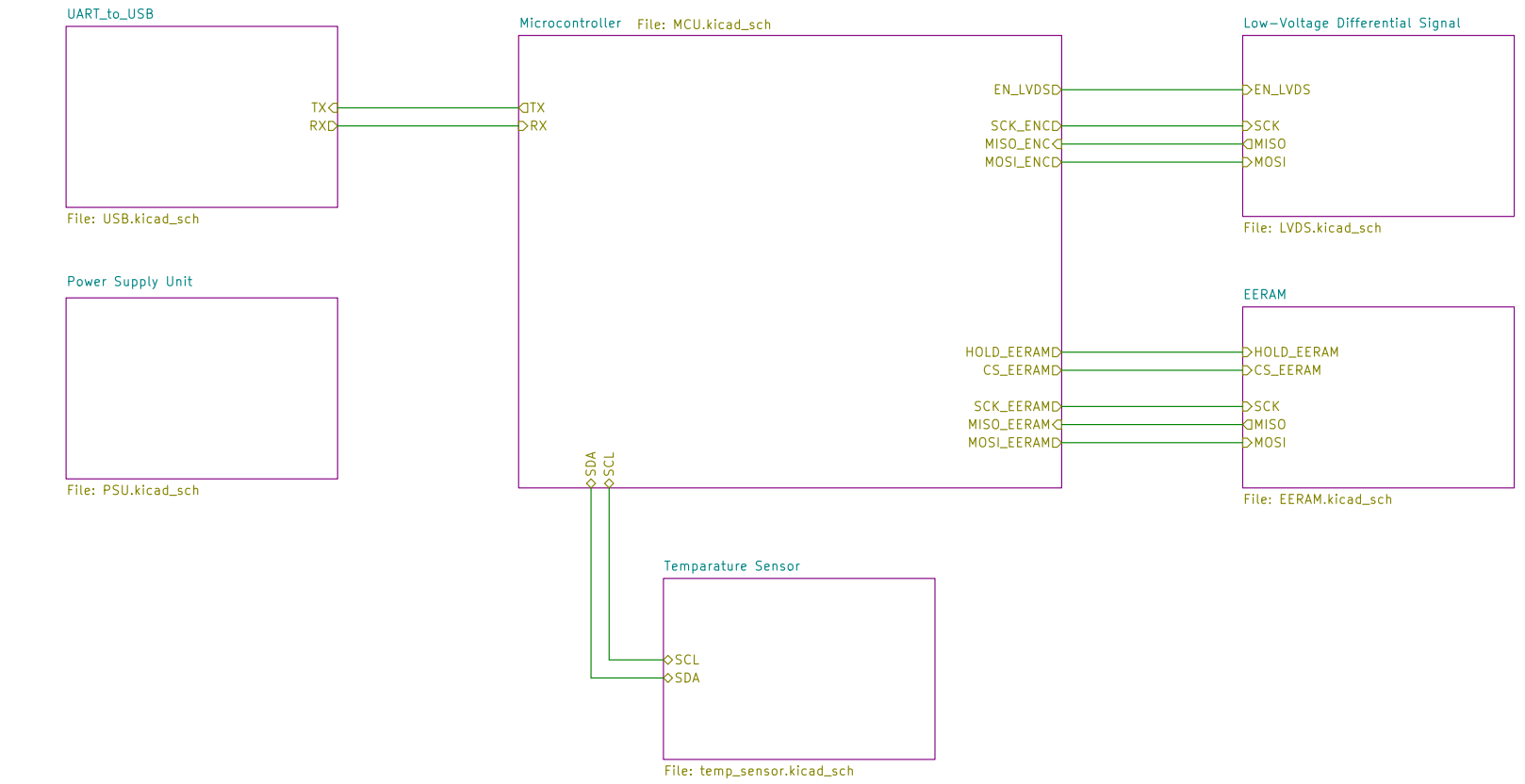
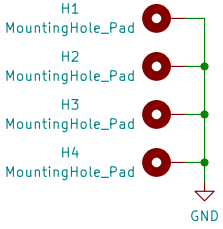
