

HYPERION EOS Chargers Firmware Update Guide (for updateable chargers only)

Before you start, PLEASE read this document completely, then refer to it again as you proceed with updating.

NOTE: Firmware updates have the potential to make your charger inoperable. Chargers which are made inoperable due to firmware updates by users are NOT covered by warranty replacement policy. If you have ANY RESERVATIONS about your ability to do the firmware upgrade, or are unwilling to accept **full responsibility** for the results:

- 1) **Don't do the update**, OR
- 2) **CONTACT YOUR DEALER** to ask about having it done for you. Most dealers should offer the service at a very small labor charge plus return shipping charges.

Again, the updates are OPTIONAL and ADD FEATURES. They are NOT required, and we will NOT replace your charger for free if there is a problem after update.

Except for the information offered on our website and in this manual, Hyperion does NOT provide end user support of any kind with respect to firmware upgrades, USB connectivity to your particular PC, or any other related issue.

Supported PC and OS: At this time the firmware update application has been tested with Windows XP and Vista 32-bit. 64-bit OS (XP, Vista) should also work, with the proper USB driver loaded.

----- **It is crucial that power is maintained to the PC during the update process!** -----

Desktop vs. Laptop: A laptop with battery installed and charged, but still connected to AC outlet power, is preferable to a desktop since the laptop battery will serve as a backup in case of power failure.

The Weather: Don't attempt to do a firmware update during thunder or lightning, or any other time when AC power is likely to fail. Likewise, be careful that the power supply to your home is not overloaded with too many air conditioners or other high-demand appliances on at the same time. You don't want to trip the main breaker!

Power Supply: Even if your charger supports greater than 15V input, you MUST use DC input between 12V and 15V for the upgrade process. The best choice is a fully charged automotive or deep-cycle battery, as it is not subject to AC power failures.

About USB Ports: Not all USB ports are created equal, even on the same PC. Your USB port should support spec 2.0 or higher. If you fail with one port, UNINSTALL the driver program, connect to a different port (say, at back of the laptop rather than front) then re-install the driver software and try again. Some ports have lower power rating and won't work. Also, do NOT attach the USB adapter to a "USB Hub"; attach it directly to the port.

See end of this document for troubleshooting tips, if you have problems using the USB adapter or Update Software Program.



Any updateable Hyperion charger with hardware version 3 or higher has built-in USB and cable included in the box. (example 0720i-NET3, 0615i-DUO3, 0720i-SDUO3, etc).

Previous version NET and DUO chargers (0610iDUO, 0610iNET, 0610iDUO2, 0720iNET) require the USB adapter shown left, to interface between the charger and PC (part number HP-TI-PRGUSB). This adapter is also used for programming Hyperion TITAN speed controllers via PC, and to connect Hyperion Emeter v1 to PC. In addition to the pictured USB adapter, a simple adapter/extension harness is needed. (part # HP-EOS06-PCCBL).
(note: the small adapter shown front/right in the picture is for Emeter v1)

ALL upgradable chargers (including hardware series 3 chargers) require a windows driver to be loaded for the USB adapter.

[CLICK HERE FOR INSTRUCTIONS ON TI-PRGUSB DRIVER DOWNLOAD AND INSTALLATION](#)

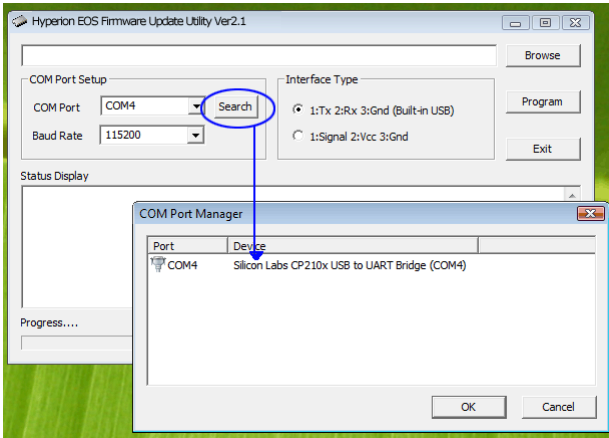
THE FIRMWARE UPDATE PROGRAM and FIRMWARE SOURCE FILE

