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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N2101B

HP Agilent Keysight N2101B PXIT 10.3125 Gb/s Bit Error Ratio Tester The Agilent/Keysight N2101B is a three-slot PXIT BERT with clock source, pattern generator, and error detector on one PXI card. OEM PXIT listings specify automatic BER analysis at 10 internal rates from 155 Mb/s to 8.5 Gb/s, and any rate to 10.3125 Gb/s with an N2099A synthesizer. External clock input is 500 MHz to 10.3125 GHz. External mode covers 500 Mb/s to 10.3125 Gb/s (re-timed recommended to 8.5 Gb/s; direct 8.5 to 10.3125 Gb/s). User patterns to 2048 bits. Single-ended output 250 mV to 1 V. Differential input 50 mV to 2 V. Connectors are PXI-1, PXI-H, and PCI. Drivers include IVI-COM, IVI-C, LabVIEW, and MATLAB. The Agilent/Keysight N2101B is a three-slot PXIT BERT with clock source, pattern generator, and error detector on one PXI card. OEM PXIT listings specify automatic BER analysis at 10 internal rates from 155 Mb/s to 8.5 Gb/s, and any rate to 10.3125 Gb/s with an N2099A synthesizer. External clock input is 500 MHz to 10.3125 GHz. External mode covers 500 Mb/s to 10.3125 Gb/s (re-timed recommended to 8.5 Gb/s; direct 8.5 to 10.3125 Gb/s). User patterns to 2048 bits. Single-ended output 250 mV to 1 V. Differential input 50 mV to 2 V. Connectors are PXI-1, PXI-H, and PCI. Drivers include IVI-COM, IVI-C, LabVIEW, and MATLAB. Optical transceiver and serial-link BER, bathtub, and error-injection tests in aPX



MODEL

**Agilent / Keysight
N2101B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N2101B

LISTING

<https://aumictechlabs.com/products/n2101b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight N2101B is a 3-slot wide PXI module that integrates a high-accuracy clock source, data pattern generator, and error detector to function as a 10.3125 Gb/s Bit Error Ratio Tester (BERT). It performs automated bit error ratio analysis for device characterization and quality assessment, delivering BERT functionality in a form factor significantly smaller than conventional benchtop instruments.

Technical Specifications

Data Rates 10 standard internal rates: 155 Mb/s to 8.5 Gb/s Supports any rate up to 10.3125 Gb/s when used with external synthesizer (e.g., Keysight N2099A)

Data Patterns PRBS patterns: $2^n - 1$ where $n = 7, 9, 11, 15, 23, 31$ K28.5, K28.7, and CR patterns User-defined patterns: up to 2048 bits maximum, or 16 Kbytes if pattern length is integer multiple of 64 bits

Signal Interface Differential data generation and analysis AC coupled signals with 50-ohm termination (unless otherwise specified)

Measurement Capabilities Bit error ratio analysis and bit error display over time Automatic clock and data alignment Jitter Bathtub display and analysis Eye opening measurement and extrapolation to defined error rates Error injection: single error or error rate injection modes

Key Features Integrated pattern generation, clock synthesis, and error detection reduce component count and system complexity PXI form factor enables integration into modular test platforms Supports multiple BERT modules within single PXI chassis for parallel or multi-channel testing

Typical Applications High-speed serial link characterization and validation Device quality assessment across telecommunications and datacom standards Jitter analysis and eye diagram measurements

Compatibility & Integration

Platform Support PXI-1, PXI-H, and PCI chassis compatible

System Integration Works with Keysight N2100B Digital Communication Analyzer, N2102B Pattern Generator, N2099A synthesizer, or multiple N2101B modules in single chassis

Control & Development Windows application control panel included DLL with ActiveX Control wrapper for custom application development Driver support: MATLAB, LabVIEW, IVI-COM, IVI-C Compatible with Microsoft Windows XP (32-bit), Windows 7 (32-bit and 64-bit) Latest software version: A.04.00

