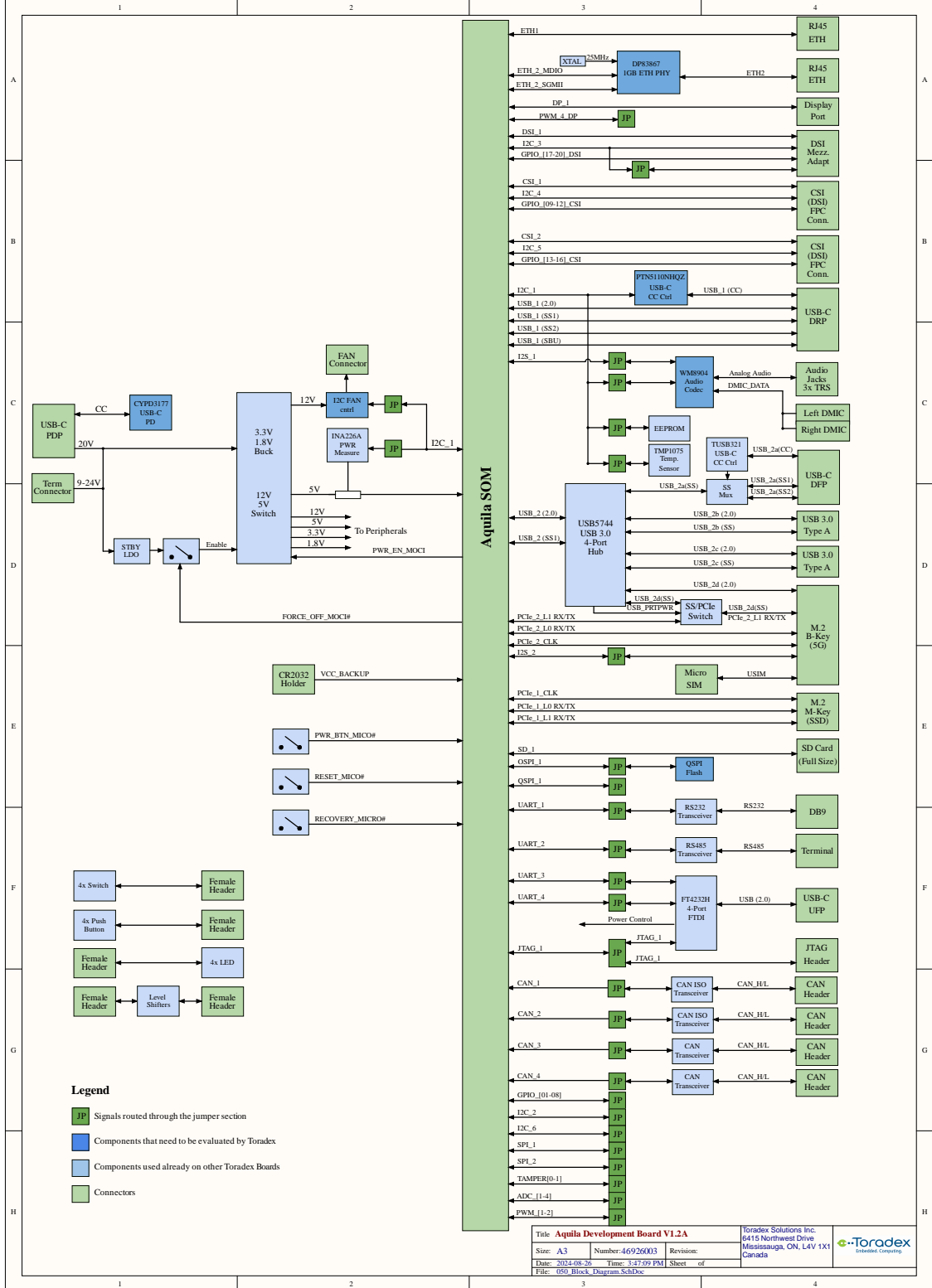


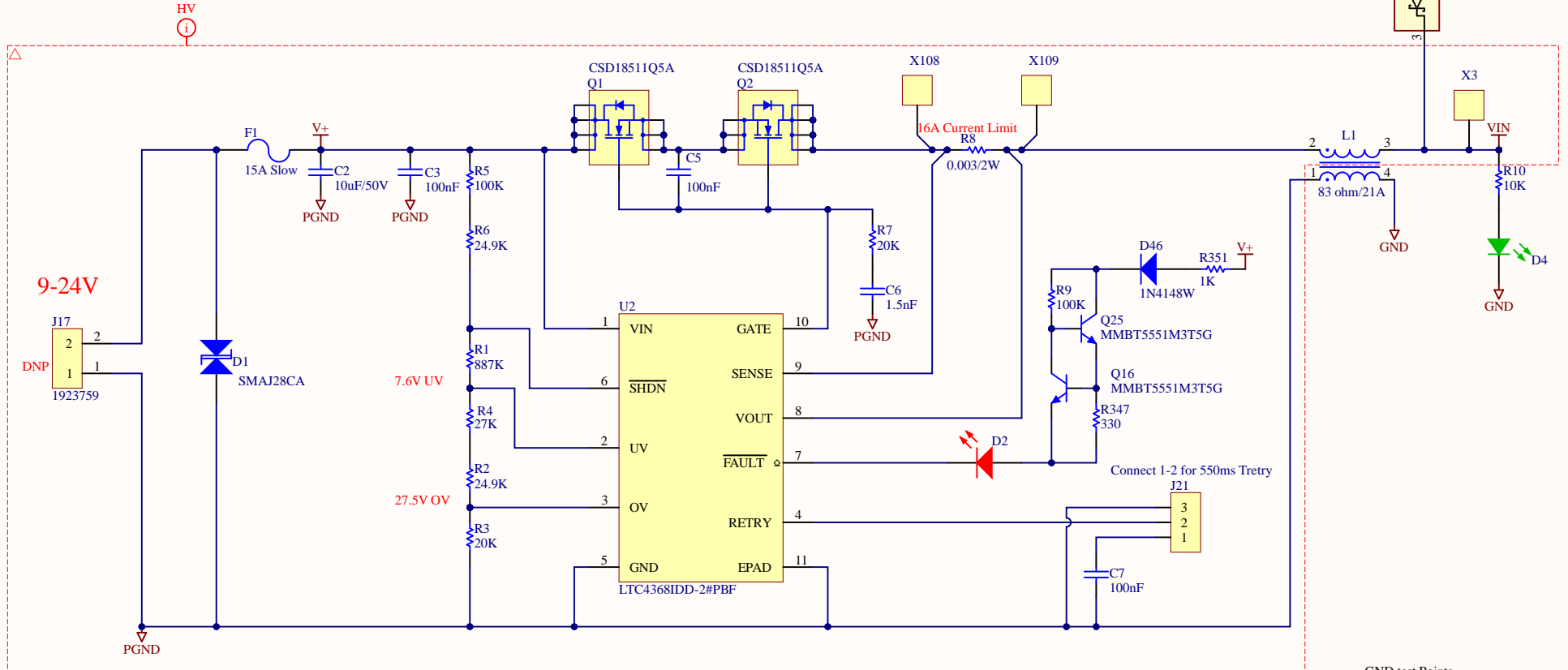
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:09 PM	Sheet of		
File: 000_Main.SchDoc				



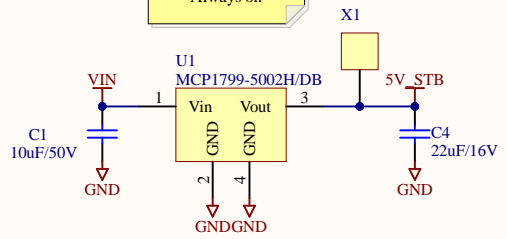


- Legend**
- Signals routed through the jumper section
 - Components that need to be evaluated by Toradex
 - Components used already on other Toradex Boards
 - Connectors

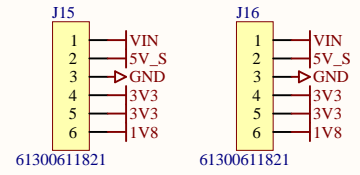
Power Supplies



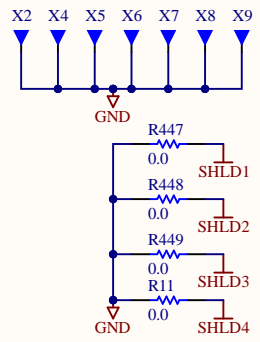
Standby 5V source Always on



Power Out Headers

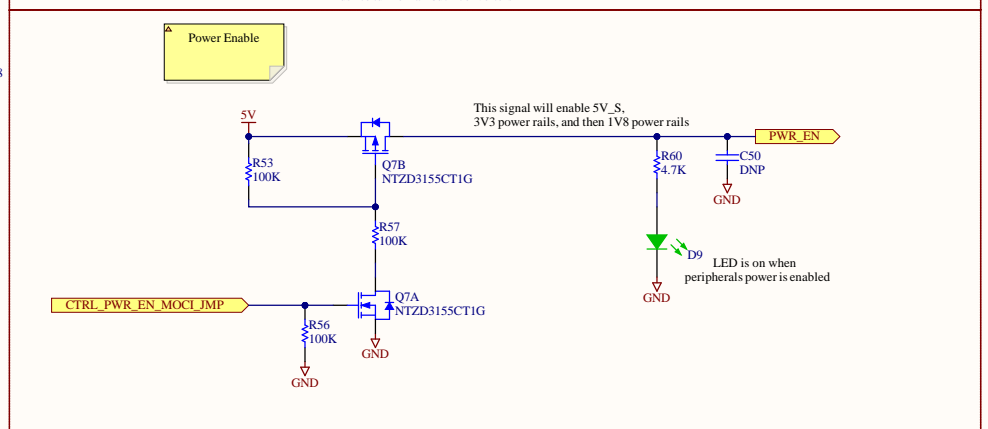
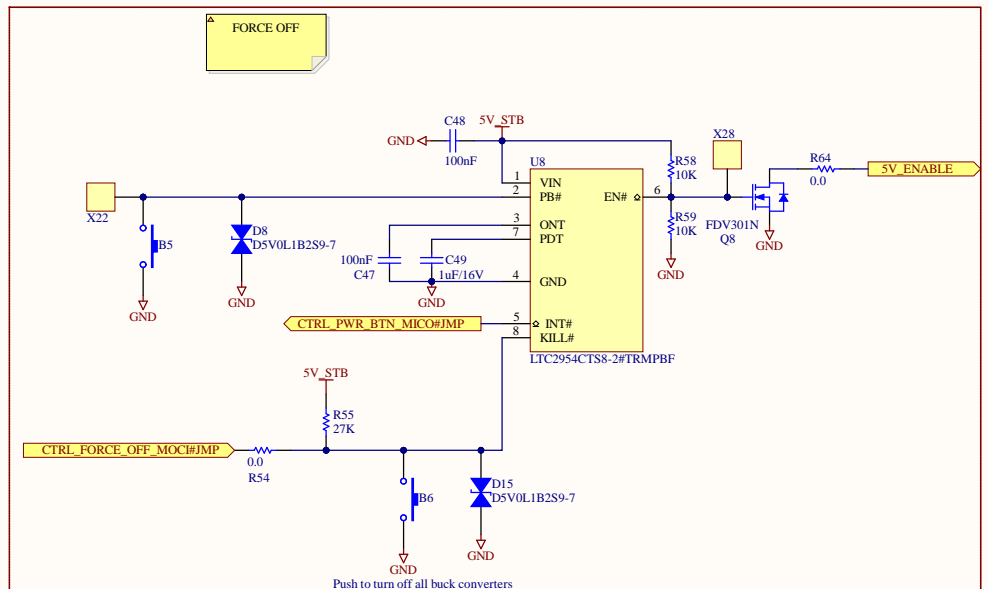
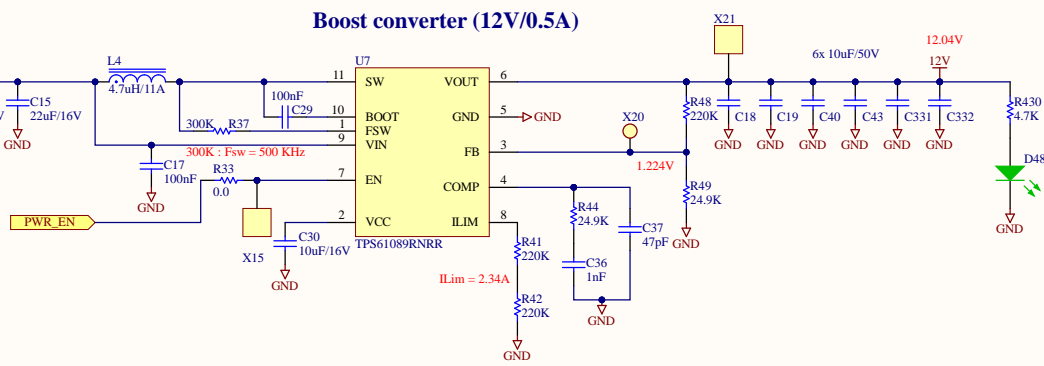
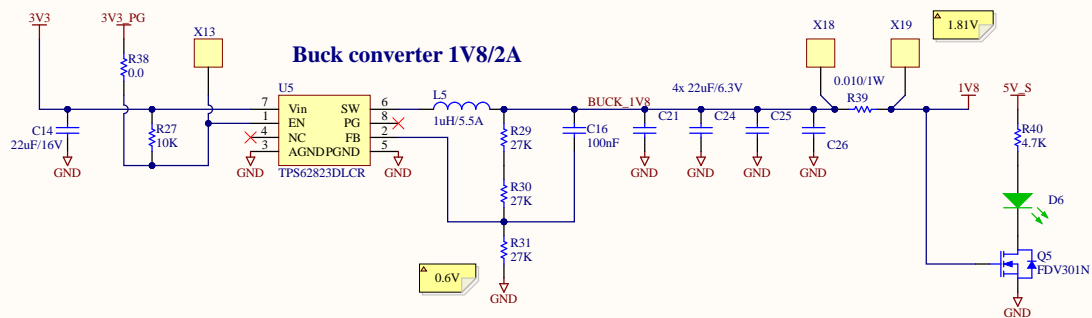
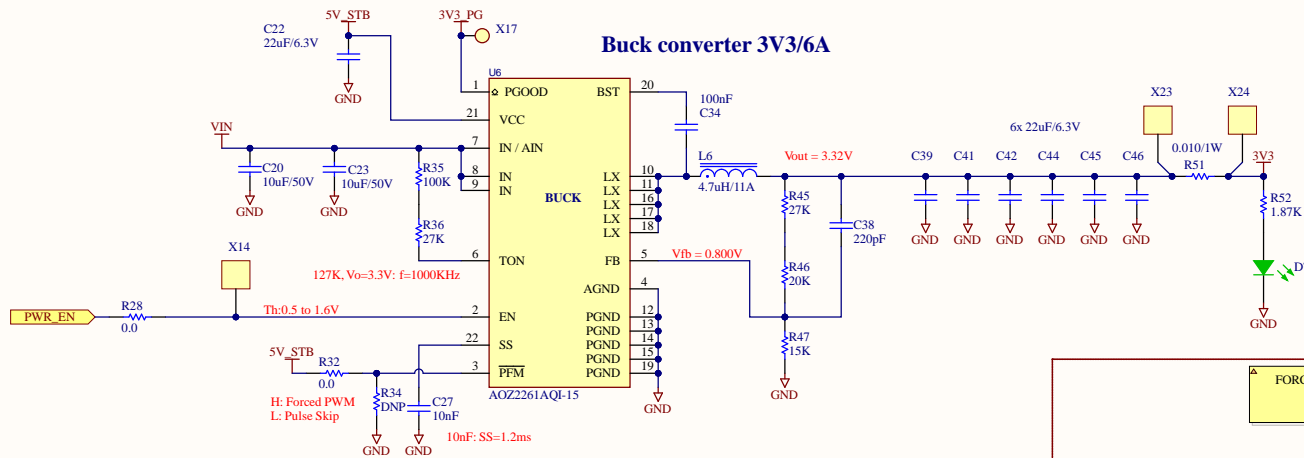


