

Product Description

The Omni Automation ORP is a microcontroller used to bridge communications between a MiR robot and other equipment. This circuit board can be mounted in an enclosure. This Microcontroller circuit board has discrete I/O, Ethernet, Wi-Fi, and Bluetooth communications that allow it to communicate with a MiR robot, a Top Module and Ancillary equipment such as conveyors and machinery. The microcontroller requires custom programming to allow it to communicate with the various equipment and to control its onboard I/O.

Typical uses include Wireless communications between a MiR top module and a stationary piece of equipment for hand-shaking. This hand-shaking might include signals such as “MiR robot in position to receive product”, “MiR robot in position to discharge product”, a “request” for a MiR to arrive at a location, and many other status signals.



Specifications

ORP

Controller	The ORP controller is a microprocessor based controller that is mounted in a NEMA 12 enclosure that can be mounted either on the top module or on ancillary equipment to allow for communications with the MiR robot, MiR top modules and other ancillary equipment.
Power Requirements	The ORP controller can be sourced with 24 VDC or 120 VAC power.
Enclosure Size	The enclosure is 12" tall, 10" wide and 5" deep.
Communications	Wi-Fi, Bluetooth, (4) USB ports, (1) HDMI port, (1) CSI camera port, (1) DSI display port.
I/O	Each controller has capacity for up to 8 inputs and 6 dry contact relay outputs.
I/O Rating	The inputs are 24 VDC. The dry contact outputs are Form C and rated for up to 10 amps at 120 VAC.
Memory	The microprocessor has 1 GB of RAM memory and can be programmed in Python, C++, C#, Java, and several other languages. The application program can be stored on a removable Micro SD card.
Safety	The ORP controller has one on-board Category 1 safety relay that can be used to interface with the robot or other equipment.
Options	Touchscreen operator interfaces are optionally available and can be mounted to the equipment.

Contact Omni Automation for information on additional top modules or custom top modules.

Mobile Robots



The **MiR100™** is a safe, cost-effective mobile robot that quickly automates your internal transportation and logistics. This 100kg payload robot optimizes workflows, freeing staff resources so you can increase productivity and reduce costs. This robot has a towing capacity of 300kg.

The **MiR200™** is a safe, cost-effective mobile robot with a 200kg payload capacity. This mobile robot has a towing capacity of 500kg.



Common Top Modules

TMRC



The Omni Automation **TMRC** is a powered roller conveyor that mounts on top of these robots. A mobile robot with a **TMRC** top module can autonomously transport product, materials, supplies, parts or good in Manufacturing Facilities, Institutions and Warehouses.

TMSU



The Omni Automation **TMSU** is a top module that provides adjustable shelving positions for autonomously transporting product, materials, supplies, parts or good in Manufacturing Facilities, Institutions and Warehouses.

TMROR



The Omni Automation **TMROR** is a top module with a robotic arm that performs various tasks throughout a facility. These robotic arms utilize a Collaborative Robot with a payload capacity of up to 10 KG. These robots can be used to retrieve product, perform manufacturing tasks, or work along-side humans in industrial manufacturing.

TMBC



The Omni Automation **TMBC** is a powered belt conveyor that mounts on top of these mobile robots. A mobile robot with a **TMBC** top module can autonomously transport product, materials, supplies, parts or good in Manufacturing Facilities, Institutions and Warehouses.

Contact Omni Automation for information on additional top modules or custom top modules.