OSCILLOSCOPE

SELECTION GUIDE

Tektronix®

OSCILLOSCOPES

Tektronix offers oscilloscopes for many different applications and uses. To help you choose the right scope for your needs, the most common criteria for selecting a scope are listed below, along with helpful tips for determining your requirements.

For more information about oscilloscope specifications, download the XYZs of Oscilloscopes Primer.
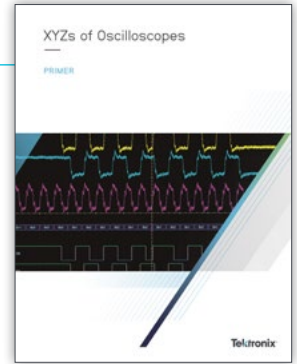
Choosing Your Oscilloscope

1 Bandwidth

All oscilloscopes have a low-pass frequency response that rolls off at higher frequencies. Oscilloscope bandwidth is specified as being the frequency at which a sinusoidal input signal is attenuated to 70.7% of the signal's true amplitude – the -3 dB point. Your oscilloscope must have sufficient bandwidth to capture all relevant frequency components of your signal. If you regularly work with digital signals, it may be easier to consider bandwidth by comparing signal and oscilloscope rise time specifications. Use an oscilloscope with a rise time specification five times faster than your signal rise time to keep error below 2%.

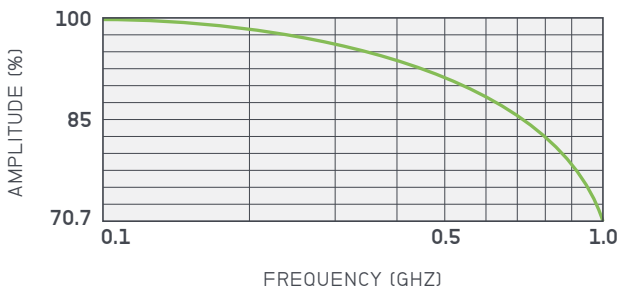**Rule: Bandwidth > 5 x Highest Signal Frequency**

FIG 01. Typical frequency response curve for a general-purpose oscilloscope

2 Input Channels

Having more input channels lets you see more of what's going on in your design. Today's oscilloscopes offer more than just 2 or 4 analog input channels.

- Newer scopes are available with up to 6 or 8 input channels
- Mixed signal oscilloscopes offer digital channels to expand visibility beyond the analog channels available on the instrument
- If you are working with RF signals, the Tektronix MDO Series of mixed domain oscilloscopes offers a built-in spectrum analyzer.

3 Sample Rate

The faster an oscilloscope samples, the greater the resolution and detail of the displayed waveform, and the less likely that critical information or events will be lost. Tektronix recommends at least 5X oversampling to ensure signal details are captured and to avoid aliasing.

Rule: Sample Rate > 5 x (Highest Frequency Component)

4 Record Length

Record length is the number of samples the oscilloscope can digitize and store in a single acquisition. Since an oscilloscope can store only a limited number of samples, the waveform duration – or length of "time" captured – will be inversely proportional to the oscilloscope's sample rate. A longer record length enables a longer time window to be captured with high resolution.

Rule: Captured Time = (Record Length) / (Sample Rate)

5 Vertical Resolution

The resolution of an oscilloscope's analog-to-digital converters determines its ability to capture and measure signal detail. 12-bit converters measures 4096 levels while 8-bit converters measure 256 levels.

6 Features and Analysis Capability

Tektronix oscilloscopes offer a range of features and analysis capabilities. When choosing your scope, you should review available triggers, waveform search tools, automated measurements, and analysis packages such as serial bus analysis, jitter and power analysis to ensure they meet your needs.

Introducing the 3 Series MDO and 4 Series MSO

These new oscilloscopes feature big, crisp 1920 x 1080 displays and the same built-for-touch user interface as the award-winning 5 Series MSO. The 4 Series offers up to 6 FlexChannel® inputs, while the 3 Series offers a choice of a 1 GHz or 3 GHz built-in spectrum analyzer. Now there's a next-generation scope for every engineer.

LEARN MORE

TYPES OF OSCILLOSCOPES

Mixed Signal Oscilloscopes – 70 MHz to 8 GHz

The engineer's choice for design and debug. They combine traditional oscilloscope input channels with digital input channels, long record length with powerful search features, and protocol support for serial buses.

Mixed Domain Oscilloscopes – 100 MHz to 1 GHz

For design and debug work, they offer the same capabilities as mixed signal oscilloscopes, but also offer a built-in spectrum analyzer, adding RF debugging to the analog/digital capabilities.

Advanced Signal Analysis Oscilloscopes – 350 MHz to 70 GHz

The emphasis is on analysis. They provide high acquisition performance and run Windows, thus supporting a wide range of analysis software. MSO versions include digital channels. They can be equipped for serial data analysis, jitter analysis, standards testing, and serial decoding capability.

High-Speed Digitizers DC to 8 GHz

When performance, channel density and cost-per-channel are critical, these low-profile instruments are a great fit. They offer the same performance as bench instruments in a rack-friendly form factor.

Sampling Oscilloscopes – DC to 80 GHz

For very high speed signal analysis, both electrical and optical, our sampling oscilloscopes support jitter and noise analysis with ultra-low jitter acquisitions. They also perform TDR and S-parameter measurements.

Basic Oscilloscopes – 30 MHz to 200 MHz

For basic signal visualization and more, these instruments are solid performers with ample supporting materials, and generous warranties. Special features for education.

Battery Powered Oscilloscopes with Isolated Channels – 100 MHz to 200 MHz

Safely and easily make 4-channel floating measurements, including 3-phase power measurements.

TDS Series Oscilloscopes – 50 MHz to 500 MHz

These capable industry-favorites have a large installed base, and thousands of companies rely on them as part of their test and measurement fleets. They continue to be fully supported.

MIXED SIGNAL AND MIXED DOMAIN OSCILLOSCOPES

	MSO/DPO2000B
Additional Resources	
Channels	2, 4 analog channels; 16 digital channels (MSO2000B)
Bandwidth	70 MHz to 200 MHz
Sample Rate	1 GS/s (analog); 1 GS/s (digital, only 1 pod); 500 MS/s (digital, both pods)
Max Record Length	1 Mpoints
Trigger Types	Edge, Logic, Pulse Width, Runt, Setup and Hold, Rise/FallTime, Video, I²C*, SPI*, CAN*, LIN*, RS-232/422/485/UART*, Parallel (MSO2000B) *****Optional
Optional Serial Bus Decode and Analysis	DPO2AUTO: CAN and LIN DPO2COMP: RS-232/422/485/UART DPO2EMBD: I²C, SPI DPO2BND: Includes DPO2AUTO, DPO2COMP, DPO2EMBD
Connectivity	USB Host, USB Device, GPIB*, Optional DPO2CONN Module: LAN (10/100 Base-T Ethernet) and Video Out *****Optional
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors: Arithmetic Waveform Math, FFT
Software	PC communications software: OpenChoice® Desktop
Upgrade	Add serial bus triggering and decode

