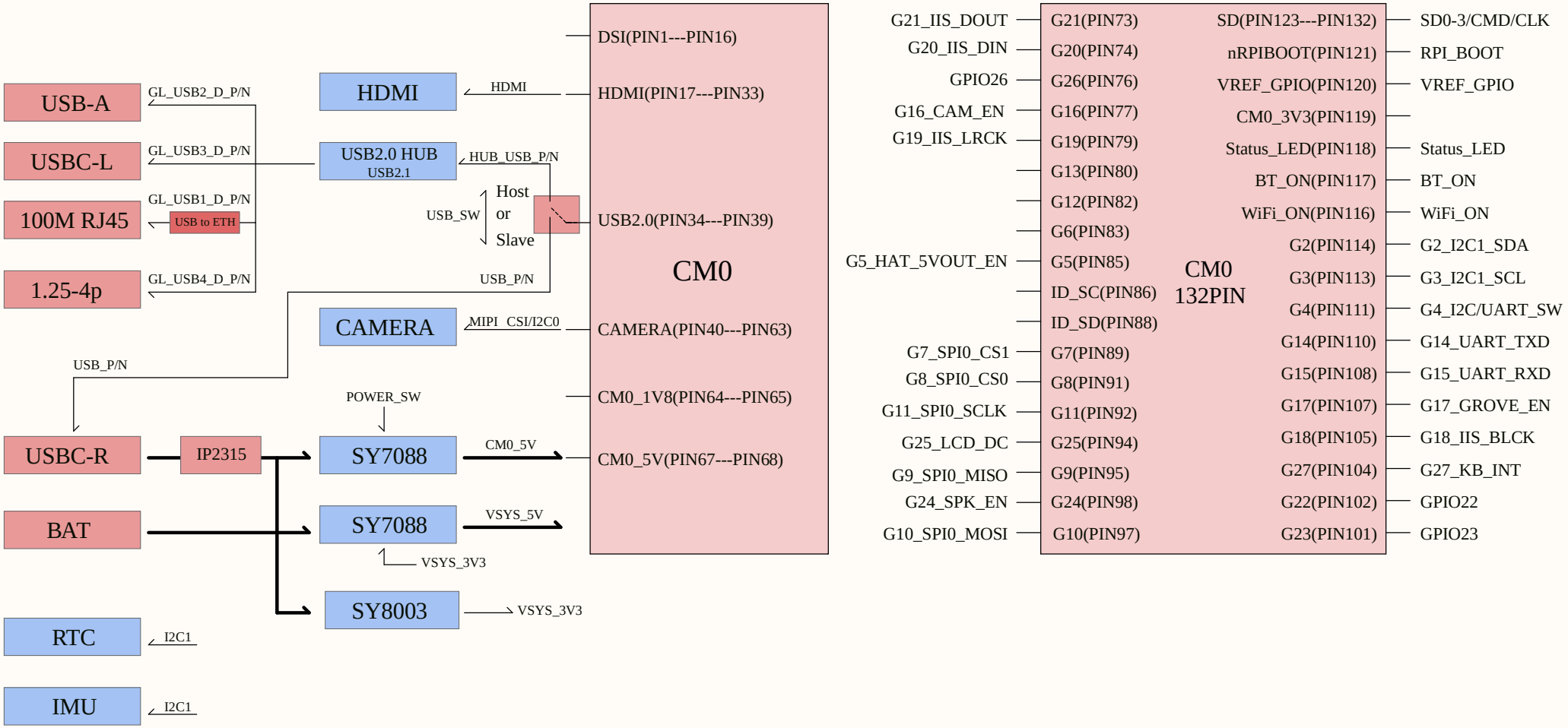
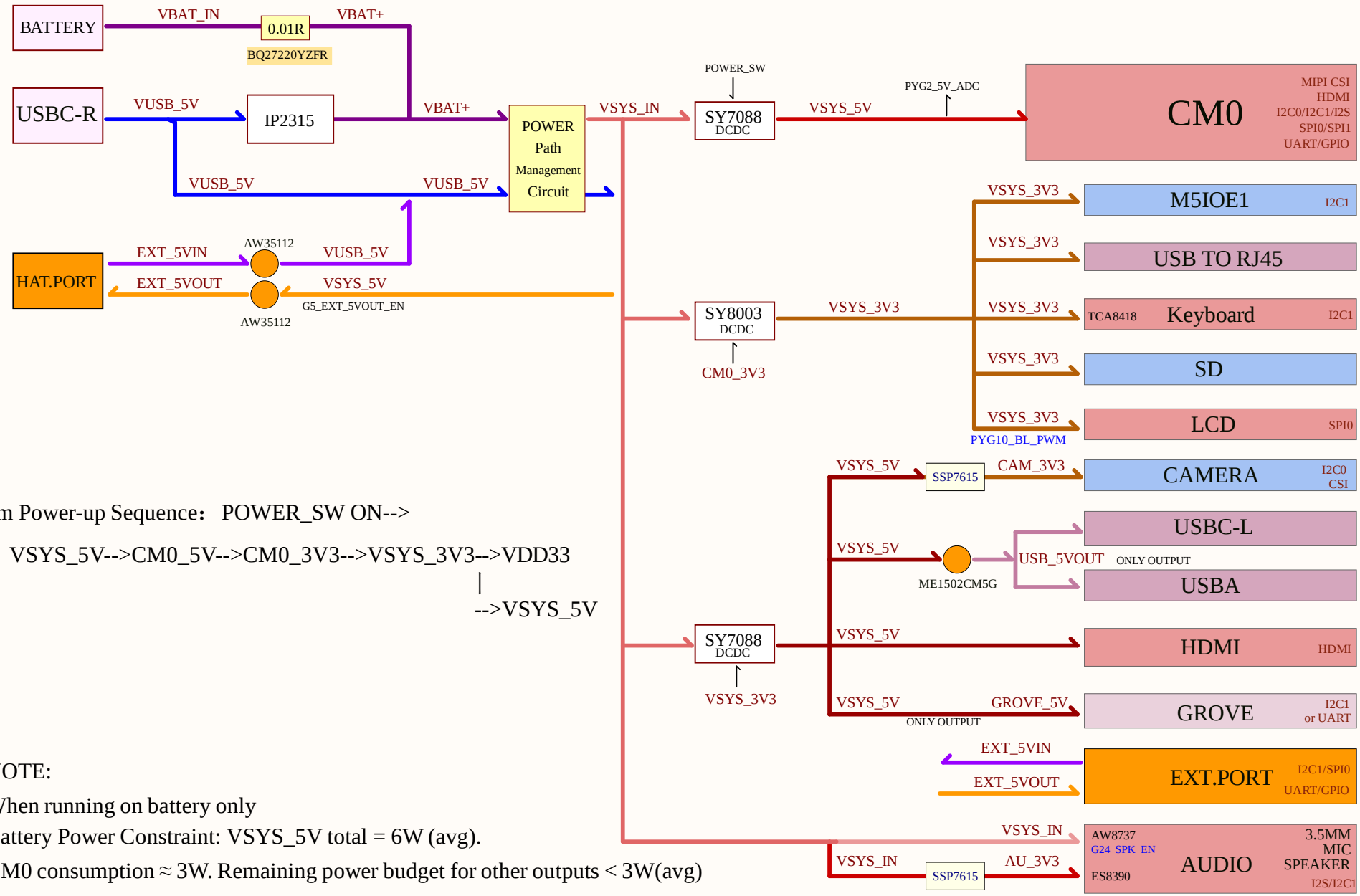
Block diagram



