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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N4903A

Agilent Keysight N4903A J-BERT High-Performance Serial BERT 7 and 12.5 Gb/s The Agilent J-BERT N4903A isahigh-performance serial BERT with complete calibrated jitter-tolerance testing at 7 Gb/s or 12.5 Gb/s. OEM N4903A data sheet (version 2.2) lists 150 Mb/s to 12.5 Gb/s (Option C13, programmable to 13.5 Gb/s) or 150 Mb/s to 7 Gb/s (Option C07), built-in CDR, and Option J10 integrated RJ, PJ, BUJ, ISI, and sinusoidal interference. PCIe, SATA, Fibre Channel, FB-DIMM, CEI, 10GbE/XAUI, and XFP/XFI receiver jitter-tolerance characterization. The Agilent J-BERT N4903A isahigh-performance serial BERT with complete calibrated jitter-tolerance testing at 7 Gb/s or 12.5 Gb/s. OEM N4903A data sheet (version 2.2) lists 150 Mb/s to 12.5 Gb/s (Option C13, programmable to 13.5 Gb/s) or 150 Mb/s to 7 Gb/s (Option C07), built-in CDR, and Option J10 integrated RJ, PJ, BUJ, ISI, and sinusoidal interference. PCIe, SATA, Fibre Channel, FB-DIMM, CEI, 10GbE/XAUI, and XFP/XFI receiver jitter-tolerance characterization. Calibrated in-box jitter injection Option J10

MODEL **Agilent / Keysight N4903A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **N4903A**	LISTING **https://aumictechlabs.com/products/n4903a-2/**

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NAICS 423690 · 811210 · 541380

This unit

The Keysight N4903A is a serial Bit Error Rate Tester (BERT) engineered for validation and characterization of high-speed digital interfaces across data rates from 150 Mb/s to 12.5 Gb/s. The instrument combines precise jitter generation, automated tolerance testing, and signal

integrity analysis in a single platform suitable for R&D, validation, and manufacturing environments. Built-in Clock Data Recovery (CDR) operates from 1 Gb/s to 12.5 Gb/s with tunable loop bandwidth, while calibrated jitter injection exceeds 0.5 UI across multiple jitter types including Random Jitter (RJ), Periodic Jitter (PJ), Sine Jitter (SJ), Bounded Uncorrelated Jitter (BUJ), and Intersymbol Interference (ISI).Technical Specifications Data Rates: 150 Mb/s to 7 Gb/s standard; up to 12.5 Gb/s with appropriate options; programmable to 13.5 Gb/s in select configurations Jitter Injection: Greater than 0.5 UI calibrated and integrated; supports RJ, PJ, SJ, BUJ, ISI, and sinusoidal interference CDR Operating Range: 1 Gb/s to 12.5 Gb/s with compliant loop bandwidth tuning Output Transition Times: Less than 20 ps Peak-to-Peak Jitter: Less than 9 ps Pattern Generation: PRBS sequences, memory-based patterns, and pattern sequencer for complex training sequences Subrate Clocking: Configurable 1:n ratio outputs Logic Levels: Configurable including LVDS for data and clock outputs Reference Connectors: 10 MHz REF IN and REF OUT Additional I/O: USB 2.0, Ethernet, Serial Port 1, Parallel PortKey Features Automated, compliant jitter tolerance testing for PCI Express, SATA, Fibre Channel, FB-DIMM, CEI, Gigabit Ethernet, and XFP/XFI standards Integrated error detection for comprehensive signal analysis Bit Recovery Mode option for analyzing undeterministic or unknown data streams Spread Spectrum Clocking (SSC) generation capability Differential I/O compatibility with 50 Ohm termination requirementTypical Applications High-speed serial interface validation and compliance testing Signal integrity characterization and jitter tolerance analysis Pattern-based stress testing and error rate measurementEnvironmental Specifications Operating Temperature: 5 – 40 °C Maximum Relative Humidity: 95% Operating Altitude: Up to 2000 meters Power Supply: Auto-selecting with AC power range monitoring

Features & description

From manufacturer datasheet

Built-in CDR; Option UTR tunable CDR loop

Pattern sequencer and PRBS Upgrade C07 to C13 (N4903A-U13) Command-compatible path to later N4903B Technical Specifications Instrument Type: High-performance serial BERT (J-BERT) Series Family: Agilent N4900 J-BERT Data Rate Option C13: 150 Mb/s to 12.5 Gb/s, programmable to 13.5 Gb/s Data Rate Option C07: 150 Mb/s to 7 Gb/s Cdr Data Rate C13: 1 Gb/s to 12.5 Gb/s (with Option UTR table) Cdr Data Rate C07: 1 Gb/s to 7 Gb/s Option C13: 150 Mb/s to 12.5 Gb/s speed class with built-in CDR Option C07: 150 Mb/s to 7 Gb/s speed class with built-in CDR Option U13: upgrade to 12.5 Gb/s Option J10: calibrated RJ, PJ, BUJ, ISI, sinusoidal interference Option J20: ISI and sinusoidal interference Option UTR: tunable CDR loop bandwidth Option U12: compliance suite upgrade Jitter Eye Closure Class: greater than 50 percent eye closure with integrated jitter sources (Option J10 literature) Remote Interfaces: LAN, USB, and GPIB Successor: N4903B with 14.2 Gb/s Option D14 and always-included tunable CDR Form Factor: J-BERT mainframe Pattern Types: PRBS and programmed patterns with sequencer Clock Topologies: embedded-clock receiver characterization Standards Examples: PCI Express, SATA, Fibre Channel, CEI, 10GbE/XAUI, XFP/XFI

