

Note:

The Blackfin input ports are VERY sensitive to ESD. Your input and output headers to the Blackfin should be well protected with TVS diodes.

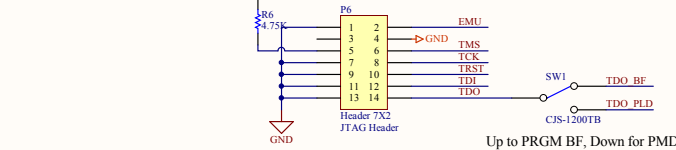
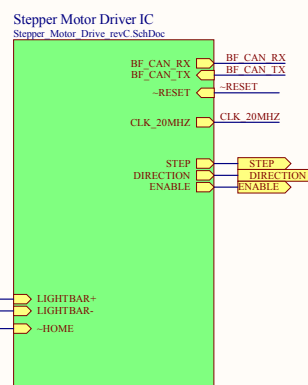
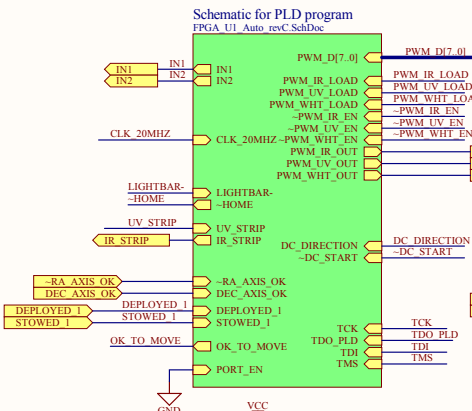
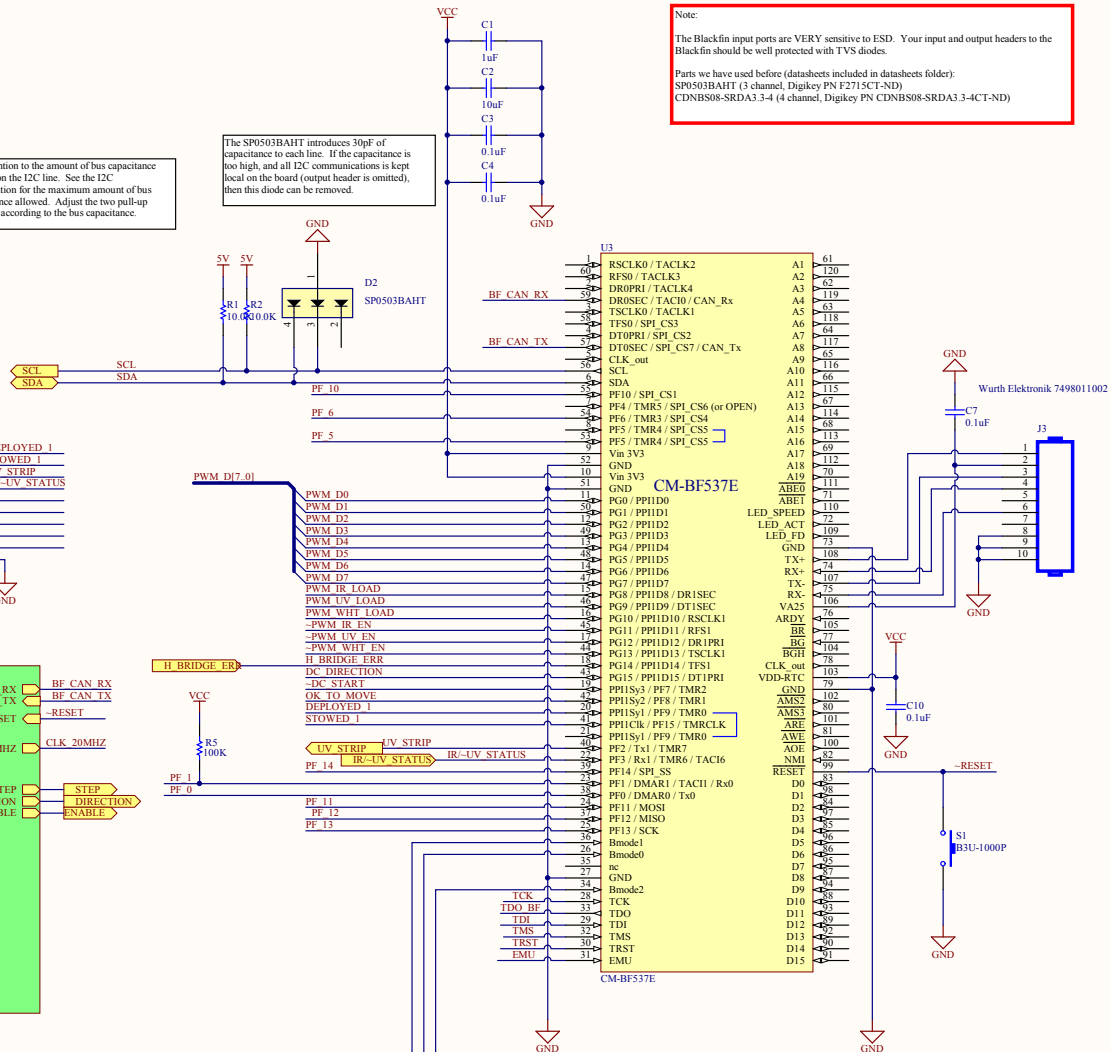
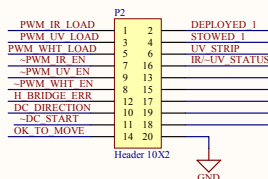
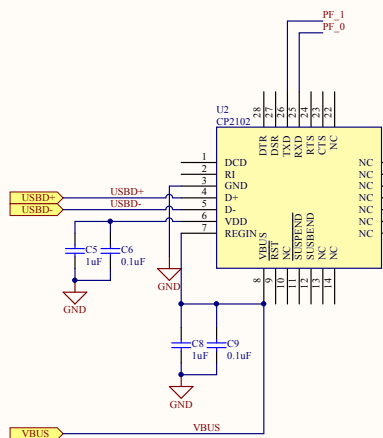
Parts we have used before (datasheets included in datasheets folder):

