

Page List

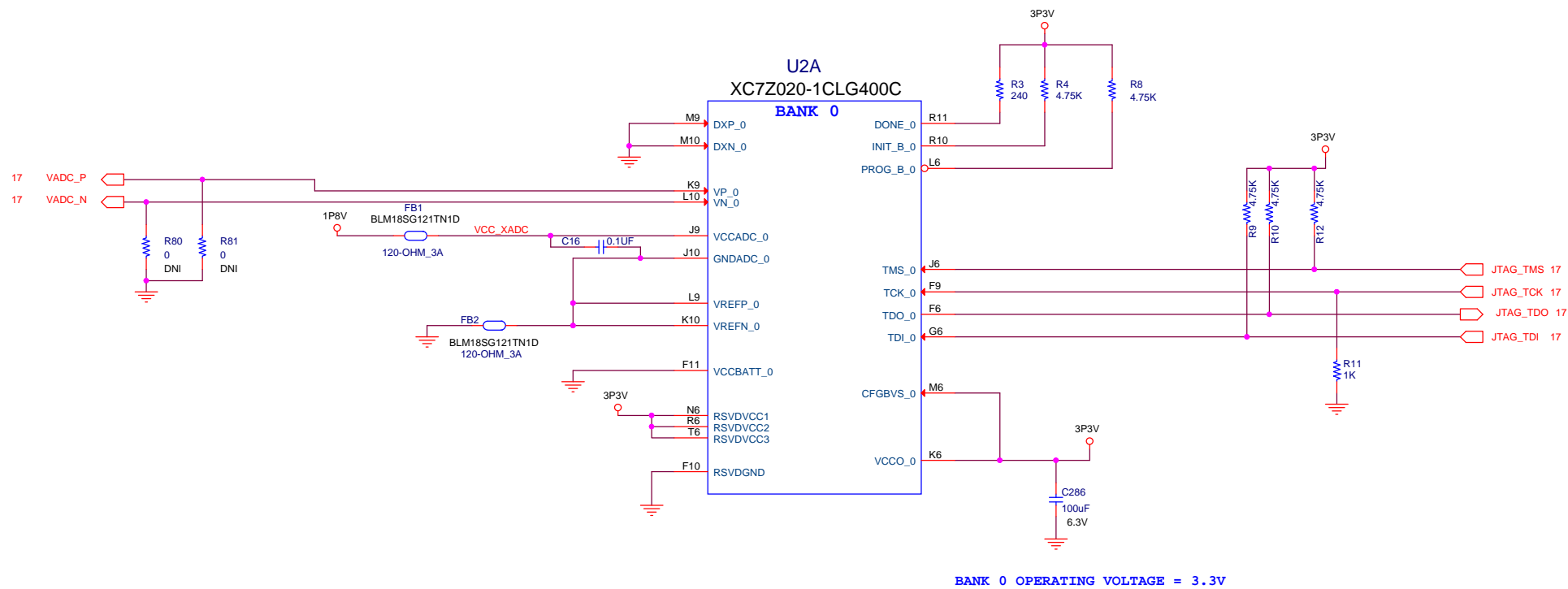
Page	Content
1	COVER PAGE
2	ZYNQ BANK 0
3	ZYNQ BANK 500
4	ZYNQ BANK 501
5	GIGE PORT
6	USB PORTS
7	ZYNQ BANK 502
8	DDR3-256Mx32
9	PL BANK 34 & 35
10	ZYNQ PWR & GND
11	DSP PROCESSOR 1-OF-3
12	DSP PROCESSOR 2-OF-3
13	DSP PROCESSOR 3-OF-3
14	DSP eLINK CONNECTORS
15	HDMI INTERFACE
16	POWER MANAGEMENT
17	RESET GENERATION

This work is licensed under Creative Commons Attribution-Share Alike 3.0 Unprotected License.
To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/3.0/> or send
a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

This schematic is *NOT SUPPORTED* and DOES NOT constitute a reference design.
Only *community* support is allowed via resources at forums.parallella.org.

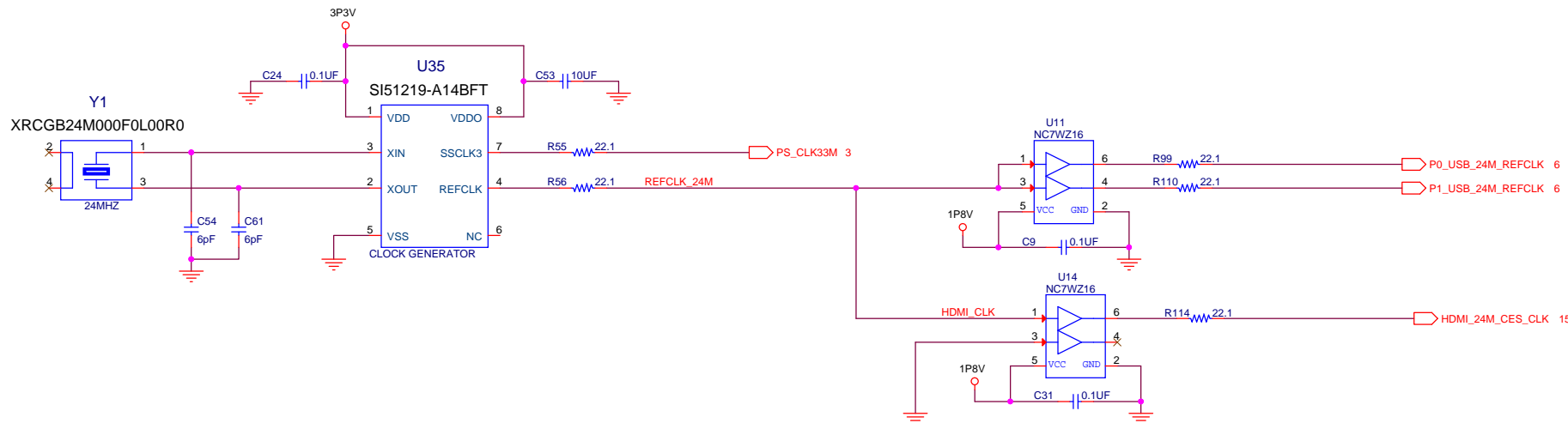
THERE IS NO WARRANTY FOR THIS DESIGN, TO THE EXTENT PERMITTED
BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE
COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE DESIGN *AS IS*
WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING,
BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY
OF PERFORMANCE OF THE DESIGN IS WITH YOU. SHOULD THE DESIGN PROVE
DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

ZYNQ BANK0



PROGRAMMABLE CLOCK GENERATOR

Place Close to U2

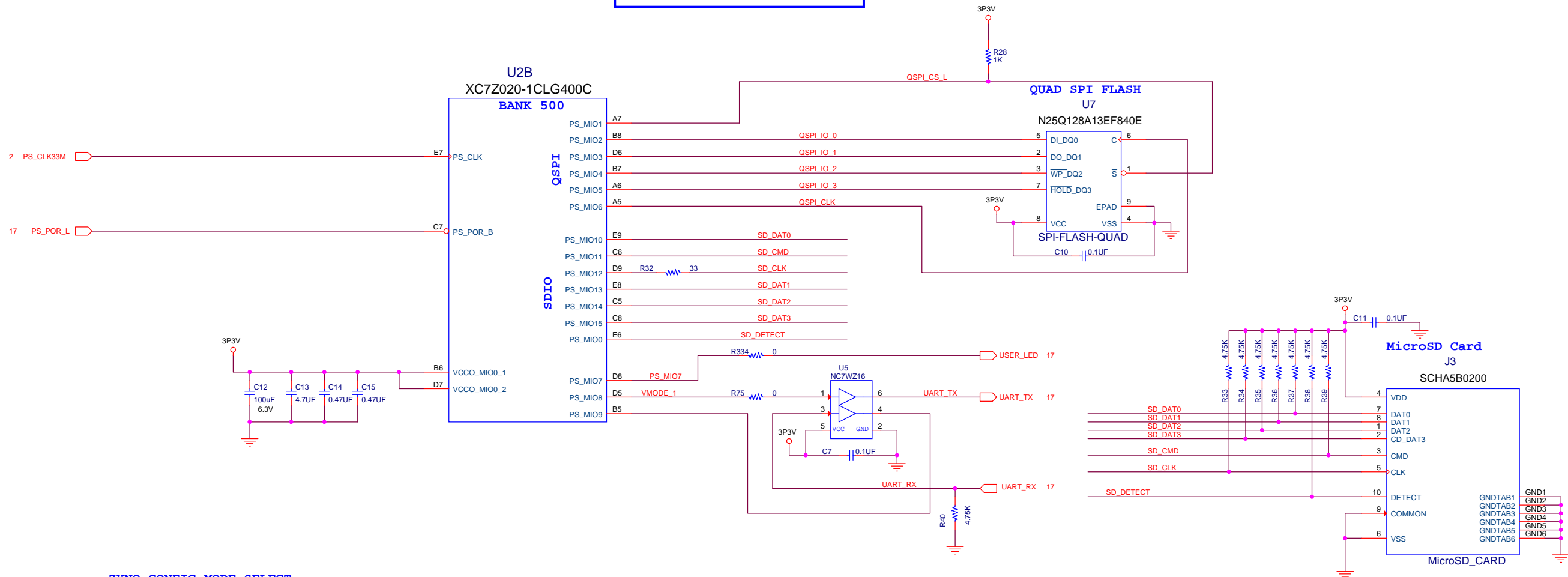


Adapteva, Inc.

