GA-880GM-D2H

Revision : 4.0

9M880GD2H-00

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06	CPU CONTROL
07	CPU POWER & GND
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10	RS780 SYSTEM I/F,STRAP
11	RS780 POWER & GND
12	RTM880T-792-VB-GRT
13	ATI SB710 PCIE/PCI/CPU/LPC
14	ATI SB710 ACPI/USB/GPIO/AUDIO
15	ATI SB710 SATA/SPI/IDE/HWM
16	ATI SB710 POWER & GND
17	PCI EXPRESS x16 ,x1
18	PCI SLOT
19	LAN AR8151/8152
20	AUDIO ALC887-VD2 AUDIO JACK
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22	IT8720 LPC IO ,Dual-BIOS, KB/MS
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PAGE	TITLE
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28	DDRIII POWER, VCC18
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Title: COVER SHEET			
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Model Name:GA-880GM-D2H

Component value change history

Version: 4.0

P-Code:

Date	Change Item	Reason
2011.07.26	3.1A EBOM Release. PCB: 3.1	Modify From 78LMT-S2P 31E
		*VCORE change 3 Phase TO-252 / all of BH change to PH REMOVE On/off charge CPU_FAN Voltage mode FUSE 2.6AX2 Codec -->ALC887 / LAN-->AR8151 Remove On/off charge Add HDMI & DVI Connector (Same as 880GM-D2H)
2011.08.25	4.0A PBOM Release. PCB: 4.0	Rename 880GM-D2H , 台固改日固 , Add CPU BOT Side 22uF *7 CAP DDR Default 改1.6V & DDR / SB OV & RM Change Black type 阻值ISL6609 to ISL6612 & 12V Driven,DEL LAC1&2,C1791,C74 C7/C1064 add 100p & ACN3 180pFor EMI request

Circuit or PCB layout change for next version

Date	Version	Change Item (RS760=RS780L)
2011.07.26	3.1 Gerber out	Modify From 78LMT-S2P 31E
		*VCORE change 3 Phase TO-252 / all of BH change to PH REMOVE On/off charge Remove CPU_FAN Voltage mode FUSE 2.6AX2 Codec -->ALC887 / LAN-->AR8151 Remove On/off charge Add HDMI & DVI Connector (Same as 880GM-D2H)
2011.08.24	880GM-D2H 4.0 Gerber out	Change From 880GM-S2H REV : 3.1 , remove LAC1&2 ,R42,R43 Add Add R75,R35 CR74,CR75,CR76,CR77 NET 移至 F_AUDIO Header端 , LAN Reference GND

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Title: BOM & PCB HISTORY

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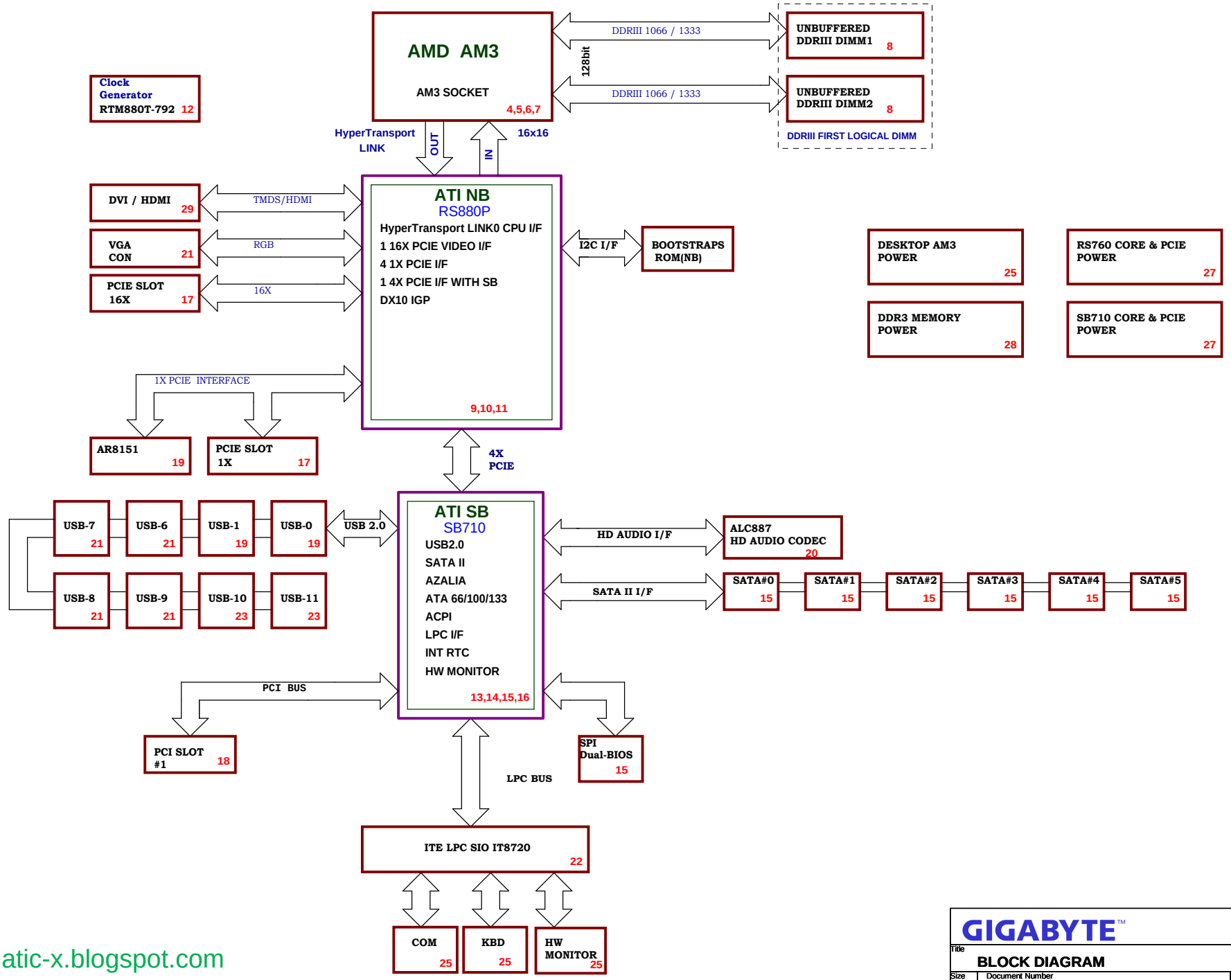
RS880P CUSTOMER DESKTOP DESIGN



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Title: BLOCK DIAGRAM

Size	Document Number	Rev
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L0_CADIN_L[0..15] L0_CADIN_L[0..15] [9]

L0_CADIN_H[0..15] L0_CADIN_H[0..15] [9]

L0_CADOUT_L[0..15] L0_CADOUT_L[0..15] [9]

L0_CADOUT_H[0..15] L0_CADOUT_H[0..15] [9]

M2CPUA

HYPERTRANSPORT

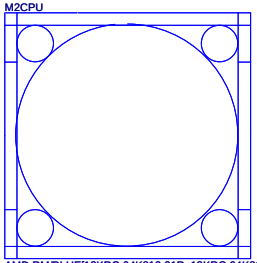
[9] L0_CLKIN_H1	L0_CLKIN_H1	N6	L0_CLKIN_H(1)	L0_CLKOUT_H(1)	AD5	L0_CLKOUT_H1	L0_CLKOUT_H1 [9]
[9] L0_CLKIN_L1	L0_CLKIN_L1	P6	L0_CLKIN_L(1)	L0_CLKOUT_L(1)	AD4	L0_CLKOUT_L1	L0_CLKOUT_L1 [9]
[9] L0_CLKIN_H0	L0_CLKIN_H0	N3	L0_CLKIN_H(0)	L0_CLKOUT_H(0)	AD1	L0_CLKOUT_H0	L0_CLKOUT_H0 [9]
[9] L0_CLKIN_L0	L0_CLKIN_L0	N2	L0_CLKIN_L(0)	L0_CLKOUT_L(0)	AC1	L0_CLKOUT_L0	L0_CLKOUT_L0 [9]
[9] L0_CTLIN_H1	L0_CTLIN_H1	V4	L0_CTLIN_H(1)	L0_CTLOUT_H(1)	Y6	L0_CTLOUT_H1	L0_CTLOUT_H1 [9]
[9] L0_CTLIN_L1	L0_CTLIN_L1	V5	L0_CTLIN_L(1)	L0_CTLOUT_L(1)	W6	L0_CTLOUT_L1	L0_CTLOUT_L1 [9]
[9] L0_CTLIN_H0	L0_CTLIN_H0	U1	L0_CTLIN_H(0)	L0_CTLOUT_H(0)	W2	L0_CTLOUT_H0	L0_CTLOUT_H0 [9]
[9] L0_CTLIN_L0	L0_CTLIN_L0	V1	L0_CTLIN_L(0)	L0_CTLOUT_L(0)	W3	L0_CTLOUT_L0	L0_CTLOUT_L0 [9]
	L0_CADIN_H15	U6	L0_CADIN_H(15)	L0_CADOUT_H(15)	Y5	L0_CADOUT_H15	
	L0_CADIN_L15	V6	L0_CADIN_L(15)	L0_CADOUT_L(15)	Y4	L0_CADOUT_L15	
	L0_CADIN_H14	T4	L0_CADIN_H(14)	L0_CADOUT_H(14)	AB6	L0_CADOUT_H14	
	L0_CADIN_L14	T5	L0_CADIN_L(14)	L0_CADOUT_L(14)	AA6	L0_CADOUT_L14	
	L0_CADIN_H13	R6	L0_CADIN_H(13)	L0_CADOUT_H(13)	AB5	L0_CADOUT_H13	
	L0_CADIN_L13	T6	L0_CADIN_L(13)	L0_CADOUT_L(13)	AB4	L0_CADOUT_L13	
	L0_CADIN_H12	P4	L0_CADIN_H(12)	L0_CADOUT_H(12)	AD6	L0_CADOUT_H12	
	L0_CADIN_L12	P5	L0_CADIN_L(12)	L0_CADOUT_L(12)	AC6	L0_CADOUT_L12	
	L0_CADIN_H11	M4	L0_CADIN_H(11)	L0_CADOUT_H(11)	AF6	L0_CADOUT_H11	
	L0_CADIN_L11	M5	L0_CADIN_L(11)	L0_CADOUT_L(11)	AE6	L0_CADOUT_L11	
	L0_CADIN_H10	L6	L0_CADIN_H(10)	L0_CADOUT_H(10)	AE5	L0_CADOUT_H10	
	L0_CADIN_L10	M6	L0_CADIN_L(10)	L0_CADOUT_L(10)	AF4	L0_CADOUT_L10	
	L0_CADIN_H9	K4	L0_CADIN_H(9)	L0_CADOUT_H(9)	AH6	L0_CADOUT_H9	
	L0_CADIN_L9	K5	L0_CADIN_L(9)	L0_CADOUT_L(9)	AG6	L0_CADOUT_L9	
	L0_CADIN_H8	J6	L0_CADIN_H(8)	L0_CADOUT_H(8)	AH5	L0_CADOUT_H8	
	L0_CADIN_L8	K6	L0_CADIN_L(8)	L0_CADOUT_L(8)	AH4	L0_CADOUT_L8	
	L0_CADIN_H7	U3	L0_CADIN_H(7)	L0_CADOUT_H(7)	Y1	L0_CADOUT_H7	
	L0_CADIN_L7	U2	L0_CADIN_L(7)	L0_CADOUT_L(7)	W1	L0_CADOUT_L7	
	L0_CADIN_H6	R1	L0_CADIN_H(6)	L0_CADOUT_H(6)	AA2	L0_CADOUT_H6	
	L0_CADIN_L6	T1	L0_CADIN_L(6)	L0_CADOUT_L(6)	AA3	L0_CADOUT_L6	
	L0_CADIN_H5	R3	L0_CADIN_H(5)	L0_CADOUT_H(5)	AB1	L0_CADOUT_H5	
	L0_CADIN_L5	R2	L0_CADIN_L(5)	L0_CADOUT_L(5)	AA1	L0_CADOUT_L5	
	L0_CADIN_H4	N1	L0_CADIN_H(4)	L0_CADOUT_H(4)	AC2	L0_CADOUT_H4	
	L0_CADIN_L4	P1	L0_CADIN_L(4)	L0_CADOUT_L(4)	AC3	L0_CADOUT_L4	
	L0_CADIN_H3	L1	L0_CADIN_H(3)	L0_CADOUT_H(3)	AE2	L0_CADOUT_H3	
	L0_CADIN_L3	M1	L0_CADIN_L(3)	L0_CADOUT_L(3)	AE3	L0_CADOUT_L3	
	L0_CADIN_H2	L3	L0_CADIN_H(2)	L0_CADOUT_H(2)	AF1	L0_CADOUT_H2	
	L0_CADIN_L2	L2	L0_CADIN_L(2)	L0_CADOUT_L(2)	AE1	L0_CADOUT_L2	
	L0_CADIN_H1	J1	L0_CADIN_H(1)	L0_CADOUT_H(1)	AG2	L0_CADOUT_H1	
	L0_CADIN_L1	K1	L0_CADIN_L(1)	L0_CADOUT_L(1)	AG3	L0_CADOUT_L1	
	L0_CADIN_H0	J3	L0_CADIN_H(0)	L0_CADOUT_H(0)	AH1	L0_CADOUT_H0	
	L0_CADIN_L0	J2	L0_CADIN_L(0)	L0_CADOUT_L(0)	AG1	L0_CADOUT_L0	

CPU-SK/941AM3/S/15u/[10SC1-A01942-01R_10SC1-A01942-02R]

CPU_VDD_RUN = VCORE
CPU_VDDA_RUN = VDDA25
VLDT_RUN = VCC12_HT
CPU_VDDIO_SUS = DDR18V
CPU_VTT_SUS = DDRVTT

VLDT_A = VCC12_HT
VLDT_B = HT12B

M2CPU



AMD RM/BLUE[12KRC-04K812-21R_12KRC-04K812-22R]

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Title	CPU HYPER TRANSPORT	
Size: Custom	Document Number: GA-880GM-D2H	Rev: 4.0
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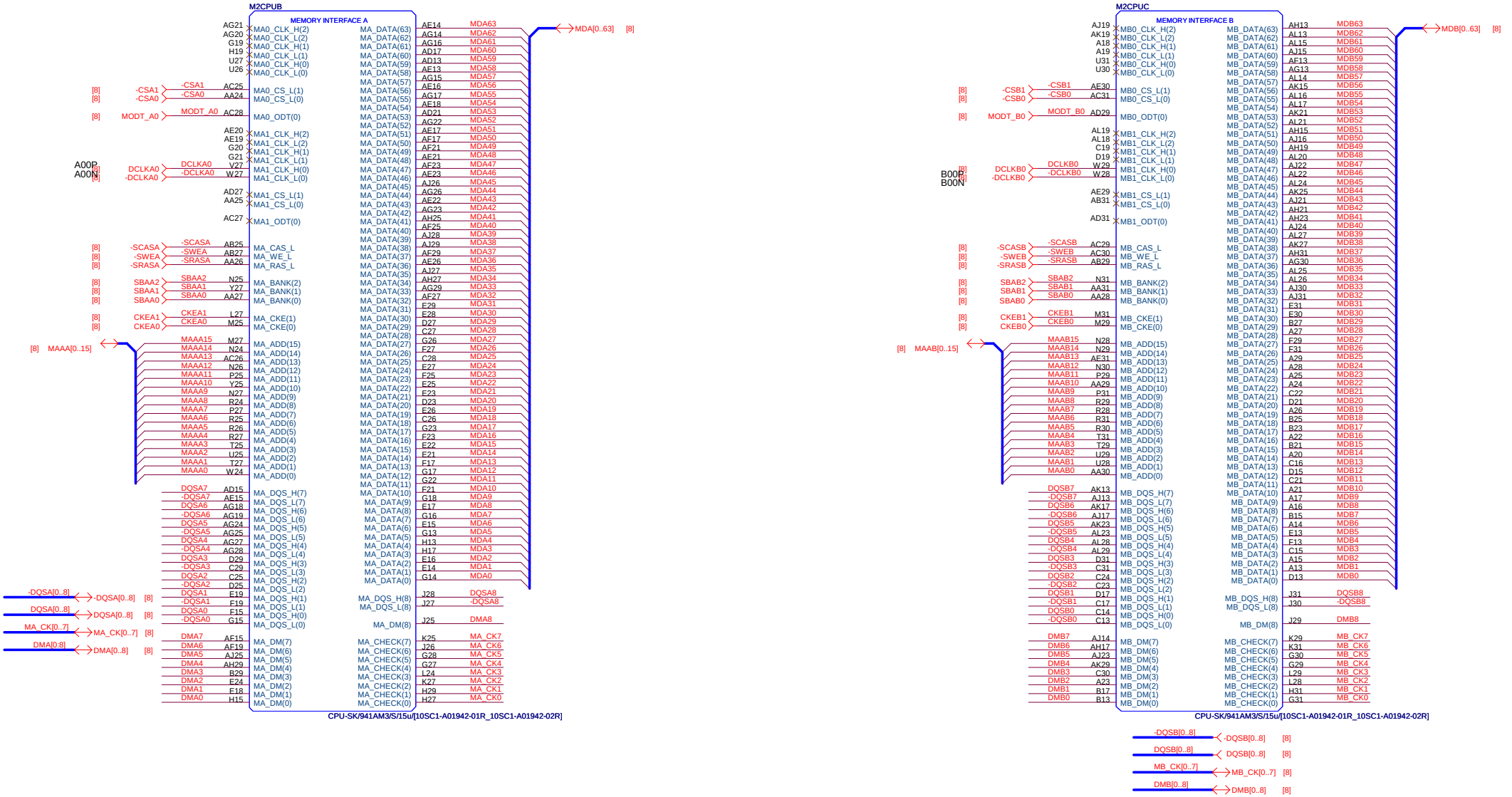
M2CPUB
MEMORY INTERFACE A
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MA0_CLK_L(2)
MA0_CLK_H(1)
MA0_CLK_L(1)
MA0_CLK_H(0)
MA0_CLK_L(0)
MA0_CS_L(1)
MA0_CS_L(0)
MA0_ODT(0)
MA1_CLK_H(2)
MA1_CLK_L(2)
MA1_CLK_H(1)
MA1_CLK_L(1)
MA1_CLK_H(0)
MA1_CLK_L(0)
MA1_CS_L(1)
MA1_CS_L(0)
MA1_ODT(0)
MA_CAS_L
MA_WE_L
MA_RAS_L
MA_BANK(2)
MA_BANK(1)
MA_BANK(0)
MA_CKE(1)
MA_CKE(0)
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MA_DQS_L(6)
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MA_DQS_L(5)
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MA_DQS_L(3)
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MDA2
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DQSA8
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DMA8
MA_CK7
MA_CK6
MA_CK5
MA_CK4
MA_CK3
MA_CK2
MA_CK1
MA_CK0
MDA[0..63]
CPU-SK/941AM3/S/15u/[10SC1-A01942-01R_10SC1-A01942-02R]
M2CPUC
MEMORY INTERFACE B
MB0_CLK_H(2)
MB0_CLK_L(2)
MB0_CLK_H(1)
MB0_CLK_L(1)
MB0_CLK_H(0)
MB0_CLK_L(0)
MB0_CS_L(1)
MB0_CS_L(0)
MB0_ODT(0)
MB1_CLK_H(2)
MB1_CLK_L(2)
MB1_CLK_H(1)
MB1_CLK_L(1)
MB1_CLK_H(0)
MB1_CLK_L(0)
MB1_CS_L(1)
MB1_CS_L(0)
MB1_ODT(0)
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MDB6
MDB5
MDB4
MDB3
MDB2
MDB1
MDB0
DQSB8
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DMB8
MB_CK7
MB_CK6
MB_CK5
MB_CK4
MB_CK3
MB_CK2
MB_CK1
MB_CK0
MDB[0..63]
CPU-SK/941AM3/S/15u/[10SC1-A01942-01R_10SC1-A01942-02R]
GIGABYTE
Title
CPU DDRII MEMORY
Size
Custom
Document Number
GA-880GM-D2H
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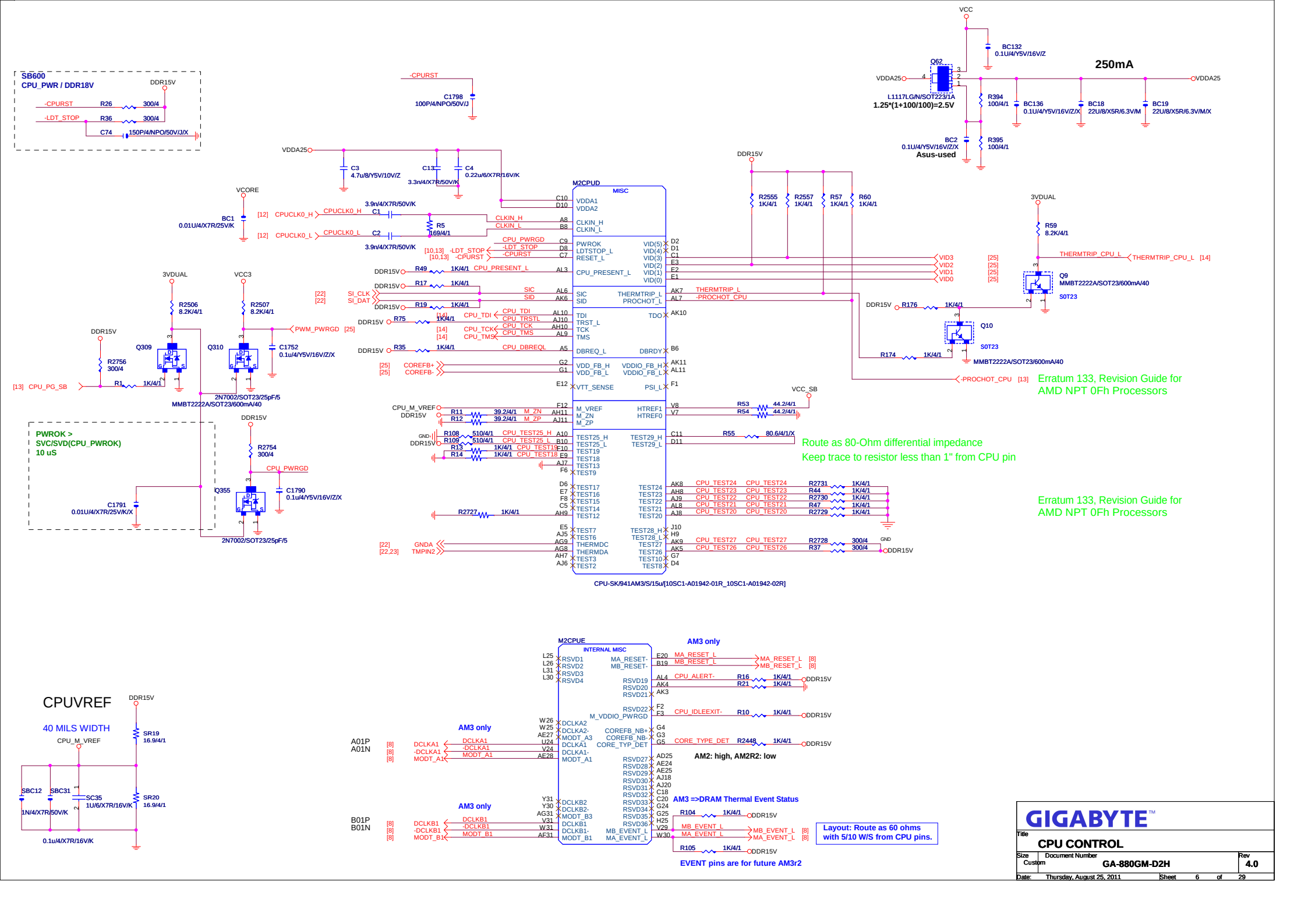
SB600
CPU_PWR / DDR18V
DDR15V
-CPURST
R26 300/4
-LDT_STOP
R36 300/4
C74 150P/4/NPO/50V/J/X
C1798 100P4/NPO/50V/J
VCC
BC132 0.1U/4/Y5V/16V/Z
Q62
250mA
VDDA25
L1117LG/N/SOT223/1A
1.25*(1+100/100)=2.5V
R394 100/4/1
BC136 0.1U/4/Y5V/16V/Z/X
BC18 22U/8/X5R/6.3V/M
BC19 22U/8/X5R/6.3V/M/X
BC2 0.1U/4/Y5V/16V/Z/X
Asus-used
R395 100/4/1
C3 4.7u/8/Y5V/10V/Z
C13 3.3n/4/X7R/50V/K
C4 0.22u/6/X7R/16V/K
VCORE
BC1 0.01U/4/X7R/25V/K
3.9n/4/X7R/50V/K
C1
C2
R5 169/4/1
CPUCLK0_H
CPUCLK0_L
M2CPUD
MISC
CLKIN_H
CLKIN_L
CPU_PWRGD
-LDT_STOP
-CPURST
CPU_PRESENT_L
R49 1K/4/1
R17 1K/4/1
R19 1K/4/1
R75 1K/4/1
R35 1K/4/1
SIC
SID
CPU_TDI
CPU_TRSTL
CPU_TCK
CPU_TMS
CPU_DBREQL
COREFB+
COREFB-
CPU_M_VREF
R11 39.2/4/1 M_ZN
R12 39.2/4/1 M_ZP
R108 510/4/1 CPU_TEST25_H
R109 510/4/1 CPU_TEST25_L
R13 1K/4/1 CPU_TEST19
R14 1K/4/1 CPU_TEST18
R2727 1K/4/1
GNDA
TMPIN2
THERMTRIP_L
PROCHOT_L
TDO
VDD_FB_H
VDD_FB_L
VDDIO_FB_H
VDDIO_FB_L
VTT_SENSE
PSI_L
HTREF1
HTREF0
TEST25_H
TEST25_L
TEST19
TEST18
TEST13
TEST9
TEST17
TEST16
TEST15
TEST14
TEST12
TEST7
TEST6
THERMDC
THERMDA
TEST3
TEST2
TEST24
TEST23
TEST22
TEST21
TEST20
TEST29_H
TEST29_L
TEST28_H
TEST28_L
TEST27
TEST26
TEST10
TEST8
CPU-SK/941AM3/S/15u/[10SC1-A01942-01R_10SC1-A01942-02R]
DDR15V
R2555 1K/4/1
R2557 1K/4/1
R57 1K/4/1
R60 1K/4/1
VID(5)
VID(4)
VID(3)
VID(2)
VID(1)
VID(0)
VID3
VID2
VID1
VID0
THERMTRIP_L
-PROCHOT_CPU
3VDUAL
R59 8.2K/4/1
THERMTRIP_CPU_L
Q9
MMBT2222A/SOT23/600mA/40
SOT23
R176 1K/4/1
Q10
R174 1K/4/1
MMBT2222A/SOT23/600mA/40
-PROCHOT_CPU [13]
Erratum 133, Revision Guide for AMD NPT 0Fh Processors
VCC_SB
R53 44.2/4/1
R54 44.2/4/1
R55 80.6/4/1/X
Route as 80-Ohm differential impedance
Keep trace to resistor less than 1" from CPU pin
Erratum 133, Revision Guide for AMD NPT 0Fh Processors
R2731 1K/4/1
R44 1K/4/1
R2730 1K/4/1
R47 1K/4/1
R2729 1K/4/1
R2728 300/4
R37 300/4
3VDUAL
VCC3
R2506 8.2K/4/1
R2507 8.2K/4/1
PWM_PWRGD [25]
C1752 0.1u/4/Y5V/16V/Z/X
Q309
Q310
R2756 300/4
R1 1K/4/1
CPU_PG_SB [13]
2N7002/SOT23/25pF/5
MMBT2222A/SOT23/600mA/40
PWROK > SVC/SVD(CPU_PWROK) 10 uS
R2754 300/4
CPU_PWRGD
Q355
C1790 0.1u/4/Y5V/16V/Z/X
C1791 0.01U/4/X7R/25V/K/X
2N7002/SOT23/25pF/5
M2CPUE
INTERNAL MISC
AM3 only
RSVD1
RSVD2
RSVD3
RSVD4
MA_RESET-
MB_RESET-
MA_RESET_L
MB_RESET_L
CPU_ALERT-
R16 1K/4/1
R21 1K/4/1
RSVD19
RSVD20
RSVD21
RSVD22
M_VDDIO_PWRGD
CPU_IDLEEXIT-
R10 1K/4/1
DCLKA2
DCLKA2-
MODT_A3
DCLKA1
DCLKA1-
MODT_A1
COREFB_NB+
COREFB_NB-
CORE_TYP_DET
CORE_TYPE_DET
R2448 1K/4/1
A01P
A01N
DCLKA1
-DCLKA1
MODT_A1
AM2: high, AM2R2: low
RSVD27
RSVD28
RSVD29
RSVD30
RSVD31
RSVD32
RSVD33
RSVD34
RSVD35
RSVD36
AM3 =>DRAM Thermal Event Status
R104 1K/4/1
MB_EVENT_L
MA_EVENT_L
R105 1K/4/1
DCLKB2
DCLKB2-
MODT_B3
DCLKB1
DCLKB1-
MODT_B1
B01P
B01N
DCLKB1
-DCLKB1
MODT_B1
Layout: Route as 60 ohms with 5/10 W/S from CPU pins.
EVENT pins are for future AM3r2
CPUVREF
40 MILS WIDTH
CPU_M_VREF
SR19 16.9/4/1
SR20 16.9/4/1
SBC12 1N/4/X7R/50V/K
SBC31
SC35 1U/6/X7R/16V/K
0.1u/4/X7R/16V/K
GIGABYTE
Title
CPU CONTROL
Size Custom
Document Number GA-880GM-D2H
Rev 4.0
Date: Thursday, August 25, 2011
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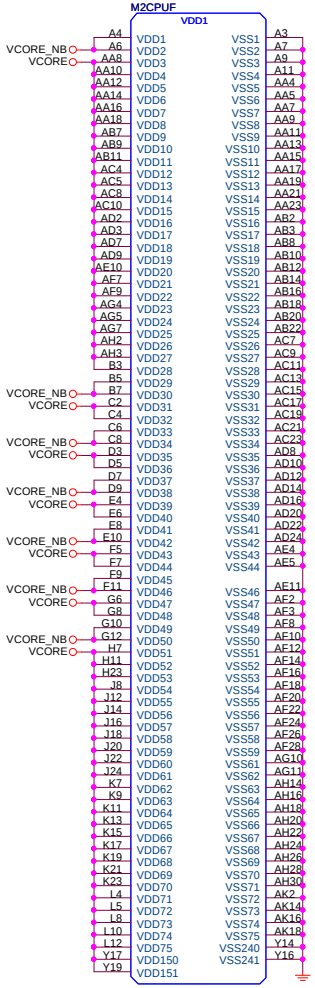
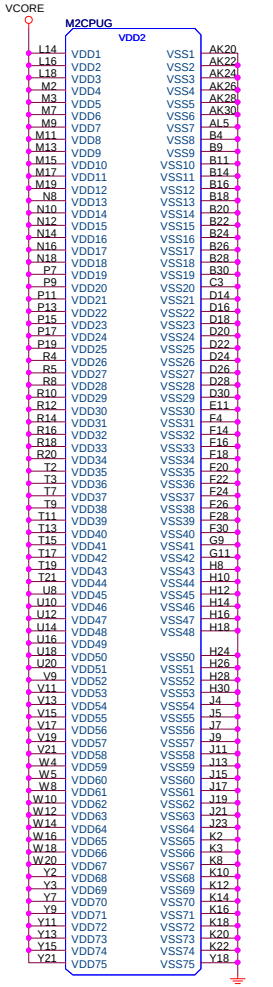
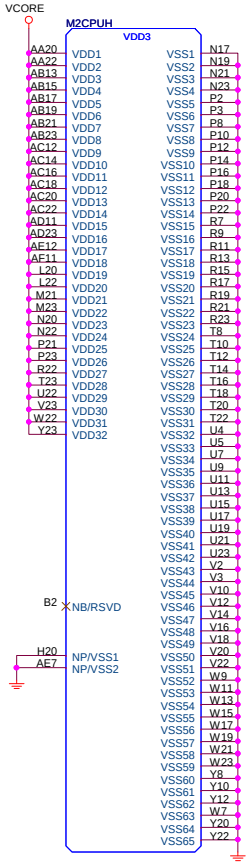
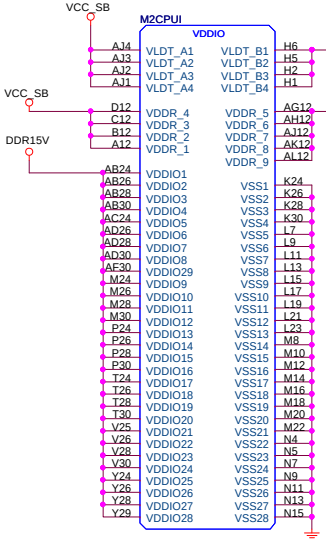
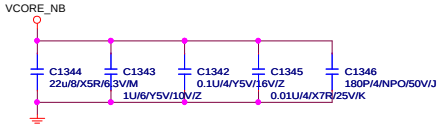
VLDT_RUN_B is connected to the VLDT_RUN power supply through the package or on the die. It is only connected on the board to decoupling near the CPU package.

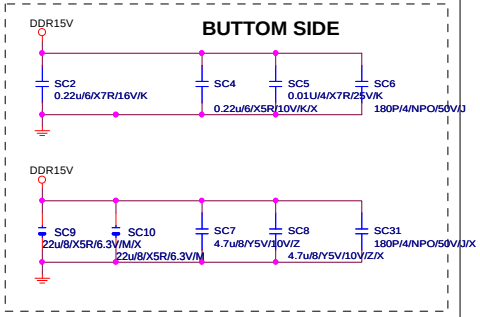


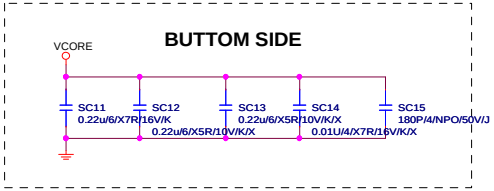


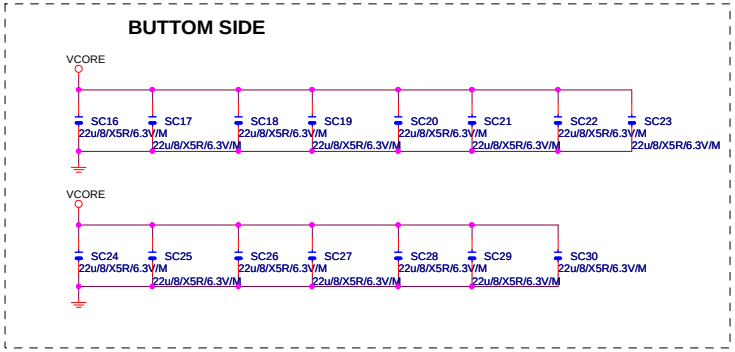


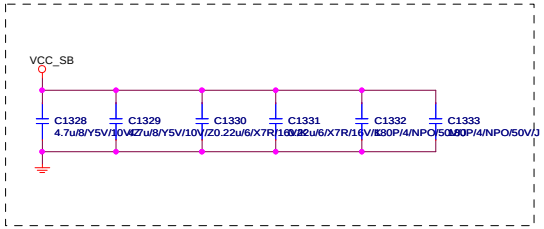


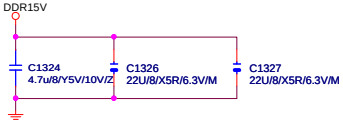


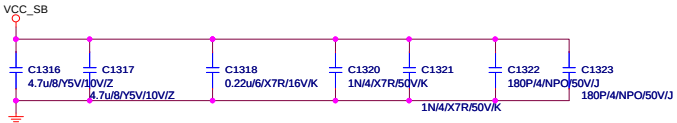


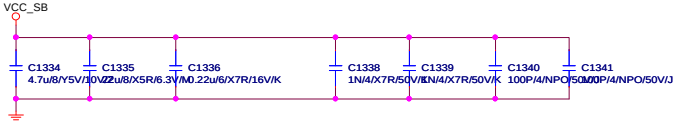


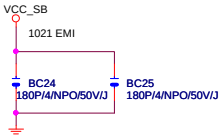












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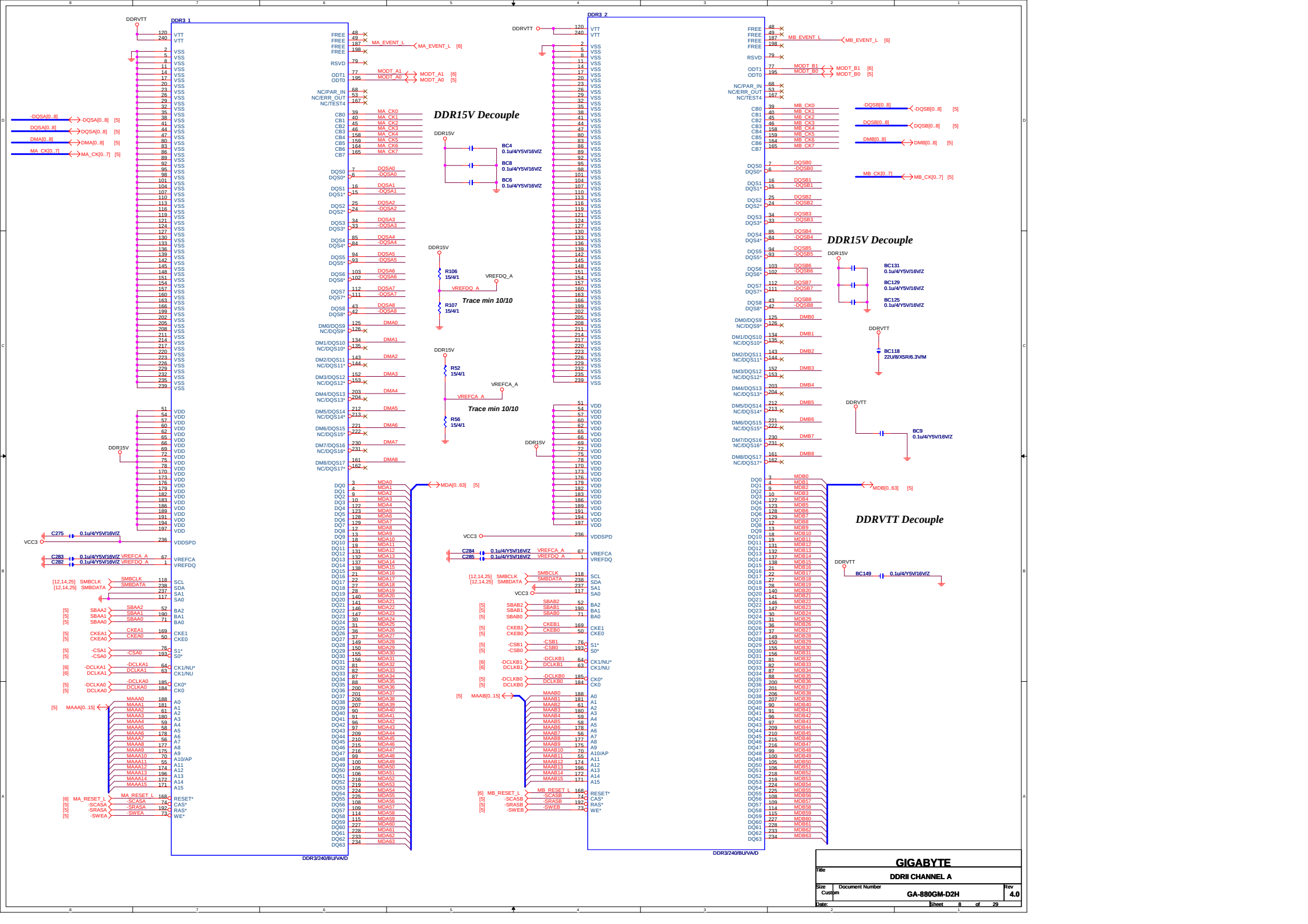
Title: CPU POWER & GND		
Size: Custom	Document Number: GA-880GM-D2H	Rev: 4.0
Date: Thursday, August 25, 2011	Sheet 7 of 29	


