

# Avia LiDAR Sensor – Livox

## Basic Specs

Model	AVIA
Laser Wavelength	905 nm
Laser Safety	Class 1 (IEC60825-1:2014)(Eye Safety)
Detection Range (@ 100 klx)	190 m @ 10% reflectivity 230 m @ 20% reflectivity 320 m @ 80% reflectivity
Detection Range (@ 0 klx)	190 m @ 10% reflectivity 260 m @ 20% reflectivity 450 m @ 80% reflectivity
FOV	Non-repetitive scanning pattern: 70.4° (Horizontal) × 77.2° (Vertical) Repetitive line scanning: 70.4° (Horizontal) × 4.5° (Vertical)
Range Precision (1σ @ 20m)	2 cm <sup>1</sup>
Angular Precision (1σ)	< 0.05°
Beam Divergence	0.28° (Vertical) × 0.03° (Horizontal)
Point Rate	240,000 points/s (first or strongest return) 480,000 points/s (dual return) 720,000 points/s (triple return)
Data Latency	≤ 2 ms
Data Port	100 Mbps Ethernet
Data synchronization: (PPS+UTC)	IEEE 1588-2008 (PTPv2), PPS (Pulse Per Second), GPS
False Alarm Rate (@ 100 klx) <sup>2</sup>	< 0.0003%
IMU	Built-in model: BMI088
Operating Temperature	-4°F to 149°F (-20°C to 65°C)
IP Rating <sup>3</sup>	IP67
Power <sup>4</sup>	Repetitive scanning pattern: 9 W (Startup: 16W) Non-repetitive: 8 W (Startup: 16W)
Power Supply Voltage Range <sup>5</sup>	10 ~ 15 V DC (with Converter 2.0: 9~30V DC )
Noise	40cm omnidirectional <45 dBA
Dimensions	91×61.2×64.8 mm

Weight	498 g (without cables)
--------	------------------------

#### Notes

1. Measured in an environment of 25°C with a target (80% reflectivity) 20 meters away. The result may vary under different test conditions.
2. The false alarms ratio of the noise created by the stray light in a test environment of 0 to 100 klx at a temperature of 25°C.
3. The Livox Avia has an overall IP rating of IP67 (not including Livox Converter 2.0 and cables)
4. Starting power, especially at low temperature, might be significantly larger than the typical power. Please refer to user manuals for detailed information.
5. Make sure the output voltage of the power supply is within this range at all times.