SP0503BAHT (3 channel, Digikey PN F2715CT-ND)

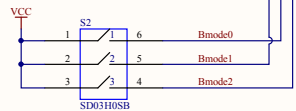
CDNBS08-SRDA3-3-4 (4 channel, Digikey PN CDNBS08-SRDA3-3-4CT-ND)

Note on PCB Layout:

Ethernet carries signals up to 100MHz. High frequency PCB layout techniques apply. RX and TX lines are differential, so differential microstrip lines should be laid out with a differential impedance of 100 ohms.

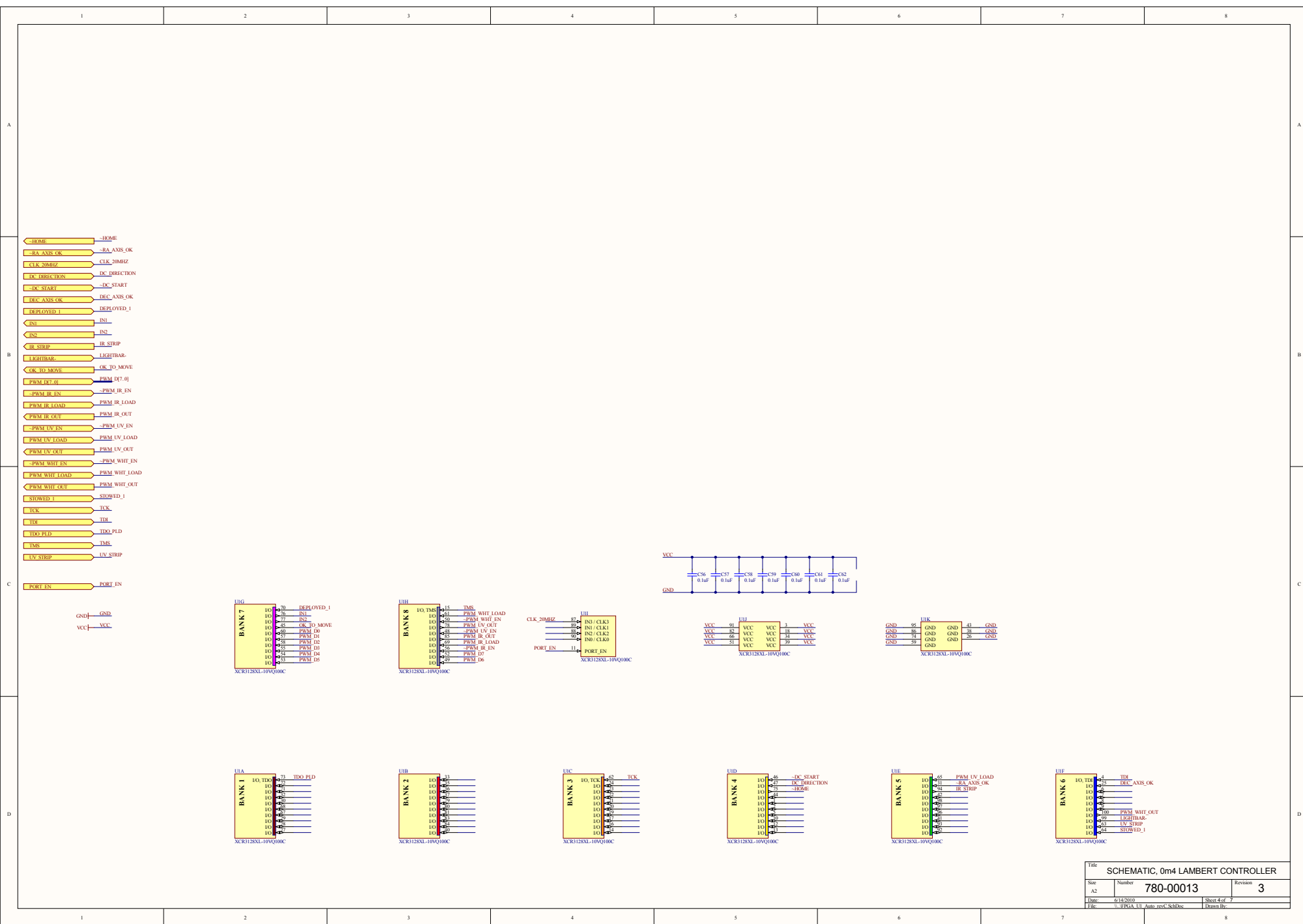


