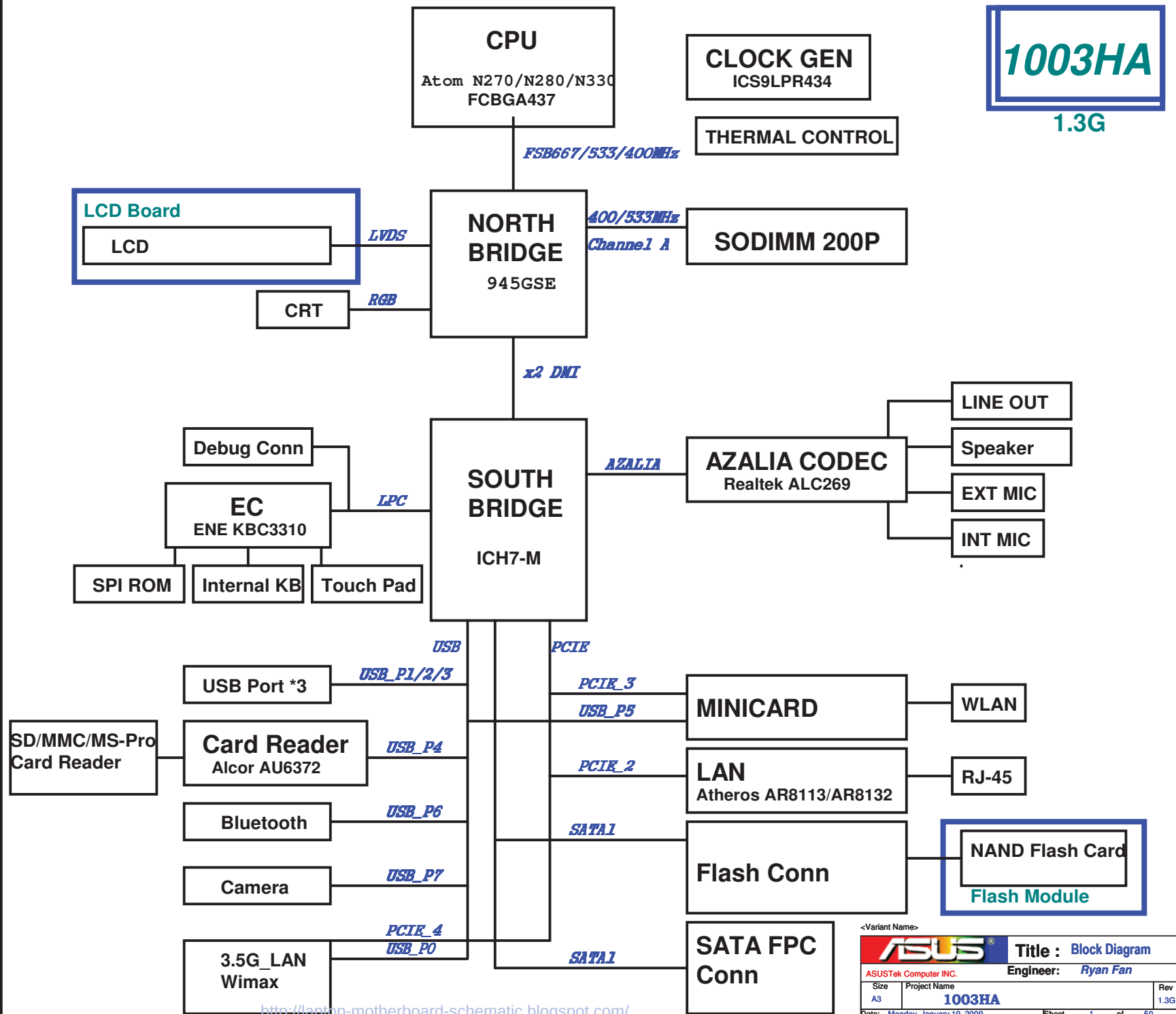


01_Block Diagram
 02_System Setting
 03_Power Sequence
 04_Clock Gen_ICS9LPR434
 05_Diamondville_BUS
 06_Diamondville_PWR
 07_NB-945GMS(HOST)
 08_NB-945GMS(DMI)
 09_NB-945GMS(GRAPHIC)
 10_NB-945GMS(DDR2)
 11_NB-945GMS(PWR)
 12_NB-945GMS(PWR2)
 13_NB-945GMS(GND)
 14_SB-ICH7M(PWR)
 15_SB-ICH7M(1)
 16_SB-ICH7M(2)
 17_SB-ICH7M(3)
 18_DDR2 SODIMM
 19_DDR2 Termination
 20_Onboard VGA
 21_LCD Conn_LID
 22_USB 3.5G LAN
 23_Mini WIFI+ BT
 24_LAN_Atheros AR8113
 25_RJ45
 26_Flash Conn
 27_USB Port
 28_Camera Conn
 29_Card Reader_AU6372A51
 30_Codec_ALC269
 31_Audio_AMP_Jack
 32_EC_ENE KB3310
 33_EC
 34_Switch_SPI ROM_Debug Conn
 35_Thermal Sensor_FAN
 36_KB_Touch Pad
 37_LED_THERMTRIP
 38_Discharge
 39_PWR Jack
 40_Srew Hole
 41_EMI
 42_POWER FLOW
 43_Vcore
 44_Power System
 45_Power_+1.8V & VTTDDR
 46_Power_VCCP
 47_Power_+1.5VS & +2.5VS
 48_Power_Charger
 49_EC Pin Define
 49_History



<http://laptop-motherboard-schematic.blogspot.com/>

ASUS		Title : Block Diagram	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	
A3	1003HA	1.3G	
Date: Monday, January 19, 2009	Sheet	1	of 50

EEE PC 1003HA PCB version

GPI37	GPI34	GPI33	PCB version
0	0	0	
0	0	0	
0	0	1	
0	0	1	
0	1	0	
0	1	0	
0	1	1	
0	1	1	
1	0	0	
1	0	0	
1	0	1	
1	0	1	
1	1	0	
1	1	0	
1	1	1	
1	1	1	

USB

USB 0	3GLAN
USB 1	USB Conn
USB 2	USB Conn
USB 3	USB Conn
USB 4	Card Reader
USB 5	Minicard
USB 6	Bluetooth
USB 7	Camera

PCIE

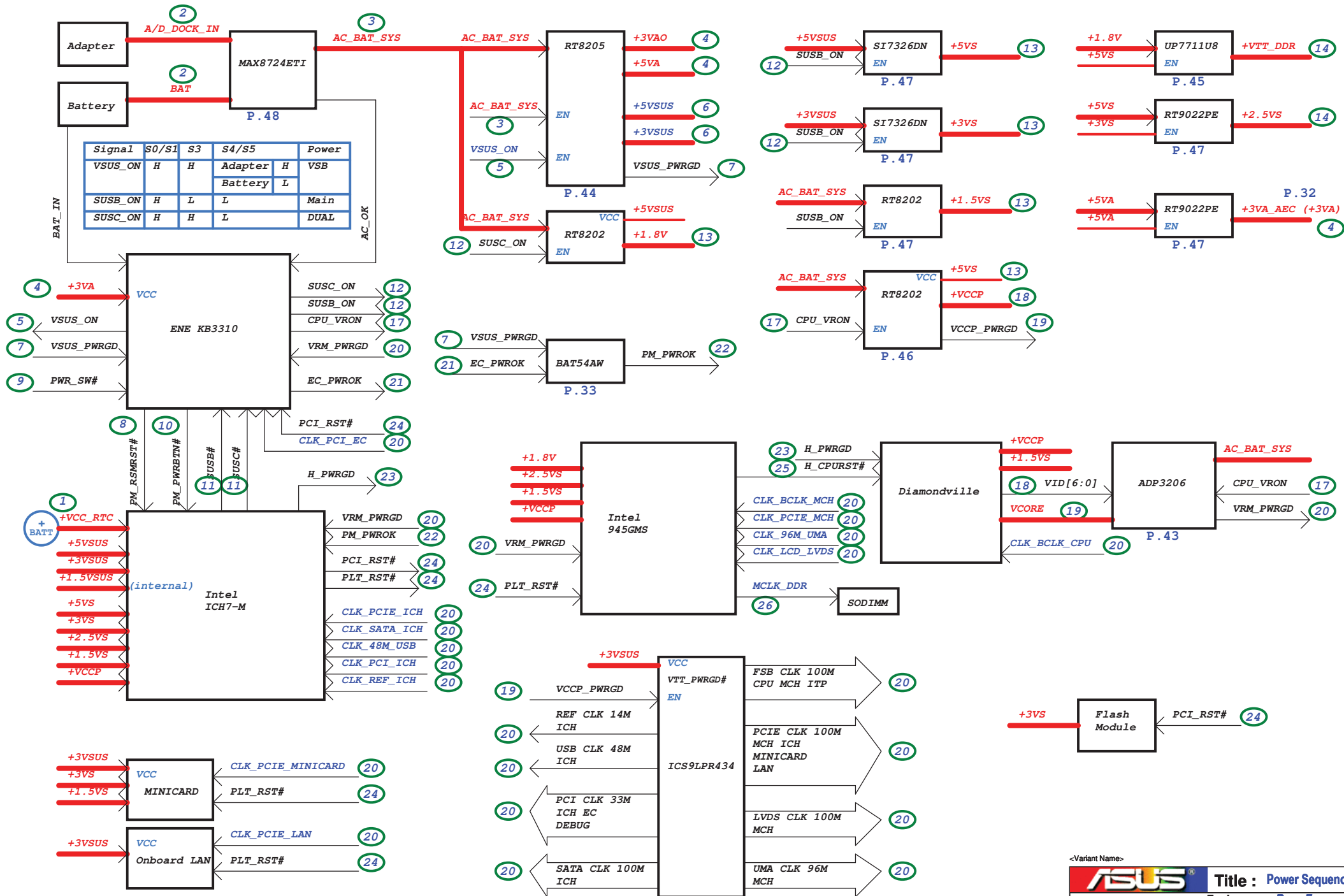
PCIE 1	NC
PCIE 2	LAN
PCIE 3	Minicard
PCIE 4	3GLAN

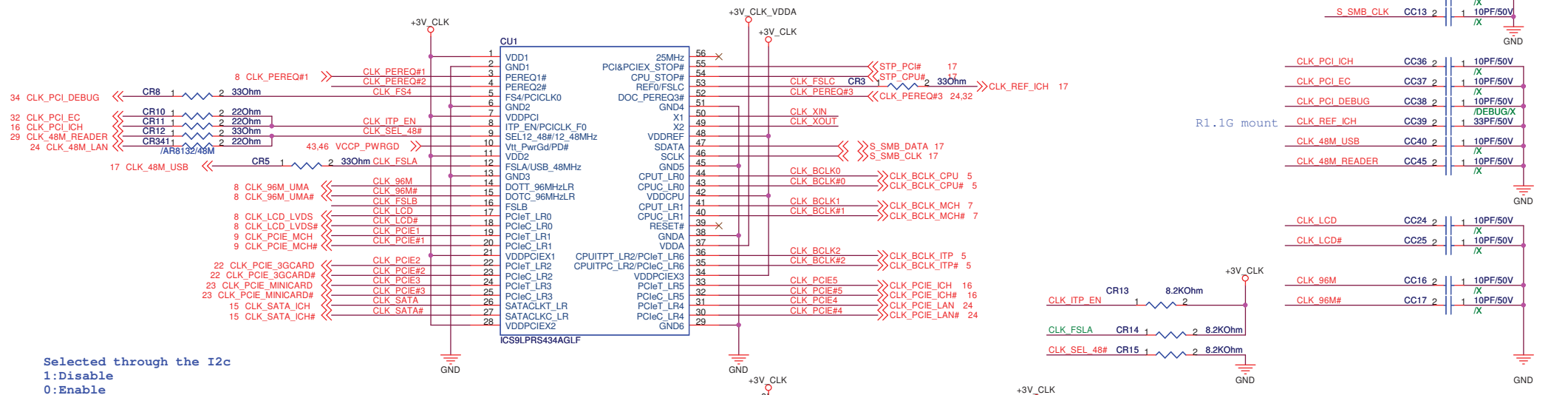
Azalia

ACZ_SDIN0	CODEC
ACZ_SDIN1	NC
ACZ_SDIN2	NC

<Variant Name>

		Title : System Setting	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A3	Project Name 1003	Rev 1.3G	
Date: Monday, January 19, 2009		Sheet	2 of 50



