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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 1690AD PC-Hosted Logic Analyzer

Agilent / Keysight 1690AD PC-Hosted Logic Analyzer The Agilent/Keysight 1690AD is the deep-memory PC-hosted logic analyzer in the 1690 Series. Acquisition hardware resides in a compact chassis controlled from a host Windows PC over IEEE 1394 (FireWire). The 1690AD provides 136 channels (132 data + 4 clock/data) with 200 MHz state analysis and conventional timing to 400 MHz full-channel / 800 MHz half-channel, with 2 M / 4 M sample memory (full/half channel). It matches 1680AD measurement performance in a smaller hosted footprint. The Agilent/Keysight 1690AD is the deep-memory PC-hosted logic analyzer in the 1690 Series. Acquisition hardware resides in a compact chassis controlled from a host Windows PC over IEEE 1394 (FireWire). The 1690AD provides 136 channels (132 data + 4 clock/data) with 200 MHz state analysis and conventional timing to 400 MHz full-channel / 800 MHz half-channel, with 2 M / 4 M sample memory (full/half channel). It matches 1680AD measurement performance in a smaller hosted footprint. Hosted digital debug from a Windows PC; deep-memory timing capture of widely separated cause/effect events; inverse assembly and bus analysis with Agilent Logic Analyzer application software; space-saving benchtop logic analysis.



MODEL

**Keysight / Agilent
1690AD**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

1690AD

LISTING

<https://aumictechlabs.com/products/1690ad-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight (Agilent) 1690AD is a PC-hosted logic analyzer that delivers 136 channels of digital signal capture and analysis for circuit debugging and validation. Built around a Windows-based interface and IEEE 1394 connection, it combines state and timing analysis modes to isolate signal integrity problems across high-speed buses and complex digital designs.

Technical Specifications

Acquisition Modes and Speed State analysis (synchronous sampling) operates at 200 MHz with 1 M samples per channel. Timing analysis provides two operational modes: conventional timing at 800 MHz (half-channel) or 400 MHz (full-channel) with up to 4 M samples (half-channel) or 2 M samples (full-channel), and transitional timing at 200 MHz with 1 M samples.

Channel and Signal Specifications The instrument provides 136 total channels with single-ended signal support. Input threshold adjustment ranges from -6 V to 6 V in 10 mV increments, enabling precise capture across diverse logic families and signal levels. Triggering Quick triggers capture edges, patterns, and glitches within the context of displayed signals. A graphical trigger builder supports complex multi-condition scenarios for intermittent fault detection.

Key Features

- Automated threshold and sample position setup for high-speed bus measurements
- Simultaneous eye diagrams on all 136 channels for rapid signal quality assessment
- Offline analysis capability - captured data transfers to a Windows PC for independent review
- Time-correlated measurement integration with external oscilloscopes to evaluate analog signal quality impact on digital operation
- Quick-trigger box drawing around suspect events for recurrence verification

Typical Applications Digital circuit validation, bus-level protocol debugging, signal integrity analysis, and multi-channel timing correlation in designs requiring simultaneous observation across large channel counts.

Compatibility & Integration Connects to host PCs via IEEE 1394 port. Minimum host requirement: 500 MHz Intel Celeron or AMD K-6 II processor running Windows 2000 Professional. Compatible with 40-pin logic analyzer probes (ordered separately). Operating temperature: 0 °C to 55 °C (instrument); 0 °C to 65 °C (probe leads and cables); 10 °C to 40 °C (disk media).

Features & description

From manufacturer datasheet

Features

- 136 channels (132 data + 4 clock/data); half-channel timing 68 channels • Deep AD memory: 2 M full / 4 M half channel timing; 1 M state • State analysis to 200 MHz; timing 400/800 MHz (full/half) • Transitional timing 200 MHz with deep memory • Simple, Quick, and Advanced (drag-and-drop) triggering • Host link IEEE 1394; uses PC display size/resolution • Time-correlated measurements with external oscilloscope via trigger I/O • Offline analysis of captured traces on a Windows PC

