

2011 Product Catalog

Test & Measurement Solutions

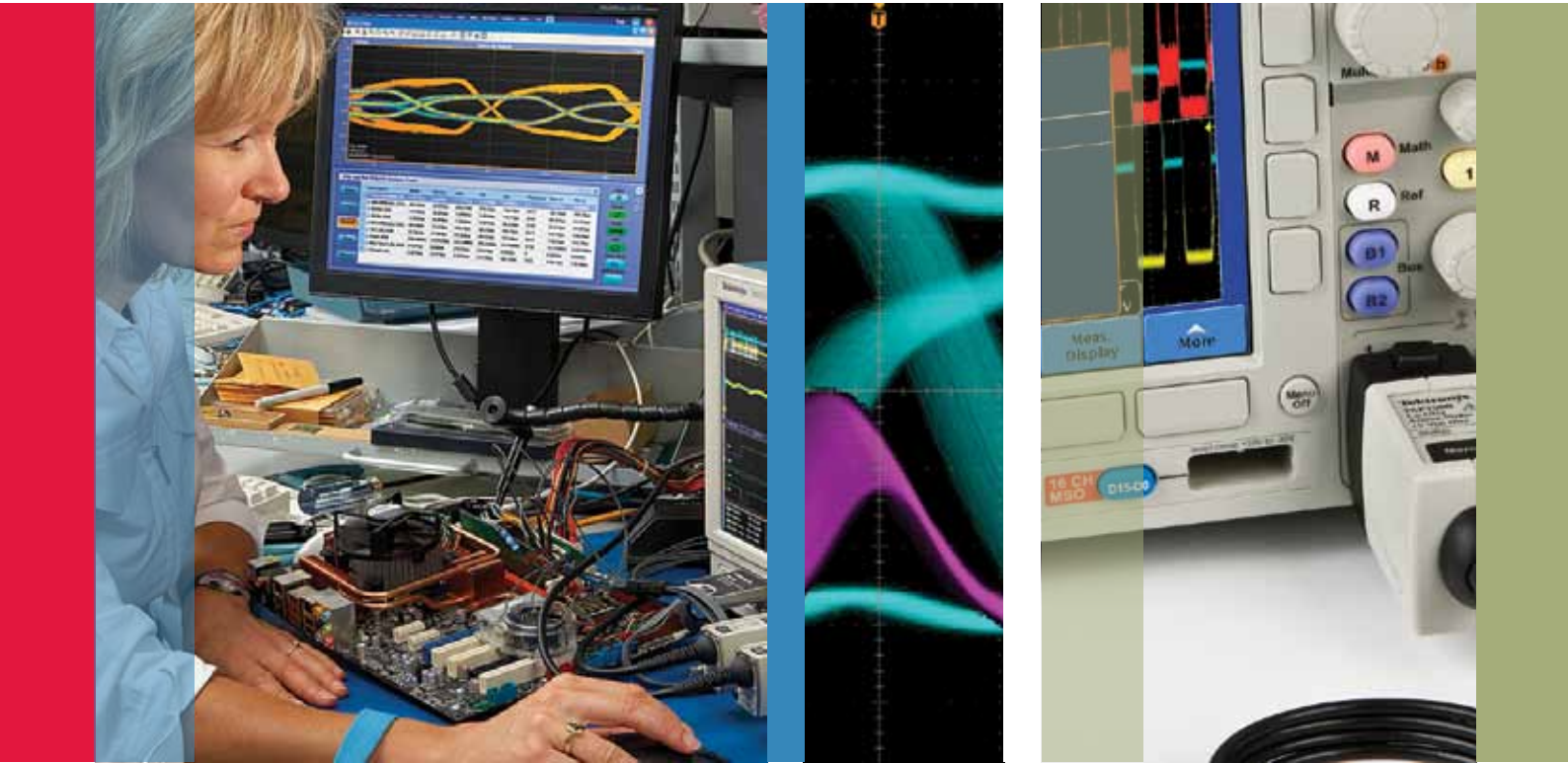


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Tektronix: The World's Standard in Oscilloscopes

8 out of 10 engineers around the world trust Tektronix to help them speed debug and test of tomorrow's designs. With the broadest portfolio of scopes available, the richest set of product features, the most extensive analysis capability and our award-winning service and support, Tektronix has the right oscilloscope to meet your need. Innovators like you, committed to using the best, have made Tektronix the dominant provider of oscilloscopes around the world for more than 60 years.

- Basic Oscilloscopes for lowest cost signal visualization and troubleshooting.
- Bench Oscilloscopes up to 1 GHz bandwidth for debug and analysis of embedded system designs with analog, digital, and serial signals.
- Performance Oscilloscopes for analysis, characterization and automated compliance test of 1st and 2nd generation serial data standards, memory and RF devices including up to 20 GHz bandwidth for 3rd generation serial data standards and the fastest optical and electrical technologies.

Tektronix Online:

www.tektronix.com

Tektronix website is a reliable resource for the latest information on products, application and technology solutions, with online selection tools to guide you to the appropriate product to fulfill your need. You will also find a library of educational materials to help you master the challenges of your application and get the best out of your tools, including Primers, How-To Videos and Webinars.

Technical Content

Enhance your understanding of technology, application and product with the latest resources covering fundamentals and advanced topics.

www.tektronix.com/techpapers

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- Webinars

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Product Demos

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Webinars

Learn the latest tips and tricks to address your application challenges.

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Videos

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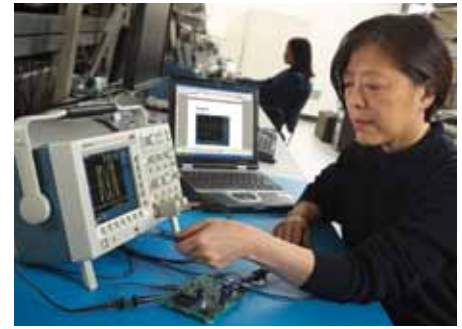
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TDS2000C Series



TPS2000 Series



TDS3000C Series

Basic Oscilloscope 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 oversampling on all channels, all the time, to precisely capture today's complex signals.

	TDS1000B	TDS2000C	TPS2000	TDS3000C
Channels	2	2, 4	2, 4 (isolated)	2, 4
Bandwidth	40 MHz to 100 MHz	50 MHz to 200 MHz	100 MHz to 200 MHz	100 MHz to 500 MHz
Rise Time	8.4 ns to 3.5 ns	7.0 ns to 2.1 ns	3.5 ns to 2.1 ns	3.5 ns to 700 ps
Sample Rate	500 MS/s to 2 GS/s	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	2.5 k points	10 k points
Trigger Types	Edge, Pulse (width), Video	Edge, Pulse (width), Video	Edge, Pulse (width), Video	Edge, Logic (Pattern, State), Pulse (Glitch, Width, Runt, Slew Rate), Video, Extended Video*, Comm* *Optional
Connectivity	USB Host, USB Device, GPIB* *Optional	USB Host, USB Device, GPIB* *Optional	RS-232, Centronics, Compact-Flash	USB Host, LAN (10Base-T Ethernet), GPIB*, RS-232*, Video Out* *Optional
Waveform Math and Analysis	12 Automated Measurements, Arithmetic Waveform Math, FFT	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, NI LabVIEW SignalExpress™ Tektronix Edition	PC Communications Software: OpenChoice® Desktop	PC Communications Software: OpenChoice® Desktop, NI LabVIEW SignalExpress™ Tektronix Edition
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"> ■ 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

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



MSO/DPO2000 Series



MSO/DPO3000 Series



MSO/DPO4000B Series

Bench Oscilloscope 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
Rise Time	3.5 ns to 2.1 ns	3.5 ns to 700 ps	1 ns to 350 ps
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, I ² C*, 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*, I ² C*, SPI*, CAN*, LIN*, RS-232/422/485/UART*, I ² S/LJ/RJ/TDM*, Parallel (MSO3000) *Optional	Edge, Sequence, Logic, Pulse Width, Timeout, Runt, Set-up and Hold, Rise/Fall Time, Video, Extended Video*, I ² C*, SPI*, USB*, Ethernet*, CAN*, LIN*, FlexRay*, RS-232/422/485/UART*, I ² S/LJ/RJ/TDM*, MIL-STD-1553*, Parallel (MSO4000B) *Optional
Optional Serial Bus Decode and Analysis	DPO2AUTO: CAN and LIN DPO2COMP: RS-232/422/485/UART DPO2EMBD: I ² C, SPI	DPO3AUDIO: I ² S, LJ, RJ, TDM DPO3AUTO: CAN and LIN DPO3COMP: RS-232/422/485/UART DPO3EMBD: I ² C, SPI	DPO4AERO: MIL-STD-1553 DPO4AUDIO: I ² S, LJ, RJ, TDM DPO4AUTO: CAN and LIN DPO4AUTOMAX: CAN, LIN and FlexRay DPO4COMP: RS-232/422/485/UART DPO4EMBD: I ² C, SPI DPO4ENET: Ethernet DPO4USB: USB
Connectivity	USB Host, USB Device, GPIB*, LAN (10/100-Base-T Ethernet)*, Video Out* *Optional	USB Host, USB Device, LAN (10/100 Base-T Ethernet), Video Out, GPIB* *Optional	USB Host (x2), USB Device, LAN (10/100/1000 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, Power Analysis* *Optional	41 Automated Measurements, Waveform and Screen Cursors, Arithmetic Waveform Math, FFT, Advanced Math, Measurement Statistics, Waveform Histograms, Limit and Mask Testing*, Power Analysis* *Optional
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 ■ Power Measurements ■ 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 ■ Power Measurements ■ Video Design and Debug ■ Automotive Electronics ■ Manufacturing Test and Quality Control

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DPO7000 Series



MSO70000 Series

Performance Oscilloscope Product Selection

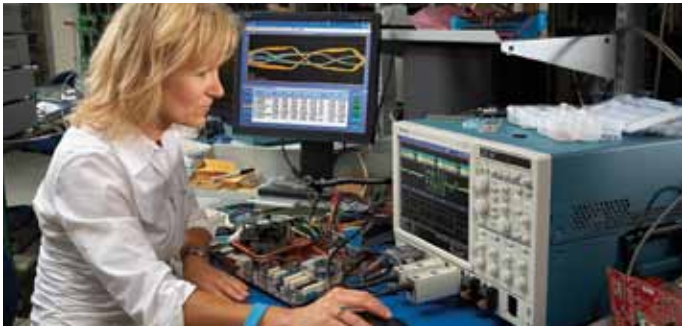
Tektronix Performance Oscilloscopes contain the analysis tools needed to speed up critical Serial and RF Design verification & debugging. The DPO/DSA Performance Oscilloscopes and MSO Mixed Signal Oscilloscopes have access to many different analysis and debugging packages.

	MSO/DPO5000	DPO7000
Channels	4 (+ 16 Digital with MSO5000)	4
Bandwidth	350 MHz - 2 GHz	500 MHz to 3.5 GHz
Rise Time	175 ps to 1 ns	95 ps to 310 ps
Sample Rate	Up to 10 GS/s	Up to 40 GS/s
Max Record Length	Up to 250 M	Up to 500 M
Trigger Types	Edge, Logic (Pattern State/Setup/Hold), Pulse (Glitch, Width, Runt, Timeout, Transition), I ² C*, SPI*, RS-232/422/485/UART*, USB (Low, Full, High)* *Optional	Pinpoint Triggering, Edge, Logic (Pattern State/Setup/Hold), Pulse (Glitch, Width, Runt, Timeout, Transition), Comm*, Serial Pattern*, I ² C, SPI, RS-232, CAN* *Optional
Connectivity	USB, LAN (10/100/1000 Base-T Ethernet), Open Access to Windows Platform	RS-232, GPIB, Centronic, LAN (10/100/1000 Base-T Ethernet), Open Access to Windows Platform, USB Host, CD-RW/DVD-R
Waveform Math and Analysis	Advanced Waveform Math, FFT, 53 Automated Measurements, Measurement Statistics, Waveform Histograms, Jitter Essentials, Compatability with Windows Analysis and Productivity Software	Advanced Waveform Math, FFT, 53 Automated Measurements, Measurement Statistics, Waveform Histograms, Jitter Essentials, Compatability with Windows Analysis and Productivity Software
Software see pages 26-31	DPOJET, PWR, ET3, USB2, VNM, DDRA, MTM, SR-EMBD, SR-COMP, SR-USB	DPOJET, PWR, SignalVu™, CPM2, DDM, ET3, JIT3, PTD, USB2, DDRA, LSA, MTM, UWB, SVE, SVP, SVM
Applications	<ul style="list-style-type: none"> ■ Signal Integrity, Jitter, and Timing Analysis ■ Verification, Debug and Characterization of Sophisticated Designs ■ Long Record Search and Mark ■ Limit and Mask Testing ■ Identify and trigger on DDR read and writes ■ Debugging and Compliance Testing of Serial Data Streams for Telecom and Data Industry Standards ■ Investigation of Transient Phenomena ■ Power Measurements and Analysis ■ Spectral Analysis ■ Ethernet and USB 2.0 Compliance Testing ■ Radar/EW 	<ul style="list-style-type: none"> ■ Signal Integrity, Jitter, and Timing Analysis ■ Verification, Debug and Characterization of Sophisticated Designs ■ Long Record Search and Mark ■ Limit and Mask Testing ■ Debugging and Compliance Testing of Serial Data Streams for Telecom and Data Industry Standards ■ Investigation of Transient Phenomena ■ Power Measurements and Analysis ■ Spectral Analysis ■ Ethernet and USB 2.0 Compliance Testing ■ Low Speed Serial Triggers and CAN/LIN Decode ■ Radar/EW ■ WiMedia UWB

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



MSO/DPO/DSA70000 Series



DSA8200 Series

Performance Oscilloscope Product Selection

Tektronix Performance Oscilloscopes with bandwidths up to 80 GHz, industry-best signal fidelity and the lowest noise floor provide you with the measurement accuracy to perform critical rise-time, jitter and noise measurements with confidence.

	MSO/DPO/DSA70000	DSA8200
Channels	4 (+16 Logic with MSO70000)	Up to 8
Bandwidth	4 to 20 GHz	DC - 80+ GHz
Rise Time	14 ps to 68 ps <small>**User Selectable DSP enhanced.</small>	5 ps
Sample Rate	25 GS/s across 4 channels on 4, 6, 8 GHz models; 50 GS/s across 4 channels on 12.5, 16, 20 GHz models. 100 GS/s across 2 channels on 12.5, 16, 20 GHz models.	200 kS/s (sequential)
Max Record Length	Up to 100 M on 4, 6, 8 GHz models; Up to 250 M on 12.5, 16, 20 GHz models.	-
Trigger Types	Pinpoint Triggering, Edge, Logic (Pattern State/Setup/Hold), Pulse (Glitch, Width, Runt, Timeout, Transition), Comm*, 5 Gb Serial Pattern and more <small>*Optional on DPO models, standard on DSA models.</small>	Edges, Internal Clock, Clock Recovery
Connectivity	RS-232, GPIB, Centronic, Ethernet, LAN (10/100/1000 Base-T Ethernet), Open Access to Windows Platform, USB, DVD-ROM	RS-232, GPIB, Centronic, Ethernet, LAN, Open Access to Windows Platform, USB, PCMCIA, CD-ROM, DVD
Waveform Math and Analysis	Advanced Waveform Math, FFT or Spectral, Compatibility with Windows Analysis and Productivity Software	
Software	DPOJET, PWR, RT-EYE, SignalVu™, CPM, DDM, DVI, ET3, HT3, JIT3, USB2, UWB, VNM, TekExpress, DDRA, DSPT, FBD, IBA, LT, PCE, SLA, SST, SVE, MIPI DPHY & MPHY Essentials, XGBT 10BASE-T,	IConnect® 80SICON, 80SOCMX, 80SSPAR, 80SJNB
Applications	<ul style="list-style-type: none"> ■ Signal Integrity, Jitter, and Timing Analysis ■ Verification, Debug and Characterization of Sophisticated Designs ■ Long Record Search and Mark ■ Limit Testing ■ Identify and trigger on DDR read and writes ■ USB High Speed and Wireless Compliance Testing ■ Design, Development and Compliance Testing of Serial Data Streams up to 8 Gb/s Rates ■ Serial Data Link Analysis (SDLA)-MIPI Mobile Phone Debug & Compliance ■ Radar/EW ■ WiMedia UWB 	<ul style="list-style-type: none"> ■ Design/Verification of Telecom and Datacom Components and Systems ■ Manufacturing/Testing for ITU/ANSI/IEEE/SONET/SDH Conformance ■ High-Performance True Differential TDR Measurements ■ Advanced Jitter, Noise, BER and Serial Data Link Analysis ■ Impedance Characteristics and Network Analysis for Serial Data Applications Including S-parameters ■ Channel & Eye diagram Simulation and Measurement-based SPICE Modeling ■ Serial Data Link Analysis (SDLA)

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TDS1000B Series



Applications

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

www.tektronix.com/tds1000b

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.

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

TDS2000C Series



Applications

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

www.tektronix.com/tds2000c

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.
Lifetime warranty*	Reduce your cost of ownership with the standard, Lifetime Warranty.

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

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 10X 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.

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TDS3000C Series



Applications

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

www.tektronix.com/tds3000c

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.

