Model Name: GA-8VM800PMD-775

Revision :1.0

SHEET	TITLE
1	BOM & PCB MODIFY HISTORY
2	COVER SHEET
3	BLOCK DIAGRAM
4,5,6,7	INTEL P4_LGA775 CPU
8,9,10,11	P4M800 PRO(NORTH BRIDGE)
12	CLOCK GENERATOR (ICS950952)
13,14,15	VT8237R+/CD (SOUTH BIRDGE)
16,17	DDRII SDRAM DIMMS 1,2 DDR TERMINATION
18	AGP SLOT
19	PCI SLOT 1,2,3
20	BIOS , VGA Connect
21	IDE,USB
22	LPC I/O_W83627EHF
23	COM,PRT,FDD,KB/MS,IR
24	AC 97 CODEC
25	AUDIO JACK
26	PANEL,FANS
27	LAN 8100C & USB CONNECTOR
28	DDR POWER
29	ATX CONN,3VDUAL,VDDQ DC POWER
30	VCORE PHASE PWM FAIRCHILD 5018B

GIGABYTE

Title: COVER SHEET

Size: Custom | Document Number: GA-8VM800PMD-775 | Rev: 1.0

Date: Wednesday, November 30, 2005 | Sheet 1 of 30

Model Name: GA-8VM800PMD-775

Version:1.0

Component value change history

P-code:A94104-2
2005.09.20

Date	Change Item		Reason
2005.09.22	0.1 BOM ISSUE	PCB 0.1	Clock Gen change to 950952BGLF
2005.10.27	1.0A BOM ISSUE	PCB 1.0	0.2 Gerber need to change capacitor direction EC40 1.0A still keep BIOS socket
			2N7002 change to 10IF1-2A7002-02/-02R/-06/-06R/-05R/-03R
2005.11.01	1.0B BOM ISSUE	PCB 1.0	Change STR patch circuit to normal, E13 fix this issue by modify Clock gen register
2005.11.01	1.0C BOM ISSUE	PCB 1.0	DR31-->120K/6/1, DR39-->499K/6/1
2005.11.08	1.0D BOM ISSUE	PCB 1.0	LU3 remove 94C46 with check sum source, PCB add vendor, BIOS change to 4Mb.
2005.11.26	1.0E BOM ISSUE	PCB 1.0	Fix Front Mic Noise CBC61--> 0.1U, AGP change to Brown
2005.11.30	1.0F BOM ISSUE	PCB 1.0	AGP change to 11AC1-05R124-62

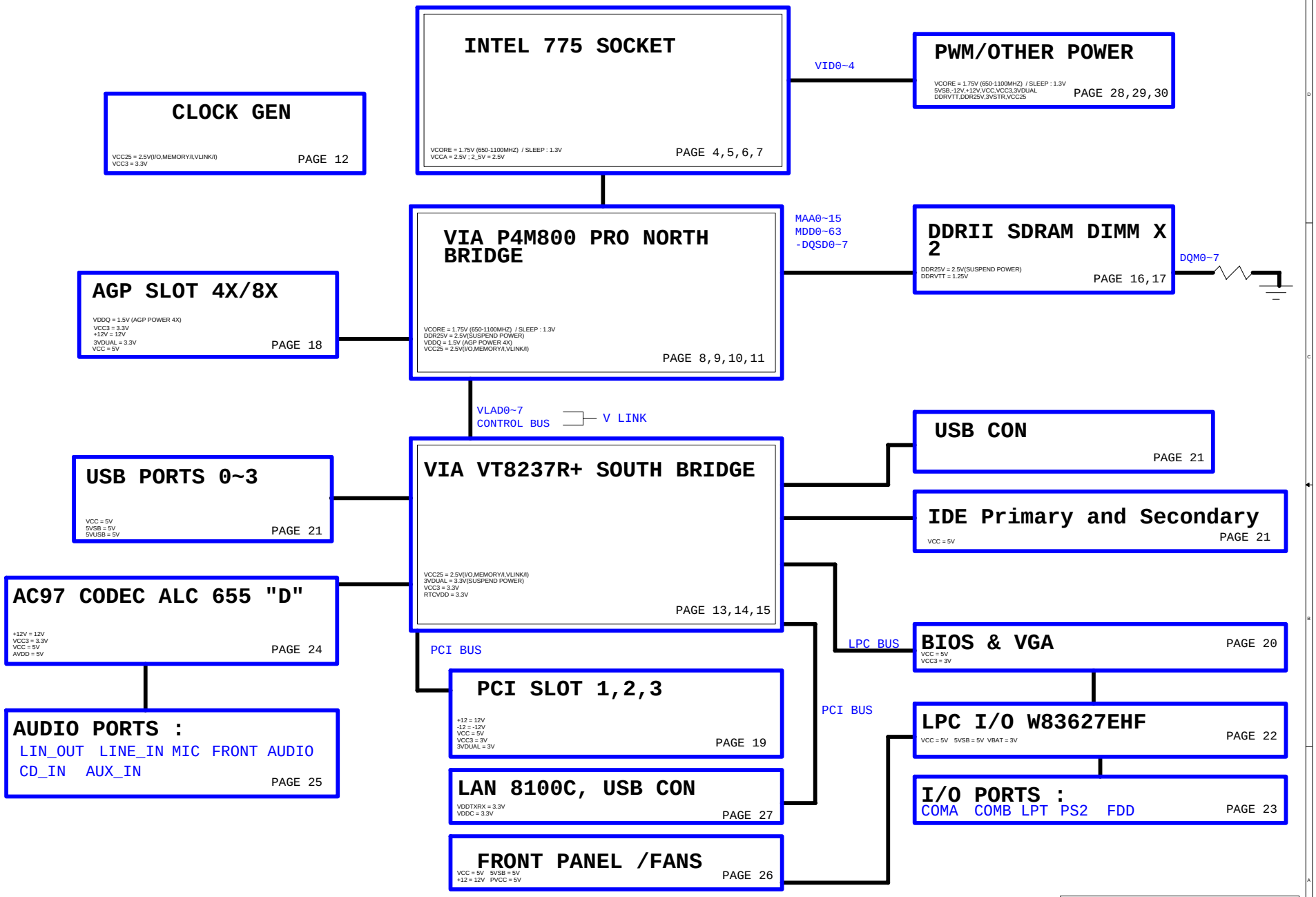
Circuit or PCB layout change for next version

Date	Change Item	Reason
2005.09.20	0.1 Gerber out	Modify from GA-8VM800PM 0.1
2005.10.27	1.0 Gerber out	Add STR fail patch circuit

GIGABYTE

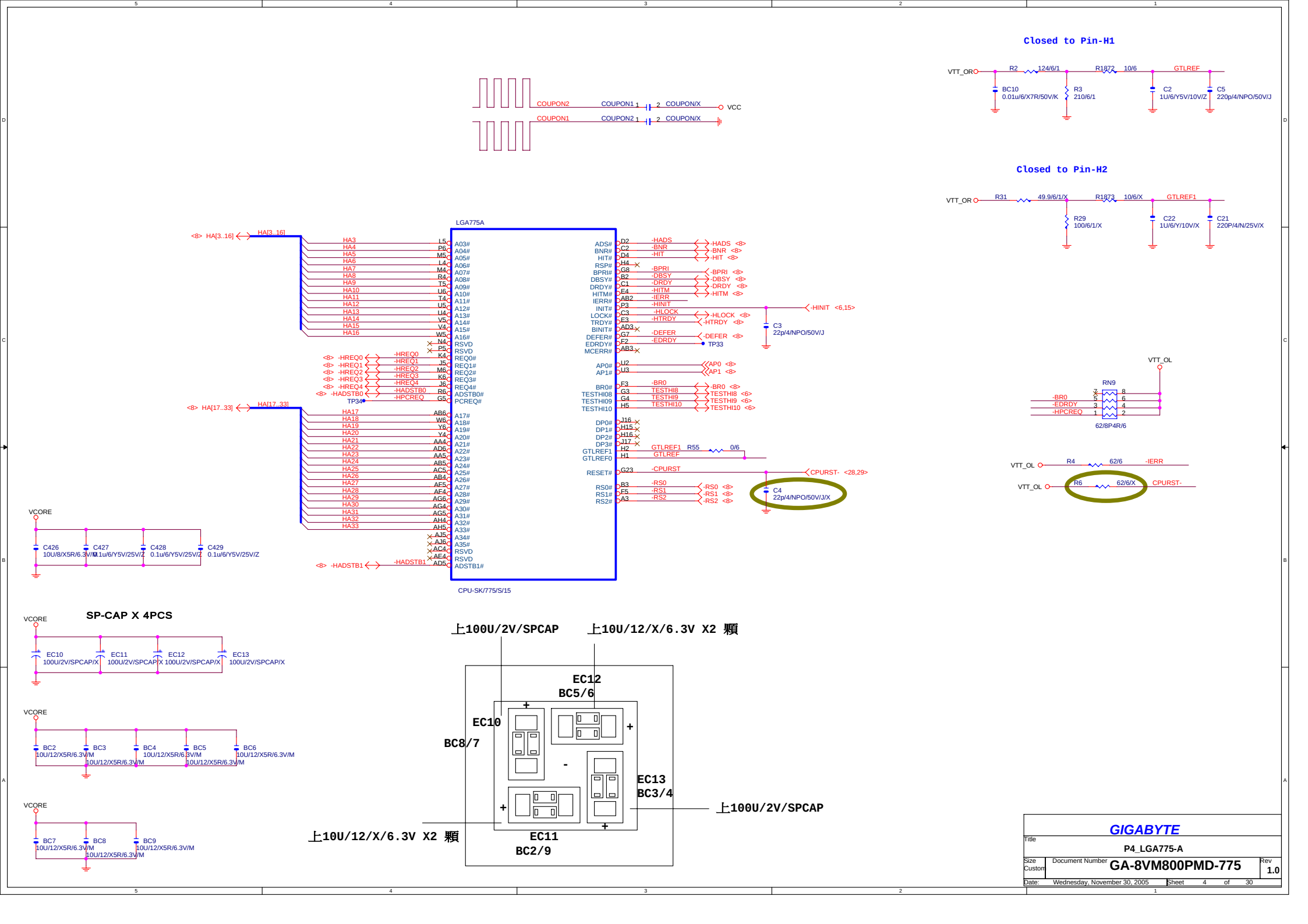
Title	BOM & PCB MODIFY HISTORY	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 2 of 30	

BLOCK DIAGRAM



GIGABYTE

Title: BLOCK DIAGRAM		
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 3 of 30	


Closed to Pin-H1
VTT_OR
R2 124/6/1
R1872 10/6
GTLREF
BC10 0.01u/6/X7R/50V/K
R3 210/6/1
C2 1U/6/Y5V/10V/Z
C5 220p/4/NPO/50V/J
COUPON2
COUPON1 1 2 COUPON/X
VCC
COUPON1
COUPON2 1 2 COUPON/X
Closed to Pin-H2
VTT_OR
R31 49.9/6/1/X
R1873 10/6/X
GTLREF1
R29 100/6/1/X
C22 1U/6/Y/10V/X
C21 220P/4/N/25V/X
LGA775A
<8> HA[3..16]
HA[3..16]
HA3 HA4 HA5 HA6 HA7 HA8 HA9 HA10 HA11 HA12 HA13 HA14 HA15 HA16
<8> -HREQ0 -HREQ1 -HREQ2 -HREQ3 -HREQ4
<8> -HADSTB0
-HPCREQ
TP34
<8> HA[17..33]
HA[17..33]
HA17 HA18 HA19 HA20 HA21 HA22 HA23 HA24 HA25 HA26 HA27 HA28 HA29 HA30 HA31 HA32 HA33
<8> -HADSTB1
-HADSTB1
ADS# BNR# HIT# RSP# BPRI# DBSY# DRDY# HITM# IERR# INIT# LOCK# TRDY# BINIT# DEFER# EDRDY# MCERR#
-HADS -BNR -HIT -BPRI -DBSY -DRDY -HITM -IERR -HINIT -HLOCK -HTRDY -DEFER -EDRDY
-HADS <8> -BNR <8> -HIT <8> -BPRI <8> -DBSY <8> -DRDY <8> -HITM <8> -HLOCK <8> -HTRDY <8> -DEFER <8>
TP33
-HINIT <6,15>
C3 22p/4/NPO/50V/J
AP0# AP1#
AP0 AP1
AP0 <8> AP1 <8>
BR0# TESTHI08 TESTHI09 TESTHI10
-BR0 TESTHI8 TESTHI9 TESTHI10
-BR0 <8> TESTHI8 <6> TESTHI9 <6> TESTHI10 <6>
DP0# DP1# DP2# DP3#
GTLREF1 GTLREF0
GTLREF1 R55 0/6
GTLREF
RESET#
-CPURST
CPURST- <28,29>
RS0# RS1# RS2#
-RS0 -RS1 -RS2
-RS0 <8> -RS1 <8> -RS2 <8>
C4 22p/4/NPO/50V/J/X
VTT_OL
RN9
-BR0 -EDRDY -HPCREQ
62/8P4R/6
VTT_OL
R4 62/6 -IERR
R6 62/6/X CPURST-
VCORE
C426 10U/8/X5R/6.3V/M
C427 0.1u/6/Y5V/25V/Z
C428 0.1u/6/Y5V/25V/Z
C429 0.1u/6/Y5V/25V/Z
CPU-SK/775/S/15
SP-CAP X 4PCS
VCORE
EC10 100U/2V/SPCAP/X
EC11 100U/2V/SPCAP/X
EC12 100U/2V/SPCAP/X
EC13 100U/2V/SPCAP/X
VCORE
BC2 10U/12/X5R/6.3V/M
BC3 10U/12/X5R/6.3V/M
BC4 10U/12/X5R/6.3V/M
BC5 10U/12/X5R/6.3V/M
BC6 10U/12/X5R/6.3V/M
VCORE
BC7 10U/12/X5R/6.3V/M
BC8 10U/12/X5R/6.3V/M
BC9 10U/12/X5R/6.3V/M
上100U/2V/SPCAP
上10U/12/X/6.3V X2 顆
EC12
BC5/6
EC10
BC8/7
EC13
BC3/4
EC11
BC2/9
上100U/2V/SPCAP
上10U/12/X/6.3V X2 顆
GIGABYTE
Title
P4_LGA775-A
Size
Custom
Document Number
GA-8VM800PMD-775
Rev
1.0
Date: Wednesday, November 30, 2005
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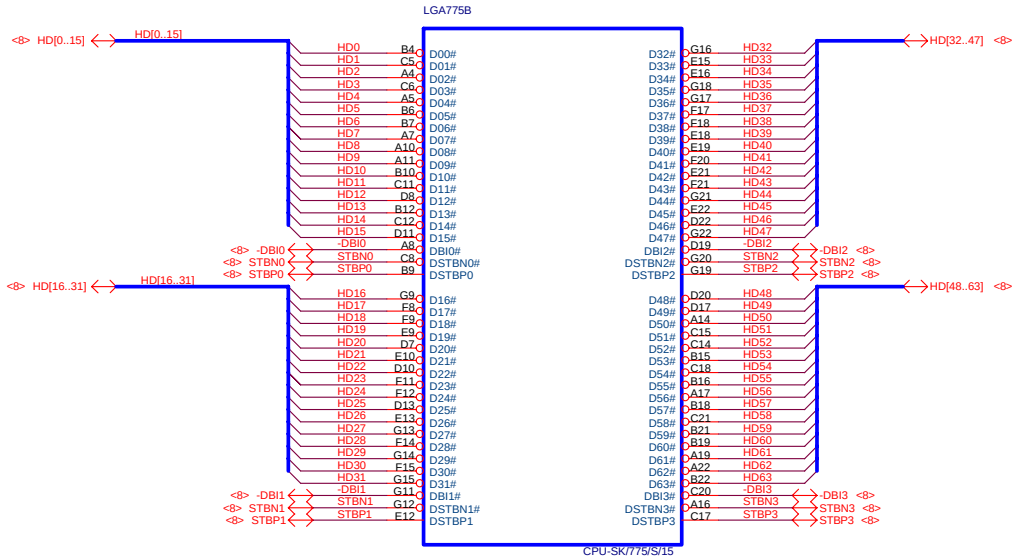


