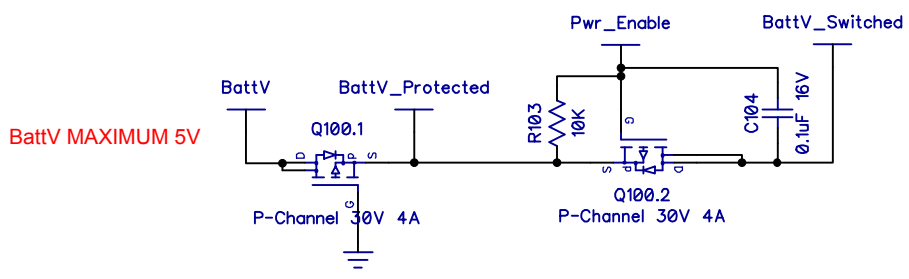


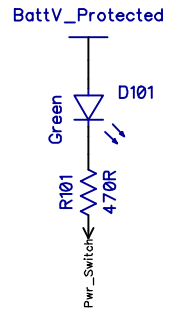
# Power

Protection against reverse input voltage and power enable controlled by switch

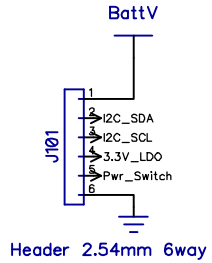
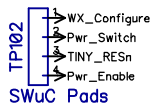
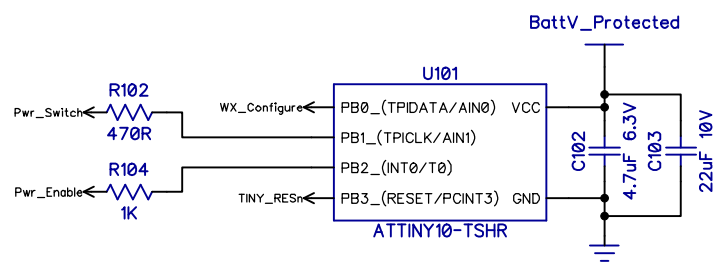
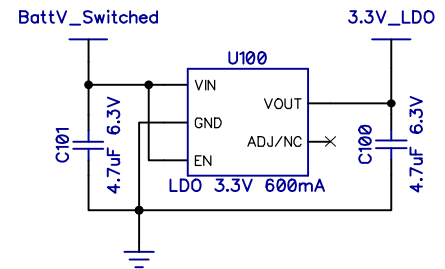


BattV MAXIMUM 5V

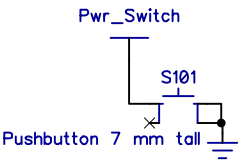
Power Status LED



3v3 LDO regulator

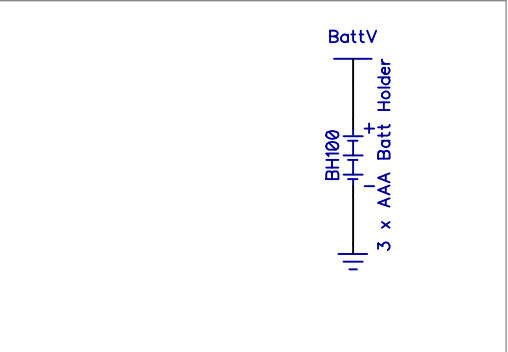


Pwr\_Switch pin (pull low to turn on device)



Pushbutton 7 mm tall

## Kitted / Manual fit items



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## BlocklyProp BadgeWX

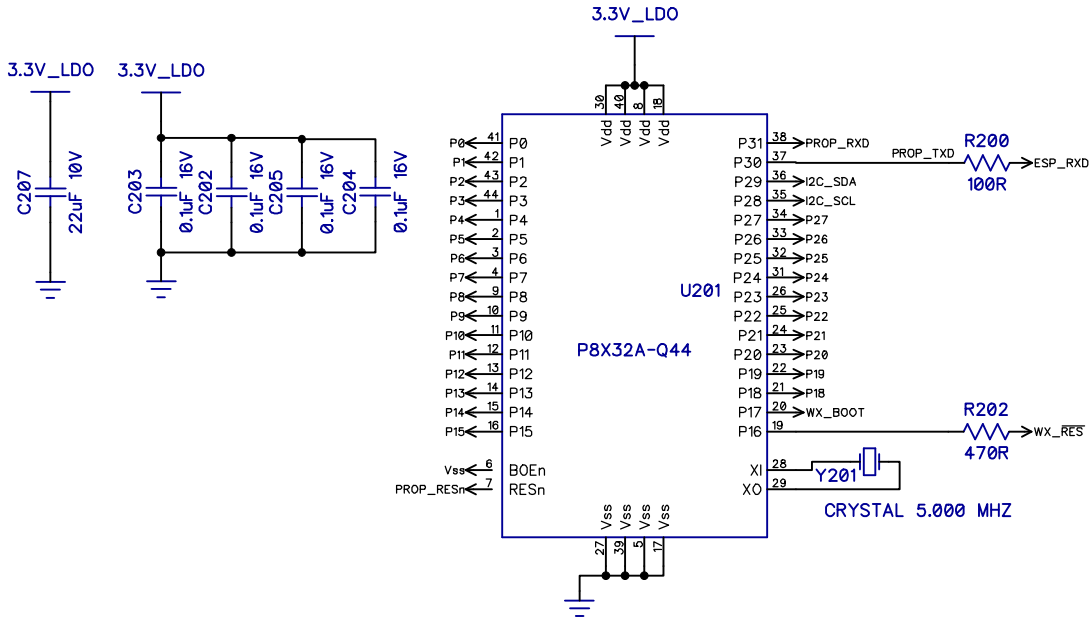
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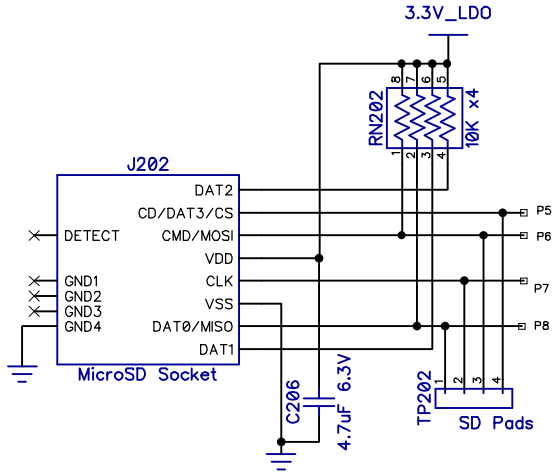
Last Update: 06 Jun 2018

