

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

AGILENT

Agilent N4906A Serial BERT 3.6 Gb/s CFG001 12 Gb/s

The Agilent N4906A Serial BERT with CFG001 option is a Bit Error Ratio Tester for validating high-speed serial communication components and systems. Operating up to 3.6 Gb/s with external clock capability, it delivers precise error detection and pattern generation across telecommunications and digital device manufacturing workflows. The instrument combines flexible test pattern generation, adjustable error injection, and multi-mode triggering in a single platform. Aumictech offers NIST-traceable calibration and repair for the Agilent N4906A/CFG001. All calibrations are performed to NIST-traceable standards and ship with a certificate. Turnaround is typically 1–3 business days after receipt. This Agilent N4906A/CFG001 is listed at . Calibration is available separately from . Contact us for volume pricing or if you need multiple units. NIST-traceable calibration for the Agilent



MODEL

**Agilent
N4906A/CFG001**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4906A/CFG001

LISTING

<https://aumictechlabs.com/products/n4906a-cfg001-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent N4906A Serial BERT with CFG001 option is a Bit Error Ratio Tester for validating high-speed serial communication components and systems. Operating up to 3.6 Gb/s with external clock capability, it delivers precise error detection and pattern generation across

telecommunications and digital device manufacturing workflows. The instrument combines flexible test pattern generation, adjustable error injection, and multi-mode triggering in a single platform.

Technical Specifications

- Pattern Generator**
 - Operating frequency: 50 MHz to 3.6 GHz (external clock); 50 MHz to 3.0 GHz (internal clock)
 - Internal clock accuracy: ± 20 ppm
 - Test patterns: $2^{31}-1$, $2^{23}-1$, $2^{15}-1$, $2^{10}-1$, 2^7-1 PRBS; 2^{23} , 2^{15} , 2^{10} , 2^7 PRBS; variable mark density (1/8 to 7/8); user-defined patterns up to 8 Mbits; alternating patterns up to 4 Mbits each
 - Output amplitude: 0.5 V to 2 V in 10 mV steps
 - Output offset: Variable with 10 mV resolution
 - Transition time (10-90%): < 42 ps typical < 30 ps
 - Jitter (peak-to-peak): < 20 ps typical < 12 ps (internal source)
 - Clock/data delay: 0 to 1 bit period or 10 ns maximum
 - Error injection: 1×10^{-2} to 1×10^{-9} single errors; user-specified burst errors
 - Output termination: 50Ω
- Error Detector**
 - Operating frequency: 50 MHz to 3.6 GHz
 - Data input amplitude: 0.1 V to 2 V typical
 - Threshold range: +3 V to -3 V with 0.5 mV resolution
 - Threshold terminations: 50Ω to -2 V, 0 V, or +1.3 V
 - Clock input amplitude: 0.2 V to 2 V typical
 - Data input delay: 0 to 1 bit period or 10 ns maximum
- Connectors**: DC-coupled 50Ω APC-3.5 female
- Trigger Output**
 - Divided clock mode: Pulses at 1/8th clock rate
 - Pattern mode: Pulses at fixed bit position within pattern

Key Features

- Flexible pattern editing with cut, copy, paste functions
- Selectable output polarity and variable crossover
- Switchable clock termination voltages with input frequency measurement
- High impedance output when disabled

Features & description

From manufacturer datasheet

Features

- Data rates 50 Mb/s to 3.6 Gb/s
- Internal synthesizer to 3.0 Gb/s
- Sub-42 ps risetimes with excellent waveform fidelity
- 8 Mbit pattern memory
- BERT Scan bathtub jitter and Q-factor software included
- GPIB LAN and parallel printer interfaces
- Keyboard and mouse supported UI

Applications

- Serial BER testing of SERDES and optical modules to 3.6 Gb/s
- Manufacturing auto-align and production BERT
- R&D bathtub jitter and Q-factor characterization
- Clock/data delay stress for low-speed margin tests

N4906ACFG001 Characteristics / Specifications

PARAMETER	VALUE
Model	N4906A
Manufacturer	Agilent / Keysight
Instrument Type	Serial Bit Error Ratio Tester
Alias	N4906A; N4906A CFG001; Agilent Serial BERT
Maximum data rate	3.6 Gb/s
Maximum data rate internal synthesizer	3.0 Gb/s
Minimum data rate	50 Mb/s
Maximum clock rate class	3.0 GHz
Pattern memory depth	1 to 8 Mbits
Risetime class	sub-42 ps
Clock data delay range	up to full bit period
Jitter software	BERT Scan / Bathtub included Qfactor software: included
Remote interfaces	GPIB, LAN Ethernet
Printer port	parallel
UI peripherals	keyboard and mouse
Auto align	fast manufacturing auto-align
Configuration listing	CFG001 common configured units
AC line	90 to 264 VAC
Line frequency	47 to 66 Hz
Power consumption	less than 500 VA
Application class	high-speed digital components and systems
Pattern types	PRBS and user memory patterns
Error analysis	BER accumulation and statistics
Form factor	benchtop Serial BERT
Family	N4900 Serial BERT Notes Specs from Agilent/Keysight N4906A Serial BERT product literature. CFG001 is a configuration listing code; confirm

PARAMETER	VALUE
	exact options and installed firmware on the unit.
Data Rate	3.6 Gb/s

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	
Technical Specifications	
PARAMETER	VALUE
Model	N4906A
Manufacturer	Agilent / Keysight
Instrument Type	Serial Bit Error Ratio Tester
Alias	N4906A; N4906A CFG001; Agilent Serial BERT
Maximum data rate	3.6 Gb/s
Maximum data rate internal synthesizer	3.0 Gb/s
Minimum data rate	50 Mb/s
Maximum clock rate class	3.0 GHz
Pattern memory depth	1 to 8 Mbits
Risetime class	sub-42 ps
Clock data delay range	up to a full bit period
Jitter software	BERT Scan / Bathtub included
Q factor software	included
Remote interfaces	GPIB, LAN Ethernet
Printer port	parallel
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Minimum data rate	50 Mb/s
Maximum clock rate class	3.0 GHz
Pattern memory depth	1 to 8 Mbits
Risetime class	sub-42 ps
Clock data delay range	up to a full bit period
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Remote interfaces	GPIO, LAN Ethernet
Printer port	parallel
UI peripherals	keyboard and mouse
Auto align	fast manufacturing auto-align
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Notes

Specs from Agilent/Keysight N4906A Serial BERT product literature. CFG001 is a configuration listing code; confirm exact options and installed firmware on the unit.

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.