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	2024/09/02	1-4	Louis Chang	Modify OSM carrier to board to board design Delete J17, J21, U40, U39, U42, U41, U43, U44, U45, U46 Delete Page [OSM-0 pinout], [OSM-S pinout], [OSM-M pinout] Add level shifter U39, U28, U41, U40 for CSI GPIO Change JTAG (J24) pin9 to JTAG_nTRST, pin 10 to system reset with R517 DNI Change J26, J18, J14 to 2.54mm pitch 6 (2 x 3) pin header Add MH14, MH15 standoff screw hole		2025/2/25	2-2	Louis Chang	Add 47K PU resistor on SDIO bus -----solve the SD card compatibility issue. Add 47K ohm PU (pull up to VDD_1V8) on the M.2 SDIO bus. change R97 from DNI to 2.49K.-----Ethernet 0 address set to "0011".						
						2025/2/27	2-3	Louis Chang	Add push-button S3 for RAM suspend mode wake-up						
						2025/3/3	2-4 (Draft 3-0)	Louis Chang	Change U37 to AND gate in order to control SD reset, input are SDIO_A_PWR_EN and RESET_OUT#						
B	2024/10/09	1-5	Louis Chang	Modify OSM carrier for V1.2 specification a. Connect VCC_OUT_IO to pin header b. Connect new added RESET_OUT# to peripheral PMIC RST_N c. Connect new added CARRIER_STBY# to LED for indicating d. OSM pin U15 from SPI_A_SDI_(IO0) to SPI_A_SDI_(IO1) e. OSM pin V15 from SPI_A_SDO_(IO1) to SPI_A_SDO_(IO0) f. Connect new added I2S_B_LRCLK/I2S_B_BITCLK to M.2 connector g. Rename I2S_AB_LRCLK/I2S_AB_BITCLK to I2S_A_LRCLK/I2S_A_BITCLK h. Rename OSM pin name SYS_RST# to RESET_IN# i. Rename OSM pin name LVDS_C to LVDS_A j. Rename I2C_CAM_SDA / CSI_TX_N to CAM_A_SDA / CSI_A_TX_N k. Rename I2C_CAM_SCL / CSI_TX_P to CAM_A_SCL / CSI_A_TX_P l. Connect CAM_B_SDA / CSI_B_TX_N and CAM_B_SCL / CSI_B_TX_P to pin header via level shifter  U4 pin 40 432K resistor (R524) to GND. Populated R460, R461, R491, R492, R495, R496, R500, R501, R505, R506 to 2.2K Change U48 to SN74AUP2G126DCUR which has OE pin control DEPOP R210, R273, JMP37 Change SDIO switch (TMUX1574, -->U32,U43) for supporting HS200 Move all expander input signals to IO expander (U21) to share INT signal. Remove U51 (one of IO expander) Add R534, R533 to 2.2K		2025/3/4	2-5	Louis Chang	1. Add AND gate in order to control IO expander reset, input are CARRIER_PWR_EN and RESET_OUT# 2. Add AND gate in order to control Audio power cycle, input are CARRIER_PWR_EN and RESET_OUT# and AUD_PWR_EN 3. Add AND gate in order to control ETH0 reset, input are CARRIER_PWR_EN and RESET_OUT# and ETH_A_RST / GPIO_A_1 4. Add AND gate in order to control ETH1 reset, input are CARRIER_PWR_EN and RESET_OUT# and GPIO_C_0/ETH_B_RST 5. Correct ETH0 and ETH1 IO voltage ro comply with OSM spec (multiple IO voltage) (bootstrap, MDIO and INT) 6. Add pull low/high resistor on IO expander (U21) P port when them as inputs						
						2025/3/24	2-6	Louis Chang	1. Add a load switch (U48) to separate PER_12V (in) and DP_12V (out) 2. Change DEBUG port from uUSB to Type C connector 3. Change USB_A from uUSB to Type C connector 4. Change ETH JACK (CON2, CON3) to Kingconn, 7RJ45-F0-0332 5. Change Q13 to SECOS, SMS2312 6. Added new variant of OSM-S						
						2025/4/9	2025/4/28	2025/4/28	7. Change R491,R492,R495,R496,R500,R501,R505 and R506 to RC0201JR-074K7P						
	2025/4/28	3-0	Louis Chang	Revision 3-0 release											
C	2024/10/11	1-6	Louis Chang	Remove J37 (delete USB_A_PD_RST connection to control USB_A_BUS) Swap back CSI connector to the original design Add 12.288MHz Oscillator (X2) for AUDIO CODEC MCLK option							C				
	2024/10/25	1-7	Louis Chang	Change CSI connector (CON9~12) to double side contact style Populate R210, R273, R62 with 0 ohm DEPOP R60 Change R61 to 0 ohm											
	2024/10/30	1-8	Louis Chang	Add J40,J41,J42, JMP40, JMP41 Delete R274, R276											
	2024/11/4	1-9	Louis Chang	Connect R49 to VDD_1V8 Remove U37, R50, R144, C73, JMP39											
D	2024/11/11	1-10	Louis Chang	Add R144, R274, R50 to 0 ohm, R276 to DNI Change R207, R208 to DNI Swap SPK_N and SPK_P Change C202, C203 from 22uF to 47uF(Murata/ GRM188R60J476ME15D)							D				
	2024/11/12	2-0	Louis Chang	Revision 2-0 release											
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	2025/08/27	3-1	Louis Chang	1. DEPOP R518 to solve SD boot issue 2. USB_C_PD_RESET and AND gate not needed for VBUS_5V control, circuit modify 2.1 JMP 38 DEPOP 3. Add a 2.54mm connector (J43) with boot switch for out off board controlled by fly bead 4. Add IRQ for MIPI display if needed on IO expander (U21) pin8 (P07) 5. Change USB_A TUSB320 to TUSB321 6. Change R327 to DNI, R338 to 100K to set current advertisement to 900mA for USB_C 7. Change R164 to DNI, R343 to 100K to set current advertisement to 900mA for USB_D 8. Add buffer U5,U6,U62 on USB_A/C/D TUSB321 id pin. 9. Change C212 to 0402 size 10. Add C276 (10uF) for Audio Differential AC-Coupled Input 11. Remove SPI Flash U30 and connect SPI_A to J44 12. Add a 12V -->5V switching regulator U30 for Camera 13. Add two pin connectors J45,J46,J48,J49 for Camera 5V 14. Add 4 load switches (U64,U65,U68,U69) for CSI 5V control 15. Add 4 load switches (U66,U67,U70,U71) for CSI 3.3V control 16. Add LDO U63 for AUDIO 3V3 17. Delete R525 let SDIO MUX switch always enable by pull low. 18. LED circuits on M.2 removed 19. M2_WL_DEVICE_WAKEUP, M2_BT_DEVICE_WAKEUP, M2_SD_nRST, SDIO_A_SWITCH_EN signal are removed 20. Delete R200		2026/1/07	5-2	Louis	1. Change load switches on CSI VDD_3V3 to current limit type 1.1 Change U66, U67, U70, U71 to TPS22950CDDCR 1.2 Change R581, R582, R593, R594 to 10K 1.3 Delete C335, C340, C351, C352 1.4 Add R285, R353, R377, R378 to 2.37K 2. Change eMMC(U49) form SanDisk/ SDINBDG4-8G-XI2 to Kingston/ EMMC16G-WW28-01E10		
						2026/1/16	5-3	Louis			
						2026/1/17	6-0	Louis Chang	6-0 Release		
						2026/4/13	7-0	Louis Chang	1. Change the VIN input to U54 (pin 1) from VDD_3V3 to VDD_SD_3V3.		
B	2025/09/05	3-2	Louis Chang	1. Delete Boundary scan control switch S4 2. Add Power Mux (U73) for display 12V, input is LS_12V or V_SYS 3. Change DP_12V net name to DP_HV 4. Add Power Mux (U72) for camera CSI_HV, input is LS_12V or VPD_output 5. Delete unnecessary net USB_A_INT_N/OUT3 6. Add switch for UART_B_MCU, one way to M.2, the other way to 2.54mm connector 7. Change CSI_5V and CSI_3.3V load switch are all controlled by IO expander.		2026/5/21	7-1	Louis Chang	Update the Block Diagram to replace the DEBUG_EN and TEST_GENERIC/TEST_BOUNDARY_SCAN switches with resistors		
C	2025/09/19	3-3	Louis Chang	1. Change (IO expander (U21) to MCP23018 2. Change R428 to 4.7K 3. Delete R438, R439							
	2025/09/22	4-0	Louis Chang	4-0 Release							
	2025/10/03	5-0	Louis Chang	1. OSM pin name changed 1.1 RGB_BL_PWM / PWM_1 change to LVDS_D_BL_PWM / PWM_1 1.2 LVDS_D_BL_PWM / PWM_2 change to RGB_BL_PWM / LVDS_E_BL_PWM / PWM_2 1.3 LVDS_E_BL_PWM / PWM_3 change to CAM_B_MCK / PWM_3 1.4 CAM_B_MCK / PWM_4 change to CAM_C_MCK / PWM_4 1.5 CAM_C_MCK / PWM_5 change to CAM_D_MCK / PWM_5 1.6 CAM_D_MCK / GPIO_D_6 change to GPIO_D_6 2. Delete J15 3. Remove variant 940-00039 (OSM-M Carrier Board) 4. Rename variant 940-00384 description and PCB description							
D	2026/01/06	5-1	Louis Chang	1. Delete JMP53 and J53, modify UART Switch (U74) control from IO expander (U35.17) 2. Change level shifter of CSI to uni-direction part 2.1 U39, U28, U41, U40 change to SN74LXC2T45QDCURQ1 2.2 Populate R375, R376, R371, R372, R389, R390, R387, R388 to 10K 2.3 Delete R353, R285, R378, R377 2.4 Add C424, C425, C426, C427 to 0.1uF							
1		2		3		4		5		6	
						<div><div></div><div><div>Title: Schematic, Common OSM-M/ OSM-S Carrier Board,</div><div><div>Sheet Name: <i>History 3</i></div><div>Project Number: 941-00018</div><div>Assembly Number: 940-00384</div><div>Drawing Number: 940-00384-SCH</div><div>Rev. 7-1</div></div><div><div>File: 940-00384[History3].SchDoc</div><div>Customer: Internal</div><div>Last Modified: 5/21/2026 PM 05:19:30</div><div>Size: B</div><div>Sheet: 3 of 33</div></div></div></div>					

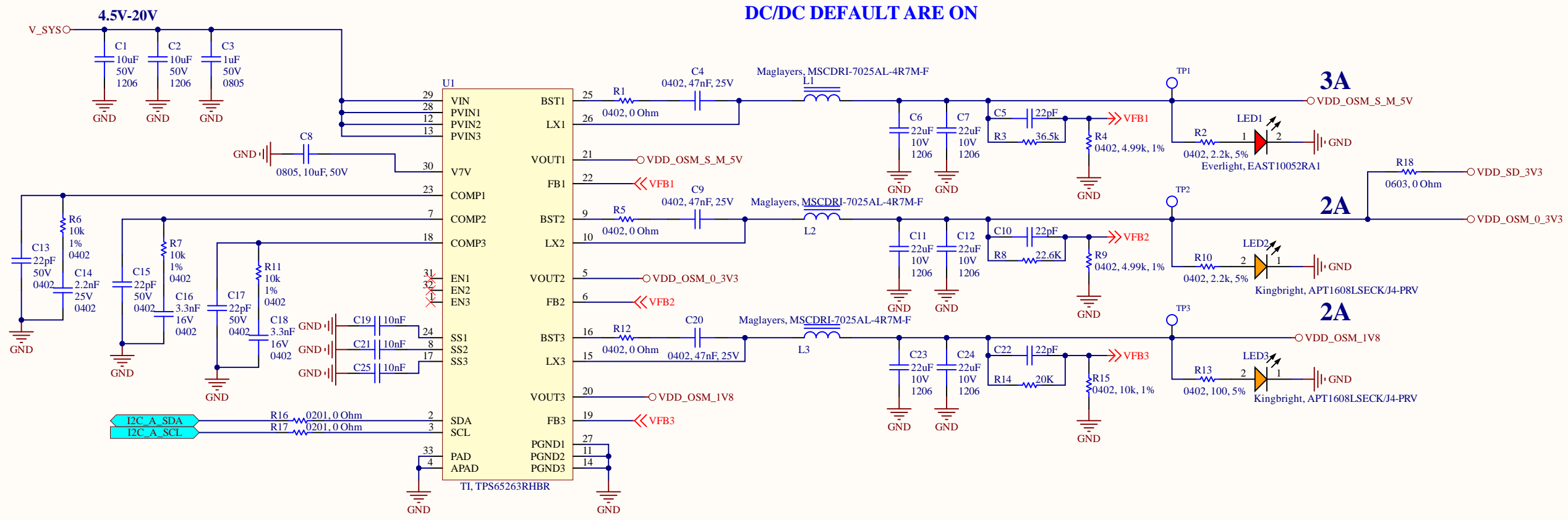
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POWER MANAGEMENT-OSM



CURRENT MEASUREMENT



Table 7-1. Address Pins and Target Addresses

A0	INA232A DEVICE OPTION	INA232B DEVICE OPTION
GND	1000000	1001000
VS	1000001	1001001
SDA	1000010	1001010
SCL	1000011	1001011

Title: Schematic, Common OSM-M/ OSM-S Carrier Board,

Sheet Name: **Power Management\_OSM**

File: 940-00384[Power Management\_OSM].SchDoc

Project Number: 941-00018

Customer: Internal

Assembly Number: 940-00384

Last Modified: 5/21/2026 PM 05:19:30

Drawing Number: 940-00384-SCH

Size: B

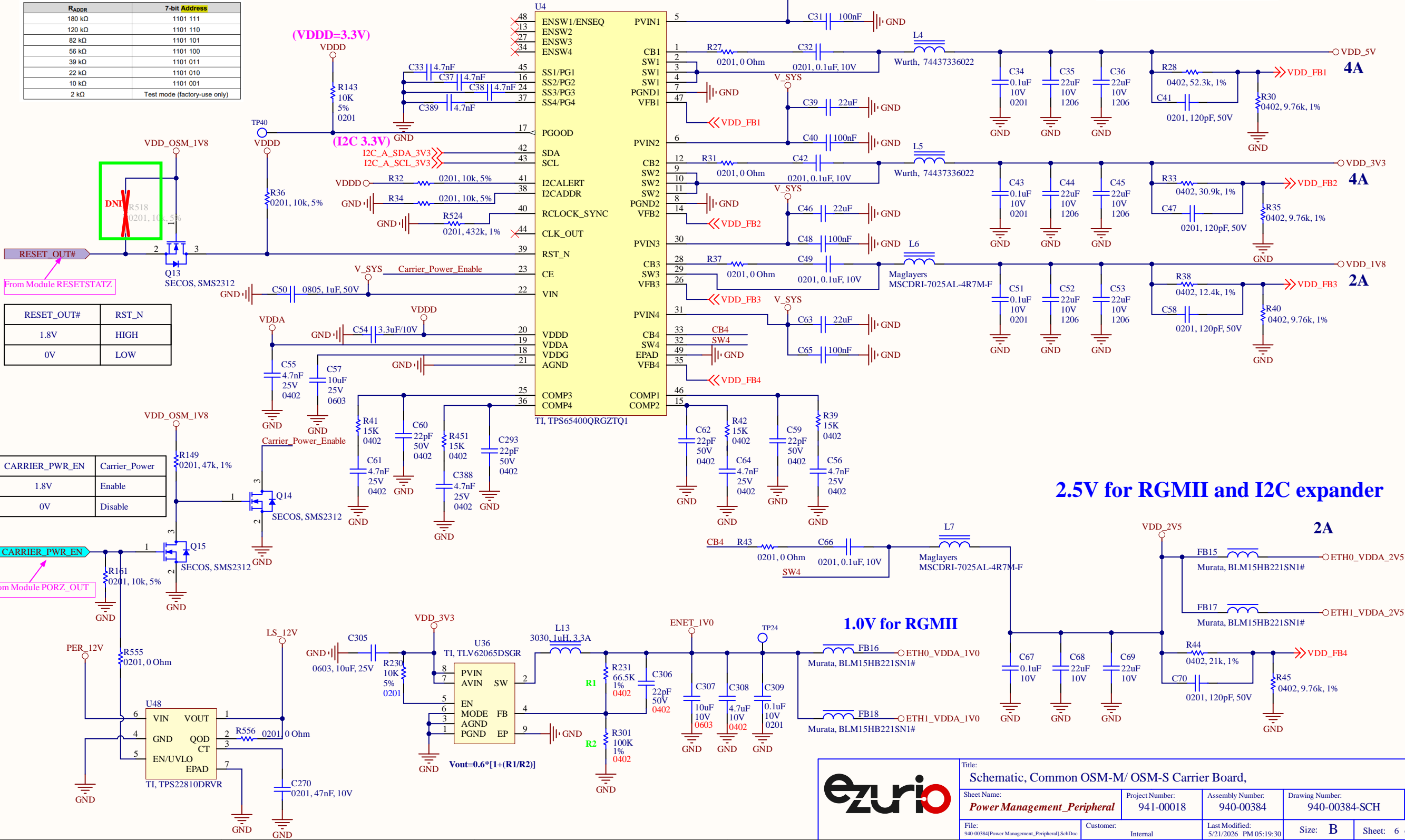
Rev: 7-1

Sheet: 5 of 33

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Power Management\_Carrier Board

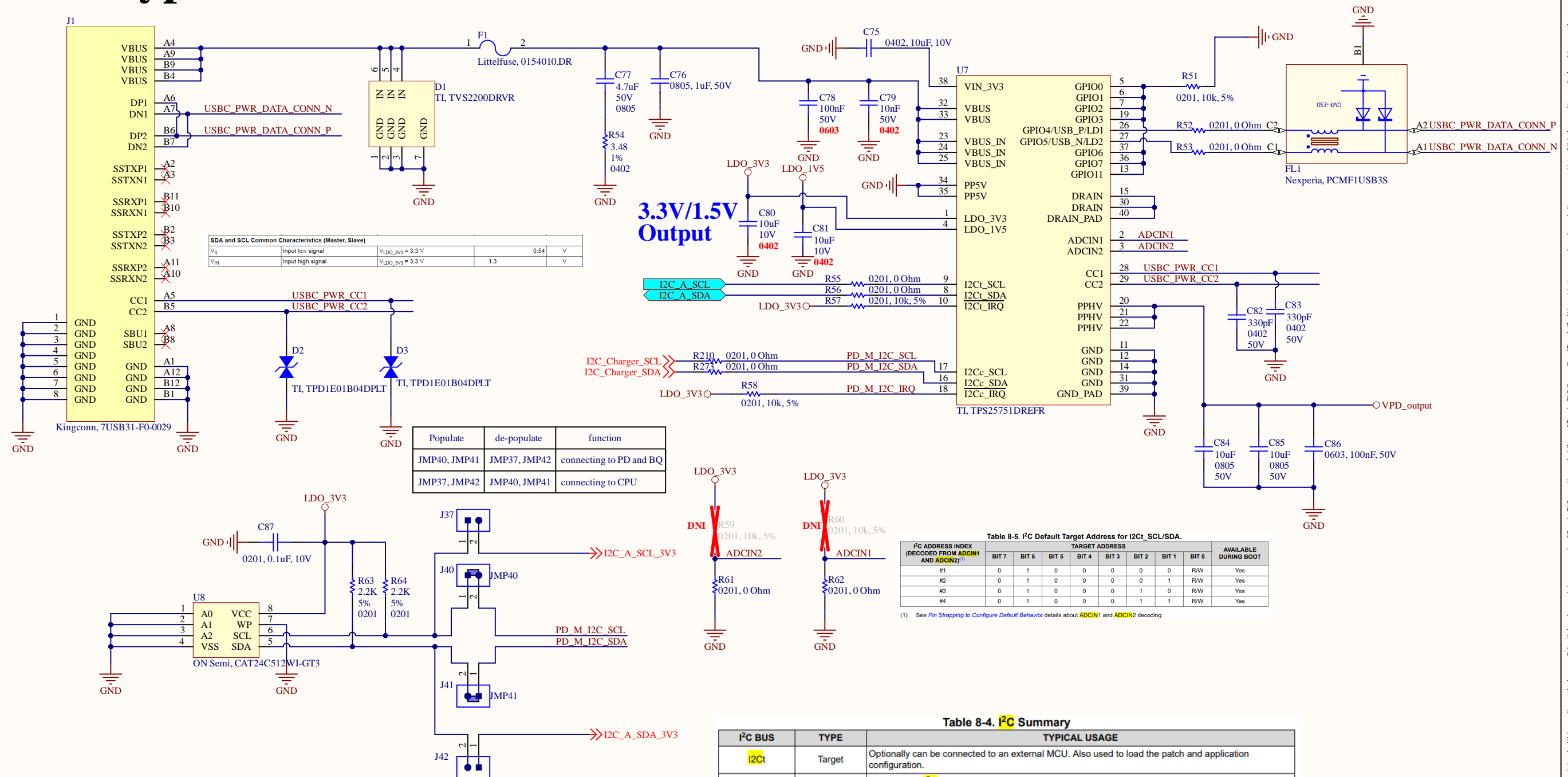
RADDR	7-bit Address
180 kΩ	1101 111
120 kΩ	1101 110
82 kΩ	1101 101
56 kΩ	1101 100
39 kΩ	1101 011
22 kΩ	1101 010
10 kΩ	1101 001
2 kΩ	Test mode (factory-use only)



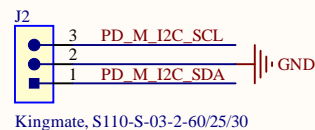
Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: Power Management_Peripheral	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384[Power Management_Peripheral].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:30	Size: B	Sheet: 6 of 33

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# USB Type C Power



During boot, the TPS25751 attempts to read patch and Application Configuration data from an external EEPROM with a 7-bit target address of 0x50. The EEPROM must be at least 36 kilo-bytes.



