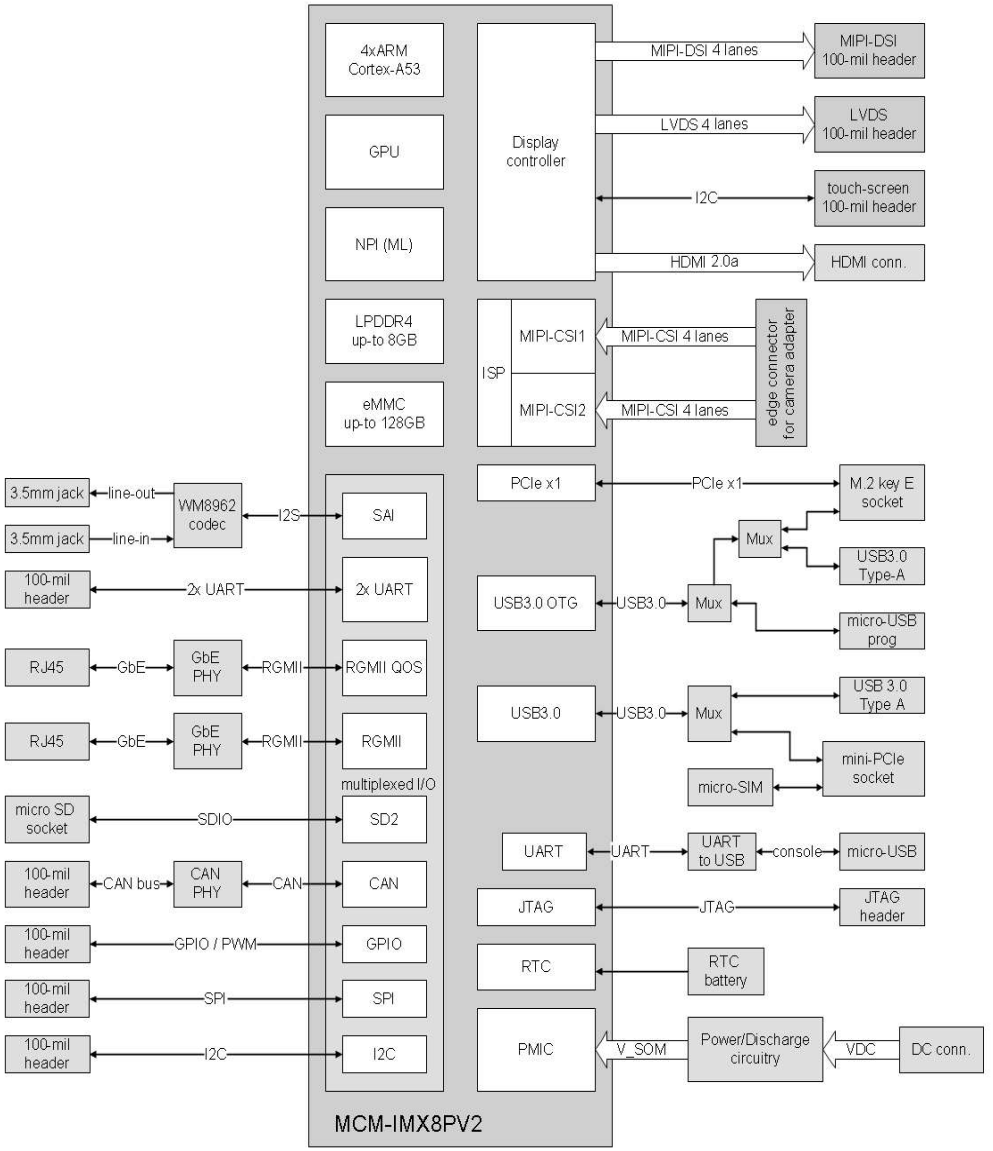
SBC-MCM8PV2 Rev. 1.0

Page	Description
01	Index and Block Diagram
02	SOM connectors
03	Console and micro-SD
04	Carrier-board Ethernet
05	Carrier-board Ethernet1
06	USB #1 and SDP
07	LVDS and MPI-DSI
08	HDMI and MIPI-CSI
09	USB #2 and mini-PCIe
10	UART, CAN, SPI, JTAG, EEPROM, GPIO exp
11	M.2 for WiFi module
12	Power
13	Audio codec
14	DC input ,RTC battery

CH #	I2C devices
I2C3	EEPROM, PCA9555, codec, touch,
I2C5	Camera
I2C6	Camera



PCB1

PCB, SBC-MCM8PV2, Rev 1.0
P/N = 188C05120

ZZ1

PARSER_VERSION_1.0

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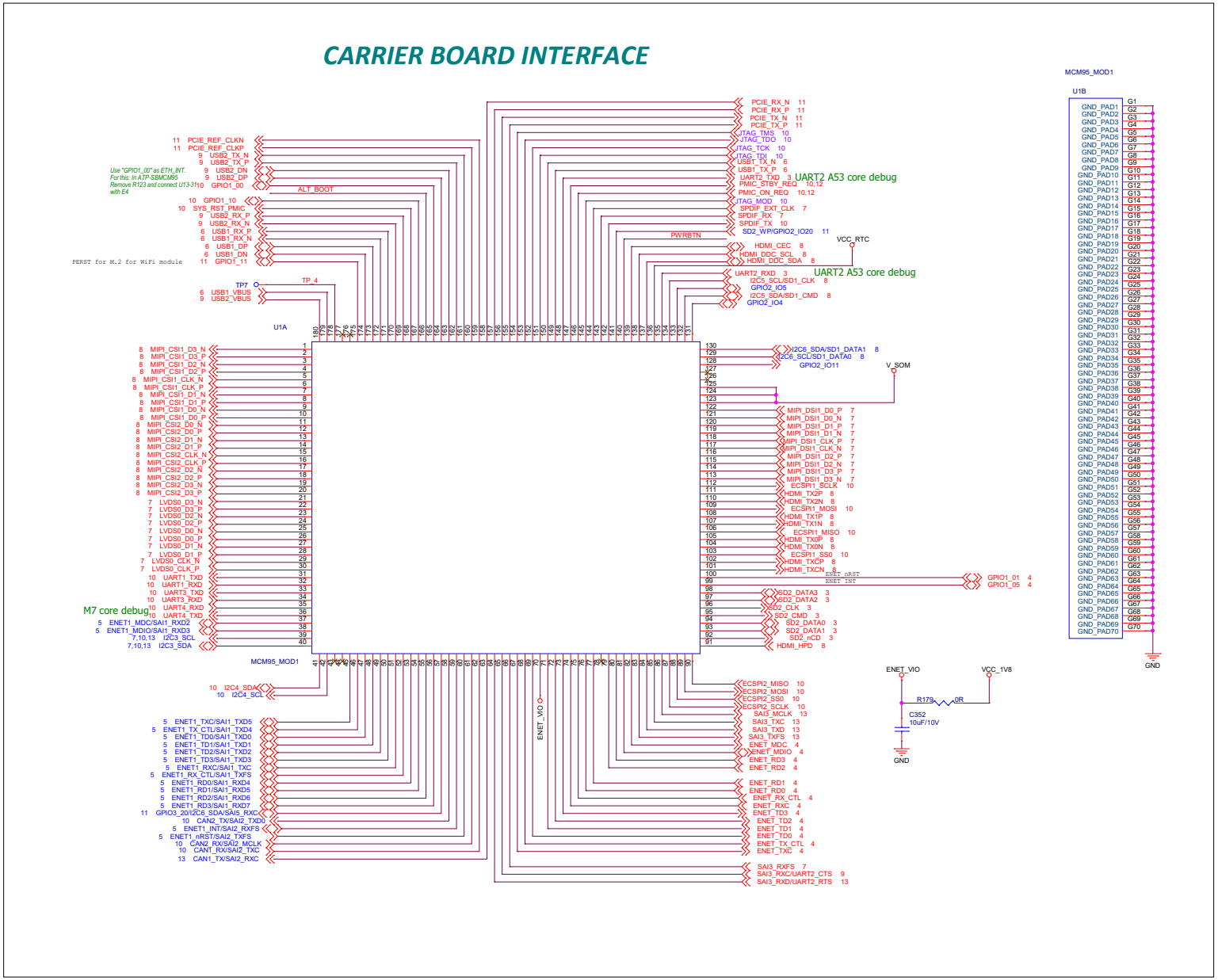
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Size	Title	Rev
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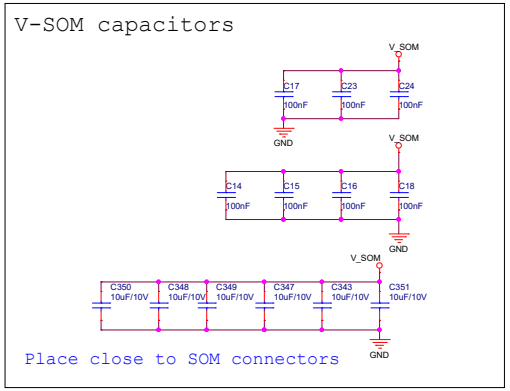
Document Number: 8000294000

