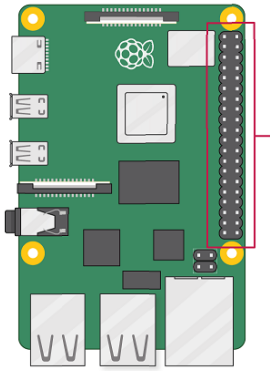


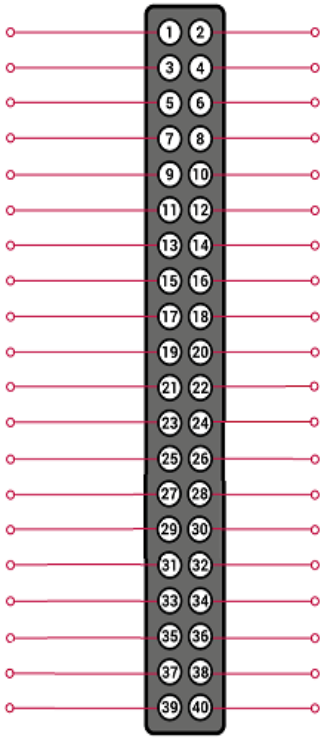
RPi 3 Connections (as viewed with USB ports below and power / hdmi ports to the left):

3V3 Pin on ESP8266 -> 3V3 POWER----------
Button 3 -> GPIO 2----------
Button 1 -> GPIO 3----------

ESP8266 GND -> GND----------

D3 on ESP8266 -> GPIO 5----------
D2 on ESP8266 -> GPIO 6----------

D0 on ESP8266 -> GPIO 26----------

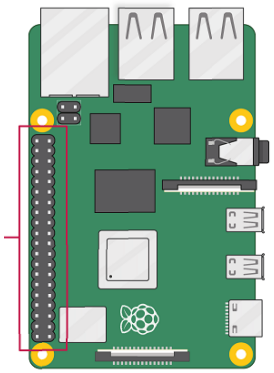



Ground <- Neopixel GND (black wire)
GPIO 14 <- Button 4
GPIO 15 <- Button 2

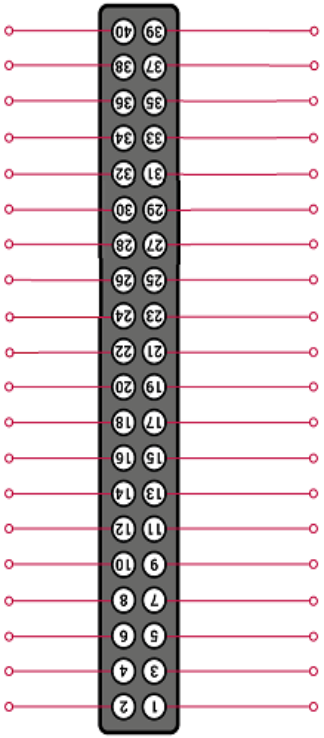
GPIO 23 <- Button 5

Ground <- System GND
GPIO 25 <- D1 on ESP8266

GREEN = RPi Pinout, BLACK = Corresponding connection



RPi 3 Connections (as viewed with USB ports above and power / hdmi ports to the right):



