GEN 4.2 CIM Firmware Update Guide

Infinitum Motors | GEN 4.2 | Using Icon Software

Before You Begin

- Download and install **Icon v2.100.0.0 or later** for the upgrade process to work correctly from **https://support.goinfinitum.com/hc/en-us/articles/52466418802707-I-con-Motor-Control-Software**
- Obtain the correct CIM firmware file labeled **CIM_Release_v4_x_x_CRC.bin**
- Follow all site safety guidelines before accessing any motor/VFD

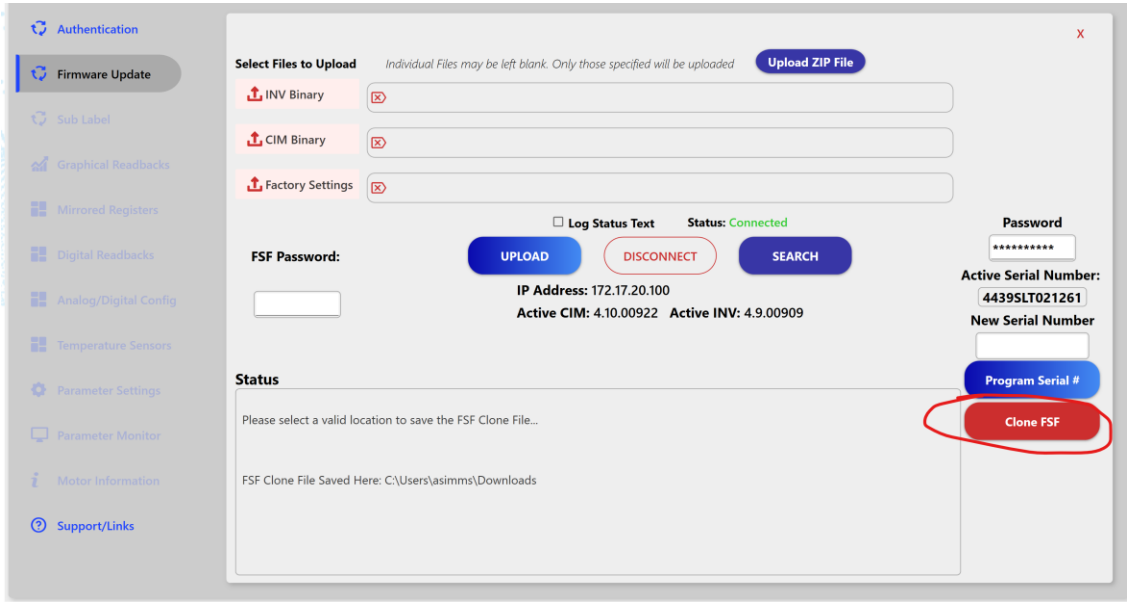
FSF_Recovery File

- When upgrading or downgrading CIM Firmware from GEN 4.1 to GEN 4.2 or GEN 4.2.2 or from GEN 4.2 to GEN 4.2.2, it may require an FSF_Recovery File to restore the motor to its previous state if the any of the parameters are not loaded back on correctly during the CIM Firmware Update Process.

Cim Firmware Versions
4.7.0 (GEN 4.1)
4.9.0 (GEN 4.2)
4.9.9 (GEN 4.2.2) – Latest Firmware Release (Recommended)

Step 1 — Back Up the Motor (Recommended)

1. Connect to the motor using Icon (TCP or Serial — see Step 2)
2. On the Firmware Update tab, enter password **redmotor25** and click **Clone FSF**



3. Save the **FSF_Clone_***.txt** file to your laptop — this lets you restore the motor if anything goes wrong

Step 2 — Connect to the Motor

Option A — TCP (Ethernet)

1. Connect ethernet cable from laptop to the CIM board
2. Go to Windows **Ethernet Settings** → **Change Adapter Options**
3. Right-click the connected ethernet → **Properties** → **Internet Protocol Version 4 (TCP/IPv4)**
4. Set static IP: **172.17.20.153**, Subnet mask: **255.255.0.0**, click OK
5. Open Icon, go to **Firmware Update** tab
6. Click the settings gear icon, enter IP **172.17.20.100**, click **Apply**

Option B — Serial (RS485)

1. Connect USB-to-RS485 adapter to laptop and to the RS485 terminals on the CIM board
2. Open **Device Manager** → **Ports** to identify which COM port appeared
3. Open Icon, go to **Firmware Update** tab
4. Select **Serial (RTU)** from the protocol dropdown
5. Click the settings gear icon and configure the default settings or the specific RS485 communication settings for the motor you are trying to program.