parallella_gen1

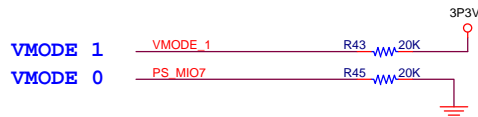
Title		
Document Number		
Size	Rev	1
C	1	
Date:	Tuesday, November 05, 2013	Sheet 2 of 17

ZYNQ BANK 500

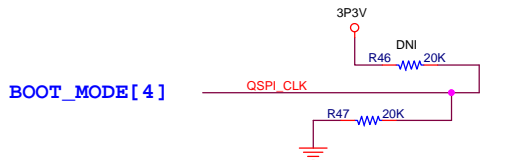


ZYNQ CONFIG MODE SELECT

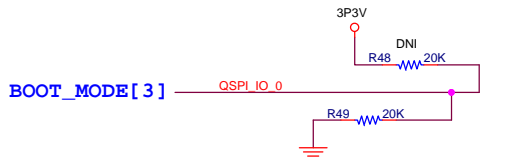
Layout Note:
Limit the Stub length to less than 10mm



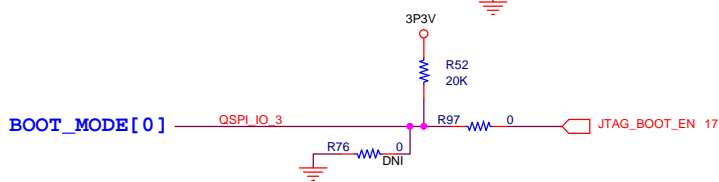
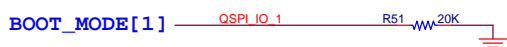
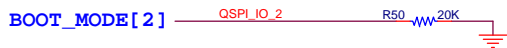
VMODE 1 = 0 -----> MIO Bank 1 Voltage = 1.8V
VMODE 0 = 0 -----> MIO Bank 0 Voltage = 3.3V



BOOT_MODE4 = 1 -----> PLL Bypassed
BOOT_MODE4 = 0 -----> PLL Used

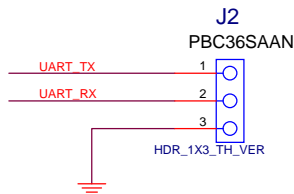


BOOT_MODE3 = 1 -----> Independant JTAG
BOOT_MODE3 = 0 -----> Cascaded JTAG

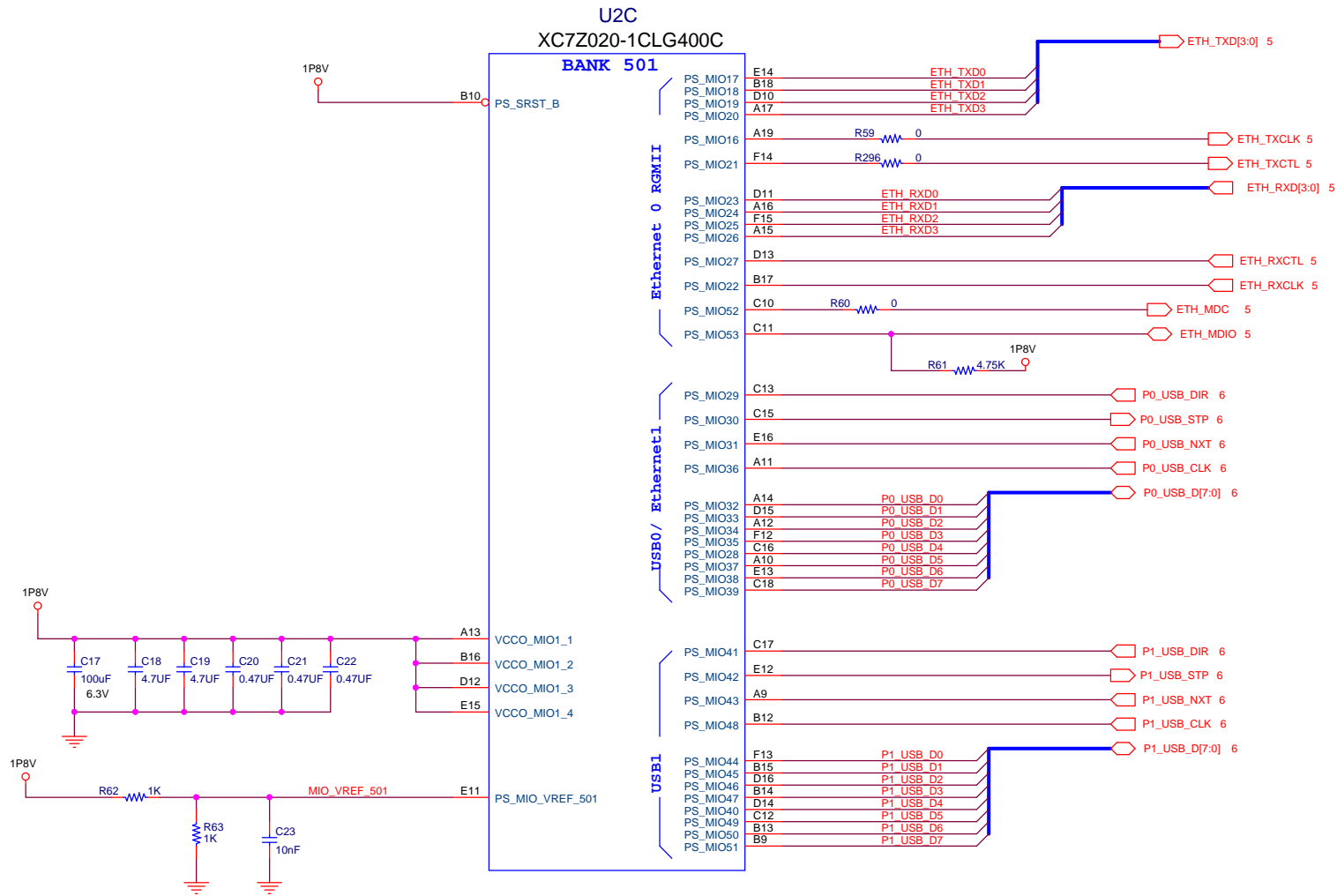


BOOT_MODE[0]	BOOT_MODE[1]	BOOT_MODE[2]	BOOT_MODE[3]	
0	0	0	0	Boot from JTAG
1	0	0	x	Boot from QSPI

