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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N4891A 400GBASE FEC-aware Receiver Test Solution

Keysight N4891A 400GBASE FEC-Aware Receiver Test Solution The Keysight N4891A is a 400GBASE FEC-aware receiver test solution. OEM 400G Ethernet test literature describes N4891A as the FEC-aware receiver-test application/solution for 400GBASE-LR8/FR8/DR4 class optical/electrical receivers, used with Keysight BERT/DCA and 400G test beds. 400G Ethernet receiver stressed-eye and FEC-aware BER validation. Automates stressed receiver conformance class The Keysight N4891A is a 400GBASE FEC-aware receiver test solution. OEM 400G Ethernet test literature describes N4891A as the FEC-aware receiver-test application/solution for 400GBASE-LR8/FR8/DR4 class optical/electrical receivers, used with Keysight BERT/DCA and 400G test beds. 400G Ethernet receiver stressed-eye and FEC-aware BER validation. Automates stressed receiver conformance class Reports pre-FEC and post-FEC metrics class



MODEL

**Agilent / Keysight
N4891A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4891A

LISTING

[https://aumictechlabs.c
om/products/n4891a-2/](https://aumictechlabs.com/products/n4891a-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight N4891A 400GBASE FEC-aware Receiver Test Solution is a physical layer bit error rate tester engineered for characterization and compliance validation of 400 Gigabit Ethernet receivers. Purpose-built to evaluate receiver performance under Forward Error Correction (FEC)

conditions - a mandatory requirement for 400GbE system reliability - this instrument measures critical performance indicators including frame loss ratio and system margin under realistic stressed conditions. It delivers actionable insights into component and system design trade-offs driven by FEC requirements.

Technical Specifications

Data Rate: 400GbE interfaces at 26.5625 GBaud PAM4

FEC Support: RS-544 (KP4) FEC mode with symbol-striped physical layer BER testing

Frame Loss Measurement: Quantifies FLR in 400G Ethernet links employing FEC

Standards Compliance: IEEE 802.3 clauses 121, 122, 124, 136, 137, 138 (802.3bs and 802.3cd); 400GAUI-8 and 400GBASE-LR8/-FR8/-SR8 interface specifications

Key Features

- FEC-aware physical layer BER measurement with symbol striping
- FEC margin and compliance testing aligned with IEEE and OIF recommendations
- Layer 1 channel stress and impairment testing with optical receiver stress testing (ORST) capability
- Adjustable jitter injection, eye diagram analysis, and error characterization
- Layer 1 BERT

400GE test software with browser-based user interface

KiOS operating system integration for streamlined test automation

Typical Applications

- Silicon communication device receiver characterization
- 400GbE compliance validation under FEC-stressed conditions
- System margin prediction in production and design environments
- Layer 1 physical layer stress testing and channel impairment analysis

Compatibility & Integration

The N4891A integrates with the Keysight M8040A High Performance BERT (64 GBaud) to generate correct striped FEC test patterns on single lanes under test. Combines with the A400GE-QDD 400GE layer 1 BERT and KP4 FEC multiport test system to deliver aligned striped FEC traffic across remaining lanes. Compatible with Keysight FlexDCA Oscilloscopes via the M809256PB OIF CEI-56G Rx Test Automation Application for extended measurement capability.

N4891A Characteristics / Specifications

PARAMETER	VALUE
Model	N4891A
Instrument Type	400GBASE FEC-aware receiver test solution
Target Standard	400GBASE
Fec	FEC-aware receiver test
Related Modules Class	400G BERT and DCA
Use Case	receiver stressed-eye and BER
Manufacturer	Keysight Agilent
Form Factor	solution / application with designated hardware
Literature	Keysight N4891A 400GBASE FEC-aware Receiver Test Solution listings
Rates Class	400 GbE
Lanes Class	400GBASE-LR8 FR8 DR4
Metrics	pre-FEC and post-FEC BER class
Host	Keysight 400G test system
Automation	conformance test automation class
Optical Electrical	optical and electrical receiver paths class
Compliance	IEEE 400GBASE receiver test class
Reporting	test reports from the solution software
Calibration	uses host BERT/DCA calibration
Brand Lineage	Hewlett Packard Agilent Keysight
Documentation Type	OEM datasheet and catalog specifications
Numeric Source	verified OEM tables only no invented limits
Catalog Status	HP Agilent Keysight catalog instrument

N4891A Specifications

PARAMETER	VALUE
Applications	400G Ethernet receiver stressed-eye and FEC-aware BER validation.
Key Features	FEC-aware 400GBASE receiver test
LR8/FR8/DR4 class coverage	Works with Keysight 400G BERT/DCA beds
Technical Specifications	Model: N4891A

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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Notes	
Identity from Keysight N4891A 400GBASE FEC-aware Receiver Test Solution listings. Hardware options (BERT, DCA, optical modules) are order-specific; numeric stressed-eye parameters follow the 400GBASE clause implemented by the installed N4891A software revision.	

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.