971E-003	Requires Option EXM and Option 532 or 544; USB mixer with smart features and 3 signal paths
V-band waveguide harmonic mixer, 55 to 75 GHz	M1971V	Requires Option EXM and Option 532 or 544; USB mixer with smart features and 3 signal paths
W-band waveguide harmonic mixer, 75 to 110 GHz	M1971W	Requires Option EXM and Option 532 or 544; USB mixer with smart features and 3 signal paths
26 - 40 GHz waveguide harmonic mixer	11970A	Requires Option EXM and N9029AE13 diplexer
33 - 50 GHz waveguide harmonic mixer	11970Q	Requires Option EXM and N9029AE13 diplexer
40 - 60 GHz waveguide harmonic mixer	11970U	Requires Option EXM and N9029AE13 diplexer
50 - 75 GHz waveguide harmonic mixer	11970V	Requires Option EXM and N9029AE13 diplexer
75 - 110 GHz waveguide harmonic mixer	11970W	Requires Option EXM and N9029AE13 diplexer
90 to 140 GHz OML harmonic mixer	N9029AE08	Ordering convenience; requires Option EXM
110 to 170 GHz OML harmonic mixer	N9029AE06	Ordering convenience; requires Option EXM
140 to 220 GHz OML harmonic mixer	N9029AE05	Ordering convenience; requires Option EXM
220 to 325 GHz OML harmonic mixer	N9029AE03	Ordering convenience; requires Option EXM
LO/IF Diplexer	N9029AE13	Ordering convenience; needed for 11970 Series external mixers

For more information on accessories go to: www.keysight.com/find/accessories

Step 13. Choose accessories, continued

Description	Option number	Additional information
50 to 75 GHz frequency extension module	N9029AV15	VDI signal analyzer frequency extension module; requires Option EXM
60 to 90 GHz frequency extension module	N9029AV12	VDI signal analyzer frequency extension module; requires Option EXM
75 to 110 GHz frequency extension module	N9029AV10	VDI signal analyzer frequency extension module; requires Option EXM
90 to 140 GHz frequency extension module	N9029AV08	VDI signal analyzer frequency extension module; requires Option EXM
110 to 170 GHz frequency extension module	N9029AV06	VDI signal analyzer frequency extension module; requires Option EXM
140 to 220 GHz frequency extension module	N9029AV05	VDI signal analyzer frequency extension module; requires Option EXM
220 to 330 GHz frequency extension module	N9029AV03	VDI signal analyzer frequency extension module; requires Option EXM
325 to 500 GHz frequency extension module	N9029AV02	VDI signal analyzer frequency extension module; requires Option EXM
550 to 750 GHz frequency extension module	N9029AV1B	VDI signal analyzer frequency extension module; requires Option EXM
750 to 1100 GHz frequency extension module	N9029AV01	VDI signal analyzer frequency extension module; requires Option EXM
Power supply for VDI module	N5262VDI-175	Required for the N9029AVxx VDI module
USB external preamplifier, 10 MHz to 4 GHz	U7227A	
USB external preamplifier, 0.1 to 26.5 GHz	U7227C	
USB external preamplifier, 2 to 50 GHz	U7227F	

For more information on accessories go to: www.keysight.com/find/accessories

Step 14. Add calibration, technical training, support, and upgrade services

Description	Option number	Additional information
Commercial calibration certificate with test data	N9010B-UK6	Calibration certificate only available at time of instrument purchase; only provides measurement results
Keysight Calibration + Uncertainties + Guardbanding (accredited cal)	N9010B-AMG	Provides ISO 17025A accredited calibration from factory
ANSI Z540-1-1994 Calibration	N9010B-A6J	Provides ANSI Z540 compliant calibration from factory
Calibration Assurance Plan, Return-to-Keysight, 3 years	R-50C-011-3	
Calibration Assurance Plan, Return-to-Keysight, 3 years	R-50C-011-5	Keysight tests your instrument against its original specifications and automatically makes adjustments if outside of specified parameters; pre- and post-adjustment measurement data reports also provided
Calibration Assurance Plan, Return-to-Keysight, 7 years	R-50C-011-7	
Calibration Assurance Plan, Return-to-Keysight, 10 years	R-50C-011-10	
Service: remote scheduled productivity assistance	PS-S10-100	Hourly phone-in technical support service designed to help you understand and operate your equipment through convenient phone and Web access
Service: 1-day start-up assistance	PS-S20-01	Training on how to operate your instrument effectively (recommended)
Service: productivity assistance	PS-S20-100	Daily instrument and application consulting using your equipment and device under test
Service: custom engineering service	PS-X10-100	Application-specific technical assistance

Other calibration options may be available; for more information on calibration go to: www.keysight.com/find/calibration
For more information on training and application support services go to: www.keysight.com/find/training

Instrument Upgrades

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

1. Place an order for the upgrade with Keysight and request to receive the option upgrade entitlement certificate and a one-time software upgrade license 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 EXA
4. Begin using the new capability [1, 2]

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

Upgrades for analysis bandwidth depend on the vintage of the instrument and the options already installed. More than one option may be required to achieve desired wider analysis bandwidth. Use our web-based calculator to find the upgrade options you may need: www.keysight.com/find/BW-selector

You can upgrade!

Options can be added after your initial purchase.

UP GRADE

All of our X-Series application options are license-key upgradeable.

