NOTES:

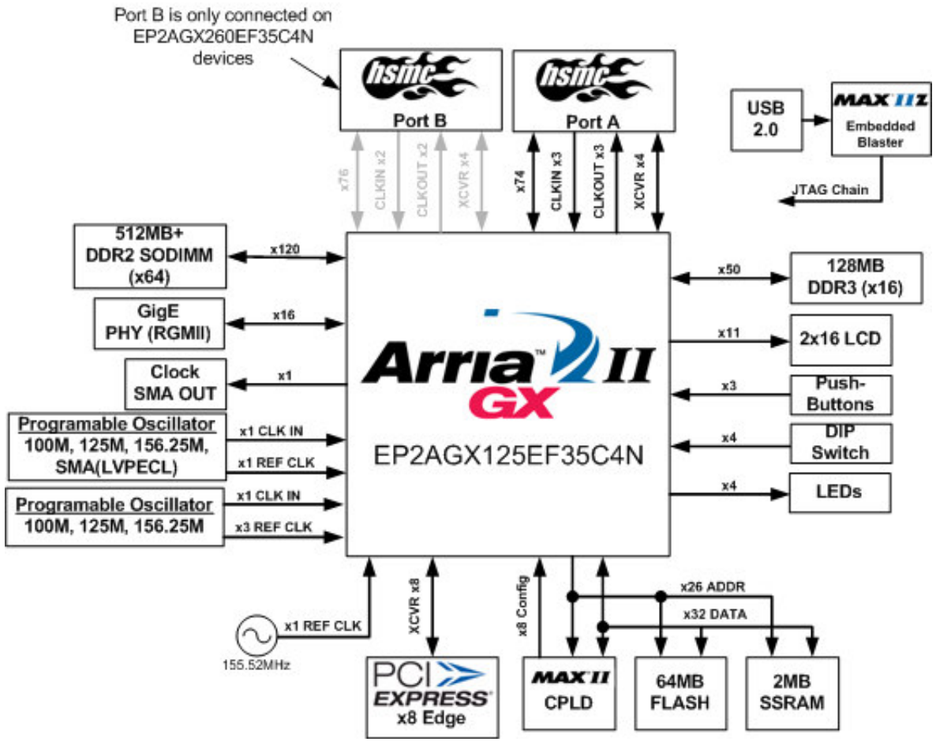
1. Project Drawing Numbers:

Raw PCB	100-0320801-C1
Gerber Files	110-0320801-C1
PCB Design Files	120-0320801-C1
Assembly Drawing	130-0320801-C1
Fab Drawing	140-0320801-C1
Schematic Drawing	150-0320801-C1
PCB Film	160-0320801-C1
Bill of Materials	170-0320801-C1
Schematic Design Files	180-0320801-C1
Functional Specification	210-0320801-C1
PCB Layout Guidelines	220-0320801-C1
Assembly Rework	320-0320801-C1

2. 909 Parts, 65 Library Parts, 972 Nets, 5007 Pins

REV	DATE	PAGES	DESCRIPTION
A	05/15/2009	All	Initial
B	06/30/2009	3, 6, 19, 20	Add a 50MHz oscillator to the EPM2210. Remove the FPGA_CONF_DONE LED, the CONF_DONE led is controlled through the EPM2210. Change the 5.0V_MONITOR regulator to the adjustable version and set the output voltage to 5.3V. Replace the 3.3V/12V output controller (TPS51220A) with two switchers TPS54550 and TPS40061.
C	08/07/2009	25	Change Bank 7A RUP pin pulled up to A2VCCIO_B7A (1.5V) instead of A2VCCIO_B7B_B8A (2.5V).

Arria II GX FPGA Development Kit Board



PAGE	DESCRIPTION
1	Title, Notes, Block Diagram, Revision History
2	FPGA Package Top
3	MAX II EPM2210
4	Buttons & Switches
5	HSMC Port A & B
6	LCD & LEDs
7	Oscillators
8	DDR2 SO-DIMM
9	DDR3 Memory Device
10	SSRAM
11	Sync Flash
12	PCIe x8 Edge Connector
13	JTAG Control & Board Setting
14	USB Blaster
15	Ethernet
16	Power Monitor
17	1.1V, 1.0V, VTT & VREF
18	2.5V, 1.8V & 1.5V
19	5V & 0.9V Dual Output
20	DC IN to 12V & 3.3V Dual Output
21	Power MUX
22	BANK QL
23	BANK3 & BANK4
24	BANK5 & BANK6
25	BANK7 & BANK8
26	FPGA Power
27	FPGA Ground
28	FPGA Decoupling
29	FPGA Configuration

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 1 of 29

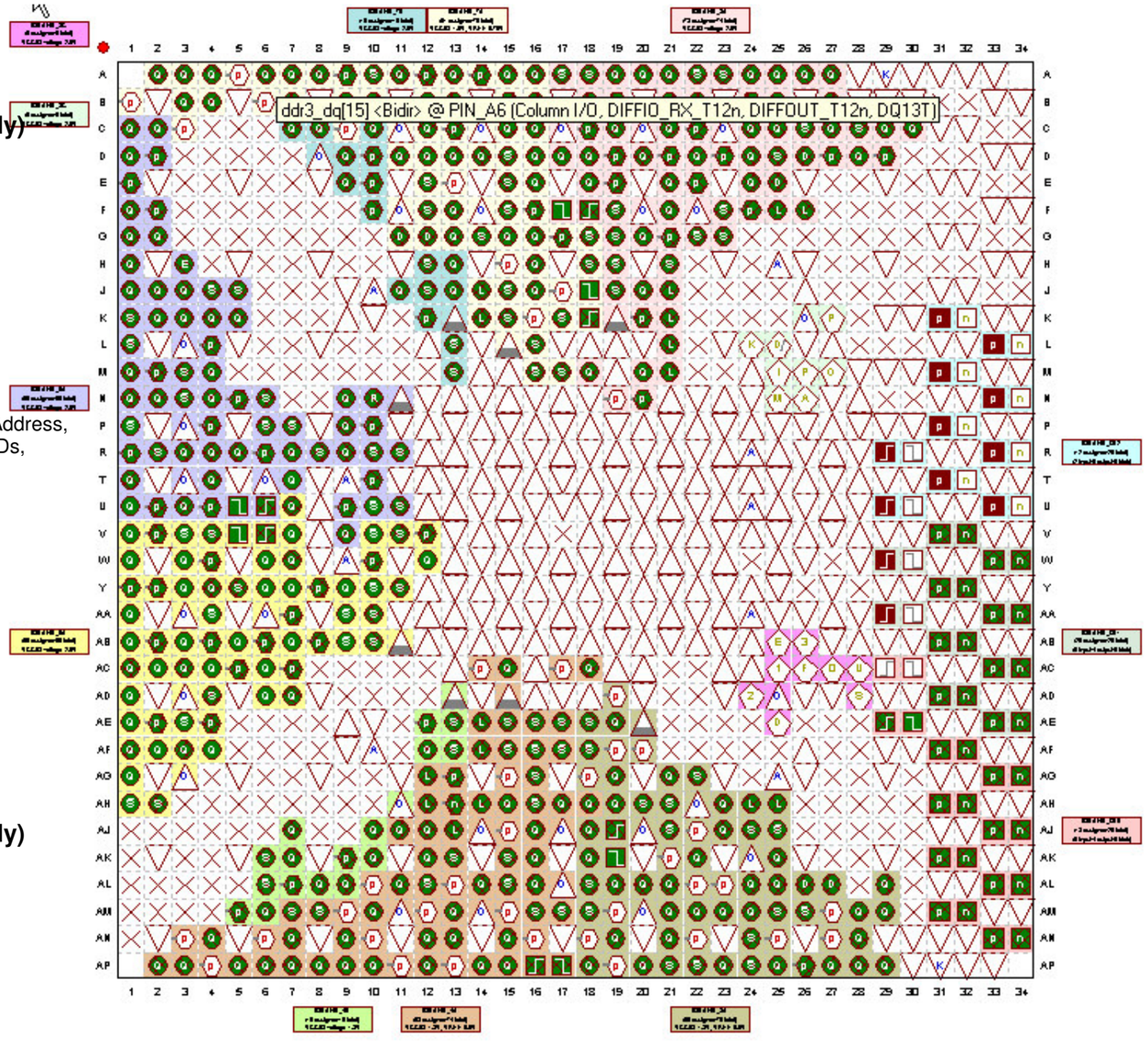
FPGA Package Top View

Pin Legend

Symbol	Pin Type
	User I/O
	User Assigned I/O
	Fitter Assigned I/O
	Unbonded Pad
	Reserved Pin
E	DEV_OE
R	DEV_CLR
n	DIFF_n
p	DIFF_p
Q	DQ
S	DQS
S	DQSB
Q	CQ#
L	Other PLL
D	Other Dual Purpose
	CLK_n
	CLK_p
n	GX_X*n
p	GX_X*p
0	MSEL0
1	MSEL1
2	MSEL2
3	MSEL3
D	CONF_DONE
D	DCLK
E	nCE
F	nCONFIG
A	DATA0
I	TDI
K	TCK
M	TMS
O	TDO
S	nSTATUS
U	nIO_PULLUP
P	Other Dedicated Programming
	VREF
	VCCP/VCCR/VCCT
A	VCCA
IO	VCCIO
	GND
K	RREF
	No Connect

BANK 7A
VCCIO = 1.5V
DDR3 Device (128MB)

BANK 7B, 8A
VCCIO = 2.5V
ENET, FSM Bus, SSRAM



BANK 6B
(EP2AGX260 only)
VCCIO = 2.5V
HSMC Port B

BANK 6A
VCCIO = 2.5V
HSMC Port A,
Flash Control, FSM Address,
LCD, DIP Switch, LEDs,
PCIe Control

BANK 5A
VCCIO = 2.5V
HSMC Port A

BANK 5B
(EP2AGX260 only)
VCCIO = 2.5V
HSMC Port B

BANK 4B
VCCIO = 1.8V
DDR2 SODIMM x64
Push-buttons

BANK 4A & 3A
VCCIO = 1.8V
DDR2 SODIMM x64

BANK 3B
(EP2AGX260 only)
VCCIO = 2.5V
HSMC Port B

Notes:

1. FPGA Schematic Symbol Breakdown:
   - (A) Banks 3A
   - (B) Banks 3B (EP2AGX260)
   - (C) Banks 4A,4B
   - (D) Banks 5A
   - (E) Banks 5B (EP2AGX260)
   - (F) Banks 6A
   - (G) Banks 6B (EP2AGX260)
   - (H) Banks 7A,7B
   - (I) Bank 8A
   - (J) Clocks
   - (K) Configuration
   - (L) Power
   - (M) IO Power
   - (N) GND1
   - (O) Transceivers
   - (P) Transceiver Power
2. Board can support the EP2AGX125EF35 and EP2AGX260EF35 devices .

XCVR BANK QR3 (EP2AGX260 only)
HSMC Port B x4

XCVR BANK QR2
HSMC Port A x4

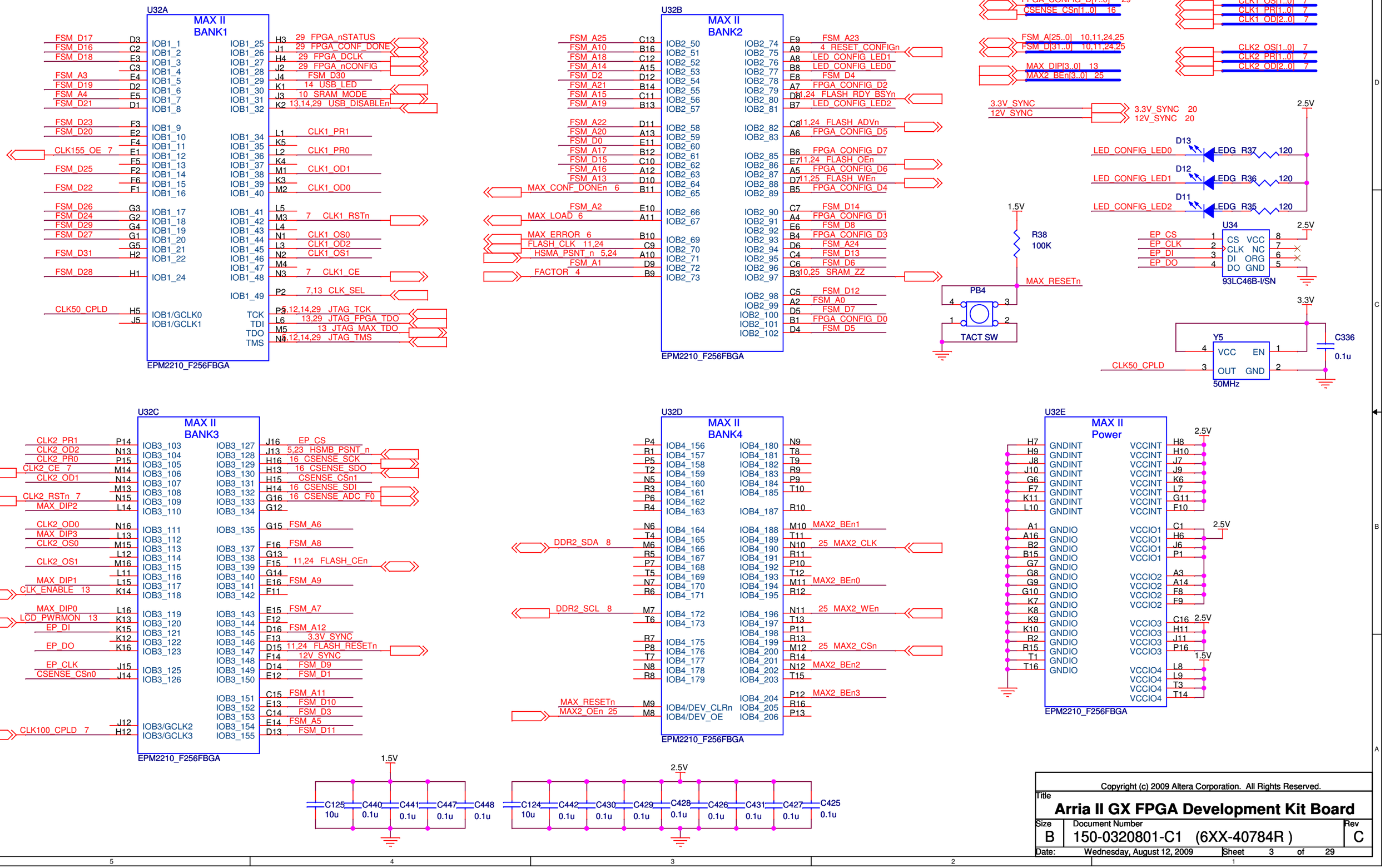
XCVR BANKS QL0, QL1
PCI Express x8
PCIe REFCLK

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 2 of 29

MAX II EPM2210

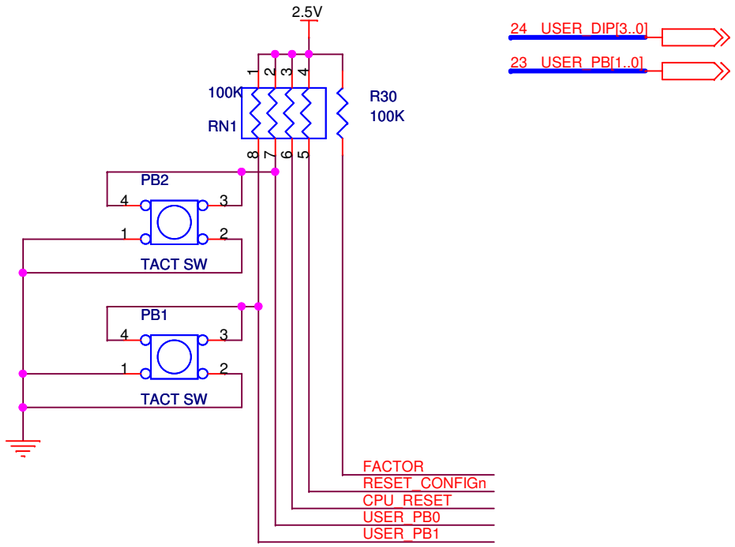


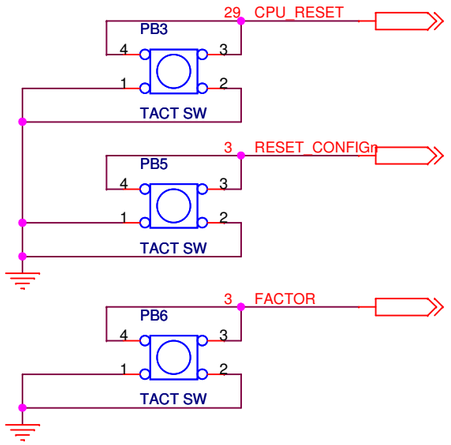
Title: **Arria II GX FPGA Development Kit Board**

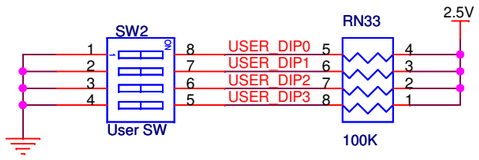
Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Wednesday, August 12, 2009 Sheet 3 of 29

Buttons & Switches





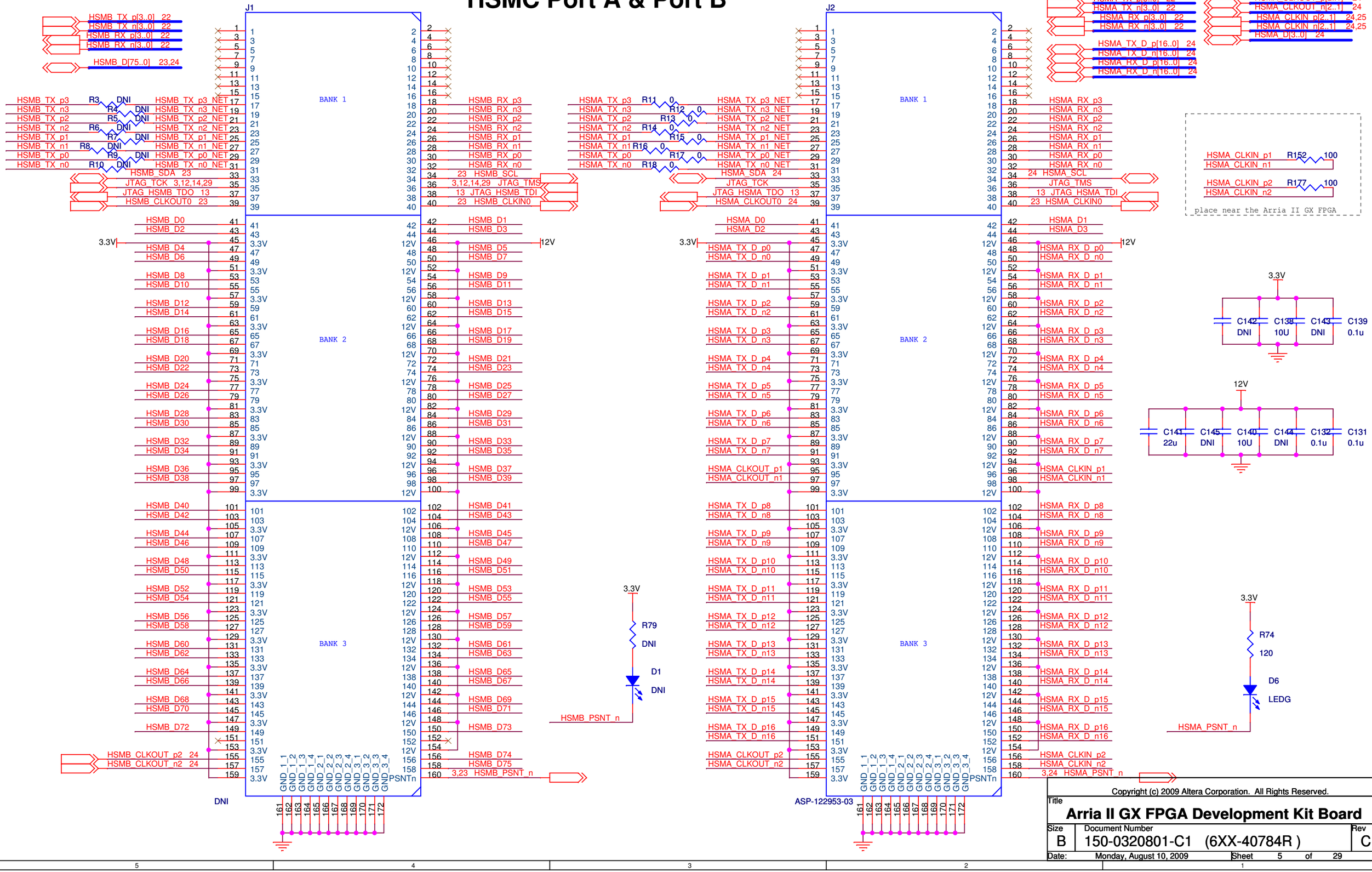


Title
Arria II GX FPGA Development Kit Board

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

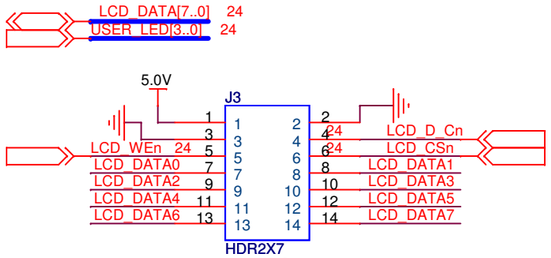
Date: Wednesday, August 12, 2009 Sheet 4 of 29

