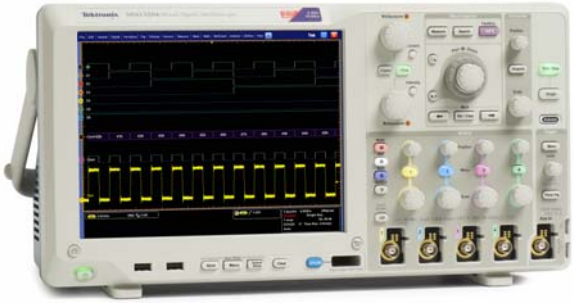
MSO/DPO5000 Series Oscilloscopes

Feature-rich tools for debugging mixed signal designs

Product Fact Sheet



Features	Benefits
4 analog and 16 digital channels	Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
FastAcq with Digital Phosphor display	Quickly discover glitches and infrequent events with Tektronix proprietary FastAcq(TM) technology. A maximum capture rate of >250,000 waveforms/s shows elusive anomalies fast.
Complete set of triggers	Rapidly capture signal anomalies with over 350 available trigger combinations, including setup/hold, serial packet and parallel data.
Wave Inspector® controls	Easily search, mark and navigate long record lengths to find all occurrences of your event.
Built-in Analysis Tools	Analyze your device with 53 automated measurements, measurement statistics, histograms, and advanced waveform math.
Parallel bus triggering and analysis (MSO Series)	Quickly debug your parallel bus with automated trigger, decode and search. Capture fast transitions with timing resolution up to 60.6 ps.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I2C, SPI, RS-232/422/485/UART, USB2.0
Application Software Packages	Transform your oscilloscope for specialized applications with jitter and eye analysis included standard and over 10 optional software packages for power analysis, memory and more.
Low-capacitance, passive voltage probes	Four probes with industry-best 4pF capacitive loading are included standard to ensure accurate measurements

www.tektronix.com/mso5000

Designed to make your work easier

Wave Inspector® controls speed navigation of long waveform records

Featuring:

- 350 MHz, 500 MHz, 1 GHz, 2 GHz models
- 4 analog channels
- 16 digital channels (MSO Series)
- Up to 250 Mpoints record length
- Up to 10GS/s sample rate
- Up to 60.6 ps timing resolution on all digital channels with MagniVu™ high speed acquisition
- 53 automated measurements and FFT analysis
- Serial bus triggering and analysis options for I2C, SPI, RS-232/422/485/UART, USB 2.0
- Parallel bus triggering and analysis (MSO Series)
- Comprehensive verification including serial debug and compliance with jitter and eye validation, power analysis, and memory analysis
- Standard removable hard disk drive
- Large 10.4” XGA display with touch screen
- Windows 7 Ultimate 64-bit operating system

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Key specifications and ordering information

Product Fact Sheet

Models	Analog Channels	Digital Channels	Bandwidth	Analog Sample Rate 4ch/2ch	Digital Sample Rate Main / MagniVu™
DPO5034	4	--	350 MHz	5 GS/s	--
MSO5034	4	16	350 MHz	5 GS/s	500 MS/s / 16.5 GS/s
DPO5054	4	--	500 MHz	5 GS/s	--
MSO5054	4	16	500 MHz	5 GS/s	500 MS/s / 16.5 GS/s
DPO5104	4	--	1 GHz	5 GS/s / 10 GS/s	--
MSO5104	4	16	1 GHz	5 GS/s / 10 GS/s	500 MS/s / 16.5 GS/s
DPO5204	4	-	2GHz	5 GS/s / 10 GS/s	-
MSO5204	4	16	2GHz	5 GS/s / 10 GS/s	500 MS/s / 16.5 GS/s

Standard Probes and Accessories

- One Passive Voltage Probe per Analog Channel (TPP0500 for 500 MHz and 350 MHz models; TPP1000 for 2 GHz and 1 GHz models)
- One P6616 16 Channel Logic Probe (MSO only)
- OpenChoice Desktop and NI LabVIEW SignalExpress™ TE (LE version) Software
- User Manual, Front Cover and Power Cord

Key Software Analysis Options

Opt. DDRA – DDR memory analysis
Opt. DJA - Advanced Jitter and Eye Diagram Analysis
Opt. ET3 - Ethernet Compliance Testing
Opt. LT - Waveform Limit Testing
Opt. MTM - Mask Testing
Opt. PS1 - Power Solution Bundle
Opt. PWR - Power Meas. & Analysis
SR-COMP - Computer Serial Triggering and Analysis
SR-EMBD – Embedded Serial Triggering and Analysis
SR-USB - USB Serial Trigger & Analysis
Opt. USB - USB 2.0 Compliance Testing
Opt. VNM - CAN/LIN Protocol Analysis SW

Recommended Probes, Accessories, and Services

TPP1000	1 GHz Passive Voltage Probe
TPP0500	500 MHz Passive Voltage Probe
TAP1500	1.5 GHz TekVPI Active Probe.
TCP0030	120 MHz TekVPI 30A AC/DC Current Probe.
TCP0150	20 MHz TekVPI 150A AC/DC Current Probe.
TDP0500	500 MHz TekVPI 42V Differential Probe.
TDP1000	1 GHz TekVPI 42V Differential Probe.
P5205*1	100 MHz, 1.3 kV High-Voltage Differential Probe
RMD5000	Rackmount Kit
Opt. R5	5 Year Repair Service Plan.
Opt. C3/C5	3, 5 Year Calibration Service Plan.

*1 Requires TPA-BNC adapter.

Key Applications	Benefits
Design and debug of embedded systems	• Perform system-level troubleshooting with up to 20 channels • Easily debug parallel and serial buses: –Trigger on serial packet content and parallel data –Decode common serial bus standards and defined parallel buses –Automatically search through acquired data
Investigation of transient phenomena	• Quickly capture elusive glitches and other infrequent events with >250,000 wfm/s waveform capture rate • Capture a long time window at high resolution with up to 250 Mpoints record length
Serial debug and analysis	• Quickly and accurately analyze your design with jitter/eye measurements • Compliance software for expert guidance on standards conformance

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