

KEYSIGHT TECHNOLOGIES (AGILENT HP)

86101A

The Keysight Agilent 86101A is a single-slot plug-in module designed for the Infiniium 86100 series Digital Communication Analyzer (DCA) mainframes. It provides a 2.8 GHz calibrated optical receiver for testing high-speed telecommunications signals at 1063 or 1250 Mb/s, alongside a high-performance 20 GHz electrical channel. It is ideal for Fibre Channel and Gigabit Ethernet compliance testing.

SPECIFICATIONS

General

Interfaces	3.5 mm male electrical input, optical input (requires connector adapter)
Factory Calibration Cycle	1 year

Physical

Operating Temperature	10 to 40 °C °C
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Optical Channel Performance

Wavelength Range	750 nm to 860 nm
Optical Bandwidth	2.8 GHz
Fiber Compatibility	62.5/125 µm multimode and single-mode
RMS Noise (Optical)	1.5 µW (characteristic at 2.8 GHz)
Reference Receiver Filter Rates	155 Mb/s, 622 Mb/s, 1.063 Gb/s, 1.250 Gb/s
Average Power Meter	Built-in
Optical Detector Material	GaAs PIN photodiode
Optical Transition Time	150 ps (calculated 10% to 90%)
Optical Return Loss	> 15 dB (for 62.5/125 µm multimode fiber)
Optical Scale Factor Range	5 µW/div to 100 µW/div
Maximum Peak Optical Input Power	2 mW

Electrical Channel Performance

Electrical Bandwidth	12.4 GHz / 20 GHz (user-selectable)
RMS Noise (Electrical, 12.4 GHz BW)	0.25 mV (characteristic)
RMS Noise (Electrical, 20 GHz BW)	0.5 mV (characteristic)
Electrical Input Connector	3.5 mm male
Nominal Input Impedance	50 Ω

General & Mainframe Compatibility

Compatible Mainframes	Keysight / Agilent 86100A, 86100B, 86100C, 86100D Infiniium DCA Wide-Bandwidth Oscilloscopes
Number of Slots Required	1 slot

Optical Input Channel

Maximum Safe Optical Input Power	2 mW
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Electrical Input Channel

Maximum Safe Electrical Input	±2 Vdc + peak AC (+16 dBm)
Electrical Rise Time (10% to 90%)	≤ 17.5 ps (20 GHz bandwidth), ≤ 28 ps (12.4 GHz bandwidth)
Electrical Scale Factor Range	1 mV/div to 100 mV/div
Electrical Channel Offset Range	±500 mV

Environmental

Storage Temperature Range	-40 °C to +70 °C
Operating Humidity Range	Up to 90% RH (non-condensing) at 40 °C
Non-operating Humidity Range	Up to 95% RH at 65 °C
Operating Altitude	Up to 4,600 m (15,000 ft)
Non-operating Altitude	Up to 15,300 m (50,000 ft)

TECHNOLOGY

Optical and Electrical Sampling

APPLICATIONS

Fibre Channel, Gigabit Ethernet, and high-speed telecommunications signal compliance testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.