Keysight Technologies
N9322C Basic Spectrum Analyzer

Configuration Guide



KEYSIGHT TECHNOLOGIES

This step-by-step process will help you determine which option numbers to specify when ordering your Keysight N9322C BSA to ensure the meets your testing needs.

Ordering Information

Description	Model number	Additional information
Basic spectrum analyzer 9 kHz to 7 GHz	N9322C	Accessories supplied as standard with each analyzer: USB cable, N-BNC adapter, BNC cable, power cord, and documentation CD-ROM

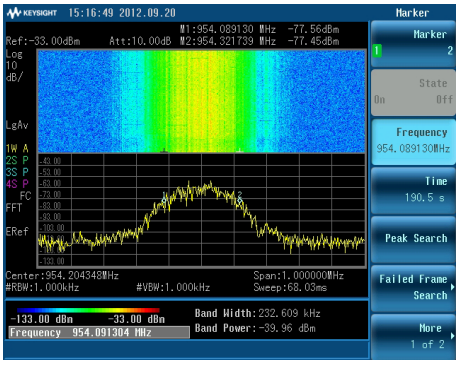
Step 1. Add performance options

Description	Option number	Additional information
Preamplifier, 7 GHz	N9322C-P07	Improves the noise floor for low-level signal detection
Precision frequency reference	N9322C-PFR	Reduces frequency drift for more accurate measurements; aging rate: ± 1 x 10^{-7}/year. Orderable only with initial purchase of the N9322C base model
Baseband input	N9322C-BB1	Optimizes DANL[1] and phase noise performance in the low frequency band for xDSL and AM/FM IBOC[2] measurements

1. DANL: Displayed average noise level
2. BOC: In-band On-channel

Step 2. Add spectrum analysis features

Description	Option number	Additional information
Time-gated spectrum analysis	N9322C-TMG	Measures any one of several signals separated in time, or excludes periodic interfering signals
Signal monitor with spectrogram record and playback	N9322C-MNT	Adds spectrogram view, record, and playback for spectrum monitoring
Channel scanner	N9322C-SCN	Provides channel power measurement of multiple channels, max. 20 channels
Task planner	N9322C-TPN	Implements customized test task that includes 20 consecutive instrument setups. Improves test efficiency for repetitive tasks. Find more information at www.keysight.com/find/taskplanner
EMI filters and quasi-peak detector	N9322C-EMC	Provides CISPR compliant resolution bandwidth (200 Hz, 9 kHz, 120 kHz and 1 MHz) and quasi-peak detector for basic EMI precompliance test.



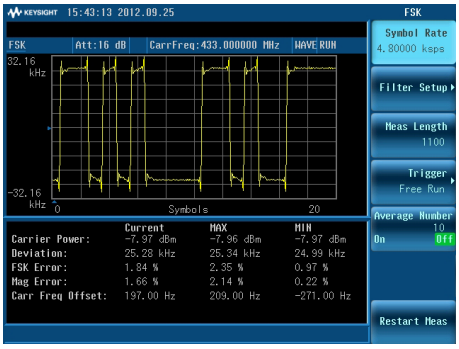
Using spectrogram for signal monitoring

Ordering Information (continued)

Step 3. Add demodulation analysis capability

Description	Option number	Additional information
AM and FM demodulation analysis	N9322C-AMA	Provides modulation metrics of an AM or FM signal: carrier power, modulation rate, AM depth, frequency deviation, SINAD[3], and carrier frequency offset
ASK and FSK demodulation analysis	N9322C-DMA	Provides modulation metrics of an ASK or FSK signal: carrier power, ASK error, depth, and index, FSK deviation, FSK error, magnitude error, and carrier frequency offset

3. SINAD: Signal-to-noise and distortion ratio



Viewing FSK demodulation metrics with option DMA

Step 4. Add stimulus-response measurement capability

Description	Option number	Additional information
Tracking generator, 7 GHz	N9322C-TG7	Provides transmission measurement of RF devices, from 5 MHz to 7 GHz. Output level from –20 dBm to 0 dBm, in 1 dB steps
Reflection measurement (requires Option TG7)	N9322C-RM7	– Provides reflection measurements including return loss, VSWR, insertion loss, and distance-to-fault – Requires the tracking generator module (Option TG7) – Recommended accessories include N9311X-201 precision mechanical calibrator (3-in-1 OSL) and N9311X-586 phase stable cable N(m) to N(f)



Using the option RM7 for reflection measurements

Step 5. Add additional features and connectivity

Description	Option number	Additional information
USB average power sensor support (U2000 Series)	N9322C-PWM	Requires the Keysight U2000 Series USB power sensor
USB peak and average power sensor support (U2020/2040 X-Series)	N9322C-PWP	Requires the Keysight U2020/2040 X-Series USB power sensor
Security features	N9322C-SEC	Includes user data sanitation and port control
GPIB interface	N9322C-G01	IEEE-488 bus connector, used in test automation systems

