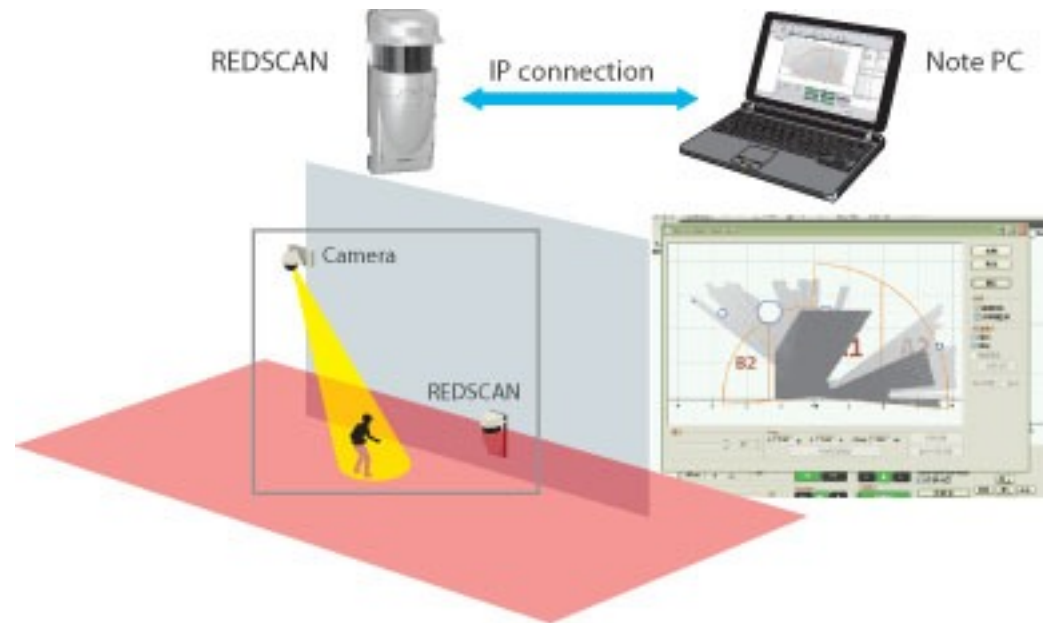


# Case Studies

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## Redscan Laser Detector



# Art Gallery

Optex protects expensive art pieces with Redscan laser sensors that detect hand/arms



**Client:**  
Major Art Gallery

**Products:**  
Redscan Laser Detectors

**Project:**  
Protect valuable paintings from being touched

## The Site

In an indoor environment, where Redscan detectors and other security products were installed high to avoid visitor's experience with the art.



## The Challenge

The goal was to prevent the public from touching priceless art, sculptures and other valuable art pieces. In addition, the customer did not want the sensors to be 'noticeable' so it wouldn't take away from the gallery experience. In addition, the Redscan units needed to tie into current security system that would provide active tracking of incidents.

## The Results

Optex worked with the Systems Integrator to provide 'virtual laser walls' that detected hands, and other body parts. One Redscan unit covers a wide area of the wall or ceiling. For art pieces that required full security of a person getting too close, Redscan was installed vertically and covered 200 feet of wall to detect body mass. For art susceptible to touching, Redscan detectors were installed vertically and covered 33 feet of wall space. This would detect 4 inches of arm length. Redscan detectors can be installed up to 50 feet. Therefore, the installation did not deter from the visitor's art gallery experience.

# Protecting Roofs

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



## Client:

Major cash handling facility

## Products:

Redscan Laser Detectors

## Project:

Installation of Redscan to protect flat and pitched roofs with skylights, HVAC and other roof entry points

## The Site

A very high-risk site belonging to a large and well-known cash handling business located in 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 Center

Optex creates an invisible fence around a warehouse storing high value electronics to guard against theft



## Client:

Major distributor of electrical goods

## Products:

Redscan Laser Detectors

## 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-meter 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 recognize the shape of uneven terrain and create a detection area without 'blind spots'. Its sensitivity can be adjusted to ignore wildlife and therefore minimize 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

