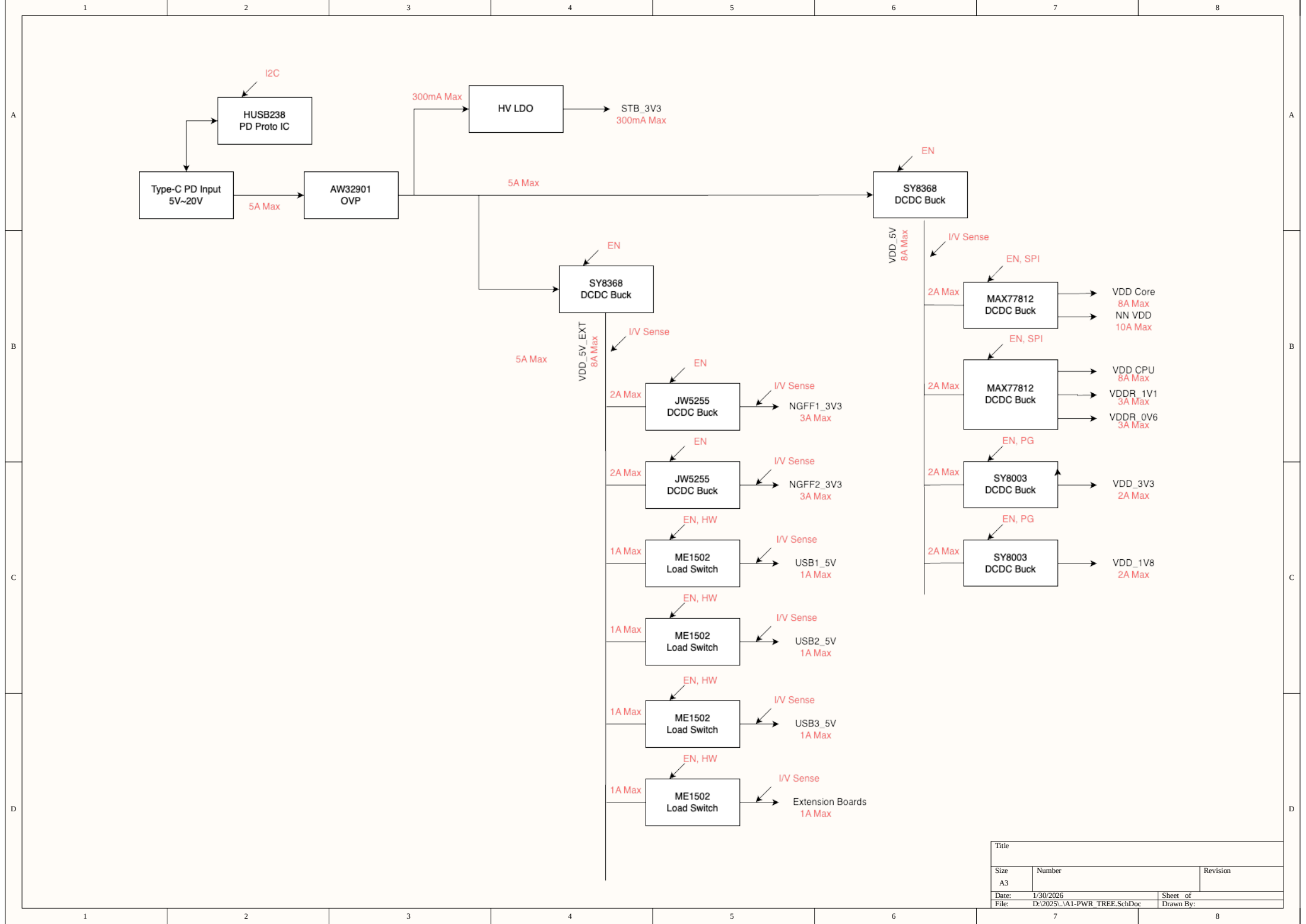
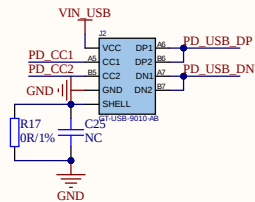


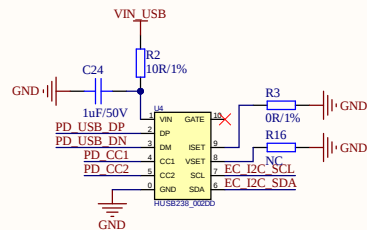


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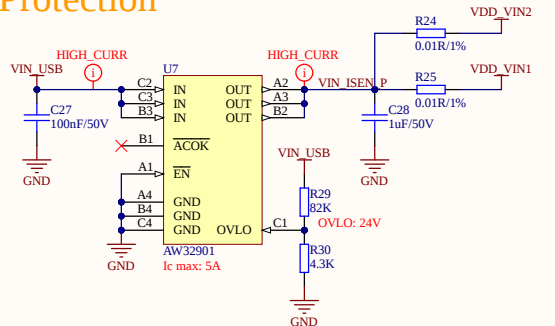
## Type-C (PWR)



