Agilent Logic Analyzers

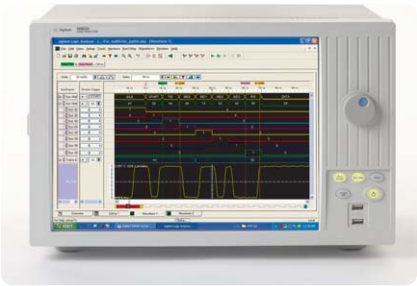
Selection Guide

Fast, Accurate Answers Throughout the Design Validation Cycle

Agilent Technologies logic analyzers help you minimize project risk by providing the most reliable, accurate measurements and the most complete view of system behavior. A comprehensive family of products offers the measurement capabilities, probing, application support and analysis tools to meet your toughest digital debug needs.

Agilent Technologies

16800 Series portable logic analyzers



- Affordable fixed configurations
- Supports a wide range of applications with 34, 68, 102, 136 or 204 channels
- Built-in 48-ch pattern generator available on select models

4 GHz high-speed timing zoom
Up to 1 GHz conventional timing
Up to 450 MHz state rate, 500 Mb/s data rate
Up to 204 channels
Up to 32 M deep memory

16901A 2-slot modular logic analysis system

- Flexibility to configure the system for your acquisition and stimulus needs
- Long-term investment protection – upgrade or re-configure as your needs evolve
- Maximize your measurement capability
  - Increase your channel count – Up to 204 channels
  - Deepest memory depth available – up to 256 M across all channels
  - Highest timing and state speeds
  - Single-ended and differential signal support

4 GHz high-speed timing zoom
Up to 1.2 GHz conventional timing
Up to 667 MHz state rate, 1066 Mb/s data rate
Up to 204 channels
Up to 256 M deep memory

16902B 6-slot modular logic analysis system

- Maximum configuration flexibility – six slots for multiple logic analyzer and/or pattern generator modules
- Long-term investment protection – upgrade or re-configure as your needs evolve
- Maximize your measurement capability
  - Increase your channel count – Up to 204 channels
  - Deepest memory depth available – up to 256 M across all channels
  - Highest timing and state speeds
  - Single-ended and differential signal support

4 GHz high-speed timing zoom
Up to 1.2 GHz conventional timing
Up to 667 MHz state rate, 1066 Mb/s data rate
Up to 612 channels
Up to 256 M deep memory

1699X application solutions

- Fully configured system for devices and buses like FPGAs, DigRF v3, and MIPI™ D-Phy
- Flexibility to add additional acquisition or stimulus capabilities
- Convenience of ordering a single model number
- Significant savings over ordering components individually

16998A high-performance FPGA analyzer
16999A digital wireless stimulus and analysis solution for DigRF v3 or MIPI D-Phy

Includes:
- Modular logic analyzer mainframe
- Logic analyzer module with the appropriate memory depth to capture the right level of system activity
- Application specific software
- Availability of the following depends on the supported application
  - Pattern generator module
  - Probes

Agilent Logic Analyzer Portfolio

		16900 Series modular systems		
Agilent model number	**16800 Series portables**	**16910A/16911A**	**16950B/16951B**	**16760A**
Channels	34, 68, 102, 136, 204	102 / 68	68	34
Max channels on single time base	34, 68, 102, 136, 204	510 / 340	340	170
High-speed timing zoom[1]	4 GHz (250 ps) with 64 K depth	4 GHz (250 ps) with 64 K depth	4 GHz (250 ps) with 64 K depth	–
Max timing sample range (half / full channels)	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)	1.0 GHz (1.0 ns) / 500 MHz (2.0 ns)	1.2 GHz (833 ps) / 600 MHz (1.67 ns)	800 MHz (1.25 ns) / 800 MHz (1.25 ns)
Max state clock rate	450 MHz with Option 500, 250 MHz with Option 250	450 MHz with Option 500, 250 MHz with Option 250	667 MHz	800 Mb/s (full channel), 1.5 Gb/s (half channel)
Max state data rate	500 Mb/s with Option 500, 250 Mb/s with Option 250	500 Mb/s with Option 500, 250 Mb/s with Option 250	1066 Mb/s	1.5 Gb/s
Memory depth	1 M up to 32 M	256 K up to 32 M	1 M up to 64 M (16950B), 256 M (16951B)	64 M
Supported signal types	Single-ended	Single-ended	Single-ended and differential	Single-ended and differential
Probe compatibility	40-pin cable connector	40-pin cable connector	90-pin cable connector	90-pin cable connector

1 All channels, all the time, simultaneous state and timing through the same probe.

Pattern generator (Available in 16821A, 16822A, 16823A portable logic analyzers and 16720A module)	**Half channels**	**Full channels**
Max clock speed	300 MHz	180 MHz
Max memory depth	16 M vectors	8 M vectors
Channels per module	24	48
Max number of channels per time base	120	240
Stimulus commands	Initialize, Block, Repeat, and Break macros	
Logic levels supported	5 V TTL, 3-state TTL, 3-state CMOS, 3-state 3.3 V ECL, 5 V PECL, 3.3 V LVPECL, 3-state 2.5 V, 3-state 1.8 V, LVDS	

Additional considerations when configuring your logic analyzer

www.agilent.com

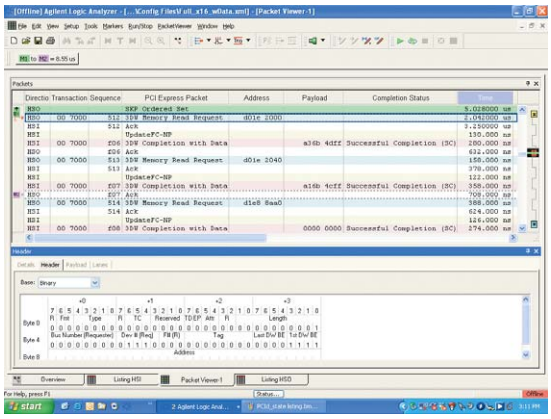
Accurate measurements start with reliable probing

Your logic analyzer measurement is only as accurate and reliable as your probing. Agilent's general purpose and device specific probes provide a robust, reliable connection between your Agilent logic analyzer and the system under test. They are easy to connect and are electrically and mechanically unobtrusive, giving you unsurpassed measurement accuracy.

Probes are ordered separately. For more information about Agilent's logic analyzer probes and accessories, visit **www.agilent.com/find/la_probing**

Application software

Turn low-level measurement data into meaningful insight with a suite of application software that can save you up to weeks of development time. A wide range of analysis and viewing tools provide insight into your system's behavior in a format you understand.



For more information, visit **www.agilent.com/find/logic-sw-apps**

Extend the life of your equipment

Easily upgrade your 16800 or 16900 Series logic analyzer by "turning on" additional memory depth and state speed when you need more. Purchase the capability you need now, then upgrade as your needs evolve.

For the most up-to-date and complete application and product information, please visit our web site at: **www.agilent.com/find/logic**

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