



Phocos Any-Grid™ series



Applicable for Any-Grid™ PSW-H models as mentioned in the Upgrade File Name

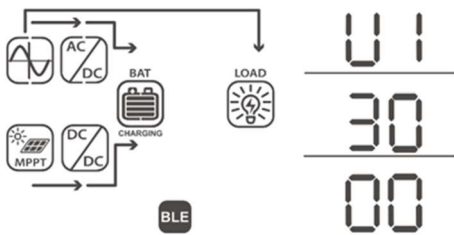
Firmware Upgrade Guide



1.0 Introduction

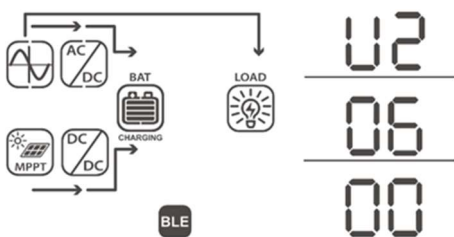
This guide outlines the required steps to upgrade the firmware of the Any-Grid™ PSW-H hybrid inverter model mentioned in the filename of the upgrade zip package.

Before proceeding, check the currently installed “Main Unit” (U1) firmware by scrolling through the Any-Grid LCD’s screen views by pressing  or  until this view is shown:



In this example the Version 30.00 is shown.

Keep scrolling to find the “Display Unit” (U2) firmware version until this view is shown:



In this example the Version 06.00 is shown.

WARNING: Be sure the Any-Grid unit is only connected to a battery. PV and all AC connections must be disconnected for your own safety. Also, any parallel communication and current sharing cables must be disconnected.

If no battery or DC source is available, the Any-Grid may be powered from an AC source via the AC input. In this case the firmware update may only be done by a trained professional. AC load output, PV and battery terminals and any parallel and current sharing cables must be disconnected when choosing to proceed with an AC source.


Make sure the upgrade procedure is undertaken with the bottom cover closed, so that no terminals are accidentally touched during the procedure. Failure to do so could cause serious injury due to electrocution.

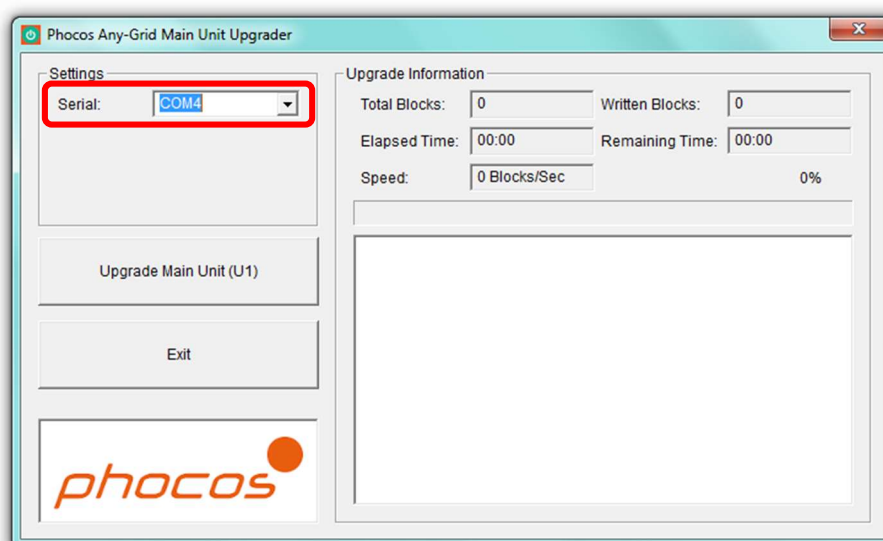
2.0 Requirements

To upgrade the Any-Grid, the following is required:

