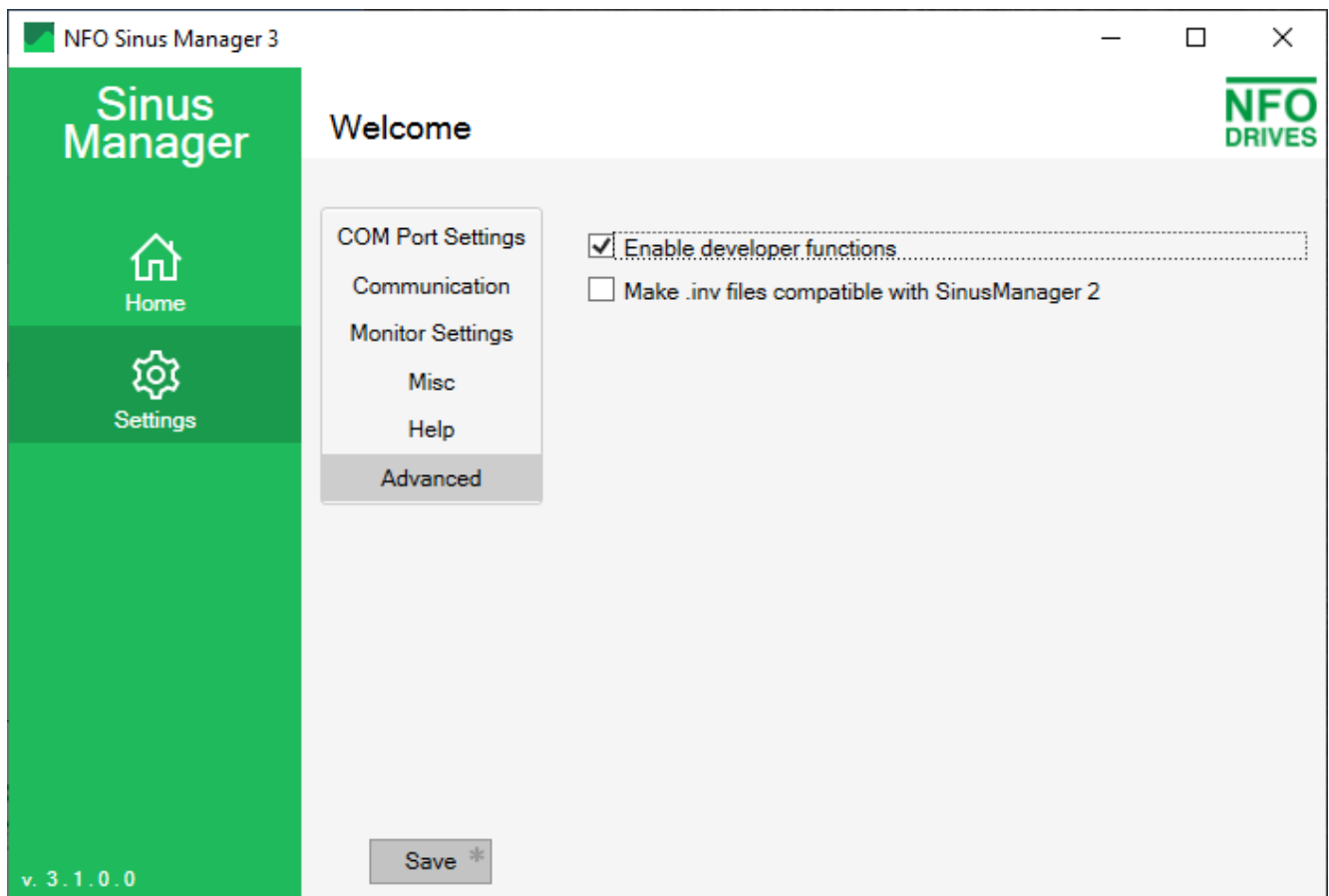


Preparations for firmware update of NFO Sinus Optimal

- Uninstall any previous version of NFO Sinus Manager 3.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 desktop icon.
- When NFO Sinus Manager has started, select **Settings** and then **Advanced**.
- Check the option **Enable developer functions** and then click **Save** button.