HSMC Port A & Port B

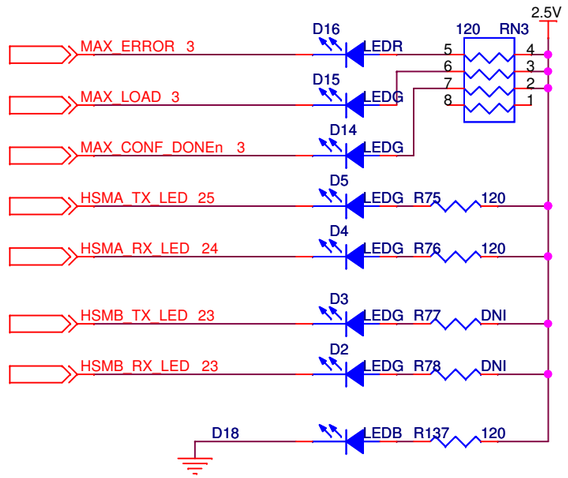


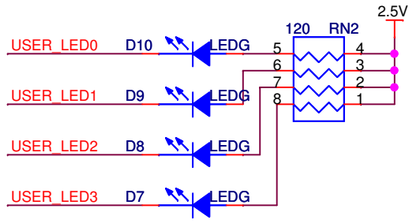
Title	Arria II GX FPGA Development Kit Board	
Size: B	Document Number: 150-0320801-C1 (6XX-40784R)	Rev: C
Date: Monday, August 10, 2009	Sheet 5 of 29	

LCD & LEDs



2 x 16 Display Connector





Title
Arria II GX FPGA Development Kit Board

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 6 of 29

Oscillators

J12 — CLOCK OUT — 25 CLKOUT_SMA

J11 — EXT CLOCK_p — EXT_CLK_p_NET1 — C123 0.1u — R67 100 — R214 84.5 — R215 124 (3.3V)

J10 — EXT CLOCK_n — EXT_CLK_n_NET1 — C122 0.1u — R66 100 — R218 84.5 — R219 124 (3.3V)

U25 — 155.52MHz — 2.5V — CLK155_OE 3 — C89 0.1u 22 CLKIN_155_p — C90 0.1u 22 CLKIN_155_n

U33 — ICS8543 — 3.3V — R216 10K — R220 10K — R217 100 — CLK1_OUT_p0 — CLK1_OUT_n0 — EXT_CLK_p_NET2 — EXT_CLK_n_NET2 — CLK_SEL 3,13 — 23 CLKIN_BOT_p — 23 CLKIN_BOT_n — C407 0.1u — R211 10K — CLK155_OE — C120 0.1u 22 CLKIN_REF_Q2_p — R64 DNI — C121 0.1u 22 CLKIN_REF_Q2_n

CLK_REF_Q1_1_p — C92 0.1u 22 CLKIN_REF_Q1_1_p — R55 DNI — CLK_REF_Q1_1_n — C91 0.1u 22 CLKIN_REF_Q1_1_n

CLK_REF_Q1_2_p — C72 0.1u 22 CLKIN_REF_Q1_2_p — R56 DNI — CLK_REF_Q1_2_n — C73 0.1u 22 CLKIN_REF_Q1_2_n

CLK_REF_Q3_p — C74 0.1u 22 CLKIN_REF_Q3_p — R57 DNI — CLK_REF_Q3_n — C75 0.1u 22 CLKIN_REF_Q3_n

C449 0.1u — C444 0.1u — C443 4.7u (3.3V)

CLK2_OS[1..0] 3 — CLK2_PR[1..0] 3 — CLK2_OD[2..0] 3

CLK1_OS[1..0] 3 — CLK1_PR[1..0] 3 — CLK1_OD[2..0] 3

U30 — CDCM61001 — 3.3V — CLK1_PR1 — CLK1_PR0 — CLK1_OUT_n0 — CLK1_OUT_p0 — CLK1_CE — CLK1_25MHz — 3.3V_CLK1_A — C107 10u — C106 10u

RN29 10K — CLK1_RSTn — CLK1_OS0 — CLK1_OS1 — CLK1_CE — CLK1_PR1 — CLK1_PR0 — CLK1_OD2 — CLK1_OD1 — RN30 10K

R60 10K — CLK1_OD0

X42-25.000-10P — Y4 — CLK1_25MHz — C108 22p

CLK1_OS1 — CLK1_OS0 — CLK1_RSTn — CLK1_OD0 — CLK1_OD1 — CLK1_OD2

RN31 10K — CLK2_RSTn — CLK2_OS0 — CLK2_OS1 — CLK2_CE — CLK2_PR1 — CLK2_PR0 — CLK2_OD2 — CLK2_OD1 — RN32 10K

R63 10K — CLK2_OD0

X42-25.000-10P — Y2 — CLK2_25MHz — C94 22p

CLK_REF_Q1_2_p — CLK_REF_Q1_2_n — CLK_REF_Q3_p — CLK_REF_Q3_n — CLK2_PR1 — CLK2_PR0

U26 — CDCM61004 — 3.3V — CLK_REF_Q1_1_n — CLK_REF_Q1_1_p — CLKIN_TOP_n 25 — CLKIN_TOP_p 25 — CLK2_CE — CLK2_25MHz — 3.3V_CLK2_A — C116 10u — C117 10u

CLK2_OS1 — CLK2_OS0 — CLK2_RSTn — CLK2_OD0 — CLK2_OD1 — CLK2_OD2

C93 10u — C406 0.1u — C404 0.1u — C403 0.1u — C405 0.1u — C402 0.1u (3.3V)

C115 10u — C422 0.1u — C424 0.1u — C423 0.1u (3.3V_CLK2_A)

L13 BEAD — 3.3V — 3.3V_CLK1_A

L9 BEAD — 3.3V — 3.3V_CLK2_A

C412 10u — C433 0.1u — C413 0.1u — C437 0.1u — C411 0.1u — C410 0.1u (3.3V)

C438 10u — C435 0.1u — C434 0.1u — C436 0.1u (3.3V_CLK1_A)

Y6 — 100MHZ — CLK100_CPLD 3 — C420 0.1u (3.3V)

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 7 of 29

DDR2 SO-DIMM

DDR2_DQ[63..0] 23
DDR2_DQS[7..0] 23
DDR2_DQSn[7..0] 23
DDR2_A[15..0] 23
DDR2_DM[7..0] 23
DDR2_CLK_p[1..0] 23

DDR2_CLK_n[1..0] 23
DDR2_BA[2..0] 23
DDR2_ODT[1..0] 23
DDR2_CS_n[1..0] 23

RN44 56 — 0.9V_VTT
DDR2_DQSn4 DDR2_DQS4 DDR2_DQ38 DDR2_DQ39 DDR2_DQ36 DDR2_DQ37 DDR2_DQ33 DDR2_DQ32
RN13 56
CN1 0.9V_VTT — 0.1uF x4

RN27 56 — 0.9V_VTT
DDR2_DQ0 DDR2_DQ1 DDR2_DQ2 DDR2_DQ3 DDR2_DQ4 DDR2_DQ5 DDR2_DQ6 DDR2_DQ7
56 RN49
CN12 0.9V_VTT — 0.1uF x4

RN12 56 — 0.9V_VTT
DDR2_DQ34 DDR2_DQ35 DDR2_DQ40 DDR2_DQ41 DDR2_DQ44 DDR2_DQ45 DDR2_DQSn5 DDR2_DQS5
56 RN42
CN5 0.9V_VTT — 0.1uF x4

RN24 56 — 0.9V_VTT
DDR2_DQSn0 DDR2_DQS0 DDR2_DQ12 DDR2_DQ13 DDR2_DQ8 DDR2_DQ9 DDR2_DQ10 DDR2_DQ11
56 RN48
CN17 0.9V_VTT — 0.1uF x4

RN41 56 — 0.9V_VTT
DDR2_DQ52 DDR2_DQ53 DDR2_DQ54 DDR2_DQ55 DDR2_DQ46 DDR2_DQ47 DDR2_DQ42 DDR2_DQ43
RN8 56
CN8 0.9V_VTT — 0.1uF x4

RN23 56 — 0.9V_VTT
DDR2_DQS1 DDR2_DQSn1 DDR2_DQ14 DDR2_DQ15 DDR2_DQ16 DDR2_DQ17 DDR2_DQSn2 DDR2_DQS2
56 RN47
CN18 0.9V_VTT — 0.1uF x4

RN7 56 — 0.9V_VTT
DDR2_DQ48 DDR2_DQ49 DDR2_DQSn6 DDR2_DQS6 DDR2_DQ50 DDR2_DQ51 DDR2_DQ60 DDR2_DQ61
56 RN38
CN11 0.9V_VTT — 0.1uF x4

RN20 56 — 0.9V_VTT
DDR2_DQ18 DDR2_DQ19 DDR2_DQ20 DDR2_DQ21 DDR2_DQ22 DDR2_DQ23 DDR2_DQ24 DDR2_DQ25
56 RN46
CN19 0.9V_VTT — 0.1uF x4

RN4 56 — 0.9V_VTT
DDR2_DQSn7 DDR2_DQS7 DDR2_DQ56 DDR2_DQ57 DDR2_DQ62 DDR2_DQ63 DDR2_DQ58 DDR2_DQ59
56 RN37
CN14 0.9V_VTT — 0.1uF x4

RN45 56 — 0.9V_VTT
DDR2_DQSn3 DDR2_DQS3 DDR2_DQ30 DDR2_DQ31 DDR2_DQ28 DDR2_DQ29 DDR2_DQ26 DDR2_DQ27
RN19 56
CN20 0.9V_VTT — 0.1uF x4

Place near the Arria II GX FPGA

1.8V
R111 10K DDR2_SDA
R110 10K DDR2_SCL

0.9V_VREF

J7

1	VREF	VSS	2
3	VSS	DQ4	4 DDR2_DQ4
DDR2_DQ0 5	DQ0	DQ5	6 DDR2_DQ5
DDR2_DQ1 7	DQ1	VSS	8
9	VSS	DM0	10 DDR2_DM0
DDR2_DQSn0 11	DQS0	VSS	12
DDR2_DQS0 13	DQS0	DQ6	14 DDR2_DQ6
15	VSS	DQ7	16 DDR2_DQ7
DDR2_DQ2 17	DQ2	VSS	18
DDR2_DQ3 19	DQ3	DQ12	20 DDR2_DQ12
21	VSS	DQ13	22 DDR2_DQ13
DDR2_DQ8 23	DQ8	VSS	24
DDR2_DQ9 25	DQ9	DM1	26 DDR2_DM1
27	VSS	VSS	28
DDR2_DQSn1 29	DQS1	CK0	30 DDR2_CLK_p0
DDR2_DQS1 31	DQS1	CK0	32 DDR2_CLK_n0
33	VSS	VSS	34
DDR2_DQ10 35	DQ10	DQ14	36 DDR2_DQ14
DDR2_DQ11 37	DQ11	DQ15	38 DDR2_DQ15
39	VSS	VSS	40
41	VSS	VSS	42
DDR2_DQ16 43	DQ16	DQ20	44 DDR2_DQ20
DDR2_DQ17 45	DQ17	DQ21	46 DDR2_DQ21
DDR2_DQSn2 47	DQS2	VSS	48
DDR2_DQS2 49	DQS2	NC0	50
51	VSS	DM2	52 DDR2_DM2
DDR2_DQ18 53	DQ18	VSS	54
DDR2_DQ19 55	DQ19	DQ22	56 DDR2_DQ22
57	VSS	DQ23	58 DDR2_DQ23
DDR2_DQ24 59	DQ24	VSS	60
DDR2_DQ25 61	DQ25	DQ28	62 DDR2_DQ28
63	VSS	DQ29	64 DDR2_DQ29
DDR2_DM3 65	DM3	VSS	66
67	NC1	DQS3	68 DDR2_DQSn3
69	VSS	DQS3	70 DDR2_DQS3
DDR2_DQ26 71	DQ26	VSS	72
DDR2_DQ27 73	DQ27	DQ30	74 DDR2_DQ30
75	VSS	DQ31	76 DDR2_DQ31
DDR2_CKE0 23 77	CKE0	VSS	78
1.8V 79	VDD	CKE1	80
DDR2_BA2 81	NC2	VDD	82 1.8V
83	BA2	A15	84 DDR2_A15
DDR2_A12 85	VDD	A14	86 DDR2_A14
DDR2_A9 87	A12	VDD	88
DDR2_A8 89	A9	A11	90 DDR2_A11
91	A8	A7	92 DDR2_A7
DDR2_A5 93	VDD	A6	94 DDR2_A6
DDR2_A3 95	A5	VDD	96
DDR2_A1 97	A3	A4	98 DDR2_A4
99	A1	A2	100 DDR2_A2
DDR2_A10 101	VDD	A0	102 DDR2_A0
DDR2_BA0 103	A10/AP	VDD	104
DDR2_WE_n 23 105	BA0	BA1	106 DDR2_BA1
DDR2_CAS_n 23 107	WE	RAS	108 23 DDR2_RAS_n
DDR2_CS_n1 109	VDD	S0	110 DDR2_CS_n0
111	CAS	VDD	112
DDR2_ODT1 113	S1	ODT0	114 DDR2_ODT0
115	VDD	A13	116 DDR2_A13
DDR2_DQ32 117	ODT1	VDD	118
DDR2_DQ33 119	VSS	NC3	120
121	DQ32	VSS	122
DDR2_DQSn4 123	DQ33	DQ36	124 DDR2_DQ36
DDR2_DQS4 125	VSS	DQ37	126 DDR2_DQ37
DDR2_DQ34 127	DQS4	VSS	128
DDR2_DQ35 129	DQS4	DM4	130 DDR2_DM4
131	VSS	VSS	132
DDR2_DQ40 133	DQ34	DQ38	134 DDR2_DQ38
DDR2_DQ41 135	DQ35	DQ39	136 DDR2_DQ39
137	VSS	VSS	138
DDR2_DM5 139	DQ40	DQ44	140 DDR2_DQ44
141	DQ41	DQ45	142 DDR2_DQ45
DDR2_DQ42 143	VSS	VSS	144
DDR2_DQ43 145	DM5	DQS5	146 DDR2_DQSn5
147	VSS	DQS5	148 DDR2_DQS5
DDR2_DQ48 149	DQ42	VSS	150
DDR2_DQ49 151	DQ43	DQ46	152 DDR2_DQ46
153	VSS	DQ47	154 DDR2_DQ47
DDR2_DQ50 155	DQ48	VSS	156
DDR2_DQ51 157	DQ49	DQ52	158 DDR2_DQ52
159	VSS	DQ53	160 DDR2_DQ53
DDR2_DQ56 161	TEST	VSS	162
DDR2_DQ57 163	VSS	CK1	164 DDR2_CLK_p1
165	DQS6	CK1	166 DDR2_CLK_n1
DDR2_DQSn6 167	DQS6	VSS	168
DDR2_DQS6 169	VSS	DM6	170 DDR2_DM6
DDR2_DQ58 171	DQ50	VSS	172
DDR2_DQ59 173	DQ51	DQ54	174 DDR2_DQ54
175	VSS	DQ55	176 DDR2_DQ55
DDR2_DM7 177	DQ56	VSS	178
179	DQ57	DQ60	180 DDR2_DQ60
DDR2_DQ52 181	VSS	DQ61	182 DDR2_DQ61
DDR2_DQ53 183	DM7	VSS	184
185	VSS	DQS7	186 DDR2_DQSn7
DDR2_DQ54 187	DQ58	DQS7	188 DDR2_DQS7
DDR2_DQ55 189	DQ59	VSS	190
191	VSS	DQ62	192 DDR2_DQ62
DDR2_DQ60 193	DQ60	DQ63	194 DDR2_DQ63
DDR2_DQ61 195	DQ61	VSS	196
DDR2_SDA 3 197	SDA	SA0	198
DDR2_SCL 3 199	SCL	SA1	200
1.8V	VDDSPD		

SOCKET-SO-DIMM200

RN6 56 — 0.9V_VTT
DDR2_ODT1 DDR2_ODT0 DDR2_CS_n1 DDR2_A13 DDR2_WE_n DDR2_RAS_n DDR2_CAS_n DDR2_CS_n0
RN10 56
CN2 0.9V_VTT — 0.1uF x4

RN11 56 — 0.9V_VTT
DDR2_A10 DDR2_A0 DDR2_BA0 DDR2_BA1 DDR2_A3 DDR2_A4 DDR2_A1 DDR2_A2
RN16 56
CN4 0.9V_VTT — 0.1uF x4

RN17 56 — 0.9V_VTT
DDR2_A8 DDR2_A7 DDR2_A5 DDR2_A6 DDR2_A12 DDR2_A14 DDR2_A9 DDR2_A11
RN18 56
CN7 0.9V_VTT — 0.1uF x4

RN22 56 — 0.9V_VTT
DDR2_CKE0 DDR2_A15 DDR2_BA2
CN10 0.9V_VTT — 0.1uF x4

Place near the DDR2 SO-DIMM

1.8V
C283 0.1u C281 0.1u C282 0.1u C325 0.1u C326 0.1u C327 0.1u

1.8V 0.9V_VREF
C284 0.1u C286 0.1u C285 0.1u C328 0.1u C329 0.1u C330 0.1u C445 0.1u