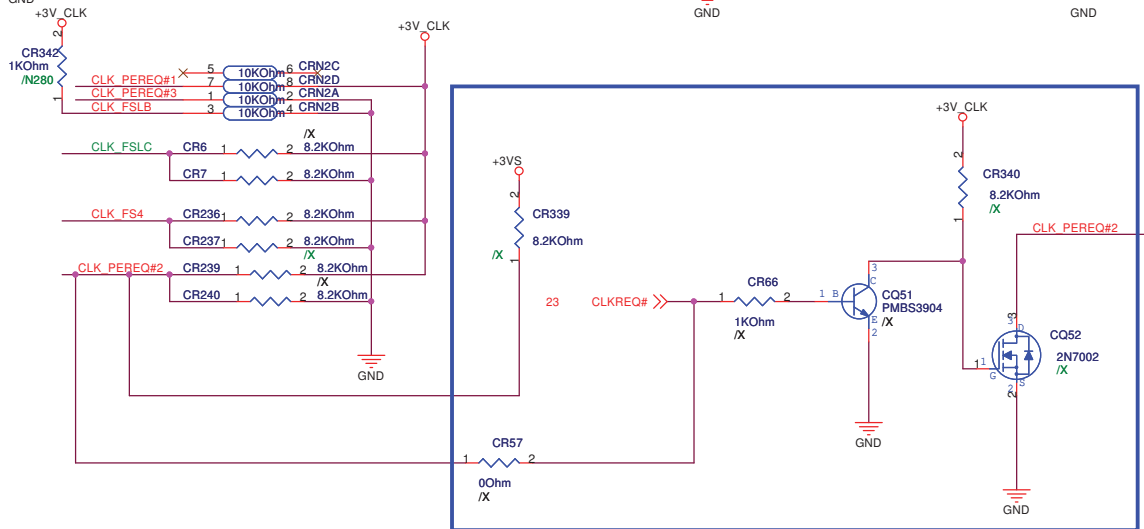
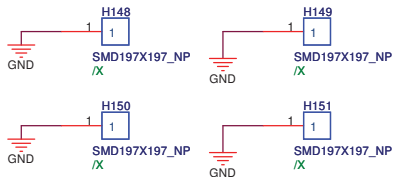


