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Data Sheet

July 30, 2026

TEKTRONIX

Tektronix MDO4104B Mixed Domain Oscilloscope

Tektronix MDO4104B Mixed Domain Oscilloscope The Tektronix MDO4104B is a Mixed Domain Oscilloscope in the MDO4000B Series. Tektronix documentation describes it as an oscilloscope with a built-in spectrum analyzer that can capture time-correlated analog, digital, and RF signals for a complete system view. The Frequency Domain view is acquired from the dedicated spectrum analyzer input, not merely an FFT of the analog channels, while remaining time-correlated to the time-domain acquisition. The MDO4104B is intended for embedded and mixed-signal design debug, RF and wireless system troubleshooting, EMI investigation, and correlating time-domain events with spectral behavior. Typical uses include PLL tuning analysis, bursted RF communications debug, serial-bus system validation, and power/EMI root-cause analysis. The Tektronix MDO4104B is a Mixed Domain Oscilloscope in the MDO4000B Series. Tektronix documentation describes it as an oscilloscope with a built-in spectrum analyzer that can capture time-correlated analog, digital, and RF signals for a complete system view. The Frequency Domain view is acquired from the dedicated spectrum analyzer input, not merely an FFT of the analog channels, while remaining time-correlated to the time-domain acquisition. The MDO4104B is intended for embedded and mixed-signal design debug, RF and wireless system troubleshooting, EMI investigation, and correlati

No photo

MODEL

**Tektronix
MDO4104B**

CALIBRATION

**N/A — off-catalog
OEM datasheet**

CONDITION

**See OEM
documentation**

STATUS

**Not listed on
Aumictech
inventory**

RFQ / SKU

MDO4104B

LISTING

**Off-catalog — OEM dat
asheet only**

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

Features & description

From manufacturer datasheet

Features

- 4 analog channels with 1 GHz bandwidth
- 16 digital channels with MagniVu high-speed acquisition
- 1 dedicated spectrum analyzer channel
- Ultra-wide RF capture bandwidth greater than or equal to 1 GHz
- Time-correlated analog, digital, and RF acquisitions in one instrument
- FastAcq waveform capture rate greater than 340,000 wfms/s
- Wave Inspector navigation and search
- Automated RF measurements: Channel Power, ACPR, and Occupied Bandwidth
- Optional serial trigger/decode for common embedded and automotive buses
- 10.4-inch XGA color display
- Compact, lightweight benchtop form factor

MDO4104B Characteristics / Specifications

PARAMETER	VALUE
Model Family	MDO4104B (MDO4104B-3 and MDO4104B-6)
Instrument Type	Mixed Domain Oscilloscope
Analog Channels	4
Analog Bandwidth	1 GHz
Rise Time	350 ps
Record Length	20 M points on all analog channels
Digital Channels	16
Maximum MagniVu Sample Rate	16.5 GS/s (60.6 ps resolution)
Maximum Main Digital Sample Rate	500 MS/s (2 ns resolution)
Waveform Capture Rate	Greater than 340,000 wfms/s with FastAcq Spectrum Analyzer
Spectrum Analyzer Channels	1
Span	1 kHz to 3 GHz (-3 models) or 1 kHz to 6 GHz (-6 models), adjustable in a 1-2-5 sequence
Resolution Bandwidth	Window-dependent ranges from about 10 Hz to 200 MHz
Reference Level	-140 dBm to +30 dBm
Vertical Units	dBm, dBmV, dBuV, dBuW, dBmA, dBuA
Displayed Average Noise Level (examples)	approximately less than -147 dBm/Hz from 400 MHz to 3 GHz (typical values better)
Spectrum Traces	Normal, Average, Max Hold, Min Hold
Detection Types	+Peak, -Peak, Average, Sample
Automated RF Measurements	Channel Power, Adjacent Channel Power Ratio (ACPR), Occupied Bandwidth (OBW) Mixed-domain And Trigger Capabilities Spectrum Time can be moved through an acquisition to observe how the RF spectrum changes over time, even onastopped acquisition
Display	264 mm (10.4 in) XGA color display
Depth / Weight (series)	approximately 147 mm (5.8 in) deep and about 5 kg (11 lb) USB 2.0 host ports (front and rear), USB device port, 10/100/1000BASE-T Ethernet, video out Standard passive probes with low capacitive loading (about 3.9 pF) and matching bandwidth class

