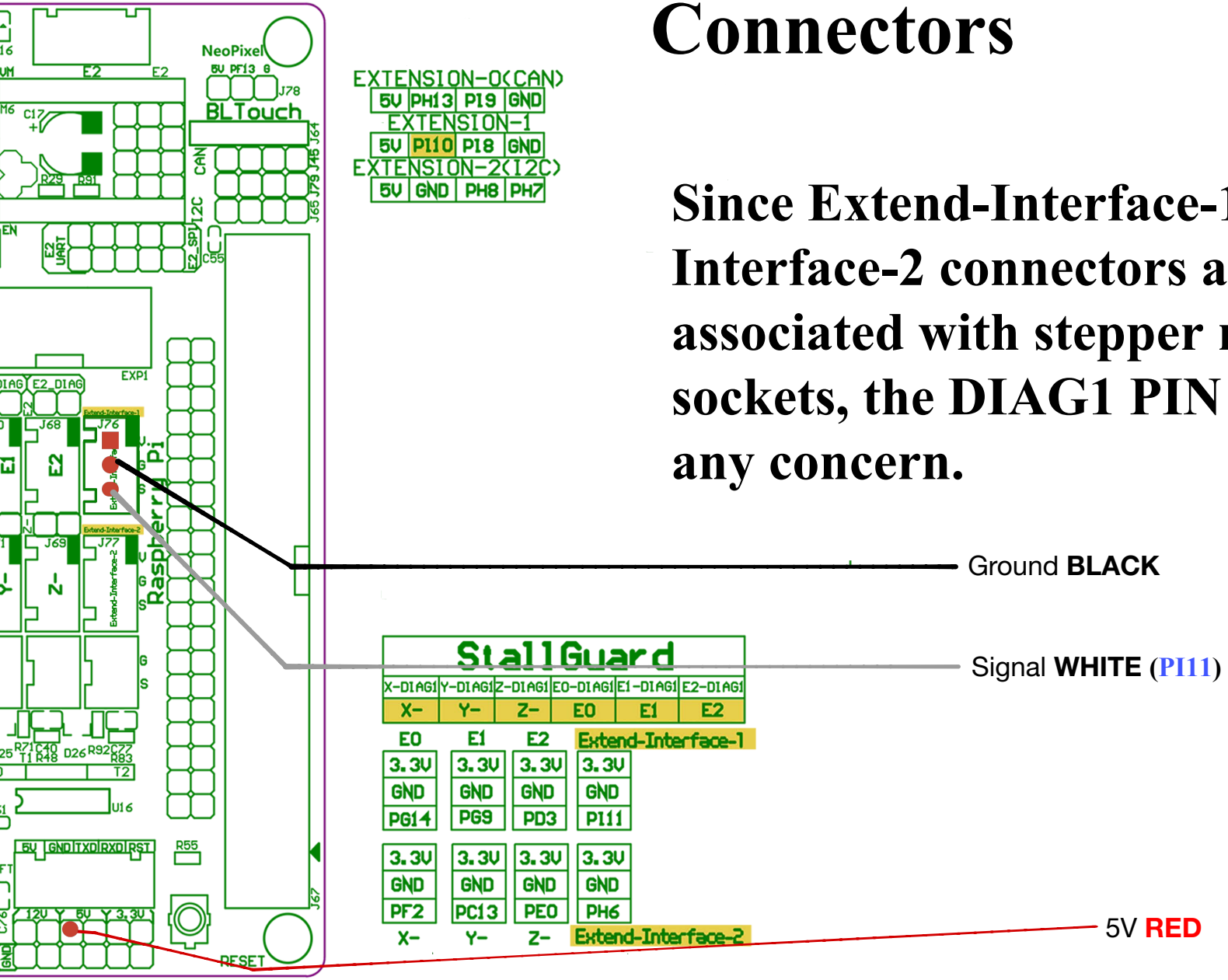
Filament Runout Sensor Guide for GTR V1.0 Board

If you want to wire the Filament Runout Sensor to Extend-Interface-1 Connector or Extend-Interface-2 Connector go to page 2.

If you want to wire the Filament Runout Sensor to an Endstop Connector {X-, Y-, Z-, E0, E1, or E2} then go to page 5.