Status: Obsolete product

N2101B Characteristics / Specifications

PARAMETER	VALUE
Model	N2101B
Instrument Type	PXIT bit error ratio tester
Form Factor	3 slot PXI module
Internal Bit Rates	10 standard internal rates from 155 Mb/s to 8.5 Gb/s
Maximum Bit Rate	10.3125 Gb/s with N2099A synthesizer
External Clock Range	500 MHz to 10.3125 GHz
External Mode Range	500 Mb/s to 10.3125 Gb/s
Retimed Mode	recommended 500 Mb/s to 8.5 Gb/s
Direct Mode	recommended 8.5 Gb/s to 10.3125 Gb/s
User Pattern Length	2048 bits maximum
Output Voltage Range	250 mV to 1 V single ended
Input Range Differential	50 mV to 2 V
Connector Compatibility	PCI, PXI-H, PXI-1
Driver Support	IVI-COM, IVI-C, LabVIEW, MATLAB
Os Support	Windows XP 32 bit; Windows 7 32 bit and 64 bit
Related Modules	N2100B PXIT DCA, N2102B pattern generator, N2099A synthesizer
Error Injection	single error or error rate injection
Display Functions	bit error over time, jitter bathtub quick and regular modes
Manufacturer	HP Agilent Keysight
Literature	Agilent N2101B PXIT 10.3125 Gb/s BERT data sheet
Family	Agilent PXIT optical manufacturing BERT
Brand Lineage	Hewlett Packard Agilent Keysight
System Role	PXI BERT for optical transceivers
Use Case	10 Gb/s class BER analysis
Documentation Type	OEM N2101B PXIT data sheet

PARAMETER	VALUE
Year Class	PXIT 10G BERT family
Bus	PXI / PCI
Application Class	optical transceiver manufacturing test

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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PARAMETER	VALUE
Model	N2101B
Instrument Type	PXIT bit error ratio tester
Form Factor	3 slot PXI module
Internal Bit Rates	10 standard internal rates from 155 Mb/s to 8.5 Gb/s
Maximum Bit Rate	10.3125 Gb/s with N2099A synthesizer
External Clock Range	500 MHz to 10.3125 GHz
External Mode Range	500 Mb/s to 10.3125 Gb/s
Retimed Mode	recommended 500 Mb/s to 8.5 Gb/s
Direct Mode	recommended 8.5 Gb/s to 10.3125 Gb/s
User Pattern Length	2048 bits maximum
Output Voltage Range	250 mV to 1 V single ended
Input Range Differential	50 mV to 2 V
Connector Compatibility	PCI, PXI-H, PXI-1
Driver Support	IVI-COM, IVI-C, LabVIEW, MATLAB
Os Support	Windows XP 32 bit; Windows 7 32 bit and 64 bit
Related Modules	N2100B PXIT DCA, N2102B pattern generator, N2099A synthesizer
Error Injection	single error or error rate injection
Display Functions	bit error over time, jitter bathtub quick and regular modes
Manufacturer	HP Agilent Keysight
Literature	Agilent N2101B PXIT 10.3125 Gb/s BERT data sheet
Family	Agilent PXIT optical manufacturing BERT
Brand Lineage	Hewlett Packard Agilent Keysight
System Role	PXI BERT for optical transceivers
Use Case	10 Gb/s class BER analysis
Documentation Type	OEM N2101B PXIT data sheet
Year Class	PXIT 10G BERT family

PARAMETER	VALUE
Bus	PXI / PCI
Application Class	optical transceiver manufacturing test

Notes

From Agilent/Keysight N2101B PXIT BERT listings (3-slot PXI, 155 Mb/s-8.5 Gb/s internal, 10.3125 Gb/s with N2099A, 2048-bit user patterns, 250 mV-1 V SE out, 50 mV-2 V differential in). Jitter bathtub binning and connector sex are on the N2101B specification pages.

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.