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 greater than 5,000 wfm/s maximum 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 maximum 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

4 analog and 16 digital channels
Digital phosphor display
Complete set of triggers
Wave Inspector® controls
Automated Measurements
Parallel bus triggering and analysis (MSO Series)
Serial triggering and analysis options
Power analysis option
Low-capacitance, passive voltage

Benefits

Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
Quickly discover glitches and infrequent events with a greater than 50,000 wfm/s maximum waveform capture rate and intensity-graded display.
Rapidly capture signal anomalies with over 125 available trigger combinations, including setup/hold, serial packet content and parallel data.
Easily search, mark and navigate long record lengths to find all occurrences of your event.
Simplify analysis of your device with 41 automated measurements, FFT analysis, measurement statistics, waveform histograms, and advanced waveform math.
Quickly debug your parallel bus with automated trigger, decode and search. Capture fast transitions with timing resolution up to 60.6 ps.
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, MIL-STD-1553, and I ² S/LJ/RJ/TDM.
Achieve fast, accurate results with integrated automated power measurements.
Four probes with industry-best 4pF capacitive loading 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/virtualmso

MSO/DPO5000 Series



Applications

- Design and debug of embedded systems
- Investigation of transient phenomena
- Serial debug and analysis

www.tektronix.com/mso5000

Features

8 Models with bandwidths from 350 MHz to 2 GHz
FastAcq with Digital Phosphor display
Complete set of triggers
Wave Inspector® controls
Built-in Analysis Tools

Benefits

Pick the performance level that fits your signals and your budget. Analyze analog and digital signals on a single instrument for system-level troubleshooting of complex designs.
Quickly discover glitches and infrequent events with Tektronix proprietary FastAcq™ technology. A maximum capture rate of >250,000 waveforms/s shows elusive anomalies fast.
Rapidly capture signal anomalies with over 350 available trigger combinations, including setup/hold, serial packet and parallel data.
Easily search, mark and navigate long record lengths to find all occurrences of your event.
Analyze your device with 53 automated measurements, measurement statistics, histograms, and advanced waveform math.

DPO7000 Series



Applications

- Design and debug of digital systems (I²C, SPI)
- Switched mode power supply design and verification
- Electrical design verification to industry standards (e.g., USB 1.0, 2.0)
- CAN/LIN Bus decoding and analysis

www.tektronix.com/dpo7000

Features

4 Models with bandwidths from 500 MHz to 3.5 GHz including user-selectable limits
Sample rate up to 40 GS/s on one channel, 10 GS/s on 4 channels simultaneously.
Long record length up to 500 M points on one channel, 125 M per channel on 4 channels
FastAcq mode with >250,000 waveforms per second continuous waveform capture rate
Pinpoint® triggering with Low-Speed Serial
Powerful set of built in analysis features
Full suite of compliance tools

Benefits

Achieves more accurate characterization of designs by optimizing the oscilloscope performance individually by channel, based on the frequency content of the signal being measured.
Improves design validation by accurately sampling the signal to ensure that all frequency content is being acquired and displayed.
Measurement on a large population for Compliance Verification is required by many standards test systems.
Shortens debugging time by quickly finding intermittent (rare) faults or events.
Enables the capture of signals that are "bad" among many that are good. Speeds up debugging of lower speed chip to chip communications buses through standards-based trigger functions.
Faster understanding of signal behavior using waveform limit testing (LT), advanced measurement analysis (DJE), and advanced event search and mark (ASM).
Saves time with pre-determined reporting and analysis steps for Compliance Verification of different communications systems (MIPI D-PHY, Ethernet, USB, IEEE, etc.).

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

MSO70000 Series



Applications

- DDR System Memory Analysis
- High Speed Embedded System Debugging
- Multi-channel acquisitions
- RF Subsystem Test

www.tektronix.com/mso70000

Features	Benefits
Highest performance MSO at 20 GHz Bandwidth on 4 analog channels and 2.5 GHz on 16 logic channels	While debugging performance mixed signals, ensure that there is accurate characterization of critical higher speed buses like PCIe 3.0 with data rates up to 8 Gb/sec.
iCapture to view analog characteristics on any connected digital channel with up to 50 GS/s sampling	Enables a quick check of any of the 16 logic signals' timing and amplitude without having to use a separate analog probe.
Extensive set of serial pattern, mixed analog+digital, logic pattern, and bus state triggers	Enhance debugging by capturing only the events of interest with triggers that look for bus cycles, specific serial words or patterns.
Simultaneous Analog and Digital Trace Display with precise timing resolution of 80 picoseconds	Improve system design integration with views of analog and digital signals simultaneously. Ensures discovery & capture of intermittent faults tied to bus contention, power, etc.
Analog/Digital Probing with a variety of connectivity support options	Flexible probing solutions for small component leads or board vias that remove the need for special fixturing/costs. Industry's only 2.5 GHz differential logic probe.
Built-in bus analysis for common serial standards I ² C & SPI along with parallel busses. Optional high-speed bus (PCI Express, USB, etc.) available.	Faster design and compliance testing with a toolset engineered to automate setup, acquisition and analysis of serial and parallel busses.
Great signal fidelity with industry's highest effective number of bits (ENOB) and very low instrument noise floor	Enables industry's best margin visibility of critical digital communications system designs. With a noise floor of less than 0.38% of full scale at 12 GHz, MSO70000 Series ensures clearer indication of true signal performance.

DPO/DSA70000 Series



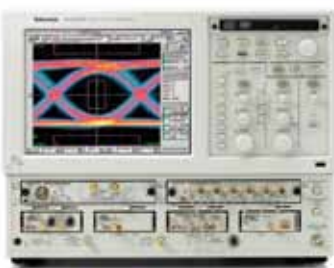
Applications

- High speed serial data compliance test software
- Serial Data Link Analysis software
- DDR system memory analysis
- Signal integrity, jitter & timing analysis

www.tektronix.com/dsa70000

Features	Benefits
6 models with bandwidths from 4 GHz to 20 GHz including user-selectable limits	Accurate characterization, jitter characterization and compliance testing of designs like PCIe Gen.3 with data rates up to 8 GB/sec.
Industry leading sample rate of 100 GS/s on 2 channels and 50 GS/s on 4 channels* (12.5, 16 & 20 GHz only, including MSO70000 Series models)	Enables thorough analysis, channel to channel and multi-lane measurements. Capture more signal details (transients, imperfections, fast edges) for greater confidence in debug/verification testing.
Industry leading signal fidelity, minimum noise and highest number of effective bits (ENOB)	Enables to perform tests with more margin. High measurements frequency designs have less available margin, which requires more exact measurement systems to pass your tests.
Industry's highest waveform capture rate on all 4 channels	Efficient discovery & capture of intermittent (rare) faults or events.
Pinpoint [®] triggering and high-speed serial pattern triggering	Speed up debug of buses like PCIe, SATA, DisplayPort and others through standards-specific trigger functions.
Comprehensive digital serial analysis solution – probing, triggering, decode and analysis	Faster design and compliance testing with a toolset engineered to automate setup, acquisition and analysis of high-speed serial data signals like SATA and DisplayPort.
Signal fidelity – all the way to the probe tip	Ensure measurement accuracy and signal fidelity with system bandwidth up to 20 GHz from the probe tip to the oscilloscope.

DSA8200 Series



Applications

- TDR/S-Parameter analysis
- Serial data link analysis
- Optical/Telecom standards compliance

www.tektronix.com/dsa8200

Features	Benefits
Up to 4 true differential channels	Accurately characterize non-linear devices such as amplifiers with true differential TDR stimulus.
High bandwidth (50 GHz) Time Domain Reflectometry	Resolve impedance discontinuities down to 1mm with a 12ps incident step.
IConnect [®] signal integrity	Reduce measurement errors resulting from test fixture signal degradation with integrated TDR and S-Parameter measurements.
Serial data network analysis (SDNA)	Reduce cost of test by combining time and frequency domain analysis with a single instrument. Accurately analyze signal path to predict signal crosstalk and jitter to ensure reliable system operation.
Serial data link analysis (SDLA)	Determine precise causes of eye closure with jitter, noise, and BER analysis.
Remote sampling heads	Optimize signal fidelity and minimize the effects of probes, cables, and fixtures by bringing the TDR head close to the device under test.
Highly accurate 10/40/100GB/s Telecom Test Modules	Clock recovery support up to 44.5 GB/s and bandwidth capability up to 80GHz provides complete measurement support for telecom/datacom designs.



BERTScope(R) BSA Series



Bit Analyzer Series



BERTScope BSA/CR/DPP Series and MSO70000 oscilloscope

Bit Error Rate Testers Product Selection

	BERTScope® BSA Series	BERTScope® CR Series	BERTScope® DPP Series	BERTScope® BA Series
Type	Bit Error Rate Testing with the Insight of an Oscilloscope	Versatile Precision Clock Recovery and Analysis	Performance, Productivity, and Insight for Serial Data Signaling	Analysis to Find the Source of Bit Errors
Maximum Bit Rate	8.5 Gb/s – 26 Gb/s	12.5 Gb/s – 28.6 Gb/s	12.5 Gb/s	1.5 Gb/s – 1.6 Gb/s
Applications	<ul style="list-style-type: none"> ■ High Speed Digital Device Characterization and Design with Integrated pattern generation, error detection, and stress generation ■ Signal Integrity Analysis – BER Correlated Eye Diagram, Jitter Peak, Jitter Map, Measured and Extrapolated BER Contours, Mask Testing, and Q-Factor Analysis ■ Optional Integrated, Calibrated Stress Generation of SJ, SI, RJ, and BUJ for stressed eye and automated jitter tolerance testing for standards including: <ul style="list-style-type: none"> - 6, 11, & 25 G CEI - PCI Express 3.0 - USB 3.0 - Fibre Channel - 10/40/100 G Ethernet - SATA & SAS - SFP+/SFI & XFP/XFI 	<ul style="list-style-type: none"> ■ Continuous clock recovery for data rates from 150 Mb/s to 12.5, 17.5, or 28.6 Gb/s ■ Existing and Next Generation Serial Data Standards' Compliant clock recovery including: 16XFC, 100GBASE-LR-4, CEI-28 G-SR, PCI-e Gen. 3, 10/40/100 G Ethernet, SAS, SATA ■ Continuous User selectable Phase Lock Loop (PLL) bandwidths from 200 kHz to 12 MHz, optionally to 24 MHz ■ Use stand alone, with existing test equipment, with the BERTScope family, or with the DSA8200 Series 	<ul style="list-style-type: none"> ■ Design Characterization for High-speed, Sophisticated Designs ■ Certification Testing of Serial Data Streams for Industry Standards ■ Design/Verification of High-speed I/O Components and Systems 	<ul style="list-style-type: none"> ■ Semiconductor Characterization ■ Production Eye Mask, BER, and Jitter Testing ■ Satellite Communications System Functional Testing ■ Wireless Communications System Functional Testing ■ Fiber Optic System and Component Testing ■ Forward Error Correction Evaluation

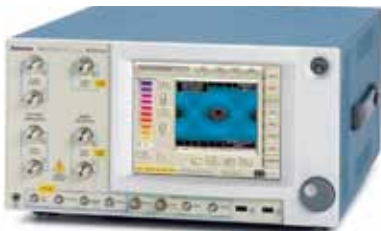
see page 11

see page 12

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see page 12

BERTScope® BSA Series



Features

Pattern Generation and Error Analysis, highspeed BER Measurements up to 26 Gb/s

Integrated Stress Generator for stressed eye sensitivity (SRS) and automated jitter tolerance compliance testing

Integrated, BER correlated eye diagram analysis with pass/fail masks for PCI Express, USB, SATA and other serial standards

Error Location and BER contour analysis on PRBS signals up to 26 GB/sec

Benefits

The combination of generation and analysis in one instrument enables receiver BER compliance testing for today's 2nd and 3rd Generation Serial Standards

A test signal's data rate, applied stress, and data pattern can be changed on the fly, independent of each other; enabling a diverse set of signal variations for testing chipset/system sensitivity.

Enhances the debug experience unlike other BERT's by providing a familiar eye diagram of the test results to compare against a standards specific mask.

Provides a quick understanding of signal integrity in terms of BER. Error location provides detailed BER pattern sensitivities to speed up identification of deterministic vs. random BER errors

Applications

- Design Verification/ Characterization
- Serial Data Compliance Testing
- Signal Integrity Analysis
 - Electrical/Optical Stressed Receiver Testing
 - Automated CDR Jitter Tolerance Testing

BERTScope® CR Series



Applications

- Design Verification/ Characterization
- Clock recovery for Sampling Oscilloscopes & Bit Error Rate Analyzers
- Signal Integrity Analysis

www.tektronix.com/bertscope

Features

Data Rate Range up to 28.6 Gb/s

Independent control, measurement, and display of phase lock loop (PLL) BW, JTF (jitter transfer function) and peaking

Clock Recovery Input Equalization

24 MHz PLL Bandwidth (Optional)

Benefits

Continuous data rate coverage for next generation I/Os including PCIe 3.0, 10GBASE-KR, 16xFC, 25 & 28G CEI and 100GBASE-LR-4 & ER-4.

Provides accurate "Golden PLL" response for transmitter jitter compliance testing and stressed receiver sensitivity test calibration. Provides full flexibility for device characterization.

Enables clock recovery on high ISI signals without impacting the data stream under test. Recovered clock enables other analysis including "clean eye", application of FIR filtering to signal, and BER testing.

Meets the JTF bandwidth requirements of USB 3.0, 6 G SATA, and PCIe 3.

BERTScope® DPP Series



Applications

- Design Verification/ Characterization
- Serial Data Compliance Testing

www.tektronix.com/bertscope

Features

1 to 12.5 Gb/s range of operation, with std. 3 tap configuration

3-Tap equalization evaluation on 8b/10b signaling greater than 5 Gb/sec (4-tap optional)

Flexible cursor position

Benefits

High data rate support of hardware based equalization enables compliance testing for today's 2nd and 3rd Generation Serial Standards

Supports compliance tests for 802.3ap, Serial Attached SCSI, 10GBASE-KR backplanes, DisplayPort™, USB 3.0, PCI Express® Gen 3

Pre-cursor or post-cursor adjustment for optimized compensation of ISI and loss.

BERTScope® BA Series



Applications

- Semiconductor Characterization
- Production Eye Mask, BER, and Jitter Testing
- Satellite and Wireless Communications System Functional Testing

www.tektronix.com/bertscope

Features

Pattern Generation and Error Analysis, high speed BER Measurements up to 1.6 Gb/s

Error Location and BER contour analysis on PRBS signals up to 1.6 Gb/s

ANSI Jitter Measurements (RJ, DJ, and TJ)

Benefits

The combination of generation and analysis in one instrument enables receiver BER compliance testing for today's electronic and communications systems

Provides a quick understanding of signal integrity in terms of BER. Error location provides detailed BER pattern sensitivities to speed up identification of deterministic vs. random BER errors

Fast, effective method for determining long pattern PRBS31 jitter composition with triangulation. Graphical representation makes jitter analysis more thorough, yet simpler to follow.

Probe Selector Tool - Let the tool do the work for you!

To match one of over 100 different probes directly to the oscilloscope, signal type or testing application you need, go online to the Tektronix Probe Selector Tool. Located at www.tektronix.com/probes

- 1 Compare selected products and instantly create PDFs of your results!
- 2 Select your probe by Instrument Series
- 3 Sort Results by:
 - Probe Type
 - Signal Type
 - Signal Bandwidth

Select your requirements below. The list of matching products will update with each click.

