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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N4416A

Keysight N4416A Balanced Measurement S-parameter Test Set 300 kHz to 6 GHz The Agilent/Keysight N4416A is a four-port S-parameter test set for balanced and balanced-to-single-ended measurements from 300 kHz to 6 GHz when combined with a compatible VNA, GPIB PC, and N4425A or N1930A software. Differential RF component characterization, balun and balanced filter test, high-speed interconnect S-parameters. Mixed-mode and single-ended S-parameter display via system software The Agilent/Keysight N4416A is a four-port S-parameter test set for balanced and balanced-to-single-ended measurements from 300 kHz to 6 GHz when combined with a compatible VNA, GPIB PC, and N4425A or N1930A software. Differential RF component characterization, balun and balanced filter test, high-speed interconnect S-parameters. Mixed-mode and single-ended S-parameter display via system software N4430A ECal supported automatic calibrations



MODEL

**Agilent / Keysight
N4416A**

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4416A

LISTING

<https://aumictechlabs.com/products/n4416a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight N4416A is a balanced measurement S-parameter test set engineered for use with Keysight PNA Series Vector Network Analyzers to characterize RF and microwave components across 300 kHz to 6 GHz. It enables measurement of single-ended and mixed-mode S-parameters, making it suitable for analyzing balanced or balanced-to-single-ended RF components and high-speed digital interconnects. Technical Specifications Frequency Range: 300 kHz to 6 GHz Measurement Parameters: Single-ended and mixed-mode S-parameters Error Correction: Full four-port vector error correction Data

Renormalization: Support for non-50-ohm device impedance

Key Features

- Automatic calibration with the optional N4430A four-port electronic calibration (ECal) module
- User-defined parameter displays for custom calculations
- Time-domain analysis capability
- Fast, accurate calibration procedures

Typical Applications

- Characterization of balanced RF and microwave components
- Mixed-mode S-parameter measurement of balanced-to-single-ended devices
- High-speed digital interconnect analysis
- Non-50-ohm device impedance characterization

Compatibility & Integration

The N4416A integrates with Keysight PNA Series VNAs - specifically the E8356A, E8357A, or E8358A with Option 015 - and requires an external PC with IEEE-488 GPIB connectivity. Operation requires either the N4425A Balanced Measurement System software or the N1930A Physical Layer Test System software for control, calibration, data display, and analysis. The test set supports the N4430A four-port electronic calibration module for streamlined calibration workflows. Note: This product is obsolete. The N4416A test set itself is not subject to calibration testing; performance characteristics are factory-verified. Functional testing can validate proper operation of all microwave components within the test set.

N4416A Characteristics / Specifications

PARAMETER	VALUE
Model	N4416A
Instrument Type	Balanced measurement S-parameter test set
Frequency Range Minimum	300 kHz
Frequency Range Maximum	6 GHz
Test Ports	4
Connector Type	compatible test-port cables Option B20
Measurement Modes	single-ended and mixed mode S-parameters
Error Correction	full four-port vector error correction
Ecal Compatibility	N4430A four-port ECal module
Control Software N4425A	Balanced Measurement System software
Control Software N1930A	Physical Layer Test System software
External Pc Requirement	IEEE-488 GPIB equipped PC
Compatible Vna Example	PNA E8356A E8357A E8358A Option 015
Renormalization	non-50-ohm device re-normalization supported in system software
Time Domain	time domain analysis option in system software
User Defined Displays	powerful user-defined parameter displays
Dut Examples	differential filters amplifiers baluns balanced transmission lines
System Role	key component of Agilent balanced-measurement system
Calibration Note	factory performance characteristics not field calibrated asastandalone unit
Functional Verification	microwave component functional test verifies proper performance
Port Configuration	four-port S-parameter test set
Interface To Analyzer	works with specified VNA option configurations for balanced measurements
Physical Layer Use	high-speed digital interconnect characterization on PLTS capable systems
Mixed Mode Parameters	displays conventional and mixed-mode S-parameters

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

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Notes

Frequency span, port count, connector, software, and system capabilities from Agilent/Keysight N4416A balanced-measurement S-parameter test set product literature (N441x family). Fine microwave limits are factory characteristics.

Ordering Information

OPTION	DESCRIPTION
Option 015	Renormalization: non-50-ohm device re-normalization supported in system software

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.
Request a quote: sales@aumictech.com · +1 (484) 841-9341

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.