

Tektronix Introduces Ultimate Performance Oscilloscopes

Real-Time DSA70000 Models Offer Unsurpassed Performance Essential for Development of Next Generation Products for the New Digital World

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Tektronix, Inc. , a leading worldwide provider of test, measurement and monitoring instrumentation, announced the introduction of the industry's first ultra-high performance oscilloscope with 20 GHz real-time bandwidth and 50 GS/s simultaneous sampling rate. The DSA70000 Digital Serial Analyzer (DSA) oscilloscope family includes several new models -- 20 GHz DSA72004, 16 GHz DSA71604 and 12.5 GHz DSA71254. These new products provide unmatched performance and analysis and extend the Real-Time DPO performance platform introduced last summer with 4GHz-8GHz DSA models. The DSA70000 series offers more four-channel performance than any alternative oscilloscopes and are ideal for the high-speed serial data applications of today and tomorrow. The new Tektronix oscilloscopes are an integral part of the new high-speed serial data test bench (see "New Tektronix DSA70000 Oscilloscopes and P7500 Probes Form Nucleus of Next Generation High-Speed Serial Data Test Bench"), and will foster development of next generation products for the new digital world.

New generations of consumer, computing, communications, and video products and systems are emerging that use faster, wider information buses and interconnects -- often using serial data architectures -- within the underlying semiconductors and IC components. Ultra-high performance oscilloscopes are required to capture the frequency harmonics of high-speed serial signals to make accurate and repeatable measurements. The DSA70000 oscilloscopes provide support on all channels for ultra-high bandwidth, deep memory, fast sample rate, and fast waveform capture rate. This is especially valuable for high-speed multi-lane serial data architectures where multi-channel analysis is needed for lane skew timing violations. The models are ideal for design engineers developing and testing state-of-the-art serial data applications, including PCI-Express 2, SATA 3, FB-DIMM II, HDMI 1.3, and 10Gbit/s Ethernet.

"The need for high-end test equipment continues to escalate in keeping with market demands driving greater performance," said Colin Shepard, Vice President, Performance Oscilloscopes, Tektronix. "Engineers need an oscilloscope that is free of compromises, that has leading specifications to keep pace with the performance curve, and that provides a complete, efficient and productive test solution. The new DSA70000 models are the best real-time oscilloscopes developed, delivering the performance our customers need for high-speed multi-lane serial data applications and processor buses. The new oscilloscopes provide the most extensive analysis and compliance measurements available and reinforce the Tektronix track record of innovation with the right technologies at the right time for the market."

The new digital real-time (DRT) models provide the best combination of performance with 12.5 GHz, 16 GHz, and 20 GHz version, 50 GS/s maximum sample rate per channel, and up to 200M memory across all four channels. A FastAcq acquisition mode waveform capture rate greater than 300,000 per second -- about 1000 times faster than any competing alternative -- with the DPX® parallel architecture signal processor yields both critical insight into signal behavior and in-depth analysis. The unequalled combination of DRT and DPO ultra-high performance on four channels simultaneously provides engineers with the industry-leading attributes they need for the most demanding test challenges.

Innovative Engineering and Technology Are at the Core

Faster than any other, the new real-time oscilloscopes share a new generation scalable performance platform

that makes broad use of IBM 7HP silicon germanium (SiGe) technology. The 7HP SiGe technology offers peak performance for applications requiring high speed transfer of data, low noise, high linearity and low power consumption.

"The new DSA70000 oscilloscopes are the ultra-high performance products that Tektronix envisioned when work began several years ago with IBM on a 7HP silicon germanium implementation," said David Haramé, director of enablement and IBM fellow, Systems and Technology Group, IBM. "The results of the collaboration are a test and measurement platform for the future, apparent in these transformational products. The new DSA70000 products provide industry leading multi-channel performance, a requirement for design engineers developing next generation products."

This level of performance is necessary for emerging 2nd and 3rd generation serial data technologies. At 50 GS/s and 200M record length, an engineer can capture more than four ms of data, ensuring the best resolution at full performance compared to alternative products. The 20 GHz DSA72004 provides 3rd harmonic measurements for data rates up to 12 Gb/s and 5th harmonic measurements on signals running up to 8 Gb/s. This performance satisfies the signal integrity measurement and compliance requirements of the fastest chip-to-chip serial bus architectures.

Digital Serial Analyzer Models Provide Advanced Serial Data Test Capabilities

With the DSA70000, Tektronix provides the performance and functionality most needed by design and test engineers working with high-speed serial data buses including the best multi-layer analysis tools for the debug and validation of single and multi-lane signals. The DSA70000 series instruments include leading Serial Compliance, Jitter and Timing Analysis tools that provide patented software clock recovery, RT-Eye® Serial Compliance and Analysis Software, and a full battery of standard-specific parametric measurements. The DSA70000 also includes hardware serial pattern triggering up to 3.125Gbit/s.

Engineers can add options for domain expertise that provide specific Pass/Fail waveform mask and measurement limit testing in conformance with industry-acknowledged standards. The DSA70000 models can be optioned with the industry's broadest range of automated software applications to speed pass/fail testing to industry standards. The analysis software provides jitter measurements for most key timing parameters required by high-speed serial data standards, and offers the greatest accuracy and lowest jitter noise measurements for the highest available bandwidth, four-channel real time oscilloscope on the market.

Full Fidelity to the Probe Tip

Many customer applications require connecting to signals through high bandwidth probes. Connecting these probes to the scope changes the overall response of the scope and probe system. The DSA70000 models offer user selectable DSP that compensates for connection of the P7313 Z-Active™ differential probe with the High Bandwidth Straight Flex Tip-Clip™ Assembly so that the full potential performance of the system is achieved with the probe attached. The same advantages of bandwidth enhancement -- flat signal response, linear phase response, and matched channels -- and noise reduction now extend all the way to the probe tip. With this new feature, any signal applied at the probe tip has the same fidelity as if it were connected directly to the scope input. Engineers now have the ability of connecting to their signals with the P7313, directly via high frequency cables, or a mix of both at the same time, and retain full system performance and fidelity. Full bandwidth to the tip support for more probes and tips, including the new P7513 and P7516 probes will be available within the next several months.

New Models Transform Oscilloscope Portfolio

With this announcement, there are now DSA70000 models ranging from the 4 GHz DSA70404 to the 20

GHz DSA72004 designed for serial data applications. These share the same basic platform with the DPO7000 and DPO70000 models designed for advanced digital test, beginning with 500 MHz DPO7054. Also now available are new DPO70000 models, also ranging from 12.5 GHz to 20 GHz. All together there are 16 new oscilloscope models introduced within the last year based upon this new generation architecture, a complete transformation of the mid-range and high-end Tektronix oscilloscopes.

Pricing

U.S. list prices for the 12.5 GHz DPO71254 begin at \$88,500. DSA71254 Digital Serial Analyzer models begin at \$99,500. Shipments of the new models are expected to begin in the first calendar quarter, 2007.

About Tektronix

Tektronix is a leading supplier of test, measurement, and monitoring products, solutions and services for the communications, computer, and semiconductor industries -- as well as military/aerospace, consumer electronics, education and a broad range of other industries worldwide. With 60 years of experience, Tektronix enables its customers to design, build, deploy, and manage next-generation global communications networks, advanced and pervasive technologies. Headquartered in Beaverton, Oregon, Tektronix has operations in 19 countries worldwide. Tektronix' Web address is <http://www.tektronix.com/>.

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