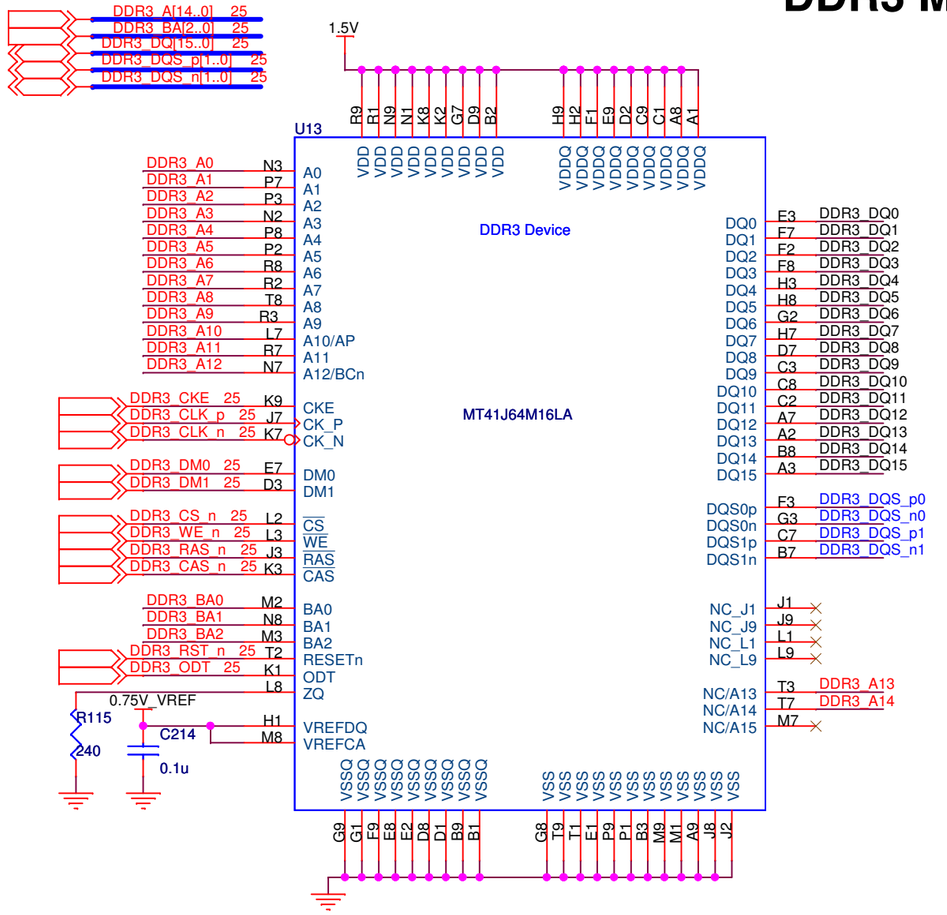
1.8V
C389 100u C384 4.7u C234 2.2u C383 1u C235 0.47u

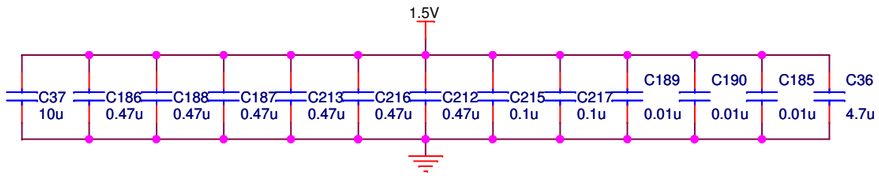
Title: **Arria II GX FPGA Development Kit Board**

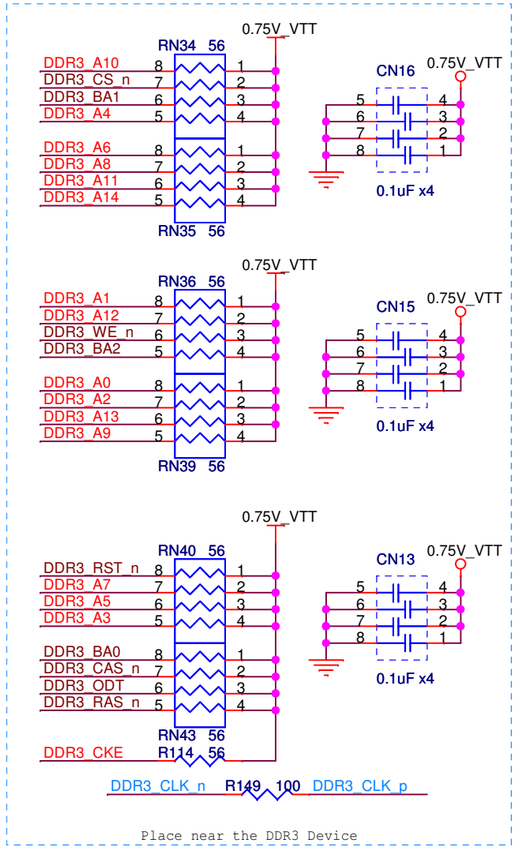
Size	Document Number	Rev
Custom	50-0320801-C1 (6XX-40784R)	C

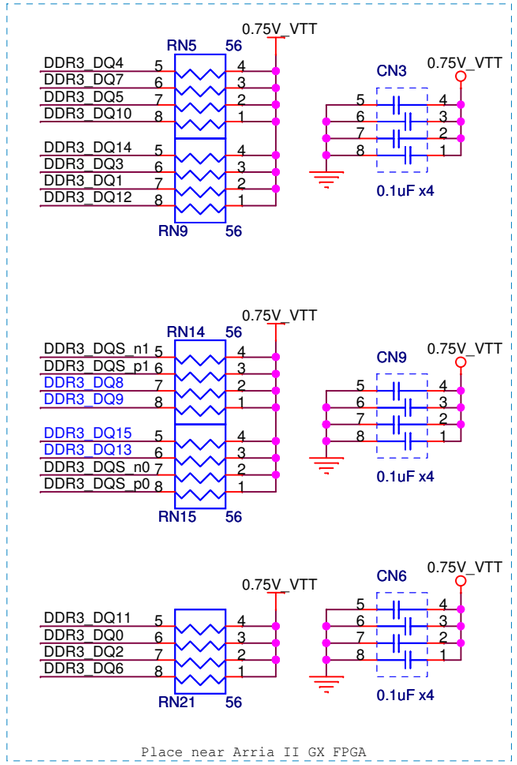
Date: Tuesday, August 11, 2009 Sheet 8 of 29

DDR3 Memory Device









Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Tuesday, August 11, 2009 Sheet 9 of 29

SSRAM

FSM_D[31..0] 3,11,24,25
SRAM_DQP[3..0] 24,25
FSM_A[22..2] 3,11,24,25
SRAM_BEn[3..0] 25

NOTE:
SSRAM 256Kx36
SSRAM 512Kx36 (Default)
SSRAM 1Mx36
SSRAM 2Mx36

2.5V

U22

IS61VPS51236A

FSM_A2	R6	A0	
FSM_A3	P6	A1	
FSM_A4	A2	A2	
FSM_A5	A10	A3	
FSM_A6	B2	A4	
FSM_A7	B10	A5	
FSM_A8	N6	A6	
FSM_A9	P3	A7	
FSM_A10	P4	A8	
FSM_A11	P8	A9	
FSM_A12	P9	A10	
FSM_A13	P10	A11	
FSM_A14	P11	A12	
FSM_A15	R3	A13	
FSM_A16	R4	A14	
FSM_A17	R8	A15	
FSM_A18	R9	A16	
FSM_A19	R10	A17	
FSM_A20	R11	A18	
FSM_A21	B1	NC_144M	
FSM_A22	A1	NC_288M	
	B11	NC_576M	
	C10	NC_1G	
	P2	NC_A	
	R2	NC_B	
SRAM_CLK 25	B6	CLK	
SRAM_OEn 25	B8	OE_n	
SRAM_CE1n 25	A3	CE1_n	
SRAM_CE2	B3	CE2	
SRAM_CE3n	A6	CE3_n	
SRAM_MODE 3	R1	MODE	
SRAM_BEn0	B5	BWA_n	
SRAM_BEn1	A5	BWB_n	
SRAM_BEn2	A4	BWC_n	
SRAM_BEn3	B4	BWD_n	
SRAM_WEn 25	A7	BWE_n	
SRAM_GWn 25	B7	GW_n	
SRAM_ADSCn 25	A8	ADSC_n	
SRAM_ADSPn 25	B9	ADSP_n	
SRAM_ADVn 25	A9	ADV_n	
SRAM_ZZ 3,25	H11	ZZ	
	R7	TCK	
	P5	TDI	
	P7	TDO	
	R5	TMS	

DQ0	J10	FSM_D0	
DQ1	J11	FSM_D1	
DQ2	K10	FSM_D2	
DQ3	K11	FSM_D3	
DQ4	L10	FSM_D4	
DQ5	L11	FSM_D5	
DQ6	M10	FSM_D6	
DQ7	M11	FSM_D7	
DQ8	D10	FSM_D8	
DQ9	D11	FSM_D9	
DQ10	E10	FSM_D10	
DQ11	E11	FSM_D11	
DQ12	F10	FSM_D12	
DQ13	F11	FSM_D13	
DQ14	G10	FSM_D14	
DQ15	G11	FSM_D15	
DQ16	D1	FSM_D16	
DQ17	D2	FSM_D17	
DQ18	E1	FSM_D18	
DQ19	E2	FSM_D19	
DQ20	F1	FSM_D20	
DQ21	F2	FSM_D21	
DQ22	G1	FSM_D22	
DQ23	G2	FSM_D23	
DQ24	J1	FSM_D24	
DQ25	J2	FSM_D25	
DQ26	K1	FSM_D26	
DQ27	K2	FSM_D27	
DQ28	L1	FSM_D28	
DQ29	L2	FSM_D29	
DQ30	M1	FSM_D30	
DQ31	M2	FSM_D31	
DQPA	N11	SRAM_DQP0	
DQPB	C11	SRAM_DQP1	
DQPC	C1	SRAM_DQP2	
DQPD	N1	SRAM_DQP3	
NC1	A11		
NC2	C2		
NC3	H1		
NC4	P1		
NC5	H3		
NC6	H9		
NC7	H10		
NC8	N2		
NC9	N5		
NC10	N10		

2.5V

	R174	R163	R162	R173	R175	R187		R171	R172	R181	R188	
	5.1K	5.1K	5.1K	5.1K	DNI	DNI		5.1K	DNI	5.1K	5.1K	
SRAM_OEn												
SRAM_CE1n												
SRAM_CE2												
SRAM_CE3n												
SRAM_GWn												
SRAM_ZZ												
SRAM_MODE												

2.5V

C71	C289	C290	C343	C344	C345	C349	C291	C348	C292	C350	C346	C347
10u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u	0.1u

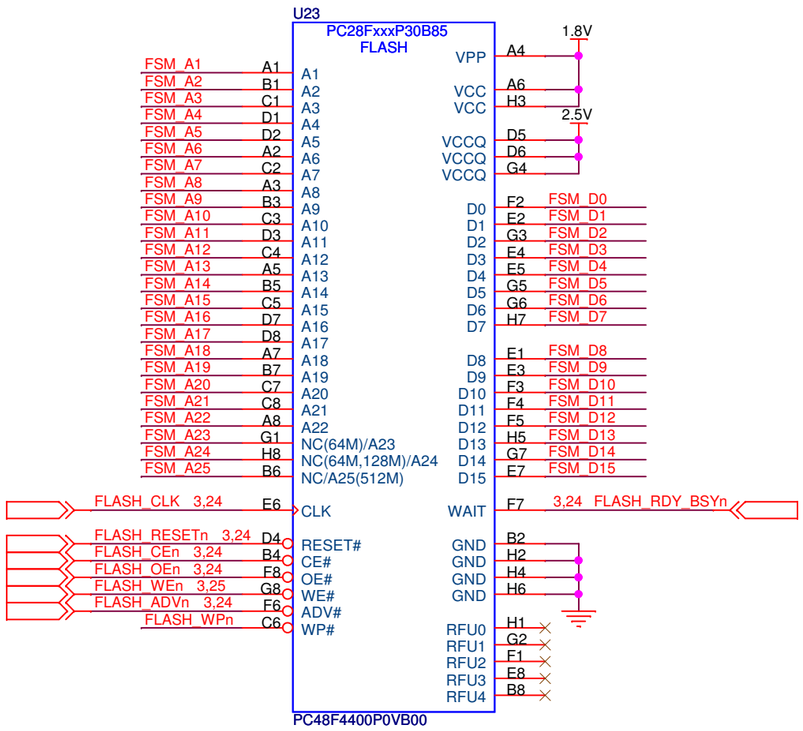
Title: **Arria II GX FPGA Development Kit Board**

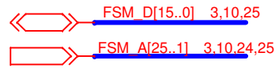
Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

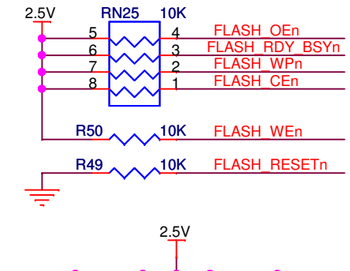
Date: Friday, August 07, 2009 Sheet 10 of 29

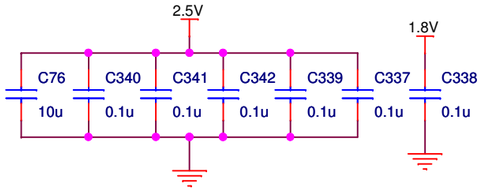
Sync Flash

FLASH 512Mb (32M X 16)









Title
Arria II GX FPGA Development Kit Board

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 11 of 29

PCIe x8 Edge Connector

PCIE_TX_p[7..0] 22
PCIE_TX_n[7..0] 22
PCIE_RX_p[7..0] 22
PCIE_RX_n[7..0] 22

12V_PCI
3.3V_PCI
PCIE_SMBCLK 25
PCIE_SMBDAT 25
PCIE_WAKEn 25
R68 DNI
R69 0 PCI_WAKEn_R

J14

B1	+12V	PRSNT1_N	A1	12V_PCI	PCIE_PRSNT1n
B2	+12V	+12V	A2		
B3	+12V	+12V	A3		
B4	GND	GND	A4		
B5	SMCLK	JTAG_TCK	A5		3,5,14,29 JTAG_TCK
B6	SMDAT	JTAG_TDI	A6		13 JTAG_PCIE_TDI
B7	GND	JTAG_TDO	A7		13 JTAG_PCIE_TDO
B8	+3_3V	JTAG_TMS	A8		3,5,14,29 JTAG_TMS
B9	JTAG_TRSTN	+3_3V	A9	3.3V_PCI	
B10	+3_3VAUX	+3_3V	A10		
B11	WAKE_N	PERST_N	A11		24 PCIE_PRESTn
	KEY				
B12	RSVD1	GND	A12		
B13	GND	REFCLK+	A13		22 PCIE_REFCLK_p
B14	PET0P	REFCLK-	A14		22 PCIE_REFCLK_n
B15	PET0N	GND	A15		
B16	GND	PER0P	A16	PCIE_TX_p0_NET	C465 0.1u PCIE_TX_p0
B17	PRSNT2_N_X1	PER0N	A17	PCIE_TX_n0_NET	C464 0.1u PCIE_TX_n0
B18	GND	GND	A18		
B19	PET1P	RSVD2	A19		
B20	PET1N	GND	A20		
B21	GND	PER1P	A21	PCIE_TX_p1_NET	C463 0.1u PCIE_TX_p1
B22	GND	PER1N	A22	PCIE_TX_n1_NET	C462 0.1u PCIE_TX_n1
B23	PET2P	GND	A23		
B24	PET2N	GND	A24		
B25	GND	PER2P	A25	PCIE_TX_p2_NET	C461 0.1u PCIE_TX_p2
B26	GND	PER2N	A26	PCIE_TX_n2_NET	C460 0.1u PCIE_TX_n2
B27	PET3P	GND	A27		
B28	PET3N	GND	A28		
B29	GND	PER3P	A29	PCIE_TX_p3_NET	C459 0.1u PCIE_TX_p3
B30	RSVD3	PER3N	A30	PCIE_TX_n3_NET	C458 0.1u PCIE_TX_n3
B31	PRSNT2_N_X4	GND	A31		
B32	GND	RSVD4	A32		
B33	PET4P	RSVD5	A33		
B34	PET4N	GND	A34		
B35	GND	PER4P	A35	PCIE_TX_p4_NET	C457 0.1u PCIE_TX_p4
B36	GND	PER4N	A36	PCIE_TX_n4_NET	C456 0.1u PCIE_TX_n4
B37	PET5P	GND	A37		
B38	PET5N	GND	A38		
B39	GND	PER5P	A39	PCIE_TX_p5_NET	C455 0.1u PCIE_TX_p5
B40	GND	PER5N	A40	PCIE_TX_n5_NET	C454 0.1u PCIE_TX_n5
B41	PET6P	GND	A41		
B42	PET6N	GND	A42		
B43	GND	PER6P	A43	PCIE_TX_p6_NET	C453 0.1u PCIE_TX_p6
B44	GND	PER6N	A44	PCIE_TX_n6_NET	C452 0.1u PCIE_TX_n6
B45	PET7P	GND	A45		
B46	PET7N	GND	A46		
B47	GND	PER7P	A47	PCIE_TX_p7_NET	C451 0.1u PCIE_TX_p7
B48	PRSNT2_N_X8	PER7N	A48	PCIE_TX_n7_NET	C450 0.1u PCIE_TX_n7
B49	GND	GND	A49		

X1 X4 X8

PCIE_RX_p0 PCIE_RX_n0 PCIE_PRSNT2n_x1
PCIE_RX_p1 PCIE_RX_n1
PCIE_RX_p2 PCIE_RX_n2
PCIE_RX_p3 PCIE_RX_n3
PCIE_PRSNT2n_x4
PCIE_RX_p4 PCIE_RX_n4
PCIE_RX_p5 PCIE_RX_n5
PCIE_RX_p6 PCIE_RX_n6
PCIE_RX_p7 PCIE_RX_n7
PCIE_PRSNT2n_x8

PCIe_Edge_X8

2.5V
RN52 120
PCIE_LED_X1 25 D24 LEDG
PCIE_LED_X4 25 D25 LEDG
PCIE_LED_X8 25 D26 LEDG

PCIE_PRSNT1n
SW3
1 2 3 4 8 7 6 5
PCIE_PRSNT2n_x1
PCIE_PRSNT2n_x4
PCIE_PRSNT2n_x8
PCIe Mode

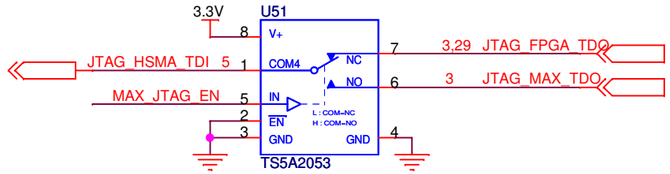
12V_PCI: C126 10u, C127 0.1u, C128 0.1u, C129 0.1u, C468 0.1u
3.3V_PCI: C466 0.1u, C130 0.1u, C467 0.1u

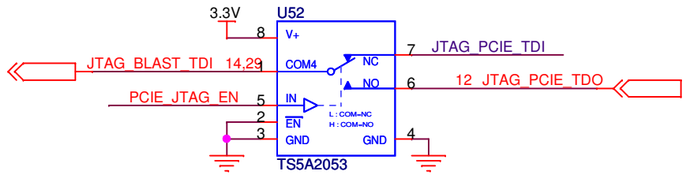
Title: Arria II GX FPGA Development Kit Board

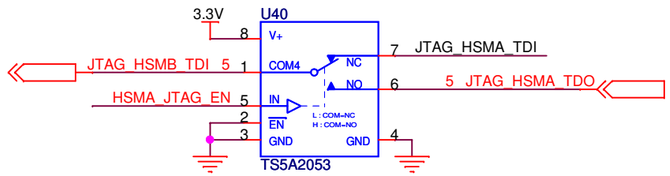
Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

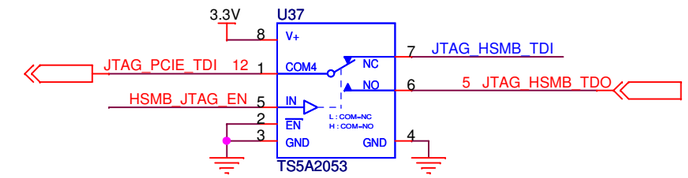
Date: Friday, August 07, 2009 Sheet 12 of 29