RS485 Settings	Default Values
COM Port	From Device Manager
Baud Rate	19200 bps
Parity	Even
Stop Bits	One
Unit Identifier	247

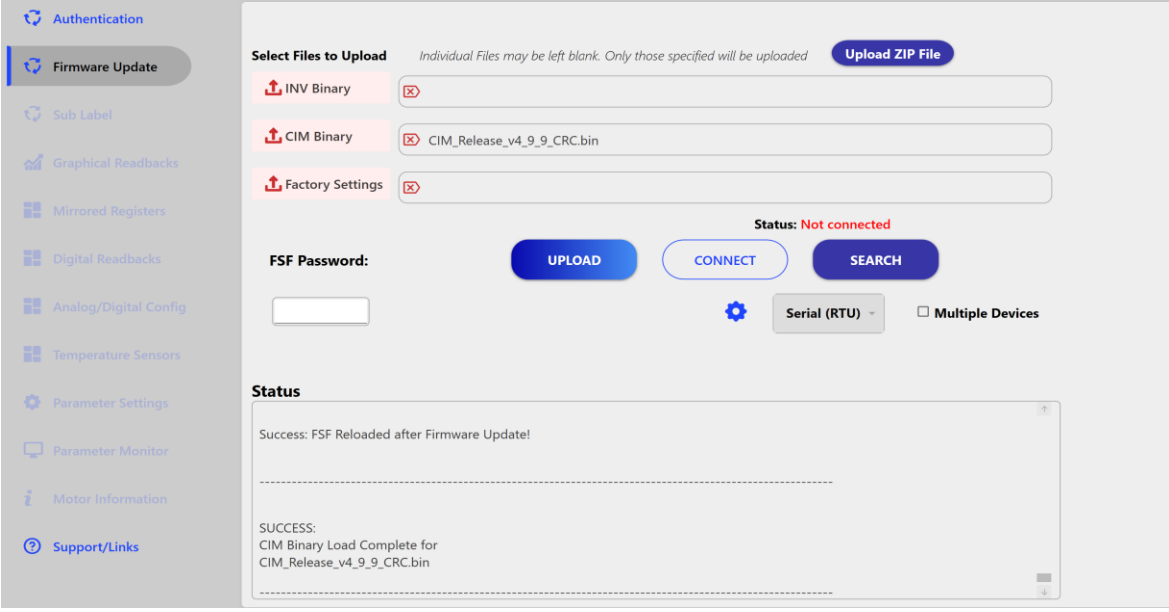
6. Click **Apply**

Step 3 — Load the CIM Firmware

1. Click **Connect** on the Firmware Update tab — wait for status to show **Connected**
2. Click the **CIM Binary** button and select your **CIM_Release_v4_x_x_CRC.bin** file
3. Click **Upload** and wait — the firmware upload over TCP takes around 90 seconds. For RS485, however, the firmware upload can take a longer for larger baud rates. The program will timeout with an error if the firmware update for each of the following baud rates:

Baud Rate	Firmware Update Timeout
1200	**60 min**
2400	**30 min**
4800	**15 min**
9600	**7.5 min**
19200	**5 min**
38400	**5 min**
57600	**5 min**
76800	**5 min**
115200	**5 min**

