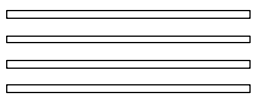
8SIMLH Schematics

Revision 3.02

SHEET	TITLE
1	COVER SHEET
2	BOM & PCB MODIFY HISTORY
3	BLOCK DIAGRAM
4,5,6	INTEL CPU_WMT_478
7-10	SIS651/645DX (NORTH BRIDGE) HOST; DDR; AGP,HYPER ZIP
11-14	962 (SOUTH BIRDGE)
15	CKG(ICS952004) + CKBF (ICS93722)
16,17	DDR SDRAM DIMMS 1,2 & DDR TERMINATION
18	AGP SLOT
19	VGA Connector
20	PCI SLOT 1-3
21	IDE,USB
22	Winbond W83697HF
23	BIOS
24	COM,PRT,FDD,KB/MS,IR
25	CNR SLOT
26	AUDIO AC 97 CODEC
27	AUDIO JACK,GAME PORT
28	RTL8100B & USB CONNECTOR
29	PANEL,STR LED,FANS ,CPU GN
30	VCORE PHASE PWM HIP 6301 + 6601
31	ALL POWER CIRCUIT
32	ATX & ATX12V CONN
33	GPIO Connecttion
34	TEST POINT



GIGABYTE

Title: COVER SHEET

Size	Document Number	Rev
Custom	GA-8SIMLH	3.02

Date: Monday, January 13, 2003 Sheet 1 of 32

Model Name: 8SIMLH

Version:3.02

Component value change history

AUTOBOM
2002/06/04

Date	Change Item	Reason
02/04	LAYOUT PLACEMENT	DEL 1394 CONNECTOR(LAYOUT ISSUE)
		SWAP NET
02/05	LAYOUT LIB	COIL-8P---->COIL-8P_SHORT
02/06	VGA/COM DUAL LAYOUT	
	DDRVTT (R&D 109)	DDRVTT DECOUPLING X14 PCS (0.1U/8P4C CAP)
02/06-1	LAYOUT LIB MODIFY	USB2.0 CHOKE (NO SHORT)
		AGP SLOT-->AGP_N
02/19	NET SWAP	BC345-->SC60(COMP-->SOLDER SIDE)
02/20	EMI ISSUE	CLOSE U16(75232) -NTXD2 ADD CAP 180P/6(BC349)
02/21	LAYOUT ISSUE	BC344-->SC61(COMP-->SOLDER SIDE)
		SWAP NET
	LIB MODIFY	MOSFET LIB TO263,252 CO LAYOUT(Q_TO263-252)
04/22	BOM MODIFY	AC97 CODEC --->ALC650
	PCB REV1.9	PWM 2 PHASE FAN5093M/C(VOCRE CAP COST DOWN)
		INTEL F_PANEL+F_USB1,2,F_AUDIO
		DDRVTT CAP 0.1U/8P4C X9PCS
04/23	PCB MODIFY	reduced PCB size(COST DOWN)
04/29		DEL MH6,ADD CAP MIC FOR EMI
05/08	PCB MODIFY	rename to GA-8SIMLH
	BOM MODIFY	SIS651+SIS962
05/13	BOM MODIFY	cost down CAP & FB
		ALC650 change to ST9721
05/21	PCB MODIFY	DEL BC218 ,ADD R1011 FOR F_MIC
		TEXT MODIFY
	BOM MODIFY	PCB CHANGE TO REV:2.0 1
06/04	BOM MODIFY	R867 10k/6 change to 470/6
		R921 324/1/6 change to 487/1/6
		ADD CN14,15,16,17 180P/8P4C
		ADD C944,C65 180P/N/50V/6
08/04	BOM MODIFY	IDE,PANEL,USB
		FDD,SMBUS,22U TO 100U

Circuit or PCB layout change for next version

Date	Change Item	Reason
08/06	BOM MODIFY	U39 change to SIS962L REV:A2
08/12	BOM MODIFY	DEL R948 1K/6 ADD R950 470/6 R949 10/6 change to 22/6
		EC1,2,3,5,34,40,46 330U/25V change to 1200U/6.3V
08/13	BOM MODIFY	EC54 22U change to 100U
	BOM MODIFY	R939 200K/6 change to 240K/6 ST9721 change to ALC101
	PCB MODIFY	REV:2.01 CHANGE TO2.1
09/12	BOM MODIFY	EC37 100U change to 22U
10/14	BOM MODIFY	R935,R943 2.2 ohm Change to 4.7 ohm
10/28	BOM MODIFY	U12 ADD W83697HF/UB
		FOR MEMO change
11/15	PCB MODIFY	PCB size ADD 0.5 cm(SPEC change)
12/09	PCB MODIFY	PCB text modify
12/09	BOM MODIFY	DEL BC20,23 ADD BC21,BC26 10U/12
		C110,C111 ADD 1K ohm C182 add 150 ohm
		R8 75/6/1 change to 100/6/1
		PCB change to REV:3.01
12/26	PCB MODIFY	ADD HT SUPPORT REV:3.02

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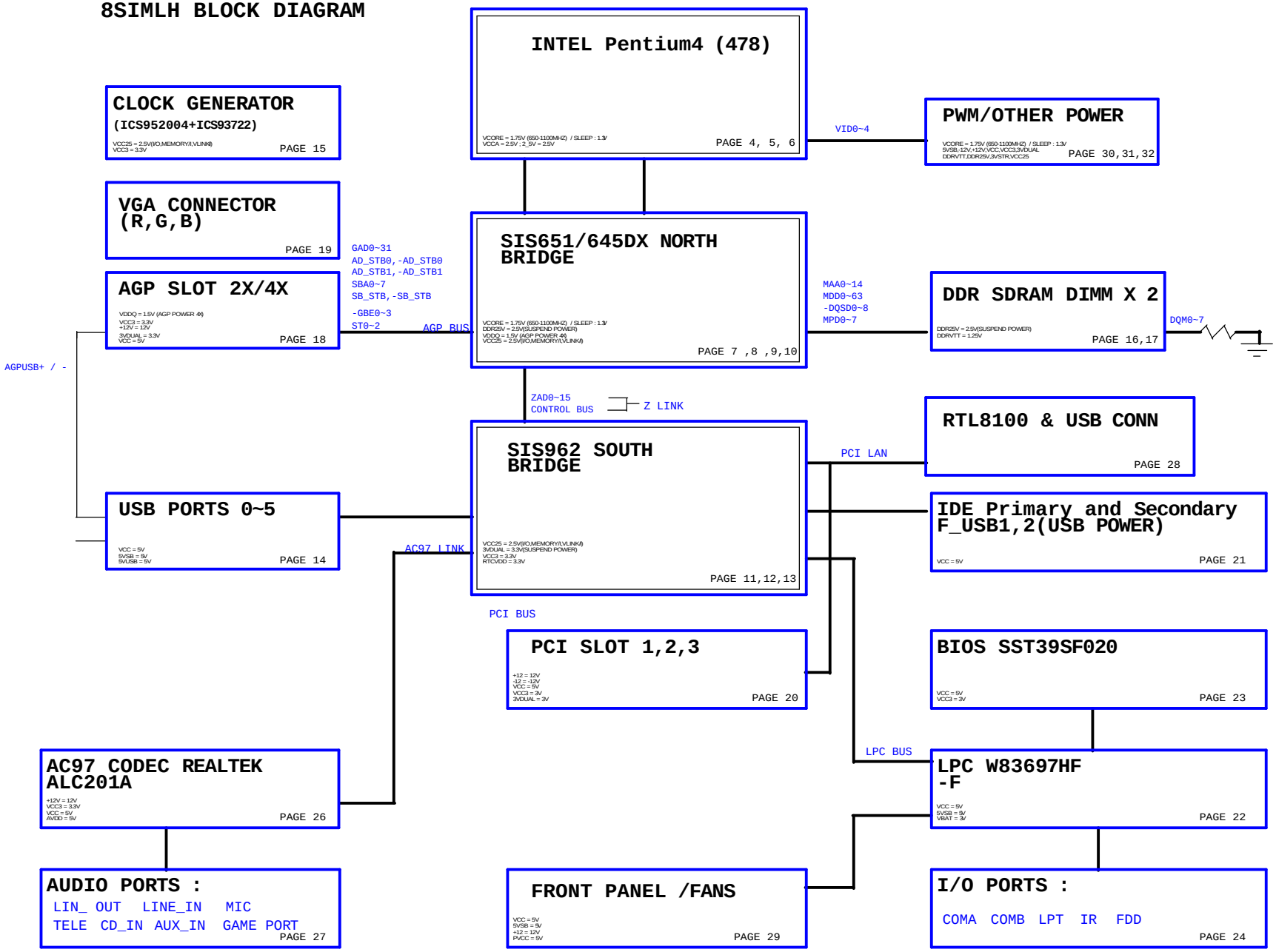
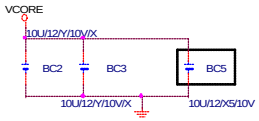
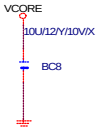
Title: BOM & PCB MODIFY HISTORY		
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 2 of 32	

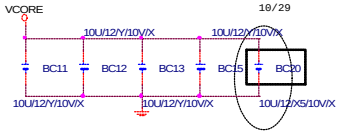
8SIMLH BLOCK DIAGRAM

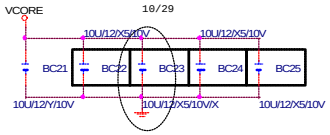


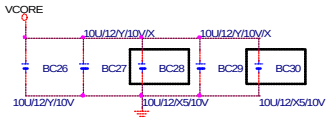
(X5R) X11 1206(10U) NOTE:GIGA

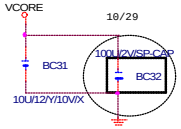


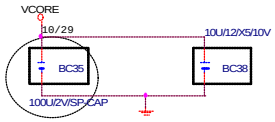


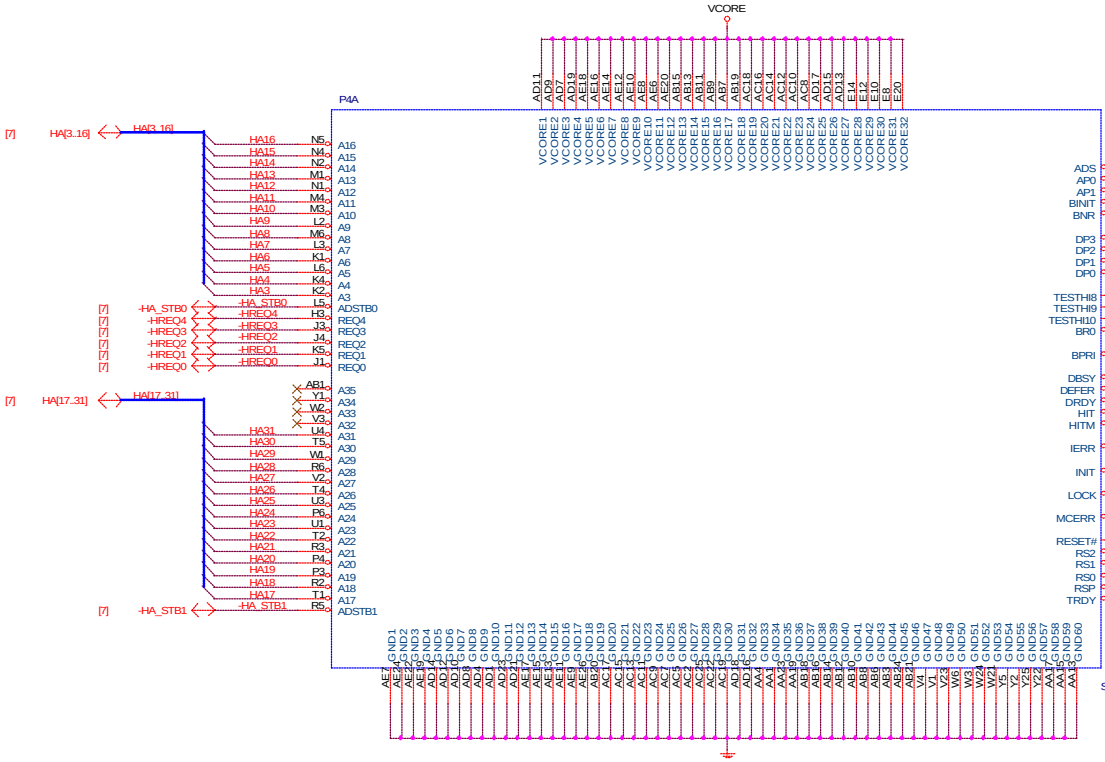












GIGABYTE		
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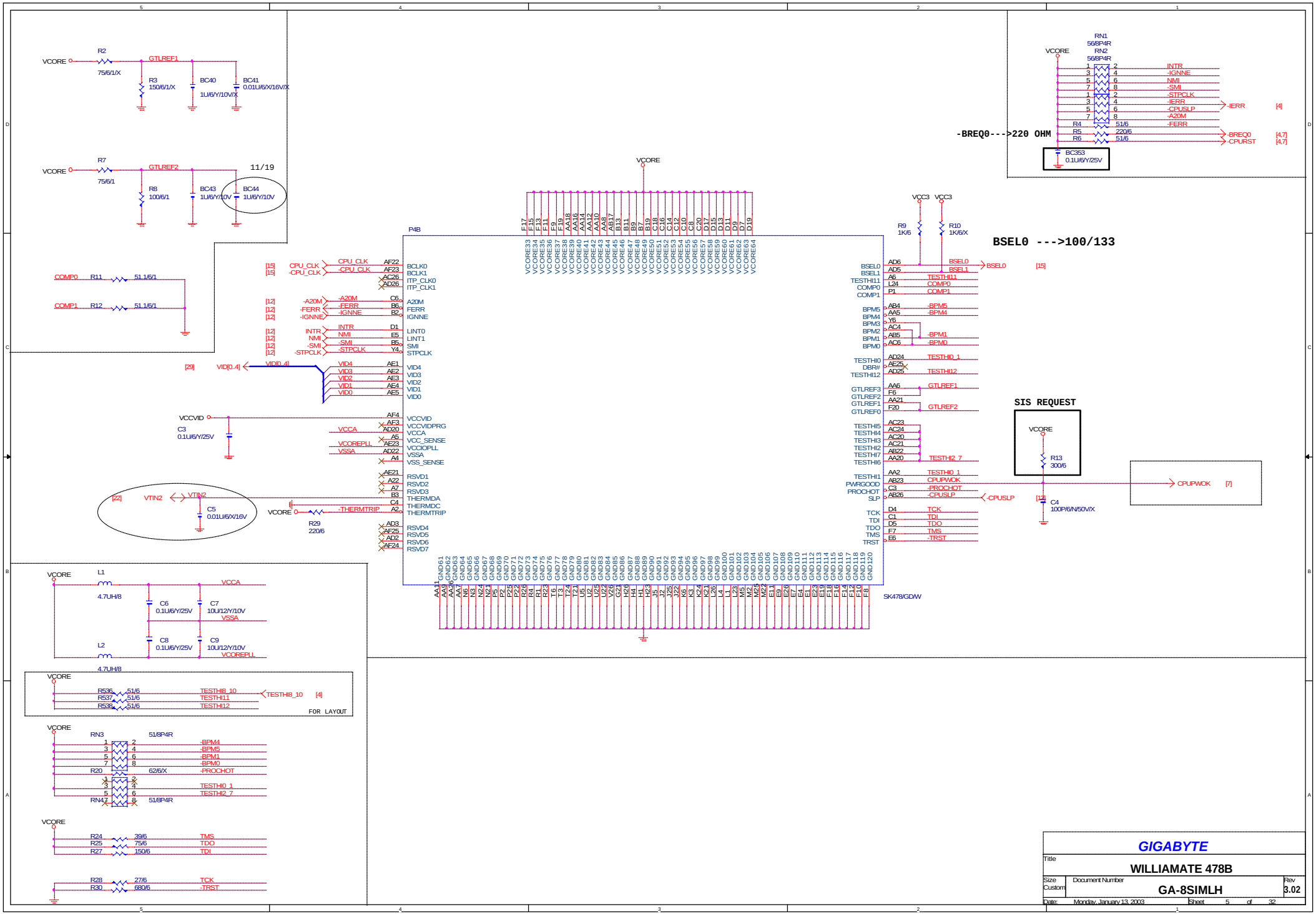
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 4 of 32	


VCORE
R2
75/6/1/X
GTLREF1
R3
150/6/1X
BC40
1U/6/Y/10V/X
BC41
0.01U/6/X/16V/X
R7
75/6/1
GTLREF2
11/19
R8
100/6/1
BC43
1U/6/Y/10V
BC44
1U/6/Y/10V
COMP0
R11
51.1/6/1
COMP1
R12
51.1/6/1
P4B
BCLK0
BCLK1
ITP_CLK0
ITP_CLK1
A20M
FERR
IGNNE
LINT0
LINT1
SMI
STPCLK
VID4
VID3
VID2
VID1
VID0
VCCVID
VCCVIDPRG
VCCA
VCC_SENSE
VCCIOPLL
VSSA
VSS_SENSE
RSVD1
RSVD2
RSVD3
THERMDA
THERMDC
THERMTRIP
RSVD4
RSVD5
RSVD6
RSVD7
SK478/GDW
VCC3
R9
1K/6
R10
1K/6/X
BSEL0 --->100/133
BSEL0
BSEL1
TESTHI11
COMP0
COMP1
BPM5
BPM4
BPM3
BPM2
BPM1
BPM0
TESTHI0
DBR#
TESTHI12
GTLREF3
GTLREF2
GTLREF1
GTLREF0
TESTHI5
TESTHI4
TESTHI3
TESTHI2
TESTHI7
TESTHI6
TESTHI1
PWRGOOD
PROCHOT
SLP
TCK
TDI
TDO
TMS
TRST
SIS REQUEST
R13
300/6
C4
100P/6/N/50V/X
CPUPWOK
-CPUSLP
-PROCHOT
RN1
56/8P4R
RN2
56/8P4R
INTR
-IGNNE
NMI
-SMI
-STPCLK
-IERR
-CPUSLP
-A20M
-FERR
-BREQ0
-CPURST
-BREQ0--->220 OHM
R4
51/6
R5
220/6
R6
51/6
BC353
0.1U/6/Y/25V
C3
0.1U/6/Y/25V
C5
0.01U/6/X/16V
VTIN2
R29
220/6
L1
4.7UH/8
C6
0.1U/6/Y/25V
C7
10U/12/Y/10V
C8
0.1U/6/Y/25V
C9
10U/12/Y/10V
L2
4.7UH/8
VCCA
VSSA
VCOREPLL
R536
R537
R538
51/6
TESTHI8_10
TESTHI11
TESTHI12
FOR LAYOUT
RN3
51/8P4R
R20
62/6/X
RN47
51/8P4R
TESTHI0_1
TESTHI2_7
R24
R25
R27
39/6
75/6
150/6
R28
R30
27/6
680/6
GIGABYTE
Title
WILLIAMATE 478B
Size
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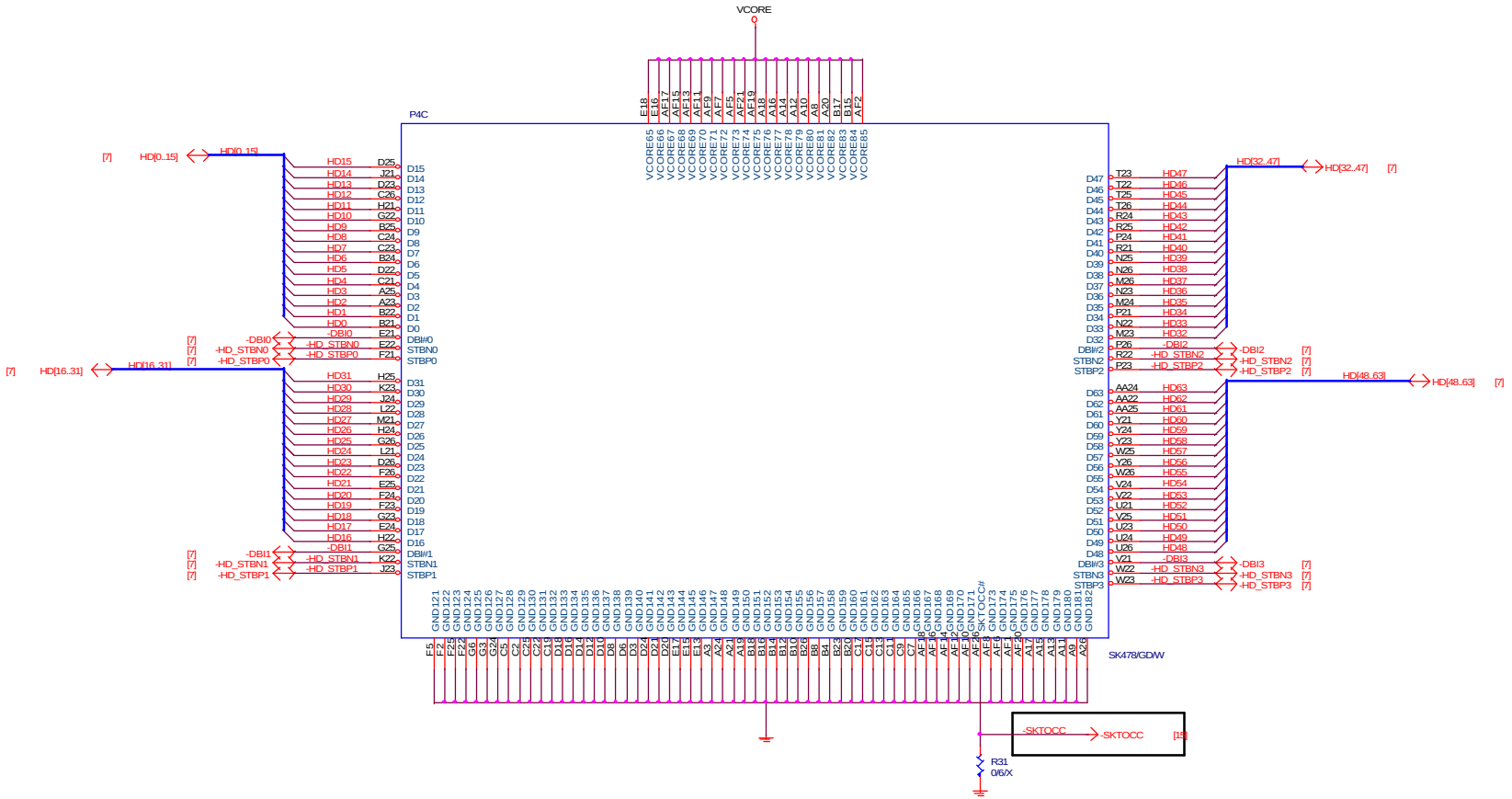
Document Number
GA-8SIMLH
Rev
3.02
Date:
Monday, January 13, 2003
Sheet
5
of
32



GIGABYTE			
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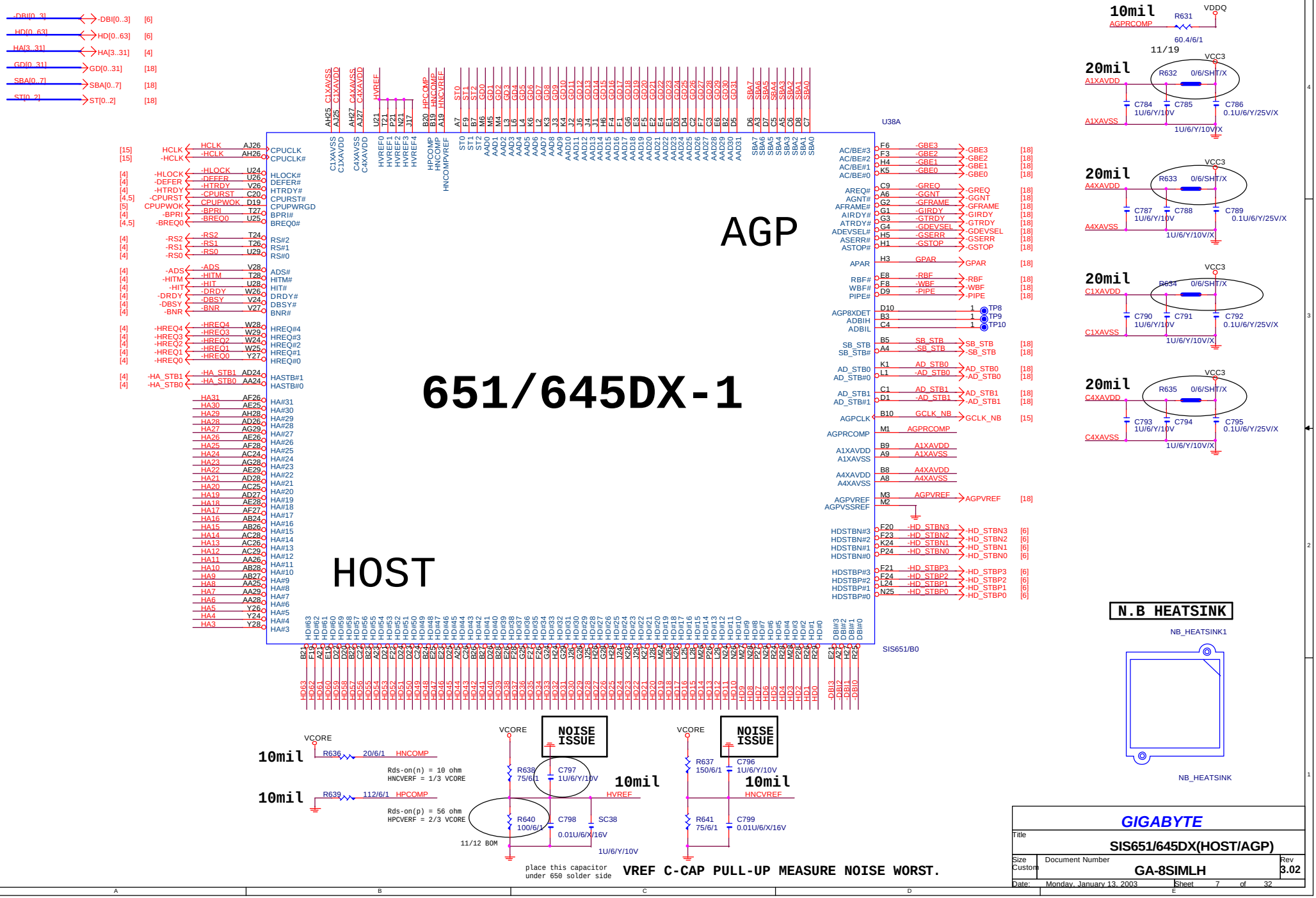
Size: Custom	Document Number: GA-8SIMLH		Rev: 3.02
Date: Monday, January 13, 2003	Sheet 6 of 32		


-DBI[0..3] -DBI[0..3] [6]
HD[0..63] HD[0..63] [6]
HA[3..31] HA[3..31] [4]
GD[0..31] GD[0..31] [18]
SBA[0..7] SBA[0..7] [18]
ST[0..2] ST[0..2] [18]
AGP
HOST
651/645DX-1
U38A
SIS651/B0
HCLK
-HCLK
CPUCLK
CPUCLK#
-HLOCK
-DEFER
-HTRDY
-CPURST
CPUPWOK
-BPRI
-BREQ0
HLOCK#
DEFER#
HTRDY#
CPURST#
CPUPWRGD
BPRI#
BREQ0#
-RS2
-RS1
-RS0
RS#2
RS#1
RS#0
-ADS
-HITM
-HIT
-DRDY
-DBSY
-BNR
ADS#
HITM#
HIT#
DRDY#
DBSY#
BNR#
-HREQ4
-HREQ3
-HREQ2
-HREQ1
-HREQ0
HREQ#4
HREQ#3
HREQ#2
HREQ#1
HREQ#0
-HA_STB1
-HA_STB0
HASTB#1
HASTB#0
HA31 AF26
HA30 AE25
HA29 AH28
HA28 AD26
HA27 AG29
HA26 AE26
HA25 AF28
HA24 AC24
HA23 AG28
HA22 AE29
HA21 AD28
HA20 AC25
HA19 AD27
HA18 AE28
HA17 AF27
HA16 AB24
HA15 AB26
HA14 AC28
HA13 AC26
HA12 AC29
HA11 AA26
HA10 AB28
HA9 AB27
HA8 AA25
HA7 AA29
HA6 AA28
HA5 Y26
HA4 Y24
HA3 Y28
HA#31
HA#30
HA#29
HA#28
HA#27
HA#26
HA#25
HA#24
HA#23
HA#22
HA#21
HA#20
HA#19
HA#18
HA#17
HA#16
HA#15
HA#14
HA#13
HA#12
HA#11
HA#10
HA#9
HA#8
HA#7
HA#6
HA#5
HA#4
HA#3
AC/BE#3
AC/BE#2
AC/BE#1
AC/BE#0
-GBE3
-GBE2
-GBE1
-GBE0
AREQ#
AGNT#
AFRAME#
AIRDY#
ATRDY#
ADEVSEL#
ASERR#
ASTOP#
-GREQ
-GGNT
-GFRAME
-GIRDY
-GTRDY
-GDEVSEL
-GSERR
-GSTOP
APAR
GPAR
RBF#
WBF#
PIPE#
-RBF
-WBF
-PIPE
AGP8XDET
ADBIH
ADBIL
TP8
TP9
TP10
SB_STB
SB_STB#
-SB_STB
AD_STB0
AD_STB0#
-AD_STB0
AD_STB1
AD_STB1#
-AD_STB1
AGPCLK
GCLK_NB
AGPRCOMP
A1XAVDD
A1XAVSS
A4XAVDD
A4XAVSS
AGPVREF
AGPVSSREF
HDSTBN#3
HDSTBN#2
HDSTBN#1
HDSTBN#0
-HD_STBN3
-HD_STBN2
-HD_STBN1
-HD_STBN0
HDSTBP#3
HDSTBP#2
HDSTBP#1
HDSTBP#0
-HD_STBP3
-HD_STBP2
-HD_STBP1
-HD_STBP0
10mil
R631
AGPRCOMP
VDDQ
60.4/6/1
11/19
20mil
R632 0/6/SHT/X
A1XAVDD
A1XAVSS
C784 1U/6/Y/10V
C785
C786 0.1U/6/Y/25V/X
1U/6/Y/10V/X
R633 0/6/SHT/X
A4XAVDD
A4XAVSS
C787 1U/6/Y/10V
C788
C789 0.1U/6/Y/25V/X
R634 0/6/SHT/X
C1XAVDD
C1XAVSS
C790 1U/6/Y/10V
C791
C792 0.1U/6/Y/25V/X
R635 0/6/SHT/X
C4XAVDD
C4XAVSS
C793 1U/6/Y/10V
C794
C795 0.1U/6/Y/25V/X
VCC3
N.B HEATSINK
NB_HEATSINK1
NB_HEATSINK
VCORE
R636 20/6/1 HNCOMP
Rds-on(n) = 10 ohm
HNCVERF = 1/3 VCORE
R639 112/6/1 HPCOMP
Rds-on(p) = 56 ohm
HPCVERF = 2/3 VCORE
NOISE ISSUE
R638 75/6/1
C797 1U/6/Y/10V
HVREF
R640 100/6/1
C798
SC38
0.01U/6/X/16V
11/12 BOM
R637 150/6/1
C796 1U/6/Y/10V
HNCVREF
R641 75/6/1
C799 0.01U/6/X/16V
place this capacitor
under 650 solder side
VREF C-CAP PULL-UP MEASURE NOISE WORST.
GIGABYTE
Title
SIS651/645DX(HOST/AGP)
Size
Custom
Document Number
GA-8SIMLH
Rev
3.02
Date: Monday, January 13, 2003
Sheet 7 of 32

DDR MD DAMPPING

Near DIMM 1

11/19 short pad

MDD[0:63] <-> MDD[0:63] [16,17]
DQM[0..7] <-> DQM[0..7] [16,17]
MAA[0..14] <-> MAA[0..14] [16,17]
-CS[0..3] <-> -CS[0..3] [16,17]
CKE[0..5] <-> CKE[0..5] [16]
-DQSD[0..7] <-> -DQSD[0..7] [16,17]

11/19 short pad

DQM0 R642 0/SHT/X DQMD0
DQM1 R643 0/SHT/X DQMD1
DQM2 R644 0/SHT/X DQMD2
DQM3 R645 0/SHT/X DQMD3
DQM4 R646 0/SHT/X DQMD4
DQM5 R647 0/SHT/X DQMD5
DQM6 R648 0/SHT/X DQMD6
DQM7 R649 0/SHT/X DQMD7

DQS0 R40 0/SHT/X -DQSD0
DQS1 R41 0/SHT/X -DQSD1
DQS2 R42 0/SHT/X -DQSD2
DQS3 R43 0/SHT/X -DQSD3
DQS4 R44 0/SHT/X -DQSD4
DQS5 R45 0/SHT/X -DQSD5
DQS6 R46 0/SHT/X -DQSD6
DQS7 R47 0/SHT/X -DQSD7

U38B

651
645DX-2

MD0 AJ23 MD1 AG22 MD2 AH21 MD3 AJ21 MD4 AD23 MD5 AE23 MD6 AF22 MD7 AF21
DQMD0 AD22 DQS0 AH22 MD8 AD21 MD9 AG20 MD10 AE19 MD11 AF19 MD12 AE21 MD13 AD20 MD14 AD19 MD15 AH19
DQMD1 AF20 DQS1 AH20 MD16 AF18 MD17 AG18 MD18 AH17 MD19 AD16 MD20 AD18 MD21 AD17 MD22 AF17 MD23 AJ17
DQMD2 AE17 DQS2 AH18 MD24 AD14 MD25 AG14 MD26 AJ13 MD27 AE13 MD28 AJ15 MD29 AF14 MD30 AD13 MD31 AF13
DQMD3 AH13 DQS3 AH14 MD32 AD10 MD33 AH10 MD34 AE9 MD35 AD8 MD36 AG10 MD37 AF10 MD38 AH9 MD39 AF9
DQMD4 AD9 DQS4 AJ9 MD40 AH5 MD41 AG4 MD42 AE5 MD43 AH3 MD44 AG6 MD45 AF6 MD46 AF5 MD47 AF4
DQMD5 AH4 DQS5 AJ3 MD48 AE4 MD49 AD6 MD50 AE2 MD51 AC5 MD52 AG2 MD53 AG1 MD54 AF3 MD55 AC6
DQMD6 AD4 DQS6 AF2 MD56 AB6 MD57 AD3 MD58 AA6 MD59 AB3 MD60 AC4 MD61 AE1 MD62 AD2 MD63 AC1
DQMD7 AB4 DQS7 AC2

MD0 MD1 MD2 MD3 MD4 MD5 MD6 MD7 DQM0 DQS0/CSB#0 MD8 MD9 MD10 MD11 MD12 MD13 MD14 MD15 DQM1 DQS1/CSB#1 MD16 MD17 MD18 MD19 MD20 MD21 MD22 MD23 DQM2 DQS2/CSB#2 MD24 MD25 MD26 MD27 MD28 MD29 MD30 MD31 DQM3 DQS3/CSB#3 MD32 MD33 MD34 MD35 MD36 MD37 MD38 MD39 DQM4 DQS4/CSB#4 MD40 MD41 MD42 MD43 MD44 MD45 MD46 MD47 DQM5 DQS5/CSB#5 MD48 MD49 MD50 MD51 MD52 MD53 MD54 MD55 DQM6 DQS6/CSB#6 MD56 MD57 MD58 MD59 MD60 MD61 MD62 MD63 DQM7 DQS7/CSB#7

SIS651/B0

11/19 short pad

REV 0.2

MA0 MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9 MA10 MA11 MA12 MA13 MA14

AH11 MA0 MA3 1 2 MAA3
AF12 MA1 MA2 3 4 MAA2 RN146
AH12 MA2 MA1 5 6 MAA1 0/8P4R/SHT/X
AG12 MA3 MA0 7 8 MAA0
AD12 MA4 MA7 1 2 MAA7
AH15 MA5 3 4 MAA5 RN147
AF15 MA6 5 6 MAA6 0/8P4R/SHT/X
AH16 MA7 MA4 7 8 MAA4
AE15 MA8 1 2
AD15 MA9 MA10 3 4 MAA10 RN148
AF11 MA10 MA12 5 6 MAA12 0/8P4R/SHT/X
AG8 MA11 MA11 7 8 MAA11
AJ11 MA12 MA14 1 2 MAA14
AG16 MA13 MA13 3 4 MAA13 RN149
AF16 MA14 MA9 5 6 MAA9 0/8P4R/SHT/X
MA8 7 8 MAA8

SRAS# AH8 -SRAS
SCAS# AJ7 -SCAS 7 8 -SCASA -SCASA [16,17]
SWE# AH7 -SWE 5 6 -SWEA -SWEA [16,17]
-SRAS 3 4 -SRASA -SRASA [16,17]
1 2
RN150 0/8P4R/SHT/X

CS#0 AE7 -C0 -C2 1 2 -CS2
CS#1 AE7 -C1 -C0 3 4 -CS0
CS#2 AH6 -C2 -C3 5 6 -CS3
CS#3 AJ5 -C3 -C1 7 8 -CS1
CS#4 AF8 -C4 1
CS#5 AD7 -C5 1
TP6
0/8P4R/SHT/X

RN151 DDR25V 3VDUAL

CKE0 AB2 CKE0 1 2
CKE1 AA4 CKE1 RN1525 6 470/8P4R
CKE2 AB1 CKE2 3 4
CKE3 Y6 CKE3 7 8
CKE4 AA5 CKE4 R654 470/6/X
CKE5 Y5 CKE5 R655 470/6/X
S3AUXSW# Y4 -SUSB -SUSB

