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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83446A Lightwave Clock/Data Receiver 2.48832 Gb/sec

HP Agilent 83446A Lightwave Clock Data Receiver 2.48832 Gb/s The HP/Agilent 83446A extracts clock and data from OC-48/STM-16 optical signals. OEM 83446A/B product data list 2.48832 Gb/s rate, 1310/1550 nm, APD plus gain-controlled amplifier and CDR hybrid, sensitivity to less than minus 27 dBm (some sheets minus 28 dBm), and design to ITU-T G.957/G.958 and Bellcore GR-253-CORE. Outputs target 71604B/71612C/86130A error detectors. Optical BER testing by feeding recovered clock and data to a BERT error detector. The HP/Agilent 83446A extracts clock and data from OC-48/STM-16 optical signals. OEM 83446A/B product data list 2.48832 Gb/s rate, 1310/1550 nm, APD plus gain-controlled amplifier and CDR hybrid, sensitivity to less than minus 27 dBm (some sheets minus 28 dBm), and design to ITU-T G.957/G.958 and Bellcore GR-253-CORE. Outputs target 71604B/71612C/86130A error detectors. Optical BER testing by feeding recovered clock and data to a BERT error detector. Auxiliary port monitors APD before regeneration Instrument Type: Lightwave clock and data receiver



MODEL

**Agilent / Keysight
83446A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83446A

LISTING

<https://aumictechlabs.com/products/83446a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 83446A Lightwave Clock/Data Receiver extracts clock and data from digitally modulated optical signals at 2.48832 Gb/sec. Built around a high-gain avalanche photodiode (APD), gain-controlled amplifier, and integrated clock/data recovery hybrid, it delivers synchronized outputs from signals as low as -27 dBm. The unit supports both 1310 nm and 1550 nm wavelengths and produces 0.5 V pk-pk data and clock outputs with characteristic RMS jitter of 5 degrees.

Technical Specifications
Data Rate: 2.48832 Gb/sec (OC-48/STM-16), $\pm 0.5\%$
Wavelength: 1310 nm and 1550 nm
Optical Sensitivity: -27 dBm minimum (characteristics to -28 dBm)
Input Optical Power Range: -27 dBm to +10 dBm
Data/Clock Outputs: 0.5 V pk-pk each
Auxiliary Output: 0.5 V pk-pk (>-24 dBm input); 0.25 V pk-pk (>-27 dBm input), AGC stabilized
Clock/Data RMS Jitter: 5 degrees (characteristic)
Optical Return Loss: 27 dB
Output Electrical Return Loss: 12 dB @ 1 GHz, 9 dB @ 2 GHz, 6 dB @ 2.5 GHz
Auxiliary Output Bandwidth: 0.1 to 1500 MHz (characteristic)
Power Requirements: 100, 120, 220, or 240 VAC $\pm 10\%$, 47-63 Hz
Power Consumption: <75 VA

Key Features
High-gain APD with gain-controlled amplification for low-power optical signal recovery
Integrated clock/data recovery hybrid ensures precise synchronization
Auxiliary electrical input (200 mV pk-pk characteristic sensitivity; 2 V pk-pk maximum safe input)
Auxiliary monitoring output with AGC stabilization
NRZ coding support
Optical connector interface: FC/PC (Agilent 81000xl Series connectors sold separately)

Typical Applications
SONET/SDH system testing and characterization
High-speed bit-error-ratio (BER) analysis on optical signals
System acceptance and BER floor assessments
Integration with high-speed BERT instrumentation

Compatibility & Integration
Designed for direct integration with bit-error-ratio test systems. Optical interface supports standard FC/PC connectors with optional interface modules.

83446A Characteristics / Specifications

PARAMETER	VALUE
Model	83446A
Instrument Type	Lightwave clock and data receiver
Bit Rate	2.48832 Gb/s (OC-48 / STM-16)
Wavelength Range	1310 nm and 1550 nm
Sensitivity	less than minus 27 dBm
Detector	avalanche photodiode APD
Architecture	APD, gain-controlled amplifier, clock/data recovery hybrid
Standards	ITU-T G.957 G.958 and Bellcore GR-253-CORE
Auxiliary Port	monitor of APD output prior to regeneration
Bert Partners	71604B 71612C 86130A error detectors
Sibling 622 Mb	83446B 622.08 Mb/s OC-12 / STM-4
Manufacturer	HP Agilent Keysight
Mechanical Package	benchtop lightwave receiver
Output Use	clock and data to BERT error detector
Minimum Frequency Optical	1310 nm class
Maximum Frequency Optical	1550 nm class
Line Rate Exact	2.48832 Gb/s
Recovery	clock and data from digitally modulated lightwave
Error Free Goal	clean outputs from optical signals as low as minus 27 dBm
Family	83446A/B
Application Class	SONET/SDH optical BER
Optical Connectors	81000xl series interfaces ordered separately

83446A Specifications

PARAMETER	VALUE
Key Features	OC-48 / STM-16 2.48832 Gb/s CDR
Auxiliary port monitors APD before regeneration	83446B is the 622.08 Mb/s sibling
Technical Specifications	Model: 83446A

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	
From HP/Agilent 83446A lightwave clock/data receiver product specifications. Sensitivity is published as less than minus 27 dBm; some listings quote minus 28 dBm. Confirm optical connector option.	

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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NIST-traceable calibration · SAM registered ·
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.