DDR3_1
DDR3_2
DDR15V Decouple
DDR15V Decouple
DDRVTT Decouple
Trace min 10/10
Trace min 10/10
DDR3/240/BU/VA/D
DDR3/240/BU/VA/D
GIGABYTE
DDRII CHANNEL A
GA-880GM-D2H
4.0
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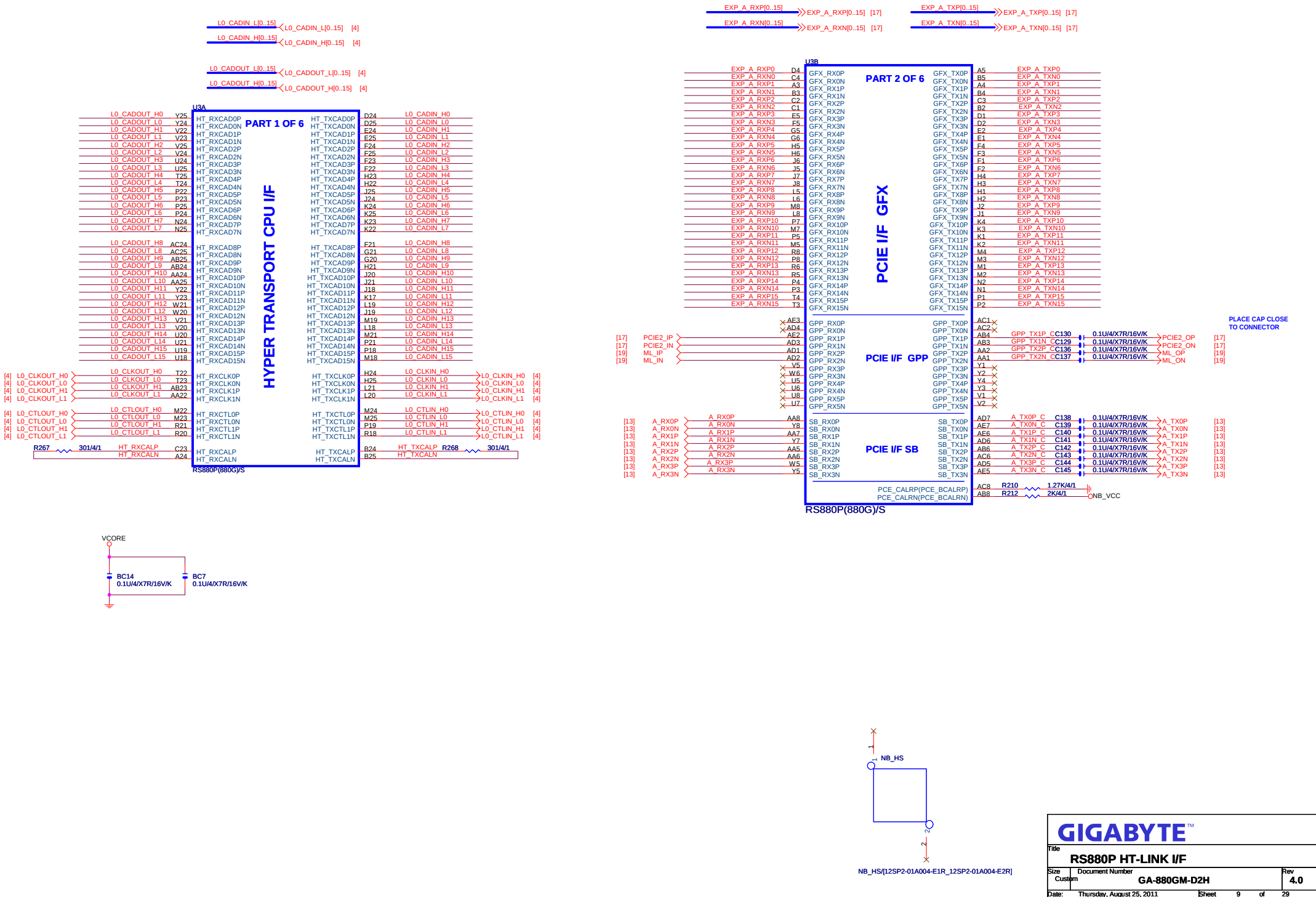
L0_CADIN_L[0..15]
L0_CADIN_L[0..15] [4]
L0_CADIN_H[0..15]
L0_CADIN_H[0..15] [4]
L0_CADOUT_L[0..15]
L0_CADOUT_L[0..15] [4]
L0_CADOUT_H[0..15]
L0_CADOUT_H[0..15] [4]
U3A
PART 1 OF 6
HYPER TRANSPORT CPU I/F
HT_RXCAD0P
HT_RXCAD0N
HT_RXCAD1P
HT_RXCAD1N
HT_RXCAD2P
HT_RXCAD2N
HT_RXCAD3P
HT_RXCAD3N
HT_RXCAD4P
HT_RXCAD4N
HT_RXCAD5P
HT_RXCAD5N
HT_RXCAD6P
HT_RXCAD6N
HT_RXCAD7P
HT_RXCAD7N
HT_RXCAD8P
HT_RXCAD8N
HT_RXCAD9P
HT_RXCAD9N
HT_RXCAD10P
HT_RXCAD10N
HT_RXCAD11P
HT_RXCAD11N
HT_RXCAD12P
HT_RXCAD12N
HT_RXCAD13P
HT_RXCAD13N
HT_RXCAD14P
HT_RXCAD14N
HT_RXCAD15P
HT_RXCAD15N
HT_RXCLK0P
HT_RXCLK0N
HT_RXCLK1P
HT_RXCLK1N
HT_RXCTL0P
HT_RXCTL0N
HT_RXCTL1P
HT_RXCTL1N
HT_RXCALP
HT_RXCALN
HT_TXCAD0P
HT_TXCAD0N
HT_TXCAD1P
HT_TXCAD1N
HT_TXCAD2P
HT_TXCAD2N
HT_TXCAD3P
HT_TXCAD3N
HT_TXCAD4P
HT_TXCAD4N
HT_TXCAD5P
HT_TXCAD5N
HT_TXCAD6P
HT_TXCAD6N
HT_TXCAD7P
HT_TXCAD7N
HT_TXCAD8P
HT_TXCAD8N
HT_TXCAD9P
HT_TXCAD9N
HT_TXCAD10P
HT_TXCAD10N
HT_TXCAD11P
HT_TXCAD11N
HT_TXCAD12P
HT_TXCAD12N
HT_TXCAD13P
HT_TXCAD13N
HT_TXCAD14P
HT_TXCAD14N
HT_TXCAD15P
HT_TXCAD15N
HT_TXCLK0P
HT_TXCLK0N
HT_TXCLK1P
HT_TXCLK1N
HT_TXCTL0P
HT_TXCTL0N
HT_TXCTL1P
HT_TXCTL1N
HT_TXCALP
HT_TXCALN
L0_CADOUT_H0 Y25
L0_CADOUT_L0 Y24
L0_CADOUT_H1 V22
L0_CADOUT_L1 V23
L0_CADOUT_H2 V25
L0_CADOUT_L2 V24
L0_CADOUT_H3 U24
L0_CADOUT_L3 U25
L0_CADOUT_H4 T25
L0_CADOUT_L4 T24
L0_CADOUT_H5 P22
L0_CADOUT_L5 P23
L0_CADOUT_H6 P25
L0_CADOUT_L6 P24
L0_CADOUT_H7 N24
L0_CADOUT_L7 N25
L0_CADOUT_H8 AC24
L0_CADOUT_L8 AC25
L0_CADOUT_H9 AB25
L0_CADOUT_L9 AB24
L0_CADOUT_H10 AA24
L0_CADOUT_L10 AA25
L0_CADOUT_H11 Y22
L0_CADOUT_L11 Y23
L0_CADOUT_H12 W21
L0_CADOUT_L12 W20
L0_CADOUT_H13 V21
L0_CADOUT_L13 V20
L0_CADOUT_H14 U20
L0_CADOUT_L14 U21
L0_CADOUT_H15 U19
L0_CADOUT_L15 U18
L0_CLKOUT_H0 T22
L0_CLKOUT_L0 T23
L0_CLKOUT_H1 AB23
L0_CLKOUT_L1 AA22
L0_CTLOUT_H0 M22
L0_CTLOUT_L0 M23
L0_CTLOUT_H1 R21
L0_CTLOUT_L1 R20
R267 301/4/1 HT_RXCALP C23
HT_RXCALN A24
D24 L0_CADIN_H0
D25 L0_CADIN_L0
E24 L0_CADIN_H1
E25 L0_CADIN_L1
F24 L0_CADIN_H2
F25 L0_CADIN_L2
F23 L0_CADIN_H3
F22 L0_CADIN_L3
H23 L0_CADIN_H4
H22 L0_CADIN_L4
J25 L0_CADIN_H5
J24 L0_CADIN_L5
K24 L0_CADIN_H6
K25 L0_CADIN_L6
K23 L0_CADIN_H7
K22 L0_CADIN_L7
F21 L0_CADIN_H8
G21 L0_CADIN_L8
G20 L0_CADIN_H9
H21 L0_CADIN_L9
J20 L0_CADIN_H10
J21 L0_CADIN_L10
J18 L0_CADIN_H11
K17 L0_CADIN_L11
L19 L0_CADIN_H12
J19 L0_CADIN_L12
M19 L0_CADIN_H13
L18 L0_CADIN_L13
M21 L0_CADIN_H14
P21 L0_CADIN_L14
P18 L0_CADIN_H15
M18 L0_CADIN_L15
H24 L0_CLKIN_H0
H25 L0_CLKIN_L0
L21 L0_CLKIN_H1
L20 L0_CLKIN_L1
M24 L0_CTLIN_H0
M25 L0_CTLIN_L0
P19 L0_CTLIN_H1
R18 L0_CTLIN_L1
B24 HT_TXCALP R268 301/4/1
B25 HT_TXCALN
RS880P(880G)/S
[4] L0_CLKOUT_H0
[4] L0_CLKOUT_L0
[4] L0_CLKOUT_H1
[4] L0_CLKOUT_L1
[4] L0_CTLOUT_H0
[4] L0_CTLOUT_L0
[4] L0_CTLOUT_H1
[4] L0_CTLOUT_L1
L0_CLKIN_H0 [4]
L0_CLKIN_L0 [4]
L0_CLKIN_H1 [4]
L0_CLKIN_L1 [4]
L0_CTLIN_H0 [4]
L0_CTLIN_L0 [4]
L0_CTLIN_H1 [4]
L0_CTLIN_L1 [4]
VCORE
BC14 0.1U/4/X7R/16V/K
BC7 0.1U/4/X7R/16V/K
EXP_A_RXP[0..15]
EXP_A_RXP[0..15] [17]
EXP_A_RXN[0..15]
EXP_A_RXN[0..15] [17]
EXP_A_TXP[0..15]
EXP_A_TXP[0..15] [17]
EXP_A_TXN[0..15]
EXP_A_TXN[0..15] [17]
U3B
PART 2 OF 6
PCIE I/F GFX
PCIE I/F GPP
PCIE I/F SB
EXP_A_RXP0 D4
EXP_A_RXN0 C4
EXP_A_RXP1 A3
EXP_A_RXN1 B3
EXP_A_RXP2 C2
EXP_A_RXN2 C1
EXP_A_RXP3 E5
EXP_A_RXN3 F5
EXP_A_RXP4 G5
EXP_A_RXN4 G6
EXP_A_RXP5 H5
EXP_A_RXN5 H6
EXP_A_RXP6 J6
EXP_A_RXN6 J5
EXP_A_RXP7 J7
EXP_A_RXN7 J8
EXP_A_RXP8 L5
EXP_A_RXN8 L6
EXP_A_RXP9 M8
EXP_A_RXN9 L8
EXP_A_RXP10 P7
EXP_A_RXN10 M7
EXP_A_RXP11 P5
EXP_A_RXN11 M5
EXP_A_RXP12 P8
EXP_A_RXN12 R8
EXP_A_RXP13 R6
EXP_A_RXN13 R5
EXP_A_RXP14 P4
EXP_A_RXN14 P3
EXP_A_RXP15 T4
EXP_A_RXN15 T3
GFX_RX0P
GFX_RX0N
GFX_RX1P
GFX_RX1N
GFX_RX2P
GFX_RX2N
GFX_RX3P
GFX_RX3N
GFX_RX4P
GFX_RX4N
GFX_RX5P
GFX_RX5N
GFX_RX6P
GFX_RX6N
GFX_RX7P
GFX_RX7N
GFX_RX8P
GFX_RX8N
GFX_RX9P
GFX_RX9N
GFX_RX10P
GFX_RX10N
GFX_RX11P
GFX_RX11N
GFX_RX12P
GFX_RX12N
GFX_RX13P
GFX_RX13N
GFX_RX14P
GFX_RX14N
GFX_RX15P
GFX_RX15N
GFX_TX0P
GFX_TX0N
GFX_TX1P
GFX_TX1N
GFX_TX2P
GFX_TX2N
GFX_TX3P
GFX_TX3N
GFX_TX4P
GFX_TX4N
GFX_TX5P
GFX_TX5N
GFX_TX6P
GFX_TX6N
GFX_TX7P
GFX_TX7N
GFX_TX8P
GFX_TX8N
GFX_TX9P
GFX_TX9N
GFX_TX10P
GFX_TX10N
GFX_TX11P
GFX_TX11N
GFX_TX12P
GFX_TX12N
GFX_TX13P
GFX_TX13N
GFX_TX14P
GFX_TX14N
GFX_TX15P
GFX_TX15N
A5 EXP_A_TXP0
B5 EXP_A_TXN0
A4 EXP_A_TXP1
B4 EXP_A_TXN1
C3 EXP_A_TXP2
B2 EXP_A_TXN2
D1 EXP_A_TXP3
D2 EXP_A_TXN3
E2 EXP_A_TXP4
E1 EXP_A_TXN4
F4 EXP_A_TXP5
F3 EXP_A_TXN5
F1 EXP_A_TXP6
F2 EXP_A_TXN6
H4 EXP_A_TXP7
H3 EXP_A_TXN7
H1 EXP_A_TXP8
H2 EXP_A_TXN8
J2 EXP_A_TXP9
J1 EXP_A_TXN9
K4 EXP_A_TXP10
K3 EXP_A_TXN10
K1 EXP_A_TXP11
K2 EXP_A_TXN11
M4 EXP_A_TXP12
M3 EXP_A_TXN12
M1 EXP_A_TXP13
M2 EXP_A_TXN13
N2 EXP_A_TXP14
N1 EXP_A_TXN14
P1 EXP_A_TXP15
P2 EXP_A_TXN15
GPP_RX0P
GPP_RX0N
GPP_RX1P
GPP_RX1N
GPP_RX2P
GPP_RX2N
GPP_RX3P
GPP_RX3N
GPP_RX4P
GPP_RX4N
GPP_RX5P
GPP_RX5N
GPP_TX0P
GPP_TX0N
GPP_TX1P
GPP_TX1N
GPP_TX2P
GPP_TX2N
GPP_TX3P
GPP_TX3N
GPP_TX4P
GPP_TX4N
GPP_TX5P
GPP_TX5N
AE3
AD4
AE2
AD3
AD1
AD2
V5
W6
U5
U6
U8
U7
AC1
AC2
AB4
AB3
AA2
AA1
Y1
Y2
Y4
Y3
V1
V2
[17] PCIE2_IP
[17] PCIE2_IN
[19] ML_IP
[19] ML_IN
GPP_TX1P_C C130 0.1U/4/X7R/16V/K PCIE2_OP [17]
GPP_TX1N_C C129 0.1U/4/X7R/16V/K PCIE2_ON [17]
GPP_TX2P_C C136 0.1U/4/X7R/16V/K ML_OP [19]
GPP_TX2N_C C137 0.1U/4/X7R/16V/K ML_ON [19]
PLACE CAP CLOSE TO CONNECTOR
SB_RX0P
SB_RX0N
SB_RX1P
SB_RX1N
SB_RX2P
SB_RX2N
SB_RX3P
SB_RX3N
SB_TX0P
SB_TX0N
SB_TX1P
SB_TX1N
SB_TX2P
SB_TX2N
SB_TX3P
SB_TX3N
A_RX0P AA8
A_RX0N Y8
A_RX1P AA7
A_RX1N Y7
A_RX2P AA5
A_RX2N AA6
A_RX3P W5
A_RX3N Y5
[13] A_RX0P
[13] A_RX0N
[13] A_RX1P
[13] A_RX1N
[13] A_RX2P
[13] A_RX2N
[13] A_RX3P
[13] A_RX3N
AD7 A_TX0P_C C138 0.1U/4/X7R/16V/K A_TX0P [13]
AE7 A_TX0N_C C139 0.1U/4/X7R/16V/K A_TX0N [13]
AE6 A_TX1P_C C140 0.1U/4/X7R/16V/K A_TX1P [13]
AD6 A_TX1N_C C141 0.1U/4/X7R/16V/K A_TX1N [13]
AB6 A_TX2P_C C142 0.1U/4/X7R/16V/K A_TX2P [13]
AC6 A_TX2N_C C143 0.1U/4/X7R/16V/K A_TX2N [13]
AD5 A_TX3P_C C144 0.1U/4/X7R/16V/K A_TX3P [13]
AE5 A_TX3N_C C145 0.1U/4/X7R/16V/K A_TX3N [13]
PCE_CALRP(PCE_BCALRP)
PCE_CALRN(PCE_BCALRN)
AC8 R210 1.27K/4/1
AB8 R212 2K/4/1
NB_VCC
RS880P(880G)/S
NB_HS
NB_HS/[12SP2-01A004-E1R_12SP2-01A004-E2R]
GIGABYTE
Title
RS880P HT-LINK I/F
Size Custom
Document Number GA-880GM-D2H
Rev 4.0
Date: Thursday, August 25, 2011
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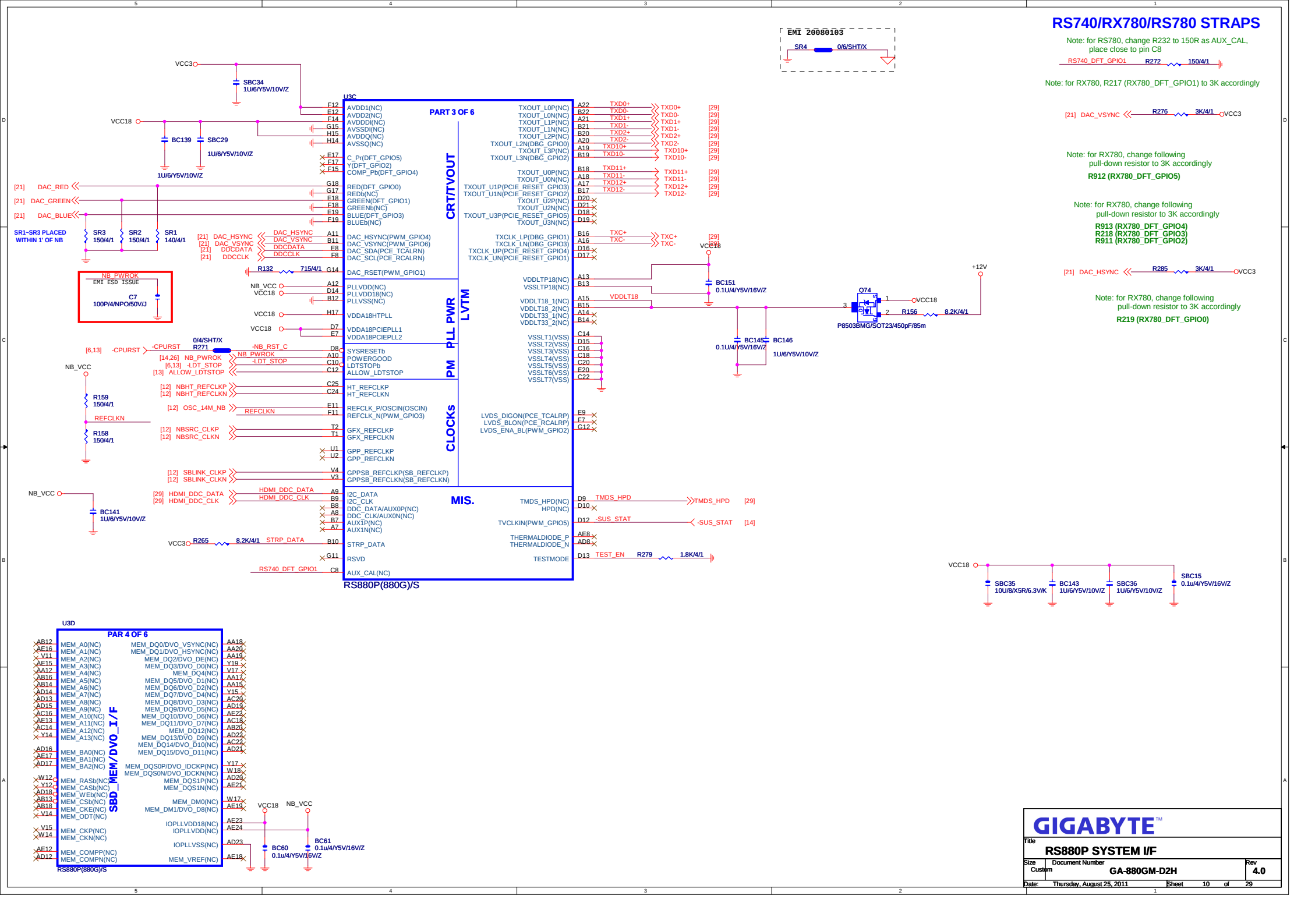
RS740/RX780/RS780 STRAPS
Note: for RS780, change R232 to 150R as AUX_CAL, place close to pin C8
RS740_DFT_GPIO1 R272 150/4/1
Note: for RX780, R217 (RX780_DFT_GPIO1) to 3K accordingly
[21] DAC_VSYNC R276 3K/4/1 VCC3
Note: for RX780, change following pull-down resistor to 3K accordingly
R912 (RX780_DFT_GPIO5)
Note: for RX780, change following pull-down resistor to 3K accordingly
R913 (RX780_DFT_GPIO4)
R218 (RX780_DFT_GPIO3)
R911 (RX780_DFT_GPIO2)
[21] DAC_HSYNC R285 3K/4/1 VCC3
Note: for RX780, change following pull-down resistor to 3K accordingly
R219 (RX780_DFT_GPIO0)
EMI 20080103
SR4 0/6/SHT/X
U3C
PART 3 OF 6
CRT/TVOUT
PLL PWR
LVTM
PM
CLOCKs
MIS.
RS880P(880G)/S
U3D
PAR 4 OF 6
SBD_MEM/DVO_I/F
RS880P(880G)/S
VCC3
VCC18
NB_VCC
SBC34 1U/6/Y5V/10V/Z
BC139
SBC29 1U/6/Y5V/10V/Z
SR3 150/4/1
SR2 150/4/1
SR1 140/4/1
SR1~SR3 PLACED WITHIN 1' OF NB
DAC_RED
DAC_GREEN
DAC_BLUE
NB_PWROK
EMI ESD ISSUE
C7 100P/4/NPO/50V/J
R132 715/4/1
DAC_HSYNC
DAC_VSYNC
DDCDATA
DDCCLK
0/4/SHT/X
R271
-CPURST
-NB_RST_C
-LDT_STOP
ALLOW_LDTSTOP
R159 150/4/1
R158 150/4/1
REFCLKN
NBHT_REFCLKP
NBHT_REFCLKN
OSC_14M_NB
NBSRC_CLKP
NBSRC_CLKN
SBLINK_CLKP
SBLINK_CLKN
BC141 1U/6/Y5V/10V/Z
HDMI_DDC_DATA
HDMI_DDC_CLK
R265 8.2K/4/1
STRP_DATA
RS740_DFT_GPIO1
BC151 0.1U/4/Y5V/16V/Z
BC145 0.1U/4/Y5V/16V/Z
BC146 1U/6/Y5V/10V/Z
VDDLT18
Q74
P8503BMG/SOT23/450pF/85m
+12V
R156 8.2K/4/1
TXD0+
TXD0-
TXD1+
TXD1-
TXD2+
TXD2-
TXD10+
TXD10-
TXD11+
TXD11-
TXD12+
TXD12-
TXC+
TXC-
TMDS_HPD
-SUS_STAT
R279 1.8K/4/1
TEST_EN
BC60 0.1u/4/Y5V/16V/Z
BC61 0.1u/4/Y5V/16V/Z
SBC35 10U/8/X5R/6.3V/K
BC143 1U/6/Y5V/10V/Z
SBC36 1U/6/Y5V/10V/Z
SBC15 0.1u/4/Y5V/16V/Z
GIGABYTE
Title
RS880P SYSTEM I/F
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Document Number GA-880GM-D2H
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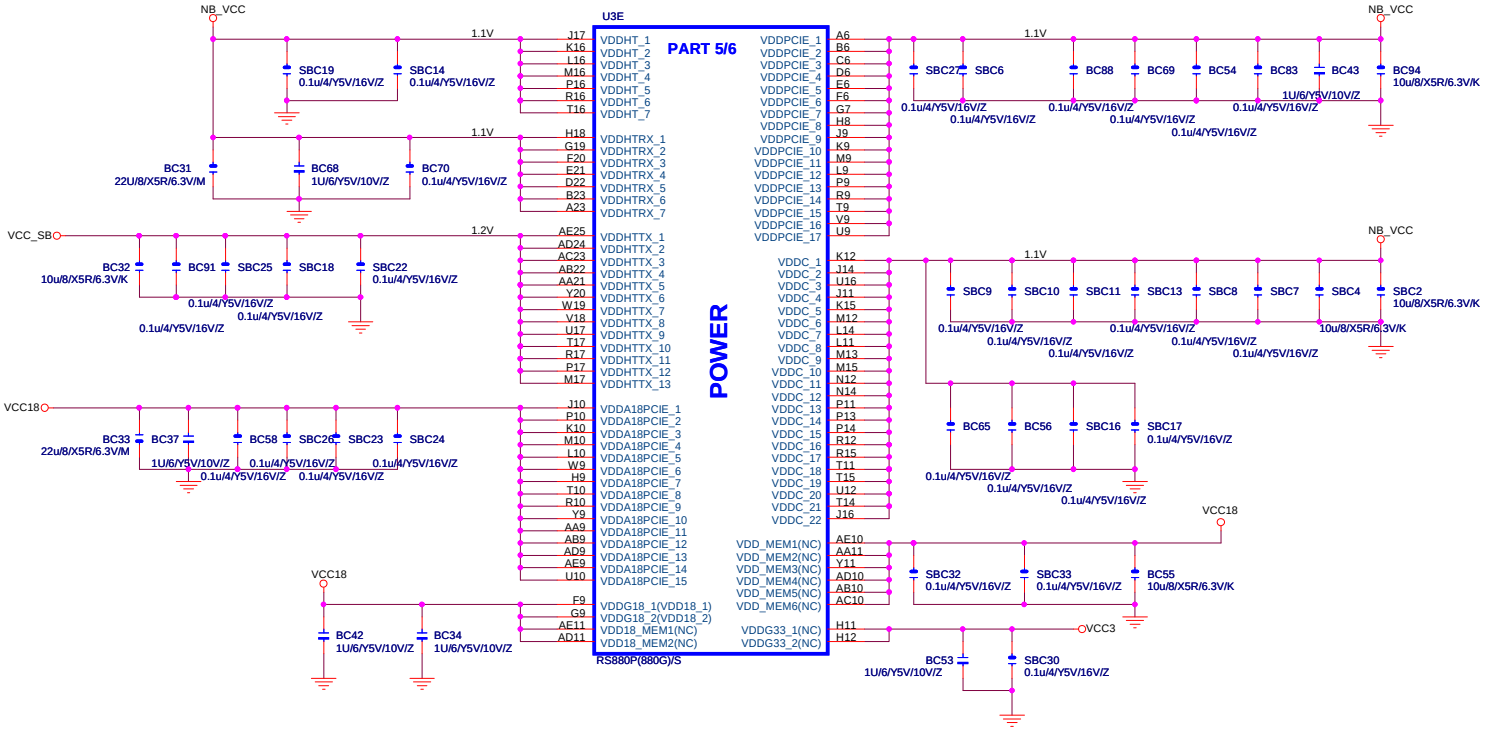
RS740/RX780/RS780 POWER DIFFERENCE TABLE

