BIGTREETECH/BIQU SKR V1.1 PRO instruction guide by Jupa Creations

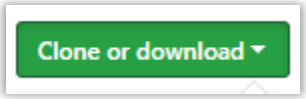
All official information like schematics and hardware about this 32 bits 3D printer mainboard can be found on the BIGTREETECH official GITHUB site.

This instruction guide is to show you how to install Marlin 2.0 firmware to the SKR V1.1 PRO board in general and some extra stuff. It does not take in account machine and other hardware specific settings!

This document is based for Windows OS systems and intended for use with a REPRAP_DISCOUNT_FULL_GRAPHIC_SMART_CONTROLLER 128x64 LCD display by standard with two 10 pin wire ribbon cables.

You can use any text editor which can work with PlatformIO. VSCode is used in this manual to compile Marlin2.0 to BIGTREETECH SKR PRO V1.1

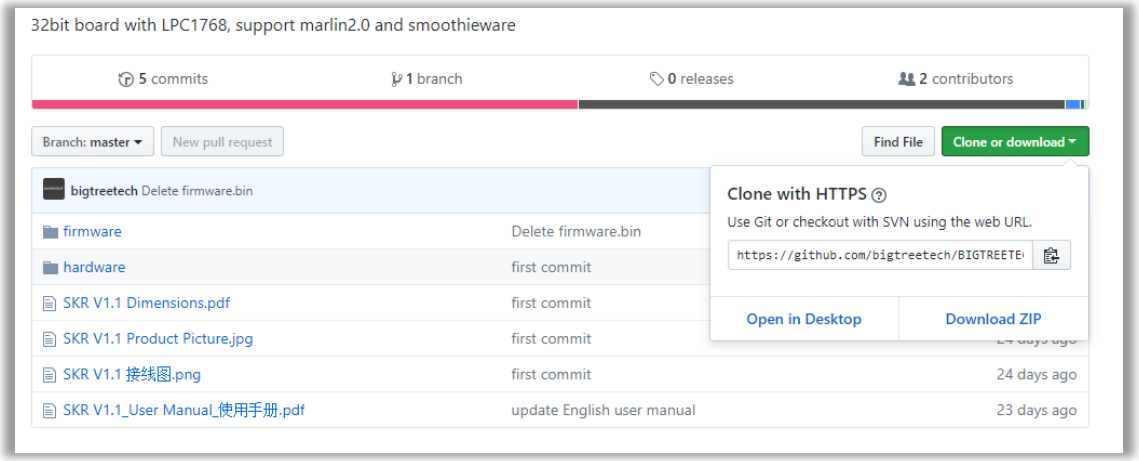
Download the Marlin2.0 firmware from Marlin 2.0 github firmware version and click.



Click “Download ZIP”

or click here for the latest Marlin 2.0 version.

