

SPI1 MOSI

TIM3 CH2 SPI1 MISO TIM3 CH1

SPI1 SCK

DAC₂

SPI1 SS

ADC12 ADC13

ADC₆

ADC15 A0

VIN

GND

WKP

DAC

A5

Α4

A3

A2

A1

NORMALOPERA TIONS 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 (OT A)

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**

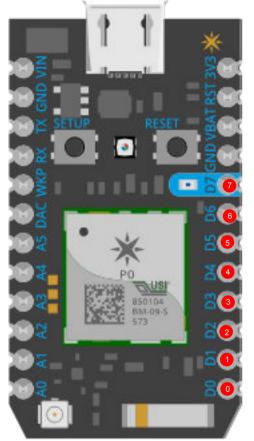
Solid white: Factor reset started

Fast flashing white: Flashing code from factory reset memory Flashing yellow: Bootloader mode, waiting for code (USB or JTAG)

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

Raptor Dozen 8/1/2016



- DHT11 data pin (left pin: [S+-]
- MOSFET ch 1 / Remote RJ45 PIN1 (w/orj):
- MOSFET ch 2 / Remote RJ45 PIN2 (orj):
- MOSFET ch3 / Remote RJ45 PIN3 (w/grn):
- MOSFET ch4 / Remote RJ45 PIN4 (w/blu): +12 Remote RJ45 PIN8 (brn): GND Remote RJ45 PIN6 (grn):
- MOSFET case molex 5
- MOSFET case molex 6
- MOSFET case molex 7

output

INPUT

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	

Parameter	Symbol	Min	Тур Ма	ıx	Unit	
Supply Input Vo	ltage V	+3.6	+5.5		V	
Supply Input Vo		+3.0	+3.3	+3.6	V	
Supply Output \	/oltage V _{IN}	+4.8		V		
Supply Output \	+3.3		V			
Supply Input Vo		+1.65	+3.6		V	
Supply Input Cu	ırrent (VBAT) I 🗤 🗛 🗆	19			uA	
Operating Curre	ent II	80		100	mΑ	
Operating Curre	ent I _{IN ne} "	235	430		mΑ	
Operating Curre	ent(w/powersave) I _{IN avg}	18		100	mΑ	
Operating Curre	ent (Wi-Fi off) I Nava	30		40	mΑ	
Sleep Current (5V@(VIN) ໄຼ້	1 2 mA				
Deep Sleep Cu	rrent (5V @ VIN) I	80		100	uA	
Operating Temp	perature T	-20	+60		°C %	
Humidity Range Non condensing, relative humidity 95						