

*1 Note on using multiple Power Supply Units (PSUs):

1. Ensure that you wire each PSU's earth grounds together (one earth ground from each PSU must go back to a common point that then gets attached to the earth ground of the AC input power connector)

2. Wire each PSU's negative terminals together (one negative terminal from each PSU must go back to a common point that then gets attached to the negative side of the AC input power connector).

***3 Note if using PSU of 24V for “MB_POWER_IN”:**

1. Calculate the maximum current draw from your 4 heaters; (13 Amps maximum for: 7 Fans, 12V rail, 5V rail and 3.3V rail); you may need to change out the **“MB_POWER_IN FUSE”** (F3) from **15 Amps** to **20 Amps** (BigtreeTech supplies one with each Octopus Pro V1.0 board).

2 - M3; M2 **3 - M3; M2**
1 - M2; M1 **OR** **2 - M2; M1**
0 - M1; M0 **1 - M1; M0**

V_R; V_R
location depends
on the
Stepper
Driver
Board

UART

(CS)

Only one (1) Jumper is needed for this mode.

SP

DRIVER0-CS PC4 MISO PA6
DRIVER1-CS PD11 SCK PA5

The diagram illustrates the SPI interface connections between the RPI and the driver ICs. The RPI pins are labeled: CS (Pin 27), SCK (Pin 11), MISO (Pin 9), and MOSI (Pin 10). The driver ICs are labeled: DRIVER2-CS (PC6), DRIVER3-CS (PC7), DRIVER4-CS (PF2), and DRIVER5-CS (PA1). The connections are as follows:

- RPI CS → DRIVER IC CS:** A red line connects Pin 27 of the RPI to the CS pins of all four driver ICs.
- RPI SCK → DRIVER IC SCK:** A blue line connects Pin 11 of the RPI to the SCK pins of all four driver ICs.
- RPI MISO → DRIVER IC MISO:** A green line connects Pin 9 of the RPI to the MISO pins of all four driver ICs.
- RPI MOSI → DRIVER IC MOSI:** A purple line connects Pin 10 of the RPI to the MOSI pins of all four driver ICs.

Each driver IC also has its own power supply connection: V_D (Pin 1) and V_S (Pin 2). A central circle indicates the operating voltage range: 12 ~ 60V. The label "MOSFET" is placed near the bottom right of the diagram.

DRIVER5-CS PE4
DRIVER6-CS PE1
DRIVER7-CS PD3



Four (4) Jumpers are needed for this mode.
 Jumpers located in: columns MISO, CS, SCK, MOSI

NOTE: Things to be aware of when using the SPI bus #1:
<https://>

The
Stepper
Motor
Drivers
share
the same
SPI bus as
[en.wikipedia.org/wi](https://en.wikipedia.org/wiki/)

peripheral_Interface They only share: MISO, MOSI and SCK lines. They have separate CS lines.

15 For stepper motor drivers, the heated bed, circuit logic, fans, & hotend heaters

WARNING!! – ONLY PLACE ONE JUMPER VERTICALLY ACROSS THE PROBE VOLTAGE SELECTION HEADER, ANY MORE THAN ONE CAN CONNECT TWO/THREE POWER SUPPLIES TOGETHER, AND THIS WILL DAMAGE THIS BOARD. THE SAME RESULT CAN HAPPEN IF A JUMPER IS PLACED HORIZONTALLY.