
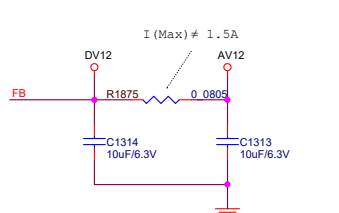
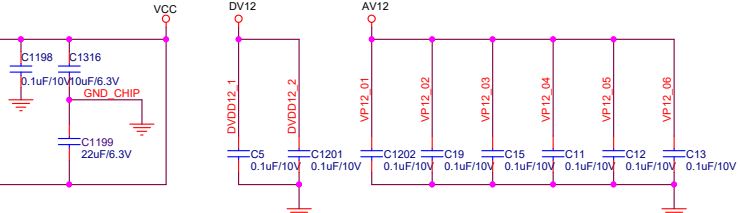
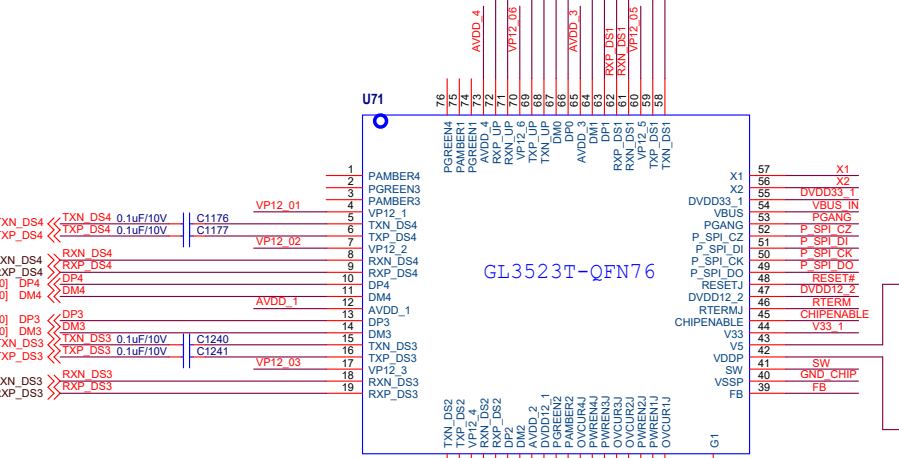
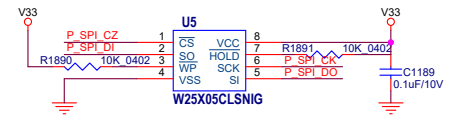
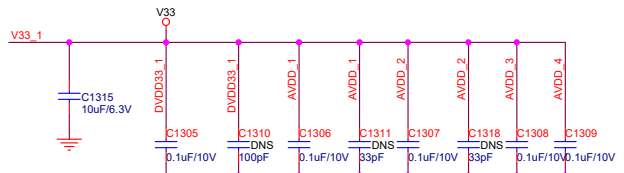
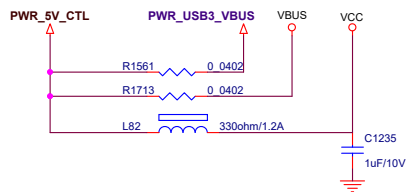
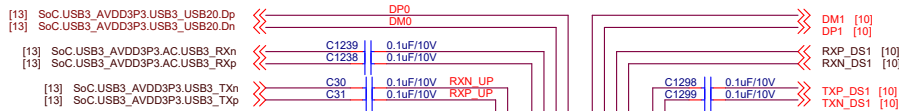


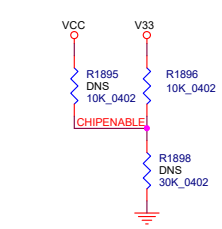
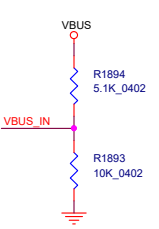
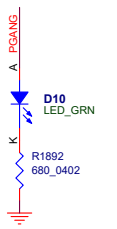
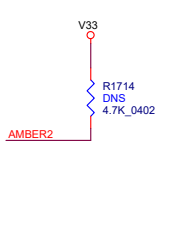
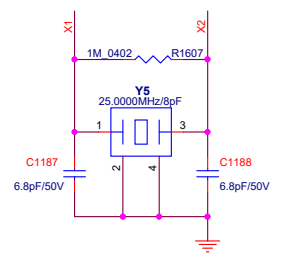
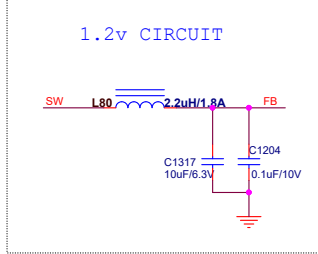
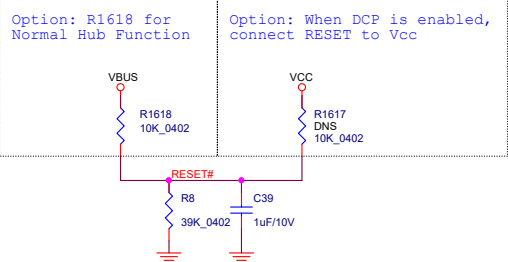
# REVISION HISTORY

Rev#	Date	Originator(s)	Rev Item ID	What Revised	Why Revised	SW Impacts	Other Impacts
A	11/01/2023	William W	1	SCH design for SL16x0 I/O-Board	I/O-Board for SL16x0 Core-Modules	NO	NO
B	01/09/2024	William W	1	Change R1863=DNS, R1983=200K, R1864=33K.	U58.23 (PWR_EN) voltage is pulled lower than expected value, which lead to Mosfet Q109.G has incorrect voltage.	NO	NO
			2	Connect U71.73 (AVDD_4) to AVDD_4.	Design missed it.		
			3	Change R1894 from 51K to 5.1K.	Correct U71.54 (VBUS_IN) voltage		
			4	Change 40P Header Pin 12,16,29,33 text illustration for SL1620 definition.	Match SL1620 latest pin definition.		
			5	Change R692 from 13.7K_1% to 13K_1%.	Change DC-DC output 5.2V from 5.0V. It is for optimizing TypeC and PoE power supply.		
			6	Change U5 footprint to soic8_1p27mm_5x4mm Change U4,U6 footprint to MSOP-8EP	PCB layout requirement.		
C	03/18/2024	William W	1	Add CM10,L58,C1345	EMI improvement for USB2.0	NO	NO
			2	Add R1994,R1995,C1344	EMI improvement for SY8386		
			3	Add Q6,Q8,D13,Q117,Q118,Q111,Q112, JP2 and related circuitry	Add USB-C-5V adaptor selection by jumper		
			4	change J29 pin239, pin241 net alias to PWR_BL_5V	USB-C-5V adaptor change accordingly.		
			5	R1506= DNS, add R1996=33K	Change LED indicator for PWR_3V3_CTL		
			6	add R2026= DNS, R2027= DNS,	Reserve PD optional settings		
			7	Reverse the pin definition of J208	Match with actual material of connector		
D	05/08/2024	William W	1	Add current sensor for both PWR_3V3 and PWR_1V8	Add current sensors	NO	NO
			2	Change L68 part number XAL7030-472ME	EMI improvement		
			3	Add Q123,Q121,R2051,R2052,R626	Protection circuitry		
			4	Update Synaptics Tittle Block	Update Synaptics Tittle Block		
E	06/28/2024	William W	1	Update power test pads to 40mil from 18mil	Manufacturer requirement	NO	NO

