Multiway Robotics

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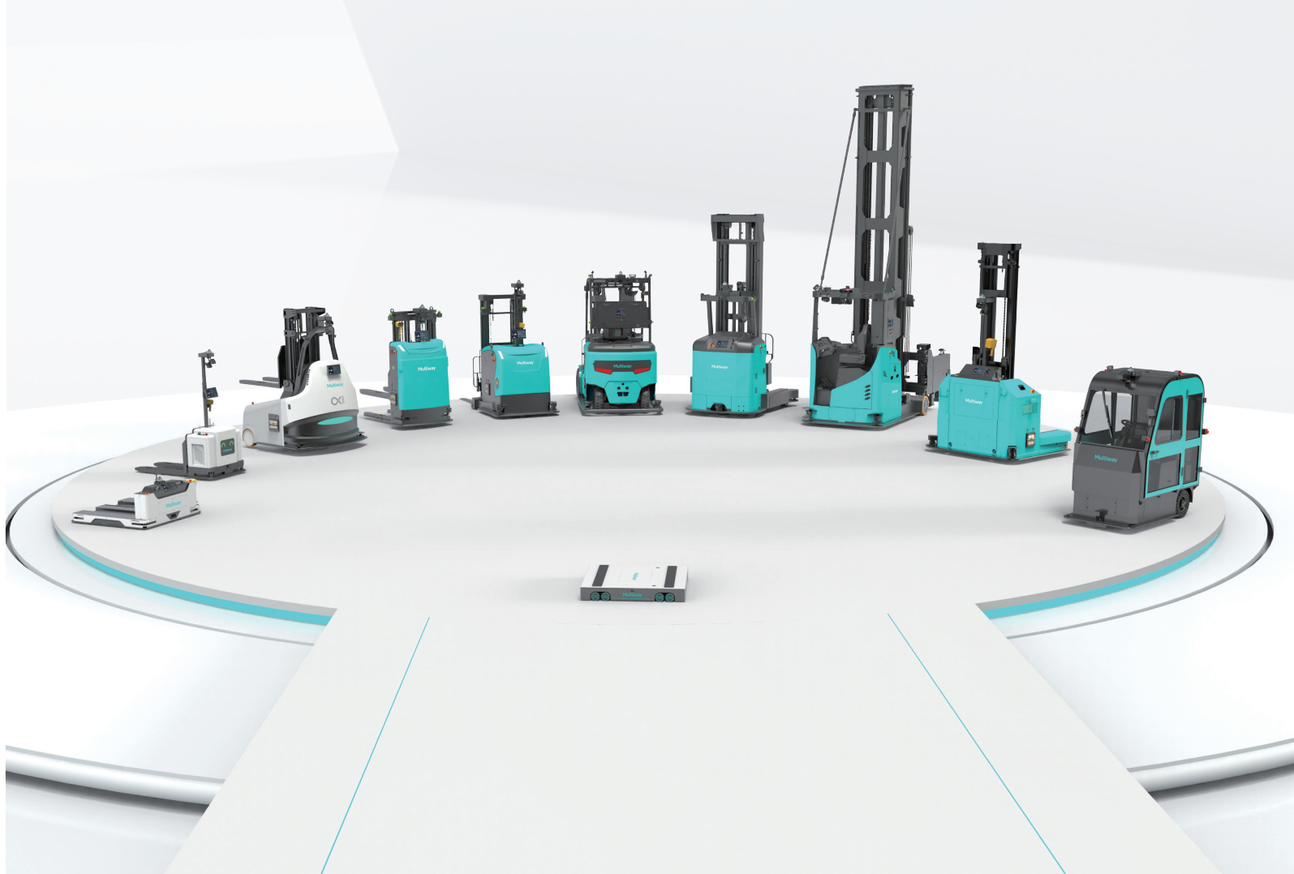
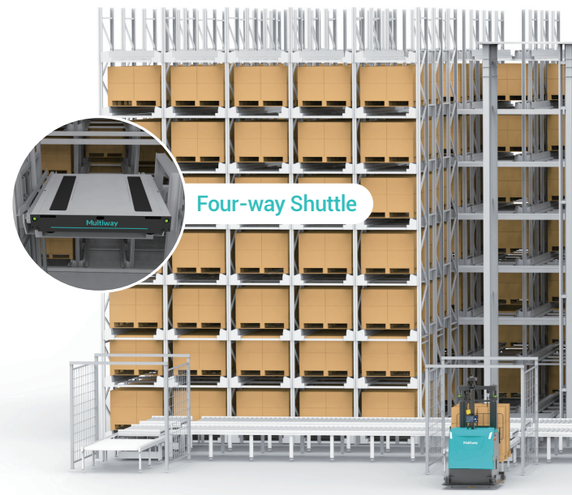
Product Selection Guide