Filament Runout Sensor Wired to Extend-Interface-1/Extend-Interface-2 Connectors



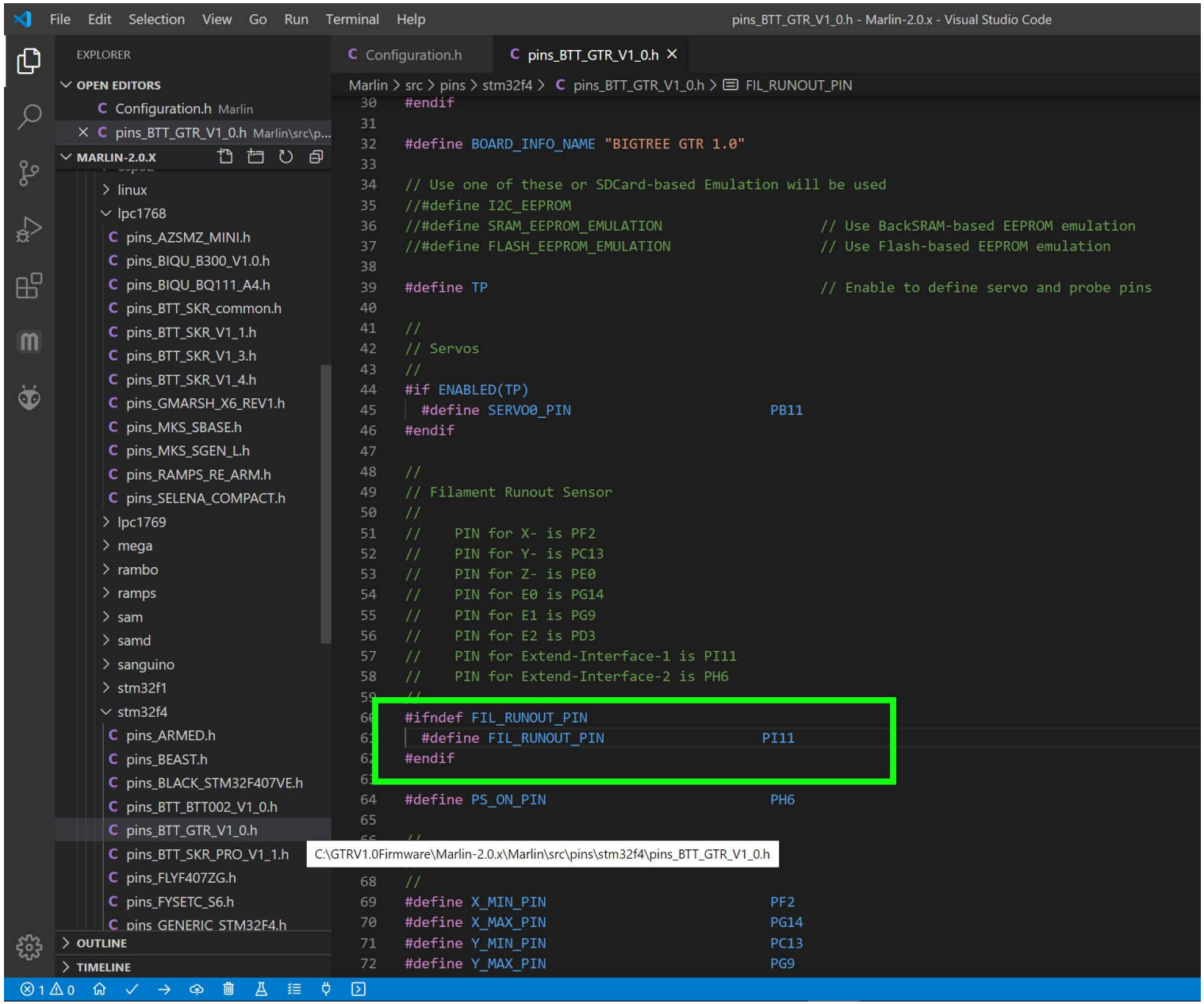
Since Extend-Interface-1 and Extend-Interface-2 connectors are not associated with stepper motor driver sockets, the DIAG1 PIN will not be of any concern.

