Cypress First Touch I/O Module - Pinout

Specific designations and features of the First Touch Kit 3 as they apply to FRC are listed in the following tables.

P2 "Wireless" connector		Notes
Pin #	Name	
12	AO 2	For Analog Output 1 & 2, 0-4V, 100uA supply current
11	AO 1	
10	Button 5	Capacitive Touch Button Input
9	GND	
8	Button 4	Capacitive Touch Button Input
7	Button 6	Capacitive Touch Button Input
6	Button 3	Capacitive Touch Button Input
5	HC DO 1	HighCurrent DigitalOut 1, 3.3V, 4mA source, 25mA sink
4	Button 2	Capacitive Touch Button Input
3	HC DO 2	HighCurrent DigitalOut 2, 3.3V, 4mA source, 25mA sink
2	3.3V	
1	GND	

J2		J3		Notes	
Marking	**API Name**	**Marking**	**API Name**		
VDDIO	V+	VDDIO	V+	VDD IO interface voltage – V+ output @ 3.3V (recommended): o Jump pins 2,3 on J1 and pins 2,3 on J4 o On-board regulator, 9V Battery current boost, same as Analog – V+ output @ 5V: o Jump pins 1,2 on J1 and pins 1,2 on J4 o Powered directly from USB Vbus – Sourced externally, custom (discouraged): o Leave J1 open, jump pins 1,2 on J4 Interface voltage supplied to V+ pins on J2 and J3	
P0_0	AI 1	P0_1	AI 2	– 14-bit, 0-3.3V	
P0_2	AI 3	P0_3	AI 4		
P0_4	AI 5	P0_5	AI 6		
P0_6	AI 7	P0_7	AI 8		
P4_4	Digital 1	P4_5	Digital 2	– 2 true PWM generators available – Each PWM has configurable frequency and 2 outputs (independent duty cycle) – 16-bits – 24MHz time-base PWM 1.Output 1: Digital 1 Output 2: Digital 2 PWM 2.Output 1: Digital 3 Output 2: Digital 4	All digital lines are configurable – Open-drain input – 5kΩ pull-up input – 5kΩ pull-down input – Active drive output o 4mA current source o 8mA current sink
P4_6	Digital 3	P4_7	Digital 4		
P6_0	Digital 5	P6_1	Digital 6	– 2 Quadrature decoders (4X decoding) available – Optional encoder index input Quad 1.A: Digital 5 B: Digital 7 Index: Digital 9 Quad 2.A: Digital 6 B: Digital 8 Index: Digital 10	
P6_2	Digital 7	P6_3	Digital 8		
P6_4	Digital 9	P6_5	Digital 10		
P6_6	Digital 11	P6_7	Digital 12		
P12_2	Digital 13	P12_3	Digital 14	– High current sink (25mA) output – Same specs as HC DOs on P2, but high is Vddio instead of 3.3V	
P2_6	Digital 15	P2_7	Digital 16	– Analog comparator inputs available – Reference voltage generated by AO 1	
GND	GND	GND	GND		

Other

- The physical button on the board is Button1 in the API. If pressed before the Driver Station application is run, the firmware version is displayed in binary on the LEDs.
- The 8 LEDs on the board are available in the Enhanced API. In compatibility mode, they mirror the Digital Output lines.
- The Capacitive Touch slider on the board is available in the Enhanced API.
- The 3 axis accelerometer is available in the Enhanced API.