I <sup>2</sup> C ADDRESS INDEX (DECODED FROM ADDRIN1 AND ADDRIN2) <sup>1)</sup>	TARGET ADDRESS								AVAILABLE DURING BOOT
	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0	
#1	0	1	0	0	0	0	0	R/W	Yes
#2	0	1	0	0	0	0	1	R/W	Yes
#3	0	1	0	0	0	1	0	R/W	Yes
#4	0	1	0	0	0	1	1	R/W	Yes

(1) See [Pin Strapping to Configure Default Behavior](#) details about `ADCIN1` and `ADCIN2` decoding

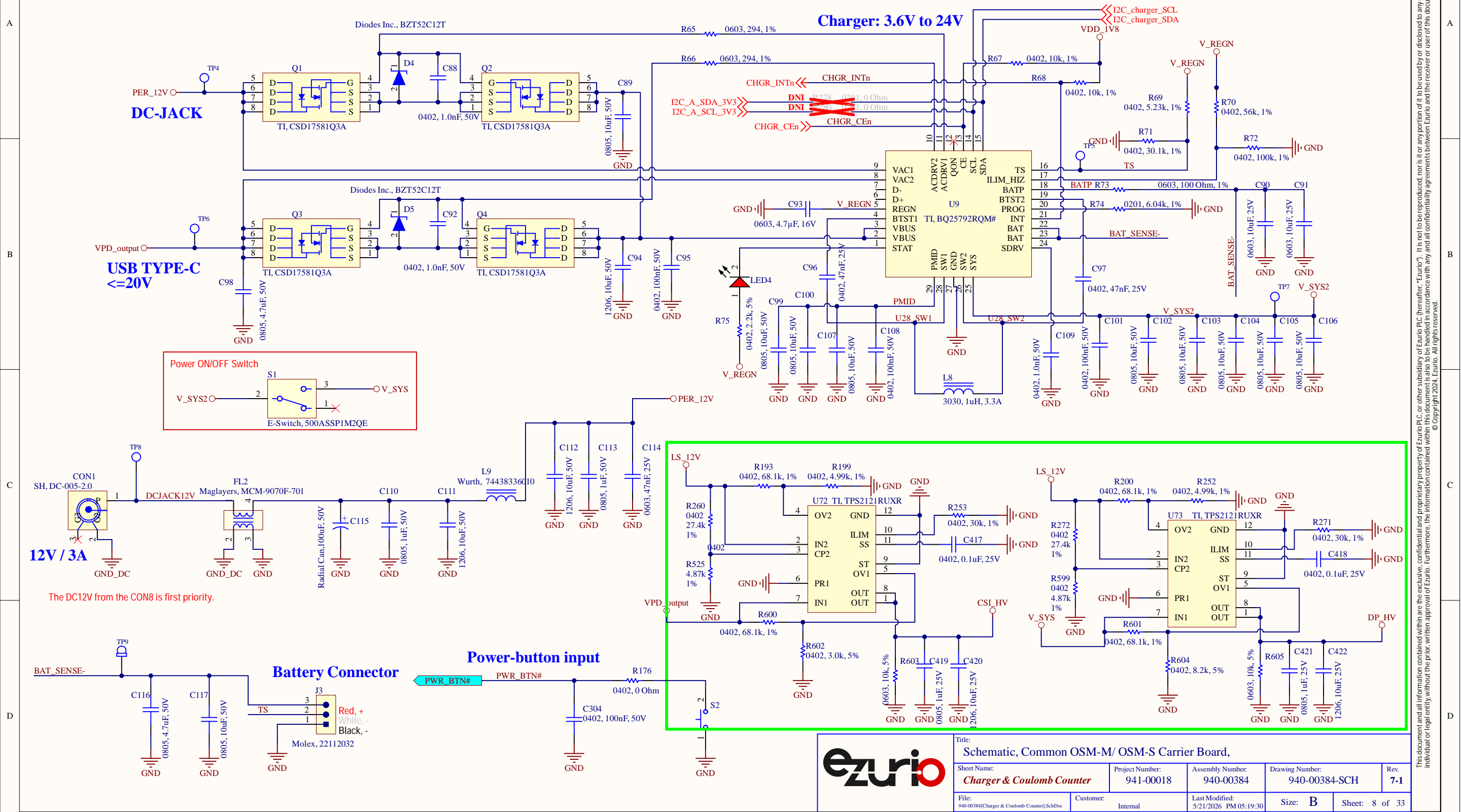
### Table 8-4. I<sup>2</sup>C Summary

I <sup>2</sup> C BUS	TYPE	TYPICAL USAGE
I2Ct	Target	Optionally can be connected to an external MCU. Also used to load the patch and application configuration.
I2Cc	Controller	Connect to a I <sup>2</sup> C EEPROM, Battery Charger. Use the LDO_3V3 pin as the pullup voltage. Multi-controller configuration is not supported.



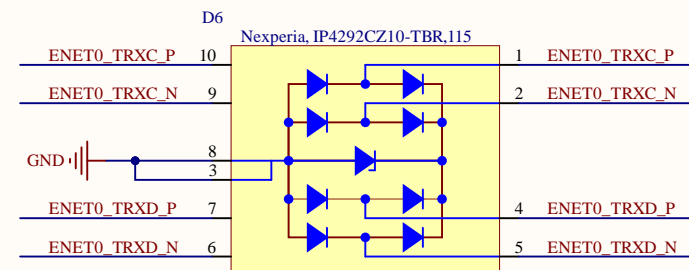
# Charger & Coulomb Counter & Boost

CE	13	DI	Active Low Charge Enable Pin – Battery charging is enabled when EN_CHG bit is 1 and CE pin is LOW. CE pin must be pulled HIGH or LOW, do not leave floating.
----	----	----	--



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## A



## A



**C**

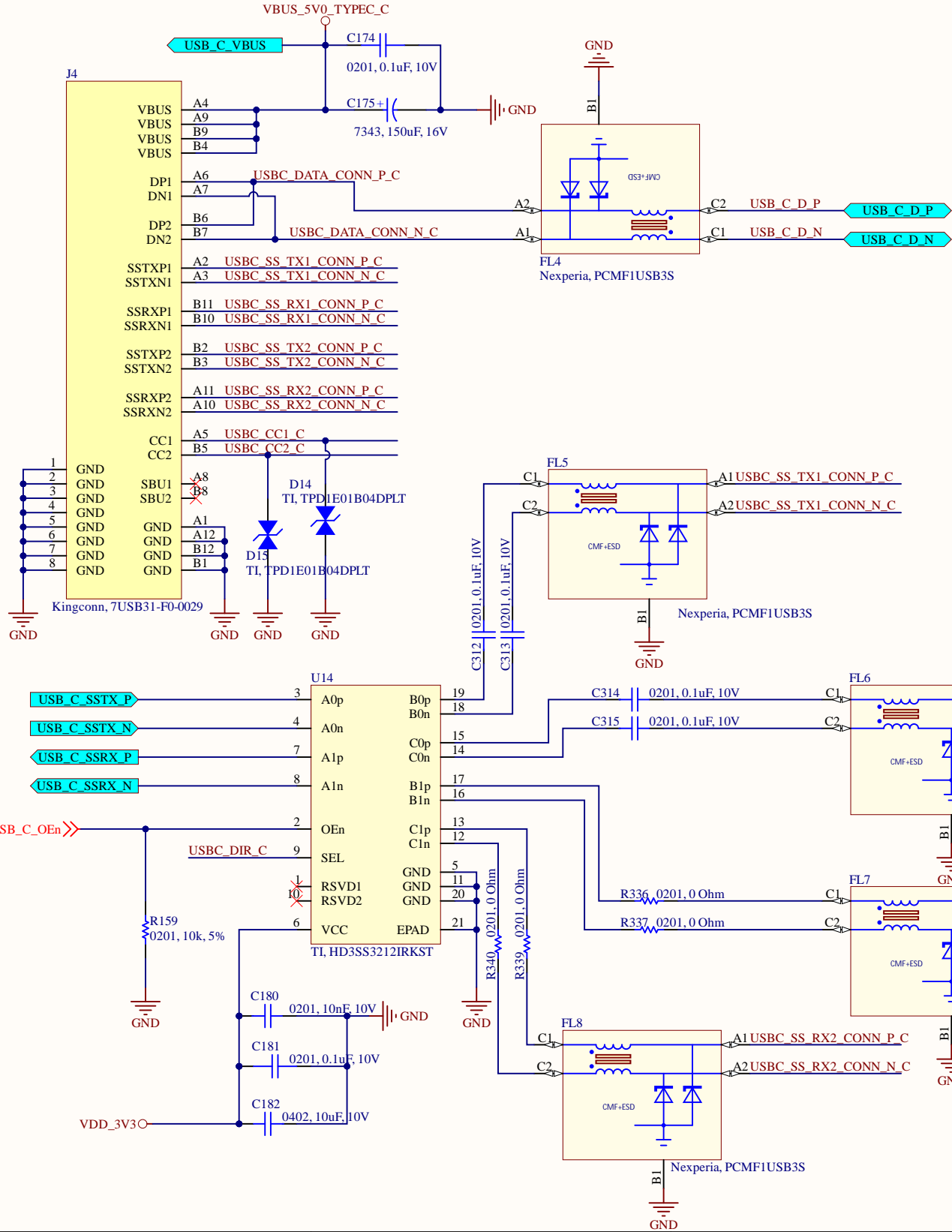


## D

5

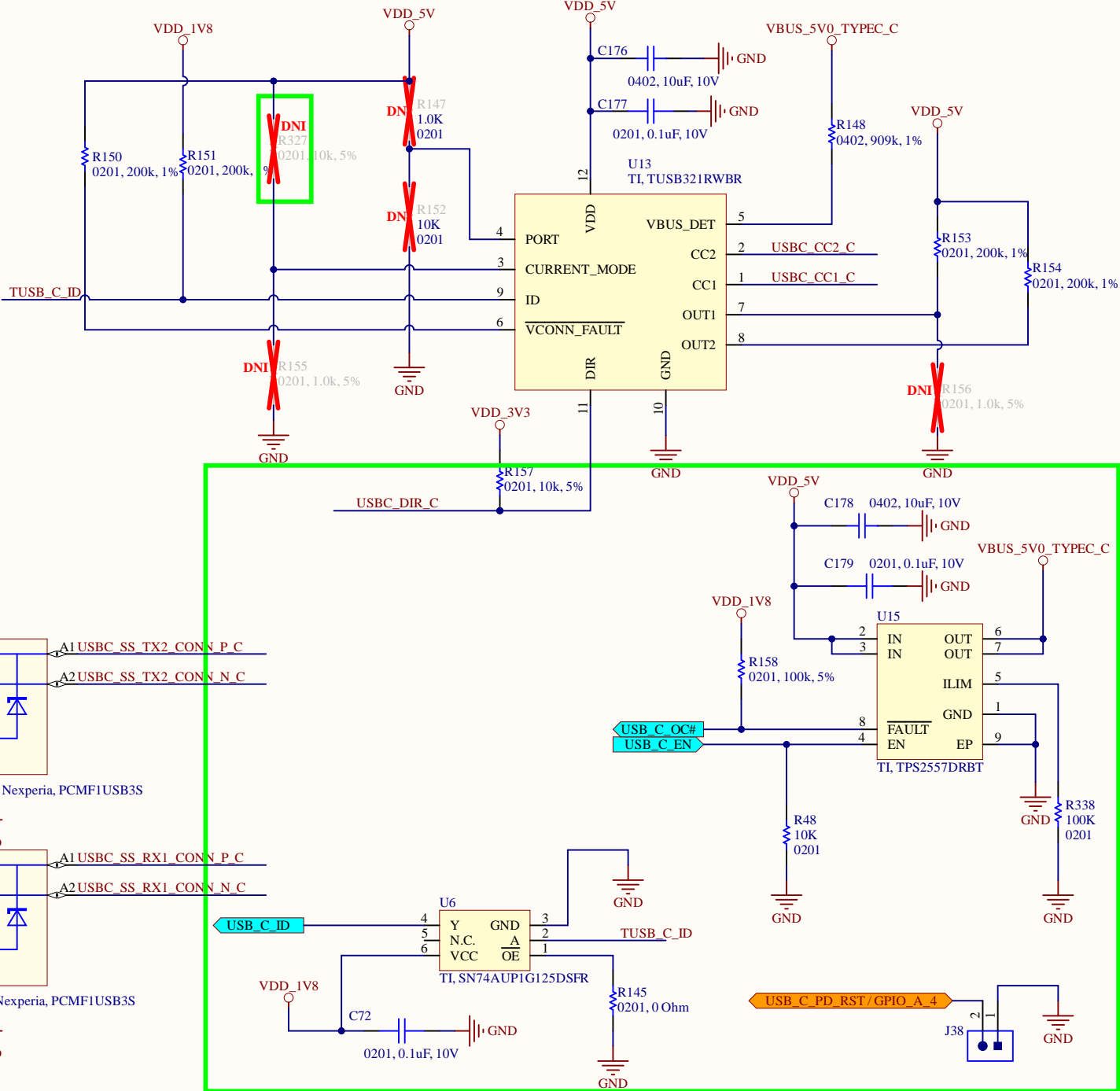
D

USB Port C: TYPe-C



TYPE-C CURRENT		UFP or DRP acting as UFP Current Detection	DFP or DRP acting as DFP Current Advertisement
Default	500 mA (USB2.0) 900 mA (USB3.1)	OUT1 = High OUT2 = High (unattached) or Low (attached)	CURRENT_MODE = L
Medium - 1.5 A		OUT1 = Low OUT2 = High	CURRENT_MODE = M
High - 3 A		OUT1 = Low OUT2 = Low	CURRENT_MODE = H

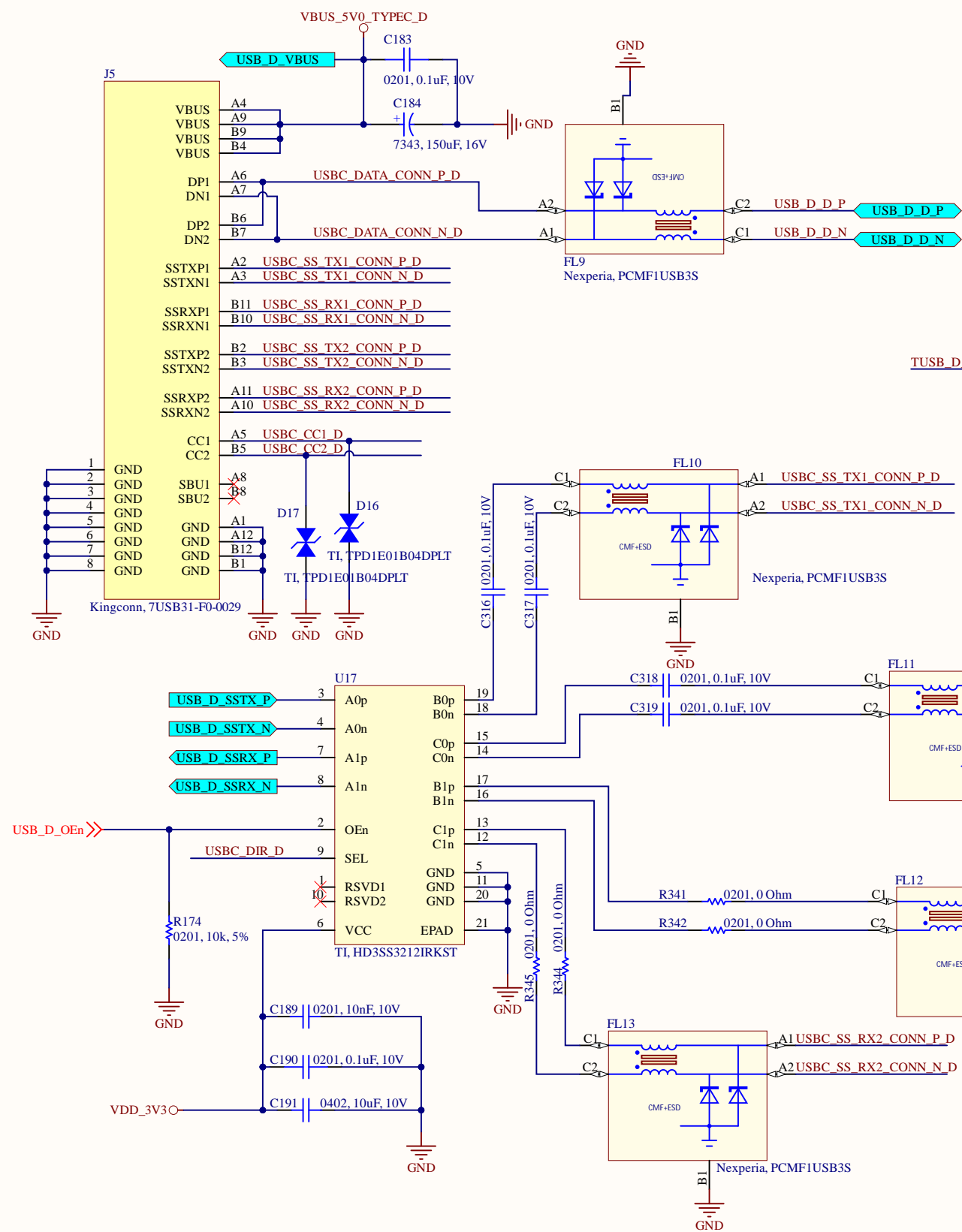
Default 900mA left unconnected or pull to GND  
R=500K Iout(max)=1.5A  
R=10k Iout(max)=3A



