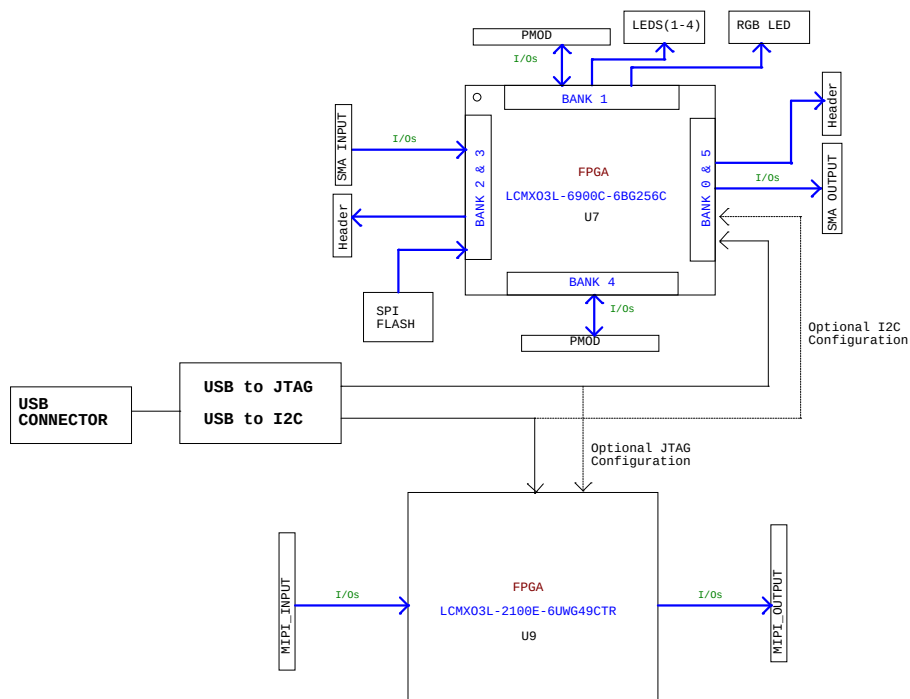


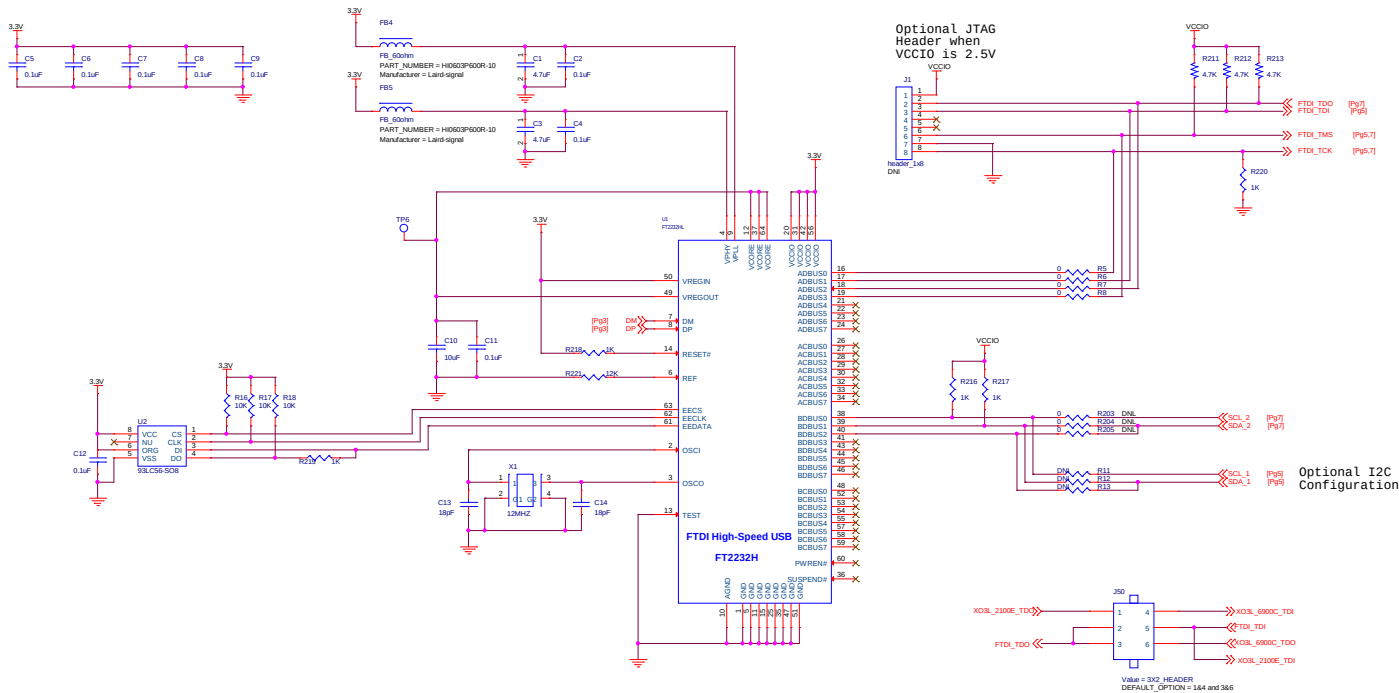
XO3L Breakout Board Revision B

May, 2014



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Title: Block Diagram			
Size: C	Project: XO3L Breakout Board	Schematic Rev: B	Board Rev: B
Date: May, 2014		Sheet: 1 of 7	



JTAG Chain Options

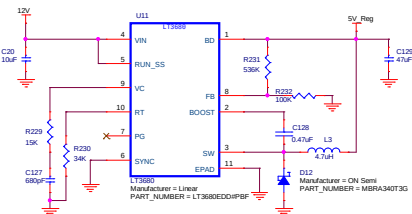
2100 + 6900	2100 only	6900 only
1 4 2 5 3 6	1 4 2 5 3 6	1 4 2 5 3 6



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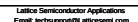
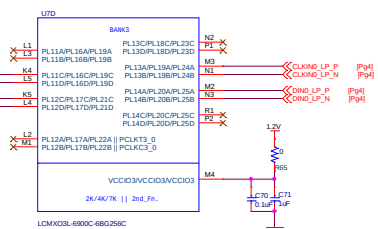
