

Press Release

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figure 9® Mode Locking for FC1500 Optical Frequency Synthesizer / First Rack-mounted Optical Comb

Menlo Systems, the leading manufacturer of optical frequency comb systems, releases the new generation of its FC1500 Optical Frequency Synthesizers. As a next step in the ongoing process of technological innovation in laser design, from now on the unique figure 9® mode locking mechanism is now available for the frequency combs as well.

Optical frequency combs enable direct measurement of optical frequencies, and thus measurement of time and length with unprecedented precision.

The fiber laser based FC1500 systems are standard calibration tools for the photonics community. While for most ultrafast laser applications the highest pulse energy or shortest pulse duration is the critical parameter, lowest phase noise and high comb mode separation are the essential parameters for frequency metrology. Menlo Systems' figure 9® lasers use polarization maintaining fiber components only, ensuring excellent stability and low-noise operation. Now this unique technology is applied to systems running at 250 MHz, the standard repetition rate for the frequency comb oscillators.

Menlo Systems brings its optical frequency combs to a new level of stability. Advanced features include complete automated control of the repetition rate and CEO frequency, sub-Hz enabled linewidth, or the optional ultrahigh stability package. Versatile frequency synthesizers with multiple output ports can measure and stabilize many lasers throughout the visible to the mid-infrared spectral range. For example, a single FC1500 system can serve sev-

eral experiments in quantum optics labs, radically simplifying the setups for laser cooling and trapping, and saving resources and time.

A special rack-mounted FC1500 system makes its debut at the Photonics West 2015. The compact footprint and robust design bring benefits for applications that require a rugged and transportable instrument. "The rack-mounted architecture is the result of customer feedback," said Dr. Marc Fischer, the product manager. "From now on, we can also offer a solution with excellent price/performance ratio for users who work at a single optical frequency or with an RF output only in applications like dimensional metrology, low-noise microwave synthesis or optical frequency distribution research."

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About Menlo Systems:

Menlo Systems, a leading developer and global supplier of instrumentation for high-precision metrology, was founded 2001 as spin-off of the Max-Planck-Institute of Quantum Optics. Known for the Nobel-Prize-winning Optical Frequency Comb technology, the Munich based company offers complete solutions based on ultrafast lasers, synchronization electronics and THz systems for applications in industry and research.
