# SiTime Boosts GPU Utilization in AI Data Centers with Elite 2 Super-TCXO

*Built for Time Synchronization—Addresses a Cumulative $1.5 Billion Market by 2030*

SANTA CLARA, Calif.--(BUSINESS WIRE)--May 4, 2026-- SiTime Corporation (NASDAQ: SITM), the Precision Timing company, today announced the Elite 2 Super-TCXO® to increase GPU utilization and compute efficiency in AI data centers by delivering better time synchronization. The product targets a $1.5 billion cumulative market by 2030.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20260504575197/en/

SiTime's Elite 2 Super-TCXO delivers sub-nanosecond time synchronization across AI clusters, improving GPU utilization and compute efficiency.

"Industry reports show GPU utilization in AI clusters can be as low as 20 to 40 percent—a large and largely hidden tax on AI infrastructure," said Piyush Sevalia, chief business officer at SiTime. "AI workloads are distributed across GPUs in tightly orchestrated time slots. Even small timing errors force wait cycles to avoid data corruption, and in extreme cases can trigger GPU timeouts and system restarts. Poor synchronization directly caps GPU utilization."

Sevalia continued, "To address this, the industry is driving towards a target of 10 nanoseconds time synchronization across an AI cluster, down from 1 microsecond today. We collaborated closely with leading AI system architects at hyperscalers and silicon providers and concluded that the right oscillator can significantly improve cluster-wide synchronization. That's why we developed the Elite 2 Super-TCXO. The device delivers sub-nanosecond synchronization, 10X better than target, which is enabled by its exceptional thermal and short-term stability. With these characteristics, Elite 2 minimizes time errors between GPUs, unlocking higher system utilization, greater throughput and better performance per watt. This is the result of SiTime leadership and systems thinking, applied to one of AI's hardest problems."

"AI networks must operate with extremely high efficiency to fully utilize expensive GPU resources," said Sameh Boujelbene, vice president at Dell'Oro Group. "As AI back-end infrastructure refreshes at a much faster cadence than traditional non-accelerated infrastructure, time synchronization accuracy becomes increasingly important to sustaining performance across rapidly evolving data center architectures."

**Elite 2 Super-TCXO delivers better synchronization in the industry's smallest footprint**

Key features:

- 1 ns time synchronization accuracy—up to 100X better
- ±2 ppb/°C dF/dT (frequency temperature slope)—up to 25X better
- $6 \times 10^{-12}$ Allan Deviation (ADEV)—up to 8X lower
- ±50 ppb frequency stability over -40 to 105°C—up to 4X better
- 3.2 mm × 2.5 mm (8 $mm^2$) footprint—up to 2X smaller
- Digital frequency tuning simplifies timing-aware network design
- Eliminates activity dips and micro jumps inherent in quartz technology
- Resistant to shock, vibration and board bending

**Availability**

The Elite 2 Super-TCXO is sampling now, with commercial production expected in Q3 2026.

The Elite 2 Super-TCXO is available in 3.2 mm × 2.5 mm plastic and 5.0 mm × 3.2 mm ceramic packages. Part numbers: SiT5234, SiT5235, SiT5434 and SiT5435.

**Additional Resources**

- Blog
- Product page

**About SiTime**

SiTime is the Precision Timing company. Our semiconductor MEMS programmable solutions offer a rich feature set that enables customers to differentiate their products with higher performance, smaller size, lower power and better reliability. With more than 4 billion devices shipped, SiTime is changing the timing industry. For more information, visit **www.sitime.com**.

About Precision Timing – Timing is the heartbeat of all electronics, ensuring performance, resilience and scalability. For decades, quartz devices, non-silicon technology, have kept systems in sync, but they struggle in harsher, more demanding environments. MEMS-based Precision Timing delivers greater accuracy, smaller size and resilience. Today, MEMS timing powers over 400 applications, including high-growth ones in AI data centers, automated driving, industrial and humanoid robots, wearables and IoT.

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