



# **WONIK** **ROBOTICS**

Total Solution Provider for Factory  
Material Handling and Automation

Our team specializes in delivering innovative and customized automation and robotics solutions, designed to meet the needs of our clients. Our mission is to drive efficiency, increase productivity and empower companies to reach their full potential.



## AMR

Supply of customized self-driving robots (AMR)

AI-based self-driving robots have built-in sensors and cameras to identify the surrounding environment and search for the most efficient route on their own, so no separate facility for sensing is required, and it can be flexibly applied even if the process or facility changes.



## AMR Shelf

The better way to handle wide range of materials and products

The AMR Shelf Type is equipped with specialized shelves or racks that are designed to securely hold and transport various items, such as components, products, or materials. These shelves are often adjustable to accommodate different sizes and types of items.



## Mobile Manipulator

The smarter way to move and work

We support design/development/operation with the optimal solution for manufacturing facilities. Through its own ACS, it provides software that can control various missions such as location, route, and scheduling, enabling rapid deployment in manufacturing facilities.

## AMR Specifications

Item	Content	Specification
Robot Basic Information	W/L/H(mm)	630 x 823 x 273mm
	Payload(kg)	300kg
	product material	- Sheet metal/ Aluminum - Power coating
	Wheel Type	Differential Type
	Wheel Information	2 main/ 4 sub, Size: 150mm
Performance	Loading method	Front/ Side Conveyor
	Moving type	Autonomous driving
	Operation Time	About 10Hr
Safety & sensor device	Average Speed (m/sec)	About 0.7m/sec
	Emergency	Up to 2EA
	Camera	3D depth camera x 2
External Interface	Lidar	SICK Lidar x 2
	Interface	Charging/Power Switch/WIFI
	Display	LCD
Battery & Charging Station	Alarm	Sound & LED
	Charing Time	About 1~ 1.5Hr
	Battery capacity	Li-ion DC24V / 50Ah
	Charging method	Autonomous docking
	Communication	WIFI
Communication	Charging station Size	575 x 313 x 760mm
	Network	WIFI (or support LTE)



## ACS AMR Control System

Real-time Integrated Control System for Multiple Robots

It controls up to 100 robots in real-time, provides a controllable network-based system, and enables efficient operation management of AMR by linking with upper systems such as ERP or MES.



# Smart Factory



**AMHS** (Automated Material Handling System)  
It streamlines the logistical processes, reduces manual labor, and enhances overall productivity.



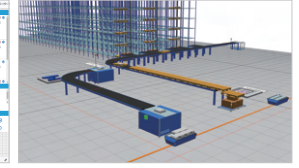
**MCS** (Material Control System)  
MCS serves as a centralized control system that oversees and manages the entire material flow within the smart factory.



**SCS** (Stacker Control System)  
It integrates with various stacker equipment, such as ASRS to monitor and control material handling operations.

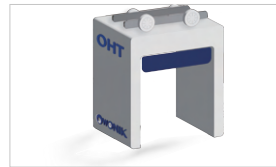


**ACS** (AMR Control System)  
Real-time integrated control system for multiple mobile robot.

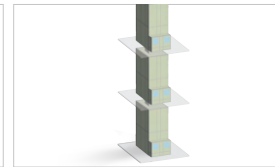


**Digital Twin**  
It can simulate production processes, providing insights into performance, bottlenecks, and potential optimizations.

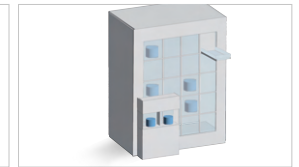
# Semiconductor / Display



**OHT** (Overhead Hoist Transport)  
OHT is a high-efficiency transporting vehicle moving along the upper rails installed on the ceiling of semiconductor manufacturing lines.



**Lifter** (Zip Tower)  
It allows a vertical transportation of FOUP between floors.



**Stocker**  
It stores and transfers FOUP (wafer storage container) between production processes.



**STB** (Side Track Buffer)  
It helps regulate the flow of wafers between different stages of the manufacturing process, ensuring smooth and continuous production.



**Probe Card STK**  
It establish electrical connections between the testing equipment and the individual devices on a semiconductor wafer during the testing phase.

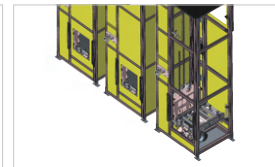


**Autonomous Mobile Robot**  
AMR system autonomously transfers products between different phases of semiconductor production.

# Secondary Battery



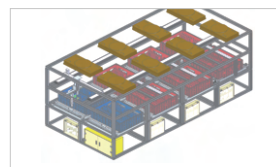
**Stacker Crane**  
Stacker Crane is an automated storage and retrieval machine in high-bay warehouses.



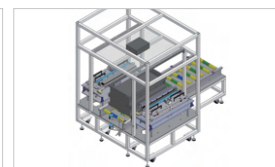
**Lifter**  
It enables vertical stacking of the components, optimizing floor space and facilitating easy access during the manufacturing process.



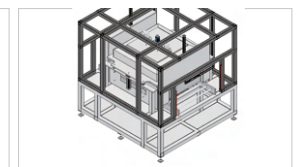
**Conveyor**  
It facilitates the continuous flow of components, enabling efficient material handling, assembly, testing, or packaging operations.



**NG Sorter**  
It helps to ensure that only acceptable and compliant products move forward in the production process.



**IR OCV**  
It provides information about the state of charge, voltage stability, and the internal resistance, helping to assess its performance and health.



**Tray Cleaner**  
It helps maintain cleanliness, prevent cross-contamination, and ensure the integrity of the battery components during transportation and storage.

# MH (Material Handling)



**Machine Tending**  
It involves managing the workflow, supplying raw materials or components, and maintaining the optimal performance of the machines.



**Robot Picking System**  
AI-based Robot Picking System automates picking operation for various kinds of items.



**Mobile Manipulator**  
It combines mobility with robotic manipulation capabilities, enabling it to perform a wide range of material handling tasks.



**AMR**  
AMR system transfers materials or finished products between different phases of production without human intervention.



**Contact Us.**

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