

## USB-C Config Channel (CC) and PD Role Controller

**8.1.1 vs 8.1.4 ?**

**fast role swap is optional**  
PTN5110 8.1.4 leaves it floating (good!)  
Unused  
Open-drain output tied with CHRG\_INT



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## Purism SPC

Sheet: /USB-C/

File: usb-c.sch

## Title: USB Type C

Size: A3

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Date: 2018-05-02

#### 4.0.7

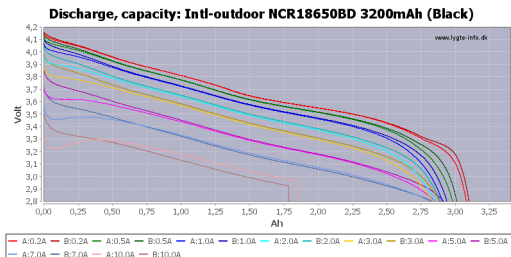
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7

Rev: v0.1.0

d: 2/16

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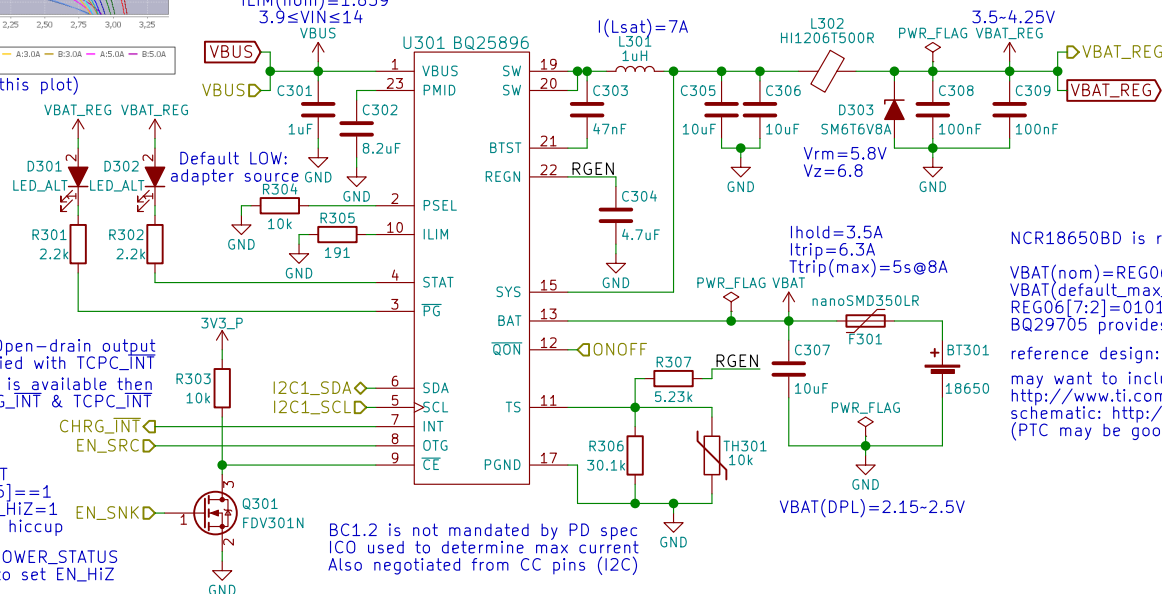


(interpret RSOC% based on this plot)

use AUTO\_DPDM\_EN  
to auto-detect IINLIM

$1.658 \leq I_{LIM} \leq 2.063$   
 $I_{LIM}(\text{nom}) \approx 1.859$   
 $3.9 \leq V_{IN} \leq 14$

# Battery Charge Controller



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Purism SPC

Sheet: /Battery/

File: battery.sch

Title: Battery

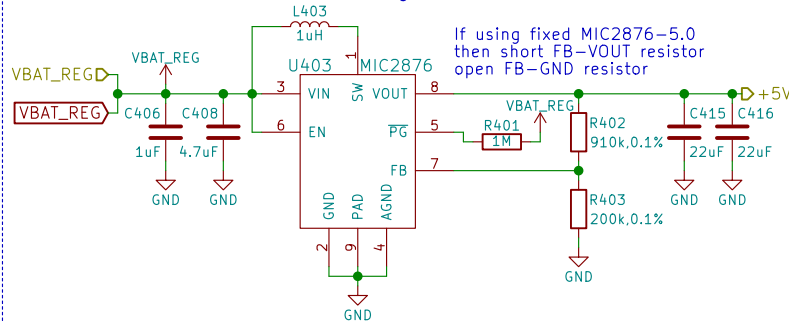
Size: A4 Date: 2018-05-02

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Rev: v0.1.0

Id: 3/16

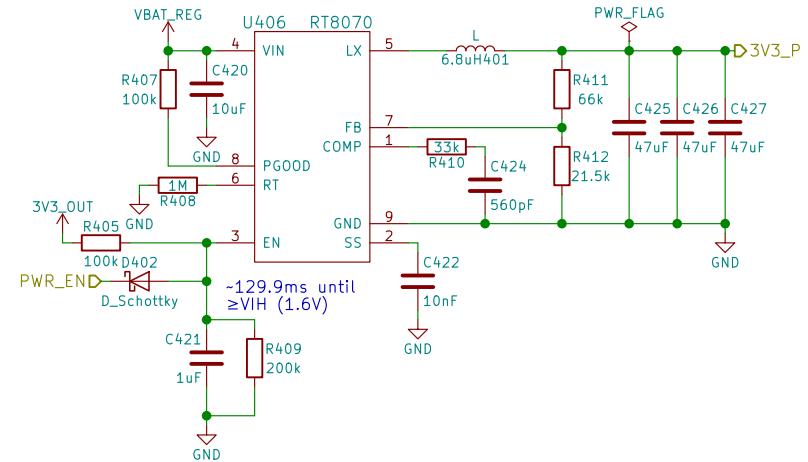
## 5.0V/3.8A



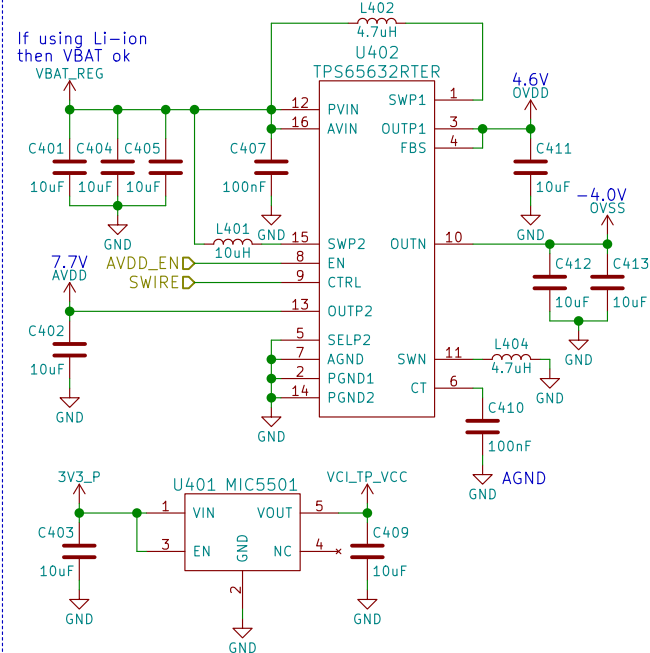
Cheaper, more efficient, smaller, and simpler than RT6150A  
Explicitly mentions USB/smartphone application

## 3.3V/3A

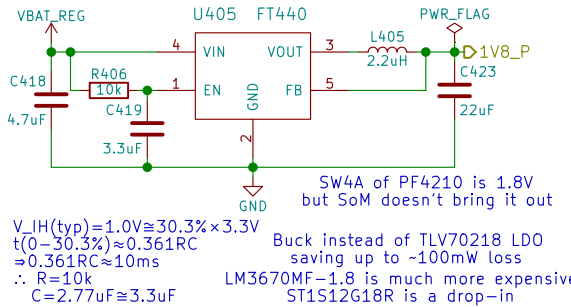
When VBAT can fall below 3.3V use TPS63020 instead!



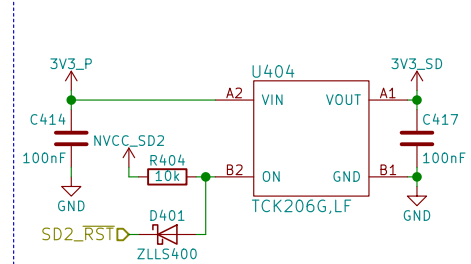
## AMOLED POWER



## 1.8V/600mA



## SD POWER

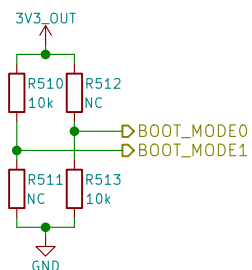
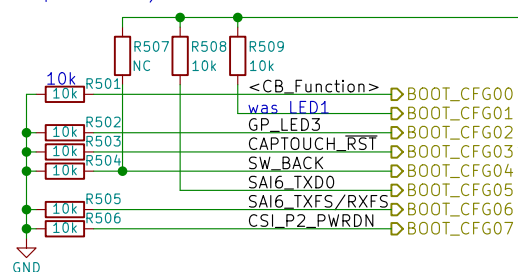
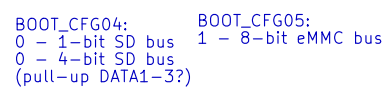