UART HEADER



ZYNQ BANK 501

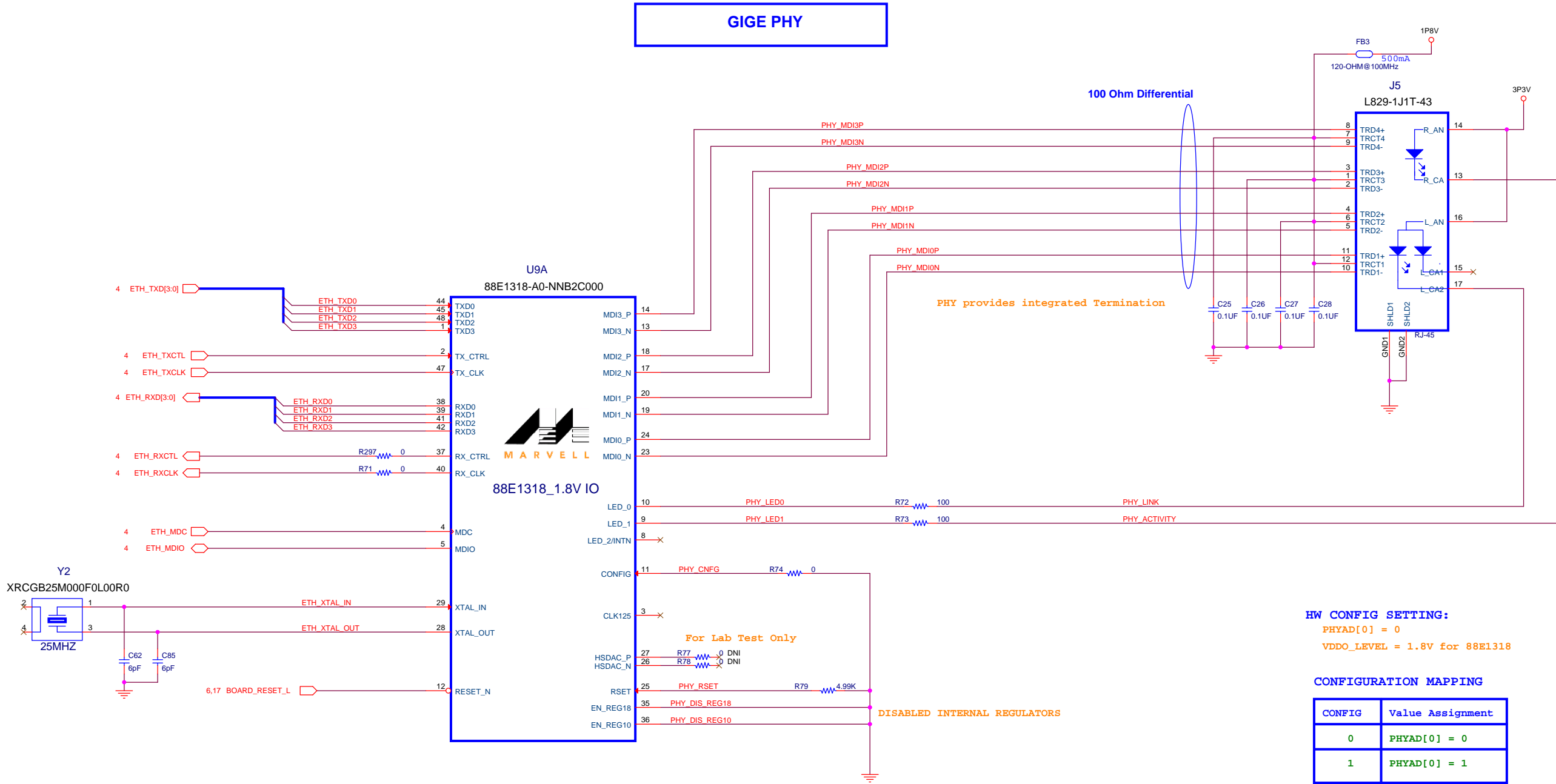


1.8V Interface IO

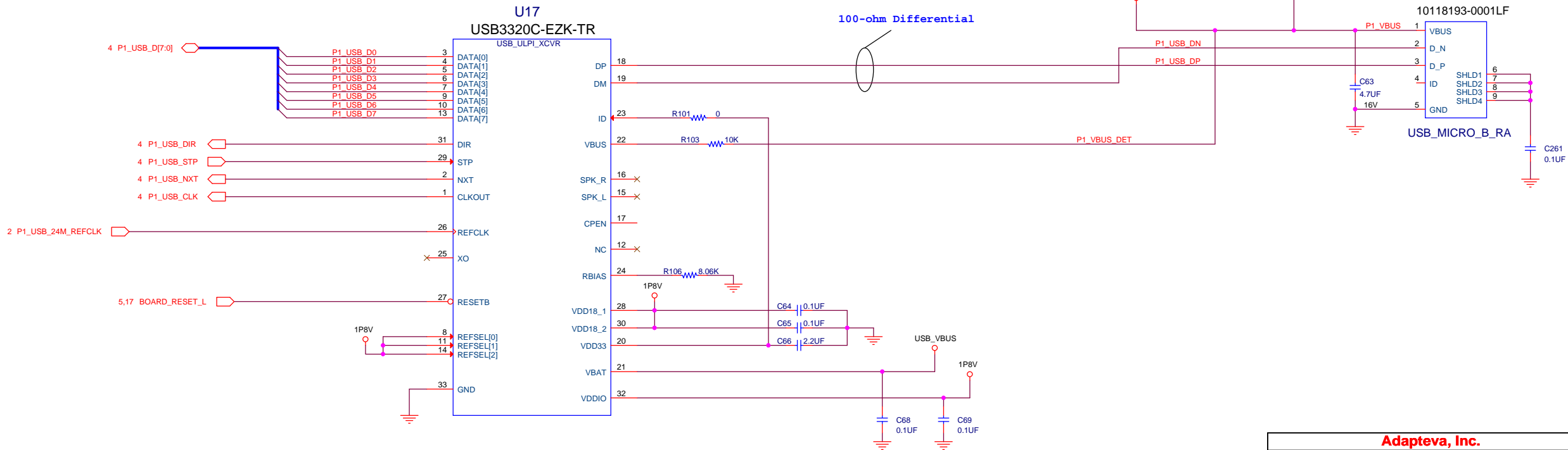
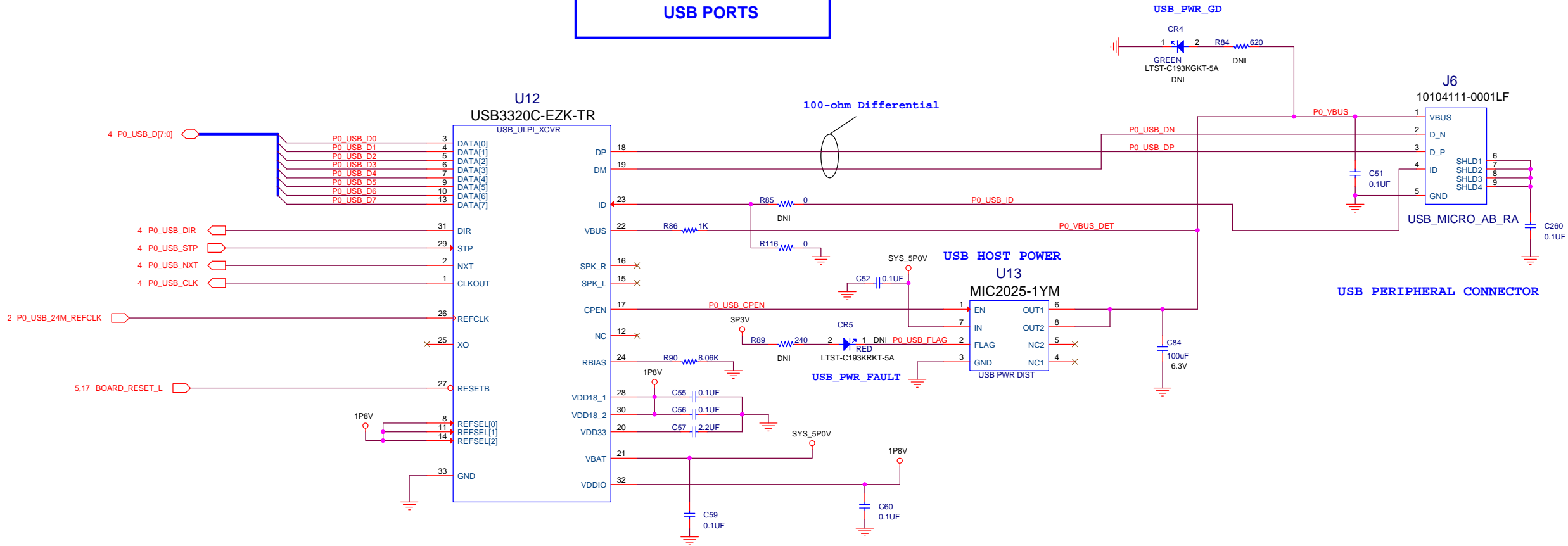
Adapteva, Inc

parallella_gen1

Title		
parallella_gen1		
Size	Document Number	Rev
C		1
Date: Tuesday, November 05, 2013 Sheet 4 of 17		



USB PORTS



Adapteva, Inc.

parallella_gen1

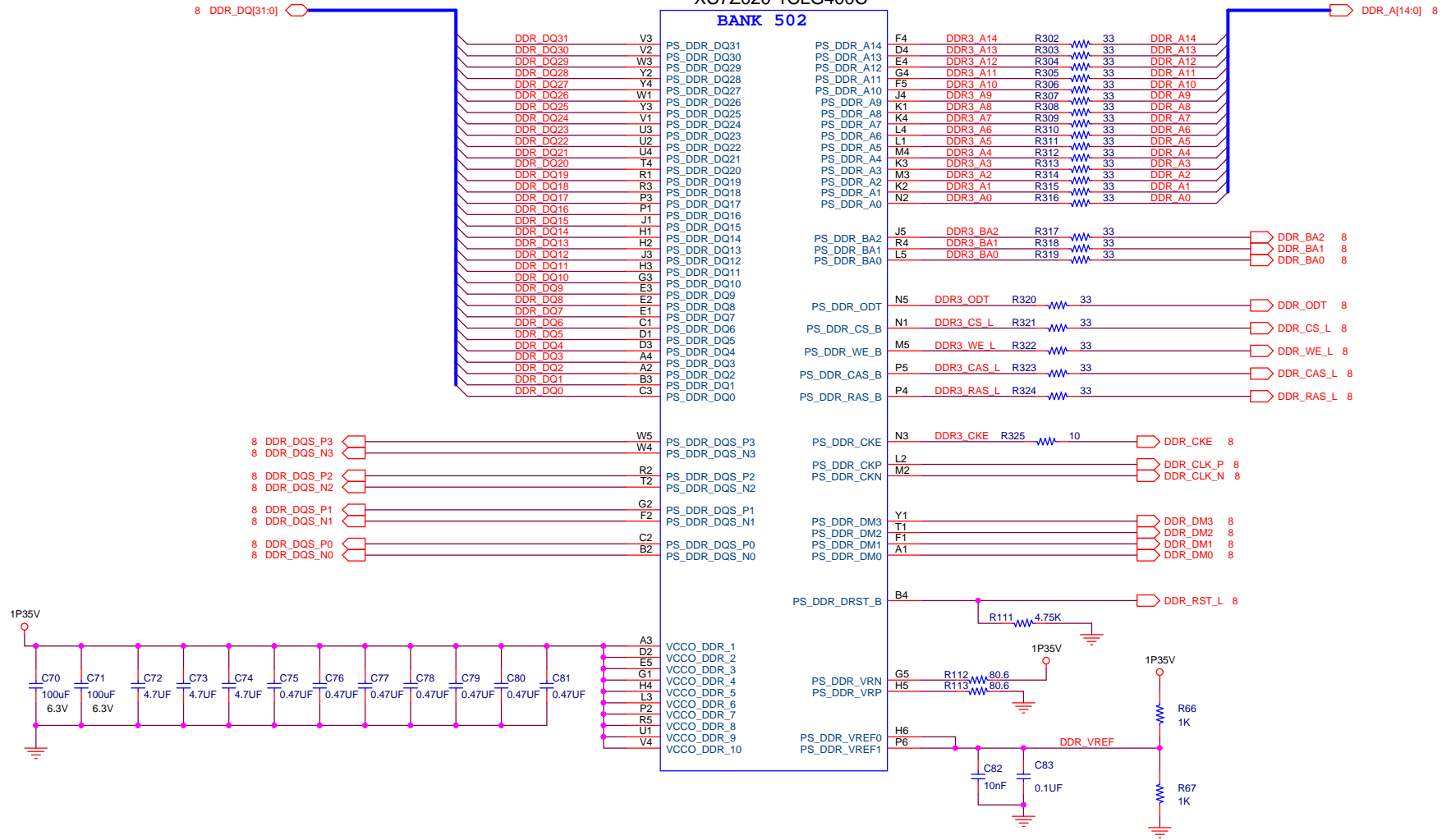
Title				Rev 1
parallella_gen1				
Size C	Document Number			
Date:	Tuesday, November 05, 2013	Sheet	6 of 17	

