Model Name: GA-J1800N-D2H

Revision 1.1

SHEET	TITLE
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	J1800 MEMORY CONTROLLER
05	J1800 DISPLAY,SATA,SD,GBE
06	J1800 USB,CLK,SPI,LPC
07	J1800 POWER/GND_1
08	J1800 POWER/GND_2
09	DDR3L SO-DIMM CHANNEL A,B
10	SMBUS,SIGNAL L/S
11	PCIE X1 SLOT /MINI PCIE SLOT
12	USB3.0/2.0,CLK BUF
13	HWM,FAN CTRL,-PROCHIT
14	COM,FP,SPK,SATALED,KB/MS
15	ITE 8620 LPC IO
16	SPI SINGLE BIOS
17	Realtek ALC887-VD2
18	REAR AUDIO JACK
19	REALTEK RTL8111F-VL
20	POWER SEQUNCE
21	DISCRETE POWER
22	ATX
23	VCORE ISL95836_1
24	VCORE ISL95836_2,VCORE,VAXG
25	HDMI,LPT
26	GENESYS GL850S

Gigabyte Technology

Title: Cover Sheet

Size: Custom | Document Number: GA-J1800N-D2H | Rev: 1.1

Date: Friday, April 18, 2014 | Sheet 1 of 26

Model Name:GA-J1800N-D2H

Revision 1.1

Component value change history

2014/04/18

Data	Change Item	Reason
2013/09/26	MINI_PCIE REMOVE USB20 SIGNAL WITHOUT BT FUNCTION.	
2013/11/7	CKD.BLUE PCB.BOM REMOVE MINI PCIE SLOT.	
2013/11/11	R94,R130,R95,R97-->0/6/SHT	
	BC41-->10U/6/X5R(機構)	
2013/11/18	R0.2. MODIFY FROM IPX1800G1 R0.1 .CONNECTOR COLOR.PCB COLOR:BROWN.	
2013/11/25	R1.0:R312,TR4-->SHT PAD	
2013/11/27	USB_LAN:USB改GND	PBOM:9MJ180D2H-00-10A.
2013/12/12	ECN ADD MOSFET 10IF9-040393-01R/10IF9-100397-01R.	
2013/12/20	R1.01 SWAP NET USB20_0/USB30_0 .	EBOM:9MJ180D2H-00-10B.
2014/01/28	R1.01 PBOM.REMOVE DDR15_OV3/4.LMV358.	PBOM:9MJ180D2H-00-10E.
2014/02/10	SOC HEATSINK 12SP2-SA0601-01R ADD 02R/03R.	ECN:9MJ180D2H-00-10E.
2014/04/18		FBOM:9MJ180D2H-00-10F.
2014/04/18	R1.1 SOC CHANGE C0 STEPPING.	PBOM:9MJ180D2H-00-11A.

Circuit or PCB layout change

DATE	Change Item	Reason

Gigabyte Technology		
Title	BOM & PCB MODIFY HISTORY	
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
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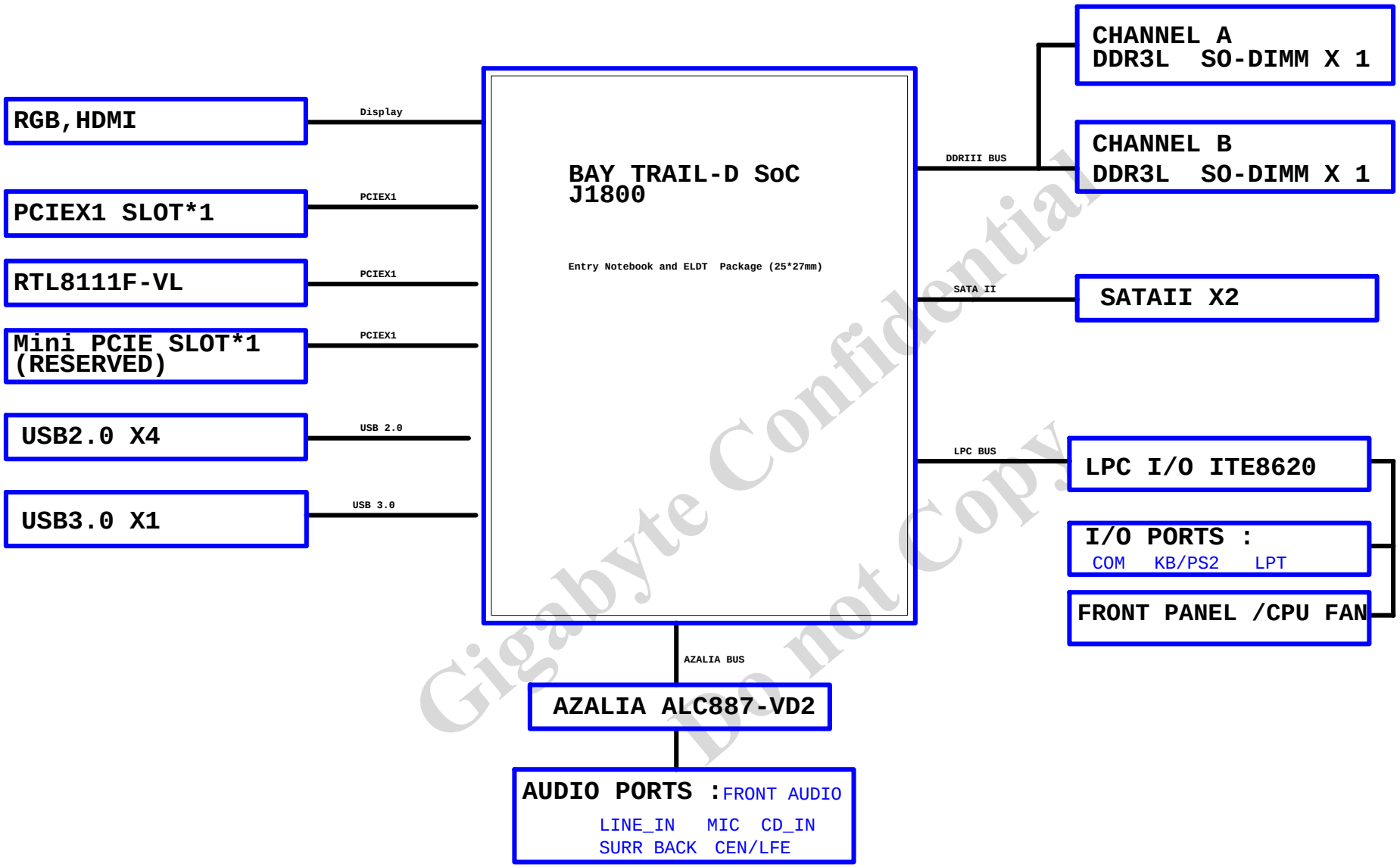
BLOCK DIAGRAM



Gigabyte Technology			
Title: BLOCK DIAGRAM			
Size: C	Document Number: GA-J1800N-D2H		Rev: 1.1
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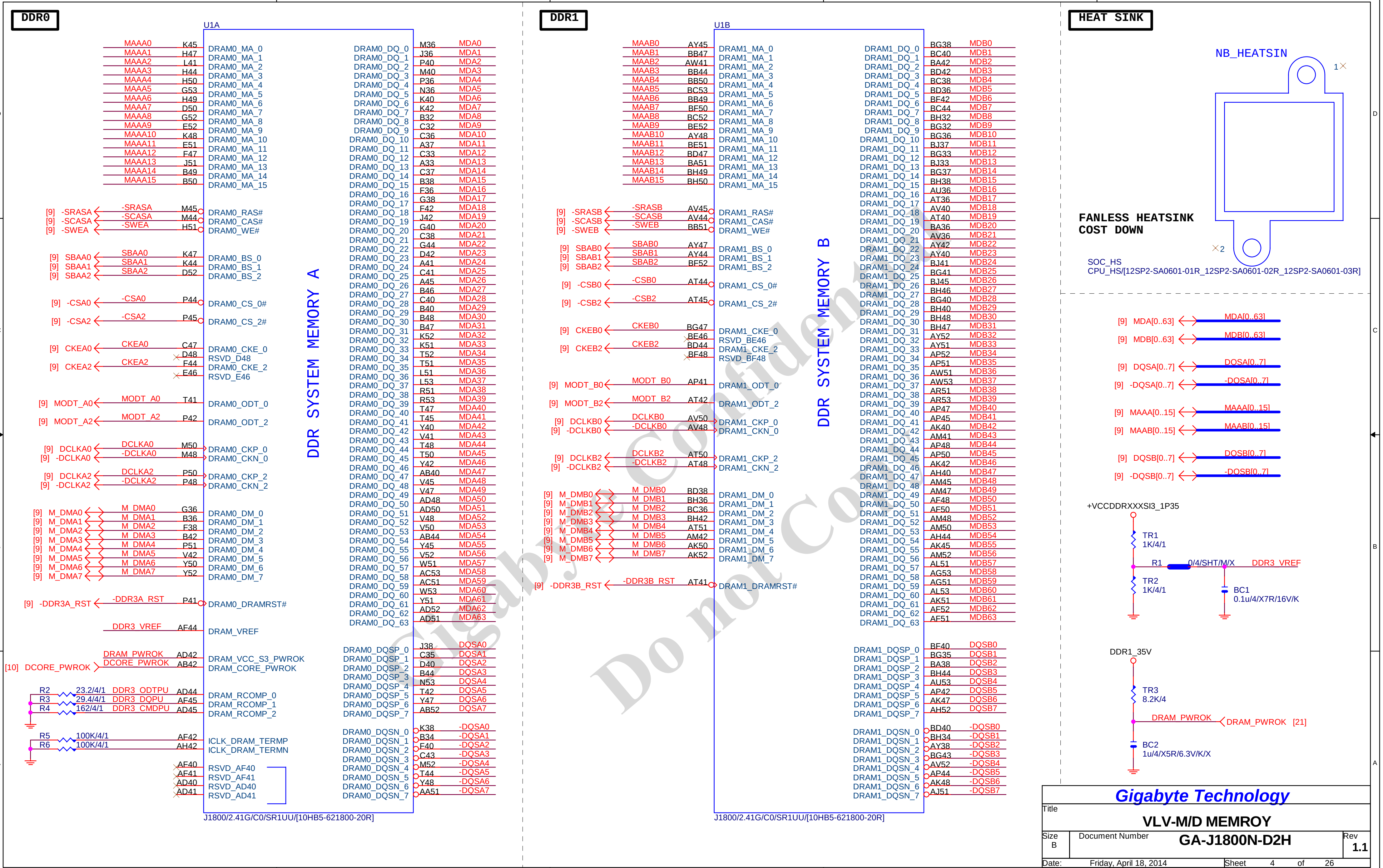

DDR0
U1A
DDR SYSTEM MEMORY A
MAAA0 K45 DRAM0_MA_0
MAAA1 H47 DRAM0_MA_1
MAAA2 L41 DRAM0_MA_2
MAAA3 H44 DRAM0_MA_3
MAAA4 H50 DRAM0_MA_4
MAAA5 G53 DRAM0_MA_5
MAAA6 H49 DRAM0_MA_6
MAAA7 D50 DRAM0_MA_7
MAAA8 G52 DRAM0_MA_8
MAAA9 E52 DRAM0_MA_9
MAAA10 K48 DRAM0_MA_10
MAAA11 E51 DRAM0_MA_11
MAAA12 F47 DRAM0_MA_12
MAAA13 J51 DRAM0_MA_13
MAAA14 B49 DRAM0_MA_14
MAAA15 B50 DRAM0_MA_15
[9] -SRASA -SRASA M45 DRAM0_RAS#
[9] -SCASA -SCASA M44 DRAM0_CAS#
[9] -SWEA -SWEA H51 DRAM0_WE#
[9] SBAA0 SBAA0 K47 DRAM0_BS_0
[9] SBAA1 SBAA1 K44 DRAM0_BS_1
[9] SBAA2 SBAA2 D52 DRAM0_BS_2
[9] -CSA0 -CSA0 P44 DRAM0_CS_0#
[9] -CSA2 -CSA2 P45 DRAM0_CS_2#
[9] CKEA0 CKEA0 C47 DRAM0_CKE_0
D48 RSVD_D48
[9] CKEA2 CKEA2 F44 DRAM0_CKE_2
E46 RSVD_E46
[9] MODT_A0 MODT_A0 T41 DRAM0_ODT_0
[9] MODT_A2 MODT_A2 P42 DRAM0_ODT_2
[9] DCLKA0 DCLKA0 M50 DRAM0_CKP_0
[9] -DCLKA0 -DCLKA0 M48 DRAM0_CKN_0
[9] DCLKA2 DCLKA2 P50 DRAM0_CKP_2
[9] -DCLKA2 -DCLKA2 P48 DRAM0_CKN_2
[9] M_DMA0 M_DMA0 G36 DRAM0_DM_0
[9] M_DMA1 M_DMA1 B36 DRAM0_DM_1
[9] M_DMA2 M_DMA2 F38 DRAM0_DM_2
[9] M_DMA3 M_DMA3 B42 DRAM0_DM_3
[9] M_DMA4 M_DMA4 P51 DRAM0_DM_4
[9] M_DMA5 M_DMA5 V42 DRAM0_DM_5
[9] M_DMA6 M_DMA6 Y50 DRAM0_DM_6
[9] M_DMA7 M_DMA7 Y52 DRAM0_DM_7
[9] -DDR3A_RST -DDR3A_RST P41 DRAM0_DRAMRST#
DDR3_VREF AF44 DRAM_VREF
DRAM_PWROK AD42 DRAM_VCC_S3_PWROK
[10] DCORE_PWROK DCORE_PWROK AB42 DRAM_CORE_PWROK
R2 23.2/4/1 DDR3_ODTPU AD44 DRAM_RCOMP_0
R3 29.4/4/1 DDR3_DQPU AF45 DRAM_RCOMP_1
R4 162/4/1 DDR3_CMDPU AD45 DRAM_RCOMP_2
R5 100K/4/1 AF42 ICLK_DRAM_TERMP
R6 100K/4/1 AH42 ICLK_DRAM_TERMN
AF40 RSVD_AF40
AF41 RSVD_AF41
AD40 RSVD_AD40
AD41 RSVD_AD41
DRAM0_DQ_0 M36 MDA0
DRAM0_DQ_1 J36 MDA1
DRAM0_DQ_2 P40 MDA2
DRAM0_DQ_3 M40 MDA3
DRAM0_DQ_4 P36 MDA4
DRAM0_DQ_5 N36 MDA5
DRAM0_DQ_6 K40 MDA6
DRAM0_DQ_7 K42 MDA7
DRAM0_DQ_8 B32 MDA8
DRAM0_DQ_9 C32 MDA9
DRAM0_DQ_10 C36 MDA10
DRAM0_DQ_11 A37 MDA11
DRAM0_DQ_12 C33 MDA12
DRAM0_DQ_13 A33 MDA13
DRAM0_DQ_14 C37 MDA14
DRAM0_DQ_15 B38 MDA15
DRAM0_DQ_16 F36 MDA16
DRAM0_DQ_17 G38 MDA17
DRAM0_DQ_18 F42 MDA18
DRAM0_DQ_19 J42 MDA19
DRAM0_DQ_20 G40 MDA20
DRAM0_DQ_21 C38 MDA21
DRAM0_DQ_22 G44 MDA22
DRAM0_DQ_23 D42 MDA23
DRAM0_DQ_24 A41 MDA24
DRAM0_DQ_25 C41 MDA25
DRAM0_DQ_26 A45 MDA26
DRAM0_DQ_27 B46 MDA27
DRAM0_DQ_28 C40 MDA28
DRAM0_DQ_29 B40 MDA29
DRAM0_DQ_30 B48 MDA30
DRAM0_DQ_31 B47 MDA31
DRAM0_DQ_32 K52 MDA32
DRAM0_DQ_33 K51 MDA33
DRAM0_DQ_34 T52 MDA34
DRAM0_DQ_35 T51 MDA35
DRAM0_DQ_36 L51 MDA36
DRAM0_DQ_37 L53 MDA37
DRAM0_DQ_38 R51 MDA38
DRAM0_DQ_39 R53 MDA39
DRAM0_DQ_40 T47 MDA40
DRAM0_DQ_41 T45 MDA41
DRAM0_DQ_42 Y40 MDA42
DRAM0_DQ_43 V41 MDA43
DRAM0_DQ_44 T48 MDA44
DRAM0_DQ_45 T50 MDA45
DRAM0_DQ_46 Y42 MDA46
DRAM0_DQ_47 AB40 MDA47
DRAM0_DQ_48 V45 MDA48
DRAM0_DQ_49 V47 MDA49
DRAM0_DQ_50 AD48 MDA50
DRAM0_DQ_51 AD50 MDA51
DRAM0_DQ_52 V48 MDA52
DRAM0_DQ_53 V50 MDA53
DRAM0_DQ_54 AB44 MDA54
DRAM0_DQ_55 Y45 MDA55
DRAM0_DQ_56 V52 MDA56
DRAM0_DQ_57 W51 MDA57
DRAM0_DQ_58 AC53 MDA58
DRAM0_DQ_59 AC51 MDA59
DRAM0_DQ_60 W53 MDA60
DRAM0_DQ_61 Y51 MDA61
DRAM0_DQ_62 AD52 MDA62
DRAM0_DQ_63 AD51 MDA63
DRAM0_DQSP_0 J38 DQSA0
DRAM0_DQSP_1 C35 DQSA1
DRAM0_DQSP_2 D40 DQSA2
DRAM0_DQSP_3 B44 DQSA3
DRAM0_DQSP_4 N53 DQSA4
DRAM0_DQSP_5 T42 DQSA5
DRAM0_DQSP_6 Y47 DQSA6
DRAM0_DQSP_7 AB52 DQSA7
DRAM0_DQSN_0 K38 -DQSA0
DRAM0_DQSN_1 B34 -DQSA1
DRAM0_DQSN_2 F40 -DQSA2
DRAM0_DQSN_3 C43 -DQSA3
DRAM0_DQSN_4 M52 -DQSA4
DRAM0_DQSN_5 T44 -DQSA5
DRAM0_DQSN_6 Y48 -DQSA6
DRAM0_DQSN_7 AA51 -DQSA7
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
DDR1
U1B
DDR SYSTEM MEMORY B
MAAB0 AY45 DRAM1_MA_0
MAAB1 BB47 DRAM1_MA_1
MAAB2 AW41 DRAM1_MA_2
MAAB3 BB44 DRAM1_MA_3
MAAB4 BB50 DRAM1_MA_4
MAAB5 BC53 DRAM1_MA_5
MAAB6 BB49 DRAM1_MA_6
MAAB7 BF50 DRAM1_MA_7
MAAB8 BC52 DRAM1_MA_8
MAAB9 BE52 DRAM1_MA_9
MAAB10 AY48 DRAM1_MA_10
MAAB11 BE51 DRAM1_MA_11
MAAB12 BD47 DRAM1_MA_12
MAAB13 BA51 DRAM1_MA_13
MAAB14 BH49 DRAM1_MA_14
MAAB15 BH50 DRAM1_MA_15
[9] -SRASB -SRASB AV45 DRAM1_RAS#
[9] -SCASB -SCASB AV44 DRAM1_CAS#
[9] -SWEB -SWEB BB51 DRAM1_WE#
[9] SBAB0 SBAB0 AY47 DRAM1_BS_0
[9] SBAB1 SBAB1 AY44 DRAM1_BS_1
[9] SBAB2 SBAB2 BF52 DRAM1_BS_2
[9] -CSB0 -CSB0 AT44 DRAM1_CS_0#
[9] -CSB2 -CSB2 AT45 DRAM1_CS_2#
[9] CKEB0 CKEB0 BG47 DRAM1_CKE_0
BE46 RSVD_BE46
[9] CKEB2 CKEB2 BD44 DRAM1_CKE_2
BF48 RSVD_BF48
[9] MODT_B0 MODT_B0 AP41 DRAM1_ODT_0
[9] MODT_B2 MODT_B2 AT42 DRAM1_ODT_2
[9] DCLKB0 DCLKB0 AV50 DRAM1_CKP_0
[9] -DCLKB0 -DCLKB0 AV48 DRAM1_CKN_0
[9] DCLKB2 DCLKB2 AT50 DRAM1_CKP_2
[9] -DCLKB2 -DCLKB2 AT48 DRAM1_CKN_2
[9] M_DMB0 M_DMB0 BD38 DRAM1_DM_0
[9] M_DMB1 M_DMB1 BH36 DRAM1_DM_1
[9] M_DMB2 M_DMB2 BC36 DRAM1_DM_2
[9] M_DMB3 M_DMB3 BH42 DRAM1_DM_3
[9] M_DMB4 M_DMB4 AT51 DRAM1_DM_4
[9] M_DMB5 M_DMB5 AM42 DRAM1_DM_5
[9] M_DMB6 M_DMB6 AK50 DRAM1_DM_6
[9] M_DMB7 M_DMB7 AK52 DRAM1_DM_7
[9] -DDR3B_RST -DDR3B_RST AT41 DRAM1_DRAMRST#
DRAM1_DQ_0 BG38 MDB0
DRAM1_DQ_1 BC40 MDB1
DRAM1_DQ_2 BA42 MDB2
DRAM1_DQ_3 BD42 MDB3
DRAM1_DQ_4 BC38 MDB4
DRAM1_DQ_5 BD36 MDB5
DRAM1_DQ_6 BF42 MDB6
DRAM1_DQ_7 BC44 MDB7
DRAM1_DQ_8 BH32 MDB8
DRAM1_DQ_9 BG32 MDB9
DRAM1_DQ_10 BG36 MDB10
DRAM1_DQ_11 BJ37 MDB11
DRAM1_DQ_12 BG33 MDB12
DRAM1_DQ_13 BJ33 MDB13
DRAM1_DQ_14 BG37 MDB14
DRAM1_DQ_15 BH38 MDB15
DRAM1_DQ_16 AU36 MDB16
DRAM1_DQ_17 AT36 MDB17
DRAM1_DQ_18 AV40 MDB18
DRAM1_DQ_19 AT40 MDB19
DRAM1_DQ_20 BA36 MDB20
DRAM1_DQ_21 AV36 MDB21
DRAM1_DQ_22 AY42 MDB22
DRAM1_DQ_23 AY40 MDB23
DRAM1_DQ_24 BJ41 MDB24
DRAM1_DQ_25 BG41 MDB25
DRAM1_DQ_26 BJ45 MDB26
DRAM1_DQ_27 BH46 MDB27
DRAM1_DQ_28 BG40 MDB28
DRAM1_DQ_29 BH40 MDB29
DRAM1_DQ_30 BH48 MDB30
DRAM1_DQ_31 BH47 MDB31
DRAM1_DQ_32 AY52 MDB32
DRAM1_DQ_33 AY51 MDB33
DRAM1_DQ_34 AP52 MDB34
DRAM1_DQ_35 AP51 MDB35
DRAM1_DQ_36 AW51 MDB36
DRAM1_DQ_37 AW53 MDB37
DRAM1_DQ_38 AR51 MDB38
DRAM1_DQ_39 AR53 MDB39
DRAM1_DQ_40 AP47 MDB40
DRAM1_DQ_41 AP45 MDB41
DRAM1_DQ_42 AK40 MDB42
DRAM1_DQ_43 AM41 MDB43
DRAM1_DQ_44 AP48 MDB44
DRAM1_DQ_45 AP50 MDB45
DRAM1_DQ_46 AK42 MDB46
DRAM1_DQ_47 AH40 MDB47
DRAM1_DQ_48 AM45 MDB48
DRAM1_DQ_49 AM47 MDB49
DRAM1_DQ_50 AF48 MDB50
DRAM1_DQ_51 AF50 MDB51
DRAM1_DQ_52 AM48 MDB52
DRAM1_DQ_53 AM50 MDB53
DRAM1_DQ_54 AH44 MDB54
DRAM1_DQ_55 AK45 MDB55
DRAM1_DQ_56 AM52 MDB56
DRAM1_DQ_57 AL51 MDB57
DRAM1_DQ_58 AG53 MDB58
DRAM1_DQ_59 AG51 MDB59
DRAM1_DQ_60 AL53 MDB60
DRAM1_DQ_61 AK51 MDB61
DRAM1_DQ_62 AF52 MDB62
DRAM1_DQ_63 AF51 MDB63
DRAM1_DQSP_0 BF40 DQSB0
DRAM1_DQSP_1 BG35 DQSB1
DRAM1_DQSP_2 BA38 DQSB2
DRAM1_DQSP_3 BH44 DQSB3
DRAM1_DQSP_4 AU53 DQSB4
DRAM1_DQSP_5 AP42 DQSB5
DRAM1_DQSP_6 AK47 DQSB6
DRAM1_DQSP_7 AH52 DQSB7
DRAM1_DQSN_0 BD40 -DQSB0
DRAM1_DQSN_1 BH34 -DQSB1
DRAM1_DQSN_2 AY38 -DQSB2
DRAM1_DQSN_3 BG43 -DQSB3
DRAM1_DQSN_4 AV52 -DQSB4
DRAM1_DQSN_5 AP44 -DQSB5
DRAM1_DQSN_6 AK48 -DQSB6
DRAM1_DQSN_7 AJ51 -DQSB7
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
HEAT SINK
NB_HEATSIN
FANLESS HEATSINK
COST DOWN
SOC_HS
CPU_HS/[12SP2-SA0601-01R_12SP2-SA0601-02R_12SP2-SA0601-03R]
[9] MDA[0..63] MDA[0..63]
[9] MDB[0..63] MDB[0..63]
[9] DQSA[0..7] DQSA[0..7]
[9] -DQSA[0..7] -DQSA[0..7]
[9] MAAA[0..15] MAAA[0..15]
[9] MAAB[0..15] MAAB[0..15]
[9] DQSB[0..7] DQSB[0..7]
[9] -DQSB[0..7] -DQSB[0..7]
+VCCDDRXXXSI3_1P35
TR1 1K/4/1
R1 0/4/SHT/M/X DDR3_VREF
TR2 1K/4/1
BC1 0.1u/4/X7R/16V/K
DDR1_35V
TR3 8.2K/4
DRAM_PWROK DRAM_PWROK [21]
BC2 1u/4/X5R/6.3V/K/X
Gigabyte Confidential Do not Copy
Gigabyte Technology
Title
VLV-M/D MEMROY
Size B
Document Number GA-J1800N-D2H
Rev 1.1
Date: Friday, April 18, 2014
Sheet 4 of 26

