

# Perimeter Protection and Intrusion Detection

For commercial and critical infrastructure sites



# Detection is the cornerstone of the security system

**Every security system needs to be triggered by an event and it is usually the fact that a person, object or vehicle is moving or entering into an area.**

## **Why detection**

An intruder can gain entry to a site from many different ways and securing sites has become a more complex task. OPTEX® solutions are designed to detect physical intrusion and unauthorised access which still account for a huge proportion of threats.

They are a key element of the security system to alert at the right time and prevent damages or theft.

## **Why OPTEX**

OPTEX has been a leading sensor manufacturer for over 45 years, providing high performance detection and video analytics systems for security, safety and business applications. Its multi-layered intrusion detection systems are deployed in thousands of installations worldwide, from military and government facilities to transportation and utilities sites and other critical infrastructure.



### Effective perimeter protection

Detection is often the first step in an event-driven security system, triggering a number of actions or responses. As each site is unique in terms of environment, topology and security requirements, it is important to define what needs to be detected, where and when. The definition of the potential threats and the analysis of the site layers help design an efficient perimeter protection and security system. Different sensing technologies suit different types of applications and environmental conditions, and it is common to see that a combination of technologies is needed to achieve best result.



### The power of sensor-led visual verification

Outdoor environment brings constant changes in lighting conditions, weather, and wild life activity. It requires a real technology expertise to deal with the elements and deliver a system with no missed alarms and a minimum of nuisance alarms. OPTEX intelligent sensors are dedicated to one function: detection and have been designed to be accurate whatever the lighting and whatever conditions and changes in the environment. They work in conjunction with video systems to provide visual verification. Because vision can't do it all, it makes sense to have combined sensing and vision and rely on sensor-led visual verification.



### Integration with VMS for better security

OPTEX's wide range of solutions can be fully-integrated with IP cameras, Network Video Recorders and other security devices, providing users a complete security system where local or remote monitoring stations will be alerted in the event of an unwanted intrusion; cameras will start tracking the object providing an accurate and fast visual verification, the incident events can be monitored in real-time, the images recorded, and an appropriate response determined.

Some deeper integration with VMS platforms delivers unique tracking and point location capabilities.

# Layers of detection to suit the site requirement

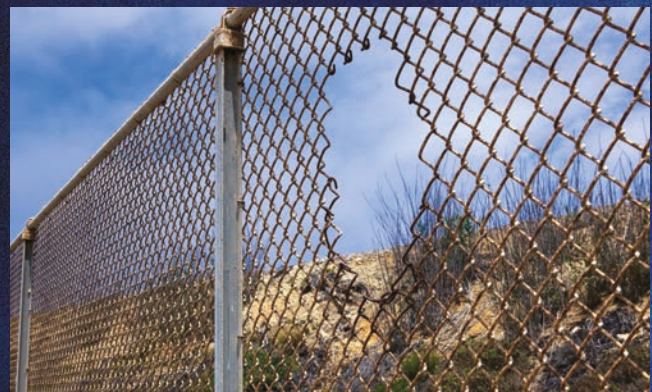
## Perimeter protection

Perimeter security is the first line of defence against intrusion and unauthorised access, and it should provide an efficient way to quickly identify threats or suspicious activities.



### Outer perimeter

For sites surrounded by a sterile zone or an area with no public access, it is useful to be alerted if people or vehicles are approaching or loitering around the site perimeter. It provides pre-warning so the situation can be monitored and escalated if necessary.



### Perimeter line

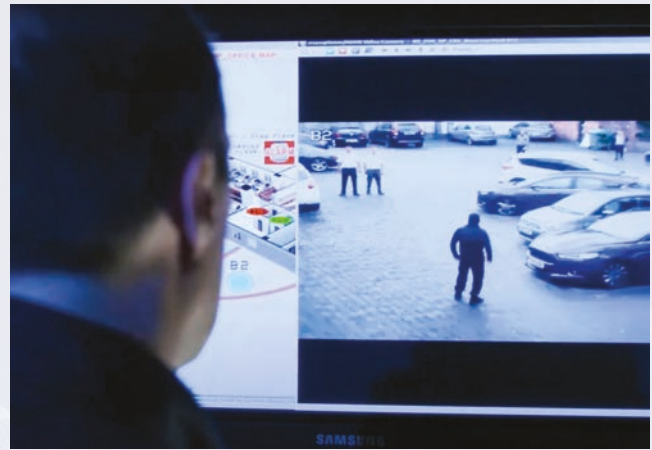
If a site is surrounded by a perimeter fence or wall, constant monitoring is needed as no one should intrude on the perimeter line during or after working hours. A number of sensing technologies can be deployed to remain armed at all times while not affecting the day-to-day operations.

When there is no physical perimeter and the access to the site is open, such as a car dealership or industrial park, a virtual perimeter can be created and activated to protect the premises out-of-hours. This can be achieved with Laser walls (LIDAR technology) or point-to-point Active Infrared (AIR) technology.

## Approach detection and tracking

**Once intruders have penetrated an area it is critical to track their whereabouts and follow them using PTZ cameras.**

It is common to have a number of intruders, each aiming at different areas; hence the intrusion system needs to be intelligent enough to detect and track several intruders concurrently, guiding cameras and remote monitoring staff to assess the situation.



