

MP1  
PCB\_Spacer\_M2  
9774030243R  
Würth Elektronik

MP3  
PCB\_Spacer\_M2  
9774030243R  
Würth Elektronik

Logo N1  
antmicro\_logo

Logo N2  
oshw\_logo

SoM



File: som.kicad\_sch

power supply



File: power\_supply.kicad\_sch

display module



File: display\_module.kicad\_sch

serialAnd\_cameras\_interfaces



File: serialAnd\_cameras\_interfaces.kicad\_sch

USB\_flash\_debug



File: USB\_flash\_debug.kicad\_sch

USB\_HUB\_Connectors



File: USB\_HUB\_Connectors.kicad\_sch

peripherals



File: peripherals.kicad\_sch

USB-PD



File: USB-PD.kicad\_sch

MP2  
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MP4  
PCB\_Spacer\_M2  
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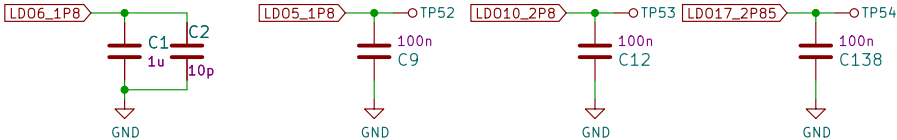
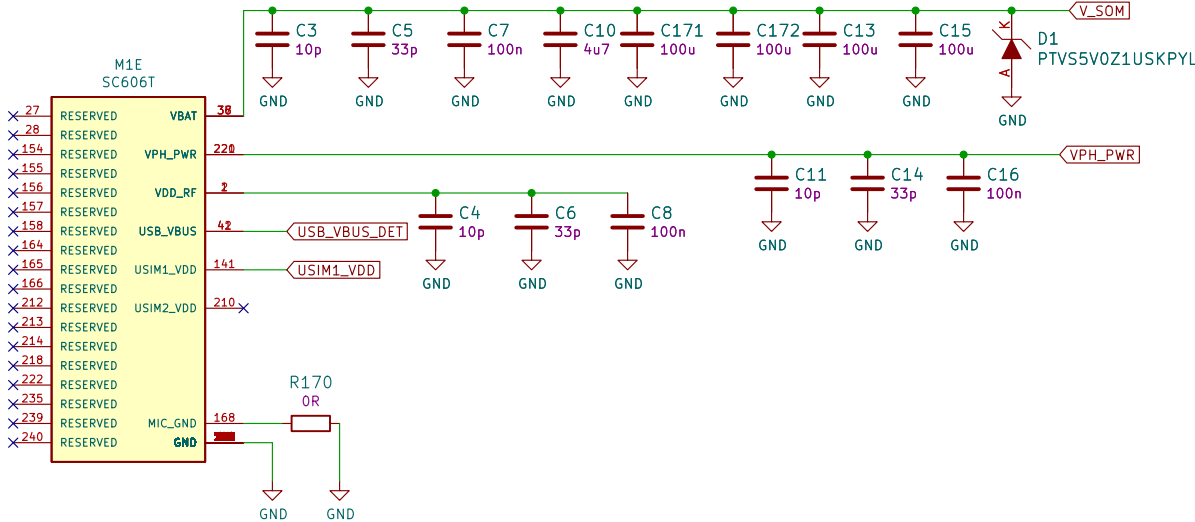
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**Title: Snapdragon 625 Baseboard**

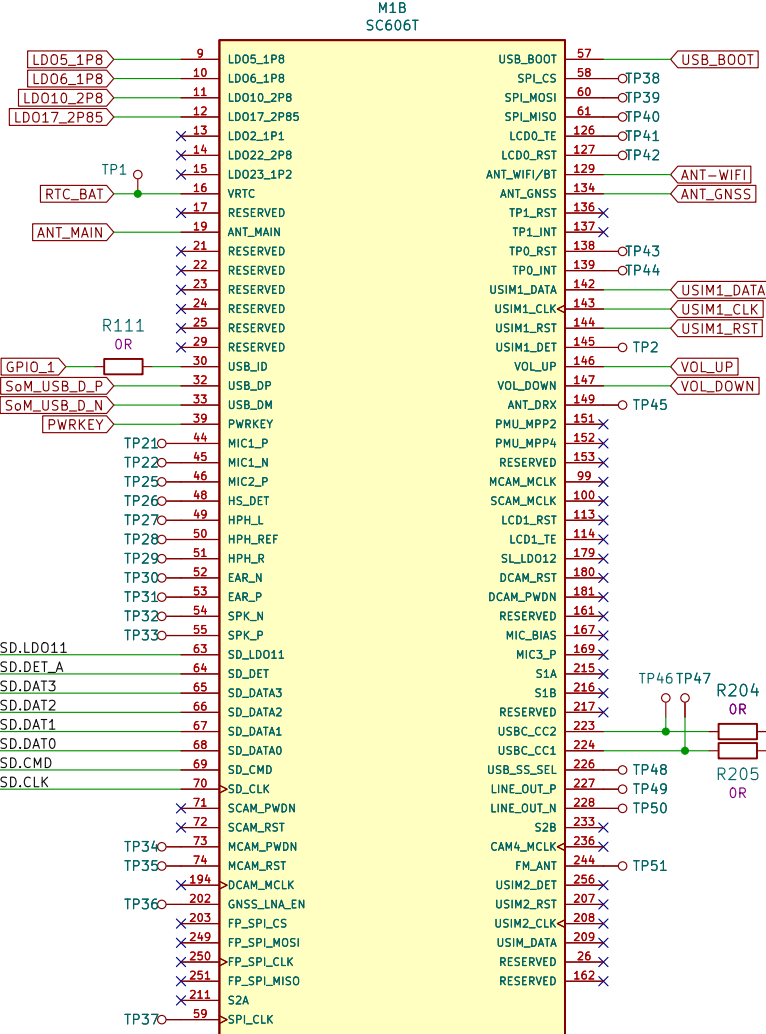
Size: A3 Date: 2022-05-10  
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1

Rev: 1.0.1  
Id: 1/9

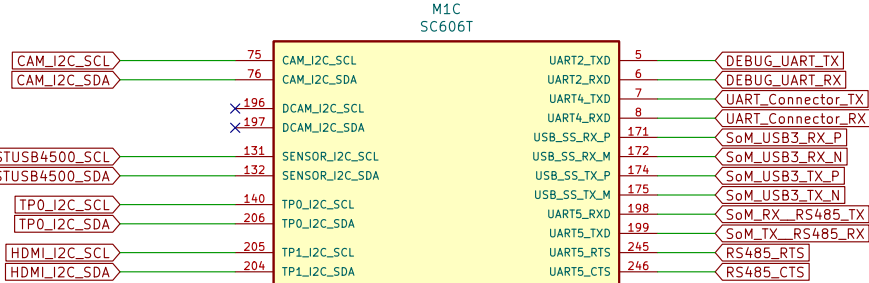
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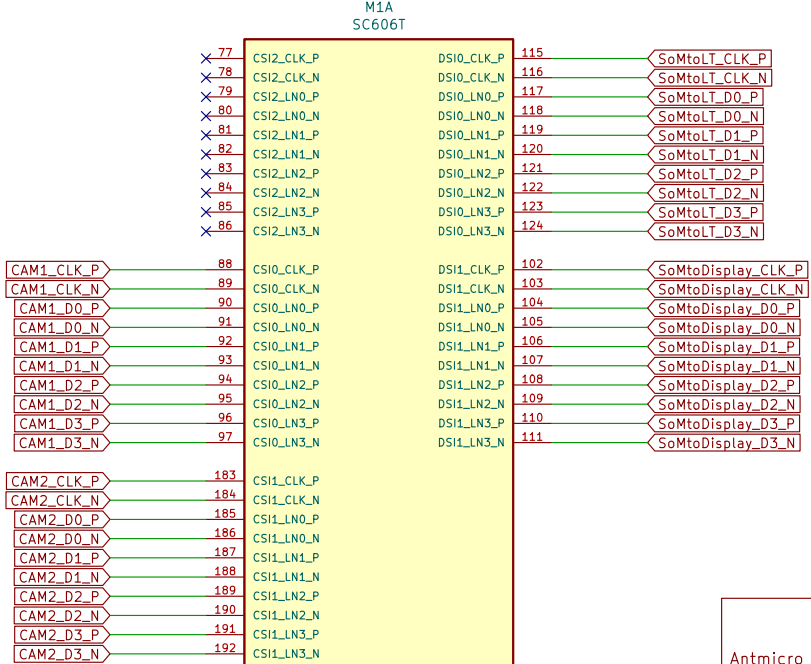
## MISC