MIXED SIGNAL AND MIXED DOMAIN OSCILLOSCOPES

	3 SERIES MDO	4 SERIES MSO
Additional Resources		
Channels	2, 4 analog channels; 16 digital channels (MSO option) 1 spectrum analyzer (SA1: 1 GHz or SA3: 3 GHz options) 1 Arbitrary/Function Generator (AFG option)	4 or 6 FlexChannel® inputs 8 digital channels per FlexChannel with TLP058 logic probe Spectral analysis on any channel (SV-BAS option) 1 Arbitrary/Function Generator (with 4-AFG option)
Bandwidth	100 MHz to 1 GHz	200 MHz to 1.5 GHz
Sample Rate	2.5 GS/s or 5 GS/s (analog); 8.25 GS/s with MagniVu™ (digital)	6.25 GS/s / channel (analog); 6.25 GS/s / channel (digital)
Max Record Length	10 Mpoints	Up to 62.5 Mpoints
Trigger Types	Edge, Sequence, Logic, Pulse Width, Runt, Timeout, Setup and Hold, Rise/Fall Time, Video, I²C*, SPI*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I2S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, USB2.0*, Parallel* *Optional	Edge, Sequence, Logic, Pulse Width, Runt, Visual Trigger, Timeout, Window, Setup and Hold, Rise/Fall Time, I²C*, SPI*, USB*, Ethernet*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I2S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, SENT*, SPMI*, Parallel *Optional
Optional Serial Bus Decode and Analysis	3-BND: Adds all serial options and power analysis 3-SRAERO: MIL-STD-1553, ARINC 429 3-SRAUDIO: I2S, LJ, RJ, TDM 3-SRAUTO: CAN, CAN FD, LIN, FlexRay 3-SRCOMP: RS-232/422/485/UART 3-SREMBD: I²C, SPI 3-SRUSB2: USB 2.0	4-SRAERO: MIL-STD-1553, ARINC 429 4-SRAUDIO: I2S, LJ, RJ, TDM 4-SRAUTO: CAN, CAN FD, LIN, FlexRay 4-SRAUTOSEN: SENT 4-SRCOMP: RS-232/422/485/UART 4-SREMBD: I²C, SPI 4-SRENET: Ethernet 4-SRI3C: MIPI I3C (decode and search) 4-SRNRZ: NRZ (decode and search) 4-SRPM: SPMI 4-SRSPACEWIRE: SpaceWire (decode only) 4-SRUSB2: USB 2.0
Connectivity	USB Host (x3), USB 2.0 Device, LAN (10/100 BASE-T Ethernet, 1.4 LXI Core 2011 Compliant), HDMI	USB Host (x5), USB 2.0 Device, LAN (10/100/1000 Base-T Ethernet, 1.5 LXI Core 2016 Compliant), HDMI
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics Optional: 3-PWR: Power Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics Optional: 4-MTM: Mask testing 4-PWR-BAS: Power analysis 4-SV-BAS: Spectrum View spectrum analysis 4-SV-RFVT: Spectrum View RF versus Time Analysis (requires 4-SV-BAS) 4-SV-BW-1: Increase Spectrum View capture bandwidth to 500 MHz (requires 4-SV-BAS)
Software	Optional: TekScope Anywhere™	Optional: TekScope Anywhere™
Upgrade	• Increase bandwidth • Add Arbitrary/Function generator • Add 16 digital channels • Add 1 GHz or 3 GHz spectrum analyzer • Add serial bus triggering and decode • Add power measurements	• Increase bandwidth • Add serial bus triggering and decode • Add Arbitrary/Function generator • Add 8 digital channels with each TLP058 logic probe • Extend record length, up to 62.5 Mpoints • Add power analysis and spectrum view

MIXED SIGNAL AND MIXED DOMAIN OSCILLOSCOPES

	MDO3000	MDO4000C
Additional Resources		
Channels	2, 4 analog channels; 16 digital channels (MDO3MSO option) 1 spectrum analyzer (Standard: 9 kHz to analog bandwidth; Optional: 9 kHz to 3 GHz) 1 Arbitrary/Function Generator (MDO3AFG option)	4 analog channels; 16 digital channels (with MDO4MSO option); 1 spectrum analyzer input (SA3: 3 GHz or SA6: 6 GHz options); 1 Arbitrary/Function Generator (with MDO4AFG option)
Bandwidth	100 MHz to 1 GHz	200 MHz to 1 GHz
Sample Rate	2.5 GS/s to 5 GS/s (analog); 121.2 ps (8.25 GS/s) MagniVu™ (digital)	2.5 GS/s to 5 GS/s (analog); 60.6 ps (16.5 GS/s) MagniVu™ (digital)
Max Record Length	10 Mpoints	20 Mpoints
Trigger Types	Edge, Sequence, Logic, Pulse Width, Runt, Timeout, Setup and Hold, Rise/Fall Time, Video, Extended Video, I²C*, SPI*, CAN FD*, CAN*, LIN*, FlexRay*, RS-232/422/485/UART*, I²S/LJ/RJ/TDM*, MIL-STD-1553*, ARINC 429, USB 2.0*, Parallel (with MDO3MSO option) *Optional	RF Power Level**, Edge, Sequence, Logic, Pulse Width, Runt, Timeout, Setup and Hold, Rise/Fall Time, Video, Extended Video*, I²C*, SPI*, USB*, Ethernet*, CAN FD*, CAN*, LIN*, FlexRay*, RS-232/422/485/UART*, I²S/LJ/RJ/TDM*, MIL-STD-1553*, ARINC 429, Parallel* **With optional MDO4TRIG module, RF power level can be used as source for Pulse Width, Timeout, Runt, Logic, Sequence
Optional Serial Bus Decode and Analysis	MDO3AERO: ARINC 429, MIL-STD-1553 MDO3AUDIO: I²S, LJ, RJ, TDM MDO3AUTO: CAN FD, CAN and LIN MDO3COMP: RS-232/422/485/UART MDO3EMBD: I²C, SPI MDO3FLEX: FlexRay MDO3USB: USB2.0 MDO3BND: Enables MDO3AERO, MDO3AUDIO, MDO3AUTO, MDO3COMP, MDO3EMBD, MDO3FLEX, MDO3LMT, MDO3PWR, MDO3USB	DPO4AERO: ARINC 429, MIL-STD-1553 DPO4AUDIO: I²S, LJ, RJ, TDM DPO4AUTO: CAN FD, CAN and LIN DPO4AUTOMAX: CAN FD, CAN, LIN and FlexRay DPO4COMP: RS-232/422/485/UART DPO4EMBD: I²C, SPI DPO4ENET: 10Base-T, 100Base-TX Ethernet DPO4USB: USB DPO4BND: Enables DPO4AERO, DPO4AUDIO, DPO4AUTO, DPO4COMP, DPO4EMBD, DPO4ENET, DPO4LMT, DPO4PWR, DPO4USB, DPO4VID
Connectivity	USB Host (x2), USB Device, LAN (10/100 Base-T Ethernet, LXI Core 2011 Compliant), Video Out, GPIB* *Optional	USB Host (x4), USB Device, LAN (10/100/1000 Base-T Ethernet, LXI Core 2011 Compliant), Video Out, GPIB* *Optional
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Advanced Math, FFT, Measurement Statistics, Waveform Histograms Optional: MDO3PWR: Power Analysis MDO3LMT: Limit/mask test MDO3BND: Enables MDO3AERO, MDO3AUDIO, MDO3AUTO, MDO3COMP, MDO3EMBD, MDO3FLEX, MDO3LMT, MDO3PWR, MDO3USB	Automated Measurements, Waveform and Screen Cursors, Spectrum Math, FFT, Advanced Math, Measurement Statistics, Waveform Histograms Optional: DPO4LMT: Limit and Mask Testing MDO4TRIG: Adv. RF Power Level Trigger DPO4PWR: Power Analysis DPO4VID: HDTV and Custom Triggering DPO4BND: Enables DPO4AERO, DPO4AUDIO, DPO4AUTO, DPO4COMP, DPO4EMBD, DPO4ENET, DPO4LMT, DPO4PWR, DPO4USB, DPO4VID
Software	PC Communications Software: OpenChoice® Desktop	PC Communications Software: OpenChoice® Desktop Vector Signal Analysis Software: SignalVu-PC
Upgrade	• Increase bandwidth • Add Arbitrary/Function generator • Add 16 digital channels • Increase spectrum analyzer maximum frequency to 3 GHz • Add measurements and analysis (power, limit/mask) • Add serial bus triggering and decode	• Increase bandwidth • Add Arbitrary/Function Generator • Add 16 digital channels • Add or upgrade spectrum analyzer channel • Add measurements & analysis (power, limit/mask, video, RF trigger) • Add serial bus triggering and decode

