

# N9042B UXA Signal Analyzer

2 Hz to 26.5, 44, or 50 GHz

## Introduction

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



# Table of Contents

- Included in the Base Product ..... 3
- Configure Your N9042B UXA Signal Analyzer ..... 4
- Instrument Upgrades..... 16
- Related Resources..... 19
- Confidently Covered by Keysight Services ..... 19

# Included in the Base Product

These options and accessories are included as standard on the N9042B UXA X-Series Signal Analyzer base instrument at no additional charge and do not need to be ordered separately.

They include:

- Spectrum analyzer software application
- KeysightCare Assured First Year Support (includes Return to Keysight Warranty – 1 year)
- Getting Started and Troubleshooting Guide
- Enhanced phase noise
- Fast sweep capability
- Enhanced fast sweep speed
- Full bypass path for frequencies above 3.6 GHz
- Microwave preselector bypass for frequencies above 3.6 GHz
- Low noise path for improved sensitivity above 3.6 GHz
- Wideband digital IF
- Enhanced display package
- External mixing for frequency coverage extension up to 1.1 THz
- Low frequency enabled
- 2 dB step mechanical attenuator
- LO/IM nulling
- Noise floor extension; instrument alignment
- Precision frequency reference
- Real-time data link for real-time IQ data streaming up to 40 MHz
- Hex-core, high-performance processor, 32 GB RAM, with flash calibration file memory
- Digital processor with 16 GB capture memory
- Removable solid-state drive
- Microsoft Windows 10 operating system
- Multi-language user interface
- Multi-touch user interface
- Receiver calibrator (RCal) control license
- Country-specific power cord
- Front and rear panel covers for protection during transit

# Configure Your N9042B UXA Signal Analyzer

This step-by-step process will help you to configure the N9042B UXA signal analyzer. Tailor the performance and features to meet your requirements.

The N9042B UXA is a wideband millimeter-wave signal analyzer in the X-series signal analyzer portfolio. For detailed specifications, please refer to the N9042B UXA X-Series Signal Analyzer, Multi-touch – Data Sheet ([3121-1037EN](#)).

## Step 1. Choose maximum frequency range (required option)

Description	Option number	Additional information
Frequency range, 2 Hz to 26.5 GHz	N9042B-526	
Frequency range, 2 Hz to 44 GHz	N9042B-544	
Frequency range, 2 Hz to 50 GHz	N9042B-550	

## Step 2. Select analysis bandwidth (required option)

Description	Option number	Additional information
Analysis bandwidth, 1 GHz	N9042B-R10	
Analysis bandwidth, 1.5 GHz	N9042B-R15	
Analysis bandwidth, 2 GHz	N9042B-R20	
Analysis bandwidth, 4 GHz	N9042B-R40	
Analysis bandwidth, 11 GHz		See N9042B-CRW in “Step 9 – Select connection options”

## Step 3. Choose an attenuator

Description	Option number	Additional information
Mechanical attenuator	Standard	2 dB steps, 0 to 70 dB; licensed as N9042B-FSA
Electronic attenuator up to 3.6 GHz	N9040B-EA3	Add in addition to the mechanical attenuator; 1 dB steps, 0 to 24 dB

