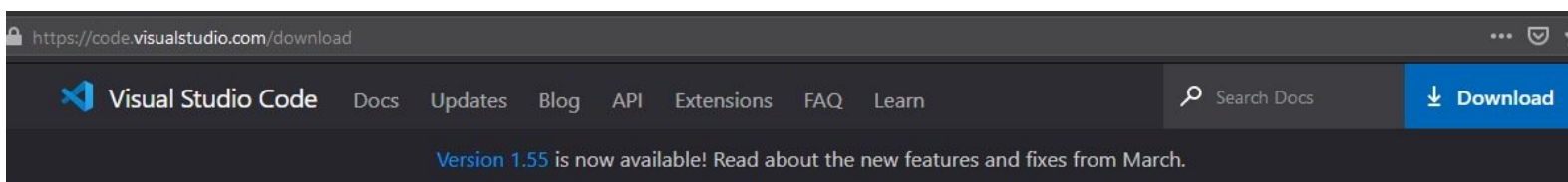


mcr

# [old] How to upload Marlin firmware from Windows


How to build & upload Marlin 3D printer firmware for polargraphs using Windows, VSCode, and PlatformIO.

Written By: Dan Royer



## Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.



↓ Windows

Windows 7, 8, 10

User Installer

System Installer

.zip

64 bit

32 bit

ARM

64 bit


32 bit

ARM

64 bit

32 bit

ARM



↓ .deb

Debian, Ubuntu

↓ .rpm

Red Hat, Fedora, SUSE

.deb

.rpm

.tar.gz

64 bit

ARM

ARM 64

64 bit

ARM


ARM 64

64 bit

ARM

ARM 64

Snap Store



↓ Mac

macOS 10.10+

.zip

Universal

Intel Chip

Apple Silicon

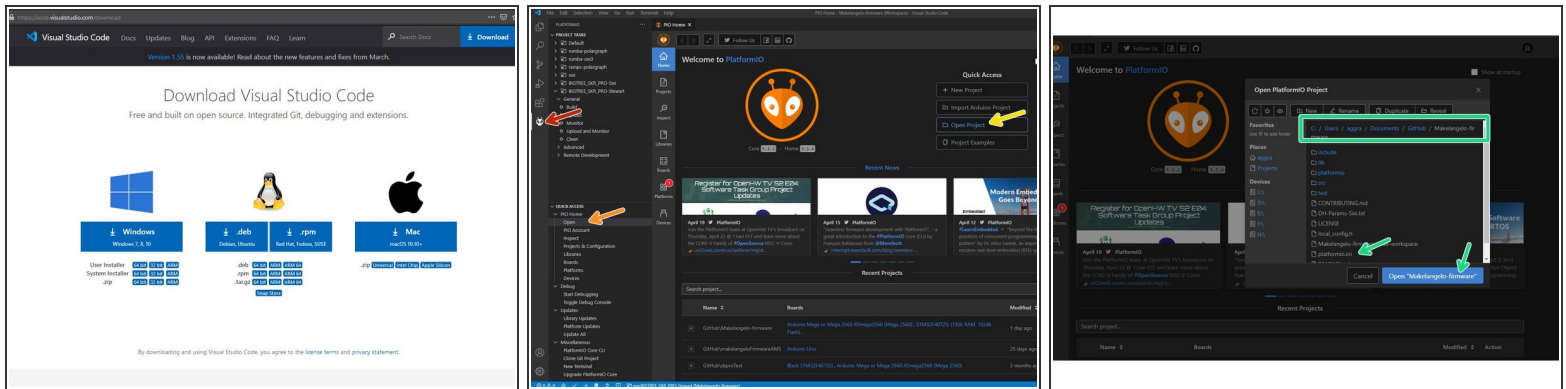
By downloading and using Visual Studio Code, you agree to the [license terms](#) and [privacy statement](#).