Bootmodes can be found on page 16 of the ADSP-BF537 datasheet. The default for our needs is all 3 switches open.



Note:
The JTAG programming cable is keyed, so pin 3 on the header needs to be cut off.

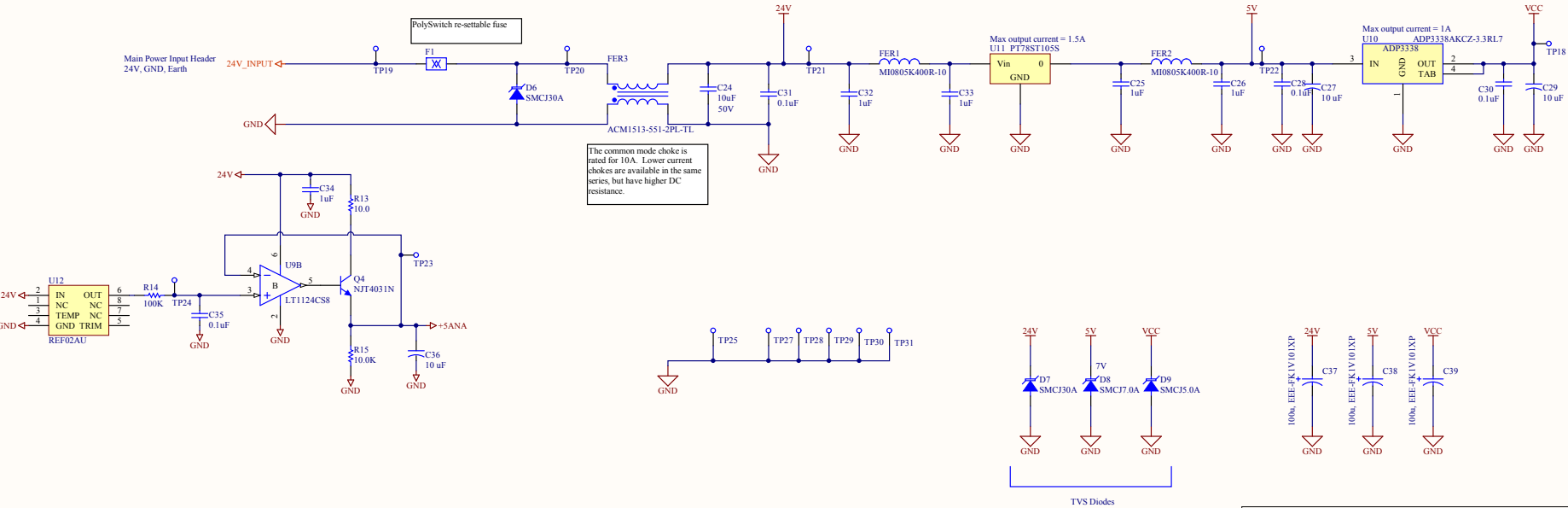
Title			SCHEMATIC, 0m4 LAMBERT CONTROLLER		
Size	Number	Revision			
Tabloid	780-00013	3			
Date:	6/14/2010	Sheet 2 of		7	
File:	\\Blackfin revC.SchDoc	Drawn By:			



