

Oscilloscopes include 16 times more vertical resolution than traditional 8-bit instruments



Teledyne LeCroy introduces two series of High Definition Oscilloscopes with HD4096 high definition technology, the HDO4000 and HDO6000. Oscilloscopes with HD4096 acquire waveforms with high resolution, high sample rate, and low noise. Waveform displays are cleaner and crisper with 16 times more vertical resolution than traditional 8-bit instruments. Waveform details which were previously difficult to see can now be easily distinguished and measured. The HDO4000 and HDO6000 are available in bandwidths from 200 MHz to 1 GHz. All HDO models sport a large 12.1" touch-screen display and intuitive interface to enhance operation and also provide powerful debug tools, plus a full complement of automatic measurements, waveform math capabilities. These tools include WaveScan search and find, history mode waveform playback, sequence acquisition mode, and Lab Notebook report generation. Spectrum-analysis and power-measurement software packages extend the oscilloscopes' capabilities while leveraging their 12-bit architecture with its wider dynamic range and improved measurement precision.

HD4096 High-definition technology

HD4096 High Definition Technology is rooted in high-sample-rate 12-bit ADCs; amplifiers with high signal-to-noise ratios; and a low-noise system architecture. This technology enables high definition oscilloscopes to capture and display signals of up to 1 GHz with high sample rate and 16 times more resolution than other oscilloscopes. Precise measurements are critical for effective debug and analysis. HD4096 enables oscilloscopes to deliver unmatched measurement precision to improve testing capabilities and provide better results.

In addition to HD4096 technology, the HDO features Teledyne LeCroy's ERES

(Enhanced Resolution) filtering, which enables users to gain up to three additional bits of resolution for 15-bit vertical resolution.

HDO4000 and HDO6000 oscilloscopes

HDO4000 oscilloscopes feature a sample rate of 2.5 GS/s with up to 25 Mpts/channel of memory (up to 50 Mpts/ch when interleaved) in two- and four-channel models from 200 MHz to 1 GHz. The HDO6000 oscilloscopes available in four-channel models deliver sample rates of 2.5 GS/s; a maximum 250-Mpts/channel memory, and bandwidths of 350 MHz, 500 MHz, and 1 GHz. All HDO models have a 12.1" touch display that gives users an easy means of controlling channels, trigger settings, and math and measurement functions.

Advanced measurement, debug, and analysis

Accurate signal display and high sampling rates go to waste in the absence of superlative debug and analysis tools. All HDO oscilloscopes contain powerful tools for fast debug and deep waveform analysis. The WaveScan advanced search and find tool, which allows searching a single acquisition for runts, glitches, and other anomalies using more than 20 different criteria, can also be used to set up a scan condition and search for an event for hours or even days. History mode permits scrolling back in time to isolate anomalies and measure them with parameters or cursors. Serial trigger and decode functionality quickly isolates bus events without the need to set manual triggers. Sequence mode store triggered events as "segments," enabling capture of many fast pulses in quick succession or events separated by long periods of time, reducing dead time between triggers. The LabNotebook documentation and report generation tool makes quick work of saving and documenting test results.

With math functions including averaging, enhanced resolution and FFT plus a wide variety of measurement parameters, the HDO can measure and analyze every aspect of a waveform. Beyond just measuring waveforms, statistics, histograms and measurement trends show waveform changes over time.

Spectrum analyzer and power analysis software

Also available for the HDO are software packages that serve to sharpen the instruments' focus on two key analysis areas that affect a broad range of design and debug tasks. The Spectrum Analyzer software converts the controls of an HDO into those of a spectrum analyzer. It enables users to adjust the frequency span, resolution bandwidth, and center frequency. Users can apply filters to input signals and watch the frequency signature change in real time. A unique peak search labels spectral components and presents frequency and level in a table. Users may touch any line to move to that peak. They can use the spectrogram display to see how the spectrum changes over time.

The Power Analysis software option quickly measures and analyzes the operating characteristics of power conversion devices and circuits with automatic loss measurements and a dedicated user interface. Areas of turn-on, turn-off and conduction loss are identified with color coded waveform overlays. Tools for performing critical power switching device measurements, control loop modulation analysis, and line power harmonic testing are all built in.

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Published on Electronic Component News (<http://www.ecnmag.com>)

Pricing

The HDO4000 is available in six different models with US list prices ranging from \$9,000 to \$16,400. The HDO6000 is available in three different models with US list prices ranging from \$14,900 to \$19,900. For further information, engineers and technicians can contact Teledyne LeCroy at 1-800-553-2769 or visit www.teledynelecroy.com [1]

Source URL (retrieved on 05/24/2013 - 3:07pm):

<http://www.ecnmag.com/product-releases/2012/10/oscilloscopes-include-16-times-more-vertical-resolution-traditional-8-bit-instruments>

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[1] <http://www.teledynelecroy.com>