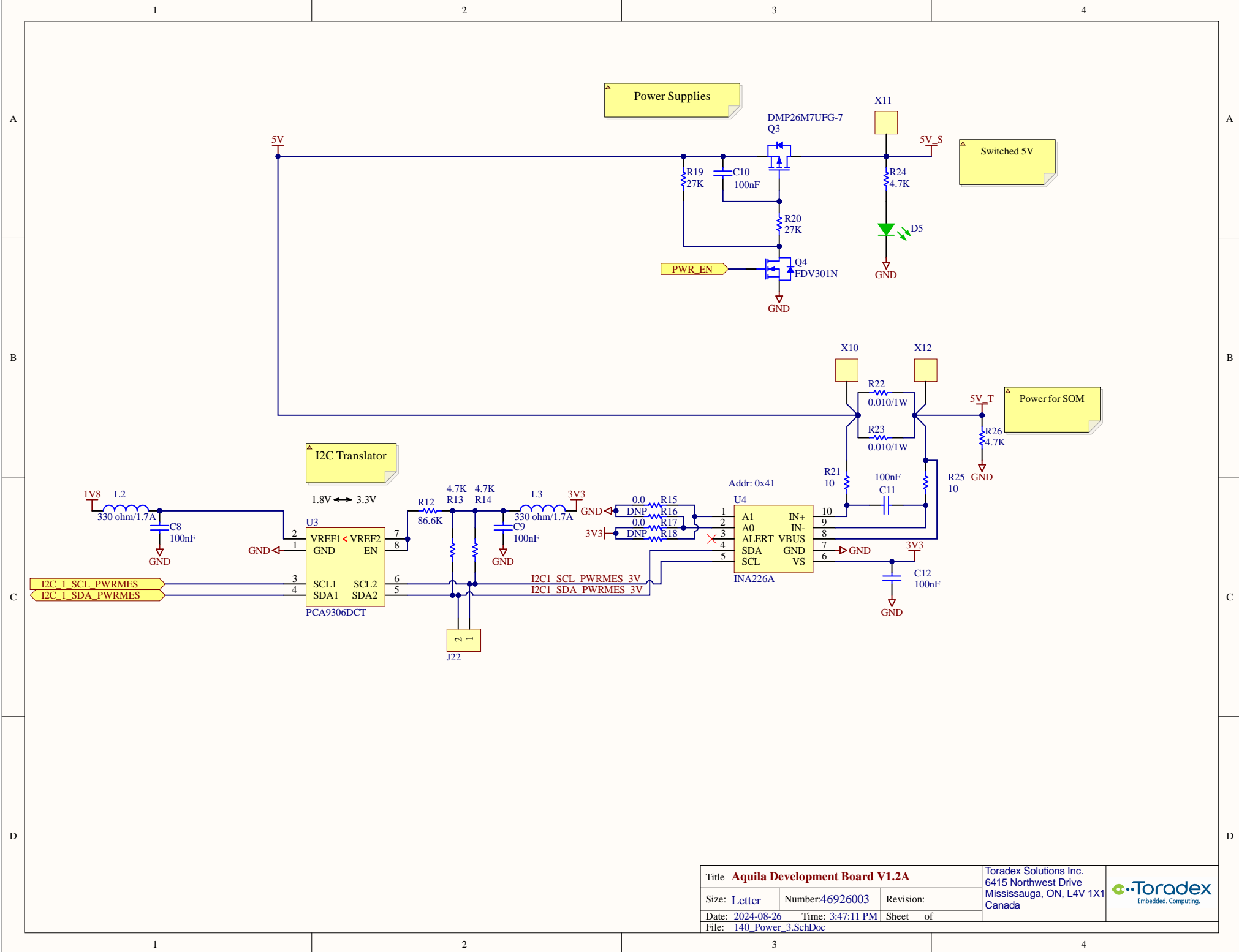
GND test Points



Mounting holes are connected to SHLD

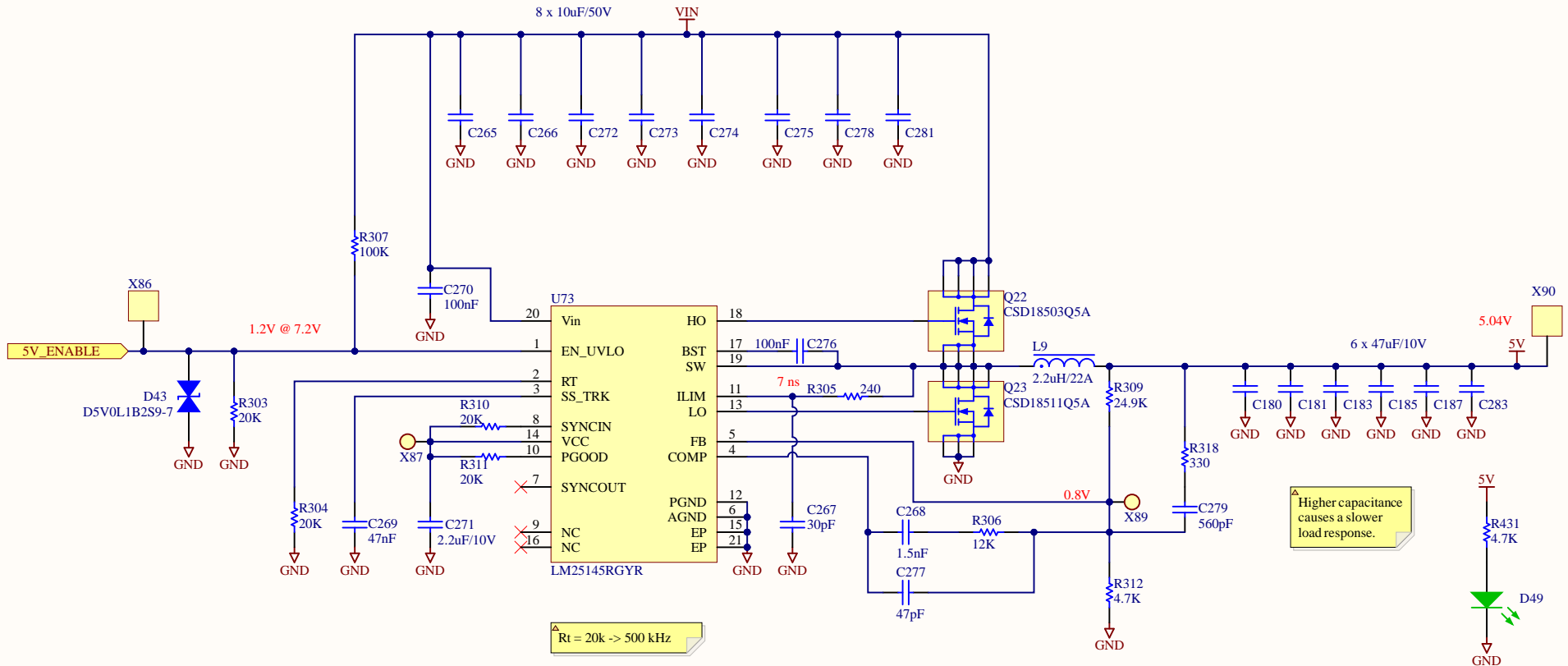
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:09 PM	Sheet of		
File: 100_Power_1.SchDoc				



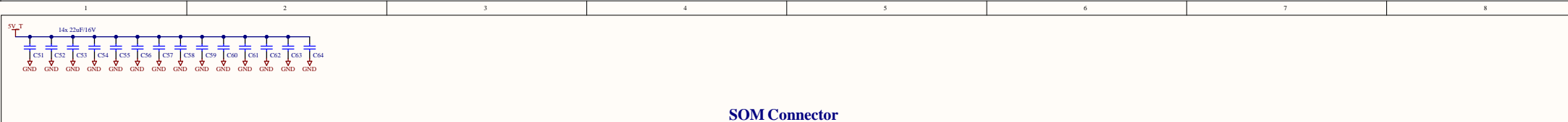


Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:11 PM	Sheet of		
File: 140_Power_3_SchDoc				

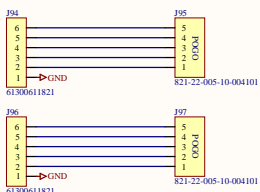
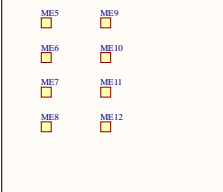
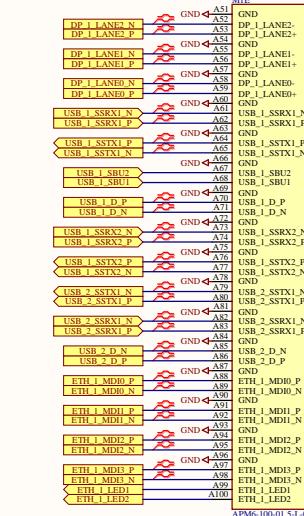
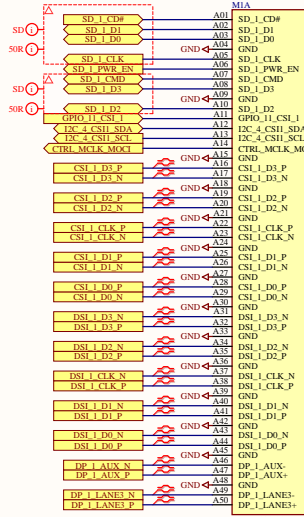
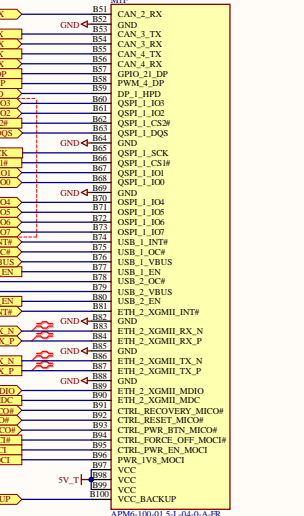
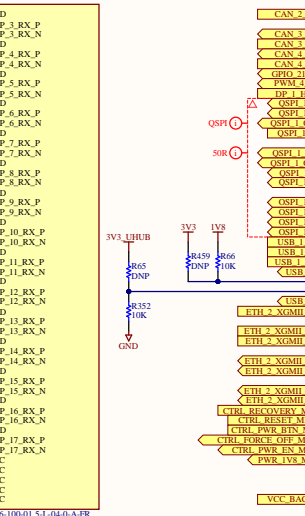
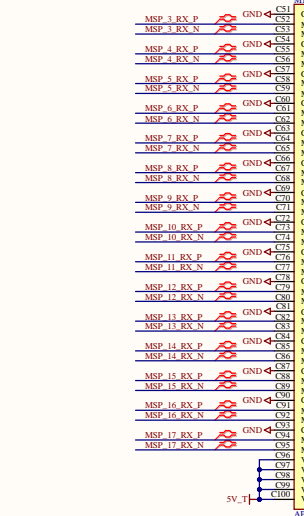
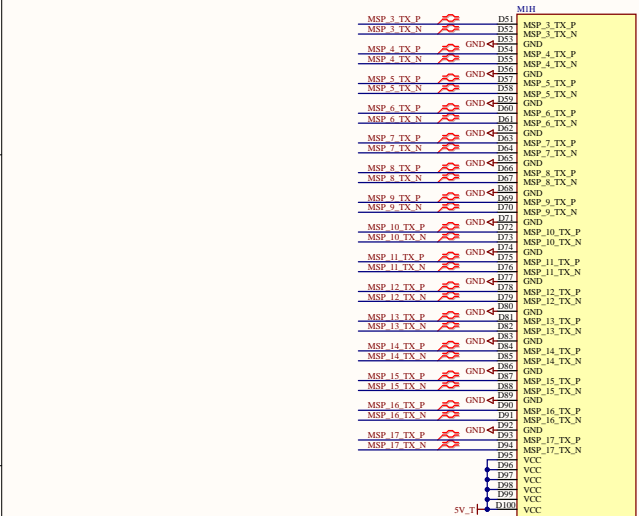
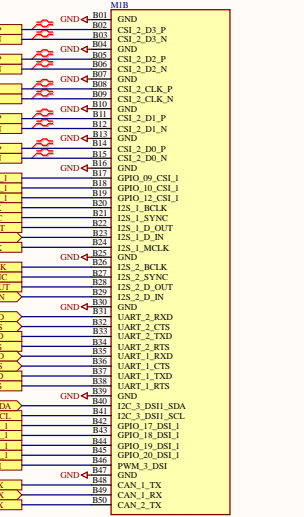
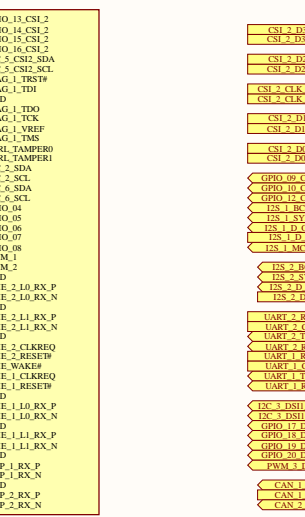
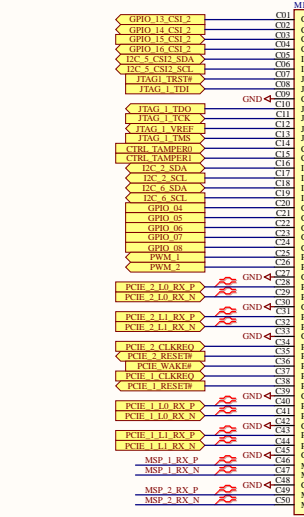
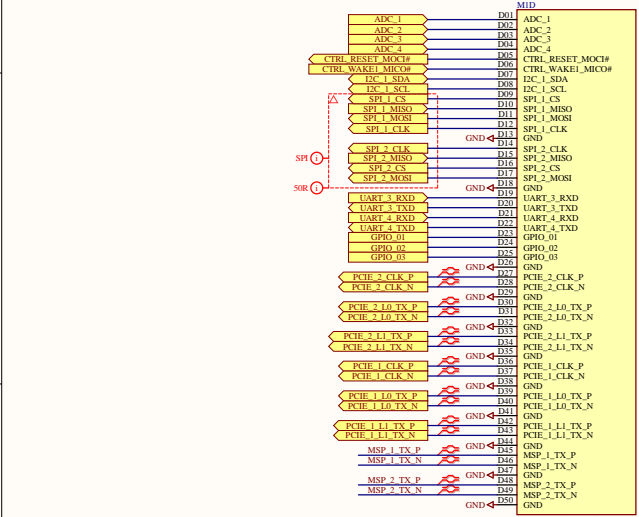
Step-Down DC/DC 5V/15A



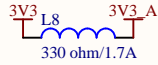
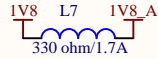
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:11 PM	Sheet of		
File: 160_Power_4.SchDoc				



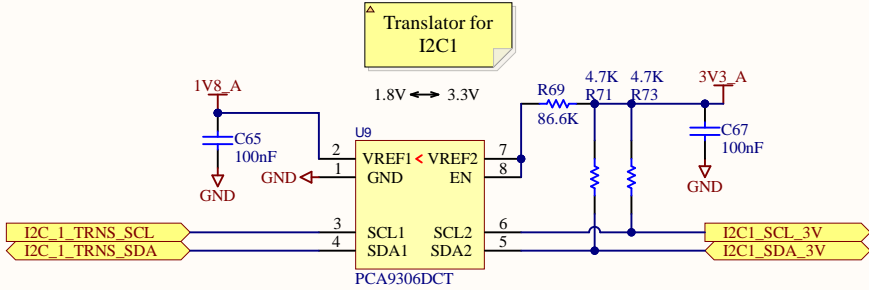
SOM Connector



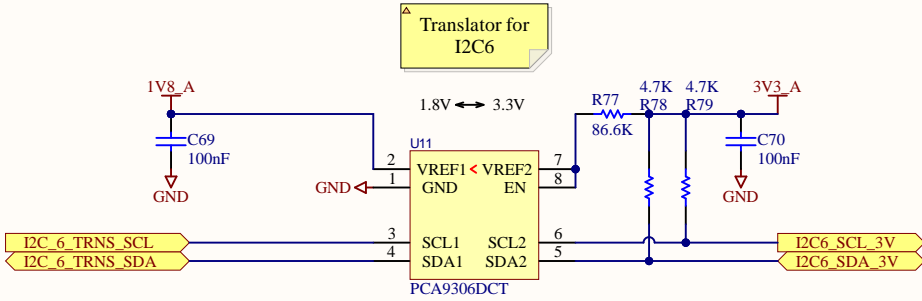
▲ Voltage Translators



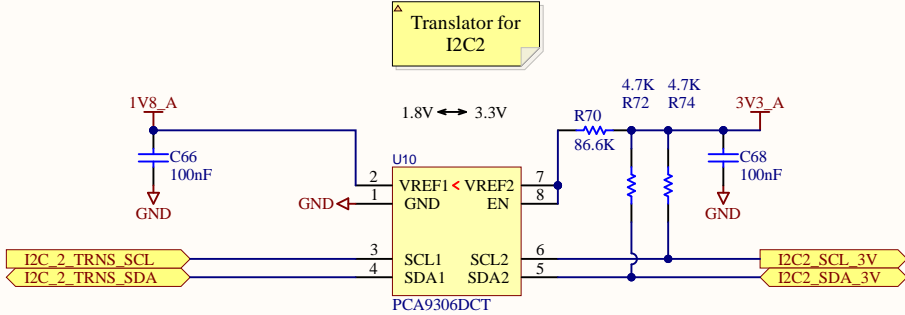
▲ Translator for I2C1



▲ Translator for I2C6



▲ Translator for I2C2



Title Aquila Development Board V1.2A		
Size: Letter	Number:46926003	Revision:
Date: 2024-08-26	Time: 3:47:12 PM	Sheet of
File: 210_Translators.SchDoc		