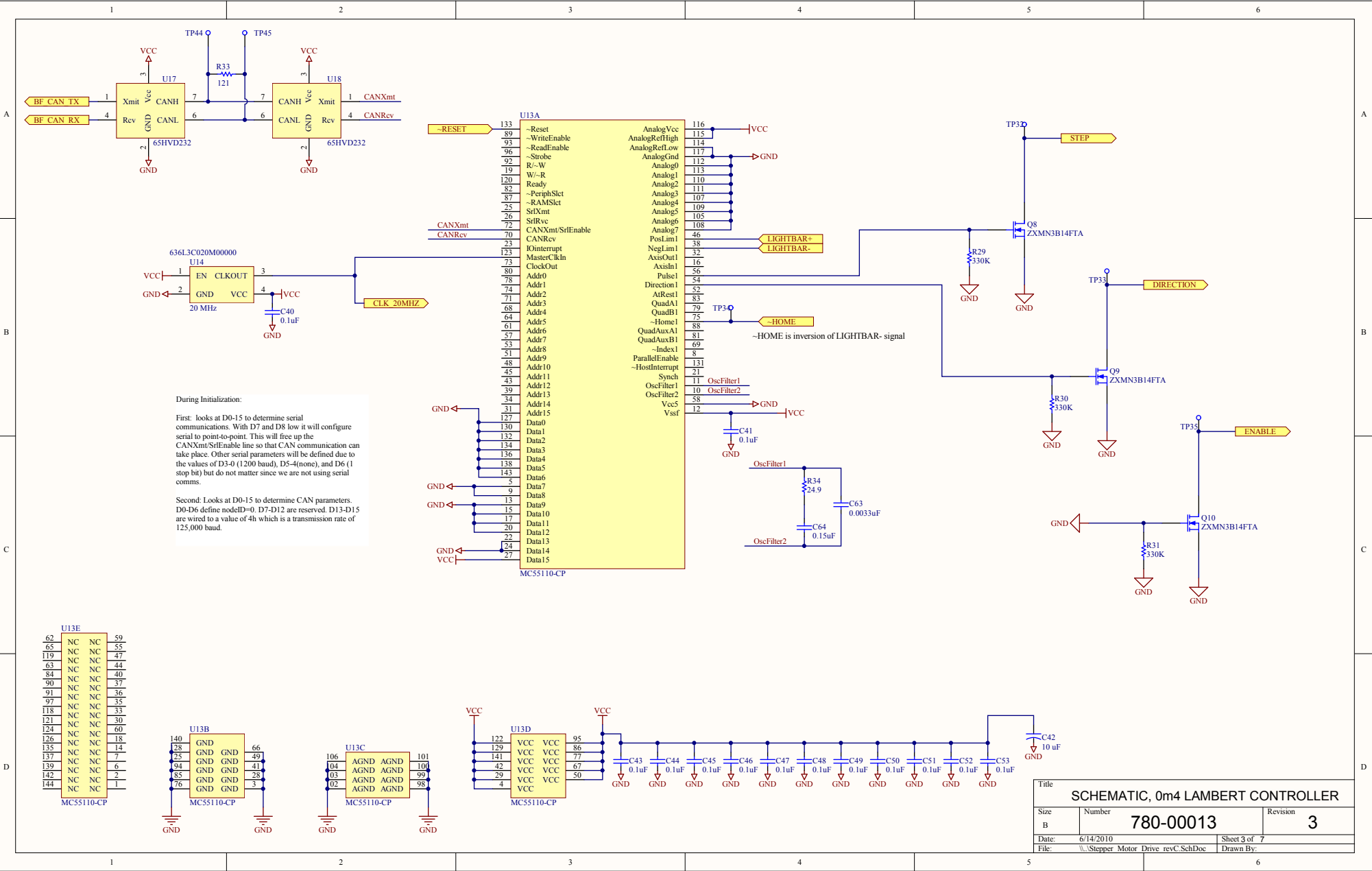
This page is the main power input stage. It takes 24Vdc in and converts it to 5V and 3.3V. Filtering and transient protection is also on this page.

The PT78ST105S is a switching buck converter. It outputs 5V with a maximum output current of 1.5A.