Power Network



System Power-up Sequence： POWER_SW ON-->

VSYS_5V-->CM0_5V-->CM0_3V3-->VSYS_3V3-->VDD33

|

-->VSYS_5V

NOTE:

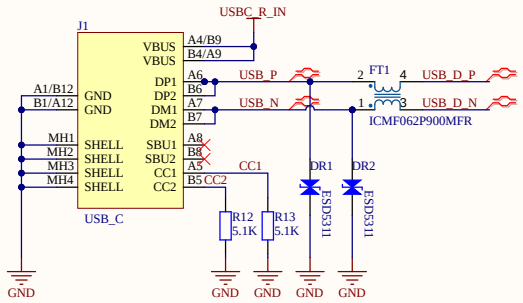
When running on battery only

Battery Power Constraint: VSYS_5V total = 6W (avg).

CM0 consumption ≈ 3W. Remaining power budget for other outputs < 3W(avg)

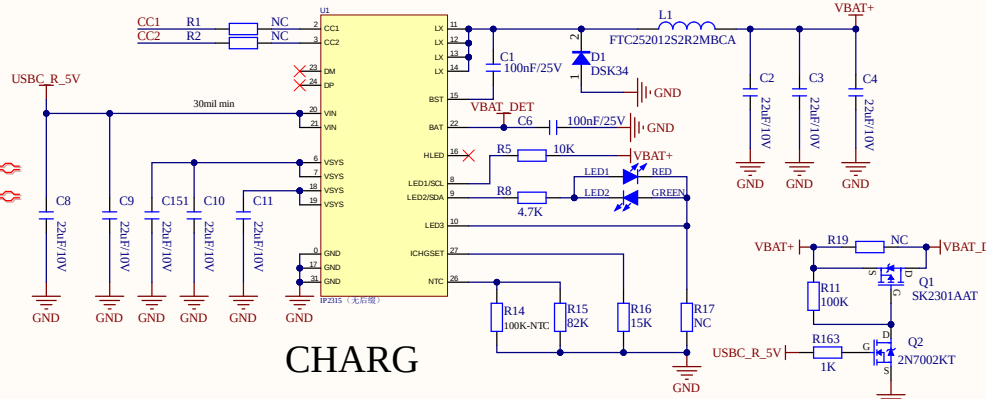
04 Power management

USBC_R

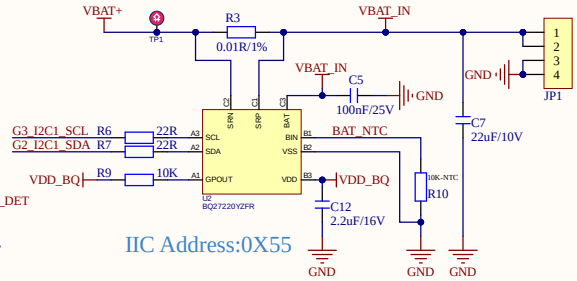


可通过USB_SW切换

CHARG



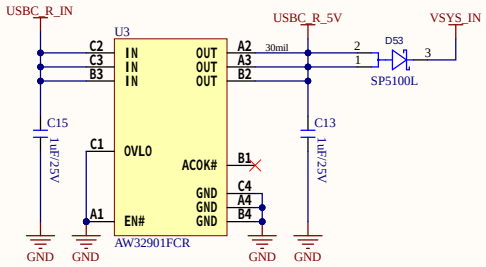
BATTERY



IIC Address:0X55

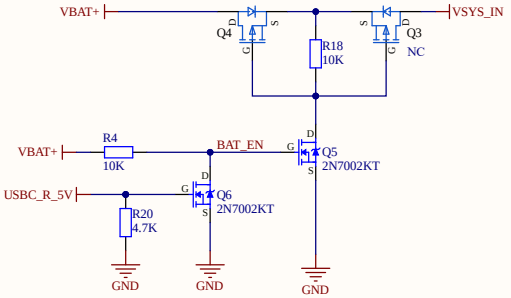
Power Path Management Circuit

USBC_R

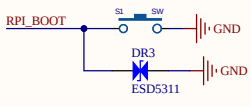


OVP

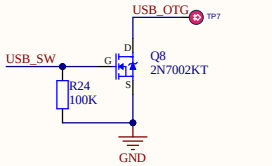
BAT



SWITCH

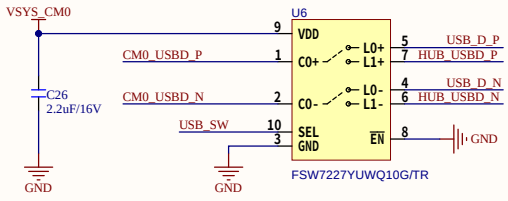


USB_SW	Function
L	HUB_USBD_P/N
H	USBC2_D_P/N

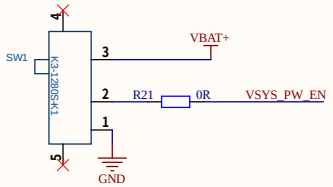


当USB_OTG引脚接地时，CM0将切换为USB主机模式

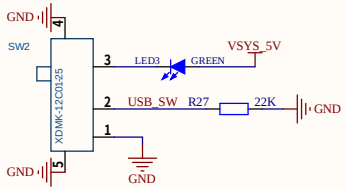
绿灯亮，Zero作为 Host；绿灯灭，为 Device 模式



PWR_SW



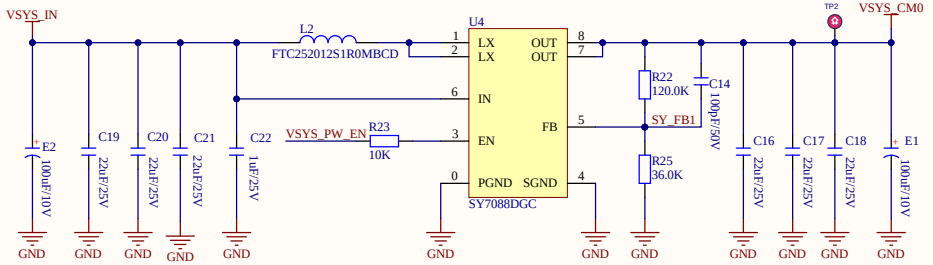
USB_SW

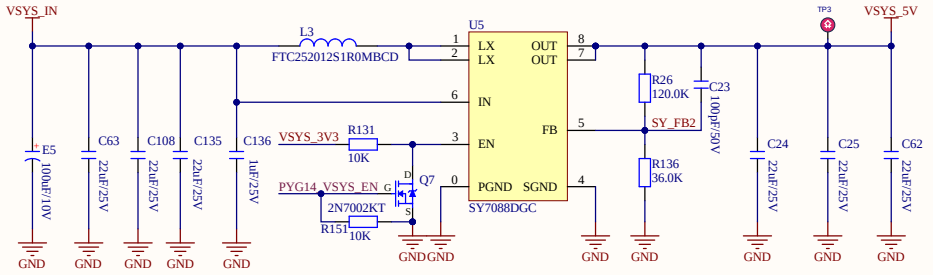


POWER

Turn on the PWR_SW to provide system power. Upon USB insertion, the system will be powered by USB while the battery is being charged.