Toradex Solutions Inc.
6415 Northwest Drive
Mississauga, ON, L4V 1X1
Canada



A

A

B

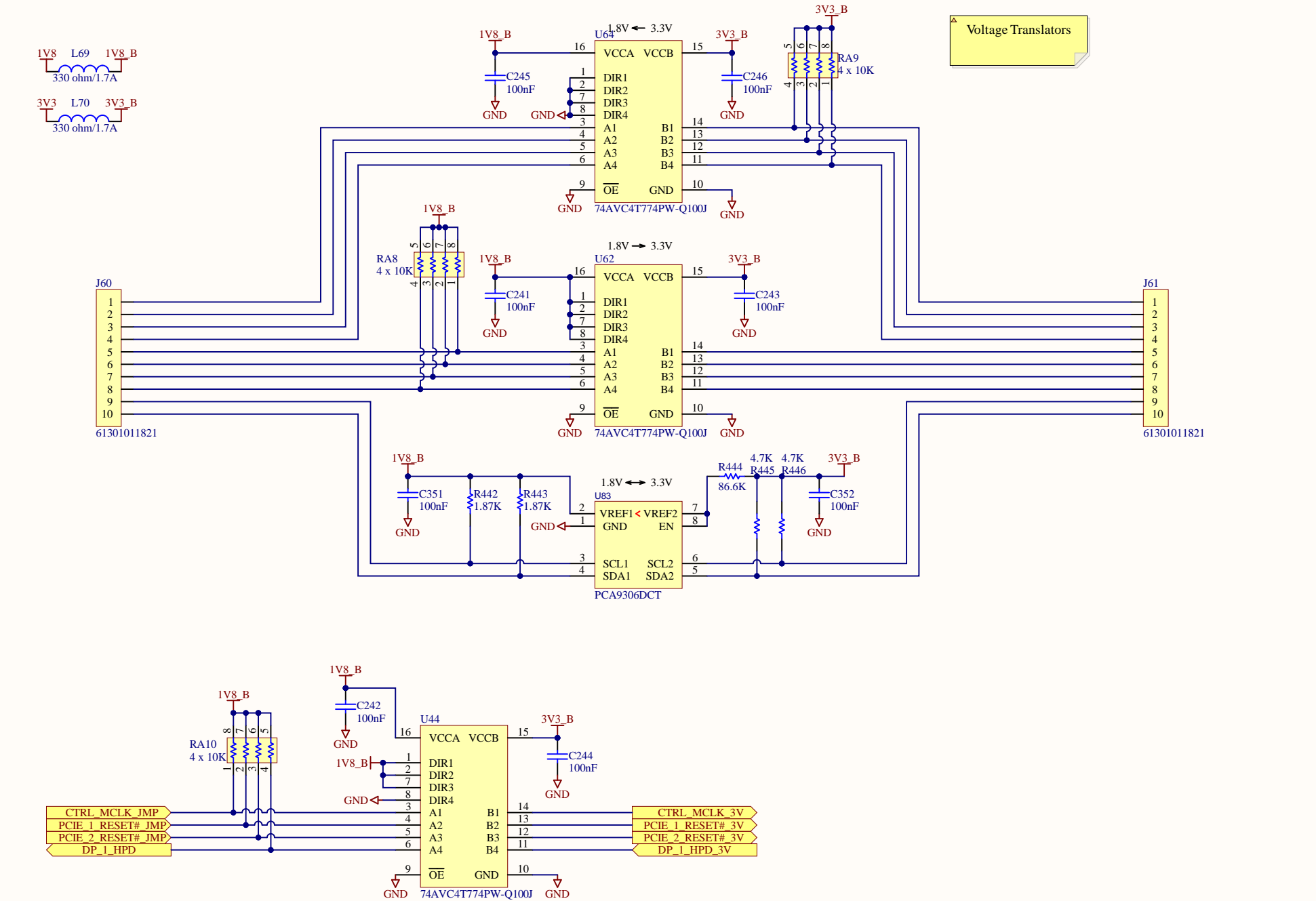
B

C

C

D

D



DIRx	Direction
0	A <= B
1	A >= B

Title **Aquila Development Board V1.2A**

Size: Letter Number:46926003 Revision:

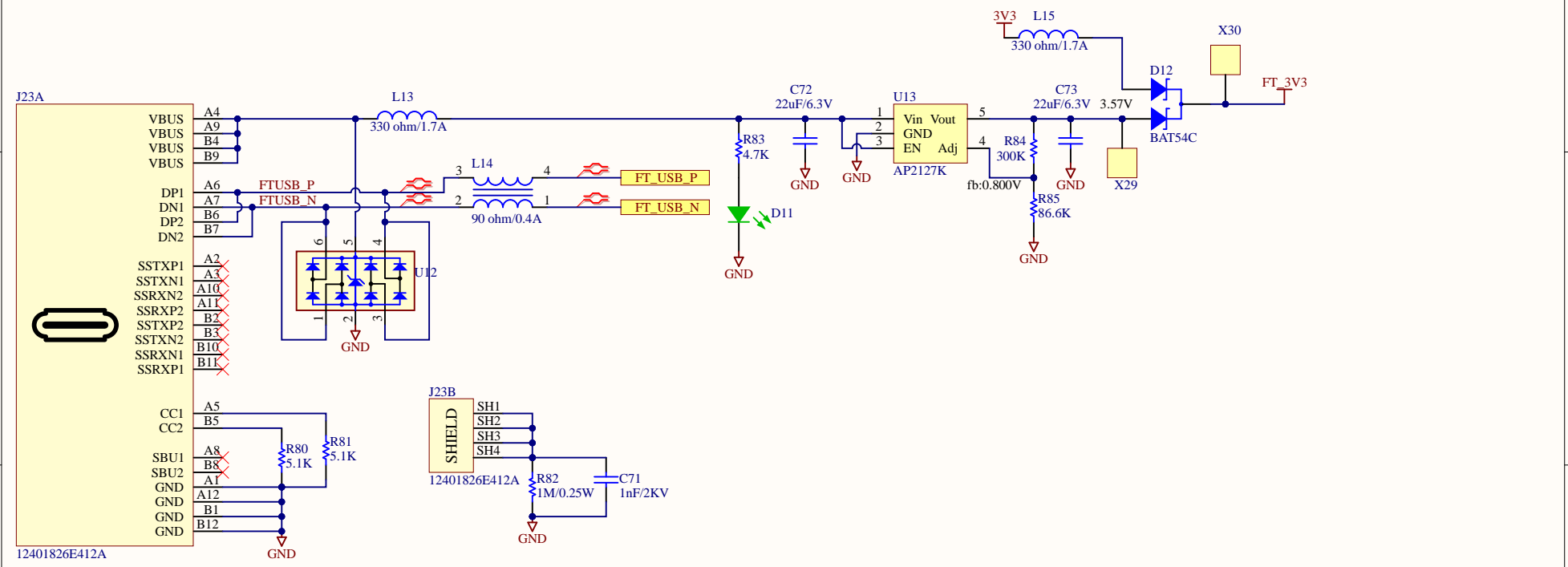
Date: 2024-08-26 Time: 3:47:13 PM Sheet of

File: 215_Translators2.SchDoc

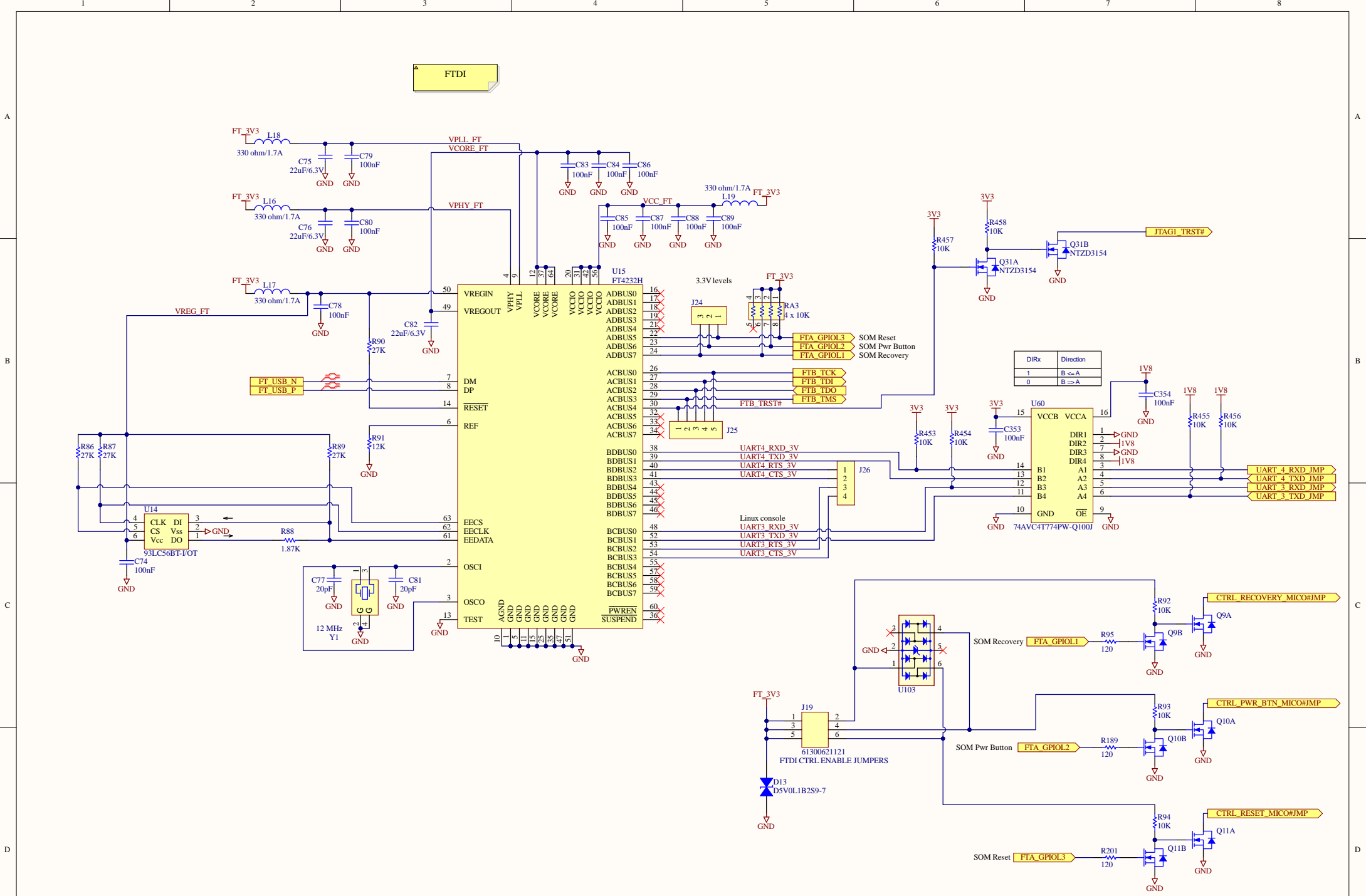
Toradex Solutions Inc.
6415 Northwest Drive
Mississauga, ON, L4V 1X1
Canada



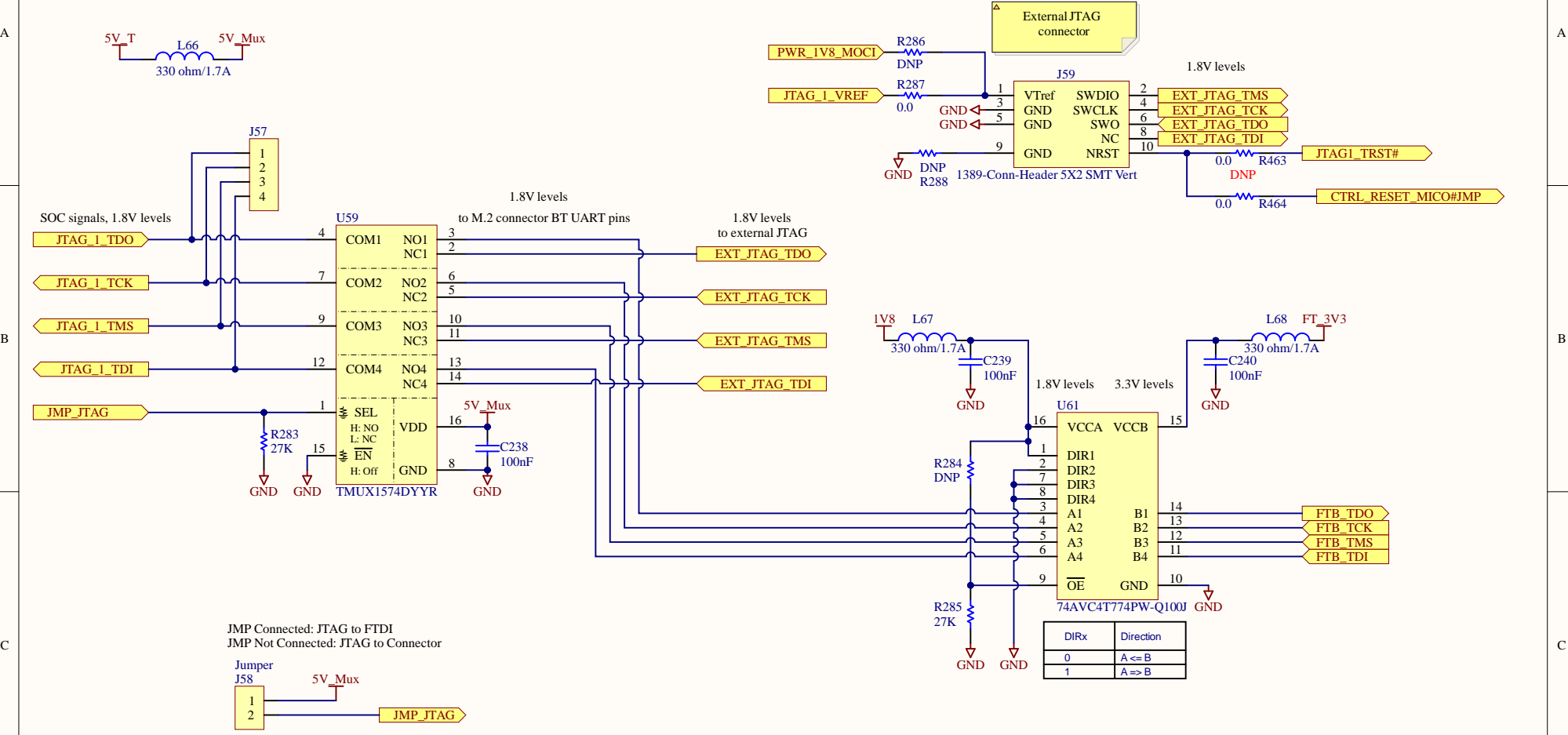
Debug Connection



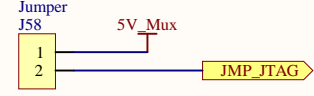
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:13 PM	Sheet of		
File: 220_Debug.SchDoc				