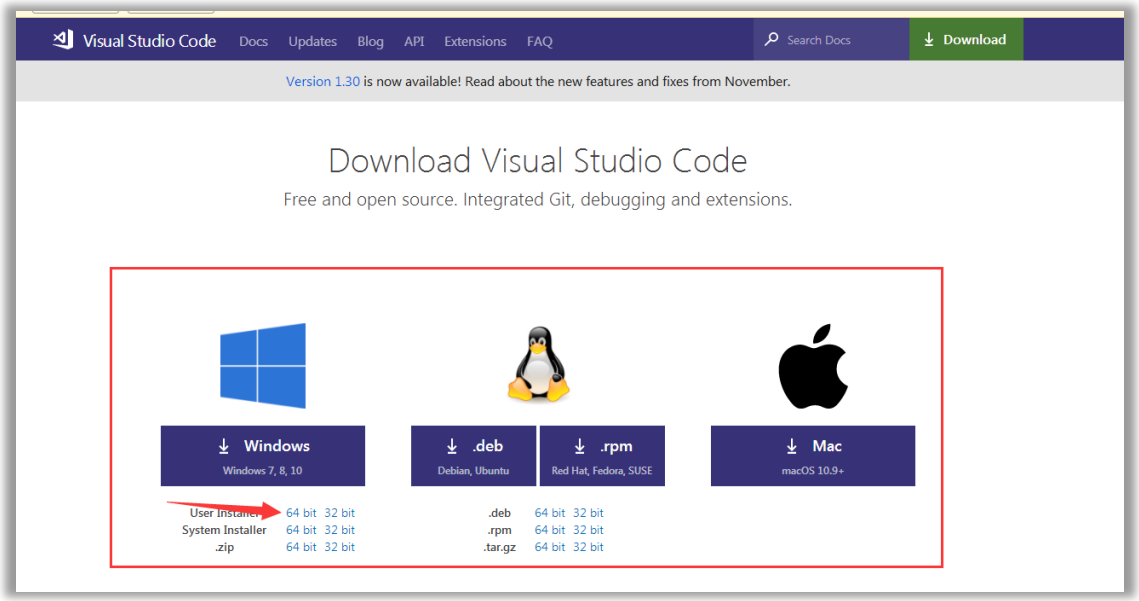
In general the BIGTREETECH firmware version on their Github page by the time your read might have been updated but will never be the same as the official Marlin 2.0. In any case download Marlin 2.0 github firmware version and modify it to your needs after the first compiling is succesfull.



When the download is complete, unzip the file to a known place on your C-Drive. Do not use long paths to store the files! It will cause errors while compiling.
We use C:\3D\Marlin-bugfix-2.0.x

In this example we use VScode (any other text editor compatible with PlatformIO will work but are not taken in account in this manual)

Download the VScode from https://code.visualstudio.com/Download.
Choose the version which is compliant with your PC operating system.

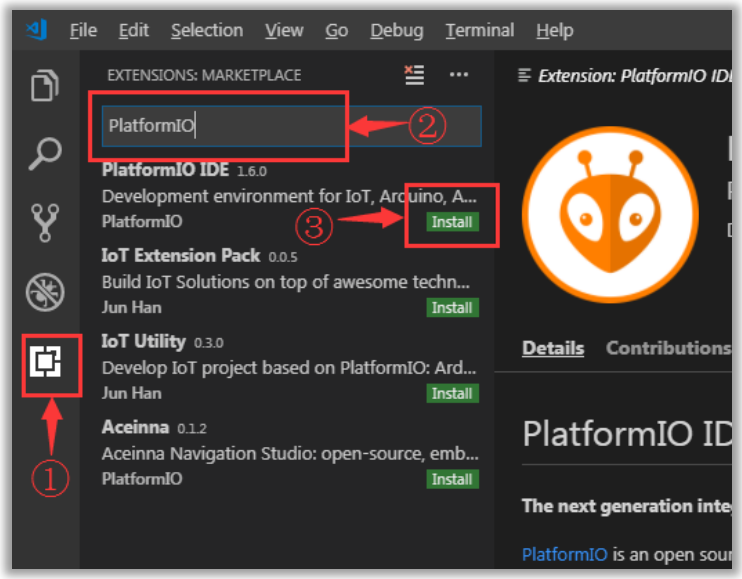


After the download is completed, double-click the installation. After the installation, open VSCode.

