

Replacing and Upgrading the Communication Board in a Single Phase Inverter with HD-Wave Technology

Revision History	1
Introduction	1
Kit Contents	2
Required Equipment	2
Prerequisites	2
Recording Inverter Configuration	2
Main Procedure	2
Removing the Inverter Cover	3
Replacing the Communication Board	4
Commissioning and Configuring the Inverter	5
Support Contact Information	6

Revision History


First release - September 2020

Introduction

This user guide is intended for installers, technicians, maintainers and integrators who use the SolarEdge power harvesting system. This guide describes the procedures for replacing and upgrading the communication board in a single phase inverter with HD-Wave technology.

The Single phase inverter with HD-Wave technology is also referred to as the inverter.

This guide assumes that the SolarEdge power harvesting system is already installed and commissioned. For additional information about how to install and commission the SolarEdge power harvesting system, refer to the Single Phase Inverter with HD-Wave Technology installation guides:

Europe, APAC and South Africa	https://www.solaredge.com/sites/default/files/se_hd_wave_inverter_installation_guide.pdf	
North America	https://www.solaredge.com/sites/default/files/se_hd_wave_inverter_installation_guide_na.pdf	

Kit Contents

- Communication board
- Upgrade communication board label for inverter
- Installation guide
- Three screws

Required Equipment

- 4 mm hex key
- Phillips screwdriver
- 3 mm flat screwdriver

Prerequisites

Using cellular communication is optional. In case you are using this option, purchase the Cellular Plug-in for new communication board, that supports SetApp, separately. For installation information refer to:

<https://www.solaredge.com/sites/default/files/se-cellular-plug-in-for-inverters-with-setapp-installation-guide.pdf>



Recording Inverter Configuration

Before replacing the communication board, take note of all the settings that were specifically configured on your inverter. Such configurations may include: Country and language, power control, communication settings, etc.

You can find the information:

- On the LCD panel using the LCD buttons
- In the monitoring platform

Main Procedure

1. Turn OFF the inverter, the Safety Switch (if applicable), and the circuit breaker on the main distribution panel. Refer to *Removing the Inverter Cover* on page 3.
2. Wipe the area on the inverter the label is to be stuck on.
3. Place the upgrade communication board label on the inverter as shown below:

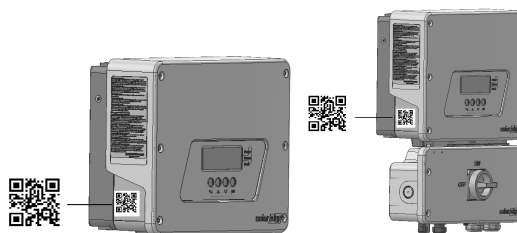


Figure 1: Label location on the inverter with and without Safety Switch

4. Remove the inverter cover, refer to the procedure in this document.
5. Replace the communication board, refer to the procedure in this document
6. Close the inverter cover.
7. Turn ON the AC to the inverter by turning ON the circuit breaker on the main distribution panel, and if applicable turn on the Safety Switch.
8. Download, register (first time only) and log-in to SetApp on your mobile device. Internet connection is required for the download one-time registration and log-in.

You can download the SetApp from the Apple App Store and Google Play before arriving at the site.



9. Commission and configure the inverter using SetApp, refer to the procedure in this document.
10. Verify the inverter is working properly:
 - a. Ensure that the pairing process had completed successfully
 - b. The inverter has started production

Removing the Inverter Cover

1. Switch the inverter ON/OFF switch to OFF. Wait five minutes for the capacitors to discharge.

WARNING!

If the inverter was operating properly (power was produced by the power optimizers), the following message is displayed.



DC VOLTAGE NOT SAFE
DO NOT DISCONNECT
VDC: 72.0

This message is displayed until the DC voltage is safe (50V). Do not open the cover until the voltage is safe or until at least five minutes have passed.

AVERTISSEMENT!

Si l'onduleur fonctionnait correctement (l'alimentation a été produite par les optimiseurs de puissance), le message suivant s'affiche.