Application Scenarios

	Pallet Truck			Forklift	Forklift			
Aisle Width	1900mm	2300mm	2300-2500mm	3150-3800mm	4100-4250mm	2300-2800mm	3150-3340mm	1750mm
	Omnidirectional	Pallet Truck	Pallet Stacker	Counterbalanced	Counterbalanced	Sideloader	Reach Truck	VNA Truck
	OT10	X20/20S	MW-SL14/16	MW-SE15/20/30	MW-E30/35/40	MW-O15/20/30/40/50/80	MW-R16S/20S/16/20/25	MW-K16
Horizontal Handling	●	●	●	●	●	●	●	●
Docking With Production Line	●	●	●	●	●	●	●	●
Floor Changeover By Elevator	●	●	●					
Cage/Frame/ Cargo Stacking			●	●	●	●		●
Loading & Unloading From Low-level Shelves			●	●	●	●	●	●
Loading & Unloading From Medium-level Shelves					●	●	●	●
Loading & Unloading From High-level Shelves							●	●
Very Narrow Aisle	●							●
Long material Handling and Storage & Retrieval From High Level						●		
Automated Loading and Unloading From Container trucks				●				
Automated Loading and Unloading From Wing-door Trucks				●	●	●	●	
Automated Loading and Unloading From Flatbed Trucks				●	●	●	●	
2-way pallet	●	●	●	●	●	●	●	●
4-way pallet	●	●		●	●	●	●	●