1690AD Characteristics / Specifications

PARAMETER	VALUE
Model	1690AD
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	PC-hosted logic analyzer
Family	1690 Series (deep memory AD)
Alias	1690AD; Agilent 1690AD; Keysight 1690AD
Total Channels	136 (132 data + 4 clock/data)
Maximum State Speed Selectable	200 MHz
Maximum State Clock Rate Full Channel Characteristic	150 MHz
Conventional Timing Full / Half Channel	400 MHz / 800 MHz
Transitional Timing	200 MHz
Timing Memory Depth Full / Half	2 M / 4 M samples
State Memory Depth	1 M samples
Threshold Accuracy	+/- (65 mV + 1.5% of threshold setting)
Setup/Hold Single Clock Single Edge	2.5 ns window, 4.5/-2.0 ns through -2.0/4.5 ns in 100 ps steps
Sample Period Full Channels	2.5 ns to 1 ms
Sample Period Half Channels	1.25 ns
Trigger Sequencer Speed	200 MHz
Trigger Sequence Levels	16
Host Interface	IEEE 1394 (FireWire)
Host PC Class	Windows 2000/XP; >=500 MHz CPU; IEEE 1394
Probe Interface	40-pin logic analyzer probes (ordered separately)
Family Channel Options	1691AD (102); 1692AD (68); 1693AD (34) Notes Specs from Agilent 1680/1690 Series datasheet 5988-2675EN and 1680/90 Series service guide 9018-04941. Confirm AD deep-memory marking vs 1690A, intact FireWire host link, and that probes are present (ordered separately).
Deep AD memory	2 M full / 4 M half channel timing; 1 M state

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.

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Applications

Hosted digital debug fromaWindows PC; deep-memory timing capture of widely separated cause/effect events; inverse assembly and bus analysis with Agilent Logic Analyzer application software; space-saving benchtop logic analysis.

Key Features

- 136 channels (132 data + 4 clock/data); half-channel timing 68 channels
- Deep AD memory: 2 M full / 4 M half channel timing; 1 M state
- State analysis to 200 MHz; timing 400/800 MHz (full/half)
- Transitional timing 200 MHz with deep memory
- Simple, Quick, and Advanced (drag-and-drop) triggering
- Host link IEEE 1394; uses PC display size/resolution
- Time-correlated measurements with external oscilloscope via trigger I/O
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Instrument Type	PC-hosted logic analyzer
Family	1690 Series (deep memory AD)
Alias	1690AD; Agilent 1690AD; Keysight 1690AD
Total Channels	136 (132 data + 4 clock/data)

Half-Channel Timing Channels: 68

Specifications

PARAMETER	VALUE
Maximum State Speed Selectable	200 MHz
Maximum State Clock Rate Full Channel Characteristic	150 MHz
Conventional Timing Full / Half Channel	400 MHz / 800 MHz
Transitional Timing	200 MHz
Timing Memory Depth Full / Half	2 M / 4 M samples
State Memory Depth	1 M samples
Threshold Accuracy	+/- (65 mV + 1.5% of threshold setting)

Minimum Master-to-Master Clock Time: 5.000 ns

Specifications

PARAMETER	VALUE
Setup/Hold Single Clock Single Edge	2.5 ns window, 4.5/-2.0 ns through -2.0/4.5 ns in 100 ps steps
Sample Period Full Channels	2.5 ns to 1 ms
Sample Period Half Channels	1.25 ns

Channel-to-Channel Skew Typical: <1.5 ns

Specifications

PARAMETER	VALUE
Trigger Sequencer Speed	200 MHz
Trigger Sequence Levels	16
Host Interface	IEEE 1394 (FireWire)
Host PC Class	Windows 2000/XP; >=500 MHz CPU; IEEE 1394
Probe Interface	40-pin logic analyzer probes (ordered separately)

Sibling Standard-Memory Model: 1690A (512K / 1M timing class)

Family Channel Options: 1691AD (102); 1692AD (68); 1693AD (34)

Notes

Specs from Agilent 1680/1690 Series datasheet 5988-2675EN and 1680/90 Series service guide 9018-04941.

Confirm AD deep-memory marking vs 1690A, intact FireWire host link, and that probes are present (ordered separately).

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.