

# MDO3000 Series and MDO4000C Series Oscilloscopes Series Comparison



Fact Sheet

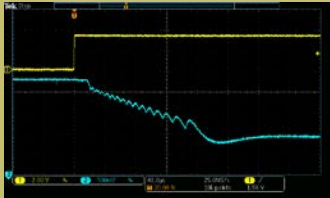
General Specifications	MDO3000	MDO4000C
Bandwidth Range	100 MHz – 1 GHz	200 MHz – 1 GHz
2 Channel Models	Available at all Bandwidths	--
Sample Rate 100-500 MHz models 1 GHz models	2.5 GS/s on all channels 2.5 / 5 GS/s on all / half channels	2.5 GS/s on all channels 2.5 / 5 GS/s on all / half channels
Record Length	10M	<b>20M</b>
Waveform Capture Rate	up to 280,000 wfm/s	up to <b>340,000 wfm/s</b>
Integrated Digital Channels	16 (Optional, up to 121.2 ps MagniVu™ timing resolution)	16 (Optional, up to <b>60.6 ps MagniVu™ timing resolution with independent thresholds</b> )
Integrated Spectrum Analyzer	Standard: 9 kHz up to oscilloscope BW Optional: 9 kHz up to 3 GHz	Optional: 9 kHz up to 3 GHz or <b>9 kHz up to 6 GHz Synchronized time and frequency domains</b>
Integrated Arbitrary / Function Generator	Optional (50 MHz BW)	Optional (50 MHz BW)
Integrated DVM	Free with product registration	Free with product registration
Serial Bus Support	I <sup>2</sup> C, SPI, RS-232/422/485/UART, CAN, LIN, FlexRay, USB, Audio, MIL-STD-1553 Two buses can be defined	I <sup>2</sup> C, SPI, RS-232/422/485/UART, CAN, LIN, FlexRay, USB, Audio, MIL-STD-1553, <b>Ethernet</b> <b>Three buses</b> can be defined
Video Support	NTSC, PAL, SECAM, <b>HDTV and Custom trigger, Picture Mode, and 75Ω termination all included standard</b>	NTSC, PAL, SECAM standard Optional DPO4VID adds HDTV and Custom trigger, Picture Mode
Other	Dual edge triggering, act-on-event, search mark table, email printing, enhanced security	Dual edge triggering, act-on-event, search mark table, email printing, enhanced security
Available Upgrades	Oscilloscope Bandwidth, Spectrum Analyzer Frequency Range, Digital Channels, AFG	Oscilloscope Bandwidth, Spectrum Analyzer Frequency Range, Spectrum Analyzer, Digital Channels, AFG
Display Size and Resolution	9" WVGA (800 x 480)	<b>10.4" XGA (1,024 x 768)</b>
Dimensions (HxWxD in inches)	8.0 x 16.4 x 5.8	9.0 x 17.3 x 5.8
Weight	9 lbs.	11 lbs.
Warranty	3 years	3 years

# MDO3000 Series and MDO4000C Series Mixed Domain Oscilloscopes

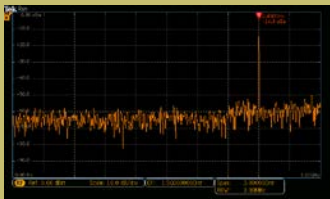
## Series Comparison

Fact Sheet

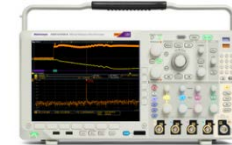
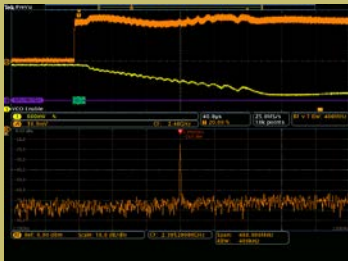
### MDO3000 Time Domain



### OR Frequency Domain



### MDO4000C Synchronized Time Domain AND Frequency Domain



RF Specifications	MDO3000 with option MDO3SA	MDO4000C with option SA3 or SA6
Frequency Range	9 kHz – 3 GHz	9 kHz – 3 GHz or 9 kHz – 6 GHz
Capture Bandwidth	3 GHz max.	3.75 GHz max.
View Time and Frequency Domains Simultaneously	--	Std.
Time Correlation Between Domains	--	Std.
RF vs. Time Traces (Amplitude, Frequency, Phase)	--	Std.
RF Power Level Triggering	--	Std.
Phase Noise at 1 GHz CF	10 kHz offset 100 kHz offset 1 MHz offset	-81 dBc/Hz, -85 dBc/Hz (typical) -97 dBc/Hz, -101 dBc/Hz (typical) -118 dBc/Hz, -122 dBc/Hz (typical)
Displayed Average Noise Level (DANL)	9 kHz – 50 kHz 50 kHz – 5 MHz 5 MHz - 400 MHz 400 MHz – 2 GHz 2 GHz – 3 GHz 3 GHz – 4 GHz 4 GHz – 6 GHz	-109 dBm/Hz , -113 dBm/Hz (typical) -126 dBm/Hz , -130 dBm/Hz (typical) -136 dBm/Hz , -140 dBm/Hz (typical) -136 dBm/Hz , -140 dBm/Hz (typical) -126 dBm/Hz , -130 dBm/Hz (typical) -- --
2nd Harmonic Distortion at 1 GHz	-55 dBc, -60 dBc (typical)	-60 dBc, -65 dBc (typical)
3rd Order Intermodulation Distortion at 1 GHz	-55 dBc, -60 dBc (typical)	-62dBc, -65 dBc (typical)
Residual Response	-78 dBm w/ exceptions to -67 dBm	-85 dBm w/ exceptions to -78 dBm
Max Input Power (average continuous power)	+20 dBm (0.1W)	+30 dBm (1W)
Export of .TIQ files for SignalVu-PC / MATLAB	Uncalibrated data	Calibrated data
LiveLink w/ SignalVu-PC	--	Opt.