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**Purism SPC**  
 Sheet: /Power/  
 File: power.sch

### Title: Power

Size: A4  
 Date: 2018-05-02  
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Rev: v0.1.0  
 Id: 4/16

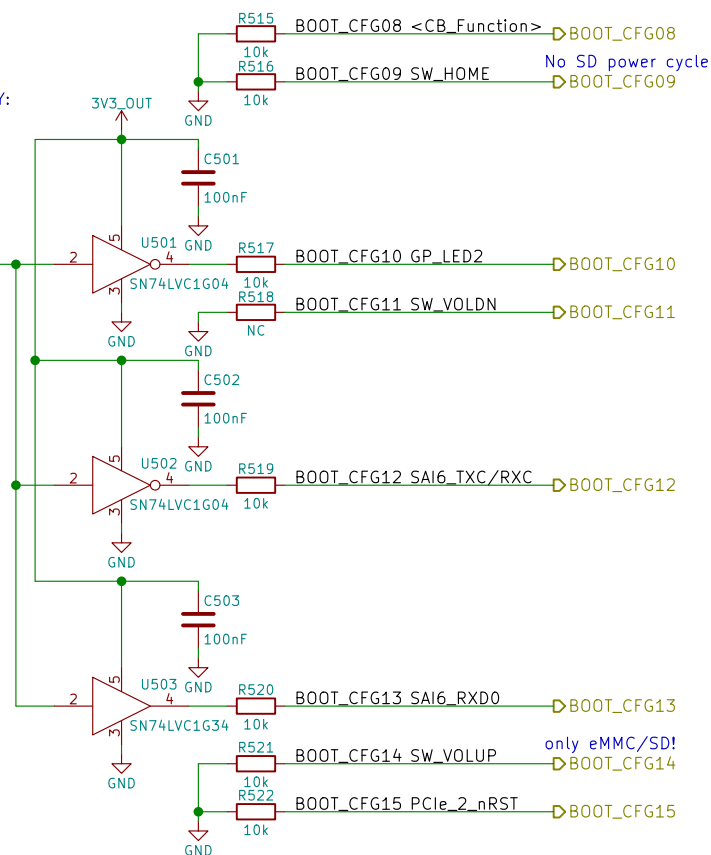


BOOT_MODE[1:0]	Boot Type
00	Boot From Fuses
01	Serial Downloader
10	Internal Boot
11	Reserved

BOOT_CFG[14:12]		Boot device		
001		SD/eSD		
010		MMC/eMMC		
011		NAND		

Fuse	Config	Definition	GPIO <sup>1</sup>	Shipped value	Settings
BOOT_CFG[11:10]	OEM	USDHC port selection	Yes	00	00 - USDHC-1 01 - USDHC-2 10 - USDHC-3 else - reserved



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### Purism SPC

Sheet: /Boot Config/  
File: boot.sch

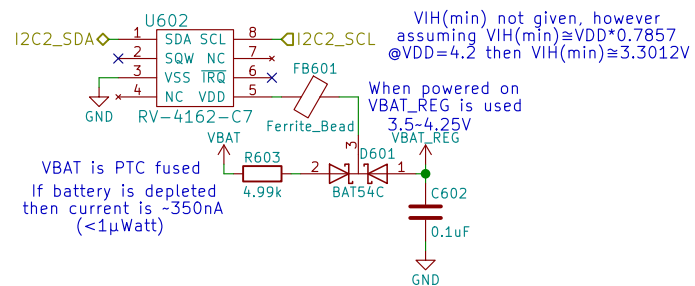
**Title: Boot Configuration**

Size: A4	Date: 2018-05-02
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Size: A4	Date:
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Rev: v0.1.0

