

P3737-A05

Jetson Orin Developer Kit Carrier Board

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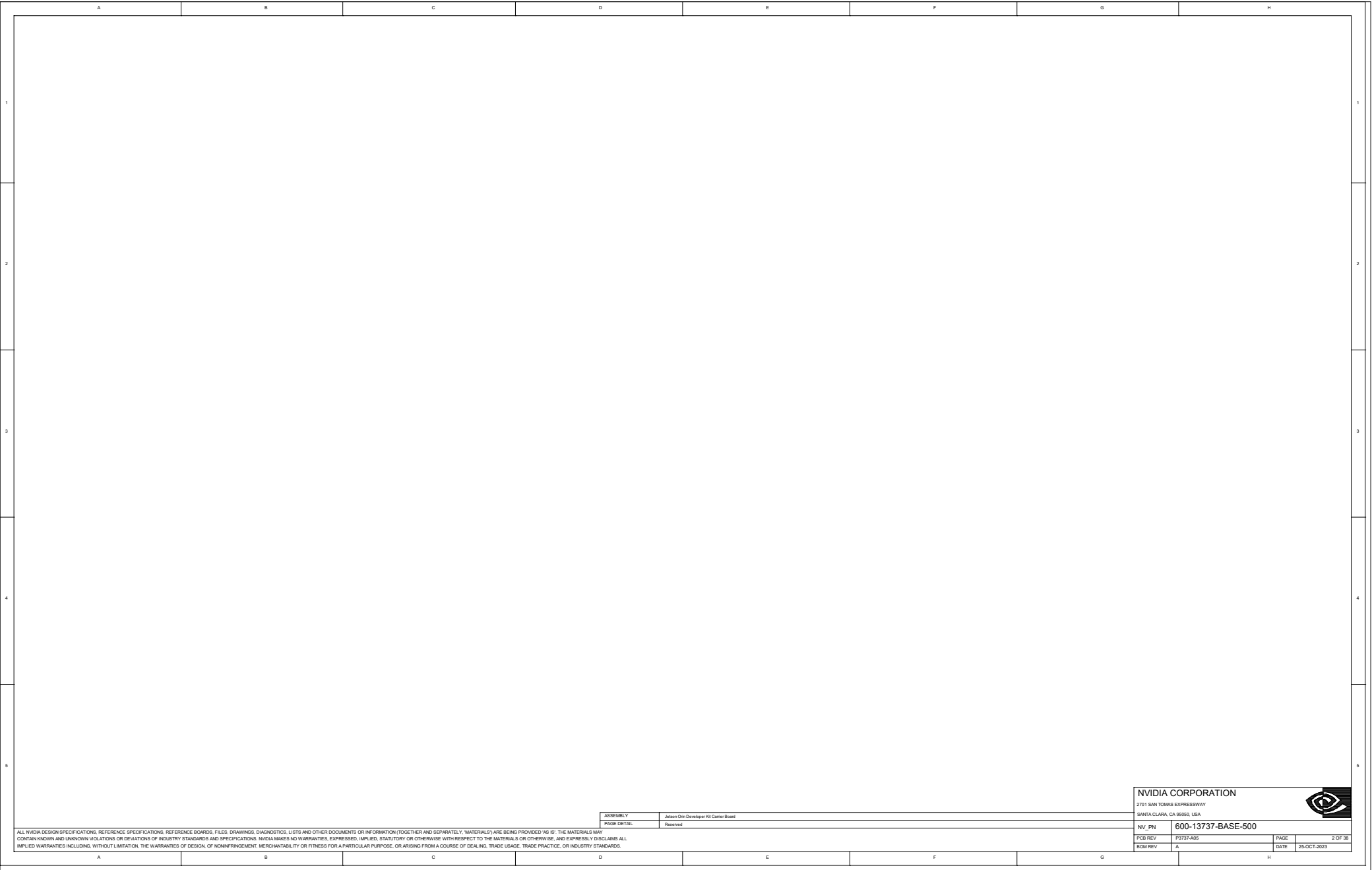
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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
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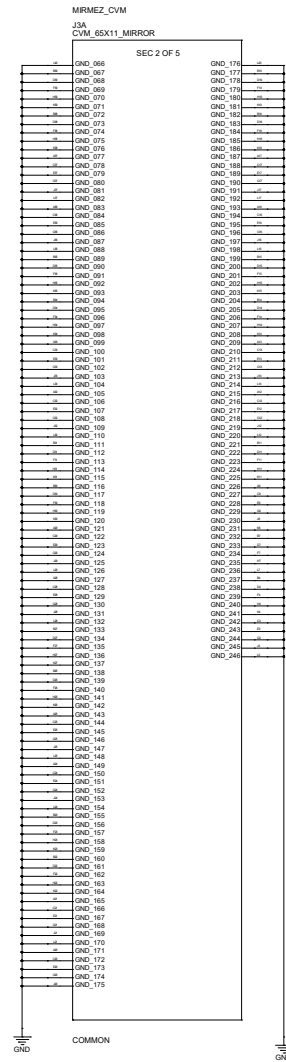
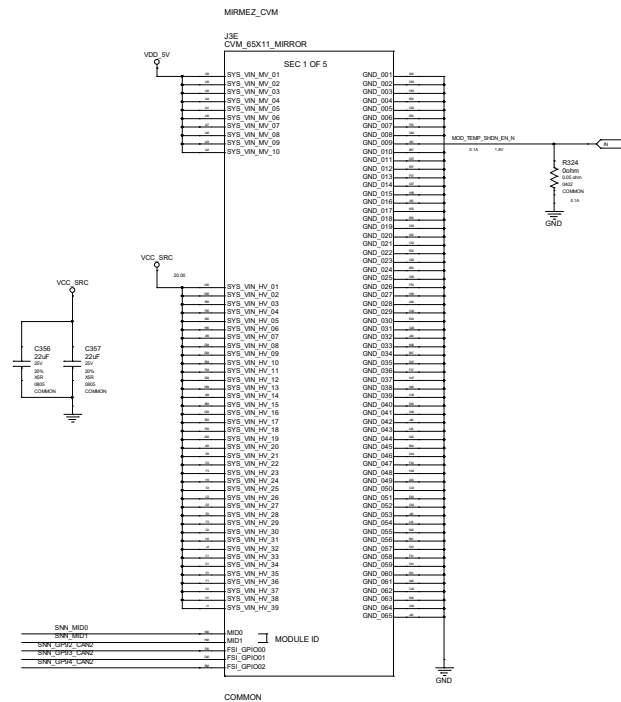


ASSEMBLY	Jetson Orin Developer Kit Carrier Board
FACE DETAIL	Reverse

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CVM CONNECTOR 1/3



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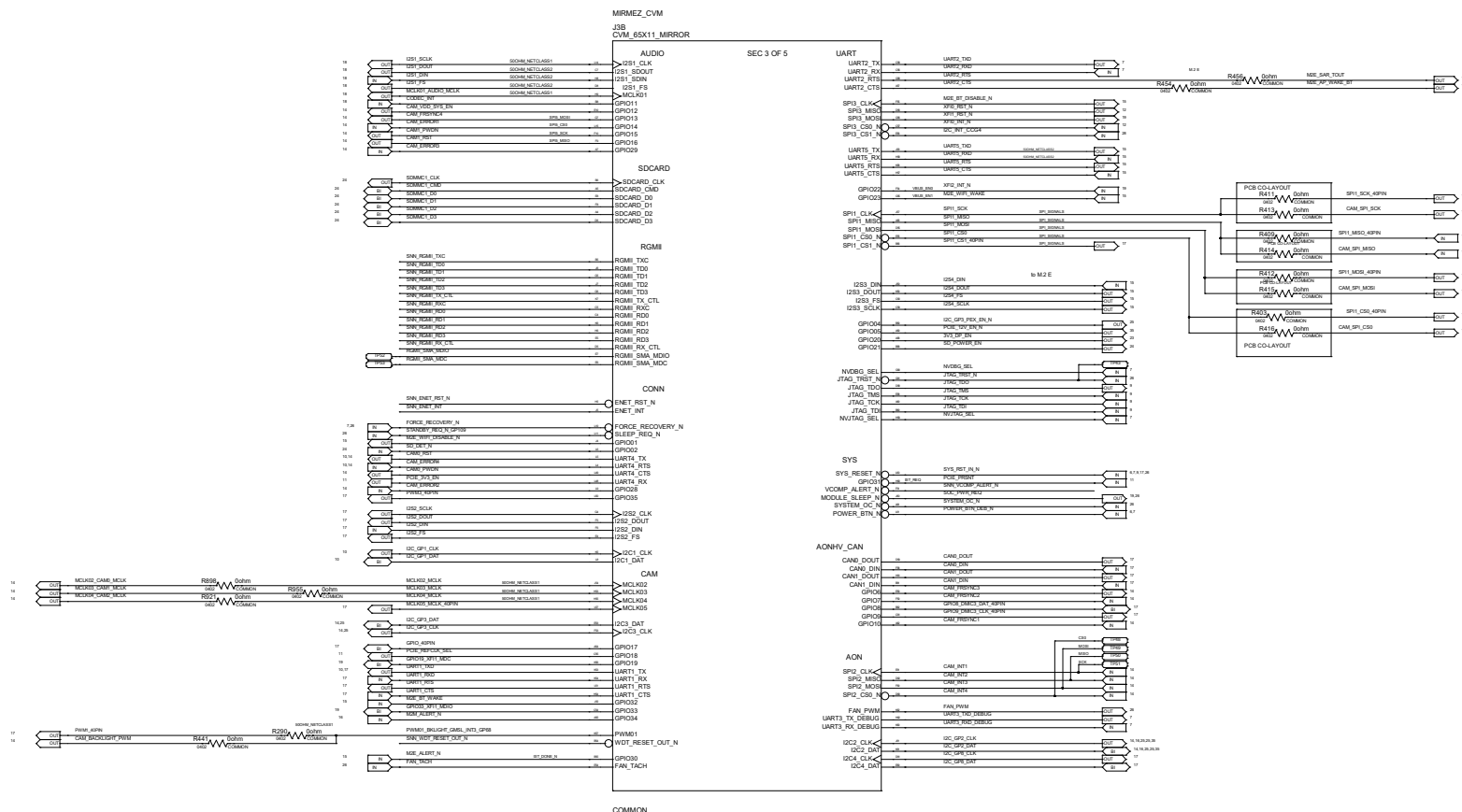
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ASSEMBLY: Jetson Orin Developer Kit Carrier Board
 PAGE DETAIL: CVM connector 1 of 5

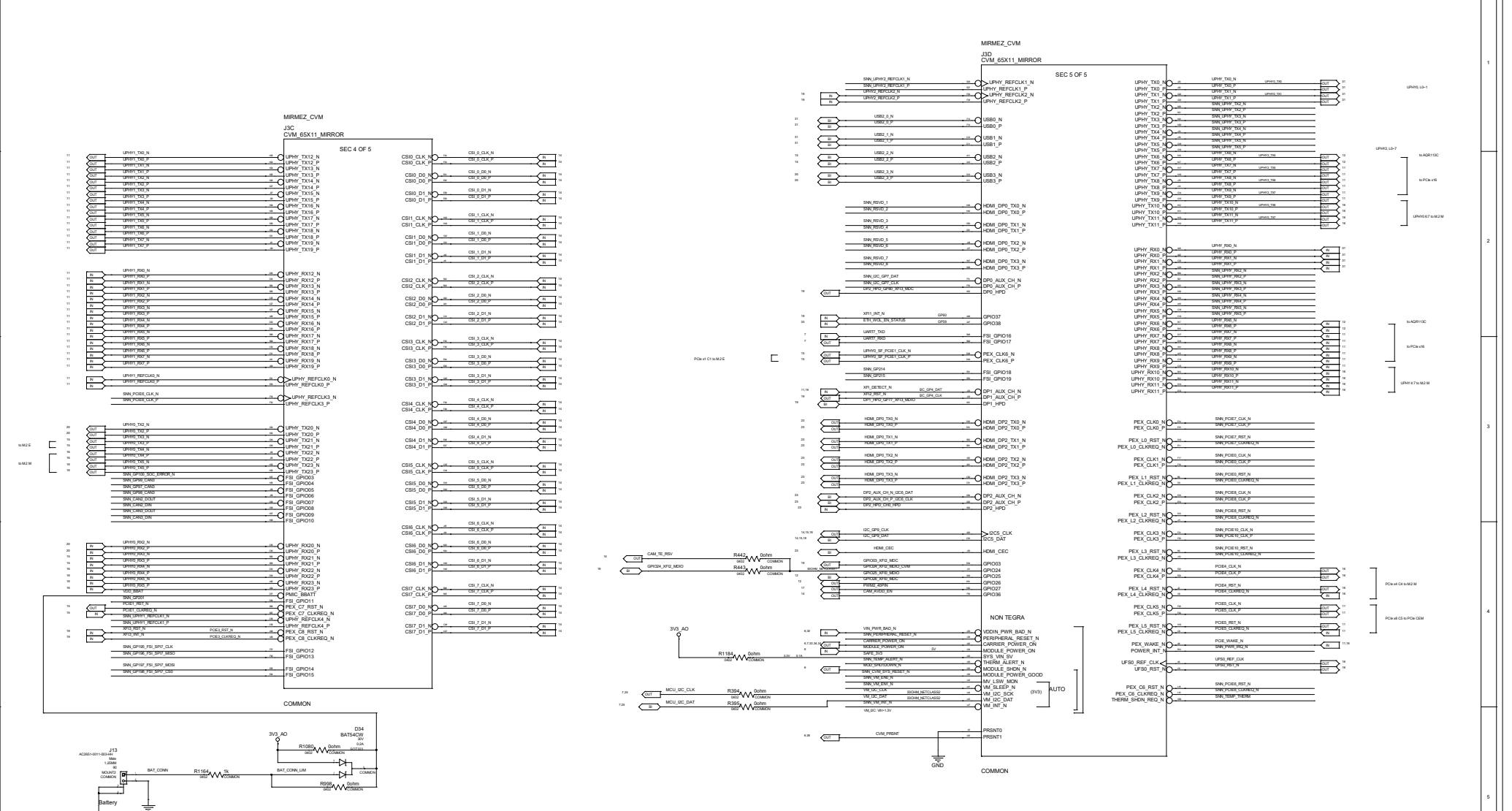
CVM CONNECTOR 2/3



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CVM CONNECTOR 3/3

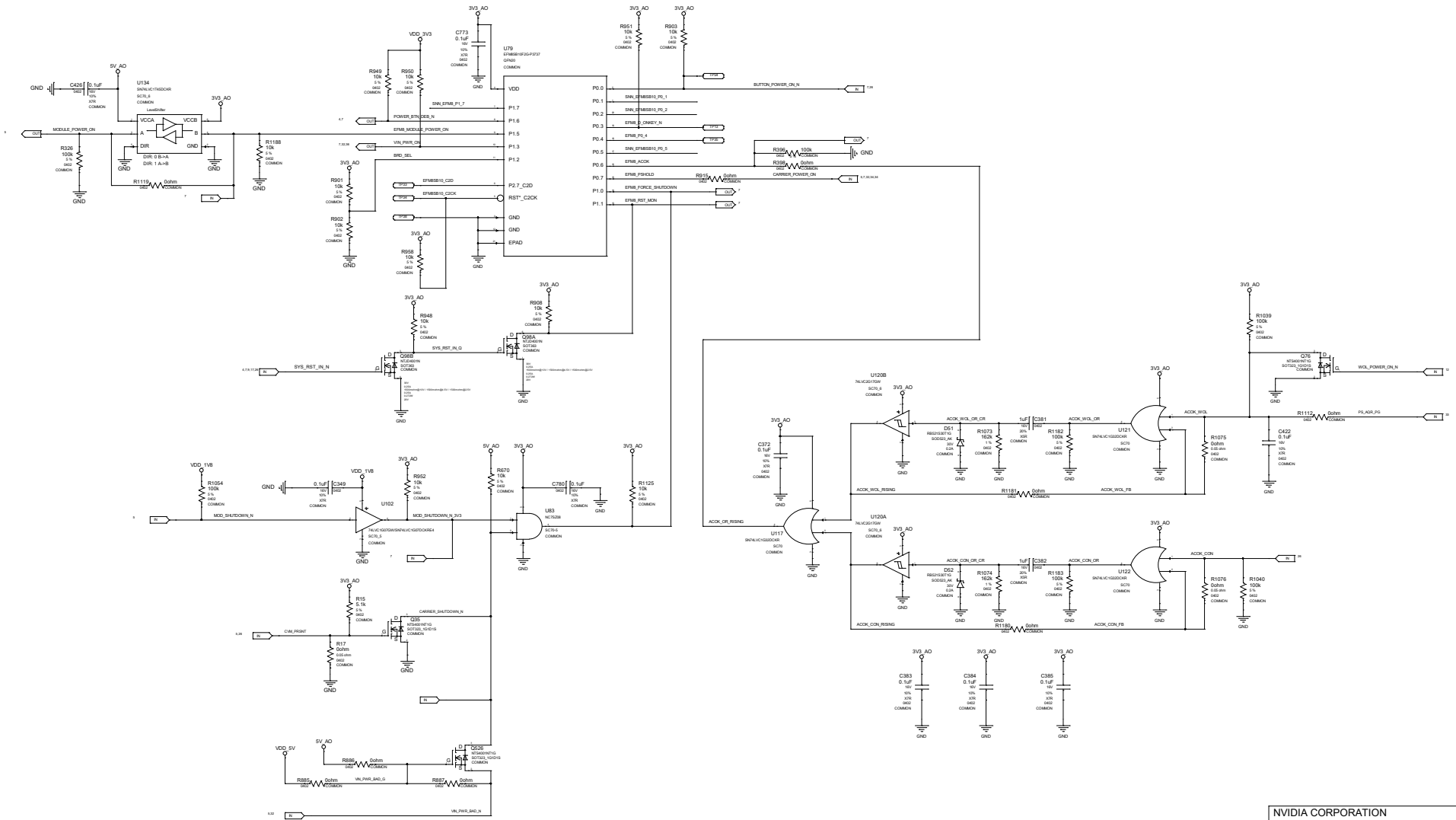


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ASSEMBLY: Jetson Orin Developer Kit Carrier Board
PAGE DETAIL: CVM connector 3 of 5

Button MCU

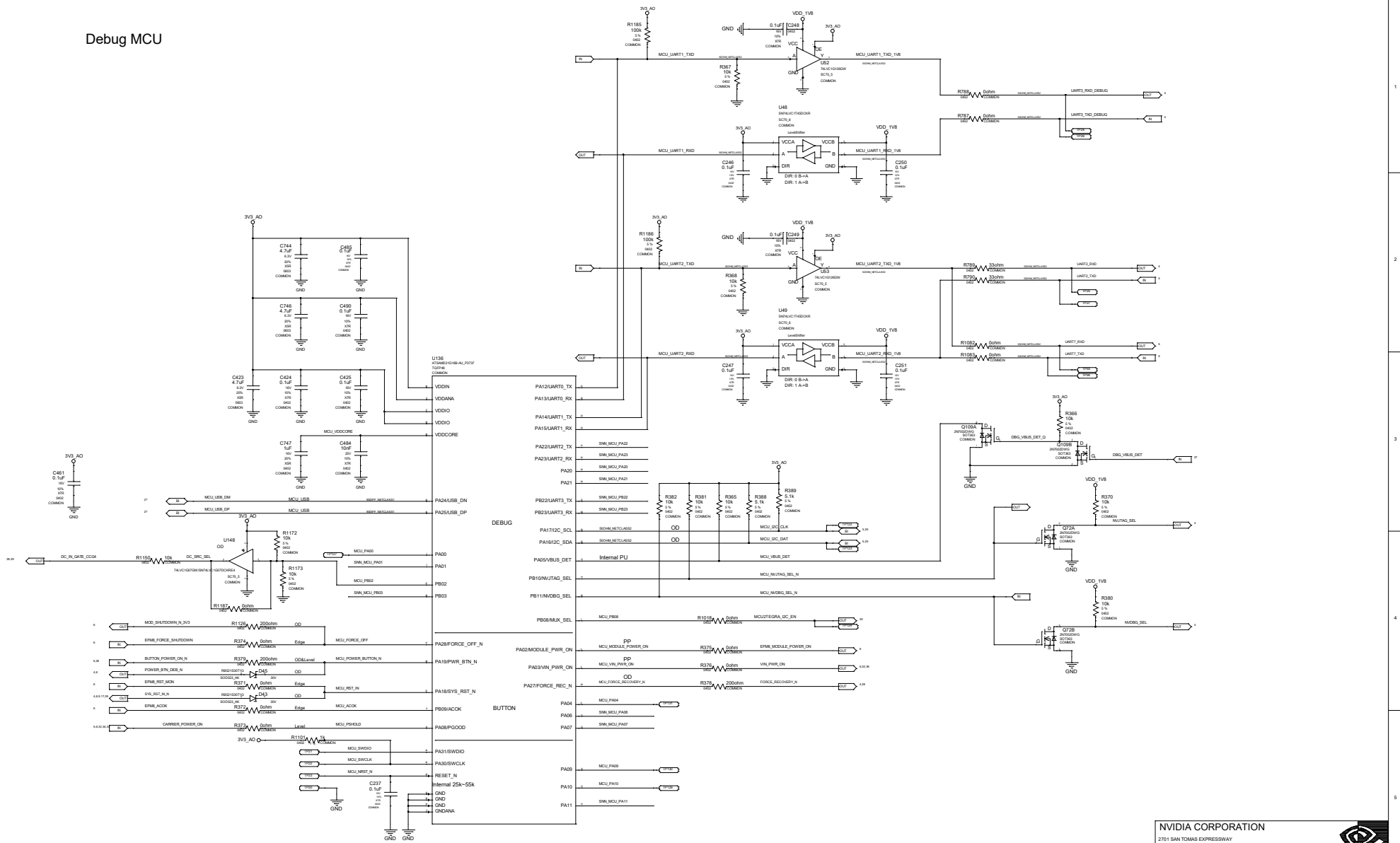


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ASSEMBLY: Jetson Orin Developer Kit Carrier Board
 PAGE DETAIL: Button MCU

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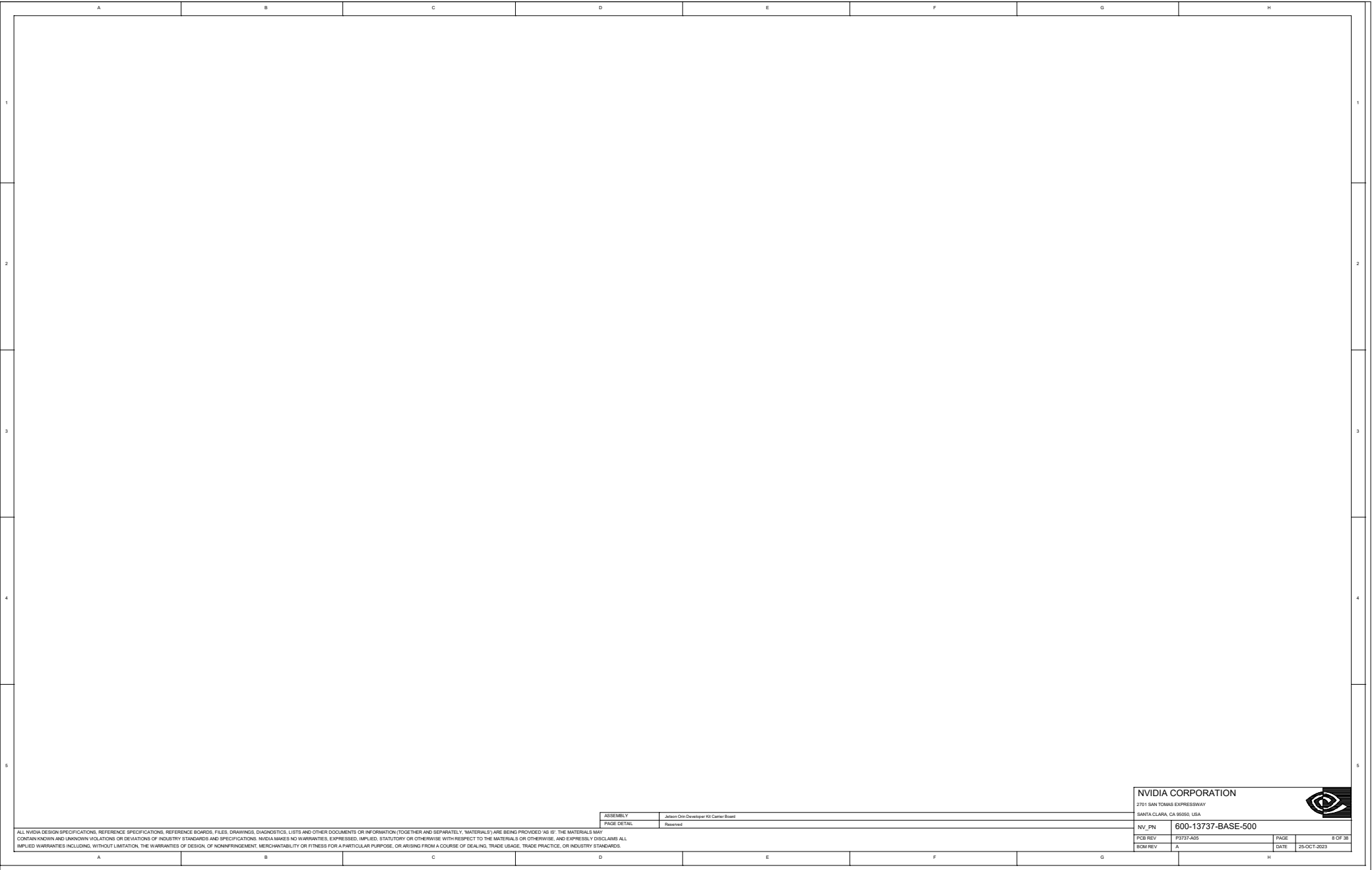
Debug MCU



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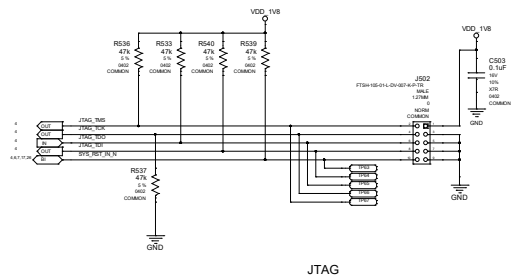


ASSEMBLY	Jetson Orin Developer Kit Carrier Board
FACE DETAIL	Revised

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AP DEBUG CONNECTOR

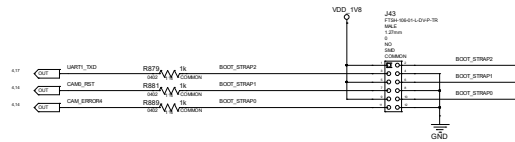
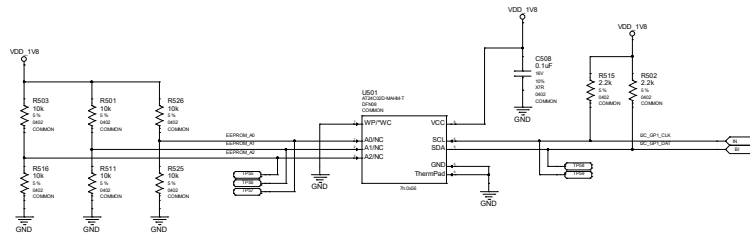


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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
PAGE DETAIL	JTAG Connector

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ID EEPROM



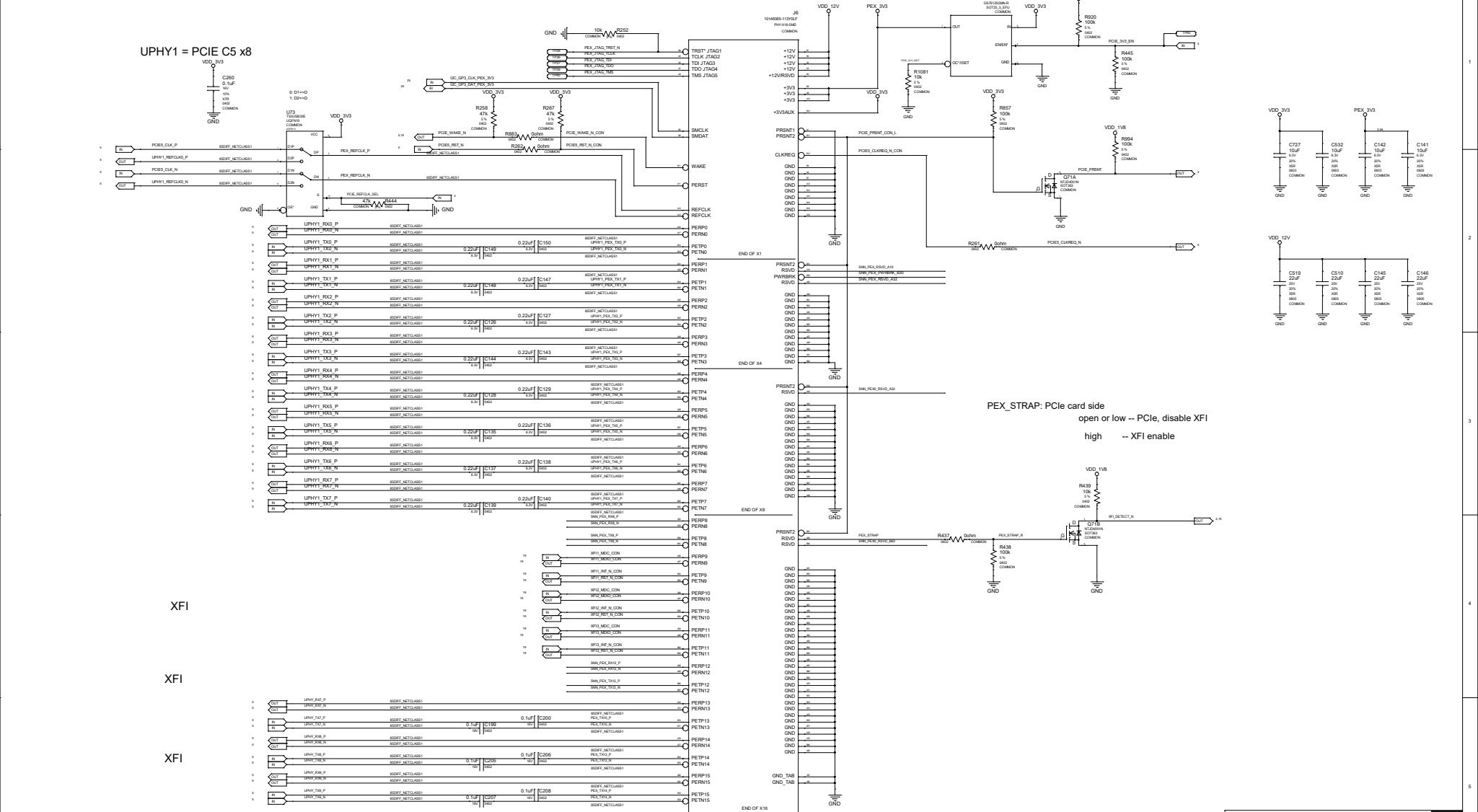
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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
PAGE DETAIL	EEPROM