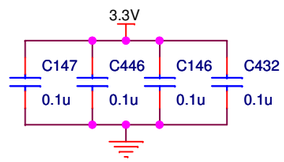
JTAG Control & Setting

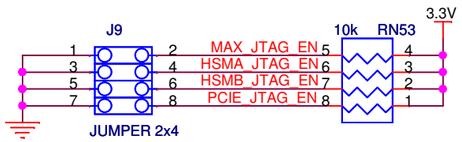


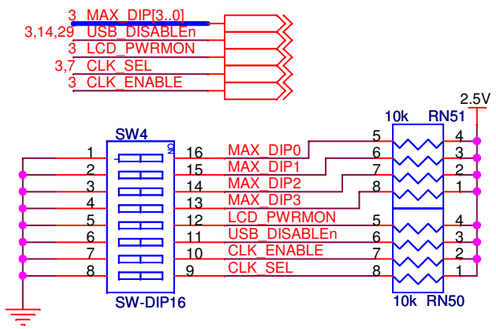










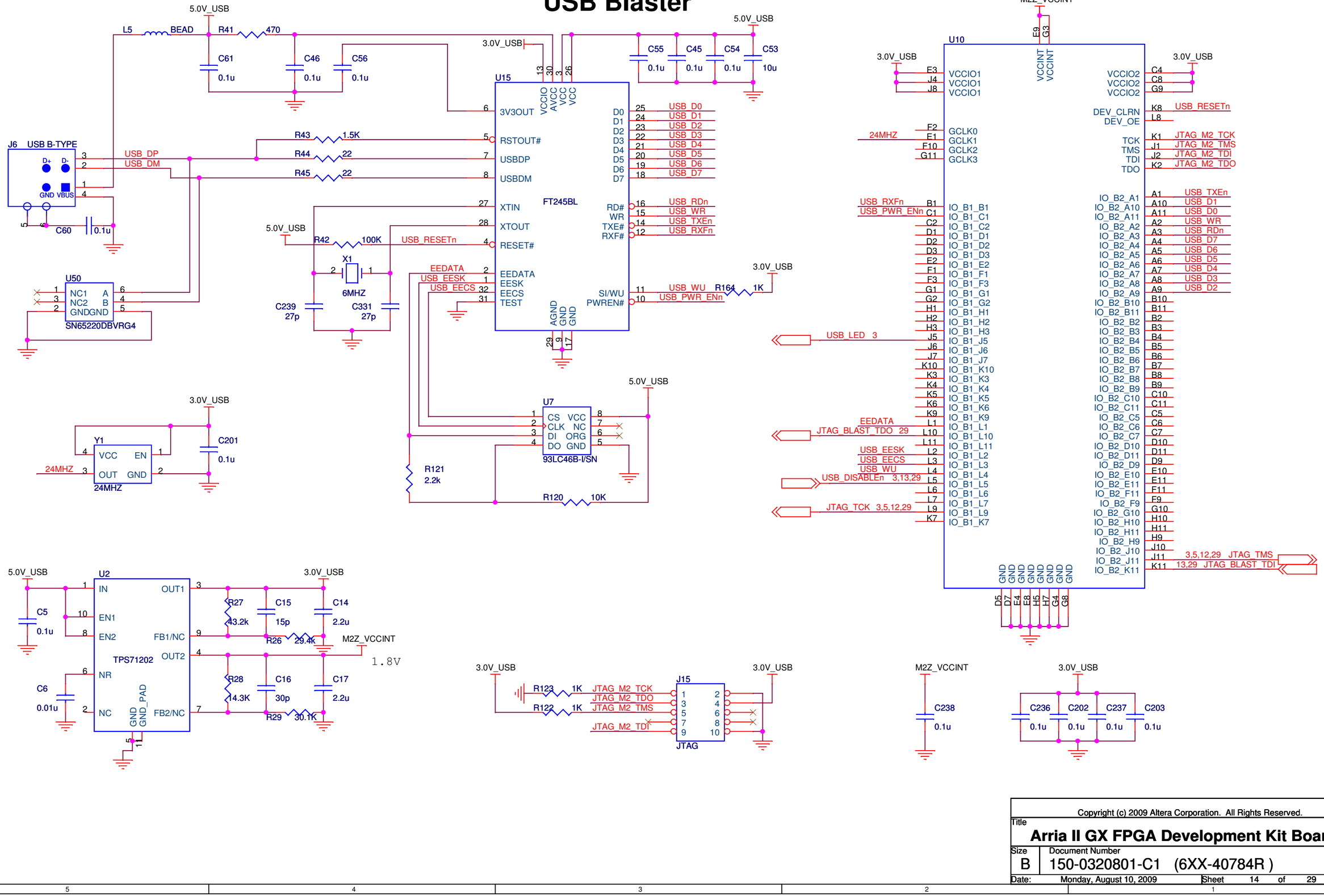


Title
Arria II GX FPGA Development Kit Board

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

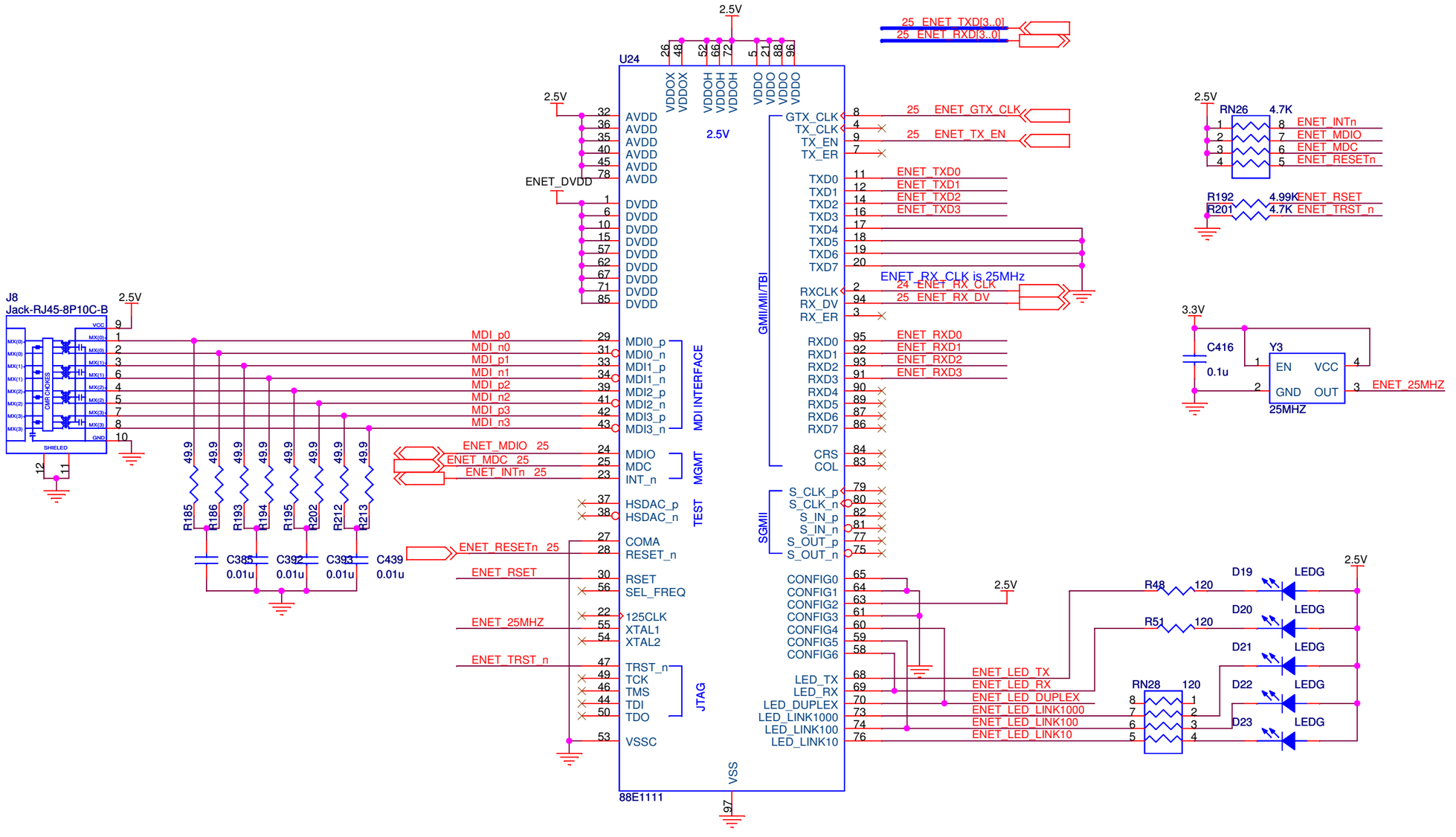
Date: Friday, August 07, 2009 Sheet 13 of 29

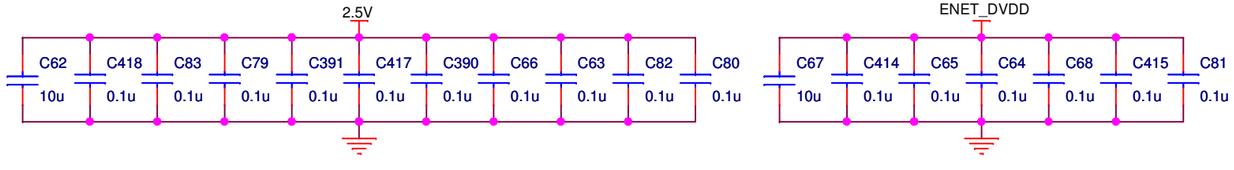
USB Blaster



Title	**Arria II GX FPGA Development Kit Board**	
Size: B	Document Number: 150-0320801-C1 (6XX-40784R)	Rev: C
Date: Monday, August 10, 2009	Sheet 14 of 29	

Ethernet



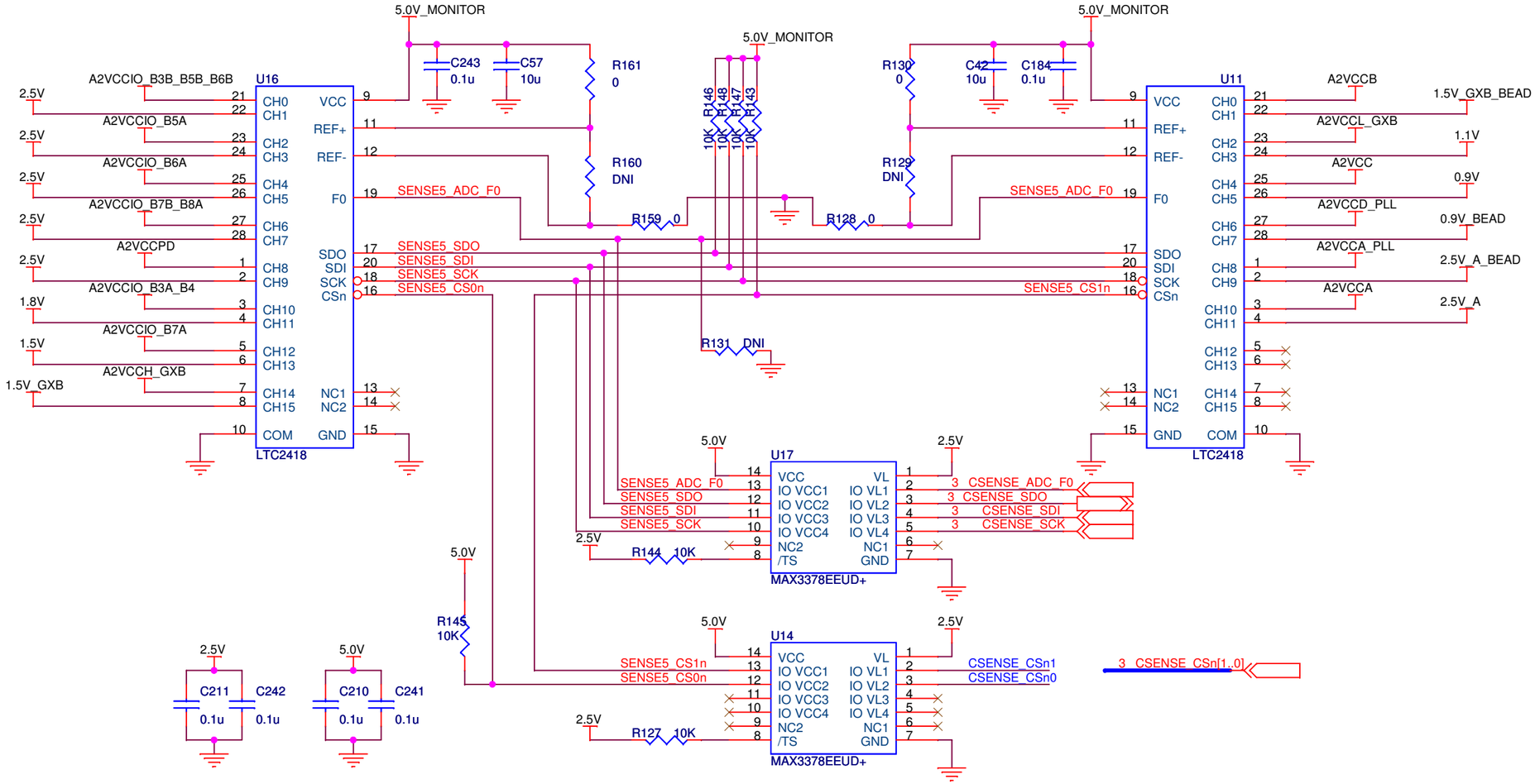


Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 15 of 29

Power Monitor



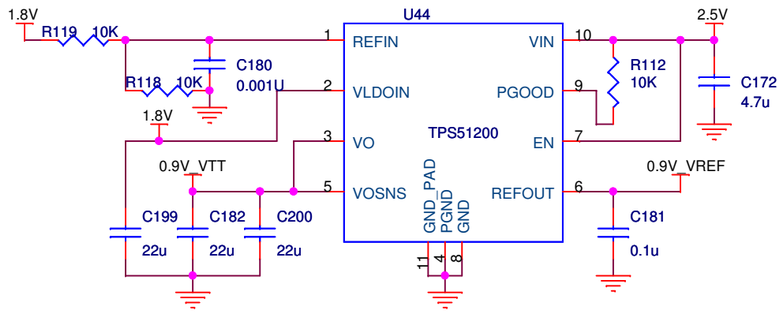
Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

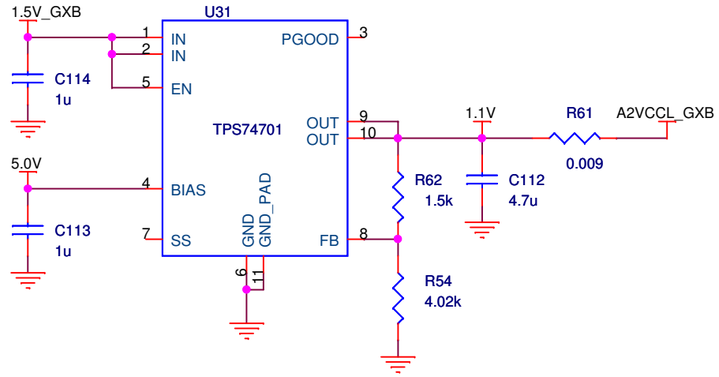
Date: Friday, August 07, 2009 Sheet 16 of 29

1.1V, 1.0V, VTT & VREF

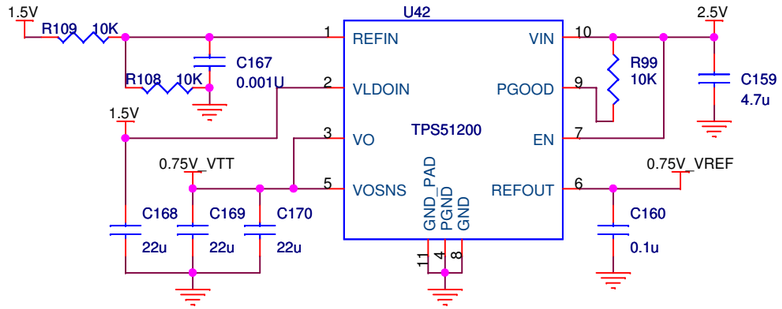
DDR2 VTT, VREF



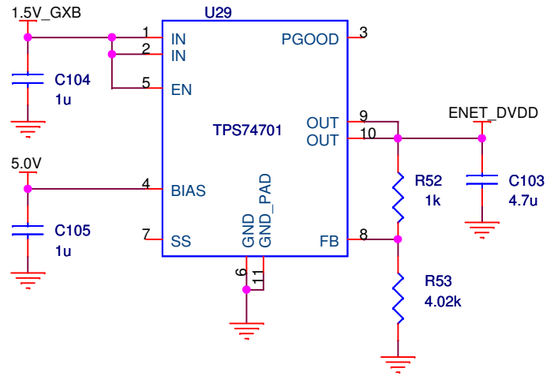
1.1V/500mA



DDR3 VTT, VREF



1.0V/500mA



MTG1 GND MTG9 GND MTG5 GND MTG4 GND MTG3 GND MTG2 GND MTG7 GND MTG8 GND MTG6 GND MTG10 GND

FID6 FID8 FID7 FID9 FID10 FID4 FID3 FID2 FID1 FID5

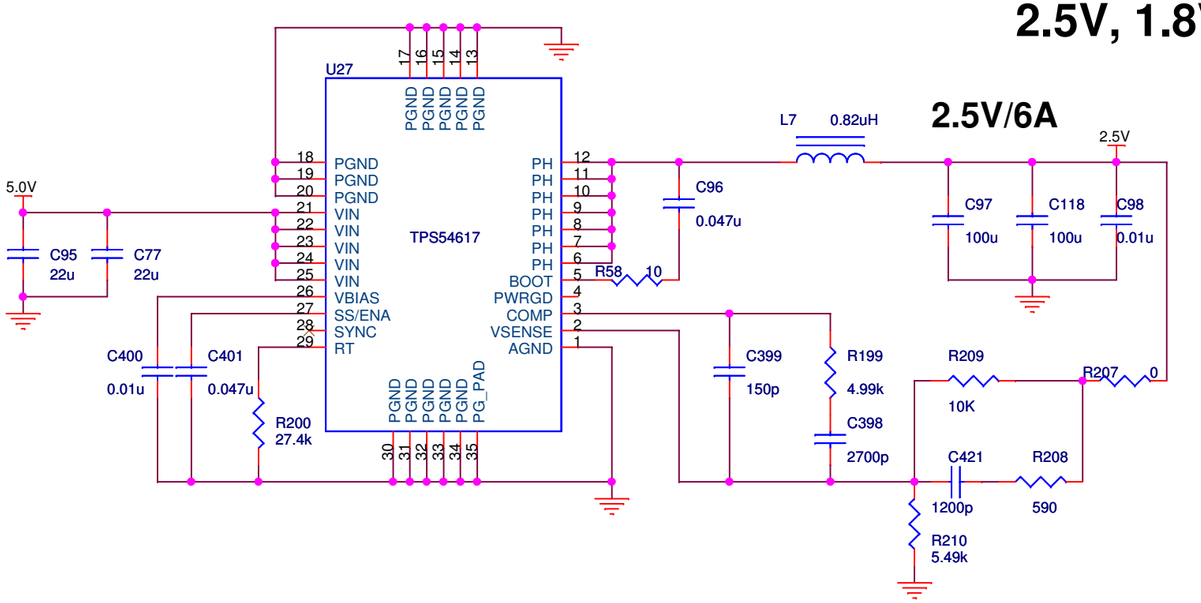
Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

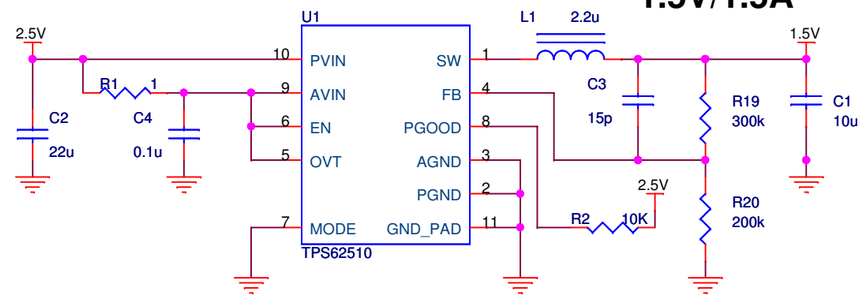
Date: Friday, August 07, 2009 Sheet 17 of 29