- Go back to start screen by clicking the **Home** symbol.

NOTE:

The firmware for the inverter is distributed as a part of the Sinus Manager application.

The NFO Sinus Optimal inverter consists internally of three CPU's:

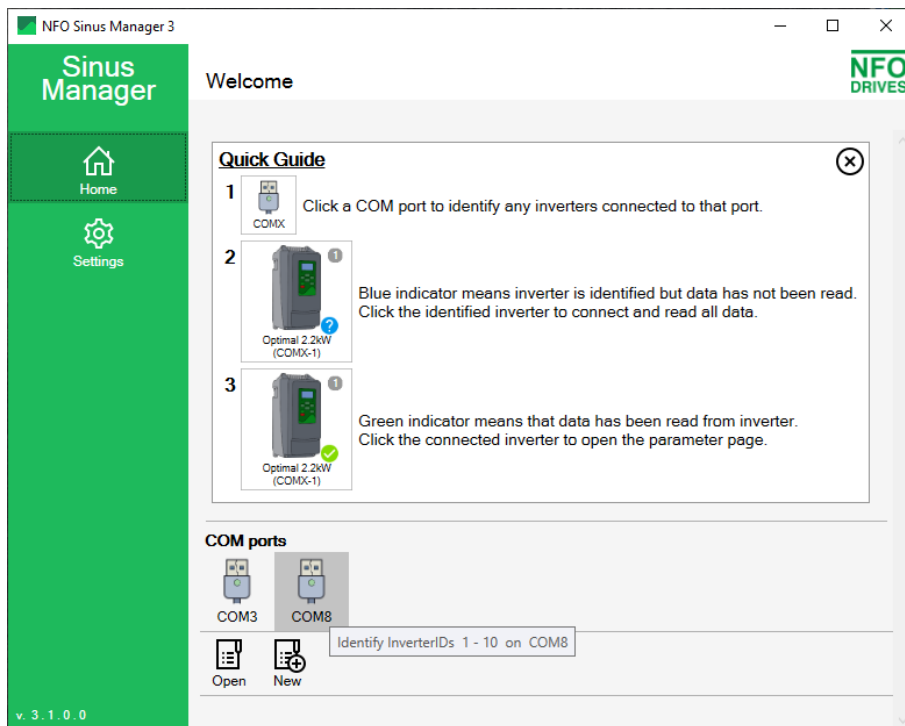
1. The Co-Processor for communication and control of terminals,
2. the Graphical User Interface for handling of the display and keypad, and
3. the Digital Signal Processor for motor control.

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.

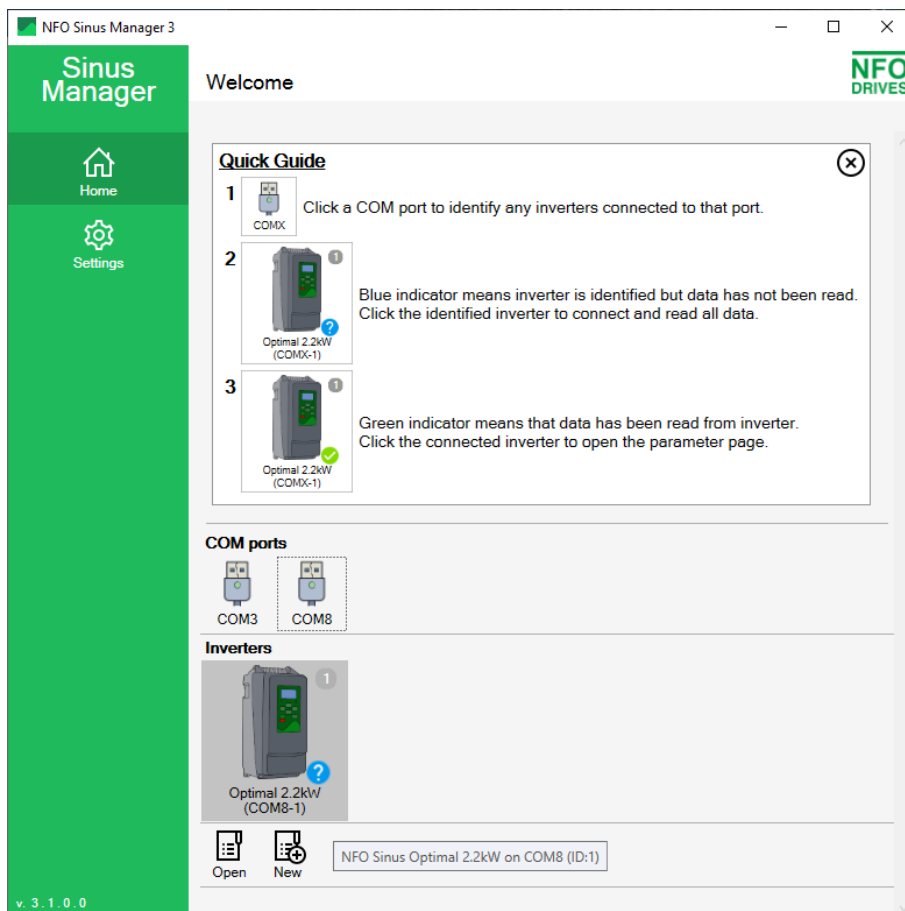
After the firmware has been updated, the unit will keep all previous settings including the motor parameters. However, sometimes the intention of the update is to be able to use new parameters or functions. Therefore, a factory reset may be required after the new firmware has been installed.

