Growatt Inverter Integration Guide

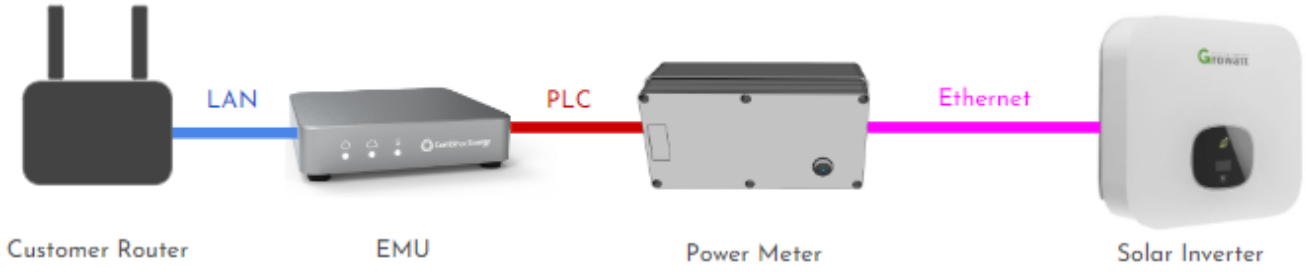
V2.0 - October 2024

Read this first

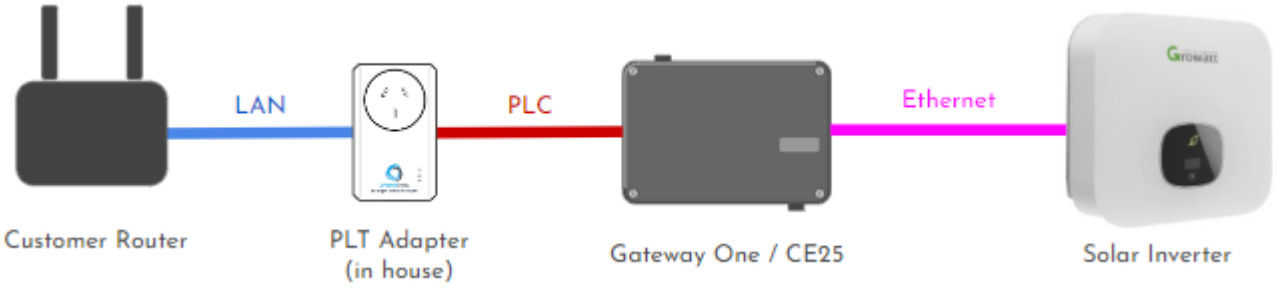
How are Growatt Inverters integrated with the CET system?

Growatt Inverters are mainly integrated with the CET system by adding an Ethernet connection between the CET device (Power Meter / Gateway One / etc) and the Inverter. A **Growatt Shine Lan-X Communication Module is required** to add Ethernet to the inverter.

Example of new system (EMU + Power Meter)



Example of old system (Gateway One)



When is a data connection to an Inverter required?

1. When the CET system is responsible for **export limiting** or **CSIP-AUS** compliance
2. When there is a **battery** connected to the Inverter

Data connection

The Ethernet connection provides a Modbus data connection for the CET system and also provides the inverter with a connection to the Internet.

Most Growatt inverter models require a **Growatt Shine Lan-X Communications Module** to add Ethernet.

Battery Configuration

Please refer to the Growatt documentation for the latest instructions on configuring a battery. Once the battery has been properly configured, the CET system will be able to use the data connection to control the battery.

The CET device should be powered from the backup circuit

If a hybrid inverter with battery is being installed, the CET device (Gateway / Power Meter / etc) should be powered from the backup circuit so that it will continue to operate during blackouts.

If a single-phase backup is being provided at a two-phase or three-phase site, the backed up circuit should be connected to the **Phase A** terminal of the CET device.

Contact CET Support to test the data connection

When the data connection to the inverter is ready to test, contact CET by logging in to the *onSite* web app at http://onsite.combined.energy/ and using the **Request Support** button in the menu.

Steps to Connect to Inverter

Combined Energy HEMS devices communicate with Growatt inverters over Ethernet using Modbus TCP on port 502. A **double-insulated Ethernet cable** with a standard T568A or T568B pinout at both ends is required.

