

Tektronix Basic and Bench Oscilloscopes

Selection Guide – Autumn 2011

Tektronix[®]

Bench Oscilloscopes – Selection Guide

Feature-rich tools for debugging mixed signal designs



INTRODUCING THE NEW
MDO4000 SERIES

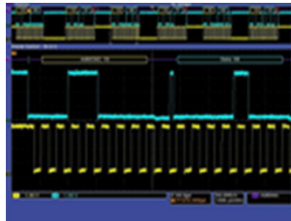
*The World's First ... AND ONLY
... oscilloscope with a built-in
spectrum analyser!*



Features	DPO7000C Series	MSO/DPO5000 Series	NEW MDO4000 Series	MSO/DPO4000B Series	MSO/DPO3000 Series	MSO/DPO2000 Series
Starting Price	From € 12,600 <i>(up to 20% reduction)</i>	From € 9,560 <i>(up to 6% reduction)</i>	From € 15,300	From € 7,990 <i>(up to 13% reduction)</i>	From € 2,580 <i>(up to 39% reduction)</i>	From € 1,370 <i>(up to 43% reduction)</i>
Bandwidth	500 MHz to 3.5 GHz	350 MHz to 2 GHz	500 MHz to 1 GHz	350 MHz to 1 GHz	100 MHz to 500 MHz	100 MHz to 200 MHz
Sample Rate	5 GS/s to 40 GS/s	5 GS/s to 10 GS/s	2.5 GS/s to 5 GS/s	2.5 GS/s to 5 GS/s	2.5 GS/s	1 GS/s
Channels	4 analog	4 analog 16 digital (MSO)	4 analog, 16 digital, 1 RF	4 analog, 16 digital (MSO)	2, 4 analog, 16 digital (MSO)	2, 4 analog, 16 digital (MSO)
Record Length (Max)	50 M – 500 M	12.5M – 250 M	20 M	20 M	5 M	1 M
Display Size	12.1 inch, XGA color	10.4 inch, XGA color	10.4 inch, XGA color	10.4 inch, XGA color	9.0 inch, WVGA color	7.0 inch, WQVGA color
Parallel Bus Analysis	No	Yes (MSO Series)	Yes	Yes (MSO Series)	Yes (MSO Series)	Yes (MSO Series)
Optional Serial Bus Analysis	I ² C, SPI, CAN, LIN RS-232/422/485/UART, USB 2.0	I ² C, SPI, CAN, LIN, RS-232/422/485/UART, and USB 2.0,	I ² C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS- 232/422/485/ UART, MIL-STD- 1553,I2S/LJ/RJ/TDM	I ² C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS- 232/422/485/ UART, MIL-STD- 1553,I2S/LJ/RJ/TDM	I ² C, SPI, CAN, LIN RS- 232/422/485/UART, I ² S/LJ/RJ/TDM	I ² C, SPI, CAN, LIN RS- 232/422/485/UART
Optional Analysis Packages	MIPI® D-PHY DSI-1 and CSI-2, Ethernet, and USB 2.0 Compliance Testing, Jitter, Timing, Eye Diagrams, Power, DDR Memory Bus Analysis, Wideband RF	Ethernet and USB 2.0 Compliance Testing, Jitter, Timing, Eye Diagrams, Power, DDR Memory Bus Analysis, and Wideband RF	Advanced RF Triggering, Power Analysis, Limit/Mask Testing, HDTV and Custom Video	Power Analysis, HDTV and Custom Video	Power Analysis, HDTV and Custom Video	FilterVu™ Variable Low-pass Filter

Working with Serial Applications

A quick guide to common serial standards



I²C (Inter-IC Bus)

- Used for chip-to-chip communication
- Uses two single-ended signals: clock and data



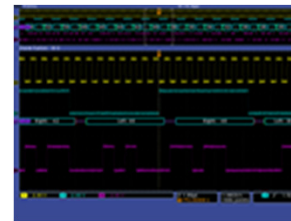
RS-232/422/485/UART

- Used for chip-to-chip and system-to-system communication
- Single-wire or differential signals



SPI (Serial Peripheral Interface)

- Used to communicate between microcontrollers and their immediate peripheral devices
- Can use 2-, 3-, or 4-wire bus topology



I²S / LJ / RJ / TDM Audio Buses

- I²S, Left Justified, and Right Justified used for stereo digital audio communication
- TDM supports >2-channel digital audio



USB

- Used for system-to-system and chip-to-chip communication
- Supports Low-speed (1.5 Mb/s, Full-speed (12 Mb/s), and High-speed (480 Mb/s) operation



CAN / LIN / FlexRay

- CAN used for system-to-system communication
- LIN used for low-cost, low-speed automotive communication
- FlexRay used for high-speed, high-reliability automotive communication

MSO and DPO Series oscilloscopes allow you to:

- **Trigger** on all the critical elements of your serial bus such as address, data, etc.
- **Decode** all the critical elements of each message. No more counting 1s and 0s!
- **Search** through long acquisitions using user defined criteria to find the specific messages you're looking for.
- **Event Table** shows decoded serial bus activity in a tabular, time-stamped format for a quick summary of system activity.

