

KEYSIGHT TECHNOLOGIES (AGILENT HP)

1660CS

The Keysight (formerly Agilent / HP) 1660CS is a high-performance benchtop logic analyzer featuring 136 channels and an integrated 2-channel oscilloscope. It combines extensive digital troubleshooting capabilities with analog measurement functionality, making it a comprehensive tool for hardware-software integration, debugging, and digital system validation.

SPECIFICATIONS

General

Interfaces	HP-IB (GPIB), RS-232C, Centronics parallel
Display	9-inch Color CRT
Supported File Systems	MS-DOS, LIF
Acoustic Noise	< 41 dBA at 1 meter

Physical

Power Supply	115/230 V AC, 48 to 66 Hz, 200 W maximum
Operating Temperature	0 °C to +55 °C °C
Dimensions (W×H×D)	425.5 mm × 195.6 mm × 355.6 mm mm
Weight	12.7 kg kg

Acquisition Performance (Logic Analyzer)

Base Channel Count	136 logic channels
Maximum State Clock Rate	100 MHz
Maximum State Data Rate	100 Mb/s
Timing Analysis Sample Rate (Full Channel)	250 MSa/s
Timing Analysis Sample Rate (Half Channel)	500 MSa/s
Transitional Timing Sample Rate	125 MSa/s
Transitional Timing Sample Rate (Half Channel)	250 MSa/s
Maximum Memory Depth (Standard)	4 KB per channel
Maximum Memory Depth (Half Channel)	8 KB per channel
State Threshold Range	-6.0 V to +6.0 V in 50 mV steps
State Threshold Accuracy	±(100 mV + 3% of setting)

Oscilloscope Performance

Oscilloscope Channel Count	2 channels
Oscilloscope Bandwidth	250 MHz
Oscilloscope Maximum Sampling Rate	1 GSa/s (simultaneous on both channels)
Oscilloscope Record Length	8,000 points
Oscilloscope Vertical Resolution	8 bits
Oscilloscope Timebase Range	1 ns/div to 5 s/div
Oscilloscope Vertical Sensitivity	16 mV to 40 V full scale

Triggering and Sequencing

Trigger Sequencer Levels	12 levels
Maximum Patterns per Level	10
Maximum Ranges per Level	2
Glitch Triggering Capability	Yes

Probing and Electrical Input

Input Impedance (Resistance)	100 k Ω
Input Impedance (Capacitance)	8 pF
Minimum Input Voltage Swing	500 mV peak-to-peak
Maximum Input Voltage (Destruct Level)	± 40 V
Probe Cable Length	1.1 m

System and Hardware Architecture

Removable Storage Drives	3.5-inch Floppy Disk Drive (FDD)
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Display and User Interface

External Display Output Type	VGA (15-pin)
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Connectivity and External I/O

External Trigger Input (BNC)	Yes
External Trigger Output (BNC)	Yes

Environmental and Safety Compliance

Operating Altitude Limit	4,600 m (15,000 ft)
Operating Humidity Range	Up to 90% relative humidity (non-condensing)

Logic Analyzer

State Clock Setup/Hold Time	3.5 ns / 0 ns (user-selectable)
Minimum State Clock Pulse Width	3.5 ns
Logic Analyzer Pod Count	8 pods
Channels per Pod	17 channels
State Clocks	6 clocks

Oscilloscope

Oscilloscope Rise Time	3.5 ns
Oscilloscope Input Impedance	1 MΩ shunted by ~7 pF
Oscilloscope Maximum Input Voltage	±40 V (DC + peak AC)
Oscilloscope Input Coupling	AC, DC
Oscilloscope Vertical Deflection Range	15 mV/div to 5 V/div (1:1 probe)
Oscilloscope DC Gain Accuracy	±2.5% of full scale
Oscilloscope Timebase Accuracy	±0.005%
Oscilloscope Trigger Sources	Channel 1, Channel 2, External, Logic Analyzer
Oscilloscope Trigger Modes	Auto, Auto-Level, Normal, Single
Oscilloscope Single-Shot Sampling Rate	250 MSa/s on two channels simultaneously
Oscilloscope Timebase Resolution	100 ps

Triggering

Pattern Recognizers	10
Range Recognizers	2

Logic Analyzer Timing Mode

Minimum Glitch Detection Width	3.5 ns
Channel-to-Channel Skew	2 ns typical

Interfaces

Printer Interface	Centronics Parallel (25-pin D-sub)
Keyboard Connector	5-pin DIN
Mouse Connector	None (connects via keyboard)

TECHNOLOGY

Logic Analyzer with Oscilloscope

APPLICATIONS

Digital system debugging, hardware-software integration, and embedded systems testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.