2.5V, 1.8V & 1.5V

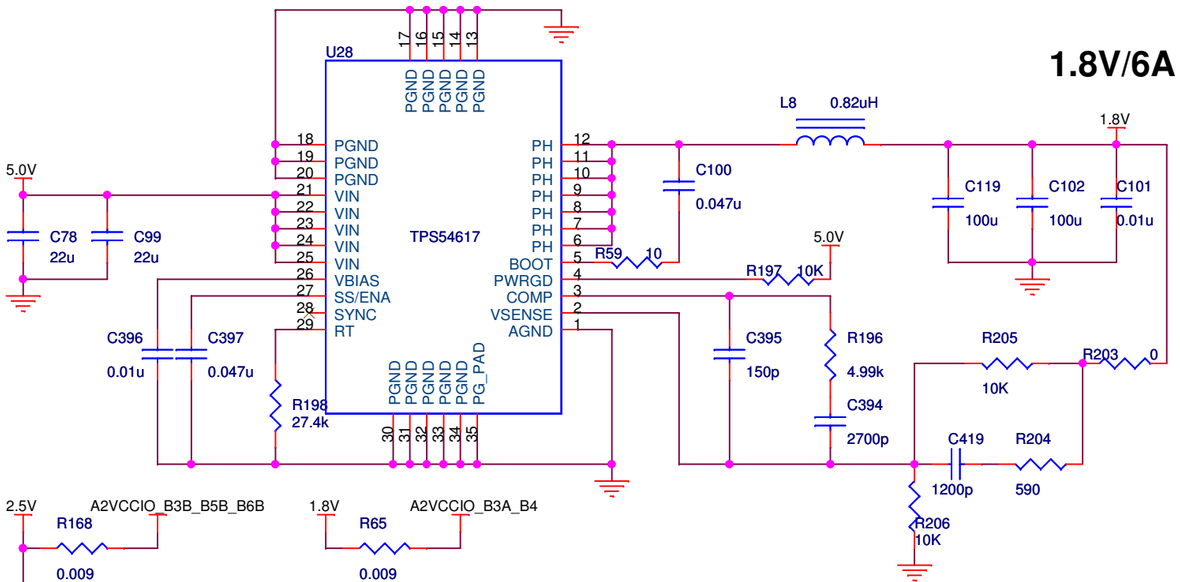
2.5V/6A



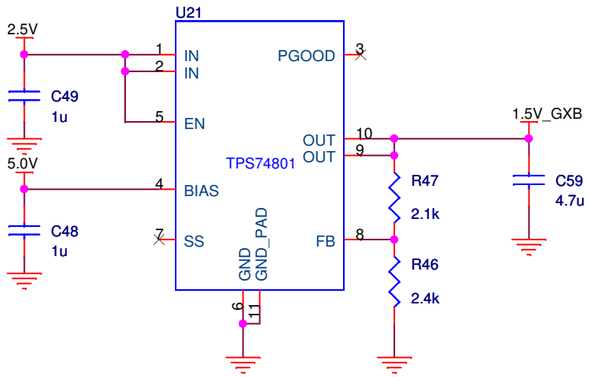
1.5V/1.5A



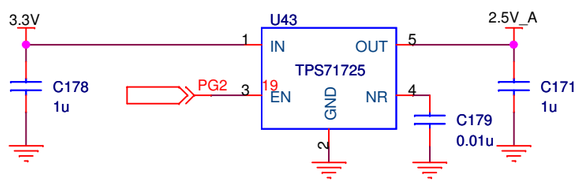
1.8V/6A



1.5V/1.5A



2.5V/150mA

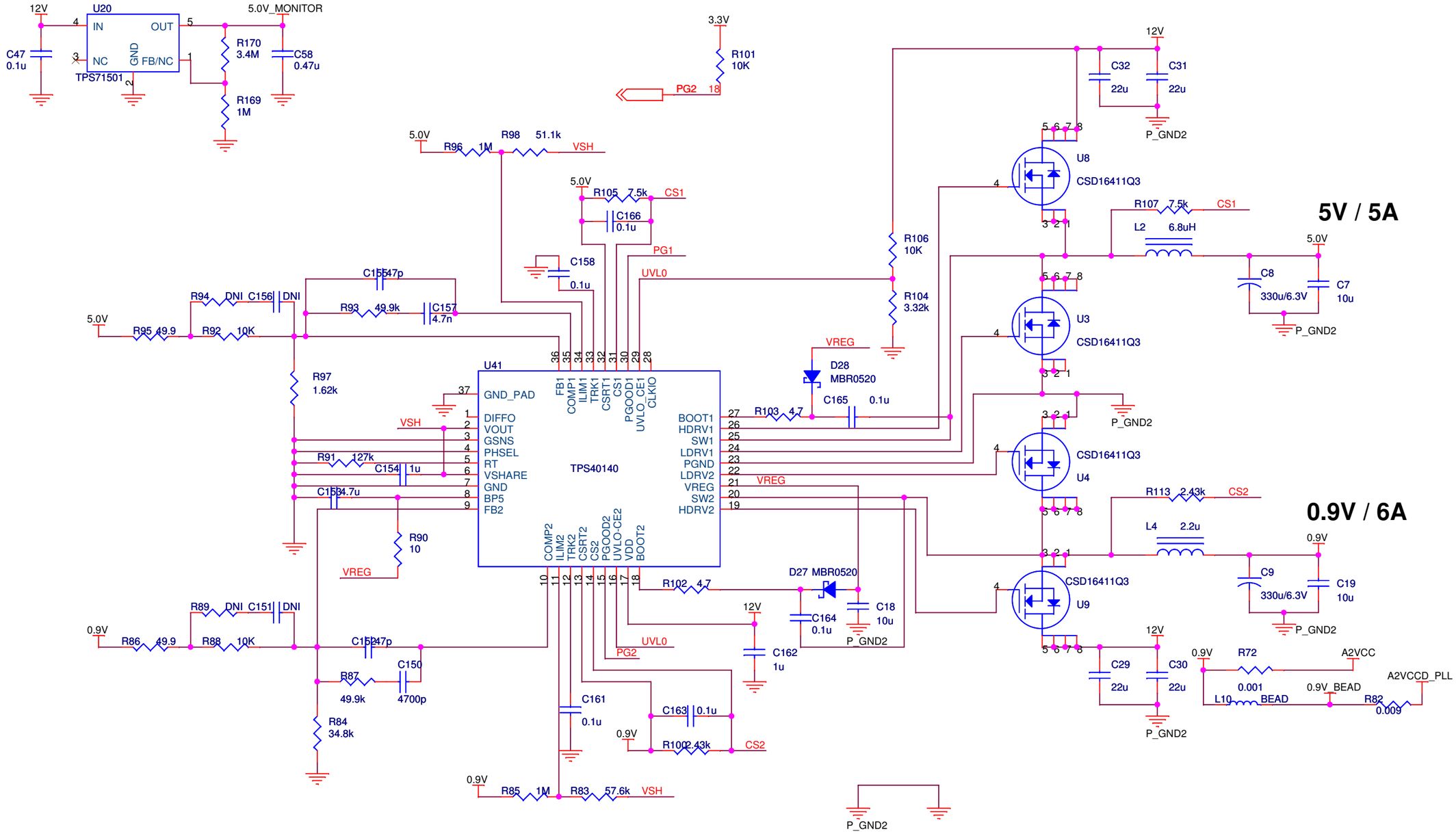


Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 18 of 29

5V & 0.9V Dual Output



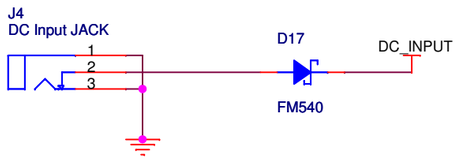
Title: **Arria II GX FPGA Development Kit Board**

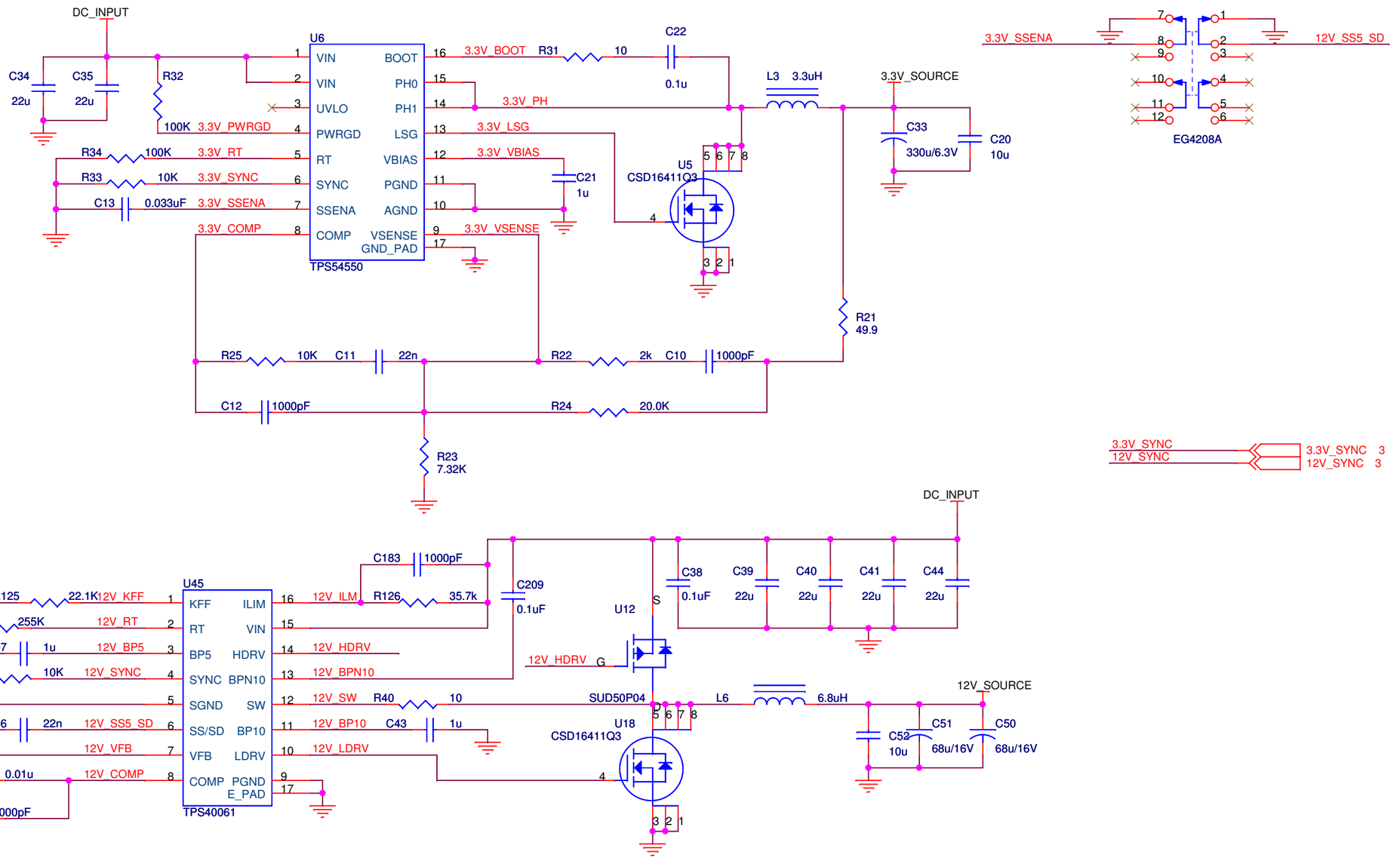
Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 19 of 29

DC IN to 12V & 3.3V

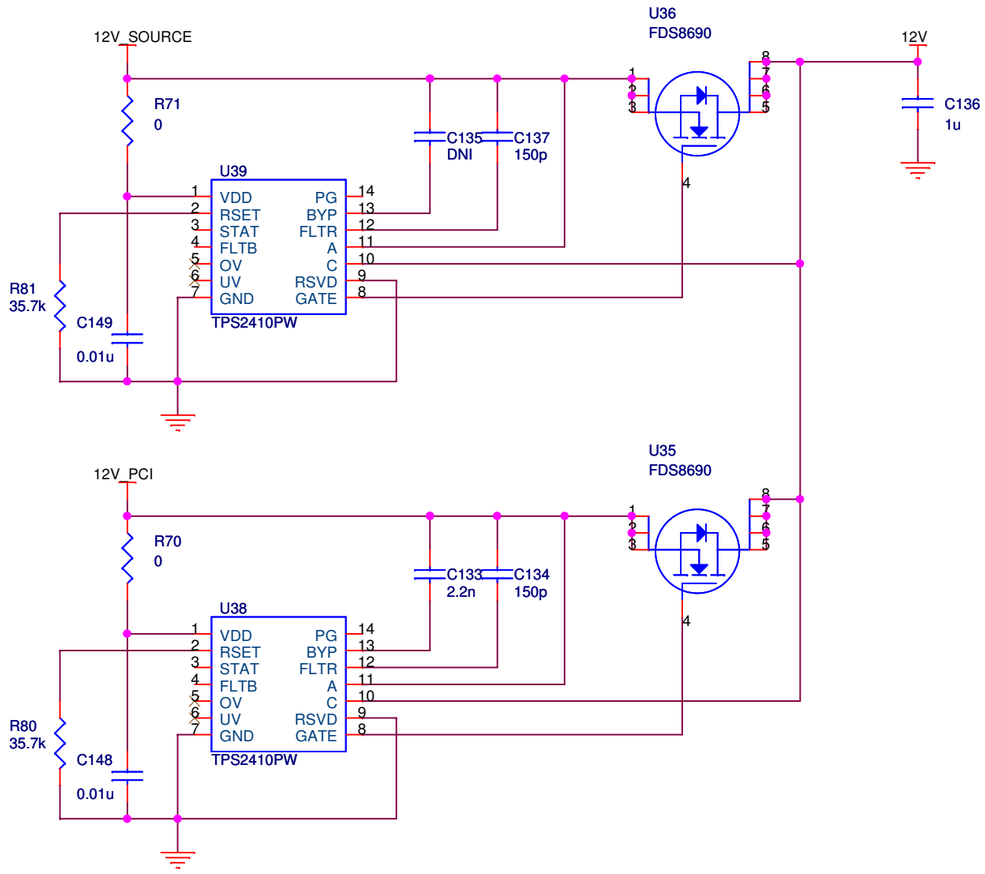
14V ~ 20V DC Input

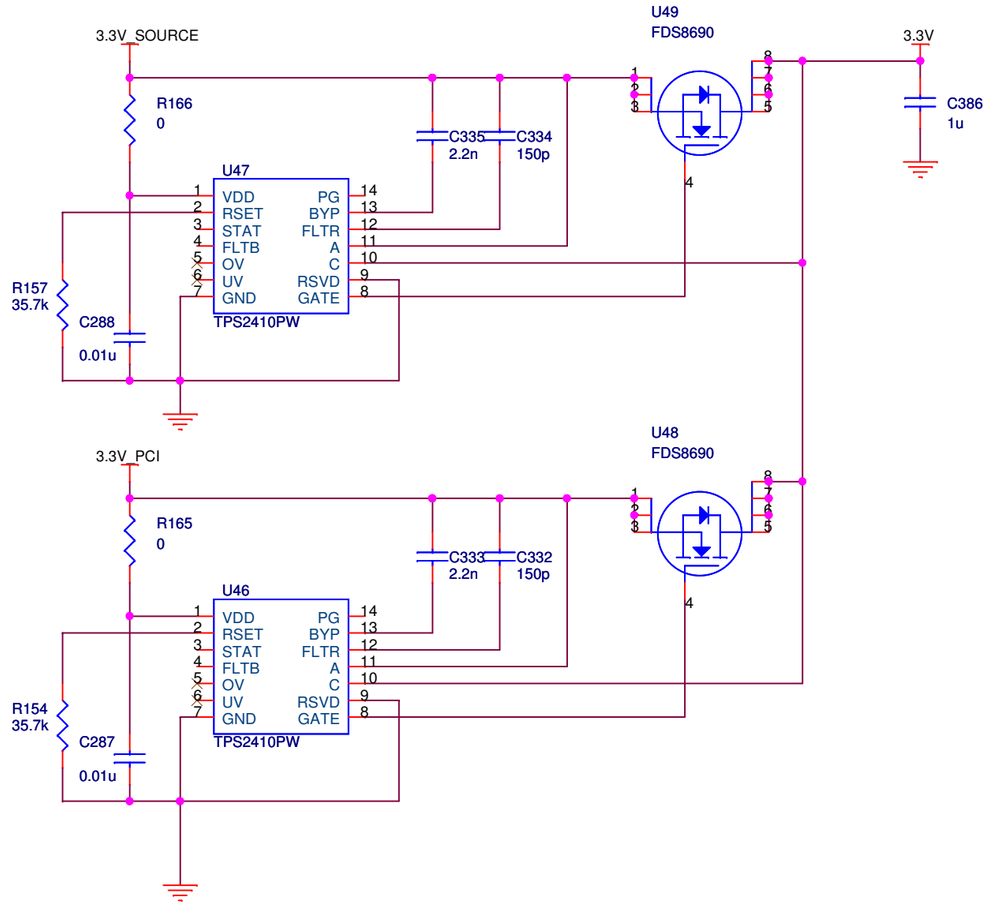




Title	Arria II GX FPGA Development Kit Board	
Size: B	Document Number: 150-0320801-C1 (6XX-40784R)	Rev: C
Date: Friday, August 07, 2009	Sheet 20 of 29	

Power MUX





Title
Arria II GX FPGA Development Kit Board

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Friday, August 07, 2009 Sheet 21 of 29

BANK QL

U19A

Arria II GX Bank QL
EP2AGX260 (EP2AGX125)

PCIE_RX_p0	AN33	GXB_RX0P	GXB_TX0P	AM31	PCIE_TX_p0
PCIE_RX_n0	AN34	GXB_RX0N	GXB_TX0N	AM32	PCIE_TX_n0
PCIE_RX_p1	AL33	GXB_RX1P	GXB_TX1P	AK31	PCIE_TX_p1
PCIE_RX_n1	AL34	GXB_RX1N	GXB_TX1N	AK32	PCIE_TX_n1
PCIE_RX_p2	AJ33	GXB_RX2P	GXB_TX2P	AH31	PCIE_TX_p2
PCIE_RX_n2	AJ34	GXB_RX2N	GXB_TX2N	AH32	PCIE_TX_n2
PCIE_RX_p3	AG33	GXB_RX3P	GXB_TX3P	AF31	PCIE_TX_p3
PCIE_RX_n3	AG34	GXB_RX3N	GXB_TX3N	AF32	PCIE_TX_n3
PCIE_RX_p4	AE33	GXB_RX4P	GXB_TX4P	AD31	PCIE_TX_p4
PCIE_RX_n4	AE34	GXB_RX4N	GXB_TX4N	AD32	PCIE_TX_n4
PCIE_RX_p5	AC33	GXB_RX5P	GXB_TX5P	AB31	PCIE_TX_p5
PCIE_RX_n5	AC34	GXB_RX5N	GXB_TX5N	AB32	PCIE_TX_n5
PCIE_RX_p6	AA33	GXB_RX6P	GXB_TX6P	Y31	PCIE_TX_p6
PCIE_RX_n6	AA34	GXB_RX6N	GXB_TX6N	Y32	PCIE_TX_n6
PCIE_RX_p7	W33	GXB_RX7P	GXB_TX7P	V31	PCIE_TX_p7
PCIE_RX_n7	W34	GXB_RX7N	GXB_TX7N	V32	PCIE_TX_n7
HSMA_RX_p0	U33	GXB_RX8P	GXB_TX8P	T31	HSMA_TX_p0
HSMA_RX_n0	U34	GXB_RX8N	GXB_TX8N	T32	HSMA_TX_n0
HSMA_RX_p1	R33	GXB_RX9P	GXB_TX9P	P31	HSMA_TX_p1
HSMA_RX_n1	R34	GXB_RX9N	GXB_TX9N	P32	HSMA_TX_n1
HSMA_RX_p2	N33	GXB_RX10P	GXB_TX10P	M31	HSMA_TX_p2
HSMA_RX_n2	N34	GXB_RX10N	GXB_TX10N	M32	HSMA_TX_n2
HSMA_RX_p3	L33	GXB_RX11P	GXB_TX11P	K31	HSMA_TX_p3
HSMA_RX_n3	L34	GXB_RX11N	GXB_TX11N	K32	HSMA_TX_n3
HSMB_RX_p0	J33	GXB_RX12P (NC)	GXB_TX12P (NC)	H31	HSMB_TX_p0
HSMB_RX_n0	J34	GXB_RX12N (NC)	GXB_TX12N (NC)	H32	HSMB_TX_n0
HSMB_RX_p1	G33	GXB_RX13P (NC)	GXB_TX13P (NC)	F31	HSMB_TX_p1
HSMB_RX_n1	G34	GXB_RX13N (NC)	GXB_TX13N (NC)	F32	HSMB_TX_n1
HSMB_RX_p2	E33	GXB_RX14P (NC)	GXB_TX14P (NC)	D31	HSMB_TX_p2
HSMB_RX_n2	E34	GXB_RX14N (NC)	GXB_TX14N (NC)	D32	HSMB_TX_n2
HSMB_RX_p3	C33	GXB_RX15P (NC)	GXB_TX15P (NC)	B31	HSMB_TX_p3
HSMB_RX_n3	C34	GXB_RX15N (NC)	GXB_TX15N (NC)	B32	HSMB_TX_n3