Learn More...

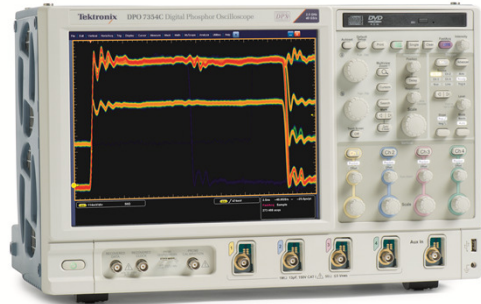
While serial buses provide a number of advantages, they also pose some significant challenges.



Get the **Serial Application Note** to learn more about common serial applications, common challenges, and how you can overcome them.

DPO7000C Series Oscilloscopes

Simplified Analysis for Complex Digital Designs



Achieve greater insight into your design



A versatile, powerful tool for benchtop design and debug

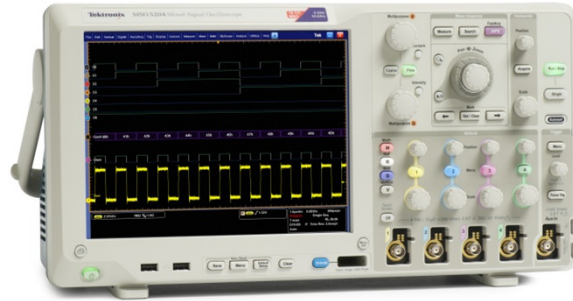
Featuring:

- 500 MHz, 1 GHz, 2.5 GHz, and 3.5 GHz models
- Up to 500 Mpoints record length
- Up to 40 GS/s sample rate
- 53 automated measurements and FFT analysis
- Serial bus triggering and analysis options for I²C, SPI, RS-232/422/485/UART, USB 2.0
- Automated serial analysis for MIPI DSI-1 and CSI-2
- Comprehensive verification including serial debug and compliance with jitter and eye validation, power analysis, MIPI D-PHY, Ethernet, USB and wideband RF analysis
- Standard removable hard disk drive
- Large 12.1" XGA display with touch screen
- Windows 7 Ultimate 64-bit operating system
- LXI Class C compliant
- 1-Year Warranty

Features	Benefits
Up to 40 GS/s sample rate	Accurately sample your signal, ensuring that all frequency content is being acquired and displayed.
FastAcq™ with Digital Phosphor display	Quickly discover glitches and infrequent events with Tektronix proprietary FastAcq technology. A maximum capture rate of >250,000 waveforms/s shows elusive anomalies fast.
Pinpoint® Triggering	Rapidly capture signal anomalies with over 1400 available trigger combinations, including setup/hold, serial packet and pattern lock for serial data streams up to 1.25 Gb/s
Advanced Search and Mark	Search for up to eight different events simultaneously with the included automated search tool
Built-in Analysis Tools	Analyze your device with 53 automated measurements, measurement statistics, histograms, and advanced waveform math.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I ² C, SPI, RS-232/422/485/UART, USB2.0
Application Software Packages	Transform your oscilloscope for specialized applications with jitter and eye analysis included standard and over 15 optional software packages for power analysis, serial compliance, RF analysis, memory and more.

MSO/DPO5000 Series Oscilloscopes

Feature-rich tools for debugging mixed signal designs

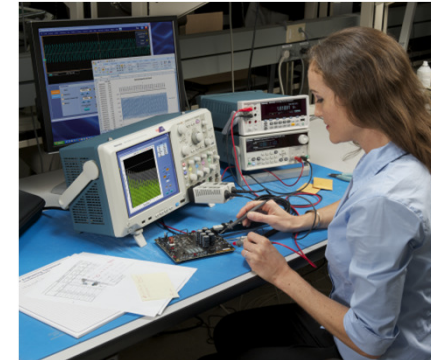


Features

Benefits

4 analog and 16 digital channels	Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
FastAcq with Digital Phosphor display	Quickly discover glitches and infrequent events with Tektronix proprietary FastAcq™ technology. A maximum capture rate of >250,000 waveforms/s shows elusive anomalies fast.
Complete set of triggers	Rapidly capture signal anomalies with over 350 available trigger combinations, including setup/hold, serial packet and parallel data.
Wave Inspector® controls	Easily search, mark and navigate long record lengths to find all occurrences of as many as 8 events simultaneously.
Built-in Analysis Tools	Analyze your device with 53 automated measurements, measurement statistics, histograms, and advanced waveform math.
Parallel bus triggering and analysis (MSO Series)	Quickly debug your parallel bus with automated trigger, decode and search. Capture fast transitions with timing resolution up to 60.6 ps.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I ² C, SPI, RS-232/422/485/UART, USB2.0
Application Software Packages	Transform your oscilloscope for specialized applications with jitter and eye analysis included standard and over 10 optional software packages for power analysis, serial compliance, RF analysis, memory, and more.
Low-capacitance, passive voltage probes	Four probes with industry-best <4pF capacitive loading are included standard to ensure accurate measurements

