# Keysight Flexible RF Test Solutions - Deliver Reliable Internet of Things (IoT)

Smart wearable, smart building, RFID/NFC, smart energy, smart industrial control – These are all part of a booming market called Internet of Things (IoT), and they all adopt wireless connectivity such as bluetooth, Wi-Fi, ZigBee, Z-wave, Wi-SUN, WirelessHART, ASK, FSK, GFSK, etc.

RF testing of these devices plays a critical role in your success in the IoT market. You need a solution that is flexible, affordable and reliable. It also should have versatile features to provide valuable insights from product development and verification, to manufacturing and repair.

Keysight's low-cost IoT RF test solution is a mix of test products. These products help you reduce test cost and time-to-market for IoT devices – allowing you to expand your market presence with minimal investment









### 33522B waveform generator



- Signal generation solution offers the following signals
- CW, low frequency (LF) and sweep: Standard on N9310A
- Analog modulation: AM, FM, PM, and pulse modulation. Standard on N9310A
- Digital modulation: ASK, FSK, GFSK, O-QPSK, and more. Requires 33522B to input baseband I-Q data to N9310A

## N9310A RF signal generator



#### Recommended configuration

Model/Option	Description
N9310A	RF signal generator, 9 kHz to 3 GHz
N9310A-001	I/Q modulator, 20 MHz
33522B	30 MHz, dual channel waveform generator
33522B-MEM	16 M memory
33522B-IQP	I/Q baseband signal player
33522B-OCX	High-stability OCXO timebase

#### www.keysight.com/find/iotRF

www.keysight.com/find/N9310A www.keysight.com/find/N9322C www.keysight.com/find/N9000A www.keysight.com/find/33522B www.keysight.com/find/N9311X



Learn how to do IoT RF testing. Scan the QR code and download Keysight's series of application notes.

https://www.keysight.com/main/editorial.jspx?cc=US&lc=eng&ckey=2590338&id=2590338&cmpid=zzfindiotrf

#### N9320B spectrum analyzer



Spectrum analysis solution provides the following test

- Frequency and power
- RF device characteristics
- Cable and antenna
- Spur and interference
- Modulation analysis

#### N9311X-100 close field probe

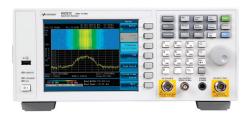


- EMI precompliance and troubleshooting solution
- Use N9320B/N9322C as basic EMI precompliance test tools and pair them with probes to troubleshoot EMI problems.

#### Recommended configuration

Model/Option	Description
N9311X-100	Close field probe set, 30 MHz to 3 GHz
85024A	High-frequency probe, 300 kHz to 3 GHz

## N9322C spectrum analyzer



#### Recommended configuration

Model/Option	Description
N9320B	Spectrum analyzer, 9 kHz to 3 GHz
N9320B-PA3	Preamplifier, 3 GHz
N9320B-TG3	Tracking generator, 3 GHz
N9320B-AMA	AM/FM modulation analysis
N9320B-DMA	ASK/FSK modulation analysis
N9322C	Spectrum analyzer, 9 kHz to 7 GHz
N9322C-PA7	Preamplifier, 7 GHz
N9322C-TG7	Tracking generator, 7 GHz
N9322C-RM7	Reflection measurement (requires option TG7)
N9322C-AMA	AM/FM modulation analysis
N9322C-DMA	ASK/FSK modulation analysis

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus.