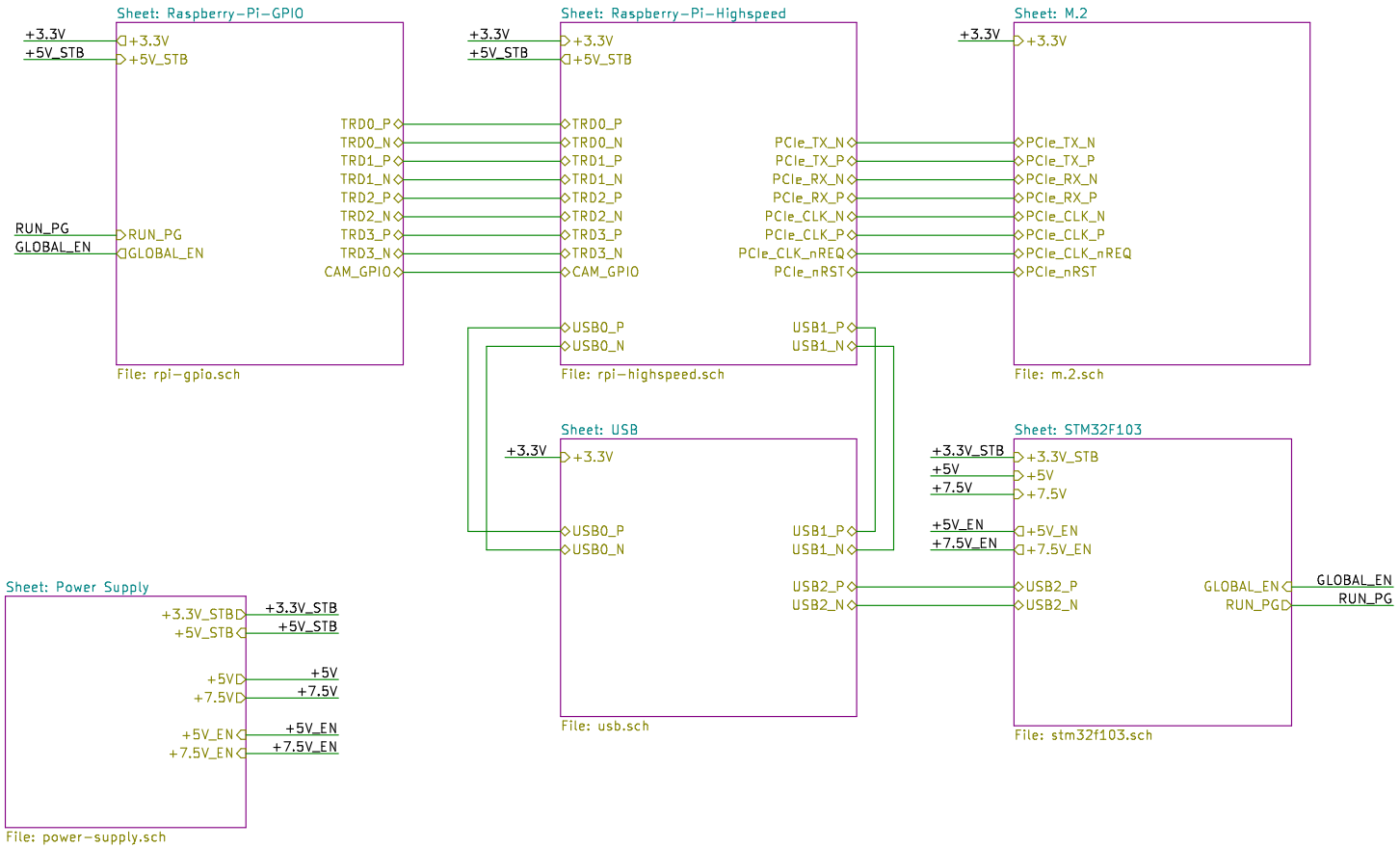
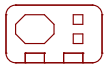




LAYOUT1
PSOne-Board-Layout

Standby power:

+3.3V_STB → +3.3V_STB

+5V_STB → +5V_STB

PSOne peripheral power (controlled by STM32):