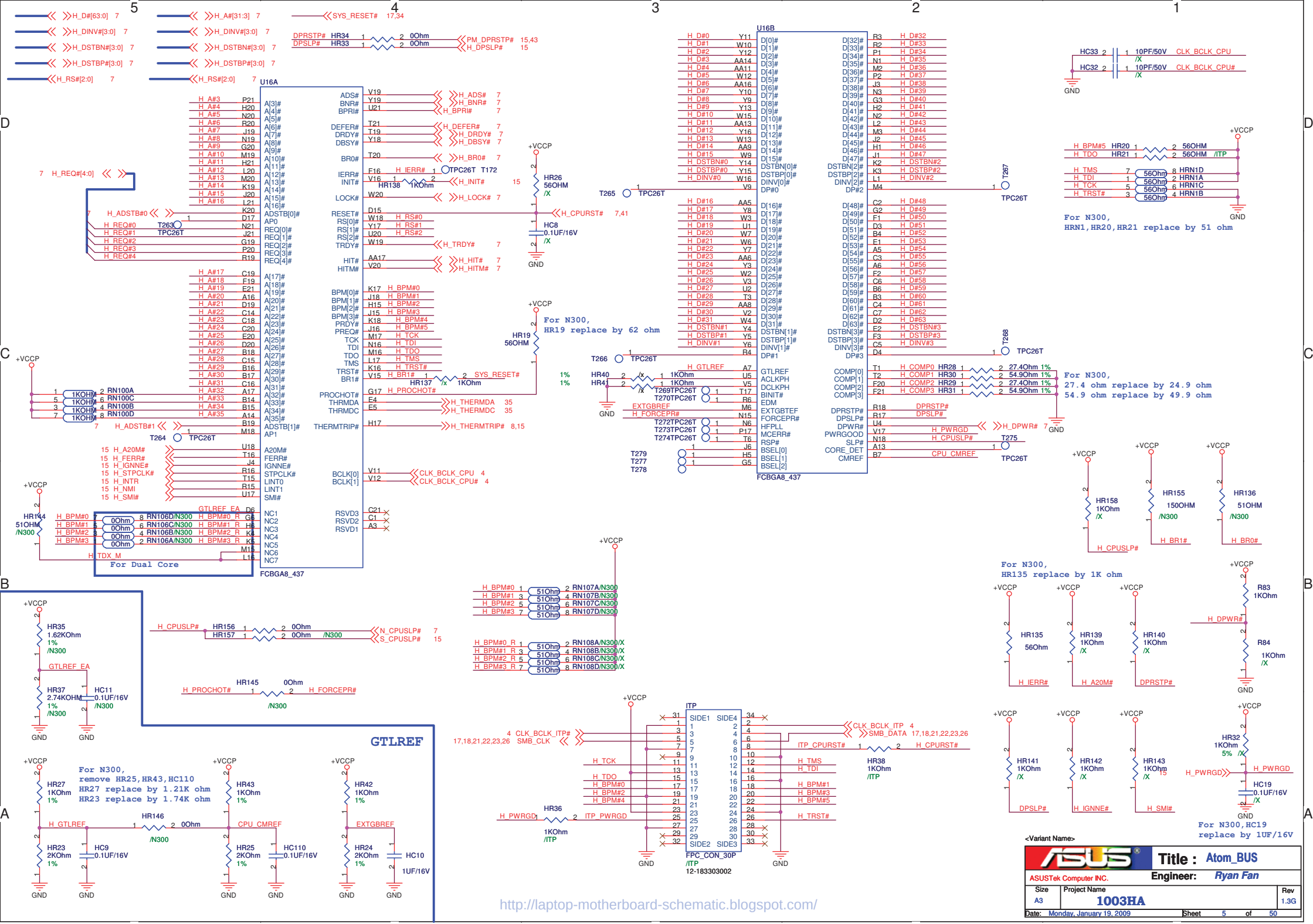
Selected through the I2C
1:Disable
0:Enable

