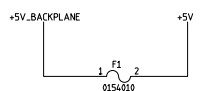
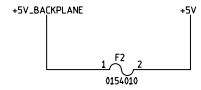


REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE			NR	
A		UPDATE: ADD RS-722 PORT HEADER TO ETHERNET MODULE. MAKE 0 REFERENCE DESIGNATOR VISIBLE. ADD +25V-5 TO J4. ADD NOTE REGARDING P1_B4/B5 AND P1_B6/B7. ADD PULL-DOWN RESISTOR ON MAIN RESET AND CHANGE R37 TO 100 OHMS. CHANGE R1 R3 TO 1K OHMS. MOVE DIFFERENTIAL CLOCK SIGNALS FROM BG00n/BG05n AND BG10n/BG15n TO DSDn/USIn AND SERn/SERB.				

REVISED 4-5-10

ROUTING NOTES:

- 1) DIFF PAIRS MATCHED @ 0.1" WITH 100 OHM IMPEDANCE
- 2) DIFF PAIRS MATCHED @ 0.1"
- 3) CLOCK SIGNALS - ROUTE CAREFULLY, AS SHORT AS POSSIBLE
- 4) HIGH SPEED SIGNALS - ROUTE CAREFULLY
- 5) JTAG SIGNALS



QTY REQ	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	INTERNAL SPECIFICATION	ZONE	NO.
PART LIST/BILL OF MATERIAL					
DRAWING LEVEL		TASK & CONTRACTOR		PROJECT	
UNCLASSIFIED		MENTOR 2004		LOS ALAMOS LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO 87545	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		APPROVALS		SCHEMATIC - FVFX FEM INTERFACE BOARD VME CONNECTORS	
TOLERANCE ARE: FRACTIONAL ± 10% DECIMAL ± .05 HOLE ± .015		DESIGNED	DATE	SIZE	
ANGULAR FINISH ± 125		DRAWN	06/02/09	D	
		CHECKED		CASE CODE	
		ENGINEERING		DRAWING NO. & CAD FILENAME	
NEXT ASSEMBLY		APPROVED		126Y-267977	
APPLICATION		FILE PATH		SCALE	
				NONE	
				SHEET 1 OF 10	