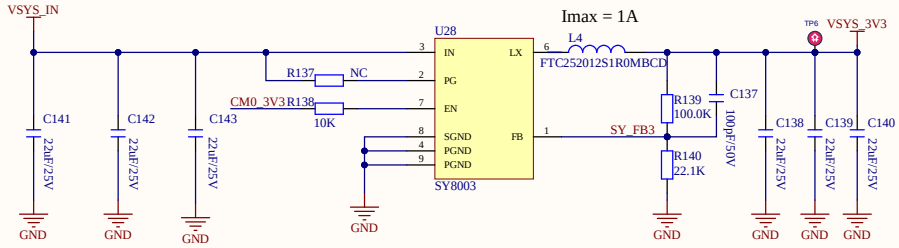
Vout = 1.2(1+(R15/R17))=5.2V



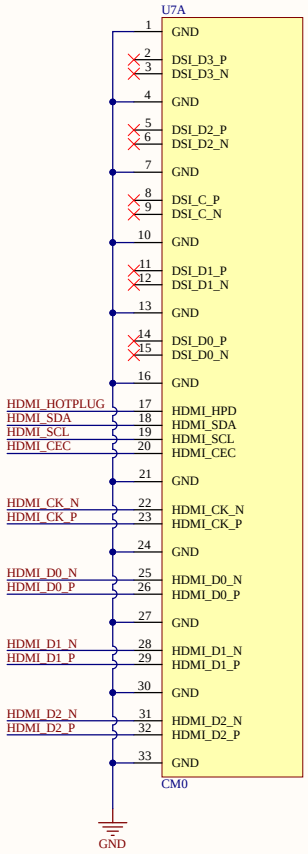


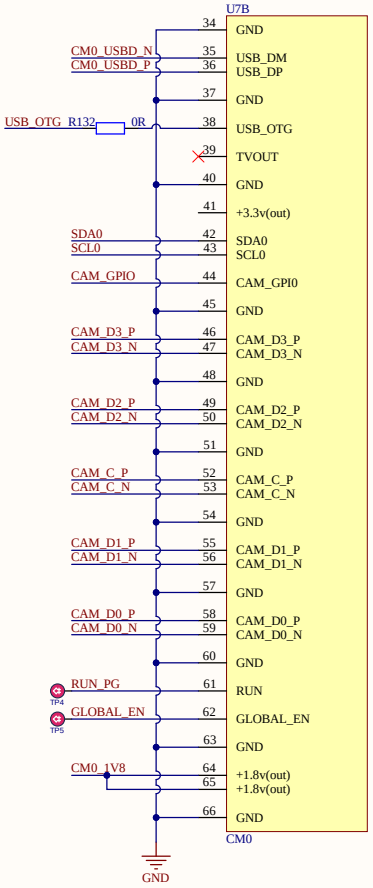
Vout = 1.2(1+(R15/R17))=5.2V

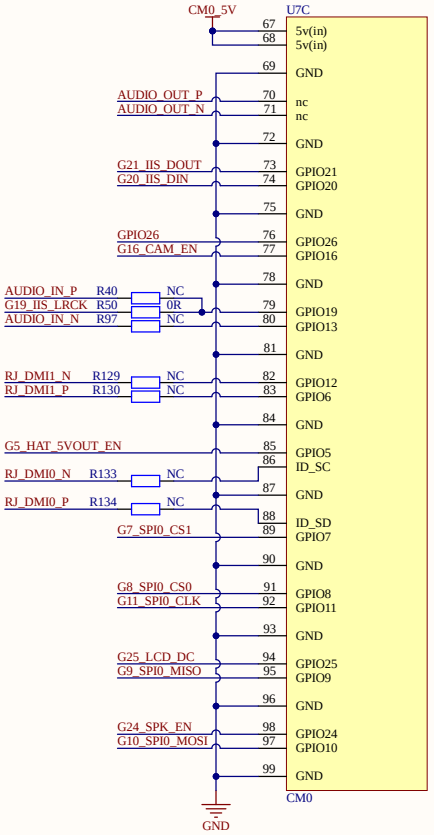
Imax = 1A

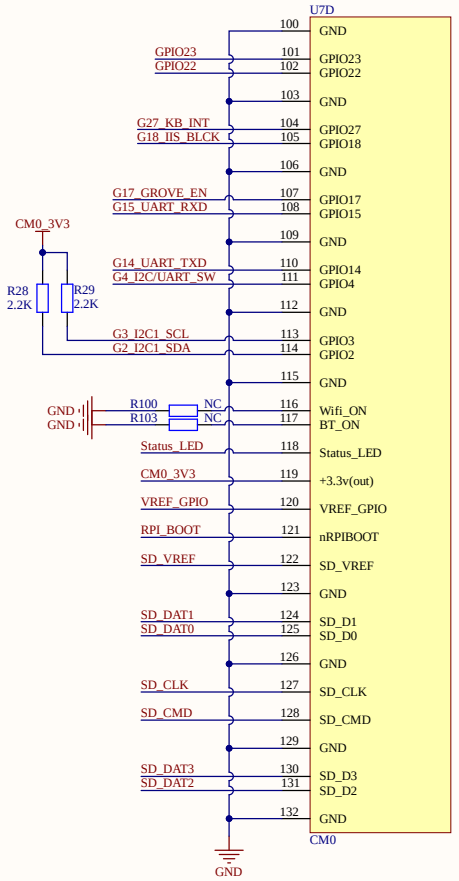


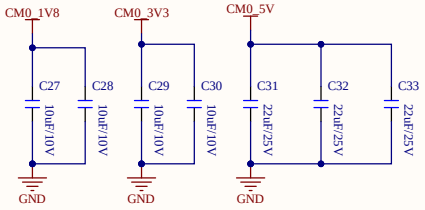
05 CM0

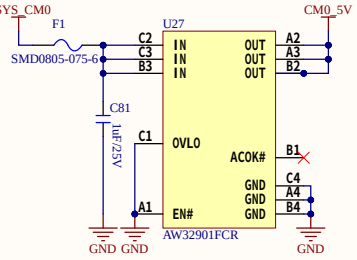


