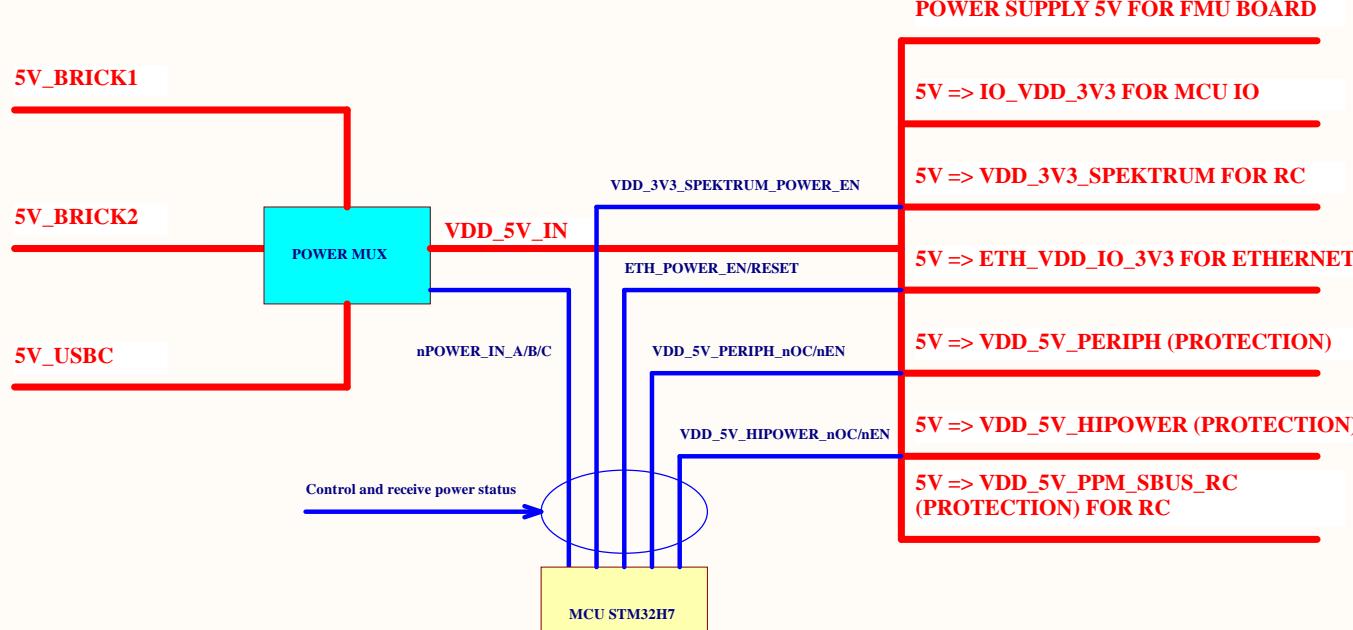


BASE_BOARD

DRAFT

VERSION 1.0
4/18/2025

POWER IO DISTRIBUTION



Designator
BASE_IO_SIGNAL_OVERVIEW.SchDoc

Designator
BASE_CONNECTION.SchDoc

Note

- Thiết kế dựa trên schematic Base Board RC05 và tài liệu về jetson base board pishhawk.
- Thiết kế dùng để đầy đủ PORT như Jetson base board pishhawk.
- Thiết kế phần Jetson dựa theo tài liệu dev-kit và design guide mới nhất.
- Sử dụng và bổ sung phần nguồn Jetson: bảo vệ nguồn, super cap, logic bắt/tắt nguồn, IC giám sát nguồn.
- Bộ USB Hub và USB controller vi chí sử dụng 2 cổng USB 3.2 Gen 2x1, 2 cổng USB 2.0 và tách cổng USB recovery riêng.
- Lại bỏ các thành phần không cần thiết từ thiết kế cũa Dev kit như: M2-Key(B), M2-Key(E), Display Port, MCU for Power up.

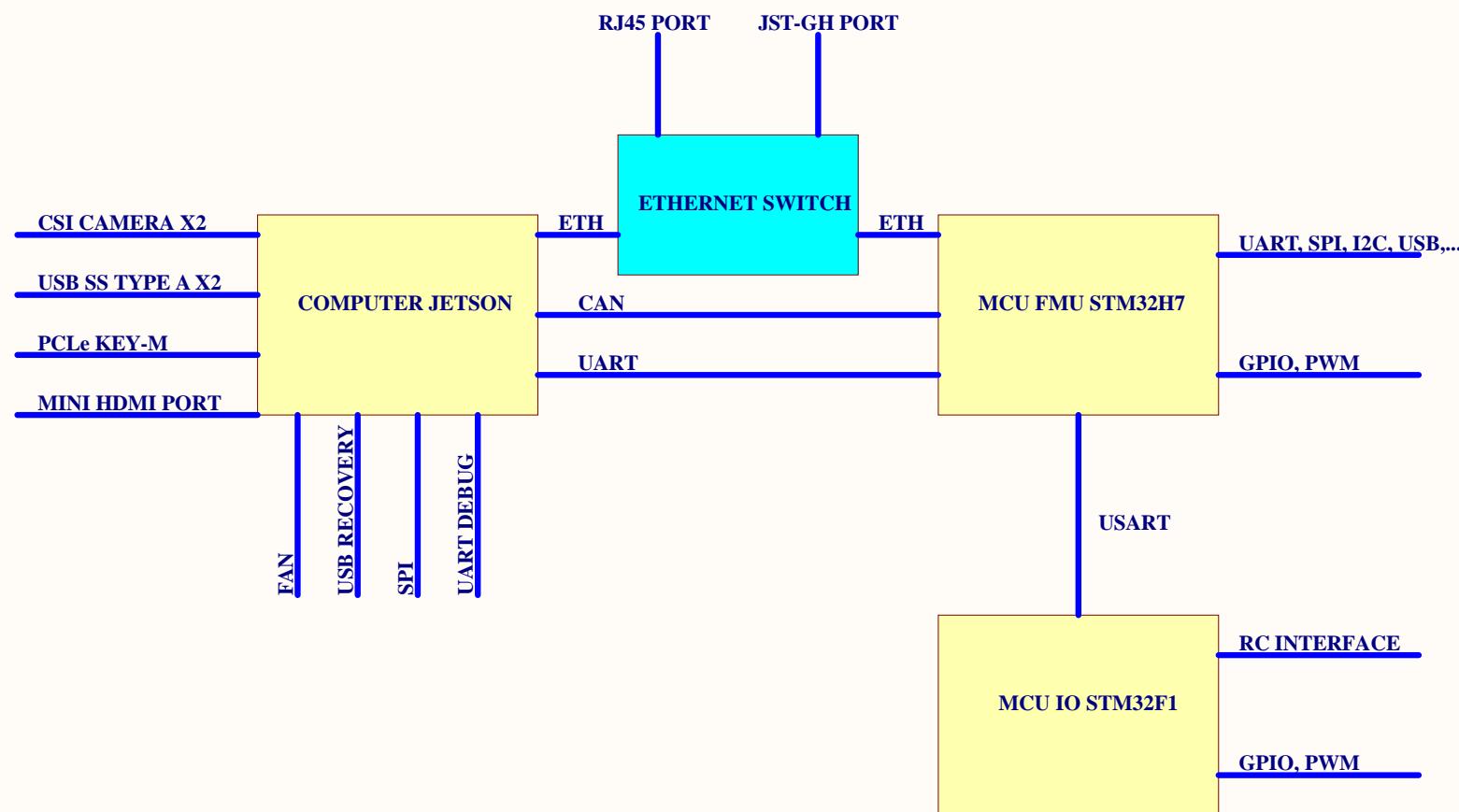
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Size	Number	Revision
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Date:	4/18/2025	Sheet of 1 / 23
File:	C:\Users\...\BASE_Overview.SchDoc	Drawn By: Le Hieu

A

A

BASE SIGNAL CONNECTION



D

D

Title BASE_BOARD

Size	Number	Revision
A		1.0
Date:	4/18/2025	Sheet of 2 / 19
File:	C:\Users\...\BASE_IO_SIGNAL_OVERVIEW	Le Hieu

BASE BOARD CONNECTION

A

A

B

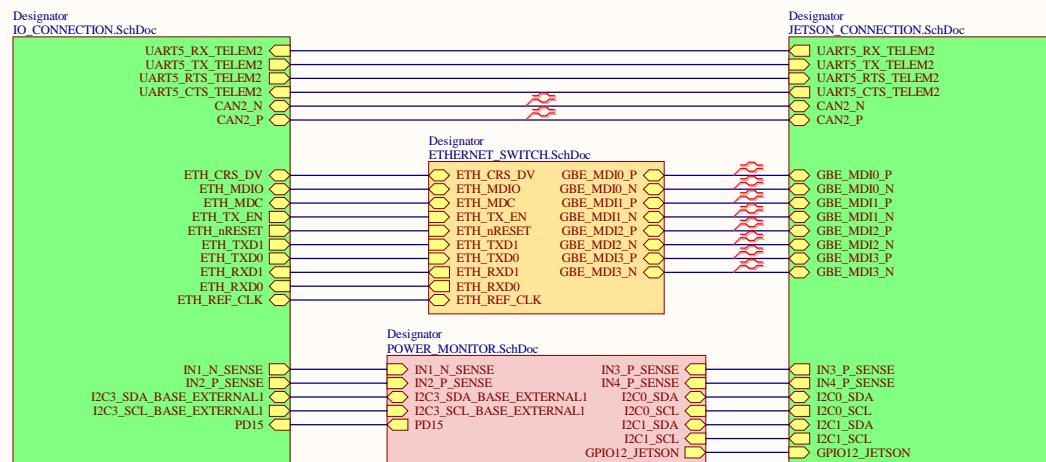
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C

C

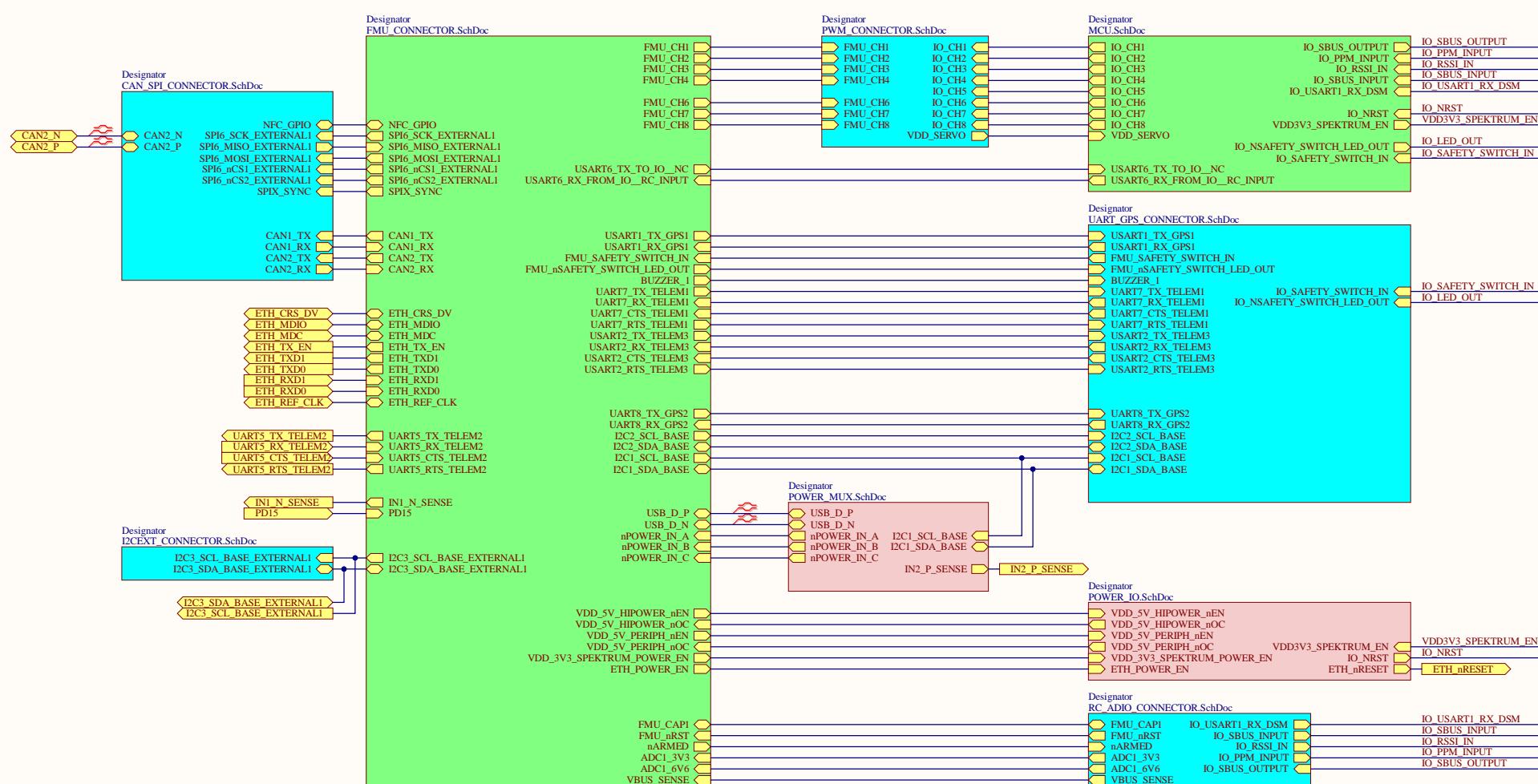
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D