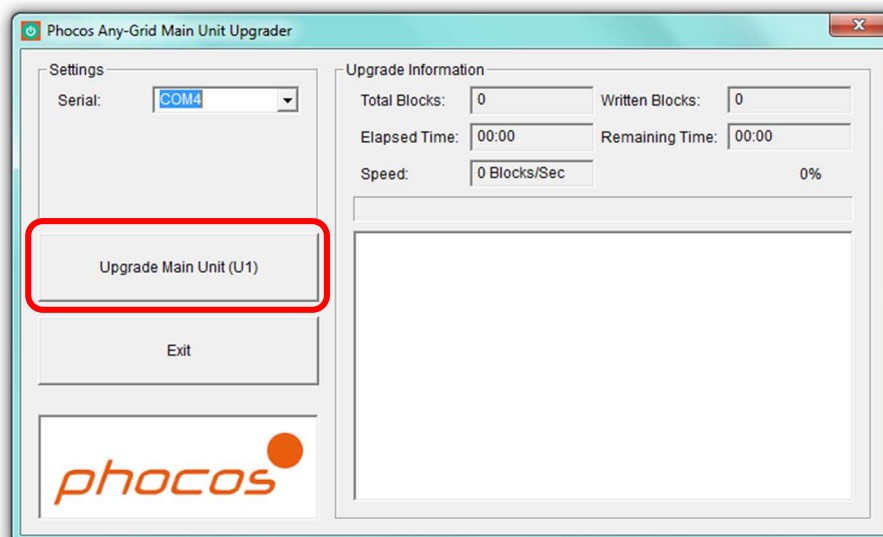
- Any-Grid PSW-H unit – model as mentioned in the filename of the upgrade zip package
- Firmware upgrade file(s) in zip package provided by your Phocos dealer
- RS-232 cable (RJ-45 to SUB-D connectors) provided with every Any-Grid unit
Using any other cable than the one provided may damage the Any-Grid and/or your PC and void your warranty.
- Windows PC (tested on Windows 7 and Windows 10)
- Native RS-232 port on the Windows PC. If no such port is available, a standard USB to RS-232 adaptor may be used to create a virtual COM port. This guide assumes that if a USB adaptor is used, the drivers are correctly installed. The COM port number assigned must be between 1 and 9.
- This guide, which is valid for both a “Main Unit” or “Display Unit” upgrade. Follow the section(s) which is/are relevant for the upgrade(s) you require. If both are to be upgraded, proceed with the “Main Unit” and if successful, continue with the “Display Unit” upgrade.

3.0 Procedure for Main Unit Upgrade

1. Attach the Any-Grid unit to your PC with the RS-232 cable mentioned above. The RJ-45 side must be plugged into the "RS-232" port of the display unit on the Any-Grid. The SUB-D side must be connected to the Windows PC directly or via an RS-232 to USB adaptor. Ensure the Any-Grid display is powered on, refer to the "Introduction" chapter of this guide for details.
2. Extract the zipped folder "PSW-H Main Unit Upgrade XX.XX" to a hard disk on the Windows PC, with which the upgrade will be conducted. Ensure the folder and its contents are extracted and no longer zipped. Do not perform the upgrade directly from a USB drive or other external peripheral to avoid interruption.
3. Enter the folder "PSW-H Main Unit Upgrade" and execute the Upgrade software:
 **Phocos Any-Grid Main Unit Upgrader.exe**
4. Select the serial COM port to which the Any-Grid unit is connected:

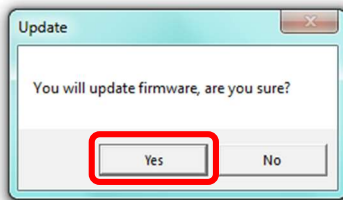


5. Click "Upgrade Main Unit (U1)":

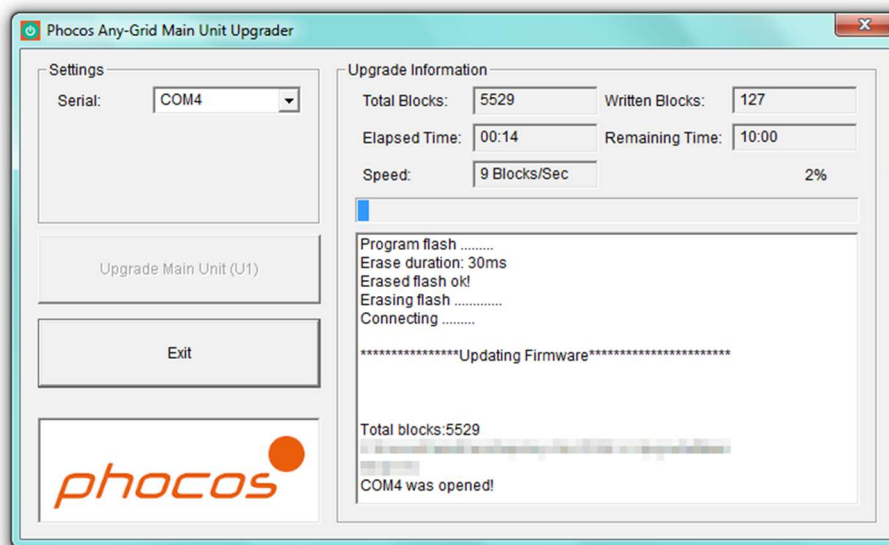


6. **Warning: Before proceeding, ensure that the battery powering the Any-Grid is sufficiently charged or, if you are using an AC source, that it will not be interrupted for at least 20 minutes.**

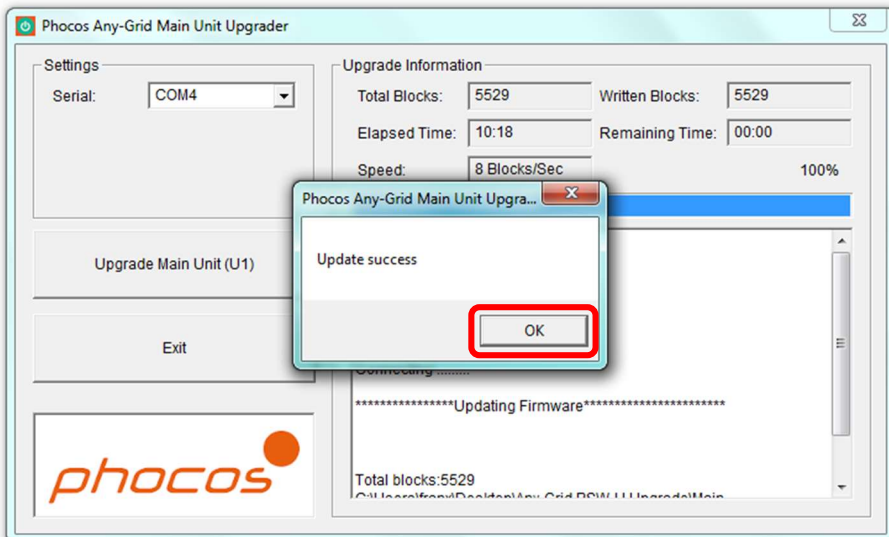
Click “Yes” when asked if you are sure, to proceed with flashing the upgrade of the firmware:



7. The Upgrader will now proceed to erase the flash memory of the Any-Grid and replace it with the updated file. It is normal that the Upgrader software may appear not to respond for a few seconds. The progress is shown, and the upgrade typically takes 10 ~ 15 minutes. **Make sure not to interrupt the upgrade during this time.**




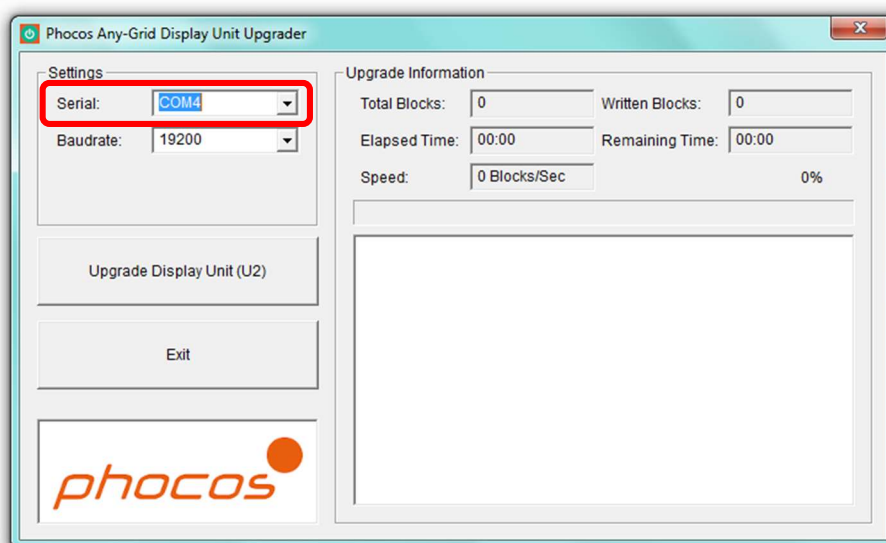
8. Once the progress reaches 100%, the Any-Grid unit will restart automatically. The Upgrader software will show an “Upgrade success” message. This can now be dismissed, and you may exit the Upgrade software.



