

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N9951A

The Keysight N9951A is a member of the FieldFox family of handheld microwave analyzers, operating up to 44 GHz. It serves as a highly integrated handheld solution that can be configured as a cable and antenna analyzer, vector network analyzer, spectrum analyzer, and more, offering laboratory-grade performance in a rugged, portable form factor designed for field use.

SPECIFICATIONS

General

Display	6.5-inch transfective color LCD (640 x 480 pixels)
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Physical

Power Supply	15 VDC (external AC to DC adapter, 100 to 240 VAC, 50 to 60 Hz input; 10.8 V, 4.6 Ah Lithium-Ion battery)
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Operating Temperature	-10 to 55 °C °C
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Dimensions (W×H×D)	292 mm x 188 mm x 72 mm mm
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Weight	3.2 kg kg
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RF Specifications

Cable and Antenna Analyzer (CAT) Frequency Range	300 kHz to 44 GHz
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Vector Network Analyzer (VNA) Frequency Range	300 kHz to 44 GHz
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Spectrum Analyzer Frequency Range (Option 233)	9 kHz to 44 GHz
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Aging Rate	±1 ppm/year
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Frequency Temperature Stability	±0.5 ppm (-10 °C to 55 °C)
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Vector Network Analyzer

VNA System Dynamic Range (300 kHz to 9 GHz)	110 dB (typical)
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VNA System Dynamic Range (9 GHz to 26.5 GHz)	100 dB (typical)
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Cable and Antenna Analyzer

CAT Sweep Resolution	101 to 10001 points
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CAT Measurements	Distance-to-Fault, Return Loss, Cable Loss, VSWR, 1-Port Cable Loss
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Spectrum Analyzer

SA Resolution Bandwidth (RBW) Range	10 Hz to 5 MHz (in 1-3-10 sequence)
SA Video Bandwidth (VBW) Range	1 Hz to 5 MHz
SA DANL (preamp off, 2 GHz)	-145 dBm/Hz (typical)
SA Phase Noise (10 kHz offset at 1 GHz)	-111 dBc/Hz (typical)
RF Input Attenuation Range (Option 233)	0 to 40 dB (in 5 dB steps)
Preamplifier Frequency Range (Option 235)	100 kHz to 44 GHz

Physical & Environmental

Test Port Connectors	2.4 mm male
IP Rating	IP53
MIL-SPEC Compliance	MIL-PRF-28800F Class 2
Storage Temperature Range	-51 °C to 71 °C
Operating Humidity	95% relative humidity at 40 °C

Power Specifications

Battery Operational Time	4 hours (typical)
Battery Charge Time	4 hours (100% charge, unit off)

Cable and Antenna Analyzer (CAT)

CAT Sweep Points	101, 201, 401, 601, 801, 1001, 1601, 4001, 10001 (user selectable)
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Vector Network Analyzer (Option 210)

VNA Sweep Points	101, 201, 401, 601, 801, 1001, 1601, 4001, 10001 (user selectable)
VNA S-Parameters	S11, S21, S12, S22 (Option 210)

Spectrum Analyzer (Option 233)

SA DANL (preamp on, 2 GHz)	-163 dBm/Hz (typical)
SA Third-Order Intercept (TOI)	+15 dBm (nominal, at 2.4 GHz)
SA Phase Noise (100 kHz offset at 1 GHz)	-110 dBc/Hz (typical)

Real-Time Spectrum Analyzer (Option 350)

RTSA Bandwidth	10 MHz (Option 350)
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I/Q Analyzer (Option 351)

I/Q Analyzer Bandwidth	10 MHz (Option 351)
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GPS Receiver (Option 330)

GPS Position Accuracy	< 2.5 m (typical, CEP 50%)
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Inputs & Outputs

External Trigger Input Connector	BNC, female
External Reference Input Connector	BNC, female, 10 MHz
Reference Output Connector	BNC, female, 10 MHz

RF Input & Power Handling

Maximum Input Power (Port 1/2)	+27 dBm (0.5 W)
Maximum DC Input Voltage	±40 VDC

Vector Voltmeter

Vector Voltmeter Frequency Range (Option 308)	300 kHz to 44 GHz
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Power Meter

Built-In Power Meter Frequency Range (Option 310)	9 kHz to 44 GHz
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Storage & Interfaces

Internal Storage	4 GB
External Storage Type	SD/SDHC card, USB Flash Drive
USB Host Ports	2 x USB 2.0 Type-A
LAN Interface Port	100Base-T RJ-45

Power Supply

AC Adapter Input	100 to 240 VAC, 50 to 60 Hz
AC Adapter Output	15 VDC, 4.0 A
Battery Specification	Lithium-ion, 10.8 V, 4.6 Ah, 50 Wh

TECHNOLOGY

Handheld Microwave Analyzer

APPLICATIONS

RF and Microwave Field Testing

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