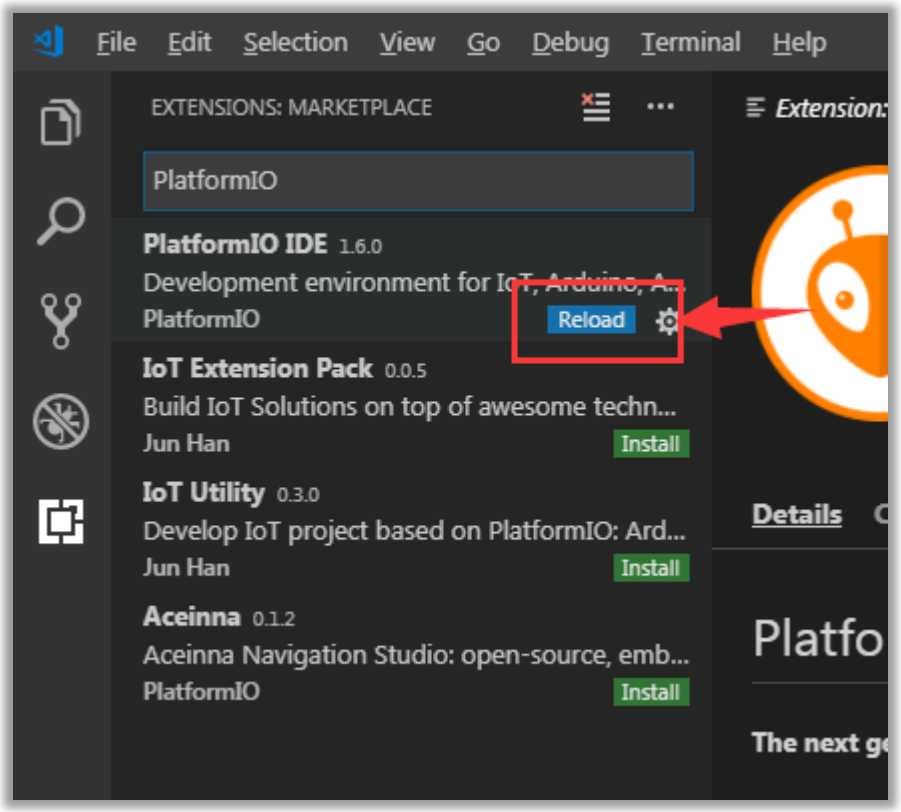
If you dislike the standard black theme you can also use the keyboard shortcut Ctrl+K - Ctrl+T to display the theme picker and select a light theme.

You also need to install the PlatformIO plugin, click on the steps below .

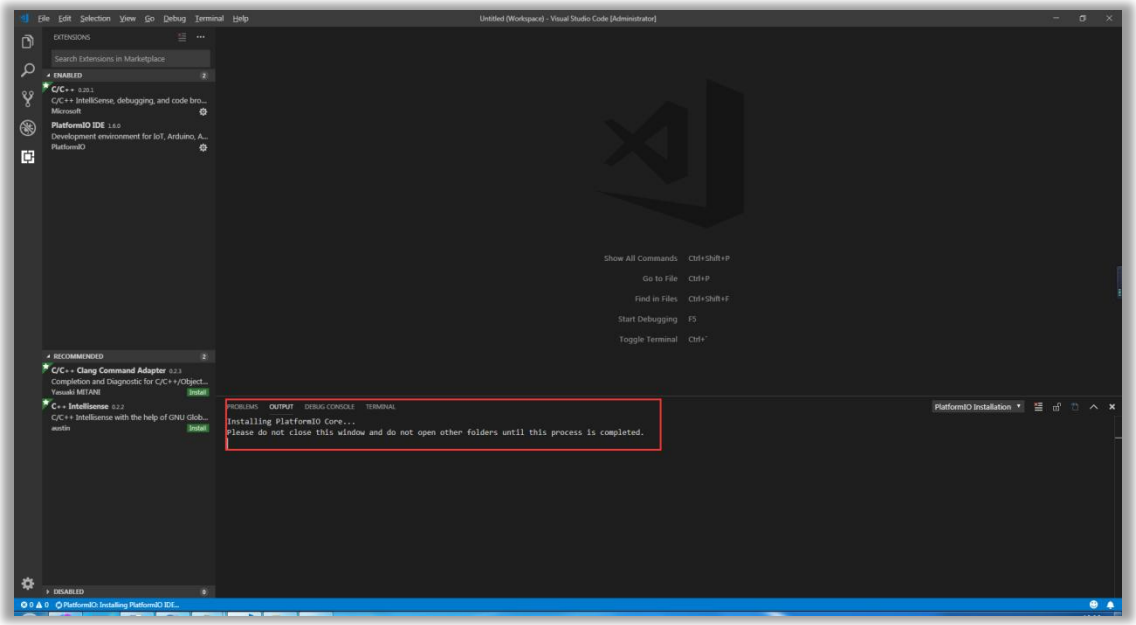
Click on the step 1 in the figure below, enter PlatformIO in step 2 and click step 3 Install to install.



