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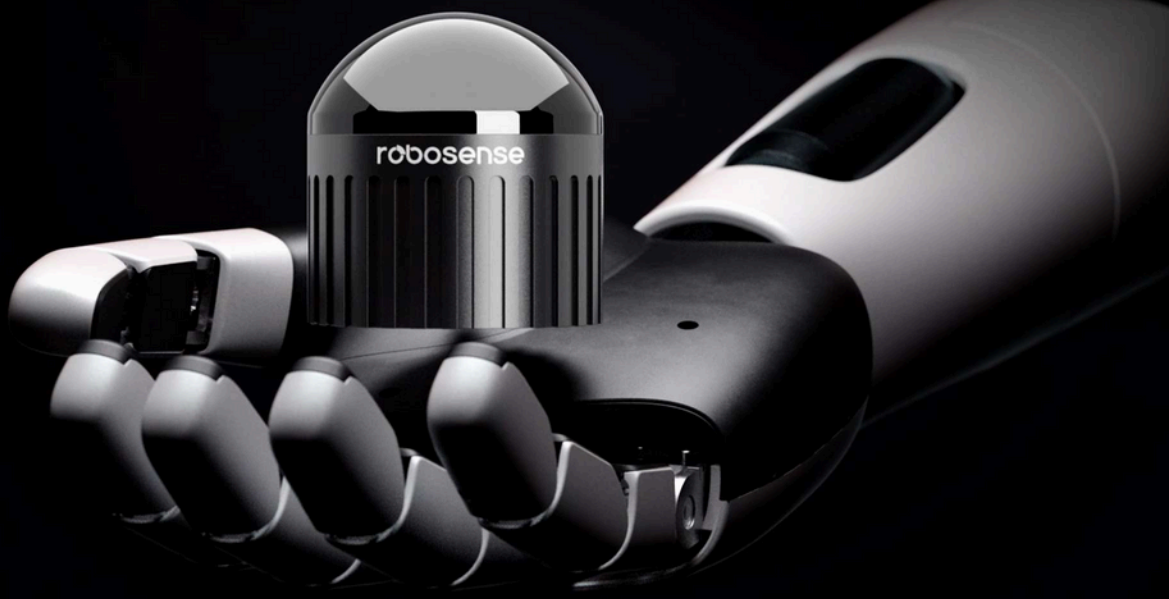


Airy

The World’s First 192-Beam Hemispherical Digital LiDAR

Génération ROBOTS

Overview

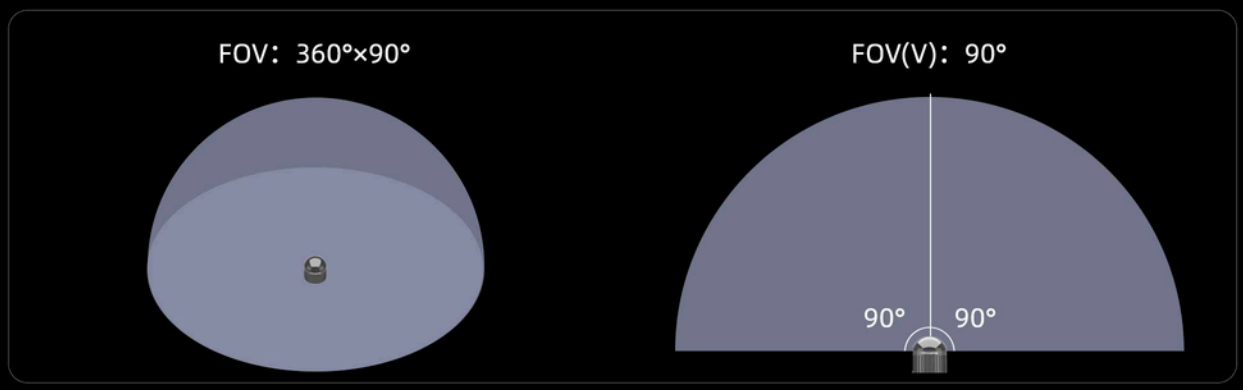
Airy is the first digital hemispherical LiDAR on the R platform, featuring a chip-based transceiver solution and a high-sensitivity digital detection scheme. Compact in size, comparable to a ping-pong ball, it delivers an ultra-wide hemispherical FOV with 360° horizontal and 90° vertical coverage, encompassing a 60-meter radius range. With 1.72 million points per second and ±1cm detection accuracy, Airy provides real-time detection of object size, contour, and distance. Its well-structured, algorithm-friendly point clouds enable exceptional performance in obstacle avoidance, mapping, and navigation tasks.