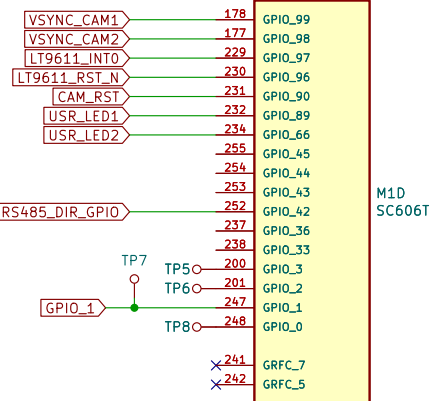
## I2C, USB SS, UART



## CSI, DSI



# GPIO



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Sheet: /SoM/  
File: som.kicad\_sch

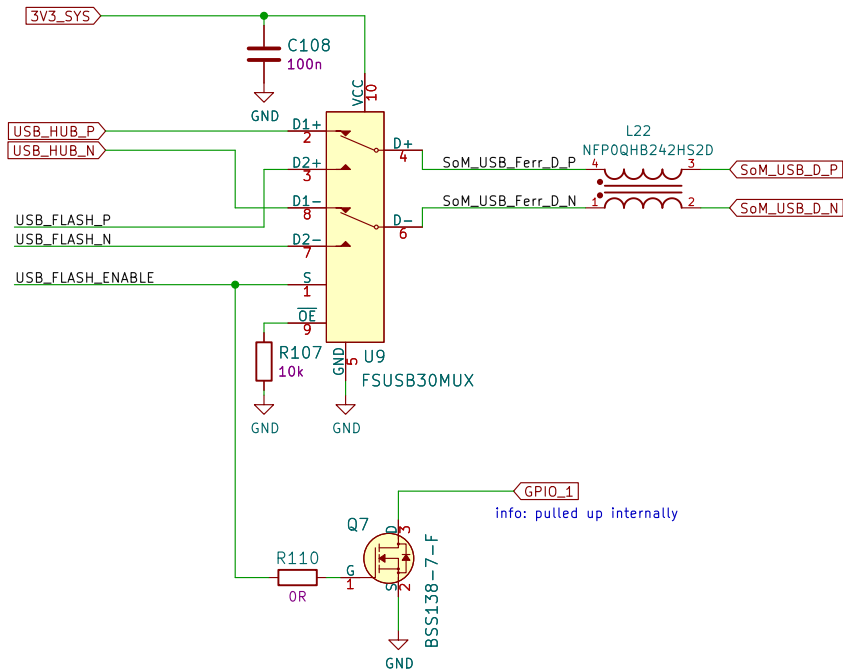
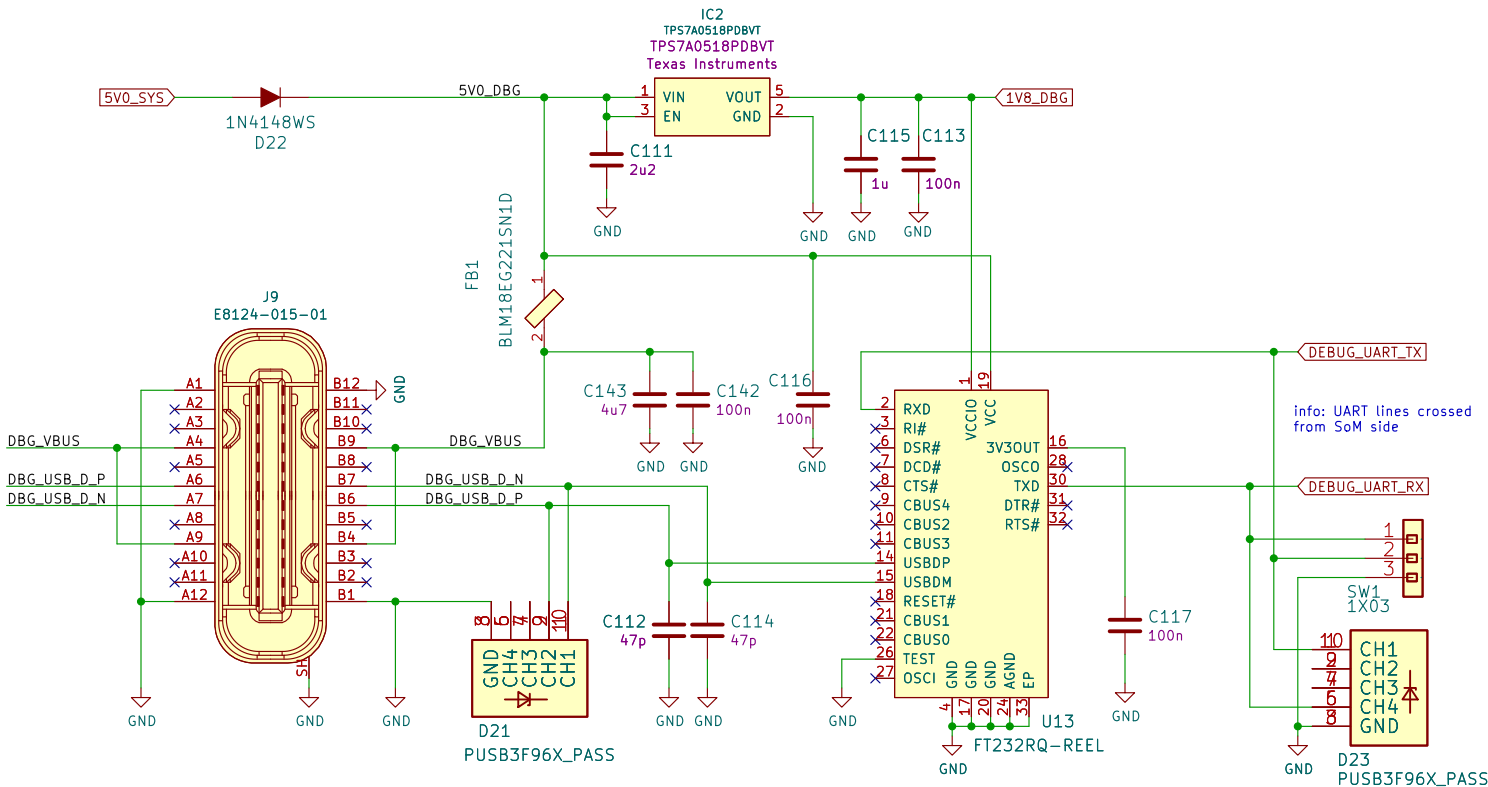
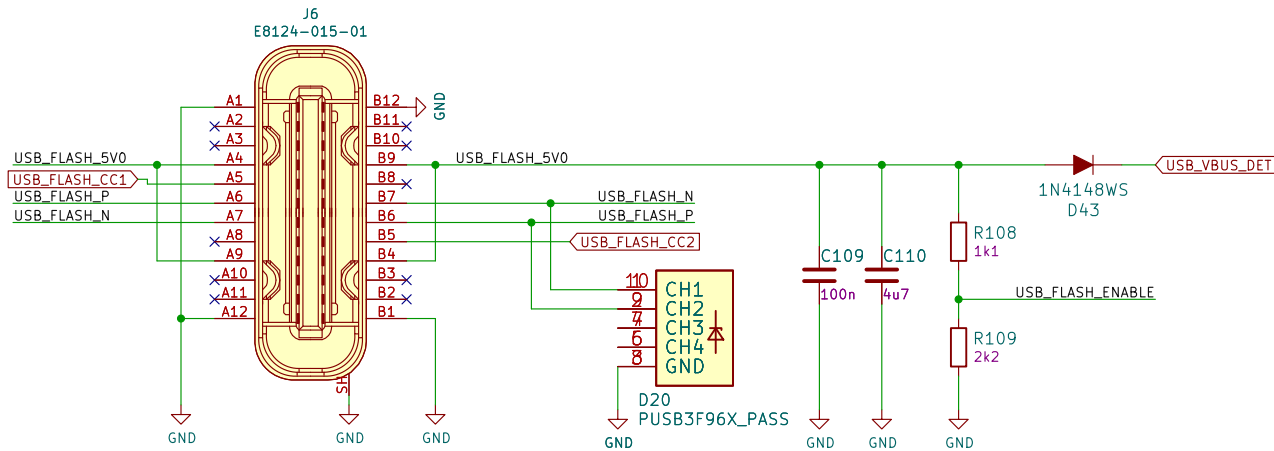
**Title: Snapdragon 625 Baseboard**

Size: A3	Date: 2022-05-10
KiCad E.D.A. eeschema 6.0.11-2627ca5db0~126~ubuntu22.04.1	

Rev: 1.0.1  
Id: 2/9

USB SoM flashing IF

Debug UART



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Sheet: /USB\_flash\_debug/  
File: USB\_flash\_debug.kicad\_sch

**Title: Snapdragon 625 Baseboard**

Size: A3 Date: 2022-05-10  
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1

Rev: 1.0.1  
Id: 3/9

The image contains two circuit diagrams. The left diagram is titled "5V Main DC/DC" and shows a TPS54561DPRT DC-DC converter. It has a VDD input, a feedback network with resistors R4, R5, R6, and R9, and a compensation network with capacitors C20, C22, and C23. The output is 5V\_SYS, filtered by capacitors C25, C28, C29, and C30. The right diagram is titled "5V to 3V3 DC/DC for system" and shows an AP62301WU-7 DC-DC converter. It has a 5V0\_SYS input, a feedback network with resistors R19, R20, R30, and R31, and a compensation network with capacitors C33 and C35. The output is 3V3\_SYS, filtered by capacitors C40 and C42.