GIGABYTE

Title	P4_LGA775-B	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 5 of 30	

Note:

VCCA & VCOREPLL define doesn't same as old P4 design kit

Trace width doesn't less than 12 Mil

As close as possible to CPU socket

Place outside of CPU socket

Locate at ICH6 Side

Remove C11

Check CPUPWOK/VCORE & VTTPWGD間的先後關係

RS2 CLOSE CPU VR MOSFET

Plase at PH4 copper

PRESCOTT

Asserted at 130 degree (RS2=720 ohm)
Deasserted at 115 degree (RS2=1270 ohm)

CPU

NA	FSB	FSA	
FSBSEL3	FSBSEL1	FSBSEL0	Clock
1	0	1	100MHz
0	0	1	133MHz
0	1	1	166MHz
0	1	0	200MHz
0	0	0	266MHz

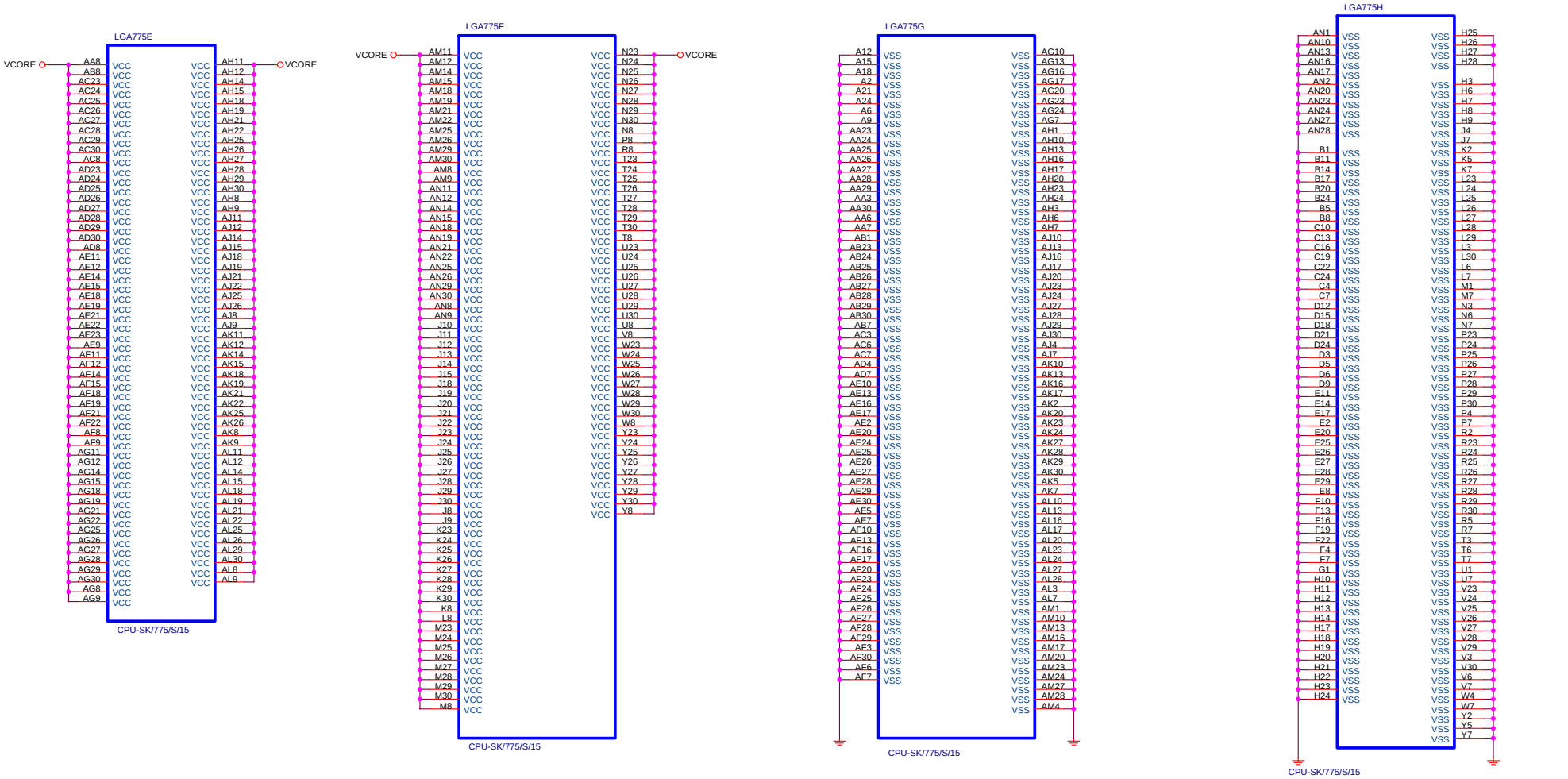
X

CPU-SK/775/S/15

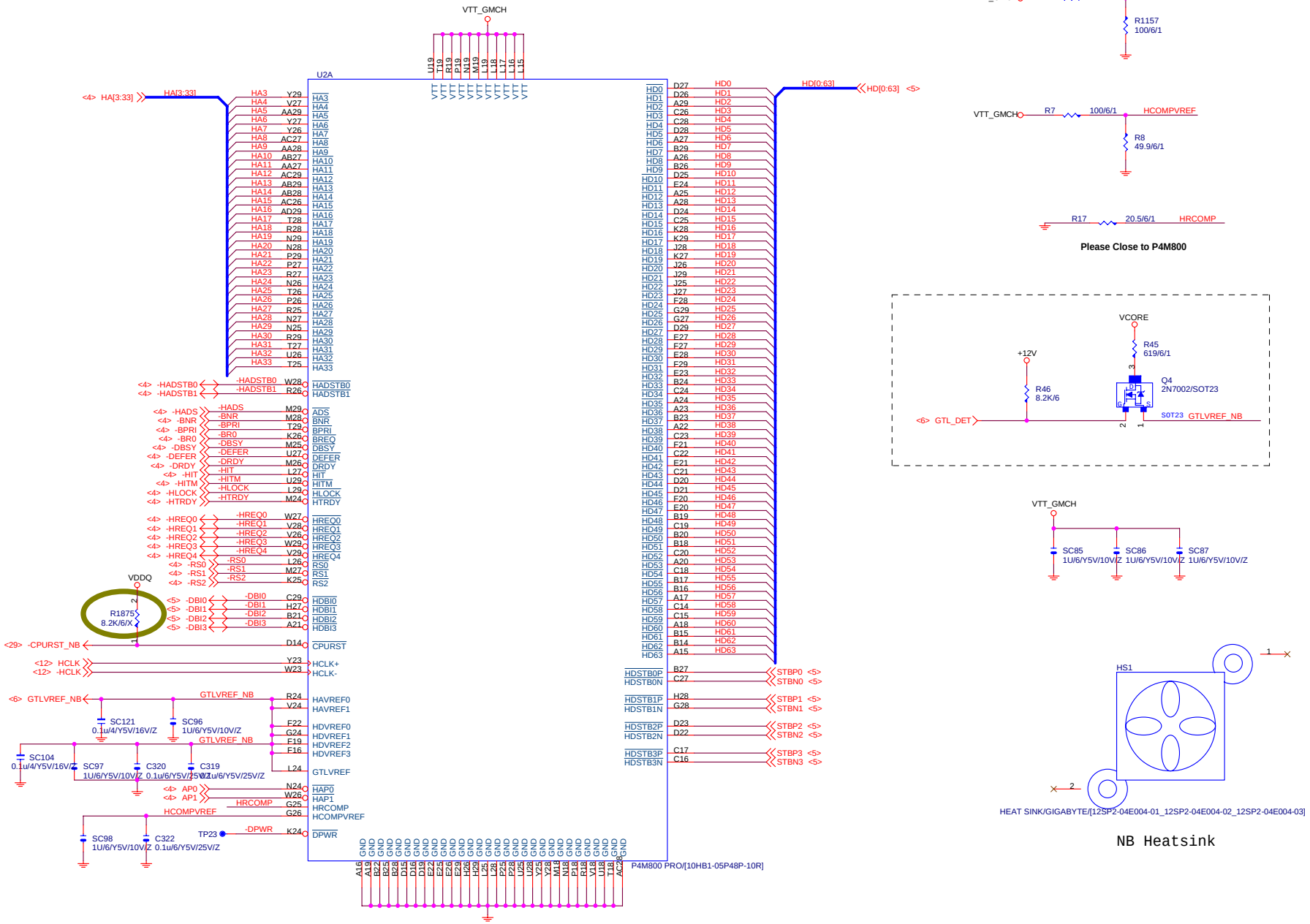
CPU-SK/775/S/15

Title	P4_LGA775-C	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 6 of 30	

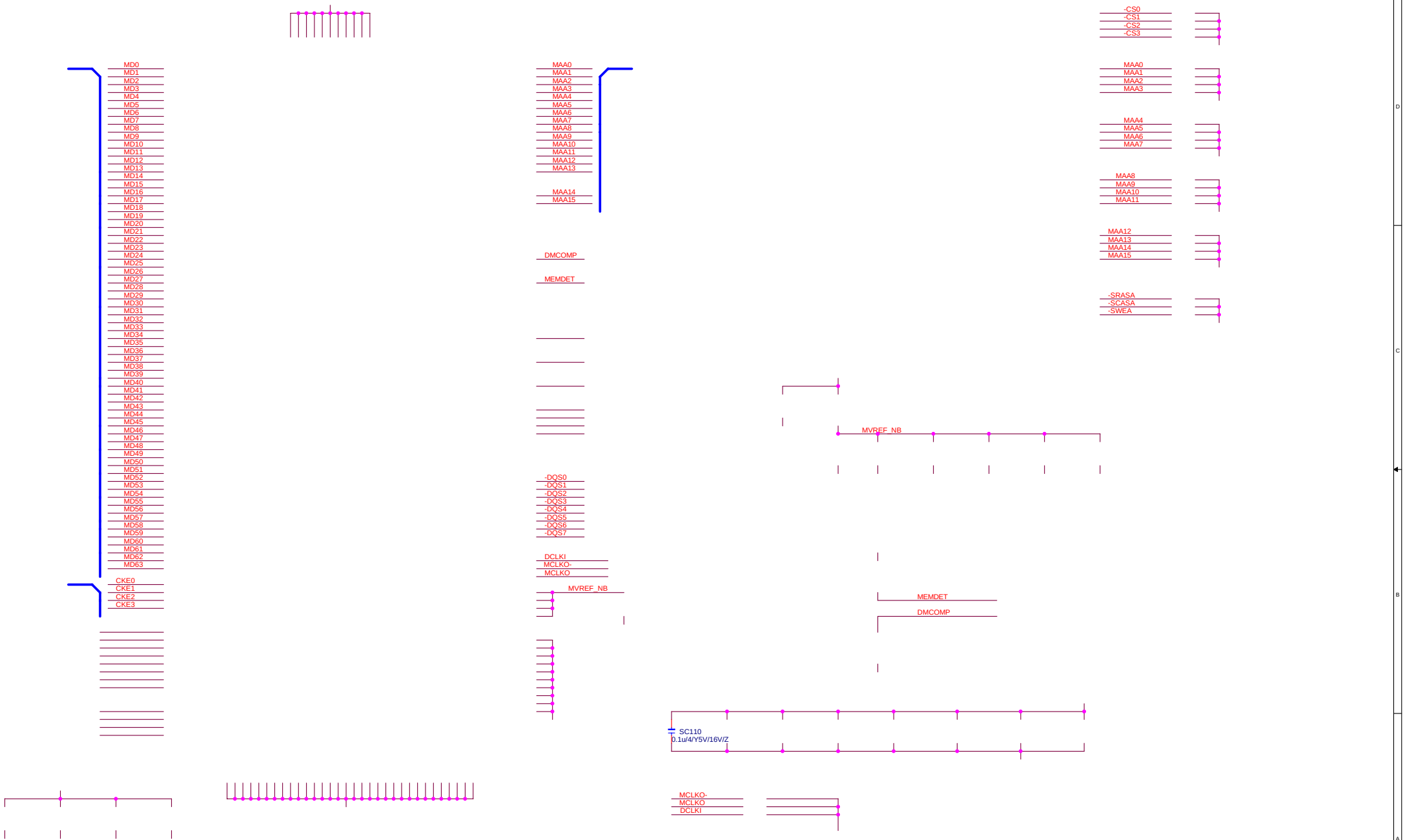
GIGABYTE



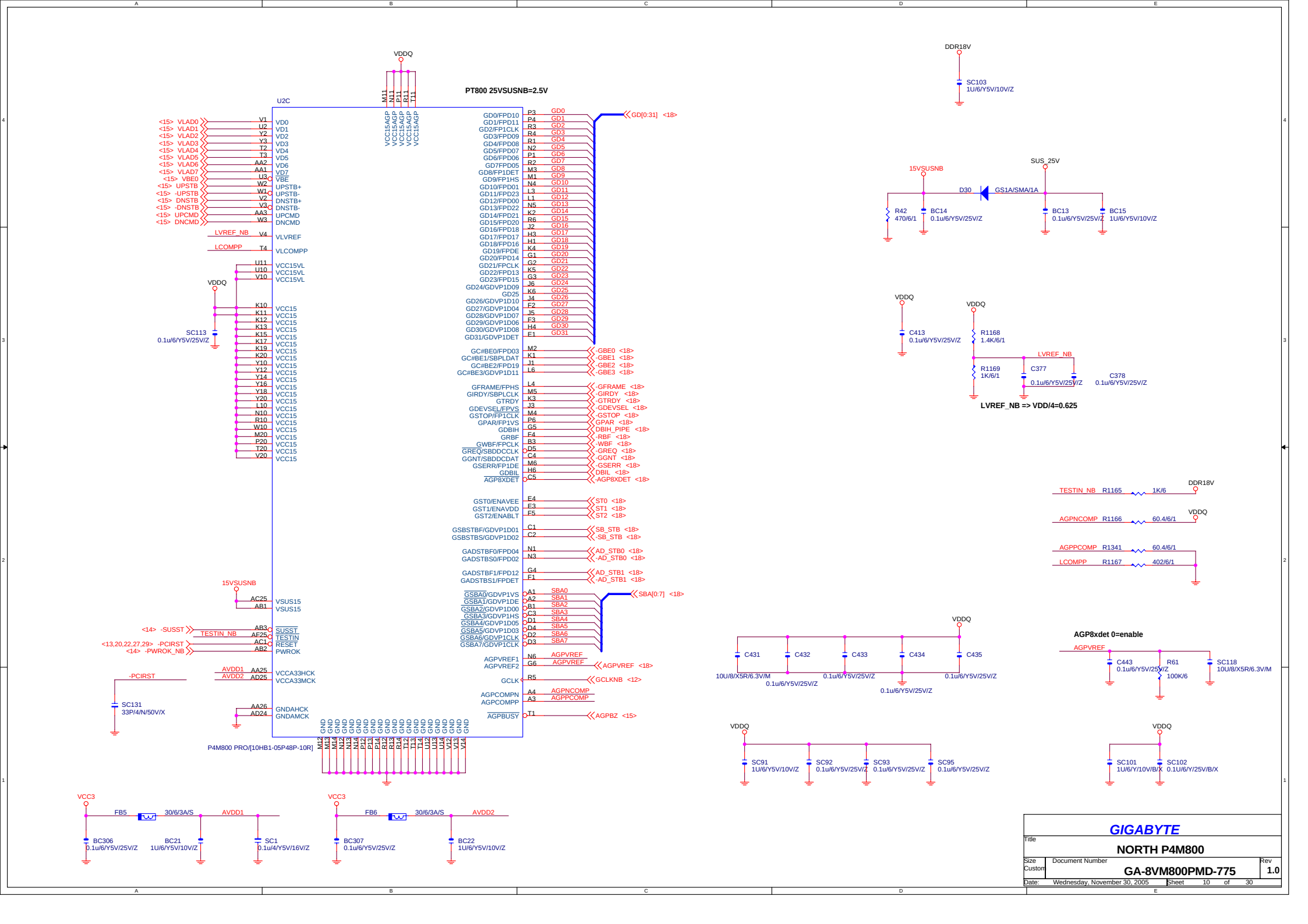
GIGABYTE			
Title	P4_LGA775-D		
Size: Custom	Document Number: GA-8VM800PMD-775		Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 7 of 30		

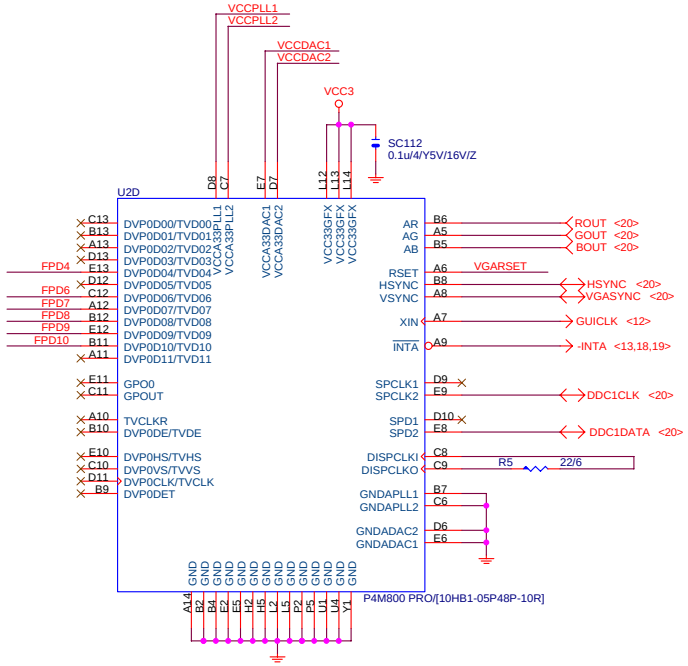


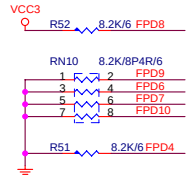
GIGABYTE		
Title	NORTH P4M800	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 8 of 30	



GIGABYTE		
Title: **NORTH P4M800**		
Size: Custom	Document Number: **GA-8VM800PMD-775**	Rev: **1.0**
Date: Wednesday, November 30, 2005	Sheet 9 of 30	


U2C
PT800 25VSUSNB=2.5V
P4M800 PRO/[10HB1-05P48P-10R]
VDDQ
DDR18V
15VSUSNB
SUS_25V
LVREF_NB => VDD/4=0.625
AGP8xdet 0=enable
GIGABYTE
NORTH P4M800
GA-8VM800PMD-775
Rev 1.0
Wednesday, November 30, 2005
Sheet 10 of 30





GFX power up strapping setting:

TVD4/DVP0D4 =>AGP Port Muxing
0: Two 12-bit DVI interface
1: One 24-bit Panel interface

TVD5/DVP0D5 =>Dedicated DVI Port Configuration
0: TMDS
1: TV Encoder

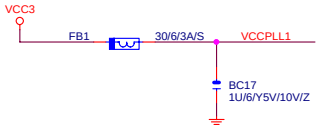
TVD6/DVP0D6 =>Dedicated DVI Port Selection