Firmware update procedure

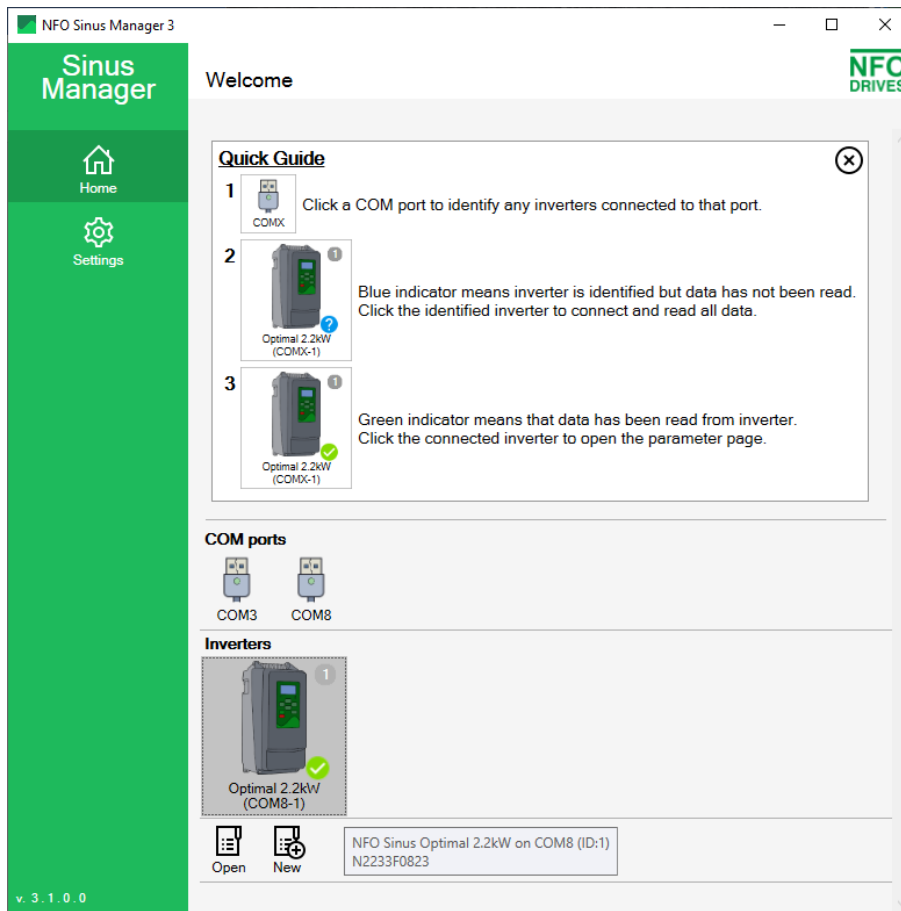
- Connect a USB cable between one of the USB ports of your computer and the USB connector of the control board of the NFO Sinus Optimal. **NOTE:** It may be convenient to look at the com port list while connecting the USB cable, and see which com port number that appears in the list.