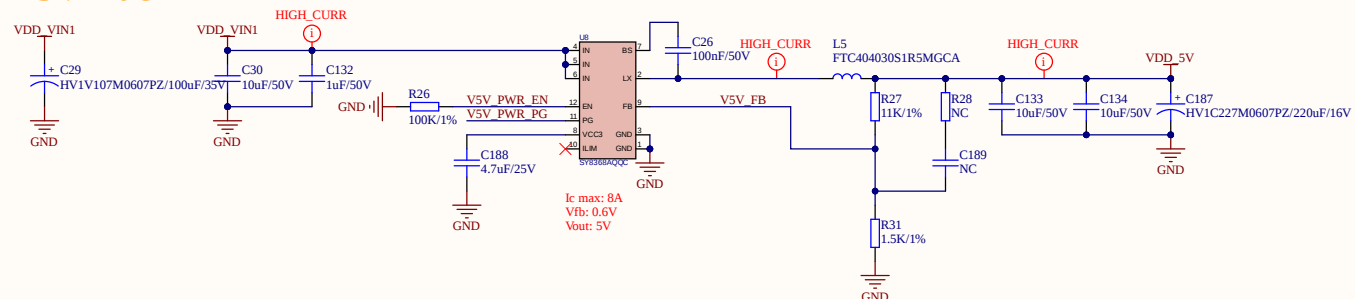
## CC Protocol



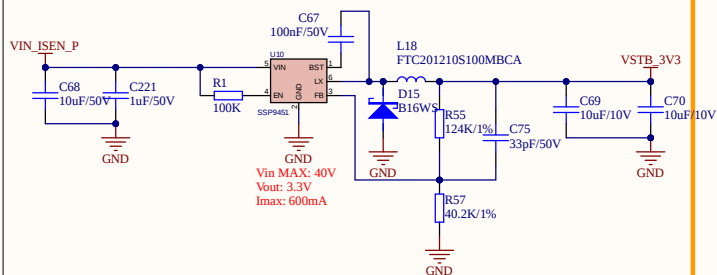
## Input Protection



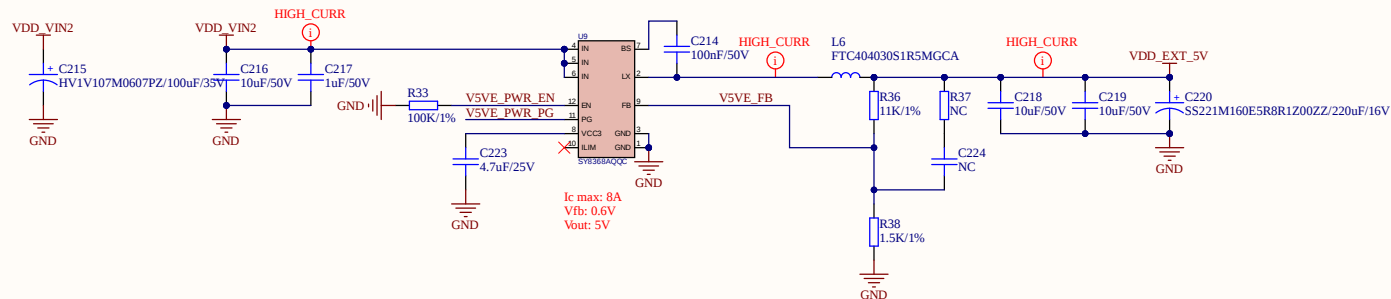
## Main 5V Buck



## Standby 3V3 Regulator

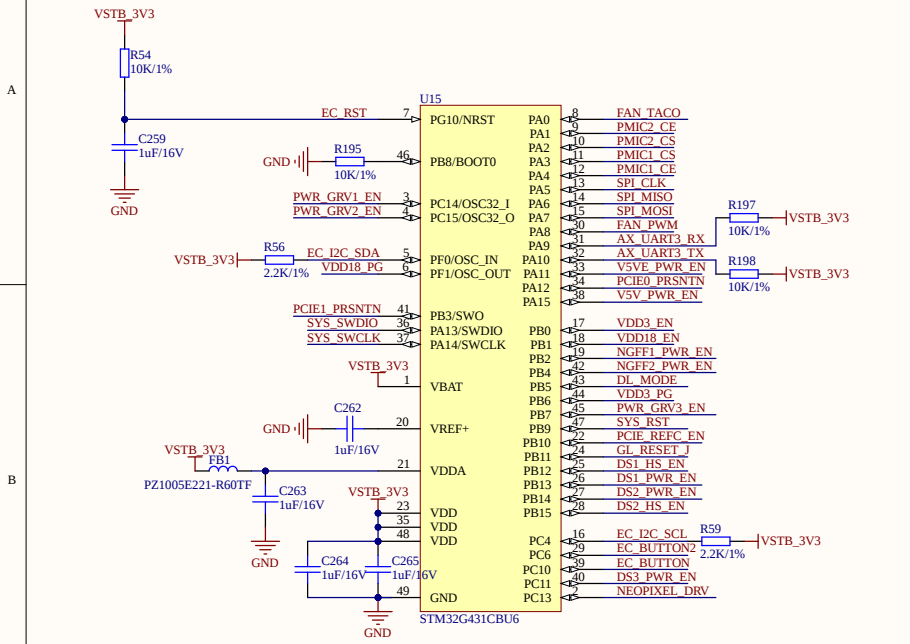


## Aux 5V Buck

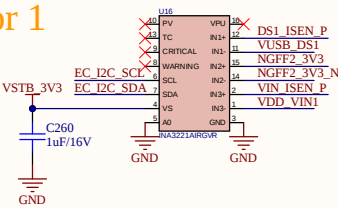


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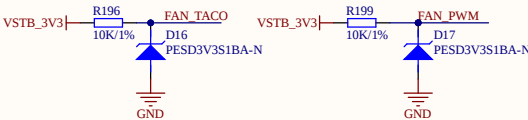
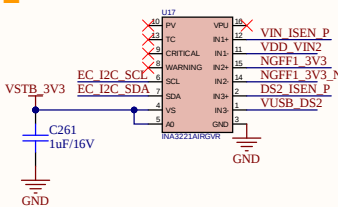
EC MCU



Power Sensor 1

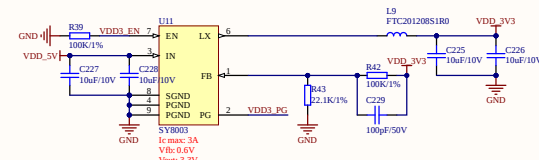


Power Sensor 2

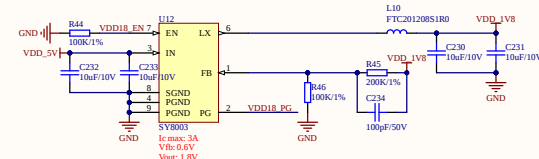


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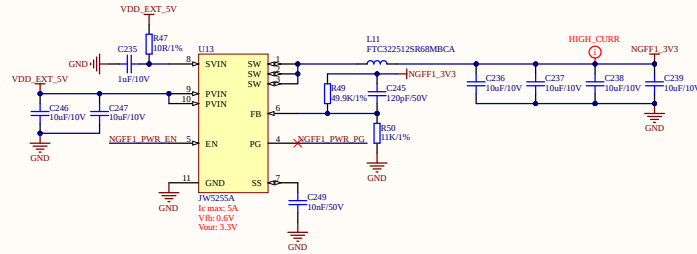
VDD 3V3 DCDC Buck



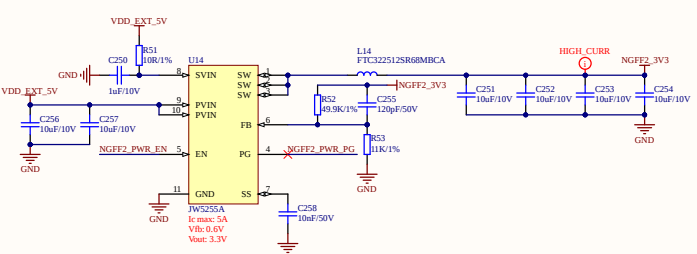
VDD 1V8 DCDC Buck



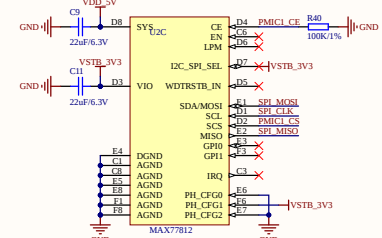
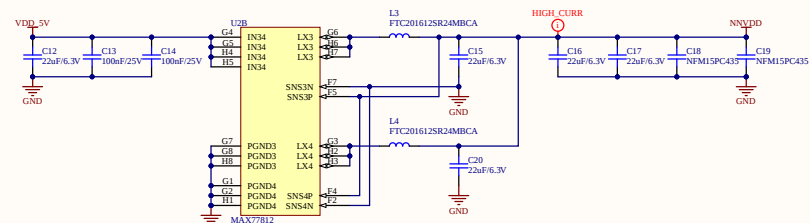
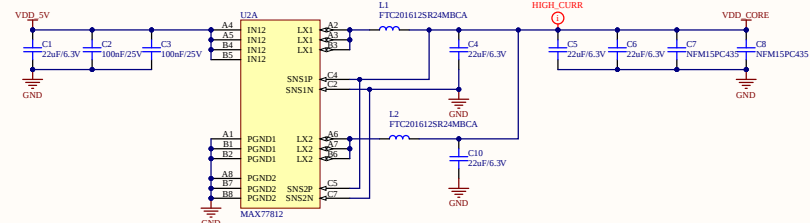
NGFF M.2 Slot 1 3V3 DCDC Buck



