

# Portable scopes provide 500kpoint memory

LeCroy's latest WaveJet digital oscilloscopes provide 500kpoint memory on each channel and come in both two and four channel models with bandwidths of 100MHz, 200MHz, 350MHz and 500MHz. The maximum sample rate is 2GS/s combined with the 500kpts/channel memory.

This long memory provides capture time of 250µs at maximum sample rate.

Also included is the ability to watch variations in low-speed signals with roll mode, and to eliminate the effects of noise or spurious events with the averaging acquisition mode. Along with these acquisition modes, the Page Mode capability provides unique insight into the waveforms being captured.

Activating page mode enables the user to scroll through the history of waveform captures to isolate glitches, runts, or other signal abnormalities and view what happened before or after that event.

A fast boot time and Auto



Setup feature enable the user to make measurements in a seconds while a intuitive front panel provides one-touch access to the horizontal, vertical, and trigger menus, and push button knobs automatically set delay, offset and trigger level. Color matched channel LEDs indicate which channel is active and whether they are controlling math or zoom traces.

There are 26 automatic

measurement parameters included with the WaveJet which enable measurements to be made quickly on any of the oscilloscope channels and see the results color coded to the channel being measured on the display, without cluttering the waveform grid. In addition to this capability, the WaveJet will also record and display the minimum and maximum values measured across all ac-

quisitions. The user can process his waveforms with the built-in math capability of the WaveJet. Choose between sum, difference, product, or FFT and then make measurements based on the results.

The WaveJet provides a separate grid for viewing zoomed waveforms. To use the zoom function, simply press the Zoom button on the front panel and then change the zoom factor and position, using the horizontal controls to your desired zoom level. The zoom function works well when used with the long memory of the WaveJet and provides insight into signal detail that may be missed on oscilloscopes with short record lengths.

The WaveJet eliminates the need for user to input probe attenuation or inclusion of a check function by including a probe sense ring for automatic probe detection.

**LeCroy**  
[www.lecroy.com](http://www.lecroy.com)

## Rugged in-system programmer

The InDART-One universal in-system programmer for Freescale Semiconductor HC(S)08 and HCS12(X) microcontrollers is available from SofTec Microsystems.

An optimised algorithm for MC908GP32 can program the 32KB memory in about 1 second, while the 256KB memory of the MC9S12DP256B needs 8.5 seconds. InDART-One's robust design is resistant to electrical shocks and makes it suitable for even the heaviest production environment.

In addition, inDART-One allows simultaneous multiple programming: up to 32 devices can be programmed with just one host PC through the USB 2.0 connection.

InDART-One comes bundled with two graphical user interfaces: DataBlaze, targeted at the full featured usage of the production/test engineer, and MultiBlaze, that allows the multiple programming option and more suited to the operator (special protected mode choice



available). The IPL programming library provides low-level functions that enable the user to set up the instrument and perform most of the programming commands and functions of the DataBlaze and MultiBlaze user interfaces from within his or her own application, making easy integration in any automated test flow possible using a programming language that supports the DLL mechanism.

It is integrated tightly with Codewarrior Development Studio, a debugging tool for all Freescale HC(S)08 and HCS12(X) microcontrollers.

**SofTec Microsystems**  
[www.softecmicro.com](http://www.softecmicro.com)

## Freescale open source tools

Freescale Semiconductor is simplifying product development for embedded networking and graphical user interface (GUI) systems with a suite of open source development tools for its MCF532x and MCF537x ColdFire® device families.

To support the ColdFire processor families, Freescale is providing a board support package that includes liquid crystal display (LCD) and networking support.

The ColdFire board support package is comprised of several software elements, including the uCLinux tool chain and kernel with basic Ethernet and serial communication drivers, full Transmission Control Protocol/Internet Protocol (TCP/IP) stack, USB Host/OTG and LCD frame-buffer drivers and the Nano-X open source tool.

Nano-X is an open source tool aimed at bringing the features of modern graphical windowing environments to smaller devices and platforms. The architecture allows devel-

opers to easily add different display, mouse, touch screen and keyboard devices to their designs and comes complete with a full set of graphical components for building application-specific GUIs. A key component of the Nano-X tool is its small system overhead (50-250k of memory), which enables the realization of powerful embedded GUI systems while keeping design costs to a minimum.

The evaluation boards come with a complimentary copy of CodeWarrior Development Studio for ColdFire Architecture, Special Edition. Freescale also offers comprehensive software and tools solutions through alliances with world-class embedded suppliers, including Green Hills, MQX Embedded, Wind River and Accelerated Technology. Customers have access to full open source software solutions and third party off-the-shelf boards.

**Freescale Semiconductor**  
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