PIN NAME	RS740	RX780	RS780	PIN NAME	RS740	RX780	RS780
VDDHT	NC	+1.1V	+1.1V	IOPLLVDD	+1.2V	NC	+1.1V
VDDHTRX	NC	+1.1V	+1.1V	AVDD	+3.3V	NC	+3.3V
VDDHTTX	+1.2V	+1.2V	+1.2V	AVDDDI	+1.8V	NC	+1.8V
VDDA18PCIE	NC	+1.8V	+1.8V	AVDDQ	+1.8V	NC	+1.8V
VDD18	+1.8V	+1.8V	+1.8V	PLLVDD	+1.2V	NC	+1.1V
VDD18_MEM	NC	NC	+1.8V	PLLVDD18	+1.8V	NC	+1.8V
VDDPCIE	+1.2V	+1.1V	+1.1V	VDDA18PCIEPLL	+1.2V	+1.8V	+1.8V
VDDC	+1.2V	+1.1V	+1.1V	VDDA18HTPLL	+1.8V	+1.8V	+1.8V
VDD_MEM	+1.8V	NC	+1.8V(DDR2) +1.5V(DDR3)	VDDLTP18	+1.8V	NC	+1.8V
VDD33	+3.3V	NC	+3.3V	VDDLT18	+1.8V	NC	+1.8V
IOPLLVDD18	+1.8V	NC	+1.8V	VDDLT33	+3.3V	NC	NC

U3F — PART 6/6 — GROUND — RS880P(880G)/S

Please use 1mm pad size, place all ELT test pads on bottom side only

U3E — PART 5/6 — POWER — RS880P(880G)/S



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Title	RS880P POWER & GND	
Size: Custom	Document Number: GA-880GM-D2H	Rev: 4.0
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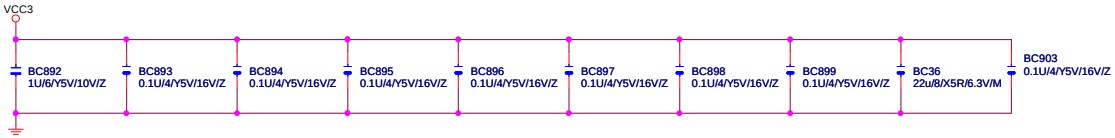


1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE TO U800 AS POSSIBLE

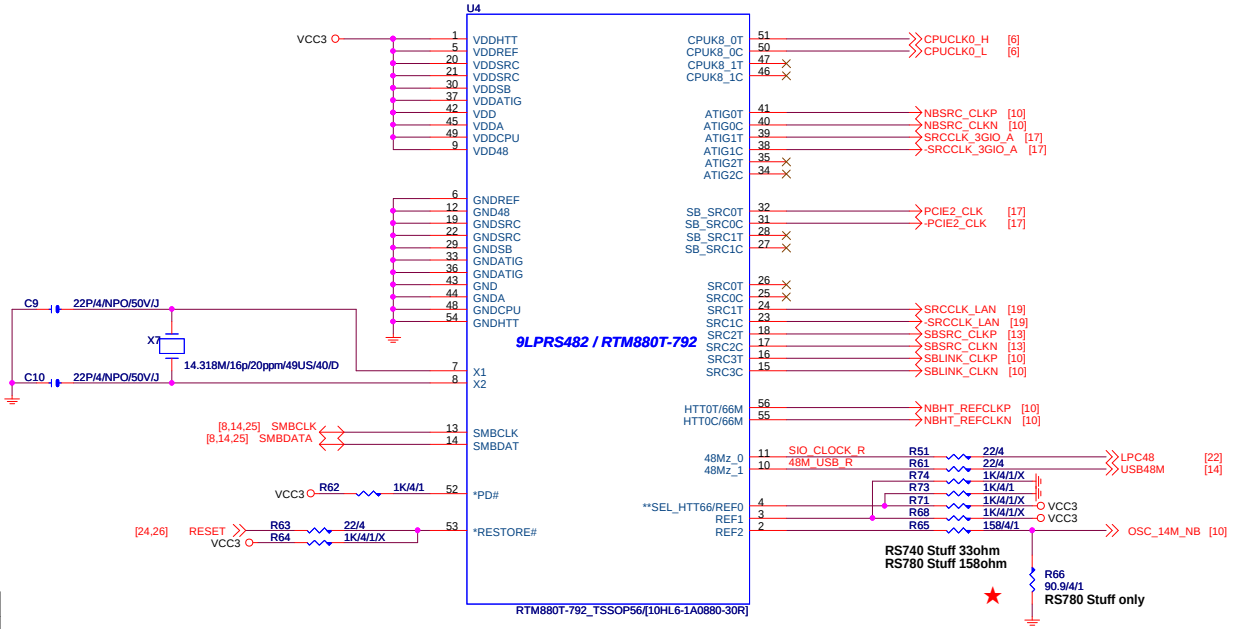
2- ROUTE ALL SRCCLKTx AND SRCCLKCx AS DIFFERENT PAIR RULE

3- PUT DECOUPLING CAPS CLOSE TO U800 POWER PIN

NB CLOCK INPUT TABLE

NB CLOCKS	RS740	RX780	RS780	
HT_REFCLKP	66M SE(SE)	100M DIFF	100M DIFF	
HT_REFCLKN	NC	100M DIFF	100M DIFF	
REFCLK_P	14M SE (3.3V)	14M SE (1.8V)	14M SE (1.1V)	100M DIFF
REFCLK_N	NC	NC	vref	100M DIFF
GFX_REFCLK*	100M DIFF	100M DIFF	100M DIFF	
GPP_REFCLK	NC	100M DIFF	100M DIFF(OUT)	
GPPSB_REFCLK	100M DIFF	100M DIFF	100M DIFF	

* the GFX_REFCLK input is required for all cases



watch dog --
RESTORE# 接 RESET

	OSC_14M_NB
RS740	3.3V 33R serial
RX780	1.8V 82.5R/130R
RS780 (Single-ended)	1.1V 158R/90.9R

**SEL_HTT66/REF0		OUT 3.3V 14.318MHz REF output.
IN	Low	100MHz differential HT clock, (Internal 120KΩ pull-down)
	High	66MHz 3.3V single ended HT clock.

GIGABYTE™

Title: ICS9LPRS477

Size: Custom | Document Number: GA-880GM-D2H | Rev: 4.0

Date: Thursday, August 25, 2011 | Sheet 12 of 29

PLACE THESE PCIE AC COUPLING CAPS CLOSE TO U600

S.B HEATSINK

SB_HS

SB_HS/[12SP2-030005-42R_12SP2-030005-43R_12SP2-030005-41R]

U2A

SB700

Part 1 of 5

PCI EXPRESS INTERFACE

PCI CLKS

PCI INTERFACE

CLOCK GENERATOR

LPC

RTC XTAL

CPU

RTC

SB710/FCBGA528/A14/[10HB1-06B710-11R]

Note: LDT_PG, LDT_STP# & LDT_RST# are OD and require a PU to the CPU I/O rail. They are also in the S5 domain to prevent glitching at power up.

PCLK2		PCLK3
PULL HIGH	WATCHDOG TIMER ON NB_PWRGD ENABLED	USE DEBUG STRAPS
PULL LOW	WATCHDOG TIMER ON NB_PWRGD DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT

BIOS after boot setting
EC AOD-ACC

	LPC_CLK0	LPC_CLK1
PULL HIGH	IMC ENABLED AOD Extreme	CLKGEN ENABLED
PULL LOW	IMC DISABLED DEFAULT	CLKGEN DISABLED DEFAULT

20mil 20mil 20mil

BAT54C/SOT23/200mA

BATTERY CR2032

CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

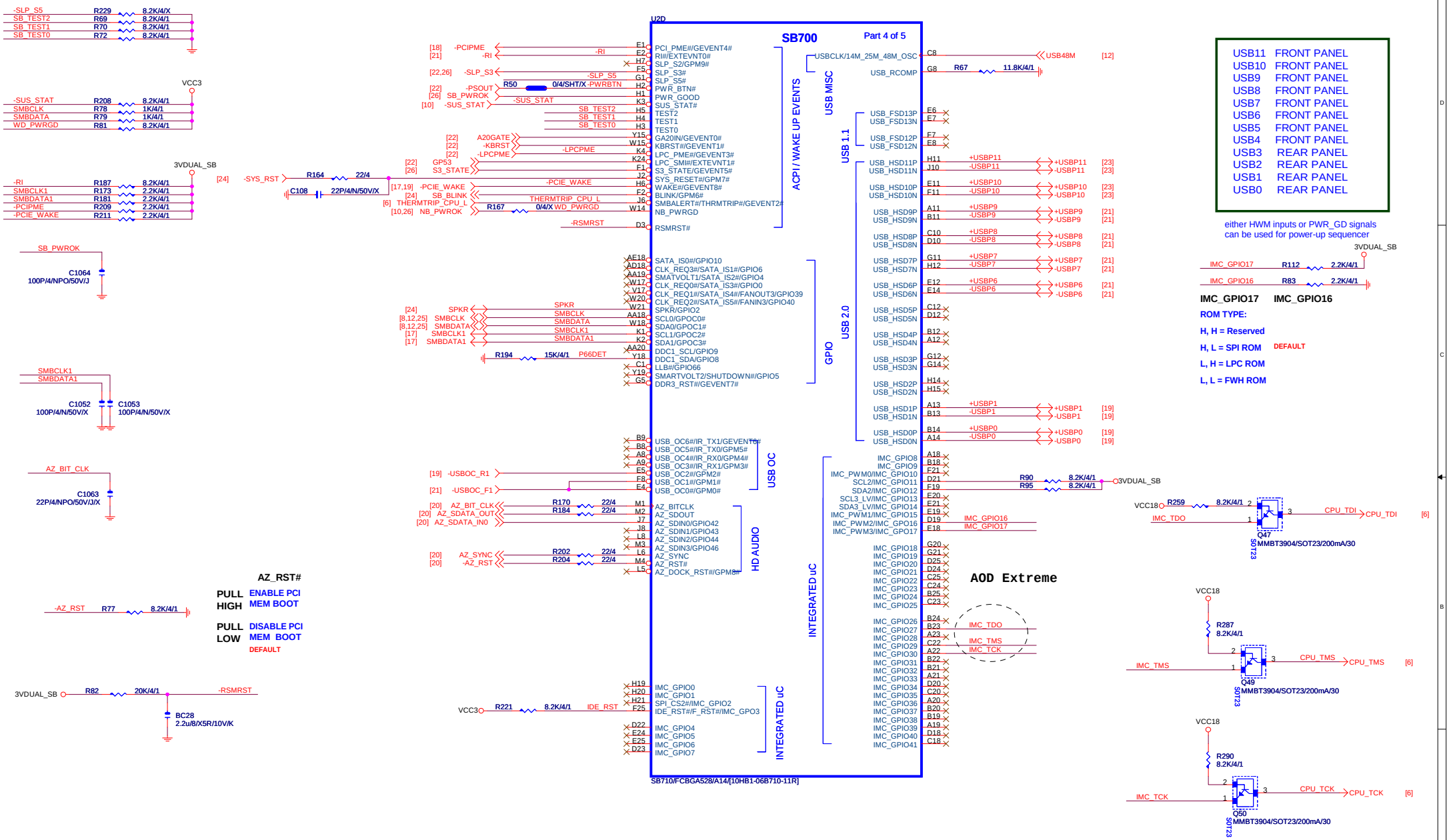
NOT ADD ICT FOR RTCVDD PIN

GIGABYTE

Title: ATI SB710 PCIE/PCI/CPU/LPC

Size: Custom | Document Number: GA-880GM-D2H | Rev: 4.0

Date: Thursday, August 25, 2011 | Sheet 13 of 29


SB700
Part 4 of 5
U2D
SB710/FCBGA528/A14/[10HB1-06B710-11R]
ACPI / WAKE UP EVENTS
USB MISC
USB 1.1
USB 2.0
GPIO
USB OC
HD AUDIO
INTEGRATED uC
PCI_PME#/GEVENT4#
RI#/EXTEVNT0#
SLP_S2/GPM9#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
SUS_STAT#
TEST2
TEST1
TEST0
GA20IN/GEVENT0#
KBRST#/GEVENT1#
LPC_PME#/GEVENT3#
LPC_SMI#/EXTEVNT1#
S3_STATE/GEVENT5#
SYS_RESET#/GPM7#
WAKE#/GEVENT8#
BLINK/GPM6#
SMBALERT#/THRMTRIP#/GEVENT2#
NB_PWRGD
RSMRST#
USBCLK/14M_25M_48M_OSC
USB_RCOMP
USB_FSD13P
USB_FSD13N
USB_FSD12P
USB_FSD12N
USB_HSD11P
USB_HSD11N
USB_HSD10P
USB_HSD10N
USB_HSD9P
USB_HSD9N
USB_HSD8P
USB_HSD8N
USB_HSD7P
USB_HSD7N
USB_HSD6P
USB_HSD6N
USB_HSD5P
USB_HSD5N
USB_HSD4P
USB_HSD4N
USB_HSD3P
USB_HSD3N
USB_HSD2P
USB_HSD2N
USB_HSD1P
USB_HSD1N
USB_HSD0P
USB_HSD0N
SATA_IS0#/GPIO10
CLK_REQ3#/SATA_IS1#/GPIO6
SMATVOLT1/SATA_IS2#/GPIO4
CLK_REQ0#/SATA_IS3#/GPIO0
CLK_REQ1#/SATA_IS4#/FANOUT3/GPIO39
CLK_REQ2#/SATA_IS5#/FANIN3/GPIO40
SPKR/GPIO2
SCL0/GPOC0#
SDA0/GPOC1#
SCL1/GPOC2#
SDA1/GPOC3#
DDC1_SCL/GPIO9
DDC1_SDA/GPIO8
LLB#/GPIO66
SMARTVOLT2/SHUTDOWN#/GPIO5
DDR3_RST#/GEVENT7#
USB_OC6#/IR_TX1/GEVENT6#
USB_OC5#/IR_TX0/GPM5#
USB_OC4#/IR_RX0/GPM4#
USB_OC3#/IR_RX1/GPM3#
USB_OC2#/GPM2#
USB_OC1#/GPM1#
USB_OC0#/GPM0#
AZ_BITCLK
AZ_SDOUT
AZ_SDIN0/GPIO42
AZ_SDIN1/GPIO43
AZ_SDIN2/GPIO44
AZ_SDIN3/GPIO46
AZ_SYNC
AZ_RST#
AZ_DOCK_RST#/GPM8#
IMC_GPIO0
IMC_GPIO1
SPI_CS2#/IMC_GPIO2
IDE_RST#/F_RST#/IMC_GPO3
IMC_GPIO4
IMC_GPIO5
IMC_GPIO6
IMC_GPIO7
IMC_GPIO8
IMC_GPIO9
IMC_PWM0/IMC_GPIO10
SCL2/IMC_GPIO11
SDA2/IMC_GPIO12
SCL3_LV/IMC_GPIO13
SDA3_LV/IMC_GPIO14
IMC_PWM1/IMC_GPIO15
IMC_PWM2/IMC_GPO16
IMC_PWM3/IMC_GPO17
IMC_GPIO18
IMC_GPIO19
IMC_GPIO20
IMC_GPIO21
IMC_GPIO22
IMC_GPIO23
IMC_GPIO24
IMC_GPIO25
IMC_GPIO26
IMC_GPIO27
IMC_GPIO28
IMC_GPIO29
IMC_GPIO30
IMC_GPIO31
IMC_GPIO32
IMC_GPIO33
IMC_GPIO34
IMC_GPIO35
IMC_GPIO36
IMC_GPIO37
IMC_GPIO38
IMC_GPIO39
IMC_GPIO40
IMC_GPIO41
USB11 FRONT PANEL
USB10 FRONT PANEL
USB9 FRONT PANEL
USB8 FRONT PANEL
USB7 FRONT PANEL
USB6 FRONT PANEL
USB5 FRONT PANEL
USB4 FRONT PANEL
USB3 REAR PANEL
USB2 REAR PANEL
USB1 REAR PANEL
USB0 REAR PANEL
either HWM inputs or PWR_GD signals can be used for power-up sequencer
IMC_GPIO17 IMC_GPIO16
ROM TYPE:
H, H = Reserved
H, L = SPI ROM DEFAULT
L, H = LPC ROM
L, L = FWH ROM
AZ_RST#
PULL HIGH ENABLE PCI MEM BOOT
PULL LOW DISABLE PCI MEM BOOT DEFAULT
AOD Extreme
MMBT3904/SOT23/200mA/30
GIGABYTE
ATI SB710 ACPI/USB/GPIO/AUDIO
GA-880GM-D2H
4.0
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PLACE SATA AC COUPLING CAPS CLOSE TO SB600

U2B

SB700
Part 2 of 5

SERIAL ATA

SP_TX0P_C AD9 SATA_TX0P
SP_TX0M_C AE9 SATA_TX0N
SP_RX0M_C AB10 SATA_RX0N
SP_RX0P_C AC10 SATA_RX0P
SP_TX1P_C AE10 SATA_TX1P
SP_TX1M_C AD10 SATA_TX1N
SP_RX1M_C AD11 SATA_RX1N
SP_RX1P_C AE11 SATA_RX1P
SP_TX2P_C AB12 SATA_TX2P
SP_TX2M_C AC12 SATA_TX2N
SP_RX2M_C AE12 SATA_RX2N
SP_RX2P_C AD12 SATA_RX2P
SP_TX3P_C AD13 SATA_TX3P
SP_TX3M_C AE13 SATA_TX3N
SP_RX3M_C AB14 SATA_RX3N
SP_RX3P_C AC14 SATA_RX3P
SP_TX4P_C AE14 SATA_TX4P
SP_TX4M_C AD14 SATA_TX4N
SP_RX4M_C AD15 SATA_RX4N
SP_RX4P_C AE15 SATA_RX4P
SP_TX5P_C AB16 SATA_TX5P
SP_TX5M_C AC16 SATA_TX5N
SP_RX5M_C AE16 SATA_RX5N
SP_RX5P_C AD16 SATA_RX5P

