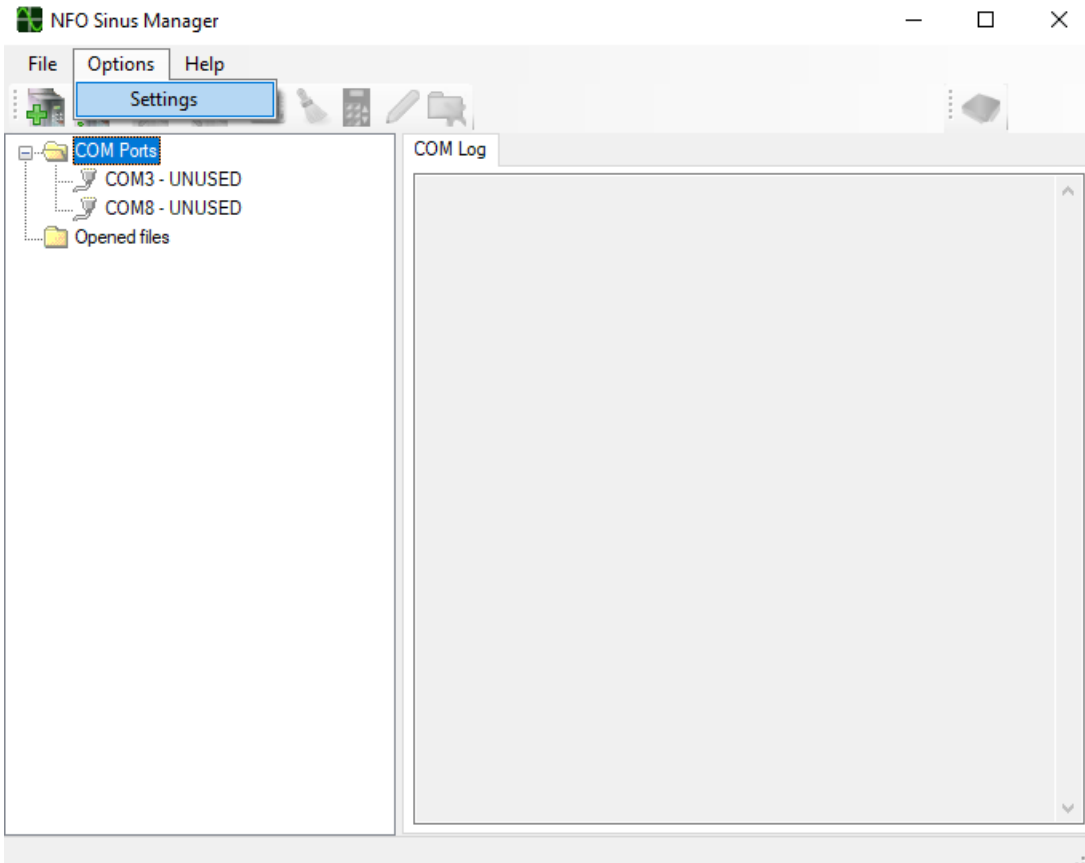
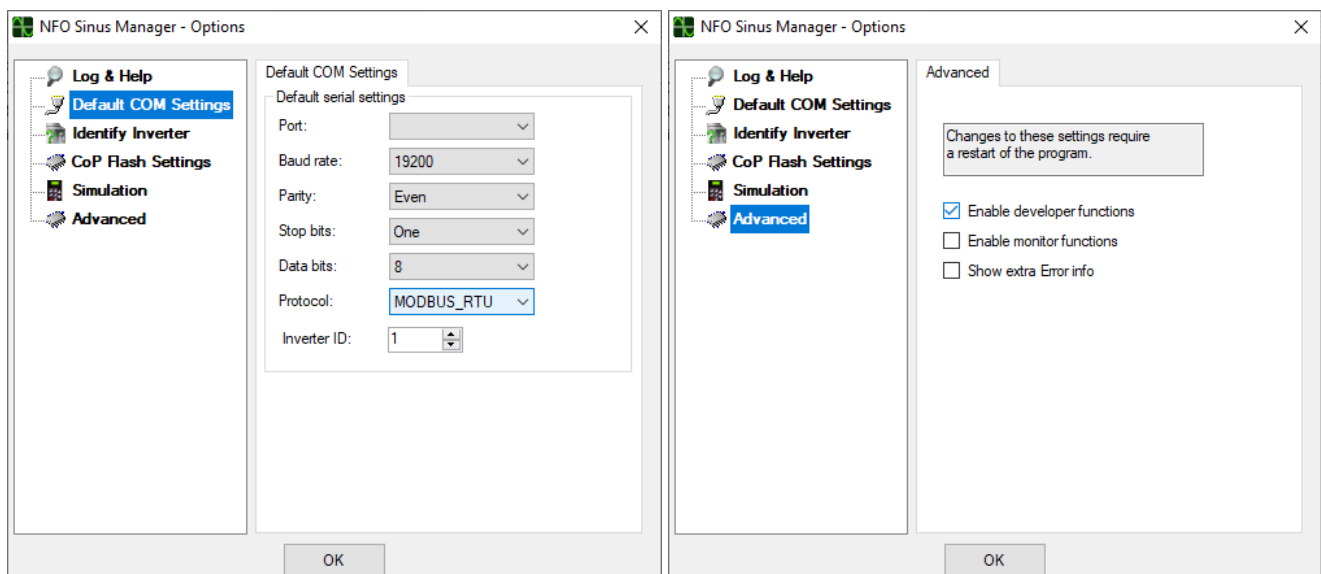