PCIE_REFCLK_p 12	AE29	REFCLK0P
PCIE_REFCLK_n 12	AE30	REFCLK0N
CLKIN_REF_Q1_1_p 7	AA29	REFCLK1P
CLKIN_REF_Q1_1_n 7	AA30	REFCLK1N
CLKIN_REF_Q2_p 7	U29	REFCLK2P
CLKIN_REF_Q2_n 7	U30	REFCLK2N
CLKIN_REF_Q3_p 7	N29	REFCLK3P (NC)
CLKIN_REF_Q3_n 7	N30	REFCLK3N (NC)
	AC29	REFCLK4P
	AC30	REFCLK4N
CLKIN_REF_Q1_2_p 7	W29	REFCLK5P
CLKIN_REF_Q1_2_n 7	W30	REFCLK5N
CLKIN_155_p 7	R29	REFCLK6P
CLKIN_155_n 7	R30	REFCLK6N
	L29	REFCLK7P (NC)
	L30	REFCLK7N (NC)

EP2AGX125F1152

PCIE_RX_p[7..0] 12
PCIE_RX_n[7..0] 12
PCIE_TX_p[7..0] 12
PCIE_TX_n[7..0] 12
HSMA_RX_p[3..0] 5
HSMA_RX_n[3..0] 5
HSMA_TX_p[3..0] 5
HSMA_TX_n[3..0] 5
HSMB_TX_p[3..0] 5
HSMB_TX_n[3..0] 5
HSMB_RX_p[3..0] 5
HSMB_RX_n[3..0] 5

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 22 of 29

BANK3 & BANK4

8 DDR2_CS_n[1..0]
8 DDR2_DM[7..0]
8 DDR2_DQ[63..0]
8 DDR2_DQS[7..0]
8 DDR2_DQSn[7..0]
8 DDR2_ODT[1..0]
4 USER_PB[1..0]

U19C

Arria II GX Bank 3A
EP2AGX260 (EP2AGX125)

DDR2_DQ3	AM27	DIFFIO_RX_B9P	DIFFIO_TX_B9P/DQ10B	AL29	DDR2_DQ1
	AM28	DIFFIO_RX_B9N/DQ10B	DIFFIO_TX_B9N/DQ10B	AM29	DDR2_DQ2
DDR2_DQ5	AN27	DIFFIO_RX_B10P	DIFFIO_TX_B10P/DQ10B/CQN10B	AJ24	DDR2_DQ6
	AN28	DIFFIO_RX_B10N/DQ10B	DIFFIO_TX_B10N/DQ10B	AJ25	DDR2_DQ7
	AJ22	DIFFIO_RX_B11P	DIFFIO_TX_B11P/DQS10B/CQ10B	AM25	DDR2_DQS0
DDR2_DM0	AK22	DIFFIO_RX_B11N/DQ10B	DIFFIO_TX_B11N/DQSN10B/DQ10B	AM26	DDR2_DQSn0
DDR2_A15	AP28	DIFFIO_RX_B12P/DQ10B	DIFFIO_TX_B12P	AE20	
DDR2_DQ4	AP29	DIFFIO_RX_B12N/DQ10B	DIFFIO_TX_B12N/DQ10B	AG21	DDR2_DQ0
	AL23	DIFFIO_RX_B13P/INIT_DONE	DIFFIO_TX_B13P/DQ9B	AL24	DDR2_DQ13
DDR2_DQ10	AM23	DIFFIO_RX_B13N/DQ9B	DIFFIO_TX_B13N/DQ9B	AM24	DDR2_DQ9
	AP26	DIFFIO_RX_B14P/NCEO	DIFFIO_TX_B14P/DQ9B/CQN9B	AG22	DDR2_DQ14
DDR2_DQ8	AP27	DIFFIO_RX_B14N/DQ9B	DIFFIO_TX_B14N/DQ9B	AH21	DDR2_DQ15
	AN25	DIFFIO_RX_B15P	DIFFIO_TX_B15P/DQS9B/CQ9B	AN24	DDR2_DQS1
DDR2_DQ11	AP25	DIFFIO_RX_B15N/DQ9B	DIFFIO_TX_B15N/DQSN9B/DQ9B	AP24	DDR2_DQSn1
DDR2_A11	AH23	DIFFIO_RX_B16P/DQ9B	DIFFIO_TX_B16P	AD19	
DDR2_DQ12	AJ23	DIFFIO_RX_B16N/DQ9B	DIFFIO_TX_B16N/DQ9B	AE19	DDR2_DM1
	AL22	DIFFIO_RX_B17P	DIFFIO_TX_B17P/DQ8B	AK25	DDR2_DQ17
DDR2_DQ19	AM22	DIFFIO_RX_B17N/DQ8B	DIFFIO_TX_B17N/DQ8B	AL25	DDR2_DQ16
	AK21	DIFFIO_RX_B18P	DIFFIO_TX_B18P/DQ8B/CQN8B	AH20	DDR2_DQ23
DDR2_DQ20	AL21	DIFFIO_RX_B18N/DQ8B	DIFFIO_TX_B18N/DQ8B	AJ21	DDR2_DQ22
	AN22	DIFFIO_RX_B19P	DIFFIO_TX_B19P/DQS8B/CQ8B	AP21	DDR2_DQS2
DDR2_DQ18	AP23	DIFFIO_RX_B19N/DQ8B	DIFFIO_TX_B19N/DQSN8B/DQ8B	AP22	DDR2_DQSn2
DDR2_A7	AL19	DIFFIO_RX_B20P/DQ8B	DIFFIO_TX_B20N/DQ8B	AG19	DDR2_DM2
DDR2_DQ21	AL20	DIFFIO_RX_B20N/DQ8B	DIFFIO_TX_B20P	AF19	
	AP19	DIFFIO_RX_B21P	DIFFIO_TX_B21N/DQ7B	AN21	DDR2_DQ24
DDR2_DM3	AP20	DIFFIO_RX_B21N/DQ7B	DIFFIO_TX_B21P/DQ7B	AM21	DDR2_DQ25
	AM19	DIFFIO_RX_B22P	DIFFIO_TX_B22P/DQ7B/CQN7B	AE18	DDR2_DQ26
DDR2_DQ29	AN19	DIFFIO_RX_B22N/DQ7B	DIFFIO_TX_B22N/DQ7B	AF18	DDR2_DQ31
	AN18	DIFFIO_RX_B23P	DIFFIO_TX_B23P/DQS7B/CQ7B	AL18	DDR2_DQS3
DDR2_DQ27	AP18	DIFFIO_RX_B23N/DQ7B	DIFFIO_TX_B23N/DQSN7B/DQ7B	AM18	DDR2_DQSn3
DDR2_A6	AJ18	DIFFIO_RX_B24P/DQ7B	DIFFIO_TX_B24P	AG18	
DDR2_DQ30	AK18	DIFFIO_RX_B24N/DQ7B	DIFFIO_TX_B24N/DQ7B	AH19	DDR2_DQ28
			IO/RUP0	AL26	
			IO/RDN0	AL27	
CLKIN_BOT_p 7	AJ19	CLK6/DIFFCLK_0P	PLL4_CLKOUT1P	AH24	DDR2_A14
CLKIN_BOT_n 7	AK19	CLK4/DIFFCLK_0N	PLL4_CLKOUT1N	AH25	

R183 49.9 A2VCCIO_B3A_B4
R182 49.9
RT9 100

EP2AGX125F1152

U19D

Arria II GX Bank 4A
EP2AGX260 (EP2AGX125)

	AN16	DIFFIO_RX_B25P	DIFFIO_TX_B25P/DQ6B	AH17	DDR2_DQ34
DDR2_DQ32	AP15	DIFFIO_RX_B25N/DQ6B	DIFFIO_TX_B25N/DQ6B	AH18	DDR2_DM4
	AP13	DIFFIO_RX_B26P	DIFFIO_TX_B26P/DQ6B/CQN6B	AE17	DDR2_DQ37
DDR2_DQ38	AP14	DIFFIO_RX_B26N/DQ6B	DIFFIO_TX_B26N/DQ6B	AF17	DDR2_DQ35
	AM15	DIFFIO_RX_B27P	DIFFIO_TX_B27P/DQS6B/CQ6B	AM16	DDR2_DQS4
DDR2_DQ33	AN15	DIFFIO_RX_B27N/DQ6B	DIFFIO_TX_B27N/DQSN6B/DQ6B	AM17	DDR2_DQSn4
DDR2_CS_n0	AM13	DIFFIO_RX_B28P/DQ6B	DIFFIO_TX_B28P	AC17	
DDR2_DQ39	AN13	DIFFIO_RX_B28N/DQ6B	DIFFIO_TX_B28N/DQ6B	AC18	DDR2_DQ36
	AP11	DIFFIO_RX_B29P	DIFFIO_TX_B29P/DQ5B	AK16	DDR2_DQ45
DDR2_DQ46	AP12	DIFFIO_RX_B29N/DQ5B	DIFFIO_TX_B29N/DQ5B	AL16	DDR2_DQ44
	AM12	DIFFIO_RX_B30P	DIFFIO_TX_B30P/DQ5B/CQN5B	AG16	DDR2_DM5
DDR2_DQ47	AN12	DIFFIO_RX_B30N/DQ5B	DIFFIO_TX_B30N/DQ5B	AH16	DDR2_DQ40
	AN10	DIFFIO_RX_B31P	DIFFIO_TX_B31P/DQS5B/CQ5B	AK15	DDR2_DQS5
DDR2_DQ42	AP10	DIFFIO_RX_B31N/DQ5B	DIFFIO_TX_B31N/DQSN5B/DQ5B	AL15	DDR2_DQSn5
DDR2_CKE0 8	AP8	DIFFIO_RX_B32P/DQ5B	DIFFIO_TX_B32P	AG15	
DDR2_DQ43	AP9	DIFFIO_RX_B32N/DQ5B	DIFFIO_TX_B32N/DQ5B	AH15	DDR2_DQ41
	AL13	DIFFIO_RX_B33P	DIFFIO_TX_B33P/DQ4B	AN7	DDR2_DQ48
DDR2_DQ53	AL14	DIFFIO_RX_B33N/DQ4B	DIFFIO_TX_B33N/DQ4B	AP7	DDR2_DQ49
	AN6	DIFFIO_RX_B34P	DIFFIO_TX_B34P/DQ4B/CQN4B	AE16	DDR2_DQ54
DDR2_DQ50	AP6	DIFFIO_RX_B34N/DQ4B	DIFFIO_TX_B34N/DQ4B	AF16	DDR2_DQ52
	AP4	DIFFIO_RX_B35P	DIFFIO_TX_B35P/DQS4B/CQ4B	AK13	DDR2_DQS6
DDR2_DQ51	AP5	DIFFIO_RX_B35N/DQ4B	DIFFIO_TX_B35N/DQSN4B/DQ4B	AL12	DDR2_DQSn6
DDR2_A1	AK12	DIFFIO_RX_B36P/DQ4B	DIFFIO_TX_B36P	AC14	
DDR2_DQ55	AL11	DIFFIO_RX_B36N/DQ4B	DIFFIO_TX_B36N/DQ4B	AC15	DDR2_DM6
	AM9	DIFFIO_RX_B37P	DIFFIO_TX_B37P/DQ3B	AP2	DDR2_DQ58
DDR2_DQ61	AN9	DIFFIO_RX_B37N/DQ3B	DIFFIO_TX_B37N/DQ3B	AP3	DDR2_DQ62
	AL10	DIFFIO_RX_B38P	DIFFIO_TX_B38P/DQ3B/CQN3B	AE15	DDR2_DM7
DDR2_DQ56	AM10	DIFFIO_RX_B38N/DQ3B	DIFFIO_TX_B38N/DQ3B	AF15	DDR2_DQ57
	AN3	DIFFIO_RX_B39P	DIFFIO_TX_B39P/DQS3B/CQ3B	AM7	DDR2_DQS7
DDR2_DQ63	AN4	DIFFIO_RX_B39N/DQ3B	DIFFIO_TX_B39N/DQSN3B/DQ3B	AM8	DDR2_DQSn7
DDR2_BA0	AJ11	DIFFIO_RX_B40P/DQ3B	DIFFIO_TX_B40P	AJ15	
DDR2_DQ59	AJ12	DIFFIO_RX_B40N/DQ3B	DIFFIO_TX_B40N/DQ3B	AJ16	DDR2_DQ60
DDR2_A3	AH13	DIFFIO_RX_B41N			
DDR2_A8	AG13	DIFFIO_RX_B41P			
HSMA_CLKIN0 5	AP17	CLK5/DIFFCLK_1N	PLL3_CLKOUT1P	AH14	DDR2_A0
HSMB_CLKIN0 5	AP16	CLK7/DIFFCLK_1P	PLL3_CLKOUT1N	AJ13	DDR2_BA1
			PLL3_CLKOUT2P	AE14	DDR2_BA2
			PLL3_CLKOUT2N	AF14	DDR2_A4
			PLL3_CLKOUT3P	AG12	DDR2_A5
			PLL3_CLKOUT3N	AH12	8 DDR2_RAS_n

EP2AGX125F1152

HSMB_D[75..0] 5,24

U19B

Arria II GX Bank 3B
EP2AGX260 Only !

HSMB_D18	AF25	DIFFIO_RX_B1P	DIFFIO_TX_B1P/DQ12B	AG27	HSMB_D13
HSMB_D16	AG24	DIFFIO_RX_B1N/DQ12B	DIFFIO_TX_B1N/DQ12B	AH26	HSMB_D14
HSMB_D7	AE28	DIFFIO_RX_B2P	DIFFIO_TX_B2P/DQ12B/CQN12B	AC22	HSMB_D25
HSMB_D15	AF27	DIFFIO_RX_B2N/DQ12B	DIFFIO_TX_B2N/DQ12B	AD22	HSMB_D24
HSMB_D22	AE26	DIFFIO_RX_B3P	DIFFIO_TX_B3P/DQS12B/CQ12B	AH28	HSMB_D9
HSMB_D20	AE27	DIFFIO_RX_B3N/DQ12B	DIFFIO_TX_B3N/DQSN12B/DQ12B	AH29	HSMB_D0
HSMB_D4	AF28	DIFFIO_RX_B4P/DQ12B	DIFFIO_TX_B4P	AE24	6 HSMB_TX_LED
HSMB_PSNT_n 3,5	AG28	DIFFIO_RX_B4N/DQ12B	DIFFIO_TX_B4N/DQ12B	AF24	HSMB_D17
HSMB_SCL 5	AJ27	DIFFIO_RX_B5N/DQ11B	DIFFIO_TX_B5P/DQ11B	AJ28	HSMB_D10
HSMB_D11	AH27	DIFFIO_RX_B5P	DIFFIO_TX_B5N/DQ11B	AJ29	HSMB_D5
HSMB_D8	AK28	DIFFIO_RX_B6P	DIFFIO_TX_B6P/DQ11B/CQN11B	AE23	HSMB_D19
HSMB_D6	AL28	DIFFIO_RX_B6N/DQ11B	DIFFIO_TX_B6N/DQ11B	AF23	6 HSMB_RX_LED
HSMB_D12	AJ26	DIFFIO_RX_B7P	DIFFIO_TX_B7P/DQS11B/CQ11B	AJ30	HSMB_D3
HSMB_SDA 5	AK27	DIFFIO_RX_B7N/DQ11B	DIFFIO_TX_B7N/DQSN11B/DQ11B	AK30	HSMB_D2
HSMB_CLKOUT0 5	AG30	DIFFIO_RX_B8P/DQ11B	DIFFIO_TX_B8P	AD21	HSMB_D23
HSMB_D1	AH30	DIFFIO_RX_B8N/DQ11B	DIFFIO_TX_B8N/DQ11B	AE21	HSMB_D21

EP2AGX125F1152

U19E

Arria II GX Bank 4B
EP2AGX260 (EP2AGX125)

DDR2_CS_n1	AL9	DIFFIO_RX_B42N/DQ2B	DIFFIO_TX_B41P/DQ2B	AJ10	DDR2_ODT0
USER_PB0	AK9	DIFFIO_RX_B42P	DIFFIO_TX_B41N/DQ2B	AK10	DDR2_A10
USER_PB1	AL7	DIFFIO_RX_B43P	DIFFIO_TX_B42P/DQ2B/CQN2B	AE13	DDR2_A9
DDR2_CAS_n 8	AL8	DIFFIO_RX_B43N/DQ2B	DIFFIO_TX_B42N/DQ2B	AF13	DDR2_A12
DDR2_A13	AM5	DIFFIO_RX_B44P	DIFFIO_TX_B43P/DQS2B/CQ2B	AK6	DDR2_CLK_p1
DDR2_WE_n 8	AM6	DIFFIO_RX_B44N/DQ2B	DIFFIO_TX_B43N/DQSN2B/DQ2B	AL6	DDR2_CLK_n1
DDR2_CLK_p0	AJ7	DIFFIO_RX_B45P/DQ2B	DIFFIO_TX_B44P	AE12	DDR2_A2
DDR2_CLK_n0	AK7	DIFFIO_RX_B45N/DQ2B	DIFFIO_TX_B44N/DQ2B	AF12	DDR2_ODT1
	AH9	DIFFIO_RX_B46P (NC)	DIFFIO_TX_B45P/DQ1B (NC)	AL5	8 DDR2_A[15..0]
	AJ9	DIFFIO_RX_B46N/DQ1B (NC)	DIFFIO_TX_B45N/DQ1B (NC)	AM4	
	AG9	DIFFIO_RX_B47P (NC)	DIFFIO_TX_B46P/DQ1B (NC)	AD12	8 DDR2_BA[2..0]
	AH10	DIFFIO_RX_B47N/DQ1B (NC)	DIFFIO_TX_B46N/DQ1B (NC)	AE11	
	AL4	DIFFIO_RX_B48P (NC)	DIFFIO_TX_B47P/DQS1B (NC)	AL3	8 DDR2_CLK_p[1..0]
	AM3	DIFFIO_RX_B48N/DQ1B (NC)	DIFFIO_TX_B47N/DQSN1B/DQ1B (NC)	AM2	
	AF11	DIFFIO_TX_B48P (NC)	DIFFIO_RX_B49P/DQ1B (NC)	AM1	8 DDR2_CLK_n[1..0]
	AG10	DIFFIO_TX_B48N/DQ1B (NC)	DIFFIO_RX_B49N/DQ1B (NC)	AN1	