ZYNQ BANK 502

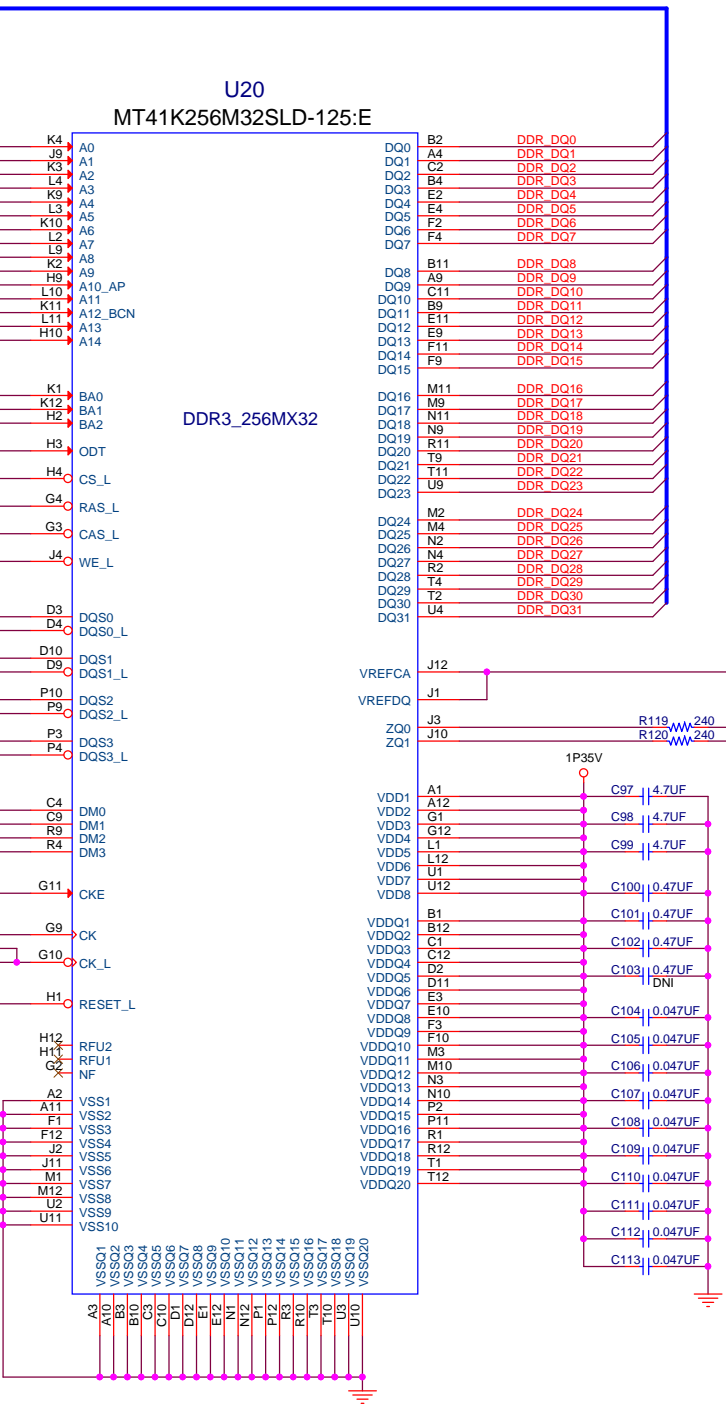
U2D

XC77020-1C| G4000

BANK 502

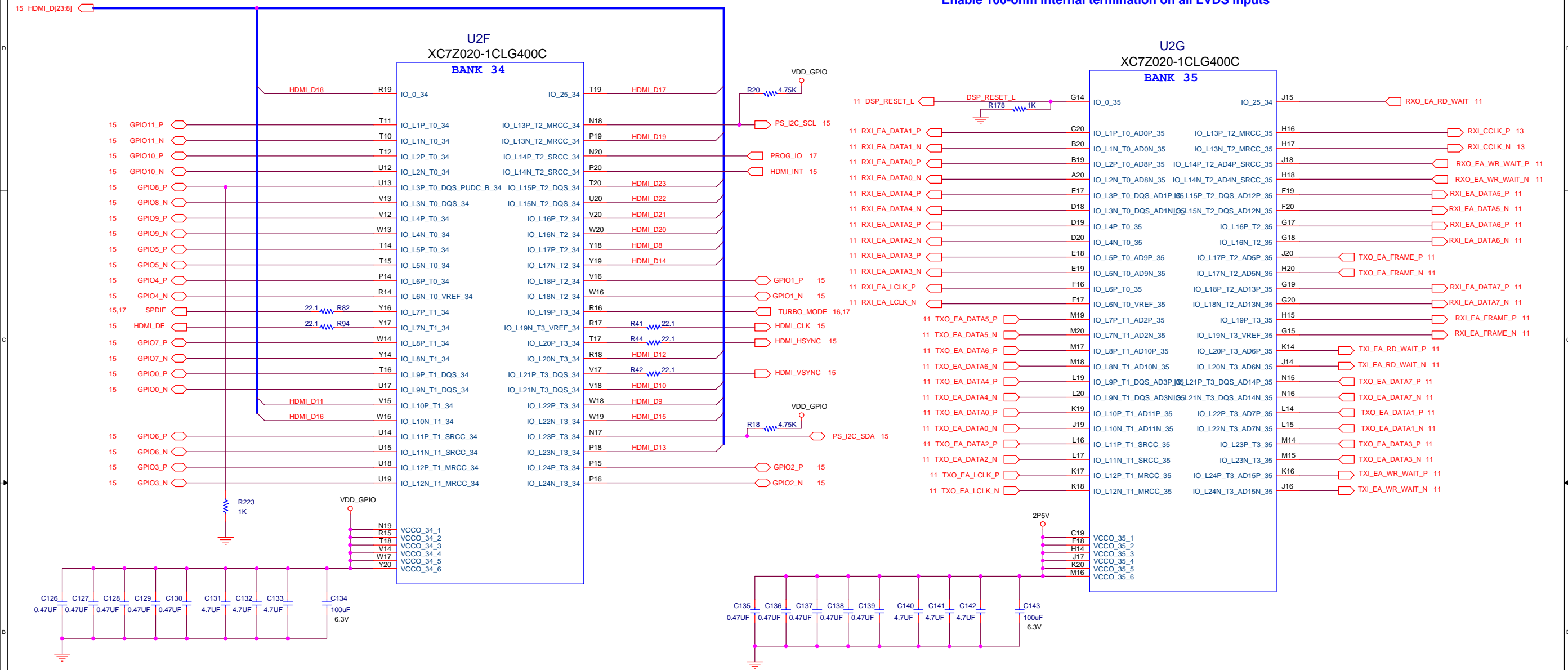


DDR3 - 256M X 32



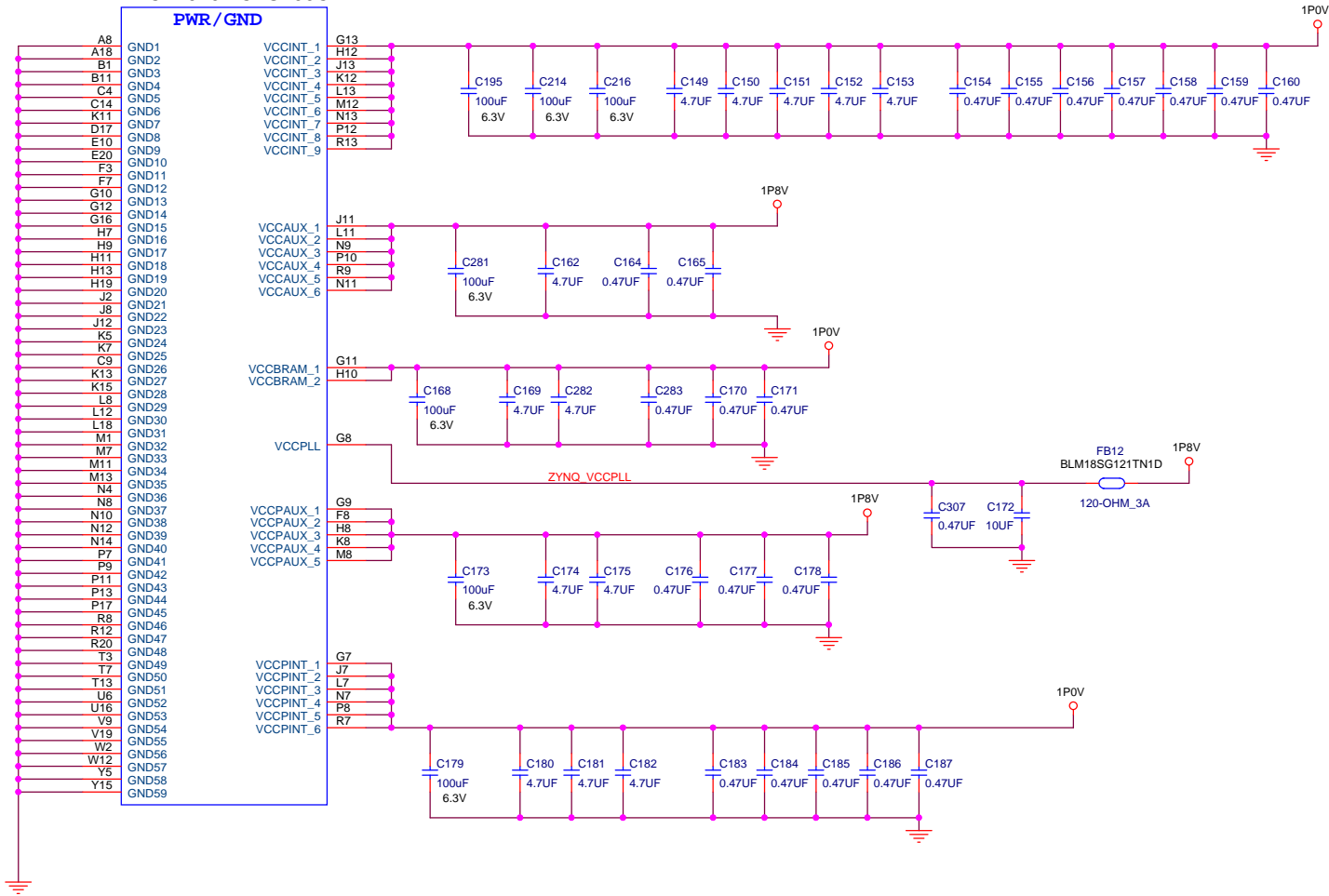
BANKS 34 & 35