GPIO 26 -> D0 on ESP8266

GPIO 6 -> D2 on ESP8266

GPIO 5 -> D3 on ESP8266

GND -> ESP8266 GND

D1 on ESP8266 <- GPIO 25----------

System GND <- Ground----------

Button 5 <- GPIO 23----------

Button 2 <- GPIO 15----------

Button 4 <- GPIO 14----------

Neopixel GND (black wire) <- Ground----------

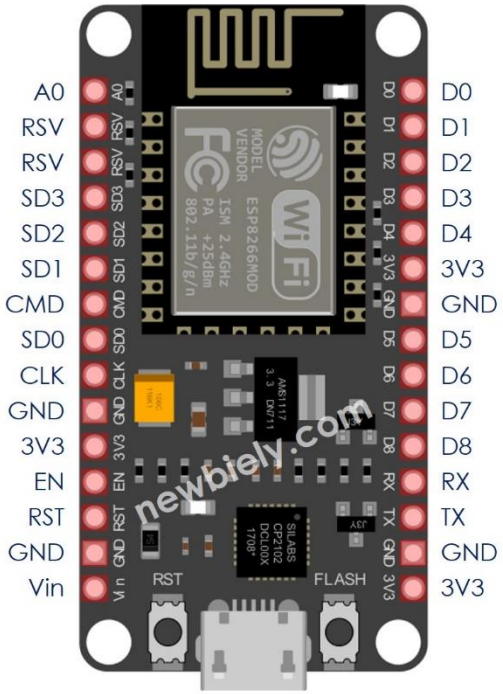
GPIO 3 -> Button 1

GPIO 2 -> Button 3

3V3 POWER -> 3V3 Pin on ESP8266

GREEN = RPi Pinout, BLACK = Corresponding connection

ESP8266 Connections




ESP8266 NodeMCU Pinout

GND----------
RPI 3V3 Pin----------

-> RPi GPIO26
-> RPi GPIO25
-> RPi GPIO6
-> RPi GPIO5

Arduino MEGA Connections

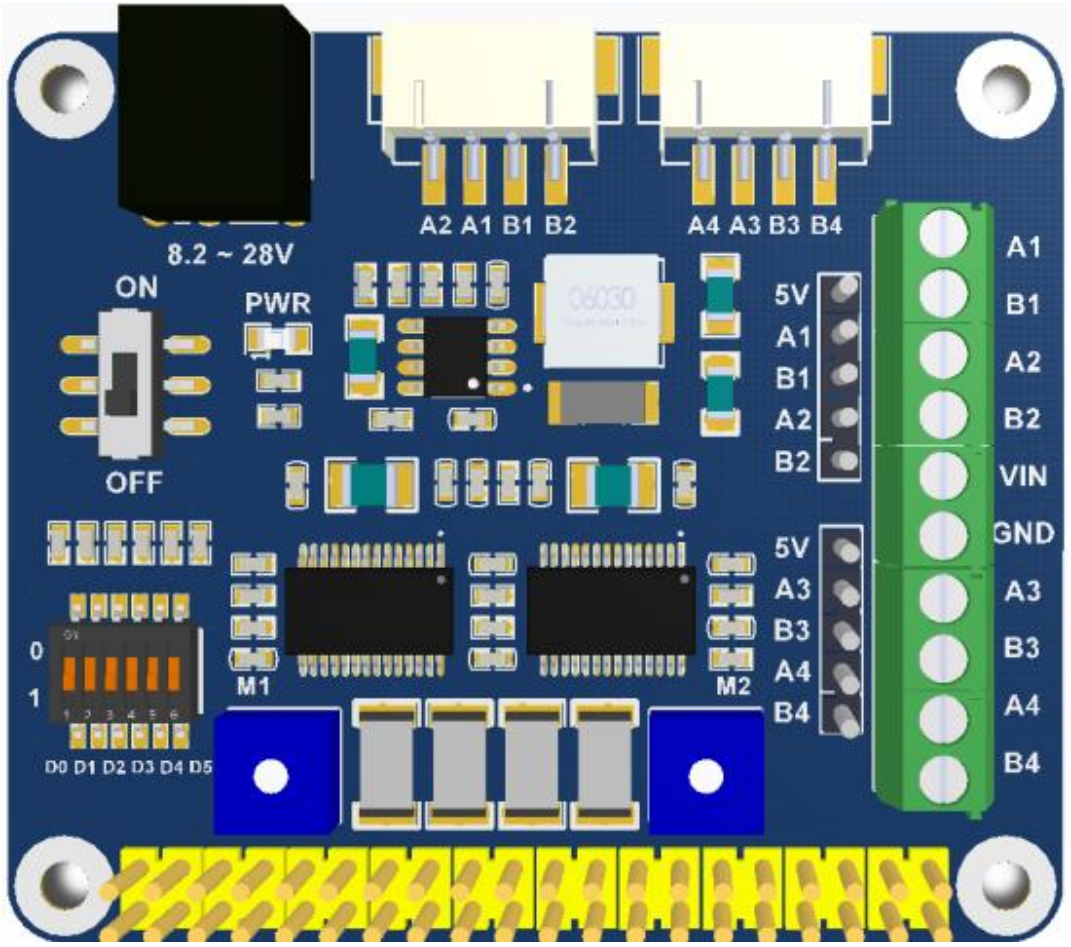
(very simple, doesn't really need a diagram)
Digital 7 -> Neopixel signal wire (green wire)
Vin -> Stepper Motor HAT 5V pin
GND -> ground

BLUE = Arduino Pinout, BLACK = Corresponding connection

Stepper Motor HAT

For A1-4 and B1-4, just use these two white connectors at the top, the Nema 17 motors connect to these directly.

8.2 ~ 28V Vin -> 12V, 5A wall plug power supply




A1,B1,A2,B2 -> horizontal stepper motor
5V -> Arduino Vin

A3,B3,A4,B4 -> vertical stepper motor
5V -> neopixel Vin (red wire)

ORANGE = HAT Pinout, BLACK = Corresponding connection

Neopixel Pinout
(simple, no diagram needed)

Vin (red wire) -> 5V HAT Pin
Data In (green wire) -> Arduino D7 Pin
GND (black wire) -> RPi GND