SiTime Transforms Precision Timing Market for Edge Networks

Elite X Super-TCXO Delivers 2x Better Stability and 30x Higher Reliability

SANTA CLARA, Calif.--(BUSINESS WIRE)--Mar. 15, 2022-- SiTime® Corporation (NASDAQ: SITM), a market leader in precision timing, today introduced the Elite X™ Super-TCXO® for edge networks such as data centers, 5G front haul, connected cars and industrial IoT. In these applications, Elite X solves critical timing problems and enables delivery of new services.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220315005619/en/



Elite X Super-TCXO shines by delivering 2x better stability and 30x higher reliability than quartz. (Graphic: Business Wire)

"Twenty-two million autonomous vehicles on the road by 2025, the rapid adoption of 5G, and the continued growth of data centers will require a large buildout in outdoor, decentralized edge networks," said Piyush Sevalia, executive vice president of marketing at SiTime. "These new edge devices and their precision timing heartbeat must perform reliably in the presence of extreme temperatures, thermal shock, and vibration. Here, our Elite X Super-TCXO shines by delivering 2x better stability and 30x higher reliability than quartz. Consequently, we believe that Elite X will now be the precision timing device of choice in edge equipment."

To enable new time-sensitive services such as ADAS, virtual reality, and smart manufacturing, edge devices will need to deliver faster speeds with lower latency. Precision timing plays a crucial role in their success. Legacy timing devices such as quartz TCXOs and mini-OCXOs have well-known weaknesses such as sensitivity to thermal shock and vibration, stability degradation at high temperatures, and shorter operating life. By using silicon MEMS technology that is inherently more robust and reliable, Elite X overcomes these problems and enables the next generation of time-sensitive services everywhere.

In edge networks, additional specifications such as aging, warm-up time, and power consumption are important for overall performance. Even here, SiTime Elite X outperforms legacy timing devices, simplifies system design, and offers dependable, consistent performance.

With Elite X (±10-20 ppb stability), Emerald (±5 ppb), and Elite (±50-500 ppb), SiTime offers a broad portfolio of best-in-class TCXOs and OCXOs that meet various application requirements in communications, networking, automotive, and industrial IoT.

SiT5501 Elite X Super-TCXO Features and Benefits

The SiT5501 Elite X Super-TCXO includes the following features and benefits:

- ±10 ppb frequency stability
- -40°C to +105°C operating temperature. More applications require 105°C operation.
- 110 mW typical power consumption
- Small package, 7.0 mm x 5.0 mm
- ±0.5 ppb/°C dF/dT (frequency slope), resistant to thermal shock and airflow
- ±0.5 ppb daily aging
- Any frequency from 1 to 60 MHz with up to 6 decimal places of accuracy

Learn More

Samples of the SiT5501 Elite X Super-TCXO are available now, with volume production in Q3’2022.

Learn more about the SiT5501 Elite X Super-TCXO (request datasheet and watch video).

Download SiT5501 photo here.

Learn more about SiTime MEMS precision timing solutions.

Visit the SiTime Timing Essentials Learning Hub to learn more about precision timing.

About SiTime
SiTime Corporation is a market leader in silicon MEMS timing. Our 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 over 2 billion devices shipped, SiTime is changing the timing industry. For more information, visit www.sitime.com.

Note on Forward-Looking Statements

This press release may contain forward-looking statements regarding future events. These forward-looking statements are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. Readers are cautioned that these forward-looking statements involve risks and uncertainties that could cause our actual results and the timing of events to differ materially from those anticipated in such forward-looking statements, including, but not limited to: our ability to develop, introduce, and ship new products in volume; quality and performance of our products; our customer relationships and our ability to retain and expand our customer relationships; and other risks and uncertainties described more fully in our documents filed with or furnished to the Securities and Exchange Commission. More information about these and other risks that may impact our business is set forth in our more recent Forms 10-K and 10-Q filed with the Securities and Exchange Commission. All forward-looking statements in this press release are based on information available to us as of the date hereof and qualified in their entirety by this cautionary statement, and we assume no obligation to revise or update these forward-looking statements.

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