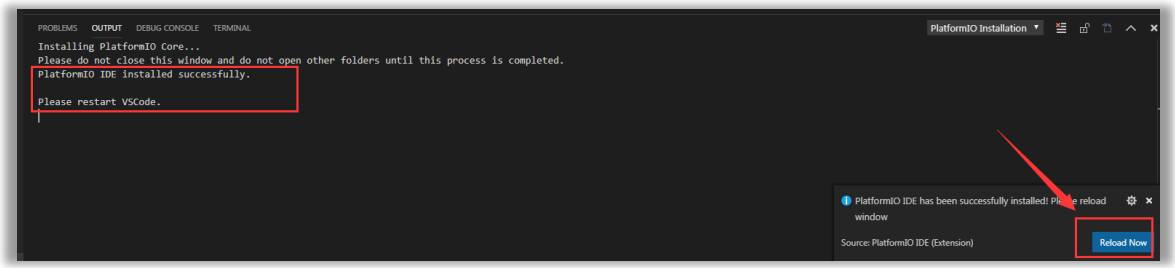
After the download is complete, you need to click Reload.



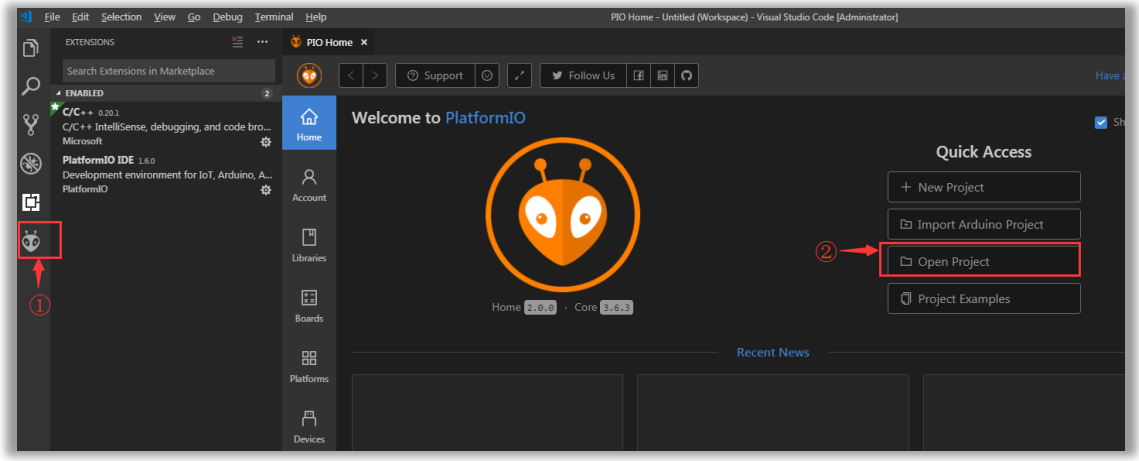
After Reload, you will be prompted to install PlatformIO Core. Please wait.