**Products:**  
Redscan Laser Detectors

**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.

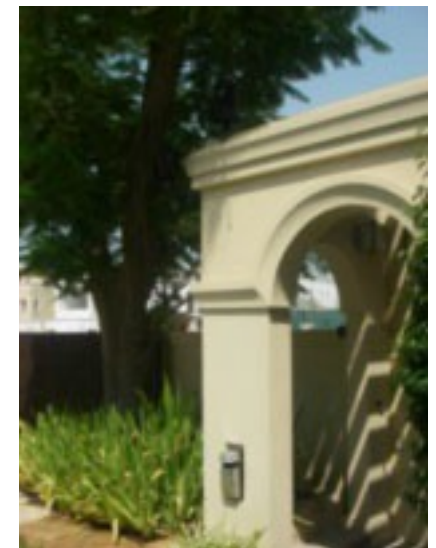


## The Challenge

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

Redscan 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.



# Usk Solar Farm

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



## The Site

Based in Wales, the solar farm consists of 22,500 panels and is built on a 32-acre site across four fields.



Client:  
Usk Solar Farm

Products:  
Redscan Laser Detectors

Project:  
Installation of 29 Redscans to protect more than 22,500 solar panels on a 32 acre site

## 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 Redscan 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-meters 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.



# Airport Hangar

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



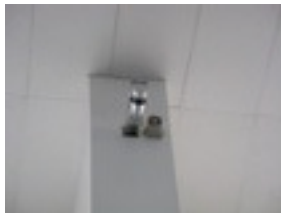
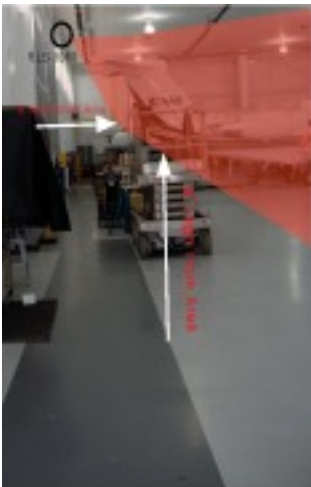
Client:  
Talon Air

Products:  
Redscan Laser Detector

Project:  
Installation of multiple Redscan 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

Optex provided 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.

# Aviation- Mobile Detection

Optex provides concept for mobile perimeter detection to protect aircraft



**Client:**  
Large Private Jet Operator

**Products:**  
Redscan Laser Detector

**Project:**  
Multiple Redscan detectors for creating mobile perimeter protection for customer airplanes



## The Site

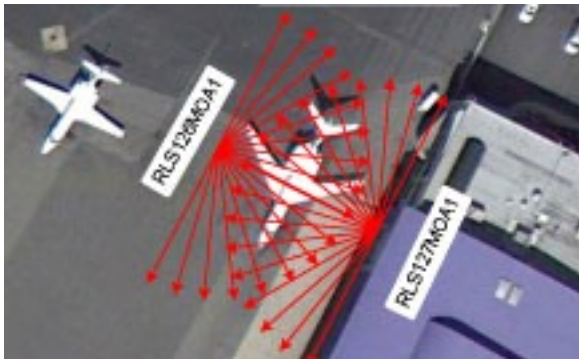
Outdoor perimeter on flat concrete surface located at the tarmac area of airport.

## The Challenge

The end user wanted to provide their customers with additional security while using their facilities. The security required had to be mobile, accommodate different size aircraft and space limitations. Each perimeter was different therefore flexibility was key. The objective was to create a security envelope to provide protection from intrusion or unauthorized access while parked overnight or extended stays at the private Jet operator's airport facility.

## The Solution

By utilizing the Optex Redscan Laser Detector, the systems integrator can deploy approximately 100 by 200 foot coverage area within a 190 degree arc. The concept allowed for deployment of a Redscan unit on the existing building, a pole and/or on a portable platform. The two Redscan Laser Detectors completely engulfed the area surrounding the protected aircraft. Integration with the existing camera system provided video verification of security activation or area violations.





# False Ceiling- Long Term Hospital

Optex creates false ceiling for long term hospital and data center



Client:  
Undisclosed

Products:  
Redscan Laser Detector

Project:  
Installation of multiple Redscan to provide security/safety alert system

## The Site

Indoor perimeter in temperature controlled rooms.

