

Velodyne LiDAR Announces New “Velarray” LiDAR Sensor

Low-cost and embeddable fixed-laser sensors are suitable for a range of automotive safety and autonomous applications



Velodyne Velarray Solid State Sensor (Photo: Business Wire)

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SAN JOSE, Calif.--(BUSINESS WIRE)--Velodyne LiDAR Inc., the world leader in 3D real-time perception systems for autonomous vehicles, today announced its new fixed-laser, solid-state Velarray™ LiDAR (Light Detection and Ranging) sensor, a cost-effective yet high-performance and rugged automotive product in a small form factor. With the Velarray sensor, which can be seamlessly embedded in both autonomous vehicles and advanced driver-assist safety (ADAS) systems, Velodyne LiDAR again sets the industry standard for image quality and functionality delivered in smaller, more cost-effective form factors.

“The Velarray enables not only fully autonomous vehicles, but also ADAS systems such as adaptive cruise control, while at the same time providing a miniature form factor and mass production target prices,” said Mike Jellen, President & Chief Commercial Officer, Velodyne LiDAR. “It offers a unique value proposition empowering a vehicle system that improves the safe driving experience, alongside an upgraded path to full autonomy.”

Velodyne LiDAR invented and patented the world’s first 3D real-time LiDAR sensors in 2005, and has since become the foundational sensor and market share leader for all truly autonomous vehicle development programs. Its surround-view sensors provide up to 360-degree coverage at long range and have been installed in thousands of vehicles. The Velarray was developed at Velodyne Labs, the company’s advanced research and development group, to combine the performance and reliability of its legacy LiDAR sensors with a small form factor to deliver the foremost technology and flexibility for enabling advanced safety and autonomous vehicles.

The new Velarray LiDAR sensor uses Velodyne’s proprietary ASICs (Application Specific Integrated Circuits) to achieve superior performance metrics in a small package size of 125mm x 50mm x 55mm that can be embedded into the front, sides, and corners of vehicles. It provides up to a 120-degree horizontal and 35-degree vertical field-of-view, with a 200-meter range even for low-reflectivity objects. With an automotive integrity safety level rating of ASIL B, Velarray will not only ensure safe operation in L4 and L5 autonomous vehicles but also in ADAS-enabled cars. It has a target price in the hundreds of dollars when produced in mass volumes.

“Velodyne LiDAR is the undisputed industry standard for 3D, real-time images required for autonomous applications,” said Anand Gopalan, Chief Technical Officer, Velodyne LiDAR. “The Velarray sensor uses a game-changing architecture that allows Velodyne to develop LiDAR sensors in various small form factors to suit automotive design aesthetics, while

providing optimum performance to ensure safe operation of autonomous vehicles.”

The company has scheduled customer demonstration of the core technology for the summer of 2017, with engineering sample units available by the end of 2017 ahead of production in 2018. It will be produced in scale at the company's new [Megafactory in San Jose](#).

About Velodyne LiDAR

Founded in 1983 and based in Silicon Valley, Velodyne LiDAR, Inc. is a technology company known worldwide for its real-time LiDAR sensors. The company evolved after founder/inventor David Hall developed the HDL-64 Solid-State Hybrid LiDAR sensor in 2005. Since then, Velodyne LiDAR has emerged as the leading developer, manufacturer, and supplier of 3D real-time perception systems used in a variety of commercial applications including autonomous vehicles, vehicle safety systems, 3D mobile mapping, 3D aerial mapping, and security. Its compact, lightweight HDL-32E sensor is available for many applications including UAVs, while the VLP-16 LiDAR Puck is a 16-channel real-time LiDAR sensor that is both substantially smaller and dramatically less expensive than previous generation sensors. Finally, the VLP-32C Ultra Puck™ offers the long-range, high-resolution and surround view required for the world's most advanced autonomous vehicles. For more information, visit <http://www.velodynelidar.com>.

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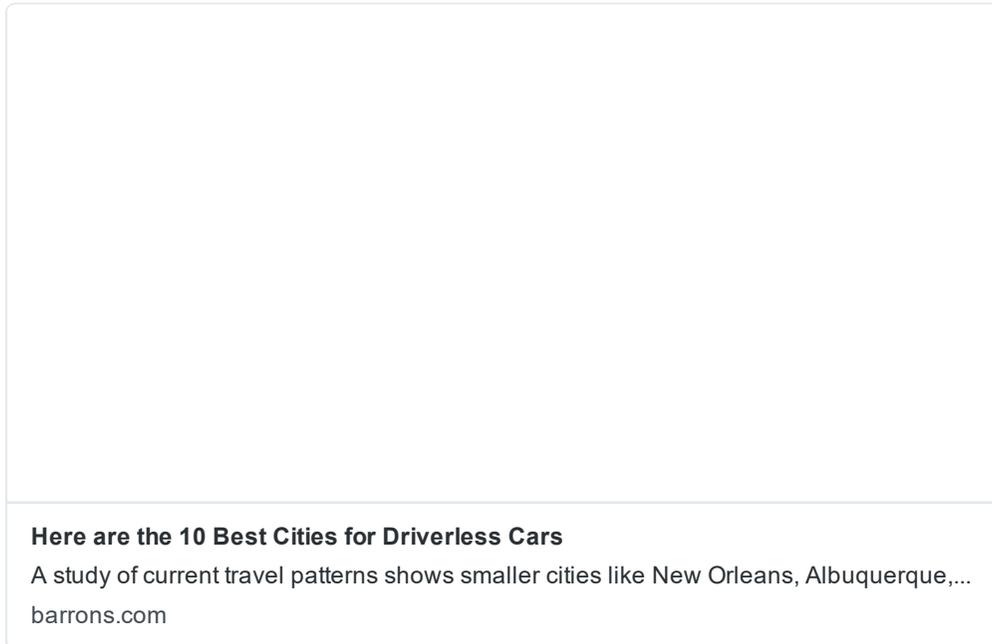
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