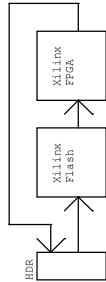
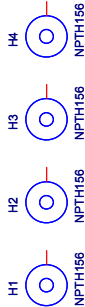


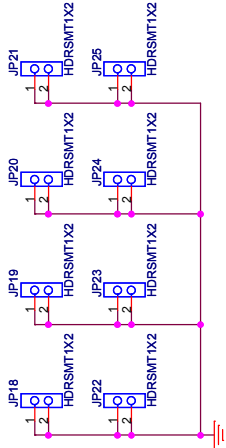
JTAG Chain



PCB Standoff Mounting Holes



GND Posts



LAST USED REFERENCES

- U23
- R231
- U233
- C222
- Q16
- MOD1
- U8
- L5
- SW4
- T1
- X2
- TP6
- H4

TABLE of CONTENTS

PG 1	- Title
PG 2	- Block Diagram
PG 3	- Helios
PG 4	- MISC - System Clock, SMA, Test HDR, Reset & LED
PG 5	- LAN MAC
PG 6	- LAN PHY
PG 7	- RS232 & Strata Flash
PG 8	- DDR SDRAM Bank #1
PG 9	- DDR SDRAM Bank #2
PG 10	- FPGA I/O Bank 0&1, MISC & Helios I/O
PG 11	- FPGA I/O Bank 2&3, DDR SDRAM #1 & #2 I/O
PG 12	- FPGA I/O Bank 4&5, Xilinx and Strata Flash I/O
PG 13	- FPGA I/O Bank 6&7, LAN and RS232 I/O
PG 14	- FPGA System Flash
PG 15	- FPGA I/O Power
PG 16	- FPGA Power
PG 17	- Power #1, Input
PG 18	- Power #2, Card 3.3v, 2.5v & 2.5v
PG 19	- Power #3, Card 1.8v & 1.2v
PG 20	- Power #4, Helios 0.9v & 1.5v
PG 21	- Power #5, Helios 1.8v, 2.2v & 2.5v
PG 22	- Power #6, Helios 4.4v & 8.5v

Limitation Notice: Tego Inc. reserves the right to make changes without further notice to any products described herein to improve reliability, function, or design. Tego Inc. does not assume any liability arising out of the application of or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.



Engineer: Jerry Russo

Thursday, July 03, 2008

Tego Inc.
375 Totten Pond Road
Waltham, MA 02451
781-547-5680

HELIOS TEST - Title Page

Size

B

CAGE Code

DWG NO

T-nmmmm-SCH00-2008

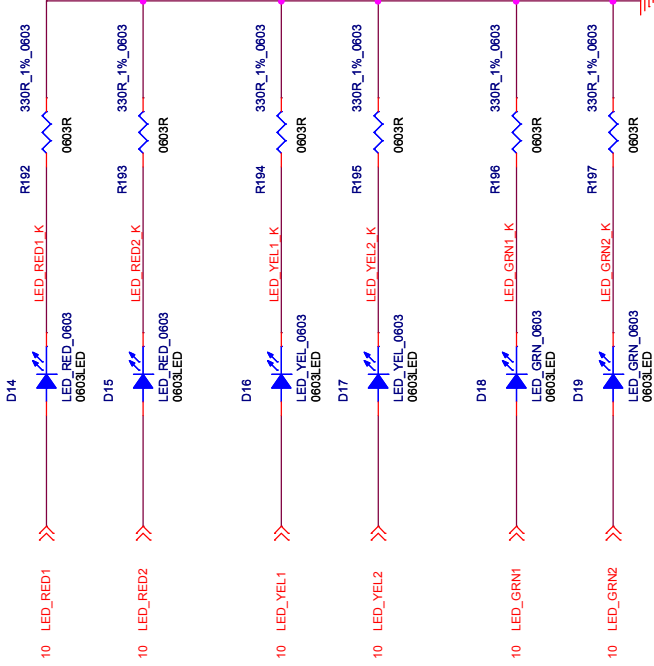
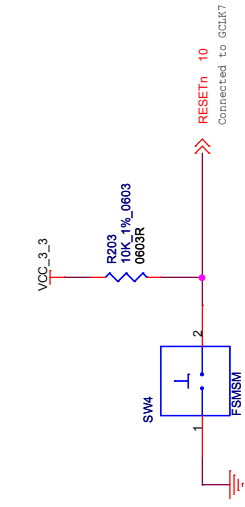
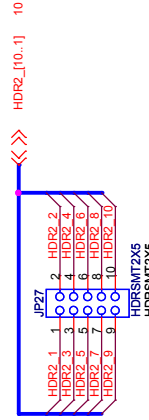
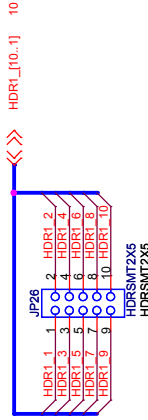
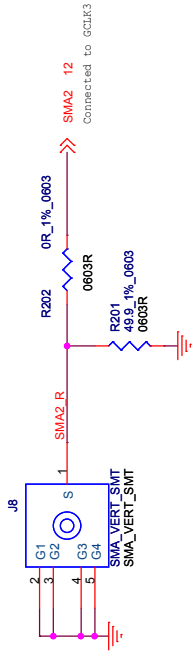
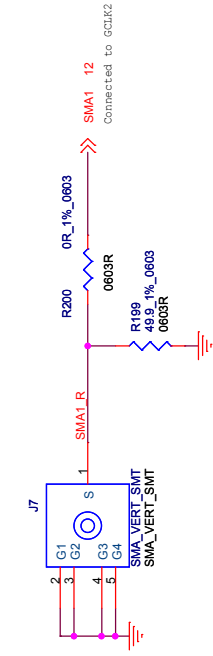
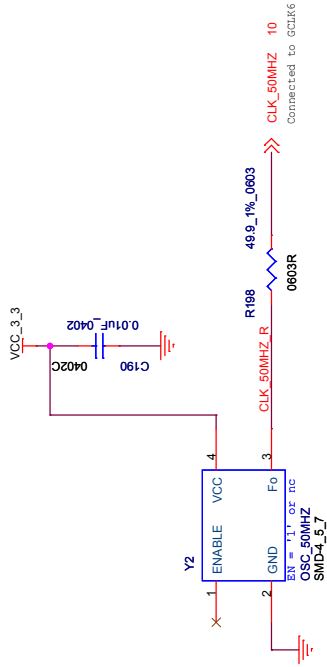
Rev