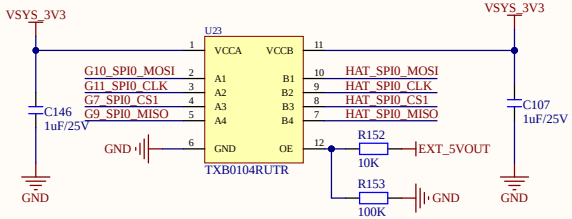


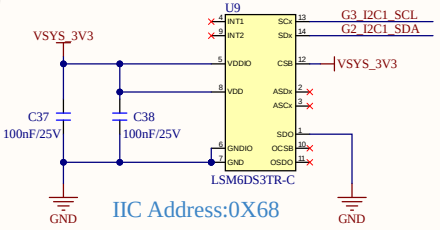








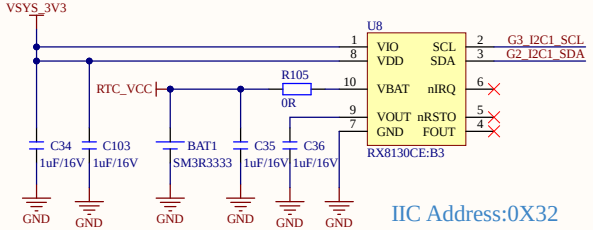




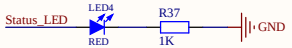
IMU

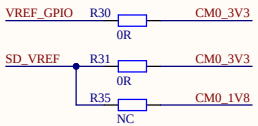
RTC

IIC Address:0X68

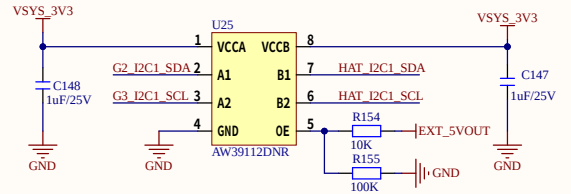


IIC Address:0X32



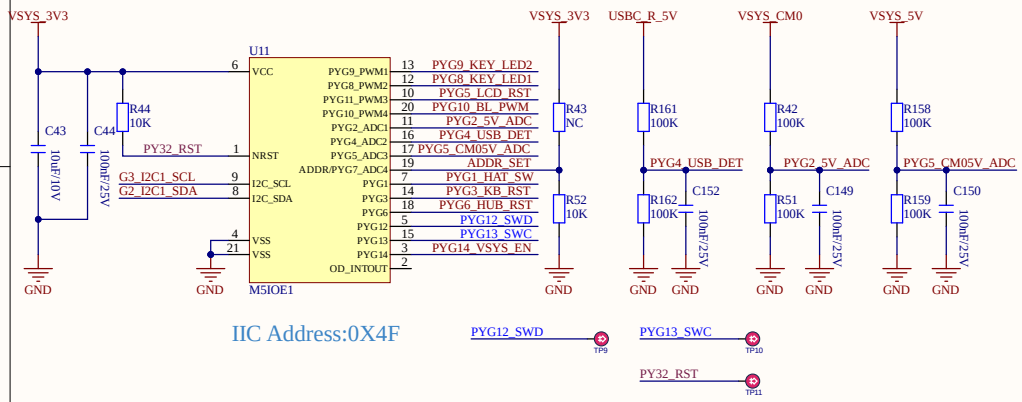


Note: SDVREF must be 1.8V when using eMMC.

