GA-E350N-USB3

OCT.20, 2010

Revision : 1.02

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	APU DDRIII, PCI_E
05	APU CONTROL
06	APU POWER & GND
07	DDRIII CHANNEL A
08	RTM880T-792/S
09	HUDSON PCIE/PCI/CPU/LPC/CLK
10	HUDSON ACPI/GPIO/USB/AUDIO
11	HUDSON SATA/IDE/HWM/SPI
12	HUDSON POWER & GND
13	PCI_E x4, VGA
14	HDMI ,DVI
15	ITE 8720 JX
16	ALC892 CODEC
17	AUDIO JACK
18	F_USB, FAN, HWMO
19	POWER SEQUENCE ,EUP
20	VCORE (PWMISL6329+6612)
21	SB, APU18 V, APU10V, VCC11_DUAL POWER
22	DDR POWER , VCC18
23	LAN RTL8111E
24	NEC USB3 uP720200
25	

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Title: COVER SHEET		
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Model Name:GA-E350N-USB3

Component value change history

Version: 1.02

P-Code: U99054-0

Date	Change Item		Reason
2010/10/25	1.0A EVT BOM Release.	PCB: 1.0	Modify from GA-BZ1 0.1
			Fix PWM COMP &FB RC PR85 --> 2K for OV table 20mV/Step delete R2430 add R8 for Power Seq. add AR24 Set HDMI
			VGA RGB R1293~1295 add 10p fine tune RGB SC1/SC2 change to 18p for SSC function
2010/12/02	1.0B DVT BOM Release.	PCB:1.01	EC29 Change to 560uF for VDD10 power U12 change to NCT3933U / Update Fan sink type
2010/12/28	1.0C PVT BOM Release.	PCB:1.02	SAC1 Change 22u/8/X5R / DC2 --> 1N/4/X7R

Circuit or PCB layout change for next version

Date	Change Item	Reason
2010.08.23	Rev 0.1 Gerber-out	New Gerber out
2010.08.23	Rev 1.0 Gerber-out	Change name from BZ1 to E350N-USB3
		Clock change to all SBCsrc, but Display clock.
2010.12.01	Rev 1.01 Gerber-out	Change APUCLK / SBSRC_CLK TO SRC PLL / SRCCLK_LAN Swiap to Pin27,28
2010.12.28	Rev 1.02 Gerber-out	Add F_PANEL text. SAC1 change to 22U for Vcore_NB ripple.
2010.12.28	Rev 1.02 Gerber-out	Change SAC1 Footprint (0805)

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Title: BOM & PCB HISTORY

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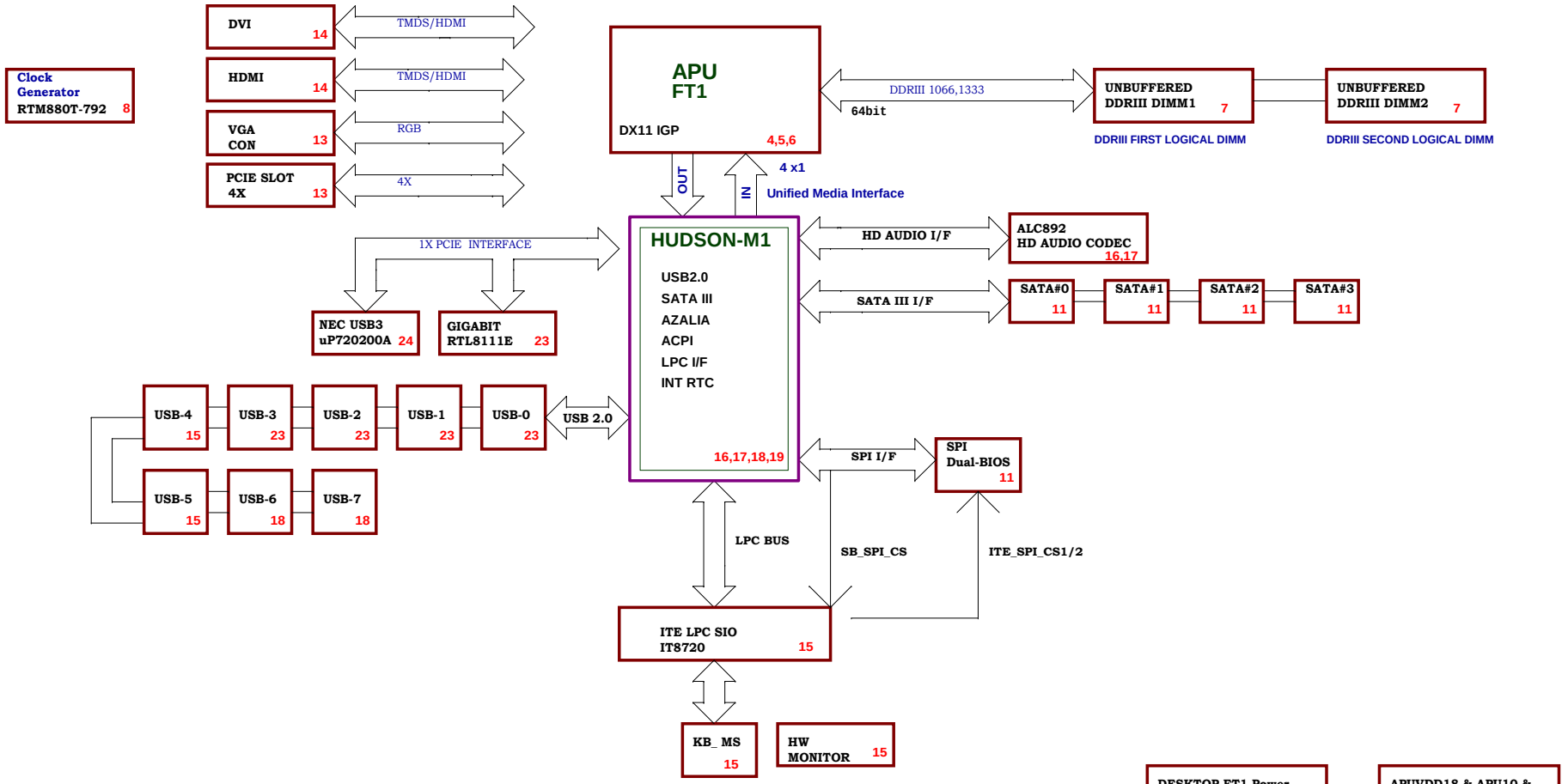
FT1 CUSTOMER DESKTOP REFERENCE DESIGN



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Title: BLOCK DIAGRAM		
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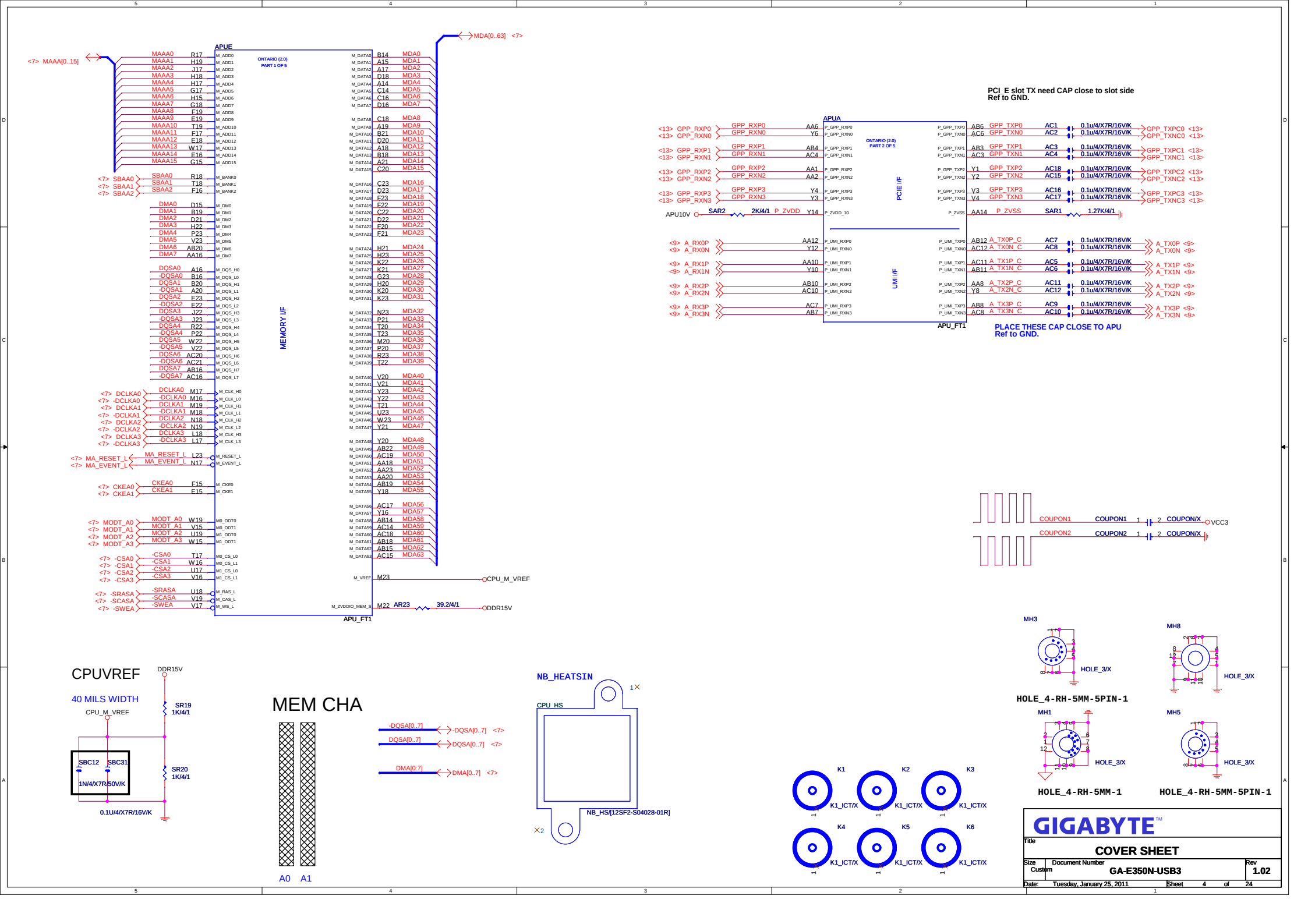
APUE
ONTARIO (2.0)
PART 1 OF 5
MEMORY I/F
APU_FT1
MAA[0..15]
MDA[0..63]
SBAA0
SBAA1
SBAA2
DMA0
DMA1
DMA2
DMA3
DMA4
DMA5
DMA6
DMA7
DQSA0
-DQSA0
DQSA1
-DQSA1
DQSA2
-DQSA2
DQSA3
-DQSA3
DQSA4
-DQSA4
DQSA5
-DQSA5
DQSA6
-DQSA6
DQSA7
-DQSA7
DCLKA0
-DCLKA0
DCLKA1
-DCLKA1
DCLKA2
-DCLKA2
DCLKA3
-DCLKA3
MA_RESET_L
MA_EVENT_L
CKEA0
CKEA1
MODT_A0
MODT_A1
MODT_A2
MODT_A3
-CSA0
-CSA1
-CSA2
-CSA3
-SRASA
-SCASA
-SWEA
M_VREF
CPU_M_VREF
M_ZVDDIO_MEM_S
AR23
39.2/4/1
DDR15V
APUA
ONTARIO (2.0)
PART 2 OF 5
PCIE I/F
UMI I/F
APU_FT1
APU10V
SAR2
2K/4/1
P_ZVDD
SAR1
1.27K/4/1
PCI_E slot TX need CAP close to slot side
Ref to GND.
PLACE THESE CAP CLOSE TO APU
Ref to GND.
GPP_RXP0
GPP_RXN0
GPP_RXP1
GPP_RXN1
GPP_RXP2
GPP_RXN2
GPP_RXP3
GPP_RXN3
GPP_TXP0
GPP_TXN0
GPP_TXP1
GPP_TXN1
GPP_TXP2
GPP_TXN2
GPP_TXP3
GPP_TXN3
A_RX0P
A_RX0N
A_RX1P
A_RX1N
A_RX2P
A_RX2N
A_RX3P
A_RX3N
A_TX0P_C
A_TX0N_C
A_TX1P_C
A_TX1N_C
A_TX2P_C
A_TX2N_C
A_TX3P_C
A_TX3N_C
0.1u/4/X7R/16V/K
COUPON1
COUPON2
COUPON/X
VCC3
CPUVREF
DDR15V
40 MILS WIDTH
CPU_M_VREF
SR19
1K/4/1
SR20
1K/4/1
SBC12
SBC31
1N/4/X7R/50V/K
0.1U/4/X7R/16V/K
MEM CHA
A0
A1
-DQSA[0..7]
DQSA[0..7]
DMA[0..7]
NB_HEATSIN
CPU_HS
NB_HS[12SF2-S04028-01R]
K1
K2
K3
K4
K5
K6
K1_ICT/X
MH3
MH8
MH1
MH5
HOLE_3/X
HOLE_4-RH-5MM-5PIN-1
HOLE_4-RH-5MM-1
HOLE_4-RH-5MM-5PIN-1
GIGABYTE
Title
COVER SHEET
Size
Custom
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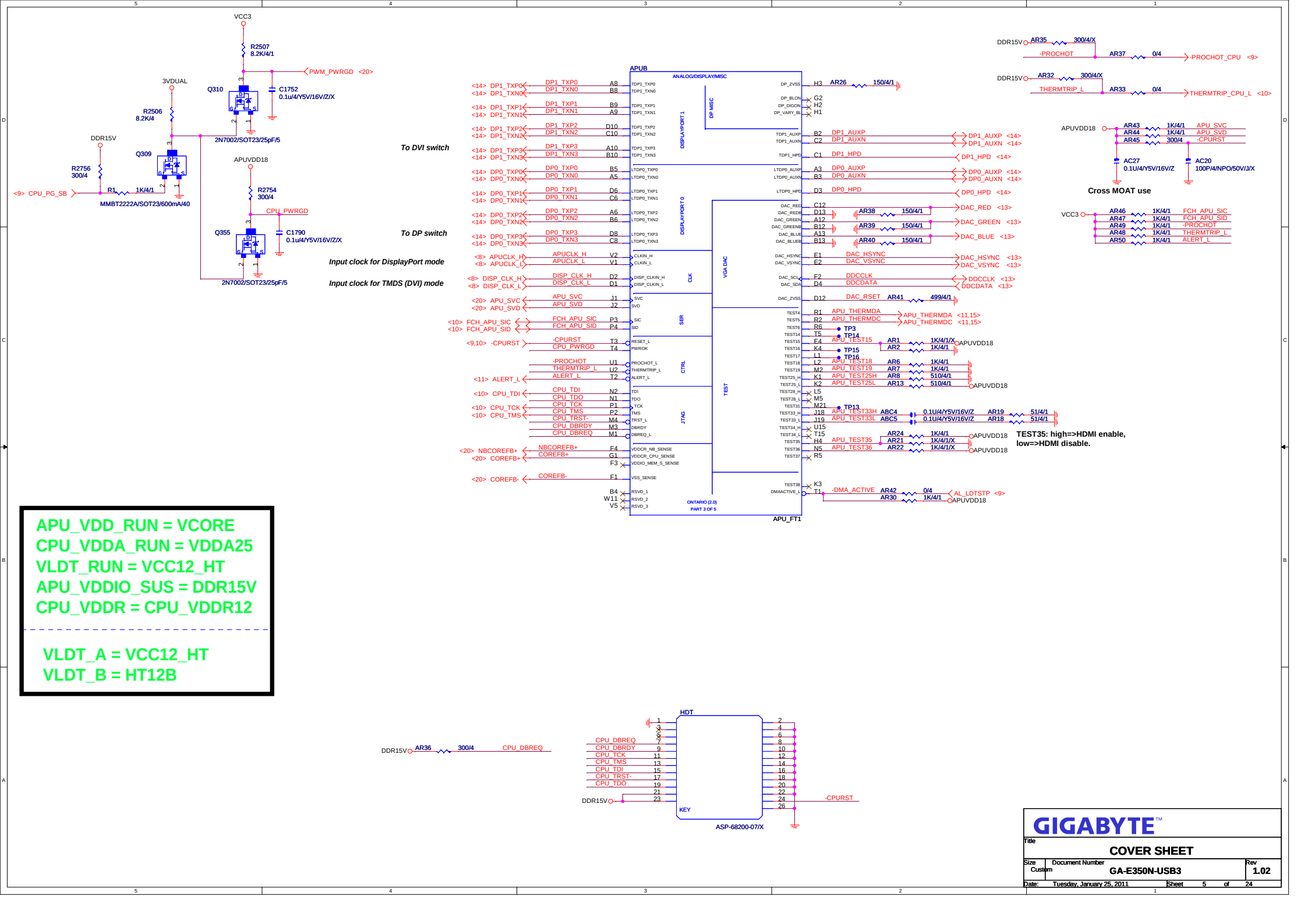

