

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9030A-508

The Keysight N9030A-508 is a high-performance PXA signal analyzer covering a frequency range from 3 Hz to 8.4 GHz. It serves as the flagship high-performance real-time diagnostic tool in the X-Series analyzer family, delivering exceptional sensitivity, dynamic range, and analysis bandwidth for demanding RF and microwave applications.

SPECIFICATIONS

General

Interfaces	GPIO, LAN (1000Base-T), USB 2.0, LXI Class C, Digital I/O
Display	10.4-inch XGA color LCD with capacitive touchscreen
Removable Drive Security	Removable solid-state drive (SSD)
Warm-up Time	45 minutes

Physical

Power Supply	100 to 120 V AC (50/60/400 Hz), 220 to 240 V AC (50/60 Hz)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	426 mm × 177 mm × 556 mm mm
Weight	22.0 kg kg

Frequency and Time Specifications

Frequency Range	3 Hz to 8.4 GHz
Frequency Span Range	0 Hz (zero span), 10 Hz to 8.4 GHz
Aging Rate	±1 × 10 ⁻⁷ / year (standard); ±1.5 × 10 ⁻⁸ / year (with Option PFR)
Temperature Stability	±1 × 10 ⁻⁶ (standard, 0 to 55 °C); ±1.5 × 10 ⁻⁸ (with Option PFR)

Amplitude Specifications

Measurement Range	DANL to +30 dBm
Maximum RF Input Power	+30 dBm (1 W)
Attenuator Range	0 to 70 dB (in 2 dB steps)

Bandwidth and Sweep

Resolution Bandwidth (RBW) Range	1 Hz to 8 MHz (in 1, 2, 3, 5, 10 steps)
Video Bandwidth (VBW) Range	1 Hz to 8 MHz
Sweep Points Range	1 to 40001

Analysis and Real-Time Capabilities

Standard Analysis Bandwidth	25 MHz
Maximum Analysis Bandwidth	Up to 160 MHz (option dependent)

Inputs, Outputs, and Connectivity

RF Input Connector Type	Type-N (female), 50 Ω impedance
10 MHz Reference Input	BNC (female)
10 MHz Reference Output	BNC (female)

Control and Software

Operating System	Windows Embedded Standard 7
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Physical, Environmental, and Power

Power Consumption	260 W (nominal), 450 W (maximum)
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Inputs & Outputs

RF Input Impedance	50 Ω (nominal)
Input VSWR (10 dB attenuation)	1.2:1 (< 3.6 GHz), 1.5:1 (3.6 to 8.4 GHz) (nominal)
USB Interfaces	USB 2.0 Type-A (1 front, 4 rear), USB 2.0 Type-B (1 rear)
LAN Interface Speed	10/100/1000Base-T (Gigabit Ethernet)
External Display Outputs	VGA (15-pin D-Sub), DVI-I
GPIB Interface	IEEE-488 (rear panel)
Trigger Inputs	External 1, External 2 (BNC female)

Performance

Mechanical Attenuator Step Size	2 dB
Electronic Attenuator Step Size	1 dB (with Option EA3)
Preamplifier Frequency Range	100 kHz to 8.4 GHz (with Option P08)
Residual Responses	-100 dBm (200 kHz to 8.4 GHz, input terminated)
Absolute Amplitude Accuracy	± 0.19 dB (at 50 MHz reference, 10 dB attenuation)
Trace Detectors	Normal, Peak, Sample, Negative Peak, Log Power Average, RMS Average, Voltage Average
Number of Traces	6

Environmental

Storage Temperature Range	-40 to +70 °C
Operating Altitude Limit	Up to 3,048 m (10,000 feet)
Acoustic Noise Emission	45 dBA (nominal)
Shock and Vibration	MIL-PRF-28800F Class 3

Compliance

Safety Standards	Conforms to IEC 61010-1, CAN/CSA-C22.2 No. 61010-1
EMC Standards	Complies with European EMC Directive, IEC/EN 61326-1, CISPR 11 Class A

Sweep

Sweep Time Range (Span = 0 Hz)	1 μs to 6000 s
Trigger Sources	Free Run, Line, Video, External 1, External 2, RF Burst, Periodic Timer

Measurement Features

Gated Sweep Gate Methods	Sweep, FFT, Video
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Amplitude

Amplitude Resolution	0.01 dB
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TECHNOLOGY

Superheterodyne Spectrum and Signal Analysis

APPLICATIONS

RF and Microwave Signal Analysis, Aerospace and Defense, Wireless Communications, Radar and Electronic Warfare Test

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