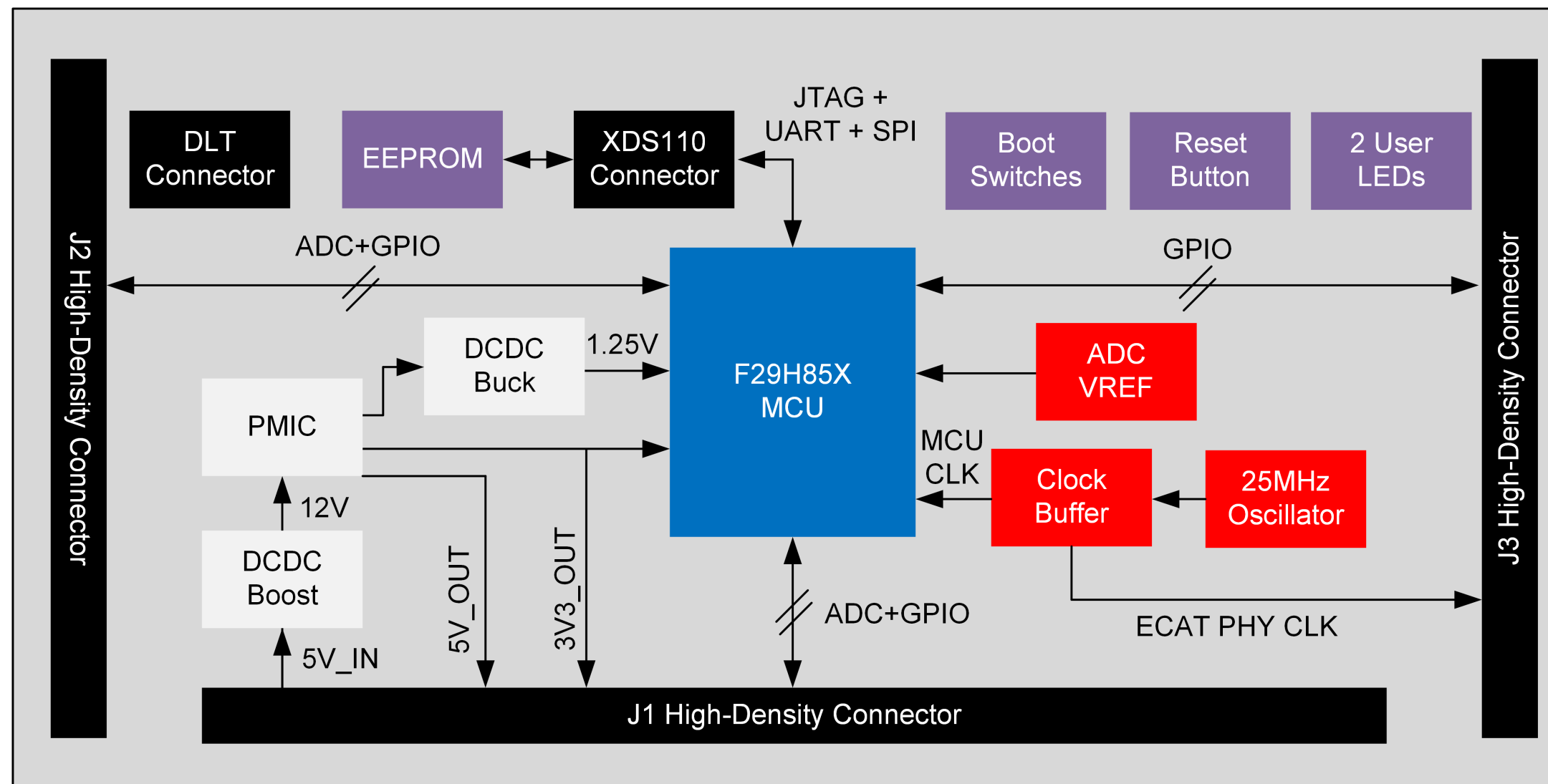
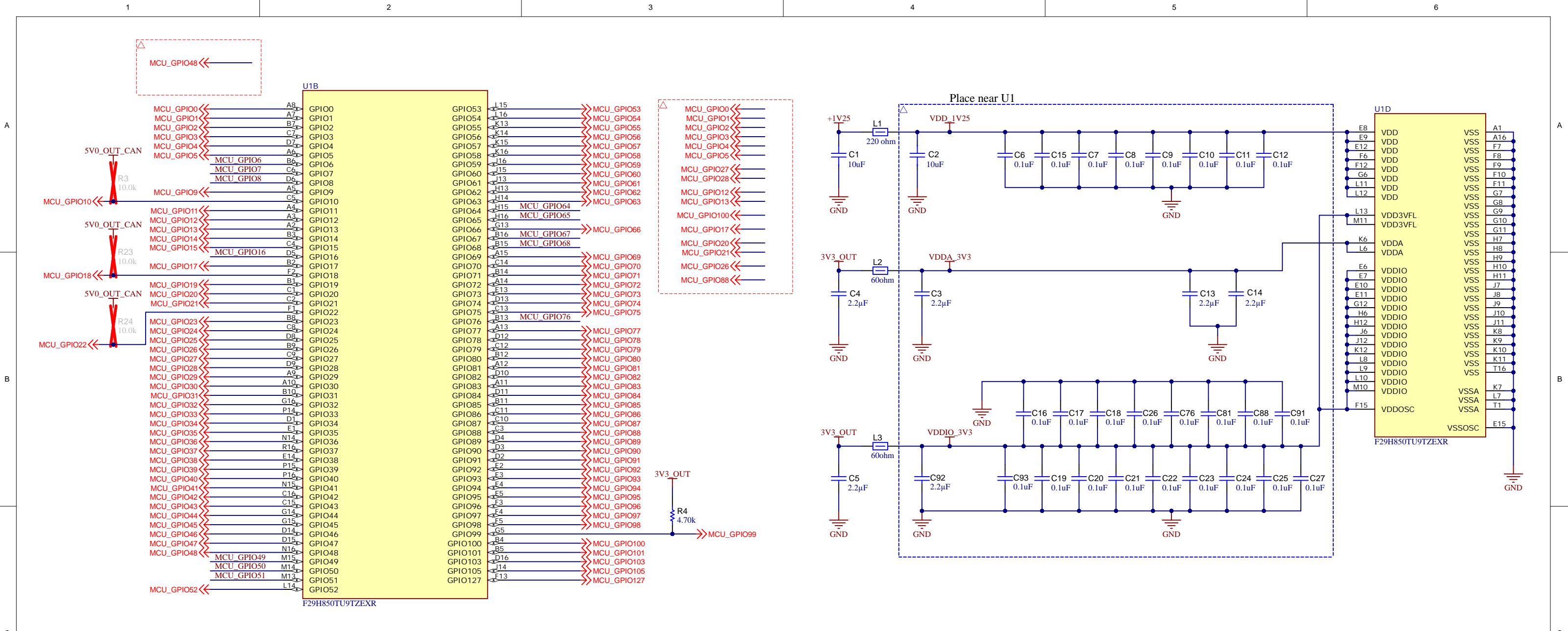


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
E1	N/A	N/A	GM	Original engineering release.
A	N/A	Oct. 17, 2024	GM	<ul style="list-style-type: none"> <li>- Changed default boot mode to 11b</li> <li>- Changed C97 part number</li> <li>- Changed internal VREF connection on S3/S4</li> <li>- Changed FSI connections on J5</li> <li>- Removed tracking feature from U7</li> <li>- Added soft start capacitor to U7</li> <li>- Changed filtering scheme for ADC external reference</li> </ul>



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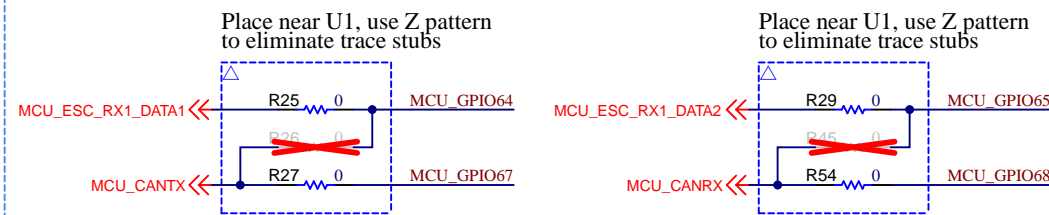
Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 10/23/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: Block Diagram
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 8
Drawn By: Gustavo Martinez	File: MCU144A_Coversheet.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	



### EtherCAT / MCAN-A Boot Selection

Mode	Resistor Configuration
EtherCAT support*	Populate R25/R27 and R29/R54 with 0-ohm resistor, remove R26/R45.
MCAN-A boot support	Populate R26/R45 with 0-ohm resistor, remove R25/R27 and R29/R54.