Date: Thursday, September 10, 2026 Sheet 1 of 14

CARRIER BOARD INTERFACE

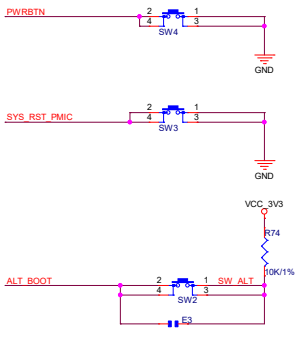


V-SOM capacitors

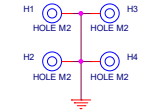


Place close to SOM connectors

Buttons



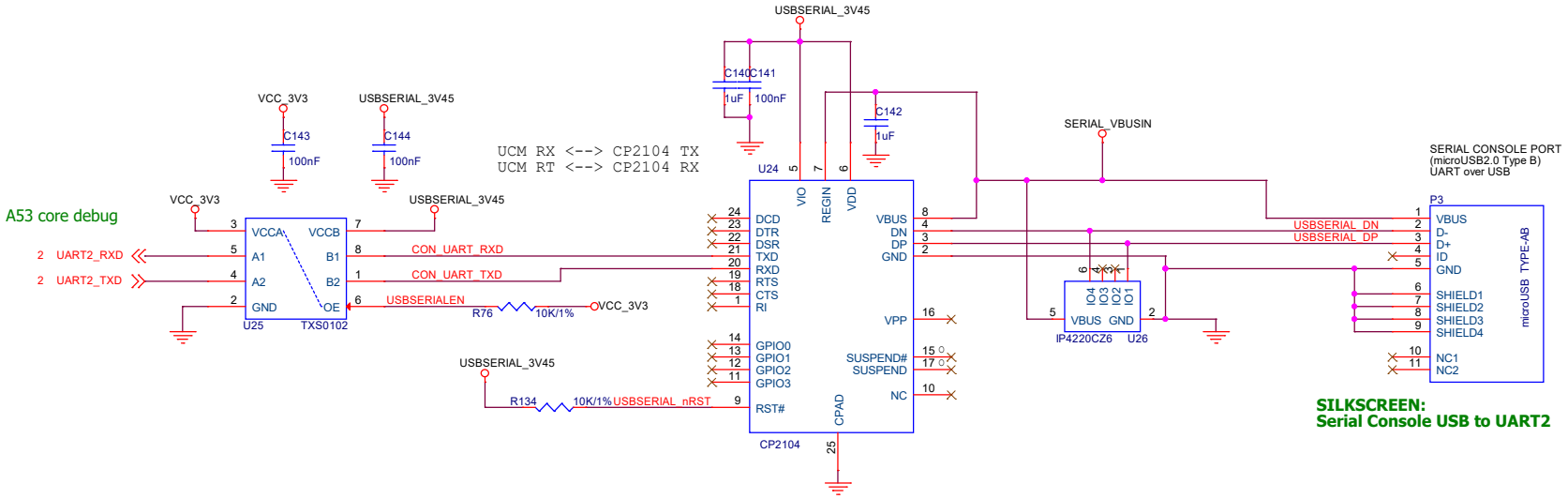
Heatsink stand-offs



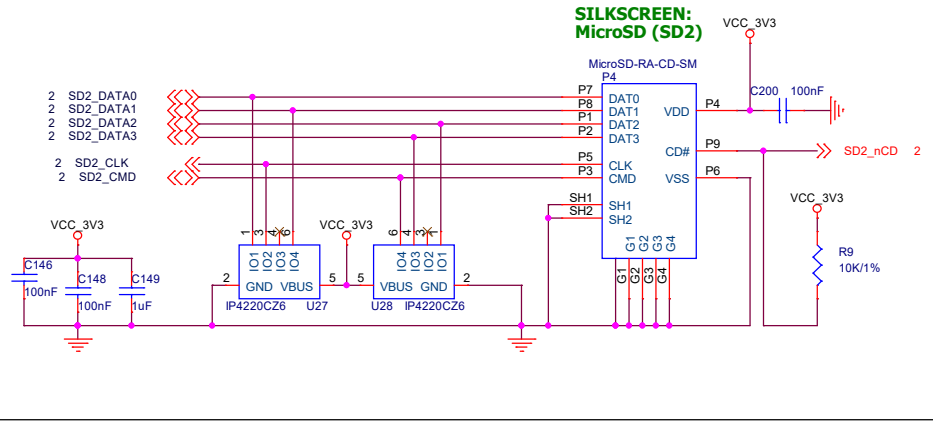
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Size	Title	Rev
A2	SBC-MCM8PV2 02. Soldered External Interface	1.0
	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 2 of 14	

Serial debug console



Micro-SD socket (bootable)

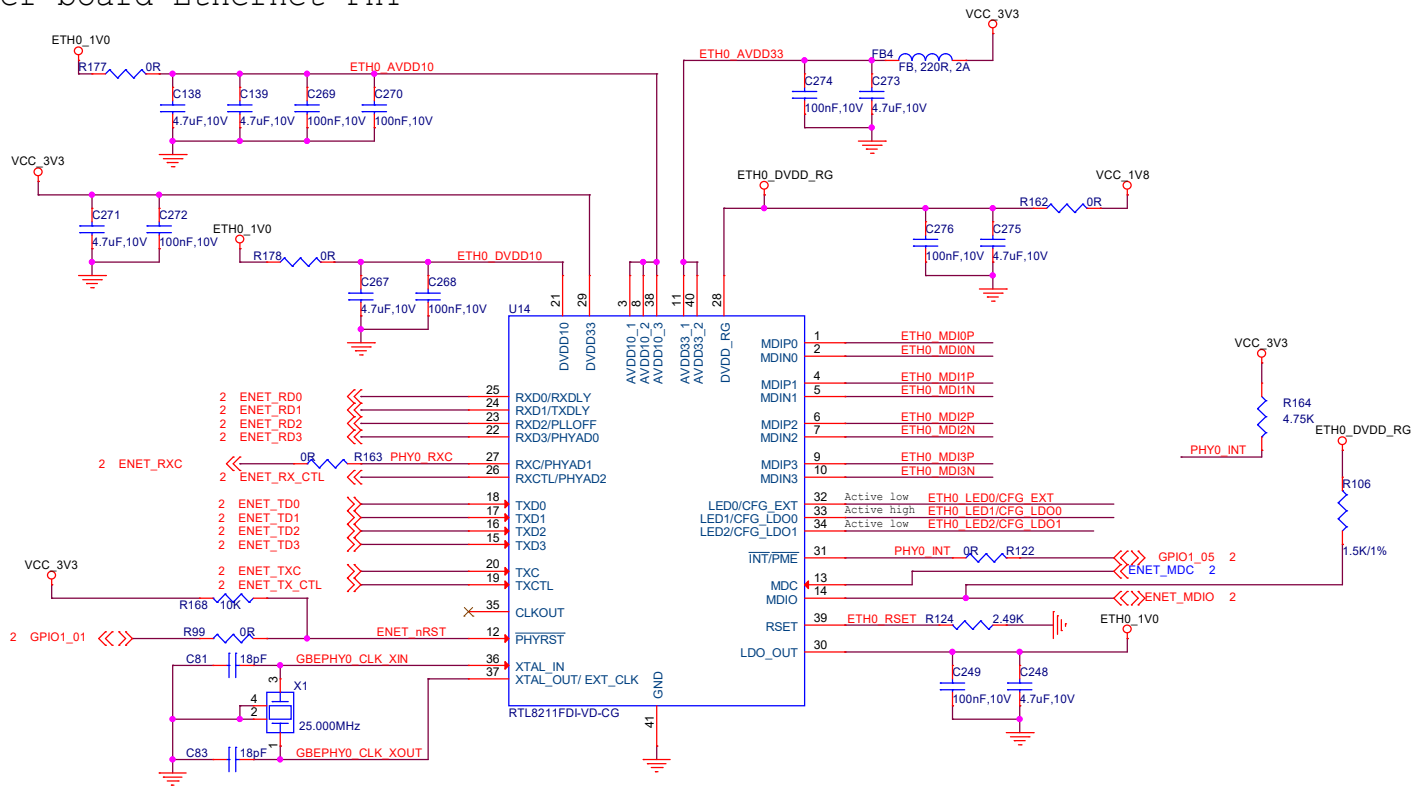


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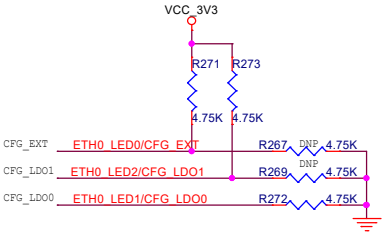
Size	Title	Rev
A3	SBC-MCM8PV2 03. Console and micro-SD	1.0
	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 3 of 14	

Carrier-board Ethernet PHY

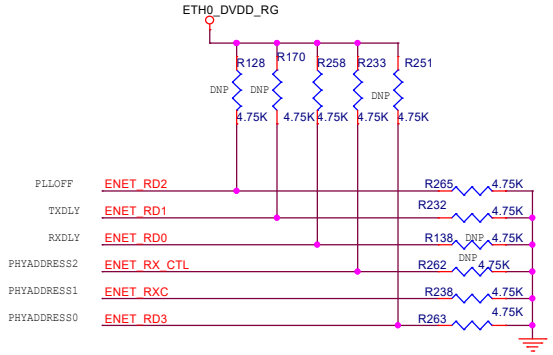


Power-on strap pins CFG

RGMII Power Source	CFG_EXT	CFG_LDO[1:0]
External 3.3V	1	00
External 1.8V	**1**	**10**
Internal 1.8V	0	10



CONFIG PINS



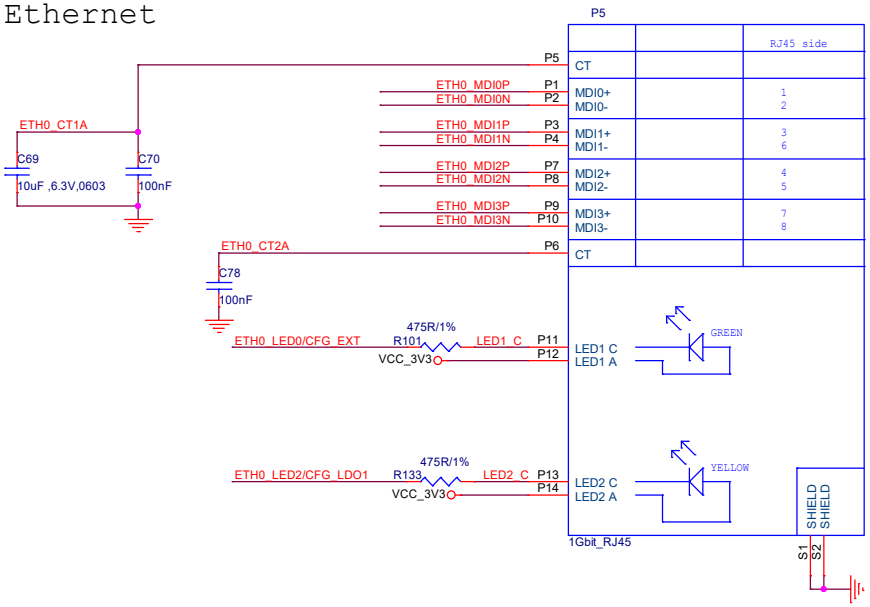
PHY ADDRESS = [1,0,0]
PHY support addresses from 00001 to 00111.
PHY address 0 is a broadcast from the MAC

PLLOFF: Pull-up to disable PLL @ ALDPS mode.

