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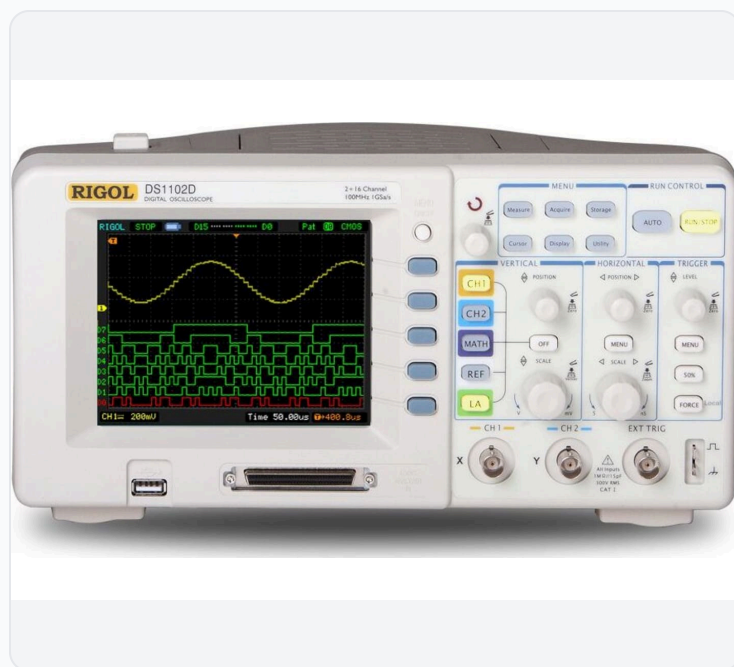
Data Sheet

August 13, 2026

RIGOL

Rigol DS1052D 50 Mhz Mixed Signal Oscilloscope, 16 Channels Logic Analyzer

Rigol DS1052D 50 MHz Mixed Signal Oscilloscope 2 Analog plus 16 Digital The DS1052D is the 50 MHz mixed signal oscilloscope in the DS1000D family. It provides 2 analog channels, 1 external trigger, and a 16 channel logic analyzer (groups D0 to D7 and D8 to D15). Real-time sample rate is 1 GSa/s (single analog) or 500 MSa/s (dual). Equivalent-time sample rate is 10 GSa/s. Typical rise is less than 7 ns. Memory is 16 kpts at 1 GSa/s; long memory 1 Mpts (single at or below 500 MSa/s) or 512 kpts dual. Logic sample rate is 200 MSa/s per channel with 512 kpts. 5.6 inch 320 × 234 64k color TFT. USB Host/Device, RS-232, pass/fail. 100 to 240 V, 50 VA max. The DS1052D is the 50 MHz mixed signal oscilloscope in the DS1000D family. It provides 2 analog channels, 1 external trigger, and a 16 channel logic analyzer (groups D0 to D7 and D8 to D15). Real-time sample rate is 1 GSa/s (single analog) or 500 MSa/s (dual). Equivalent-time sample rate is 10 GSa/s. Typical rise is less than 7 ns. Memory is 16 kpts at 1 GSa/s; long memory 1 Mpts (single at or below 500 MSa/s) or 512 kpts dual. Logic sample rate is 200 MSa/s per channel with 512 kpts. 5.6 inch 320 × 234 64k color TFT. USB Host/Device, RS-232, pass/fail. 100 to 240 V, 50 VA max. 50 MHz analog plus 16 digital mixed signal debug



MODEL

Rigol DS1052D

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

DS1052D

LISTING

<https://aumictechlabs.com/products/ds1052d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rigol DS1052D is a mixed-signal oscilloscope integrating a 50 MHz bandwidth analog scope with a 16-channel logic analyzer on a single platform. It captures both analog and digital signals simultaneously, delivering 1 GSa/s real-time sampling on analog channels and 200 MSa/s on logic channels. The 5.7" TFT display presents waveforms across a 5 ns/div to 50 s/div timebase range, supported by up to 1 Mpts memory depth for detailed transient analysis. This instrument addresses embedded systems development and mixed-signal design verification where synchronized observation of analog behavior and digital state is essential.