---

## INTRODUCTION

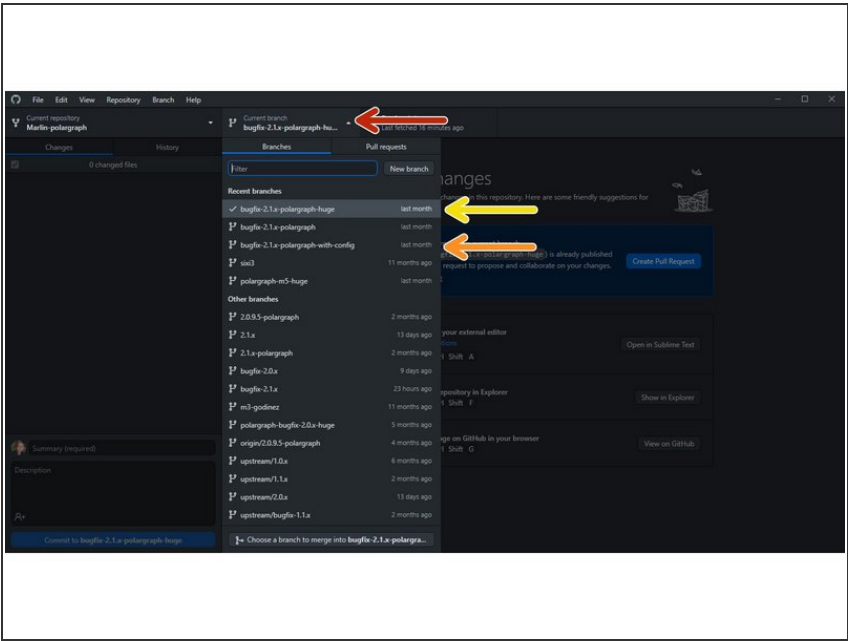
As of 2021 Makelangelo-firmware is now built and uploaded with PlatformIO. These instructions will show you how to build & upload from any windows-based device running VSCode.

## Step 1 — Install Apps and open project



- [Install Microsoft Visual Studio Code](#)
- [Install PlatformIO inside MSVC.](#)
- [Install Github Desktop](#) (or your favorite flavor of git)
- [Clone the Marlin firmware repository.](#) I will clone to local directory ~/Marlin/
- Click on the PlatformIO plugin
- Click Quick Access PIO Home > Open
- Click Open Project and then
- Open your copy of folder ~/Marlin/