Airy supports a wide variety of robots operating seamlessly in diverse lighting conditions, enabling all-weather continuous operations and advancing the intelligent application of robots across all scenarios.

Product Specifications

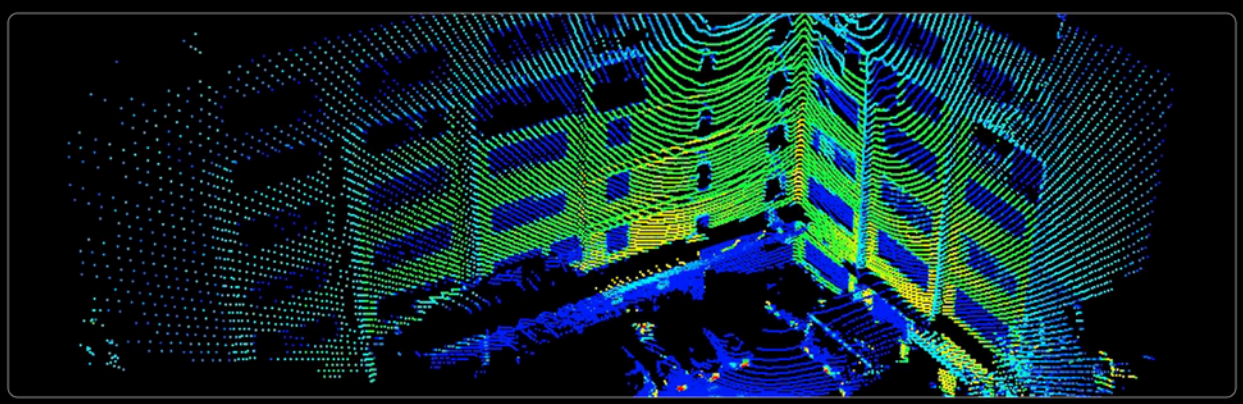
Wavelength	940nm	#of Lines	192/96/48
Range	30m@10%	Laser safety	Class 1 eye safety
Maximum range	60m	Accuracy	±1cm
FOV (H×V)	360°×90°	Blind spot	＜0.1m
Angular resolution (H)	0.4°	Angular resolution (V)	0.47°
Frame rate	10Hz	Power consumption	<8W
Points per second (single return mode)	~1,720,000pts/s (192-Beam) ~860,000pts/s (96-Beam) ~430,000pts/s (48-Beam)	Points per second (Dual return mode)	~3,440,000pts/s (192-Beam) ~1,720,000pts/s (96-Beam) ~860,000pts/s (48-Beam)
Ethernet connection	100Base-TX	Output	UDP packets over Ethernet
Dimension	ϕ60mm×H63mm	UDP packet include	Spatial Coordinates Intensity Timestamp, etc.
Weight (without cabling)	＜240g	Operating voltage	9V ~ 32V
Operating temperature	-40°C ~ +60°C	Storage temperature	-40°C ~ +85°C
Time synchronization	$GPRMC with 1PPS, PTP&gPTP	Ingress protection	IP67、IP6K9K