## Step 4. Specify performance options

Description	Option number	Additional information
Enhanced phase noise performance	Standard	DDS-based LO assembly; licensed as N9042B-EP0
External mixing	Standard	Provides external mixing with Keysight and third-party mixers; single port (when used with Keysight 11970 Series external mixers, an external diplexer is required. Recommended diplexer can be purchased from Keysight as N9029BE13) for LO out and IF in (SMA female); licensed as N9042B-EXM
Fast sweep capability	Standard	Improves sweep speed at swept mode; licensed as N9042B-FS1 and FS2
LO/IM nulling	Standard	Minimizes the LO feed-thru and the intermodulation distortion; licensed as N9042B-NUL
Low noise path	Standard	Improves sensitivity (DANL) in frequency bands above 3.6 GHz without degrading dynamic range; licensed as N9042B-LNP
Microwave preselector bypass	Standard	Bypass the microwave preselector for wider bandwidth IF; licensed as N9042B-MPB
Full bypass path	Standard	Bypass the microwave preselector and enable the low noise path for improved sensitivity above 3.6 GHz; licensed as N9042B-FBP
Precision frequency reference	Standard	Aging rate: $\pm 3 \times 10^{-8}$ /year; licensed as N9042B-PFR
Noise floor extension	Standard	Improves analyzer's DANL performance; licensed as N9042B-NF2
Enhanced display package	Standard	Includes spectrogram, trace zoom, and zone span in SA mode; licensed as N90E1EDPB
Fast power	N90EMFP2B	Accelerate power measurements such as ACPR
Basic EMI precompliance	N90EMEMCB	Perform basic EMI precompliance measurements with CISPR 16-1-1 detectors and bandwidths; tune and listen, and measure at marker are also available
External digitizer control	N9042B-EDC	Requires N9042B-CRW
External mixing, wide bandwidth	N9042B-EXW	Enables use of the V3050A signal analyzer frequency extender
Multi-box synchronization for MIMO	N9042MM0B	Supports MIMO analysis with multi-box and calibration; supports N9085EM0E 5G NR measurement application
1 GHz IQ streaming	N9042B-ST1	Stream gap-free I/Q data up to 1 GHz bandwidth for offline analysis; high speed ODI connector allows connection to external RAID; requires option R10, R15, R20, or R40
2 GHz IQ streaming	N9042B-ST2	Stream gap-free I/Q data up to 2 GHz bandwidth for offline analysis; high speed ODI connector allows connection to external RAID; requires option R20 or R40

## Step 5. Add a preamplifier

Description	Option number	Additional information
Preamplifier, 26.5 GHz	N9042B-P26	Compatible with N9042B-526 only
Preamplifier, 44 GHz	N9042B-P44	Compatible with N9042B-544 only
Preamplifier, 44 GHz, basic	N9042B-P4L	Compatible with N9042B-544 only; non-IVL, no export control
Preamplifier, 50 GHz	N9042B-P50	Compatible with N9042B-550 only
Preamplifier, 50 GHz, basic	N9042B-P5L	Compatible with N9042B-550 only: non-IVL, no export control
Low noise amplifier	Standard	Standard when Option P26, P44, P4L, P50 or P5L is installed; licensed as N9042B-LNA

## Step 6. Specify PC security

Description	Option number	Additional information
Security features, exclude launching programs	N9042B-SF1	Prevents the launching of Windows programs from the instrument application
Security features, prohibit saving results	N9042B-SF2	Prevents instrument application from saving/recall of measurement results or user configurations to/from instrument's data storage
Additional M.2 NVMe solid state drive, Win10, for PCA	N9042B-SS3	Provides a fully imaged, removable SSD in addition to the one installed in instruments, with Windows 10 operating system

## Step 7. Choose source connectivity

Description	Option number	Additional information
External source control	N9042B-ESC	External source control for selected Keysight EXG, MXG, and PSG signal generators; supports external mixing; includes 3 BNC cables and 1 cross-over LAN cable

## Step 8. Select connection options

Description	Option number	Additional information
Auxiliary log video output	N9042B-ALV	Fast rise time video out; output on Aux IF connector
Y-axis video output	N9042B-YAV	Screen video (0-1 volt open circuit); log video and linear video
Connector rear, programmable IF output	N9042B-CRP	IF out 10 to 75 MHz (in 500 kHz steps); output on Aux IF connector at rear panel
Connector, IF out, wide	N9042B-CRW	Enables Wide IF Out connector that provides 11 GHz BW IF signal from the internal wideband signal paths for center frequencies 18 GHz or higher; required for N9042B-EDC, External Digitizer Control

## Step 9. Add real-time spectrum analysis

Note: Keysight offers flexible subscriptions for these measurement applications.

