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Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 12, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) N4906B Serial BERT, 12.5 Gb/s

The N4906B is a general-purpose serial bit error ratio tester with pattern generator and error detector. Catalog listing is the 12.5 Gb/s class (Option 012: 9.5–12.5 Gb/s); Option 003 covers 150 Mb/s–3.6 Gb/s. Options add differential analysis, CDR, and full 150 Mb/s–12.5 Gb/s range. Instrument Type: Serial Bit Error Ratio Tester Alias: N4906B; Agilent N4906B; Keysight N4906B Specs from Agilent/Keysight N4906B Serial BERT data sheet. Confirm Option 003 vs 012 and 101/102 on the unit (listing implies 12.5 Gb/s class).



MODEL Keysight / Agilent N4906B	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU N4906B	LISTING https://aumictechlabs.com/products/n4906b-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight (Agilent) N4906B Serial BERT is a bit error ratio tester for validation of high-speed serial interfaces from 150 Mb/s to 12.5 Gb/s. This general-purpose instrument delivers cost-effective testing across telecommunications, data center, and semiconductor manufacturing environments with integrated pattern generation, error detection, and optional Clock Data Recovery (CDR) for clockless interface testing. Technical Specifications Data Rate Coverage Option 003: 150 Mb/s to 3.6 Gb/s Option 012: 9.5 Gb/s to 12.5 Gb/s Option 102: 150 Mb/s to 12.5 Gb/s with CDR functionality Pattern Generation and Detection Integrated pattern generator and error detector Pattern depth: 32 Mbit Pattern editor supporting user-defined, test, and PRBS sequences Clock Output Specifications Option 003: 150 MHz to 3.6 GHz Option 012: 9.5 GHz to

12.5 GHz Option 102: 150 MHz to 12.5 GHz Square wave output with +0.5 V High / -0.5 V Low (typical) Transition times: < 20 ps (Option 003), < 25 ps (Option 012), < 50 ps (Option 102) Differential or single-ended interface Error Output RZ format, active high DC coupled, 50 Ω Key Features Option 101 (Enhanced Measurement Suite) includes differential input testing for LVDS and similar interfaces, BERT scan with total jitter and random/deterministic jitter separation, fast total jitter measurement, spectral decomposition, eye contour analysis, error location capture, output-level measurements, and fast eye mask testing for manufacturing pass/fail validation. Typical Applications High-speed serial interface validation, component and system characterization, telecommunications device testing, data center link qualification, and semiconductor manufacturing quality assurance. Compatibility & Integration Remote control via LAN, GPIB, and USB. Compatible with Agilent TestExec, Vee, Microsoft Excel, Visual Basic, and National Instruments LabVIEW. Windows-based color touch screen interface with backward compatibility for legacy remote commands.

Features & description

From manufacturer datasheet

Features

• Pattern generator + error detector • Option 012 data rate: 9.5 Gb/s to 12.5 Gb/s • Option 003 data rate: 150 Mb/s to 3.6 Gb/s • Option 102: 150 Mb/s to 12.5 Gb/s + CDR • PG amplitude: 0.1 V to 1.8 V / 5 mV steps • PG transition time (Opt 012): <25 ps (10–90%) • PG transition time (Opt 003): <50 ps with N4915A-001 converter • ED sensitivity: <50 mVpp • ED decision threshold: –2 V to +3 V in 0.1 mV steps • ED max input: 2.0 V; terminations –2 V to +3 V or off • Phase margin: 1 UI – 12 ps typ. • Sampling delay: ±0.75 ns in 100 fs steps • Data connectors: 2.4 mm female (adapters to 3.5 mm included with kits) • Clock input: 100 mV to 1.2 V; SMA; Opt 012 9.5–12.5 GHz • CDR output jitter: 0.01 UI rms typ. • Interfaces: LAN, USB, GPIB; Windows XP touch UI • Opt 101: differential analysis, fast eye mask, enhanced measurement suite

Applications

• Manufacturing BER testing of high-speed serial devices • Telecom / semiconductor digital component test • Eye mask, TJ/RJ/DJ analysis with Option 101

N4906B Characteristics / Specifications

PARAMETER	VALUE
Model	N4906B
Manufacturer	Keysight / Agilent
Instrument Type	Serial Bit Error Ratio Tester
Alias	N4906B; Agilent N4906B; Keysight N4906B
Max data rate	12.5 Gb/s
Opt 012 range	9.5–12.5 Gb/s
PG amplitude	0.1 V to 1.8 V / 5 mV steps
PG transition Opt 0	<25 ps
ED sensitivity	<50 mVpp
ED threshold	–2 to +3 V
Data connector	2.4 mm Notes Specs from Agilent/Keysight N4906B Serial BERT data sheet. Confirm Option 003 vs 012 and 101/102 on the unit (listing implies 12.5 Gb/s class).
Option 012 data rate	9.5 Gb/s to 12.5 Gb/s
Option 003 data rate	150 Mb/s to 3.6 Gb/s
Option 102	150 Mb/s to 12.5 Gb/s + CDR
PG transition time (Opt 012)	<25 ps (10–90%)
PG transition time (Opt 003)	<50 ps with N4915A-001 converter
ED decision threshold	–2 V to +3 V in 0.1 mV steps
ED max input	2.0 V; terminations –2 V to +3 V or off
Phase margin	1 UI – 12 ps typ.
Sampling delay	±0.75 ns in 100 fs steps
Data connectors	2.4 mm female (adapters to 3.5 mm included with kits)
Clock input	100 mV to 1.2 V; SMA; Opt 012 9.5–12.5 GHz
CDR output jitter	0.01 UI rms typ.
Interfaces	LAN, USB, GPIB; Windows XP touch UI

PARAMETER	VALUE
Opt 101	differential analysis, fast eye mask, enhanced measurement suite
Data Rate	9.5 Gb/s to 12.5 Gb/s - Option 003 data rate: 150 Mb/s to 3.6 Gb/s - Option 102: 150 Mb/s to 12.5 Gb/s + CDR - PG amplitude: 0.1 V to 1.8 V / 5 mV steps - PG transition time (Opt 012): <25 ps (10–90%) - PG transition time (Opt 003): <50 ps with N4915

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
Model	N4906B
Manufacturer	Keysight / Agilent
Instrument Type	Serial Bit Error Ratio Tester
Alias	N4906B; Agilent N4906B; Keysight N4906B

Specifications

PARAMETER	VALUE
Max data rate	12.5 Gb/s
Opt 012 range	9.5–12.5 Gb/s
PG amplitude	0.1–1.8 V
PG transition Opt 012	<25 ps
ED sensitivity	<50 mVpp
ED threshold	–2 to +3 V
Data connector	2.4 mm

Notes

Specs from Agilent/Keysight N4906B Serial BERT data sheet. Confirm Option 003 vs 012 and 101/102 on the unit (listing implies 12.5 Gb/s class).

Ordering Information

OPTION	DESCRIPTION
Option 003	covers 150 Mb/s–3.6 Gb/s. Options add differential analysis, CDR, and full 150 Mb/s–12.5 Gb/s range.
Option 101	Key Features
Option 012	data rate: 9.5 Gb/s to 12.5 Gb/s

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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NIST-traceable calibration · SAM registered ·
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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.