Title	COVER SHEET	
Size: Custom	Document Number: GA-E350N-USB3	Rev: 1.02
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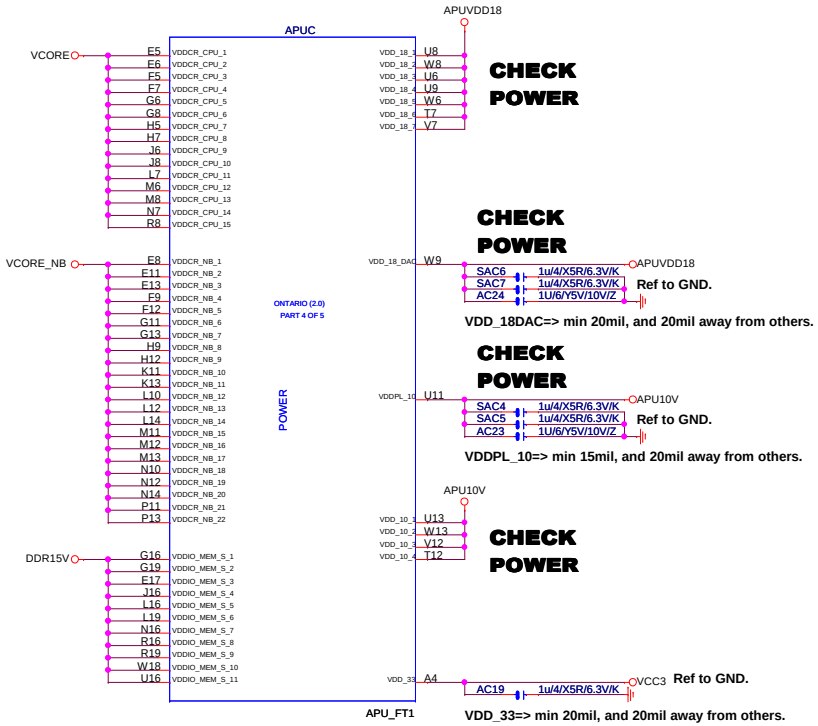

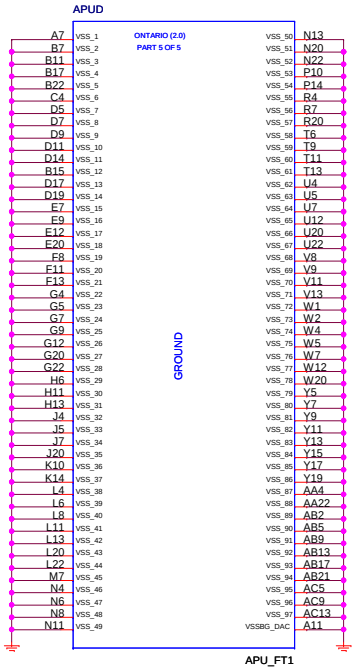

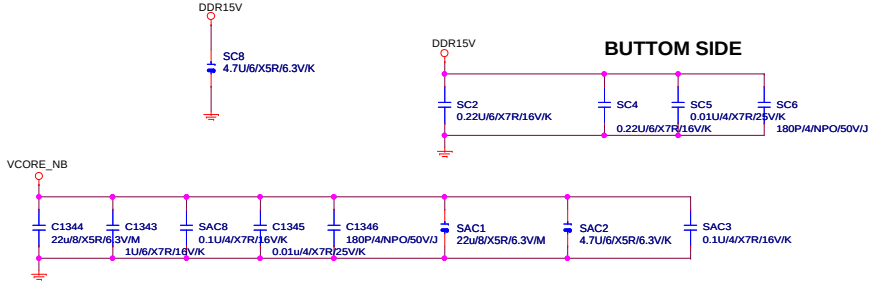

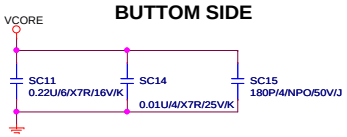

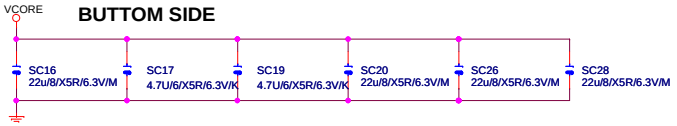

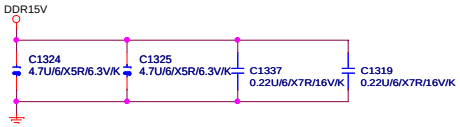

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Title: CPU POWER & GND		
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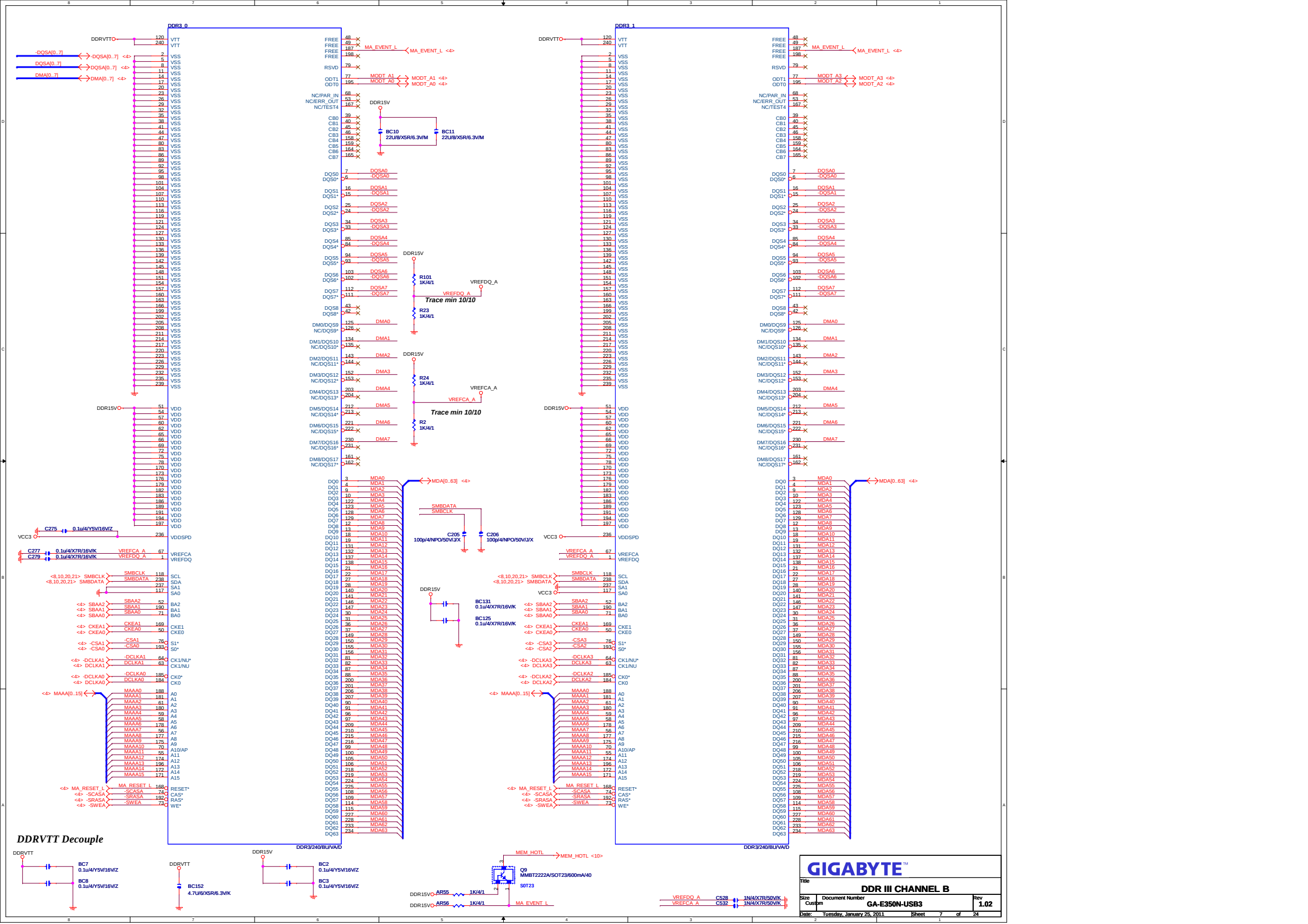
DDR3_0
DDR3_1
DDR3/240/BUIVA/D
DDRVTT Decouple
Trace min 10/10
Trace min 10/10
GIGABYTE
DDR III CHANNEL B
Size: Custom
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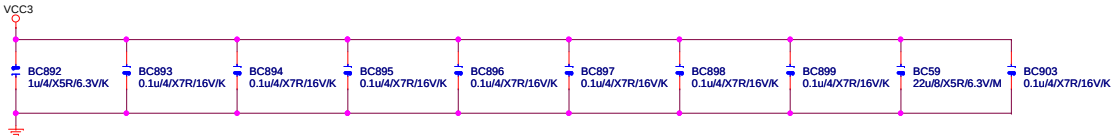
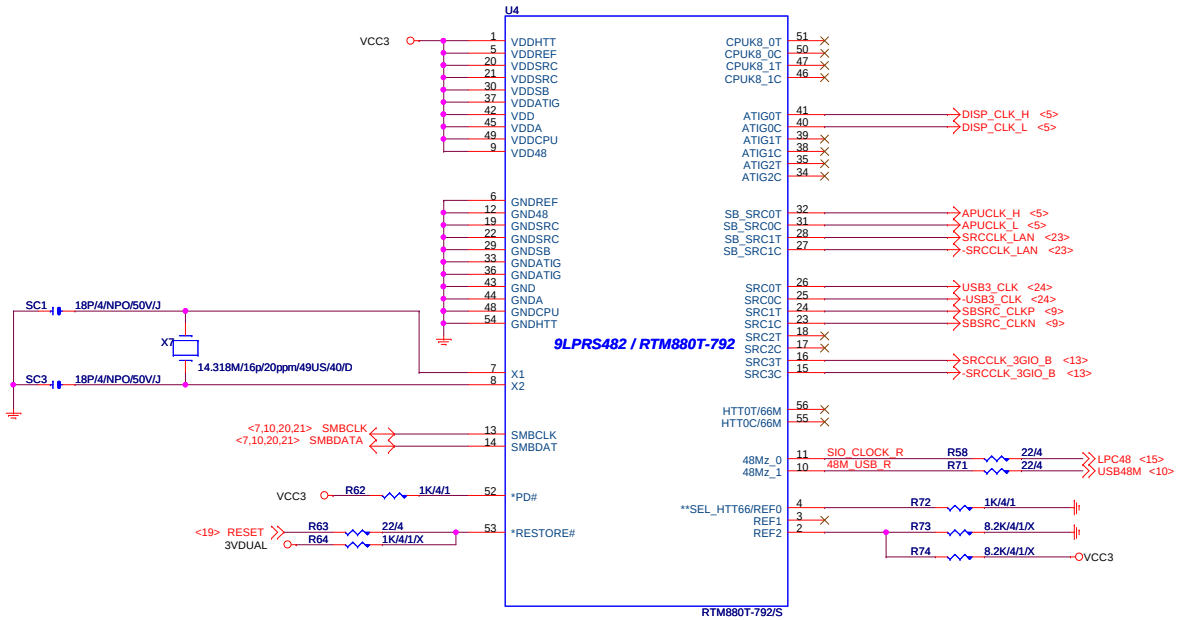


NB CLOCK INPUT TABLE

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



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Title: RTM880T-792			
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PLACE THESE PCIE AC COUPLING CAPS CLOSE TO SB850

S.B HEATSINK

SB_HS

SB_HS/X

U1E

HUDSON-1

PART 1 OF 5

PCI EXPRESS I/F

PCI CLKS

PCI I/F

LPC

CLOCK GENERATOR

CPU

RTC

218-0792006/S

Hudson-M1: 1. Don't have PCI controller. 2. Don't support GbE MAC. 3. Don't support Flash controller.

Low: Force PCIE GEN1, High: Allow PCIE GEN2

Watch Dog Timer :Low=>Disable, High=>Enable

Debug Straps:Low=>Disable, High=>Enable

Fusion clock mode :Low=>Enable, High=>Disable

This strap is not used if the strap CLKGEN is configured for external clock generator mode.

	LPC_CLK0	LPC_CLK1
PULL HIGH	IMC ENABLED	Internal Clock Mode
PULL LOW	AOD Extreme IMC DISABLED	External Clock Mode
	DEFAULT	DEFAULT

20mil 20mil 20mil

BAT54C/SOT23/200mA

BAT-SK/BK/P/S/D/SN

CR2032

CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

NOT ADD ICT FOR RTCVDD PIN

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.

PX1 32.768K/12.5p/20ppm/TF38/35K/D

PX2 25M/20p/30ppm/49US/20/D

SHW/D0.64*5.08*6.74

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Title	ATI SB700 PCIE/PCI/CPU/LPC	
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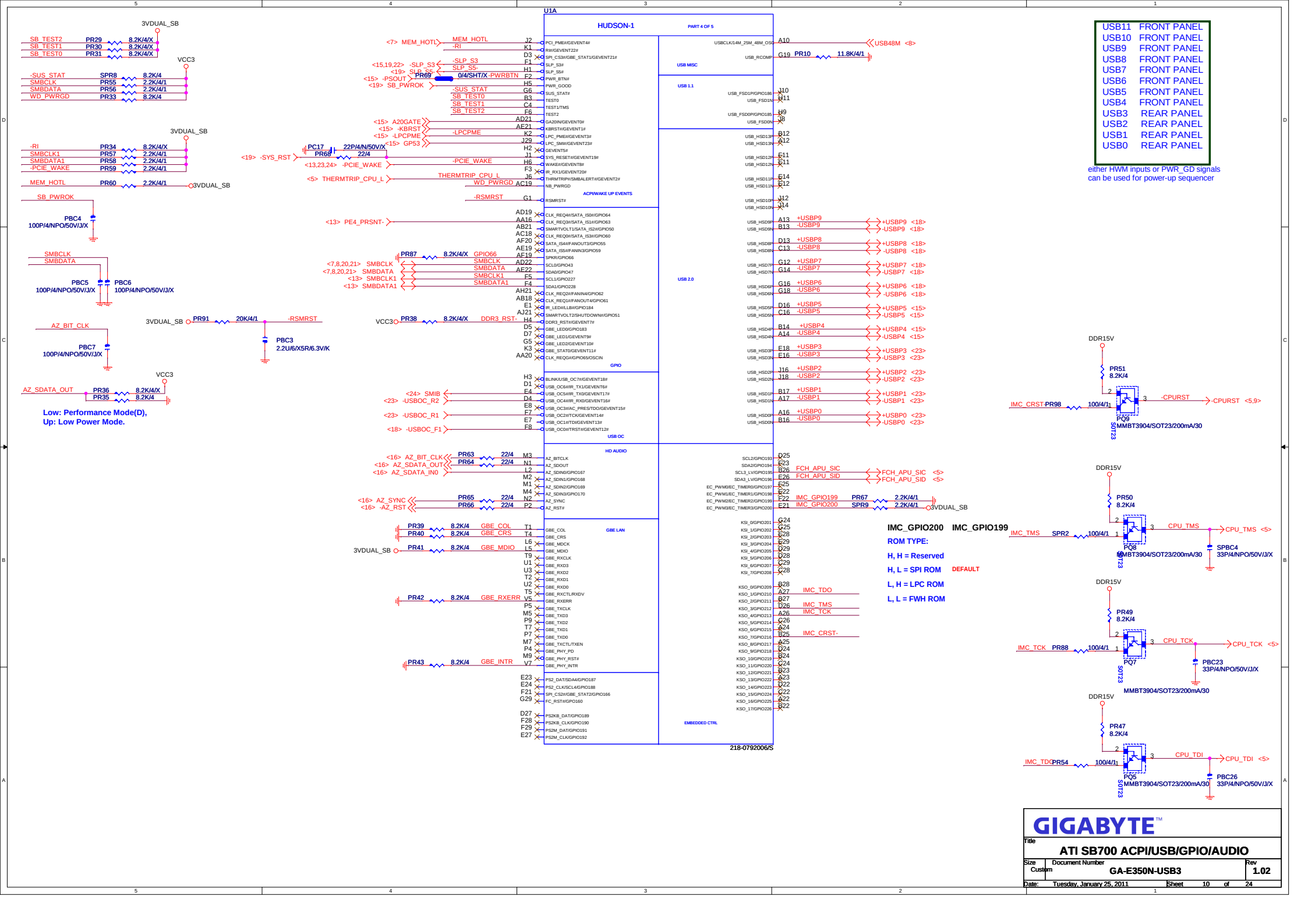
U1A
HUDSON-1
PART 4 OF 5
USB11 FRONT PANEL
USB10 FRONT PANEL
USB9 FRONT PANEL
USB8 FRONT PANEL
USB7 FRONT PANEL
USB6 FRONT PANEL
USB5 FRONT PANEL
USB4 FRONT PANEL
USB3 REAR PANEL
USB2 REAR PANEL
USB1 REAR PANEL
USB0 REAR PANEL
either HWM inputs or PWR_GD signals can be used for power-up sequencer
Low: Performance Mode(D),
Up: Low Power Mode.
IMC_GPIO200 IMC_GPIO199
ROM TYPE:
H, H = Reserved
H, L = SPI ROM DEFAULT
L, H = LPC ROM
L, L = FWH ROM
218-0792006/S
GIGABYTE
Title
ATI SB700 ACPI/USB/GPIO/AUDIO
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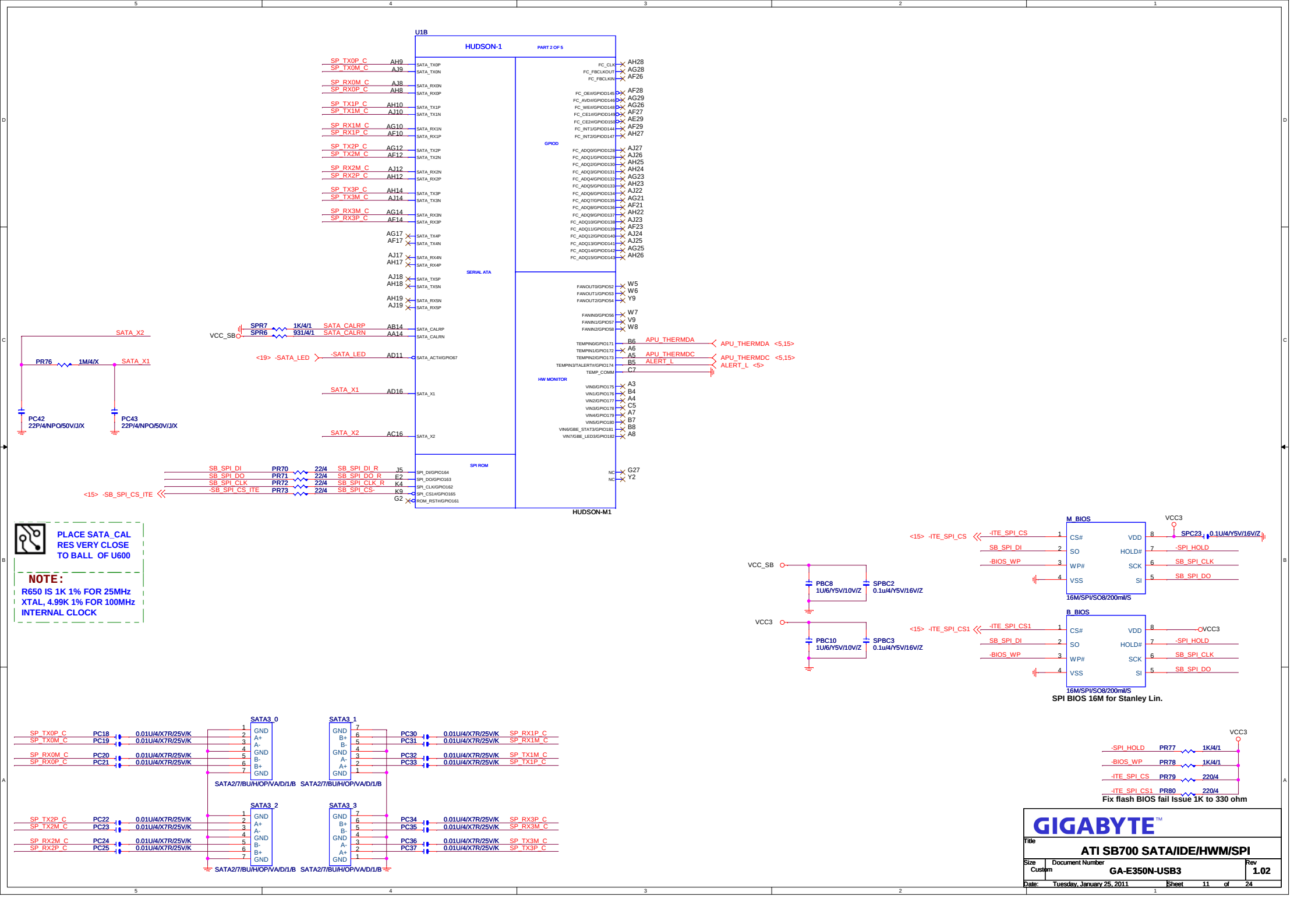
U1B
HUDSON-1
PART 2 OF 5
SERIAL ATA
GPIOD
HW MONITOR
SPI ROM
HUDSON-M1
SATA_X2
PR76 1M/4/X
SATA_X1
PC42 22P/4/NPO/50V/J/X
PC43 22P/4/NPO/50V/J/X
VCC_SB
SPR7 1K/4/1 SATA_CALRP
SPR6 931/4/1 SATA_CALRN
<19> -SATA_LED
-SATA_LED
SB_SPI_DI PR70 22/4 SB_SPI_DI_R
SB_SPI_DO PR71 22/4 SB_SPI_DO_R
SB_SPI_CLK PR72 22/4 SB_SPI_CLK_R
-SB_SPI_CS_ITE PR73 22/4 SB_SPI_CS-
<15> -SB_SPI_CS_ITE
APU_THERMDA
APU_THERMDC
ALERT_L
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
M_BIOS
B_BIOS
16M/SPI/SO8/200mil/S
SPI BIOS 16M for Stanley Lin.
SATA3_0
SATA3_1
SATA3_2
SATA3_3
SATA2/7/BU/H/OP/VA/D/1/B
Fix flash BIOS fail Issue 1K to 330 ohm
GIGABYTE
Title
ATI SB700 SATA/IDE/HWM/SPI
Size Custom
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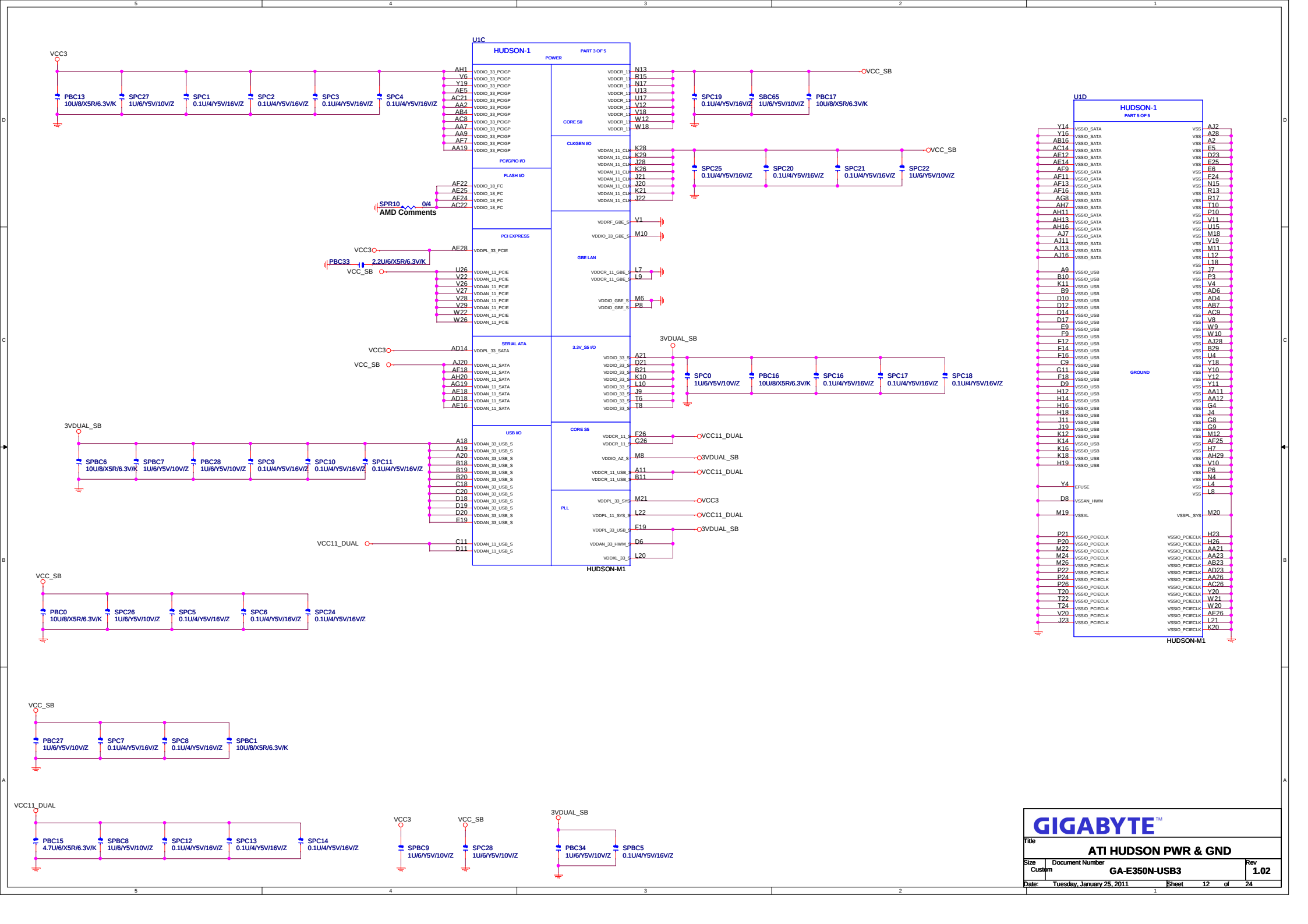