EP2AGX125F1152

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 23 of 29

BANK5 & BANK6

5 HSMA_RX_D_p[16..0]
5 HSMA_RX_D_n[16..0]

5 HSMA_CLKOUT_p[2..1]
5 HSMA_CLKOUT_n[2..1]

5 HSMA_TX_D_n[16..0]
5 HSMA_TX_D_p[16..0]

U19G — Arria II GX Bank 5A
EP2AGX260 (EP2AGX125)

HSMA_RX_D_p16	AC7	DIFFIO_RX_R9P	DIFFIO_TX_R9P/DQ10R	AD7	HSMA_CLKOUT_p1
HSMA_RX_D_n16	AC6	DIFFIO_RX_R9N/DQ10R	DIFFIO_TX_R9N/DQ10R	AD6	HSMA_CLKOUT_n1
HSMA_RX_D_p15	AB8	DIFFIO_RX_R10P	DIFFIO_TX_R10P/DQ10R/CQN10R	AB10	HSMA_TX_D_p3
HSMA_RX_D_n15	AB7	DIFFIO_RX_R10N/DQ10R	DIFFIO_TX_R10N/DQ10R	AB9	HSMA_TX_D_n3
HSMA_RX_D_p1	AE4	DIFFIO_RX_R11P	DIFFIO_TX_R11P/DQS10R/CQ10R	AH2	HSMA_TX_D_p2
HSMA_RX_D_n1	AF4	DIFFIO_RX_R11N/DQ10R	DIFFIO_TX_R11N/DQSN10R/DQ10R	AH1	HSMA_TX_D_n2
HSMA_RX_D_p2	AF1	DIFFIO_RX_R12P/DQ10R	DIFFIO_TX_R12P	AA7	HSMA_TX_D_p8
HSMA_RX_D_n2	AG1	DIFFIO_RX_R12N/DQ10R	DIFFIO_TX_R12N/DQ10R	Y6	HSMA_TX_D_n8
HSMA_RX_D_p3	AE2	DIFFIO_RX_R13P	DIFFIO_TX_R13P/DQ9R	AF3	HSMA_TX_D_p5
HSMA_RX_D_n3	AE1	DIFFIO_RX_R13N/DQ9R	DIFFIO_TX_R13N/DQ9R	AF2	HSMA_TX_D_n5
HSMA_RX_D_p13	AB6	DIFFIO_RX_R14P	DIFFIO_TX_R14P/DQ9R/CQN9R	AA10	HSMA_TX_D_p0
HSMA_RX_D_n13	AB5	DIFFIO_RX_R14N/DQ9R	DIFFIO_TX_R14N/DQ9R	AA9	HSMA_TX_D_n0
HSMA_RX_D_p0	AC5	DIFFIO_RX_R15P	DIFFIO_TX_R15P/DQS9R/CQ9R	AD4	HSMA_TX_D_p6
HSMA_RX_D_n0	AC4	DIFFIO_RX_R15N/DQ9R	DIFFIO_TX_R15N/DQSN9R/DQ9R	AE3	HSMA_TX_D_n6
HSMA_RX_D_p4	AC1	DIFFIO_RX_R16P/DQ9R	DIFFIO_TX_R16P	Y8	HSMA_TX_D_p4
HSMA_RX_D_n4	AD1	DIFFIO_RX_R16N/DQ9R	DIFFIO_TX_R16N/DQ9R	Y7	HSMA_TX_D_n4
HSMA_RX_D_p12	AB4	DIFFIO_RX_R17P	DIFFIO_TX_R17P/DQ8R	AC3	HSMA_TX_D_p11
HSMA_RX_D_n12	AB3	DIFFIO_RX_R17N/DQ8R	DIFFIO_TX_R17N/DQ8R	AC2	HSMA_TX_D_n11
HSMA_RX_D_p5	AB2	DIFFIO_RX_R18P	DIFFIO_TX_R18P/DQ8R/CQN8R	Y11	HSMA_TX_D_p1
HSMA_RX_D_n5	AB1	DIFFIO_RX_R18N/DQ8R	DIFFIO_TX_R18N/DQ8R	Y10	HSMA_TX_D_n1
HSMA_RX_D_p6	Y1	DIFFIO_RX_R19P	DIFFIO_TX_R19P/DQS8R/CQ8R	Y5	HSMA_TX_D_p10
HSMA_RX_D_n6	AA1	DIFFIO_RX_R19N/DQ8R	DIFFIO_TX_R19N/DQSN8R/DQ8R	AA4	HSMA_TX_D_n10
HSMA_RX_D_p11	Y4	DIFFIO_RX_R20P/DQ8R	DIFFIO_TX_R20P	W10	HSMA_TX_D_p12
HSMA_RX_D_n11	Y3	DIFFIO_RX_R20N/DQ8R	DIFFIO_TX_R20N/DQ8R	Y9	HSMA_TX_D_n12
HSMA_RX_D_p7	Y2	DIFFIO_RX_R21P	DIFFIO_TX_R21P/DQ7R	W7	HSMA_TX_D_p9
HSMA_RX_D_n7	W1	DIFFIO_RX_R21N/DQ7R	DIFFIO_TX_R21N/DQ7R	W6	HSMA_TX_D_n9
HSMA_RX_D_p9	W4	DIFFIO_RX_R22P	DIFFIO_TX_R22P/DQ7R/CQN7R	V11	HSMA_TX_D_p15
HSMA_RX_D_n9	W3	DIFFIO_RX_R22N/DQ7R	DIFFIO_TX_R22N/DQ7R	V10	HSMA_TX_D_n15
HSMA_RX_D_p8	V2	DIFFIO_RX_R23P	DIFFIO_TX_R23P/DQS7R/CQ7R	V4	HSMA_TX_D_p7
HSMA_RX_D_n8	V1	DIFFIO_RX_R23N/DQ7R	DIFFIO_TX_R23N/DQSN7R/DQ7R	V3	HSMA_TX_D_n7
HSMA_RX_D_p14	U7	DIFFIO_RX_R24P/DQ7R	DIFFIO_TX_R24P	V12	HSMA_CLKOUT_p2
HSMA_RX_D_n14	V7	DIFFIO_RX_R24N/DQ7R	DIFFIO_TX_R24N/DQ7R	W12	HSMA_CLKOUT_n2

ENET_RX_CLK is 25MHz

ENET_RX_CLK 15	V6	CLK10/DIFFCLK_2P
HSMB_D75 5	V5	CLK8/DIFFCLK_2N

EP2AGX125F1152

HSMB_D[75..26] 5

U19H — Arria II GX Bank 6A
EP2AGX260 (EP2AGX125)

HSMA_RX_D_p10	U2	DIFFIO_RX_R25P	DIFFIO_TX_R25P/DQ6R	R7	HSMA_TX_D_p13
HSMA_RX_D_n10	U1	DIFFIO_RX_R25N/DQ6R	DIFFIO_TX_R25N/DQ6R	T7	HSMA_TX_D_n13
HSMA_SDA 5	R1	DIFFIO_RX_R26P	DIFFIO_TX_R26P/DQ6R/CQN6R	U11	HSMA_TX_D_p16
HSMA_SCL 5	T1	DIFFIO_RX_R26N/DQ6R	DIFFIO_TX_R26N/DQ6R	U10	HSMA_TX_D_n16
USER_DIP3	U4	DIFFIO_RX_R27P	DIFFIO_TX_R27P/DQS6R/CQ6R	R2	HSMA_TX_D_p14
HSMA_PSNT_n 3,5	U3	DIFFIO_RX_R27N/DQ6R	DIFFIO_TX_R27N/DQSN6R/DQ6R	P1	HSMA_TX_D_n14
USER_DIP0	N2	DIFFIO_RX_R28P/DQ6R	DIFFIO_TX_R28P	U9	USER_DIP1
PCIE_PRESTn 12	N1	DIFFIO_RX_R28N/DQ6R	DIFFIO_TX_R28N/DQ6R	V9	USER_DIP2
HSMA_D1	R6	DIFFIO_RX_R29P	DIFFIO_TX_R29P/DQ5R	R4	FSM_A24
USER_LED3	R5	DIFFIO_RX_R29N/DQ5R	DIFFIO_TX_R29N/DQ5R	T4	3,11 FLASH_ADVn
	M2	DIFFIO_RX_R30P	DIFFIO_TX_R30P/DQ5R/CQN5R	R11	FSM_D23
HSMA_D3	M1	DIFFIO_RX_R30N/DQ5R	DIFFIO_TX_R30N/DQ5R	R10	FSM_D17
FSM_D22	P4	DIFFIO_RX_R31P	DIFFIO_TX_R31P/DQS5R/CQ5R	K1	HSMA_D2
FLASH_RDY_BSYn 3,11	R3	DIFFIO_RX_R31N/DQ5R	DIFFIO_TX_R31N/DQSN5R/DQ5R	L1	HSMA_D0
LCD_CSn 6	J2	DIFFIO_RX_R32P/DQ5R	DIFFIO_TX_R32N/DQ5R	R9	FSM_D16
LCD_D_Cn 6	J1	DIFFIO_RX_R32N/DQ5R	DIFFIO_TX_R32P	T10	FSM_D21
LCD_DATA2	E1	DIFFIO_RX_R33P	DIFFIO_TX_R33P/DQ4R	G1	USER_LED0
LCD_DATA0	F1	DIFFIO_RX_R33N/DQ4R	DIFFIO_TX_R33N/DQ4R	H1	6 LCD_WEn
LCD_DATA4	D2	DIFFIO_RX_R34P	DIFFIO_TX_R34P/DQ4R/CQN4R	R8	FSM_D18
LCD_DATA5	D1	DIFFIO_RX_R34N/DQ4R	DIFFIO_TX_R34N/DQ4R	P7	FSM_A22
HSMA_RX_LED 6	N5	DIFFIO_RX_R35P	DIFFIO_TX_R35P/DQS4R/CQ4R	M3	3,11 FLASH_CEn
FLASH_CLK 3,11	N4	DIFFIO_RX_R35N/DQ4R	DIFFIO_TX_R35N/DQSN4R/DQ4R	N3	3,11 FLASH_RESETn
LCD_DATA6	C2	DIFFIO_RX_R36P/DQ4R	DIFFIO_TX_R36P	P10	5 HSMA_CLKOUT0
LCD_DATA7	C1	DIFFIO_RX_R36N/DQ4R	DIFFIO_TX_R36N/DQ4R	P9	SRAM_DQP2
LCD_DATA1	H3	DIFFIO_RX_R39P/DEV_OE	DIFFIO_TX_R39P/DQS3R/CQ3R	J5	USER_LED2
FSM_A1	J3	DIFFIO_RX_R39N/DQ3R	DIFFIO_TX_R39N/DQSN3R/DQ3R	J4	USER_LED1
FLASH_OEn 3,11	K5	DIFFIO_RX_R40P/DQ3R			
FSM_A25	K4	DIFFIO_RX_R40N/DQ3R			
LCD_DATA3	F2	DIFFIO_RX_R38P/CLKUSR			
FSM_A6	N9	DIFFIO_TX_R40N/DQ3R			

3,10,11,25 FSM_D[31..0]
3,10,11,25 FSM_A[25..0]
6 LCD_DATA[7..0]
5 HSMA_D[3..0]
6 USER_LED[3..0]
4,23 USER_PB[1..0]
4 USER_DIP[3..0]

HSMA_CLKIN_p1 5 — U6
HSMA_CLKIN_n1 5 — U5

CLK11/DIFFCLK_3P
CLK9/DIFFCLK_3N

EP2AGX125F1152

10,25 SRAM_BEn[3..0]
10,25 SRAM_DQP[3..0]

U19F — Arria II GX Bank 5B
EP2AGX260 Only !

HSMB_D36	AE8	DIFFIO_RX_R1P	DIFFIO_TX_R1P/DQ12R	AH7	HSMB_D30
HSMB_D33	AF7	DIFFIO_RX_R1N/DQ12R	DIFFIO_TX_R1N/DQ12R	AJ6	HSMB_D39
HSMB_D40	AK4	DIFFIO_RX_R2P	DIFFIO_TX_R2P/DQ12R/CQN12R	AD10	HSMB_D37
HSMB_D42	AK3	DIFFIO_RX_R2N/DQ12R	DIFFIO_TX_R2N/DQ12R	AD9	HSMB_D38
HSMB_D32	AG7	DIFFIO_RX_R3P	DIFFIO_TX_R3P/DQS12R/CQ12R	AH6	HSMB_D50
HSMB_D31	AG6	DIFFIO_RX_R3N/DQ12R	DIFFIO_TX_R3N/DQSN12R/DQ12R	AH5	HSMB_D27
HSMB_D41	AL2	DIFFIO_RX_R4P/DQ12R	DIFFIO_TX_R4P	AE8	HSMB_D35
HSMB_D43	AL1	DIFFIO_RX_R4N/DQ12R	DIFFIO_TX_R4N/DQ12R	AE7	HSMB_D34
HSMB_D44	AJ4	DIFFIO_RX_R5P	DIFFIO_TX_R5P/DQ11R	AJ1	HSMB_D47
HSMB_D46	AJ3	DIFFIO_RX_R5N/DQ11R	DIFFIO_TX_R5N/DQ11R	AK1	HSMB_D45
HSMB_D49	AH3	DIFFIO_RX_R6P	DIFFIO_TX_R6P/DQ11R/CQN11R	AC11	HSMB_D54
HSMB_D48	AJ2	DIFFIO_RX_R6N/DQ11R	DIFFIO_TX_R6N/DQ11R	AC10	HSMB_D52
HSMB_D26	AG4	DIFFIO_RX_R7P	DIFFIO_TX_R7P/DQS11R/CQ11R	AF6	HSMB_D28
HSMB_D51	AH4	DIFFIO_RX_R7N/DQ11R	DIFFIO_TX_R7N/DQSN11R/DQ11R	AF5	HSMB_D29
	AE6	DIFFIO_RX_R8P/DQ11R	DIFFIO_TX_R8N/DQ11R	AC8	
HSMB_D74 5	AE5	DIFFIO_RX_R8N/DQ11R	DIFFIO_TX_R8P	AC9	

EP2AGX125F1152

U19I — Arria II GX Bank 6B
EP2AGX260 Only !

H4		DIFFIO_RX_R41P	DIFFIO_TX_R41P/DQ2R	M6	
G3		DIFFIO_RX_R41N/DQ2R	DIFFIO_TX_R41N/DQ2R	M5	
F4		DIFFIO_RX_R42P	DIFFIO_TX_R42P/DQ2R/CQN2R	N8	5 HSMB_CLKOUT_p2
F3		DIFFIO_RX_R42N/DQ2R	DIFFIO_TX_R42N/DQ2R	N7	5 HSMB_CLKOUT_n2
E4		DIFFIO_RX_R43P	DIFFIO_TX_R43P/DQS2R/CQ2R	D4	
E3		DIFFIO_RX_R43N/DQ2R	DIFFIO_TX_R43N/DQSN2R/DQ2R	D3	
HSMB_D60	K7	DIFFIO_RX_R44P/DQ2R	DIFFIO_TX_R44P	M10	HSMB_D53
HSMB_D62	K6	DIFFIO_RX_R44N/DQ2R	DIFFIO_TX_R44N/DQ2R	M9	HSMB_D55
HSMB_D65	G5	DIFFIO_RX_R45P	DIFFIO_TX_R45P/DQ1R	J7	HSMB_D64
HSMB_D70	G4	DIFFIO_RX_R45N/DQ1R	DIFFIO_TX_R45N/DQ1R	J6	HSMB_D63
HSMB_D69	D5	DIFFIO_RX_R46P	DIFFIO_TX_R46P/DQ1R/CQN1R	M8	HSMB_D56
HSMB_D73	C5	DIFFIO_RX_R46N/DQ1R	DIFFIO_TX_R46N/DQ1R	M7	HSMB_D58
HSMB_D72	D6	DIFFIO_RX_R47P	DIFFIO_TX_R47P/DQS1R/CQ1R	G6	HSMB_D68
HSMB_D71	C6	DIFFIO_RX_R47N/DQ1R	DIFFIO_TX_R47N/DQSN1R/DQ1R	F5	HSMB_D67
HSMB_D61	J8	DIFFIO_RX_R48P/DQ1R	DIFFIO_TX_R48P	K8	HSMB_D59
HSMB_D66	H7	DIFFIO_RX_R48N/DQ1R	DIFFIO_TX_R48N/DQ1R	L7	HSMB_D57

EP2AGX125F1152

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 24 of 29

BANK7 & BANK8

U19K — Arria II GX Bank 7A

EP2AGX260 (EP2AGX125)

DDR3_DQ15	G13	DIFFIO_RX_T9P/DQ10T	DIFFIO_TX_T9P/	H15	
DDR3_DQ9	F13	DIFFIO_RX_T9N/DQ10T	DIFFIO_TX_T9N/DQ10T	G15	DDR3_DQ13
	B1	DIFFIO_RX_T10P	DIFFIO_TX_T10P/DQS10T/CQ10T	F12	DDR3_DQS_p1
DDR3_DQ10	A2	DIFFIO_RX_T10N/DQ10T	DIFFIO_TX_T10N/DQSN10T/DQ10T	E12	DDR3_DQS_n1
	C3	DIFFIO_RX_T11P	DIFFIO_TX_T11P/DQ10T/CQN10T	K15	DDR3_DM1
DDR3_DQ14	B4	DIFFIO_RX_T11N/DQ10T	DIFFIO_TX_T11N/DQ10T	J15	DDR3_DQ11
	E13	DIFFIO_RX_T12P	DIFFIO_TX_T12P/DQ10T	D12	DDR3_DQ12
DDR3_DQ8	D13	DIFFIO_RX_T12N/DQ10T	DIFFIO_TX_T12N/DQ10T	D11	DDR3_A8
DDR3_DQ7	B3	DIFFIO_RX_T13P/DQ9T	DIFFIO_TX_T13P	K16	
DDR3_DQ4	A3	DIFFIO_RX_T13N/DQ9T	DIFFIO_TX_T13N/DQ9T	J16	DDR3_DQ0
	A5	DIFFIO_RX_T14P	DIFFIO_TX_T14P/DQS9T/CQ9T	G14	DDR3_DQS_p0
DDR3_DQ5	A4	DIFFIO_RX_T14N/DQ9T	DIFFIO_TX_T14N/DQSN9T/DQ9T	F15	DDR3_DQS_n0
	C9	DIFFIO_RX_T15P	DIFFIO_TX_T15P/DQ9T/CQN9T	L16	DDR3_DQ6
DDR3_DM0	B9	DIFFIO_RX_T15N/DQ9T	DIFFIO_TX_T15N/DQ9T	K17	DDR3_DQ2
	B6	DIFFIO_RX_T16P	DIFFIO_TX_T16P/DQ9T	B7	DDR3_DQ1
DDR3_DQ3	A6	DIFFIO_RX_T16N/DQ9T	DIFFIO_TX_T16N/DQ9T	A7	DDR3_A4
MAX2_BEn2	D14	DIFFIO_RX_T17P/DQ8T	DIFFIO_TX_T17P	J17	
MAX2_BEn0	C15	DIFFIO_RX_T17N/DQ8T	DIFFIO_TX_T17N/DQ8T	H16	MAX2_BEn1
MAX2_BEn3	A9	DIFFIO_RX_T18P	DIFFIO_TX_T18P/DQS8T/CQ8T	E15	DDR3_A11
DDR3_A12	A8	DIFFIO_RX_T18N/DQ8T	DIFFIO_TX_T18N/DQSN8T/DQ8T	D15 9	DDR3_CAS_n
DDR3_A6	C13	DIFFIO_RX_T19P	DIFFIO_TX_T19P/DQ8T/CQN8T	H18	DDR3_A2
DDR3_BA1	C12	DIFFIO_RX_T19N/DQ8T	DIFFIO_TX_T19N/DQ8T	G18 9	DDR3_RST_n
DDR3_A3	F16	DIFFIO_RX_T20P/DQ8T	DIFFIO_TX_T20P/DQ8T	D16	DDR3_BA0
DDR3_ODT 9	E16	DIFFIO_RX_T20N/DQ8T	DIFFIO_TX_T20N/DQ8T	C16	DDR3_BA2
DDR3_CLK_p 9	B13	DIFFIO_RX_T21P/DQ7T	DIFFIO_TX_T21P	G17	DDR3_A5
DDR3_CLK_n 9	B12	DIFFIO_RX_T21N/DQ7T	DIFFIO_TX_T21N/DQ7T	G16	DDR3_A0
DDR3_A1	A12	DIFFIO_RX_T22P	DIFFIO_TX_T22P/DQS7T/CQ7T	B10 9	DDR3_CKE
DDR3_A10	A11	DIFFIO_RX_T22N/DQ7T	DIFFIO_TX_T22N/DQSN7T/DQ7T	A10 9	DDR3_CS_n
MAX2_OEn 3	A14	DIFFIO_RX_T23P	DIFFIO_TX_T23P/DQ7T/CQN7T	M17	DDR3_A13
DDR3_RAS_n 9	A13	DIFFIO_RX_T23N/DQ7T	DIFFIO_TX_T23N/DQ7T	M16	DDR3_A9
DDR3_A14	B15	DIFFIO_RX_T24P	DIFFIO_TX_T24P/DQ7T	B16 3	MAX2_WEn
DDR3_WE_n 9	A15	DIFFIO_RX_T24N/DQ7T	DIFFIO_TX_T24N/DQ7T	A16 3	MAX2_CSn
HSMA_CLKIN_p2 5	K18	CLK13/DIFFCLK_5P	IO/RUP1	G12	
HSMA_CLKIN_n2 5	J18	CLK15/DIFFCLK_5N	IO/RDN1	G11	
			PLL2_CLKOUT1P	K14	DDR3_A7
			PLL2_CLKOUT1N	J14 3	MAX2_CLK