Designed to make your work easier



Wave Inspector® controls speed navigation of long waveform records

Featuring:

- 350 MHz, 500 MHz, 1 GHz, 2 GHz models
- 4 analog channels
- 16 digital channels (MSO Series)
- Up to 250 Mpoints record length (optional); 12.5 Mpoints/ch standard
- Up to 10GS/s sample rate
- Up to 60.6 ps timing resolution on all digital channels with MagniVu™ high speed acquisition
- 53 automated measurements and FFT analysis
- Serial bus triggering and analysis options for I²C, SPI, RS-232/422/485/UART, USB 2.0
- Parallel bus triggering and analysis (MSO Series)
- Comprehensive verification including serial debug and compliance with jitter and eye validation, power analysis, and memory analysis
- Standard removable hard disk drive
- Large 10.4" XGA display with touch screen
- Windows 7 Ultimate 64-bit operating system
- 1-year warranty

NEW! MDO4000 Series Mixed Domain Oscilloscopes

The World's Only Oscilloscope with a Built-in Spectrum Analyzer



Designed to make your work easier



See the time and frequency domains at a single glance with the world's first mixed domain oscilloscope.

Featuring:

- 4 analog channels
 - 500 MHz and 1 GHz models
- 16 digital channels
 - Up to 60.6 ps timing resolution with MagniVu™
- 1 RF channel
 - 3 GHz or 6 GHz frequency range models
 - ≥ 1 GHz ultra-wide capture bandwidth
 - Normal, Average, Max Hold and Min Hold Traces
 - +Peak, -Peak, Average and Sample Detection
 - Spectrogram display
- 20 Mpoint standard record length on all channels
- Over 135 available trigger combinations
- Wave Inspector® to automatically search and easily navigate all waveforms
- 44 automated measurements and FFT analysis
- Front -panel USB host ports for data storage
- Serial bus triggering and analysis options
- Parallel bus triggering and analysis, including multi-channel set-up and hold triggering (included standard)
- 3-year warranty

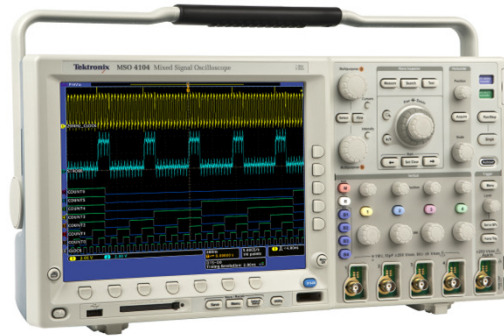
Features

Benefits

Dedicated RF input	Accurately analyze your RF signals with -60 dBc (typical) dynamic range.
Time-correlated display	See what's happening in your design at any instant with the time-correlated display of your analog, digital and RF signals.
Spectrum Time	Investigate how your RF spectrum is changing over time or with device state by moving Spectrum Time through your acquisition.
Wide-capture bandwidth	See your whole spectrum of interest at any point in time with the ≥ 1 GHz ultra-wide capture bandwidth.
Advanced RF triggers	Quickly capture specific RF events with advanced RF power triggers - pulse width, runt, logic and more.
Automated and manual RF markers	Simply define threshold and excursion values to automatically mark all peaks that meet your criteria. Or mark your own points in the spectrum.
RF vs. time traces	Easily see amplitude, frequency or phase vs. time for your RF signal displayed in the time domain; easily measure RF/system latencies.
Serial and parallel bus triggering and analysis	Quickly debug your parallel bus and/or common serial buses with automated trigger, decode and search.
Built-on the MSO4000B platform	Debug your device fast with comprehensive tools from the award-winning platform – DPO Technology, Wave Inspector®, and more.

MSO/DPO4000B Series Oscilloscopes

Feature-rich tools for debugging mixed signal designs



Features

Benefits

4 analog and 16 digital channels	Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
Digital phosphor display	Quickly discover glitches and infrequent events with a greater than 50,000 wfms waveform capture rate and intensity-graded display.
Complete set of triggers	Rapidly capture signal anomalies with over 125 available trigger combinations, including setup/hold, serial packet and parallel data.
Wave Inspector® controls	Easily search, mark and navigate long record lengths to find all occurrences of your event.
Automated Measurements	Simplify analysis of your device with 41 automated measurements, FFT analysis, measurement statistics, waveform histograms, and advanced waveform math.
Parallel bus triggering and analysis (MSO Series)	Quickly debug your parallel bus with automated trigger, decode and search. Capture fast transitions with timing resolution up to 60.6 ps.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I ² C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS-232/422/485/UART, I2S/LJ/RJ/TDM, and MIL-STD-1553.
Power analysis option	Achieve fast, accurate results with integrated automated power measurements.
Low-capacitance passive voltage probing	Four probes with industry-best 4pF capacitive loading and up to 1 GHz bandwidth are included standard to ensure accurate measurements