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Title	ATI HUDSON PWR & GND	
Size: Custom	Document Number: GA-E350N-USB3	Rev: 1.02
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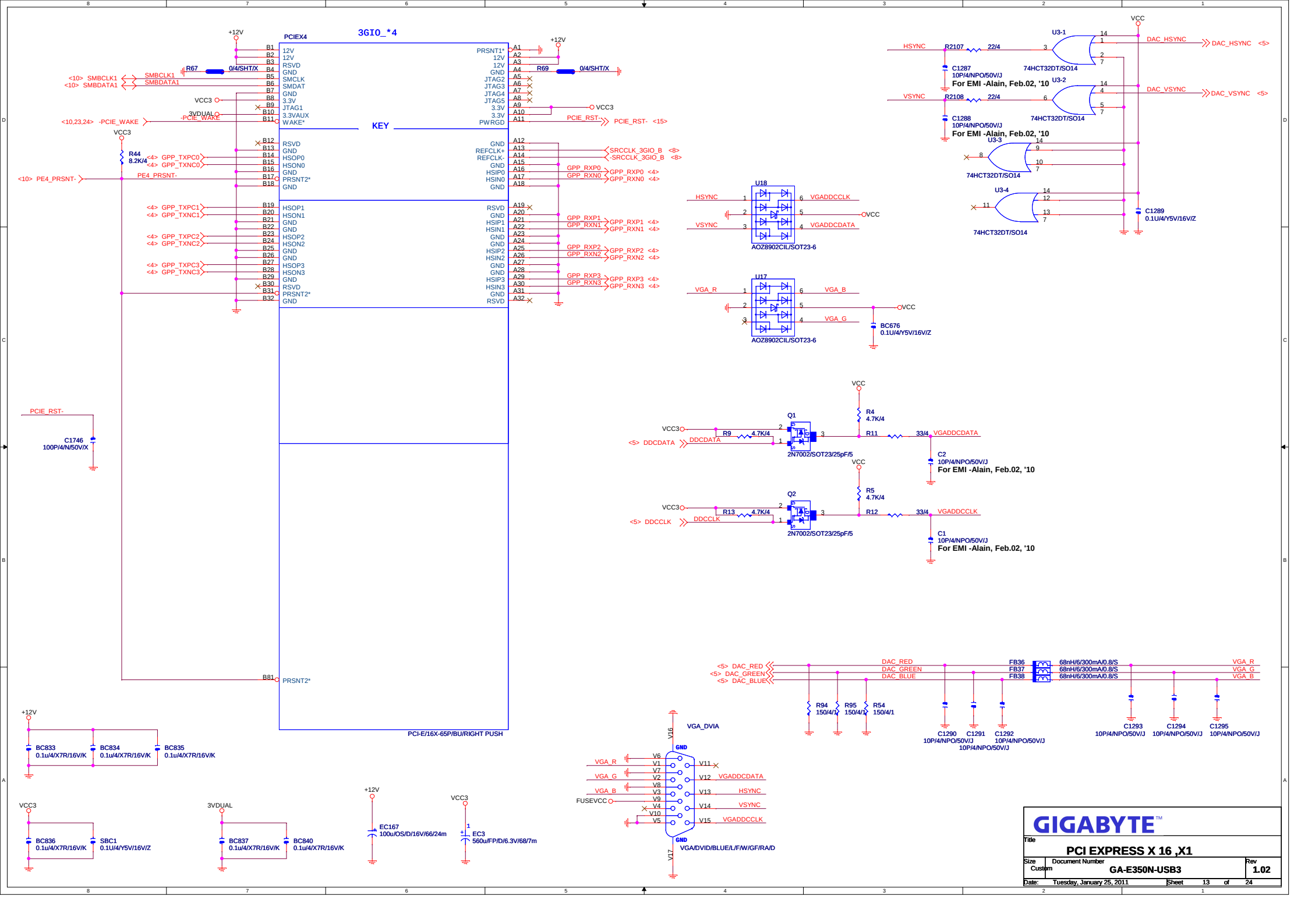
PCIEX4
3GIO_*4
KEY
PCI-E/16X-65P/BU/RIGHT PUSH
+12V
VCC3
3VDUAL
R67 0/4/SHT/X
R69 0/4/SHT/X
SMBCLK1
SMBDATA1
-PCIE_WAKE
PE4_PRSNT-
PRSNT2*
R44 8.2K/4
C1746 100P/4/N/50V/X
BC833 0.1u/4/X7R/16V/K
BC834 0.1u/4/X7R/16V/K
BC835 0.1u/4/X7R/16V/K
BC836 0.1u/4/X7R/16V/K
SBC1 0.1U/4/Y5V/16V/Z
BC837 0.1u/4/X7R/16V/K
BC840 0.1u/4/X7R/16V/K
EC167 100u/OS/D/16V/66/24m
EC3 560u/FP/D/6.3V/68/7m
U18
AOZ8902CIL/SOT23-6
U17
AOZ8902CIL/SOT23-6
VGADDCCLK
VGADDCDATA
VGA_R
VGA_B
VGA_G
BC676 0.1U/4/Y5V/16V/Z
U3-1
U3-2
U3-3
U3-4
74HCT32DT/SO14
HSYNC
VSYNC
R2107 22/4
R2108 22/4
C1287 10P/4/NPO/50V/J
C1288 10P/4/NPO/50V/J
For EMI -Alain, Feb.02, '10
C1289 0.1U/4/Y5V/16V/Z
Q1
Q2
2N7002/SOT23/25pF/5
R4 4.7K/4
R5 4.7K/4
R9 4.7K/4
R13 4.7K/4
R11 33/4
R12 33/4
DDCDATA
DDCCLK
C2 10P/4/NPO/50V/J
C1 10P/4/NPO/50V/J
DAC_RED
DAC_GREEN
DAC_BLUE
FB36
FB37
FB38
68nH/6/300mA/0.8/S
R94 150/4/1
R95 150/4/1
R54 150/4/1
C1290 10P/4/NPO/50V/J
C1291 10P/4/NPO/50V/J
C1292 10P/4/NPO/50V/J
C1293 10P/4/NPO/50V/J
C1294 10P/4/NPO/50V/J
C1295 10P/4/NPO/50V/J
VGA_DVIA
VGA/DVID/BLUE/L/F/W/GF/RA/D
FUSEVCC
GIGABYTE
Title
PCI EXPRESS X 16 ,X1
Size Custom
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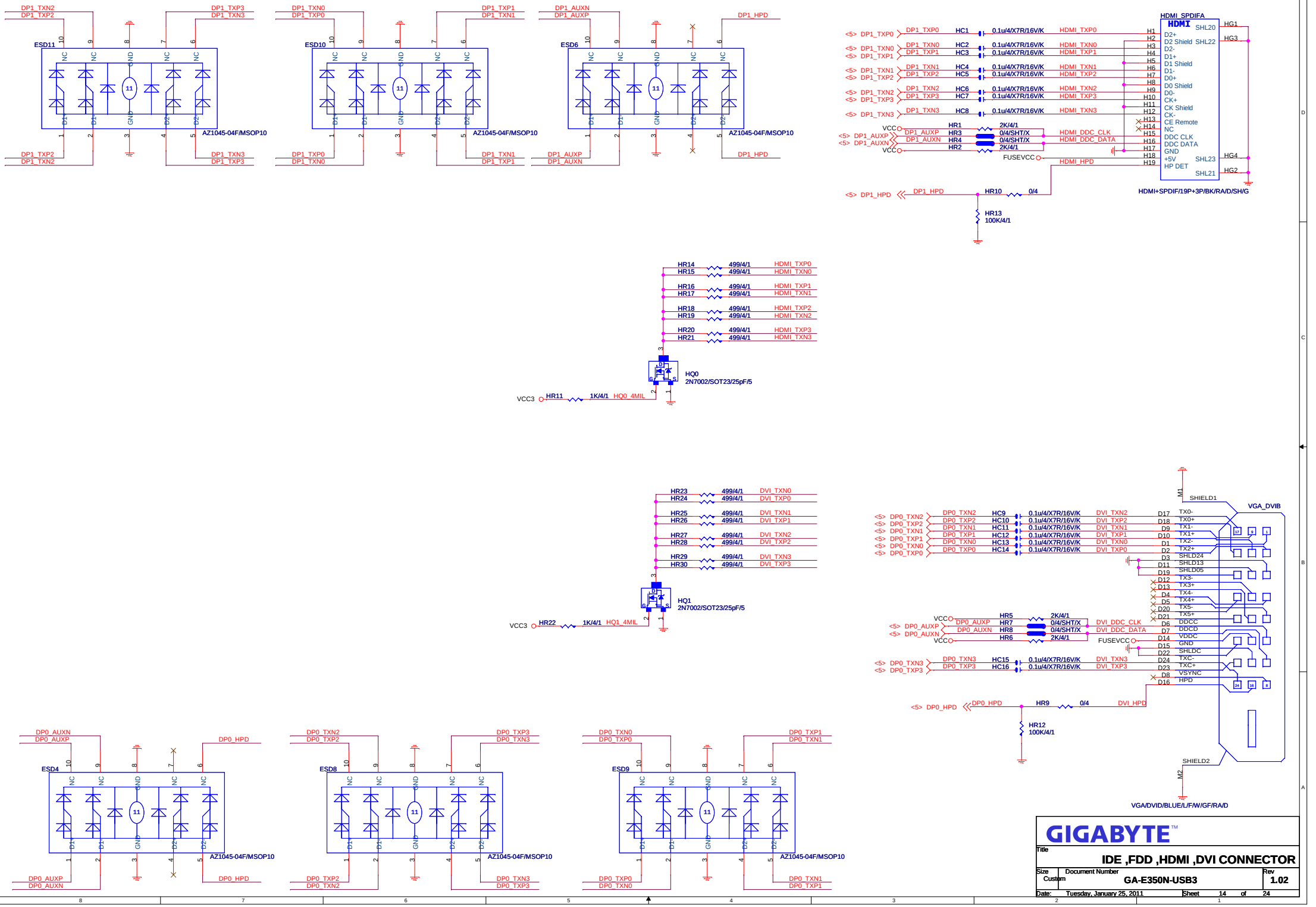

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Title	IDE ,FDD ,HDMI ,DVI CONNECTOR	
Size: Custom	Document Number: GA-E350N-USB3	Rev: 1.02
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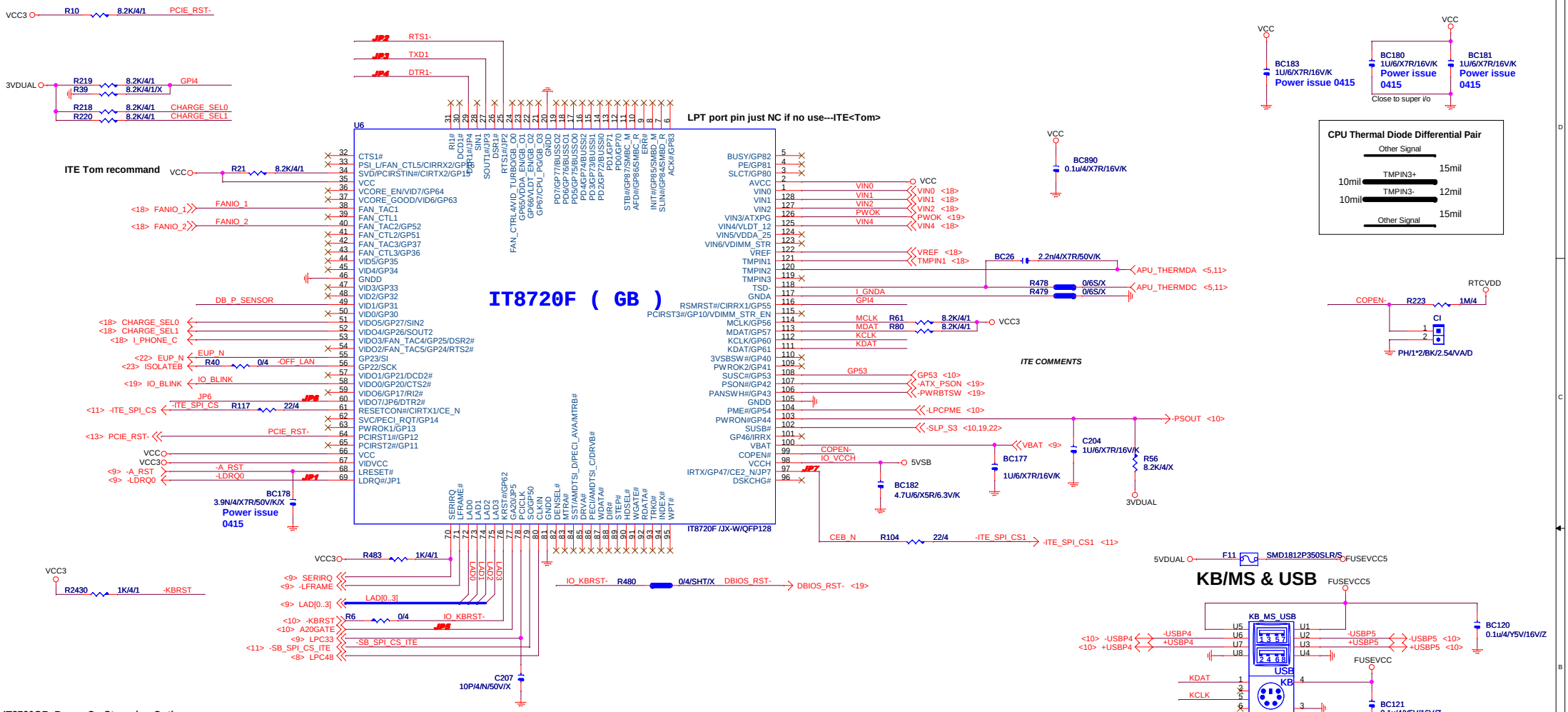

IT8720GB Power On Strapping Options

	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

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Title: ITE 8720 LPC IO ,Dual-BIOS

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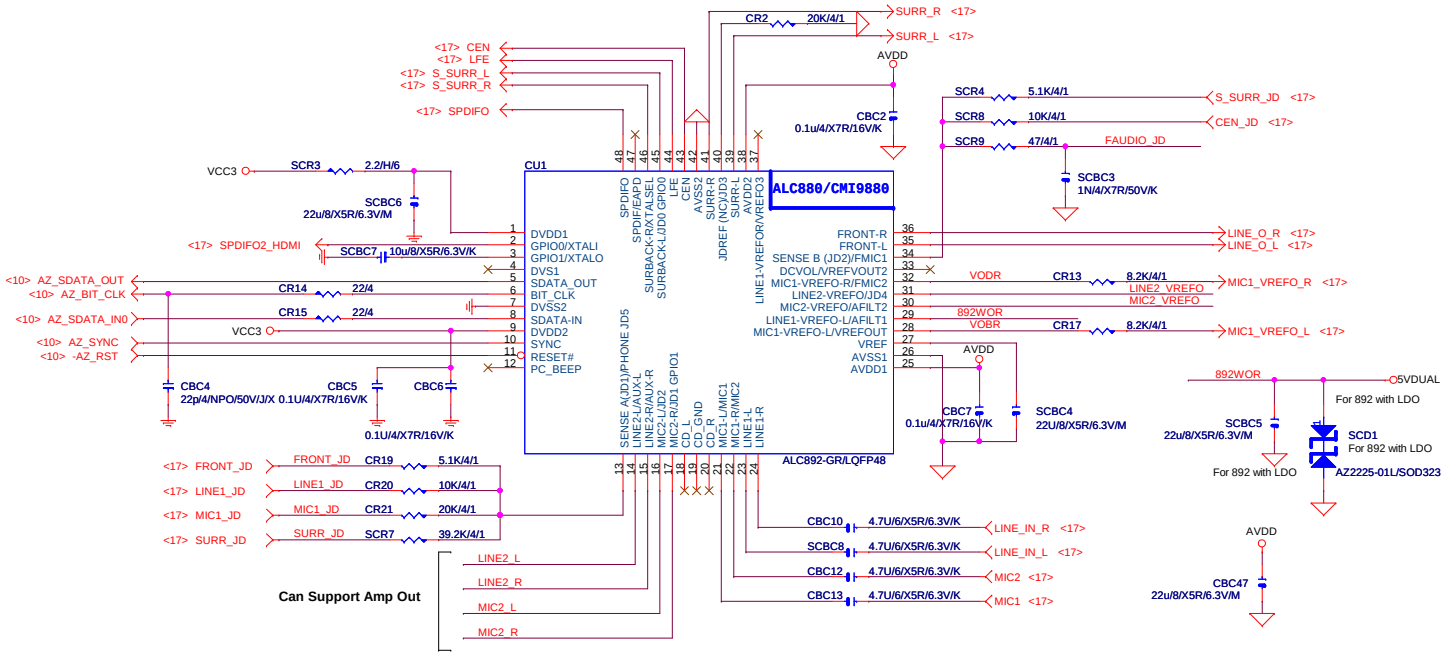
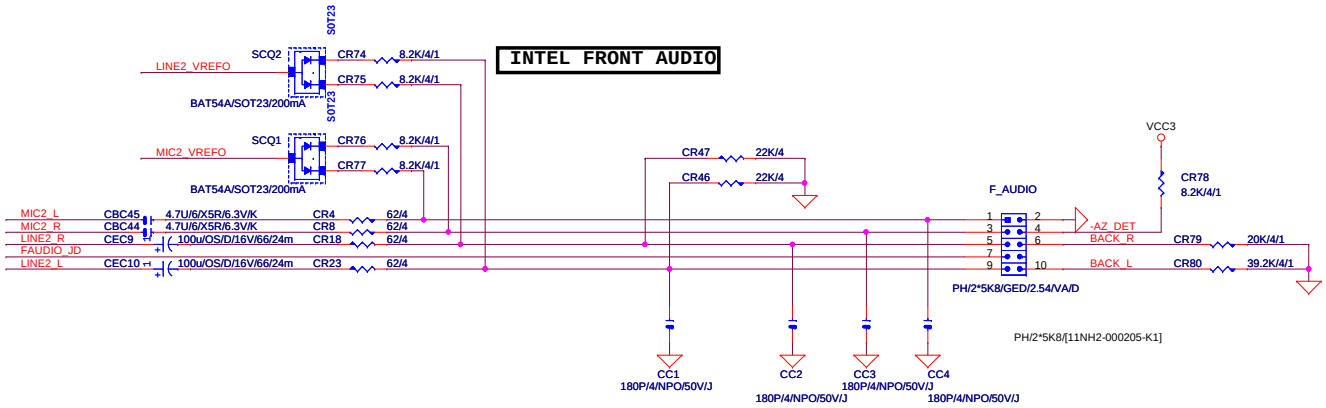
AZALIA CODEC ***ALC892/ALC889/ Colay***

	ALC892	ALC889	ALC889A
CR16	X	X	O
CR24	X	X	O
CR25	X	O	O
CBC42	10uF/X5R	X	X
CR2	20K/1%	20K/1%	20K/0.1%
CR9	O	O	X
CR10	X	X	O
CBC10/CBC11/CBC12/ CBC13/CBC44/CBC45	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR4/CR8/CR18/CR23/ CR11/CR12/CR27/CR29/ CR49/CR50/CR43/CR44/ CR45/CR48/CR59/CR60	75 ohm	66 ohm or lower	75 ohm





Title	ALC889 CODEC
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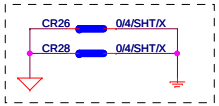

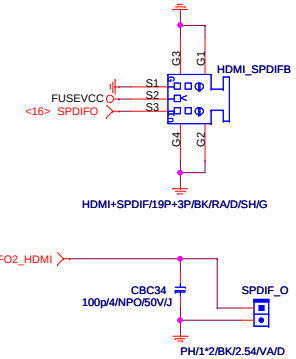

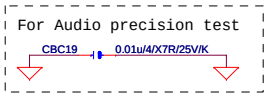

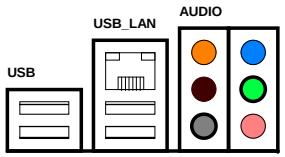

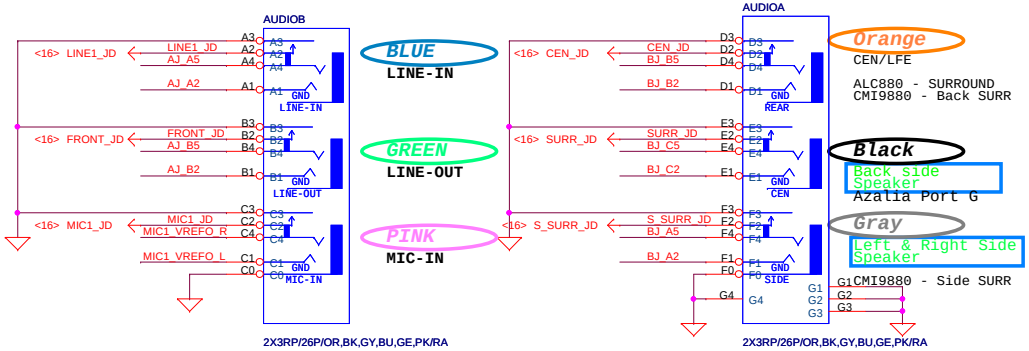

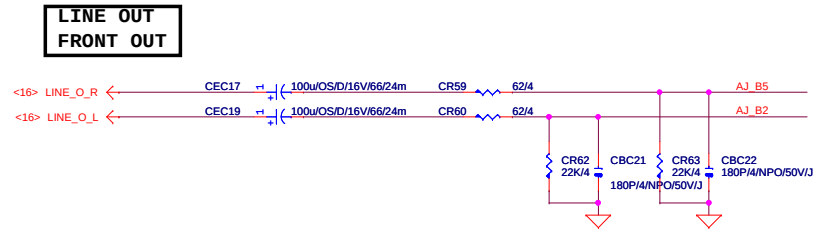

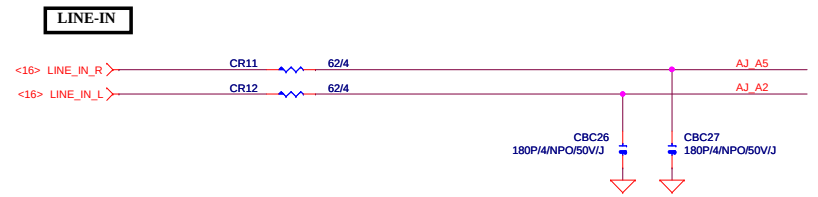

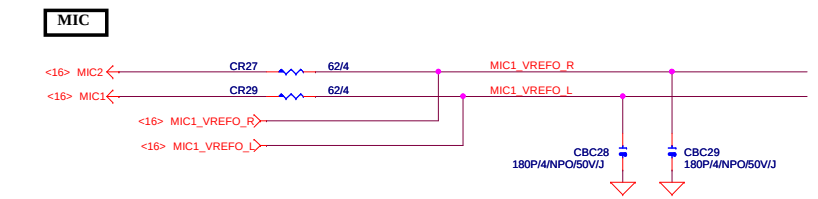

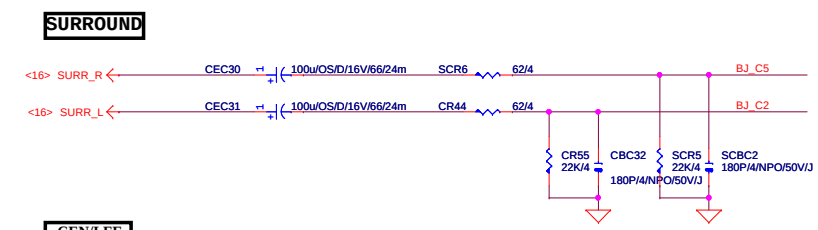

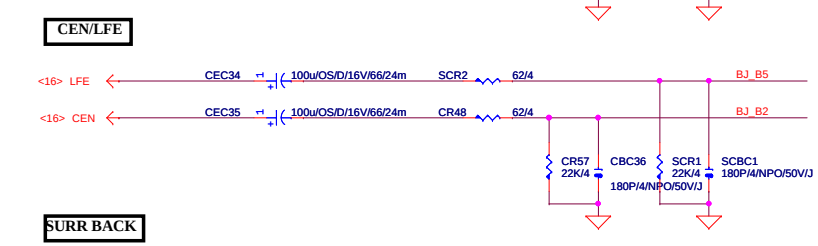

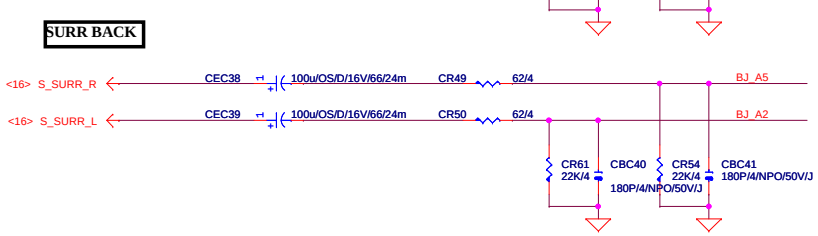

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Title: AUDIO JACK		
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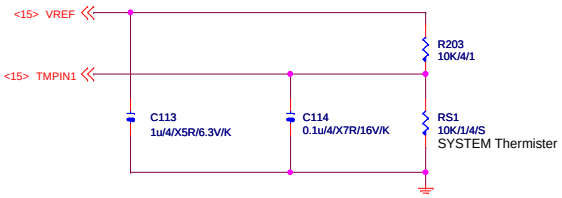
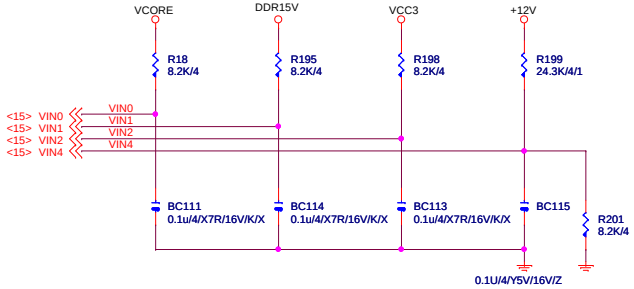
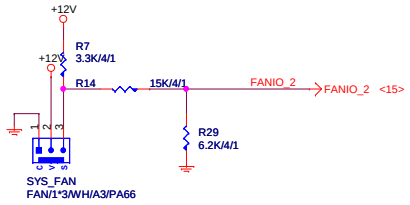
Hardware Monitor circuits





SYSTEM FAN



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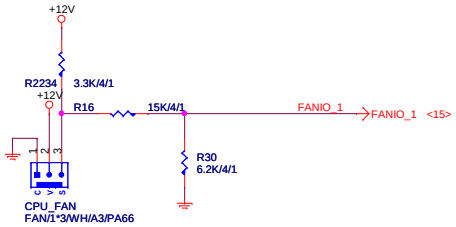
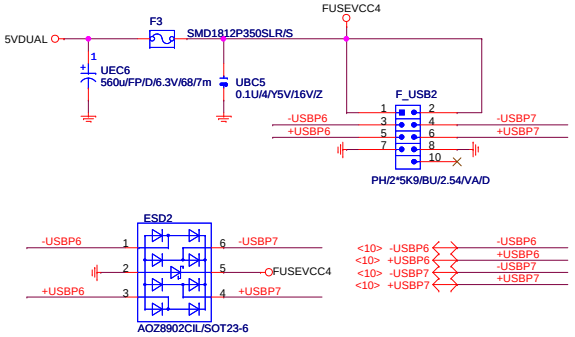
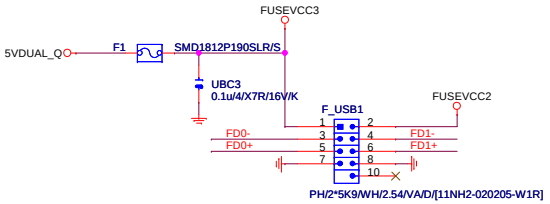
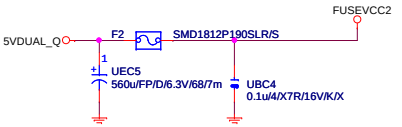
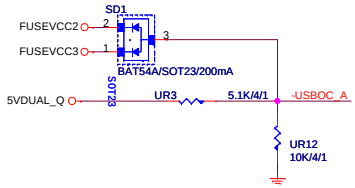


