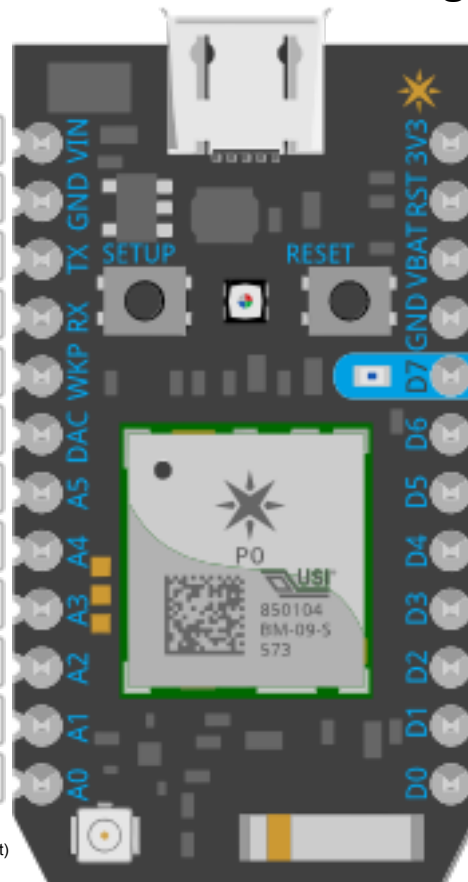


Particle Photon Pinout Diagram v0.22

Notes:

(1) All pins except A3 and DAC are 5V tolerant (when not in analog mode). If used as a 5V input the pull-up/pull-down resistor must be disabled.

(2) PWM is available on D0, D1, D2, D3, A4, A5, WKP, RX, TX with a caveat: PWM timer peripheral is duplicated on two pins (A5/D2) and (A4/D3) for 7 total independent PWM outputs. For example: PWM may be used on A5 while D2 is used as a GPIO, or D2 as a PWM while A5 is used as an analog input. However A5 and D2 cannot be used as independently controlled PWM outputs at the same time.



3V3	3V3		
RST	RST		
VBAT	VBAT		
GND	GND		
D7	JTAG_TMS		
D6	JTAG_TCK		
D5	I2S_WS	JTAG_TDI	SPI3_SS
D4	I2S_SCK	JTAG_TDO	SPI3_SCK
D3	TIM3_CH1	JTAG_TRST	SPI3_MISO
D2	CAN2_RX	TIM3_CH2	SPI3_MOSI
D1	SCL	CAN2_TX	TIM4_CH1
D0	SDA	TIM4_CH2	

Name	I2C/Wire	I2C
Power	CAN	JTAG
GND	DAC	SPI
Control	Serial	
ADC	TIM	

VIN	VIN		
GND	GND		
TIM1_CH2	UART1_TX	TX	
TIM1_CH3	UART1_RX	RX	
TIM5_CH1	ADC0	WKP	
DAC1	ADC4	DAC	
SPI1_MOSI	TIM3_CH2	ADC7	A5
SPI1_MISO	TIM3_CH1	ADC6	A4
SPI1_SCK	DAC2	ADC5	A3
SPI1_SS	ADC12	A2	
	ADC13	A1	
	ADC15	A0	

NORMAL OPERATIONS LED COLOR CODES

White pulse: Start-up (happens when the Photon is first powered on or when it's reset)

Flashing blue: Smart Config, waiting for Wi-Fi credentials

Solid blue: Smart Config, received Wi-Fi credentials

Flashing green: Connecting to local Wi-Fi network

Flashing cyan: Connecting to Particle Cloud

Fast flashing cyan: Particle Cloud handshake

Breathing cyan: Connected to Particle Cloud

Flashing magenta: Receiving new firmware update over-the-air (OTA)

Breathing magenta: Safe mode, connected to Particle Cloud but user firmware not running

ERROR COLOR CODES

Flash Red twice: Connection failure, no internet connection

Flash red three times: Connection failure, Cloud is unreachable

Orange flashing: Connection failure, bad handshake

FACTOR REST & BOOTLOADER COLOR CODES

Solid white: Factor reset started

Fast flashing white: Flashing code from factory reset memory

Flashing yellow: Bootloader mode, waiting for code (USB or JTAG)

Parameter	Symbol	Min	Typ	Max	Unit
Supply Input Voltage	V_{IN}	+3.6		+5.5	V
Supply Input Voltage	V_{3V3}	+3.0	+3.3	+3.6	V
Supply Output Voltage	V_{IN}		+4.8		V
Supply Output Voltage	V_{3V3}		+3.3		V
Supply Input Voltage	V_{VBAT}	+1.65		+3.6	V
Supply Input Current (VBAT)	I_{VBAT}			19	uA
Operating Current	$I_{IN avg}$		80	100	mA
Operating Current	$I_{IN pk}$			430	mA
Operating Current(w/powersave)	$I_{IN avg}$		18	100	mA
Operating Current (Wi-Fi off)	$I_{IN avg}$		30	40	mA
Sleep Current (5V @ VIN)	I_{Qs}		1	2	mA
Deep Sleep Current (5V @ VIN)	I_{Qds}		80	100	uA
Operating Temperature	T_{op}	-20		+60	°C
Humidity Range Non condensing, relative humidity				95	%