

2011 Bench Products

Test & Measurement Solutions

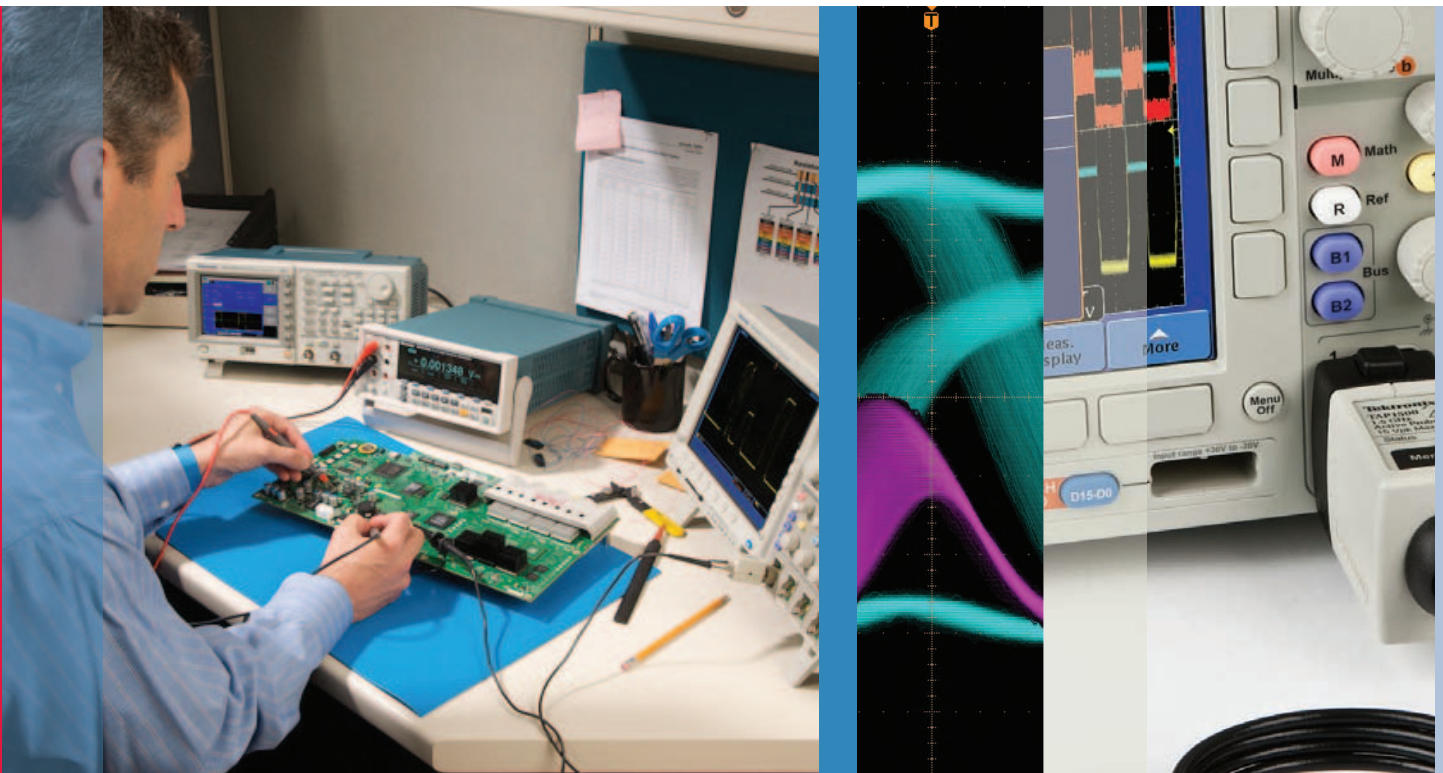
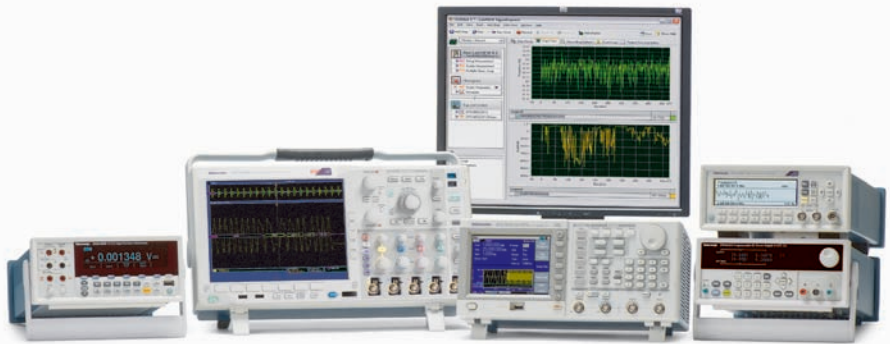


Table of Contents

Product Highlight.....	3
Oscilloscopes	4-7
Selection Guides	4, 6
Visit: www.tektronix.com/oscilloscopes	
Digital Multimeters	8
Selection Guide	8
Visit: www.tektronix.com/dmm	
Power Supplies	9
Selection Guide	9
Visit: www.tektronix.com/powersupply	
Frequency Counter/Timers	10
Selection Guide	10
Visit: www.tektronix.com/timercounter	
Signal Generators	11
Selection Guide	11
Visit: www.tektronix.com/signal_generators	
Probes and Accessories	12
Visit: www.tektronix.com/accessories	
Connect Your Bench	13
Service	14
Visit: www.tektronix.com/service	
Notes	15



Tektronix: The World's Standard in Oscilloscopes

8 out of 10 engineers around the world trust Tektronix to help them speed debug and test of tomorrow's designs. To complement our oscilloscopes, we offer a portfolio of bench instruments designed with the same ease-of-use you've come to expect from us over the last 65 years. From dedicated buttons for common functions to USB ports for saving data. Our instruments are designed to be quick to learn and simple to operate.