PCIe X16 Connector

UPHY1 = PCIe C5 x8

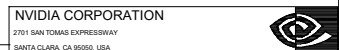


XFI

XFI

XFI

XFI connections shown on the PCIe connector are not supported

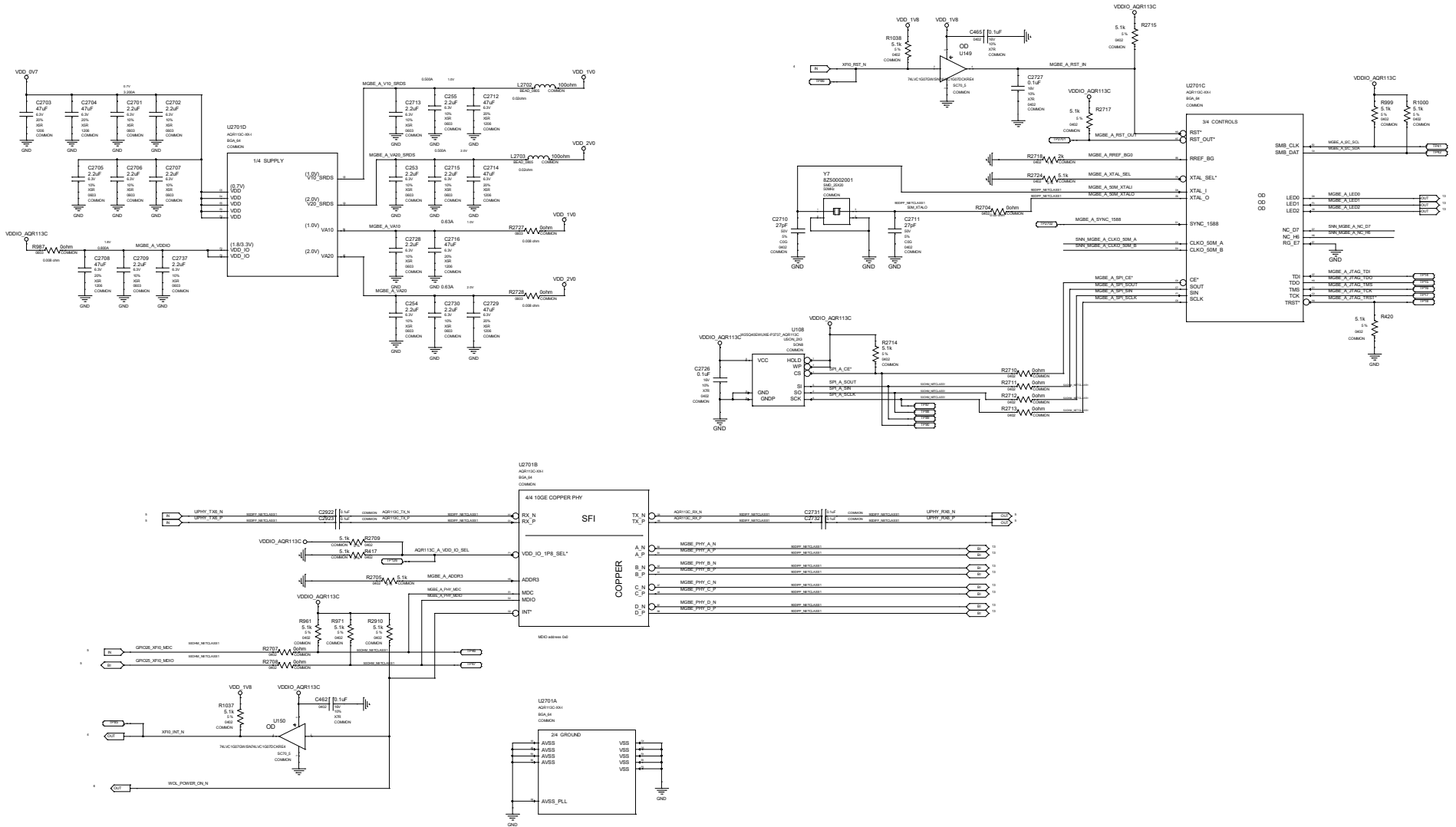


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10GB ETH PHY AQR113C



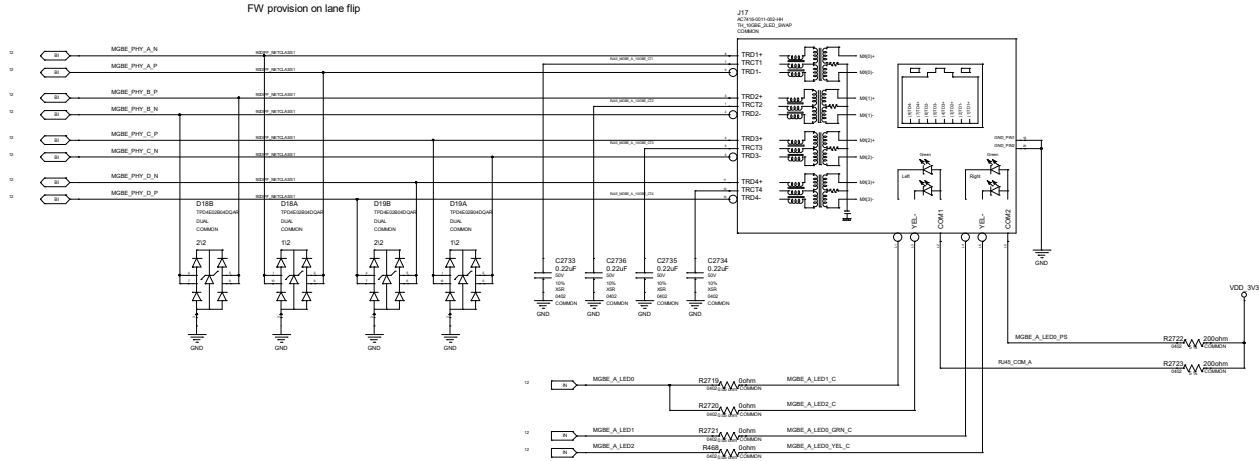
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ASSEMBLY PAGE DETAIL
 Ariton Ono Developer Kit Carrier Board
 10GB ETH PHY AQR113C

support lane flip and polarity correction
 automatic P/N correction
 FW provision on lane flip

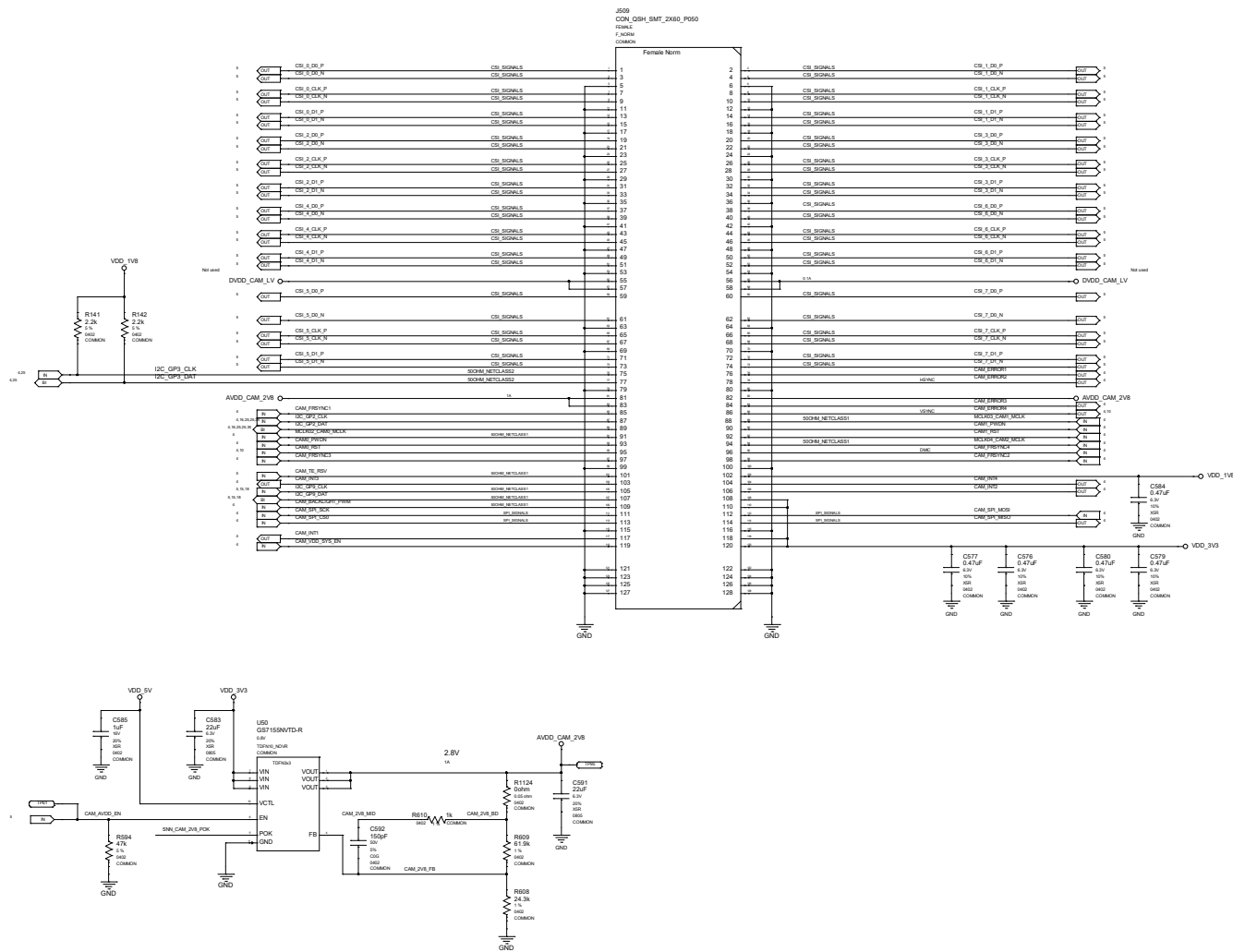


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ASSEMBLY	Altium Ono Developer Kit Carrier Board
FACE DETAIL	160A 16AHS Connector

Camera Connector

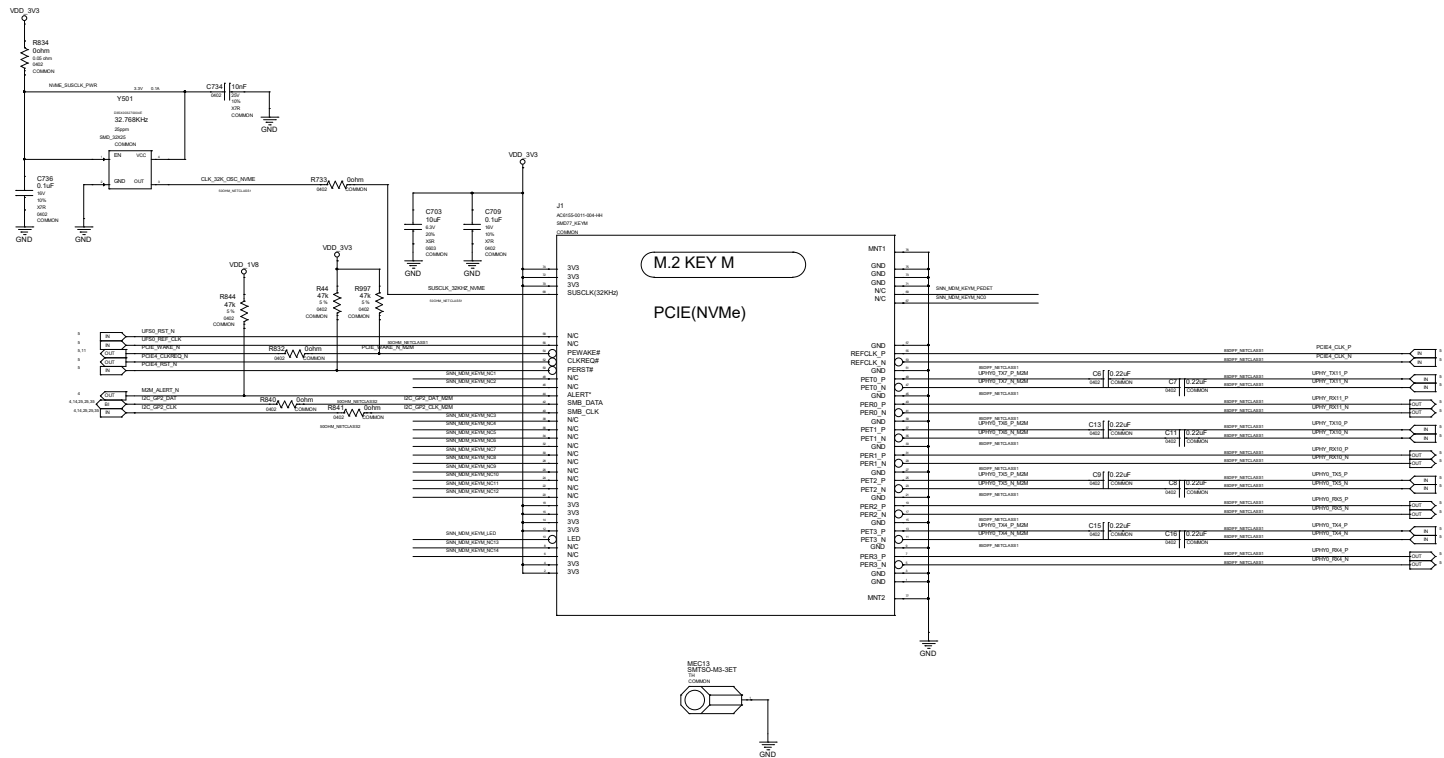


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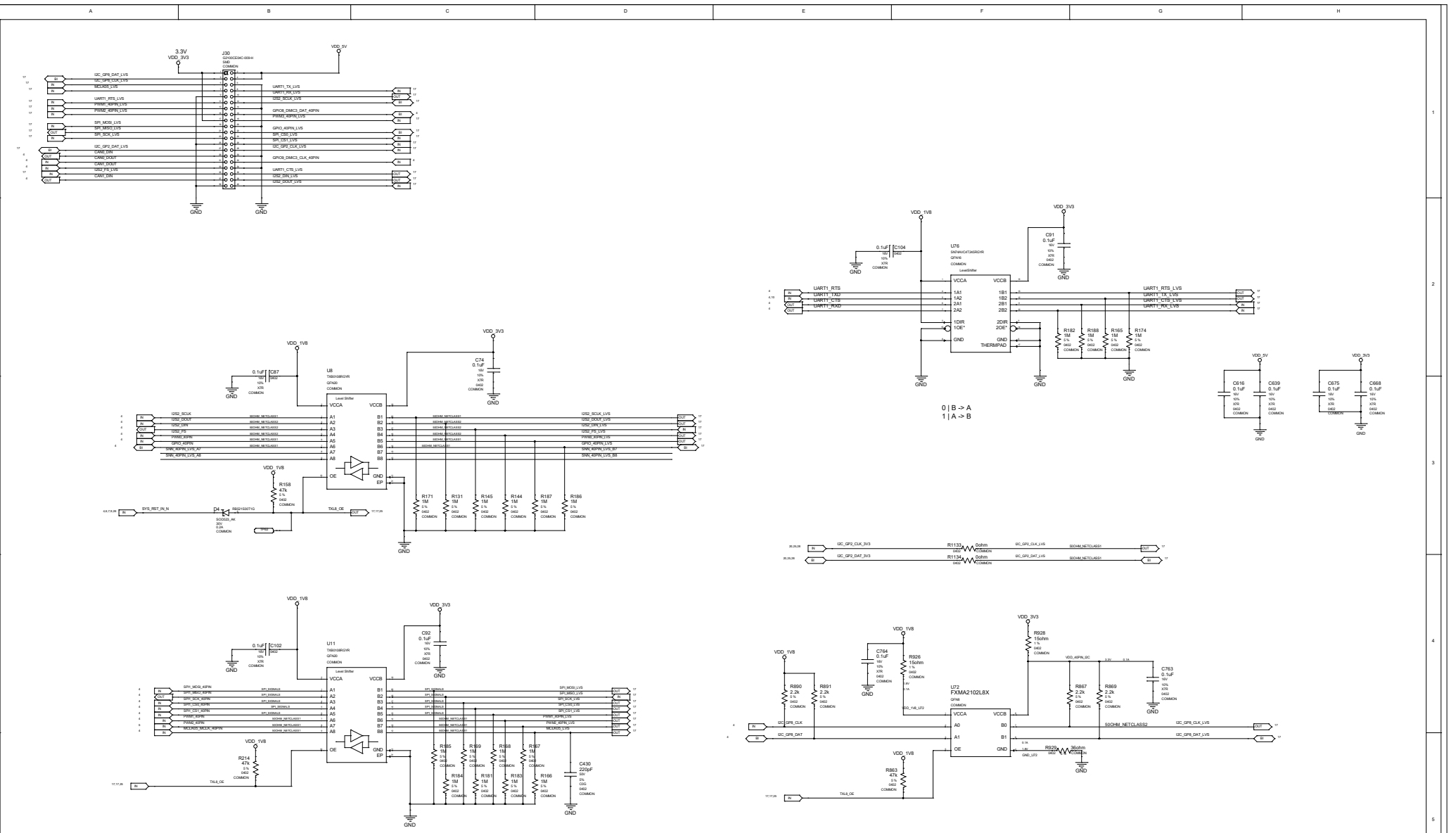
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ASSEMBLY: Jetson Orin Developer Kit Carrier Board
PAGE DETAIL: Camera connector

M.2 Key M Connector



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ASSEMBLY: Jetson Nano Developer Kit Carrier Board
 PAGE DETAIL: 49 Pin Header

