BruControl Interface Wiring Map: Adafruit Feather M0 (Firmware v45E+)					
Connection ->		TCP (Network)	Serial	<- Connection	
Wiring Map ->		Default	Default	<- Wiring Map	
Firmware Prefix ->		BruControl.45.FeatherM0.		<- Firmware Prefix	
Firmware Suffix ->				<- Firmware Suffix	
Interface pin #	BruControl port #	E / W	S	UniShield UF-1 Location	User Description (record device type and device connected)
0	N/A	D, A, R	D, A, R	2-6	
1	1	D, A, R	D, A, R	2-5	
5	5	D, O, P,	D, O, P, R	1-7	
6	6	D, O, P, R	D, O, P, R	1-6	
9	9	D, O, P, R	D, O, P, R	1-5	
10	10	D, O, P, C, R	D, O, P, C, R	1-2	
11	11	D, O, P, C, R	D, O, P, C, R	1-1	
12	12	D, O, P, C, R	D, O, P, C, R	1-3	
13	13	D*, P, C, L	D*, P, C, L	1-4	
A0 / 14	14	D, A, O, R	D, A, O, R	2-2	
A1 / 15	15	D, A, O, R	D, A, O, R	2-1	
A2 / 16	16	D, A, R	D, A, R	2-3	
A3 / 17	17	D, A, R	D, A, R	2-4	
A4 / 18	18	D, A, R	D, A, R	2-8	
A5 / 19	19	D, A, R	D, A, R	2-7	
20	20	D, R	D, R	JP7-2	
21	21	D, R	D, R	JP7-1	
22	22	N/C	N/C	JP5-6	
23	23	N/C	N/C	JP5-5	
24	24	N/C	N/C	JP5-4	
Notes / Key					

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

Default Ethernet (E) shield/boards must be Wiznet 5100 or 5500 based. Wi-Fi (W) shields/boards must be Atmel WINC1500 based.

Interface Wiring Map Codes:

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

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

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 AREF, which is tied to 3.3V… also 3.3V is maximum input).

O = 1-Wire Input (Note: all 1-wire data pins must be tied to only one interface pin. All sensors are addressed by virtual ports 200 - 209 in BruControl).

R = RTD Input (via SPI board). Wire CS pin from each individual boards to these pins only. Other board pins wired in parallel - see RTD schematic.

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

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

PID and Deadband 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).

Note pin A0's PWM output mode is true 10 bit analog, not PWM.

Analog Reference pin (AREF) should be tied to +3.3V or less to measure analog voltage inputs.

Maximum current (sink or source) per pin is 7mA. Recommend to keep each equal or less than 5mA .