DC TENSION NON SÉCURISÉE
NE PAS DÉCONNECTER
VDC: 72.0

Ce message s'affiche jusqu'à ce que la tension CC soit sûre (50 V).

Ne pas ouvrir le couvercle ou les connecteurs DC jusqu'à ce que la tension soit affichée comme sécurisée ou jusqu'à ce que cinq minutes au moins se soient écoulées.

2. Turn the Safety Switch (if applicable) to OFF.
3. Disconnect the AC to the inverter by turning OFF the circuit breakers on the distribution panel.
4. Open the inverter cover (see *Figure 2*).
 - a. Release the Allen screws of the cover.
 - b. Tilt the top of the cover towards you.
 - c. Slide the cover down and remove it.

CAUTION!

When removing the inverter cover, make sure not to damage the internal components. SolarEdge will not be held responsible for any components damaged as a result of incautious cover removal.



ATTENTION!

Lors du retrait du couvercle, assurez-vous de ne pas endommager les composants internes. SolarEdge ne peut être tenue pour responsable des composants endommagés à la suite d'une imprudence dans le retrait du couvercle.

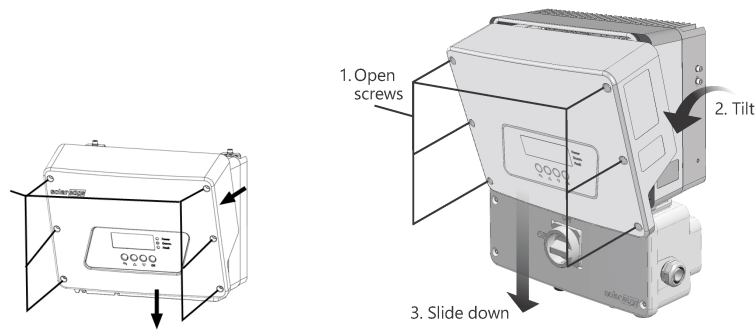


Figure 2: Removing the Single phase inverter with HD-Wave technology cover

Replacing the Communication Board

Removing the Communication Board

1. Carefully disconnect the following connectors (see *Figure 3*) from the communication board:

- RJ45 Ethernet
- RS485
- SolarEdge ZigBee plug-in with an antenna
- 8-pin power control
- Fan power supply
- Power supply
- SolarEdge Wi-Fi antenna
- Cellular antenna

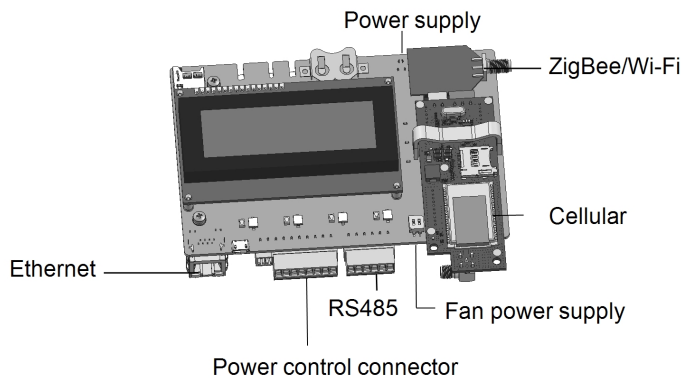


Figure 3: Connectors on communication board (before replacement)

2. Remove the four screws (circled in *Figure 4*) that attach the communication board to the power board standoffs. Hold the stand offs to avoid their rotation with the screws.
3. Carefully pull the communication board to separate it from the standoffs and set the board aside.

