

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

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|------------------------------|--------------------------------------|
| 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

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|---|---|
| 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

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|---|--|
| 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

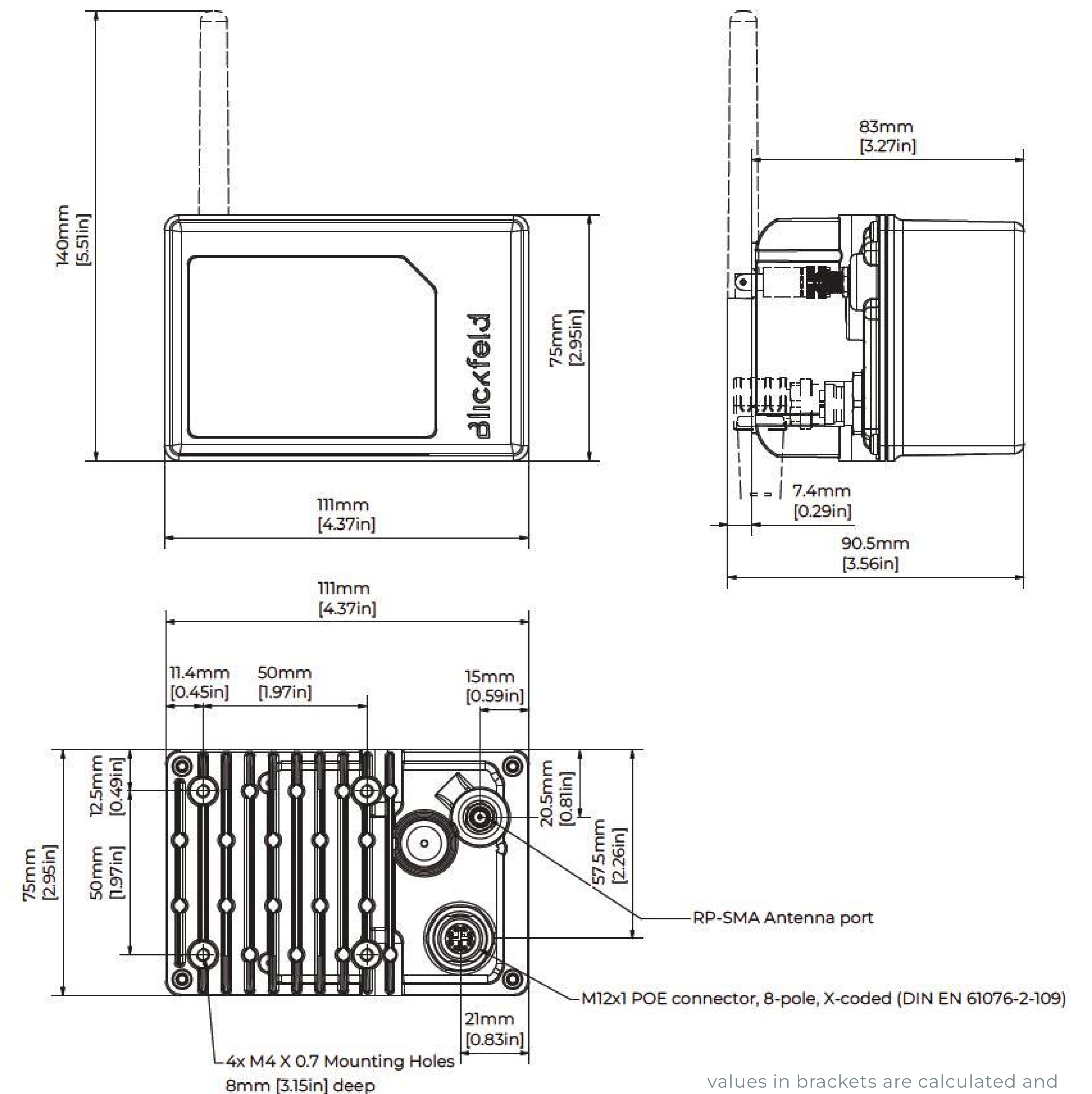
| | |
|---------------------------|---|
| LAN connection | Ethernet 1000 Base-T (1 Gbit/s) |
| Ethernet connector | M12x1 Industrial Ethernet connector, 8-pole, X-coded (EN 61076-2-109), IP67 ^g |
| Security | User & API-key authentication (multiple access levels, read-only access), 802.1X & WPA2 (EAP) |

OPTIONS & ACCESSORIES

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|--------------------------|---|
| 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 antenna and Ethernet cable 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 Ethernet cable and protective cap attached

DIMENSIONS



values in brackets are calculated and may contain round-off errors