In this example the Filament Runout Sensor is wired to Extend-Interface-1

Marlin 2.0.x Setup for Filament Runout Sensor Connected to Extend-Interface-1 Connector

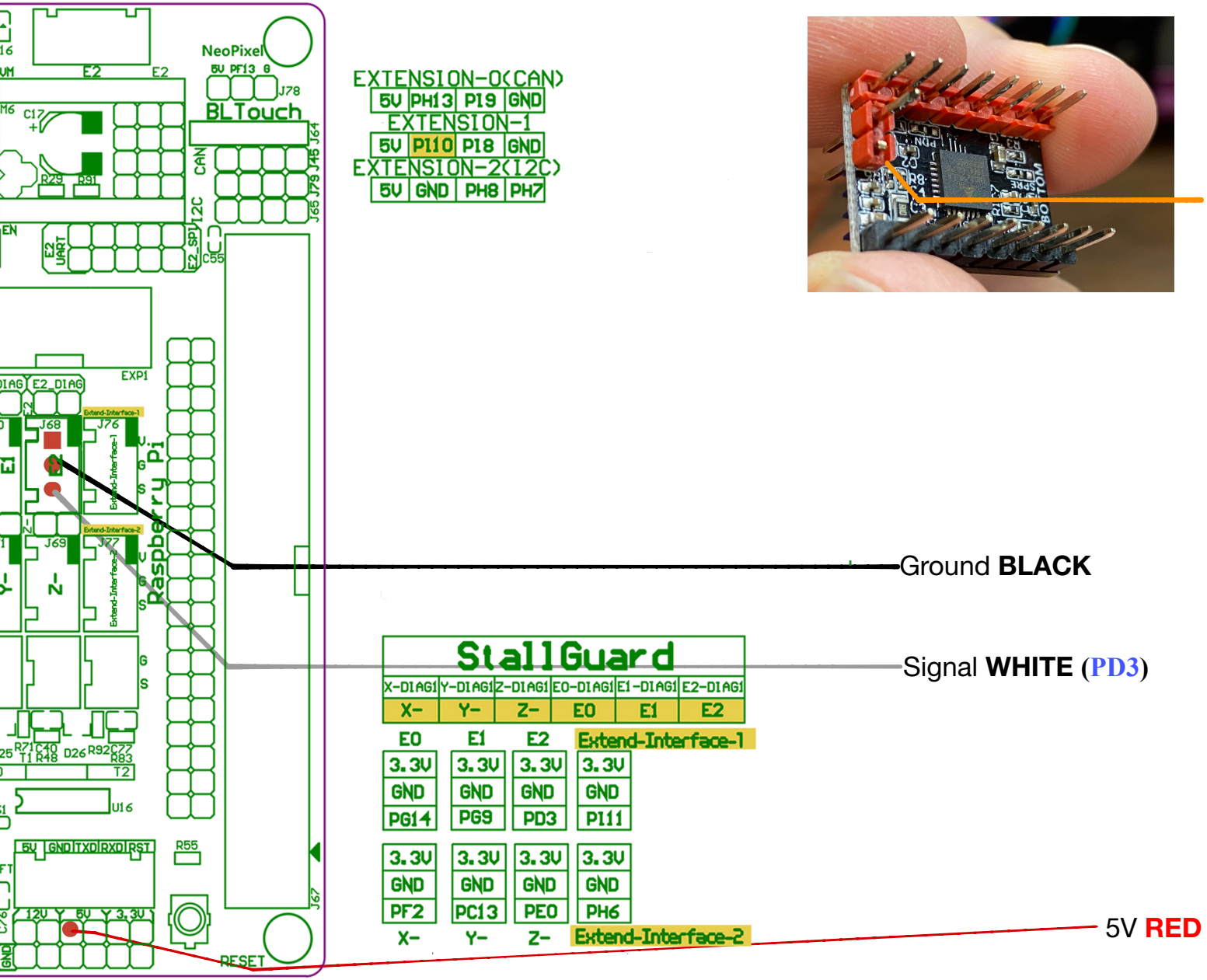
- **Define the Fil_RUNOUT_PIN in pins_BTT_GTR_V1_0.h file. The pins file for GTR V1.0 board is located in "...\Marlin\src\pins\stm32f4\ subdirectory.**
- **Enter the following lines into the pins_BTT_GTR_V1_0.h file:**

```
#ifndef FIL_RUNOUT_PIN
        #define FIL_RUNOUT_PIN          PI11
#endif
```



To Finish the Marlin 2.0.x Setup, go to page 7.

