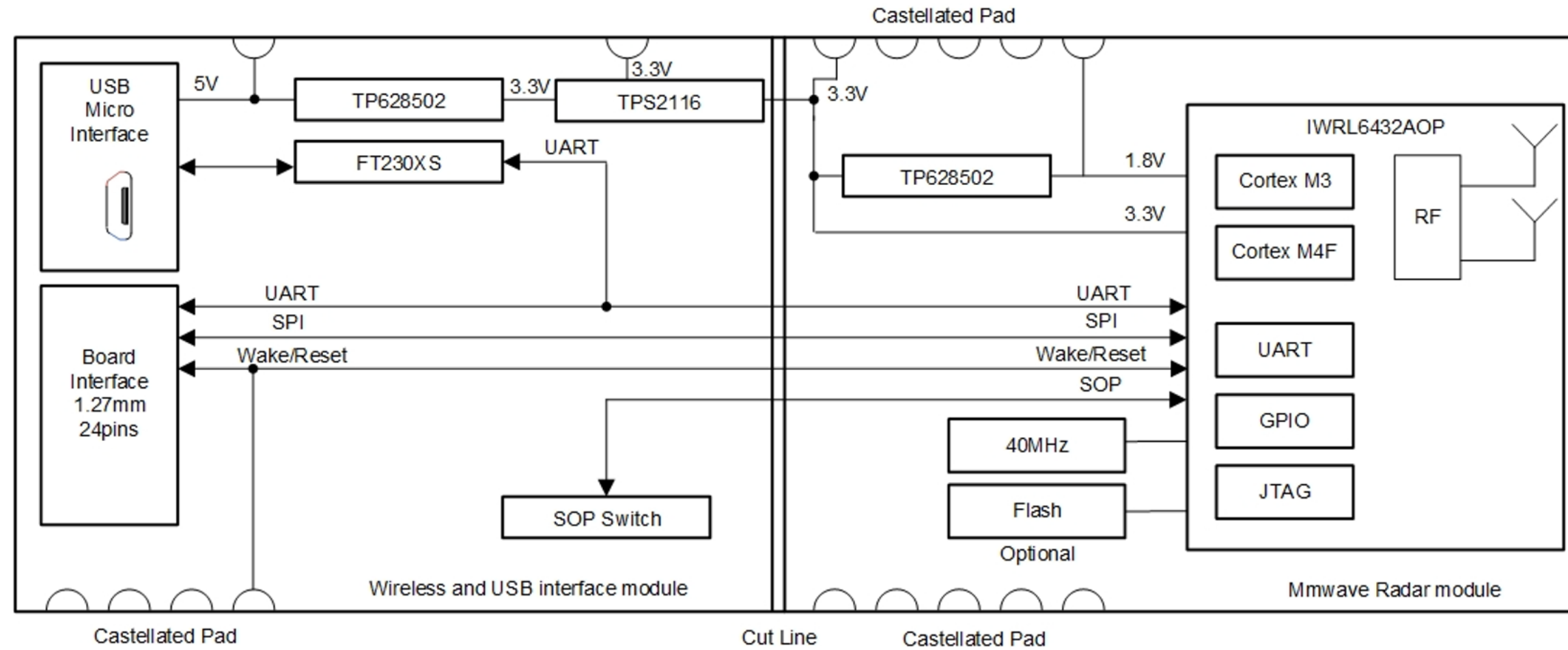


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
A	N/A	2025/2/14	Justin/Chethan	First Draft.
B	N/A	2025/4/28	Justin/Chethan	Fix C27 Decap issue.

BLOCK DIAGRAM



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Orderable:	Designed for: Public Release	Mod. Date: 5/16/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: BLOCK DIAGRAM
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 1 of 8
Drawn By: Justin Yin	File: TIDA-010967_Diagram.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	