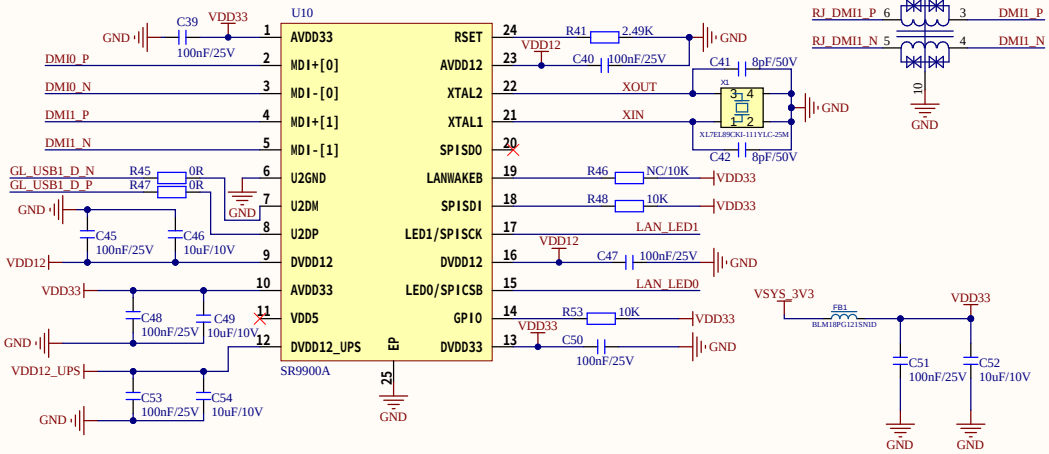


06 Peripheral

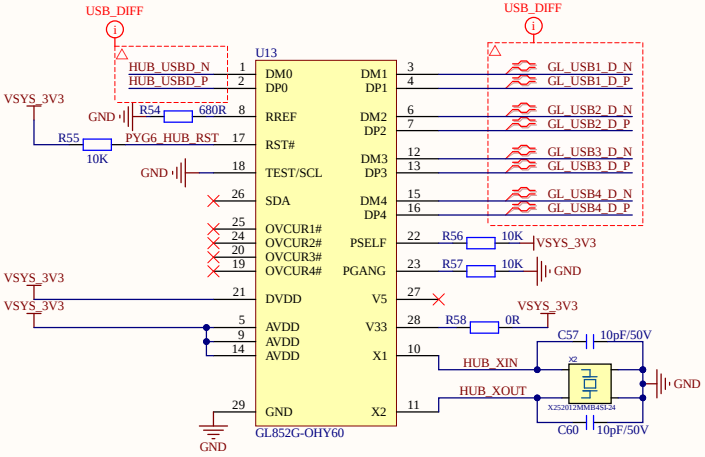
M5IOM1

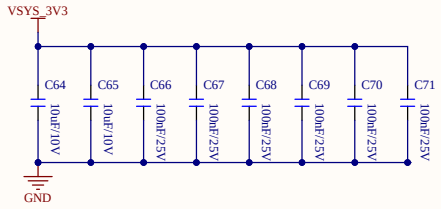


USB TO LAN 100M

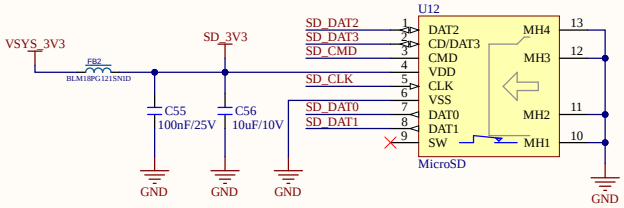


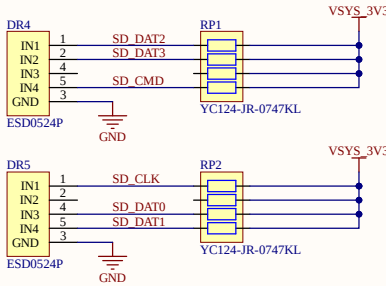
USB 2.0 HUB



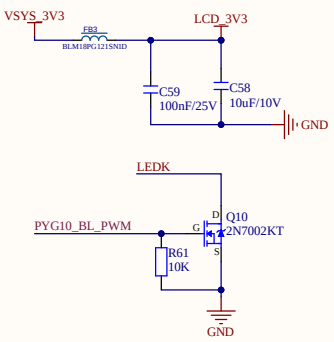


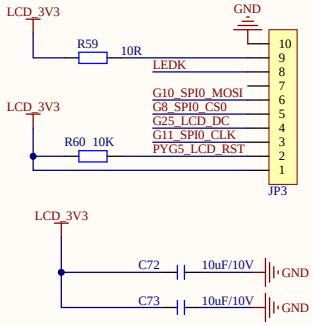
SD



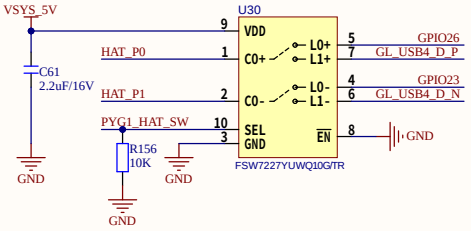


LCD

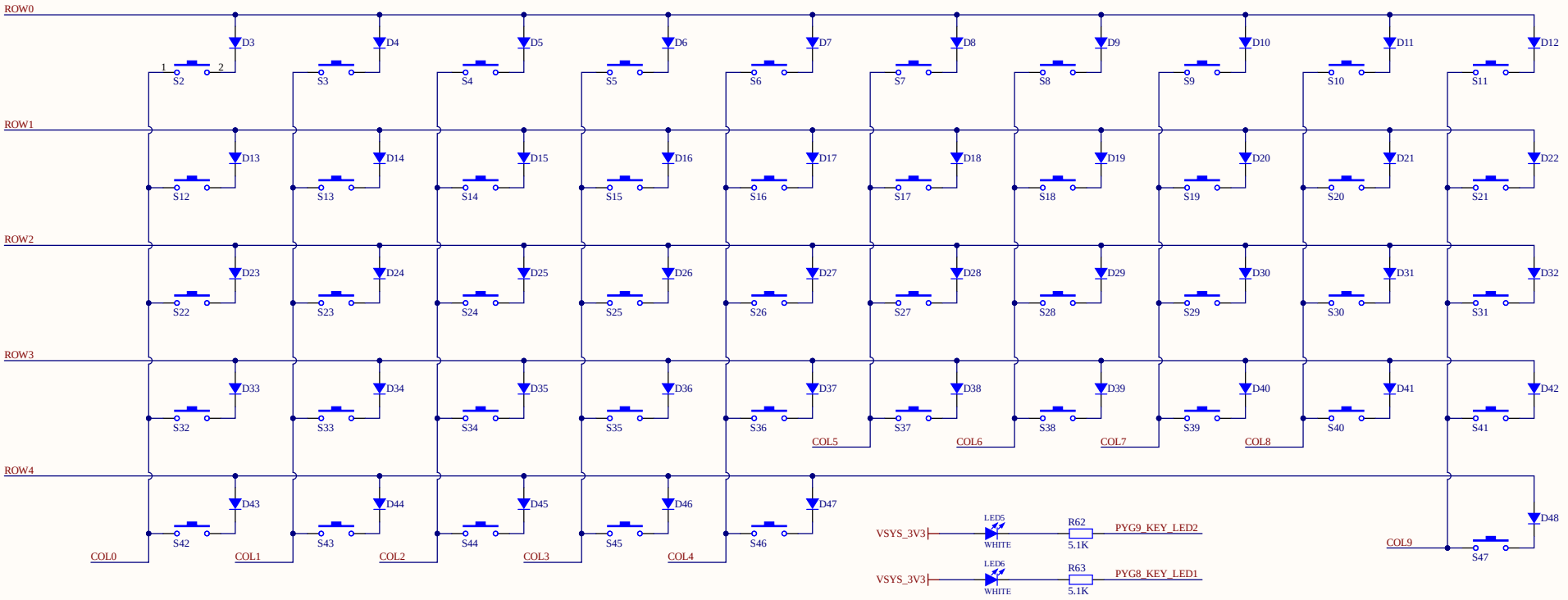


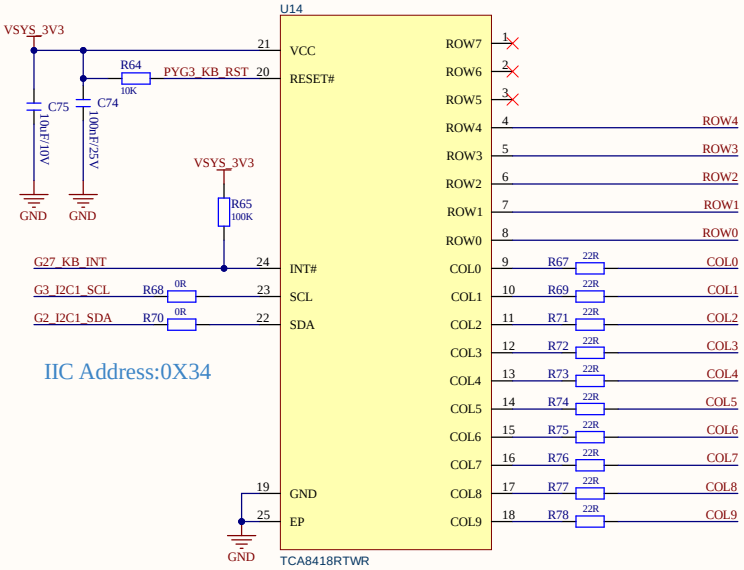


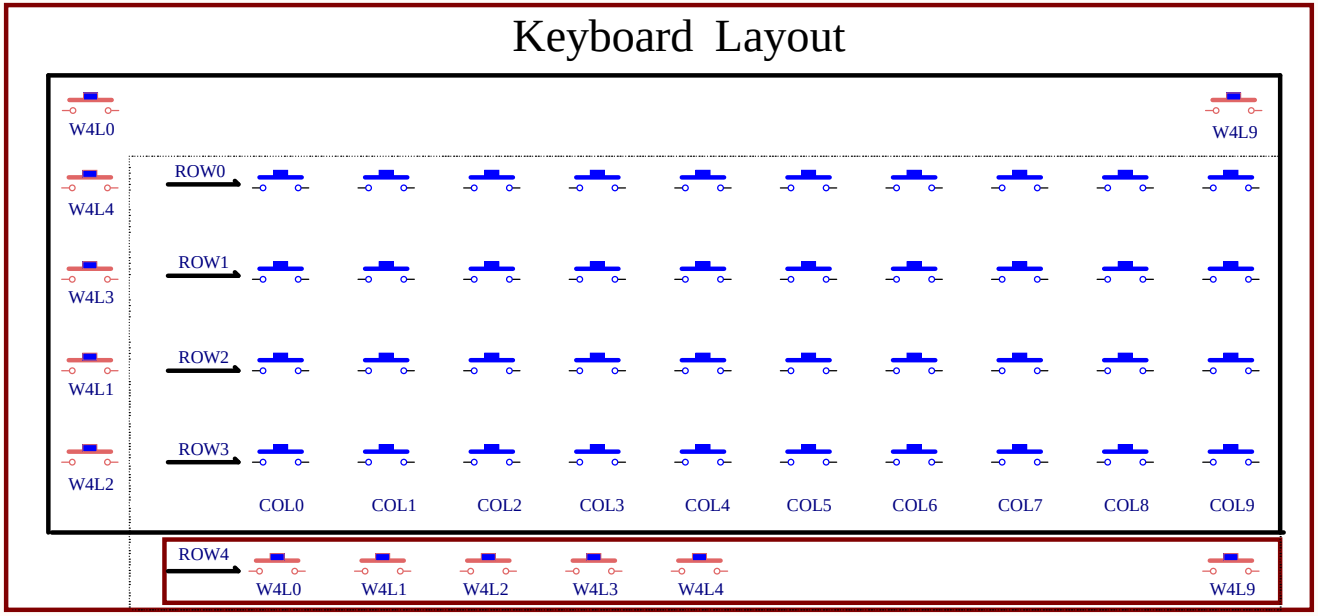
EXT.HAT-USB



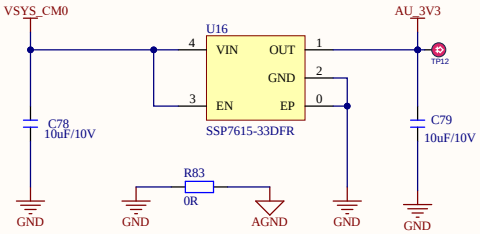