5V to 3V3 DC/DC for system

The schematic diagram illustrates a 5V to 3V3 DC/DC converter circuit. The input is labeled 5V0\_SYS. The circuit includes a 100k resistor (R19) connected to the VIN pin (pin 3) of the AP62301WU-7 IC (U3). The EN pin (pin 5) is connected to the 5V0\_SYS line. The GND pin (pin 1) is connected to ground. The SW pin (pin 2) is connected to the SW pin of the XEL4030-332MEC inductor (L4). The BST pin (pin 6) is connected to the BST pin of the inductor. The FB pin (pin 4) is connected to the FB pin of the inductor. The output of the inductor is connected to the 3V3\_SYS line. The circuit also includes several capacitors: C35 (100nF) connected between the SW and BST pins, C33 (10uF) connected between the EN and GND pins, C40 (22uF) connected between the SW and GND pins, and C42 (22uF) connected between the FB and GND pins. Other components include resistors R20 (0R) and R213 (0R) connected to ground, and a 10k resistor (R31) connected to the 3V3\_SYS line. A temperature sensor (TP58) is also connected to the 3V3\_SYS line.

**5V Main DC/DC**

This diagram shows a 5V Main DC/DC converter using the TPS54561DPRT (IC1). The input is VDD, which is connected to the VIN pin (pin 2). The EN pin (pin 3) is connected to VDD through a 120k resistor (R4). The RT/CLK pin (pin 5) is connected to VDD through a 18k resistor (R5). The SS/TR pin (pin 4) is connected to VDD through a 243k resistor (R6). The COMP pin (pin 7) is connected to VDD through a 16k resistor (R9). The PWRGD pin (pin 10) is connected to VDD through a 100k resistor (R12). The BOOT pin (pin 1) is connected to VDD through a 100nF capacitor (C25). The SW pin (pin 9) is connected to the SW pin of the L27447798720 inductor (L2). The FB pin (pin 6) is connected to the FB pin of the L27447798720 inductor (L2). The GND pin (pin 11) is connected to GND. The output is 5V0\_SYS, which is connected to the SW pin of the L27447798720 inductor (L2). The output is filtered by a 47uF 6.3V capacitor (C28) and a 47uF 6.3V capacitor (C29). The output is also connected to a 47uF 6.3V capacitor (C30) and a 47pF capacitor (C23). The output is also connected to a 47pF capacitor (C22) and a 47pF capacitor (C20). The output is also connected to a 47pF capacitor (C17) and a 47pF capacitor (C18). The output is also connected to a 47pF capacitor (C19) and a 47pF capacitor (C16). The output is also connected to a 47pF capacitor (C15) and a 47pF capacitor (C14). The output is also connected to a 47pF capacitor (C13) and a 47pF capacitor (C12). The output is also connected to a 47pF capacitor (C11) and a 47pF capacitor (C10). The output is also connected to a 47pF capacitor (C9) and a 47pF capacitor (C8). The output is also connected to a 47pF capacitor (C7) and a 47pF capacitor (C6). The output is also connected to a 47pF capacitor (C5) and a 47pF capacitor (C4). The output is also connected to a 47pF capacitor (C3) and a 47pF capacitor (C2). The output is also connected to a 47pF capacitor (C1) and a 47pF capacitor (C0). The output is also connected to a 47pF capacitor (C17) and a 47pF capacitor (C18). The output is also connected to a 47pF capacitor (C19) and a 47pF capacitor (C16). The output is also connected to a 47pF capacitor (C15) and a 47pF capacitor (C14). The output is also connected to a 47pF capacitor (C13) and a 47pF capacitor (C12). The output is also connected to a 47pF capacitor (C11) and a 47pF capacitor (C10). The output is also connected to a 47pF capacitor (C9) and a 47pF capacitor (C8). The output is also connected to a 47pF capacitor (C7) and a 47pF capacitor (C6). The output is also connected to a 47pF capacitor (C5) and a 47pF capacitor (C4). The output is also connected to a 47pF capacitor (C3) and a 47pF capacitor (C2). The output is also connected to a 47pF capacitor (C1) and a 47pF capacitor (C0).

**5V to 3V3 DC/DC for system**

This diagram shows a 5V to 3V3 DC/DC converter for the system using the AP62301WU-7 (U3). The input is 5V0\_SYS, which is connected to the VIN pin (pin 3). The EN pin (pin 5) is connected to 5V0\_SYS through a 100k resistor (R19). The SW pin (pin 2) is connected to the SW pin of the L4XEL4030-332MEC inductor (L4). The BST pin (pin 6) is connected to the BST pin of the L4XEL4030-332MEC inductor (L4). The FB pin (pin 4) is connected to the FB pin of the L4XEL4030-332MEC inductor (L4). The output is 3V3\_SYS, which is connected to the SW pin of the L4XEL4030-332MEC inductor (L4). The output is filtered by a 31k resistor (R30) and a 22uF capacitor (C40). The output is also connected to a 22uF capacitor (C42) and a 22uF capacitor (C35). The output is also connected to a 22uF capacitor (C33) and a 22uF capacitor (C31). The output is also connected to a 22uF capacitor (C30) and a 22uF capacitor (C29). The output is also connected to a 22uF capacitor (C28) and a 22uF capacitor (C27). The output is also connected to a 22uF capacitor (C26) and a 22uF capacitor (C25). The output is also connected to a 22uF capacitor (C24) and a 22uF capacitor (C23). The output is also connected to a 22uF capacitor (C22) and a 22uF capacitor (C21). The output is also connected to a 22uF capacitor (C20) and a 22uF capacitor (C19). The output is also connected to a 22uF capacitor (C18) and a 22uF capacitor (C17). The output is also connected to a 22uF capacitor (C16) and a 22uF capacitor (C15). The output is also connected to a 22uF capacitor (C14) and a 22uF capacitor (C13). The output is also connected to a 22uF capacitor (C12) and a 22uF capacitor (C11). The output is also connected to a 22uF capacitor (C10) and a 22uF capacitor (C9). The output is also connected to a 22uF capacitor (C8) and a 22uF capacitor (C7). The output is also connected to a 22uF capacitor (C6) and a 22uF capacitor (C5). The output is also connected to a 22uF capacitor (C4) and a 22uF capacitor (C3). The output is also connected to a 22uF capacitor (C2) and a 22uF capacitor (C1).

**5V to 3V3 DC/DC for camera**

This diagram shows a 5V to 3V3 DC/DC converter for the camera using the AP62301WU-7 (U2). The input is 5V0\_SYS, which is connected to the VIN pin (pin 3). The EN pin (pin 5) is connected to 5V0\_SYS through a 100k resistor (R17). The SW pin (pin 2) is connected to the SW pin of the L3XEL4030-332MEC inductor (L3). The BST pin (pin 6) is connected to the BST pin of the L3XEL4030-332MEC inductor (L3). The FB pin (pin 4) is connected to the FB pin of the L3XEL4030-332MEC inductor (L3). The output is 3V3\_CAM, which is connected to the SW pin of the L3XEL4030-332MEC inductor (L3). The output is filtered by a 31k resistor (R28) and a 22uF capacitor (C39). The output is also connected to a 22uF capacitor (C41) and a 22uF capacitor (C34). The output is also connected to a 22uF capacitor (C32) and a 22uF capacitor (C30). The output is also connected to a 22uF capacitor (C28) and a 22uF capacitor (C27). The output is also connected to a 22uF capacitor (C26) and a 22uF capacitor (C25). The output is also connected to a 22uF capacitor (C24) and a 22uF capacitor (C23). The output is also connected to a 22uF capacitor (C22) and a 22uF capacitor (C21). The output is also connected to a 22uF capacitor (C20) and a 22uF capacitor (C19). The output is also connected to a 22uF capacitor (C18) and a 22uF capacitor (C17). The output is also connected to a 22uF capacitor (C16) and a 22uF capacitor (C15). The output is also connected to a 22uF capacitor (C14) and a 22uF capacitor (C13). The output is also connected to a 22uF capacitor (C12) and a 22uF capacitor (C11). The output is also connected to a 22uF capacitor (C10) and a 22uF capacitor (C9). The output is also connected to a 22uF capacitor (C8) and a 22uF capacitor (C7). The output is also connected to a 22uF capacitor (C6) and a 22uF capacitor (C5). The output is also connected to a 22uF capacitor (C4) and a 22uF capacitor (C3). The output is also connected to a 22uF capacitor (C2) and a 22uF capacitor (C1).

