

Oscilloscope Selection Chart



	MSO/DPO4000 Series	DP03000 Series	MSO/DPO2000 Series	TDS3000C Series	TPS2000 Series	TDS1000B/2000B Series
Channels	Analog	2 ¹ , 4	2, 4	2, 4	2, 4 Isolated	2, 4 ⁵
	Digital	16 ⁴ (MSO Series)	–	16 ⁴ (MSO Series)	–	–
Bandwidth	350 MHz to 1 GHz	100 MHz to 500 MHz	100 MHz to 200 MHz	100 MHz to 500 MHz	100 MHz to 200 MHz	40 MHz to 200 MHz
Rise Time	1.0 ns to 350 ps	3.5 ns to 700 ps	3.5 ns to 2.1 ns	3.5 ns to 700 ps	3.5 ns to 2.1 ns	8.4 ns to 2.1 ns
Sample Rate (Real-time)	2.5 GS/s to 5 GS/s	2.5 GS/s	1 GS/s	1.25 GS/s to 5 GS/s	1 GS/s to 2 GS/s	500 MS/s to 2 GS/s
Display Size	10.4 in. (264 mm) XGA	9.0 in. (229 mm) WVGA	7.0 in. (178 mm) WVQGA	6.4 in. (163 mm) VGA	5.6 in. (142 mm) QVGA	5.6 in. (142 mm) QVGA
Record Length (Max)	10 M	5 M	1 M	10 k	2.5 k	2.5 k
Digital Channel⁴ Characteristics (MSO Series)	Main: 500 MS/s, 10 M record length MagniVu™: 16.5 GS/s, 10 k record length (centered at the trigger)	–	Main: 1 GS/s (8 Ch) 500 MS/s (16 Ch) 1 M record length (8 Ch) 500 k record length (16 Ch)	–	–	–
Trigger Types	Edge, Sequence, Logic, Pulse Width, Runt, Multi-channel Set-up and Hold, Rise/Fall Time, Video, I ² C ² , SPI ² , CAN ² , LIN ² , FlexRay ² , RS-232/422/485/UART ² , I ² S/LJ/RJ/TDM ² , Extended Video ² , Parallel ⁴	Edge, Sequence, Logic, Pulse Width, Runt, Set-up and Hold, Rise/Fall Time, Video, I ² C ² , SPI ² , CAN ² , LIN ² , RS-232/422/485/UART ² , I ² S/LJ/RJ/TDM ² , Extended Video ²	Edge, Logic, Pulse Width, Runt, Set-up and Hold, Rise/Fall Time, Video, I ² C ² , SPI ² , CAN ² , LIN ² , RS-232/422/485/UART ²	Edge, Logic, Pulse, Video, Extended Video ² , Comm ¹	Edge, Pulse, Video	Edge, Pulse, Video
Connectivity and Storage	USB host for storage, USB device for PC connectivity or direct print, CompactFlash, LAN, GPIB ² , Video out	USB host for storage, USB device for PC connectivity or direct print, LAN, GPIB ² , Video out	USB host for storage, USB device for PC connectivity or direct print, LAN ² , GPIB ² , Video out ²	USB host for storage, LAN, RS-232 ² , GPIB ² , Video out ²	RS-232, Centronics, CompactFlash	USB host for storage, USB device for PC connectivity or direct print, GPIB ²
Waveform Math and Analysis	Waveform math (+, -, x, /), FFT, Arbitrary expression math, Connect to a PC for extended analysis on OpenChoice [®] or NI LabVIEW SignalExpress™ Tektronix Edition software	Waveform math (+, -, x, /), FFT, Arbitrary expression math, Connect to a PC for extended analysis on OpenChoice [®] or NI LabVIEW SignalExpress™ Tektronix Edition software	Waveform math (+, -, x), Connect to a PC for extended analysis on OpenChoice [®] or NI LabVIEW SignalExpress™ Tektronix Edition software	Waveform math (+, -, x, /), DPO math ³ , Arbitrary expression math ³ , FFT, Connect to a PC for extended analysis on OpenChoice [®] or NI LabVIEW SignalExpress™ Tektronix Edition software	Waveform math (+, -, x), FFT, Connect to a PC for extended analysis on OpenChoice [®] software and MS Windows software	Waveform math (+, -, x), FFT, Connect to a PC for extended analysis on OpenChoice [®] or NI LabVIEW SignalExpress™ Tektronix Edition software and MS Windows software
Applications	Embedded design & debug, Investigation of transient phenomena, Automotive electronics design & debug, Manufacturing test & quality control, Industrial control	Embedded design & debug, Investigation of transient phenomena, Power measurements, Video design & debug, Automotive electronics design & debug, Manufacturing test & quality control, Industrial control	Embedded design & debug, Power measurements, Video design & debug, Automotive electronics design & debug, Manufacturing test & quality control, Industrial control, Education and Training	Telecomm mask testing and manufacturing, Digital troubleshooting, Video design and service, Power supply design	Industrial power design and installation, Advanced electronics design and installation, Education, Automotive	Design and debug, Service and repair, Education and training, Manufacturing test and quality control
Dimensions	17.3 in. (439 mm) wide x 9.0 in. (229 mm) high x 5.4 in. (137 mm) deep	16.4 in. (417 mm) wide x 8.0 in. (203 mm) high x 5.4 in. (137 mm) deep	14.9 in. (377 mm) wide x 7.1 in. (180 mm) high x 5.3 in. (134 mm) deep	14.8 in. (375 mm) wide x 6.9 in. (176 mm) high x 5.9 in. (149 mm) deep	13.2 in. (336 mm) wide x 6.3 in. (161 mm) high x 5.1 in. (130 mm) deep	12.9 in. (326 mm) wide x 6.2 in. (158 mm) high x 4.9 in. (124 mm) deep
Weight	11.0 lbs. (5.0 kg)	9.0 lbs. (4.1 kg)	7.9 lbs. (3.6 kg)	7.0 lbs. (3.2 kg)	7.0 lbs. (3.2 kg) with one battery installed	4.4 lbs. (2.0 kg)
Serial Decode² and Analysis	I ² C, SPI, CAN, LIN, RS-232/422/485/UART, FlexRay	I ² C, SPI, CAN, LIN, RS-232/422/485/UART	I ² C, SPI, CAN, LIN, RS-232/422/485/UART	–	–	–
Power Measurements² and Analysis	Power Quality, Switching Loss, Safe Operating Area, Harmonics, Ripple, Modulation, Slew Rate	Power Quality, Switching Loss, Safe Operating Area, Harmonics, Ripple, Modulation, Slew Rate			Power Quality, Switching Loss, Harmonics, Slew Rate	

