

# VE.Bus to VE.Can interface manual

(draft)

[ todo add picture of cable ]

Note that for brevity, Multis and Quattros are called VE.Bus devices in this manual.

## Intended usage

This interface is used in Hub-1 systems with grid-feedback enabled. The cable interfaces between the VE.Bus device(s) to one or more MPPT solar chargers with a VE.Can connection: the [MPPT 150/70](#) and/or [MPPT 150/85](#).

Normally these solar chargers will reduce their output power as soon as the battery voltages hits the absorption voltage. When the goal is to feedback excess power to the grid, the solar charger should continue to operate on the Maximum Power Point instead. By using this interface together with the Hub-1 Assistant, that is exactly what will happen: the VE.Bus device will instruct the solar charger to continue maximizing solar output, and any excess power available on the DC side will be fed back by the VE.Bus device into the grid.

Note that this is the only purpose of this cable. In all other systems, where feedback of DC-coupled PV power to the grid is not intended, do not use this cable.

## Installation and configuration

To install the cable, simply connect it between the VE.Bus device and the solar charger(s). Separately powering the VE.Can network is not necessary, since it is powered by the solar charger(s). Same for the VE.Bus network, it will be powered by the VE.Bus device.

When a [Color Control GX](#) is also in the system, do not connect the VE.Bus device to the VE.Bus port on the CCGX. Instead, connecting the CCGX VE.Can port to the VE.Can network. The CCGX will read information from both the VE.Bus device and the Solar chargers from the VE.Can network.

[todo add network drawing here, with CCGX marked as optional]

Either way, with or without CCGX, make sure that the VE.Can network is terminated on both sides, using the VE.Can terminators supplied with the CCGX and the MPPT charger controllers. They are also available for purchase as a [separate accessory](#).

Once properly configured, including the assistant in the VE.Bus device, the display of the solar charger will show "HUB-1" to indicate that all is working properly.

## Updating interface firmware

In case a firmware update of the VE.Bus to VE.Can interface is necessary, there are two ways to do that:

1. use a CANUSB. Note that, while performing the update, make sure that the solar charger is also switched on and connected to the same VE.Can network, in order to power the interface.
2. use a CCGX, and perform a [Remote firmware update](#).

## Known limitation

The Solar yield and Consumption tab on the VRM Portal does not work yet. We have planned to make that work, though unfortunately cannot give a fixed date for that yet.

## More information

- [Hub-1 blogpost](#)

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