0: Disable
1: Enable

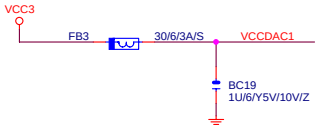
TVD8/DVP0D8 =>External AGP Function Enable
0: External
1: Internal

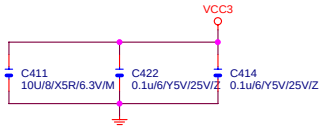
TVD9/DVP0D9 =>PCI Signal Test Output Enable
0: Disable
1: Enable

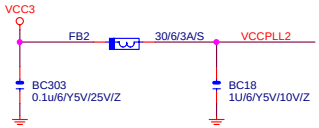
TVD10/DVP0D10 =>CPUCK/MCK Clock Select
0: From NB
1: From External

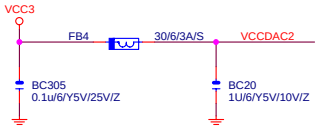
TVD7/DVP0D7 =>GFX Clock Select(VCK/LCDCK/ECK)
0: Refer Internal PLL
1: From External











GIGABYTE

Title: NORTH P4M800

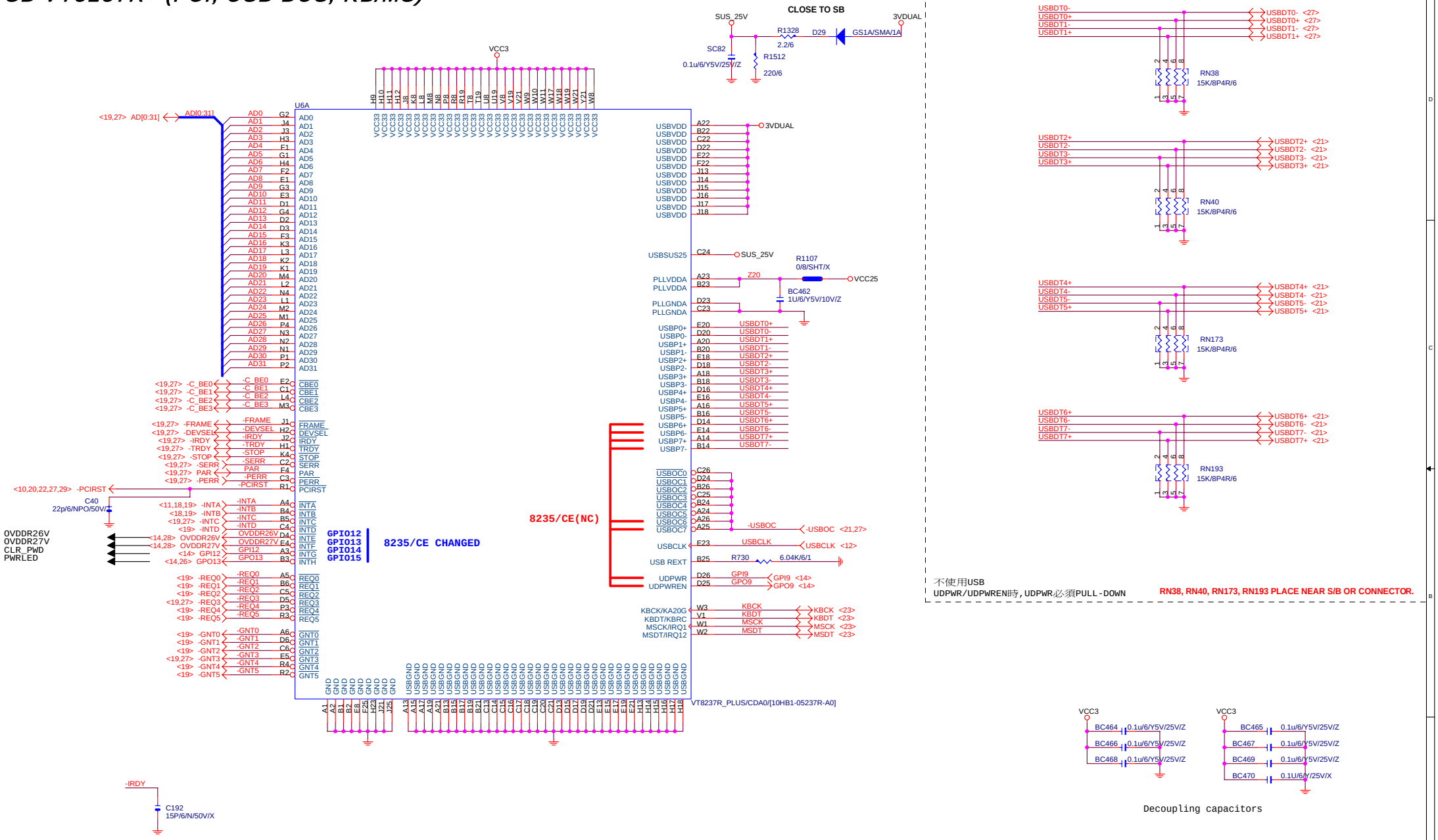
Size: Custom | Document Number: GA-8VM800PMD-775 | Rev: 1.0

Date: Wednesday, November 30, 2005 | Sheet 11 of 30

GIGABYTE

Title	CLOCK GENERATOR	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 12 of 30	

SB VT8237R+ (PCI, USB BUS, KB/MS)



GIGABYTE		
Title	SB VT8237CD (PCI, USB BUS, KB/MS)	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 13 of 30	

SB VT8237R+ (SATA,IDE, AC97, POWER MANAGEMENT, PGIO)

P/SDA1	P/SDA0	GTL Driving Strength
0	0	WEAK
0	1	MIDDLE WEAK
1	0	STRONG
1	1	STRONGEST

GPIOD = GTL Pull
0 --> Enable
1 --> Disable

GPIOB
0--->IOQ=8
1--->IOQ=1

U6B

8235/CE CHANGED
SA17
SA18
SA16
SA19

8235/CE(NC)

VT8237R_PLUS/CDA0/[10HB1-05237R-A0]

PWRLED

AMD TEMP

VT8237 INTERNAL IDSEL LIST:
1.AD26:SATA
2.AD27:USB2.0
3.AD28:S.B(USB1.1)
4.AD29:LAN

FOR 8237CD
H: 66/AUTOMODE (GPIOA,C=H) L: 100/133/166/200

PDA0 => GTL Driving Strength

PDA1 => GTL Driving Strength

PDA2 => SB include ROMSIP

For 8237CD
-PDCS3: VKCOMP for Vlink at 4x mode
0=>0.75V, 1=>0.9V

SPKR: 0/1 ENABLE/DISABLE CPU FREQ STRAPPING

SEEDI:1/0:ENABLE/DISABLE 8237CD
SEEDI: AN233 NC IF MII NO POP

Width & Space --> 20:5:10:5:20

CLOSE VT8237 CHIPSET

SATA0

SATA1

SATA/7/RE/OH/P/VA/D/1/B

GPIO ID SETTING

-PDDACK: 0/1 ENABLE/DISABLE EXTERNAL SATA PHY(FOR 8237CD)