Description	Option number	Additional information
Real-time analysis, up to 1 GHz BW, basic detection	N9042RTAB	Minimum 15 $\mu$ s signal duration for 100% probability of intercept (POI) with full amplitude accuracy; requires option R10, R15, R20 or R40; requires option G2H in Show System or 900 Watt Max power rating listed on rear panel; if neither G2H nor 900 Watt Max power rating is shown then requires N9042BU-HW1; requires firmware version $\geq$ A.36; node-locked only; non-IVL, no export control
Real-time analysis, up to 1 GHz BW, optimum detection	N9042RTBB	Minimum 227 ns signal duration for 100% probability of intercept (POI) with full amplitude accuracy; requires option R10, R15, R20 or R40; requires option G2H in Show System or 900 Watt Max power rating listed on rear panel; if neither G2H nor 900 Watt Max power rating is shown then requires N9042BU-HW1; requires firmware version $\geq$ A.36; node-locked only
Real-time analysis, up to 2 GHz BW, basic detection	N9042RTEB	Minimum 15 $\mu$ s signal duration for 100% probability of intercept (POI) with full amplitude accuracy; requires option R20 or R40; requires option G2H in Show System or 900 Watt Max power rating listed on rear panel; if neither G2H nor 900 Watt Max power rating is shown then requires N9042BU-HW1; requires firmware version $\geq$ A.36; node-locked only; non-IVL, no export control
Real-time analysis, up to 2 GHz BW, optimum detection	N9042RTFB	Minimum 227 ns signal duration for 100% probability of intercept (POI) with full amplitude accuracy; requires option R20 or R40; requires option G2H in Show System or 900 Watt Max power rating listed on rear panel; if neither G2H nor 900 Watt Max power rating is shown then requires N9042BU-HW1; requires firmware version $\geq$ A.36; node-locked only



## Step 10. Choose measurement applications and license type

**Note:** Keysight offers flexible license types and terms for the measurement applications, refer to page 11 of X-Series Measurement Applications – Brochure (5989-8019EN).

Description	Option number	Additional information
<b>General purpose</b>		
Spectrum analyzer and IQ analyzer	Standard	Traditional spectrum analysis plus many new and enhanced functions
Power Suite	N90EMPSMB	Power measurements based on industry specifications
EMI	N6141EM0E	Performs pre-compliance conducted and radiated emission measurements
MATLAB Software	N6171A	
Vector modulation analysis digital demodulation	N9054EM0E	Performs one-button flexible modulation analysis measurements with FSK, PSK, QAM, MSK, ASK, APSK, VSB etc. and popular format preset
Vector modulation analysis custom OFDM	N9054EM1E	Performs one-button custom OFDM modulation analysis measurement with user-defined settings or recalling 89600 VSA or Signal Studio output files
Power amplifier	N9055EM0E	Characterizes power amplifier (PA) with pre-distortion applied in RF and millimeter wave, with simple and integrated multi-touch user interface; Also supports ET (Envelop Tracking) with dual-channel VXG
Channel quality	N9056EM0E	Performs repeatable channel response measurements as group delay and other characteristics with multi-tone signals for wideband component testing
Remote language compatibility	N9061EM0E	Adds capability to emulate HP/Agilent 8566/68 and 856xE/EC spectrum analyzers
SCPI language compatibility	N9062EM0E	Adds capability to emulate the R&S FSP/FSU/FSL/FSV/FSW spectrum analyzers or ESU EMI receiver
Analog demodulation	N9063EM0E	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.
Pulse analysis	N9067EM0E	Characterize pulsed RF signals in the time domain, with phase frequency and statistical analysis of large pulse sets; enables fixed and variable length gated acquisition for capturing pulses of varying pulse width and PRI
Phase noise	N9068EM0E	Adds one-button measurements for analyzing phase noise in frequency domain (log plot) and time domain (spot frequency), supports external mixing