Id: 5/16



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**Purism SPC**

Sheet: /RTC/  
File: rtc.sch

**Title: RTC**

Size: A4 Date: 2018-05-02

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**Rev: v0.1.0**

Id: 6/16



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**Purism SPC**

Sheet: /UART Debug/  
File: uart.sch

**Title: UART Debug**

Size: A4 Date: 2018-05-02

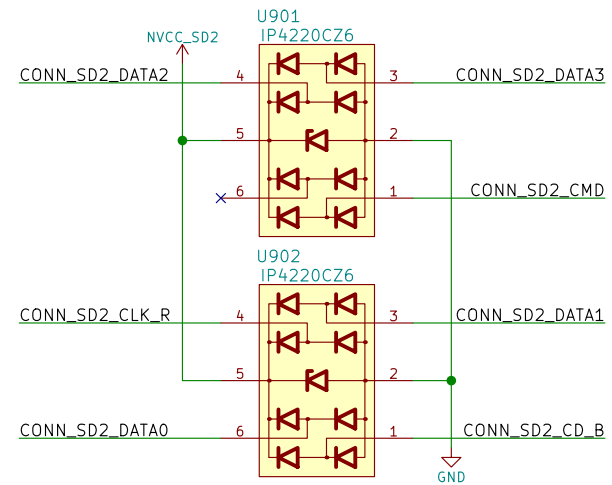
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**Rev: v0.1.0**