07 Keyboard

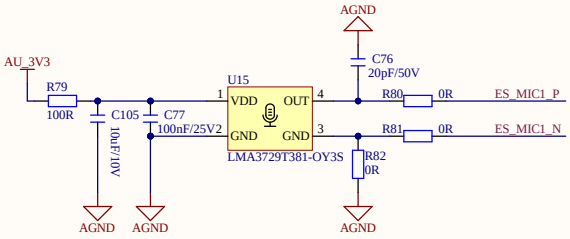

ROW0
ROW1
ROW2
ROW3
ROW4
COL0
COL1
COL2
COL3
COL4
COL5
COL6
COL7
COL8
COL9
D3 D4 D5 D6 D7 D8 D9 D10 D11 D12
D13 D14 D15 D16 D17 D18 D19 D20 D21 D22
D23 D24 D25 D26 D27 D28 D29 D30 D31 D32
D33 D34 D35 D36 D37 D38 D39 D40 D41 D42
D43 D44 D45 D46 D47 D48
S2 S3 S4 S5 S6 S7 S8 S9 S10 S11
S12 S13 S14 S15 S16 S17 S18 S19 S20 S21
S22 S23 S24 S25 S26 S27 S28 S29 S30 S31
S32 S33 S34 S35 S36 S37 S38 S39 S40 S41
S42 S43 S44 S45 S46 S47
VSYS_3V3
LED5
WHITE
R62
5.1K
PYG9_KEY_LED2
VSYS_3V3
LED6
WHITE
R63
5.1K
PYG8_KEY_LED1