4. Watch the Status box for: **"SUCCESS: CIM Binary Load Complete"**
5. If successful — the motor is ready to run

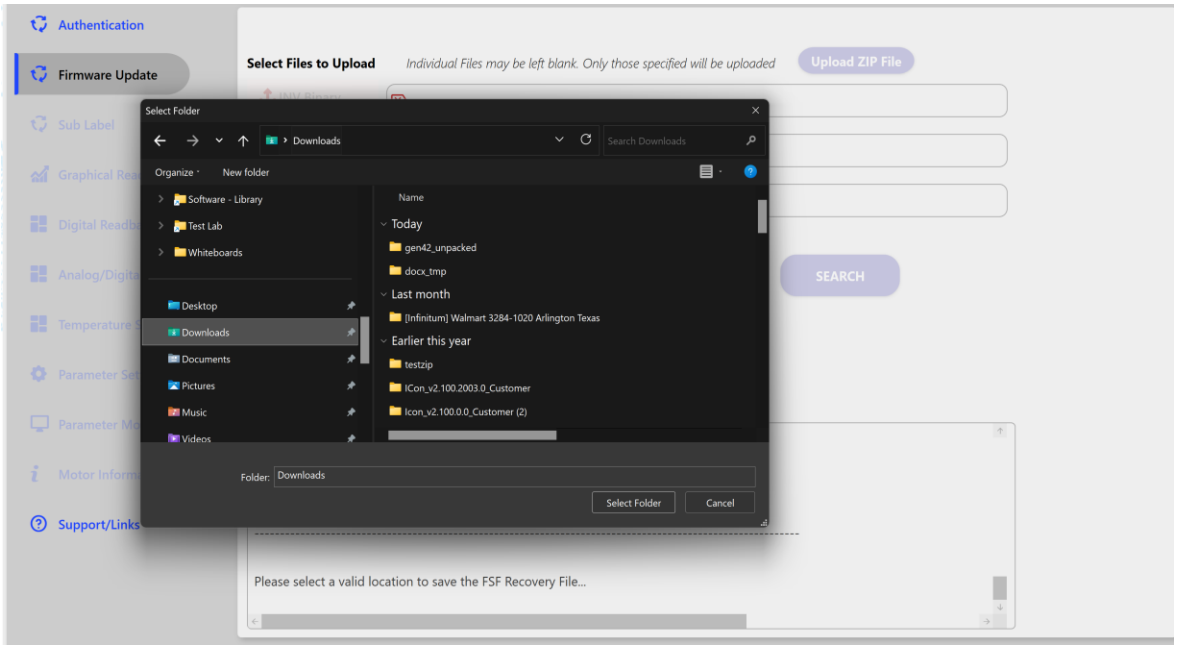


6. If it requests you to save an FSF Recovery File, then it will also give you a CIM Binary Load Fail because the EEPROM Parameters changed after the upload and they were not loaded correctly on a first pass. This occurs when updating from Firmware from Gen 4.1 -> GEN 4.2/4.2.2. The EEPROM Parameters need to be reloaded with the FSF_Recovery File.