PARAMETER

VALUE

Bandwidth

16 digital channels with MagniVu high-speed acquisition - 1 dedicated spectrum analyzer channel - Ultra-wide RF capture bandwidth greater than or equal to 1 GHz - Time-correlated analog, digital, and RF acquisitions in one instrument - FastAcq wavefo

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	
Specifications	
PARAMETER	VALUE
Model Family	MD04104B (MD04104B-3 and MD04104B-6)
Instrument Type	Mixed Domain Oscilloscope
Analog Channels	4
Analog Bandwidth	1 GHz
Rise Time	350 ps
Sample Rate, 1 Channel: 5 GS/s Sample Rate, 2 Channels: 5 GS/s Sample Rate, 4 Channels: 2.5 GS/s	
Specifications	
PARAMETER	VALUE
Record Length	20 M points on all analog channels
Digital Channels	16
Maximum MagniVu Sample Rate	16.5 GS/s (60.6 ps resolution)
Maximum Main Digital Sample Rate	500 MS/s (2 ns resolution)
Waveform Capture Rate	Greater than 340,000 wfms/s with FastAcq
Spectrum Analyzer Spectrum Analyzer Channels: 1 Frequency Range, MD04104B-3: 9 kHz to 3 GHz Frequency Range, MD04104B-6: 9 kHz to 6 GHz Real-time Capture Bandwidth: Greater than or equal to 1 GHz	
Specifications	
PARAMETER	VALUE
Span	1 kHz to 3 GHz (-3 models) or 1 kHz to 6 GHz (-6 models), adjustable in a 1-2-5 sequence
Resolution Bandwidth	Window-dependent ranges from about 10 Hz to 200 MHz
Reference Level	-140 dBm to +30 dBm
Vertical Units	dBm, dBmV, dBuV, dBuW, dBmA, dBuA
Displayed Average Noise Level (examples)	approximately less than -147 dBm/Hz from 400 MHz to 3 GHz (typical values better)

PARAMETER	VALUE
Spectrum Traces	Normal, Average, Max Hold, Min Hold
Detection Types	+Peak, -Peak, Average, Sample

RF Time-domain Traces: Amplitude vs. time, Frequency vs. time, Phase vs. time

Automated RF Measurements: Channel Power, Adjacent Channel Power Ratio (ACPR), Occupied Bandwidth (OBW)

Mixed-domain And Trigger Capabilities

Spectrum Time can be moved through an acquisition to observe how the RF spectrum changes over time, even onastopped acquisition

Trigger sources include Edge, Sequence, Pulse Width, Timeout, Runt, Logic, Setup/Hold, Rise/Fall Time, Video, parallel/serial bus packet triggers, and RF power level

Optional advanced RF triggering available via application module

Connectivity And Physical

Display: 264 mm (10.4 in) XGA color display

Depth / Weight (series): approximately 147 mm (5.8 in) deep and about 5 kg (11 lb)

USB 2.0 host ports (front and rear), USB device port, 10/100/1000BASE-T Ethernet, video out

Standard passive probes with low capacitive loading (about 3.9 pF) and matching bandwidth class

Optional Analysis

Optional serial triggering and analysis for I2C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS-232/422/485/UART, MIL-STD-1553, and I2S/LJ/RJ/TDM

Optional power analysis, limit/mask testing, video analysis, and advanced RF triggering

Compatible with SignalVu-PC Live Link for wideband vector signal analysis

Operational Notes

When both spectrum analyzer and analog/digital channels are on, the display is split into time-domain and frequency-domain views that remain time correlated. The spectrum analyzer has an independent acquisition system so each domain can be configured optimally. Models differ by spectrum analyzer upper frequency: 3 GHz (-3) or 6 GHz (-6).

Notes

This manual OEM source was compiled from the official Tektronix MD04000B Series Mixed Domain Oscilloscopes datasheet covering the MD04104B-3 and MD04104B-6.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: N/A — off-catalog OEM datasheet. See OEM documentation · Not listed on Aumictech inventory.

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

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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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.