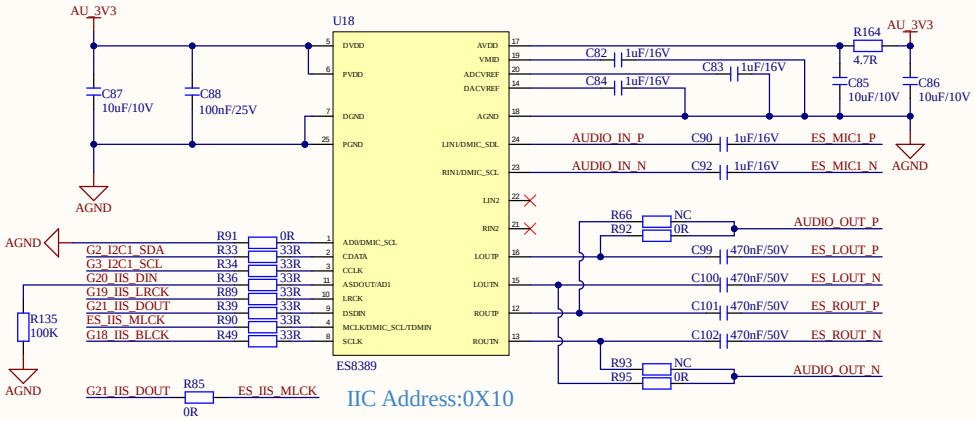

U14
VSYS_3V3
VCC
RESET#
PYG3_KB_RST
R64
10K
C75
101F/10V
C74
100nF/25V
GND
GND
VSYS_3V3
R65
100K
G27_KB_INT
INT#
G3_I2C1_SCL
R68
0R
SCL
G2_I2C1_SDA
R70
0R
SDA
IIC Address:0X34
GND
EP
GND
TCA8418RTWR
ROW7
ROW6
ROW5
ROW4
ROW3
ROW2
ROW1
ROW0
COL0
COL1
COL2
COL3
COL4
COL5
COL6
COL7
COL8
COL9
R67 R69 R71 R72 R73 R74 R75 R76 R77 R78
22R

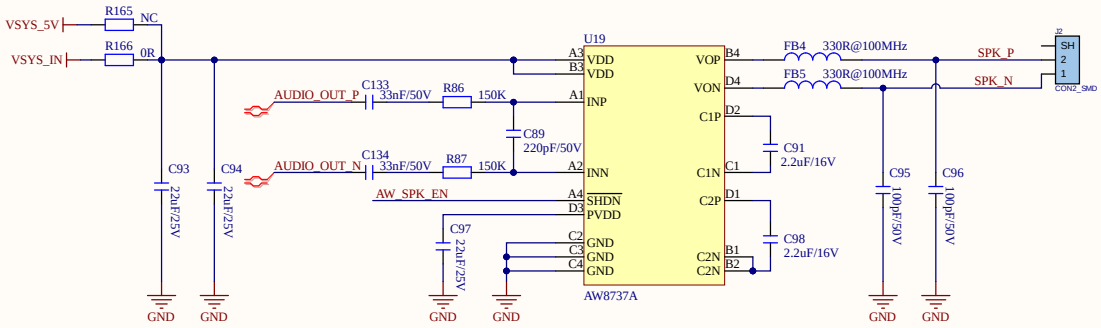

Keyboard Layout
W4L0
W4L4
W4L3
W4L1
W4L2
W4L9
ROW0
ROW1
ROW2
ROW3
ROW4
COL0
COL1
COL2
COL3
COL4
COL5
COL6
COL7
COL8
COL9
W4L0
W4L1
W4L2
W4L3
W4L4
W4L9

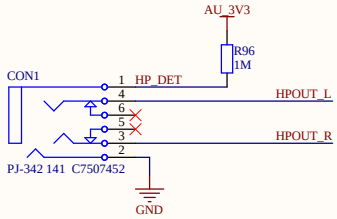
AUDIO CODEC

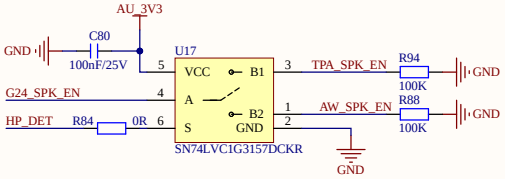






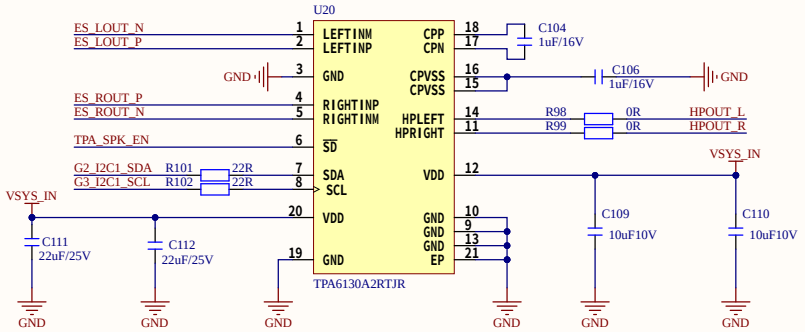




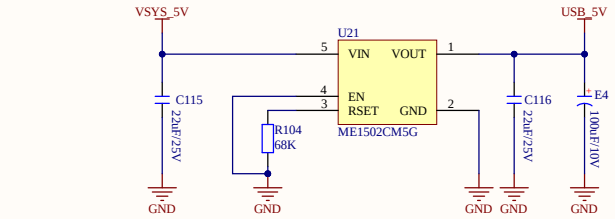


Supports DAC output only; does not support MIC input

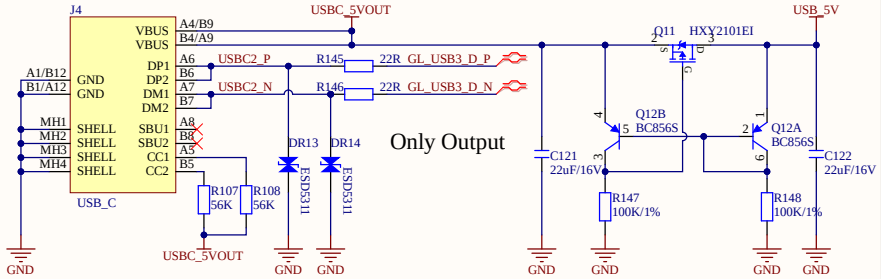
Headphone detection triggers SPK_EN to go low, which cuts off power to the power amplifier (PA)