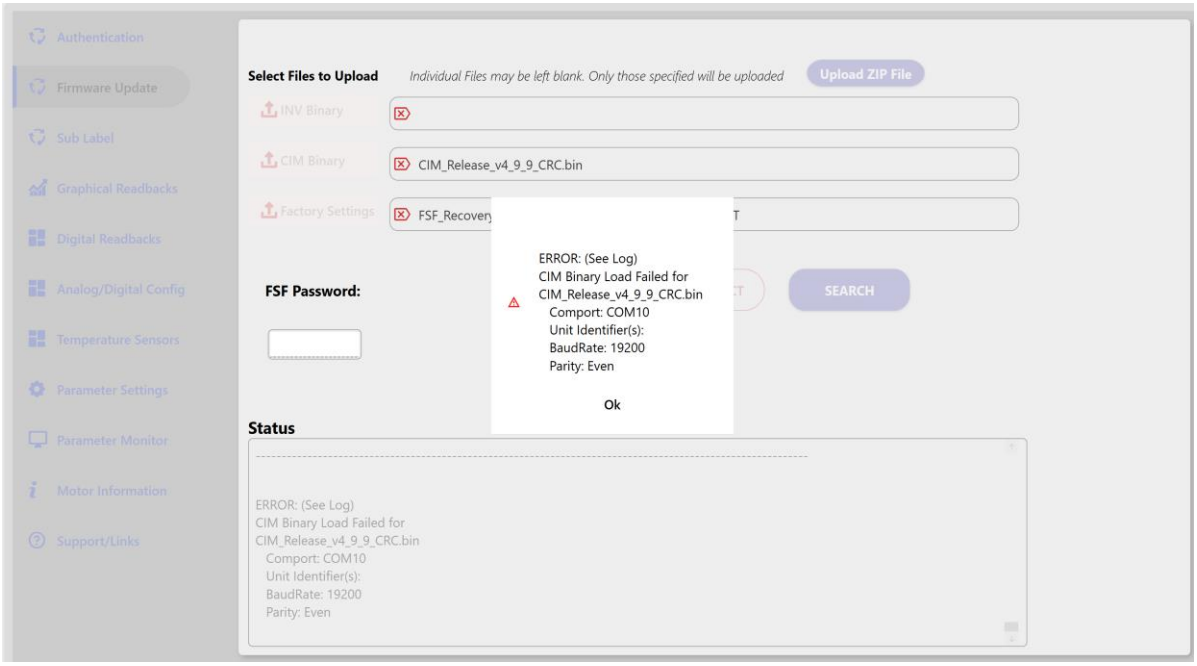
Step 4 — If the Update Fails

Restore using the FSF Recovery:

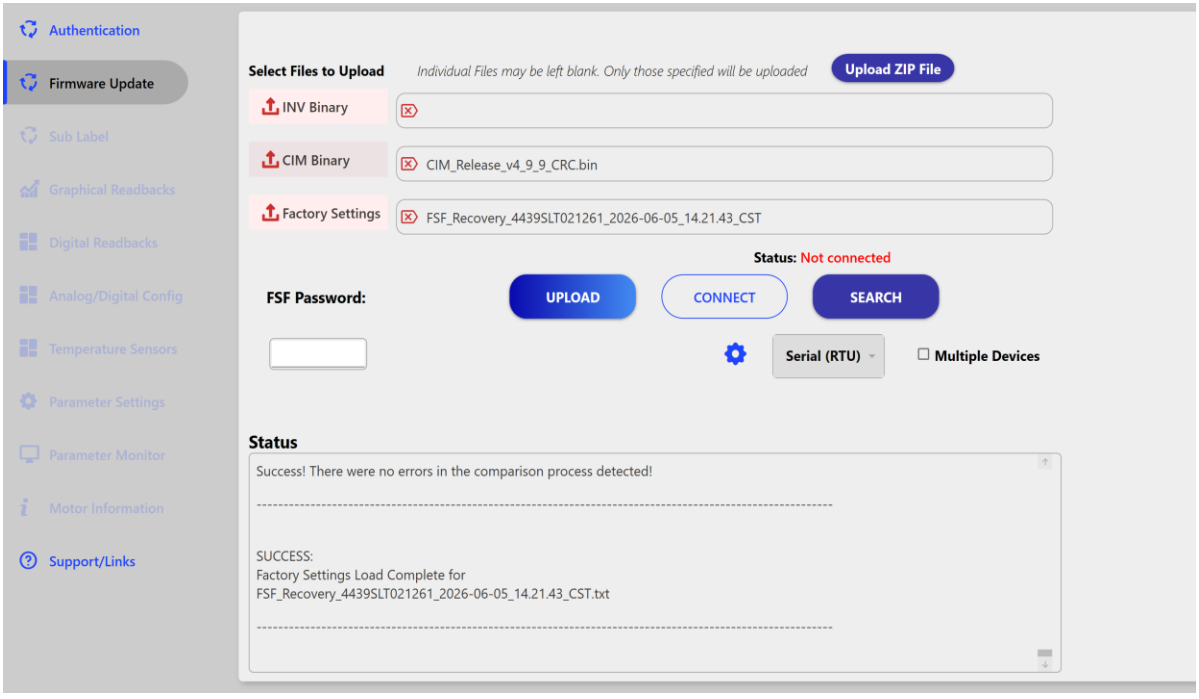
1. Icon will prompt you to save an **FSF_Recovery.txt** file — save it to your laptop



2. Icon will display an error message that the CIM Firmware Upload Failed.
   Note: The Upload succeeded, but restoring the parameters failed.