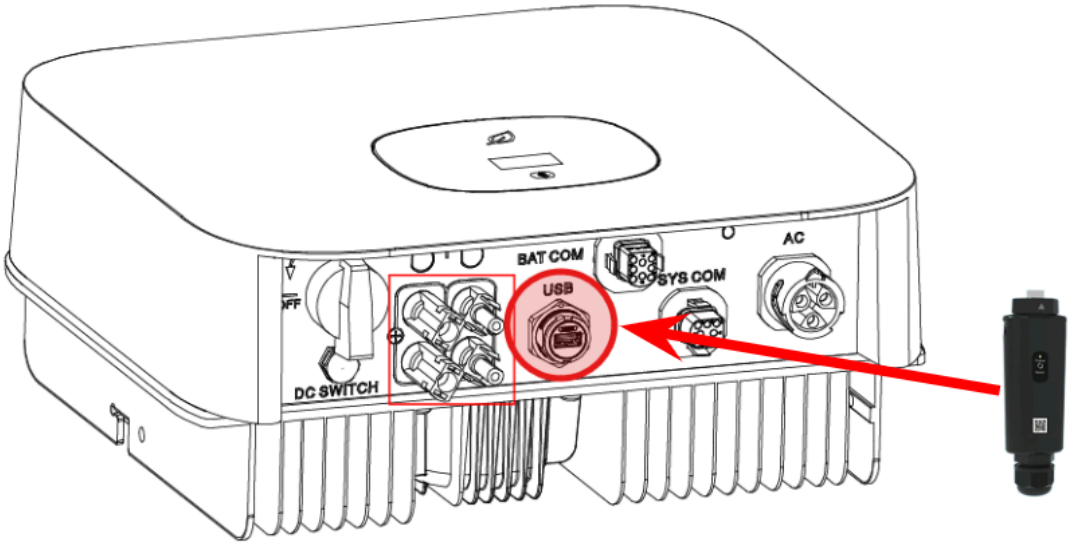
The Growatt Shine Lan-X module is required to add Ethernet to the inverter. **If the model of Growatt inverter being installed is not listed below, we still recommend taking the Shine Lan-X module to site as it is compatible with most Growatt inverters.**

The images shown are for reference only. The actual product received may differ if modified by Growatt.

MIN TL-X Series

1. Prepare a **double-insulated Ethernet cable** with a standard T568A or T568B pinout at both ends.

2. Connect the Growatt Shine Lan-X Communication Module to the **USB** port of the inverter. This will enable Ethernet communications. Further instructions on how to attach the module can be found in the Shine Lan-X Quick Guide available on the Growatt website. Connect one end of the Ethernet cable to the module.

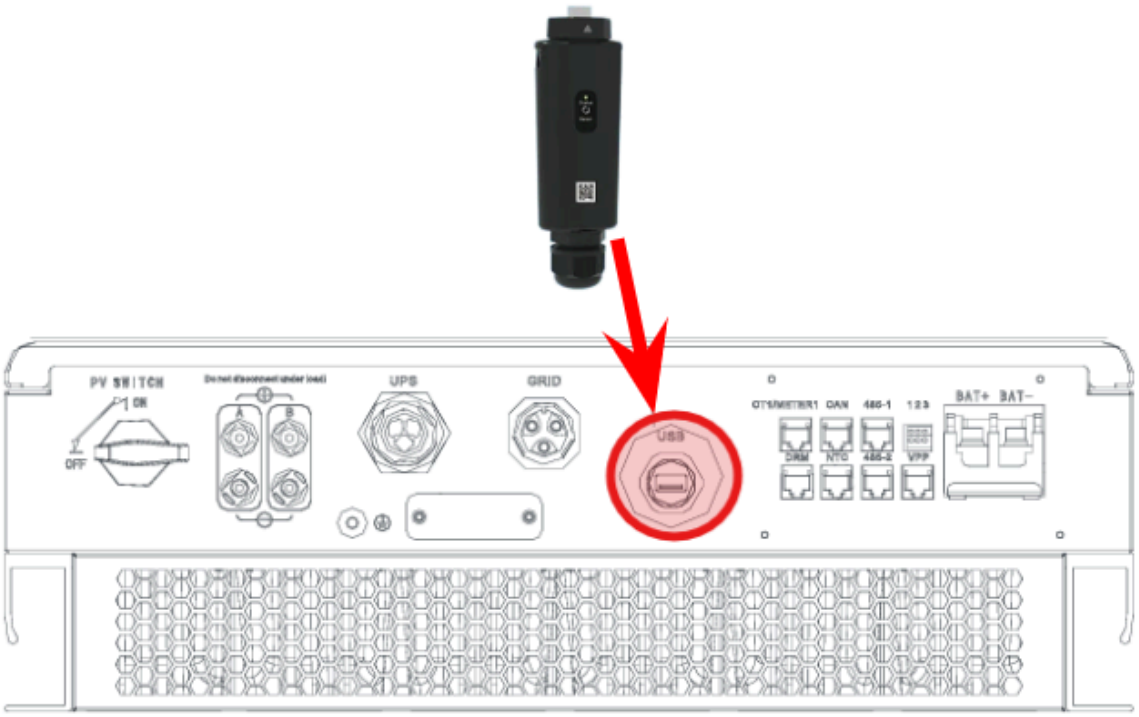


3. Connect the other end of the Ethernet cable to the CET device in accordance with the specific steps for the device in the Steps to Connect to CET Device section of this document.

SPH TL BL-UP Series

1. Prepare a **double-insulated Ethernet cable** with a standard T568A or T568B pinout at both ends.

2. Connect the Growatt Shine Lan-X Communication Module to the **USB** port of the inverter. This will enable Ethernet communications. Further instructions on how to connect the module can be found in the Shine Lan-X Quick Guide available on the Growatt website. Connect one end of the Ethernet cable to the module.