▼ **Select By Instrument Series:** (Click To Expand)

Instrument Series:

<input type="checkbox"/> Don't Know	<input type="checkbox"/> 400	<input type="checkbox"/> 2200	<input type="checkbox"/> 2400
<input type="checkbox"/> CSA7000B	<input type="checkbox"/> DPO2000	<input type="checkbox"/> DPO3000	<input type="checkbox"/> DPO4000
<input type="checkbox"/> DPO4000B	<input type="checkbox"/> DPO5000	<input type="checkbox"/> DPO7000	<input type="checkbox"/> DPO70000
<input type="checkbox"/> DSA70000	<input type="checkbox"/> DSA8200	<input type="checkbox"/> MSO2000	<input type="checkbox"/> MSO3000
<input type="checkbox"/> MSO4000	<input type="checkbox"/> MSO4000B	<input type="checkbox"/> MSO5000	<input type="checkbox"/> MSO70000
<input type="checkbox"/> RSA3000A	<input type="checkbox"/> RSA3408A	<input type="checkbox"/> RSA6100A	<input type="checkbox"/> TDS1000
<input type="checkbox"/> TDS2000	<input type="checkbox"/> TDS300	<input type="checkbox"/> TDS500	<input type="checkbox"/> TDS3000
<input type="checkbox"/> TDS400	<input type="checkbox"/> TDS6000	<input type="checkbox"/> TDS5000	<input type="checkbox"/> THS700
<input type="checkbox"/> TDS600	<input type="checkbox"/> TDS7000	<input type="checkbox"/> TDS700	<input type="checkbox"/> TPS2000

Probe Type: (Select all applicable types)

Voltage Current Optical Logic

Signal Type: < HELP

<input type="checkbox"/> AC/DC Split Core	<input type="checkbox"/> AC Split Core	<input type="checkbox"/> AC Fixed Core
<input type="checkbox"/> Active Single-Ended	<input type="checkbox"/> Active Differential	<input type="checkbox"/> Logic Single-Ended
<input type="checkbox"/> Passive Single-Ended	<input type="checkbox"/> Passive Differential	<input type="checkbox"/> Passive Single-Ended Zo

Signal Bandwidth: < HELP

<input type="checkbox"/> 0 to 5 MHz	<input type="checkbox"/> > 5 to 50 MHz	<input type="checkbox"/> > 50 to 200 MHz
<input type="checkbox"/> > 200 MHz to 1 GHz	<input type="checkbox"/> > 1 to 4 GHz	<input type="checkbox"/> > 4 to 8 GHz
<input type="checkbox"/> > 8 GHz		

Maximum Voltage Capabilities: < HELP

<input type="checkbox"/> 0 to 5 V	<input type="checkbox"/> 5 to 10 V	<input type="checkbox"/> 10 to 100 V
<input type="checkbox"/> 100 to 500 V	<input type="checkbox"/> 500 V to 1.5 kV	<input type="checkbox"/> > 1.5 kV

Maximum Current Capabilities: < HELP

<input type="checkbox"/> 0 to 10 A	<input type="checkbox"/> > 10 to 50 A	<input type="checkbox"/> > 50 to 150 A
<input type="checkbox"/> > 150 A		

Minimum Current Capabilities:

<input type="checkbox"/> 0 to 1 mA	<input type="checkbox"/> > 1 to 5 mA	<input type="checkbox"/> > 5 to 50 mA
<input type="checkbox"/> > 50 mA		
















Other Accessories:

Adaptor Battery Power Cart

Case Rackmount

107 Matches

Compare Start Over

 TCP0030	 P7520	 TPP1000
 TPP0201	 TCPA300	 TPP0500
 TAP1500	 TCP202	 P7313SMA
 P6015A	 P6139B	 TCP0150
 P5205	 P7516	 TDP1000

Images appear for the first 15 matches
The rest of the matches are listed below.

1103 80A03 A621 A622 AC2100 AC3000 AC4000 ACD2000 ACD4000 ADA400A	P6158 P6205 P6241 P6243 P6245 P6246 P6247 P6248 P6251 P6330	RM3000 RM4000 RMD2000 RMD3000 RTPA2A TAP1500X2 TAP2500 TAP3500 TCA-1MEG TCA-292MM
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Active Probes

Features

- 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
- DUT Attachment Accessories Enable Connection to SMDs as small as 0.5 mm Pitch
- Service, Durability and Reliability

Applications

- Verification, debug and characterization of high-speed designs
- Component design and characterization
- Design, development and compliance testing
- Signal integrity, jitter, timing analysis
- Manufacturing engineering and test
- Educational research



Differential Probes

Features

- TriMode™ probing provides differential, single-ended or common mode measurements with a signal probe (P7500 Series)
- Excellent signal fidelity, with high bandwidth to >20 GHz, excellent step response, low loading, and high CMRR
- Versatility to make differential or single-ended measurements with low cost TriMode accessories
- Tip-Clip™ interchangeable probe tip system to configure your probe with the optimal tip for your application (P7300 Series)
- Differential TDR hand probe for high fidelity impedance measurements of differential transmission lines (P80318)

Applications

- Debug, validation and compliance testing of high speed serial designs
- Communications Systems
- Semiconductor characterization & validation



Passive Probes

Features

- DC to 1 GHz
- 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
- Modularity to provide lower cost of ownership (P613X)
- Compact size accessories to provide compatibility with existing adapters

Applications

- Mixture of high, medium and low frequency general purpose measurements
- Digital design
- Power device characterization
- Power supply design
- UPS systems, power converters
- Electronic ballast
- Mixed signal
- Service, manufacturing



Current Probes

Features

- 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 constructions

Applications

- Switching power supplies
- Motor drives
- Disk drive
- Electronic ballasts
- Inverters
- Silicon characterization
- High-frequency analog design



High Voltage Probes

Features

- Wide range of voltage measurements - Up to 40 kV peak (100 ms pulse)
- High voltage measurement capabilities
- Single-ended - referenced to earth ground
- Differential - non-ground referenced and ground referenced
- Bandwidths from DC to 1 GHz

Applications

- Power supplies
- Motor drives
- Electronic ballast
- DC to DC power converters
- Power device design and evaluation
- Switch mode control
- UPS systems



Logic Probes

Features

- 16 channel probe sets for digital channel acquisitions with Tektronix Mixed Signal Oscilloscopes.
- Differential logic probing up to 2.5 GHz for high signal fidelity with low device loading
- Color-coded tips match channels to signal traces on the oscilloscope display
- Variety of connectivity options available for device leads, solder-in, Traces, etc.

Applications

- DDR Memory Electrical Verification
- High Speed Mixed Signal System Debugging
- Multi-channel acquisitions

Digital Multimeter Product Selection

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

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.

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.
Trendplot™ 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.

See virtual demo at www.tek.com/products/digital-multimeter/dmm4050_dmm4040/demo/

Power Supply Product Selection

	PWS2000	PWS4000
Output Voltage/Current	<ul style="list-style-type: none"> ■ 18V/5A ■ 32V/3A 	<ul style="list-style-type: none"> ■ 32V/6A ■ 72V/1.5A
Basic Accuracy	<ul style="list-style-type: none"> ■ 0.05% Voltage ■ 0.2% Current 	<ul style="list-style-type: none"> ■ 20V/5A ■ 30V/5A ■ 32V/3A ■ 60V/2.5A ■ 72V/1.2A
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	Benefits
Linear regulation	Deliver clean power - with less than 3 mV _{p-p} ripple and noise - to your device.
Better than 0.05% basic voltage accuracy	Be confident in your power supply's output value with 0.05% voltage and 0.2% current basic accuracy.
Up to 72 V Output Voltage	Generate the power you need for a wide variety of applications with a single power supply.
Maximum Voltage Setting	Constrain the voltage setting to an appropriate level for your device under test.
20 setup memories	Simplify complex tests by saving your setup to an internal setup memory. Next time, simply recall that setting.
Numeric keypad	Quickly set precise voltage and current values with the direct-entry keypad.
Bright display	See your power supply's display at a distance, at an angle, or under dim lighting conditions.
User-definable password	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	Benefits
Linear regulation	Deliver clean power - with less than 5 mV _{p-p} ripple and noise - to your device.
Better than 0.03% basic voltage accuracy	Be confident in your power supply's output value with 0.03% voltage and 0.05% current basic accuracy.
Up to 72 V Output Voltage	Generate the power you need for a wide variety of applications with a single power supply.
Overvoltage Protection (OVP) and maximum voltage setting	Protect your device under test from accidental damage with integrated OVP circuit and microprocessor-controlled maximum voltage setting.
Remote sense inputs	Deliver accurate voltage to your device under test by eliminating the effect of voltage drop in your lead wires.
List mode	Define up to 7 custom test sequences, each with up to 80 voltage and current steps, with the built-in list mode.
40 setup memories	Simplify complex tests by saving your setup to an internal setup memory. Next time you need to run the test, simply recall that setting.
Numeric keypad	Quickly set precise voltage and current values with the direct-entry keypad.
Bright display	See your power supply's meter readings and limits with a single glance; a bright display provides excellent readability.
User-definable password	Prevent unwanted adjustments during critical tests by locking the front panel of your power supply.
PC Connectivity	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/Timer Product Selection

	FCA3000	FCA3100	MCA3000
Frequency Range	300 MHz, 3 GHz, 20 GHz	300 MHz, 3 GHz, 20 GHz	27 GHz, 40 GHz
Resolution	<ul style="list-style-type: none"> 100 ps (time) 12 digit/s (freq) 	<ul style="list-style-type: none"> 50 ps (time) 12 digit/s (freq) 	<ul style="list-style-type: none"> 100 ps (time) 12 digit/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, PLLs and more
- Education
- Calibration
- Radar and frequency hopping test
- Automated test

www.tektronix.com/fca3000

Features

Benefits

12 digit/s frequency resolution	See small changes in frequency with industry-leading frequency resolution.
Down to 50 ps time resolution	Accurately capture signal details with industry-leading single-shot time resolution.
Trend Plot 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, standard and Allan deviation to see how your signal is changing.
Optional TimeView™ software	Transform your counter/timer into a modulation domain analyzer and see frequency changes over time to truly characterize your device's performance.
USB and GPIB ports	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.
PC Connectivity	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, PLLs and more
- Calibration
- Radar and frequency hopping test
- Automated test

www.tektronix.com/mca3000

Features

Benefits

12 digit/s frequency resolution	See small changes in frequency with industry-leading frequency resolution.
100 ps time resolution	Accurately capture signal details with industry-leading single-shot time resolution.
Trend Plot 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, standard and Allan deviation to see how your signal is changing.
Integrated power meter	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
Optional TimeView™ software	Transform your counter/timer into a modulation domain analyzer and see frequency changes over time to truly characterize your device's performance.
USB and GPIB ports	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.
PC Connectivity	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

Mixed/Analog Signal Generators

	AWG5000 Series	AWG7000 Series	AFG3000 Series
Channels (maximum)	4 analog, 28 digital	2 analog	1, 2
Sample Rate (maximum)	1.2 GS/s, Up to 370 MHz	24 GS/s	2.0 GS/s
Frequency (maximum)	370 MHz	9.6 GHz	240 MHz
Memory Depth (maximum)	Up to 32 M	Up to 128 M	128 k
Vertical Resolution (bits)	14	10	14
Output Amplitude ¹ (maximum)	4.5	2	20 V p-p
Marker Outputs (maximum)	4	4	1 (trigger out)
Parallel Digital Outputs (maximum)	28 ²	-	-
Integrated Editors	Graphical, Sequence	Graphical, Sequence	Graphical, Text
Built-in Applications	RFXpress®, SerialXpress® & the Open Window-based system supports third-party software		-
	see page 19	see page 19	see page 19

Logic Signal Sources

	DTG5334	DTG5274	DTG5078
Channels (maximum)	16	16	96
Data Rate (maximum)	3.35 Gb/s	2.7 Gb/s	750 Mb/s
Pattern Depth (maximum)	3.35 Gb/s	2.7 Gb/s	750 Mb/s
Timing Resolution Range	200 fs/600 ns ¹	200 fs/600 ns ¹	1 ps/600 ns ¹
Output Amplitude/Resolution (max)	Three modules support from 0.03 to 3.5 Vp-p/5 mV ²		
Rise/Fall Time	Three modules offer from < 540 ps to < 110 ps ³		
Auxiliary Inputs	External Clock IN, Phase Lock IN, 10 MHz Ref. IN, Trigger IN, Event IN, Skew Cal IN		
Auxiliary Outputs	DC Outputs, Clock OUT, 10 MHz Red OUT, Sync OUT		
Auxiliary Features	PC/Windows Platform, Jitter Generation, Variable Crossing Points, Duty Cycle, Pulse Generator Mode		

¹ Vp-p into 50 Ohm
² Based on data rate settings.
³ Variable or fixed, depending on module.
⁴ Four channel only per pod, delay only.

DTG5000 Series



Features	Benefits
Versatile Platform	Combines Features of Data Generator, Pulse Generator, and DC Source.
Integrated PC	Supports Network Integration and Built-in CD-ROM, LAN, Floppy Drive, USB Ports.
Modular Architecture	Helps to Protect Your Investment and Allows the Instrument to Expand With Your Growing Needs.

Applications

- Semiconductor device functional test and characterization
- Compliance and interoperability testing to emerging standards (PCI-Express, SATA, InfiniBand, XAUI, HDMI/DVI)

www.tektronix.com/dtg5000

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	Benefits
Dual-channel models	Save cost and bench space by replacing two signal generators with one that offers two tightly synchronized or two completely independent signals.
Up to 2 GS/s sample rate	Generate waveforms with fine timing resolution.
Up to 20 Vp-p amplitude into 50 Ω load (AFG3011)	Save cost and set-up time by creating high amplitude signals without using an external power amplifier.
25 shortcut keys	Reduce set up and evaluation time with direct access to frequently used functions and parameters.
Large 5.6" (142 mm) color display	Full confidence in your signal since all relevant settings and waveform graphs can be seen at a single glance. (Monochrome on AFG3021B).
Only 6.6" (168 mm) deep	Free up valuable bench-top space.
ArbExpress™ software	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.

AWG5000 Series



Applications

- I/Q modulator test
- Consumer electronics
- Serial data

www.tektronix.com/awg5000

Features	Benefits
Multiple output types (Available on AWG5002B/5012B)	Save cost and bench space by replacing multiple instruments with one, flexible signal generator capable of analog, digital and mixed signals.
14-bit vertical resolution	Easily stress test your device by creating ideal, distorted or "real-world" signals with glitches and other signal impairments.
Up to 32 M point record length	Generate multiple, high resolution complex waveforms.
RFxpress® software	Quickly create digitally-modulated IQ and IF signals for both standard and custom applications with support for a wide range of modulation types.
Integrated PC	Seamlessly integrate to your network with LAN and USB ports. Easily save data with a built-in DVD, removable hard drive and USB ports on the front.
Intuitive user-interface	Shorten test time with an easy-to-use interface.

AWG7000 Series

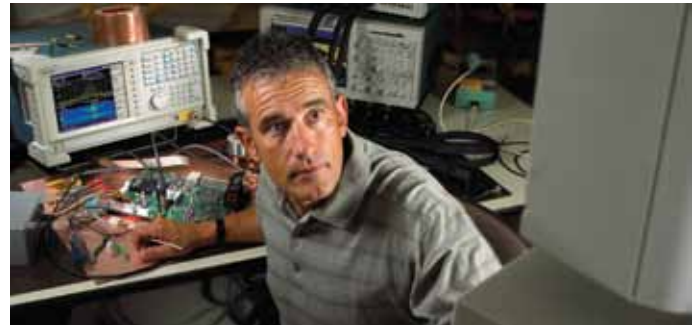
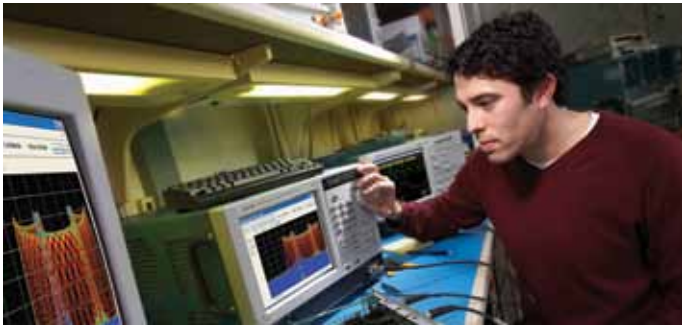


Applications

- Serial data validation and compliance testing
- WiMedia conformance and margin testing
- Radar signal generation
- Disk drive validation and test

www.tektronix.com/awg7000

Features	Benefits
High speed interleaved sampling	Generate more accurate signals with lower jitter, utilizing higher oversampling with up to 24 GS/s on the AWG7122B.
Waveform sequencing	Real-time sequencing creates infinite waveform loops, jumps, and conditional branches for longer pattern length generation suitable for replicating real world behavior of serial transmitters.
Bandwidth expansion filter	Rise time can be decreased by applying a bandwidth expansion filter to address the challenges of fast serial data signal generation.
SerialXpress® software	SerialXpress software enables creation of exact waveforms required for thorough and repeatable design validation, margin/ characterization and conformance testing of high speed serial data receivers.
RFxpress® software	Easily create and edit RF/IF/IQ signals for radar and radio comms testing.
Deep memory	Replicate low frequency events such as spread spectrum clocking on high speed serial signals which require long pattern lengths.
Superior RF frequency output	9.6 GHz RF frequency output provides effective bandwidth for test of wide bandwidth RF technologies and support for 2nd/3rd generation serial standards.



Spectrum Analyzers

Tektronix Spectrum Analyzers Deliver Confidence to Confront the Most Challenging Microwave and RF Designs

Effectively characterize time-variant signals and solve unexpected problems with DPX™ Live RF spectrum display. Standard on all Real Time Spectrum Analyzers ranging from handheld to high performance benchtop instruments.

- Performance Spectrum Analyzers integrate revolutionary DPX™ Live RF spectrum display with the industry-leading dynamic range and bandwidth combination.
- Mid-Range Spectrum Analyzers deliver performance capabilities, including DPX™ Live RF spectrum display and frequency masked trigger, for complete time-correlated analysis in the frequency, time and modulation domains.
- Handheld Spectrum Analyzers scan the RF environment, reliably classify signals, and locate signals with the industry's only integrated mapping solution.

