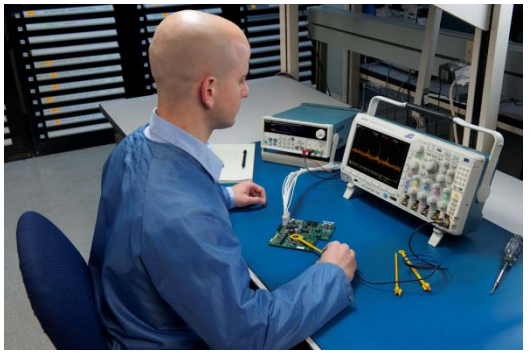
MDO3000 Series Mixed Domain Oscilloscopes

6 Instruments, 1 Oscilloscope for Today's Mixed Signal Designs

Features	Benefits
Mixed Domain Oscilloscope – Integrated Spectrum Analyzer	Every model comes standard with an integrated spectrum analyzer, enabling you to analyze RF signals up to the rated bandwidth of the scope. Option MDO3SA extends the spectrum analyzer frequency coverage to 3 GHz!
Wave Inspector® Navigation	Dedicated front panel controls enable easy zoom and navigation through 10 Mpoint records. Automated search capability quickly finds and marks every occurrence of user specified events.
Integrated, upgradable arbitrary /function generator	The optional function generator saves bench space and enables closed loop testing by simulating sensors or unfinished system blocks. Capture real signals and replicate them as arbitrary waveforms up to 128k points long, with a single instrument!
Integrated, upgradable MSO	Enables debug of digital portions of embedded designs. Trace system timing issues with broader system visibility.
Serial and parallel bus triggering and analysis	Quickly debug your parallel bus and/or common serial buses with automated trigger, decode and search.
Integrated Digital Voltmeter	Free with product registration! Enables quick measurements of DC voltage, AC+DC RMS, AC RMS and frequency.
Incredibly small form factor	Saves valuable bench space by integrating a spectrum analyzer, arbitrary function generator, logic analyzer, protocol analyzer and DVM into your debug tool of choice – the oscilloscope. Only 5.8 inches deep and 9 lbs yet it still provides a 9" WVGA display!
Upgradeability	Don't know what you'll be working on next year? Upgrades are available to analog bandwidth, spectrum analyzer frequency range, arbitrary function generator, digital channels (MSO), serial trigger and analysis packages, and more --ensuring usefulness for years to come

www.tektronix.com/mdo3000

Designed to make your work easier



Debug your designs faster than ever before with the world's most versatile oscilloscope – the MDO3000 Series.

Featuring:

- 2 or 4 analog channels
  - 100 , 200, 350, 500 MHz and 1 GHz models
- 16 digital channels with option MDO3MSO
  - Up to 121 ps timing resolution with MagniVu™
- 10 Mpoint standard record length on all channels
- >280,000 waveforms/sec capture rate for easy identification of intermittent events and signal anomalies
- Low-C passive voltage probes included for each analog channel , with 1 GHz probes on 1 GHz models
- Serial bus triggering and analysis on serial standards such as I^2C, SPI, RS-232/422/485/UART, CAN, LIN, FlexRay, MIL-STD-1553, USB and Audio
- Over 125 available trigger combinations
- 33 automated time and frequency domain measurements
- 75Ω termination with triggers and features for video applications
- Power analysis package (optional: MDO3PWR)
- Limit / mask testing package (optional: MDO3LMT)
- Front-panel USB host port for data storage
- LXI Core 2012 certified
- 3-year warranty

Tektronix®

MDO3000 Series Mixed Domain Oscilloscopes

Key specifications and ordering information

Models	Analog Ch.	Analog Bandwidth	Analog Sample Rate	Record Length	Waveform Capture Rate	Digital Ch. (opt.)	Digital Sample Rate Main / MagniVu™	Spec. An. Ch. (std.)	Spec. An. Freq. Range (std.)	AFG Ch. (opt)	DVM / Counter
MDO3012	2	100 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 100 MHz	1	Free With Product Registration
MDO3014	4	100 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 100 MHz	1	
MDO3022	2	200 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 200 MHz	1	
MDO3024	4	200 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 200 MHz	1	
MDO3032	2	350 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 350 MHz	1	
MDO3034	4	350 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 350 MHz	1	
MDO3052	2	500 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 500 MHz	1	
MDO3054	4	500 MHz	2.5 GS/s	10M	>235,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 500 MHz	1	
MDO3102	2	1 GHz	5 GS/s	10M	>280,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 1 GHz	1	
MDO3104	4	1 GHz	5 GS/s	10M	>280,000	16	500 MS/s / 8.25 GS/s	1	9 kHz – 1 GHz	1	