R2194 1K/4/1 SATA_CAL V12 SATA_CAL
SATA_X1 Y12 SATA_X1
SATA_X2 AA12 SATA_X2
[24] -SATA_LED W11 SATA_ACT#/GPIO67

VCC_SB AA11 PLLVDD_SATA
VCC3 W12 XTLVDD_SATA

SATA PWR

ATA 66/100/133

IDE_IORDY AA24 PIORDY
IDE_IRQ AA25 IRQ14
IDE_A0 Y22
IDE_A1 AB23
IDE_A2 Y23
IDE_DACK# AB24
IDE_DRQ AD25 PDDREQ
IDE_IOR# AC25
IDE_IOW# AC24
IDE_CS1# Y25
IDE_CS3# Y24
IDE_D0/GPIO15 AD24
IDE_D1/GPIO16 AD23
IDE_D2/GPIO17 AE22
IDE_D3/GPIO18 AC22
IDE_D4/GPIO19 AD21
IDE_D5/GPIO20 AE20
IDE_D6/GPIO21 AB20
IDE_D7/GPIO22 AD19 PDD7
IDE_D8/GPIO23 AE19
IDE_D9/GPIO24 AC20
IDE_D10/GPIO25 AD20
IDE_D11/GPIO26 AE21
IDE_D12/GPIO27 AB22
IDE_D13/GPIO28 AD22
IDE_D14/GPIO29 AE23
IDE_D15/GPIO30 AC23

VCC3 R183 4.7K/4/X PIORDY SB710 DG
R185 8.2K/4/X IRQ14 SB710 DG
R189 8.2K/4/1 PDD7
R191 5.6K/4/X PDDREQ SB710 DG

SPI ROM

SPI_DI/GPIO12 G6 SB_SPI_DI_R R101 22/4 SB_SPI_DI
SPI_DO/GPIO11 D2 SB_SPI_DO_R R102 22/4 SB_SPI_DO
SPI_CLK/GPIO47 D1 SB_SPI_CLK_R R92 22/4 SB_SPI_CLK
SPI_HOLD#/GPIO31 E4
SPI_CS1#/GPIO32 F3 SB_SPI_CS R103 22/4 -SB_SPI_CS_ITE -SB_SPI_CS_ITE [22]
LAN_RST#/GPIO13 U15
ROM_RST#/GPIO14 J1

HW MONITOR

FANOUT0/GPIO3 M8
FANOUT1/GPIO48 M5
FANOUT2/GPIO49 M7
FANIN0/GPIO50 P5
FANIN1/GPIO51 P8
FANIN2/GPIO52 R8
TEMP_COMM C6
TEMPIN0/GPIO61 B6
TEMPIN1/GPIO62 A6 VCC_SB_OV2 [27]
TEMPIN2/GPIO63 A5 VCC_SB_OV1 [27]
TEMPIN3/TALERT#/GPIO64 B5
VIN0/GPIO53 A4 HDMI_DVI_BIOS [29]
VIN1/GPIO54 B4
VIN2/GPIO55 C4 NB_VCC_OV2 [27]
VIN3/GPIO56 D4 NB_VCC_OV1 [27]
VIN4/GPIO57 D5
VIN5/GPIO58 D6
VIN6/GPIO59 A7 DDR18V_OV2 [28]
VIN7/GPIO60 B7

AVDD F6 3VDUAL_SB
AVSS G7

BC119 0.1u/4/Y5V/16V/Z
BC117 1U/6/Y5V/10V/Z

SB710/FCBGA528/A14/[10HB1-06B710-11R]

PLACE SATA_CAL RES VERY CLOSE TO BALL OF U600

NOTE:
R650 IS 1K 1% FOR 25MHz XTAL, 4.99K 1% FOR 100MHz INTERNAL CLOCK

SATA_X2 SATA_X1
R168 10M/4
X6 1 2
25M/20p/30ppm/49US/20/D
C115 10P/4/NPO/50V/J
C119 10P/4/NPO/50V/J

VCC3
BC112 1U/6/Y5V/10V/Z
SBC1 0.1u/4/Y5V/16V/Z
SBC3 0.1u/4/Y5V/16V/Z

M_BIOS

[22] -ITE_SPI_CS -ITE_SPI_CS 1 CS# VDD 8 BC203 0.1U/4/Y5V/16V/Z
SB_SPI_DI 2 SO HOLD# 7 -SPI_HOLD0
-BIOS_WP 3 WP# SCK 6 SB_SPI_CLK
4 VSS SI 5 SB_SPI_DO
16M/SPI/SO8/200mil/S

B_BIOS

[22] -ITE_SPI_CS1 -ITE_SPI_CS1 1 CS# VDD 8
SB_SPI_DI 2 SO HOLD# 7 -SPI_HOLD0
-BIOS_WP 3 WP# SCK 6 SB_SPI_CLK
4 VSS SI 5 SB_SPI_DO
16M/SPI/SO8/200mil/S

-SPI_HOLD0 R29 1K/4/1
SB_SPI_DO R34 1K/4/X
-BIOS_WP R38 1K/4/1
SB_SPI_DI R39 1K/4/X
-ITE_SPI_CS R28 220/4
-ITE_SPI_CS1 R33 220/4

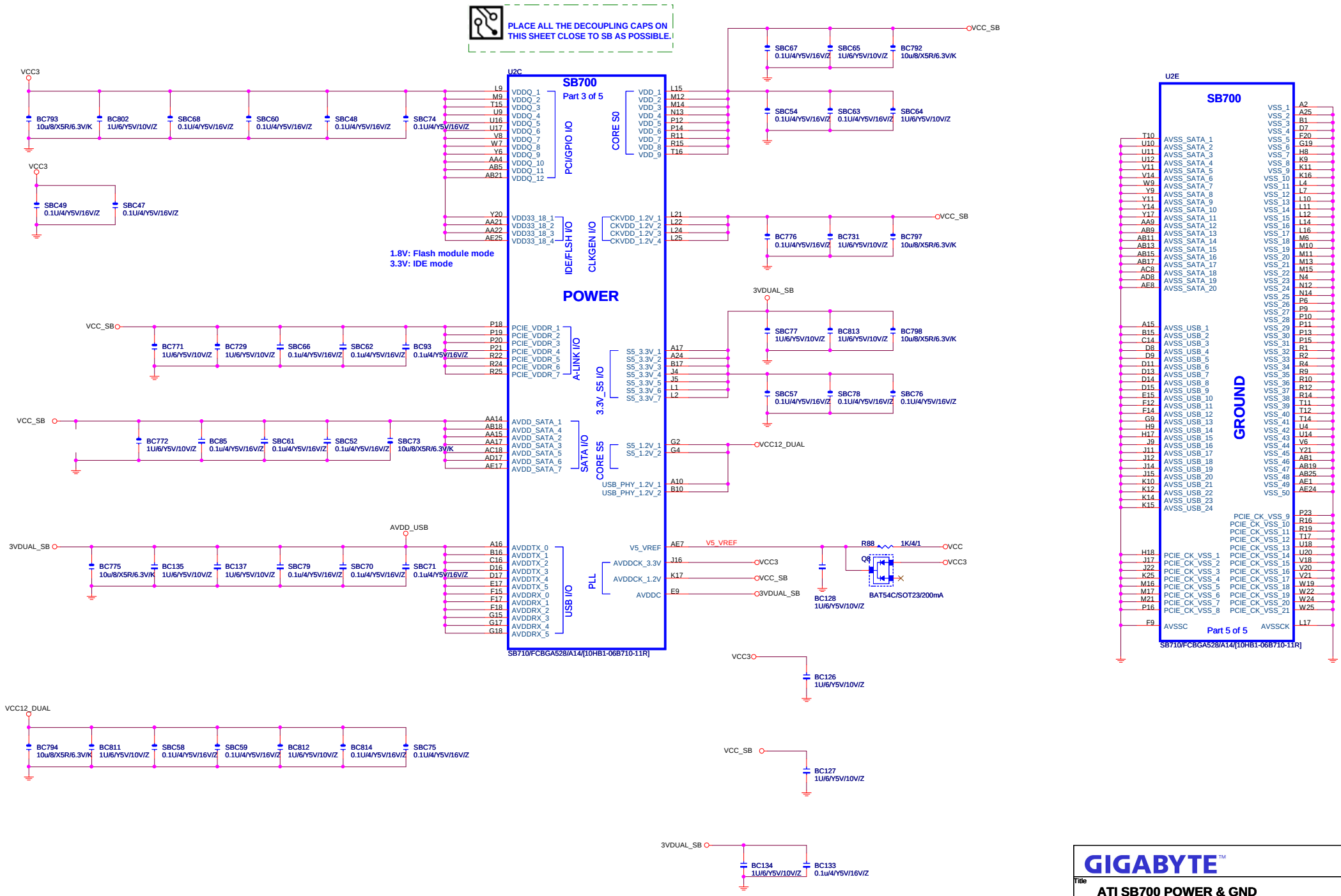
SATA2_0 SATA2/7/BU/H/OP/VA/D/1/B
SATA2_1 SATA2/7/BU/H/OP/VA/D/1/B
SATA2_2 SATA2/7/BU/H/OP/VA/D/1/B
SATA2_3 SATA2/7/BU/H/OP/VA/D/1/B
SATA2_4 SATA2/7/BU/H/OP/VA/D/1/B
SATA2_5 SATA2/7/BU/H/OP/VA/D/1/B

SP_TX0P_C C1310 0.01U/4/X7R/25V/K
SP_TX0M_C C1309 0.01U/4/X7R/25V/K
SP_RX0M_C C1308 0.01U/4/X7R/25V/K
SP_RX0P_C C1302 0.01U/4/X7R/25V/K
SP_TX2P_C C1279 0.01U/4/X7R/25V/K
SP_TX2M_C C1278 0.01U/4/X7R/25V/K
SP_RX2M_C C1282 0.01U/4/X7R/25V/K
SP_RX2P_C C1283 0.01U/4/X7R/25V/K
SP_TX4P_C C1313 0.01U/4/X7R/25V/K
SP_TX4M_C C1314 0.01U/4/X7R/25V/K
SP_RX4M_C C1315 0.01U/4/X7R/25V/K
SP_RX4P_C C1303 0.01U/4/X7R/25V/K

SP_RX1P_C C1307 0.01U/4/X7R/25V/K SP_TX1P_C
SP_RX1M_C C1311 0.01U/4/X7R/25V/K SP_TX1M_C
SP_TX1M_C C1300 0.01U/4/X7R/25V/K SP_RX1M_C
SP_TX1P_C C1286 0.01U/4/X7R/25V/K SP_RX1P_C
SP_RX3P_C C1284 0.01U/4/X7R/25V/K SP_TX3P_C
SP_RX3M_C C1285 0.01U/4/X7R/25V/K SP_TX3M_C
SP_TX3M_C C1281 0.01U/4/X7R/25V/K SP_RX3M_C
SP_TX3P_C C1280 0.01U/4/X7R/25V/K SP_RX3P_C
SP_RX5P_C C1319 0.01U/4/X7R/25V/K SP_TX5P_C
SP_RX5M_C C1312 0.01U/4/X7R/25V/K SP_TX5M_C
SP_TX5M_C C1301 0.01U/4/X7R/25V/K SP_RX5M_C
SP_TX5P_C C1296 0.01U/4/X7R/25V/K SP_RX5P_C

GIGABYTE™

Title	ATI SB710 SATA/IDE/HWM/SPI	
Size: Custom	Document Number: GA-880GM-D2H	Rev: 4.0
Date: Thursday, August 25, 2011	Sheet 15 of 29	

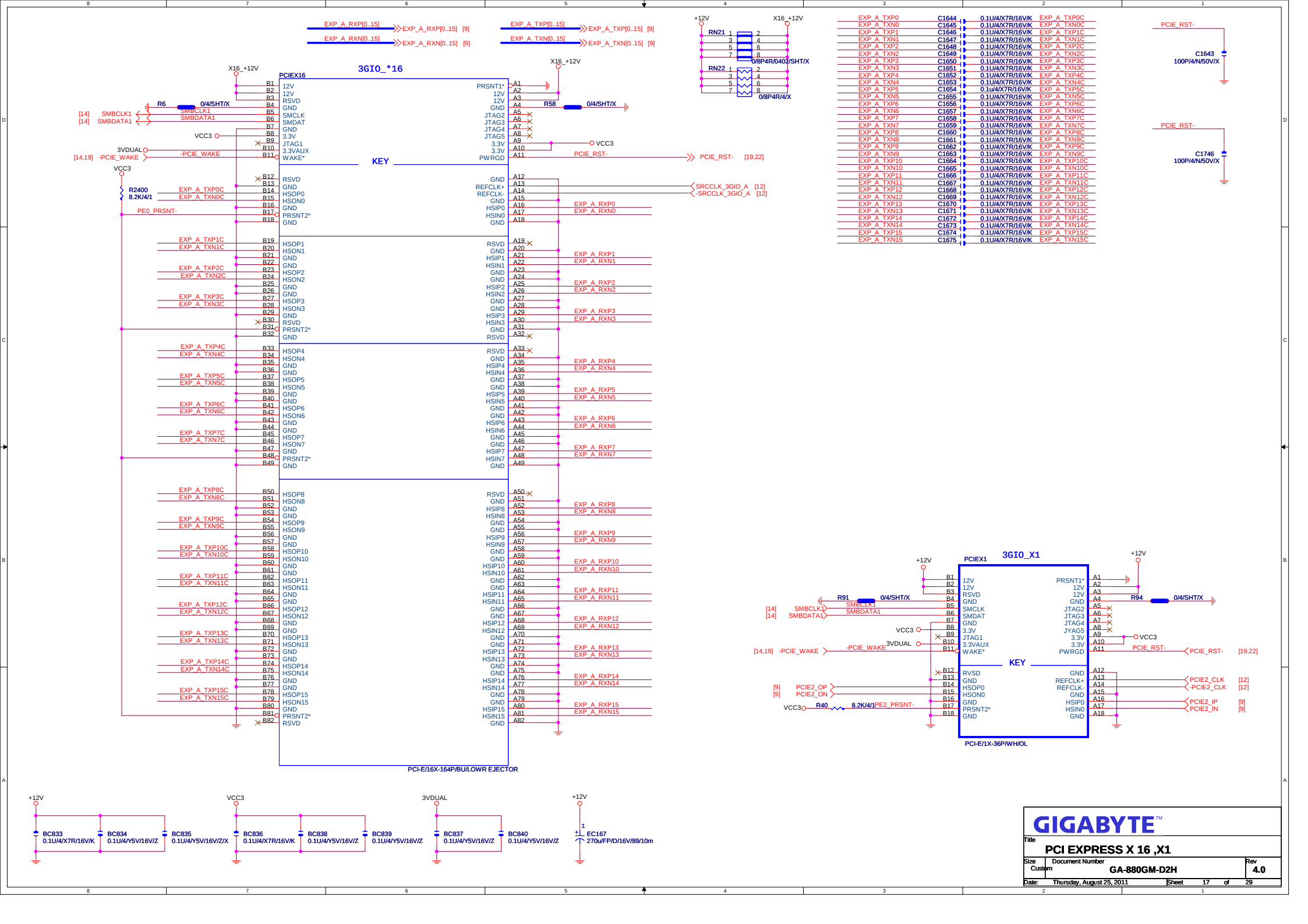


GIGABYTE™

Title: ATI SB700 POWER & GND

Size	Document Number	Rev
Custom	GA-880GM-D2H	4.0

Date: Thursday, August 25, 2011 Sheet 16 of 29


3GIO_*16
PCIEX16
KEY
PCI-E/16X-164P/BU/LOWR EJECTOR
3GIO_X1
PCIEX1
PCI-E/1X-36P/WH/OL
RN21
RN22
0/8P4R/0402/SHT/X
0/8P4R/4/X
R6
R58
R94
R91
R40
R2400
8.2K/4/1
EXP_A_RXP[0..15]
EXP_A_RXN[0..15]
EXP_A_TXP[0..15]
EXP_A_TXN[0..15]
SMBCLK1
SMBDATA1
-PCIE_WAKE
PE0_PRSNT-
PE2_PRSNT-
PCIE_RST-
SRCCLK_3GIO_A
-SRCCLK_3GIO_A
PCIE2_OP
PCIE2_ON
PCIE2_CLK
-PCIE2_CLK
PCIE2_IP
PCIE2_IN
BC833 0.1U/4/X7R/16V/K
BC834 0.1U/4/Y5V/16V/Z
BC835 0.1U/4/Y5V/16V/Z/X
BC836 0.1U/4/X7R/16V/K
BC838 0.1U/4/Y5V/16V/Z
BC839 0.1U/4/Y5V/16V/Z
BC837 0.1U/4/Y5V/16V/Z
BC840 0.1U/4/Y5V/16V/Z
EC167 270u/FP/D/16V/89/10m
C1643 100P/4/N/50V/X
C1746 100P/4/N/50V/X
GIGABYTE
PCI EXPRESS X 16 ,X1
GA-880GM-D2H
Thursday, August 25, 2011
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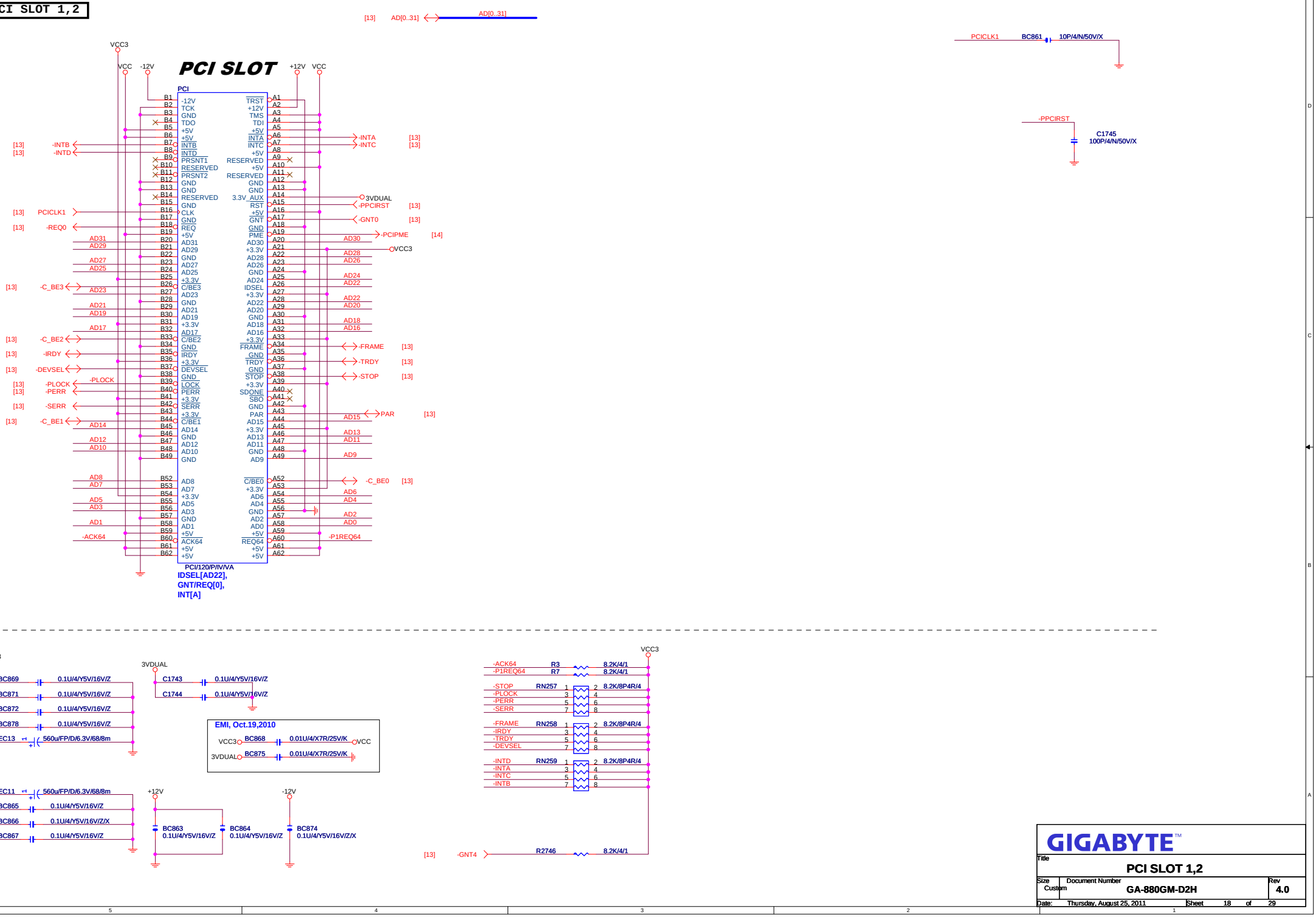
PCI SLOT 1,2



Title	PCI SLOT 1,2
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LAN:AR8151/AR8161

離IC近越好

LA_ ML-->80歐姆:[15/5/5/5/15]

SRCCLK-->50歐姆:[18/4/10/4/18]

[12] -SRCCLK_LAN
[12] SRCCLK_LAN
[9] ML_OP
[9] ML_ON

LABC5 0.1u/4/X7R/16V/K
LABC4 1u/4/X5R/6.3V/K
LABC3 0.1u/4/X7R/16V/K
LABC6 0.1u/4/X7R/16V/K
AR8161-->N/A
(LABC6)

LA_AVDDVCO
LABC7 0.1u/4/X7R/16V/K/X
LABC8 4.7u/6/X5R/6.3V/K/X
AR8161-->(O)