High-density AS/RS warehouse

AGV Tow Tractor

Indoor/outdoor traction

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AGV Forklift Parameters

● Standard ○ Optional – Not Available







Product Name		Omnidirectional Pallet Truck	Pallet Truck	Pallet Stacker	Counterbalanced Forklift	Counterbalanced Forklift	Counterbalanced Forklift	Reach Truck
Model		OT10	X20S	SL14	SE15	E35	Q20	R20S
Navigation	LiDAR Navigation	●	●	●	●	●	●	●
	Sky Navigation	○	○	○	○	○	○	○
	Mixed Navigation	○	○	○	○	○	○	○
Communication	Wi-Fi/ 5G/ Optical Communication	Support	Support	Support	Support	Support	Support	Support
Basic Parameter	Rated Load (kg)	1000	2000	1400	1500	3500	1550	2000
	Turning Radius (mm)	933	1540	1184	1386	2600	1828	1811
	Maximum Lifting Height (mm)	316	205±5	3500	4500	6000	1500	8500
	Fork Dimensions l/e/s (mm)	1155×175×55	1150×175×68	1150×170×60	1070×100×40	1070×150×50	1070×100×40	1220×125×45
	Aisle Width (mm)	1900	2450	2300	3150	4250	4100	3150
	Weight (kg)	500	580	930	2800	5580	3700	4750
	Dimensions L×W×H (mm)	1426×1296×718	1747×900×(1940/2140/2340)	1751×998×(1940/2140/2340)	2512×1144×(1940/2140/2820)	3810×1410×2420	3398×1244×2266	2608×1628×3688
Movement Specifications	Driving Features	Omnidirectional	Forward, Reverse, Arc	Forward, Reverse, Arc	Forward, Reverse, Arc	Forward, Reverse, Arc	Forward, Reverse, Arc	Forward, Reverse, Arc, Spin
	Travel Speed (m/s)	1.7	1.3	1.38	1.5	2.5	2.5	2
	Position Accuracy (mm)	±10	±10	±10	±10	±20	±20	±10
	Cross-Groove Capability (mm)	⩽10	⩽30	⩽30	⩽30	⩽30	⩽30	⩽30
	Climbing Capacity (mm)	⩽2° (3%)	⩽3° (5%)	⩽3° (5%)	⩽3° (5%)	Full Load⩽8° (14%) /No Load⩽8.5° (15%)	Full Load⩽8.5° (15%) /No Load⩽8.5° (15%)	⩽3° (5%)
Safety Protection	Path Deviation Protection	●	●	●	●	●	●	●
	Component Fault Protection	●	●	●	●	●	●	●
	Safety Obstacle Avoidance LiDAR	●	●	●	●	●	●	●
	Backward Bottom Obstacle Avoidance	●	–	●	●	●	●	●
	Stereo Obstacle Avoidance	●	●	●	●	●	●	●
	Safety Bumper	●	●	●	●	●	●	●
	HMI	●	●	●	●	●	●	●
Battery Specifications	Battery Standard Capacity (Ah)	67	40	200	200	450	450	460
	Run Time (h)	6~8	6~8	6~8	6~8	8~10	8~10	8~10
Cargo inspection	Pallet Position Detection	●	●	●	●	●	●	●
	Right Pick-up Inspection	●	●	●	●	●	●	●
	Barcode/RFID Reader	○	○	○	○	○	○	○
	Overweight Alarm (±5%)	–	–	○	○	○	○	○

Note: Support customized requirements such as mast, vehicle height, color, etc.
Above specifications are for reference only.

AGV Forklift Parameters

● Standard ○ Optional – Not Available

		Reach Truck	Sideloader	VNA Truck
Product Name				
Model		R20	O20	K16
Navigation	LiDAR Navigation	●	●	○
	Sky Navigation	○	○	○
	Mixed Navigation	○	○	●
Communication	Wi-Fi/ 5G/ Optical Communication	Support	Support	Support
Basic Parameter	Rated Load (kg)	2000	2000	1500
	Turning Radius (mm)	1879	1530	2250
	Maximum Lifting Height (mm)	9000	6500	11000 (Customization supports up to 16500)
	Fork Dimensions l/e/s (mm)	1070×125×45	1220×100×45	1200×125×50
	Aisle Width (mm)	3340	2600	1750
	Weight (kg)	4200	2960~3160	6280~7260
	Dimensions L×W×H (mm)	2657×1526× (2350~4086)	2287×2108× (2350~3444)	3456×1625× (2935~4265)
Movement Specifications	Driving Features	Forward, Reverse, Arc	Omnidirectional	Forward, Reverse, Arc
	Travel Speed (m/s)	2	1.5	2.2
	Position Accuracy (mm)	±10	±10	±10
	Cross-Groove Capability (mm)	⩽30	⩽30	⩽30
	Climbing Capacity (mm)	⩽5.7° (10%)	⩽2° (3%)	—
Safety Protection	Path Deviation Protection	●	●	●
	Component Fault Protection	●	●	●
	Safety Obstacle Avoidance LiDAR	●	●	●
	Backward Bottom Obstacle Avoidance	●	●	●
	Stereo Obstacle Avoidance	●	●	●
	Safety Bumper	●	●	●
	HMI	●	●	●
Battery Specifications	Battery Standard Vapacity (Ah)	460	300	450
	Run Time (h)	8~10	8~10	6~8
Cargo inspection	Pallet Position Detection	●	●	●
	Right Pick-up Inspection	●	●	●
	Barcode/RFID Reader	○	○	○
	Overweight Alarm (±5%)	○	○	○

