

Improving signal integrity and event identification

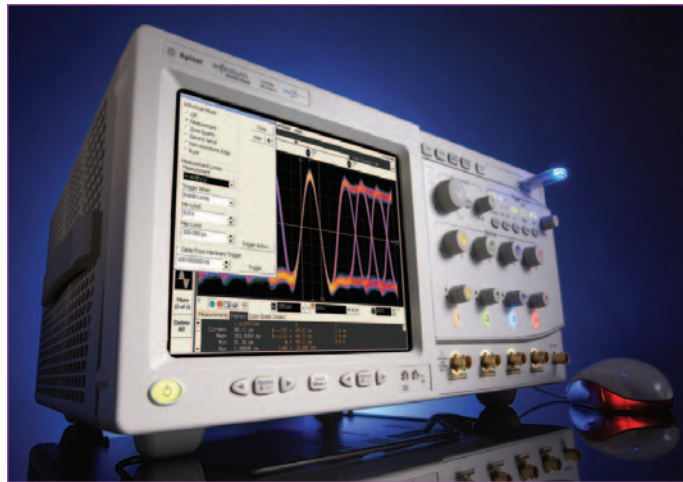
Agilent Technologies' Infiniium 80000B Series provides improved signal integrity based on the company's RF design expertise, proprietary packaging technologies and CMOS ADC architecture.

The Infiniium oscilloscopes have been enhanced via the addition of a touch-screen, an XGA resolution display, a front-panel USB port, and a higher-performance CPU system for faster display and measurement execution.

The Infiniium 80000B Series includes the MegaZoom technology used in the Infiniium 8000A Series and the Agilent 6000A Series oscilloscopes. MegaZoom's 256 levels of intensity grading clearly identifies waveform anomalies that were previously invisible with earlier model oscilloscopes. MegaZoom is always active and is not a limited oscilloscope mode.

Infiniium application software is available for the Infiniium 80000B Series. There are 23 application packages vital to engineers designing high-speed serial buses, RF and wireless products, and other ultra-high-speed electronics.

Agilent's InfiniiScan (more details below), event identification software, is now part of the selection that includes second-generation jitter analysis, serial data analysis with 8b/10b



decoding, and compliance test packages for standards such as USB 2.0, PCI Express, Ethernet, DVI, HDMI, Fibre Channel, FBD, DDR and SATA, and SAS.

The Agilent Infiniium DSO80000B Series is available in 2, 3, 4, 6, 8, 10, 12 and 13GHz real-time models.

Agilent has also introduced event identification software that allows digital designers who use Infiniium oscilloscopes to quickly and easily identify signal integrity issues found in electronic designs. The software works by scanning through thousands of acquired waveforms per second and then isolating anomalous signal behaviour.

InfiniiScan overcomes the limitations of hardware trigger-

ing systems by automatically inspecting each signal it acquires, then informing the user of any potential signal integrity issues it discovers.

With InfiniiScan, digital designers can monitor up to five different events or the same event on four channels simultaneously.

The software can also isolate events as narrow as 70ps, well beyond the 300ps limitation of hardware-based approaches. InfiniiScan is able to identify a single waveform anomaly out of 10,000 screens of data without requiring programming.

There are two main components that comprise InfiniiScan: the InfiniiScan software finders and the measurement limit test.

InfiniiScan software finders can be used in conjunction with an Infiniium oscilloscope hardware trigger via the delay from hardware trigger control. They include the measurement finder which sets boundary conditions to the specified measurement results (inside/outside limits). The Zone qualify finder - draws a 'must pass' and a 'must not pass' zone on the oscilloscope screen to visually determine the event identification condition. If a user can see the event of interest on the screen, it can quickly be isolated without having to figure out how to set up a trigger or needing to repeatedly press the 'Single' key.

A generic serial finder - sets up to an 80-bit serial pattern for the oscilloscope to identify (up to 8.5Gbs). User-definable CDR (clock data recovery) methods are available, and fixed frequency CDR is standard.

The non-monotonic edge finder identifies non-monotonic edges caused by signal reflections, which helps identify poor signal terminations while runt finder - identifies undersized signal pulses to resolutions that are beyond the capability of hardware approaches by using user-defined hysteresis and threshold levels.

Agilent Technologies
www.agilent.com

IAR adds to ARM debug line

IAR Systems latest addition to its ARM debug probe product line is the IAR J-Trace hardware debug trace device. It supports all ARM7 and ARM9 devices with ETM (Embedded Trace Macrocell), connects to the host computer via full-speed USB 2.0 in a small and convenient package, and provides a 2Mbytes trace buffer.

IAR J-Trace is fully supported by IAR Embedded Workbench for ARM, IAR Systems' integrated development environment with C/C++ compiler and debugger tools. IAR J-Trace also works as a standard JTAG-debugger through a separate JTAG-port.

JTAG speed is 12MHz and

the unit includes Auto speed recognition, USB-2 full speed (12Mbit/sec), adaptive clock based on RTCK JTAG signal and all signals can be monitored and the target voltage can be measured.

The 2Mbyte trace memory buffer provides trace supports up to 200MHz full and 100MHz half clock rate. Support for cycle accurate and compressed tracing is provided and it Supports 4/8/16 bit trace port at both full and half-rate clocking. The trace window synchronizes to source and disassembly window.

IAR Systems
www.iar.com

SBC provides TFT control

Distec's Galaxy single board computer with Intel ULV Celeron processor provides TFT control in industrial applications. The graphics capability supports basic 2D monitor applications as well as high-end 3D applications. A special combination of components minimizes power loss and heat development. Galaxy manages applications with closed housing without a fan, because processor, chipset and graphics processor are mounted on the back of the board and the heat is dissipated directly by the housing.

Galaxy is equipped with internal interfaces for up to 2 displays, including backlight

supply and brightness adjustment and an external interface for controlling a remote display unit: via a 36-pin MDR-plug data signals and power supply for display and backlight are provided.

On basis of the basic design there are four versions available, which differ in graphics performance and control features.

The most basic board has an Intel 815 chipset and a 400 Hz Intel ULV Celeron processor and supports one TFT and one CRT display each up to SXGA resolution.

Distec
www.distec.de