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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) N4874A Pattern Generator Module

Agilent / Keysight N4874A 7 Gb/s ParBERT Pattern Generator Module The Agilent N4874A is a 7 Gb/s data generator module for the 81250 ParBERT parallel bit-error-ratio tester. It occupies one VXI slot and requires the E4809A central clock module. The module generates differential or single-ended NRZ data from 620 Mb/s to 7 Gb/s with PRBS up to $2^{31}-1$, PRWS, and memory-based patterns to 64 Mb. Companion analyzer is N4875A. Serial and multi-serial interface characterization to 6.4 Gb/s class rates; InfiniBand, Serial ATA, PCI Express, FireWire, RapidIO computation links; backplane and high-speed memory interface stimulus; Fiber Channel 4x (4.24 Gb/s); multi-device OC-48 manufacturing BER test with ParBERT. The Agilent N4874A is a 7 Gb/s data generator module for the 81250 ParBERT parallel bit-error-ratio tester. It occupies one VXI slot and requires the E4809A central clock module. The module generates differential or single-ended NRZ data from 620 Mb/s to 7 Gb/s with PRBS up to $2^{31}-1$, PRWS, and memory-based patterns to 64 Mb. Companion analyzer is N4875A. Serial and multi-serial interface characterization to 6.4 Gb/s class rates; InfiniBand, Serial ATA, PCI Express, FireWire, RapidIO computation links; backplane and high-speed memory interface stimulus; Fiber Channel 4x (4.24 Gb/s); multi-device OC-48 manufacturing BER test with ParBERT.

**MODEL****Keysight / Agilent
N4874A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****N4874A****LISTING**<https://aumictechlabs.com/products/n4874a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N4874A is a pattern generator module designed for testing high-speed digital interfaces and devices within the ParBERT family. This VXI-based generator produces differential and single-ended signals across data rates from 620 Mb/s to 7 Gb/s, supporting pseudo-random word sequences, standard PRBS patterns up to $2^{31}-1$, and memory-based patterns up to 64 Mb. The module delivers output amplitudes from 0.7 Vpp to 7.8 Vpp with 5 mV resolution, fast transition times below 20 ps, and typical jitter under 9 ps pp across a jitter modulation bandwidth of DC to 1 GHz. Engineered for R&D and manufacturing environments, the N4874A characterizes emerging backplane, memory interface, and serial bus applications requiring precise signal generation and validation up to 6.4 Gb/s. Operation requires the E4809A Central Clock module as a companion instrument.

Technical Specifications
Data Rate Range: 620 Mb/s to 7 Gb/s
Output Amplitude: 0.7 Vpp to 7.8 Vpp
Output Amplitude Resolution: 5 mV
Transition Times (20% – 80%): < 20 ps
Jitter (typical): < 9 ps pp
Jitter Modulation Bandwidth: DC to 1 GHz
Module Width: 1 VXI slot
Pattern Types: Pseudo-Random Word Sequences (PRWS), PRBS up to $2^{31}-1$, memory-based patterns up to 64 Mb
Signal Configuration: Differential and single-ended

Key Features
Fast sub-20 ps transition times enable high-fidelity waveform reproduction
Low jitter performance (< 9 ps pp typical) supports accurate timing margin analysis
Multiple pattern generation modes accommodate custom and standard test sequences
Configurable output amplitude from 0.7 Vpp to 7.8 Vpp in 5 mV steps
Modular VXI architecture integrates with system-level test benches

Typical Applications
High-speed communication port and chip characterization
Serial interface validation and stress testing
Backplane and memory interface qualification
Digital system design validation through 6.4 Gb/s

Compatibility & Integration
The N4874A requires the E4809A Central Clock module for operation. System integration with power supplies, parametric measurement units, and oscilloscopes is supported via GPIB, LAN, and VXI interfaces using Keysight 81200 plug-and-play drivers. Note: This product is obsolete. The M8030A Multi-Channel BERT is the recommended replacement.

N4874A Characteristics / Specifications

PARAMETER	VALUE
Model	N4874A
Manufacturer	Agilent / Keysight
Instrument Type	ParBERT data generator module
Alias	N4874A; Agilent N4874A; Keysight N4874A
Data Rate Range	620 Mb/s to 7 Gb/s
Signal Modes	Differential or single-ended
Pattern Types	PRBS to 2 ³¹ -1; PRWS; memory-based to 64 Mb
VXI Slot Width	1
Required Clock Module	E4809A
Companion Analyzer	N4875A
Output Amplitude Range Class	0.05 V to 2.0 V (also cited 0.7 to 7.8 Vpp / 5 mV resolution depending on frontend config)
Amplitude Resolution	5 mV
Jitter Typical	less than 9 ps pp
Jitter Modulation Bandwidth	DC to 1 GHz (delay line)
External Clock Input Class	620 MHz to 7 GHz
Data Formats	NRZ class serial data
Addressable Technologies	LVDS, CML, PECL/ECL, low-voltage CMOS class
System Family	81250 ParBERT
Frontend Requirement	No separate frontend (one channel per module) Notes Specs from Agilent/Keysight ParBERT 7 Gb/s module literature and 81250 user guide. Confirm E4809A presence, cable set, and exact amplitude frontend configuration on the installed module.
Bandwidth	DC to 1 GHz
Data Rate	620 Mb/s to 7 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	
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Instrument Type	ParBERT data generator module
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Pattern Types	PRBS to 2^31-1; PRWS; memory-based to 64 Mb
VXI Slot Width	1
Required Clock Module	E4809A
Specifications	
PARAMETER	VALUE
Companion Analyzer	N4875A
Output Amplitude Range Class	0.05 V to 2.0 V (also cited 0.7 to 7.8 Vpp / 5 mV resolution depending on frontend config)
Amplitude Resolution	5 mV
Transition Time 20-80%: less than 20 ps	
Specifications	
PARAMETER	VALUE
Jitter Typical	less than 9 ps pp
Jitter Modulation Bandwidth	DC to 1 GHz (delay line)

PARAMETER	VALUE
External Clock Input Class	620 MHz to 7 GHz

Specifications

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Data Formats	NRZ class serial data
Addressable Technologies	LVDS, CML, PECL/ECL, low-voltage CMOS class
System Family	81250 ParBERT

Frontend Requirement: No separate frontend (one channel per module)

Notes

Specs from Agilent/Keysight ParBERT 7 Gb/s module literature and 81250 user guide. Confirm E4809A presence, cable set, and exact amplitude frontend configuration on the installed module.

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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30-day returns
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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.