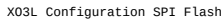
Title		USB to JTAG	
Size	Project	MeachXZBL DSI Breakout Board	Schematic Rev B
Doc	May 2014	Sheet	2 of 7

1) External 12V DC Supply
2) Signet Main Board Connector

[illegible]

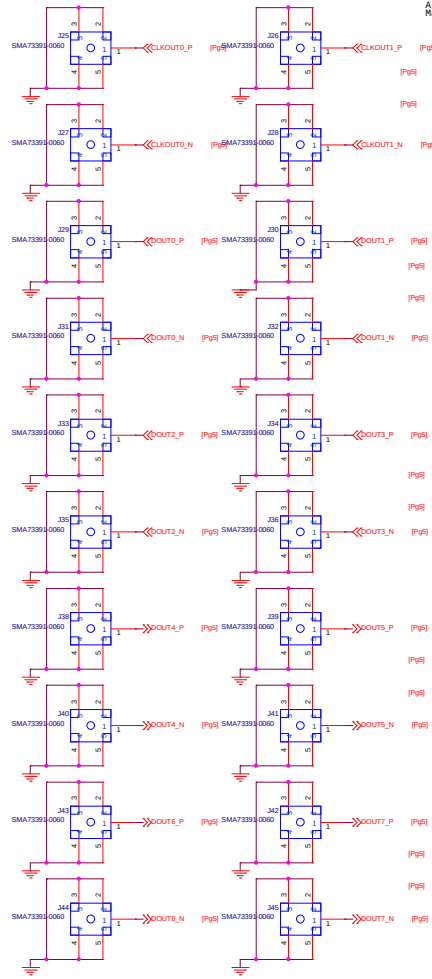
Title		Board Power	
Size	Project	Schematic Rev	Board Rev
C	MachXO3L DSI Breakout Board		
Date	May, 2014	Sheet	3 of 7

Place resistors as close to the bank 2 pins on X03 as possible.
Arrange them so they do not influence the "HS" trace path.
Match trace length for all P and N signals. Match lengths between HS signals, match lengths between LP signals.