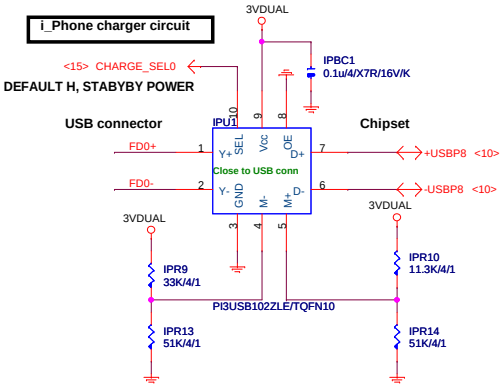


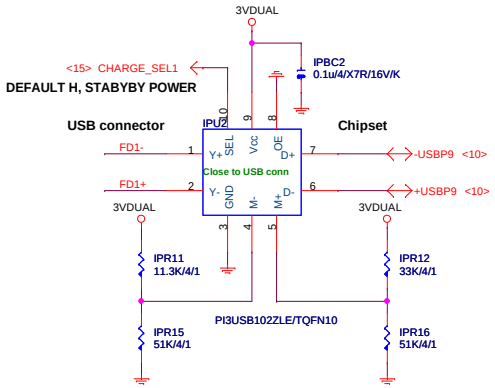
FRONT USB

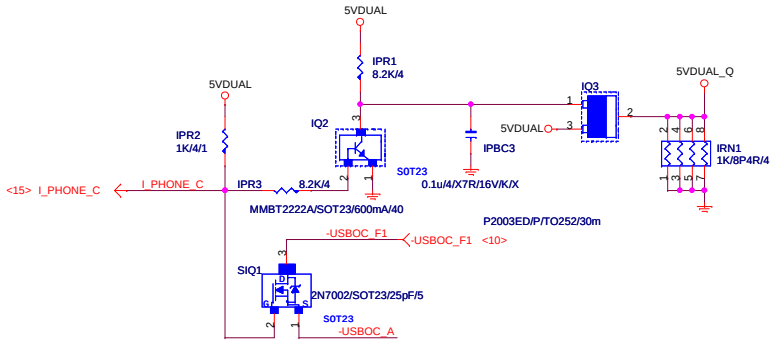












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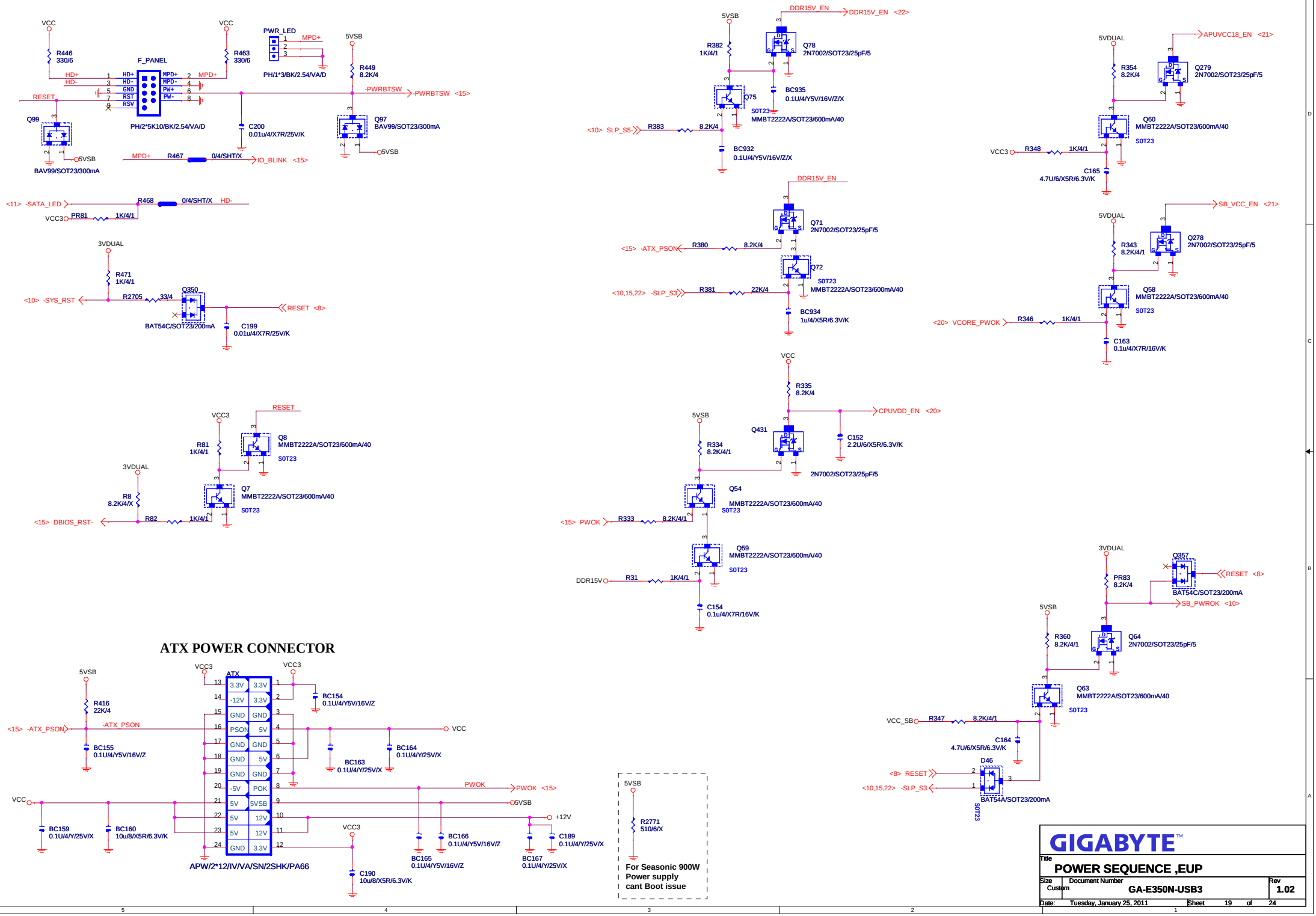
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R446 330/6
F_PANEL
HD+
HD-
RESET
Q99
PH/2*5K10/BK/2.54/VA/D
BAV99/SOT23/300mA
5VSB
PWR_LED
MPD+
PH/1*3/BK/2.54/VA/D
R463 330/6
R449 8.2K/4
-PWRBTSW
<15> -PWRBTSW
Q97 BAV99/SOT23/300mA
C200 0.01u/4/X7R/25V/K
R467 0/4/SHT/X
IO_BLINK <15>
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HD-
VCC3
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3VDUAL
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R2705 33/4
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BAT54C/SOT23/200mA
RESET <8>
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RESET
VCC3
R81 1K/4/1
Q8 MMBT2222A/SOT23/600mA/40
S0T23
3VDUAL
R8 8.2K/4/X
Q7 MMBT2222A/SOT23/600mA/40
S0T23
<15> DBIOS_RST-
R82 1K/4/1
ATX POWER CONNECTOR
5VSB
R416 22K/4
<15> -ATX_PSON
-ATX_PSON
BC155 0.1U/4/Y5V/16V/Z
VCC
VCC3
ATX
3.3V
-12V
GND
PSON
5V
-5V
POK
5VSB
12V
BC154 0.1U/4/Y5V/16V/Z
BC163 0.1U/4/Y/25V/X
BC164 0.1U/4/Y/25V/X
PWOK
PWOK <15>
+12V
BC159 0.1U/4/Y/25V/X
BC160 10u/8/X5R/6.3V/K
BC165 0.1U/4/Y5V/16V/Z
BC166 0.1U/4/Y5V/16V/Z
BC167 0.1U/4/Y/25V/X
BC189 0.1U/4/Y/25V/X
C190 10u/8/X5R/6.3V/K
APW/2*12/IV/VA/SN/2SHK/PA66
5VSB
R2771 510/6/X
For Seasonic 900W Power supply cant Boot issue
DDR15V_EN
DDR15V_EN <22>
R382 1K/4/1
Q78 2N7002/SOT23/25pF/5
Q75
BC935 0.1U/4/Y5V/16V/Z/X
S0T23
MMBT2222A/SOT23/600mA/40
<10> SLP_S5
R383 8.2K/4
BC932 0.1U/4/Y5V/16V/Z/X
DDR15V_EN
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<15> -ATX_PSON
R380 8.2K/4
Q72
S0T23
MMBT2222A/SOT23/600mA/40
<10,15,22> -SLP_S3
R381 22K/4
BC934 1u/4/X5R/6.3V/K
VCC
R335 8.2K/4
CPUVDD_EN <20>
5VSB
Q431
C152 2.2U/6/X5R/6.3V/K
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S0T23
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DDR15V
R31 1K/4/1
C154 0.1u/4/X7R/16V/K
5VDUAL
APUVCC18_EN <21>
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Q279 2N7002/SOT23/25pF/5
Q60
MMBT2222A/SOT23/600mA/40
S0T23
VCC3
R348 1K/4/1
C165 4.7U/6/X5R/6.3V/K
SB_VCC_EN <21>
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R343 8.2K/4/1
Q278 2N7002/SOT23/25pF/5
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R346 1K/4/1
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RESET <8>
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MMBT2222A/SOT23/600mA/40
S0T23
VCC_SB
R347 8.2K/4/1
C164 4.7U/6/X5R/6.3V/K
D46
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BAT54A/SOT23/200mA
S0T23
GIGABYTE
Title
POWER SEQUENCE ,EUP
Size
Custom
Document Number
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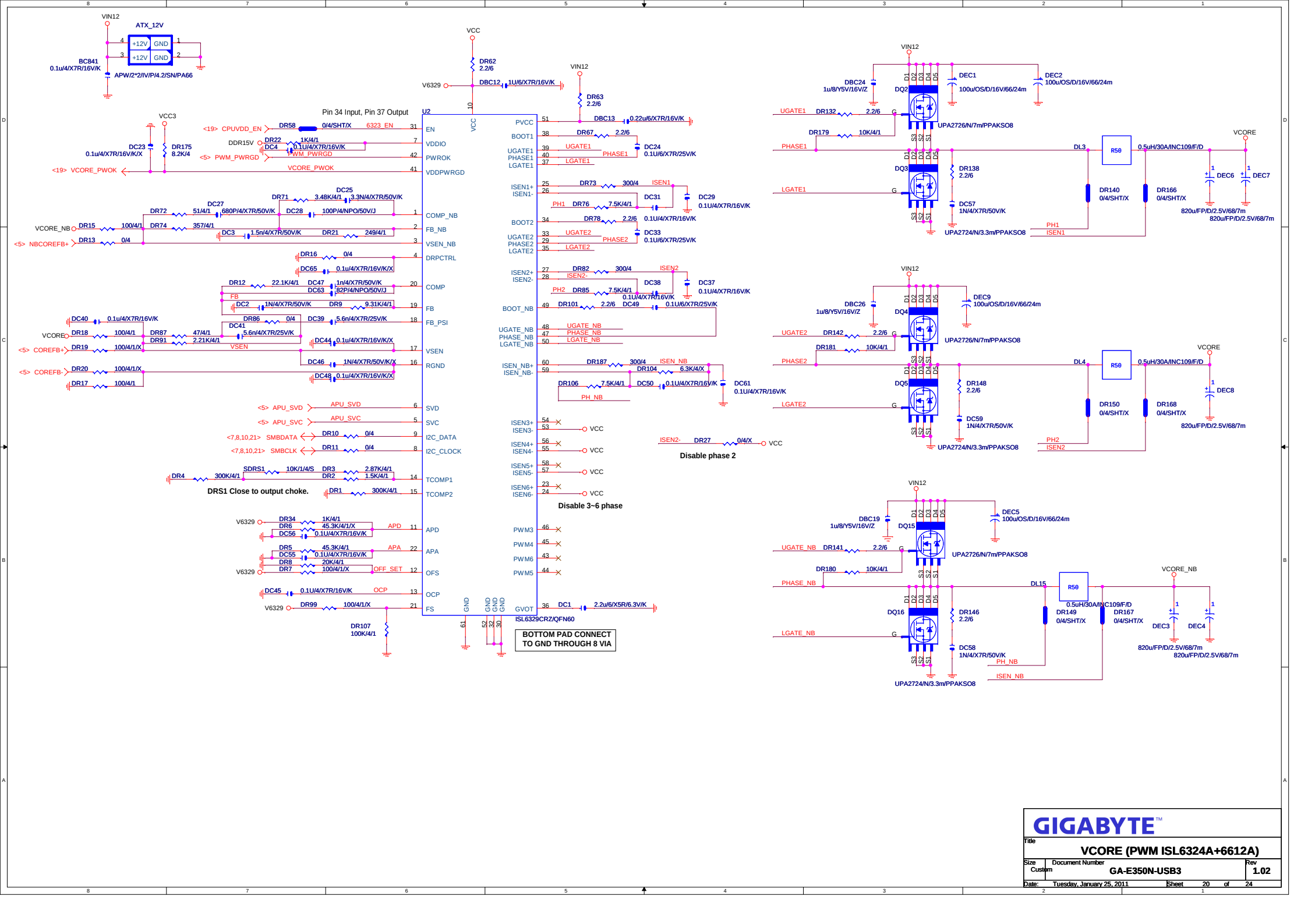