Enable internal delays

TX delay is disable
RX delay is enabled

Carrier-board Ethernet connector

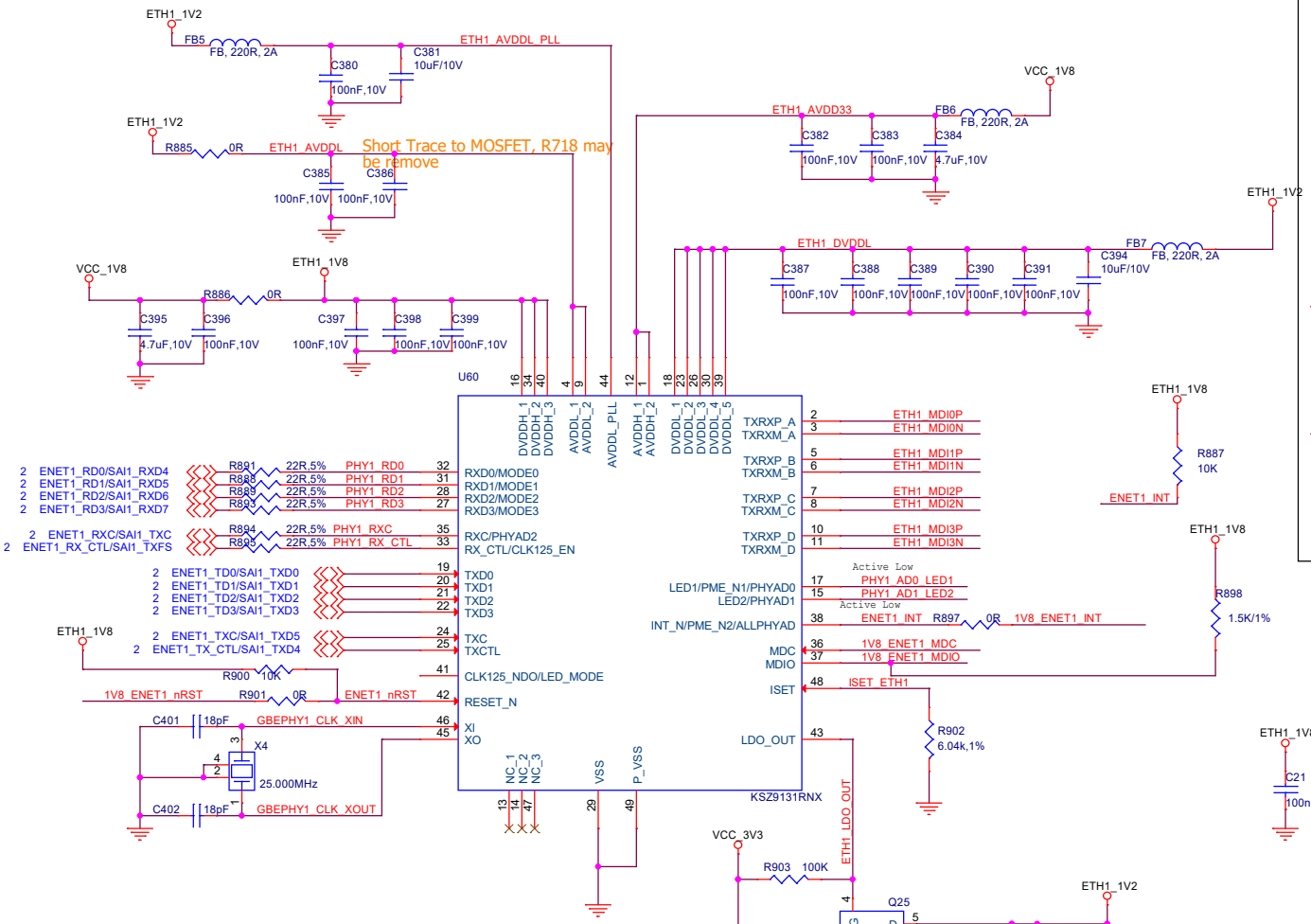


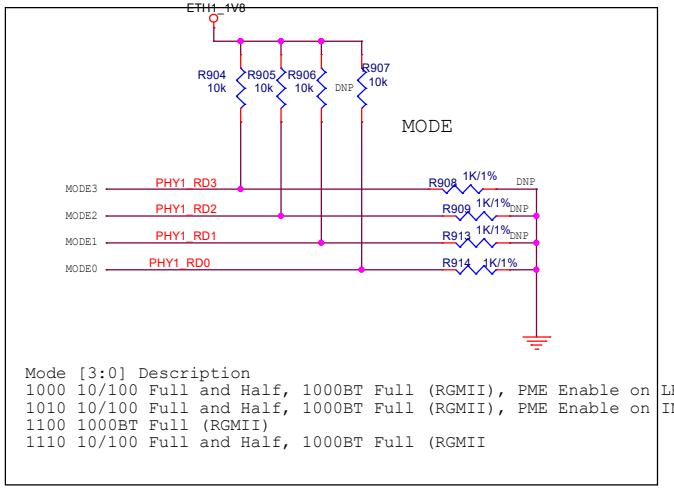
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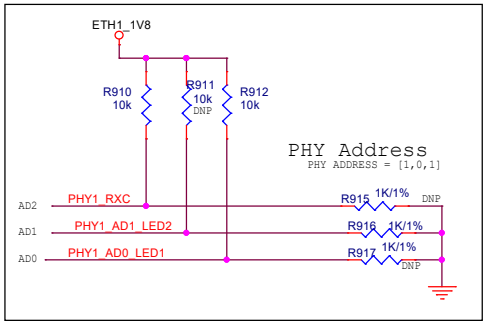
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Size	Title	Rev
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	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 4 of 14	

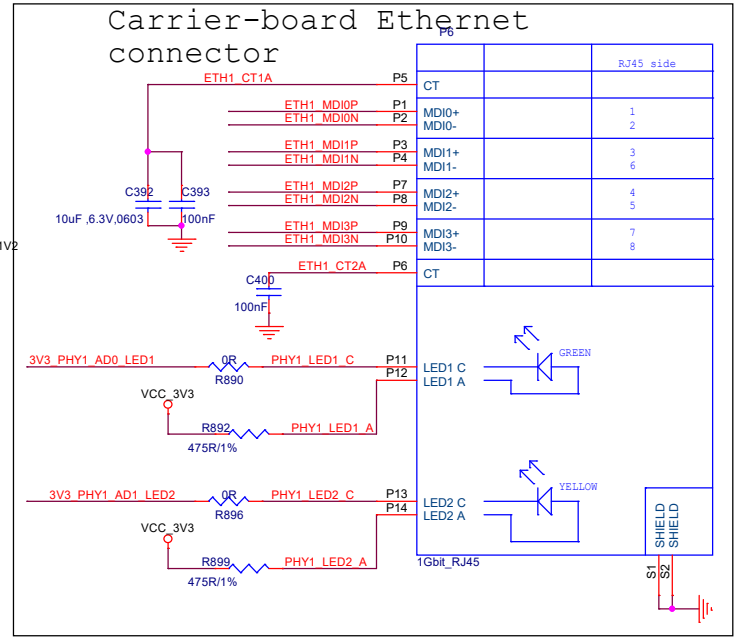
Carrier-board Ethernet PHY

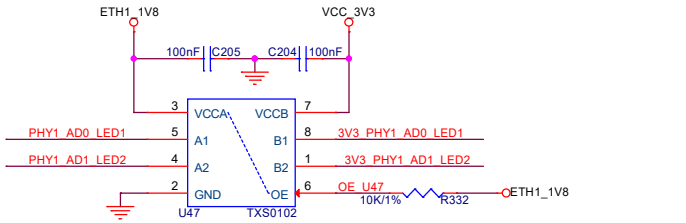


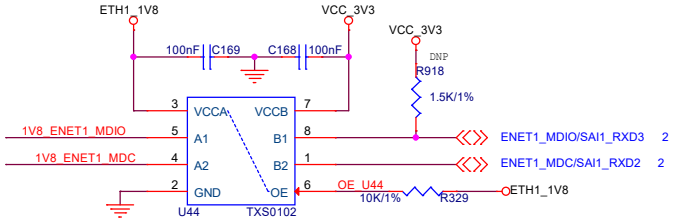


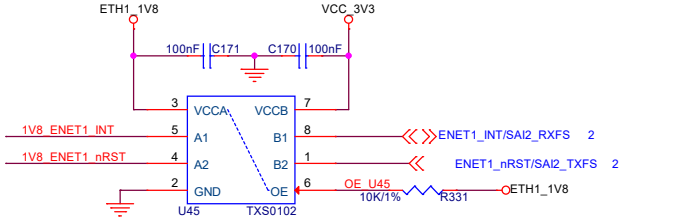


Carrier-board Ethernet connector





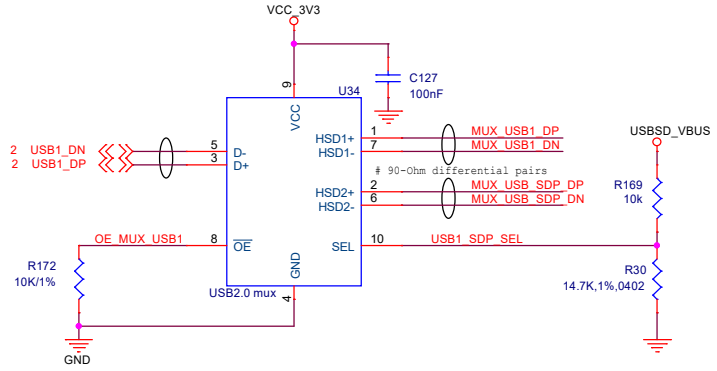




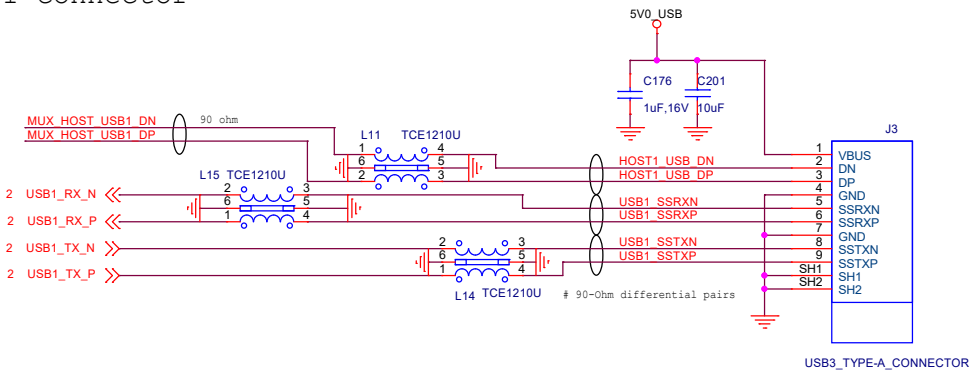
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Size	Title	Rev
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	Document Number: 8000294000	
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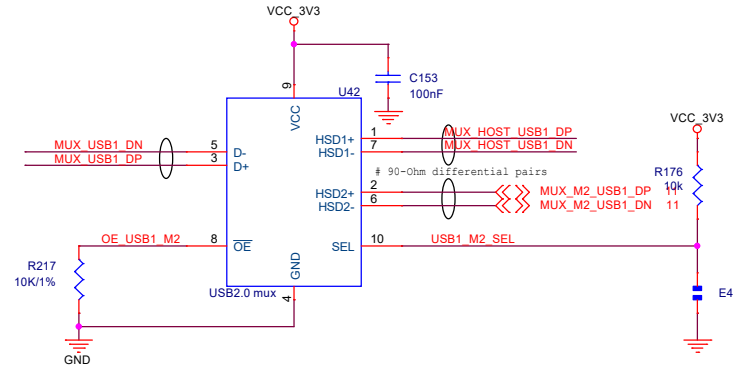
USB #1 SDP mux (USB2 signals only)