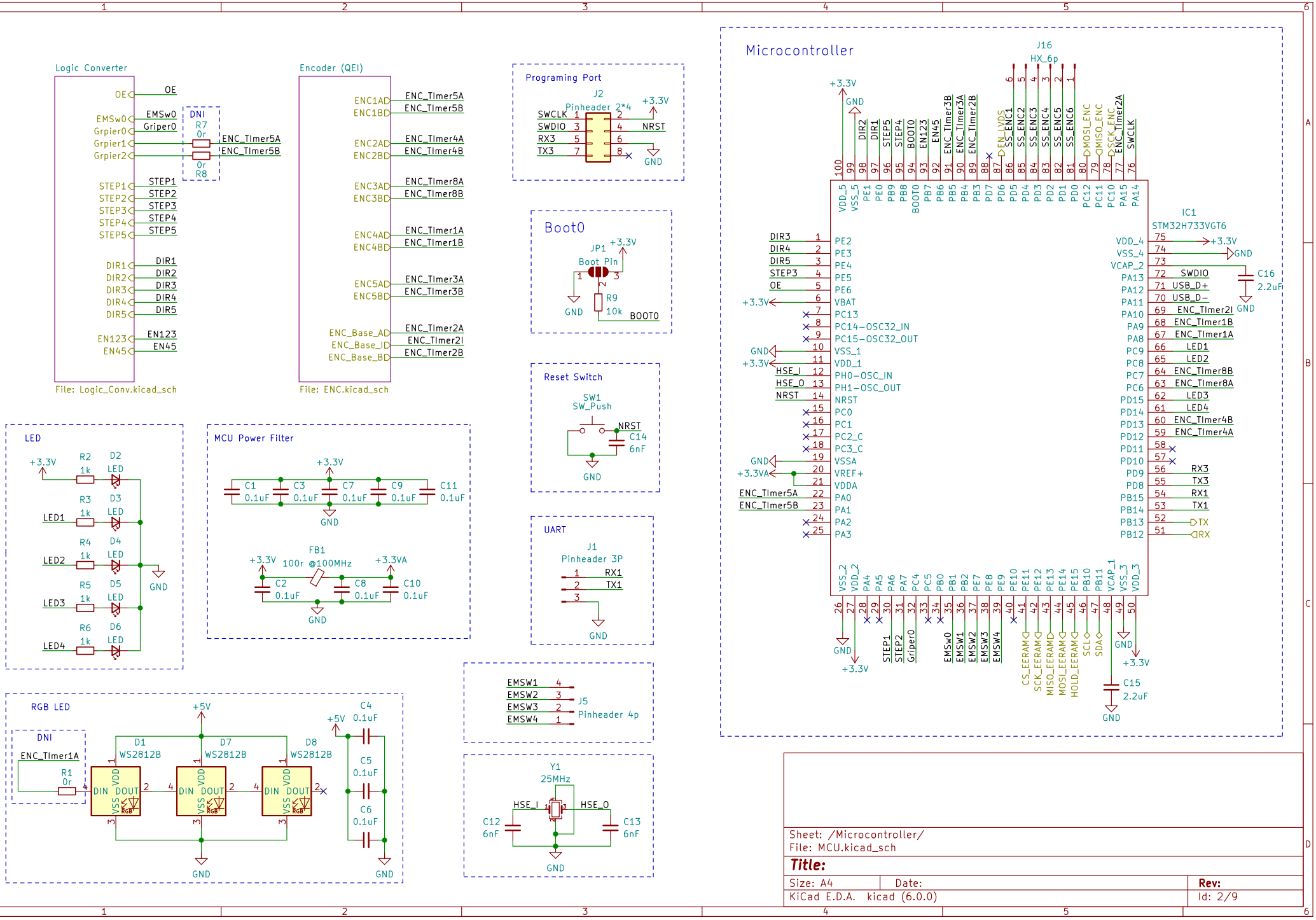
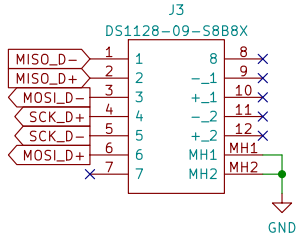




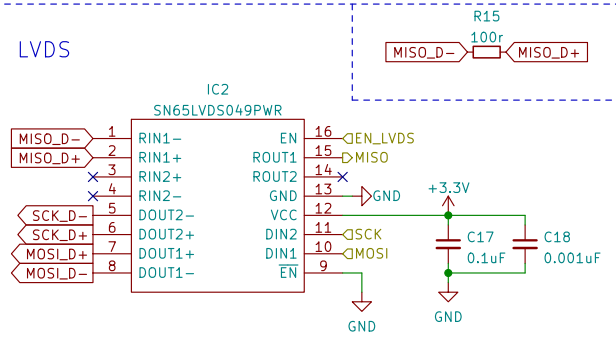
Sheet: / File: NarwhelMainV2.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 1/9


Logic Converter
OE
EMSw0
Griper0
Grpier1
Grpier2
STEP1
STEP2
STEP3
STEP4
STEP5
DIR1
DIR2
DIR3
DIR4
DIR5
EN123
EN45
DNI
R7
0r
R8
0r
ENC_TImer5A
ENC_TImer5B
File: Logic_Conv.kicad_sch
Encoder (QEI)
ENC1AD
ENC1BD
ENC2AD
ENC2BD
ENC3AD
ENC3BD
ENC4AD
ENC4BD
ENC5AD
ENC5BD
ENC_Base_AD
ENC_Base_ID
ENC_Base_BD
ENC_TImer5A
ENC_TImer5B
ENC_TImer4A
ENC_TImer4B
ENC_TImer8A
ENC_TImer8B
ENC_TImer1A
ENC_TImer1B
ENC_TImer3A
ENC_TImer3B
ENC_TImer2A
ENC_TImer2I
ENC_TImer2B
File: ENC.kicad_sch
Programing Port
J2
Pinheader 2*4
SWCLK
SWDIO
RX3
TX3
+3.3V
NRST
GND
Boot0
JP1
Boot Pin
R9
10k
BOOT0
Reset Switch
SW1
SW_Push
NRST
C14
6nF
GND
UART
J1
Pinheader 3P
RX1
TX1
GND
LED
+3.3V
R2
1k
D2
LED
R3
D3
R4
D4
R5
D5
R6
D6
LED1
LED2
LED3
LED4
GND
MCU Power Filter
+3.3V
C1
0.1uF
C3
C7
C9
C11
FB1
100r @100MHz
+3.3VA
C2
C8
C10
GND
RGB LED
DNI
ENC_TImer1A
R1
0r
+5V
D1
WS2812B
D7
D8
DIN
DOUT
VDD
VSS
C4
C5
C6
GND
EMSW1
EMSW2
EMSW3
EMSW4
J5
Pinheader 4p
Y1
25MHz
HSE_I
HSE_O
C12
6nF
C13
6nF
Microcontroller
J16
HX_6p
IC1
STM32H733VGT6
DIR3
DIR4
DIR5
STEP3
OE
PC13
PC14-OSC32_IN
PC15-OSC32_OUT
VSS_1
VDD_1
PH0-OSC_IN
PH1-OSC_OUT
NRST
PC0
PC1
PC2_C
PC3_C
VSSA
VREF+
VDDA
PA0
PA1
PA2
PA3
ENC_TImer5A
ENC_TImer5B
VBAT
SWDIO
USB_D+
USB_D-
ENC_TImer2I
ENC_TImer1B
ENC_TImer1A
LED1
LED2
ENC_TImer8B
ENC_TImer8A
LED3
LED4
ENC_TImer4B
ENC_TImer4A
RX3
TX3
RX1
TX1
TX
RX
C16
2.2uF
C15
2.2uF
STEP1
STEP2
Griper0
EMSw0
EMSW1
EMSW2
EMSW3
EMSW4
CS_EEERAM
SCK_EEERAM
MISO_EEERAM
MOSI_EEERAM
HOLD_EEERAM
SCL
SDA
Sheet: /Microcontroller/
File: MCU.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad (6.0.0)
Id: 2/9