0.2

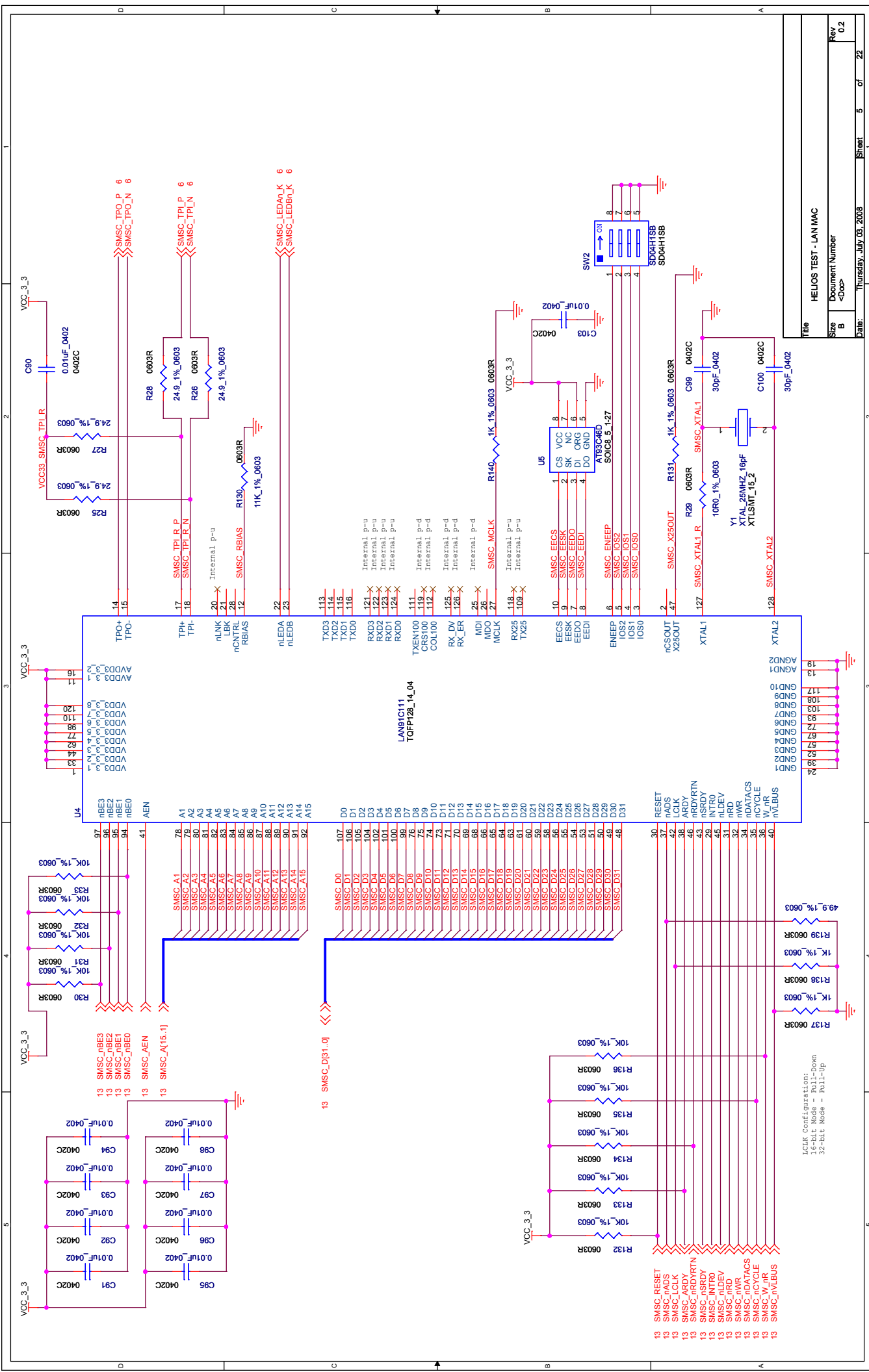
Scale

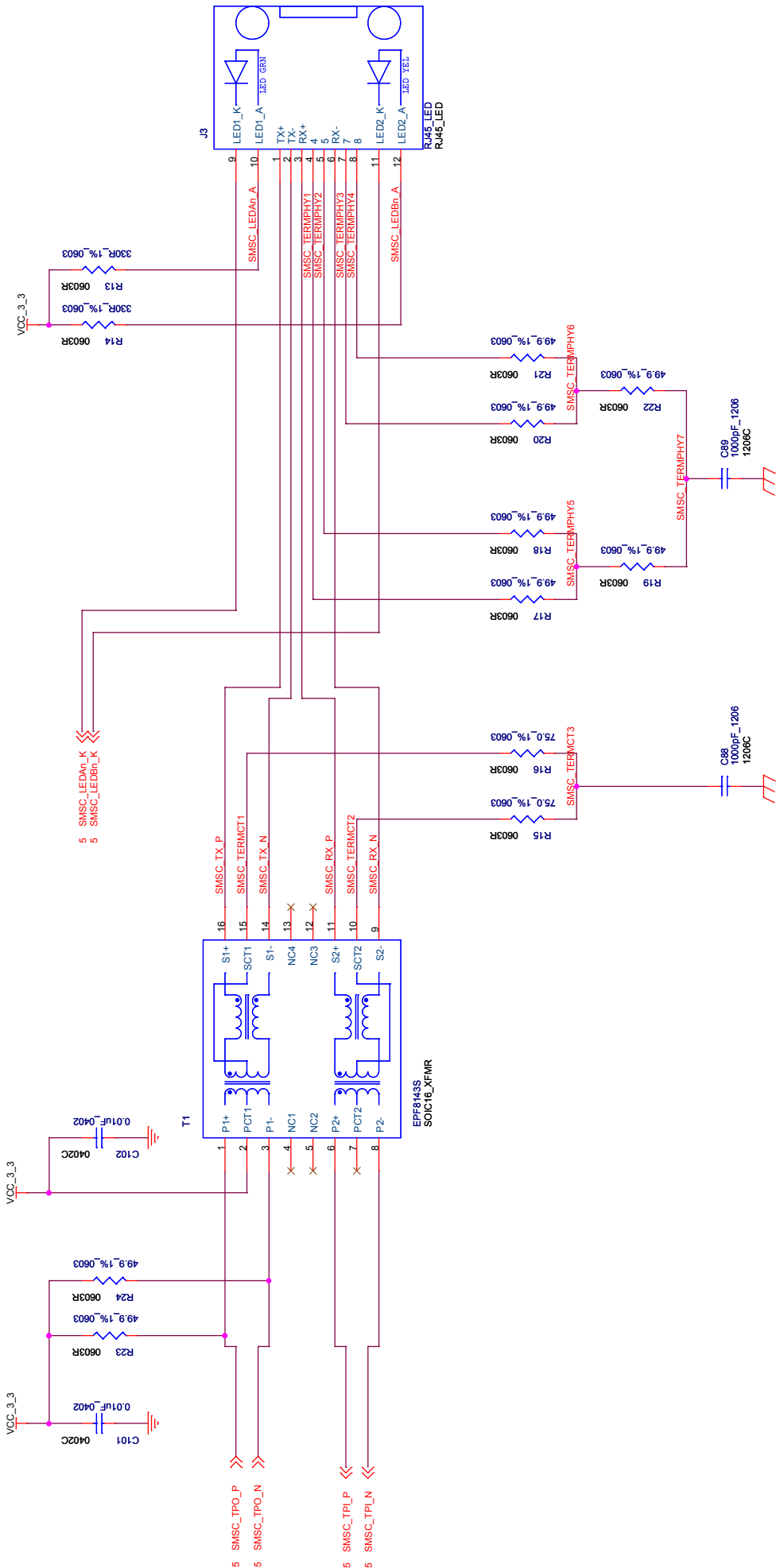
Sheet

1 of 22

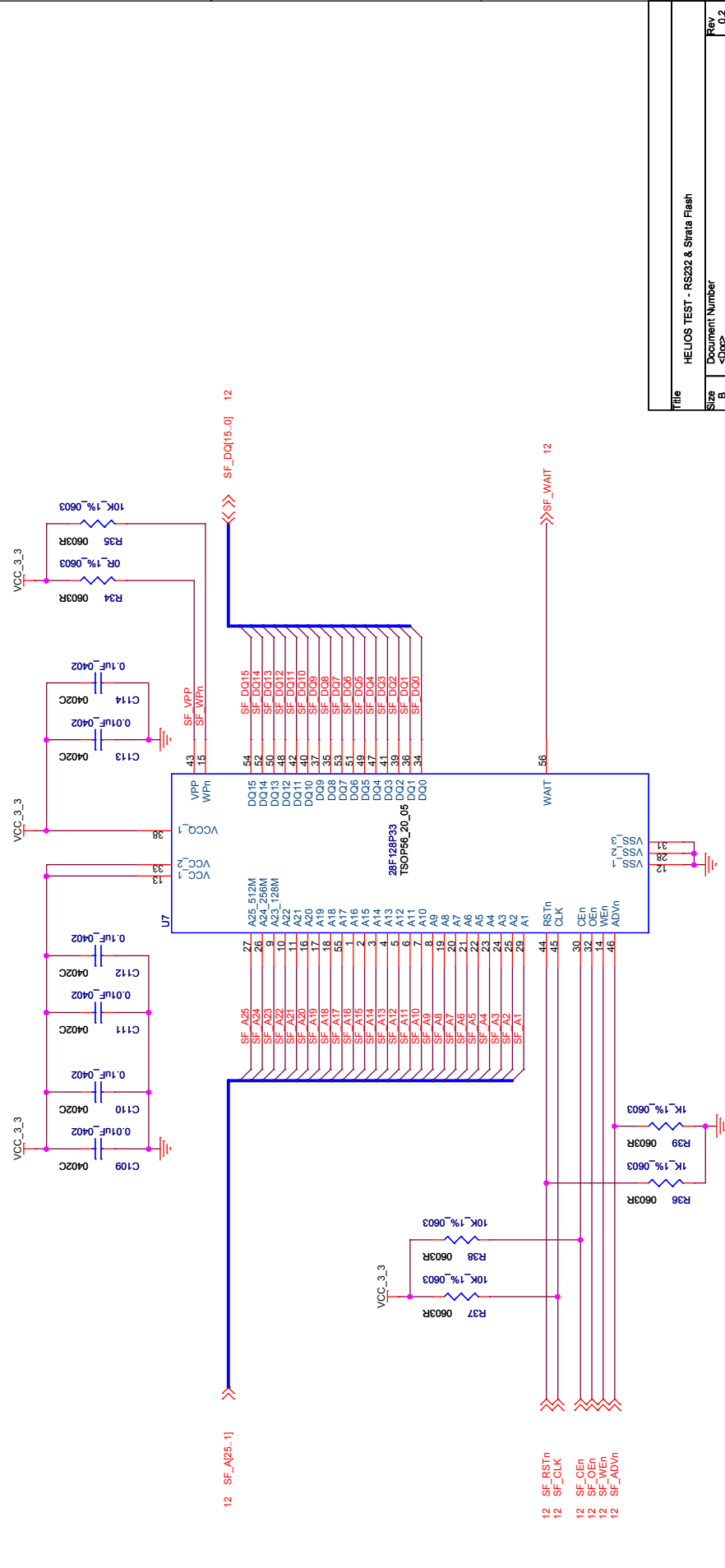
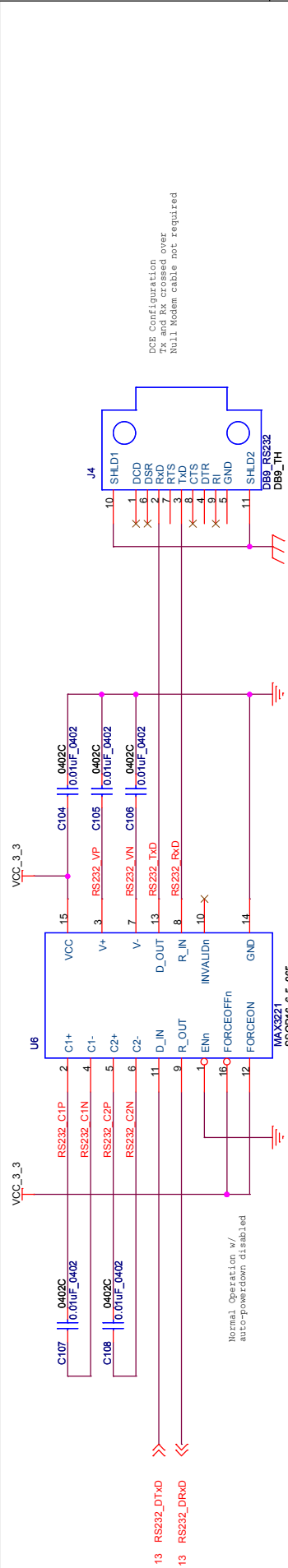


Title			
HELIOS TEST - MISC - System Clock, SMA, Test HDR, Reset & LED			
