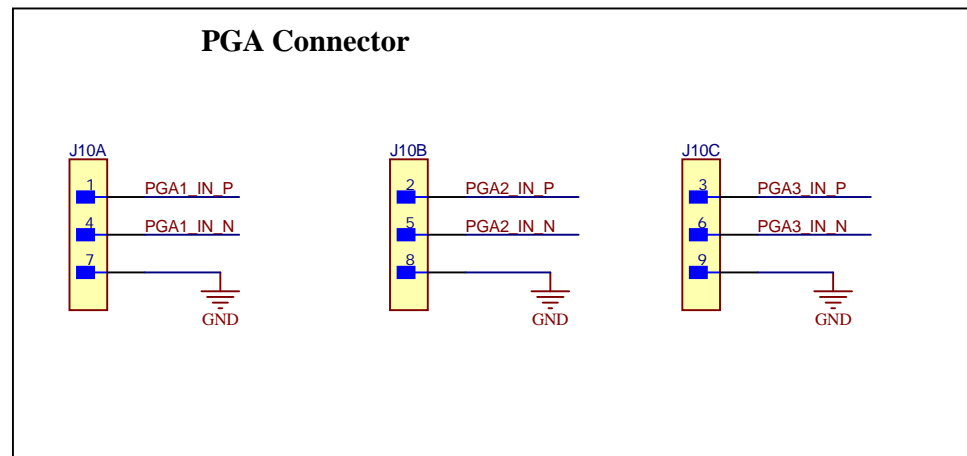
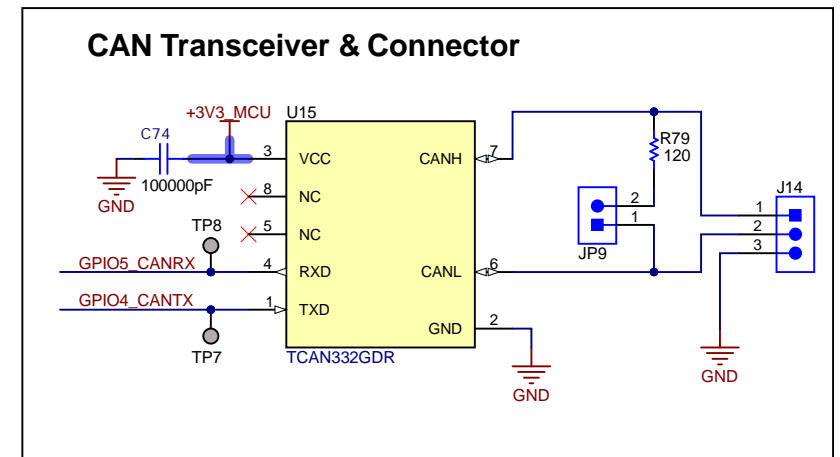
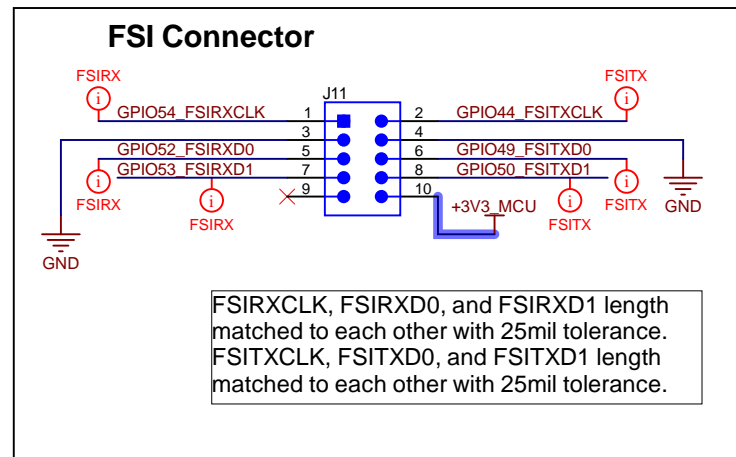
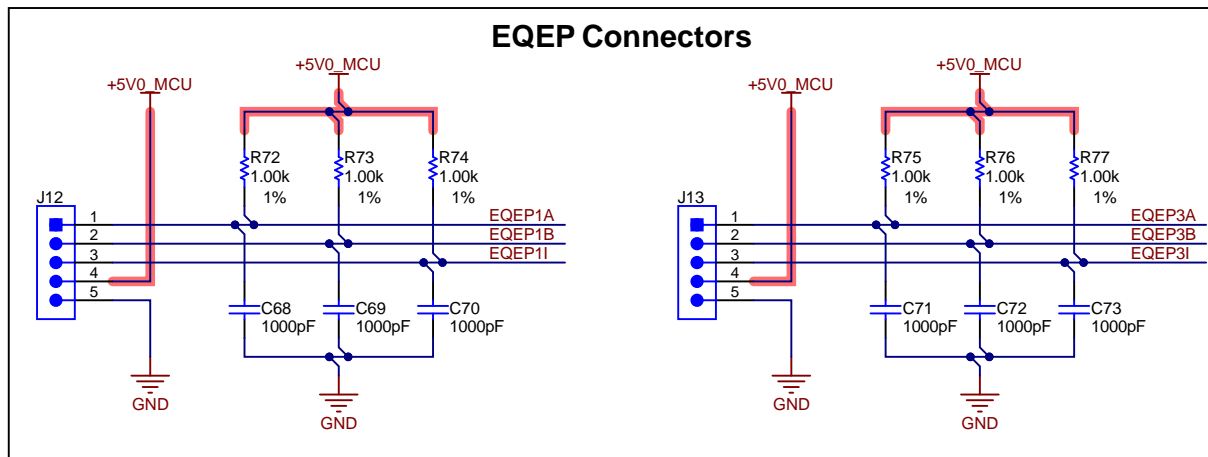
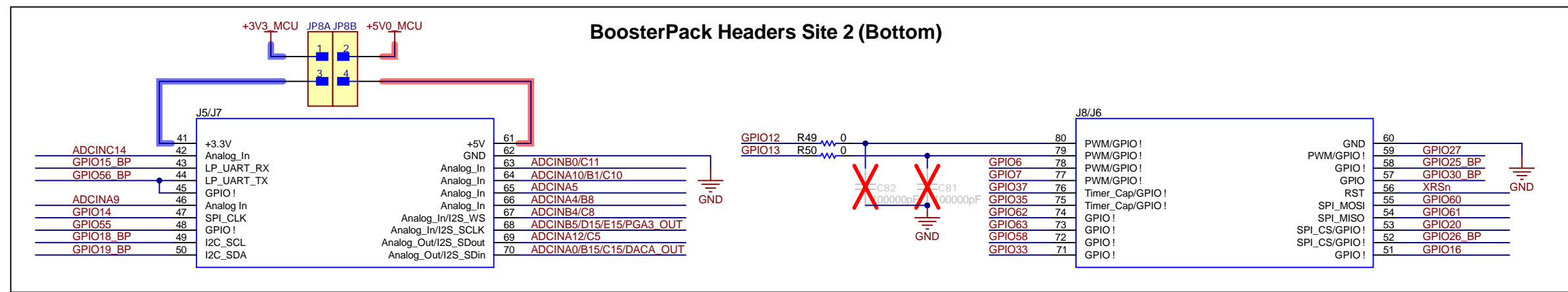
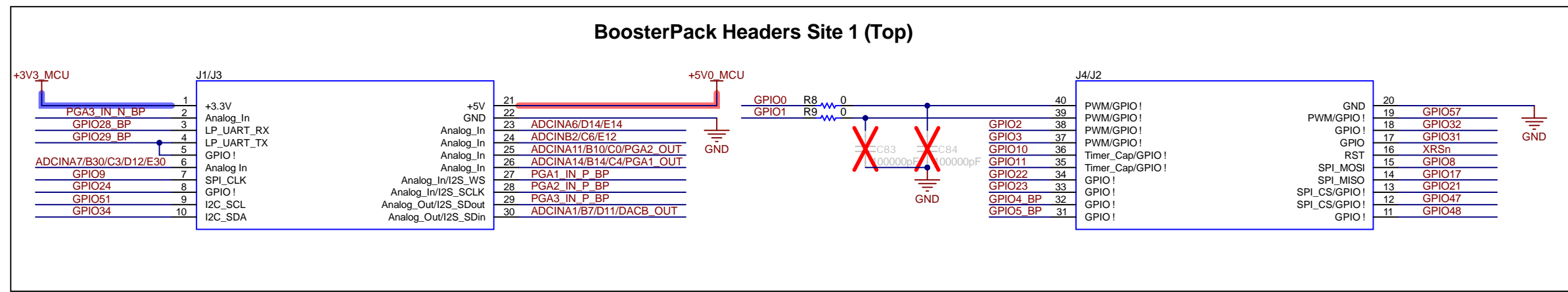