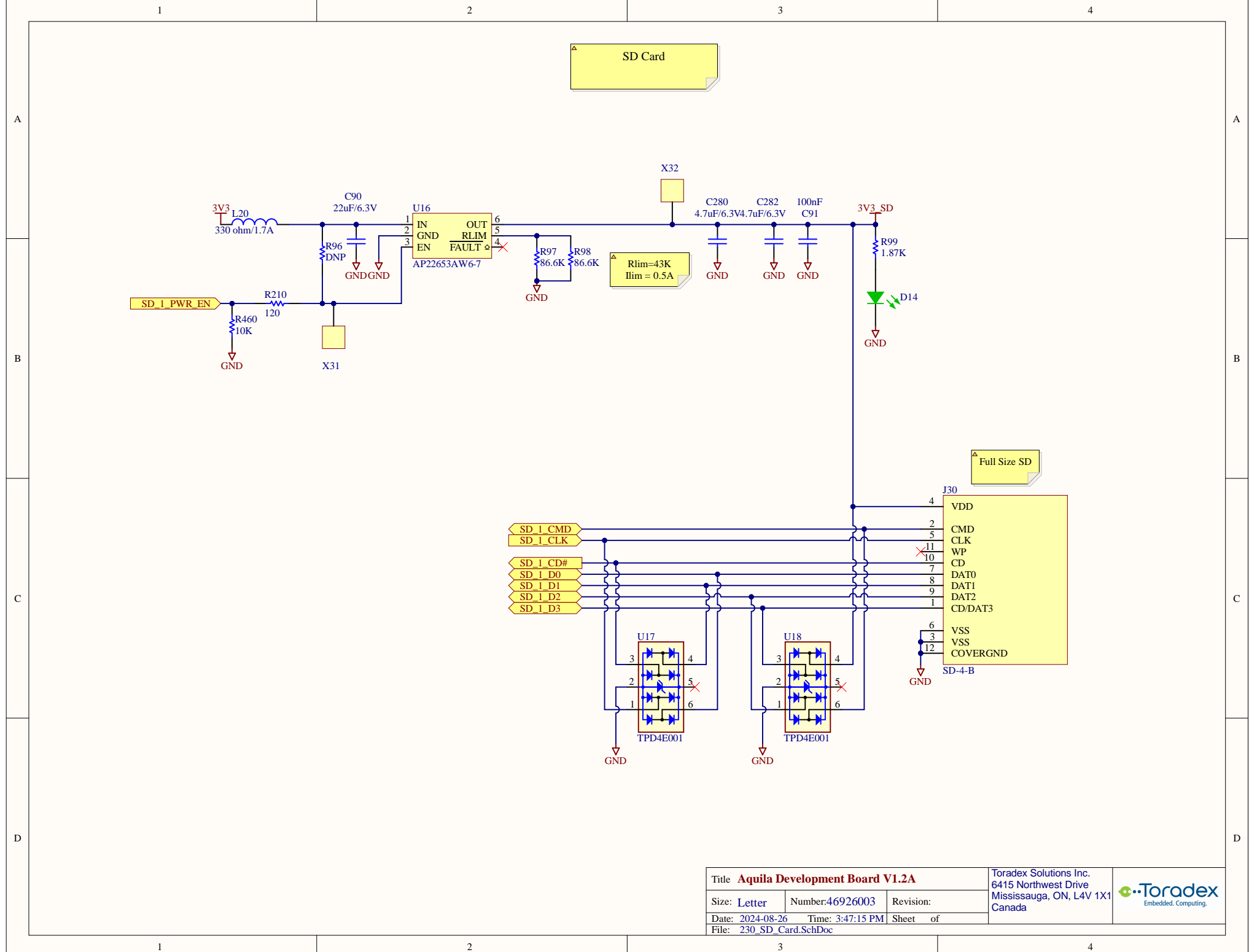
JTAG



JMP Connected: JTAG to FTDI
 JMP Not Connected: JTAG to Connector



DIRx	Direction
0	A <=> B
1	A => B



Title **Aquila Development Board V1.2A**

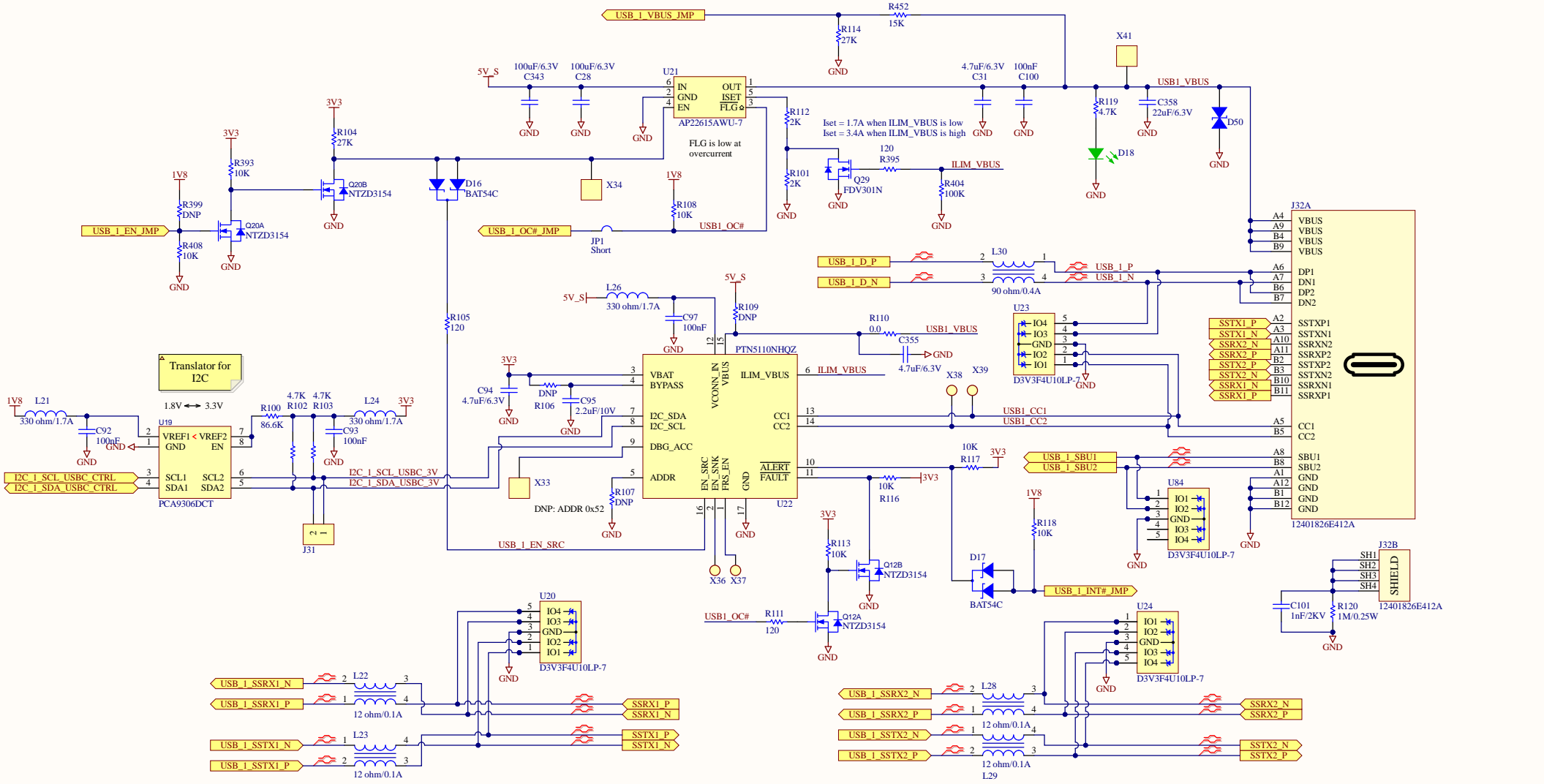
Toradex Solutions Inc.
6415 Northwest Drive
Mississauga, ON, L4V 1X1
Canada

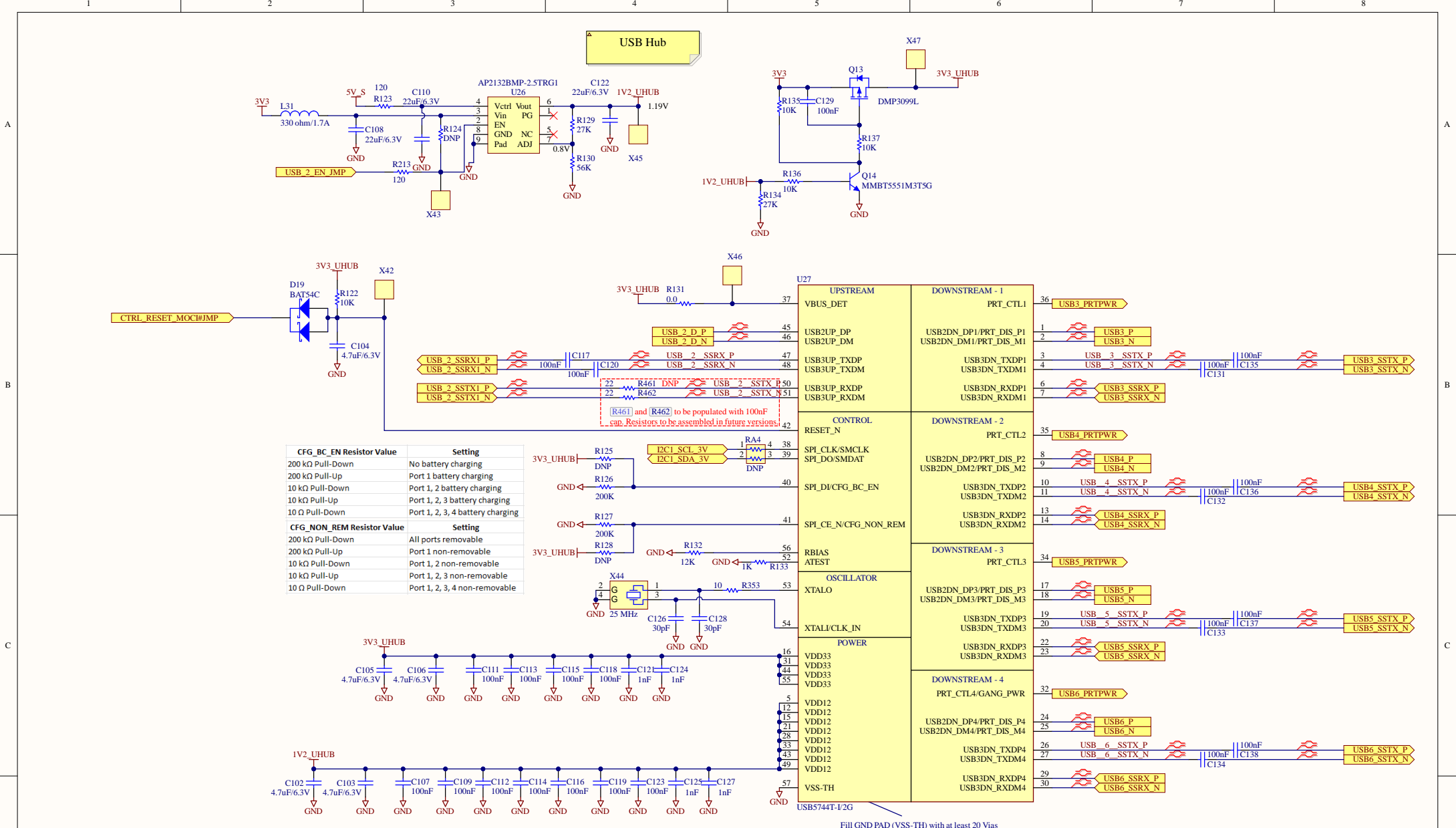


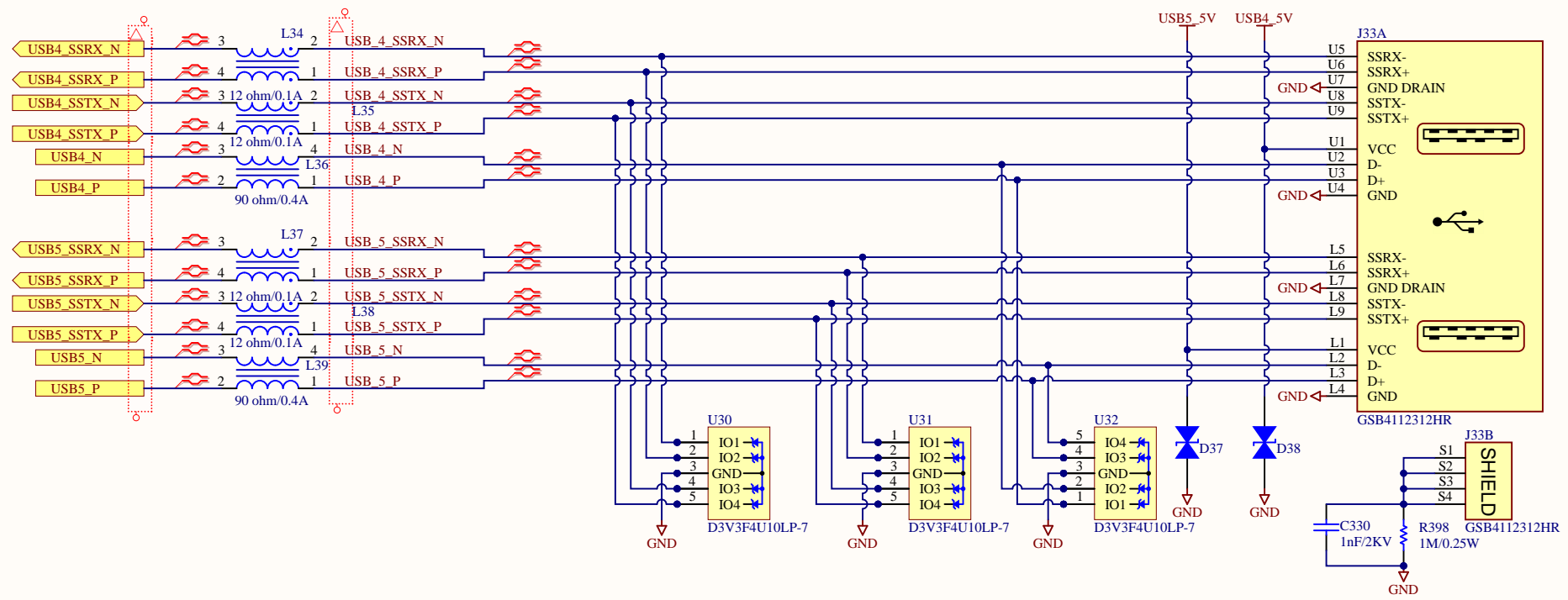
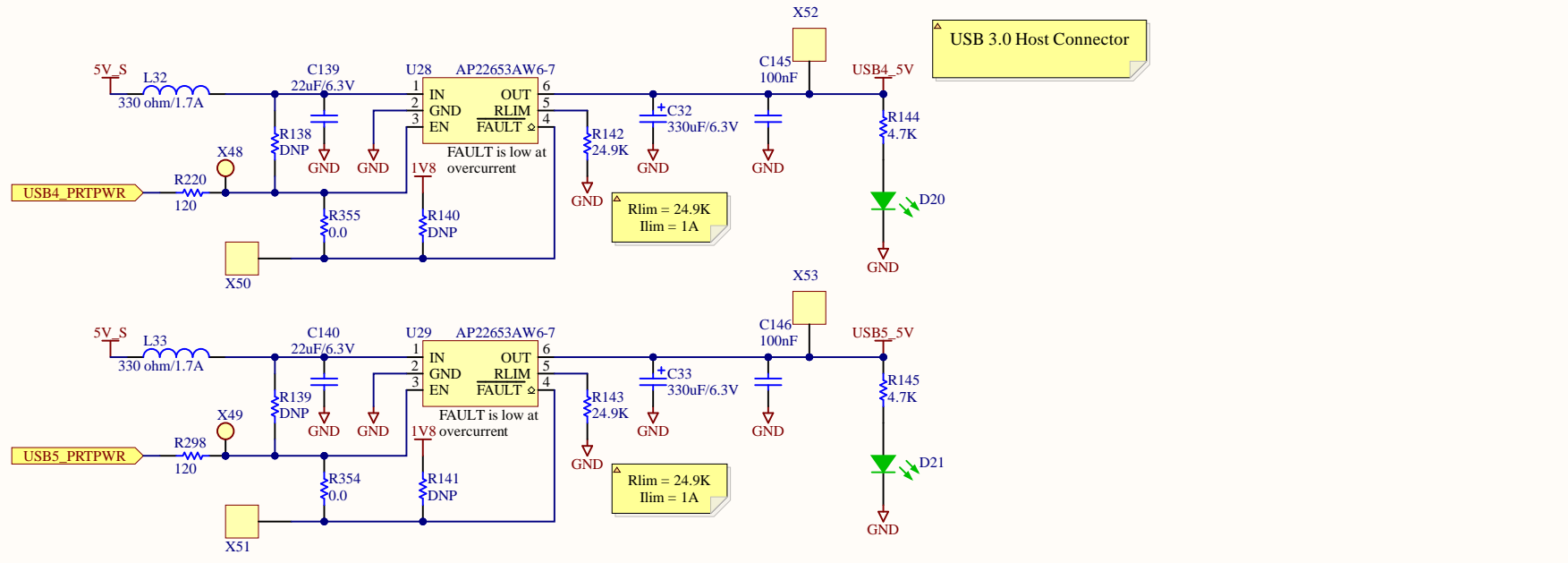
Size: Letter	Number: 46926003	Revision:
Date: 2024-08-26	Time: 3:47:15 PM	Sheet of
File: 230_SD_Card.SchDoc		

USB1 - OTG

[R452] to be changed to 120ohm in future version for 5V tolerant SOM pin







Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:16 PM	Sheet of		
File: 310_USB3.SchDoc				

