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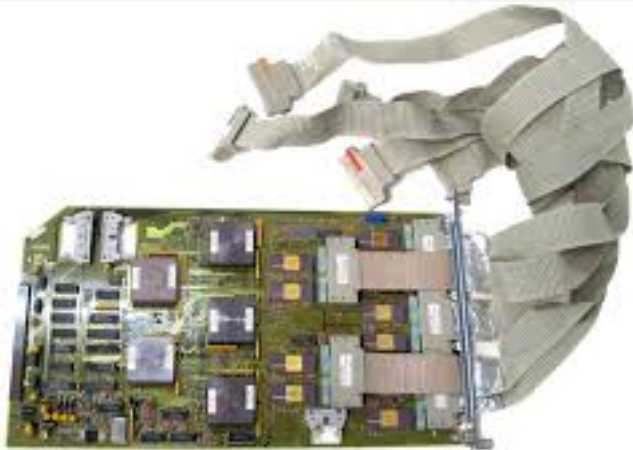
Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 16510B

HP Agilent 16510B 80 Channel Logic Analyzer Module for 16500A The HP 16510B is an 80-channel state/timing card for the 16500A mainframe. OEM 16510B getting-started and front-panel references list 100 MHz timing and 35 MHz state on all channels, 1k memory per channel, glitch detection, eight sequence levels, eight pattern recognizers, and up to five cards (400 channels) in a 16500A. State and timing analysis in HP 16500A modular logic-analysis systems. Two independent machines (state/state or state/timing) The HP 16510B is an 80-channel state/timing card for the 16500A mainframe. OEM 16510B getting-started and front-panel references list 100 MHz timing and 35 MHz state on all channels, 1k memory per channel, glitch detection, eight sequence levels, eight pattern recognizers, and up to five cards (400 channels) in a 16500A. State and timing analysis in HP 16500A modular logic-analysis systems. Two independent machines (state/state or state/timing) Pod Organization: multiples of 16 channels per machine



MODEL

**Agilent / Keysight
16510B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

16510B

LISTING

<https://aumictechlabs.com/products/16510b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 16510B is an 80-channel logic analyzer module designed to expand the Agilent/Keysight 16500A mainframe with dual-mode state and timing analysis for digital circuit debugging and verification. State analysis operates at up to 35 MHz with 1024 samples per channel and 60 ns minimum state intervals. Timing analysis reaches 100 MHz with 5 ns glitch

detection and transitional timing mode that extends memory to 5000 seconds at 10 ns resolution. The module supports asynchronous pattern triggering, glitch/edge detection, and five independent clock inputs with four qualifiers. Five input pods accommodate passive probes requiring 600 mVp-p minimum swing, with individually configurable thresholds from -9.9 V to +9.9 V in 0.1 V increments and dynamic range of ± 10 V about threshold. Time correlation and simultaneous state/state or state/timing analysis operate across the 16500A intermodule bus. Preprocessor adapters enable direct microprocessor support for Intel, Motorola, Zilog, National, Hitachi, GTE, Rockwell, and NEC architectures, with software conversion of state data to mnemonics.

Technical Specifications

Channels: 80

State Analysis: 35 MHz max clock rate, 1024 samples per channel, 60 ns minimum state interval, 20 ns setup time, 5 ns hold time

Timing Analysis: 100 MHz max clock rate, 5 ns minimum detectable glitch, 20 ns to 50 ms sample period, 512 samples per channel

Transitional Timing Mode: 10 ns sample period, covers 10.24 μ s to 5000 seconds

Memory: 1 KB base; extended via transitional timing

Threshold Range: -9.9 V to +9.9 V in 0.1 V increments; TTL preset +1.6 V, ECL preset -1.3 V

Maximum Input Voltage: ± 40 V peak

Dynamic Range: ± 10 V about threshold

Probe Input: 100 k Ω $\pm 2\%$ impedance with ~ 8 pF; 600 mVp-p minimum swing; 250 mV or 30% overdrive minimum

Clock Inputs: 5 available with 4 qualifiers

Key Features

- Asynchronous pattern triggering based on duration
- Glitch/edge triggering with continuous pattern detection
- Dual-mode analysis: simultaneous state/state or state/timing
- Time tagging for transition duration measurement
- Pod-by-pod threshold configuration (pods 1-3 individual; pods 4-5 shared)
- Time correlation over 16500A intermodule bus
- Microprocessor Support CPU-socket preprocessor adapters for Intel, Motorola, Zilog, National, Hitachi, GTE, Rockwell, and NEC families with mnemonic conversion software.

Compatibility & Integration

Expands Agilent/Keysight 16500A mainframe with multimodule synchronization and data correlation.

16510B Characteristics / Specifications

PARAMETER	VALUE
Model	16510B
Instrument Type	Logic analyzer module
Host Mainframe	HP 16500A
Channel Count	80
Timing Rate	100 MHz all channels
State Rate	35 MHz all channels
Memory Depth	1k per channel
Pod Organization	multiples of 16 channels per machine
Max Cards In 16500A	5 (400 channels)
Sequence Levels	8
Pattern Recognizers	8
Range Recognizers	1
Timing Modes	transitional or glitch
Glitch Detection	on all channels
Tagging	time and number-of-states tagging
Compare	state compare chart and waveform
Predecessor	16510A 25 MHz state / 100 MHz timing
Probe Cables	five 40-pin IDC cables permanently attached
Manufacturer	HP Agilent Keysight
Mechanical Package	16500 plug-in module
Mainframe Io	HP-IB and RS-232C on 16500A
Machines	up to two independent analyzers
Mainframe Family	HP 16500A logic analysis system

16510B Specifications

PARAMETER	VALUE
Applications	State and timing analysis in HP 16500A modular logic-analysis systems.
Key Features	80 channels per card
Two independent machines (state/state or state/timing)	Transitional or glitch timing modes
Technical Specifications	Model: 16510B

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 16510B Logic Analyzer Module Getting Started Guide 5952-0173 and Front-Panel Operation Reference 16510-90913. 16510A is the 25 MHz state predecessor.	

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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.