# Microcontroller and Memory

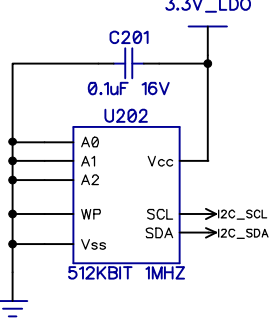
## Propeller microcontroller



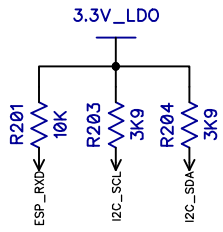
## MicroSD Card Socket



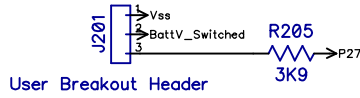
## EEPROM



## Pullups



## BRW (BattV)



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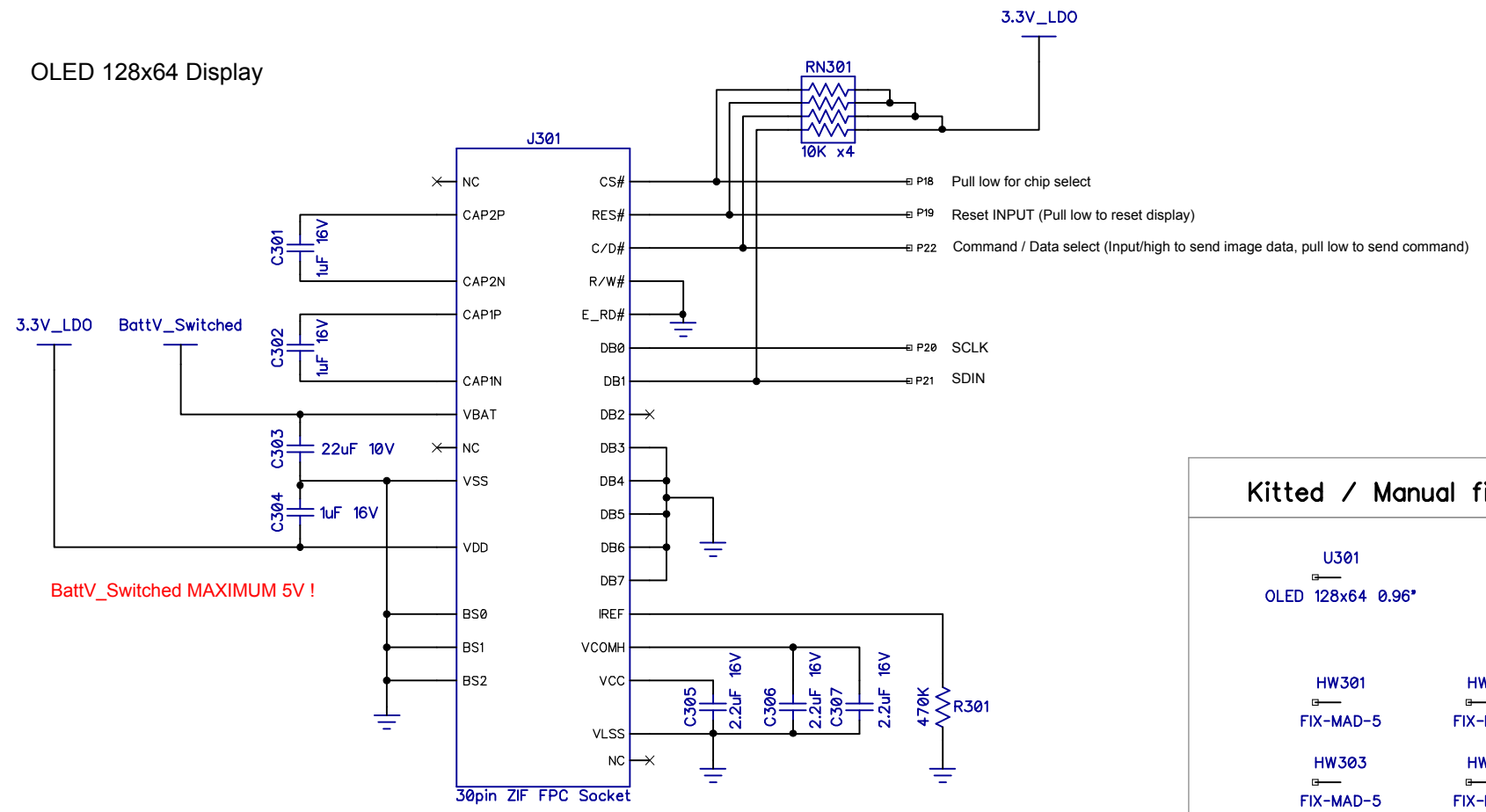
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# Display

## OLED 128x64 Display



Kitted / Manual fit items	
<b>U301</b> OLED 128x64 0.96"	
<b>HW301</b> FIX-MAD-5	<b>HW302</b> FIX-MAD-5
<b>HW303</b> FIX-MAD-5	<b>HW304</b> FIX-MAD-5
<b>HW306</b> Lanyard, nylon-loop end	