R34 1K/6

NO USE NO POP

SDCLK AA3 SDCLK SDCLK [15]
FWDSDCLKO AD11 R657 22/6 FWDSDCLKO FWDSDCLKO [15]
SDRCLKI AE11
C807 10P/6/N/50V/X

SDAVDD Y1 SDAVDD
SDAVSS Y2 SDAVSS

DDRAVDD AA1 DDRAVDD
DDRAVSS AA2 DDRAVSS

DDRVREFA AJ19 DDRVREFA
DDRVREFB AH2 DDRVREFB

DRAM_SEL W3 R660 4.7K/6 3VDUAL

11/19

20mil
SDAVDD R650 0/6/SHT/X VCC3
C800 1U/6/Y/10V C801 1U/6/Y/10V C802 0.1U/6/Y/25V
SDAVSS 1U/6/Y/10V/X

20mil
DDRAVDD R651 0/6/SHT/X VCC3
C803 1U/6/Y/10V C804 1U/6/Y/10V C805 0.1U/6/Y/25V/X
DDRAVSS 1U/6/Y/10V/X

NOISE ISSUE
[31]
DDR25V
11/19 10mil DDRVREFB
C806 1U/6/Y/10V R656 150/6/1
C808 0.01U/6/X/16V R658 150/6/1

NOISE ISSUE
DDR25V
10mil DDRVREFA
C809 1U/6/Y/10V R659 150/6/1
C810 0.01U/6/X/16V R661 150/6/1

MD4 1 2 MDD4
MD0 3 4 MDD0
MD5 5 6 MDD5
MD1 7 8 MDD1
RN5 0/8P4R/SHT/X
MD6 1 2 MDD6
MD2 3 4 MDD2
MD7 5 6 MDD7
MD3 7 8 MDD3
RN6 0/8P4R/SHT/X
MD15 1 2 MDD15
MD14 3 4 MDD14
MD10 5 6 MDD10
MD11 7 8 MDD11
RN7 0/8P4R/SHT/X
MD8 1 2 MDD8
MD12 3 4 MDD12
MD9 5 6 MDD9
MD13 7 8 MDD13
RN8 0/8P4R/SHT/X
MD20 1 2 MDD20
MD17 3 4 MDD17
MD21 5 6 MDD21
MD16 7 8 MDD16
RN9 0/8P4R/SHT/X
MD18 1 2 MDD18
MD19 3 4 MDD19
MD23 5 6 MDD23
MD22 7 8 MDD22
RN10 0/8P4R/SHT/X
MD24 1 2 MDD24
MD28 3 4 MDD28
MD25 5 6 MDD25
MD29 7 8 MDD29
RN11 0/8P4R/SHT/X
MD30 1 2 MDD30
MD26 3 4 MDD26
MD31 5 6 MDD31
MD27 7 8 MDD27
RN12 0/8P4R/SHT/X
MD34 1 2 MDD34
MD38 3 4 MDD38
MD35 5 6 MDD35
MD39 7 8 MDD39
RN13 0/8P4R/SHT/X
MD36 1 2 MDD36
MD33 3 4 MDD33
MD32 5 6 MDD32
MD37 7 8 MDD37
RN14 0/8P4R/SHT/X
MD44 1 2 MDD44
MD40 3 4 MDD40
MD45 5 6 MDD45
MD41 7 8 MDD41
RN15 0/8P4R/SHT/X
MD42 1 2 MDD42
MD46 3 4 MDD46
MD43 5 6 MDD43
MD47 7 8 MDD47
RN16 0/8P4R/SHT/X
MD60 1 2 MDD60
MD56 3 4 MDD56
MD61 5 6 MDD61
MD57 7 8 MDD57
RN17 0/8P4R/SHT/X
MD49 1 2 MDD49
MD52 3 4 MDD52
MD48 5 6 MDD48
MD53 7 8 MDD53
RN18 0/8P4R/SHT/X
MD62 1 2 MDD62
MD58 3 4 MDD58
MD59 5 6 MDD59
MD63 7 8 MDD63
RN19 0/8P4R/SHT/X
MD54 1 2 MDD54
MD51 3 4 MDD51
MD55 5 6 MDD55
MD50 7 8 MDD50
RN20 0/8P4R/SHT/X

MDD[0:63] <-> MDD[0:63] [16,17]

VREF C-CAP PULL-UP MEASURE NOISE WORST.

GIGABYTE

Title	SIS651/645DX(DDR)	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 8 of 32	

NOTE: This page is for universal PCB design(suitable for both 645 or 650)

NB Hardware Trap Table

	0	1	Default	embedded pull-low (30~50K Ohm)
DLLEN#	enable PLL	disable PLL	0	yes
DRAM_SEL	SDR	DDR	1(DDR)	yes
TRAP0	normal	NB debug mode	0	yes
TRAP1	TV selection, NTSC/PAL(0/1)		0	
CSYNC	enable VB		0	
RSYNC	enable VGA interrupt		1	
LSYNC	enable panel link		0	

650
645DX-3

HyperZip

U38C

SIS651/B0

REV 0.2 EMI

SIS 645DX NO POP

SIS REQUEST
NO POP

DACAVDD1(VSS)---->DACAVDD2(VSS)
(SIS AP-02)

REV 0.2 SIS CHECK

NOISE ISSUE

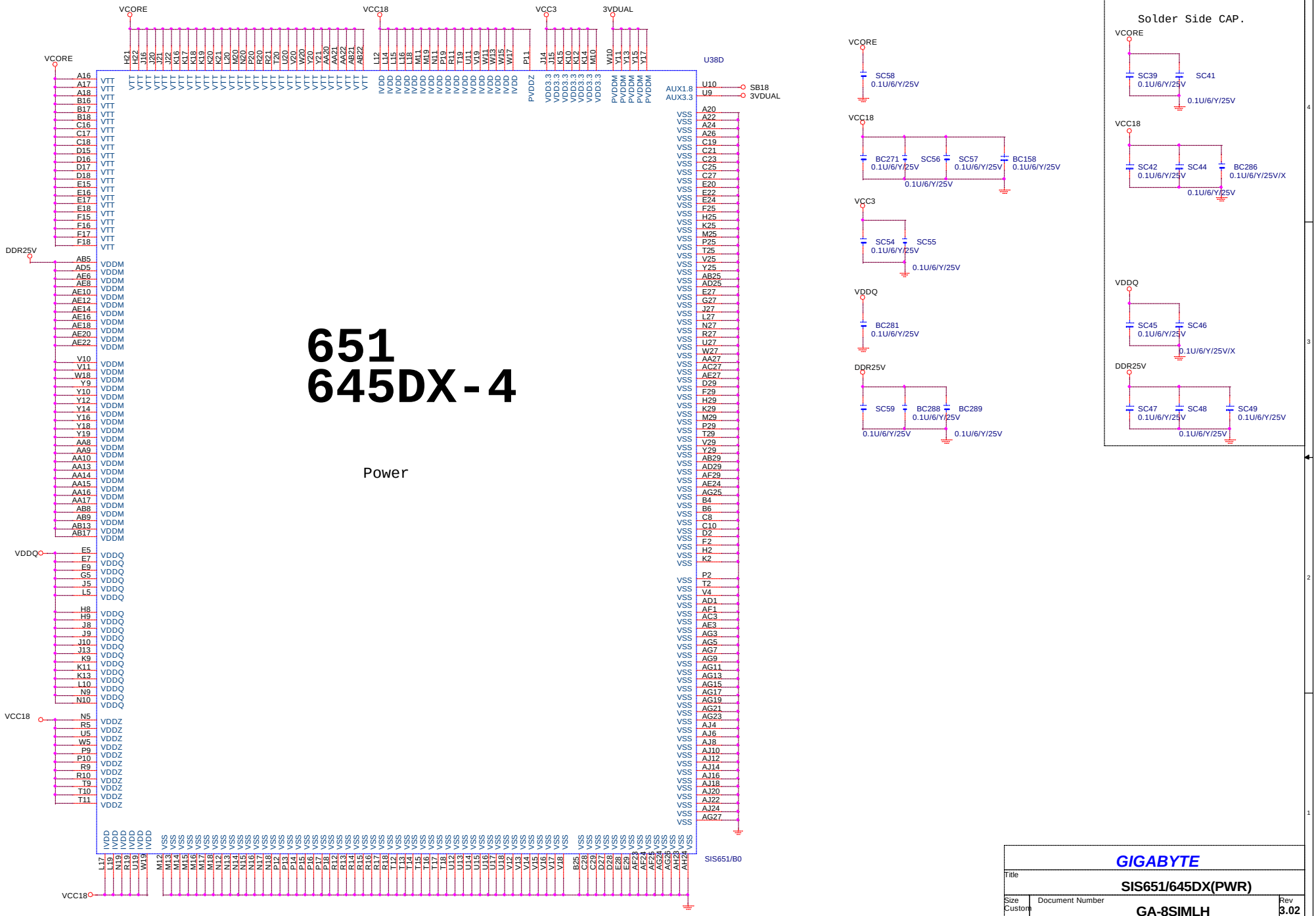
11/19

11/17 MEM0131

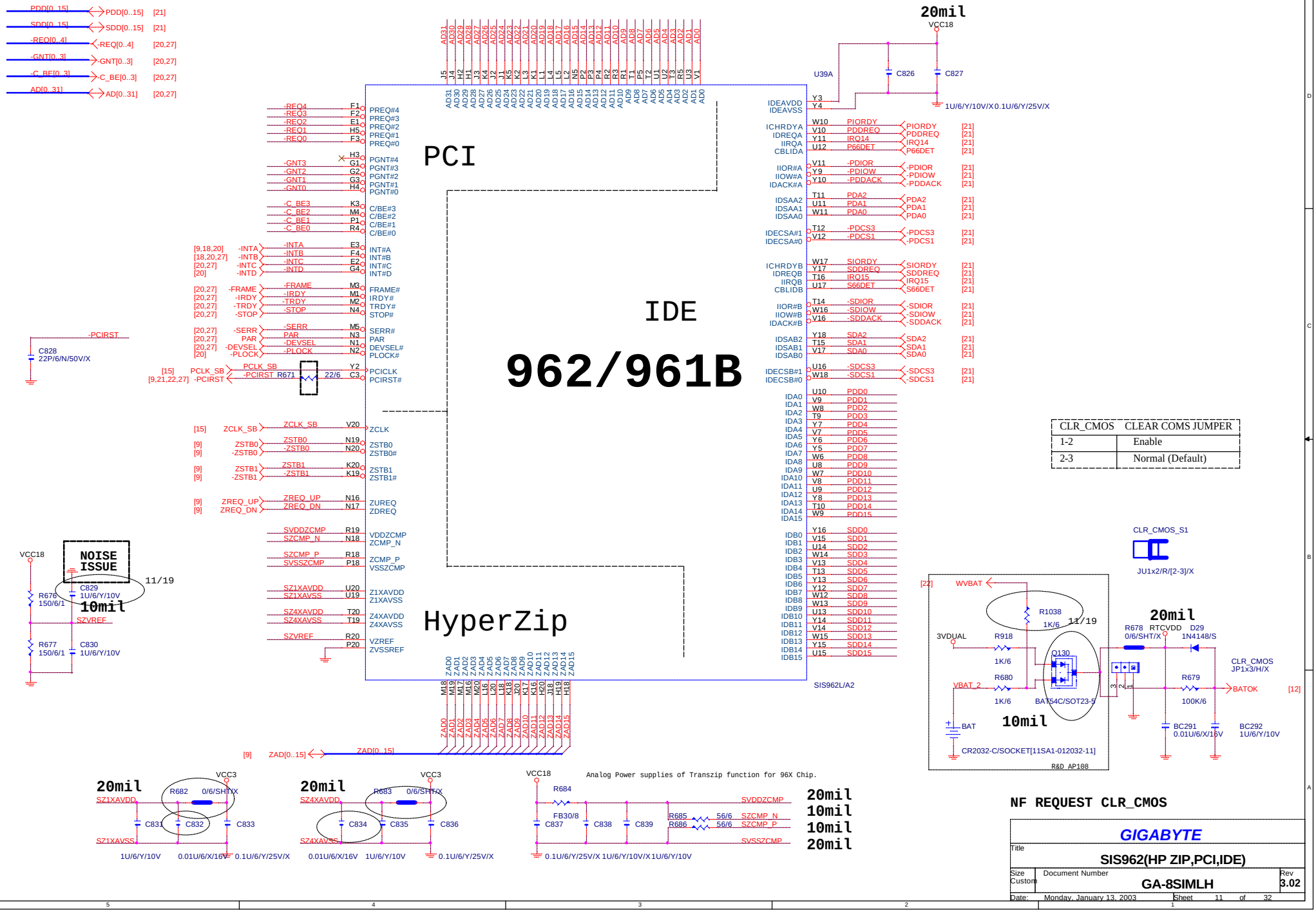
20mil
10mil
10mil
20mil

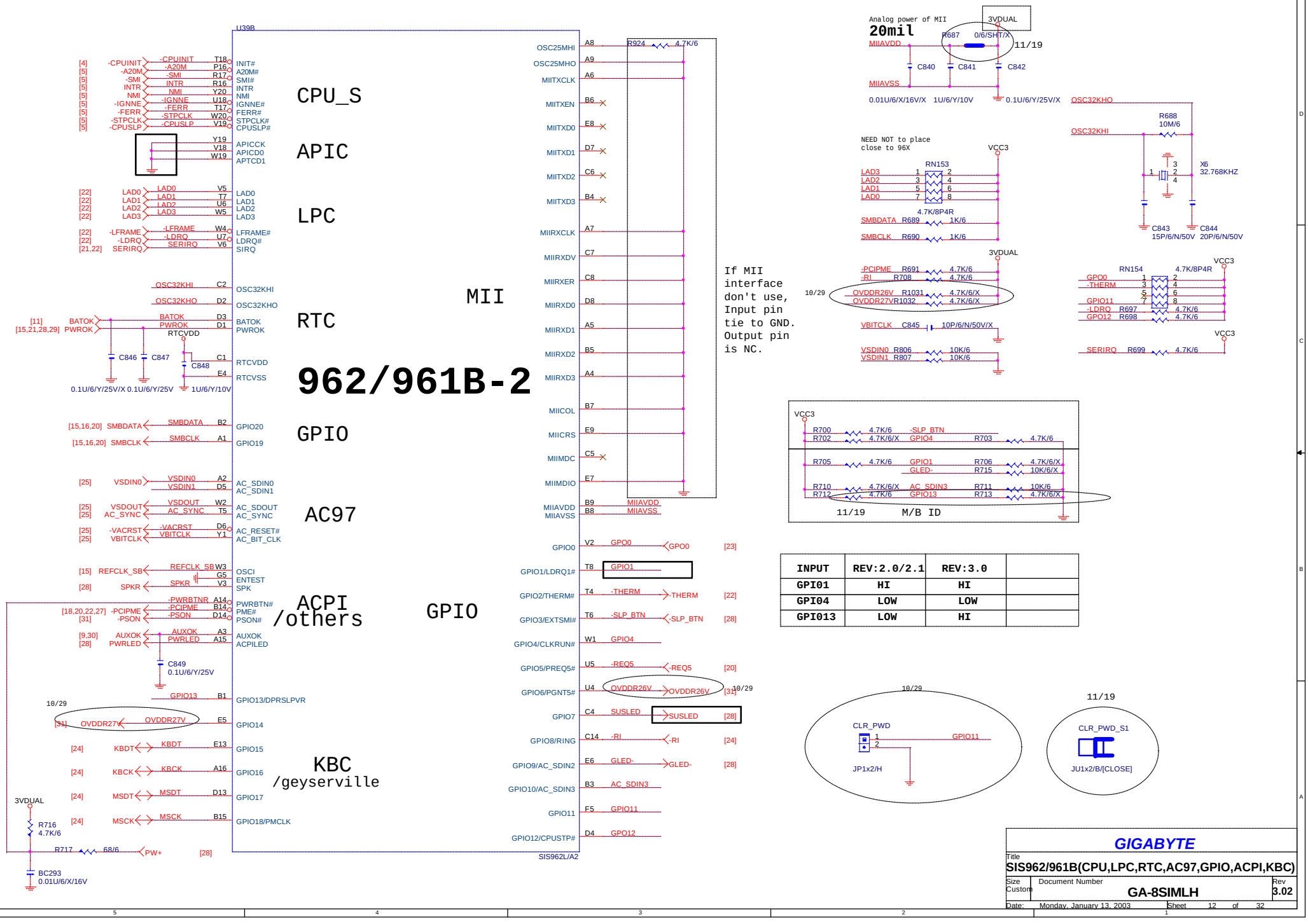
Title	SIS651/645DX(HYPER ZIP)	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 9 of 32	

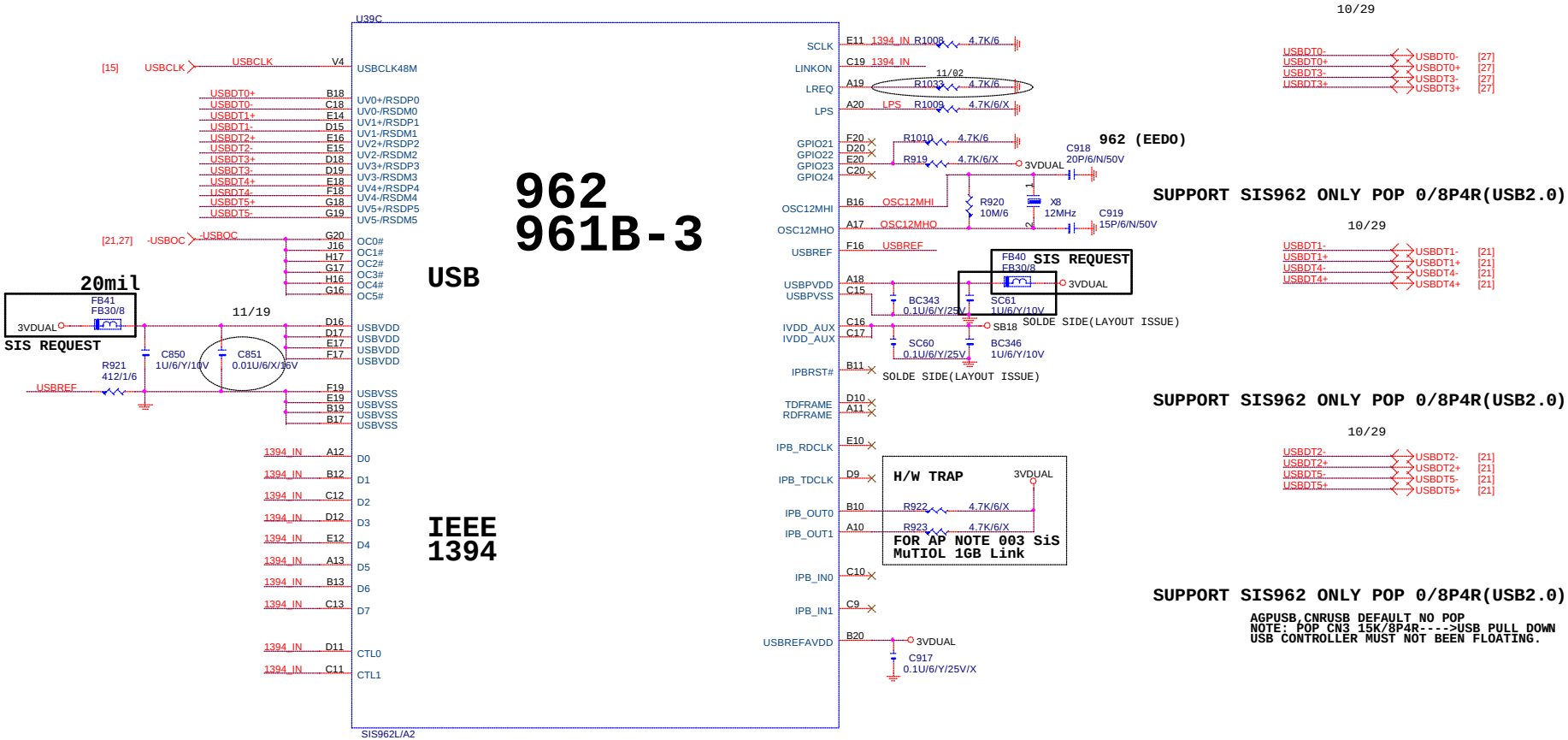
GIGABYTE



GIGABYTE		
Title	SIS651/645DX(PWR)	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 10 of 32	