TABLE OF CONTENTS

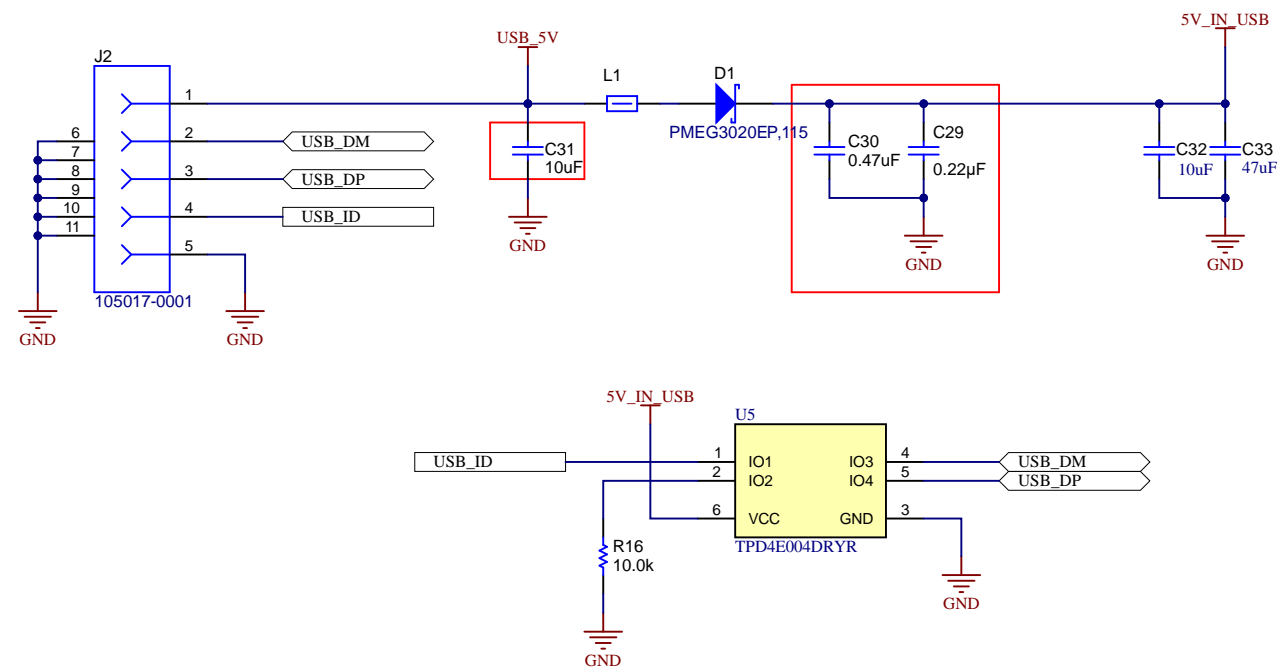
SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
2	TABLE OF CONTENTS
3	USB_PWR_CONNECTOR
4	DC REGULATORS
5	xWRL6432_CHIP
6	DECOUPLING_CAPS
7	QSPI_FLASH
8	HARDWARE

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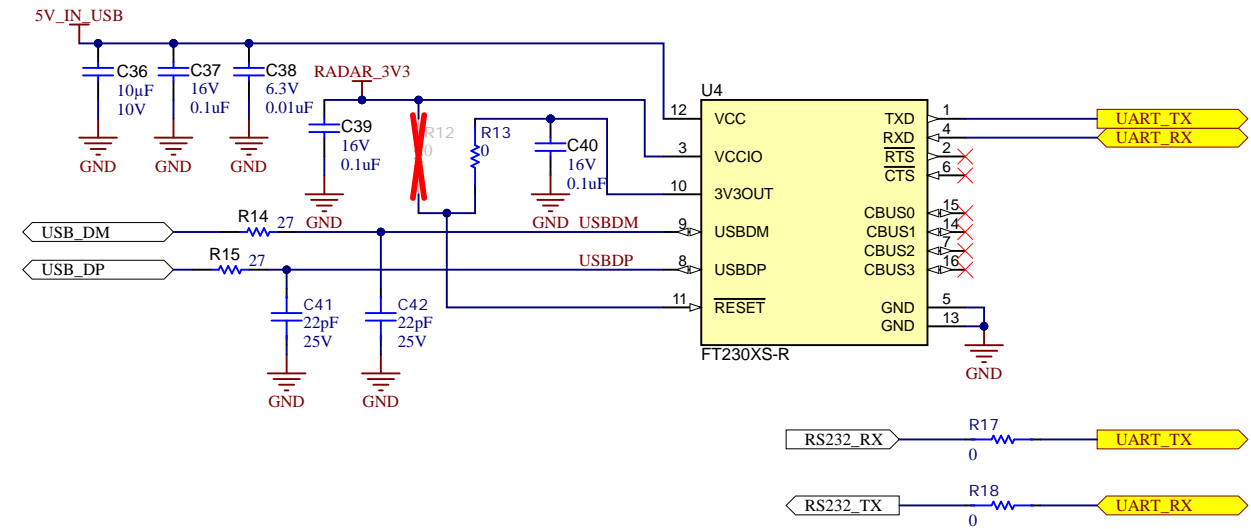
Orderable:	Designed for: Public Release	Mod. Date: 2/14/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: TABLE OF CONTENTS
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 2 of 8
Drawn By: Justin Yin	File: TIDA-010967_Table_Of_Contents.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	