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: USB TypeC port C	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384\USB TypeC port C\SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:30	Size: B	Sheet: 12 of 33

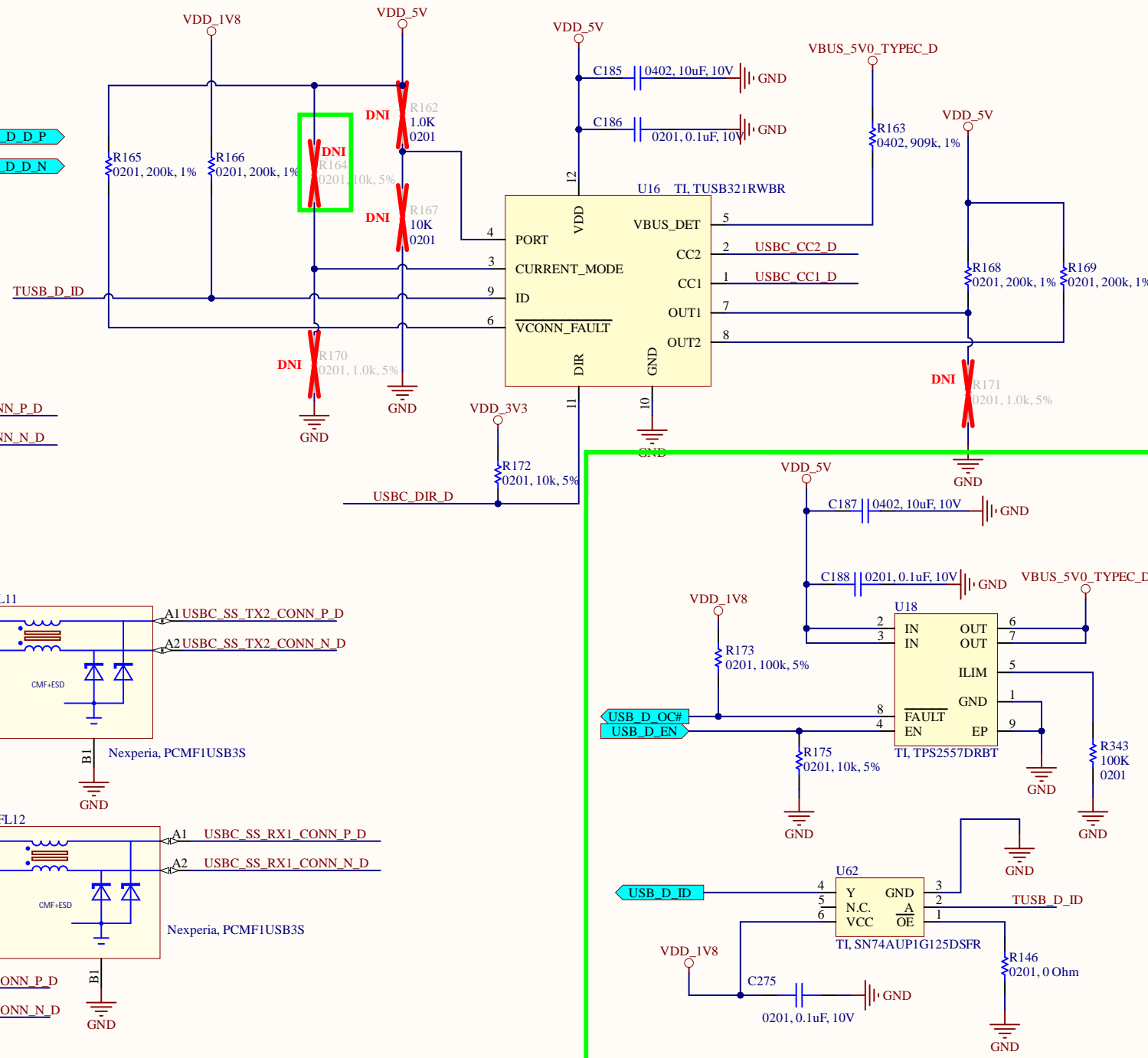
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# USB Port D:Type-C



TYPE-C CURRENT		UFP or DRP acting as UFP Current Detection	DFP or DRP acting as DFP Current Advertisement
Default	500 mA (USB2.0) 900 mA (USB3.1)	OUT1 = High OUT2 = High (unattached) or Low (attached)	CURRENT_MODE = L
Medium - 1.5 A		OUT1 = Low OUT2 = High	CURRENT_MODE = M
High - 3 A		OUT1 = Low OUT2 = Low	CURRENT_MODE = H

Default 900mA left uncooect ot pull to GND $R=500K$ $I_{out(max)}=1.5A$ $R=10k$ $I_{out(max)}=3A$
---





AUDIO CODEC

Table 7-10. Output Pin Configuration for the Playback Channel	
P0_R100_D[4:2] : OUT1x_CFG[2:0]	OUT1P/OUT1M Pin Configuration
000 (default)	OUT1P/OUT1M as a differential pair
001	OUT1P and OUT1M as independent single-ended outputs
010	Mono Single Ended output on OUT1P only
011	Mono Single Ended output on OUT1M only
100	Pseudo-differential output with OUT1P as signal and OUT1M as VCOM
101	Pseudo differential output with OUT1P as signal, OUT1M as VCOM and OUT2M as VCOM sense.
110	Pseudo differential output with OUT1M as signal and OUT1P as VCOM
111	Reserved. Do not use this setting.

Similarly, the output pin configuration for output channel 2 can be done using the OUT2x\_CFG[2:0] (P0\_R107\_D[4:2]) register bits.

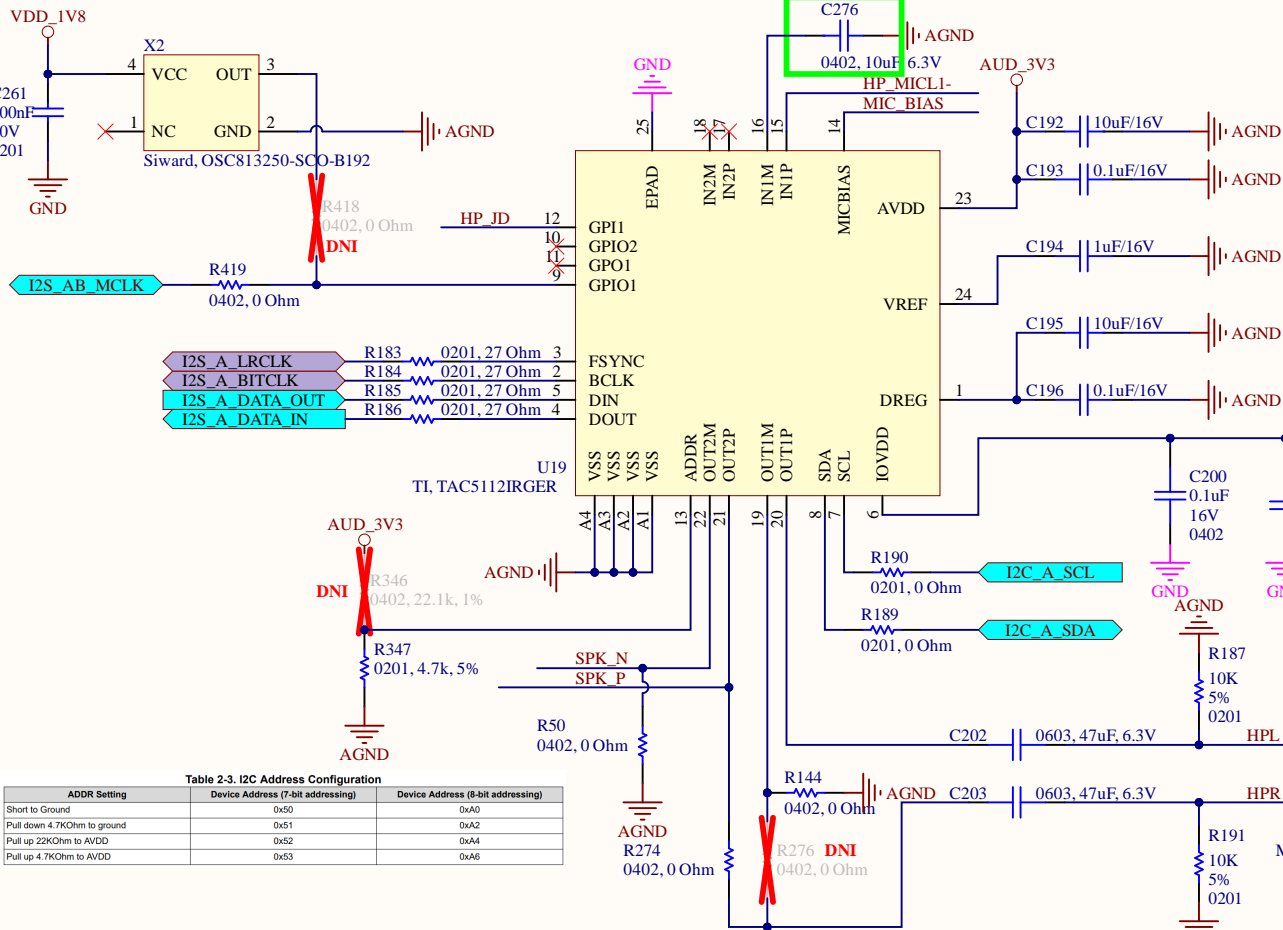
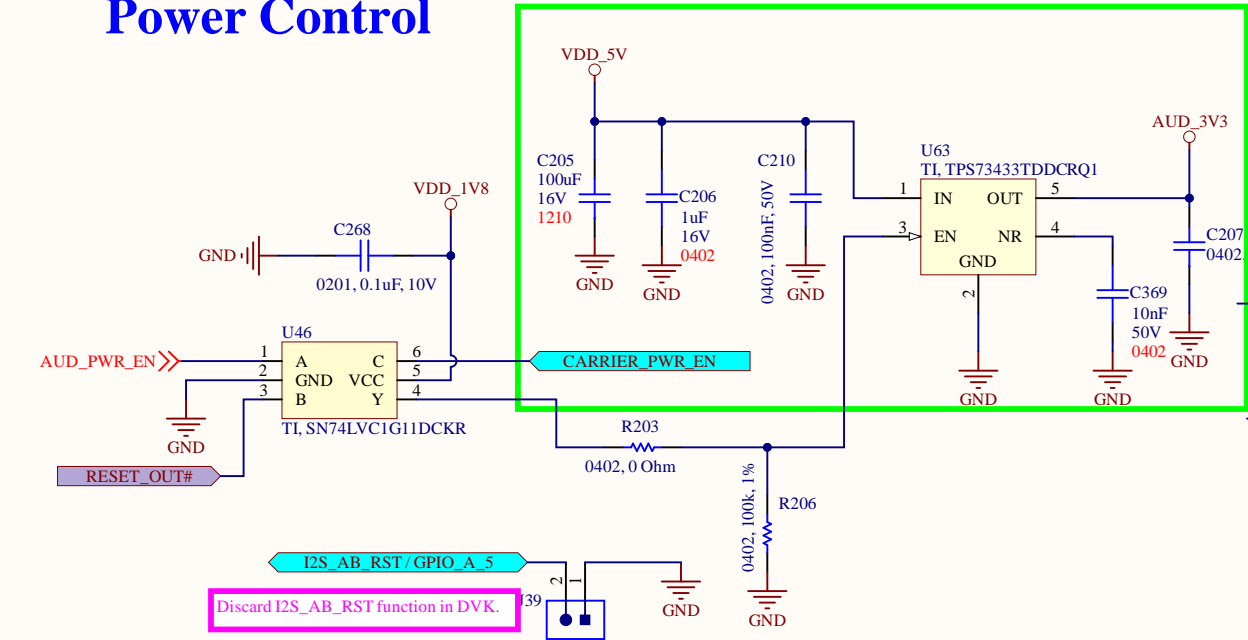


Table 2-3. I2C Address Configuration		
ADDR Setting	Device Address (7-bit addressing)	Device Address (8-bit addressing)
Short to Ground	0x50	0xA0
Pull down 4.7KOhm to ground	0x51	0xA2
Pull up 22KOhm to AVDD	0x52	0xA4
Pull up 4.7KOhm to AVDD	0x53	0xA6

Function	Populate	de-populate
Right channel to audio jack (Default)	R274, R144, R50	R276, R207, R208
Right channel to speaker connector	R276, R207, R208	R274, R144, R50

Power Control

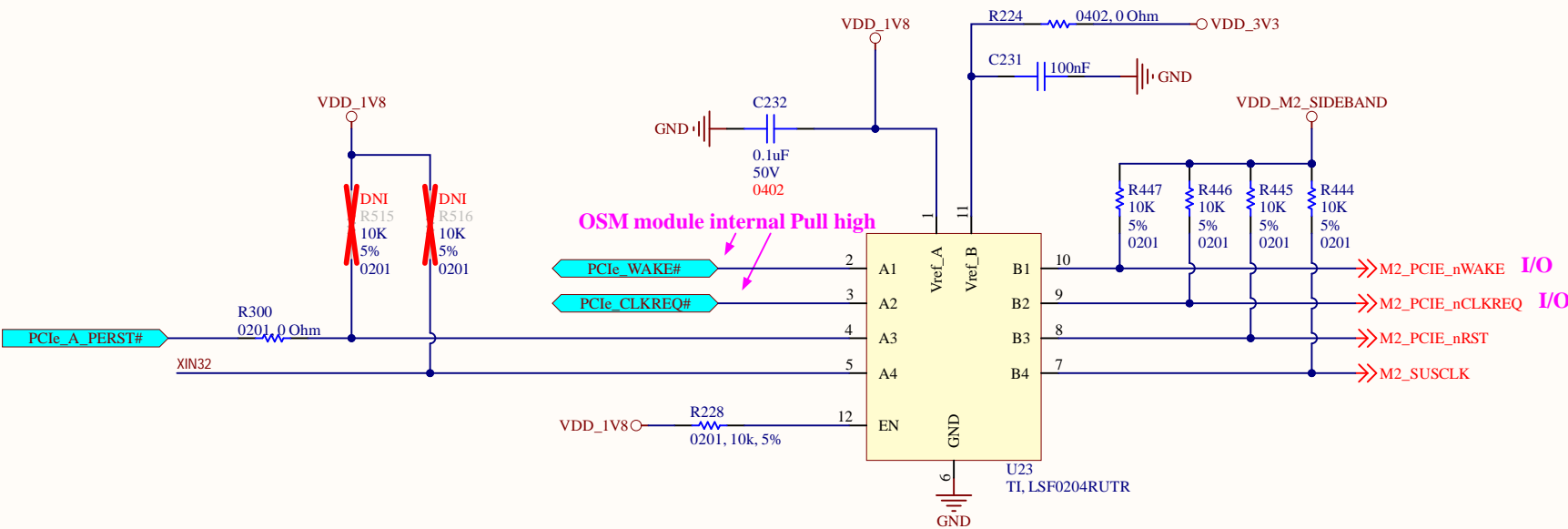


Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: AUDIO	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384[AUD10]SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 14 of 33

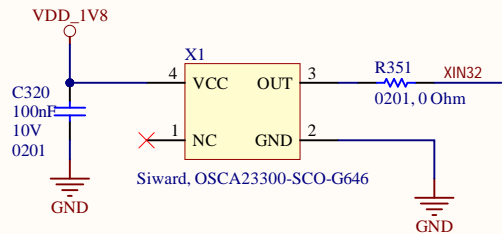
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M2\_Level Shifter\_Detector

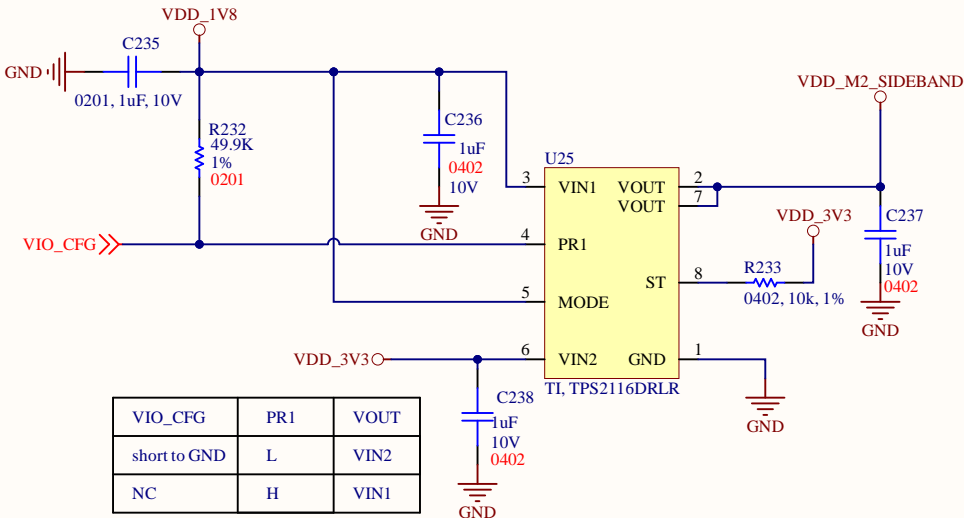
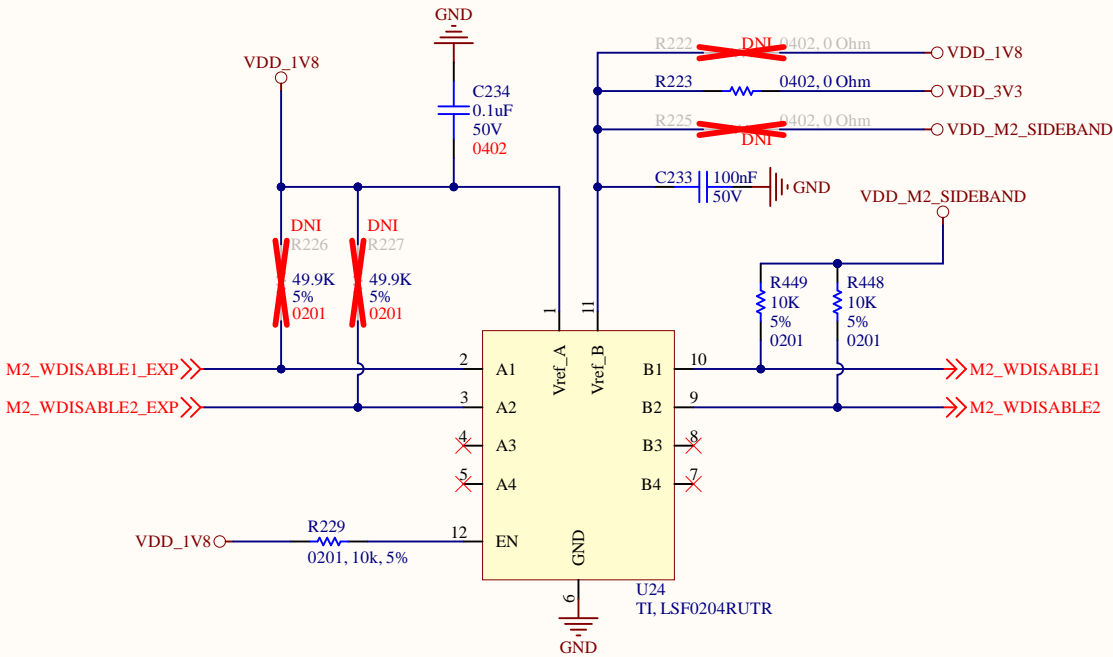
M2 sideband signal level shifter



