LiDAR-Based Security Solution Brings High Accuracy to Korean Security Facility

Overview

A critically vulnerable security facility in Korea was in need of additional technology to increase the accuracy and reliability of its current surveillance system. The facility was not looking for an entirely new system, but rather new technology that could be integrated into its current surveillance platform to enhance its capabilities. Due to the sensitive nature of the facility, traditional security technologies used in Korea such as video cameras and infrared sensors would not provide the necessary additional protection or real-time awareness needed for this deployment.

Problem

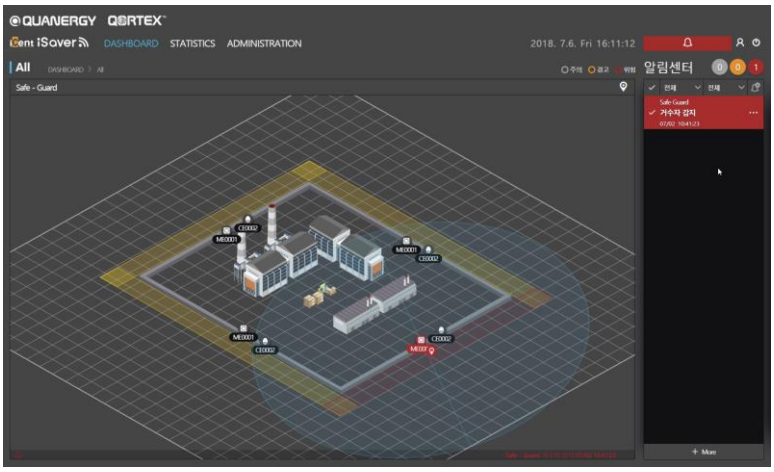
At facilities such as this, the security breaches have dedicated reaction protocols and set off a chain of events that any misstep or mistake can have extreme consequences. One of the most difficult challenges for this specific facility was eliminating false positives and false negatives, caused by environmental (shaking trees and bushes) and weather (snow and rain) factors and general human error. The facility needed a technology that could solve for these conditions while simultaneously providing confirmation (or the lack thereof) of alerts.

Through a series of tests, the facility tried various technologies to enhance its system and solve for these issues including optical fiber sensors, infrared sensors, piezoelectric sensors, and additional video camera surveillance. Ultimately, none of these technologies accurately or reliably limited the false positives and negatives.

Solution

Once the facility realized that traditional technology could not provide the added security it sought, a local system integrator, iCENT stepped in to identify other more non-traditional solutions. After multiple tests, iCENT selected Quanergy's AI-Powered 3D LiDAR-based security solution which is built on Quanergy's M8 LiDAR sensors and QORTEX™ DTC perception software.

The LiDAR sensors and perception software proved far surpassing the capabilities of other technologies and significantly lowered the number of false positives and false negatives. Additionally, Quanergy's solution was able to seamlessly integrate into the facility's existing system and was used in conjunction with existing video equipment to check and verify surveillance data in real-time. While iCENT had previously known about LiDAR as an autonomous vehicle technology, it discovered that Quanergy's LiDAR could also be used for security applications because of its extreme accuracy in detecting humans and resistance to environmental impacts. Quanergy provided hands on training to iCENT to comfortably and confidently integrate Quanergy's QORTEX DTC solution with iCENT's iSaver* technology, which gave the facility an additional layer of relatability data for its surveillance system.



Real-Time Security Data with LiDAR Technology

Lowering the number of false positives and negatives

Conclusion

Since the deployment, the facility has been incredibly satisfied with the stability and high reliability of QORTEX™ DTC for Security. Compared to other technologies traditionally used in Korea for surveillance purposes, Quanergy's AI-powered 3D LiDAR-based security solution has proven to be the most accurate at lowering the number of false positives and negatives. By combining

Quanergy's technology with its existing surveillance system, the facility is now able to analyze real-time data and video and maintain the highest level of security at all times.

* **iSaver:** Integrated security platform that provides customers with s/w to eliminate false positives and false negatives caused by environmental factors based on reliable surveillance data from Quanergy LiDAR sensors under the brand name of iCent's security surveillance solution.

***QORTEX™:** LiDAR-based, 3D perimeter fencing and intrusion detection software. An integrated hardware and software platform, which combines Quanergy's M8™ LiDAR sensor with QORTEX perception software.