

Zigbee Wired USB Extender installation guide

Wired USB Extenders relocate the Communications kit away from IQ Gateway. If there is a large distance between the IQ Gateway and IQ System Controller/IQ Batteries or if there are obstructions like concrete walls between them, then a Wired USB Extender should be used to move the Communications kit near the IQ System Controller/ IQ Batteries. A Range Test can determine if a Wired USB Extender is required.

[Zigbee Range Test user manual](#), and the [Designing an Enphase Zigbee network tech brief](#) describe how to conduct a Range Test, choose optimal location for the equipment, and select a range extension method. Please follow the guidelines in the above documents to determine if a Wired USB Extender is needed. The [Zigbee range extension FAQ](#) has answers to specific questions that installers may have.

Preparations to be done before installation

1. **Purchase an off-the-shelf CAT5e/CAT6 or Fiber based USB extender that contains a transmitter, a receiver, USB cable, and power adaptor. Ensure that the extender meets regulatory requirements in your region.**
2. **The USB port on the IQ Gateway where the extender must be plugged is of USB Type-A. Therefore, ensure that the cable that comes along with the extender kit is also of USB Type-A.**
3. **Purchase an off-the-shelf, half-duplex or full duplex fiber/ethernet cable, and choose the length based on the distance required. If the ethernet cable is passed in the same conduit as power lines, please make sure that the cable is shielded.**
4. **Make sure there is a power socket near the final location of the Communications kit for powering the USB over ethernet transmitter. The power socket must be on a backed-up circuit.**
5. **Complete the installation of the Wired USB Extender before commissioning the Enphase system using the Enphase Installer App.**
6. **If you plan to remove the IQ Combiner dead-front cover, make sure that the IQ Combiner is de-energized.**

Installation procedure

To relocate the Communications kit by installing a Wired USB Extender, follow the below steps:

1. **If installing in an IQ Combiner, open the enclosure door. Plug the free end of the USB Type-A cable into the USB port on the IQ Gateway.**
2. **Plug the other end of the USB cable into the USB port on the receiver unit.**
3. **Plug one end of the fiber/ethernet cable into the port for the cable on the receiver, plug the other end into the port for the cable on the transmitter.**
4. **Plug the Enphase Communications kit (COMMS-KIT-01 for NA and COMMS-KIT_EU_01 for EMEA) into the USB port on the transmitter. Power the transmitter using the power adapter provided with the USB over ethernet extender. The power socket must be on a backed-up circuit.**
5. **Install the transmitter and the Communications kit inside an NRTL-certified, NEMA type 3R (or better) enclosure when installing outdoors.**

Commissioning the system post installation

The steps for commissioning a system with an extender are the same as the steps for commissioning a system without an extender. Refer to the [Communications kit Quick Install Guide](#) for details.

Recommended off-the-shelf USB extenders that can be purchased

USB Extender over Cat5e/6

Available [here](#)



USB Extender over Fiber

Available [here](#)



Please [click here](#) to download our latest Enphase Installer App for faster and efficient installations.