3VDUAL
LABC9 10u/8/X5R/6.3V/K
LABC10 1u/4/X5R/6.3V/K
LABC11 0.1u/4/X7R/16V/K

LAU1

LA_ ML-->80歐姆:[15/5/5/5/15]

離IC近越好

Atheros
AR8151/AR8161

LA_VDD33
PCIE_RST-
-PCIE_WAKE
-CLKREQ
LA_VDDCT
LA_AVDDL
LA_XTALO
LA_XTALI
LA_AVDDH
LA_RBIAS

LAC33 100p/4/NPO/50V/J/X
LAR6 8.2K/4/1
LABC12 1u/4/X5R/6.3V/K
AR8161-->N/A
(LABC12)
LABC15 1u/4/X5R/6.3V/K
LABC16 0.1u/4/X7R/16V/K
LABC18 1u/4/X5R/6.3V/K
LABC19 0.1u/4/X7R/16V/K
LAR10 2.37K/4/1

LA_ML_IP_C LAC12 0.1u/4/X7R/16V/K ML_IP
LA_ML_IN_C LAC13 0.1u/4/X7R/16V/K ML_IN
LAR9 0/4
LABC14 0.1u/4/X7R/16V/K
LA_DVDDL
AR8161-->N/A
(LAR9,LAC18)
LA_PPS
LA_LED_LINK1000
LA_AVDDH
LA_MDI3-
LABC17 0.1u/4/X7R/16V/K

LAX1
25M/20p/30ppm/49US/20/D
LA_XTALI
LA_XTALO
LAC31 27p/4/NPO/50V/J
LAC32 27p/4/NPO/50V/J

LA_MDI0+ LA_MDI0- LA_MDI1+ LA_MDI1- LA_MDI2+ LA_MDI2- LA_MDI3+ LA_MDI3-

LABC20 0.1u/4/X7R/16V/K
AR8161-->N/A
(LABC20)
LABC21 0.1u/4/X7R/16V/K
LAR19 0/4
LAR20 0/4
3VDUAL
LA_AVDDH
AR8151:LA_AVDDH(LAR20)
AR8161:3VDUAL(LAR19)
LABC22 1u/4/X5R/6.3V/K

SCH BOM OPT:(二擇一使用)
-->(LAC30):M/B有CLK GEN 25M
-->(LAX1,LAC31,LAC32):M/B無CLK GEN 25M

LAN POWER

NEW DESIGN ONLY FOR INTERNAL SWR
AR8151:LAR3(0),LAR5(X)
AR8161:LAR5(0),LAR3/LAR4(X)

EMI Request
Put on LAR4

LAL1 4.7uH/1A/[10LC4-5A470B-01R_10LI5-12470B-01R]
LA_LX_OUT
LA_LX
CLOSE
LA_LX 200mil
LABC1 10u/8/X5R/6.3V/K
LABC2 0.1u/4/X7R/16V/K

LAESD2
AZ2225-01L/SOD323/X

LA_VDDCT
LAR3 0/4
AR8161-->N/A
(LAR3,LAR4)
LA_AVDD_CEN
LAR4 0/4

AR8151 POWER

LA_DVDDL LA_AVDDL LA_AVDDVCO
LAR5 0/6/X
AR8161-->(O)
LAFB2 0/6/X
AR8161-->BEAD
AR8151-->N/A
LAFB3 0/6
AR8161-->BEAD
AR8151-->0/6

AR8161 POWER

AR8161-->(O)
LA_AVDDH
LAR7 8.2K/4/X
LA_LED_ACT_TXRX
LA_LED_LINK100
LAR8 8.2K/4/X

AR8161-->(O)
VCC3
LAR1 30K/4/X
LAR2 0/4/X
LA_VDDCT
N_ISOLATEB [22]

Power domain chart

	AR8151	AR8161
AVDD33	N/A	3.3V
VDD33	3.3V	3.3V
AVDDH	2.7V	2.7V
AVDDL/DVDDL	1.1V	1.1V
VDDCT	1.7V	

MDI : AR8161-->N/A

LA_MDI0+ LA_MDI0-
LAR11 49.9/4/1
LAR12 49.9/4/1
LAR13 49.9/4/1
LA_MDI_RC0
LAC26 0.1u/4/X7R/16V/K

LA_MDI1+ LA_MDI1-
LAR14 49.9/4/1
LAR15 49.9/4/1
LA_MDI_RC1
LAC27 0.1u/4/X7R/16V/K

LA_MDI2+ LA_MDI2-
LAR16 49.9/4/1
LAR17 49.9/4/1
LA_MDI_RC2
LAC28 0.1u/4/X7R/16V/K

LA_MDI3+ LA_MDI3-
LAR18 49.9/4/1
LA_MDI_RC3
LAC29 0.1u/4/X7R/16V/K

CLOSE LAN CHIP

USB_LAN CONNECTOR

LAESD1
LA_LED_LINK100
LA_LED_LINK1000
LA_LED_ACT_TXRX
LAN_3VDUAL_LED
LA_LED_D2
AOZ8902CIL/SOT23-6

5VDUAL F6 SMD1812P260/6V FUSEVCC
FUSEVCC R3161 150K/4 -USBOC_R1 [14]
R3162 270K/4

FUSEVCC
LEC4 560u/FP/D/6.3V/68/8m
EC要靠近USB_PORT的FUSEVCC

3VDUAL
LEC7 100u/OS/D/16V/66/24m
Nearby LAN Chip

注意:LAN LED PROTECT:(CO-LAYOUT)
1.ESD(6PIN):AOZ8902CIL/SOT23-6(DEFAULT)
2.SURGE(5PIN):AZ2025-04S/SOT23-5L

注意:USB PORT(目前:暫代6,7PORT)
USB-->90歐姆:[15/4.5/7.5/4.5/15]

LA_MDI-->100歐姆:[20/4/8/4/20]

SU1
-USBP0
+USBP0
-USBP1
+USBP1
FUSEVCC
AOZ8902CIL/SOT23-6

LABC23 0.1u/4/X7R/16V/K
LA_AVDD_CEN
LA_MDI0+
LA_MDI0-
LA_MDI1+
LA_MDI1-
LA_MDI2+
LA_MDI2-
LA_MDI3+
LA_MDI3-
GND_L10
LABC25 0/4/SHT/M/X

USB_LAN
UP
DOWN

LA_LED_ACT_TXRX
LA_LED_D2
LA_LED_LINK100
LA_LED_LINK1000
LR13 150/4/1
LR21 150/4/1
LR22 150/4/1
LFB4 0/6/SHT/X
LAN_3VDUAL_LED
LBC33
0.1U/4/Y5V/25V/Z/X
LBC26
-USBP0 +USBP0 [14]
-USBP1 +USBP1 [14]

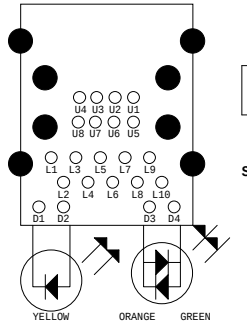
USB+LAN/1G/GO,Y/OS/RA/D/8C/[11NR6-702009-0ER]

EMI
LR28 0/6/SHT/X

料號	規格	廠商
11NR6-702009-0ER	1G LAN (12core)	UDE
11NR6-702009-91R	1G LAN(8 core)	FOXCONN
11NR6-702009-92R	1G LAN(8 core)	UDE
11NR6-702009-11R	1G LAN(12core/RED)	UDE
11NR6-702009-12R	1G LAN(8 core/RED)	FOXCONN

USB_LAN BOM區分:

1.(紅色/12CORE/三倍):USB+LAN/1G/GO,Y/OS/RA/D/1/RED
2.(黑色/12CORE):USB+LAN/1G/GO,Y/OS/RA/D/1
3.(黑色/8CORE):USB+LAN/1G/GO,Y/OS/RA/D/8C



Dual Color LED
D4 D3 Green
D4 D3 Orange

Single Color LED
D2 D1 Yellow

GIGABYTE™

Title: LAN AR8151
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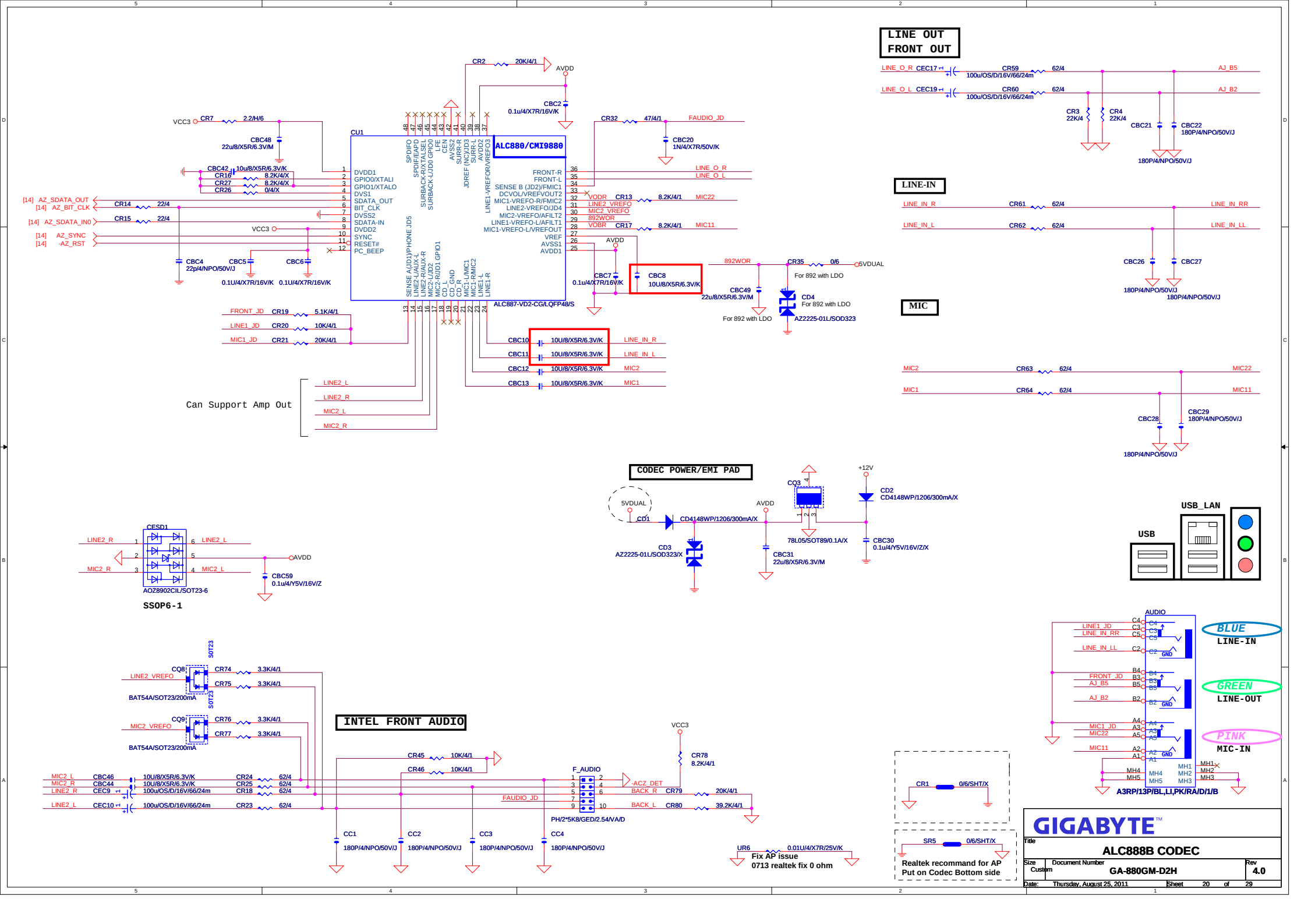
LINE OUT
FRONT OUT
LINE-IN
MIC
CODEC POWER/EMI PAD
INTEL FRONT AUDIO
USB_LAN
ALC888/CMI9880
ALC887-VD2-CG/LQFP48/S
SSOP6-1
Can Support Amp Out
Fix AP issue
0713 realtek fix 0 ohm
Realtek recommand for AP
Put on Codec Bottom side
BLUE
LINE-IN
GREEN
LINE-OUT
PINK
MIC-IN
A3RP/13P/BL,LI,PK/RA/D/1/B
ALC888B CODEC
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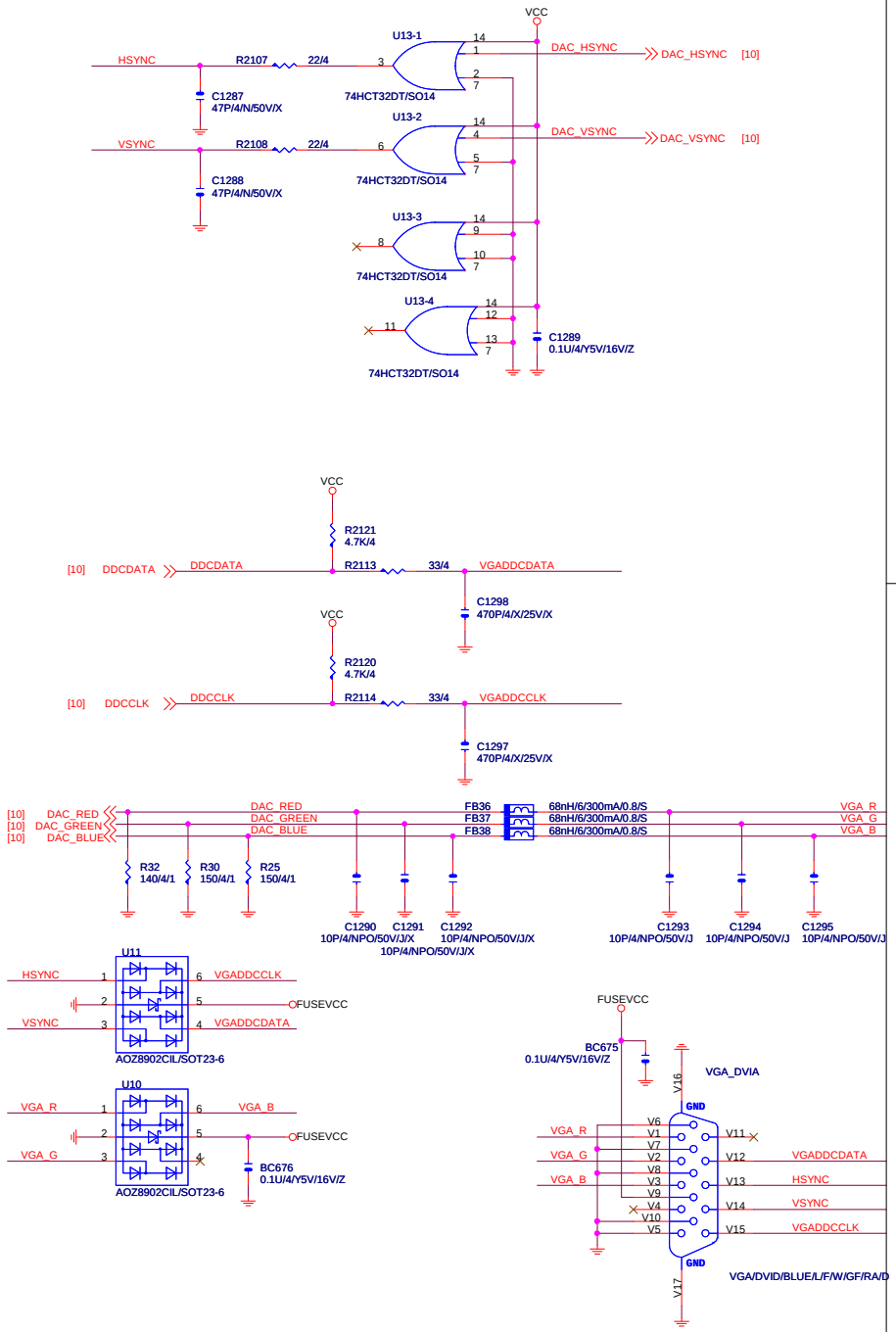
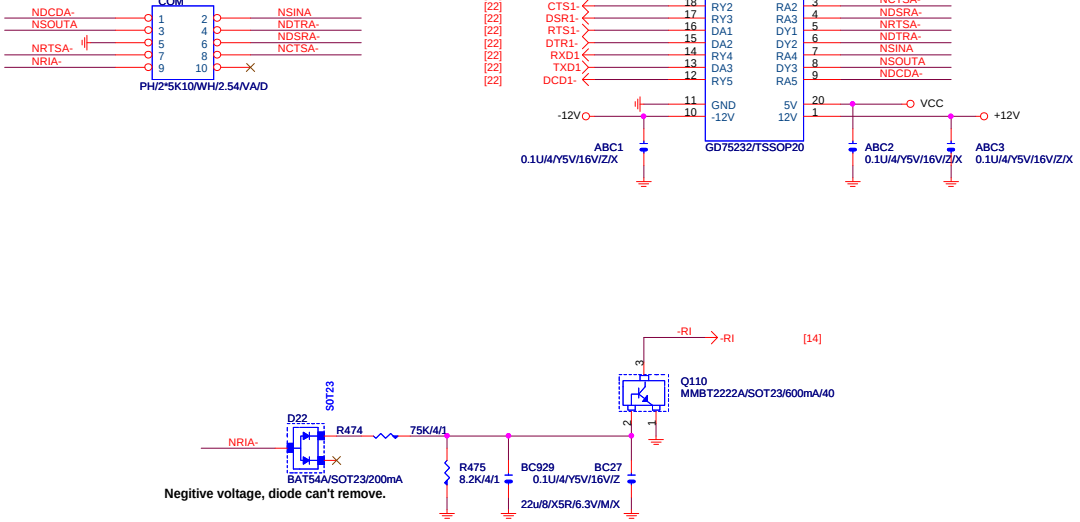
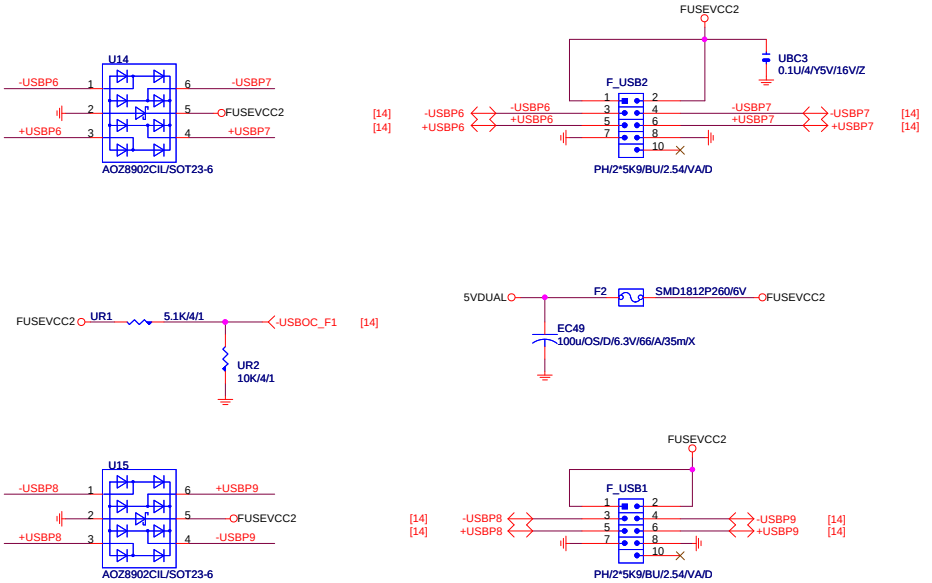
D-SUB



COM



Front USB



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Title	RGB ,TV CONNECTOR	
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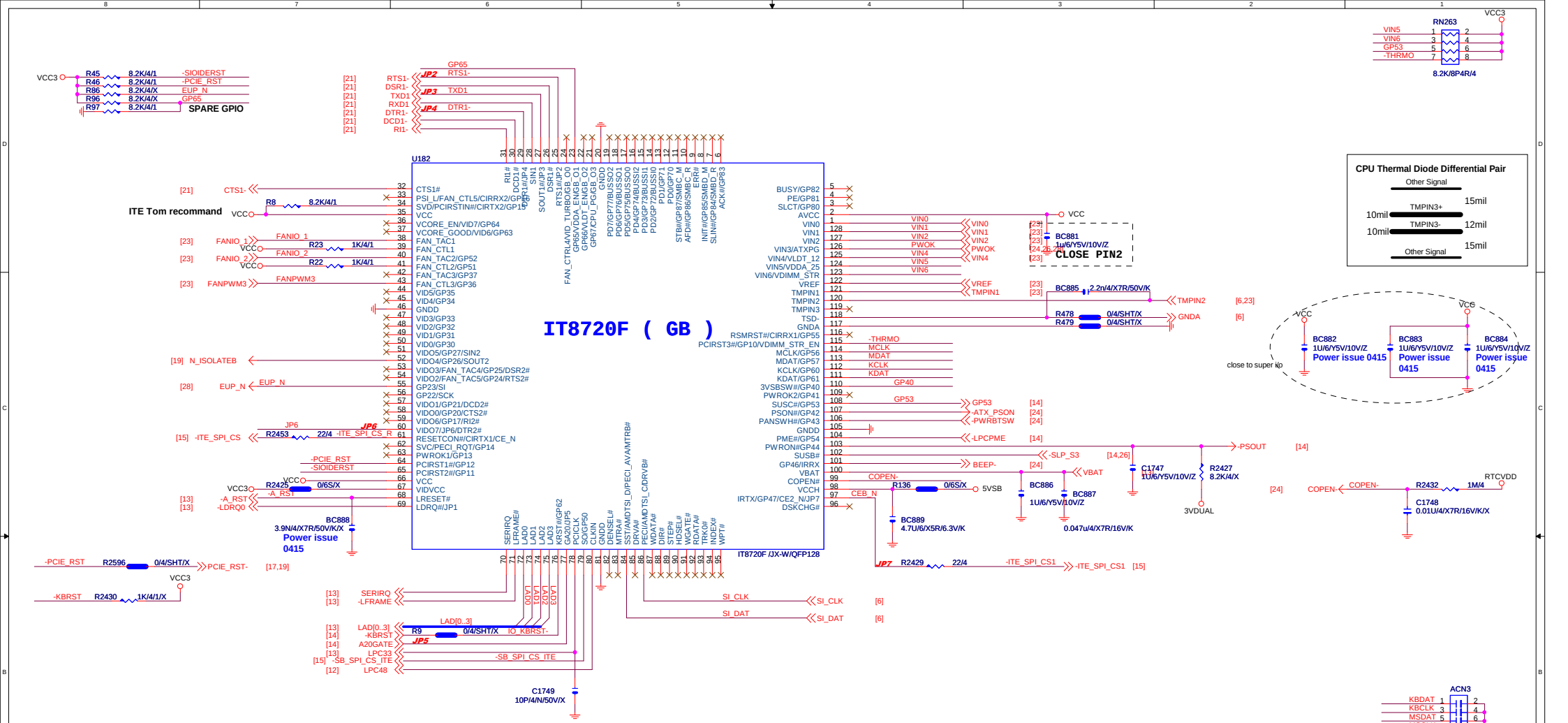

