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Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 86101A/H22

Agilent / Keysight Bit Error Rate Testers (BERT). Bandwidth: Over 2.8 GHz, Bandwidth: 12.4 GHz or 20 GHz (user-selectable).



MODEL

**Agilent / Keysight
86101A/H22**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86101A/H22

LISTING

<https://aumictechlabs.com/products/86101a-h22/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 86101A/H22 is a digital communication analyzer module for the 86100 series oscilloscope mainframes, delivering integrated optical and electrical measurement channels for high-speed signal characterization. Purpose-built for compliance testing and parametric analysis of digital communication systems, this module combines a calibrated optical receiver with dual-bandwidth electrical inputs to support comprehensive eye diagram analysis and mask testing across multiple data rates.

Technical Specifications

- Optical Channel Bandwidth: Over 2.8 GHz
- Wavelength range: 750 nm to 860 nm
- Fiber support: Single-mode and multimode (62.5/125 μm)
- Characteristic RMS noise: 1.5 μW at 3 GHz bandwidth
- Peak power measurement capability: Up to 400 μW (−4 dBm)
- Integrated average power meter
- Reference receiver compliance support: 155 Mb/s, 622 Mb/s, 1063 Mb/s (Fibre Channel), 1250 Mb/s (Gigabit Ethernet)
- Electrical Channel Bandwidth: 12.4 GHz or 20 GHz (user-selectable)
- Input connector: 3.5 mm male
- Characteristic RMS noise: 0.25 mV (12.4 GHz) / 0.5 mV (20 GHz)

Key Features

- Switchable reference filters for industry-standard compliance testing
- Eye diagram analysis and capture
- Compliance mask testing

with margin analysis Automated parametric compliance testing Dual-channel architecture supports simultaneous optical and electrical measurements Environmental Specifications Operating temperature: 10°C to +40°C Non-operating temperature: -40°C to +70°C Operating humidity: Up to 90% (non-condensing) at +40°C Operating altitude: Up to 4,600 m Operating vibration: 5–500 Hz, 2.41 g (rms) Compatibility & Integration Designed for Agilent/Keysight 86100A, 86100B, 86100C, and 86100D Infiniium DCA and DCA-J mainframes.

Features & description

From manufacturer datasheet

Built-in average optical power meter

Twelve bit vertical resolution class with averaging to 15 bits Compatible with 86100A/B/C 83480A and 54750 series mainframes Technical Specifications Model: 86101A Instrument Type: optical electrical DCA plug in module Optical Unfiltered Bandwidth: 2.85 GHz 3 GHz typical Wavelength Range: 750 to 860 nm Calibrated Wavelength: 850 nm Filtered Data Rates Mb/s: 155 622 1063 1250 Sensitivity Smallest Avg Power Mask: -17 dBm Transition Time Filtered OC48 Class: less than 190 ps Transition Time Filtered OC12 Class: less than 750 ps Transition Time Filtered OC3 Class: less than 3 ns Transition Time Unfiltered: 160 ps or less RMS Noise Optical Characteristic: 1.5 uW RMS Noise Optical Maximum: 2.5 uW Scale Factor Optical Min Max: 5 uW to 100 uW per division Average Power Monitor Range: -30 dBm to -2.2 dBm Maximum Input Power Specified Peak: 0.4 mW -4 dBm Maximum Peak Input Power: 10 mW +10 dBm Fiber Input: 62.5/125 um user selectable connector Input Return Loss: 20 dB Electrical Bandwidth: 12.4 and 20 GHz Electrical Transition 12.4 GHz: 28.2 ps Electrical Transition 20 GHz: 17.5 ps Electrical RMS Noise Characteristic: 0.25 mV at 12.4 GHz 0.5 mV at 20 GHz Electrical Connector: 3.5 mm Notes Numeric rows from Agilent 861xx Infiniium DCA modules specification sheet and 86101A published module tables. H22 class adds Gigabit Ethernet/2xFC reference-receiver filter combinations.

86101AH22 Characteristics / Specifications

PARAMETER	VALUE
Model	86101A
Instrument Type	optical electrical DCA plug in module
Optical Unfiltered Bandwidth	2.85 GHz 3 GHz typical
Wavelength Range	750 to 860 nm
Calibrated Wavelength	850 nm
Filtered Data Rates Mb/s	155 622 1063 1250
Sensitivity Smallest Avg Power Mask	-17 dBm
Transition Time Filtered OC48 Class	less than 190 ps
Transition Time Filtered OC12 Class	less than 750 ps
Transition Time Filtered OC3 Class	less than 3 ns
Transition Time Unfiltered	160 ps or less
RMS Noise Optical Characteristic	1.5 uW
RMS Noise Optical Maximum	2.5 uW
Scale Factor Optical Min Max	5 uW to 100 uW per division
Average Power Monitor Range	-30 dBm to -2.2 dBm
Maximum Input Power Specified Peak	0.4 mW -4 dBm
Maximum Peak Input Power	10 mW +10 dBm
Fiber Input	62.5/125 um user selectable connector
Input Return Loss	20 dB
Electrical Bandwidth	12.4 and 20 GHz
Electrical Transition 12.4 GHz	28.2 ps
Electrical Transition 20 GHz	17.5 ps
Electrical RMS Noise Characteristic	0.25 mV at 12.4 GHz 0.5 mV at 20 GHz
Electrical Connector	3.5 mm
Bandwidth	2.85 GHz 3 GHz typical

PARAMETER	VALUE
Return loss	20 dB

86101AH22 Specifications

PARAMETER	VALUE
Keysight 86101A Optical Electrical DCA Module	Overview
One optical plus one electrical measurement channel	Switchable reference filters for 155 622 1063 1250 Mb/s classes
Technical Specifications	Model: 86101A

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	
Specifications	
PARAMETER	VALUE
Model	86101A
Instrument Type	optical electrical DCA plug in module
Optical Unfiltered Bandwidth	2.85 GHz 3 GHz typical
Wavelength Range	750 to 860 nm
Calibrated Wavelength	850 nm
Filtered Data Rates Mb/s	155 622 1063 1250
Sensitivity Smallest Avg Power Mask	-17 dBm
Transition Time Filtered OC48 Class	less than 190 ps
Transition Time Filtered OC12 Class	less than 750 ps
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RMS Noise Optical Maximum	2.5 uW
Scale Factor Optical Min Max	5 uW to 100 uW per division
Average Power Monitor Range	-30 dBm to -2.2 dBm
Maximum Input Power Specified Peak	0.4 mW -4 dBm
Maximum Peak Input Power	10 mW +10 dBm
Fiber Input	62.5/125 um user selectable connector
Input Return Loss	20 dB
Electrical Bandwidth	12.4 and 20 GHz
Electrical Transition 12.4 GHz	28.2 ps
Electrical Transition 20 GHz	17.5 ps
Electrical RMS Noise Characteristic	0.25 mV at 12.4 GHz 0.5 mV at 20 GHz
Electrical Connector	3.5 mm

Notes

Numeric rows from Agilent 861xx Infiniium DCA modules specification sheet and 86101A published module tables.
H22 class adds Gigabit Ethernet/2xFC reference-receiver filter combinations.

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.