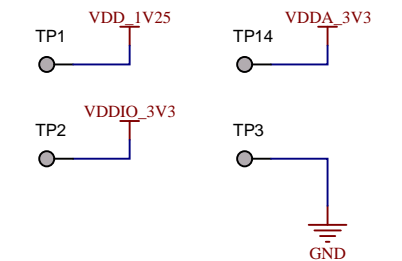
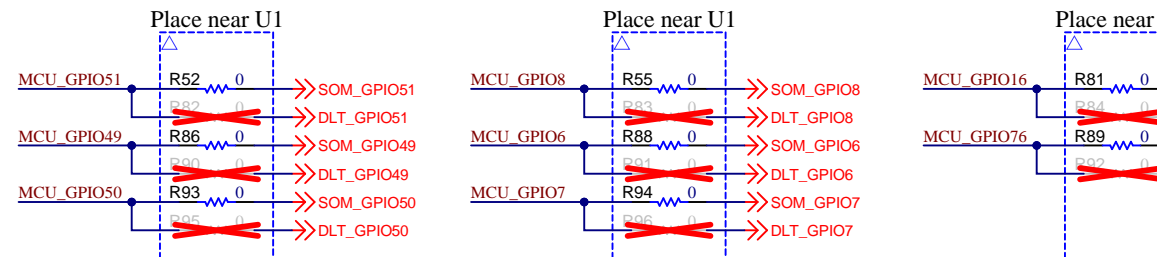
\*Default



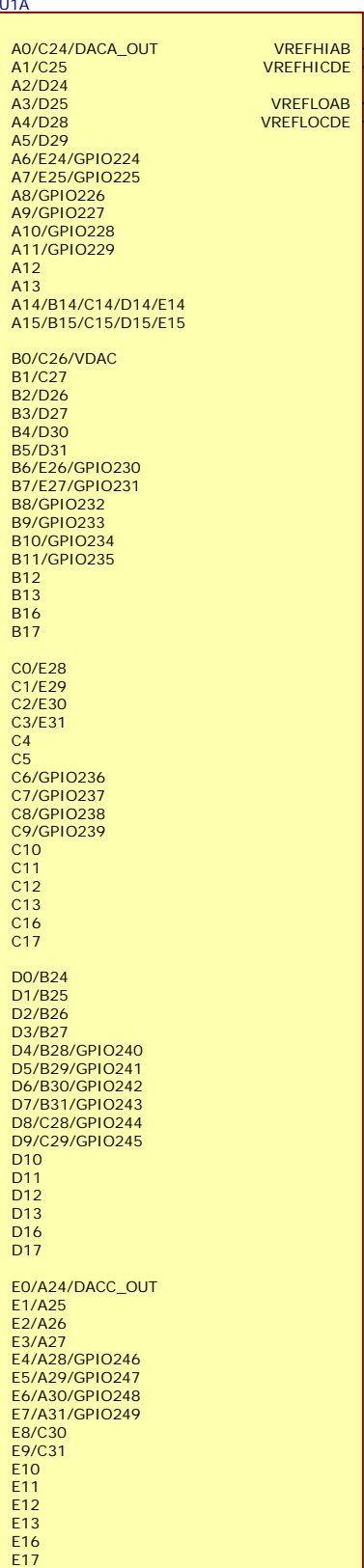
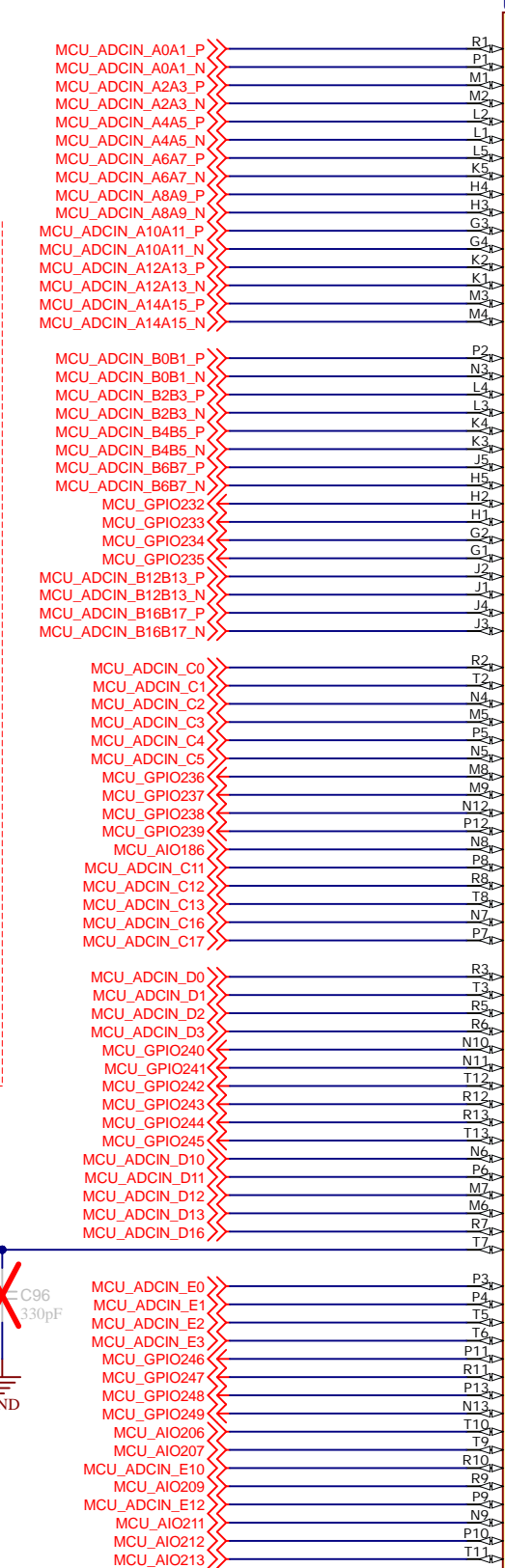
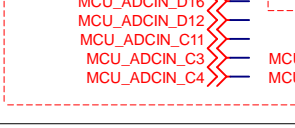
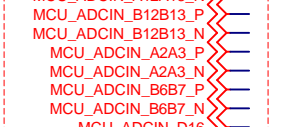
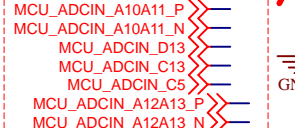
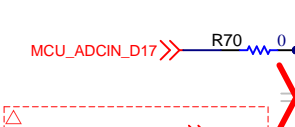
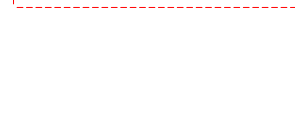
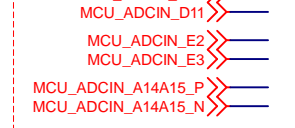
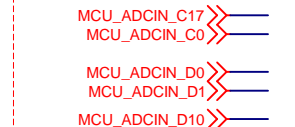
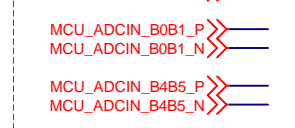
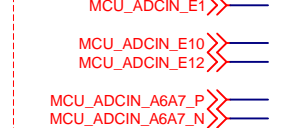
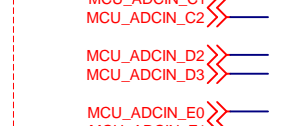
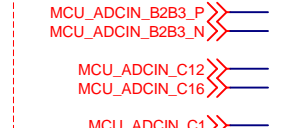
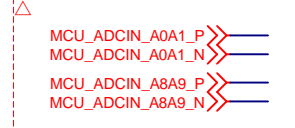
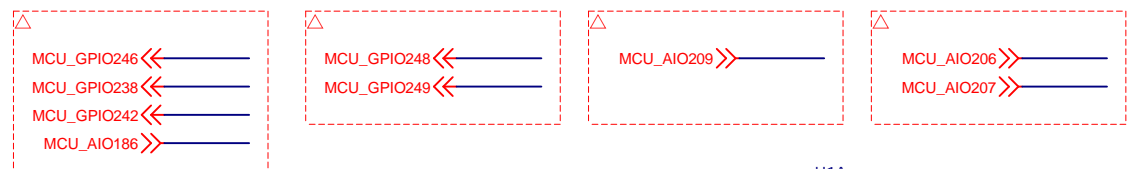
### FSI Baseboard / DLT Selection

Mode	Resistor Configuration
Baseboard support*	Populate all 0-ohm resistors on SOM_GPIO nets. Remove all resistors on DLT_GPIO nets.
DLT support	Populate all 0-ohm resistors on DLT_GPIO nets. Remove all resistors on SOM_GPIO nets.