N4903A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	High-performance serial BERT (J-BERT)
Series Family	Agilent N4900 J-BERT
Data Rate Option C	150 Mb/s to 12.5 Gb/s, programmable to 13.5 Gb/s
Cdr Data Rate C	1 Gb/s to 12.5 Gb/s (with Option UTR table)
Jitter Eye Closure Class	greater than 50 percent eye closure with integrated jitter sources (Option J10 literature)
Remote Interfaces	LAN, USB, and GPIB
Successor	N4903B with 14.2 Gb/s Option D14 and always-included tunable CDR
Form Factor	J-BERT mainframe
Pattern Types	PRBS and programmed patterns with sequencer
Clock Topologies	embedded-clock receiver characterization
Standards Examples	PCI Express, SATA, Fibre Channel, CEI, 10GbE/XAUI, XFP/XFI
User Interface	color touch screen
Literature	Agilent J-BERT N4903A data sheet version 2.2; N4903A technical specifications 5989-2899EN
Operating Temperature Class	specified after warm-up per N4903A data sheet
Bandwidth	Option U12: compliance suite upgrade
Data Rate	Option C13: 150 Mb/s to 12.5 Gb/s, programmable to 13.5 Gb/s
Operating temperature	Class: specified after warm-up per N4903A data sheet

N4903A Specifications

PARAMETER	VALUE
Applications	PCIe, SATA, Fibre Channel, FB-DIMM, CEI, 10GbE/XAUI, and XFP/XFI receiver jitter-tolerance characterization.
Key Features	Calibrated in-box jitter injection Option J10
Pattern sequencer and PRBS	Upgrade C07 to C13 (N4903A-U13)
Technical Specifications	Instrument Type: High-performance serial BERT (J-BERT)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: specified after warm-up per N4903A data sheet
Operating Temperature	Class: specified after warm-up per N4903A data sheet
Operating Temperature Class	specified after warm-up per N4903A data sheet Notes Numeric rows from Agilent J-BERT N4903A High-Performance Serial BERT data sheet version 2.2 (C07/C13 rates, programmable 13.5 Gb/s, CDR ranges, J10 jitter). Output-amplitude and BER-floor tables are in that data sheet's specification chapter.

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.

Performance Serial BERT 7 and 12.5 Gb/s

Overview
The Agilent J-BERT N4903A isahigh-performance serial BERT with complete calibrated jitter-tolerance testing at 7 Gb/s or 12.5 Gb/s. OEM N4903A data sheet (version 2.2) lists 150 Mb/s to 12.5 Gb/s (Option C13, programmable to 13.5 Gb/s) or 150 Mb/s to 7 Gb/s (Option C07), built-in CDR, and Option J10 integrated RJ, PJ, BUJ, ISI, and sinusoidal interference.

Applications
PCIe, SATA, Fibre Channel, FB-DIMM, CEI, 10GbE/XAUI, and XFP/XFI receiver jitter-tolerance characterization.

Key Features
Calibrated in-box jitter injection Option J10
Built-in CDR; Option UTR tunable CDR loop
Pattern sequencer and PRBS
Upgrade C07 to C13 (N4903A-U13)
Command-compatible path to later N4903B

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Instrument Type	High-performance serial BERT (J-BERT)
Series Family	Agilent N4900 J-BERT
Data Rate Option C13	150 Mb/s to 12.5 Gb/s, programmable to 13.5 Gb/s
Data Rate Option C07	150 Mb/s to 7 Gb/s
Cdr Data Rate C13	1 Gb/s to 12.5 Gb/s (with Option UTR table)
Cdr Data Rate C07	1 Gb/s to 7 Gb/s

Option C13: 150 Mb/s to 12.5 Gb/s speed class with built-in CDR
Option C07: 150 Mb/s to 7 Gb/s speed class with built-in CDR
Option U13: upgrade to 12.5 Gb/s
Option J10: calibrated RJ, PJ, BUJ, ISI, sinusoidal interference
Option J20: ISI and sinusoidal interference
Option UTR: tunable CDR loop bandwidth
Option U12: compliance suite upgrade

Specifications

PARAMETER	VALUE
Jitter Eye Closure Class	greater than 50 percent eye closure with integrated jitter sources (Option J10 literature)
Remote Interfaces	LAN, USB, and GPIB
Successor	N4903B with 14.2 Gb/s Option D14 and always-included tunable CDR
Form Factor	J-BERT mainframe
Pattern Types	PRBS and programmed patterns with sequencer

PARAMETER	VALUE
Clock Topologies	embedded-clock receiver characterization
Standards Examples	PCI Express, SATA, Fibre Channel, CEI, 10GbE/XAUI, XFP/XFI
User Interface	color touch screen
Literature	Agilent J-BERT N4903A data sheet version 2.2; N4903A technical specifications 5989-2899EN
Operating Temperature Class	specified after warm-up per N4903A data sheet

Notes
Numeric rows from Agilent J-BERT N4903A High-Performance Serial BERT data sheet version 2.2 (C07/C13 rates, programmable 13.5 Gb/s, CDR ranges, J10 jitter). Output-amplitude and BER-floor tables are in that data sheet's specification chapter.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

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