KEYSIGHT TECHNOLOGIES (AGILENT HP)

# 54620C

The Keysight (Agilent) 54620C is a portable 16-channel color logic analyzer designed to operate with the familiar, intuitive user interface of an oscilloscope. Featuring a 500 MSa/s maximum sample rate, it enables engineers and technicians to troubleshoot complex digital circuits efficiently using enhanced color-coded multi-channel signal visualization.

## SPECIFICATIONS

### General

| | |
|---|---|
| Interfaces | Optional HP-IB (GPIB), RS-232, or Parallel interfaces via expansion modules |
| Display | 7-inch color raster CRT display with customizable channel coloring |
| Analyzer Type | Timing Analyzer |

### Physical

| | |
|---|---|
| Power Supply | 100 - 240 VAC (±10%), 45 - 440 Hz, 80 VA max |
| Operating Temperature | 0 to +55 °C °C |
| Dimensions (W×H×D) | 322 mm × 172 mm × 317 mm mm |
| Weight | 6.8 kg kg |

### Acquisition System

| | |
|---|---|
| Number of Channels | 16 timing channels |
| Maximum Sample Rate | 500 MSa/s |
| Memory Depth | 2,048 samples per channel |
| Glitch Detection | Minimum glitch width 3.5 ns |

### Triggering

| | |
|---|---|
| Triggering Modes | Edge, pattern, and advanced (including duration times and sequences) |
| Trigger Inputs | All 16 logic channels and external trigger |

### Measurements

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|---|---|
| Automated Measurements | Frequency, period, duty cycle, ± width, and delay |

### Input Specifications

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|---|---|
| Input Impedance | 100 kΩ \|\| 8 pF |
| Maximum Input Voltage | ±40 V |

### User Interface

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|---|---|
| Autoscale | Instant automatic scaling of active signals |

### Input Channels

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|---|---|
| Threshold Presets | TTL (1.4 V), CMOS (2.5 V), ECL (-1.3 V) |
| User-Defined Threshold Range | -6.0 V to +6.0 V in 50 mV increments |
| Input Capacitance | 8 pF |
| Dynamic Range | ±10 V about the threshold |

### Measurement & Timing

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

### Horizontal System

| | |
|---|---|
| Timebase Range | 2 ns/div to 5 s/div |
| Timebase Accuracy | ±0.01% |

### Thresholds

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|---|---|
| Threshold Accuracy | ±(100 mV + 3% of threshold setting) |
| Threshold Resolution | 50 mV |

### Input Signal Characteristics

| | |
|---|---|
| Minimum Input Voltage Swing | 500 mV p-p |

### Power Requirements

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

### Environmental

| | |
|---|---|
| Non-Operating Temperature | -40 °C to +70 °C |
| Operating Humidity | 95% RH at 40 °C |

## TECHNOLOGY

Logic Analyzer

## APPLICATIONS

Digital circuit debugging and timing analysis