Id: 7/16

Id: 8/16





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**Purism SPC**

Sheet: /uSD Card/

File: sd.sch

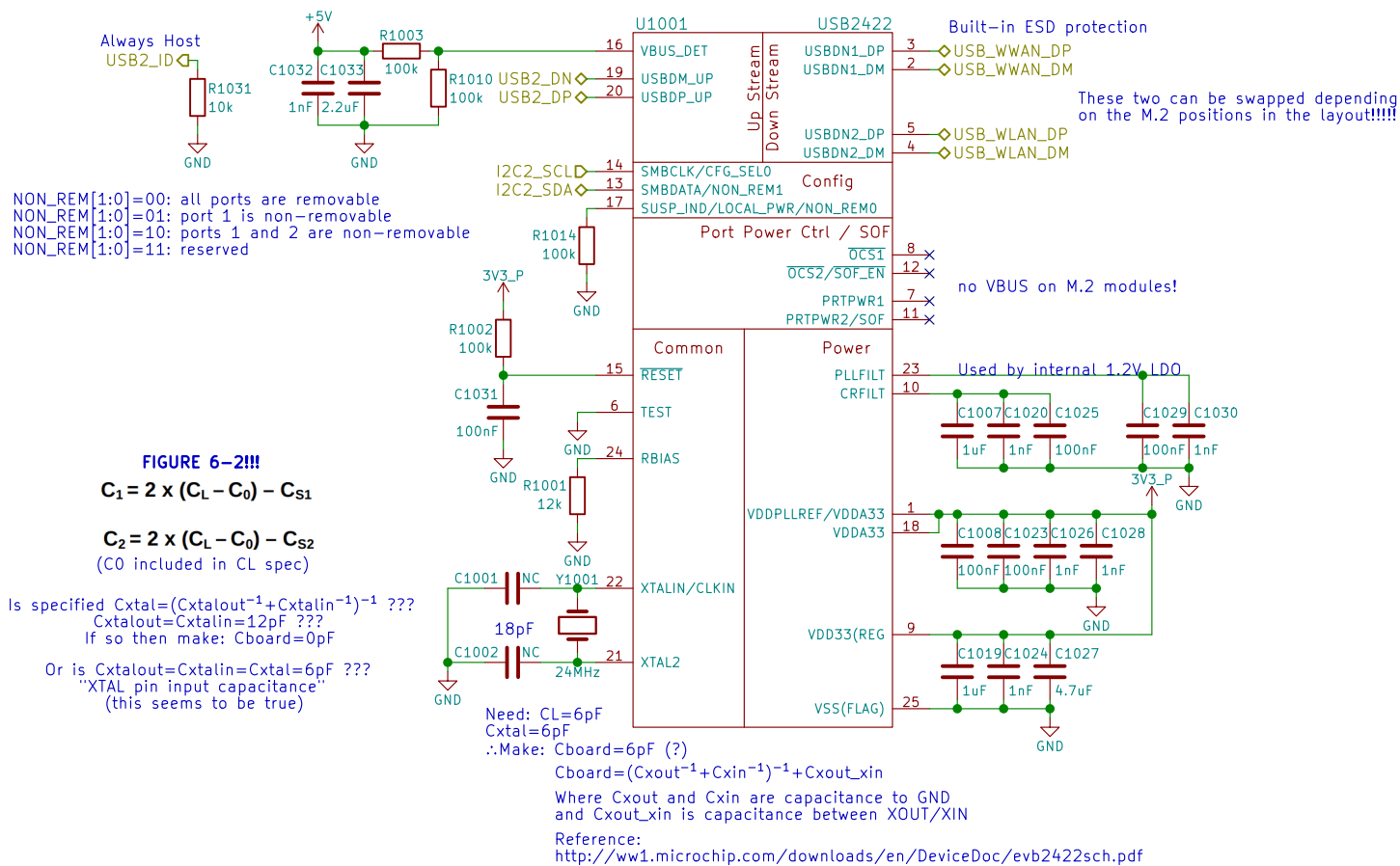
**Title: uSD Card**

Size: A4 Date: 2018-05-02

KiCad E.D.A. kicad 4.0.7

**Rev: v0.1.0**

Id: 9/16



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**Purism SPC**

Sheet: /USB Hub/

File: usb\_hub.sch

**Title:**

Size: A4

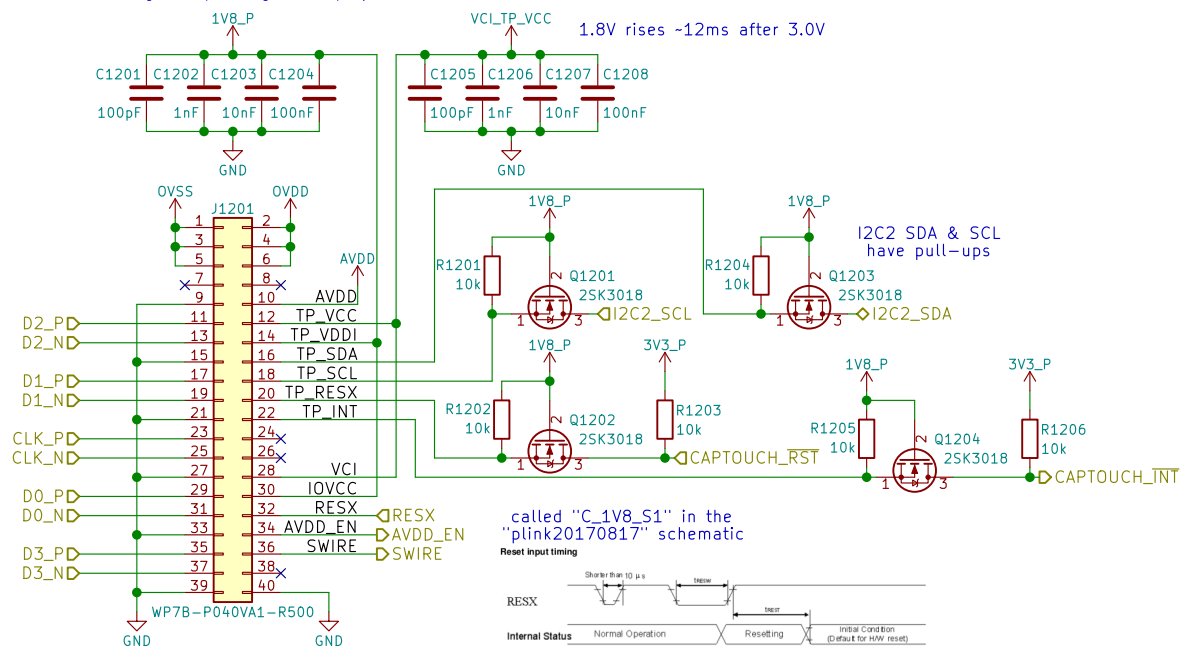
Date: 2018-05-02

**Rev: v0.1.0**

KiCad E.D.A. kicad 4.0.7

Id: 10/16

Using H546DLB01.1 pin assignment may need to be changed depending on display used