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Title <b>01: REVISION HISTORY</b>		
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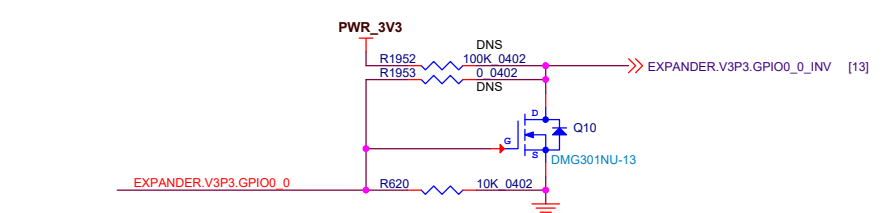
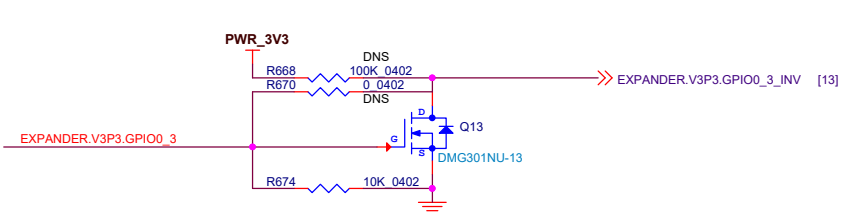
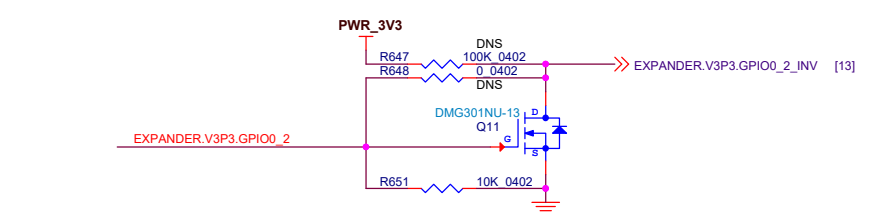
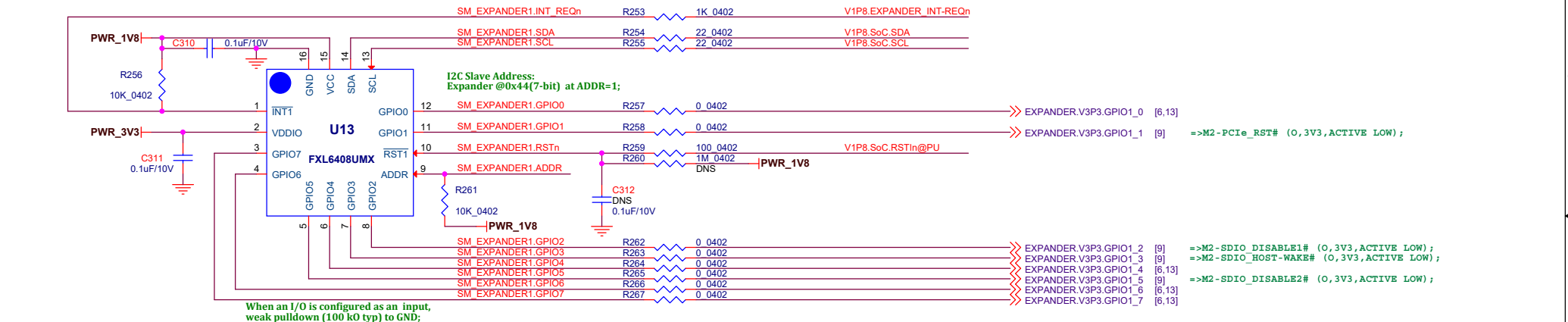
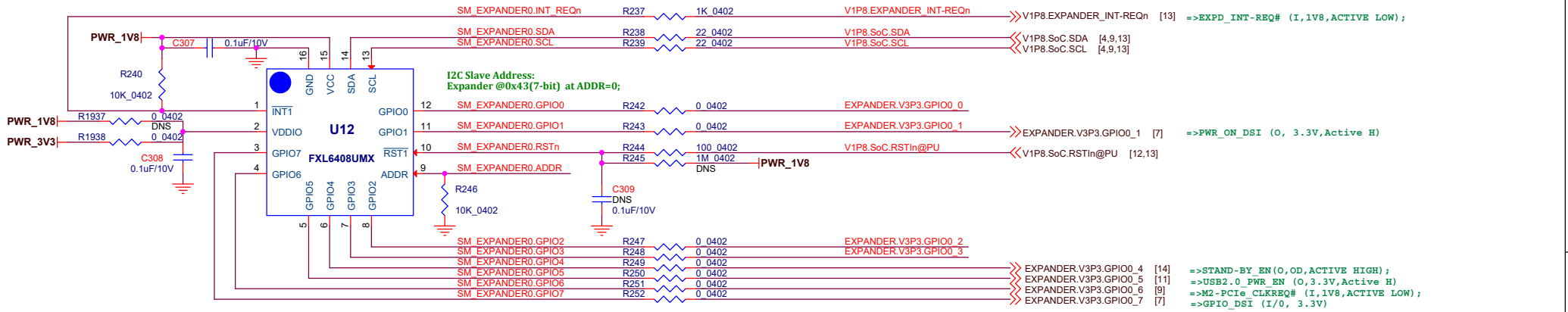
Part number:  
Commercial: GL3523-OTY3C  
Industrial: GL3523T-20



Individual Mode

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Title <b>02: PERIF - USB3 HUB</b>		
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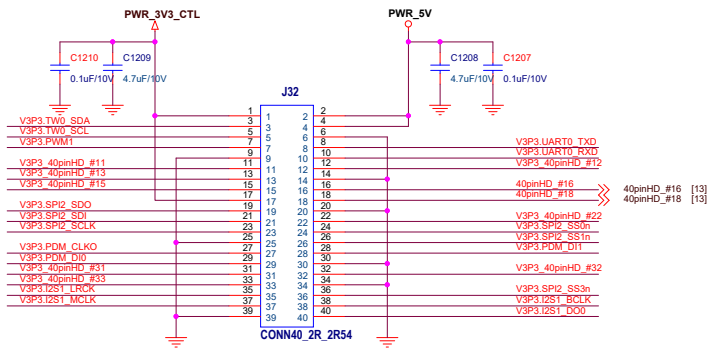
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**synaptics**

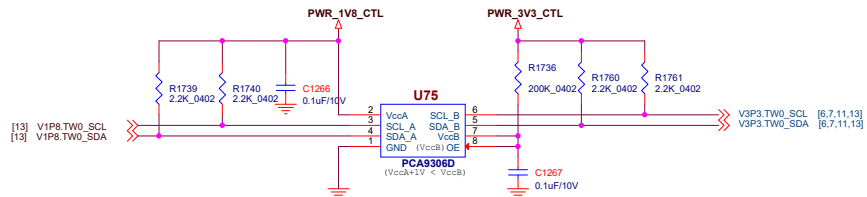
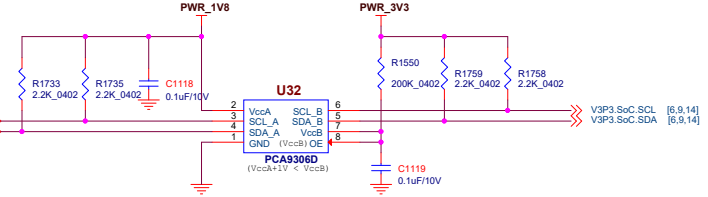
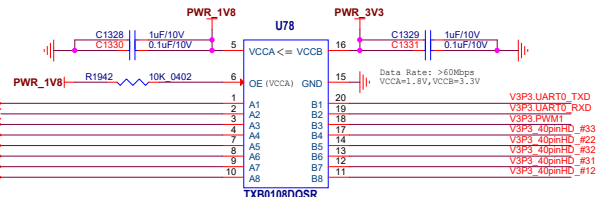
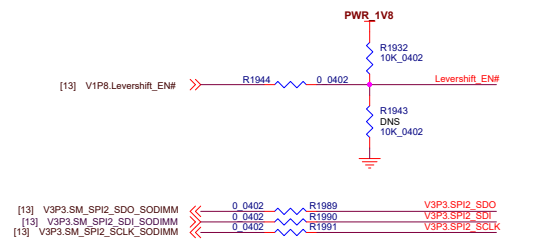
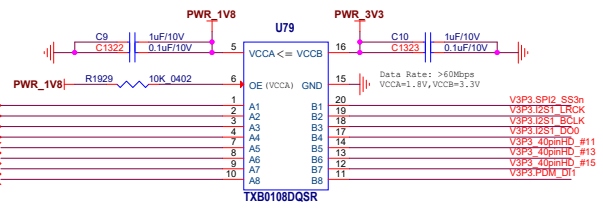
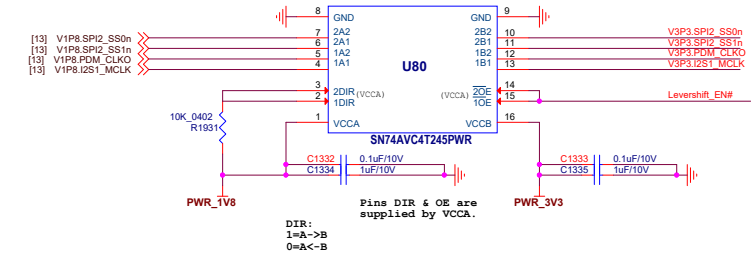
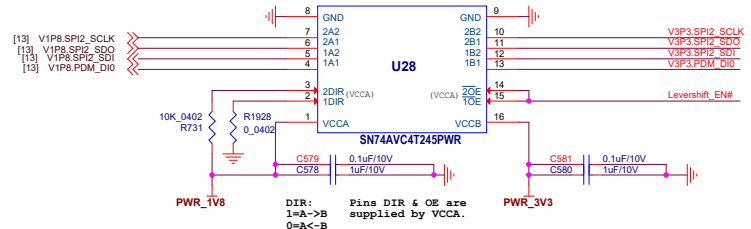
Title: **03: PERIF - GPIO EXPANDER**

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SL1680, SL1640/SL1620			
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40



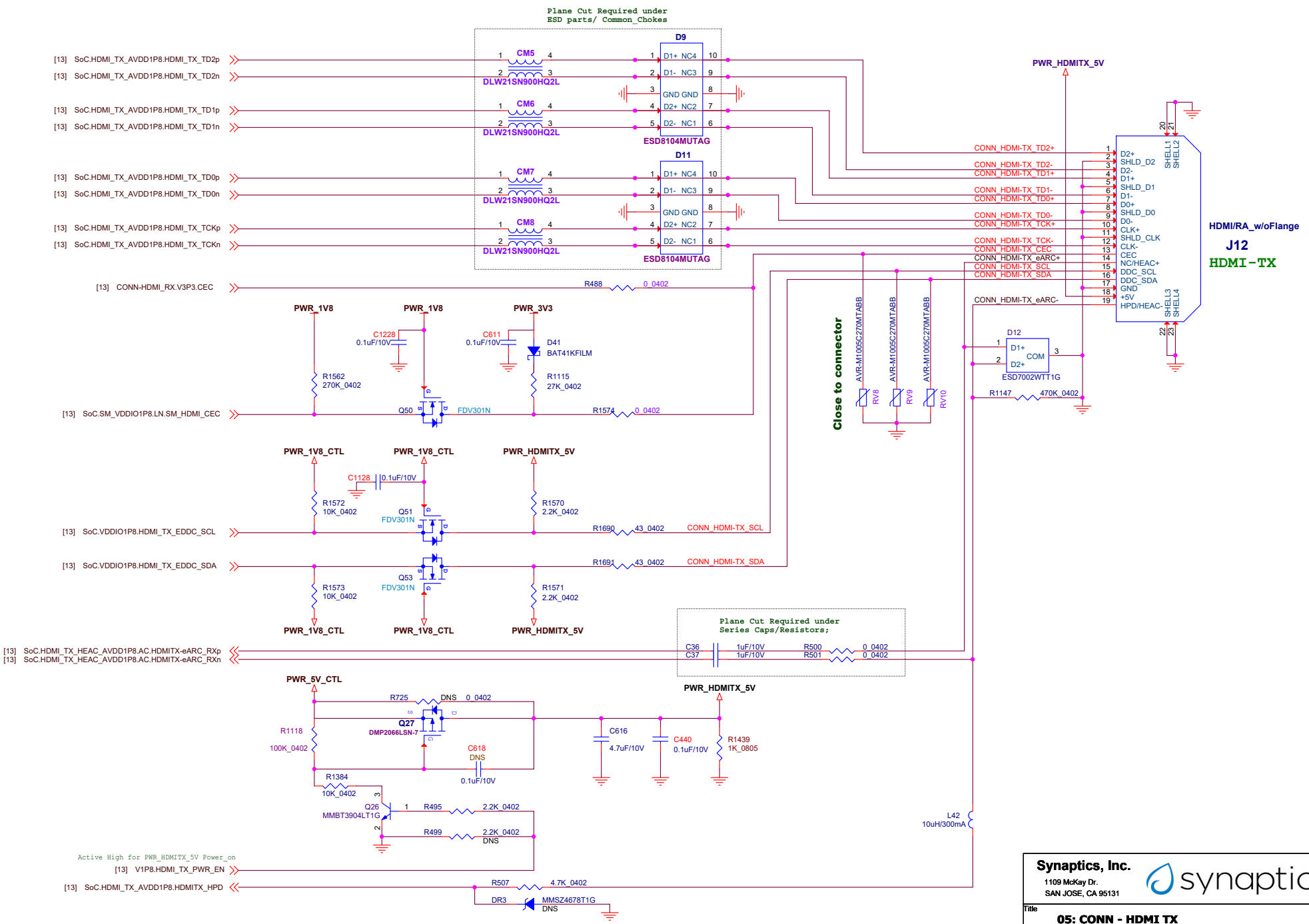
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**04: CONN - 40P Header**


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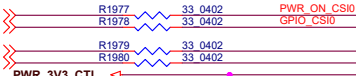
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Title		
<b>05: CONN - HDMI TX</b>		
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- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD0n
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD0p
  
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD1n
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD1p
  
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RCKn
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RCKp
  
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD2n
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD2p
  
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD3n
- [13] SoC.MIPI\_CSI0\_AVDD1P8.MIPI\_CSI0\_RD3p

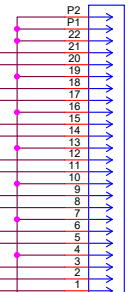
- [3,13] EXPANDER.V3P3.GPIO1\_4
- [3,13] EXPANDER.V3P3.GPIO1\_0
  
- [4,9,14] V3P3.Soc.SCL
- [4,9,14] V3P3.Soc.SDA



PWR\_3V3\_CTL <



J206



CON\_5051102296

- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RD0n
- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RD0p
  
- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RD1n
- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RD1p
  
- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RCKn
- [13] SoC.MIPI\_CSI1\_AVDD1P8.MIPI\_CSI1\_RCKp

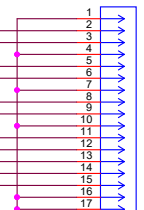
- [3,13] EXPANDER.V3P3.GPIO1\_7
- [3,13] EXPANDER.V3P3.GPIO1\_6
- [4,7,11,13] V3P3.TW0\_SCL
- [4,7,11,13] V3P3.TW0\_SDA



PWR\_3V3\_CTL <

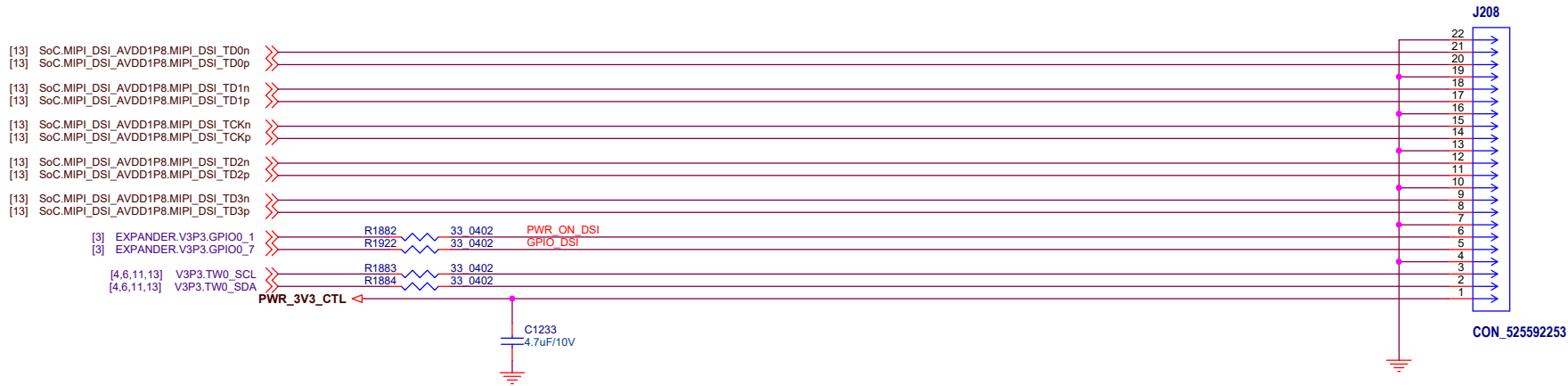


J207




CON15\_1X15\_DRB\_SFW

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<b>Title</b> 06: CONN - MIPI CSI		
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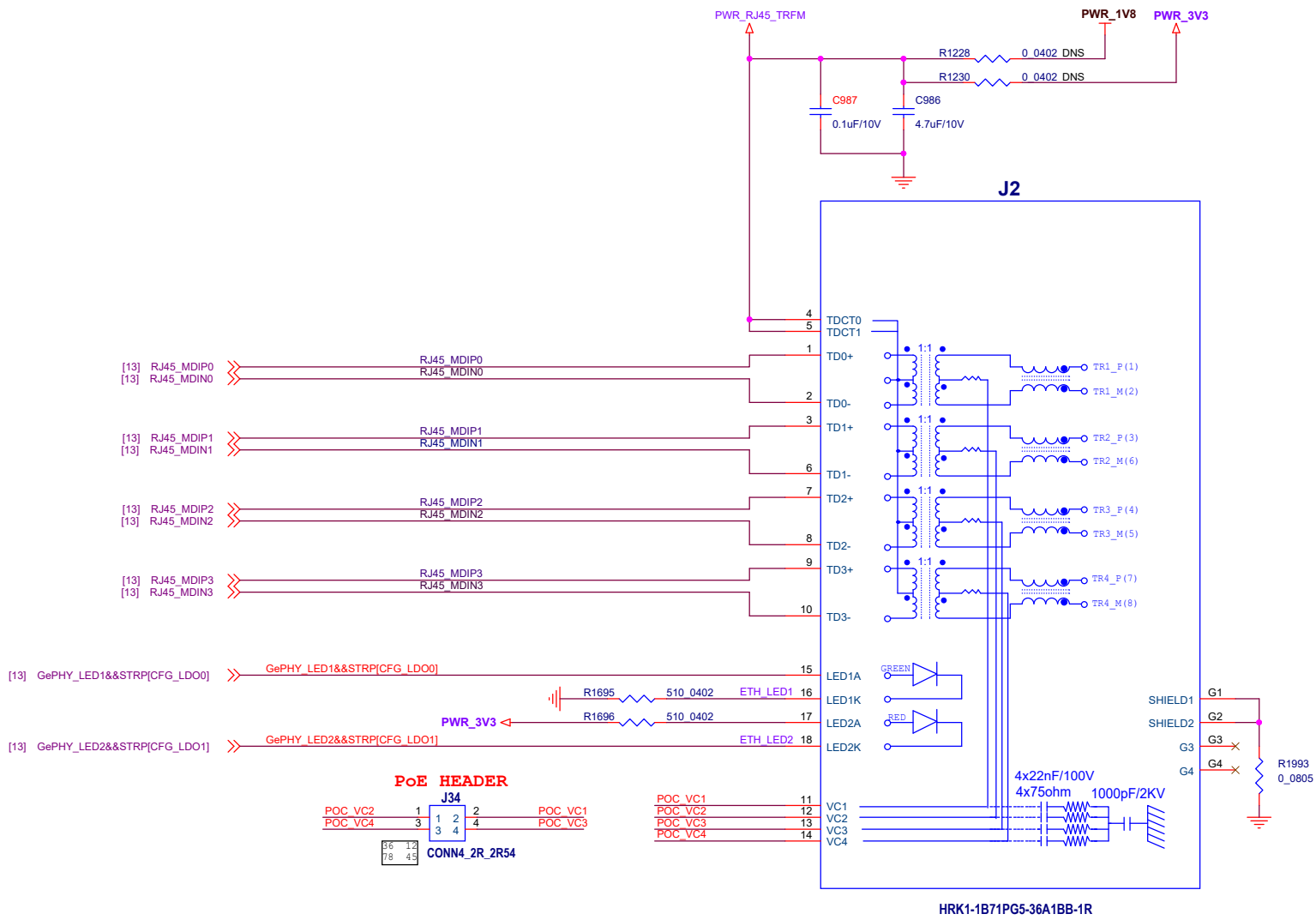