Tektronix' DPX technology lets you see what others don't. Learn more at www.tektronix.com/rsa

	RSA6000 Series	RSA3000 Series	RSA5000 Series	H600/SA2600 Series
Frequency Range	9 kHz to 20 GHz	DC to 8 GHz	1 Hz to 6.2 GHz	10 kHz to 6.2 GHz
Capture Bandwidth	Up to 110 MHz	Up to 36 MHz	Up to 85 MHz	20 MHz
Minimum Event Duration for 100% Probability of Intercept (POI)	As brief as 10.3 μs	As brief as 20 μs	As brief as 5.8 μs	As brief as 125 μs
SFDR (typical)	Down to -78 dBc	Down to -73 dBc	Down to -75 dBc	Down to -70 dBc
DANL (equivalent at 1 Hz RBW)	Down to -170 dBm/Hz	Down to -151 dBm/Hz	Down to -153 dBm/Hz	Down to -163 dBm/Hz
Phase Noise (typical at 10 kHz offset)	≤ -110 dBc/Hz	≤ -112 dBc/Hz	≤ -113 dBc/Hz	≤ -95 dBc/Hz
Phase Noise (typical at 1 MHz offset)	≤ -134 dBc/Hz	≤ -135 dBc/Hz	≤ -131 dBc/Hz	≤ -110 dBc/Hz
DPX Live RF Spectrum Display	> 292,000 Spectrums/s	> 48,000 Spectrums/s	> 292,000 Spectrums/s	> 10,000 Spectrums/s

see page 21

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H600/SA2600 Series



Features	Benefits
DPX® Live RF spectrum display	Discover previously unseen signal behavior. Improve test confidence and find elusive signals missed by conventional spectrum analyzers.
DPX spectrum mask	Capture small signals in the presence of large signals with a user-definable mask drawn in the frequency domain.
Integrated and GPS-enabled mapping	Locate outdoor signals faster with simple integrated tools in a portable, battery-operated package. No external PC required for plotting measurements on a map.
Signal database, classification and IQ data export	Quickly recognize the presence of new unwanted signals by comparing current results against previously saved spectrum surveys. Built-in classification tools enable you to efficiently categorize signals as desirable or undesirable.
Rugged designed for field use	Test longer with extended battery life and industry's only hot swap power system. LAN interface for remote control and unattended monitoring stations for spectrum awareness.

Applications

- Spectrum Monitoring and Surveillance
- Interference Detection
- Signal Hunting
- Signal Identification
- Homeland Security

www.tektronix.com/sa2600

RSA3000 Series



Applications

- Radio/Satellite Communications
- Spectrum Management
- Radar/EW
- RF Debug
- Wireless Communications

www.tektronix.com/RSA3000

Features

- DPX® Spectrum Display
100% Probability of Intercept (POI)
- Frequency Mask Trigger
100% POI
- Seamless data capture into deep memory or external recording system
- Time-correlated data analysis with automatic domain correlation and linked markers
- One box multi-function design for spectrum analysis, vector signal analysis, pulse analysis, baseband analysis, signal source analysis, audio distortion analysis, and wireless standard analysis

Benefits

- Improve test confidence and catch very short duration transients missed by conventional spectrum analyzers. Discover signal behavior previously unseen.
- Save time by isolating signal faults and efficiently utilizing memory with a unique frequency domain trigger. Isolate hardware and software anomalies with cross domain triggering between multiple instruments.
- Observe the entire duration of signal events, like frequency hopping sequences, PLL settling times, turn on transients, and multiple pulses.
- Accelerate troubleshooting and analysis by pinpointing the root cause of problems in multiple domains.
- Simplify test and save test time with multiple measurements on the same captured data. Reduce cost of test with a versatile single instrument that replaces multiple test sets.

RSA5000 Series



Applications

- Radar/EW
- Spectrum Management
- Radio Communications

www.tektronix.com/RSA5000

Features

- DPX® Live RF spectrum display
- Triggering expertise
- Seamless data capture
- Multi-domain time correlation
- Automatic pulse measurement and detection

Benefits

- Discover previously unseen signal behavior. Improve test confidence and catch very short duration transients missed by conventional spectrum analyzers.
- Save time by isolating signal anomalies that other instruments can't even trigger on. Isolate hard to find hardware and software anomalies with cross domain triggering between multiple instruments.
- Observe the entire duration of signal events, like frequency hopping sequences, PLL settling times, turn on transients, and multiple pulses.
- Accelerate troubleshooting and analysis by pinpointing the root cause of problems in multiple domains. Analyze captured data in any/all domains at any time with correlated markers.
- Simplify test and save test time with multiple measurements on the same captured data. Reduce cost of test with a versatile single instrument that replaces multiple test sets.

RSA6000 Series



Applications

- Radar/EW
- Spectrum Management
- Radio/Satellite Communications
- RF Debug
- EMI Diagnostics

www.tektronix.com/RSA6000

Features

- DPX® Live RF spectrum display
- Triggering expertise
- Seamless data capture
- Multi-domain time correlation
- Automatic pulse measurement and detection

Benefits

- Discover previously unseen signal behavior. Improve test confidence and catch very short duration transients missed by conventional spectrum analyzers.
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- Simplify test and save test time with multiple measurements on the same captured data. Reduce cost of test with a versatile single instrument that replaces multiple test sets.



Logic Analyzer Product Selection

With Tektronix Logic Analyzers, you can acquire fast edges with the industry's highest acquisition speed. Support packages tuned to your specific application makes it easier for you to probe, acquire, decode, analyze, and validate the performance of your microprocessor, FPGA or memory design.

	TLA520xB	TLA6xxx	TLA7ACx	TLA7Bxx	TLA7SAxx
Channels	34, 68, 102, 136	68, 102, 136	68, 102, 136	68, 102, 136	8, 16
Maximum Channels per Timebase (merge)	136	136	272 in TLA7012, 408 in TLA7016	272 in TLA7012, 408 in TLA7016	-
Maximum Channels per Mainframe	136	136	272 in TLA7012, 816 in TLA7016	272 in TLA7012, 816 in TLA7016	32 in TLA7012, 96 in TLA7016
Maximum Channels per System	136	136	2,176 (with eight in TLA7012s and one TLA708EX) 6,528 (with eight in TLA7016s and one TLA708EX)		
Maximum Independent Buses per System	1	1	16 (with eight in TLA7012s and one TLA708EX) 48 (with eight in TLA7016s and one TLA708EX)		
State Clock Rate	235 MHz	235 MHz std.; 450 MHz opt.	235 MHz std.; 450 MHz opt.	750 MHz std.; 1.4 GHz opt.	Up to 8.0 GT/s
Maximum State Clock Rate	235 MHz	800 MHz (half channel mode)	800 MHz (half channel mode)	up to 1.4 GHz	Up to 8.0 GT/s
Maximum State Data Rate	470 Mb/s	1,250 Mb/s	1,250 Mb/s	3.0 Gb/s	-
MagniVu™ Timing (all channels, all the time)	125 ps (8GHz) with 16 Kb depth	-	125 ps (8 GHz) with 16 Kb depth	20 ps (50 GHz)	-
Simultaneous State and Timing Through Same Probe	yes	yes	yes	yes	no
Analog Measurements Through Same Probe	no	optional	optional	yes	Yes. Requires the use of an adapter probe P67UHDSMA to connect the probe to an oscilloscope
Timing	500 ps (2 GHz)/1 ns (1 GHz)/2 ns (500 GHz)/ (quarter/half/full channels)	500 ps (2 GHz)/1 ns (1 GHz)/2 ns (500 GHz)/ (quarter/half/full channels)	500 ps (2 GHz)/1 ns (1 GHz)/2 ns (500 GHz)/ (quarter/half/full channels)	156.25 ps/312.5 ps/625 ps to 50 ns(quarter/half/full channels)	-
Analog Outputs (four per module - analog MUX)	no	optional	optional	yes	no
Record Length	8/4/2 Mb to 128/64/32 Mb (quarter/half/full channels timestamp)	8/4/2 Mb to 512/256/128 Mb (quarter/half/full channels with timestamp)	8/4/2 Mb to 512/256/128 Mb (quarter/half/full channels with timestamp)	4/2 Mb to 256/128 Mb (half/full channels with timestamp)	Up to 160M symbols/ differential input 8 GB physical memory total (16 GB for a x16 configuration)
Source Synchronous Clocking	yes	yes	yes	yes	no

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Logic Analyzer Probes and Interconnect Systems

No test and measurement solution is complete without addressing probing and considering its impact on your system and your measurement time. You can depend on Tektronix probes to protect the integrity of your signal, whether you need simultaneous digital-analog acquisition, an economical compression probe or a high-fidelity general-purpose probe.

www.tektronix.com/logic_analyzers/probes

TLA5000 Series



Applications

- FPGA
- Serial data
- Signal integrity

www.tektronix.com/tla5000

Features	Benefits
MagniVu™ acquisition	Avoid missing events completely in either timing or state acquisition mode with higher sampling resolution (up to 20 ps) on all channels.
Flagging the glitch	Remove the need to manually search all channels using exclusive ability to show both the time and channel where the glitch occurred.
T_s/T_{th} violation triggering	Eliminate the time consuming and complex task of monitoring the circuit's outputs with real-time violation triggering that automatically acquires intermittent setup and hold violations.
Automated measurements	Easily summarize your design's performance with sophisticated measurements such as: frequency, period, pulse width, duty cycle, and edge count.
Drag & drop triggers	Quickly isolate events through simple and intuitive trigger setup. Triggers include: Channel Edge, Channel Value, Bus Value, Multi-Group Value, Glitch, Setup and Hold Violation, or Trigger on Anything.
iView™ display	Gain complete system visibility with time-correlated, integrated analog and digital data on one display.

TLA6000 Series



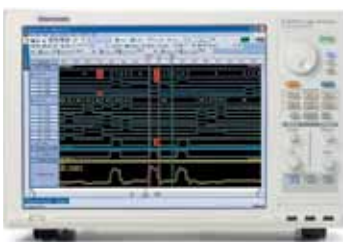
Applications

- FPGA
- Processor and Bus Debug and Verification
- Signal integrity
- DDR2

www.tektronix.com/tla6000

Features	Benefits
Glitch Trigger, Capture and Display	Quickly find signal integrity problems by triggering on common problems such as crosstalk and termination errors. Exclusive glitch display removes need to manually search all channels by showing both the time and channel where any signal integrity problems occurred.
iCapture™ multiplexing	Eliminate double probing and see both digital and analog acquisitions through a single logic analyzer probe.
iView™ display	Gain complete system visibility with time-correlated, integrated analog and digital data on one display.
MagniVu™ acquisition	Accurately determine signal relationships with high sampling resolution (125 ps) on all channels.
Automated measurements	Easily summarize your design's performance with sophisticated measurements such as: frequency, period, pulse width, duty cycle, and edge count.
Drag & drop triggers	Quickly isolate events through simple and intuitive trigger setup. Triggers include: Channel Edge, Channel Value, Bus Value, Multi-Group Value, Glitch, Setup and Hold Violation, or Trigger on Anything.

TLA7000 Series



Applications

- Signal integrity
- Memory
- FPGA
- Serial data
- MIPI

www.tektronix.com/tla7000

Features	Benefits
MagniVu™ acquisition	Avoid missing events completely in either timing or state acquisition mode with higher sampling resolution (up to 20 ps) on all channels.
iCapture™ multiplexing	Eliminate double probing with simultaneous digital and analog acquisition through a single logic analyzer probe.
iView™ display	Gain complete system visibility with time-correlated, integrated analog and digital data on one display.
iVerify™ analysis	Quickly find signal integrity issues with multi-channel bus analysis using oscilloscope-generated eye diagram.
Automated measurements	Easily summarize your design's performance with sophisticated measurements such as: frequency, period, pulse width, duty cycle, and edge count.
Drag & drop triggers	Quickly isolate events through simple and intuitive trigger setup. Triggers include: Channel Edge, Channel Value, Bus Value, Multi-Group Value, Glitch, Setup and Hold Violation, or Trigger on Anything.

TLA7SA00 Series Logic Protocol Analyzer for PCI Express

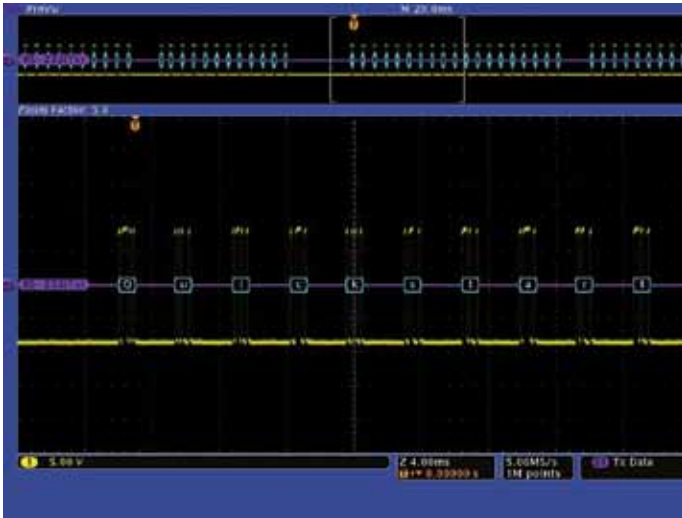
The TLA7SA00 Series Logic Protocol Analyzer modules for the TLA7000 Series offer a complete solution for physical through protocol layer debug of your PCI Express systems. Learn more at: www.tektronix.com/LA

Software to Expand your Tektronix Instrument Capability

Automate your testing, simplify execution and speed evaluation of your most challenging system designs with these software solutions. For a minimal investment increase your design insight by taking advantage of the latest software, options, and upgrades.

Here is a representative list of the most popular application software packages available. There are over 40 packages from Tektronix. For a more complete list of application software packages for a specific instrument, please consult the product home pages listed at www.tektronix.com/products/accessories/application_software.

Bench and Performance Oscilloscopes



Common Serial Bus Triggering and Analysis

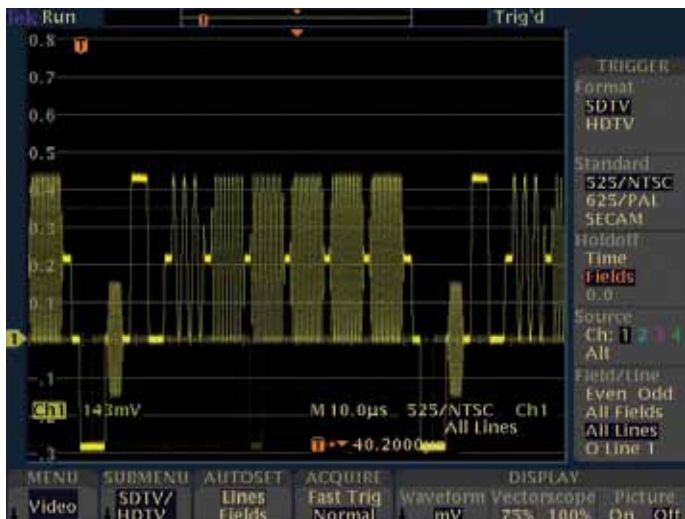
Speed debug of your serial bus with automated trigger, decode and search for common serial standards, such as I²C, SPI, USB, Ethernet, CAN, LIN, FlexRay, RS-232/422/485/UART, MIL-STD-1553 and I²S/LJ/RJ/TDM.

www.tektronix.com/products/accessories/application_software

Power Analysis

Improve the efficiency of your switching power supply. Provides automated measurements for analyzing power quality, current harmonics, switching loss, safe operating area, slew rate, modulation, and ripple.

www.tektronix.com/products/accessories/application_software



HDTV and Custom Video Analysis

Simplify debug of video signals. Provides video quickmenu, autoset, hold, line count trigger, video picture mode, vectorscope mode, HDTV format trigger gratitudes and more.

www.tektronix.com/products/accessories/application_software



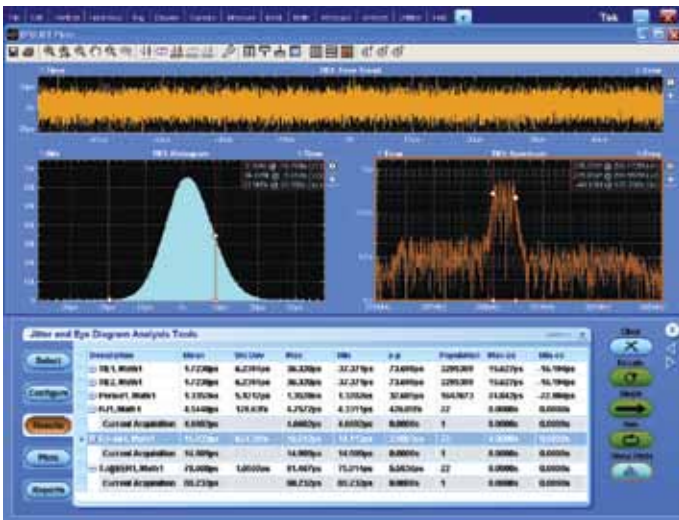
Easier PC Connectivity from Tektronix

Tektronix OpenChoice® Software - The freedom to analyze, document and present your data any way you choose.

OpenChoice® Desktop software solutions deliver simple, seamless integration between the instrument and the PC. OpenChoice® provides you with multiple choices to easily generate, capture, transfer, document and analyze your measurement results, according to your application environment and preference.

www.tektronix.com/openchoice

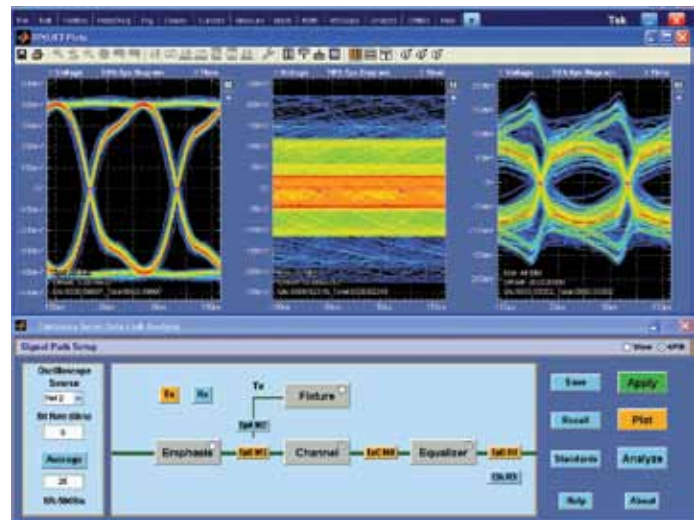
Performance Oscilloscopes



DPOJET Jitter and Eye Diagram Analysis

Simplify identifying signal integrity concerns, jitter, and their related sources with DPOJET software. DPOJET provides the highest sensitivity and accuracy available for real-time oscilloscopes.