USBC_L

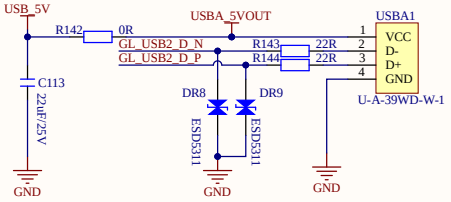


USBA+USBC_L ： Current Limit: 1A

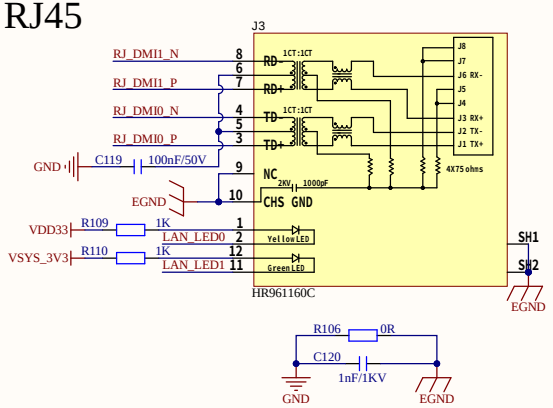


USBA

Only Output



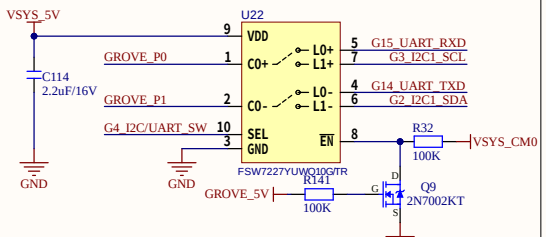
RJ45

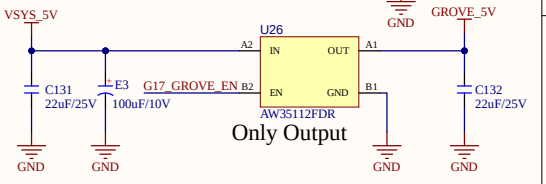


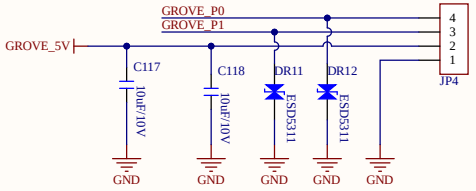
GROVE

Only Output

GROVE_SW	Function
L	UART
H	I2C1

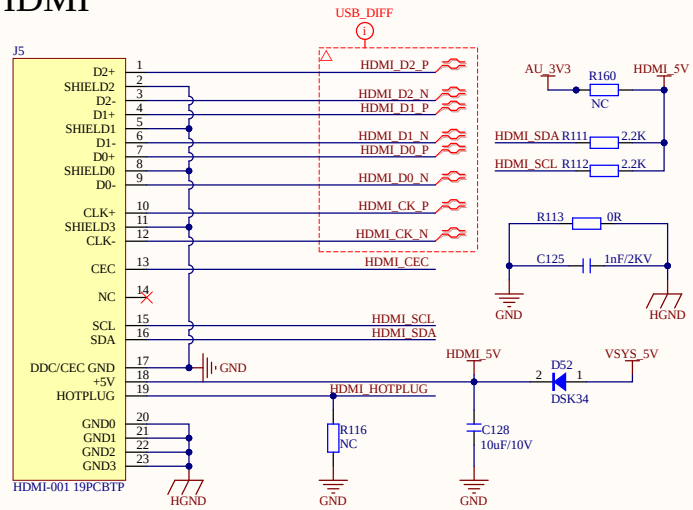


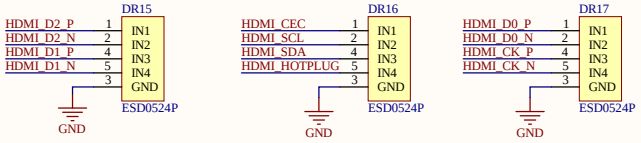




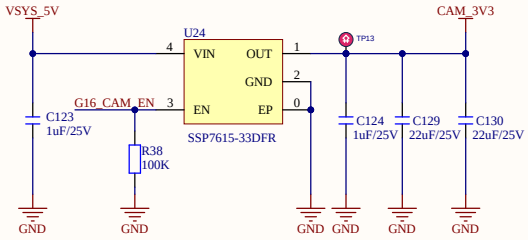
the GROVE_5V : Max current shall not exceed 0.5A

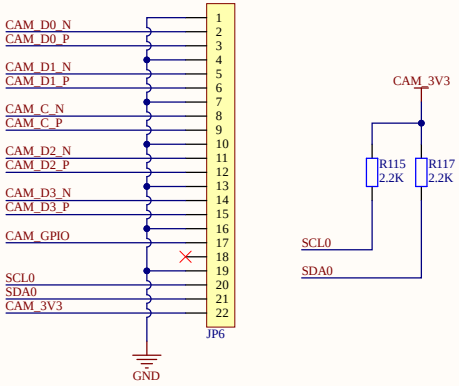
HDMI



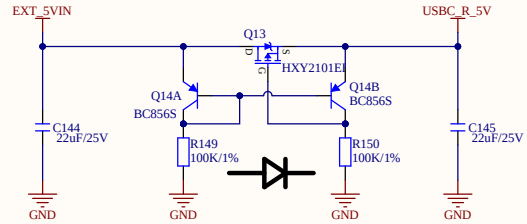


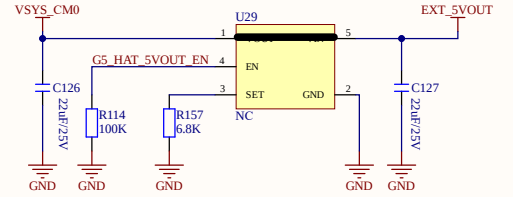
CAMERA

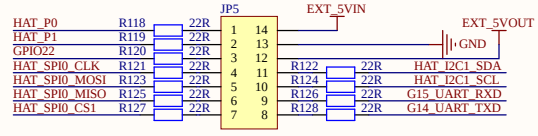




HAT.PORT







WARNING:
Do not supply power through USBC_R and EXT_5VIN (HAT Port) at the same time