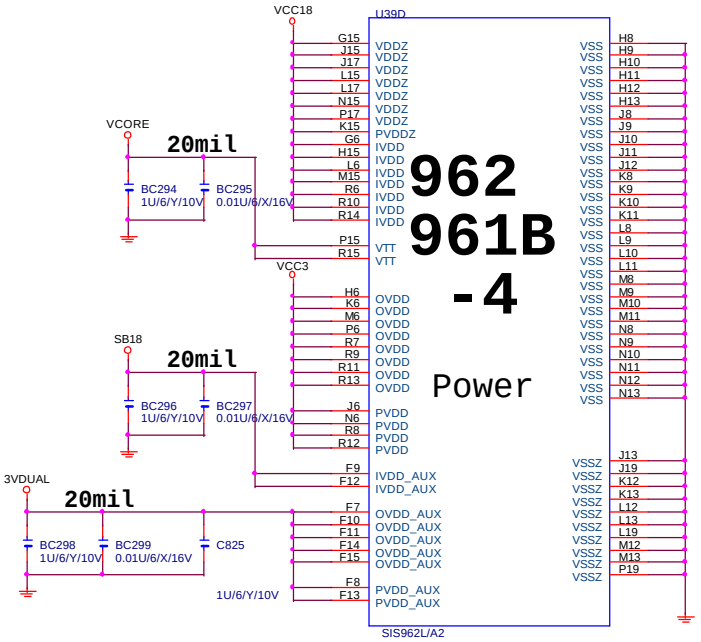

PCI
IDE
962/961B
HyperZip
SIS962L/A2
NOISE ISSUE
11/19
10mil
20mil
CLR_CMOS_S1
JU1x2/R/[2-3]/X
CLR_CMOS JUMPER
CLR_CMOS
Enable
Normal (Default)
NF REQUEST CLR_CMOS
GIGABYTE
SIS962(HP ZIP,PCI,IDE)
GA-8SIMLH
3.02
Monday, January 13, 2003
Analog Power supplies of Transzip function for 96X Chip.
CR2032-C/SOCKET[11SA1-012032-11]
R&D AP108

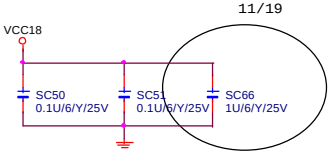

CPU_S
APIC
LPC
MII
RTC
962/961B-2
GPIO
AC97
ACPI
/others
GPIO
KBC
/geyserville
If MII interface don't use, Input pin tie to GND. Output pin is NC.
Analog power of MII
20mil
3VDUAL
MIIAVDD
MIIAVSS
R687 0/6/SHT/X
11/19
C840 C841 C842
0.01U/6/X/16V/X 1U/6/Y/10V 0.1U/6/Y/25V/X
OSC32KHO
OSC32KHI
R688 10M/6
X6 32.768KHZ
C843 15P/6/N/50V
C844 20P/6/N/50V
NEED NOT to place close to 96X
VCC3
RN153
LAD3 LAD2 LAD1 LAD0
4.7K/8P4R
SMBDATA R689 1K/6
SMBCLK R690 1K/6
3VDUAL
-PCIPME R691 4.7K/6
-RI R708 4.7K/6
10/29
OVDDR26V R1031 4.7K/6/X
OVDDR27V R1032 4.7K/6/X
VBITCLK C845 10P/6/N/50V/X
VSDIN0 R806 10K/6
VSDIN1 R807 10K/6
RN154 4.7K/8P4R
GPO0 -THERM GPIO11 -LDRQ GPO12
SERIRQ R699 4.7K/6
VCC3
R700 4.7K/6 -SLP_BTN
R702 4.7K/6/X GPIO4 R703 4.7K/6
R705 4.7K/6 GPIO1 R706 4.7K/6/X
GLED- R715 10K/6/X
R710 4.7K/6/X AC_SDIN3 R711 10K/6
R712 4.7K/6 GPIO13 R713 4.7K/6/X
11/19 M/B ID
INPUT | REV:2.0/2.1 | REV:3.0
GPI01 | HI | HI
GPI04 | LOW | LOW
GPI013 | LOW | HI
10/29
CLR_PWD
GPIO11
JP1x2/H
11/19
CLR_PWD_S1
JU1x2/B/[CLOSE]
3VDUAL
R716 4.7K/6
R717 68/6 PW+ [28]
BC293 0.01U/6/X/16V
SIS962L/A2
GIGABYTE
Title
SIS962/961B(CPU,LPC,RTC,AC97,GPIO,ACPI,KBC)
Size Custom
Document Number
GA-8SIMLH
Rev 3.02
Date: Monday, January 13, 2003
Sheet 12 of 32

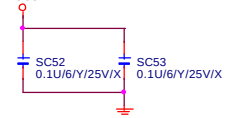


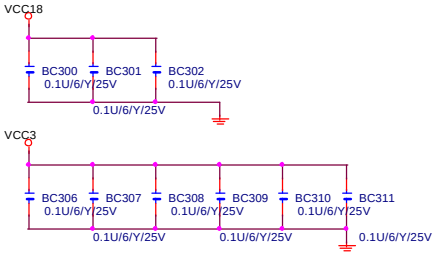
GIGABYTE

Title	SIS962/961B(USB20,1394)	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 13 of 32	

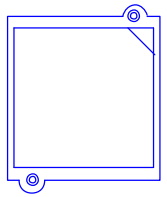




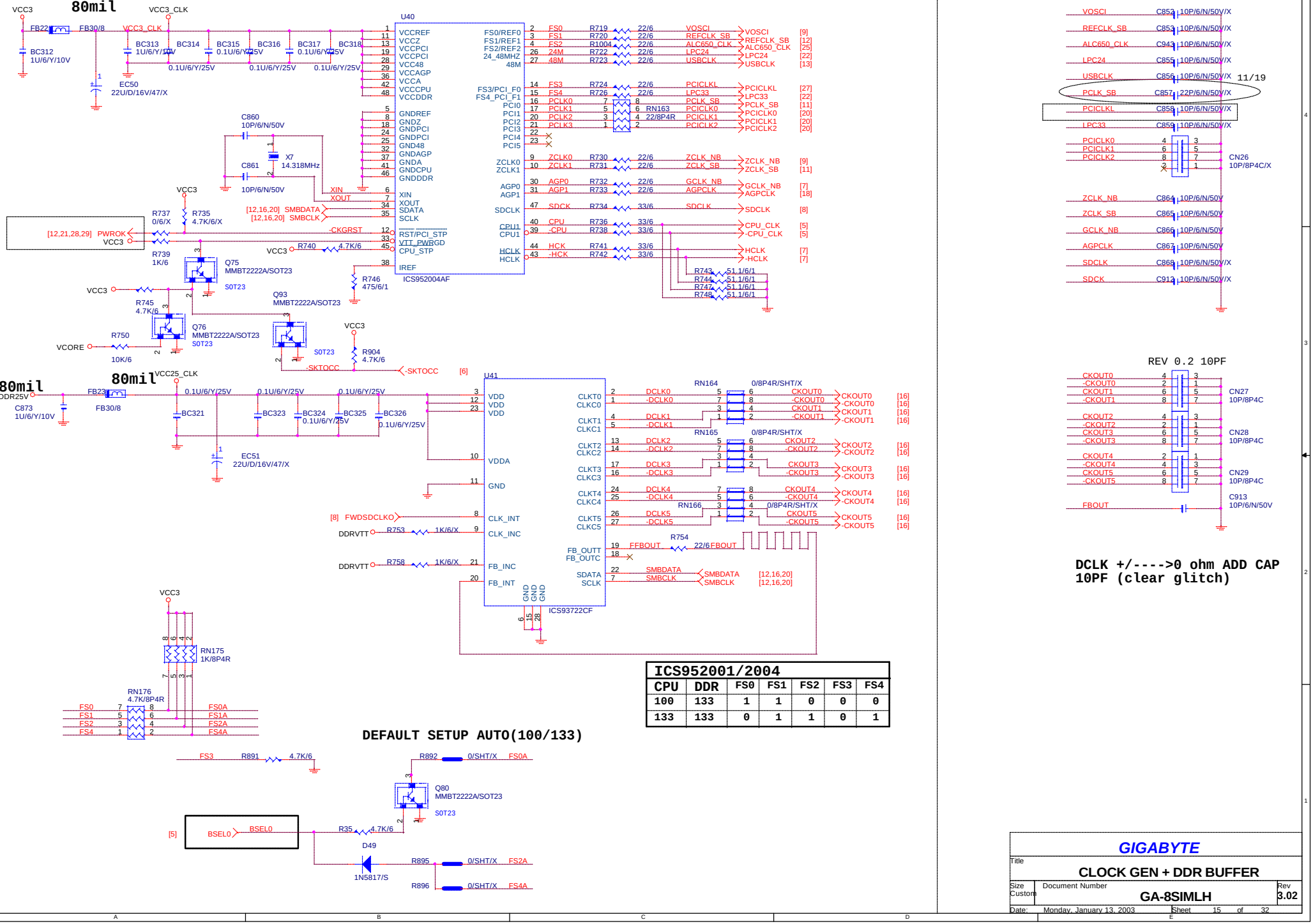




S.B HEATSINK



GIGABYTE		
Title: SIS962/961B(PWR)		
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 14 of 32	



ICS952001/2004						
CPU	DDR	FS0	FS1	FS2	FS3	FS4
100	133	1	1	0	0	0
133	133	0	1	1	0	1

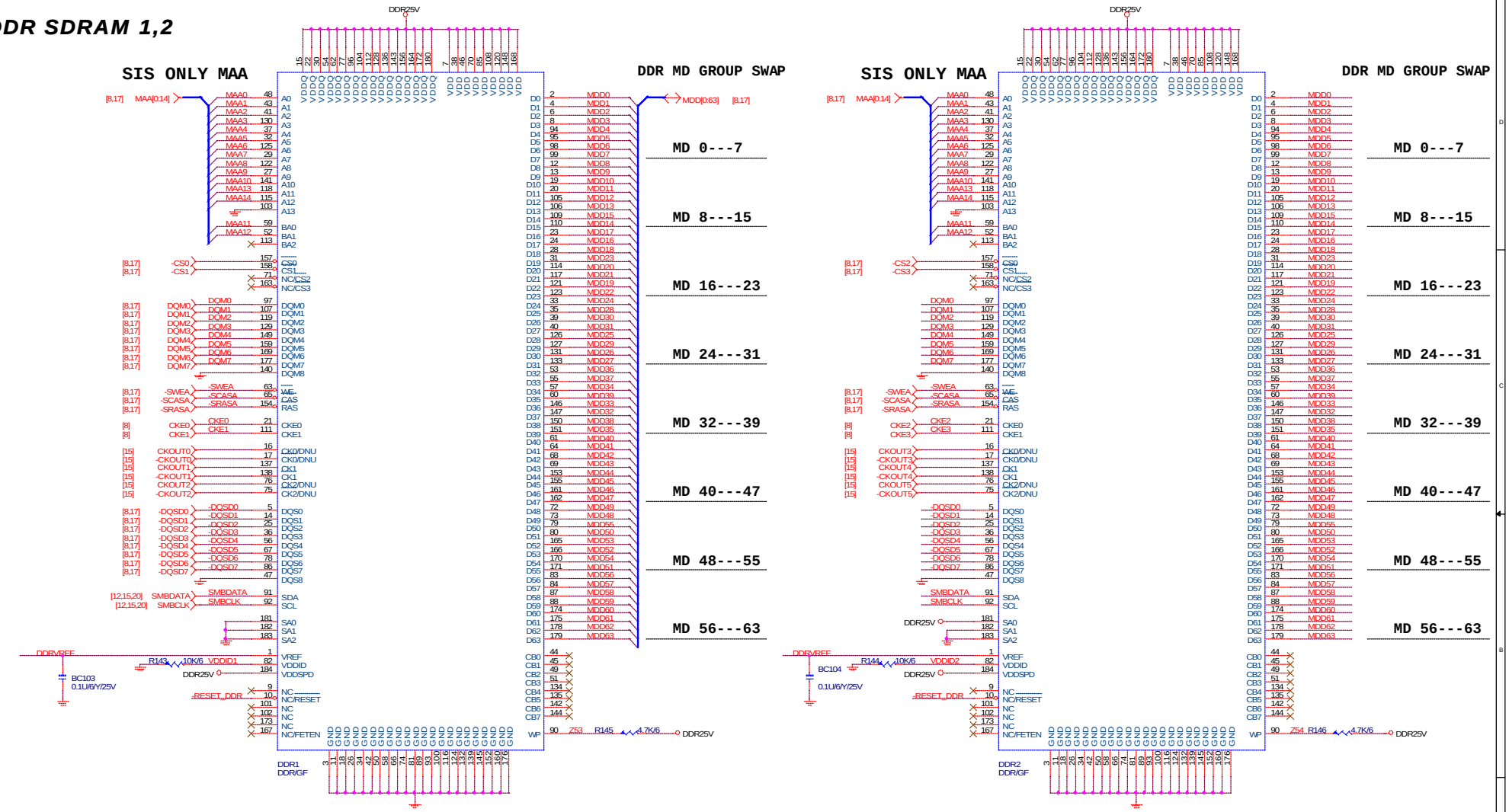
GIGABYTE

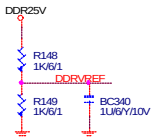
Title: CLOCK GEN + DDR BUFFER

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

Date: Monday, January 13, 2003 | Sheet 15 of 32

DDR SDRAM 1,2





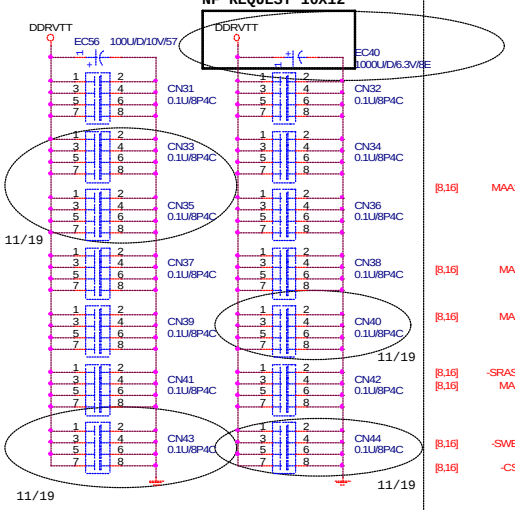
For Register DDR Support

GIGABYTE

Title	DDR UNBUFFERED 1,2	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 16 of 32	

DDRVTT Decouple

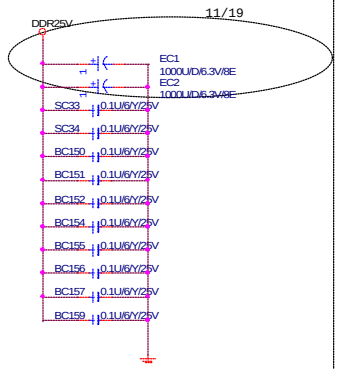
NF REQUEST 10X12



R&D NOTE 109 (0.1U/8P4C X9PCS)

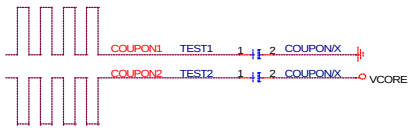
NOTE: Place these decoupling capacitors close to VTT_MEM termination resistors. (one decoupling coapcitor for each two R-packs)

DDR25V Decouple



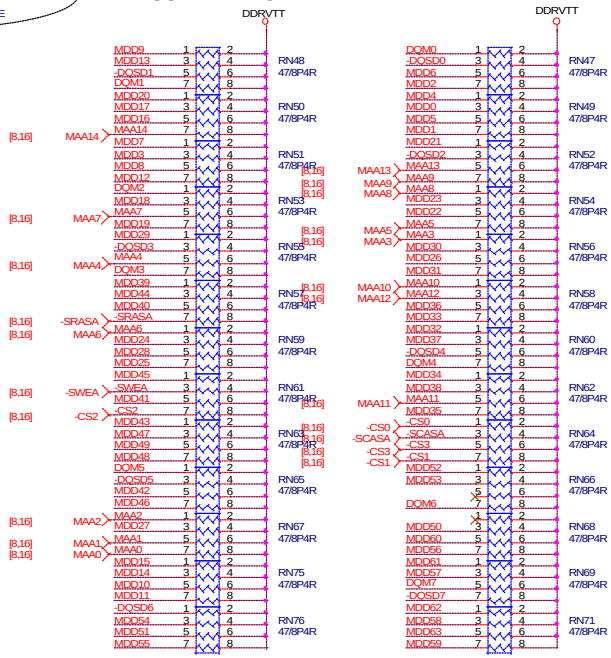
NOTE: Place Detribute 4 pcs per DDR module.