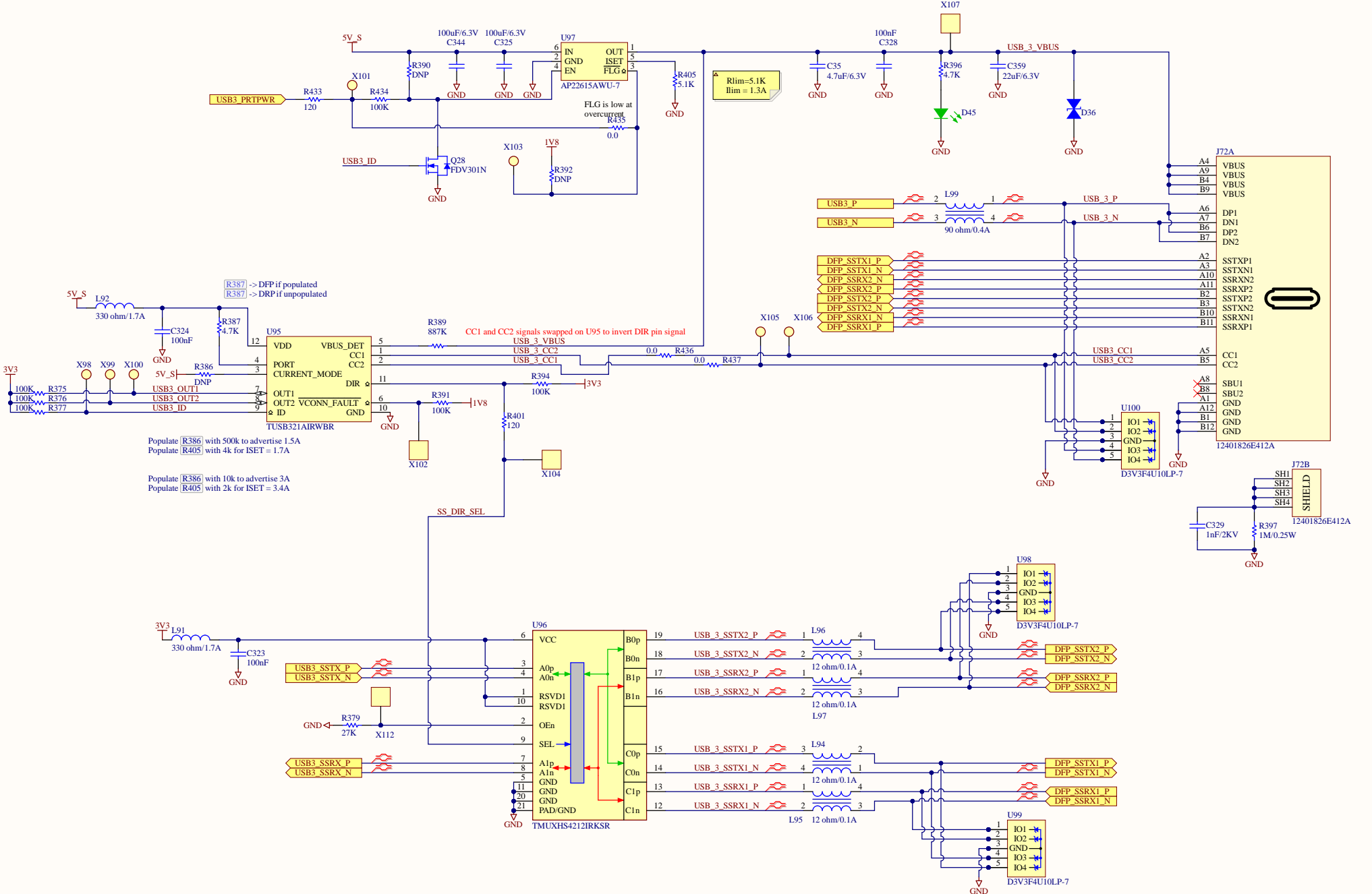
USBC - DFP

A

B

C

D



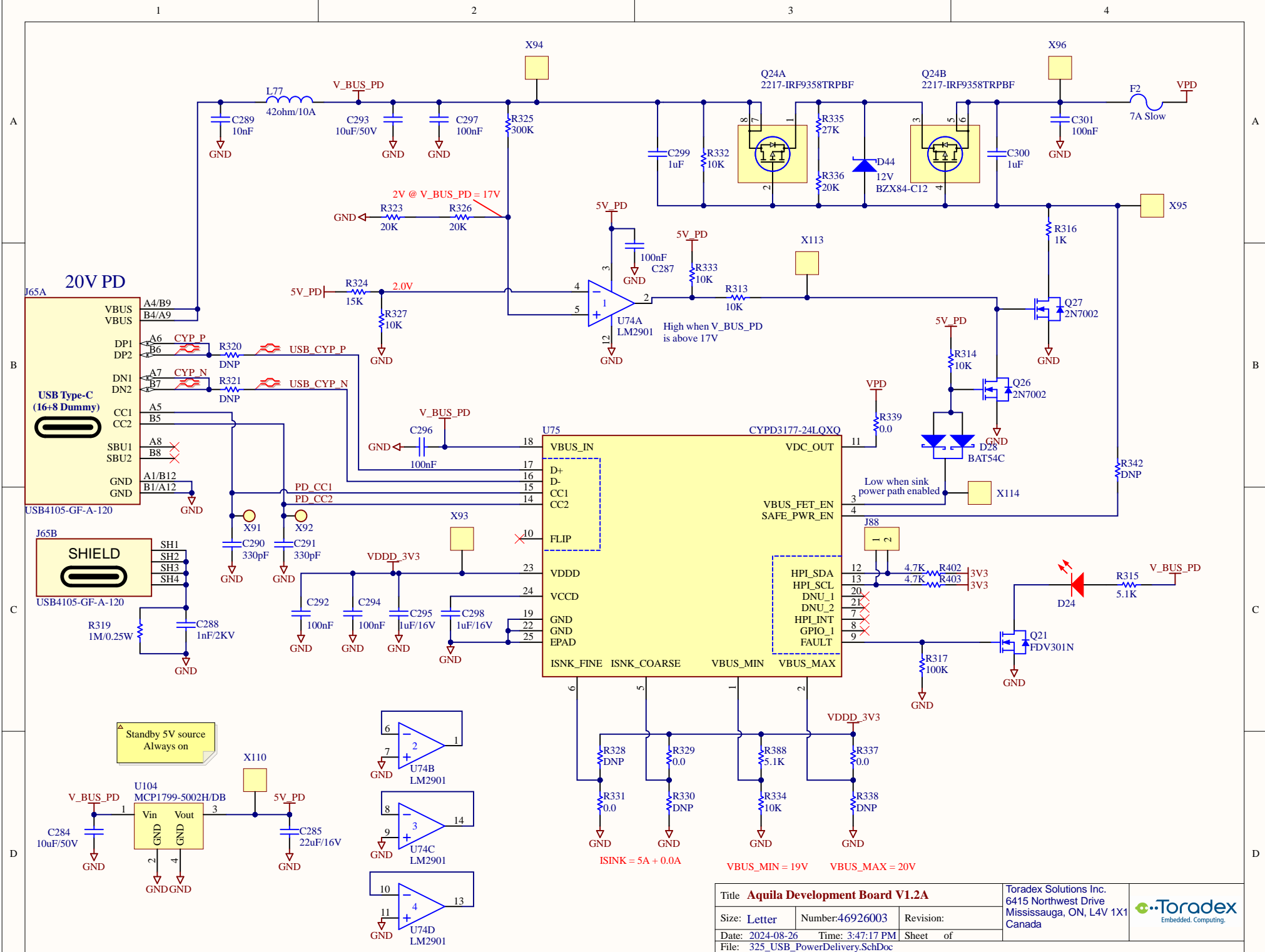
R387 -> DFP if populated
R387 -> DRP if unpopulated

Populate R386 with 500k to advertise 1.5A
Populate R405 with 4k for ISET = 1.7A

Populate R386 with 10k to advertise 3A
Populate R405 with 2k for ISET = 3.4A

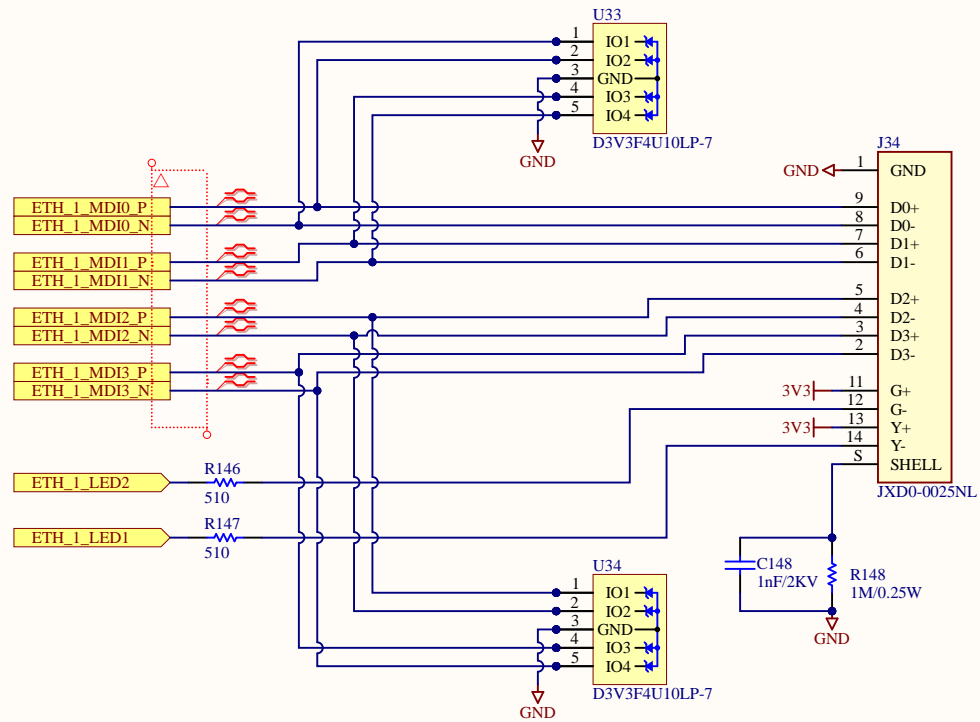
CC1 and CC2 signals swapped on U95 to invert DIR pin signal

Rlim=5.1K
Ilim = 1.3A

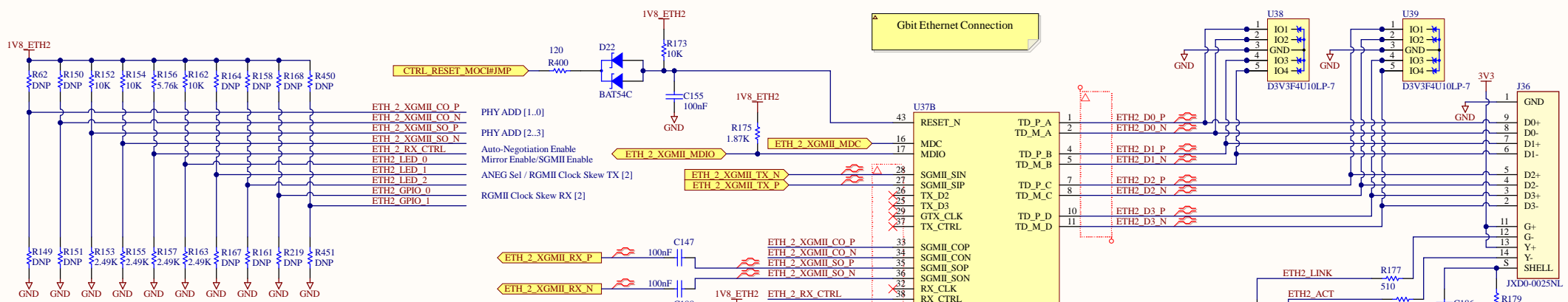


Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:17 PM	Sheet of		
File: 325_USB_PowerDelivery.SchDoc				

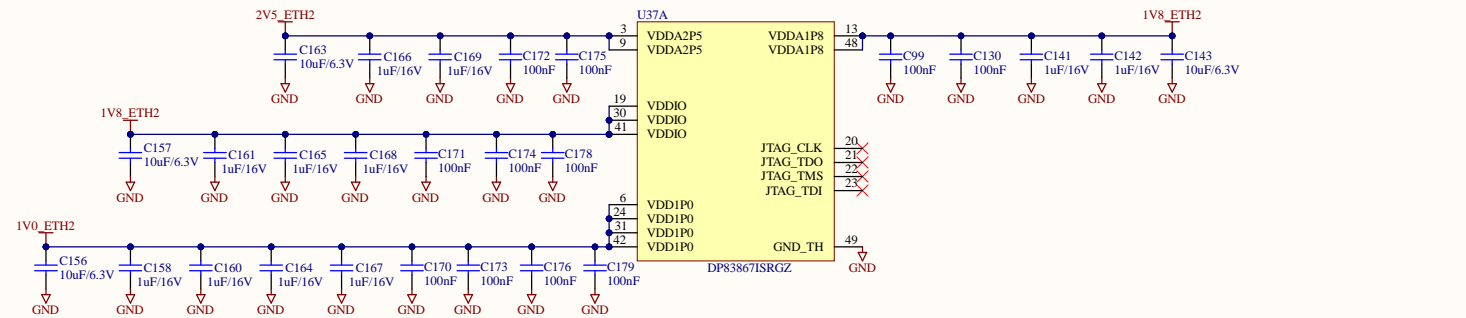
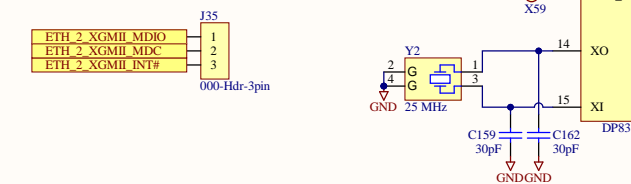
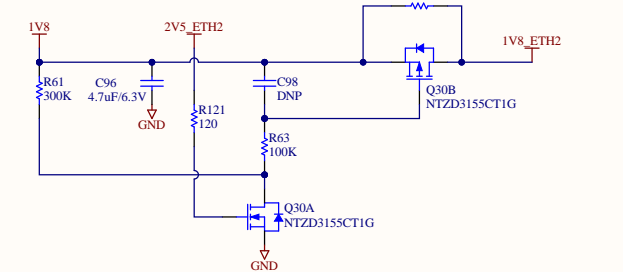
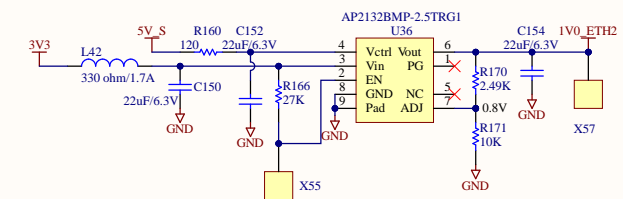
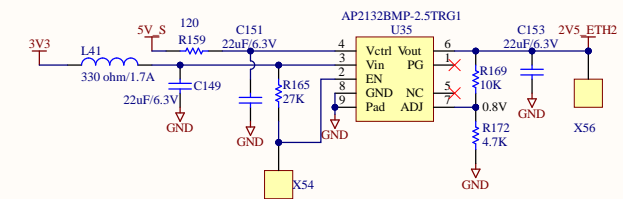
A
Gbit Ethernet Connection

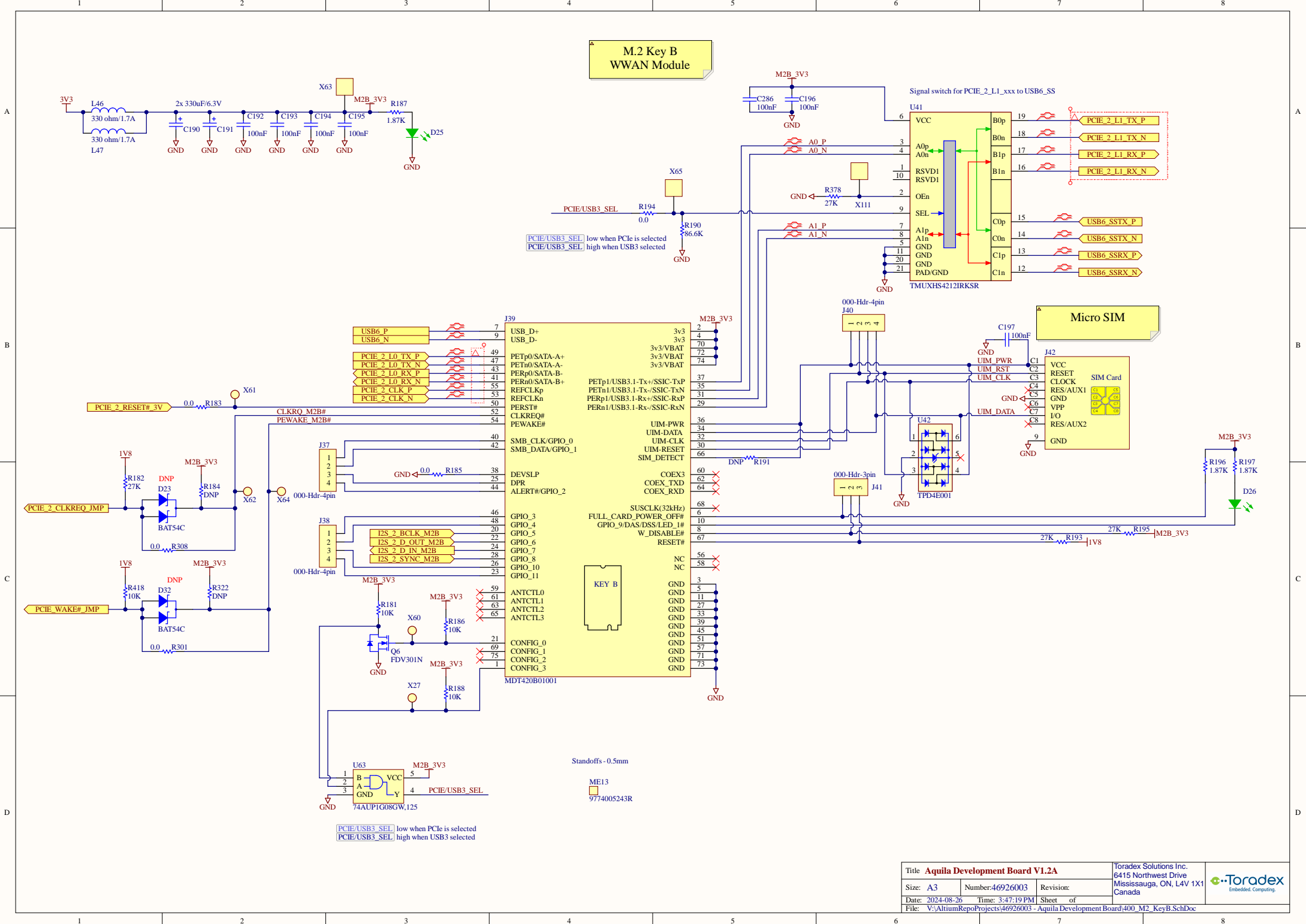


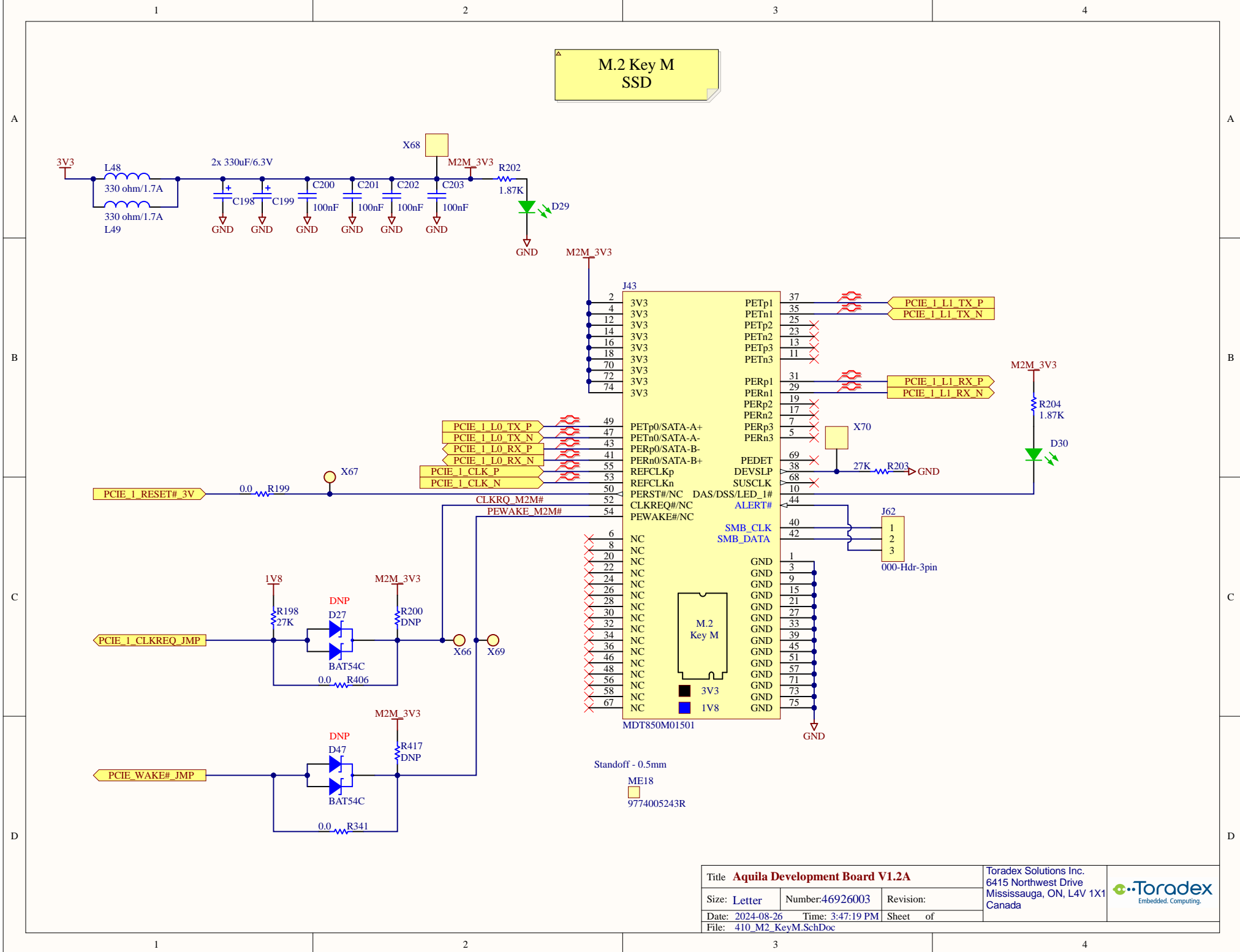
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number:46926003	Revision:		
Date: 2024-08-26	Time: 3:47:18 PM	Sheet of		
File: 350_Ethernet.SchDoc				