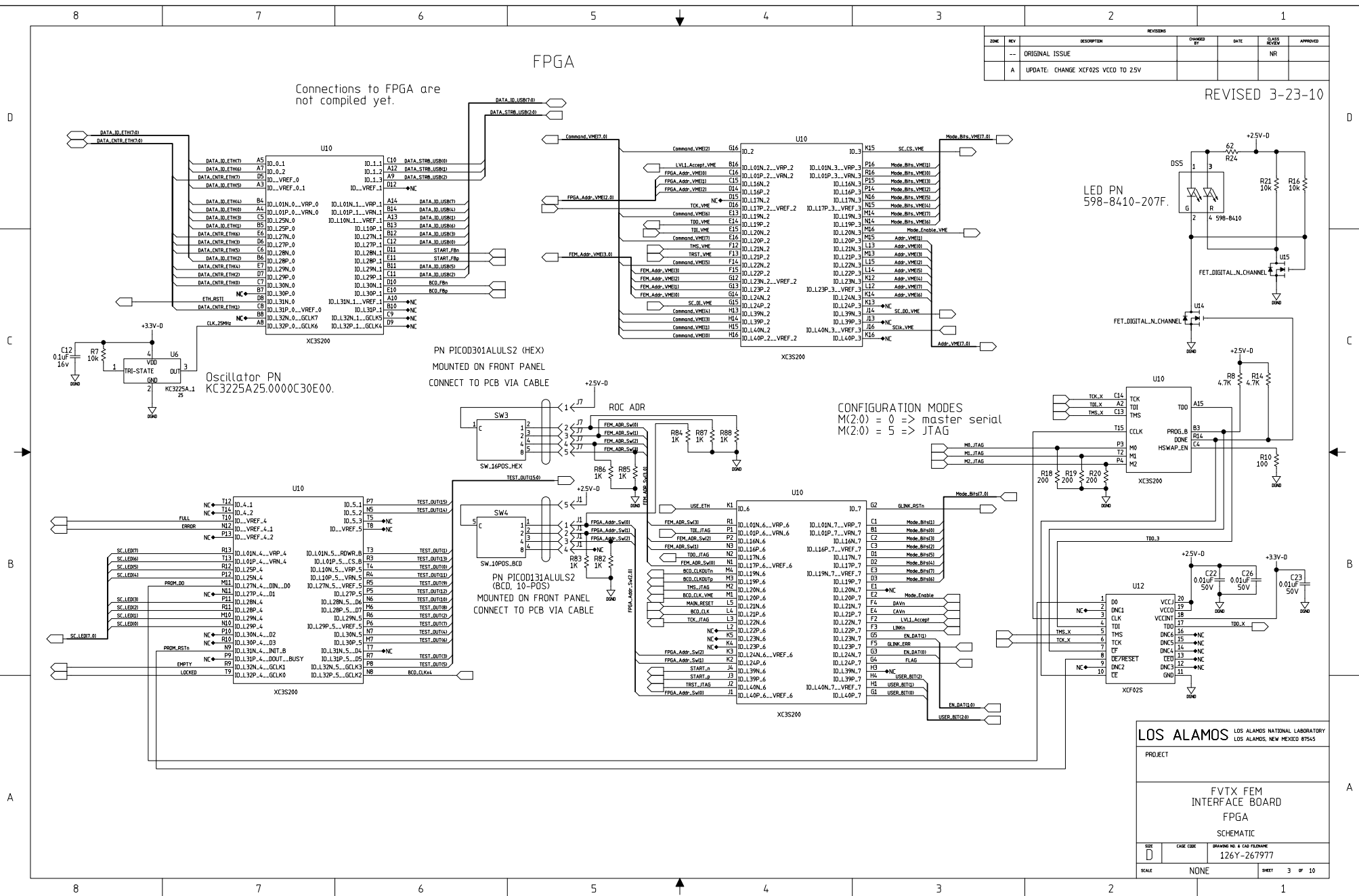


ZONE		REV	DESCRIPTION	CHANGED BY	DATE	CLASS	APPROVED
--		1	ORIGINAL ISSUE			NR	
A		1	UPDATE: CHANGE XCF02S VCC0 TO 25V				

REVISED 3-23-10

Connections to FPGA are not compiled yet.

FPGA



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PROJECT

FVTX FEM  
INTERFACE BOARD  
FPGA

SCHEMATIC

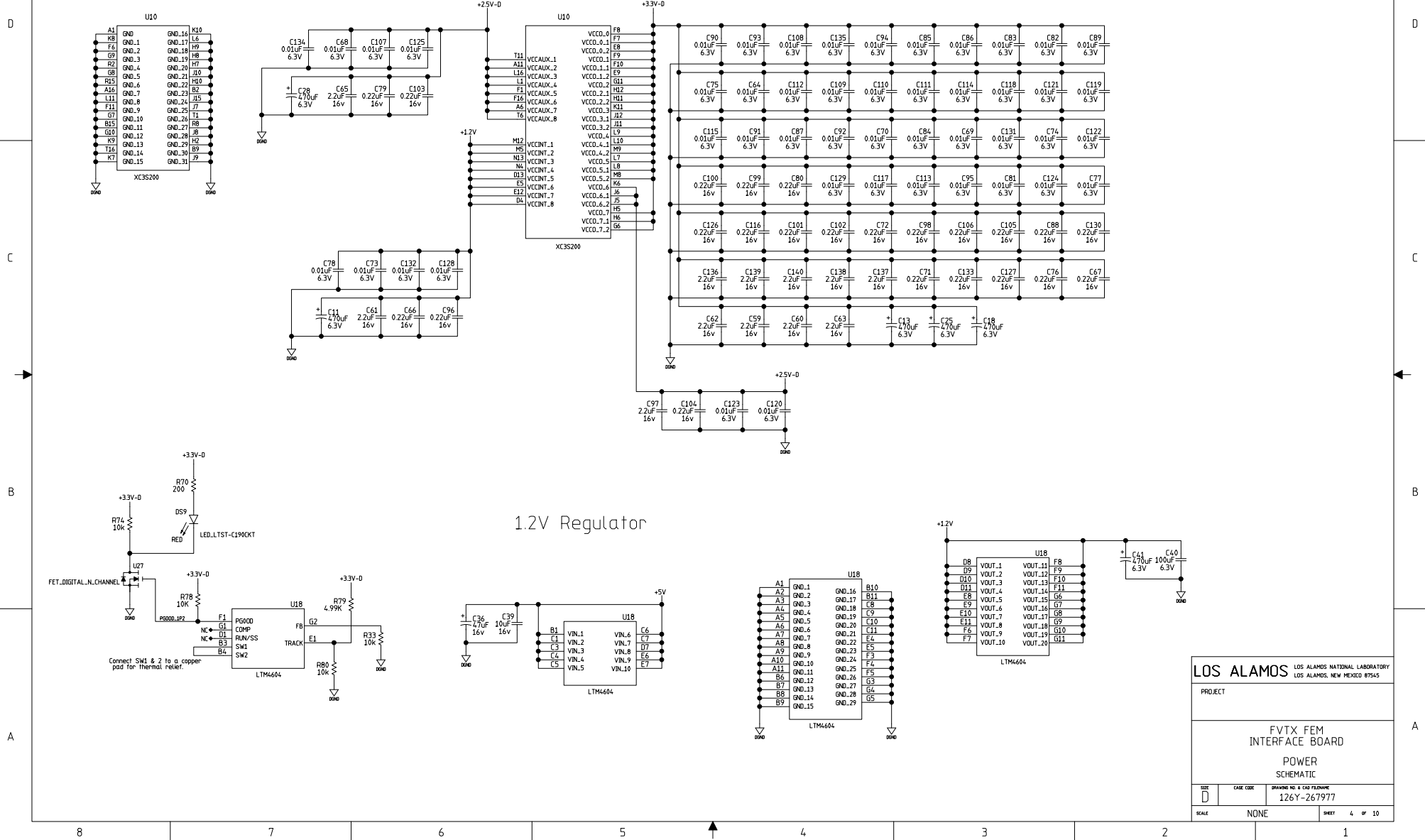
SIZE D CASE CODE DRAWING NO & CAD FILENAME  
126Y-267977

SCALE NONE SHEET 3 OF 10

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				

REVISED 9-23-09

### FPGA POWER



### 1.2V Regulator

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PROJECT

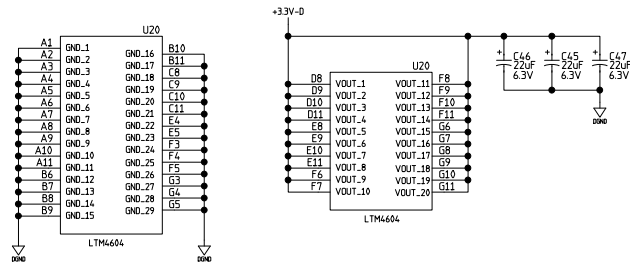
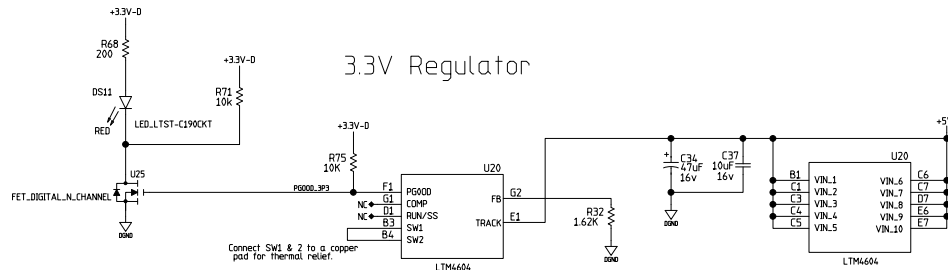
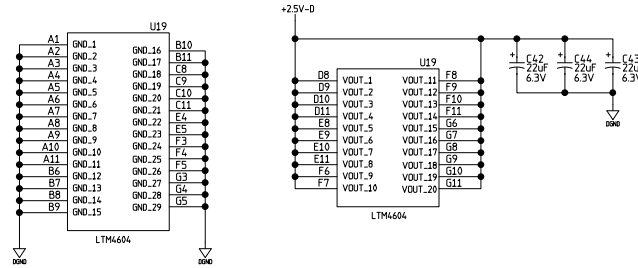
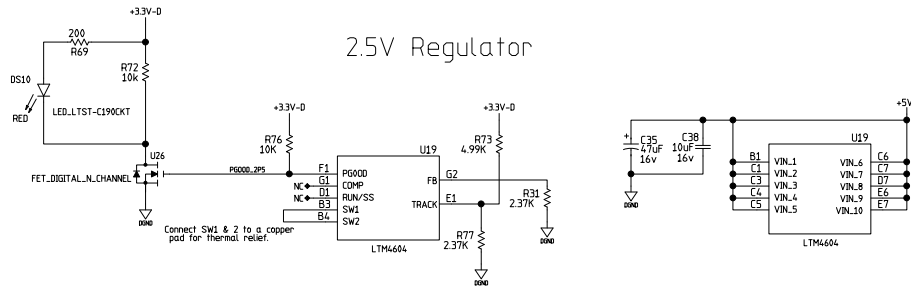
FVIX FEM  
INTERFACE BOARD  
POWER  
SCHEMATIC

SIZE D CASE CODE DRAWING NO & CAD FILENAME  
126Y-267977

SCALE NONE SHEET 4 of 10

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				

REVISED 9-23-09



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PROJECT

FVTX FEM  
INTERFACE BOARD  
POWER  
SCHEMATIC

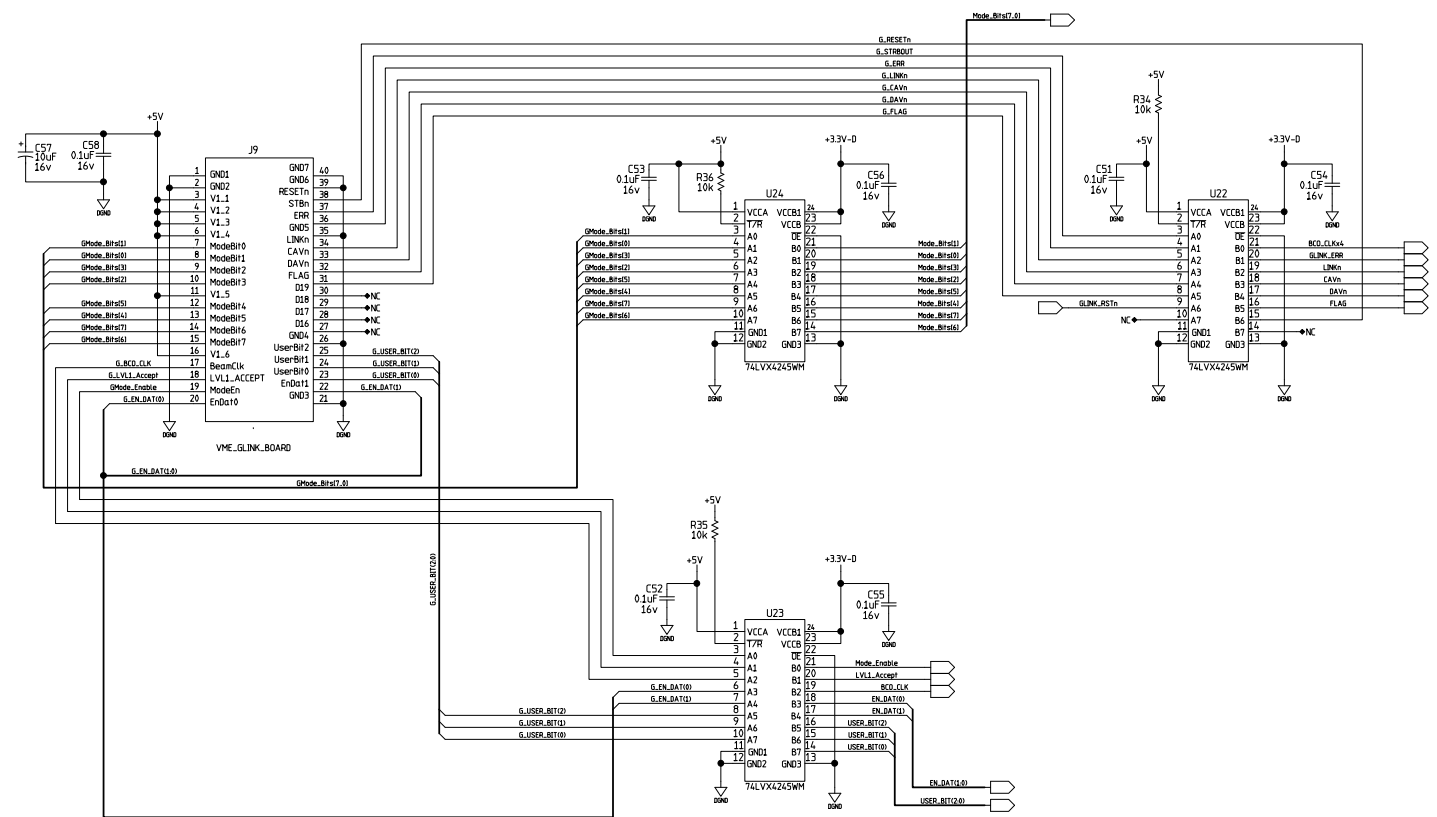
SIZE D	CASE CODE	DRAWING NO. & CAD FILENAME 126Y-267977
SCALE NONE	SHEET 5 OF 10	



REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				

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GLINK BOARD



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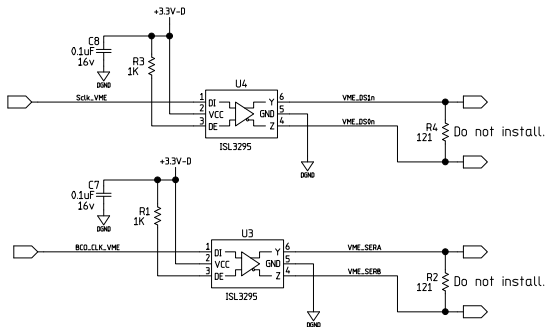
PROJECT