Filament Runout Sensor Wired to Limit Switch {X-, Y-, Z-, E0, E1, or E2}

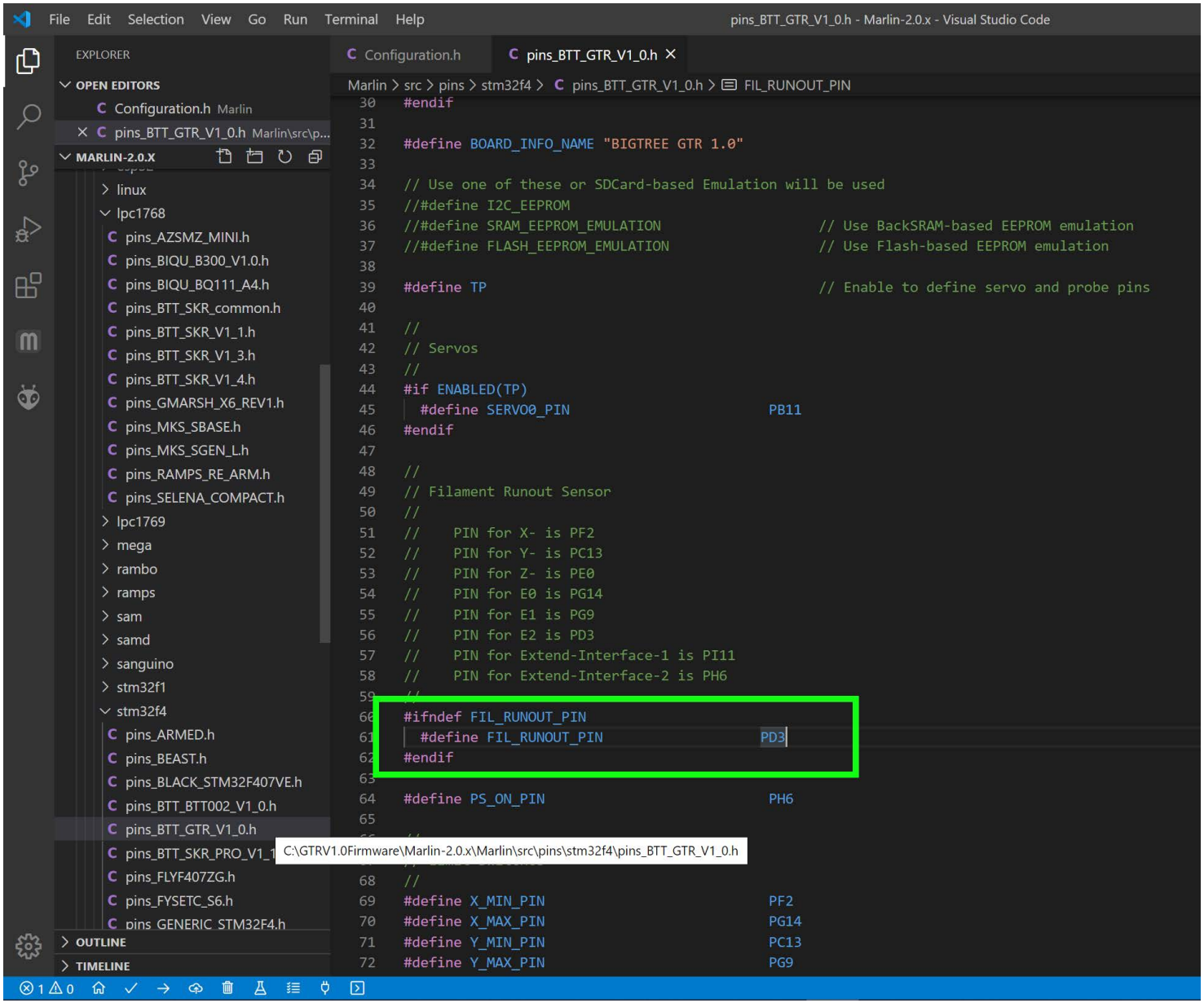


The filament sensor won't work with the diagnostic pin (DIAG1) of the extruded stepper (or other Limit switches/ Endstops) so you must cut it or use a soldering iron to heat up the pin and slide it up out of the way.