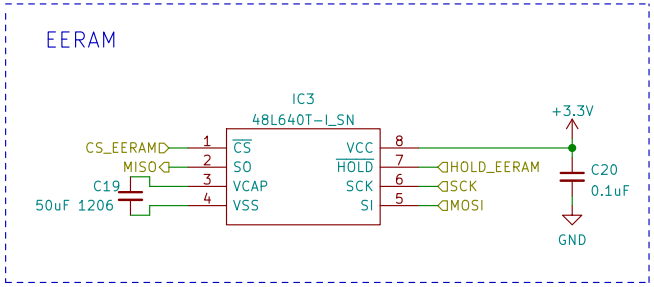
RJ45



LVDS

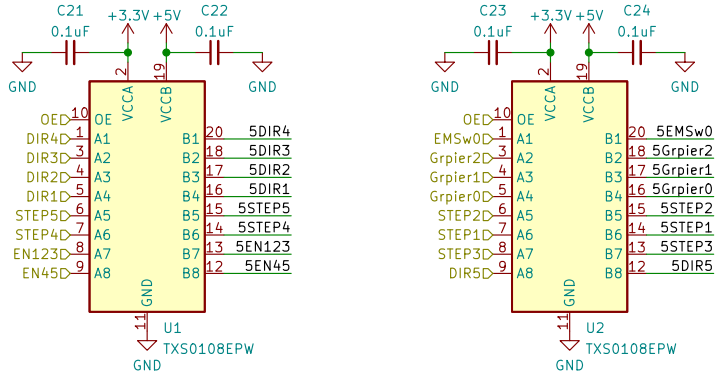


Sheet: /Low-Voltage Differential Signal/		
File: LVDS.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 3/9

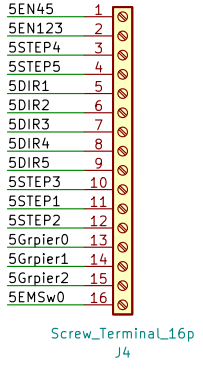


Sheet: /EERAM/		
File: EERAM.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 4/9

Logic Converter



Terminal



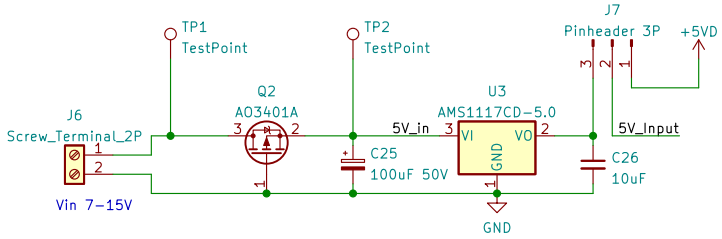
Sheet: /Microcontroller/Logic Converter/
File: Logic_Conv.kicad_sch

Title:

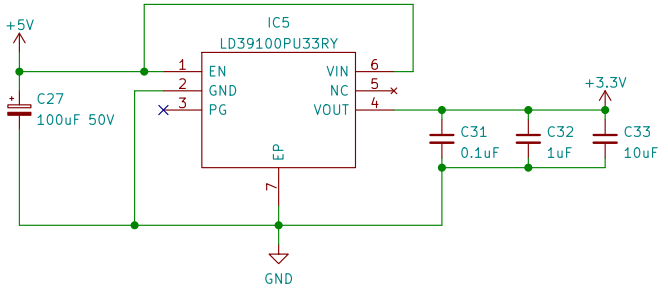
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 5/9