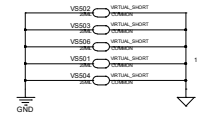
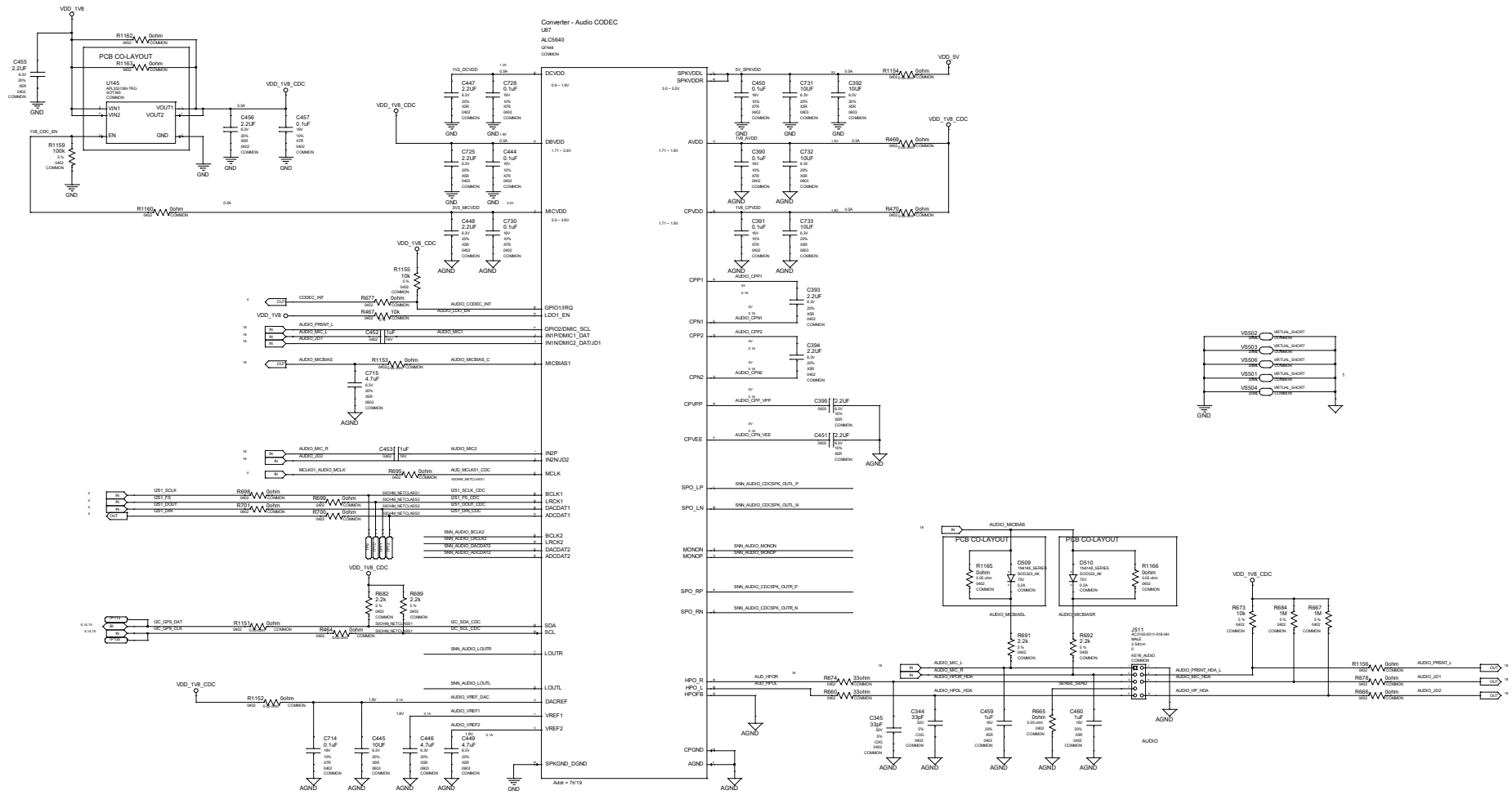
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CODEC (I2S1)



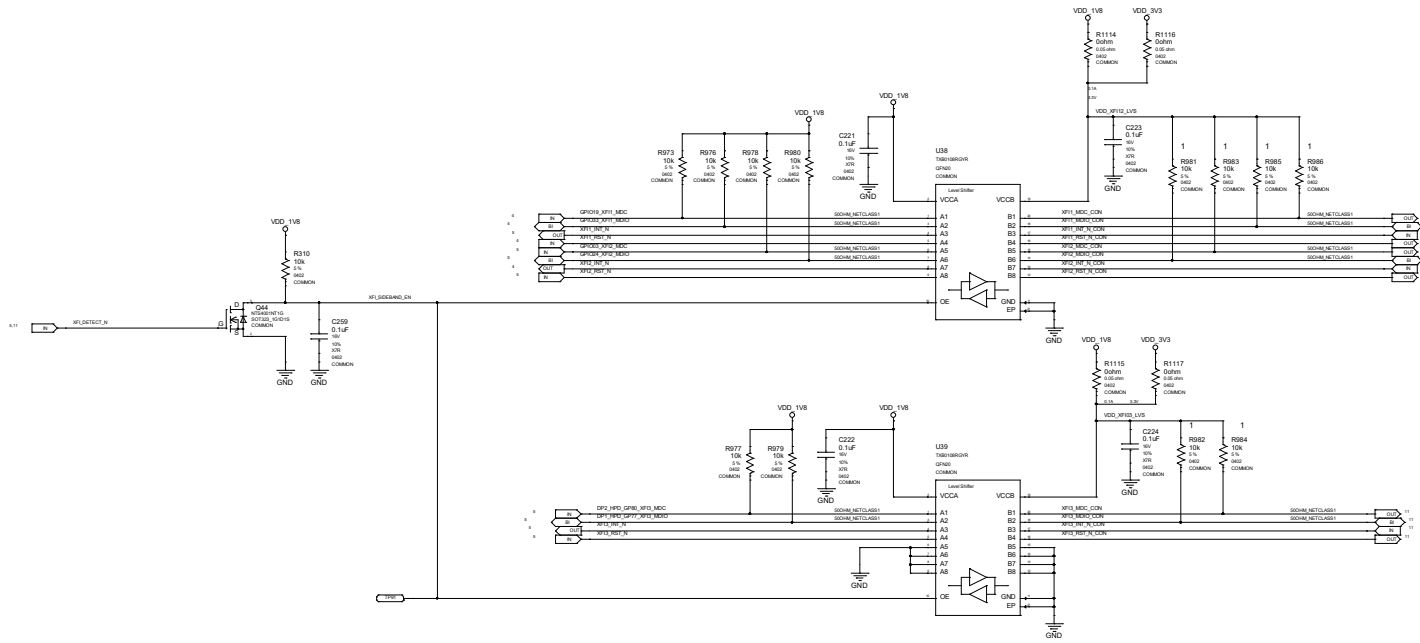
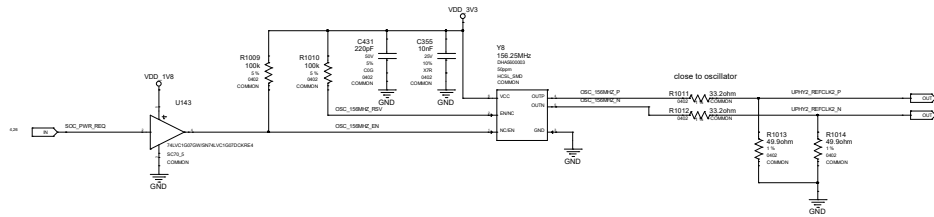
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ASSEMBLY: **Jason Orin Developer Kit Carrier Board**
 PAGE DETAIL: **Codec and I2S Audio Interface**

MGBE

MGBE reference clock



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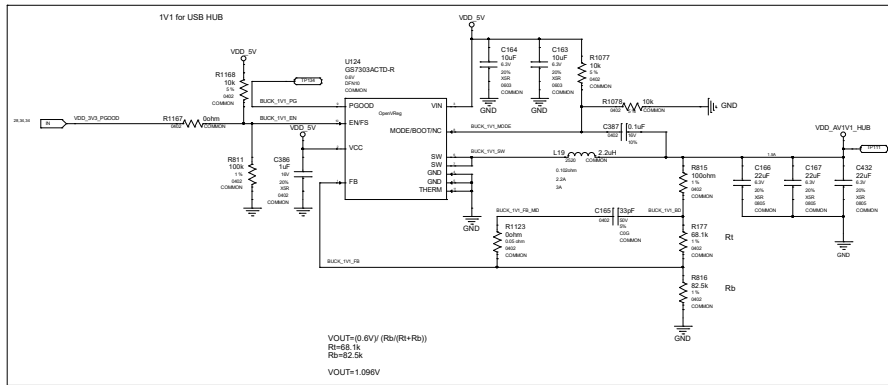
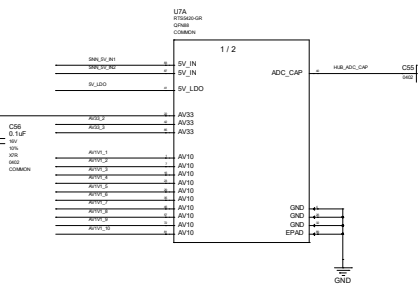
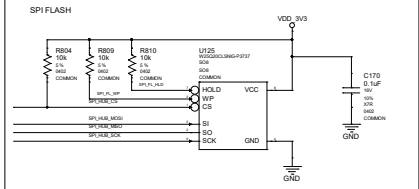
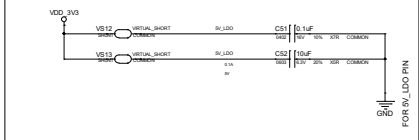
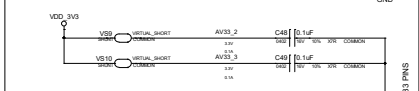
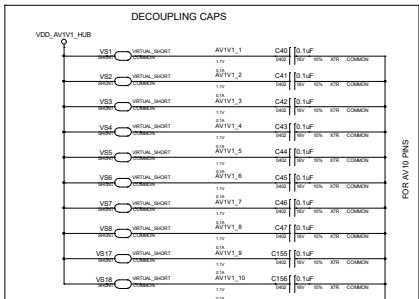


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ASSEMBLY PAGE DETAIL
 Jetson Orin Developer Kit Carrier Board
 NV-100

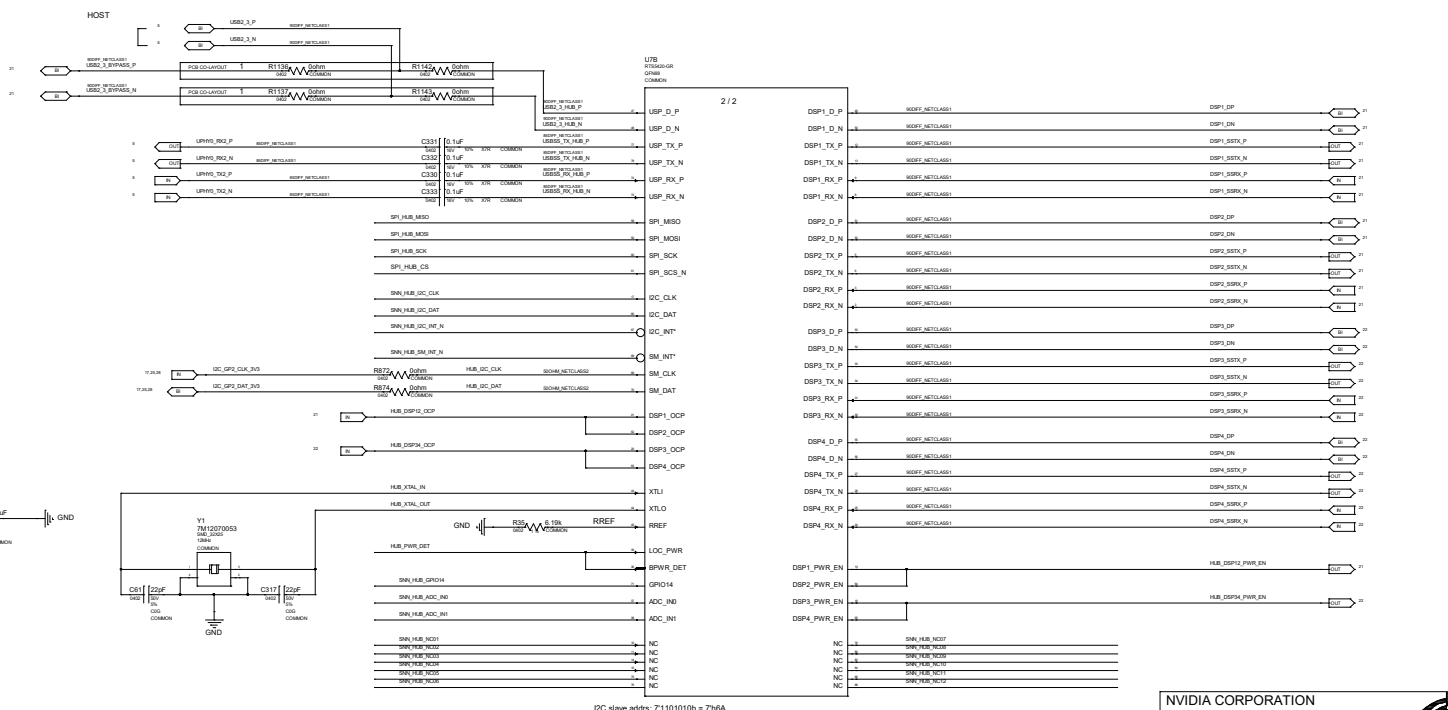
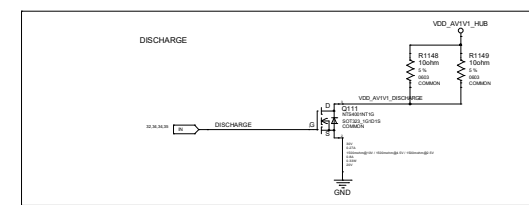
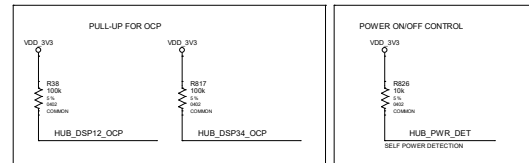
USB3.1 GEN2 HUB x4 PORTS



