



NEWS RELEASE

Adtran sets new industry benchmarks with optical pumping cesium atomic clocks

2024-06-13

News summary:

- Rising precision demands and GPS/GNSS vulnerabilities are driving the urgent need for secure, reliable synchronization
- Adtran's new OSA 3300 Super HP and OSA 3350 Super ePRC+ meet the need for enhanced accuracy, stability and robust timing protection
- Technology ensures 100-nanosecond precision for 100 days, assuring PNT for critical infrastructure and defense operations

HUNTSVILLE, Ala.--(BUSINESS WIRE)-- Adtran today launched two new optical cesium atomic clocks that set new standards in network time synchronization: the OSA 3300 Super High-Performance (OSA 3300 SHP) and the OSA 3350 Super Enhanced Primary Reference Clock+ (OSA 3350 SePRC+). As part of Adtran's Oscilloquartz portfolio of industry-first optical cesium clocks, the devices leverage unique, state-of-the-art optical pumping technology to meet evolving demands across applications from scientific research to critical PNT infrastructure. The **OSA 3300 SHP** offers exceptional stability and accuracy, making it a valuable tool for metrology institutes and scientific research facilities. In contrast, the **OSA 3350 SePRC+** is specifically designed to enhance holdover capabilities for PNT services. It maintains 100 days of 100-nanosecond precision, providing continuous and accurate timing even in environments where GPS/GNSS is unavailable. This makes it a crucial component for ensuring the integrity of mission-critical networks and supporting vital infrastructure and defense operations with reliable backup timing.

Adtran's new optical pumping cesium clocks are a significant breakthrough for the

"Our two new optical cesium



networking industry. (Photo: Business Wire)

clocks represent a major breakthrough, offering

substantial benefits to a wide variety of industries. Take the OSA 3350 SePRC+, for instance – it ensures 100-nanosecond accuracy over a span of more than three months. This level of precision and stability is critical for infrastructures relying on continuous PNT services, providing our customers with supreme reliability and robust protection against escalating cyber threats to GPS/GNSS,” said Gil Biran, GM of Oscilloquartz, Adtran. “In an era marked by rising global tensions and heightened risks of state-sponsored interference in satellite communications, our latest innovation has arrived at a pivotal moment. It will greatly enhance our capacity to address the demand for secure and reliable network timing around the world. Building on our 75-year legacy and unmatched expertise, the OSA 3350 SePRC+ exemplifies our commitment to excellence in assured PNT technology. As pioneers in the field, we continue to set new benchmarks, consistently improving standards to meet the dynamic needs of our customers and the broader market.”

The OSA 3300 SHP and OSA 3350 SePRC+ redefine the capabilities of PRCs and ePRCs, unlocking new possibilities in their respective domains. The OSA 3300 SHP, with its superior Allan Deviation (ADEV) performance – twice as accurate as the 3300 HP with the same 10-year lifespan – ensures exceptional stability and accuracy, making it an ideal choice for metrology institutes and scientific research facilities. Its advanced feature set enables these institutions to achieve new levels of precision in their timekeeping and calibration processes, directly driving advancements in scientific research and industrial applications. Meanwhile, the OSA 3350 SePRC+ is specifically designed to enhance holdover capabilities for PNT services. This high-end optical cesium clock, together with our Super ePRTC+ combiner can maintain 100 days of 100-nanosecond precision, far exceeding previous industry records, and ensuring continuous and accurate timing even in environments where GPS/GNSS are unavailable.

“Our OSA 3300 SHP provides unprecedented accuracy in timekeeping, maintaining nanosecond precision over extended periods. This level of enhanced accuracy and stability is crucial for scientific research and metrology, supporting high-precision experiments and the calibration of instruments to the highest standards. The 3300 SHP allows researchers to conduct groundbreaking experiments in fields like quantum mechanics and relativity, where extreme accuracy is paramount,” commented Patrick Berthoud, time and frequency chief scientist at Oscilloquartz, Adtran. “At Oscilloquartz, we’re dedicated to advancing time and frequency technology, leveraging our world-renowned Swiss expertise in this field. Our latest innovations demonstrate our commitment to delivering superior solutions that meet the evolving demands of our customers, driving progress in both scientific research and industrial applications.”

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**.

Published by

ADTRAN Holdings, Inc.

www.adtran.com

For media

Gareth Spence

+44 1904 699 358

public.relations@adtran.com

For investors

Steven Williams

+49 89 890 665 918

investor@adtran.com

Source: Adtran