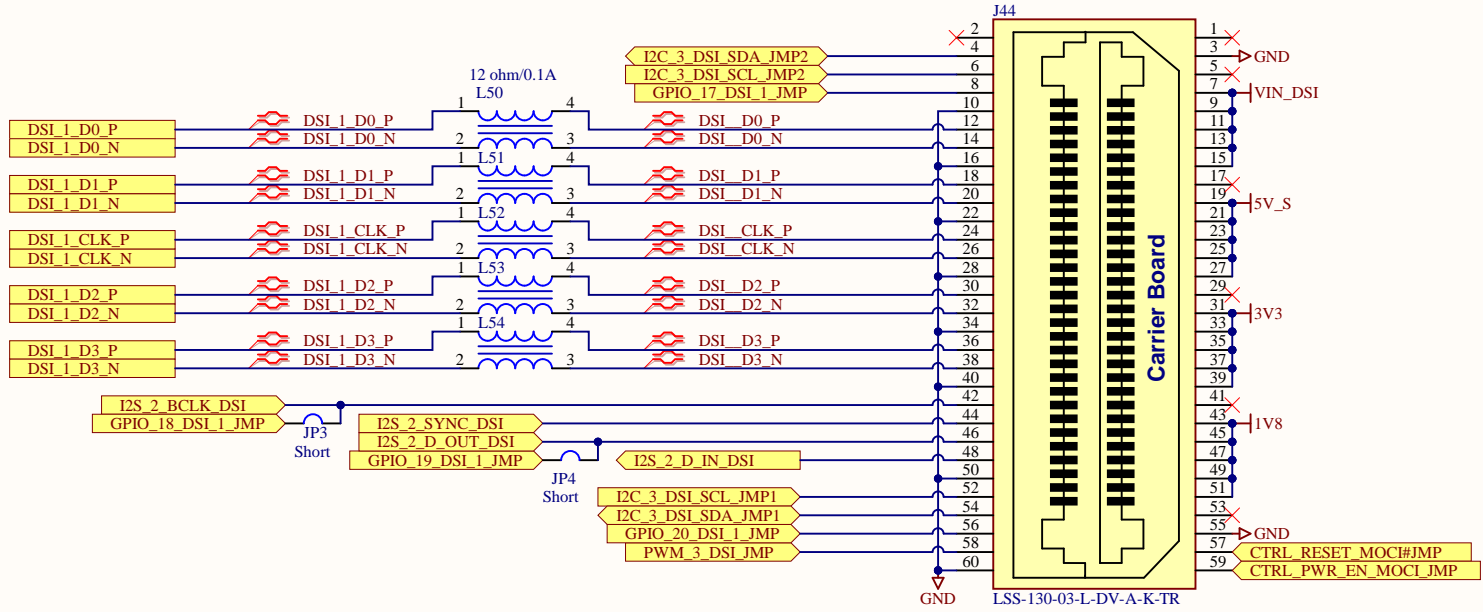
Pin Name	Mode	Rhi	Rlo	Function
SGMII_COP	1	Open	Open	Phy Addr [0...3] = 0100 (4)
SGMII_SOP	2	10k	2.49k	
RX_CTRL	3	5.76k	2.49k	Auto-Neg Enabled
LED_0	2	10k	2.49k	Mirror Disabled, SGMII Enabled
LED_1	1	Open	Open	Advertise ability of 10/100/1000
LED_2	1	Open	Open	Clock TX Skew [0...2] = 000 (2 ns)
GPIO_0	1	Open	Open	Clock RX Skew [0...2] = 000 (2 ns)
GPIO_1	1	Open	Open	





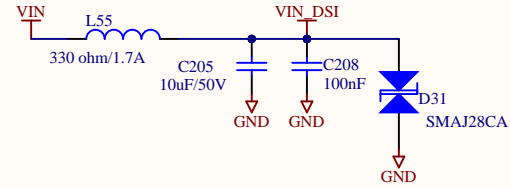
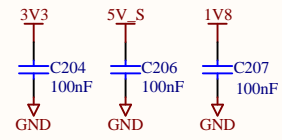


MIPI DSI

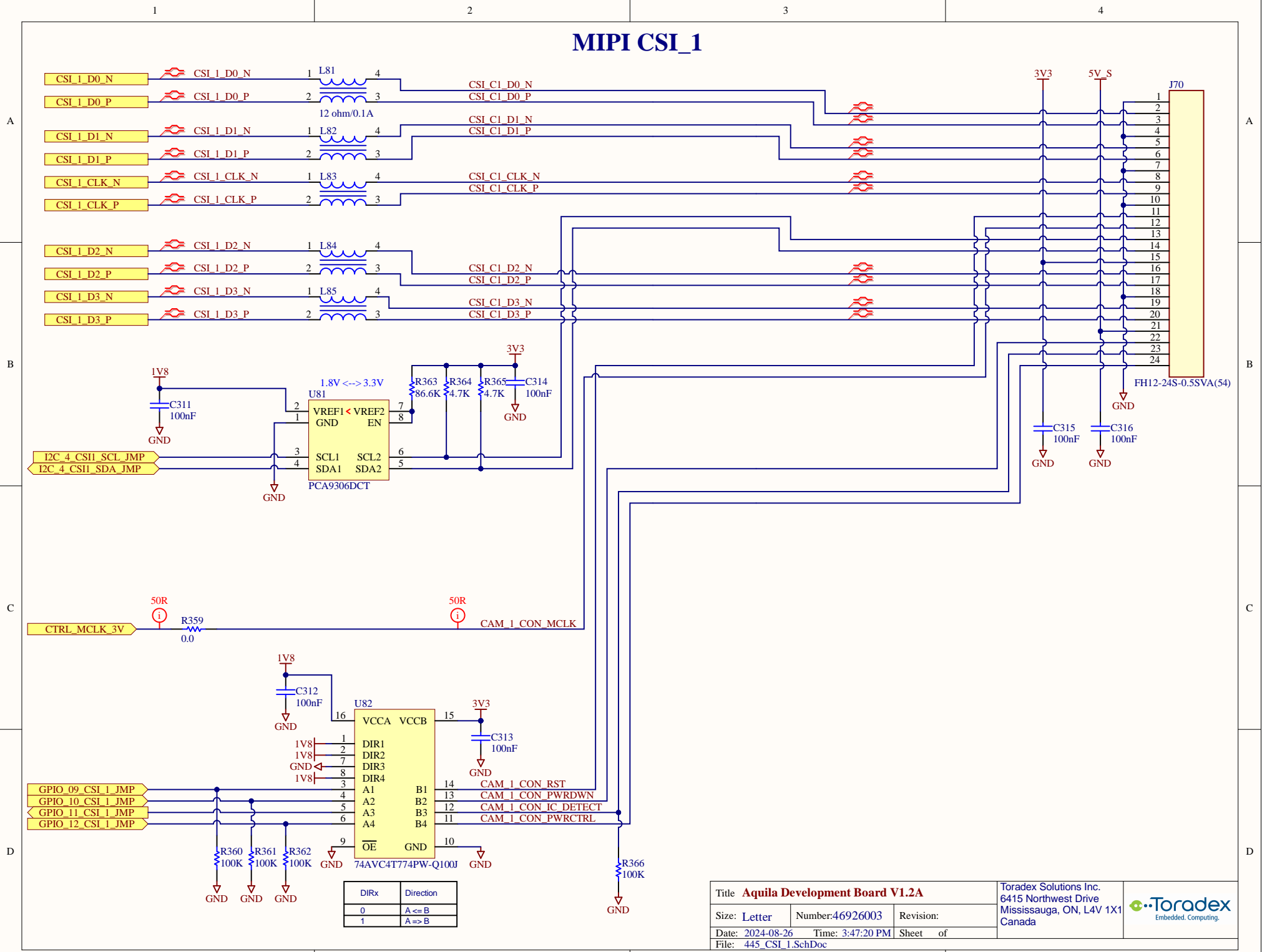


DSI Standoffs

ME1	ME3
9774080360R	9774080360R
ME2	ME4
9774080360R	9774080360R



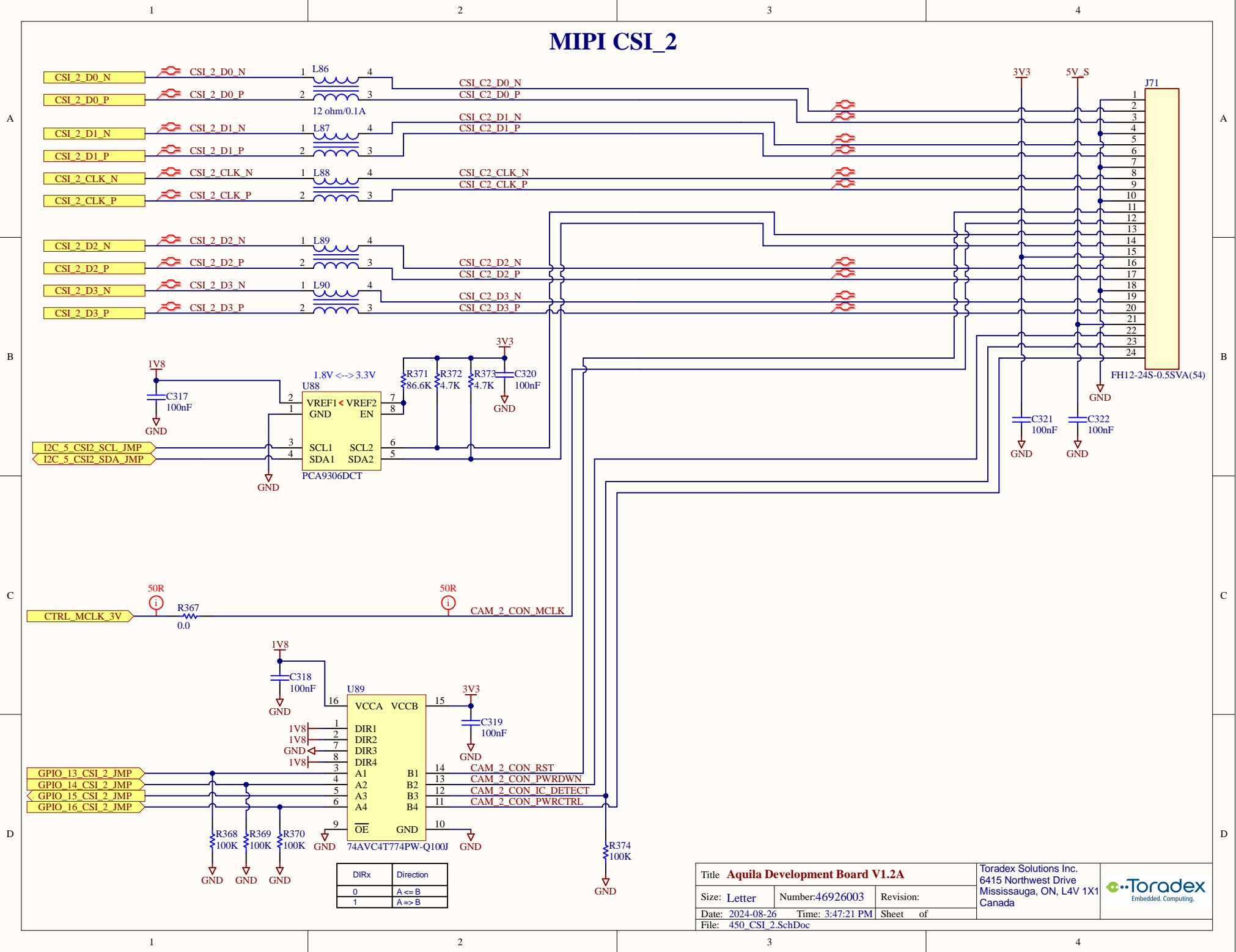
MIPI CSI_1



DIRx	Direction
0	A <=> B
1	A >=> B

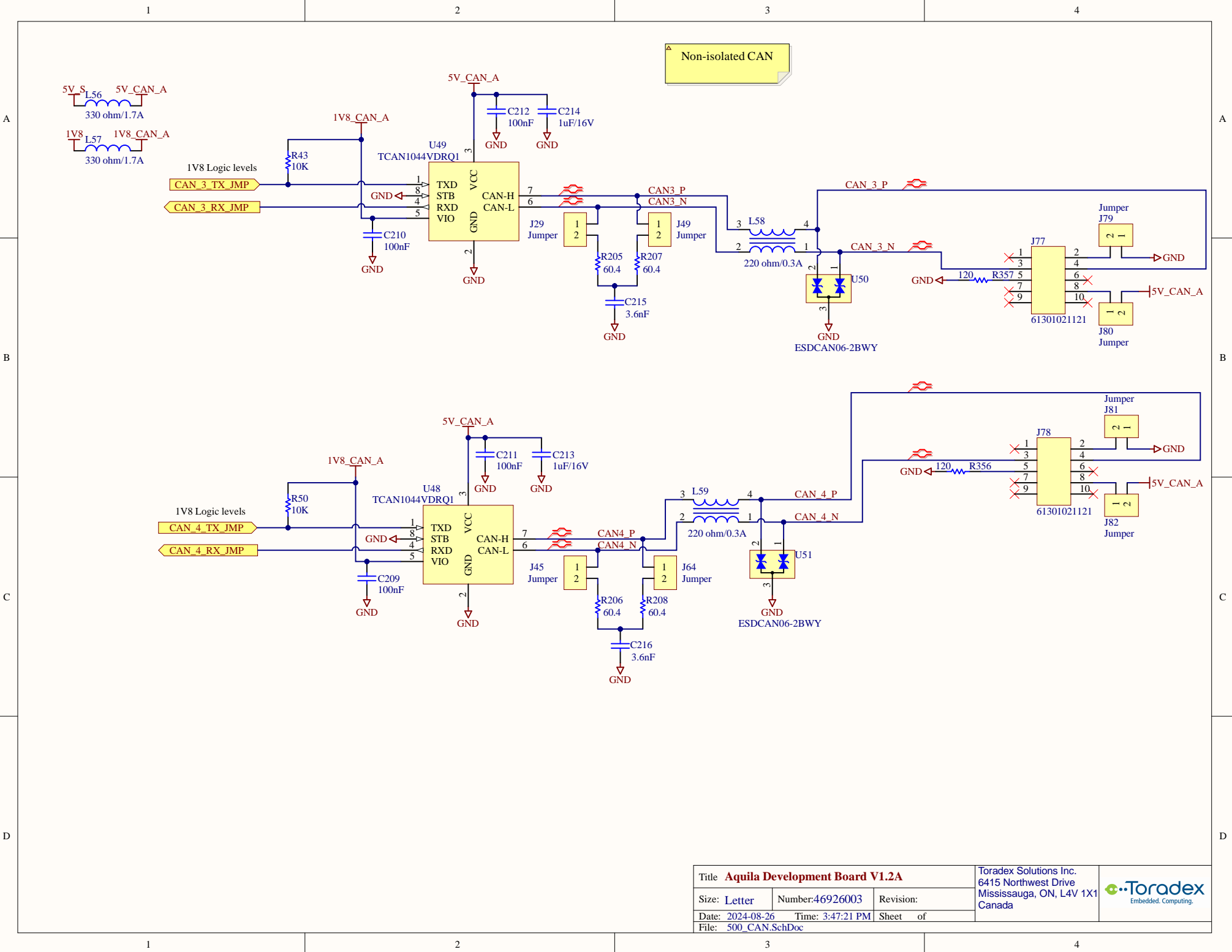
Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:20 PM	Sheet of		
File: 445_CSI_1.SchDoc				