R150 49.9 A2VCCIO_B7A

R151 49.9

EP2AGX125F1152

U19L — Arria II GX Bank 8A

EP2AGX260 (EP2AGX125)

ENET_INTn 15	D18	DIFFIO_RX_T25P/DQ6T	DIFFIO_TX_T25P	N19	
ENET_RX_DV 15	D17	DIFFIO_RX_T25N/DQ6T	DIFFIO_TX_T25N/DQ6T	M18	12 PCIE_SMBCLK
FSM_D1	C18	DIFFIO_RX_T26P	DIFFIO_TX_T26P/DQS6T/CQ6T	A18	FSM_D24
FSM_D25	B18	DIFFIO_RX_T26N/DQ6T	DIFFIO_TX_T26N/DQSN6T/DQ6T	A17	FSM_D19
FSM_D3	B19	DIFFIO_RX_T27P	DIFFIO_TX_T27P/DQ6T/CQN6T	G19	FSM_D6
FSM_D0	A19	DIFFIO_RX_T27N/DQ6T	DIFFIO_TX_T27N/DQ6T	F19	FSM_D7
FSM_D27	D19	DIFFIO_RX_T28P	DIFFIO_TX_T28P/DQ6T	A21	FSM_D29
FSM_D26	C19	DIFFIO_RX_T28N/DQ6T	DIFFIO_TX_T28N/DQ6T	A20	10 SRAM_ADSPn
FSM_D30	C21	DIFFIO_RX_T29P/DQ5T	DIFFIO_TX_T29P	K20	15 ENET_MDC
FSM_D28	B21	DIFFIO_RX_T29N/DQ5T	DIFFIO_TX_T29N/DQ5T	J20	ENET_TXD0
FSM_D4	E19	DIFFIO_RX_T30P	DIFFIO_TX_T30P/DQS5T/CQ5T	A23	FSM_A8
FSM_D5	E18	DIFFIO_RX_T30N/DQ5T	DIFFIO_TX_T30N/DQSN5T/DQ5T	A22	FSM_D31
SRAM_DQP3	C22	DIFFIO_RX_T31P	DIFFIO_TX_T31P/DQ5T/CQN5T	J19	FSM_A13
SRAM_DQP1	B22	DIFFIO_RX_T31N/DQ5T	DIFFIO_TX_T31N/DQ5T	H19	FSM_A14
FSM_A9	B24	DIFFIO_RX_T32P/DQ5T	DIFFIO_TX_T32P/DQ5T	B25	FSM_D12
SRAM_DQP0	A24	DIFFIO_RX_T32N/DQ5T	DIFFIO_TX_T32N/DQ5T	A25	FSM_D11
FSM_D15	A27	DIFFIO_RX_T33P/DQ4T	DIFFIO_TX_T33P	G21	ENET_TXD3
FSM_D13	A26	DIFFIO_RX_T33N/DQ4T	DIFFIO_TX_T33N/DQ4T	G20	15 ENET_TX_EN
FSM_D8	D21	DIFFIO_RX_T34P	DIFFIO_TX_T34P/DQS4T/CQ4T	C28	12 PCIE_LED_X1
FSM_A7	D20	DIFFIO_RX_T34N/DQ4T	DIFFIO_TX_T34N/DQSN4T/DQ4T	B27	3,10 SRAM_ZZ
FSM_D9	D23	DIFFIO_RX_T35P	DIFFIO_TX_T35P/DQ4T/CQN4T	G23	FSM_A19
FSM_A10	C24	DIFFIO_RX_T35N/DQ4T	DIFFIO_TX_T35N/DQ4T	F23	7 CLKOUT_SMA
ENET_RXD3	F24	DIFFIO_RX_T36P/CRC_ERROR	DIFFIO_TX_T36P/DQ4T	D24	FSM_D10
ENET_RXD1	E24	DIFFIO_RX_T36N/DQ4T	DIFFIO_TX_T36N/DQ4T	C25	ENET_TXD1
FSM_A12	F21	DIFFIO_RX_T37P/DQ3T	DIFFIO_TX_T37P	N20	15 ENET_MDIO
ENET_RXD0	E21	DIFFIO_RX_T37N/DQ3T	DIFFIO_TX_T37N/DQ3T	M20	15 ENET_RESETn
PCIE_SMBDAT 12	D27	DIFFIO_RX_T38P	DIFFIO_TX_T38P/DQS3T/CQ3T	D25	15 ENET_GTX_CLK
PCIE_LED_X8 12	C27	DIFFIO_RX_T38N/DQ3T	DIFFIO_TX_T38N/DQSN3T/DQ3T	C26	FSM_D14
ENET_RXD2	E22	DIFFIO_RX_T39P	DIFFIO_TX_T39P/DQ3T/CQN3T	H21	FSM_A20
FSM_D20	D22	DIFFIO_RX_T39N/DQ3T	DIFFIO_TX_T39N/DQ3T	G22	ENET_TXD2
FSM_A2	D29	DIFFIO_RX_T40P/DQ3T	DIFFIO_TX_T40P/DQ3T	C30	12 PCIE_WAKEn
FSM_D2	D28	DIFFIO_RX_T40N/DQ3T	DIFFIO_TX_T40N/DQ3T	C29	6 HSMA_TX_LED
CLKIN_TOP_p 7	F18	CLK12/DIFFCLK_4P	IO/RDN2	D26	12 PCIE_LED_X4
CLKIN_TOP_n 7	F17	CLK14/DIFFCLK_4N	IO/RUP2	E25	FSM_A11
			PLL1_CLKOUT1P	M21	FSM_A0
			PLL1_CLKOUT1N	L21	FSM_A16
			PLL1_CLKOUT2P	F26	FSM_A18
			PLL1_CLKOUT2N	F25	FSM_A17
			PLL1_CLKOUT3P	K21	FSM_A15
			PLL1_CLKOUT3N	J21	FSM_A3

R176 100

EP2AGX125F1152

U19J — Arria II GX Bank 7B

EP2AGX260 (EP2AGX125)

	F6	DIFFIO_RX_T1P/DQ12T (NC)	DIFFIO_TX_T1P (NC)	L11	
	E6	DIFFIO_RX_T1N/DQ12T (NC)	DIFFIO_TX_T1N/DQ12T (NC)	K11	
	G7	DIFFIO_RX_T2P (NC)	DIFFIO_TX_T2P/DQS12T/CQ12T (NC)	H9	
	F7	DIFFIO_RX_T2N/DQ12T (NC)	DIFFIO_TX_T2N/DQSN12T/DQ12T (NC)	G9	
	E7	DIFFIO_RX_T3P (NC)	DIFFIO_TX_T3P/DQ12T/CQN12T (NC)	L10	
	D7	DIFFIO_RX_T3N/DQ12T (NC)	DIFFIO_TX_T3N/DQ12T (NC)	L9	
	H10	DIFFIO_RX_T4P (NC)	DIFFIO_TX_T4P/DQ12T (NC)	F9	
	G10	DIFFIO_RX_T4N/DQ12T (NC)	DIFFIO_TX_T4N/DQ12T (NC)	F8	
FSM_A5	C8	DIFFIO_RX_T5P/DQ11T	DIFFIO_TX_T5P	K12	10 SRAM_GWn
FLASH_WEn 3,11	C7	DIFFIO_RX_T5N/DQ11T	DIFFIO_TX_T5N/DQ11T	J11	10 SRAM_WEn
FSM_A23	F10	DIFFIO_RX_T6P	DIFFIO_TX_T6P/DQS11T/CQ11T	J12	10 SRAM_CLK
SRAM_BEn2	E9	DIFFIO_RX_T6N/DQ11T	DIFFIO_TX_T6N/DQSN11T/DQ11T	H12	SRAM_BEn1
SRAM_CE1n 10	E10	DIFFIO_RX_T7P	DIFFIO_TX_T7P/DQ11T/CQN11T	M13	FSM_A21
SRAM_ADVn 10	D9	DIFFIO_RX_T7N/DQ11T	DIFFIO_TX_T7N/DQ11T	L13	FSM_A4
SRAM_OEn 10	D10	DIFFIO_RX_T8P	DIFFIO_TX_T8N/DQ11T	H13	SRAM_BEn3
SRAM_ADSCn 10	C10	DIFFIO_RX_T8N/DQ11T	DIFFIO_TX_T8P/DQ11T	J13	SRAM_BEn0

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U19M — Arria II GX Bank 8B

EP2AGX260 Only !

	G25	DIFFIO_RX_T41P/DQ2T	DIFFIO_TX_T41P/	K23	
	G24	DIFFIO_RX_T41N/DQ2T	DIFFIO_TX_T41N/DQ2T	J22	
	J27	DIFFIO_RX_T42P	DIFFIO_TX_T42P/DQS2T/CQ2T	H27	
	J28	DIFFIO_RX_T42N/DQ2T	DIFFIO_TX_T42N/DQSN2T/DQ2T	G26	
	G28	DIFFIO_RX_T43P	DIFFIO_TX_T43P/DQ2T/CQN2T	L22	
	G27	DIFFIO_RX_T43N/DQ2T	DIFFIO_TX_T43N/DQ2T	K22	
	L28	DIFFIO_RX_T44P	DIFFIO_TX_T44P/DQ2T	F27	
	K28	DIFFIO_RX_T44N/DQ2T	DIFFIO_TX_T44N/DQ2T	E27	
	J29	DIFFIO_RX_T45P/DQ1T	DIFFIO_TX_T45P	K24	
	H28	DIFFIO_RX_T45N/DQ1T	DIFFIO_TX_T45N/DQ1T	J24	
	G30	DIFFIO_RX_T46P	DIFFIO_TX_T46P/DQS1T/CQ1T	J30	
	F30	DIFFIO_RX_T46N/DQ1T	DIFFIO_TX_T46N/DQSN1T/DQ1T	H30	
	F28	DIFFIO_RX_T47P	DIFFIO_TX_T47P/DQ1T/CQN1T	J25	
	E28	DIFFIO_RX_T47N/DQ1T	DIFFIO_TX_T47N/DQ1T	H24	
	G29	DIFFIO_RX_T48P	DIFFIO_TX_T48P/DQ1T	E30	
	F29	DIFFIO_RX_T48N/DQ1T	DIFFIO_TX_T48N/DQ1T	D30	

EP2AGX125F1152

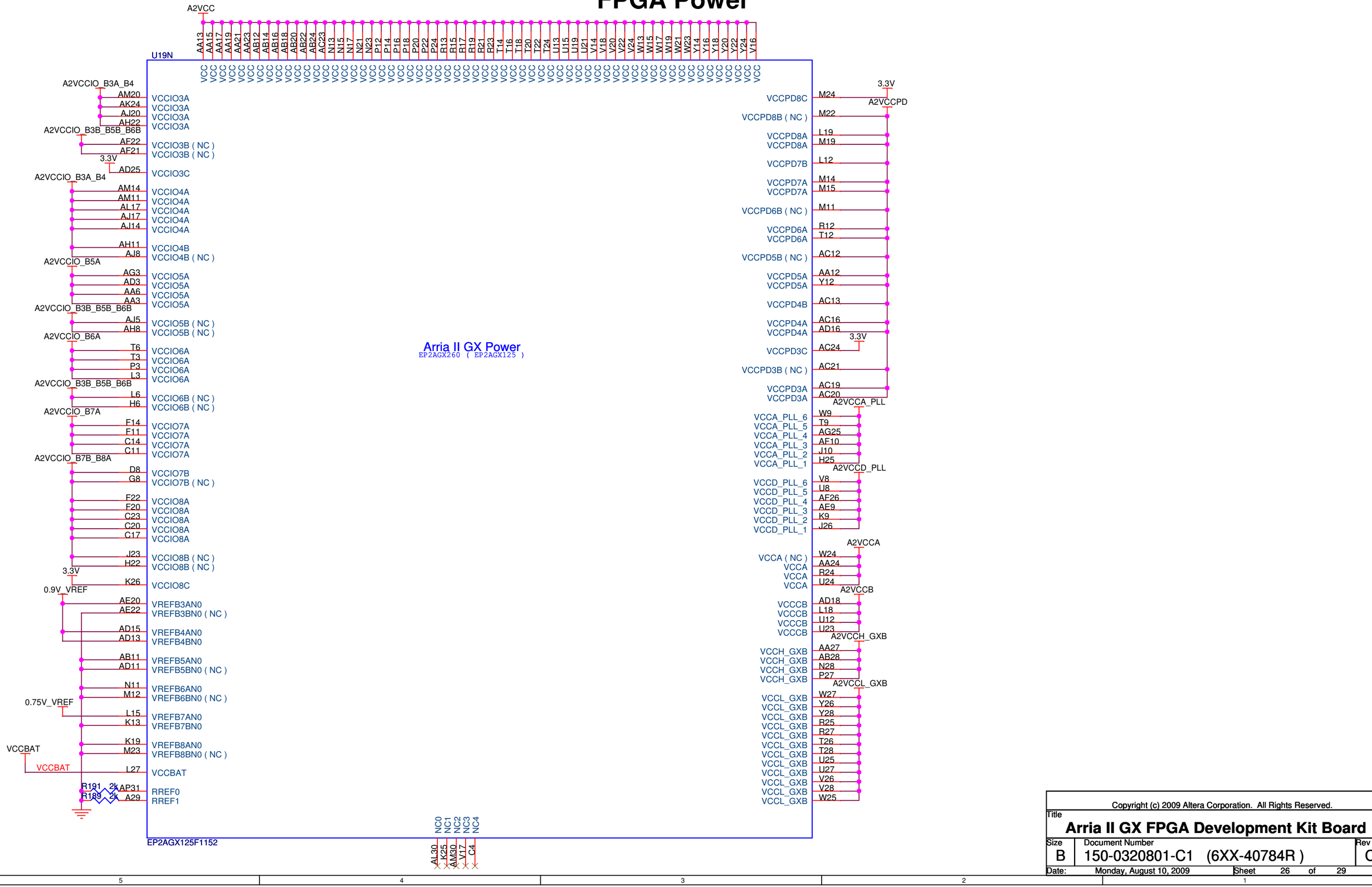
9 DDR3_A[14..0]
9 DDR3_BA[2..0]
9 DDR3_DM[1..0]
9 DDR3_DQ[15..0]
9 DDR3_DQS_n[1..0]
9 DDR3_DQS_p[1..0]
3,10,11,24 FSM_A[25..0]
3,10,11,24 FSM_D[31..0]
10 SRAM_BEn[3..0]
10,24 SRAM_DQP[3..0]
15 ENET_TXD[3..0]
15 ENET_RXD[3..0]
3 MAX2_BEn[3..0]

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 25 of 29

FPGA Power



Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 26 of 29

FPGA Ground

Title: **Arria II GX FPGA Development Kit Board**

Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

Date: Monday, August 10, 2009 Sheet 27 of 29

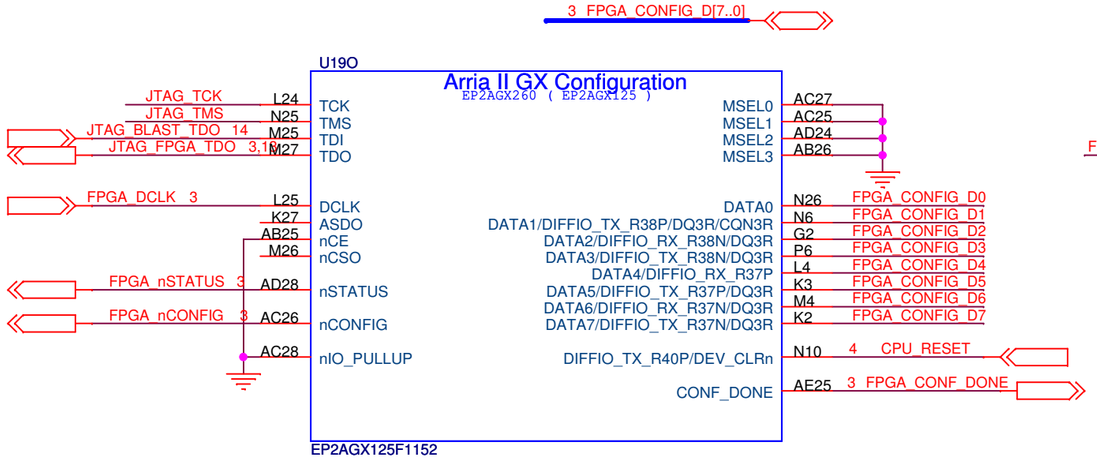
FPGA Decoupling

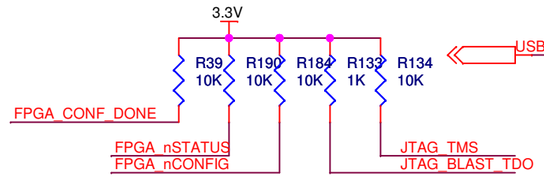
Title
Arria II GX FPGA Development Kit Board

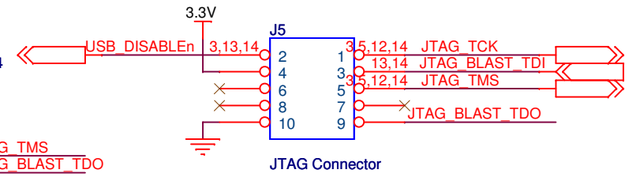
Size	Document Number	Rev
B	150-0320801-C1 (6XX-40784R)	C

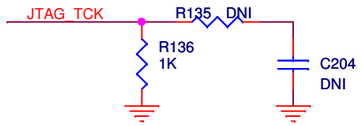
Date: Monday, August 10, 2009 Sheet 28 of 29

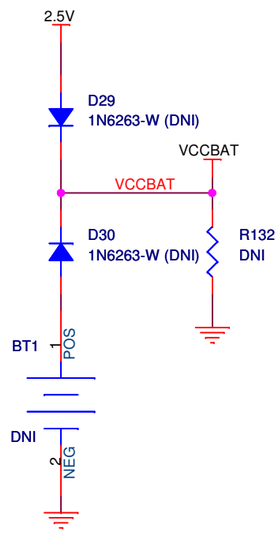
FPGA Configuration











Title	Arria II GX FPGA Development Kit Board	
Size: B	Document Number: 150-0320801-C1 (6XX-40784R)	Rev: C
Date: Monday, August 10, 2009	Sheet 29 of 29	