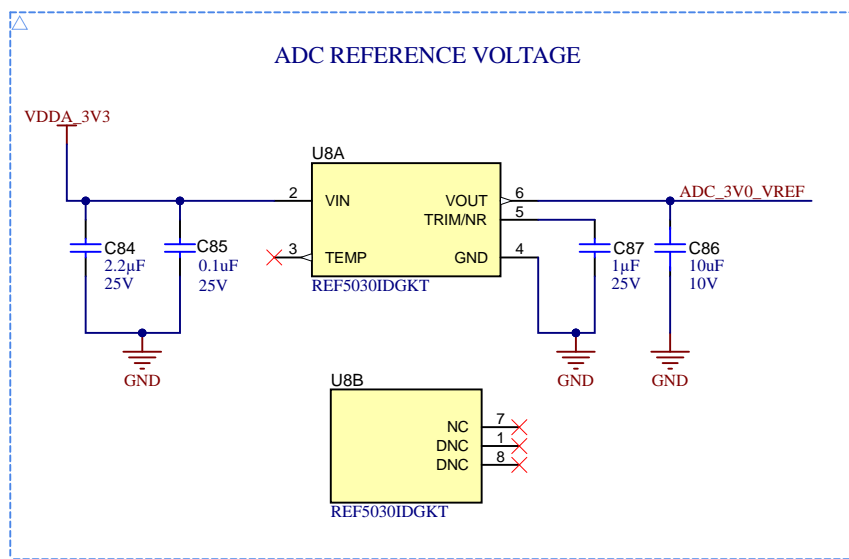
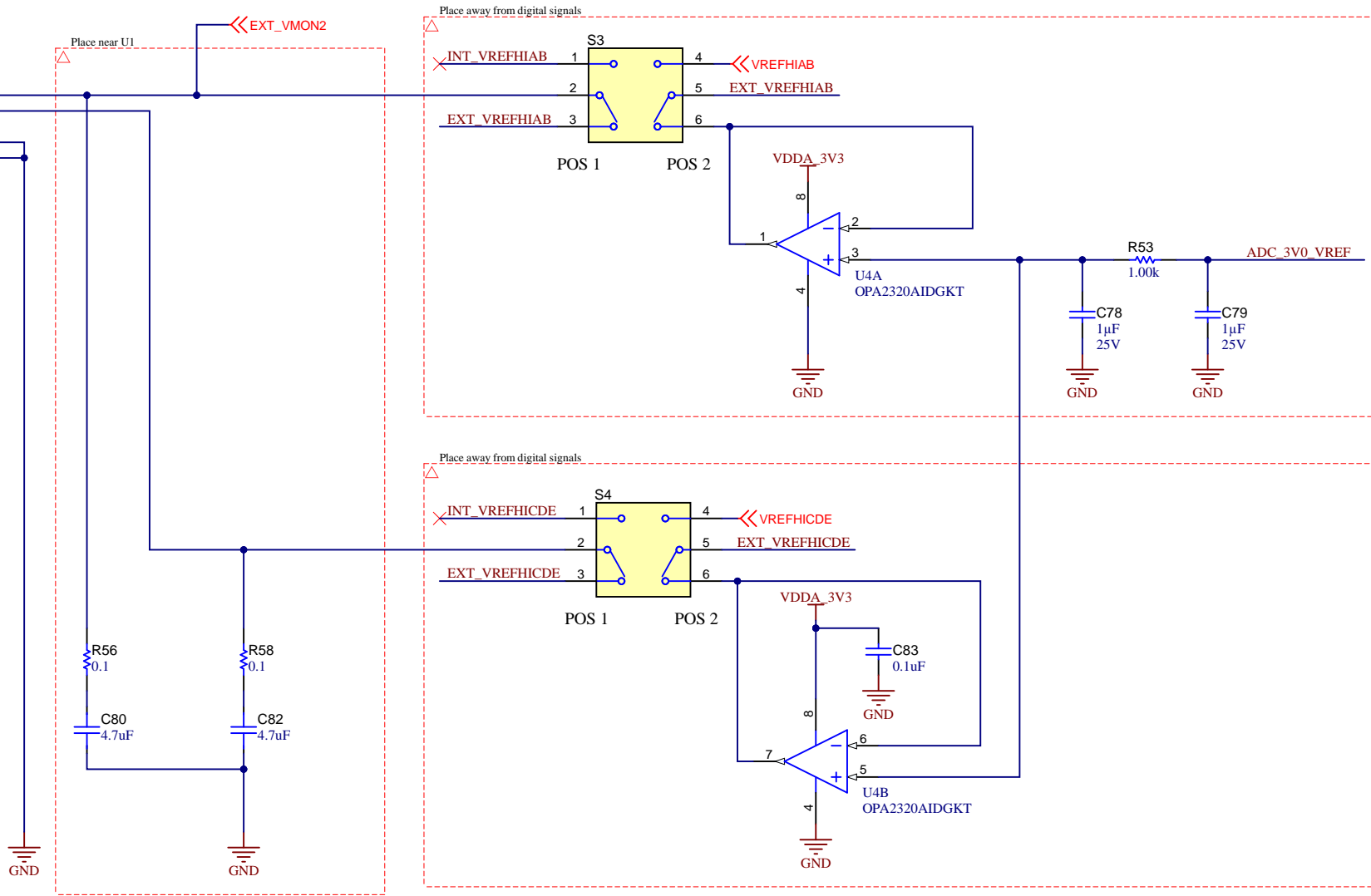
\*Default