Perfect Hemispherical FOV

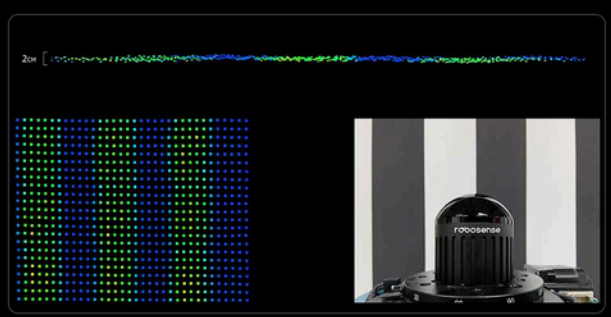


Neat and High Resolution Point Cloud

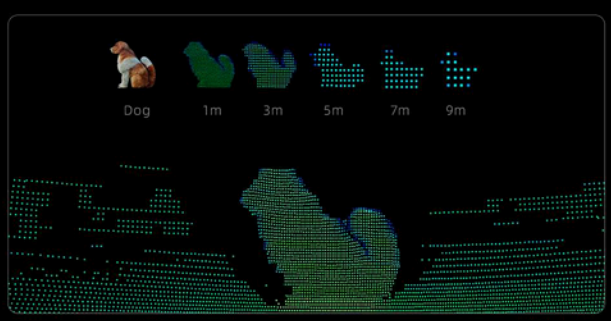
Ultra-wide FOV



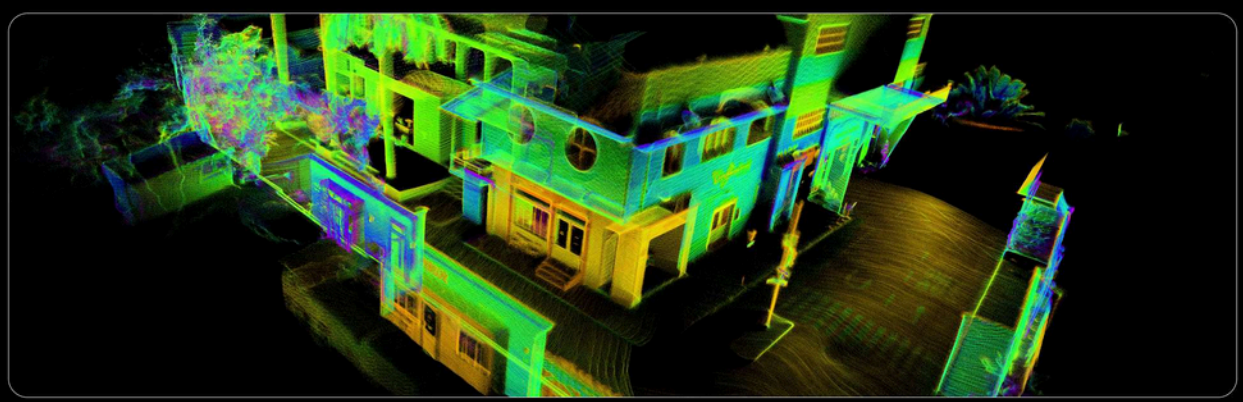
Achieves a distance measurement accuracy of up to ±1cm



High-Definition Detection of Small Animals



3D SLAM



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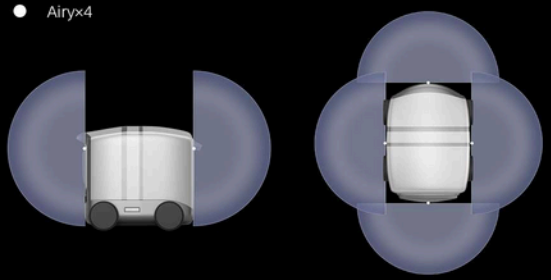
Applications

Airy delivers an ultra-wide hemispherical FOV with 360° horizontal and 90° vertical coverage, spanning a 120-meter diameter range. This significantly enhances robots' efficiency in obstacle avoidance, mapping, and localization.

