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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86108B Precision Waveform Analyzer

Agilent Keysight 86108B Precision Waveform Analyzer 35/50 GHz The Keysight 86108B Precision Waveform Analyzer is an 86100C/D plug-in combining dual electrical samplers, hardware clock recovery, and a precision timebase. OEM 86108B data sheet 5990-9754 lists 35 GHz (LBW) or 50 GHz (HBW) bandwidth, residual jitter less than 50 fs rms typical (less than 70 fs maximum with CR+PTB on HBW), and clock recovery 50 Mb/s to 16 Gb/s (216) or 32 Gb/s (232). Accurate eye, jitter, and waveform characterization of 10-28 Gb/s electrical SERDES and backplane signals, including closed eyes via Aux CR input. The Keysight 86108B Precision Waveform Analyzer is an 86100C/D plug-in combining dual electrical samplers, hardware clock recovery, and a precision timebase. OEM 86108B data sheet 5990-9754 lists 35 GHz (LBW) or 50 GHz (HBW) bandwidth, residual jitter less than 50 fs rms typical (less than 70 fs maximum with CR+PTB on HBW), and clock recovery 50 Mb/s to 16 Gb/s (216) or 32 Gb/s (232). Accurate eye, jitter, and waveform characterization of 10-28 Gb/s electrical SERDES and backplane signals, including closed eyes via Aux CR input.



MODEL

**Agilent / Keysight
86108B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86108B

LISTING

<https://aumictechlabs.com/products/86108b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 86108B Precision Waveform Analyzer is a plug-in module for the 86100C/D Infiniium DCA oscilloscope family, delivering waveform characterization for high-speed electrical signals up to 32 Gb/s and beyond. With residual jitter below 50 fs RMS and integrated clock recovery spanning 50 Mb/s to 32 Gb/s, this module provides the timing accuracy and signal fidelity required for validating communication systems and semiconductor components.

Technical Specifications

- Bandwidth: Up to 50 GHz (35 GHz receivers available)
- Residual Jitter: Typically < 50 fs RMS
- Timebase Jitter: Typically < 50 fs RMS
- Channel Noise: Typically < 300 μ V RMS
- Jitter Measurement Range: RJ component as low as 38 fs
- Data Rate Coverage: 50 Mb/s to 32 Gb/s (continuous)
- Clock Recovery Input: Auxiliary CR input for degraded signals; limit amp reduces AM to PM conversion
- Input Signal Levels: Can analyze signals in the tens of mV range via auxiliary CR input

Key Features

- Integrated clock recovery with adjustable loop bandwidth and peaking up to 32 Gb/s
- Triggerless single-connection operation
- Jitter spectrum analysis and RJ isolation
- PLL characterization including jitter transfer and loop bandwidth measurements
- PCIe Gen 1/2/3 compliant PLL bandwidth and peaking measurements
- Phase-matched cables and integrated pickoffs for simplified signal acquisition
- Recovered clock output for downstream analysis

Typical Applications

- High-speed digital design validation
- Semiconductor component characterization
- Telecommunications signal analysis
- PCIe and Fibre Channel signal integrity assessment
- 10GBASE-KR and high-speed serial link validation

Compatibility & Integration

Designed exclusively as a plug-in module for Keysight/Agilent 86100C and 86100D Infiniium DCA mainframes. Connects via CH1 and CH2 inputs, explicit clock input, and auxiliary CR input. Outputs recovered clock for real-time analysis.

86108B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Precision waveform analyzer plug-in
Series Family	Keysight 86108A/B / 86100 DCA
Bandwidth Option Lbw	dual 35 GHz electrical, 3.5 mm inputs
Bandwidth Option Hbw	dual 50 GHz electrical, 2.4 mm inputs
Clock Recovery Option 2	50 Mb/s to 16 Gb/s continuous
Residual Jitter Typical Cr Ptb Hbw	less than 50 fs rms typical
Residual Jitter Maximum Cr Ptb Hbw	less than 70 fs
Residual Jitter Typical Cr Ptb Lbw	less than 50 fs rms typical (86108B-LBW table)
Residual Jitter Maximum Cr Ptb Lbw	less than 90 fs (86108A/LBW column)
Jitter Without Ptb Typical	less than 1.25 ps typical
Trigger To Sample Delay Typical	less than 200 ps typical (CR and PTB)
Precision Timebase Trigger Bandwidth Lbw	2 to 13.5 GHz (1 to 17 GHz)
Precision Timebase Trigger Bandwidth Hbw	1 to 18 GHz
Loop Bandwidth Option 3	15 kHz to 20 MHz adjustable plus peaking
Timebase Resolution With Ptb	0.5 ps/div
Timebase Resolution Ptb Disabled	2 ps/div
Ptb Input Amplitude Characteristic	1.0 to 1.6 Vpp
Ptb Maximum Input	plus or minus 2 V (16 dBm)
Ptb Maximum Dc Offset	plus or minus 200 mV
Ptb Input Impedance	50 ohm
Firmware	86100C/D firmware A.10.70 or later
Literature	Keysight 86108B data sheet 5990-9754 and 86100D configuration guide 5992-0038
Bandwidth	Option Lbw: dual 35 GHz electrical, 3.5 mm inputs

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	Precision waveform analyzer plug-in
Series Family	Keysight 86108A/B / 86100 DCA
Bandwidth Option Lbw	dual 35 GHz electrical, 3.5 mm inputs
Bandwidth Option Hbw	dual 50 GHz electrical, 2.4 mm inputs
Clock Recovery Option 216	50 Mb/s to 16 Gb/s continuous
Clock Recovery Option 232	50 Mb/s to 32 Gb/s continuous
Residual Jitter Typical Cr Ptb Hbw	less than 50 fs rms typical
Residual Jitter Maximum Cr Ptb Hbw	less than 70 fs
Residual Jitter Typical Cr Ptb Lbw	less than 50 fs rms typical (86108B-LBW table)
Residual Jitter Maximum Cr Ptb Lbw	less than 90 fs (86108A/LBW column)
Jitter Without Ptb Typical	less than 1.25 ps typical
Trigger To Sample Delay Typical	less than 200 ps typical (CR and PTB)
Precision Timebase Trigger Bandwidth Lbw	2 to 13.5 GHz (1 to 17 GHz)
Precision Timebase Trigger Bandwidth Hbw	1 to 18 GHz
Loop Bandwidth Option 300	15 kHz to 20 MHz adjustable plus peaking
Timebase Resolution With Ptb	0.5 ps/div
Timebase Resolution Ptb Disabled	2 ps/div
Ptb Input Amplitude Characteristic	1.0 to 1.6 Vpp
Ptb Maximum Input	plus or minus 2 V (16 dBm)
Ptb Maximum Dc Offset	plus or minus 200 mV
Ptb Input Impedance	50 ohm
Firmware	86100C/D firmware A.10.70 or later
Literature	Keysight 86108B data sheet 5990-9754 and 86100D configuration guide 5992-0038
Notes	
Numeric rows from Keysight 86108B Precision Waveform Analyzer data sheet 5990-9754 and 86100D Infiniium DCA-X	

module tables (LBW/HBW, CR 216/232, PTB jitter). Option PTB is standard no-cost on 86108B. 86100D-PTB in the mainframe is disabled when 86108B is installed.

Ordering Information

OPTION	DESCRIPTION
Option 300	adjustable loop BW 15 kHz to 20 MHz and peaking
Option 400	auxiliary clock-recovery input with limit amp

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

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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.