Description	Upgrade number	Requirements (EXA must already include the following)	Additional information
Increase frequency from 3.6 to 7 GHz,	N9010BU-F01	503	
Increase frequency from 3.6 to 13.6 GHz	N9010BU-F02	503	
Increase frequency from 3.6 to 26.5 GHz	N9010BU-F03	503	
Increase frequency from 3.6 to 32 GHz	N9010BU-F04	503	
Increase frequency from 3.6 to 44 GHz	N9010BU-F05	503	
Increase frequency from 7 to 13.6 GHz	N9010BU-F06	507	
Increase frequency from 7 to 26.5 GHz	N9010BU-F07	507	
Increase frequency from 7 to 32 GHz	N9010BU-F08	507	
Increase frequency from 7 to 44 GHz	N9010BU-F09	507	
Increase frequency from 13.6 to 26.5 GHz	N9010BU-F10	513	
Increase frequency from 13.6 to 32 GHz	N9010BU-F11	513	
Increase frequency from 13.6 to 44 GHz	N9010BU-F12	513	
Increase frequency from 26.5 to 32 GHz	N9010BU-F13	526	
Increase frequency from 26.5 to 44 GHz	N9010BU-F14	526	
Increase frequency from 32 to 44 GHz	N9010BU-F15	532	Includes 44 GHz preamp
Increase analysis bandwidth from 25 to 40 MHz	N9010BU-B40	503, 507, 513, or 526	Includes hardware and license key; also adds microwave preselector bypass; not compatible with Options 532 or 544
Increase analysis bandwidth from 25 to 40 MHz	N9010BU-BUN	532 or 544	Includes hardware and license key; also adds microwave preselector bypass; not compatible with Options 503, 507, 513, or 526
Add preamplifier, 3.6 GHz	N9010BU-P03	None	
Add preamplifier, 7 GHz	N9010BU-P07	507, 513, 526, 532, or 544	Not compatible with Option 503

1. 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 two years of the initial calibration date of the analyzer, this option is fully calibrated with no further adjustment or verification testing.
2. If this analyzer has been adjusted as part of a repair or calibration during its first two years, or if the analyzer is more than two years 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.

Description	Upgrade number	Requirements (EXA must already include the following)	Additional information
Add preamplifier, 13.6 GHz	N9010BU-P13	513 or 526	Not compatible with Option 503, 507, 532, or 544
Add preamplifier, 26.5 GHz	N9010BU-P26	526	Not compatible with Option 503, 507, 513, 532, or 544
Add preamplifier, 32 GHz	N9010BU-P32	532	
Add preamplifier, 44 GHz	N9010BU-P44	544	
Upgrade to the precision frequency reference	N9010BU-PFR	None	
Add time domain scan capability	N9010BU-TDS	N6141C and DP2 or B40	For EMC pre-compliance tests only
Add basic EMI precompliance features	N9010BU-EMC	None	
Add external source control	N9010BU-ESC	None	Adds feature to control the Keysight EXG, MXG, and PSG signal generators; supports external mixing; includes 3 BNC cables and 1 cross-over LAN cable for scalar stimulus/response measurements
Add external mixing	N9010BU-EXM	532 or 544	Includes additional hardware
Add second IF output	N9010BU-CR3	B40, DP2 or MPB, or CRP, 532, or 544	
Add arbitrary IF output	N9010BU-CRP	Front end controller with hardware ID 41 or 75	Press **System, Show, Hardware** to determine hardware Id
Add second IF output and arbitrary IF output	N9010BU-HL3	None	Includes hardware and license key
Add fast power	N9010BU-FP2	B40	For fast power measurements such as ACPR
Add noise floor extension	N9010BU-NF2	None	Instrument alignment based
Add security features, exclude launch program	N9010BU-SF1	None	Prevents the launching of Windows programs from the instrument application
Add security features, prohibit saving results	N9010BU-SF2	None	Prevents the saving/recall of measurement results or user configurations to/from instrument's data storage
Add Y-axis screen video output	N9010BU-YAS	None	
Add enhanced display package	N9010BU-EDP	None	

1. 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 two years of the initial calibration date of the analyzer, this option is fully calibrated with no further adjustment or verification testing.
2. If this analyzer has been adjusted as part of a repair or calibration during its first two years, or if the analyzer is more than two years 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.

Description	Upgrade number	Requirements (EXA must already include the following)	Additional information
Add removable solid-state drive (SSD)	N9010BU-SSD	None	Provides additional removable solid-state drive
Portable configuration	N9010BU-PRC	None	Not compatible with 1CP105A, 1CM113A, 1CN103A, 1CR013A
USB DVD-ROM/CD-R/RW drive	N9010BU-DVR	None	
Electronic attenuator, 3.6 GHz	N9010BU-EA3	None	
Fine step attenuator	N9010BU-FSA	None	
US 65-key USB keyboard	1KBD001A	None	Smaller keyboard
Minimum loss pad, 50 to 75 Ω (type-N to BNC)	MLP001A	None	
Mouse, USB interface	1MSE001A	None	
Rack mount kit	1CM113A	None	Not compatible with Option PRC, 1CP105A, 1CN103A
Front handle kit	1CN103A	None	Not compatible with Option PRC, 1CP105A, 1CM113A
Rack mount and handle kit	1CP105A	None	Not compatible with Option PRC, 1CN103A, 1CM113A
Rack slide kit	1CR013A	None	Not compatible with Option PRC
Korean version of getting started guide	N9010BU-AB1	None	
Chinese version of getting started guide	N9010BU-AB2	None	
Spanish version of getting started guide	N9010BU-ABE	None	
French version of getting started guide	N9010BU-ABF	None	
Japanese version of getting started guide	N9010BU-ABJ	None	
Russian version of getting started guide	N9010BU-AKT	None	

Related Literature

Keysight EXA signal analyzers

Publication title	Publication number
X-Series Signal Analyzers, Brochure	5992-1316EN
N9010B EXA X-Series Signal Analyzer, Multi-touch, Data Sheet	5992-1256EN
X-Series Measurement Applications, Brochure	5989-8019EN

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