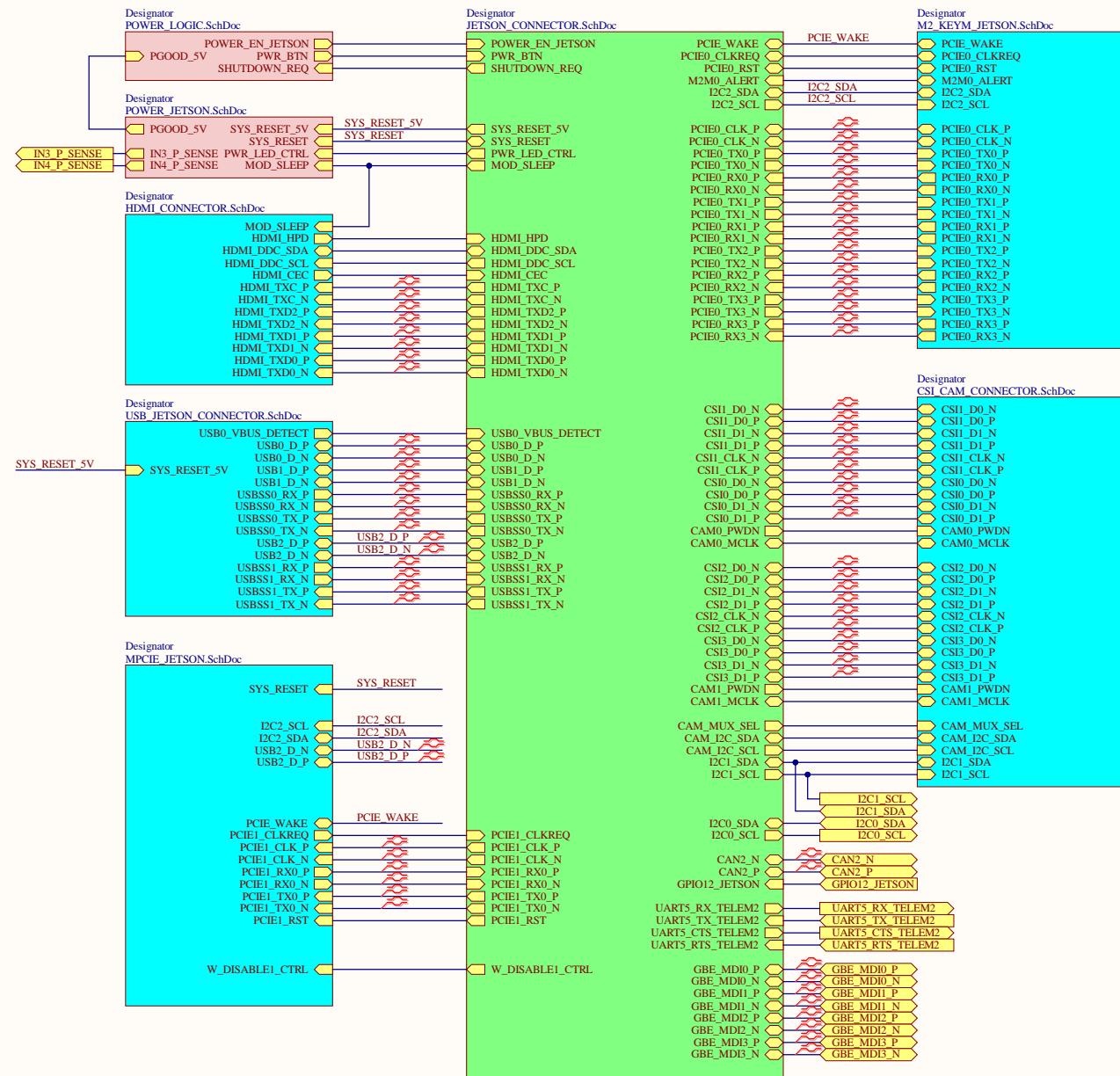
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IO CONNECTION



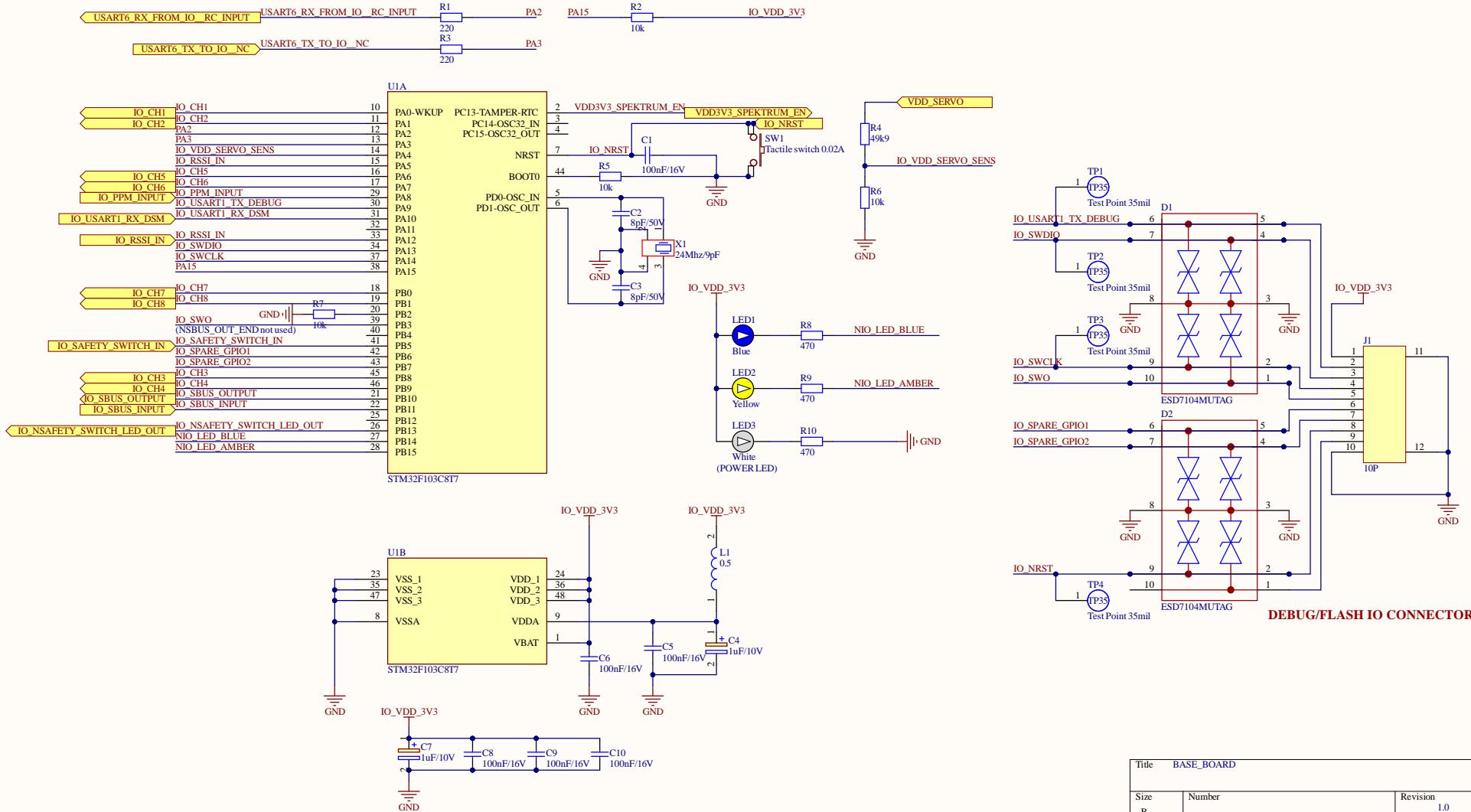
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JETSON CONNECTION



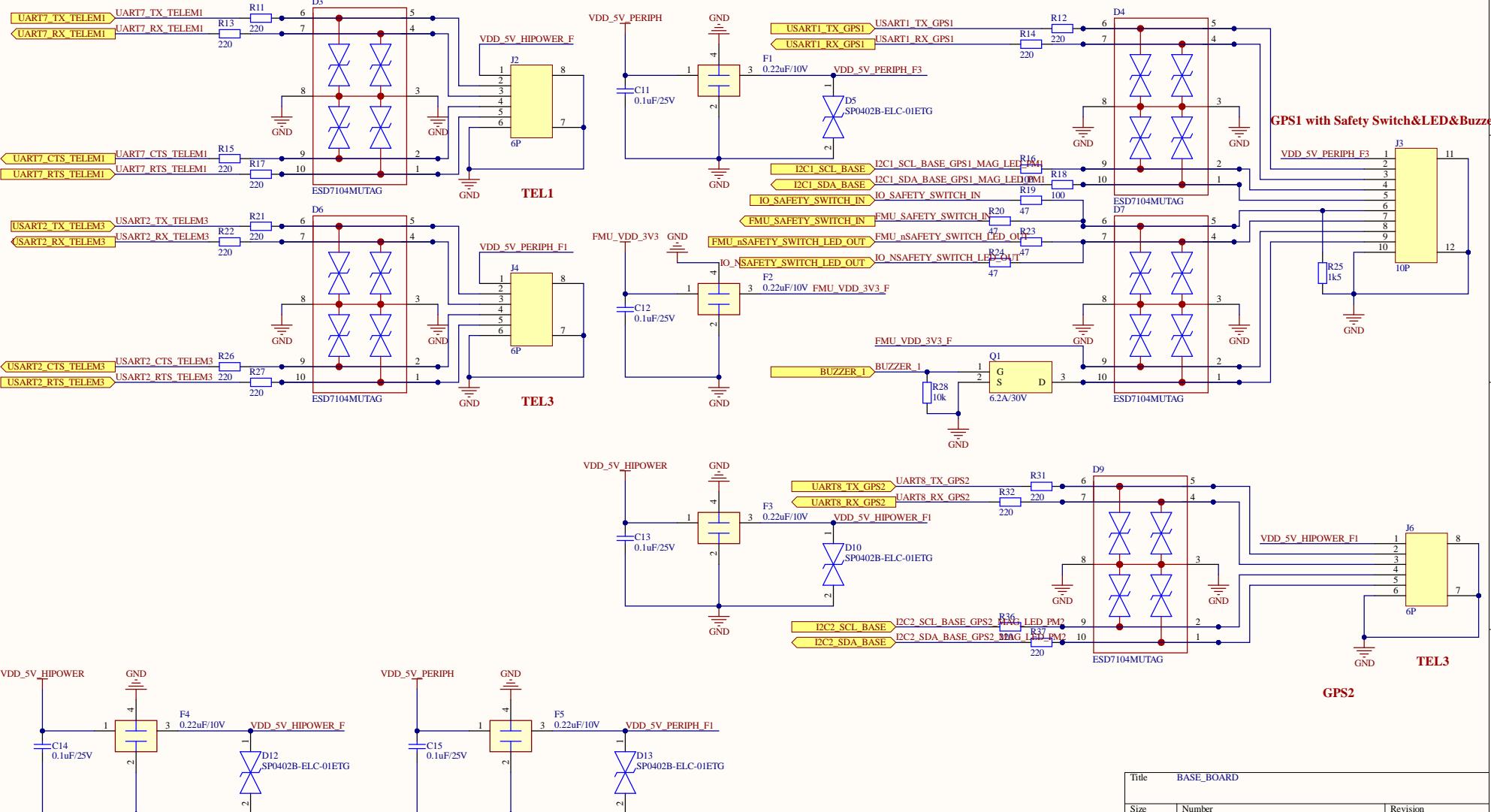
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MCU



