Product Specifications
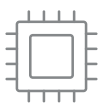
	Model	AMB-300XS	AMB-300/300D
Parameter	Navigation Method	Laser SLAM	
	Drive Mode	Two-wheel differential	
	Shell Color	Pearl white	
	Dimensions (without Robotic Arm)	845 mm x 585 mm x 700 mm	1000 mm x 700 mm x 793 mm
	Rotation Diameter	980 mm	1040 mm
	Weight (with Battery)	120 kg	144 kg
	Load Capacity	300 kg	
	Minimum Aisle Width	725 mm	840 mm
	Navigation Accuracy	± 5 mm, ± 0.5°	
	Navigation Speed	≤ 1.5 m/s	≤ 1.4 m/s
	Map Area (Single Frame)	200,000 m²	
Battery	Spec	48V, 40 Ah (lithium battery)	48V, 40 Ah (lithium iron phosphate)
	Endurance	8 h	8 h
	Charging Time (10-80%)	≤ 2.5 h	
	Charging Method	Manual/automatic/quick charge	
Extended Interface	Power DO	Three-way (Total load capacity of 24V/2A)	Seven-way (Total load capacity of 24V/2A)
	DI	Eleven-way (PNP/NPN)	Ten-way (PNP/NPN)
	Emergency Stop Interface	Two-way output	
Network Interface	Wired Network	Two-way M12 X-CodeGigabit Network	Three-way RJ45 Gigabit Network
	Wireless Network	Wi-Fi 802.11 a/b/g/n/ac	
Operation Panel	Number of Lidar	2 (SICK nanoScan3)	1 or 2 (Free-Optics H1E0)
	E-stop Button, Buzzer, Ambient Light, Safety Rim	✓	
	HMI Display	–	✓
Working Environment	Ambient Temperature and Humidity	0° to 50° C. 10% to 90% noncondensing	
	IP Rating	IP20	IP20
Certifications	ISO 3691-4	✓	–
	EMC/ESD, UN38.3, RoHS, REACH	✓	
	Cleanroom	ISO Class 5	–

DOBOT

Autonomous Mobile Manipulation Robot

General Purpose Transportation Solution

AMMR

The AMMR combines cutting edge SLAM, laser navigation, and human machine interaction technologies to realize transportation and pick-and-place capabilities, featuring precise navigation, proactive safety measures, easy to use software, and is safe for collaborations with humans. Combined with accessories from our ecosystem partners, the AMMR can perform tasks such as wafer transportation, loading & unloading to multiple machines, power inspection and more, to improve logistics efficiency in industrial scenarios.

Application Scenarios

| Wafer handling | Loading & unloading | Machinery processing | Power inspection | Consumer electronics | Healthcare | Personal care products |

Key Features

Easy to Use. Precise and Efficient.

Reliability
Embedded laser SLAM algorithm achieves repeatability up to ± 5 mm and ≤ ± 2 mm relative positioning for seamless workflow among labor, machines, and cargo to improve logistics efficiency.

Expandability
Highly modularized design with cobots, AMR, cameras and grippers, the AMMR works with every cobot in the DOBOT CR Series, popular 2D/3D vision systems and grippers from third parties. Choose from a variety of accessories to work with your transportation and other scenarios.

Deployability
Use just one software to perform all the setup tasks, including map construction, points of interest, path planning, robot calibration, task creation. A resource management system is also included to manage operations with ease. MES can be seamlessly connected.
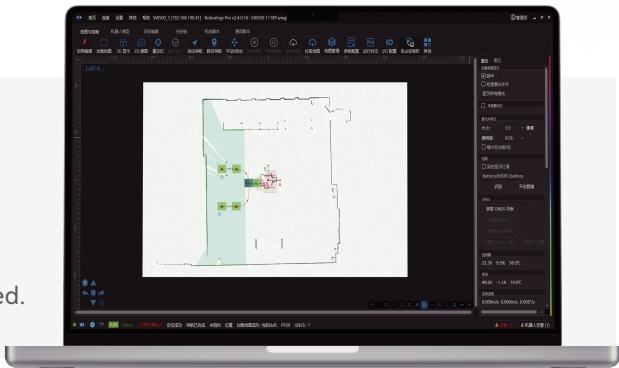
Better Protection with Safety Features.

Speed Monitoring: Dual encoders monitor the movement and spinning speed of AMMR, and stop motors when threshold is exceeded.

Safety Limit: Proximity sensors check for arrival to destination and halt robots to avoid collision.

Safety Zone: Dual lidar sensors perform 360-degree scan to recognize safety zones set by users.

ISO 3691-4:2020, CE-MD, CE-EMC, CE-RED certified.

IEC 61508, IEC 62061, ISO 13849 certified.

Faster Calibration with Vision Sensors.

Optional vision kit with proprietary 2.5D calibration process and visual positioning algorithm for spatial compensation to achieve visual positioning accuracy of 0.5 mm. The operation can be done manually or automatically in 3 steps involving no-code graphical programming. The kit supports measurement, QR code and letter recognition to enable a wide range of vision-based applications.
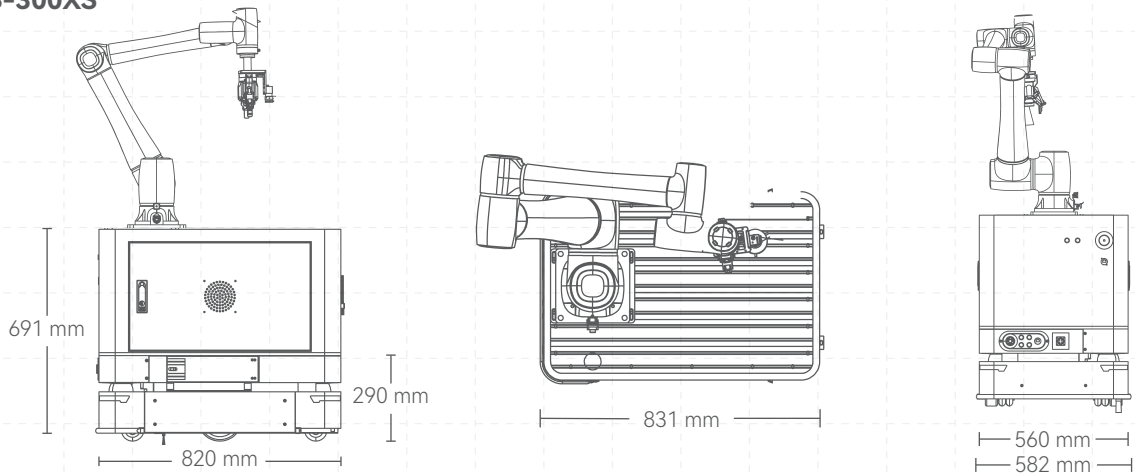
ISO Class 5 Cleanroom certified.

All parts meet the CE requirement.

Product Dimensions

AMB-300XS

691 mm
290 mm
820 mm
831 mm
560 mm
582 mm

AMB-300/300D

793 mm
200 mm
1000 mm
1000 mm
657 mm
700 mm