DISPLAY

U1C

Digital Display Interface

CRT

RSVD

DDI0_TXP_0 DDI0_TXN_0 DDI0_TXP_1 DDI0_TXN_1 DDI0_TXP_2 DDI0_TXN_2 DDI0_TXP_3 DDI0_TXN_3
DDI0_AUXP DDI0_AUXN DDI0_HPD DDI0_DDCDATA DDI0_DDCCLK DDI0_VDDEN DDI0_BKLTEN DDI0_BKLTCTL

[25] HDMI_TX2 [25] HDMI_TX2- [25] HDMI_TX1 [25] HDMI_TX1- [25] HDMI_TX0 [25] HDMI_TX0- [25] HDMI_TXC [25] HDMI_TXC-
[25] HDMI_HDP_F
[25] DDP0_CTRLDATA [25] DDP0_CTRLCLK

DD0 DETECT
0:NOT
1:DETECT

DDI1_TXP_0 DDI1_TXN_0 DDI1_TXP_1 DDI1_TXN_1 DDI1_TXP_2 DDI1_TXN_2 DDI1_TXP_3 DDI1_TXN_3
DDI1_AUXP DDI1_AUXN DDI1_HPD DDI1_DDCDATA DDI1_DDCCLK DDI1_VDDEN DDI1_BKLTEN DDI1_BKLTCTL

VCC1_8V R24 2.2K/4/1/X eDP_DDCDATA
R26 8.2K/4

DD1 DETECT
0:NOT
1:DETECT

RSVD_T2 RSVD_T3 RSVD_AB3 RSVD_AB2 RSVD_Y3 RSVD_Y2 RSVD_W3 RSVD_W1 RSVD_V2 RSVD_V3 RSVD_R3 RSVD_R1 RSVD_AD6 RSVD_AD4 RSVD_AB9 RSVD_AB7 RSVD_Y4 RSVD_Y6 RSVD_V4 RSVD_V6 GPIO_S0_NC13 GPIO_S0_NC14 RSVD_AB14 GPIO_S0_NC12 RSVD_C30

Intel reserved

VCC1_8V R35 8.2K/4/X BRIDGE_SDA
R36 8.2K/4
TP3
TP4

VCC1_8V R37 2.2K/4/1/X DDP0_CTRLDATA
R38 8.2K/4/X

Intel reserved

VGA_RED VGA_BLUE VGA_GREEN
VGA_IREF VGA_IRTN
VGA_HSYNC VGA_VSYNC
VGA_DDCCLK VGA_DDCDATA

CRT_IREF R7 357/4/1
H_SYNC R8 33/4 GHSYNC
V_SYNC R9 33/4 GVSYNC
DDCCLK
DDCDATA

DDI0_RCOMP_N R12 402/4/1
DDI0_RCOMP_P
VSS_AM4 R16 0/4/SHT/M/X
VSS_AM2 R17 0/4/SHT/M/X
VSS_AH4 R23 0/4/SHT/M/X
VSS_AH2 R20 0/4/SHT/M/X

RSVD_T7 RSVD_T9 RSVD_AB13 RSVD_AB12 RSVD_Y12 RSVD_Y13 RSVD_V10 RSVD_V9 RSVD_T12 RSVD_T10 RSVD_V14 RSVD_V13 RSVD_T14 RSVD_T13 RSVD_T6 RSVD_T4 RSVD_P14
RSVD_K34
RSVD_D32 RSVD_N32 RSVD_J34 RSVD_K28 RSVD_F28 RSVD_F32 RSVD_D34 RSVD_J28 RSVD_D28 RSVD_M32 RSVD_F34

J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]

U1D

SATA_TXP_0 SATA_TXN_0 SATA_RXP_0 SATA_RXN_0
SATA_TXP_1 SATA_TXN_1 SATA_RXP_1 SATA_RXN_1
SATA_GP0 SATA_GP1 SATA_LED#
ICLK_SATA_TERMP ICLK_SATA_TERMN
SATA_RCOMP_P SATA_RCOMP_N

SATA0TXP SATA0TXN SATA0RXP SATA0RXN
SATA1TXP SATA1TXN SATA1RXP SATA1RXN
[14] -SATALED

R10 0/4/SHT/M/X
R11 0/4/SHT/M/X
R13 402/4/1

MMC1_CLK MMC1_D0 MMC1_D1 MMC1_D2 MMC1_D3 MMC1_D4 MMC1_D5 MMC1_D6 MMC1_D7 MMC1_CMD MMC1_RST# MMC1_RCOMP
SD2_CLK SD2_D0 SD2_D1 SD2_D2 SD2_D3_CD# SD2_CMD
SD3_CLK SD3_D0 SD3_D1 SD3_D2 SD3_D3 SD3_CD# SD3_CMD SD3_1P8EN SD3_PWREN# SD3_RCOMP

SATA
SD CARD

PCIE_TXP_0 PCIE_TXN_0 PCIE_RXP_0 PCIE_RXN_0
PCIE_TXP_1 PCIE_TXN_1 PCIE_RXP_1 PCIE_RXN_1
PCIE_TXP_2 PCIE_TXN_2 PCIE_RXP_2 PCIE_RXN_2
PCIE_TXP_3 PCIE_TXN_3 PCIE_RXP_3 PCIE_RXN_3
VSS_BB7 VSS_BB5

LA_ML_OP [19] LA_ML_ON [19] LA_ML_IP [19] LA_ML_IN [19]
PCIEX1_OP [11] PCIEX1_ON [11] PCIEX1_IP [11] PCIEX1_IN [11]
MPCIE_TP [11] MPCIE_TN [11] MPCIE_IP [11] MPCIE_IN [11]

PET_P3 C178 0.1u/4/X7R/16V/K
PET_N3 C179 0.1u/4/X7R/16V/K
R14 0/4/SHT/M/X
R15 0/4/SHT/M/X

PCIE

PCIE_CLKREQ_0# PCIE_CLKREQ_1# PCIE_CLKREQ_2# PCIE_CLKREQ_3# SD3_WP_BD5
PCIE_RCOMP_P PCIE_RCOMP_N
PCIE_RCOMP_P R21 402/4/1

CLKREQ

RESERVED_BB4 RESERVED_BB3 RESERVED_AV10 RESERVED_AV9

HDA_RCOMP HDA_RST# HDA_SYNC HDA_CLK HDA_SDO HDA_SDI0 HDA_SDI1 HDA_DOCKRST# HDA_DOCKEN#
HDA_RCOMP R28 49.9/4/1
A_SYC R30 33/4 ACZ_SYNC [17]
R31 33/4 ACZ_BITCLK [17]
A_SO R32 33/4 ACZ_SDOUT [17]
ACZ_SDIN0 [17]
ACZ_RST [17]

HDA

PROCHOT# C24 A_-PROCHOT A_-PROCHOT [15]
LPE_I2S2_CLK LPE_I2S2_FRM LPE_I2S2_DATAOUT LPE_I2S2_DATAIN
I2S_2_FS I2S_2_TXD
RSVD_P34 RSVD_N34 RSVD_AK9 RSVD_AK7

J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]

LAN
PCIEX1
MINI PCI-E

VCC1_8VDUAL
A_SO R18 8.2K/4/X
ACZ_SDIN0 R19 8.2K/4/X
VCC1_05V
A_-PROCHOT R22 51/4/1

VCC1_8V
I2S_2_FS R25 8.2K/4/X
R27 8.2K/4/X

BIOS BOOT SELECTION
0-->LPC
1-->SPI

Intel reserved
FOR TXE
ENABLE/DISABLE

R33 8.2K/4/X
I2S_2_TXD
VCC1_8V R34 8.2K/4

SECURITY FLASH DESCRIPTOR
0-->OVERRIDE
1-->NORMAL

SATA2 CONN

SATA2_0

SATA0TXP 0.01u/4/X7R/25V/K C3 SATA0TXPC
SATA0TXN 0.01u/4/X7R/25V/K C5 SATA0TXNC
SATA0RXN 0.01u/4/X7R/25V/K C7 SATA0RXNC
SATA0RXP 0.01u/4/X7R/25V/K C9 SATA0RXPC

GND T+ T- GND R- R+ GND

SATA2/7/BK/H/OP/VA/D/1/B

BLACK CONNECTOR

SATA2_1

SATA1TXP 0.01u/4/X7R/25V/K C4 SATA1TXPC
SATA1TXN 0.01u/4/X7R/25V/K C6 SATA1TXNC
SATA1RXN 0.01u/4/X7R/25V/K C8 SATA1RXNC
SATA1RXP 0.01u/4/X7R/25V/K C10 SATA1RXPC