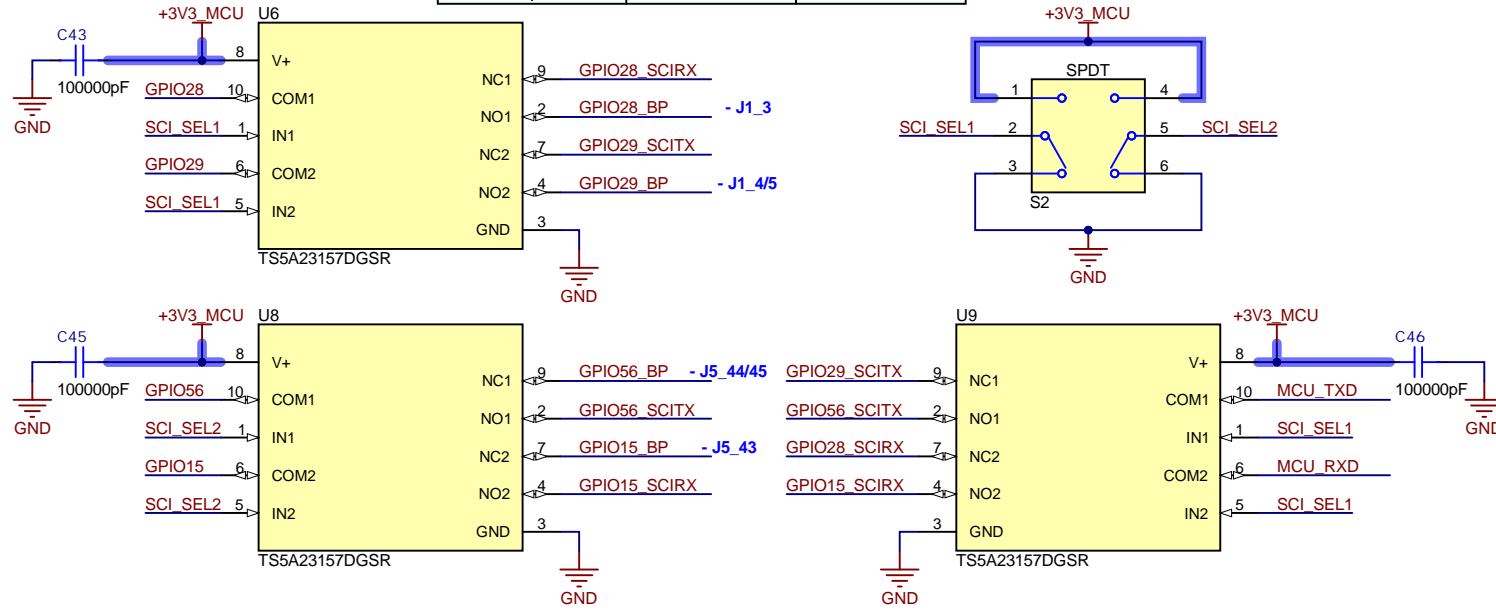
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Orderable: LAUNCHXL-F28P55X	Designed for: Public Release	Mod. Date: 2/20/2024	
TID #: N/A	Project Title: LAUNCHXL-F28P55X	Sheet: 1 of 8	
Number: MCU133	Rev: A	File: MCU133A_Block_Diagram_SchDoc	Size: B
SVN Rev: Not in version control	Assembly Variant: 001	Engineer: Stevan Duraskovic	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>
<a href="http://www.ti.com">http://www.ti.com</a>			© Texas Instruments 2024