There are two files supplied in each "ZIP" file for EOS Firmware upgrades:

- * An executable program called **eos-upXX.exe** (XX=version, such as eos-up21.exe)
- * The newest Firmware update source file for your charger, such as **hp_0615duo3_3a2.bin** (firmware v3.2 for DUO3)

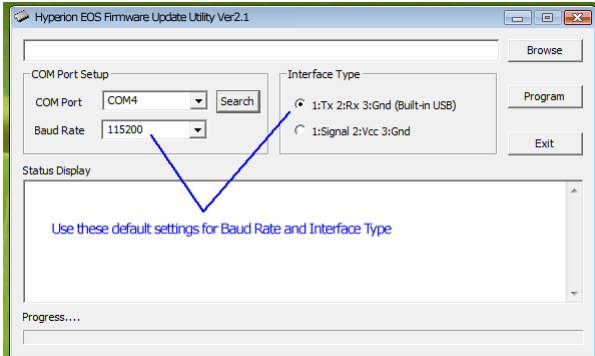
[DOWNLOAD THE APPROPRIATE FIRMWARE UPDATE ZIP PACKAGE HERE](http://media.hyperion.hk/dn/pc/eosfw.htm) (http://media.hyperion.hk/dn/pc/eosfw.htm)

- 1) Prepare a DC power supply for your charger which is reliable, and provides between 12V and 15V. Arrange the charger power input leads (clamps) so that your are ready to connect the charger to input power...
BUT DO NOT CONNECT YOUR CHARGER TO INPUT POWER YET!! That comes later....
- 2) UNZIP the Update Zip package to your desktop
- 3) Make sure that the USB adapter is connected properly to a USB port on your PC, and driver has been installed.
- 4) Double-Click the **eos-up.exe** file to start the Update Program



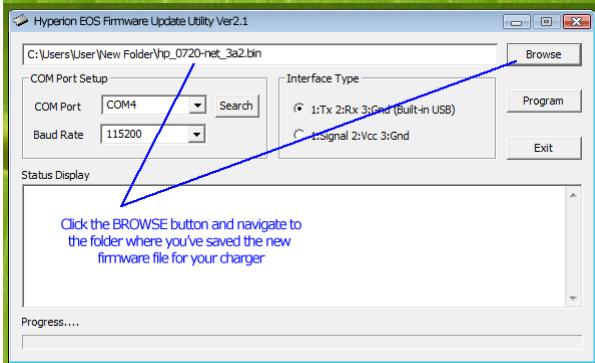
You should see the program running as left.

Click the SEARCH button. You should see a line as pictured like "Silicon Labs CP210x..." and an associated COM port. There may also be other COM ports listed, but only one should say "silicon labs". Choose that port and click OK.



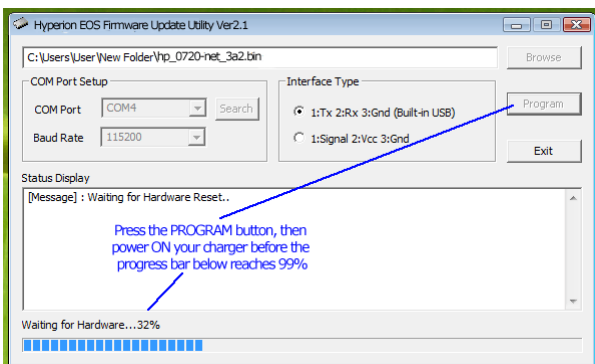
It should not be necessary to change any of the other serial communication settings.