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F29H850TU9TZX

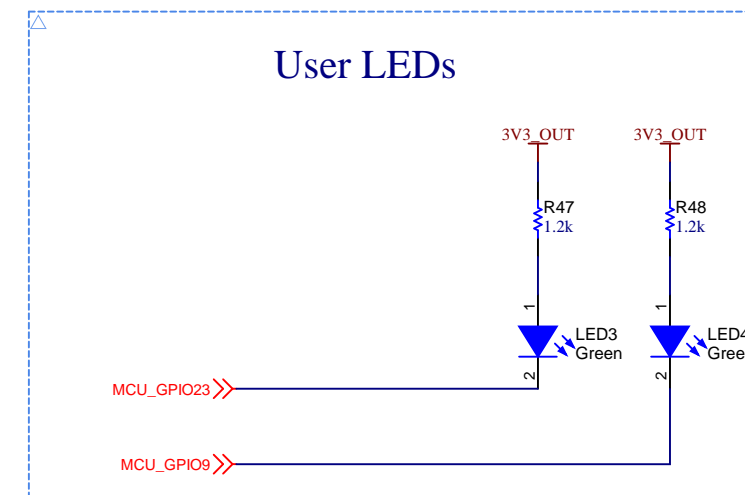
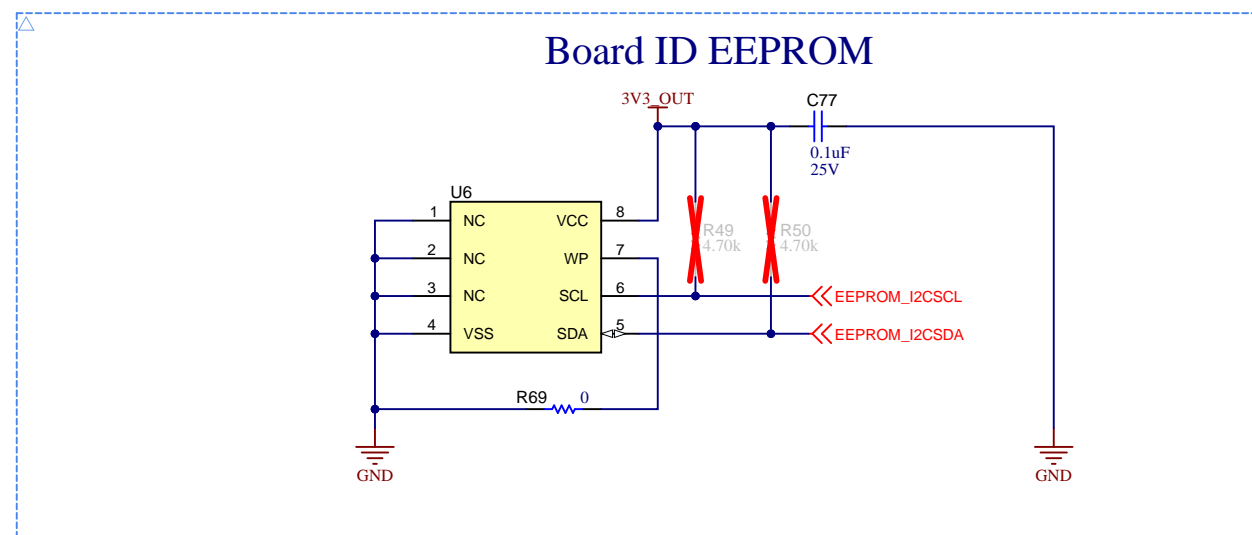
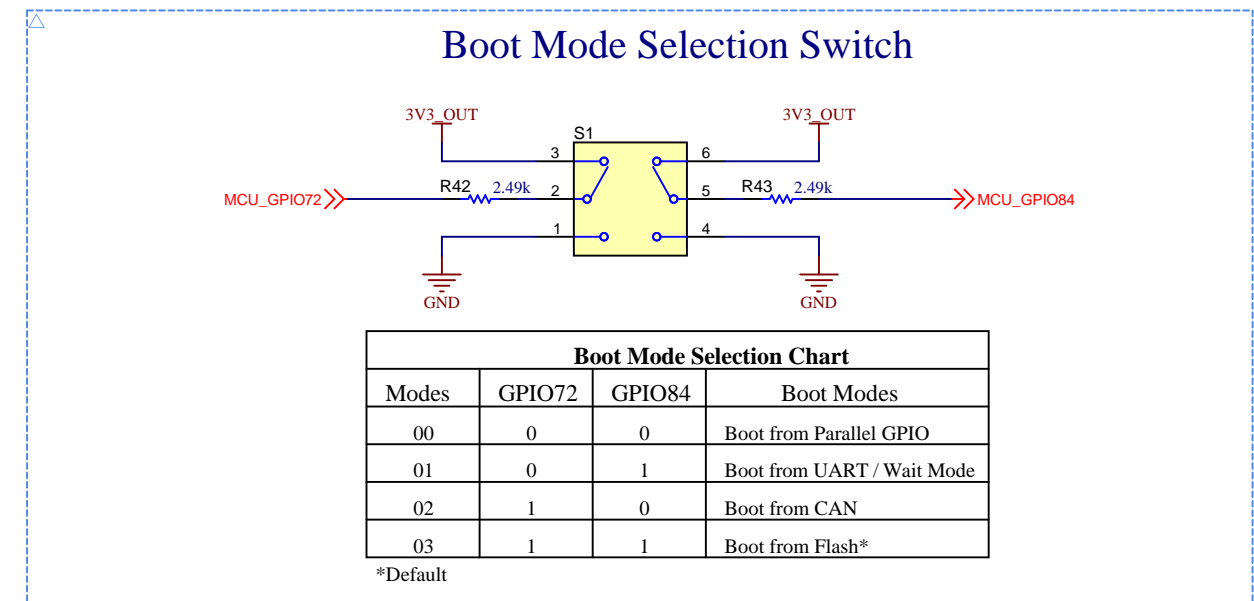
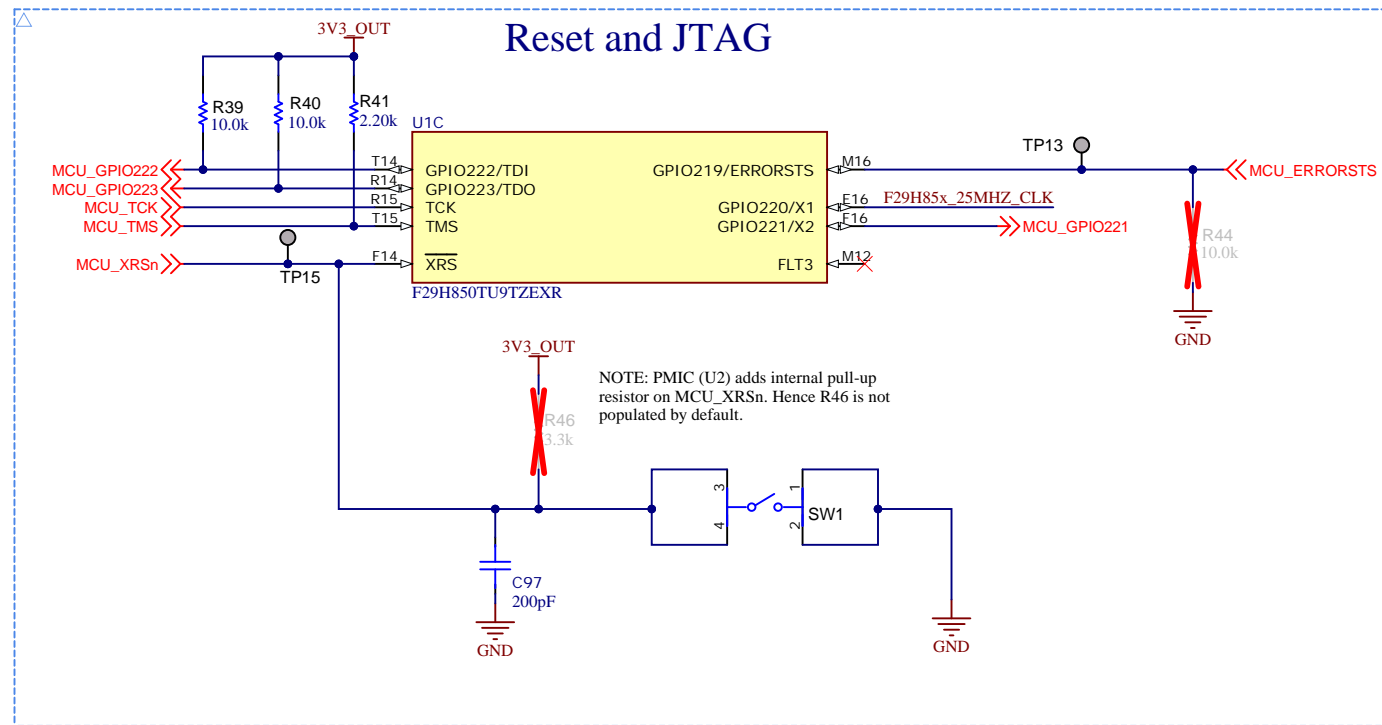
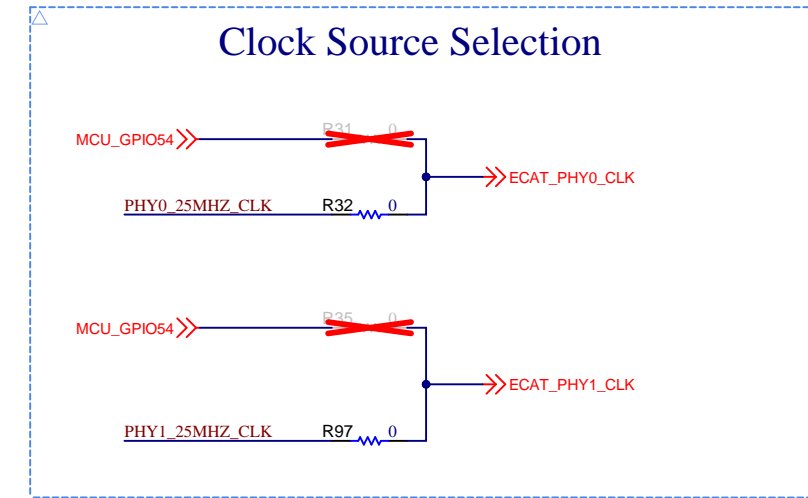
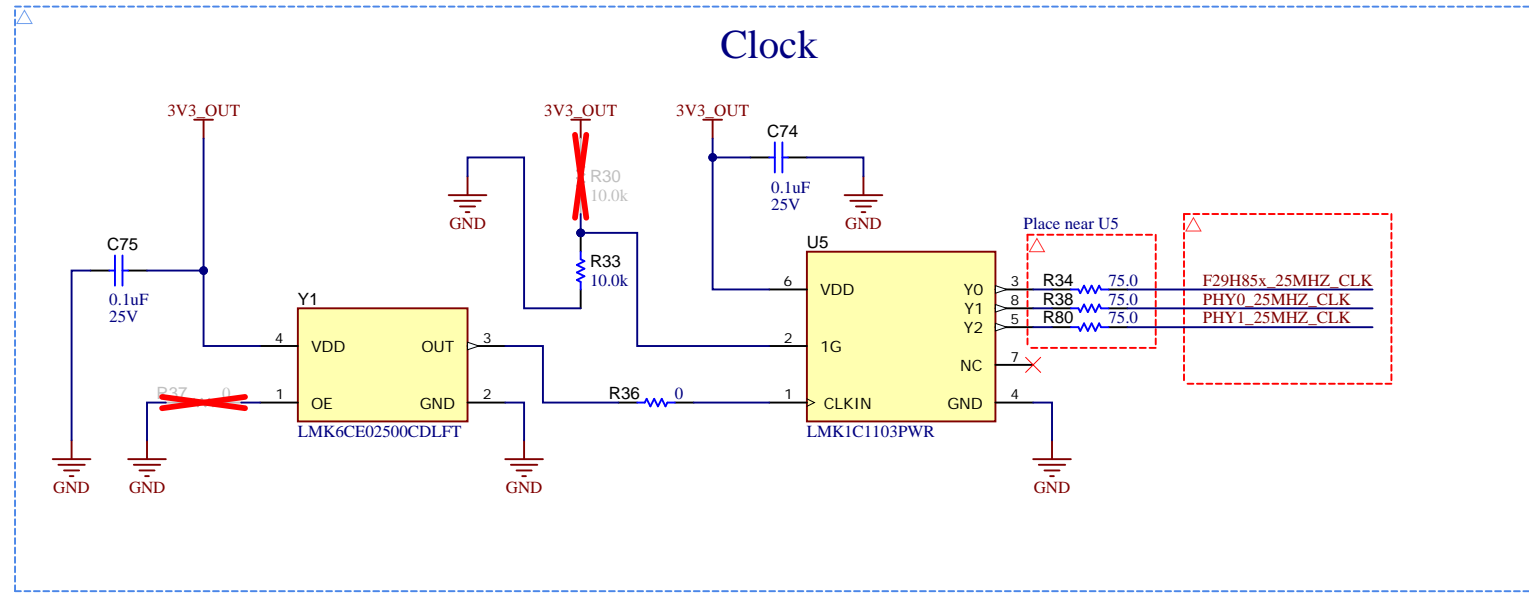


S3 (POS 1)	S3 (POS 2)	VREFHIAB Source
1-2	X	Internal VREF
2-3	4-5	External VREF (J1.VREFHIAB)
2-3	5-6	External VREF (3V0)*

\*Default

S4 (POS 1)	S4 (POS 2)	VREFHICDE Source
1-2	X	Internal VREF
2-3	4-5	External VREF (J1.VREFHICDE)
2-3	5-6	External VREF (3V0)*