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**Purism SPC**

Sheet: /MIPI DSI/  
File: mipi\_dsi.sch

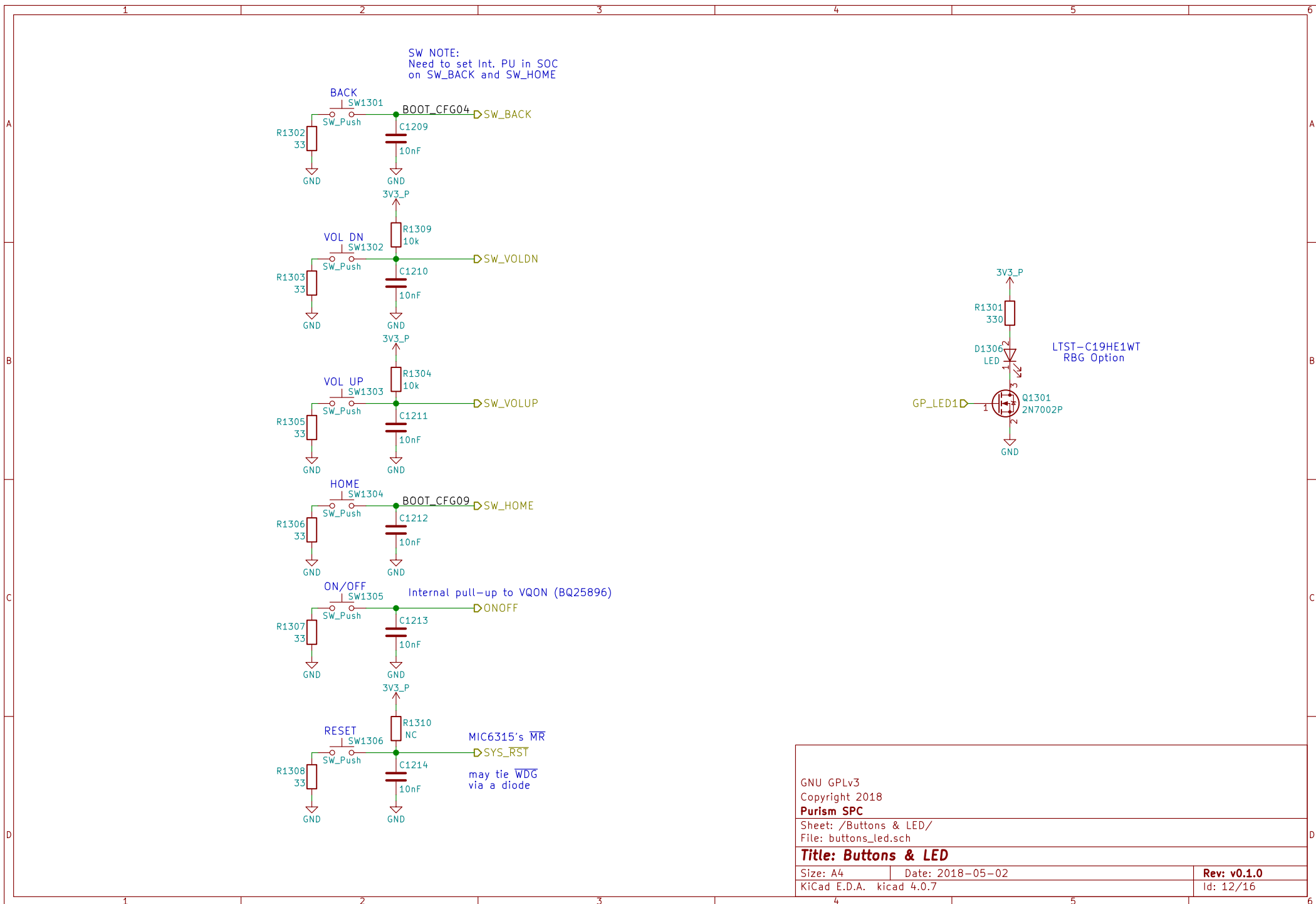
**Title: MIPI DSI**

Size: A4 Date: 2018-05-02

KiCad E.D.A. kicad 4.0.7

**Rev: v0.1.0**

Id: 11/16



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**Purism SPC**

Sheet: /Buttons & LED/  
File: buttons\_led.sch

**Title: Buttons & LED**

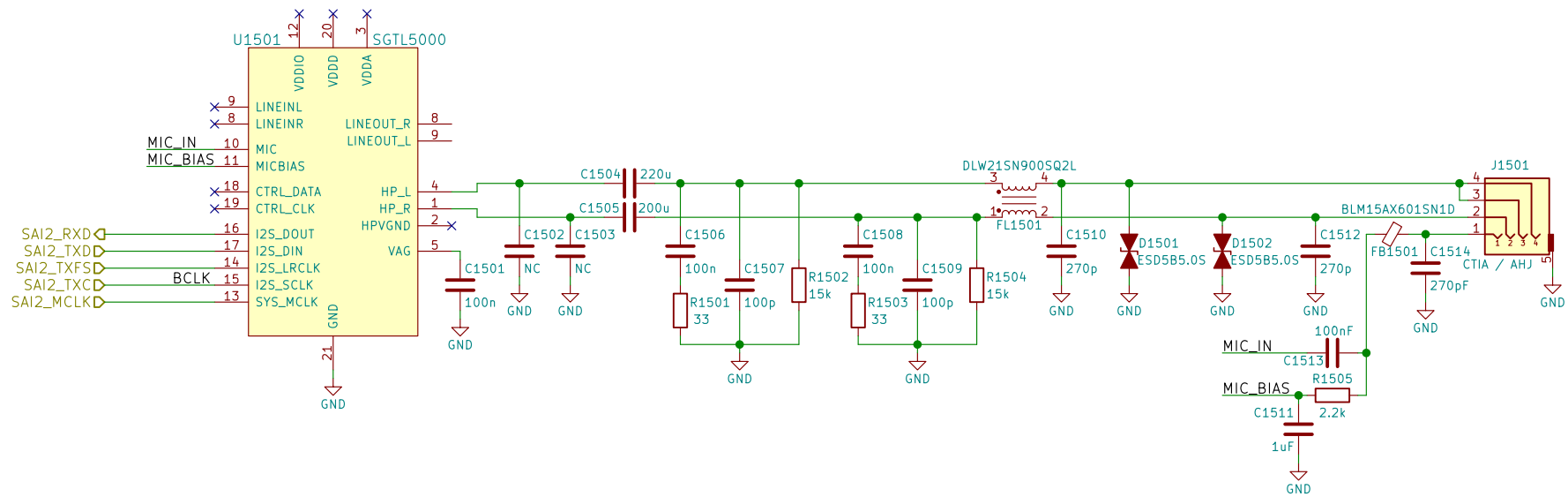
Size: A4 Date: 2018-05-02

KiCad E.D.A. kicad 4.0.7

**Rev: v0.1.0**

Id: 12/16





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**Purism SPC**

Sheet: /Audio/  
File: audio.sch

**Title: Audio**

Size: A4 Date: 2018-05-02  
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**Rev: v0.1.0**  
Id: 14/16

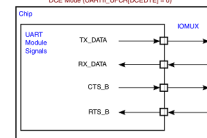
RS9116 NC:  
RTS, CTS, BT\_HOST\_WAKE, WIFI\_WAKE