GND T+ T- GND R- R+ GND

SATA2/7/BK/H/OP/VA/D/1/B

VGA ESD

ESD1
VGADDCCLK VGADDCDATA GHSYNC GVSYNC VCC_5
AZC099-04S/SOT23-6L

SSOP6_ESD

ESD2
VGA_R VGA_G VCC3 VGA_B
AZC099-04S/SOT23-6L

VGA SIGNAL

GVSYNC C17 100p/4/NPO/50V/J/X
GHSYNC C18 100p/4/NPO/50V/J/X

R G B
FB1 FB2 FB3 60/4/3A/S
VGA_R VGA_G VGA_B

R39 75/4/1 R41 75/4/1 R40 75/4/1

Close to Filter

C11 C12 C13 10p/4/NPO/50V/J
C14 C15 C16 22p/4/NPO/50V/J

VCC3_SOC
R44 2.2K/4/1 R45 2.2K/4/1
DDCDATA
DDCCLK

VCC
R46 1K/4/1
Q1 2N7002/SOT23/25pF/5
R42 2.2K/4/1
VCC_5
R43 2.2K/4/1
VGADDCDATA

Q2 2N7002/SOT23/25pF/5
VGADDCCLK
R47 1K/4/1

D-SUB

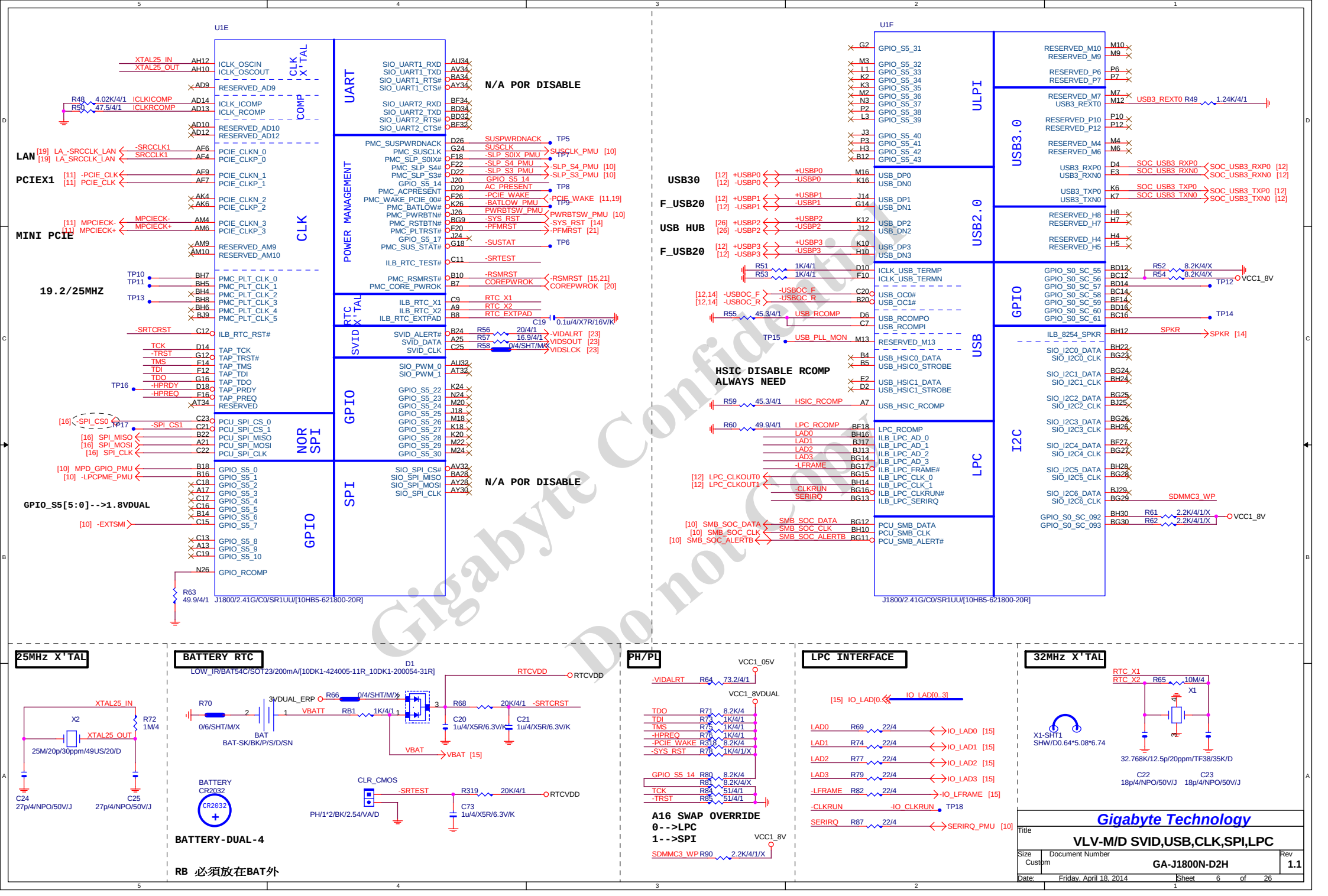
FUSEVCC_R
BC3 0.1u/4/X7R/16V/K/X

VGA_R VGA_G VGA_B
VGA
VGADDCDATA GHSYNC GVSYNC VGADDCCLK

BLACK D-SUB

VGA/BK/SC-11/RA/D/L/[11NR6-103015-21R_11NR6-103015-22R]

Gigabyte Technology			
Title: DISPLAY,SATA,SD,GBE			
Size: Custom	Document Number: GA-J1800N-D2H		Rev: 1.1
Date: Friday, April 18, 2014	Sheet 5 of 26		

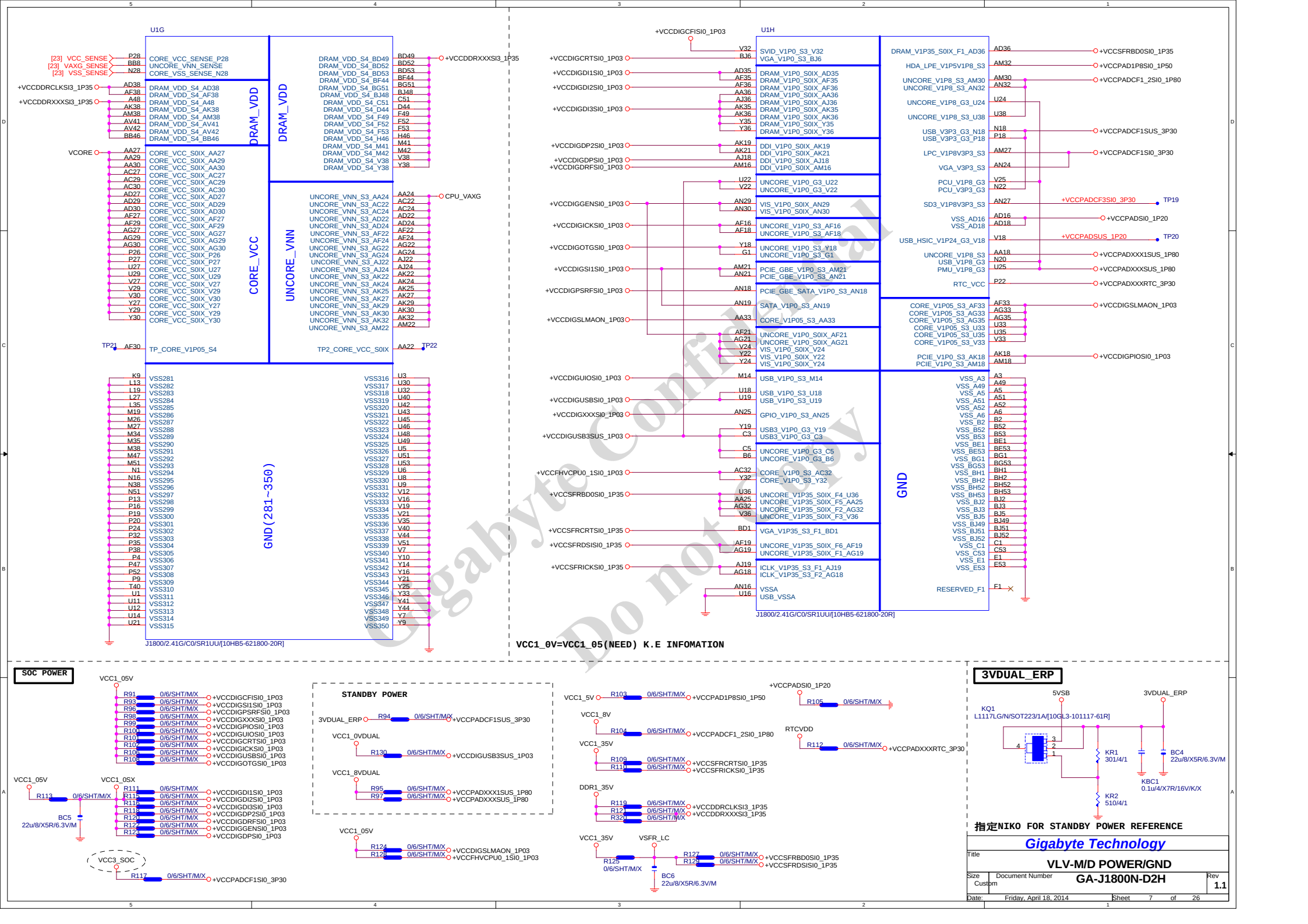


Gigabyte Technology

Title: VLV-M/D SVID,USB,CLK,SPI,LPC

Size	Document Number	Rev
Custom	GA-J1800N-D2H	1.1

Date: Friday, April 18, 2014 Sheet 6 of 26


U1G
[23] VCC_SENSE
[23] VAXG_SENSE
[23] VSS_SENSE
CORE_VCC_SENSE_P28
UNCORE_VNN_SENSE
CORE_VSS_SENSE_N28
+VCCDDRCLKSI3_1P35
+VCCDDRXXXSI3_1P35
DRAM_VDD_S4_AD38
DRAM_VDD_S4_AF38
DRAM_VDD_S4_A48
DRAM_VDD_S4_AK38
DRAM_VDD_S4_AM38
DRAM_VDD_S4_AV41
DRAM_VDD_S4_AV42
DRAM_VDD_S4_BB46
DRAM_VDD
DRAM_VDD_S4_BD49
DRAM_VDD_S4_BD52
DRAM_VDD_S4_BD53
DRAM_VDD_S4_BF44
DRAM_VDD_S4_BG51
DRAM_VDD_S4_BJ48
DRAM_VDD_S4_C51
DRAM_VDD_S4_D44
DRAM_VDD_S4_F49
DRAM_VDD_S4_F52
DRAM_VDD_S4_F53
DRAM_VDD_S4_H46
DRAM_VDD_S4_M41
DRAM_VDD_S4_M42
DRAM_VDD_S4_V38
DRAM_VDD_S4_Y38
+VCCDDRXXXSI3_1P35
VCORE
CORE_VCC_S0IX_AA27
CORE_VCC_S0IX_AA29
CORE_VCC_S0IX_AA30
CORE_VCC_S0IX_AC27
CORE_VCC_S0IX_AC29
CORE_VCC_S0IX_AC30
CORE_VCC_S0IX_AD27
CORE_VCC_S0IX_AD29
CORE_VCC_S0IX_AD30
CORE_VCC_S0IX_AF27
CORE_VCC_S0IX_AF29
CORE_VCC_S0IX_AG27
CORE_VCC_S0IX_AG29
CORE_VCC_S0IX_AG30
CORE_VCC_S0IX_P26
CORE_VCC_S0IX_P27
CORE_VCC_S0IX_U27
CORE_VCC_S0IX_U29
CORE_VCC_S0IX_V27
CORE_VCC_S0IX_V29
CORE_VCC_S0IX_V30
CORE_VCC_S0IX_Y27
CORE_VCC_S0IX_Y29
CORE_VCC_S0IX_Y30
CORE_VCC
UNCORE_VNN_S3_AA24
UNCORE_VNN_S3_AC22
UNCORE_VNN_S3_AC24
UNCORE_VNN_S3_AD22
UNCORE_VNN_S3_AD24
UNCORE_VNN_S3_AF22
UNCORE_VNN_S3_AF24
UNCORE_VNN_S3_AG22
UNCORE_VNN_S3_AG24
UNCORE_VNN_S3_AJ22
UNCORE_VNN_S3_AJ24
UNCORE_VNN_S3_AK22
UNCORE_VNN_S3_AK24
UNCORE_VNN_S3_AK25
UNCORE_VNN_S3_AK27
UNCORE_VNN_S3_AK29
UNCORE_VNN_S3_AK30
UNCORE_VNN_S3_AK32
UNCORE_VNN_S3_AM22
UNCORE_VNN
CPU_VAXG
TP21
TP_CORE_V1P05_S4
TP2_CORE_VCC_S0IX
TP22
GND(281~350)
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
U1H
+VCCDIGCFISI0_1P03
+VCCDIGCRTSI0_1P03
+VCCDIGDI1SI0_1P03
+VCCDIGDI2SI0_1P03
+VCCDIGDI3SI0_1P03
+VCCDIGDP2SI0_1P03
+VCCDIGDPSI0_1P03
+VCCDIGDRFSI0_1P03
+VCCDIGGENSI0_1P03
+VCCDIGICKSI0_1P03
+VCCDIGOTGSI0_1P03
+VCCDIGSI1SI0_1P03
+VCCDIGPSRFSI0_1P03
+VCCDIGSLMAON_1P03
+VCCDIGUIOSI0_1P03
+VCCDIGUSBSI0_1P03
+VCCDIGXXXSI0_1P03
+VCCDIGUSB3SUS_1P03
+VCCFHVCPU0_1SI0_1P03
+VCCSFRBD0SI0_1P35
+VCCSFRCRTSI0_1P35
+VCCSFRDSISI0_1P35
+VCCSFRICKSI0_1P35
SVID_V1P0_S3_V32
VGA_V1P0_S3_BJ6
DRAM_V1P0_S0IX_AD35
DRAM_V1P0_S0IX_AF35
DRAM_V1P0_S0IX_AF36
DRAM_V1P0_S0IX_AA36
DRAM_V1P0_S0IX_AJ36
DRAM_V1P0_S0IX_AK35
DRAM_V1P0_S0IX_AK36
DRAM_V1P0_S0IX_Y35
DRAM_V1P0_S0IX_Y36
DDI_V1P0_S0IX_AK19
DDI_V1P0_S0IX_AK21
DDI_V1P0_S0IX_AJ18
DDI_V1P0_S0IX_AM16
UNCORE_V1P0_G3_U22
UNCORE_V1P0_G3_V22
VIS_V1P0_S0IX_AN29
VIS_V1P0_S0IX_AN30
UNCORE_V1P0_S3_AF16
UNCORE_V1P0_S3_AF18
UNCORE_V1P0_S3_Y18
UNCORE_V1P0_S3_G1
PCIE_GBE_V1P0_S3_AM21
PCIE_GBE_V1P0_S3_AN21
PCIE_GBE_SATA_V1P0_S3_AN18
SATA_V1P0_S3_AN19
CORE_V1P05_S3_AA33
UNCORE_V1P0_S0IX_AF21
UNCORE_V1P0_S0IX_AG21
VIS_V1P0_S0IX_Y24
VIS_V1P0_S0IX_Y22
VIS_V1P0_S0IX_Y24
USB_V1P0_S3_M14
USB_V1P0_S3_U18
USB_V1P0_S3_U19
GPIO_V1P0_S3_AN25
USB3_V1P0_G3_Y19
USB3_V1P0_G3_C3
UNCORE_V1P0_G3_C5
UNCORE_V1P0_G3_B6
CORE_V1P0_S3_AC32
CORE_V1P0_S3_Y32
UNCORE_V1P35_S0IX_F4_U36
UNCORE_V1P35_S0IX_F5_AA25
UNCORE_V1P35_S0IX_F2_AG32
UNCORE_V1P35_S0IX_F3_V36
VGA_V1P35_S3_F1_BD1
UNCORE_V1P35_S0IX_F6_AF19
UNCORE_V1P35_S0IX_F1_AG19
ICLK_V1P35_S3_F1_AJ19
ICLK_V1P35_S3_F2_AG18
VSSA
USB_VSSA
DRAM_V1P35_S0IX_F1_AD36
HDA_LPE_V1P5V1P8_S3
UNCORE_V1P8_S3_AM30
UNCORE_V1P8_S3_AN32
UNCORE_V1P8_G3_U24
UNCORE_V1P8_S3_U38
USB_V3P3_G3_N18
USB_V3P3_G3_P18
LPC_V1P8V3P3_S3
VGA_V3P3_S3
PCU_V1P8_G3
PCU_V3P3_G3
SD3_V1P8V3P3_S3
VSS_AD16
VSS_AD18
USB_HSIC_V1P24_G3_V18
UNCORE_V1P8_S3
USB_V1P8_G3
PMU_V1P8_G3
RTC_VCC
CORE_V1P05_S3_AF33
CORE_V1P05_S3_AG33
CORE_V1P05_S3_AG35
CORE_V1P05_S3_U33
CORE_V1P05_S3_U35
CORE_V1P05_S3_V33
PCIE_V1P0_S3_AK18
PCIE_V1P0_S3_AM18
RESERVED_F1
+VCCSFRBD0SI0_1P35
+VCCPAD1P8SI0_1P50
+VCCPADCF1_2SI0_1P80
+VCCPADCF1SUS_3P30
+VCCPADCF1SI_3P30
+VCCPADCF3SI0_3P30
+VCCPADSI0_1P20
+VCCPADSUS_1P20
+VCCPADXXX1SUS_1P80
+VCCPADXXXSUS_1P80
+VCCPADXXXRTC_3P30
+VCCDIGSLMAON_1P03
+VCCDIGPIOSI0_1P03
GND
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
VCC1_0V=VCC1_05(NEED) K.E INFOMATION
SOC POWER
VCC1_05V
VCC1_0SX
VCC3_SOC
STANDBY POWER
3VDUAL_ERP
VCC1_0VDUAL
VCC1_8VDUAL
VCC1_8V
VCC1_35V
DDR1_35V
VSFR_LC
RTCVDD
3VDUAL_ERP
5VSB
KQ1
L1117LG/N/SOT223/1A/[10GL3-101117-61R]
KR1 301/4/1
KR2 510/4/1
BC4 22u/8/X5R/6.3V/M
KBC1 0.1u/4/X7R/16V/K/X
BC5 22u/8/X5R/6.3V/M
BC6 22u/8/X5R/6.3V/M
指定NIKO FOR STANDBY POWER REFERENCE
Gigabyte Technology
Title
VLV-M/D POWER/GND
Size
Custom
Document Number
GA-J1800N-D2H
Rev
1.1
Date: Friday, April 18, 2014
Sheet 7 of 26
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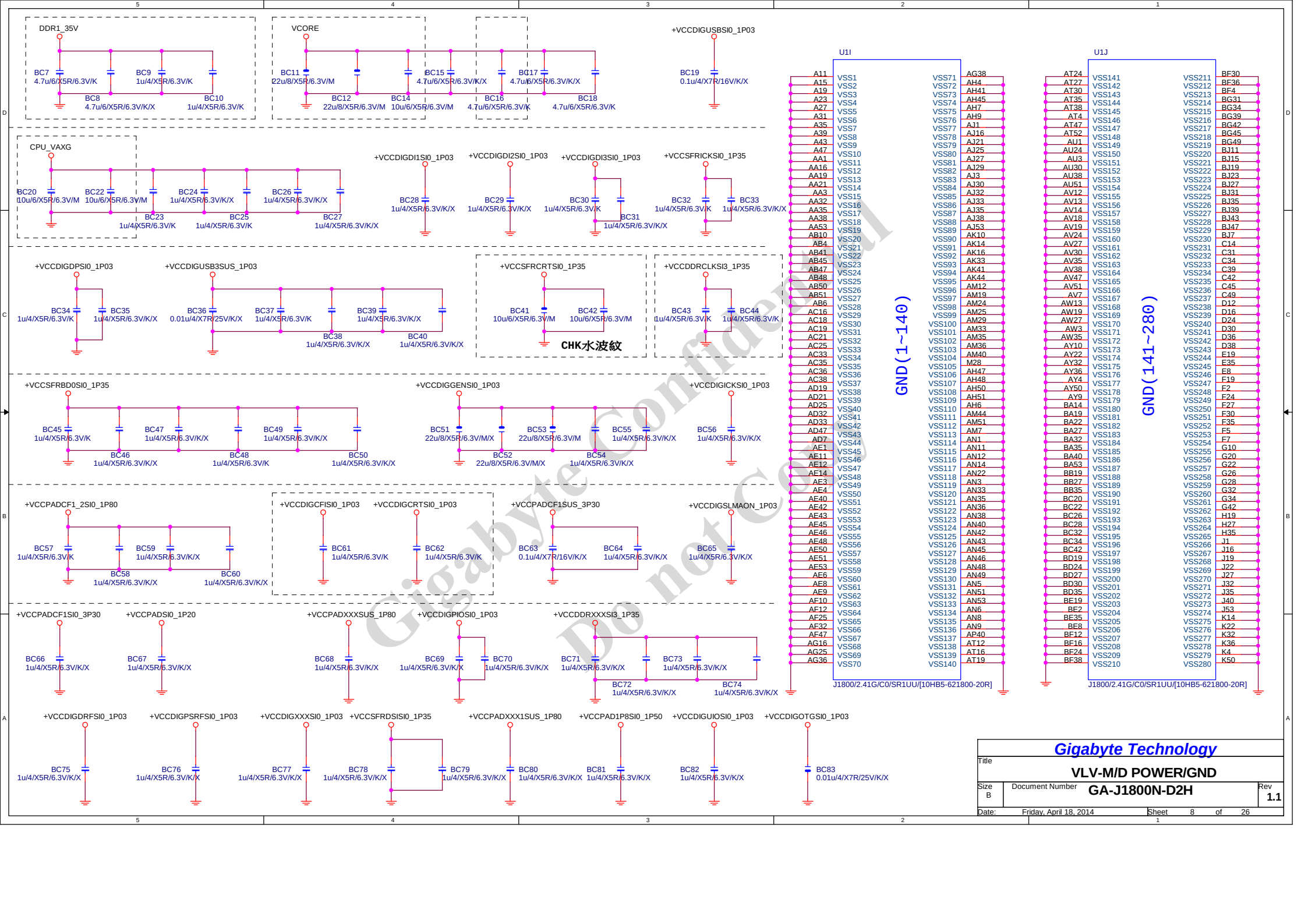
DDR1_35V
BC7 4.7u/6/X5R/6.3V/K
BC8 4.7u/6/X5R/6.3V/K/X
BC9 1u/4/X5R/6.3V/K
BC10 1u/4/X5R/6.3V/K
VCORE
BC11 22u/8/X5R/6.3V/M
BC12 22u/8/X5R/6.3V/M
BC14 10u/6/X5R/6.3V/M
BC15 4.7u/6/X5R/6.3V/K/X
BC16 4.7u/6/X5R/6.3V/K
BC17 4.7u/6/X5R/6.3V/K/X
BC18 4.7u/6/X5R/6.3V/K
+VCCDIGUSBSI0_1P03
BC19 0.1u/4/X7R/16V/K/X
CPU_VAXG
BC20 10u/6/X5R/6.3V/M
BC22 10u/6/X5R/6.3V/M
BC23 1u/4/X5R/6.3V/K
BC24 1u/4/X5R/6.3V/K/X
BC25 1u/4/X5R/6.3V/K
BC26 1u/4/X5R/6.3V/K/X
BC27 1u/4/X5R/6.3V/K/X
+VCCDIGDI1SI0_1P03
BC28 1u/4/X5R/6.3V/K/X
+VCCDIGDI2SI0_1P03
BC29 1u/4/X5R/6.3V/K/X
+VCCDIGDI3SI0_1P03
BC30 1u/4/X5R/6.3V/K
BC31 1u/4/X5R/6.3V/K/X
+VCCSFRICKSI0_1P35
BC32 1u/4/X5R/6.3V/K
BC33 1u/4/X5R/6.3V/K/X
+VCCDIGDPSI0_1P03
BC34 1u/4/X5R/6.3V/K
BC35 1u/4/X5R/6.3V/K/X
+VCCDIGUSB3SUS_1P03
BC36 0.01u/4/X7R/25V/K/X
BC37 1u/4/X5R/6.3V/K
BC38 1u/4/X5R/6.3V/K/X
BC39 1u/4/X5R/6.3V/K/X
BC40 1u/4/X5R/6.3V/K/X
+VCCSFRCRTSI0_1P35
BC41 10u/6/X5R/6.3V/M
BC42 10u/6/X5R/6.3V/M
CHK水波紋
+VCCDDRCLKSI3_1P35
BC43 1u/4/X5R/6.3V/K
BC44 1u/4/X5R/6.3V/K/X
+VCCSFRBD0SI0_1P35
BC45 1u/4/X5R/6.3V/K
BC46 1u/4/X5R/6.3V/K/X
BC47 1u/4/X5R/6.3V/K/X
BC48 1u/4/X5R/6.3V/K
BC49 1u/4/X5R/6.3V/K/X
BC50 1u/4/X5R/6.3V/K/X
+VCCDIGGENSI0_1P03
BC51 22u/8/X5R/6.3V/M/X
BC52 22u/8/X5R/6.3V/M/X
BC53 22u/8/X5R/6.3V/M
BC54 1u/4/X5R/6.3V/K/X
BC55 1u/4/X5R/6.3V/K/X
+VCCDIGICKSI0_1P03
BC56 1u/4/X5R/6.3V/K/X
+VCCPADCF1_2SI0_1P80
BC57 1u/4/X5R/6.3V/K
BC58 1u/4/X5R/6.3V/K/X
BC59 1u/4/X5R/6.3V/K/X
BC60 1u/4/X5R/6.3V/K/X
+VCCDIGCFISI0_1P03
BC61 1u/4/X5R/6.3V/K
+VCCDIGCRTSI0_1P03
BC62 1u/4/X5R/6.3V/K
+VCCPADCF1SUS_3P30
BC63 0.1u/4/X7R/16V/K/X
BC64 1u/4/X5R/6.3V/K/X
+VCCDIGSLMAON_1P03
BC65 1u/4/X5R/6.3V/K/X
+VCCPADCF1SI0_3P30
BC66 1u/4/X5R/6.3V/K/X
+VCCPADSI0_1P20
BC67 1u/4/X5R/6.3V/K/X
+VCCPADXXXSUS_1P80
BC68 1u/4/X5R/6.3V/K/X
+VCCDIGPISI0_1P03
BC69 1u/4/X5R/6.3V/K/X
BC70 1u/4/X5R/6.3V/K/X
+VCCDDRXXXSI3_1P35
BC71 1u/4/X5R/6.3V/K/X
BC72 1u/4/X5R/6.3V/K/X
BC73 1u/4/X5R/6.3V/K/X
BC74 1u/4/X5R/6.3V/K/X
+VCCDIGDRFSI0_1P03
BC75 1u/4/X5R/6.3V/K/X
+VCCDIGPSRFSI0_1P03
BC76 1u/4/X5R/6.3V/K/X
+VCCDIGXXXSI0_1P03
BC77 1u/4/X5R/6.3V/K/X
+VCCSFRDSISI0_1P35
BC78 1u/4/X5R/6.3V/K/X
BC79 1u/4/X5R/6.3V/K/X
+VCCPADXXX1SUS_1P80
BC80 1u/4/X5R/6.3V/K/X
+VCCPAD1P8SI0_1P50
BC81 1u/4/X5R/6.3V/K/X
+VCCDIGUIOSI0_1P03
BC82 1u/4/X5R/6.3V/K/X
+VCCDIGOTGSI0_1P03
BC83 0.01u/4/X7R/25V/K/X
U1I
GND(1~140)
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
U1J
GND(141~280)
J1800/2.41G/C0/SR1UU/[10HB5-621800-20R]
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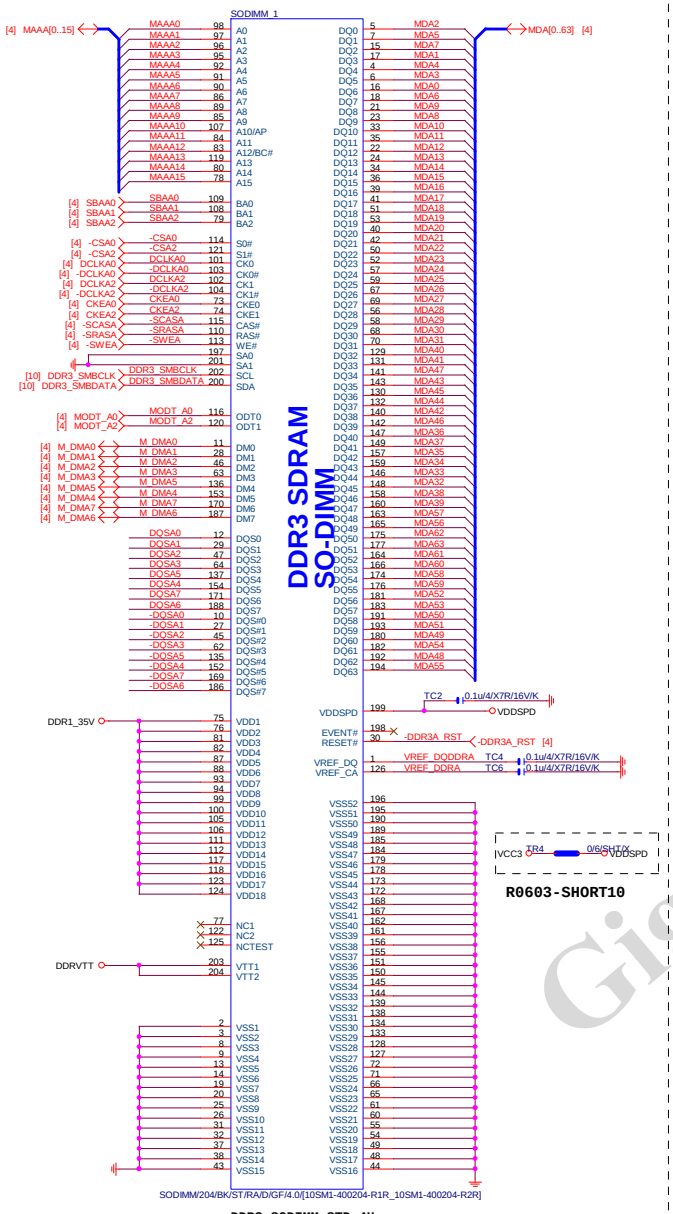
Gigabyte Technology
Title
VLV-M/D POWER/GND
Size B
Document Number GA-J1800N-D2H
Rev 1.1
Date: Friday, April 18, 2014
Sheet 8 of 26