Enable 100-ohm internal termination on all LVDS inputs

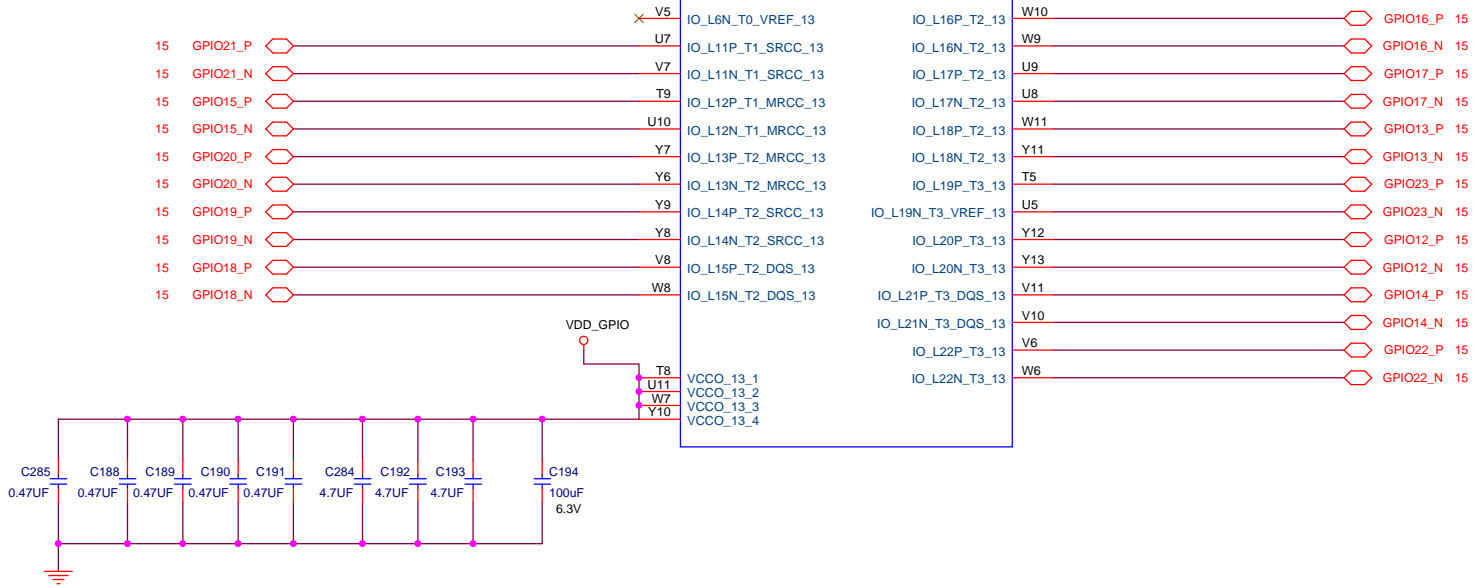


ZYNQ POWER & GROUND

U2H
XC7Z020-1CLG400C
PWR/GND



U2E
XC7Z020-1CLG400C
BANK 13

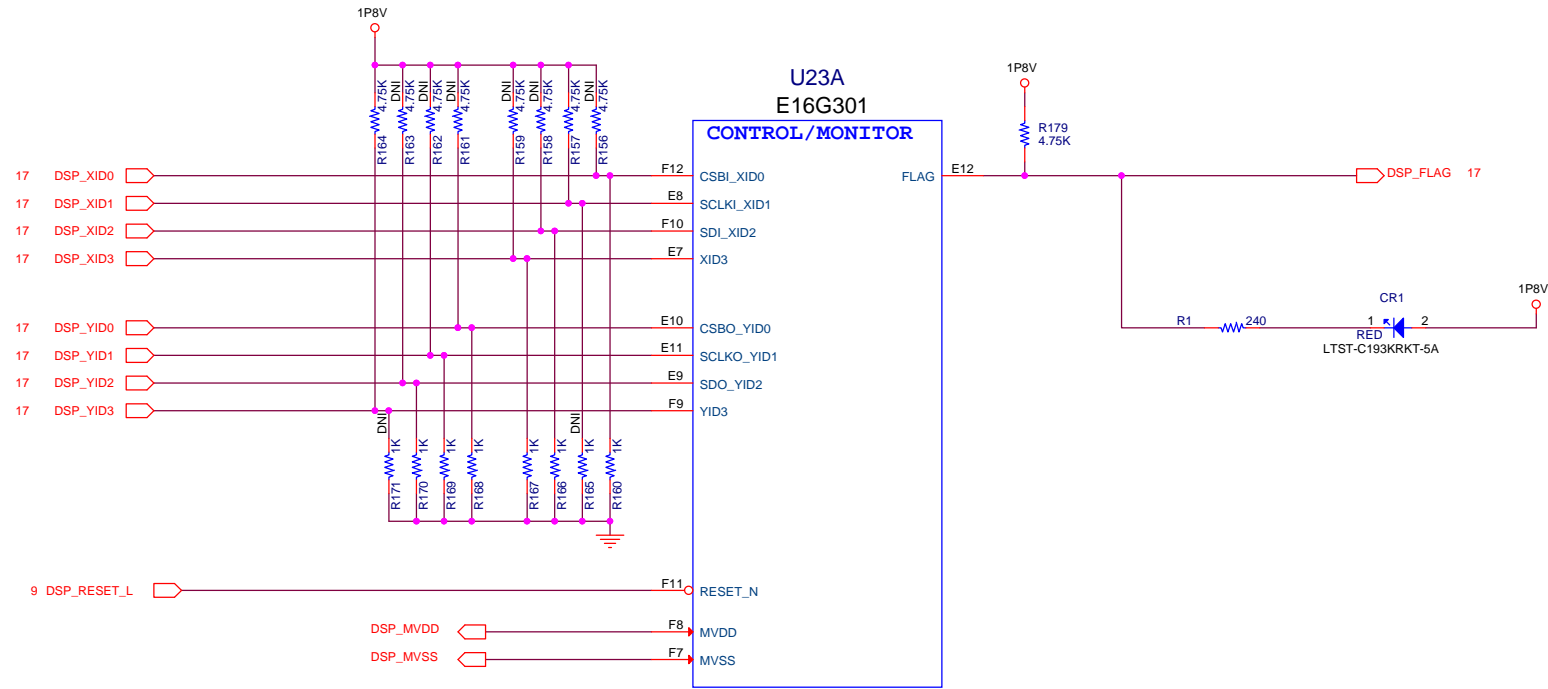


Adapteva, Inc.