**07: CONN - MIPI DSI**

Title: **07: CONN - MIPI DSI**

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Title: **08: CONN - RJ45,POE+**

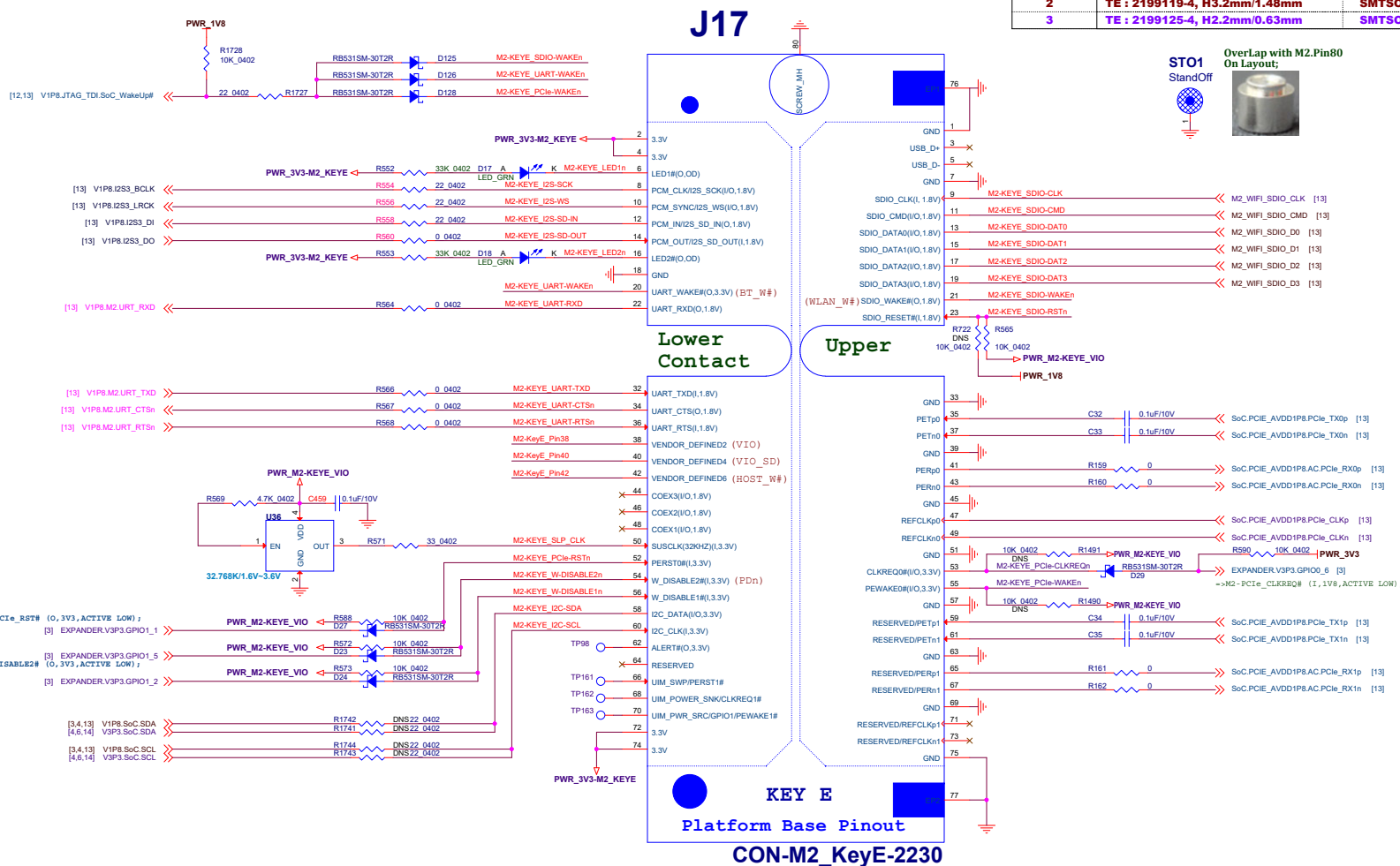
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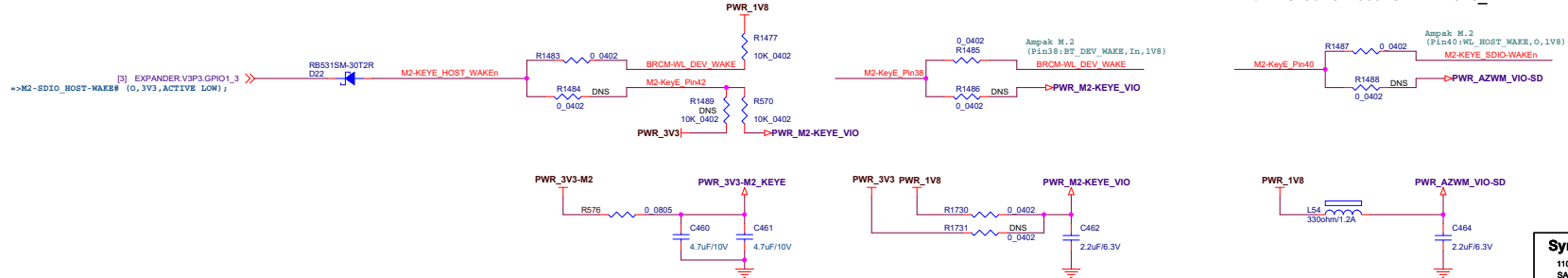
# KeyE M.2 Receptacle & Stand-Off Choice

Choice#	MFR:P/N,Height RECP/Card	Stand-Off
1	TE : 2199230-4, H4.2mm/2.48mm	SMTSO-M2-2.5ET
2	TE : 2199119-4, H3.2mm/1.48mm	SMTSO-M2-1.5ET
3	TE : 2199125-4, H2.2mm/0.63mm	SMTSO-M2-0.5ET



**KEY E**  
Platform Base Pinout  
**CON-M2\_KeyE-2230**

M.2 Default Module: AP12676\_M2P



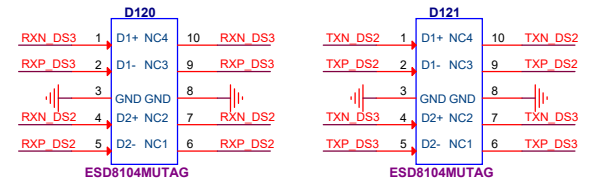
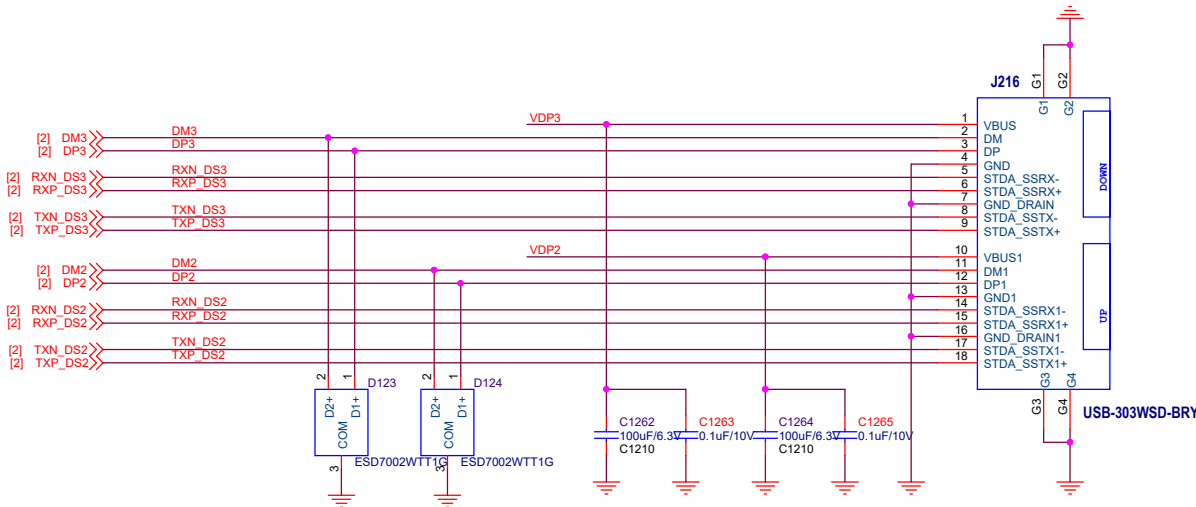
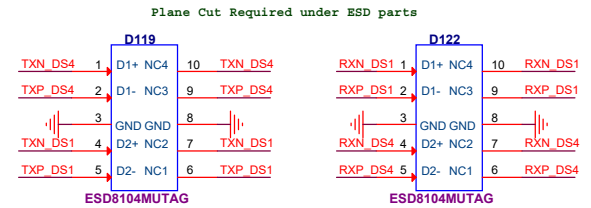
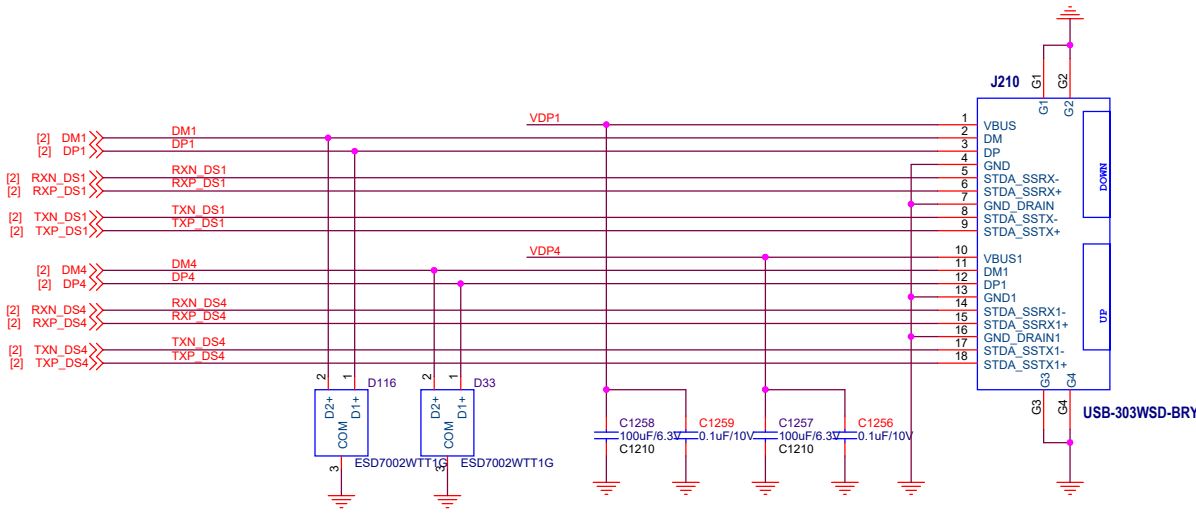
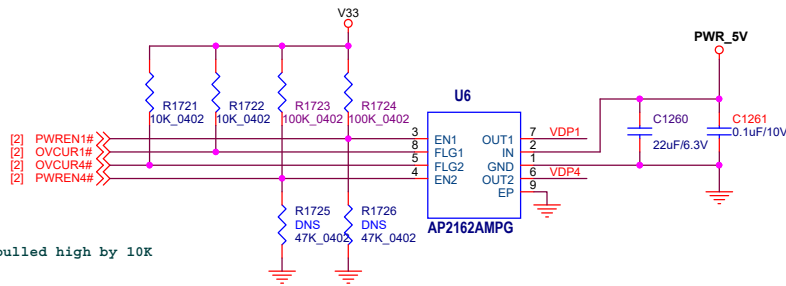
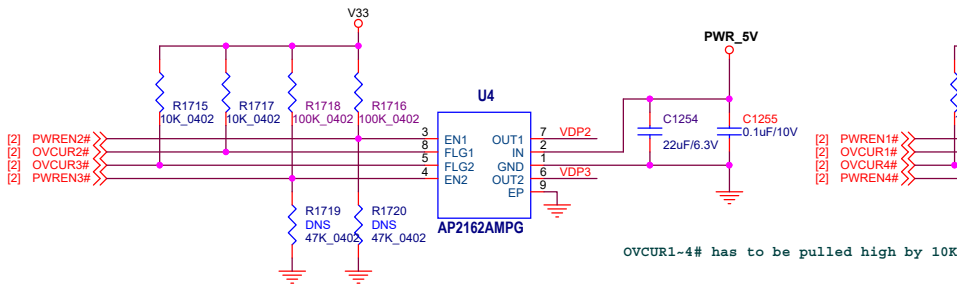
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File: **09: CONN - M.2 KeyE**

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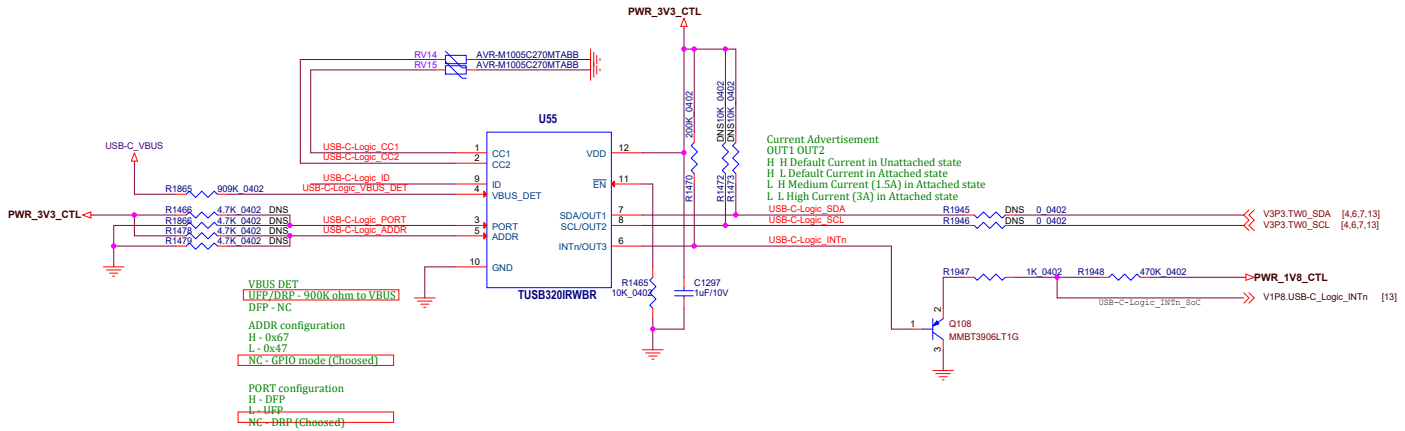
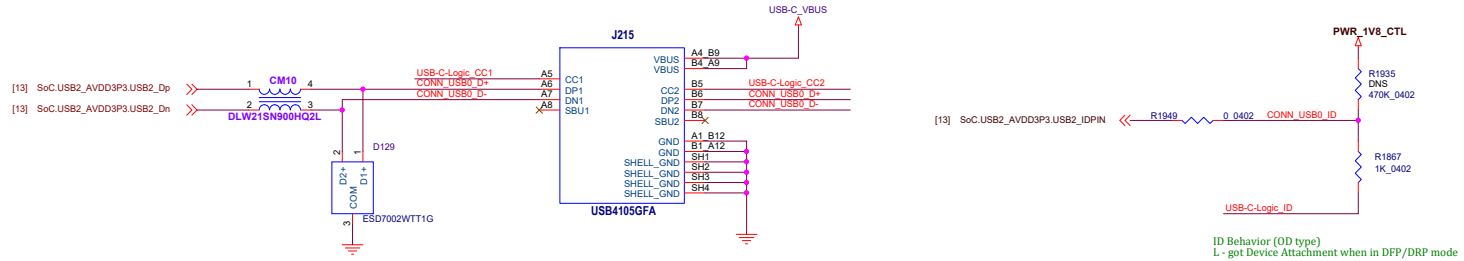
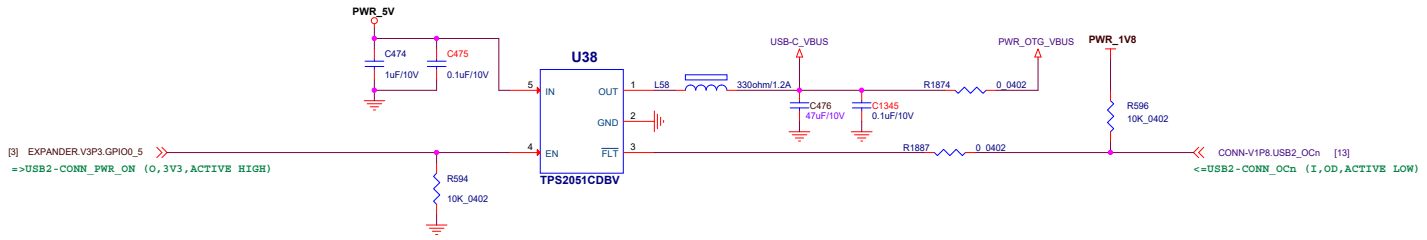


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Title: **10: CONN - USB3.0**

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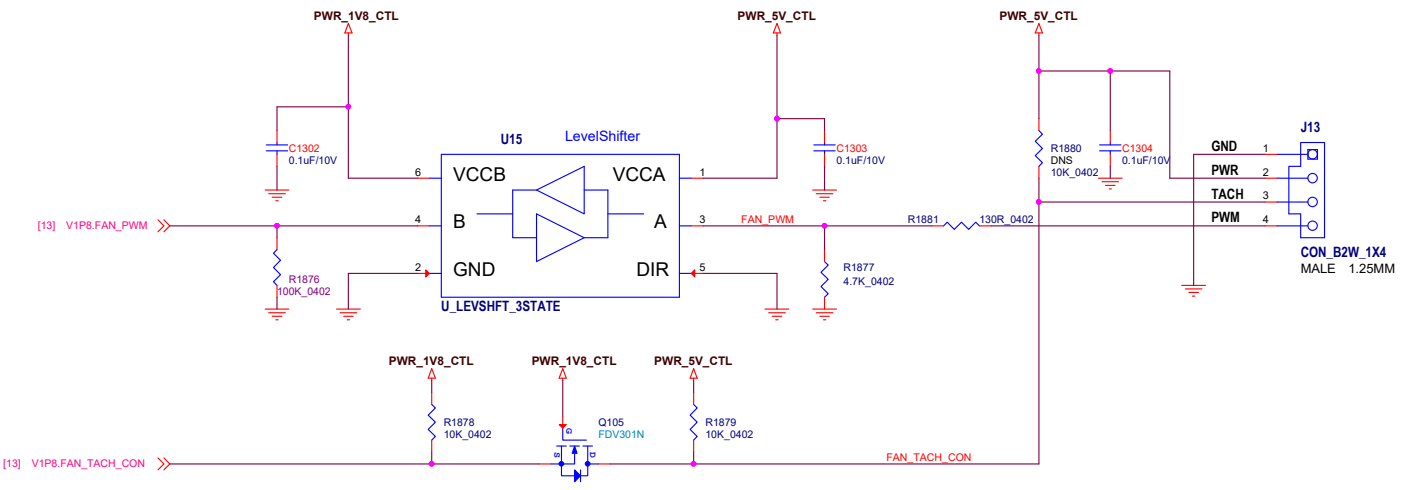
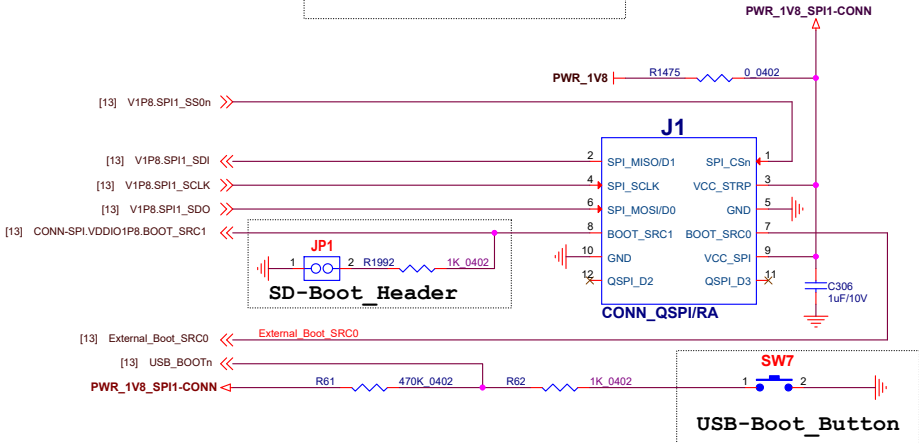
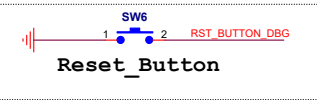
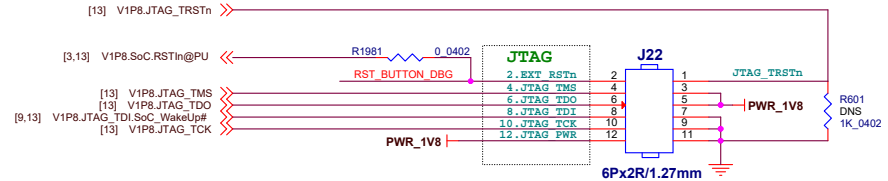


