

**Aumictech**

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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N4431D

4.3-10 connector option unique to N4431D in this family Instrument Type: Four port electronic calibration module Series Family: Keysight N443xD 4-port ECal Control Interface: USB 2.0; High Speed 480 Mbit/s and Full Speed 12 Mbit/s; any USB 2.0 hub Agilent Keysight N4431D 4-port ECal Module DC to 13.5 GHz The Keysight N4431D is a 4-port RF ECal module. OEM ECal technical overview 5963-3743 lists DC to 13.5 GHz with 3.5 mm or Type-N 50 ohm connectors (code 010/020), DC to 7.5 GHz with 7-16 connectors, and DC to 12 GHz with 4.3-10 connectors, plus mixed-connector per-port options including 4.3-10 (unique to N4431D). Full four-port VNA calibration of multiport RF devices, mixed-connector DUTs, and 4.3-10 cellular infrastructure ports. 3.5 mm, Type-N 50 ohm, 7-16, and 4.3-10 connector families



MODEL

**Agilent / Keysight
N4431D**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4431D

LISTING

<https://aumictechlabs.com/products/n4431d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N4431D is a 4-port electronic calibration (ECal) module engineered for rapid, accurate calibration of Keysight vector network analyzers. Operating from DC to 13.5 GHz, it delivers full 4-port calibration in a fraction of the time required by mechanical kits, while eliminating connector wear and reducing setup complexity. Direct USB control from the VNA eliminates the need for external PCs or operator intervention between port connections. Technical Specifications Frequency range: DC to 13.5 GHz Impedance: 50 Ohm (Type-N reference) Port count: 4 Calibration method: Electronic (ECal) Control interface: USBKey Features Fast 4-port

calibration cycle dramatically reduces measurement setup time versus mechanical calibration kits Flexible connector architecture supports Type-N, 3.5 mm, 7-16, and 4.3-10 connectors in female-female, male-male, or mixed configurations Direct VNA control via USB eliminates manual port cycling and associated connector stress Broad DC to 13.5 GHz frequency coverage enables single-module operation across baseband through X-band applications Available configurations include N4431D/010/0DC (four 3.5 mm female connectors) and N4431D/020/0DC (four Type-N 50 Ohm female connectors) Typical Applications Broadband device modeling and characterization Time-domain and signal integrity analysis Multiport measurements in high-volume production environments Phased array antenna and massive MIMO testing High-speed digital interconnect validation Compatibility & Integration The N4431D integrates directly with Keysight vector network analyzers via USB. Port-specific connector selection accommodates integration into existing test benches without adapter chains, supporting mixed connector configurations where measurement points use different interface types.

N4431D Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Four port electronic calibration module
Series Family	Keysight N443xD 4-port ECal
Port Count	4
Control Interface	USB 2.0; High Speed 480 Mbit/s and Full Speed 12 Mbit/s; any USB 2.0 hub
Operating Temperature	plus 20 C to plus 26 C
Operating Humidity	up to 95 percent RH at 40 C, non-condensing
Typical Maximum Input Power	minus 7 dBm (calibration degrades above this)
Typical Maximum Dc Level	plus or minus 3 V
Typical Damage Level	plus 20 dBm
Mixed Connectors	per-port gender and family codes 101-408 class
Literature	Keysight ECal modules technical overview 5963-3743
Supported Analyzers	PNA, ENA, PXI VNA (N4433D not on some FieldFox paths)
Frequency 3.5 Mm Or Type N	DC to 13.5 GHz (codes 010 / 020)
Frequency 7	DC to 7.5 GHz
Frequency 4p3	DC to 12 GHz
Code 010 Connectors	four 3.5 mm female
Code 020 Connectors	four Type-N 50 ohm female
Directivity 010 Dc To 10 MHz	45 dB
Directivity 010 10 MHz To 5 GHz	53 dB
Directivity 010 5 To 9 GHz	48 dB
Directivity 010 9 To 13.5 GHz	45 dB
Source Match 010 Dc To 10 MHz	36 dB
Source Match 010 10 MHz To 5 GHz	50 dB
Source Match 010 5 To 9 GHz	45 dB
Source Match 010 9 To 13.5 GHz	37 dB