Description	Option number	Additional information
Noise figure	N9069EM0E (requires preamplifier)	Adds one-button measurements for noise figure, gain, and related metrics; requires preamplifier to meet specifications; works with Keysight U1831C USB noise source, 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
<b>Cellular communications</b>		
GSM/EDGE/Evo	N9071EM0E	Standard-based, one-button GSM/EDGE/EDGE Evolution measurements
W-CDMA/HSPA+	N9073EM0E	Standard-based, one-button W-CDMA, HSPA and HSPA+ measurements
LTE and LTE-Advanced FDD	N9080EM0E	Standard-based, one-button LTE/LTE-Advanced FDD measurements
NB-IoT and eMTC FDD	N9080EM3E	Standard-based, one-button NB-IoT/eMTC measurements
LTE V2X	N9080EM4E	Standard-based, one-button LTE-V2X transmitter measurements
LTE and LTE-Advanced TDD	N9082EM0E	Standard-based, one-button LTE/LTE-Advanced TDD measurements
5G NR	N9085EM0E	Standard-based, one-button 5G NR (New Radio) downlink and uplink measurements
5G NR V2X	N9085EM4E	Standard-based, one-button 5G NR V2X transmitter measurements
<b>Wireless connectivity</b>		
WLAN 802.11a/b/g/j/p/n/af/ah	N9077EM0E	Standard-based, one-button 802.11a/b/g/j/p/n/af/ah measurement
WLAN 802.11ac/ax	N9077EM1E	Standard-based, one-button 802.11ac/ax measurement
WLAN 802.11be	N9077EM2E	Standard-based, one-button WLAN 802.11be measurements
<i>Bluetooth</i> <sup>®</sup>	N9081EM0E	Standard-based, one-button <i>Bluetooth</i> (BR/EDR, Low Energy 4.0/4.2 and <i>Bluetooth</i> 5/5.1) measurements; supports Qualcomm Bluetooth High Speed Link as QBHSL
Short Range Communications and IoT	N9084EM0E	Standard-based, one-button 802.15 for Zigbee measurement, G.9959 for Z-Wave measurement, LoRa CSS, and HRP UWB measurement

## Step 11. Choose 89600 VSA software licenses

Description	Option number	Additional information
Basic vector signal analysis and hardware connectivity	89601200C (required Core option)	Provides the tools and user interface that make up the 89600 VSA software including time and frequency domain measurement, hardware connectivity, recordings and playback
<b>General purpose</b>		
Digital demodulation analysis	89601AYAC	Analysis of >40 modulation formats, including custom APSK and presets for communication formats like GSM/EDGE, ZigBee FSK, <i>Bluetooth</i> <sup>®</sup> BR, APCO25 and SOQPSK. Proprietary and pre-standard, customized IQ constellation signals
Custom OFDM modulation analysis	89601BHFC	Proprietary and pre-standard OFDM formats such as WLAN, DAB, DVBT/H, DVB-SH, ISDB-T and more
PowerSuite measurement	89601PSMC	PowerSuite measurement for ACP and EVM
<b>Cellular communication</b>		
LTE/LTE-A FDD modulation analysis	89601BHGC	LTE FDD, LTE-Advanced FDD
3G modulation analysis	89601B7NC	W-CDMA/HSPA+, TD-SCDMA/HSPA, cdma2000, 1xEV-DO and 1xEV-DV
LTE/LTE-A TDD modulation analysis	89601BHHC	LTE FDD, LTE-Advanced FDD modulation analysis
5G NR modulation analysis	89601BHNC	5G NR, Pre-5G
Channel sounding signal analysis	89601CSDC	Performs channel sounding measurement
Cross-correlated EVM	89601EVMC	Best EVM performance for 5G NR and WLAN
<b>Wireless connectivity</b>		
Wireless connectivity modulation analysis	89601B7RC	WLAN 802.11a/b/g/j/p, WiMax modulation analysis
High throughput WLAN modulation analysis	89601BHXC	WLAN 802.11n/ac, WLAN 802.11ax, WLAN 802.11be
IoT modulation analysis	89601BHTC	NB-IoT, RFID, HRP UWB (802.15.4/4z)
<b>Radar analysis</b>		
FMCW radar analysis	89601BHPC	For multi-chirp linear FM modulated signals or automotive radar
Pulse analysis	89601BHQC	Pulsed modulated radar signal analysis and frequency hopping signal analysis
<b>Other standard formats</b>		
DOCSIS modulation analysis	89601BHMC	DOCSIS3.1 downstream and upstream modulation analysis