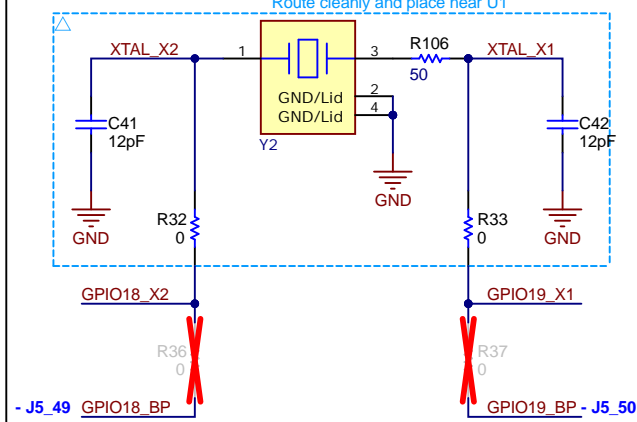


### UART Routing

SCI_SEL1	SCI_SEL2	GPIO28/29 Route	GPIO15/56 Route	
0	0	XDS110 COM Port	BP	- DEFAULT
0	1	XDS110 COM Port	NC	
1	0	BP	BP	
1	1	BP	XDS110 COM Port	

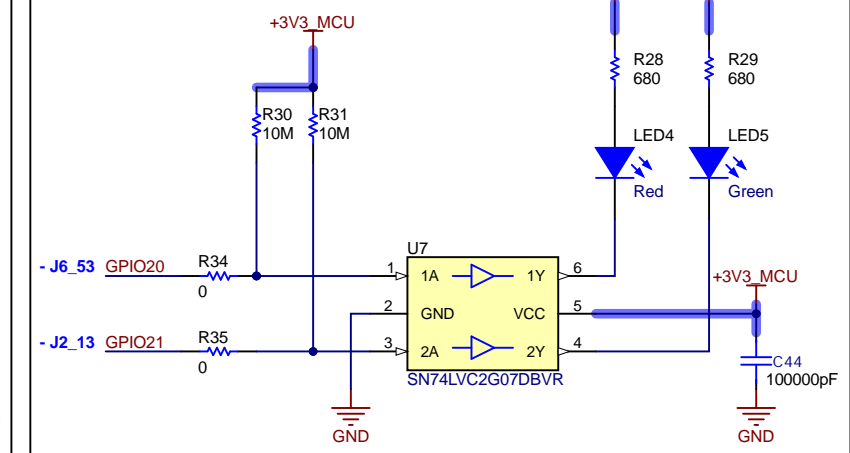


### Oscillator

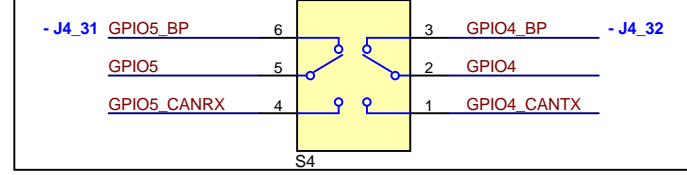


By default:  
 Crystal Y2 is connected between GPIO18\_X2 and GPIO19\_X1.  
 - GPIO18\_BP AND GPIO19\_BP are connected to the BoosterPack headers.  
 If GPIO18 and GPIO19 are needed at the Boosterpack Headers:  
 Remove R32 and R33, populate R36 and R37 with 0 ohm resistors  
 - The F28P55x device's internal oscillator will need to be used

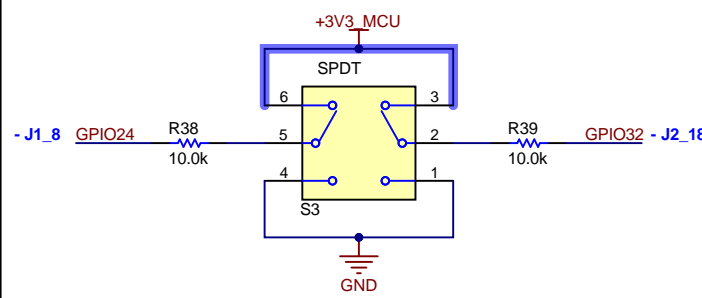
### User LEDs



### CAN Routing



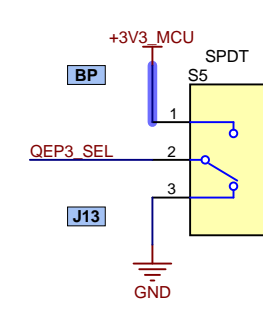
### Boot Mode Select



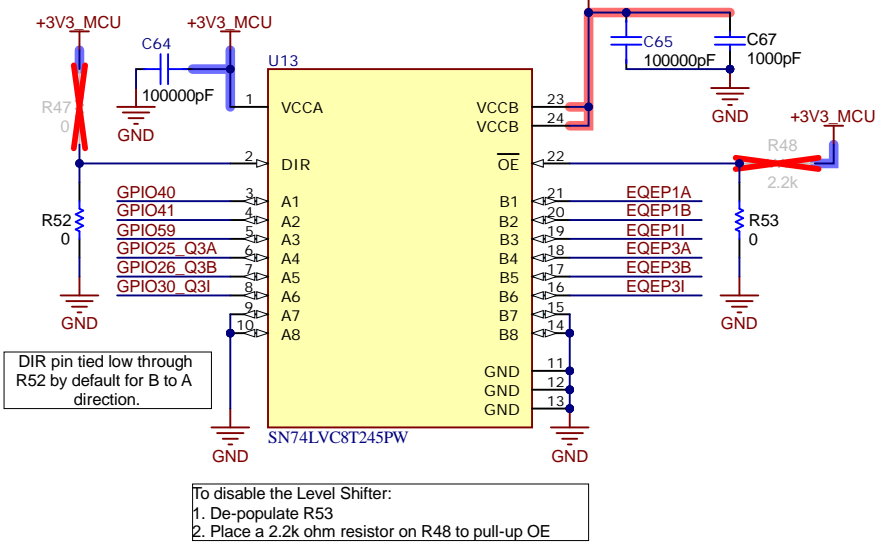
Selected Boot Mode Chart

Mode #	GPIO24	GPIO32	Boot Mode
00	0	0	Boot from Parallel GPIO
01	0	1	Boot from SCI / Wait Mode
02	1	0	Boot from CAN
03	1	1	Boot from Flash