### 5V to 3V3 DC/DC for system

5V0\_SYS

R19 100k

R20 0R DNP

C33 10u

U3 AP62301WU-7

VIN SW

EN BST

GND FB

C35 100n

L4 XEL4030-332MEC 3u3/5.9A

R30 31k6

R31 10k

C40 22u

C42 22u

TP58

R213 0R

3V3\_SYS

### 5V to 3V3 DC/DC for camera

5V0\_SYS

R17 100k

R18 0R DNP

C32 10u

U2 AP62301WU-7

VIN SW

EN BST

GND FB

C34 100n

L3 XEL4030-332MEC 3u3/5.9A

R28 31k6

R29 10k

C39 22u

C41 22u

TP59

R214 0R

3V3\_CAM

CAM\_RST 100R

Q1 BSS138APW

The image displays three circuit diagrams. The first, titled "Auto Power-On", shows a 5V0\_SYS input connected to a network of resistors (R21, R22, R24, R26, R27) and capacitors (C31, C36, C37, C38) leading to a 74LVC1G123DP,125 timer (U4). The timer's output (Q) drives the base of a BSS138-7-F MOSFET (Q2), which is connected to a PWRKEY input. The second diagram, titled "RTC", shows a 5V0\_SYS input connected to an AP62301WU-7 RTC (U1). The RTC's output (SW) is connected to an inductor (L1, XEL4030-332MEC) and a network of capacitors (C21, C24, C26, C27) and resistors (R7, R8, R10, R11, R215) leading to a 1V2\_SYS output. A note above the RTC circuit states: "Inductor value differs from datasheet. It is calculated and works." The third diagram is a simple schematic showing a 5V0\_SYS input connected to a 1V2\_SYS output through a resistor (R215).

Inductor value differs from datasheet.  
It is calculated and works.

The image displays a KiCad schematic for a power supply section. It features a timer component U4\_1 (SN74LVC1G123YZPR) and an RTC component. The timer's VCC pin is connected to 5V0\_SYS, and its output Q is connected to the RTC\_BAT input. The RTC component is also connected to a battery (BAT1, MS621FE-FL11E) and ground. The schematic is part of a larger project titled 'Snapdragon 625 Baseboard'.

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**RTC**

RTC\_BAT

BAT1  
MS621FE-FL11E

5V0\_SYS

U4\_1  
SN74LVC1G123YZPR

U4A 1  
A REXT/CEXT 7 U4REXT

U4B 2  
B DNP CEXT 6 U4CEXT

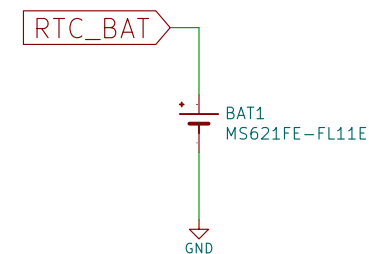
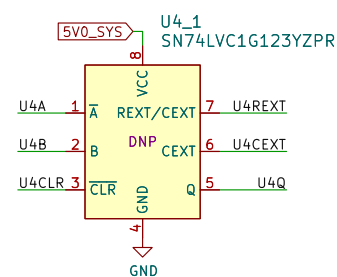
U4CLR 3  
CLR GND 5 U4Q

GND

Sheet: /power supply/  
File: power\_supply.kicad\_sch

**Title: Snapdragon 625 Baseboard**

Size: A3	Date: 2022-05-10	Rev: 1.0.1
KiCad: E.D.A.	eeschema: 6.0.11-2627ca5db0-126-ubuntu22.04.1	Id: 4/9



Rev: 1.0.1  
Id: 4/9

This figure displays a detailed PCB layout for the USB\_HUB\_Connectors section of the Snapdragon 625 Baseboard. The layout is organized into four main functional areas:

- USB Load Switch:** This section shows the power management for the USB hub. It includes a 5V0\_SYS input, a 5V0\_USB output, and a load switch IC (IC4, AP22652W6-7). Key components include resistors R171 (10k), R172 (470R), R173 (12k4), and R174 (DNP), and capacitors C160 (10u), C161 (100u), and C162 (100u). A diode D24 (KP-1608EC) is also present.
- USB HUB:** The central component is the USB hub IC (U15, USB57442G). It is connected to various system signals including 3V3\_SYS, 1V2\_SYS, and 5V0\_USB. The hub has multiple USB ports (USB\_C1, USB\_C2, USB\_C3) and is connected to the system bus via SPI and I2C. Key components include resistors R112 (0R), R114 (20k), R115 (20k), R116 (20k), R117 (20k), R118 (20k), R119 (20k), R120 (20k), R121 (1M), R122 (0R), R123 (56k), R124 (0R), R125 (56k), R126 (56k), R127 (56k), R128 (56k), R129 (56k), R130 (56k), R131 (56k), R132 (56k), R133 (56k), R134 (56k), R135 (56k), R136 (56k), R137 (56k), R138 (56k), R139 (56k), R140 (56k), R141 (56k), R142 (56k), R143 (56k), R144 (56k), R145 (56k), R146 (56k), R147 (56k), R148 (56k), R149 (56k), R150 (56k), R151 (56k), R152 (56k), R153 (56k), R154 (56k), R155 (56k), R156 (56k), R157 (56k), R158 (56k), R159 (56k), R160 (56k), R161 (56k), R162 (56k), R163 (56k), R164 (56k), R165 (56k), R166 (56k), R167 (56k), R168 (56k), R169 (56k), R170 (56k), R171 (56k), R172 (56k), R173 (56k), R174 (56k), R175 (56k), R176 (56k), R177 (56k), R178 (56k), R179 (56k), R180 (56k), R181 (56k), R182 (56k), R183 (56k), R184 (56k), R185 (56k), R186 (56k), R187 (56k), R188 (56k), R189 (56k), R190 (56k), R191 (56k), R192 (56k), R193 (56k), 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(56k), R527 (56k), R528 (56k), R529 (56k), R530 (56k), R531 (56k), R532 (56k), R5

This diagram illustrates the USB Hub and USB-C connectors for the Snapdragon 625 Baseboard. It includes a USB Load Switch, a USB Hub, and two USB-C connectors, each with its own ESD protection circuit.

### USB Load Switch

The USB Load Switch circuit (IC4: AP22652W6-7) controls the 5V0\_USB supply. It includes a 5V0\_SYS input, a 10k resistor (R171), a 470R resistor (R172), a 10uF capacitor (C160), a 12k4 resistor (R173), a 100uF capacitor (C161), and a 470R resistor (R174). The switch is controlled by a 5V0\_USB signal and a 5V0\_USB output.

### USB HUB

The USB Hub (U15: USB57442G) is connected to the 3V3\_SYS and 1V2\_SYS power rails. It includes a 100nF capacitor (C118), a 4u7 capacitor (C119), and a 100nF capacitor (C120). The hub is connected to various USB signals, including USB\_C1\_D2\_P, USB\_C1\_D2\_N, USB\_C1\_D1\_P, USB\_C1\_D1\_N, USB\_C2\_D2\_P, USB\_C2\_D2\_N, USB\_C2\_D1\_P, USB\_C2\_D1\_N, USB\_C2\_SS\_TX1\_P, USB\_C2\_SS\_TX1\_N, USB\_C2\_SS\_TX2\_P, USB\_C2\_SS\_TX2\_N, USB\_C2\_SS\_RX1\_P, USB\_C2\_SS\_RX1\_N, USB\_C2\_SS\_RX2\_P, USB\_C2\_SS\_RX2\_N, USB\_C1\_SS\_TX1\_P, USB\_C1\_SS\_TX1\_N, USB\_C1\_SS\_TX2\_P, USB\_C1\_SS\_TX2\_N, USB\_C1\_SS\_RX1\_P, USB\_C1\_SS\_RX1\_N, USB\_C1\_SS\_RX2\_P, USB\_C1\_SS\_RX2\_N, and USB\_C1\_SS\_RX1\_P. The hub is also connected to a 1V2\_SYS supply and a 3V3\_SYS supply.

### USB-C Connectors

Two USB-C connectors (J10 and J11) are shown, each with its own ESD protection circuit. The connectors are connected to various USB signals, including USB\_C1\_SS\_TX1\_P, USB\_C1\_SS\_TX1\_N, USB\_C1\_SS\_TX2\_P, USB\_C1\_SS\_TX2\_N, USB\_C1\_SS\_RX1\_P, USB\_C1\_SS\_RX1\_N, USB\_C1\_SS\_RX2\_P, USB\_C1\_SS\_RX2\_N, USB\_C2\_SS\_TX1\_P, USB\_C2\_SS\_TX1\_N, USB\_C2\_SS\_TX2\_P, USB\_C2\_SS\_TX2\_N, USB\_C2\_SS\_RX1\_P, USB\_C2\_SS\_RX1\_N, USB\_C2\_SS\_RX2\_P, USB\_C2\_SS\_RX2\_N, and USB\_C1\_SS\_RX1\_P. The connectors are also connected to a 5V0\_USB supply and a 3V3\_SYS supply.

