

TEKTRONIX

MDO4034-3

The Tektronix MDO4034-3 is a 350 MHz, 4-channel mixed domain oscilloscope from the MDO4000 series. It is the world's first oscilloscope category to feature an integrated 3 GHz RF spectrum analyzer, 16 digital channels, and a 20 Mpoint record length, enabling time-correlated analysis of analog, digital, and RF signals in a single instrument.

SPECIFICATIONS

General

Interfaces	4 x USB 2.0 host ports (2 front, 2 rear), 1 x USB 2.0 device port (rear), 1 x Integrated 10/100/1000BASE-T Ethernet port, 1 x Video out port, 1 x Auxiliary output (Trigger out), 1 x External Reference input
Display	10.4 inch (264 mm) liquid-crystal TFT color display, 1024 x 768 pixels (XGA)

Physical

Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	439 mm × 229 mm × 147 mm mm
Weight	5 kg (11 lbs) kg
Rackmount Height	5U

Analog Channel Specifications

Number of Analog Channels	4
Analog Bandwidth (-3 dB)	350 MHz
Calculated Rise Time	1 ns
Input Coupling	AC, DC
Input Impedance	1 MΩ ±1%, 50 Ω ±1%
Vertical Resolution	8 bits (11 bits with Hi Res)
Maximum Input Voltage (1 MΩ)	300 Vrms CAT II with peaks ≤ ±425 V
Maximum Input Voltage (50 Ω)	5 Vrms with peaks ≤ ±20 V
Hardware Bandwidth Limit	20 MHz or 250 MHz

Digital Channel Specifications (MSO)

Number of Digital Channels	16
MagniVu Fine Timing Resolution	60.6 ps
Vertical Resolution (Digital)	1 bit
Minimum Detectable Pulse Width (Digital)	1 ns (typical)

Spectrum Analyzer Specifications (RF Channel)

RF Input Channels	1
RF Frequency Range	50 kHz - 3 GHz
RF Real-time Capture Bandwidth	≥1 GHz
Maximum RF Input Level (DC safe)	±40 V DC
RF to Analog Channel Skew	<5 ns
RF Frequency Domain Trace Types	Normal, Average, Max Hold, Min Hold
RF Time Domain Trace Types	Amplitude vs Time, Frequency vs Time, Phase vs Time
RF Automatic Markers	One to eleven peaks identified based on user-adjustable threshold and excursion values
RF Manual Markers	Two manual markers indicating frequency, amplitude, noise density, and phase noise

Acquisition and Horizontal System

Maximum Analog Sample Rate	2.5 GS/s
Maximum Digital Sample Rate	500 MS/s (2 ns resolution)
Maximum Record Length (Analog)	20 M points
Maximum Record Length (Digital)	20M points
Time Base Range	1 ns to 1000 s
Maximum Duration at Highest Sample Rate	8 ms
Time-Base Delay Time Range	-10 divisions to 5000 s
Channel-to-Channel Deskew Range	±125 ns
Acquisition Mode - Sample	Acquire sampled values
Acquisition Mode - Peak Detect	Captures glitches as narrow as 1.6 ns at all sweep speeds
Acquisition Mode - Averaging	From 2 to 512 waveforms included in average
Acquisition Mode - Envelope	Min-max envelope reflecting Peak Detect data over multiple acquisitions
Acquisition Mode - Hi Res	Real-time boxcar averaging reduces random noise and increases vertical resolution
Acquisition Mode - Roll	Scrolls waveforms right to left across the screen at sweep speeds slower than or equal to 40 ms/div

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Holdoff Range	20 ns to 8 s
Optional Serial Triggering and Analysis	I2C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS-232/422/485/UART, MIL-STD-1553, I2S/LJ/RJ/TDM
Trigger Level Range (Any Channel)	±8 divisions from center of screen

Waveform Measurements and Analysis

Waveform Measurements and Analysis	Cursors, automatic measurements (time & frequency domains), statistics, gating, waveform histogram, histogram measurements, waveform math
Optional Advanced Analysis	Power measurements, limit/mask testing

Display and User Interface

Display Interpolation	Sin(x)/x
-----------------------	----------

Connectivity and Interfaces

Probe Compensator Output Amplitude	0 to 2.5 V
Probe Compensator Output Frequency	1 kHz
LXI Compliance	LXI Class C, Version V1.3

Physical and Power Characteristics

Depth	147 mm (5.8 in)
-------	-----------------

Vertical System - Analog Channels

Vertical Sensitivity Range (1 MΩ)	1 mV/div to 10 V/div
Vertical Sensitivity Range (50 Ω)	1 mV/div to 1 V/div

RF System

FFT Windows	Kaiser-Bessel, Rectangular, Hamming, Hanning, Blackman-Harris, Flat-Top
-------------	---

Power Specifications

Power Source Voltage	100 to 240 V ±10%
Power Source Frequency	50 to 60 Hz (100 to 240 V), 400 Hz ±10% (115 V)
Power Consumption	225 W maximum

Search & Navigation

Wave Inspector Controls	Dedicated front-panel controls for zoom, pan, play/pause, set/clear mark, and search
-------------------------	--

TECHNOLOGY

Mixed Domain Oscilloscope (MDO)

APPLICATIONS

Mixed-signal design, RF system integration, embedded debugging, and EMI troubleshooting

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