Designed to make your work easier



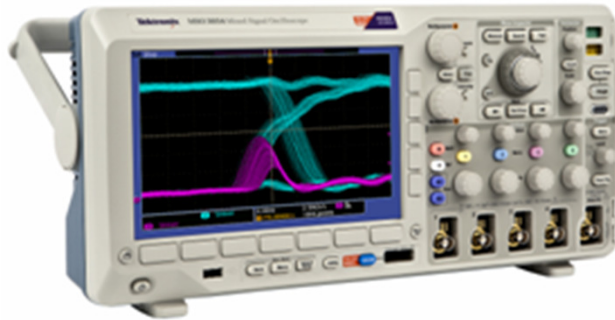
Wave Inspector® controls speed navigation of long waveform records

Featuring:

- 350 MHz, 500 MHz, 1 GHz models
- 4 analog channels
- 16 digital channels (MSO Series)
- 20 Mpoint standard record length on all channels
- Up to 5 GS/s sample rate on all analog channels
- Up to 60.6 ps timing resolution on all digital channels with MagniVu™ high speed acquisition
- 41 automated measurements and FFT analysis
- Front panel USB host ports for data storage
- Serial bus triggering and analysis options for I²C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS-232/422/485/UART, I2S/LJ/RJ/TDM, and MIL-STD-1553
- Parallel bus triggering and analysis, including multi-channel set-up and hold triggering (MSO Series)
- Power analysis option
- Limit/Mask test option
- HDTV and custom video analysis option

MSO/DPO3000 Series Oscilloscopes

Feature-rich tools for debugging mixed signal designs



Features

Benefits

Up to 4 analog and 16 digital channels	Visualize and analyze analog, digital and serial signals on a single instrument for system-level troubleshooting of complex designs.
Digital phosphor display	Quickly discover glitches and infrequent events with a greater than 50,000 wfms/s waveform capture rate and intensity-graded display.
Complete set of triggers	Rapidly capture signal anomalies with over 125 available trigger combinations, including setup/hold, serial packet content and parallel data.
Wave Inspector® controls	Easily search, mark and navigate long record lengths to find all occurrences of your event.
Automated Measurements	Simplify analysis of your device with 29 automated measurements, FFT analysis, measurement statistics, and advanced waveform math.
Parallel bus triggering and analysis (MSO Series)	Quickly debug your parallel bus with automated trigger, decode and search. Capture fast transitions with timing resolution up to 121.2 ps.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I ² C, SPI, CAN, LIN, RS-232/422/485/UART and I ² S/LJ/RJ/TDM.
Power analysis option	Achieve fast, accurate results with integrated automated power measurements.

Designed to make your work easier



Wave Inspector® controls speed navigation of long waveform records

- Featuring:
- 100 MHz, 300 MHz, 500 MHz models
- 2 or 4 analog channels
- 16 digital channels (MSO Series)
- 5 Mpoint standard record length on all channels
- Up to 2.5 GS/s sample rate on all analog channels
- Up to 121.2 ps timing resolution on all digital channels with MagniVu™ high speed acquisition
- 29 automated measurements and FFT analysis
- Front panel USB host port for data storage
- Serial bus triggering and analysis options for I²C, SPI, CAN, LIN, RS-232/422/485/UART and I²S/LJ/RJ/TDM
- Parallel bus triggering and analysis, including multi-channel set-up and hold triggering (MSO Series)
- Power analysis option
- HDTV and custom video analysis option

MSO/DPO2000 Series Oscilloscopes

Feature-rich tools for debugging mixed signal designs



Features

Benefits

Up to 4 analog and 16 digital channels	Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
Digital phosphor display	Quickly discover glitches and infrequent events with a 5,000 wfm/s waveform capture rate and intensity-graded display.
Complete set of triggers	Rapidly capture signal anomalies with over 125 available trigger combinations, including setup/hold, serial packet content and parallel data.
Wave Inspector® controls	Easily search, mark and navigate long record lengths to find all occurrences of your event.
Automated Measurements	Simplify analysis of your device with 29 automated measurements and FFT analysis.
Parallel bus triggering and analysis (MSO Series)	Quickly debug your parallel bus with automated trigger, decode and search.
Serial triggering and analysis options	Quickly debug common serial buses with automated trigger, decode and search – I ² C, SPI, CAN, LIN, and RS-232/422/485/UART.
FilterVu™ variable low-pass filter	Easily filter out unwanted noise without losing sight of important anomalies or glitches with the innovative peak detect glitch capture.