Technical Specifications

Oscilloscope Section
Bandwidth: 50 MHz
Analog Channels: 2 + External Trigger
Real-Time Sample Rate: 1 GSa/s (single channel), 500 MSa/s (dual channel)
Equivalent-Time Sample Rate: 25 GSa/s
Memory Depth: 16 kpts (normal), 1 Mpts (long memory)
A/D Resolution: 8 bits
Vertical Range: 2 mV/div to 10 V/div
Input Impedance: $1\text{ M}\Omega \pm 2\%$ || $15\text{ pF} \pm 3\text{ pF}$
Maximum Input: 300 V RMS (CAT I), 100 V RMS (CAT II), 1000 V pk instantaneous overvoltage
Bandwidth Limit: 20 MHz (typical)
Input Coupling: DC, AC, GND
Rise Time: $< 7\text{ ns}$
Logic Analyzer Section
Channels: 16
Sample Rate: 200 MSa/s
Maximum Voltage: 40 V pk-pk
Horizontal & Triggering Timebase: 5 ns/div to 50 s/div
Roll Mode: 500 ms/div to 50 s/div
Trigger Modes: Edge, Video, Pulse Width, Slope, Alternate
Pattern Trigger: Yes
Adjustable Trigger Sensitivity: Yes

Key Features
Dual-domain capture: simultaneous analog and 16-bit logic analysis
Deep memory (1 Mpts) with selectable sample rate tradeoffs
Video trigger support for NTSC/PAL signal analysis
Pulse-width triggering for protocol-specific measurements
Low-frequency AC response: $\leq 5\text{ Hz}$ at input

Typical Applications
Embedded firmware debugging with real-time peripheral monitoring; mixed-signal protocol validation (SPI, I²C alongside power rails); digital design verification with analog signal correlation; power integrity analysis in microcontroller-based systems.

Compatibility & Integration
Standard BNC connectors for analog input; digital channels accept standard TTL/CMOS logic levels up to 40 V pk-pk.

DS1052D Characteristics / Specifications

PARAMETER	VALUE
Triggers	Edge, Pulse Width, Slope, Video, Alternate, Pattern, Duration 8 bit analog; 2 mV/div to 10 V/div Timebase 5 ns/div to 50 s/div 10 waveforms and 10 setups stored PictBridge USB print Technical Specifications
Model	DS1052D
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope
Alias	DS1052D; RIGOL DS1052D; DS1000D 50 MHz
Analog Bandwidth	50 MHz
Single Shot Bandwidth	50 MHz
Analog Channels	2 plus external trigger
Digital Channels	16
Real Time Sample Rate Single	1 GSa/s
Real Time Sample Rate Dual	500 MSa/s
Equivalent Sample Rate	10 GSa/s
Rise Time Typical	less than 7 ns
Analog Resolution	8 bit
Vertical Scale	2 mV/div to 10 V/div
Analog Input Impedance	1 MOhm parallel 15 pF
Analog Max Input	300 Vrms CATIBandwidth Limit: 20 MHz typical
Lower Frequency AC	less than or equal to 5 Hz at BNC
Timebase Scale	5 ns/div to 50 s/div
Normal Memory 1 GSa/s	16 kpts
Long Memory Single at or below 500 MSa/s	1 Mpts
Long Memory Dual	512 kpts
Logic Sample Rate	200 MSa/s each channel