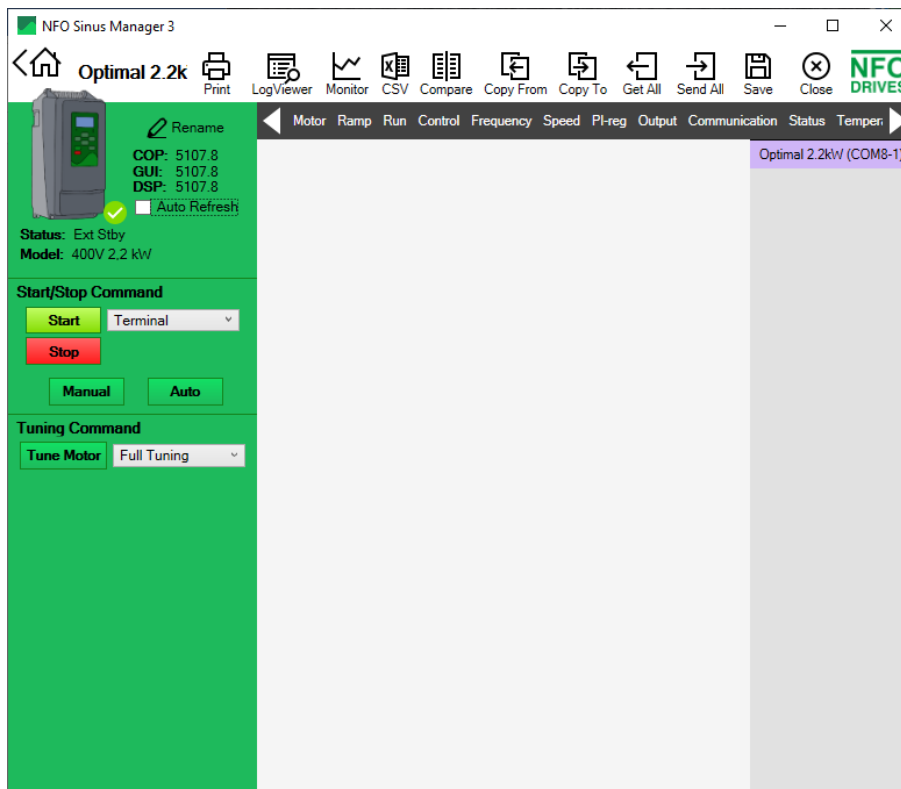
- Click on the COM port to identify the connected unit, then click the inverter symbol to read inverter data.



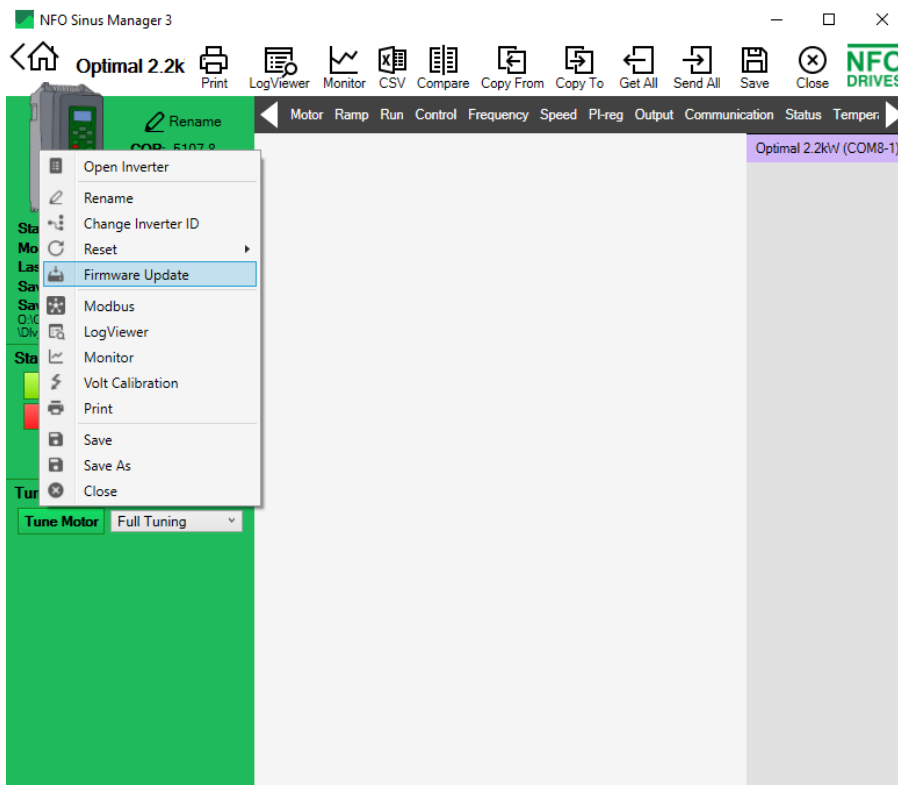
- After a moment, the data is read from inverter (the blue question mark turns green)



