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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N5102 Optical Modulation Analyzer Software

Agilent Keysight N5102 Baseband Studio Digital Signal Interface Module The Agilent/Keysight N5102 (N5102A) Baseband Studio digital signal interface module delivers digital IQ or IF test signals from an ESG/PSG/X-Series vector signal generator or N5101A PCI card to a DUT. OEM N5102A installation guide lists output mode and input mode, 2.5 V and 3.3 V logic, a 3 m proprietary digital cable, and break-out boards that avoid custom fixtures. Early digital testing of ASICs, transceivers, and baseband subsystems with the same waveform later modulated onto RF; W-CDMA, 1xEV-DV, WLAN, and multitone at the bit level. The Agilent/Keysight N5102 (N5102A) Baseband Studio digital signal interface module delivers digital IQ or IF test signals from an ESG/PSG/X-Series vector signal generator or N5101A PCI card to a DUT. OEM N5102A installation guide lists output mode and input mode, 2.5 V and 3.3 V logic, a 3 m proprietary digital cable, and break-out boards that avoid custom fixtures. Early digital testing of ASICs, transceivers, and baseband subsystems with the same waveform later modulated onto RF; W-CDMA, 1xEV-DV, WLAN, and multitone at the bit level.



MODEL

**Agilent / Keysight
N5102**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5102

LISTING

<https://aumictechlabs.com/products/n5102-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight N5102 provides the capability to generate a wide array of baseband signals and emulate realistic channel conditions. Its flexible architecture allows for customization of signal parameters, thoroughly evaluate the performance of their designs under various operating scenarios. It is widely used in research, development, and manufacturing environments.

N5102 Characteristics / Specifications

PARAMETER	VALUE
Model	N5102
Instrument Type	Baseband Studio digital signal interface module
Series Family	Agilent N5100 Baseband Studio
Output Mode	user interface on ESG/PSG/X-Series
Input Mode	supported per N5102A installation guide
Host Generators	ESG, PSG, X-Series N5182B/N5172B
Alternate Host	N5101A PCI card inaPC
Logic Levels	2.5 V and 3.3 V (mode-dependent per installation guide)
Digital Cable Length	3 m proprietary digital cable to the signal generator
Connectors	break-out boards supplied for DUT connection
Data Types	digital IQ or IF test signals
Formats Class	W-CDMA, multitone, 1xEV-DV, WLAN and other ESG/PSG formats at bit level
Gps Format	Real Time GPS format not supported on N5102A
Control Ui On Generator	softkey operation for modulation format and interface module
Control Ui On Pci	N5110B Baseband Studio waveform capture and playback
Form Factor	external interface module
Purpose	eliminate custom digital fixtures in most cases
Correlation Test	identical baseband data available as RF modulation on the host generator
Documentation	Keysight N5102A Baseband Studio Digital Signal Interface Module installation guide 9018-05118
Signaling	DUT clock, data, and signaling configurable per device requirements
Application Stage	pre-RF digital subsystem test then RF integration test
Interface Standard	Baseband Studio digital interface
Power	powered as specified in the N5102A installation guide

PARAMETER	VALUE
Operating Mode Limit	output-mode logic limited to 2.5 V and 3.3 V per the installation guide

N5102 Specifications

PARAMETER	VALUE
Key Features	Connects to ESG/PSG/MXG/X-Series or N5101A PCI card
Digital IQ or IF to the device under test	Selectable logic types and break-out connectors
Technical Specifications	Model: N5102

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	
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Notes

From Keysight N5102A Baseband Studio Digital Signal Interface Module installation guide. Clock-rate and bit-width numeric tables are in the N5102A specifications/configuration guide for the connected generator. Queue slug N5102 maps this file.

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.