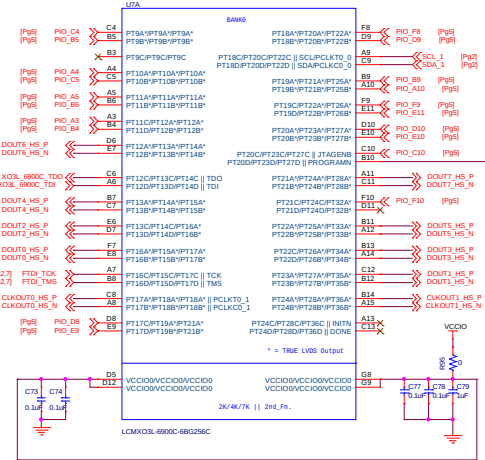
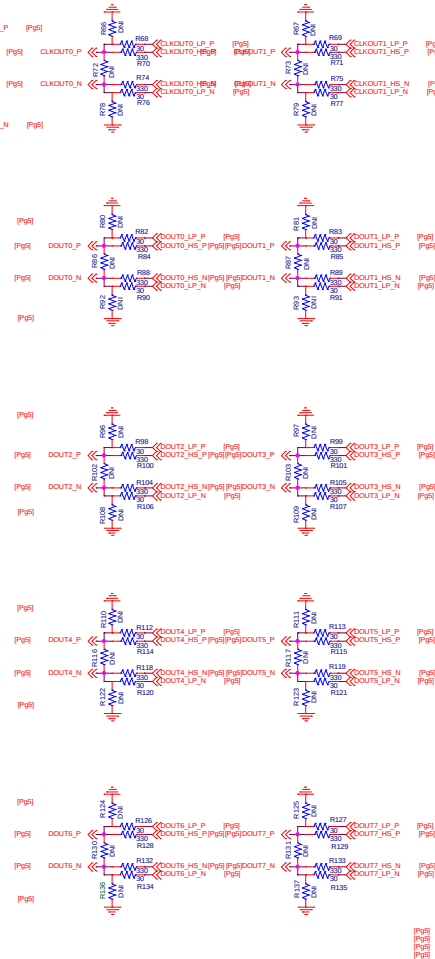
Title		DS: SMA_INPUT	
Size C	Project MachXO3L DSI Breakout Board	Schematic Rev	B
		Board Rev	B
Date	May, 2014	Sheet	4 of 7

SMA Connectors

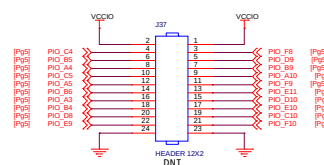


MIPI TX Termination

Place resistors as close to the bank 0 pins on X03 as possible.
Arrange them so they do not influence the "HS" trace path.
Match trace length for all P and N signals. Match lengths between HS signals, match lengths between LP signals.

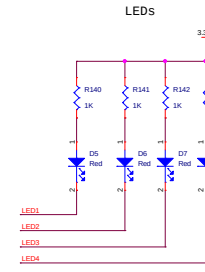
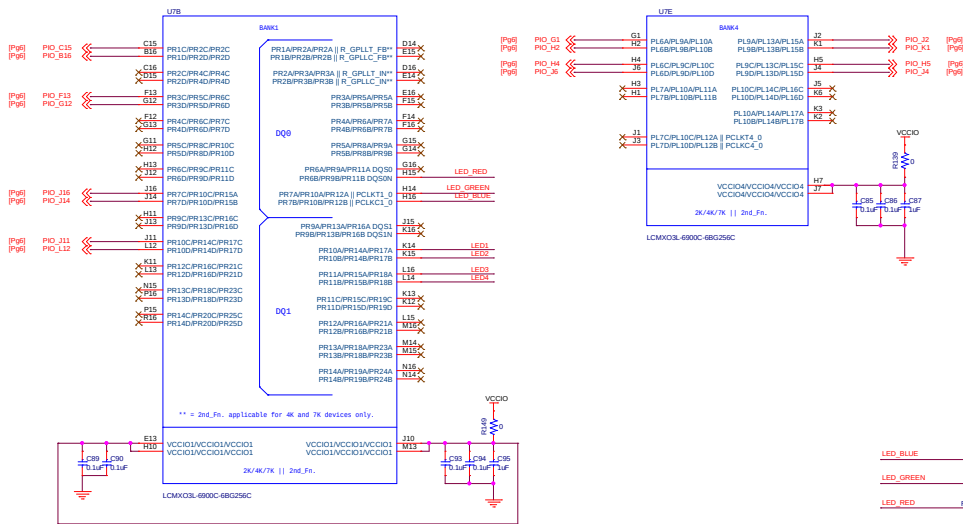


I/O Header



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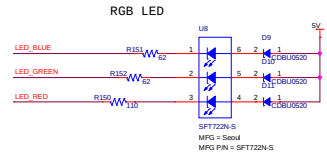
File	DS: SMA_OUTPUT	Schematic Rev	B
Size	Project	May 2014	B
C	Max9203L DSI Unloaded Board	Sheet	5 of 7
Date	May 2014	Sheet	5 of 7



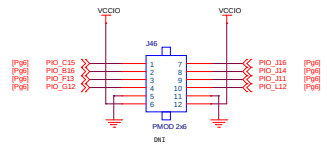
BLUE LED
 VF=2.1V, IF=20mA
 RS=(5.0V-3.2V)/20mA=145Ohm
 IOL@3.3V=24mA
 RS=(5.0V-2.1V)/24mA=120.8Ohm

