



TELEDYNE LECROY

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Product Selection Guide



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OSCILLOSCOPE SELECTION GUIDE



HDO4000/ HDO4000-MS

WaveSurfer 10/ WaveSurfer 10M

WaveSurfer 3000

Bandwidth	200 MHz to 1 GHz	1 GHz	200 MHz to 750 MHz
Resolution	12-bit ADC resolution, 15-bit with enhanced resolution	8-bit ADC resolution, 11-bit with enhanced resolution	8-bit ADC resolution, 11-bit with enhanced resolution
Rise Time	1.75 ns to 450 ps	350 ps	1.75 ns to 550 ps
Channels	2, 4, 2 + 16, 4 + 16	4, 4 + 18	2, 4, 2 + 16, 4 + 16
Display	12.1" Color WXGA Touch Screen	10.4" Color SVGA Touch Screen	10.1" Color WSVGA Touch Screen
Memory	12.5 Mpts/Ch 25 Mpts Interleaved	10 Mpts/Ch 20 Mpts interleaved	10 Mpts/Ch
Maximum Memory[†]	Up to 25 Mpts/Ch 50 Mpts Interleaved	10 Mpts / 20 Mpts, 16 Mpts / 32 Mpts with WaveSurfer 10M or ADT option	–
Sample Rate	2.5 GS/s	10 GS/s	2 GS/s to 4 GS/s
MSO Characteristics	250 MHz, 1.25 GS/s [†]	250 MHz, 1 GS/s [†]	125 MHz, 500 MS/s [†]
Trigger Types	Edge, Width, Glitch, Pattern, TV, Runt, Slew Rate, Interval (Period), Dropout, Qualified	Edge, Width, Glitch, Pattern, TV, Runt, Slew Rate, Interval (Period), Dropout, Qualified	Edge, Width, Pattern, TV, Runt, Slew Rate, Interval (Period), Dropout, Qualified
Serial Trigger and Decode[†]	I ² C, SPI, UART, RS-232, CAN, CAN FD, LIN, FlexRay, SENT, Audio, MIL-STD-1553, D-PHY, ARINC 429, DigRF 3G, DigRF v4, ENET, Manchester, NRZ, USB 1.0/1.1/2.0, USB 2.0-HSIC, SpaceWire	I ² C, SPI, UART, RS-232, CAN, CAN FD, LIN, FlexRay, SENT, Audio, MIL-STD-1553, D-PHY, ARINC 429, DigRF 3G, DigRF v4, ENET, Manchester, NRZ, USB 1.0/1.1/2.0, USB 2.0-HSIC, SpaceWire	I ² C, SPI, UART, RS-232, CAN, CAN FD, LIN
Connectivity and Storage	USB Host for Storage USB Device for PC LAN for PC GPIB for PC [†]	USB Host for Storage LAN for PC GPIB for PC [†]	USB Host for Storage USB Device for PC LAN for PC GPIB for PC [†]
Math	+, -, x, /, FFT, Absolute Value, Average, Derivative, Deskew, Envelope, Enhanced Resolution, Floor, Integral, Invert, Reciprocal, Rescale, Roof, Square, Square Root, Trend, Zoom	+, -, x, /, FFT, Derivative, Deskew, Integral, Rescale, Roof, Square, Square Root, Zoom (Absolute Value, Average, Envelope, Enhanced Resolution, Exp (base e), Exp (base 10) Floor, Invert, Log (base e), Log (base 10), Reciprocal, Roof and Trend included with WaveSurfer 10M or ADT option)	+, -, x, /, FFT, Absolute Value, Average, Derivative, Envelope, Enhanced Resolution, Floor, Integral, Invert, Reciprocal, Rescale, Roof, SinX/x, Square, Square Root, Trend, Zoom
Dimensions (HWD)	291.7 x 399.4 x 131.31 mm (11.48" x 15.72" x 5.17")	260 x 340 x 152 mm (10.25" x 13.4" x 6")	270 x 380 x 125 mm (10.63" x 14.96" x 4.92")
Weight	5.71 kg (12.6 lbs)	7.26 kg (16.0 lbs)	4.81 kg (10.6 lbs)

[†] Optional



	WaveJet Touch	WaveAce 2000	WaveAce 1000
Bandwidth	350 MHz / 500 MHz	70 MHz to 300 MHz	40 MHz to 100 MHz
Resolution	8-bit ADC resolution , 12-bit with enhanced resolution	8-bit ADC resolution	8-bit ADC resolution
Rise Time	1 ns / 750 ps	5.0 ns to 1.2 ns	8.8 ns to 3.5 ns
Channels	4	2, 4	2
Display	7.5" Color VGA Touch Screen	7" Color WQVGA	7" Color WQVGA
Memory	2.5 Mpts/Ch 5 Mpts interleaved	12 kpts/Ch 24 kpts Interleaved	1 Mpts/Ch 2 Mpts Interleaved
Maximum Memory[†]	–	–	–
Sample Rate	up to 2 GS/s	1 GS/s to 2 GS/s	500 MS/s to 1 GS/s
MSO Characteristics	–	–	–
Trigger Types	Edge, Edge ALT, Edge OR, Pulse Width, Period, Pulse Count, Dropout, TV, Logic	Edge, Width, Video, Slope, Alternate	Edge, Width, Video, Slope, Alternate
Serial Trigger and Decode	I ² C, SPI, UART, RS-232	–	–
Connectivity and Storage	USB Host for Storage USB Device for PC LAN for PC GPIB for PC	USB Host for Storage USB Device for PC LAN for PC	USB Host for Storage USB Device for PC
Math	+, -, x, FFT, Integral, Derivative	+, -, x, /, FFT	+, -, x, /, FFT
Dimensions (HWD)	190 x 330 x 124 mm (7.5" x 13" x 4.9")	163 x 360 x 124.1 mm (6.42" x 14.17" x 4.89")	163 x 313 x 115.8 mm (6.42" x 12.32" x 4.6")
Weight	3.7 kg (8.16 lbs)	3.33 kg (7.40 lbs)	2.78 kg (6.10 lbs)

