

Blickfeld QbProtect



Smart 3D Security LiDAR with on-device data processing for advanced physical security

Blickfeld’s QbProtect is a smart 3D Security LiDAR designed for advanced physical security. It ensures reliable threat detection and reduces false alarms by producing high-density 3D data and processing it directly on-device. Based on Qb2 hardware, with weather-resistant technology and robust performance in various lighting conditions, QbProtect excels in both indoor and outdoor environments.

TECHNICAL DATA

PERFORMANCE

Technology	3-dimensional laser ranging (LiDAR) with edge processing	
Maximum field-of-view	90° x 50° (horizontal x vertical) a	
Range b	Foveated	Non-foveated
Description	Range performance of up to 80m under typical conditions by focusing on a defined area of interest with a denser scan pattern; ideal for applications like securing fences, facades or larger areas.	Range performance of up to 60m under typical conditions with a uniform scan pattern across the entire field of view; suitable for gates, entrances or similar applications with homogeneous coverage.
	Human (150 x 50 cm)	80m
		60m
Scan pattern	High density pattern with ROI c	High density pattern
	304 scan lines	240 scan lines
Mounting height	3 – 8 m	0.5 – 25 m
	recommended mount see accessories	recommended mount see accessories

Maximum number of scan lines	1200, configurable
Number of returns	up to 3, configurable (highest, nearest, farthest)
Frame rate	1 - 50 Hz depending on configured scan pattern
Point spacing	0.25° ; 0.5° ; 0.75°

LASER

Laser class	Class 1, eye-safe (IEC 60825-1:2014)
Laser wavelength	Infrared, 905 nm
Laser beam divergence	0.25° x 0.25°

ON-DEVICE SOFTWARE AND OUTPUT DATA

Integrated web interface	Interactive 3D LiDAR point cloud visualization, device configuration and setup, output specification, alarm history and data recording
Central processing unit	Broadcom Quad-core (ARM v8) 64-bit, 1.5 GHz
Zone management	Security zone configuration, object detection and tracking
Alarm types	Pre-alarms, intrusion detection, sabotage / tampering, malfunction detection
Alarm parameters	Object size (small, human, big) Direction Number of objects / points Alarm / intruding duration Object track length / lifetime Custom alarm logic (AND/OR/NOT)
Integrated inertial measurement unit (IMU)	TDK InvenSense ICM-20600
LiDAR data and IMU	available via API
Protocols	ARP, ICMP, DHCP, DNS, TLS, 802.1X, UDP, NTP, IPv4, IPv6, TCP/IP, HTTP, HTTPS, gRPC, MQTT, RTSP, ONVIF

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 ^e	IP67 (IEC 60529)
Operating ambient temperature ^f	-30 °C ... +60 °C
Storage temperature	-40 °C ... +60 °C
Conformity marks / compliance	CE, UKCA, REACH, FDA, FCC, SRRC TAA-compliant product variants available upon request
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 ^g
Security	User & API-key authentication (multiple access levels, read-only access), 802.1X & WPA2 (EAP)
OPTIONS & ACCESSORIES	
Cable	Matching Ethernet cable, length: 3 / 7 / 10 m. 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 Matching WiFi antenna. WiFi operation only permitted with Blickfeld-authorized antenna.
Mounting	Pan-tilt mounting bracket, Dual sensor mount
Add-on	Weather protection roof

- ^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. Reduced accuracy and resolution in small areas of the field of view in close distance to the sensor. Stated numbers measured at 25%.
- ^c Configured with 3x density for 8° ROI (region of interest)
- ^d Without cables or antenna attached
- ^e With antenna and Ethernet cable attached or with protective caps attached
- ^f Continuous operation between -37°C and 60°C. Increased start-up time (max. 30 min) for temperatures below -30°C
- ^g IP67 with cable and protective cap attached

DIMENSIONS