### ESD Protection

ESD protection diodes (D25, D26, D27, D28, D31, D32) are used to protect the USB-C connectors from electrostatic discharge. The diodes are connected to the USB signals and the 5V0\_USB supply.

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Sheet: /USB\_HUB\_Connectors/  
File: USB\_HUB\_Connectors.kicad\_sch

**Title: Snapdragon 625 Baseboard**

Size: A3 Date: 2022-05-10 Rev: 1.0.1  
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1 Id: 5/9

This diagram illustrates the USB Hub and USB-C connectors for the Snapdragon 625 Baseboard. It includes a USB Load Switch, a USB Hub, and two USB-C connectors, each with its own ESD protection circuit.

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### USB HUB

The USB Hub (U15: USB57442G) is connected to the 3V3\_SYS and 1V2\_SYS power rails. It includes a 100nF capacitor (C118), a 4u7 capacitor (C119), and a 100nF capacitor (C120). The hub is connected to various USB signals, including USB\_C1\_D2\_P, USB\_C1\_D2\_N, USB\_C1\_D1\_P, USB\_C1\_D1\_N, USB\_C2\_D2\_P, USB\_C2\_D2\_N, USB\_C2\_D1\_P, USB\_C2\_D1\_N, USB\_C2\_SS\_TX1\_P, USB\_C2\_SS\_TX1\_N, USB\_C2\_SS\_TX2\_P, USB\_C2\_SS\_TX2\_N, USB\_C2\_SS\_RX1\_P, USB\_C2\_SS\_RX1\_N, USB\_C2\_SS\_RX2\_P, USB\_C2\_SS\_RX2\_N, USB\_C1\_SS\_TX1\_P, USB\_C1\_SS\_TX1\_N, USB\_C1\_SS\_TX2\_P, USB\_C1\_SS\_TX2\_N, USB\_C1\_SS\_RX1\_P, USB\_C1\_SS\_RX1\_N, USB\_C1\_SS\_RX2\_P, USB\_C1\_SS\_RX2\_N, and USB\_C1\_SS\_RX1\_P. The hub is also connected to a 1V2\_SYS supply and a 3V3\_SYS supply.

### USB-C Connectors

Two USB-C connectors (J10 and J11) are shown, each with its own ESD protection circuit. The connectors are connected to various USB signals, including USB\_C1\_SS\_TX1\_P, USB\_C1\_SS\_TX1\_N, USB\_C1\_SS\_TX2\_P, USB\_C1\_SS\_TX2\_N, USB\_C1\_SS\_RX1\_P, USB\_C1\_SS\_RX1\_N, USB\_C1\_SS\_RX2\_P, USB\_C1\_SS\_RX2\_N, USB\_C2\_SS\_TX1\_P, USB\_C2\_SS\_TX1\_N, USB\_C2\_SS\_TX2\_P, USB\_C2\_SS\_TX2\_N, USB\_C2\_SS\_RX1\_P, USB\_C2\_SS\_RX1\_N, USB\_C2\_SS\_RX2\_P, USB\_C2\_SS\_RX2\_N, and USB\_C1\_SS\_RX1\_P. The connectors are also connected to a 5V0\_USB supply and a 3V3\_SYS supply.

### ESD Protection

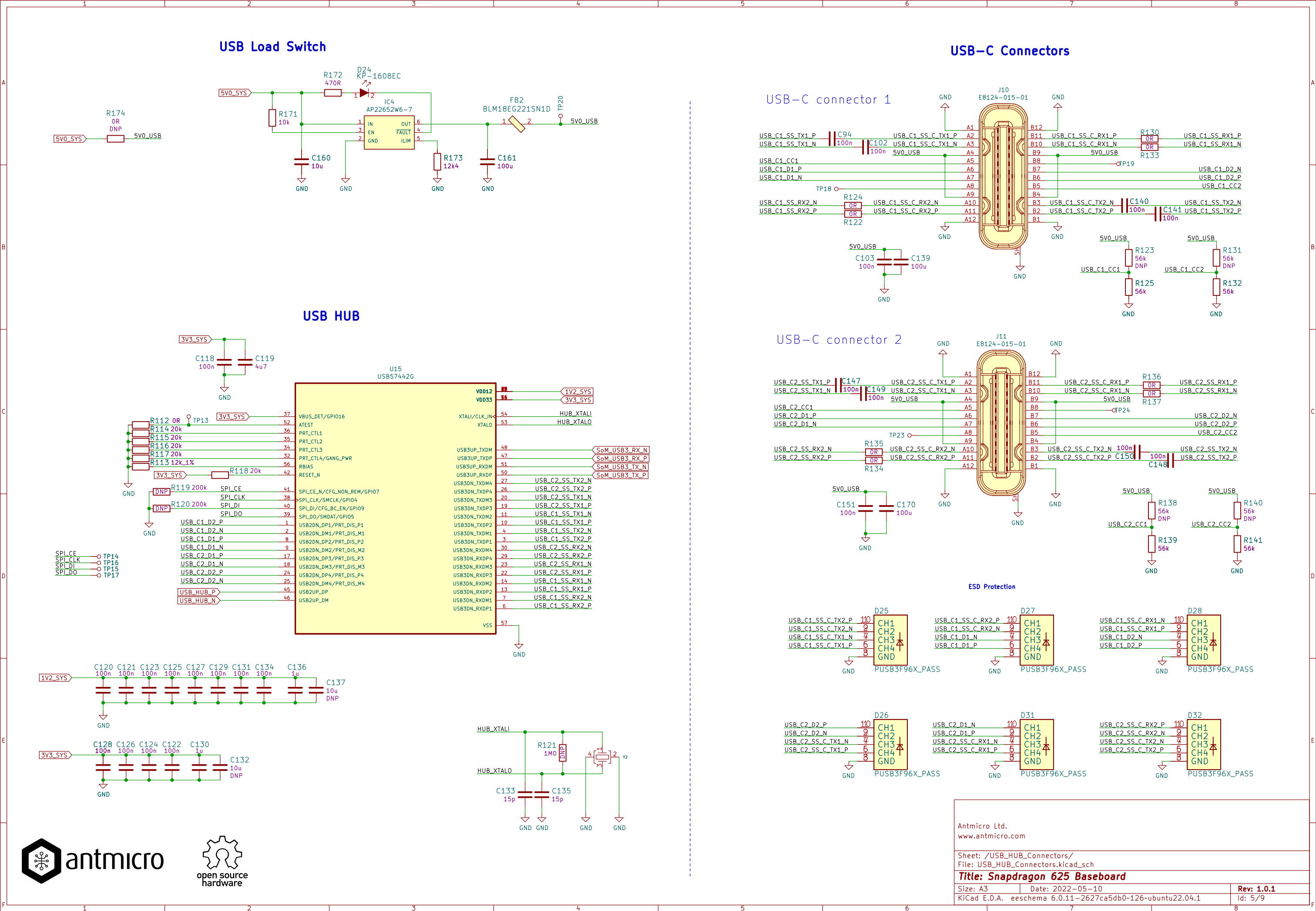
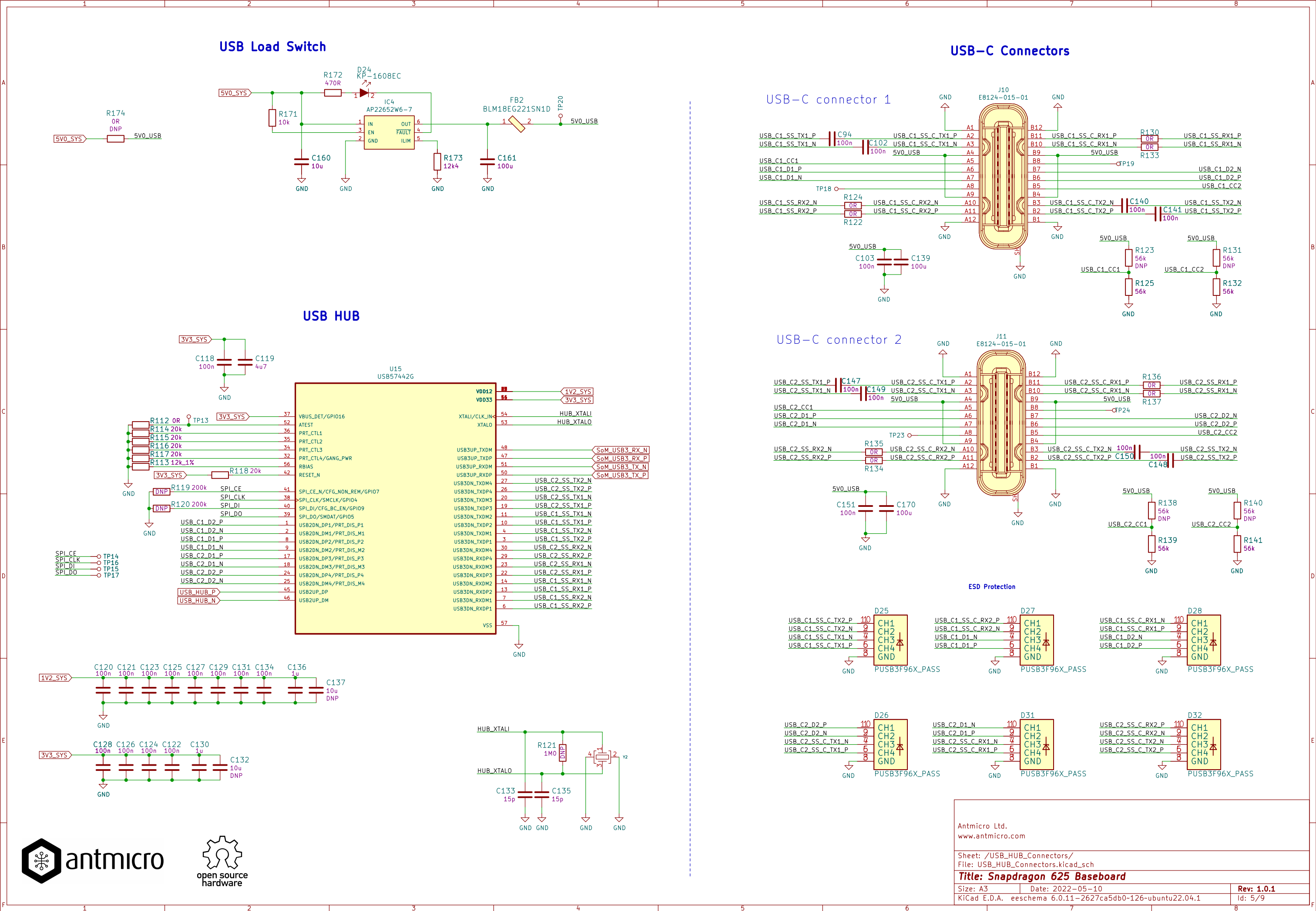
ESD protection diodes (D25, D26, D27, D28, D31, D32) are used to protect the USB-C connectors from electrostatic discharge. The diodes are connected to the USB signals and the 5V0\_USB supply.