ADVANCED SIGNAL ANALYSIS OSCILLOSCOPES

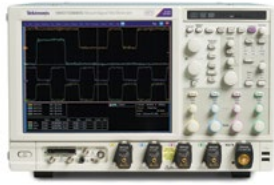|	5 SERIES MSO	6 SERIES MSO
Additional Resources		
Channels	4, 6, or 8 FlexChannel® inputs; 8 digital channels per FlexChannel input with TLP058 logic probe; Spectral analysis on any channel 1 Arbitrary/Function Generator (with 5-AFG option)	4 FlexChannel® inputs; 8 digital channels per FlexChannel input with TLP058 logic probe; Spectral analysis on any channel 1 Arbitrary/Function Generator (with 6-AFG option)
Bandwidth	350 MHz to 2 GHz	1 GHz to 8 GHz
Sample Rate	6.25 GS/s (analog); 6.25 GS/s (digital)	25 GS/s / channel (analog); 25 GS/s / channel (digital)
Max Record Length	Up to 125 Mpoints	Up to 250 Mpoints
Trigger Types	Edge, Sequence, Logic, Pulse Width, Runt, Visual Trigger, Timeout, Window, Setup and Hold, Rise/Fall Time, I^2C^*, SPI*, USB*, Ethernet*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I^2S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, SENT*, SPMI*, Parallel *Optional	Edge, Sequence, Logic, Pulse Width, Runt, Visual Trigger, Timeout, Window, Setup and Hold, Rise/Fall Time, I^2C^*, SPI*, USB*, Ethernet*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I^2S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, SENT*, SPMI*, Parallel *Optional
Optional Serial Bus Decode and Analysis	5-SRAERO: MIL-STD-1553, ARINC 429; 5-SRAUDIO: I^2S, LJ, RJ, TDM; 5-SRAUTO: CAN, CAN FD, LIN, FlexRay; 5-SR8B10B: 8b10b; 5-SRAUTOEN1: 100BASE-T1; 5-SRAUTOSEN: SENT; 5-SRCOMP: RS-232/422/485/UART; 5-SREMBD: I^2C, SPI; 5-SRENET: Ethernet; 5-SRI3C: MIPI I3C; 5-SRNRZ: NRZ; 5-SRPM: SPMI; 5-SRSPACEWIRE: Spacewire; 5-SRUSB2: USB 2.0	6-SRAERO: MIL-STD-1553, ARINC 429; 6-SRAUDIO: I^2S, LJ, RJ, TDM; 6-SRAUTO: CAN, CAN FD, LIN, FlexRay; 6-SR8B10B: 8b10b; 6-SRAUTOEN1: 100BASE-T1 automotive Ethernet; 6-SRAUTOSEN: SENT; 6-SRCOMP: RS-232/422/485/UART; 6-SREMBD: I^2C, SPI; 6-SRENET: 10/100 Ethernet; 6-SRI3C: MIPI I3C; 6-SRNRZ: NRZ; 6-SRPM: SPMI; 6-SRSPACEWIRE: Spacewire; 6-SRUSB2: USB 2.0
Connectivity	USB Host (x7), USB 3.0 Device, LAN (10/100/1000 Base-T Ethernet, 1.4 LXI Core 2011 Compliant), Display Port, DVI-D, Video Out	USB Host (x7), USB 3.0 Device, LAN (10/100/1000Base-T Ethernet, 1.4 LXI Core 2011 Compliant), Display Port, DVI-D, Video Out
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Spectrum View spectrum analysis Optional: 5-AUTOEN-BND: Automotive Ethernet Compliance, Signal Separation, PAM3 Analysis, 100Base-T1 Decode; 5-AUTOEN-SS: Automotive Ethernet Signal Separation; 5-CMAUTOEN: 100/1000BASE-T1 Automotive Ethernet Compliance; 5-CMENET: 10/100/1000BASE-T Ethernet Compliance; 5-CMINDUEN10: 10Base-T1L Long Reach Industrial Ethernet Compliance; 5-CMUSB2: USB 2.0 Compliance; 5-DBLVDS: LVDS test solution; 5-DJA: Advanced Jitter and Eye Diagram Analysis; 5-DPM: Digital Power Management Analysis; 5-DPMBAS: Basic Digital Power Management Analysis; 5-MTM: Mask testing; 5-PAM3: PAM3 Analysis; 5-PWR: Advanced Power Measurements; 5-PWRFRA: Frequency Response Analysis; 5-SV-BW-1: Increase Spectrum View Capture Bandwidth to 500 MHz; 5-SV-RFVT: Spectrum View RF versus Time Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Spectrum View spectrum analysis Optional: 6-AUTOEN-BND: Automotive Ethernet compliance, Signal Separation, PAM3 Analysis, 100Base-T1 decode; 6-AUTOEN-SS: Automotive Ethernet Signal Separation; 6-CMAUTOEN10: 10Base-T1S Short Reach Automotive Ethernet Compliance; 6-CMINDUEN10: 10Base-T1L Long Reach Industrial Ethernet Compliance; 6-CMNBASET: 2.5 and 5 GBASE-T Ethernet Compliance; 6-CMXGBT: 10 GBASE-T Ethernet Compliance; 6-CMENET: 10/100/1000BASE-T Ethernet Compliance; 6-CMDPHY: MIPI D-PHY 1.2 Compliance; 6-CMAUTOEN: 100/1000BASE-T1 Automotive Ethernet Compliance; 6-CMUSB2: USB 2.0 Compliance; 6-CMDDR3: DDR3/LPDDR3 Compliance; 6-DBLVDS: LVDS test solution; 6-DJA: Advanced Jitter and Eye Diagram Analysis; 6-DPM: Digital Power Management Analysis; 6-PWR: Advanced Power Measurements; 6-DBDDR3: DDR3/LPDDR3 Memory Measurements; 6-MTM: Mask testing; 6-PAM3: PAM3 Analysis; 6-PWRFRA: Frequency Response Analysis; 6-SV-BW-1: Increase Spectrum View Capture Bandwidth to 2 GHz; 6-SV-RFVT: Spectrum View RF versus Time Analysis
Software	Optional: TekScope Anywhere™	Optional: TekScope Anywhere™
Upgrade	• Add serial bus triggering and decode • Add serial bus compliance testing • Add digital channels with each TLP058 logic probe • Add extended record length, up to 125 Mpoints • Add advanced measurements and analysis (power, jitter)	• Add serial bus triggering and decode • Add serial bus compliance testing • Add memory debug or compliance testing • Add digital channels with each TLP058 logic probe • Add extended record length, up to 250 Mpoints • Add advanced measurements and analysis (power, jitter)

ADVANCED SIGNAL ANALYSIS OSCILLOSCOPES

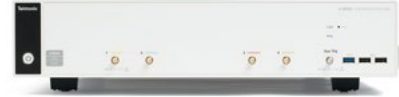|	MSO/DPO5000B
Additional Resources	
Channels	4 analog channels; 16 digital channels (MSO5000B)
Bandwidth	350 MHz to 2 GHz
Sample Rate	5 GS/s to 10 GS/s (analog); 60.6 ps (16.5 GS/s) MagniVu™ (digital)
Max Record Length	Up to 250 Mpoints
Trigger Types	Edge, Sequence, Logic, Pulse Width, Glitch, Runt, Timeout, Transition, Setup and Hold, Rise/Fall Time, Video, I²C*, SPI*, USB (Low, Full, High)*, RS-232/422/485/UART*, USB*, Ethernet*, CAN*, LIN*, FlexRay*, MIL-STD-1553*, Parallel (MSO5000B), Visual Trigger *Optional
Optional Serial Bus Decode and Analysis	SR-AERO: MIL-STD-1553 SR-AUTO: CAN/LIN/FlexRay SR-COMP: RS-232/422/485/UART SR-DPHY: MIPI D-PHY SR-EMBD: I²C, SPI SR-ENET: 10/100Base-T Ethernet SR-USB: USB
Connectivity	USB Host (x6), USB Device, LAN (10/100/1000 Base-T Ethernet, LXI Class C Compliant), Video Out, GPIB* *Optional
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic and Advanced Waveform Math, FFT, Measurement Statistics, Waveform Histograms, Waveform Limit Testing Optional: BRR: BroadR-Reach Compliance Test; DDRA: DDR Memory Bus Analysis; DJA: DPOJET Advanced Jitter and Eye Diagram Analysis; ET3: Ethernet Compliance Test Solution; MTM: Mask Testing; PWR: Power Analysis; SignalVu Vector Signal Analysis; USB2: USB Compliance Test Solution; MOST: MOST 50/150 Compliance Test Solution; USBPWR: USB Power Adapter/ EPS Compliance Automated Test Solution
Software	Optional: TekScope Anywhere™
Upgrade	• Add 16 digital channels • Add extended record length, up to 250 Mpoints • Add serial bus compliance testing • Add measurements and analysis (power, jitter, mask, RF) • Add serial bus triggering and decode

