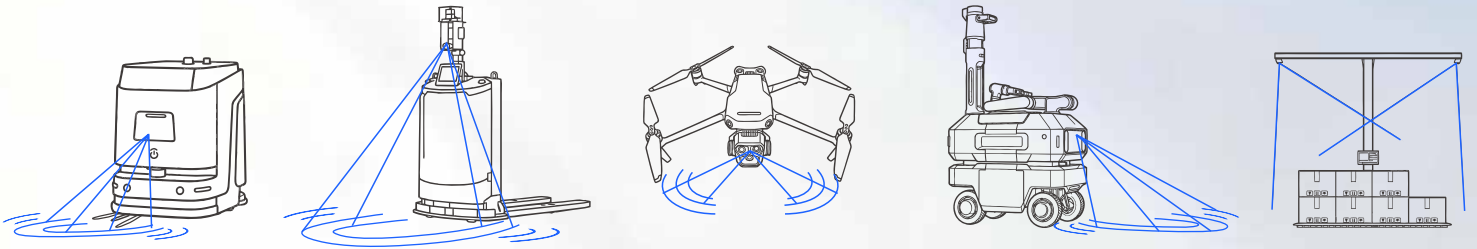


Physical AI begins with perception

S Series RGB-D Cameras

Giving robots the vision to act



MRDVS

S10 & S11 LiDAR-Vision Fusion Sensors

Enabling Reliable Navigation and Intelligent Obstacle Avoidance through fused perception. Engineered for scalable autonomy across environments.

S10 Ultra (Flagship Model)

Integrates **SPAD-based solid-state LiDAR + RGB-IMU fusion**, delivering:

- ✓ **42m long-range** (90% reflectivity) | $\leq 4\text{cm}$ accuracy
- ✓ **Real-time 3D SLAM** & semantic obstacle avoidance
- ✓ **Multi-sensor sync** (Depth/RGB/IR @10fps)
- ✓ **IP67 ruggedized** for harsh outdoor use

Ideal for: Self-driving vehicles, industrial robots requiring **long-range perception**.

S11 (Cost-Optimized Series)

Designed for **high-accuracy short-range** applications:

- ✓ **5m range** with $\leq 1\text{cm}$ precision (90% reflectivity)
- ✓ **140° ultra-wide FOV** (TOF & RGB aligned)
- ✓ **MIPI interface support** (Customizable for volume OEMs)

Perfect for: AGVs, service robots, and embedded systems needing **compact, high-res depth + RGB fusion**.

Product Specifications

Model	S10 Ultra	S10	S11	S11 MIPI
				
Market Status	Pre-order	Available Now	Pre-order	Pre-order
Sensor Type	LiDAR + RGB + IMU	LiDAR + RGB	dToF RGB-D Camera	dToF Camera
Laser Wavelength	940 nm	940 nm	940 nm	940 nm
TOF Resolution & Frame Rate	240 × 160 @Max. 10fps, Typical 10fps	240 × 160 @Max. 20fps, Typical 15fps	240 × 96 @Max. 20fps, Typical 10fps	240 × 96 @Max. 20fps, Typical 10fps
TOF FOV (H×V)	120° × 80°	120° × 80° ± 3°	118° × 44° ± 3°/ 140° × 56° ± 3°	118° × 44° ± 3°/ 140° × 56° ± 3°
Time Sync	PTP	PTP	PTP	-
Eye Safety	CLASS I	CLASS I	CLASS I	CLASS I

Model	S10 Ultra	S10	S11	S11 MIPI
RGB Resolution & Frame Rate	1280 × 1080 @Max. 20fps, Typical 10fps	1632 × 1224 @Max.20fps Typical 15fps	1280 × 1080 @Max. 20fps, Typical 15fps	-
RGB FOV (H×V)	120° × 110° ± 3°	120° × 80° ± 3°	120° × 110° ± 3°	-
Depth Measurement Range	0.2~42m (90% reflectivity) 0.2~30m (10% reflectivity)	0.3~8m (90% reflectivity) 0.3~3m (5% reflectivity)	118° FOV: 0.1~5 m/ 140° FOV: 0.1~3 m (10%~90% reflectivity)	118° FOV: 0.1~5 m/ 140° FOV: 0.1~3 m (10%~90% reflectivity)
Accuracy	≤4 cm	≤3 cm	≤1 cm	≤1 cm
Power Consumption	≤9W (avg)	≤4W (avg)	≤4W (avg)	≤2W (avg)
Dimensions (L×W×H)	105.8 × 69 × 42.45mm	80mm × 37mm × 25mm	90mm × 25mm × 25mm	32.2mm × 17.4mm × 11.1mm 32.2mm × 17.4mm × 12.7mm
Weight	440g	190g	<130g	<10g
Power Supply	12~27V	12V~28V	12V~28V	3.3V/5V
Communication Interface	Ethernet	Ethernet *Interface: Customizable	Ethernet/USB	MIPI
IP Rating	IP67	IP54	IP54	N/A
Operating Temperature	-20°C~75°C	-20°C~60°C	-10°C~50°C	-10°C~50°C
Storage Temperature	-40°C~85°C	-40°C~85°C	-20°C~65°C	-20°C~65°C
Software Environment	C/C++/ROS SDK	C/C++/ROS SDK	C/C++/ROS SDK	C/C++/ROS SDK
OS Support	Windows 7/8/10/11, Linux, Arm Linux/ROS	Windows 7/8/10/11, Linux, Arm Linux/ROS	Windows 7/8/10/11, Linux, Arm Linux/ROS	Windows 7/8/10/11, Linux, Arm Linux/ROS
Ambient Light Immunity	100 kLux	100 kLux	100 kLux	100 kLux

Case Studies

Outdoor Case studies

Alpheus Autonomous Sweeper S10 Ultra



「Fusion of Solid-state LiDAR, vision, and IMU」
Achieves centimeter-level mapping and positioning, along with semantic obstacle avoidance.

S10/S11



Reliably detects dynamic obstacles and static clutter.





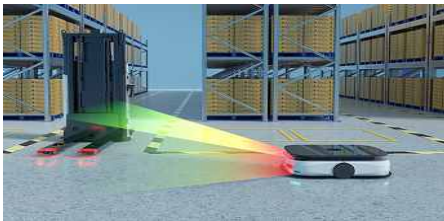
Indoor Case studies

THK Humanoid Robot Mobile Base S10/S11



Reliably detects both dynamic obstacles and static clutter in the operational environment.

Multiple Application Scenarios



AGV/AMR



Embodied Humanoid



UAV



Autonomous Delivery Robot



Volume Measurement



Unmanned Cleaning Vehicle



Home Companion Robot



Quadruped Robot



Inspection Vehicle



Service Robot



Robotic Lawn Mower



UGV

MRDVS
Mobile Robot Vision Expert

One Vision Platform, For Every Move and Load

Engineered for real-world complexity and scalable autonomy.



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