

0 - M1; MS1 0 - M0; MS0
1 - M2; MS2 OR 1 - M1; MS1
2 - M3; MS3 2 - M2; MS2

From Driver

To/From MCU

X-CS	PC14
Y-CS	PE1
Z-CS	PB5
E0-CS	PG10
E1-CS	PD4
E2-CS	PC12


20 For the heated bed.


15 For stepper motor drivers.

10 For logic, fans, hotend heaters.

	EN	STEP	DIR		EN	STEP	DIR		EN	STEP	DIR		EN	STEP	DIR		EN	STEP	DIR	
X	PF1	PC15	PF0	Y	PE4	PE3	PE2	Z	PB9	PB8	PB7	*1	E0	PG13	PG12	PG11	E1	PD7	PD6	PD5
																	E2	PD2	PD1	PD0

V_R; V_P -location depends on Driver Board

+5V  **Powered By PSU**

 **+5V** **Powered By USB**

BIGTREETECH
GTR V1.0
WWW.BIGTREE-TECH.COM

URL from Marlin for this processor:
<http://www.st.com/en/microcontrollers/stm32f407zg.html>

```
default_envs =
  BIGTREE_
  GTR V1 0
```

BIGTREE TECH
GTR V1.0

SP
3.3 V

3.3 V	PF11	NC	PC7 (USART6)
PC6 (USART6)	PC5	NC	GND

A diagram showing a grey rectangular box on the left. To its right is a green rectangular box labeled '5U' at the top. Below the green box is a red rectangular box labeled '5V' on the left and 'GN' on the right. A horizontal line connects the grey box to the green box.

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

12C 5V GND PH8 PH7

Raspberry Pi		(USART1)
3.3V	5V	
NC	5V	
NC	GND	
NC	PA10	
GND	PA9	
NC	NC	
NC	GND	
NC	NC	
NC	NC	
NC	GND	
NC	NC	
NC	NC	
GND	NC	
NC	NC	
NC	GND	
NC	NC	
NC	NC	
GND	NC	

BIGTREETECH M5 Board Connector			
MOTO_MOSI	PG15	PB6	MOTO_MISO
KMOSI	PI2	PB3	MOTO_SCK
M1_STEP	PF3	PI1	KSCK
M1_STOP	PI4	PF4	M2_STOP
TEMP_M5	PF5	PF6	M3_STOP
TEMP_M4	PF7	PF8	M1_EN
TEMP_M2	PF9	PF10	TEMP_M3
FAN_M1	PC5	PG3	M1_DIR
M1_CS	PG4	PG2	M2_EN
HEAT_M1	PD15	PD14	M2_STOP
HEAT_M2	PD13	PD11	M2_DIR
HEAT_M3	PD12	PE14	FAN_M5
HEAT_M5	PI6	PI3	HEAT_M4
M5_STOP	PF12	PE12	M3_STOP
M2_CS	PE15	PE10	M3_DIR
FAN_M3	PE11	PE8	M4_EN
FAN_M2	PE9	PG1	M4_DIR
M3_CS	PE7	PF15	M4_CS
M4_STOP	PG0	PI0	M5_EN
M3_EN	PF14	PH5	M5_DIR
M5_STOP	PH12	PH14	M5_CS
KCS	PH2	PI5	FAN_M1
TEMP_M1	PA3	PF13	RGB_LED
M4_STOP	PI7	5V	
	3,3V	GND	

X	X-DIAG1	PF2	X
Y	Y-DIAG1	PC13	Y
Z	Z-DIAG1	PE0	Z
E0	E0-DIAG1	PG14	E
E1	E1-DIAG1	PG9	E
E2	E2-DIAG1	PD3	E

Note Concerning the TMC2209 in UART Mode ONLY:
If using limit switches/enstops, ensure the DIAG pin is **NOT plugged into the GTR 1.0 board** (i.e., the DIAG pin must be cut off the driver board on the TMC2209). This note does not apply to the TMC2130, TMC5160 or TMC5161 in SPI mode.

Note: For TMC2209, TMC2130, TMC5160 and TMC5161 (any Driver Board that supports sensor-less homing) if you install it on the extruder and you want to use a filament runout sensor, remove the DIAG/DIAG1/DIAG0 PIN to allow the filament runout sensor to work properly.