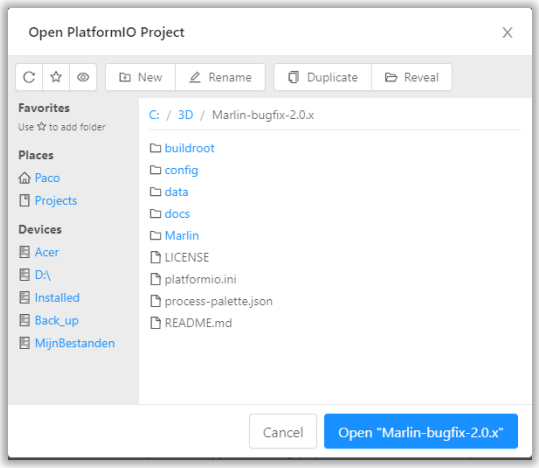
After the installation is successful, you need to Reload it again, and then PlatformIO is installed.



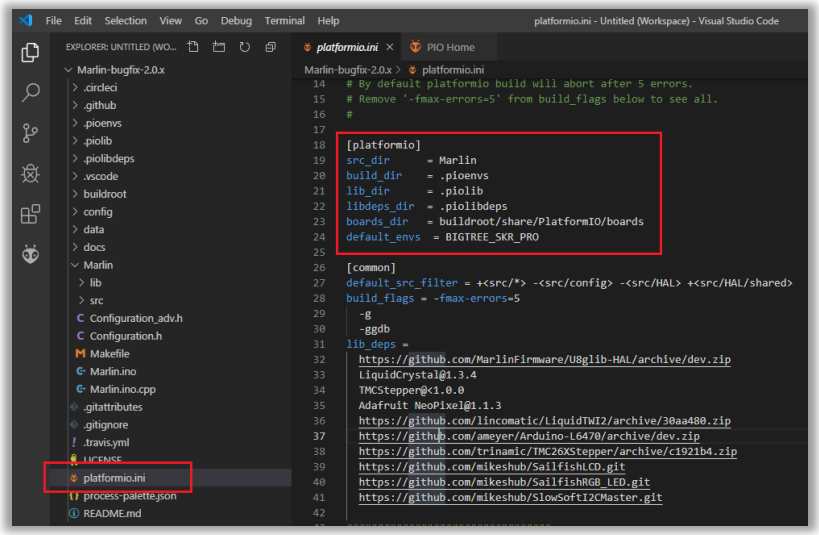
In the PIO Home screen you can see in the lower left corner the icon (1), which is PlatformIO plug-in. Click (2) Open Project to Open the Project.



Find the marlin2.0 source directory where you extracted in the very first step, and click Open.



After opening the project, go to the PlatformIO.ini file and change the default environment from megaatmega2560 to “default_envs = BIGTREE_SKR_PRO”.



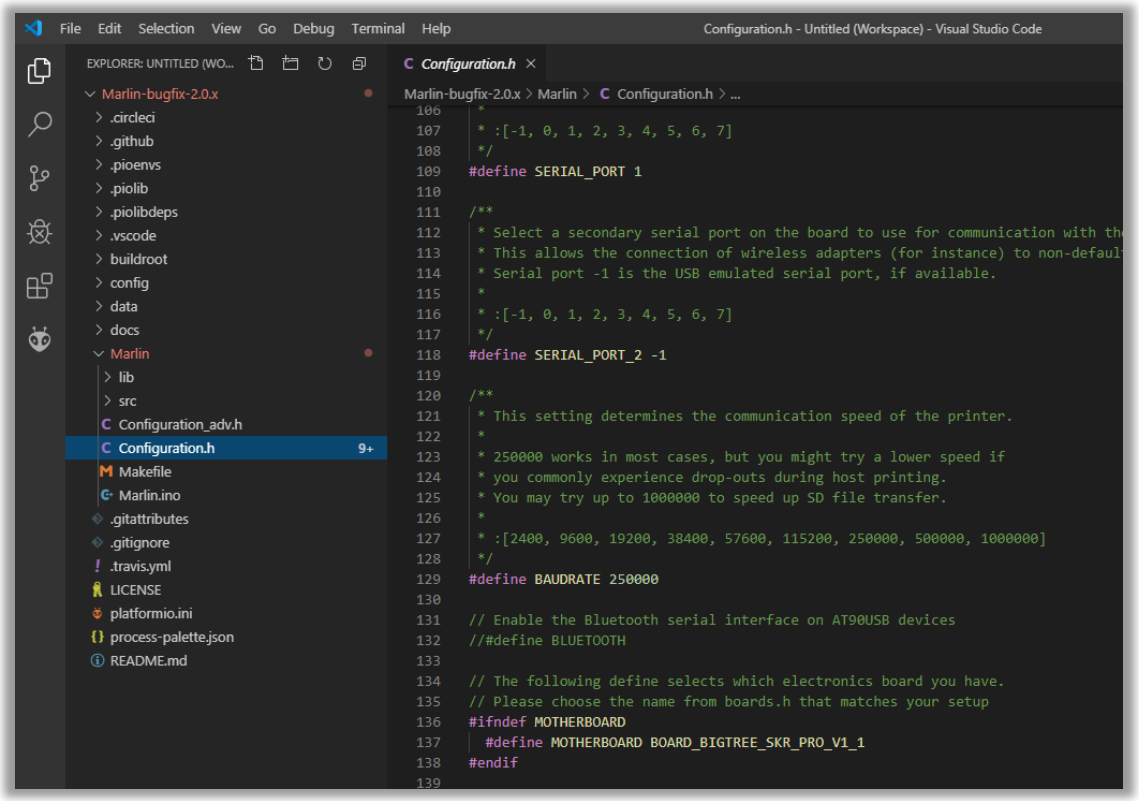
Then go to the configuration.h file and if not yet done modify it to