Marlin 2.0.x Setup for Filament Runout Sensor Connected to E2 Endstop Connector

- **Define the Fil_RUNOUT_PIN in pins_BTT_GTR_V1_0.h file. The pins file for GTR V1.0 board is located in "...\Marlin\src\pins\stm32f4\ subdirectory.**
- **Enter the following lines into the pins_BTT_GTR_V1_0.h file:**

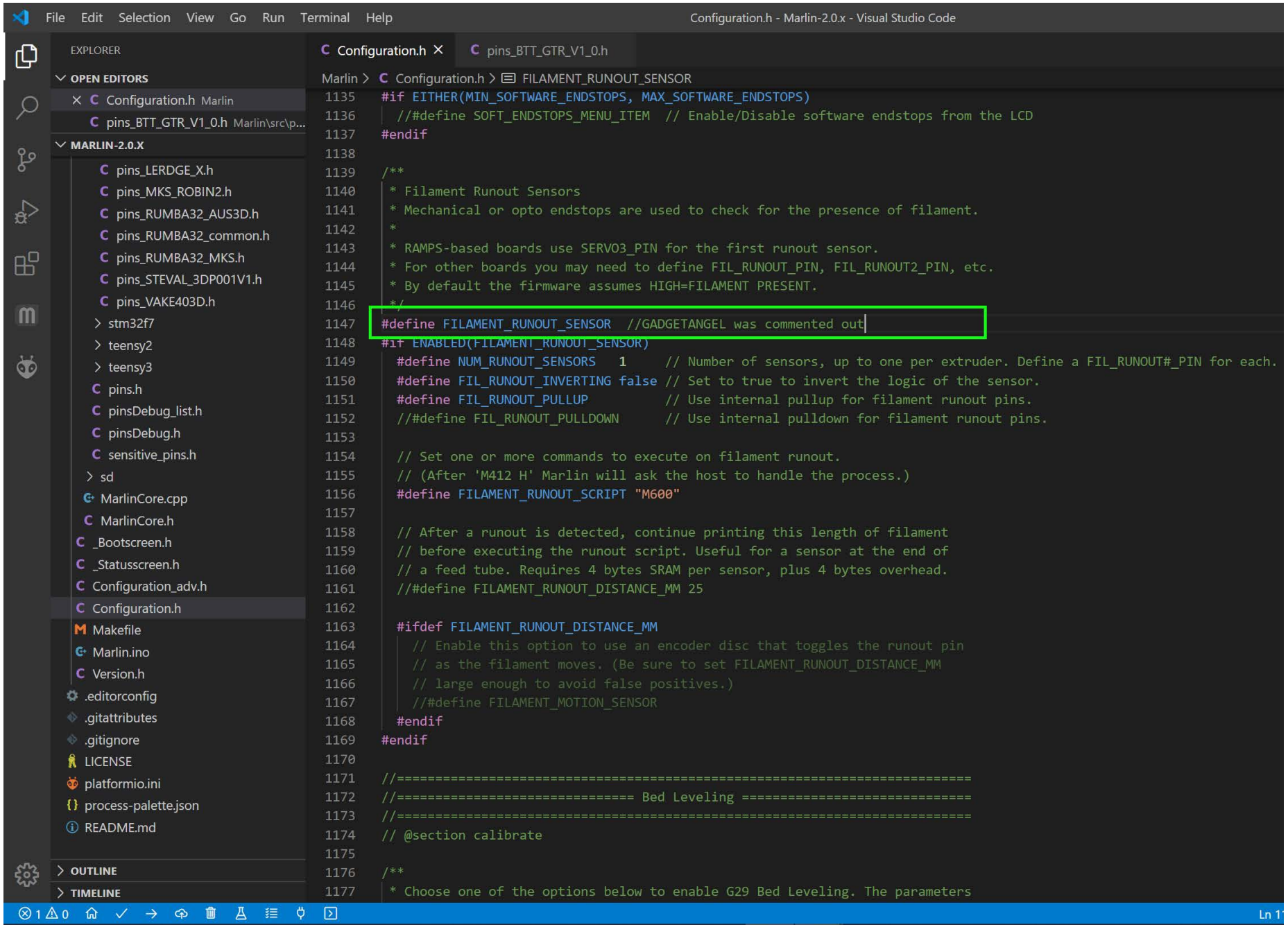
```
#ifndef FIL_RUNOUT_PIN
        #define FIL_RUNOUT_PIN          PD3
#endif
```



Marlin 2.0.x Setup Continued for Filament Runout Sensor Wired by Extend-Interface-1 Connector or E2 Endstop Connector.