## Step 12. Select accessories

Description	Option number	Additional information
Signal analyzer frequency extender	V3050A	Requires N9042B-EXW; extends frequency from 50 GHz to 67, 90 or 110 GHz
Receiver calibration (RCal) module	U9361C/F/G/M	Enables magnitude and complex corrections
Power cord	Standard	Dependent upon the region of use
Adapter, 2.4 mm (f) to 3.5 mm (f)	Standard	Only for UXA with Option 526
Adapter, 2.4 mm (f) to 2.4 mm (f)	Standard	Only for UXA with Option 544 or 550
Adapter, 2.4 mm (f) to 2.92 mm (f)	Standard	Only for UXA with Option 544 or 550
ROM/CD-R/RW drive	1DVR001A	Enhances the usability of the Windows OS
USB Mouse	1MSE001A	Enhances the usability of the 89600 VSA software
Minimum Loss Pad, 50 to 75 $\Omega$ (type-N to BNC)	MLP001A	50 $\Omega$ type-N male to 75 $\Omega$ BNC female adapter, Frequency range: 9 MHz to 2 GHz, Input/output return loss: 20/11 dB, Insertion loss: 5.7 dB
Rack mount flange kit 265.9 mm H (6U) – two flange brackets, two standard rails	N9042B-2CM	Adds rack mount flanges and rails to the UXA
Rack mount flange and handle kit 265.9 mm H (6U) – two brackets, handles, rails	N9042B-2CP	Adds rack mount flanges, rails and handles to the UXA
Adapter-coaxial, straight jack BNC plug, SMA 50 Ohm	N9042B-1RM	
Adapter-coaxial, tee female, BNC male, BNC female	N9042B-2RM	
Cable assembly-coaxial RG-58, 50-ohm, BNC male, BNC male 2m-LG	N9042B-3RM	
PCIe cable, x4-x8, 2 m	N9042B-4RM	
Cable assembly-coaxial, 50-ohm SMA, plug SMA, plug 610 mm-LG	N9042B-5RM	
Cable assembly-coaxial, 50-ohm SMA, plug SMA, plug 1219 mm-LG	N9042B-6RM	
Cable assembly-USB a to Mini-B, 3 m	N9042B-7RM	
Additional optical data interface cable, 1 m	N9042B-8RM	
Optical data interface cable, 3 m	N9042B-9RM	

Description	Option number	Additional information
V-band waveguide harmonic mixer, 50 to 75 GHz	M1970V-001	Requires Option EXM; USB mixer with smart features
Extended V-band waveguide harmonic mixer, 50 to 80 GHz	M1970V-002	Requires Option EXM; USB mixer with smart features
E-band waveguide harmonic mixer, 60 to 90 GHz	M1970E	Requires Option EXM; USB mixer with smart features
W-band waveguide harmonic mixer, 75 to 110 GHz	M1970W	Requires Option EXM; USB mixer with smart features
E-band waveguide harmonic mixer, 60 to 90 GHz	M1971E-001	Requires Option EXM; USB mixer with smart features and 3 signal paths
E-band waveguide harmonic mixer, 55 to 90 GHz	M1971E-003	Requires Option EXM; USB mixer with smart features and 3 signal paths
V-band waveguide harmonic mixer, 50 to 75 GHz	M1971V	Requires Option EXM; USB mixer with smart features and 3 signal paths
W-band waveguide harmonic mixer, 75 to 110 GHz	M1971W	Requires Option EXM; USB mixer with smart features and 3 signal paths
26 to 40 GHz waveguide harmonic mixer	11970A	Requires Option EXM and N9029BE13 diplexer
33 to 50 GHz waveguide harmonic mixer	11970Q	Requires Option EXM and N9029BE13 diplexer
40 to 60 GHz waveguide harmonic mixer	11970U	Requires Option EXM and N9029BE13 diplexer
50 to 75 GHz waveguide harmonic mixer	11970V	Requires Option EXM and N9029BE13 diplexer
75 to 110 GHz waveguide harmonic mixer	11970W	Requires Option EXM and N9029BE13 diplexer
LO/IF diplexer	N9029BE13	Ordering convenience; required for 11970 Series external mixers
50 to 75 GHz frequency extension module	N9029BV-W15	VDI signal analyzer frequency extension module; requires Option EXM
60 to 90 GHz frequency extension module	N9029BV-W12	VDI signal analyzer frequency extension module; requires Option EXM
75 to 110 GHz frequency extension module	N9029BV-W10	VDI signal analyzer frequency extension module; requires Option EXM
90 to 140 GHz frequency extension module	N9029BV-W08	VDI signal analyzer frequency extension module; requires Option EXM
110 to 170 GHz frequency extension module	N9029BV-W06	VDI signal analyzer frequency extension module; requires Option EXM