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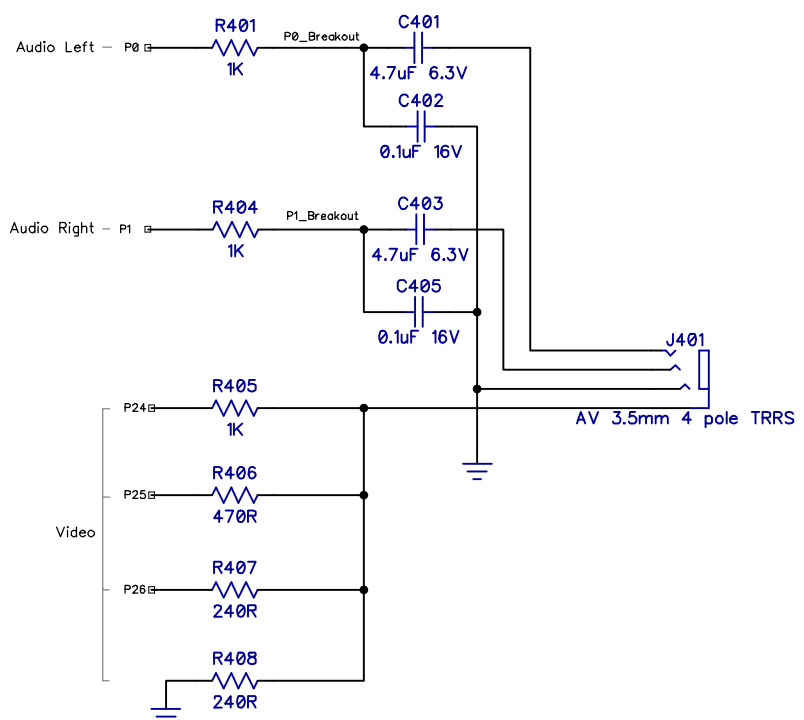
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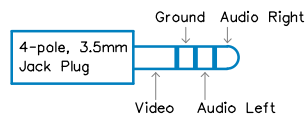
Last Update: 06 Jun 2018

# IR and AV

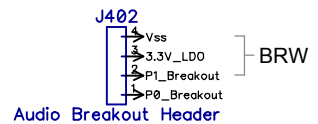
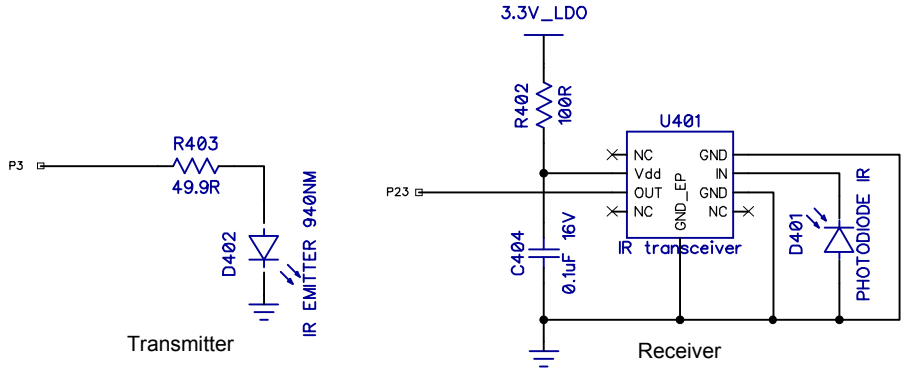
## Stereo Audio & Composite Video



Pinout for Audio Video connector J401



## Infrared Communications



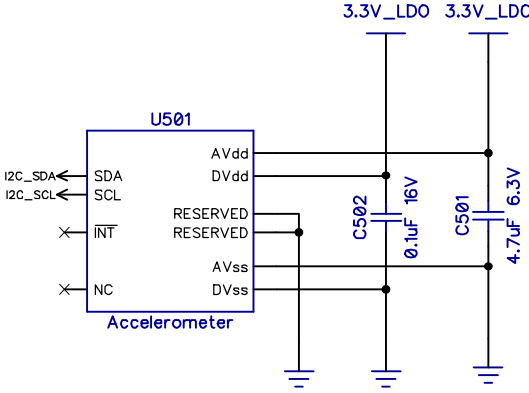
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# Motion Sensor

