



## Optametra and LeCroy Test Solution 224 Gb/s PM-QPSK

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### Optametra and LeCroy to Showcase Test Solution Capable of 224 Gb/s PM-QPSK at OFC/NFOEC Exposition

**Chestnut Ridge, NY, March 19, 2010** – LeCroy Corporation, designer of the world's fastest (30 GHz) real-time oscilloscope, and Optametra, a leading supplier of coherent lightwave signal analyzers, will showcase their combined test solution at the OFC/NFOEC Exposition, Booth 1406, San Diego from March 23 to 25.

LeCroy's WaveMaster 830Zi, a 30 GHz real-time oscilloscope, has already been used to measure 224 Gb/s capability using 56 Gb/s per tributary polarization multiplexed quadrature phase shift keying (PM-QPSK) signals. This is a significant step towards accelerating the availability of 200G transmission technology and beyond for ultra long haul Dense Waveform Division Multiplexing (DWDM) networks.

By integrating the capability of the 30 GHz Optametra OM4106B Coherent Lightwave Signal Analyzer with the real-time 30 GHz bandwidth of the LeCroy WaveMaster 830Zi oscilloscope, the combined instruments offer the highest real-time bandwidth for signal analysis in ultra-long-haul fiber telecommunications. Optametra's software operates within the LeCroy oscilloscope permitting access to all variables in the analysis via Matlab, and providing users with an excellent platform for developing and testing proprietary algorithms including Chromatic Dispersion (CD) compensation, Polarization Multiplex Distortion (PMD) compensation, new proprietary modulation schemes, pass-fail criteria, or any user-defined algorithm.

The demand for increased telecommunications bandwidth is being driven by YouTube, Facebook, Google, data centers, and high-speed infrastructure build-out. Advanced modulation formats with greater spectral efficiency offer an easy, flexible and lower-cost route to the commercialization of 100G or greater transport technology. The Optametra and LeCroy test solution proves the feasibility of using PM-QPSK to modulate the phase, rather than the amplitude of the signal at high data rates without taking any shortcuts that can lose valuable data. Critical components of the solution are the internal speed of the OM4106 Coherent Lightwave Signal Analyzer and the availability of the WaveMaster 830Zi oscilloscope for use as a data acquisition system with excellent bandwidth, sample rate and signal fidelity.

"We are very pleased with the capabilities of the LeCroy oscilloscope," said Daniel van der Weide, VP of Engineering at Optametra. He added, "Access to a 30 GHz real-time oscilloscope with a high sampling rate and superior signal fidelity over such a wide bandwidth enables us to capture the complete electric field of the optical signal and measure everything that can be known about the signal at higher and higher speeds in real-time."

The LeCroy WaveMaster 830Zi oscilloscope features a real-time bandwidth of 30 GHz, a sampling rate of 80 Gigasamples/second on two channels, a maximum acquisition memory of 512 Megapoints/channel. Two oscilloscopes can be synchronized together to achieve 30 GHz on four channels to acquire four optical signals. The acquisition system in the 830Zi utilizes LeCroy's patented fifth-generation Digital Bandwidth Interleaving (DBI) technology to achieve an industry leading 30 GHz real-time bandwidth, 15.5 ps rise time, and a 200 fs jitter noise floor with superior signal fidelity. With DBI, the basic 16 GHz Silicon-Germanium signal conditioning components are always operating comfortably in their rated frequency range and interleaved with a combination of radio frequency (RF) hardware and Digital Signal Processing (DSP) to achieve 30 GHz performance. Sample rate and memory are simultaneously interleaved. The bandwidth and sampling rate combined with a deep acquisition memory enable large blocks of data to be acquired in real-time allowing signal processing and detection of the data bits and computation of bit error ratios.

"LeCroy continues to push the limits of high speed analog acquisition and A/D converter technology in order to enable our customers to develop the next generation in communications equipment," said Michael Schnecker, LeCroy Business Development Manager, Signal Integrity. "We are very excited to be a part of Optametra's groundbreaking instrumentation development."

Engineers and technicians who would like to know more can contact LeCroy at 1-800-5LeCroy (1-800-553-2769) or visit [www.lecroy.com](http://www.lecroy.com).

#### **About Optametra**

Optametra, LLC is a privately held company dedicated to developing instrumentation that enables customers to develop, manufacture, install, and monitor complex modulation transceivers. Optametra: complex measurements made simple. To inquire more or review these products, you will receive the quickest response to inquiries by contacting Daniel van der Weide.

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#### **About LeCroy**

LeCroy Corporation is a worldwide leader in serial data test solutions, creating advanced instruments that drive product innovation by quickly measuring, analyzing, and verifying complex electronic signals. The Company offers high-performance oscilloscopes, serial data analyzers, and global communications protocol test solutions used by design engineers in the computer and semiconductor, data storage device, automotive and industrial, and military and aerospace markets. LeCroy's 45-year heritage of technical innovation is the foundation for its recognized leadership in "WaveShape Analysis"—capturing, viewing, and measuring the high-speed signals that drive today's information and communications technologies. LeCroy is headquartered in Chestnut Ridge, New York. Company information is available at <http://www.lecroy.com>.

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