FVTX FEM  
INTERFACE BOARD

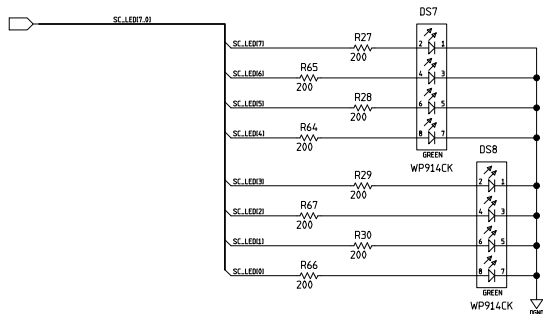
G-LINK INTERFACE  
SCHEMATIC

SIZE D	CAGE CODE	DRAWING NO & CAD FILENAME 126Y-267977
SCALE NONE	SHEET 7 of 10	

### DIFFERENTIAL CONVERSION



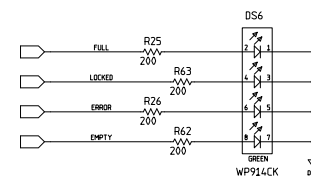
### FRONT PANEL LEDS



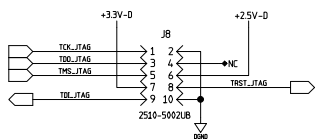
REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				
A		UPDATE: MAKE J8 REFERENCE DESIGNATOR VISIBLE. ADD NOTE FOR FRONT PANEL JTAG CONNECTOR. ADD +2.5V-D TO J4. ADD PULL-DOWN RESISTOR ON MAIN_RESET AND CHANGE R37 TO 10K OHMS. CHANGE R3 TO 1K OHMS. CHANGE DIFFERENTIAL CLOCK SIGNALS FROM BGD0N/BGD0In AND BGL0N/BGL0In TO DSDN/DSIn AND SERA/SERB				

REVISED 4-5-10

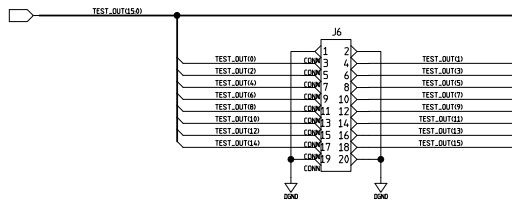
### PN WP914CK/4GDT



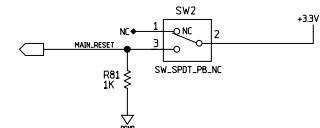
### FRONT PANEL JTAG HEADER For ROC Actel FPGA programming



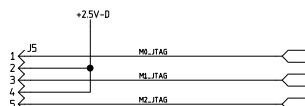
### TEST OUTPUT HEADER



### RESET SWITCH

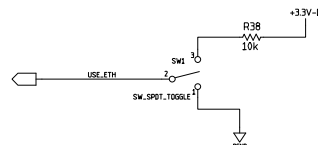


### FPGA CONFIGURATION MODE HEADER

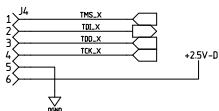


CONFIGURATION MODES  
M(2:0) = 0 => master serial  
M(2:0) = 5 => JTAG  
(Need 0.1" spacing jumpers)

### USB/ETHERNET SWITCH



### FPGA JTAG HEADER

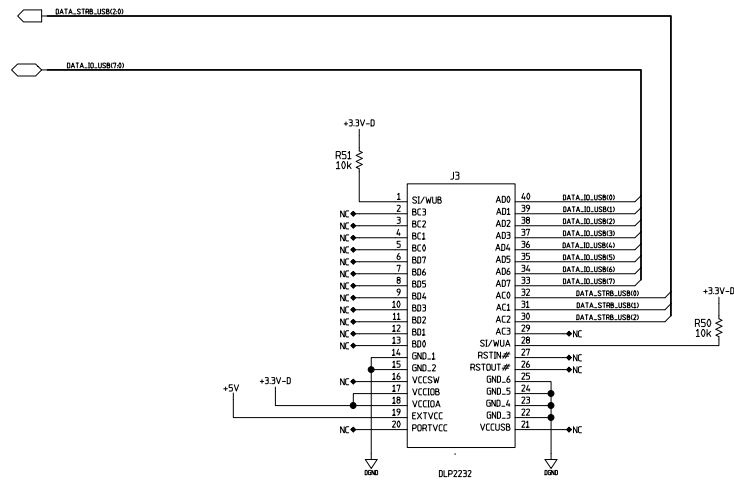


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PROJECT			
FVTX FEM INTERFACE BOARD CLOCK DIFFERENTIAL CONVERTERS, FRONT PANEL CONNECTIONS			
SCHEMATIC			
SIZE D	CAGE CODE	DRAWING NO. & TAG FILENAME 126Y-267977	
SCALE NONE	SHEET 8 OF 10		



REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				
A		UPDATE: PHYSICAL FOOTPRINT FOR USB MODULE PIN NUMBERING WAS CORRECTED (WAS 180 DEGREES OFF)				

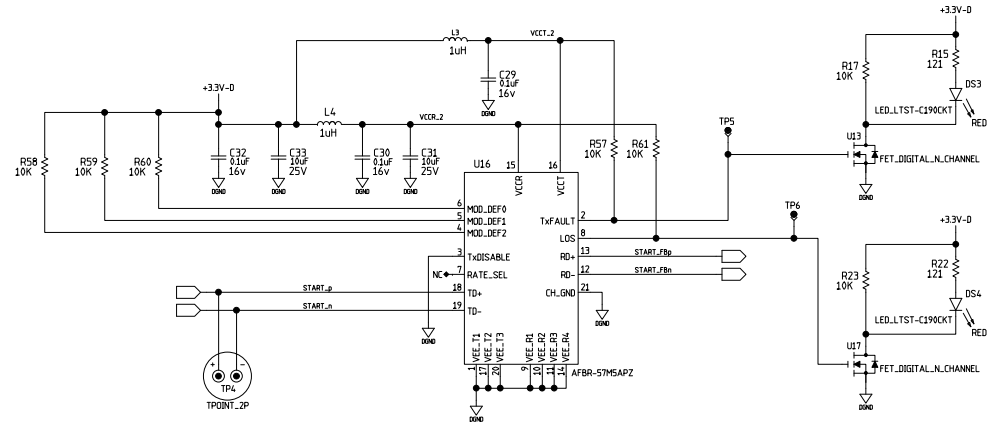
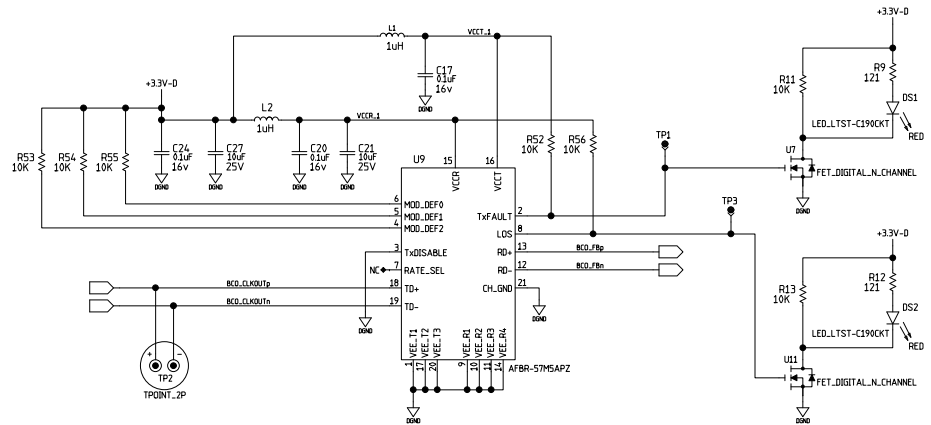
REVISED 3-17-10



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PROJECT					
FVTX FEM INTERFACE BOARD USB MODULE SCHEMATIC					
SIZE	CASE CODE	DRAWING NO & CAD FILENAME			
D		126Y-267977			
SCALE	NONE	SHEET		9 OF 10	

REVISIONS						
ZONE	REV	DESCRIPTION	CHANGED BY	DATE	CLASS REVIEW	APPROVED
--		ORIGINAL ISSUE				

REVISED 9-23-09



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PROJECT

FVTX FEM  
INTERFACE BOARD  
FIBER OPTIC MODULES  
SCHEMATIC

SIZE D	CASE CODE	DRAWING NO. & CAD FILENAME 126Y-267977
SCALE NONE	SHEET 10	OF 10