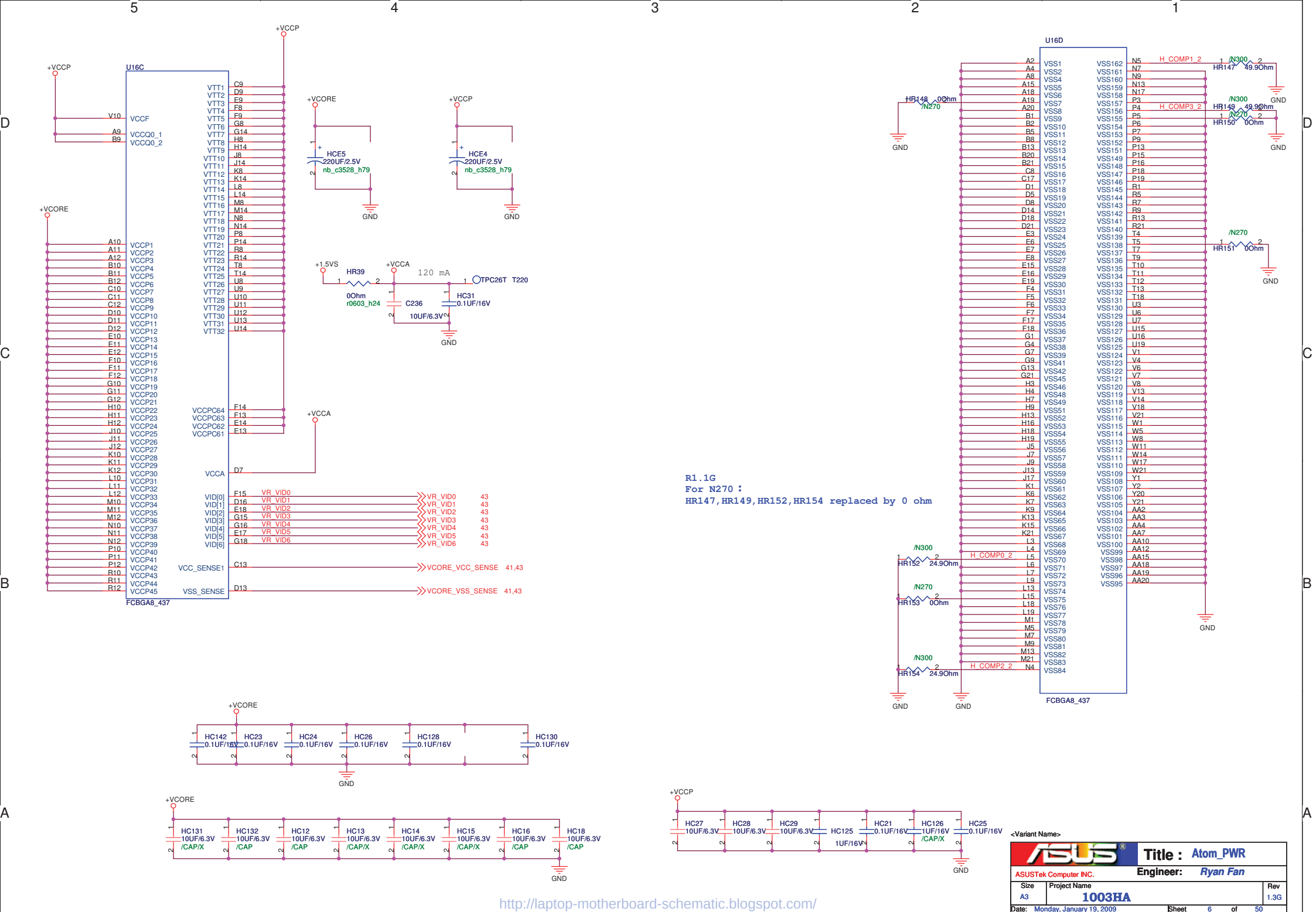
```
PEREQ1:PCIEx0 & PCIEx1
PEREQ2:PCIEx2 & PCIEx3 & SATA
PEREQ3:PCIEx4 & PCIEx5 & PCIEx6
```

FSC	FSB	FSA	CPU	PCIE	SATA
0	0	1	133	100	100
1	0	1	100	100	100
0	1	1	166	100	100

H148-H151 reserve to place GASKET for EMI







R1.1G
For N270 :
HR147,HR149,HR152,HR154 replaced by 0 ohm

**Power :
+VCCP**

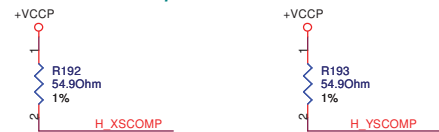
RCOMP For N300
R188 and R189 replaced by 16.9 ohm