USB #1 connector

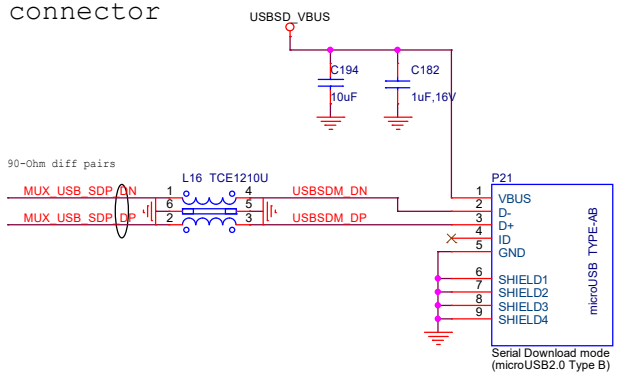


USB #1 M.2 mux (USB2 signals only)

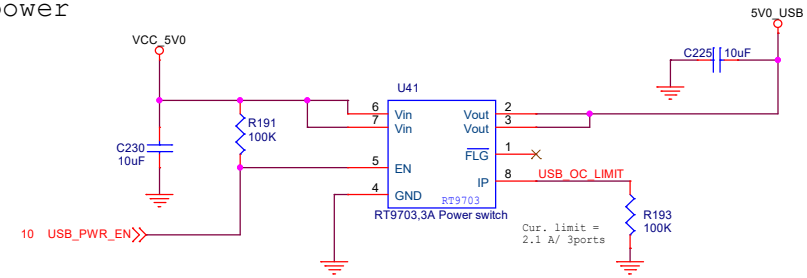


E4 operation
Open: for USB conn. J3
Close: for M.2 socket

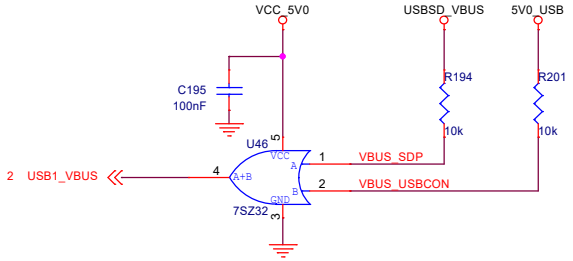
SDP connector



USB power



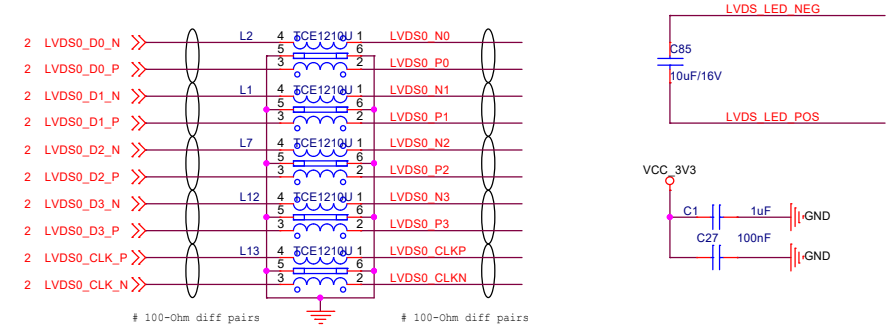
USB VBUS

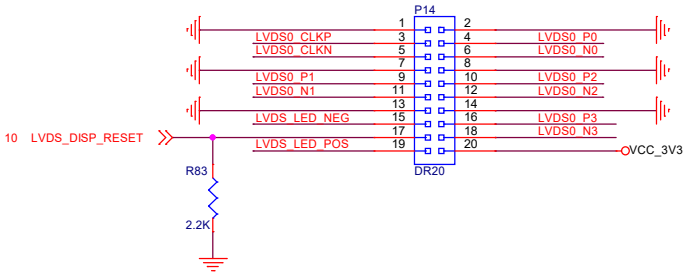


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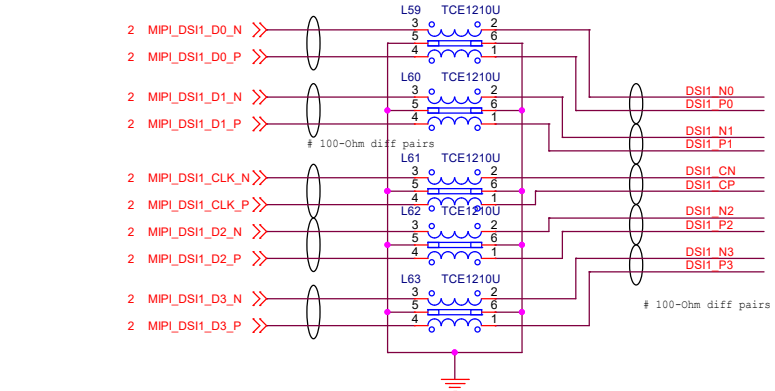
Size	Title	Rev
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	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 6 of 14	

