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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 16821A

Agilent Keysight 16821A Portable Logic Analyzer 34 Channel with Pattern Generator The Agilent 16821A is the 34-channel 16800-series portable logic analyzer with a 48-channel pattern generator. OEM 16800-series data sheet lists 34 logic channels, 48 pattern-generator channels, 4 GHz (250 ps) timing zoom with 64K depth, 1.0 GHz / 500 MHz half/full conventional timing, 250 MHz state (Option 250) or 450 MHz (Option 500), and memory 1M/4M/16M/32M (Options 001/004/016/032). Portable digital debug with built-in stimulus for FPGA, memory, and board bring-up. The Agilent 16821A is the 34-channel 16800-series portable logic analyzer with a 48-channel pattern generator. OEM 16800-series data sheet lists 34 logic channels, 48 pattern-generator channels, 4 GHz (250 ps) timing zoom with 64K depth, 1.0 GHz / 500 MHz half/full conventional timing, 250 MHz state (Option 250) or 450 MHz (Option 500), and memory 1M/4M/16M/32M (Options 001/004/016/032). Portable digital debug with built-in stimulus for FPGA, memory, and board bring-up. 34 LA channels plus 48-channel pattern generator

**MODEL****Agilent / Keysight
16821A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****16821A****LISTING**<https://aumictechlabs.com/products/16821a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 16821A is a 34-channel portable logic analyzer with integrated 48-channel pattern generation, purpose-built for digital system debugging and validation. The instrument combines state and timing analysis modes in a single platform, with a 15-inch color display (touch

screen optional) and configurable acquisition memory up to 32 M. Adjustable signal thresholds from -5 V to 5 V in 10 mV increments enable precise single-ended measurements across high-speed buses. Technical Specifications Logic Analyzer 34 channels with up to 32 M acquisition memory (selectable: 1 M, 4 M, 16 M, 32 M) Threshold adjustment: -5 V to 5 V in 10 mV increments 15-inch color display with optional touch screen Timing Analysis (Asynchronous) Timing zoom resolution: 4 GHz (250 ps) with 64 K memory Conventional timing: 1.0 GHz / 500 MHz (half / full-channel) with deep memory Transitional timing: 500 MHz State Analysis (Synchronous) State clock rates: up to 250 MHz Data rates: up to 250 Mb/s Automated threshold and sample position setup for high-speed buses Simultaneous eye diagrams on all channels Pattern Generator 48 channels at up to 300 MVector/s vector speed 16 M vector depth Multiple logic level support: 5 V TTL, 3-state TTL, 3-state TTL/CMOS, 3-state 1.8 V, 3-state 2.5 V, 3-state 3.3 V, ECL, 5 V PECL, 3.3 V LVPECL, LVDS Clock pod: internal programmable 1 MHz to 300 MHz, external DC to 300 MHz, 7 ns output delay in 14 steps Clock input minimum high time: 1.3 ns Key Features Dual analysis capability: state and timing modes in single session Component substitution via pattern generation for functional testing 3-bit pattern level sensing on clock pod data inputs 10/100 Base-T LAN connectivity Compatibility & Integration The 16821A is part of the 16800 Series and accepts 40-pin logic analyzer probes (ordered separately). Clock and data pods are field-installable and ordered separately. Memory depth in 250 Mb/s state mode is reduced by half when all pods are assigned; full depth available with one pod pair unassigned.

16821A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Portable logic analyzer with pattern generator
Series Family	Agilent 16800 Series
Logic Analyzer Channels	34
Pattern Generator Channels	48
State Analysis Channels	32 data plus 2 clocks
Conventional Timing Channels	34
Timing Zoom	4 GHz (250 ps) with 64K depth
Maximum Timing Sample Rate Half Full	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)
Maximum State Clock Option 2	250 MHz
Maximum State Clock Option 5	450 MHz with Option 500
Maximum State Data Rate Option 2	250 Mb/s
Maximum State Data Rate Option 5	500 Mb/s
Memory Option 0	16 M samples
Pattern Generator Depth	16 M vectors (16821A/16822A/16823A table)
Setup Hold Window Class	minus 3.2 ns to plus 3.2 ns class of 16800 state table
Sample Adjustment Resolution Typical	80 ps typical
Logic Levels Supported	5 V TTL, 3-state TTL/CMOS, 1.8/2.5/3.3 V, ECL, LVPECL, LVDS class
Form Factor	16800 portable logic analyzer
Sibling Models	16822A 68 ch, 16823A 102 ch with pattern generator
Literature	Agilent 16800 Series Portable Logic Analyzers data sheet
Data Rate	Option 250: 250 Mb/s

16821A Specifications

PARAMETER	VALUE
Key Features	34 LA channels plus 48-channel pattern generator
Up to 32M state/timing memory	250 or 500 Mb/s state data rate options
Technical Specifications	Instrument Type: Portable logic analyzer with pattern generator

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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PARAMETER	VALUE
Instrument Type	Portable logic analyzer with pattern generator
Series Family	Agilent 16800 Series
Logic Analyzer Channels	34
Pattern Generator Channels	48
State Analysis Channels	32 data plus 2 clocks
Conventional Timing Channels	34
Timing Zoom	4 GHz (250 ps) with 64K depth
Maximum Timing Sample Rate Half Full	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)
Maximum State Clock Option 250	250 MHz
Maximum State Clock Option 500	450 MHz with Option 500
Maximum State Data Rate Option 250	250 Mb/s
Maximum State Data Rate Option 500	500 Mb/s
Memory Option 001	1 M samples
Memory Option 004	4 M samples
Memory Option 016	16 M samples
Memory Option 032	32 M samples
Pattern Generator Depth	16 M vectors (16821A/16822A/16823A table)
Setup Hold Window Class	minus 3.2 ns to plus 3.2 ns class of 16800 state table
Sample Adjustment Resolution Typical	80 ps typical
Logic Levels Supported	5 V TTL, 3-state TTL/CMOS, 1.8/2.5/3.3 V, ECL, LVPECL, LVDS class
Form Factor	16800 portable logic analyzer
Sibling Models	16822A 68 ch, 16823A 102 ch with pattern generator
Literature	Agilent 16800 Series Portable Logic Analyzers data sheet
Notes	
Numeric rows from Agilent 16800 Series Portable Logic Analyzers data sheet (16821A column: 34 LA / 48 PG, timing zoom, state options, memory options). Confirm installed 250 vs 500 and memory option on the label.	

Ordering Information

OPTION	DESCRIPTION
Option 500	Maximum State Data Rate Option 250: 250 Mb/s

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.