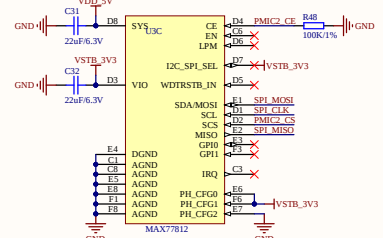
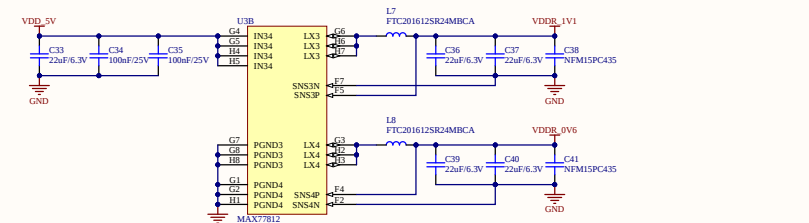
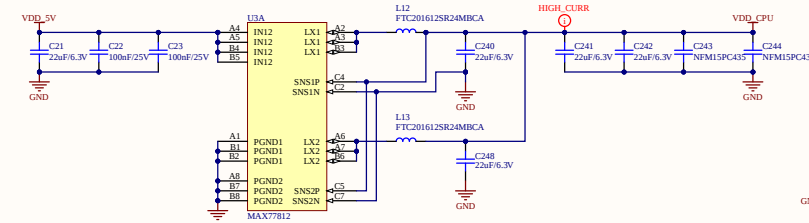
NGFF M.2 Slot 2 3V3 DCDC Buck