parallella_gen1

Title		
parallella_gen1		
Size	Document Number	Rev
C		1
Date: Tuesday, November 05, 2013 Sheet 10 of 17		

DSP PROCESSOR 1-OF-3



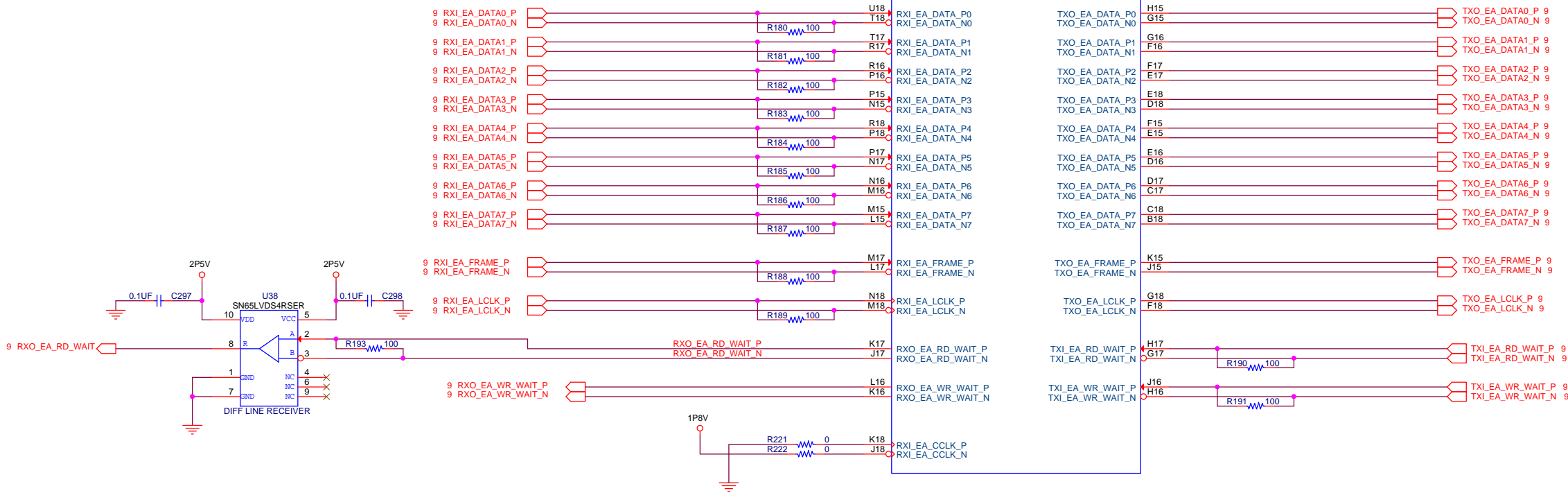
100 Ohm Differential LVDS Signals

U23B

E16G301

eLINK - EAST

100 Ohm Differential LVDS Signals

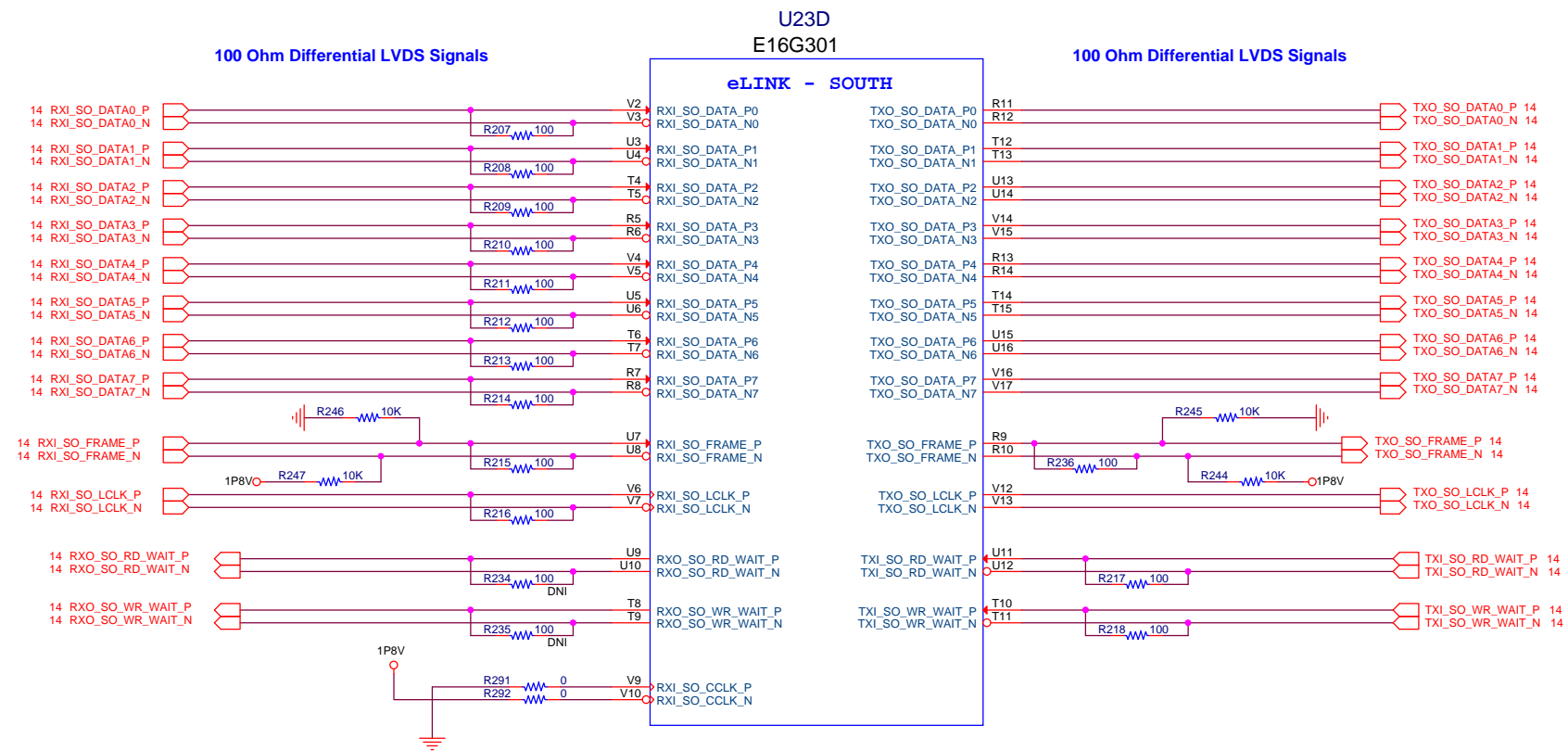
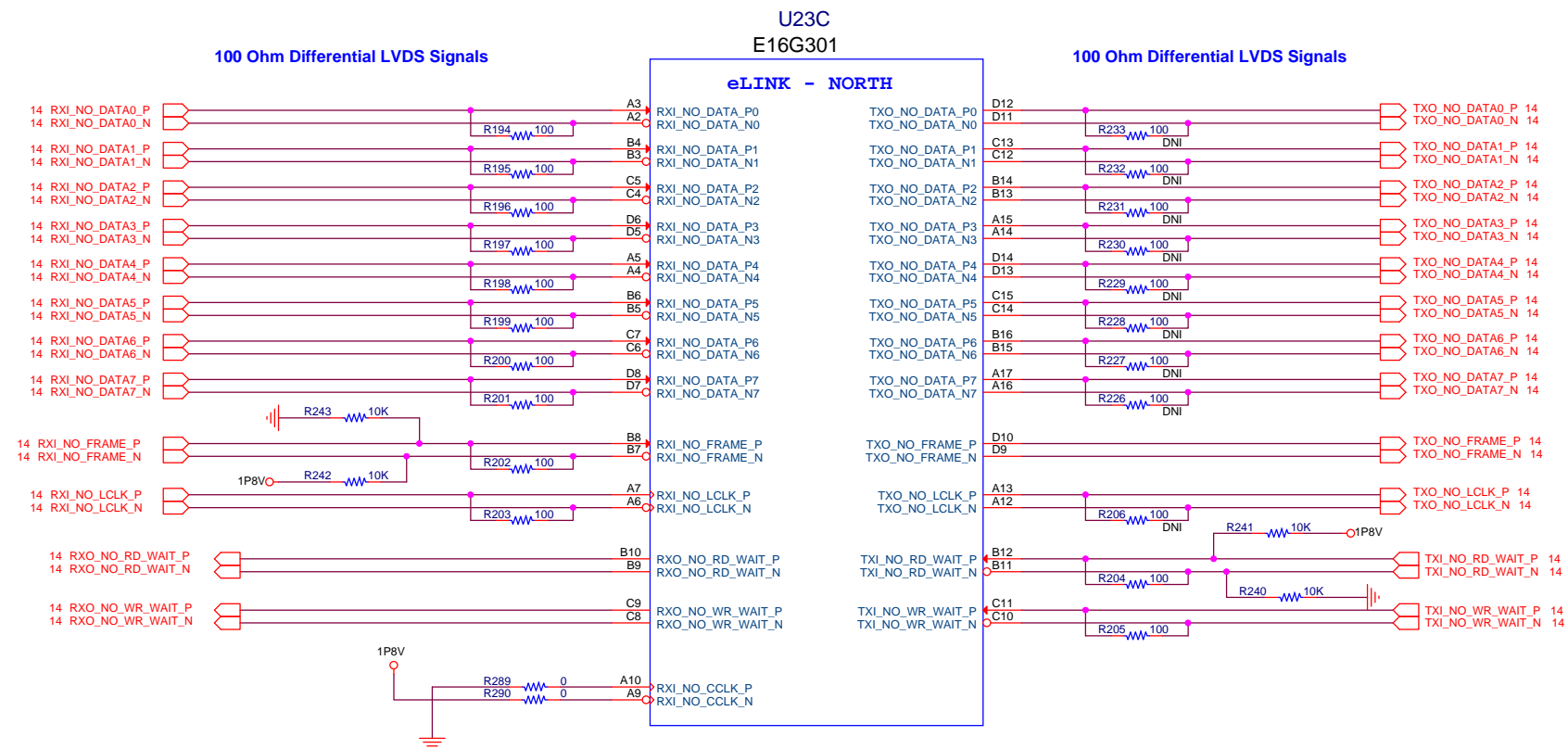


