Keysight N5166B CXG RF Vector Signal Generator

Master the essential

IoT design and verification (DVT) engineers need to keep up with today's expanding consumer electronic market. This is same for many general-purpose radio device designers. Engineers, like yourself, need an economic and versatile test and measurement system that can handle the diverse consumer electronic devices and give the performance required to make receiver tests across several different wireless standards.

Keysight has developed N5166B CXG X-Series RF vector signal generator, that is a low-cost, multi-functional signal generation tool, used in general-purpose and educational applications.

Key specifications	
Frequency range	9 kHz – 3/6 GHz
Specified output power range	-110 to +18 dBm
Switching speed	5 ms
Phase noise (1 GHz, 20 kHz offset)	-119 dBc/Hz typical
Amplitude accuracy	±0.6 dB
Internal baseband RF BW	60 or 120 MHz
External IQ inputs RF BW	200 MHz
Baseband amplitude flatness	±0.2 dB, measured with channel correction
Baseband memory	32 MSa (standard), 512 MSa optional
External IQ RF BW	200 MHz

Key features
Continuous wave output, in Sine or Square
Step and list swept output
AM, FM, ΦM, and pulse modulations
Internal baseband generator up to 120 MHz or external IQ input
Multi-function generator (LF) Up to 7 utilities, maximum 10 MHz
Signal Studio waveform playback via 5-pack or 50-pack license on CXG

Option	Description
503	CXG RF vector signal generator, 9 kHz – 3 GHz
506	CXG RF vector signal generator, 9 kHz – 6 GHz
653	ARB baseband generator, 60 MHz, 32 MSa
655	Upgrade BBG from 60 to 120 MHz, 32 MSa
022	Upgrade BBG memory from 32 to 512 MSa
221, …229	Signal Studio Waveform playback license, 5-pack
250, …259	Signal Studio Waveform playback license, 50-pack
More information: Refer to N5166B CXG Configuration Guide	

Learn more at: www.keysight.com

Ideal market segments:

- Consumer electronics design, manufacturing and repair
- IoT device design and validation
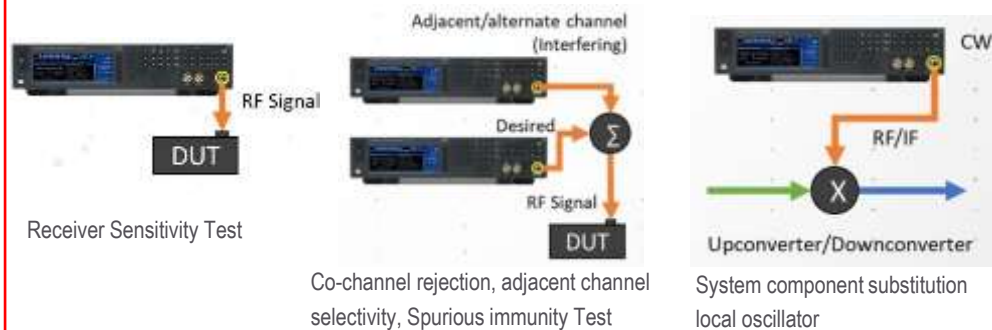- General purpose applications, including education

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CXG Front Panel Overview

Easily save and recall instrument setups from the front panel.

Transfer instrument files, licenses, and waveforms, or connect up to four Keysight USB power sensors via USB 2.0 (Type-A port).

External I/Q inputs, 200 MHz RF BW

RF output with up to 50 W reverse power protection.

Top 3 reasons: Why buy N5166B CXG

Proven Reliability	Simplified Signal Generation	Low-Cost of ownership
• Consistent with E/MXG frameworks • SCPI commands compatible with many signal sources	• Playback offline Signal Studio waveforms • Ensure designs meet latest standards	• Calibration internval and warranty period: 3-year • Target MTBF 116 khours

Measurement applications

CXG is used in Component test, System component substitution, and Receiver test, generating varieties of signals:

- Wanted signal (desired CW or modulation signals)
- Blocking signal
- Modulated interference signal

Receiver Sensitivity Test

Co-channel rejection, adjacent channel selectivity, Spurious immunity Test

System component substitution local oscillator

Also Need a Signal Analysis Solution?

Try Keysight N9000B CXA signal analyzer as a companion to your N5166B CXG signal generator!

N9000B CXA Signal Analyzer, 9 kHz – 3/7.5/13.6/26.5 GHz

N5166B CXG RF Vector Signal Generator, 9 kHz – 3/6 GHz

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