PMIC1 For VDD Core, NN VDD

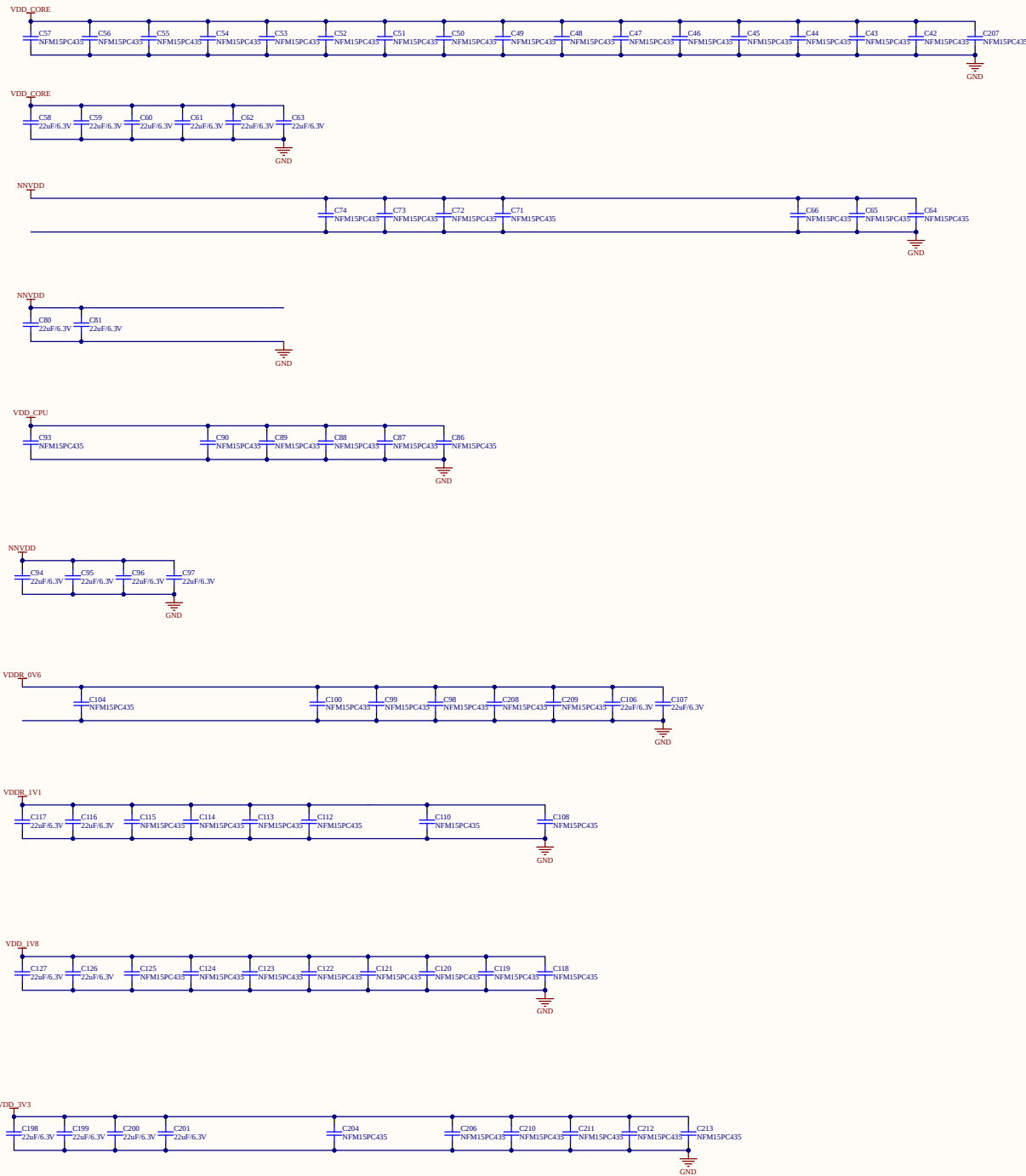


PMIC2 For VDD CPU, VDDR\_1V1, VDDR\_0V6

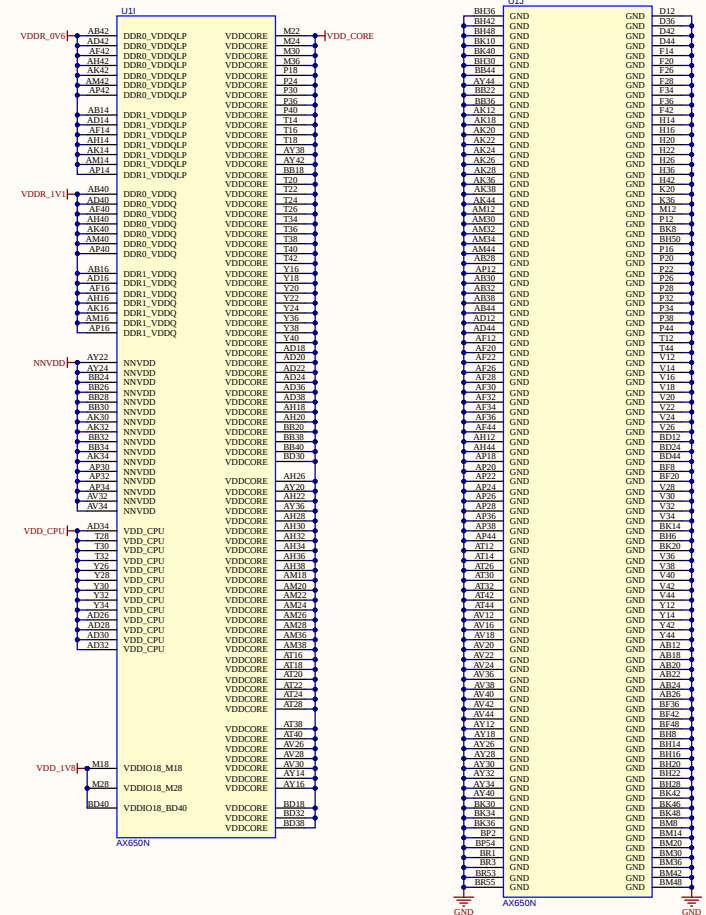


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## Decoupling Caps



## AX650N Power/Ground Nets

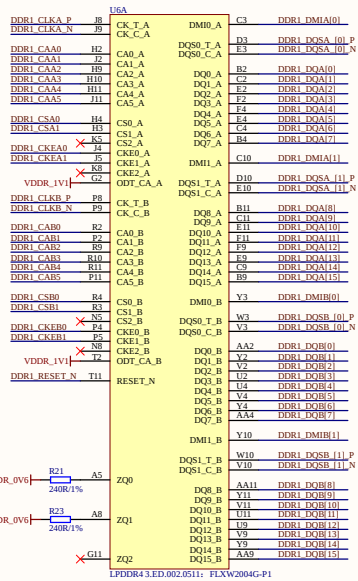


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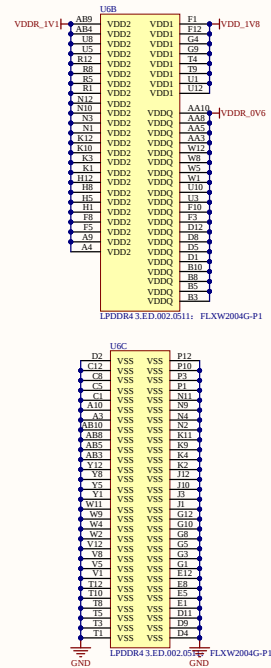