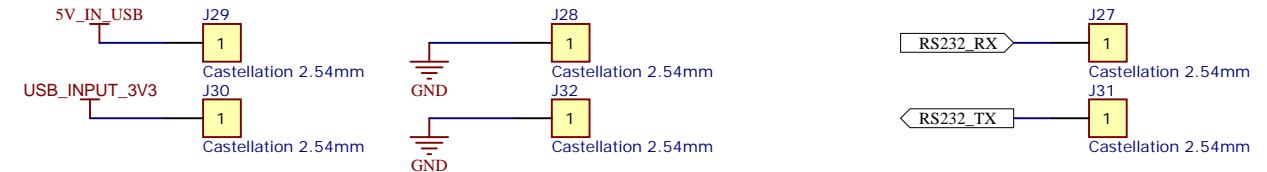
USB CONNECTOR



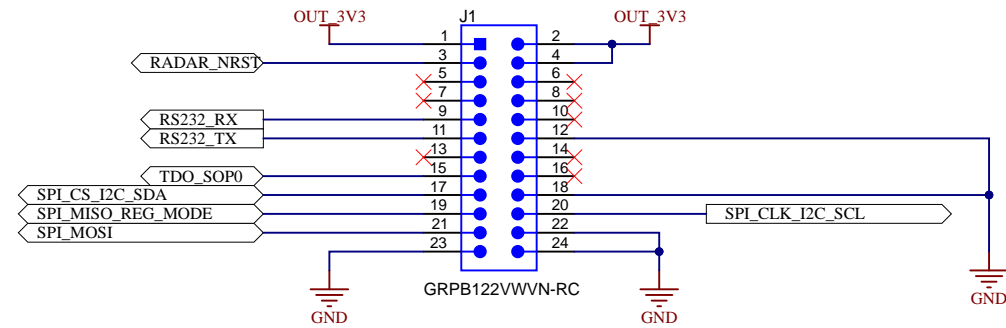
USB CONVERTER



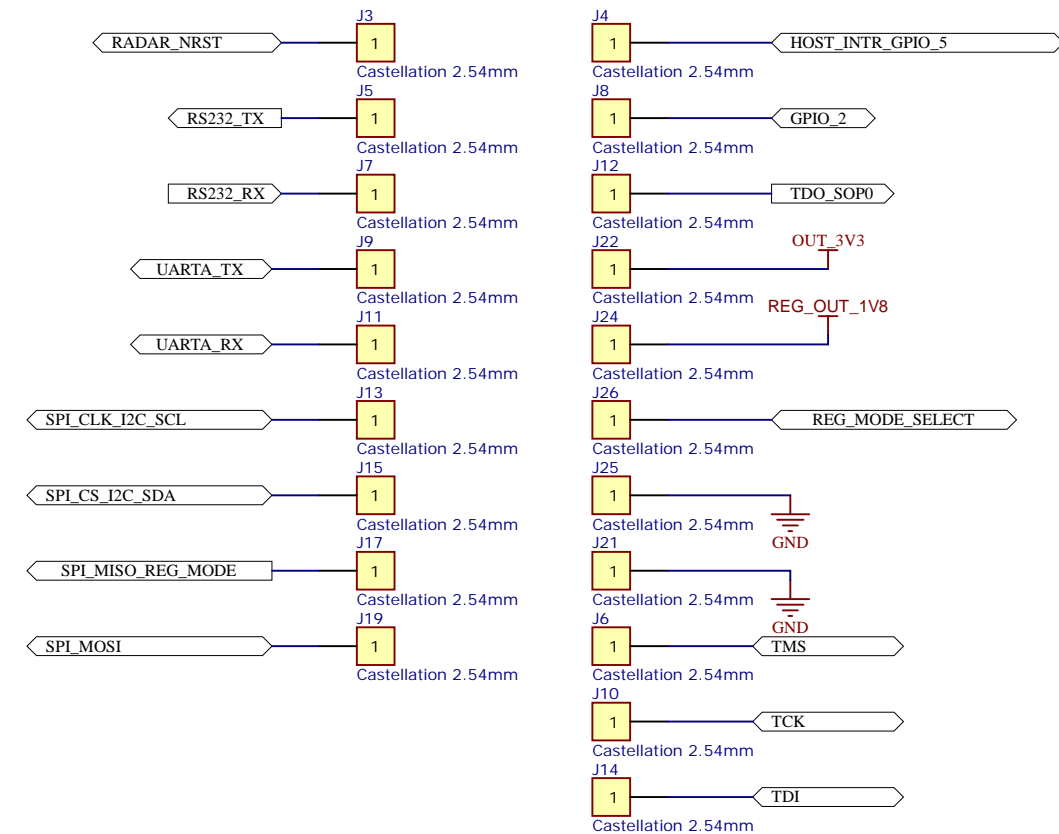
Wireless Castellation Connectors