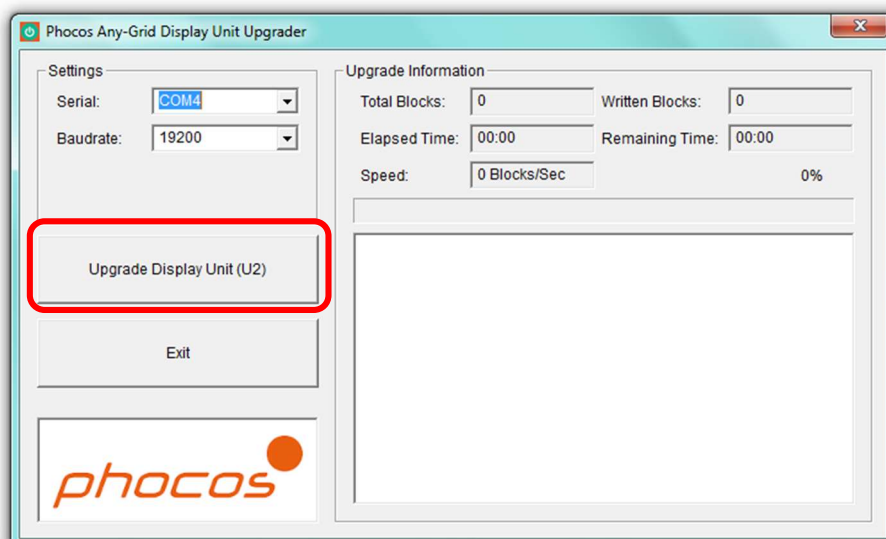
9. The Any-Grid may be disconnected from its power source 2 minutes after its automatic restart is complete. Alternatively, you may now reconnect the battery or AC input, whichever was disconnected during the procedure. Then continue to connect the PV array and loads as required.
10. The “Main Unit” upgrade procedure is complete. You can check the new version number as described in the chapter “**Introduction**” of this document.

4.0 Procedure for Display Unit Upgrade

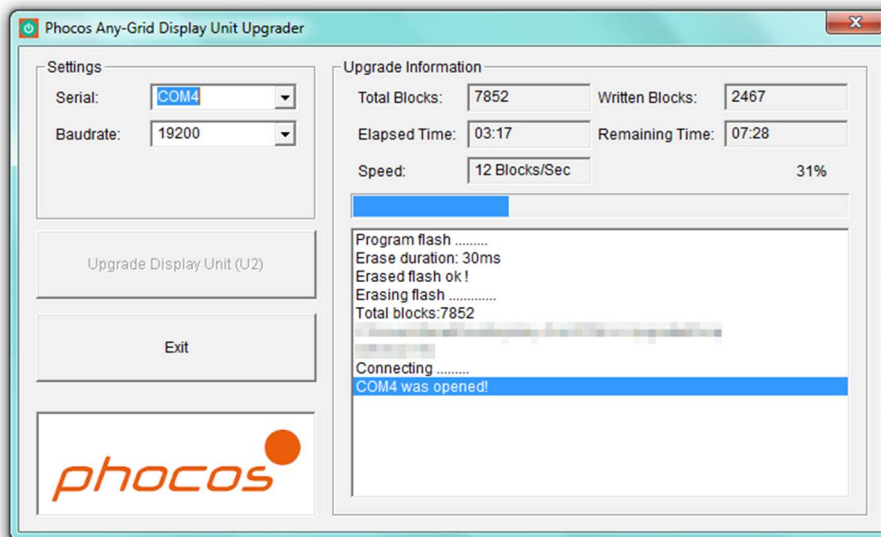
1. Attach the Any-Grid unit to your PC with the RS-232 cable mentioned above. The RJ-45 side must be plugged into the "RS-232" port of the display unit on the Any-Grid. The SUB-D side must be connected to the Windows PC directly or via an RS-232 to USB adaptor. Ensure the Any-Grid display is powered on, refer to the "Introduction" chapter of this guide for details.
2. Extract the zipped folder "PSW-H Display Unit Upgrade XX.XX" to a hard disk on the Windows PC, with which the upgrade will be conducted. Ensure the folder and its contents are extracted and no longer zipped. Do not perform the upgrade directly from a USB drive or other external peripheral to avoid interruption.
3. Enter the folder "PSW-H Display Unit Upgrade" and execute the Upgrade software:
 Phocos Any-Grid Display Unit Upgrader.exe
4. Select the serial COM port to which the Any-Grid unit is connected:



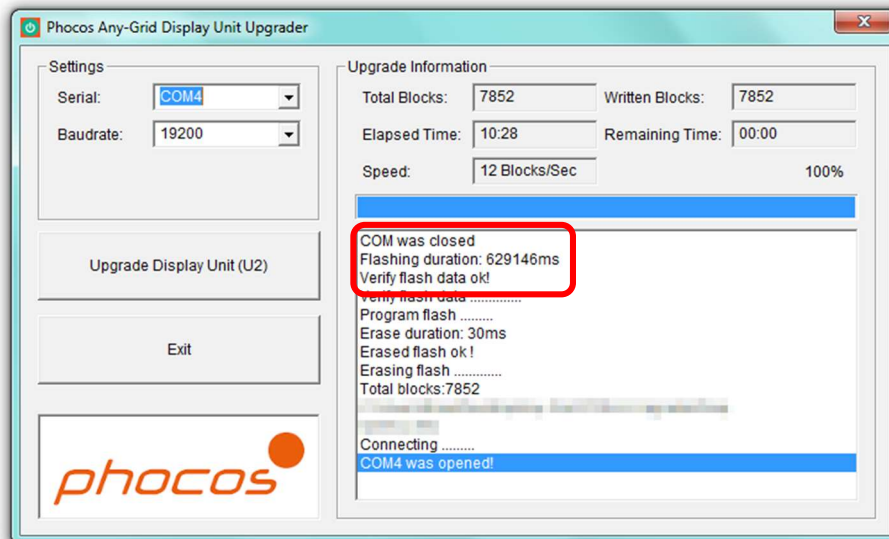
5. **Warning: Before proceeding, ensure that the battery powering the Any-Grid is sufficiently charged or, if you are using an AC source, that it will not be interrupted for at least 20 minutes.** Click "Upgrade Display Unit (U2)":



6. The Upgrader will now proceed to erase the flash memory of the Any-Grid and replace it with the updated file. It is normal that the Upgrader software may appear not to respond for a few seconds. The progress is shown, and the upgrade typically takes 10 ~ 15 minutes. **Make sure not to interrupt the upgrade during this time.**



7. Once the progress reaches 100%, the Any-Grid unit will restart automatically. The Upgrader software will show "Verify flash data ok!" and "COM was closed" messages in the log area. You may now exit the Upgrader software.



8. The Any-Grid may be disconnected from its power source 2 minutes after its automatic restart is complete.

Alternatively, manually turn off the unit (load ON/OFF switch on display unit set to OFF). The unit will turn off after a few seconds. Leave it off for at least a minute (ensure the display is off). You may now reconnect the battery or AC input, whichever was disconnected during the procedure (if any). Turn on the unit again (load ON/OFF switch on display unit set to ON). Then continue to connect the PV array and loads as required.

9. The "Display Unit" upgrade procedure is complete. You can check the new version number as described in the chapter "**Introduction**" of this document.

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Phocos AG
Magirus-Deutz-Str. 12
89077 Ulm, Germany

Phone +49 731 9380688-0
Fax +49 731 9380688-50

www.phocos.com
info@phocos.com