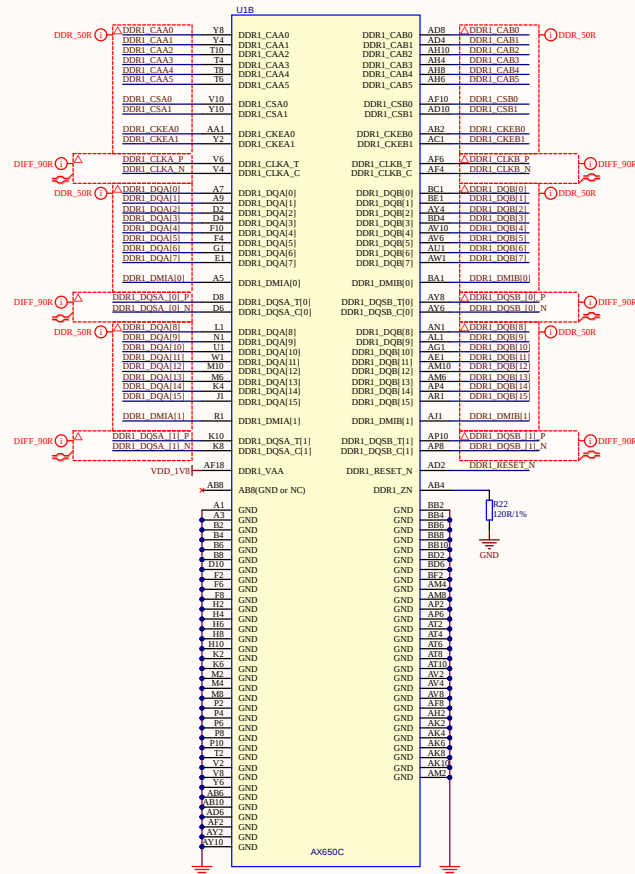
## LPDDR4 DRAM CA/DQ



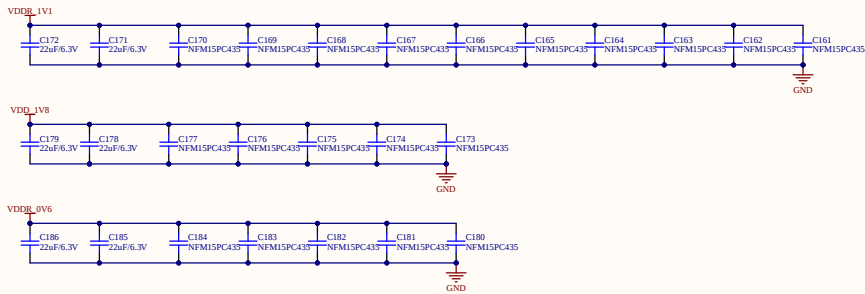
## LPDDR4 DRAM Power



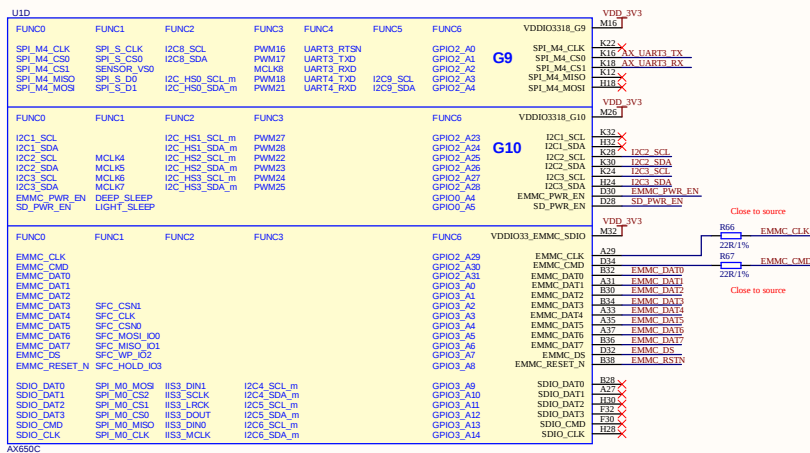
## AX650N LPDDR Controller



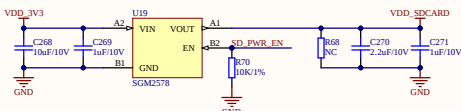
## LPDDR4 Decoupling Caps



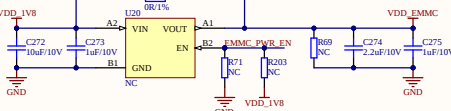
AX650N EMMC, I2C Block



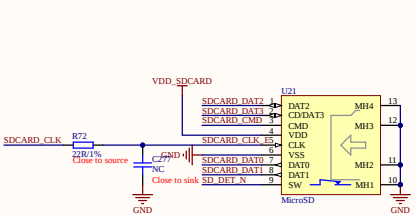
SDCard Load Switch



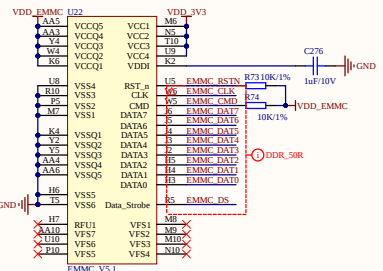
EMMC Load Switch



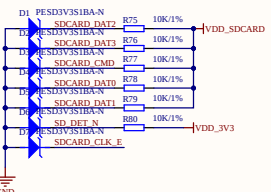
SDCard Slot



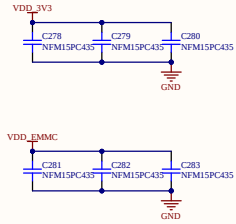
EMMC



SDCard ESD, Pull-ups



EMMC Decoupling

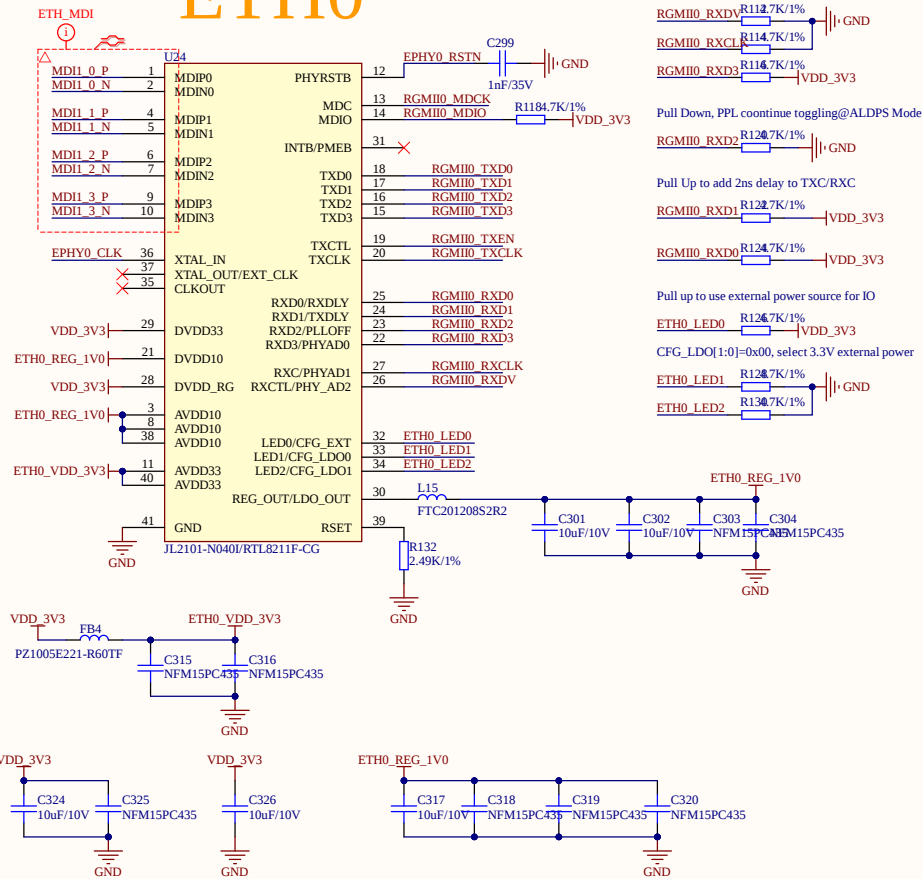


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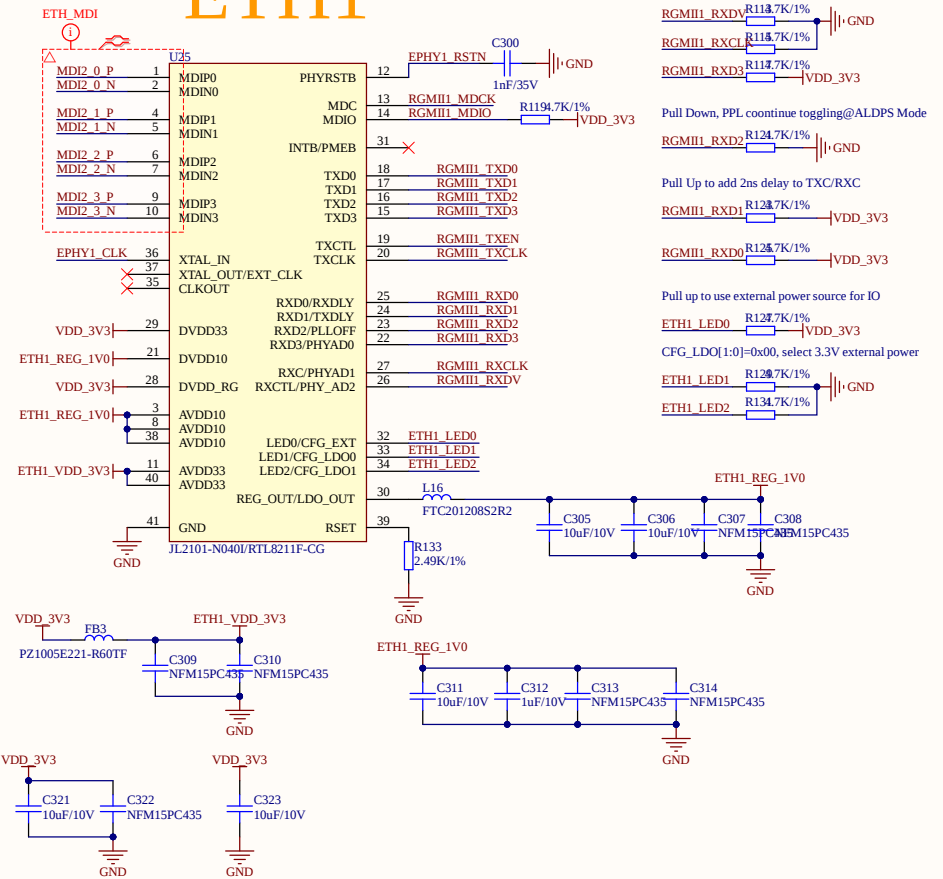
# Gigabit Ethernet Phy 1