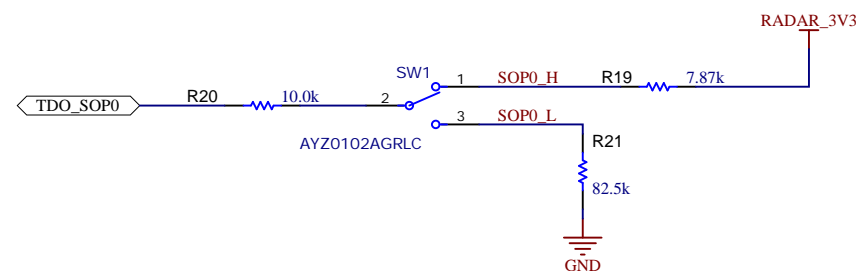
Base Board Connectors



Radar Castellation Connectors



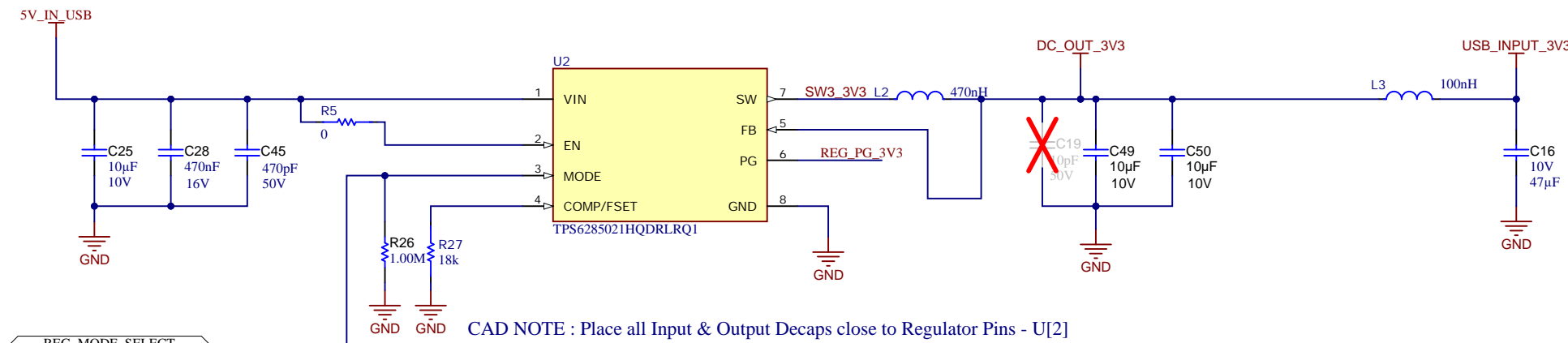
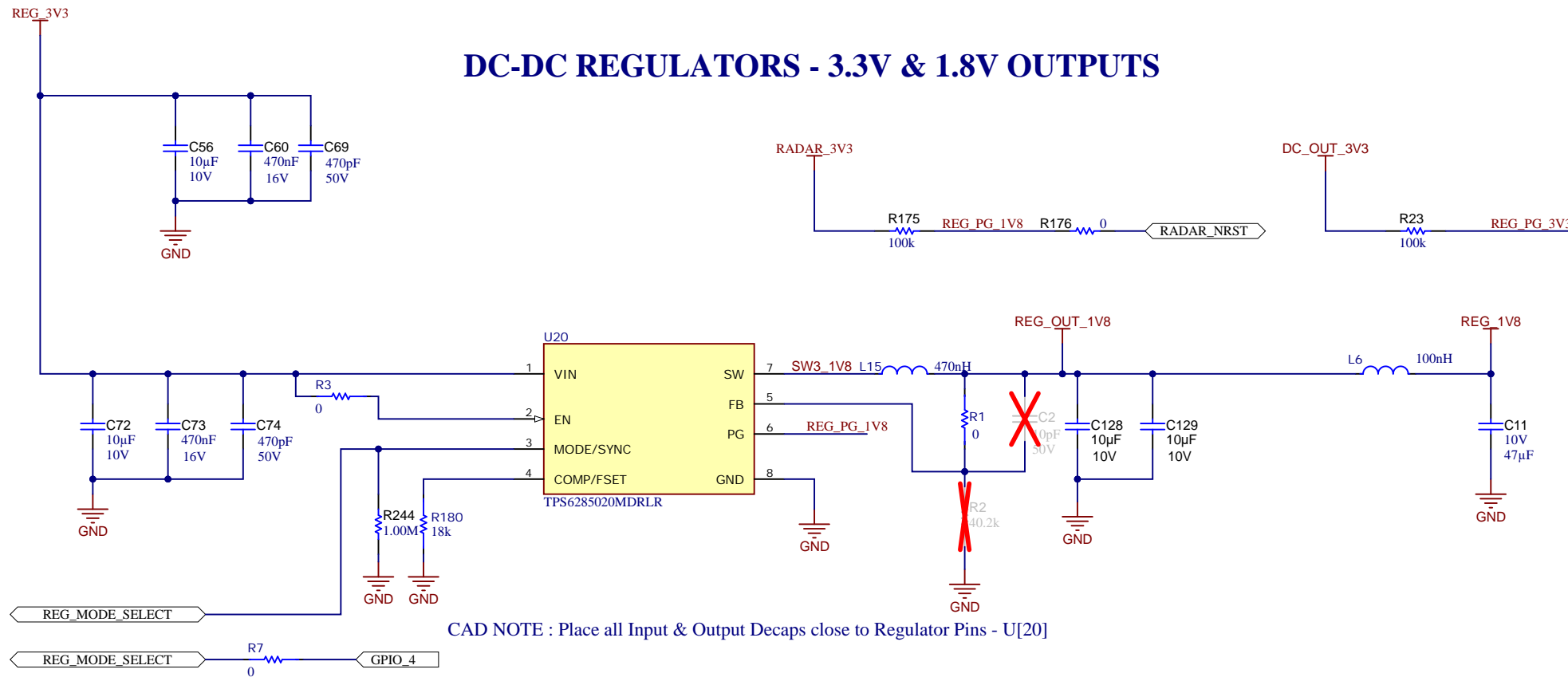
SOP SWITCH