Size	Document Number	Rev	0.2
B	<Doc>		
Date:	Thursday, July 03, 2008	Sheet	4 of 22

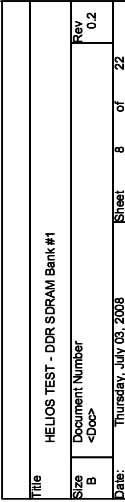


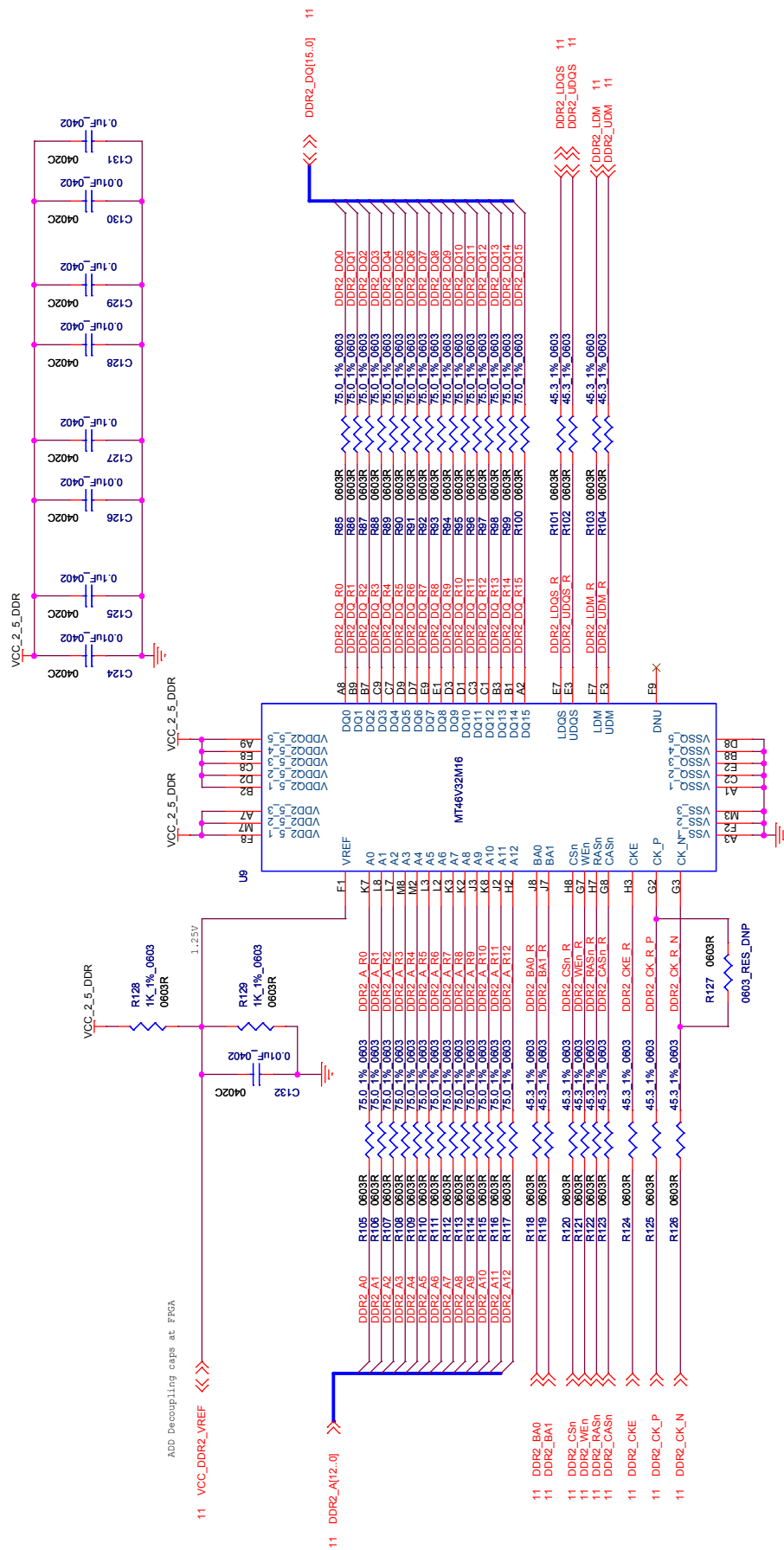


Title		HELIOS TEST - LAN PHY	
Size	Document Number	Rev	0.2
B	-Q00-		
Date:	Thursday, July 03, 2008	Sheet	6 of 22