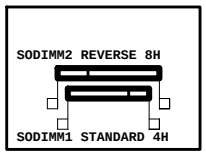
DDR3L A

DUAL CHANNEL

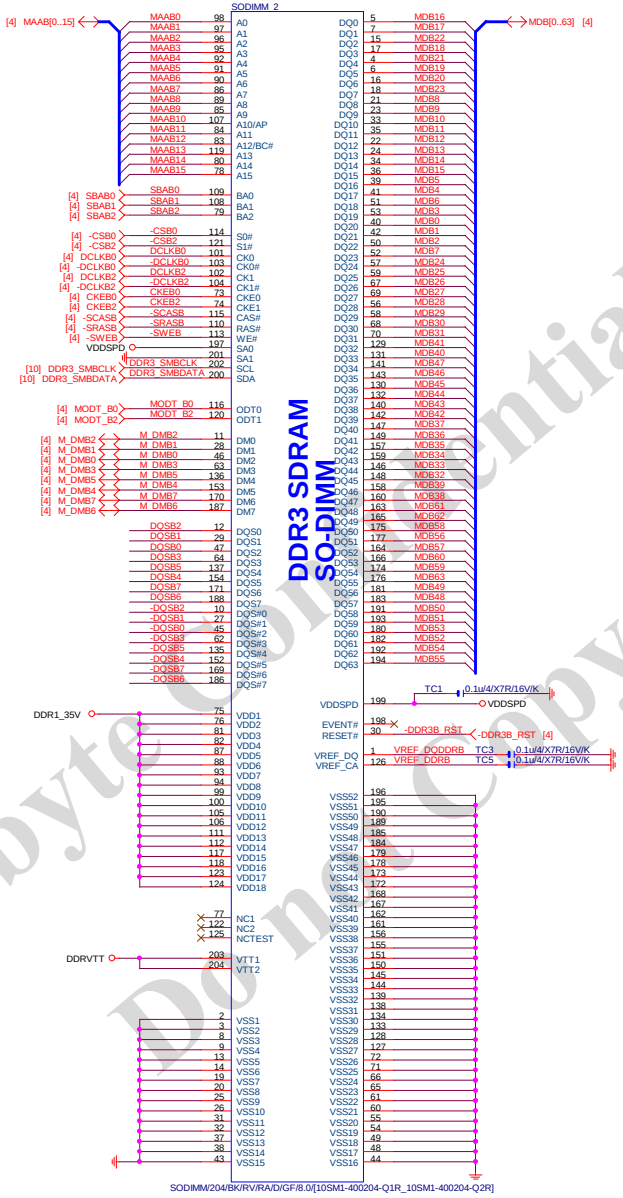


DDR3-SODIMM-STD-4H

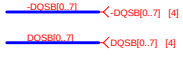
R0603-SHORT10



DDR3L B



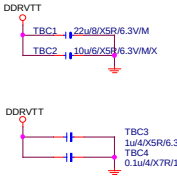
DDR3-SODIMM-RVS-8H



10SM1-400204-Q1R 鴻海 黑色 REVERSE
10SM1-400204-R1R 鴻海 黑色 STANDARD

10SM1-400204-Q2R 德潤 黑色 REVERSE
10SM1-400204-R2R 德潤 黑色 STANDARD

DDRVTT Decouple



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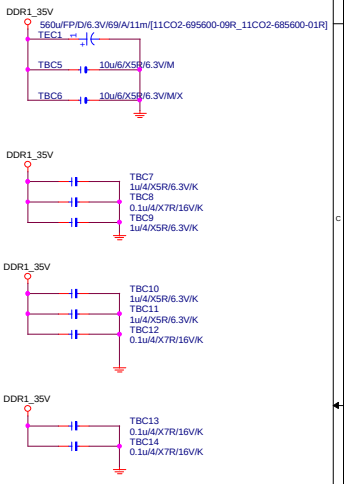
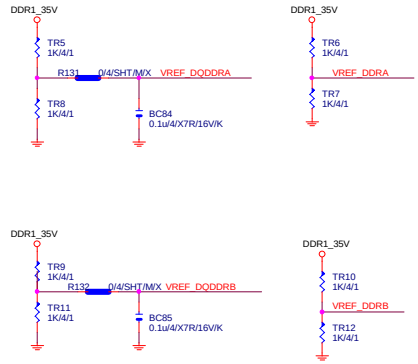
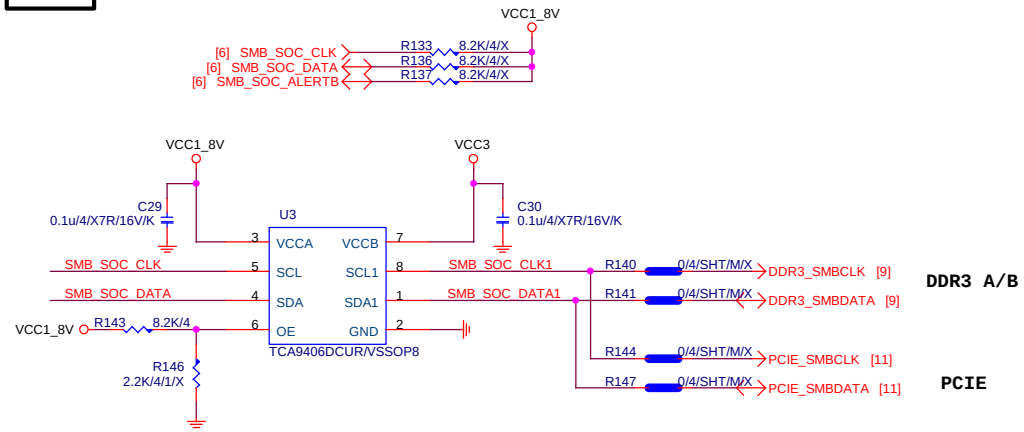


DDR VREF



Gigabyte Technology			
Title: DDR3L SO-DIMM 1,2			
Size: C	Document Number: GA-J1800N-D2H		Rev: 1.1
Date: Friday, April 18, 2014	Sheet 9 of 26		

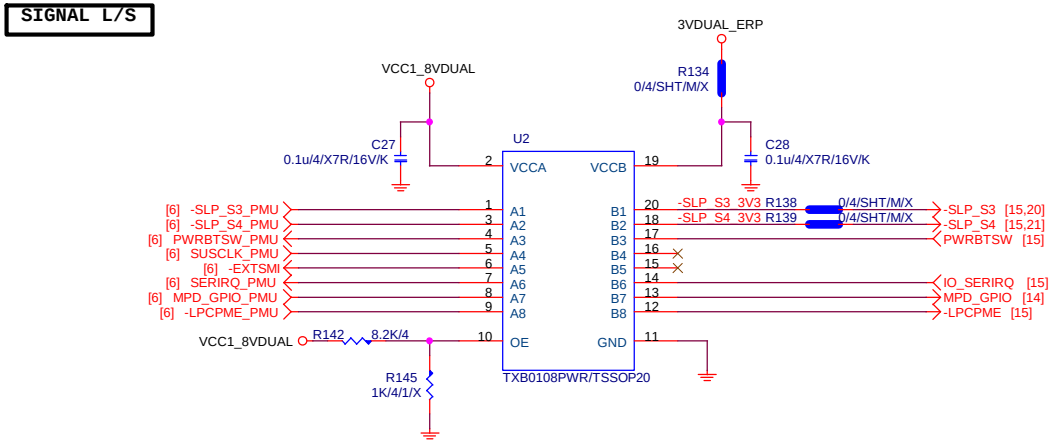
SMBUS

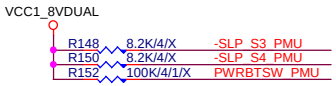


DDR3 A/B

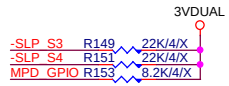
PCIE

SIGNAL L/S



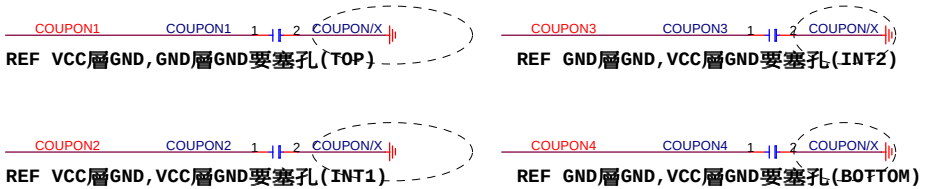


PWRBTSW_PMU NEED P.H. OVER 100K OR N/A

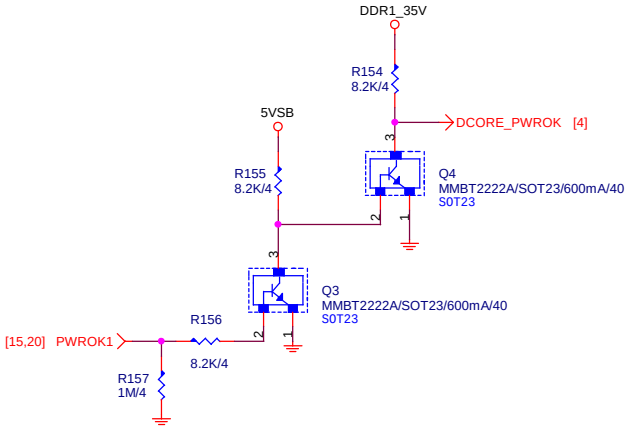


R149/R151 N/A,FOR S5 LEAKAGE.

