

Smart 3D LiDAR is designed for advanced physical security applications. It offers dependable threat detection and minimizes false alarms by generating high-density 3D data, processed directly on-device. With its weather-resistant design and consistent performance in diverse lighting conditions, this solution is ideal for both indoor and outdoor environments.

TECHNICAL DATA

Technology	3-dimensional Laser Ranging (LiDAR) with edge processing	
Maximum field-of-view (Horizontal x vertical) ^a	90° x 50°	
Coverage ^a	Installation height, tilt angle	Coverage (width x depth)
	3 m / 9.8 ft, 30°	15 x 12 m / 49.2 x 39.4 ft
	5 m / 16.4 ft, 30°	28 x 22 m / 91.9 x 72.2 ft
	10 m / 32.8 ft, 35°	35 x 28 m / 115 x 91.9 ft
	15 m / 49.2 ft, 40°	41 m x 28 m / 135 x 91.9 ft
	20 m / 65.6 ft, 40°	56 m x 45 m / 184 x 148 ft
Laser class	Class 1, eye-safe (IEC 60825-1:2014)	
Laser wavelength	Infrared, 905 nm	
Laser beam divergence	0.25° x 0.25°	
Multiple returns	up to 3, configurable (highest, nearest, farthest)	

Range ^b	Perimeter	Area
Description	Perimeter encompasses applications along fences, walls, and other perimeter structures.	Area provides comprehensive site protection for large spaces, open areas, critical infrastructure, and facilities.
Human (150 x 50cm)	85 m	65 m
Frame rate	1 - 50 Hz depending on configured scan pattern	
Point spacing	0.25° ; 0.5° ; 0.75°	
Scan pattern	High Density Pattern with ROI ^c 304 scan lines	High Density Pattern 240 scan lines
Mounting height	3 – 8 m recommended mount see accessories	0.5 – 25 m recommended mount see accessories

Embedded Software

Integrated web interface	Interactive 3D LiDAR point cloud visualization, Device configuration / setup, Zone placement and configuration, Alarm logic definition, Interface / output specification
Alarm types	Pre-Alarms, Intrusion detection, Sabotage / Tampering, Malfunction detection
Alarm parameters	Object Size (small, human, big) Direction Number of objects Alarm duration Alarm logic (AND/OR/NOT)
Central Processing Unit	Broadcom Quad-core (ARM v8) 64-bit, 1.5 GHz
Integrated Inertial Measuring Unit (IMU)	TDK InvenSense ICM-20600
Output interfaces	MQTT; TCP
LiDAR data and IMU	available via API

Interfaces

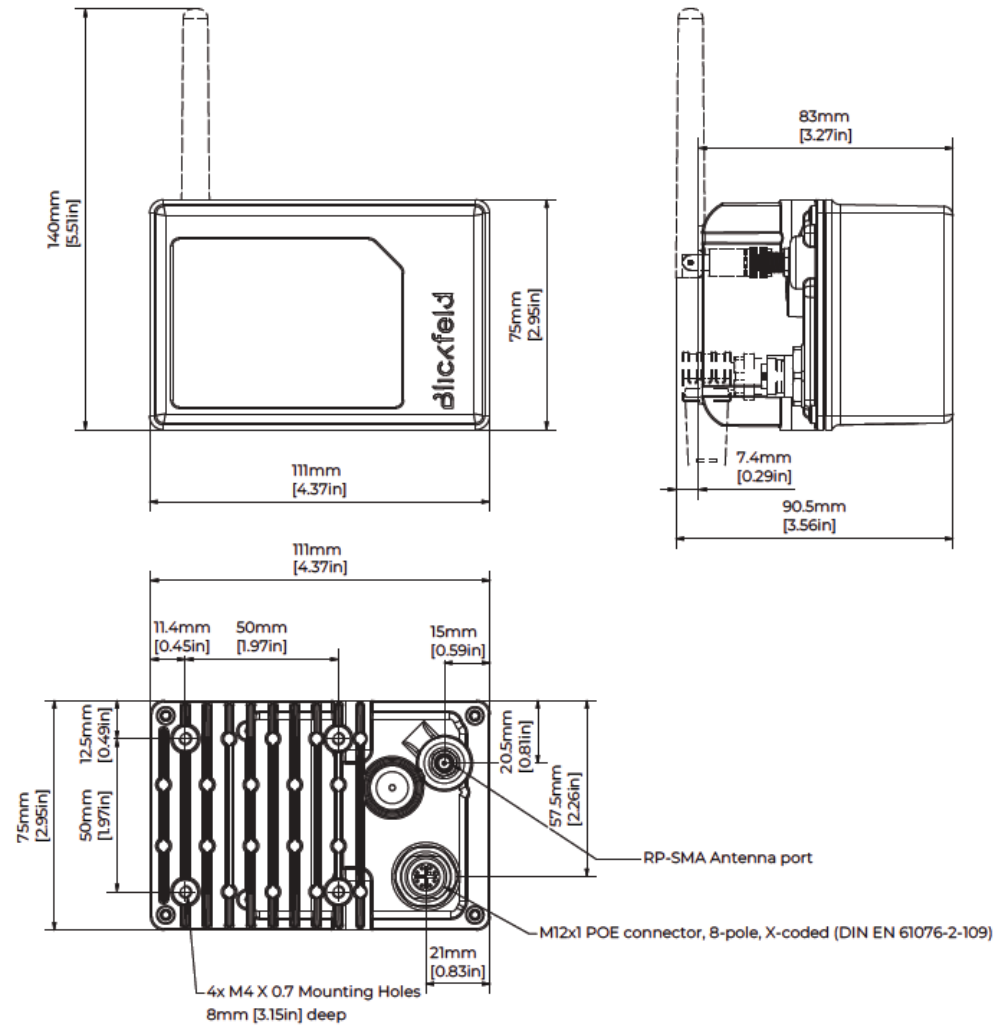
LAN connection	Ethernet 1000 Base-T (1 Gbit/s)
Ethernet connector	M12x1 Industrial Ethernet connector, 8-pole, X-coded (EN 61076-2-109); IP67 f

Operational	
Dimensions (H x W x D) ^d	Ca. 75 mm x 111 mm x 83 mm
Weight ^d	Ca. 535 g
Voltage input	Power over Ethernet (PoE) IEEE 802.3at Type 1
Power consumption	Typ. 10 W; max. 13 W
Ingress Protection	IP67 ^e (IEC 60529)
Operating ambient temperature	-30 °C ... +60 °C
Storage temperature	-30 °C ... +60 °C

Options & Accessories	
Cable	Matching Ethernet Cable, Length: 3 m. Technical Specifications: M12x1 Industrial Ethernet Connector to RJ45, straight, Cat. 6a, X-coded, 8-pole, UV-resistant, Halogen-free, PUR jacket
WIFI connectivity	2.4 GHz: IEEE 802.11b/g/n 5 GHz: IEEE 802.11n/ac Matching WiFi antenna. WiFi operation only permitted with manufacturer-authorized antenna.
Mounting options	Dual sensor mount; Pan-tilt mounting bracket

Senstar Ordering Information		
H1SP0100-001	LiDAR Device	LiDAR, 3-dimensional laser ranging sensor (LiDAR) with integrated perimeter sensors, alarm logic and threat detection, field of view 90° x 50°, range 85m, laser class 1 (eye-safe), IP67, Power over Ethernet
H1SP0201-001	Mounting Solution	Mounting bracket, for outdoor use, for mounting on solid surfaces (wall, ceiling, pole), swivel/tilt, gray
H1SP0202-001	Mounting Case Fence	Dual mounting housing, holder for two LiDAR devices outdoors, weather protection roof, pole mounting, approx. 7kg
H1SP0203-001	Sunshade/Rainshield	Weather protection roof, for outdoor use, for mounting on LIDAR, gray
H1SP0300-001	Cable 3m	Connection cable, M12x1 Industrial Ethernet plug to RJ45, Cat.6A, X-coded, 8-pin, UV-resistant, halogen-free, length 3m

DIMENSIONS



^a Non-rectangular Field-of-view
^b Range performance depends on many factors including but not limited to object reflectivity, orientation, surface texture, ambient light level, and ambient temperature. Below 2 m reduced resolution
^c Less than 50 scan lines requires reduced Field-of-view
^d Without antenna and cables attached
^e With antenna and Ethernet cable cable attached or with protective caps attached
^f IP67 with cable or protective cap attached