Software Upgrade using SD/MicroSD card - Application Note

Revision History

Version 1.1 (August 2018)

- Updated the specifications of supported non-SolarEdge cards.
- Added a link to the SolarEdge firmware page.

Version 1.0

The first version of this document

SolarEdge Card

SolarEdge supplies a proprietary memory card with its inverters (SD/MicroSD card). This card activates the inverter (sets the correct country settings) and installs the latest firmware (FW) version if required. This card cannot be read and written to by conventional card readers and writers.

Figure 1: SolarEdge upgrade card

For firmware upgrade of installed inverters, go to https://www.solaredge.com/service/firmware.
This document explains what type of card to use and how to upgrade the inverter firmware version.

Supported Non-SolarEdge Cards

Use commercially available cards that meet the following specifications:

- Memory cards format: microSD
- Maximum space: 8GB
- Format: FAT32
- Maximum data rate: Class 2, 4, 10

Depending on inverter model, the card slot on the communication board may be either SD card type or microSD type. Use either the microSD-to-SD card adapter (usually included when you purchase a microSD card) or the micro-SD card, which can be removed from the adapter, according to the activation card slot type on your inverter communication board.

Firmware Upgrade

→ **To check the inverter CPU version:**

1. Verify that the inverter has been activated using the activation card supplied with the inverter.
2. Short-press the LCD light button until the following screen is displayed:

```
I D :  # # # # # # # #   # #

D S P 1 / 2 : x . x x x x / x . x x x x

C P U  : 0 0 0 3 . 1 6 0 0

C o u n t r y : X X X X X
```

3. Check the CPU version number. If required, upgrade the inverter software as described below.
4. If required, obtain the upgrade file from https://www.solaredge.com/service/firmware and copy it to the memory card. If multiple updates are required, each update file must be copied to a separate card.

→ **To upgrade the inverter software:**

1. Turn OFF:
   - The inverter ON/OFF switch
   - The Safety Switch (if applicable)
   - The AC breaker connected to the inverter.

2. Verify that AC to the inverter is OFF, or disconnect the AC to the inverter by turning OFF the circuit breakers on the distribution panel. Wait 5 minutes for the capacitors to discharge.

3. Open the inverter cover's six Allen screws and carefully pull the cover horizontally before lowering it, as described in the inverter *Installation Guide*.

> ⚠️ **WARNING!**
> ELECTRICAL SHOCK HAZARD. Do not touch uninsulated wires when the inverter cover is removed.

4. Insert the card into the card slot on the communication board. If the communication board has an SD card slot, use the SD card adapter. If there is a micro-SD card slot, remove the micro-SD card from the adaptor and insert it.
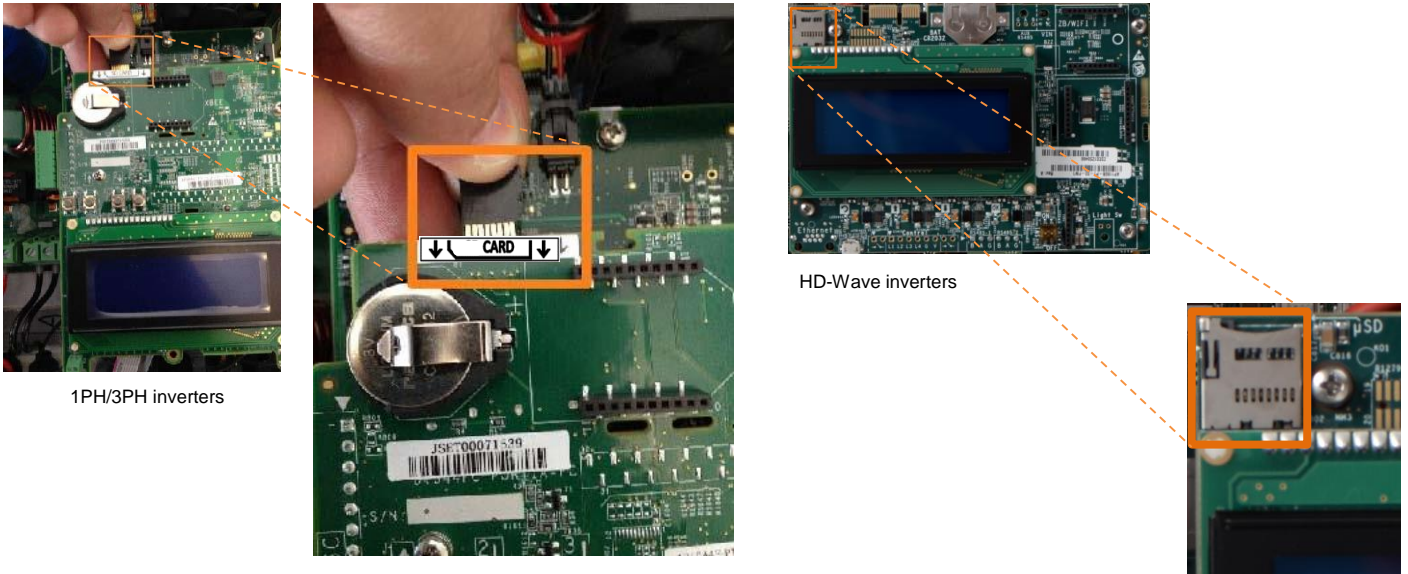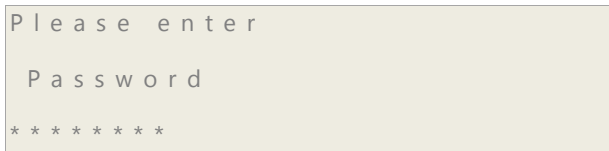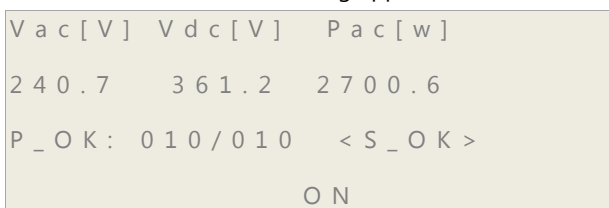

1PH/3PH inverters

HD-Wave inverters

Figure 2: Inserting the card

5. Turn the AC on.

6. Enter Setup mode: Press the Enter button for at least 5 seconds. The following message is displayed:

```
P l e a s e   e n t e r

 P a s s w o r d

* * * * * * * *
```

7. Use the three rightmost internal LCD user buttons to type in the following password: **12312312.** The inverter is now In Setup mode. Short-press the buttons to scroll between menus and long press the enter button to select a menu.

8. Select Maintenance ➔ SW Upgrade-SD Card.

9. Check that the card is inserted with the corresponding update file and select **Continue ➔ Yes**.

10. The inverter runs the script / update. Wait for the message "Done" to be displayed on the LCD.

11. Verify the correct version as described above.

12. Remove the card from the inverter and keep it for additional upgrades.

13. Close the inverter cover by tightening the screws with a torque of 9.0 N*m/ 6.6 lb*ft. For proper sealing, first tighten the corner screws and then the two central screws.

14. Turn ON the Safety Switch. If an additional external DC switch is installed between the power optimizers and the inverter(s) then turn it ON.

    A status screen similar to the following appears on the LCD:

```
V a c [ V ]   V d c [ V ]     P a c [ w ]

2 4 0 . 7     3 6 1 . 2     2 7 0 0 . 6

P _ O K :   0 1 0 / 0 1 0     < S _ O K >

                    O N
```

15. Check for proper inverter functionality.