

EMBARGOED UNTIL SEPTEMBER 6, 2021 at 7:00AM GMT

**Lumotive Unveils Meta-Lidar™Platform —** **Industry’s Smallest, Solid-State, All‑Silicon, Scalable 3D Sensing Solution**

*Leading Customers in Automotive, Industrial and Consumer Markets Leveraging Lumotive’s Next-Generation Lidar Technology*

MUNICH ([IAA MOBILITY](https://www.iaa.de/en/mobility)) – September 6, 2021 – [Lumotive](https://www.lumotive.com/), a leading developer of solid-state lidar systems, today introduced the Meta-Lidar™Platform — the industry’s smallest and most cost-effective 3D sensing solution comprising a Lumotive tiny lidar device with patented beam steering technology, software-defined scan modes, and a reference system design. Powered by Lumotive’s highly scalable Light Control Metasurface™ silicon chips (LCMs) manufactured in a standard CMOS semiconductor process, the Meta-Lidar Platform is a scalable solution for a range of size, price, performance and power requirements, removing barriers to greater proliferation of 3D sensing in automotive, industrial and consumer applications.

More than a dozen world-class mobility, industrial automation and consumer product companies are already using the Lumotive Meta-Lidar Platform’s high-performance, small form factor and low-cost advantages to differentiate next-generation designs for autonomous vehicle, warehousing, logistics and augmented reality (AR) applications. Launched in 2021, Lumotive’s early access program (EAP) was oversubscribed by Fortune 500 companies.

**Meta-Lidar on Display: Specifications**

This week at [IAA Mobility](https://www.iaa.de/en/mobility), Lumotive is demonstrating an early version of its tiny lidar M30 device, the workhorse of the Meta-Lidar Platform, expected to be in commercial production by the end of 2022. Setting a new size/cost/performance standard, the M30 boasts a 10-20 meter range, a field of view of 120º x 90º, and 640 x 480 resolution — all in a golf ball-sized form factor suited for integration around vehicles and robots for autonomy and safety cocoon applications. The M30 is the first in a series of Lumotive products scalable for sensing ranges from 5 to 200 meters, and form factors less than 1 cubic centimeter for integration into smartphones, AR devices, and wearables.

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**Secret Sauce: Semiconductors for The Win in Multiple Markets**

The scalability of Lumotive’s products is enabled by the company’s disruptive Light Control Metasurface (LCM™) solid-state beam steering chips, which significantly reduce the cost and size of lidar systems while improving performance and fidelity. Manufactured in proven and scalable CMOS semiconductor processes, LCM chips eliminate the need for mechanical moving parts (that challenge the cost and reliability of traditional lidar devices) while delivering new levels of perception, detection and navigation in autonomous systems. LCM technology enables the industry’s first software-defined lidar capability, allowing the lidar scan pattern, frame rate and resolution to be customized for specific use cases — a feature unique to the Lumotive Meta-Lidar Platform.

“There is a huge opportunity to address the requirements of price-sensitive applications that need near-range and smaller size solutions,” said Alexis Debray, PhD. Senior Technology and Market Analyst, Emerging Technologies at Yole Développement (Yole). “The market for automotive, industrial and smart city lidar-enabled products is expected to reach $5.7B by 2026 with short-range applications accounting for a significant portion of the total (1). A 10–20-meter range is adequate for peripheral sensing in a car, or for factory robots or small-scale delivery vehicles, for example. Lumotive’s unique all-silicon, solid-state approach gives it specific advantages in cost, size and reliability, as well as a scalable platform that product developers can leverage to meet specific price/performance needs across a range of uses.”

1. *Source: LiDAR for Automotive and Industrial Applications report, Yole Développement, 2021*

**Making Lidar Ubiquitous Through a Scalable Technology**

Unlike vehicle navigation systems that require long range lidar to detect objects at ranges of 200 meters or more, other mobility and AR applications require less powerful lasers than can scale to smaller sizes, lower costs and less energy consumption. But the traditional approaches that use moving-mirror assemblies are unable to scale.

On the other hand, low cost sensing solutions using ultrasonics, cameras, or 2D sensing don’t provide the needed performance, reliability or accuracy for many safety critical applications in mobility and industrial automation.

“In order to make lidar truly ubiquitous, the industry needs compact, low-power and mass production-ready 3D sensing systems at competitive price points,” said Gleb Akselrod, CTO and co-founder of Lumotive. “By taking advantage of semiconductor economics and scaling, which have proven to be the winning formula in so many other application areas, our Meta-Lidar Platform is the only approach that provides the performance and flexibility needed for volume production and mass adoption.”

**NOTE TO EDITORS AT IAA Mobility:** Lumotive’s Chief Technology Officer, Dr. Gleb Akselrod, will present “3D Sensing Everywhere” on the Startup Lounge stage in Hall B1 of the Messe München on Tuesday, September 7 at 1:15pm and again on Saturday, September 11 at 10:15am.

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**About Lumotive** [**https://www.lumotive.com/**](https://www.lumotive.com/)

Founded in 2018, Lumotive is a leader in all-silicon lidar systems, developing high-performance solutions for consumer electronics, industrial automation, robotics and automotive applications. The Seattle-based company’s Meta-Lidar™Platform leverages revolutionary beam-steering technology based on patented Light Control Metasurfaces™ and implemented in standard semiconductor manufacturing processes to deliver an unprecedented combination of high performance, cost, reliability and size. Lumotive’s random access beam-steering chips enable the industry’s first software-defined lidar with region-of-interest scanning, object tracking and advanced perception capabilities. Lumotive’s investors include Bill Gates and Quan Funds. The company has received measurable industry acclaim with inclusion in the following rankings: Built In Seattle’s [Best Small Companies to Work For,](https://www.builtinseattle.com/companies/best-small-places-to-work-seattle-2021#lumotive) [JMP Securities Efficient Fifty](https://lumotive.reportablenews.com/pr/lumotive-named-one-of-jmp-securities-efficient-fifty-companies-for-second-consecutive-year) list of the most interesting private companies in industrial and energy technology, and EE Times’ [Silicon 100: Emerging Startups to Watch](https://www.eetimes.com/product/silicon-100-startups-worth-watching-in-2021/). Lumotive is a finalist for the “Best of Sensors 2021 – Startup of the Year” award to be presented on September 23 at [Sensors Converge](https://www.sensorsexpo.com/).



*The Lumotive M30 tiny lidar device, the workhorse of the Meta-Lidar™ Platform, will be demonstrated at IAA Mobility, Munich, September 6-12, 2021.*