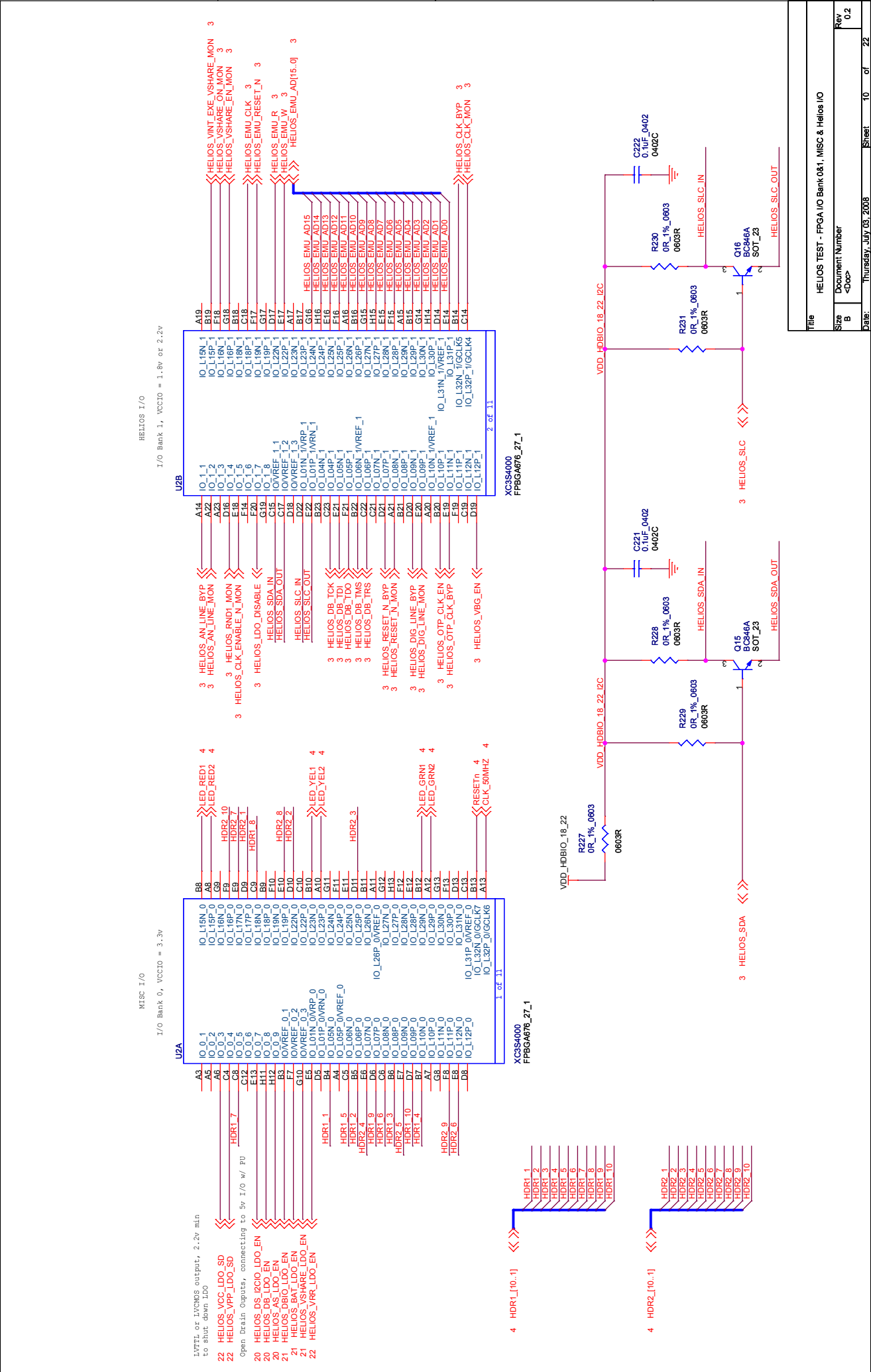


File	HELIOS TEST - RS232 & Strata Flash		
Size	Document Number	Revision	0.2
B	<Doc>	Sheet	7 of 22
Date:	Thursday, July 03, 2008		





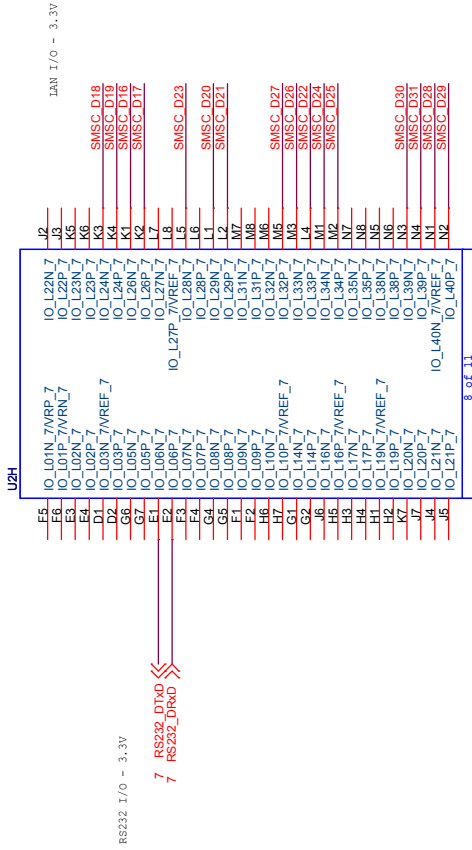
File	HELIOS TEST - DDR SDRAM Bank #2		
Size	Document Number	Rev	0.2
B	<Doc>		
Date:	Thursday, July 03, 2008	Sheet	9 of 22

