



AMP-600

HIGH PAYLOAD AUTONOMOUS GUIDED MOBILE ROBOT

Product Overview

An Autonomous Mobile Platform (AMP) with self-mapping and self-navigation.

Easy to re-deploy for different applications and services by interchange of top modules.

The main advantage of the AMP-600 over other major players is that, the wheels are linkage driven and tend to perform well in uneven surfaces, climb and descent, giving stability to the robot body.

Features & Benefits

- Differential drive wheels with castors mounted on independent linkages for uneven terrain
- On-board charging and quick battery swap options
- Navigates bumps of up to 18mm height
- 13° terrain climbing capability
- Automatic route planning to prevent collisions
- Fleet management capabilities
- Centralized configuration and map management
- Smaller footprint, easy deployment
- Smart battery management
- Safety features with on-board- ultrasonic sensors, bumper sensors and LIDARs to detect obstructions and an E-stop button to abort mission in case of emergency/service

Technical Specifications

Drivetrain

Drive wheels - two 200mm Poly tetra methylene ether glycol.

Four swivel caster driven wheels – 2 in front & 2 at the back

Differential steering for 0° turn radius

Brake - no brake

Linkage based suspension for ramp manoeuvrability

Motor power- 48V, 400W

Physical Dimensions

Overall dimensions – 740mm length x 488mm width x 432mm height

Base clearance – 47mm

Weight (Robot base + battery) – 75KG

Performance

120KG payload capability

Turn radius of 0 mm

Maximum translational speed of 0.6m/s

Maximum rotational speed of 0.6 rad/s

18mm bump clearing capability

13 Degree slope climbing ability

Nominal translational speed of 0.3m/s

Nominal rotational speed of 0.3 rad/s

Battery

Nominal voltage – 48V

Capacity – 30Ah

Recharge time – 6Hr

Weight – 10KG

Fully charged voltage – 53V typical

Fully discharged voltage – 42V typical

Max discharge current - 15A

Max charge current - 4.5A

Operating temperature - 0 to 40 Degree Celsius

Typical run time (no load) – 13Hr

Charging - charging sockets provided on the service port (Manual Charging)

Communication & Service Ports

RJ 45 Ethernet port - 1 on the service port and 1 on the bulkhead

HDMI display port - 1 on bulk head for communication with different interfaces

USB-A port - 1 on the bulkhead for communication with different interfaces and 1 on the service port

External charging port & switch for ease of charging & powering on the robot

DPDT switch - 2 on service port

Charging port - 1

Antenna - 2

Mapping & Navigation

2-D mapping from laser scan with a LIDAR

Localization based on odometry and laser scan

Automated navigation with obstacle avoidance using LIDARs and ultrasonic sensors

Live video stream with the 2D camera coloured 14fps and 5MP resolution USB 3.0 communication

LIDAR – 1 at the front and 1 in the rear

Ultrasonic sensor - 2 at the front and 2 in the rear

Bumper – 1 at the front and 1 in the rear

Camera – 1 at the front

Wi-Fi receiver - 1

Keyboard, mouse/receiver -1

EMO – 1 master-off for safety & instantaneous abortion of missions

USB network switch – 2

Ethernet network switch

Speaker - 2 in the front, downward facing

LED status lights - 2 front and 2 rear

Dual axis motor driver

I/O module - 1

Building mapping -2D mapping from laser scan

Localization using odometry and laser scan

Navigation featured with obstacle avoidance

Joystick based motion control



Ordering Information

Price

Contact

Phone