ADVANCED SIGNAL ANALYSIS OSCILLOSCOPES

	MSO/DPO70000C/DX	DPO70000SX
Additional Resources		
Channels	4 analog channels; 16 digital channels (MSO70000)	2 or 4 analog channels
Bandwidth	4 GHz to 33 GHz Analog	13 GHz to 70 GHz
Sample Rate	25 GS/s to 100 GS/s (analog); 80 ps (12.5 GS/s) (digital)	50 GS/s to 200 GS/s
Max Record Length	Up to 1 Gpoints	Up to 1 Gpoints
Trigger Types	Pinpoint™ Triggering, Edge, Glitch, Pulse Width, Runt, Time-out, Transition, Setup/Hold, Pattern, State, Window, Trigger Delay (by Time and by Event), I²C*, SPI*, USB (Low, Full)*, RS-232/422/485/UART*, Serial Pattern*, Visual Trigger* *Optional	Pinpoint™ Triggering, Edge, Glitch, Pulse Width, Runt, Time-out, Transition, Setup/Hold, Pattern, State, Window, Trigger Delay (by Time and by Event), Visual Trigger* *Optional
Optional Serial Bus Decode and Analysis	SR-AERO: MIL-STD-1553; SR-AUTO: CAN/LIN/FlexRay; SR-COMP: RS-232/422/485/UART; SR-DPHY: MIPI D-PHY; SR-EMBD: I²C, SPI; SR-ENET: 10/100Base-T Ethernet SR-PCIE: PCI Express; SR-USB: USB; SR-810B: 8b/10b; 10G-KR: 10GBASE-KR/KR4	SR-COMP: RS-232/422/485/UART; SR-EMBD: I²C, SPI; SR-ENET: 10/100Base-T Ethernet SR-PCIE: PCI Express; SR-USB: USB; SR-810B: 8b/10b
Connectivity	USB Host (x5), LAN (10/100/1000 Base-T Ethernet, LXI Class C Compliant), GPIB, eSATA, DVI, VGA	USB2.0 Host (4 on front)/3.0 Host (4 on rear), USB Device, LAN (10/100/1000 Base-T Ethernet, LXI Class C Compliant), DVI, VGA, DisplayPort (2)
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic and Advanced Waveform Math, FFT, Measurement Statistics, Waveform Histograms Optional: BRR: BroadR-Reach Compliance Test; DDR Memory Bus Analysis; DPOJET Advanced Jitter and Eye Diagram Analysis; Ethernet Compliance; Waveform Limit Testing; Mask Testing; Power Analysis; USB2 and USB3 Compliance and Analysis; USB Power Adapter/ EPS Compliance Automated Test Solution; MOST 50/150 Compliance Test; SignalVu Vector Signal Analysis; HDMI Compliance Test; HSIC Electrical Validation; MIPI D-PHY and M-PHY Characterization and Analysis; SAS Testing; SFP+ Compliance and Debug; Serial Data Link Analysis; 10G-KR Compliance and Debug; PCIe Compliance and Debug; Thunderbolt Characterization, Compliance and Debug; UHS Measurements; PAM4 Transmitter Analysis Software; SignalCorrect Cable, Channel and Probe Compensation Software	Automated Measurements, Waveform and Screen Cursors, Arithmetic and Advanced Waveform Math, FFT, Measurement Statistics, Waveform Histograms **Optional:** DPOJET Noise, Jitter and Eye Analysis Tools; Frequency Counter-Timer; PAM4 Transmitter Analysis Software; Serial Data Link Analysis; 10G/40G/100G KR4/CR4 Transmitter Compliance; DDR Memory Bus Analysis; DisplayPort 1.2/1.4 Test Software; MIPI D-PHY Transmitter Debug and Compliance Test Solution; EDP Compliance Test Package; Ethernet Compliance Testing; Fiber Channel Essentials; HDMI 2.0 Analysis and Compliance; High Speed Serial Link Training Analysis; HDMI Compliance Testing; MIPI M-PHY Debug and Compliance Test; NBASE-T TekExpress Conformance and Debug Software; PCI Express Gen1/2/3/4 TekExpress Compliance/ Debug; Power Measurement and Analysis Software; SAS-3 Tx Compliance Test; SATA PHY Transmitter Test; SignalCorrect Cable, Channel, and Probe Compensation Software; SFP+ Compliance and Debug Solution; Embedded Serial Triggering and Analysis (I²C, SPI); USB 2.0/3.0/3.1 Automated Compliance Test; SignalVu Vector Signal Analysis
Software	Optional: TekScope Anywhere™	Optional: TekScope Anywhere™
Upgrade	• Increase bandwidth • Add 16 digital channels • Upgrade older platforms to the latest platforms • Add extended record length, up to 1 Gpoints • Add serial bus compliance testing • Add measurements and analysis (jitter, DDR, mask, RF) • Add serial bus triggering and decode	• Increase bandwidth • Upgrade older platforms to the latest platforms • Add extended record length, up to 1 G points • Add measurements and analysis (jitter, mask, RF)

