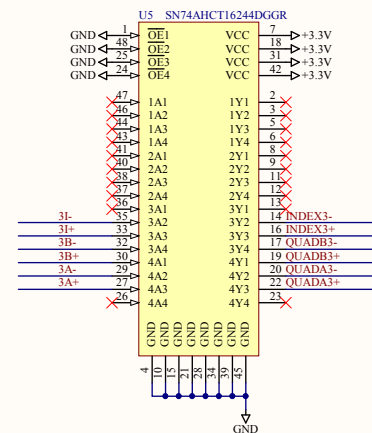


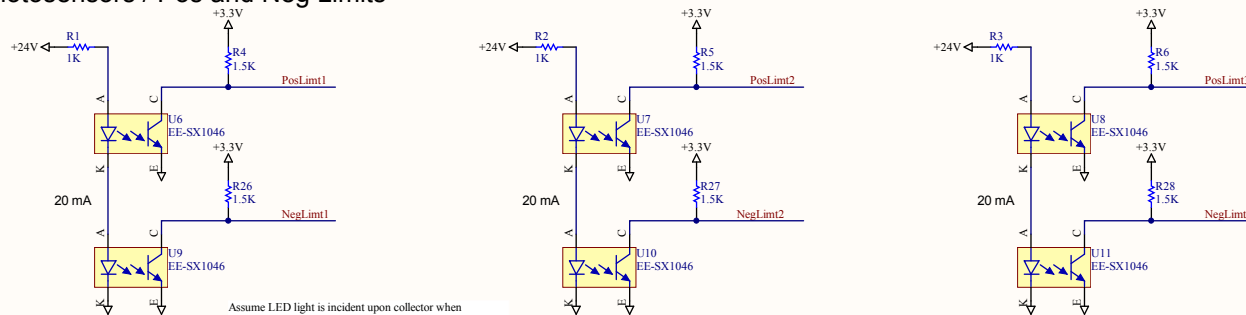
See IM481 Data sheet for cap layout

### Translators +5V to 3.3V



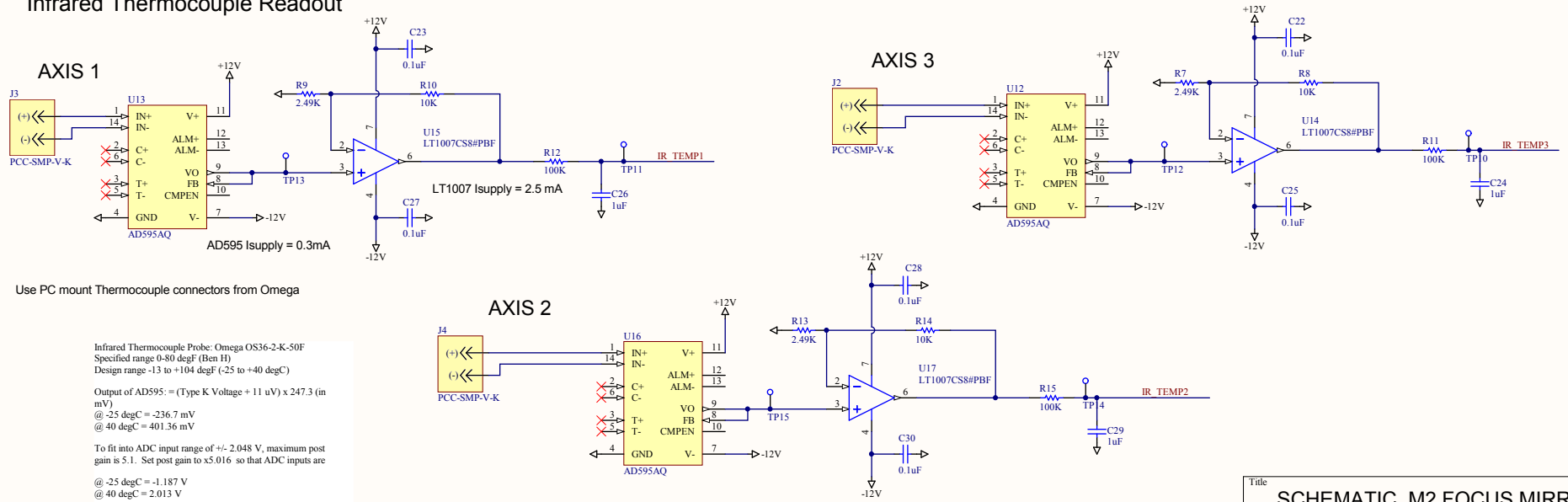
Title			SCHEMATIC, M2 FOCUS MIRROR		
Size	Number			Revision	1
B	780-00012				
Date:	8/18/2010	Sheet 1 of			
File:	\\780-00012-P1_Sch M2 Focus Drive Sch Drawn By				