### EQEP Routing

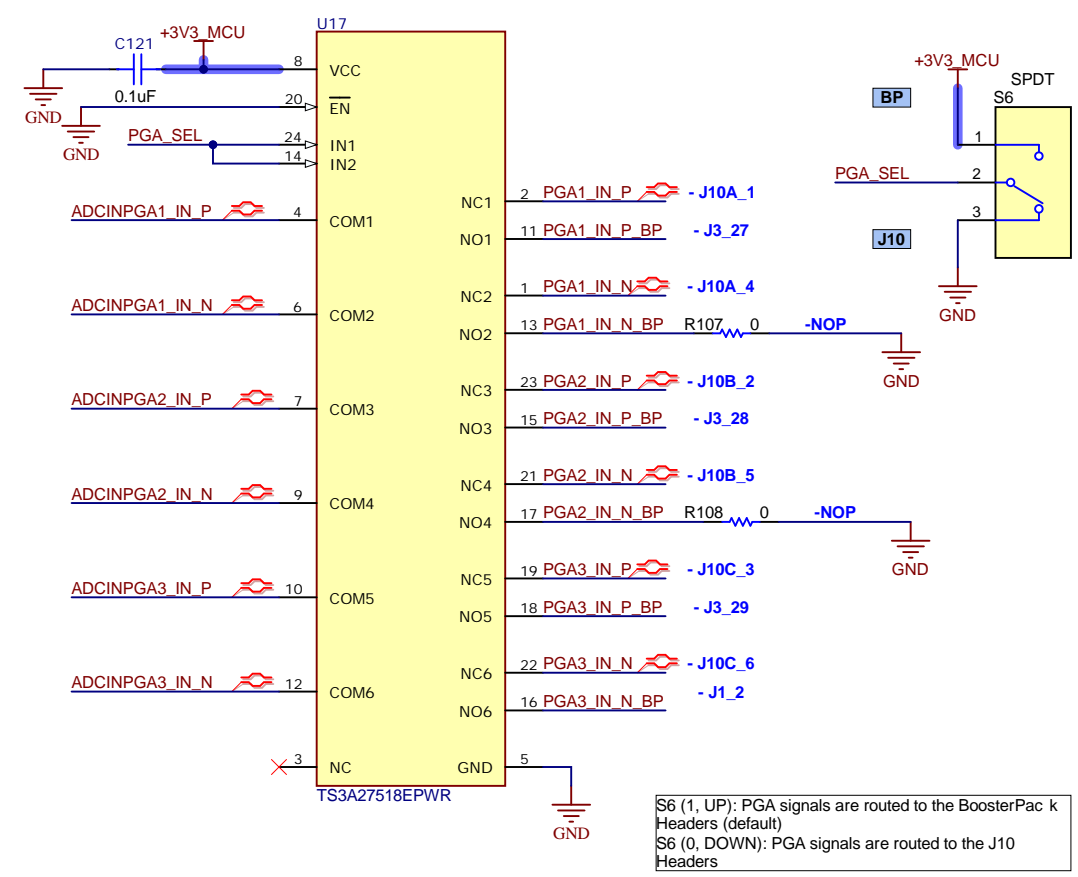


### EQEP Level Shifter



To disable the Level Shifter:  
 1. De-populate R53  
 2. Place a 2.2k ohm resistor on R48 to pull-up OE

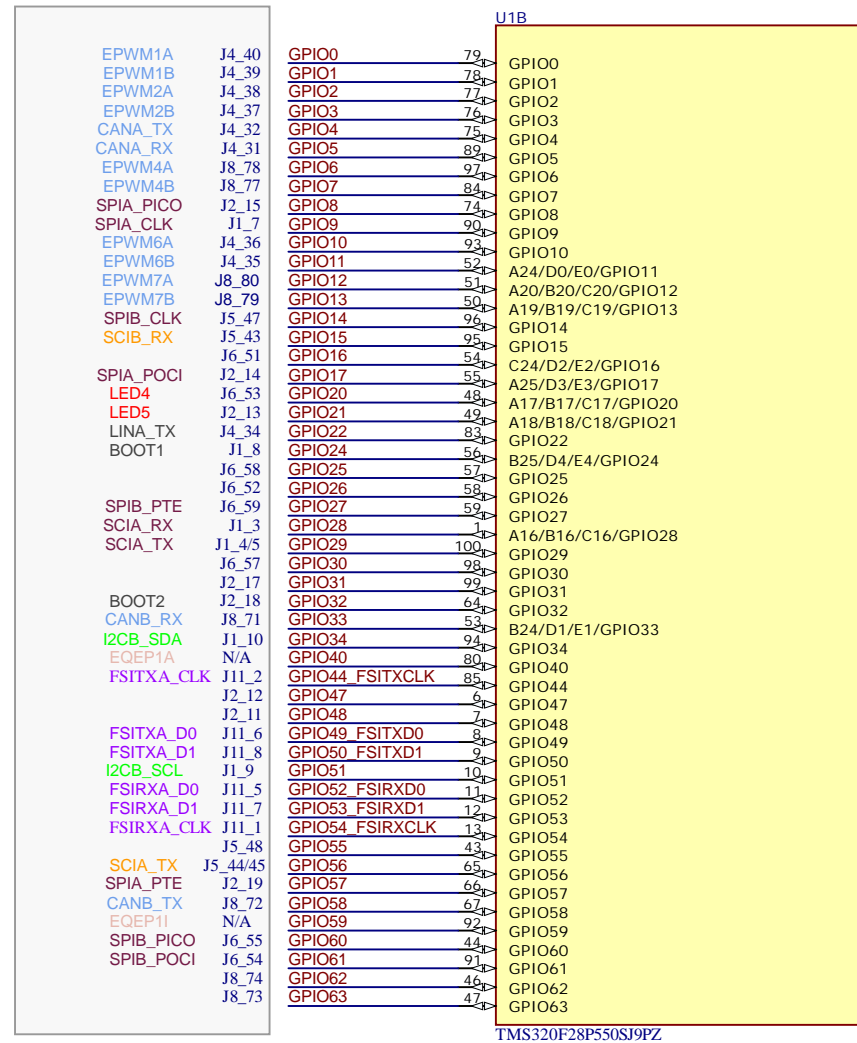
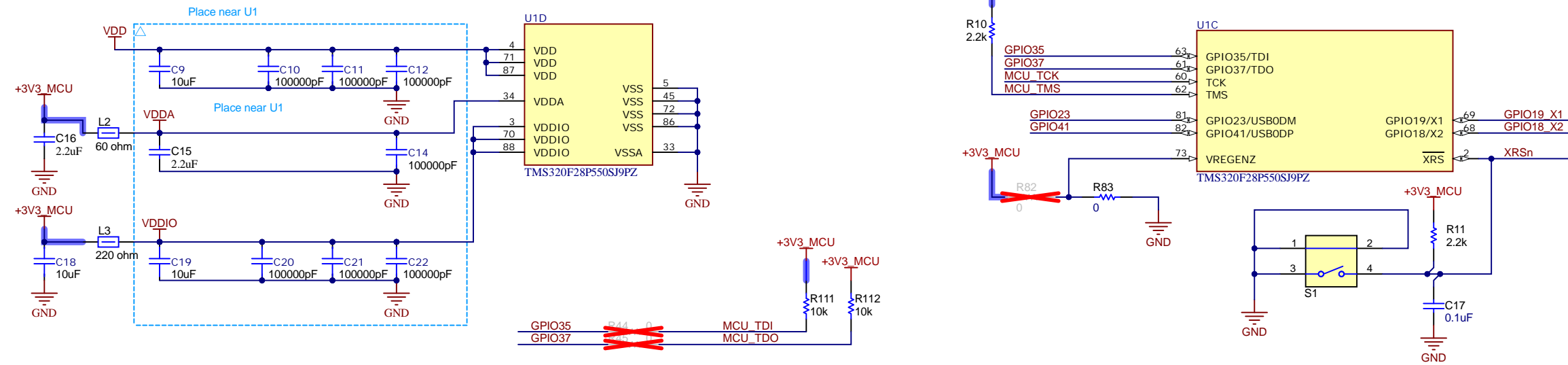
### PGA Routing