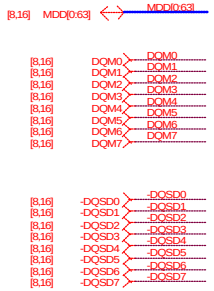
IMPEDENCE TESTING COUPON



DDR TERMINATION

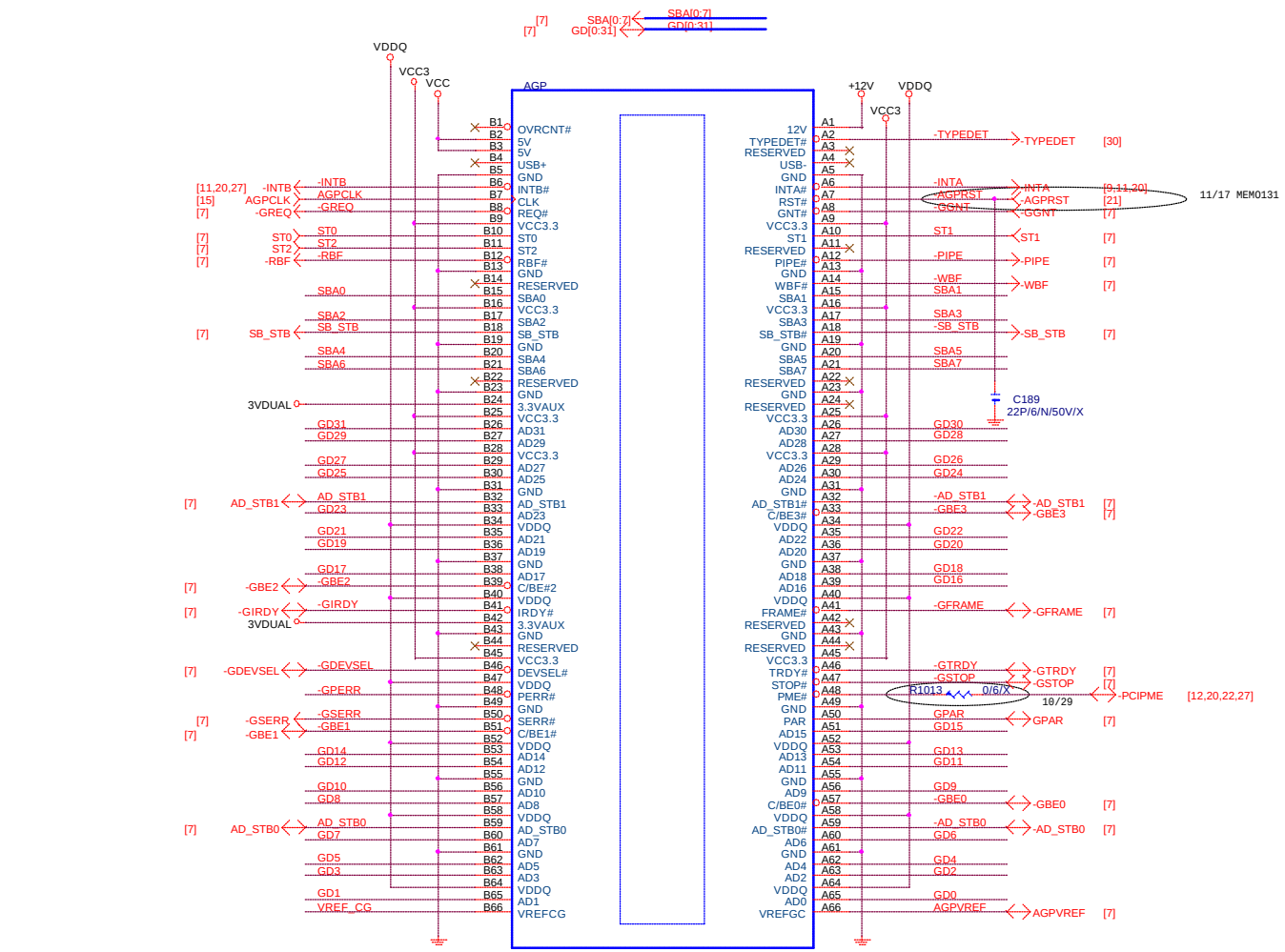
REV 0.2 DDR DIMM ISSUE
33-->47 OHM

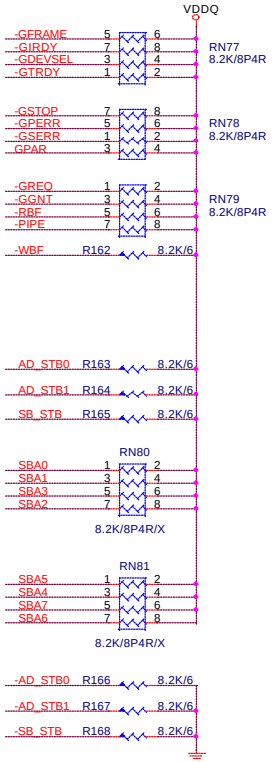


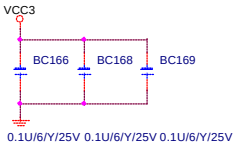


Title	DDR UNBUFFERED 3
Size: Custom	Document Number: GA-8SIMLH
Rev	3.02
Date: Monday, January 13, 2003	Sheet 17 of 32

GIGABYTE

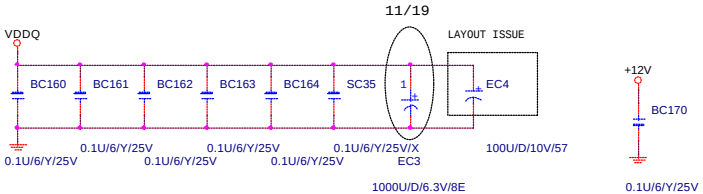






Place 1 at each pair of 3.3V pins

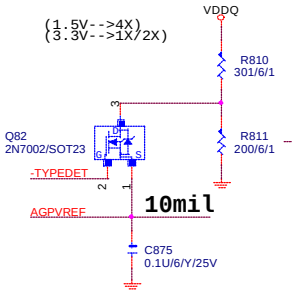
Decoupling capacitors
(Place near AGP slot)



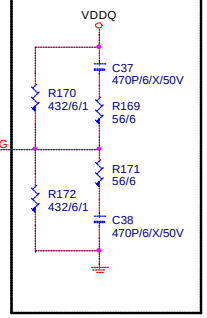
Place 1 at each pair of VDDQ pins

Place an additional for spread from A14 - A33

SWITCH CIRCUIT FOR VDDQ



SIS DESIGN

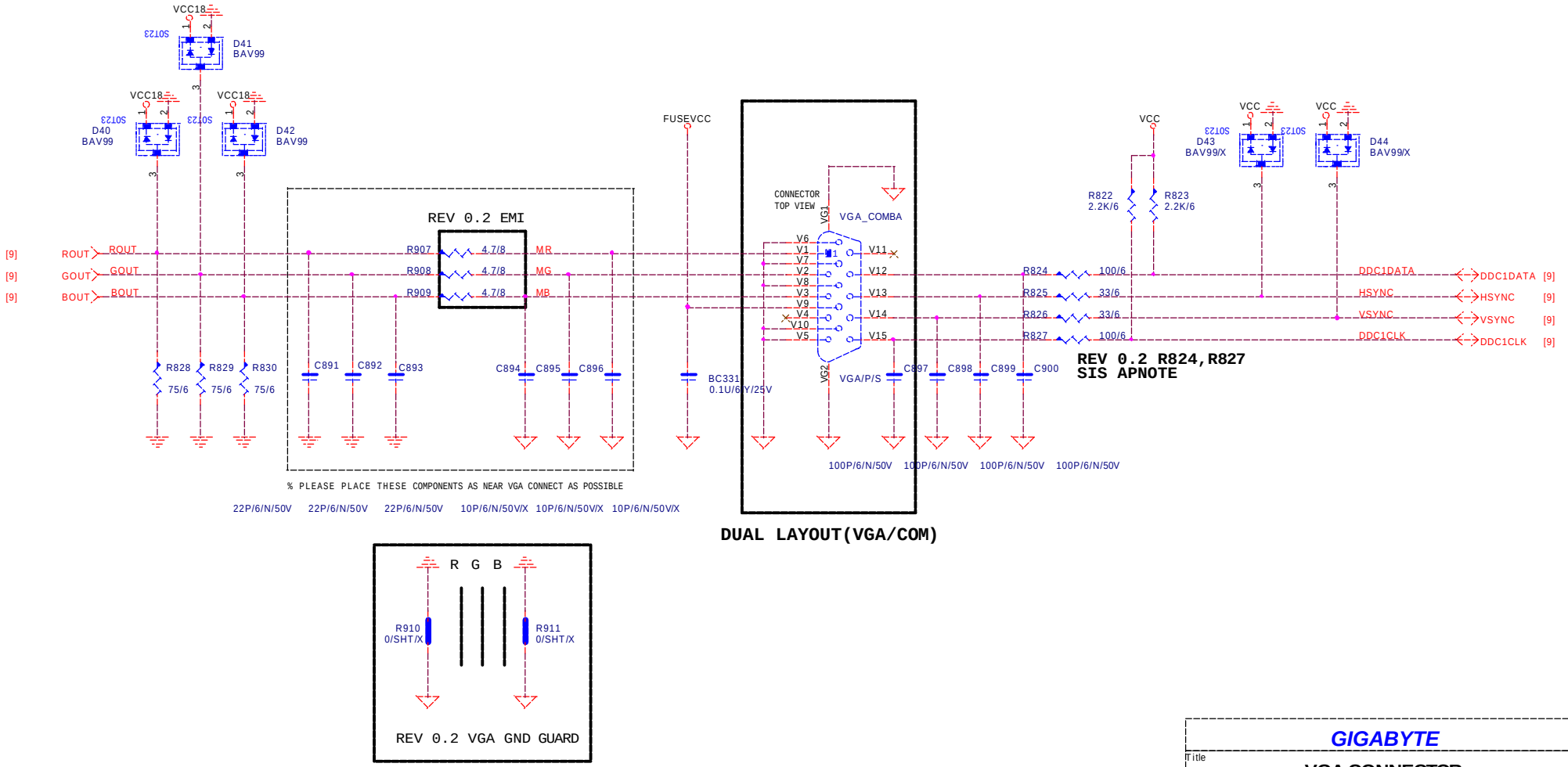


GIGABYTE

Title	AGP SLOT	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 18 of 32	

VGA CONNECTOR 1

SIS 645DX NO POP

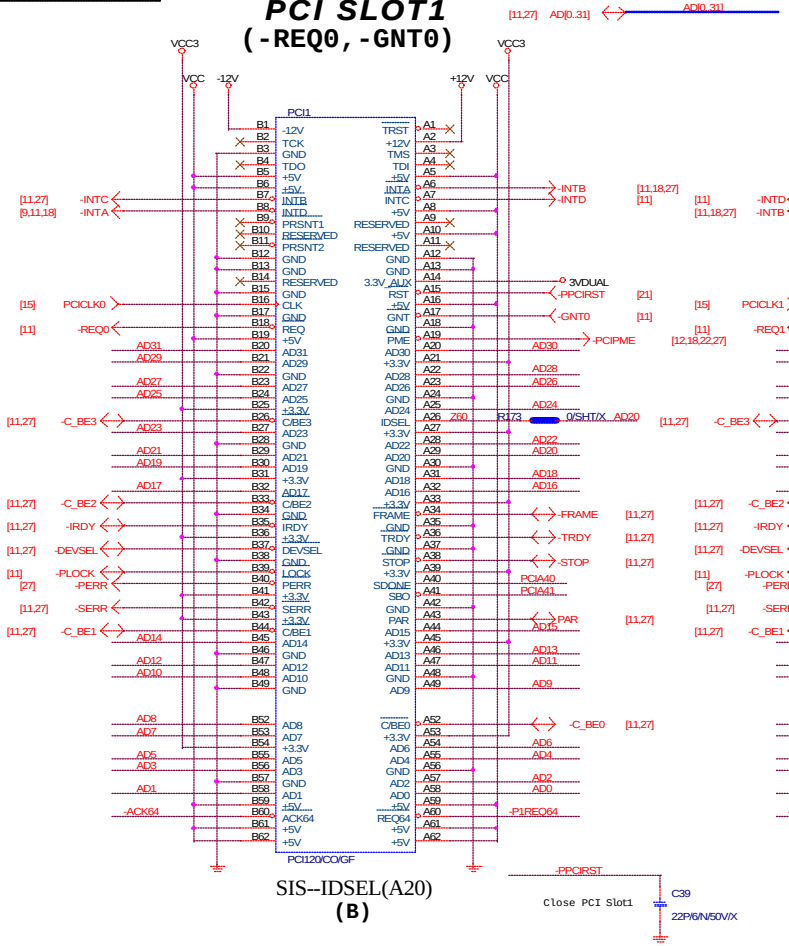


DUAL LAYOUT(VGA/COM)

GIGABYTE		
Title: VGA CONNECTOR		
Size: B	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 19 of 32	

PCI SLOT 1,2,3

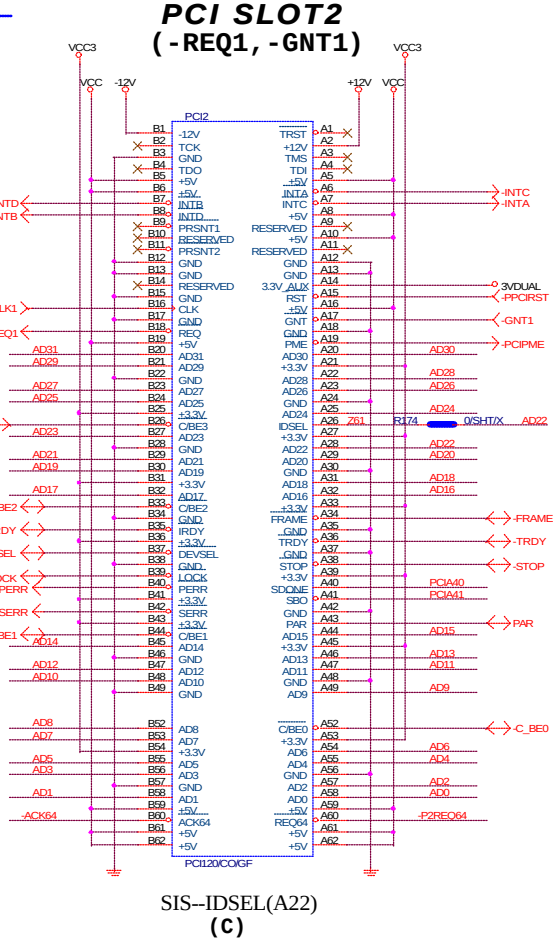
PCI SLOT1 (-REQ0,-GNT0)



SIS--IDSEL(A20)

(B)

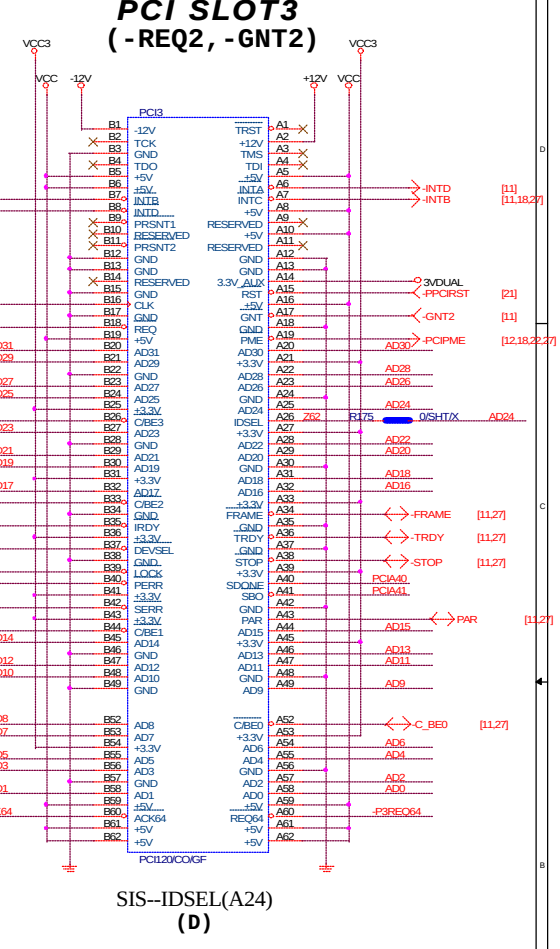
PCI SLOT2 (-REQ1,-GNT1)



SIS--IDSEL(A22)

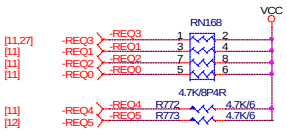
(C)

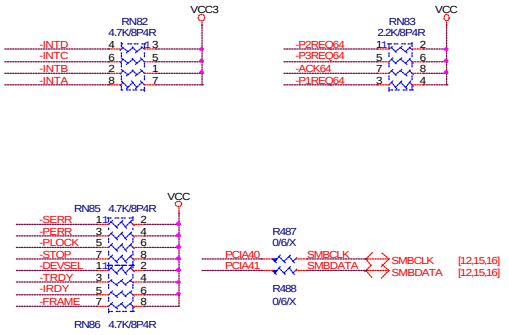
PCI SLOT3 (-REQ2,-GNT2)

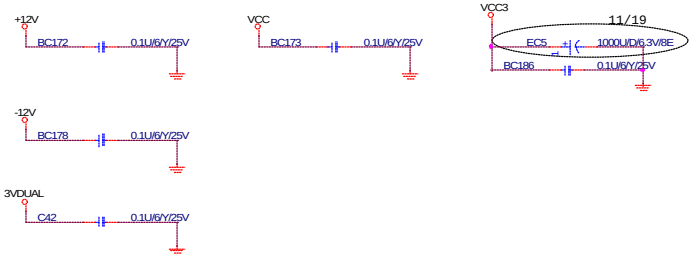


SIS--IDSEL(A24)

(D)





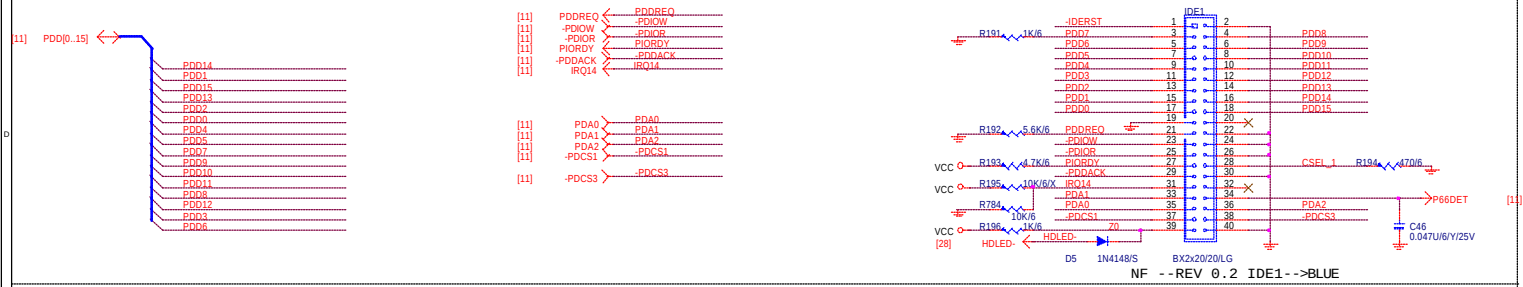


GIGABYTE

Title	PCI SLOT 1,2,3	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 20 of 32	

PRIMARY IDE

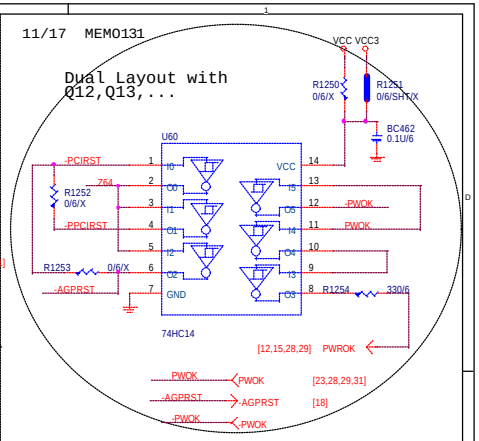
10/29



NF --REV 0.2 IDE1-->BLUE

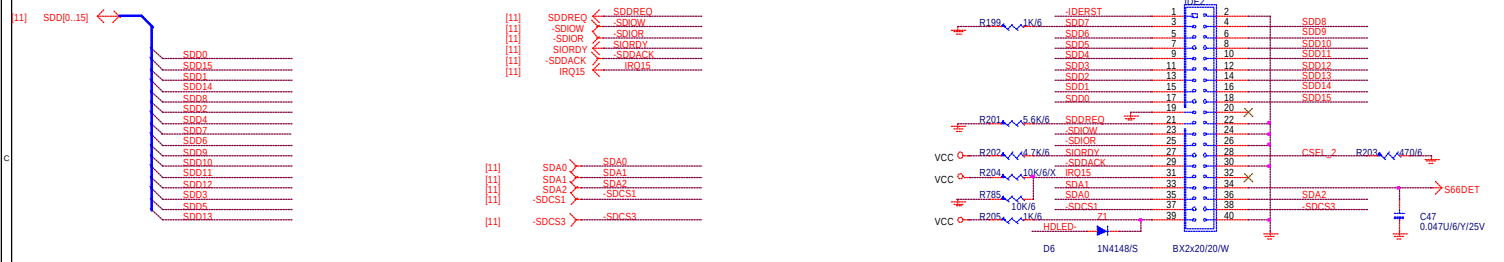
11/17 MEMO131

Dual Layout with Q12,Q13,...