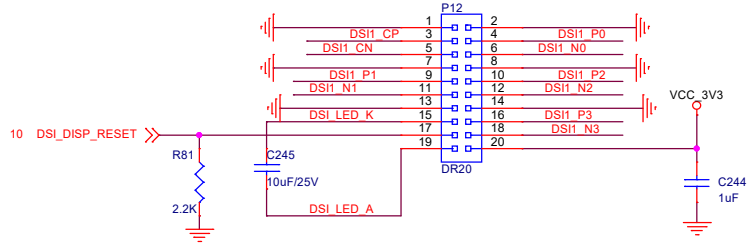
LVDS connector



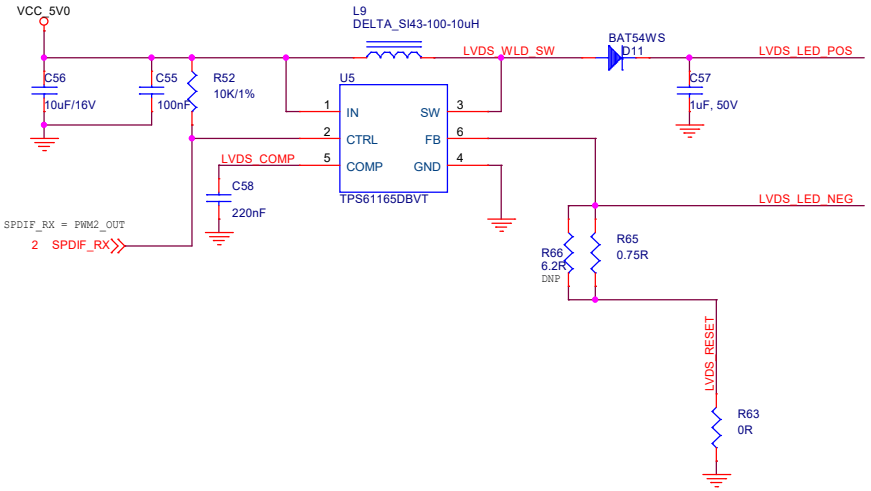


MIPI-DSI connector

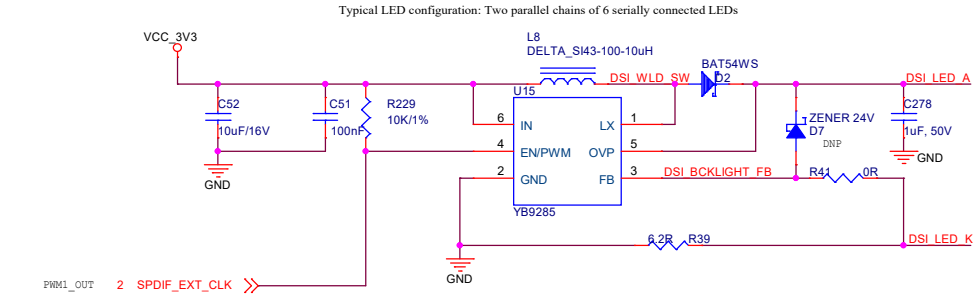




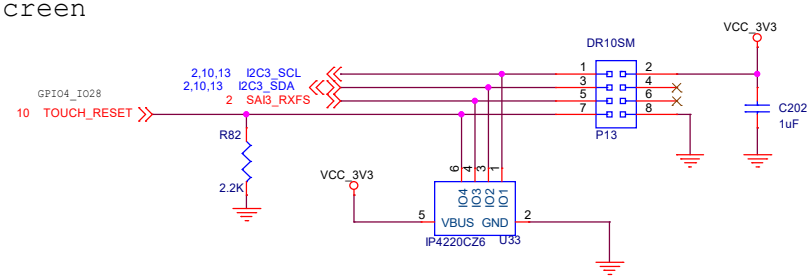
LVDS panel back-light



MIPI-DSI panel back-light



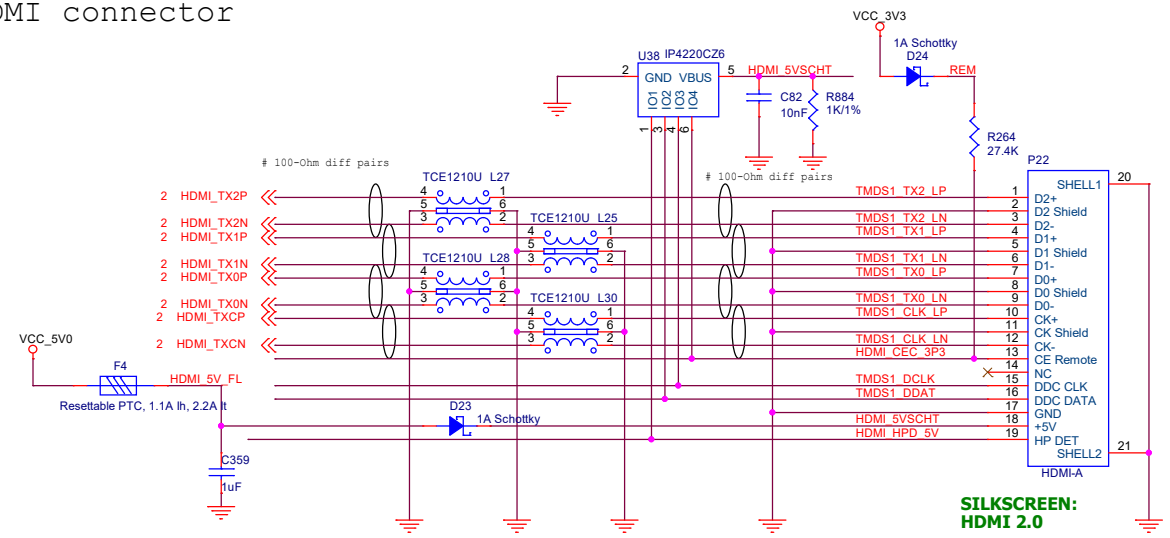
Touch-screen



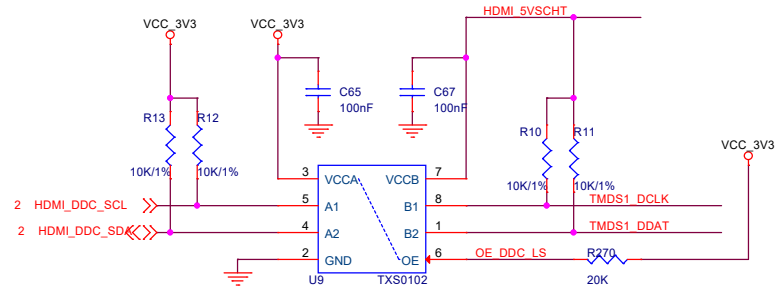
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Size	Title	Rev
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	Document Number: 8000294000	
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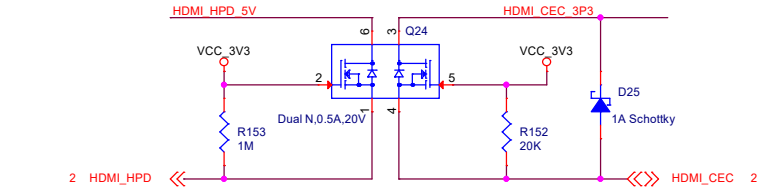
HDMI connector



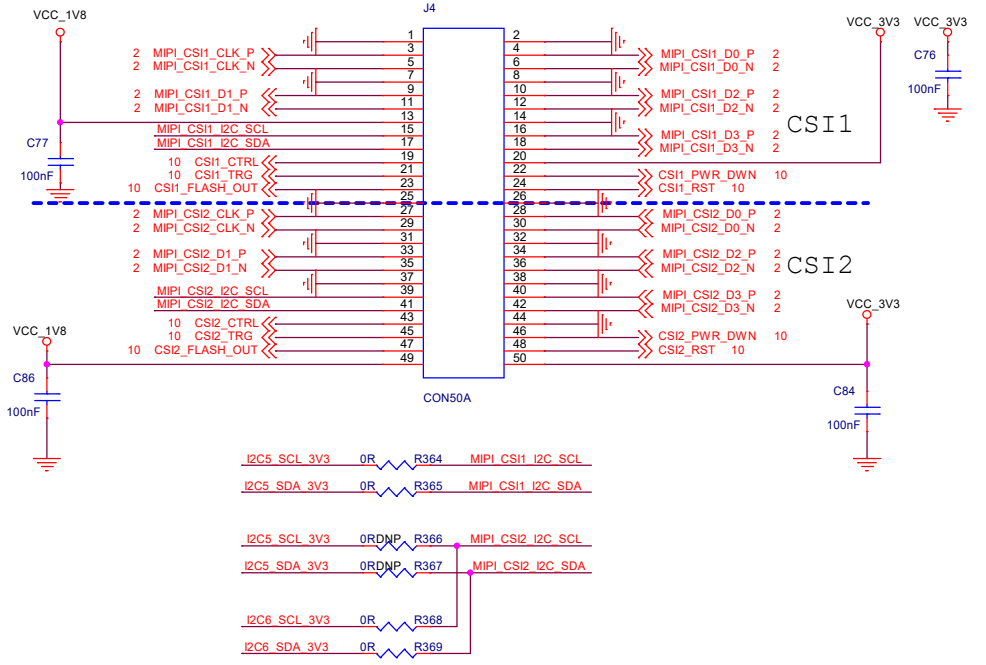
DDC level shifter



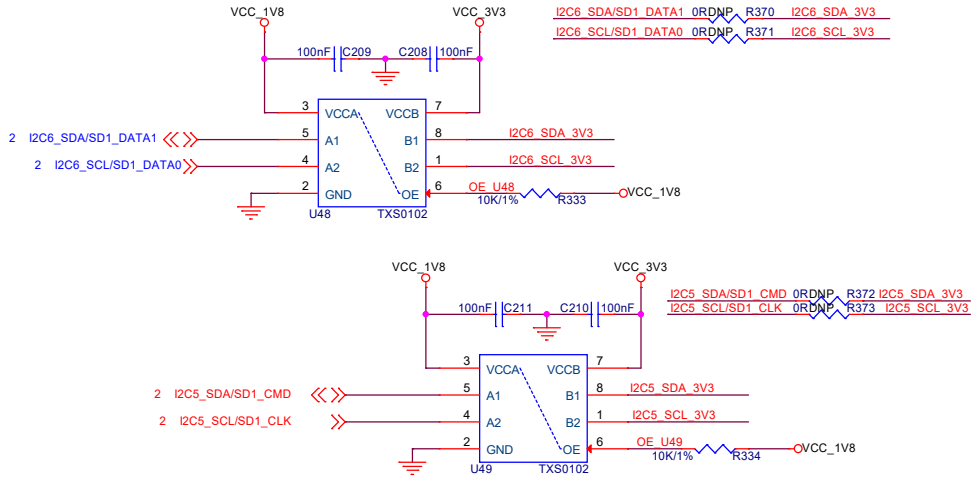
HPD and CEC level shifter



Camera Edge Connector



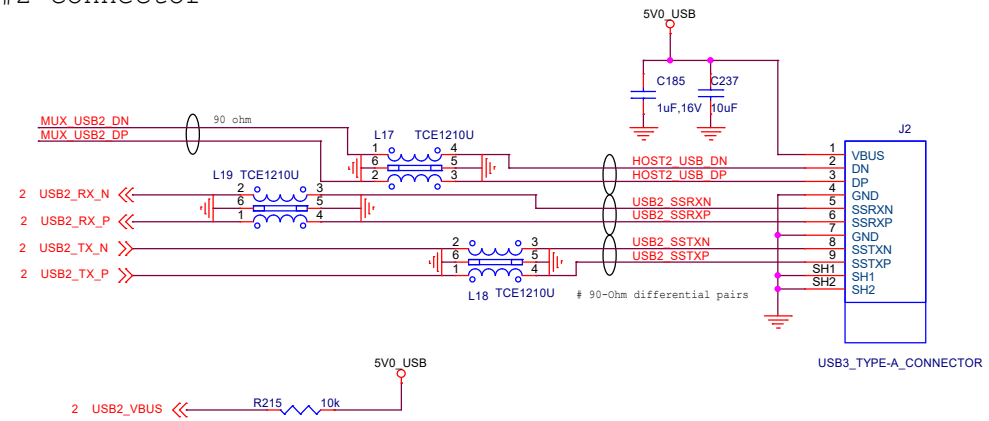
I2C level shifters



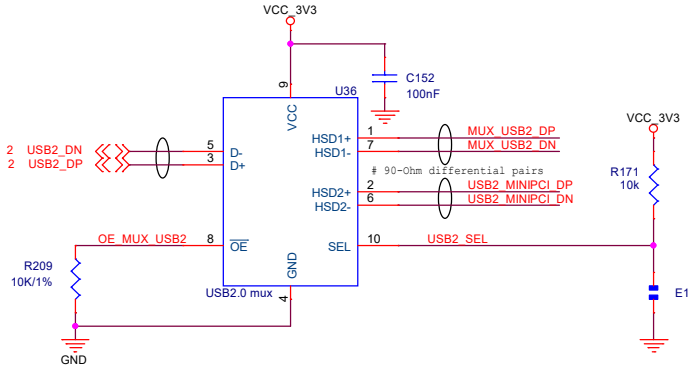
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A3	SBC-MCM8PV2 08. HDMI and MIPI-CSI	1.0
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USB #2 connector

