

Firmware Upgrade Guide

This article provides installers with a standardized procedure upgrading firmware, verifying software versions for SolisStorage Battery Protocol using the **Solis 2nd-Generation One-Click Upgrade Dongle (MS-S2-UPG)**.

Video Reference:

<https://www.youtube.com/watch?v=3jToGIUF6k8>



Required Tools and Materials

Before starting the upgrade: you'll need

- Solis 2nd-Generation Upgrade Dongle (MS-S2-UPG)
- S2-WL-ST Data Logger
- USB Flash Drive(s)
- AC Wiring Cables
- DC Positive and Negative Connectors
- Anti-static Gloves
- T10 Screwdriver or Electric Screwdriver



Power-Up and Firmware Upgrade Procedure

1.1 Prepare Power Connections

Option A – DC Power Supply

- Connect pre-crimped DC connectors to the inverter PV+ and PV– ports.
- Supply DC voltage between 180V and 600V.
- Recommended test voltage: approximately 200V DC.
- Turn the inverter DC switch to ON.

Option B – AC Power Supply

- Remove the AC wiring cover using a T10 screwdriver.
- Connect AC cables to the inverter Grid terminals:
 - L
 - N
- Energize the AC supply.
- Press the Grid Connection Button on the inverter.

1.2 Determine the Correct Firmware

Before upgrading, verify the inverter date and model from the serial number.

If inverter date is before the date mentioned in the overview a Firmware update is needed, when the date is later no update is needed and the inverter already has the new protocol to match the SolisStorage Battery.

- Example: 103173**A26323**0227
- Date: 2026.10.23 (YYYY_MM_DD)

S/N Code Rules:

S/N: X X XXXXXXXXXX XXXX

The 11th and 12th digits represent the date 01-31
 The 10th digit represents months 1-12, "A" represents October/
 "B" represents November/"C" represents December
 The 8th and 9th digits represent the year (26 represents 2026,
 27 represents 2027, and so on)

Inverter Model	Date	Inverter Model	Date
S6-EH3P(7-10)K02-LV-YD-L	2026.04.06	S6-EH1P(3-8)K-L-PRO	2026.06.10
S6-EH3P(5-18)K02-NV-YD-L	2026.04.06	S6-EH2P(5-8)K02-SV-YD-L	2026.06.10
S6-EH1P(3-10)K-L-PLUS	2026.04.21	S6-E01P(4-5)K-48-EU	2026.06.10
S6-EH1P(9.9-18)K03-NV-YD-L	2026.05.17	S6-EH2P(9.6-16)K03-SV-YD-L-US	2026.06.10
S6-EH1P(3-6)K-L-EU/AU	2026.06.10	S6-EA1P(3.6-6)K-L	2026.06.30
Collector Model	Date	Collector Model	Date
S2-WL-ST	2026.04.25	S1-W4G-ST	2026.07.15
S5-WiFi-ST	2026.05.30		

For the S5-EH1P(3-6)K(-Smart) model (previous generation). Updated software versions will be available after July 30, 2026;

How to Identify the Model:

Example: SN: 10**3173**A263230227

The 3rd to 6th digits indicates the model number: **3173**

Use this model number to obtain the correct:

- DSP firmware
- HMI firmware
- LCD firmware

Please contact your local Solis After Sales Service by creating a ticket for the firmware request to update the inverter with the SolisStorage Firmware. The following models currently have firmware available:

Series	Model	HMI version	DSP version	LCD version
S6-EH1P(3-10)K-PLUS	3170, 3171, 3172, 3173, 3174, 3175, 317A, 317B, 317C, 317D, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199, 3126	V2EB05	V1AB02	V11B01
S6-EH1P(9.9-18)K03-NV-YD-L	3139, 3127, 3128, 3129, 3130, 3150, 3178	V2D-62	V0EB04	V0F-08
S6-EH3P(8-15)K-L	3330, 3331, 3333, 3332, 3334, 3335, 3350, 3351, 3352, 3353	V106B	V11B05	V0D01
S6-EH2P(5-8)K02-SV-YD-L	3182, 3183, 3184, 3185, 3189	V0703	V09B63	V0761
S6-EO1P(4-6)K	5120, 5121, 5123, 5122, 5124, 5125, 5126, 5127, 5128, 5129	V1161	V10BOA	n/a
S6-EH1P(3-6)K-L; S6-EH1P(3-8)K-L-PRO:	3111, 3112, 3113, 3114, 3115, 3145, 3146, 3147, 3148, 3149, 3116, 3117, 3118, 3119, 3120	V2D-B62	V17-B05	n/a
S6-EH2P(9.6-16)K-SV	3156, 3157, 3158, 3159, 3160, 3161, 3162, 3163, 3164, 3166, 3179	V07B04	VOAB02	V0602
S6-EA3P(5-10)KAA-NV(LV)-YD-H-PRO	4312, 4309, 4310, 4324, 4311	V02-07	n/a	V02-60
S6-EA3P(5-10)KAA-NV-ND-H	4305, 4306, 4307, 4308	V1F01	V1201	n/a
S6-EH3P(3-12)K-H	3301, 3302, 3303, 3304, 3305, 3306, 3319	V1F01	V1201	n/a

2.3 Prepare the USB Drives

Important Requirements

- Create a folder named: "UPGRADE" on the USB drive if it does not already exist.
- Copy the firmware .bin file into the UPGRADE folder.
- Only one firmware file is allowed per USB drive.

Recommended Setup:

Use separate USB drives for:

Firmware Type	USB Drive
DSP	USB #1
HMI (ARM)	USB #2
LCD	USB #3

2.4 Connect the Upgrade Dongle

1. Insert the USB drive into the MS-S2-UPG dongle.
2. Connect the dongle to the inverter COM port.

2.5 Select Upgrade Mode

After connecting the dongle:

1. The display shows: BEG
2. Short press Key B.
3. Display changes to: UEH
4. Press and hold Key A for 2 seconds.
5. Enter the generation selection screen.
6. Select: 2-0

2.6 Start the Firmware Upgrade

1. Return to the main menu.
2. Locate: BEG
3. Press and hold Key A for 3 seconds.
4. The upgrade process will begin.

The dongle automatically identifies the firmware file and upgrades the inverter.

Supported Firmware Types

- HMI (ARM)
- DSP
- LCD

Upgrade Completion

The display shows a progress bar. When the progress reaches: 100% the upgrade is complete.

3. Verifying Firmware Versions

Inverters with LCD Screens:

1. Press ENTER twice.
2. Press DOWN.
3. Review the firmware version information.
4. Confirm the displayed version matches the target firmware.

Screenless Inverters (ND)

Use the **SolisCloud App** and connect locally via Bluetooth.

Requirements

- Log in using an Administrator Account
- Do not select: Installer or Owner
- This prevents registration conflicts and device ownership issues.
- Local Bluetooth Password: solis#800

Verification Process

1. Connect to the inverter via local Bluetooth.
2. Open Local Commissioning.
3. Read the inverter information.
4. Confirm firmware versions have been updated successfully.

4. Upgrading Additional Firmware

Repeat the same procedure separately for:

- ARM / HMI firmware
- DSP firmware
- LCD firmware

Each firmware must be upgraded individually using its corresponding USB drive.

5. Troubleshooting

If an upgrade fails:

1. Check the error code displayed on the dongle.
2. Refer to the corresponding error description.
3. Repeat the upgrade process.

LCD Freeze or Upgrade Lockup

If the inverter or dongle becomes unresponsive:

1. Restart the inverter.
2. Retry the firmware upgrade.

If the problem persists after multiple attempts, escalate to Technical Support.