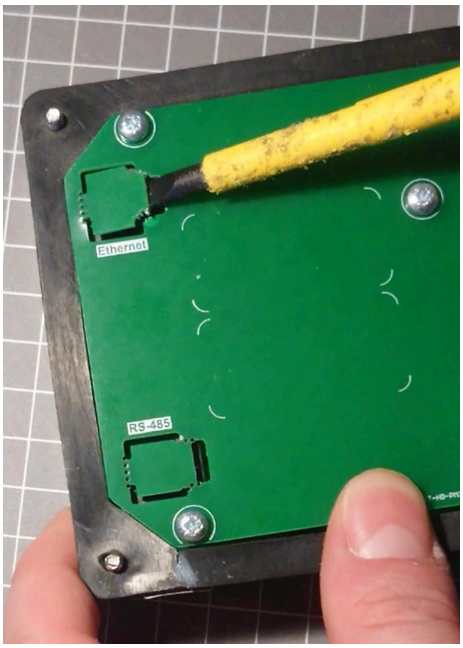


3. Connect the other end of the Ethernet cable to the CET device in accordance with the specific steps for the device in the Steps to Connect to CET Device section of this document.

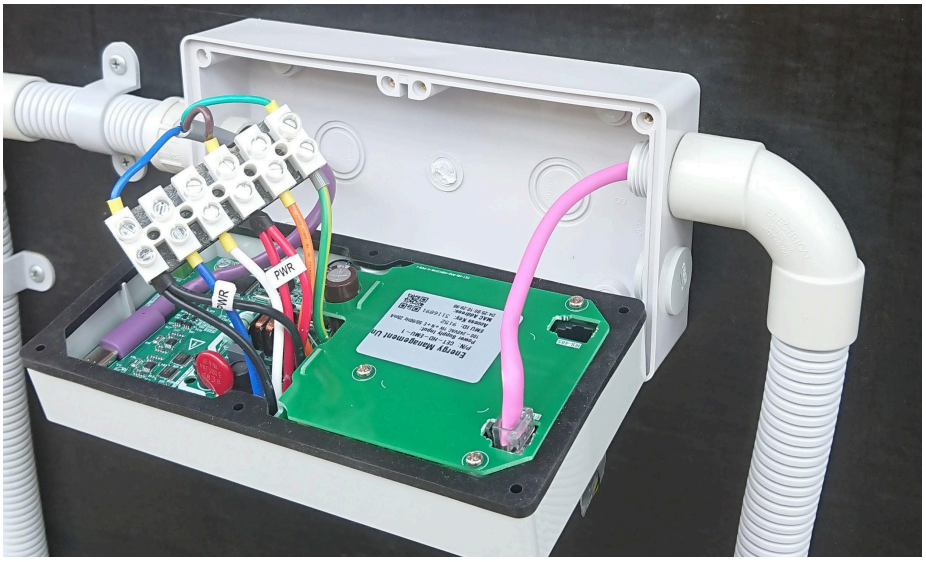
Steps to Connect to CET Device

Power Meter (EMU system)

1. Using a flat blade screwdriver, carefully remove the breakout tab covering the RJ45 "Ethernet" port:

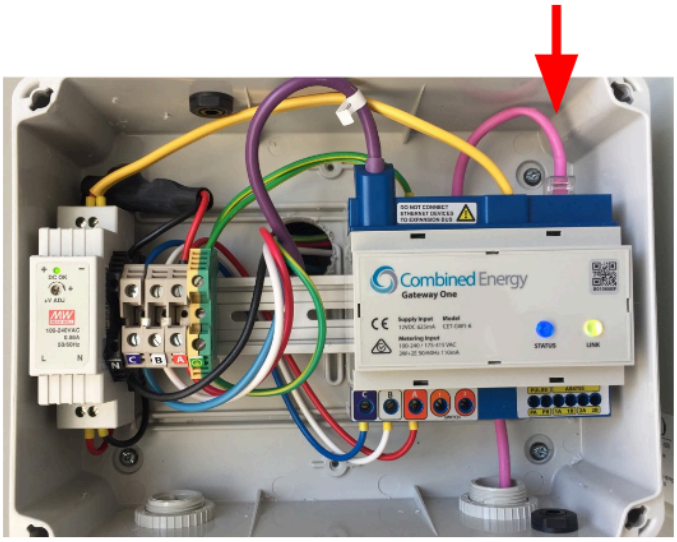


2. Connect the remote equipment to the RJ45 port using a **double insulated** Ethernet cable (e.g. Clipsal 5005C305B).



Gateway One

Terminate the **double-insulated** Ethernet cable and plug the cable into the Ethernet port on the **far right-hand side** of the Gateway:



Multiple Inverters

If multiple Growatt inverters need to be connected to a single CET Device, an Ethernet switch is required to provide sufficient Ethernet ports.