+5V → +5V

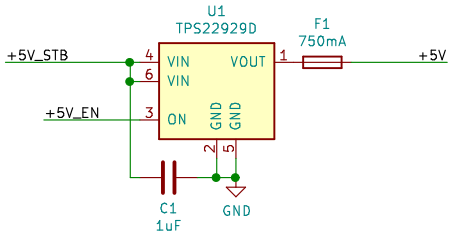
+7.5V → +7.5V

Control inputs from STM32

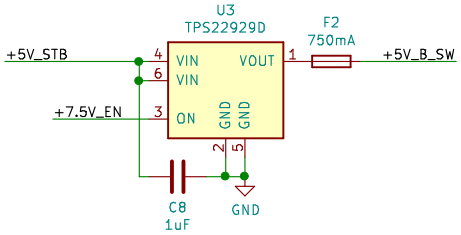
+5V_EN → +5V_EN

+7.5V_EN → +7.5V_EN

+5V power switch for PSOne peripherals

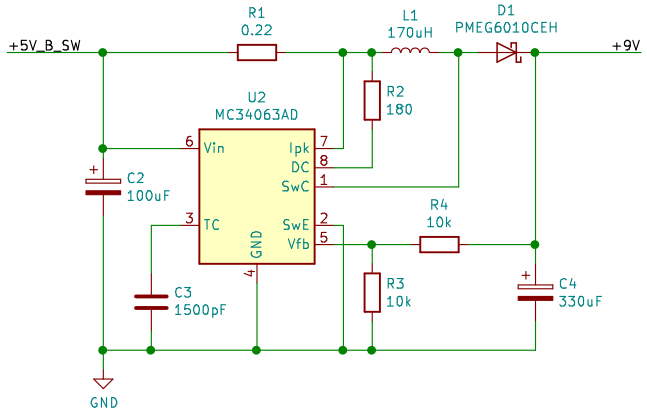


+5V power switch to +7.5V boost converter for cd drive and rumble



+9V boost converter

TODO: R3, R4 and output should be changed for 7.5V (Playstation 1 uses 9V, PSOne only 7.5V)