32.768KHz Oscillator



M2 VIO\_CFG voltage detector



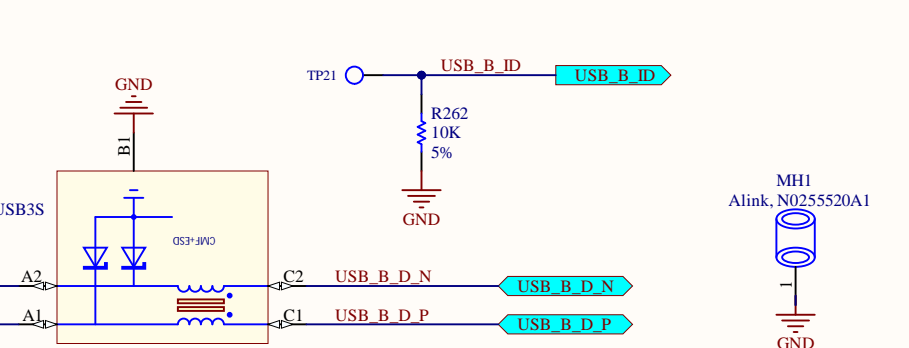
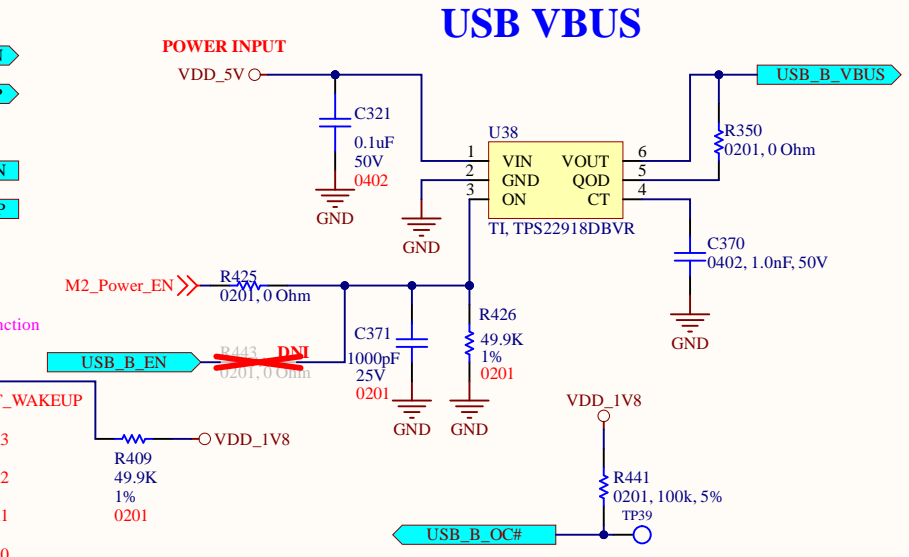
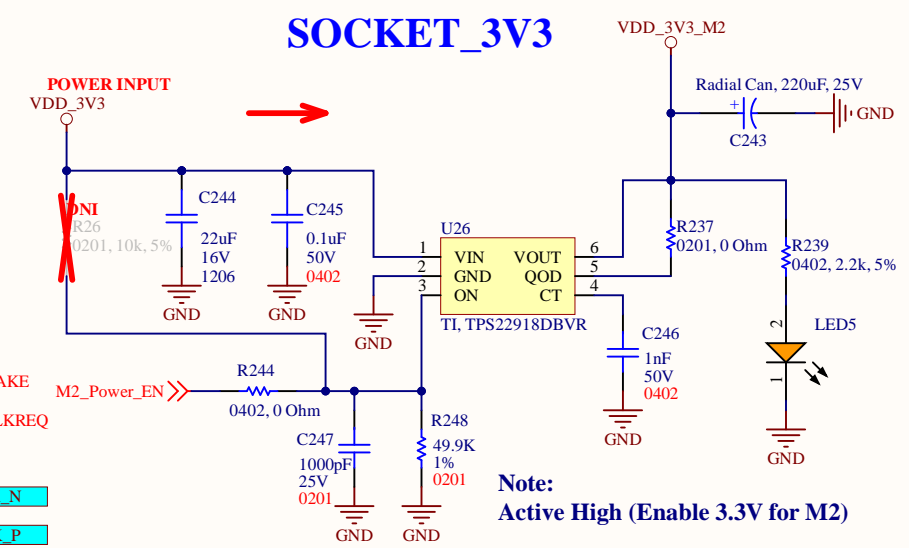
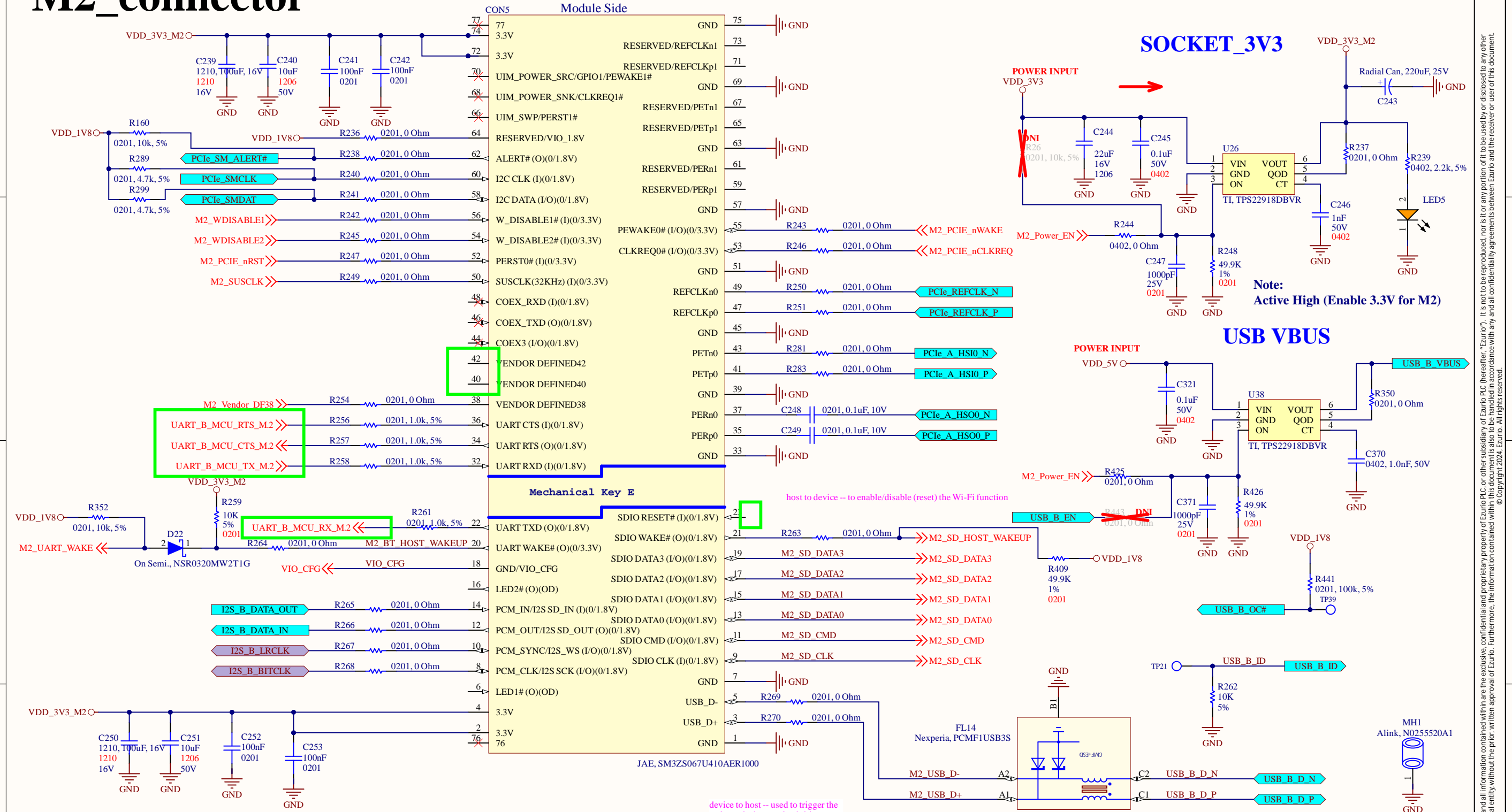
TVIO\_CFG is the PCIe 4.0 new define. VIO\_CFG=GND PCIe Sideband signal is 3.3V.  
VIO\_CFG=NC PCIe Sideband signal is 1.8V



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: M2_Level Shifter_Detector	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384[M2_Level Shifter_Detector].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 15 of 33

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M2\_connector



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: M.2 connector	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384[M.2 connector].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 16 of 33

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CAN\_BUS

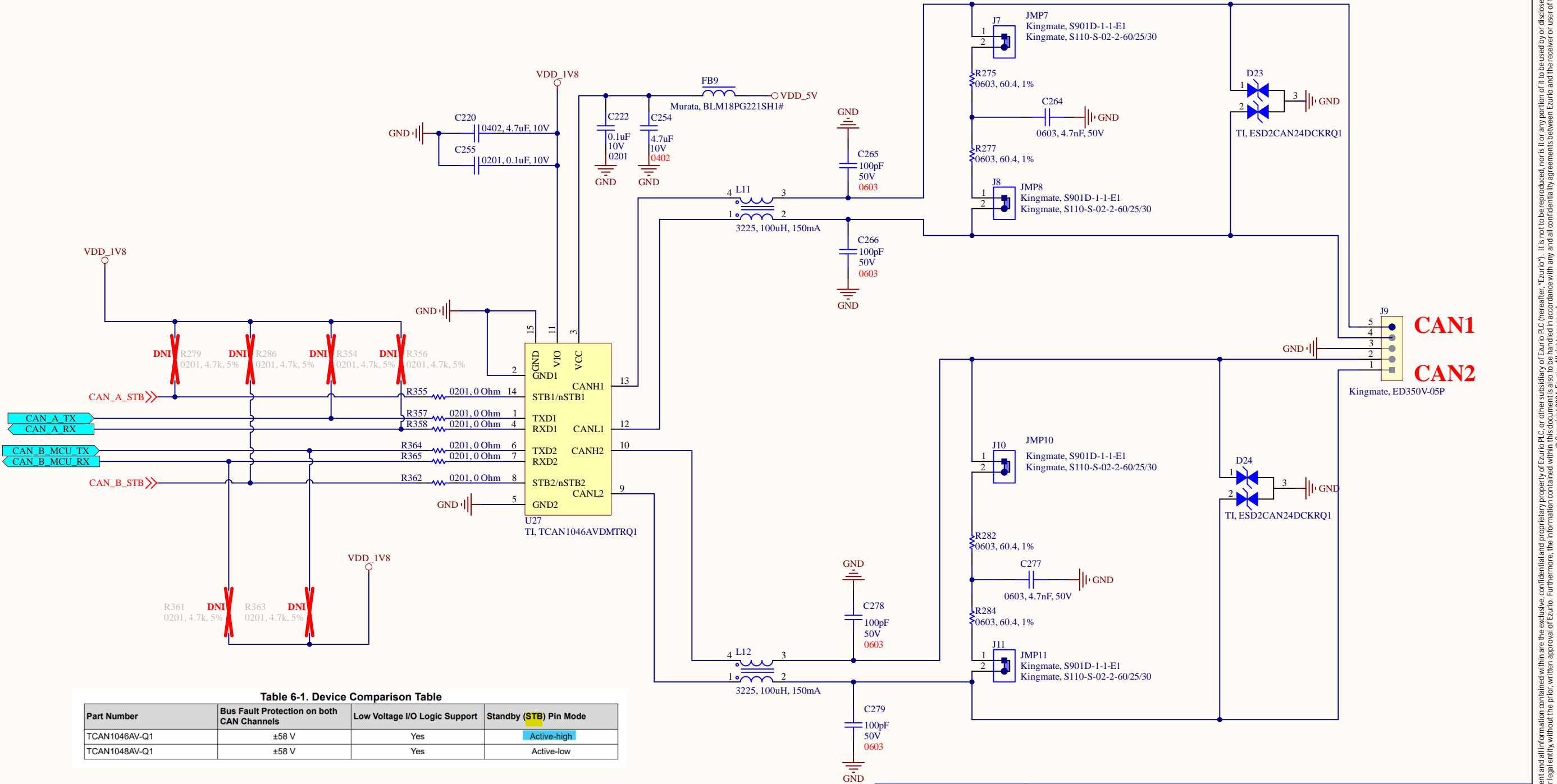


Table 6-1. Device Comparison Table

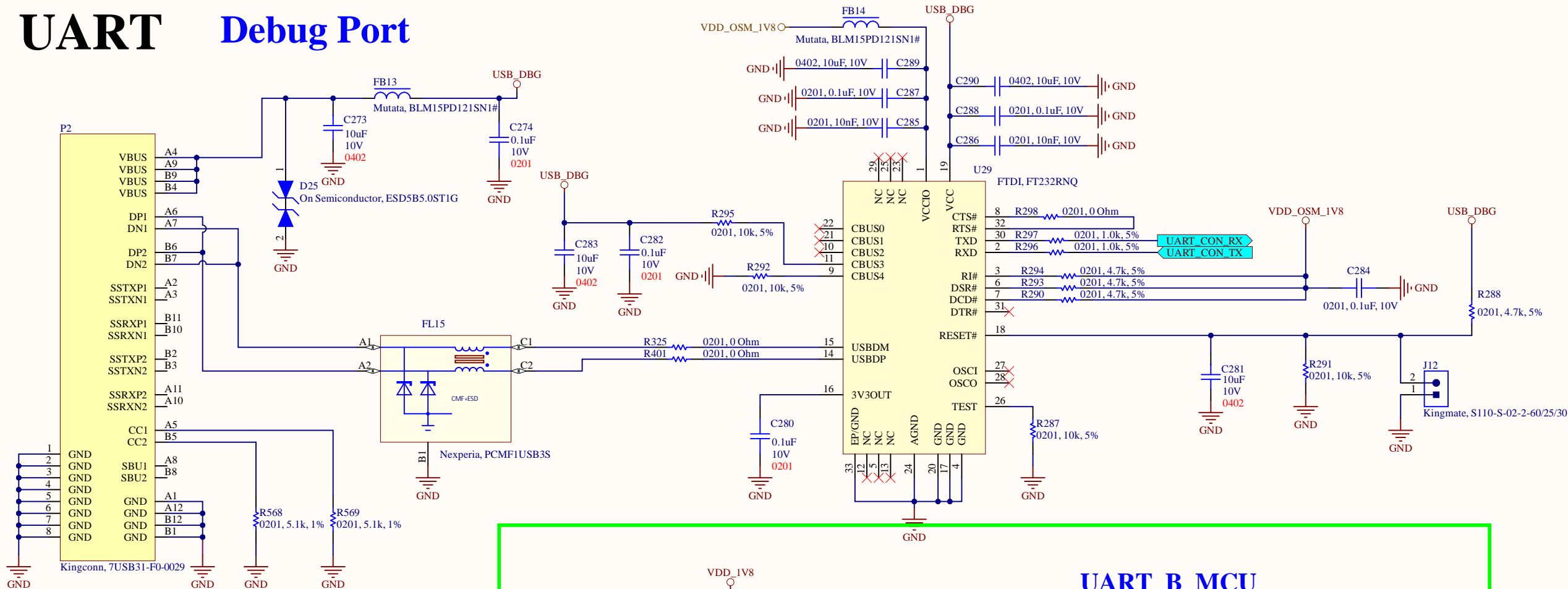
Part Number	Bus Fault Protection on both CAN Channels	Low Voltage I/O Logic Support	Standby (STB) Pin Mode
TCAN1046AV-Q1	±58 V	Yes	Active-high
TCAN1048AV-Q1	±58 V	Yes	Active-low



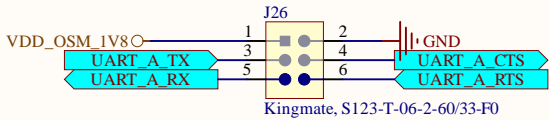
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Sheet Name: <b>CAN BUS</b>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384[CAN BUS].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 17 of 33

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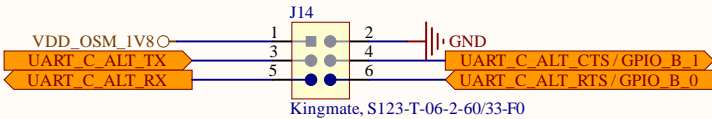
# UART Debug Port



