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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N4414A

Keysight N4414A Balanced Measurement S-parameter Test Set 300 kHz to 6 GHz The Agilent/Keysight N4414A 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 N4414A 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
N4414A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4414A

LISTING

<https://aumictechlabs.com/products/n4414a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight N4414A is a 4-port S-parameter test set engineered for balanced measurements of devices that challenge conventional two-port characterization. It is the measurement front-end in balanced-measurement systems, delivering full four-port vector error correction for high-accuracy testing of differential filters, amplifiers, baluns, and balanced transmission lines. Operation requires control software - either the N4425A Balanced

Measurement System or N1930A Physical Layer Test System - along with a compatible Keysight Vector Network Analyzer. The test set processes both conventional (single-ended) and mixed-mode S-parameters, enabling re-normalization for non-50-ohm device characterization. Electronic calibration modules (such as the N4430A) provide fast, automatic calibrations with traceability to NIST standards through fully verifiable electronic calibration data stored in ECal module memory. Technical Specifications Frequency range: 300 kHz to 6 GHz Port configuration: 4-port Reference impedance: 50 Ω Measurement modes: Single-ended and mixed-mode S-parameters Error correction: Full four-port vector error correction Data re-normalization: Non-50-ohm device support Time domain analysis: Available as option Key Features Four-port vector error correction for high measurement accuracy User-defined display functions for parameter calculation and analysis Electronic calibration with NIST-traceable standards Factory calibration accuracy transferred directly to network analyzer Unique S-parameter data retained in ECal module memory for permanent error-term reference Typical Applications Differential filter characterization Balanced amplifier measurement Balun performance testing Balanced transmission line analysis Mixed-mode S-parameter extraction Compatibility & Integration Control: Keysight Vector Network Analyzers or host PC via software Software platforms: N4425A Balanced Measurement System; N1930A Physical Layer Test System System integration: Part of Keysight N44xxA Multiport Test Systems

N4414A Characteristics / Specifications

PARAMETER	VALUE
Model	N4414A
Instrument Type	Balanced measurement S-parameter test set
Frequency Range Minimum	300 kHz
Frequency Range Maximum	6 GHz
Test Ports	4
Connector Type	SMA
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	8753/PNA class balanced systems
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

PARAMETER	VALUE
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 N4414A balanced-measurement S-parameter test set product literature (N441x family). Frequency span listed as 300 kHz to 6 GHz on N441x balanced test-set family product listings; fine microwave limits are factory characteristics.

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

Aumictech

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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.