

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9020A

The Keysight (formerly Agilent) N9020A is a mid-performance MXA signal analyzer from the X-Series, designed for RF and microwave applications in wireless communications, aerospace, and general-purpose testing. Offering frequency coverage up to 26.5 GHz and analysis bandwidths up to 160 MHz, it balances speed, performance, and flexibility. The instrument features a multi-touch capable Windows-based interface (on later revisions) and supports a wide range of standard-specific measurement applications.

SPECIFICATIONS

General

Interfaces	USB 2.0, LAN (1000Base-T), GPIB (IEEE-488), VGA, LXI Class C
Display	8.4-inch XGA (1024 x 768) color TFT LCD
Series	MXA X-Series
Internal Storage	Removable hard disk drive or solid-state drive (hardware revision dependent)
Warm-up Time	5 minutes

Physical

Power Supply	100-120 V (50/60/400 Hz), 220-240 V (50/60 Hz)
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	426 × 177 × 368 mm
Weight	16.0 kg

Frequency Specifications

Frequency Range	10 Hz to 3.6, 8.4, 13.6, or 26.5 GHz (option dependent)
Span Range	0 Hz (Zero Span), 10 Hz to maximum frequency
Sweep (Trace) Point Range	1 to 40,001

Amplitude Specifications

Measurement Range	Displayed Average Noise Level (DANL) to +30 dBm
Maximum Safe AC Input	+30 dBm (1 W)
Input Attenuator Range	0 to 70 dB
Input Attenuator Step Size	2 dB steps
Absolute Amplitude Accuracy	±0.23 dB (Typical)

Dynamic Range and Noise

Phase Noise at 10 kHz Offset	-114 dBc/Hz (at 1 GHz)
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Bandwidth Specifications

Resolution Bandwidth (RBW) Range	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8 MHz
Video Bandwidth (VBW) Range	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8 MHz
Standard Analysis Bandwidth	10 MHz
Maximum Analysis Bandwidth (Option Dependent)	160 MHz (with Option B1X)

Sweep and Triggering

Sweep Time Range (Span > 0 Hz)	1 ms to 4000 s
Sweep Time Range (Zero Span)	1 μ s to 6000 s
Trigger Source	Free Run, Video, Line, External 1, External 2, RF Burst, Periodic Timer

Demodulation and Analysis

Optional Measurement Applications	LTE, W-CDMA, GSM/EDGE, 802.11a/b/g/n/ac, Phase Noise, Noise Figure, Analog Demodulation
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Front Panel Inputs and Outputs

RF Input Impedance	50 Ω
USB Ports (Front)	2 $\times$ USB 2.0 (Type A)

Rear Panel Interfaces

Timebase Reference Input	10 MHz, BNC (female)
Timebase Reference Output	10 MHz, BNC (female)
External Trigger Input	BNC (female)
External Trigger Output	BNC (female)

Connectivity and Control

LAN Interface	1000Base-T Ethernet
GPIO (IEEE-488) Interface	Standard
LXI Compliance Level	LXI Class C
Remote Control Programming Language	SCPI

Display Specifications

Display Size	8.4 in
Display Resolution	1024 x 768

Physical Specifications

Rackmount Height (RU)	4U
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Inputs & Outputs

Maximum Continuous RF Input Power	+30 dBm (1 W)
External Display Output	VGA

Signal Analysis	
Trace Detectors	Normal, Positive Peak, Sample, Negative Peak, Log Power Average, RMS Average, Voltage Average
Options	
Preamplifier Options	3.6 GHz, 8.4 GHz, 13.6 GHz, 26.5 GHz (Options P03, P08, P13, P26)
Compliance	
EMC Compliance	IEC/EN 61326-1, CISPR 11 Group 1 Class A, EN 55011
Safety Compliance	IEC/EN 61010-1, CAN/CSA-C22.2 No. 61010-1
Performance	
Reference Level Range	-170 dBm to +30 dBm
Signal Analysis & Trace	
Number of Traces	6
Trace Functions	Clear/write, max hold, min hold, average, view, blank
Number of Markers	12
EMI Resolution Bandwidths (CISPR)	200 Hz, 9 kHz, 120 kHz, 1 MHz
MIL-STD Resolution Bandwidths	10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz
Sweep Modes	Continuous, single
TECHNOLOGY	
Signal Analyzer	
APPLICATIONS	
RF and Microwave Measurement, Wireless Communications Analysis, R&D, Manufacturing Test	

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