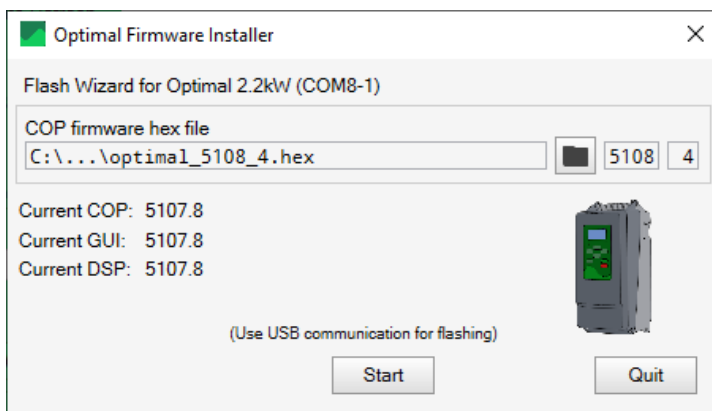
- Click the inverter symbol to open the parameter pages.



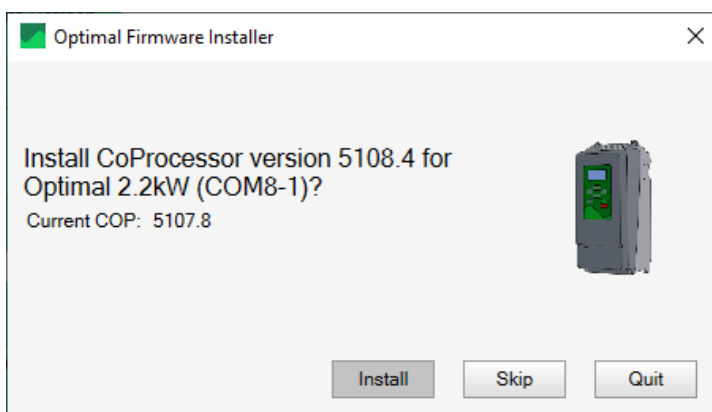
- Right-click the inverter symbol and select **Firmware Update** from the menu.



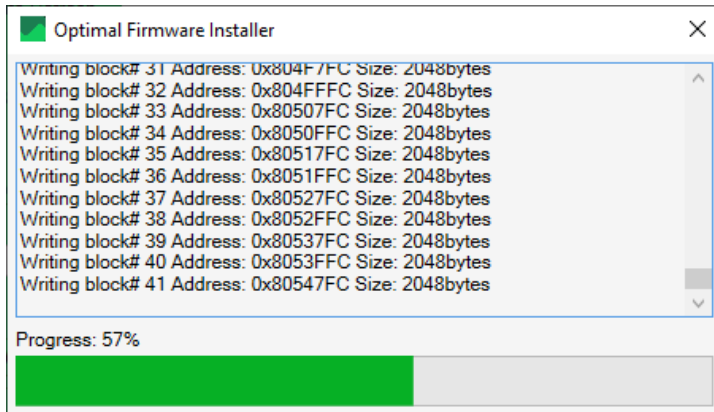
- Sinus Manager suggests the most recent distributed firmware included in the Sinus Manager installation. (If user wants to install another version, it's possible to click the folder button and select another file.)