GREEN LED
 VF=3.2V, IF=20mA
 RS=(5.0V-3.1V)/10mA=90Ohm
 IOL@3.3V=24mA
 RS=(5.0V-3.1V)/24mA=75Ohm

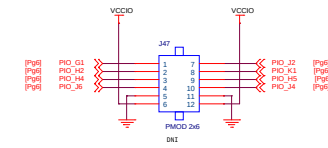
RED LED
 VF=3.2V, IF=20mA
 RS=(5.0V-3.2V)/10mA=90Ohm
 IOL@3.3V=24mA
 RS=(5.0V-3.2V)/24mA=75Ohm



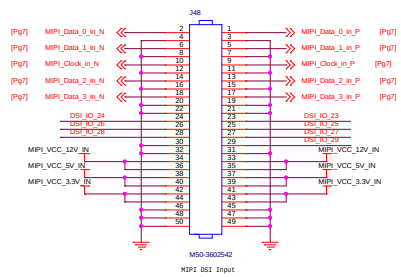
PMOD Connector



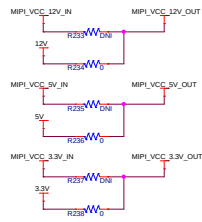
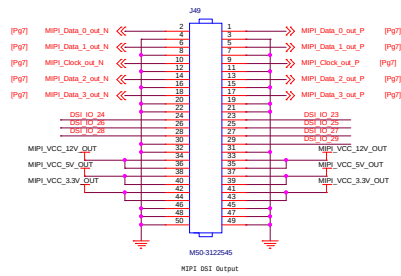
PMOD Connector



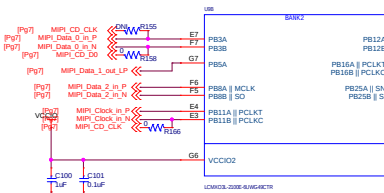
DSI Input Connector



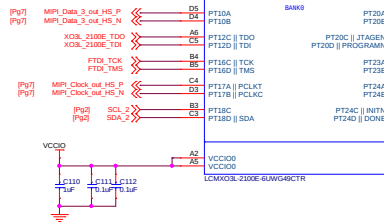
DSI Output Connector



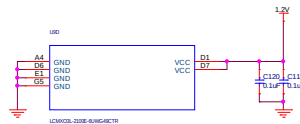
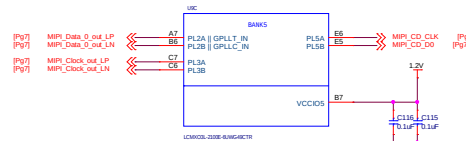
Place "CD" resistors and I2C pull up as close to bank 2 pins as possible. Trace match "HS" pins between P and N channels as well as individual pairs. Minimize routing and trace match "CD" signals to bank 5 pairs.



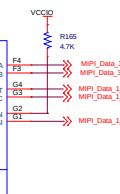
US



Optional JTAG Configuration

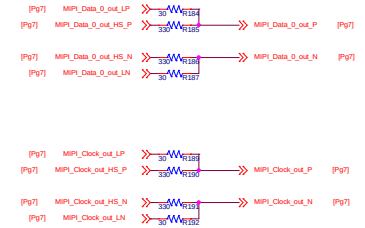
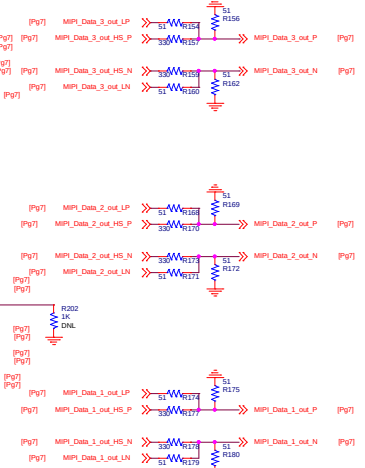


This resistor is for external pull up for cases where I2C is used. If I2C is not used for programming this signal is not needed.



MIPI Tx Termination

Place MIPI Tx resistor network as close to bank 0 as possible. Trace match "HS" P & N channels as well as individual pairs. Minimize routing and trace match "LP" signals to bank 5 and 0.



Note: Most of the resistor size is 0603, except in Page 7, they are 0201.



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File	XOS B06 + DS1: LCMX30-2100E-6WLCSP40	Schematic Rev	B
Size	Project	Board Rev	B
C	MezzXOS30 DSI Breakout Board		
Date	May 2024	Sheet	7 of 7