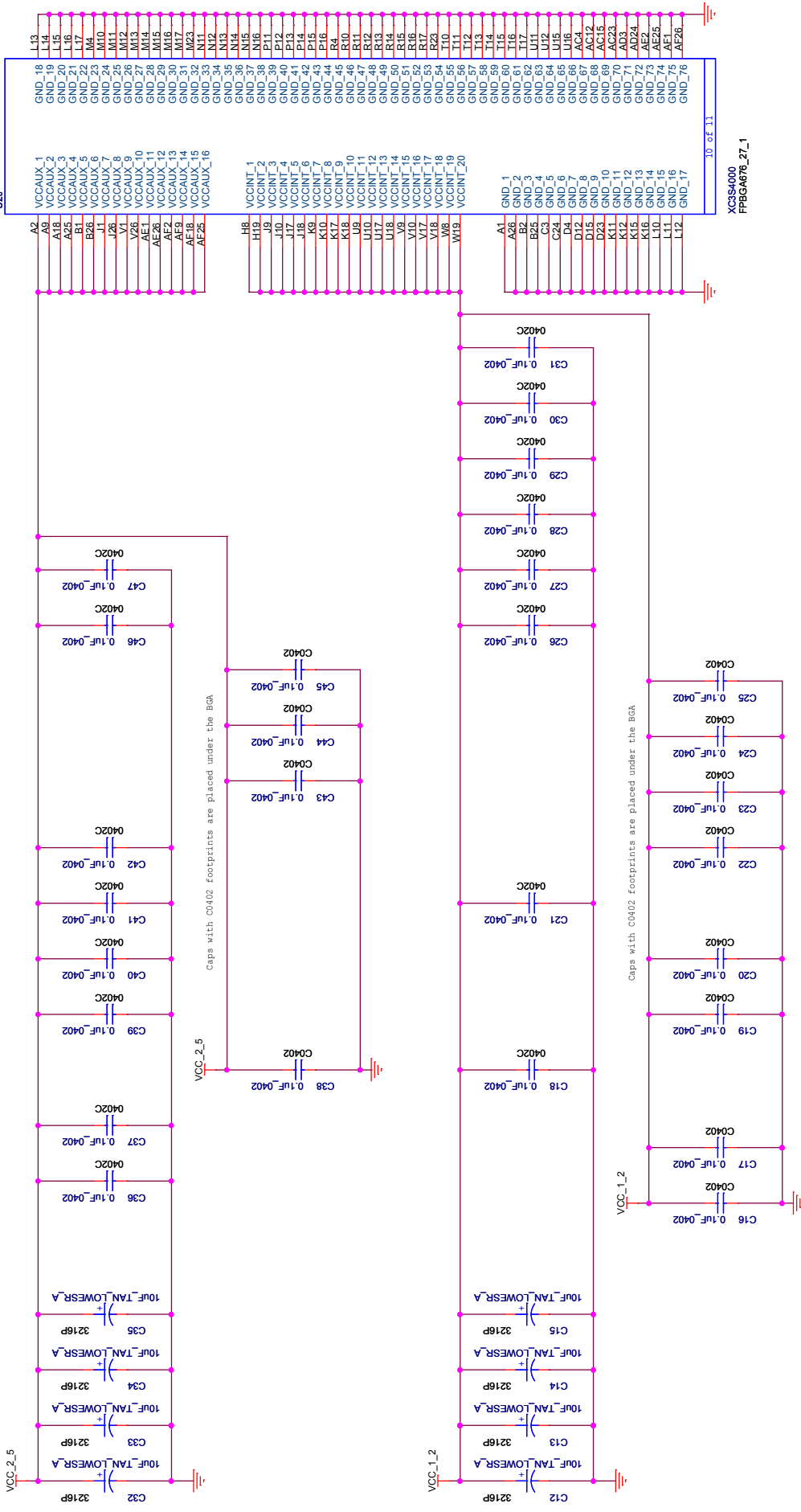


Title			HELIOS TEST - FPGA IO Bank 0&1, MISC & Helios IO		
Size	Document Number	Rev			
B	-Q000	0.2			
Date:			Thursday, July 03, 2008	Sheet	10 of 22

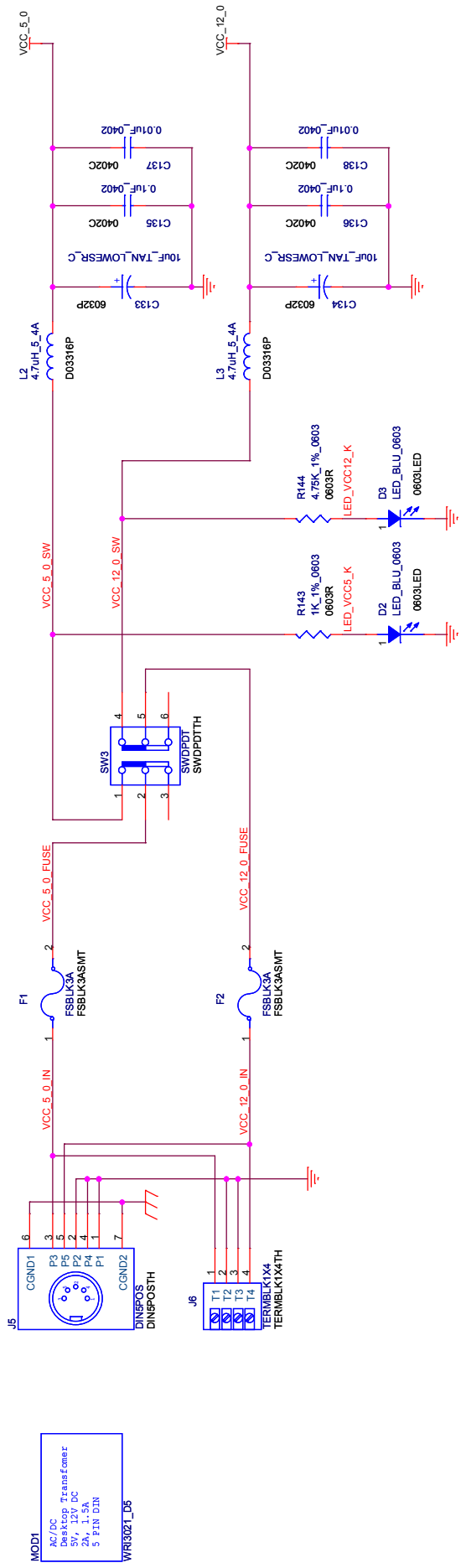
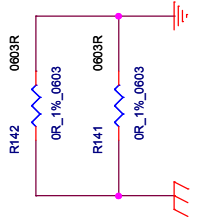
I/O Bank 0, VCCIO = 3.3v			HELIOS I/O				
I/O Bank 1, VCCIO = 1.8v or 2.2v							
MISC I/O							
LVTTL or LVCMOS output, 2.2v min to shut down LDO							
Open Drain Outputs, connecting to 5v I/O w/ PU							
20 HELIOS_DS_PCO_LDO_EN							
20 HELIOS_DS_LDO_EN			<<>>	HDR1 7	22 HELIOS_VCC_LDO_SD		
20 HELIOS_VPP_LDO_SD							
21 HELIOS_BAT_LDO_EN							
21 HELIOS_VSHR_LDO_EN							
22 HELIOS_VRR_LDO_EN							
22 HELIOS_VINT_EXE_VSHARE_MON							
22 HELIOS_VSHR_ON_MON							
22 HELIOS_VSHR_EN_MON							
22 HELIOS_EMU_CLK							
22 HELIOS_EMU_RESET_N							
22 HELIOS_EMU_R							
22 HELIOS_EMU_W							
22 HELIOS_EMU_AD15_0							
22 HELIOS_EMU_AD16							
22 HELIOS_EMU_AD17							
22 HELIOS_EMU_AD18							
22 HELIOS_EMU_AD19							
22 HELIOS_EMU_AD20							
22 HELIOS_EMU_AD21							
22 HELIOS_EMU_AD22							
22 HELIOS_EMU_AD23							
22 HELIOS_EMU_AD24							
22 HELIOS_EMU_AD25							
22 HELIOS_EMU_AD26							
22 HELIOS_EMU_AD27							
22 HELIOS_EMU_AD28							
22 HELIOS_EMU_AD29							
22 HELIOS_EMU_AD30							
22 HELIOS_EMU_AD31							
22 HELIOS_EMU_AD32							
22 HELIOS_EMU_AD33							
22 HELIOS_EMU_AD34							
22 HELIOS_EMU_AD35							
22 HELIOS_EMU_AD36							
22 HELIOS_EMU_AD37							
22 HELIOS_EMU_AD38							
22 HELIOS_EMU_AD39							
22 HELIOS_EMU_AD40							
22 HELIOS_EMU_AD41							
22 HELIOS_EMU_AD42							
22 HELIOS_EMU_AD43							
22 HELIOS_EMU_AD44							
22 HELIOS_EMU_AD45							
22 HELIOS_EMU_AD46							
22 HELIOS_EMU_AD47							
22 HELIOS_EMU_AD48							
22 HELIOS_EMU_AD49							
22 HELIOS_EMU_AD50							
22 HELIOS_EMU_AD51							
22 HELIOS_EMU_AD52							
22 HELIOS_EMU_AD53							
22 HELIOS_EMU_AD54							
22 HELIOS_EMU_AD55							
22 HELIOS_EMU_AD56							
22 HELIOS_EMU_AD57							
22 HELIOS_EMU_AD58							
22 HELIOS_EMU_AD59							
22 HELIOS_EMU_AD60							
22 HELIOS_EMU_AD61							
22 HELIOS_EMU_AD62							
22 HELIOS_EMU_AD63							
22 HELIOS_EMU_AD64							
22 HELIOS_EMU_AD65							
22 HELIOS_EMU_AD66							
22 HELIOS_EMU_AD67							
22 HELIOS_EMU_AD68							
22 HELIOS_EMU_AD69							
22 HELIOS_EMU_AD70							
22 HELIOS_EMU_AD71							
22 HELIOS_EMU_AD72							
22 HELIOS_EMU_AD73							
22 HELIOS_EMU_AD74							
22 HELIOS_EMU_AD75							
22 HELIOS_EMU_AD76							
22 HELIOS_EMU_AD77							
22 HELIOS_EMU_AD78							
22 HELIOS_EMU_AD79							
22 HELIOS_EMU_AD80							
22 HELIOS_EMU_AD81							
22 HELIOS_EMU_AD82							
22 HELIOS_EMU_AD83							
22 HELIOS_EMU_AD84							
22 HELIOS_EMU_AD85							
22 HELIOS_EMU_AD86							
22 HELIOS_EMU_AD87							
22 HELIOS_EMU_AD88							
22 HELIOS_EMU_AD89							
22 HELIOS_EMU_AD90							
22 HELIOS_EMU_AD91							
22 HELIOS_EMU_AD92							
22 HELIOS_EMU_AD93							
22 HELIOS_EMU_AD94							
22 HELIOS_EMU_AD95							
22 HELIOS_EMU_AD96							
22 HELIOS_EMU_AD97							
22 HELIOS_EMU_AD98							
22 HELIOS_EMU_AD99							
22 HELIOS_EMU_AD100							
22 HELIOS_EMU_AD101							
22 HELIOS_EMU_AD102							
22 HELIOS_EMU_AD103							
22 HELIOS_EMU_AD104							
22 HELIOS_EMU_AD105							
22 HELIOS_EMU_AD106							
22 HELIOS_EMU_AD107							
22 HELIOS_EMU_AD108							
22 HELIOS_EMU_AD109							
22 HELIOS_EMU_AD110							
22 HELIOS_EMU_AD111							
22 HELIOS_EMU_AD112							
22 HELIOS_EMU_AD113							
22 HELIOS_EMU_AD114							
22 HELIOS_EMU_AD115							
22 HELIOS_EMU_AD116							
22 HELIOS_EMU_AD117							
22 HELIOS_EMU_AD118							
22 HELIOS_EMU_AD119							
22 HELIOS_EMU_AD120							
22 HELIOS_EMU_AD121							
22 HELIOS_EMU_AD122							
22 HELIOS_EMU_AD123							
22 HELIOS_EMU_AD124							
22 HELIOS_EMU_AD125							
22 HELIOS_EMU_AD126							
22 HELIOS_EMU_AD127							
22 HELIOS_EMU_AD128							
22 HELIOS_EMU_AD129							
22 HELIOS_EMU_AD130							
22 HELIOS_EMU_AD131							
22 HELIOS_EMU_AD132							
22 HELIOS_EMU_AD133							
22 HELIOS_EMU_AD134							
22 HELIOS_EMU_AD135							
22 HELIOS_EMU_AD136							
22 HELIOS_EMU_AD137							
22 HELIOS_EMU_AD138							
22 HELIOS_EMU_AD139							
22 HELIOS_EMU_AD140							
22 HELIOS_EMU_AD141							
22 HELIOS_EMU_AD142							
22 HELIOS_EMU_AD143							
22 HELIOS_EMU_AD144							
22 HELIOS_EMU_AD145							
22 HELIOS_EMU_AD146							
22 HELIOS_EMU_AD147							
22 HELIOS_EMU_AD148							
22 HELIOS_EMU_AD149							
22 HELIOS_EMU_AD150							

