

## **Tektronix Delivers Industry's Highest Performance Mixed Signal Oscilloscope**

**With Industry Leading Timing Resolution, New MSO70000 Series Brings Tightly Integrated Digital & Analog Analysis to System Integration Debugging for Memory, RF and Serial Bus Designs**

BEAVERTON, Ore., October 12, 2009– Tektronix, Inc., a leading worldwide provider of test, measurement and monitoring instrumentation, today announced the MSO70000 Mixed Signal Oscilloscope Series, the industry's first high-performance family of integrated MSOs. The instruments have up to 20 channels of measurement capture (4 analog and 16 digital) with analog bandwidth ranging from 4 to 20 GHz and 80ps digital channel timing resolution. With the MSO70000 introduction, Tektronix now has a complete portfolio of Mixed Signal Oscilloscopes on the market; 17 MSO models are offered, which range from the value-priced portable MSO2000 all the way to the 20GHz MSO72004 – the fastest MSO available.

The MSO70000 Series 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. In addition, the MSO70000 delivers the widest variety of probing accessories for making both analog and digital connections to the device under test (DUT) with minimal disruption.

“Higher-speed MSOs are becoming more important as bus speeds increase in frequency and type. The need to visualize multiple digital buses of gigabit speeds simultaneously while performing analog debug beyond 4 GHz is critical,” said Brian Reich, vice president, Performance Oscilloscopes, Tektronix. “In today's challenging economic environment, an all-in-one solution like the Tektronix MSO70000 offers customers an unmatched combination of performance and versatility for debugging these increasingly complex systems.”

The MSO has emerged as the tool of choice in embedded system engineering, an area where there is a strong need to correlate analog and digital signals. Now, embedded systems like network switches and data servers are incorporating faster technology, necessitating higher performance MSOs. Other application areas such as high speed serial and digital RF increasingly require full system visibility to understand bus contention issues and other timing related concerns. With the introduction of the MSO70000 Series, Tektronix offers not only the broadest MSO portfolio in the industry, but also the best analog/digital acquisition performance and most versatile probing solutions of any instrument vendor on the market.

“The combined analog and digital performance level provided by the new Tektronix MSO70000 give Arria II GX and Stratix IV FPGA designers a robust solution to analyze the logic and high-speed IOs in our devices,” said Dr. Mike Li, principal architect and distinguished engineer, Altera Corporation. “Our 40-nm FPGAs provide customers with several leading-edge innovations such as high-speed integrated transceivers and memory interfaces. With the MSO70000, our customers are able to quickly, accurately, and efficiently characterize and evaluate the performance of their entire FPGA design with the same instrument.”

### **A Full Suite of Tools – One Instrument**

The MSO70000 family of performance MSOs enhances debugging by providing a full suite of measurement capability in a single instrument, making it the ideal choice for resolving analog issues in digital systems. The new instrument delivers advances in three core areas: performance, signal access and insight.

Discover Problems in Seconds – With 4 channel analog bandwidth ranging from 4 to 20 GHz depending on model, the MSO70000 offers up to 5 times more bandwidth and 5 times better timing resolution than the

fastest integrated MSOs currently available – enabling greater signal visibility for problem discovery. It provides record lengths up to 250 million points and sample rates of 50 GS/s analog and 12.5 GS/s digital. This uncompromised performance means that engineers can capture long duration events with high sample resolution and have time-correlated views of high-speed analog and digital data.

Capture Events the First Time – For MSOs to deliver true value, customers need reliable and convenient access to capture both analog and digital signals of interest, as well as excellent signal integrity from the probing system. The MSO70000 delivers on this front with a comprehensive set of innovative solder-in probe accessories which make connecting to vias and fine pitch components on tightly packed boards easier, in order to acquire digital control signals such as the DDR command bus. The Tektronix toolset for DDR probing now also includes new BGA interposers for all variants of DDR3 and DDR2 memory components, providing access to all signals with excellent fidelity. Coupled with the ground-breaking iCapture™ technology which allows internal routing of selected digital signals to the analog channels for full analog evaluation – the MSO70000 is ideal for fine pitch, highly sensitive board layouts.

Search Entire Records Quickly – With its iCapture feature, the MSO70000 provides analog views on any connected digital channel, enabling unsurpassed versatility and debugging insight across all 20 channels. The MSO70000 Series provides extensive triggering capabilities including serial pattern, mixed analog and digital, logic pattern, and bus state triggers that designers can combine to isolate system faults that only occur during particular system states. The MSO70000 series provides extremely tight timing synchronization between the analog and digital subsystems, with timing correlation as close as 80ps is possible, resulting in a much easier determination of cause and effect in circuit operation.

Analyze Devices & Busses Efficiently – With over 30 different analysis suites running on the MSO70000 Series, customers can select from the newly available I2C and SPI bus analysis, DPOJET for jitter and eye diagram analysis, DDRA for DDR Memory Bus Verification, SDLA for EQ/channel emulation and analysis, and SignalVu for Frequency Domain display and analysis.

#### Pricing & Availability

Available to order in October, the U.S. MSRP for the MSO70000 starts at \$67,400.

#### 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, computing and advanced technologies. Headquartered in Beaverton, Oregon, Tektronix has operations in 19 countries worldwide. Tektronix' Web address is [www.tektronix.com](http://www.tektronix.com) .

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