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Sheet: /USB\_HUB\_Connectors/  
File: USB\_HUB\_Connectors.kicad\_sch

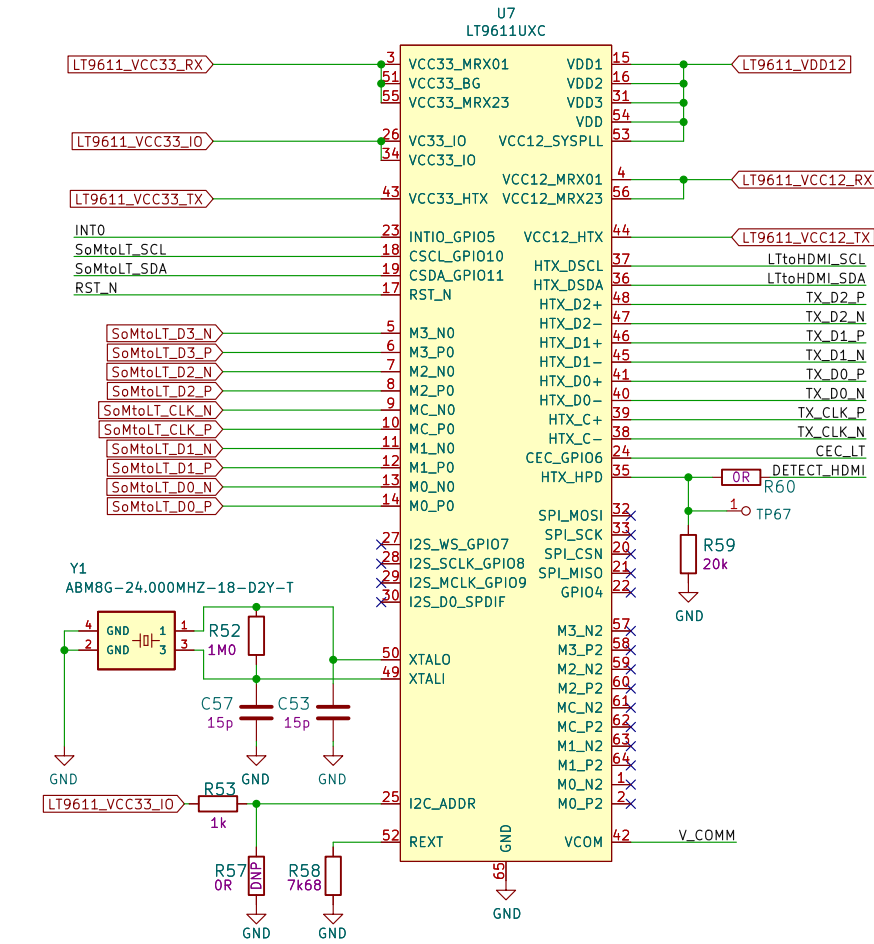
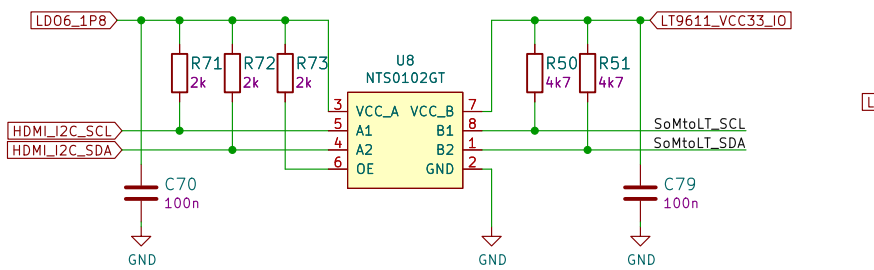
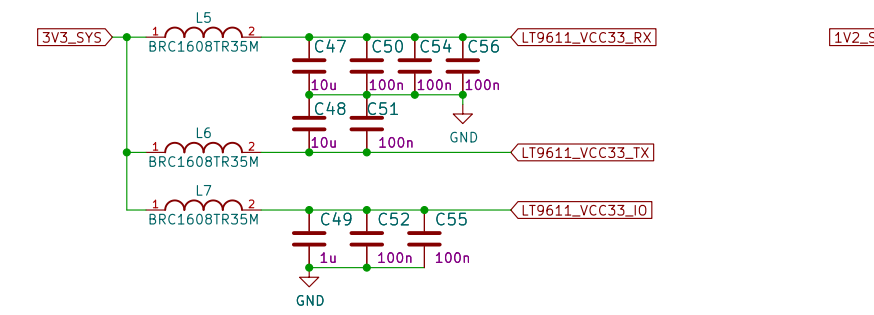
**Title: Snapdragon 625 Baseboard**

Size: A3 Date: 2022-05-10 Rev: 1.0.1  
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1 Id: 5/9