HIGH-SPEED DIGITIZERS

	5 SERIES MSO LOW PROFILE	6 SERIES LOW PROFILE DIGITIZER
Additional Resources		
Channels	8 FlexChannel™ inputs; 8 digital channels per FlexChannel input with TLP058 logic probe; Spectral analysis on any channel; 1 Arbitrary/Function Generator (5-AFG option); Aux trigger	4 SMA inputs for Analog and/or Spectral Analysis capturing 1 Arbitrary/Function Generator (6-AFG option); Aux trigger
Bandwidth	1 GHz	1 GHz to 8 GHz on all channels
Sample Rate	6.25 GS/s (analog); 6.25 GS/s (digital)	25 GS/s on all channels
Max Record Length	125 Mpoints	Up to 250 Mpoints
Trigger Types	Edge, Sequence, Logic, Pulse Width, Runt, Visual Trigger, Timeout, Window, Setup and Hold, Rise/Fall Time, I²C*, SPI*, USB*, Ethernet*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I²S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, SENT*, SPMI*, Parallel *Optional	Edge, Sequence, Logic, Pulse Width, Runt, Visual Trigger, Timeout, Window, Setup and Hold, Rise/Fall Time, I²C*, SPI*, USB*, Ethernet*, CAN*, CAN FD*, LIN*, FlexRay*, RS-232/422/485/UART*, I²S/LJ/RJ/ TDM*, MIL-STD-1553*, ARINC 429*, SENT*, SPMI*, Parallel *Optional
Optional Serial Bus Decode and Analysis	5-SRAERO: MIL-STD-1553, ARINC 429 5-SRAUDIO: I²S, LJ, RJ, TDM 5-SRAUTO: CAN, CAN FD, LIN, FlexRay 5-SRAUTOSEN: SENT 5-SRAUTOEN1: 100Base-T1 5-SRCOMP: RS-232/422/485/UART 5-SREMBD: I²C, SPI 5-SRI3C: MIPI I3C 5-SRENET: Ethernet 5-SRPM: SPMI 5-SRSPACEWIRE: Spacewire 5-SRUSB2: USB 2.0	6-SRAERO: MIL-STD-1553, ARINC 429 6-SRAUDIO: I²S, LJ, RJ, TDM 6-SRAUTO: CAN, CAN FD, LIN, FlexRay 6-SRAUTOSEN: SENT 6-SRAUTOEN1: 100Base-T1 6-SRCOMP: RS-232/422/485/UART 6-SREMBD: I²C, SPI 6-SRI3C: MIPI I3C 6-SRENET: Ethernet 6-SRPM: SPMI 6-SRSPACEWIRE: Spacewire 6-SRUSB2: USB 2.0
Connectivity	USB Host (x6), USB 3.0 Device, LAN (10/100/1000 Base-T Ethernet, DisplayPort, DVI-D, Video Out	USB Host (x7), USB 3.0 Device, LAN (10/100/1000 Base-T Ethernet, 1.5 LXI Core Compliant), DisplayPort, DVI-D, Video Out
Waveform Math and Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Spectrum View analysis Optional: 5-SEC: Security for classified locations 5-DJA: Advanced Jitter and Eye Diagram Analysis; 5-PWR: Advanced Power Measurements 5-AUTOEN-SS: Automotive Ethernet Signal Separation; 5-DBLVDS: LVDS test solution; 5-DPM: Digital Power Management Analysis 5-PWRFRA: Frequency Response Analysis 5-PAM3: PAM3 Analysis 5-SV-BW-1: Increase Spectrum View Capture Bandwidth to 500 MHz 5-SV-RFVT: Spectrum View RF versus Time Analysis	Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Spectrum View analysis Optional: 6-SEC: Security for classified locations 6-DJA: Advanced Jitter and Eye Diagram Analysis; 5-PWR: Advanced Power Measurements 6-AUTOEN-SS: Automotive Ethernet Signal Separation; 6-DBLVDS: LVDS test solution; 6-DPM: Digital Power Management Analysis 6-PWRFRA: Frequency Response Analysis 6-PAM3: PAM3 Analysis 6-SV-BW-1: Increase Spectrum View Capture Bandwidth to 2 GHz 6-SV-RFVT: Spectrum View RF versus Time Analysis
Upgrade	• Add serial bus triggering and decode • Add digital channels with each TLP058 logic probe • Add advanced measurements and analysis	• Add RF analysis and offloading capability • Add advanced measurements and analysis • Add extended record length, up to 250 Mpoints • Add more bandwidth as needed

SAMPLING OSCILLOSCOPES

	DSA8300
Additional Resources	
Channels	Six modules support up to 8 single-ended or 4 differential channels and/or 2 optical channels
Bandwidth	Up to 70+ GHz Electrical bandwidth and 80+ Optical bandwidth modules available with intrinsic jitter as low as <100 fs RMS
Sample Rate	300 ks/s Maximum sample rate
Max Record Length	50 to 16,000 per channel native record length; with up to 1M points when using available IConnect Signal Integrity Software, 10M samples (100k unit intervals, 100 samples per unit interval) when equipped with available 80SJNB Jitter, Noise and BER Analysis software
Trigger Types	Clock Input/Prescale Trigger, TDR clock (generated internally), Clock Recovery from Optical Sampling modules and Electrical Clock Recovery modules, and Phase Reference time base supports acquisitions Free Run mode and Trigger Direct Input for <100 fs RMS intrinsic jitter typical
Optional Serial Bus Decode and Analysis	80SJNB Jitter, Noise, BER, Serial Data Link and PAM4 Analysis Software; IConnect Signal Integrity Software; 100GBASE-SR4 Transmitter and Dispersion Eye Closure (TDEC) Automation Test Solution
Connectivity	3 USB 2.0 Port(s) connector on the front panel, 4 USB 2.0 Ports on the rear panel; LAN PORT, RJ-45 connector, supports 10BASE-T, 100BASE-T, 1000BASE-T on rear panel; 1 Serial Port, DB-9 COM1, COM2 ports; 1 DVI IEEE488.2 connector on rear panel; 1 DVI connector, female on rear panel, DVI to VGA 15-pin D-sub connector adapter provided; PS2 Serial Ports Mouse and keyboard inputs; Audio Ports 1/8 in. microphone input and line output
Waveform Math and Analysis	Automated measurements include RZ, NRZ, and pulse signal types, and the following measurement types, plus 8 math waveforms using the following math functions: Add, Subtract, Multiply, Divide, Average, Differentiate, Exponential, Integrate, Natural Log, Log, Magnitude, Min, Max, Square Root, and Filter. In addition, measurement values can be utilized as scalars in math waveform definitions; Mask support for many applications, standard masks are available as predefined, built-in masks; Automated Masked Margin based on Mask Hit Ratio as required by many standards.
Software	Windows® 7 Ultimate (32-bit) Operating System; IConnect Signal Integrity Software for frequency domain analysis, S-parameter measurements, and impedance characterization 80SJNB Jitter, Noise, BER, and Serial Link analysis including Cross-Talk aware TJ (BUJ and PAM4 Analysis); 80SJARB Jitter Analysis of Arbitrary Data with J2-J9 measurements, and support for pattern lengths to PRBS31; 100GBASE-SR4 (IEEE 802.3bm) optical transmitter characterization measurements, including TDEC, signaling rate, Average Launch Power, OMA, ER, Transmitter Eye Mask
Upgrade	• Modular architecture lets you add channels or bandwidth • Add TDR, optical and electrical standards support • Add advanced analysis, compliance test, frequency domain analysis software • Add clock recovery trigger pickoff (CRTP) to select optical modules • Enhance system jitter floor performance to <100 fs RMS

BASIC OSCILLOSCOPES

	TBS1000	TBS1000B/ TBS1000B-EDU	TBS2000
Additional Resources			
Channels	4	2	2, 4
Bandwidth	60 MHz to 150 MHz	70 MHz to 200 MHz	70 MHz, 100 MHz
Sample Rate	1 GS/s	1 GS/s to 2 GS/s	1 GS/s
Max Record Length	2.5 k points	2.5 k points	20 M points
Trigger Types	Edge, Pulse (width), Video	Edge, Pulse (width), Video	Edge, Pulse (width), Runt
Optional Serial Bus Decode and Analysis	—	—	—
Connectivity	USB Host, USB Device, **Optional:** GPIB	USB Host, USB Device, **Optional:** GPIB	USB Host, Wi-Fi adapter support, 10/100 Base-T Ethernet port
Waveform Math and Analysis	Automated Measurements, Arithmetic Waveform Math, FFT, Waveform Limit Testing, Automated Datalogging	Automated Measurements, Arithmetic Waveform Math, FFT, Dual-Channel Frequency Counter, Waveform Limit Testing*, TrendPlot™ function*, Automated Datalogging* * Not available on EDU models	Automated Measurements, Arithmetic Waveform Math, FFT, Frequency Counter
Software	PC Communications Software: OpenChoice® Desktop, Educator Classroom and Lab Resource CD	PC Communications Software: OpenChoice® Desktop Software, PC Courseware Editor Tool, Product Documentation and Lab Resource CD	PC Communications Software: OpenChoice® Desktop, PC Courseware Editor
Battery Operation	—	—	—

Teaching Oscilloscopes

TBS2000 and TBS1000B-EDU Oscilloscopes have unique features designed to meet the needs of schools and universities. They use an innovative courseware system that enables educators to build teaching materials into the oscilloscope. Along with a powerful PC Courseware Editor Tool and a courseware website, these oscilloscopes support a complete education ecosystem that makes it easier to teach engineering and easier to learn.

