

Firmware Update Guide (Mac-Terminal)

Preparation

Install dependencies

Following packages are required and must be installed before performing the update.

- Python 3
- python-pip
- python-venv

For example in Mac:

- Go to the official [Python website](#).
- Download the latest Python 3 installer for macOS.
- Run the installer and follow the instructions to install the latest version of Python 3.

Create workspace for update

This creates a virtual Python environment and downloads required modules.

Open a terminal and run:

```
mkdir gyrfa1con_update
cd gyrfa1con_update
python3 -m venv .
. bin/activate
python3 -m pip install ymodem
```

You can use the same environment for future firmware updates.

Perform the update

1. Download and unpack the firmware archive.
2. Open a terminal and activate the update workspace you created earlier (e.g. `gyrfa1con_update`):

```
. gyrfa1con_update/bin/activate
```

Adjust the path as necessary.

3. Plug in the power supply to the charger, then connect the charger via USB to your computer.

4. A new serial device should appear, most likely `/dev/tty.usbserial-1234`.

Use this device in all further commands.

It might be necessary to give your user additional permissions:

```
sudo chmod 666 /dev/tty.usbserial-1234
```

5. Set up the serial connection and reboot the charger into the bootloader by executing:

```
stty -f /dev/tty.usbserial-1234 -a | grep -qE "cs8.*-parenb.*-cstopb|cs8.*-cstopb.*-parenb|-parenb.*cs8.*-cstopb|-parenb.*-cstopb.*cs8|-cstopb.*cs8.*-parenb|-cstopb.*-parenb.*cs8" && echo '*fwupdrst' | sudo cu -l /dev/tty.usbserial-1234 -s 115200
```

6. Now you are ready to upload the firmware. Adjust the path as required:

```
ymodem send -p /dev/tty.usbserial-1234 /path/to/GYRFALCON_S8000_Firmware.bin
```

7. After a successful update, the charger will reboot automatically.

It is now safe to close the terminal and unplug the USB cable.