About Tektronix:

www.tektronix.com

For 65 years, engineers have turned to Tektronix for test, measurement and monitoring instrumentation to solve design challenges, improve productivity and dramatically reduce time to market. You can always count on us to give you the domain expertise, innovation, performance, practical advice and quality you need.

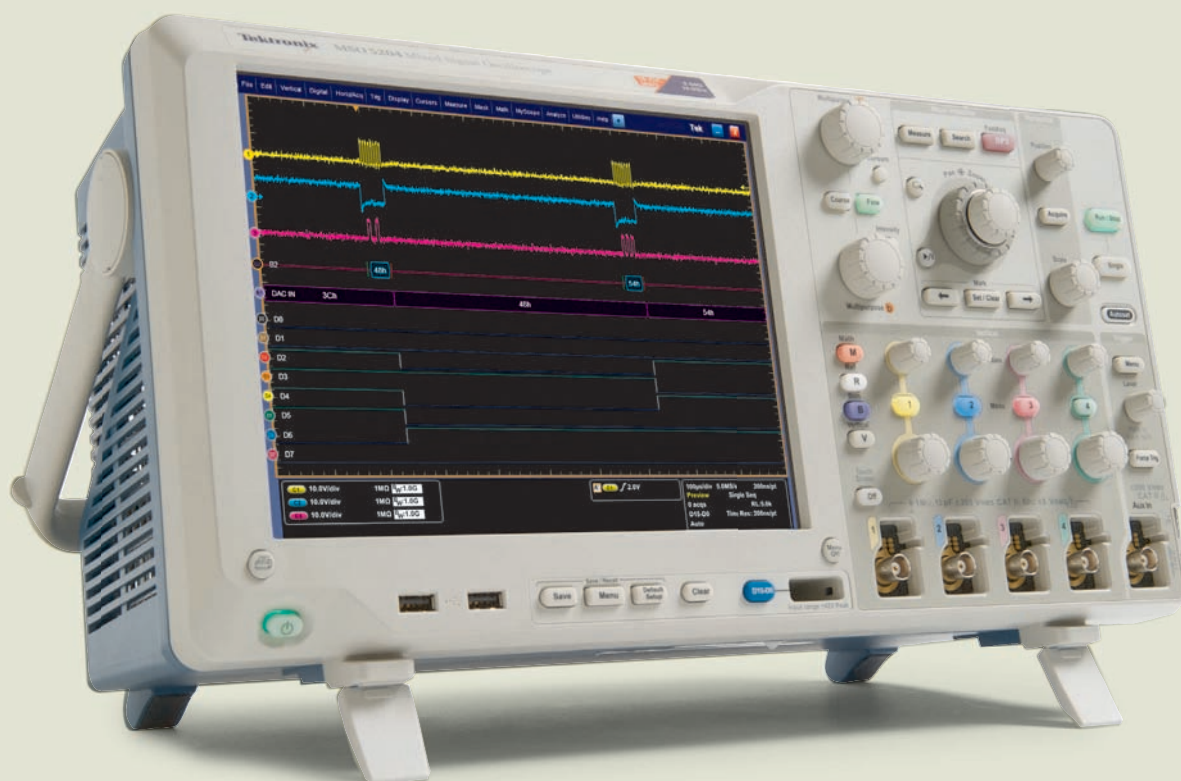
Tektronix offers a wide range of test and measurement solutions, from oscilloscopes and probes to signal generators and spectrum analyzers, with much more in between including our comprehensive line of bench instruments.

To see our full portfolio, please visit us at www.tektronix.com.

NEW! MSO/DPO5000 Series Mixed Signal Oscilloscopes

Feature-rich Tools for Mixed Signal Debug

Offering up to 2 GHz bandwidth and 10 GS/s sample rate, the MSO/DPO5000 Mixed Signal Oscilloscope Series features affordable, yet powerful Windows®-based models. With over 10 different application software packages available, you can test many different applications with a single instrument. Exclusive Tektronix features such as FastAcq with DPX® technology and a superior suite of triggers enable you to quickly find intermittent events that other oscilloscopes miss. Combine that with comprehensive analysis tools and innovative Wave Inspector® controls, the MSO/DPO5000 Series provides the feature-rich tools you need to simplify and speed debug of your complex design.