Standard Probes and Accessories

- One Passive Voltage Probe per Analog Channel
- N-to-BNC Adapter (103-0473-00)
- OpenChoice® Desktop Software
- Calibration Certificate, Quick Reference Manual & Documentation CD
- Front Panel Cover, Power Cord, Accessory Bag
- 3-year Warranty

Application Modules

Instrument Options

MDO3AFG	Arbitrary Function Generator
MDO3MSO	16 Digital Channels with Digital Probe
MDO3SA	Spectrum Analyzer Coverage to 3 GHz
MDO3SEC	Enhanced Instrument Security

Serial Bus Triggering and Protocol Analysis

MDO3AERO	Aerospace (MIL-STD-1553)
MDO3AUDIO	Audio (I^2S, LJ, RJ and TDM)
MDO3AUTO	Automotive (CAN, LIN)
MDO3COMP	Computer (RS-232/422/485/UART)
MDO3EMBD	Embedded (I^2C, SPI)
MDO3FLEX	Automotive (FlexRay)
MDO3USB	USB 2.0 (Dec-LS/FS/HS, Trig-LS/FS)

Additional Analysis

MDO3PWR	Power Analysis
MDO3LMT	Limit and Mask Testing

Recommended Probes and Accessories

Passive Voltage Probes

TPP0250	250 MHz, 10X, 300V TekVPI Low C (3.9 pF)
TPP0500B	500 MHz, 10X, 300V TekVPI Low C (3.9 pF)
TPP0502	500 MHz, 2X, 300V TekVPI Low C (12.7 pF)
TPP0850	800 MHz, 50X, 2,500V TekVPI (1.8 pF)
TPP1000	1 GHz, 10X, 300V TekVPI Low C (3.9 pF)

Active Voltage Probes

TAP1500	1.5 GHz, 10X, ±8V TekVPI, Single-ended
TAP2500	2.5 GHz, 10X, ±4V TekVPI, Single-ended
TAP3500	3.5 GHz, 10X, ±4V TekVPI, Single-ended

Differential Voltage Probes

TDP0500	500 MHz, 50X/5X, ±42V TekVPI, Differential
TDP1000	1 GHz, 50X/5X, ±42V TekVPI, Differential
TDP1500	1.5 GHz, 10X/1X, ±8.5V TekVPI, Differential
THDP0100	100 MHz, 1000X/100X, ±6kV TekVPI, Diff.
THDP0200	200 MHz, 500X/50X, ±1.5kV TekVPI, Diff.
TMDP0200	200 MHz, 250X/25X, ±750V TekVPI, Diff.

Current Probes

TCP0020	50 MHz, 20A AC/DC TekVPI
TCP0030A	120 MHz, 30A AC/DC TekVPI
TCP0150	20 MHz, 150A AC/DC TekVPI

Spectrum Analyzer Accessories

TPA-N-PRE	Preamplifier, 12 dB gain, 9kHz – 6 GHz
TPA-N-VPI	N-to-TekVPI Adapter
119-4146-00	Near Field Probe Set, 100 kHz – 1 GHz
119-6609-00	Flexible Monopole Antenna

Service Options

C3 / C5	Calibration Service 3 / 5 Years
D1 / D3 / D5	Calibration Data Report 1 / 3 / 5 Years
G3 / G5	3 / 5 Year Gold Care Plan
R5	Repair Service 5 Years

Key Applications	Benefits
Design and debug of embedded systems	• Perform system-level troubleshooting with up to 4 analog, 16 digital and 1 spectrum analyzer channel. • Trigger on and decode parallel and common low speed serial buses. • Integrated AFG can simulate missing signals to speed design process.
Hunting Noise Sources	• Analyze your RF spectrum for noise with the built-in spectrum analyzer • See your entire spectrum at once with up to 3 GHz capture bandwidth
Power supply design and analysis	• Quickly and accurately analyze your design with automated power measurements
Future proof	• Variety of available instrument upgrades ensure usefulness for years to come

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