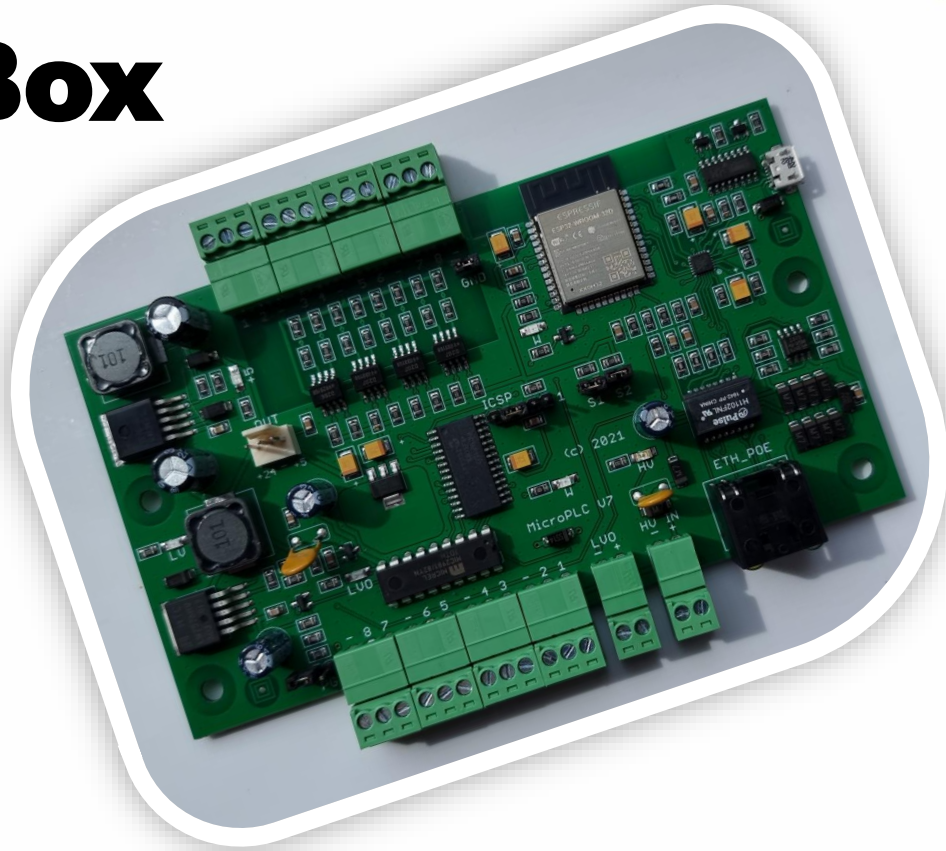


# I/O Box



**ai automation**<sup>®</sup>

Taking the initiative



[aiatom.ro](http://aiatom.ro)

# I/O Box

- Ai Atom I/O Box – Work easily with I/O zones from MIR Map and Real World

Based on the defined I/O zones on the map we can work with actuators / motors / etc.



# I/O Box

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Based on a certain state of the input we can adjust PLC Number XXX from the robot (robots) so that further automation can be performed on the mission.

This happens from Outside World to MIR Map.



# I/O Box

- Example – If there is machine / area under maintenance and the road is no longer available for the robot, the register XXX is changed to Y.
- When the robot is going to the decision point – with a simple if, else you can direct the robot to an alternative route. There are many scenarios here, including the one with forklifts working in the same area as MIR Robots.
- They all have one thing in common – use of PLC registers and the method to acquire the data.



# I/O Box

- The I/O box with Ai Atom can be used in two main options:
  - Work with PLC registers
  - Start or manipulate variables in the Missions



# I/O Box

- Working with PLC registers:
  - Inputs of I/O Box – Change the state of a PLC register on the Robots (control zones, wait for confirmations, etc)
  - Output of I/O Box – Based on the state of PLC registers assigned from the Robots, events are generated as an output from the box.
- Example: if register 133 is changed on the robot to 1, the output number from the Box (Output number 3 for instance) is activated to control a conveyor system. When the part arrives, a sensor is detecting the presence of the goods on the conveyor, the Input number 3 from the BOX is used to stop the conveyor system. At the same time, it confirms to the Robot that it is safe to go further with the mission.

# I/O Box

- The I/O Box is available as:
- 3 In / 3 Out
- 6 In / 6 Out
- 8 In / 8 Out
- 20 In / 20 Out
- More configurations are being developed to include the SMART RGB buttons for visual configurations.
- Custom I/O is also available
- It can handle multiple Robots and Fleets.



# I/O Box

- The I/O Box can communicate:
  - Wireless
  - LAN with Power Over Ethernet (POE)



# I/O Box

- The I/O Box Power Supply:
  - Can arrive with a convenient adaptor
  - Power Over Ethernet
  - Can be connected to a power source – from 5V to 48V – Customizations can be done as needed