Preparations [For use with NFO Sinus Manager 2.x.x]

- Uninstall any previous version of NFO Sinus Manager 2.x.x. before installing a new version
- Download and install latest version of NFO Sinus Manager from <https://www.nfodrives.se/products>
- At end of installation you may launch the program, or start it by clicking the icon on desktop
- When NFO Sinus Manager has started, select **Options** → **Settings**



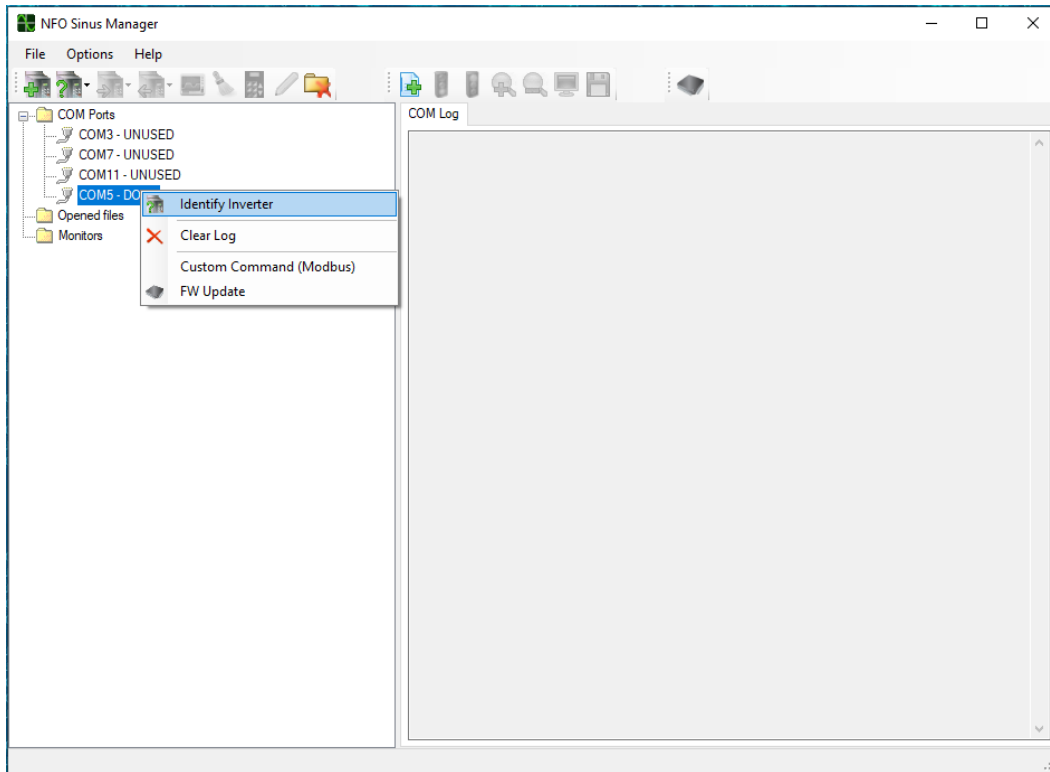
- Click the **Default COM Settings** section and select protocol **MODBUS_RTU**
- Click the **Advanced** section, tick the box for **Enable developer functions** and then click **OK**.