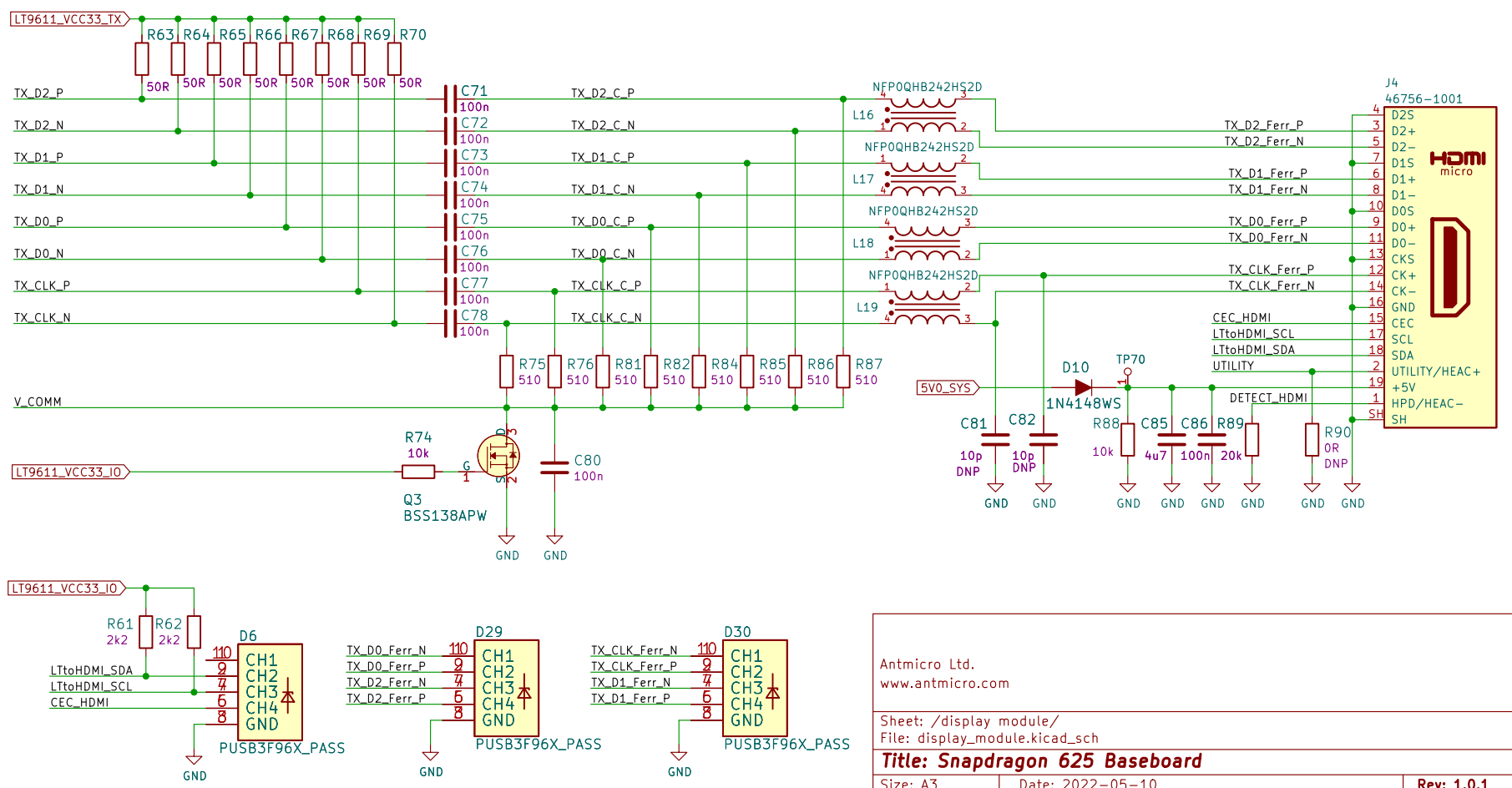
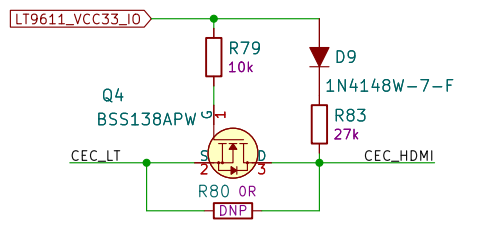
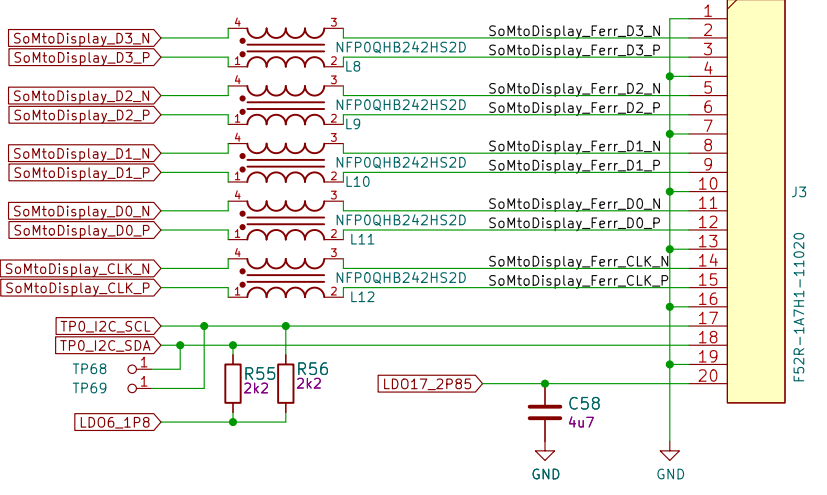
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Rev: 1.0.1  
Id: 5/9

# MIPI DSI to HDMI



# TP + LCD Interface



Antmicro Ltd. www.antmicro.com		
Sheet: /display module/ File: display_module.kicad_sch		
Title: Snapdragon 625 Baseboard		
Size: A3	Date: 2022-05-10	Rev: 1.0.1
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1		Id: 6/9

**Main SD card connector**

SD{DAT[0..3] DET\_A CMD CLK LD011}

SD.LD011

R2 56k R3 56k R192 56k R193 56k R194 56k R196 56k

SD.DET\_A R197 50R DET\_A

SD.DAT2 R198 50R DAT2

SD.DAT3 R199 50R DAT3

SD.CMD R200 50R CMD

SD.CLK R201 50R CLK

SD.DAT0 R202 50R DAT0

SD.DAT1 R203 50R DAT1

R195 470k

TP11

GND

D41

DET\_A 110 CH1

DAT1 2 CH2

DAT0 4 CH3

CLK 6 CH4

8 GND

PUSB3F96X\_PASS

GND

D42

CMD 110 CH1

DAT3 2 CH2

DAT2 4 CH3

6 CH4

8 GND

PUSB3F96X\_PASS

GND

J7

DM3AT-SF-PEJM5

HIROSE

DM3AT-SF-PEJM5

DAT2 1

DAT3 2

CMD 3

SD\_LD011 4

VDD 5

CLK 6

DAT0 7

DAT1 8

DET\_A 9

DET\_B 10

SHIELD 11

GND

SD\_LD011

C97 33p

C100 4u7

GND

**Main micro SIM connector**

USIM1\_VDD R98 22R

USIM1\_RST R99 22R

USIM1\_CLK R100 22R

USIM1\_DATA R101 10k

C104 22p

C107 22p

C105 22p

C106 100n

GND

GND

GND

GND

C1

VCC

RST

CLK

RESERVED

GND

VPP

I/O

RESERVED

J8

693022010811

Würth Elektronik

CH1 110

CH2 2

CH3 4

CH4 6

GND 8

D16

PUSB3F96X\_PASS

GND

**Main SD card connector**

SD{DAT[0..3] DET\_A CMD CLK LD011}

SD.LD011

R2 56k R3 56k R192 56k R193 56k R194 56k R196 56k

SD.DET\_A R197 50R DET\_A

SD.DAT2 R198 50R DAT2

SD.DAT3 R199 50R DAT3

SD.CMD R200 50R CMD

SD.CLK R201 50R CLK

SD.DAT0 R202 50R DAT0

SD.DAT1 R203 50R DAT1

R195 470k

TP11

GND

D41

DET\_A 110 CH1

DAT1 2 CH2

DAT0 4 CH3

CLK 6 CH4

8 GND

PUSB3F96X\_PASS

GND

D42

CMD 110 CH1

DAT3 2 CH2

DAT2 4 CH3

6 CH4

8 GND

PUSB3F96X\_PASS

GND

J7

DM3AT-SF-PEJM5

HIROSE

DM3AT-SF-PEJM5

DAT2 1

DAT3 2

CMD 3

SD\_LD011 4

VDD 5

CLK 6

DAT0 7

DAT1 8

DET\_A 9

DET\_B 10

SHIELD 11

GND

SD\_LD011

C97 33p

C100 4u7

GND

**Main micro SIM connector**

USIM1\_VDD R98 22R

USIM1\_RST R99 22R

USIM1\_CLK R100 22R

USIM1\_DATA R101 10k

C104 22p

C107 22p

C105 22p

C106 100n

GND

GND

GND

GND

C1

VCC

RST

CLK

RESERVED

GND

VPP

I/O

RESERVED

J8

693022010811

Würth Elektronik

CH1 110

CH2 2

CH3 4

CH4 6

GND 8

D16

PUSB3F96X\_PASS

GND

GNSS Antenna

Wi-Fi Antenna

Main Antenna

SYSTEM BUTTONS AND LEDs

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Sheet: /peripherals/  
File: peripherals.kicad\_sch

**Title: Snapdragon 625 Baseboard**

Size: A3	Date: 2022-05-10	Rev: 1.0.1
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1		Id: 7/9

GNSS Antenna

Wi-Fi Antenna

Main Antenna

SYSTEM BUTTONS AND LEDs

Antmicro Ltd.  
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Sheet: /peripherals/  
File: peripherals.kicad\_sch

**Title: Snapdragon 625 Baseboard**

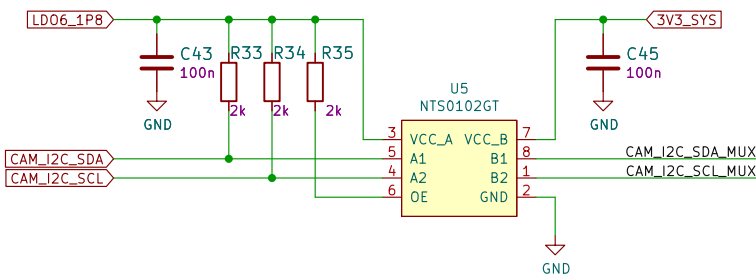
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KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1		Id: 7/9