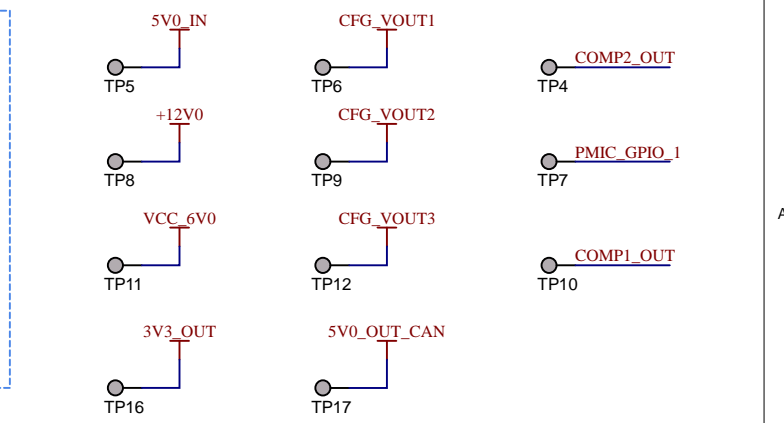
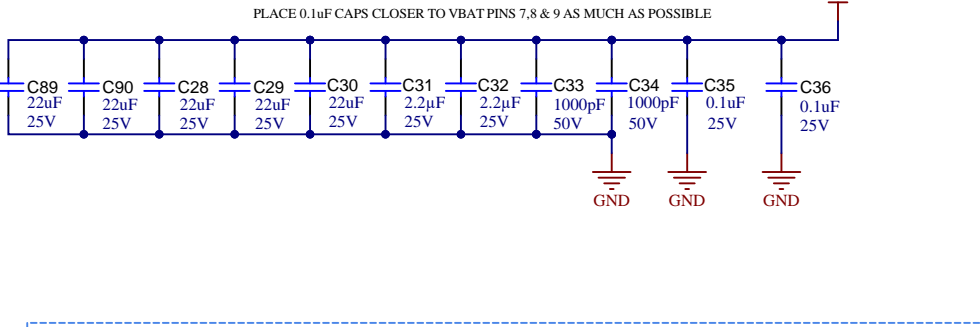
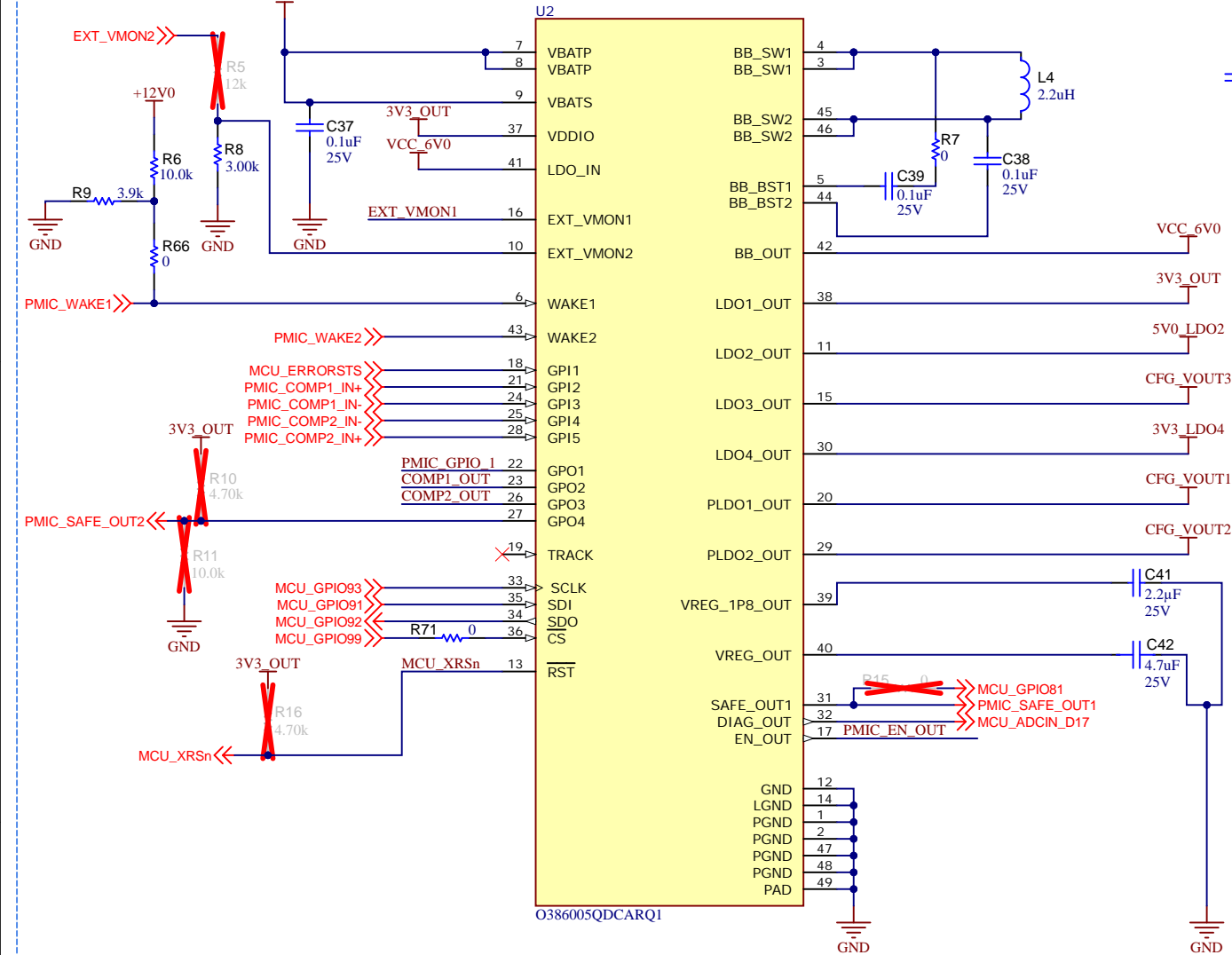
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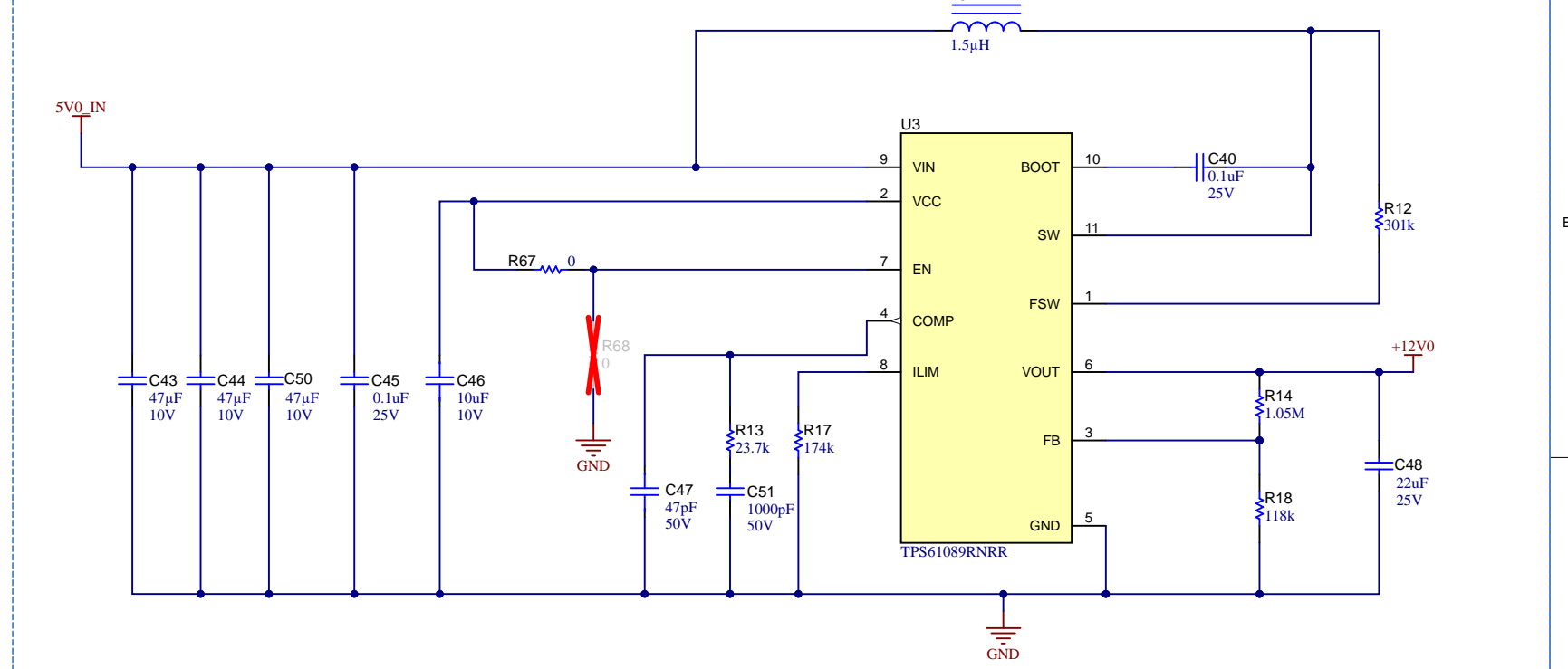
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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 11/21/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: Clock, Reset, and Boot
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 4 of 8
Drawn By: Gustavo Martinez	File: MCU144A_Clock_Reset_Boot.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