No matter what series Net or DUO charger you have, keep Interface Type setting on **1:Tx 2:Rx 3:Gnd (Built-in USB)**



Click the BROWSE button and navigate to the update package folder which has the firmware update .BIN file file as shown left.

Select the .BIN file and click OK. The screen should now appear as left. (example shows 0720iNET v3.2 firmware)



You should soon see the "Waiting for hardware reset"... message as shown left.

NOW CONNECT YOUR CHARGER POWER INPUT CLAMPS TO YOUR DC POWER SUPPLY! DO NOT ALLOW THE CLAMPS TO "CHATTER" AGAINST THE POWER SUPPLY OUTPUTS! CONNECTION MUST BE SMOOTH AND IN "ONE SHOT".

You should see some communications messages scrolling down the screen. If the bootloader program in your charger is below v2.5, the bootloader will be updated first (click "OK" when asked), ending with a message "Bootloader has been successfully updated". The charger will automatically reset, and then start the firmware update. When FW update is finished, you should see a message: "Successfully Done!!"

Disconnect DC Power from the charger, then disconnect the USB adapter from the charger.

NOTE! ALL FIRMWARE UPDATES BELOW ALSO REQUIRE AN INITIALIZATION STEP AFTER UPDATE, AS FOLLOWS:

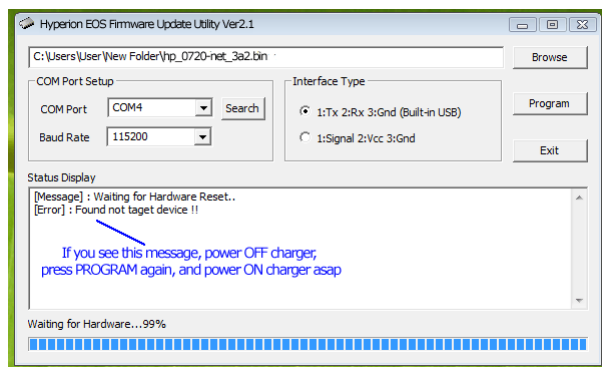
- * Power OFF the charger
- * PRESS and HOLD DOWN the MODE Button, then power ON the charger
- * Release MODE button
- * Press ENTER button (once or twice, depending on charger and FW update). POWER OFF Charger. Power On to use.

The new Firmware Update Utility (eos-up21.EXE or later), when used the first time with any NET/DUO charger, will update the charger BOOT LOADER to version 2.5, and then continue with the selected FW update. Any charger with v2.5 boot loader which is then FW updated in future DOES NOT NEED TO HAVE POWER OFF ATBEGINNING OF THE PROCESS. That is, future updates should be as follows:

- A) Connect USB cable to charger and PC
- B) Power ON the Charger
- C) Start the eos-upXX.exe FW Update Utility
 - Press the SEARCH Com Port Button, and select the SiliconLabs Port
 - BROWSE and SELECT the new FW update .BIN file
 - Press the PROGRAM Button
- D) Power OFF the charger

This greatly reduces the chances of a FW Update problem, as the charger is ON from the beginning, and connector "chattering" (tapping connectors to PS before getting solid connection) cannot confuse the Update Utility.

TROUBLESHOOTING



If you get a message as seen left, then there is a communication error between the PC and Charger. First try turning charger input power OFF, then press PROGRAM again, and power charger ON very soon after.

If still no good...

- * Make sure that the COM port you have chosen is correct
- * Check to be sure the wiring between Charger and USB adapter is correct.
- * Check to be sure the USB adapter is secure in the USB Port, and

Green LED on the USB adapter is ON.
(for chargers w/out built-in USB)

- * Try assigning a different open COM Port to the USB device in device manager. COM ports 1 through 8 are recommended (and re-check device manager to see the COM Port assigned!)
- * Remove any other USB<->Serial Adapter and Uninstall its driver (such as a Castle ESC programmer, etc), then remove and reinstall the Hyperion USB adapter and driver.
- * Make sure your DC Input power supply is 12V~15V during the process