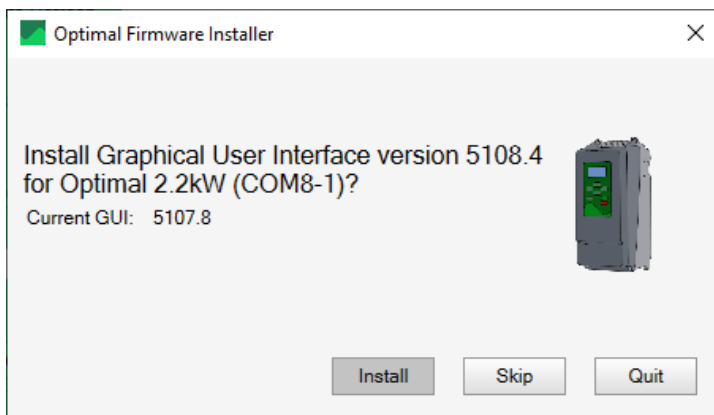
- Click **Start** and then **Install** to start the firmware update.



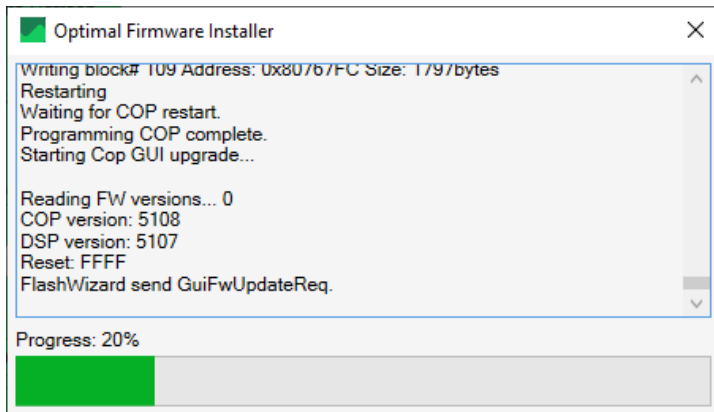
- The installation program will show a progress bar for a short period of time.



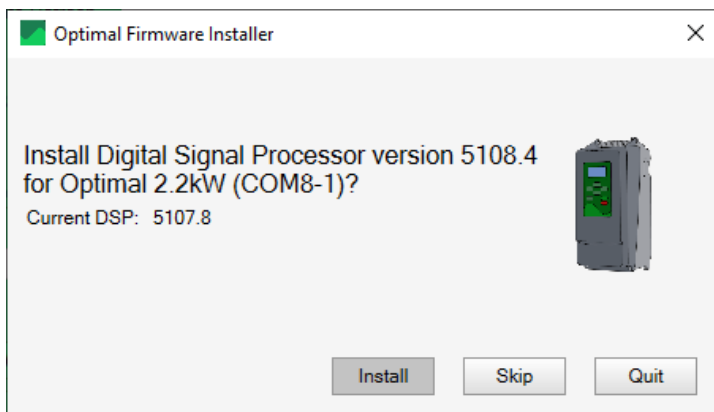
- When finished with Co-Processor, the installer will prompt to continue with GUI. Click **Install** to continue.



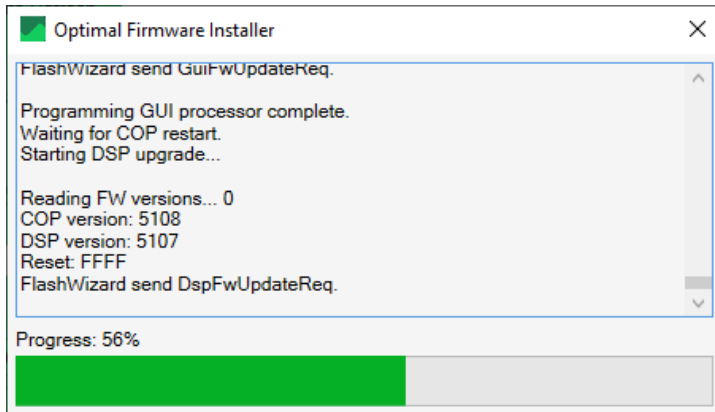
- Again, the installation program will show a progress bar. Wait for installation of GUI to finish.