I/O Bank 7, VCCIO = 3.3V

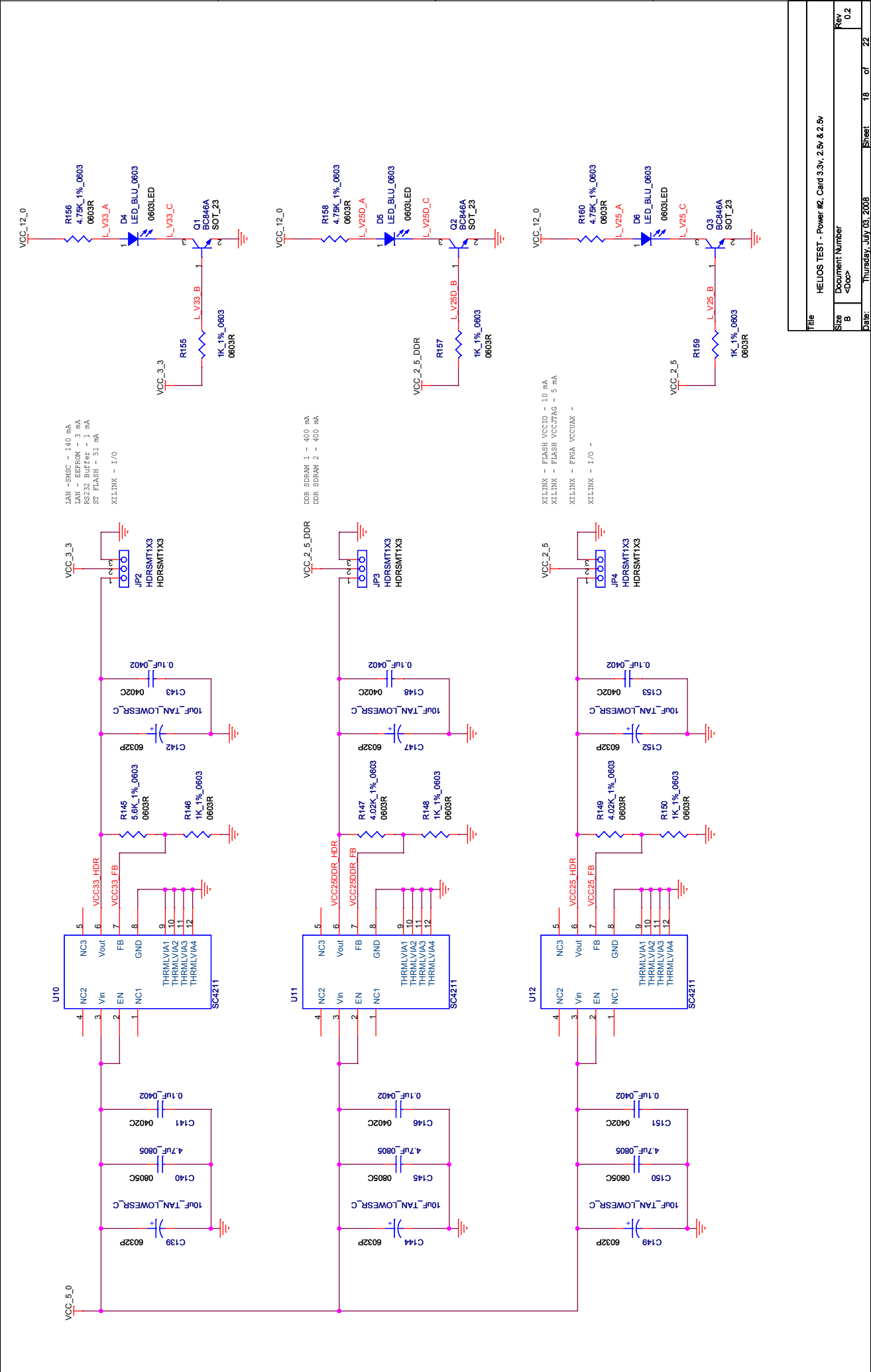




Title		HELIOS TEST - FPGA Power	
Size	B	Document Number	Rev
	-Q00-		0.2
Date:	Thursday, July 03, 2008	Sheet	16 of 22

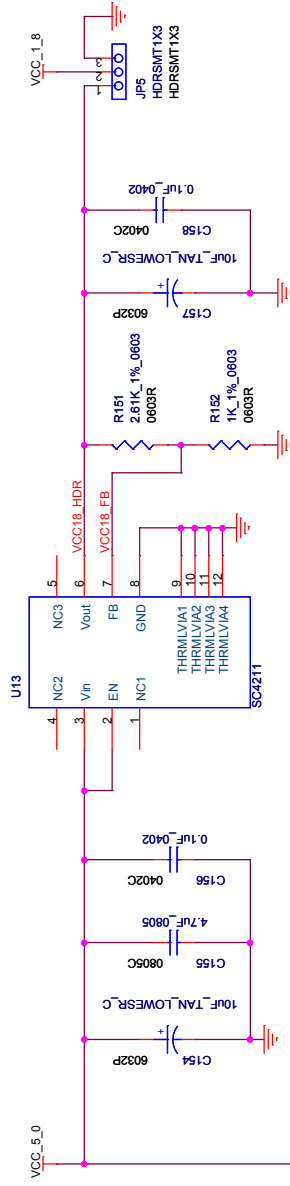


Title			HELIOS TEST - Power #1, Input		
Size			Document Number		
B			-Qos-		
Date:			Thursday, July 03, 2008		
Sheet			17 of 22		