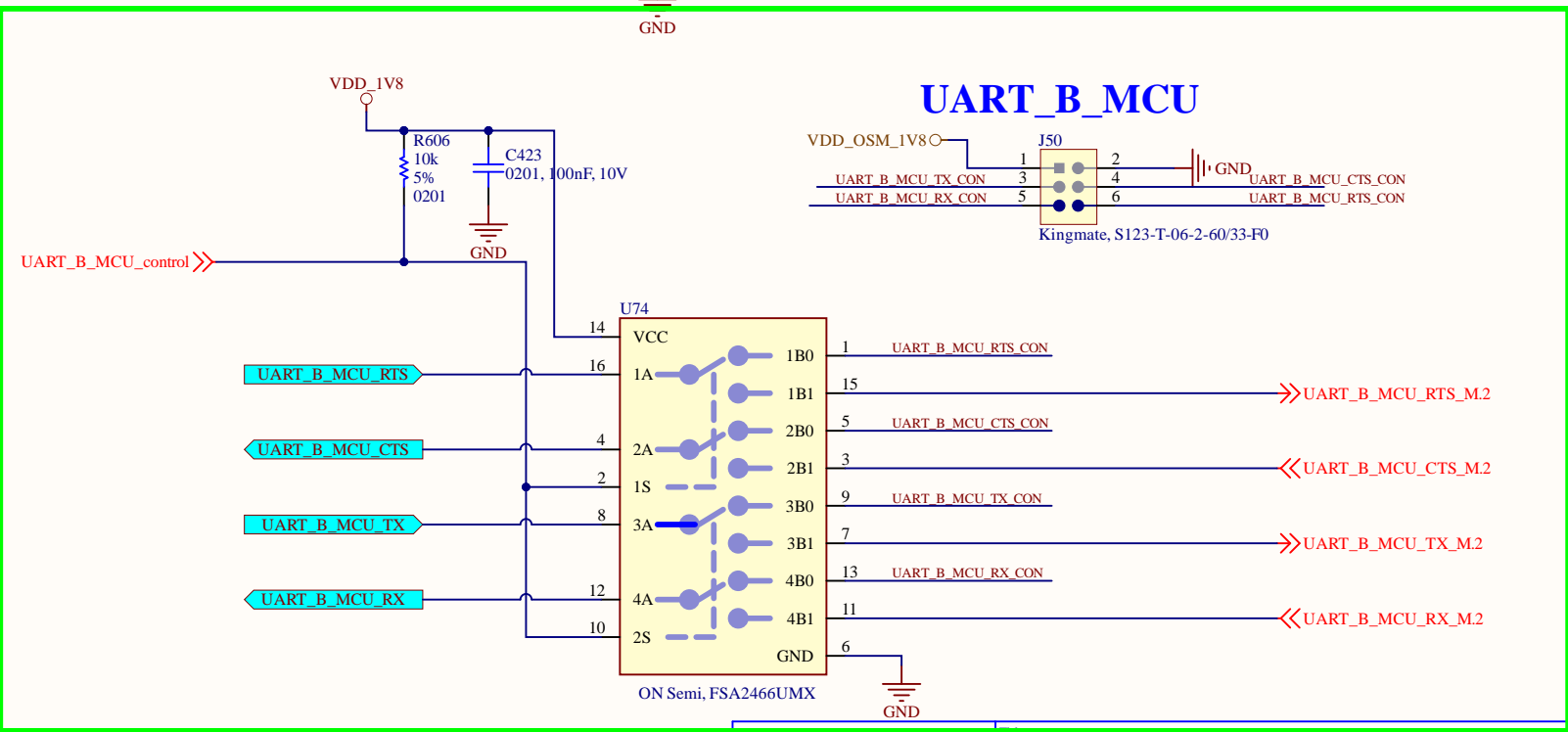
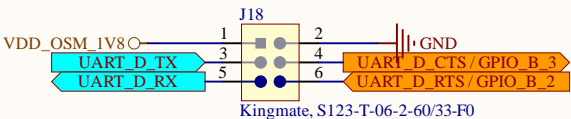
## UART\_A



## UART\_C



## UART\_D

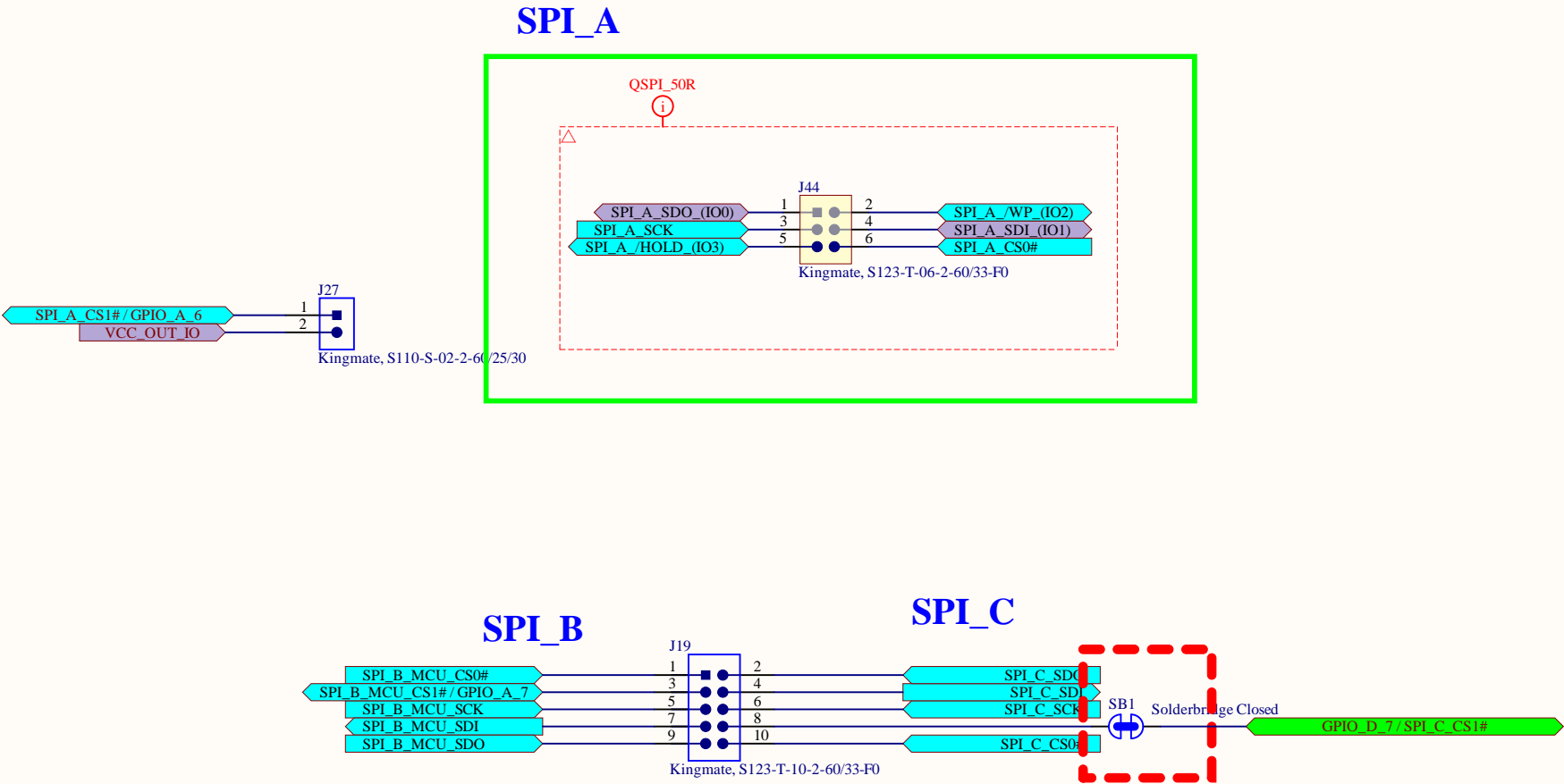


Schematic, Common OSM-M/ OSM-S Carrier Board,

Sheet Name: <b>UART</b>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384[UART].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 18 of 33

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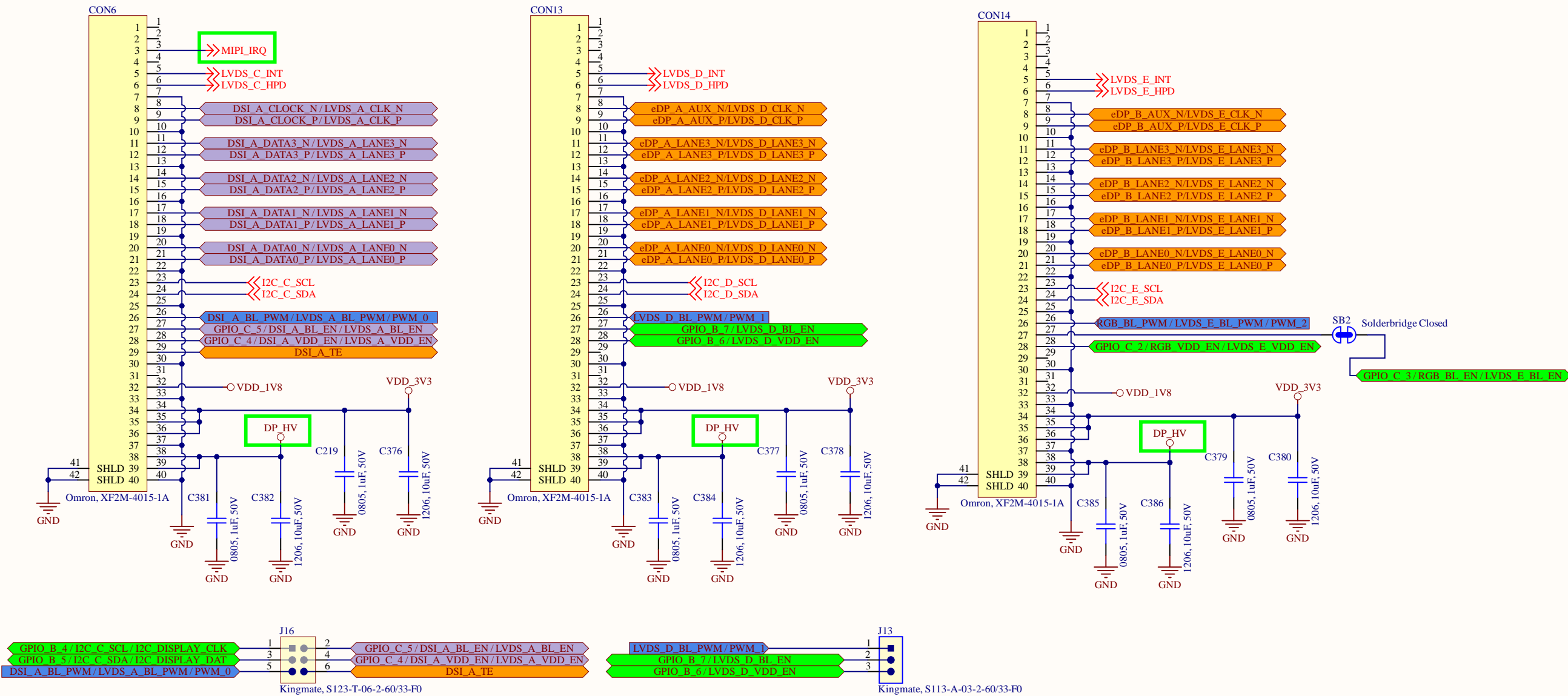
SPI



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,					
Sheet Name: <b>SPI</b>		Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384[SPI].SchDoc	Customer: Internal		Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 19 of 33

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MIPI\_LVDS Display

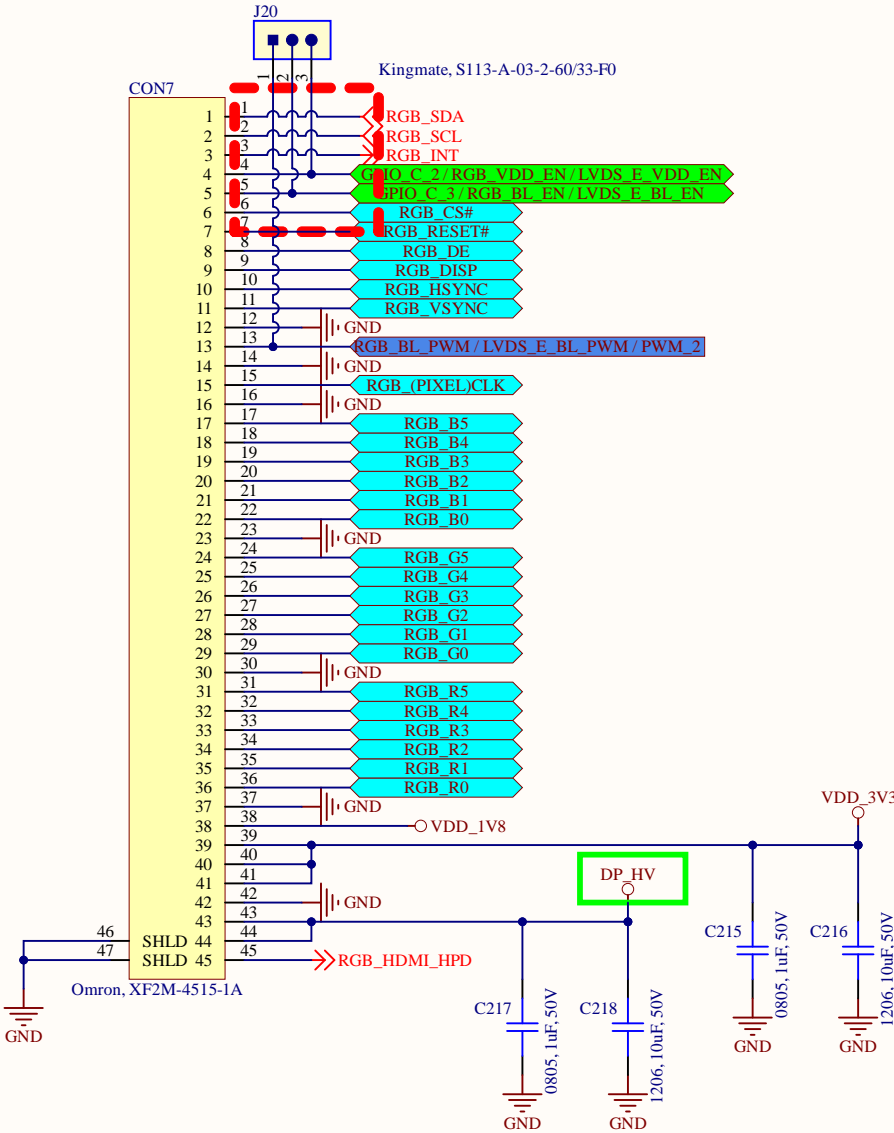


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Sheet Name: MIPI_LVDS Display	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1	
File: 940-00384[MIPI_LVDS Display].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 20 of 33	