GPO26 H:PHY LAN, LOW:GIGABIT LAN

ASYNC: 0/1 ENABLE/DISABLE LPC FWH COMMAND(FOR 8237CD)

ACSDO: 0/1 ENABLE/DISABLE AUTO REBOOT(FOR 8237CD)

-PCISTP: 0/1 ENABLE/DISABLE 100MHZ VLINK CLK

-PDCS1: 0/1 ENABLE/DISABLE SATA MASTER/SLAVE MODE

GIGABYTE

Title	SB VT8237CD (SATA,IDE, AC97, POWER , GPIO)	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 14 of 30	

SB VT8237(Vlink, CPU, LPC, LAN, LAN EEPROM, I2C BUS)

U6C

8235/CE(NC)

8235/CE(NC)

8235/CE(NC)

VT8237R_PLUS/CDA0/[10HB1-05237R-A0]

Decoupling capacitors

Internal MAC P.U

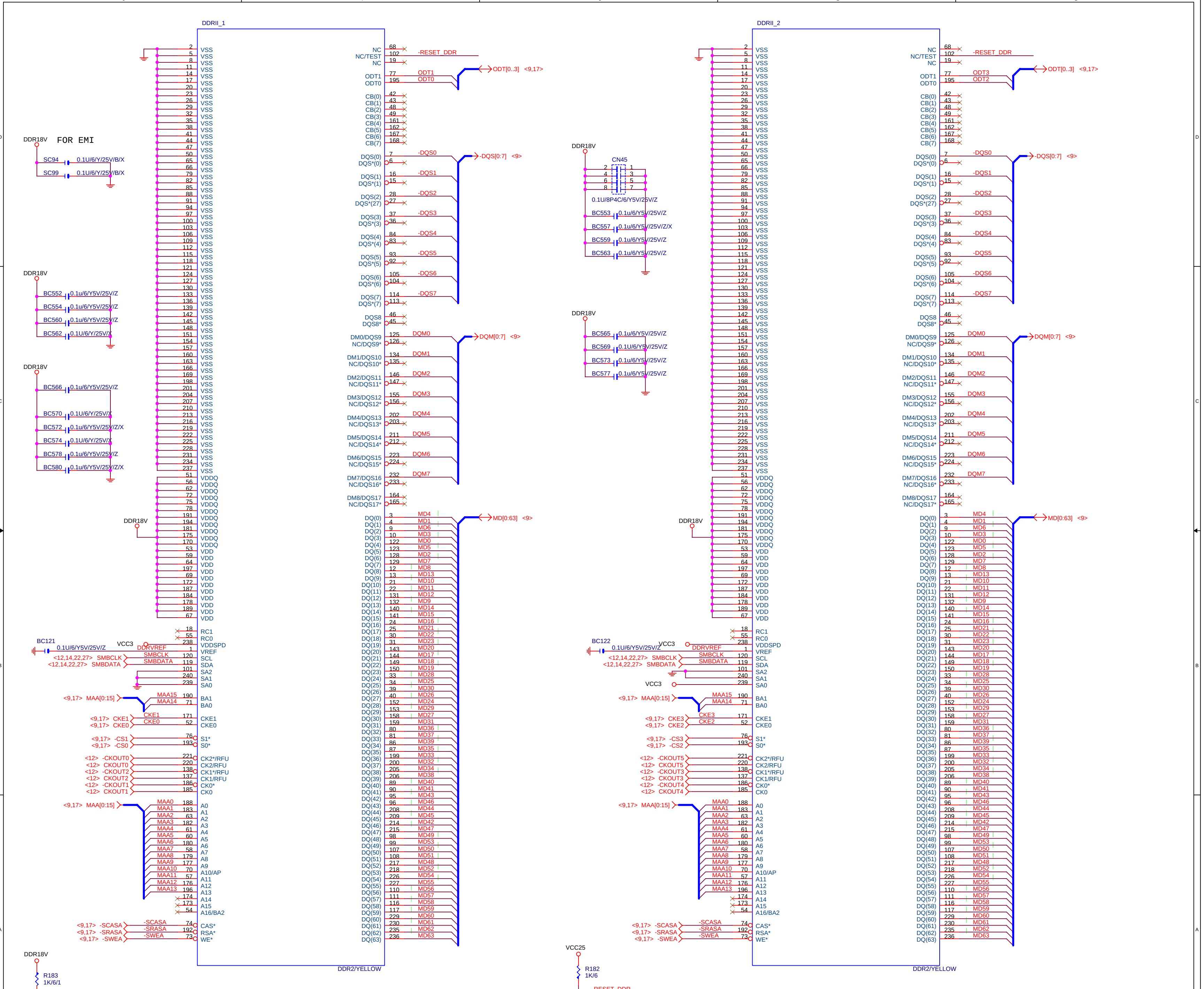
AN233 REMOVE Sep.8

Case Open Circuits

CLR_CMOS	CLEAR COMS JUMPER
SHORT	CLEAR CMOS
OPEN	NORMAL (Default)

R1106 430/6/1 FOR P4M533

GIGABYTE			
Title: SB VT8237CD(Vlink, CPU, LPC, LAN, I2C)			
Size: Custom	Document Number: GA-8VM800PMD-775		Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 15 of 30		

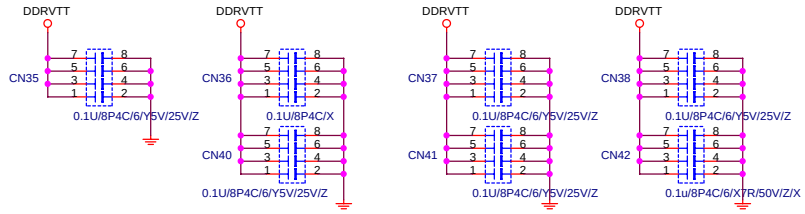


GIGABYTE

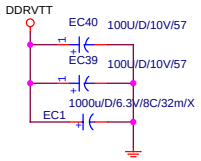
Title: DDRII UNBUFFERED 1,2

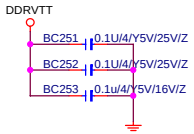
Size: Custom | Document Number: GA-8VM800PMD-775 | Rev: 1.0

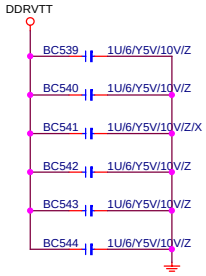
Date: Wednesday, November 30, 2005 | Sheet 16 of 30



DDRVTT Decouple

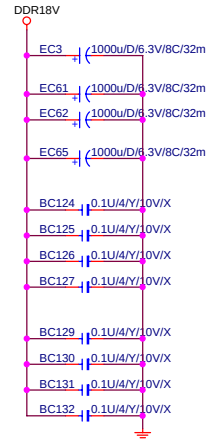


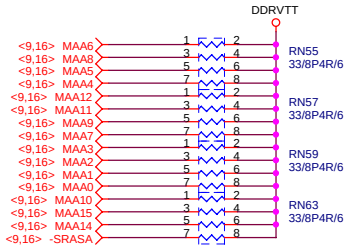


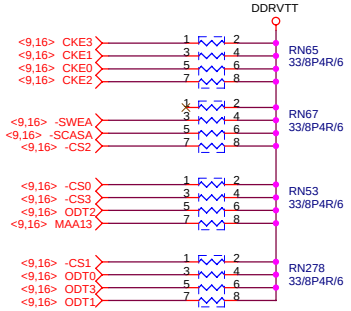


NOTE: Place these decoupling capacitors close to VTT_MEM termination resistors. (one decoupling coapcitor for each two R-packs)

DDR18V Decouple

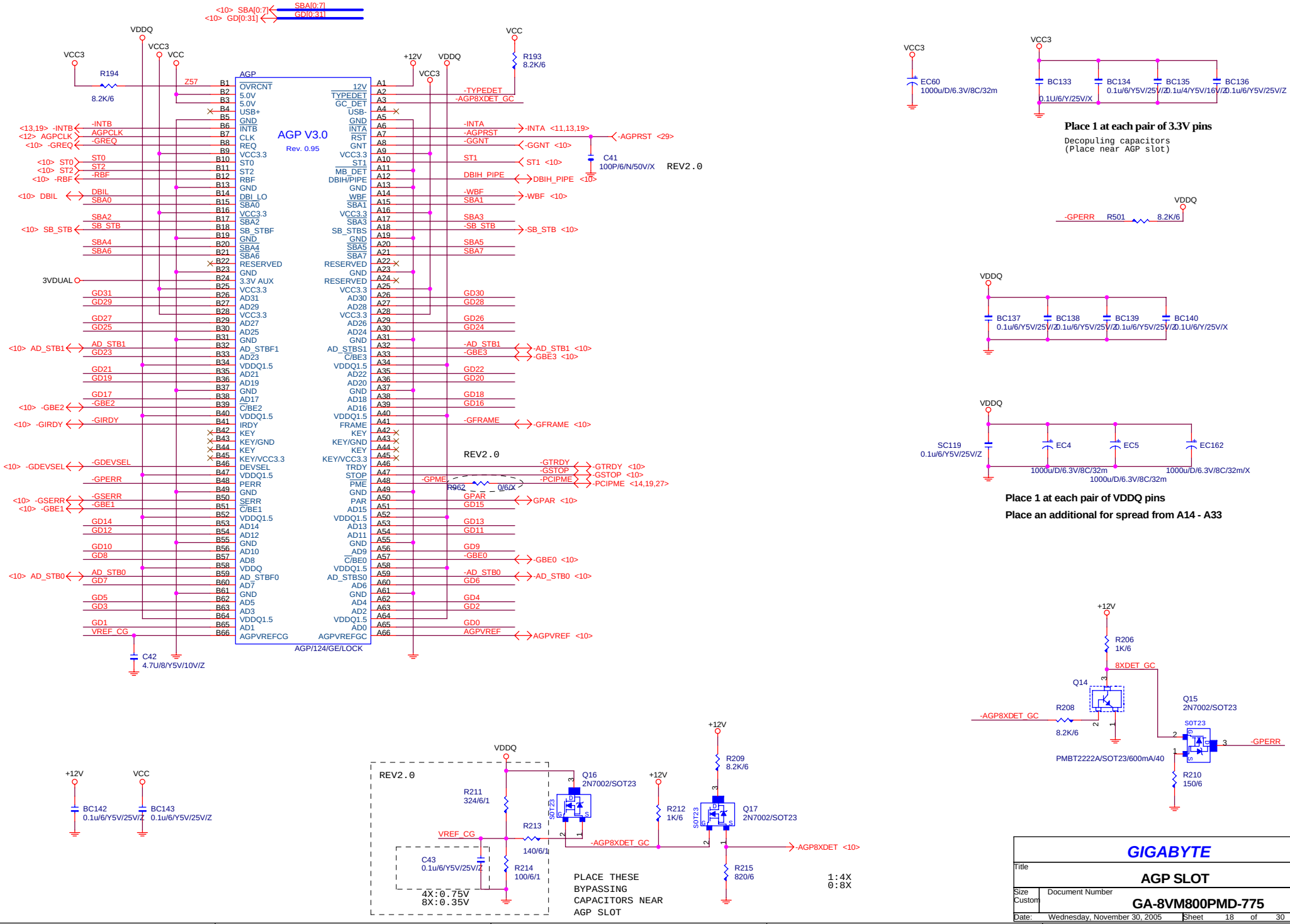






GIGABYTE

Title: DDRII Terminator		
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
Date: Wednesday, November 30, 2005	Sheet 17 of 30	


AGP V3.0
Rev. 0.95
AGP/124/GE/LOCK
REV2.0
SBA[0:7]
GD[0:31]
<10> SBA[0:7]
<10> GD[0:31]
VDDQ
VCC3
VCC
+12V
3VDUAL
R193 8.2K/6
R194 8.2K/6
C41 100P/6/N/50V/X
C42 4.7U/8/Y5V/10V/Z
-TYPEDET
-AGP8XDET_GC
-INTA <11,13,19>
-AGPRST <29>
-GGNT <10>
ST1 <10>
DBIH_PIPE <10>
-WBF <10>
SBA1
SBA3
-SB_STB <10>
SBA5
SBA7
GD30
GD28
GD26
GD24
-AD_STB1 <10>
-GBE3 <10>
GD22
GD20
GD18
GD16
-GFRAME <10>
-GTRDY <10>
-GSTOP <10>
-PCIPME <14,19,27>
GPAR <10>
GD15
GD13
GD11
GD9
-GBE0 <10>
-AD_STB0 <10>
GD6
GD4
GD2
GD0
AGPVREF <10>
-GPME
R962 0/6/X
EC60 1000u/D/6.3V/8C/32m
BC133 0.1U/6/Y/25V/X
BC134 0.1u/6/Y5V/25V/Z
BC135 0.1u/4/Y5V/16V/Z
BC136 0.1u/6/Y5V/25V/Z
Place 1 at each pair of 3.3V pins
Decoupling capacitors
(Place near AGP slot)
-GPERR R501 8.2K/6
BC137 0.1u/6/Y5V/25V/Z
BC138 0.1u/6/Y5V/25V/Z
BC139 0.1u/6/Y5V/25V/Z
BC140 0.1U/6/Y/25V/X
SC119 0.1u/6/Y5V/25V/Z
EC4 1000u/D/6.3V/8C/32m
EC5 1000u/D/6.3V/8C/32m
EC162 1000u/D/6.3V/8C/32m/X
Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33
R206 1K/6
8XDET_GC
Q14
Q15 2N7002/SOT23
R208 8.2K/6
-AGP8XDET_GC
PMBT2222A/SOT23/600mA/40
R210 150/6
BC142 0.1u/6/Y5V/25V/Z
BC143 0.1u/6/Y5V/25V/Z
Q16 2N7002/SOT23
Q17 2N7002/SOT23
R209 8.2K/6
R211 324/6/1
R212 1K/6
R213 140/6/1
R214 100/6/1
R215 820/6
C43 0.1u/6/Y5V/25V/Z
4X:0.75V
8X:0.35V
PLACE THESE BYPASSING CAPACITORS NEAR AGP SLOT
1:4X
0:8X
GIGABYTE
Title
AGP SLOT
Size Custom
Document Number
GA-8VM800PMD-775
Rev 1.0
Date: Wednesday, November 30, 2005
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-GNT0
-GNT1
-GNT3
-GNT2

-GNT4

-GNT5

-REQ0
-REQ3
-REQ1
-REQ2

-REQ4

-REQ5

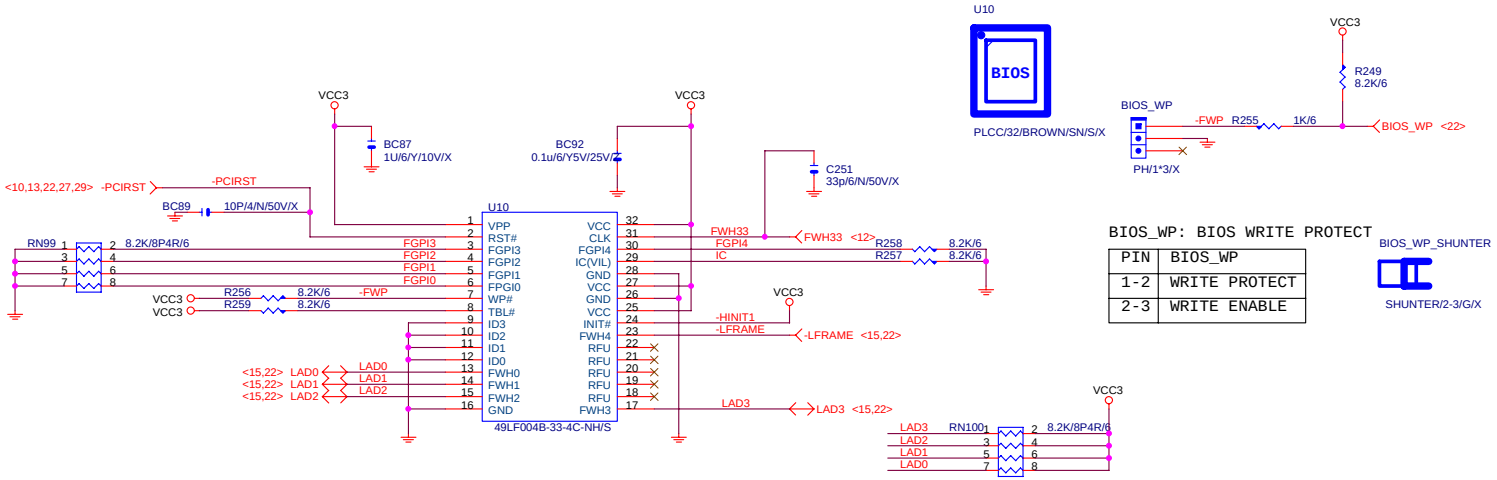
GIGABYTE

Title

PCI SLOT 1,2,3

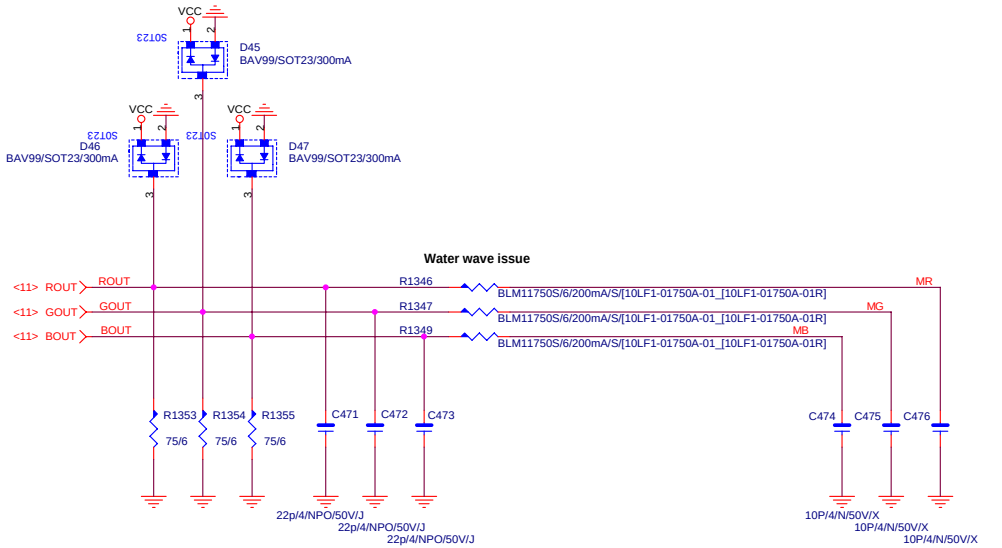
Size	Document Number	Rev
Custom	GA-8VM800PMD-775	1.0

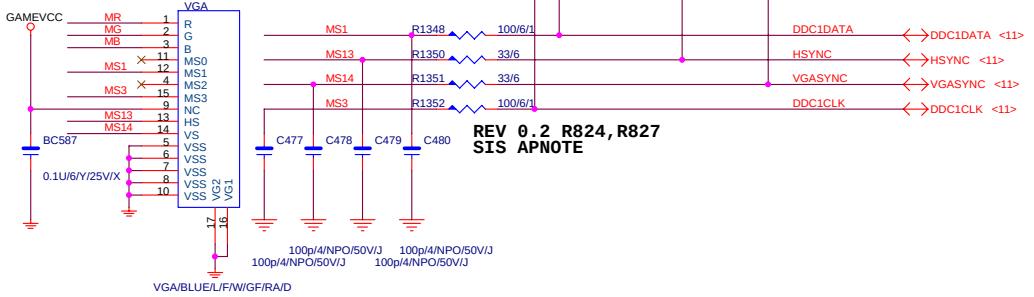
Date: Wednesday, November 30, 2005 Sheet 19 of 30



BIOS_WP: BIOS WRITE PROTECT

PIN	BIOS_WP
1-2	WRITE PROTECT
2-3	WRITE ENABLE





GIGABYTE			
Title: BIOS & VGA CONN			
Size: Custom	Document Number: GA-8VM800PMD-775		Rev: 1.0
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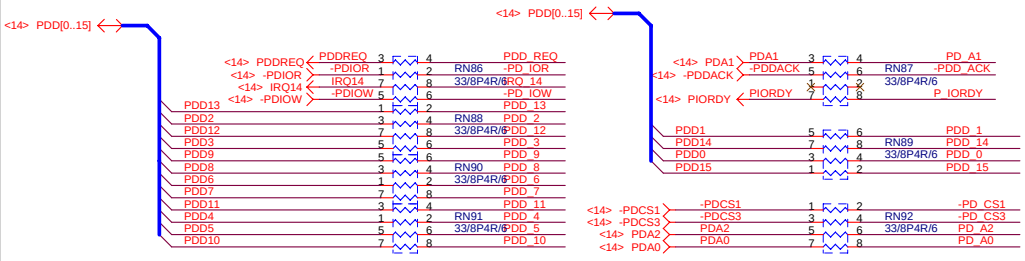
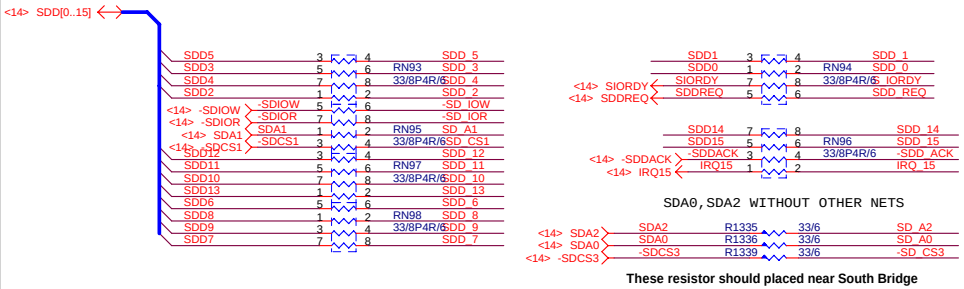
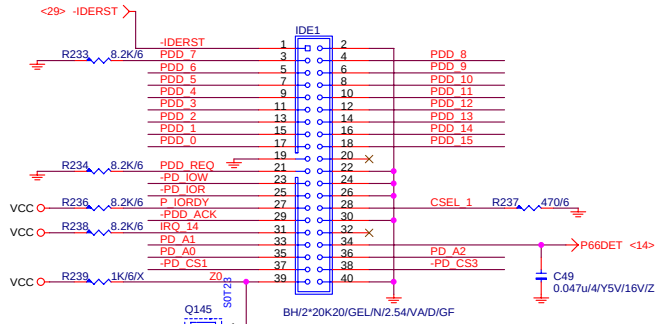
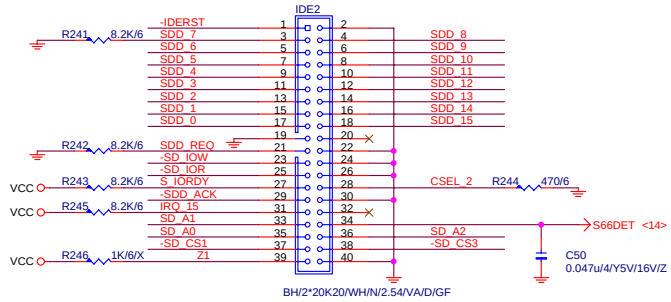
PRIMARY IDE