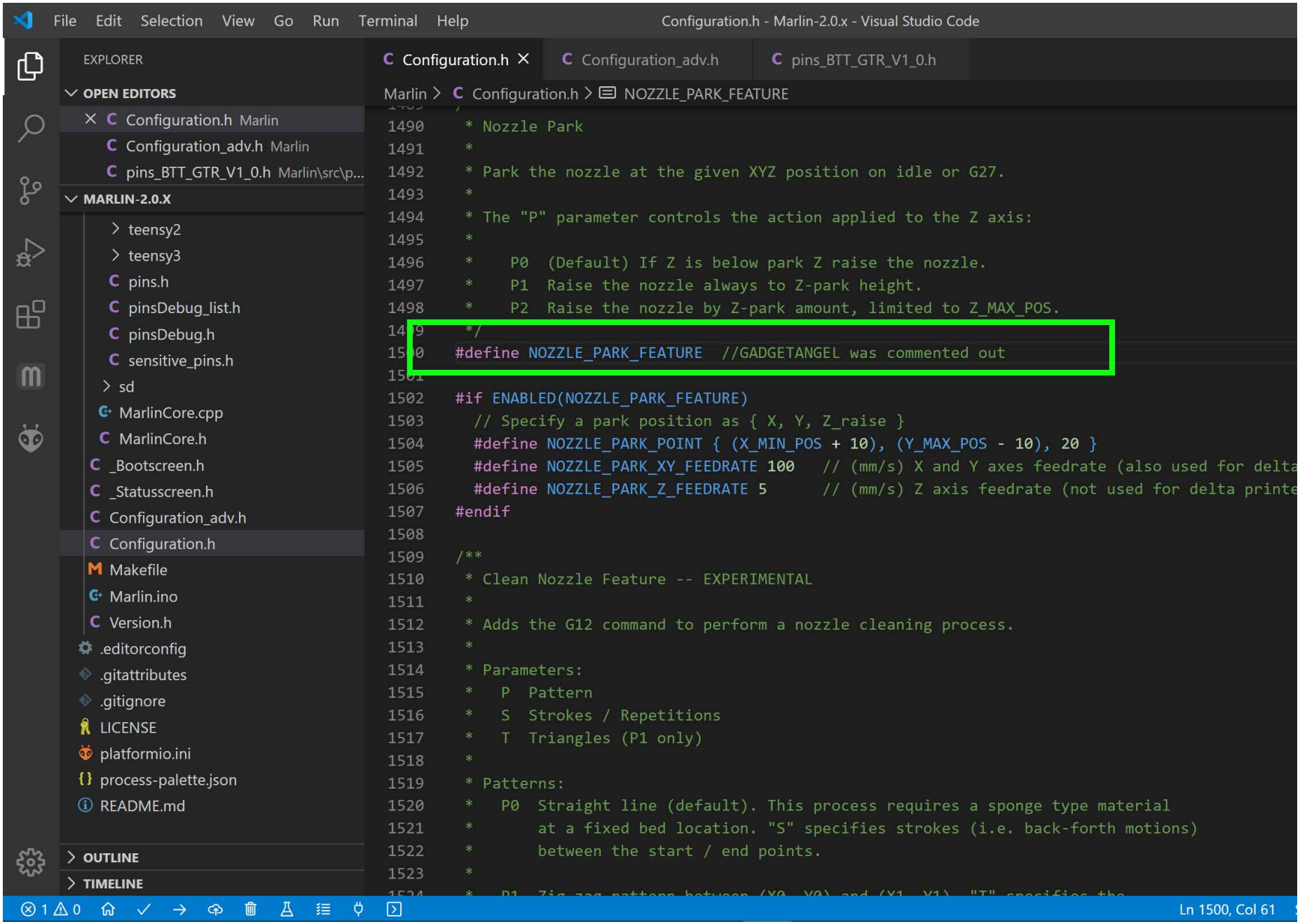
Marlin 2.0.x Setup for Filament Runout Sensor

- **In Configuration.h file remove the forward slashes in front of #define FILAMENT_RUNOUT_SENSOR line**



