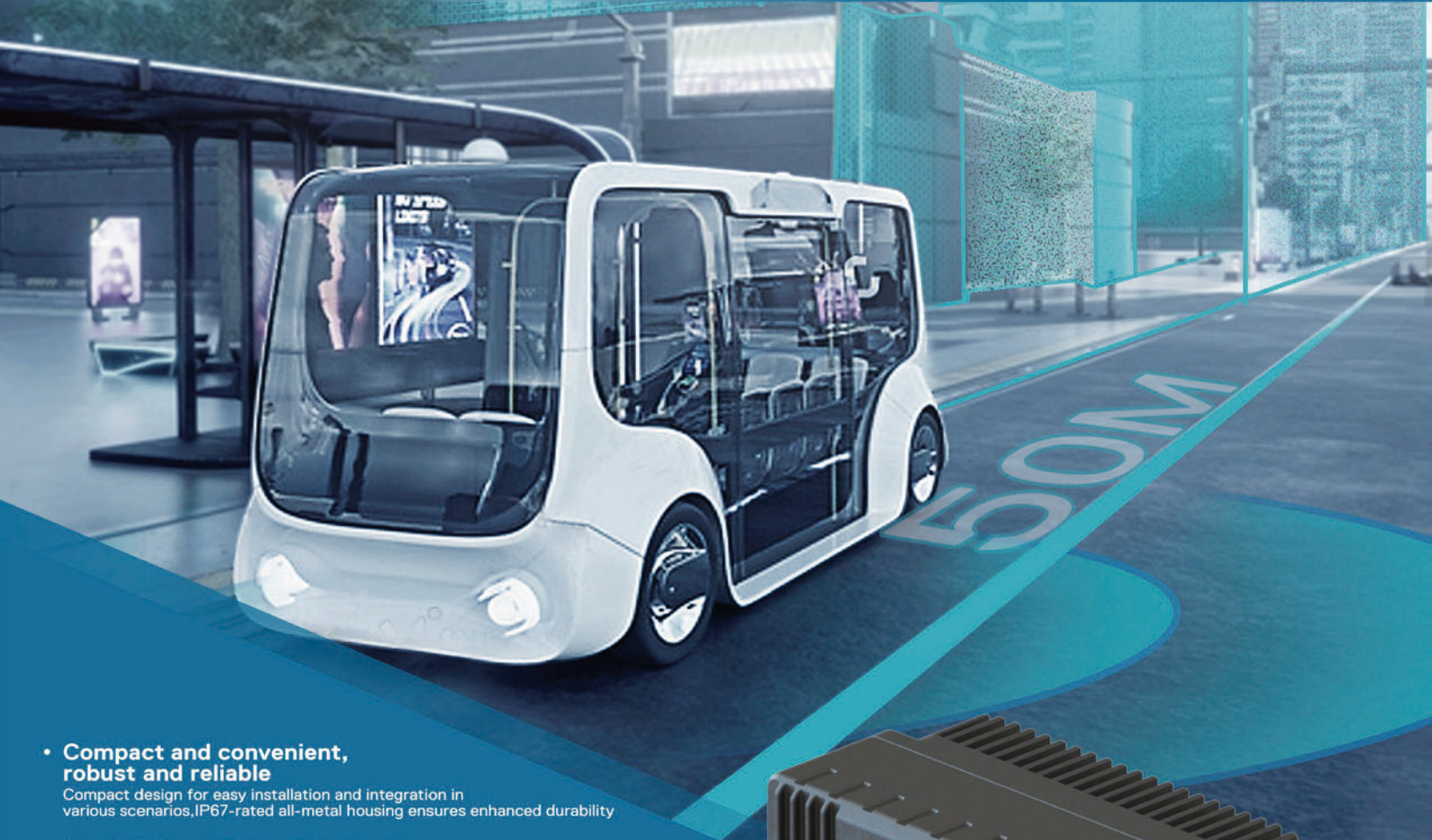


# VSS-50 All-solid-state LiDAR



- **Compact and convenient, robust and reliable**

Compact design for easy installation and integration in various scenarios, IP67-rated all-metal housing ensures enhanced durability

- **Wider FOV, denser point cloud**

With a 120°x50° FOV and 540,000 points per second, it creates high-definition 3D point cloud maps for clear scenarios.

- **Enhanced perception, longer detection range**

The VSS-50 can detect targets with 10% reflectivity at a distance of 30 meters, with a maximum detection range exceeding 50 meters. Resistant to 100,000 Lux light, it can assist various carriers in comprehensively mapping distant targets.



Robot Navigation



Surveying and mapping



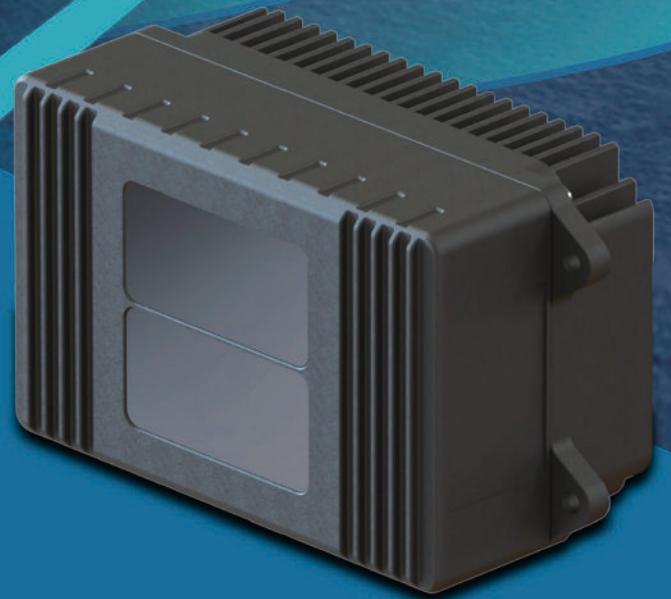
Vehicle autonomous driving



Obstacle avoidance for unmanned aerial vehicles



Safety monitoring



## Specification table

Item	Unit	Specification
Distance measurement principle		dToF distance measurement
Scanning principle		Flash scanning
Laser wavelength	nm	905
Laser Safety Class		Class1 (IEC 60825-1: 2014)
Measurement range		50m@90% 30m@10%
Range of measurement		0.1m~50m
Accuracy		±5cm (1 Sigma)
SPAD pixel array	m	368 (H) × 152 (V)
Horizontal field of view		120° (-60°~ + 60°)
Vertical field of view		50° (-25°~ + 25°)
Angular resolution		0.33° (H) × 0.33° (V)
Frame rate		10Hz
Spot frequency (single - echo mode)		540,000 pts/s @ 10Hz
Ambient light interference		100k Lux
Data interface		Gigabit Ethernet
Built-in Inertial Measurement Unit (IMU)		LSM6DS3TR-C
Data output protocol		UDP
UDP packet content		Coordinate values of the point cloud, reflection intensity or reflectivity
Power supply voltage	V	DC 9 ~ 16 V
Operating temperature	°C	-20°C~ + 55°C
Weight	g	720g
Overall dimension	mm	130×75×65

## Outline and mounting