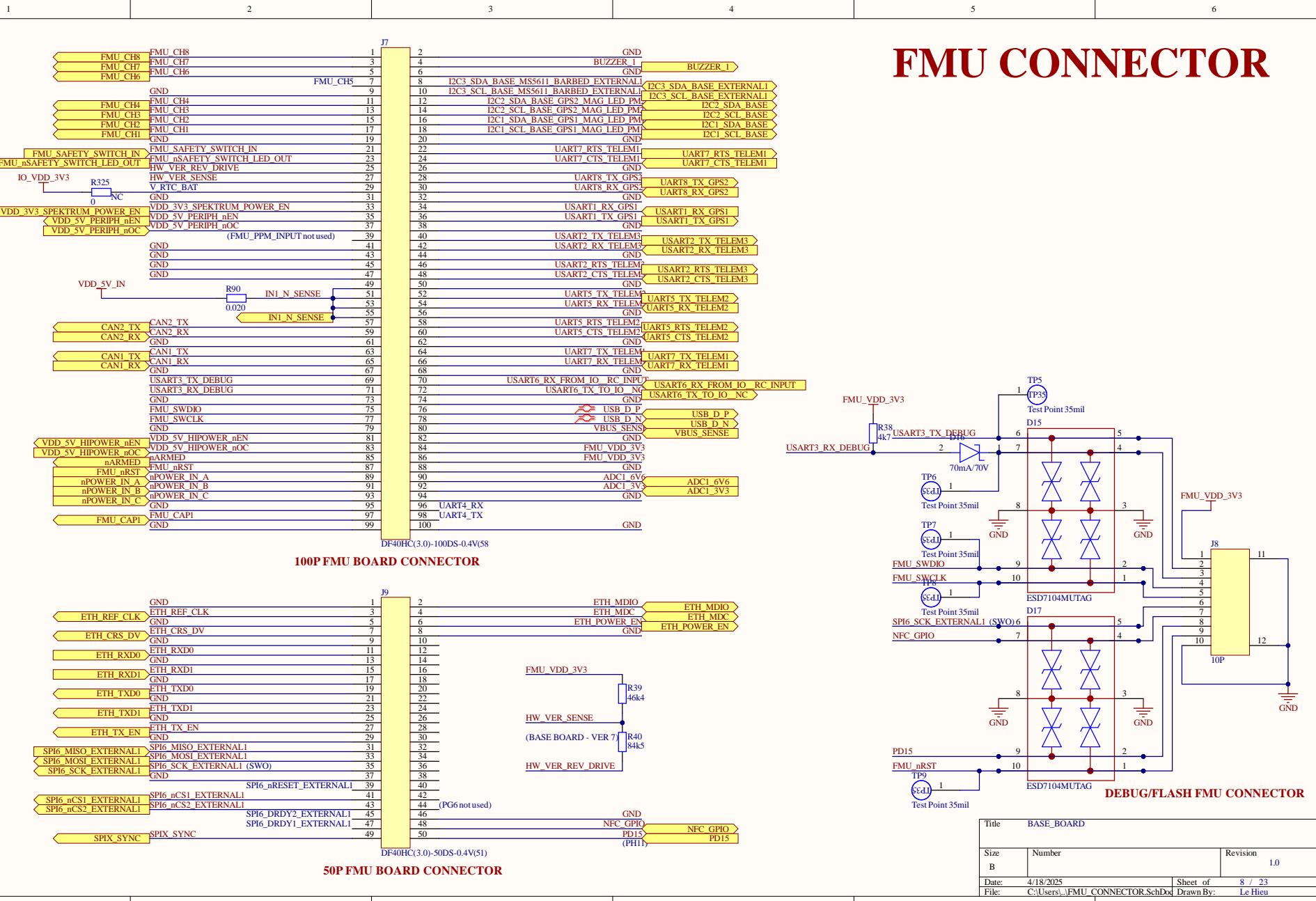
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Size	Number	Revision
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UART GPS CONNECTOR

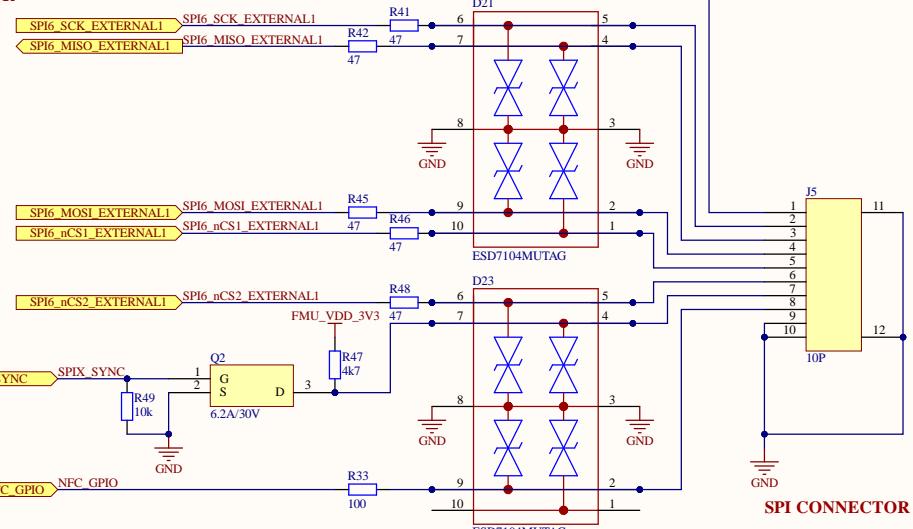
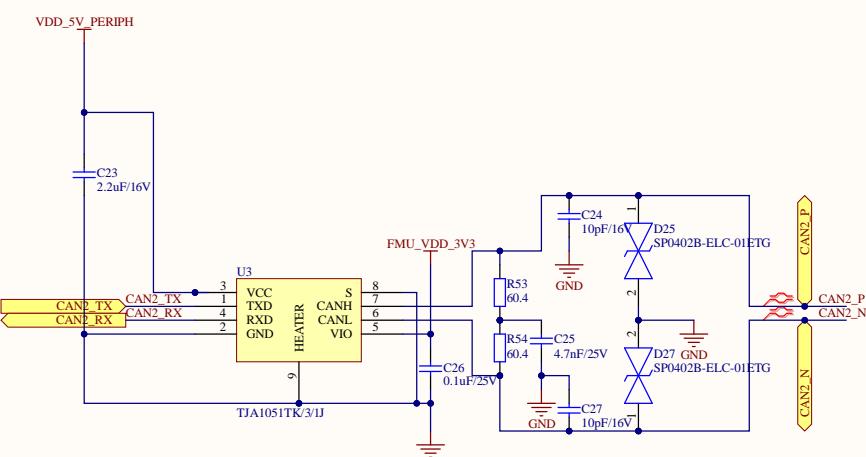
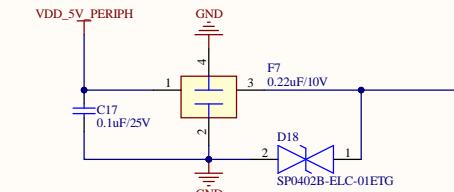
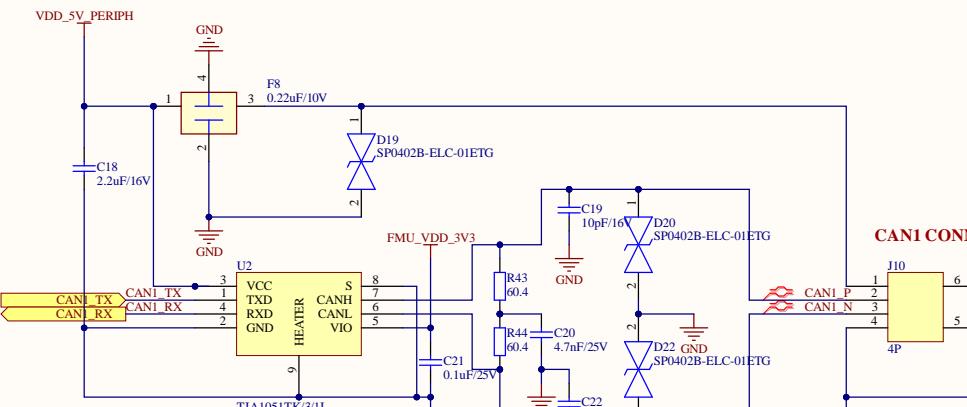