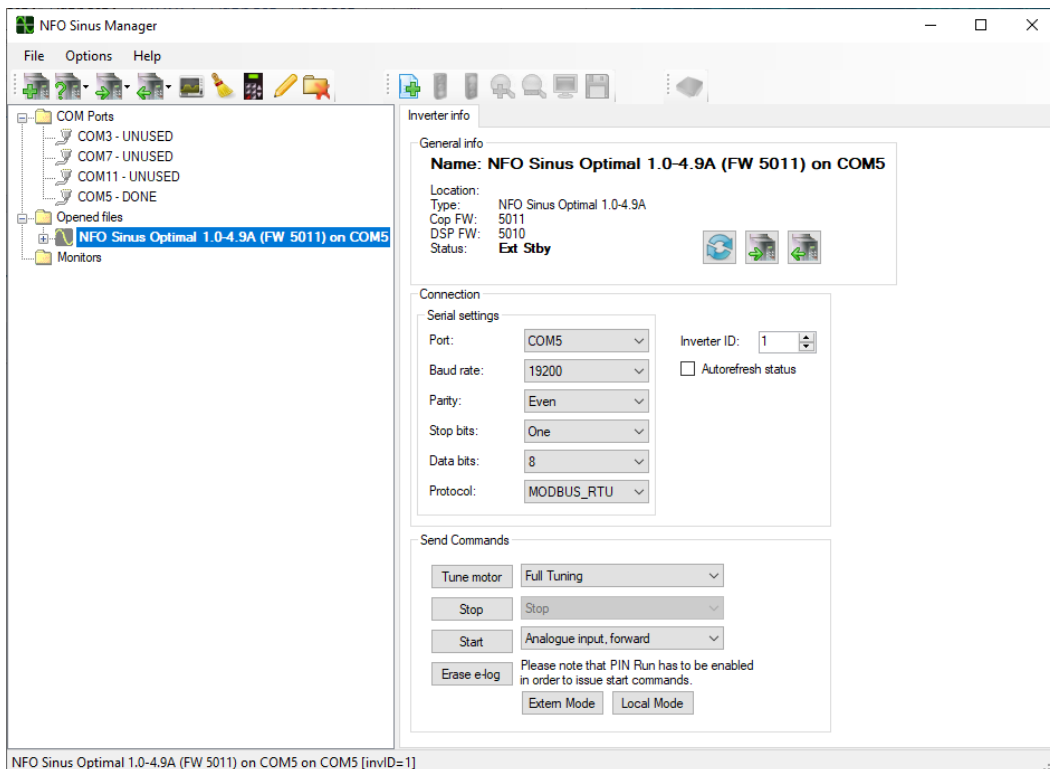
- For changes to take effect, you need to **close the NFO Sinus Manager** and then start it again.