## Building and asset protection

**Expensive machinery, valuable material, fuel tanks or chemical containers stored outdoors require the highest level of security to avoid theft, misuse and disruption to the business.**

Banks, government or corporate buildings need to protect any access to their building including roofs, windows, balconies and fire exits while not disrupting flexible working hours and possible maintenance work.

Indoor restricted areas, such as bonded areas in warehouses, IT server rooms etc. require accurate detection integrated with access control to check credentials and video surveillance for verification and case management reports.



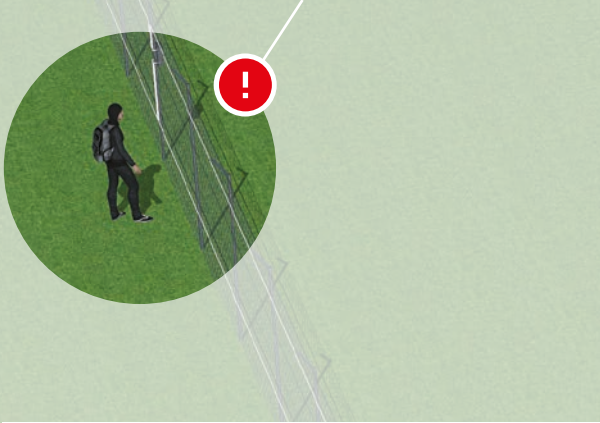
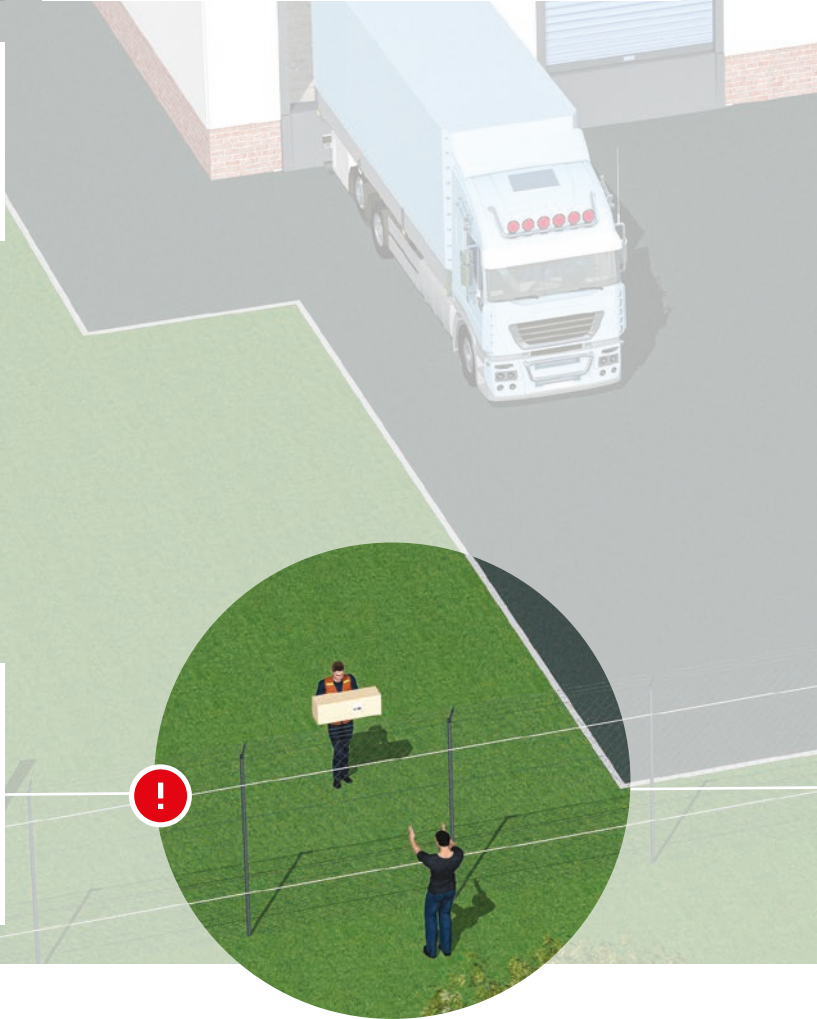
In museums, galleries, bars or boutiques, there is a need to protect artwork, valuables and expensive or licensed goods while allowing free movement of people. Here customised and precise sensing technologies can be used to detect hands approaching/ touching specific items. Additionally, for restricted areas, the detection technology can be combined with access control to validate the credentials of the person entering the zone.



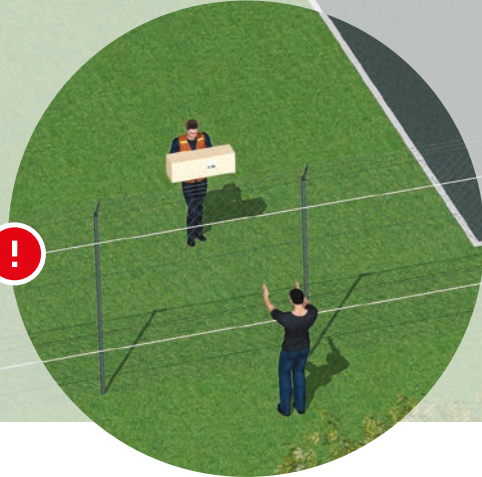


**Building and roof protection**  
 The building itself should be protected against intrusion, detecting people standing near doors and windows, climbing onto the facade, drilling into walls or accessing the roof.

**Outer perimeter for pre-warning**  
 Suspicious activities in sterile zones, such as loitering or approaching people or vehicles should be monitored as a pre-warning to a potential threat.



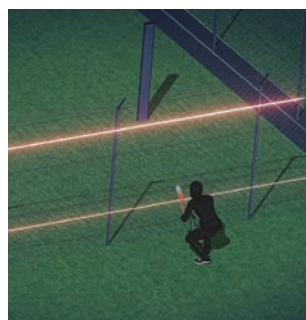
**Perimeter line**  
 Any breach of the perimeter wall or fence should be notified immediately.  
 Sites with no physical barrier can still monitor intrusion within the site boundaries by using virtual perimeter technologies.



**Sensing technologies to protect each layer**

**Fence intrusion detection with fibre sensing**

When a security fence is in place, fibre sensing technology is a very accurate way to detect if someone has cut through, climbed over or crawled under it. Fiber SenSys PIDS are ideal to protect large fence perimeters.



**Creating virtual perimeter with active infrared**

Active Infrared (AIR) detection consists of a transmitter emitting constant infrared beams to a receiver, creating a virtual perimeter. If a person or vehicle crosses the beams it interrupts the reception and creates an alarm.



## Asset protection indoor or outdoor

The theft of, or damage done to, certain equipment or assets can be critical to a company's operations. It is essential to protect them wherever they are stored, inside or outside.

## Entry points: Gates and turnstiles

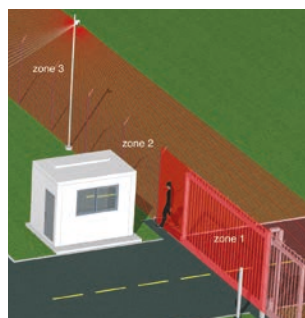
Gates and turnstiles need to be secured out-of-hours against intrusion but also during business operations to detect tailgating or unauthorised access.

## Infield or Approach protection

Using sensors with cameras helps locate and track intruders in alleyways around buildings or in wide open areas on site and give precise information to the response team.

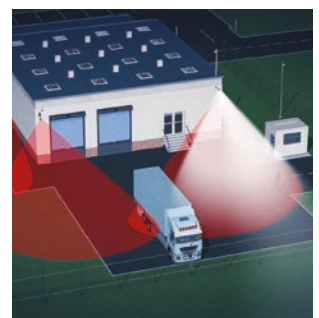
## LiDAR virtual wall or plane

Laser technology (LiDAR) enables an indoor or outdoor virtual wall or plane to be created. The laser wall can be used as virtual perimeter or as an additional protection layer above and along the wall or fence to detect intrusion. The laser plane generates a horizontal detection layer to protect the roof, ceiling or the in-field area.



## Volumetric thermal detection

To cover wide open areas, or alleyway between the perimeter and the building, OPTEX long range thermal sensors are designed to work in conjunction with CCTV cameras to track across detection zones.



# Fiber SenSys Series

## Fence-mounted, buried or hybrid perimeter protection

Our fibre sensing solutions use advanced signal processing to detect intruders attempting to climb over, crawl under or cut through fenced perimeters ranging from 50 meters up to over 100 km.



Beyond fence detection, our latest sensors can also be buried allowing them to detect people walking or vehicles approaching the perimeter. In addition to perimeter protection, several of our fibre optic sensors can be mounted on walls or ceilings to detect drilling.

The detection principle consists of a laser pulse sent through fibre optic sensing cable where disturbances to the fibre cable change the characteristics of the light monitored by the Alarm Processing Unit (APU). The APU algorithms intelligently analyse these disturbances and categorise them. All of our APUs can be tuned to distinguish disturbances created by wind, vibrations generated by nearby traffic, and small animals from those caused by genuine intrusions, such as climbing over or cutting the fence.

### Designed for harsh and hazardous environments

Fibre optic sensors are ideal for high-security/harsh environment applications. Solutions can be designed for remote deployment with no power or communications needed in the field, reducing the infrastructure requirements and allowing the sensor to operate in locations prone to lightning and RF interference, corrosive environments including chemicals and salty sea air, and explosive environments.

### Locating the intrusion

All sites have different characteristics and security requirements. To meet these needs, we offer a full line of perimeter sensors which includes both zone sensors and point location sensors.



### Independent zones

For smaller systems or sites that require high-fault tolerance, zone sensors are the ideal choice. Although site-specific, an average zone is approximately 100 m. We have sensors that can support one zone up to 25 zones. Whether your site is a simple commercial storage area, an industrial facility, or a high-security military site, we have a system that will fit your needs.

### Point detection

In high-security environments, precisely locating an intruder is critical for an immediate and effective response. Our point-locating sensors deliver accurate detection along the perimeter, ensuring security teams know exactly where a breach has occurred.



### Durable and low maintenance

APUs have a projected life of 20 years and offer excellent performance and low ongoing system maintenance costs making them very durable and giving them a low cost of ownership.

## Fiber Defender® 7000 Series

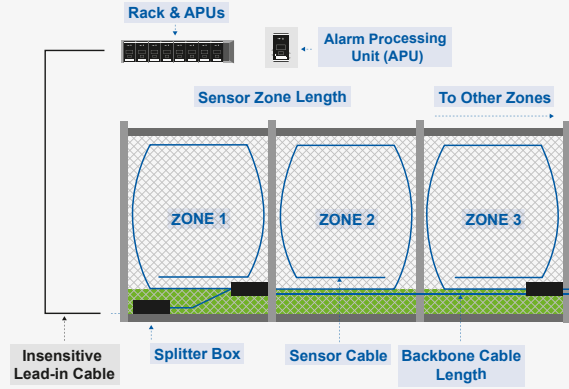
**Model: FD7104**

The PoE compliant Fiber Defender 7000 APU Series features a new generation algorithm and a web interface with built-in tuning and calibration software that provides remote tuning.

## Fiber Defender® 500 Series

**Models: FD504, FD508, FD525, FD525R**

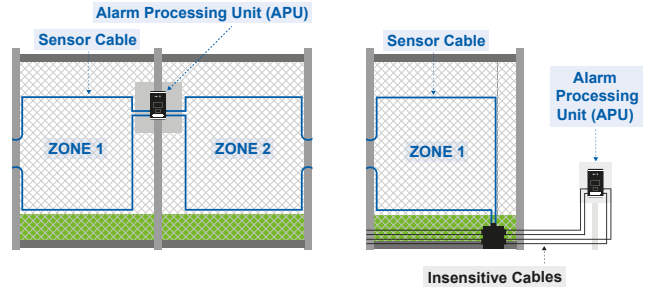
The Fiber Defender 500 Series Alarm Processors are the superior choice for medium to large projects with multiple-zone requirements, from 4 up to 25 individual sensor cables/zones that detect simultaneous intrusion attempts.



## Fiber Defender® 300 Series

**Models: FD322, FD331/FD332, FD341/342 and FD348R**

The Fiber Defender 300 Series offers cost-effective, packaged one and two-zone fibre-optic detection solutions to provide an easy deployment to protect small to medium-sized perimeters.



## Point Defender™

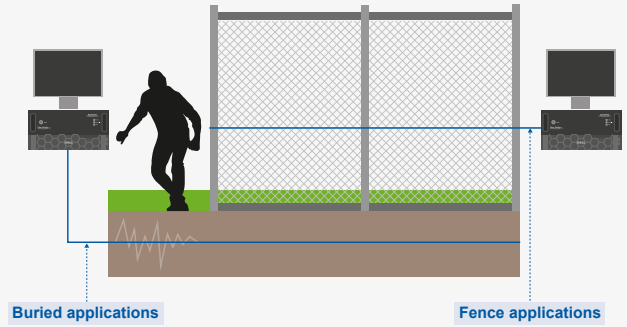
**Model: PD500™**

Point Defender™ is the only copper-based fence sensor with cut-tolerant technology, maintaining detection even if the cable is severed. Its patented End-to-End Correlation (E2EC™) technology delivers 1 m intrusion detection reliably across short and mid-range fenced perimeters.

## EchoPoint™ Series

**Model: EP9300™**

The EchoPoint™ Distributed Acoustic Sensors (DAS) use the latest technologies in fibre optic sensing and classification algorithms to pinpoint the location of a disturbance to plus or minus 6 m in a range of up to 100 km and can identify the differences in intrusion attempts.



## Select the right model for your application

Fibre optic series	Fiber Defender (FD) 300 series				FD 500 series		FD 7000 series	EchoPoint	Point Defender™
Model	FD322	FD331/2	FD341/2	FD348R	FD504/8	FD525	FD7104	EP9300™	PD500™
Fence application	●	●	●	●	●	●	●	●	●
Wall application	–	●	●	●	●	●	●	●	–
Buried	–	–	–	–	–	–	–	●	–
High security sites	–	●	●	●	●	●	●	●	●
Point location	–	–	–	–	–	–	–	+/- 6 m	1 m
Remote capable (insensitive lead)	–	–	20 km	20 km	5 km	5 km	5 km	●	●
Number of SW tuning parameters	6	30	30	30	>30	>30	7	Machine learning-based settings	
IP-enabled	●	Opt.	Opt.	●	●	●	●	●	●
Number of channels (zones)	2	1/2	1/2	8/ Ind. Rack card	4/8	25	4	Programmable	Programmable
Max. sensing cable per zone	500 m	5 km	5 km	5 km	800 m	800 m	800 m	Programmable	500

\* Specifications can be subject to change without prior notice.

# Smart Line Series

## Building and asset protection

Expensive machinery, valuable material, fuel tanks or chemical containers stored outdoors require the highest level of security to avoid theft, misuse and disruption to the business.



Active infrared beams consist of a pair of transmitter and receiver units, where the transmitter unit constantly emits infrared beams to the receiver and will trigger an alarm if the transmission is broken by an intruder. The detection is accurate even in warm countries where human temperature is similar to ambient.

The beams can be mounted on poles next to the fence to detect intruders crossing the fence line or on top of a wall or fence to detect anyone climbing. Some models can be stacked in beam towers which offer extra flexibility in terms of system design.



### Reliable detection in harsh environments

Our SmartLine AIR sensors feature Quad beams which significantly reduces false alarms caused by wildlife or falling leaves.

Most of our Quad sensors are equipped with four selectable frequency channels making it easy to stack in beam towers as well as providing a highly reliable signal transmission between receiver and transmitter even when exposed to strong sunlight or harsh weather conditions.

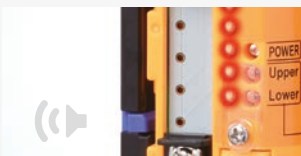
### Simple installation

The quality of the signal transmission relies on a good alignment between the transmitter and receiver beam. To make the optical alignment as easy as possible, OPTEX

active beams are equipped with a telescopic magnifying lens, a sound gauge to validate the signal level sent and received, complemented, for some models, by five LEDs rating the signal from poor to excellent.

infrared beams over time. Several models are also equipped with sunshine protection technology to give better performance against external light sources such as sunlight, mercury-vapour lamps, and fluorescent lights.

In addition, for the coldest climates a heater accessory is available for all hardwired beam models to allow them to work consistently.



Transmitter



Receiver

### Durable and weather resistant

IP65 rated, the Smart Line series has been designed to resist against both water and dust. The two hoods featured on the front cover are positioned over the upper and lower beam to prevent frost from attaching to the cover and potentially affecting the signal power. The housing is made of UV resistant polycarbonate material to avoid deterioration caused by ultraviolet rays and maintain the good transparency for the



## Smart-Line SL-QDM, SL-QDP (wired)

### SL-200/350/650QDM, SL-200/350/650QDP

The SL-QDM and SL-QDP series is a range of high specification wired active infrared beams, designed to sustain harsh environmental conditions and ensure optimal communication between transmitter and receiver. They offer double modulation beams that differ in pulse patterns enhancing the discrimination of potential sources of false alarms such as sunlight and severe weather. They can be stacked in towers to



create a virtual perimeter. When used in conjunction with our PiE-1 encoder, they can transmit alarm events via the network to many VMS and PSIM platforms that have an integrated OPTEX Redwall event code.

## Smart Line QFR and QNR series (wireless)

### SL-350QFR, SL-350QNR

Ideally suited to protect remote locations or areas difficult to wire, the Smart Line TNR series provides up to 60 m and SL-QFR and SL-QNR series up to 100m perimeter protection that is completely wirefree, reducing the installation time and cost to a minimum. The battery operated sensors can accommodate most wireless transmitters available on the market, or OPTEX can provide beams with pre-fitted wireless transmitters.



## Pre-built beam towers

### QDM, QDP and QFR models can be stacked into pre-assembled beam towers

When using active infrared beams for perimeter protection it is good practice to mount them into towers rather than onto walls or poles. This enhances the security level as the housing protects them from possible vandalism and conceals the mounting location



making it very difficult for potential intruders to determine the number and height of beams installed. Another key benefit of using towers is the ability to host several supplementary components into a weatherproof enclosure, which can be mounted in a tidy and organised way. Towers can be single-sided or double-sided, wall mounted or ground mounted, and are available in 2 or 3 m housing.



## Select the right IR beam model for your application

Smart Line Series	SL-QDM, SL-QDP Series		QFR and QNR Series	
Model	SL-200QDM, SL-350QDM, SL-650QDM	SL-200QDP, SL-350QDP, SL-650QDP	SL-350QFR	SL-350QNR
Reach	60 m / 100 m / 200 m	60 m / 100 m / 200 m	100 m	100 m
Connectivity	Wired		Wireless	
Beam frequency	4 channels selectable	4 channels selectable	4 channels selectable	–
Fog resistant	***	**	*	*
Lightning resistant	*	*	**	**
Frost resistant	***	**	*	*
Sunshine protection technology	●	●	–	–
Beam power control selector	●	●	–	–
Automatic transmit power control	●	–	–	–
Re-transmission	●	–	–	–
LED indicator and sound assist	●	● (receiver)	–	–
IP/ PoE option	● (with PiE-1 encoder)	● (with PiE-1 encoder)	–	–
Can be stacked into Beam towers	*up to 2	*up to 2	*up to 2	–

\* Specifications can be subject to change without prior notice.

# REDFSCAN Series

## Sophisticated and precise LiDAR detector

REDFSCAN is an award-winning laser detector that identifies the size and exact location of a moving object and can function in effect like an invisible wall or plane. Using LiDAR technology, the sensors are unaffected by light or heat sources making it a very reliable detection system.

### Intelligent high resolution detection

The REDSCAN sensor constantly scans the detection area, emitting a laser beam which returns to the sensor after hitting an object. This allows the very quick and precise detection of any object calculating its size and exact location from the sensor. The sensor can therefore be configured to trigger an event or alarm only for a certain size of object such as a car, a person or even a hand approaching a valuable object (indoor mode) and ignore the others, making it very versatile.

LiDARs provide real-time X and Y coordinates, and when integrated with a video management platform, they allow accurate mapping and tracking of detected objects.

### Versatile sensor for endless applications

The REDSCAN sensors can be mounted in horizontal mode creating a virtual plane to protect open areas, ceiling and roofs or in vertical mode creating a virtual wall for perimeter, façade, gate and asset protection. The virtual wall can be tilted, allowing it to detect a low target such as a crawling person or an object traveling fast such as a running person. It can work in conjunction with an access control system to detect unauthorised access, such as a jumping over a turnstile, detecting a person entered a restricted area without the right credentials.



### Independent detection zones and integrated camera

REDFSCAN LiDARs offer a number of detection zones with independent alarm outputs, maximising the possibilities of detecting where an intrusion has occurred and directing pre-set cameras to verify the event.

The REDSCAN Pro and mini-Pro models also offer the ability to independently configure the target size and sensitivity of

each zone. Different profiles can be set to suit security requirements, such as day/night configuration. A number of REDSCAN models are available with integrated camera to assist in sensor configuration and alarm verification.



### Integration and enhanced security network

Most LiDARs are IP devices that can be powered via PoE (REDFSCAN mini) or PoE+ (REDFSCAN Pro and mini-Pro)

and easily integrated into network security systems. REDSCAN sensors are equipped with leading industry protection and effectively prevent potential hacking threats.

## REDFSCAN Lite

### Model: RLS-1010L

REDFSCAN Lite is a compact and easy to deploy LiDAR providing all the trusted detection of REDSCAN LiDARs for streamlined short-range installations of 10 m x 10 m. Particularly well suited for tight narrow areas where total coverage is required.



## REDFSCAN mini

### Models: RLS-2020I and RLS-2020S

The REDSCAN mini series includes an indoor-only model, the RLS-2020I, and a high-resolution indoor/outdoor model, the RLS-2020S. Both models have a detection area of 20 m x 20 m with four independent detection zones and are Grade 3 compliant.



## REDFSCAN mini-Pro

### Models: RLS-2020A and RLS-2020V

REDFSCAN mini-Pro series includes two models for LiDAR detection area of 20 m x 20 m, providing eight independent detection zones. The RLS-2020V model has a built-in IR camera and on-device recording for immediate visual verification when an alarm signal is generated.



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## REDFSCAN Pro

### Models: RLS-3060V and RLS-50100V

REDFSCAN Pro is a long-range LiDAR series with coverage of up to 50 m x 100 m, providing eight independent detection zones. Both models have an integrated camera that assists in configuration and post-event analysis.



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## Select the right model for your application

Model	RLS-1010L	RLS-2020I	RLS-2020S	RLS-2020A	RLS-2020V	RLS-3060V	RLS-50100V
Installation location	Indoor	Indoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor/ Outdoor	Indoor/ Outdoor
Detection range	10x10 m 95°	20x20 m 95°	20x20 m 95°	20x20 m 95°	20x20 m 95°	30x60 m, 190°	50x100 m, 190°
Independent detection zones	–	4		8			
Alarm outputs	3 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable			6 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable			
Configurable response time	within 100 ms to 1 min	within 100 ms and 15 min	within 75 msec to 15 min				
High-resolution mode	●	–	●	●	●	●	●
Indoor throw-in mode	–	–	●	●	●	●	●
Auto area adjustment	●	–	●	●	●	●	●
Configuration	Intuitive Web User Interface (via web browser)	REDFSCAN Manager software		Intuitive Web User Interface (via web browser)			
Integrated camera	–	–	–	–	●	●	●
Recording of images and event data on sensor	Event data only	–	–	Event data only	●	●	●
Network protocol	–	UDP / TCP / DHCP / DNS / HTTP / HTTPS / FTP / SNMPv1-v3 / ICMP / ARP		UDP / TCP / HTTP / HTTPS / IPV4/DNS / DHCP / SNMPv1-v3 / NTP/WS-Discovery / ONVIF			
Operating temperature	[-20 °C to +50 °C]	[-40 °C to +50 °C]	[-40 °C to +60 °C]				
Multi-angle adjustment bracket	Optional 90° bracket	Optional accessory				Built-in	

\* ONVIF is a trademark of Onvif, Inc.

\*\* Specifications can be subject to change without prior notice.

# REDWALL SIP Series

## Volumetric detection for approach and alleyway protection

The long-range and high-mount REDWALL SIP outdoor detection systems provide volumetric detection for wide open areas and long alleyways. Working in conjunction with a CCTV system, they will detect and track intruders across detection zones and guide cameras to visually verify the alarm activation.



### Detecting and Tracking in open area

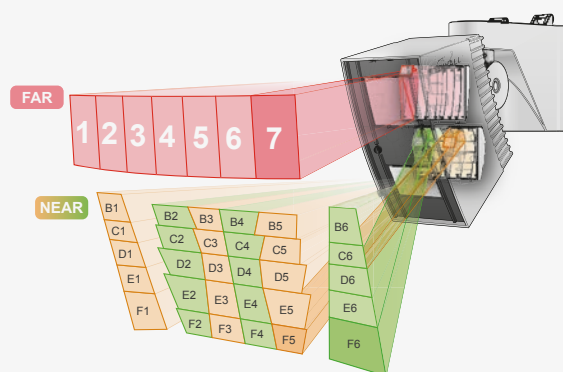
Once intruders are on site, especially on large sites, it is a challenging task to track their whereabouts. The OPTEX SIP series sensors can be mounted up to 4 m height and provides a wide coverage up to 50 m x 30 m or long narrow range up to 100 m x 3 m and connect to cameras to detect where the targets are and trigger camera pre-sets. Multiple SIPs can be connected to a single PTZ camera.



### Two in one sensor with the Creep zone

SIP-3020/5-404/5-4010/5, SIP-5030 and SIP-100 analogue and IP models.

The creep zone is the area located under the sensor to detect anyone walking underneath the PIR or trying to tamper with the sensor. The SIP models with creep zone functionality features an independent sensor looking down, providing 5 m 90 degree arc detection, which can be rotated by 270 degrees. When used with PTZ camera it allows to see if anyone is there, waiting to strike.



### Catch performance

Detection is the cornerstone of all event-driven security systems, and it is crucial to ensure no intrusion is missed. To provide best catch performance throughout the detection range, the REDWALL outdoor sensors

are equipped with a near and far sensing area, featuring independent sensitivity settings that automatically adjust to the ambient temperature and light conditions to ensure no detection is missed.



### Precise detection using the Area View Finder

The SIP sensor's lens features many sections to detect moving objects. Using the Area View Finder accessory, those sections can be identified on the field of view of the sensor to identify sections outside the detection area that should be masked to avoid any risk of overspill or nuisance alarms created by vegetation.

### Anti-vandalism features

All REDWALL SIP sensors are made of reinforced polycarbonate housing and feature anti-vandalism functions to notify the system if they have been tampered with. This consists of an Active Infrared anti-masking detection and anti-rotation function with accelerometer.

## Flexibility of Wireless SIPs

Our battery powered SIP-3020WF/ 404WF/ 4010WF work with most universal transmitters enabling quick deployment for temporary sites such as construction sites or events, being used for CCTV Towers or simply when the access to main power is challenging.



## Added functionalities with the IP series

**Models: SIP-3020/404/4010/5030/100-IP-BOX**

**SIP-3020/5-404/5-4010/5-IP-BOX**

The SIP-IP-BOX series feature our IP encoder which is integrated with many VMS platforms. A number of additional alarm event codes can be transmitted allowing the system to be more dynamic, creating rules for different events. For instance, if two detection zones are simultaneously activated (Creep and Near for instance) a COMBI code is generated to trigger a specific camera view to see both areas rather



than juggling back and forth with two pre-sets. Another benefit of the IP integration is to monitor devices and alert the management software if any Redwall SIP is not working or dropped off the network.

## Select the right model for your application

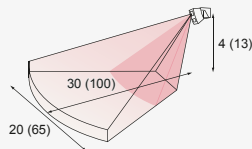
All sensors can be mounted between 2.3 to 4 m height.

	Detection range	Auto sensitivity adjustment	Creep Zone	Alarm output	Connectivity	Device monitoring / combi codes	Operating temperature	Anti-vandalism
SIP-3020/ SIP-404/SIP-4010	30x20 m 40x4 m 40x10 m	●	–	1	Hardwired	–	-25°C +60°C or -40°C +60°C with optional heater (heater can't be used when using PoE)	●
SIP-3020/5-404/5-4010/5		●	●	2	Hardwired	–		●
SIP-3020/404/4010-IP-BOX		●	–	1	IP/PoE	●		●
SIP-3020/5-404/5-4010/5-IP-BOX		●	●	2	IP/PoE	●		●
SIP-5030	50x30 m	●	●	2	Hardwired	–		●
SIP-5030-IP-BOX		●	●	2	IP/PoE	●		●
SIP-100	100x3 m	●	●	3	Hardwired	–		●
SIP-100-IP-BOX		●	●	3	IP/PoE	●		●
SIP-3020WF/404WF/4010WF	30x20 m / 40x4 m / 40x10 m	●	–	1	Battery operated*	–	-25°C +60°C	●

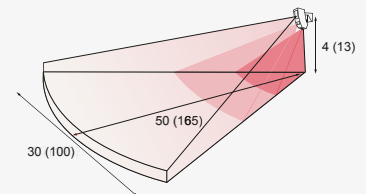
\* Batteries and wireless transmitter not provided

\*\* Specifications can be subject to change without prior notice.