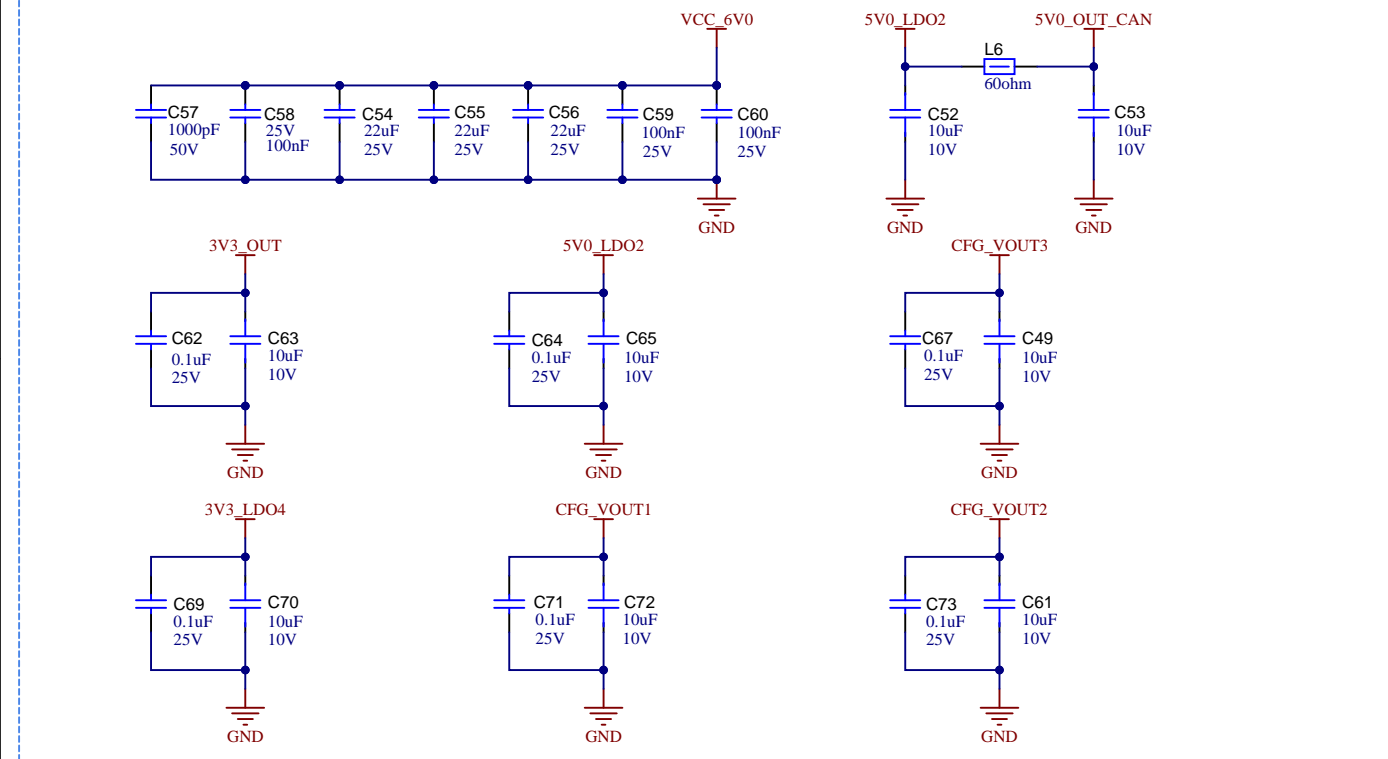
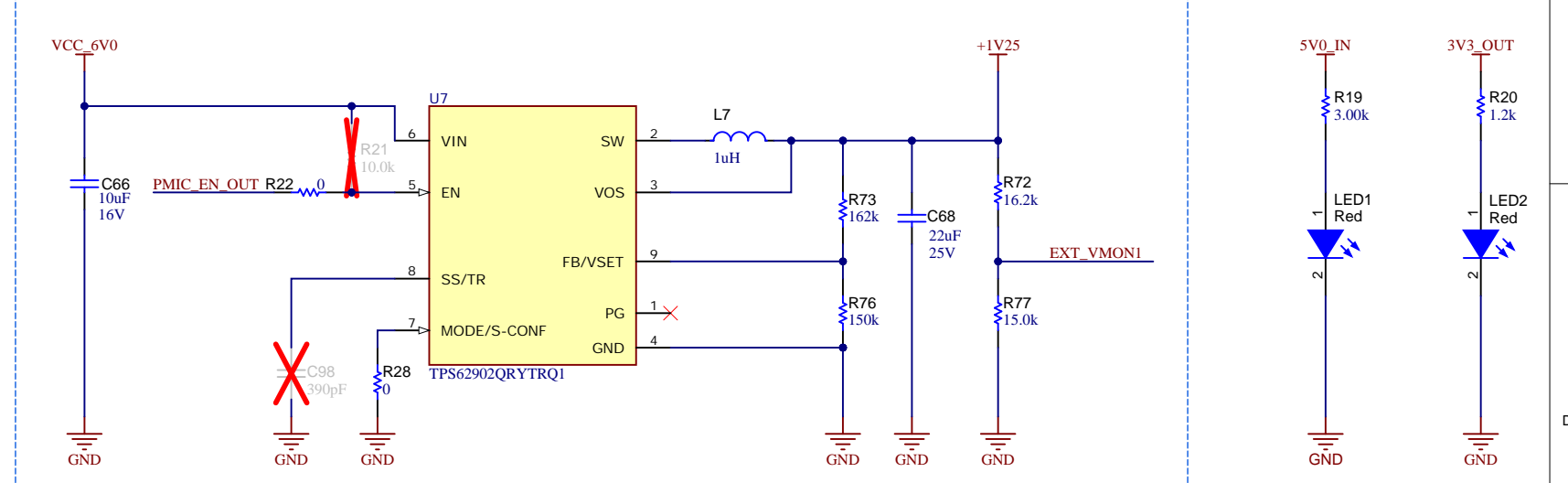
# TPS653860 PMIC



## BOOST CONVERTER - 12V



## BUCK CONVERTER - 1V25



Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 11/2/2024
TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: controlSOM Power
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 5 of 8
Drawn By: Gustavo Martinez	File: MCU144A_SOM_Power.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: http://www.ti.com/support	

