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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 86103A

Keysight 86103A Optical Electrical Plug-in Module The Keysight 86103A is an Infiniium DCA plug-in providing one calibrated optical channel (980 to 1625 nm, 2.85 GHz unfiltered) and one dual-bandwidth electrical channel (12.4/20 GHz) with switchable reference filters per Agilent 86100A family module tables. SONET SDH Fibre Channel and Gigabit Ethernet optical eye and mask testing, plus high-bandwidth electrical waveform analysis in an 86100 DCA mainframe. Integrated optical and electrical channels The Keysight 86103A is an Infiniium DCA plug-in providing one calibrated optical channel (980 to 1625 nm, 2.85 GHz unfiltered) and one dual-bandwidth electrical channel (12.4/20 GHz) with switchable reference filters per Agilent 86100A family module tables. SONET SDH Fibre Channel and Gigabit Ethernet optical eye and mask testing, plus high-bandwidth electrical waveform analysis in an 86100 DCA mainframe. Integrated optical and electrical channels Instrument Type: Optical electrical DCA plug-in module



MODEL

**Agilent / Keysight
86103A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86103A

LISTING

<https://aumictechlabs.com/products/86103a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 86103A is a dual-channel electrical and optical module for the 86100 series Digital Communications Analyzer platform. It delivers precision signal analysis across high-speed electrical and optical domains, supporting standards including SDH/SONET, Fibre Channel, and Gigabit Ethernet. The module combines wide electrical bandwidth with calibrated optical

reception for comprehensive protocol compliance testing. Technical Specifications Electrical Channel Bandwidth: 12.4 GHz and 20 GHz Transition time (10–90%): 28.2 ps at 12.4 GHz; 17.5 ps at 20 GHz RMS noise: 0.25 mV at 12.4 GHz; 0.5 mV at 20 GHz Maximum input signal: ± 2 Vdc Input impedance: 50 ohm DC accuracy (single marker): $\pm 0.4\%$ of full scale ± 2 mV at both bandwidths Offset range: ± 500 mV Input dynamic range: ± 400 mV Optical Channel Unfiltered bandwidth: 2.85 GHz (3 GHz typical) Wavelength range: 1000–1600 nm; calibrated at 1310 nm and 1550 nm Transition time (10–90%): 160 ps Sensitivity: -20 dBm characteristic RMS noise: 1–1.5 μ W at 155/622 Mb/s; 1.5–2.5 μ W at 1.063/1.250 Gb/s Scale factor: 5–100 mW/division CW accuracy: ± 6 mW $\pm 0.4\%$ of full scale $\pm 3\%$ of (reading – offset) Maximum non-destructive average power: 0.4 mW (-4 dBm) Maximum non-destructive peak power: 10 mW Factory calibrated accuracy (single mode): $\pm 5\%$ ± 100 nW, 20–30°C Factory calibrated accuracy (multimode): $\pm 10\%$ ± 100 nW, 20–30°C User calibrated accuracy: $\pm 2\%$ ± 100 nW, $<5^\circ\text{C}$ change Key Features Switchable hardware filters for 155/622 Mb/s or 1063/1250 Mb/s compliance testing Dual-wavelength calibration reduces setup complexity Low electrical noise enables detailed signal characterization Average power monitor operating range: -30 dBm to 0 dBm Typical Applications SDH/SONET optical network testing Fibre Channel signal integrity analysis Gigabit Ethernet compliance verification High-speed electrical signal characterization Compatibility & Integration Designed as a plug-in module for the Agilent/Keysight 86100 series DCA platform. Note: This product is obsolete per manufacturer designation.

86103A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Optical electrical DCA plug-in module
Host Platform	86100 Infiniium DCA family
Optical Channels	1
Electrical Channels	1
Optical Fiber Input	62.5 125 um multimode compatible path
Optical Wavelength Range	980 to 1625 nm
Optical Unfiltered Bandwidth Spec	2.85 GHz
Optical Unfiltered Bandwidth Typical	greater than 3.0 GHz
Optical Sensitivity Typical Mask Test	minus 20 dBm
Filtered Data Rates Mb Per S	155 622 1063 1250 2125 2488
Electrical Bandwidth Modes	12.4 GHz and 20 GHz
Predecessor Module Reference	83486A
Calibrated Wavelengths Class	1310 nm and 1550 nm family tables
Modules Per Mainframe Maximum	2
Measurement Channels Per Mainframe Maximum	4
Optical Transition Time Filtered Oc48 Class	less than 190 ps 10 to 90 calculated
Optical Transition Time Filtered Oc12 Class	less than 750 ps
Optical Transition Time Filtered Oc3 Class	less than 3 ns
Mask Standards Supported Class	OC-3 OC-12 OC-48 Fibre Channel Gigabit Ethernet
Electrical Low Noise Mode	12.4 GHz
Electrical High Fidelity Mode	20 GHz
Module Form	86100 series plug-in
Wavelength range	980 to 1625 nm

PARAMETER	VALUE
Bandwidth	Spec: 2.85 GHz

86103A Specifications

PARAMETER	VALUE
Switchable reference filters	12.4 GHz and 20 GHz electrical modes
Calibrated optical receiver path	86100 Infiniium DCA compatible
Technical Specifications	Instrument Type: Optical electrical DCA plug-in module

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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Mask Standards Supported Class	0C-3 0C-12 0C-48 Fibre Channel Gigabit Ethernet
Electrical Low Noise Mode	12.4 GHz
Electrical High Fidelity Mode	20 GHz
Module Form	86100 series plug-in

Notes

Numeric rows from Agilent 86100A Wide-Bandwidth Oscilloscope module comparison tables for 86103A (83486A).
Sensitivity is typical smallest average power for mask test.

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.