SECONDARY IDE

10/29



SIRQ

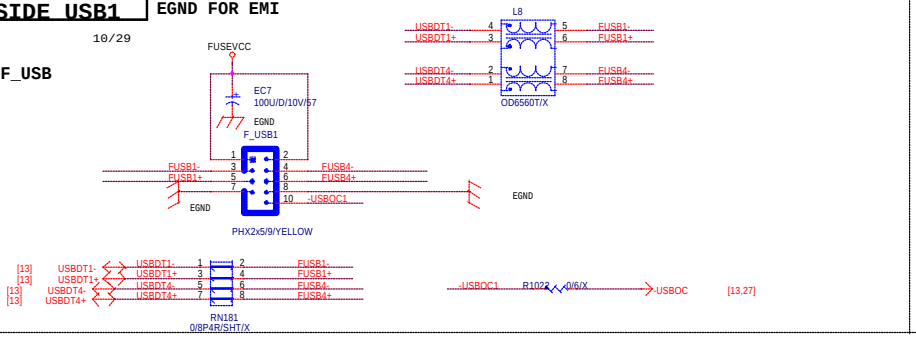
FRONT SIDE USB1

EGND FOR EMI

USB2.0

INTEL CONN F_USB

10/29



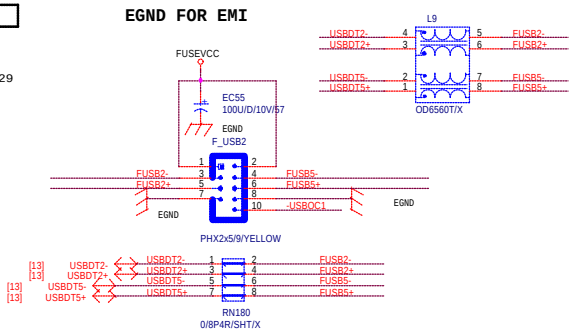
FRONT SIDE USB2

EGND FOR EMI

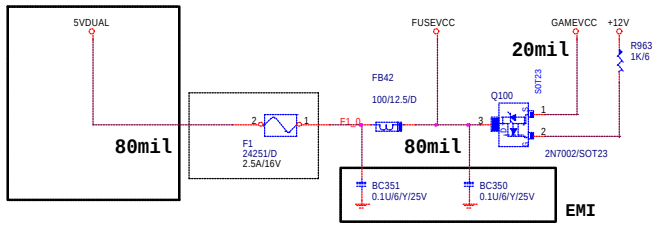
USB2.0

INTEL CONN F_USB

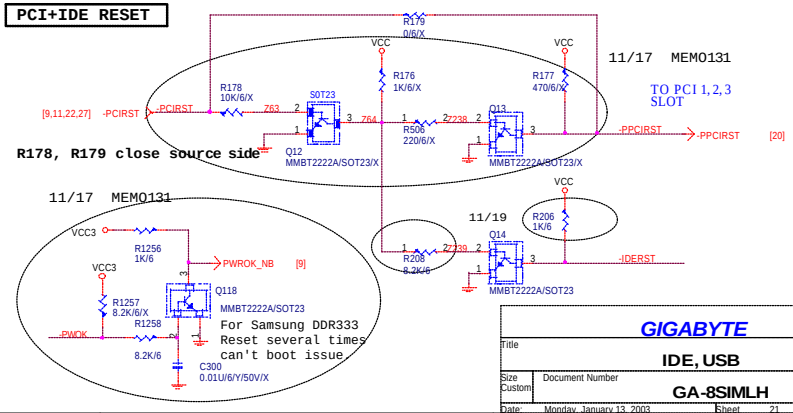
10/29



FUSEVCC,GAMEVCC



PCI+IDE RESET

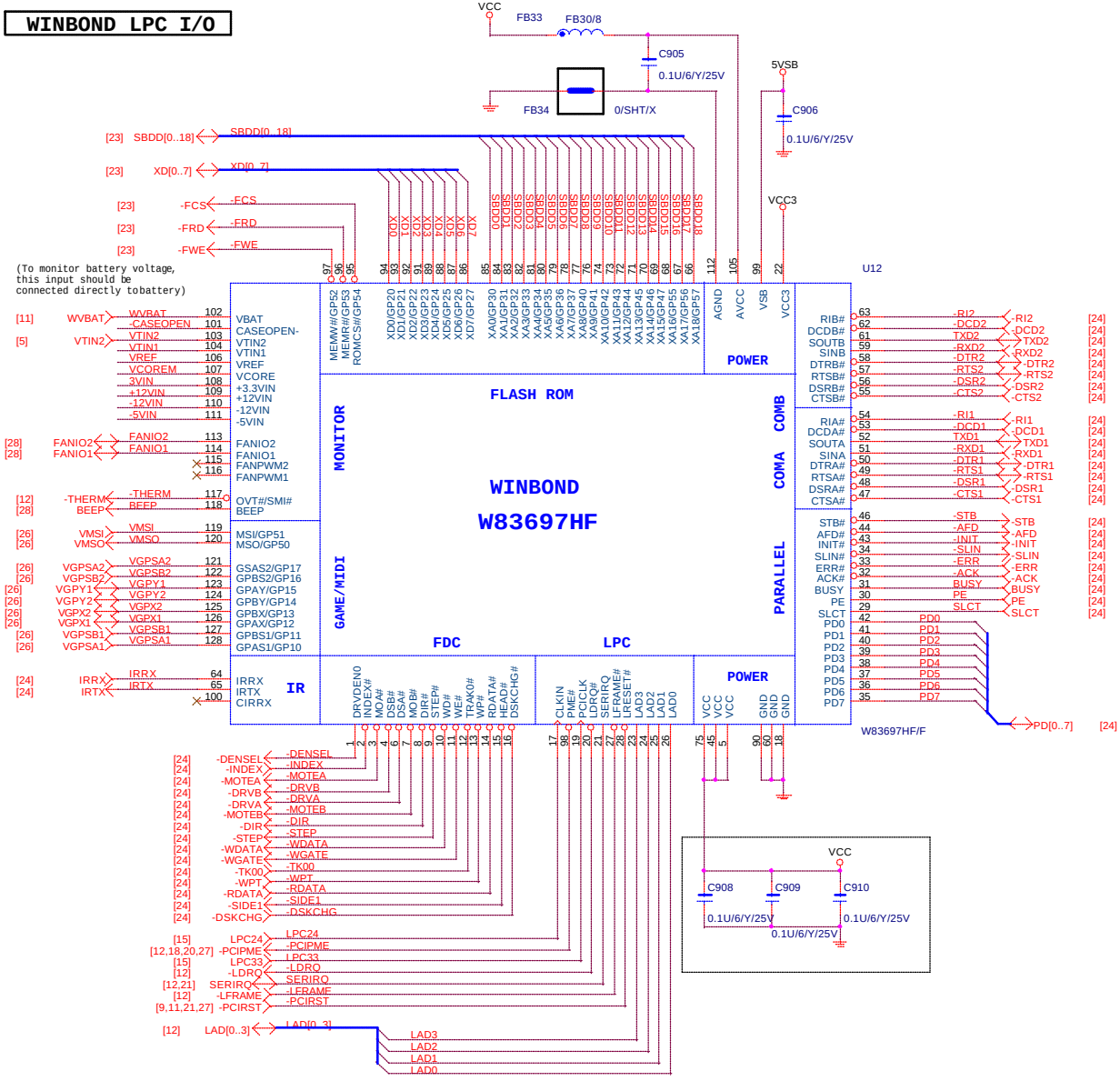


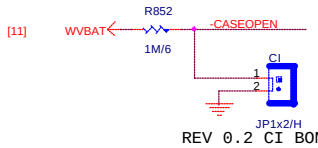
GIGABYTE

Title: IDE, USB

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

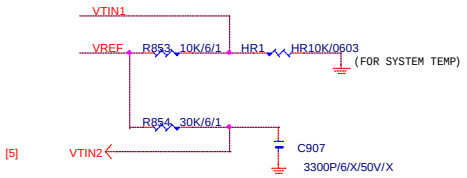
Date: Monday, January 13, 2003 | Sheet 21 of 32



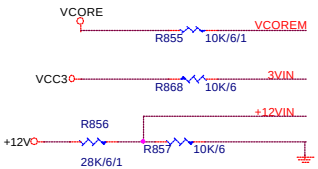


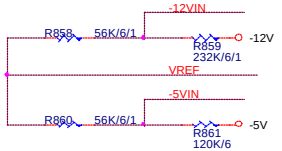
REV 0.2 CI BOM MODIFY

Case Open Circuits



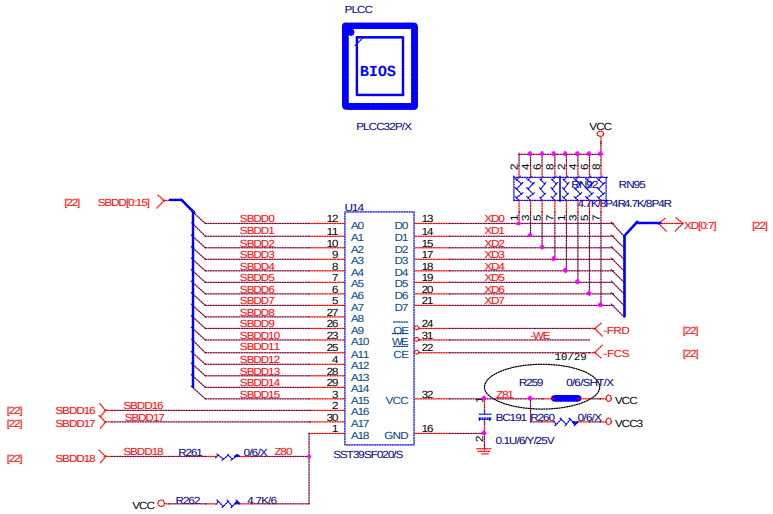
Thermal Monitoring

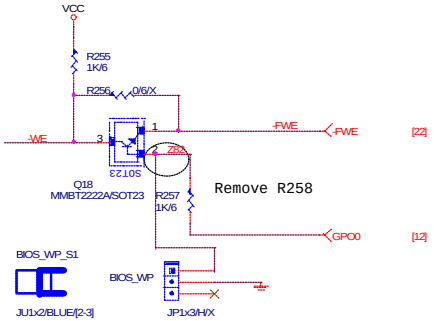




Voltage Monitoring

GIGABYTE	
Title	LPC W83697
Size: Custom	Document Number: GA-8SIMLH
Rev: 3.02	
Date: Monday, January 13, 2003	Sheet 22 of 32



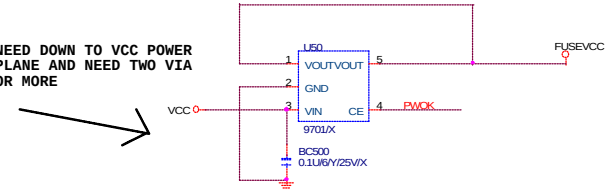


BIOS_WP: BIOS WRITE PROTECT

PIN	BIOS_WP
1-2	WRITE PROTECT
2-3	WRITE ENABLE (default)

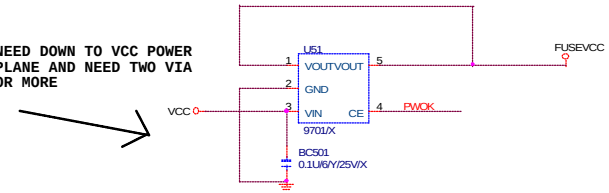
NEAR F_USB1 CONNECTOR

NEED DOWN TO VCC POWER PLANE AND NEED TWO VIA OR MORE



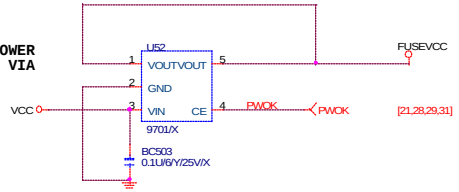
NEAR F_USB2 CONNECTOR

NEED DOWN TO VCC POWER PLANE AND NEED TWO VIA OR MORE



NEAR USB_LAN CONNECTOR

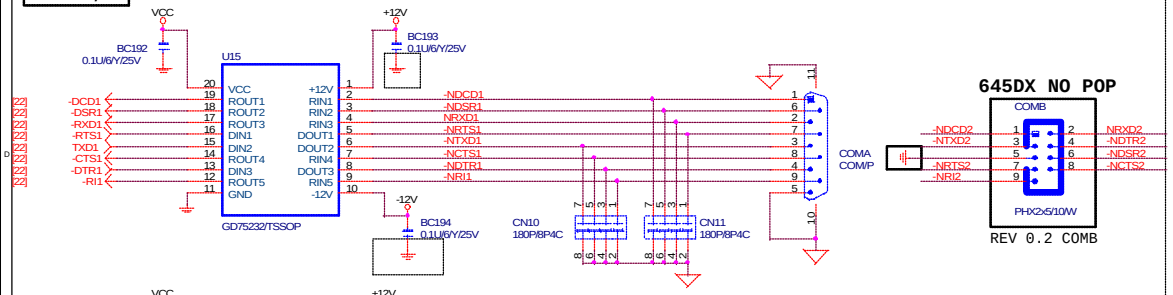
NEED DOWN TO VCC POWER PLANE AND NEED TWO VIA OR MORE