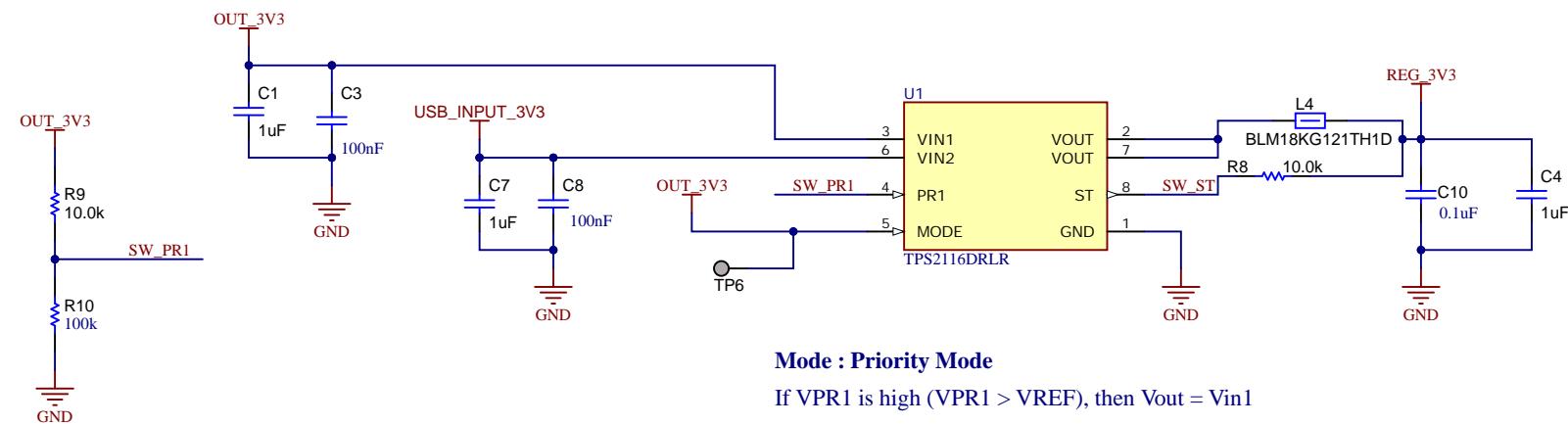
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Orderable:	Designed for: Public Release	Mod. Date: 2/26/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: USB_PWR_Connector
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 3 of 8
Drawn By: Justin Yin	File: TIDA-010967_USB_PWR_Connector.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	

DC-DC REGULATORS - 3.3V & 1.8V OUTPUTS



POWER MUX



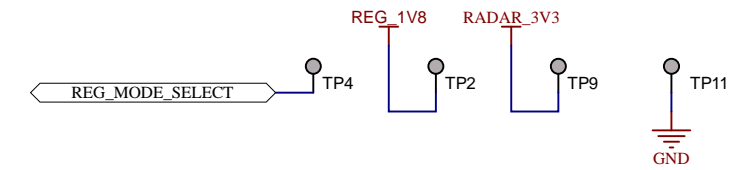
Mode : Priority Mode

If VPR1 is high (VPR1 > VREF), then Vout = Vin1

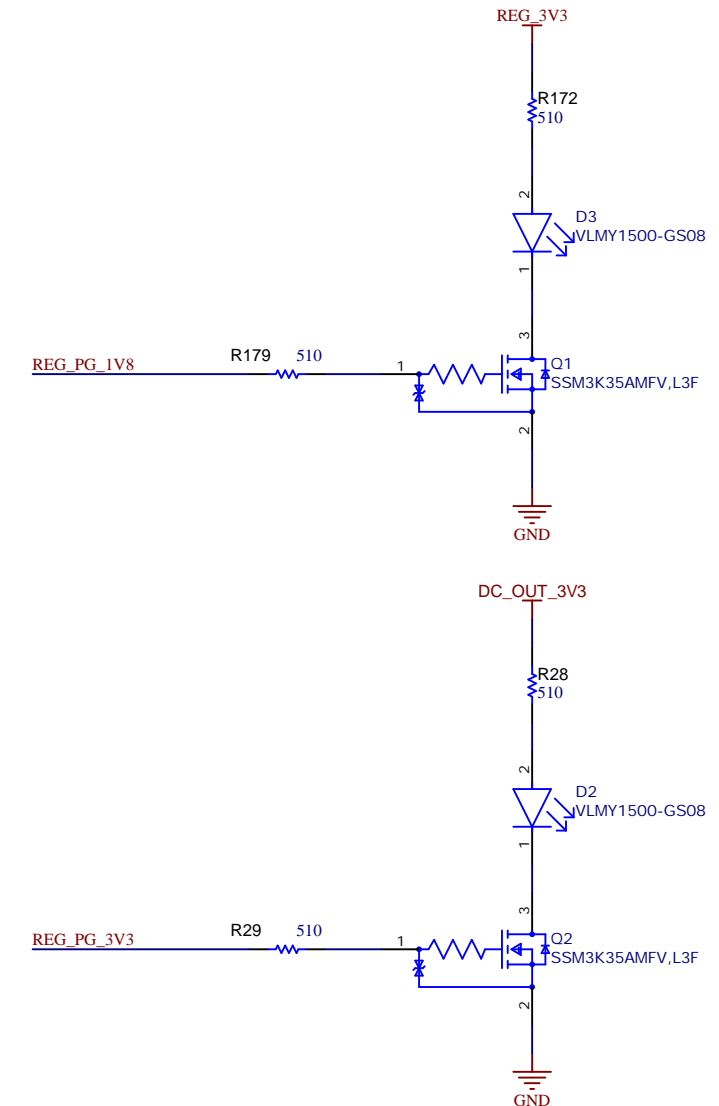
If VPR1 is low (VPR1 < VREF), then Vout = Vin2

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TEST POINTS

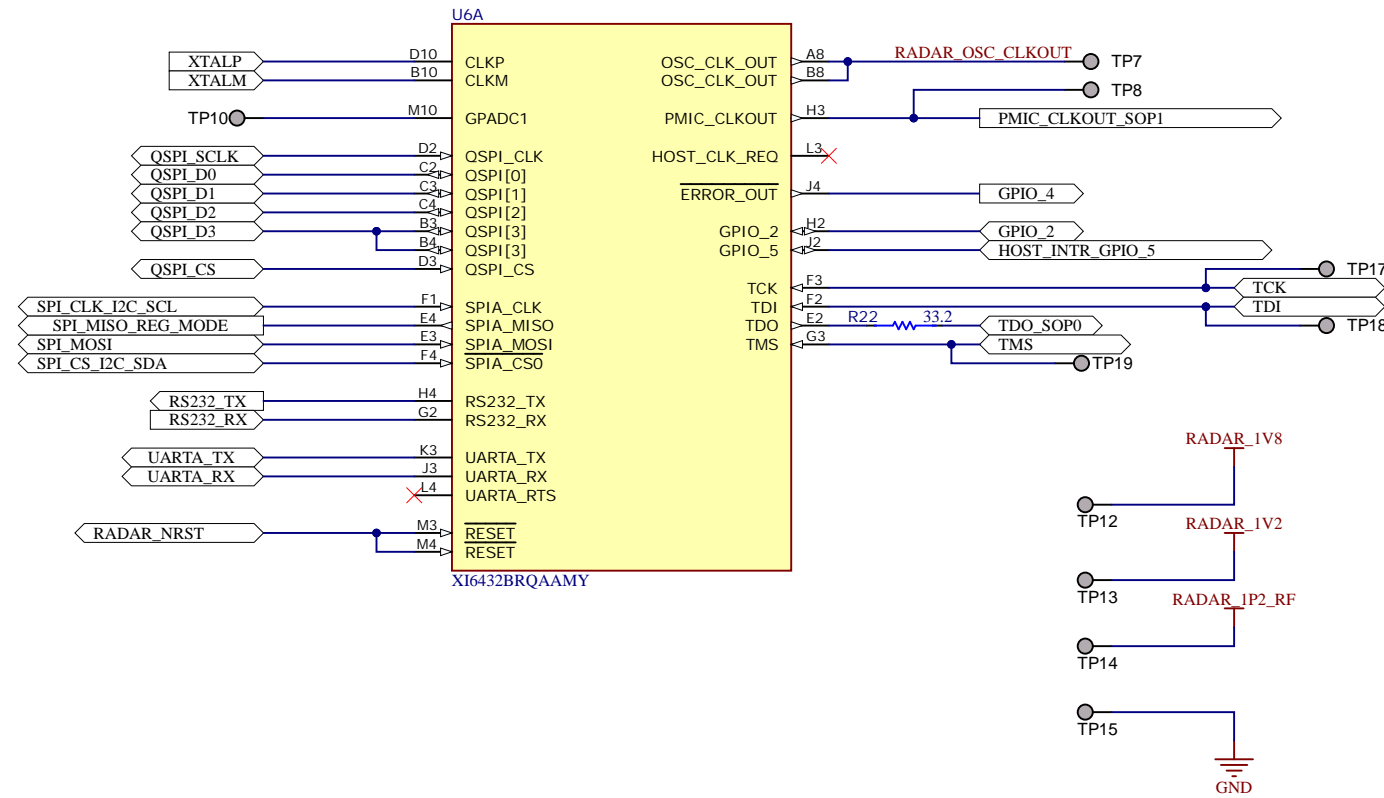


PGOOD LED

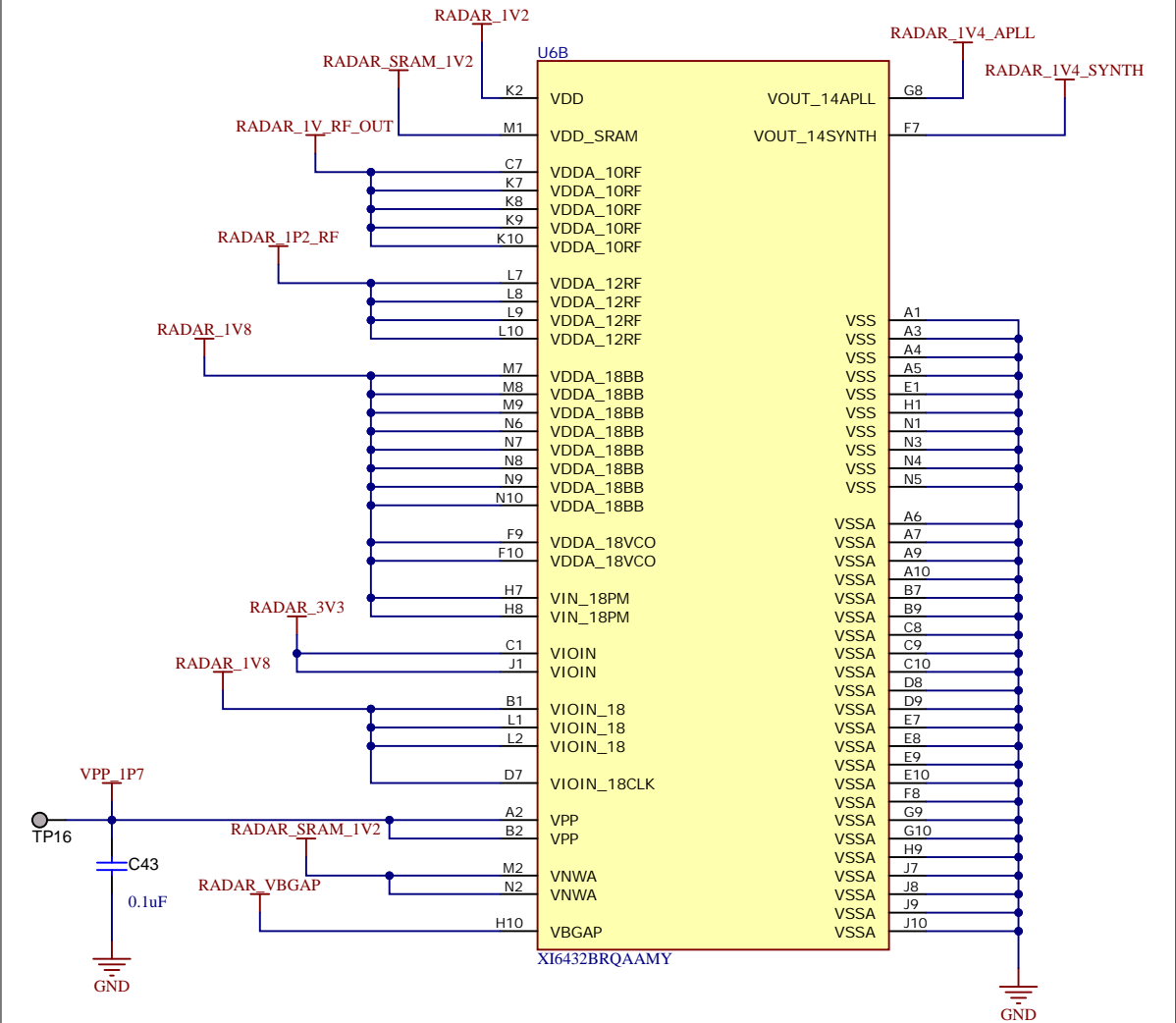


Orderable:	Designed for: Public Release	Mod. Date: 4/28/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: DC REGULATORS
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 4 of 8
Drawn By: Justin Yin	File: TIDA-010967_DC_Regulators.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	

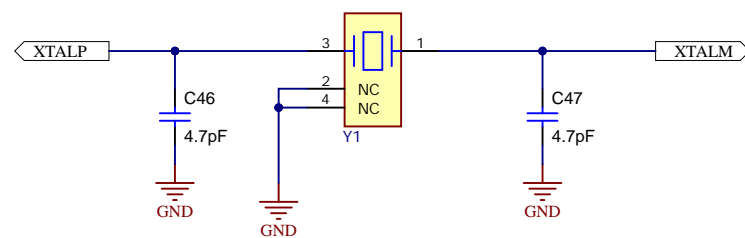
xWRL6432AOP CHIP - INTERFACE



xWRL6432AOP CHIP - POWER

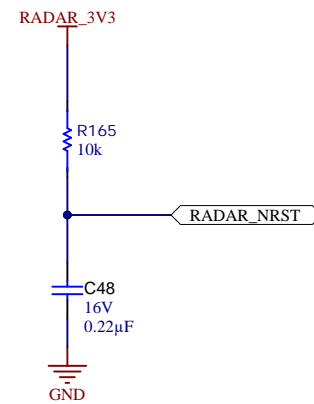


40 MHz CRYSTAL OSCILLATOR

