

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N5102A Baseband Studio Digital Signal Interface Module

Agilent Keysight N5102A Baseband Studio Digital Signal Interface Module The Agilent/Keysight 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 Option 003 output mode and Option 004 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 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 Option 003 output mode and Option 004 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
N5102A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5102A

LISTING

<https://aumictechlabs.com/products/n5102a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight N5102A baseband signal generator is engineered for creating complex waveforms and simulating a variety of signals. It enables precise control over signal characteristics, which is essential for testing modern communication systems and electronic devices. Key capabilities include high-speed arbitrary waveform generation, allowing users to define custom waveforms, and real-time signal processing for dynamic signal simulation. This instrument supports a wide range of applications, including wireless communication, aerospace, and defense. Its flexibility and accuracy make it a valuable tool for research, development, and manufacturing environments.

N5102A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Baseband Studio digital signal interface module
Series Family	Agilent N5100 Baseband Studio
Host Generators	ESG, PSG, X-Series N5182B/N5172B
Alternate Host	N5101A PCI card in a PC
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
Operating Mode Limit	output-mode logic limited to 2.5 V and 3.3 V per the installation guide

N5102A 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	Instrument Type: Baseband Studio digital signal interface module

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

Instrument Type: Baseband Studio digital signal interface module

Series Family: Agilent N5100 Baseband Studio

Option 003: output mode (N5102A user interface on ESG/PSG/X-Series)

Option 004: input mode

Specifications

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

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; do not invent sample-rate limits here.

Ordering Information

OPTION	DESCRIPTION
Option 003	output mode and Option 004 input mode, 2.5 V and 3.3 V logic, a 3 m proprietary digital cable, and break-out boards that avoid custom fixtures.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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