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FMU CONNECTOR

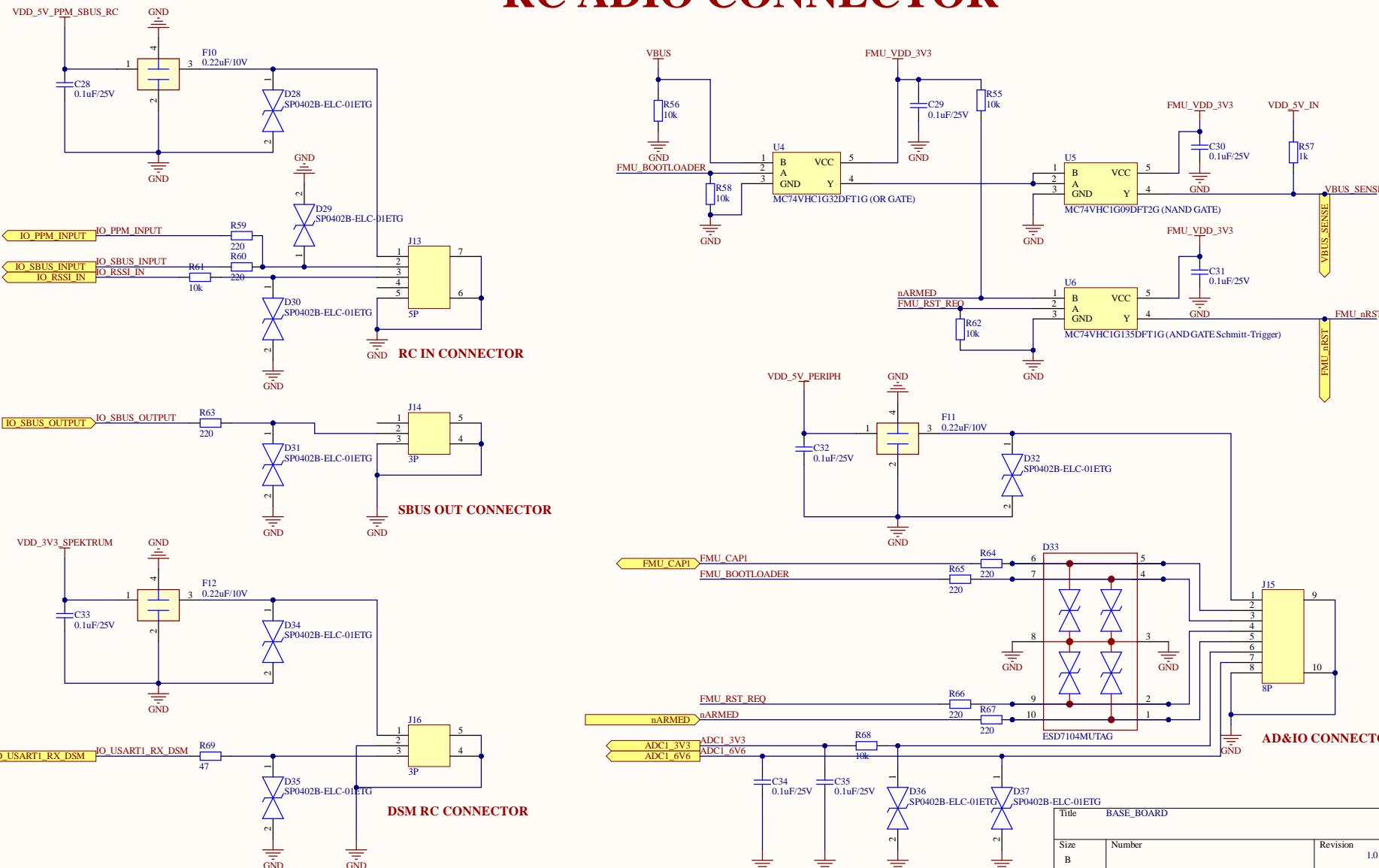


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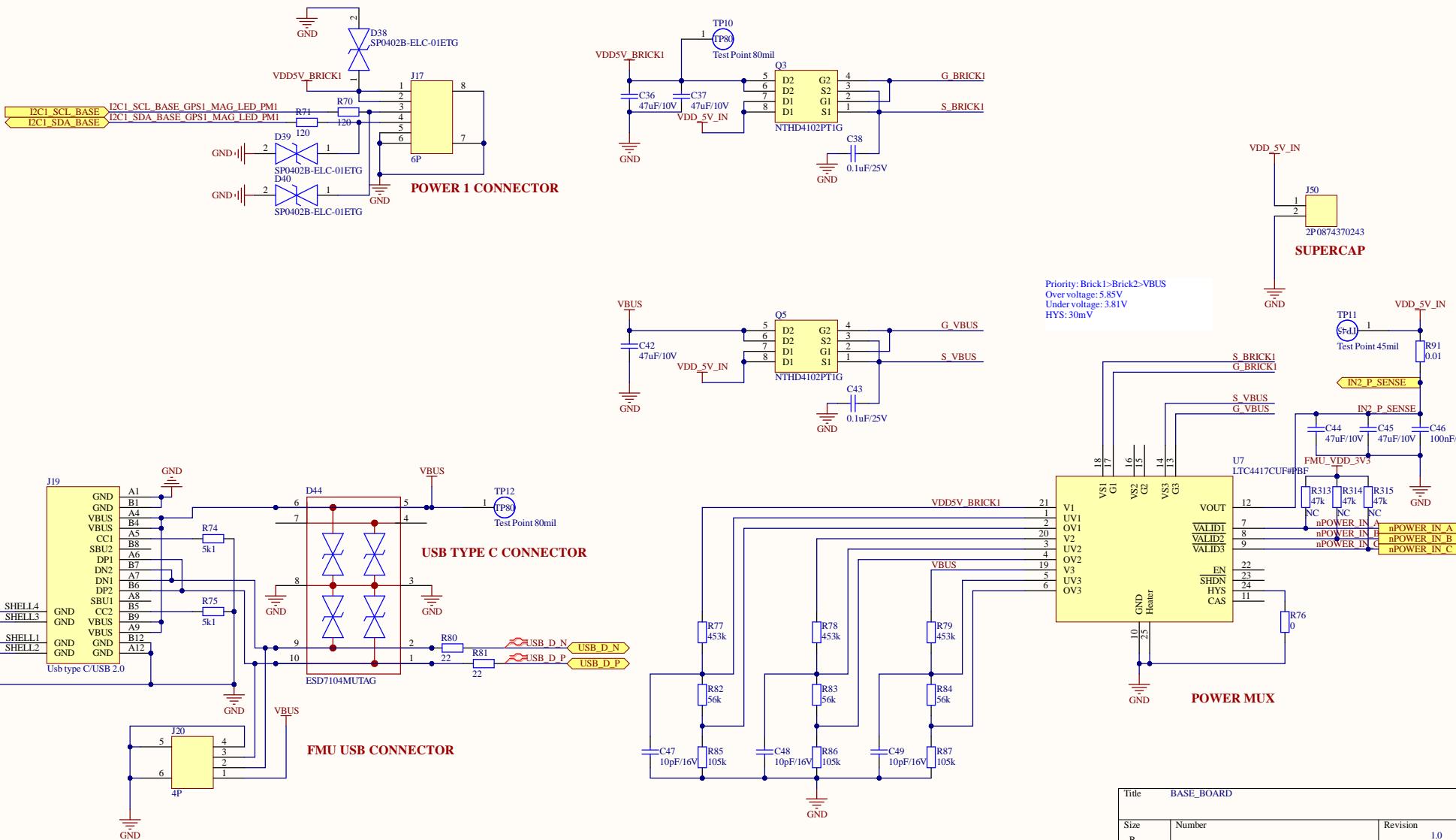
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Size B	Number	Revision 1.0
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RC ADIO CONNECTOR



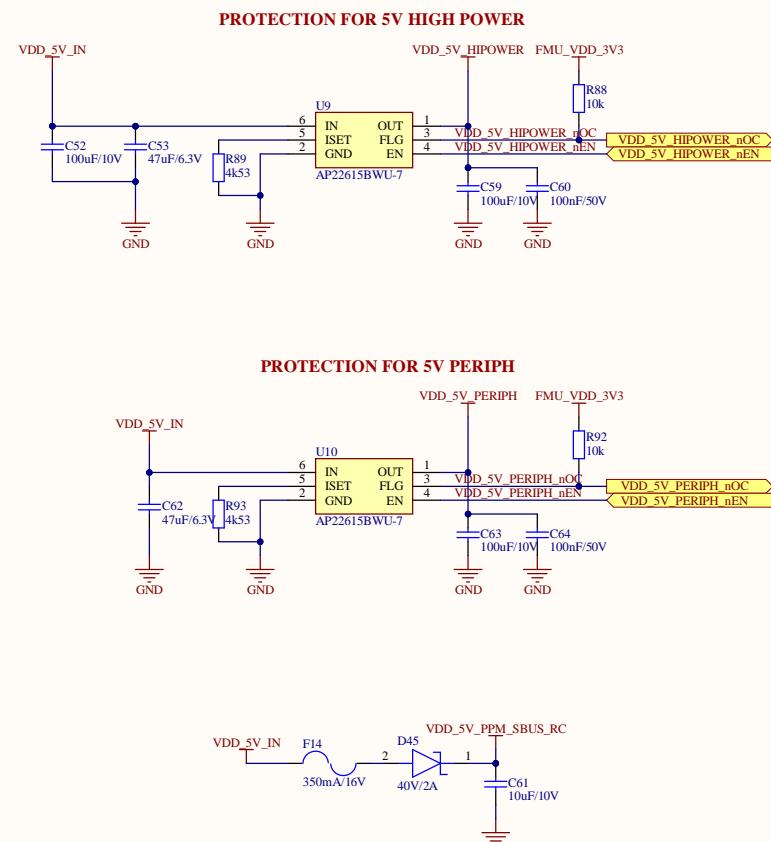
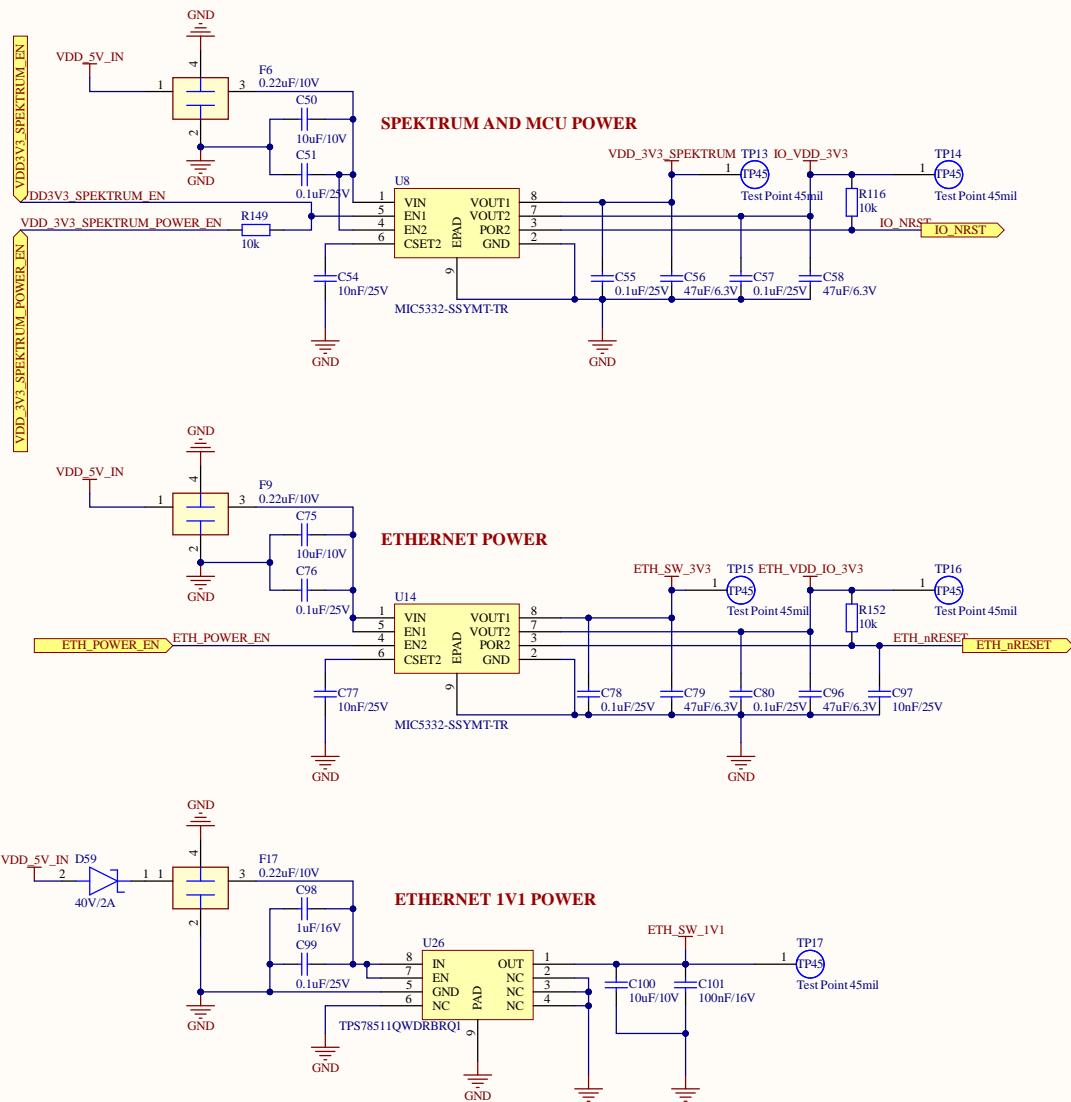
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Size	Number	Revision
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Date: 4/18/2025	Sheet of 10 / 23	Download By: Le Hieu
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POWER MUX