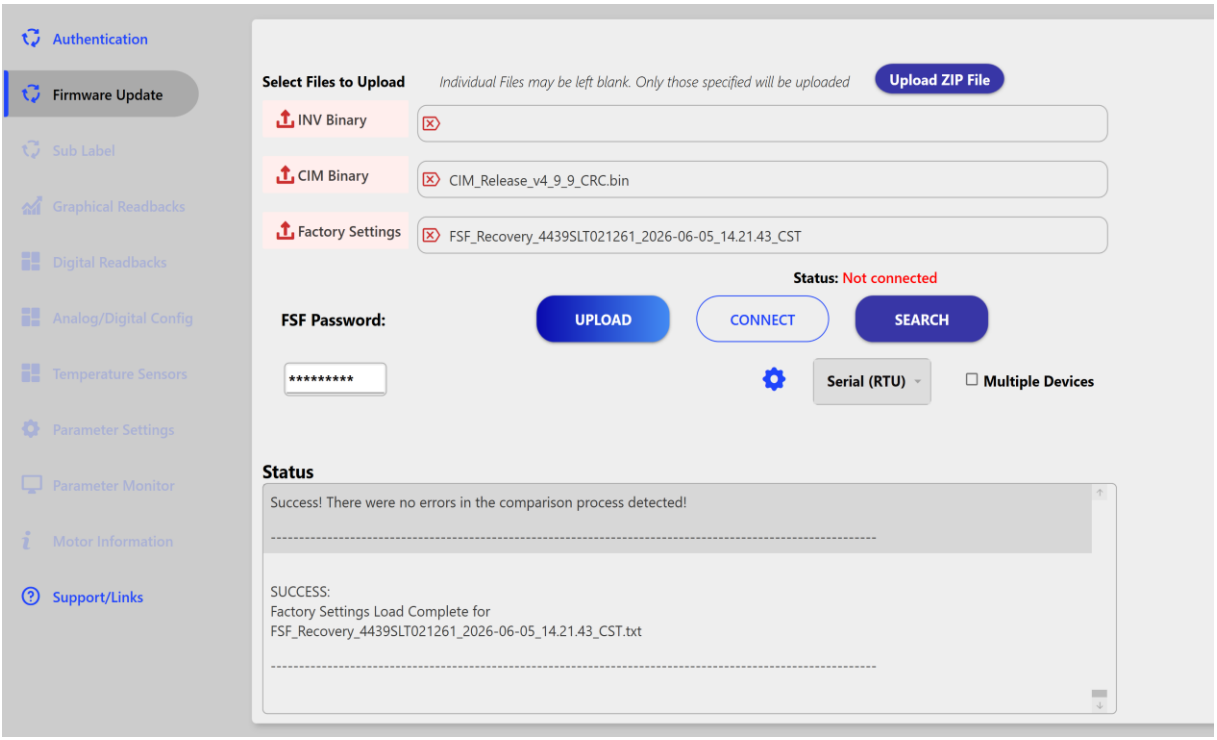


3. Icon will then automatically try to reload the FSF_Recovery File



4. If it succeeds, then power cycle the motor and you are done.
5. If that fails, then try reloading the FSF_Recovery File with the following steps:
6. Enter FSF password **techridge**
7. Click **Factory Settings**, select the **FSF_Recovery.txt** file

8. Click **Upload** and wait for it to complete



9. After FSF Recovery File has been loaded, power cycle the motor
10. The motor is now restored to its pre-update state

If you have an FSF Clone from Step 1:

Follow the same restore process above but select your FSF_Clone_***.txt file instead of the FSF_Recovery file.

Step 5 — Report Persistent Issues

If problems continue after two attempts or you need to reload an FSF File because Motor Settings have been lost, contact Infinitum Support:

Email: support@goinfinitum.com

Include: Icon software version, CIM firmware version, factory settings file used

Note: Capture a Save State File, which should include the Icon software version and CIM Firmware versions