## ETH0

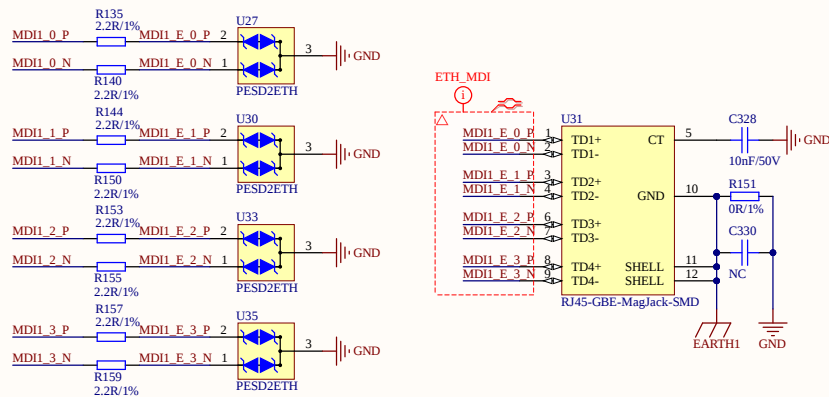


## Gigabit Ethernet Phy 2

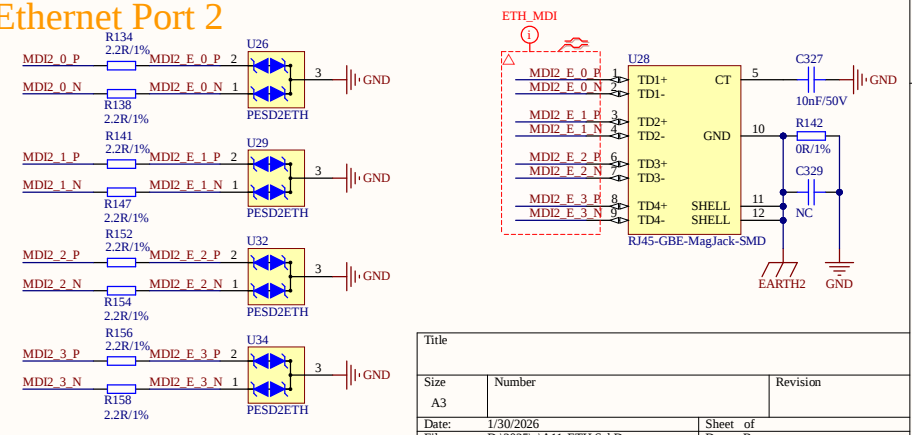
# ETH1



## Gigabit Ethernet Port 1

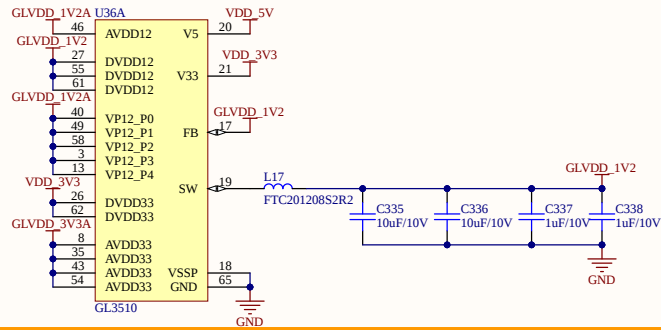


## Gigabit Ethernet Port 2

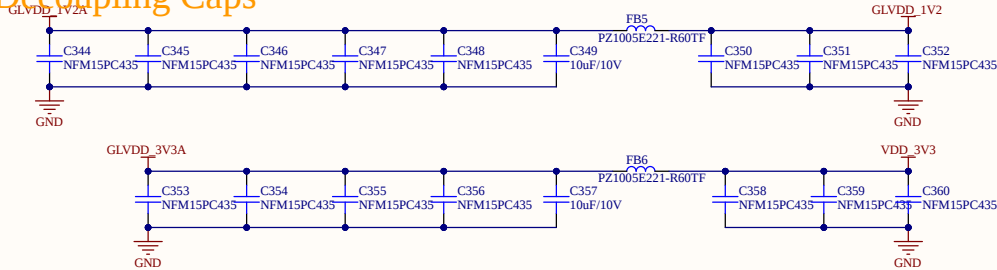


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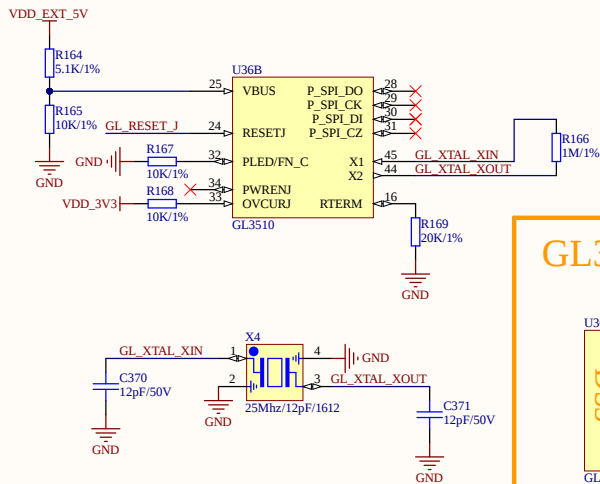
## GL3510 USB3.0 Hub Power