IT8720GB Power On Strapping Options

	Symbol	value	Description
JP1 Pin 69			
JP2 Pin 25	VIDO_EN	1	Disable VID output pins
		0	Enable VID output pins
JP3 Pin 27	Flashseg1_EN	1	Disabled.
		0	Flash I/F Address Segment 1 is enabled
JP4 Pin 29	K8PWR_EN	1	K8 power sequence disabled
		0	K8 power sequence enabled
JP3 & JP5 Pin 27 & Pin 77	FAN_CTL_SEL	11 Half Run	Default value of EC Index 15h/16h/17h is 40h
		10 No Run	Default value of EC Index 15h/16h/17h is 7Fh
		01 Full Run	Default value of EC Index 15h/16h/17h is 00h
		00 75% Run	Default value of EC Index 15h/16h/17h is 20h
JP5 Pin 77	WDT_EN	1	Disable WDT to rest PWROK
		0	Enable WDT to rest PWROK
JP6 Pin 60	SVID_EN	1	Disable SVID Function
		0	Enable SVID Function
JP7 Pin 97	Dual_BIOS_EN	1	Enable Dual BIOS Function for GigaByte Only
		0	Disable Dual BIOS Function for GigaByte Only

Title	ITE 8720 LPC IO		
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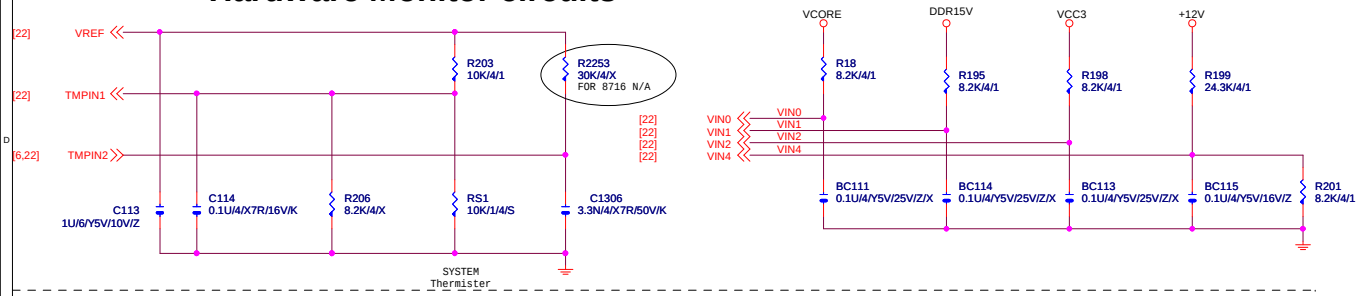
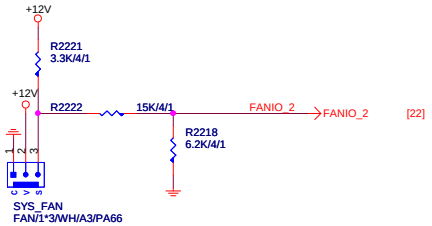
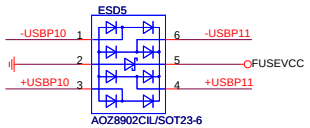
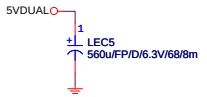
Hardware Monitor circuits



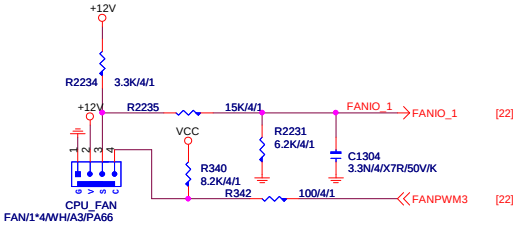
SYSTEM FAN

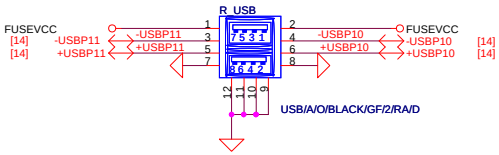






CPU FAN





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Title	FAN/HWMO ,KB/USB	
Size: Custom	Document Number: GA-880GM-D2H	Rev: 4.0
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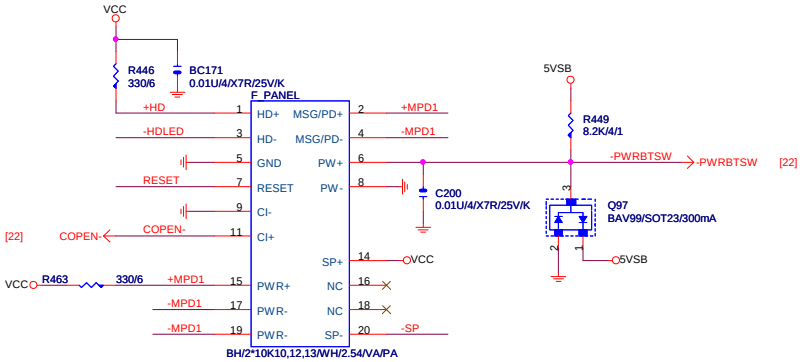
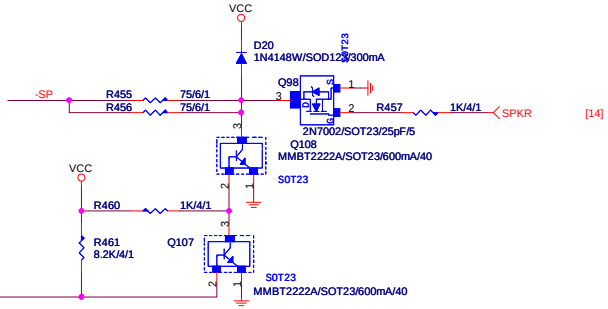
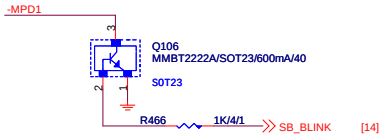
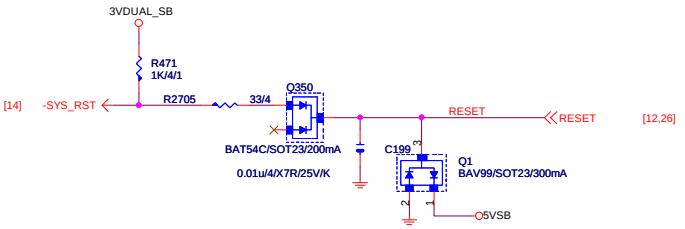
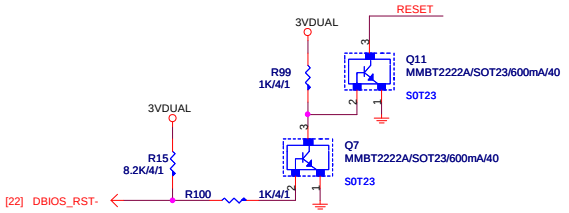
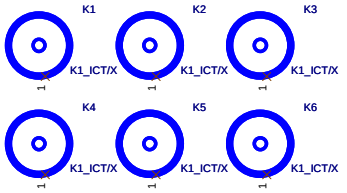




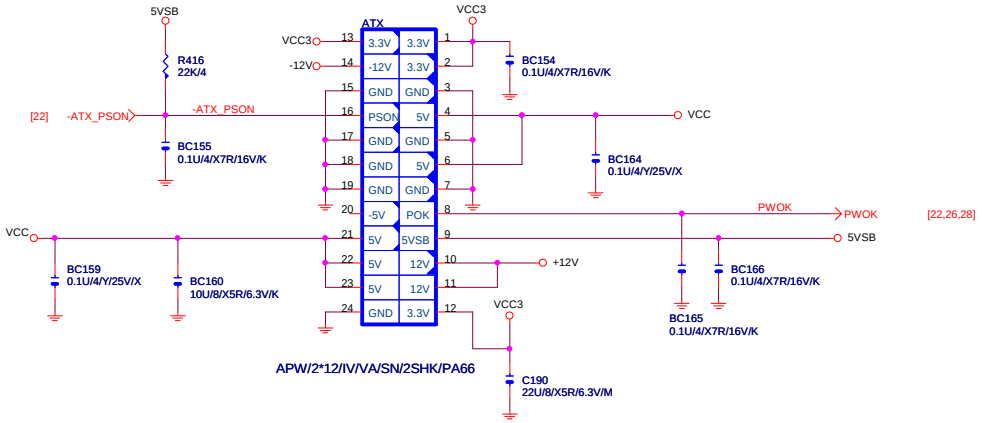


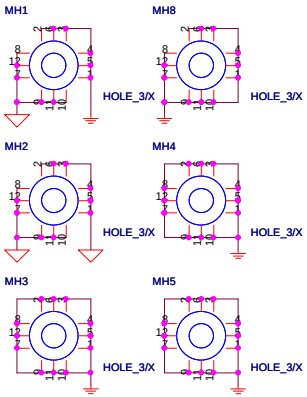






ATX POWER CONNECTOR





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Title: ATX, FRONT PANEL		
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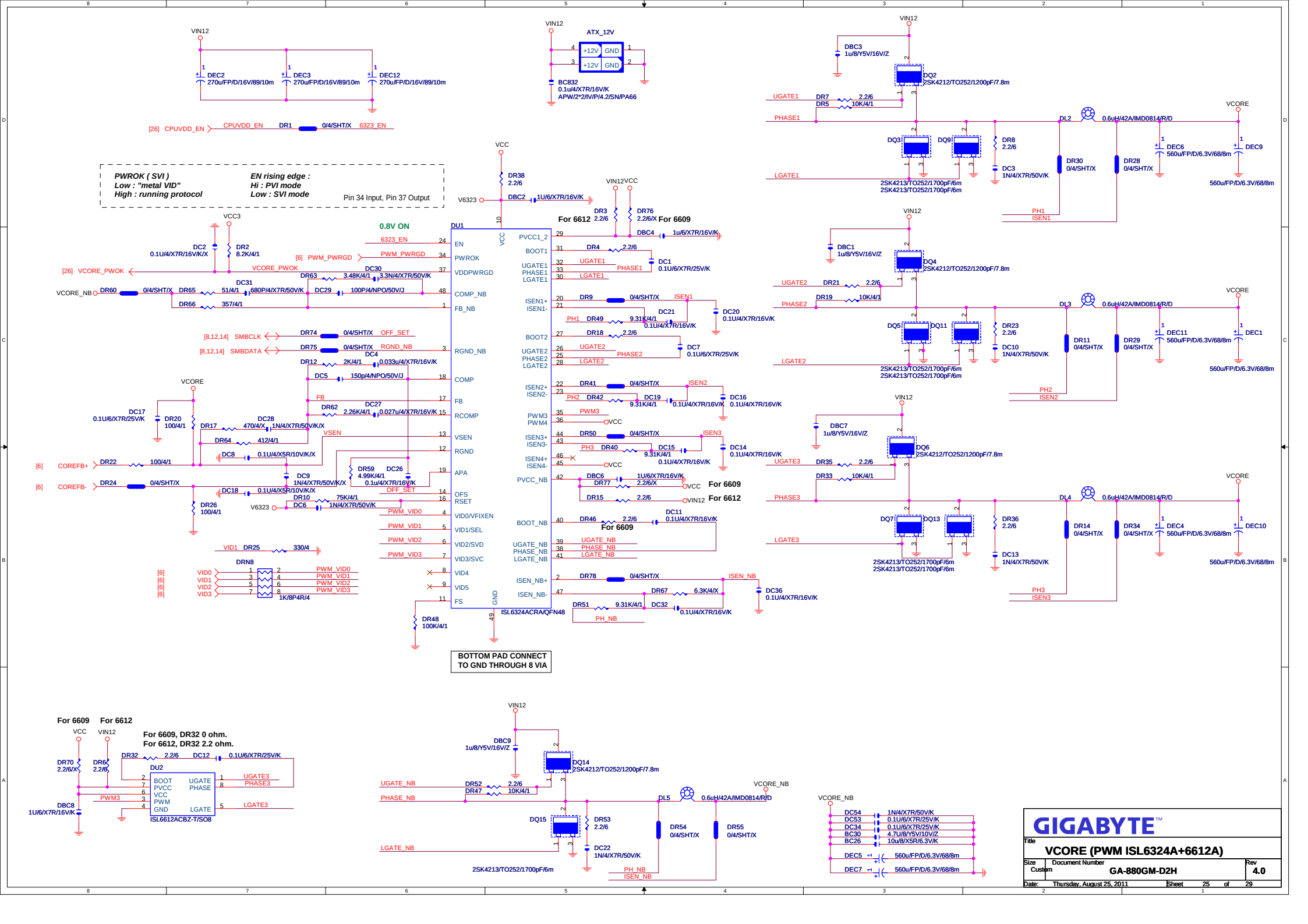
VIN12
DEC2 270u/FP/D/16V/89/10m
DEC3 270u/FP/D/16V/89/10m
DEC12 270u/FP/D/16V/89/10m
[26] CPUVDD_EN
CPUVDD_EN
DR1 0/4/SHT/X
6323_EN
ATX_12V
+12V
GND
BC832 0.1u/4/X7R/16V/K APW/2*2/IV/P/4.2/SN/PA66
PWROK (SVI)
Low : "metal VID"
High : running protocol
EN rising edge :
Hi : PVI mode
Low : SVI mode
Pin 34 Input, Pin 37 Output
VCC
VIN12
V6323
DR38 2.2/6
DBC2 1U/6/X7R/16V/K
For 6612
For 6609
DR3 2.2/6
DR76 2.2/6/X
DBC4 1u/6/X7R/16V/K
0.8V ON
DU1
6323_EN
PWM_PWRGD
[6] PWM_PWRGD
VCORE_PWOK
[26] VCORE_PWOK
VCORE_NB
DR60 0/4/SHT/X
DR65 51/4/1
DR66 357/4/1
DC30 3.48K/4/1 3.3N/4/X7R/50V/K
DC31 680P/4/X7R/50V/K
DC29 100P/4/NPO/50V/J
[8,12,14] SMBCLK
[8,12,14] SMBDATA
DR74 0/4/SHT/X OFF_SET
DR75 0/4/SHT/X RGND_NB
DC4 0.033u/4/X7R/16V/K
DR12 2K/4/1
DC5 150p/4/NPO/50V/J
FB
DR62 2.26K/4/1
DC27 0.027u/4/X7R/16V/K
DC17 0.1U/6/X7R/25V/K
DR20 100/4/1
DR17
DC28 470/4/X 1N/4/X7R/50V/K/X
DR64 412/4/1
VSEN
DC8 0.1U/4/X5R/10V/K/X
[6] COREFB+
DR22 100/4/1
[6] COREFB-
DR24 0/4/SHT/X
DC9 1N/4/X7R/50V/K/X
DC18 0.1U/4/X5R/10V/K/X
DR26 100/4/1
DR59 4.99K/4/1
DC26 0.1u/4/X7R/16V/K
DR10 75K/4/1
DC6 1N/4/X7R/50V/K
V6323
OFF_SET
PWM_VID0
PWM_VID1
PWM_VID2
PWM_VID3
VID1 DR25 330/4
DRN8
VID0
VID1
VID2
VID3
1K/8P4R/4
DR48 100K/4/1
EN
PWROK
VDDPWRGD
COMP_NB
FB_NB
RGND_NB
COMP
FB
RCOMP
VSEN
RGND
APA
OFS
RSET
VID0/VFIXEN
VID1/SEL
VID2/SVD
VID3/SVC
VID4
VID5
FS
GND
ISL6324ACRA/QFN48
PVCC1_2
BOOT1
UGATE1
PHASE1
LGATE1
ISEN1+
ISEN1-
DR9 0/4/SHT/X
ISEN1
DC20 0.1U/4/X7R/16V/K
PH1 DR49 9.31K/4/1
DC21 0.1U/4/X7R/16V/K
BOOT2
UGATE2
PHASE2
LGATE2
DR18 2.2/6
DC7 0.1U/6/X7R/25V/K
ISEN2+
ISEN2-
DR41 0/4/SHT/X
ISEN2
DC16 0.1U/4/X7R/16V/K
PH2 DR42 9.31K/4/1
DC19 0.1U/4/X7R/16V/K
PWM3
PWM4
ISEN3+
ISEN3-
DR50 0/4/SHT/X
ISEN3
DC14 0.1U/4/X7R/16V/K
PH3 DR40 9.31K/4/1
DC15 0.1U/4/X7R/16V/K
ISEN4+
ISEN4-
PVCC_NB
DBC6 1U/6/X7R/16V/K
DR77 2.2/6/X
DR15 2.2/6
For 6609
For 6612
BOOT_NB
DR46 2.2/6
DC11 0.1U/4/X7R/16V/K
UGATE_NB
PHASE_NB
LGATE_NB
ISEN_NB+
ISEN_NB-
DR78 0/4/SHT/X
ISEN_NB
DR67 6.3K/4/X
DR51 9.31K/4/1
DC32 0.1U/4/X7R/16V/K
DC36 0.1U/4/X7R/16V/K
PH_NB
BOTTOM PAD CONNECT TO GND THROUGH 8 VIA
VIN12
DBC3 1u/8/Y5V/16V/Z
DQ2 2SK4212/TO252/1200pF/7.8m
UGATE1
DR7 2.2/6
DR5 10K/4/1
PHASE1
LGATE1
DR8 2.2/6
DC3 1N/4/X7R/50V/K
DL2 0.6uH/42A/IMD0814/R/D
DR30 0/4/SHT/X
DR28 0/4/SHT/X
DEC6 560u/FP/D/6.3V/68/8m
DEC9 560u/FP/D/6.3V/68/8m
VCORE
2SK4213/TO252/1700pF/6m
PH1
ISEN1
DBC1 1u/8/Y5V/16V/Z
DQ4 2SK4212/TO252/1200pF/7.8m
UGATE2
DR21 2.2/6
DR19 10K/4/1
PHASE2
LGATE2
DR23 2.2/6
DC10 1N/4/X7R/50V/K
DL3 0.6uH/42A/IMD0814/R/D
DR11 0/4/SHT/X
DR29 0/4/SHT/X
DEC11 560u/FP/D/6.3V/68/8m
DEC1 560u/FP/D/6.3V/68/8m
PH2
ISEN2
DBC7 1u/8/Y5V/16V/Z
DQ6 2SK4212/TO252/1200pF/7.8m
UGATE3
DR35 2.2/6
DR33 10K/4/1
PHASE3
LGATE3
DR36 2.2/6
DC13 1N/4/X7R/50V/K
DL4 0.6uH/42A/IMD0814/R/D
DR14 0/4/SHT/X
DR34 0/4/SHT/X
DEC4 560u/FP/D/6.3V/68/8m
DEC10 560u/FP/D/6.3V/68/8m
PH3
ISEN3
For 6609 For 6612
VCC VIN12
DR70 2.2/6/X
DR6 2.2/6
For 6609, DR32 0 ohm.
For 6612, DR32 2.2 ohm.
DR32 2.2/6
DC12 0.1U/6/X7R/25V/K
DU2
BOOT
PVCC
VCC
PWM
GND
UGATE
PHASE
LGATE
UGATE3
PHASE3
LGATE3
PWM3
DBC8 1U/6/X7R/16V/K
ISL6612ACBZ-T/SO8
DBC9 1u/8/Y5V/16V/Z
DQ14 2SK4212/TO252/1200pF/7.8m
UGATE_NB
PHASE_NB
DR52 2.2/6
DR47 10K/4/1
DL5 0.6uH/42A/IMD0814/R/D
VCORE_NB
DQ15
DR53 2.2/6
DC22 1N/4/X7R/50V/K
DR54 0/4/SHT/X
DR55 0/4/SHT/X
LGATE_NB
2SK4213/TO252/1700pF/6m
PH_NB
ISEN_NB
DC54 1N/4/X7R/50V/K
DC53 0.1U/6/X7R/25V/K
DC34 0.1U/6/X7R/25V/K
BC30 4.7U/8/Y5V/10V/Z
BC26 10u/8/X5R/6.3V/K
DEC5 560u/FP/D/6.3V/68/8m
DEC7 560u/FP/D/6.3V/68/8m
GIGABYTE
Title
VCORE (PWM ISL6324A+6612A)
Size Custom
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Date: Thursday, August 25, 2011
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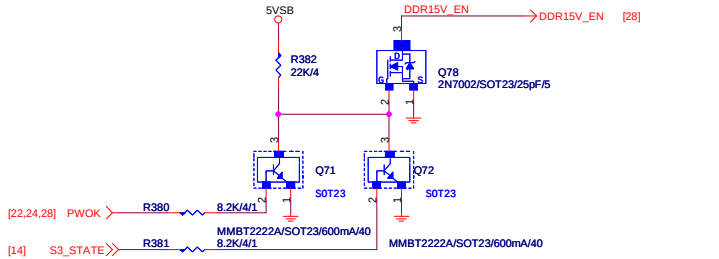

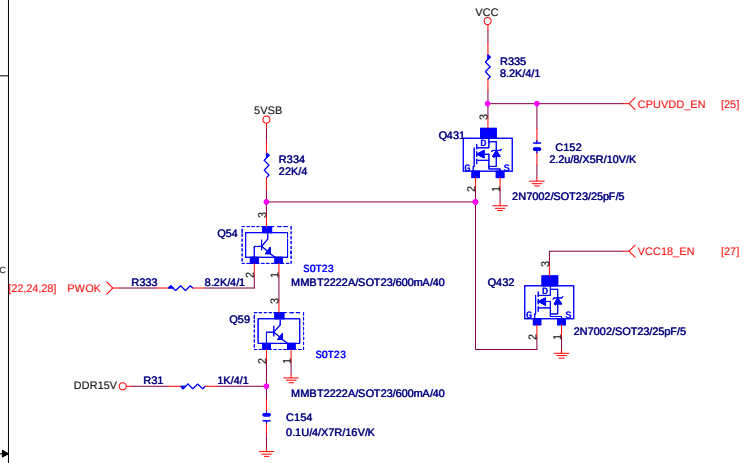

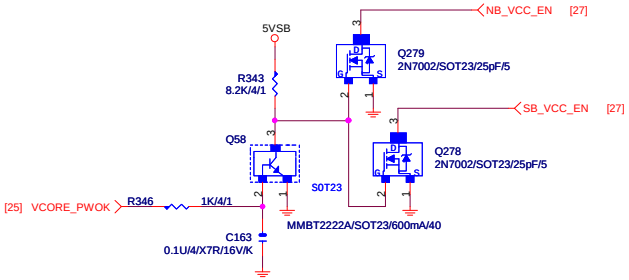

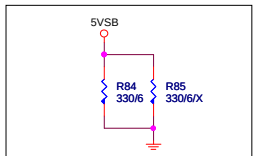

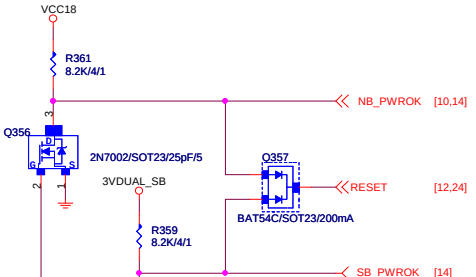

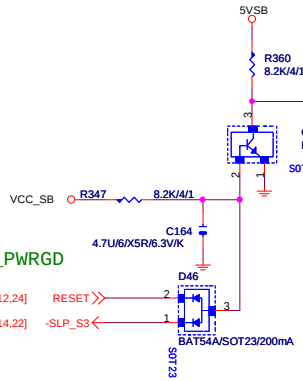

PWOK > NB_PWRGD / SB_PWRGD

(1.8V , 1.2V , 1.1V) > NB_PWRGD 前 1ms

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Title: POWER SEQUENCE		
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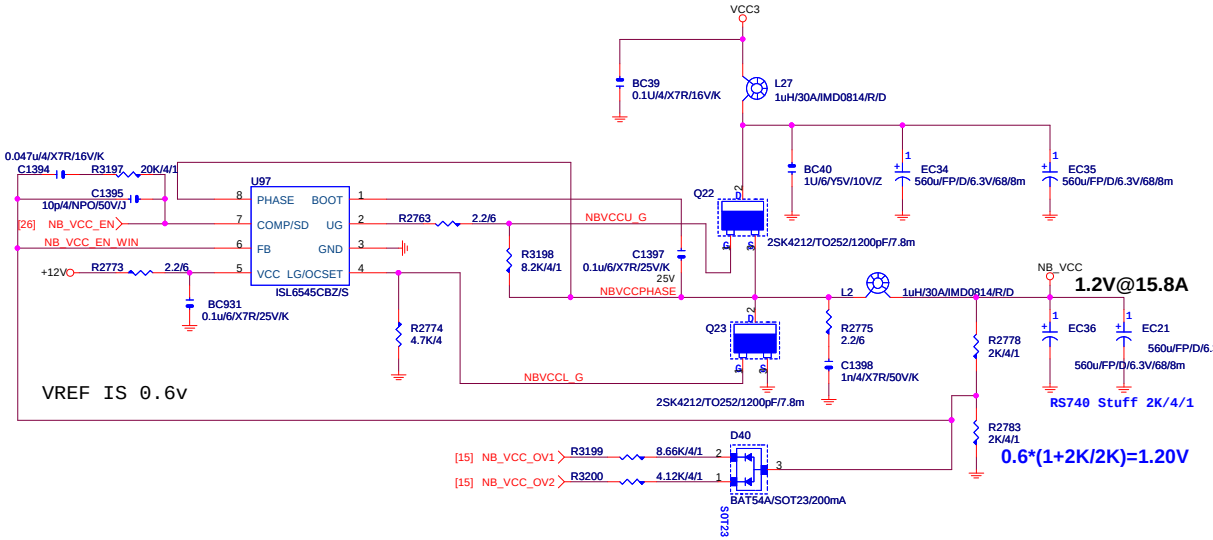
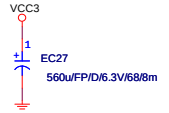
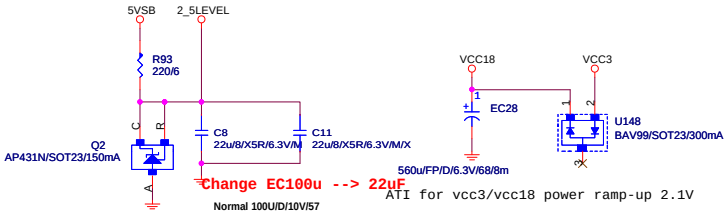
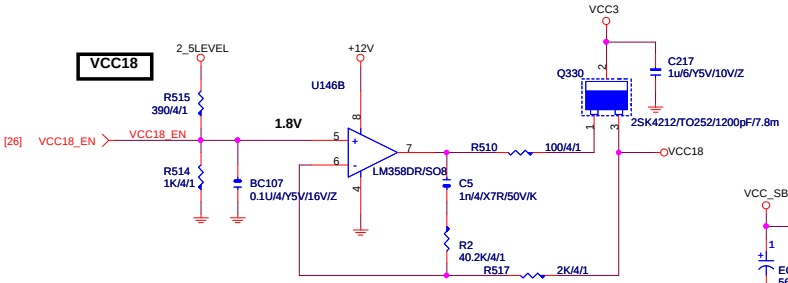
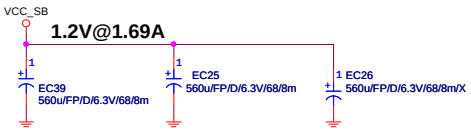


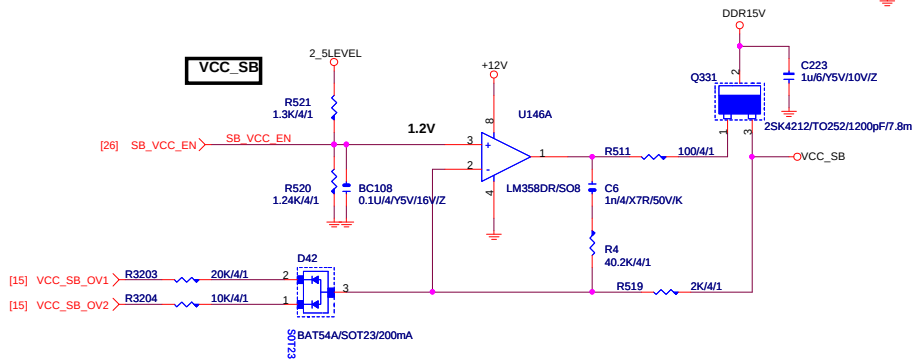


NB_VCC_OV1	NB_VCC_OV2	NB_VCC
L	X	1.20V
X	L	1.30V
L	L	1.40V

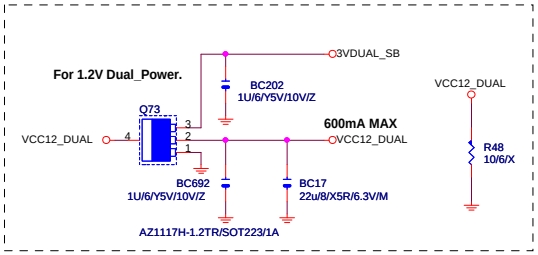








VCC_SB_OV1	VCC_SB_OV2	VCC_SB
L	X	1.30V
X	L	1.40V
L	L	1.50V



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Title: NB/SB POWER,VCC12HT,VDDA25,VCC12Dual

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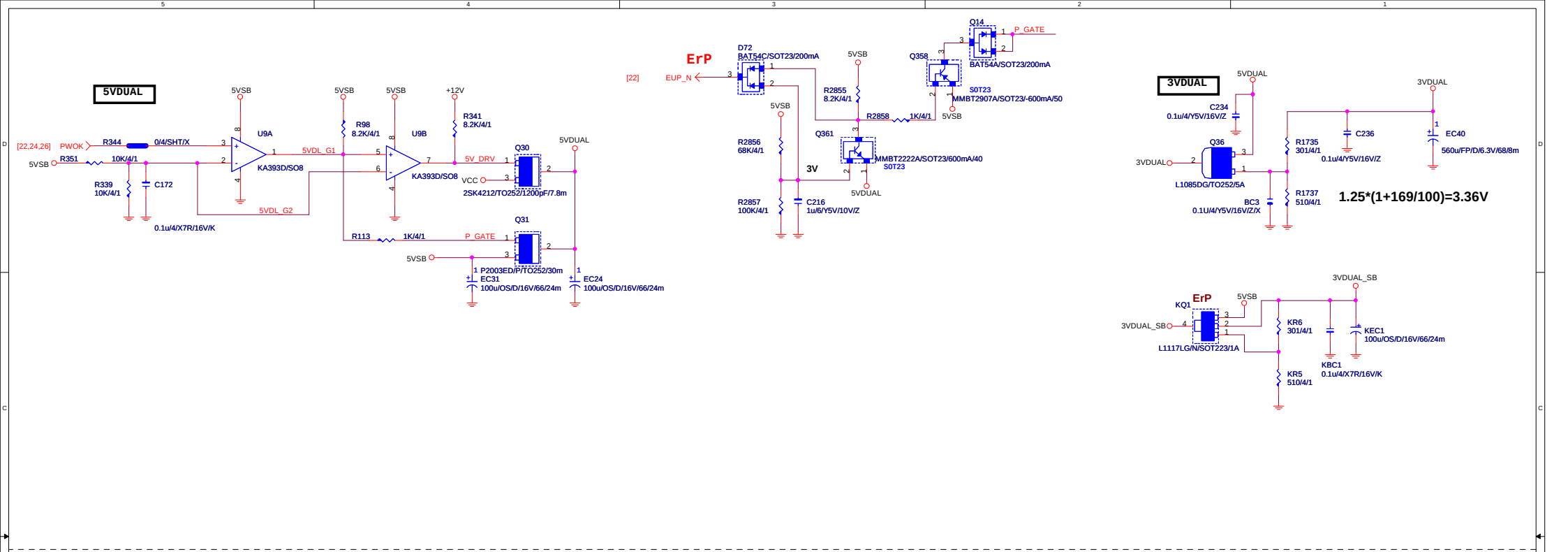

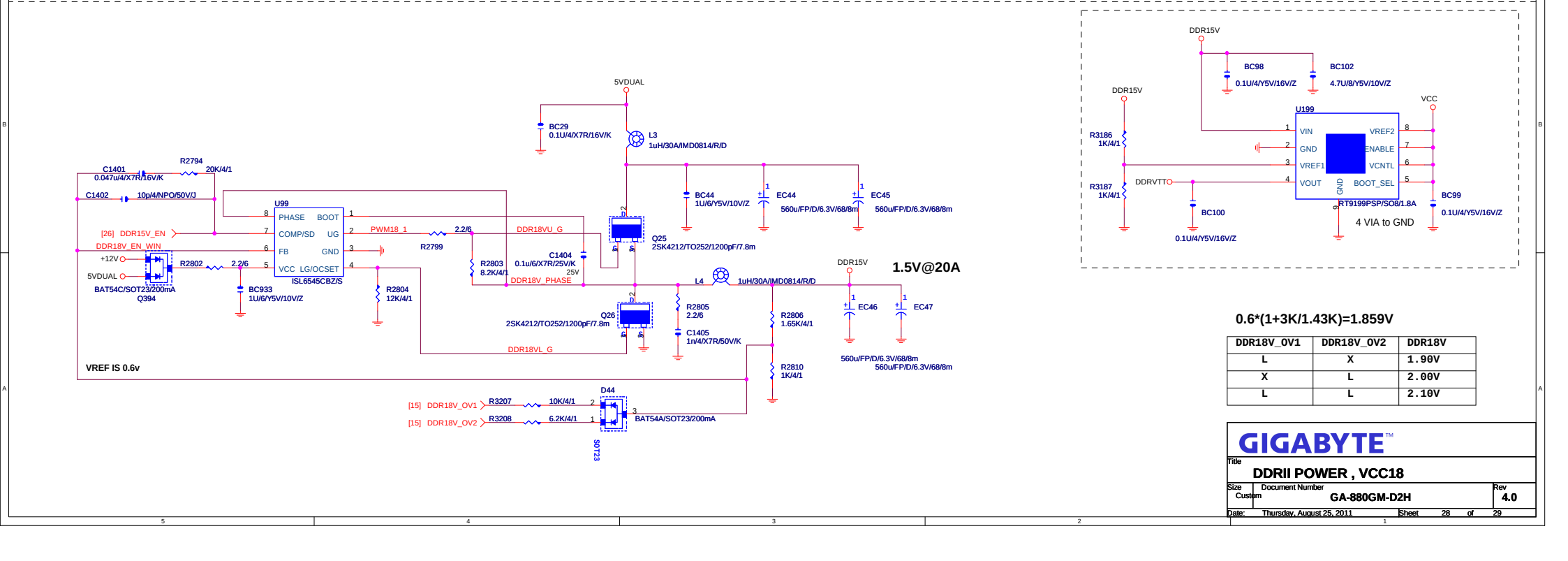

DDR18V_OV1	DDR18V_OV2	DDR18V
L	X	1.90V
X	L	2.00V
L	L	2.10V

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Title	DDRII POWER , VCC18	
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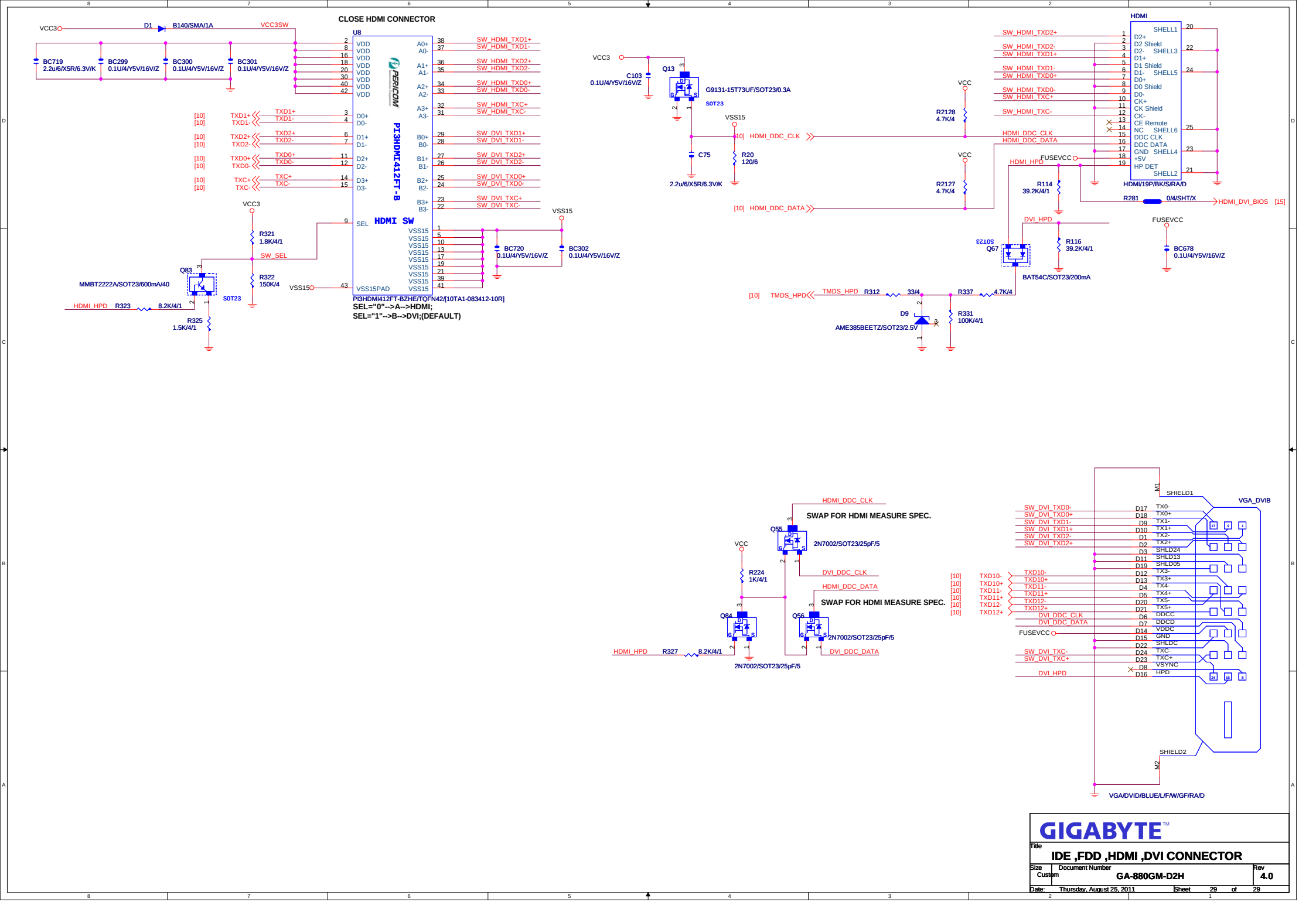
CLOSE HDMI CONNECTOR
VCC3
D1
B140/SMA/1A
VCC3SW
BC719 2.2u/6/X5R/6.3V/K
BC299 0.1U/4/Y5V/16V/Z
BC300 0.1U/4/Y5V/16V/Z
BC301 0.1U/4/Y5V/16V/Z
U8
PERICOM
PI3HDMI412FT-B
HDMI SW
VDD
SEL
VSS15
VSS15PAD
A0+
A0-
A1+
A1-
A2+
A2-
A3+
A3-
B0+
B0-
B1+
B1-
B2+
B2-
B3+
B3-
D0+
D0-
D1+
D1-
D2+
D2-
D3+
D3-
SW_HDMI_TXD1+
SW_HDMI_TXD1-
SW_HDMI_TXD2+
SW_HDMI_TXD2-
SW_HDMI_TXD0+
SW_HDMI_TXD0-
SW_HDMI_TXC+
SW_HDMI_TXC-
SW_DVI_TXD1+
SW_DVI_TXD1-
SW_DVI_TXD2+
SW_DVI_TXD2-
SW_DVI_TXD0+
SW_DVI_TXD0-
SW_DVI_TXC+
SW_DVI_TXC-
TXD1+
TXD1-
TXD2+
TXD2-
TXD0+
TXD0-
TXC+
TXC-
R321 1.8K/4/1
R322 150K/4
R325 1.5K/4/1
R323 8.2K/4/1
SW_SEL
HDMI_HPD
Q83
MMBT2222A/SOT23/600mA/40
S0T23
BC720 0.1U/4/Y5V/16V/Z
BC302 0.1U/4/Y5V/16V/Z
PI3HDMI412FT-BZHE/TQFN42/[10TA1-083412-10R]
SEL="0"-->A-->HDMI;
SEL="1"-->B-->DVI;(DEFAULT)
Q13
G9131-15T73UF/SOT23/0.3A
C103 0.1U/4/Y5V/16V/Z
C75
R20 120/6
2.2u/6/X5R/6.3V/K
HDMI_DDC_CLK
HDMI_DDC_DATA
R2128 4.7K/4
R2127 4.7K/4
R114 39.2K/4/1
R281 0/4/SHT/X
HDMI_DVI_BIOS
HDMI
SHELL1
SHELL2
SHELL3
SHELL4
SHELL5
SHELL6
HDMI/19P/BK/S/RA/D
FUSEVCC
DVI_HPD
Q67
BAT54C/SOT23/200mA
R116 39.2K/4/1
BC678 0.1U/4/Y5V/16V/Z
TMDS_HPD
R312 33/4
R337 4.7K/4
D9
AME385BEETZ/SOT23/2.5V
R331 100K/4/1
SWAP FOR HDMI MEASURE SPEC.
Q55
Q84
Q56
2N7002/SOT23/25pF/5
R224 1K/4/1
R327 8.2K/4/1
DVI_DDC_CLK
DVI_DDC_DATA
VGA_DVIB
SHIELD1
SHIELD2
M1
M2
VGA/DVID/BLUE/L/F/W/GF/RA/D
GIGABYTE
IDE ,FDD ,HDMI ,DVI CONNECTOR
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4.0
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