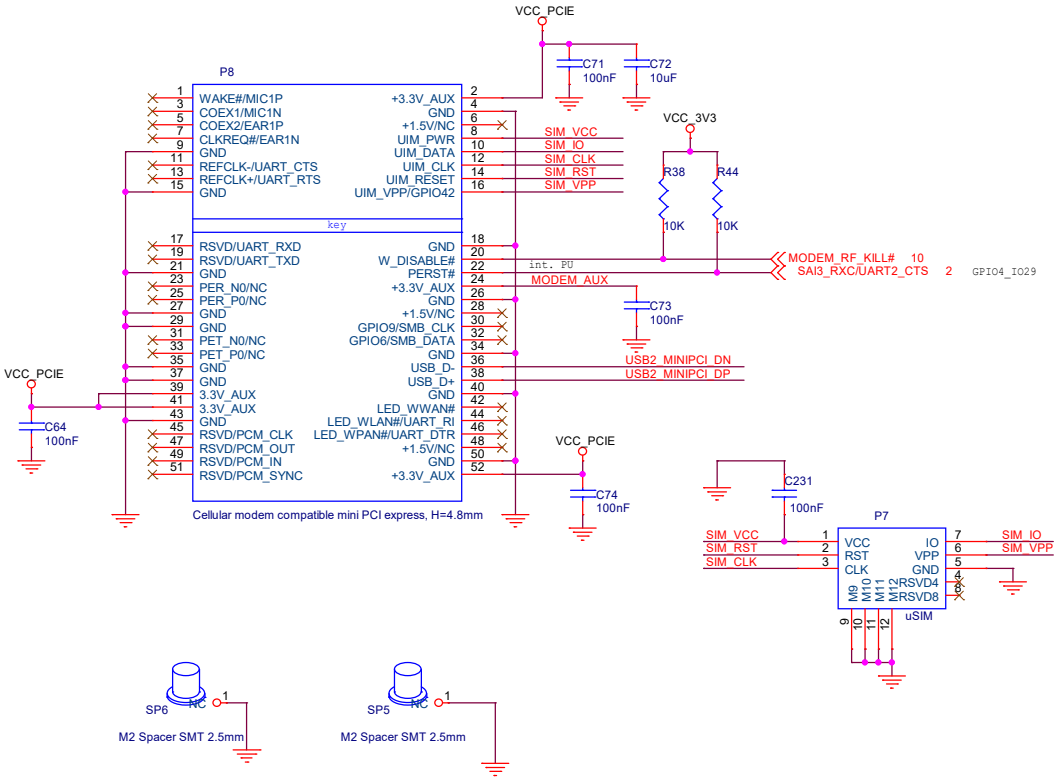


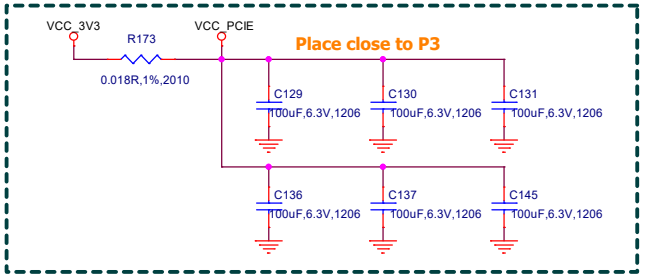
USB #2 mux (USB2 signals only)



E1 operation
Open: for USB conn. J2
Close: for miniPCIe socket P3

mini-PCIe socket



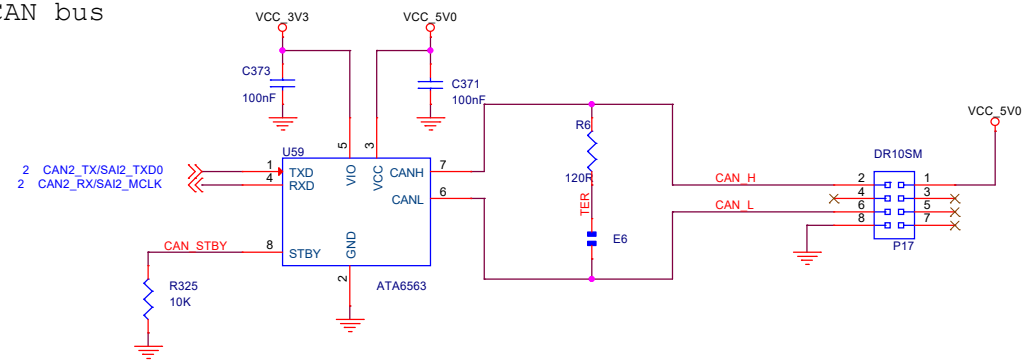


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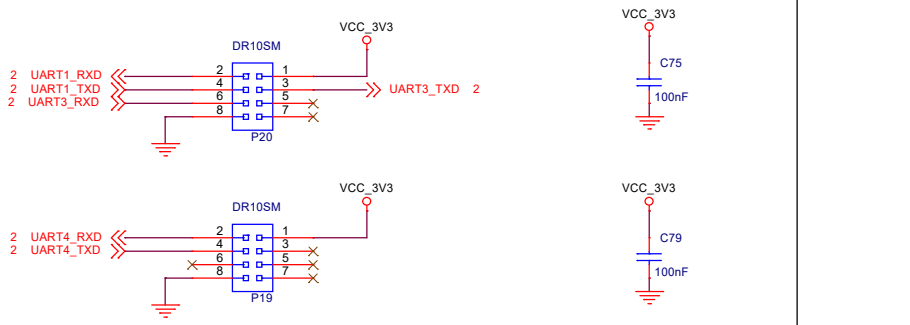
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Size	Title	Rev
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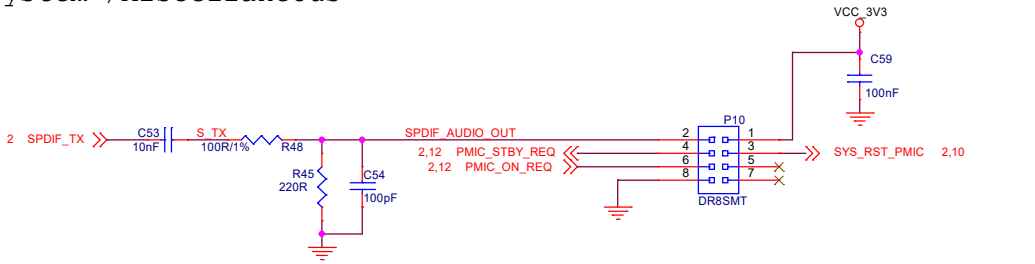
CAN bus