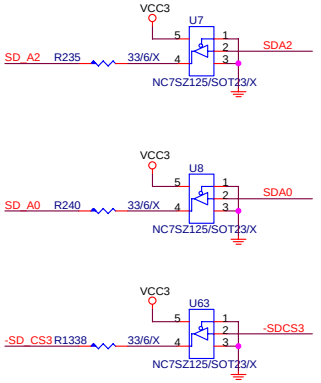
SECONDARY IDE



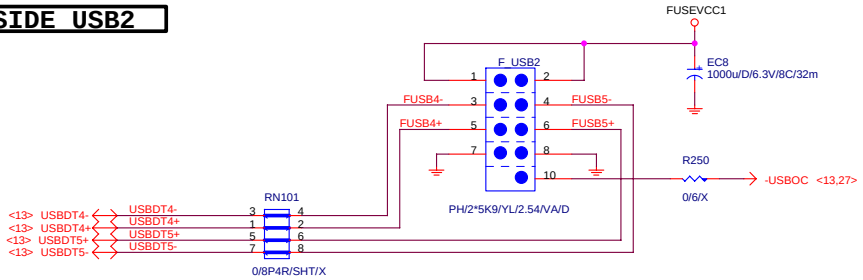


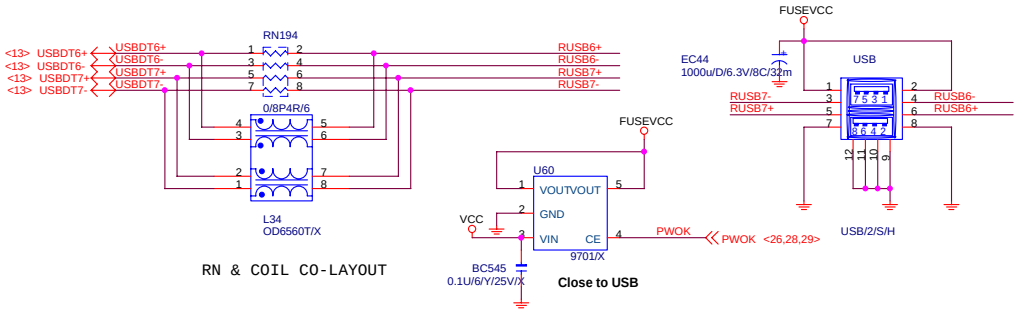


CD,DVD ROM STRAPPING ISSUE

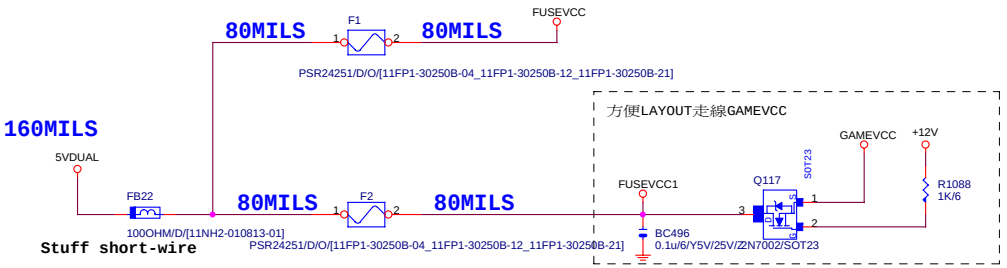


FRONT SIDE USB2

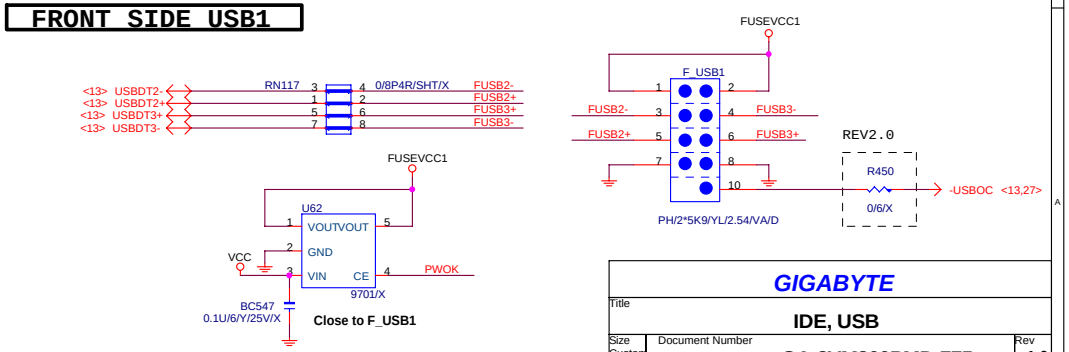




FUSEVCC,GAMEVCC



FRONT SIDE USB1



GIGABYTE

Title	IDE, USB	
Size: Custom	Document Number: GA-8VM800PMD-775	Rev: 1.0
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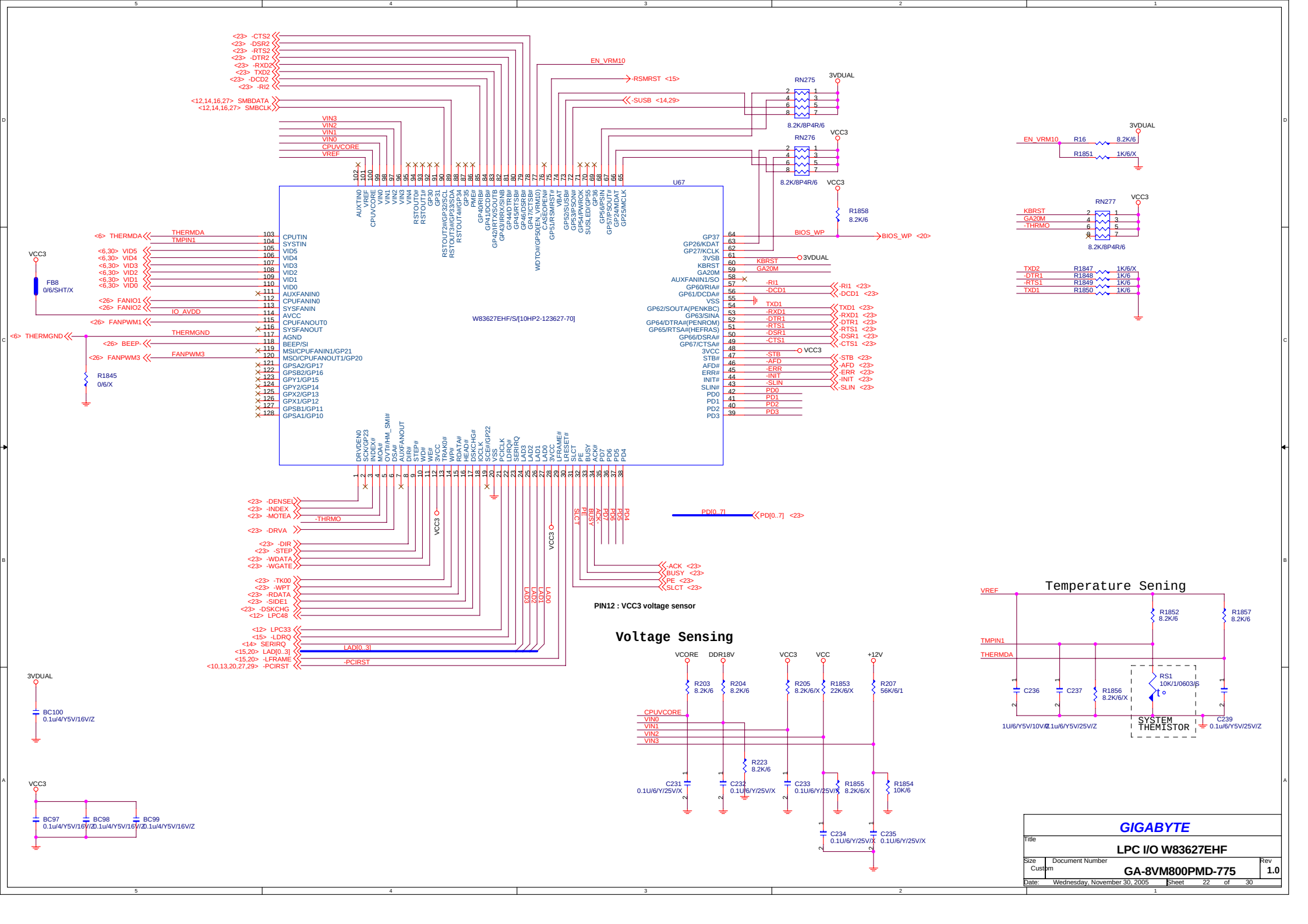
U67
W83627EHF/S/[10HP2-123627-70]
Voltage Sensing
Temperature Sening
SYSTEM THEMISTOR
PIN12 : VCC3 voltage sensor
GIGABYTE
Title
LPC I/O W83627EHF
Size
Custom
Document Number
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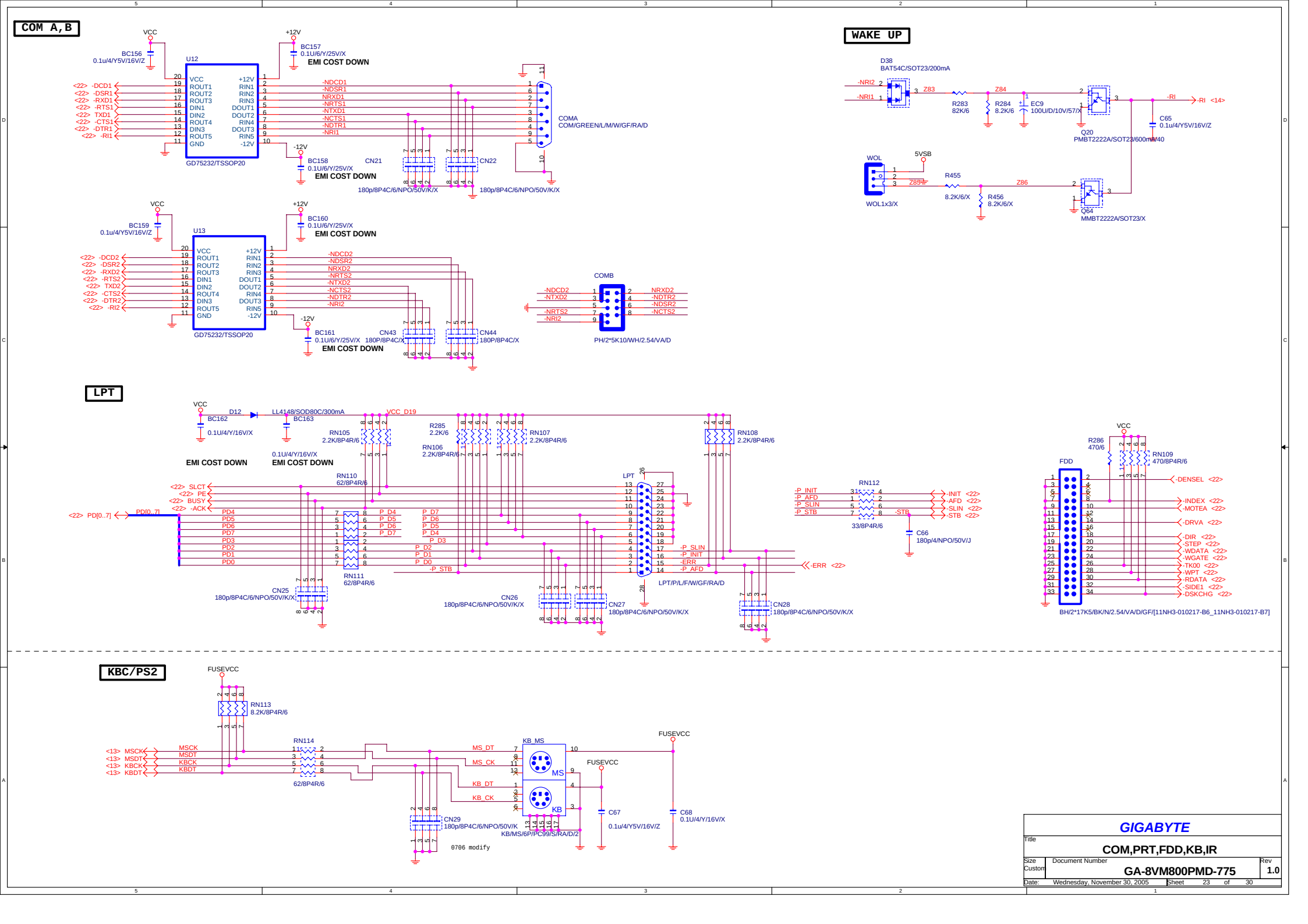
COM A,B
WAKE UP
LPT
KBC/PS2
U12
GD75232/TSSOP20
U13
GD75232/TSSOP20
COMA
COM/GREEN/L/M/W/GF/RA/D
COMB
PH/2*5K10/WH/2.54/VA/D
D38
BAT54C/SOT23/200mA
Q20
PMBT2222A/SOT23/600mW/40
Q64
MMBT2222A/SOT23/X
WOL1x3/X
D12
LL4148/SOD80C/300mA
LPT/P/L/F/W/GF/RA/D
FDD
BH/2*17K5/BK/N/2.54/VA/D/GF/[11NH3-010217-B6_11NH3-010217-B7]
KB_MS
KB
KB/MS/6P/PC99/S/RA/D/2
0706 modify
EMI COST DOWN
GIGABYTE
COM,PRT,FDD,KB,IR
GA-8VM800PMD-775
1.0
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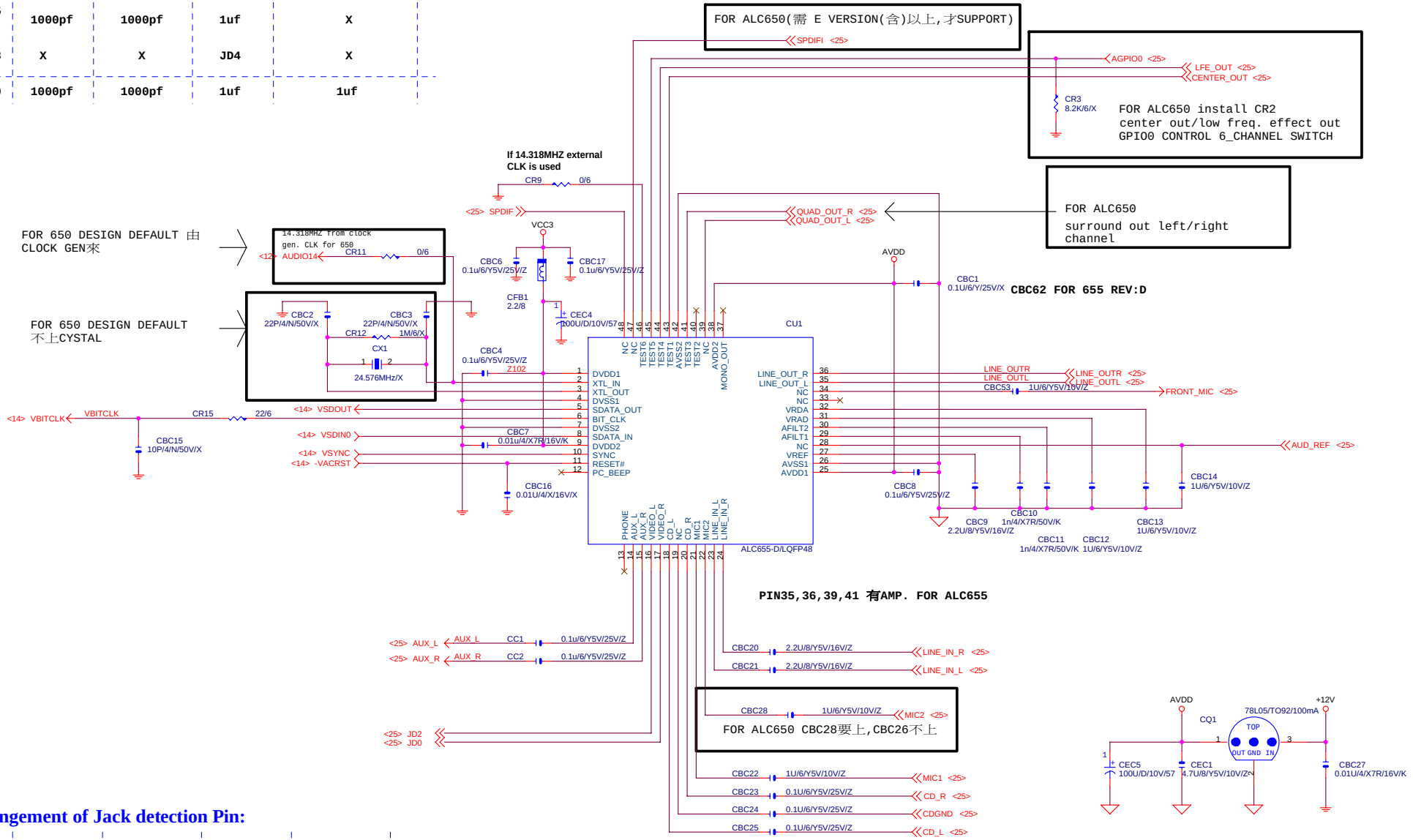
Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf



Arrangement of Jack detection Pin:

	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN		
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed

Title	ALC655
Size	Custom
Document Number	GA-8VM800PMD-775
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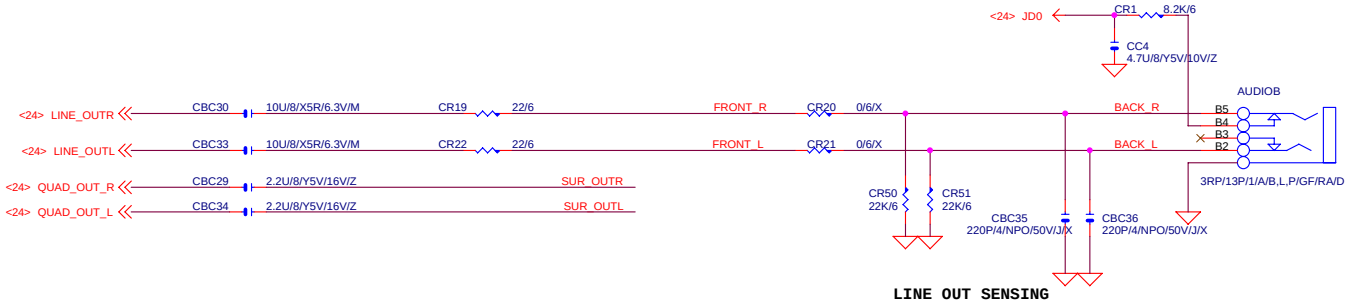
GIGABYTE

