Aeva Introduces Eve 1 Product Line of High-Precision Sensors for Growing Industrial Automation Market

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World's First FMCW-Based Sensors Deliver Sub-Micron Repeatability for High-Volume Manufacturing Automation Applications

MOUNTAIN VIEW, Calif.--(BUSINESS WIRE)--Apr. 29, 2025-- Aeva® (Nasdaq: AEVA), a leader in next-generation sensing and perception systems, today introduced the Aeva Eve™ 1 line of high-precision sensors, starting with Eve 1D, the industry's first FMCW-based laser displacement sensor designed for high-volume and inline industrial automation applications, including factory and process automation. The new product addresses the growing $4 billion global laser displacement sensor market.

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Aeva Eve 1D, the industry's first FMCW-based laser displacement sensor designed for high-volume and inline industrial automation applications.

Laser displacement sensors are redefining precision measurement in modern production environments. They measure the distance between the sensor and a target surface without physical contact, using a laser beam. Designed for high-speed, non-contact operation, the sensors are designed to measure accuracy down to the micrometer level, which is about 1/100th the thickness of a human hair. Commonly used in industrial automation, quality control, and precision manufacturing, manufacturers can use these sensors to measure the thickness, height, or position of components, monitor the velocity or vibration of moving parts, and check for flatness or warping in manufacturing.

Eve 1D laser displacement sensors are the industry's first to leverage Frequency Modulated Continuous Wave (FMCW) laser technology and are powered by Aeva's CoreVision™ lidar-on-chip modules. They leverage the same silicon technology built from the ground up to meet the strict reliability and durability requirements of automotive applications, fine-tuned for high-precision sensing. Each module is built using silicon photonics to integrate key sensor elements on silicon. Combined with Aeva's proprietary precision sensing software, Eve 1D provides a scalable, software-defined product free from the limitations of industry-standard laser triangulation technology in performance, cost and form-factor.

"Built on the same core FMCW technology found in our Atlas automotive 4D LiDAR products, our Eve 1 line of sensors opens an entirely new market with significant revenue opportunity for Aeva," said Mina Rezk, Co-founder and CTO at Aeva. "Eve 1D delivers a unique combination of performance, cost, and scalability, and addresses many of the drawbacks of today's laser displacement sensor technologies. The sensors will help increase quality control and precision as the global manufacturing industry becomes increasingly automated and reliant upon advanced sensor technologies."

Eve 1D sensors are designed to measure down to sub-micron precision and can operate across a wide range of target standoff distances from 100 millimeters up to 20 meters, all within the same compact all-in-one form factor that combines measurement and data processing. They outperform state-of-the-art displacement sensors with an accuracy of 100 parts per million (0.01% linearity) and operate at high measurement speeds. These advantages allow for faster, precise inspection, giving customers high levels of throughput, improved quality control, and cost efficiency in their manufacturing processes.

Eve 1D combines optical components and data processing into a compact, single box design allowing for a seamless plug-and-play experience. In addition, FMCW technology provides important advantages over industry-leading displacement sensors that use traditional triangulation or time-of-flight based measurement methods, including:

- **Works Across Materials** – Ultra-high dynamic range delivers reliable precision across various materials and surface types—reflective, transparent, or dark—with seamless transitions and no artifacts
- **Works In All Lighting Conditions** – Unaffected by ambient light or sensor interference, it is well-suited for any lighting environment, outdoor use or high-density sensing environments.
- **Occlusion-Free Measurement** – A unique coaxial laser beam design enables versatile scanning in small clearance areas without occlusions or sensitivity to scan direction.
- **Precise Vibration and Velocity Measurement** – Accurately captures radial velocity, expanding functionality to include vibrometry and velocimetry to precisely measure the vibration of rotating parts like fans and shafts and detect the speed of moving parts like conveyor belts.

Demonstration and Availability

Aeva will be demonstrating Eve 1D at its booth #8418 at the Automate conference in Detroit from May 12-15. Samples are

available now with production expected to start this year. To learn more about Eve 1D visit: www.aeva.com/eve-1d.

About Aeva Technologies, Inc. (Nasdaq: AEVA)

Aeva's mission is to bring the next wave of perception to a broad range of applications from automated driving to industrial robotics, consumer electronics, consumer health, security and beyond. Aeva is transforming autonomy with its groundbreaking sensing and perception technology that integrates all key LiDAR components onto a silicon photonics chip in a compact module. Aeva 4D LiDAR sensors uniquely detect instant velocity in addition to 3D position, allowing autonomous devices like vehicles and robots to make more intelligent and safe decisions. For more information, visit www.aeva.com, or connect with us on X or LinkedIn.

Forward looking statements

This press release contains certain forward-looking statements within the meaning of the federal securities laws. Forward-looking statements generally are identified by the words "believe," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. These forward-looking statements include, but are not limited to expectations about market opportunity, our product features and performance. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this press release, including, but not limited to: (i) the fact that Aeva is an early stage company with a history of operating losses and may never achieve profitability, (ii) Aeva's limited operating history, (iii) the ability to implement business plans, forecasts, and other expectations and to identify and realize additional opportunities, (iv) the ability for Aeva to have its products selected for inclusion in OEM products, (v) the early stage of the market, (vi) manufacturing issues, (vii) customer acceptance of this technology, and (viii) other material risks and other important factors that could affect our financial results. Please refer to our filings with the SEC, including our most recent Form 10-Q and Form 10-K. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and Aeva assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. Aeva does not give any assurance that it will achieve its expectations.

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