

KEYSIGHT TECHNOLOGIES (AGILENT HP)

1671G

The Keysight (Agilent/HP) 1671G is a high-performance standalone logic analyzer belonging to the 1670G series. It features 102 channels of logic analysis with a state speed of 150 MHz and a timing speed of 500 MHz. The instrument offers powerful configuration options, including a 2-channel 500 MHz oscilloscope, a 32-channel pattern generator, and expanded acquisition memory depths of up to 2M per channel, making it a versatile tool for hardware and software debugging in digital systems.

SPECIFICATIONS

General

Interfaces	Centronics printer port, GPIB, RS-232, LAN (remote operation via X-Windows, data transfers via FTP/NFS)
Display	Color flat-panel VGA display

Physical

Power Supply	115 / 230 V AC ($\pm 20\%$), 48 - 66 Hz, 315 W max
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	425 mm × 198 mm × 432 mm mm
Weight	11.4 kg kg

Logic Analysis

Number of Logic Analyzer Channels	102 channels
State Speed	150 MHz
Timing Speed	500 MHz
Standard Acquisition Memory	64K
Acquisition Memory with Option 001	256K
Acquisition Memory with Option 002	2M
Number of Pods	6
Channels per Pod	17
Minimum Glitch Width	3.5 ns
Maximum Timing Sample Rate (Half Channel)	500 MHz
Maximum Transitional Timing Sample Rate (Full Channel)	125 MHz
Maximum Transitional Timing Sample Rate (Half Channel)	250 MHz

Oscilloscope Option

Oscilloscope Channels (Option 003)	2
Oscilloscope Bandwidth (Option 003)	500 MHz
Oscilloscope Sample Rate (Option 003)	2 GSa/s
Oscilloscope Memory Depth (Option 003)	32K

Pattern Generator Option

Pattern Generator Channels (Option 004)	32
Pattern Generator Vector Speed (Option 004)	100M vector/sec
Pattern Generator Memory Depth (Option 004)	256K vector

Storage

Hard Drive Capacity	2 GB
Floppy Drive Type	1.44 MB DOS floppy drive
Supported File Formats	ASCII data, PCX, TIFF, EPS screen shots

User Interface

Operating Controls	Mouse or front-panel operation
Keyboard Support	Optional PC-style keyboard

Triggering

Predefined Trigger Functions	23 predefined functions with graphical representations and plain language descriptions
Trigger Levels	10 levels
Pattern Recognizers	10
Range Recognizers	2
Edge/Glitch Recognizers	2
Timers / Counters	2
Sequence Levels	10
Maximum Occurrences per Level	1,048,575

State Analysis

Maximum State Clock Speed	150 MHz
State Setup / Hold Time	1.5 ns / 0 ns (minimum)

Probing & Signal Inputs

Minimum Voltage Swing	500 mV peak-to-peak
Input Impedance	100 k Ω ($\pm 2\%$) in parallel with ~ 8 pF
Maximum Probe Input Voltage	± 40 V peak
Threshold Range	-5.0 V to +5.0 V in 50 mV increments

Option 003 Oscilloscope Specifications

Oscilloscope Vertical Resolution	8 bits (with Option 003)
Oscilloscope Input Impedance	1 MΩ in parallel with ~7 pF (with Option 003)
Oscilloscope Maximum Input Voltage	±250 V (with Option 003)

Environmental & Safety

Storage Temperature	-40 to +75 °C
Operating Altitude	up to 4,600 m (15,000 ft)
Safety Certifications	CSA C22.2 No. 1010.1, EN 61010-1 / IEC 1010-1
EMC Compliance	CISPR 11 / EN 55011 Group 1, Class A

Inputs & Outputs

External Trigger Input	BNC, TTL compatible, 1.5 kΩ input impedance
External Trigger Output	BNC, TTL level into 50 Ω

Environmental

Storage Altitude	15,300 m
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TECHNOLOGY

Logic Analyzer

APPLICATIONS

Digital circuit debugging, state and timing analysis, hardware-software integration

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