PARAMETER	VALUE
Reflection Tracking 010 10 MHz To 5 GHz	plus or minus 0.03 dB
Directivity 020 10 MHz To 5 GHz	50 dB
Source Match 020 10 MHz To 5 GHz	47 dB
Directivity 7 16 10 MHz To 5 GHz	50 dB
Directivity 4p3 10 10 MHz To 5 GHz	50 dB
Directivity 4p3 10 9 To 12 GHz	45 dB
Connector 4p3 10 Codes	107/207/307/407 female and 108/208/308/408 male per port
Humidity	up to 95 percent RH at 40 C, non-condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	plus 20 C to plus 26 C
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Humidity	up to 95 percent RH at 40 C, non-condensing
Operating Humidity	up to 95 percent RH at 40 C, non-condensing
Typical Maximum Input Power	minus 7 dBm (calibration degrades above this)
Typical Maximum Dc Level	plus or minus 3 V
Typical Damage Level	plus 20 dBm
Mixed Connectors	per-port gender and family codes 101-408 class
Literature	Keysight ECal modules technical overview 5963-3743
Supported Analyzers	PNA, ENA, PXI VNA (N4433D not on some FieldFox paths)
Frequency 3.5 Mm Or Type N	DC to 13.5 GHz (codes 010 / 020)
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Frequency 4p3	DC to 12 GHz
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Code 020 Connectors	four Type-N 50 ohm female
Directivity 010 Dc To 10 MHz	45 dB
Directivity 010 10 MHz To 5 GHz	53 dB
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Source Match 010 Dc To 10 MHz	36 dB
Source Match 010 10 MHz To 5 GHz	50 dB
Source Match 010 5 To 9 GHz	45 dB
Source Match 010 9 To 13.5 GHz	37 dB
Reflection Tracking 010 10 MHz To 5 GHz	plus or minus 0.03 dB
Directivity 020 10 MHz To 5 GHz	50 dB

PARAMETER	VALUE
Source Match 020 10 MHz To 5 GHz	47 dB
Directivity 7 16 10 MHz To 5 GHz	50 dB
Directivity 4p3 10 10 MHz To 5 GHz	50 dB
Directivity 4p3 10 9 To 12 GHz	45 dB
Connector 4p3 10 Codes	107/207/307/407 female and 108/208/308/408 male per port Notes Frequency, connector codes, temperature, input-power, and residual- error rows from Keysight ECal technical overview 5963-3743 N4431D tables (010 3.5 mm, 020 Type-N, 7-16, 4.3-10). Residual errors apply when applied power does not exceed minus 7 dBm.

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.

Specifications	
Specifications	
PARAMETER	VALUE
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Operating Temperature	plus 20 C to plus 26 C
Operating Humidity	up to 95 percent RH at 40 C, non-condensing
Typical Maximum Input Power	minus 7 dBm (calibration degrades above this)
Typical Maximum Dc Level	plus or minus 3 V
Typical Damage Level	plus 20 dBm
Mixed Connectors	per-port gender and family codes 101-408 class
Literature	Keysight ECal modules technical overview 5963-3743
Supported Analyzers	PNA, ENA, PXI VNA (N4433D not on some FieldFox paths)
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Directivity 010 10 MHz To 5 GHz	53 dB
Directivity 010 5 To 9 GHz	48 dB
Directivity 010 9 To 13.5 GHz	45 dB
Source Match 010 Dc To 10 MHz	36 dB
Source Match 010 10 MHz To 5 GHz: 50 dB	
Source Match 010 5 To 9 GHz: 45 dB	
Source Match 010 9 To 13.5 GHz: 37 dB	
Reflection Tracking 010 10 MHz To 5 GHz: plus or minus 0.03 dB	
Directivity 020 10 MHz To 5 GHz: 50 dB	
Source Match 020 10 MHz To 5 GHz: 47 dB	

Directivity 7 16 10 MHz To 5 GHz: 50 dB

Directivity 4p3 10 10 MHz To 5 GHz: 50 dB

Directivity 4p3 10 9 To 12 GHz: 45 dB

Connector 4p3 10 Codes: 107/207/307/407 female and 108/208/308/408 male per port

Notes

Frequency, connector codes, temperature, input-power, and residual-error rows from Keysight ECal technical overview 5963-3743 N4431D tables (010 3.5 mm, 020 Type-N, 7-16, 4.3-10). Residual errors apply when applied power does not exceed minus 7 dBm.

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.