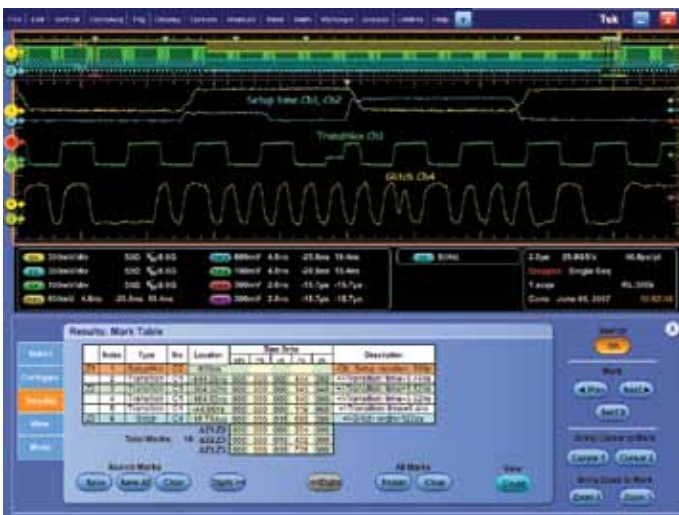
www.tektronix.com/products/accessories/application_software



Serial Data Link Analysis

Analyze link performance while modifying transmitter emphasis and receiver settings incorporating feed forward and decision-feedback equalization. Improve accuracy with the ability to de-embed fixture and other channel effects from the measurements.

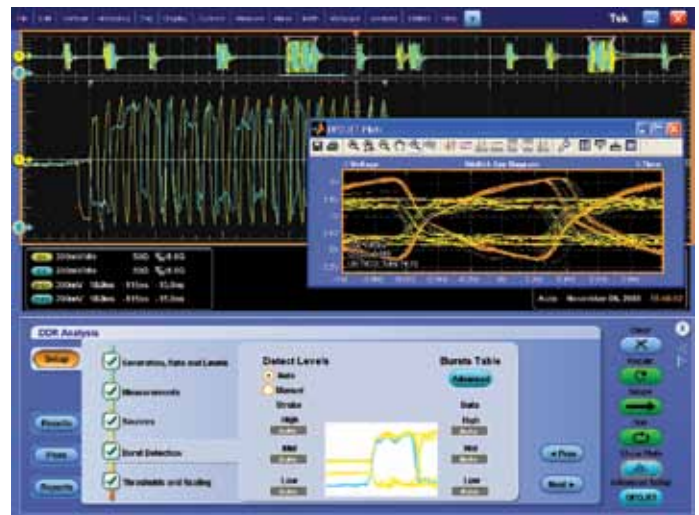
www.tektronix.com/products/accessories/application_software



Advanced Event Search and Mark

Ease the tedious task of examining captured waveform data by highlighting important events, skipping the unimportant ones and enhancing the comprehension of event relationships on your Tektronix oscilloscope. Navigate between events of interest effortlessly to get to the source of your measurement task.

www.tektronix.com/products/accessories/application_software



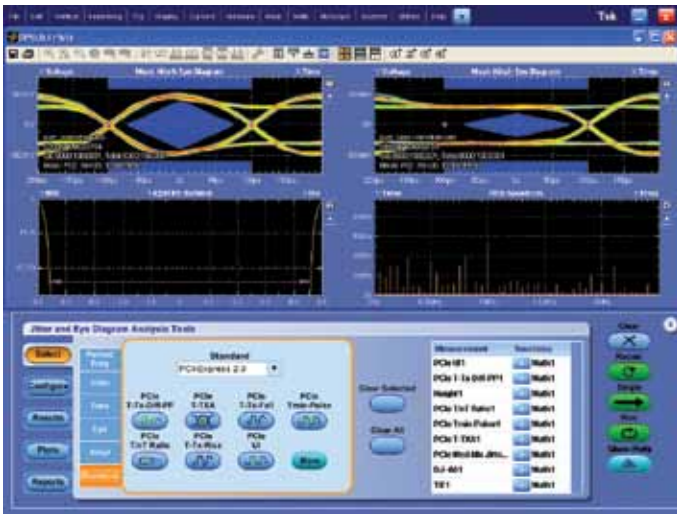
DDR Memory Bus Analysis

Automatically identify DDR1, LPDDR, LPDDR2, DDR2, DDR3 and GDDR3 Reads and Writes to clearly see how analog anomalies are affecting your DDR/Memory. DDRA with DPOJET, combined with DPX® technology, is the fastest way to solve complex memory signaling issues.

www.tektronix.com/products/accessories/application_software

Performance Oscilloscopes

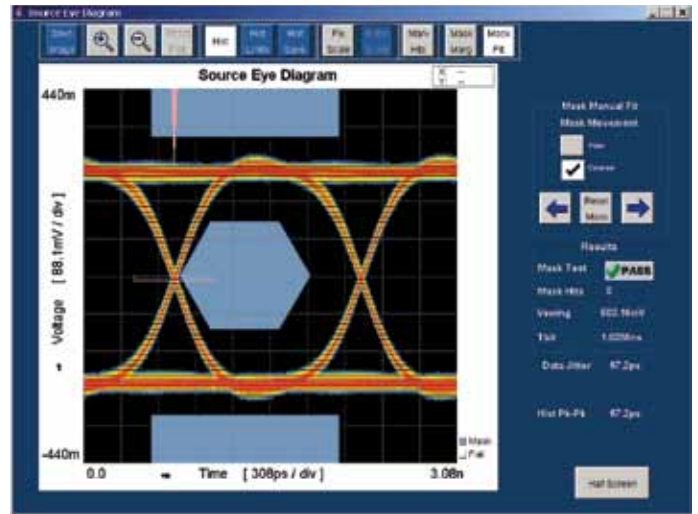
Software



PCI Express Analysis Test Solution

Analyze the performance of your PCI-Express Rev 1.0, 2.0 or 3.0 design with comprehensive test support. Option PCE 3.0 enables tests that conform to PCI-SIG standards using the powerful DPOJET analysis package. With DPO/DSA70000 Series Oscilloscopes, view critical timing margins for PCI-Express Rev 3.0 signaling.

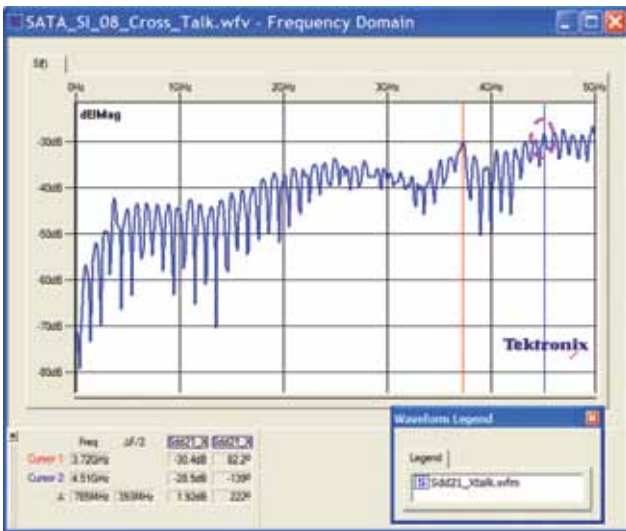
www.tektronix.com/products/accessories/application_software



HDMI Compliance Test Solution

Fast, efficient solution for HDMI compliance measurement challenges, no matter if you are working on a Source, Cable, or Sink solution. This application provides all the HDMI compliance test solutions you need to ensure quality and interoperability to both CTS1.3c and CTS1.4 test specification.

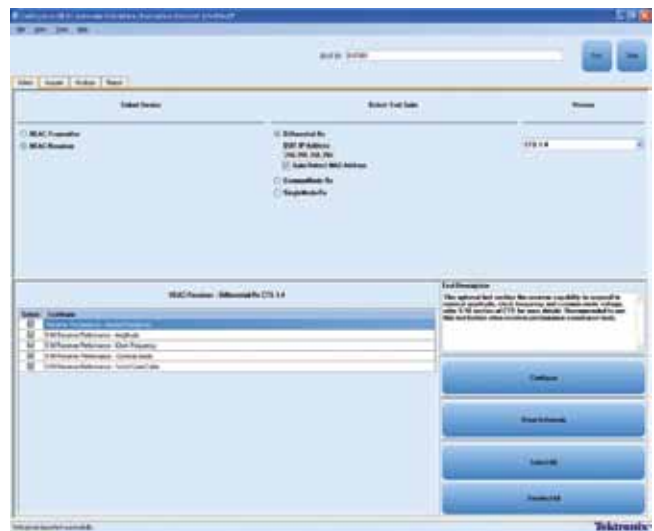
www.tektronix.com/products/accessories/application_software



IConnect® MeasureXtractor™ Signal Integrity TDR and S-parameter

Efficient, easy-to-use, and cost-effective solution for measurement-based performance evaluation of gigabit interconnect links and devices, including signal integrity analysis, impedance, S-parameter and eye diagram tests, and fault isolation.

www.tektronix.com/products/accessories/application_software

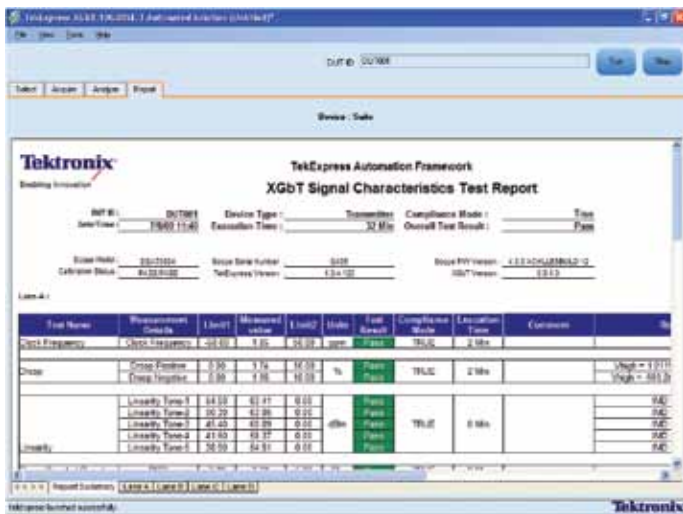


TekExpress™ Automated Serial Compliance Test Software

Reduce your compliance test time on SATA, SAS, USB and DisplayPort standards-based designs by approximately 70% with the simple, efficient testing and automation of all required testing suites provided by TekExpress software. Also included is auto-recognition of required test equipment like Tektronix 70000 Series Oscilloscopes and precise DUT/Host control one-button testing. TekExpress provides support for SATA/SAS, MIPI, HDMI, USB, DisplayPort and Ethernet standards.

www.tektronix.com/products/accessories/application_software

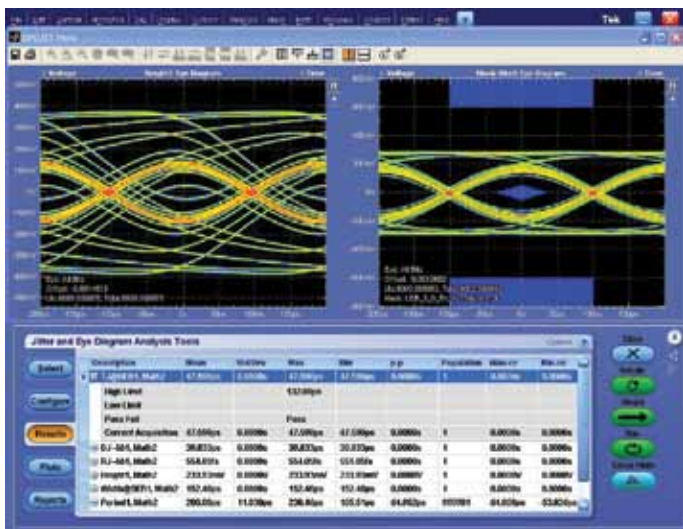
Performance Oscilloscopes



Ethernet Compliance Test Solutions

Receive full PHY layer electrical test support for Ethernet variants from 10BASE-T to 10GBASE-T with a comprehensive, integrated Ethernet tool set. Analog verification, device characterization and automated compliance solutions are all included.

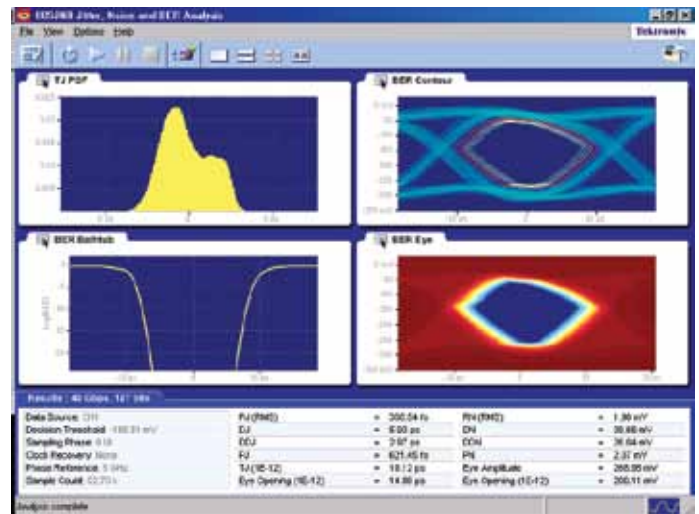
www.tektronix.com/products/accessories/application_software



USB 3.0 Transmitter Testing

Verify, characterize and debug SuperSpeed USB designs with pass/fail testing for all USB 3.0 Normative and Informative measurements. USB3 with DPOJET provides the fastest method to resolve complex USB signal integrity issues. For compliance tests, TekExpress USB 3.0 provides an automated, simple and efficient way to test USB 3.0 Transmitter hosts and devices consistent with the requirements of the SuperSpeed Universal Serial Bus Electrical Compliance Test Specification.

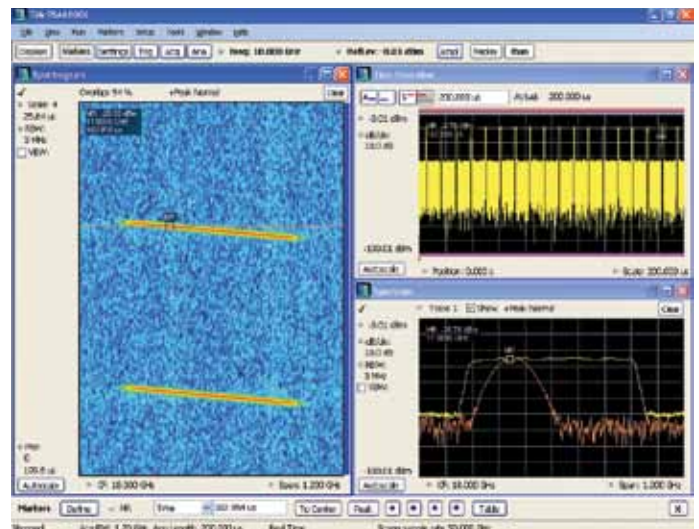
www.tektronix.com/products/accessories/application_software



Jitter, Noise & BER Analysis Software (80SJNB)

Characterize Jitter, Noise and BER performance of high-speed serial designs from 1 Gb/s to 60 Gb/s data rates; Characterize advanced links using FFE/DFE equalization, and with TWDP and DDPWS measurements; Link budgeting and "What-if" analysis with emulation of a range of channels with just-one transmitter measurement.

www.tektronix.com/products/accessories/application_software



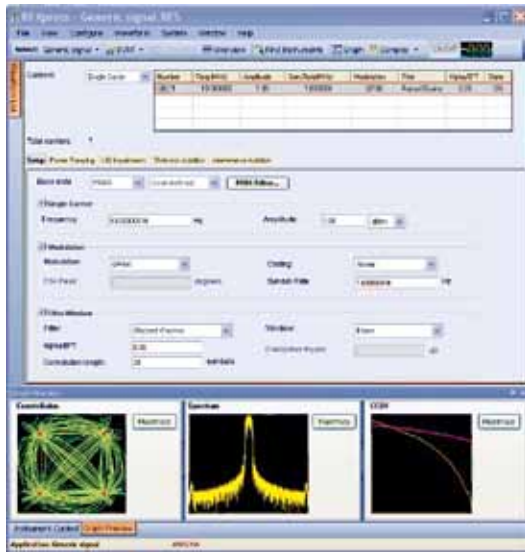
SignalVu™ Vector Signal Analysis

Easily characterize wideband spectral events and verify designs such as wideband radar, high data rate satellite links or frequency-hopping radios. SignalVu combines the functionality of a vector signal analyzer, a spectrum analyzer and the powerful triggering capabilities of Tektronix oscilloscopes – all in a single package.

