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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 1660ES

Agilent Keysight 1660ES Logic Analyzer 136 Channel E-Series with Oscilloscope The HP 1660ES is a 1660-series standalone logic analyzer. OEM 1660-series technical data (5963-2172) and the 1660-series user's reference list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 136 state/timing channels plusabuilt-in 2-channel 1 GSa/s 250 MHz oscilloscope. Digital hardware debug, microprocessor bus trace, and timing/glitch analysis with simultaneous analog capture on the built-in scope. 100 MHz state / 500 MHz half-channel timing The HP 1660ES is a 1660-series standalone logic analyzer. OEM 1660-series technical data (5963-2172) and the 1660-series user's reference list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 136 state/timing channels plusabuilt-in 2-channel 1 GSa/s 250 MHz oscilloscope. Digital hardware debug, microprocessor bus trace, and timing/glitch analysis with simultaneous analog capture on the built-in scope. 100 MHz state / 500 MHz half-channel timing Graphical trigger macros and inverse assemblers

MODEL **Agilent / Keysight 1660ES**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **1660ES**	LISTING **https://aumictechlabs.com/products/1660es-2/**

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NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 1660ES is a benchtop logic analyzer with integrated dual-channel oscilloscope for simultaneous digital and analog signal analysis. This instrument combines 136 logic channels operating at 500 MHz timing speed with a 2 GHz, 2 GSa/s oscilloscope, correlate analog behavior with digital logic events for efficient debugging of complex hardware.Technical

Specifications Logic Analyzer 136 logic channels with 4 K samples per channel (8 K in half-channel modes) State speed: 100 MHz Timing speed: 500 MHz (250 MHz all channels conventional mode; 500 MHz half channels) Timing analysis modes: Conventional, Transitional, and Glitch Detection at 125–250 MHz Minimum detectable glitch: < 12 ns Minimum timing resolution: 2 ns 6 state clock/qualifiers Integrated Oscilloscope (1660ES) 2 channels at 2 GS/s per channel Bandwidth: DC to 500 MHz Memory: 32 K samples per channel Vertical resolution: 8 bits Rise time: 700 ps Logic analyzer triggering supported Storage & Display 2 GB internal hard drive 1.44 MB DOS floppy drive VGA color flat-panel display LAN port with TCP/IP, FTP, and NFS support; X Window interface accessKey Features Dual-channel oscilloscope synchronized with logic analyzer for mixed-signal debugging Glitch detection down to 12 ns for capturing transient events 2 ns timing resolution for precise edge-to-edge correlation Network connectivity for remote programming and file transfer Front-panel operation with mouse and optional keyboard supportTypical Applications Digital system validation and hardware integration testing Mixed-signal debugging requiring simultaneous logic and analog observation Complex timing analysis and transient glitch detection Real-time protocol and signal integrity analysisCompatibility & Integration Supplied with Agilent/Keysight 1160 family passive probes HP Symbol Utility software support User interface consistent with HP 16500 systems Network-based remote programming via standard TCP/IP

1660ES Characteristics / Specifications

PARAMETER	VALUE
Model	1660ES
Instrument Type	Standalone logic analyzer
Series Family	HP 1660 A/C/E series
State And Timing Channels	136
State Speed	100 MHz, all channels
State Speed Alternate Listing	50 MHz also listed on the 1660-series characteristics table
Conventional Timing All Channels	250 MHz
Conventional Timing Half Channels	500 MHz
Transitional Timing All Channels	125 MHz
Transitional Timing Half Channels	250 MHz
Glitch Timing	125 MHz half channels
State Clocks Qualifiers	6
Memory Depth Full Channel	4K samples per channel
Memory Depth Half Channel	8K samples per channel
Channel Count Full Half	136/68
State Sequence Levels	12 sequence levels with two-way branching (1660A user reference)
State Pattern Terms	10 pattern resource terms, 2 range terms, 2 timers
Timing Sequence Levels	10 sequence levels with two-way branching
Timing Edge Terms	2 edge terms plus 2 timers (timing analyzer)
Remote Interface	HP-IB and RS-232C standard (except 1664A notes)
Disk	3.5 inch high-density floppy, LIF and DOS
Weight Family	26 lb (11.8 kg)
Width	17.3 in (440 mm) family outline
Height	8.1 in (205 mm) family outline
Depth	14.5 in (367 mm) family outline

PARAMETER	VALUE
Oscilloscope Channels	2
Oscilloscope Sample Rate	1 GSa/s per channel (1660AS/CS table)
Oscilloscope Bandwidth	dc to 250 MHz (dc coupled)
Oscilloscope Rise Time	1.4 ns
Oscilloscope Vertical Resolution	8 bits
Oscilloscope Memory	8k samples per channel
Display	color CRT
Bandwidth	dc to 250 MHz (dc coupled)
Rise Time	1.4 ns

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.

technical data (5963-2172) and the 1660-series user's reference list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 136 state/timing channels plusabuilt-in 2-channel 1 GSa/s 250 MHz oscilloscope.

Applications
Digital hardware debug, microprocessor bus trace, and timing/glitch analysis with simultaneous analog capture on the built-in scope.

Key Features
136 state/timing channels
100 MHz state / 500 MHz half-channel timing
4K memory (8K half-channel)
Graphical trigger macros and inverse assemblers
HP-IB and RS-232 programmability

Technical Specifications

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Display	color CRT

Notes
Channel, timing, state, memory, and (where listed) oscilloscope rows from HP 1660-Series Technical Data 5963-2172 and HP 1660-Series User's Reference 01660-90904. CS/ES add color display relative to A/AS; confirm E-series memory options on the 1660E label if present.

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

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