Firmware update part 1 – Download image and update Co-Processor

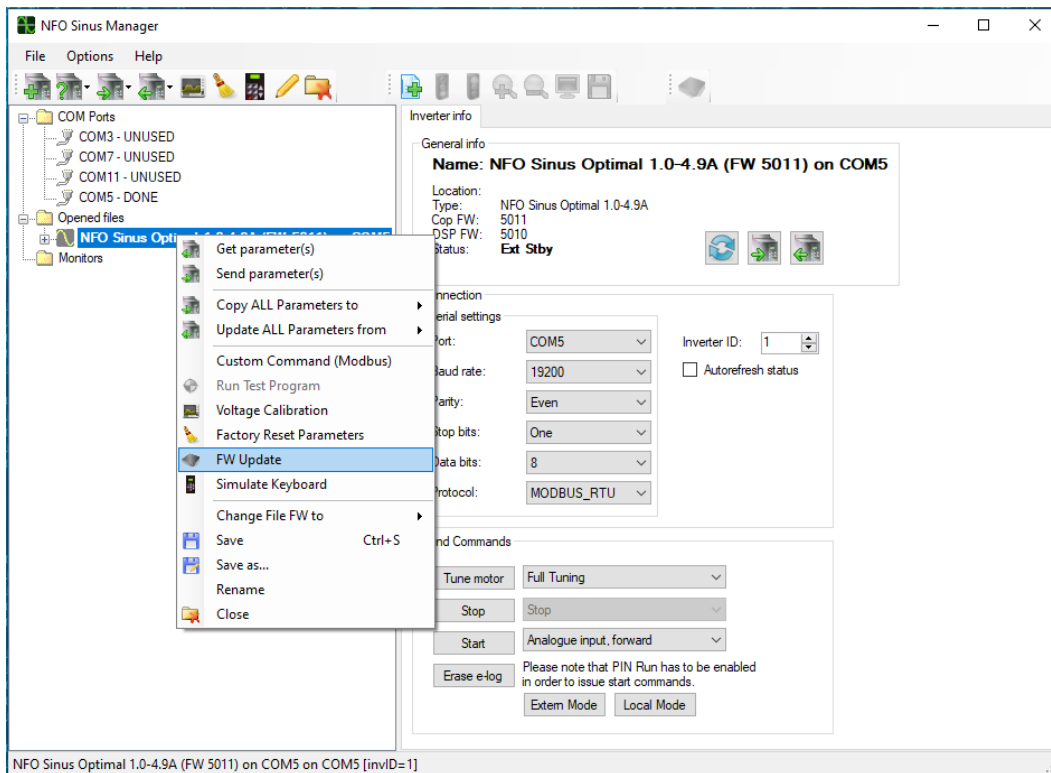
- Connect a USB-A cable between one of the USB ports of your computer and the USB connector of the control board of the NFO Sinus Optimal. **NOTE:** It may be convenient to look at the com port list while connecting the USB cable, and see which com port number that appears in the list.
- Right-click on the com port number that is connected to the Optimal and select **Identify Inverter**



- After a few seconds, data transfer is completed and information about the connected inverter is shown. **NOTE:** If needed, make a note of the current Cop FW and DSP FW (firmware versions) shown on screen.

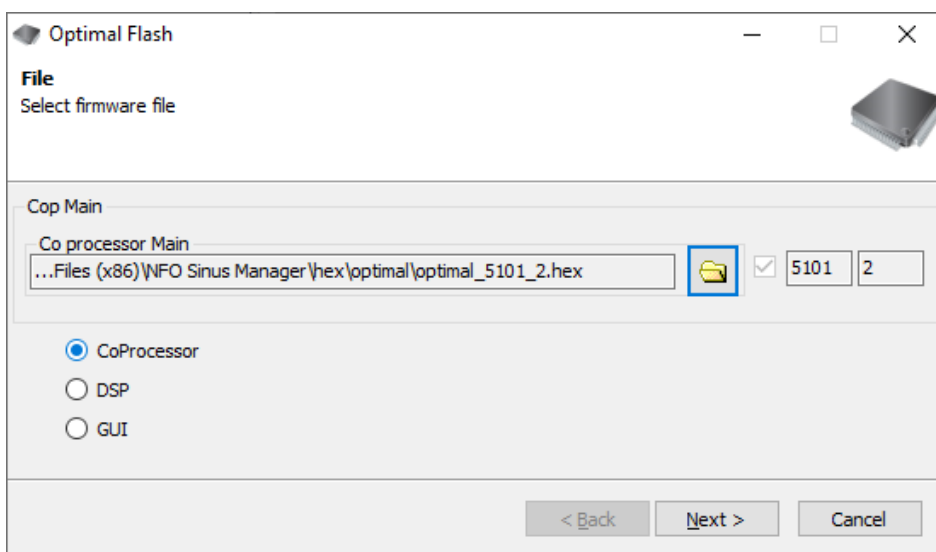


- To proceed with the firmware update, right-click on the inverter instance, and select **FW Update**.



