

**BruControl Interface Wiring Map: NodeMCU or WemosD1 (Firmware v43)**

Connection ->		TCP (Network)	Serial (USB)	<- Connection
Wiring Map ->		Default		<- Wiring Map
Firmware Prefix ->		BruControl.43.NodeMCU. or BruControl.43.WemosD1.		<- Firmware Prefix
Firmware Suffix ->		W		<- Firmware Suffix
Interface	BruControl			User Description
GPIO #	port #			(record device type and device connected)
0	0	D, P, C		
1	N/A	N/C		
2	2	D, P, C, L		
3	N/A	N/C		
4	4	D, P, C		
5	5	D, P, O*		
6	N/A	N/C		
7	N/A	N/C		
8	N/A	N/C		
9	N/A	N/C		
10	N/A	N/C		
11	N/A	N/C		
12	12	D, P, C		
13	13	D, P		
14	14	D, P		
15	15	D, P		
16	16	D, P		
A0	100	A		

**Notes / Key**

Instructions: Select the column for firmware used. Wire each Interface GPIO per possible input/outputs. Select device's corresponding port in BruControl.

ESP8266 Wi-Fi is internal based. Will also connect via Serial (USB) connection.

Interface Wiring Map Codes:

D = Digital Input or Digital Output (Note: Input can be 3.3V active high or low, output is 3.3V)

P = PWM Output (Note: Output is 3.3V peak. Frequency is ~500 or ~1000 Hz. Create Analog Output using RC filter or RC/op-amp.)

C = Counter Input (Note: trigger is falling edge. Sensor must pull up/down 3.3V, otherwise an external resistor is needed)

A = Analog Input (Note: range is compared to 1.0V... range is 0 - 1.0V max)

O = 1-Wire Input (\*Note: all 1-wire data pins must be tied to pin 5 or 6 per above only but are addressed by virtual ports 200 - 209 in BruControl).

L = ESP module LED (Note: connecting GPIO to "Active Low" or "Low Trigger" relay board may light LED when device is disabled in BruControl)

Local LCD pins are not default GPIO#4/5. Wire as SDA: GPIO#13 and SCL: GPIO#14.

Duty Cycle and Hysteresis devices use a Digital Output (D).

PID devices on pins with both Digital (D) and PWM Output (P) will use PWM Output. For binary switches (e.g. SSR), select pin without PWM Output (P).

Wire physical pin matching GPIO # for specific ESP8266 module, since this varies across different board brands & models.

Some GPIO# may not have physical pins on some ESP8266 modules (e.g. GPIO 6-11).

Maximum current (sink or source) per pin is 12mA. Recommend to keep each equal or less than 5mA .