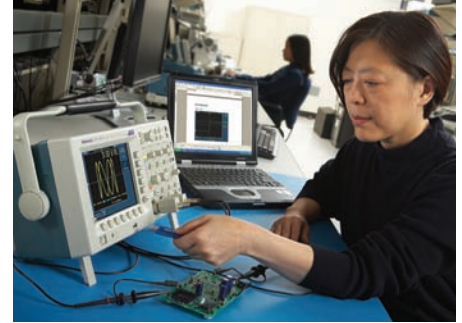
4 analog and 16 digital channels	Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
FastAcq with Digital Phosphor display	Quickly discover glitches and infrequent events with Tektronix proprietary FastAcq technology. A maximum capture rate of >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 your event.
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, USB 2.0.
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, memory and more.
Low-capacitance, passive voltage probes	Four probes with industry-best 4pF capacitive loading are included standard to ensure accurate measurements.



TDS2000C Series



TPS2000 Series



TDS3000C Series

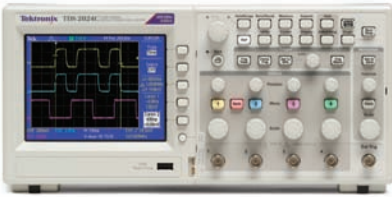
Basic Oscilloscopes Product Selection

To accurately visualize the intricate details of fast changing signals, you need an oscilloscope with uncompromised performance. Tektronix basic oscilloscopes feature digital real-time sampling with at least x5 over sampling on all channels, all the time, to precisely capture today's complex signals.

	TDS2000C	TPS2000	TDS3000C
Channels	2, 4	2, 4 (isolated)	2, 4
Bandwidth	50 MHz to 200 MHz	100 MHz to 200 MHz	100 MHz to 500 MHz
Sample Rate	500 MS/s to 2 GS/s	1 GS/s to 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, Extended Video*, Comm* *Optional
Optional Analysis	--	TPS2PWR1: Power Measurement and Analysis	TDS3AAM: Advanced Analysis TDS3LIM: Limit Testing TDS3SDI: 601 Serial Digital Video Analysis TDS3TMT: Telecom Mask Testing TDS3VID: HDTV and Custom Video Triggering
Connectivity	USB Host, USB Device, GPIB* *Optional	RS-232, Centronics, CompactFlash	USB Host, LAN (10Base-T Ethernet) Optional TDS3GV Module: GPIB, RS-232, and Video Out
Waveform Math and Analysis	16 Automated Measurements, Arithmetic Waveform Math, FFT, waveform limit testing, automated datalogging	11 Automated Measurements, Arithmetic Waveform Math, FFT	25 Automated Measurements, Arithmetic Waveform Math, FFT, Advanced Math* *Optional
Software	PC Communications Software: OpenChoice® Desktop, NI LabVIEW SignalExpress™ Tektronix Edition	PC Communications Software: OpenChoice® Desktop	PC Communications Software: OpenChoice® Desktop, NI LabVIEW SignalExpress™ Tektronix Edition
Battery Operation	--	One TPSBAT Battery Pack Included Standard	Requires Optional TDS3BATC Battery Pack
Applications	<ul style="list-style-type: none"> ■ Design and Debug ■ Education and Training ■ Manufacturing Test and Quality Control ■ Service and Repair 	<ul style="list-style-type: none"> ■ Portable Power Troubleshooting ■ Electronics Design and Installation ■ Automotive Electronics ■ Education 	<ul style="list-style-type: none"> ■ Design and Debug ■ Video Design and Service ■ Telecomm Mask Testing and Manufacturing ■ Manufacturing Test and Quality Control ■ Service and Repair

Probe Selector Tool: Find the best probe for your needs at: www.tektronix.com/probes

TDS2000C Series



Applications

- Design and debug
- Education and training
- Manufacturing test and quality control
- Service and repair

www.tektronix.com/tds2000

Features	Benefits
Digital real-time sampling	Accurately capture signals with at least 10X over-sampling on all channels, all the time.
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 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 plug-and-play PC connectivity	Simply transfer, analyze and document results with NI LabVIEW SignalExpress™ TE and Tektronix OpenChoice® Desktop software.
Lifetime Warranty*	Reduce your cost of ownership with the standard, Lifetime Warranty*.
Just 4.4 lbs (2 kg)	Easily transport from lab-to-lab with the lightweight and compact design.

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

Take the TDS2000C for a spin, right from your desk. Try the 360 degree interactive product demo at: www.tektronix.com/tds2000demo

TPS2000 Series



Applications

- Design and debug
- Industrial power design and debug
- Installation and maintenance
- Service and repair

www.tektronix.com/tps2000

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.

Try out the TPS2000 from your desk. Visit the 360 degree interactive product demo at: www.tektronix.com/tps2000/demo/

TDS3000C Series



Applications

- Design and debug
- Video design and development
- Manufacturing test and quality control
- Service and repair

www.tektronix.com/tds3000

Features	Benefits
Digital real-time sampling	Accurately capture signals with at least 5X over-sampling on all channels, all the time.
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.

