

Usk Solar Farm

Optex protects one of the largest solar panel farms from unwanted intrusion



Client

The Usk Solar Farm

Installer

AVA Security

Product used

REDSCAN

Project

Installation of 29 REDSCANS to protect more than 22,500 solar panels on a 32-acre site.

The site

Based in Wales, the solar farm consists of 22,500 panels and is built on a 32-acre site across four fields near Usk in Monmouthshire. The farm will generate enough electricity to power 2,500 homes, 24 hours a day, seven days a week, feeding power into the national grid and saving at least 60,792 tons of CO2 emissions over 25 years by comparison with fossil fuels.

The challenge

The owner wanted to improve security by creating detection area around the solar panels to detect potential intruders, and turned to remote site specialist AVA Security who specified 29 REDSCANS as the only detector that could offer the closely defined detection area and the flexibility to eliminate nuisance alarms from animals and those triggered by environmental conditions.

The solution

REDSCAN is an innovative laser scan detector that will detect a moving objects position, size and speed and can be programmed to only go into alarm when intruders enter specific areas, resulting in a highly reliable detection of intruders and with minimal false alarms.

When mounted horizontally, REDSCAN creates a detection area with a radius of 30-metres and an arc of 180°. With four outputs for remote video applications and four truly programmable detection areas linked with these outputs, REDSCAN is ideal for controlling pan/tilt/zoom (PTZ) cameras.

REDSCAN has the best capture rate and minimum false alarms.

Phil Grunewald, Managing Director at AVA Security

Mobile CCTV Tower

Optex unites with JCB Site Security to provide a reliable temporary security solution for external environments



Client

JCB Site Security

Product used

REDWALL SIP-100 and SIP-3020/5

Project

REDWALL PIR provide protection against theft of site materials reducing insurance costs

The site

The JCB Site Security Mobile CCTV Tower is designed to deter and prevent crime at construction sites where manned guarding might typically be used to protect valuable machinery, and other such environments requiring temporary but reliable security 24/7.



The challenge

Plant theft in the UK last year cost more than £1 billion, in addition to the damage caused by vandalism. Replacing stolen or damaged machinery can further cost businesses as a result of down time.

Optex and JCB Site Security teamed up to produce a reliable security solution that could be used to protect construction sites and other external locations, but more cost effectively than manned guarding. The solution also had to be mobile and not require any invasive ground works for installation, minimising site disruption.

The solution

The JCB Site Security Mobile CCTV Tower is a fully-integrated security system that combines REDWALL V detectors with an external CCTV infra-red camera. The tower, which is BS8418:2010 accredited and comes with URN priority police response, has been so successful that some sites have recorded a 50% reduction in security costs compared to sites with manned guarding.

The detectors alert a local (during the working day) or remote (at night) monitoring station in the event of an unwanted intrusion. The event can then be seen in real time as it happens, the images recorded, and an appropriate response determined.

Aircraft Hangar

Optex protects valuable aircraft and vulnerable ground crew working in the tight confines of an aircraft hangar



Client

Talon Air

Product used

REDSKAN

Project

Installation of multiple REDSCAN units to prevent costly accidents within an aircraft hangar.

The site

Two aircraft hangars in constant use, owned by Talon Air, a full service private aviation business.



The challenge

Aircraft are expensive assets – certainly too expensive to risk being damaged in avoidable accidents whilst on the ground or being moved around a hangar. The challenge was in finding a solution that would alert ground crews to the risk of collision, and that was flexible to work with different aircraft sizes and hangar configurations. The challenge was also in providing an area for ground crew to move around safely while the aircraft were being maintained.

The solution

Grid Squared Systems and Optex teamed up to provide a unique system of detection using REDSCAN. Taking advantage of REDSCAN's vertical mount capabilities, they have created 'virtual walls' of protection. In each hangar, three walls are covered with a total of four RLS-3060's in vertical mode. The detectors are used as an analog device, activating a series of strobe lights and sounders that notify the ground crew prior to any impact to a wall. A detection area above the floor surface has also been created so workers can move freely throughout the facility. Customized adjustments were required to ensure detection of various aircraft sizes and other working areas.

Protecting Roofs

Optex demonstrates the advantages of REDSCAN in protecting open roof spaces in challenging conditions



Client

Major cash handling facility

Product used

REDSCAN

Project

Installation of REDSCAN to protect flat and pitched roofs with skylights

The site

A very high-risk site belonging to a large and well-known cash handling business located on a busy commercial complex.