## Photosensors / Pos and Neg Limits

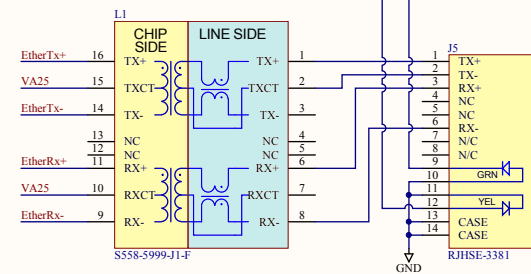
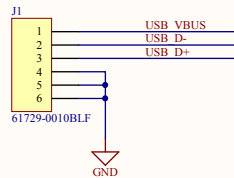
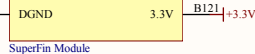
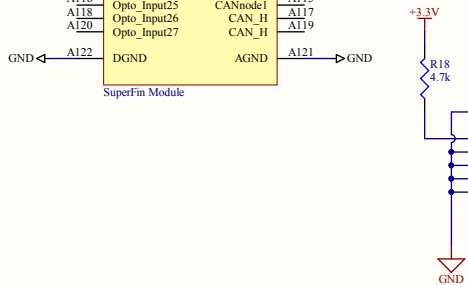


Assume LED light is incident upon collector when motion is NOT at limit. This means that transistor is conducting. Opto coupler at SuperFin input has diode COM connected to GND hence they are in parallel with transistor of photosensor. SuperFin has pull-down resistor on emitter of opto transistor. So when photosensor is ON, no current is going through SuperFin opto and PMD chip sees a LOW as it should. When limit is reached, photosensor does not conduct, current goes through SuperFin input diode and input to PMD chip goes HIGH.

## Infrared Thermocouple Readout

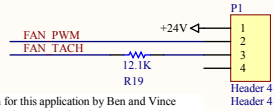


Title		
SCHEMATIC, M2 FOCUS MIRROR		
Size	Number	Revision
B	780-00012	1
Date:	8/18/2010	Sheet 2 of
File:	\\.\780-00012-P2_Sch M2 Focus Drive.Sch Drawn By:	