VBUS\_DET  
 [UFP/DRP - 900K ohm to VBUS]  
 DFP - NC  
 ADDR configuration  
 H - 0x67  
 L - 0x47  
 NC - GPIO mode (Chooosed)  
 PORT configuration  
 H - DFP  
 L - UFP  
 NC - DRP (Chooosed)

Current Advertisement  
 OUT1 OUT2  
 H H Default Current in Unattached state  
 H L Default Current in Attached state  
 L H Medium Current (1.5A) in Attached state  
 L L High Current (3A) in Attached state

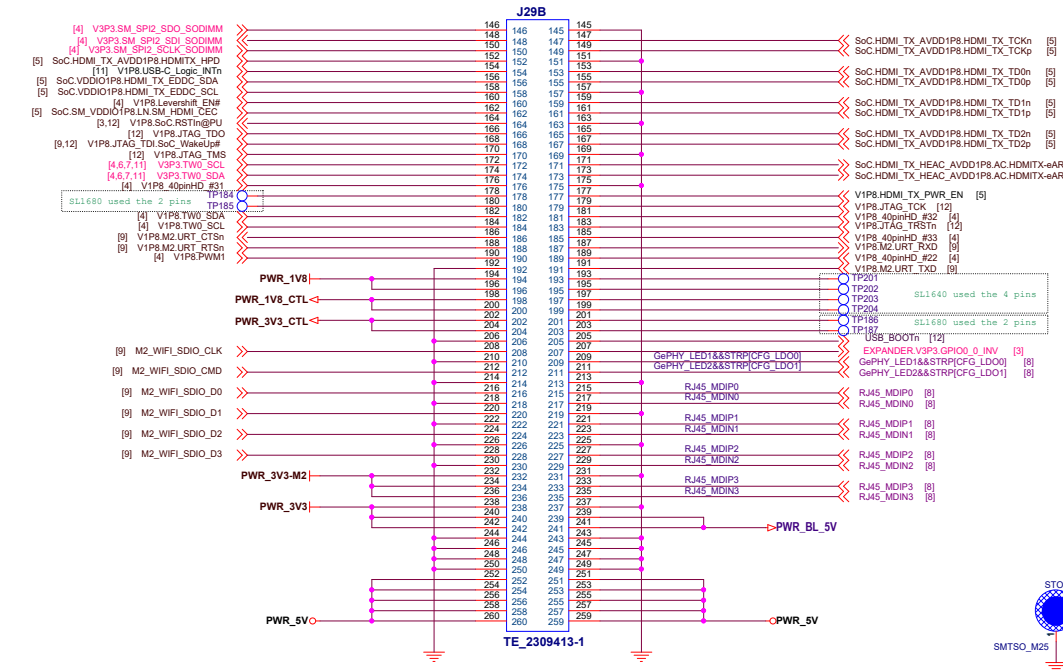
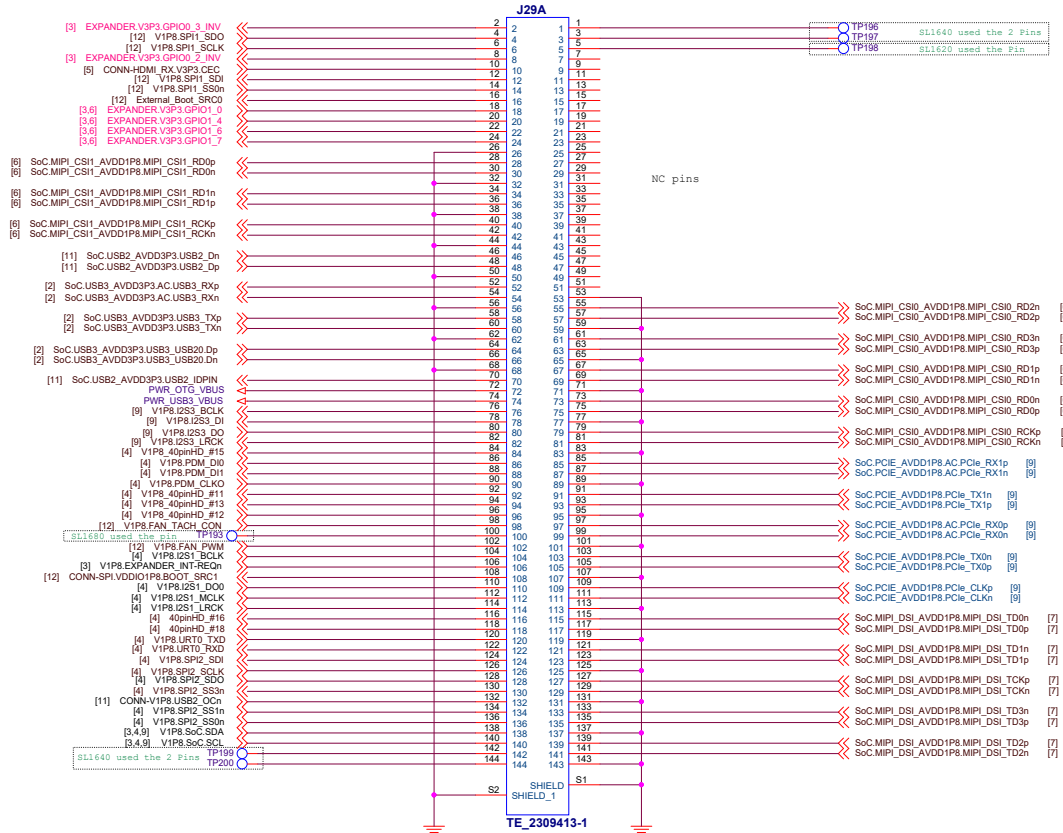
ID Behavior (OD type)  
 L - got Device Attachment when in DFP/DRP mode

Connection with debug board for SM JTAG



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File: **12: CONN - JTAG,SPI,FAN,Button**  
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13: CONN - SODIMM\_260P

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