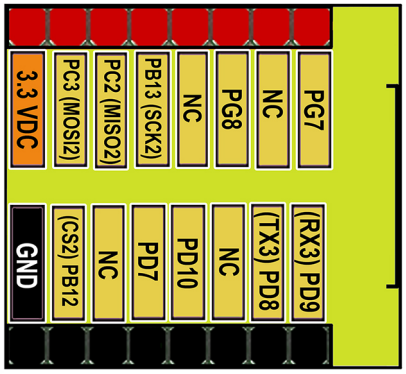
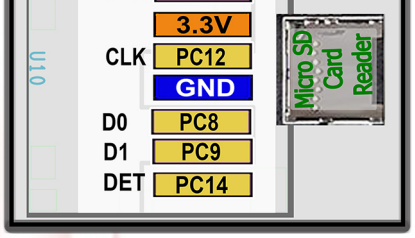
WIFI

(BIGTREETECH ESP8266 module or BTT ESP-07S module)

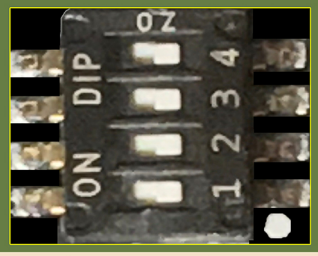


Micro SD Card Reader



PT100/PT1000 DIP Switch Settings

ON



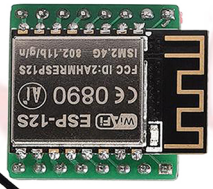
OFF

*2

1	2	3	4	Sensor model
ON	ON	ON	OFF	Two-wire PT100 Sense Ω = 430
ON	ON	OFF	ON	Two-wire PT1000 Sense Ω = 4300
OFF	ON	ON	OFF	Three-wire PT100 Sense Ω = 430
OFF	ON	OFF	ON	Three-wire PT1000 Sense Ω = 4300
OFF	OFF	ON	OFF	Four-wire PT100 Sense Ω = 430
OFF	OFF	OFF	ON	Four-wire PT1000 Sense Ω = 4300

***2 Note the default setting is all DIP switches set to OFF (i.e. Please set DIP Swithches before you install the board!!!).**

BIGTREETECH ESP8266 Module



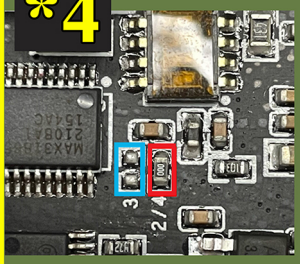
MAX31865

MOSI	PA7
MISO	PA6
SCK	PA5
CS	PF8

WIFI Socket

BTT ESP-07 Module

*4

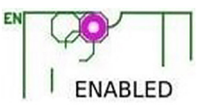


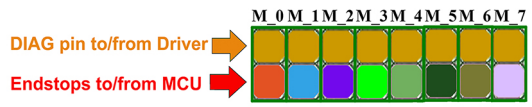
***4 The integrated MAX31865 is hardware configured from the factory with the "2/4" pads bridged with a 0 Ω resistor (as seen in the red box in the picture to the left). This factory default setup is for PT100/PT1000 sensors that have a 2-wire or 4-wire arrangment.**

If you are using a 3-wire PT100/PT1000 sensor, then you will need to move the 0 Ω resistor to the "3" pads on the board (as seen in the blue box in the picture to the left) .

STALLGUARD (Sensor-less Homing)

	DIAG PIN	ENDSTOP	
M_0	MOT0-DIAG0	PG6	Stop_0
M_1	MOT1-DIAG1	PG9	Stop_1
M_2	MOT2-DIAG2	PG10	Stop_2
M_3	MOT3-DIAG3	PG11	Stop_3
M_4	MOT4-DIAG4	PG12	Stop_4
M_5	MOT5-DIAG5	PG13	Stop_5
M_6	MOT6-DIAG6	PG14	Stop_6
M_7	MOT7-DIAG7	PG15	Stop_7





Note1 Concerning the TMC2209/TMC2226 in UART Mode ONLY:
If using limit switches/enstops, ensure the DIAG pin is NOT connected to the MCU Endstop (i.e., ensure the 'Diag Jumper' is removed).

Note2 For TMC2209/TMC2226 in UART Mode ONLY:
if you are using it for your extruder motor and you want to use a filament runout sensor, ensure the DIAG/DIAG1/DIAG0 PIN is NOT connected to the MCU Endstop to allow the filament runout sensor to work properly (i.e., ensure the 'Diag Jumper' is removed for the corresponding extruder motor).

RX1	PD0
TX1	PD1

PA11
PA12

Note: If you are unsure about any of the information provided on this PIN Diagram, please ask for help from the 3D printer community, check the Processor's data sheet and board's schematic diagram.

Klipper

Klipper Building Options for The Octopus Pro (F446):
Clock Frequency : (12 MHz)

Klipper Building Options for The Octopus Pro (F429):
Clock Frequency: (8 MHz)

For F429: all options the same as F446 except for Clock Frequency!
The Example below is for the F446.

```
(Top)
                    Klipper Firmware Configuration
[*] Enable extra low-level configuration options
    Micro-controller Architecture (STMicroelectronics STM32)  --->
    Processor model (STM32F446)  --->                          *5
    Bootloader offset (32KiB bootloader)  --->
    Clock Reference (12 MHz crystal)  --->                     *6
    Communication interface (USB (on PA11/PA12))  --->
    USB ids  --->
[ ] Specify a custom step pulse duration (NEW)
()  GPIO pins to set at micro-controller startup (NEW)
```

*5 For F429 choose STM32F429

*6 For F429 choose 8 MHz