Description	Option number	Additional information
140 to 220 GHz frequency extension module	N9029BV-W05	VDI signal analyzer frequency extension module; requires Option EXM
170 to 260 GHz frequency extension module	N9029BV-W04	VDI signal analyzer frequency extension module; requires Option EXM
220 to 330 GHz frequency extension module	N9029BV-W03	VDI signal analyzer frequency extension module; requires Option EXM
260 to 400 GHz frequency extension module	N9029BV-W2B	VDI signal analyzer frequency extension module; requires Option EXM
330 to 500 GHz frequency extension module	N9029BV-W02	VDI signal analyzer frequency extension module; requires Option EXM
550 to 750 GHz frequency extension module	N9029BV-W1B	VDI signal analyzer frequency extension module; requires Option EXM
750 to 1100 GHz frequency extension module	N9029BV-W01	VDI signal analyzer frequency extension module; requires Option EXM
USB external preamplifier, 10 MHz to 4 GHz	U7227A	External preamplifier with smart “plug-and-play” features
USB external preamplifier, 0.1 to 26.5 GHz	U7227C	External preamplifier with smart “plug-and-play” features
USB external preamplifier, 2 to 50 GHz	U7227F	External preamplifier with smart “plug-and-play” features

For more information on accessories, please go to: [www.keysight.com/find/accessories](http://www.keysight.com/find/accessories)

## Step 13. Order service and support

Description	Option number	Additional information
KeysightCare Assured First Year Support	Standard	Includes Return to Keysight Extended Warranty
<b>KeysightCare upgrades – warranty and calibration</b>		
KeysightCare Assured – Extend to 2 years	R-55A-001-2	Includes Return to Keysight Extended Warranty
KeysightCare Assured – Extend to 3 years	R-55A-001-3	
KeysightCare Assured – Extend to 5 years	R-55A-001-5	
KeysightCare Enhanced – Upgrade 1 year	R-55B-001-1	Includes KeysightCare Assured Services (Return to Keysight Extended Warranty) plus Return to Keysight Calibration
KeysightCare Enhanced – Extend to 2 years	R-55B-001-2	
KeysightCare Enhanced – Extend to 3 years	R-55B-001-3	
KeysightCare Enhanced – Extend to 5 years	R-55B-001-5	
<b>Calibration services</b>		
Commercial calibration certificate with test data	N9042B-UK6	Calibration certificate only available at time of instrument purchase; only provides measurement results
ANSI Z540 calibration	N9042B-A6J	Provides ANSI Z540 compliant calibration from factory
Calibration Plan -Return to Keysight – 3 years	R-50C-011-3	
Calibration Plan -Return to Keysight – 5 years	R-50C-011-5	
<b>Product assistance</b>		
Remote scheduled productivity assistance. Select 1 to 999 hours	PS-S10	
Startup assistance, daily	PS-S20	
Custom services	PS-X10	

Other calibration options may be available; for more information on calibration go to:  
[www.keysight.com/find/calibration](http://www.keysight.com/find/calibration)

# Instrument Upgrades

Fast license-key upgrades for 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 UXA
4. Begin using the new capability

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. 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

Installation, calibration, and verification information is available at: [www.keysight.com/find/uxa\\_upgrades](http://www.keysight.com/find/uxa_upgrades)

Description	Upgrade number	Requirements	Additional information
<b>Analysis bandwidth</b>			
Increase analysis bandwidth from 1 GHz to 1.5 GHz	N9042BU-B12	R10	License key only
Increase analysis bandwidth from 1 GHz to 2 GHz	N9042BU-B13	R10	License key only
Increase analysis bandwidth from 1 GHz to 4 GHz	N9042BU-B14	R10	Includes additional hardware; return to Keysight factory
Increase analysis bandwidth from 1.5 GHz to 2 GHz	N9042BU-B15	R15	License key only
Increase analysis bandwidth from 1.5 GHz to 4 GHz	N9042BU-B16	R15	Includes additional hardware; return to Keysight factory
Increase analysis bandwidth from 2 GHz to 4 GHz	N9042BU-B17	R20	Includes additional hardware; return to Keysight factory