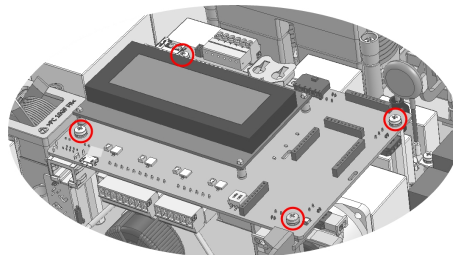


Figure 4: Screws on communication board (before replacement)

Installing the New Communication Board

1. Position the new board over the standoffs and fasten it using the four previously removed screws (see *Figure 4*).
2. Reconnect the following connectors to the new communication board:

- RJ45 Ethernet
- RS485
- ZigBee plug-in with an antenna
- 8-pin power control connector
- Fan power supply (if applicable)
- Power supply
- Wi-Fi antenna
- Cellular antenna

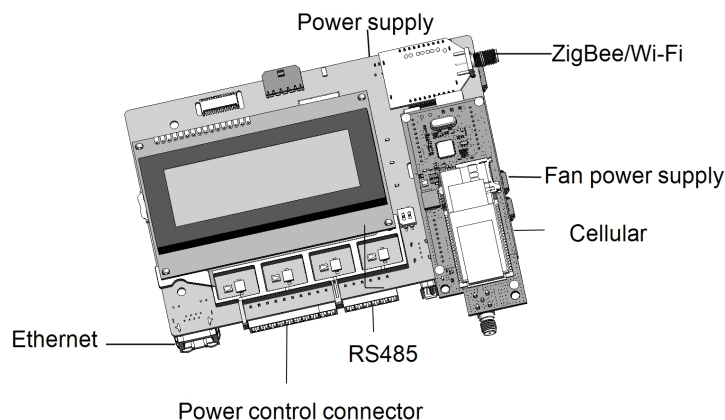


Figure 5: Connectors on communication board (after replacement)

3. In case you are using cellular communication don't use the plug-in from the previous communication board, as it is not compatible with the new communication board. Connect the cellular plug-in purchased separately.

NOTE

For the cellular plug-in installation information refer to: <https://www.solaredge.com/sites/default/files/cellular-plug-in-for-setapp-installation-guide.pdf>.



4. Close the inverter cover:
Attach the inverter cover and secure it by tightening the screws with a torque of 3.0 N*m/ 2.2 lb.*ft. For proper sealing, first tighten the corner screws and then the two central screws.

Commissioning and Configuring the Inverter

1. Turn ON the AC circuit breaker on the main distribution panel, if applicable turn ON the Safety Switch.

The following screen is displayed on the inverter screen:

Initializing....

2. Open SetApp and follow the on-screen instructions on your mobile device to connect to the inverter. In case the inverter is not connected to the monitoring platform via Ethernet or cellular, these instructions include setting up communications to the monitoring platform.
3. When initialization is complete the following message is displayed on the inverter screen:

Hold any button for
2 seconds to turn
Wi-Fi AP and use
SetApp to connect


4. With SetApp scan:
- a. The upgrade communication board sticker, supplied with this kit, now placed on the inverter, see *Figure 1*
 - b. The barcode on the top right corner of the inverter ratings label, see the following figure:





5. Press any button on the inverter for two seconds when instructed by SetApp.
6. The following screen is displayed on the inverter screen:

Wi-Fi AP Enabled
ID: XXXX - XXXXXXXX - XX
PW: XXXX
Use App to connect

7. Using SetApp, set the lifetime AC production counter (this screen is one of the SetApp wizard screens, it appears automatically): In the **Set lifetime AC production counter** screen, tap **Set Counter** to set the number of kWh displayed, or enter the pre-recorded number of kWh and tap **Set Counter**.

 **NOTE** In case you don't set the AC productions counters (tap Skip on SetApp) the following message appears: 'SetApp will sync the production counters when communication with the monitoring platform is available.'

8. Comission and configure the inverter usint SetApp as explained in, "Activating, Commissioning and Configuring the System Using the Inverter SetApp" chapter in the following installation guides:

Europe, APAC and South Africa	https://www.solaredge.com/sites/default/files/se_hd_wave_inverter_SetApp_installation_guide.pdf	
North America	https://www.solaredge.com/sites/default/files/se_hd_wave_inverter_with_SetApp_installation_guide_na.pdf	

Support Contact Information

If you have technical problems concerning SolarEdge products, please contact us:



<https://www.solaredge.com/service/support>

Before contact, make sure to have the model and serial number of the product in question information at hand.