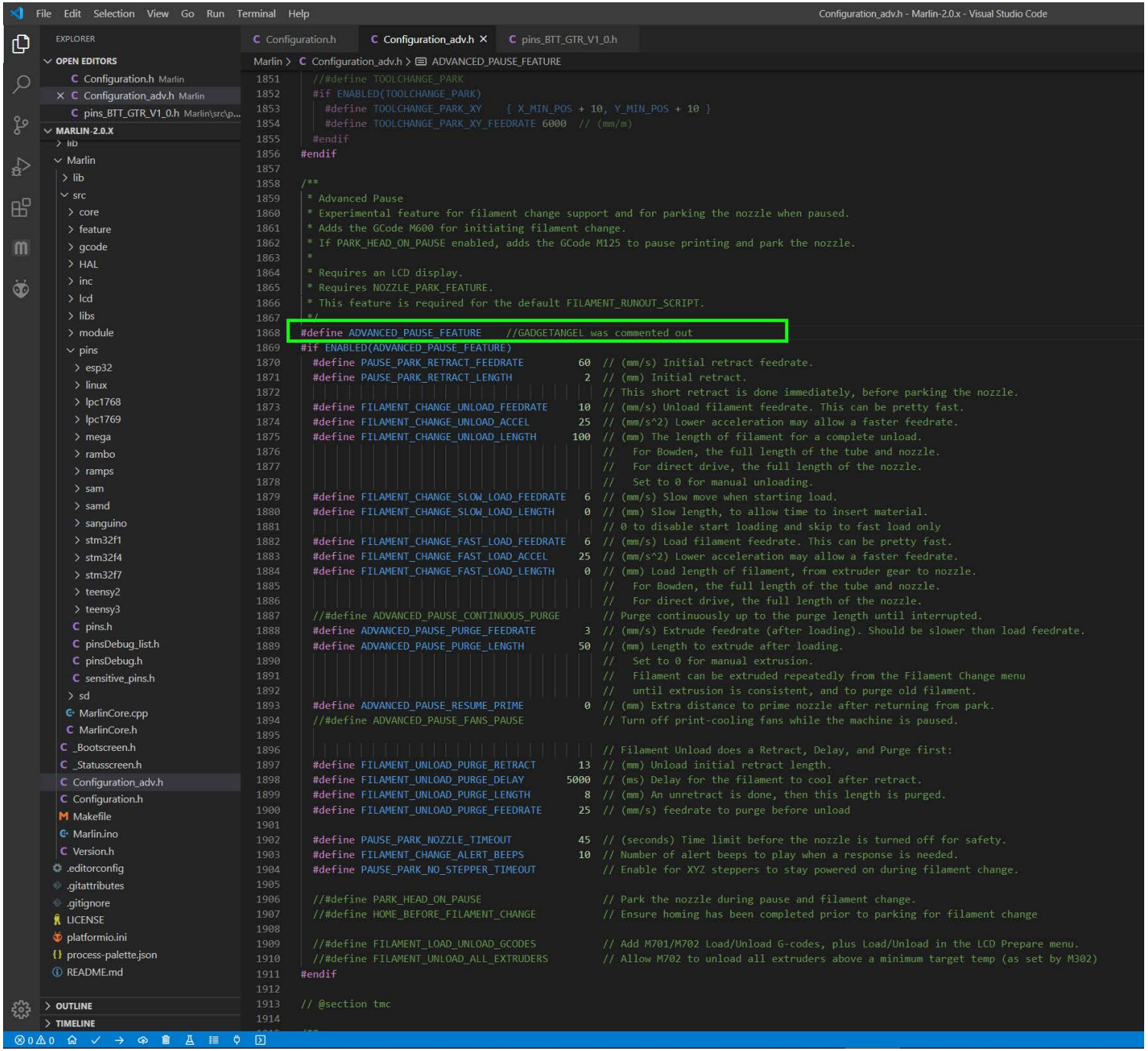
Marlin 2.0.x Setup for Filament Runout Sensor

- **In Configuration.h file remove the forward slashes in front of #define NOZZLE_PARK_FEATURE line**



Marlin 2.0.x Setup for Filament Runout Sensor

- **In Configuration_adv.h file remove the forward slashes before #define ADVANCED_PAUSE_FEATURE**



Marlin 2.0.x Setup for Filament Runout Sensor

- keep the settings to the same as above until the filament sensor is working. Afterwards you are free to tweak away.
- All Finished with setting up the filament runout sensor!!
- Use a spare strip of filament and feed it through the filament runout sensor. Start a print, and then pull the filament strip out of the filament runout sensor.
- If filament runout sensor is working, the printer will have paused and if this was not a test, you would then load in new filament.