www.tektronix.com/products/accessories/application_software

Software

Signal Generators

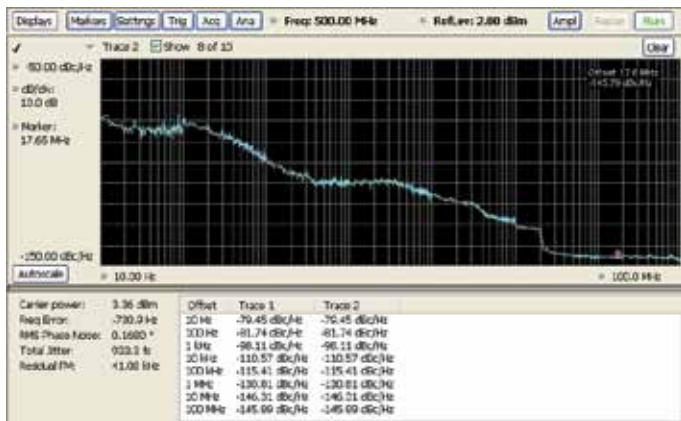


RFXpress® Software for the AWG5000, AWG7000 (RFX100)

If you are doing RF Designs requiring signal modulation, Tektronix' RFXpress software for the AWG series delivers advanced capabilities to synthesize digitally modulated baseband, IF and RF/microwave signals supporting a wide range of modulation schemes. RFXpress simplifies waveform creation. Special options are available for Radar, OFDM, S-Parameter, and UWB signals specifically.

www.tektronix.com/products/accessories/application_software

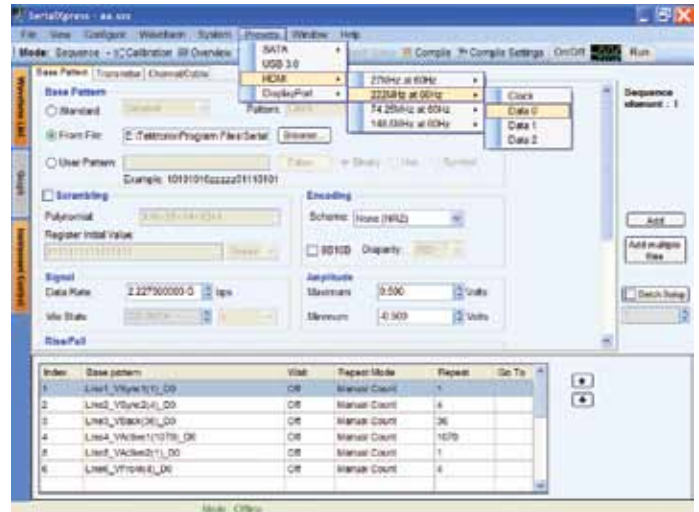
Spectrum Analyzers RSA6000 Series



Phase Noise and Jitter Measurements for the RSA6000 Series (Option 11)

Make important phase noise measurements faster than any other spectrum analyzer on the market. Identify timing issues with advanced jitter measurement capability like Timing Interval Error (TIE) and other jitter analysis plots.

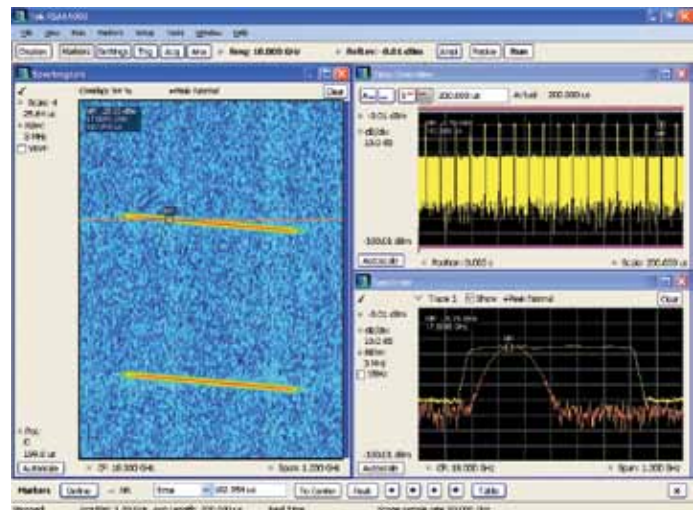
www.tektronix.com/products/accessories/application_software



SerialXpress® Software for the AWG5000, AWG7000 (SDX100)

Recreate exact waveforms required for thorough and repeatable design validation, margin/characterization and conformance testing with SerialXpress and AWG Series signal generators. SerialXpress' easy to use graphical user interface allows for a combination of test signals and various impairments including Inter Symbol Interferences (ISI), Duty Cycle Distortion (DCD), Spread Spectrum Clocking (SSC), Pre-emphasis and noise.

www.tektronix.com/products/accessories/application_software

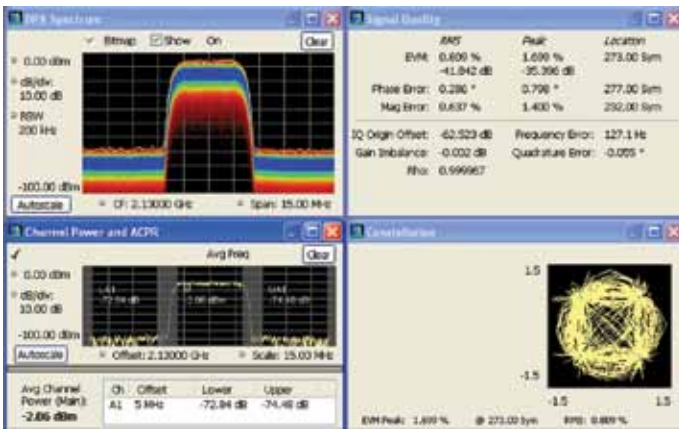


SignalVu™ Vector Signal Analysis

Easily characterize wideband spectral events and verify designs such as wideband radar, high data rate satellite links or frequency-hopping radios. SignalVu combines the functionality of a vector signal analyzer, a spectrum analyzer and the powerful triggering capabilities of Tektronix oscilloscopes – all in a single package.

www.tektronix.com/products/accessories/application_software

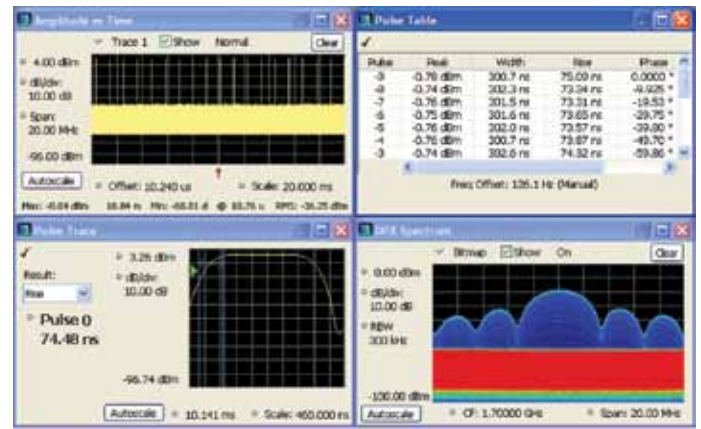
Spectrum Analyzers RSA6000 Series



General Modulation Analysis for the RSA6000 Series (Option 21)

Now you can have Digital Signal Analysis on up to 22 different modulation types including QPSK, 128 QAM, and FSK - all loaded on your RSA6000 Series spectrum analyzer. This also includes basic analysis on items such as Symbol Table and Constellation, Eye, Trellis, and Demodulated IQ Diagrams.

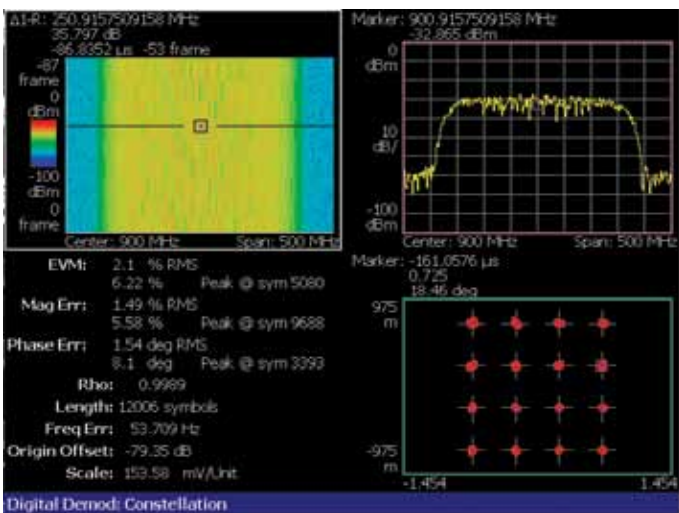
www.tektronix.com/products/accessories/application_software



Advanced Signal Analysis for the RSA6000 Series (Option 20)

Characterize pulsed signals within a 110 MHz bandwidth with over 20 automatic pulse width measurements such as Rise Time, Duty Cycle, Pulse Ripple and Droop. Improve your ability to gain insight into important pulsed signals with a pulse table of all results, pulse traces of specific single pulse parameters, and pulse trend information on data for the whole pulse train. Includes vector measurement analysis as well!

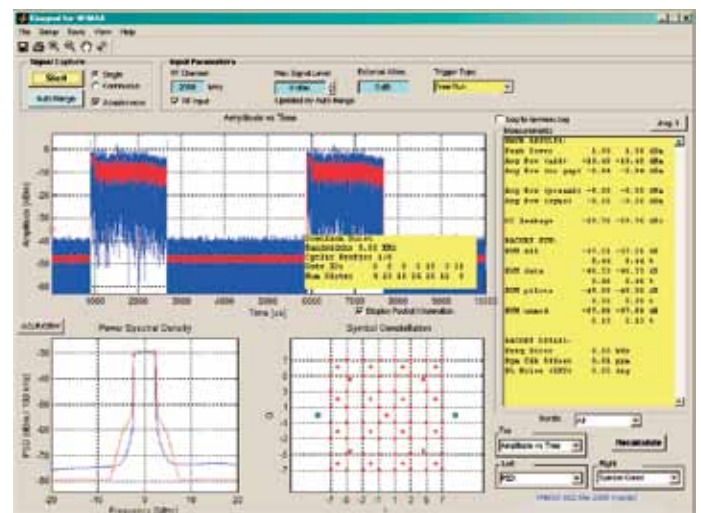
www.tektronix.com/products/accessories/application_software



RSAVu Offline Analysis Software

RSAVu software enables offline analysis of data captured from Tektronix Real-Time Spectrum Analyzers (RTSAs) and oscilloscopes. The software offers users the same demodulation and analysis capabilities included in the RSA3408B software option suite. From 3G wireless standards to the latest RFID formats and pulsed-signal analysis, RSAVu is a tool designers can use to analyze signals without having acquisition hardware connected.

www.tektronix.com/products/accessories/application_software



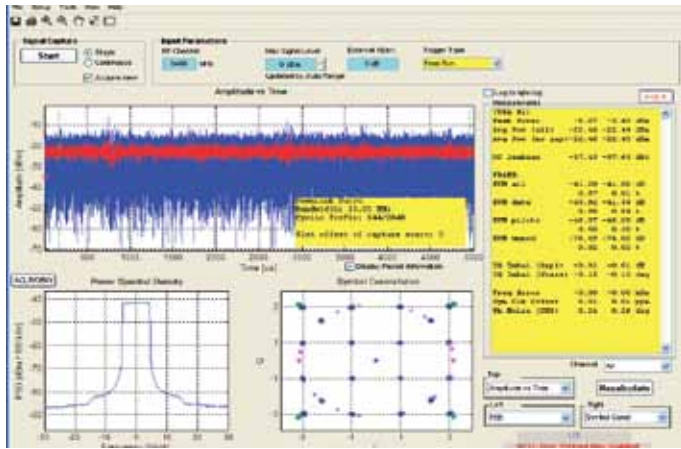
RSA IQMAX WiMAX Software

RSA-IQWIMAX offers advanced analysis of WiMAX waveforms captured by the RTSA, including EVM and spectral measurements. For example, RSA-IQWIMAX can easily analyze frequency settling time and phase errors that occur during a burst transmission. Such capabilities significantly help in understanding and debugging RF performance-related issues.

www.tektronix.com/products/accessories/application_software

Software

Spectrum Analyzers RSA6000 Series

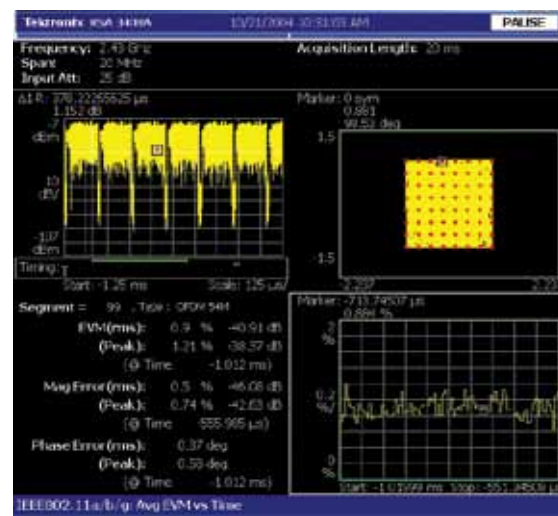
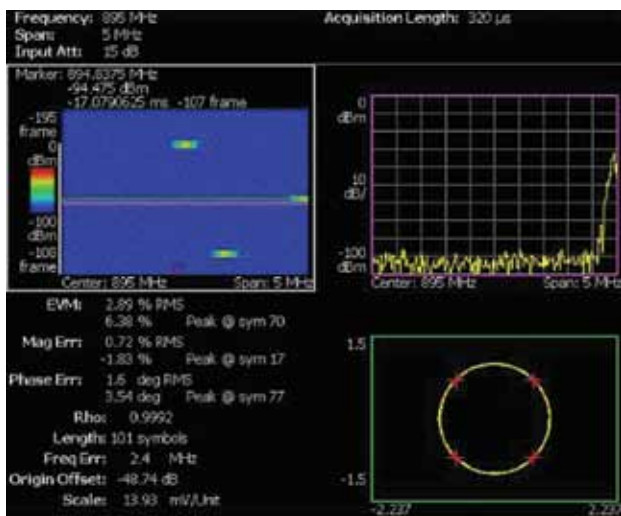


RSALTE LitePoint IQsignal™ LTE

RSALTE offers advanced analysis of LTE waveforms captured by the RSA Series, including EVM and spectral measurements. For example, RSALTE can easily analyze frequency-settling time and phase errors that occur during a burst transmission. Such capabilities significantly help in understanding and debugging RF performance-related issues.

www.tektronix.com/products/accessories/application_software

Spectrum Analyzers RSA3000 Series



General Demodulation Analysis, RFID and Signal Source Analysis for the RSA3000 Series (Option 21)

Get more efficient use of your RSA3000 Series with Signal Source Analysis that includes Automated Frequency Settling Time Measurements, Comprehensive Phase Noise and a Jitter Measurement Suite. This popular analysis suite includes RFID conformance, and compliance and interoperability tests, all supporting the latest ISO 18000-7 standard.

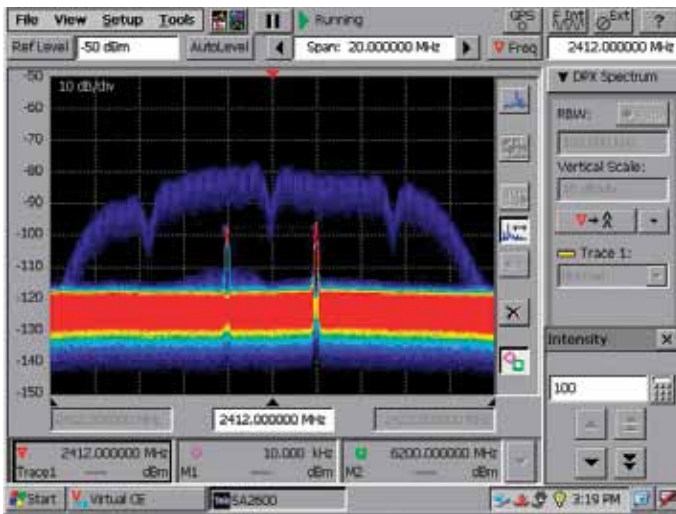
www.tektronix.com/products/accessories/application_software

802.11a/b/g/n Analysis (RSA3408B only) (Option 29)

With integrated support for the a wide variety of WLAN standards, the RSA3000 Series spectrum analyzer can help with the most challenging design and compliance challenges. With DPX™ Live RF spectrum display, patented Frequency Mask Triggering for event isolation, and unique MIMO measurements for link analysis, you gain the insight necessary to ensure your WLAN designs will operate successfully.

www.tektronix.com/products/accessories/application_software

SA2600/H600 Series



Enhanced DPX™ Live RF for the SA2600 Series (Option EP1)

Enhances SA2600 Series DPX™ Live RF spectrum display to 10,000 spectrums/s and 125 μ s minimum signal duration for 100% Probability of Intercept (POI), typical.

www.tektronix.com/products/accessories/application_software



Signal Classification for the SA2600 Series (Option SC1)

Enhances SA2600 Series by adding signal classification capability.

www.tektronix.com/products/accessories/application_software

The latest digital video technologies are faster and often more complex than prior generations and require video test equipment capable of greater performance and more extensive analysis. Tektronix mission critical test, measurement and monitoring tools help you preserve signal integrity, reduce production time, reduce operating costs, ensure standards compliance and optimize system performance.

