AdvanceGuard®

Jersey Airport secures complex CP line

Case Study - Jersey Airport, United Kingdom

The busy critical part at Jersey Airport sits within an unrestricted area of the airport grounds. Unable to protect it with a physical barrier, the airport is using AdvanceGuard with its virtual alarm zones to secure the area.

Safety is everything.

NAVTECH RADAR

The Challenge

Protecting Critical Airport Infrastructure

Jersey Airport

Jersey Airport typically deals with 1.6 million passengers a year on over 40,000 flights. The airport has one terminal and one runway. Jersey had a security challenge as the airport's 'critical part' (CP) sits inside of the airport boundary, surrounded by 'airside' regions operating a less stringent security standard. Aircraft must be able to travel in and out of the CP, so a fence cannot be erected, yet the CP must be protected from persons or vehicles entering it that have not been screened to a compliant standard.

Reliably monitoring the critical part boundary is a challenge for many airports. Unlike the outer perimeter which can be protected by a simple security fence, aircraft and security are constantly crossing the critical part boundary throughout each day. There is a trade-off between keeping freedom of movement of people and heightening security measures to limit access.

The problem lies in distinguishing between permitted bodies entering the zone and unauthorized personnel. Relying on CCTV or manned surveillance posts — where security teams would need to constantly

monitor movement around the area — proves a costly solution with the inevitable risk of machine or human error, especially at night and in poor weather conditions.

This critical part of the airfield was previously monitored by manned guards, but the Department for Transport required that a response was initiated within three minutes following a breach. The existing number of patrol officers meant it was impossible to cover all of the areas and guarantee the response time without significantly increasing the number of officers. This would have been costly and inefficient.

A number of surveillance technologies such as video analysis were trialled, but proved ineffective for some requirements such as reliability and ease of use. A fully automated wide-area surveillance system was chosen, which resulted in significant operational benefits and reduced on-going costs.

The objective of the project was to secure a specific critical part within the airport. Just one radar sensor installed gave coverage over a large proportion of Jersey Airport.

Jersey needed a virtual perimeter to be monitored and certain access restricted. Any unauthorised vehicle or person entering the zone needed to be identified as a threat, whilst all other movements through the zone were permitted.

Traditional detection technologies require the construction of physical barriers which involve major investments and restrict movement. Navtech's virtual perimeters provide more accurate asset protection and do not affect the free movement of people and equipment.

The Solution

Real-time Threat Analysis

Equipment used for critical part monitoring

Navtech Radar designed an integrated solution to monitor the critical part area. It installed AdvanceGuard, a radar-based security system, to monitor the area and integrated it with PTZ cameras. Using AdvanceGuard's rules-based software, a virtual alarm zone was specified encompassing the critical part area and surrounding open land.

Anything that enters the critical part area generates a visual and audio alarm, depending on whether its behaviour breaches pre-programmed rules. The target is also classified as a "vehicle" or "person" using complex algorithms. When an unauthorised target is detected, the radar automatically directs the cameras to focus on the threat, providing continuous visual information to the operator with no required interaction.

Irrespective of the weather conditions, the radar will continually track a detected target, updating the operator every second on the exact location and direction of movement. This information is easily relayed to a response vehicle and can greatly assist in achieving quick and efficient apprehension of an intruder.

The solution is highly flexible and user friendly. Its intuitive interface displays and tracks the current and historical location of all threats for easier and quicker interception by security personnel.

Critical Part

Instant detection

AdvanceGuard monitors a critical area, detecting and alerting the operator about any intrusions into the area.

Low false Alarm rate

High accuracy

AdvanceGuard has an unrivalled low false alarm rate.

Friend or Foe

Intelligent analysis

AdvanceGuard distinguishes between authorised personnel access and threats.

AdvanceGuard®

Summary

AdvanceGuard helped Jersey Airport to achieve increased site security whilst eliminating the high cost of manned guarding in the critical area.

AdvanceGuard also gave Jersey Airport the flexibility of unrestricted movement, while monitoring vehicles and people within the surveillance area. Not all breaches constitute a risk and AdvanceGuard categorises intruders as 'friend' or 'foe'. All alarm and track history is stored for easy retrieval and post-event analysis.

Programmed to Jersey Airport's specific requirements, AdvanceGuard provides a level of security and feasibility which is hard to achieve with alternative technologies and full-time manned guards. The system ultimately improves the airport's operational efficiency and cost-effectiveness.

Visit our website to find out more about AdvanceGuard, the radar-based security solution when high performance in all conditions is essential.

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