LEARN MORE

BATTERY POWERED OSCILLOSCOPES WITH ISOLATED CHANNELS AND TDS SERIES OSCILLOSCOPES

	TPS2000B	TDS2000C	TDS3000C
Additional Resources			
Channels	2, 4 (isolated)	2, 4	2, 4
Bandwidth	100 MHz to 200 MHz	100 MHz to 200 MHz	100 MHz to 500 MHz
Sample Rate	1 GS/s to 2 GS/s	2 GS/s	1.25 GS/s to 5 GS/s
Max Record Length	2.5 k points	2.5 k points	10 k points
Trigger Types	Edge, Pulse (width), Video	Edge, Pulse (width), Video	Edge, Logic (Pattern, State), Pulse (Glitch, Width, Runt, Slew Rate), Video, **Optional:** Extended Video, Comm
Optional Serial Bus Decode and Analysis	–	–	–
Connectivity	RS-232 (includes RS-232-to-USB Host Serial Cable), Centronics, CompactFlash	USB Host, USB Device, **Optional:** GPIB	USB Host, LAN (10Base-T Ethernet) **Optional:** TDS3GV Module: GPIB, RS-232, and Video Out
Waveform Math and Analysis	Automated Measurements, Arithmetic Waveform Math, FFT Optional: TPS2PWR1: Power Measurement and Analysis	Automated Measurements, Arithmetic Waveform Math, FFT, Waveform Limit Testing, Automated Datalogging	Automated Measurements, Arithmetic Waveform Math, FFT **Optional:** TDS3LIM: Limit Testing, TDS3TMT: Telecom Mask Testing, TDS3VID: HDTV & Custom Video Triggering
Software	PC Communications Software: OpenChoice® Desktop	PC Communications Software: OpenChoice® Desktop	PC Communications Software: OpenChoice® Desktop
Battery Operation	One TPSBAT Battery Pack Included Standard	–	Requires Optional TDS3BATC Battery Pack

OSCILLOSCOPE PROBES AND ACCESSORIES

Tektronix probes and accessories are perfectly matched to our industry-leading oscilloscopes. With over 100 choices available, you will find the probe you need. Need help finding the right probe for your application? The online Tektronix Probe Selector Tool will guide you through a few easy questions to match your need to the right probe.

LEARN MORE ON THE GO!

Isolated Probes

- High-resolution measurements in the presence of common mode signals or noise
- Up to 1 GHz bandwidth
- Complete galvanic isolation
- 1 Million to 1 (120 dB) of common mode rejection at 100 MHz

tek.com/isolated-measurement-systems

Power Rail Probes

- Bandwidth up to 4 GHz
- Offset range up to +/-60 V
- Lowest noise
- Flexible connectivity

tek.com/power-rail-probes

High Voltage Differential Probes

- Dynamic range to ± 6000 V
- Bandwidth up to 200 MHz
- Most extensive set of probe accessories

tek.com/differential-probe-high-voltage

Current Probes

- Easy to use and accurate AC/DC current measurements
- DC up to 2 GHz
- Amplitude measurements from 1 mA to 2,000 A
- Split core and solid core construction

tek.com/current-probe

Low Voltage Differential Probes

- Bandwidth up to 33 GHz
- Easily measure differential signals
- Low input capacitance: down to < 0.3 pF
- High common mode rejection ratio (CMRR)
- Wide range of probe tips for easier circuit access

tek.com/differential-probe-low-voltage

Low Voltage Single-ended Probes

- Bandwidth up to 4 GHz
- True signal reproduction and fidelity
- Low input capacitance: down to < 0.8 pF
- Small, compact probe heads for probing small geometry circuit elements

tek.com/low-voltage-probe-single-ended

Passive Probes

- Best-in-class bandwidth up to 1 GHz
- Best-in-class input capacitance as low as 3.9 pF, which minimizes probe loading effects
- Rugged and reliable
- High voltage versions with dynamic range up to 2500 V

tek.com/passive-probe

tek.com/high-voltage-probe-single-ended

Optical

- Broad Wavelength Response: 500 to 950 nm or 1100 to 1700 nm
- High-bandwidth DC up to 1.2 GHz
- High Gain 1 V/mW
- Low Noise <11 pW/√Hz
- DPO7OE1/DPO7OE2 high bandwidth optical probes - DC to 33GHz/59GHz

tek.com/optical-probe

tek.com/high-bandwidth-optical-probe

SERIAL SUPPORT BY OSCILLOSCOPE SERIES AND REQUIRED OPTIONAL SOFTWARE

	Serial Standard	MSO/DPO70000C/DX Series			DPO7000C Series		
		Decode & Search	Serial Trigger	Compliance Test	Decode & Search	Serial Trigger	Compliance Test
Embedded	I²C	SR-EMBD	SR-EMBD	-	SR-EMBD	SR-EMBD	-
	SPI	SR-EMBD	SR-EMBD	-	SR-EMBD	SR-EMBD	-
	I3C	-	-	-	-	-	-
	RS-232/UART	SR-COMP	SR-COMP	-	SR-COMP	SR-COMP	-
	SPMI	-	-	-	-	-	-
	I²S	-	-	-	-	-	-
Transportation	CAN	SR-AUTO	SR-AUTO	-	SR-AUTO	SR-AUTO	-
	CAN FD	-	-	-	-	-	-
	LIN	SR-AUTO	SR-AUTO	-	SR-AUTO	SR-AUTO	-
	FlexRay	SR-AUTO	SR-AUTO	-	SR-AUTO	SR-AUTO	-
	MOST	-	-	MOST	-	-	MOST
	SENT	-	-	-	-	-	-
	Automotive Ethernet	-	-	BRR	-	-	BRR
	ARINC 429	-	-	-	-	-	-
	MIL-STD-1553B	SR-AERO	SR-AERO	-	SR-AERO	SR-AERO	-
	SpaceWire	-	-	-	-	-	-
Computer / Peripherals	USB 2.0	SR-USB	SR-USB (LS, FS)	USB2	SR-USB	SR-USB (LS, FS)	USB2
	USB 3.0	SR-USB	-	USB3, TEKEXP Opt. USB-RMT, USB-TX	-	-	-
	USB Power	-	-	USBPWR	-	-	USBPWR
	MIPI D-PHY	SR-DPHY	-	D-PHY, TEKEXP Opt. D-PHYTX	SR-DPHY	-	D-PHY TEKEXP Opt. D-PHYTX
	MIPI M-PHY	-	-	M-PHY, M-PHYTX, M-PHYRX	-	-	-
	PCIe	SR-PCIE	-	PCE3	SR-PCIE	-	-
	DiiVA	-	-	TEKEXP Opt. DIIVA	-	-	-
	DisplayPort	-	-	DP12, TEKEXP Opt. DP-SINK	-	-	-
	HDMI	-	-	HT3, HT3DS	-	-	-
	MHL	-	-	MHD	-	-	-
	SATA	-	-	SATA-RSG, SATA-TSG	-	-	-
	SAS3	-	-	SAS3, SAS-TSG, SAS-TSGW	-	-	-
	Thunderbolt	-	-	TBT-TX	-	-	-
	UHS-II	-	-	UHS2	-	-	-
	LVDS	-	-	LVDSTX	-	-	LVDSTX
Memory	DDR	-	-	DDRA, DDR-LP4	-	-	DDRA
Datacom	Ethernet	SR-ENET	-	CMENET3, XBGT2, NBASET	SR-ENET	-	CMENET3, XBGT2, NBASET
	Industrial Ethernet	-	-	-	-	-	-
	Comm. Mask Testing	-	-	MTH	-	-	MTM
	Fibre Channel	-	-	FC-16G	-	-	-
	10GBASE-T KR	-	-	10G-KR	-	-	-
	SFP+	-	-	SFP-TX, SFP-WDP	-	-	-
Advanced Analysis	Custom Serial	SR-CUST	-	-	SR-CUST	-	-
	8b/10b	SR-810B	-	-	SR-810B	ST1G	-
	NRZ Serial	-	ST6G	-	-	ST1G	-
	PAM4	-	-	PAM4	-	-	-
	Serial Data Link Analysis	-	-	SDLA64	-	-	-
	Jitter & Eye Diagram Analysis	-	-	DJA (DJE incl. std), DJAN	-	-	DJA (DJE incl. std), DJAN

