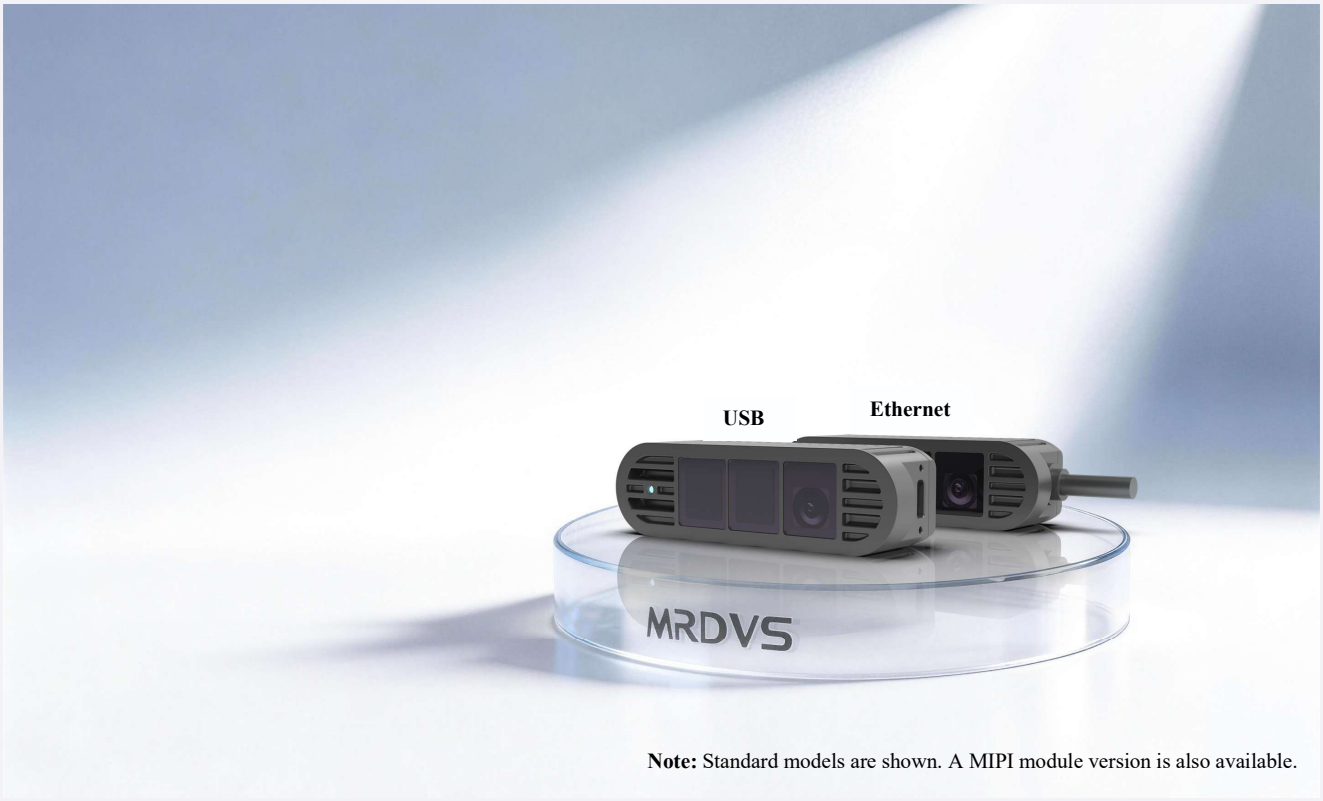
S11 dToF 3D Camera

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Note: Standard models are shown. A MIPI module version is also available.

The MRDVS S11 is a fully solid-state 3D camera based on dToF technology, designed specifically for mobile robots. It is available in Ethernet and USB versions. It provides real-time depth sensing over a typical outdoor range of 0.1 to 5m[1], with accuracy as fine as 1cm. It simultaneously outputs depth data, RGB images, and IR (infrared) images, providing a cost-effective, highly stable vision solution for core mobile robot functions such as obstacle avoidance, spatial perception, and modeling.

Note [1]: The indoor measurement range extends up to 10 m.

Key Features

dToF Depth Sensing Technology

Measures distance directly from the round-trip travel time of laser light. Compared with iToF, it offers higher accuracy (≤1cm), a wider effective detection range (0.1 to 10m indoors), and greater resistance to ambient light interference outdoors.

Synchronized Data Output

Simultaneously outputs depth images, RGB images, and IR amplitude images with no delay in data acquisition.