Specifications may vary based on the model selected within the product families listed above.

¹ Requires TDS3TMT module. ² Optional. ³ Requires TDS3AAM module. ⁴ MSO Series only. ⁵ TDS2000B Series only.

For further assistance in choosing the right Tektronix oscilloscope for your needs, please contact your local Tektronix representative, or visit www.tektronix.com/oscilloscopes

Want advice on which oscilloscope will best fit your particular needs?
Visit www.tektronix.com/oscilloscopes



Recommended Accessories

MSO/DPO4000 Series Accessories

DPO4AUTO Module	Automotive serial triggering and analysis module (CAN, LIN)
DPO4AUTOMAX Module	Automotive serial triggering and analysis module (CAN, LIN, FlexRay)
DPO4EMBD Module	Embedded serial triggering and analysis module (FC, SPI)
DPO4COMP Module	Computer serial triggering and analysis module (RS-232/422/485/UART)
DPO4AUDIO Module	Audio serial triggering and analysis module (FSLJ/RJ/TDM)
DPO4VID Module	HDTV and custom (non-standard) video triggering module
DPO4PWR Module	Adds analysis capability for power quality, switching loss, harmonics, safe operating area (SOA), modulation, ripple, and slew rate (di/dt, dv/dt)
TPA-BNC	TekVPI to TekProbe BNC adapter
TEK-USB-488	GPIB to USB adapter
ACD4000	Soft transit case
HCTEK4321	Hard carrying case (requires ACD4000)
RM4000	Rackmount kit
TEK-DPG	Deskew Pulse Generator
DPO4PWRBND Bundle	Includes P5205 and TDP0500 differential voltage probes, TCP0030 current probe, TPA-BNC adapter, deskew pulse generator (TEK-DPG), deskew fixture, and power analysis module (DPO4PWR) in a hard-sided carrying case. Bundle discount included in price.