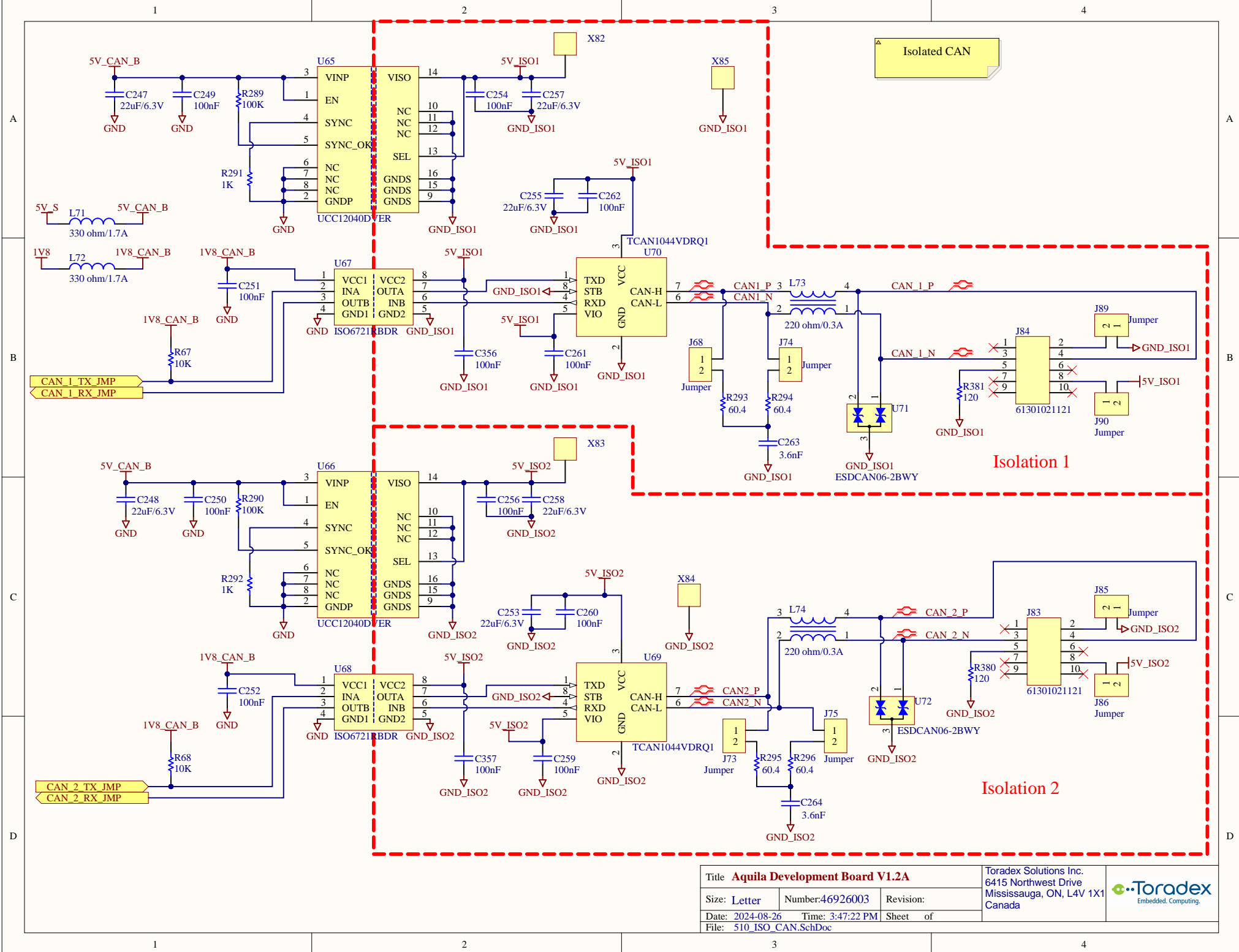
MIPI CSI_2



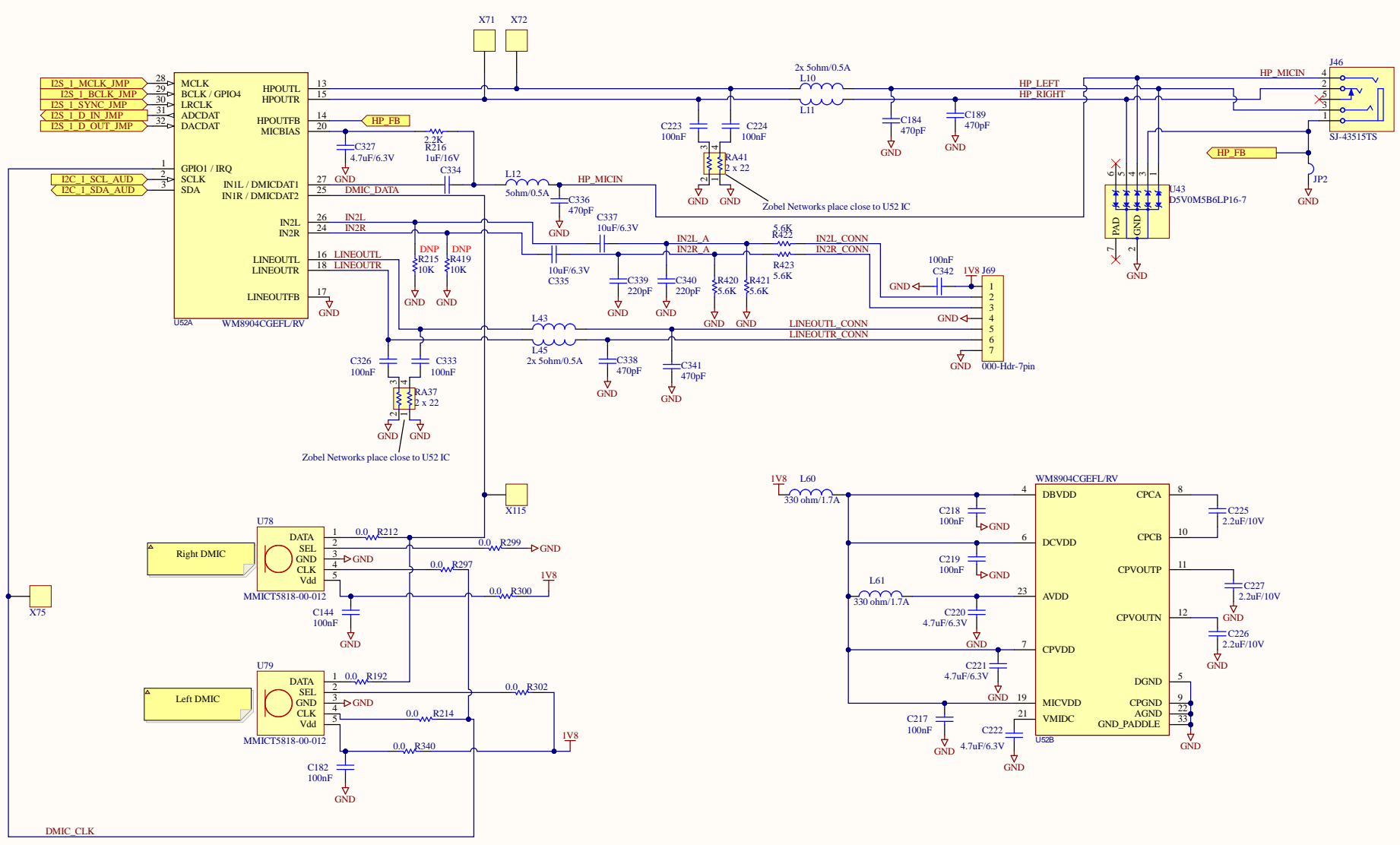
DIRx	Direction
0	A <=> B
1	A >=> B

Title Aquila Development Board V1.2A			Toradex Solutions Inc. 6415 Northwest Drive Mississauga, ON, L4V 1X1 Canada	
Size: Letter	Number: 46926003	Revision:		
Date: 2024-08-26	Time: 3:47:21 PM	Sheet of		
File: 450_CSI_2.SchDoc				

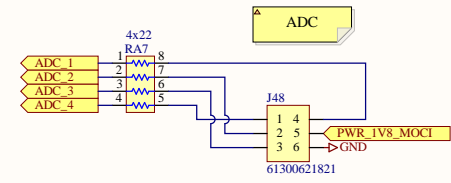
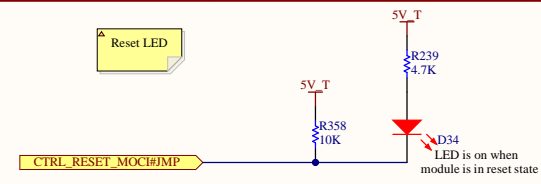
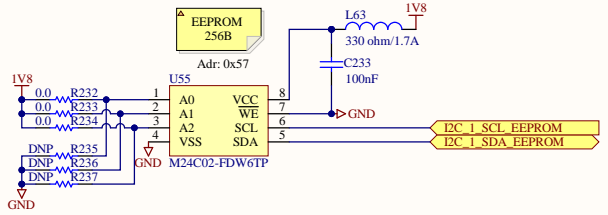
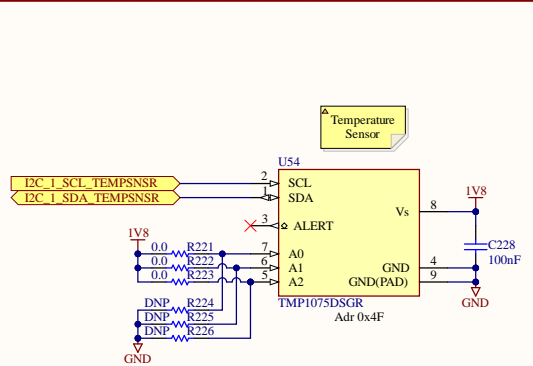
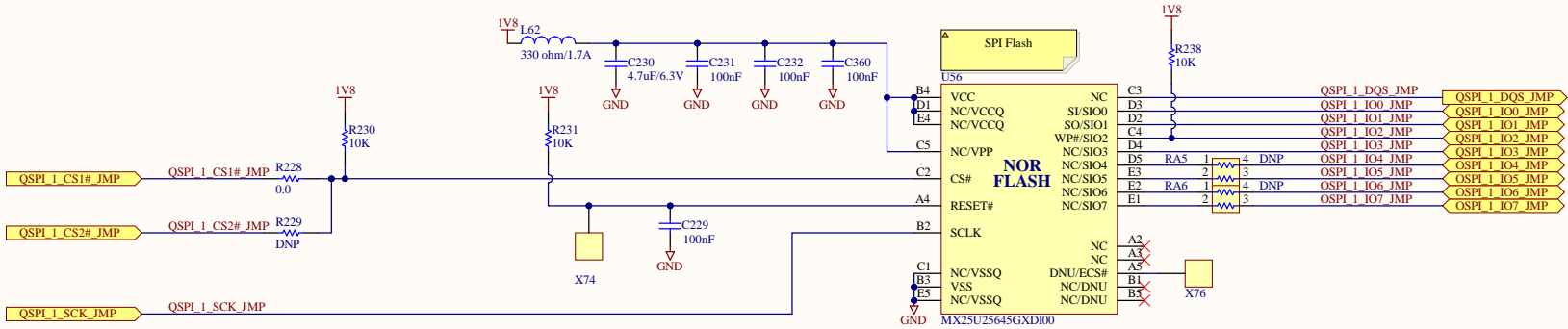
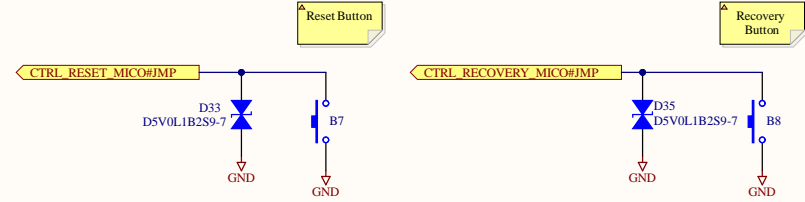
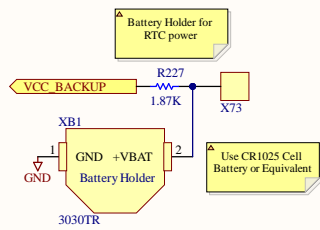


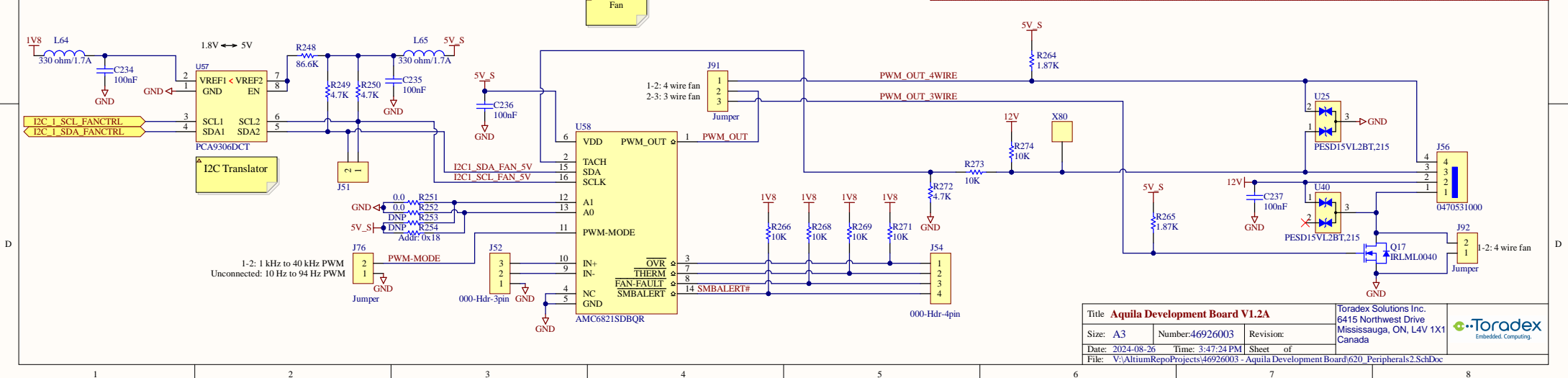
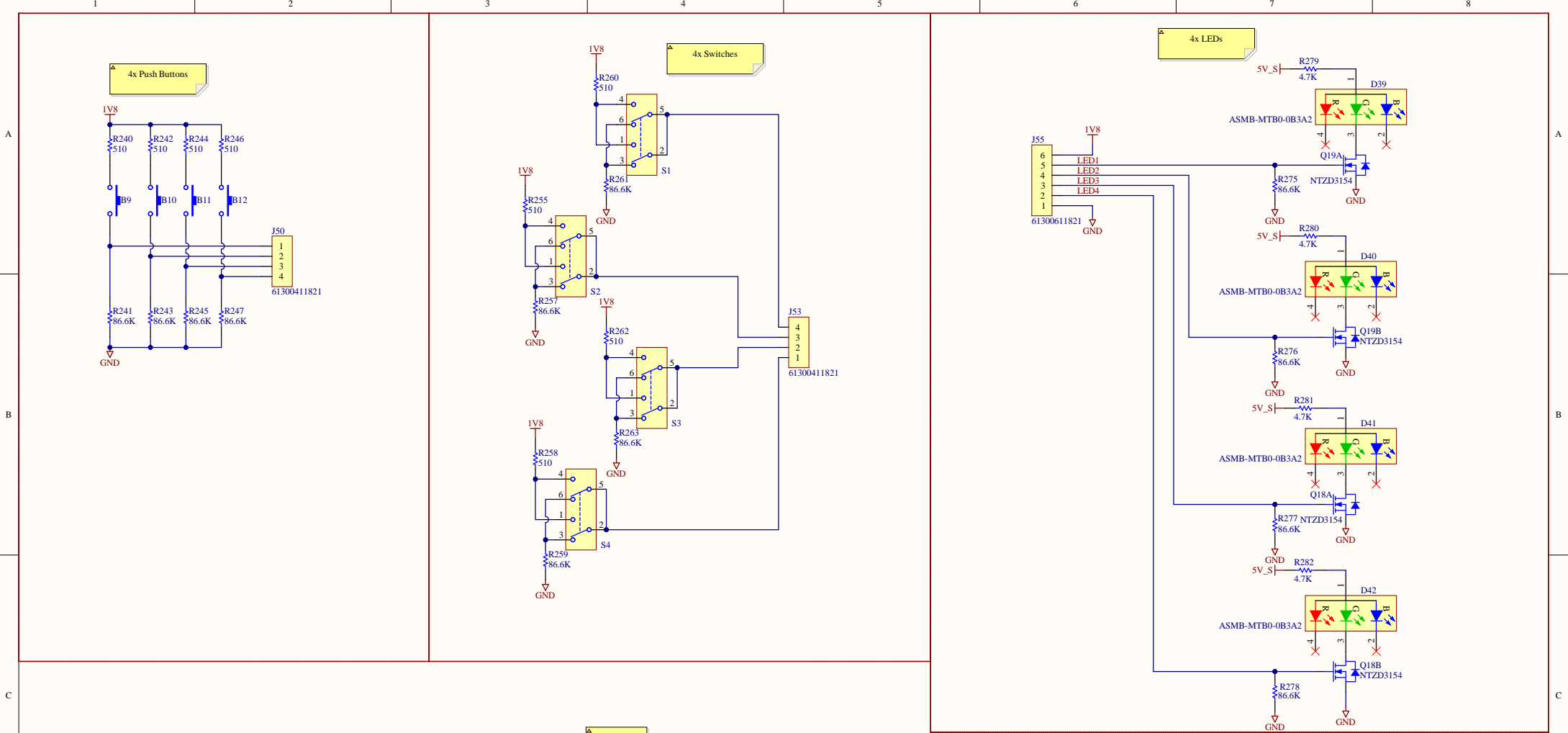