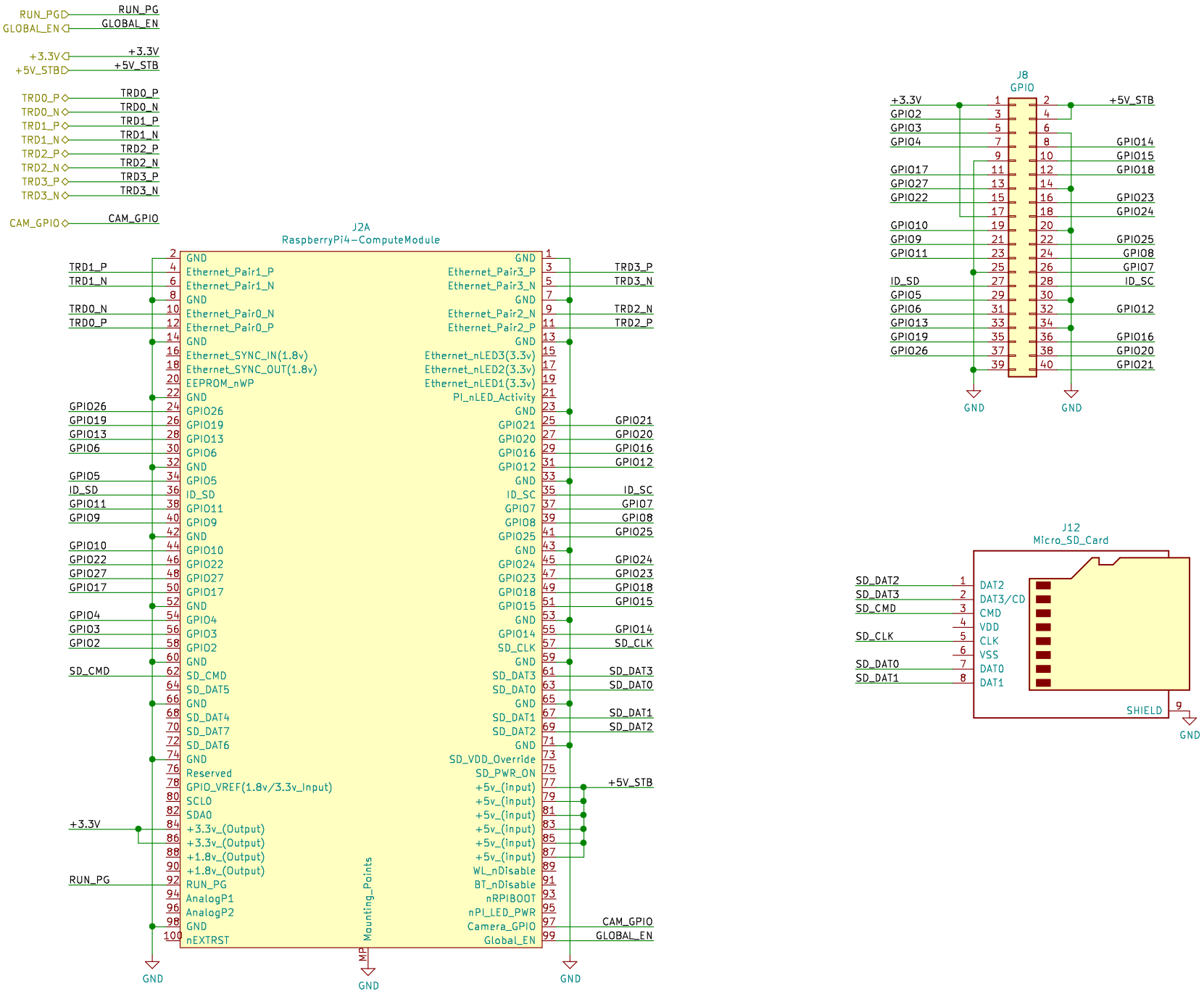


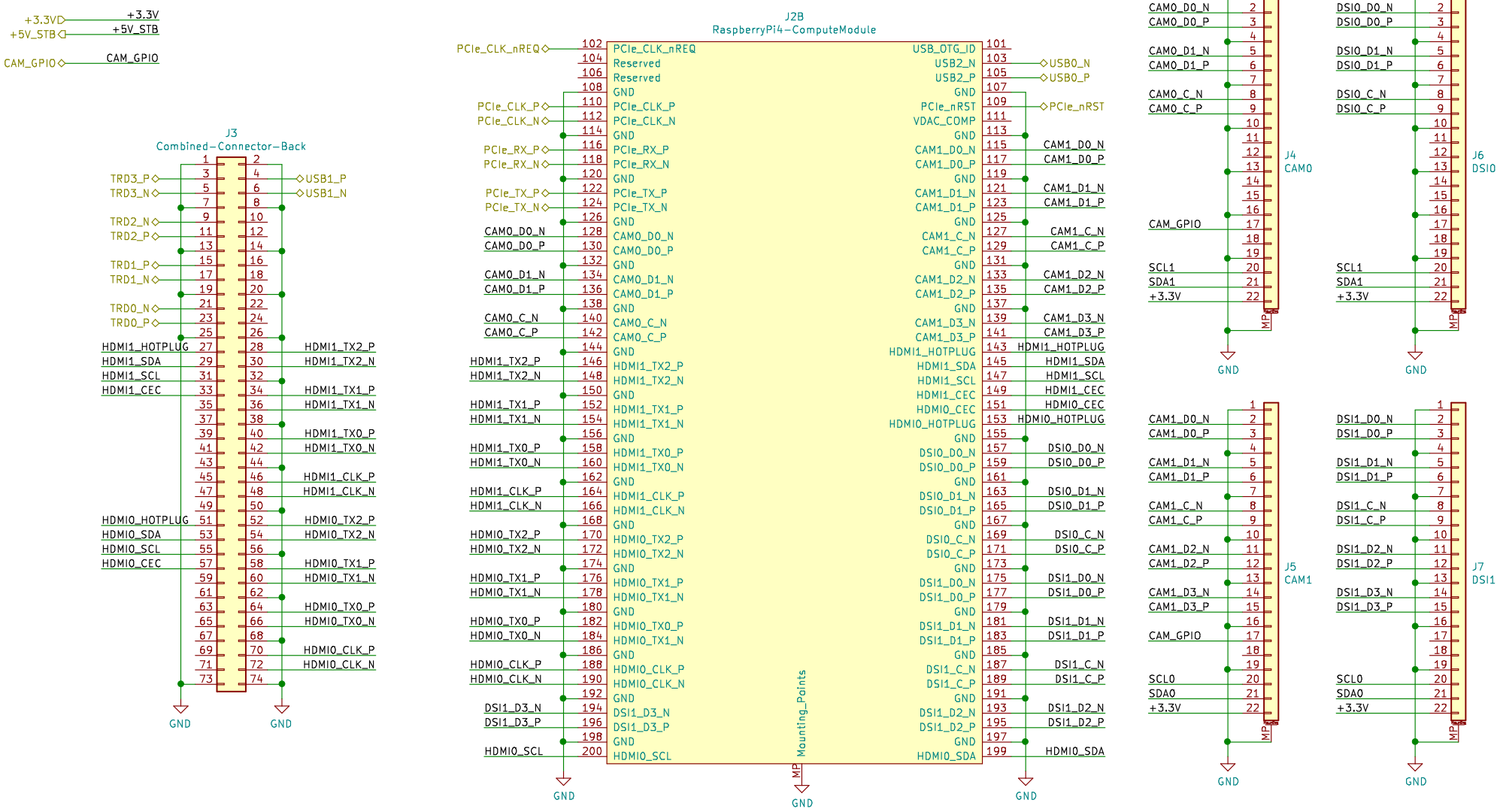
TODO: +5V_STB to +3.3V_STB converter for STM32F103 and eventually M.2