Designed to make your work easier



Wave Inspector® controls speed navigation of long waveform records

Featuring:

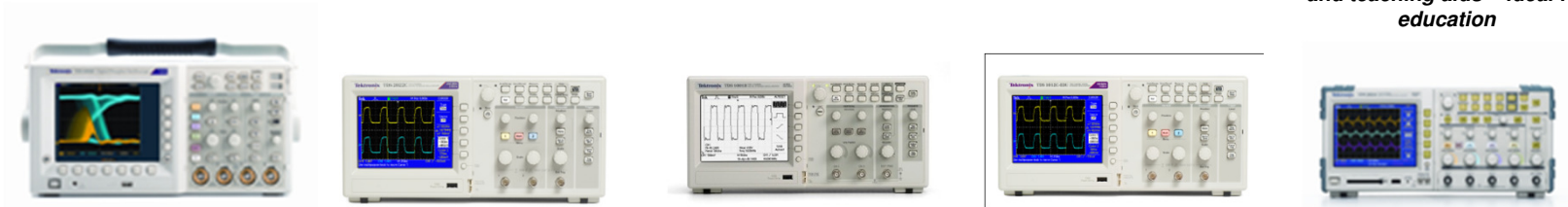
- 100 MHz and 200 MHz models
- 2 or 4 analog channels
- 16 digital channels (MSO Series)
- 1 Mpoint standard record length on all channels
- Up to 1 GS/s sample rate on all analog channels
- Up to 2 ns timing resolution on all digital channels
- 29 automated measurements and FFT analysis
- Front panel USB host port for data storage
- Serial bus triggering and analysis options for I²C, SPI, CAN, LIN, and RS-232/422/485/UART
- Parallel bus triggering and analysis, including multi-channel set-up and hold triggering (MSO Series)

Basic Oscilloscopes – Selection Guide

General purpose, isolated, and battery-powered oscilloscopes.
Brilliantly engineered. Irresistibly priced.



THE NEW TDS1000C-EDU
Includes a resource CD with labs
and teaching aids – ideal for
education



Features	TDS3000C Series	TDS2000C Series	TDS1000B Series	NEW TDS1000C-EDU Series	NEW TPS2000B Series
Starting Price	From € 4,420	From € 666 <i>(up to 22% reduction)</i>	From € 748 <i>(up to 8% reduction)</i>	From € 591 <i>(up to 13% reduction)</i>	From € 2,240 <i>(up to 13% reduction)</i>
Bandwidth	500 MHz, 300 MHz, 100 MHz	200 MHz, 100 MHz, 70 MHz, 50 MHz	100 MHz, 60 MHz, 40 MHz	100 MHz, 60 MHz, 40 MHz	200 MHz, 100 MHz
Sample Rate	Up to 5 GS/s	Up to 2 GS/s	Up to 2 GS/s	Up to 1 GS/s	Up to 2 GS/s
Channels	2, 4 analog	2, 4 analog	2 analog	2 analog	2, 4 analog isolated
Record Length	10 k points	2.5 k points	2.5 k points	2.5 k points	2.5 k points
Display Size	6.5 inches, VGA color	5.7 inches, active TFT color	5.7 inches, QVGA monochrome (TDS1000B)	5.7 inches, QVGA colour TFT (TDS1000C-EDU)	5.7 inches, QVGA color TFT
Battery Power	Optional	--	--	--	Standard
Special Features	Optional modules for Limit Testing, Communications Mask Testing, HDTV/Custom Video, Serial Digital Video	Limited Lifetime Warranty*	Limited Lifetime Warranty*	Classroom labs and resources included	Isolated Inputs, Optional module for power analysis USB cable included as standard



* Limitations apply. For terms and conditions, visit www.tektronix.com/lifetimewarranty

Oscilloscope Basics

Understanding the 5 key banner specifications

Bandwidth

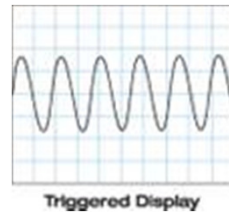
What's the fastest-changing signal I can see?

Electronic systems rely on rapidly changing signals, and “frequency” tells how often a signal changes. Bandwidth describes the highest frequency a scope can track.

If bandwidth is too low compared to the signal being measured, the scope will not accurately display the shape of the signal. Oscilloscopes can show signals that change millions of times each second (megahertz, MHz) or billions of times per second (gigahertz, GHz).

Probes and connectors also have bandwidth associated with them, so it's important to use the correct probe for the scope and the signal being measured.

Rule of thumb: Oscilloscope Bandwidth should be 5 x Highest Frequency Being Measured



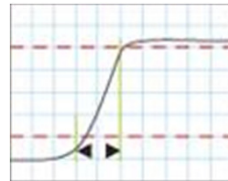
Rise Time

Another way of asking, what's the fastest signal I can see?

Digital systems rely on “clean” edges between ones and zeros.

Rise time tells how well an oscilloscope can show fast changes between ones and zeros, and is another way to describe how well the instrument tracks changes. Rise time is directly related to bandwidth ($\text{Bandwidth} \sim 0.35 \div \text{Risetime}$).

Rule of thumb: Oscilloscope Rise Time should be 1/5 of the fastest rise time of the signal being measured.