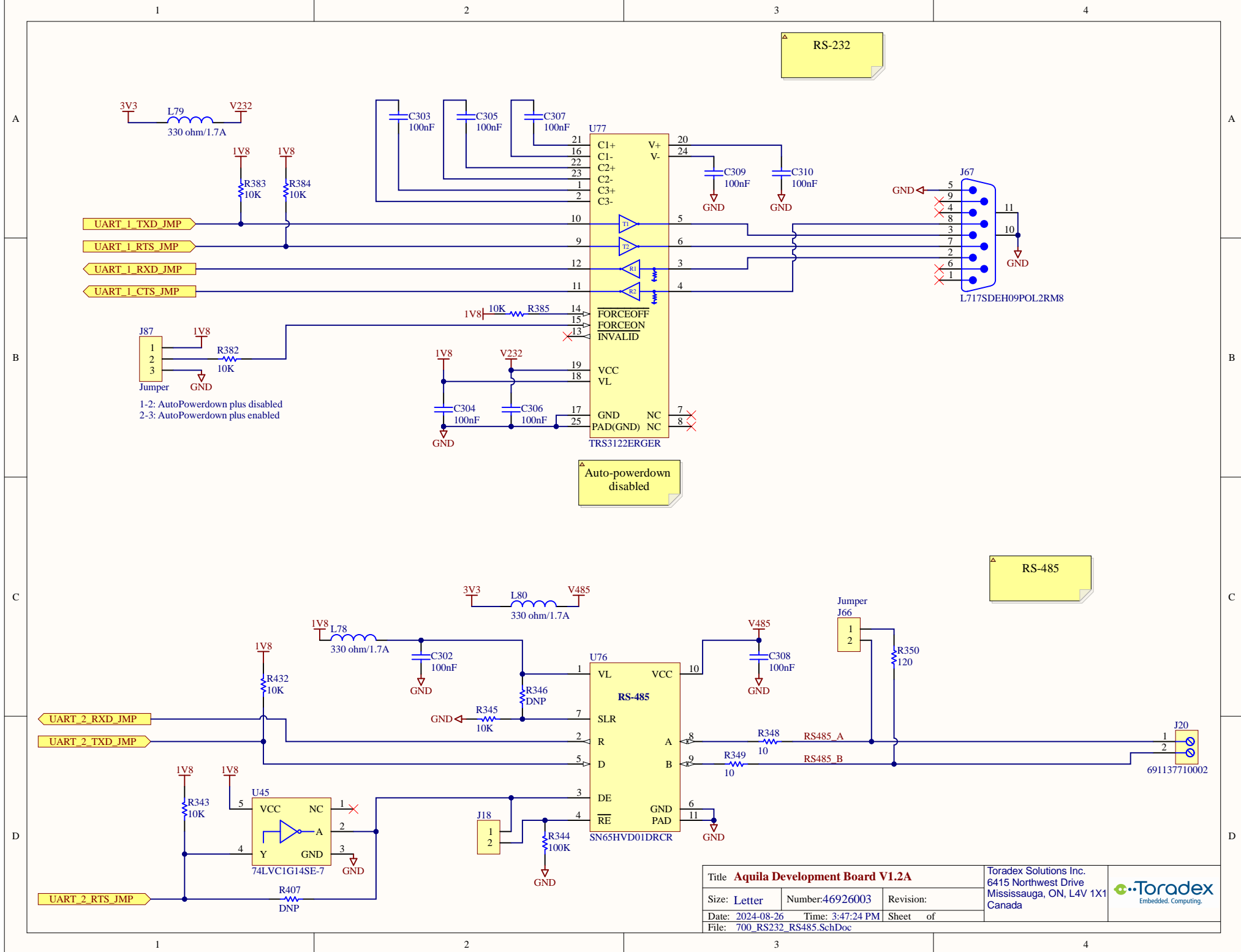
Audio Codec and Amplifier



Peripherals







3V3 L79 V232
330 ohm/1.7A

UART_1_TXD_JMP
UART_1_RTS_JMP
UART_1_RXD_JMP
UART_1_CTS_JMP

J87
1 2 3
Jumper
1-2: AutoPowerdown plus disabled
2-3: AutoPowerdown plus enabled

Auto-powerdown disabled

RS-232

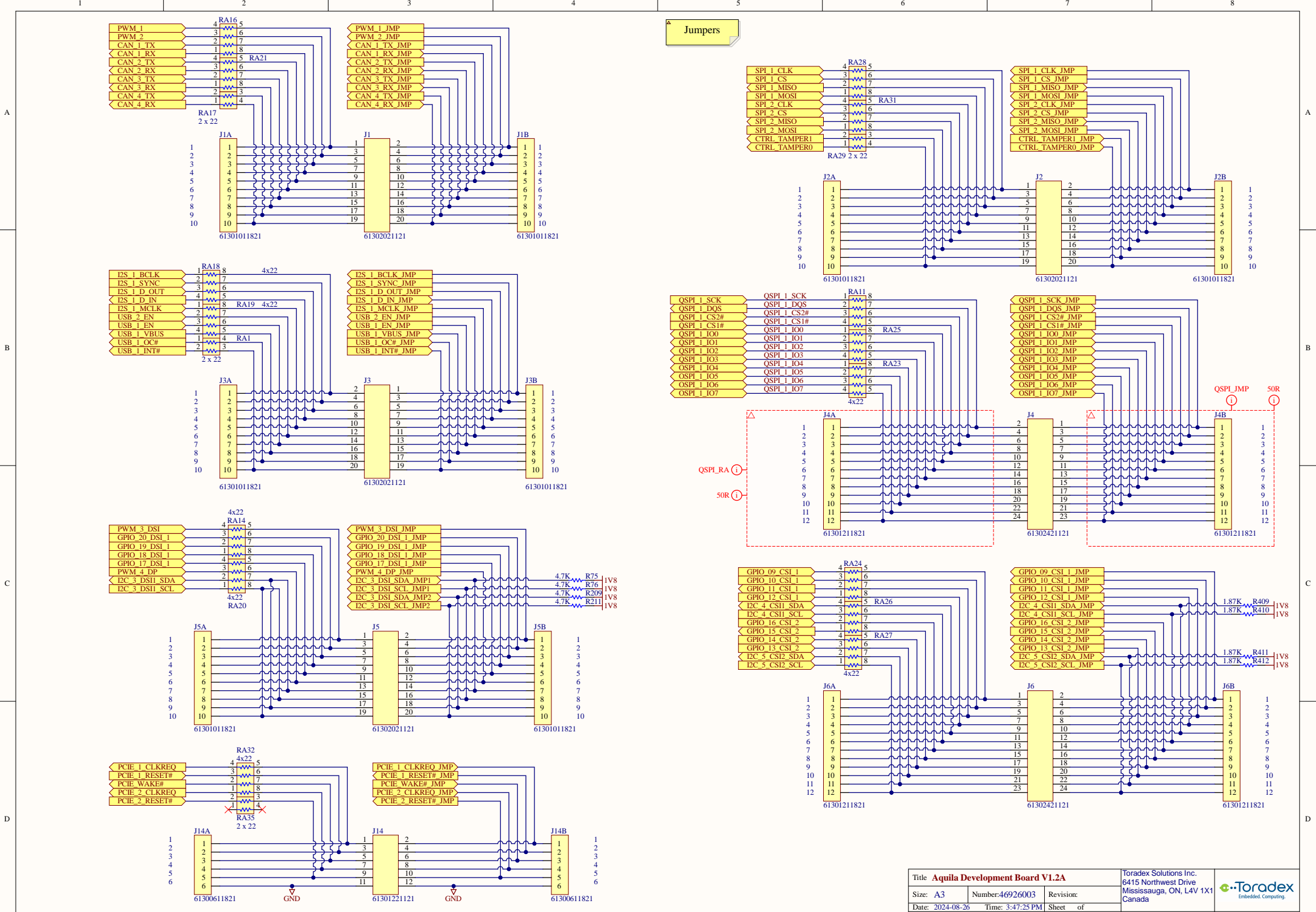
RS-485

UART_2_RXD_JMP

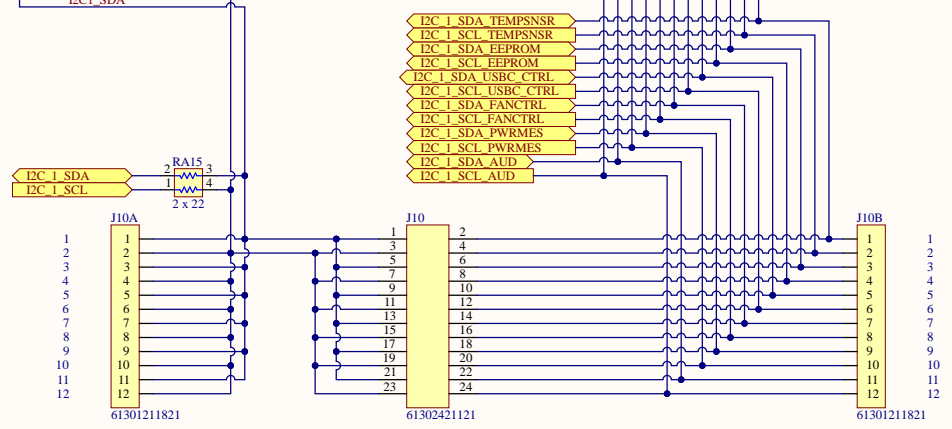
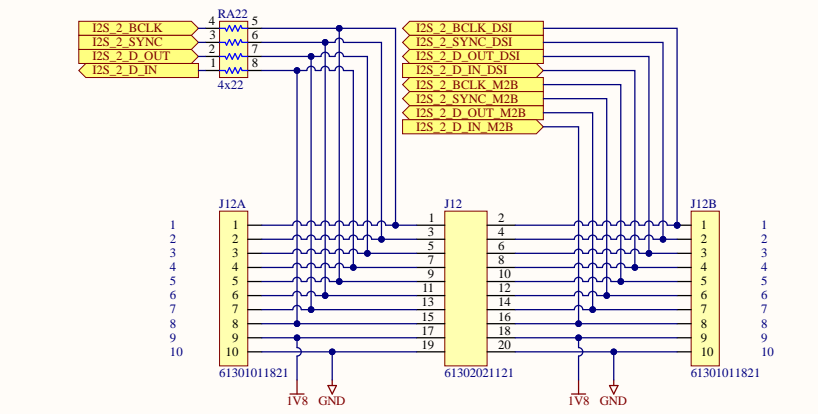
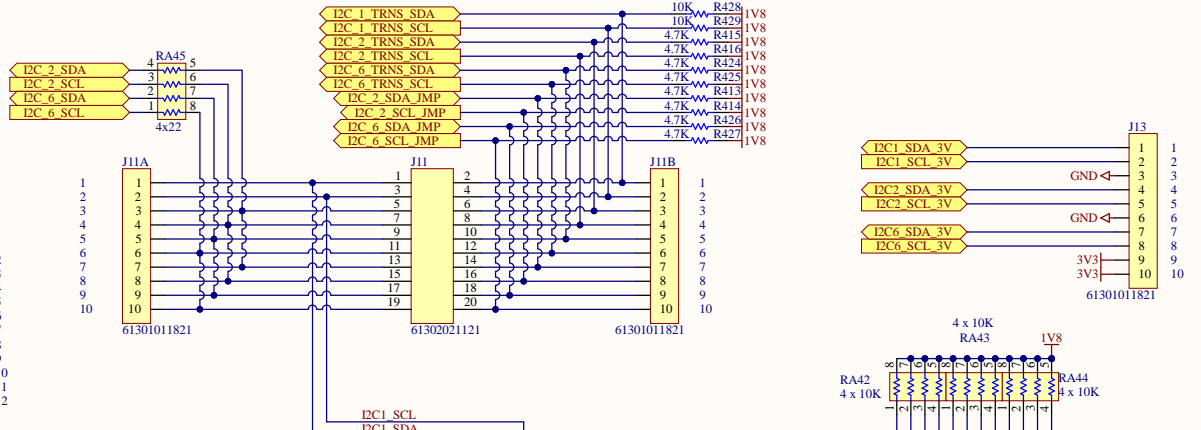
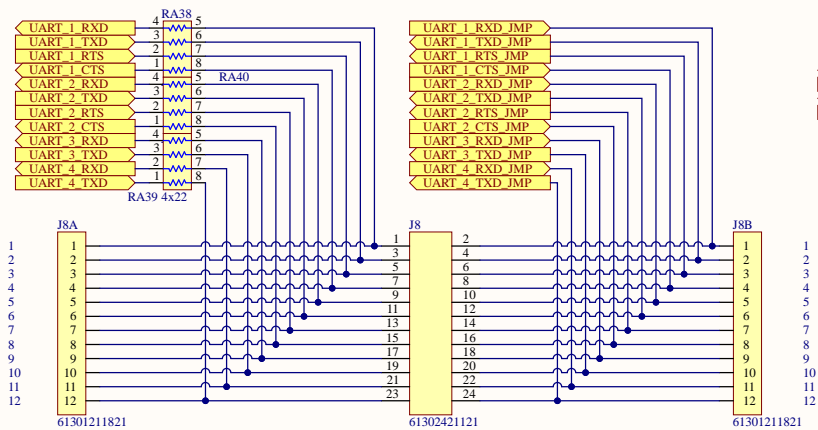
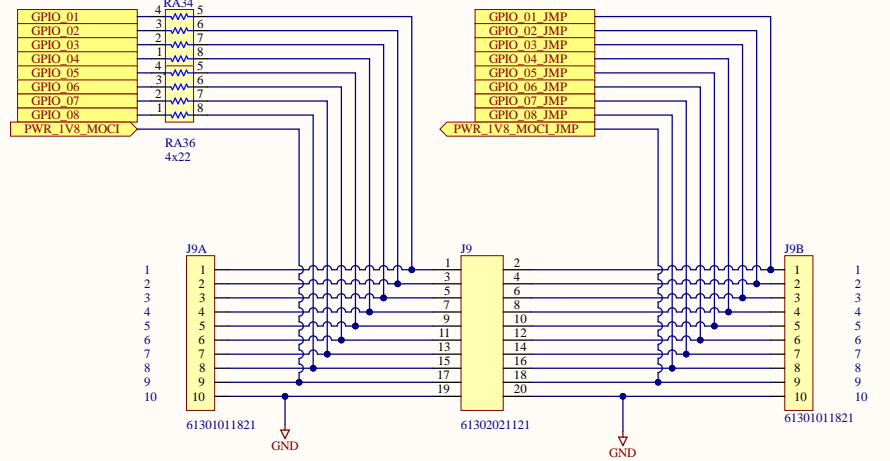
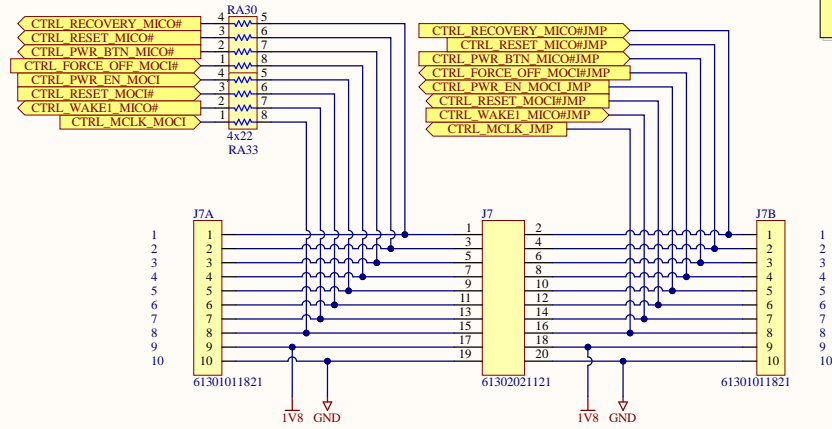
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UART_2_RTS_JMP

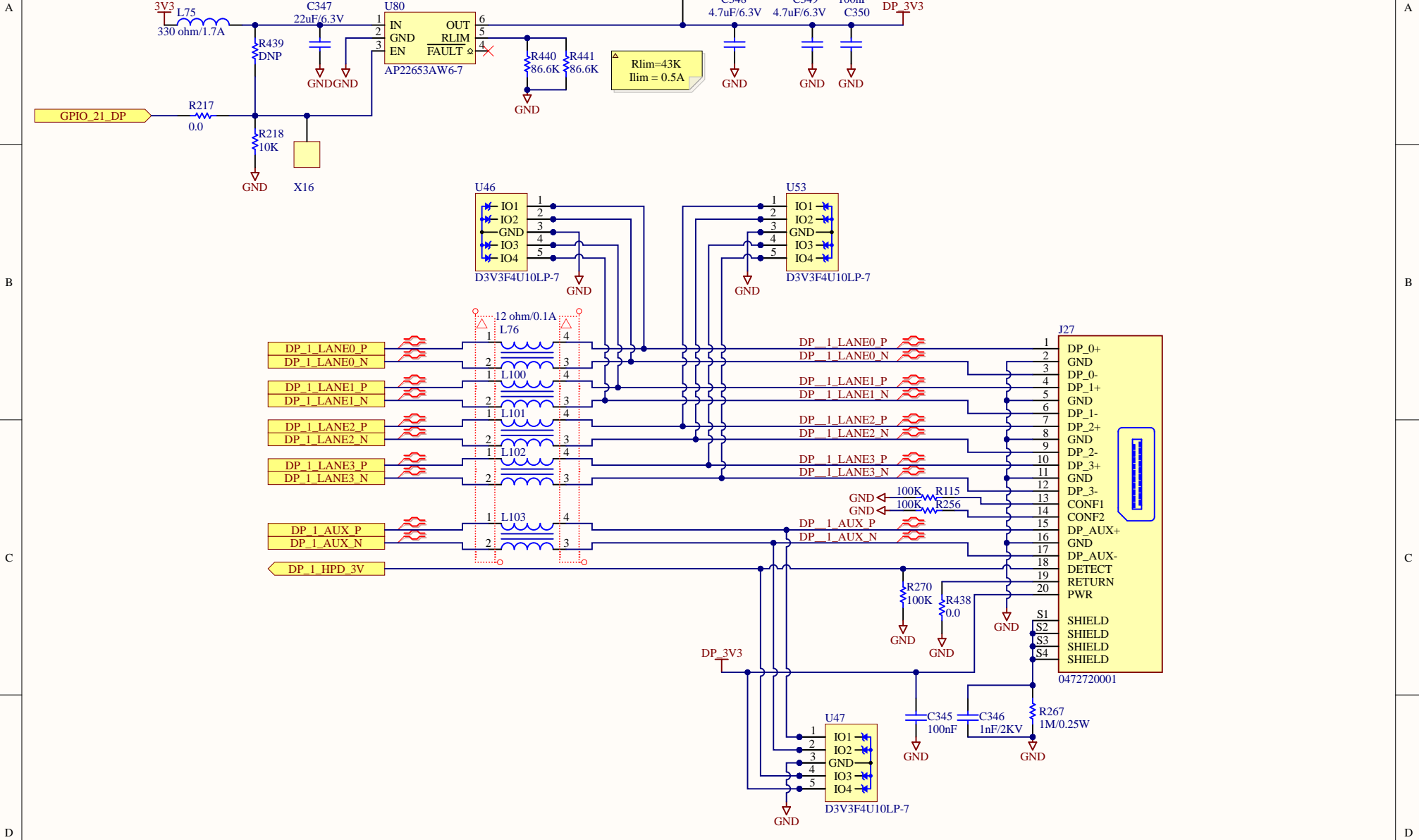
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Jumpers



Display Port



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