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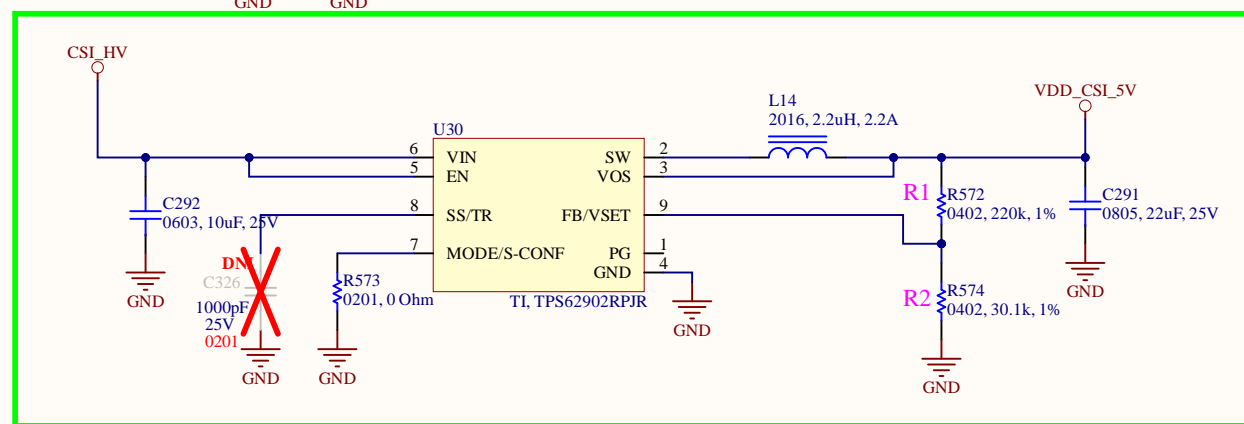
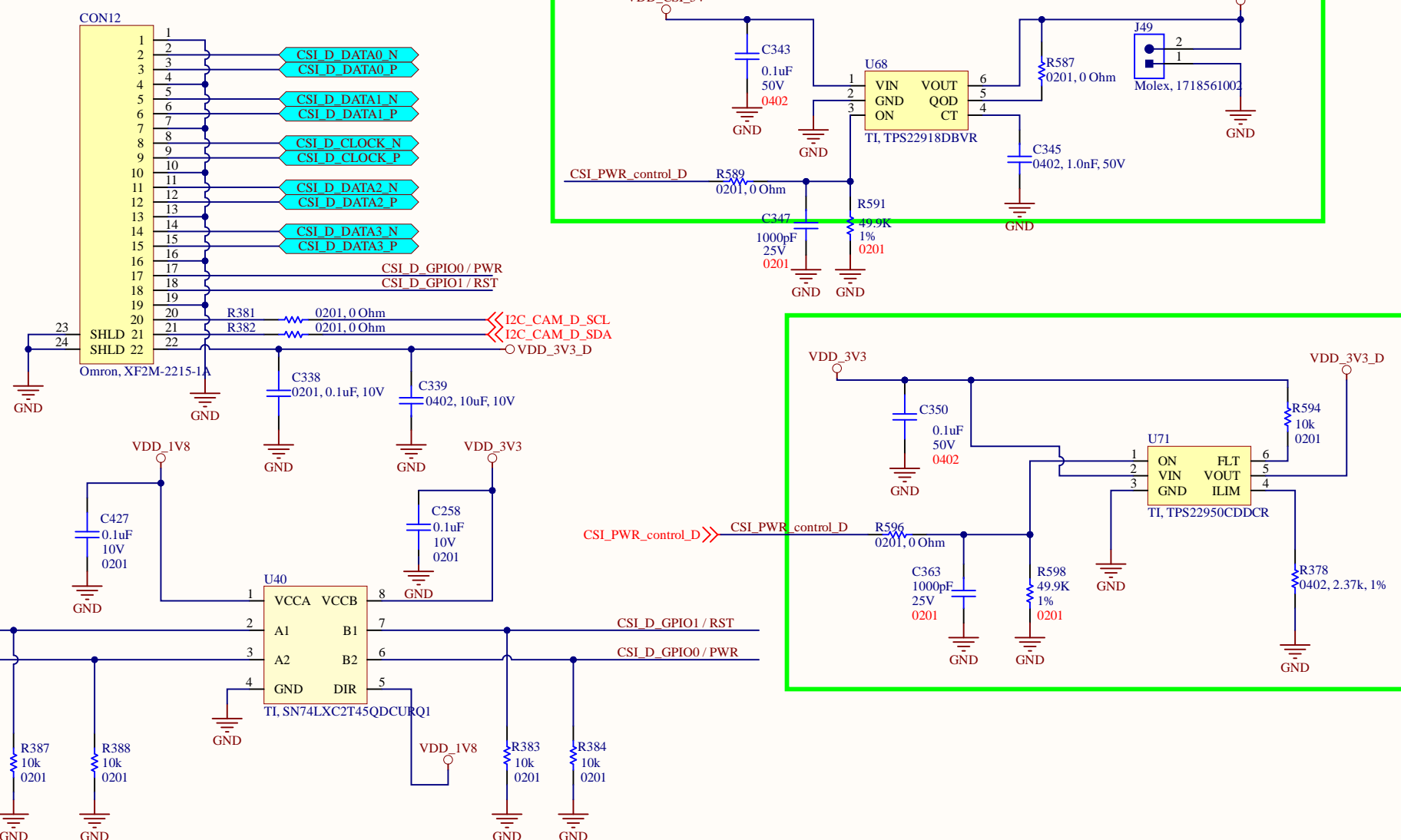
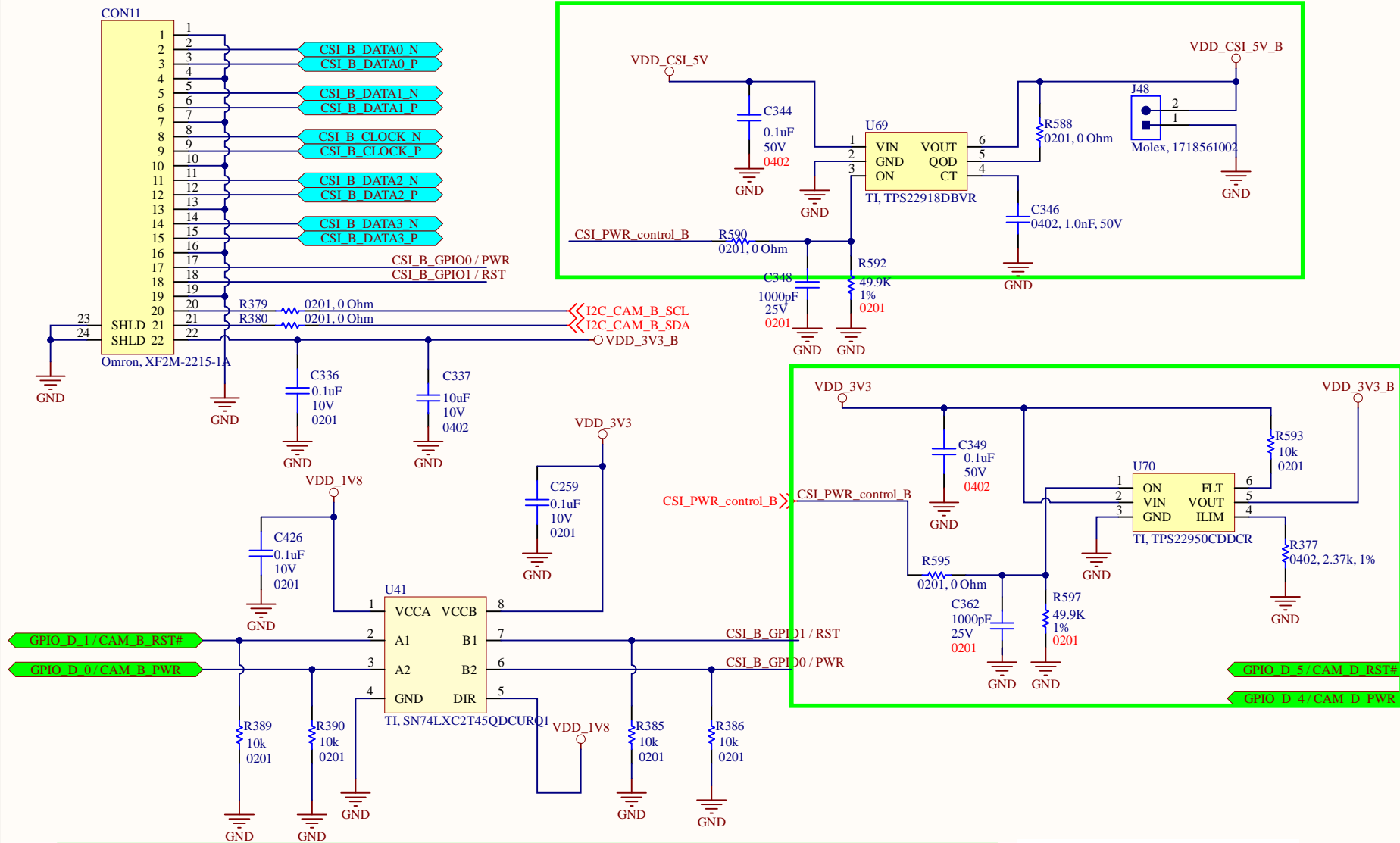
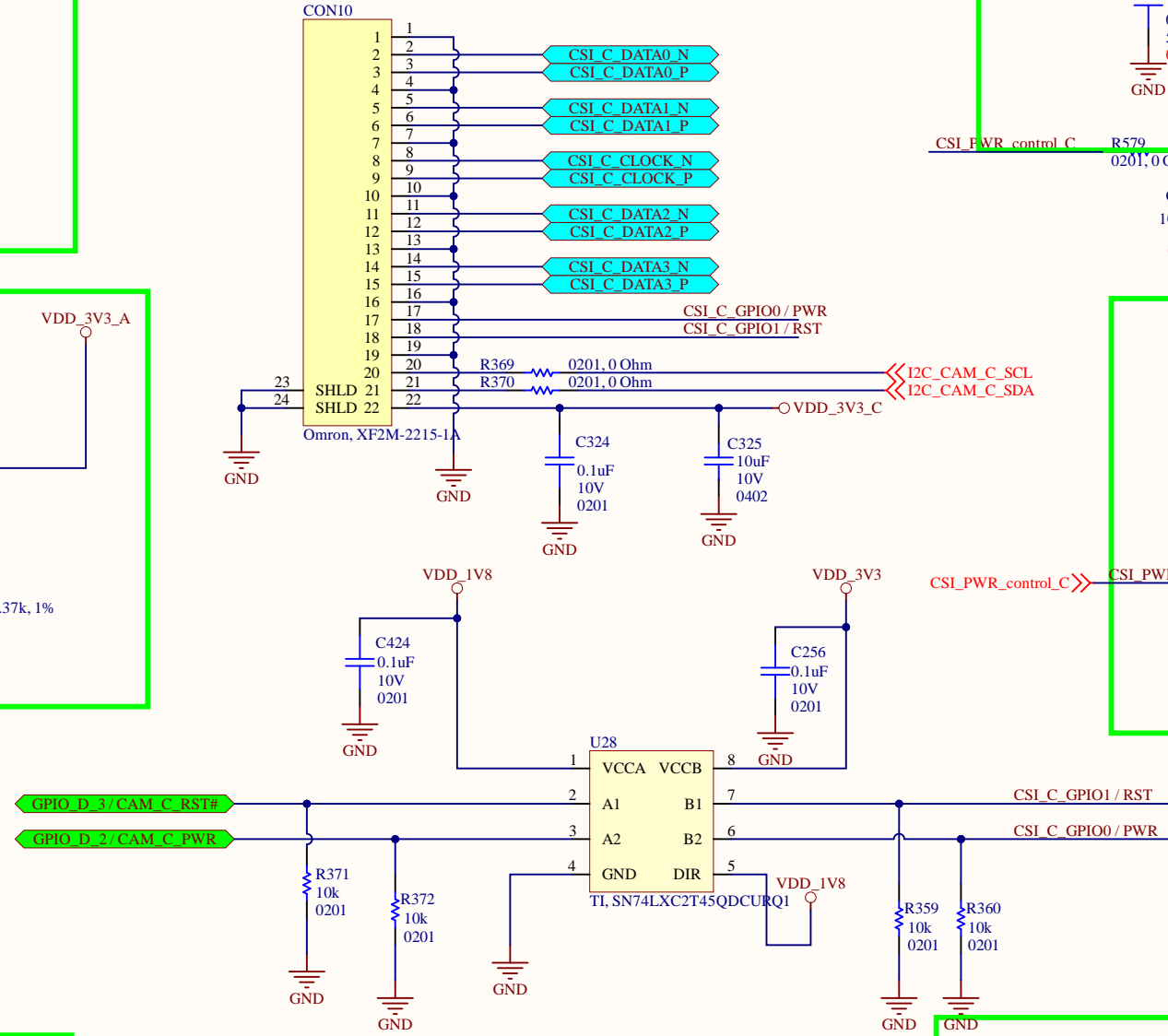
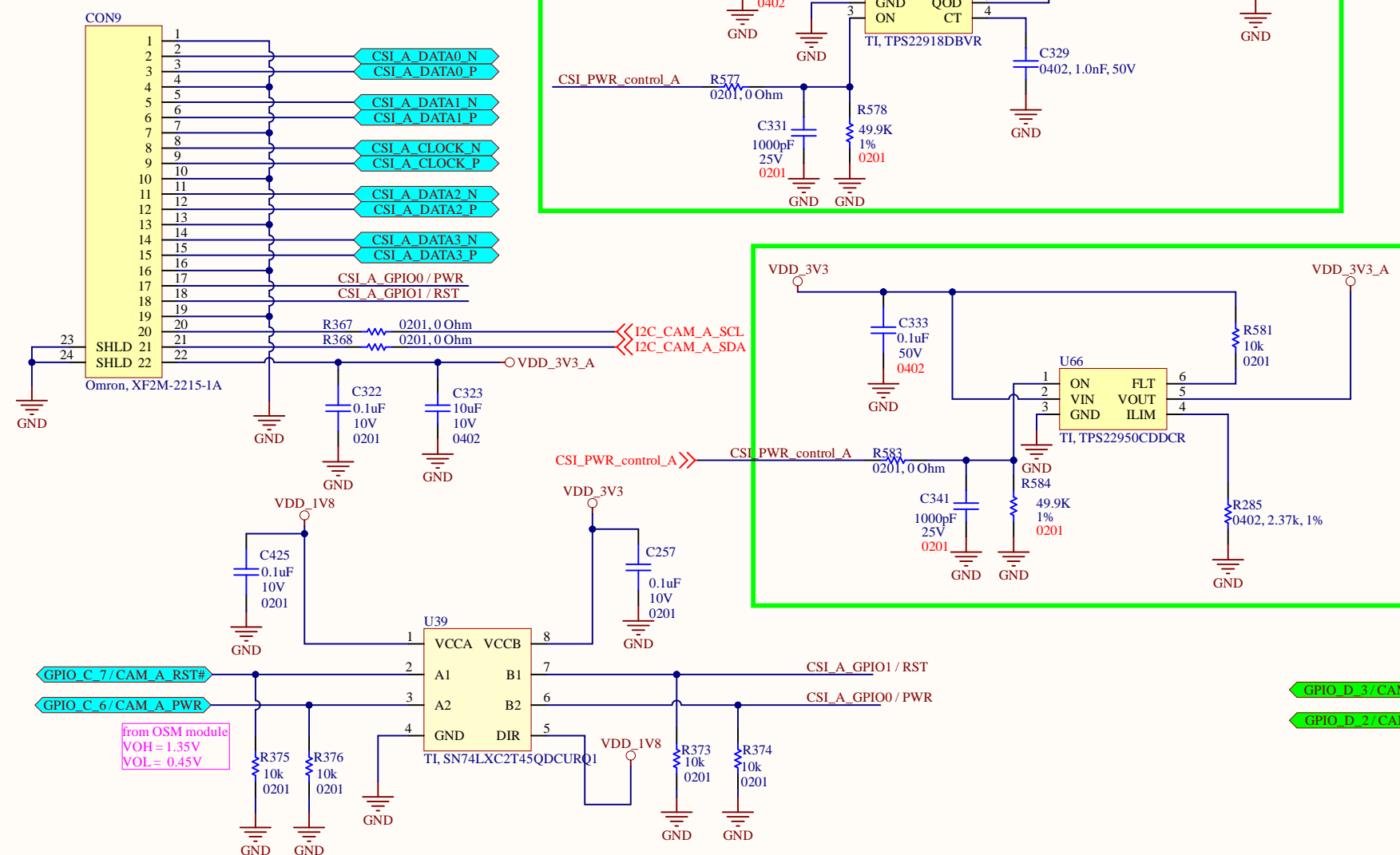
RGB Display



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: RGB Display	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
File: 940-00384[RGB Display].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 21 of 33

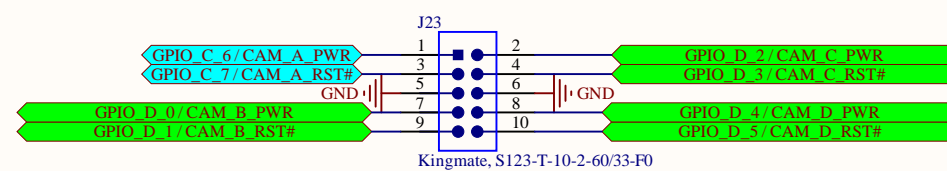
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## CSI\_A



$$R_1 = R_2 \times \left( \frac{V_{OUT}}{V_{FB}} - 1 \right)$$

With typical  $V_{FB} = 0.6 \text{ V}$ :



A

B

### Table 1. TMUX1574 Truth Table

D

(1) X denotes *don't care*.

Title:	Schematic, Common OSM-M/ OSM-S Carrier Board,
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Sheet Name:  
***SDIO\_A***

Project Number:	941-00018
-----------------	-----------

Assembly Number:  
940-00384

Drawing Number:  
940-0038

Rev.	
<b>7-1</b>	

File:  
940-00384[SDIO AL SchDoc

Customer:	
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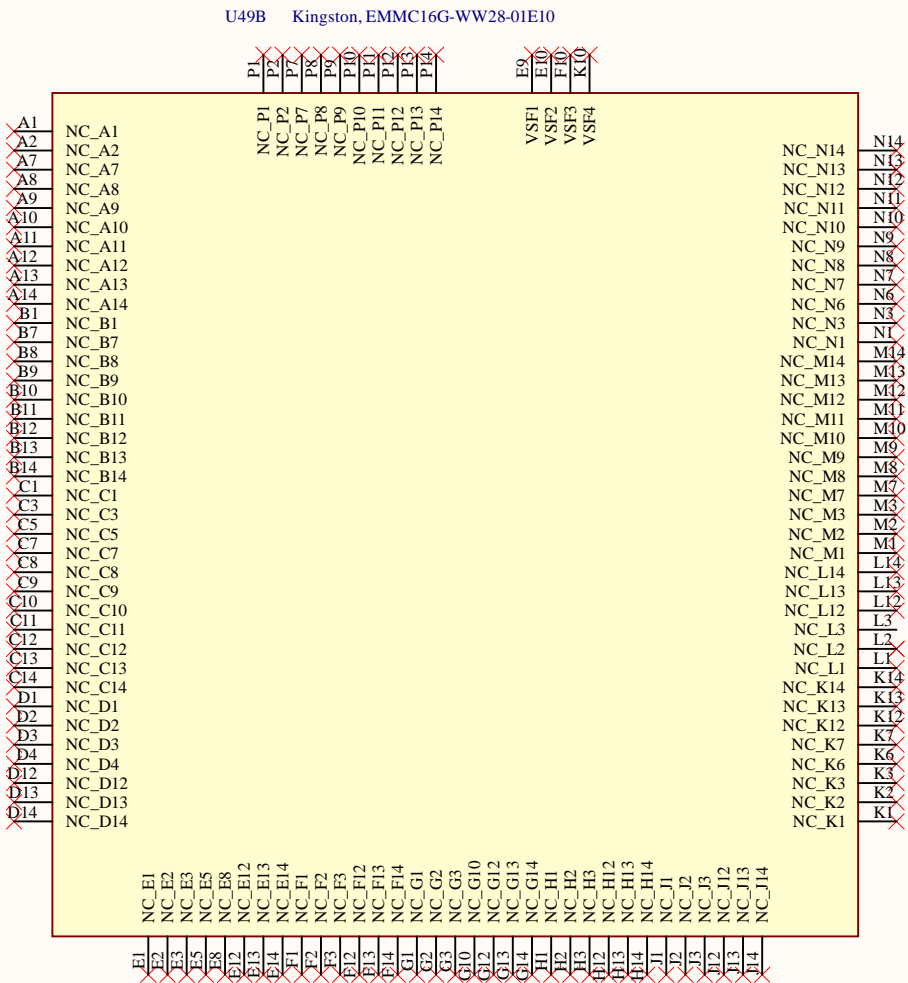
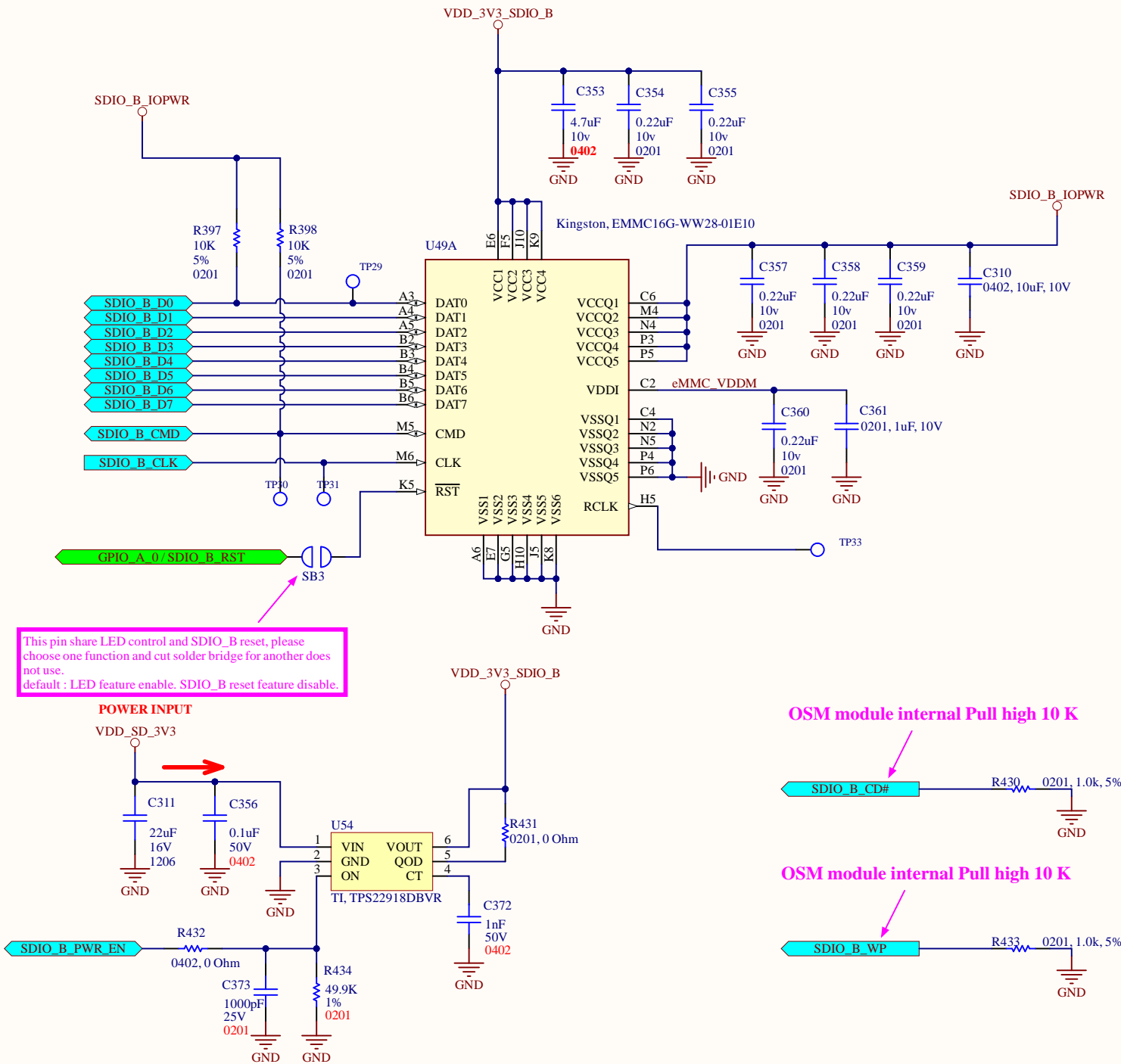
Last Modified:  
5/21/2026 PM 05:19:31

Size: B Sheet: 23 of 33

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SDIO\_B : eMMC



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: <b>SDIO_B</b>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384[SDIO_B].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 24 of 33