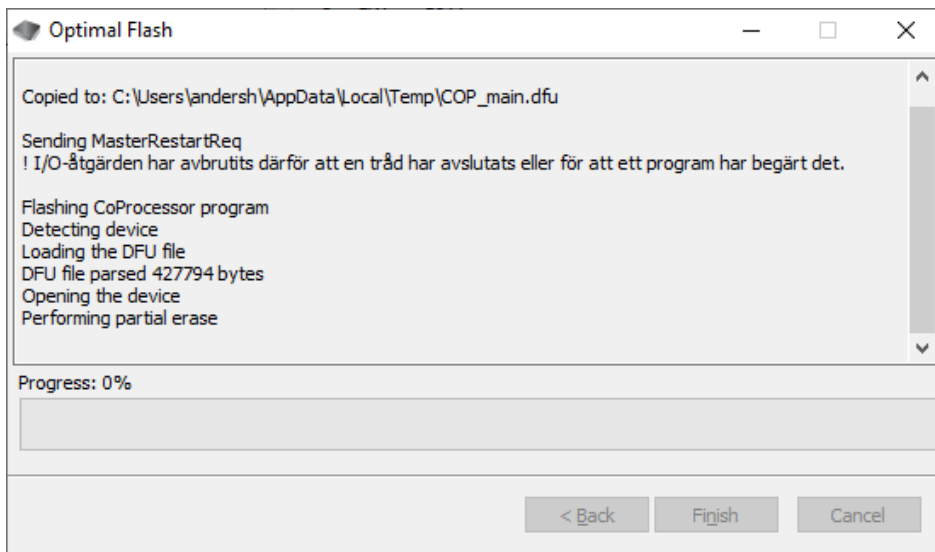
NOTE: The product consists of three CPU’s: The Co-Processor for communication and control of terminals, the DSP for motor control, and the GUI for handling of the display and keypad. When the firmware is distributed, all three CPU’s firmwares are packed together into the Co-Processor firmware file. Therefore, it’s essential to start the update procedure by updating the Co-Processor before any of the other two.

- Click and select the **CoProcessor** option.
- Click the **[folder symbol]** and select your location of the distributed firmware file.
(With NFO Sinus Manager 2.1.1.0 and later versions, the most recent release of NFO Sinus Optimal firmware is included and located in *installation_folder\hex\optimal\filename_version.hex*)

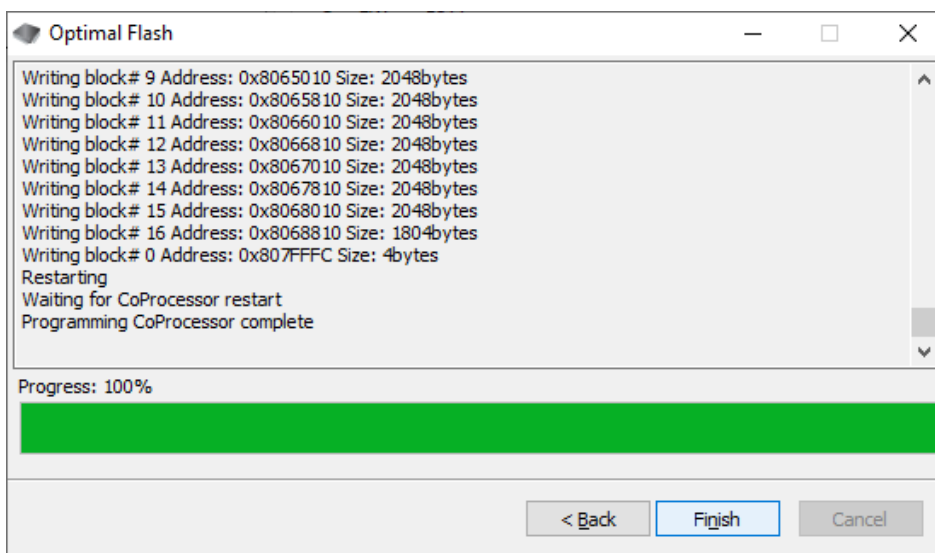


- Click the **Next** button

- The update process will now put the CPU in DFU (Device Firmware Update) mode and proceed by itself.