Picture Quality Analyzer



PQA600 Applications

- CODEC Design, Optimization, and Verification
- Conformance Testing, Transmission Equipment, and System Evaluation
- Digital Consumer Product Development and Manufacturing

www.tektronix.com/video

Features

Objective perceptual measurements based on an accurate human vision system model

Attention modeling software and attention-weighted picture quality measurements

Measurements for artifact detection, artifact-weighted picture quality and classic PSNR

Benefits

- Ensure measurement results match viewers' subjective ratings.
- Achieve and verify differentiated picture quality with cost-effective and time-efficient repeatable assessments.
- Reduce the time and effort needed to detect, diagnose and correct picture quality problems.
- Optimize video processing algorithm performance.
- Clearly state the quality acceptance criteria for video products, systems or content.
- Easily share the conformance measurements and results throughout the organization or with suppliers.

Unique tools for optimizing video processing algorithms and video distribution systems.

Help isolate and correct quality problems and evaluate quality tradeoffs.

Video and Audio QoE Software



Features

Reliable and accurate video artifact measurement by performing a full decode on the video stream

Can be used with all Tektronix DTV monitoring probe configurations using robust private backhauled video from the monitoring probes.

Multiple instances can be run per license (dependent on PC processing power and video content type)

Benefits

Allows operators to determine if the source of a problem is in the content source (for example over-compression) or in network distribution.

Identify systemic issues that are otherwise hard to track down and optimize network configuration and equipment settings to deliver the best viewing experience possible within bandwidth constraints to their customers

Enables service comparison at different network locations

VQS1000 Applications

- Affordable QoE Monitoring
- Network performance optimization
- Remote diagnostics of broadcast delivery issues

www.tektronix.com/video

Video Elementary Stream Analyzer



Features

- Compliance verification with the encoding standard
- Multiple displays and overlays of codec information
- Buffer analysis

Benefits

- Confirm the stream will be correctly decoded by all compliant receivers in the market place
- Diagnose errors introduced by the encoder algorithms
- Confirm the stream will cause receiver under or overflow errors without needing to test all receivers in market place

MTS4EA Applications

- Equipment manufacturers - research & development
- Manufacturing test
- Broadcasters and network operators troubleshooting

www.tektronix.com/video

MPEG Generator



Features

- Compliance verification with the encoding standard
- Multiple displays and overlays of codec information
- Buffer analysis

Benefits

- Confirm the stream will be correctly decoded by all compliant receivers in the market place
- Diagnose errors introduced by the encoder algorithms
- Confirm the stream will cause receiver under or overflow errors without needing to test all receivers in market place

MTX100B Applications

- Equipment manufacturers - research & development
- Manufacturing test
- Broadcasters and network operators troubleshooting

www.tektronix.com/video

MPEG Analyzer



Features

- Cross layer error correlation and diagnostic capability
- High performance line rate Gigabit Ethernet (GbE) IP connectivity and integrated cross layer analysis
- Wide range of DTV standards are supported
- CaptureVu™ technology
- Innovative program-centric user interface
- Integrated cross layer fault analysis and logging
- Tclips test streams, multiplexing, H.264 buffer analysis and ES compliance checking

Benefits

- Diagnose problems anywhere in the network environment, whether that be transmission links (RF or IP layer) or content processing (TS layer).
- Diagnose of complex timing problems in video over IP and IPTV network equipment.
- Analyze any Terrestrial, Cable, Satellite or Telco transport.
- Analyze system events in real time or deferred time to debug CaptureVu™ technology intermittent or complex problems that other analyzers miss.
- Brings expert power to the novice user.
- Reduces time to insight when troubleshooting and Integrated cross layer fault analysis and logging diagnosing problems.
- Suite of tools for creation and analysis of transport streams containing next generation video content.

MTS430 Applications

- Codec Design – Hardware Testing
- Encoder and Multiplexer Design
- Testing Set Top Box software

www.tektronix.com/video

MPEG Analysis Software



Features

- Real time (IP) and deferred time Transport Stream (TS) analysis
- Wide range of DTV standards are supported, including MPEG, DVB, ATSC and ISDB
- CaptureVu™ technology together with PCR measurement and graphing capabilities

Benefits

- Analyze streams either received via the PC's Ethernet interface (TSCR) or stored on hard disk (TSCA)
- Analyze any terrestrial, cable, satellite or Telco TS
- Analyze system events in real time and deferred time to debug intermittent and complex problems missed by traditional analyzers

MTS4SA Applications

- Equipment manufacturers - research & development
- Manufacturing test
- Broadcasters and network operators troubleshooting

www.tektronix.com/video

Video Signal Generator



Features

- Standard test signals
- Complete set of Serial Digital Interface formats
- Composite and component analog video formats
- Modular form factor
- PC connectivity
- Automated test sequences

Benefits

- Provides precise test patterns for testing and verifying color reference, display geometry, frequency response, signal timing, and signal performance.
- Supports all major SDI formats and frame rates: 270 Mb/s 525/625 SD-SDI, 1.5 Gb/s 720/1080 HD-SDI, dual link HD-SDI, and 3G-SDI. Supports RGB and XYZ color spaces, 10 or 12 bit sampling, and 2K raster size for dual link and 3G interfaces.
- Supports composite NTSC and PAL formats, including timing pulses, subcarrier and black burst signals. Supports YPbPr and RGB component analog formats for 525/625 SD and 720/1080 HD.
- Flexibility to choose the right set of video output modules for your application, and to easily upgrade your TG700 system in the future.
- Remotely configure and control the TG700 via the LAN interface, and download custom test patterns, logos, and frame pictures.
- Use Tcl scripts and SCPI commands for program control of the TG700, simplifying tasks such as automated regression testing.

TG700 Applications

- Digital and Analog Broadcast Video Product Development and Manufacturing

www.tektronix.com/video

Advanced Waveform Monitor



Features

The most comprehensive physical layer monitoring and measurements available (including 3Gb/s SDI signals with Option 3G)

ANC Data Inspector

A/V Delay Measurement

Benefits

Makes it easier and faster to track down SDI signal path problems with automated physical layer measurements

Automatically detects and displays the presence, absence and status for all ANC data types

Helps prevent Lip-Sync problems with fast, accurate and repeatable out-of-service A/V delay measurements

WFM8300 Applications

- Monitoring and Compliance Checking in Content Distribution and Broadcast
- Quality Control in Content Production and Post Production
- Equipment/System Qualification and Troubleshooting for Installation and Maintenance of Content Creation and Distribution Facilities
- Research and Development of Professional Video Equipment

www.tektronix.com/video

Automated Video Analyzer



Features

Pass-Fail limit testing & summary screen

Test utilities

Automatic report generator

Companion test signal packages

Auto format detect

LAN connectivity

Complete oscilloscope functionality

Benefits

Fast and efficient review of hundreds of individual parameters can be quickly assessed via an intuitive Red/Green display including numerical results for failed parameters.

Make HDTV video testing faster, more robust, more Test utilities convenient and more accurate.

Speeds test documentation including test results, Automatic report generator configuration settings and signal reference data.

Speed and simplify testing of supported formats with opt. SS.

Simplifies operation and allows multiple formats to be tested Auto format detect automatically in sequence.

Access video test reports or data stored on the hard disk via LAN connectivity the network.

Increased platform flexibility that includes full DPO7104 Complete oscilloscope functionality functionality and specifications.

VM6000 Applications

- Automated video testing of digital set-top boxes and video semiconductors

www.tektronix.com/video

Technology and Application Solutions

Keep up-to-date on the latest technologies and applications with Tektronix at: www.tektronix.com/applications



Serial Data



Embedded Systems



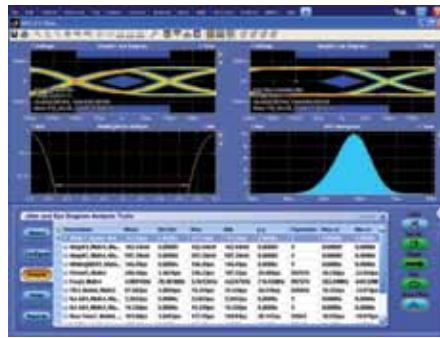
RF/Microwave



Digital Video

Other Applications

www.tektronix.com/applications



PCI Express®

PCI Express Design Challenges Need Fast, Accurate Answers

PCI Express 3.0 testing requires dual-port acquisition and 1 million unit interval analysis. Tektronix oscilloscopes provide full sample rate and deep memory on all channels required for compliance testing. The DPO70000B features channel emulation, equalization and up to 20 GHz Bandwidth which enables 5th harmonic measurements on 3rd generation data rates to 8 Gb/s.

Recommended Products:

Oscilloscopes and Application Software:

- DSA70000 Series Real Time Oscilloscopes
- DPOJET Jitter and Eye Analysis software
- DSA8200 Sampling Oscilloscope with 80E08 module
- IConnect® S-parameters and Z-Line software 80SSPAR

Probing:

- P7300SMA Series SMA Differential Probing System
- P7300 and P7500 Series TriMode Differential Probes
- P80318 TDR hand Probes

Logic Analyzers:

- TLA7000 Series
- TLA7Sxx Serial Analyzer module
- TLA SW version 5.1 or higher and protocol disassembly software

Bit Error Rate Analyzers:

- BSA85C
- DPP125
- CR125

Signal Generators:

- AWG7000 Series
- AFG3000 Series

Spectrum Analyzers:

- RSA6000 Series

For more information visit:
www.tektronix.com/pci_express

Serial ATA

Powerful Serial ATA Automated Compliance Toolset Saves Time and Effort

Serial ATA test requirements are some of the most complex among current serial data standards. With a full toolset for characterization you will know how much margin your design really has. Tektronix' one-button solution for device state control and test automation allows you to focus your attention on other priorities.

Recommended Products:

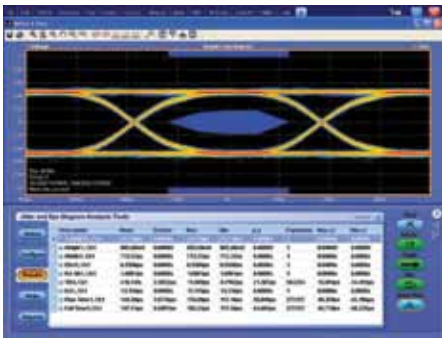
Oscilloscopes and Application Software:

- DSA70000 Series Real Time Oscilloscopes
- TekExpress SATA Compliance Automation software
- DPOJET Jitter and Eye Analysis software
- DSA8200 Series Sampling Oscilloscope
- TDR and S-Parameter software 80SSPAR

Signal Generators:

- AWG7000 Series Arbitrary Waveform Generators

For more information visit:
www.tektronix.com/serial_data



DisplayPort®

Powerful, Efficient Solution for DisplayPort Compliance Measurement Challenges

DisplayPort compliance testing for CTS v.1.1a requires timing/jitter measurements for Source validation, impedance tests for cables and confirming clock recovery with low bit error rates on Sink tests. Simplify your DisplayPort tests for CTS v.1.1a with Tektronix automated toolset for Source, Sink and Cable. Tektronix' suite of oscilloscopes, signal sources and signal analysis tools enable you to resolve design challenges quickly and efficiently.

Recommended Products:

Source Testing:

- MSO/DPO/DSA70000 Series Real Time Oscilloscopes
- TekExpress DisplayPort Compliance Automation software
- DPOJET Jitter and Eye Diagram Analysis Tool
- P7380SMA Probes
- TF-DP-TPA-x Test Fixtures

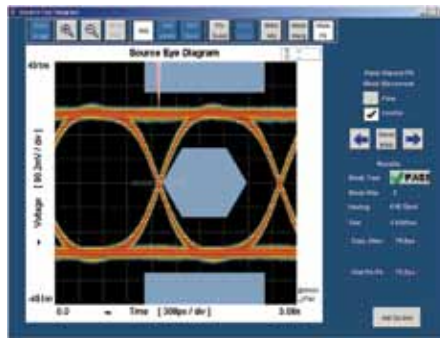
Sink Testing:

- AWG7122 Arbitrary Waveform Generator
- DSA70000 Series Real Time Oscilloscopes
- Automated DisplayPort Sink Test software Opt. DSPT
- DPOJET Jitter and Eye Diagram Analysis Tool
- TF-DP-TPA-x Test Fixtures
- Attenuators

Cable Testing (Passive & Active):

- DSA8200 Sampling Oscilloscope
- TDR Module 80A04
- Pattern Sync Module 80A06
- TDR and S-Parameter software 80SSPAR
- Jitter Analysis software 80SJNB
- TF-DP-TPA-x Test Fixtures

For more information visit:
www.tektronix.com/displayport



HDMI

Complete HDMI Compliance Test Solution for CTS V1.4

Tektronix' comprehensive automated sink, source and cable test solution addresses all requirements of the latest revision of the HDMI test specification CTS V1.4 and DVI specification. Four channel testing capability enables faster and more reliable testing with the results easily generated in a consolidated HTML report.

Recommended Products:

Oscilloscopes and Application Software:

- MSO/DPO/DSA70000 Series Real Time Oscilloscope with TDSHT3 Compliance Test software
- DSA8200 Sampling Oscilloscope
- TDR and S-Parameter software 80SSPAR
- Pattern Sync Module 80A06
- Jitter Analysis software 80SJNB

Probing:

- P7313SMA Differential Probe

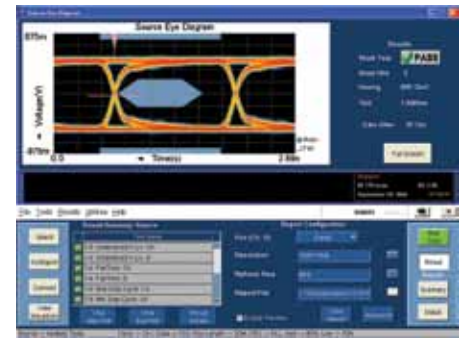
Signal Generators:

- AWG7122 Arbitrary Waveform Generator
- DTG5334 with DTGM30

Test Fixtures:

- TPA-P and TPA-R

For more information visit:
www.tektronix.com/hdmi



Memory

Better Memory Designs, In Less Time, with The Right Tools.

Engineers integrating DDR devices into their designs face many challenges, like separating read/write bursts and debugging protocol violations.

The sophisticated triggering and software analysis packages available on the DPO Series Oscilloscopes and integrated DDR support in the Tektronix TLA Logic Analyzers enable designers to quickly validate and debug DDR designs.

Shrinking package size and type have also created enormous access challenges. Tektronix probing and fixture solutions simplify DDR testing with minimal system loading.

Recommended Products:

Logic Analyzers:

- TL7000 Series
- TL7BB4 Logic Analyzer Module

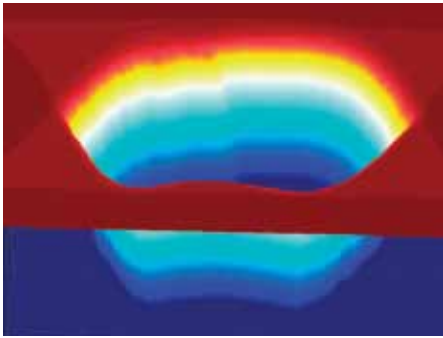
Oscilloscopes:

- MSO/DPO/DSA70000 Series Real Time Oscilloscope
- DDR Analysis Option (Opt. DDRA)
- DPOJET Jitter and Eye Diagram Analysis Tool

Probing & Fixtures:

- P7500 TriMode™ Differential Probes
- P6780 Differential Logic Probes
- NEX-DDR3MP78BSC or NEX-DDR3MP78BSCSK Chip Interposers for Oscilloscopes

For more information visit:
www.tektronix.com/memory



Jitter/Noise Analysis

Solving Jitter Debug and Analysis Challenges Made Easy

Tektronix offers jitter measurement solutions for signals ranging from low-speed digital to ultra-high speed serial data. Real-time oscilloscopes provide electrical measurement and debug capability to support standards up to 10 Gb/s.

For electrical standards above 10 Gb/s, and optical standards above 2.5 Gb/s, Tektronix offers the DSA8200 Series sampling oscilloscope with optical and electrical capabilities for 40 Gigabit OC-768 and beyond as well as the BERTScope Bit Error Rate Analyzers for speeds up to 26 Gb/sec.

For solving jitter problems on low level and low noise signals, or for measuring the very small amounts of jitter often found on clocks, Tektronix offers Real Time Spectrum Analyzers (RTSA) that enable engineers to measure and characterize jitter over a wide dynamic range.