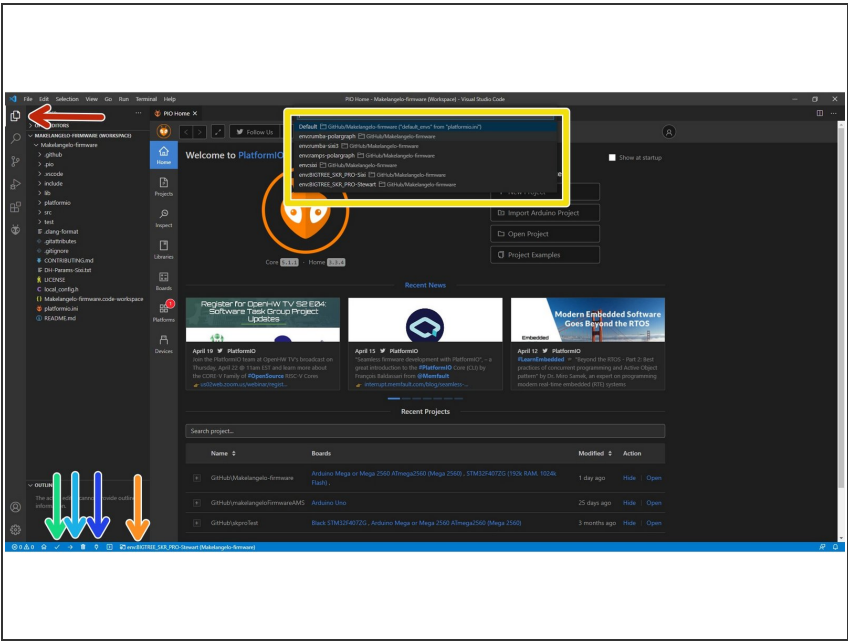
## Step 2 — Default versions



**i** The code from Github has several "branches". Each branch is pre-made for a different type of machine.

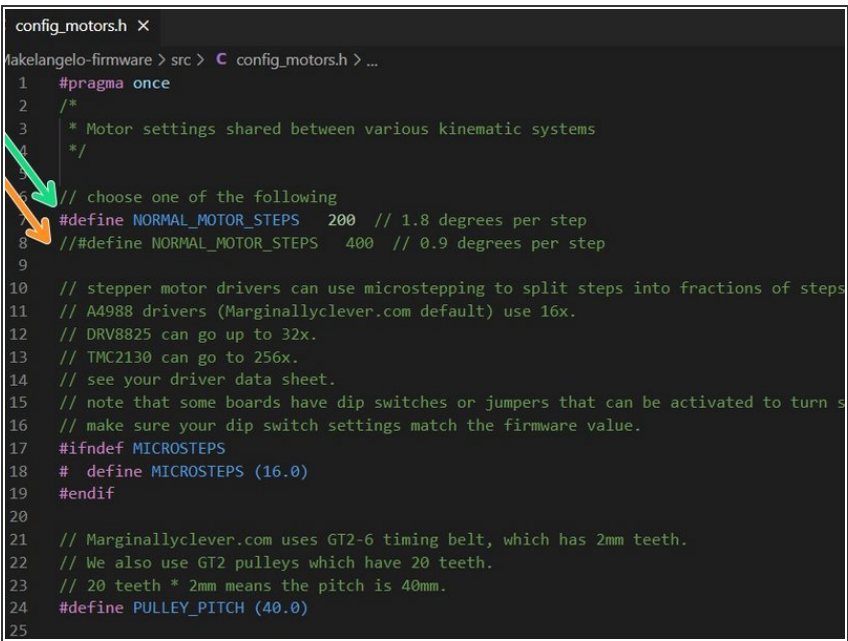
- Click here to change the current branch.
- **bugfix-2.1.x-polargraph-with-config** is the branch installed by default on all Makleangelo 5 robots.
- **bugfix-2.1.x-polargraph-huge** is the custom version for Huge machines. Out of the box a Huge might still have the 5 branch installed.

### Step 3



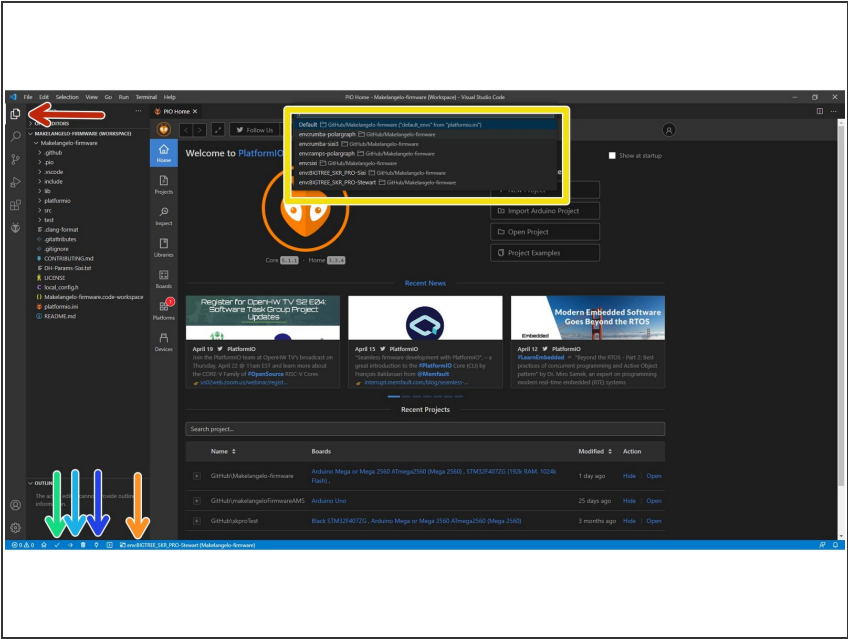
- Click on "Explorer"
- Click on "Switch PlatformIO Environment"
- Choose your environment. The default env for Makelangelo robots is **env:mega2560**.
- Compile your code to make sure there are no errors.
- If your board allows and is connected, upload your code.
- If your board communicates over serial USB, connect here.

### Step 4 — Customizing the firmware



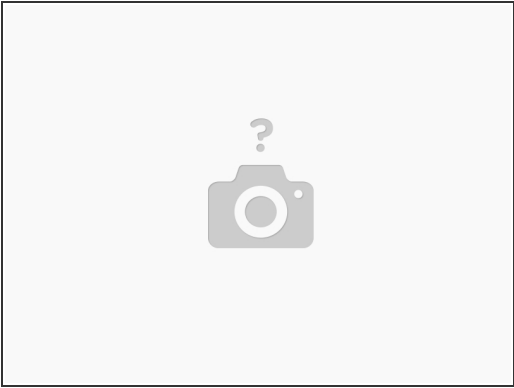
- ① By default the firmware is setup for Makelangelo 5 polargraph robots.
- Please use [Friday Facts 4](#) to customize your firmware for other hardware, etc.
- Once this is set correctly, upload the firmware again.

## Step 5 — Factory reset



- Makelangelo robots store some important numbers in EEPROM such as machine size. New machines have all values at zero. Old machines getting a firmware upgrade may have outdated numbers.
- To set these numbers to factory default values, connect to your robot through the serial monitor and send **M502**, *factory reset*.
- You can verify the new numbers with **M503**, *report all settings*.

## Step 6 — Firmware update via SD card



- Some custom boards (such as STM32\* type) must be updated by copying firmware to an SD card. If you're reading this, come to Discord and tell me to finish this section.