Ordering Information (continued)

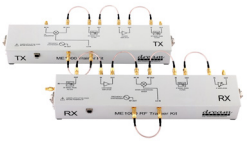
Step 6. Add optional accessories

Description	Option number	Additional information
Hard transit case	N9322C-1TC	645 x 444 x 268 mm, 13 kg nominal
Rack mount kit	N9322C-1CM	Includes a rack mount flange. Fits standard 9-inch rack and occupies three units (3U) of rack space
Rack mount and handle kit	N9322C-1CP	Includes a rack mount flange and front handle kit. Fits standard 9-inch rack and occupies 3U rack space
Precision mechanical calibrator, 3-in-1 OSL	N9311X-201	DC to 7 GHz, N (m) connector
Minimum loss pad	N9311X-548	50 to 75 Ω adapter, DC to 1 GHz
Near field probes	N9311X-100	4 pieces of H-field probes
RF training kit	Y1800A	Consists of RF transceiver and pre-written lab sheets

Looking for more N9311X series RF accessories? Visit **www.keysight.com/find/n9311x.**



N9311X-100 near field probe set



Y1800A RF training kit

Step 7. Choose localized User's Guide

Description	Option number	Additional information
English User's Guide	N9322C-ABA	
Simplified Chinese User's Guide	N9322C-AB2	
Japanese User's Guide	N9322C-ABJ	

Ordering Information (continued)

Step 9. Add calibration, technical training, support, and upgrade services

Description	Option number	Additional information
Commercial calibration certificate with test data	N9322C-UK6	Calibration certificate only available at time of instrument purchase; only provides measurement results
Select Keysight calibration plan		
3-year calibration assurance plan (return to Keysight)	R-50C-011-3	Priority calibration service covering all calibration costs for 3 years; 15% cheaper than buying stand-alone calibrations
5-year calibration assurance plan (return to Keysight)	R-50C-011-5	Priority calibration service covering all calibration costs for 5 years; 20% cheaper than buying stand-alone calibrations

Other calibration options may 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

Upgrade your existing N9322C

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

1. Place an order for the upgrade with Keysight and request to receive the software entitlement certificate through email.
2. Install the license key in the N9322C. Upgrade firmware to the latest revision if required.
3. Restart the N9322C.
4. Begin using the new capability.

Installation, calibration, and verification information is available at http://www.keysight.com/find/n9322c.

Select additional upgrades

Description	Upgrade number	Additional information
Preamplifier, 7 GHz	N9322CK-P07	
Baseband input	N9322CK-BB1	
Time-gated spectrum analysis	N9322CK-TMG	
Signal monitor with spectrogram record and playback	N9322CK-MNT	
Channel scanner	N9322CK-SCN	
Task planner	N9322CK-TPN	
AM/FM demodulation analysis	N9322CK-AMA	
ASK/FSK demodulation analysis	N9322CK-DMA	
Tracking generator, 7 GHz	N9322CK-TG7	The tracking generator requires additional hardware that is installed inside the N9322C. Upgrade at Keysight's local service center
Reflection measurement	N9322CK-RM7	
USB average power sensor support (U2000 Series)	N9322CK-PWM	
USB peak and average power sensor support	N9322CK-PWP	
Security features	N9322CK-SEC	
GPIB interface	N9322CK-G01	Requires additional hardware installed inside the N9322C
Hard transit case	N9322CK-1TC	
Rack mount kit	N9322CK-1CM	
Rack mount and handle kit	N9322CK-1CP	
English User's Guide	N9322CK-ABA	
Simplified Chinese User's Guide	N9322CK-AB2	
Japanese User's Guide	N9322CK-ABJ	
EMI filters and quasi-peak detector	N9322CK-EMC	

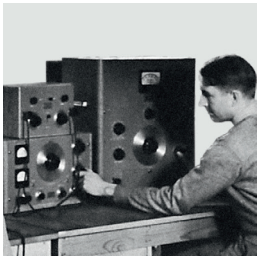
For More Information

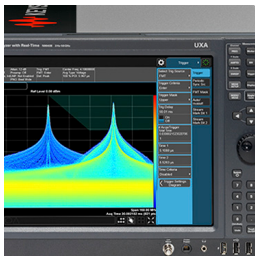
Please refer to these resources:

- *Keysight N9322C Basic Spectrum Analyzer*, Brochure, literature number 5991-1166EN.
- *Keysight N9322C Basic Spectrum Analyzer*, Data Sheet, literature number 5991-1167EN.

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For other unlisted countries:
www.keysight.com/find/contactus
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