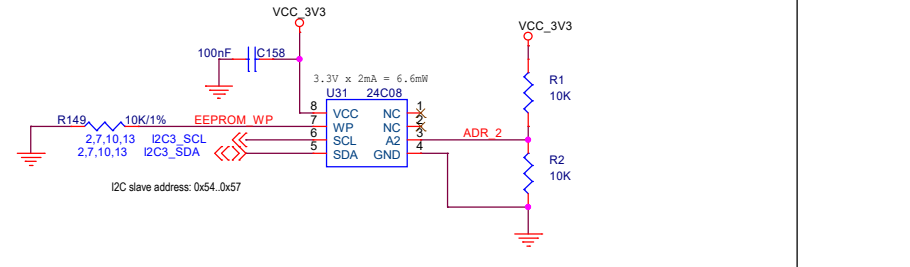
UARTs



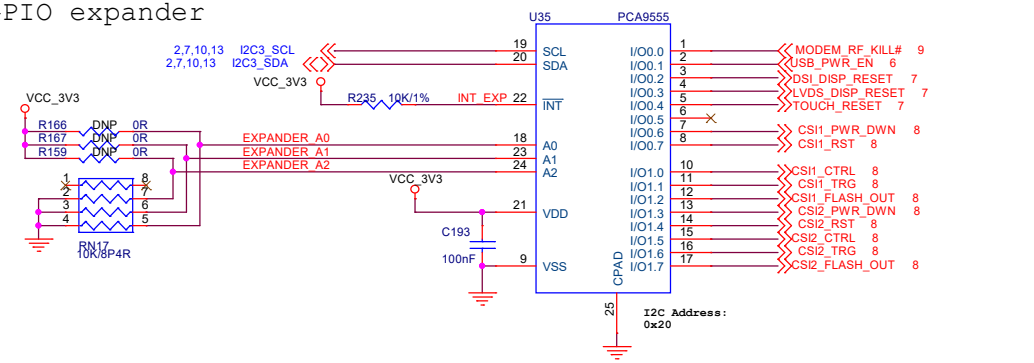
System /Miscellaneous



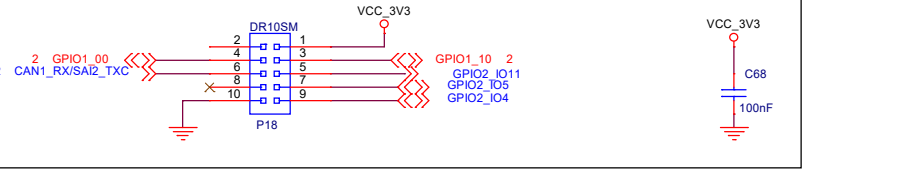
EEPROM



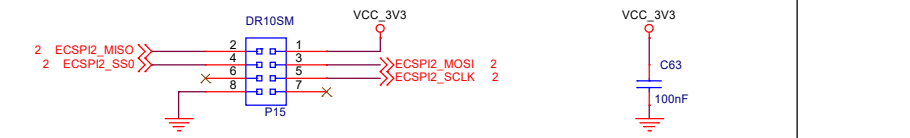
GPIO expander



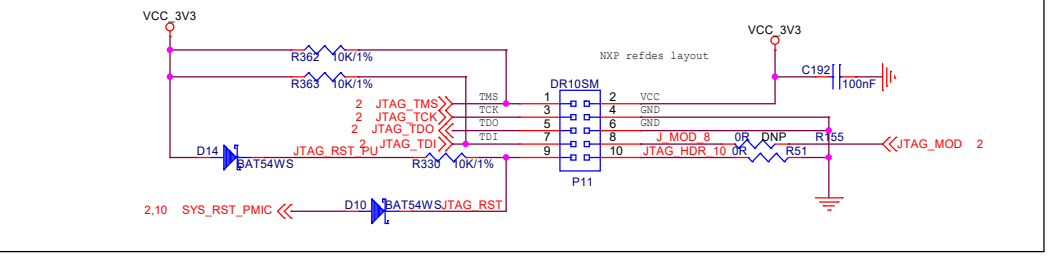
GPIO



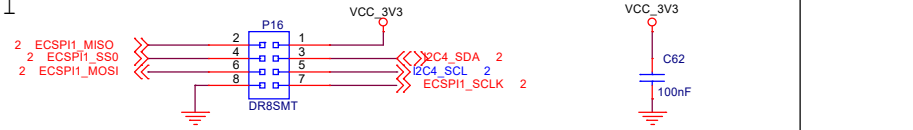
SPI



JTAG



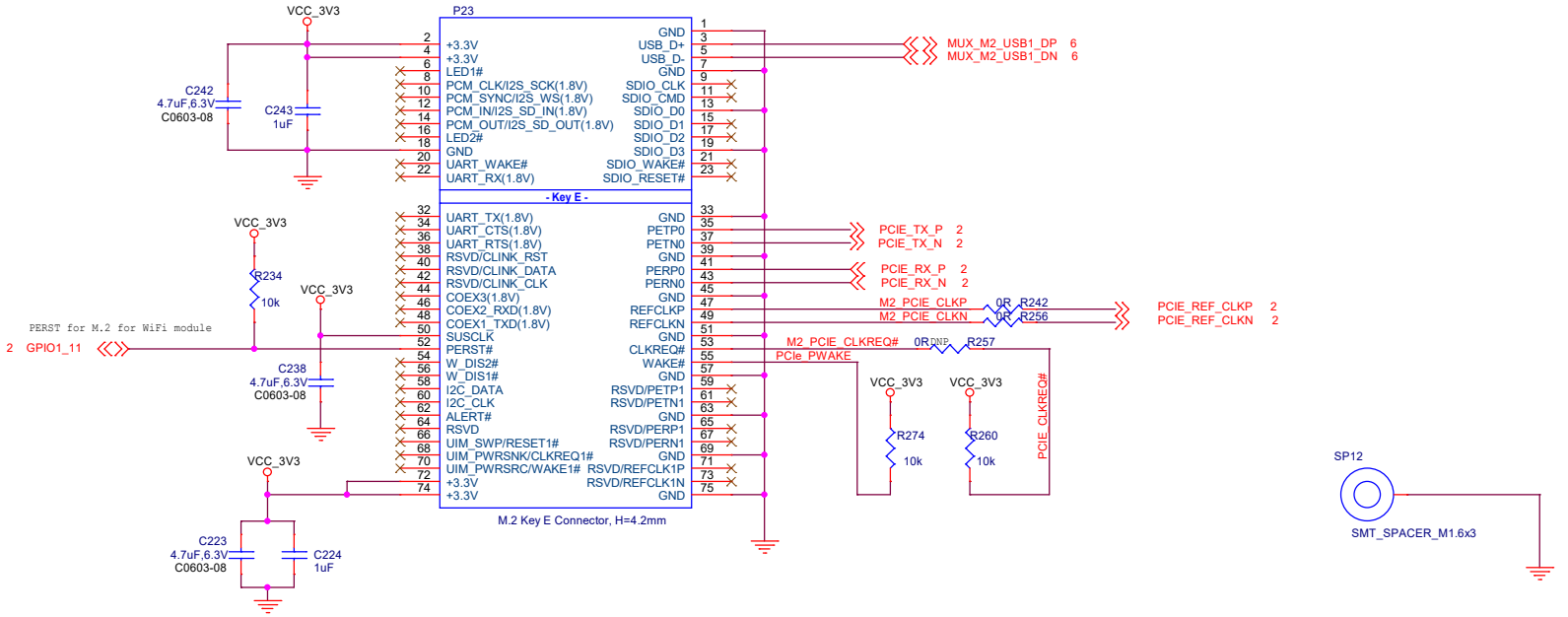
I2C/SPI



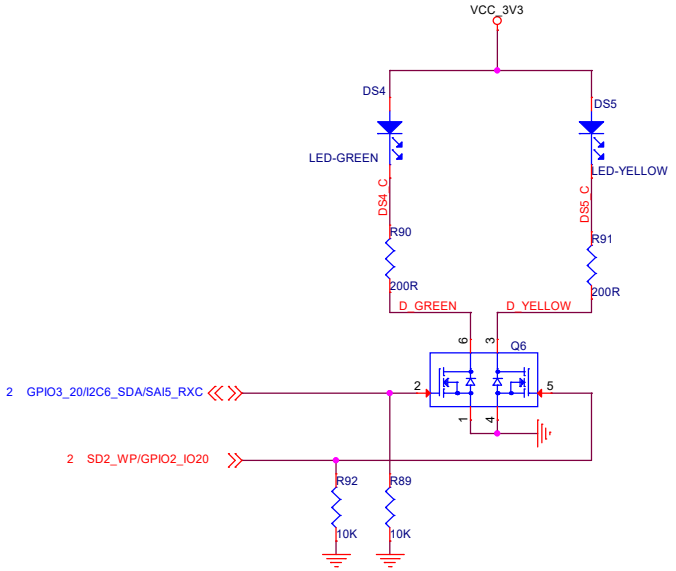
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Size	Title	Rev
A3	SBC-MCM8PV2 10. UART, CAN, SPI, I2C, MISC	1.0
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M.2 for WiFi module



User LEDs

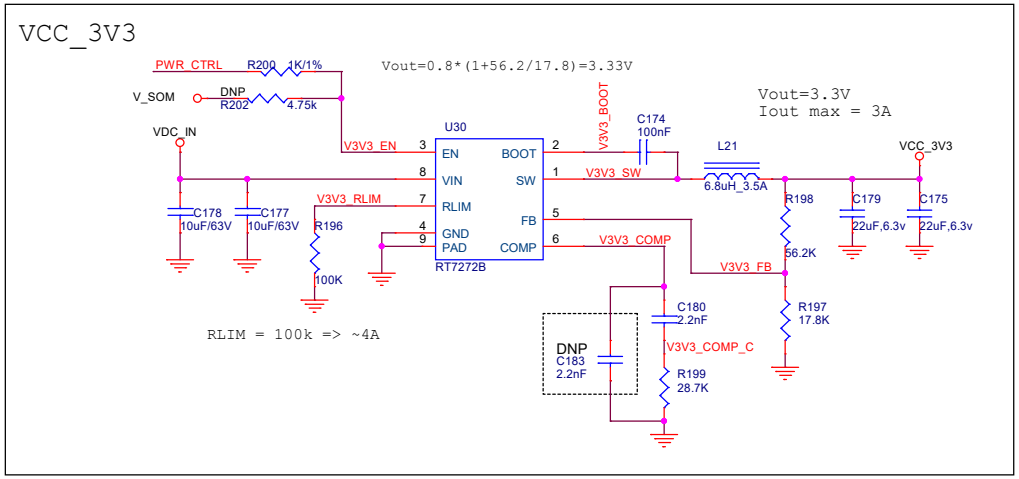


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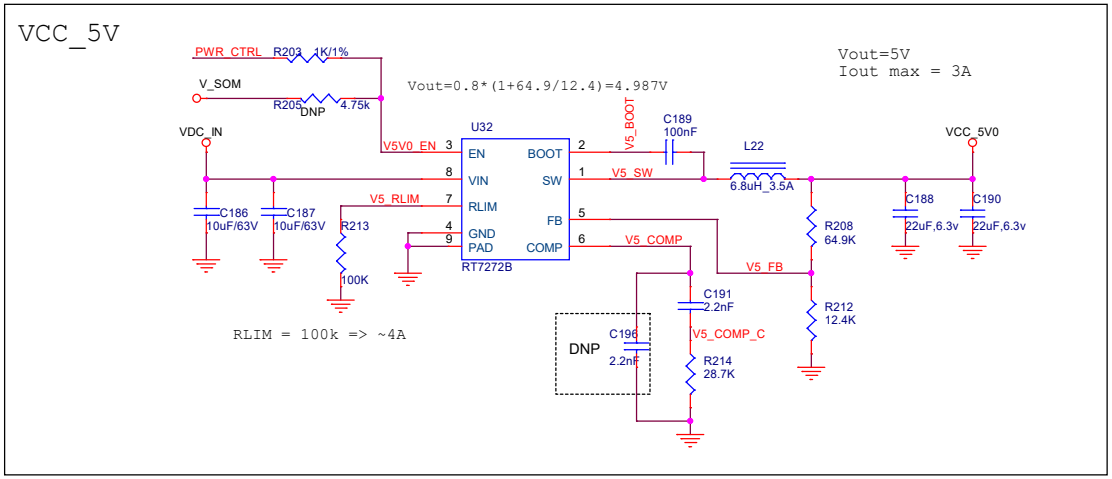
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Size	Title	Rev
A3	SBC-MCM8PV2 11. M.2 for WiFi module	1.0
	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 11 of 14	