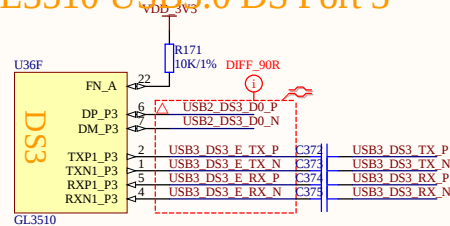
## Decoupling Caps



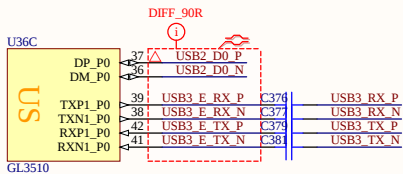
## GL3510 USB3.0 Hub Sys



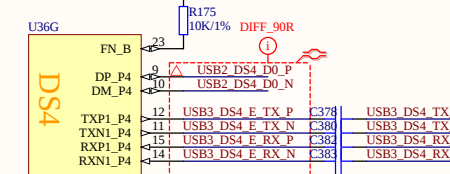
## GL3510 USB3.0 DS Port 3



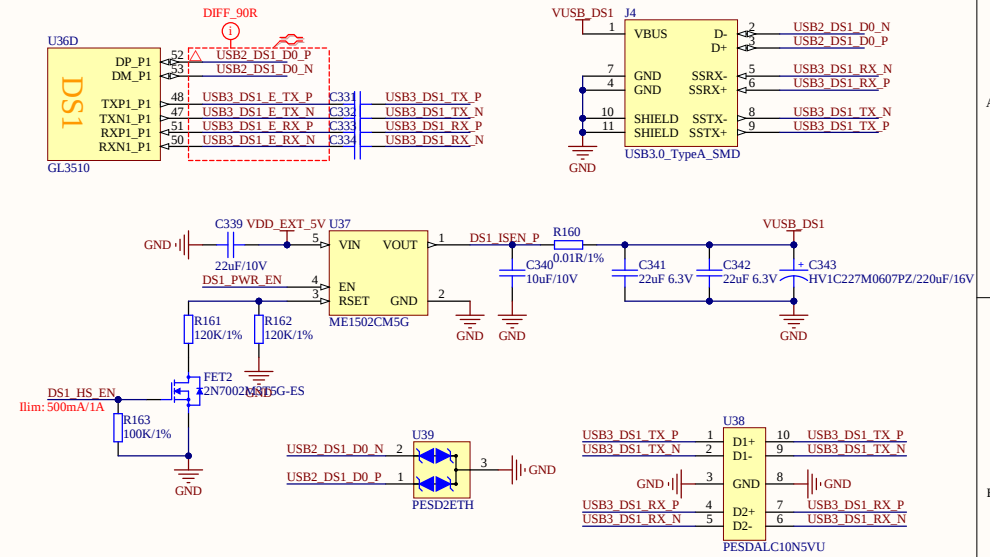
## GL3510 USB3.0 US Port



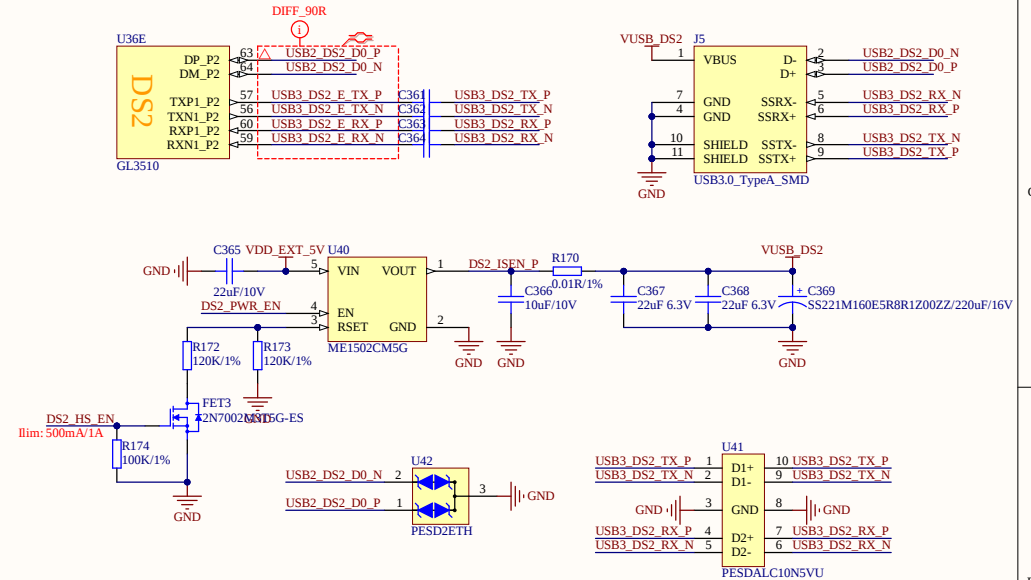
## GL3510 USB3.0 DS Port 4



## GL3510 USB3.0 DS Port 1 & USB3.0 TypeA Interface



## GL3510 USB3.0 DS Port 2 & USB3.0 TypeA Interface



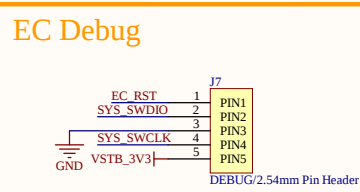
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**FAN**

Diagram showing the connection of the FAN module to the PH1.25-4P-TX connector. The FAN module has four pins: FAN\_TACO (pin 4), FAN\_PWM (pin 3), FAN\_VDD (pin 2), and FAN\_GND (pin 1). The FAN\_GND pin is connected to the GND symbol. The FAN\_VDD pin is connected to the VDD\_5V pin of the PH1.25-4P-TX connector. The FAN\_TACO and FAN\_PWM pins are connected to pins 4 and 3 of the PH1.25-4P-TX connector, respectively. The PH1.25-4P-TX connector is labeled with pins 1, 2, 3, and 4, and is also labeled with FAN1, FAN2, FAN3, and FAN4.

下板之前核对实物线序和连接器方向



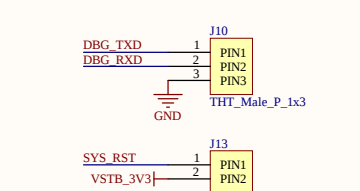
## EC Debug



The diagram shows a 5-pin header labeled J7. The pins are numbered 1 to 5. The connections are as follows:

| Pin | Signal    |
|-----|-----------|
| 1   | EC_RST    |
| 2   | SYS_SWDIO |
| 3   |           |
| 4   | SYS_SWCLK |
| 5   | VSTB_3V3  |

The VSTB\_3V3 pin is connected to a ground symbol. The header is labeled J7 and the pins are labeled PIN1 through PIN5. The text "DEBUG/2.54mm Pin Header" is at the bottom.



## HDMI

# UART Level Shifter

The diagram illustrates a UART Level Shifter circuit using an SN74AVC4T245RSV buffer (U46). The circuit connects four signals between two voltage domains: 1V8 and 3V3.

**Signals and Connections:**

- DBG\_RXD:** Connected to pin 15 (1A1) and pin 1 (1O1).
- THM\_RXD:** Connected to pin 14 (1A2) and pin 2 (2O1).
- DBG\_TXD:** Connected to pin 13 (2A1) and pin 16 (2O2).
- THM\_TXD:** Connected to pin 12 (2A2) and pin 3 (2DIR).

**Power and Ground Connections:**

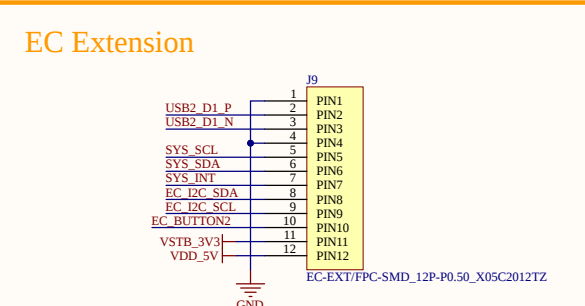
- VDD\_3V3:** Connected to pins 3 (VCCA), 4 (1DIR), 5 (2DIR), and 16 (2O2).
- VDD\_1V8:** Connected to pins 2 (VCCB), 1 (1O1), and 16 (2O2).
- GND:** Connected to pins 10 (GND), 11 (1OE), and 12 (2OE).

**Resistors and Capacitors:**

- R146 (10K/1%):** Pull-up resistor for DBG\_RXD to VDD\_3V3.
- R148 (10K/1%):** Pull-up resistor for THM\_RXD to VDD\_3V3.
- R149 (10K/1%):** Pull-up resistor for DBG\_TXD to VDD\_1V8.
- R204 (10K/1%):** Pull-up resistor for THM\_TXD to VDD\_3V3.
- C393 (1uF/10V):** Decoupling capacitor for VDD\_3V3.
- C394 (1uF/10V):** Decoupling capacitor for VDD\_1V8.