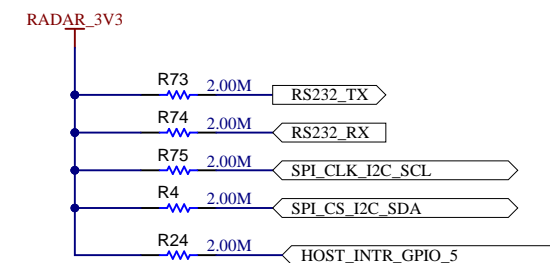


Alternate Crystal part number :
 XRCGE40M000FBAABR0(Murata)
 CX2016SA40000D0PTWC1

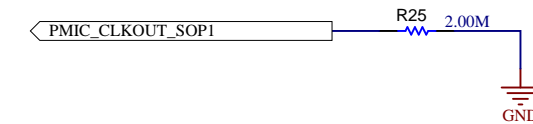
RESET



Pull Up



Pull Down

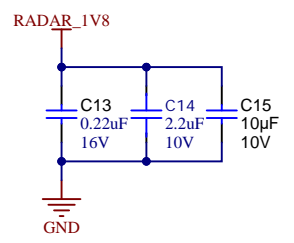


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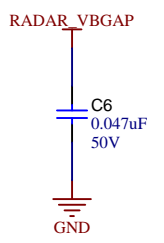
Orderable:	Designed for: Public Release	Mod. Date: 4/28/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: xWRL6432AOP_CHIP
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 5 of 8
Drawn By: Justin Yin	File: TIDA-010967_xWRL6432_Chip.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	

