Video Analytics Success in Critical Infrastructures: Airports

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DAVANTIS

Success of Video Analytics in Critical Infrastructures

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The System of Choice for
Airport Perimeter Security

Intelligent airport perimeter security is essential for securing this type of critical infrastructure. Perimeter control and protection at airports must be efficient and precise enough to act as an effective deterrent and detect, assess risks, and **activate security protocols**. That's why perimeter security systems based on video analytics are a vital guarantee effective protection both inside buildings and in the surroundings, on runways and around logistical buildings on the site.

Airport security is more than protecting passenger security. The site perimeter must also be properly covered to prevent attempts at terrorism, keep intruders out of unauthorised or dangerous areas, smuggling and theft, among other threats. At DAVANTIS, we specialise in smart video analytics systems that enhance all types of airport security strategies, integrating and adapting seamlessly into any tactical video surveillance security design. Our **deep-learning artificial intelligence systems based on deep learning algorithms** detect people and objects at even long distances and in difficult environmental conditions.

Airports cover huge areas and are subjected to enormous, incessant flows of people and cargo. This is a great challenge in perimeter security, where real-time early detection of intruders and incidents is crucial.

Video analytics beyond the perimeter

Airport perimeter security systems consist of various outdoor protective elements, such as perimeter fences. However, in exposed areas with many kilometres to cover, physical protection can be extremely difficult for control centres to manage. DFUSION video analytics systems give the broadest coverage with maximum precision to resolve this situation. In addition, they can activate deterrent measures via IP to reduce the risk of break-ins.

Coupled with this, airport perimeters are too long for mobile patrols to provide efficient coverage. Maintenance requirements and secondary areas of airports are also a security risk beyond the capabilities of security staff in ground patrols. That's where smart video analytics systems make the difference, combining all types of technologies such as support domes, ground-based radar, thermal cameras, IP deterrents, among others.

Early intruder detection with DFUSION leads to a **drastic reduction in false alarms** and damage and vandalism

caused by intruders slipping through the net. In addition, the areas surrounding airports are exposed to all kinds of weather conditions, needing technology to raise the alarm in case of intruders, sabotage or technical alarms from cameras.

Maximum Perimeter Security: Precision and Efficiency

Security management in airports presents significant challenges. Not only does the security provider have to control the people inside, but it also controls the perimeter to keep intruders out. That's why all security strategies consider the main buildings and car parks, landing strips, storerooms, and neighbouring workshops within a perimeter that can span from 20 to 50 kilometres.

With a combination of deep-learning-based algorithms, our DFUSION range can fuse **image appearance and movement** for ultra-precise detection while avoiding non-detections. This maximises the efficiency of CCTV video surveillance systems. It also drastically reduces false alarms, optimising operating costs.

Our video analytics technology continuously and precisely analyses a massive number of images per second, even poor quality images. That's why DFUSION can analyse the details of images in even rainy and foggy conditions and at night. Furthermore, our video analytics system integrates seamlessly with all alarm management platforms (VMS, PSIM), offering control centres an effective service. In addition, DFUSION gives real-time access to images captured by CCTV cameras to streamline alarm verification processes, making ours the best technological tool for airport perimeter security.

Airports protected by video analytics

DAVANTIS has managed perimeter security at national and international airports for many years. Our smart video analytics system achieves high efficiency and precision in critical infrastructures through deep learning algorithms and **total integration and adaptability**.

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Internationally endorsed by the United Kingdom's Centre for the Protection of National Infrastructure (CPNI), DAVANTIS' efficient, high-quality solutions are supported by a team of video analytics and critical infrastructure security experts, who are ready to advise and assist in all phases of installation and maintenance.

CPNI®
Centre for the Protection
of National Infrastructure

Shannon Airport —

Ireland

Shannon international airport is in County Clare (Ireland), halfway between Ennis and Limerick. It is Ireland's busiest airport and is ranked fifth on the island. The landing strip is the longest in the country (32 km), making it an alternative destination for the space shuttle. The complex has a range of facilities: stores, observatories, car parking and others.

Given the location, the perimeter security system needs to detect unwanted intruders inside the buildings and outside (runway) in real-time. **Our video analytics systems** are the most effective way to manage all types of real alarms. Our system makes it possible to drastically reduce false alarms, control costs, and improve operations at monitoring and surveillance centres.

**Shannon Airport /
Google Earth**

London
Airport —

United Kingdom

London City Airport offers high-performance short field take-offs and steep angle landings. It is one of the city's busiest airports (the fifth) after Heathrow, Gatwick, Luton and Stansted. With a constant flow of people and cargo, perimeter security strategy is based on the early detection of intruders.

Our video analytics systems use deep learning algorithms to detect people and objects at long distances and in adverse environmental conditions quickly and efficiently. This, added to real-time access to the images captured by CCTV cameras, facilitates alarm verification processes so that the surveillance team can activate protocols immediately.

London Airport /
Google Earth

Birmingham International Airport

United Kingdom

Birmingham International Airport is in the Midlands. Its central location and extensive infrastructures make it the seventh busiest airport in the United Kingdom. In addition, it provides services to numerous international destinations: Europe, the Middle East, South East Asia, North America and the Caribbean. With two passenger terminals and an average of nine million passengers per year, these facilities require a video analytics system capable of covering extensive areas and efficiently managing all types of indoor and outdoor detections.

DAVANTIS has enabled full integration of the alarm management platform and other pieces of hardware to maximise protection standards. Our video analytics can detect all signs of intrusion and reduce false alarms to optimise costs thanks to deep learning algorithms. What's more, its anti-sabotage smart camera system adding value to outdoor video surveillance systems.

Birmingham International Airport / Google Earth

Luton
Airport —

United
Kingdom

This international airport is 2.4 km outside Luton and 45 km from central London. It has a single, 2,160-metre landing strip from east to west. The airport is equipped with an Instrument Landing System (ILS) classed as IIIB, enabling it to operate even in low visibility conditions.

The installers needed a smart video analytics system to detect under difficult environmental conditions to control the perimeter. In light of the situation, DAVANTIS guarantees total adaptation of the environment, ensuring efficiency and precision in difficult conditions with changing weather conditions. Our technology provides clearer, sharper images, while our AI function + fine-tuning use sensitivity filters tailored to the specifics of the CCTV installation.

**Luton Airport /
Google Earth**