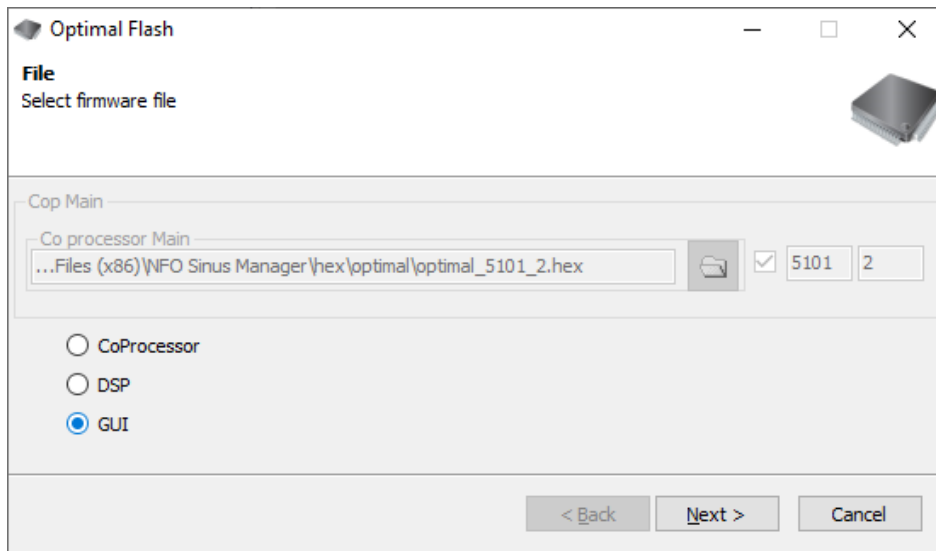


- After a minute or so, the update of the Co-Processor is complete, then click the **Finish** button.

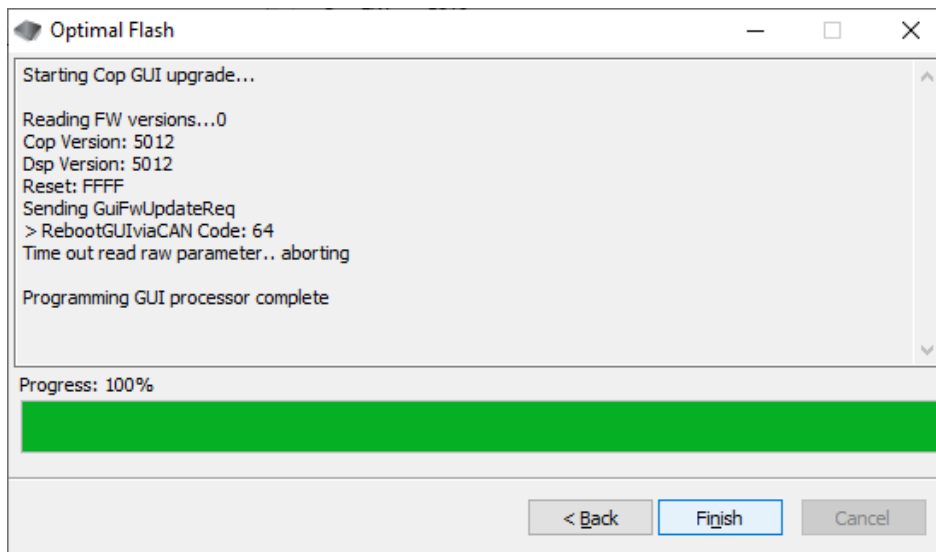


Firmware update part 2 – GUI

- Again right-click on the inverter instance, and select **FW Update** (shown in previous section).
- Click and select the **GUI** option.
- Click the **Next** button.