Note: Support customized requirements such as mast, vehicle height, color, etc.
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AMR Parameters

● Standard ○ Optional – Not Available

		C04	C06	C10
Product Name				
Navigation	Navigation Method	QR Code Navigation / Laser Navigation(2D SLAM)	QR Code Navigation / Laser Navigation(2D/3D SLAM)	
Communication	Wireless WiFi	●	●	●
	Optical Communication	○	○	○
	5G	○	○	○
Basic Specifications	Rated Load (kg)	400	600	1000
	Dimensions LxWxH(mm)	778x540x268	950x650x268	1150x820x260
	Weight (kg)	98	130	180
Movement Features	Driving Speed (m/s)	1.9/1.5	2/1.5	1.8/1.5
	Positioning Precision (mm)	±10	±10	±10
	Stop Angle (°)	±1	±1	±1
	Cross-Groove Capability (mm)	⩽30	⩽30	⩽30
	Control Mode Climbing Capacity (mm)	⩽3°(5%)	⩽3°(5%)	⩽3°(5%)
	Obstacle Clearing Capability (mm)	⩽5	⩽5	⩽5
	Lifting Stroke (mm)	60	60	60
Safety Protection	Auto/Manual	●	●	●
	Path Deviation Protection	●	●	●
	Positioning Fault Protection	●	●	●
	Obstacle Detection LiDAR	●	●	●
	3D Obstacle Detection & Avoidance	○	○	○
	Dynamic Obstacle Detouring	○	○	○
	Anti-Collision Strip	●	●	●
	Emergency Stop Button	●	●	●
	Sound & Light (Warning)	●	●	●
	HMI	○	○	○
Battery Specifications	Charging Mode	Auto/Manual		
	Battery Type (Standard)	Lithium Iron Phosphate		
	Rated Voltage (V)	48	48	48
	Standard Capacity (Ah)	16	24	40
	Discharge Rate/Runtime (h)	6~8h		
	Battery Life	Complete charge-discharge 1500 times		

Note: Support customized requirements such as mast, vehicle height, color, etc.
Above specifications are for reference only.

AGV Tow Tractor Parameters

● Standard ○ Optional – Not Available

Product Name		AGV Tugger
Model		SP60
Navigation	LiDAR Navigation	●
	Sky Navigation	○
	Mixed Navigation	○
Communication	Wi-Fi/ 5G/ Optical Communication	Support
Basic Parameter	Rated Load (kg)	6000
	Rated Towing Hook Traction Force (N)	1200
	Dimensions LxWxH (mm)	1980×1200×2260
	Turning Radius (mm)	3500 (Trolley L5600×W1500mm)
	Cross-Groove Capability (mm)	⩽30
	Cross-Groove Capability (mm)	⩽3° (5%)
	Weight (kg)	1300
Movement Specifications	Driving Features	Forward, Reverse, Arc
	Automatic Hooking (visual correction)	○
	Travel Speed (m/s)	1.5
	Stop Angle (°)	±1
	Position Accuracy (mm)	±20
Safety Protection	Path Deviation Protection	●
	Component Fault Protection	●
	Backward Bottom Obstacle Avoidance	●
	Stereo Obstacle Avoidance	●
	Safety Bumper	●
	Emergency Stop Button	●
	Sound & Light Warning	●
	HMI	●
	Vehicle Dashcam	○
Battery Specifications	Automatic Charging	○
	Battery Type	Lithium Iron Phosphate
	Rated Voltage (V)	48
	Battery Standard Capacity (Ah)	300
	Run Time (h)	8

Note: Support customized requirements such as mast, vehicle height, color, etc.
Above specifications are for reference only.