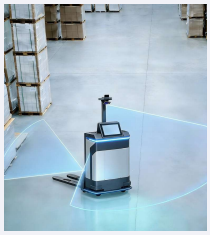
Fully Solid-State Design

With no moving mechanical parts, the camera features a compact design (90×25×25mm) and low weight (approximately 130g for the Ethernet model and 90g for the USB model), with improved shock resistance and stability. A customized MIPI version (33×18×13mm) is available on request.

Applications

Cleaning Robots	Ground obstacle detection
Industrial Mobile Robots	AGV/AMR/Autonomous Forklift/Obstacle Avoidance
Service Robots	Shopping assistance and delivery
Home Companion Robots	Environmental perception
Special-Purpose Robots	Low-temperature or humid environments







400-025-6680 No. 7-902, China Artificial Intelligence Town, Hangzhou City Website: https://mrdvs.com/ More information: https://hub.mrdvs.cn/

S11 dToF 3D Camera

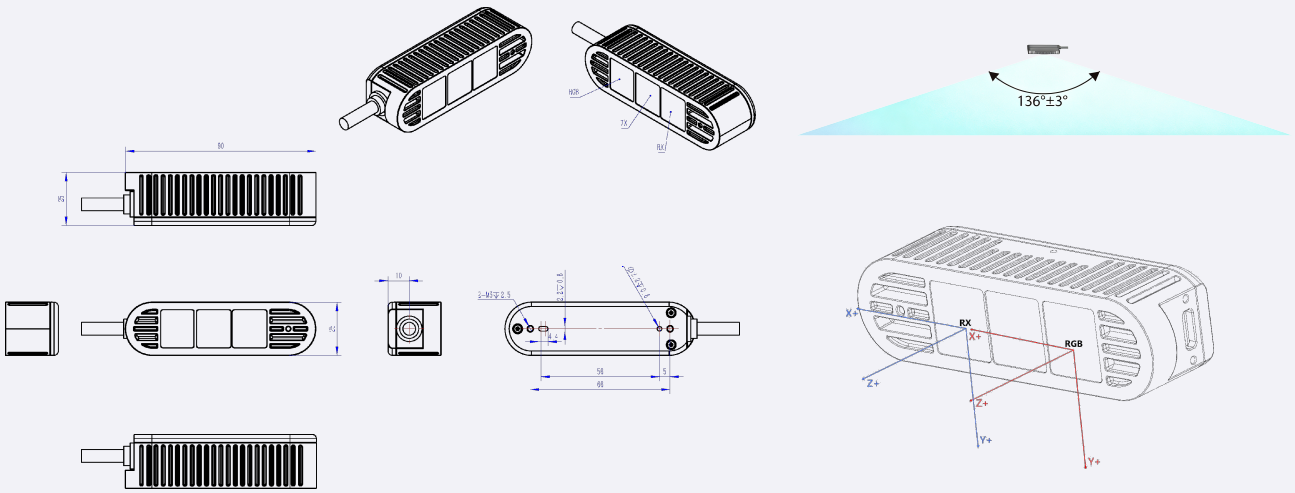
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MRDVS

Product Specifications

Model	S11 dToF 3D Camera		
Operating Environment	Indoor/outdoor	Operating Temperature	-20℃~75℃
Depth Measurement Technology	dToF	Storage Temperature	-40℃~85℃
Laser Wavelength	940nm	Time Synchronization	PTP
Depth Measurement Range	0.1-5m (outdoor) Reflectivity: 10%-90%	IP Rating	IP54 (Ethernet)/IP67[3]
Measurement Accuracy	≤1cm	Eye Safety	CLASS I
Output Data	Depth images (point clouds)/RGB images/IR amplitude images	Dimensions	90×25×25mm
Depth Resolution / Frame Rate	240×96@Max.15fps/10fps (typical)	Weight	Ethernet: about 130g USB: about 90g
Depth FOV[1]	136°×56°	Power Consumption	< 4W (average) 13W (peak)
RGB Resolution / Frame Rate	1280×1080@Max.15fps/10fps (typical)	Power Supply	Ethernet: 12V~28V DC USB: 5V via USB 3.0
RGB FOV[1]	120°×110°	Software Environment	C/C++/ROS SDK
RGBD Alignment	Supported	Supported Systems	Windows 7+, Linux, Arm Linux/ROS
Data Interface[2]	Ethernet/USB	Ambient Light Immunity	100 kLux

Note [1]: Both the depth and RGB fields of view have a tolerance of ±3°; **Note [2]:** A customized MIPI module is available on request; **Note [3]:** For information on the IP67 version, please contact the MRDVS FAE team.



Note: For dimensional drawings of the USB model and MIPI module, please visit the MRDVS Knowledge Community