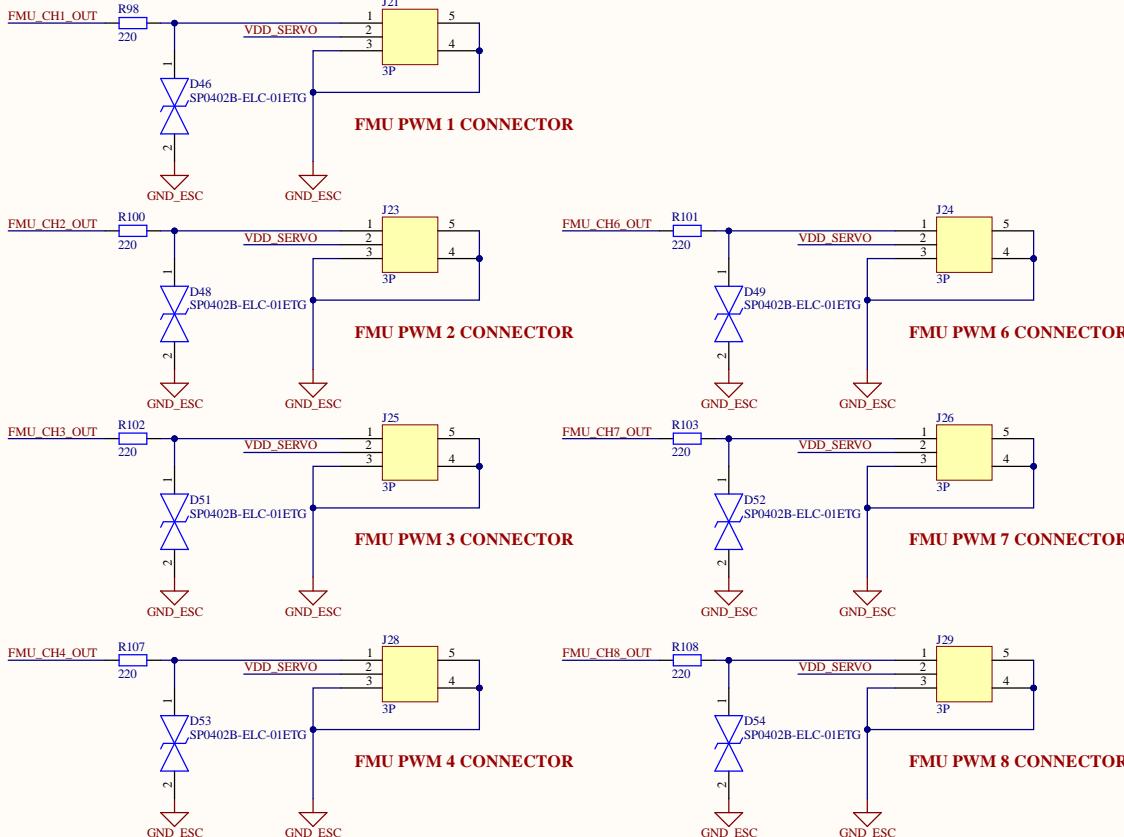
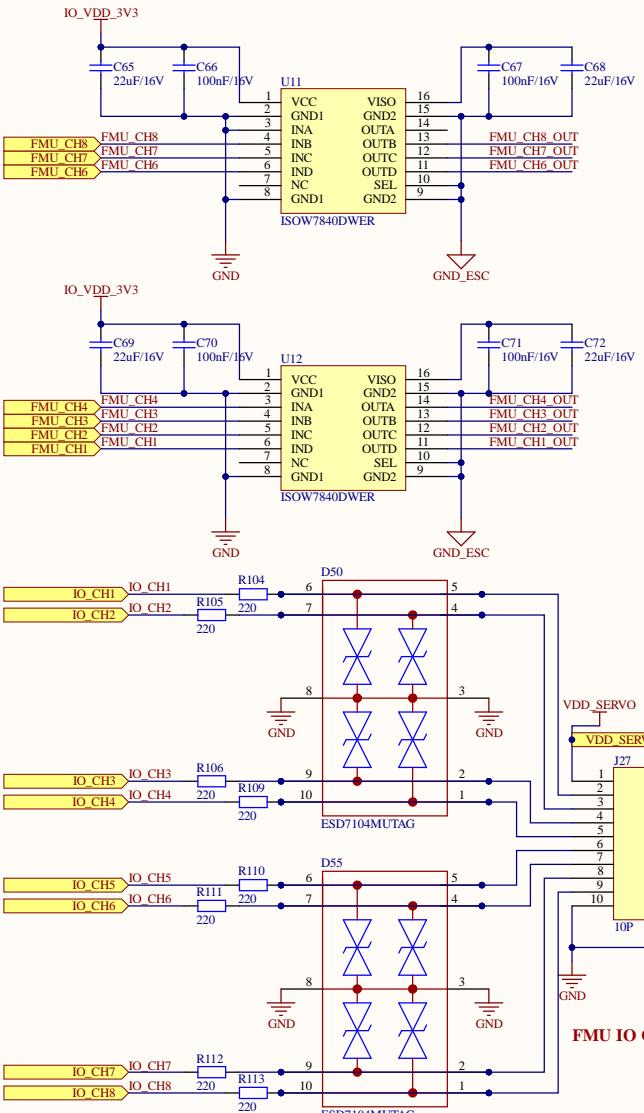
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Size	Number	Revision
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POWER IO



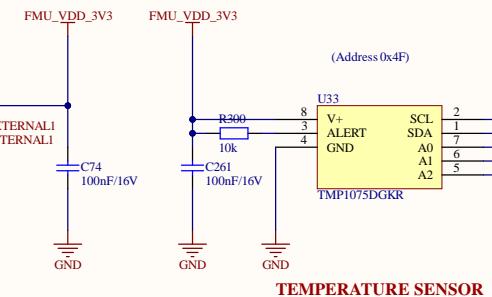
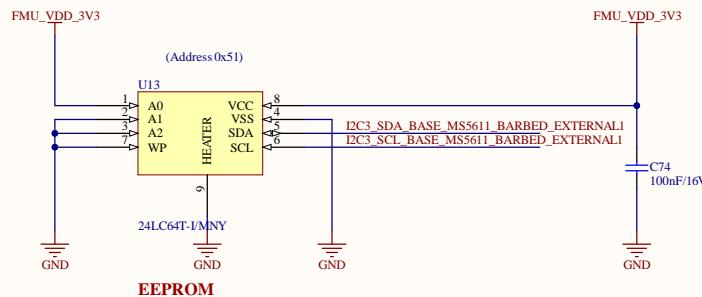
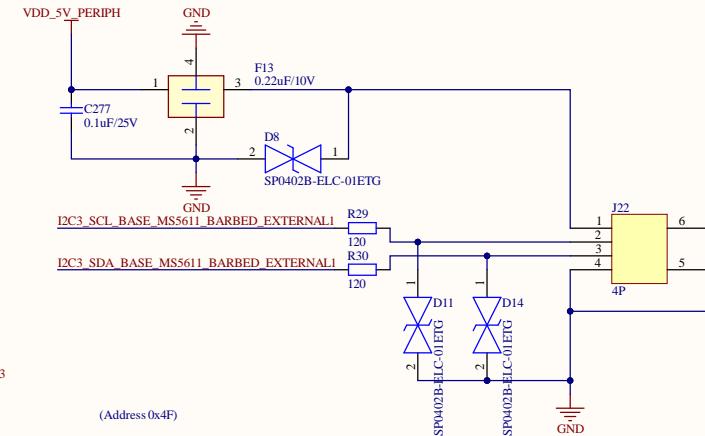
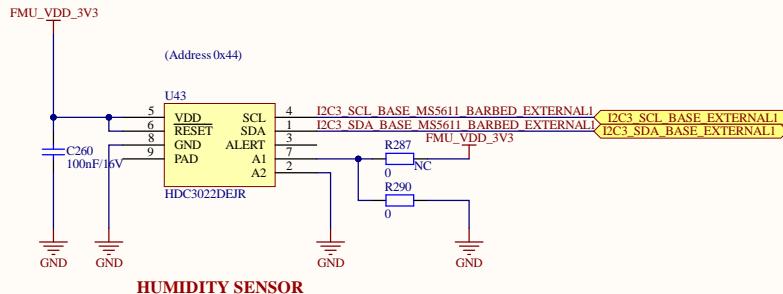
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Size	Number	Revision	
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File:	C:\Users\1\POWER_IO.SchDoc	Drawn By:	Le Hieu

PWM CONNECTOR



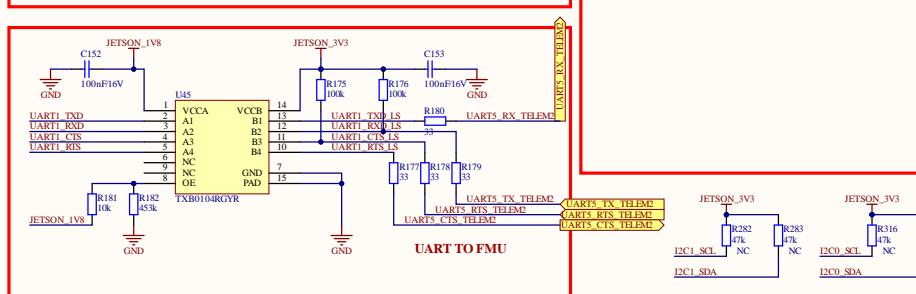
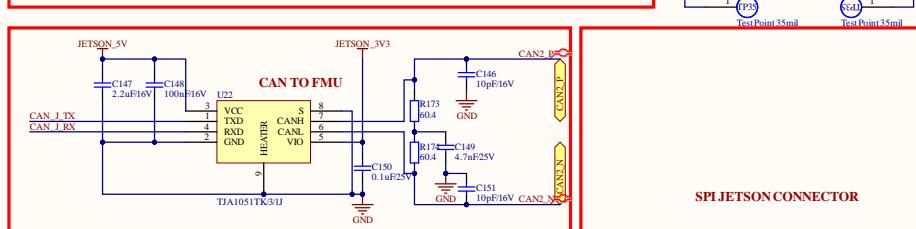
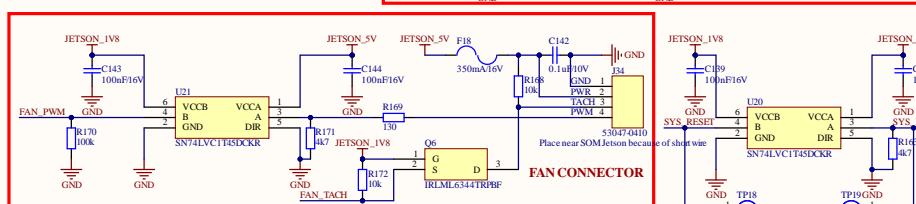
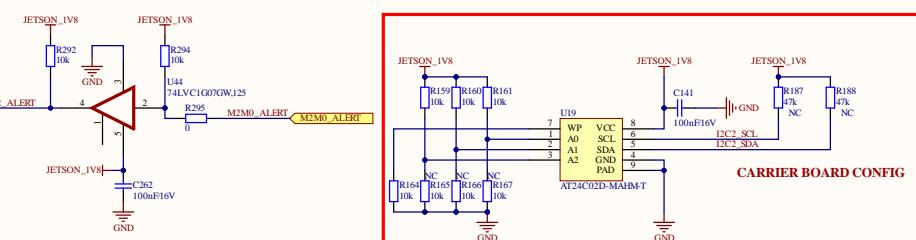
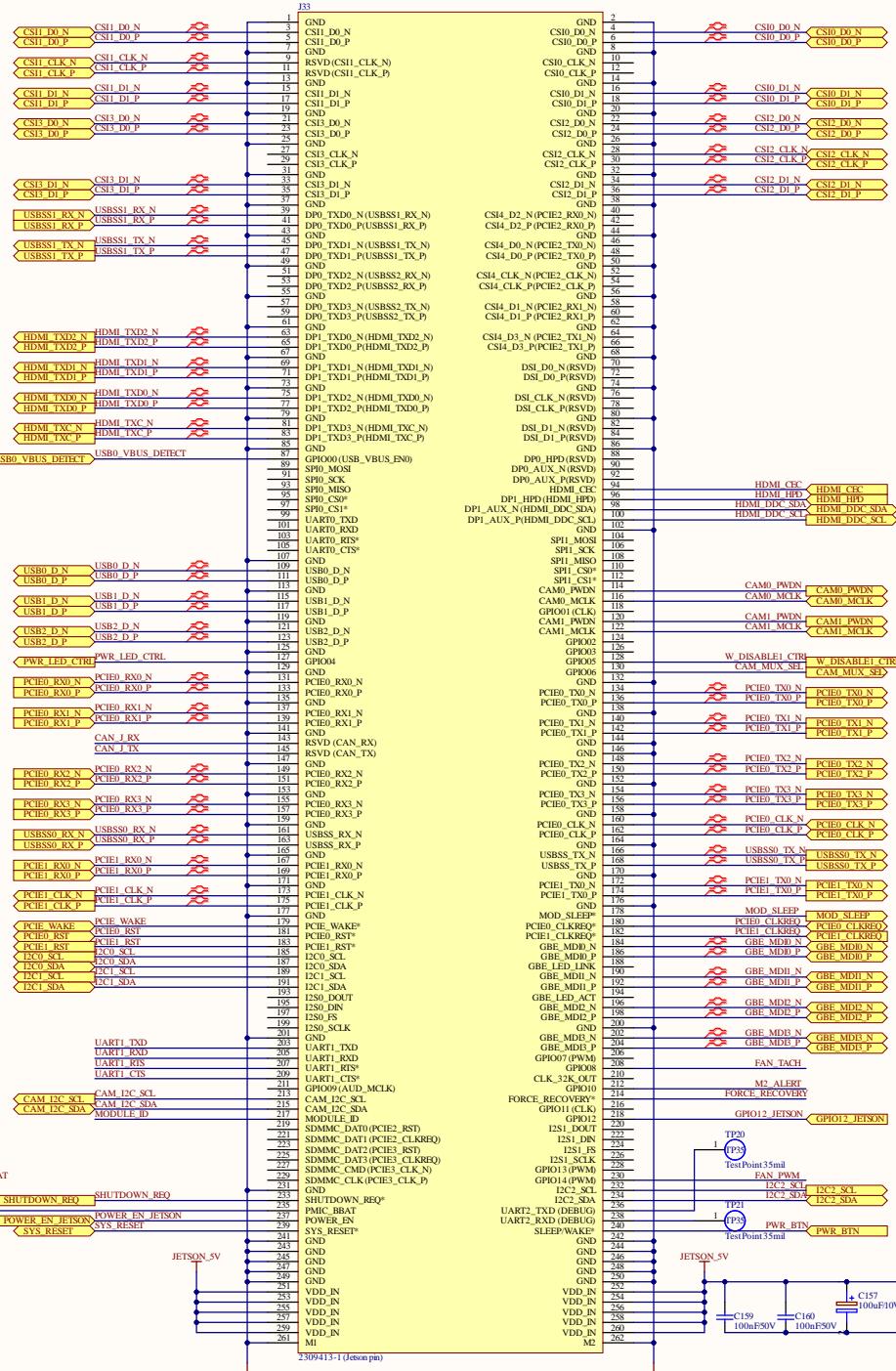
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Size	Number	Revision
B		1.0
Date: 4/18/2025	Sheet of 13 / 23	Drawn By: Le Hieu
File: C:\Users\Le Hieu\Documents\ PWM_CONNECTOR.SchDoc		