Or use the +3.3V from the Compute Module?

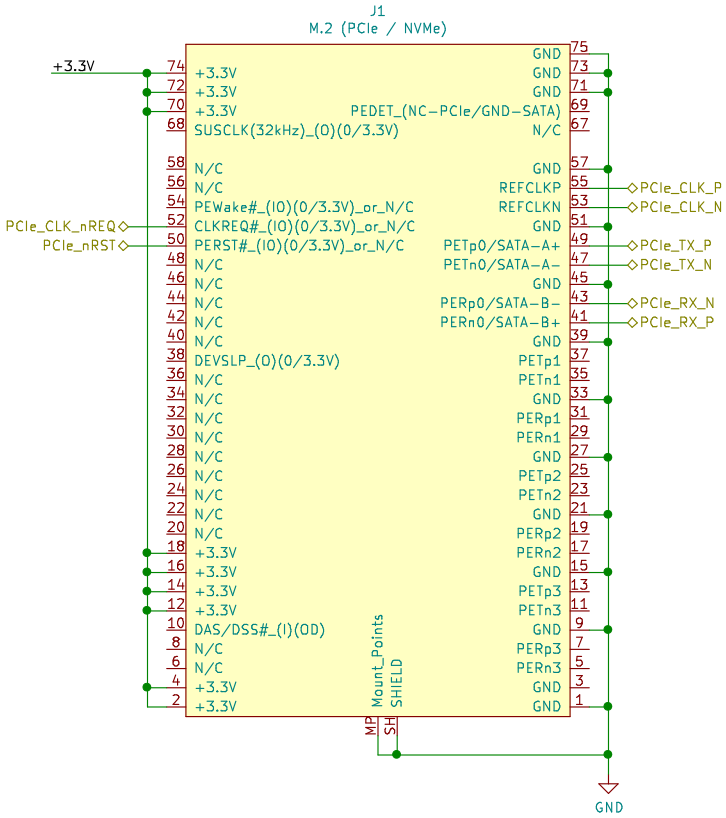
+5V_STB

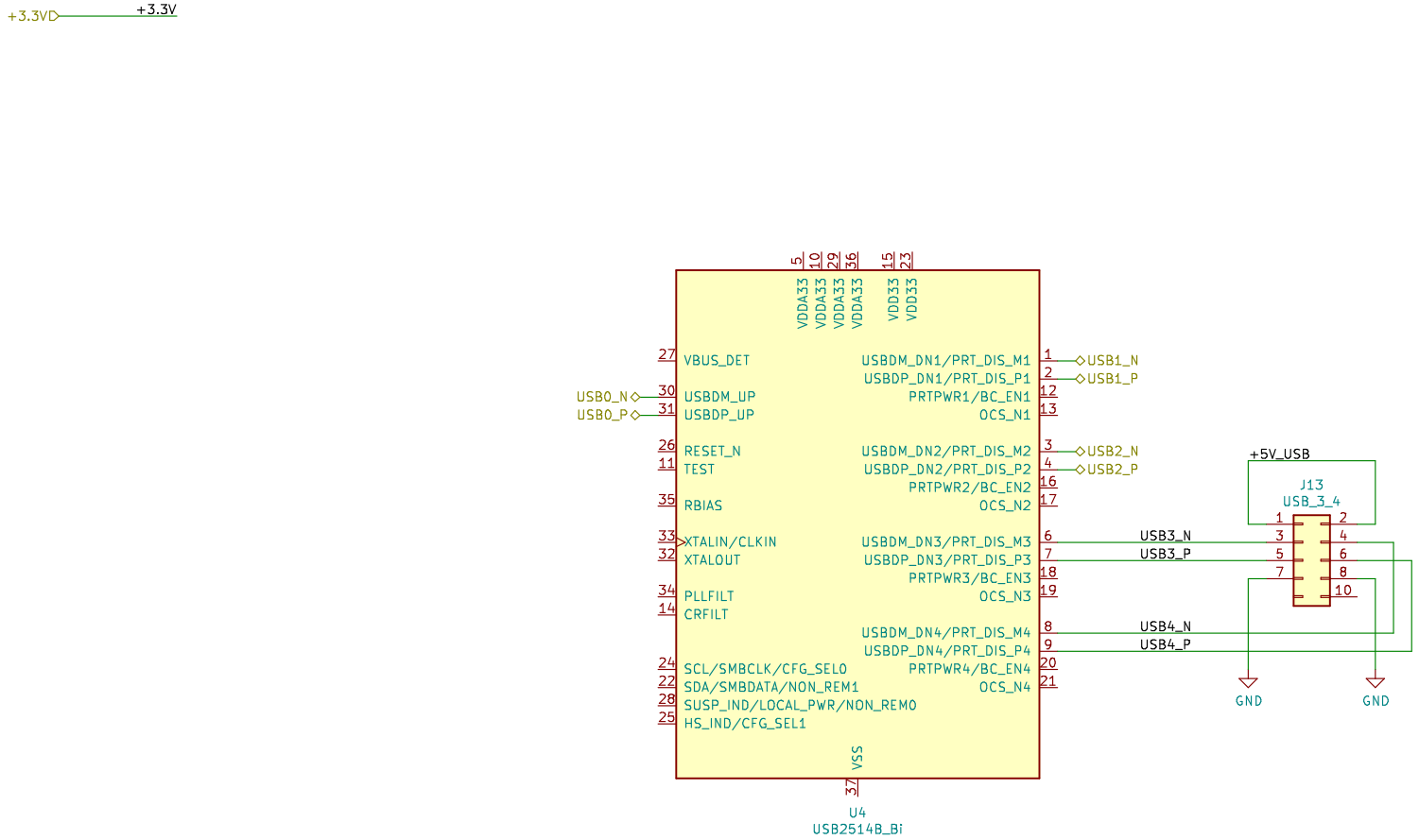
+3.3V_STB

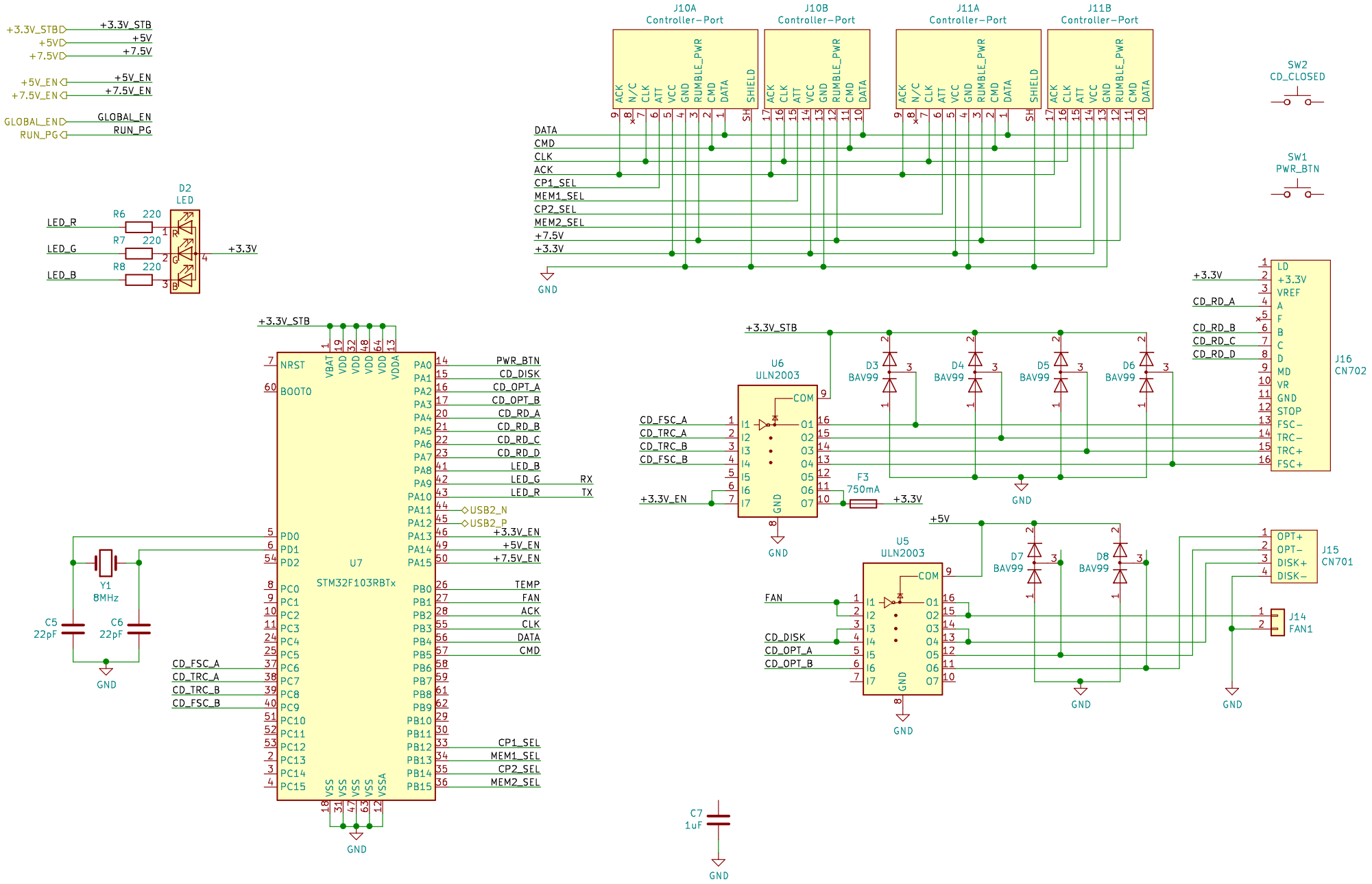

RUN_PG
GLOBAL_EN
+3.3V
+5V_STB
TRD0_P
TRD0_N
TRD1_P
TRD1_N
TRD2_P
TRD2_N
TRD3_P
TRD3_N
CAM_GPIO
J2A
RaspberryPi4–ComputeModule
GND
Ethernet_Pair1_P
Ethernet_Pair1_N
Ethernet_Pair0_N
Ethernet_Pair0_P
Ethernet_SYNC_IN(1.8v)
Ethernet_SYNC_OUT(1.8v)
EEPROM_nWP
GPIO26
GPIO19
GPIO13
GPIO6
GPIO5
ID_SD
GPIO11
GPIO9
GPIO10
GPIO22
GPIO27
GPIO17
GPIO4
GPIO3
GPIO2
SD_CMD
SD_DAT5
SD_DAT4
SD_DAT7
SD_DAT6
Reserved
GPIO_VREF(1.8v/3.3v_Input)
SCL0
SDA0
+3.3v_(Output)
+1.8v_(Output)
RUN_PG
AnalogP1
AnalogP2
nEXTRST
Ethernet_Pair3_P
Ethernet_Pair3_N
Ethernet_Pair2_N
Ethernet_Pair2_P
Ethernet_nLED3(3.3v)
Ethernet_nLED2(3.3v)
Ethernet_nLED1(3.3v)
PI_nLED_Activity
GPIO21
GPIO20
GPIO16
GPIO12
ID_SC
GPIO7
GPIO8
GPIO25
GPIO24
GPIO23
GPIO18
GPIO15
GPIO14
SD_CLK
SD_DAT3
SD_DAT0
SD_DAT1
SD_DAT2
SD_VDD_Override
SD_PWR_ON
+5v_(input)
WL_nDisable
BT_nDisable
nRPIBOOT
nPI_LED_PWR
Camera_GPIO
Global_EN
Mounting_Points
MP
J8
GPIO
J12
Micro_SD_Card
DAT2
DAT3/CD
CMD
VDD
CLK
VSS
DAT0
DAT1
SHIELD