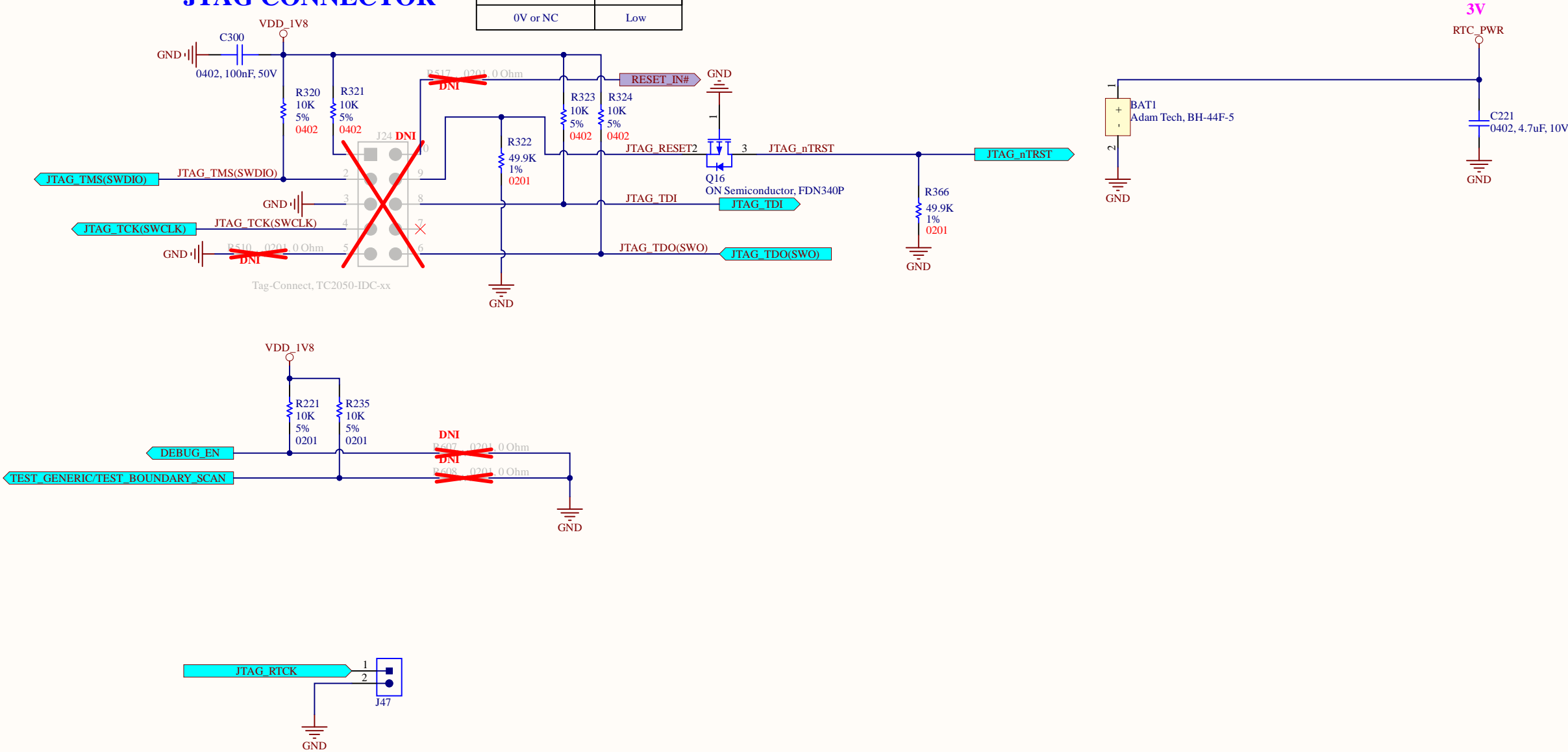
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JTAG

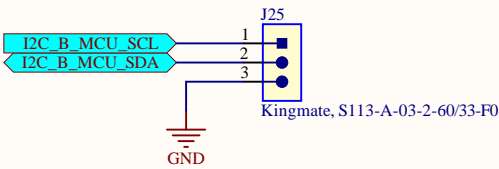
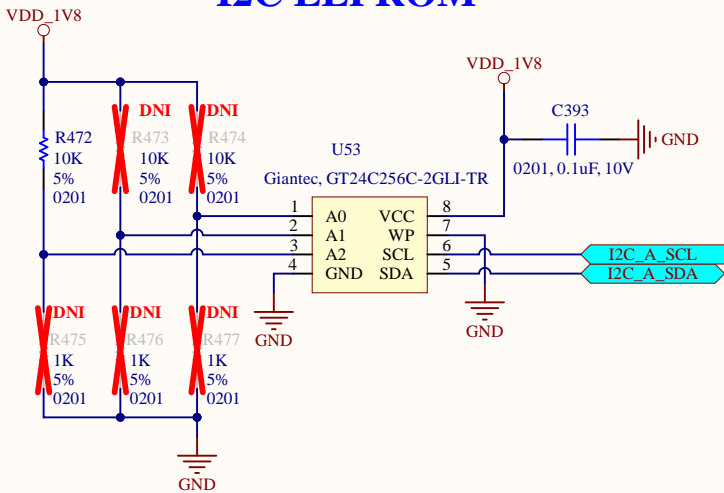
JTAG CONNECTOR

J24.9 (NTRST)	JTAG_nTRST
1.8V	High
0V or NC	Low

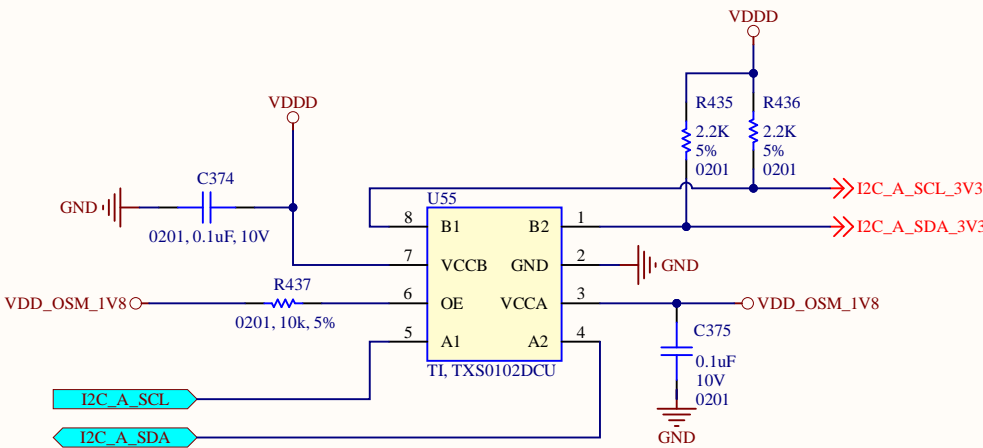


Title: Schematic, Common OSM-M/ OSM-S Carrier Board,					
Sheet Name: <b>JTAG</b>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>	
File: 940-00384[JTAG_RTC_Power].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 25 of 33	

I2C EEPROM



I2C\_1V8



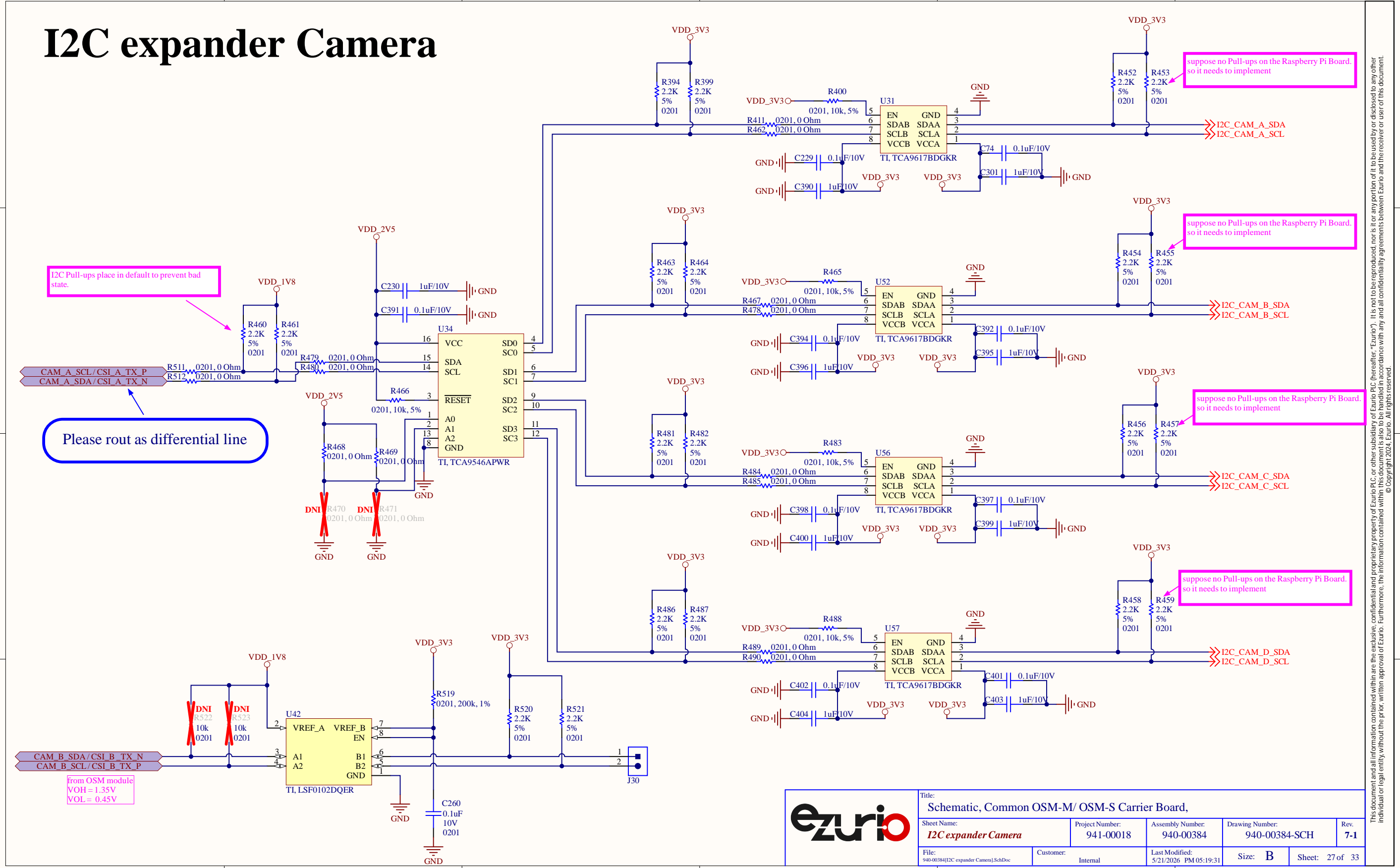
I2C\_3V3




Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
Sheet Name: <b>I2C</b>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384(I2C).SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 26 of 33

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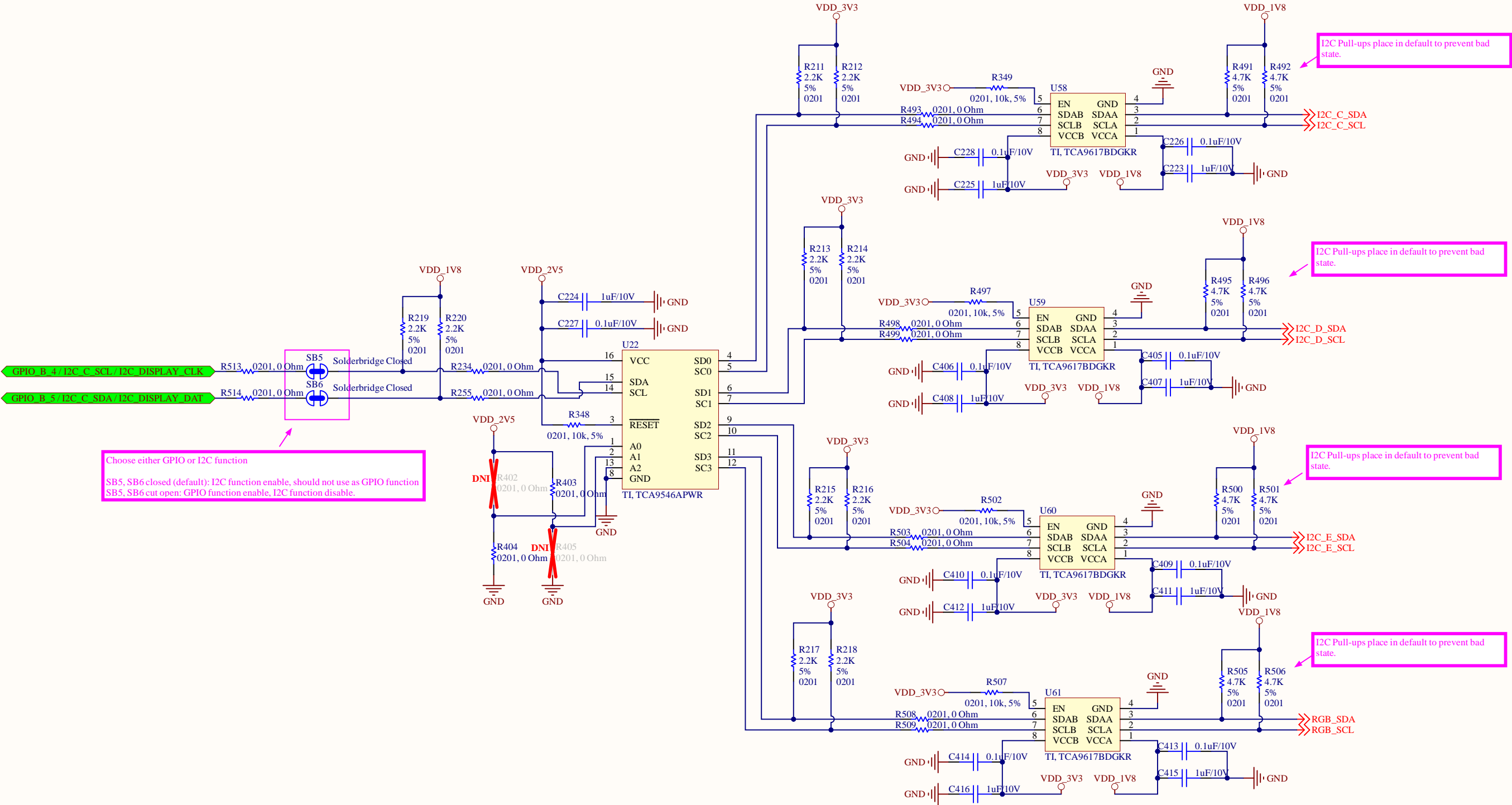
I2C expander Camera



	Title: Schematic, Common OSM-M/ OSM-S Carrier Board,				
	Sheet Name: <i>I2C expander Camera</i>	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
	File: 940-00384[I2C expander Camera].SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 27 of 33

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I2C expander Display

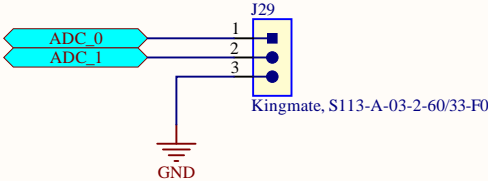
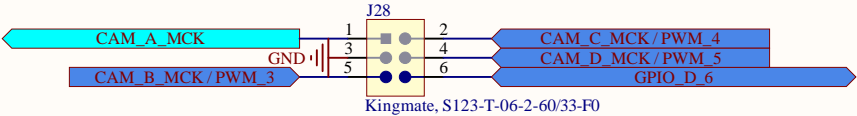


Title: Schematic, Common OSM-M/ OSM-S Carrier Board,		Project Number: 941-00018		Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. 7-1
Sheet Name: I2C expander Display		Customer: Internal		Last Modified: 5/21/2026 PM 05:19:31		Size: B
File: 940-00384(I2C expander Display)SchDoc				Sheet: 28 of 33		

