Firmware

Description

Firmware is the software that lives on the printer and LCD boards to control the printer. Firmware can periodically be updated to unlock new features or fix existing bugs. Please make sure to download the latest firmware for your printer from the gCreate websites and not directly from the source github.

Upload Mainboard Firmware (Marlin 2.x)

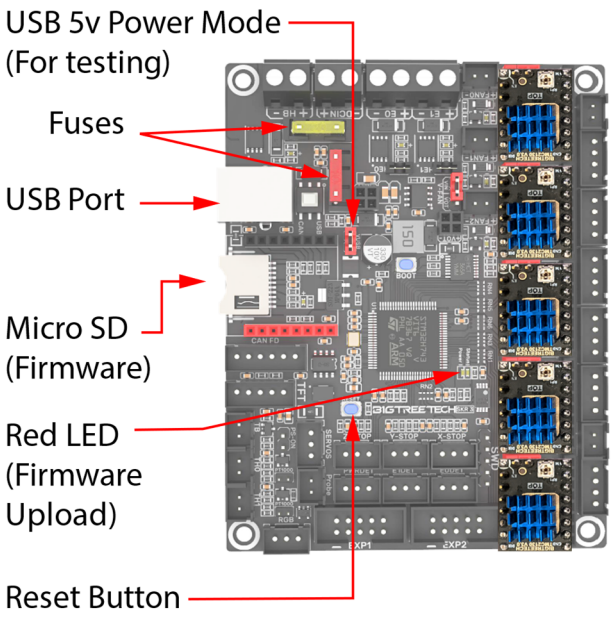
The gMax 2 Pro uses the popular Marlin 2.x open-source firmware and it has been tailored for the machine. We offer pre-compiled .bin files for the printer so updating is quick and easy.

1. Use a Micro SD card to install the mainboard firmware.

2. From your computer, download the correct .bin file for your machine and put it in the main folder of the SD card. The file must be renamed to "**firmware.bin**" or the printer won't recognize it.

3. Once you have transferred the file, put the card back inside the printer and turn it on. You should see a small red led blink twice slowly then several times quickly as the firmware uploads. If this didn't happen then press the reset button to force the printer to try again.

4. The update will happen quickly and the way to verify it installed is to go to "**Menu > Settings > Info**" to check the date of the build.



5. After the upload the file on the SD card will be named "**firmware.CUR**". If it isn't then, the firmware didn't upload. Reformat the card using a PC and try again.

6. After the firmware update, the bed leveling matrix might be erased and a warning will appear that says "**Failed to enable bed leveling**". This is normal and just press "**OK**" then run the bed leveling routine again.

Upload LCD Screen Firmware

The LCD screen has its own firmware, configuration file and graphics theme (with icons and fonts). We recommend updating all 3 whenever you update the firmware. Note the LCD screen can load independently of the main board so make sure the mainboard firmware is properly installed before the screen.

1. Download the correct zip file from our forum or website and unzip to a spot on your computer. You should see a firmware file, a config.ini file and a folder containing the graphics theme.

2. Put everything in the base directory of the formatted SD card that came with your printer.

3. Put this SD card in the LCD screen just like you are going to start a print and turn on the printer. You will see the firmware, config files, fonts, and all the graphics update. It should take a few minutes to complete. Once finished put the SD card back in the computer to see if the files are renamed with a "**.CUR**" extension at the end. If not, format the card and try the installation again.

4. Note: You may need to go to "**Menu > Settings > Machine > EEPROM > Reset**" to properly reset the print back to the factory settings after the firmware update. The printer will display "**Failed to enable bed leveling**" after a reset because the bed leveling matrix has been erased. Click OK and run bed leveling again.

Firmware Error Codes and Troubleshooting

- **Firmware doesn't install**
  - When you install firmware, there should be an LED on the motherboard that will flash twice, then several times. Also, when you put the micro SD card back in the computer the firmware.bin filename should be renamed to firmware.CUR. If these two things didn't happen, try the following:
  - Turn off the printer for a few seconds and try again.
  - Reformat the card with Fat32 and try again.
  - If you are using a Mac, try formatting the card on a Windows PC and try again.

Thermistors

There are different types of thermistors depending on the hotend you have. Alternatively, older E3D hotends use an E3D thermistor. When installing firmware, make sure to select the correct thermistor type that matches the hotend you have installed.

Dual Chimera 350° C (E3D thermistor)

Dual 2-in-1 245° C (FYSETC Set to max of 245° C)

Single Copperhead 400° C (DYZE thermistor)

Single Copperhead 350° C (FYSETC thermistor)