DPO3000 Series Accessories

DPO3AUTO Module	Automotive serial triggering and analysis module (CAN, LIN)
DPO3EMBD Module	Embedded serial triggering and analysis module (FC, SPI)
DPO3COMP Module	Computer serial triggering and analysis module (RS-232/422/485/UART)
DPO3AUDIO Module	Audio serial triggering and analysis module (FSLJ/RJ/TDM)
DPO3VID Module	HDTV and custom (non-standard) video triggering module
DPO3PWR Module	Adds analysis capability for power quality, switching loss, harmonics, safe operating area (SOA), modulation, ripple, and slew rate (di/dt, dv/dt)
TPA-BNC	TekVPI to TekProbe BNC adapter
TEK-USB-488	GPIB to USB adapter
ACD4000	Soft transit case
HCTEK4321	Hard carrying case (requires ACD4000)
RMD3000	Rackmount kit
TEK-DPG	Deskew Pulse Generator
DPO3PWRBND Bundle	Includes P5205 and TDP0500 differential voltage probes, TCP0030 current probe, TPA-BNC adapter, deskew pulse generator (TEK-DPG), deskew fixture, and power analysis module (DPO3PWR) in a hard-sided carrying case. Bundle discount included in price.

MSO/DPO2000 Series Accessories

DPO2AUTO Module	Automotive serial triggering and analysis module (CAN, LIN)
DPO2EMBD Module	Embedded serial triggering and analysis module (FC, SPI)
DPO2COMP Module	Computer serial triggering and analysis module (RS-232/422/485/UART)
DPO2CONN Module	LAN and Video Out connectivity module
TPA-BNC	TekVPI to TekProbe BNC adapter
TEK-USB-488	GPIB to USB adapter
ACD2000	Soft transit case
HCTEK4321	Hard carrying case (requires ACD2000)
RMD2000	Rackmount kit
119-7465-XX	TekVPI External Power Supply

TDS3000C Series Accessories

TDS3GV Communication Module	GPIB, VGA and RS-232 interfaces. Includes TDSPCS1 OpenChoice® software
TDS3AAM Advanced Analysis Module	Adds extended math capability, arbitrary math expressions, measurement statistics and additional automated measurements
TDS3LIM Limit Testing Module	Offers fast, accurate Go/No Go verification that tested circuits are operating within intended parameters
TDS3TMT Telecommunications Mask Testing Module	Pass/Fail compliance testing of ITU-T G.703 and ANSI T1.102 standards, custom mask editing and more
TDS3VID Extended Video Analysis Module	Adds Video QuickMenu, Autoset, Holdoff, Line Count Trigger, Video Picture mode, Vectorscope mode, HDTV format triggering, graticules and more
TDS3SDI 601 Serial Digital Video Module	Identify and analyze ITU-R BT.601 video signals, video picture mode with bright line select, Vectorscope mode, HDTV format triggering and more
TDS3BATC	Battery pack for up to 3 hours of continuous operation without line power
AC3000	Soft carrying case
HCTEK4321	Hard carrying case (requires AC3000)
RM3000	Rackmount kit

TPS2000 Series Accessories

TPS2PBND Power Bundle	Includes (4) P5120 passive, high-voltage probes and TPS2PWR1 power measurement and analysis software
TPS2PWR1 Power Software	Offers instantaneous power waveform analysis, harmonics analysis, switching loss, phase angles, di/dt and dv/dt cursors
TPSBAT	Instrument ships standard with one battery pack for up to 4 hours battery operation Optional second battery offers hot-swappability for 8+ hours continuous battery operation
TPSCHG	External battery charger
AC2100	Soft carrying case
HCTEK4321	Hard carrying case (requires AC2100)

TDS2000B and TDS1000B Series Accessories

TEK-USB-488	GPIB to USB adapter
AC2100	Soft carrying case
HCTEK4321	Hard carrying case (requires AC2100)
RM2000B	Rackmount kit

Recommended Software

MSO/DPO4000, DPO3000, MSO/DPO2000, TDS3000C, TDS1000B/2000B Series Software

SIGEXPT Software	NI LabVIEW SignalExpress™ Tektronix Edition - Fully interactive measurement software environment optimized for the MSO4000, DPO4000, DPO3000, MSO2000, DPO2000, TDS3000C, TDS2000B and TDS1000B Series (Full Version).
IVI Driver	Provides a standard instrument programming interface for common applications such as LabVIEW, LabWindows/CVI, Microsoft .NET and MATLAB.