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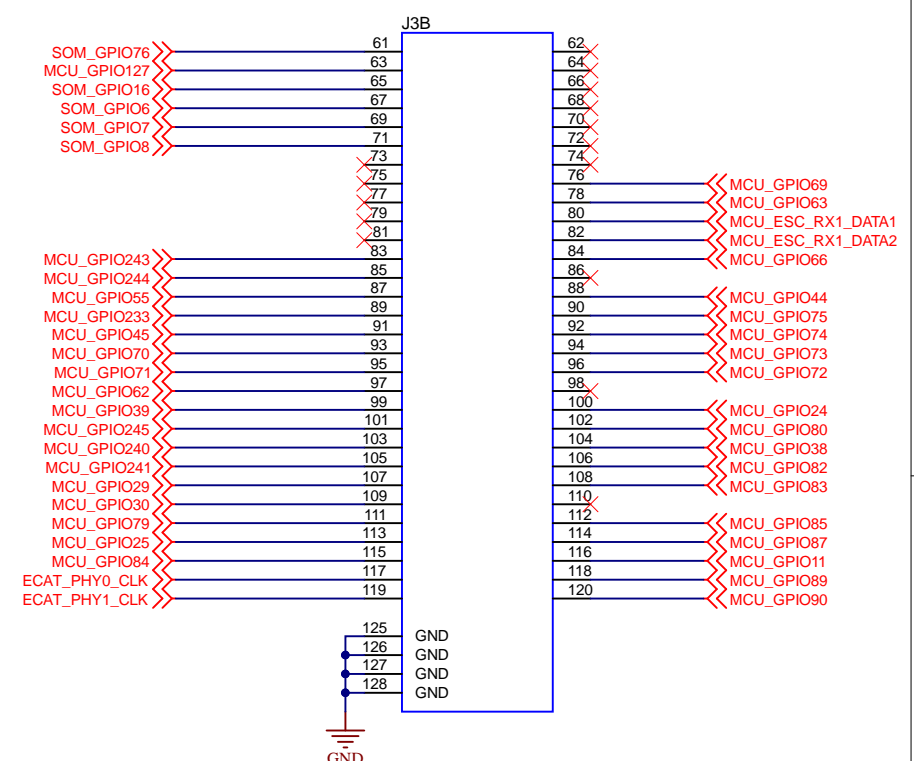
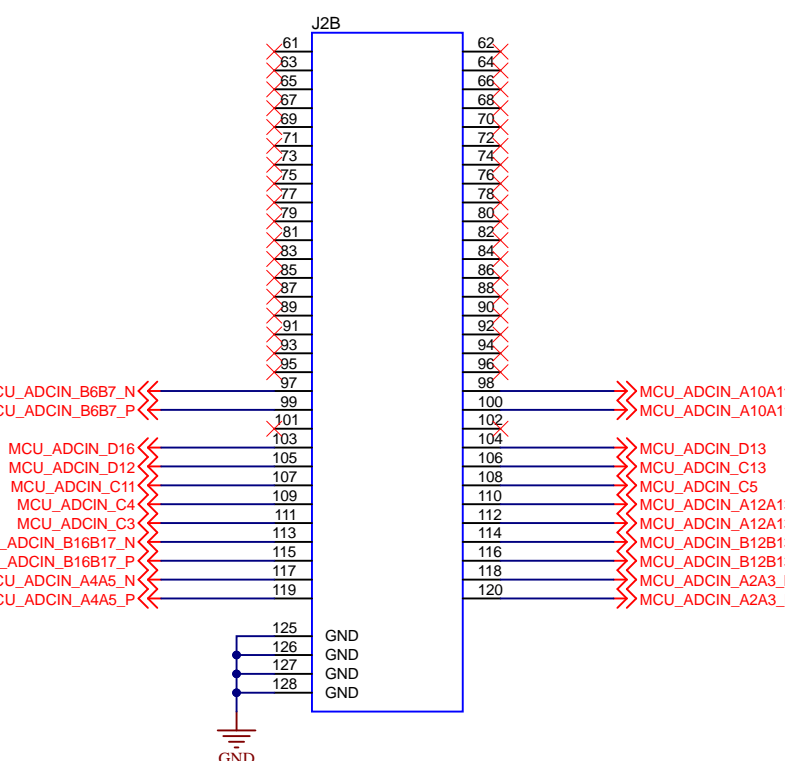
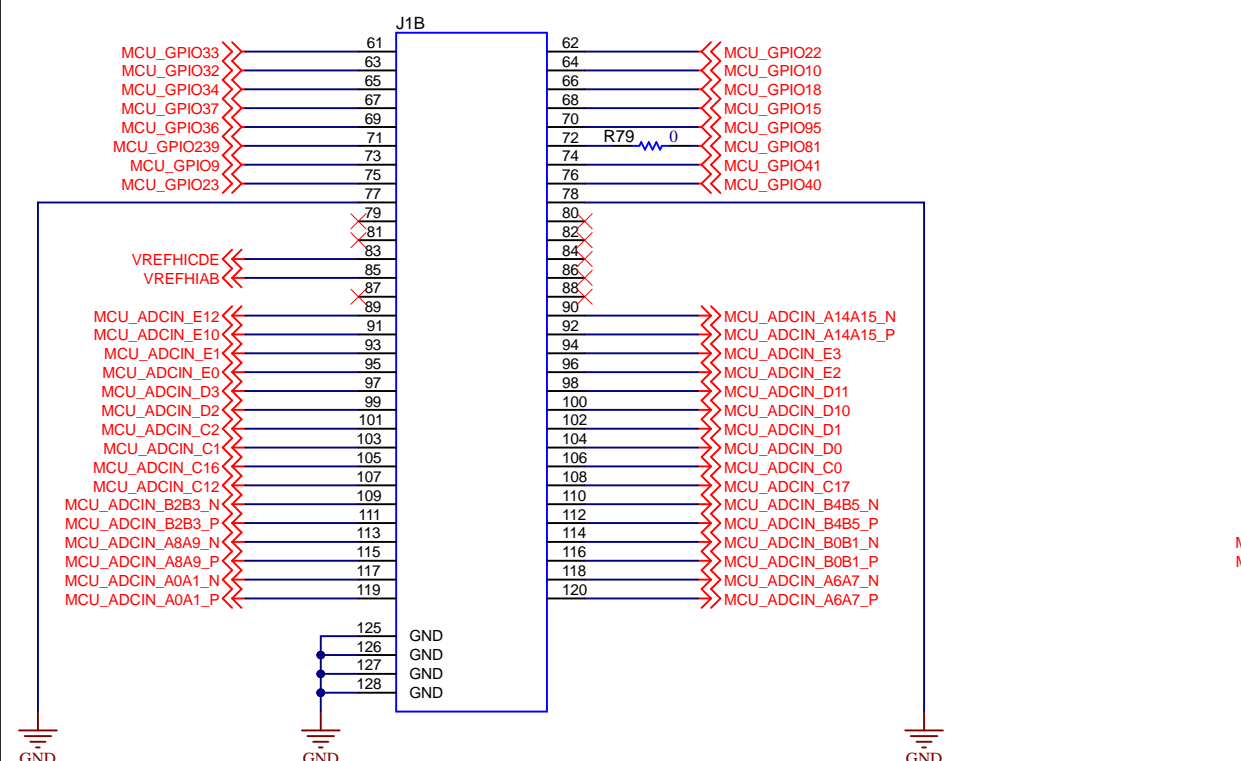
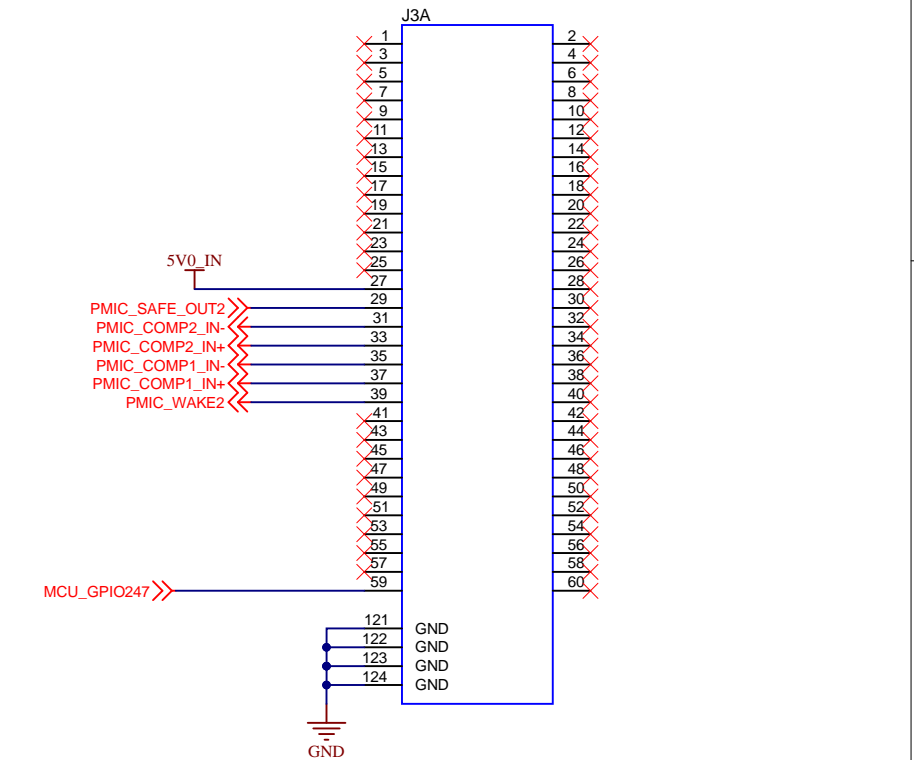
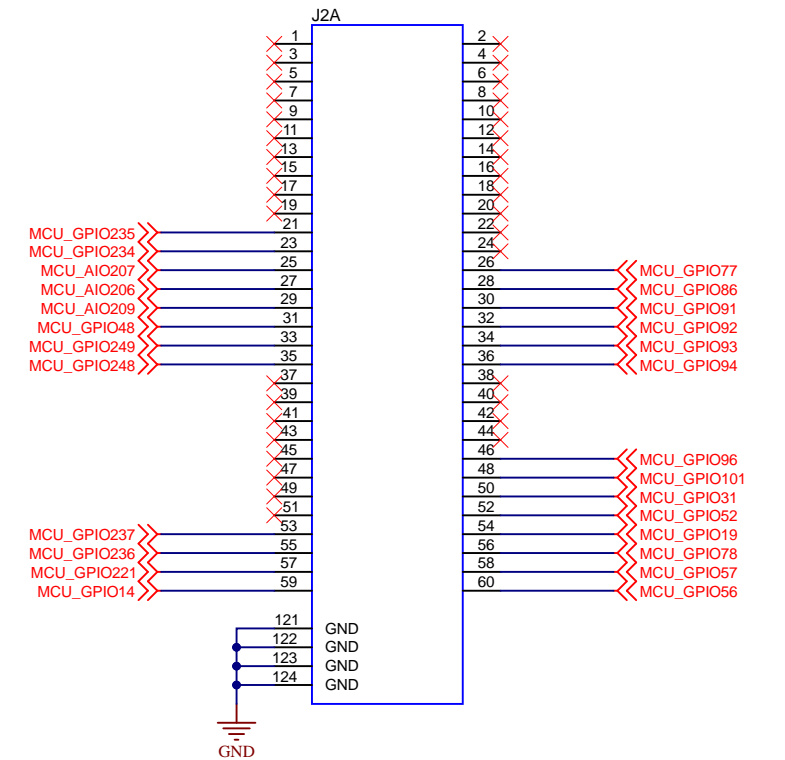
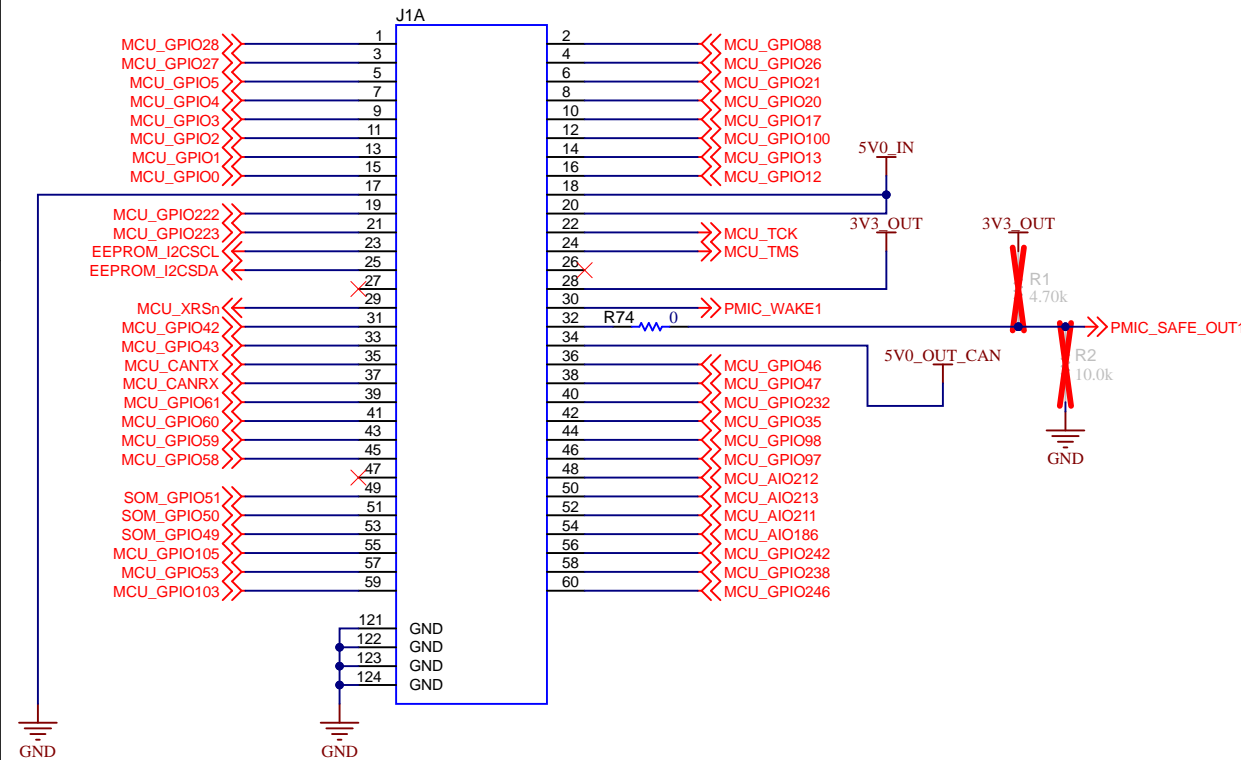




