

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9030A

The Keysight (formerly Agilent) N9030A is the first-generation PXA signal analyzer, representing the highest-performance member of the X-Series family. Designed to replace high-performance legacy analyzers like the PSA, it delivers exceptional phase noise, dynamic range, and measurement sensitivity for advanced RF and microwave test applications. The N9030A is highly configurable, with frequency options up to 50 GHz and analysis bandwidths up to 160 MHz, and supports Real-Time Spectrum Analysis (RTSA) and a wide range of measurement applications.

SPECIFICATIONS

General

Interfaces	USB 2.0, 1000Base-T LAN, GPIB
Display	8.4 inch (213 mm) diagonal XGA color LCD
Warm-up Time	5 minutes
Calibration Cycle	1 year
Display Size	8.4 inch (213 mm) diagonal
Display Resolution	1024 x 768 pixels (XGA)
Operating System	Windows Embedded Standard 7 (Windows XP on older units)
Data Storage	Removable solid-state drive (SSD)

Physical

Power Supply	100 to 120 V / 220 to 240 V, 50/60 Hz; 100 to 120 V, 400 Hz
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	426 x 177 x 556 mm
Weight	22 kg kg

Frequency Specifications

Frequency Range	3 Hz to 3.6, 8.4, 13.6, 26.5, 43, 44, or 50 GHz (configuration dependent)
Internal Reference Frequency	10 MHz
Resolution Bandwidth (RBW) Range	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8 MHz
Analysis Bandwidth (Standard)	10 MHz

Phase Noise Specifications

Phase Noise at 10 kHz Offset	-129 dBc/Hz (1 GHz center frequency)
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Amplitude and Dynamic Range

Maximum Safe Input Level (Average Total Power)	+30 dBm (1 W)
Input Attenuator Range	0 to 70 dB
Input Attenuator Step Size	2 dB steps

Sweep Specifications

Sweep Time Range (Span > 0 Hz)	1 μ s to 6000 s
Sweep Time Range (Zero Span)	1 μ s to 6000 s

Front Panel Inputs and Outputs

RF Input Impedance	50 Ω
USB Ports (Front Panel)	USB 2.0 (Type-A)

Rear Panel Inputs and Outputs

10 MHz Reference Input	BNC female
10 MHz Reference Output	BNC female

Connectivity and Interfaces

Gigabit LAN Interface	1000Base-T (RJ-45)
GPIO Interface	IEEE-488 bus connector
LXI Class Compliance	LXI Class C

Software and Measurement Capabilities

Real-Time Spectrum Analysis (RTSA) Support	Supported (Option RT1/RT2)
Vector Signal Analysis (VSA) Software Compatibility	Supported (89600 VSA Software)

Environmental and Regulatory

Storage Temperature Range	-40 $^{\circ}$ C to 70 $^{\circ}$ C
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Measurement & Sweep

Detector Types	Normal, Peak, Sample, Negative Peak, Log power average, RMS average, Voltage average
Trace Functions	Clear/write, max hold, min hold, view, blank, trace average
Trigger Sources	Free run, line, video, external 1, external 2, RF burst, periodic timer

Performance

Absolute Amplitude Accuracy	$\pm$ 0.19 dB (20 Hz to 3.6 GHz, 95th percentile)
Video Bandwidth (VBW) Range	1 Hz to 3 MHz (10% steps), plus 4, 5, 6, 8 MHz
Noise Floor Extension (NFE)	Standard feature (characterizes and removes analyzer noise)
Residual Responses	-137 dBm (nominal, 200 kHz to 8.4 GHz)

Power

Power Consumption (Maximum)	695 W (fully loaded)
Power Consumption (Standby)	70 W

Compliance

EMC Compliance	CISPR Pub 11 Group 1, class A; AS/NZS CISPR 11; ICES/NMB-001
Safety Compliance	IEC 61010-1, CSA C22.2 No. 61010-1, UL 61010-1

Options & Configuration

Preamplifier Options	3.6 GHz, 8.4 GHz, 13.6 GHz, 26.5 GHz, 43 GHz, 44 GHz, or 50 GHz (dependent on maximum frequency option)
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Frequency

Available Frequency Options	3.6 / 8.4 / 13.6 / 26.5 / 43 / 44 / 50 GHz (Options 503, 508, 513, 526, 543, 544, 550)
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Inputs & Outputs

Probe Power Connector	+15 VDC, -12.6 VDC at 150 mA maximum (front panel)
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TECHNOLOGY

Signal/Spectrum Analysis

APPLICATIONS

Aerospace, Defense, Commercial Communications, and General Purpose RF/Microwave Test

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