## 6.2 M.2 Signal Directions

Module: Table 23  
Socket: Table 46

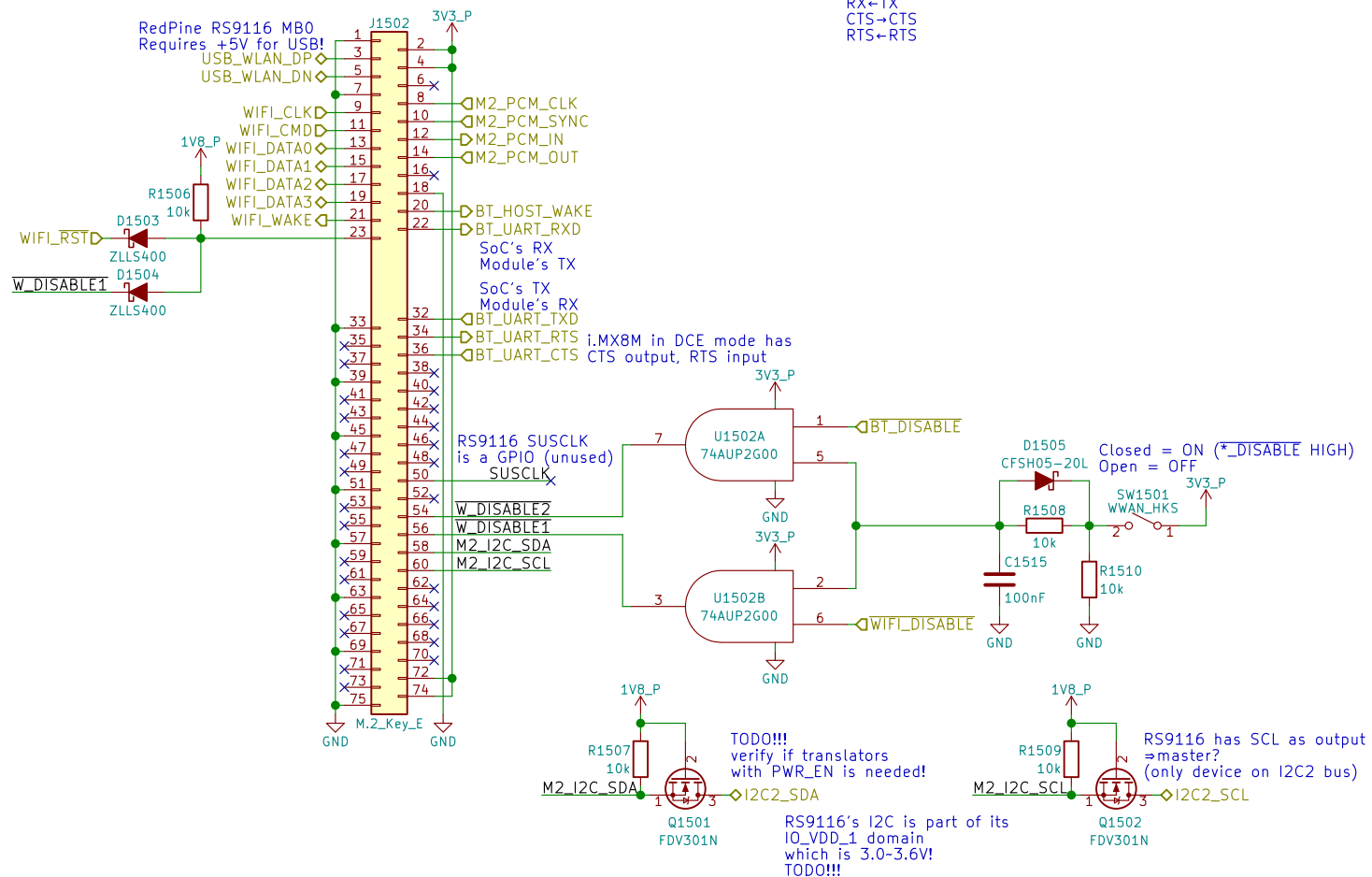
UARTn\_UFCR[DCEDTE]=0 on POR

DCE Mode (UARTn\_UFCR[DCEDTE]=0)



TX output  
RX input  
CTS output  
RTS input

= TX→RX  
RX←TX  
CTS→CTS  
RTS→RTS



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**Purism SPC**

Sheet: /WLAN+BT M.2/

File: wifi\_bt\_m2.sch

**Title: WLAN+BT M.2**

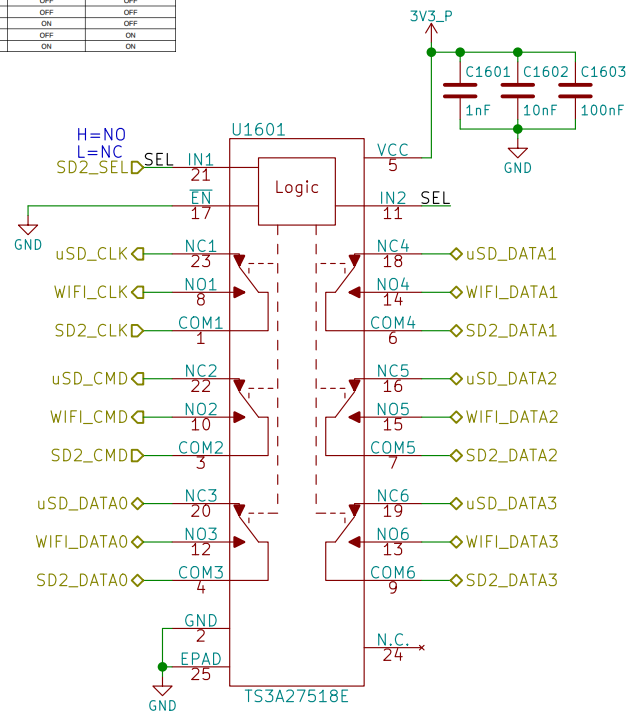
Size: A4 Date: 2018-05-02

KiCad E.D.A. kicad 4.0.7

**Rev: v0.1.0**

Id: 15/16

EN	IN1	IN2	NC1/2/3 TO COM1/2/3, COM1/2/3 TO NC1/2/3	NC4/5/6 TO COM4/5/6, COM4/5/6 TO NC4/5/6	NO1/2/3 TO COM1/2/3, COM1/2/3 TO NO1/2/3	NO4/5/6 TO COM4/5/6, COM4/5/6 TO NO4/5/6
H	X	X	OFF	OFF	OFF	OFF
L	L	L	ON	ON	OFF	OFF
L	H	L	OFF	ON	ON	OFF
L	L	H	ON	OFF	OFF	ON
L	H	H	OFF	OFF	ON	ON



Id: 16/16