**Component Labels:**

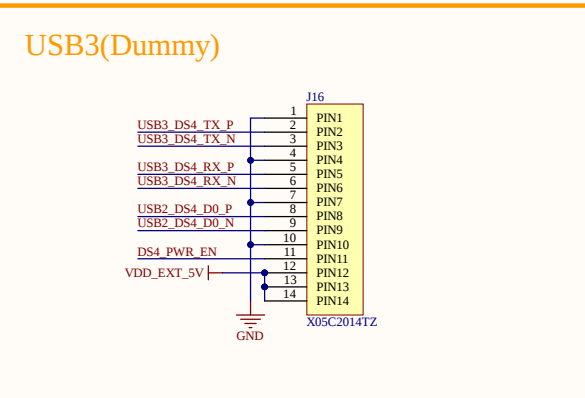
- U46:** SN74AVC4T245RSV
- New Parts:** SN74AVC4T245RSV



A detailed pinout diagram for the X05C2014TZ component, showing the connection between a USB3 interface and the component's pins. The diagram is organized into two main sections: a yellow box on the right representing the component's pins (PIN1 to PIN14) and a blue box on the left representing the USB3 interface signals. The connections are as follows:

- USB3\_DS3\_TX\_P** (Blue) connects to **PIN1** (Yellow).
- USB3\_DS3\_TX\_N** (Blue) connects to **PIN2** (Yellow).
- USB3\_DS3\_RX\_P** (Blue) connects to **PIN3** (Yellow).
- USB3\_DS3\_RX\_N** (Blue) connects to **PIN4** (Yellow).
- USB2\_DS3\_D0\_P** (Blue) connects to **PIN5** (Yellow).
- USB2\_DS3\_D0\_N** (Blue) connects to **PIN6** (Yellow).
- DS3\_PWR\_EN** (Blue) connects to **PIN7** (Yellow).
- VDD\_EXT\_5V** (Blue) connects to **PIN8** (Yellow).
- GND** (Blue) connects to **PIN9** (Yellow).
- GND** (Blue) connects to **PIN10** (Yellow).
- GND** (Blue) connects to **PIN11** (Yellow).
- GND** (Blue) connects to **PIN12** (Yellow).
- GND** (Blue) connects to **PIN13** (Yellow).
- GND** (Blue) connects to **PIN14** (Yellow).

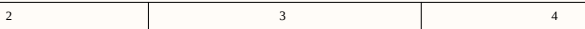
The component is identified as **X05C2014TZ** at the bottom right.



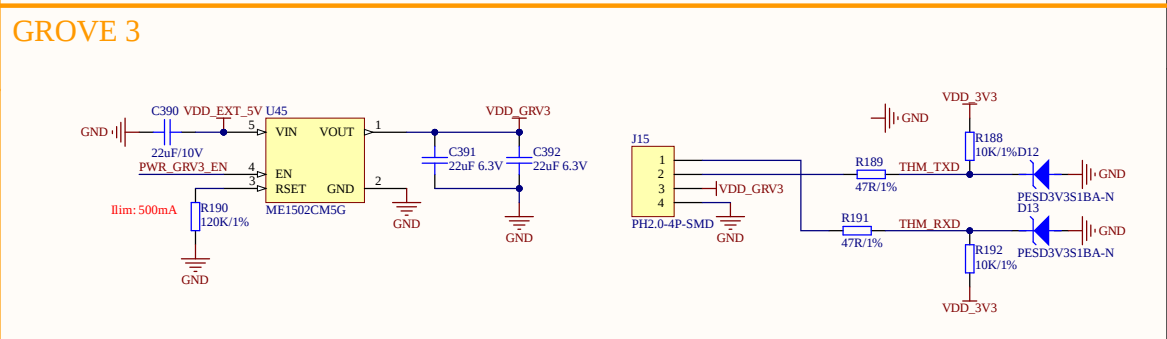
# USB3(Dummy)

The diagram shows the pin connections for the X05C2014TZ component. A yellow box labeled 'J16' contains pins 1 through 14. The connections are as follows:

- Pin 1: USB3\_DS4\_TX\_P
- Pin 2: USB3\_DS4\_TX\_N
- Pin 3: USB3\_DS4\_RX\_P
- Pin 4: USB3\_DS4\_RX\_N
- Pin 5: USB2\_DS4\_D0\_P
- Pin 6: USB2\_DS4\_D0\_N
- Pin 7: DS4\_PWR\_EN
- Pin 8: VDD\_EXT\_5V
- Pin 9: GND
- Pin 10: GND
- Pin 11: GND
- Pin 12: GND
- Pin 13: GND
- Pin 14: GND



## GROVE 2



# AUDIO/USB OTG/Flash

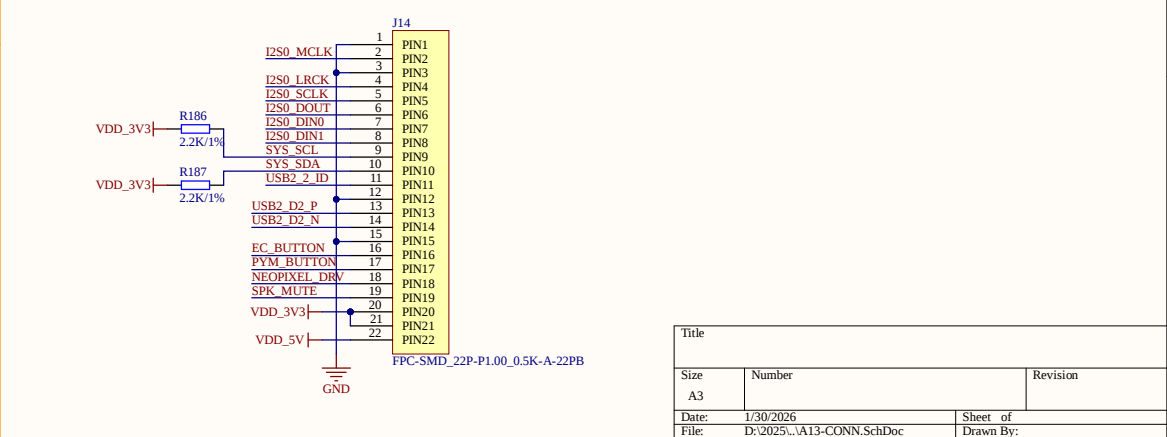
Pinout for J14:

| Pin | Signal       |
|-----|--------------|
| 1   | I2S0_MCLK    |
| 2   | I2S0_LRCK    |
| 3   | I2S0_SCLK    |
| 4   | I2S0_DOUT    |
| 5   | I2S0_DIN0    |
| 6   | I2S0_DIN1    |
| 7   | SYS_SCL      |
| 8   | SYS_SDA      |
| 9   | USB2_2_ID    |
| 10  | USB2_D2_P    |
| 11  | USB2_D2_N    |
| 12  | EC_BUTTON    |
| 13  | PYM_BUTTON   |
| 14  | NEOPIXEL_DRV |
| 15  | SPK_MUTE     |
| 16  | VDD_3V3      |
| 17  | VDD_3V3      |
| 18  | VDD_5V       |
| 19  | VDD_5V       |
| 20  | VDD_5V       |
| 21  | VDD_5V       |
| 22  | GND          |

Component values: R186 = 2.2K/1%, R187 = 2.2K/1%.

File: FPC-SMD\_22P-P1.00\_0.5K-A-22PB

| Title |                            |           |
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| Size<br>A3 | Number                  | Revision  |
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MIPI Phy RX (Not Used)

