

## FW-01

Full Scene Application Omnidirectional UGV  
Multiple Moving Mode | 0m Turning Radius | 80kg Payload | Security Protection  
Indoor and Outdoor Modular Mobile Robot Platform



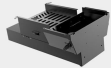
FW-01 is an omnidirectional UGV, based on innovated four-wheel independent control theory, which adopts drive and steering integrated in one module.

### Full Scene Application Handling

It has a variety of flexible driving modes and combining powerful maneuverability and flexibility to accommodate a wide variety of robotics applications in patrol, detection and manipulator collaborative mission.



### Core Technology



#### Modular EC-BOX

Meeting the requirements of using in -20°C to 50°C condition, vibration, salt spray, light rain etc.



#### Development Possibility

Payload mounting plates and accessible power and communication ports allow FW-01 to be easily customized with sensors and other payloads.



**Easy to Start Your Robotics Application**  
CAN interface, ROS1 and ROS2 driver are available for starting your robotics application.



**VCU-Comprehensive Security and Maintenance**  
Contained 20 security strategies, and run in high-precision control. Stability is 30% better than other similar robot chassis.

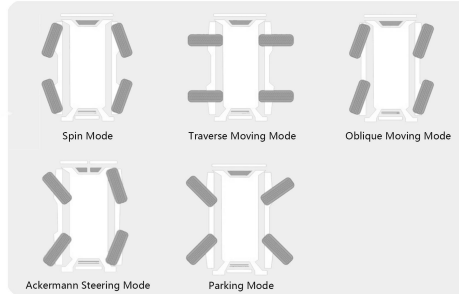
### Precise Control

Steering Accuracy <math>\lt; \pm 1^\circ</math>



Steering motor with 4096 pulse encoder ( $\lt; \pm 1^\circ$ )  
Wheel hub motor with 1024 pulse encoder ( $\lt; \pm 1^\circ$ )

### Multiple Moving Mode



### Security Strategy

- Heartbeat Protection
- Communication BCC Protection
- Communication Timeout Protection
- Steering Limited Protection
- Emergency-stop Protection

### EC-BOX Disattachable Design

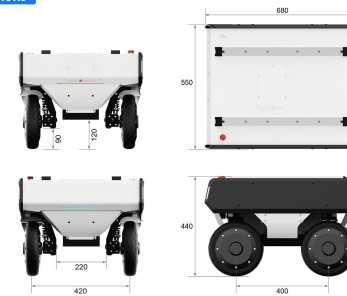


Easy for handling device maintenance and upgrade

### Technical Specification

Dimensions	680*550*440mm	External Power Supply	24V/15A-12V/15A
Weight	68kg	Braking Method	Motor Braking
Drive Form	Serve Steering Motor Drive	Parking Method	Motor Parking
Material	Aluminium Alloy	Payload	80KG
Ground Clearance	120mm	Speed	5.4km/h
Wheel Track	400mm	Running Mileage	40km
Wheel Base	420mm	Wading Depth	100mm
Wheel Diameter	9.5 inch/240mm	Max Climbing Capacity	15° with full load
Motor	350W*4 Servo Motor	Span Width	120mm with full load
Battery	36V/30AH	Obstacle Surmounting Height	25mm with full load
Charging Time	4-5h	IP Rating	IP33
Charging Method	36V/10A Manual Charging/ Auto Charging	Communication Interface	CAN 2.0B

### Dimensions



### Technical Support

**User Manual**    
 **ROS 1 & 2 Driver**    
 **Modular Mount**    
 **Communication Port**

- Supports motion control development
- Supports auto charging detection
- Steering limited protection
- Parking protection
- Supports remote control priority
- Battery temperature, voltage and current feedback
- Supports charging status feedback

### Advantage

**Communication Protocol Port**    
 **Modular Power Ports**    
 **RC mode/Auto Mode switch**    
 **sport Kinematics Imputation algorithm**    
 **Optimized Acceleration**