#define SERIAL_PORT 1

#define SERIAL_PORT_2 -1

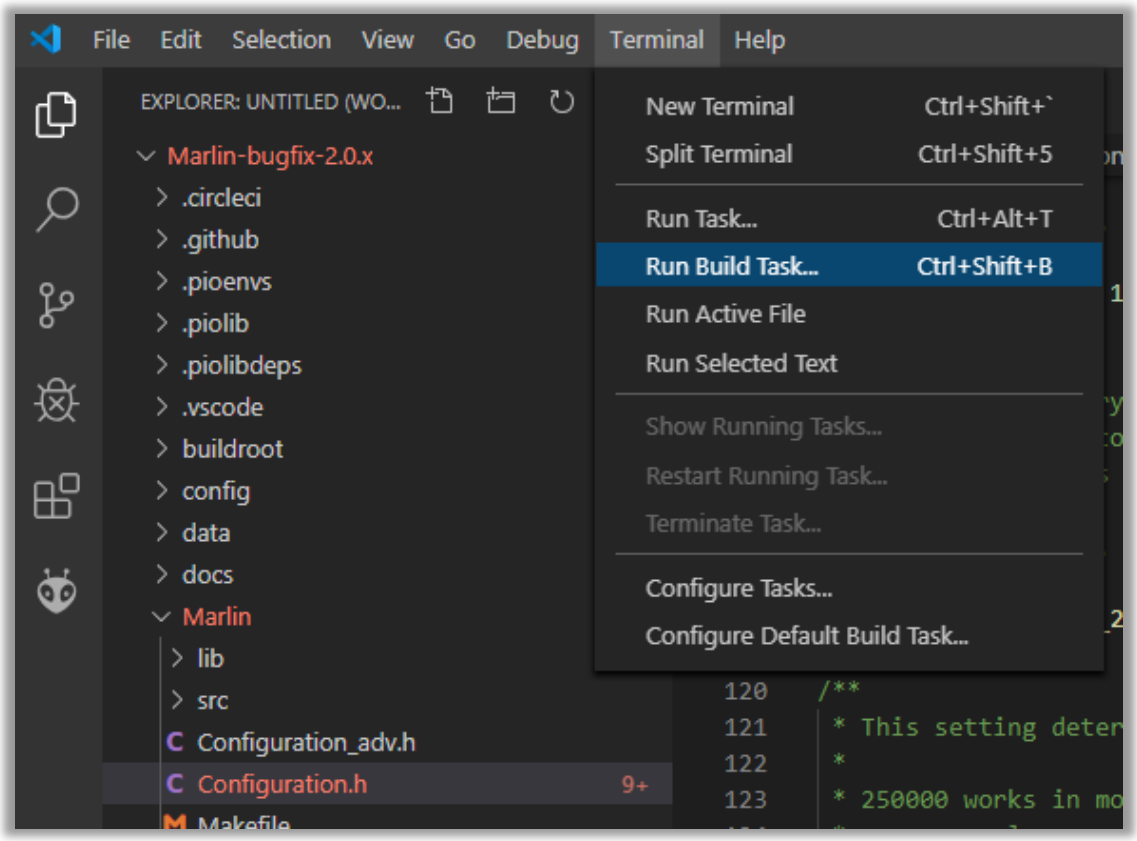
#define BAUDRATE 250000 .

