SiTime Rearchitects Wireless Infrastructure Timing with New Elite RF Platform

Integrated Super-TCXO Delivers RF and Synchronization Performance, 30x Higher Reliability, and 20x Better Environmental Resilience

SANTA CLARA, Calif.--(BUSINESS WIRE)--Dec. 7, 2022-- SiTime Corp. (NASDAQ: SITM), the precision timing company, today announced a new precision timing platform, Elite RF™, that simplifies timing architecture in wireless infrastructure. The Elite RF Super-TCXO® enables higher bandwidth and lower latency that is critical to future 5G and satellite communications deployment. This new platform expands SiTime's SAM by $150M with target applications such as infrastructure radios in small cells, remote radio units (RRUs), microwave backhaul, and SATCOM equipment.

The Elite RF Super-TCXO is an entirely new class of MEMS-based temperature-controlled oscillators. They are purpose-built to withstand extreme environments in which 5G radios are deployed, while delivering the phase noise, accuracy, and resilience in a single, highly integrated device. These devices also meet the stringent performance requirements specified by the IEEE 1588v2 timing synchronization protocol.

Until now, mini-OCXOs were the primary timing reference for 5G and SATCOM radios. Mini-OCXOs provided the stability over changing temperature that was necessary to clock advanced synchronized radios. While mini-OCXOs are accurate, they are notoriously unreliable, especially in harsh environments, and they consume excessive power and board space and require additional components, such as jitter cleaners and VCXOs for generating RF-capable clocks. One Elite RF Super-TCXO replaces all these components.

"To enable new services, radios are expected to deliver 10x the bandwidth of previous generations with significantly lower latency," said Piyush Sevalia, executive VP of marketing, SiTime. "To achieve these performance goals, next-gen radios must be deployed closer to the user, and all nodes in the network must be time-synchronized. Past radio architectures used separate timing devices for the radio and for synchronization. The SiTime Elite RF platform integrates these two clocking functions, simplifying the radio timing architecture and delivering on the promise of 5G bandwidth and coverage."

Elite RF Super-TCXO Family Highlights

- 1 to 220 MHz any frequency output
- ±100 ppb stability over temperature
- -40 °C to +105 °C operating temperature range
- ±0.9 ppb/°C stability over temperature slope
- ±400 ppm digital control with ±0.05 ppt (parts per trillion) resolution
- 100 fs typical integrated phase jitter (19.2 MHz, 12 kHz to 20 MHz integration range)
- 0.3 ppb/day typical daily aging
- 144 mW power consumption at 1.8V
- 5.0 mm x 3.5 mm ceramic package

Availability

Limited customer sampling available now; general sampling available in Q2 2023; mass production is expected in Q3 2023. Contact SiTime for additional product and ordering information.

Additional Resources

Download Elite RF photo
Learn more about the Elite RF SiT5376/SiT5377 Super-TCXOs
Learn more about SiTime precision timing solutions
Request datasheet
Visit the SiTime Timing Essentials Learning Hub to learn more about precision timing

About SiTime

SiTime Corporation is the precision timing company. 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 3 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 ship products; 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 Form 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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