Adapteva, Inc.

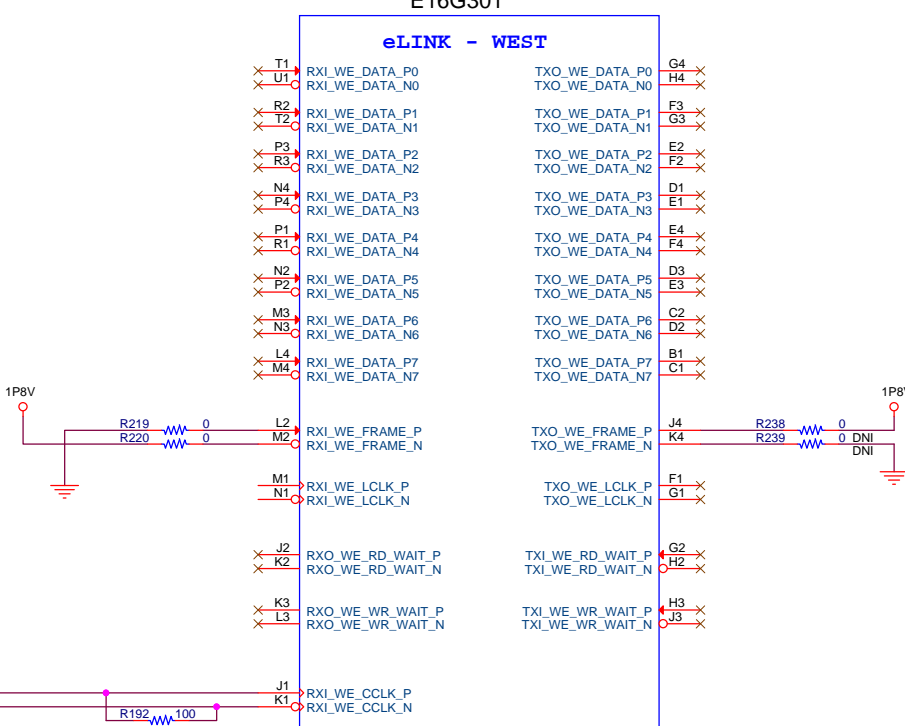
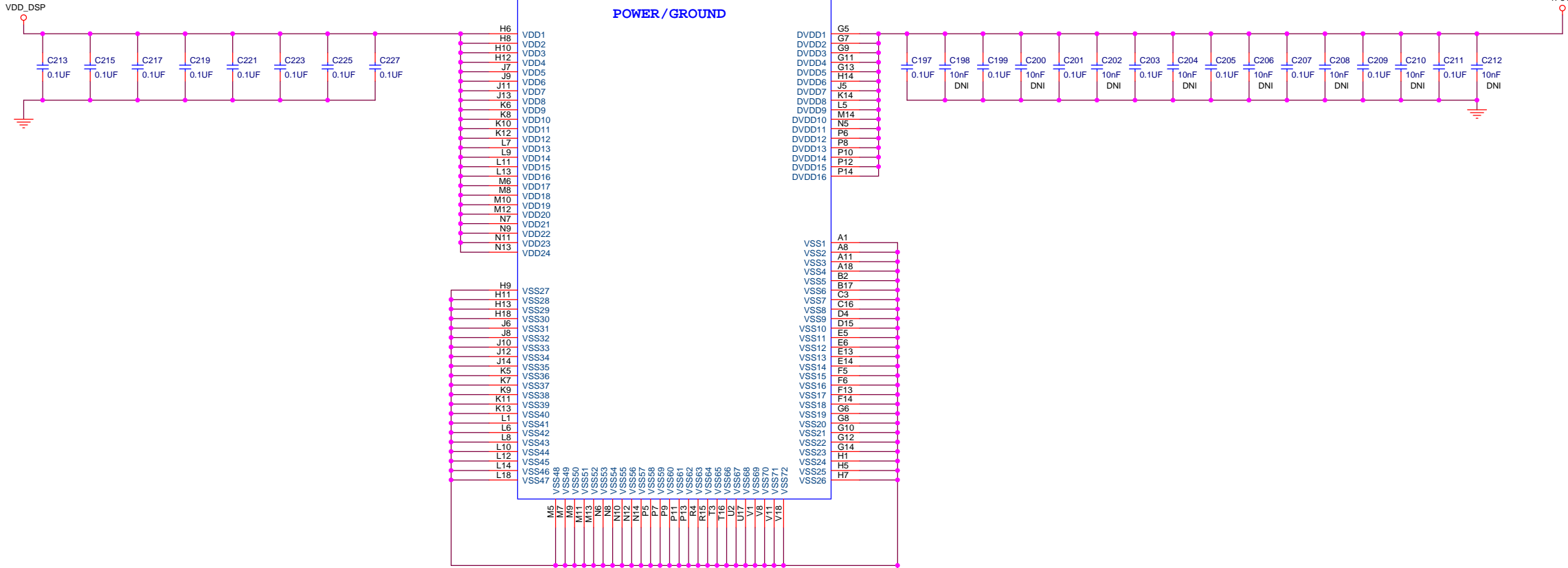
parallella_gen1

Title		
Size	Document Number	Rev
C		1
Date:	Tuesday, November 05, 2013	Sheet 11 of 17