#define MOTHERBOARD BOARD_BIGTREE_SKR_Pro_V1_1

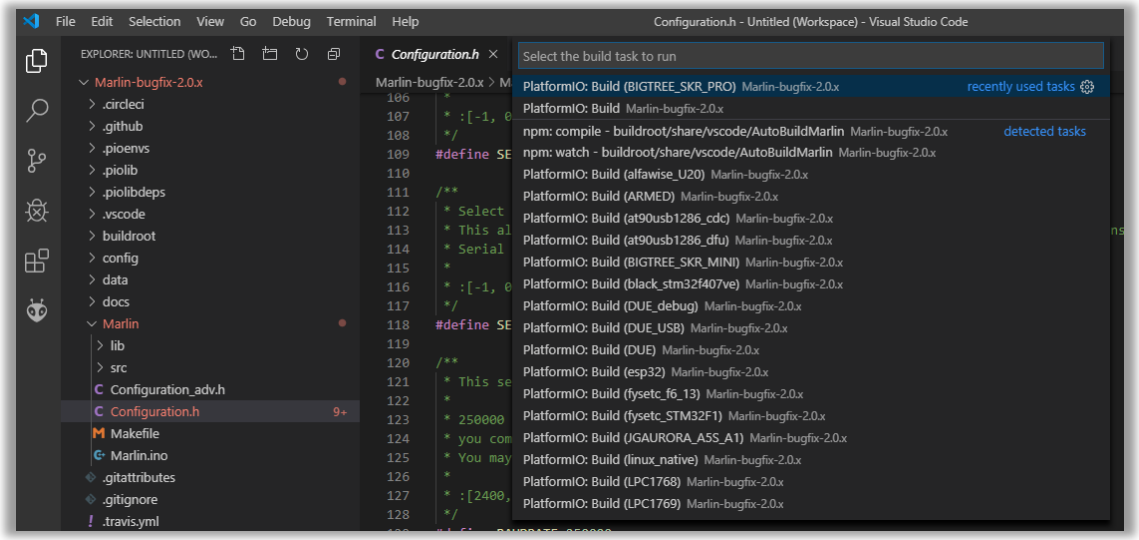


Hit control+shift+B key to start the compiling. Or click “Terminal > Run Build Task…”

The changes will be automatically saved.



