

S10Ultra-Lite Solid-State LiDAR

V2.0 2026-09-08

MRDVS



The MRDVS S10Ultra-Lite is a compact, cost-effective, fully solid-state LiDAR. Using direct time-of-flight (dToF) technology, it delivers high-performance depth data over a range of 0.2 to 42 m indoors and outdoors. Its onboard SoC outputs depth maps, point clouds, and IR amplitude images. It supports software triggering and spatial and temporal alignment. An integrated IMU provides data at up to 200 Hz to support SLAM algorithms such as FAST-LIO and FAST-LIO2.

Key Features



dToF Depth Sensing

Measures the round-trip travel time of laser pulses to calculate distance, with a range of 0.2 to 42m and ambient light immunity up to 100klux.



Synchronized Data Output

Simultaneously outputs depth maps, point clouds, and IR amplitude images with temporal alignment.



Fully Solid-State Design

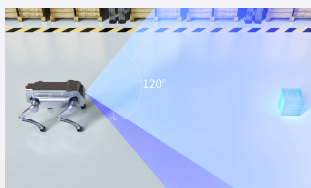
No moving parts. The compact 106×69×43mm design offers improved vibration resistance and stability.

Applications



Robotic Lawn Mowers

Enables precise localization and navigation for autonomous operation in gardens and on lawns.



Industrial Quadruped Robots

Improves localization, navigation, and environmental perception for inspection and exploration in complex industrial environments.

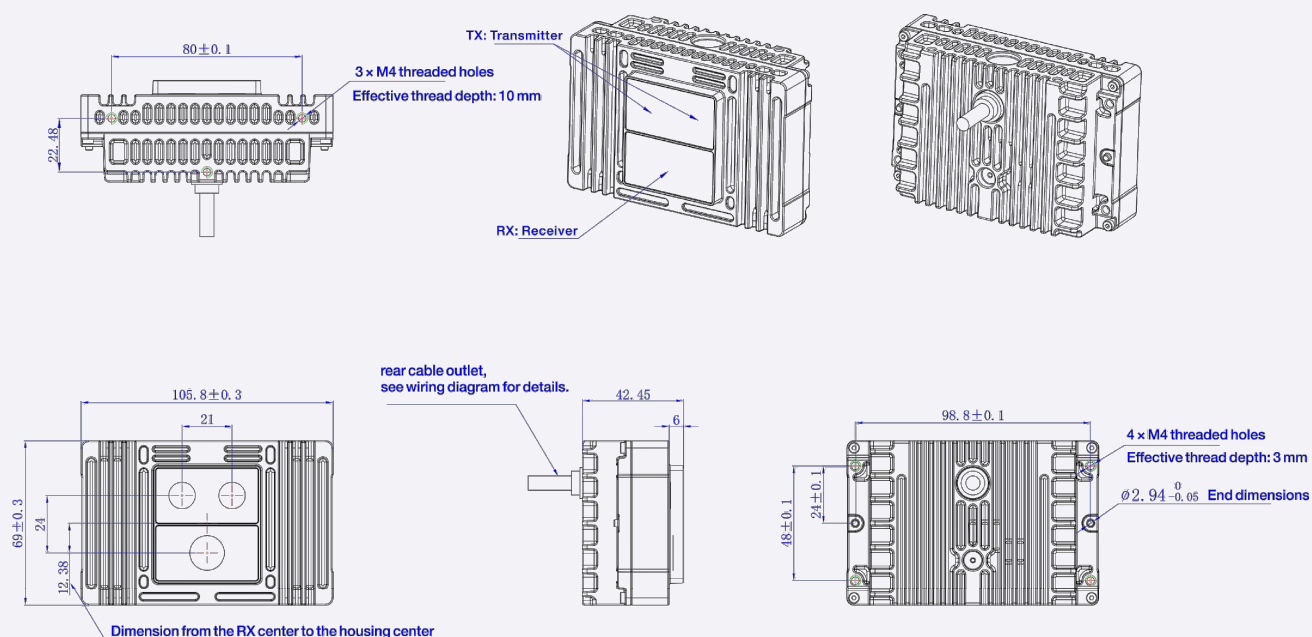


Multirotor UAVs

Improves localization, navigation, obstacle avoidance, and environmental perception for inspection and surveying.

Product Specifications

Model		S10Ultra-Lite	
Operating Environment	Indoor / outdoor	Time Synchronization	PTP
Depth Sensing Technology	dToF	Ingress Protection	IP67
Laser Wavelength	940nm	Laser Safety Class	Class I
Measurement Range	0.2–42m (90% reflectivity) 0.2–30m (10% reflectivity)	Dimensions	106×69×43mm
Ranging Accuracy	≤ 4cm	Weight	Approx. 410g
Output Data	Depth maps / point clouds / IR amplitude images	Power Consumption	< 9W
Depth Resolution / Frame Rate	240×120 @10fps (typical)	Input Voltage	12–27V
Depth FOV	120°×60°±3°	SDK Support	C/C++/ROS SDK
Data Interface	Circular connector	Supported Platforms	Windows 7 or later / Linux / Arm Linux / ROS / Android
Operating Temperature	–20°C to 75°C	Ambient Light Immunity	100klux
Storage Temperature	–40°C to 85°C	IMU Output Rate	200Hz



Unit: mm