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Quanergy Releases QORTEX, Perception Software Platform for LiDAR Technology

Leading LiDAR manufacturer introduces software framework for LiDAR solutions across autonomous driving, security and industrial automation

SUNNYVALE, Calif.—January 8, 2018--[Quanergy](#), the leading provider of solid state LiDAR sensors and smart sensing solutions, today introduced QORTEX™, a core, proprietary perception software platform compatible with Quanergy's full suite of LiDAR sensors. With the release of QORTEX, Quanergy is now the only LiDAR manufacturer to commercially produce an integrated software and hardware platform solution, enabling an entirely new level of smart awareness for autonomous vehicles and beyond.

LiDAR sensors use lasers that send pulses that reflect off objects to measure directly the distance and shape, creating a detailed 3D map of the physical world. However, in order to perceive what these objects are and where they are located, additional technology is needed to interpret the 3D data from the sensor. QORTEX has been developed over 10 years to accomplish this feat with high accuracy and ensure a flexible, modular and scalable approach to deploying LiDAR-enabled applications.

"Quanergy is committed to pushing the boundaries of what is possible with LiDAR, and is now the only commercially available full system LiDAR solution provider," said Dr. Louay Eldada, founder and CEO of Quanergy. "Working in combination with Quanergy's LiDAR sensors, perception software applications derived from QORTEX provide the necessary information to make informed decisions in real time, giving autonomous vehicles and smart machines across industries one of the most advanced understandings of their environment."

Each of Quanergy's products and sensing solutions is derived from a variety of available functions and modules within QORTEX, and the software is designed to work specifically with Quanergy's LiDAR sensors, including the solid-state S3 and mechanical M8. Customized LiDAR solutions can also be built by bundling different layers from QORTEX's functionality toolkit.

The QORTEX platform is flexible enough to be used across multiple industries to quickly and accurately analyze 3D point cloud data. It incorporates machine vision, deep learning and 3D perception proprietary algorithms to perform key functions such as object detection, tracking and classification. Quanergy software solution offerings use the building blocks available within the QORTX framework to build software application bundles which are optimized for the target application. The software communicates directly with multiple sensors to collect and evaluate data and interpret what is

happening in a given environment, from detecting perimeter security breaches to tracking the flow of customers in a retail store.

“Deciphering data from 3D point clouds is one of the most difficult aspects of using LiDAR technology,” said Jeroen Floor, vice president of software engineering at Quanergy. “As the central perception engine of Quanergy’s products, QORTEX drastically improves how we understand these inputs by detecting and interpreting point clouds and providing actionable data from what our systems see.”

QORTEX serves as the main technology framework for LiDAR sensor perception across the various applications and markets that Quanergy serves.

- QORTEX for Security is a powerful and intelligent 3D perimeter fencing system that enables real-time 3D detection of humans and is fully integrated with market leading security providers’ video monitoring systems and PTZ (Pan-Tilt- Zoom) camera control infrastructure.
- QORTEX for Industrial Automation creates virtual movable walls around large machinery and aids the navigation of robots and automated guided vehicles (AGVs).
- QORTEX for Transportation supports a variety of ADAS functionality including Adaptive Cruise Control (ACC), Lane Departure Warning (LDW), Lane Change Warning (LCW) and Forward Collision Warning (FCW). There will also be a QORTEX solution bundle to address smart city applications such as counting vehicles across multiple lanes, tracking vehicles across intersections, detecting pedestrians and DSRC communication of obstacles and road hazards.

For more information on Quanergy’s LiDAR products and solutions visit quanergy.com.

About Quanergy Systems, Inc.

Quanergy Systems, Inc. was founded in 2012 and builds on decades of experience of its team in the areas of optics, photonics, optoelectronics, artificial intelligence software and control systems. Headquartered in Sunnyvale, California, in the heart of Silicon Valley, Quanergy offers smart sensing solutions. It is a leading provider of LiDAR sensors and perception software for real-time capture and processing of 3D spatial data and object detection, tracking and classification. Its sensors are disruptive in price, performance, reliability, size, weight and power. Its solutions are applicable in numerous sectors including transportation, security, industrial automation, 3D mapping, mining, agriculture, drones, robotics, smart spaces and 3D-aware smart devices for improved safety, efficiency and quality of life. For more information, visit www.quanergy.com