ORDERING INFORMATION

Product Description	Product Code	Product Description	Product Code
HDO4000 Oscilloscopes		WaveAce Oscilloscopes	
200 MHz, 2.5 GS/s, 2 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4022	40 MHz, 500 MS/s, 2 Ch, 1 Mpts/Ch with 7" Color WQVGA Display. 1 GS/s Interleaved, 1 MΩ Input	WaveAce 1001
200 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4024	60 MHz, 500 MS/s, 2 Ch, 1 Mpts/Ch with 7" Color WQVGA Display. 1 GS/s Interleaved, 1 MΩ Input	WaveAce 1002
350 MHz, 2.5 GS/s, 2 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4032	100 MHz, 500 MS/s, 2 Ch, 1 Mpts/Ch with 7" Color WQVGA Display. 1 GS/s Interleaved, 1 MΩ Input	WaveAce 1012
350 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4034	70 MHz, 1 GS/s, 2 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 1 MΩ Input	WaveAce 2002
500 MHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4054	70 MHz, 1 GS/s, 4 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 1 MΩ Input	WaveAce 2004
1 GHz, 2.5 GS/s, 4 Ch, 12.5 Mpts/Ch 12-bit HD Oscilloscope with 12.1" Color WXGA Touch Display	HDO4104	100 MHz, 1 GS/s, 2 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 1 MΩ Input	WaveAce 2012
200 MHz, 2.5 GS/s, 2+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4022-MS	100 MHz, 1 GS/s, 4 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 1 MΩ Input	WaveAce 2014
200 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4024-MS	200 MHz, 1 GS/s, 2 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 50/1 MΩ Input	WaveAce 2022
350 MHz, 2.5 GS/s, 2+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4032-MS	200 MHz, 1 GS/s, 4 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 50/1 MΩ Input	WaveAce 2024
350 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4034-MS	300 MHz, 1 GS/s, 2 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 50/1 MΩ Input	WaveAce 2032
500 MHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4054-MS	300 MHz, 1 GS/s, 4 Ch, 12 kpts/Ch with 7" Color WQVGA Display. 24 kpts, 2 GS/s Interleaved, 50/1 MΩ Input	WaveAce 2034
1 GHz, 2.5 GS/s, 4+16ch, 12.5 Mpts/Ch 12-bit HD Mixed Signal Oscilloscope w/ 12.1" Color WXGA Display	HDO4104-MS		
WaveSurfer 10 Oscilloscopes		Logic Studio Logic Analyzer	
1 GHz, 5 GS/s, 4 Ch, 10 Mpts/Ch DSO with 10.4" Touch Screen Display.	WaveSurfer10	16 Channel, 1 GS/s, 100 MHz USB Logic Analyzer	LogicStudio 16
10 GS/s, 20 Mpts Interleaved			
1 GHz, 10 GS/s, 4 Ch, 16 Mpts/Ch DSO with 10.4" Touch Screen Display. 10 GS/s, 32 Mpts Interleaved includes WS10-ADT option	WaveSurfer 10M		
WaveSurfer 3000 Oscilloscopes		ArbStudio Arbitrary Waveform Generators	
200 MHz, 4 GS/s, 2 Ch, 10 Mpts/Ch with 10.1" Touch screen Display	WaveSurfer 3022	2 Ch 16-bit 1 GS/s Arbitrary Waveform Generator	ArbStudio 1102
200 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Touch screen Display	WaveSurfer 3024	2 Ch 16-bit 1 GS/s Arbitrary Waveform and Digital Pattern Generator	ArbStudio 1102D
350 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Touch screen Display	WaveSurfer 3034		
500 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Touch screen Display	WaveSurfer 3054		
750 MHz, 4 GS/s, 4 Ch, 10 Mpts/Ch with 10.1" Touch screen Display	WaveSurfer 3074		
WaveJet Touch Oscilloscopes		WaveStation Function/Arbitrary Waveform Generators	
350 MHz, 1 GS/s, 4 Ch, 2.5 Mpts/Ch with 7.5" Touch screen Display;	WaveJet 334T	10 MHz, 2 Ch, 14-bit, 125 MS/s Function/Arbitrary Waveform Generator with 3.5" Display	WaveStation 2012
2 GS/s, 5 Mpts Interleaved		25 MHz, 2 Ch, 14-bit, 125 MS/s Function/Arbitrary Waveform Generator with 3.5" Display	WaveStation 2022
500 MHz, 1 GS/s, 4 Ch, 2.5 Mpts/Ch with 7.5" Touch screen Display;	WaveJet 354T	50 MHz, 2 Ch, 14-bit, 125 MS/s Function/Arbitrary Waveform Generator with 3.5" Display	WaveStation 2052
2 GS/s, 5 Mpts Interleaved		80 MHz, 2 Ch, 14 bit, 500 MS/s Function/Arbitrary Waveform Generator with 4.3" Display	WaveStation 3082
		120 MHz, 2 Ch, 14 bit, 500 MS/s Function/Arbitrary Waveform Generator with 4.3" Display	WaveStation 3122
		160 MHz, 2 Ch, 14 bit, 500 MS/s Function/Arbitrary Waveform Generator with 4.3" Display	WaveStation 3162