



Menlo Systems

Menlo Systems GmbH is a leading developer and global supplier of instrumentation for high-precision metrology. The company with headquarters in Martinsried near Munich is known for its Nobel Prize winning optical frequency comb technology.

With subsidiaries in the US, Japan, and offices in France and China, Menlo Systems is closely connected to its customers from science and industry. The main product lines are optical frequency combs, time and frequency distribution, terahertz systems, ultrafast and ultrastable lasers, and corresponding control electronics. Besides standard production, Menlo Systems develops and manufactures custom made solutions for laser-based precision measurements.

<https://www.menlosystems.com/>

PMWG-1500 Ultrastable Microwave Generator

Ultra-stable microwave sources are paramount for a broad range of applications, including precision metrology, deep space navigation, telecom and next generation wireless communication, as well as coherent radar. The idea to phase-coherently divide high-fidelity optical signals into the microwave domain was already envisioned in the very early stages of frequency comb technology.

In laboratory demonstrations the level of phase noise of these photonic microwaves has been proved to vastly exceed the performance of any other established technology. Menlo Systems is now providing a performance that significantly outperforms commercially available microwave oscillators. Combining our established ultra-stable optical reference systems (ORS-Cubic) and our state-of-the-art optical frequency combs (SmartComb), Menlo Systems offers an all-in-one solution for photonic microwave generation.

<https://www.menlosystems.com/products/ultrastable-microwaves/pmwg-1500/>



FC1500-250-ULN Optical Frequency Comb

The FC1500-250-ULN Ultra Low Noise Optical Frequency Comb is a compact and versatile fiber-based metrology system. Laser operation relies on the figure 9[®] mode locking technology, which ensures excellent stability and low-noise operation. The femtosecond laser is ready-to-use at the press of a single button, and automatic phase lock loops ensure easy stabilization to either a RF or an optical reference. Thanks to the mature system design, users report long-term uninterrupted operation. With a variety of extension packages and add-ons, systems are exactly tailored to the individual experimental requirements.

Ever increasing demands for stability and accuracy of time and frequency signals require improved frequency references. But even the best optical references have very limited spectral coverage. The FC1500-250-ULN overcomes these limitations by transferring the spectral purity of a stable reference to the entire wavelength range of 500-2000 nm. This unique feature enables the users to compare different (optical) frequency references, stabilize all CW lasers to one absolute frequency reference and use it as a clockwork for optical clocks. The overall stability is evaluated in an out of loop comparison between two independent optical frequency combs, which is integral part of the quality check during factory acceptance of each system. Choose between two variants, depending on the stability and accuracy that you require in your lab.

<https://www.menlosystems.com/products/optical-frequency-combs/fc1500-250-uln/>

