NEWS RELEASE

Adtran launches optical cesium clock upgrade to enhance short-term stability for precision timing applications

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News summary:

- Industries such as metrology, aerospace and defense need ultra-stable timing for accurate data collection and reliable communication
- Adtran's Oscilloquartz optical cesium clock now features the ESTU precision timing module for enhanced short-term frequency stability
- Upgrade improves short-term Allan Deviation, ensuring greater timing accuracy and performance for mission-critical operations

HUNTSVILLE, Ala.--(BUSINESS WIRE)-- Adtran today launched its Enhanced Short-Term Unit (ESTU) precision timing module, a new addition to its **OSA 3300** High-Performance (OSA 3300 HP) and OSA 3300 Super High-Performance (OSA 3300 SHP) optical cesium clocks. Designed to meet the demands of industries requiring ultra-stable short-term timing, the module achieves performance levels comparable to the passive hydrogen maser, which is no longer available in the Western market. The ESTU module significantly improves short-term frequency stability, measured through Allan Deviation, providing the synchronization accuracy and reliability essential for sectors including metrology, space exploration and defense. It enables more stable data collection, satellite communication and measurement operations, reinforcing the OSA 3300 Series as the ideal choice for mission-critical applications.

Adtran's Oscilloquartz ESTU module optimizes short-term frequency stability, ensuring greater timing accuracy for mission-critical applications. (Photo: Business Wire)

“With our precision timing module, we’re setting new benchmarks in short-term frequency stability, addressing the critical demands of sectors ranging from scientific research labs to aerospace companies,” said Gil Biran, GM of Oscilloquartz, Adtran. “This advanced ESTU module enhances our industry-first high-performance optical cesium atomic clocks, delivering substantial benefits, including reduced Allan Deviation. These improvements are essential for ensuring the stability and accuracy of timing network infrastructure. Our solutions are the first in the market to combine the short-term stability of a passive hydrogen maser with the long-term stability of a high-performance cesium clock. This innovation underscores our commitment to providing advanced technology tailored to mission-critical applications.”

This latest addition to Adtran’s comprehensive portfolio of Oscilloquartz synchronization technologies is designed to optimize short-term frequency stability. By improving frequency precision, the new ESTU module ensures greater timing accuracy for high-stakes operations. It supports both 5MHz and 10MHz output frequencies, making it a versatile solution for various high-precision operations, including systems using passive hydrogen masers. The enhanced short-term stability delivered by the new ESTU module is crucial for industries that rely on ultra-precise synchronization, such as satellite communication systems, metrology labs and deep-space exploration.

“With over 75 years of expertise in timing and synchronization, Oscilloquartz has established a lasting legacy of innovation and trust. This latest upgrade of our high-end optical cesium clocks continues that tradition, delivering significant improvements in short-term frequency stability while maintaining the superb long-term stability for industries that rely on ultra-precise timing,” commented Patrick Berthoud, time and frequency chief scientist at Oscilloquartz, Adtran. “Leveraging our world-renowned Swiss expertise, this new ESTU module enhances our high-performance optical cesium atomic clocks, providing the short-term stability that mission-critical applications demand. It reflects our team’s ongoing commitment to pushing the boundaries of synchronization technology and ensuring unmatched accuracy for our customers.”

More information on the ESTU module is available in these **slides**.

About Adtran

ADTRAN Holdings, Inc. (NASDAQ: ADTN and FSE: QH9) is the parent company of Adtran, Inc., a leading global provider of open, disaggregated networking and communications solutions that enable voice, data, video and internet communications across any network infrastructure. From the cloud edge to the subscriber edge, Adtran empowers communications service providers around the world to manage and scale services that connect people, places and things. Adtran solutions are used by service providers, private enterprises, government organizations and millions of individual users worldwide. ADTRAN Holdings, Inc. is also the largest shareholder of Adtran Networks SE, formerly ADVA Optical Networking SE. Find more at **Adtran**, **LinkedIn** and **X**.

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