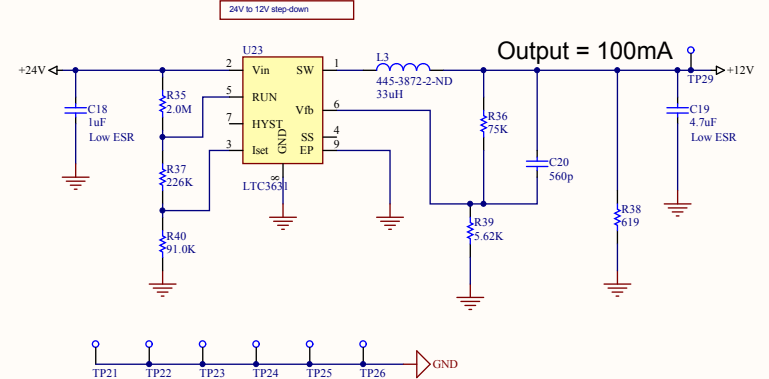
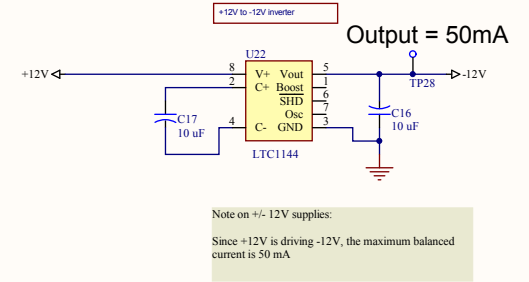
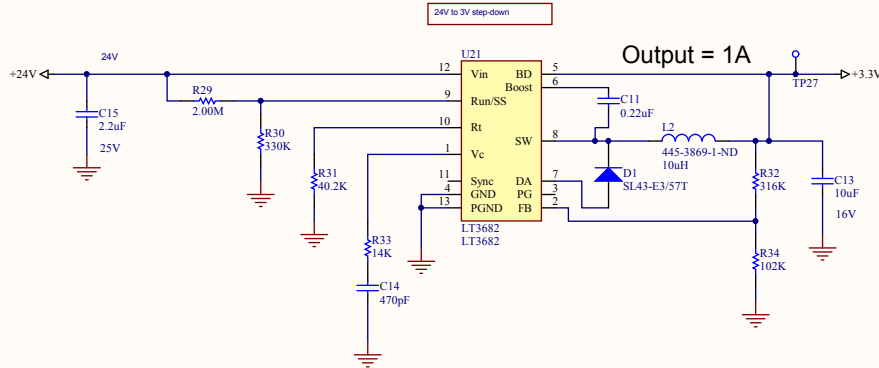
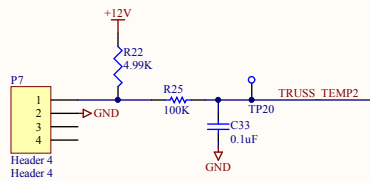
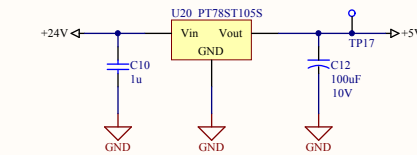
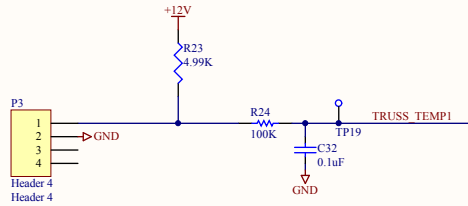
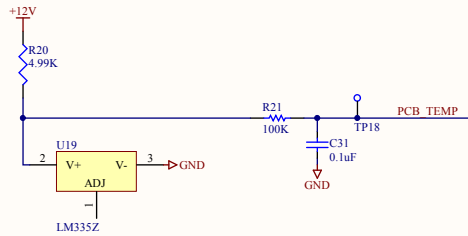
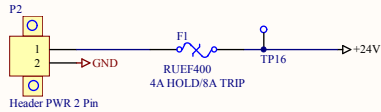
Title			
Size B	Number		Revision
Date:	8/18/2010	Sheet of	
File:	\\1780-00012-P3_Sch M2 Focus Drive Sch 01.dwg		
Drawn By:			

## TOP FAN DRIVE



The fan chosen for this application by Ben and Vince has a 0-10V speed control option that I am not going to use because it requires me to generate +12V so that I can gain up my DAC out to get +10V. I am going to vary fan speed by PWMing the COM line with an open drain MOSFET from the SuperFin board.

It seems that this fan (EBMcpast 4212/2HAU) has already been phased out by Pabst for a different series (the 4400 series).



Title		
Size	Number	Revision
B		
Date:	8/18/2010	Sheet of
File:	\\1780-00012-P4_Sch M2 Focus Drive.Sch	Drawn By: