OPTEX
Sensing Innovation

REDSCAN Series

Customizable LiDAR Sensing Solutions For High Security Applications

The REDSCAN Product Series utilizes LiDAR sensing technology to provide highly accurate detection of intruders and moving objects. Equipped with OPTEX's most advanced technologies, it provides excellent detection performance not affected by variable lighting, temperature, or environmental changes, making it the ideal solution for high security sites.

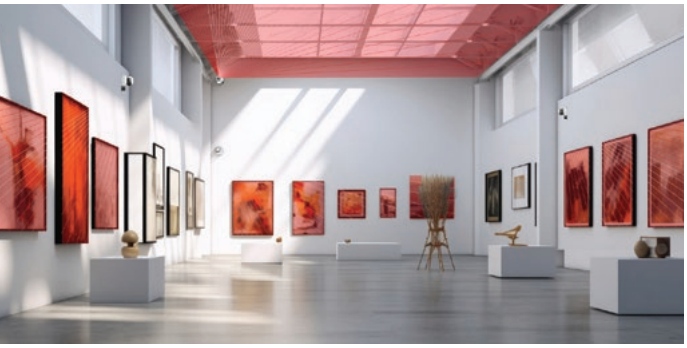
Applications Include:
Power plants, substations, border protection, correctional facilities, data centers, distribution centers, airports, water treatment plants, ports, warehouses, museums & art galleries, financial institutions, hospitals, and schools.

REDSCAN Lite

REDSCAN mini Series

REDSCAN mini-Pro Series

REDSCAN Pro Series



Precision LiDAR Detection Series Tailored for Critical Security Zones

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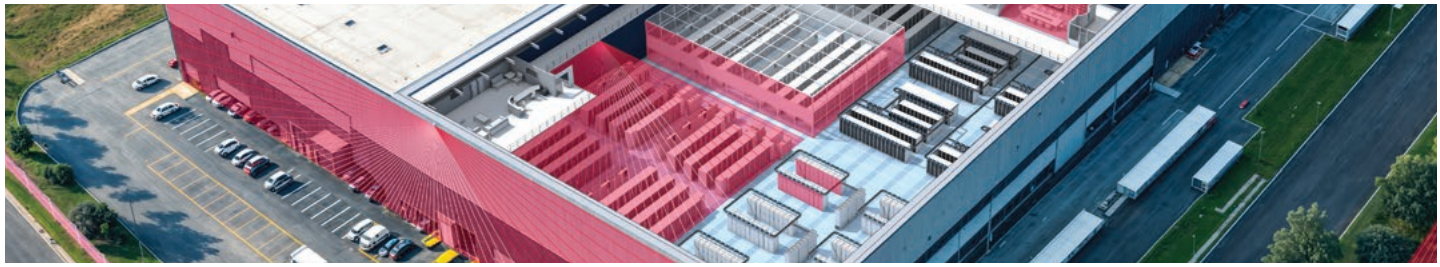
PoE
Power over Ethernet

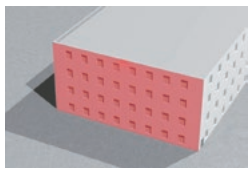


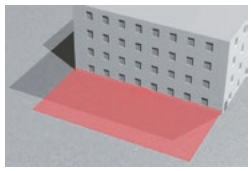
REDSCAN Pro Series

High-resolution long range LiDAR sensors delivering precise intrusion detection up to 165 x 330 ft., with consistent detection accuracy across the entire range. Engineered for critical security sites and built to perform in any lighting or environmental condition.

FEATURES

- ***RLS-50100V:*** 50 x 100 m (approx. 165 x 330 ft.)
- ***RLS-3060V:*** 30 x 60 m (approx. 100 x 200 ft.)
- Very high detection resolution: 0.125°
- Vertical and horizontal mounting
- Selectable installation method (wall, ceiling, pole mount)
- Rectangular detection area
- 8 independent detection zones with customizable target size, sensitivity, and output
- Embedded video camera for visualizing your detection area
- Event log function: Confirm events with event log & image
- Auto area adjustment
- Small animal tolerant
- Setting by Internet browser
- Environmental resistance function





ONVIF® | S

ONVIF is a trademark of Onvif, Inc

RLS-50100V

- Indoor / outdoor model
- Expanded mode: up to 530 ft vertical / 265 ft radius horizontal mount

RLS-3060V

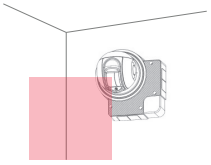
- Indoor / outdoor model

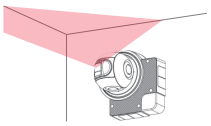
REDSCAN mini-Pro Series

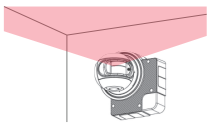
Extremely accurate LiDAR intrusion detection sensors using time-of-flight technology to identify the size, location, and distance of moving or loitering objects and track them to the exact X and Y coordinates. Now with built-in IR camera for visual verification and recording.

FEATURES

- 20 m x 20 m (65 ft. x 65 ft.), 95° detection area
- Vertical, horizontal, or multi-angled mounting options
- Up to 8 independent detection zones
- 0.125° angular resolution for precise detection
- 100ms response time for instant target visualization
- Built-in IR FHD camera on RLS-2020V model
- Operates in temperatures from -40°F to 140°F (-40°C to 60°C)
- Automatic ground level adjustment
- Real-time event analysis and logic-based filtering for prioritized alerts
- ONVIF Profile S compliant for seamless integration with VMS or IP devices
- Supports multiple network protocols
- Secure network connectivity via IP and analog
- Easy installation and configuration with intuitive user interface and web browser settings







ONVIF® | S

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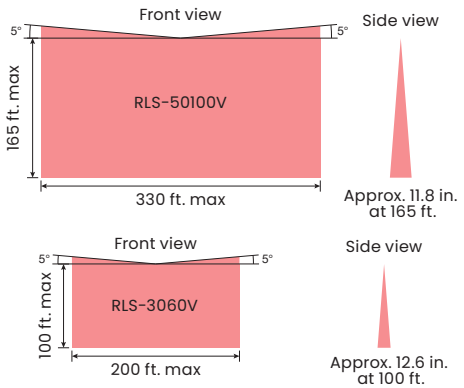
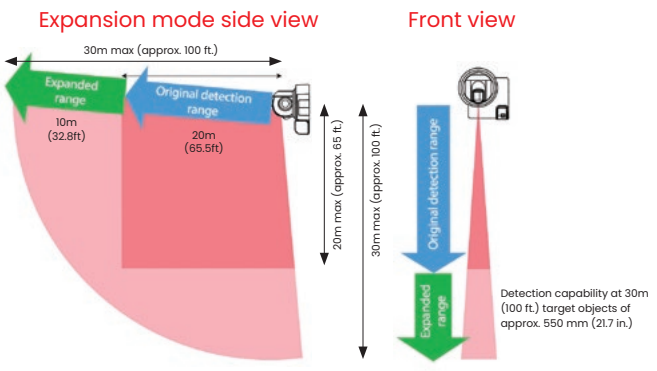
RLS-2020V

- Indoor / outdoor mode
- Built-in FHD camera and IR LED for visual verification of alarm signals

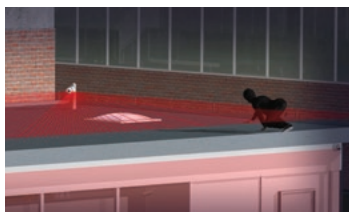
RLS-2020A

- Indoor / outdoor model

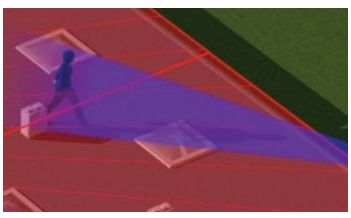




Detect a crawling person

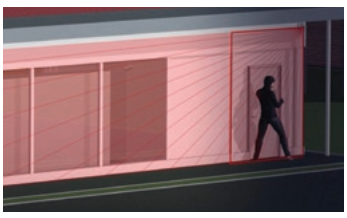


Detect a running person



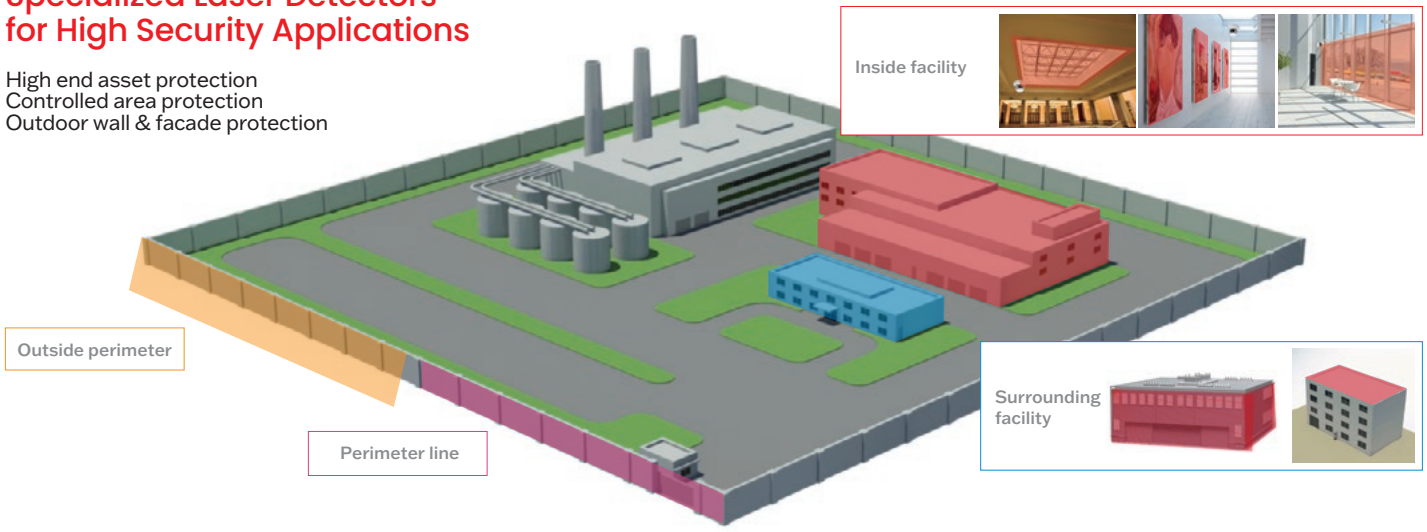
Thrown object detection

Quick intrusion detection



Specialized Laser Detectors for High Security Applications

High end asset protection
Controlled area protection
Outdoor wall & facade protection



REDSCAN mini Series

Compact and highly customizable LiDAR sensor series that works in an unobstructed way to protect houses, buildings, flat roofs, controlled areas, and assets, by creating an invisible laser wall or plane and detecting any intrusion breaching it.

FEATURES

- 20 m x 20 m (65 ft. x 65 ft.), 95° detection area
- Vertical and Horizontal detection modes
- Multi-angle Adjustment Shell Structure (M.A.S.S.)
- Unique detection algorithm
- Automatic area setting function
- Advanced area setting
- 4 adjustable detection areas on IP connection
- 3 outputs can be assigned for analog connection
- Supporting multiple network protocols
- Anti-rotation, anti-masking, soiling, trouble, tamper, DQ outputs (Selectable)
- Paintable housing
- Environmental disqualification circuit (D.Q.)
- Area selection
- Integration to external devices and applications with REDWALL Event Code

RLS-2020S

- Indoor / outdoor model
- Indoor high resolution mode
- Indoor throw-in mode
- Detection range expansion mode

RLS-2020I

- Indoor use model

REDSCAN Lite

Ultra-compact LiDAR sensor that protects indoor areas like skylights, walls, and data centers by creating a precise detection plane, with intelligent auto-learning and real-time history analysis for fast, flexible installation and pinpoint intrusion tracking.

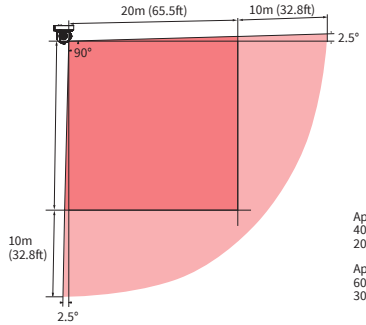
FEATURES

- 10 m x 10 m (32 ft. x 32 ft.), 95° detection area
- Vertical or horizontal mounting flexibility
- Auto area learning and correction at startup
- Real-time Dynamic History Analysis
- External LED indicators for alignment and detection
- PC-less setup via optional alignment tool
- Web interface for setup, tuning, and maintenance
- Selectable PoE or 12/24 VDC power input
- Conjunction box–friendly A-directional mounting plate
- Immune to lighting and temperature changes
- Globally accredited for indoor security standards
- Detects object size, speed, and position
- Simplified REDSCAN UI for intuitive configuration
- Anti-overspill zone correction near mesh/barriers
- Compact, unobtrusive design for indoor environments
- Laser-based detection with invisible scan plane
- Adjustable detection area shape and size
- Pigtail I/O interface for streamlined wiring

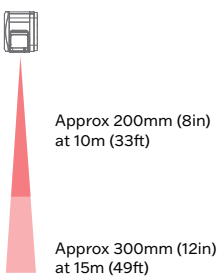
RLS-1010L

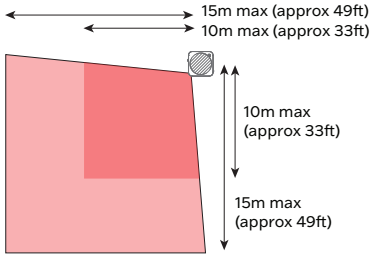
- Indoor use model

Expansion mode side view



Front view





SPECIFICATIONS

Model	RLS-50100V	RLS-3060V
Installation location	Indoor / Outdoor	
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	19.2-30 VDC, PoE+ (IEEE 802.3at compliant)	
Current draw	500 mA max. (24 VDC), 12 W max. (PoE+)	
	with heater option: 1.25 A max. (24 VDC), 25.5 W max. (PoE+)	
Mounting method	Ceiling mount, Wall mount, Pole mount	
Detection area	50x100 m, 190° (approx. 165x330 ft.)	30x60 m, 190° (approx. 100x200 ft.)
Detection range	Radius 1-50m (approx. 3.3-165 ft.), 10% reflectivity	Radius 1-30m (approx. 3.3-100 ft.), 10% reflectivity
Detection res. /Response time	0.125° / within 100 msec. to 15 min.	0.25° / within 100 msec. to 15 min.
Mounting height (Vertical mode)	Indoor: 2m (approx. 6.7ft.) or higher/Outdoor: 4m (approx. 13ft.) or higher (recommended)	
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Protocol	UDP/TCP/HTTP/HTTPS/IPV4/DNS/DHCP/SNMPv1-v3/NTP/WS-Discovery/ONVIF	
Output	6 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable	
Input	1 Non-voltage contact input	
Alarm period	Approx. 2 second delay timer	
Operating temperature	-20°C to 60°C (-4°F to 140°F)	
	with RLS-LWVH: -40 °C to 60°C (-40°F to 140°F)	
Dimensions (HxWxD), Weight	230 x 160 x 256.6 mm max. (9.1 x 6.3 x 10.1 inch), 2.6 kg (92 oz.)	
IP rating	IP66	

Model	RLS-2020V	RLS-2020A
Installation location	Indoor/Outdoor	
Detection method	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	19.2-30 VDC, PoE+ (IEEE 802.3 af/at compliant)	19.2-30 VDC, PoE (IEEE 802.3 at compliant)
Power input	580 mA max. (24 VDC), 14 W max. (PoE+)	420 mA max. (24 VDC), 10 W max. (PoE)
Mounting method	Ceiling mount, Wall mount, Pole mount	
Detection area	20 x 20m, 95 degree (approx. 65 x 65 ft.)	
Detection range	Radius 1 to 21m (approx. 3.3 to 68ft) at 10% reflectivity	
Detection resolution/ response time	0.125° / within 100 msec. to 15 min. / 0.25° / within 50 msec. to 15 min.	
Mounting height (vertical mode)	Indoor: 2m (6.7 ft.) or higher / Outdoor : 4m (13 ft.) or higher (Recommended)	
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Protocol	UDP/ TCP/ HTTP/ HTTPS/ IPV4/ IPV6/ DNS/DHCP/ SNMPv1-v3/ NTP/ WS-Discovery/ ONVIF/IEEE802.1X	
Output	6 outputs, 28 VDC 0.2 A max. N.O./N.C.(selectable) (6 from Master alarm, Zone alarm, Trouble, Tamper, Environmental Disqualification, Device Monitoring) (programmable) RS-485	
Input	2 Non-voltage contact input (Detection profile switching, Area set, Sensor check, Turn on LEDs, Create AND/NAND logic, Dynamic event filtering), Programmable	
Alarm period	Approx. 2 second delay timer	
Operating temperature	-40°C to 60°C (-40°F to 140°F)	
Dimensions (HxWxD) Weight	202.6 x 206.7 x 163.5 mm max. (8.0 x 8.1 x 6.4 inch) RLS-2020V: 1.6 kg (3.5 lbs) / RLS-2020A: 1.3 kg (2.9 lbs)	

Model	RLS-2020I	RLS-2020S
Installation location	Indoor	Indoor/Outdoor
Detection metod	Infrared Laser Scan	
Laser protection class	Class 1	
Power input	10.5 to 30 VDC, PoE (IEEE802.3af/at compliant)	
Current draw	500mA max. (12 VDC), 250mA max. (24 VDC), 6W max. (PoE)	
Mounting method	Ceiling mount, Wall mount, Tripod mount, Pole mount (option), Recess mount (option)	
Detection area	S: 30m (97.5ft) radius arc | i: 20 x 20 m, (approx. 65 x 65 ft.) | 95 degrees	
Detection range	Radius 1 to 21m (approx. 3.0 to 68 ft.) at 10% reflectivity	
Detection resolution/ Response time	0.25° / within 75 ms to 1 min	0.25° / within 75ms to 1 min (for indoor & outdoor modes) 0.25° / within 25ms (for indoor throw-in mode) 0.125° / within 100ms to 1 min (for indoor high resolution mode)
Mounting height (Vertical mode)	2m (6.7 ft.) or higher	Indoor: 2m (6.7 ft.) or higher Outdoor: 4m (13 ft.) or higher(recommended)
Communication port	Ethernet RJ-45 10BASE-T/100BASE-TX (Auto negotiation)	
Protocol	UDP, TCP/IP (Redwall Event Code), Http (Web setting), SNMP	
Output	3 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper)	3 outputs, 28 VDC 0.2A max. N.O./N.C. Selectable (3 from Master alarm, Zone outputs, Trouble, Tamper, D.Q.)
Input	-	1 Non-voltage contact input
Alarm period	Approx. 2 sec delay timer	
Operating temperature	-40 to 50 C° (-40 to 122 F°)	-40 to 60 C° (-40 to 140 F°)
IP rating	IP66	
Dimensions (HxWxD)	146 x 160 x 160 mm (5.8 x 6.3 x 6.3 inch)	
Weight	1.0 kg (2.2 lb)	

Model	RLS-2020V
Image sensor	Full HD (1980 x 1080)
Image resolution	1080P (Web User Interface) / 1080P/720P/360P (RTSP)
Viewing angle	H: 130° / V: 65°
Minimum illumination	Approx.1 lux.
IR Range	Removable infrared-cut filter (Auto-adjustable / Night / Day) (selectable)
Image compression	H.264, JPEG
Frame rate	1 to 10 FPS (selectable)

Model	RLS-1010L
Installation location	Indoor
Detection method	ToF
Laser protection class	Class 1
Power input	10.5 - 30 VDC PoE (IEEE 802.3af compliant)
Current draw	500mA max (12 VDC) 250 mA max (24 VDC) 6 W max (PoE)
Mounting method	Wall, Ceiling, Bracket Mounting
Detection area	10 x 10m, 95° (approx 33 x 33ft)
Detection range	Radius 1 to 15m (approx 3.3 to 50ft) at 10% reflectivity
Detection resolution/ response time	0.125° / within 100 msec to 1 min
Maintenance port	Ethernet RJ-45 10BASE-T/100BASE-TX (auto negotiation)
Communication port	RS-485
Output	3 outputs, 28 VDC 0.2 A max. N.C.
Input	1 non-voltage contact input
Alarm period	Approx 2 sec delay timer
Operation temp	-20°C to 50°C (-4°F to 122°F)
IP rating	IP55
Dimensions (HxWxD)	118 x 115 x 96 mm max (4-5/8 x 4-1/2 x 3-3/4 in)
Weight	680g (1.5lbs)

*ONVIF is a trademark of Onvif, Inc. www.onvif.org/profiles/profile-s/

OPTIONAL ACCESSORIES

LAC-1

Laser area checker

2020-MINIPLT mini

REDSCAN mini series mounting plate

2020-MINIPROPLT mini-Pro

REDSCAN mini-Pro series mounting plate

2020-PROPLT Pro

REDSCAN Pro series mounting plate (includes RLS-RP Reinforcement Plate)

RLS-UMB

REDSCAN Series mounting bracket

RLS-LWV Pro

Replacement window

RLS-LWVH Pro

Replacement window with heater unit

RLS-LW mini-Pro

Replacement window for RLS-2020A, RLS-2020V

RLS-PB2 mini-Pro

Pole mount bracket for RLS 2020A, RLS-2020V

RLS-LAT Lite

Laser alignment tool

RLS-LBL Lite

L-mount bracket

RLS-LWL Lite

Laser window

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