$$V_{OUT} = 0.6V \cdot \left(\frac{R_b + R_r}{R_b} \right)$$

R_b = 82.5k
R_r = 82.5k

$$V_{OUT} = 1.095V$$



IC2 slave addr: 71101010b = 7h6A

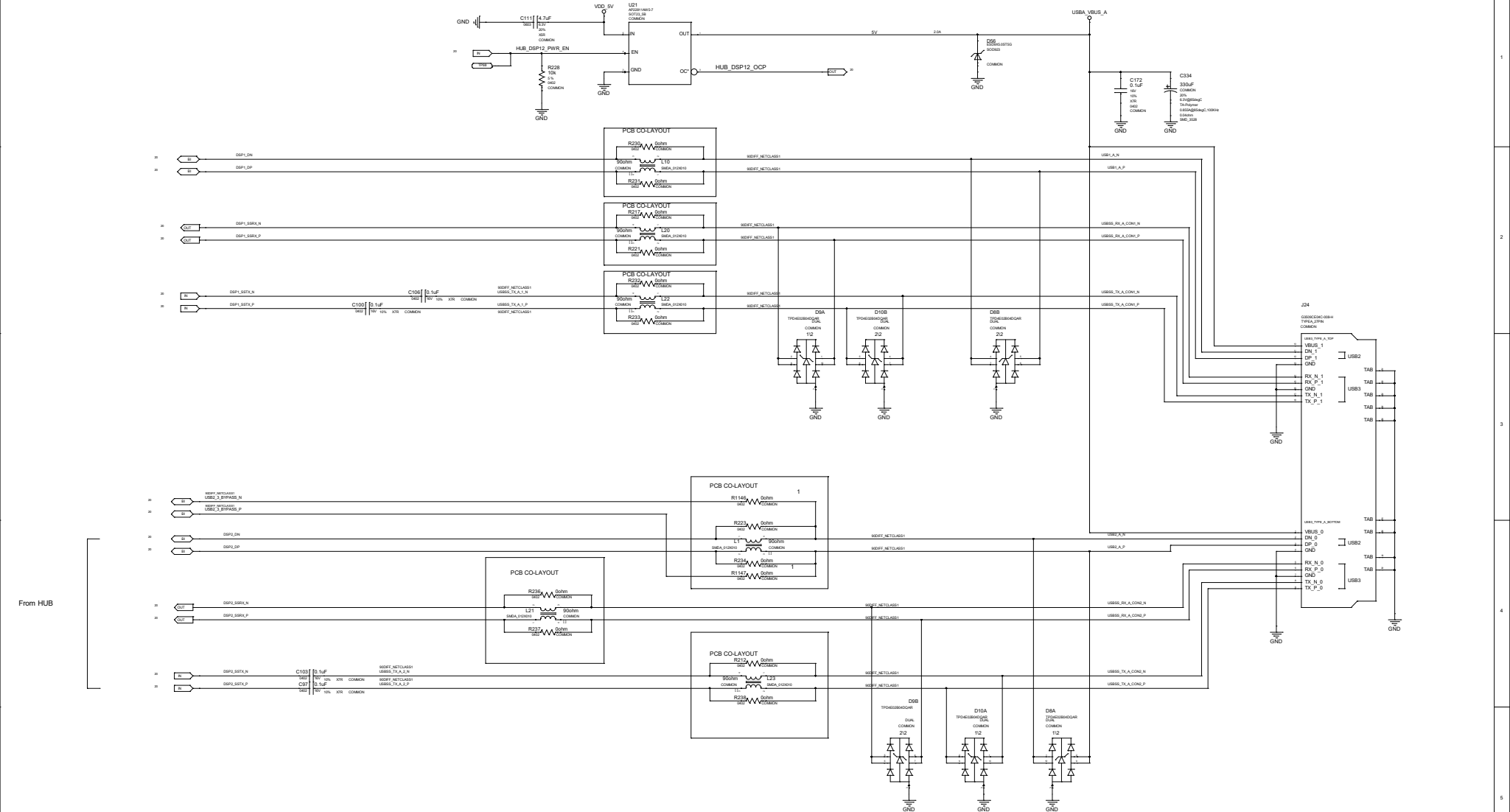
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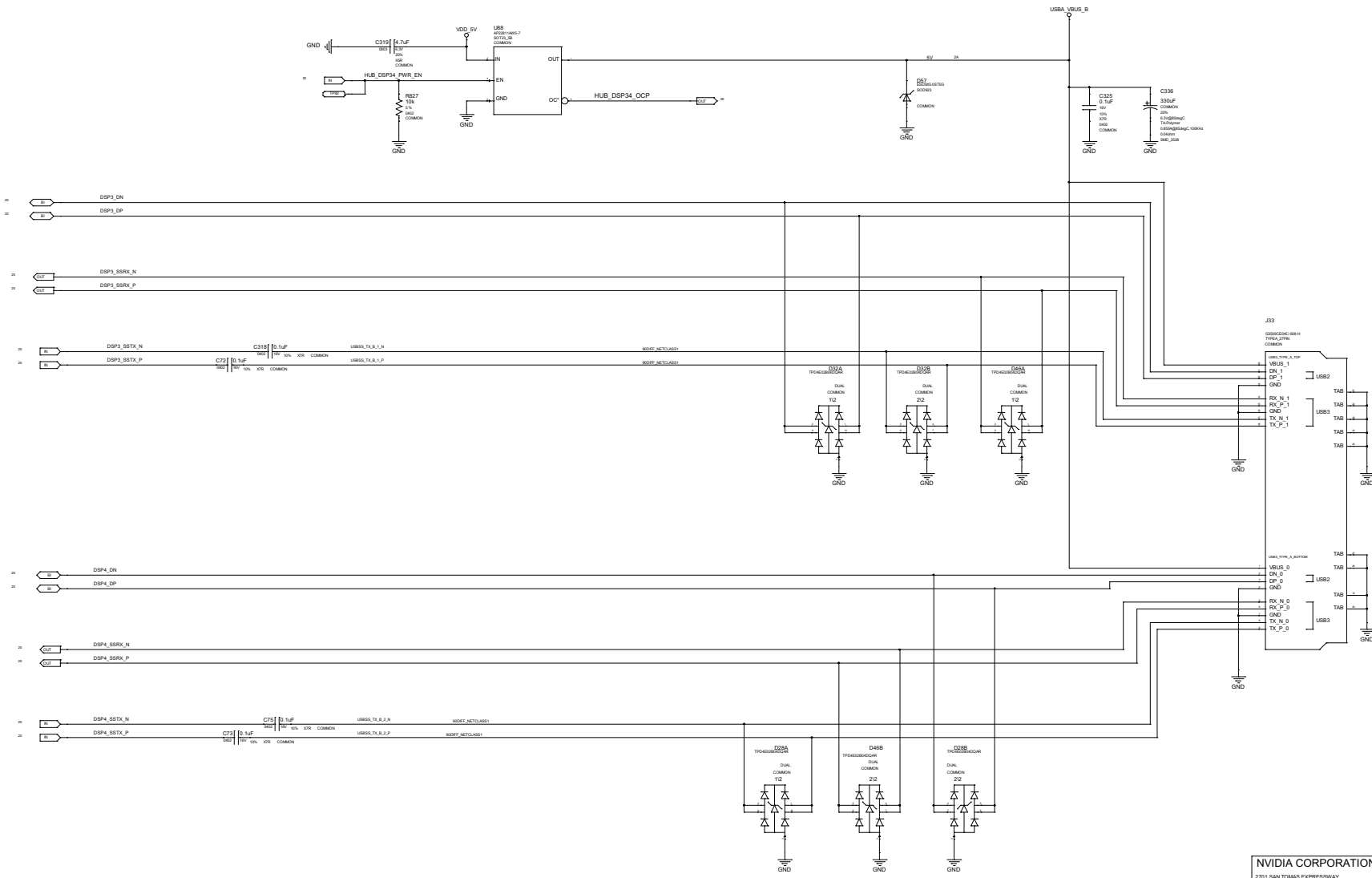
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BOM REV A	DATE 25-0CT-2023

USB3.1 TYPE-A x2 (A)



USB3.1 TYPE-A x2 (B)

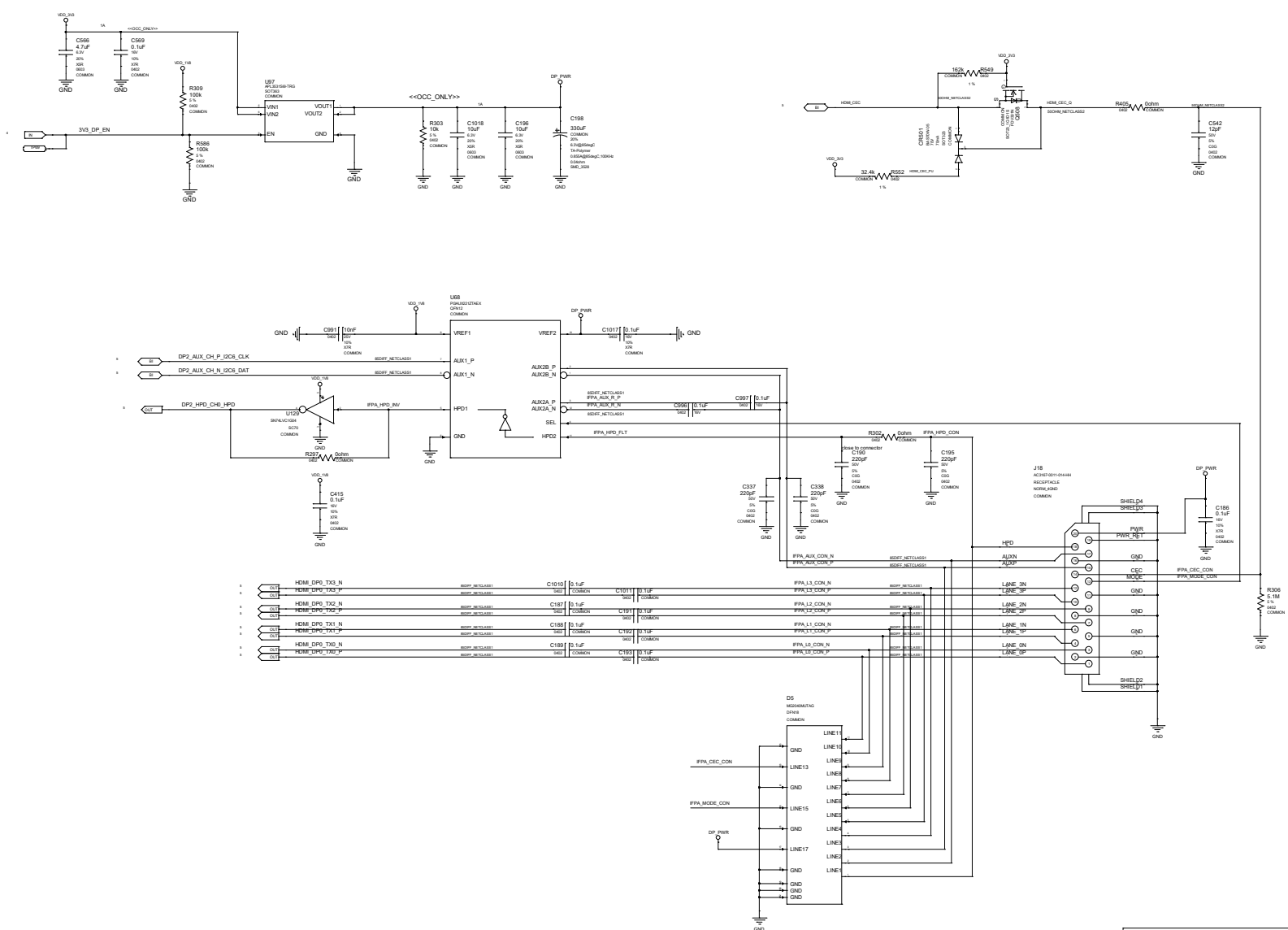


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ASSEMBLY: Jetson Orin Developer Kit Carrier Board
 PAGE DETAIL: USB3.1 Type-A x2 (B)

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BOM REV	A		

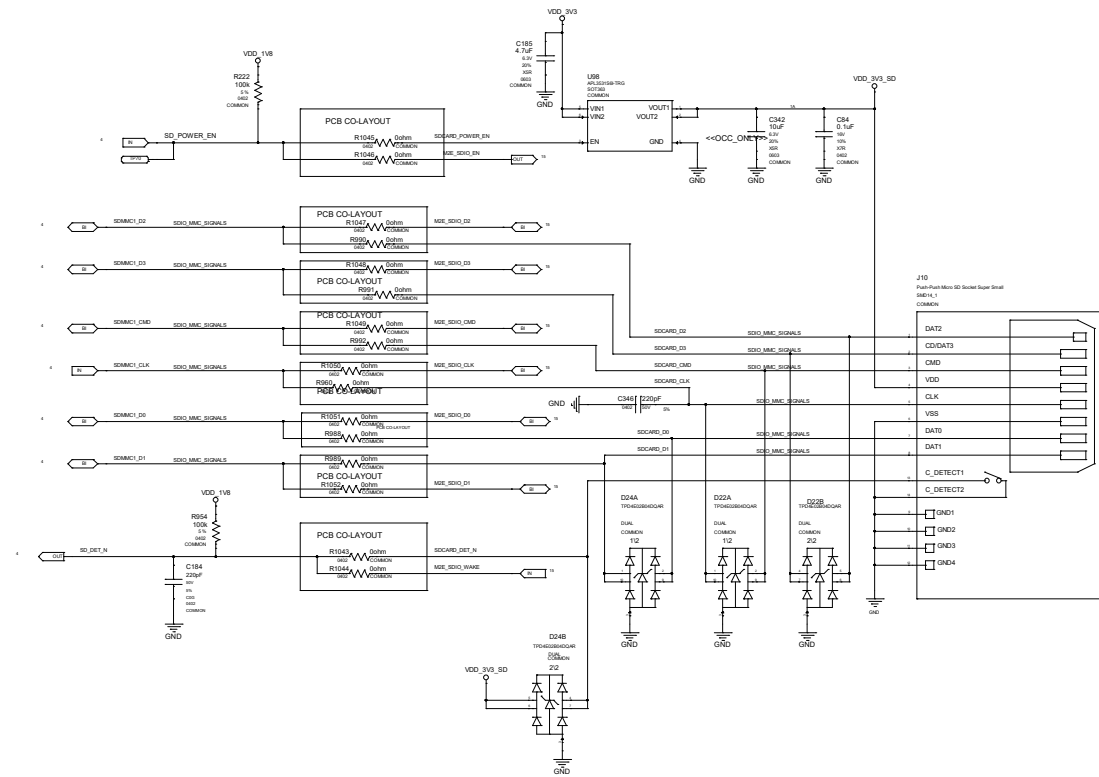
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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
PAGE DETAIL	DP Connector

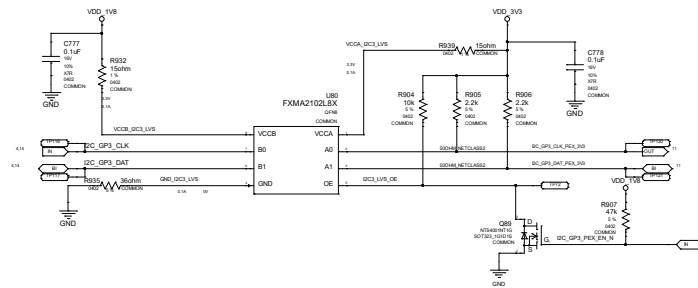
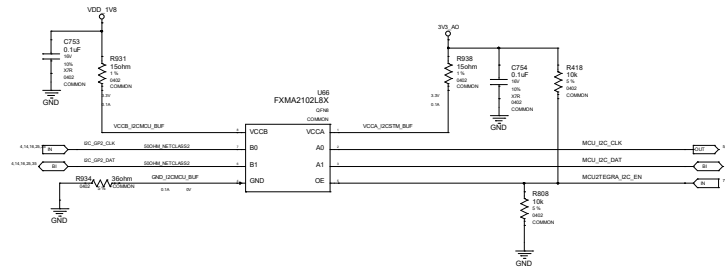
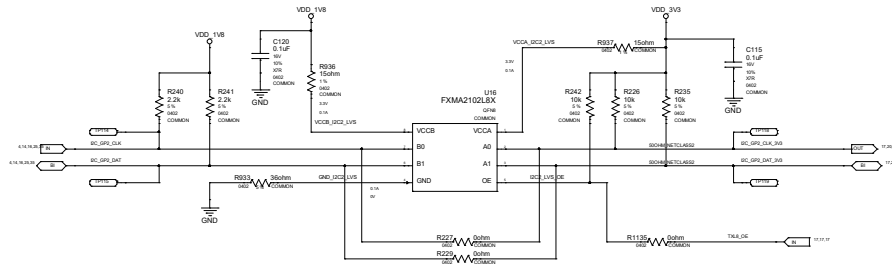
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PCB REV	P3737-A05			
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ASSEMBLY	Atsion Ono Developer Kit Carrier Board
PACKAGE DETAIL	integrated socket

I2C GP2 LEVEL SHIFTER/REPEATER



ASSEMBLY Jiteem Ono Developer Kit Carrier Board
 PAGE DETAIL I2C LevelShifter

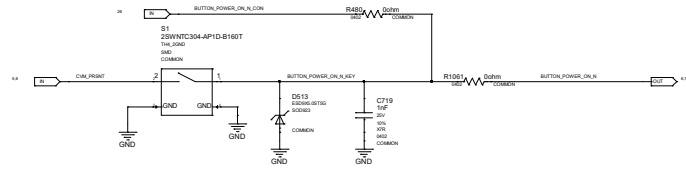
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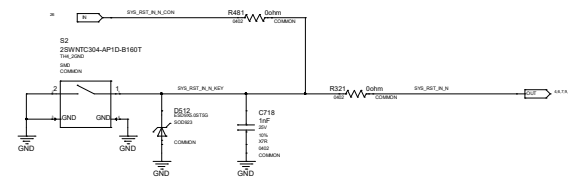
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Buttons & Fan