Experience the TDS3000C. Try the 360 degree interactive product demo at: www.tektronix.com/tds3000c

Probe Selector Tool: Find the best probe for your needs at: www.tektronix.com/probes



MSO/DPO2000 Series



MSO/DPO3000 Series



MSO4000B Series

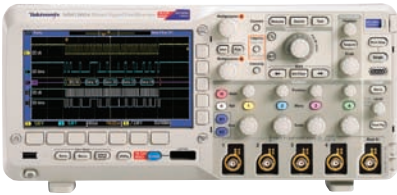
Bench Oscilloscopes Product Selection

With the MSO/DPO Series of bench oscilloscopes, you can analyze analog and digital signals with a single instrument. Combine that with automated serial and parallel bus analysis, innovative Wave Inspector® controls for rapid waveform navigation, and automated power measurements, and the MSO/DPO Series provides the feature-rich tools you need to simplify and speed debug of your complex design.

	MSO/DPO2000	MSO/DPO3000	MSO/DPO4000B
Channels	2, 4 analog channels; 16 digital channels	2,4 analog channels; 16 digital channels	4 analog channels; 16 digital channels
Bandwidth	100 MHz and 200 MHz	100 MHz to 500 MHz	350 MHz to 1 GHz
Sample Rate	1 GS/s (analog); 1 GS/s (digital, only 1 pod) 500 MS/s (digital, both pods)	2.5 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	1 M points	5 M points	20 M points
Trigger Types	Edge, Logic, Pulse Width, Runt, Set-up and Hold, Rise/Fall Time, Video, I²C*, SPI*, CAN*, LIN*, RS-232/422/485/UART*, Parallel (MSO2000) *Optional	Edge, Sequence, Logic, Pulse Width, Runt, Set-up and Hold, Rise/Fall Time, Video, Extended Video*, I²C*, SPI*, CAN*, LIN*, RS-232/422/485/UART*, I²S/LJ/RJ/TDM*, Parallel (MSO3000) *Optional	Edge, Sequence, Logic, Pulse Width, Runt, Set-up and Hold, Rise/Fall Time, Video, Extended Video*, I²C*, SPI*, USB*, Ethernet*, CAN*, LIN*, FlexRay*, RS-232/422/485/UART*, I²S/LJ/RJ/TDM*, MIL-STD-1553*, Parallel (MSO4000) *Optional
Optional Serial Bus Decode and Analysis	DPO2AUTO: CAN and LIN DPO2COMP: RS-232/422/485/UART DPO2EMBD: I²C, SPI	DPO3AUDIO: I²S, LJ, RJ, TDM DPO3AUTO: CAN and LIN DPO3COMP: RS-232/422/485/UART DPO3EMBD: I²C, SPI	DPO4AERO: MIL-STD-1553 DPO4AUDIO: I²S, LJ, RJ, TDM DPO4AUTO: CAN and LIN DPO4AUTOMAX: CAN, LIN and FlexRay DPO4COMP: RS-232/422/485/UART DPO4EMBD: I²C, SPI DPO4ENET: Ethernet DPO4USB: USB
Connectivity	USB Host, USB Device, GPIB* Optional DPO2CONN Module: LAN (10/100 Base-T Ethernet) and Video Out *Optional	USB Host, USB Device, LAN (10/100 Base-T Ethernet), Video Out, GPIB* *Optional	USB Host (x2), USB Device, LAN (10/100 Base-T Ethernet), Video Out, GPIB* *Optional
Waveform Math and Analysis	29 Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT	29 Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics Optional: DPO3PWR: Power Analysis DPO3VID: HDTV and Custom Triggering	41 Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Waveform Histograms Optional: DPO4LMT: Limit and Mask Testing DPO4PWR: Power Analysis DPO4VID: HDTV and Custom Triggering
Software	PC communications software: OpenChoice® Desktop, NI LabVIEW Signal Express™ Tektronix Edition	PC Communications Software: OpenChoice® Desktop, NI LabVIEW Signal Express™ Tektronix Edition	PC Communications Software: OpenChoice® Desktop, NI LabVIEW Signal Express™ Tektronix Edition
Applications	<ul style="list-style-type: none"> ■ Mixed Signal Design and Debug ■ Embedded Design and Debug ■ Investigation of Transient Phenomena ■ Automotive Electronics ■ Manufacturing Test and Quality Control 	<ul style="list-style-type: none"> ■ Mixed Signal Design and Debug ■ Embedded Design and Debug ■ Investigation of Transient Phenomena ■ Video Design and Debug ■ Automotive Electronics ■ Manufacturing Test and Quality Control 	<ul style="list-style-type: none"> ■ Mixed Signal Design and Debug ■ Embedded Design and Debug ■ Investigation of Transient Phenomena ■ Video Design and Debug ■ Automotive Electronics ■ Manufacturing Test and Quality Control

Probe Selector Tool: Find the best probe for your needs at: www.tektronix.com/probes

MSO/DPO2000 Series



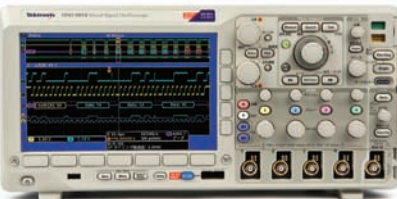
Applications

- Design and debug of embedded systems
- Investigation of transient phenomena
- Visualization of signals masked by noise

www.tektronix.com/mso2000

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.

