SiTime Expands Addressable Market with its New Precision Timing Solution for Autonomous Vehicles

New Differential Oscillators Deliver 10x Higher Resilience and Reliability to Enable Level 4 and 5 Advanced Driver Assistance Systems (ADAS)

SANTA CLARA, Calif.--(BUSINESS WIRE)--Sep. 27, 2022-- SiTime Corporation (NASDAQ: SITM), a leader in precision timing, today introduced a new automotive oscillator family, based on SiTime's advanced MEMS technology. The new differential oscillators are 10x more resilient and ensure reliable operation of ADAS across extreme road conditions and temperatures. The launch of the new automotive oscillator, AEC-Q100 SiT9396/7, expands the SiTime served available market (SAM) by $50 million.

"Indeed, the market for radar, camera, LiDAR, and computing for ADAS is accelerating very fast," reports Pierrick Bouley, Senior Analysts at Yole Intelligence, part of Yole Group. "With a 13.2% CAGR, we see this market growing from $15.4 billion in 2022 to $28.6 billion in 2027 (note 1)."

As automotive safety systems integrate more sensors and cameras, they are generating an explosion of data that is crucial for safe, autonomous operation. According to the Automotive Edge Computing Consortium, a vehicle generates 2 TB per hour today, increasing 10x to 20 TB per hour by 2025.

ADAS sensor data must be transferred at very high speeds within the in-car network, even in the most demanding environments, so that ADAS computers can make timely decisions for a safe, reliable journey.

Timing is the heartbeat of all high-speed communications. Legacy timing technology is one of the weakest links in today's sophisticated car electronics. In fact, quartz devices are susceptible to vibration and shock, extreme temperatures, and exhibit performance degradation over time. SiTime's new SiT9396/7 precision timing solutions, based on resilient and reliable silicon MEMS technology, are designed to perform in extreme conditions and ensure reliable operation of ADAS computers, domain/zone controllers, radar, and LiDAR subsystems.

"As more cars are equipped with ADAS technologies, precision timing becomes a critical component for safety," said Piyush Sevalia, EVP marketing, SiTime. "SiTime's automotive-grade timing solutions mitigate safety and reliability challenges, delivering unmatched benefits to automotive OEMs and Tier 1 suppliers. SiTime continues to expand its SAM and delivers higher performance levels to our automotive customers. We work with leading EV OEMs today to deliver autonomous driving innovations that are redefining how we drive, navigate, and experience our cars."

SiT9396/7 Automotive Timing Family Highlights

- AEC-Q100 Grade 1 qualified differential oscillators, temperature range (-40°C to 125°C) Grade 2 and 3 also available.
- High Performance: 150 fs jitter (typ.)
- ±30 ppm stability: Ensures best system performance in hostile environments (contact SiTime for ±25 ppm or better)
- 20x better vibration sensitivity
- Small form-factor: 2.0 x 1.6 mm package
- Flexible programmable features: 1 MHz to 920 MHz, 1.8 V to 3.63 V
- Superior reliability: 1 billion hours MTBF
- Popular differential output drivers include LVPECL, LVDS, HCSL and low-power HCSL, and

FlexSwing™ giving developers a flexible range of output options for their automotive system designs.

Availability

Samples of the SiT9396/7 differential oscillators are available now. Contact SiTime for order information and volume production expected in 2Q23.

Additional Resources

Download SiT9396/7 photos: Image 1 | Image 2
SiT9396 Datasheet
SiT9397 Datasheet
Watch Video

Learn more about the SiT9396/7 oscillators, SiTime MEMS precision timing solutions and SiTime timing solutions for ADAS.

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 2.5 billion devices shipped, SiTime is changing the timing industry. For more information, visit https://www.sitime.com.

1. Semiconductor Trends for automotive report, Yole Intelligence, 2022

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; quality and performance of our 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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