

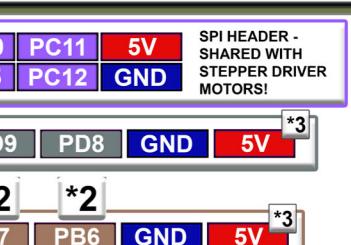


STALLGUARD (Sensor-less Homing)

Note1 Concerning the TMC2209/TMC226 in UART Mode ONLY:
If using limit switches/estops, ensure the DIAG pin is NOT plugged into the SKR PRO V1.1 board (i.e., the DIAG pin must be cut off the driver board on the TMC2209/TMC226). This note does not apply to the TMC2130, TMC5160 or TMC5161 in SPI mode.**

Note2 Concerning the TMC2209/TMC226 in UART Mode ONLY:
if you install TMC2209 or TMC226 on the extruder (E0, E1 or E2) and you want to use a filament runout sensor, remove the DIAG PIN to allow the filament runout sensor to work properly. This note does not apply to the TMC2130, TMC5160 or TMC5161 in SPI mode.**

*For more information see https://github.com/bigtreeTech/BIGTREETECH-Stepper-Motor-Driver/blob/master/TMC2209_V1.2/TMC2209%20Problems%20Solving.pdf



*2 WILL WORK WITH 3.3 OR 5V. A LOT OF PINS ARE 5V TOLERANT. ONLY TESTED I2C - CHECK DATASHEET AND SCHEMATIC!

2 - M3; MS2
1 - M2; MS2
0 - M1; MS1
OR
1 - M1; MS1
0 - M0; MS0

V_R ; V_R location depends on the Stepper Motor Driver Board

DG - DIAG PIN (D/D0/D1); V_R - V_{ref} or Voltage Reference

Z Motor Sockets:
For 1 Stepper Motor place 2 Jumper as shown below in the Z1 Socket.

DG - DIAG PIN; V_R - V_{ref}
 V_R - location depends on Driver Board

SPI

| | | | | |
|-------|------|----|----|-------|
| MISO | PC11 | EN | DG | V_R |
| SCK | PC10 | | | |
| MOSI | PC12 | | | |
| X-CS | PA15 | | | |
| Y-CS | PB8 | | | |
| Z-CS | PB9 | | | |
| E0-CS | PB3 | | | |
| E1-CS | PG15 | | | |
| E2-CS | PG12 | | | |

Marlin 2.0.x Firmware Changes

In Platformio.ini file

change: default_envs =

BIGTREE_SKR_PRO

In Configuration.h file change:

#define SERIAL_PORT -1

#define SERIAL_PORT_2 1

#define MOTHERBOARD

BOARD_BTT_SKR_PRO_V1_2

Note: Serial Port definitions in Marlin 2.0.x for SKR PRO

V1.1 Board:

-1: USB Port; 1: TFT Port; 6: WIFI Port;
3: TX3/RX3 on UART Header

UART

(axis_UART)

axis_RX - TX

| | | | |
|----|------|-----|----------------|
| X | PC13 | PE4 | To/From Driver |
| Y | PE3 | PE2 | |
| Z | PE1 | PE0 | |
| E0 | PD4 | PD2 | |
| E1 | PD1 | PD0 | |
| E2 | PD6 | PD5 | To/From MCU |

DG - DIAG PIN; V_R - V_{ref}

V_R - location depends on Driver Board

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