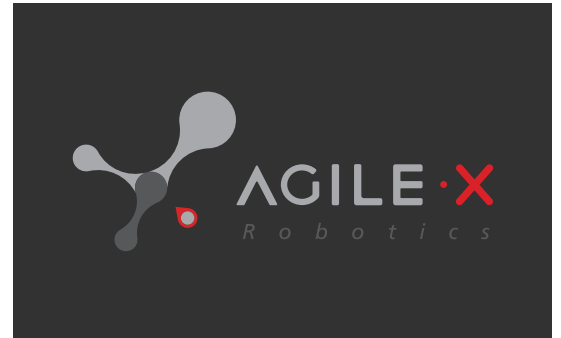AGILE·X
Robotics

Mobile Operation Robots

Precisely Clamping and
Delivering, Empowering
Unmanned Factory.

Company Profile

Founded in 2016, AgileX Robotics is a leading mobile robot chassis and customized unmanned driving solution provider with a vision to enable all industries to improve productivity and efficiency through robot technology.

AgileX Robotics has developed a full line-up of industry-leading robotics chassis that fully meet all industries requirements, including general UGV, indoor AGV, tracked chassis and many of them obtained CE certification. Back by mature software capabilities, Agilex Robotics also provides customized autonomous driving solutions, including parallel driving solutions, robot R&D kits, mobile manipulator, and autopilot kit to enable customers to accelerate the development and verification of their autonomous driving and robotics projects.

The company's core teams come from leading companies such as DJI and Mathworks and well-known scientific research institutions. With the cooperation with over a thousand enterprises including Alibaba, Huawei, Honda, the China Construction Third Engineering Bureau, and over fifty global top universities, AgileX Robotics has deployed more than one thousand applications in a range of industries purposes including autonomous driving, academic research, agriculture management, geographic surveying industries, and more.

Introduction

Based on AMR platform, AgileX Mobile Operation Robots equip with 7-axis manipulator which carrying sucker, claws and other end effectors, applying in multiple logistics scenes of semiconductor producing, CNC manufacturing and other industry, providing flexible and steady transport for precise instrument.

Functions

Abundant Combination
Equipping with claws, sucker and other end effectors.

Easy Deployment
Based on Lidar and Vision navigation, deployment can be done within a week.

Precise Docking
The accuracy of end effector is better than ±1mm, robot can dock to equipment precisely.

Intelligent Dispatch
Intelligently task allocation and dynamic cluster control.

Continuous Operation
Autonomous recharge or battery replacement, providing continuous productivity.
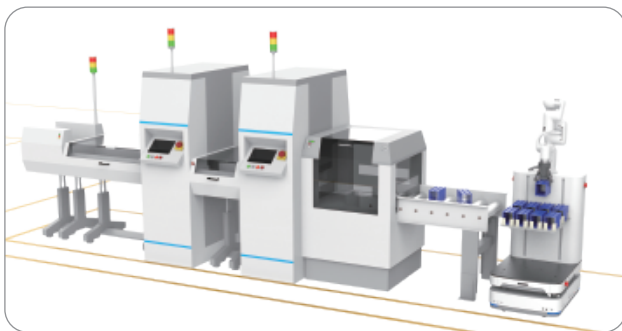
Safe and Stable
Stereoscopic detection and intelligent obstacle avoidance.

Scene

Wafer Box Transport

■ Industry: Semiconductor

With mobile operation robots, the wafer box can be transported automatically which can improve product yield, realizing flexible manufacturing of wafer.

Magazine Transfer

■ Industry: Semiconductor

AMR can load and unload single magazine, realizing the circulation of entire pallets between station and oven.
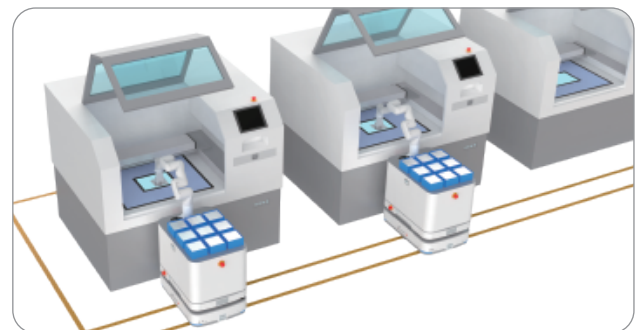
Diaphragm Cutting