3-Axis Orientation / Motion Detection Sensor



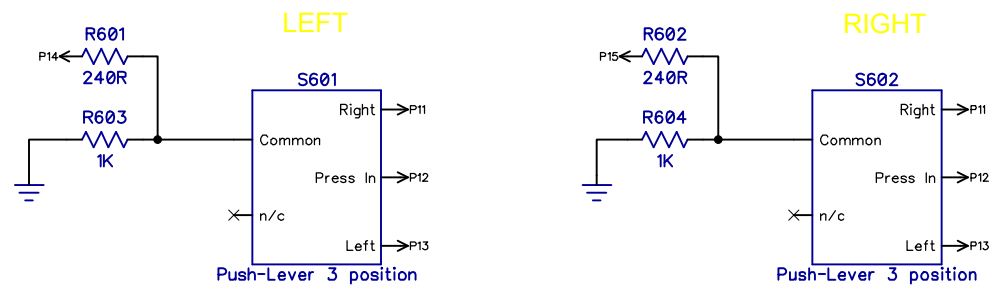
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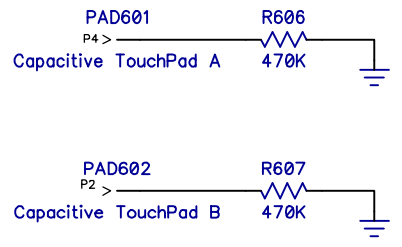
# Buttons

## Rocker Buttons



Wired like a keypad:  
assert P11,12,13 and read P14,15

## Capacitive Touch Pads



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## BlocklyProp BadgeWX

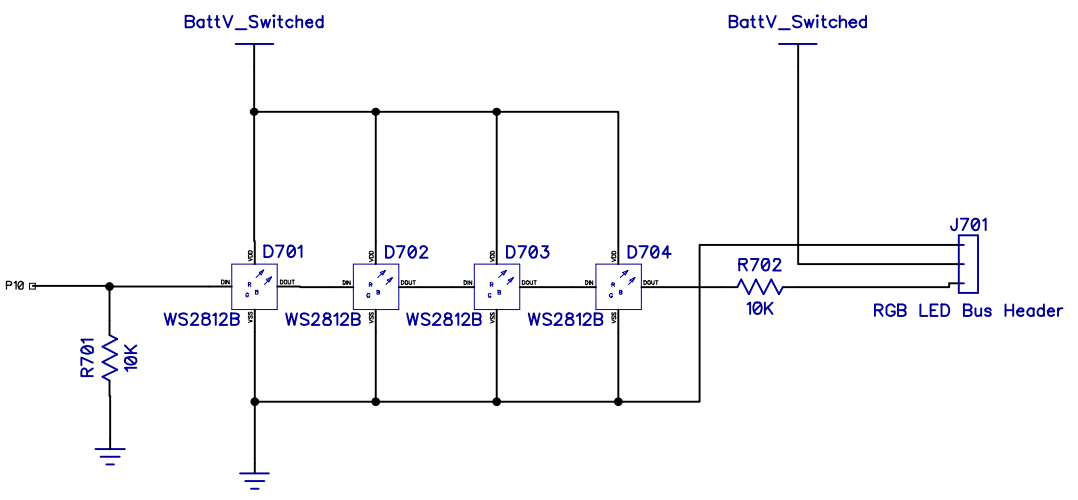
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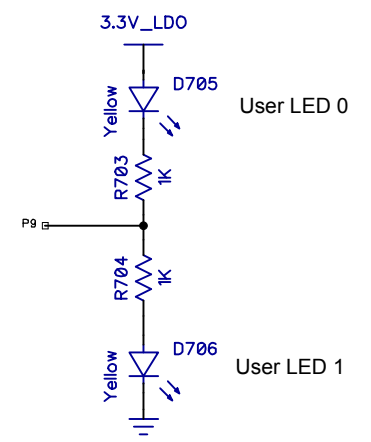
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# Leds

## RGB Leds and LED Bus Header



## Status LED's



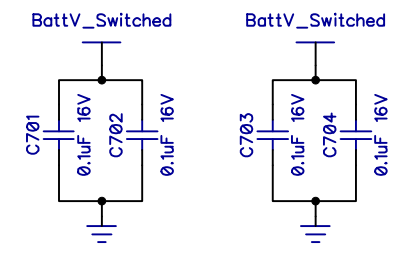
P9 = low for led0, P9 = high for led1, P9 = input for LED's off

BattV\_Switched is 3.5 to 4.5 range, so DIN high 3.2V max (ie. 3.3V drive ok)

External power recommended for external RGB LEDs!

