

Installation Instructions: Equipment, Setup, & Troubleshooting v1.2

Equipment List

The following equipment will be supplied by CopperTree:

- CopperTree CopperConnector
- Power adapter
- Ethernet cable
- DIN clip and screws

Set up your CopperConnector

You're on your way to gaining Insights into your building operation and equipment performance. First, let's set up the device that will gather and send your BAS data to CopperTree servers.

Step 1: Prepare the device

The CopperConnector requires a 110-240 Volt AC receptacle. Further, an Ethernet jack to the BAS controls LAN or VLAN is also required. To ensure the CopperConnector can connect to the CopperTree server, the firewall should be configured to allow the FQDNs outlined here: <https://support.coppertreeanalytics.com/knowledge-base/edgedevice/network-requirements/network-requirements/>

The CopperConnector can be deployed on a desktop, on top of a BAS workstation, or a DIN rail using the mounting bracket. The mounting bracket is present in the box with the CopperConnector. The mounting brackets can be screwed onto the device and then the device can be installed to a DIN rail.

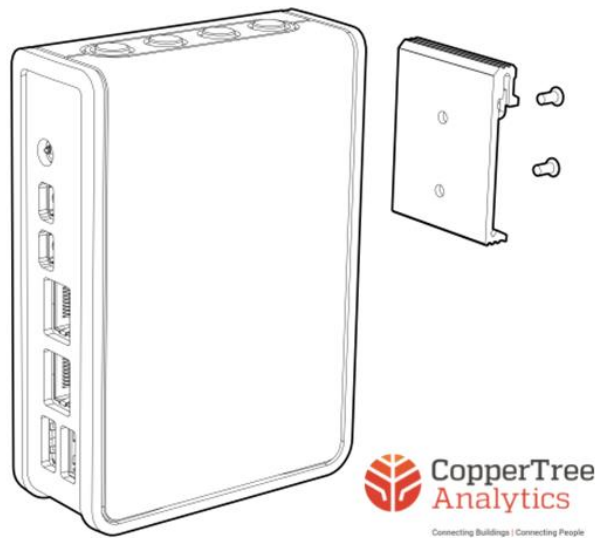


Figure 1. CopperConnector with mounting clip for DIN rail

Step 2: Plug-in Device

- i. Connect the Ethernet cable to the device's Ethernet port, then to the BAS switch.
- ii. Connect the power adapter
- iii. Check for a **steady red light** from the device, allow **1 minute** for the device to fully boot.

Normal Operating Sequence

- A. Solid Green Link Light
- B. Flashing Amber Speed Light
- C. Solid White Power Light



Figure 2: CopperConnector with one LAN port



Figure 3: CopperConnector with two LAN ports



Figure 4: Top view of the CopperConnector



Figure 5: Side view of the CopperConnector with the power button and power cable

Step 3: Verify Connection

- i. Contact CopperTree's Customer Solutions team to let them know the device is installed and deployed on the network.
Hours: 07:30 - 16:30 PST (GMT-8h)
Direct: 1.778.726.0524
- ii. Inform CopperTree Customer Solutions if you need to assign a specific IP address to the device and have not already coordinated the setup ahead of the device shipment
In this case, the device will need to be plugged into a DHCP network for us to remotely set it up. Please provide:
 - a. The IP address, subnet mask, and gateway
 - b. DNS/NTP servers (optional)
- iii. Wait for Customer Solutions to verify that the device is connected.

Advanced Setup

If the BAS does not have internet access and no gateway is available to allow internet access, two alternatives depending on the available controllers.

Option 1: Ethernet Adapter

This adapter allows the CopperConnector to connect to the Internet via an Ethernet connection and the BAS through the BAS Ethernet connection to a USB adapter.

- i. Plug into the Internet with an Ethernet cable.
- ii. Plug in the USB to Ethernet adapter into the CopperConnector's USB and the BAS network's Ethernet connection.
- iii. Turn on the power.



Figure 6: CopperConnector with a USB to ethernet connection

Option 2: For Serial Legacy Connections

- i. Plug into the internet via the Ethernet port of the CopperConnector.
- ii. Plug the USB-serial cable adapter into a USB port of the CopperConnector.
- iii. Plug the USB adapter into the serial side of the grey RJ-11 Siemens adapter.
- iv. Plug the RJ-11 into the MMI port on the panel. (It looks like a phone cable.)



Figure 7: CopperConnector with Serial Legacy connection

Troubleshooting

On the Ethernet port of the CopperConnector are two LEDs that can be used to troubleshoot the device.

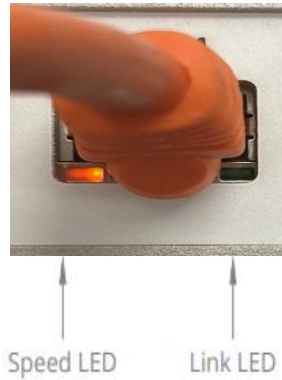


Figure 8: The LED Port of CopperConnector which can help with diagnosing issues

Indication	Colour	State	Conditions	Troubleshooting
Link LED	No Light	Off	The link is not connected	Check the physical connection of the BAS
	Green Light	Blinking	The link is physically connected but not established	Try a power cycle, unplugging the device and plugging it back in
		On	Link established	Normal Operating Condition
Speed LED	No Light	Off	Communication is not occurring	Try a power cycle, unplugging the device and plugging it back in
	Amber Light	Solid	Communication is blocked	There is either a virtual port block or a physical connection issue. Verify the cables are connected and that the firewall rules are correctly input.
		Blinking	Communication is occurring	Normal Operating Condition

Figure 9: A troubleshooting guide for diagnosing issues with CopperConnector

Further Troubleshooting

Contact CopperTree Analytics Customer Solutions at customersolutions@coppertreeanalytics.com or 1.778.726.0524.