

Solis Firmware Update

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Requirements:

1: Update Stick:

Please contact Solis Support, if you do not have an Update stick yet. (Please note that sticks are only send to installers, not end customers.)



2: Firmware files:

Please contact our Solis support line. We will provide the Firmware files for you.

3: USB Stick:

Please make sure that the stick is empty, Format FAT32, if possible, no metal casing

4: Communication cable / Address set

Verify no communication cables are connected. Also verify the address is set to 1 on the inverter.

NOTE: If you need to do both, a HMI and DSP Update on your inverter, we recommend to do the DSP Update before the HMI Update.

DSP Update

Compatible Models:

Solis-1P(.7-3.6)K-M-4G

Solis-1P(2.5-6)K-4G

S5-GR1P(.7-3.6)K-M

S5-GR1P(2.5-6)K

S5-GR3P(3-20)K

S5-GC(25-40)K

S5-GC(50-60)K

S5-GC3P(50-60)K

S5-GC80K

S5-GC(100-110)K

S5-EH1P(3-4.6)K-L

Solis-3P(3-20)K-4G

Solis-3P(5-30)K-LV

Solis-(25-50)K-5G + Plus

Solis-(40-70)K

Solis-(80-110)K-5G

Solis-(80-110)K-5G-PRO

Solis-125K-EHV-5G

Solis-255K-EHV-5G

S6-GR1P(0.6-3.6)K-M

S6-GR1P(2.5-6)K

RAI-3K-48ES-5G

RHI-(3-5)K-48ES

RHI-(3-6)K-48ES-5G

RHI-3P(5-10)K-HVES-5G

Procedure:

1. Take the files supplied to you and put them on a USB stick
 - a. One file is named 28062API.bin (this file will never change)
 - b. One file is named 28062APP.bin (this is the specific file for the inverter)
 - i. If the file is not named 28062APP.bin please **RENAME IT**.
 - ii. Ensure the file is not zipped. If it is extract it.
 - iii. Ensure the file is not in a folder in your USB Drive.
 - iv. Ensure there are no other files in the USB Drive

For Example:

 28062API.bin	30/11/2018 3:14...	BIN
 28062APP.bin	30/11/2018 3:14...	BIN

2. Place the USB into the Firmware Update Tool and place into the inverter's 4 pin Green Port.
Note: Example image is the 1 Phase RHI series. The COM port is on most inverters identical.
(Except for our S6 series, which have an USB connector)



3. The Firmware Update Tool Should Light RED and GREEN as seen in the picture.



4. Go to Advanced Settings – password 0010 – go to DSP Update
5. Verify the Version
6. **Select ENTER** on DSP Update.
7. “CLICK” the button on the back up of the Firmware Update Tool. Verify the GREEN light is flashing (with some inverters you will hear the fans come on)



IMPORTANT: Verify the Green light flashes quickly and then change to a slow flash. Slow flashing means the inverter and the update tool have made a connection. It could take some time until the update is completed, so please be patient.

8. Once the Firmware is complete, you will see the only the RED light being solid.



IMPORTANT: After some time the GREEN light should go on again. Please be patient since this can take some time. If the green light does not go on after some time means the inverter did not take the update. In that case please try again uploading the update.



9. Verify on DSP Update that the version changed. (Go to Advanced Settings – password 0010 – DSP Update)

IN some cases, it is important to restart the inverter. If the updated Firmware Version is not displayed on the inverter, please restart the system, and check again.

HMI Update

Compatible Models:

Solis-1P(.7-3.6)K-M-4G
Solis-1P(2.5-6)K-4G

S5-GR1P(.7-3.6)K-M
S5-GR1P(2.5-6)K
S5-GR3P(3-20)K
S5-GC(25-40)K
S5-GC(50-60)K
S5-GC3P(50-60)K
S5-GC80K
S5-GC(100-110)K
S5-EH1P(3-4.6)K-L

Solis-3P(3-20)K-4G
Solis-3P(5-30)K-LV
Solis-(25-50)K-5G + Plus
Solis-(40-70)K
Solis-(80-110)K-5G
Solis-(80-110)K-5G-PRO
Solis-125K-EHV-5G
Solis-255K-EHV-5G

S6-GR1P(0.6-3.6)K-M
S6-GR1P(2.5-6)K

RAI-3K-48ES-5G

RHI-(3-5)K-48ES
RHI-(3-6)K-48ES-5G
RHI-3P(5-10)K-HVES-5G

File Name Chart:

- Solis-mini-4G - HMI.bin \leq 18 - HMI_WIFI.bin $30 \geq$
- Solis-Single Phase-4G - HMI.bin \leq 18 - HMI_WIFI.bin $30 \geq$
- Solis-Single Phase-5G - HMI_WIFI.bin only
- Solis-3P(3-20)K-4G - HMI.bin Only
- Solis-3P(5-10)K-LV - HMI.bin Only
- Solis-3P(15-20)K-LV - HMI.bin \leq FD - HMI_WIFI.bin $>$ FD
- Solis-3P(25-30)K-LV - HMI.bin \leq FC - HMI_WIFI.bin $>$ FC
- Solis-(25-50)K-5G - HMI.bin Only
- Solis-(80-110)K-5G - HMI.bin Only
- Solis-125K-EHV-5G - HMI.bin Only
- Solis-255K-EHV-5G - HMI.bin Only
- RAI-3K-48ES-5G - HMI.bin Only
- RHI-(3-5)K-48ES - HMI.bin \leq 15 - HMI_WIFI.bin $20 \geq$
- RHI-(3-6)K-48ES-5G - HMI_WIFI.bin ONLY
- RHI-3P(5-10K-HVES-5G - HMI.bin Only

Procedure:

1. Take the file supplied to you and put them on a USB stick. The only file needed on the stick is named HMI.bin or HMI_WIFI.bin - **Please see chart above on how to name it.** Ensure the file is not zipped. If it is, **extract it.**
2. Place the USB into the Firmware Update Tool and Place in the Inverter 4 pin Green Port.
3. The Firmware Update Tool Should Light RED and GREEN as seen in the picture.



4. Go to Advanced Settings – password 0010 – go to HMI Update. Verify current HMI Version.

5. Go to the Firmware update tool and push and hold the button on the back until all 3 lights are lit as shown below and then let go. RED, GREEN and YELLOW should all be lit solid.



6. Advanced Settings – password 0010 – go to HMI Update – **Select ENTER** to go into Update Mode
7. “CLICK” the button on the back up of the Firmware Update Tool. Verify the GREEN and YELLOW lights are Flashing.



IMPORTANT: Verify the Green light flashes quickly and then change to a slow flash. Slow flashing means the inverter and the update tool have made a connection. It could take some time until the update is completed, so please be patient.

8. Once the Firmware is complete, you will see the ALL 3 LEDs go solid.



NOTE: If only the RED light is on that means the inverter did not take the update.

9. Verify on HMI Update that the version changed. (Advanced Settings – password 0010 – go to HMI Update)

IN some cases, it is important to restart the inverter. If the updated Firmware Version is not displayed on the inverter, please restart the system, and check again.

HMI Update

(In case of frozen screen/display)

Information:

An HMI recovery should be performed when an HMI firmware update has failed and the inverters HMI screen has gone blank with black blocks. This can happen when incorrect firmware is used or the wrong procedure was tried in a. Check that the firmware version and procedure used was correct.

Procedure:

1. Check the correct firmware version was used for the inverter model.
2. Ensure all other COM's cables and devices have been unplugged and disconnected.
3. Do a quick format on a USB thumb drive.
4. Rename the HMI firmware file to HMI.bin.
5. Copy the HMI.bin file to the USB drive.
6. Switch off the inverter by turning off DC and AC power to the inverter.
7. Plug the USB drive into the USB port of the Solis Upgrade stick.
8. Plug the upgrade stick into the green 4 pin COM plug of the inverter.
9. Turn on the inverter using the DC PV Power.
10. Put the inverter into HMI recovery mode by holding down the **Escape + Up + Enter button simultaneously once the red LED is on**. Press the buttons a few seconds until the green LED has flashed at least 4 times.
RED and GREEN LED on the Upgrade stick should be lit.



11. Hold down and press the reset button on the Solis upgrade stick until the RED, GREEN & YELLOW LED's are on.



12. Once all the LED's are on, quick press the reset button on the Solis firmware update stick and the LED's will start to flash very fast to start with and more slowly later on.



13. Once the Firmware is complete, you will see the ALL 3 LEDs go solid.



EPM3-5G-PLUS

File Name Chart:

- **EPM Plus - HMI_WIFI.bin**

Procedure:

The process of locally updating the Export Power Manager (EPM) differs slightly from updating inverters. To access the specific procedure for updating the EPM, please follow the link:

[EPM – Local Update SOP](#)



Troubleshooting Tips:

1. Ensure your USB doesn't have a metal casing. This has been known to cause problems with the update.
 2. Ensure your USB is a newer style USB and not using an old file system
 3. Ensure your files are correct (90% of the time it's a file issue). If you think that you may have an incorrect file, contact the Solis Service to receive another Firmware file.
 4. Ensure you do not have external communication hooked up.
 - a. For Example, if you have an inverter with a RS485 connection and you are updating via the green Port, there could be a communication crash and the update will become corrupted.
 5. Ensure you have the INVERTER ADDRESS SET TO 1 (for HMI Update)
 6. Ensure your green port is working (verify with a voltage check of 1.7 VDC on the port. If the port is showing strange voltages the update will never work.
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- RED = +5 volts DC = Pin 1
 - BLACK = -5 volts DC = Pin 2
 - YELLOW = +RS 485 = Pin 3
 - BLUE = -RS 485 = Pin 4



Connect with Solis