Do not connect more than 4 external RGB modules when using Badge power

## RGB bypass capacitors



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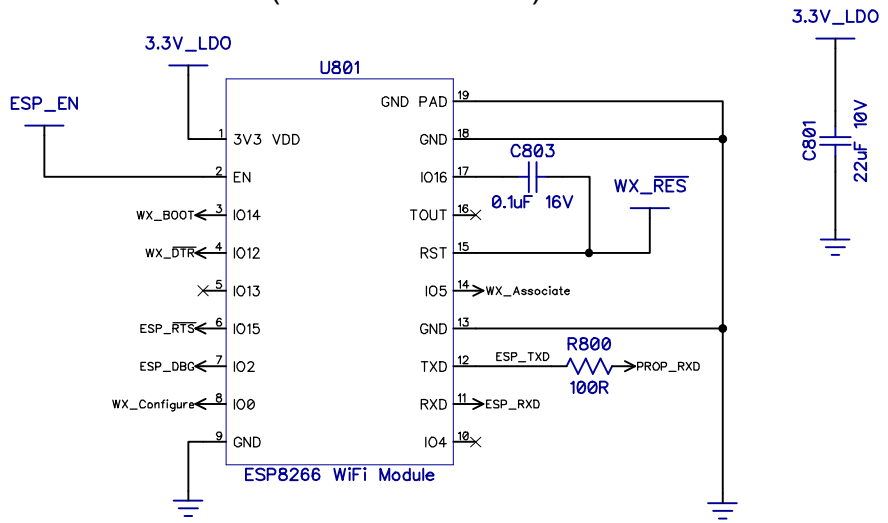
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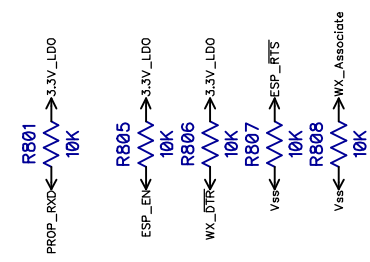
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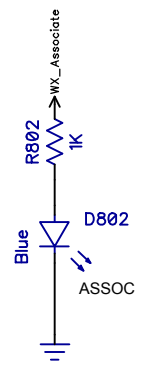
ESP-8266 WiFi Module (ESP-WROOM-02)



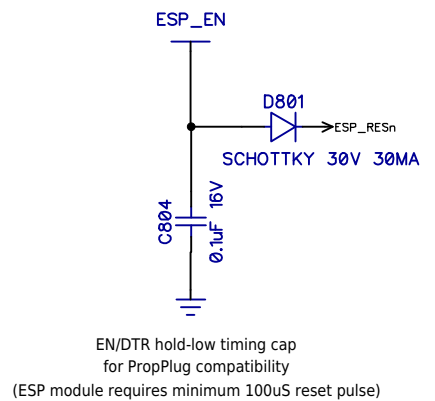
Pull-up / pull-down resistors



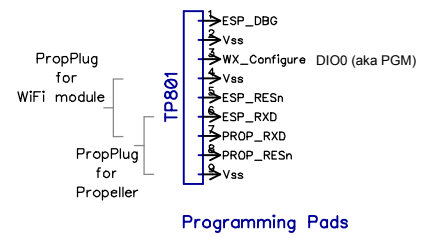
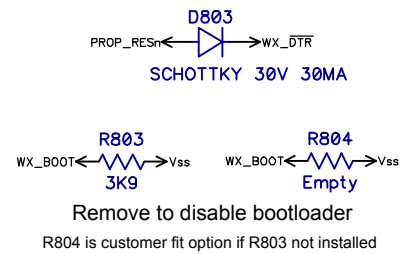
WiFi status LED



Reset feature



SIP 0.1" Breakout pads



When programming Propeller, short ESP\_RESn to VSS  
 When programming WiFi, short PROP\_RESn and WX\_Configure to VSS

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