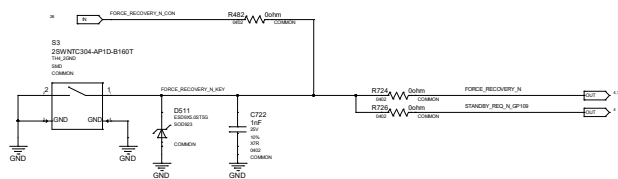
POWER



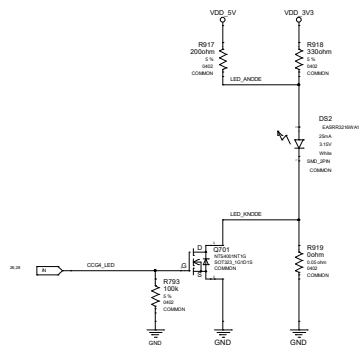
RESET



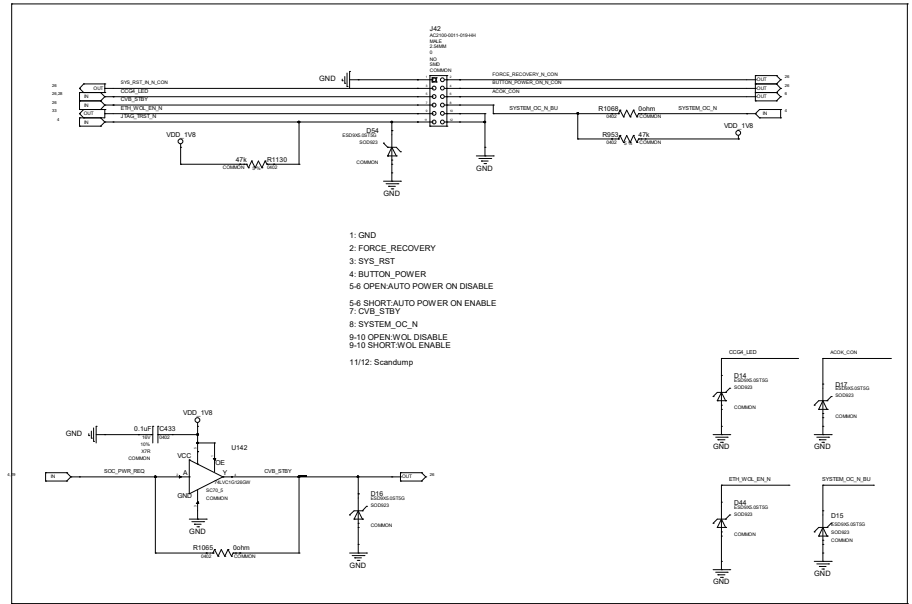
FORCE_RECOVERY



LED

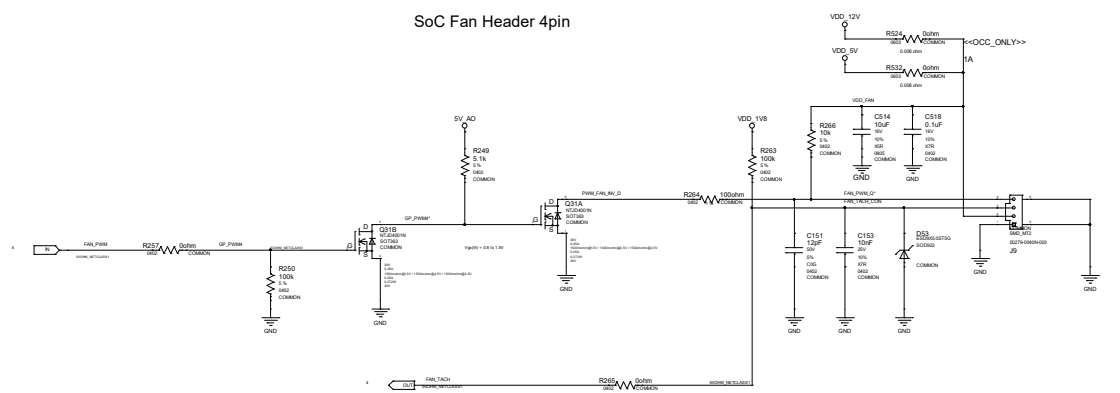


Automation Header



- 1: GND
- 2: FORCE_RECOVERY
- 3: SYS_RST
- 4: BUTON_POWER
- 5: 6 OPEN/AUTO POWER ON DISABLE
- 6: 5.6 SHORT/AUTO POWER ON ENABLE
- 7: CVB_STBY
- 8: SYSTEM_DC_N
- 9-10: OPEN/WOL DISABLE
- 9-10: 9-10 SHORT/WOL ENABLE
- 11/12: Scandump

SoC Fan Header 4pin



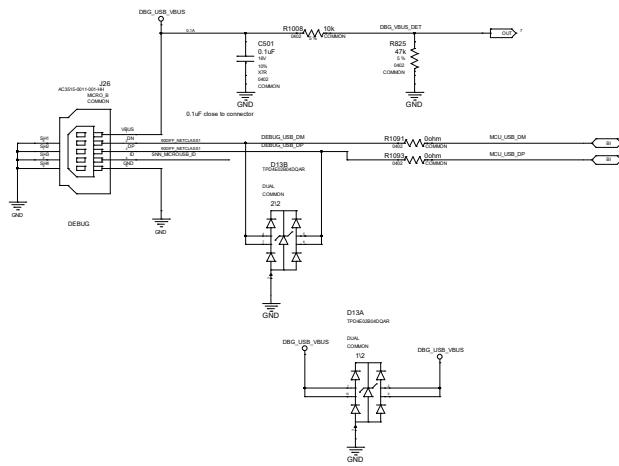
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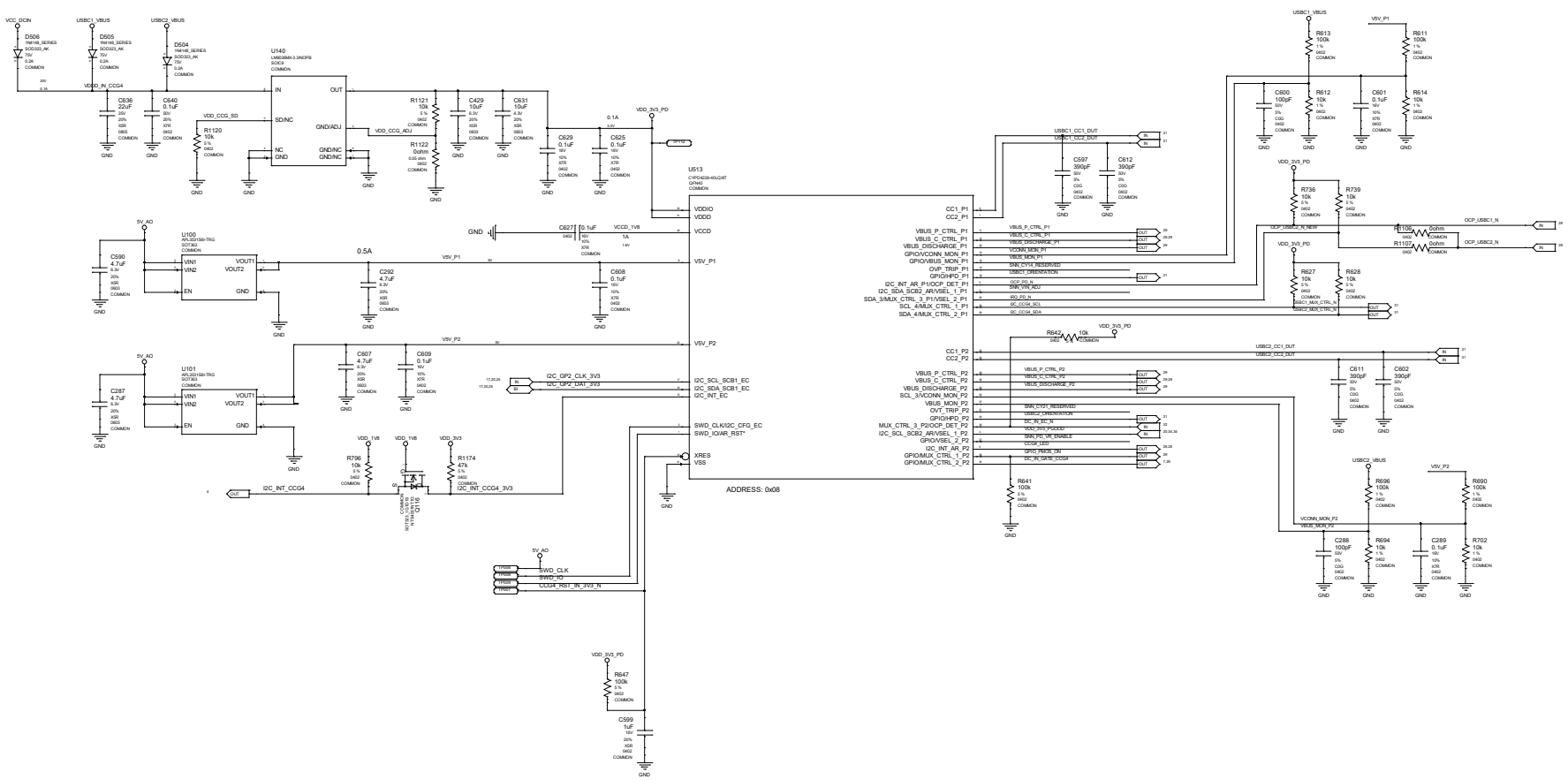
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USB PD Controller

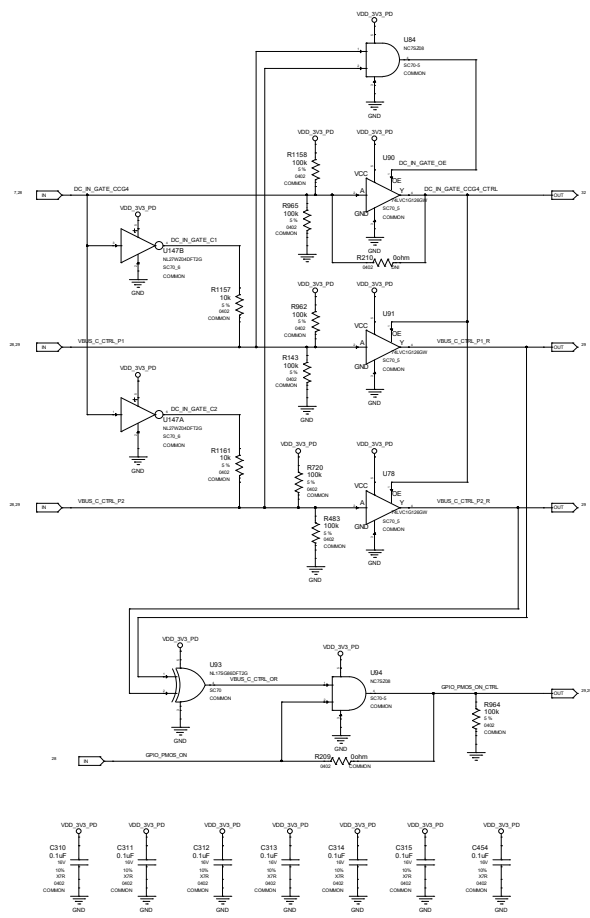


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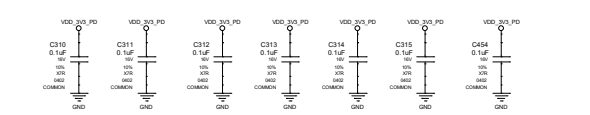
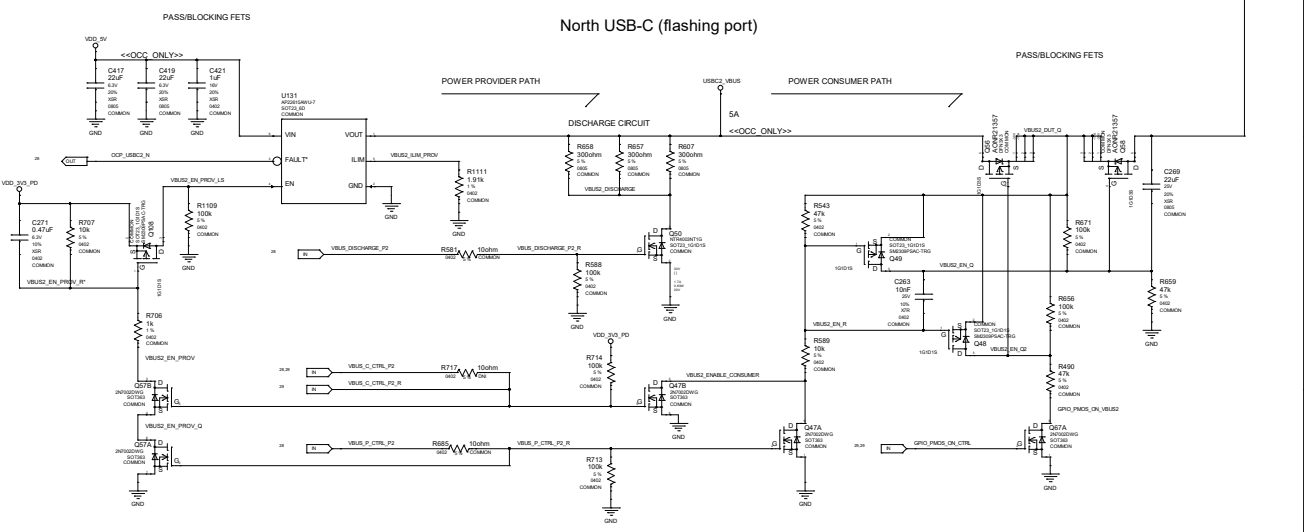
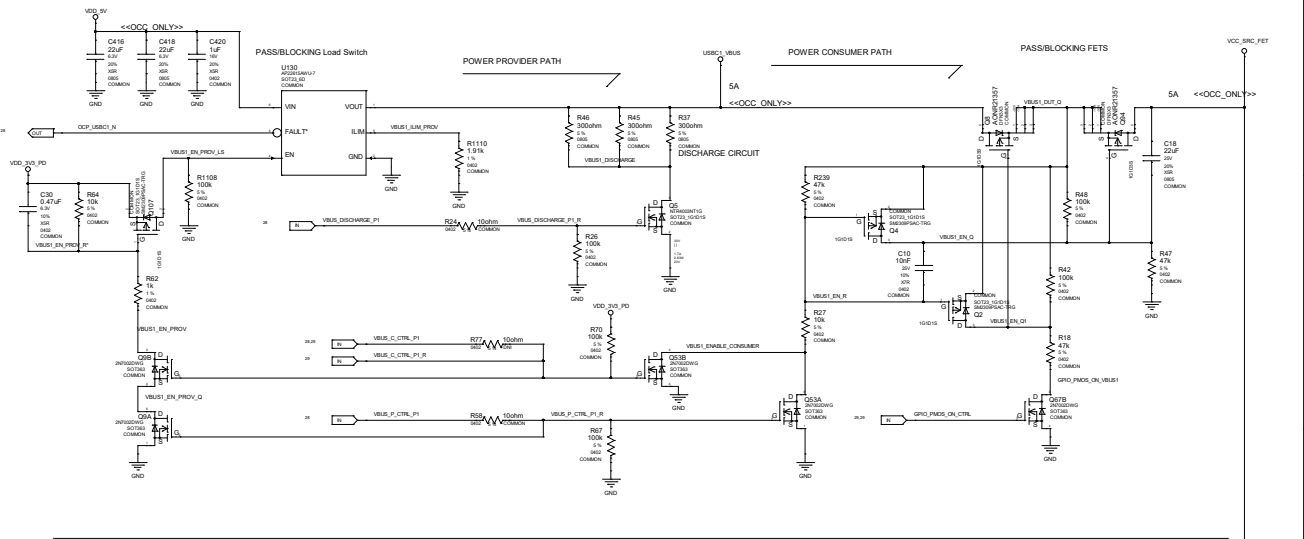
ASSEMBLY	Jetson Orin Developer Kit Carrier Board
PAGE DETAIL	USB PD Controller