Description	Upgrade number	Requirements	Additional information
<b>Frequency</b>			
Increase frequency from 26.5 to 44 GHz	N9042BU-F13	526	Return to Keysight factory; does not include a preamp upgrade to 44 GHz. If N9042B already has P26 (preamplifier, 26.5 GHz) installed then N9042BU-P44 or N9042BU-P4L must also be ordered.
Increase frequency from 26.5 to 50 GHz	N9042BU-F14	526	Return to Keysight factory; does not include a preamp upgrade to 50 GHz. If N9042B already has P26 (preamplifier, 26.5 GHz) installed then N9042BU-P44 or N9042BU-P4L must also be ordered.
Increase frequency from 44 to 50 GHz	N9042BU-F15	544	Return to Keysight factory; includes preamp upgrade to 50 GHz.
<b>Preamplifiers</b>			
Add preamplifier, 26.5 GHz	N9042BU-P26	526	License key only
Add preamplifier, 44 GHz	N9042BU-P44	544	License key only
Add preamplifier, 44 GHz, basic	N9042BU-P4L	544	License key only
Add preamplifier, 50 GHz	N9042BU-P50	550	License key only
Add preamplifier, 50 GHz, basic	N9042BU-P5L	550	License key only
<b>Additional upgrades</b>			
ROM/CD-R/RW drive	1DVR001A	None	Enhances the usability of the Windows OS
USB Mouse	1MSE001A	None	Enhances the usability of the 89600 VSA software
Minimum Loss Pad, 50 to 75 $\Omega$ (type-N to BNC)	MLP001A	None	50 $\Omega$ type-N male to 75 $\Omega$ BNC female adapter, Frequency range: 9 MHz to 2 GHz, Input/output return loss: 20/11 dB, Insertion loss: 5.7 dB
Rack mount flange kit 265.9 mm H (6U) – two flange brackets, two standard rails	N9042B-2CM	None	Adds rack mount flanges and rails to the UXA
Rack mount flange and handle kit 265.9mm H (6U) – two brackets, handles, rails	N9042B-2CP	None	Adds rack mount flanges, rails and handles to the UXA
Adapter-coaxial, straight jack BNC plug, SMA 50 Ohm	N9042B-1RM	None	
Adapter-coaxial, tee female, BNC male, BNC female	N9042B-2RM	None	
Cable assembly-coaxial RG-58, 50-ohm, BNC male, BNC male 2 m-LG	N9042B-3RM	None	
PCIe cable, x4-x8, 2 m	N9042B-4RM	None	

Description	Upgrade number	Requirements	Additional information
Cable assembly-coaxial, 50-ohm SMA, plug SMA, plug 610 mm-LG	N9042B-5RM	None	
Cable assembly-coaxial, 50-ohm SMA, plug SMA, plug 1219 mm-LG	N9042B-6RM	None	
Cable assembly-USB a to Mini-B, 3 m	N9042B-7RM	None	
Optical data interface cable, 1 m	N9042B-8RM	None	
Optical data interface cable, 3 m	N9042B-9RM	None	
Add auxiliary log video output	N9042BU-ALV	None	License key only
Add connector Rear, Programmable IF output	N9042BU-CRP	None	License key only
Add connector, IF out, wide	N9042BU-CRW	None	License key only
Add screen video, log video and linear video	N9042BU-YAV	None	License key only
Add external mixing, wide bandwidth	N9042BU-EXW	None	License key only
Add electronic attenuator, 3.6 GHz	N9042BU-EA3	None	License key only
Add external digitizer control	N9042BU-EDC	CRW	License key only
Add 1 GHz IQ streaming	N9042BU-ST1	R10, R15, R20, or R40	Includes additional hardware; return to Keysight factory
Add 2 GHz IQ streaming	N9042BU-ST2	R20 or R40	Includes additional hardware; return to Keysight factory
Add external source control	N9042BU-ESC	None	
Add security features, exclude launching programs	N9042BU-SF1	None	License key only
Add security features, prohibit saving results	N9042BU-SF2	None	License key only
Upgrade to PCA, hex-core, high-performance processor, 32 GB RAM, with flash calibration file memory	N9042BU-PCA	PC8	Upgrade to hex-core, high-performance processor, 32 GB RAM, with flash calibration file memory and removable solid-state drive
Add additional removable solid-state drive, Win10, for PC8	N9042BU-SS2	PC8	Provides additional removable solid-state drive, with Windows 10 operating system
Add additional removable solid-state drive, Win10, for PCA	N9042BU-SS3	PCA	Provides additional removable solid-state drive, with Windows 10 operating system
Power supply upgrade, 900W	N9042BU-HW1	No G2H	Required for upgrade to N9042RTAB, N9042RTBB, N9042RTEB, N9042RTFB.
Cooling fans upgrade, low noise	N9042BU-HW2	No G2H	