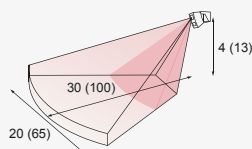
### SIP-3020 models detection range



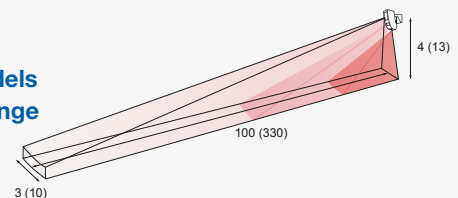
### SIP-5030 models detection range



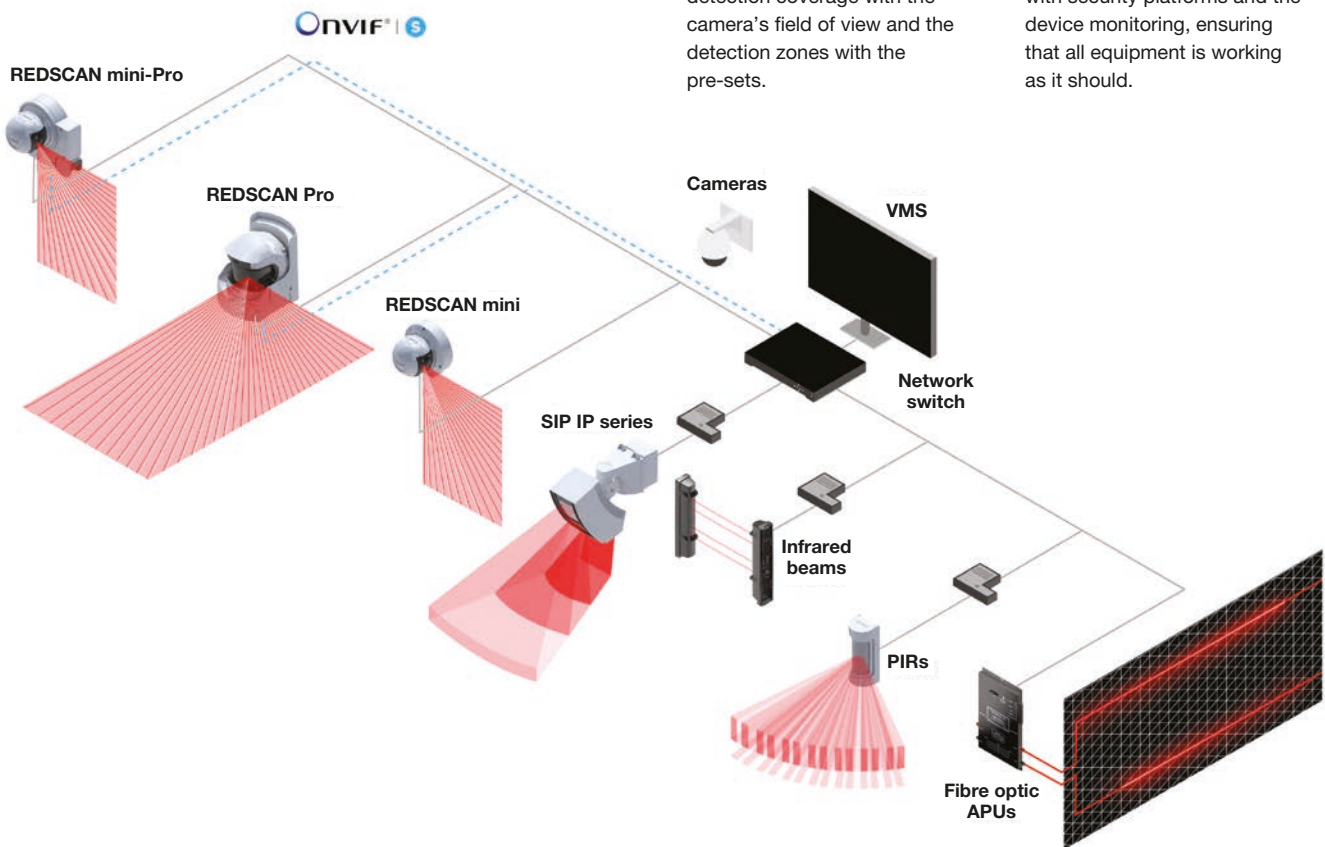
### SIP-3020/5 models detection range



### SIP-100 models detection range



## Sensor-led visual verification



To facilitate the efficient video verification of alarm events, sensors and cameras should work together, matching the detection coverage with the camera's field of view and the detection zones with the pre-sets.

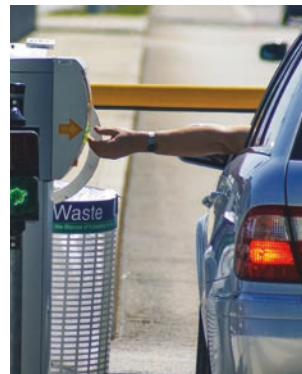
OPTEX IP sensors are integrated with the key Video Management Software platforms to enable a direct alarm communication with security platforms and the device monitoring, ensuring that all equipment is working as it should.

## Additional OPTEX solutions



### Access security

To protect buildings against unauthorised access, OPTEX provides tailgating detection systems. The OV-102 is designed to detect when a person has followed another through an open door or someone has exited via the same door without using his/her access credentials. Tailgating prevention in airlocks or revolving doors are also part of OPTEX's portfolio.



### Vehicle sensors

Vehicle detection is mainly used for gate or barrier activation but also for many other applications such as alert for drive through and sign activation. OPTEX offers microwave-based single lane vehicle sensors. The OVS series is installed above ground, as opposed to ground loop systems that require costly and unsightly civil works, and can detect vehicles of all types.



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