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USB PD FET logic



USB PD Power Path

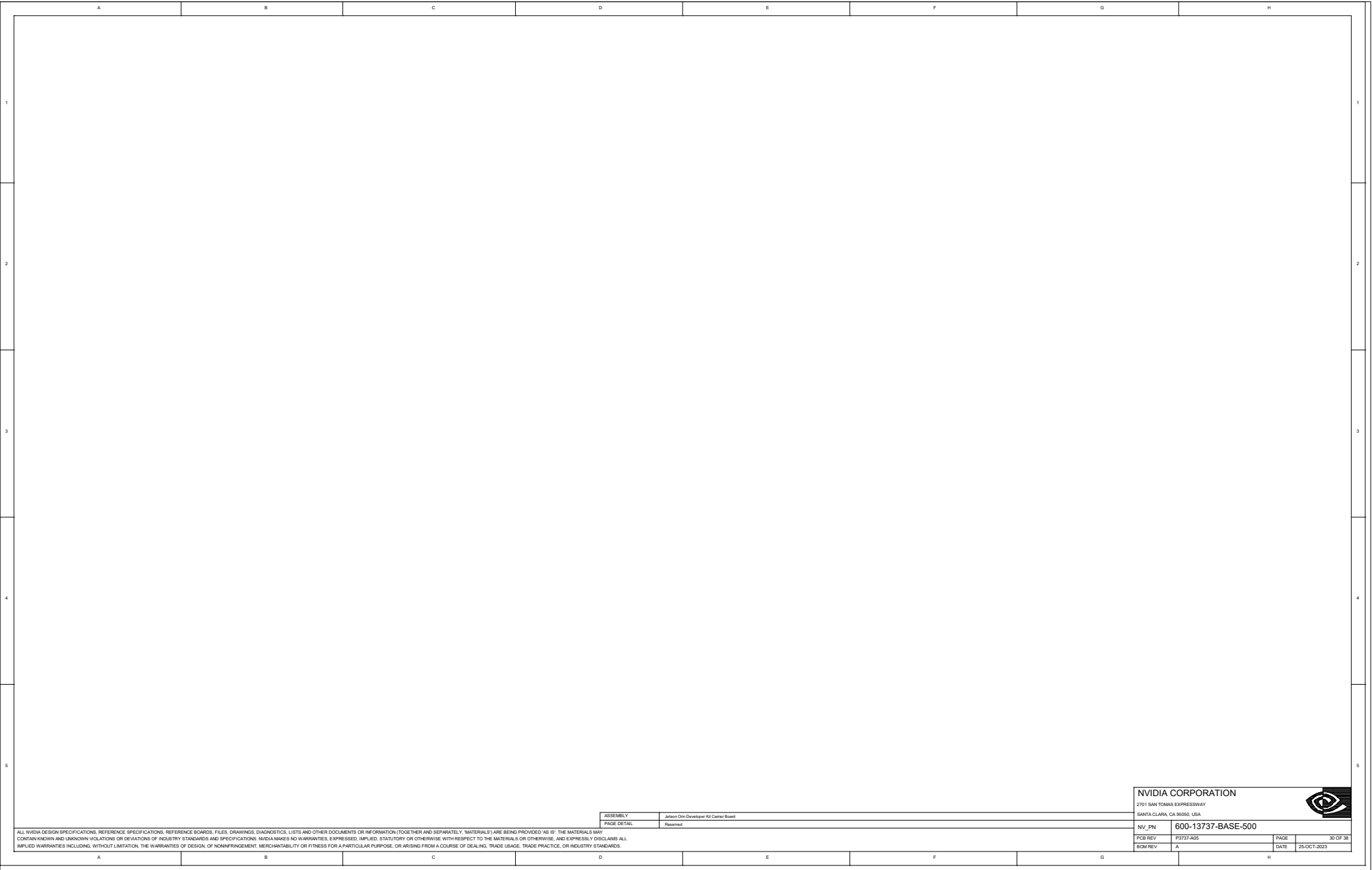



ASSEMBLY	Nvidia On Developer Kit Carrier Board
PAGE DETAIL	USB PD Path

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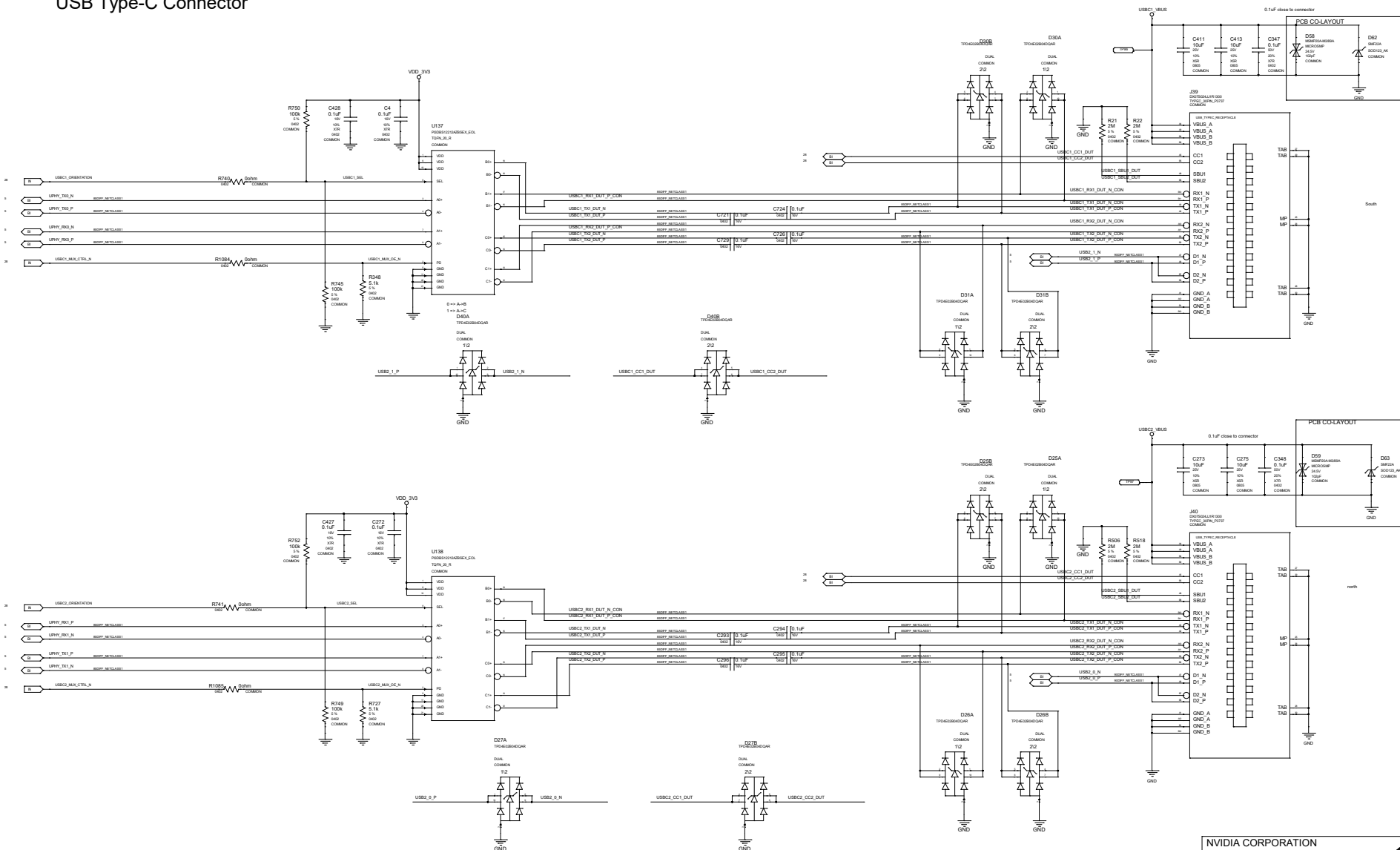


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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
FACE DETAIL	Revised

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USB Type-C Connector



ASSEMBLY: Jetson Orin Developer Kit Carrier Board
 PAGE DETAIL: USB type-C Connector

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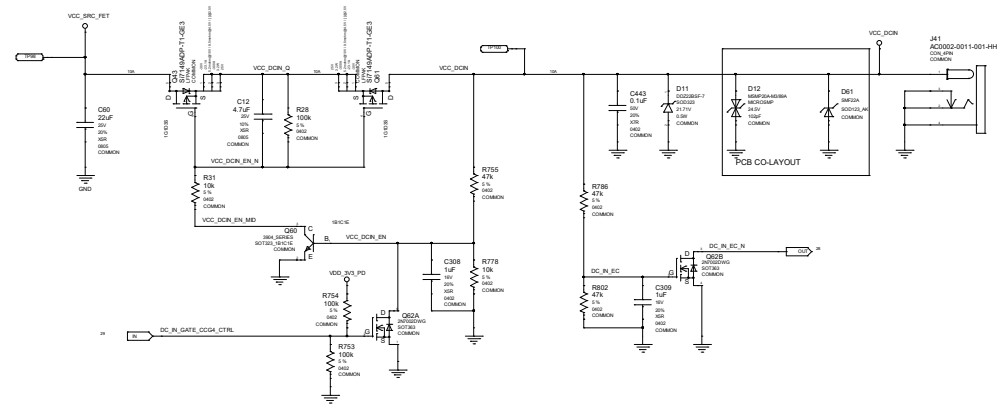
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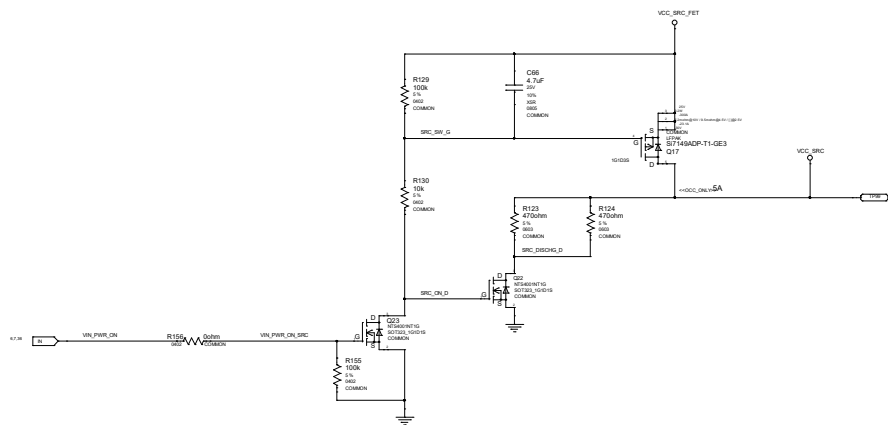
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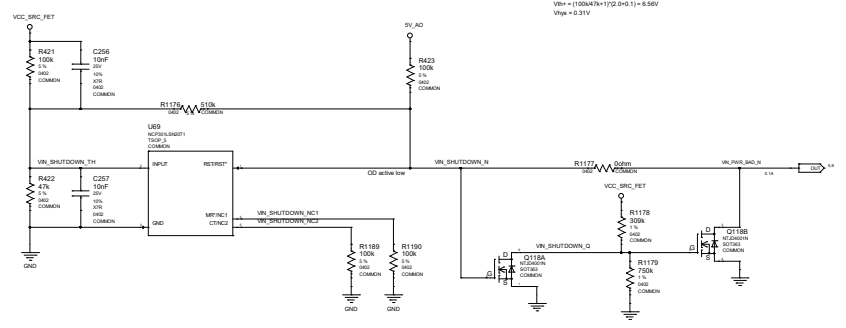
Input Power Source



Input control



VIN LOSS DETECTION

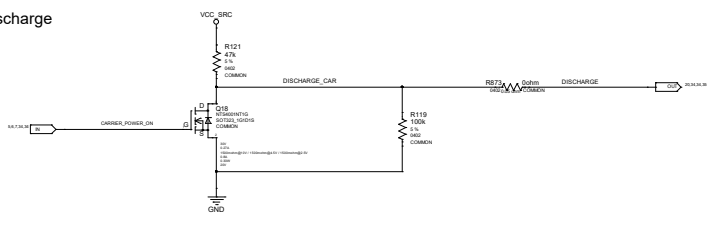


$$V_{in} = (100\mu A \times 172.5\Omega) + 0.25V$$

$$V_{in} = (100\mu A \times 172.5\Omega) + 0.58V$$

$$V_{in} = 0.51V$$

Discharge



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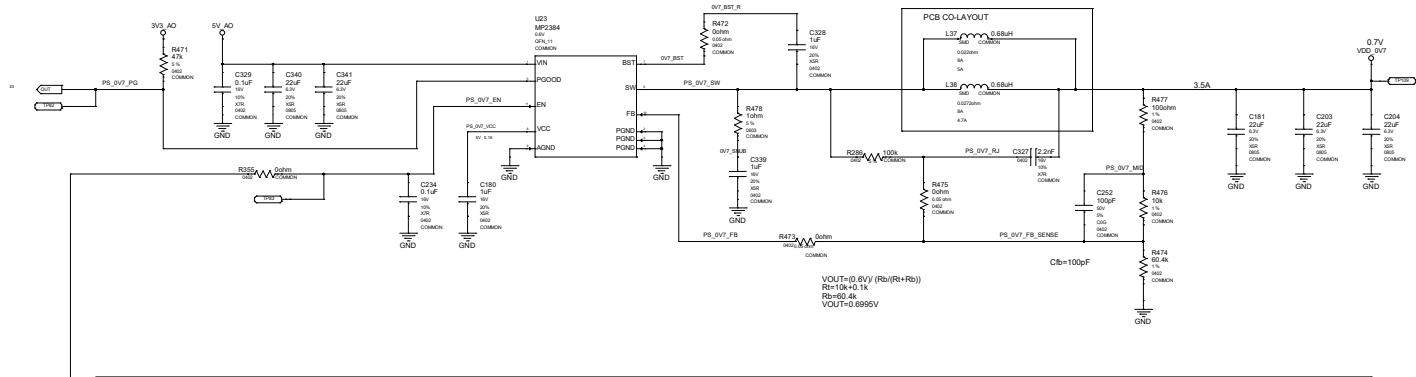
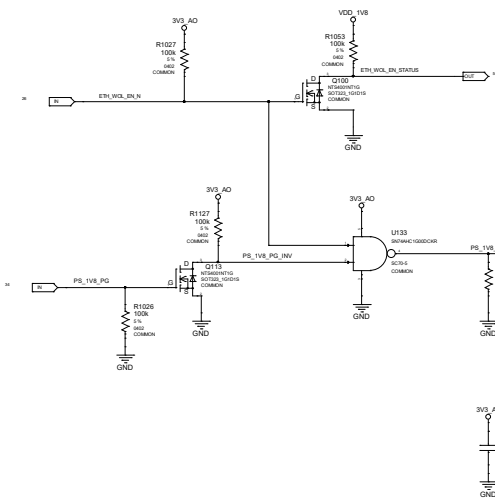
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ASSEMBLY	Autism Ono Developer Kit Carrier Board
PAGE DETAIL	DC JACK

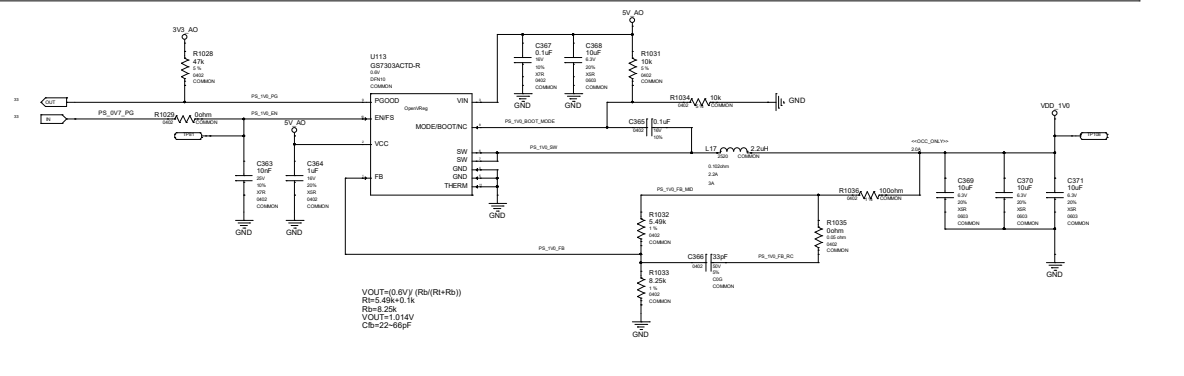
0V7

WOL from Off

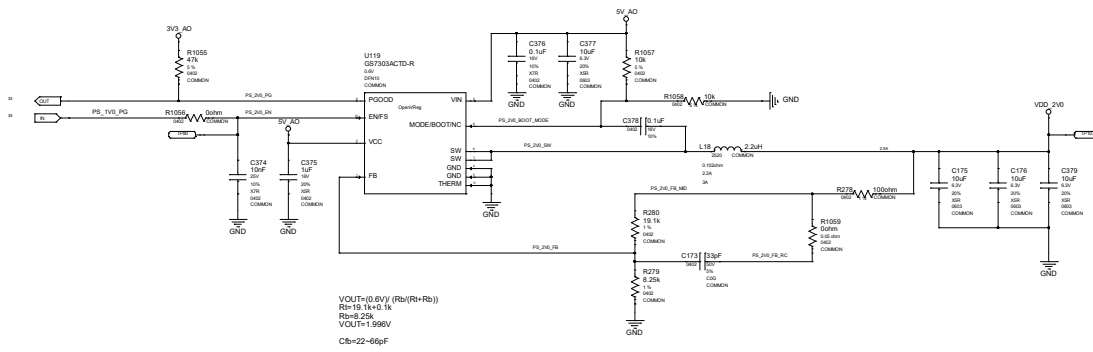
Jumper open: disable WOL (default)
Jumper short: enable WOL



