

Case Study - Army Barracks in a Large Middle Eastern Country

Perimeter Intrusion Detection



Challenge

When concerned with perimeter intrusion detection in their army barracks, a military customer in a large Mid-Eastern country experienced a large number of false alarms generated by their old security system consisting of camera-based

analytics and thermal cameras. Their old solution ended up masking any real threats due to alarm fatigue.

Quanergy Solution

A solution that combines Quanergy's long-range 3D LiDAR sensors with advanced perception software, Q-track, was integrated with the customer's Video Management System. The flexible installation and configuration enabled the customer to deploy sensors over a very diverse terrain with diverse elevations/slopes and bad lighting.

Outcome



Quanergy's solution passed an extensive test aimed at defeating the system with flying colors. This test entailed a team of military personnel who ran hundreds of intrusion attempts by jumping over fences, digging tunnels, etc, in bright daylight as well as pitch black darkness.

Quanergy's highly accurate solution exponentially reduced the false alarm and detected all true intrusion attempts made by the military personnel.

Solution Overview

Quanergy's LiDAR-based portfolio is rapidly becoming the security solution of choice for critical infrastructure sites with over 100 sites already deployed due to its ability to combat alarm fatigue by dramatically reducing costly false alarms. Quanergy's solutions bring the operators' attention to what really matters most by focusing on real threats and providing actionable insights with hyper accuracy. After deploying Quanergy's solutions, which results in a dramatic reduction in false alarms compared to their legacy perimeter intrusion detection (PID) systems, customers can reduce the number of expensive guard services helping save tens if not hundreds of millions of dollars each year. This also enables a more efficient allocation of resources.

Quanergy's solutions allow customers to keep leveraging existing investments by augmenting their camera-based PID systems, enabling them to locate with unprecedented level accuracy the exact location of a potential intruder. Quanergy's solution addresses all major mission-critical security use cases including perimeter intrusion detection, server rack and cabinet security, mobile security towers, man trap/vestibule access controls, and rooftop security through the following core competencies:

- **3D Real-time Proactive Awareness:** Comprehensive 360° view of your surroundings for proactive decision-making.
- **Privacy-Assured Operation:** Q-Track does not capture any personally identifiable information (PII), ensuring privacy compliance and safeguarding sensitive data.
- **Wide Coverage with High Accuracy:** Each Q-Track sensor provides an impressive coverage area of 165,000 square feet (15,000 square meters), ensuring high accuracy in object detection, tracking, and classification of people, vehicles, and sub-vehicles.
- **Low Cost Per Square Foot:** Each sensor can classify objects at 420 feet/140 meters, therefore dramatically reducing the number of sensors, cables, networking ports and installation runs to deliver industry leading total cost of ownership



- **Drastic Reduction of False Alarms:** Reduce costly false alarms by greater than 95% thanks to Q-Track's innovative features such as occlusion filter & motion threshold filter
- **Simultaneous Tracking of 600 Objects:** With Q-Track, you can track up to 600 unique objects simultaneously, ensuring comprehensive monitoring of your environment.
- **Continuous Object Tracking with Sensor Fusion:** Our sensor fusion technology enables continuous object tracking in virtually unlimited areas, providing a reliable and continuous monitoring solution.
- **Unlimited Range with Mesh Network:** Create a mesh network of sensors and servers to continuously track objects over an unlimited range, allowing for flexible and scalable deployments.
- **Speed, Direction, and Geolocation Detection:** Q-Track can accurately detect the speed, direction, and geolocation of objects, enabling you to respond promptly to potential threats.
- **Reliable Performance in Harsh Environments:** Q-Track is designed to operate reliably in harsh environmental conditions, ensuring continuous surveillance without compromise.
- **NDAA Compliance:** Our solution is fully compliant with the National Defense Authorization Act (NDAA), ensuring adherence to regulatory standards.
- **Seamless Integration with Existing Systems:** Q-Track seamlessly enhances existing security systems through a large ecosystem of integrations with VMSes, cameras, access control solutions, PSIMs, and analytics solutions.
- **Buying Flexibility:** Budget this advanced solution as a capital expense (CAPEX) or an operating expense (OPEX) via the Security as a Service subscription.