

Tektronix Raises Bar for Oscilloscope Sampling Rates+ Signal Integrity World's First 100 GS/s Real-time Oscilloscope Delivers Superior Margin Performance for High-speed Designs

BEAVERTON, Ore., October 19, 2010 – Tektronix, Inc., the world's leading manufacturer of oscilloscopes, today announced the DPO/DSA/MSO70000C digital and Mixed Signal Oscilloscope Series now deliver 100 GS/s sampling rate performance; enabling lower noise along with increased data points on 5x oversampled 20 GHz acquisitions. This world's best over-sampling performance in a high bandwidth oscilloscope delivers significant real-world benefits including more accurate signal integrity measurements for such high-speed serial standards as PCI Express Gen 3. Other enhancements include a new, faster compute platform and a more stable timebase, ideal for radar applications.

High-performance oscilloscopes with bandwidth of greater than 4 GHz are used in a variety of high-speed serial, wideband radar, fast optical communications systems, high-end embedded systems, and high-energy physics applications. As designs move to faster and faster data rates, the margin provided by the measurement system becomes a critical factor. The DPO/DSA/MSO70000C Series, with its unprecedented 5x oversampling, delivers the performance and signal fidelity designers need to ensure that their latest cutting edge components and systems meet design specifications.

“With few exceptions, the most important requirement for a high-performance oscilloscope is that it have a high sample rate that in turn leads to a lower noise floor and less jitter, thus providing a better performing instrument for signal integrity measurements,” said Brian Reich, general manager, Performance Oscilloscopes, Tektronix. “The DPO/DSA/MSO70000C Series, with its 100 GS/s acquisition performance, gives our customers even more measurement margins that they can put to use today to increase their designs’ performance levels and lower manufacturing costs.”

Along with a two-fold increase in sampling rate compared to the “B” Series it replaces, the DPO/DSA/MSO70000C Series features a faster compute platform. This new platform offers faster processing for longer data records such as jitter, noise, BER (bit error rate) measurements and statistics. Boot and application start up times are also significantly quicker.

“With the DPO/DSA/MSO70000C Series Tektronix delivers performance in all the right places where it will help us characterize designs with more speed and precision,” said Mark Marlett, principal engineer at Xilinx, Inc. “With adequate oversampling, we get more data points in our measurement results to accurately understand rise time performance on fast signals. With the 70000 Series, we gain confidence using real data versus having to guess with lesser sampling rates.”

In any digital oscilloscope, there is a strong correlation between sampling rate and internal noise -- a high sampling rate results in less noise which in turn leads to more margin for the user. As shown by extensive comparison testing, the DPO/DSA/MSO70000C Series with 100 GS/s operation delivers up to 20 percent reduction in noise compared to the 50 GS/s setting on the same instrument.

High Stability Timebase for Wideband Radar System Verification

Modern radar designs use frequency and phase modulation within the radar pulses to increase a radar's range resolution and target identification capabilities. Maintaining the same modulation characteristics from pulse to pulse is key to the system's operation. Performance oscilloscopes are the tool of choice for radar pulse measurement, but must have a stable timebase able to stay on frequency for long captures.

The DPO/DSA/MSO70000C Series meets this requirement with a new high-stability timebase that provides for lower long term jitter, phase and frequency stability. When combined with the pulse and frequency settling measurement capabilities of SignalVu vector signal analysis software, the DPO/DSA/MSO70000C Series gives designers of frequency agile radios and radars the ability to accurately verify system performance.

Tektronix Leads in Serial Data Test

The DPO/DSA/MSO70000C Series oscilloscopes provide the bandwidth and sampling rates needed to debug serial data signals up to 12 Gb/s on all channels simultaneously – ideal for multi-lane applications including PCI Express 3, SATA 6 Gb/s, SuperSpeedUSB , HDMI, DisplayPort, and 10 Gb Ethernet. The FastAcq acquisition mode provides a capture rate greater than 300,000 waveforms per second – about 100 times faster than competing alternatives – delivering both critical insight into signal behavior and in-depth analysis.

Tektronix offers a broad range of software packages for high-speed serial data design, debug, and compliance verification. This includes DPOJET for jitter and timing analysis, SDLA for testing transmitter, interconnects and receivers, and standard-specific packages for DDR, DisplayPort, PCI Express, USB, HDMI, SATA, Ethernet, Fibre Channel and others. In addition, Tektronix delivers the widest variety of oscilloscope probing accessories, including innovative TriMode™ probes, for making both analog and digital connections to the device under test (DUT) with minimal disruption.

Highest Performance Mixed Signal Oscilloscope

Winner of the “Best in Test” 2010 Award, the MSO70000 Series is the industry’s highest performance family of integrated MSOs and provides up to 20 channels of measurement capture (4 analog and 16 digital) with analog bandwidth ranging from 4 to 20 GHz. The MSO70000C combines the signal visibility and timing features of a high performance logic analyzer with the analog precision, probing and usability of a high performance real-time oscilloscope. This makes it the ideal debug and verification tool for such demanding high-speed design applications as DDR memory, high performance ASICs, FPGAs, system-on-a-chip devices, and digital RF.

Pricing & Availability

DPO/DSA/MSO70000C Series is available now globally. Pricing starts at \$110,000 U.S. MSRP for a 12.5 GHz DPO71254C.

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About Tektronix

For more than sixty years, engineers have turned to Tektronix for test, measurement and monitoring solutions to solve design challenges, improve productivity and dramatically reduce time to market. Tektronix is a leading supplier of test instrumentation for engineers focused on electronic design, manufacturing, and advanced technology development. Headquartered in Beaverton, Oregon, Tektronix serves customers worldwide and offers award-winning service and support. Stay on the leading edge at www.tektronix.com.

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