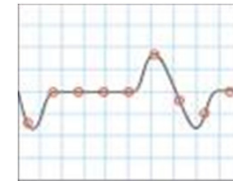


Sample Rate

How much detail can I see?

The faster an oscilloscope samples a signal, the greater the resolution and detail of the displayed waveform.

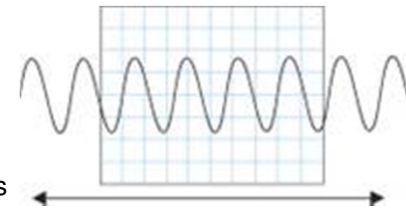
Complex waveforms require higher sample rate than simple sine waves. Oscilloscopes can take billions of samples each second.



Record Length

How much time can I capture?

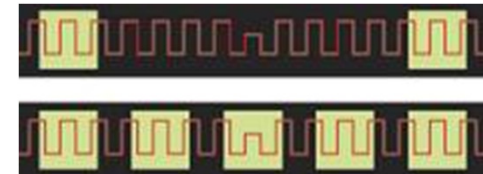
The oscilloscope's record length determines the maximum number of points in a signal acquisition. It determines the amount of time you can capture.



Waveform

Capture Rate

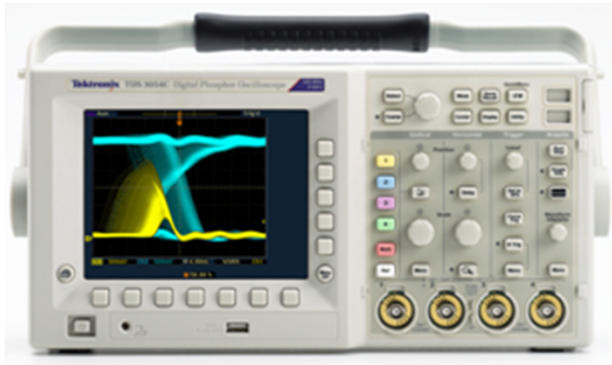
How fast can I take snapshots?



Waveform capture rate describes how fast a scope can acquire and display waveforms on the screen. Newer instruments capture thousands of waveforms each second. This reduces the risk of missing a “glitch” that happens only intermittently.

TDS3000C Series Oscilloscopes

Performance you need at a price you can afford



Features

Benefits

Digital real-time sampling	Accurately capture signals with at least 5X over-sampling.
Digital phosphor display	Quickly capture and visualize glitches and infrequent events with a high waveform capture rate and intensity-graded display.
Advanced triggering	Capture digital signal anomalies with runt, glitch, rise/fall-time, and setup/hold violation triggers .
Dedicated front-panel controls	Spend less time learning and more time on the task at hand with easy-to-use front panel controls.
Front-panel USB host port	Quickly store and transfer your waveforms.
PC connectivity	Simply transfer, analyze and document results with NI LabVIEW SignalExpress™ TE and Tektronix OpenChoice® Desktop software.
Just 5.9 inches (149 mm) deep	Free up valuable bench-top space.
Battery pack (optional)	Work where you need to with up to three-hours of portable battery operation.
Application modules (optional)	Transform your oscilloscope into a specialized instrument for limit testing, telecom mask testing, and video troubleshooting.

Easy to set-up and use



Easily transfer, document and analyze data on your PC.

Featuring:

- 100 MHz, 300 MHz, 500 MHz models
- 2 or 4 analog channels
- 10 k standard record length on all channels
- Up to 5 GS/s sample rate on all channels
- Front panel USB host port for data storage
- Ethernet port for PC connectivity
- Optional battery operation
- Optional limit testing, telecommunications mask testing, and HDTV and custom video triggering and analysis

TDS2000C Series Oscilloscopes

Performance you need at a price you can afford



Features

Benefits

Digital real-time sampling	Accurately capture signals with at least 10X over-sampling on all channels, all the time with Tektronix proprietary sampling technology.
Built-in analysis tools	Simplify analysis of your device with 16 automated measurements, FFT analysis, waveform math and cursors.
Waveform limit testing	Eliminate mistakes with the pass/fail summary table that clearly shows how many waveforms are within the limits of your specified template.
Help menu	Get the help you need – when and where you need it – with the built-in, context-sensitive help system.
Dedicated front-panel controls	Spend less time learning and more time on your task with easy-to-use front-panel controls.
Front-panel USB host port	Quickly store and transfer your waveforms and settings.
USB PC connectivity	Easily connect to a personal computer with the rear-panel USB device port; Use NI LabVIEW SignalExpress™ software to control your scope, log data, and to simply transfer and document your results.
Bright color display	See your waveform and measurement results at a distance, at an angle or under dim lighting with the bright, active color display.
Lifetime warranty*	Reduce your cost of ownership with the standard, Lifetime Warranty.

Designed to Make Your Work Easy



Conveniently store your data with the USB flash drive.