MSO/DPO3000 Series



Applications

- Design and debug of embedded systems
- Investigation of transient phenomena
- Power supply design and analysis

www.tektronix.com/mso3000

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 greater than 50,000 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, 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.

MSO/DPO4000B Series



Applications

- Design and debug of embedded systems
- Investigation of transient phenomena
- Power supply design and analysis

www.tektronix.com/mso4000

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 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 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, I ² S/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

Try the Tektronix Bench Oscilloscopes for yourself. With interactive product controls and 360 degree product views. Simply go to: www.tektronix.com/mso4000

Probe Selector Tool: Find the best probe for your needs at: www.tektronix.com/probes

Digital Multimeters Product Selection

	DMM4050	DMM4040	DMM4020
Resolution	6.5 digit	6.5 digit	5.5 digit
Basic V_{dc} Accuracy	Up to 0.0024%	Up to 0.0035%	Up to 0.015%
Measurements	V ac, V dc, I ac, I dc, Resistance, Continuity, Diode, Frequency, Period, Temperature, Capacitance	V ac, V dc, I ac, I dc, Resistance, Continuity, Diode, Frequency, Period	V ac, V dc, I ac, I dc, Resistance, Continuity, Diode, Frequency
Analysis Modes	Trend Plot, Statistics, Histogram	Trend Plot, Statistics, Histogram	Limit Compare
Connectivity	Front panel: USB host Rear panel: RS-232, RS-232 to USB adapter included, IEEE-488 and Ethernet PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition	Front panel: USB host Rear panel: RS-232, RS-232 to USB adapter included, IEEE-488 and Ethernet PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition	Rear panel: RS-232, RS-232 to USB adapter included PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition

DMM4050/DMM4040 Series



Applications

- Design and debug of embedded systems
- Automated Test
- Education

www.tektronix.com/dmm4050

Features

Benefits

6.5 digit resolution	Precisely measure volts, ohms and amps with a basic V dc accuracy of up to 0.0024%.
Frequency, period, capacitance* and temperature* measurements	Save cost and bench space by replacing a multifunction DMM, counter, capacitance meter, and temperature meter with one versatile instrument.
Patented split terminal jacks	Make 4-wire resistance measurements with just two leads.
Trend Plot™ paperless recorder mode	Plot measurement trends and graphically identify the extent of drift and intermittent events.
Histogram mode	Discover stability or noise problems by viewing results as a histogram.
Statistics mode	View multiple statistical values such as average, min, max and standard deviation to see how your signal is changing.
Dual display	Measure two different parameters of the same signal from one test connection.
Single button for every function	Reduce set up and evaluation time with dedicated front-panel buttons to access frequently used functions and parameters.
USB host port	Conveniently store data and user settings to USB memory devices using the front-panel port.
PC connectivity	Easily connect to a personal computer with multiple interface ports; Use NI LabVIEW SignalExpress™ software to control your DMM, log data, and to simply transfer and document your results.

DMM4020 Series



Applications

- Design and debug of embedded systems
- Automated Test
- Education
- Manufacturing test and quality control

www.tektronix.com/dmm4020

Features

Benefits

5.5 digit resolution	Measure volts, ohms and amps with a basic V dc accuracy of 0.015%.
Frequency measurements	Save cost and bench space by replacing a multifunction DMM and counter with one instrument.
DC leakage current measurements	Make sensitive low current measurements with 1 nA resolution.
Patented split terminal jacks	Make 4-wire resistance measurements with just two leads.
Dual display	Measure two different parameters of the same signal from one test connection.
Limit compare mode	Eliminate mistakes with pass/fail indicators that clearly show if a test passes or fails.
Six setup buttons	Simplify complex measurements by saving the setup to a dedicated, front-panel button. Next time, simply press the appropriate setup button.
Single button for every function	Reduce set up and evaluation time with dedicated front-panel buttons to access frequently used functions and parameters.
PC connectivity	Easily connect to a personal computer using RS-232 or USB; Use NI LabVIEW SignalExpress™ software to control your DMM, log data, and to simply transfer and document your results.

See how easy it is to use a DMM, try out the virtual demo right from your desk, visit: www.tektronix.com/dmm

Power Supplies Product Selection

	PWS2000	PWS4000
Output Voltage/Current	<ul style="list-style-type: none"> ■ 18V/5A ■ 32V/3A ■ 32V/6A ■ 72V/1.5A 	<ul style="list-style-type: none"> ■ 20V/5A ■ 30V/5A ■ 32V/3A ■ 60V/2.5A ■ 72V/1.2A
Basic Accuracy	<ul style="list-style-type: none"> ■ 0.05% Voltage ■ 0.2% Current 	<ul style="list-style-type: none"> ■ 0.03% Voltage ■ 0.05% Current
Ripple and Noise	Less than 3 mV _{pp}	Less than 5 mV _{pp}
Features	<ul style="list-style-type: none"> ■ 20 Setup Memories ■ User-defined Password Lock Out 	<ul style="list-style-type: none"> ■ 40 Setup Memories ■ Adjustable Overvoltage Protection ■ User-defined Password Lock Out ■ Remote Sense ■ List Mode
Connectivity	--	Rear panel: USB device port PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition

PWS2000 Series



Applications

- Design and debug of embedded systems
- Education

www.tektronix.com/pws2000

Features

- Linear regulation
- Better than 0.05% basic voltage accuracy
- Up to 72 V Output Voltage
- Maximum Voltage Setting
- 20 setup memories
- Numeric keypad
- Bright display
- User-definable password

Benefits

- Deliver clean power - with less than 3 mV_{pp} ripple and noise - to your device.
- Be confident in your power supply's output value with 0.05% voltage and 0.2% current basic accuracy.
- Generate the power you need for a wide variety of applications with a single power supply.
- Constrain the voltage setting to an appropriate level for your device under test.
- Simplify complex tests by saving your setup to an internal setup memory. Next time, simply recall that setting.
- Quickly set precise voltage and current values with the direct-entry keypad.
- See your power supply's display at a distance, at an angle, or under dim lighting conditions.
- Prevent unwanted adjustments during critical tests by locking the front panel of your power supply.

PWS4000 Series



Applications

- Design and debug of embedded systems
- Automated test
- Education
- Manufacturing test and quality control

www.tektronix.com/pws4000

Features

- Linear regulation
- Better than 0.03% basic voltage accuracy
- Up to 72 V Output Voltage
- Overvoltage Protection (OVP) and maximum voltage setting
- Remote sense inputs
- List mode
- 40 setup memories
- Numeric keypad
- Bright display
- User-definable password
- PC Connectivity

Benefits

- Deliver clean power - with less than 5 mV_{pp} ripple and noise - to your device.
- Be confident in your power supply's output value with 0.03% voltage and 0.05% current basic accuracy.
- Generate the power you need for a wide variety of applications with a single power supply.
- Protect your device under test from accidental damage with integrated OVP circuit and microprocessor-controlled maximum voltage setting.
- Deliver accurate voltage to your device under test by eliminating the effect of voltage drop in your lead wires.
- Define up to 7 custom test sequences, each with up to 80 voltage and current steps, with the built-in list mode.
- Simplify complex tests by saving your setup to an internal setup memory. Next time you need to run the test, simply recall that setting.
- Quickly set precise voltage and current values with the direct-entry keypad.
- See your power supply's meter readings and limits with a single glance; a bright display provides excellent readability.
- Prevent unwanted adjustments during critical tests by locking the front panel of your power supply.
- Easily connect to a personal computer using the USB device port; Use your preferred programming environment or included NI LabVIEW SignalExpress software to control your power supply remotely.

Try out the Tektronix power supplies with the virtual simulation at:
www.tektronix.com/powersupply

Frequency Counter/Timers Product Selection

	FCA3000	FCA3100	MCA3000
Frequency Range	400 MHz, 3 GHz, 20 GHz	400 MHz, 3 GHz, 20 GHz	27 GHz, 40 GHz
Resolution	<ul style="list-style-type: none"> 100 ps (time) 12 digits/s (freq) 	<ul style="list-style-type: none"> 50 ps (time) 12 digits/s (freq) 	<ul style="list-style-type: none"> 100 ps (time) 12 digits/s (freq)
Data Transfer	<ul style="list-style-type: none"> 250 k Samples/sec (internal) 5 k Samples/sec (block) 	<ul style="list-style-type: none"> 250 k Samples/sec (internal) 15 k Samples/sec (block) 	<ul style="list-style-type: none"> 250 k Samples/sec (internal) 5 k Samples/sec (block)
Measurements	13 Automated Measurements Frequency, Period, Ratio, Time Interval, Time Interval Error, Pulse Width, Rise/Fall Time, Phase Angle, Duty Cycle, V_{max} , V_{min} , V_{p-p}	14 Automated Measurements Frequency, Period, Ratio, Time Interval, Time Interval Error, Pulse Width, Rise/Fall Time, Phase Angle, Duty Cycle, V_{max} , V_{min} , V_{p-p} , Totalize	13 Automated Measurements Frequency, Period, Ratio, Time Interval, Time Interval Error, Pulse Width, Rise/Fall Time, Phase Angle, Duty Cycle, V_{max} , V_{min} , V_{p-p} + Integrated Power Meter
Analysis Modes	Trend Plot, Measurement Statistics, Allan Deviation, Histogram	Trend Plot, Measurement Statistics, Allan Deviation, Histogram	Trend Plot, Measurement Statistics, Allan Deviation, Histogram
Connectivity	Rear panel: USB device port, GPIB PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition	Rear panel: USB device port, GPIB PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition	Rear panel: USB device port, GPIB PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition

FCA3000/31000 Series



Applications

- Design and debug of embedded systems
- Design and manufacturing of oscillators
- Education
- Automated test
- Manufacturing test and quality control

www.tektronix.com/fca3000

Features

12 digit/s frequency resolution

Down to 50 ps time resolution

Trend Plot mode

Histogram mode

Statistics mode

Optional TimeView™ software

USB and GPIB ports

PC Connectivity

Benefits

See small changes in frequency with industry-leading frequency resolution.

Accurately capture signal details with industry-leading single-shot time resolution.

Plot measurement trends and graphically identify the extent of drift and intermittent events.

Discover stability or noise problems by viewing results as a histogram.

View multiple statistical values such as average, min, max, standard and Allan deviation to see how your signal is changing.

Transform your counter/timer into a modulation domain analyzer and see frequency changes over time to truly characterize your device's performance.

Easily connect to a personal computer for further analysis or into an ATE system with the back-panel USB and GPIB ports; an emulation mode for legacy counter/timers further simplifies integrating into an existing ATE system.

Control your counter/timer, log data, and simply transfer and document your results with the included copy of NI LabVIEW SignalExpress software.

MCA Series



Applications

- Design and debug of embedded systems
- Design and manufacturing of oscillators
- Automated test
- Manufacturing test and quality control

www.tektronix.com/mca3000

Features

12 digit/s frequency resolution

100 ps time resolution

Trend Plot mode

Histogram mode

Statistics mode

Integrated power meter

Optional TimeView™ software

USB and GPIB ports

PC Connectivity

Benefits

See small changes in frequency with industry-leading frequency resolution.

Accurately capture signal details with industry-leading single-shot time resolution.

Plot measurement trends and graphically identify the extent of drift and intermittent events.

Discover stability or noise problems by viewing results as a histogram.

View multiple statistical values such as average, min, max, standard and Allan deviation to see how your signal is changing.

Measure frequency and power with a single connection, enabling you to analyze variations in signal power with 0.01 dBm resolution @ 100 ms acquisition time

Transform your counter/timer into a modulation domain analyzer and see frequency changes over time to truly characterize your device's performance.

Easily connect to a personal computer for further analysis or into an ATE system with the back-panel USB and GPIB ports; an emulation mode for legacy counter/timers further simplifies integrating into an existing ATE system.

Control your counter/timer, log data, and simply transfer and document your results with the included copy of NI LabVIEW SignalExpress software.

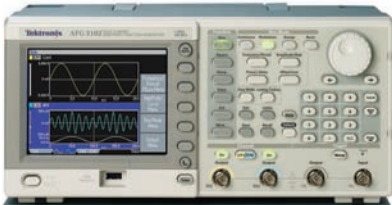
Test the Tektronix frequency counter/timers with the virtual simulation at:
www.tektronix.com/frequencycounter

Signal Generators

AFG3000 Series

Bandwidth	240 MHz, 100 MHz, 25 MHz, 10 MHz				
Channels	1 or 2 (independent or synchronized)				
Memory Depth	128 k points				
Standard Waveforms	Sine Gaussian Haversine	Sine(x)/x Pulse Exponential Decay	Square Lorentz Exponential Rise	DC Noise	Ramp Arbitrary
Modulation	AM, FM, PM, FSK, PWM, External				
Additional Modes	Sweep, Burst, Add Noise Impairment				
Connectivity	Front panel: USB host Rear panel: USB device, LAN, GPIB PC communications software: NI LabVIEW SignalExpress™ Tektronix Edition				

AFG3000 Series



Applications

- Replicate sensor signals or other missing system inputs
- Device stress testing
- Electronic design optimization
- Power semiconductor device test
- I/Q modulator test

www.tektronix.com/afg3000

Features

- Dual-channel models
- Up to 2 GS/s sample rate
- Up to 20 Vp-p amplitude into 50 Ω load (AFG3011)
- 25 shortcut keys
- Large 5.6" (142 mm) color display
- Only 6.6" (168 mm) deep
- ArbExpress™ software

Benefits

- Save cost and bench space by replacing two signal generators with one that offers two tightly synchronized or two completely independent signals.
- Generate waveforms with fine timing resolution.
- Save cost and set-up time by creating high amplitude signals without using an external power amplifier.
- Reduce set up and evaluation time with direct access to frequently used functions and parameters.
- Full confidence in your signal since all relevant settings and waveform graphs can be seen at a single glance. (Monochrome on AFG3021B).
- Free up valuable bench-top space.
- Create and modify waveforms with ease - import waveforms seamlessly from your Tektronix oscilloscope or create them via the equation editor, free hand, point draw or waveform math.

Try out the AFG3000 from your desk. Visit the 360 degree interactive product demo at: www.tektronix.com/afg3000

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.



Active Probes - TAP Series shown.



Current Probes - TCP Series shown.



Differential Probes - TDP Series shown.

Active Probes

- Bandwidth up to 4 GHz
- True signal reproduction and fidelity
- Low input capacitances: < 0.5 pF
- Small Compact Probe Heads for Probing small geometry circuit elements

Current Probes

- Easy to use and accurate AC/DC current measurements
- DC up to 2 GHz
- Amplitude measurements from 1 mA to 20,000 A
- Split core and solid core construction

Differential Probes

- Bandwidth up to 20 GHz
- Easily measure differential signals
- Low input capacitances: < 0.3 pF
- High common mode rejection ratio (CMRR)
- Wide range of probe tips for easier circuit access



Passive Probes



High Voltage Probes



Passive Probes

- DC to 500 MHz
- Wide range of performance to meet the demands of many applications
- Lightweight, ergonomic designs to fit your needs
- Wide range of probe tips for easier circuit access