LINE OUT

JDO,JD2,GPIO0 爲偵測DEVICE INPUT 時由LOW TO HIGH Edge trigger(pop manual)

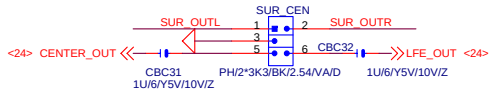
1/2(3.14)RC=1/2(3.14)8.2K*4.7U=4.3HZ以上AC 信號全部衰減 TO 0V 不會造成JDO 誤動作(無device 時play wav)



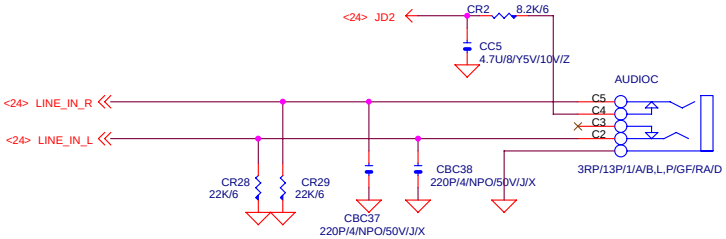
LINE OUT SENSING
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

FOR SUPPORT 6 CHANNEL, SURROUND OUT

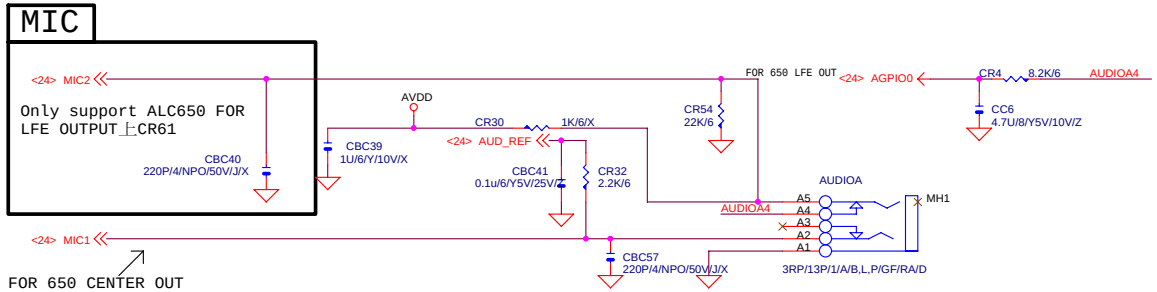
CENTER OUT,LOW FREQUENCY EFFECT OUT



LINE-IN

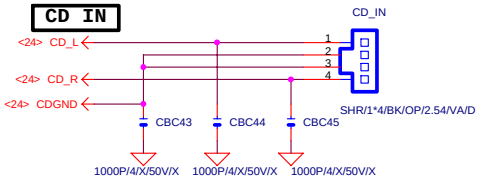


MIC



FOR 650 CENTER OUT
FOR ALC650 CR52=22 OHM

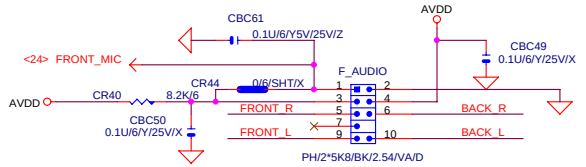
CD IN



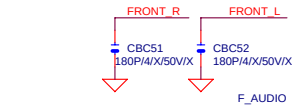
MICROPHONE IN SENSING(當INPUT)(利用vref 偏壓與CR43,CR32 並聯求出阻抗)
7.1k ohm>R>2.3k ohm===>microphone in
R<2.3k ohm or R>7.1k ohm===>unknown device

MICROPHONE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE

INTEL FRONT AUDIO

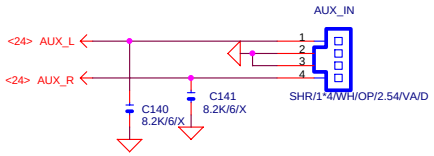


For EMI

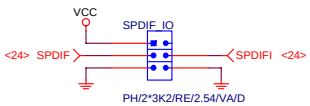


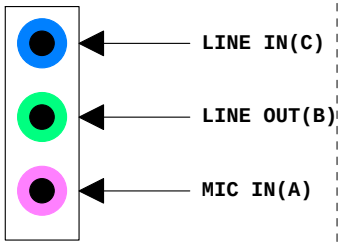
F_AUDIO
JP/1*2/BLUE/GF/O::[5-6]CLOSE

F_AUDIO
JP/1*2/BLUE/GF/O::[9-10]CLOSE



SPDIF_IO





AUDIO PANEL

Title	AUDIO OUTPUT,GAME PORT		
Size: Custom	Document Number: GA-8VM800PMD-775		Rev: 1.0
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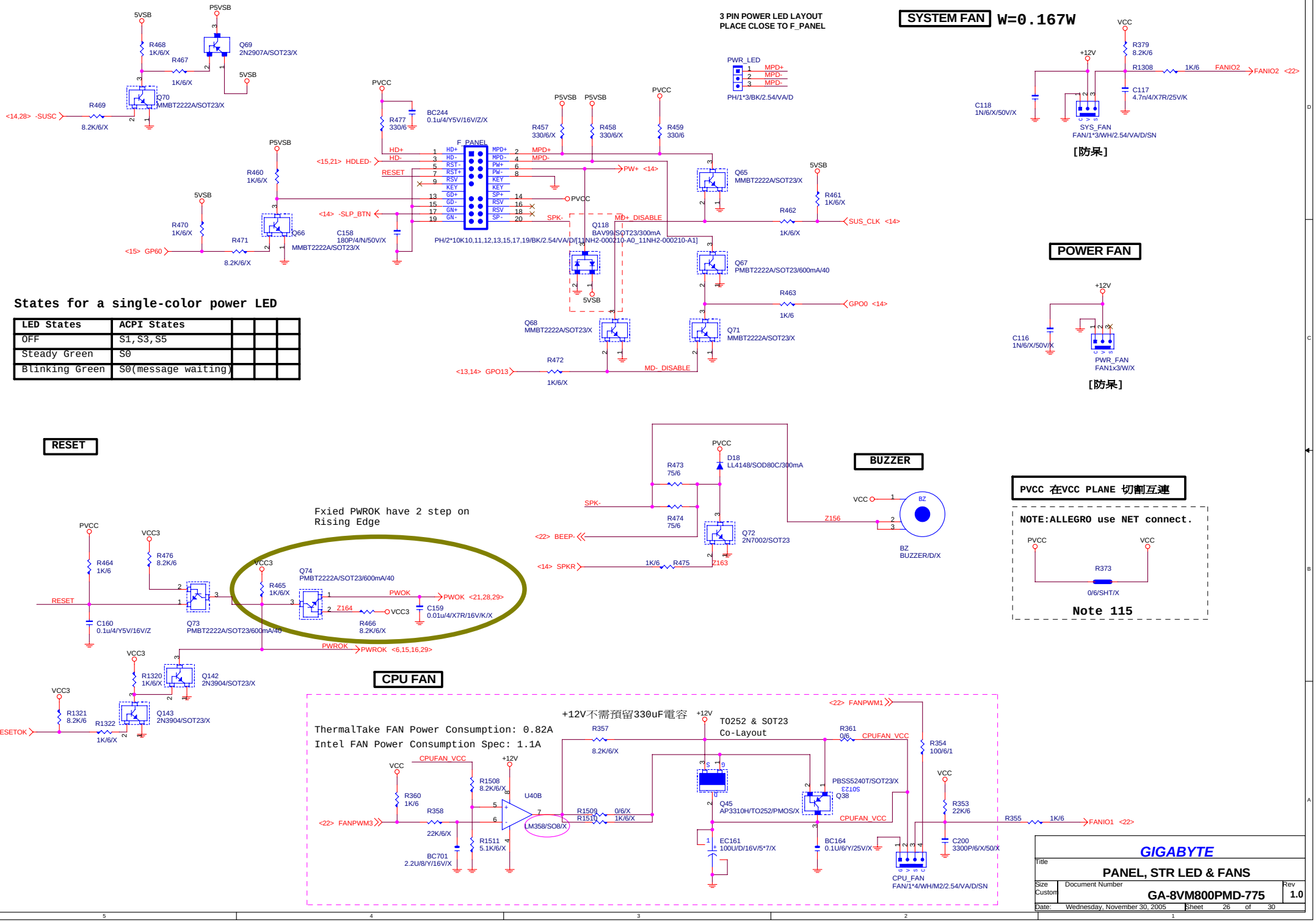
3 PIN POWER LED LAYOUT
PLACE CLOSE TO F_PANEL
SYSTEM FAN W=0.167W
PWR_LED
PH/1*3/BK/2.54/VA/D
F_PANEL
PH/2*10K10,11,12,13,15,17,19/BK/2.54/VA/D/[11]NH2-000210-A0_11NH2-000210-A1]
SYS_FAN
FAN/1*3/WH/2.54/VA/D/SN
[防呆]
POWER FAN
PWR_FAN
FAN1x3/W/X
[防呆]
States for a single-color power LED
LED States | ACPI States
OFF | S1,S3,S5
Steady Green | S0
Blinking Green | S0(message waiting)
RESET
Fxied PWROK have 2 step on
Rising Edge
BUZZER
BZ
BUZZER/D/X
PVCC 在VCC PLANE 切割互連
NOTE:ALLEGRO use NET connect.
Note 115
CPU FAN
ThermalTake FAN Power Consumption: 0.82A
Intel FAN Power Consumption Spec: 1.1A
+12V不需預留330uF電容
TO252 & SOT23
Co-Layout
CPU_FAN
FAN/1*4/WH/M2/2.54/VA/D/SN
GIGABYTE
PANEL, STR LED & FANS
GA-8VM800PMD-775
1.0
Wednesday, November 30, 2005
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	10/100 8100C	Giga 8110S	Giga 8110SB
AVDDH	N/A	3.3V	3.3V
V_12P	2.5V	N/A	3.3V
AVDDL	3.3V	2.5V	2.5V
V_DAC	N/A	2.5V	2.5V
DVDD	2.5V	1.8V	1.3V
DVDD_A	2.5V	1.8V	1.3V

		Dual Color LED	
	Yellow	Green	Orange
10Mb	---	OFF	OFF
100Mb	---	ON	OFF
1Gb	---	OFF	ON
Link	ON	---	---
Active	Blink	---	---

LU1:
100M=>8100C,
1G=>8110S

LR15:
100M=>5.6K/6/1,
1G=>2.49K/6/1

LR4:
93C46:N/A
93C56:8.2K/6

LR16:
100M:N/A
1G:0/8

LFB2:
100M:0/8
1G:N/A

LFB1:
100M:N/A
1G:0/8

LFB3:
100M:0/8
1G:N/A

LQ1:
100M:N/A
2SB1132

LR35:
100M:N/A
1G:0/6

FOR EMI

LQ3:
100M:2N2907A
1G:N/A

DVDD:
100M:2.5V
1G:1.8V

For : Gigabyte LAN

USB

LAN EEPROM

IDESEL 30
-REQ/-GNT(5)
-INTC

LR26~LR29:
100M:N/A
1G:49.9/6/1

LBC28, LBC29:
100M:N/A
1G:0.01U/6

LBC23:
100M:N/A
1G:N/A

LR17:
100M:N/A
1G:0/6

Spacing : at least 50 mils between each differential pair

LBC25:
100M:0.1U/6
1G:0.01U/6

FOR 1G:P35-152-19W9
FOR 100M:P35-152-11Z9

LR22, LR23, LBC26 Close to Lan Chip
Realtek suggestion (TX+, TX-).

LR24, LR25, LBC27 Close to Lan Chip
Realtek Suggestion (RX+, RX-).

For 8100C

For 8110S

FOR EMI

GIGABYTE

Title: **LAN RTL8110C**

Size: Custom | Document Number: **GA-8VM800PMD-775** | Rev: **1.0**

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VDDQ FOR AGP 4X/8X

VTT_GMCH=1.25V

AP40T03H/TO252/25m/[10IF4-254003-01_10IF4-332003-01R_10IF4-200408-01_10IF4-200408-01R_10IF4-254003-01R]
AP40T03H/TO252/25m/[10IF4-254003-01_10IF4-332003-01R_10IF4-200408-01_10IF4-200408-01R_10IF4-254003-01R]/X

close to u14b

Voltage=10.4V

0.9V DDRVTT SWITCHING SOLUTION

Z13 can't connect to powerok, this is level issue. Connect to Power ok will cause 4 seconds shutdown.

Z13 use power ok: power ok is 4.7V, and Q48 S is vcore, this will make Q48 always open (G,S>0.7V), and Z11 is about 1.8V, and Z12 will be1.5V, cause U14 pin 1 drive hi.