SERIAL SUPPORT BY OSCILLOSCOPE SERIES AND REQUIRED OPTIONAL SOFTWARE

	Serial Standard	6 Series MSO			5 Series MSO		
		Decode & Search	Serial Trigger	Compliance Test	Decode & Search	Serial Trigger	Compliance Test
Embedded	I²C	6-SREMBD	6-SREMBD	-	5-SREMBD	5-SREMBD	-
	SPI	6-SREMBD	6-SREMBD	-	5-SREMBD	5-SREMBD	-
	I3C	6-SRI3C	-	-	5-SRI3C	-	-
	RS-232/UART	6-SRCOMP	6-SRCOMP	-	5-SRCOMP	5-SRCOMP	-
	SPMI	6-SRPM	6-SRPM	-	5-SRPM	5-SRPM	-
	I²S	6-SRAUDIO	6-SRAUDIO	-	5-SRAUDIO	5-SRAUDIO	-
Transportation	CAN	6-SRAUTO	6-SRAUTO	-	5-SRAUTO	5-SRAUTO	-
	CAN FD	6-SRAUTO	6-SRAUTO	-	5-SRAUTO	5-SRAUTO	-
	LIN	6-SRAUTO	6-SRAUTO	-	5-SRAUTO	5-SRAUTO	-
	FlexRay	6-SRAUTO	6-SRAUTO	-	5-SRAUTO	5-SRAUTO	-
	MOST	-	-	-	-	-	-
	SENT	6-SRAUTOSEN	6-SRAUTOSEN	-	5-SRAUTOSEN	5-SRAUTOSEN	-
	Automotive Ethernet	6-SRAUTOEN1	-	6-CMAUTOEN, 6-AUTOEN-SS, 6-PAM3, 6-AUTOEN-BND	5-SRAUTOEN1	-	5-CMAUTOEN, 5-AUTOEN-SS, 5-PAM3, 5-AUTOEN-BND
	ARINC 429	6-SRAERO	6-SRAERO	-	5-SRAERO	5-SRAERO	-
	MIL-STD-1553B	6-SRAERO	6-SRAERO	-	5-SRAERO	5-SRAERO	-
	SpaceWire	6-SRSPACEWIRE	-	-	5-SRSPACEWIRE	-	-
Computer / Peripherals	USB 2.0	6-SRUSB2	6-SRUSB2	6-CMUSB2	5-SRUSB2	5-SRUSB2	5-CMUSB2
	USB 3.0	-	-	-	-	-	-
	MIPI D-PHY	-	-	6-CMDPHY	-	-	-
	MIPI M-PHY	-	-	-	-	-	-
	PCIe	-	-	-	-	-	-
	DiiVA	-	-	-	-	-	-
	DisplayPort	-	-	-	-	-	-
	HDMI	-	-	-	-	-	-
	MHL	-	-	-	-	-	-
	SATA	-	-	-	-	-	-
	SAS3	-	-	-	-	-	-
	Thunderbolt	-	-	-	-	-	-
	UHS-II	-	-	-	-	-	-
	LVDS	-	-	6-DBLVDS (debug and analysis)	-	-	5-DBLVDS (debug and analysis)
Memory	DDR	-	-	6-DBDDR3 (DDR3 debug and analysis), 6-CMDDR3	-	-	-
Datacom	Ethernet	6-SRENET	6-SRENET	6-CMENET, 6-CMNBASET, 6-CMXGBT	5-SRENET	5-SRENET	5-CMENET
	Industrial Ethernet	-	-	6-CMINDUEN10	-	-	5-CMINDUEN10
	Comm. Mask Testing	-	-	-	-	-	-
	Fibre Channel	-	-	-	-	-	-
	10GBASE-T KR	-	-	-	-	-	-
	SFP+	-	-	-	-	-	-
Advanced Analysis	Custom Serial	-	-	-	-	-	-
	8b/10b	6-SR8B10B	-	-	5-SR8B10B	-	-
	NRZ Serial	6-SRNRZ	-	-	5-SRNRZ	-	-
	PAM4	-	-	-	-	-	-
	Serial Data Link Analysis	-	-	-	-	-	-
	Jitter & Eye Diagram Analysis	-	-	6-DJA	-	-	5-DJA

SERIAL SUPPORT BY OSCILLOSCOPE SERIES AND REQUIRED OPTIONAL SOFTWARE

	Serial Standard	4 Series MSO			MDO4000C Series		
		Decode & Search	Serial Trigger	Compliance Test	Decode & Search	Serial Trigger	Compliance Test
Embedded	I²C	4-SREMBD	4-SREMBD	-	DPO4EMBD	DPO4EMBD	-
	SPI	4-SREMBD	4-SREMBD	-	DPO4EMBD	DPO4EMBD	-
	I3C	4-SRI3C	-	-	-	-	-
	RS-232/UART	4-SRCOMP	4-SRCOMP	-	DPO4COMP	DPO4COMP	-
	SPMI	4-SRPM	4-SRPM	-	-	-	-
	I²S	4-SRAUDIO	4-SRAUDIO	-	DPO4AUDIO	DPO4AUDIO	-
Transportation	CAN	4-SRAUTO	4-SRAUTO	-	DPO4AUTO	DPO4AUTO	-
	CAN FD	4-SRAUTO	4-SRAUTO	-	DPO4AUTO	DPO4AUTO	-
	LIN	4-SRAUTO	4-SRAUTO	-	DPO4AUTO	DPO4AUTO	-
	FlexRay	4-SRAUTO	4-SRAUTO	-	DPO4AUTOMAX	DPO4AUTOMAX	-
	MOST	-	-	-	-	-	-
	SENT	4-SRAUTOSEN	4-SRAUTOSEN	-	-	-	-
	Automotive Ethernet	-	-	-	-	-	-
	ARINC 429	4-SRAERO	4-SRAERO	-	DPO4AERO	DPO4AERO	-
	MIL-STD-1553B	4-SRAERO	4-SRAERO	-	DPO4AERO	DPO4AERO	-
	SpaceWire	4-SRSPACEWIRE	-	-	-	-	-
Computer / Peripherals	USB 2.0	4-SRUSB2	4-SRUSB2	-	DPO4USB	DPO4USB	-
	USB 3.0	-	-	-	-	-	-
	MIPI D-PHY	-	-	-	-	-	-
	MIPI M-PHY	-	-	-	-	-	-
	PCIe	-	-	-	-	-	-
	DiiVA	-	-	-	-	-	-
	DisplayPort	-	-	-	-	-	-
	HDMI	-	-	-	-	-	-
	MHL	-	-	-	-	-	-
	SATA	-	-	-	-	-	-
	SAS3	-	-	-	-	-	-
	Thunderbolt	-	-	-	-	-	-
	UHS-II	-	-	-	-	-	-
	LVDS	-	-	-	-	-	-
Memory	DDR	-	-	-	-	-	-
Datacom	Ethernet	4-SRENET	4-SRENET	-	DPO4ENET	DPO4ENET	-
	Industrial Ethernet	-	-	-	-	-	-
	Comm. Mask Testing	-	-	-	-	-	DPO4LMT
	Fibre Channel	-	-	-	-	-	-
	10GBASE-T KR	-	-	-	-	-	-
	SFP+	-	-	-	-	-	-
Advanced Analysis	Custom Serial	-	-	-	-	-	-
	8b/10b	-	-	-	-	-	-
	NRZ Serial	4-SRNRZ	-	-	-	-	-
	PAM4	-	-	-	-	-	-
	Serial Data Link Analysis	-	-	-	-	-	-
	Jitter & Eye Diagram Analysis	-	-	-	-	-	-