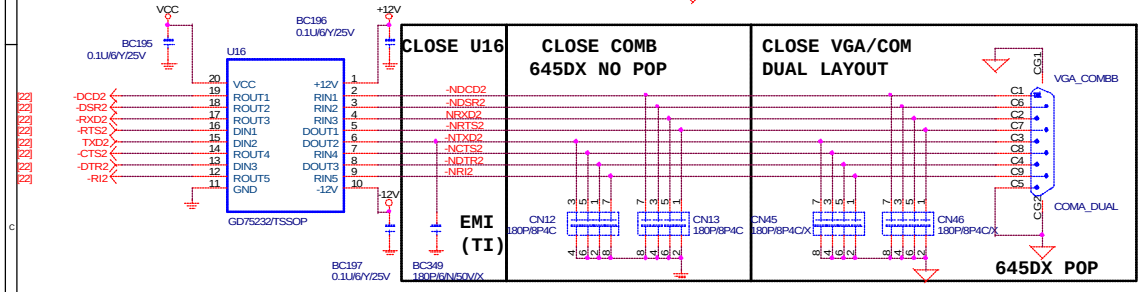


GIGABYTE

Title	Flash ROM	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 23 of 32	

COM A,B





WAKE UP

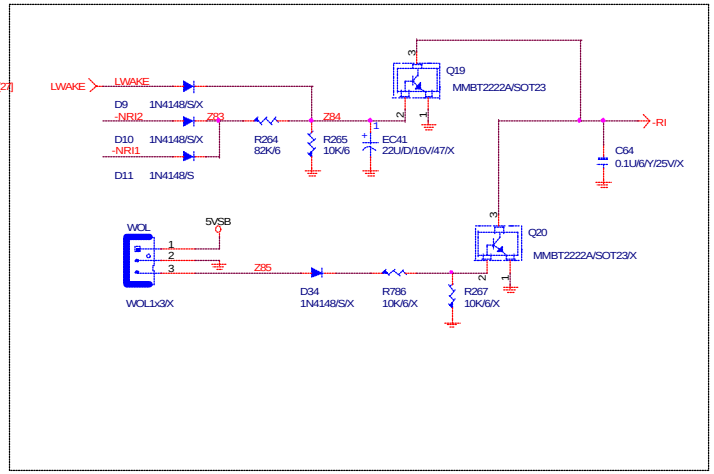
RING IN

WAKE ON LAN

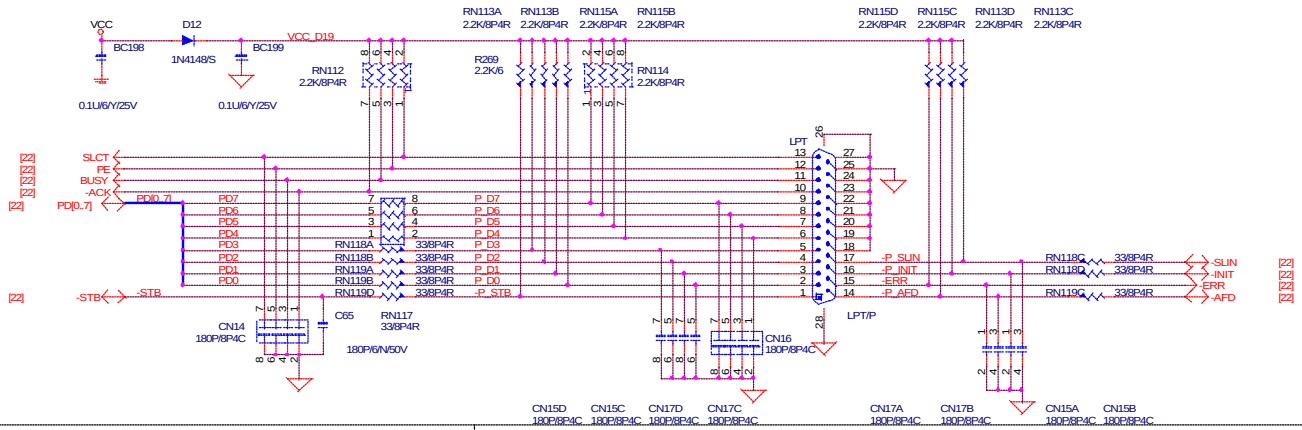
LAN WAKEUP

RING POWER ON

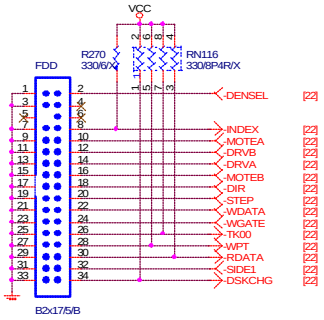
MODEM WAKEUP



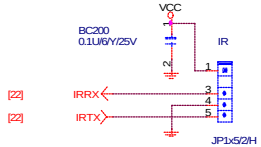
LPT



FDD

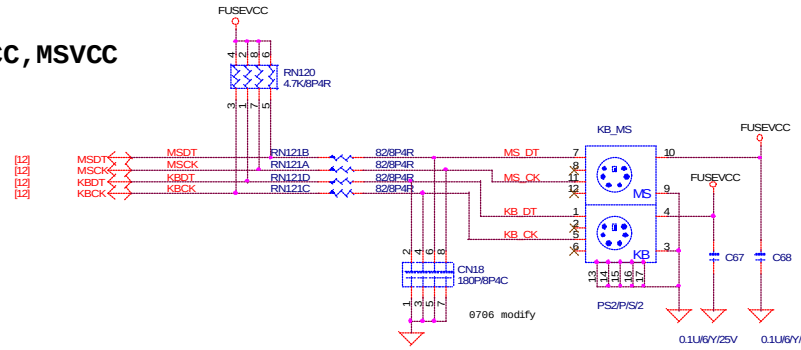


IR CONNECTOR



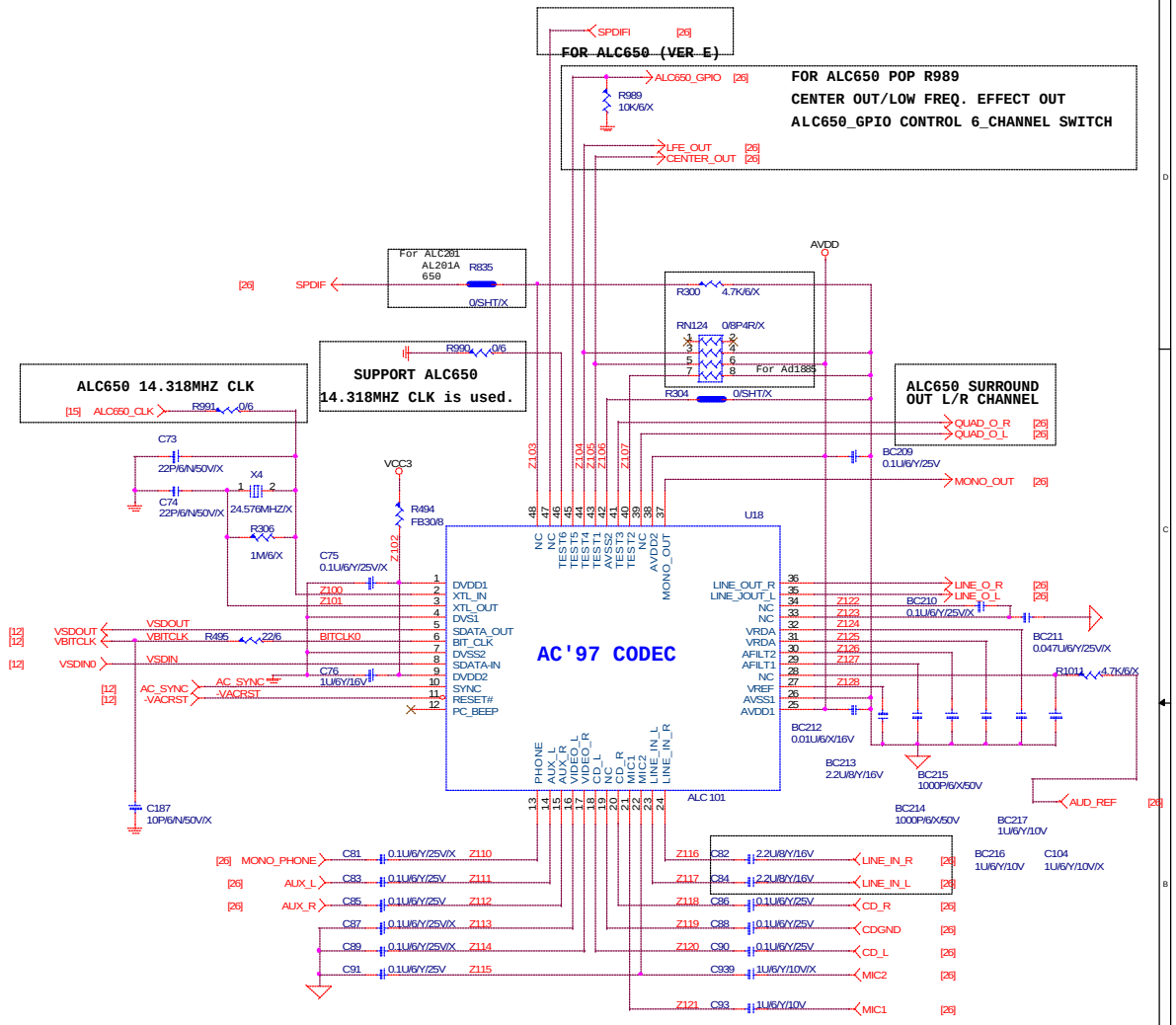
KBC/PS2

NF KBVCC,MSVCC



GIGABYTE

Title	COM,PRT,FDD,KB,IR	
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 24 of 32	



NF	SIGMATEL9756
Disti	ALC201A

GIGABYTE

Title: AUDIO (AC97 CODEC)

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

Date: Monday, January 13, 2003 | Sheet 25 of 32

SPDIF

FUSEVCC
SPDIF
SPDIF
SPDIF/SOSP/B/X
(OUT)

FUSEVCC
SPDIF_I
SPDIFI
SPDIF_IN/SOSP/X
(IN)

ALC650 SPDIF INPUT
(VER E:SUPPORT)

LINE OUT

EC8,9,10,11不可DUAL LAYOUT

FLOR
SUR_OUTR
R992 0/6/X
EC8 100U/D/10V/57/X
QUAD_O_R
R993 0/6/X
EC9 100U/D/10V/57
LINE_O_R
R994 0/6
EC10 100U/D/10V/57
LINE_O_L
R995 0/6
EC11 100U/D/10V/57/X
QUAD_O_L
R996 0/6/X
SUR_OUTL
R997 0/6/X
FLOL
LNR
LNL
R914 0/6/X
R917 0/6/X
AUDIO_1A
3RJ+15FEMALE
LINE OUT
C97
C98
180P/6/N/50V
180P/6/N/50V

SUR_CEN
SUR_OUTL
SUR_OUTR
CENTER_OUT
LFE_OUT
C940 1U/6/Y/10V/X
H2X3/4/H/X
C941 1U/6/Y/10V/X

+12V
R998 47K/6/X
Q102 MMBT2222A/SOT23/X
SOT23
AVDD
Q103 2N7002/SOT23/X
SOT23
VCC3
R999 4.7K/6/X
ALC650_GPIO
R1000 100/6/X
EC57 22U/D/16V/47/X
R1001 0/6/X
RESERVE
R1002 10K/6/X
MIC
BC352 1U/6/Y/10V/X
RESERVE

LINE-IN

LINE_IN_R
LINE_IN_L
R327 10K/6
R330 10K/6
R529 8.2K/6/X
R530 8.2K/6/X
AUDIO_1B
3RJ+15FEMALE
LINE-IN
C102 1000P/6/X/50V
C103 1000P/6/X/50V

INTEL FRONT AUDIO

AVDD
R925 10K/6
F_AUDIO
MIC
AUD_REF
FLOR
FLOL
LNR
LNL
KEY
BC348
Reseved
0.1U/6/Y/50V/X
JP2x5/8/H
Not Drill on pin8
BC347
0.1U/6/Y/50V/X
F_AUDIO_S1
F_AUDIO_S2
JU1x2/B/[5-6]
JU1x2/B/[9-10]

ONLY ALC650 FOR LFE OUTPUT POP R

MIC

MIC2
R1003 3.3K/6/X
C942 1000P/6/X/50V/X
AVDD
R335 2.2K/6/X
C105 1U/6/Y/10V
AUD_REF
R336 10K/6
R337 0/6/X
MIC1
R339 3.3K/6
C181 1000P/6/X/50V
0703 MODIFY
MIC
C944 180P/6/N/50V
EMI
Z137
Z138
R338 0/6/X
AUDIO_1C
3RJ+15FEMALE
MIC

AUX IN

DISTI DEFAULT NO POP

11/19

AUX_L
AUX_R
AUX_IN
C108 1000P/6/X/50V/X
C109 1000P/6/X/50V/X
WF1x4W/X

CD IN

CD_L
CD_R
CDGND
CD_IN
WF1x4/B
C182
C110
C111
150/6
1K/6
1K/6

TELE

DISTI DEFAULT NO POP

MONO_PHONE
MONO_OUT
BC227
0.1U/6/Y/25V/X
Z140
C183 1000P/6/X/50V/X
TELE
WF1x4/G/X

GAME PORT

FOR I/O W83697HF

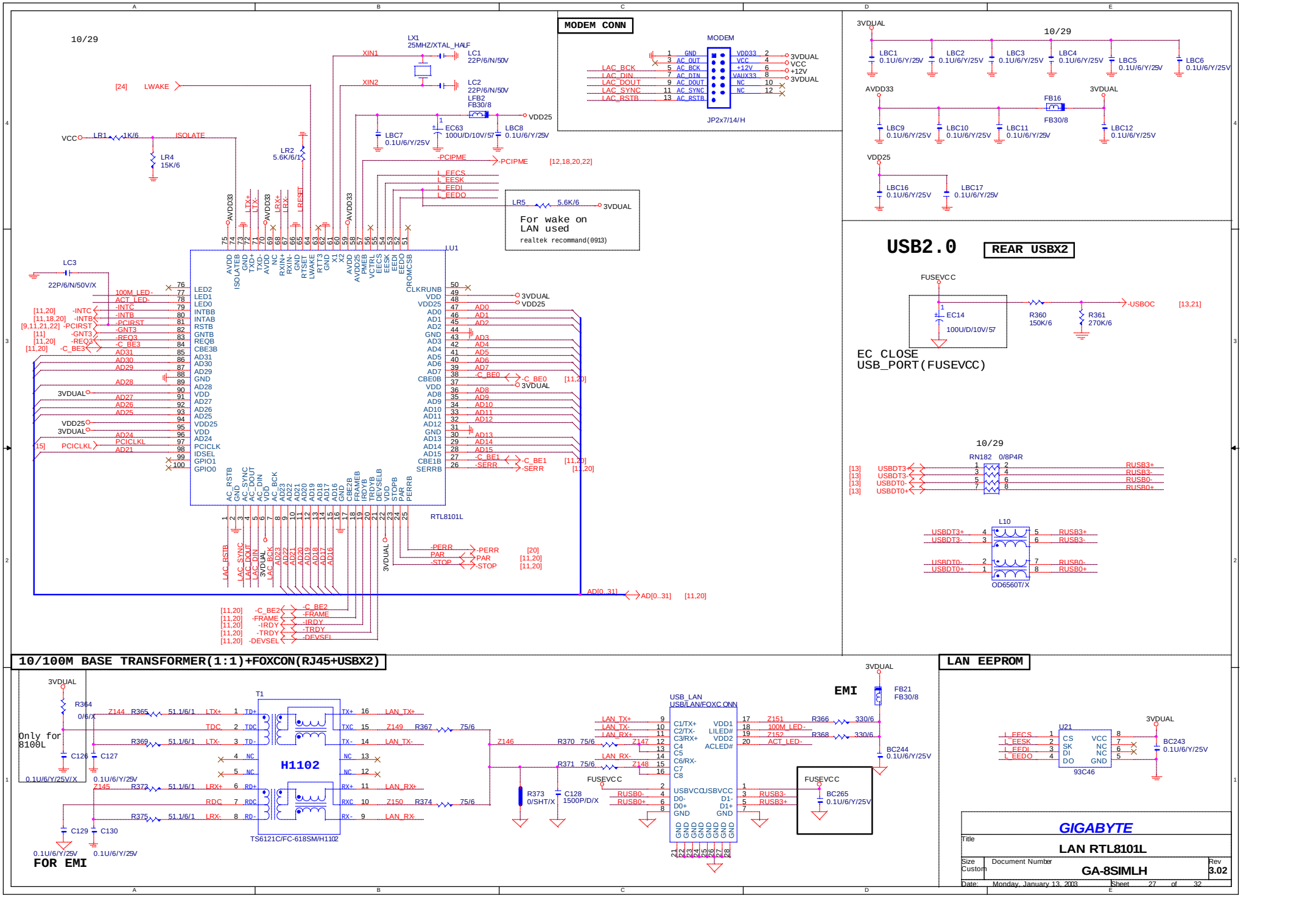
R344 4.7K/6/X
R345 4.7K/6/X
GAMEVCC
RN126 2.2K/8P4R
GAME-1
VGPSA1
VGPSB1
VGPX1
VGPX2
VMSO
VGPY2
VGPY1
VGPSB2
VGPSA2
VMSI
RN129C 0/8P4R/SHT/X
RN129D 0/8P4R/SHT/X
RN130A 2.2K/8P4R
RN130C 2.2K/8P4R
R346 2.2K/6
RN130D 2.2K/8P4R
RN130B 2.2K/8P4R
RN129B 0/8P4R/SHT/X
RN129A 0/8P4R/SHT/X
R347 2.2K/6
GP_SA1
GP_SB1
GP_X1
GP_X2
MS_0
GP_Y2
GP_Y1
GP_SB2
GP_SA2
MS_1
RN174 1M/8P4R
BC230 0.1U/6/Y/25V
AD/GM
GAMEVCC
BC228 0.1U/6/Y/25V
BC229 0.1U/6/Y/25V
C114 0.01U/6/X/16V
C115 0.01U/6/X/16V
C116 100P/6/N/50V/X
C117 0.01U/6/X/16V
C118 0.01U/6/X/16V
C121 1000P/6/X/50V
C122 180P/6/N/50V
C123 180P/6/N/50V
CN19 180P/8P4C
CN20 0.01U/8P4C

GIGABYTE

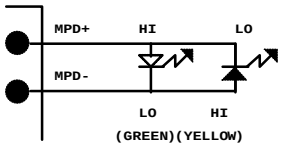
Title: AUDIO OUTPUT,GAME PORT

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

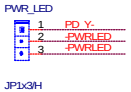
Date: Monday, January 13, 2003 | Sheet 26 of 32


MODEM CONN
MODEM
JP2x7/14/H
10/29
LX1
25MHZ/XTAL_HALF
LC1
22P/6/N/50V
LC2
22P/6/N/50V
LFB2
FB30/8
VDD25
LBC7
0.1U/6/Y/25V
EC63
100U/D/10V/57
LBC8
0.1U/6/Y/25V
LR1
1K/6
LR2
5.6K/6/1
LR4
15K/6
ISOLATE
LWAKE
-PCIPME
[12,18,20,22]
L_EECS
L_EESK
L_EEDI
L_EEDO
LR5
5.6K/6
3VDUAL
For wake on
LAN used
realtek recommand(0913)
LU1
RTL8101L
LC3
22P/6/N/50V/X
100M_LED-
ACT_LED-
-INTC
-INTB
-PCIRST
-GNT3
-REQ3
-C_BE3
AD31
AD30
AD29
AD28
AD27
AD26
AD25
AD24
PCICLKL
AD21
-C_BE0
-C_BE1
-SERR
-PERR
PAR
-STOP
-C_BE2
-FRAME
-IRDY
-TRDY
-DEVSEL
AD[0..31]
3VDUAL
VDD25
10/29
LBC1
LBC2
LBC3
LBC4
LBC5
LBC6
0.1U/6/Y/25V
AVDD33
FB16
FB30/8
LBC9
LBC10
LBC11
LBC12
LBC16
LBC17
USB2.0
REAR USBX2
FUSEVCC
EC14
100U/D/10V/57
R360
150K/6
R361
270K/6
-USBOC
[13,21]
EC CLOSE
USB_PORT(FUSEVCC)
10/29
RN182 0/8P4R
USBDT3+
USBDT3-
USBDT0-
USBDT0+
RUSB3+
RUSB3-
RUSB0-
RUSB0+
L10
OD6560T/X
10/100M BASE TRANSFORMER(1:1)+FOXCON(RJ45+USBX2)
T1
H1102
TS6121C/FC-618SM/H1102
Only for
8100L
FOR EMI
R364
0/6/X
C126
C127
C129
C130
0.1U/6/Y/25V
0.1U/6/Y/25V/X
R365
R369
R372
R375
51.1/6/1
Z144
Z145
Z146
Z147
Z148
Z149
Z150
R367
R374
75/6
R370
R371
R373
0/SHT/X
C128
1500P/D/X
LAN_TX+
LAN_TX-
LAN_RX+
LAN_RX-
USB_LAN
USB/LAN/FOXCONN
FUSEVCC
RUSB0-
RUSB0+
RUSB3-
RUSB3+
R366
R368
330/6
Z151
Z152
100M_LED-
ACT_LED-
EMI
FB21
FB30/8
BC244
BC265
0.1U/6/Y/25V
LAN EEPROM
U21
93C46
BC243
0.1U/6/Y/25V
GIGABYTE
Title
LAN RTL8101L
Size
Custom
Document Number
GA-8SIMLH
Rev
3.02
Date:
Monday, January 13, 2003
Sheet
27
of
32

FRONT PANEL



PWR_LED FOR DISTI PIN 1X3 LED USED

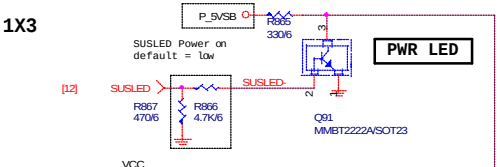


LED States	ACPI States	MPD+	MPD-
OFF	S1,S3,S5	HI	HI
Steady Green	S0	HI	LO
Blinking Green	S0(message waiting)	HI	BLINKING

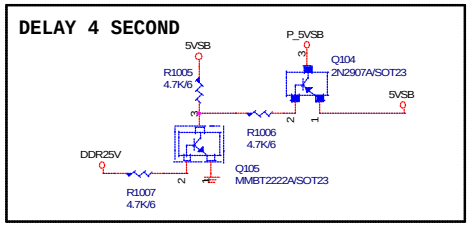
States for a dual-color power LED

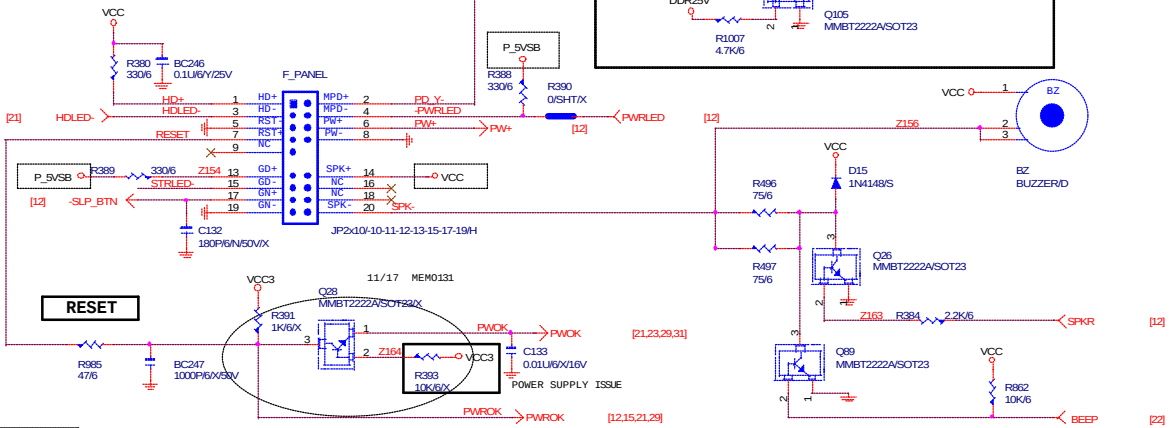
LED States	ACPI States	MPD+	MPD-
OFF	S5	HI	HI
Steady Green	S0	HI	LO
Blinking Green	S0(message waiting)	HI	BLINKING
Steady Yellow	S1,S3	LO	HI
Blinking Yellow	S1,S3(message waiting)	LO	BLINKING

PWR LED



DELAY 4 SECOND

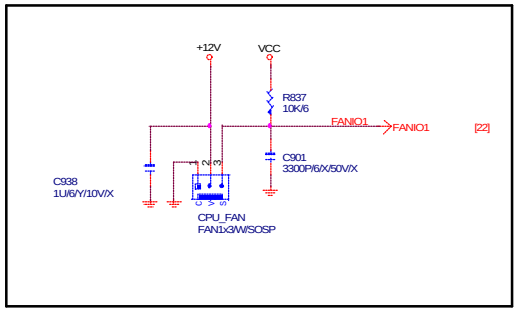




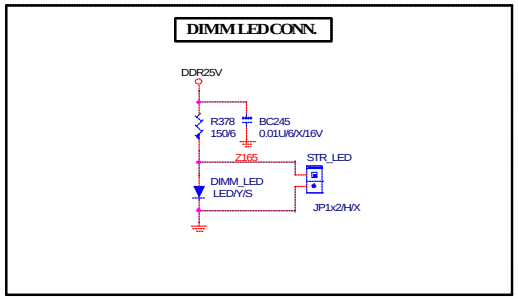
RESET

NOTE:ALLEGRO use NET connect.