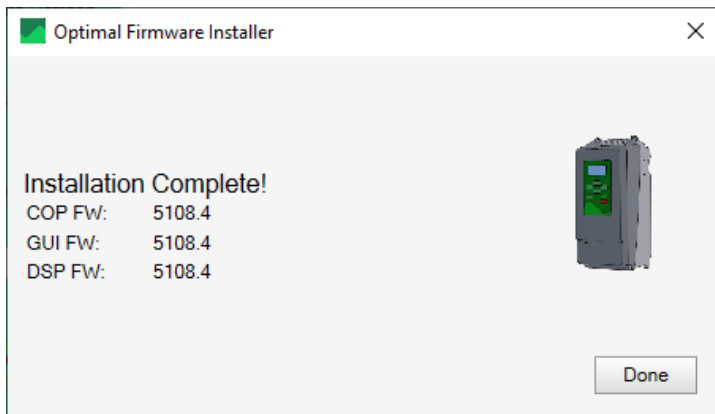
- When GUI is finished, the installer will prompt to continue with DSP. Click **Install** to update the DSP.



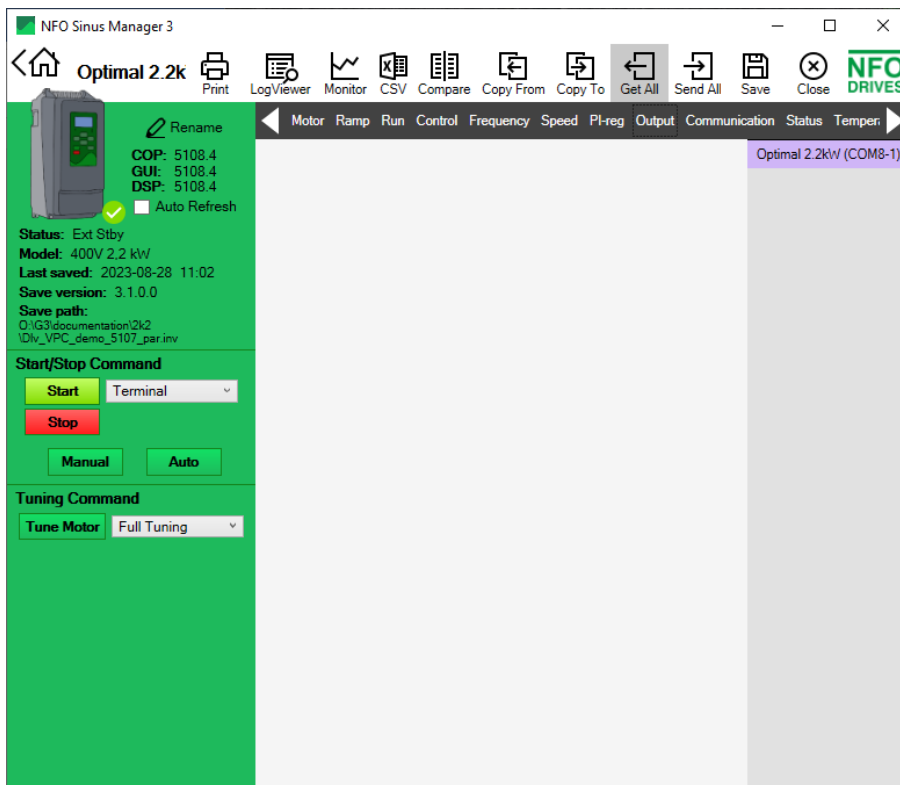
- Again, the installation program will show a progress bar. The DSP takes the most amount of time, about two minutes are required.



- When finished all three CPU's, the installer will show a summary screen. Click **Done** to close it.