SERIAL SUPPORT BY OSCILLOSCOPE SERIES AND REQUIRED OPTIONAL SOFTWARE

Category	Serial Standard	3 Series MDO			MDO3000 Series		
		Decode & Search	Serial Trigger	Compliance Test	Decode & Search	Serial Trigger	Compliance Test
Embedded	I²C	3-SREMBD	3-SREMBD	-	MDO3EMBD	MDO3EMBD	-
	SPI	3-SREMBD	3-SREMBD	-	MDO3EMBD	MDO3EMBD	-
	I3C	-	-	-	-	-	-
	RS-232/UART	3-SRCOMP	3-SRCOMP	-	MDO3COMP	MDO3COMP	-
	SPMI	-	-	-	-	-	-
	I²S	3-SRAUDIO	3-SRAUDIO	-	MDO3AUDIO	MDO3AUDIO	-
Transportation	CAN	3-SRAUTO	3-SRAUTO	-	MDO3AUTO	MDO3AUTO	-
	CAN FD	3-SRAUTO	3-SRAUTO	-	MDO3AUTO	MDO3AUTO	-
	LIN	3-SRAUTO	3-SRAUTO	-	MDO3AUTO	MDO3AUTO	-
	FlexRay	3-SRAUTO	3-SRAUTO	-	MDO3FLEX	MDO3FLEX	-
	MOST	-	-	-	-	-	-
	SENT	-	-	-	-	-	-
	Automotive Ethernet	-	-	-	-	-	-
	ARINC 429	3-SRAERO	3-SRAERO	-	-	-	-
	MIL-STD-1553B	3-SRAERO	3-SRAERO	-	MDO3AERO	MDO3AERO	-
	SpaceWire	-	-	-	-	-	-
Computer / Peripherals	USB 2.0	3-SRUSB2	3-SRUSB2	-	MDO3USB	MDO3USB	-
	USB 3.0	-	-	-	-	-	-
	MIPI D-PHY	-	-	-	-	-	-
	MIPI M-PHY	-	-	-	-	-	-
	PCIe	-	-	-	-	-	-
	DiiVA	-	-	-	-	-	-
	DisplayPort	-	-	-	-	-	-
	HDMI	-	-	-	-	-	-
	MHL	-	-	-	-	-	-
	SATA	-	-	-	-	-	-
	SAS3	-	-	-	-	-	-
	Thunderbolt	-	-	-	-	-	-
	UHS-II	-	-	-	-	-	-
	LVDS	-	-	-	-	-	-
Memory	DDR	-	-	-	-	-	-
Datacom	Ethernet	-	-	-	-	-	-
	Industrial Ethernet	-	-	-	-	-	-
	Comm. Mask Testing	-	-	-	-	-	MDO3LMT
	Fibre Channel	-	-	-	-	-	-
	10GBASE-T KR	-	-	-	-	-	-
	SFP+	-	-	-	-	-	-
Advanced Analysis	Custom Serial	-	-	-	-	-	-
	8b/10b	-	-	-	-	-	-
	NRZ Serial	-	-	-	-	-	-
	PAM4	-	-	-	-	-	-
	Serial Data Link Analysis	-	-	-	-	-	-
	Jitter & Eye Diagram Analysis	-	-	-	-	-	-

SERIAL SUPPORT BY OSCILLOSCOPE SERIES AND REQUIRED OPTIONAL SOFTWARE

	Serial Standard	MSO/DPO2000B Series			MSO/DPO5000B Series		
		Decode & Search	Serial Trigger	Compliance Test	Decode & Search	Serial Trigger	Compliance Test
Embedded	I²C	DPO2EMBD	DPO2EMBD	-	SR-EMBD	SR-EMBD	-
	SPI	DPO2EMBD	DPO2EMBD	-	SR-EMBD	SR-EMBD	-
	I3C	-	-	-	-	-	-
	RS-232/UART	DPO2COMP	DPO2COMP	-	SR-COMP	SR-COMP	-
	SPMI	-	-	-	-	-	-
	I²S	-	-	-	-	-	-
Transportation	CAN	DPO2AUTO	DPO2AUTO	-	SR-AUTO	SR-AUTO	-
	CAN FD	-	-	-	-	-	-
	LIN	DPO2AUTO	DPO2AUTO	-	SR-AUTO	SR-AUTO	-
	FlexRay	-	-	-	SR-AUTO	SR-AUTO	-
	MOST	-	-	-	-	-	MOST
	SENT	-	-	-	-	-	-
	Automotive Ethernet	-	-	-	-	-	BRR
	ARINC 429	MDO3AERO	MDO3AERO	-	-	-	-
	MIL-STD-1553B	-	-	-	SR-AERO	SR-AERO	-
	SpaceWire	-	-	-	-	-	-
Computer / Peripherals	USB 2.0	-	-	-	SR-USB	SR-USB	USB2
	USB 3.0	-	-	-	-	-	-
	MIPI D-PHY	-	-	-	SR-DPHY	-	-
	MIPI M-PHY	-	-	-	-	-	-
	PCIe	-	-	-	SR-PCIE	-	-
	DiiVA	-	-	-	-	-	-
	DisplayPort	-	-	-	-	-	-
	HDMI	-	-	-	-	-	-
	MHL	-	-	-	-	-	-
	SATA	-	-	-	-	-	-
	SAS3	-	-	-	-	-	-
	Thunderbolt	-	-	-	-	-	-
	UHS-II	-	-	-	-	-	-
	LVDS	-	-	-	-	-	-
Memory	DDR	-	-	-	-	-	DDRA
Datacom	Ethernet	-	-	-	SR-ENET	SR-ENET	CMENET3
	Industrial Ethernet	-	-	-	-	-	-
	Comm. Mask Testing	-	-	-	-	-	MTM
	Fibre Channel	-	-	-	-	-	-
	10GBASE-T KR	-	-	-	-	-	-
	SFP+	-	-	-	-	-	-
Advanced Analysis	Custom Serial	-	-	-	SR-CUST	-	-
	8b/10b	-	-	-	SR-810B	-	-
	NRZ Serial	-	-	-	-	-	-
	PAM4	-	-	-	-	-	-
	Serial Data Link Analysis	-	-	-	-	-	-
	Jitter & Eye Diagram Analysis	-	-	-	-	-	DJA (DJE incl. std), DJAN

Contact Information

Australia* 1 800 709 465

Austria 00800 2255 4835

Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777

Belgium* 00800 2255 4835

Brazil +55 (11) 3759 7627

Canada 1 800 833 9200

Central East Europe / Baltics +41 52 675 3777

Central Europe / Greece +41 52 675 3777

Denmark +45 80 88 1401

Finland +41 52 675 3777

France* 00800 2255 4835

Germany* 00800 2255 4835

Hong Kong 400 820 5835

India 000 800 650 1835

Indonesia 007 803 601 5249

Italy 00800 2255 4835

Japan 81 (3) 6714 3086

Luxembourg +41 52 675 3777

Malaysia 1 800 22 55835

Mexico, Central/South America and Caribbean 52 (55) 56 04 50 90

Middle East, Asia, and North Africa +41 52 675 3777

The Netherlands* 00800 2255 4835

New Zealand 0800 800 238

Norway 800 16098

People's Republic of China 400 820 5835

Philippines 1 800 1601 0077

Poland +41 52 675 3777

Portugal 80 08 12370

Republic of Korea +82 2 565 1455

Russia / CIS +7 (495) 6647564

Singapore 800 6011 473

South Africa +41 52 675 3777

Spain* 00800 2255 4835

Sweden* 00800 2255 4835

Switzerland* 00800 2255 4835

Taiwan 886 (2) 2656 6688

Thailand 1 800 011 931

United Kingdom / Ireland* 00800 2255 4835

USA 1 800 833 9200

Vietnam 12060128

* European toll-free number. If not
accessible, call: +41 52 675 3777

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