Recommended Products:

Oscilloscopes and Application Software:

- MSO/DPO/DSA7000 Series Real-time Oscilloscopes
- DPOJET Jitter and Eye Diagram and Analysis Tools
- DSA8200 Sampling Oscilloscopes
- 80SJNB Jitter, Noise and BER Analysis software
- IConnect® and MeasureXtractor™ Signal Integrity TDR and S-parameter software

Bit Error Rate Analyzers:

- BSA Series Bit Error Rate Analyzers
- CR Series Clock Recovery Modules

Probing:

- P7313/P7313SMA Differential Probes
- P7500 TriMode Probes

Real-Time Spectrum Analyzers:

- RSA3000 Series

For more information visit:
www.tektronix.com/jitter



Signal Integrity, Time Domain Reflectometry (TDR) and S-parameter Measurements

Signal integrity measurements are a critical step in the process of developing digital systems. The task of isolating and eliminating signal integrity problems anywhere in the system is challenging. You need solutions with the bandwidth and time-saving features to properly address high-speed signal deviations, including digitizing oscilloscopes, logic analyzers, real-time spectrum analyzers, time-domain reflectometry solutions, signal generators, high-fidelity probes, and analysis software. Learn about these solutions that let you quickly locate and trace faults back to their source, eliminating schedule delays and reliability issues.

Recommended Products:

Oscilloscopes and Application Software:

- DSA8200 Sampling Oscilloscope
- IConnect® advanced and MeasureXtractor™ Signal Integrity TDR and S-parameter software
- 80SJNB Jitter, Noise and BER Analysis software

Probing:

- P8018 Single Ended/P80318 Differential TDR Probes

For more information visit:
www.tektronix.com/signal_integrity



Receiver Testing

Overcoming RX Testing Challenges

As a designer specializing in receiver test, you seek easy signal generation of very complex serial data signals. Tektronix offers a variety of solutions that deliver the ultimate in signal and impairment generation.

Recommended Products:

Bit Error Rate Analyzers:

- BERTScope BSA Series up to 26 Gb/sec
- DPP Series for Digital Pre-Emphasis (3/4 TAP)

Signal Generators:

- AWG7000/AWG5000 Series Arbitrary Waveform Generator
- RFXpress® software for RF/IF/IQ waveform creation and editing
- SerialXpress® software for high speed serial data signal creation and editing

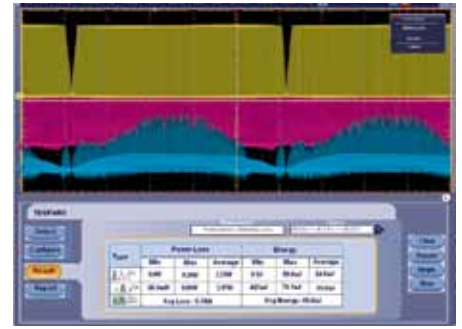
Oscilloscopes and Application software:

- DSA7000 Series Real-time Oscilloscopes
- DPOJET Jitter and Eye Diagram and Analysis Tools

Probing:

- P7313/P7313SMA Differential Probes
- P7500 TriMode Probes

For more information visit:
www.tektronix.com/receiver_test



I²C, SPI, USB, Ethernet, RS-232, CAN, LIN, FlexRay, MIL-STD-1553, I²S

Comprehensive Solutions for Fast Debug of Serial Buses

Serial buses are pervasive in today's embedded systems. Now, troubleshooting a system level problem often requires decoding a complex serial data signal. Tektronix offers integrated serial triggering, protocol decoding and comprehensive analysis capabilities to help you speed the debug of your design.

Recommended Products:

Oscilloscopes and Application Software:

- MSO/DPO2000, MSO/DPO3000 or MSO/DPO4000B Series
 - DPO4AERO - Aerospace Serial Triggering and Analysis Modul (MIL-STD-1553)
 - DPO4AUTOMAX - Extended Automotive Serial Triggering and Analysis Module (CAN, LIN, FlexRay)¹
 - DPO4USB - USB Serial Triggering and Analysis Module (Low-speed, Full-speed and High-speed USB 2.0)¹
 - DPO2AUTO, DPO3AUTO, and DPO4AUTO - Automotive Serial Triggering and Analysis Module (CAN, LIN)
 - DPO2EMBD, DPO3EMBD, and DPO4EMBD - Embedded Serial Triggering and Analysis Module (I²C, SPI)
 - DPO4ENET - Ethernet Serial Triggering and Analysis Module (10BASE-T and 100BASE-TX)
 - DPO2COMP, DPO3COMP and DPO4COMP - Computer Serial Triggering and Analysis Module (RS-232/422/485/UART)
 - DPO3AUDIO and DPO4AUDIO - Audio Serial Triggering and Analysis Module (I²S/LJ/RJ/TDM)²
- MSO/DPO5000 Series
 - DDRA - DDR Memory Bus Analysis
 - DPOJET Jitter and Eye Diagram Analysis - Advanced
 - TDSET3 Ethernet Compliance Test Software
 - SR-COMP - Computer Serial Triggering and Analysis (RS-232/422/485/UART)
 - SR-EMBD - Embedded Serial Triggering and Analysis (I²C, SPI)
 - SR-USB - USB Serial Triggering and Analysis (LS, FS, HS)
 - TDSUSB2 - USB 2.0 Compliance Testing Software
 - TDSVNM CAN and LIN Timing and Protocol Decode software

- DPO7000 Series
 - DPOJET Jitter and Eye Diagram Analysis - Advanced
 - TDSVNM CAN and LIN Timing and Protocol Decode software
 - PDI-R - I²C Protocol Decode software
 - PDS-R - SPI Protocol Decode software
 - PDF-R - FlexRay Protocol Decode software
 - PDU-R - RS-232/UART Protocol Decode software

Probing:

- P6139B Passive Probes
- TPP0500 and TPP1000 Series Passive Probes
- TDP0500 and TDP1000 Series Differential Probes

Logic Analyzers:

- TLA5000B Series
- TLA7000 Series
- Microprocessor/Bus Support

Signal Generators:

- AFG3000 Series Arbitrary Function Generator
- AWG5000 Series Arbitrary Waveform Generator

For more information visit:
www.tektronix.com/serialdebug

¹ MSO/DPO4000B Series Only
² MSO/DPO4000B and MSO/DPO3000 Series Only

Power Measurement and Analysis

Transform Your Tektronix Oscilloscope Into an Ideal Tool for Power Analysis

Today's power supplies are driving to a level of efficiency never seen before, requiring design engineers to perform numerous specialized power measurements that are time-consuming and complex. Tektronix offers an array of power measurement solutions to help you achieve fast, accurate and repeatable results for your specific application.

Recommended Products:

Oscilloscopes and Application Software:

- TPS2000 Series
 - TPS2PWR1 Power Measurement and Analysis software
- MSO/DPO3000 Series
 - DPO3PWR Power Analysis Module
- MSO/DPO4000B Series
 - DPO4PWR Power Analysis Module
- MSO/DPO5000 Series
 - DPOPWR Power Measurement and Analysis software
- DPO7000, MSO/DPO/DSA70000 Series
 - DPOPWR Power Measurement and Analysis software

Probing:

- TCP0030 / TCP0150 AC/DC Current Probes
- TCP202 Current Probe
- TCPA300/400 Series Current Probes and Amplifiers
- P5100 Passive High Voltage Probes
- P5200/P5205/P5210 High Voltage Differential Probes
- TDP0500/TDP1000 High Voltage Differential Probes

Signal Generators:

- AFG3000 Series Arbitrary Function Generator

For more information visit:
www.tektronix.com/power



FPGA Validation

Tools to Optimize Real-Time FPGA Debug

Field Programmable Gate Arrays (FPGAs) continue to grow in performance and flexibility. However, increasing gate counts, advanced logic programming, and increasing signal frequencies with tighter timing margins make debug and design verification a challenging process when implementing an FPGA-based design.

Tektronix mixed signal oscilloscopes (MSOs) and logic analyzers with FPGAView™ enable you to correlate internal FPGA signal activity to board-level signals and instantly move probe points within Altera and Xilinx FPGAs without the need to recompile your design.

Recommended Products:

Logic Analyzers:

- TLA5000B Series
- TLA7000 Series

Mixed Signal Oscilloscopes:

- MSO2000 Series
- MSO3000 Series
- MSO4000B Series
- MSO70000 Series

Application Software:

- FPGAView™ software

For more information visit:
www.tektronix.com/fpga

Microprocessor Validation

System-Level Troubleshooting for Fast Design Verification and Test of Microcontrollers and Microprocessors

The number and types of microprocessors and microcontrollers enable powerful embedded system performance but can make design verification and debugging a test challenge. The growing combination of signal processing variables increases the number of communication paths in the design, adding to system complexity. Tektronix instruments provide a better system view of mixed signal performance, enabling you to speed up the design verification and test of microcontrollers and microprocessors in your embedded system.

Recommended Products:

Logic Analyzers:

- TLA5000B Series
- TLA7000 Series
- P6400 & P6800/P6900 Series Probes
- Microprocessor/Bus Support

Oscilloscopes:

- MSO/DPO2000 Series
- MSO/DPO3000 Series
- MSO/DPO4000B Series
- MSO/DPO5000 Series
- MSO70000 Series
- DPO7000 Series
- MSO/DPO/DSA70000 Series

Probing:

- TDP0500/TDP1000/TDP1500/TDP3500 High Voltage Differential Probes
- TAP1500/TAP2500/TAP3500 Active Probes

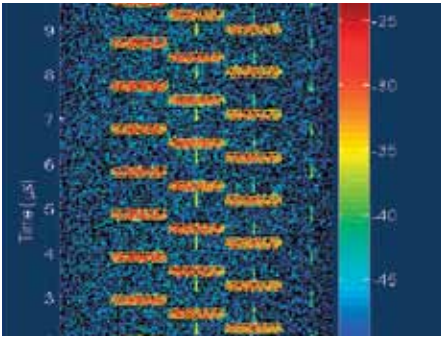
Signal Generators:

- AFG3000 Series Arbitrary/Function Generator
- AWG5000 Series Arbitrary Waveform Generator
- AWG7000 Series Arbitrary Waveform Generator

Application Software:

- DPOJET Jitter and Timing Analysis software
- iLink™ Logic Analyzer/Oscilloscope Integration Package

For more information visit:
www.tektronix.com/microprocessor



**Faster, Easier, and More Affordable
Ultra-Wideband Designs**

Recommended Products:

Receiver Testing:

- AWG7000 Series Arbitrary Waveform Generator with RFXpress Software

Transmitter Testing:

- MSO/DPO/DSA70000 Series Oscilloscope with SignalVu Software Option

For more information visit:
www.tektronix.com/wimediaPerformance,
Precision and Insight for Your Radar/Electronic Warfare Design

Recommended Products:

Receiver/Stimulus Test:

Transmitter Analysis:

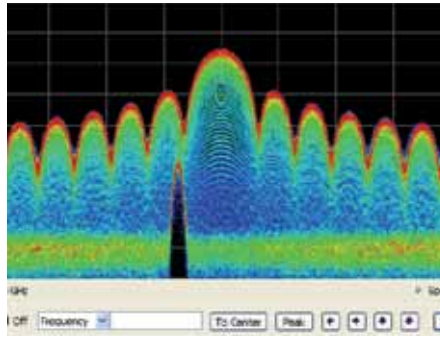
For more information visit:
www.tektronix.com/radar

**Accuracy and Insight All Across
the Spectrum**

Recommended Products:

Spectrum Management:

For more information visit:
www.tektronix.com/surveillance



Radar/EW

**Performance, Precision and Insight for Your
Radar/Electronic Warfare Design**

With today's rapid advances in radar/electronic warfare technology, developing and manufacturing highly specialized and innovative electronic products requires leading-edge technology and tools. Our innovative test equipment reduces uncertainty during the design process and delivers confidence in the integrity of increasingly complex designs.

Recommended Products:

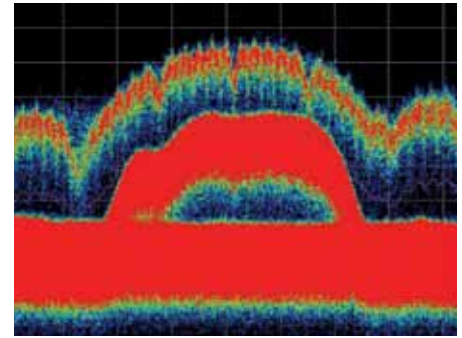
Receiver/Stimulus Test:

- AWG5000 Series Arbitrary Waveform Generator with RFXpress® software
- AWG7000 Series Arbitrary Waveform Generator with RFXpress® software

Transmitter Analysis:

- RSA6100 Series Spectrum Analyzer
- RSA3000 Series Spectrum Analyzer
- DPO/DSA70000B Series Oscilloscope with SignalVu™ software
- DPO7000 Series Oscilloscope with SignalVu™ software
- Ultra-wideband Analysis software

For more information visit:
www.tektronix.com/radar



Spectrum Management

**Accuracy and Insight All Across
the Spectrum**

Solve today's demanding signal detection and exploitation challenges with world-class instrumentation for detection, identification, mapping, and hunting down signals or sources of interference. DPX™ Live RF spectrum display will change the way you search and discover elusive signals.

Recommended Products:

Spectrum Management:

- H600/SA2600 Series Handheld Spectrum Analyzer
- RSA3000 Series Spectrum Analyzer
- RSA6000 Series Spectrum Analyzer

For more information visit:
www.tektronix.com/surveillance



Your Tektronix Service Advantage

You can trust Tektronix to offer unequalled engineering expertise and a customer-centric approach to ensure the optimal performance of your Tektronix products and maximize the lifetime value of your Tektronix investment.

Summary of Service Care Plans

Silver Care Plan	Gold Care Plan	Platinum Care Plan	Commercial Calibration Service
<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"> ■ Eliminate unplanned service costs over coverage period ■ Minimize downtime with one-call process for repair/calibration ■ Priority access to Tektronix Customer Care Center for fast technical support <ul style="list-style-type: none"> - Free calibration on factory-recommended intervals 	<ul style="list-style-type: none"> ■ Identically configured dedicated spare products ■ Flexible contract duration and payment terms ■ Priority access to technical support 	<ul style="list-style-type: none"> ■ Accredited calibration ■ Traceable calibration ■ Functional verification ■ Applicable software, safety and reliability updates ■ Calibration records retention

■ 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



Comprehensive Calibration and Value-Added Services

Service Solutions for all your calibration needs

- Single Source Provider for all of your calibration needs
- Over 133,000 products from more than 9000 manufacturers covered
- Certified and accredited calibration facilities and personnel

Performance

Calibration is the cornerstone of measurement confidence. Now Tektronix can deliver on-site calibration services for all of your measurement equipment, irrespective of product brand or origin, with a Single Source Provider (SSP) plan designed just for your needs. Tektronix can be your single point of contact for all calibration schedules, events, and issues. A Single Source Provider (SSP) plan ensures the highest measurement quality for your Tektronix instruments, along with many other test systems in your facility, ensuring that all test systems receive the most thorough calibration in the industry. Hundreds of individual tests probe deeply into the instrument's behavior, adjusting it to a "factory-new" performance level, guaranteed.

Tektronix provides uncompromised calibration services—and measurement confidence—for all of your electrical, mechanical and process control instrumentation.

Compliance

Your instruments must be calibrated to globally accepted standards so that measurements results which impact your end-product's quality can be trusted. An SSP plan ensures that calibrations are performed under ISO accreditation and in compliance with metrology Standards such as the following:

- ISO/IEC 17025:2005
- ANSI/NCSL Z540.1-1994(R2002)
- ISO 9001

Tektronix SSP plans address more than 133,000 model types. Tektronix manages the technicians, tools, and procedures used in your calibrations, and is the primary point of contact with full responsibility for the calibration compliance of all your equipment.

- Flexible Delivery Models from Depot-based, temporary on-site, to full outsourced service
- Plans customized to your requirements
- Fixed price levels - no budget surprises

Convenience

Tektronix SSP plan calibrations are performed on-site at your facility, scheduled at your convenience. On-site calibration procedures use mobile instruments that meet the same standards as depot-based tools. If you have multiple facilities with SSP plan contracts, every site will benefit from consistent policies, procedures, and...results.

Tektronix SSP plans can address at least 95% of your entire instrument inventory. You get a single point of contact for scheduling, tracking, and resolving unforeseen issues. The accountability rests with Tektronix.

Cost Effectiveness

Each SSP plan is customized to meet your technical, logistical, and budget needs. When you opt for an SSP plan, Tektronix representatives will meet with you to review equipment lists and arrange scheduling and access to facilities. The price of these services is competitive with that of third parties who cannot match Tektronix' breadth and depth of product knowledge.

On-site SSP plan services ensure the highest performance for all your measurement capital equipment, while reducing downtime and eliminating administrative headaches. A Tektronix SSP plan enables you to easily manage the total cost of calibration services, allowing increased productivity and a higher return on your investment.

Your Tektronix Service Advantage

Keeping a lab full of measurement instruments calibrated is a complex, demanding job. You've always been able to rely on Tektronix' proven expertise for calibration of the Tektronix products you own.

If you own a qualifying inventory of Tektronix and non-Tektronix instruments needing routine calibration, a Tektronix SSP plan can be a big advantage. You can select a convenient plan suited to your administrative and technical needs. You'll receive world-class calibration services managed by a leader in measurement and calibration technology. And you will get years of peak performance and value out of your instruments. That is your Tektronix service advantage.

For details, contact Tektronix at:

By Phone:

00800 2255 4835* (00800-CALL-4-TEK)
or +41-52 675 3777

* Austria, Belgium, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden, Switzerland, UK

By E-Mail: lb-emea-support@tektronix.com

Via our web: <http://www.tek.com/home/contact>

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 7600
Canada 1 (800) 833-9200
Central East Europe, Ukraine 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 25 May 2010

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



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