

## Product Datasheet - Technical Specifications



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# N5166B CXG

## RF Vector Signal Generator

9 kHz – 3 or 6 GHz



# Configure Your N5166B CXG RF Vector Signal Generator

This step-by-step process will help you to configure the N5166B CXG signal generator. Choose options to meet your requirements.

N5166B CXG is an entry-level RF vector signal generator in the X-Series signal generators. For detailed specifications, refer to the [CXG signal generator data sheet \(5992-3959EN\)](#).

## Step 1. Choose frequency range

Description	Option number	Additional information
Frequency range, 9 kHz – 3 GHz	N5166B-503	Not compatible with 506
Frequency range, 9 kHz – 6 GHz	N5166B-506	Not compatible with 503

## Step 2. Choose baseband options

Description	Option number	Additional information
ARB baseband generator (60 MHz RF bandwidth, 32 MSa)	N5166B-653	
Upgrade baseband generator from 60 to 120 MHz RF bandwidth	N5166B-655	Requires 653
Upgrade baseband generator memory from 32 to 512 MSa	N5166B-022	Requires 653

## Step 3. Choose performance enhancement options

Description	Option number	Additional information
AM, FM, phase modulation	N5166B-UNT	
Narrow pulse modulation	N5166B-UNW	
Multifunction generator	N5166B-303	
Internal solid-state drive	N5166B-009	
Flexible reference input	N5166B-1ER	

## Step 4. Choose Signal Studio and embedded software

Note: The following software can be added at purchase or as an upgrade. To configure Signal Studio applications, refer to the configuration assistant at: [www.keysight.com/find/signalstudio](http://www.keysight.com/find/signalstudio). For more information on Signal Studio configuration and licenses, go to [www.keysight.com/find/SS\\_licensing](http://www.keysight.com/find/SS_licensing).

Product number	Description	Additional information
<b>Cellular communications</b>		
N7600C	Signal Studio for W-CDMA/HSPA+ <sup>1</sup>	Requires option 653
N7601C	Signal Studio for cdma2000®/1xEV-DO <sup>1</sup>	Requires option 653
N7602C	Signal Studio for GSM/EDGE/Evo <sup>1</sup>	Requires option 653
N7612C	Signal Studio for TD-SCDMA/HSPA <sup>1</sup>	Requires option 653
N7624C	Signal Studio for LTE/LTE Advanced FDD/LTE-Advanced Pro (NB-IoT/eMTC)	Requires option 653
N7625C	Signal Studio for LTE/LTE-Advanced TDD	Requires option 653
N7626C	Signal Studio for V2X	Requires option 653
N7630C	Signal Studio for Pre-5G <sup>1</sup>	Requires option 653
N7631C	Signal Studio for 5G NR	Requires option 653
<b>Wireless connectivity</b>		
N7606C	Signal Studio for Bluetooth (BR, EDR, LE 4.0, BT5)	Requires option 653
N7607C	Signal Studio for DFS Radar Profiles	Requires option 653
N7610C	Signal Studio for IoT (Internet of Things)	Requires option 653
N7617C	Signal Studio for WLAN 802.11a/b/g/j/p/n/ac/ah/ax <sup>1</sup>	Requires option 653
<b>Detection, positioning, tracking &amp; navigation</b>		
N7609C	Signal Studio for Global Navigation Satellite Systems (GNSS) <sup>1</sup>	Requires option 653
<b>General purpose</b>		
N7608C	Signal Studio for custom modulation	Requires option 653
N5180320B	Pulse train generator	Option UNW
N5180403B	Calibrated AWGN	Option 653
N5180430B	Multitone and two-tone	Option 653
N5180431B	Custom digital modulation	Option 653
N5166B 221-229	Waveform license 5-pack 1 to 9	Use option 221 to 229 to purchase up to 9-pack for 45 Signal Studio waveforms offline playback utility. Requires option 653
N5166B 250-259	Waveform license 50-pack 1 to 10	Use option 250 to 259 to purchase up to 10-pack for 500 Signal Studio waveforms offline playback utility. Requires option 653

You may also consult your nearest Keysight sales representative for more details about software license types, or refer to [Software Terms, Types and KeysightCare \(5992-3419EN\)](#) for more information.

<sup>1</sup> Only support "File Export" based waveform playback.

## Step 5. Choose accessories

Description	Option number	Additional information
Rack mount flange kit	1CM110A	
Rack mount flange kit with front handles	1CP104A	
Rack slide kit	1CR112A	
Front handle kit	1CN106A	
Front panel cover	N5180CVRB	
Hard transit case	N5180AXTB	

## Step 6. Others: Calibration option, Service options

Description	Option number	Additional information
Commercial calibration certificate with test data	N5166B-UK6	
Remote scheduled assistance 1 to 999 hours	PS-S10	
Daily productivity assistance	PS-S20	

# Upgrade Your Existing N5166B CXG

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 software entitlement certificate through email
2. Redeem the certificate through the Web by following the instructions on the certificate
3. Install the license file using Keysight License Manager
4. Begin using the new capability

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

Description	Upgrade number	Requirement	Additional information
ARB baseband generator (60 MHz RF bandwidth, 32 MSa)	N5166BU-653	None	Customer installable – software, license key
Upgrade baseband generator from 60 to 120 MHz RF BW	N5166BU-655	653	Customer installable – software, license key
Upgrade baseband generator memory from 32 to 512 MSa	N5166BU-022	653	Customer installable – software, license key
AM, FM, phase modulation	N5166BU-UNT	None	Customer installable – software, license key
Narrow pulse modulation	N5166BU-UNW	None	Customer installable – software, license key
Multifunction generator	N5166BU-303	None	Customer installable – software, license key
Internal solid-state drive	N5166BU-009	None	Customer installable – software, license key
Flexible reference input	N5166BU-1ER	None	Customer installable – software, license key
Waveform license 5-pack 1 to 9	N5166BU 221-229	653	Customer installable – software, license key
Waveform license 50-pack 1 to 10	N5166BU 250-259	653	Customer installable – software, license key

# Reference

Publication title	Publication number
N5166B CXG signal generator data sheet	5992-3959EN
N9000B CXA signal analyzer data sheet	5992-1274EN
X-Series Signal Sources Technical Overview	5990-9957EN