

VECTOR NETWORK ANALYSIS WITH PERFORMANCE AND ACCURACY THAT STANDS OUT - RAPID AND ROBUST AT AN UNRIVALED VALUE.

Signal Hound's VNA400 is a high-performance, 40 GHz, two-port vector network analyzer. It is USB-powered and boasts a dynamic range of up to 132 dB. This VNA is optimized for data-rich, system-level analysis. This versatile unit is powered from a Thunderbolt 3/4 port or USB-C port rated at 15 watts or higher and draws less than 15 watts. The VNA400 fully-featured software suite is included with this powerful test and measurement device. Perform industry standard measurements with ease, in the lab, the manufacturing facility, or out in the field.

APPLICATIONS

- Cable Testing
- Antenna Testing
- Return Loss/VSWR Measurements
- Filter Tuning
- Insertion Loss Measurements
- Field Use Through Ka Band
- Electrical Length Measurements
- SMT Component Evaluation
- Impedance Measurements
- Group Delay Measurements
- Amplifier Testing

FEATURES

- Frequency Range from 40 MHz to 40 GHz
- USB-Powered
- Full Automation Through SCPI
- Sub-Hz Resolution
- Frequency and Time Domain Measurements
- Dynamic Range Up to 132 dB



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VNA400 Vector Network Analyzer

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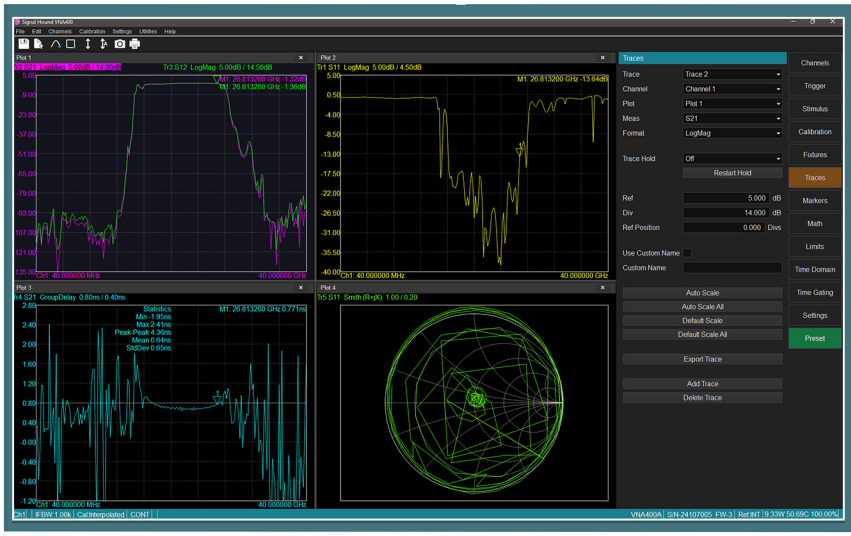
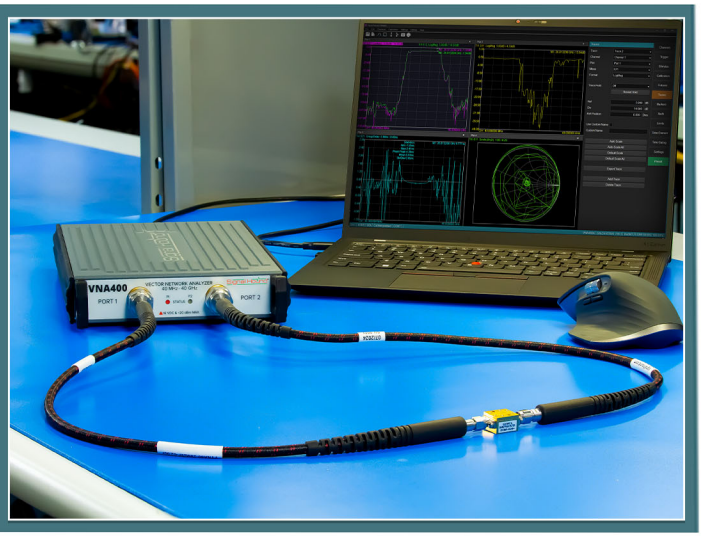
Preliminary Specifications

Frequency Range	40 MHz to 40 GHz
Dynamic Range at BW (Typ) 100 Hz BW Isolation Off Max Power to Noise Floor	• -132 dB from 100 MHz to 2 GHz • -125 dB from 2 GHz to 8 GHz • -117 dB from 10 GHz to 32 GHz • -110 dB Up to 40 GHz
Frequency Accuracy	+/- 1 ppm
Frequency Resolution	sub-Hz
Measurement Bandwidth	10 Hz - 100 kHz
Number of Measurement Points	1-64001
Output Power Range (Typ)	-30 to +0 dBm
Output Power Resolution	1 dB
Measurement Speed (201 pts)	• 1-port: 80 ms • 2-port: 320 ms
Trace noise magnitude (IFBW 1 kHz)	0.004 dB RMS (0.0015 Typ)
Corrected System Performance (Typ) Using Maury 8770CK	• Directivity < 24 GHz: < -42 dB ≥ 24 GHz: < -39 dB • Source Match < 24 GHz: < -37 dB ≥ 24 GHz: < -34 dB • Load Match < 24 GHz: < -42 dB ≥ 24 GHz: < -40 dB
Absolute Maximum	±16 VDC, +20 dBm Peak RF Input, ±1.0 kV HBM (Typ)
Test Port Connector	NMD 2.92 mm, male • 50 Ohm
Number of Test Ports	2
Operating Temperature	• Standard -4°F to 122°F (-20°C to +50°C)
Size and Weight	• 11.2” x 6.8” x 1.5” (284mm x 172mm x 38mm) • 4.5 lbs. (2.04 kg)
Power Consumption	• 5 VDC 15 Watts (max)
Interface	USB Type C • Thunderbolt 3/4 Recommended
System Requirements	Windows or Linux Operating System, x64_86 architecture

Signal Hound’s PC-Based VNA Software





Ordering Options
Standard, No D Rings
Option 20, D Rings • 11.4” x 7.0” x 1.5” (290mm x 172mm x 38mm) • 4.5 lbs. (2.04 kg)
Option 21, D Rings, No Rails, Rack Mount Ready • 11.4” x 6.5” x 1.5” (290mm x 165mm x 38mm) • 4.5 lbs. (2.04 kg)