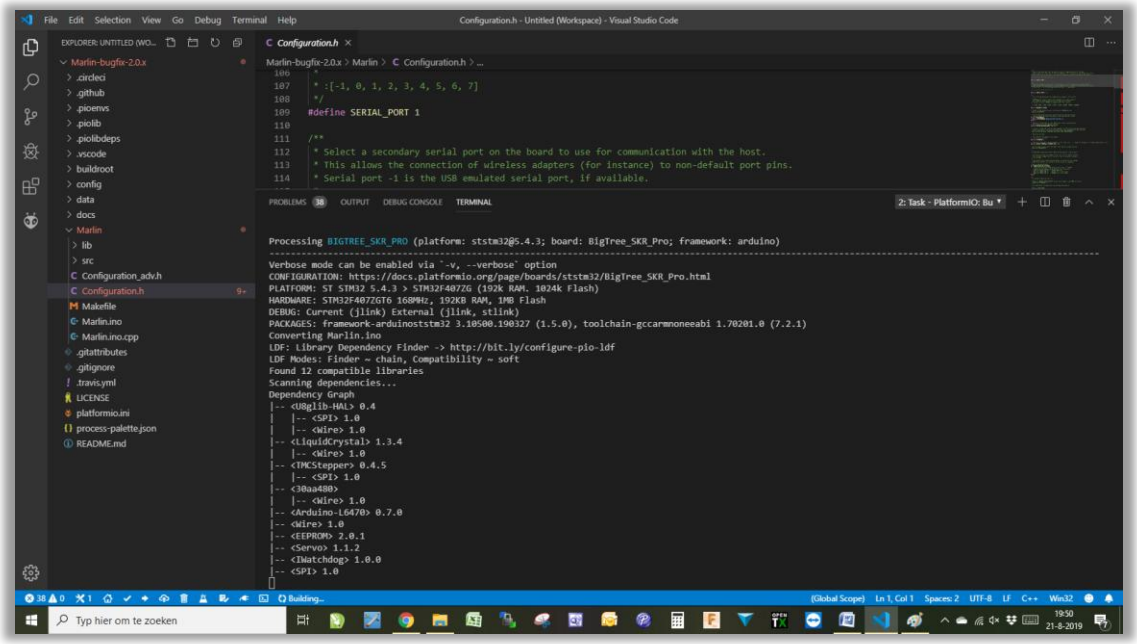
Select “PlatformIO: Build BIGTREE_SKR_PRO” from the list and wait patiently for the compiling to start.

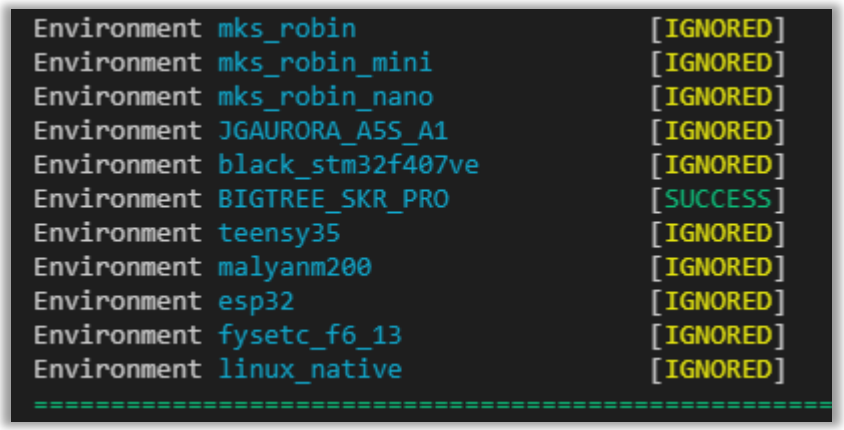


During the compiling you will see it loads all needed libraries automatically.

If you see yellow code lines do not be afraid and proceed.

When an error has occurred during compiling and error message will be shown in red.





Now we know the standard default Marlin 2.0 compiles we can start altering the code lines needed to accommodate to your needs.

It is wise to only change a few code lines and then test compile instead of doing all code lines at once and when compiling fails you do not know what is causing the compile error.

After the compiling is successful, a “firmware.bin” file will be generated in the C:\pio(envs)\build\BIGTREE_SKR_PRO directory. Copy this file to the TF card of the motherboard. Powercycle the motherboard, so that the firmware is burned into the motherboard.

The green leds on the board will flash for 3 seconds.

Change Marlin in configuration.h and configuration_adv.h to your liking.

More Marlin settings and set ups will be available soon in 2019 when time allows.

Paco Raap – Jupa Creations