

Uni-COM™ Modules

Installation Guide

UAC-01EC2



The UAC-01EC2 communication module supports EtherCAT, and is compatible with the UniStream® PLC (USC-B5/B10) controller series.

This guide provides basic installation information.

Technical specifications may be downloaded from the Unitronics website.
Note that:

- UAC-01EC2 is compatible only with UniStream® PLC USC-B5/B10.
- Only one UAC-01EC2 module may be connected to a PLC.
- The UAC-01EC2 must be adjacent to the CPU.
 - UAC-01EC2 cannot be connected to the CPU via an expansion cable.
 - No other module may be installed between the CPU and the UAC-01EC2.





Before You Begin

Before installing the device, the installer must:


- Read and understand this document.
- Verify the Kit Contents.

Alert Symbols and General Restrictions

When any of the following symbols appear, read the associated information carefully.

Symbol	Meaning	Description
	Danger	The identified danger causes physical and property damage.
	Warning	The identified danger could cause physical and property damage.
Caution	Caution	Use caution.

- All examples and diagrams are intended to aid understanding, and do not guarantee operation. Unitronics accepts no responsibility for actual use of this product based on these examples.
- Please dispose of this product according to local and national standards and regulations.
- This product should be installed only by qualified personnel.

-  Failure to comply with appropriate safety guidelines can cause severe injury or property damage.
 - Do not attempt to use this device with parameters that exceed permissible levels.
 - Do not connect/disconnect the device when power is on.

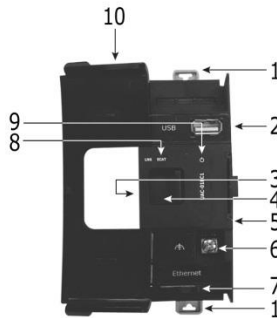
Environmental Considerations

- ⚠️ ▪ Ventilation: 10mm (0.4”) of space is required between the device top/bottom edges and the enclosure’s walls.
- Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive heat, regular impact shocks or excessive vibration, in accordance with the standards and limitations given in the product’s technical specification sheet.
- Do not place in water or let water leak onto the unit.
- Do not allow debris to fall inside the unit during installation.
- Install at maximum distance from high-voltage cables and power equipment.

Kit Contents

- 1 UAC-01EC2 module

Diagram



1	Snap-on clips	Physically hold the module in place.
2	USB Host port	Maintenance port: update module’s firmware via USB flash drive
3	IO/COM Bus-Left	Left-side Connector
4	Bus Connector Lock	Slide the Bus Connector Lock to the left, to electrically connect the module to the CPU.
5	IO/COM Bus-Right	Right-Side Connector, shipped covered.
	Bus Connector Cover	Leave covered when not in use.
6	Functional Ground Terminal	Connect to the system earth
7	Ethernet port	Supports EtherCAT fieldbus protocol
8	EtherCAT LEDs	Green LEDs
9	Status LED	Tricolor LED, Green/Red/Orange

NOTE ▪ Refer to the module's specification sheet for LED indications.

10	Module door	Shipped covered with protective tape to prevent the door from being scratched. Remove tape during installation.
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About the IO/COM Bus Connectors

The IO/COM Bus connectors provide the physical and electrical connection points between modules. The right side connector is shipped covered by a protective cover, protecting the connector from debris, damage, and ESD.

The IO/COM Bus - Left (#3 in diagram) can only be connected directly to a CPU.

The IO/COM Bus - Right (#5 in diagram) can be connected to an I/O module, or to the Base Unit of the Local Expansion Adapter.


- Notes**
- UAC-01EC2 module must be next to and directly connected to a CPU
 - In case that the UAC-01EC2 is the only module in the configuration, to which nothing is connected to its right: do not remove its Bus Connector Cover.
 - Uni-COM™ modules cannot be connected via a Local Expansion Adapter.

Installation




- Turn off system power before connecting or disconnecting any module or device.
- Use proper precautions to prevent Electro-Static Discharge (ESD).

Installing the UAC-01EC2 Module

1. Check the unit to which you will connect the UAC-01EC2 module. Verify that its Bus Connector is not covered.
If the UAC-01EC2 module is the last one in the configuration, do not remove the cover of its IO/COM Bus-Right connector.
 2. Open the door of the UAC-01EC2 module and hold it as shown in the accompanying figure.
 3. Use the upper and lower guide-tunnels (tongue & groove) to slide the UAC-01EC2 module into place.
 4. Verify that the clips located at the top and bottom of the UAC-01EC2 module have snapped onto the DIN-rail.
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Uni-COM™ grip for placement/removal



Guide Tunnel
5. Slide the Bus Connector Lock all the way to the left as shown in the accompanying figure.
 6. If there is already a module located to its right, complete the connection by sliding the Bus Connector lock of the adjacent unit to the left.
 7. If the module is the last in the configuration, leave the IO/COM Bus Connector covered.

Removing a Module

8. Turn off the system power.
9. Disconnect the connectors from the Ethernet and USB ports (#2,7 in the Diagram on page 2).
10. Disconnect the UAC-01EC2 module from the adjacent units: slide its Bus Connector Lock to the right. If there is a unit located on its right, slide the lock of this module to the right as well.
11. On the UAC-01EC2 module, pull the top DIN-rail clip up and the bottom clip down.
12. Open the door of the UAC-01EC2 and hold it with two fingers as shown in the figure on page 3; then pull it carefully from its place.

Wiring



- All wiring activities should be performed while power is OFF.
 - Unused points should not be connected (unless otherwise specified). Ignoring this directive may damage the device.
 - Double-check all wiring before turning on the power supply.
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Wiring Procedure

Functional ground terminal (⚡)

Use a wire of minimum thickness of 14 AWG (2 mm²); terminate it with a ring or fork crimp terminal, stud size #6.

Tighten the screw enough to make sure the ring/fork crimp terminal is not loose.

Wiring Guidelines

In order to ensure that the device will operate properly and to avoid electromagnetic interference:

- Use a metal cabinet. Make sure the cabinet and its doors are properly earthed.
- Connect the functional ground terminal (⚡) to the earth of the system (preferably to the metal cabinet chassis).
- Individually connect each functional ground point (⚡) to the earth of the system (preferably to the metal cabinet chassis). Use the shortest and thickest wires possible: less than 1m (3.3') in length, minimum thickness 14 AWG (2 mm²).
- Ensure shield continuity when extending shielded cables.

NOTE For detailed information, refer to the document System Wiring Guidelines, located in the Technical Library in the Unitronics' website.

Connecting Ports

Use the following:

- Ethernet Ethernet cable that meet at least the requirements of category 5 (CAT5) with RJ45 connector
- USB Host Directly connect a USB flash drive with a Type-A plug for updating firmware.
Using of cable to connect a device to the USB port is not allowed.

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