### High Density Connector J1

### High Density Connector J2

### High Density Connector J3

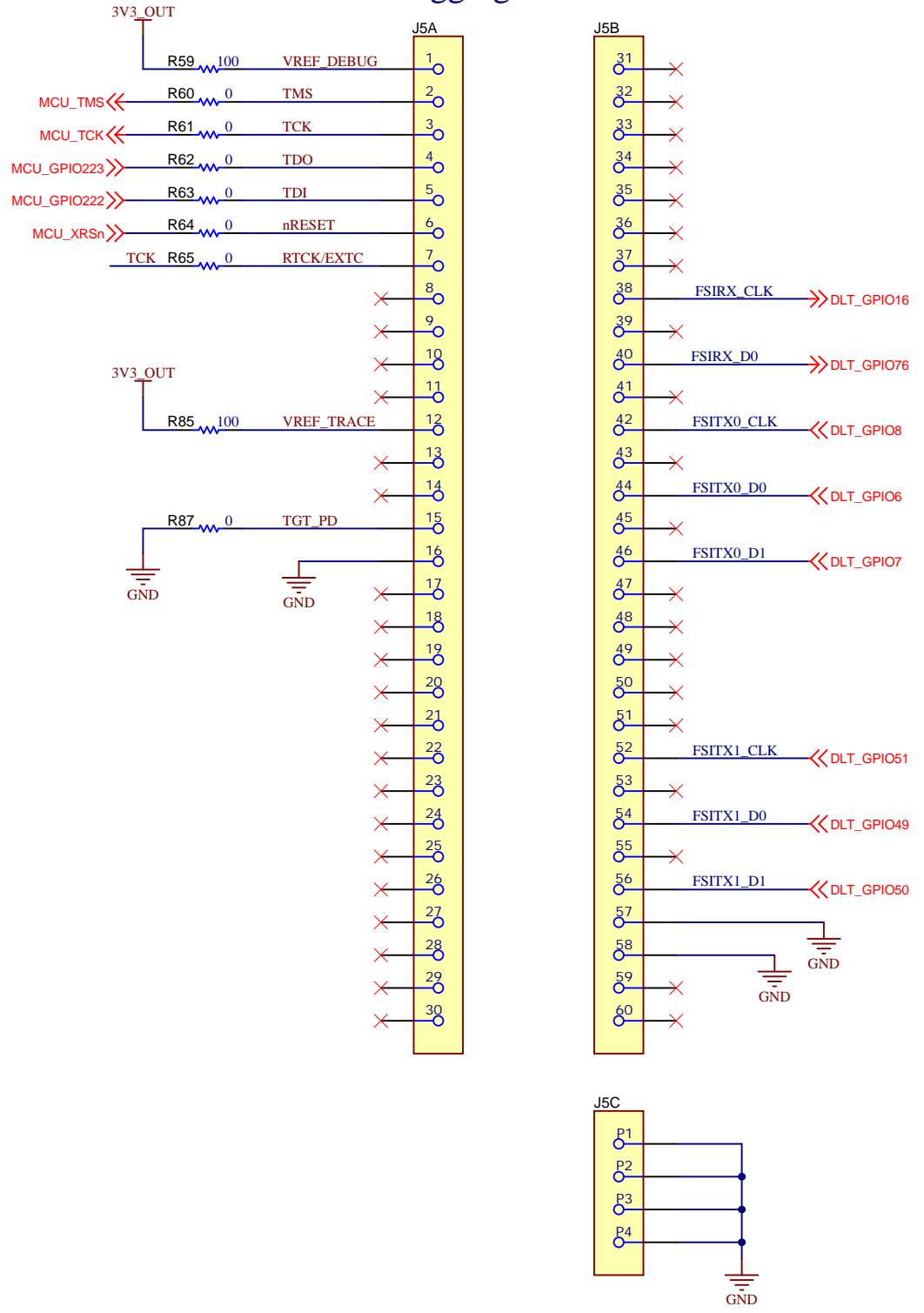


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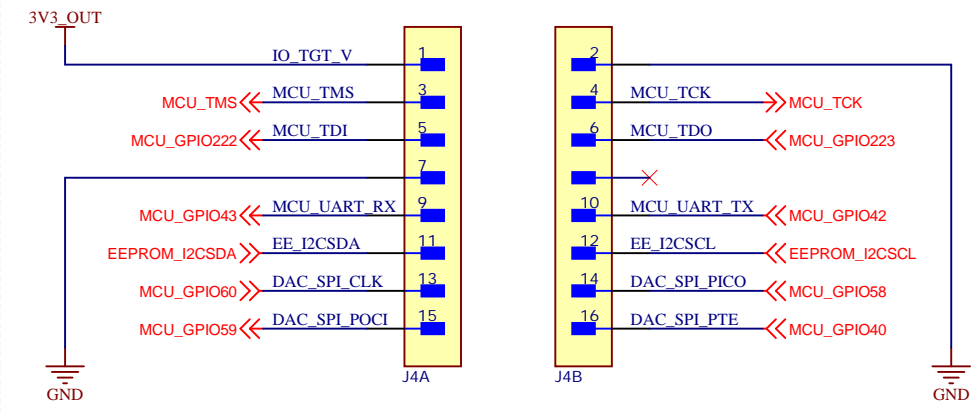
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TID #: N/A	Project Title: F29H85x controlSOM EVM	
Number: MCU144	Rev: A	Sheet Title: Baseboard Connectors
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 6 of 8
Drawn By: Gustavo Martinez	File: MCU144A_Baseboard_Connectors.SchDoc	Size: B
Engineer: Gustavo Martinez	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	



### Data Logging and Trace Connector



### Emulator Connector

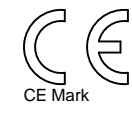


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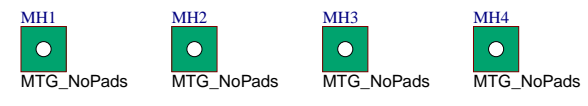
PCB Number: MCU144  
PCB Rev: A

PCB LOGO  
Texas Instruments



PCB LOGO  
FCC disclaimer

PCB LOGO  
WEEE logo



Variant/Label Table	
Variant	Variant Description
001	25-MHz clock disabled.
002	25-MHz clock enabled.

ZZ1  
Label Assembly Note  
This Assembly Note is for PCB labels only

ZZ2  
Assembly Note  
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3  
Assembly Note  
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4  
Assembly Note  
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

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Orderable: F29H85X-SOM-EVM	Designed for: Public Release	Mod. Date: 12/9/2024	<p>TEXAS INSTRUMENTS <a href="http://www.ti.com">http://www.ti.com</a> © Texas Instruments 2024</p>
TID #: N/A	Project Title: F29H85x controlSOM EVM		
Number: MCU144	Rev: A	Sheet Title: EVM Hardware	
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 8 of 8	
Drawn By: Gustavo Martinez	File: MCU144A_EVM_Hardware_SchDoc	Size: B	
Engineer: Gustavo Martinez	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>		



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