I2C EXT CONNECTOR

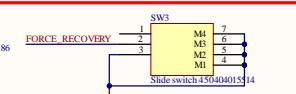


Title BASE_BOARD		
Size B	Number	Revision 1.0
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JETSON CONNECTOR

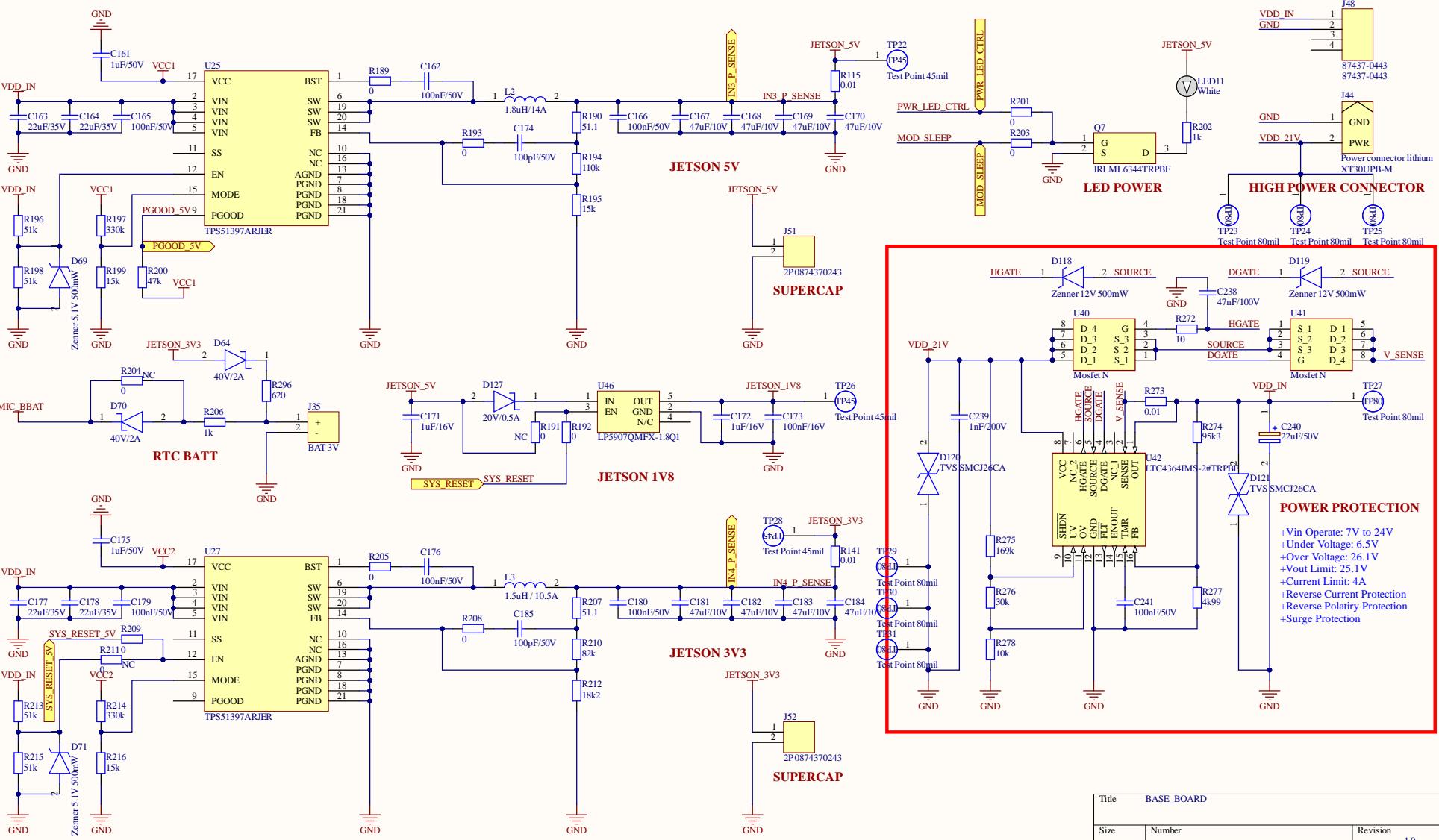


ONLY SUPPORT 5V VDD IN



Title		BASE_BOARD	Revision
Size	Number	1.0	
C			
Date:	4/18/2025	Sheet of	15 / 23
File:	C:\Users\JETSON_CONNECTOR\sch	Drawn By:	LeHieu

POWER JETSON



Title		BASE_BOARD	
Size B	Number	Revision 1.0	
Date:	4/18/2025	Sheet of	16 / 23
File:	C:\Users\POWER_JETSON.SchDoc	Drawn By:	Le Hieu

POWER LOGIC

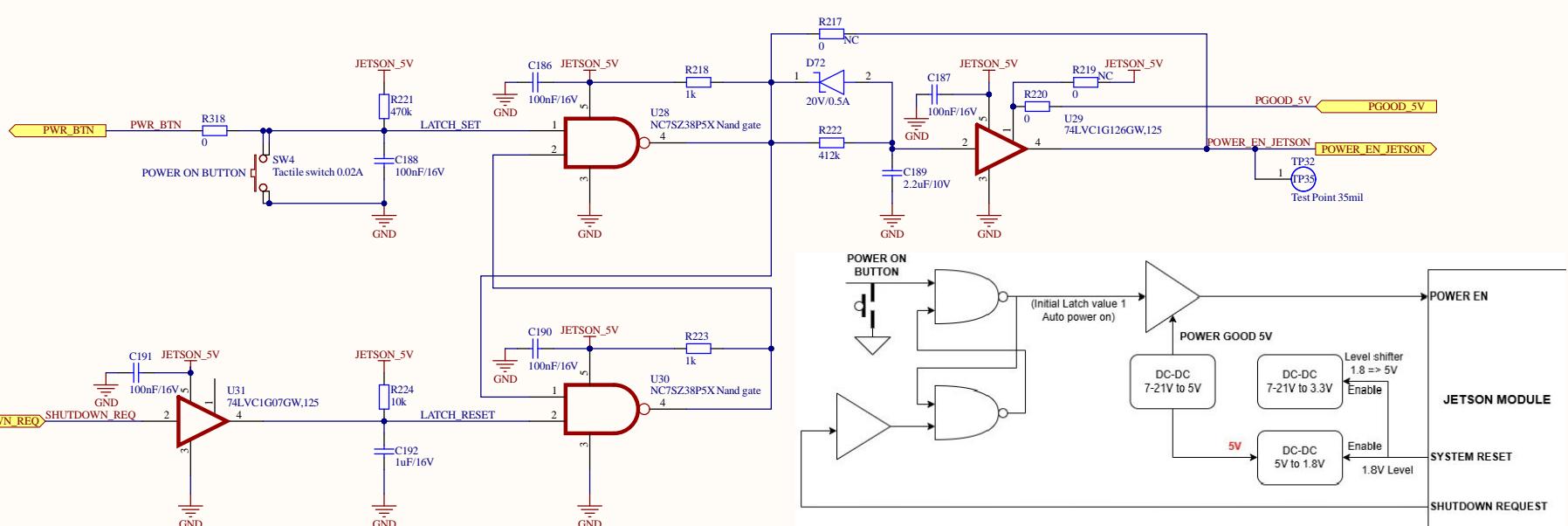
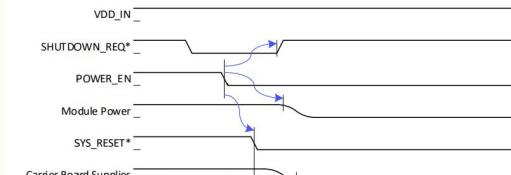
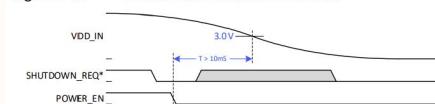


Figure 6-5. Power Down Initiated by SHUTDOWN_REQ* Assertion



Note: SYS_RESET* is driven by the Power Sequencer or PMIC during power down.

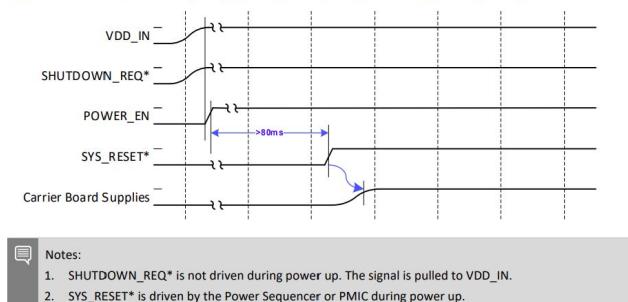
Figure 6-6. Power Down Sudden Power Loss



Note: SHUTDOWN_REQ* must always be serviced by the carrier board to toggle POWER_EN from high to low, even in cases of sudden power loss.

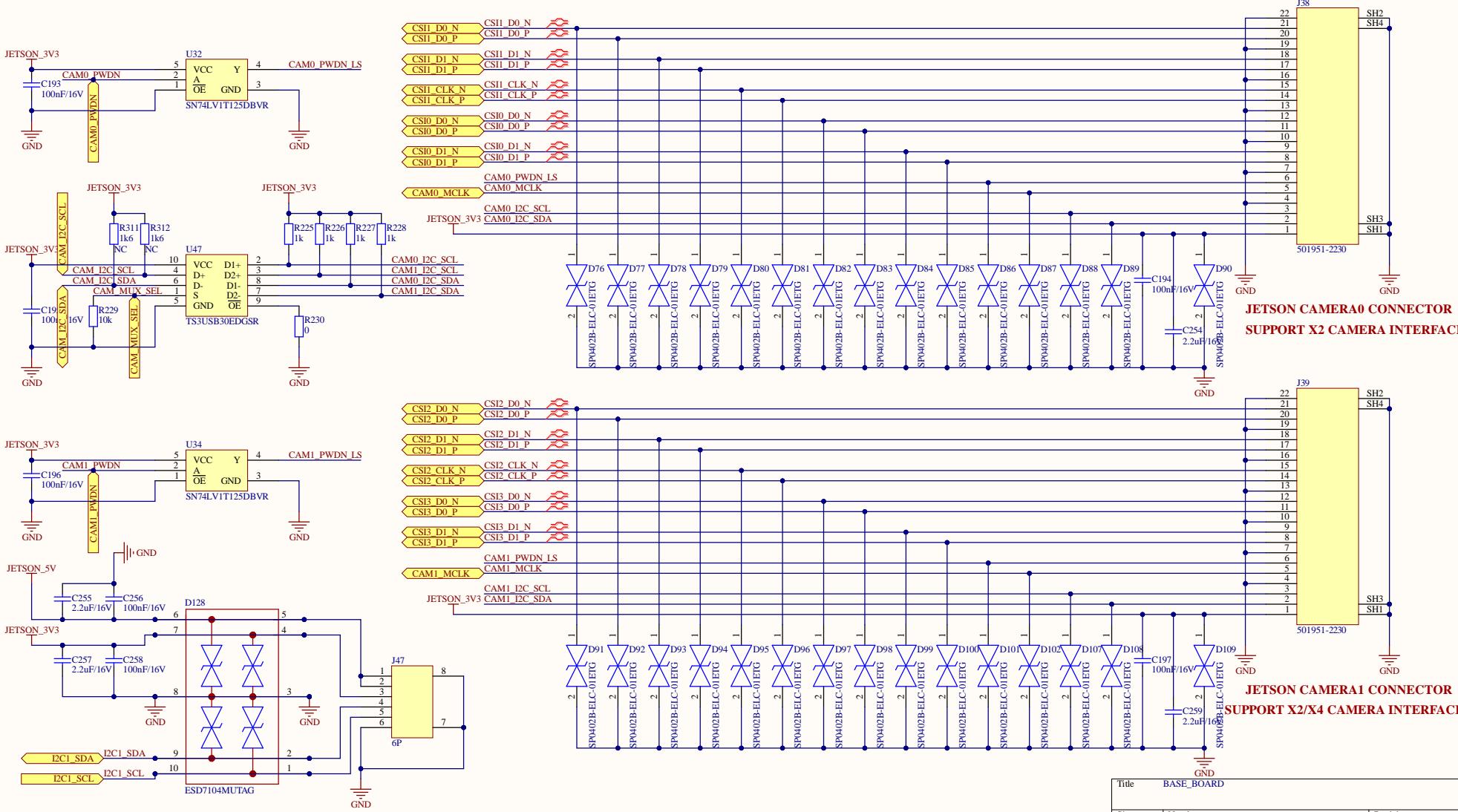
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Size	Number	Revision
B		1.0
Date: 4/18/2025	Sheet of 17 / 23	Drawn By: Le Hieu
File: C:\Users\Le Hieu\POWER_LOGIC.SchDoc		

