

ABB/FIMER Inverter integration guide

Update Inverter Firmware

Before configuring the ABB/FIMER Inverter with the HEMS, please ensure that the Inverter has been updated to the latest firmware.

Connection Options

There are three recommended methods of connecting ABB/FIMER inverters to the Combined Energy HEMS:

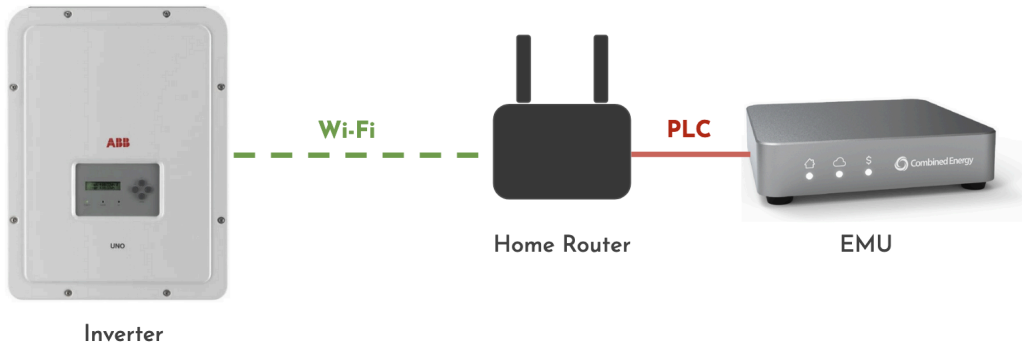
Option 1: Ethernet to Power Meter (requires UNO-DM-PLUS Ethernet COM KIT expansion for inverter) - this is the preferred option



Option 2: RS485 to Power Meter (requires UNO-DM-COM KIT expansion for inverter)



Option 3: Wi-Fi via customer's network



If inverter control is not required the inverter can alternatively be monitored using a CT, however this is not an option if export limiting is required or if there is a battery.

Direct connections to the Power Meter (via RS485 or Ethernet) are preferred because the connection can not be unexpectedly interrupted later by customers replacing their networking hardware or changing their Wi-Fi password.

ABB/FIMER Power Meter not required

ABB/FIMER power meters are not required when integrating ABB/FIMER PV inverters with the CET HEMS.

Communications is required if there is a battery

If the ABB/FIMER inverter controls a battery or you need to control the solar production (i.e. Export limited sites), then the inverter must be connected to the HEMS.

Installation of COM expansion boards (Ethernet / RS485)

For the physical installation of the Ethernet expansion board (**UNO-DM-PLUS Ethernet COM KIT**) and RS485 expansion board (**UNO-DM-COM KIT**), see:

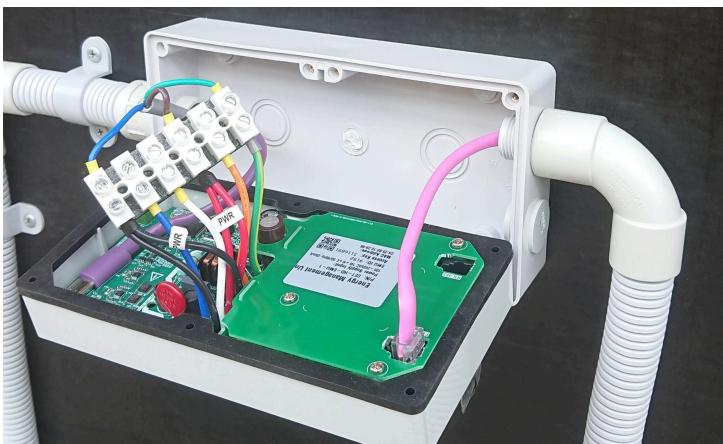
<https://www.fimer.com/sites/default/files/UNO-DM-COM%20KIT%20%26%20UNO-DM-PLUS%20Ethernet%20COM%20KIT-Quick%20Installation%20Guide%20EN-RevC.pdf>

Inverter Configuration

Ethernet (Option 1)



1. Complete the inverter setup normally and confirm the **inverter is generating power**.
2. Check that the Inverter has been updated to the latest firmware.
3. Install the Ethernet expansion board and connect an Ethernet cable from the COM card to the CET-HD-PM2 Power Meter's Ethernet port:

