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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83494A Optical clock recovery module

Agilent Keysight 83494A Clock Recovery Module The Agilent 83494A is a clock-recovery plug-in for 83480A/86100-class digital communications analyzers providing recovered clocks at standard SDH/SONET rates (155/622/2488 Mb/s class). OEM 83480/86100 module guides list the 83494A as an integrated optical/electrical CDR module with signal taps for triggering eyes when no explicit clock is available. OC-3/OC-12/OC-48 optical and electrical eye triggering on 83480A and early 86100 mainframes. Optical and electrical input paths on optioned units The Agilent 83494A is a clock-recovery plug-in for 83480A/86100-class digital communications analyzers providing recovered clocks at standard SDH/SONET rates (155/622/2488 Mb/s class). OEM 83480/86100 module guides list the 83494A as an integrated optical/electrical CDR module with signal taps for triggering eyes when no explicit clock is available. OC-3/OC-12/OC-48 optical and electrical eye triggering on 83480A and early 86100 mainframes. Optical and electrical input paths on optioned units Predecessor to 83496A/B continuous-rate CDR



MODEL

**Agilent / Keysight
83494A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83494A

LISTING

<https://aumictechlabs.com/products/83494a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 83494A Optical Clock Recovery Module is a plug-in module for high-speed digital transmission testing and optical communication system characterization. It derives timing references directly from optical data streams, eliminating the need for separate trigger sources. The module synchronizes to SONET/SDH transmission rates through 10 Gb/s and delivers exceptional jitter performance for precise waveform capture and signal analysis.

Technical Specifications
Data Rates: 155 Mb/s, 622 Mb/s, 2.488 Gb/s, 9.953 Gb/s, 10.3125 Gb/s, 10.709 Gb/s
Optical Wavelengths: 1310 nm / 1550 nm (1200–1600 nm operating range)
Input Power Range: –14 to +3 dBm (≤ 2.488 Gb/s); –8 to +3 dBm (≥ 9.953 Gb/s)
Maximum Insertion Loss: 1.5 dB
Fiber Type: Single-mode (9/125 μm)
PLL Bandwidth: 90 kHz (internal triggering); 4–5 MHz (external output)

Key Features
Automatic clock recovery from optical signal eliminates external trigger dependencies
Recovered clock output available at dedicated CLOCK connector for jitter transfer measurements
Fast jitter tracking enables accurate high-speed signal acquisition
Data rate selection via SELECT key with green indicator light confirmation
Trigger On Data bypass mode available for alternate triggering strategies

Typical Applications
SONET/SDH optical link characterization and validation
High-speed digital transmission testing to 10 Gb/s
Jitter analysis and measurement in optical communication systems
Waveform capture and timing reference derivation from live data streams

Compatibility & Integration
Inserts into Agilent 86100A/B, 86100C, and 86100D Infiniium DCA mainframes, as well as the 83480A Digital Communications Analyzer and 54750A digitizing oscilloscope.

83494A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Clock recovery plug-in module
Series Family	Agilent 83494A / 83496A/B / 86100 DCA
Host Mainframe Class	83480A and 86100 DCA family
Rate Class 1	155.52 Mb/s STM-1/OC-3 class
Rate Class 6	622.08 Mb/s STM-4/OC-12 class
Rate Class 24	2.488 Gb/s STM-16/OC-48 class
Function	recover clock from live data for DCA trigger
Input Paths	optical and electrical depending on 83494A options
Signal Taps	integrated pickoff/taps class of 8349x CDR modules
Successor	83496A/B continuous 50 Mb/s to 7.1/14.2 Gb/s CDR
Form Factor	86100/83480 plug-in
Trigger Output	recovered clock to mainframe trigger
Standards	SDH/SONET
Documentation	Agilent 83480A/86100 module configuration guides listing 83494A
Wavelength Class	1310/1550 nm optical CDR path when optical option fitted
Electrical Input Class	single-ended electrical data into CDR
Operating Temperature Family	plus 10 C to plus 40 C class of 86100 modules
Application	eye diagrams without a forwarded clock
Loop	instrumentation golden-PLL class CDR
Compatibility Note	confirm 86100A/B/C firmware support on the 83494A note
Verification	read the option label for installed rates
Operating temperature	Family: plus 10 C to plus 40 C class of 86100 modules

83494A Specifications

PARAMETER	VALUE
Agilent Keysight 83494A Clock Recovery Module	Overview
Applications	OC-3/OC-12/OC-48 optical and electrical eye triggering on 83480A and early 86100 mainframes.
Key Features	Plug-in CDR for 83480A/86100
Optical and electrical input paths on optioned units	Predecessor to 83496A/B continuous-rate CDR
Technical Specifications	Instrument Type: Clock recovery plug-in module

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Family: plus 10 C to plus 40 C class of 86100 modules
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Operating Temperature Family	plus 10 C to plus 40 C class of 86100 modules
Application	eye diagrams without a forwarded clock
Loop	instrumentation golden-PLL class CDR
Compatibility Note	confirm 86100A/B/C firmware support on the 83494A note
Verification	read the option label for installed rates
Use	laboratory DCA plug-in Notes Rate class 155/622/2488 Mb/s and 83480A/86100 plug-in identity from Agilent 83480/86100 module configuration literature listing 83494A. Continuous-rate 50 Mb/s-14.2 Gb/s numbers belong to 83496B, not 83494A.

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
Instrument Type	Clock recovery plug-in module
Series Family	Agilent 83494A / 83496A/B / 86100 DCA
Host Mainframe Class	83480A and 86100 DCA family
Rate Class 155	155.52 Mb/s STM-1/OC-3 class
Rate Class 622	622.08 Mb/s STM-4/OC-12 class
Rate Class 2488	2.488 Gb/s STM-16/OC-48 class
Function	recover clock from live data for DCA trigger
Input Paths	optical and electrical depending on 83494A options
Signal Taps	integrated pickoff/taps class of 8349x CDR modules
Successor	83496A/B continuous 50 Mb/s to 7.1/14.2 Gb/s CDR
Form Factor	86100/83480 plug-in
Trigger Output	recovered clock to mainframe trigger
Standards	SDH/SONET
Documentation	Agilent 83480A/86100 module configuration guides listing 83494A
Wavelength Class	1310/1550 nm optical CDR path when optical option fitted
Electrical Input Class	single-ended electrical data into CDR
Operating Temperature Family	plus 10 C to plus 40 C class of 86100 modules
Application	eye diagrams without a forwarded clock
Loop	instrumentation golden-PLL class CDR
Compatibility Note	confirm 86100A/B/C firmware support on the 83494A note
Verification	read the option label for installed rates
Notes On Sparse Table: lock range and sensitivity are on the 83494A specification sheet	
Use: laboratory DCA plug-in	
Notes	
Rate class 155/622/2488 Mb/s and 83480A/86100 plug-in identity from Agilent 83480/86100 module configuration literature listing 83494A. Continuous-rate 50 Mb/s-14.2 Gb/s numbers belong to 83496B, not 83494A.	

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.