Figure 6-3. Power Up Sequence No Power Button – Auto Power On



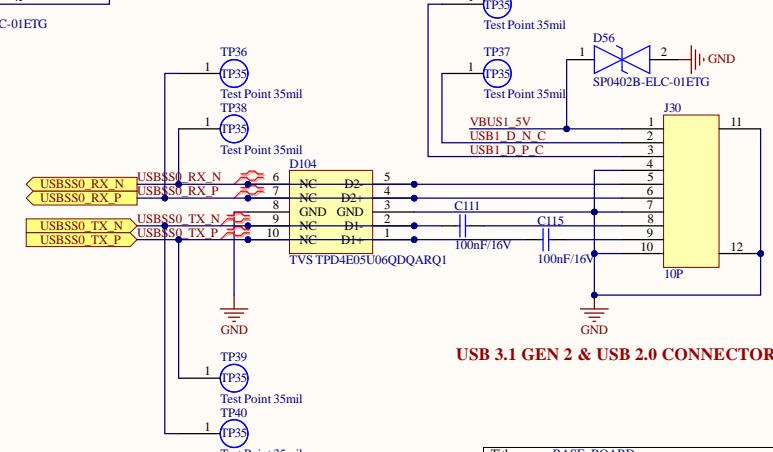
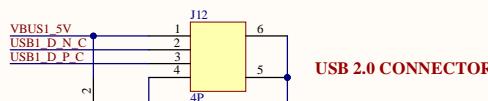
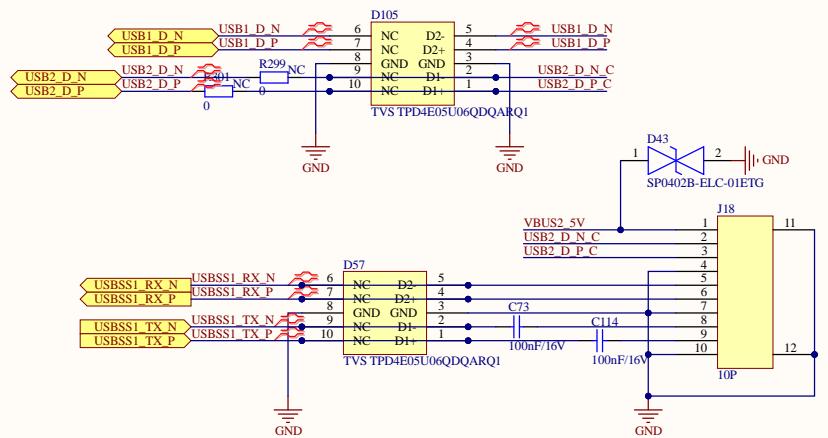
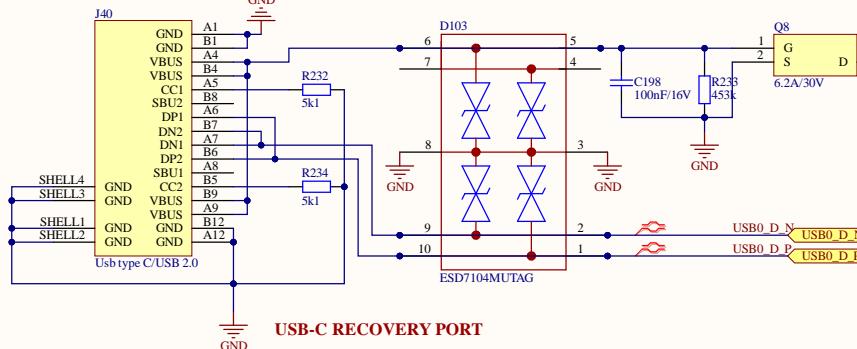
- Notes:
1. SHUTDOWN_REQ* is not driven during power up. The signal is pulled to VDD_IN.
 2. SYS_RESET* is driven by the Power Sequencer or PMIC during power up.

CSI CAM CONNECTOR



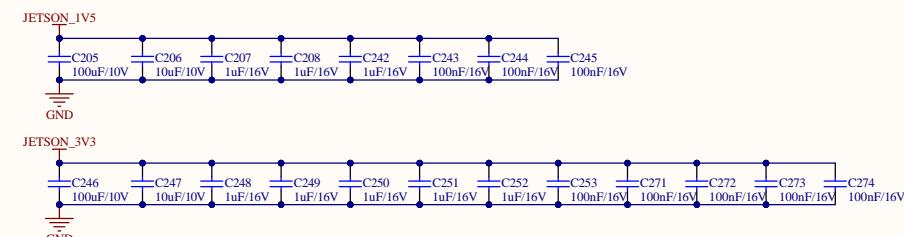
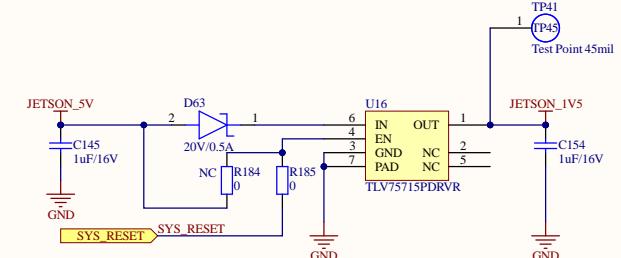
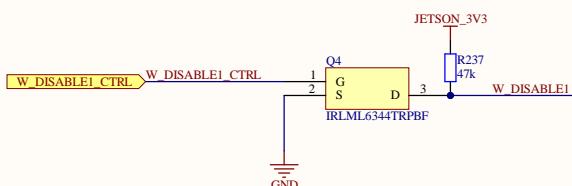
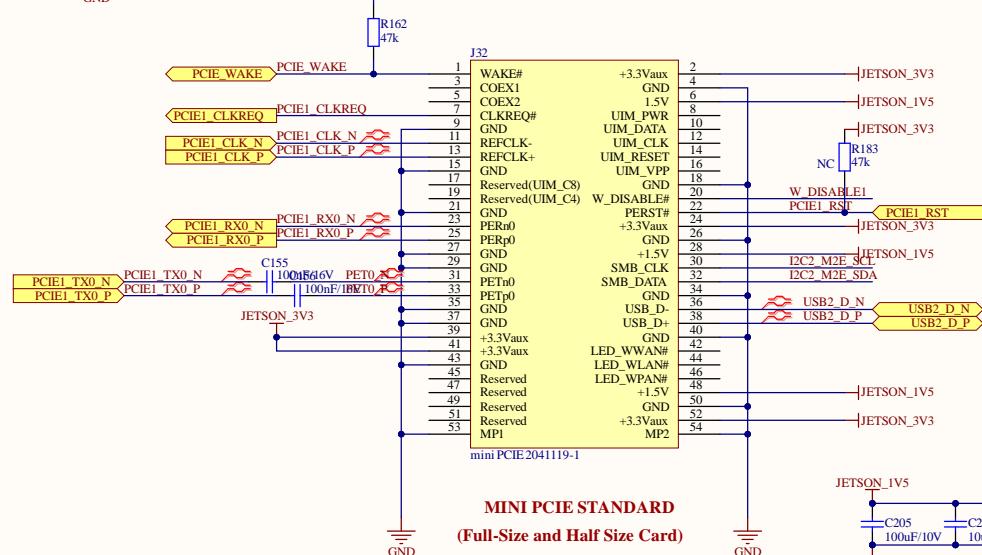
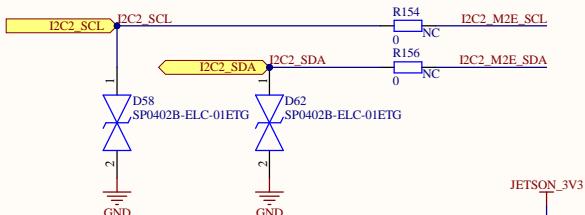
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Size	Number	Revision
B		1.0
Date: 4/18/2025	Sheet of 18/ 23	File: C:\Users\Le Hieu\CSI CAM_CONNECTOR_SchDwnBy: Le Hieu

USB JETSON CONNECTOR



Title		BASE_BOARD	
Size	Number	Revision	
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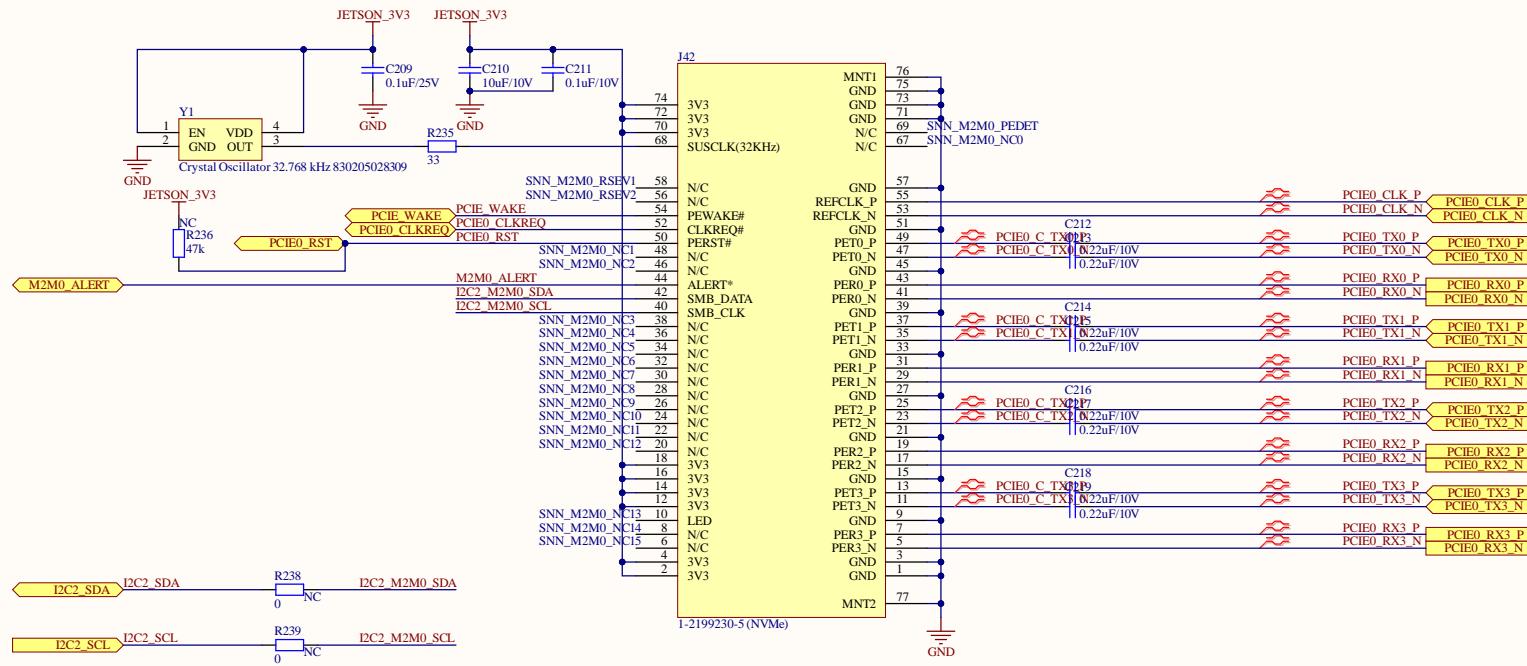
MINI PCIE



