KEYSIGHT TECHNOLOGIES (AGILENT HP)

54620A

The Agilent/HP 54620A is a portable 16-channel logic analyzer designed on an oscilloscope-style platform. It combines a familiar interface with a fast monochrome display, providing intuitive troubleshooting for digital circuits and embedded systems.

SPECIFICATIONS

General

Interfaces	Optional GPIB, RS-232, or Parallel (Centronics) via rear-panel plug-in modules
Display	7-inch monochrome CRT

Physical

Power Supply	100 to 240 V AC (±10%), 45 to 440 Hz, 80 VA max
Operating Temperature	0 °C to +55 °C °C
Dimensions (W×H×D)	322 mm × 172 mm × 317 mm mm
Weight	6.2 kg kg

Acquisition Performance

Channel Count	16 logic channels
Maximum Sample Rate	500 MSa/s
Minimum Detectable Pulse Width	3.5 ns
Maximum Memory Depth	2,048 samples per channel
State Threshold Range	-6.0 V to +6.0 V (in 50 mV steps)
State Threshold Accuracy	±(100 mV + 3% of setting)
Timing Resolution	2 ns
Glitch Capture	3.5 ns minimum width

Triggering and Sequencing

Trigger Modes	Edge, Pattern, Advanced (Duration, Sequence)
Advanced Triggering	Duration (pattern present > or < time), Sequence (find pattern, then find edge)
Trigger Sources	Channels 0 to 15, External Trigger
Automated Measurements	Frequency, period, duty cycle, +width, -width, delay

Probing and Electrical Input

Input Impedance	100 kΩ ±2% in parallel with ~8 pF
Minimum Input Voltage Swing	500 mV peak-to-peak
Maximum Input Voltage	±40 V
Probe Interface	HP 10085A 16-channel probe cable compatibility

Display and User Interface

Display Type	Monochrome CRT
Display Size	7-inch
Autoscale	Instantly displays and scales all active logic signals

Connectivity and External I/O

External Trigger Input	BNC (front panel)
External Trigger Input Impedance	1 MΩ in parallel with ~13 pF
External Trigger Max Input	±40 V (DC + peak AC)
External Trigger Threshold Range	-6.0 V to +6.0 V
Expansion Slot	Rear-panel slot for measurement and interface modules

Environmental and Safety Compliance

Non-operating Temperature Range	-40 °C to +70 °C

Timebase System

Timebase Range	2 ns/div to 5 s/div
Timebase Accuracy	±0.01%
Maximum Pre-trigger Delay	4 divisions or 10.24 µs (whichever is greater)
Maximum Post-trigger Delay	1000 divisions or 2500 s (whichever is greater)

Logic Thresholds

Preset Thresholds	TTL (1.4 V), CMOS (2.5 V), ECL (-1.3 V)

Accessories

Included Probes	Two HP 10474A 8-channel probe manifolds

Environmental

Operating Humidity	95% RH at 40 °C
Operating Altitude	Up to 4,500 m
Non-operating Altitude	Up to 15,000 m

Display

Display Resolution	500 (horizontal) x 240 (vertical) pixels

Logic Inputs

Input Capacitance (with probe)	8 pF

Acquisition System

Channel-to-Channel Skew	2 ns typical

Power Requirements

Maximum Power Consumption	80 VA
AC Input Voltage	100 - 240 VAC (±10%)
AC Input Frequency	45 Hz to 440 Hz

Compliance & Safety

Safety Standards	CSA C22.2 No. 1010.1, EN 61010-1 / IEC 1010-1
EMC Standards	CISPR 11 Class A, EN 50082-1

TECHNOLOGY

Digital Logic Analysis

APPLICATIONS

Embedded systems debugging and digital circuit troubleshooting

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