COUPON



DDR PWROK



Gigabyte Technology		
Title: SMBUS,SIGNAL L/S		
Size: B	Document Number: GA-J1800N-D2H	Rev: 1.1
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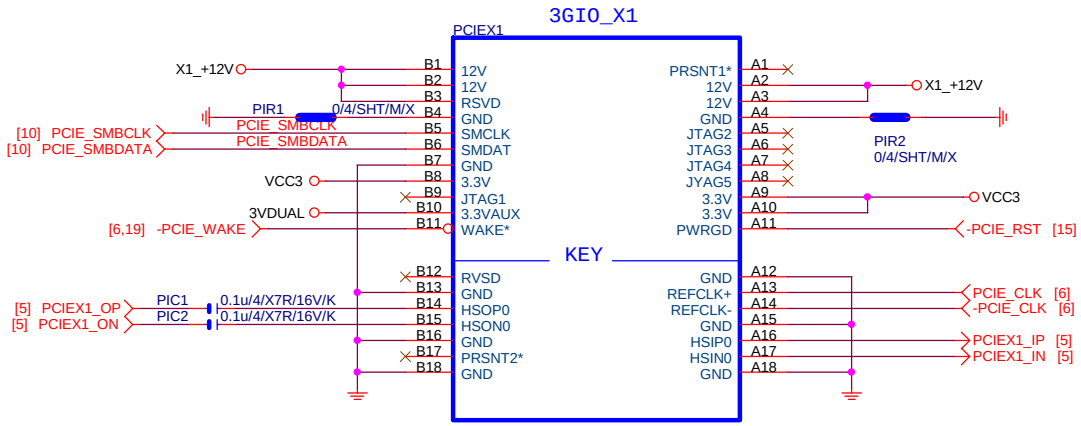
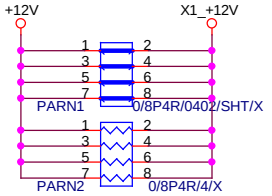
PCIEX1 SLOT

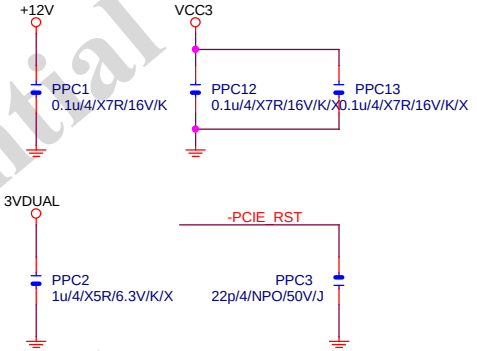


PCI-E/1X-36P/BK/OL

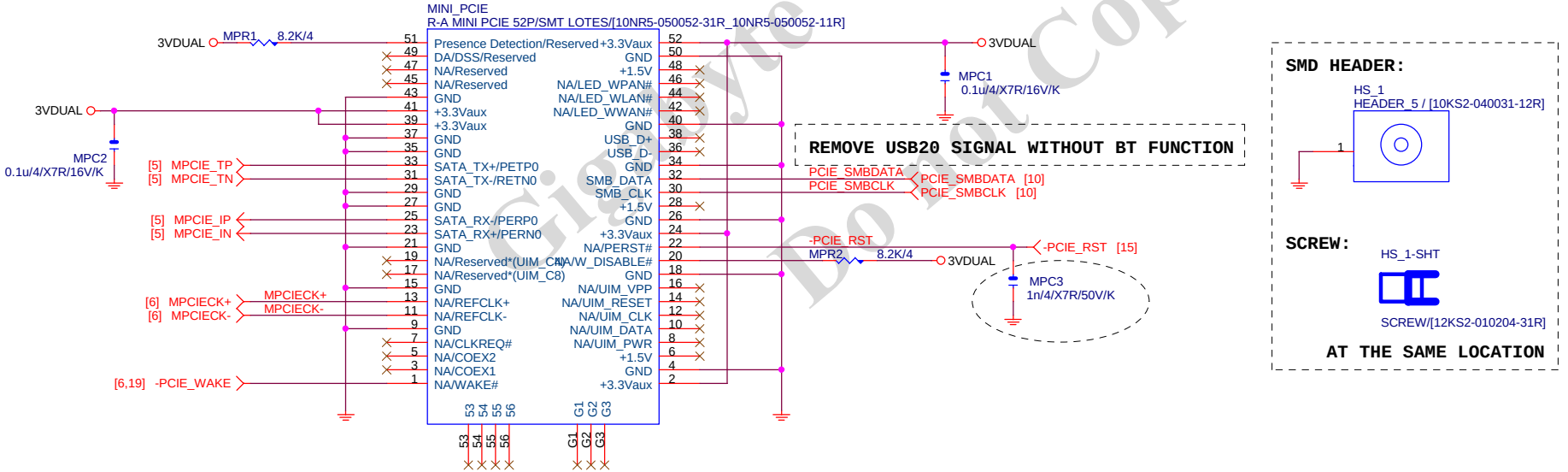
BLACK CONNECTOR

PCIEX16 PROTECT SHT





mini PCI-E



MINI_PCIE52P-HALF-A

BLACK CONNECTOR

SMD HEADER:

SCREW:

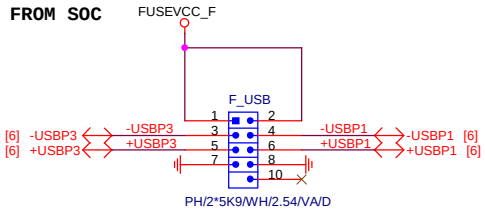
SCREW/[12KS2-010204-31R]

AT THE SAME LOCATION

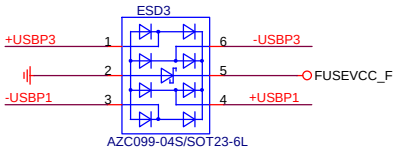
Gigabyte Technology		
Title: PCIE*1 SLOT/MINI PCIE		
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 11 of 26	

FRONT USB20

FROM SOC



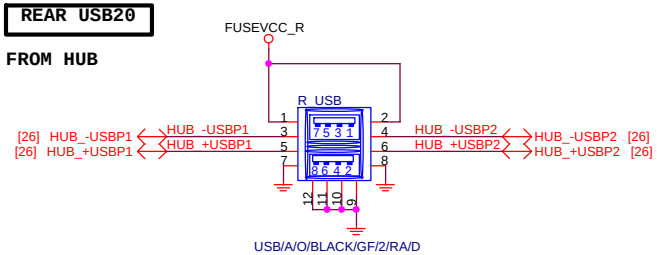
WHITE CONNECTOR

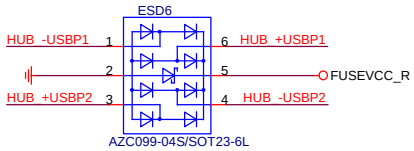


Close to connector

REAR USB20

FROM HUB



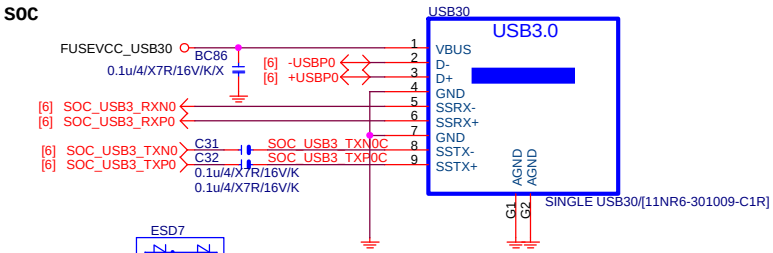


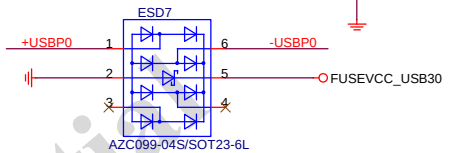
Close to connector

REAR USB30

FROM SOC

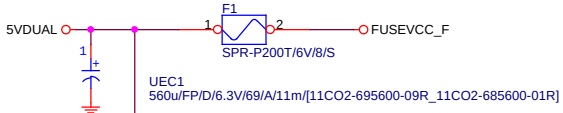
USB30-SINGLE



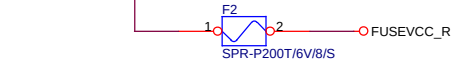


Close to connector

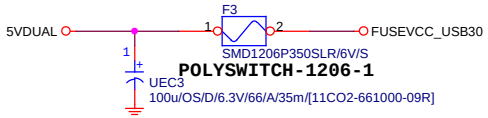
USB POWER



CLOSE F_USB

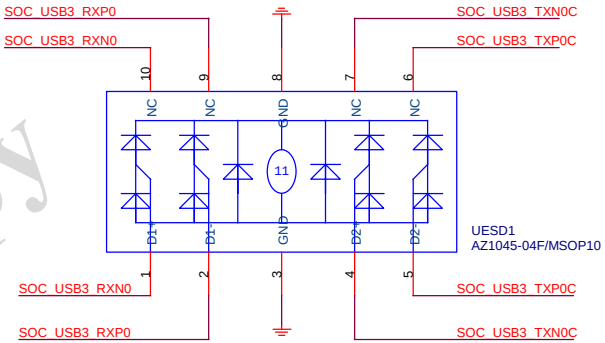


CLOSE R_USB

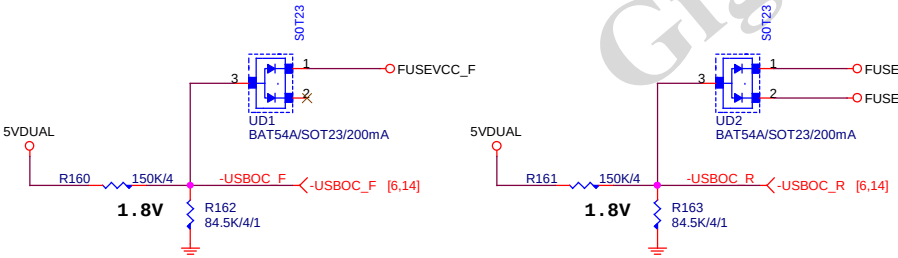


USB30_20 ESD PROCTECT

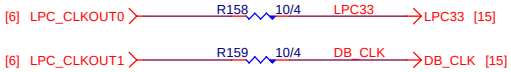
USB3.0 ESD



USB_OC

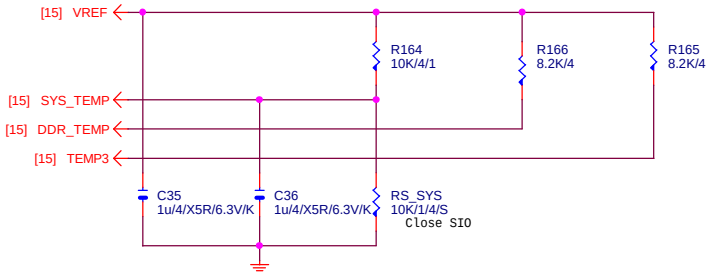


CLK BUFFER

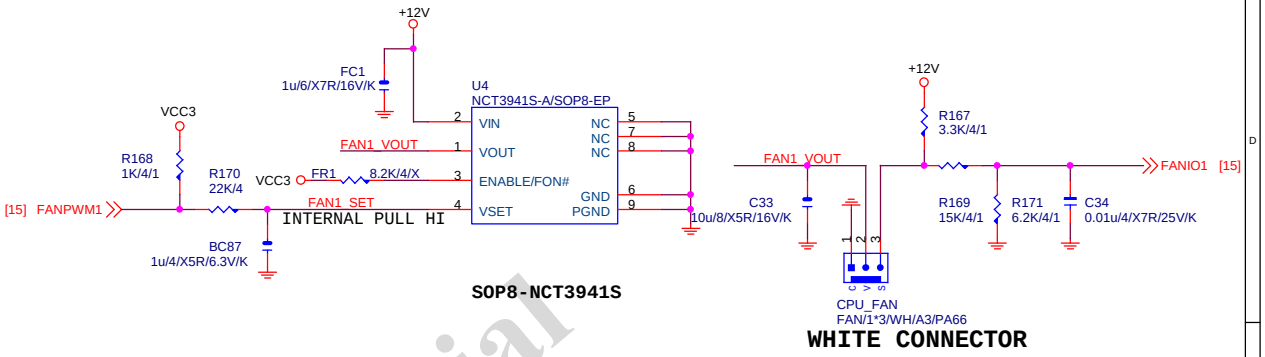


Gigabyte Technology		
Title: USB2.0/USB3.0		
Size: B	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 12 of 26	

TEMP H/W MONITOR



CPU SMART FAN

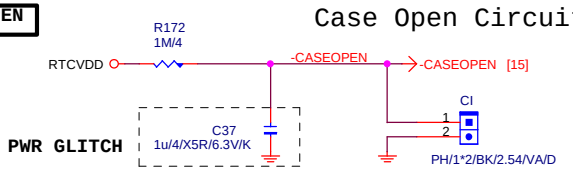


SOP8-NCT3941S

WHITE CONNECTOR

CASE OPEN

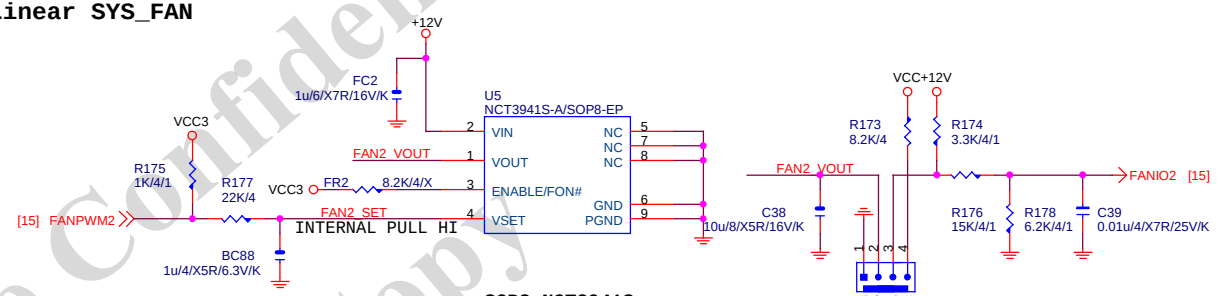
Case Open Circuits



PWR GLITCH

SYS SMART FAN

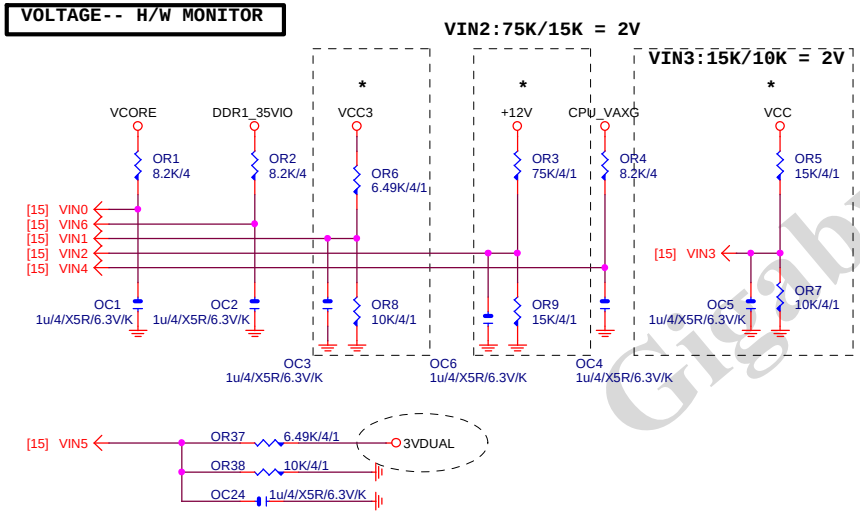
Linear SYS_FAN



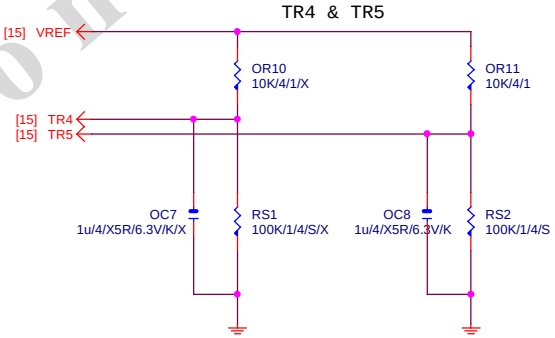
SOP8-NCT3941S

BLACK CONNECTOR

VOLTAGE-- H/W MONITOR



I/O IT8620 THERMAL SENSOR



RS1、RS2 CLOSE CPU VR MOSFET

-PROHOT

N/A

Gigabyte Technology		
Title: HWM,FAN CTRL,OV		
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
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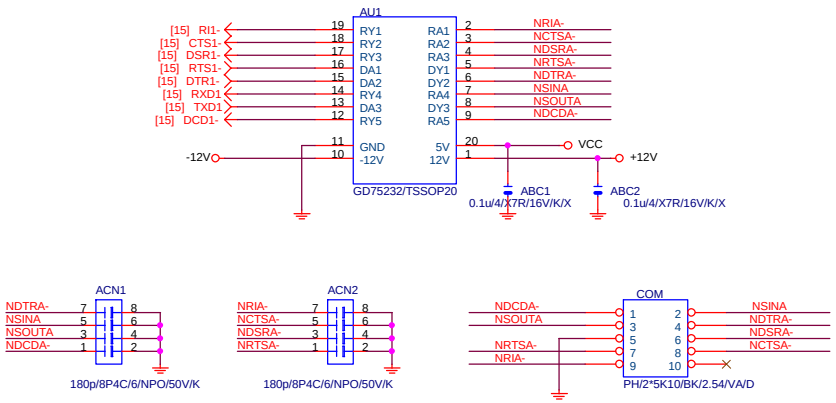
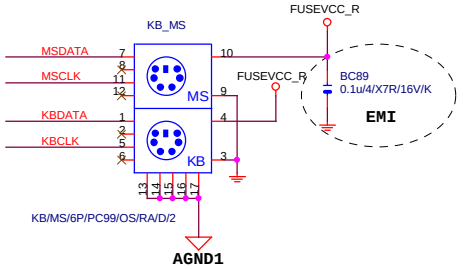
COM