Featuring:

- 50 MHz to 200 MHz models
- 2 or 4 analog channels
- Up to 2 GS/s sample rate on all channels
- 2.5 k standard record length on all channels
- Advanced triggering
- 16 automated measurements
- FFT function standard on all models
- Built-in waveform limit testing
- Automated data logging
- Context-sensitive help menu
- Probe Check Wizard
- Front panel USB host port for data storage
- Rear panel USB device port for PC connectivity and direct printing to a PictBridge® compatible printer
- National Instruments LabVIEW SignalExpress™ TE, Limited Edition included
- Lifetime Warranty*

* Limitations apply. For terms and conditions, visit www.tektronix.com/lifetimewarranty

TPS2000B Series Oscilloscopes

Powerful productivity from bench to field

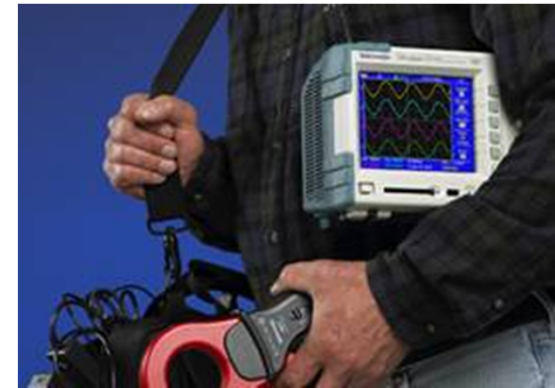


Features

Benefits

Four isolated channels	Safely and easily make 4-channel floating measurements, including 3-phase power measurements.
Digital real-time sampling	Accurately capture signals with at least 5X over-sampling on all channels, all the time.
Dedicated front-panel controls	Spend less time learning and more time on your task with easy-to-use front-panel controls.
Front-panel CompactFlash™ port	Quickly store and transfer your waveforms.
Hot-Swappable battery pack	Work where you need to with up to 8 hours of continuous battery operation*.
Just 6 lbs (2.7 kg)	Easily transport from lab-to-lab or into the field with the lightweight and compact design.
Power measurement and analysis application module (optional)	Quickly make automatic measurements of real and apparent power, phase angle measurements, harmonics, and switching loss.

Designed to make your work easier



Quickly correlate your measurements between bench, lab and field

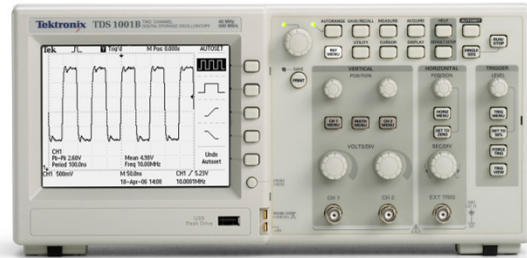
Featuring:

- 100 MHz and 200 MHz models
- 2 or 4 isolated analog channels
- 2.5 k standard record length on all channels
- Up to 2 GS/s sample rate on all channels
- Advanced triggering
- 11 automatic measurements
- FFT function standard on all models
- Front-panel CompactFlash™ port for data storage
- Lightweight and portable
- Optional power measurement and analysis module
- 3 year warranty

* Comes standard with 1 battery. Each battery provides 4 hours of operation.

TDS1000B Series Oscilloscopes

Performance you need at a price you can afford



Features

Benefits

Digital real-time sampling	Accurately capture signals with at least 10X over-sampling on all channels, all the time with Tektronix proprietary sampling technology.
Built-in analysis tools	Simplify analysis of your device with 12 automated measurements, FFT analysis, waveform math and cursors.
Help menu	Get the help you need – when and where you need it – with the built-in, context-sensitive help system.
Dedicated front-panel controls	Spend less time learning and more time on your task with easy-to-use front-panel controls.
Front-panel USB host port	Quickly store and transfer your waveforms and settings.
USB PC connectivity	Easily connect to a personal computer with the rear-panel USB device port.
Lifetime warranty*	Reduce your cost of ownership with the standard, Lifetime Warranty.

Designed to Make Your Work Easy



Conveniently store your data with the USB flash drive.

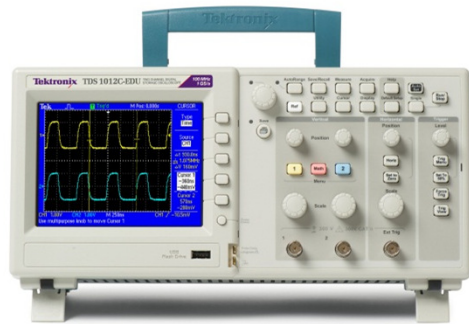
Featuring:

- 40 MHz to 100 MHz models
- 2 analog channels
- Up to 1 GS/s sample rate on all channels
- 2.5 k standard record length on all channels
- Monochrome LCD display
- Advanced triggering
- 12 automated measurements
- FFT function standard on all models
- Context-sensitive help menu
- Probe Check Wizard
- Front panel USB host port for data storage
- Rear panel USB device port for PC connectivity and direct printing to a PictBridge® compatible printer
- National Instruments LabVIEW SignalExpress™ TE, Limited Edition included
- Lifetime Warranty*

