



NEW LIDAR-DRIVEN SECURITY SOLUTION OFFERS INNOVATIVE WAY TO SECURE SENSITIVE PERIMETERS

Security experts and technology companies debut solution for more capable and cost-effective perimeter security

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SUNNYVALE, Calif.--([BUSINESS WIRE](#))--[Quanergy Systems, Inc.](#), a leading manufacturer of LiDAR sensors and smart 3D sensing solutions, today announces a first-of-its-kind LiDAR-driven security solution. This solution provides a cost-effective and technology-based way to monitor and defend open and unprotected perimeters at national borders, airports, railroads, subways, power lines, power plants, natural resource sites and more. This advanced technology was developed to overcome the economic, functional and environmental challenges associated with securing vast properties and stretches of land.

The innovative security system utilizes LiDAR technology provided by Quanergy in concert with multiple security experts and the [Border Commerce and Security Council](#). Primarily known as the technology that gives "sight" to autonomous vehicles, LiDAR ("light detection and ranging") operates by reflecting laser pulses off objects to measure distance, size and shape, and enables machines to sense, perceive, analyze and react to surroundings.

The solution consists of Quanergy's intelligent security monitoring system, powered by Quanergy's M8™ LiDAR sensor and QORTEX™ artificial intelligence perception software. Multiple LiDARs create a virtual 3D point cloud to easily detect, classify and track physical security breaches in any environment, day or night, and instantly alert authorities and direct them to a specific location. The system allows for monitoring to take place 24/7 and can be powered by solar panels with battery packs or grid power.

"Technology, and more specifically LiDAR sensing, is the most effective and economical modern-day solution to help secure vulnerable perimeters," said Dr. Louay Eldada, founder and CEO of Quanergy. "Quanergy's innovative technology, developed by industry veterans in Silicon

Valley, can play a key role in solving the complicated challenges associated with perimeter security."

To deploy its technology, Quanergy partners with system integrators such as Unalakleet Investments LLC, an Alaskan Native corporation, who play a key role in ensuring the installation and deployment of systems meet the needs of governments or other organizations seeking advanced perimeter security. Quanergy's intelligent security monitoring system is designed to easily integrate with existing security platforms, and can be used as a stand-alone solution or in conjunction with other detection and deterrent technologies such as remote video surveillance systems, long range cameras, unattended ground sensors and radar.

"As physical security systems become more connected, new technologies must offer the flexibility to work across various platforms," said Conrad Celestial, president of Unalakleet. "This LiDAR-driven solution can seamlessly integrate into new and existing security networks and will allow us to provide our clients with a more comprehensive way to secure critical infrastructure and perimeters."

Currently, Quanergy has a small scale version of this solution on private riverfront property on the U.S./Mexico border in Del Rio, Texas, serving as a real-world example of an integrated intelligent system for border security. Current solutions, including ground sensors, cameras and physical structures, are all limited in their effectiveness, which is why this particular application was selected as a relevant test case.

"Given the immense size of the U.S./Mexico border, it is impossible to know what is happening at all points along it at any given moment," said Sheriff Joe Frank Martinez (D), Sheriff of Val Verde County. "This virtual security system will create a force-multiplier effect by providing law enforcement with an unprecedented level of awareness and allowing us to quickly identify and deploy units to the exact location of a security breach."

Legislation introduced by Congress, such as The Secure Miles with All Resources and Technology (SMART) Act, supports the use of technology-enabled border security as a realistic solution with several key advantages over creating additional physical barriers. Advantages of Quanergy's LiDAR-driven system include:

- **Cost:** Reports estimate that a physical barrier on the U.S./Mexico border could cost as much as \$70 billion to build and \$150 million a year to maintain. Quanergy's LiDAR-driven security system can be installed for approximately \$250,000 per mile, which is about one percent of the cost of alternative solutions.

- **Effectiveness:** Quanergy's LiDAR provides 360 degrees of ground detection within a 200 meter range, classifies movement in all directions; the installation can be configured to include vertical detection of drones and other airborne objects, effectively creating a dome of protection; it acts as an early warning system for law enforcement, allowing faster response time.
- **Efficiency:** The borders of the United States are vast, and it is impossible to monitor all locations at once. Quanergy's LiDAR delivers real-time intelligence information to front-line law enforcers, enabling them to quickly and efficiently deploy the exact resources needed to alert zones.
- **Non-intrusive:** Quanergy's LiDAR provides superior security capability in a minimally invasive manner that does not intrude on private lands or create an eyesore or disruption to the environment.

"The Border Commerce and Security Council is perpetually seeking better, more innovative solutions to border security problems, which we believe we have found in this new LiDAR security system" said Nelson Balido, chairman of the Border Commerce and Security Council. "Border agents need to have information at their fingertips so they know exactly where and how to respond to perimeter infractions. Other technologies that are available today simply do not provide the complete situational awareness needed."

Quanergy LiDAR sensors and QORTEX artificial intelligence perception software work together to provide smart awareness. The use of Quanergy security solutions extend to numerous smart space applications where Quanergy is currently active globally. The applications include securing railroad crossings in partnership with leading global corporations, protecting industrial sites of Fortune 100 companies, collaborating with Cisco on smart city connected roadway solutions, and working with CRON Systems on advanced border security solutions in India.

About Quanergy Systems, Inc.

Quanergy Systems was founded in 2012 and builds on decades of experience of its team in the areas of

optics, photonics, optoelectronics, robotics, artificial Intelligence, machine learning and controls.

Headquartered in Sunnyvale, California, in the heart of Silicon Valley, Quanergy offers the world's leading

LiDAR sensors and software for the capture and processing of 3D spatial data, and object detection, tracking and classification. Its sensing systems improve safety, efficiency and costs in sectors ranging from transportation and security to industrial automation and 3D terrestrial and

aerial mapping. Quanergy's LiDAR leads in all key commercialization areas – price, performance, reliability, size, weight, power efficiency. For more information, visit www.quanergy.com.

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