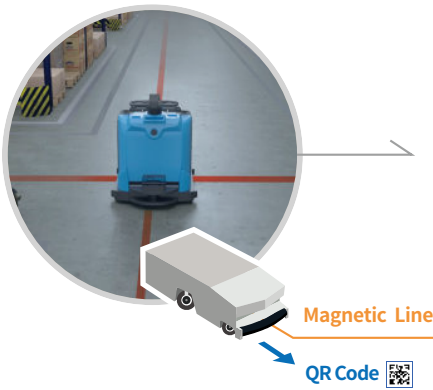


Autonomous Mobility Solutions

# Robotization Package

**AGV**  
(Automatic Guided Vehicle)



**AMR**  
(Autonomous Mobile Robot)



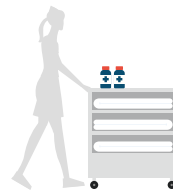
Transforms a manual device to an **autonomous mobile robot**



Manual Machine



AMR



Manual Machine



AMR



**YUJIN 3D LiDAR**  
YRL3V2-05/10/25



**YUJIN SLAM**  
YSL-1000



**YUJIN Navigation**  
YNC-1000



**YUJIN Safety**  
YSC-1000



**FMS**

## Transform your manual device into a robot with autonomous navigation

YUJIN Robotization Package is a comprehensive package comprising of Yujin Robot's 3D LiDAR, SLAM, Navigation Controller, a globally accredited ISO standard PL-d Safety system, FMS (Fleet Management System) that enables simple and easy transformation of a manual machine into a fully autonomous mobility machine.

### Key Features

- ✓ Transforms a manual device to an autonomous mobile robot
- ✓ Cost-effective and proven technology for autonomous mobility
- ✓ PL-d level safety equivalent functionality as an option
- ✓ Fully compatible with Yujin FMS (Fleet Management System)

# Autonomous Mobility Solutions

# Robotization Package

## YUJIN 3D LiDAR(YRL3V2-05/10/25)

ROS

Functionality	Object Detection (3D) & Measure Distance			
Model Name	YRL3V2-05	YRL3V2-10	YRL3V2-25	
Detection Range	5 m	10 m	25 m	
Dimension (L x W x H)	65 mm x 85 mm x 91.4 mm (2.55" x 3.34" x 3.59")			
Weight	410 g (0.90 lbs)			
Power Consumption	6 W			
Voltage	DC 12 V			
Laser Class	Class 1, Eye Safe(IEC 60825-1:2014)			
Laser Wavelength	905 nm			
Scanning Mode	Mode 1(Default)	Mode 2	Mode 3	Mode 4
FoV: Horizontal x Vertical	Upper: 360° x 55° (+40° ~ -15°) Lower: 270° x 25° (-15° ~ -40°)	360° x 40° (+35° ~ -5°)	Upper: 360° x 20° (+5° ~ -15°) Lower: 270° x 20° (-15° ~ -35°)	360° x 20° (+10° ~ -10°)

## YUJIN SLAM(YSL-1000)

Functionality	Mapping, route planning & obstacle avoidance
Input Data	LiDAR Data (Angle, Range), Odom Data (Encoder, IMU)
Output Data	Map (PNG File, Key Frame), Adjusted Pose (x, y, theta)
Dimension (L x W x H)	198.2 mm x 196.8 mm x 89.0 mm (7.80" x 7.74" x 3.50")
Weight	1.7 kg (3.74 lbs)
Board General Data	<ul style="list-style-type: none"> <li>• CPU: Intel i7-7700</li> <li>• Memory: DDR4 8GB</li> <li>• Ports: HDMI (2 ea), USB 3.0 (4 ea), Ethernet (1 ea)</li> <li>• Slot: PCIe, Mini PCIe, mSATA</li> <li>• Power: DC 12 V, 5.5 A</li> </ul>
Communication Protocol	Input Data: UDP (User Datagram Protocol) • Output Data: WebSocket or PLC *PLC may have limited functions.
Interface I/O	Ethernet RJ-45
Maximum Mobile Platform Speed in Mapping (SLAM) Mode	0.5 m/s ~ 0.6 m/s
Maximum Mobile Platform Speed in Mapping (SLAM) Mode	2 m/s
SLAM/Localization Accuracy	Typically ± 10 mm, ± 1°
Pose Update Rate	25 Hz
Mapping Coverage	700 m x 700 m

## YUJIN Navigation(YNC-1000)

Functionality	Localization, support button & GPIO interface
Dimensions (L x W x H)	203.7 mm x 122.2 mm x 84.4 mm (8.01" x 4.81" x 3.32")
Weight	1.21 kg (2.66 lbs)
Kinematics	Differential drive, mecanum drive
Accuracy	± 10 mm, ± 1°
Obstacle Avoidance Rate	10 Hz
Path Following Rate	10 Hz
Compatible Laser Scanners	2D LiDAR: SICK TIM 510, 571 3D LiDAR: YUJIN YRL3-Series
Motor Drives	RS485, Ethernet/IP
User Configurable I/Os	<ul style="list-style-type: none"> <li>• 8 dig. in / 8 dig. out</li> <li>• 2 anal. in / 2 anal. out</li> </ul>
Input Voltage	DC 24 ~ 58 V
Power Consumption	100 W

## YUJIN Safety(YSC-1000)

Functionality	Functional Safety
Dimensions (L x W x H)	216.8 mm x 122.6 mm x 84.4 mm (8.53" x 4.82" x 3.32")
Weight	1.07 kg (2.35 lbs)
Input Time	≥ 50 ms
Type of Output	Magnetic Contactor A, B Digital I/O, I2C, SPI, UART, RS232, RS485, CANopen Debug Port (UART) JTAG
Response Speed	≤ 200 ms
Input Voltage	DC 24 V
Power Consumption	50 W

\* Specifications and design are subject to change without any prior notice.