* Limitations apply. For terms and conditions, visit www.tektronix.com/lifetimewarranty

TDS1000C-EDU Series Oscilloscopes

Performance you need at a price you can afford



Features

Benefits

Education Resource CD	Help your students master the use of an oscilloscope with the included classroom labs and resources.
Bright color display	See your waveform and measurement results at a distance, at an angle or under dim lighting with the bright, active color display.
Digital real-time sampling	Accurately capture signals with at least 10X over-sampling on all channels, all the time with Tektronix proprietary sampling technology.
Built-in analysis tools	Simplify analysis of your device with 16 automated measurements, FFT analysis, waveform math and cursors.
Help menu	Get the help you need – when and where you need it – with the built-in, context-sensitive help system.
Dedicated front-panel controls	Spend less time learning and more time on your task with easy-to-use front-panel controls.
Front-panel USB host port	Quickly store and transfer your waveforms and settings.
USB PC connectivity	Easily connect to a personal computer with the rear-panel USB device port; Use OpenChoice® software to log data and to simply document your results.
Direct Printing	Print your image directly to any PictBridge®-compatible printer to quickly document your lab results.

Simple to Learn, Easy to Operate



Conveniently store your data with the USB flash drive.

Featuring:

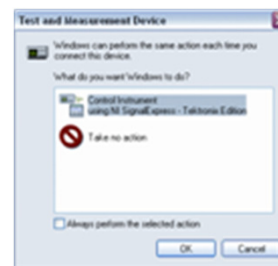
- 40 MHz to 100 MHz models
- 2 analog channels
- Up to 1 GS/s sample rate on all channels
- 2.5 k standard record length on all channels
- Advanced triggering
- 16 automated measurements
- Autoset button
- FFT function standard on all models
- Context-sensitive help menu
- Probe Check Wizard
- Front panel USB host port for data storage
- Rear panel USB device port for PC connectivity and direct printing to a PictBridge® compatible printer
- OpenChoice® PC Connectivity Software included
- Included Education Resource CD provides the tools you need to help your students master the use of an oscilloscope
- 3-Year Warranty

National Instruments LabVIEW SignalExpress™ Tektronix Edition

Seamless oscilloscope-to-pc connectivity

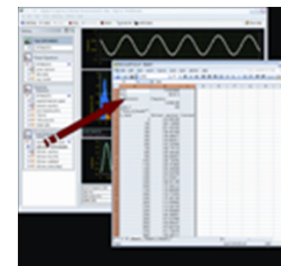
Feature	LE Version	Full Version
Instrument Control (Horz Vert Trig Pos)	✓	✓
Customizable Graphs and Interactive Cursors	✓	✓
Tektronix Instrument Support	MSO4000/DPO4000, MSO/DPO3000, MSO/DPO2000, AFG3000, TDS3000C, TDS1000B/TDS2000B, TDS1000/TDS2000, DMM4000	MSO4000/DPO4000, MSO/DPO3000, MSO/DPO2000, AFG3000, TDS3000C, TDS1000B/TDS2000B, TDS1000/TDS2000, DMM4000
Support for over 300 Common Benchtop Instruments	✓	✓
Data Logging	Basic	Advanced
pSpice, SPICE File Conversion from EDA Tools		✓
Drag & Drop Data into Microsoft Excel and Word	✓	✓
Advanced Analysis		Amplitude and Level, Timing and Transition, Histograms, Power Spectrum, Frequency Response, Distortion, Tone Extraction
Signal Processing		Software Filtering, Scalar/Waveform Math, Analog/Digital Conversion, Windowing, Scaling and Conversion
Automated Sweeping and Limit Testing		✓
NI LabVIEW Integration		✓
Model Number and Price	Included with: MSO/DPO4000, MSO/DPO3000, MSO/DPO2000, TDS1000B, TDS2000C, TDS3000C, DMM4000 and available for download at www.tek.com/signalexpress	SIGEXPTE

All prices are subject to change without notice. Please contact your local Tektronix representative.



Automatic Instrument Detection

Tektronix instruments equipped with USB device ports are instantly detected by Microsoft Windows.



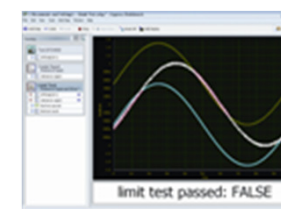
Save and Document Measurements

Print waveforms, save measurements to file, or simply drag the signal data to Microsoft Excel, Word, or WordPad.



Live Signal Processing and Analysis

More than 200 built-in functions, including time and frequency domain analysis, greatly reduce the need to perform tedious, off-line analysis.



Limit Testing

Use the Limit Test step to determine a pass or fail status based on predefined guard bands or custom waveform limits.