PCB THERM

DDR25V FOR DDR DIMM & NB

GP023

VCC25 FOR NB,SB

5VDUAL CIRCUIT

Company	GIGABYTE
Title	DDR POWER
Size / Custom	Document Number: GA-8VM800PMD-775
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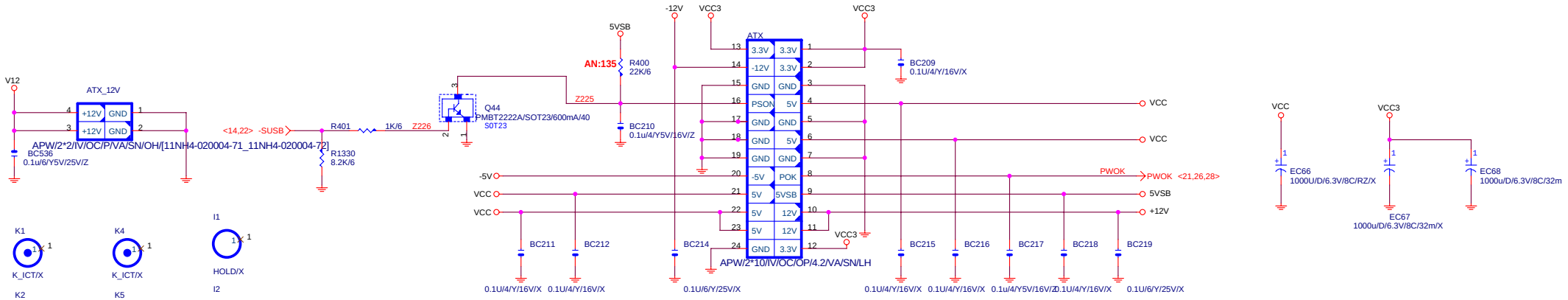
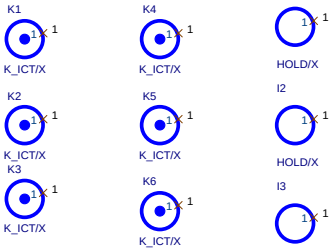
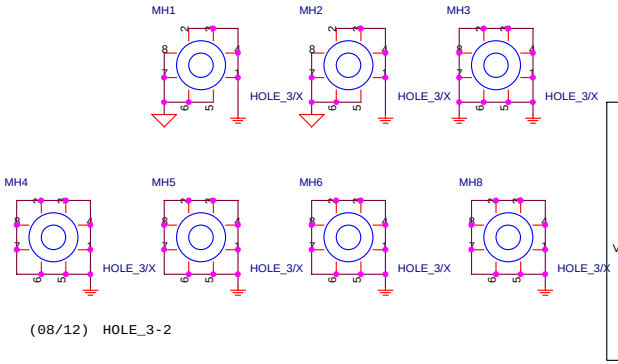
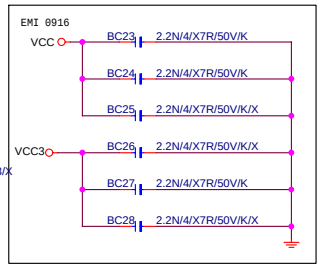
ATX CONN, DC POWER

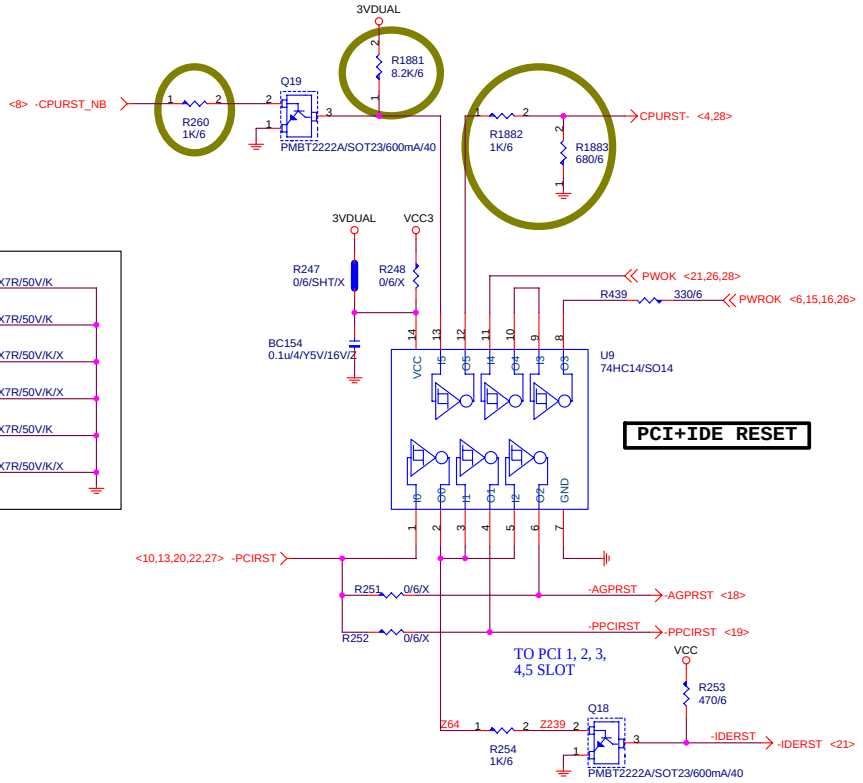
ATX POWER CONNECTOR

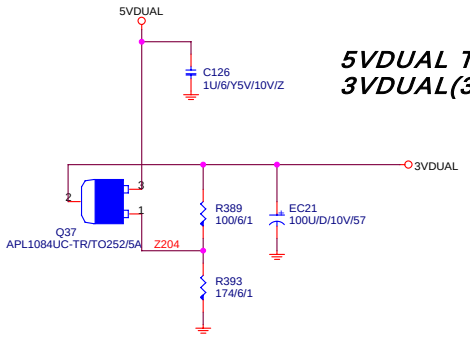












5VDUAL TRANS TO 3VDUAL(3.3V)

GIGABYTE			
Title: ATX, DC POWER			
Size: Custom	Document Number: GA-8VM800PMD-775		Rev: 1.0
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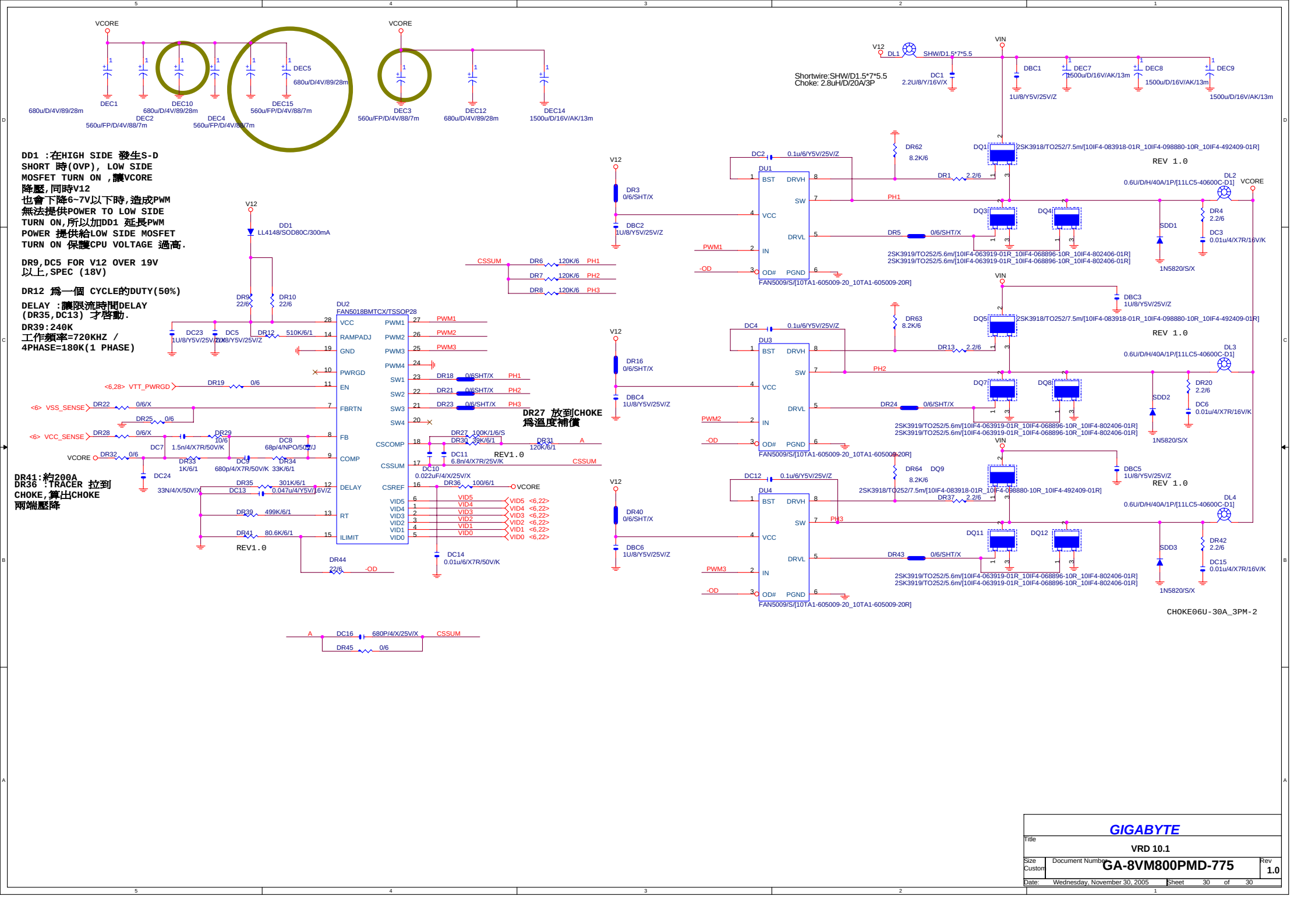
VCORE
DEC1 680u/D/4V/89/28m
DEC10 680u/D/4V/89/28m
DEC2 560u/FP/D/4V/88/7m
DEC4 560u/FP/D/4V/88/7m
DEC15 560u/FP/D/4V/88/7m
DEC5 680u/D/4V/89/28m
DEC3 560u/FP/D/4V/88/7m
DEC12 680u/D/4V/89/28m
DEC14 1500u/D/16V/AK/13m
DD1 :在HIGH SIDE 發生S-D SHORT 時(OVP), LOW SIDE MOSFET TURN ON ,讓VCORE 降壓,同時V12 也會下降6~7V以下時,造成PWM 無法提供POWER TO LOW SIDE TURN ON,所以加DD1 延長PWM POWER 提供給LOW SIDE MOSFET TURN ON 保護CPU VOLTAGE 過高.
DR9,DC5 FOR V12 OVER 19V 以上,SPEC (18V)
DR12 爲一個 CYCLE的DUTY(50%)
DELAY :讓限流時間DELAY (DR35,DC13) 才啓動.
DR39:240K
工作頻率=720KHZ / 4PHASE=180K(1 PHASE)
DR41:約200A
DR36 :TRACER 拉到 CHOKE,算出CHOKE 兩端壓降
V12
DD1 LL4148/SOD80C/300mA
DR9 22/6
DR10 22/6
DU2 FAN5018BMTCX/TSSOP28
VCC
RAMPADJ
GND
PWRGD
EN
FBRTN
FB
COMP
DELAY
RT
ILIMIT
PWM1
PWM2
PWM3
PWM4
SW1
SW2
SW3
SW4
CSCOMP
CSSUM
CSREF
VID5
VID4
VID3
VID2
VID1
VID0
DC23 1U/8/Y5V/25V/Z
DC5 1U/8/Y5V/25V/Z
DR12 510K/6/1
DR19 0/6
DR22 0/6/X
DR25 0/6
DR28 0/6/X
DR29 10/6
DC7 1.5n/4/X7R/50V/K
DR32 0/6
DR33 1K/6/1
DC8 68p/4/NPO/50V/J
DC9 680p/4/X7R/50V/K
DR34 33K/6/1
DC24 33N/4/X/50V/X
DR35 301K/6/1
DC13 0.047u/4/Y5V/16V/Z
DR39 499K/6/1
DR41 80.6K/6/1
REV1.0
DR44 22/6
-OD
DR18 0/6/SHT/X
DR21 0/6/SHT/X
DR23 0/6/SHT/X
DR27 100K/1/6/S
DR30 39K/6/1
DR31 120K/6/1
DC11 6.8n/4/X7R/25V/K
DC10 0.022uF/4/X/25V/X
DR36 100/6/1
DC14 0.01u/6/X7R/50V/K
DR27 放到CHOKE 爲溫度補償
CSSUM
DR6 120K/6 PH1
DR7 120K/6 PH2
DR8 120K/6 PH3
A
DC16 680P/4/X/25V/X
DR45 0/6
<6,28> VTT_PWRGD
<6> VSS_SENSE
<6> VCC_SENSE
VCORE
VID5 <6,22>
VID4 <6,22>
VID3 <6,22>
VID2 <6,22>
VID1 <6,22>
VID0 <6,22>
VIN
V12
DL1 SHW/D1.5*7*5.5
Shortwire:SHW/D1.5*7*5.5
Choke: 2.8uH/D/20A/3P
DC1 2.2U/8/Y/16V/X
DBC1 1U/8/Y5V/25V/Z
DEC7 1500u/D/16V/AK/13m
DEC8 1500u/D/16V/AK/13m
DEC9 1500u/D/16V/AK/13m
DR62 8.2K/6
DQ1
2SK3918/TO252/7.5m/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
REV 1.0
DC2 0.1u/6/Y5V/25V/Z
DU1
BST
DRVH
SW
VCC
DRVL
IN
OD#
PGND
DR1 2.2/6
PH1
DR3 0/6/SHT/X
DBC2 1U/8/Y5V/25V/Z
PWM1
-OD
DQ3
DQ4
DR5 0/6/SHT/X
2SK3919/TO252/5.6m/[10IF4-063919-01R_10IF4-068896-10R_10IF4-802406-01R]
FAN5009/S/[10TA1-605009-20_10TA1-605009-20R]
DL2 0.6U/D/H/40A/1P/[11LC5-40600C-D1]
SDD1 1N5820/S/X
DR4 2.2/6
DC3 0.01u/4/X7R/16V/K
DBC3 1U/8/Y5V/25V/Z
DR63 8.2K/6
DQ5
DC4 0.1u/6/Y5V/25V/Z
DU3
DR13 2.2/6
PH2
DR16 0/6/SHT/X
DBC4 1U/8/Y5V/25V/Z
PWM2
DQ7
DQ8
DR24 0/6/SHT/X
DL3 0.6U/D/H/40A/1P/[11LC5-40600C-D1]
SDD2 1N5820/S/X
DR20 2.2/6
DC6 0.01u/4/X7R/16V/K
DBC5 1U/8/Y5V/25V/Z
DR64 8.2K/6
DQ9
DC12 0.1u/6/Y5V/25V/Z
DU4
DR37 2.2/6
PH3
DR40 0/6/SHT/X
DBC6 1U/8/Y5V/25V/Z
PWM3
DQ11
DQ12
DR43 0/6/SHT/X
DL4 0.6U/D/H/40A/1P/[11LC5-40600C-D1]
SDD3 1N5820/S/X
DR42 2.2/6
DC15 0.01u/4/X7R/16V/K
CHOKE06U-30A_3PM-2
GIGABYTE
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VRD 10.1
Size Custom
Document Number
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