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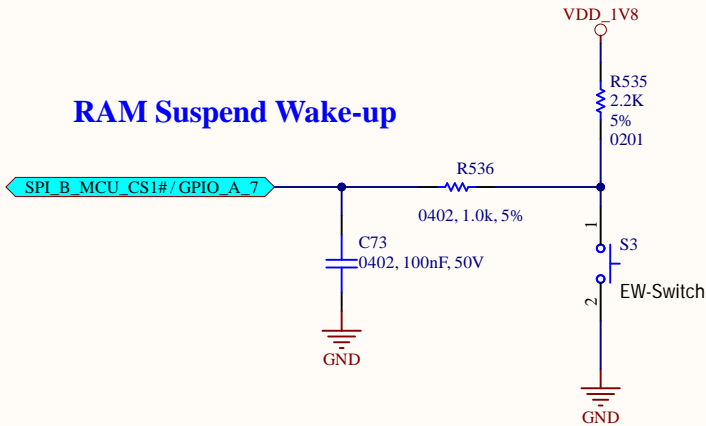
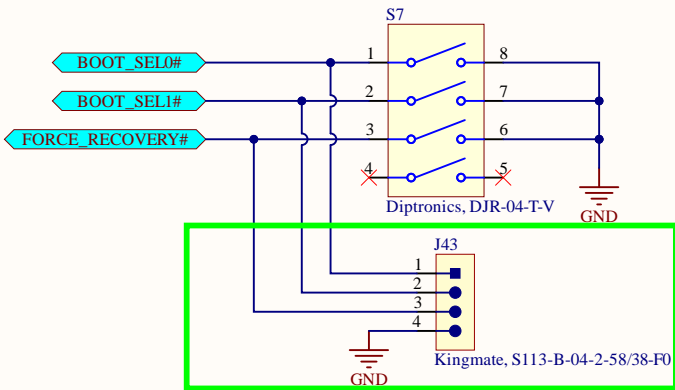
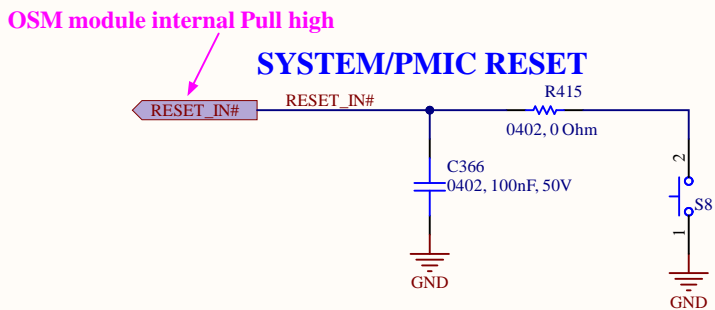
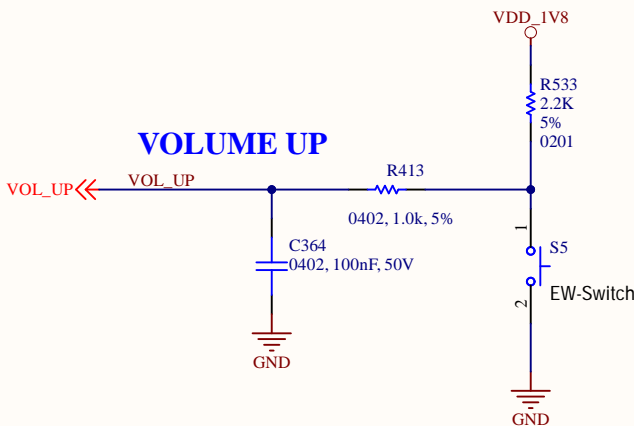
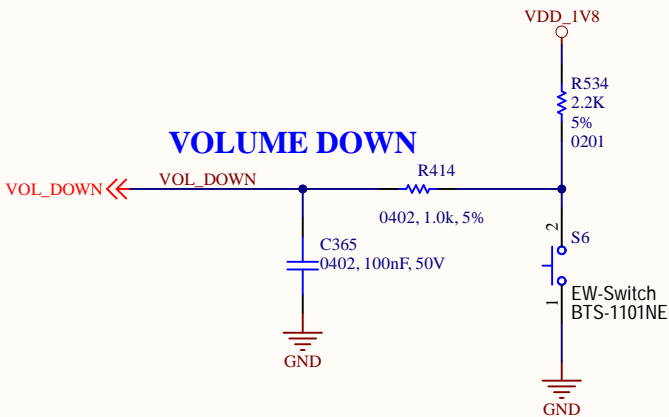
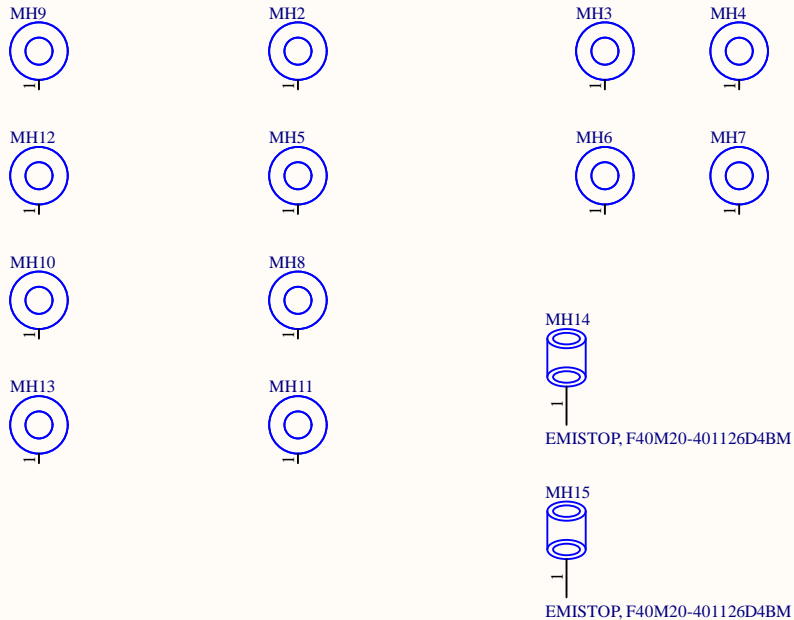
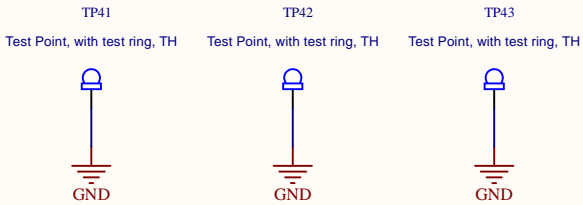
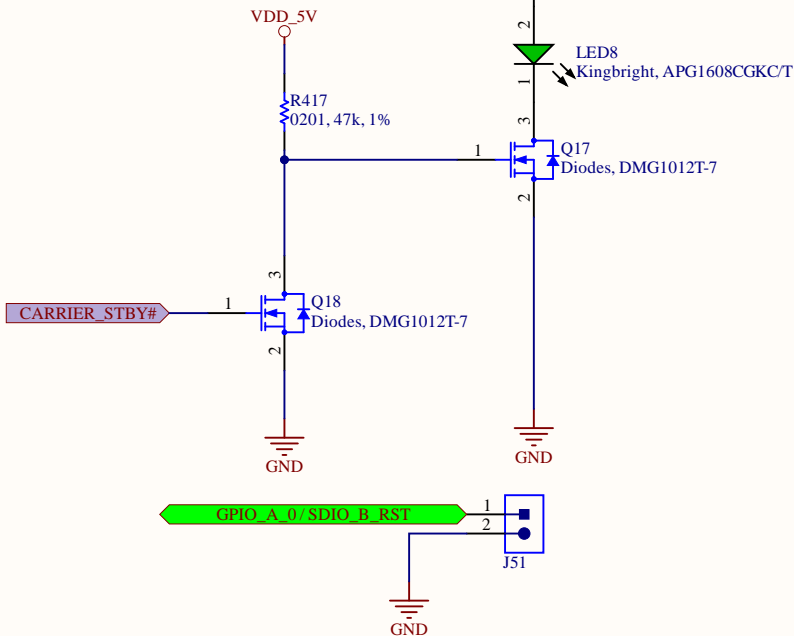
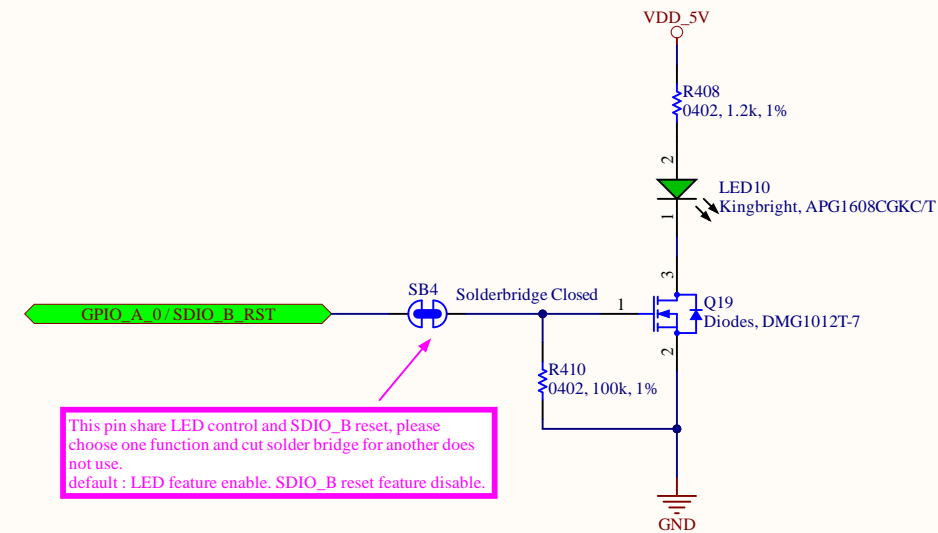
# PWM and ADC



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,					
Sheet Name: <b>PWM_ADC_GPIO</b>		Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384[PWM_ADC_GPIO].SchDoc	Customer: Internal		Last Modified: 5/21/2026 PM 05:19:31	Size: <b>B</b>	Sheet: 29 of 33

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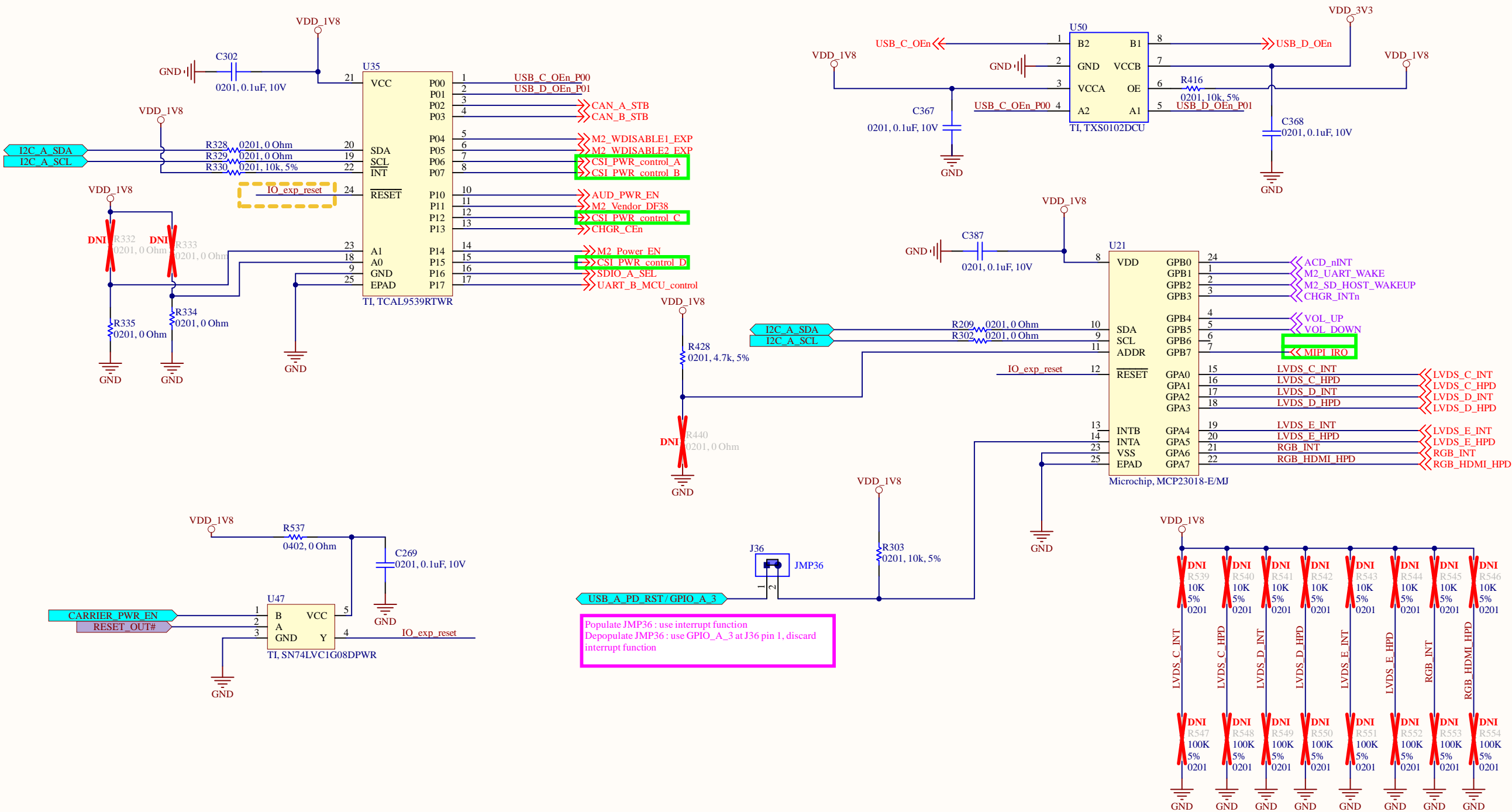
LED and Buttons




Title: Schematic, Common OSM-M/ OSM-S Carrier Board,					
Sheet Name: LED_Buttens_Boot	Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev: 7-1	
File: 940-00384(LED_Buttens_Boot)SchDoc	Customer: Internal	Last Modified: 5/21/2026 PM 05:19:31	Size: B	Sheet: 30 of 33	

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IO expander





Title:  
Schematic, Common OSM-M/ OSM-S Carrier Board,  
*IO expander*

Sheet Number:  
941-00018

Project Number:  
941-00018

File:  
940-00384[IO expander].SchDoc

Assembly Number:  
940-00384

Customer:  
Internal

Last Modified:  
5/21/2026 PM 05:19:31

Drawing Number:  
940-00384-SCH

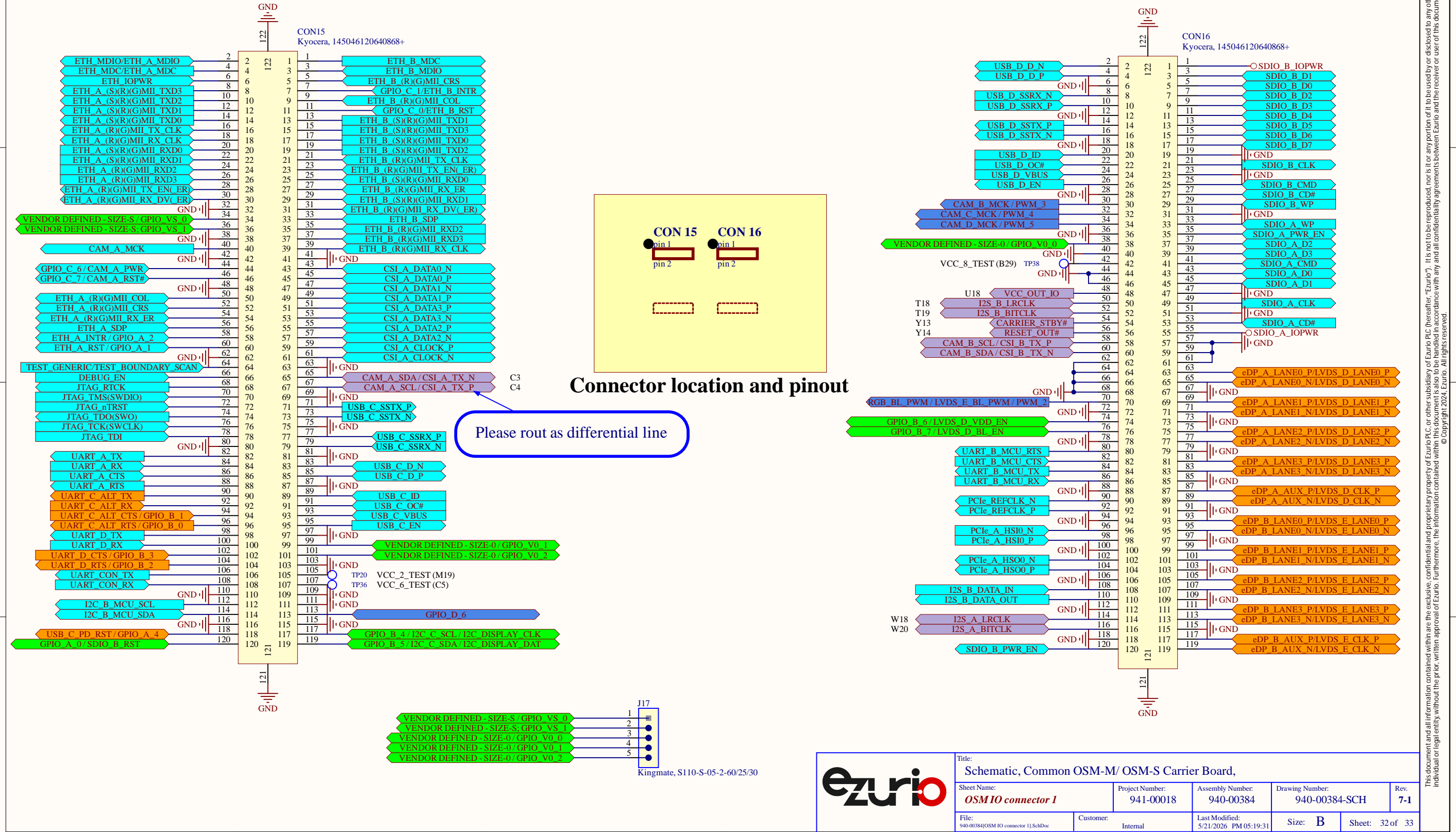
Size:  
B

Rev.  
7-1

Sheet:  
31 of 33

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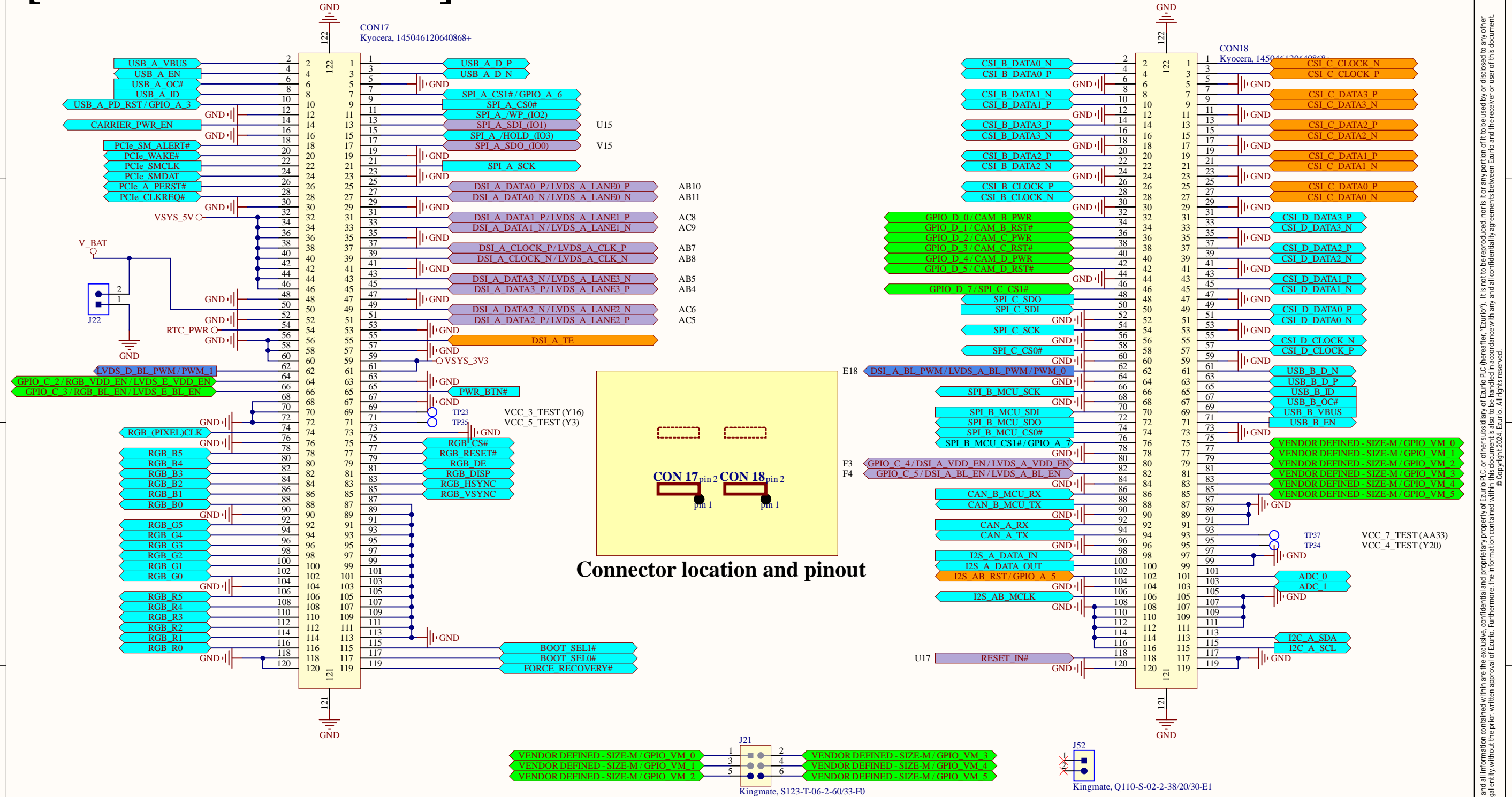
[OSM IO connector 1]



Title:		Schematic, Common OSM-M/ OSM-S Carrier Board,			
Sheet Name:		941-00018	940-00384	940-00384-SCH	7-1
File:		Customer:	Last Modified:	Size:	Sheet:
940-00384[OSM IO connector 1].SchDoc		Internal	5/21/2026 PM 05:19:31	B	32 of 33



[OSM IO connector 2]



Connector location and pinout



Title: Schematic, Common OSM-M/ OSM-S Carrier Board,					
Sheet Name: <b>OSMIO connector 2</b>		Project Number: 941-00018	Assembly Number: 940-00384	Drawing Number: 940-00384-SCH	Rev. <b>7-1</b>
File: 940-00384(OSM IO connector 2).SchDoc		Customer: Internal	Last Modified: 5/21/2026 PM 05:19:32	Size: <b>B</b>	Sheet: 33 of 33

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