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Technical parameters of Four-way Shuttle

Product Name		Four-way Shuttle
Model		Z15
Basic Parameter	Wi-Fi	●
	Rated Load (kg)	1500
	Adjustable to pallet width (mm)	1200~1300
	Jacking Height (mm)	42
	Service Weight (kg)	420
	Dimensions LxWxH (mm)	1300x980x136
	Temp. Environment (°C)	-5~45
	Control method	Auto/Manual
Movement Specifications	Driving Features	Four-way
	Jacking Method	Hydraulic Lifting
	Lifting Time (s)	5
	Travel Speed (m/s)	1.5
	Position Accuracy (mm)	⩽2
	Reversing Time (s)	4
Battery Specifications	Charging Mode	Auto/Manual
	Charging Time (h)	1.5
	Rated Voltage (V)	48
	Battery Standard Capacity (Ah)	30

Note: Support customized requirements such as mast, vehicle height, color, etc.
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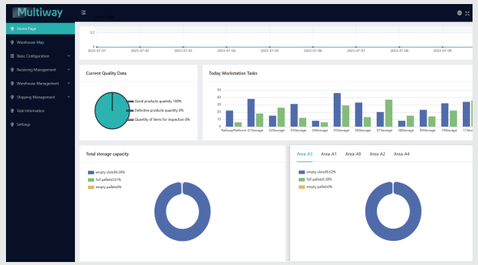
Software System



Multiway Warehouse Management System - MW WMS

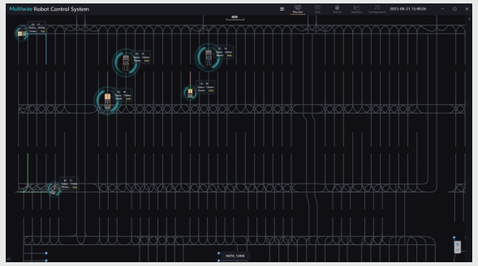
Multiway Warehouse Management System (MW WMS) is a digital core platform purpose-built for modern smart warehouses. Through deep integration with autonomous forklifts and other automated equipment, the system enables end-to-end digital management and intelligent orchestration of inventory, inbound and outbound operations, and storage resources. Compatible with diverse warehouse environments and racking configurations, MW WMS empowers warehouses with full-process visibility, intelligent decision-making, and unmanned operations.

Vision Solution - Horizon System

Multiway provides flexible vision solutions that enable intelligent manufacturing and intelligent logistics through machine vision and artificial intelligence technology. Our system allows management visualization with dynamic business monitoring of the entire production line and edge-computing data processing platform. It makes the factory's working environment safer and greatly improves production efficiency.

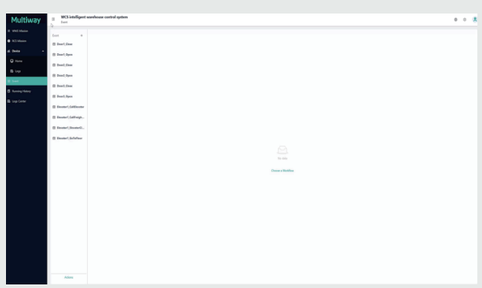
Multiway Robot Control System - MW RCS

Multiway Robot Control System supports hundreds of different kinds of AGVs running at the same time and generates the most optimized route. It achieves overall optimal navigation route planning and completes tasks in the shortest time and guaranteed to operate at maximum efficiency.



Simulation System - MW Simulation

The simulation system combines simulation modeling with robots based on the method of model design. It supports traffic simulation of hundreds of vehicles under different application scenarios, and carries out simulation experiments of robot kinematics, dynamics and trajectory planning algorithms. It could also improve robot's theoretical analysis and design capabilities, including scheme design, product selection, offline programming and collision detection, etc., which not only shortens production delivery time, but also avoids unnecessary rework.



Multiway Warehouse Control System - MW WCS

Multiway Warehouse Control System provides a uniform interface to a broad range of material handling equipment including AGV, AMR, automatic doors, conveyors, elevators and etc. It connects the system console and data center to manage the equipment and information flow for the entire site.

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