The challenge

The company had identified a security weak-spot in its facility – namely the roof and the skylights within the roof. They had considered using active infrared beams, but these had been discounted because they could not cover the entire roof space. CCTV with video analysis was also considered, but similarly discounted since it is easily affected by varying light and shadow conditions, and its reliability could not therefore be depended upon.

The solution

The solution was to install REDSCAN to cover the whole surface of the roof and skylights, integrating the detection units with the existing alarm system so that any potential intrusion is alerted. The detection area of the REDSCAN was easy to set up to the exact shape and size of the roof; a flat roof can be protected by a single REDSCAN unit. The sensitivity of the target object size and speed can be adjusted to dramatically reduce the possibility of false alarms from birds or fog.

Warehouse/Distribution Centre

Optex creates an invisible fence around a warehouse storing high value electrical goods to guard against the threat of intruders



Client

A major distributor of electrical goods

Product used

REDSKAN

Project

Installation of 19 REDSCANs to provide reliable detection as part of wider remotely monitored CCTV solution.

The site

The site is the warehouse facility of a major distributor of high value electrical goods on a remote industrial park without a perimeter fence and with wildlife roaming around.



The challenge

The warehouse does not have a physical fence to protect it, but did want to make maximum use of the latest Remote Video Response technology to provide a CCTV-led security solution. The challenge was in the number of false alarms that were being generated by wildlife, and the unreliability of other potential solutions being discussed. Active infrared beam were a possibility, but the AIR towers did not fit with the aesthetics of the site. Video Analytics was also considered, but was susceptible to missed activations prompted by changing environmental conditions. It was also expensive.

The solution

The customer wanted a high performance, highly reliable detector with short zone lengths, that would provide the highest capture rates and with the lowest false alarms. Some 19 REDSCAN units have been installed that create a vertical detection 'virtual' fence line around the perimeter with 15-metre zone length, and the ability to seamlessly integrate with both PTZ and static cameras and connect to the RVR monitoring station. REDSCAN is able to recognise the shape of uneven terrain and create a detection area without 'blind spots'. Its sensitivity can be adjusted to ignore wildlife and therefore minimise false alarms - an essential requirement of the RVR monitoring station.

VIP Residence

Optex protects a private residence and its extensive grounds from potential intrusion



Client

Private home owner

Product used

REDFSCAN ULTIMATE

Project

Installation of 17 REDSCANS to protect perimeter and integrate with cameras

The site

This private residence and its grounds comprises a variety of different perimeters including fences, bushes and walls with large areas of vegetation and pets roaming around freely.



The challenge

The home-owner sought to protect his property from intrusion using a discreet early-warning detection technology linked to a networked CCTV system. The system had to provide 100% ground coverage in a precise detection pattern and be immune to false activations by the home-owner's pets and vegetation. Other solutions were deemed unsuitable for the task: it was difficult to set the detection areas of a PIR or a microwave detector precisely enough; Video Analysis is expensive and could be affected by environmental conditions, such as light and shadows; and a buried cable sensor would have been costly and disruptive to install.

The solution

REDFSCAN was chosen because it was easy and quick to install and possible to set up a precise detection area easily, which would not be affected by the type of the boundary or the environment with very low false alarms.

Solar Farm

Optex protects solar panel farms from unwanted intrusion



Client

Solar farm

Product used

REDWALL SIP-100 + SIP-404/5

Project

Installation of Redwall SIP-100 protect a number of solar farms with 2.5km perimeters

The site

A number of solar farms on remote sites with perimeters of approximately 2.5km needed protection to prevent the solar panels from being stolen or damaged.



The challenge

To provide perimeter protection using a curtain of detectors linked to remote video and alarm monitoring. The owner wanted an overall solution that was quick and easy to install, price competitive, and with easy and quick alignment with Area View Finder which is an optional detection area adjustment tool. The installer had used alternative PIR technologies in the past but switched to REDWALL SIP due to the excellent capture performance of the SIP compared to alternative brands that produced too many false alarms and were difficult to align.

The solution

25 REDWALL SIP-100 units were specified per site to cover the perimeter using a networked CCTV system, with three alarm outputs per detector for precise camera identification. The SIP was chosen because of its unique features including area masking, built-in creep zone, detection range selector and unique REDWALL PIR sensitivity algorithm.

The REDWALL 404/5 sensors are specifically designed for use in small-to medium-sized external areas. Rugged and durable construction and reliable operation make them ideal for use as motion sensors in remotely monitored CCTV applications where Preset Dome cameras are to be used. The areas of coverage have been designed to match common fixed camera and lens combinations.