

# i<sup>3</sup>-E User Guide



## 1 INTRODUCTION

The i<sup>3</sup> Ethernet COM Module (i3-E) is used to provide Ethernet communications support between a PC and an i<sup>3</sup> controller. The following applications are supported:

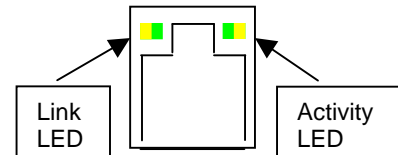
- i<sup>3</sup>-Configurator - Allows remote programming, monitoring and debugging
- ODIN OPC Server – Allows remote data monitoring
- Panel-Point SCADA*lite* – Software package for PC-based HMI functionality



Before using PC with the Ethernet module, communication re-director software must be installed. Please see the Ethernet COM Module manual for additional details. No updates are required for the i<sup>3</sup> controller to install a Ethernet module.

The Ethernet module has two LEDs for status indication:

Link LED (Left Side)		Activity LED (Right Side)	
Color	Meaning	Color	Meaning
Off	No Link	Off	No Activity
Amber	10 Mbps	Amber	Half-Duplex
Green	100 Mbps	Green	Full-Duplex



## 2 SPECIFICATIONS

<b>Ethernet</b>	10BASE-T & 100BASE-TX full / half duplex auto switching
<b>Power</b>	64mA Max at 24VDC (in additional to the requirements for the I3 controller)

## 3 INSTALLATION PROCEDURE

### 3.1 Installation Procedure

1. Disconnect all power from the i<sup>3</sup> unit including I/O power.
2. Remove the four screws on the back of the i<sup>3</sup> unit and remove the back cover. The back cover can be discarded or saved, but it will be replaced with the extended back cover that ships with the communication add-on. Screws are re-used (Figure 1).

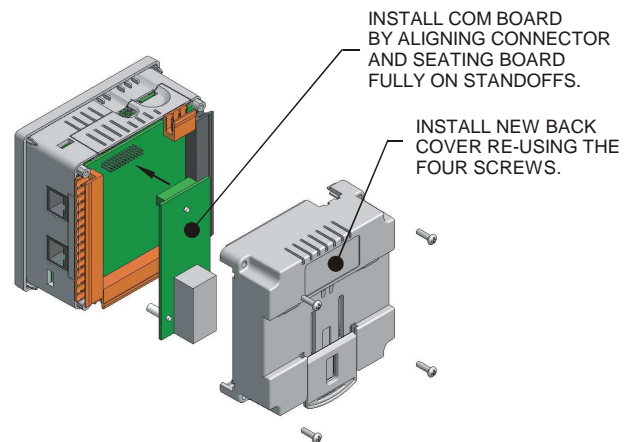
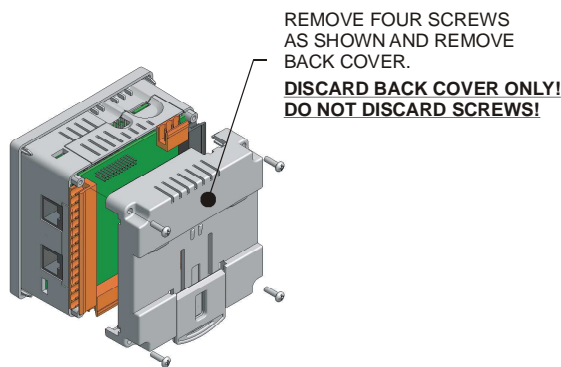


Figure 1-Removing Back Cover of the i<sup>3</sup>

Figure 2- Installing the COM Board in the i<sup>3</sup>

3. Make sure all the jumper settings on the I/O board are set correctly for the application.
4. Plug the communication board onto the 24-pin connector. Make sure all the pins are properly aligned (Figure 2).  
**WARNING:** Damaging the pins during install invalidates the IMO warranty.
5. Place the extended back cover onto the unit. It can be helpful to tip it at an angle so the connector on the COM board aligns with the opening on the back cover.
6. Place the screw back into the hole and turn the screw slowly counter clockwise until it clicks into the threads. This prevents the screw from being cross-threaded. Now, turn the screw clock-wise until the cover is firmly secured. Repeat this process for all four (4) screws.

#### 4 SAFETY

When found on the product, the following symbols specify:



**WARNING:** Consult user documentation.



**WARNING:** Electrical Shock Hazard.

**WARNING:** To avoid the risk of electric shock or burns, always connect the safety (or earth) ground before making any other connections.

**WARNING:** To reduce the risk of fire, electrical shock, or physical injury it is strongly recommended to fuse the voltage measurement inputs. Be sure to locate fuses as close to the source as possible.

**WARNING:** Replace fuse with the same type and rating to provide protection against risk of fire and shock hazards.

**WARNING:** In the event of repeated failure, do not replace the fuse again as a repeated failure indicates a defective condition that will not clear by replacing the fuse.

**WARNING:** Only qualified electrical personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, or service this equipment. Read and understand this manual and other applicable manuals in their entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

- All applicable codes and standards need to be followed in the installation of this product.
- For I/O wiring (discrete), use the following wire type or equivalent: Belden 9918, 18 AWG or larger.

Adhere to the following safety precautions whenever any type of connection is made to the module.

- Connect the green safety (earth) ground first before making any other connections.
- When connecting to electric circuits or pulse-initiating equipment, open their related breakers. Do not make connections to live power lines.
- Make connections to the module first; then connect to the circuit to be monitored.
- Route power wires in a safe manner in accordance with good practice and local codes.
- Wear proper personal protective equipment including safety glasses and insulated gloves when making connections to power circuits.
- Ensure hands, shoes, and floor are dry before making any connection to a power line.
- Make sure the unit is turned OFF before making connection to terminals. Make sure all circuits are de-energized before making connections.
- Before each use, inspect all cables for breaks or cracks in the insulation. Replace immediately if defective.

#### 5 TROUBLESHOOTING

- If  $i^3$ -E will not function after installation. Check card is installed correctly. Perform firmware update on  $i^3$  Controller to make sure most the current version is installed then re-test.

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For further technical information and a full specification, please consult the Hardware Manual