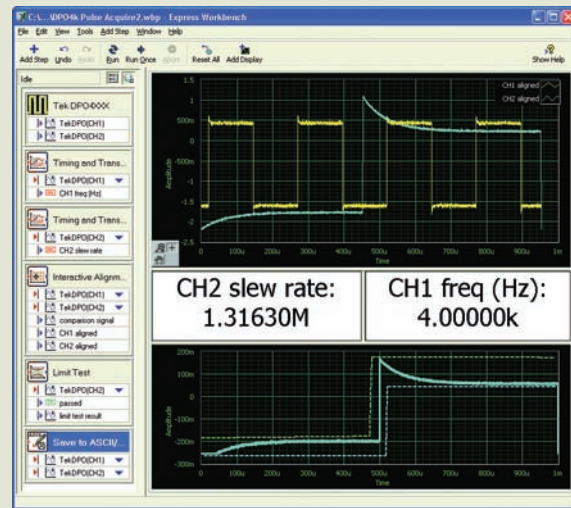
High Voltage Probes

- Wide range of voltage measurements - Up to 40 kV peak (100 ms pulse)
- Single-ended or differential

Carry Cases

- Soft- and hard-sided cases available

Probe Selector Tool: Find the best probe for your needs at: www.tektronix.com/probes



Connect Your Test Bench

with Limited Tektronix Edition of National Instruments LabVIEW SignalExpress™

To simplify your most complicated tasks, connect your test bench with the Limited Tektronix Edition of LabVIEW SignalExpress™ from National Instruments, included standard with Tektronix bench instruments*. Control your Tektronix instruments right from your PC. Automate measurements and analyze data across multiple instruments. Capture and save results. Create reports. All from one intuitive software package.

The optional Professional Version of SignalExpress (SIGEXPTE) offers over 200 built-in functions for extended analysis including time and frequency domain analysis, limit testing, advanced data logging and customizable reports.

To experience the Tektronix Edition of SignalExpress, view our virtual demo and download your free copy of the software at: www.tektronix.com/signalexpress.

* For a list of qualifying instruments, visit: www.tektronix.com/signalexpress.

Your Tektronix Service Advantage

Tektronix bench instruments come standard with at least a 3-year warranty covering all parts and labor*. Tektronix offers a range of repair and calibration plans to extend your coverage and keep your instrument operating at optimal performance.

*Excludes probes.

■ Tektronix Factory Experts

Access to the engineering expertise that designed and built your products to ensure they are in peak performance. Over 20 man years of training per support engineer.

■ Comprehensive and Thorough Treatment

Software updates, safety and reliability modifications, and cosmetic enhancements are included if applicable. Products are returned to you in a "like new" condition. Worldwide support is available through the Tektronix network.

■ Efficiency and Convenience

Team of professionals focused on getting your instruments back to you as soon as possible to keep your downtime to a minimum and your service management easy.

■ Flexible Repair and Calibration Service

Choice of cost effective, flexible options and service packages to meet your needs.

For further details visit:
www.tektronix.com/service



Summary of Service Plans

Repair Service Extended Coverage	Calibration Service Coverage	Multi-Vendor Calibration Services	High Availability Service Plan
<ul style="list-style-type: none"> ■ Save money with multi-year coverage ■ Priority service ■ Covers equipment, parts, labor and transportation ■ Applicable software, safety and reliability updates 	<ul style="list-style-type: none"> ■ Accredited calibration ■ Traceable calibration ■ Functional verification ■ Applicable software, safety and reliability updates ■ Calibration records retention 	<ul style="list-style-type: none"> ■ Single point of contact for all of your calibration needs ■ Simplify your operations and reduce administrative costs ■ On-site delivery for convenience and reduced downtime 	<ul style="list-style-type: none"> ■ Identically configured dedicated spare products ■ Flexible contract duration and payment terms ■ Priority access to technical support

Also available:

Test and Measurement Catalog

Key product highlights and specifications for the entire suite of Tektronix test solutions.



To download a copy, please visit: www.tektronix.com/catalog

Contact Tektronix:

- ASEAN / Australasia (65) 6356 3900
- 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 and the 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
- Italy* 00800 2255 4835
- Japan 81 (3) 6714-3010
- Luxembourg +41 52 675 3777
- Mexico, Central/South America & Caribbean 52 (55) 56 04 50 90
- Middle East, Asia and North Africa +41 52 675 3777
- The Netherlands* 00800 2255 4835
- Norway 800 16098
- People's Republic of China 400-820-5835
- Poland +41 52 675 3777
- Portugal 80 08 12370
- Republic of Korea 001-800-8255-2835
- Russia & CIS +7 (495) 7484900
- South Africa +27 11 206 8360
- Spain* 00800 2255 4835
- Sweden* 00800 2255 4835
- Switzerland* 00800 2255 4835
- Taiwan 886 (2) 2722-9622
- United Kingdom & Ireland* 00800 2255 4835
- USA 1 (800) 833-9200

* If the European phone number above is not accessible, please call +41 52 675 3777

Contact List Updated 10 February 2011

For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tektronix.com

Copyright © 2011, Tektronix. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

03/11 EA/WWW
TEK0544

48W-25025-5

