

KEYSIGHT TECHNOLOGIES (AGILENT HP)

16555D

The Keysight (Agilent/HP) 16555D is a 68-channel logic analyzer module offering up to 110 MHz state analysis and 500 MHz timing analysis. Designed for the HP 16500B and 16500C mainframe systems, it features 2 Megasamples of acquisition memory per channel (expandable to 4 Megasamples in half-channel timing mode) to capture long windows of complex digital signals.

SPECIFICATIONS

General

Interfaces	None (controlled via HP 16500 series mainframe)
Display	None (uses mainframe display)

Physical

Power Supply	Powered via mainframe backplane
Dimensions (W×H×D)	Single-slot module for HP 16500 series mainframe mm

Acquisition and Channels

Number of Channels	68 channels (64 data, 4 clock/data)
Maximum State Clock Speed	110 MHz
Maximum Conventional Timing Sample Rate	500 MHz (half-channel mode), 250 MHz (full-channel mode)
Maximum Transitional Timing Sample Rate	250 MHz (half-channel mode), 125 MHz (full-channel mode)
Glitch Timing Sample Rate	125 MHz
Maximum State Data Rate	110 Mb/s
Clock Channels	4 clock channels (can also be used as data)

Memory and Record Length

Standard Memory Depth	2 M samples per channel
Maximum Memory Depth	4 M samples per channel (half-channel mode)
Memory Depth in State Mode	2 M samples per channel

Input Signal Characteristics

Input Impedance	100 kΩ (probe dependent)
Input Capacitance	8 pF (probe dependent)
Minimum Input Voltage Swing	500 mV peak-to-peak
Threshold Voltage Range	-6.0 V to +6.0 V
Threshold Voltage Resolution	50 mV
Threshold Voltage Accuracy	±150 mV
Setup and Hold Time Window	3.5 ns
Maximum Input Voltage	±40 V

Triggering and Sequencing

Trigger Sequence Levels	12 levels
Pattern Recognizers	10 pattern recognizers
Range Recognizers	2 range recognizers
Edge/Glitch Recognizers	2
Timer Resources	2 timers
Trigger Macro Library	Yes

Probing Options and Connectivity

Supported Probe Types	HP 10461A (data), HP 10462A (clock/data), E5346A high-density probe
Probe Loading	100 k Ω , 8 pF
Multi-Module Expansion	Yes (up to 5 modules can be cascaded for 340 channels)

Mainframe Compatibility and Electrical Power

Compatible Mainframes	HP 16500B, HP 16500C
Backplane Slot Width Requirements	1 slot

Physical and Environmental

Form Factor	Plug-in module for HP 16500 series
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Power Requirements

Mainframe Power Draw (+5 V)	4.5 A
Mainframe Power Draw (-5.2 V)	1.3 A

Environmental

Operating Altitude	Up to 4,600 m (15,000 ft)
Non-Operating Altitude	Up to 15,300 m (50,000 ft)

Signal Inputs

Number of Pods	4
Channels per Pod	17
Input Dynamic Range	± 10 V

Timing Analysis

Channels in Half-Channel Timing Mode	34
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Triggering

Maximum Trigger Sequencer Speed	110 MHz
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TECHNOLOGY

Logic Analyzer Module

APPLICATIONS

State and timing analysis of digital hardware systems

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