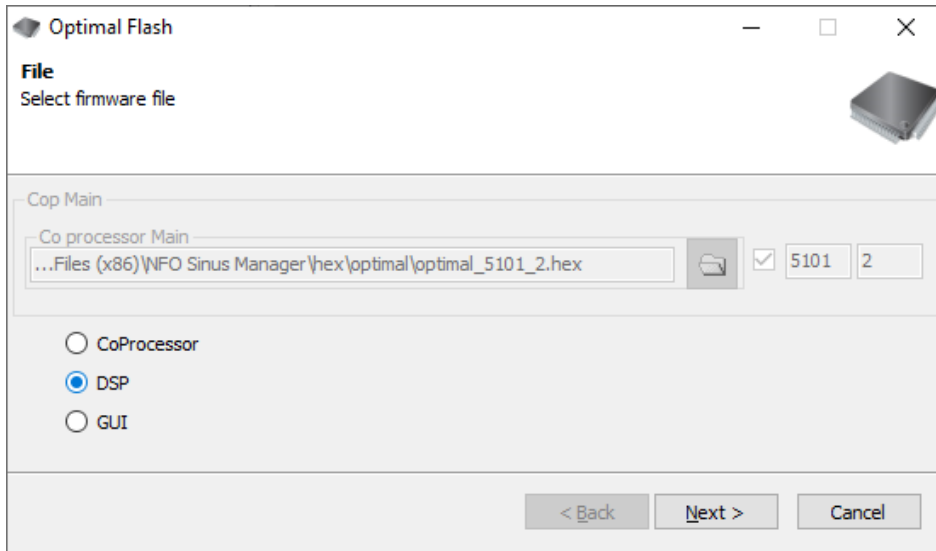


- Wait for update and click **Finish** button when ready.

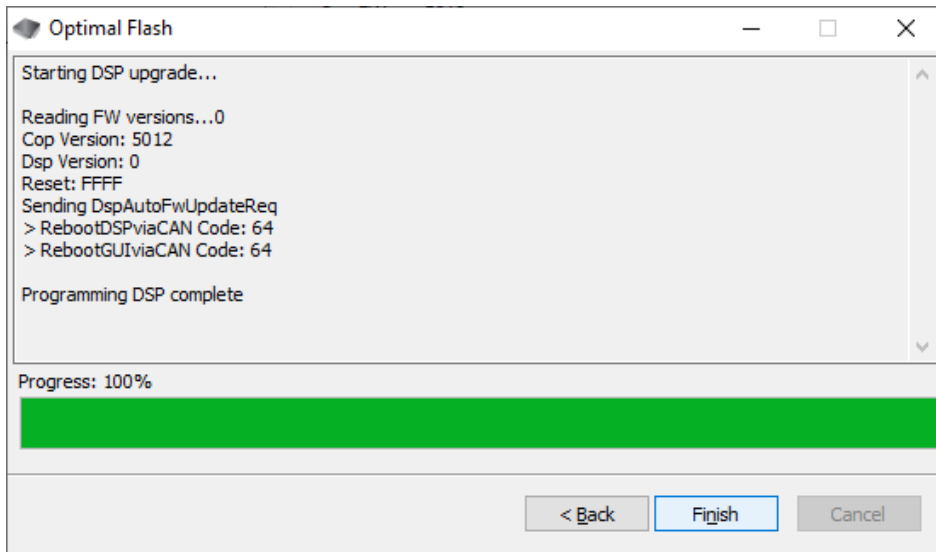


Firmware update part 3 – DSP

- Again right-click on the inverter instance, and select **FW Update** (shown in previous section).
- Click and select the **DSP** option.
- Click the **Next** button.



- Wait for update and click **Finish** button when ready.



Firmware update finish

- To complete the update process, close the Sinus Manager program.
You can safely answer **[No]** when prompted for saving the inverter data.
- Unplug the USB cable from either the computer or the Optimal.
- Power cycle the inverter, i.e. turn off power, wait for it to black out, and then reconnect power.
- Start Sinus Manager
- Insert the USB cable again
- Right-click on the com port number that is connected to the Optimal and select **Identify Inverter**
- After connection is established, the new versions are shown on the screen. It's also possible to read the firmware versions in the **Version** parameter group. Verify that all processors have correct versions
- Verify that motor data and other crucial settings are as intended
- New firmware versions may contain new parameters and/or new default settings of parameters that you may want to check before operating your drive system