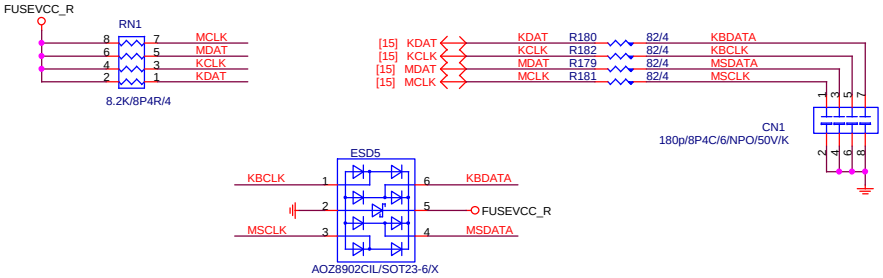


PIN2X5-CUT10-COM

BLACK CONNECTOR

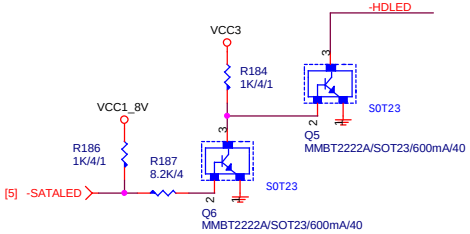
KB/MS



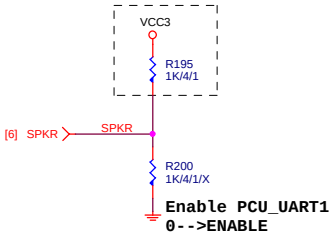


CLOSE KB_MS

SATA LED

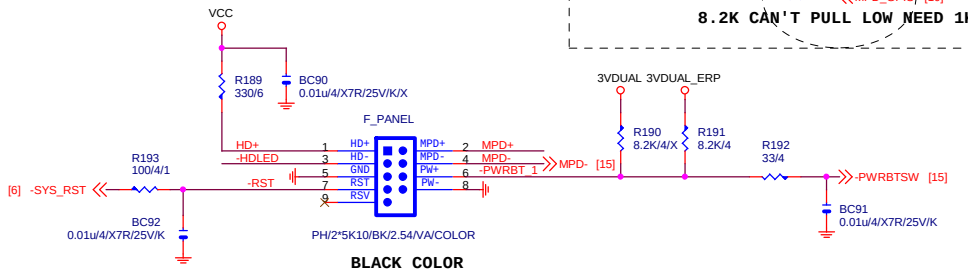


SPKR



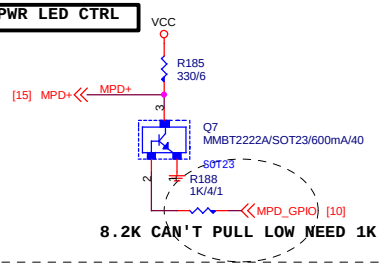
Enable PCU_UART1
0-->ENABLE
1-->DISABLE

INTEL FRONT PANEL



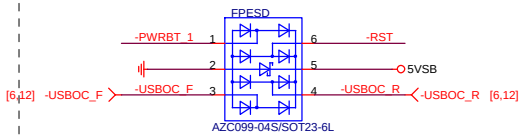
BLACK COLOR

PWR LED CTRL



8.2K CAN'T PULL LOW NEED 1K

SYSTEM ESD



Gigabyte Technology

Title	FP,F_USB,USB PWR,SPKR,SATA LED
Size: Custom	Document Number: GA-J1800N-D2H
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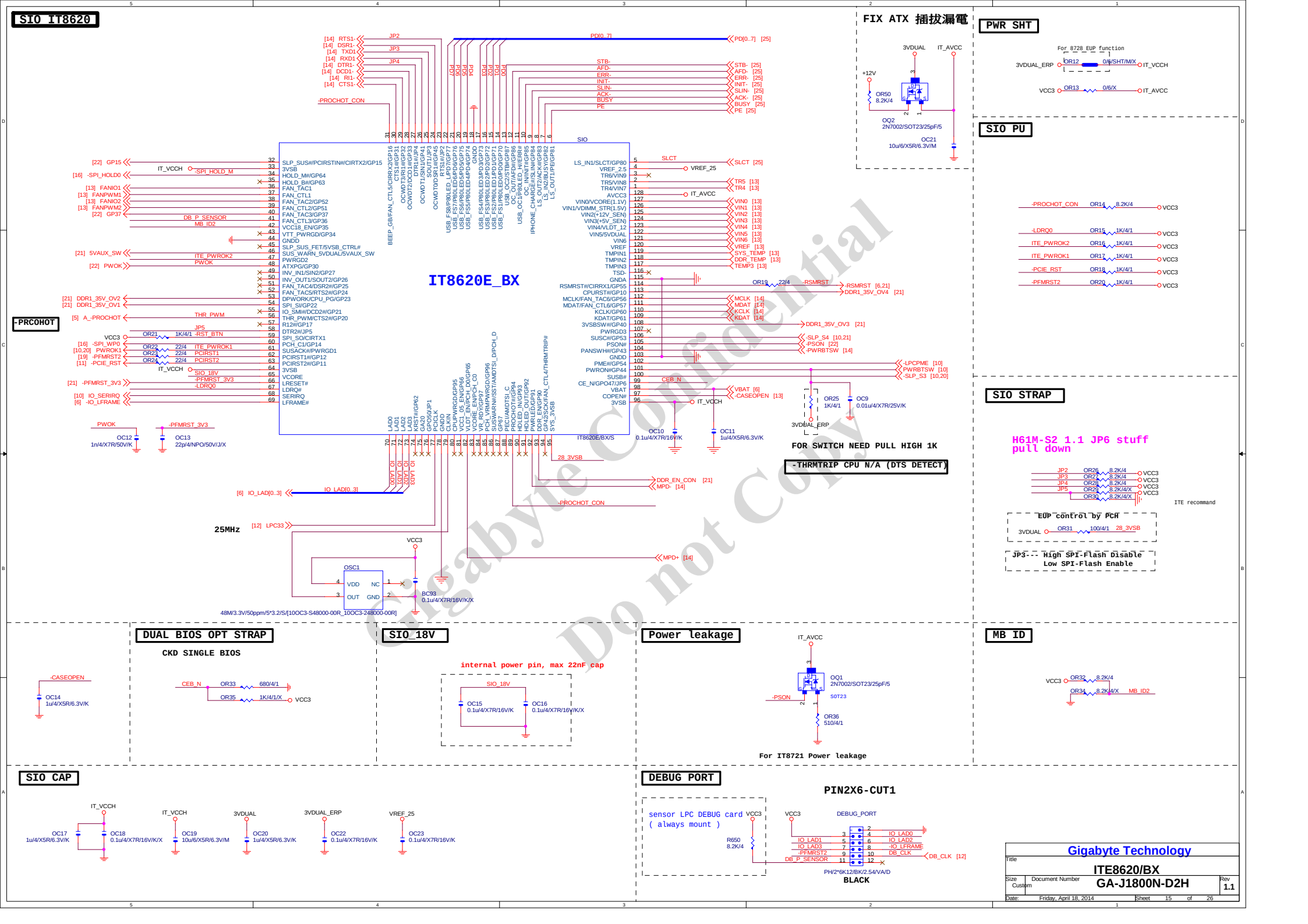
Date: Friday, April 18, 2014	Sheet 14 of 26


SIO IT8620
IT8620E_BX
IT8620E/BX/S
SIO
-PRCOHOT
FIX ATX 插拔漏電
PWR SHT
SIO PU
SIO STRAP
H61M-S2 1.1 JP6 stuff pull down
FOR SWITCH NEED PULL HIGH 1K
-THRMTRIP CPU N/A (DTS DETECT)
25MHz
DUAL BIOS OPT STRAP
CKD SINGLE BIOS
SIO_18V
internal power pin, max 22nF cap
Power leakage
For IT8721 Power leakage
MB ID
SIO CAP
DEBUG PORT
PIN2X6-CUT1
sensor LPC DEBUG card (always mount)
BLACK
EUP control by PCH
JP3--- High SPI-Flash Disable
Low SPI-Flash Enable
ITE recommand
Gigabyte Technology
ITE8620/BX
GA-J1800N-D2H
Rev 1.1
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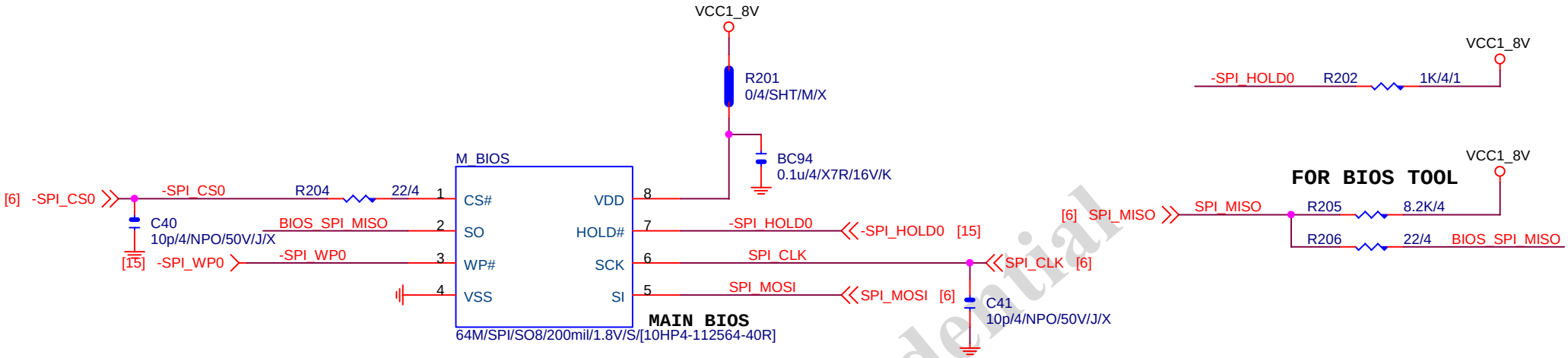
Gigabyte Confidential
Do not Copy

MAIN BIOS



SPI ROM(1.8V)

Gigabyte Technology		
Title: SPI BIOS		
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
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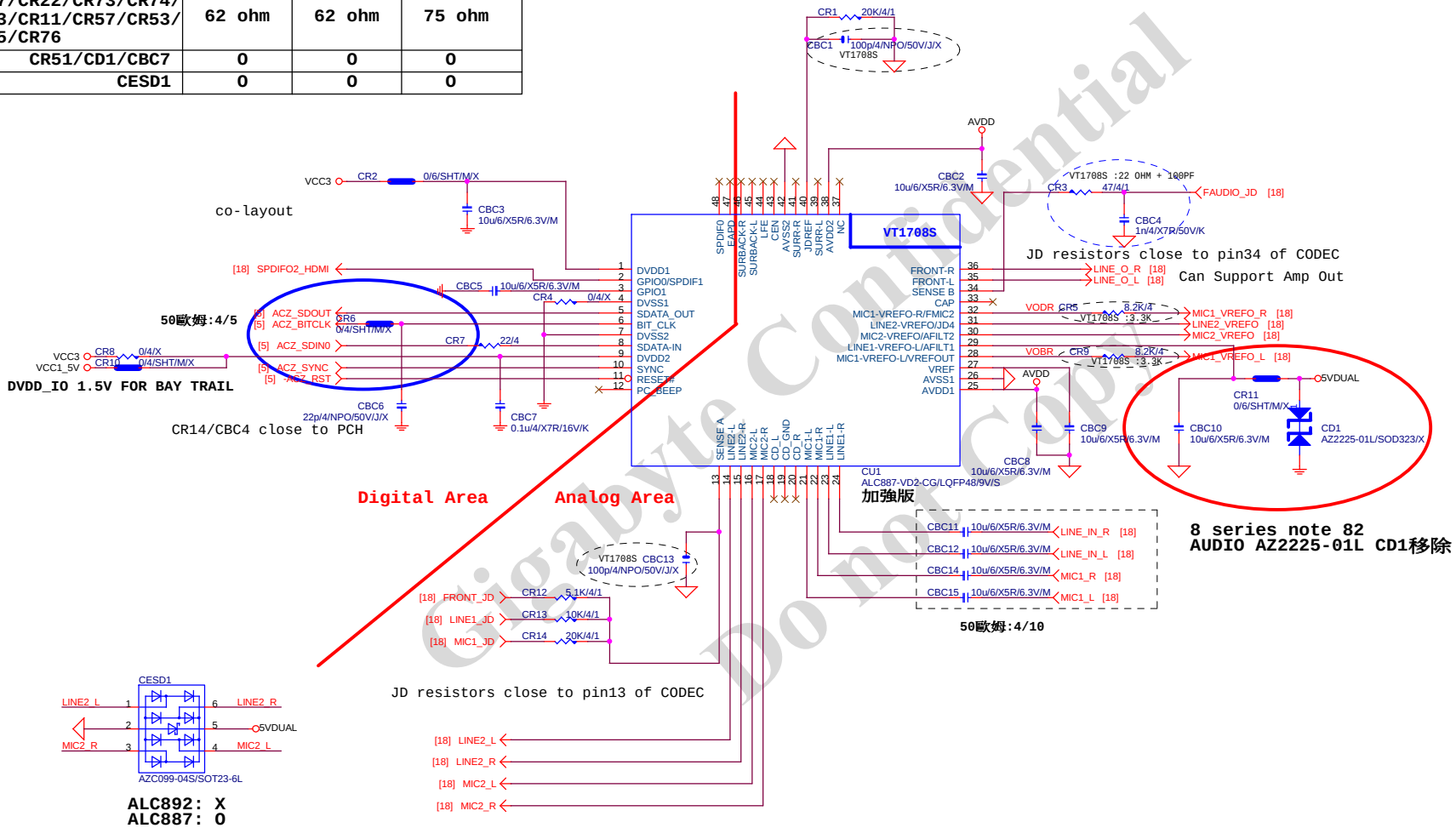
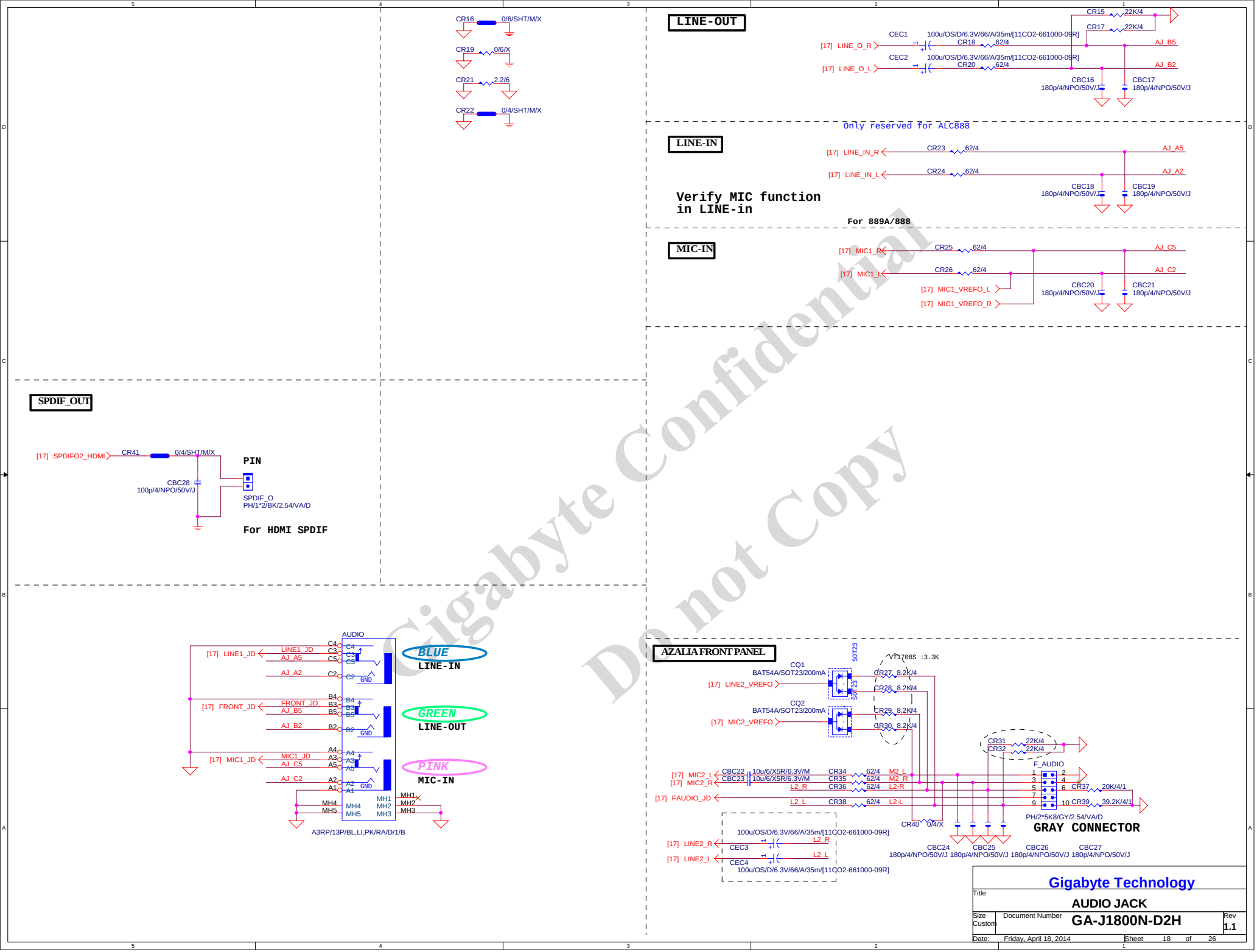
AZALIA CODEC *ALC892/ALC887-VD2/VT1708-CE Colay*