S6 (1, UP): PGA signals are routed to the BoosterPack Headers (default)  
 S6 (0, DOWN): PGA signals are routed to the J10 Headers

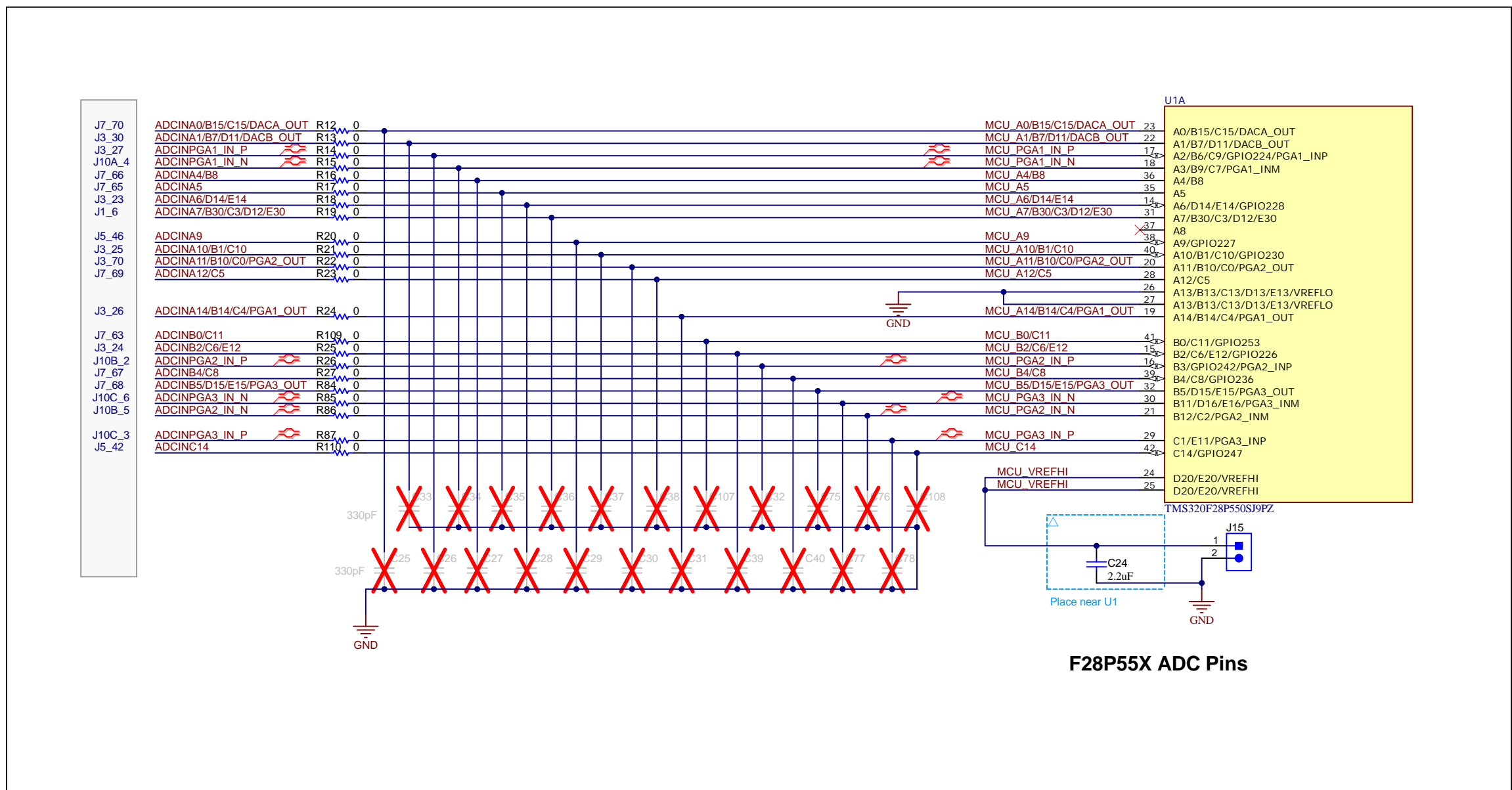
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# F28P55x Device



Orderable: LAUNCHXL-F28P55X	Designed for: Public Release	Mod. Date: 2/20/2024
TID #: N/A	Project Title: LAUNCHXL-F28P55X	
Number: MCU133	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 8
Drawn By: Stevan Duraskovic	File: MCU133A_F28P55x_Device.SchDoc	Size: B
Engineer: Stevan Duraskovic	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