GIGABYTE			
Title	VCORE (PWM ISL6324A+6612A)		
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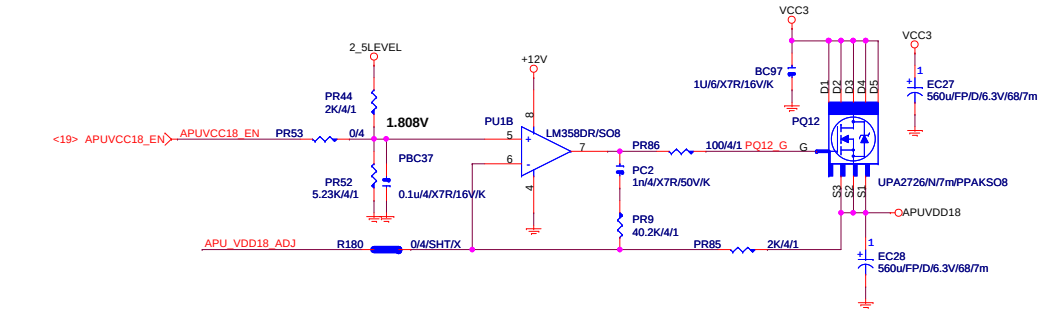
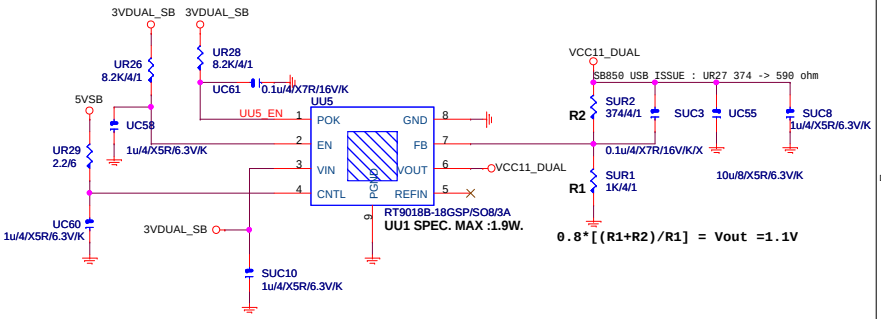
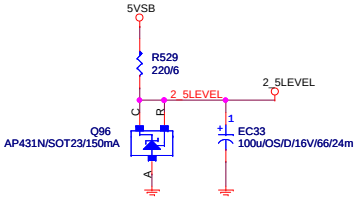
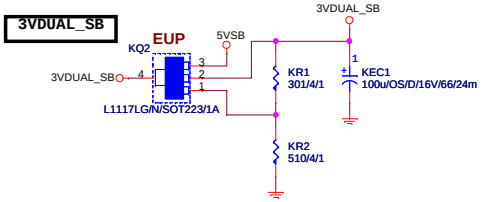
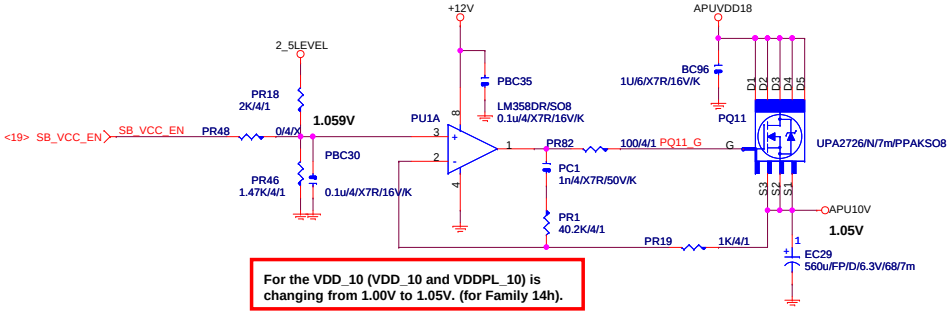




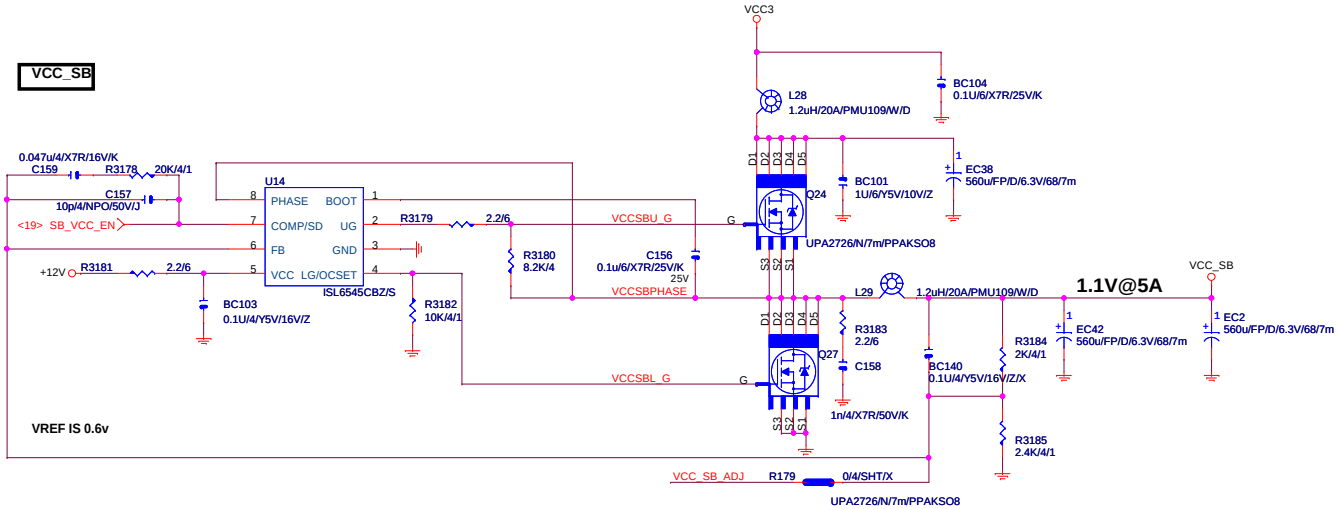


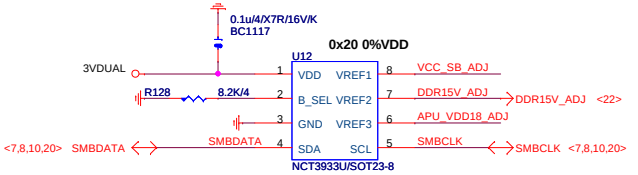




For the VDD_10 (VDD_10 and VDDPL_10) is changing from 1.00V to 1.05V. (for Family 14h).

VCC_SB





GIGABYTE™

Title	NB/SB POWER,VCC12HT,VDDA25,VCC12Dual	
Size: Custom	Document Number: GA-E350N-USB3	Rev: 1.02
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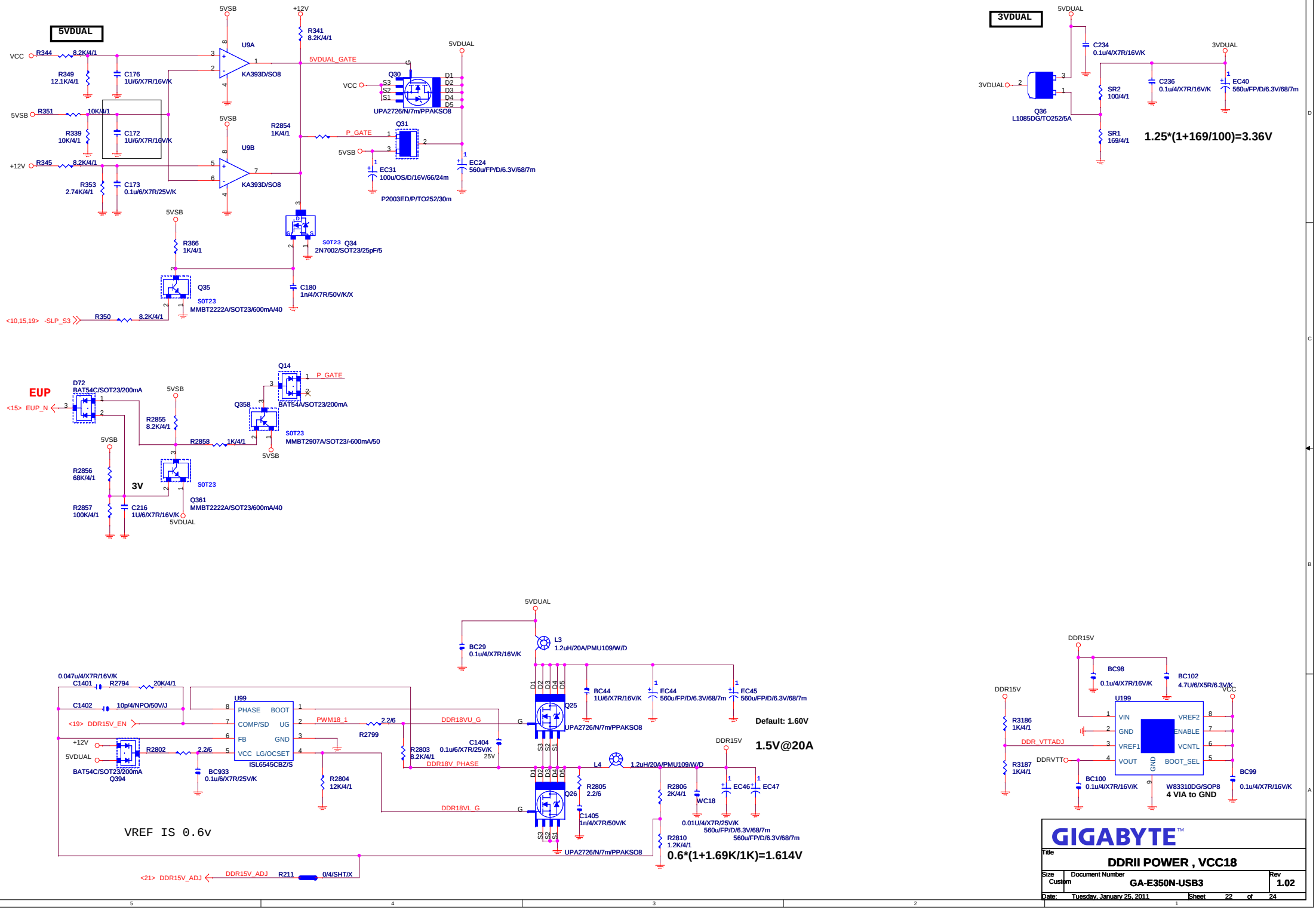
5VDUAL
5VSB
+12V
R344 8.2K/4/1
R349 12.1K/4/1
C176 1U/6/X7R/16V/K
U9A
KA393D/SO8
R341 8.2K/4/1
5VDUAL_GATE
Q30
UPA2726/N/7m/PPAKSO8
R351 10K/4/1
R339 10K/4/1
C172 1U/6/X7R/16V/K
R2854 1K/4/1
P_GATE
Q31
EC31 100u/OS/D/16V/66/24m
EC24 560u/FP/D/6.3V/68/7m
P2003ED/P/TO252/30m
U9B
R345 8.2K/4/1
R353 2.74K/4/1
C173 0.1u/6/X7R/25V/K
R366 1K/4/1
SOT23 Q34 2N7002/SOT23/25pF/5
Q35
SOT23
MMBT2222A/SOT23/600mA/40
C180 1n/4/X7R/50V/K/X
<10,15,19> -SLP_S3
R350 8.2K/4/1
3VDUAL
C234 0.1u/4/X7R/16V/K
C236 0.1u/4/X7R/16V/K
EC40 560u/FP/D/6.3V/68/7m
Q36 L1085DG/TO252/5A
SR2 100/4/1
SR1 169/4/1
1.25*(1+169/100)=3.36V
EUP
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R2855 8.2K/4/1
R2858 1K/4/1
Q14
Q358 BAT54A/SOT23/200mA
SOT23
MMBT2907A/SOT23/-600mA/50
R2856 68K/4/1
3V
R2857 100K/4/1
C216 1U/6/X7R/16V/K
Q361 MMBT2222A/SOT23/600mA/40
BC29 0.1u/4/X7R/16V/K
L3 1.2uH/20A/PMU109/W/D
BC44 1U/6/X7R/16V/K
EC44 560u/FP/D/6.3V/68/7m
EC45 560u/FP/D/6.3V/68/7m
Q25
Default: 1.60V
1.5V@20A
0.047u/4/X7R/16V/K
C1401
R2794 20K/4/1
C1402 10p/4/NPO/50V/J
<19> DDR15V_EN
U99
PHASE BOOT
COMP/SD UG
FB GND
VCC LG/OCSET
ISL6545CBZ/S
PWM18_1
2.2/6
R2799
DDR18VU_G
R2803 8.2K/4/1
C1404 0.1u/6/X7R/25V/K 25V
DDR18V_PHASE
R2802
BC933 0.1u/6/X7R/25V/K
BAT54C/SOT23/200mA Q394
R2804 12K/4/1
DDR18VL_G
Q26
L4 1.2uH/20A/PMU109/W/D
R2805 2.2/6
R2806 2K/4/1
WC18 0.01U/4/X7R/25V/K
EC46 560u/FP/D/6.3V/68/7m
EC47 560u/FP/D/6.3V/68/7m
C1405 1n/4/X7R/50V/K
R2810 1.2K/4/1
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VREF IS 0.6v
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DDR15V_ADJ
R211 0/4/SHT/X
DDR15V
BC98 0.1u/4/X7R/16V/K
BC102 4.7U/6/X5R/6.3V/K
VCC
U199
VIN VREF2
GND ENABLE
VREF1 VCNTL
VOUT BOOT_SEL
GND
R3186 1K/4/1
DDR_VTTADJ
R3187 1K/4/1
DDRVTT
BC100 0.1u/4/X7R/16V/K
BC99 0.1u/4/X7R/16V/K
W83310DG/SOP8
4 VIA to GND
GIGABYTE
Title
DDRII POWER , VCC18
Size Custom
Document Number GA-E350N-USB3
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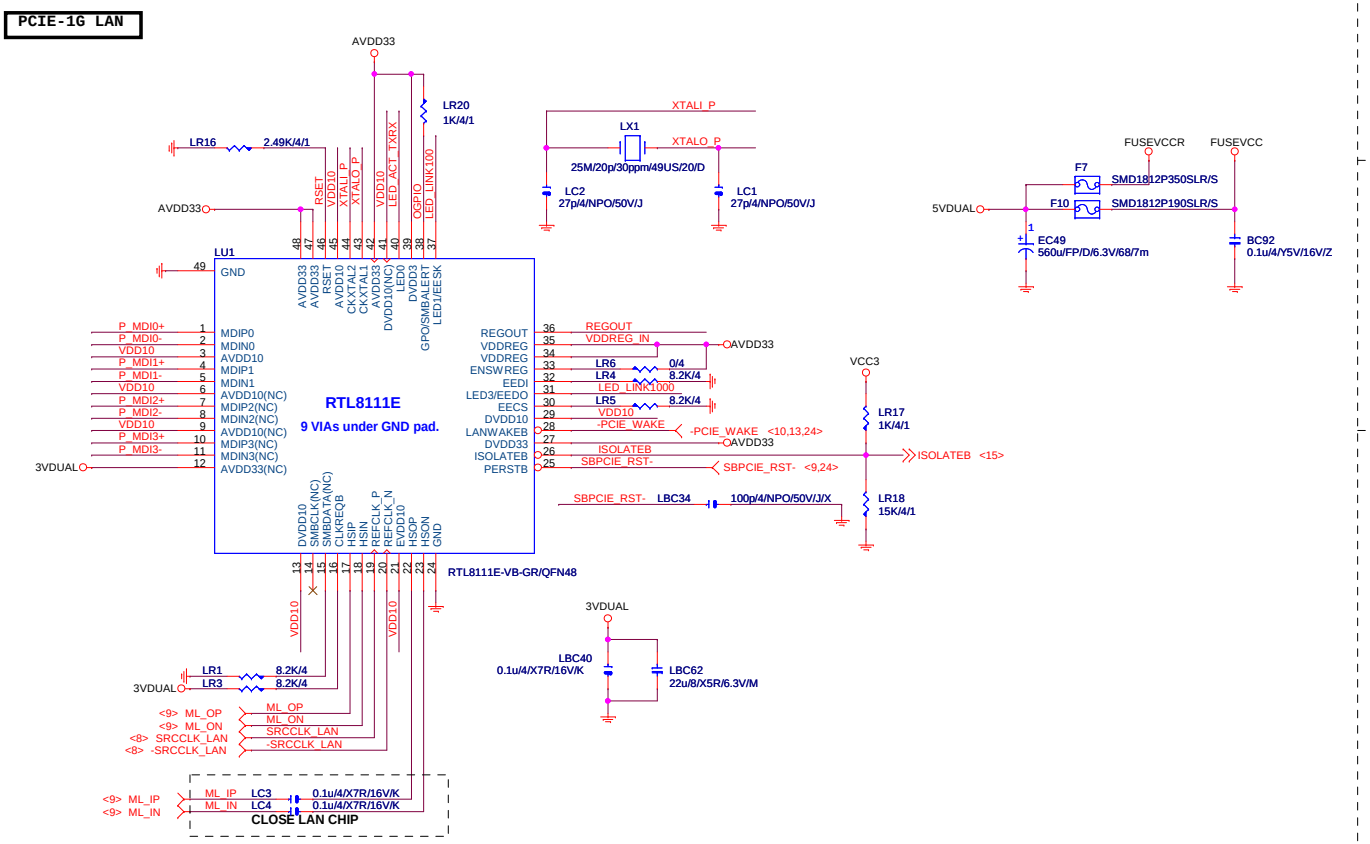
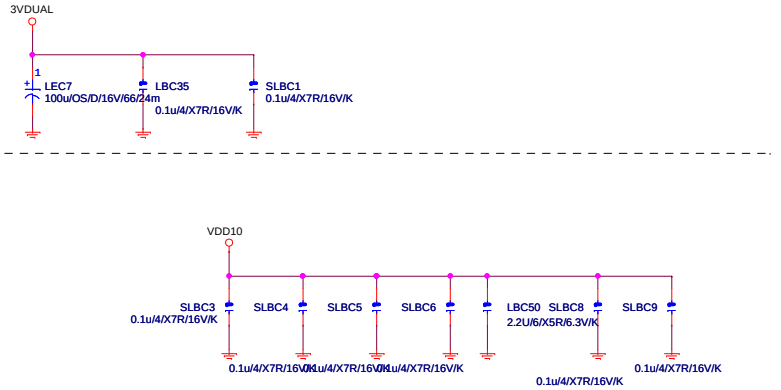
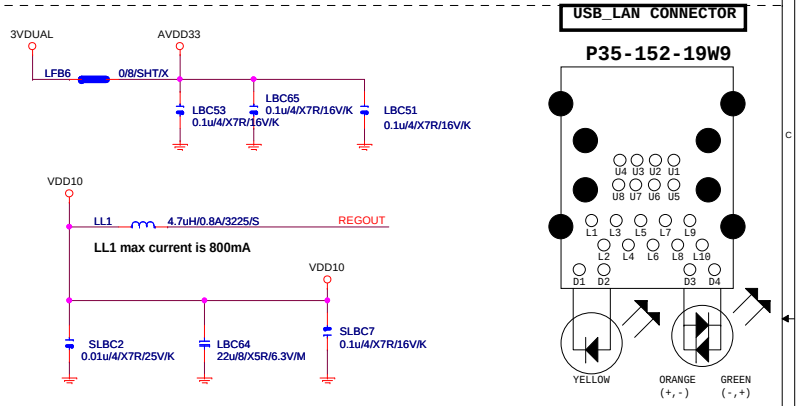
PCIE-1G LAN