Title		BASE_BOARD	
Size B	Number	Revision 1.0	
Date:	4/18/2025	Sheet of	20/ 23
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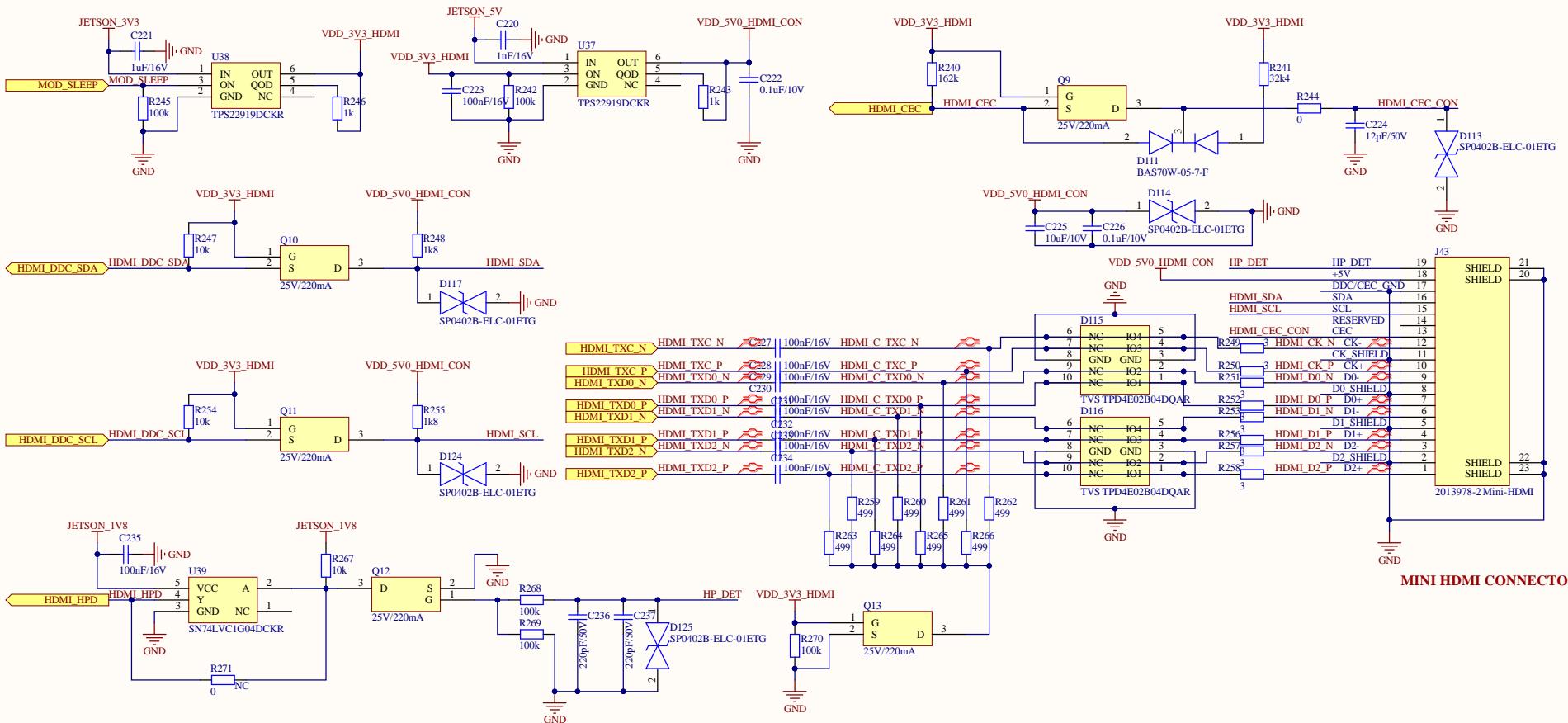
M.2 KEY-M (NVME)

(1x X4PCIe)



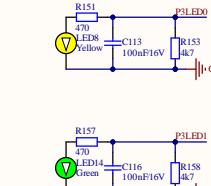
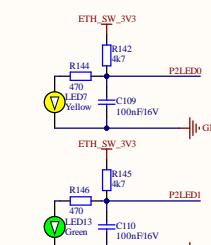
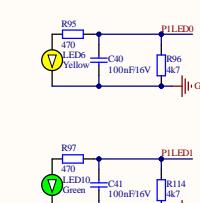
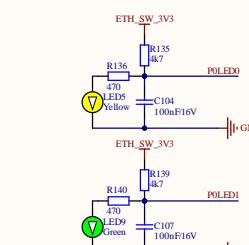
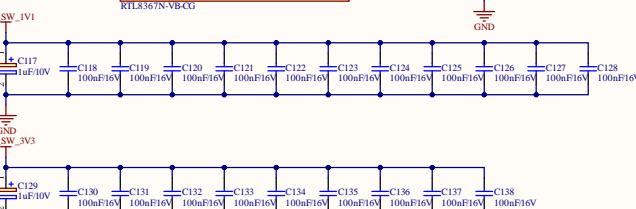
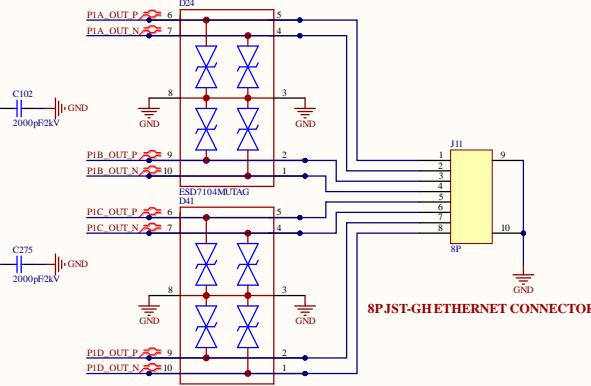
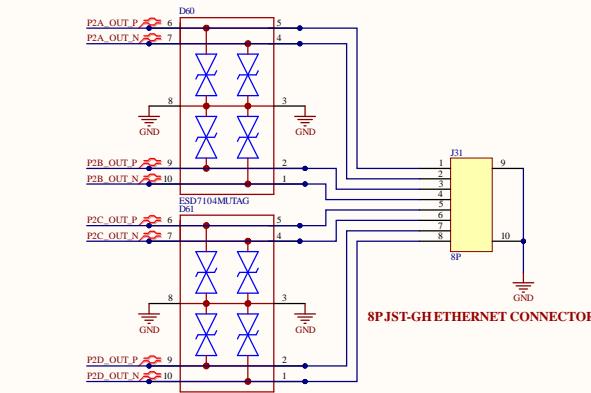
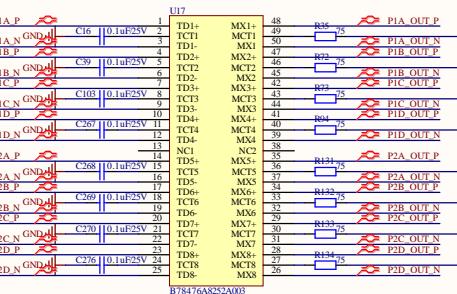
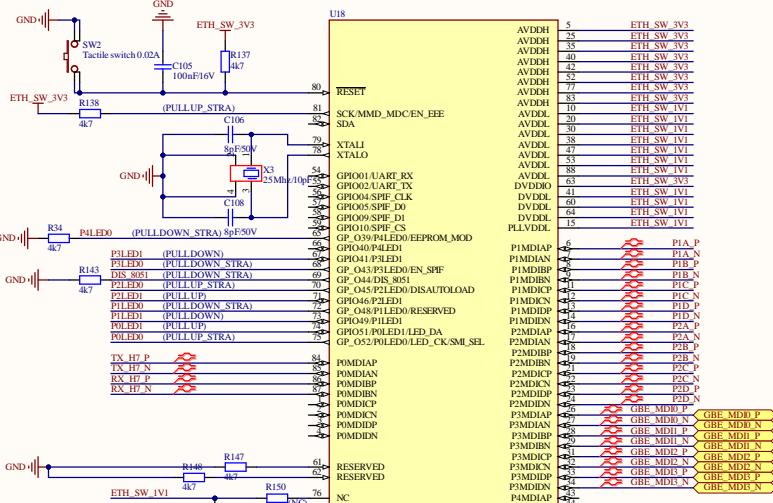
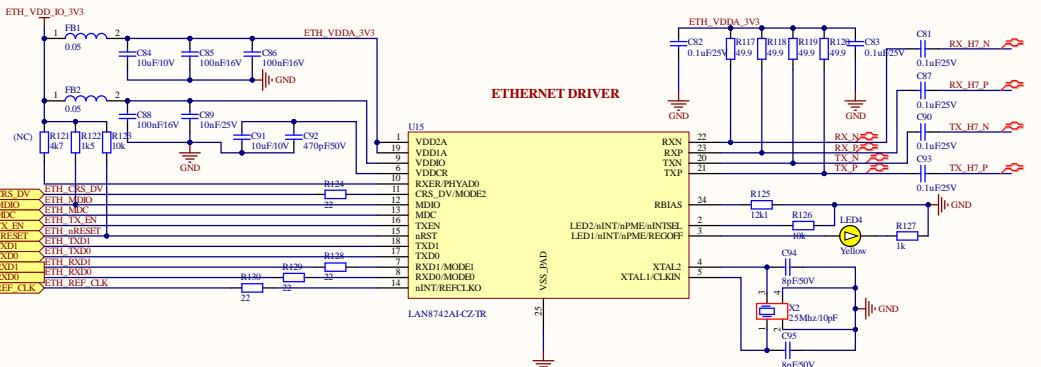
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Size B	Number	Revision 1.0
Date: 4/18/2025	Sheet of 20/ 23	
File: C:\Users\Le Hieu\NVME.JETSON.SchDoc	Drawn By: Le Hieu	

HDMI CONNECTOR



Title		BASE_BOARD	
Size	Number	Revision	
B		1.0	
Date:	4/18/2025	Sheet of	21 / 23
File:	C:\Users\1\HDMI_CONNECTOR.SchDoc	Drawn By:	Le Hieu

ETHERNET SWITCH



Title BASE_BOARD		
Size C	Number	Revision 1.0
Date: 4/18/2025	Sheet of 22	23
File: C:\Users\JETHERNET SWITCH\Sch	Drawn By: Le Hieu	

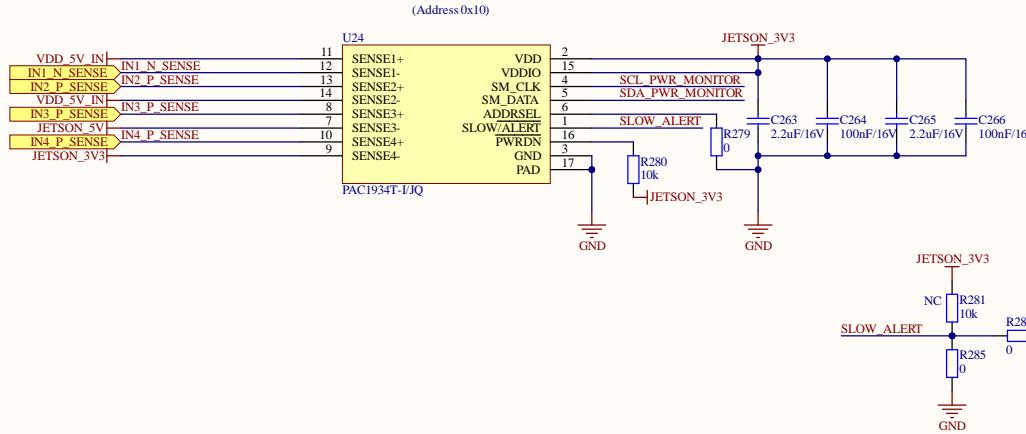
POWER MONITOR

Current sense 1 at 5V FMU BOARD
Max 2.5A, Shunt 0.02 / 2W, Full scale 5.0A

Current sense 2 at 5V input (IO + FMU)
Max 8A, Shunt 0.010 / 2W, Full scale 10A

Current sense 3 at 5V jetson
Max 6A, Shunt 0.010 / 2W, Full scale 10A

Current sense 4 at 3V3 jetson
Max 6A, Shunt 0.010 / 2W, Full scale 10A



Title BASE_BOARD		
Size B	Number	Revision 1.0
Date: 4/18/2025	Sheet of 23 / 23	
File: C:\Users\Le Hieu\POWER_MONITOR.SchDoc	Drawn By: Le Hieu	