+3.3V
+5V_STB
CAM_GPIO
J3
Combined-Connector-Back
TRD3_P
TRD3_N
TRD2_N
TRD2_P
TRD1_P
TRD1_N
TRD0_N
TRD0_P
USB1_P
USB1_N
HDMI1_HOTPLUG
HDMI1_SDA
HDMI1_SCL
HDMI1_CEC
HDMI1_TX2_P
HDMI1_TX2_N
HDMI1_TX1_P
HDMI1_TX1_N
HDMI1_TX0_P
HDMI1_TX0_N
HDMI1_CLK_P
HDMI1_CLK_N
HDMI0_HOTPLUG
HDMI0_SDA
HDMI0_SCL
HDMI0_CEC
HDMI0_TX2_P
HDMI0_TX2_N
HDMI0_TX1_P
HDMI0_TX1_N
HDMI0_TX0_P
HDMI0_TX0_N
HDMI0_CLK_P
HDMI0_CLK_N
GND
GND
J2B
RaspberryPi4-ComputeModule
PCIe_CLK_nREQ
PCIe_CLK_P
PCIe_CLK_N
PCIe_RX_P
PCIe_RX_N
PCIe_TX_P
PCIe_TX_N
CAM0_D0_N
CAM0_D0_P
CAM0_D1_N
CAM0_D1_P
CAM0_C_N
CAM0_C_P
DSI1_D3_N
DSI1_D3_P
HDMI0_SCL
Reserved
Reserved
USB_OTG_ID
USB2_N
USB2_P
PCIe_nRST
VDAC_COMP
CAM1_D0_N
CAM1_D0_P
CAM1_D1_N
CAM1_D1_P
CAM1_C_N
CAM1_C_P
CAM1_D2_N
CAM1_D2_P
CAM1_D3_N
CAM1_D3_P
HDMI1_HOTPLUG
HDMI1_SDA
HDMI1_SCL
HDMI1_CEC
HDMI0_CEC
HDMI0_HOTPLUG
DSI0_D0_N
DSI0_D0_P
DSI0_D1_N
DSI0_D1_P
DSI0_C_N
DSI0_C_P
DSI1_D0_N
DSI1_D0_P
DSI1_D1_N
DSI1_D1_P
DSI1_C_N
DSI1_C_P
DSI1_D2_N
DSI1_D2_P
HDMI0_SDA
USB0_N
USB0_P
PCIe_nRST
Mounting_Points
MP
GND
GND
GND
J4
CAM0
CAM0_D0_N
CAM0_D0_P
CAM0_D1_N
CAM0_D1_P
CAM0_C_N
CAM0_C_P
CAM_GPIO
SCL1
SDA1
+3.3V
J6
DSI0
DSI0_D0_N
DSI0_D0_P
DSI0_D1_N
DSI0_D1_P
DSI0_C_N
DSI0_C_P
SCL1
SDA1
+3.3V
J5
CAM1
CAM1_D0_N
CAM1_D0_P
CAM1_D1_N
CAM1_D1_P
CAM1_C_N
CAM1_C_P
CAM1_D2_N
CAM1_D2_P
CAM1_D3_N
CAM1_D3_P
CAM_GPIO
SCL0
SDA0
+3.3V
J7
DSI1
DSI1_D0_N
DSI1_D0_P
DSI1_D1_N
DSI1_D1_P
DSI1_C_N
DSI1_C_P
DSI1_D2_N
DSI1_D2_P
DSI1_D3_N
DSI1_D3_P
SCL0
SDA0
+3.3V

+3.3VD +3.3V


J1
M.2 (PCIe / NVMe)
+3.3V
PCIe_CLK_nREQ
PCIe_nRST
74 +3.3V
72 +3.3V
70 +3.3V
68 SUSCLK(32kHz)_(O)(0/3.3V)
58 N/C
56 N/C
54 PEWake#_(IO)(0/3.3V)_or_N/C
52 CLKREQ#_(IO)(0/3.3V)_or_N/C
50 PERST#_(IO)(0/3.3V)_or_N/C
48 N/C
46 N/C
44 N/C
42 N/C
40 N/C
38 DEVSLP_(O)(0/3.3V)
36 N/C
34 N/C
32 N/C
30 N/C
28 N/C
26 N/C
24 N/C
22 N/C
20 N/C
18 +3.3V
16 +3.3V
14 +3.3V
12 +3.3V
10 DAS/DSS#_(I)(OD)
8 N/C
6 N/C
4 +3.3V
2 +3.3V
MP Mount_Points
SH SHIELD
75 GND
73 GND
71 GND
69 PEDET_(NC-PCIe/GND-SATA)
67 N/C
57 GND
55 REFCLKP
53 REFCLKN
51 GND
49 PETp0/SATA-A+
47 PETn0/SATA-A-
45 GND
43 PERp0/SATA-B-
41 PERn0/SATA-B+
39 GND
37 PETp1
35 PETn1
33 GND
31 PERp1
29 PERn1
27 GND
25 PETp2
23 PETn2
21 GND
19 PERp2
17 PERn2
15 GND
13 PETp3
11 PETn3
9 GND
7 PERp3
5 PERn3
3 GND
1 GND
PCIe_CLK_P
PCIe_CLK_N
PCIe_TX_P
PCIe_TX_N
PCIe_RX_N
PCIe_RX_P
GND