5V Regulator

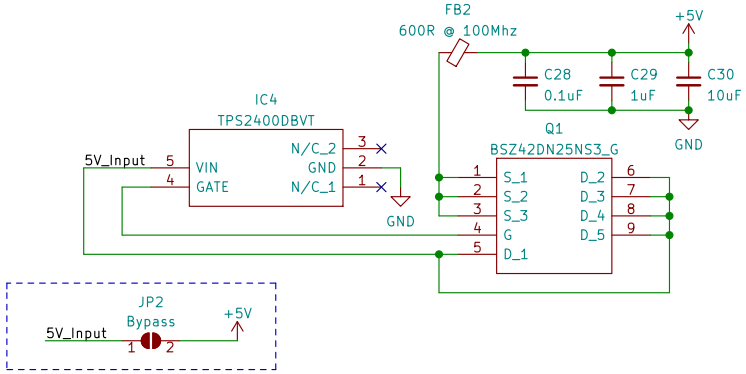
5VD -> USB 5V



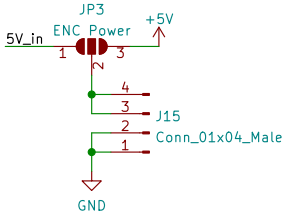
3.3V Regulator



Voltage Controller

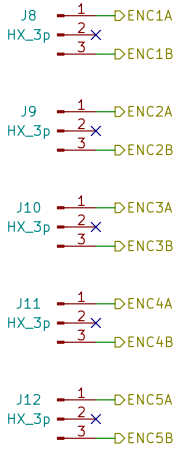


Encoder Power

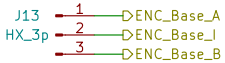


Sheet: /Power Supply Unit/ File: PSU.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 6/9

Robot Encoder



Base Encoder

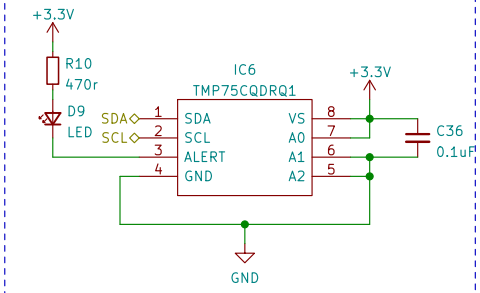


Sheet: /Microcontroller/Encoder (QEI)/
File: ENC.kicad_sch

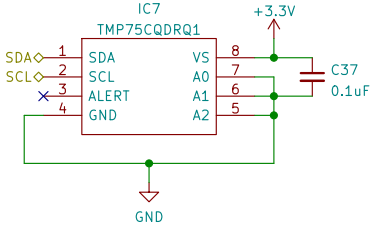
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 7/9

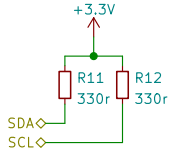
Regulator Temp Sensor



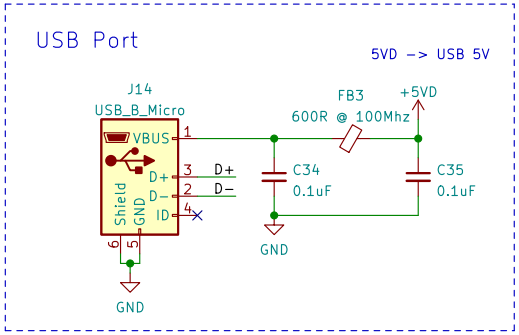
Environment Temp Sensor

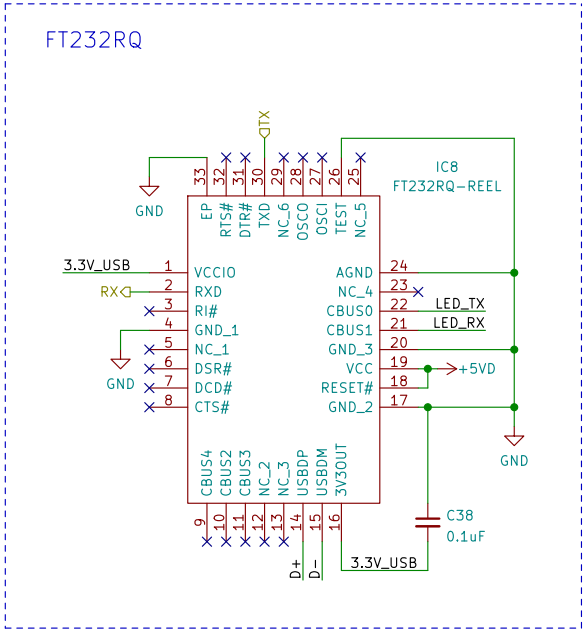


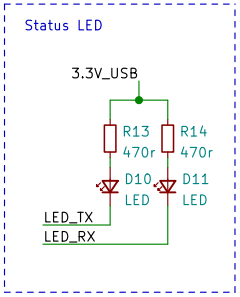
Pull-up



Sheet: /Temparature Sensor/ File: temp_sensor.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 8/9







Sheet: /UART_to_USB/
File: USB.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (6.0.0)		Id: 9/9