PARAMETER	VALUE
Logic Memory	512 kpts each channel
Logic Threshold TTL	1.4 V
Logic Threshold CMOS	2.5 V
Logic Threshold ECL	minus 1.3 V
Logic Threshold User	minus 8 V to +8 V
Channel Delay Typical	500 ps
DC Gain Accuracy 10 mV to 10 V	plus/minus 3 percent (Normal or Average)
Display	5.6 inch TFT, 320 × 234, 64k color
Display Contrast Typical	150:1
Probe Compensator	about 3 Vpp at 1 kHz
Power	100 to 240 VACrms, 45 to 440 Hz, 50 VA max
Stored Waveforms	10
Stored Setups	10
Interfaces	USB Device, USB Host, RS-232, P/F Out
Sibling DS1102D Bandwidth	100 MHz, 25 GSa/s equivalent, 2 ns/div
Sibling DS1052E	50 MHz analog only (no 16 ch logic) Notes Specs from Rigol DS1000E/DS1000D series datasheets. DS1052D is the 50 MHz MSO; DS1102D is 100 MHz. Confirm long-memory mode and logic pod fit.
Bandwidth	50 MHz
Rise Time	Typical: less than 7 ns

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Technical Specifications	
PARAMETER	VALUE
Model	DS1052D
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope
Alias	DS1052D; RIGOL DS1052D; DS1000D 50 MHz
Analog Bandwidth	50 MHz
Single Shot Bandwidth	50 MHz
Analog Channels	2 plus external trigger
Digital Channels	16
Real Time Sample Rate Single	1 GSa/s
Real Time Sample Rate Dual	500 MSa/s
Equivalent Sample Rate	10 GSa/s
Rise Time Typical	less than 7 ns
Analog Resolution	8 bit
Vertical Scale	2 mV/div to 10 V/div
Analog Input Impedance	1 MOhm parallel 15 pF
Analog Max Input	300 Vrms CAT I
Bandwidth Limit	20 MHz typical
Lower Frequency AC	less than or equal to 5 Hz at BNC
Timebase Scale	5 ns/div to 50 s/div
Normal Memory 1 GSa/s	16 kpts
Specifications	
PARAMETER	VALUE
Model	DS1052D
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope

PARAMETER	VALUE
Alias	DS1052D; RIGOL DS1052D; DS1000D 50 MHz
Analog Bandwidth	50 MHz
Single Shot Bandwidth	50 MHz
Analog Channels	2 plus external trigger
Digital Channels	16
Real Time Sample Rate Single	1 GSa/s
Real Time Sample Rate Dual	500 MSa/s
Equivalent Sample Rate	10 GSa/s
Rise Time Typical	less than 7 ns
Analog Resolution	8 bit
Vertical Scale	2 mV/div to 10 V/div
Analog Input Impedance	1 MOhm parallel 15 pF
Analog Max Input	300 Vrms CATIBandwidth Limit: 20 MHz typical
Lower Frequency AC	less than or equal to 5 Hz at BNC
Timebase Scale	5 ns/div to 50 s/div
Normal Memory 1 GSa/s	16 kpts

Long Memory Single at or below 500 MSa/s: 1 Mpts

Specifications

PARAMETER	VALUE
Long Memory Dual	512 kpts
Logic Sample Rate	200 MSa/s each channel
Logic Memory	512 kpts each channel
Logic Threshold TTL	1.4 V
Logic Threshold CMOS	2.5 V
Logic Threshold ECL	minus 1.3 V
Logic Threshold User	minus 8 V to +8 V
Channel Delay Typical	500 ps

DC Gain Accuracy 10 mV to 10 V: plus/minus 3 percent (Normal or Average)

Specifications

PARAMETER	VALUE
Display	5.6 inch TFT, 320 x 234, 64k color

PARAMETER	VALUE
Display Contrast Typical	150:1
Probe Compensator	about 3 Vpp at 1 kHz
Power	100 to 240 VACrms, 45 to 440 Hz, 50 VA max
Stored Waveforms	10
Stored Setups	10
Interfaces	USB Device, USB Host, RS-232, P/F Out
Sibling DS1102D Bandwidth	100 MHz, 25 GSa/s equivalent, 2 ns/div
Sibling DS1052E	50 MHz analog only (no 16 ch logic)

Notes
Specs from Rigol DS1000E/DS1000D series datasheets. DS1052D is the 50 MHz MS0; DS1102D is 100 MHz. Confirm long-memory mode and logic pod fit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.