


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 71501A – Optical Spectrum Analyzer

Storage Temperature Class: minus 40 C to 75 C Safety: instrument and laser safety practices Input: high speed electrical optical receivers class Numeric bandwidth and channel rows from published HP 71501A eye diagram analyzer specifications. Inventory titles sometimes mislabel it as an OSA; it is an eye analyzer. Safety: instrument and laser safety practices Input: high speed electrical optical receivers class Numeric bandwidth and channel rows from published HP 71501A eye diagram analyzer specifications. Inventory titles sometimes mislabel it as an OSA; it is an eye analyzer.



MODEL

**Agilent / Keysight
71501A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

71501A

LISTING

<https://aumictechlabs.com/products/71501a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 71501A is a modular test set designed to enhance network analyzer capabilities for RF and microwave component and system testing. Operating as an eye diagram analyzer system, it integrates multiple modules within the Hewlett-Packard Modular Measurement System (MMS) architecture to deliver extended measurement functionality and improved measurement accuracy. The system requires an MMS mainframe such as the HP 70001A for operation. Technical Specifications The 71501A is configured as a modular assembly incorporating dedicated hardware and firmware for eye diagram and microwave transition analysis. Core

operational requirements include the HP 70874A Eye Diagram Analyzer Personality (requires firmware revision 1.1 or greater on the HP 70820A module) and the HP 70820A Microwave Transition Analyzer Module. The system integrates with the HP 70004A Color Display/Mainframe for control and visualization.

Key Features

- Eye diagram analysis capability through dedicated personality module
- Microwave transition analysis via HP 70820A hardware module
- Modular architecture compatible with MMS slot configuration
- Color display and control interface via HP 70004A mainframe
- Firmware-configurable analysis functions (revision 1.1 minimum)

Typical Applications

The 71501A addresses RF and microwave component characterization, system-level signal integrity analysis, and eye diagram measurement for high-speed digital and analog modulation schemes.

Compatibility & Integration

Operation requires integration within an HP 70001A Modular Measurement System mainframe. Supplementary components include the HP 70841A/B Pattern Generator for input stimulus and the HP 70311A Clock Source for precise timing synchronization. All modules connect via MMS slot interfaces within the mainframe housing.

71501A Characteristics / Specifications

PARAMETER	VALUE
Model	71501A
Instrument Type	eye diagram analyzer
Manufacturer	HP Agilent Keysight
Channel Count	2
Bandwidth Standard	20 GHz extended bandwidth off
Bandwidth Extended	40 GHz extended bandwidth on
Display Modes	eye pattern and eye line
Form Factor	lightwave analyzer mainframe class
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 75 C
Line Power	AC mains
Humidity Class	non condensing
Remote Interface Class	HP-IB
Duty	continuous optical test
Grounding	chassis ground
Cooling	forced air
Mass Class	benchtop analyzer
Calibration	timebase and amplitude cal
Safety	instrument and laser safety practices
Input	high speed electrical optical receivers class
Trigger	precision trigger path
Timebase	precision sampling timebase
Vertical	high bandwidth vertical path
Persistence	eye persistence display
Masks	eye mask test class

PARAMETER	VALUE
Histogram	eye histogram analysis class
Compatibility	HP lightwave accessories
Bandwidth	Standard: 20 GHz extended bandwidth off
Storage temperature	Class: minus 40 C to 75 C
Operating temperature	Class: 0 C to 55 C
Humidity	Class: non condensing

71501A Specifications

PARAMETER	VALUE
Agilent HP 71501A Eye Diagram Analyzer	Overview
Two channel eye diagram analysis	20 GHz bandwidth extendable to 40 GHz
Technical Specifications	Model: 71501A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 40 C to 75 C
Operating temperature	Class: 0 C to 55 C
Operating Temperature	Class: 0 C to 55 C
Humidity	Class: non condensing
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 75 C
Line Power	AC mains
Humidity Class	non condensing
Remote Interface Class	HP-IB
Duty	continuous optical test
Grounding	chassis ground
Cooling	forced air
Mass Class	benchtop analyzer
Calibration	timebase and amplitude cal
Safety	instrument and laser safety practices
Input	high speed electrical optical receivers class
Trigger	precision trigger path
Timebase	precision sampling timebase
Vertical	high bandwidth vertical path
Persistence	eye persistence display
Masks	eye mask test class
Histogram	eye histogram analysis class
Compatibility	HP lightwave accessories Notes Numeric bandwidth and channel rows from published HP 71501A eye diagram analyzer specifications. Inventory titles sometimes mislabel it as an OSA; it is an eye analyzer.

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 list 2 channels with 20 GHz bandwidth (40 GHz with extended bandwidth on), providing eye-pattern and eye-line display modes beyondaconventional sampling oscilloscope view.

Applications
Optical transmitter eye analysis, high-speed component characterization, and lightwave communications R&D production test.

Key Features
Two channel eye diagram analysis 20 GHz bandwidth extendable to 40 GHz Eye line continuous trace display mode
High sensitivity eye pattern analysis Lightwave communications focused instrument

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	71501A
Instrument Type	eye diagram analyzer
Manufacturer	HP Agilent Keysight
Channel Count	2
Bandwidth Standard	20 GHz extended bandwidth off
Bandwidth Extended	40 GHz extended bandwidth on
Display Modes	eye pattern and eye line
Form Factor	lightwave analyzer mainframe class
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 75 C
Line Power	AC mains
Humidity Class	non condensing
Remote Interface Class	HP-IB
Duty	continuous optical test
Grounding	chassis ground
Cooling	forced air
Mass Class	benchtop analyzer
Calibration	timebase and amplitude cal
Safety	instrument and laser safety practices
Input	high speed electrical optical receivers class
Trigger	precision trigger path

PARAMETER	VALUE
Timebase	precision sampling timebase
Vertical	high bandwidth vertical path
Persistence	eye persistence display
Masks	eye mask test class
Histogram	eye histogram analysis class
Compatibility	HP lightwave accessories

Notes

Numeric bandwidth and channel rows from published HP 71501A eye diagram analyzer specifications. Inventory titles sometimes mislabel it as an OSA; it is an eye analyzer.

Laser Safety

laser safety practices Input: high speed electrical optical receivers class Trigger: precision trigger path Timebase: precision sampling timebase Vertical: high bandwidth vertical path Persistence: eye persistence display Masks: eye mask test class Histogram: eye histogram analysis class Compatibility: HP lightwave accessories Notes Numeric bandwidth and channel rows from published HP 71501A eye diagram anal

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.