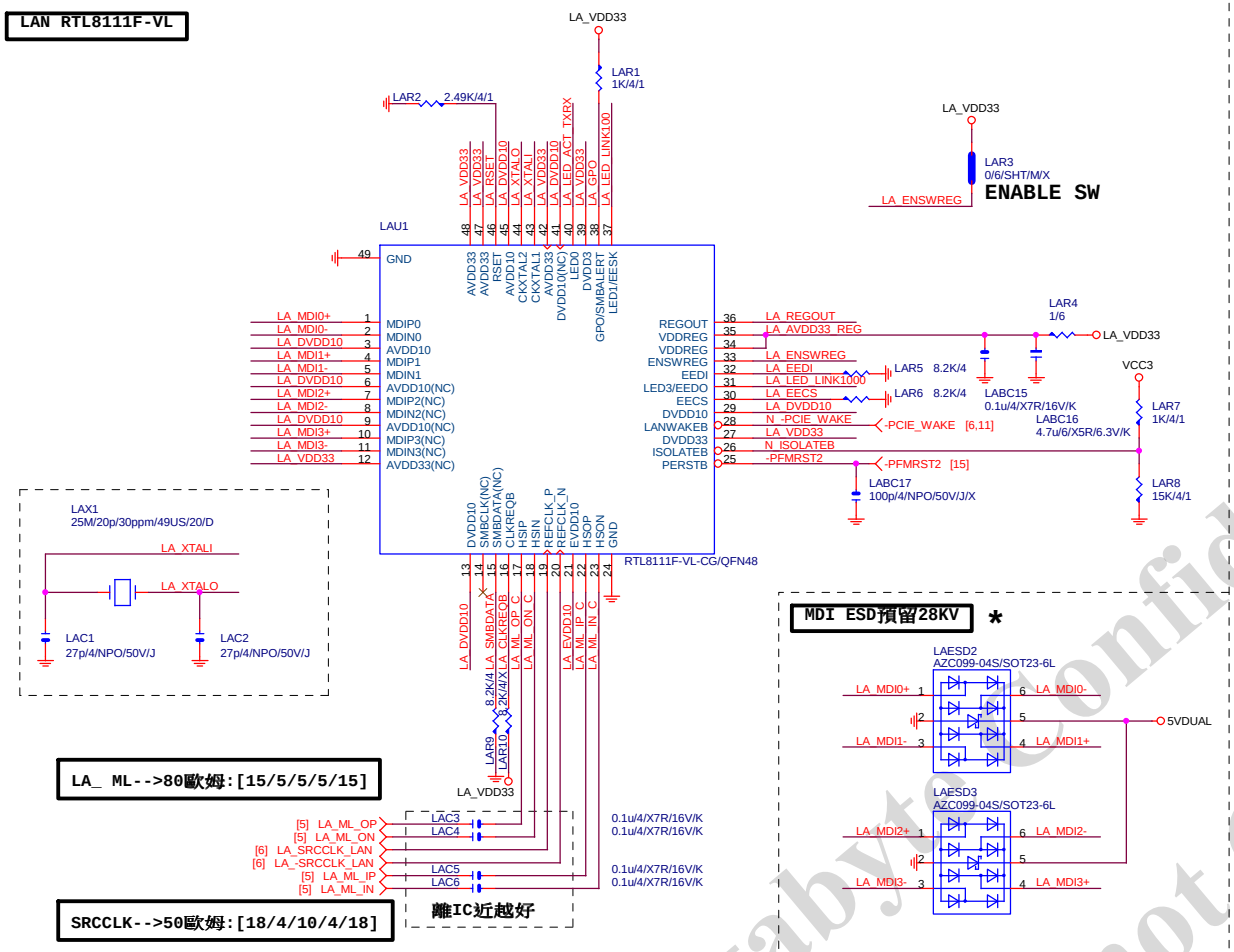
	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	0	0	0
CESD1	0	0	0



Gigabyte Technology			
Title: HD AUDIO ALC887B-VD2/VT1708S/VT2021			
Size: Custom	Document Number: GA-J1800N-D2H		Rev: 1.1
Date: Friday, April 18, 2014	Sheet 17 of 26		



LAN RTL8111F-VL

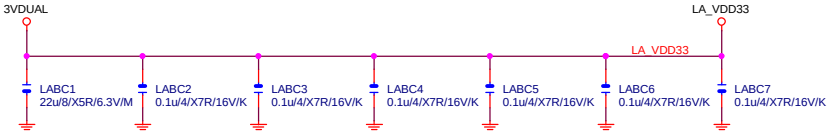


LA_ ML-->80歐姆:[15/5/5/5/15]

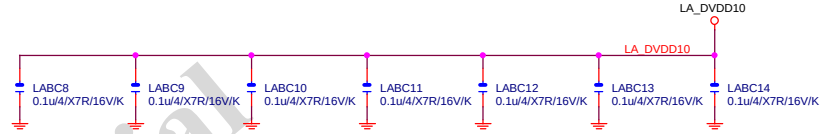
SRCCLK-->50歐姆:[18/4/10/4/18]

MDI ESD預留28KV *

LAN POWER

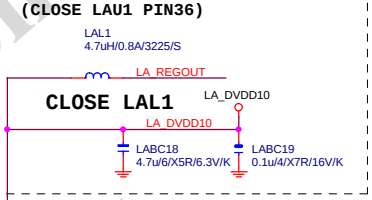


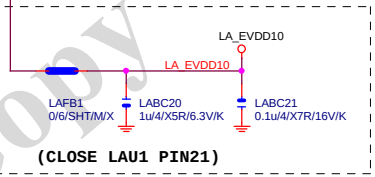
(CLOSE LAU1 PIN:12,27,39,42,47,48)



(CLOSE LAU1 PIN3,6,9,13,29,41,45)

(CLOSE LAU1 PIN36)



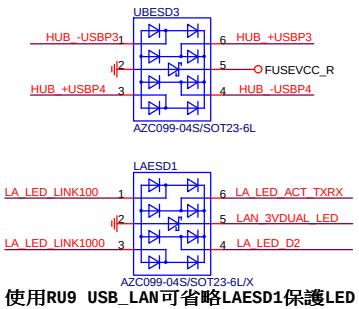


(CLOSE LAU1 PIN21)

Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V

LAN CONNECTOR ESD

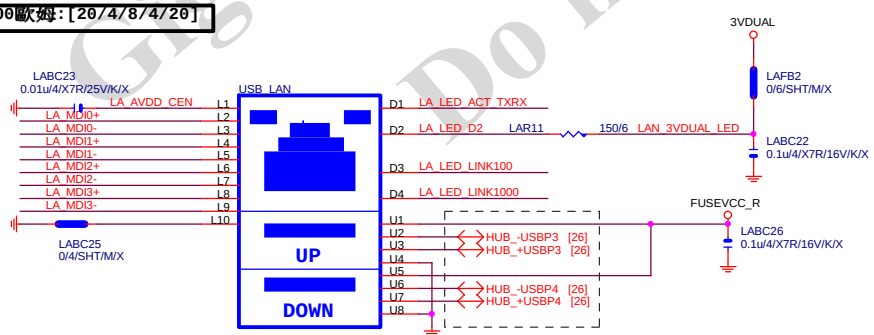


使用RU9 USB_LAN可省略LAESD1保護LED

EMI SHORT PAD

PS:視EMI需求

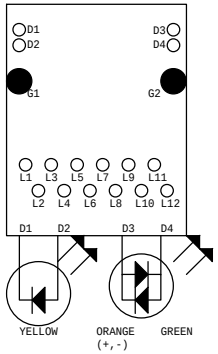
LA_MDI-->100歐姆:[20/4/8/4/20]



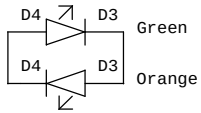
USB+LAN/1G/GO,Y/OS/RA/D/1/[11NR6-702009-96R]

9KV ESD protection

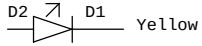
USB_LAN:USB改GND



Dual Color LED



Single Color LED



Gigabyte Technology			
Title: RTL111F-VL			
Size: Custom	Document Number: GA-J1800N-D2H		Rev: 1.1
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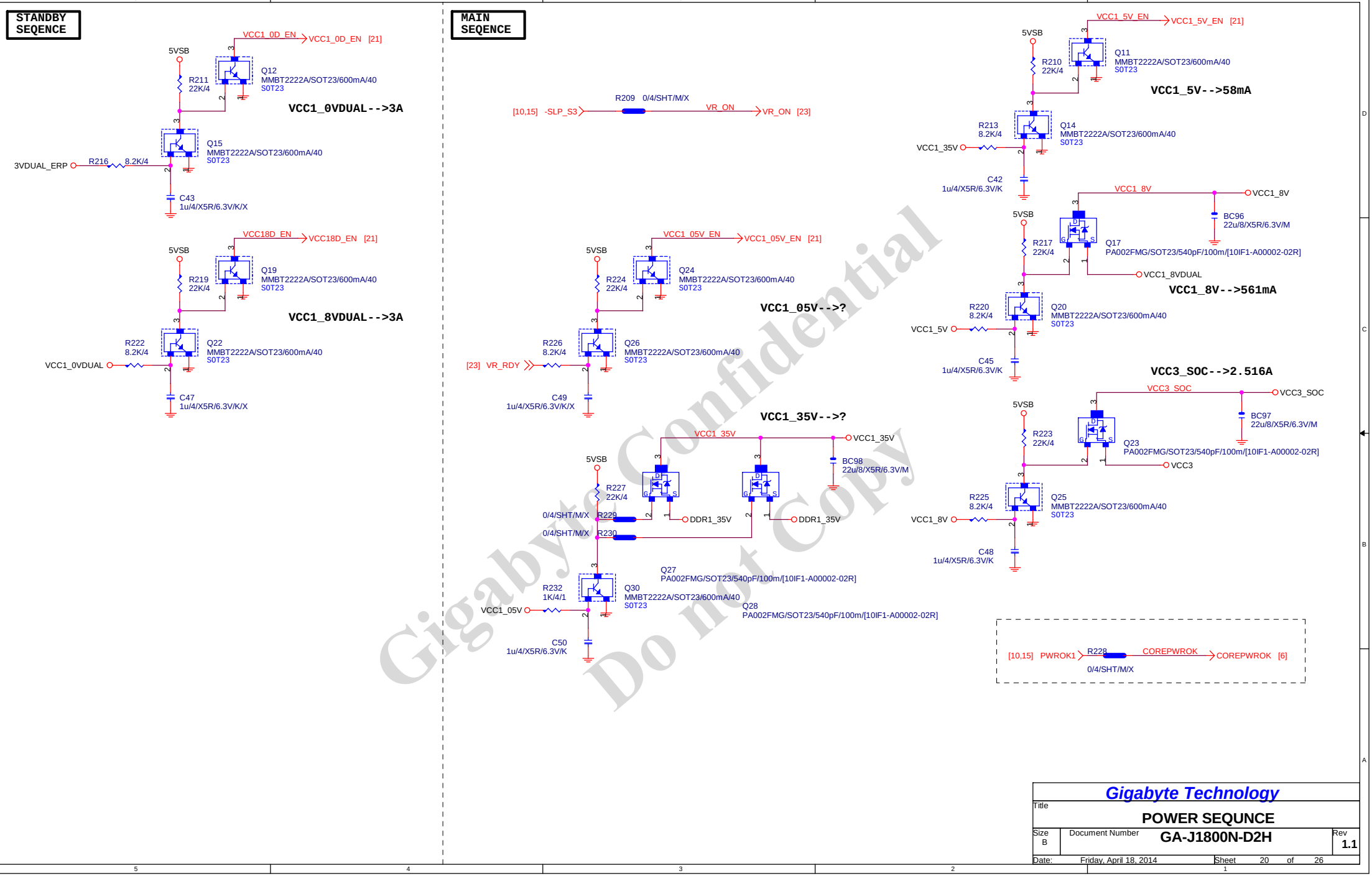
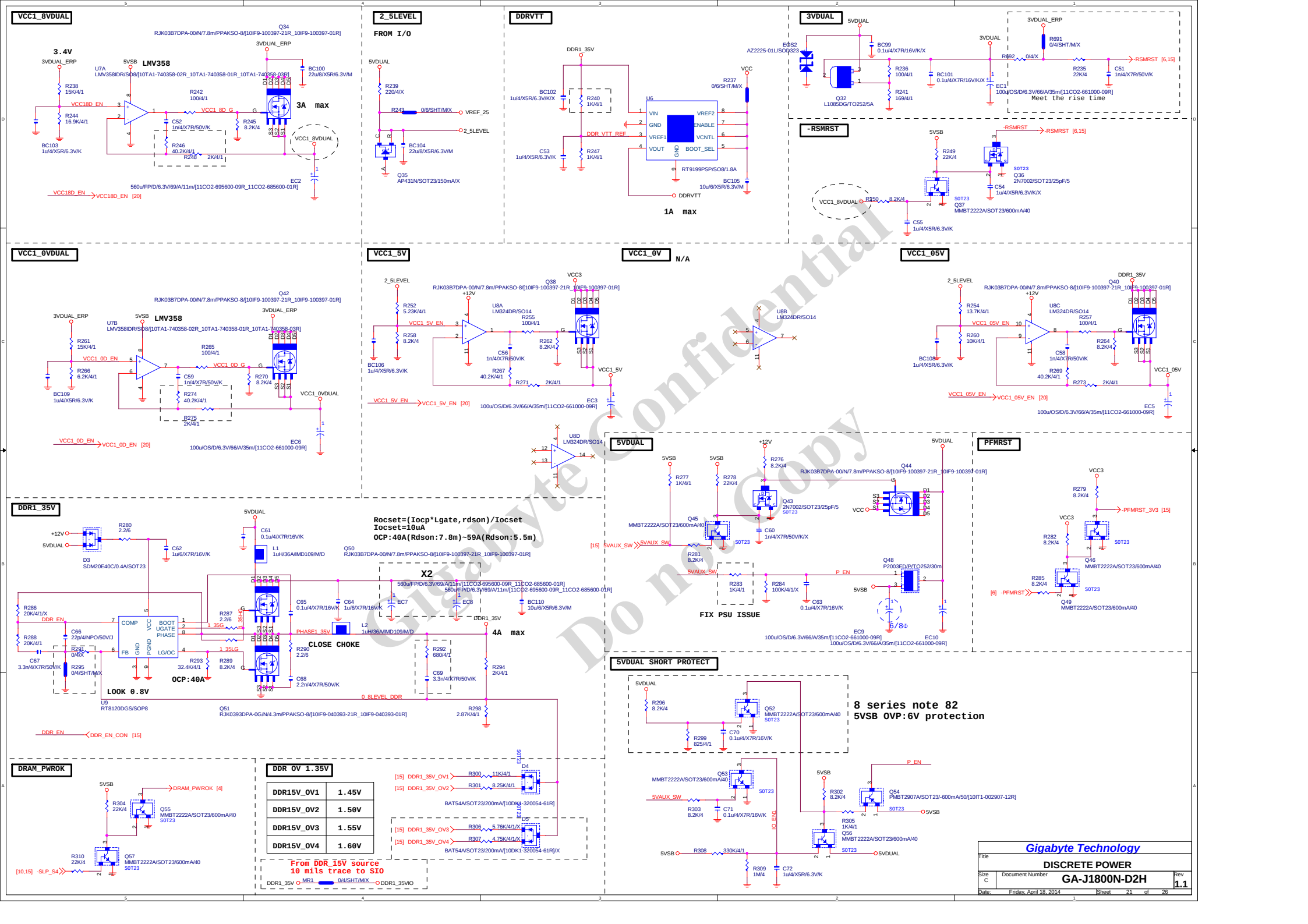


Gigabyte Technology		
Title: POWER SEQUNCE		
Size: B	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 20 of 26	


VCC1_8VDUAL
3.4V
LMV358
3A max
2_5LEVEL
FROM I/O
DDRVTT
1A max
3VDUAL
Meet the rise time
-RSMRST
VCC1_0VDUAL
VCC1_5V
VCC1_0V
N/A
VCC1_05V
5VDUAL
FIX PSU ISSUE
PFMRST
DDR1_35V
Rocset=(Iocp*Lgate,rdson)/Iocset
Iocset=10uA
OCP:40A(Rdson:7.8m)~59A(Rdson:5.5m)
X2
CLOSE CHOKE
4A max
LOOK 0.8V
OCP:40A
5VDUAL SHORT PROTECT
8 series note 82
5VSB OVP:6V protection
DRAM_PWROK
DDR 0V 1.35V
DDR15V_0V1 1.45V
DDR15V_0V2 1.50V
DDR15V_0V3 1.55V
DDR15V_0V4 1.60V
From DDR_1.5V source
10 mils trace to SIO
Gigabyte Confidential
Do not Copy
Gigabyte Technology
DISCRETE POWER
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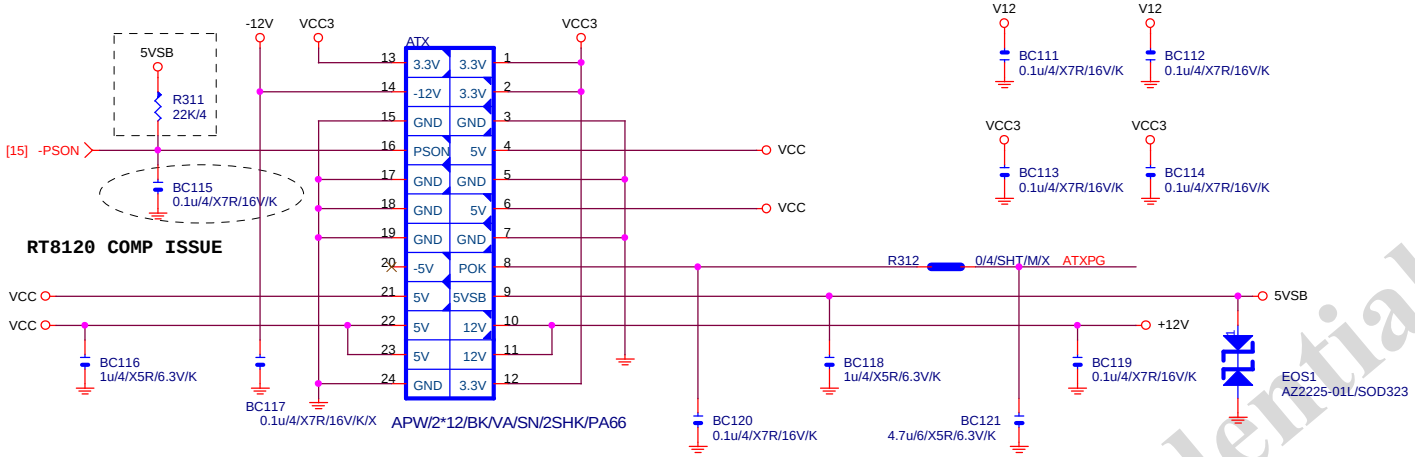
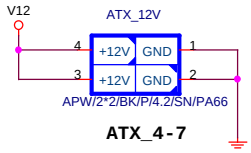
ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】