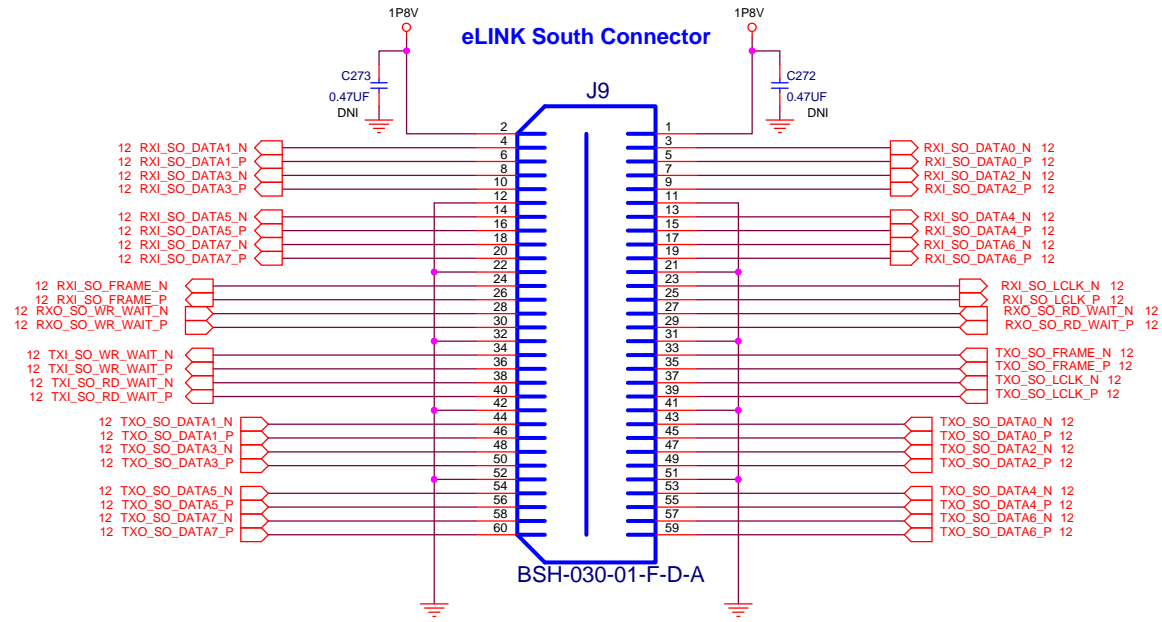
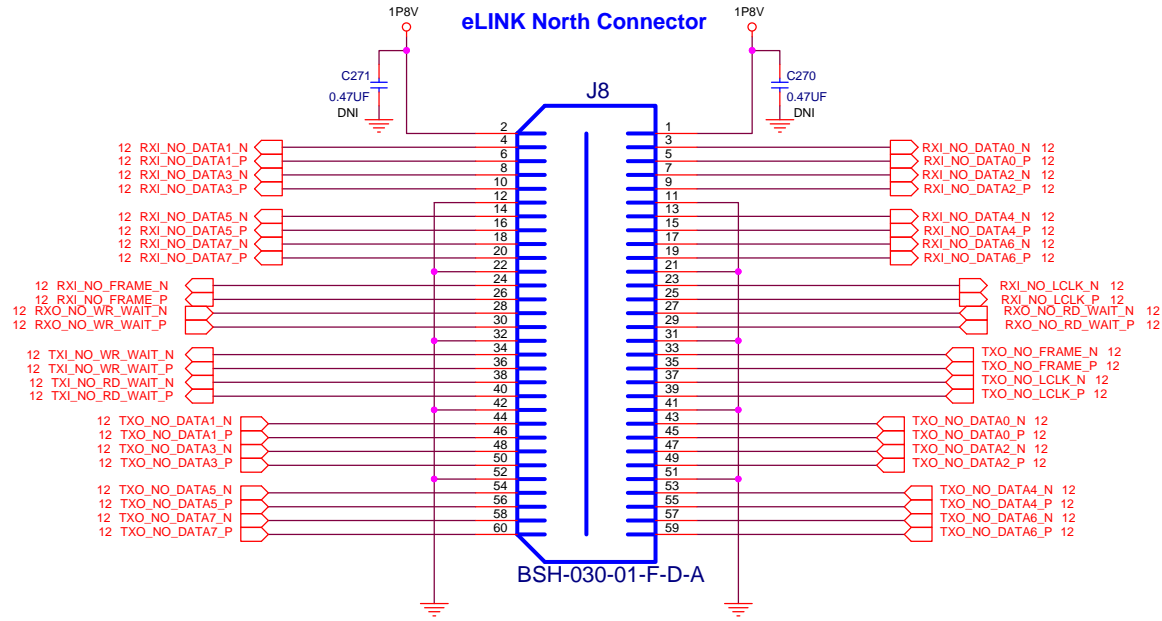
DSP PROCESSOR 2-OF-3



DSP PROCESSOR 3-OF-3



DSP eLINK CONNECTORS

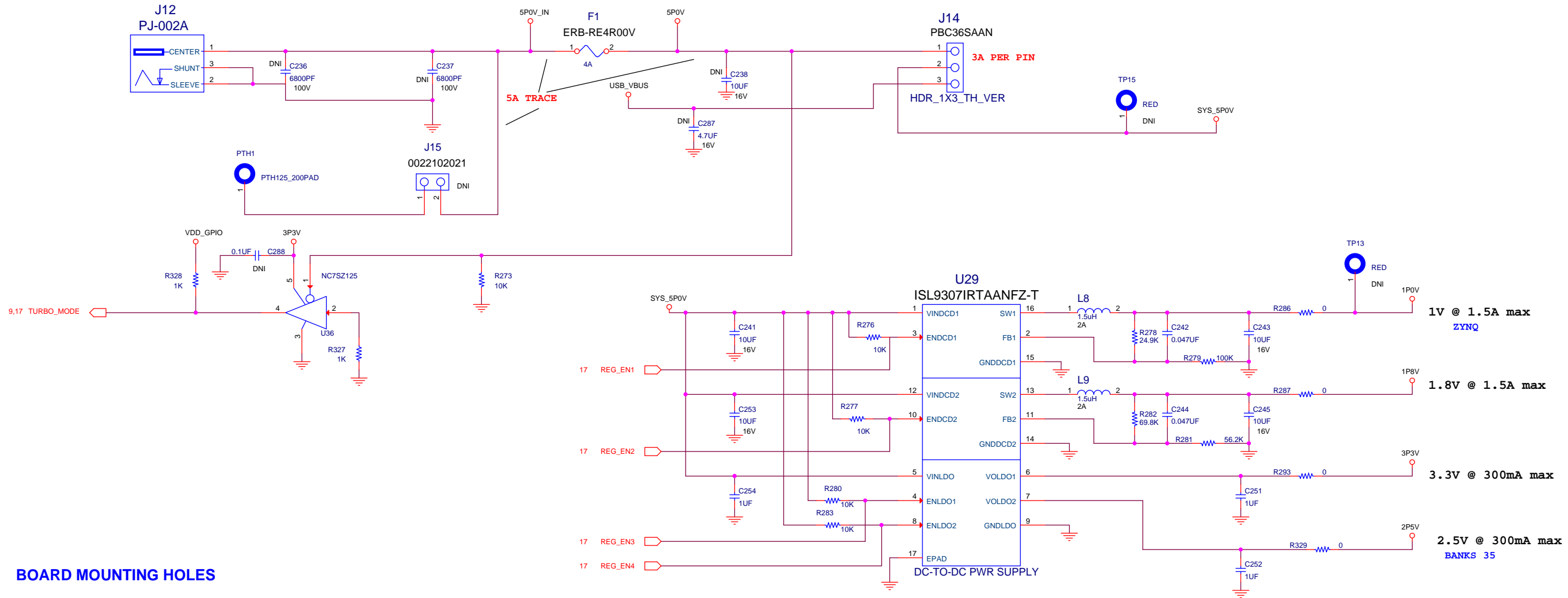


Adapteva, Inc.

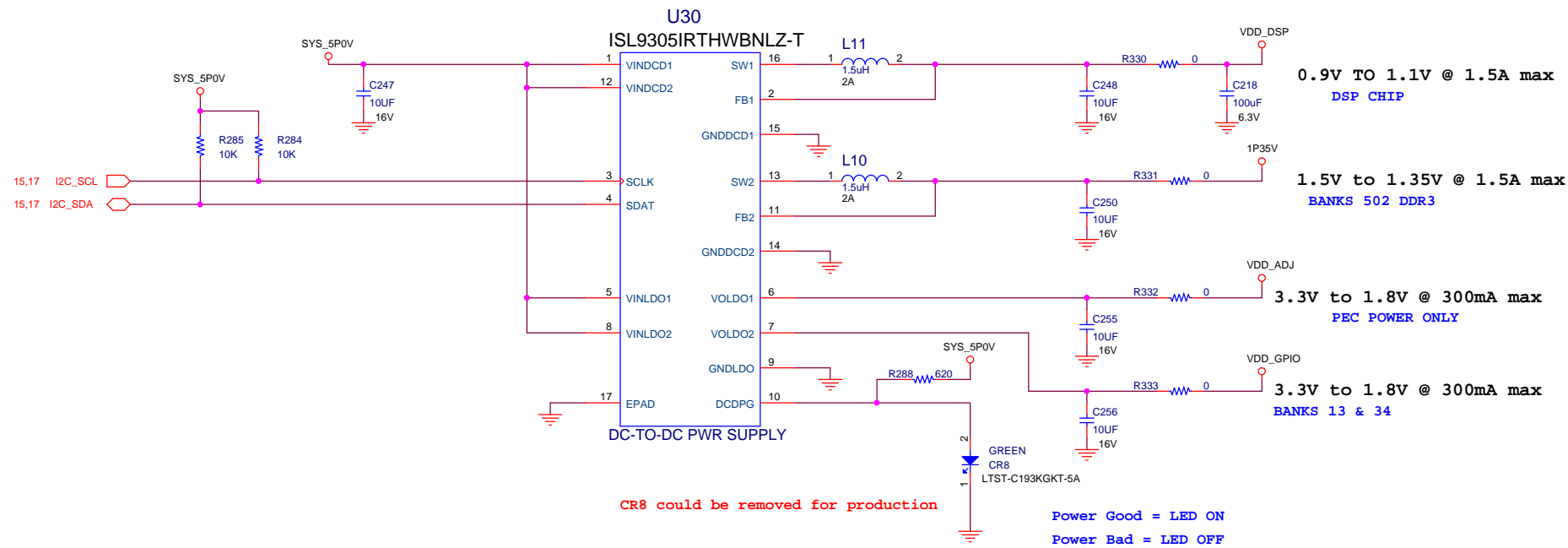
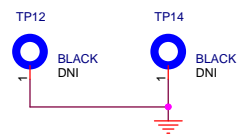
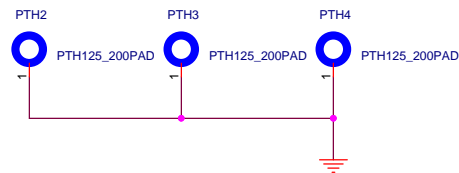
parallella_gen1

Title		
Size C	Document Number	Rev 1
Date:	Tuesday, November 05, 2013	Sheet 14 of 17

POWER MANAGEMENT



BOARD MOUNTING HOLES



Adapteva, Inc.

Title		
parallella_gen1		
Size	Document Number	Rev
C		1
Date:	Monday, November 11, 2013	Sheet 16 of 17

RESET GENERATION