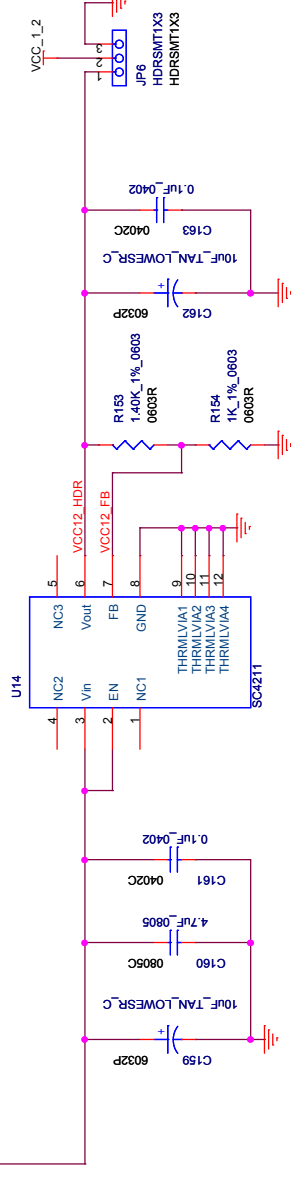


Title			HELIOS TEST - Power #2, Card 3.3v, 2.5v & 2.5v		
Size			Document Number		
Rev			0.2		
Date:			Thursday, July 03, 2008		

