

Falcon K1 LiDAR

Falcon is an industry-leading automotive-grade LiDAR developed by Seyond through forward engineering. It can detect objects as far as 500 meters, and dark objects with 10% reflectivity up to 250 meters. Falcon can maximize point density in region of interest (ROI) which is adjustable to focus where it matters most to better track objects on the road. High performance LiDAR with strong environmental adaptability like Falcon is key to safe autonomy and smart transportation.




Features

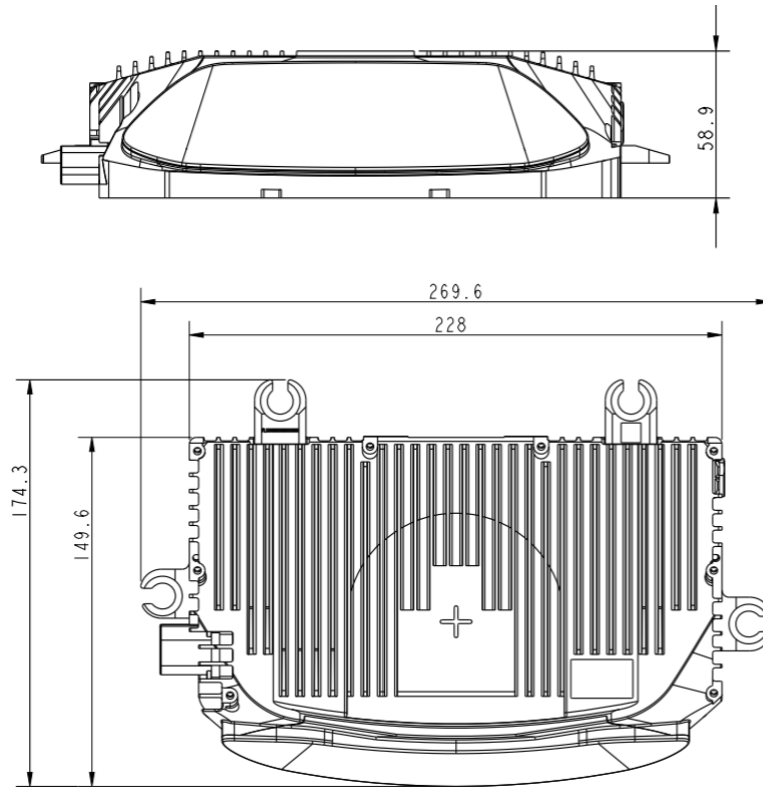
- 500m ultra-long detection range, image-grade ultra-high resolution
- Flexible and adjustable ROI
- 1550nm laser wavelength enables better eye-safety
- Greater environmental adaptability and longer product life
- Mass production of automotive-grade robust products is ready

Specifications

OPTICAL PERFORMANCE	
Range (Maximum)	500 m
Range (Minimum)	1.5 m
Detection Range (10% Lambertian reflectivity @ 10 Hz)	250 m@100 klx sunlight, POD>90%
Detection Range Accuracy	± 5 cm for Lambertian targets ± 10 cm for retroreflectors
Detection Range Precision (10% Lambertian reflectivity)	2 cm (50 m@1sigma)
Detection Range Resolution	0.5 cm
Vertical Scanning Lines	1520 lines/sec
FOV in non-ROI (H×V)	120°×25°
FOV in ROI (H×V)	40°×4.8°
Angular Resolution in non-ROI (H×V)	0.18°×0.24°
Angular Resolution in ROI (H×V)	0.09°×0.08°
Angular Accuracy	± 0.1°
Frame Rate	10 FPS (configurable: 5 to 20 FPS)
False Positive Rate	<0.01% @ 100 klx sunlight
# of Returns	Up to 2 returns
LASER	
Laser Safety Class	Class 1 (IEC 60825-1)
Laser Wavelength	1550 nm
Beam Divergence (Full Angle)	0.1°

LIDAR OUTPUT	
Data transmission	1000Base-T1 Ethernet (UDP, TCP)
Points Per Second	900,000 Points/sec
Data Rate (Megabits Per Second)	7.385MB/S@1 return 10.965MB/S@2 return
CONTROL INTERFACE	
Interface	TCP and HTTP APIs
Time Synchronization	<ul style="list-style-type: none"> • IEEE1588 (PTP) • IEEE 802.1as(gPTP)
MECHANICAL/ELECTRICAL	
Power	12V/30W
Operating Voltage	9 to 34V DC
Connector	Proprietary pluggable connector (Power + Automotive Ethernet + CAN)
Dimensions (H×W×D)	58.9mm×228mm×149.6mm
Weight	1.75 kg
Mounting	4×M4×18 screws, located in bushings
OPERATIONAL	
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +105 °C
Ingress Protection	IP67(body) IP69K(window)
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-64
Compliance	IEC60825-1 Class 1 eye-safe, RoHS, CE 
ACCESSORIES	
Optional Wire Harness	5m cable (power & Ethernet)
Optional Converter	Metadaptor
Optional Mount	Metal bracket
SOFTWARE	
Available Drivers	ROS/ROS2

Dimensions (Unit: mm)



*Specifications are subject to change without notice and based on engineering targets. Specs are not guaranteed to have passed full validation at the time of publication.