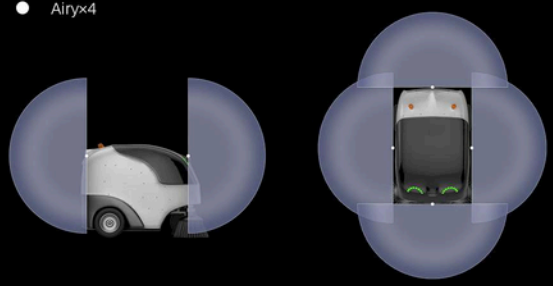
Autonomous Delivery Robot

- Airy×4



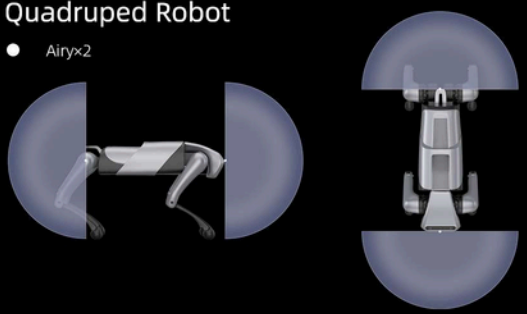
Cleaning Robot

- Airy×4



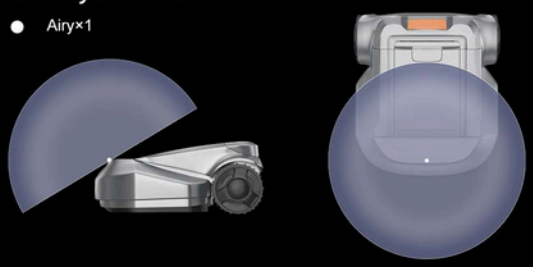
Quadruped Robot

- Airy×2



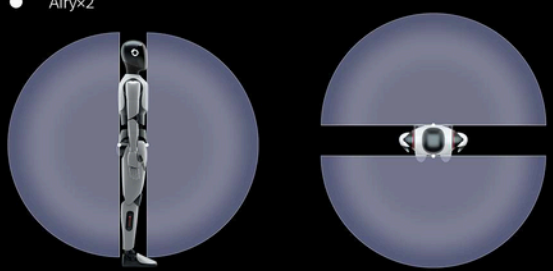
Courtyard Robot

- Airy×1



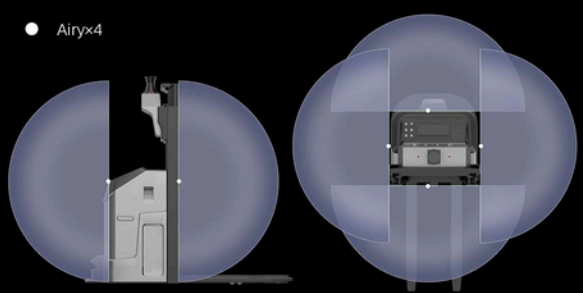
Humanoid Robot

- Airy×2



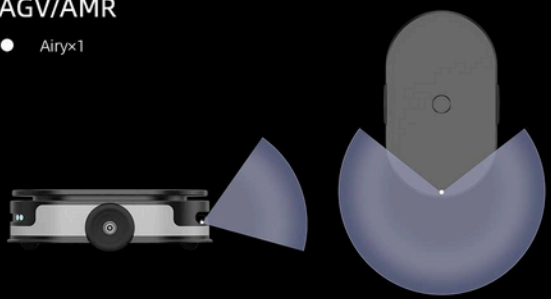
Unmanned Forklift

- Airy×4



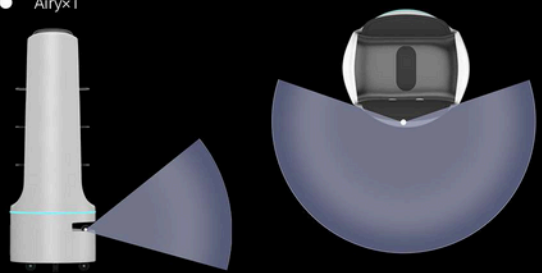
AGV/AMR

- Airy×1



Service Robot

- Airy×1



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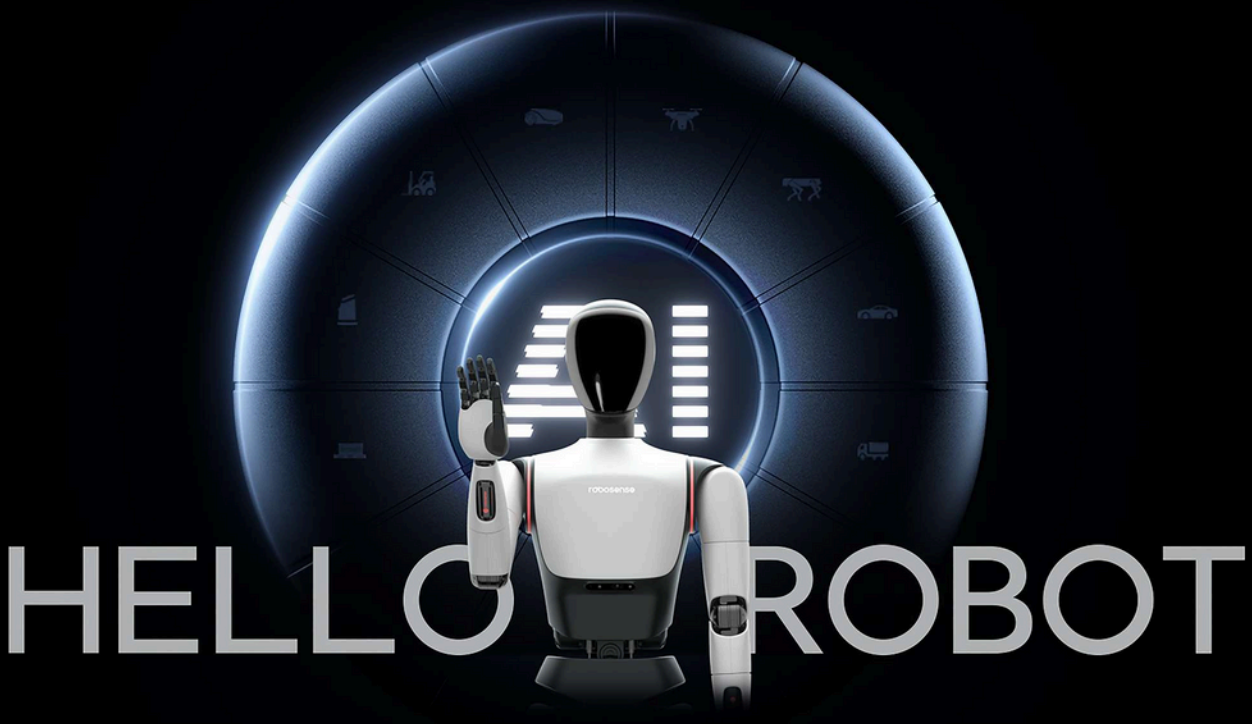

About RoboSense

RoboSense (2498.HK), founded in 2014, is an AI-driven robotics technology company that supplies industry-leading incremental components and solutions for the robotics market.The company is committed to "Become the global leader in robotics technology platforms", and its mission is "Safer world, Smarter life". Headquartered in Shenzhen, China, RoboSense employs over 1,400 professionals and operates offices in various countries and regions, including Shanghai, Suzhou, Hong Kong in China, Stuttgart in Germany, and Detroit, Silicon Valley in the United States.

With a strong foundation in robotic systems, RoboSense develops and supplies solutions for mobile and operational robots. In the automotive market, known for its stringent requirements on mass production and delivery, the company has established partnerships with over 290 global automotive OEMs and Tier 1 suppliers. In the rapidly growing intelligent robotics market, RoboSense serves over 2,600 customers across robotics and other industries, offering incremental components and solutions tailored to diverse scenarios and tasks. The company actively supports robotics developers and promotes the growth of the intelligent robotics technology ecosystem.

Generation ROBOTS

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