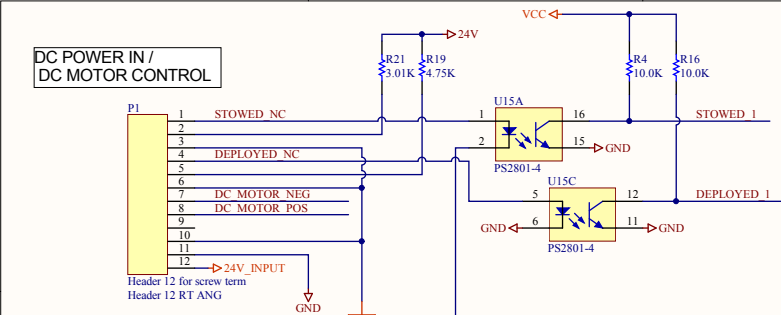
The ADP3338 is a 3.3V linear regulator with a maximum output current of 1A.



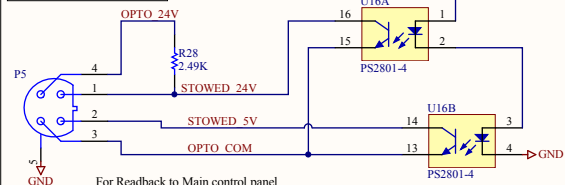
Title		
SCHEMATIC, 0m4 LAMBERT CONTROLLER		
Size	Number	Revision
Tabloid	780-00013	3
Date:	6/14/2010	Sheet 5 of 7
File:	\\Power Input revC SchDoc	Drawn By:



DC POWER IN / DC MOTOR CONTROL



POSITION STATUS

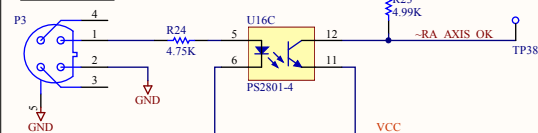


For Readback to Main control panel

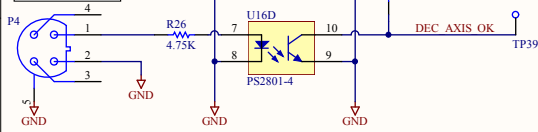
For interfacing to Kollmorgen S300 the manual says it wants a high level between 11-30V to drive an Opto LED at between 2 and 11 mA. The STOWED_24V signal is going to go to both motor drives hence need to be able to source 4 to 22 mA. With pullups of 2.49K and 24V should give about 4mA for each input with a Vd on of 3V

The STOWED_5V goes directly to an OC input on the WinSystems board for direct reading of the status of Lambert

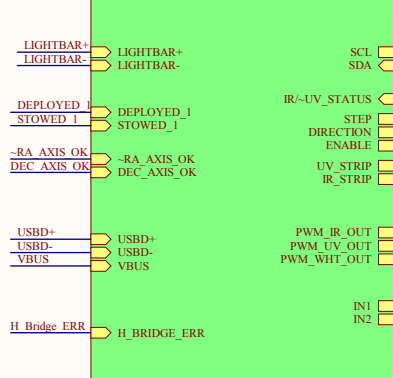
RA PROXY



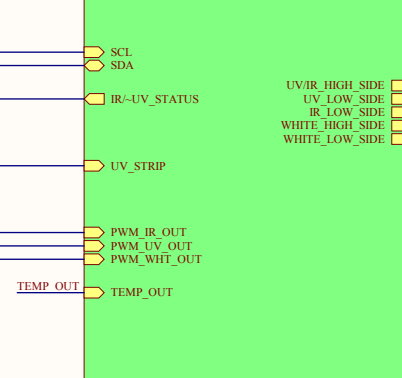
DEC PROXY



BlackFin --> CPLD/Stepper Motor Drive



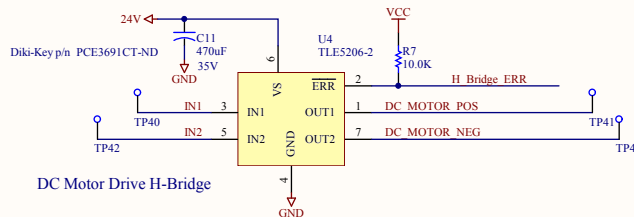
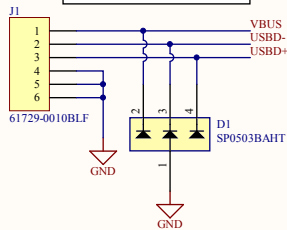
LED Drive



Power Supplies



This is the serial to USB converter that allows for console access to U-Boot and uClinux.



Title			
SCHEMATIC, 0m4 LAMBERT CONTROLLER			
Size	Number	Revision	
B	780-00013	3	
Date:	6/14/2010	Sheet	1 of 7
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