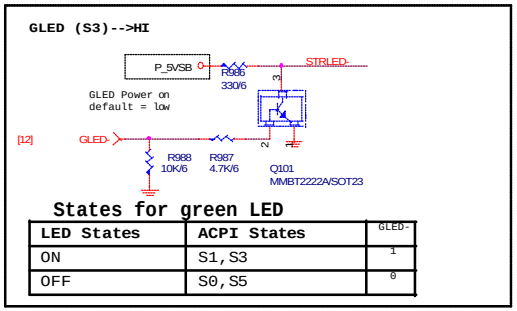
CPU FAN W=0.167W



DIMM LED CONN.



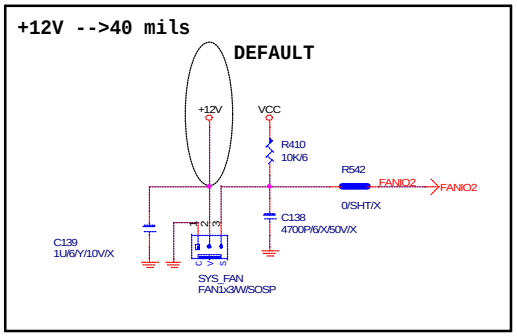
GLED (S3)-->HI



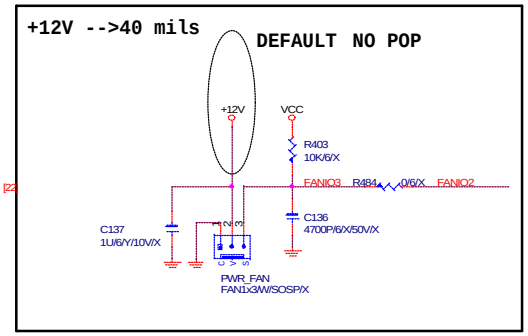
States for green LED

LED States	ACPI States	GLED-
ON	S1,S3	1
OFF	S0,S5	0

SYSTEM FAN W=0.167W

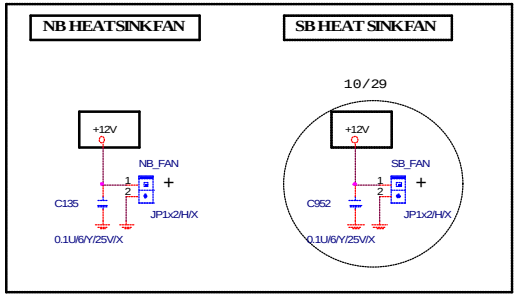


POWER FAN W=0.167W



NB HEATSINK FAN

SB HEAT SINK FAN

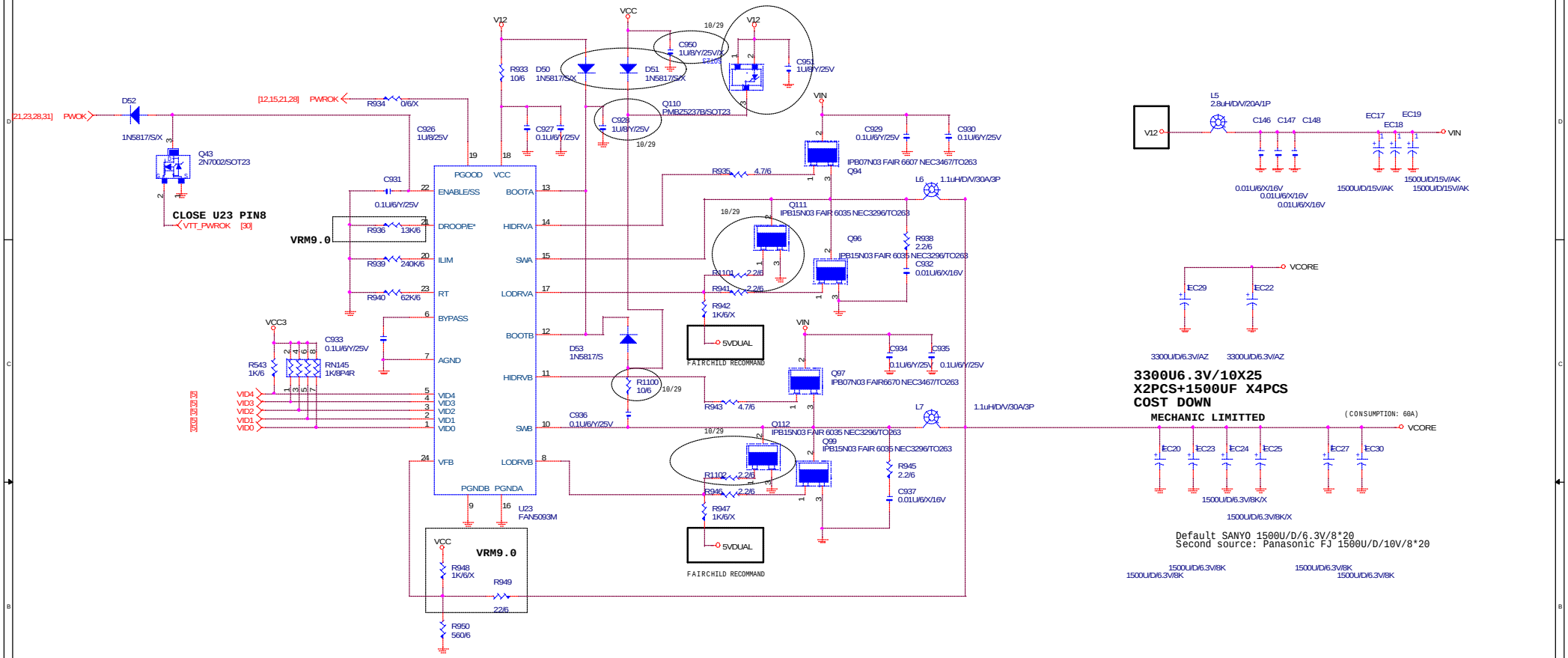


GIGABYTE

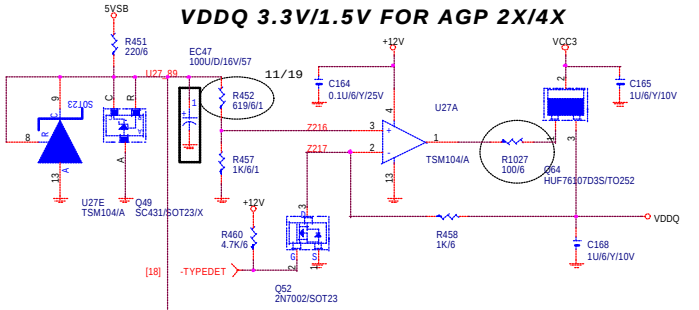
Title: PANEL, STR LED & FANS

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

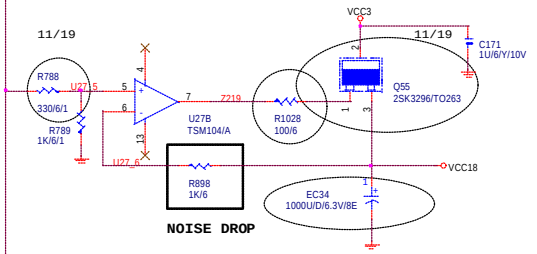
Date: Monday, January 13, 2003 | Sheet 28 of 32


CLOSE U23 PIN8
VRM9.0
VRM9.0
FAIRCHILD RECOMMAND
FAIRCHILD RECOMMAND
3300U6.3V/10X25
X2PCS+1500UF X4PCS
COST DOWN
MECHANIC LIMITTED
(CONSUMPTION: 60A)
Default SANYO 1500U/D/6.3V/8*20
Second source: Panasonic FJ 1500U/D/10V/8*20
GIGABYTE
VCORE (PWM FAN5093M)
GA-8SIMLH
3.02
Monday, January 13, 2003
29
32

VDDQ 3.3V/1.5V FOR AGP 2X/4X

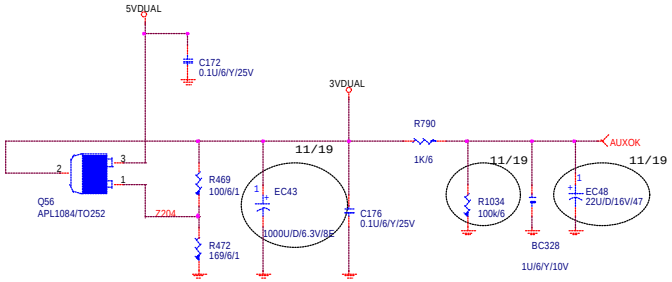


VCC18 FOR NB,SB

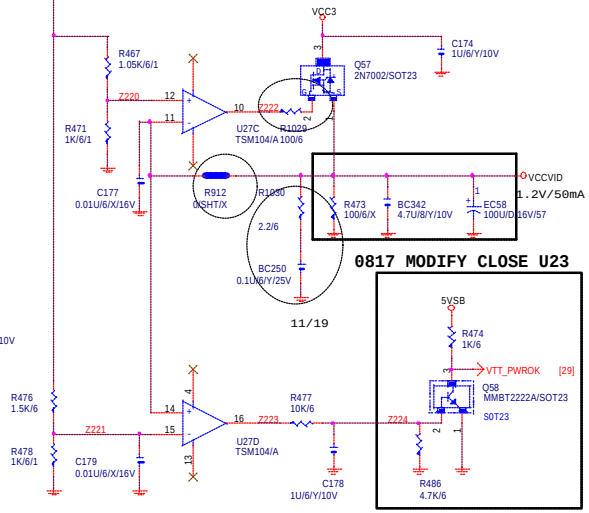


5VDUAL TRANS TO 3VDUAL(3.3V)

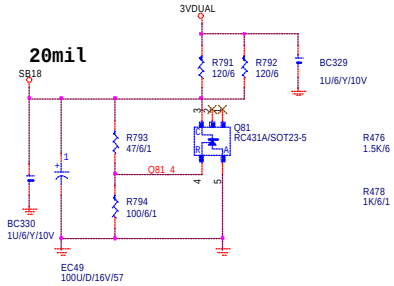
5VDUAL 80 mils ABOVE



VCCVID FOR NORTHWOOD CPU



SB18 FOR SB



GIGABYTE		
Title: DC POWER		
Size: Custom	Document Number: GA-8SIMLH	Rev: 3.02
Date: Monday, January 13, 2003	Sheet 30 of 32	

ATX CON, DDR POWER

Default應該由3VDUAL轉DDR25V,因改舊版無法把5VDUAL及3VDUAL的MOS靠近DDR, 故另加兩個DIODE作出3VDUAL1。

6 VIA

VCC3 VCC3 3VDUAL

D61 1N5820/S/X D20 1N5820/S RN137 4.7/8P4R D21 1N5817/S

Z214

10/29

3VDUAL1

BC952 0.1U/6Y/25V/X

DDR25V with over-current protect.

DIP Cap. at other page

6 VIA

DDR25V

Q119 APM3055/TO252

R1273 100/6/SHT/X

BC961 0.01U/6Y/25V/X

VCC3

BC962 0.1U/6Y/25V

Q122 APM3055/TO252

R1276 100/6/SHT/X

DDRVTT

BC963 0.01U/6Y/25V/X

Q123 APM3055/TO252

R1277 100/6/SHT/X

BC964 0.01U/6Y/25V/X

5VSB

BC959 0.1U/6Y/25V

U67 W83301R

VCC 5V_DRV 5V_DLSB PWOK 5VDLEND# S3# S5# C1 C2 SS VSS

STR_DRV1 STR_SEN1 STR_DRV2 STR_SEN2 STR_DRV3 STR_SEN3 CHRPMP V_SET0 V_SET1

VCC

BC956 0.1U/6Y/25V

Q121 HUF76107D3S/TO252

R1274 100/SHT/X

R1275 100/SHT/X

5VSB

Q120 HUF76107D3S/TO252

BC957 0.1U/6Y/25V

5VDUAL

EC46 1000U/D/6.3V/8E

BC954 0.01U/6Y/25V/X

BC955 0.01U/6Y/25V/X

BC958 0.1U/6Y/25V

BC965 0.1U/6Y/25V

5VDUAL

R1035 1K/6/X

[21,23,28,29] PWOK

[8] -SUSB

SLP_S5EN

Add a pull-up R

-SUSB: S3=Low

-SUSB: S0,S1,S5=Hi

11/19

5VSB

Q59 2N7002/SOT23

R475 47K/6/X

R802 8.2K/6

Q60 2N7002/SOT23

Z210

[8] -SUSB

[21,23,28,29] PWOK

Z211

R479 47K/6

C194 1U/6Y/10V/X

C876 1U/6Y/10V/X

OVDDR267, OVDDR27V RESUME WELL DEFAULT HIGH

	GPIO13 OVDDR27V	GPIO1 OVDDR26V
2.5V	HIGH	HIGH
2.6V	LOW	HIGH
2.7V	LOW	LOW

BC960 R1278 1K/6 0.1U/6Y/25V

5VSB

Over Voltage to 2.6V

R1283 1K/6

5VSB

R1279 1K/6

R1280 1K/6/X

Q125 MMBT2222A/SOT23/X

Q124 MMBT2222A/SOT23/X

[12] OVDDR27V R1281 8.2K/6/X

[12] OVDDR26V R1282 8.2K/6/X

K1 K_ICT/X

K2 K_ICT/X

K3 K_ICT/X

K4 K_ICT/X

K5 K_ICT/X

K6 K_ICT/X

I1 4MMH/X

I2 4MMH/X

I3 4MMH/X

I4 4MMH/X

MH7 MH4 MH2 MH1 MH5 MH3 HOLE_3

EGND

5VSB

R482 470K/6

Z225

[12] -PSON

BC252 0.1U/6Y/25V

-12V VCC3 VCC3

ATX

3.3V 3.3V -12V 3.3V GND GND PSON 5V GND GND GND 5V GND GND -5V POK 5V 5VSB 5V 12V

PWR2x10/CL1

BC251 0.1U/6Y/25V

VCC VCC PWOK 5VSB +12V

-5V VCC VCC

BC253 BC254 BC255 BC256 BC257 BC258 BC259 BC260 BC261 0.1U/6Y/25V

V12

ATX_12V

+12V GND +12V GND

BC262 0.1U/6Y/25V

PWR2x2/CL1/SOSP

[21,23,28,29] PWOK

PB REQUEST V12

+12V TRACE 250MIL

ATX POWER CONNECTOR

GIGABYTE

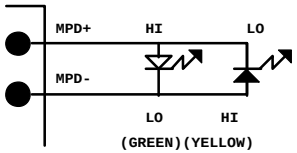
Title: ATX, DDR POWER

Size: Custom | Document Number: GA-8SIMLH | Rev: 3.02

Date: Monday, January 13, 2003 | Sheet 31 of 32

LO:Normal

RTL8100L ON-BOARD		
	-REQ0 PCI1	**IDSEL(A20)--B**
	-REQ1 PCI2	**IDSEL(A22)--C**
	-REQ2 PCI3	**IDSEL(A24)--D**
	-REQ3 RTL8100L	**IDSEL(A27)--B**



8SRXL South Bridge GPIO LIST				
ITEM	DESCRIPTION	I/O	STATUS	Default
GPIO0	Bios Write Protect	O	Hi:Write Enable, Lo:Write Protect	Hi
GPIO1	N/A		PULL-UP	Hi
GPIO2	THERM#			Hi
GPIO3	Green Button	O	Hi:Normal, Lo:Into Green mode	Hi
GPIO4	CLKRUN#		PULL-DOWN	Lo
GPIO5	N/A		PULL-UP	Hi
GPIO6	DDR OVER VOLTAGE	O		Hi
GPIO7	SUSLED	O	**AS LIKE DEFINED...**	Lo
GPIO8	Wake On Ring	I	Hi:Normal, Lo:Ring Power On	Hi
GPIO9	GLED	I	**AS LIKE DEFINED...**	Lo
GPIO10	Mother Board ID	I	SIS DEMO B/D PULL-DOWN	Lo
GPIO11	N/A		PULL-UP	Hi
GPIO12	N/A		PULL-UP	Hi
GPIO13	Mother Board ID	I	SIS DEMO B/D PULL-DOWN	Lo
GPIO14	DDR OVER VOLTAGE	I		Lo
GPIO15	KB Data	I/OD		
GPIO16	KB Clk	I/OD		
GPIO17	MS Data	I/OD		
GPIO18	MS Clk	I/OD		

States for a single-color power LED

				BIOS	
LED States	**ACPI States**	MPD+	MPD-	GPIO7	ACPILED
OFF	S5	HI	HI	**LO**	**HI/NC**
Steady Green	S0	HI	LO	**LO**	**LO**
Blinking Green	S0(message waiting)	HI	BLINKING	**LO**	**BLINKING**

States for a dual-color power LED

				BIOS	
LED States	**ACPI States**	MPD+	MPD-	GPIO7	ACPILED
OFF	S5	HI	HI	**LO**	**HI/NC**
Steady Green	S0	HI	LO	**LO**	**LO**
Blinking Green	S0(message waiting)	HI	BLINKING	**LO**	**BLINKING**
Steady Yellow	S1,S3	LO	HI	**HI**	**HI**
Blinking Yellow	S1,S3(message waiting)	LO	BLINKING	**HI**	**BLINKING**

States for green LED

			BIOS
LED States	**ACPI States**	GLED-	GPIO9
ON	S1,S3	HI	**HI**
OFF	S0,S5	LO	**LO**

BIOS REQUEST

		INTEL LED DEFINED				GIGABYTE LED DEFINED					
SINGLE	**DUAL**		**GPIO7**	**ACPILED**	**GPIO9**		**GPIO7**	**ACPILED**	**GPIO9**	**SINGLE**	**DUAL**
GREEN	**GREEN**	**S0**	**LO**	**LO**	**LO**	**S0**	**LO**	**LO**	**LO**	**GREEN**	**GREEN**
OFF	**YELLOW**	**S1**	**HI**	**HI**	**HI**	**S1**	**LO**	**BLINKING**	**HI**	**G(BLINK)**	**G(BLINK)**
OFF	**YELLOW**	**S3**	**HI**	**HI**	**HI**	**S3**	**HI**	**HI**	**HI**	**OFF**	**YELLOW**
OFF	**OFF**	**S4/S5**	**LO**	**HI/NC**	**LO**	**S4/S5**	**LO**	**HI/NC**	**LO**	**OFF**	**OFF**

GIGABYTE

Title: **GPIO, REQ/GNT Table**

Size: Custom | Document Number: **GA-8SIMLH** | Rev: **3.02**

Date: Monday, January 13, 2003 | Sheet 32 of 32