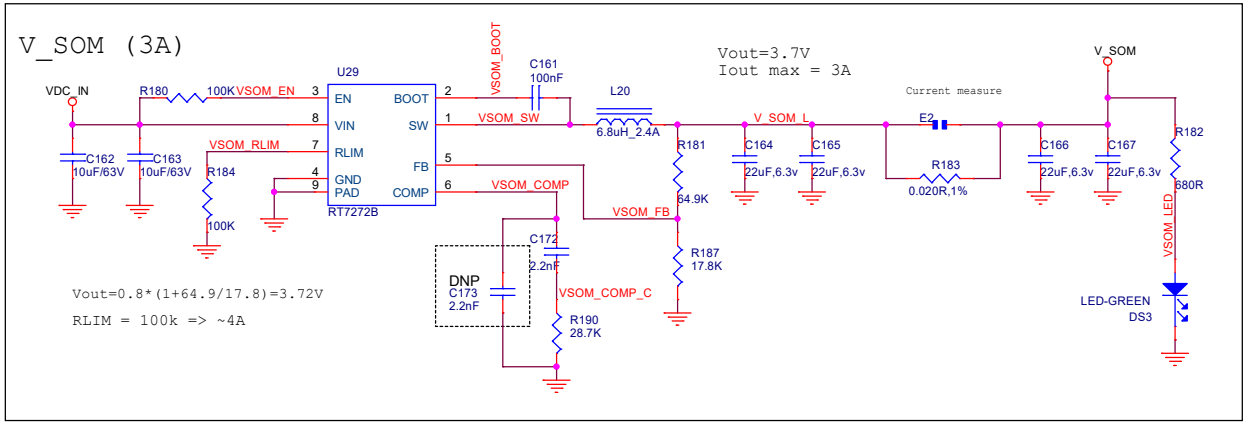
VCC_3V3



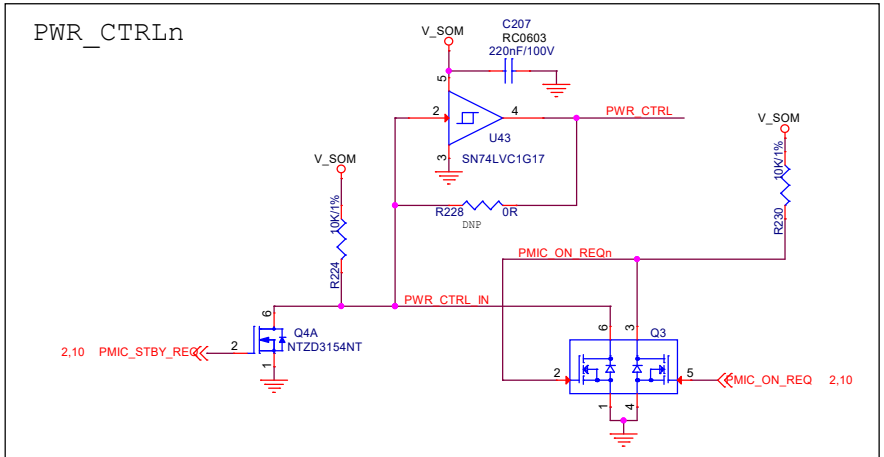
VCC_5V



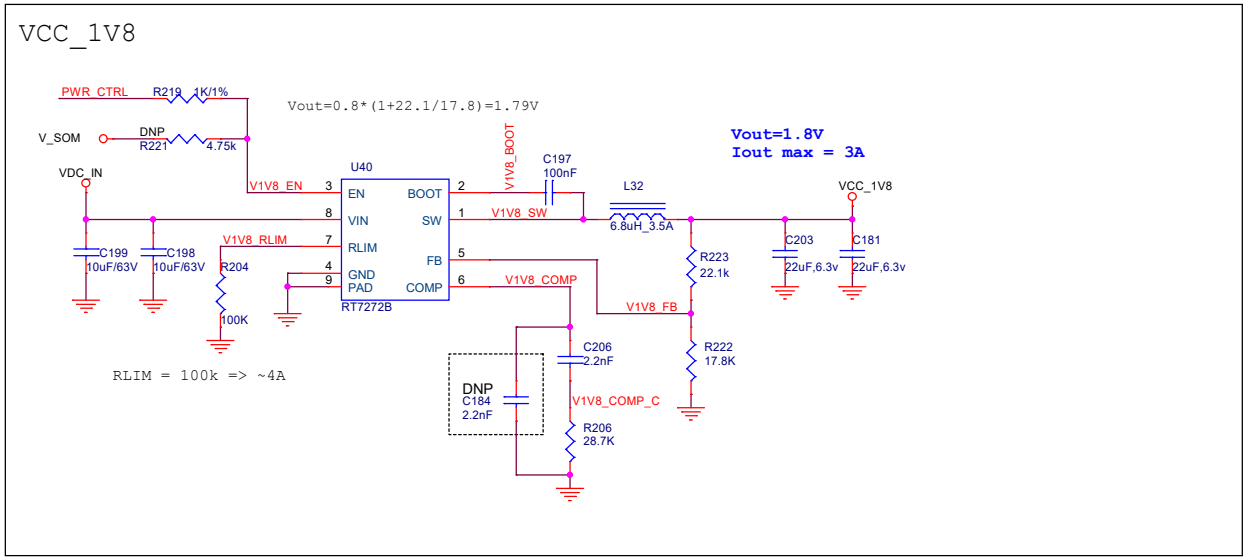
V_SOM (3A)



PWR_CTRLn

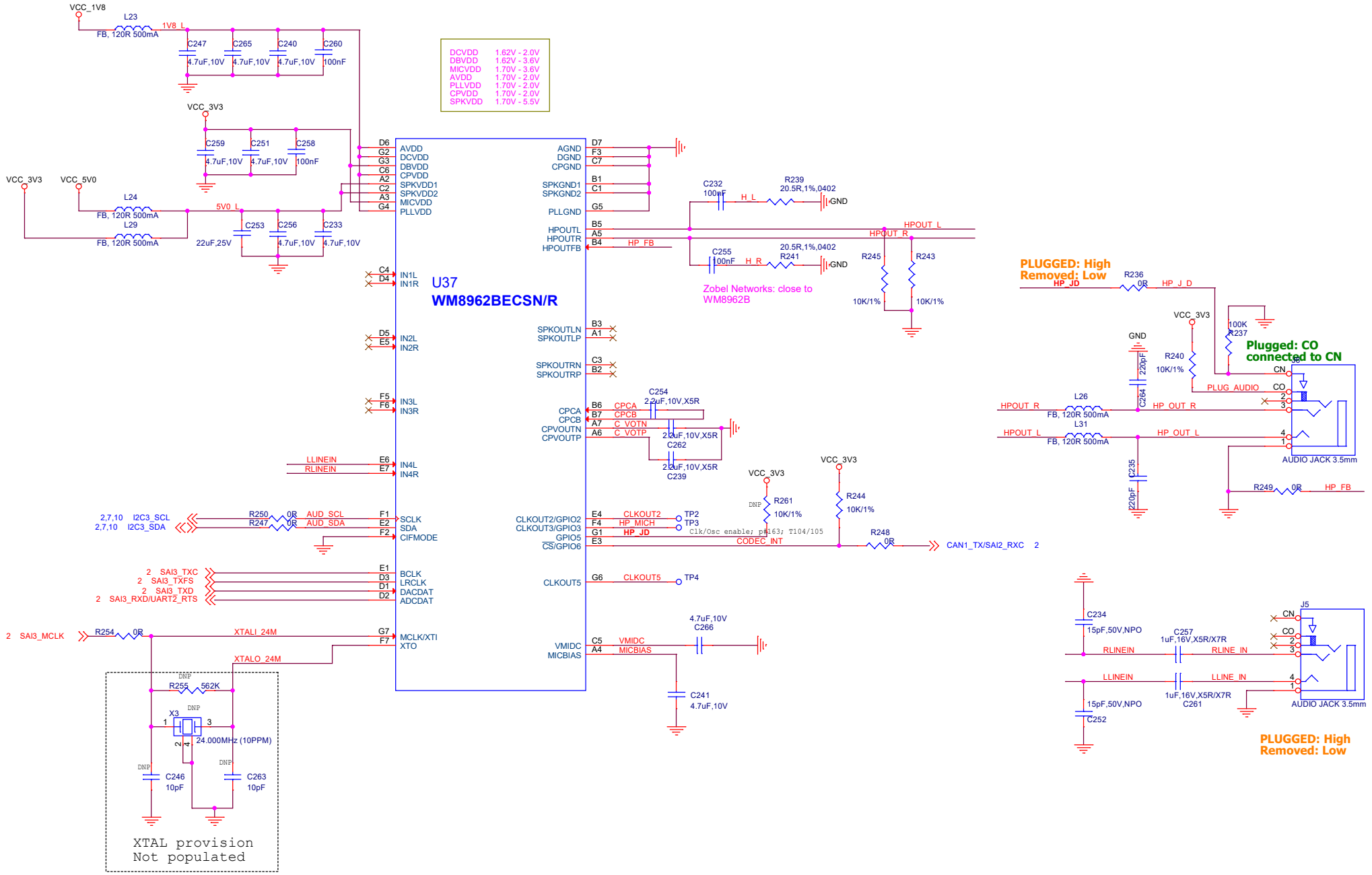


VCC_1V8



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A3	SBEV-UCMIMX8PLUS 12. Power	1.0
	Document Number: 8000168001	
Date: Thursday, September 10, 2026	Sheet 12 of 14	

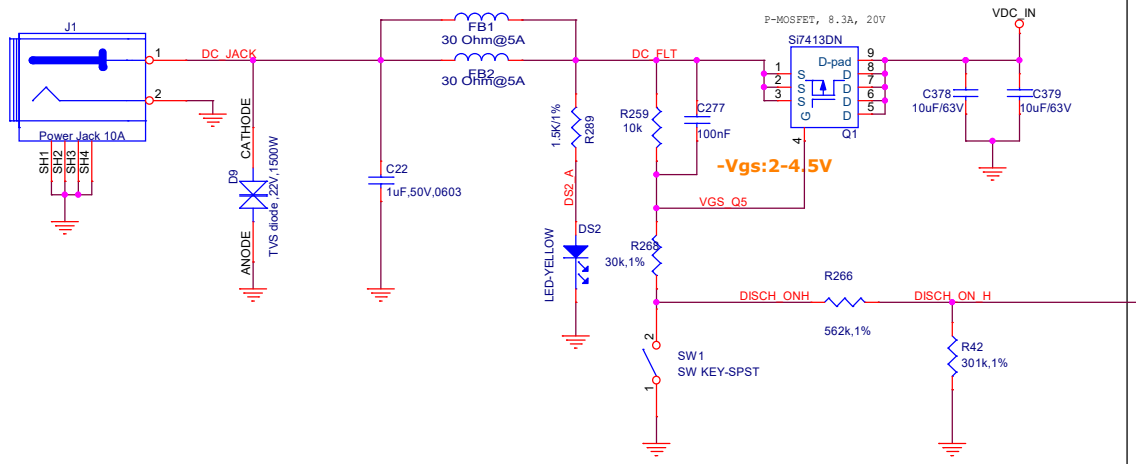


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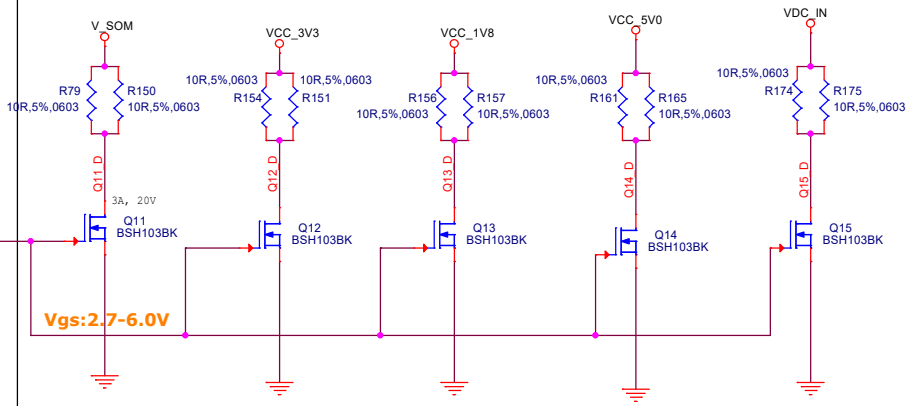
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Size	Title	Rev
A3	SBC-MCM8PV2 13. AUDIO CODEC	1.0
	Document Number: 8000294000	
Date: Thursday, September 10, 2026	Sheet 13 of 14	

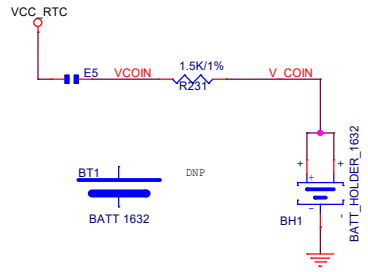
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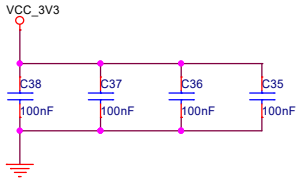
Discharge



RTC battery



Stitching capacitors



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A3	SBC-MCM8PV2 14. DC input ,RTC battery	1.0
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