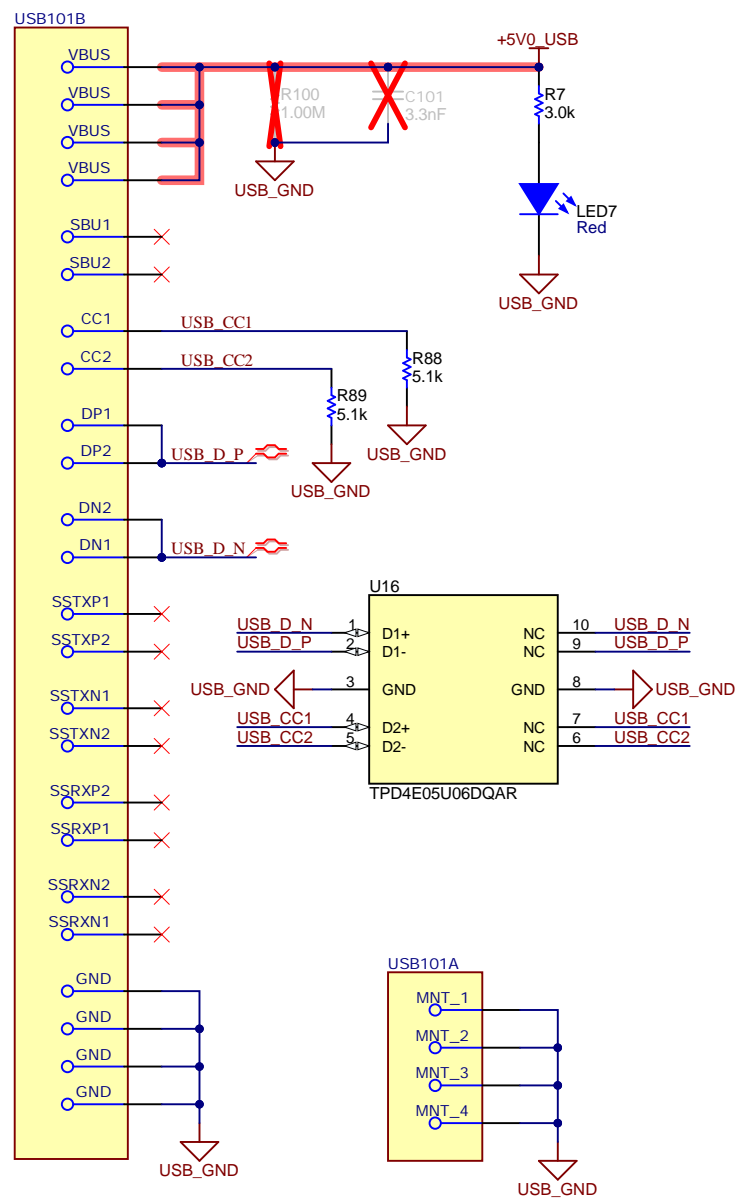
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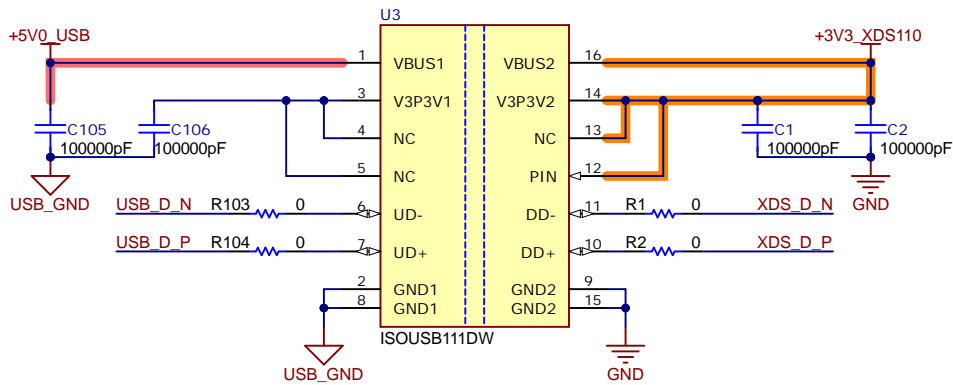
F28P55X ADC Pins

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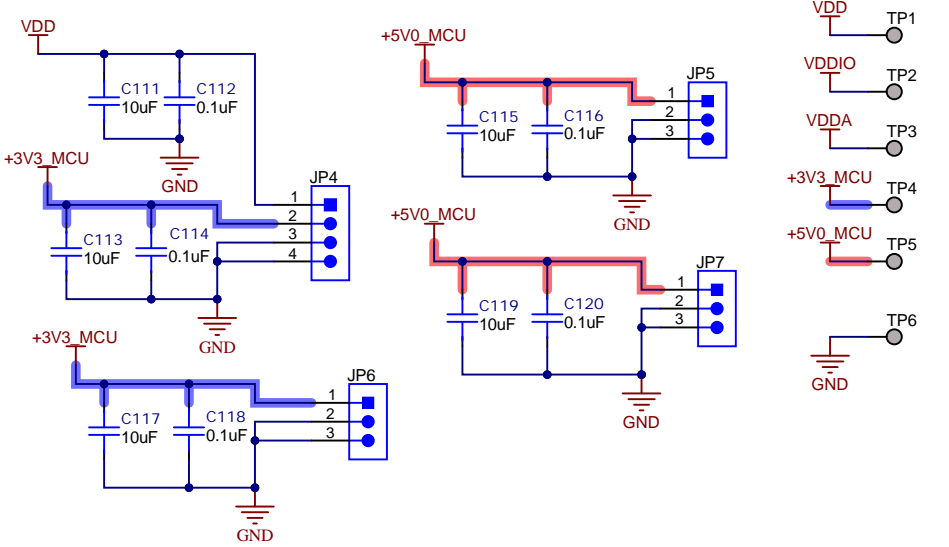
### USB-C Connector