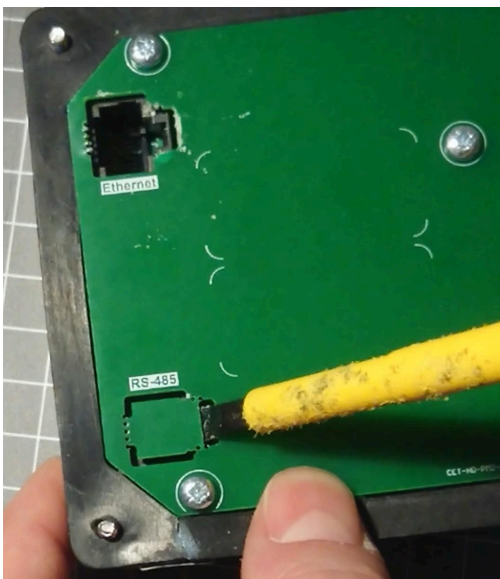


4. Ensure you have **Modbus** enabled in the Inverter **NETWORK** configuration. This can be configured through the Inverter web interface. *Note: Modbus will usually be enabled by default.*
5. Contact CET Support using the **Request Support** feature in the *onSite* app to configure the Inverter.

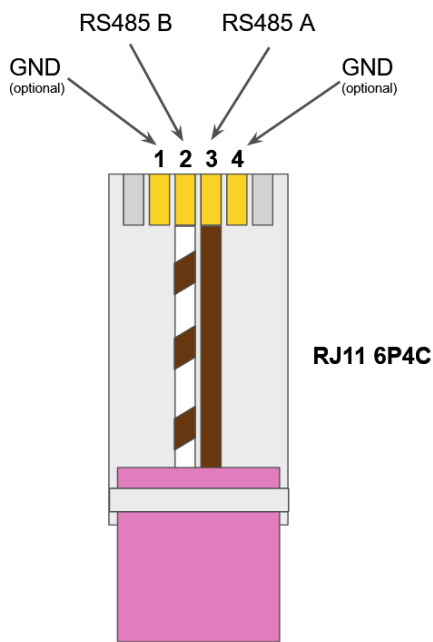
RS485 (Option 2)



1. Complete the inverter setup normally and confirm the **inverter is generating power**.
2. Check that the Inverter has been updated to the latest firmware.
3. Using a flat blade screwdriver, carefully lever out the breakout tab covering the RJ11 "RS-485" port on the CET-HD-PM2 Power Meter:



4. Connect the remote equipment to the RJ11 6P4C port using a double insulated data cable (e.g. Clipsal 5005C305B). The pinout for the RS485 cable is shown below:



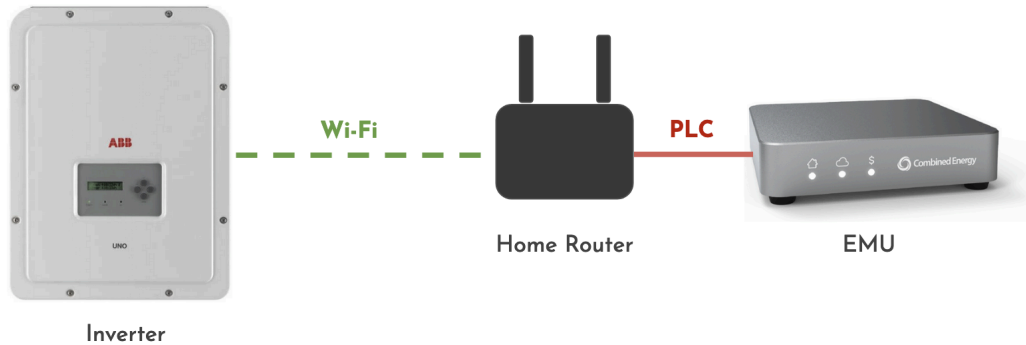
(looking at contact side)



RS485 terminals on the ABB/FIMER UNO-DM-COM KIT expansion card

5. Ensure you have **Modbus** enabled in the Inverter **NETWORK** configuration. This can be configured through the Inverter web interface. *Note: Modbus will usually be enabled by default.*
6. Contact CET using the **Request Support** function in the *onSite* app. CET will complete the configuration.

Customer Wi-Fi (Option 3)



1. Follow the steps in the inverter user guide to connect to the customer Wi-Fi network.
2. Complete the inverter setup normally and confirm the **inverter is generating power**.
3. Check that the Inverter has been updated to the latest firmware.
4. Ensure you have **Modbus** enabled in the Inverter **NETWORK** configuration. This can be configured through the Inverter web interface. *Note: Modbus will usually be enabled by default.*
5. Contact CET using the **Request Support** function in the *onSite* app. CET will complete the configuration.