

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 1661ES

Agilent Keysight 1661ES Logic Analyzer 102 Channel The HP 1661ES is a 1660-series standalone logic analyzer with 102 state/timing channels. OEM 1660-series technical data list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 6 state clocks/qualifiers plus a built-in 2-channel 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 1661ES is a 1660-series standalone logic analyzer with 102 state/timing channels. OEM 1660-series technical data list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 6 state clocks/qualifiers plus a built-in 2-channel 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
1661ES**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

1661ES

LISTING

<https://aumictechlabs.com/products/1661es-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 1661ES is a benchtop logic analyzer that combines digital state and timing analysis with integrated dual-channel oscilloscope functionality. This single instrument enables simultaneous capture and display of both logic and analog signals, eliminating the need for separate test equipment on the bench. The 1661ES addresses the validation requirements of engineers developing embedded systems and signal integrity analysis. Technical Specifications

Logic Analysis 102 data channels State analysis: 100 MHz all channels Timing analysis: 250 MHz all channels, 500 MHz half channels Transitional analysis: 125 MHz all channels, 250 MHz half channels Glitch detection: 125 MHz on half channels Memory: 4K samples per channel (8K in half-channel modes) 6 state clocks/qualifiers 23 predefined trigger sequences with 12 levels state sequencing and 10 levels timing sequencing Oscilloscope 2 analog channels 500 MHz bandwidth 2 GSa/s sample rate per channel 32K samples memory per channel 8-bit vertical resolution 700 ps rise time 100 k Ω input impedance, 1 pF input capacitance Logic analyzer trigger compatibility System 2 GB hard drive storage 1.44 MB floppy drive VGA color display

Key Features Configurable trigger sequences for state and timing domains Wide logic analyzer probe compatibility Dual-domain triggering between logic and oscilloscope channels High sample memory supports extended capture windows

Interfaces RS-232 serial HP-IB bus Centronics printer port Ethernet (LAN) for remote operation via X-Windows, FTP, and NFS data transfer Standard mouse; DIN keyboard connector supported

Status This product is marked obsolete. Documentation for related 1660 and 1670 Series instruments is available.

1661ES Characteristics / Specifications

PARAMETER	VALUE
Model	1661ES
Instrument Type	Standalone logic analyzer
Series Family	HP 1660 A/C/E series
State And Timing Channels	102
Channel Count Full Half	102/51
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
State Sequence Levels	12 sequence levels with two-way branching
State Pattern Terms	10 pattern resource terms, 2 range terms, 2 timers
Timing Sequence Levels	10 sequence levels with two-way branching
Remote Interface	HP-IB and RS-232C standard
Disk	3.5 inch high-density floppy, LIF and DOS
Weight Family	26 lb (11.8 kg) on 1660A-class outline; 28.6 lb (13 kg) on 1660E technical data
Width	17.3 in (440 mm) family outline
Height	8.1 in (205 mm) family outline
Depth	14.5 in (367 mm) family outline
Display	color CRT/flat panel on ES series

PARAMETER	VALUE
Power	115 Vac or 230 Vac, minus 22 percent to +10 percent, 48-66 Hz, 320 VA max on 1660E technical data
Oscilloscope Channels	2
Oscilloscope Sample Rate Cs	1 GSa/s per channel on 1660CS technical data 5963-2172
Oscilloscope Bandwidth Cs	dc to 250 MHz (dc coupled) on 1660CS technical data
Oscilloscope Sample Rate Es	2 GSa/s per channel on 1660ES technical data
Oscilloscope Bandwidth Es	dc to 500 MHz on 1660ES technical data
Oscilloscope Rise Time Es	700 ps on 1660ES technical data
Oscilloscope Vertical Resolution	8 bits
Oscilloscope Memory Es	32k samples per channel on 1660ES technical data
Bandwidth	Cs: dc to 250 MHz (dc coupled) on 1660CS technical data
Rise Time	Es: 700 ps on 1660ES technical data

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 list 100 MHz state, 500 MHz half-channel timing, 4K/8K memory, and 6 state clocks/qualifiers plusabuilt-in 2-channel oscilloscope.

Applications

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

Key Features

102 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

Technical Specifications

PARAMETER	VALUE
Model	1661ES
Instrument Type	Standalone logic analyzer
Series Family	HP 1660 A/C/E series
State And Timing Channels	102
Channel Count Full Half	102/51
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
State Sequence Levels	12 sequence levels with two-way branching
State Pattern Terms	10 pattern resource terms, 2 range terms, 2 timers
Timing Sequence Levels	10 sequence levels with two-way branching
Remote Interface	HP-IB and RS-232C standard
Disk	3.5 inch high-density floppy, LIF and DOS

PARAMETER	VALUE
Weight Family	26 lb (11.8 kg) on 1660A-class outline; 28.6 lb (13 kg) on 1660E technical data
Width	17.3 in (440 mm) family outline
Height	8.1 in (205 mm) family outline
Depth	14.5 in (367 mm) family outline
Display	color CRT/flat panel on ES series
Power	115 Vac or 230 Vac, minus 22 percent to +10 percent, 48-66 Hz, 320 VA max on 1660E technical data
Oscilloscope Channels	2
Oscilloscope Sample Rate Cs	1 GSa/s per channel on 1660CS technical data 5963-2172
Oscilloscope Bandwidth Cs	dc to 250 MHz (dc coupled) on 1660CS technical data
Oscilloscope Sample Rate Es	2 GSa/s per channel on 1660ES technical data
Oscilloscope Bandwidth Es	dc to 500 MHz on 1660ES technical data
Oscilloscope Rise Time Es	700 ps on 1660ES technical data
Oscilloscope Vertical Resolution	8 bits
Oscilloscope Memory Es	32k samples per channel on 1660ES technical data

Notes

Channel, timing, state, memory, clock, and (where listed) oscilloscope rows from HP 1660-Series Technical Data 5963-2172, HP 1660CS-series user's guide channel table, and HP 1660E/ES technical data 1660E-series sheet. CS/ES add color display andabuilt-in scope; ES scope is 2 GSa/s / 500 MHz on the 1660E-series sheet while CS technical data lists 1 GSa/s / 250 MHz.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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