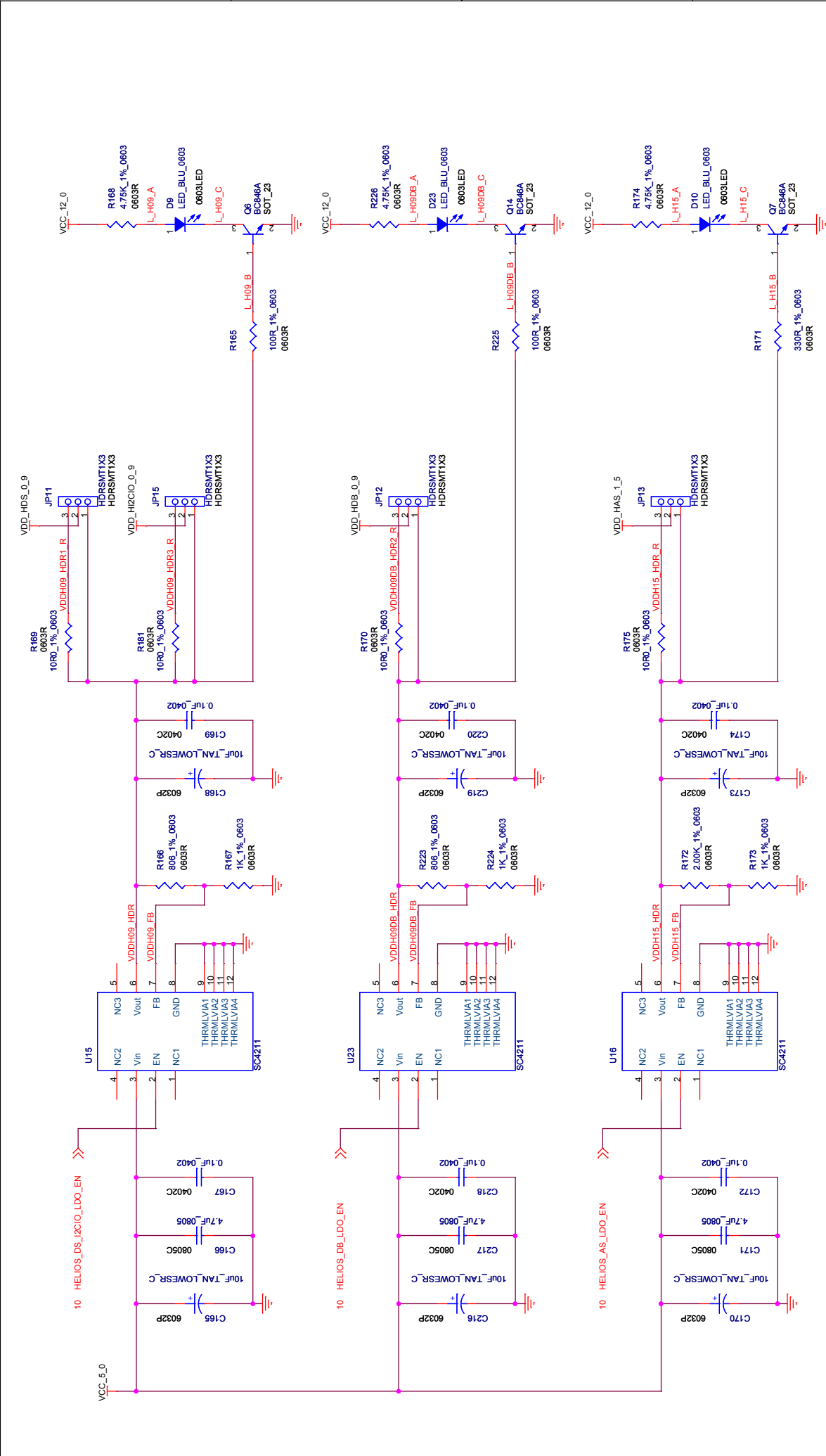
XILINK - FLASH VCCINT - 1.0 mA



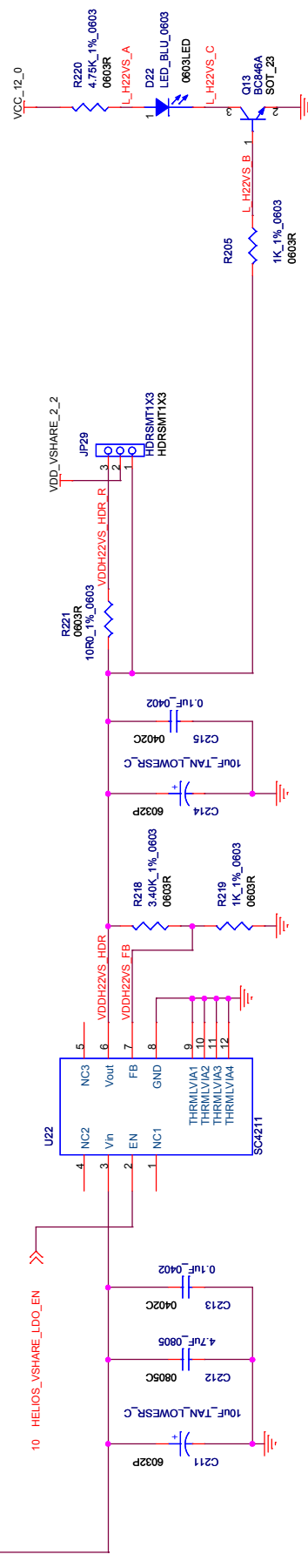
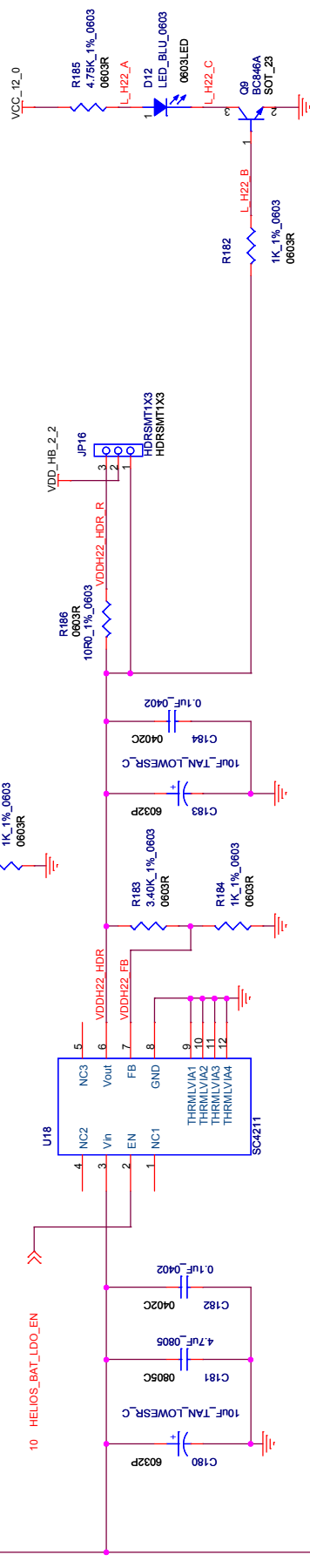
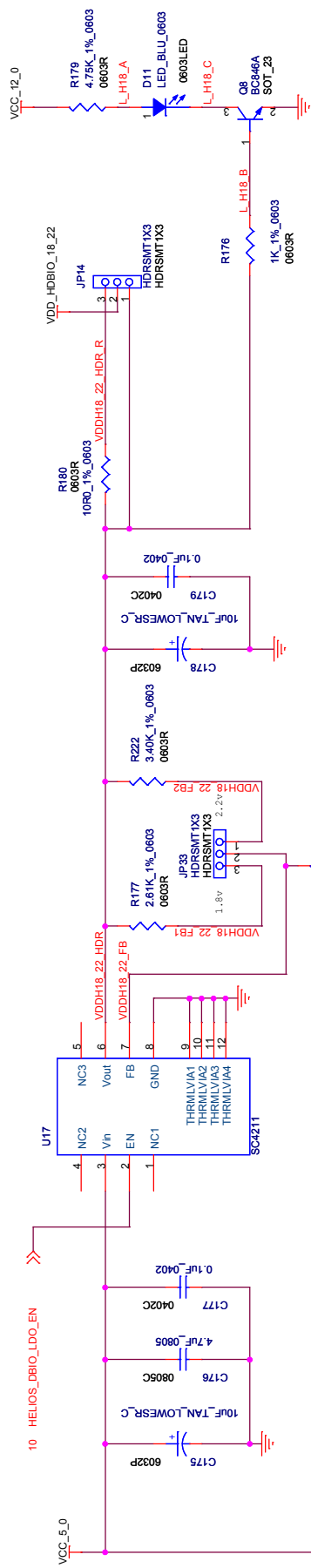
XILINK - FPGA VCCINT -



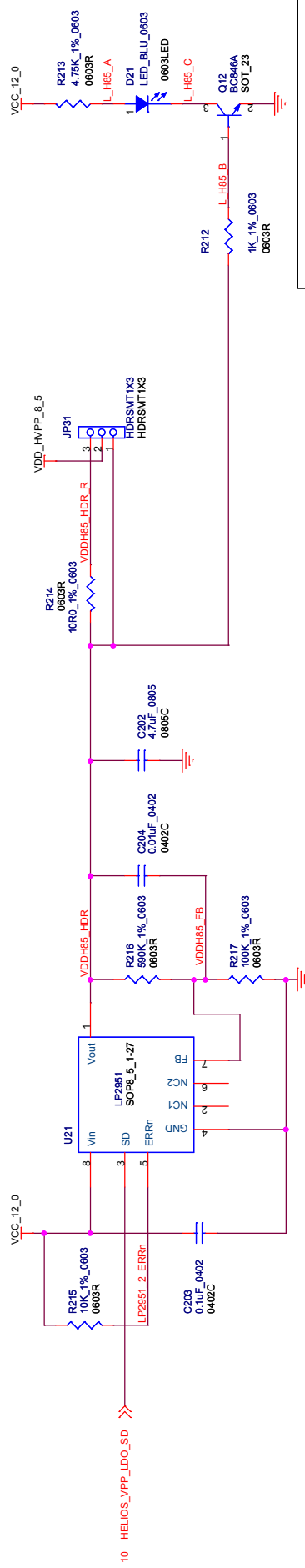
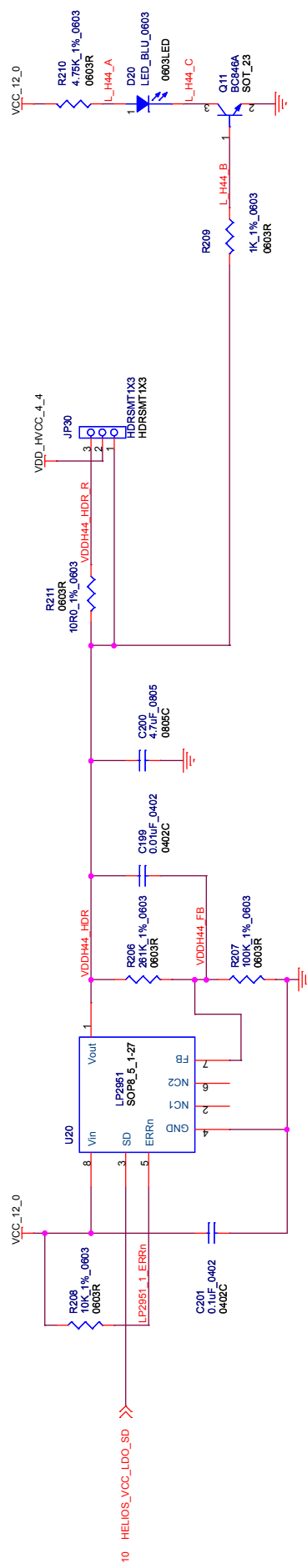
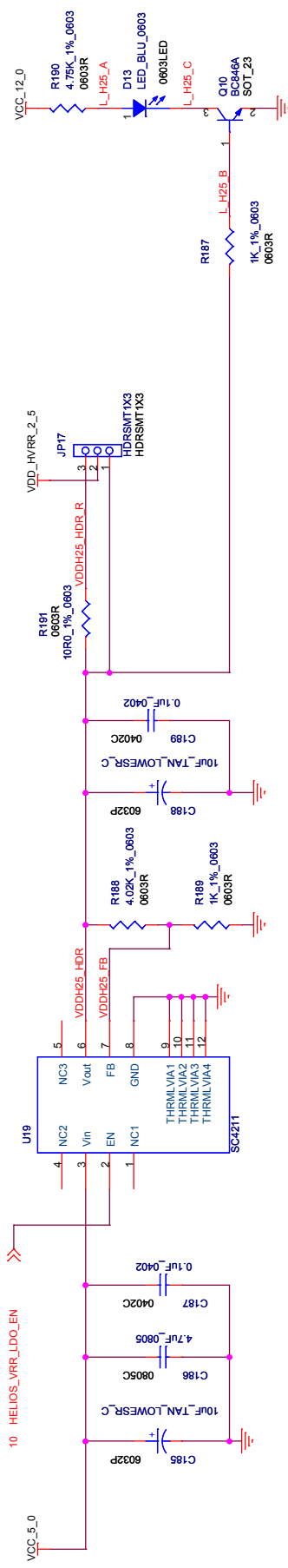
Title					
HELIOS TEST - Power #3, Card 1.8v & 1.2v					
Size	Document Number				Rev
B	<Doc>				0.2
Date:			Thursday, July 03, 2008	Sheet	19 of 22



Title		HELIOS TEST - Power #4, Helios 0.9v & 1.5v	
Size	Document Number	Rev	0.2
B	-Q000		
Date:	Thursday, July 03, 2008	Sheet	20 of 22



Title		HELIOS TEST - Power #6, Helios 1.8v, 2.2v & 2.5v	
Size B	Document Number </value>	Rev 0.2	
Date:	Thursday, July 03, 2008	Sheet	21 of 22



HELIOS TEST - Power #6, Helios 4.4v & 8.5v		
Size B	Document Number	Rev 0.2
Date:	Thursday, July 03, 2008	Sheet 22 of 22