

Shannon Airport tightens their security with wide-area surveillance

Case study - Shannon Airport, County Clare, Republic of Ireland

AdvanceGuard provides a confidence that no other security solution offers and successfully alerts operators to intruders before they enter the airfield.



The Challenge

Protecting the airfield from intruders in all weathers, at all times

Shannon Airport

Shannon Airport is an international airport located in the Republic of Ireland. It is the third busiest airport and has the longest runway in Ireland at 3,199m long (10,495 ft). The airport has a history of pioneering global aviation and a large proportion of the airport's business is generated from US military stopovers.

In 2017 Shannon Airport became concerned about the security of the site, as the airport had become a target for protester activity and had been subjected to a number of unwanted incursions. Because of this, it

became necessary to improve the perimeter detection capability, which was challenging given the coastal location of the airport. They were also experiencing high levels of nuisance and were seeking a solution to overcome this.

Several technologies were evaluated but these solutions only provided incursion locations on the perimeter, whereas the airport needed to be able to monitor intruders across the entire site. They recognised they needed to improve the situational awareness and required a solution that would operate effectively in all weather and light conditions.



AdvanceGuard's scalability and adaptability meant the solution was easily integrated into Shannon Airport's existing systems and infrastructure. This lowered the overall cost as no new infrastructure was required.



Due to the long-range, 360° detection, fewer radar sensors were needed for coverage of the entire site. This minimised the costs and boosted site security.



The perimeter at Shannon Airport is tracked and monitored on a simple, user-friendly interface, ready to detect a potential intrusion and identify the exact location and direction of movement. Camera integration provides added visual information.

The Solution

Radar-based wide-area surveillance solution with Friend or Foe integration

Wide area coverage

The site survey revealed that there were specific vulnerable locations across the airfield, where protesters had repeatedly entered the site. The site design ensured that each commissioned radar achieved maximum coverage. The three radars which were installed were a mix of HDR-200, HDR-311 and HDR-321. The radars were strategically positioned to provide wide area surveillance which enhanced the situational awareness of the airfield. This enabled operators to automatically track all intrusions in all light and weather conditions.

Reliable detection and tracking

The AdvanceGuard intelligent rules-based software continuously monitors inside and outside the airports perimeter, automatically generating an alert when there is a breach in rules. Unlimited unknown targets are displayed on a user-friendly interface, pinpointing their exact location, with reliable detection being unaffected by adverse weather or light conditions.

Friend or Foe integration

As Shannon Airport were experiencing high levels of nuisance alarms, they also chose to integrate AdvanceGuard Friend or Foe, to allow operators to distinguish between legitimate and unauthorised personnel and to eliminate unwanted nuisance alarms. The Friend or Foe integration offered Shannon the ability to detect up to 500 known (friendly) targets simultaneously. In addition, the locational accuracy provided by AdvanceGuard offered Shannon the ability to introduce runway incursion capability with vehicle mounted displays, offering drivers full awareness of their location and generating audible or visual alarms should they stray beyond the authorised zones.

As an addition ADS-B was integrated to provide detailed movement of all airborne vehicles with fitted trackers. Shannon Airport also decided to integrate Milestone which ensured AdvanceGuard could directly support the PTZ cameras across the site, deploying full recording capabilities and alarm management functionality, to create a cohesive security system that would raise alarms and provide visual verification.



“With AdvanceGuard Friend or Foe we can see where intruders have entered, we can detect, track, intercept and we can remove them early on in the intrusion and before they pose a safety and security risk”.

“We looked at a number of options that were open to us, we looked at perimeter protection, but perimeter protection we weren’t satisfied with, because it didn’t deliver the tracking capability that the radar solution offers”

**John Francis, Chief
Officer Security Airport
Police, Shannon Airport.**



Summary

The long range, high-resolution, wide-area surveillance solution now fully protects the airfield and has already proven successful in preventing further intrusions.

The placement of the radar sensors was of critical importance with one of the radar strategically positioned close to the critical part (CP) line,

to allow this to be monitored should this be a future requirement.

AdvanceGuard was able to seamlessly integrate together with Friend or Foe, ADS-B and Milestone, to create a cohesive security system, that could raise alarms and provide visual verification in all weather and

light conditions.

With no upgrades to existing infrastructure required, Shannon Airport have managed to regain complete reassurance that they have not only protected the airfield, but they are keeping protesters safe and out of danger.

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