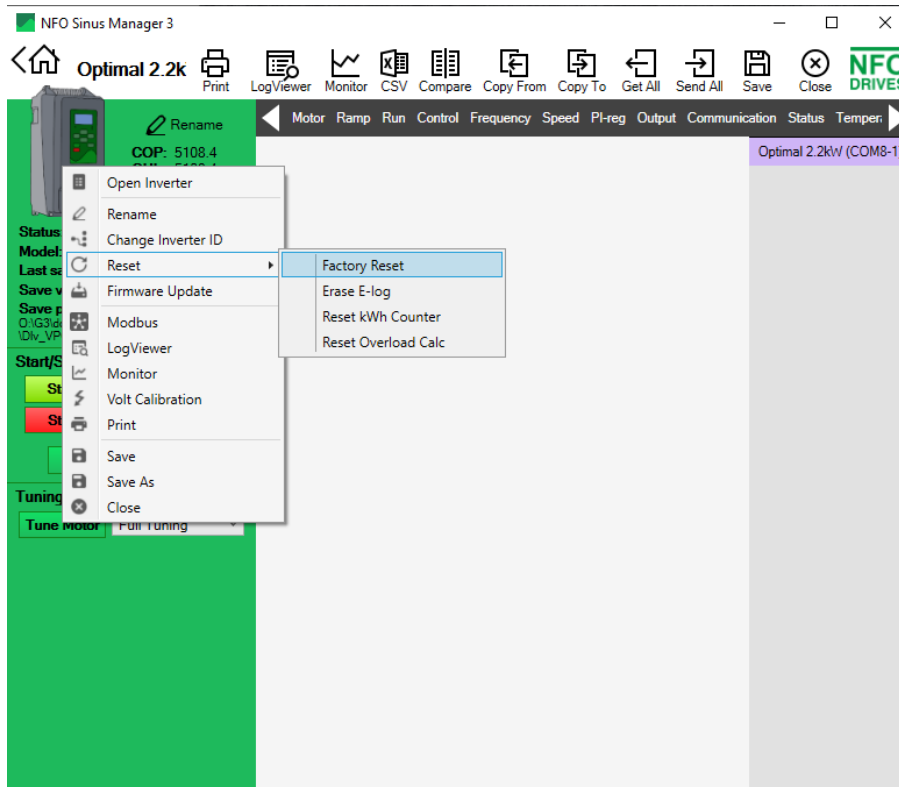


- The firmware update is now completed, and user may want to re-read all parameters from the inverter. If so, click the **Get All** option on the tool bar.

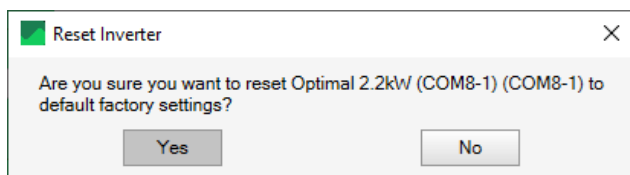


Factory reset

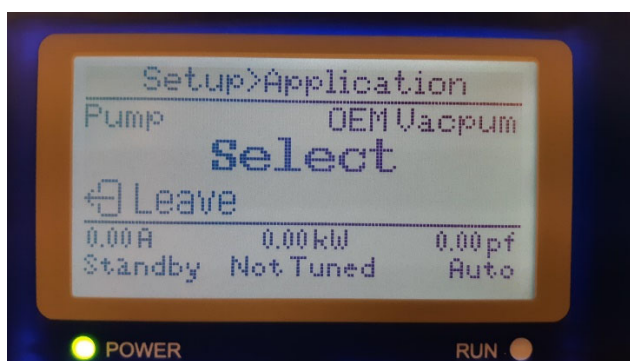
- To be sure that the inverter will operate with the default setting of the parameters of the new firmware, it's recommended to perform a factory reset.
- Right-click on the inverter, then select **Reset** and **Factory Reset**



- Click **Yes** to continue



- Go to the inverter. After a factory reset, the user must select application.



- Use arrow up/down buttons to select the application that correspond to, or is the most correct, for the actual installation. Selectable options are **Pump** (e.g. water pump), **Ventilation**, or **OEM Vacuum pump**.
- Press ENTER button to save the selection, then press ESCAPE to return to main screen.
- After a factory reset, user must enter correct motor data and perform an autotuning. Please see manual.