+3.3VD
+3.3V
5
10
29
36
15
23
VDDA33
VDDA33
VDDA33
VDDA33
VDD33
VDD33
27
VBUS_DET
30
USBDM_UP
31
USBDP_UP
26
RESET_N
11
TEST
35
RBIAS
33
XTALIN/CLKIN
32
XTALOUT
34
PLLFILT
14
CRFILT
24
SCL/SMBCLK/CFG_SEL0
22
SDA/SMBDATA/NON_REM1
28
SUSP_IND/LOCAL_PWR/NON_REMO
25
HS_IND/CFG_SEL1
37
VSS
USB0_N
USB0_P
USBDM_DN1/PRT_DIS_M1
USBDP_DN1/PRT_DIS_P1
PRTPWR1/BC_EN1
OCS_N1
USBDM_DN2/PRT_DIS_M2
USBDP_DN2/PRT_DIS_P2
PRTPWR2/BC_EN2
OCS_N2
USBDM_DN3/PRT_DIS_M3
USBDP_DN3/PRT_DIS_P3
PRTPWR3/BC_EN3
OCS_N3
USBDM_DN4/PRT_DIS_M4
USBDP_DN4/PRT_DIS_P4
PRTPWR4/BC_EN4
OCS_N4
1
2
12
13
3
4
16
17
6
7
18
19
8
9
20
21
USB1_N
USB1_P
USB2_N
USB2_P
USB3_N
USB3_P
USB4_N
USB4_P
U4
USB2514B_Bi
+5V_USB
J13
USB_3_4
1
2
3
4
5
6
7
8
10
GND
GND


+3.3V_STB
+5V
+7.5V
+5V_EN
+7.5V_EN
GLOBAL_EN
RUN_PG
D2
LED
R6 220
R7 220
R8 220
LED_R
LED_G
LED_B
+3.3V
J10A
Controller–Port
J10B
Controller–Port
J11A
Controller–Port
J11B
Controller–Port
ACK
N/C
CLK
ATT
VCC
GND
RUMBLE_PWR
CMD
DATA
SHIELD
DATA
CMD
CLK
ACK
CP1_SEL
MEM1_SEL
CP2_SEL
MEM2_SEL
+7.5V
+3.3V
GND
SW2
CD_CLOSED
SW1
PWR_BTN
U7
STM32F103RBTx
NRST
BOOT0
PA0 PWR_BTN
PA1 CD_DISK
PA2 CD_OPT_A
PA3 CD_OPT_B
PA4 CD_RD_A
PA5 CD_RD_B
PA6 CD_RD_C
PA7 CD_RD_D
PA8 LED_B
PA9 LED_G RX
PA10 LED_R TX
PA11 USB2_N
PA12 USB2_P
PA13 +3.3V_EN
PA14 +5V_EN
PA15 +7.5V_EN
PB0 TEMP
PB1 FAN
PB2 ACK
PB3 CLK
PB4 DATA
PB5 CMD
PB12 CP1_SEL
PB13 MEM1_SEL
PB14 CP2_SEL
PB15 MEM2_SEL
PC0
PC1
PC2
PC3
PC4
PC5
PC6 CD_FSC_A
PC7 CD_TRC_A
PC8 CD_TRC_B
PC9 CD_FSC_B
PC10
PC11
PC12
PC13
PC14
PC15
Y1
8MHz
C5
22pF
C6
22pF
C7
1uF
U6
ULN2003
COM
CD_FSC_A
CD_TRC_A
CD_TRC_B
CD_FSC_B
+3.3V_EN
D3 BAV99
D4 BAV99
D5 BAV99
D6 BAV99
F3
750mA
U5
ULN2003
FAN
CD_DISK
CD_OPT_A
CD_OPT_B
D7 BAV99
D8 BAV99
J16
CN702
LD
VREF
CD_RD_A
CD_RD_B
CD_RD_C
CD_RD_D
MD
VR
STOP
FSC–
TRC–
TRC+
FSC+
J15
CN701
OPT+
OPT–
DISK+
DISK–
J14
FAN1