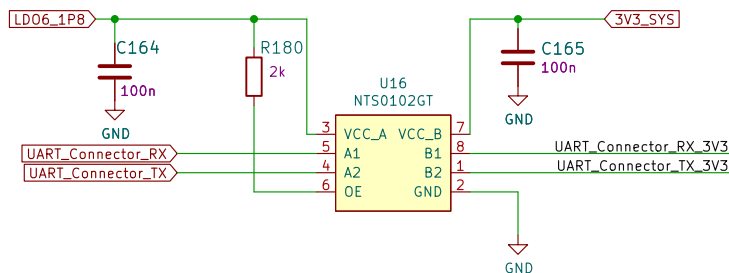
Rev: 1.0.1



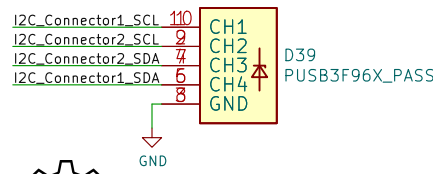
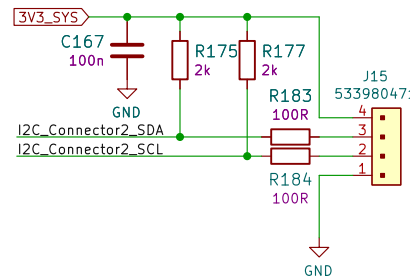
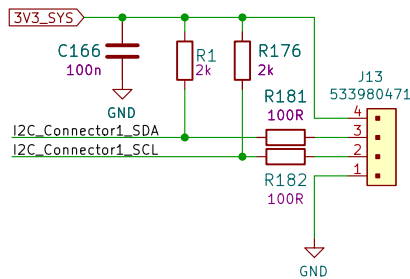
## SoM to I2C Mux voltage translating transceiver



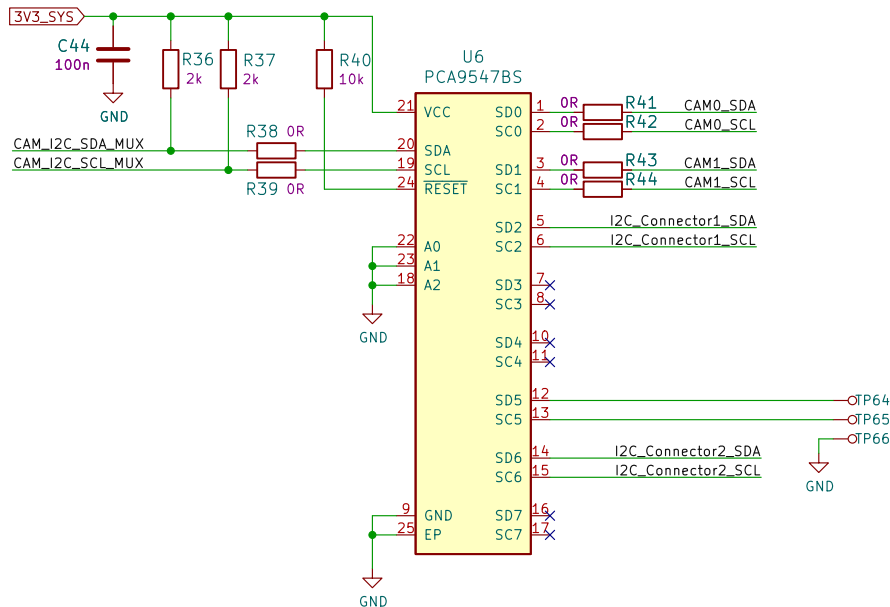
## UART connector voltage translating transceiver



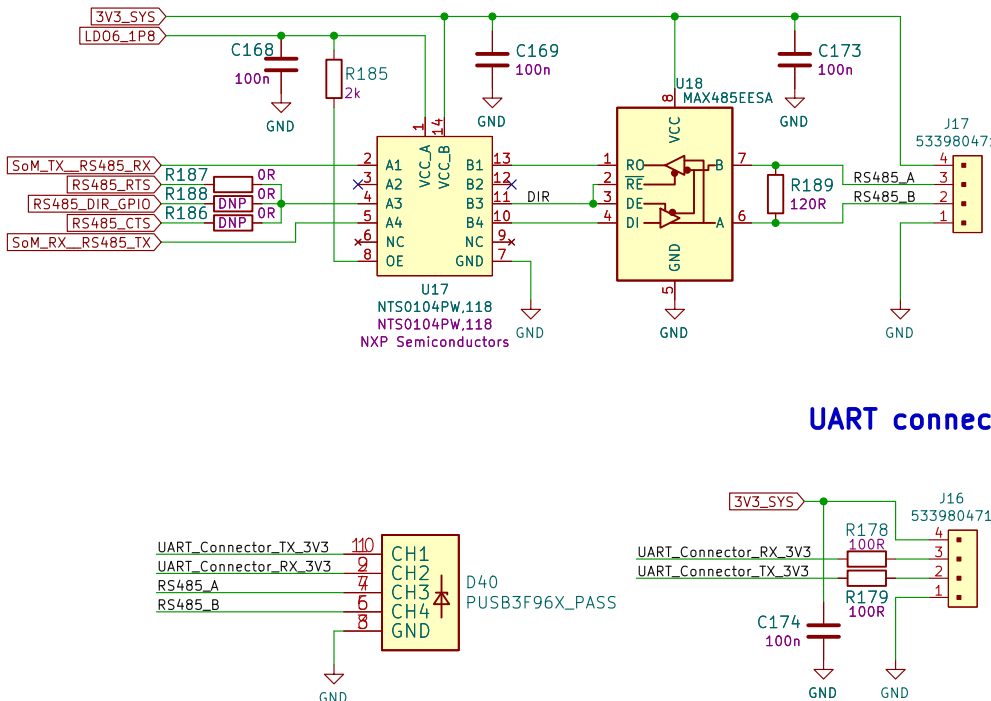
## I2C connectors



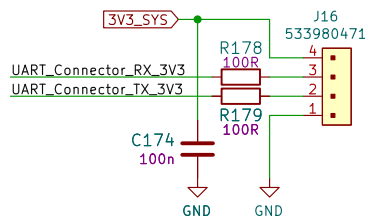
## Camera I2C multiplexer



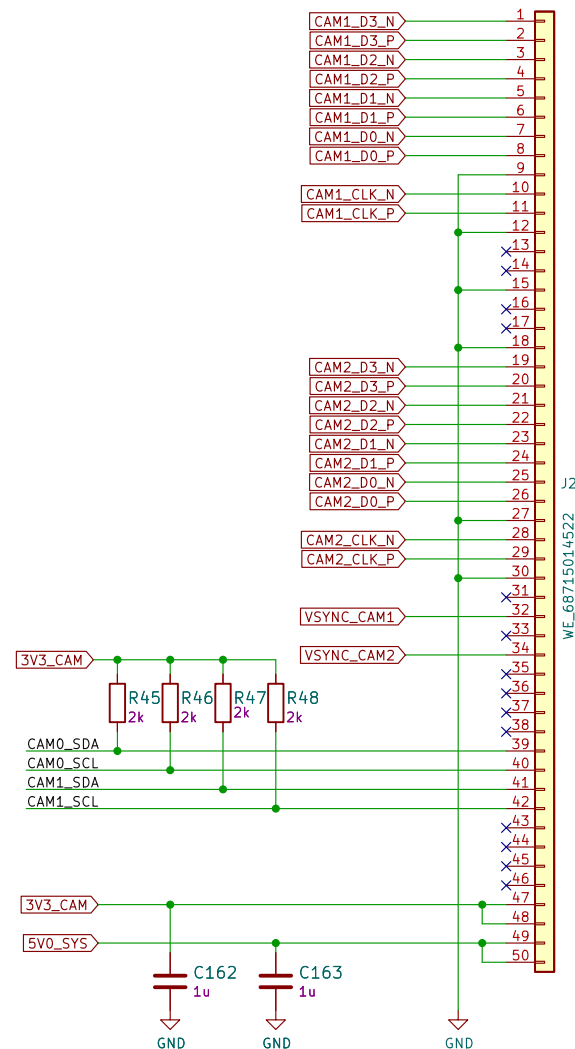
## RS485 connector and voltage translator



## UART connector



## Camera FFC



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Sheet: /serial\_and\_cameras\_interfaces/  
File: serial\_and\_cameras\_interfaces.kicad\_sch

**Title: Snapdragon 625 Baseboard**

Size: A3 Date: 2022-05-10  
KiCad E.D.A. eeschema 6.0.11-2627ca5db0-126-ubuntu22.04.1

Rev: 1.0.1  
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## Auxiliary Power Control