BLACK CONNECTOR

ATXX4 POWER CONNECTOR

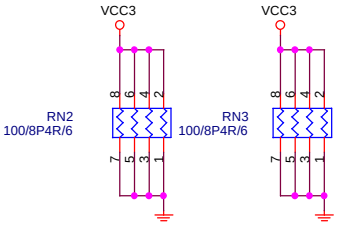


ATX_4-7

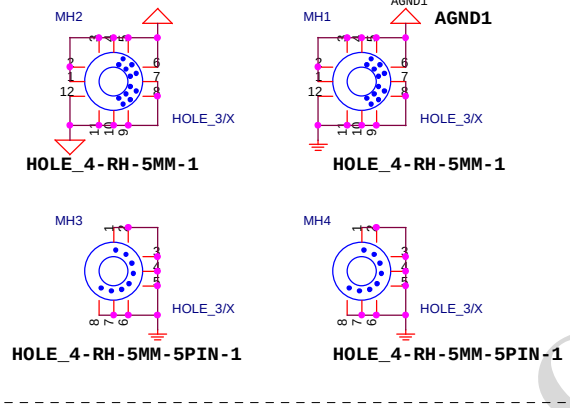
BLACK CONNECTOR

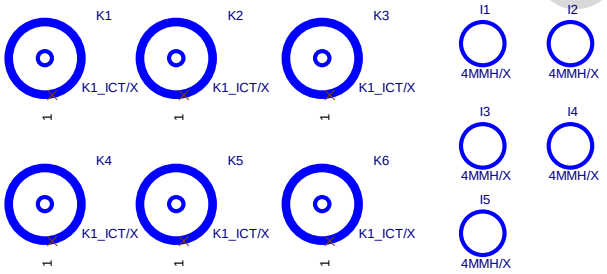
MIN. LOAD

FIX PWR MINMUN LOAD

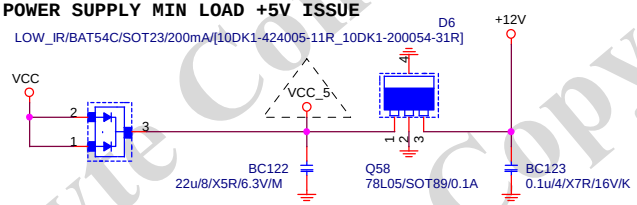


MB LOCATION





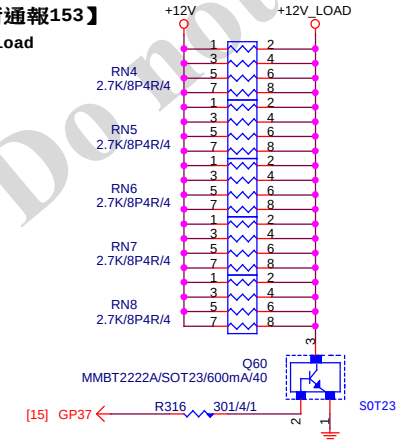
FIX POWER SUPPLY MIN LOAD +5V ISSUE



To prevent the 5VSB under loading when boot

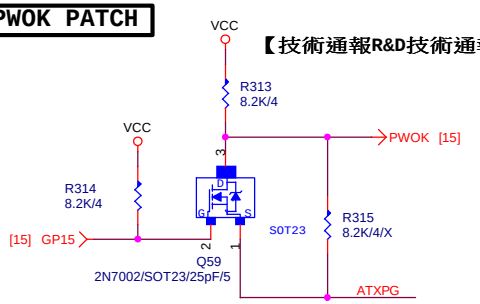
【技術通報R&D技術通報153】

To fix 12V light load abnromal issue



PWOK PATCH

【技術通報R&D技術通報154】



Gigabyte Technology		
Title: ATX CONNECTOR		
Size: B	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 22 of 26	

VCORE PWM

FIX O.V CIRCUIT FAIL

TYPE III

GT2
Load line-->5.9mohm

TYPE II
GAIN 150倍

S.W frequncy-->350Khz
Imax-->45A

LAYOUT RESERVE
CHOKE SPACE

Close DL6

RGntc=(RGseries+DRT4)//RGparellel

RGseries

RGparellel

RGi

IGocp-->40A

RC MATCH
CHOKE 0.3uH--> Ci:0.33u

disable PWM2G

DISABLE NTCG

DISABLE NTC

1.8V LEVEL

PWM
INTERSIL
ISL95836HRTZ

BOTTOM PAD
CONNECT TO GND
THROUGH 10 VIA

ISL95836HRZ[10TA1-695836-01R]

RC MATCH
CHOKE 0.3uH--> Ci:0.33u

Close DL2

Rntc=(Rseries+DRT3)//Rparellel

Rseries

Rparellel

Ri

Iocp-->40A

TYPE III

TYPE II GAIN 150倍

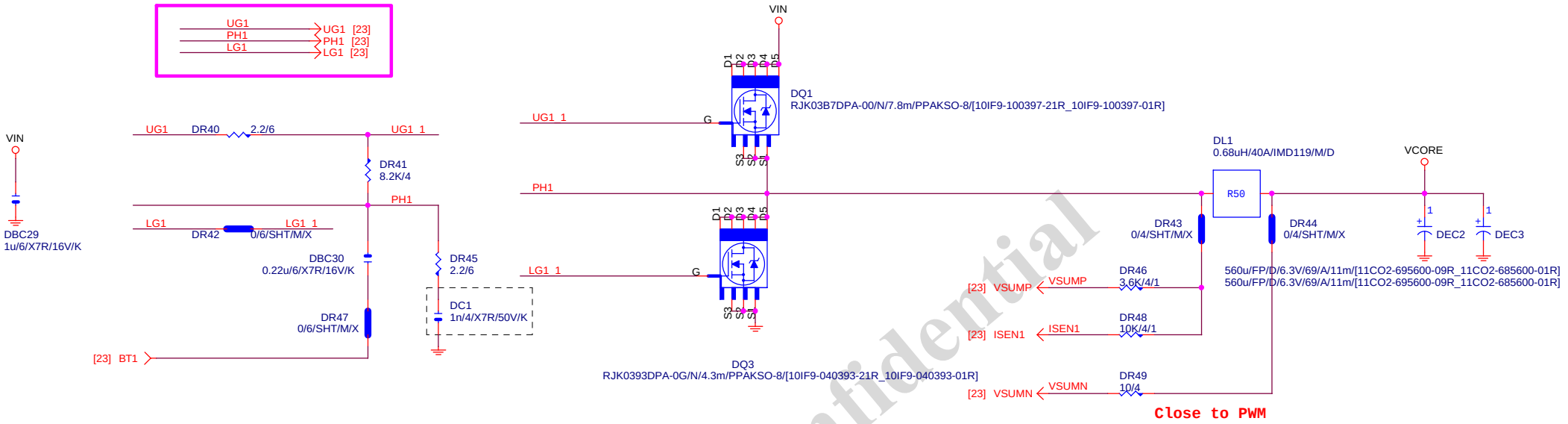
Valley View
Vboot-->1.1V
Imax-->38A

FIX O.V CIRCUIT FAIL

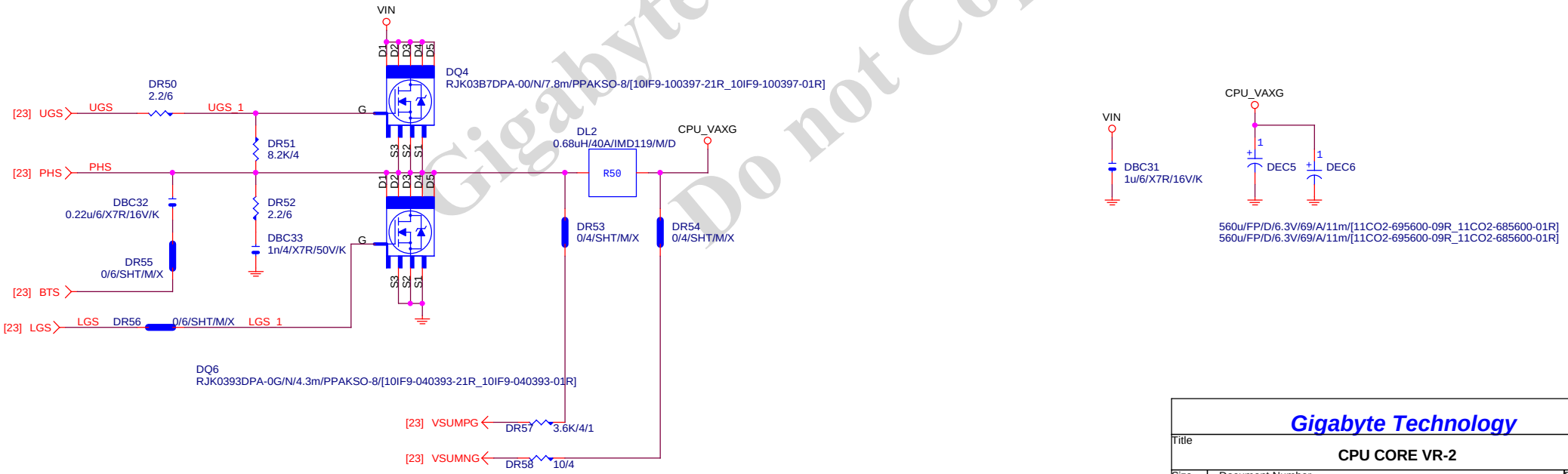
ULTA LOW CPU
Load line-->5.9mohm

Gigabyte Technology			
Title	CPU CORE VR-1		
Size Custom	Document Number GA-J1800N-D2H		Rev 1.1
Date: Friday, April 18, 2014	Sheet 23 of 26		

VCORE

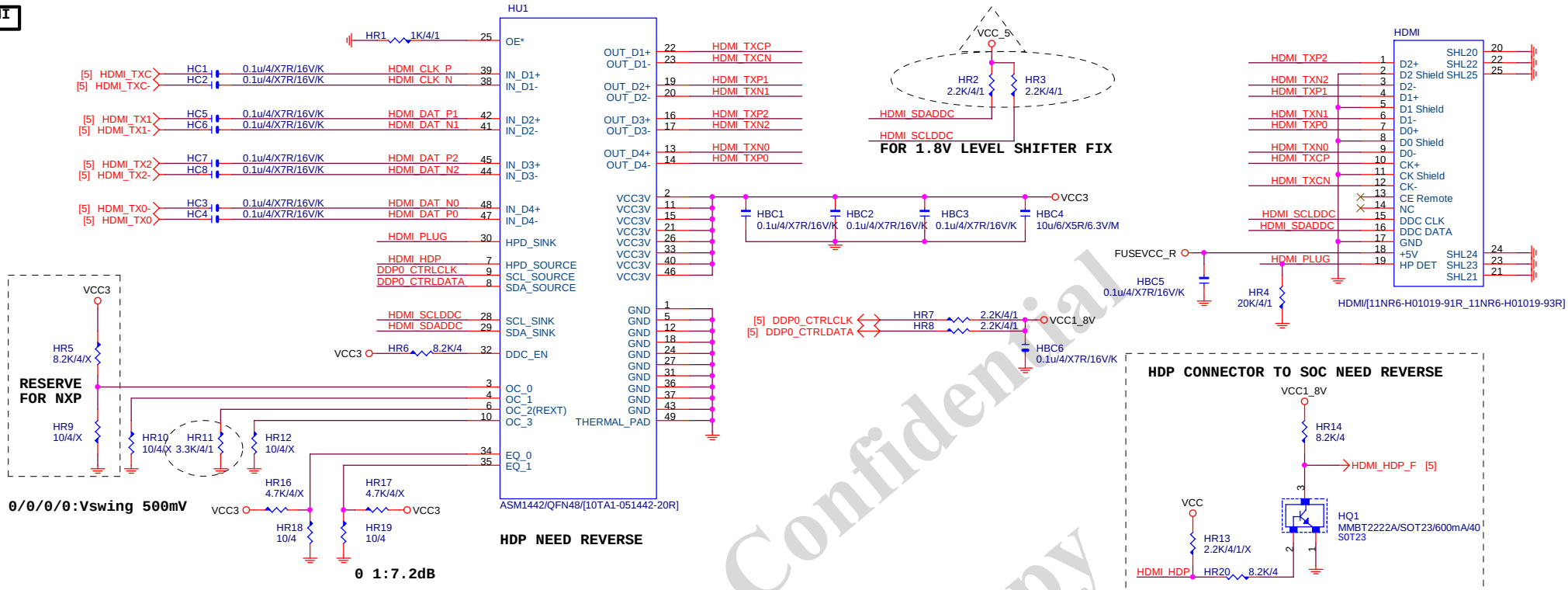


VAXG



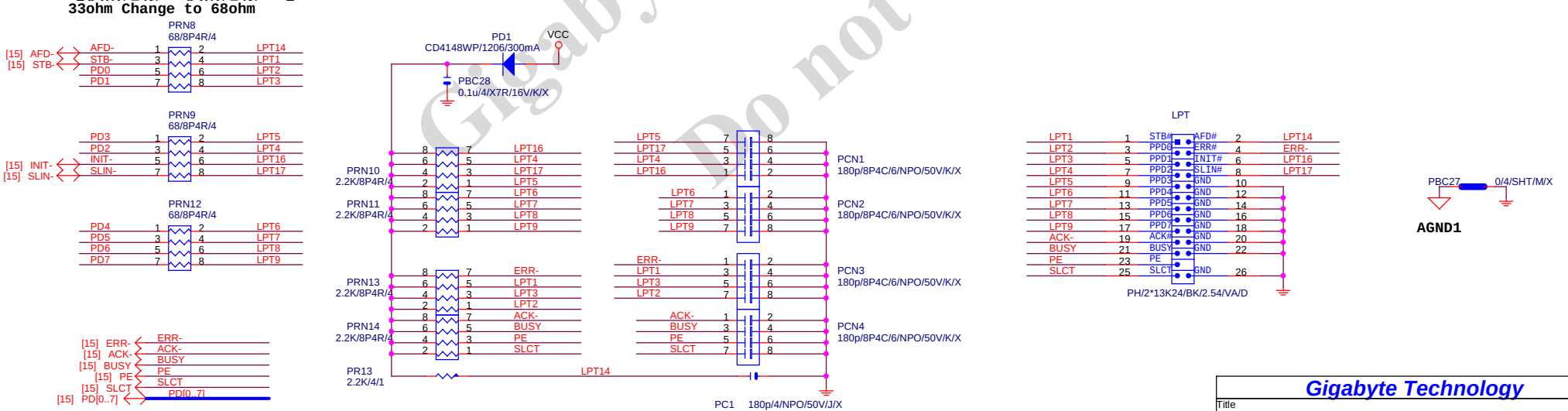
Gigabyte Technology		
Title: CPU CORE VR-2		
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 24 of 26	

HDMI



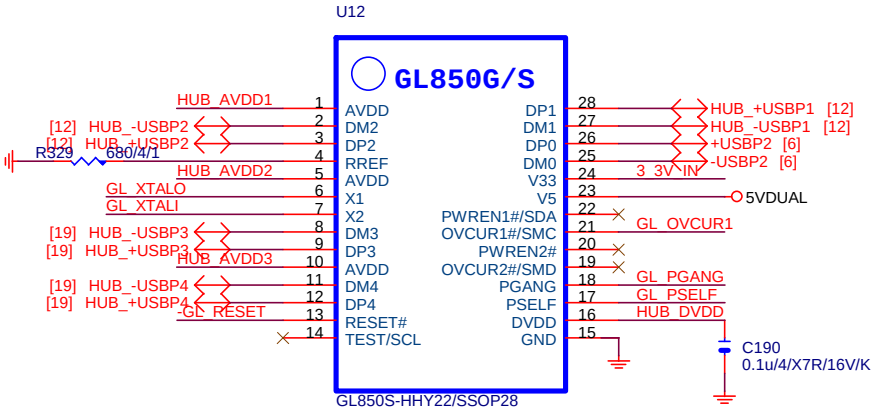
LPT PORT

【技術通報R&D技術通報151】
33ohm Change to 68ohm



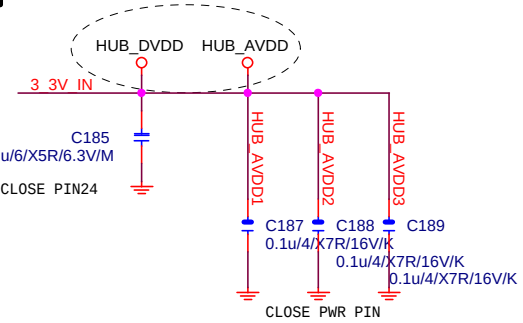
Gigabyte Technology		
Title: HDMI,LPT		
Size: Custom	Document Number: GA-J1800N-D2H	Rev: 1.1
Date: Friday, April 18, 2014	Sheet 25 of 26	

USB20 HUB

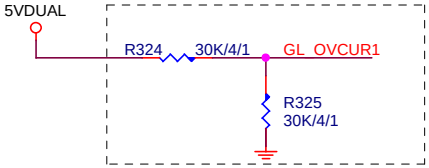


SSOP28-IT8209R

HUB PWR

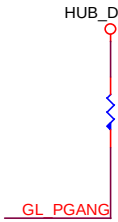


HUB OVER CURRENT SENSE



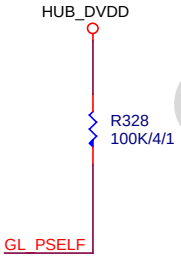
HUB MODE

Ganged mode



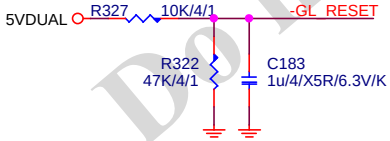
P.H. USE GL_OVCUR1
DETECT ALL PORT

PSELF



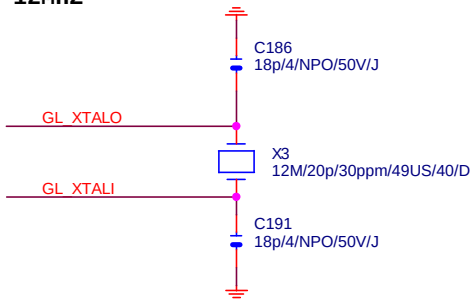
HUB self-power mode:
P.H.=EVERY PORT 500mA.
P.D.=EVERY PORT 100mA.

HUB RESET



HUB CRYSTAL

ONLY SUPPORT 12MHZ



Gigabyte Technology			
Title: HUB GL850GS			
Size: Custom	Document Number: GA-J1800N-D2H		Rev: 1.1
Date: Friday, April 18, 2014		Sheet 26 of 26	