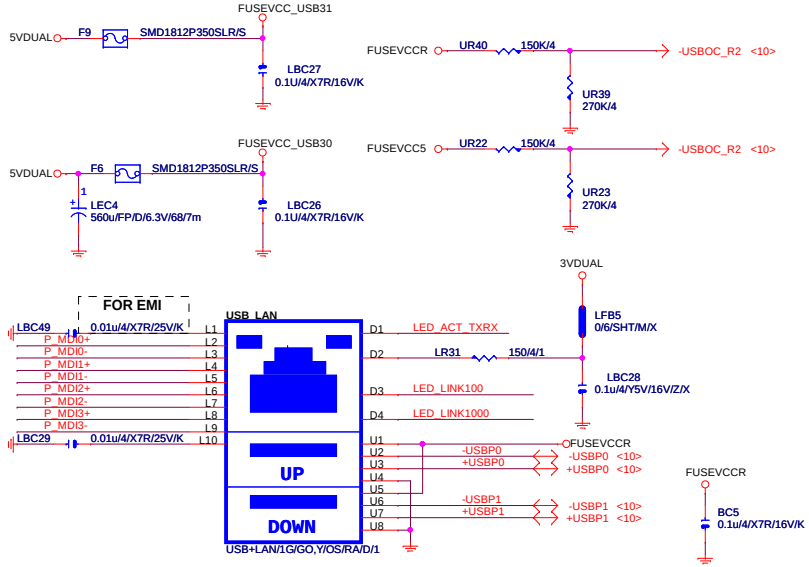


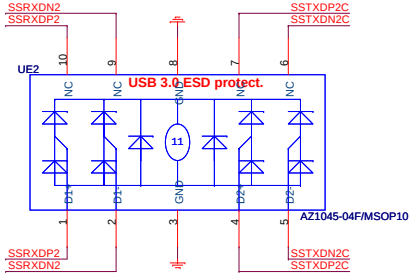


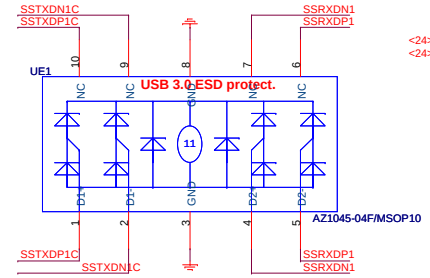


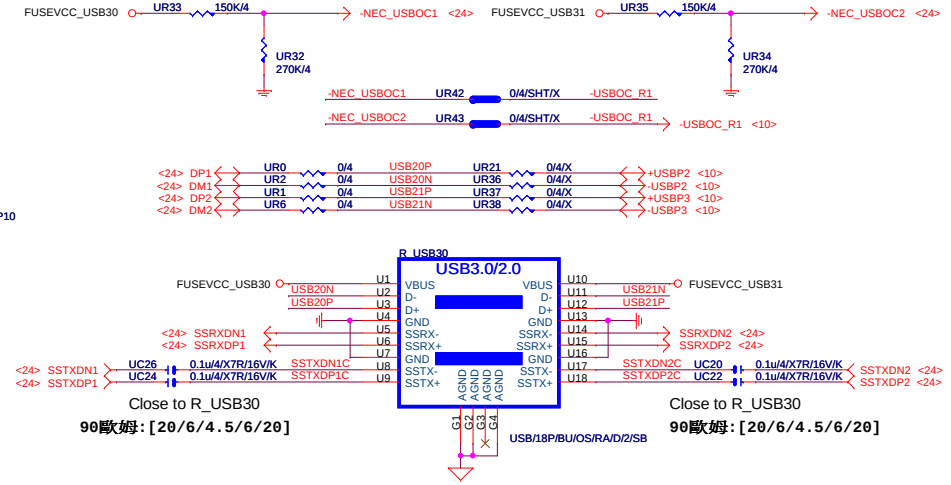
USB_LAN CONNECTOR

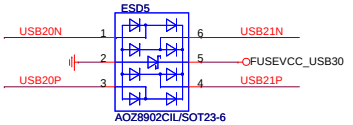
USB_LAN











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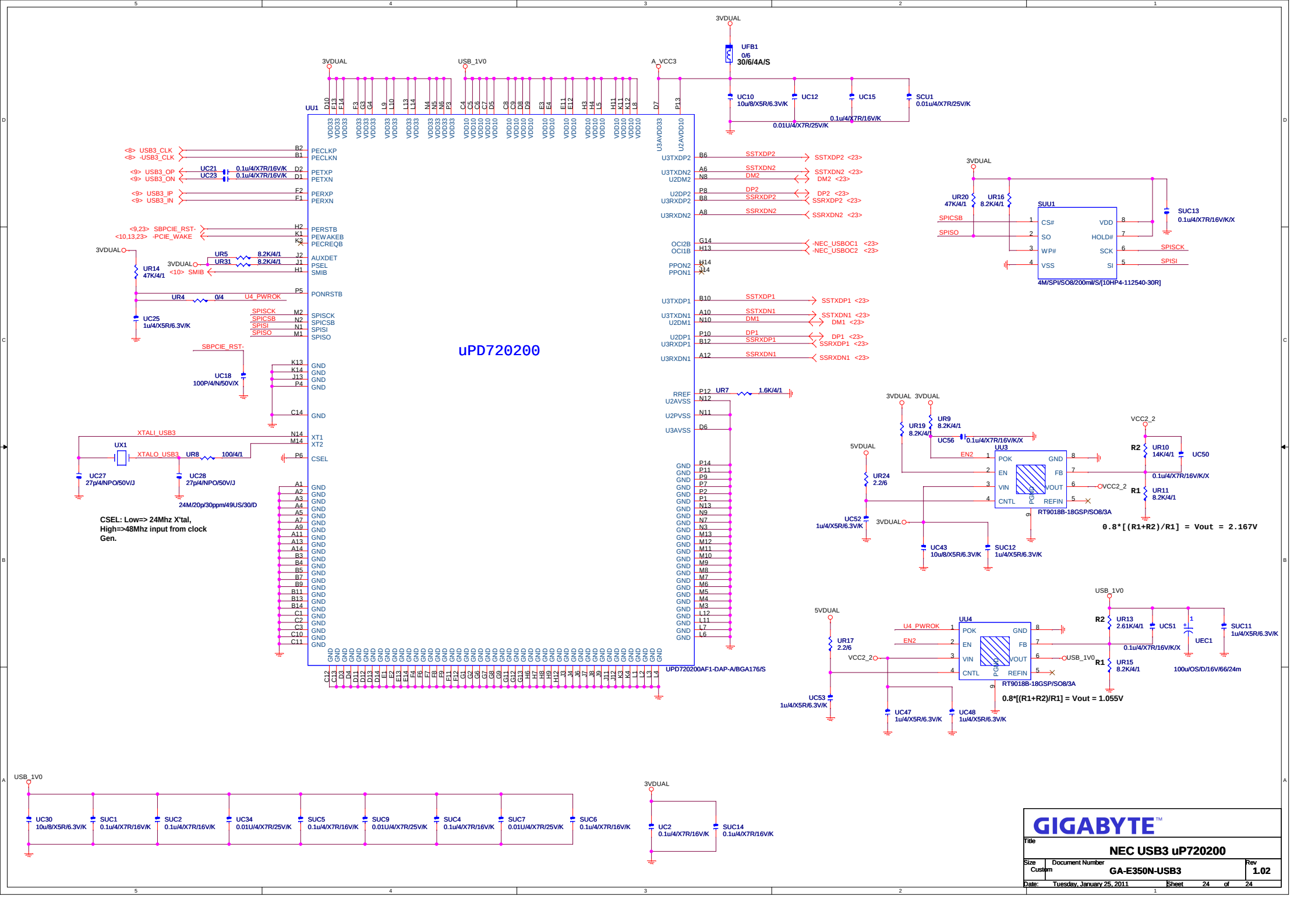
uPD720200
UU1
UPD720200AF1-DAP-A/BGA176/S
3VDUAL
USB_1V0
A_VCC3
UFB1
0/6
30/6/4A/S
UC10
10u/8/X5R/6.3V/K
UC12
0.1u/4/X7R/16V/K
UC15
0.01U/4/X7R/25V/K
SCU1
0.01u/4/X7R/25V/K
PECLKP
PECLKN
PETXP
PETXN
PERXP
PERXN
PERSTB
PEWAKEB
PECREQB
AUXDET
PSEL
SMIB
PONRSTB
SPISCK
SPICSB
SPISI
SPISO
GND
XT1
XT2
CSEL
RREF
U2AVSS
U2PVSS
U3AVSS
U3TXDP2
U3TXDN2
U2DM2
U2DP2
U3RXDP2
U3RXDN2
OCI2B
OCI1B
PPON2
PPON1
U3TXDP1
U3TXDN1
U2DM1
U2DP1
U3RXDP1
U3RXDN1
SSTXDP2
SSTXDN2
DM2
DP2
SSRXDP2
SSRXDN2
-NEC_USBOC1
-NEC_USBOC2
SSTXDP1
SSTXDN1
DM1
DP1
SSRXDP1
SSRXDN1
UC21
UC23
0.1u/4/X7R/16V/K
UR5
UR31
8.2K/4/1
UR14
47K/4/1
UR4
0/4
U4_PWROK
UC25
1u/4/X5R/6.3V/K
SBPCIE_RST-
UC18
100P/4/N/50V/X
UR7
1.6K/4/1
XTALI_USB3
XTALO_USB3
UX1
UR8
100/4/1
UC27
27p/4/NPO/50V/J
UC28
27p/4/NPO/50V/J
24M/20p/30ppm/49US/30/D
CSEL: Low=> 24Mhz X'tal,
High=>48Mhz input from clock
Gen.
SUU1
4M/SPI/SO8/200mil/S/[10HP4-112540-30R]
UR20
47K/4/1
UR16
8.2K/4/1
SUC13
0.1u/4/X7R/16V/K/X
UR19
UR9
UC56
5VDUAL
UR24
2.2/6
UC52
1u/4/X5R/6.3V/K
UU3
RT9018B-18GSP/SO8/3A
UR10
14K/4/1
UC50
UR11
8.2K/4/1
0.8*[(R1+R2)/R1] = Vout = 2.167V
UC43
10u/8/X5R/6.3V/K
SUC12
1u/4/X5R/6.3V/K
UU4
UR17
2.2/6
UC53
1u/4/X5R/6.3V/K
UR13
2.61K/4/1
UC51
UEC1
SUC11
1u/4/X5R/6.3V/K
UR15
8.2K/4/1
100u/OS/D/16V/66/24m
0.8*[(R1+R2)/R1] = Vout = 1.055V
UC47
1u/4/X5R/6.3V/K
UC48
1u/4/X5R/6.3V/K
UC30
10u/8/X5R/6.3V/K
SUC1
SUC2
UC34
0.01U/4/X7R/25V/K
SUC5
SUC9
SUC4
SUC7
SUC6
UC2
SUC14
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