# Autonomous Transporter



## Technology Overview

Intelligent/collaborative robots are great tools for improving productivity in the manufacturing environment. They are designed to work along-side humans.

The transporter robot provides a simple, lean solution for materials transportation, and can handle payloads of up to 50kg. It is fully auto-nomous and can navigate narrow spaces with position accuracy of ±35mm. The transporter robot uses open-source Robot Operating System (ROS), is modular and easy to configure, unlimited extension to include vision, GPS, camera and other gadgets, etc.

## Features & Specifications

Dimension (LxWxH): 650mm x 500mm x 370mm
Weight (with Battery): 50kg
Payload: 50kg
Construction: Modular design for easy maintenance.
Mobility: 2 active 200mm diameter drive wheels,
         4 passive caster wheels.
Power: 24V D.C.
Communication: Wi-Fi enabled joystick.
Special Abilities: 6-axis arm with 3-finger hand.
(Customizable)
Operating System: ROS (Robot Operating System)
                 based.



## Customer Benefits

The goal is to make the hardware and software development for the transporter robot more accessible to SMEs and robotics researchers, by lowering the development cost and increasing the capabilities of the robot. This will allow SMEs and researchers without hardware/software expertise to participate in the implementation and deployment of transporter robots in manufacturing plants. The transporter robot will be an affordable and easily assembled test-bedding platform for SME industry and the robotics research community at large.

## Potential Applications

Some of the possible applications are deployment in work spaces that are hazardous to humans. Other applications include developing a modular robotics system with capabilities which can be scaled appropriately to achieve a variety of unspecified tasks, for example, cooperative mobile platform to create a production transporter chain. Other possible spin-offs are medical robot, warehouse robot and tour-guide robot.

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