■ Industry: Semiconductor

With sucker as end effector of manipulator, AMR can realize load and unload diaphragm during the process of diaphragm cutting.
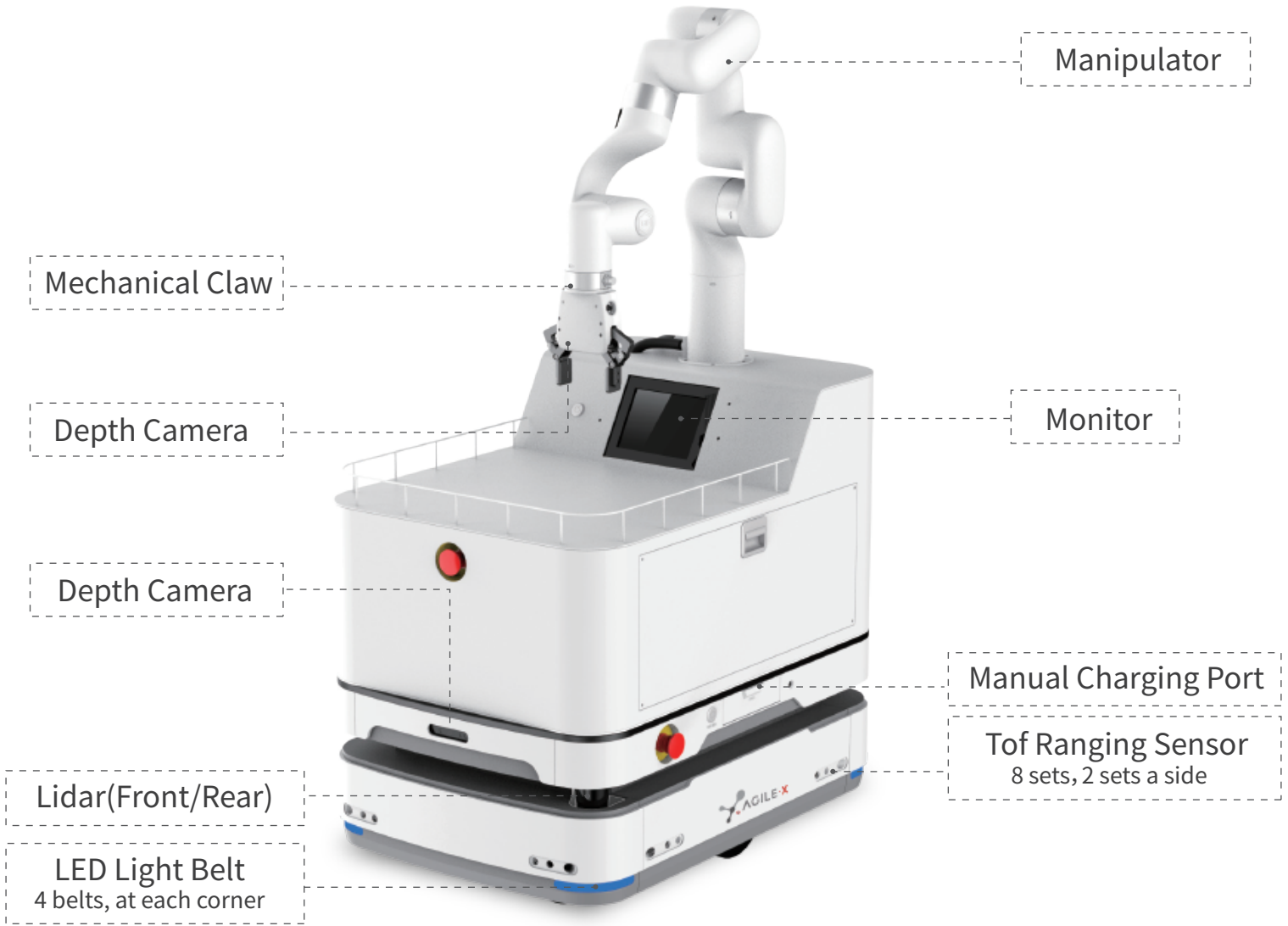
CNC Material Transfer

■ Industry: CNC

Docking to CNC manufacturing station, AMR can realize auto loading and unloading of CNC material.

Conflguration

Manipulator

Mechanical Claw

Depth Camera

Monitor

Depth Camera

Manual Charging Port

Tof Ranging Sensor
8 sets, 2 sets a side

Lidar(Front/Rear)

LED Light Belt
4 belts, at each corner

AGILE-X

Deployment Accessories

UWB Station, Remote Control Box, Charging Pile

Parameter

Model	Mobile Operation Robot
Dimensions	820x560x1440mm
Weight	160kg
Payload	160kg
Turning Radius	470mm（Turning on its center）
Aisle Width(one way)	860mm
Aisle Width(turning)	1440mm
Navigation Method	Autonomous navigation based on SLAM
Driving Method	Two-wheel differential
Brake Method	Slow down/Emergency stop
IP Class	IP21
Max Speed	Rated speed：1.25m/s ，Max angular velocity：120°/s，Max navigation speed：1.2m/s
Environment	5~40 ℃
Humidity	10~95 RH%
Lithium Battery	Rated voltage：24V ，Capacity：40Ah ， Charging time：2.5h ，Running time：8h（Continuously running under full load）
Charging Voltage	29.4V
Rated power	650W
Positioning accuracy	Positioning precision：±100mm/±3° With VL mark：±10mm/±1°
Traf☒cability	Traversable gap：20mm ，Traversable step：10mm ， Traversable step： 5%（Only chassis）
Ground	Hard, ☒at ground（No water/oil/dust）
Communication	Wi-Fi：802.11a/b/g/n/ac I/O：USB and RJ45
Standard Accessories	AC adapter
Protection	Lidar（Front and rear）, Depth Camera（Front）, Emergency Stop Button（Left, right side, and front of manipulator base）, TOF Ranging Sensors（Each side）, LED Light and speaker alert

Accessories	UWB Station	Remote control box	Charging pile

AGILE·X
Robotics

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