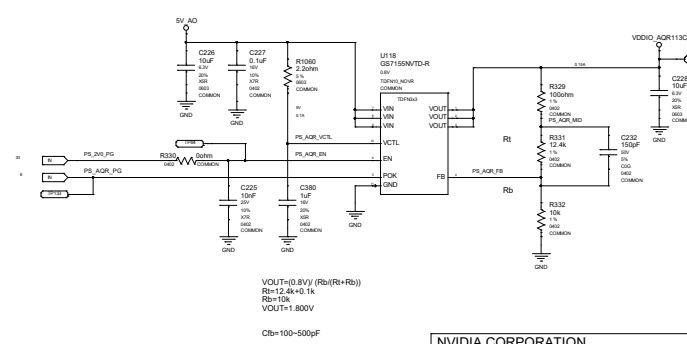
1V



2V



VDDIO_AQR113C



ASSEMBLY	Jetson Orin Developer Kit Carrier Board
PAGE DETAIL	System Power VIT_V15_210

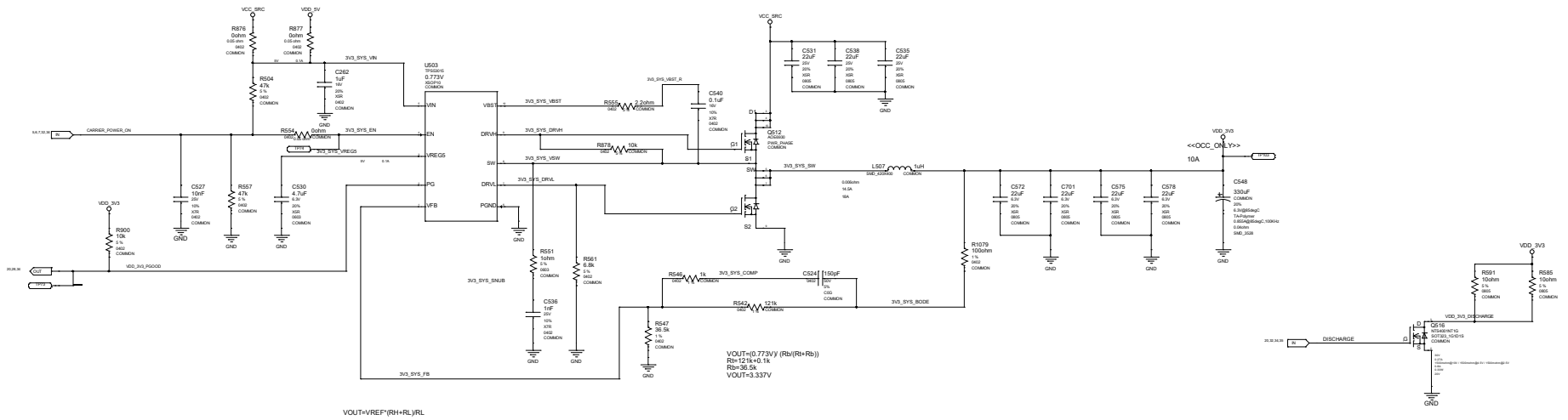
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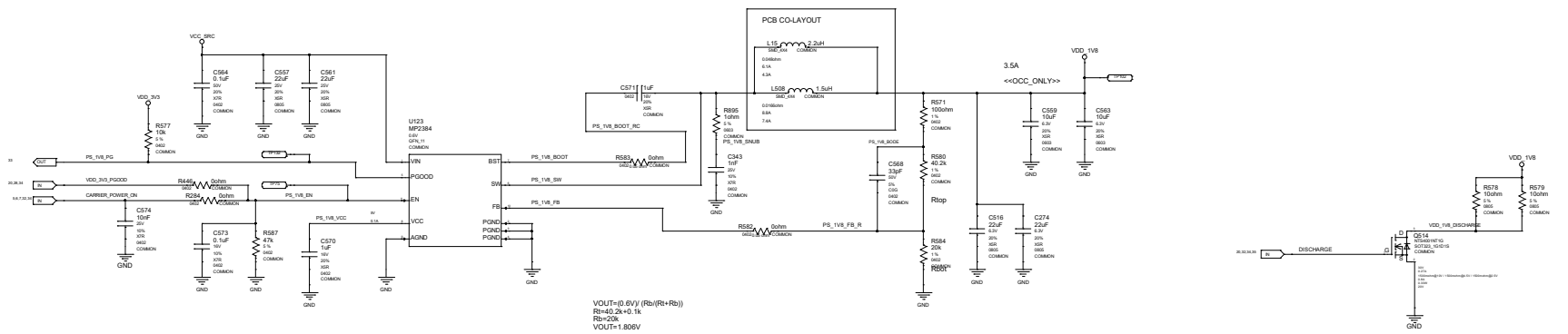
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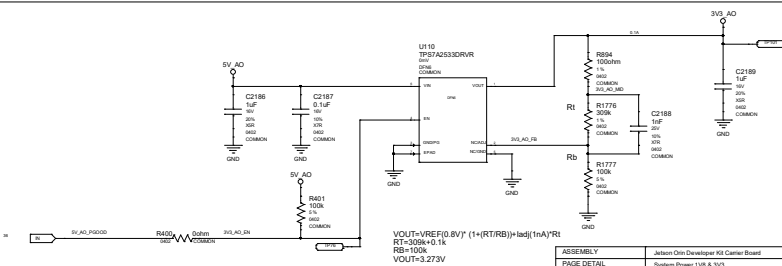
3V3



1V8



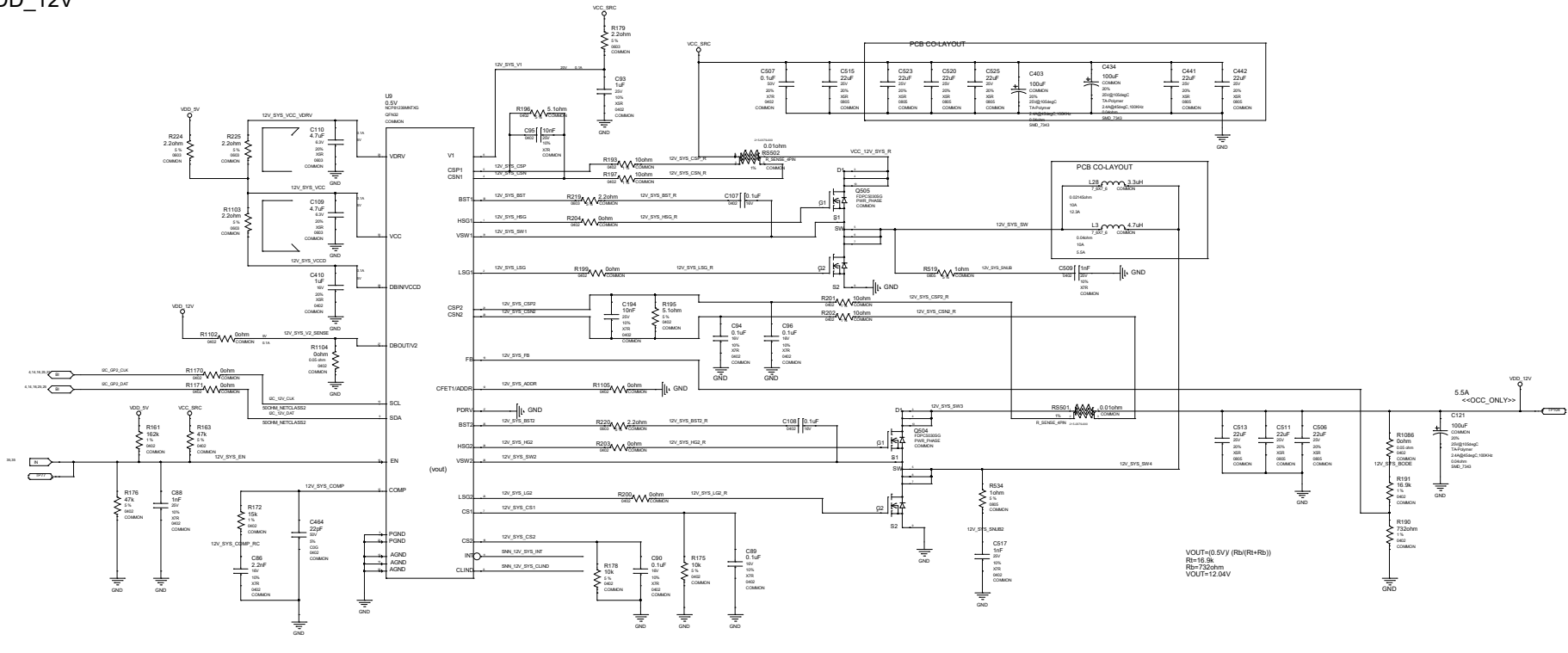
3V3_AO



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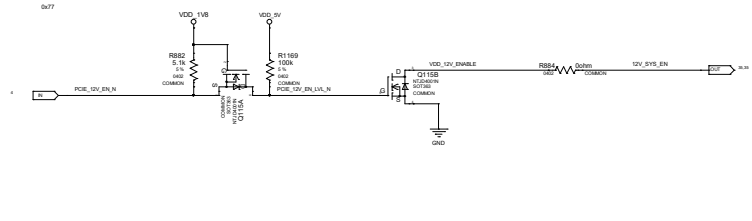
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VDD_12V



Resistor VCC address (7bit)

500m	0x74	← default
201k	0x75	
442k	0x76	
715k	0x77	



$$V_{OUT} = 0.5V \cdot \frac{R_1}{R_1 + R_2}$$

$$R_1 = 16.9k$$

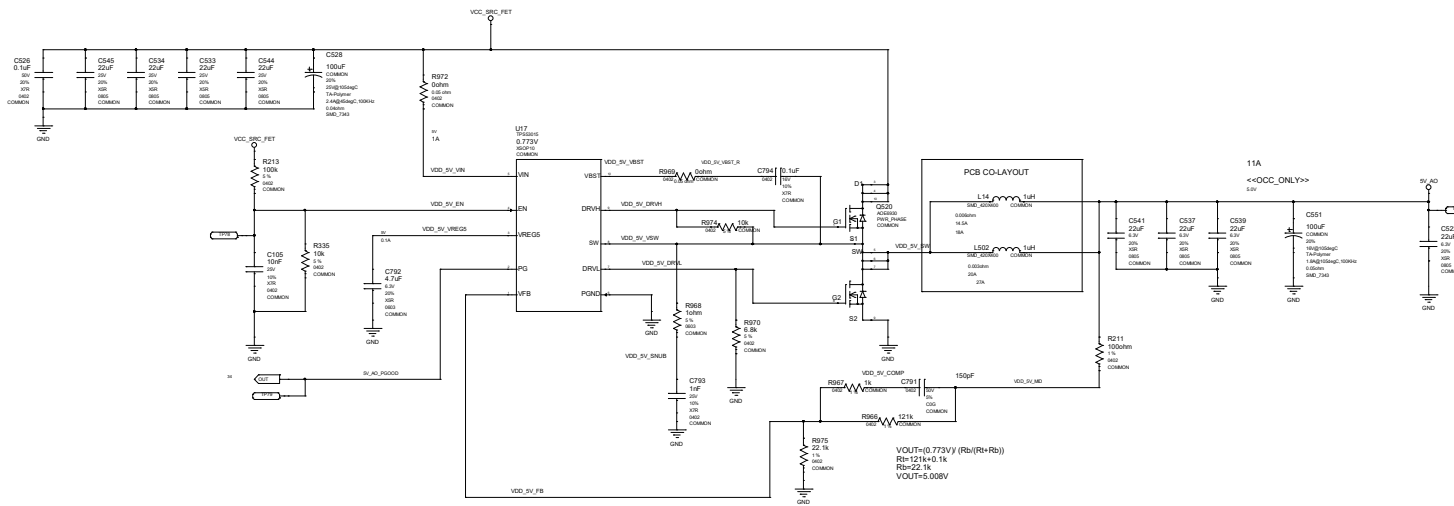
$$R_2 = 75000m$$

$$V_{OUT} = 12.04V$$

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5V_AO

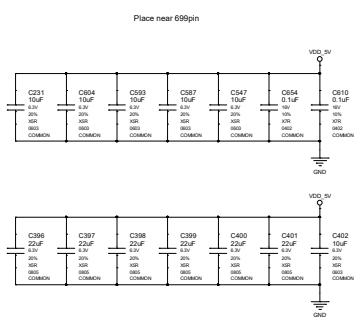
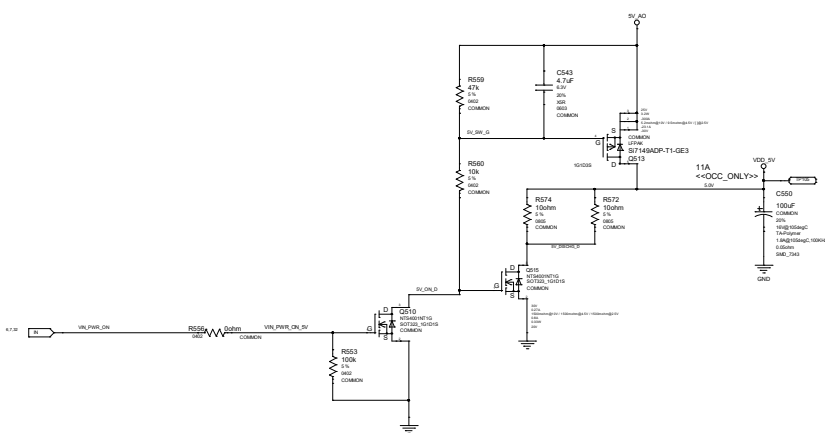



$$V_{OUT} = 0.773V \cdot \left(\frac{R_{211} + R_{212}}{R_{212}} \right)$$

$$R_{211} = 121k, R_{212} = 0.1k$$

$$V_{OUT} = 5.008V$$

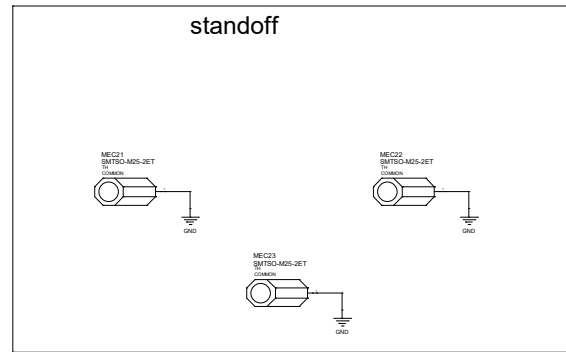
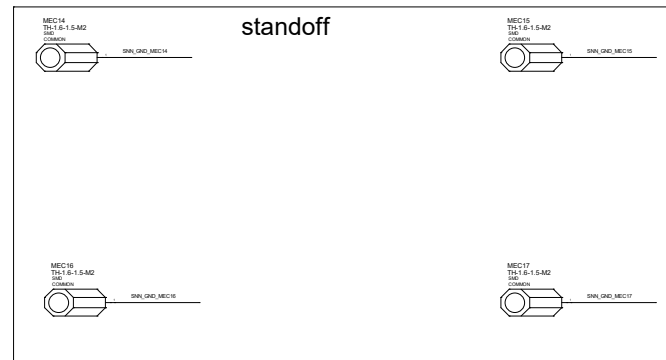
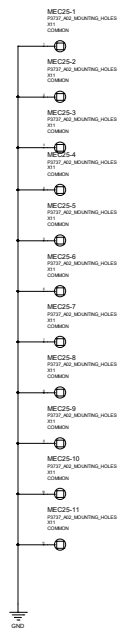
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PAGE DETAIL	Mechanical

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ASSEMBLY	Jetson Orin Developer Kit Carrier Board
FACE DETAIL	Reverse

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