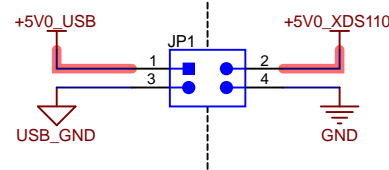
### USB Isolation



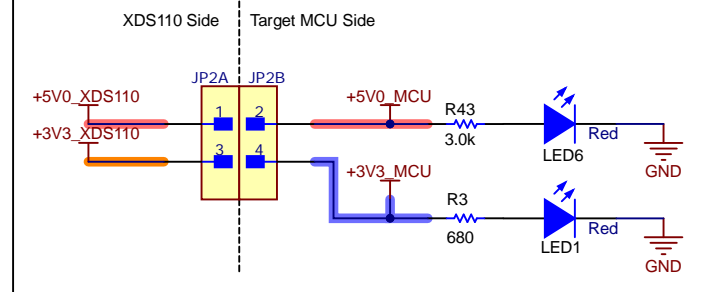
### Power Headers and Test Points



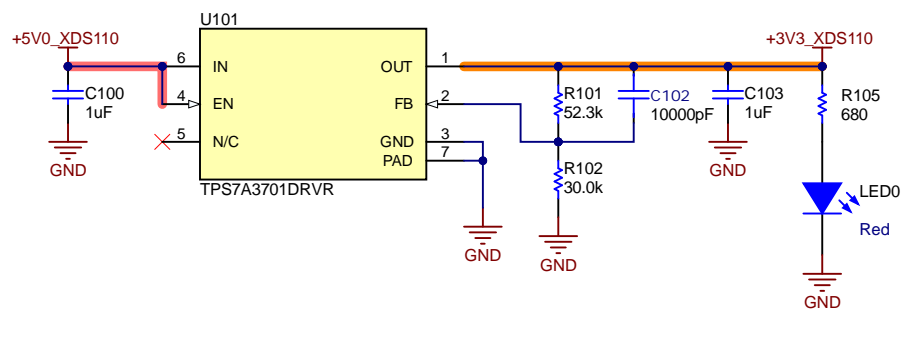
### PWR & GND Isolation Boundary



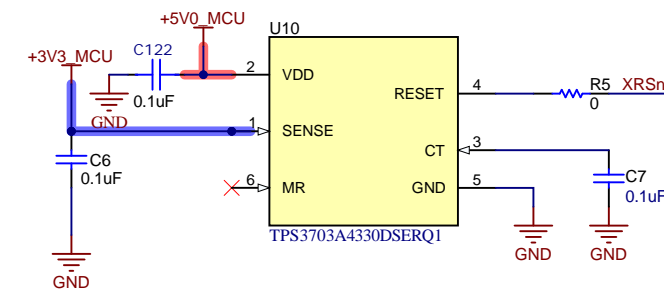
### 5V & 3.3V Isolation Boundary



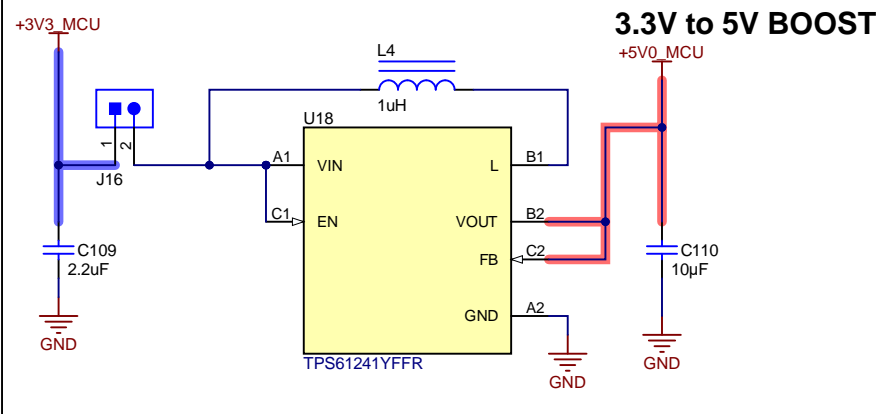
### 5V to 3.3V



### System Supervisory Circuit



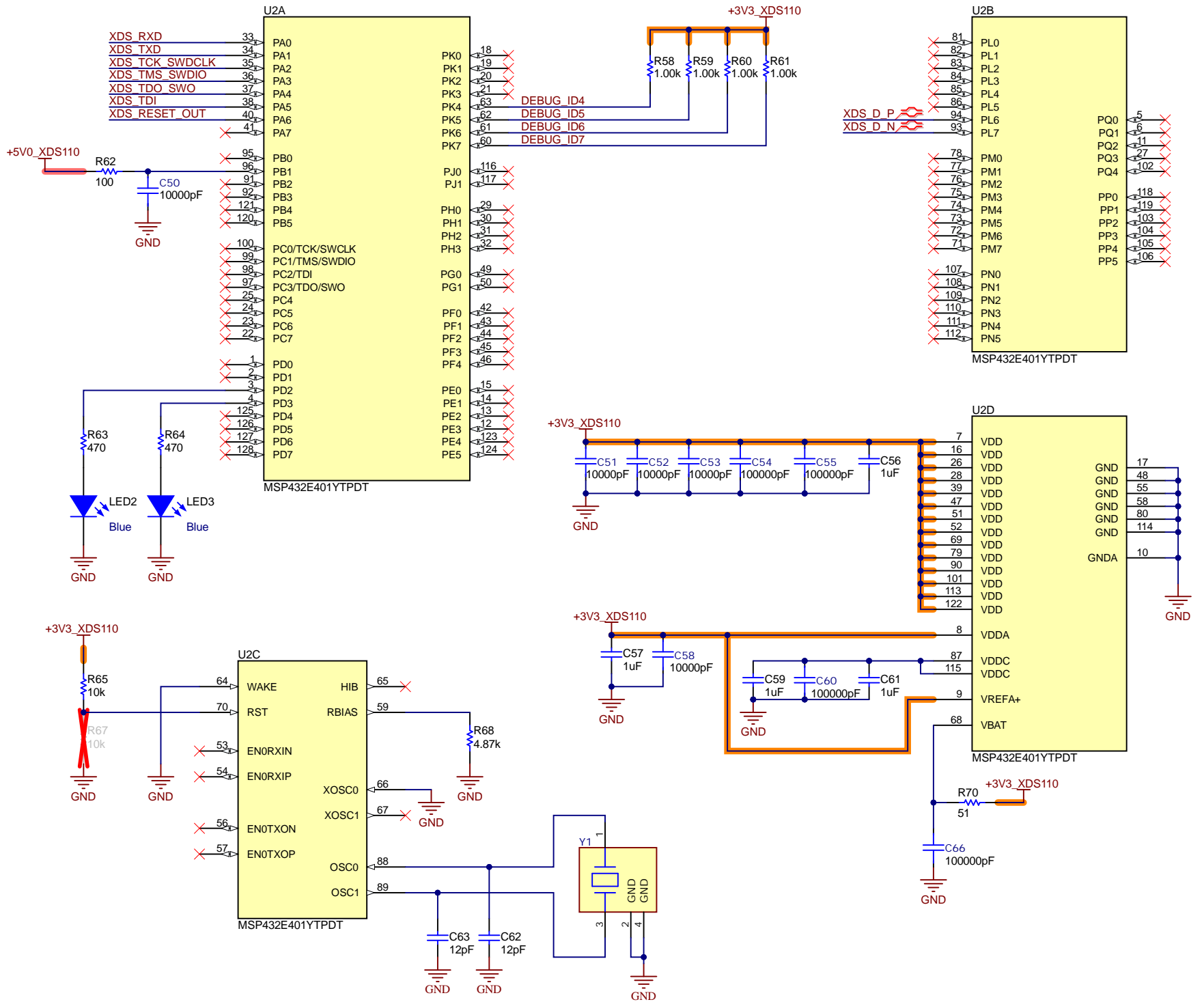
### 3.3V to 5V BOOST



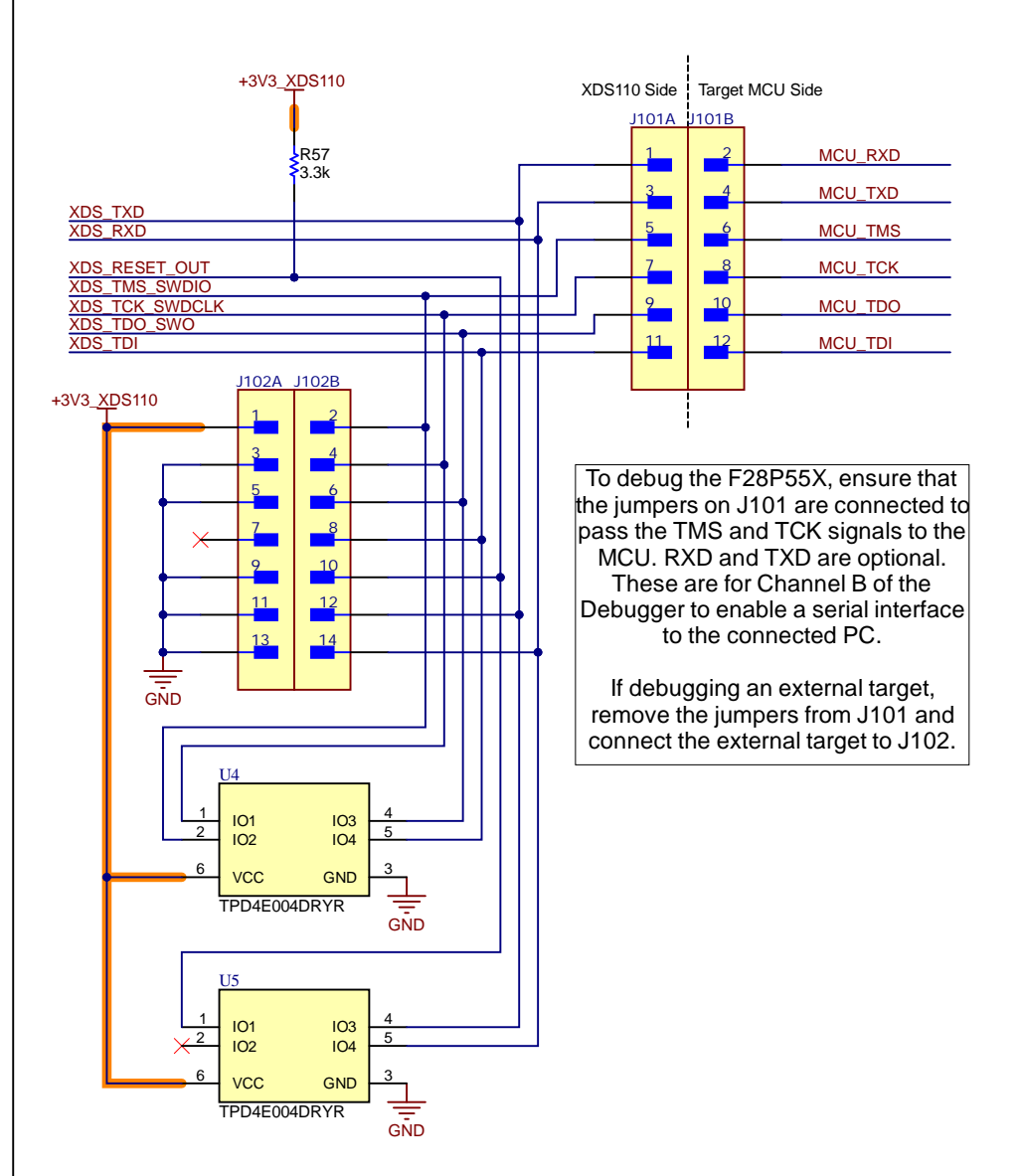
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# XDS110 Device



# XDS110 Target Interface



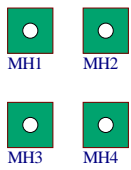
To debug the F28P55X, ensure that the jumpers on J101 are connected to pass the TMS and TCK signals to the MCU. RXD and TXD are optional. These are for Channel B of the Debugger to enable a serial interface to the connected PC.

If debugging an external target, remove the jumpers from J101 and connect the external target to J102.

Orderable: LAUNCHXL-F28P55X	Designed for: Public Release	Mod. Date: 1/11/2024
TID #: N/A	Project Title: LAUNCHXL-F28P55X	
Number: MCU133	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 8
Drawn By: Stevan Duraskovic	File: MCU133A_XDS110_MCU.SchDoc	Size: B
Engineer: Stevan Duraskovic	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	



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PCB Number: MCU133  
PCB Rev: A

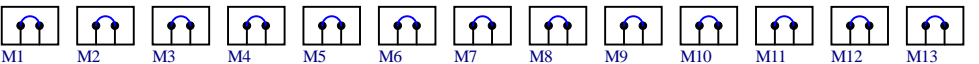
Logo1  
PCB  
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PCB  
LOGO  
FCC disclaimer

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PCB  
LOGO  
WEEE logo

Logo5  
PCB  
LOGO  
Texas Instruments



ZZ1  
Assembly Note  
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2  
Assembly Note  
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ3  
Assembly Note  
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

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Orderable: LAUNCHXL-F28P55X	Designed for: Public Release	Mod. Date: 2/3/2024	
TID #: N/A	Project Title: LAUNCHXL-F28P55X		
Number: MCU133	Rev: A	Sheet: 8 of 8	
SVN Rev: Not in version control	Assembly Variant: 001	Size: B	
Drawn By: Stevan Duraskovic	File: MCU133A_Hardware.SchDoc	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	
Engineer: Stevan Duraskovic	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>		© Texas Instruments 2024



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