Complete Probe Solutions

Passive Probes	P2220 - 1/10X, 7MHz/200 MHz passive probe
	P2221 - 1/10X, 7MHz/200 MHz passive probe
	P3010 - 10X, 100 MHz passive probe
	P6101B - 1X, 15 MHz passive probe
	P6139A - 10X, 500 MHz passive probe
Low-capacitance Probes	P6158 - 20X, 3 GHz low-capacitance probe
Active Probes	P6205 - 10X, 750 MHz active probe ^{2,7,9}
	P6243 - 10X, 1 GHz active probe ^{1,7,9}
	TAP1500 - 1.5 GHz TekVPI™ active probe ^{3,9}
Differential Probes	ADA400A - 100X/10X/1X/0.1X, 1 MHz differential preamplifier ^{2,3,7,9}
	P5205 - 1.3 kV, 100 MHz high-voltage differential probe ^{2,7,9}
	P5210 - 5.6 kV, 50 MHz high-voltage differential probe ^{2,7,9}
	P6246 - 1X/10X, 400 MHz differential probe ^{1,7,9}
	P6247 - 1X/10X, 1 GHz differential probe ^{1,7,9}
	TDP0500 - 500 MHz TekVPI 42V differential probe ^{3,9}
	TDP1000 - 1 GHz TekVPI 42V differential probe ^{3,9}
Current Probes	A621 - 1000 A _{RMS} , 50 kHz current probe
	A622 - 70 A _{RMS} , 100 kHz current probe
	P6021 - 5 A _{RMS} , 60 MHz current probe
	P6022 - 2 A _{RMS} , 120 MHz current probe
	TCP202 - 15 A, DC to 50 MHz current probe ²
	TCP312 - 30 A, DC to 100 MHz current probe ⁴
	TCP305 - 50 A, DC to 50 MHz current probe ⁴
	TCP303 - 150 A, DC to 15 MHz current probe ⁴
	TCP404XL - 750 A, DC to 2 MHz current probe ⁵
	TCP0030 - 120 MHz TekVPI 30 Ampere AC/DC current probe ^{3,9}
	TCP0150 - 20 MHz TekVPI 150 Ampere AC/DC current probe ^{3,9}
	TCPA300/400 - Current measurement systems ⁷
High-Voltage Probes	P5100 - 100X, 250 MHz, passive high-voltage probe
	P5120 - 20X, 200 MHz, passive high-voltage probe
	P6015A - 1000X, 75 MHz passive high-voltage probe
	P5200 - 50X/500X, 25 MHz, high-voltage differential probe ⁸
	P5205 - 50X/500X, 100 MHz, high-voltage differential probe ^{2,7}
	P5210 - 100X/1000X, 50 MHz high-voltage differential probe ^{2,7}
Probe Accessories	NEX-HD2HEADER - Mictor connector breakout to 0.1" header pins

¹ Requires 1103 TEKPROBE power supply when used with TDS1000B, TDS2000B, TDS3000C or TPS2000 Series. ² Requires 1103 TEKPROBE power supply when used with TDS1000B, TDS2000B or TPS2000 Series. ³ Bandwidth limits: 100 Hz, 3 kHz and 100 kHz. ⁴ Used with TCPA300 amplifier. ⁵ Used with TCPA400 amplifier. ⁶ Not compatible with TPS2000 Series. ⁷ Requires TekVPI to TekProbe™ BNC adapter for use with MSO/DPO4000, DPO3000, and MSO/DPO2000 Series. ⁸ MSO/DPO4000, DPO3000, and MSO/DPO2000 Series only. ⁹ Requires TekVPI external power supply 119-7465-XX for use with MSO/DPO2000 Series.

Want advice on which oscilloscope will best fit your particular needs?
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