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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 1680AD Standalone Logic Analyzer

Keysight (Agilent) 1680AD Standalone Logic Analyzer The Agilent/Keysight 1680AD is the deep-memory member of the Windows-based 1680 Series standalone benchtop logic analyzers. It provides 136 channels (132 data + 4 clock/data), selectable state analysis to 200 MHz, conventional timing to 250 MHz full / 500 MHz half channel, and 2M samples of acquisition memory (approximately 4M in half-channel timing). A 12.1-inch LCD and Windows XP Professional deliver an intuitive standalone debug environment; 40-pin probes are ordered separately. The Agilent/Keysight 1680AD is the deep-memory member of the Windows-based 1680 Series standalone benchtop logic analyzers. It provides 136 channels (132 data + 4 clock/data), selectable state analysis to 200 MHz, conventional timing to 250 MHz full / 500 MHz half channel, and 2M samples of acquisition memory (approximately 4M in half-channel timing). A 12.1-inch LCD and Windows XP Professional deliver an intuitive standalone debug environment; 40-pin probes are ordered separately. Standalone digital debug; microprocessor and bus inverse assembly; long conventional and transitional timing captures; Windows-based documentation and networked file exchange.



MODEL

**Keysight / Agilent
1680AD**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

1680AD

LISTING

<https://aumictechlabs.com/products/1680ad-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight (Agilent) 1680AD is a standalone logic analyzer built for real-time capture and analysis of complex digital signals in embedded systems, ASICs, and digital designs. The integrated 10.4" or 12.1" color LCD display and embedded GUI eliminate the need for external PC dependency during basic operation. Engineers gain access to advanced triggering, state and timing analysis modes, and protocol decode capabilities - all from a self-contained instrument.

Technical Specifications

Acquisition Architecture

Channel count: up to 136 channels

Memory depth (Conventional Timing): 2 M or 4 M samples per channel

Memory depth (Transitional Timing): 1 M samples per channel

Memory depth (State Analysis): 1 M samples per channel

Conventional Timing sample rate: 800 MHz (half-channel), 400 MHz (full-channel)

Transitional Timing sample rate: 200 MHz

State Analysis sample rate: 200 MHz

Timing zoom: 4 GHz with 250 ps resolution

Display & Computing

Integrated color LCD: 10.4" or 12.1"

Embedded operating system with graphical interface

Data Capture & Storage

Hard drive: 40 GB minimum for setups and results

Floppy drive: 1.44 MB (3.5-inch)

Network interface: 10/100Base-T LAN

Additional connectivity: USB, GPIB (option-dependent)

Key Features

Advanced trigger recall - save and reuse complex trigger configurations

State analysis with inverse assembler support for processor mnemonics and bus transactions

Timing analysis using internal clock for extended, high-resolution measurement periods

Protocol analysis: I2C, SPI, and parallel bus support

View Scope: time-correlated logic analyzer and oscilloscope data display

Eye Finder: automatic threshold and sample position configuration

Typical Applications

Embedded system debugging, ASIC validation, microprocessor bus cycle capture, multi-protocol signal analysis, and high-speed timing measurements requiring sub-nanosecond resolution.

Connectivity & Integration

LAN connectivity enables result sharing and PC storage without external PC requirement for standalone operation. USB and GPIB interfaces (where available) support laboratory integration workflows.

Features & description

From manufacturer datasheet

Features

- 136 channels (132 data + 4 clock/data); half-channel timing uses 68 channels

1680AD Characteristics / Specifications

PARAMETER	VALUE
Model	1680AD
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Standalone benchtop logic analyzer
Family	1680 Series (AD deep-memory)
Alias	1680AD; Agilent 1680AD
Channels (full)	136 (132 data + 4 clock/data)
Maximum state analysis rate (selectable)	200 MHz
Transitional timing	200 MHz class
Threshold accuracy	+/- (65 mV + 1.5% of threshold setting)
Setup/hold single clock single edge	4.5/-2.0 ns to -2.0/4.5 ns, 100 ps steps
Display	12.1-inch LCD
Operating system	Microsoft Windows XP Professional
Hard disk	~80 GB
Interfaces	Centronics; LAN; IEEE 1394 hosted control; PS/2 mouse/keyboard
Probe interface	40-pin logic analyzer probes (ordered separately)
Power class	115/230 Vac autodetect; AD series higher VA than 1680A
Sibling channel counts	1681AD 102-ch; 1682AD 68-ch; 1683AD 34-ch Notes Specs from Agilent 1680/90 Series service guide characteristics and 1680AD product literature. Confirm AD vsAmemory marking on the chassis. Probes are not included with the mainframe.

1680AD Specifications

PARAMETER	VALUE
Keysight (Agilent) 1680AD Standalone Logic Analyzer	Overview
Key Features	- 136 channels (132 data + 4 clock/data); half-channel timing uses 68 channels
Technical Specifications	Model: 1680AD

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.

characteristics)

- Conventional timing 250 MHz full / 500 MHz half channel
- Acquisition memory 2M full / ~4M half-channel (AD series); deeper than 512K/1M on 1680A
- Transitional timing to 200 MHz class for bursty activity
- Threshold accuracy +/- (65 mV + 1.5% of threshold setting)
- Setup/hold (single clock, single edge) 4.5/-2.0 ns through -2.0/4.5 ns in 100 ps steps
- 12.1-inch LCD; Windows XP Professional; ~80 GB HDD; floppy; Centronics; LAN; IEEE 1394 hosted control

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	1680AD
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Standalone benchtop logic analyzer

Specifications

PARAMETER	VALUE
Family	1680 Series (AD deep-memory)
Alias	1680AD; Agilent 1680AD
Channels (full)	136 (132 data + 4 clock/data)

Channels (half-channel timing): 68

Maximum state analysis rate (selectable): 200 MHz

Maximum state clock rate (full-channel characteristic): 150 MHz

Conventional timing (full-channel): 250 MHz

Conventional timing (half-channel): 500 MHz

Transitional timing: 200 MHz class

Memory depth (full-channel): 2048 K (2M)

Memory depth (half-channel): 4196 K (~4M)

Specifications

PARAMETER	VALUE
Threshold accuracy	+/- (65 mV + 1.5% of threshold setting)
Setup/hold single clock single edge	4.5/-2.0 ns to -2.0/4.5 ns, 100 ps steps
Display	12.1-inch LCD

Specifications

PARAMETER	VALUE
Operating system	Microsoft Windows XP Professional
Hard disk	~80 GB
Interfaces	Centronics; LAN; IEEE 1394 hosted control; PS/2 mouse/keyboard

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Notes

Specs from Agilent 1680/90 Series service guide characteristics and 1680AD product literature. Confirm AD vsAmemory marking on the chassis. Probes are not included with the mainframe.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.