## The Challenge

A large, long term hospital was having issues with patient safety (themselves and others). Patients were climbing furniture in common areas to remove suspended ceiling strut pieces to use as weapons. Even though security cameras were installed, there was no monitoring the live video due to the large number of cameras, size of the floor space and budget restrictions. Once the patients realized this, the CCTV system became ineffective for its purpose. Another

system had to be installed in conjunction with the video cameras that would trigger an alarm and the video simultaneously when someone grabbed the ceiling structures.

## The Solution

Optex provided a unique system of detection using Redscan. The detectors were strategically installed in every common area so that the entire floor space within range of the detector (100 ft.) was monitored with an alarm and CCTV video recording. The units blended with the aesthetics of the hospital staff to continue to focus on patient care, control expenses and

provide a safe environment for their staff and patients.



# False Ceiling- Data Center

Optex creates false ceiling for data center or IT communications room



Client:  
Undisclosed

Products:  
Redscan Laser Detector

Project:  
Multiple Redscan detectors for creating a false ceiling protecting entry from space above Data Comm equipment

## The Site

Indoor perimeter in temperature controlled rooms.



## The Challenge

Hot-zones of heated air and large volume transfer disrupt typical motion and IR sensors. Also, some data comm rooms are built in such a way that intruders could potentially access the protected space from above or below, say from a suspended ceiling or raised floor space. Even trying to create a full-area protection zone for such areas could be very expensive in installation and design time, with only marginal coverage.

## The Solution

By mounting the Optex Redscan laser detector a few inches below the ceiling in a horizontal position but in the Vertical detection mode, the unit now casts its 100' laser field in a 180 degree pattern. Properly placed, the laser will cover wall-to-wall and detect anybody coming in or out of the ceiling panels. Mounted in crawl spaces of raised floors, the device will operate in a similar fashion but in Horizontal detection mode.

# Virtual Gate

Optex provides concept for virtual gate using Redscan Laser Detector



Client:  
Undisclosed

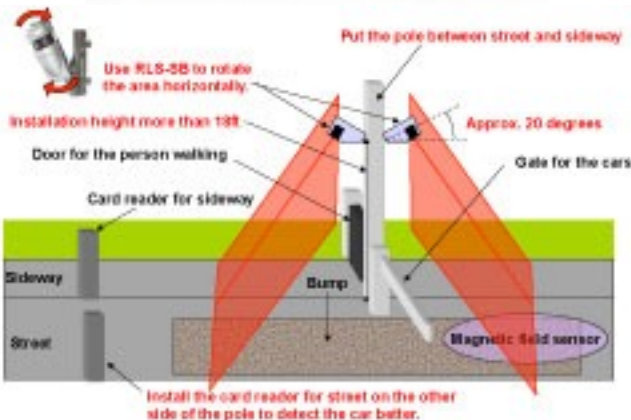
Products:  
Redscan Laser Detector

Project:  
Multiple Redscan detectors for creating a virtual gate for government facility



## The Site

Outdoor perimeter featuring gateways for vehicles and pedestrian walkways.



## The Challenge

Client wanted to create a virtual gate tracking vehicles and pedestrians entering the facilities. The protection needed to start from entry when Gate is opened for extended periods and request to exit. Concept is to create a virtual gate.

## The Solution

Optex Redscan laser detector is installed to form a 100 feet by 200 feet area of detection. Mounted in the vertical mode, Redscan will create an invisible detection wall that can be adjusted for size of detection area and detection zones. This should enable the system to cover the entry and exit lanes, plus the pedestrian walkway. Operation of the system will consist of entry card readers,

to grant valid access to the traffic lane and/or pedestrian walkway. A valid card read will turn the stoplight green and bypass the Redscan laser. Unauthorized breaches will generate an alert and local notification. An IP camera will aid in the visual verification with two-way audio interrogation. Free egress will be accomplished with a request to exit photo beam or a software algorithm (if available). To simplify installation a solar pole will be utilized to supply power and data conductivity will be via wireless Ethernet bridge.