SUPPLY_DECOUPLING_CAPS

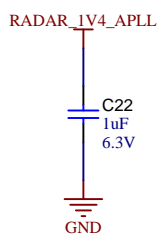
IP8V SUPPLY



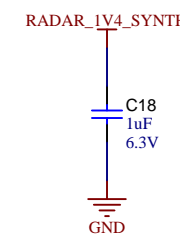
VBGAP SUPPLY



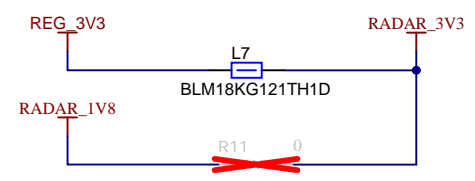
VOUT_PLL SUPPLY



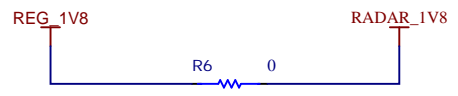
VOUT_SYNTH SUPPLY



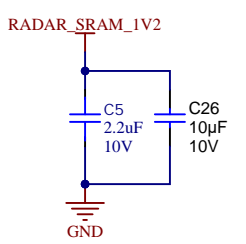
DC-DC CURRENT MEASUREMENT



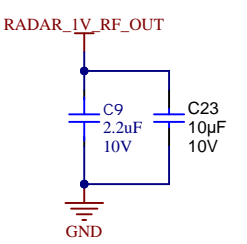
NOTE : For changing I/O voltage to 1.8V, mount R11 and unmount L7.



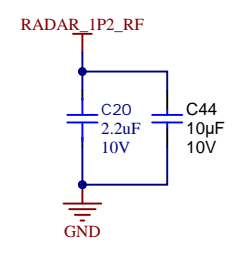
VNWA & SRAM SUPPLY



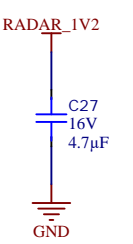
1V_RF_OUT SUPPLY



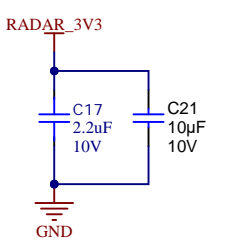
1V2_RF SUPPLY



1V2 DIG SUPPLY



3V3_IO SUPPLY

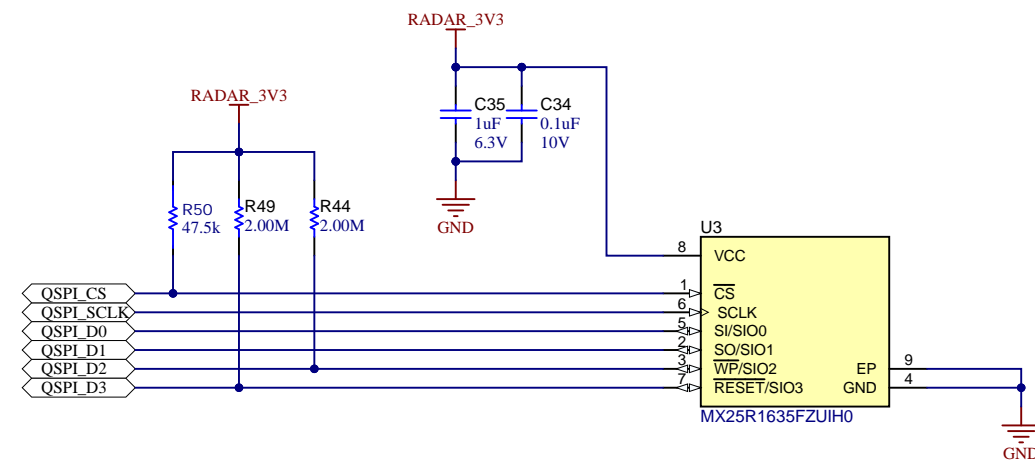


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Orderable:	Designed for: Public Release	Mod. Date: 4/28/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: DECOUPLING_CAPS
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 6 of 8
Drawn By: Justin Yin	File: TIDA-010967_Decoupling_caps.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	



QSPI FLASH



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Orderable:	Designed for: Public Release	Mod. Date: 2/3/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: QSPI_FLASH
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 7 of 8
Drawn By: Justin Yin	File: TIDA-010967_QSPI_Flash_SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	





PCB Number: TIDA-010967
PCB Rev: B

PCB LOGO
Texas Instruments



PCB LOGO
WEEE logo

Variant/Label Table	
Variant	Label Text
001_IWR	IWRL6432AOPMOD
002_AWR	AWRL6432AOPMOD

CAPACITORS HIGHLIGHTED IN THE RED COLOR BOXES ARE ADDED FOR IMPROVEMENT AND THOSE ARE NOT MANDATORY.

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.

ZZ5
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable:	Designed for: Public Release	Mod. Date: 4/28/2025
TID #: N/A	Project Title: xWRL6432AOP Low Cost Module design	
Number: TIDA-010967	Rev: B	Sheet Title: HARDWARE
SVN Rev: Not in version control	Assembly Variant: 001_IWR	Sheet: 8 of 8
Drawn By: Justin Yin	File: TIDA-010967_Hardware.SchDoc	Size: B
Engineer: Justin Yin	Contact: http://www.ti.com/support	

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