# Related Resources


- N9042B UXA X-Series Signal Analyzer, Multi-touch – Data Sheet, [3121-1037EN](#)

## Confidently Covered by Keysight Services

Prevent delays caused by technical questions and reduce system downtime due to instrument maintenance and repairs with Keysight Services. Keysight Services are here to support your test needs with expert technical support, instrument repair and calibration, software support, training, alternative acquisition program options, and more.

A KeysightCare agreement provides dedicated, proactive support through a single point of contact for instruments, software, and solutions. KeysightCare covers an extensive group of instruments, application software, and solutions and ensures optimal uptime, faster response, faster access to experts, and faster resolution.

## Keysight Services

Offering	Benefits
<b>KeysightCare</b> 	KeysightCare provides elevated support for Keysight instruments and software, with access to technical support experts that respond within a specified time and ensure committed repair and calibration turnaround times (TAT). KeysightCare offers multiple service agreement tiers, including KeysightCare Assured, Enhanced, and Application Software Support. See the <a href="#">KeysightCare data sheet</a> for details.
KeysightCare Assured	KeysightCare Assured goes beyond basic warranty with repair services that include committed TAT and unlimited access to technical experts.
KeysightCare Enhanced	KeysightCare Enhanced includes all the benefits of KeysightCare Assured plus Keysight's accurate and reliable <a href="#">Calibration Services</a> , accelerated, and committed TAT, and technical response.
<b>Keysight Support Portal &amp; Knowledge Center</b>	All KeysightCare tiers include access to the Keysight Support Portal where you can manage support and service resources related to your assets such as service requests, and status, or browse the Knowledge Center.
<b>Education Services</b>	Build confidence and gain new skills to make accurate measurements, with flexible Education Services developed by Keysight experts. Including Start-up Assistance.
<b>Alternative acquisition options</b>	
<b>KeysightAccess</b>	Reduce budget challenges with a leased-based subscription service, that offers low monthly payments, enabling you to get the instruments, software, and technical support you want for your test needs.

## Recommended services

Maximize your test system up-time by securing technical support, repair, and calibration services with committed response and turnaround times. 1-year KeysightCare Assured is included in every new instrument purchase. Obtain multi-year KeysightCare upfront to eliminate the need for lengthy and tedious paperwork and yearly requests for maintenance budget. Plus, you benefit from secured service for 2, 3, or 5 years.

Service	Function
<b>KeysightCare Enhanced <sup>1</sup></b>	<b>Includes tech support, warranty and calibration</b>
R-55B-001-1	KeysightCare Enhanced – Upgrade 1 year
R-55B-001-2	KeysightCare Enhanced – Extend to 2 years
R-55B-001-3	KeysightCare Enhanced – Extend to 3 years (Recommended)
R-55B-001-5	KeysightCare Enhanced – Extend to 5 years (Recommended)
<b>KeysightCare Assured</b>	<b>Includes tech support and warranty</b>
R-55A-001-2	KeysightCare Assured – Extend to 2 years
R-55A-001-3	KeysightCare Assured – Extend to 3 years
R-55A-001-5	KeysightCare Assured – Extend to 5 years
<b>Start-Up Assistance</b>	
PS-S40-01	Included – instrument fundamentals and operations starter
PS-S40-04	Recommended – instrument fundamentals and operations starter
PS-S40-02	Optional, technology & measurement science standard learning

1. Available in select countries. For details, please view the [datasheet](#). R-55B-001-2/3/5 must be ordered with R-55B-001-1.



Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at [www.keysight.com](http://www.keysight.com).

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