For Calibrating the FSB I/O Buffer



SCOMP For N300
R192 and R193 replaced by 60.4 ohm

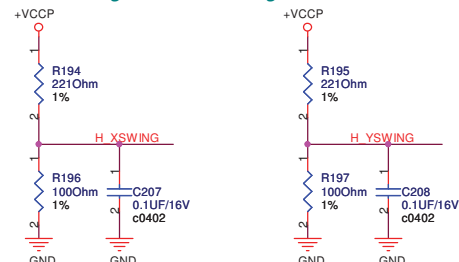
For Slew Rate Compensation on the FSB



For N300
R194 and R195 replaced by 301 ohm
R196 and R197 replaced by 84.5 ohm

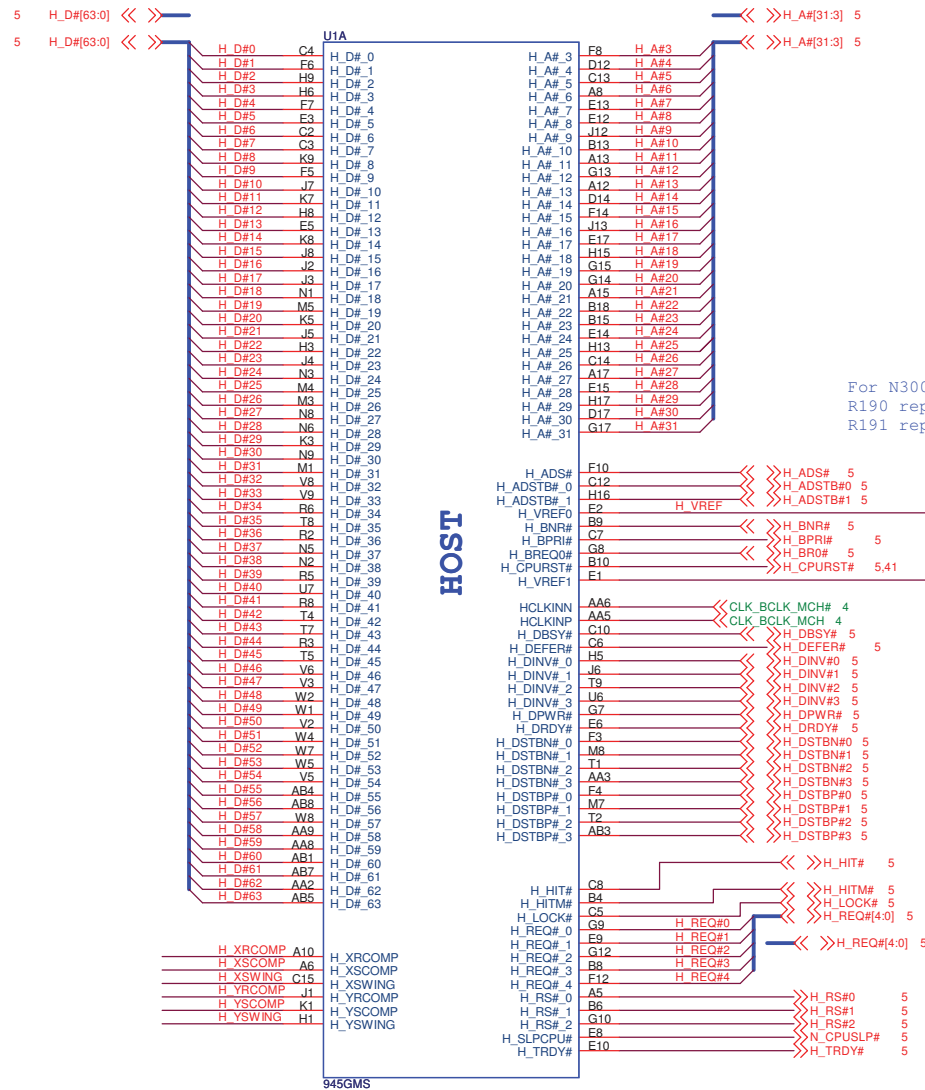
Voltage Swing

For Providing a Reference Voltage to The FSB RCOMP circuits



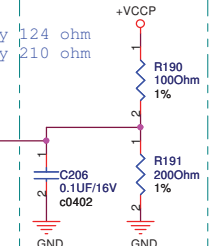
For N270
Signal voltage level = $0.3125 \cdot VCCP$
Trace should be 10 mil wide with 20 mil spacing

For N300
Signal voltage level = $0.22 \cdot VCCP$



AGTL+ I/O Voltage Reference

For N300
R190 replaced by 124 ohm
R191 replaced by 210 ohm



Layout Note:
0.1uF should be placed 100mils or less from GMCH pin.

<Variant Name>

ASUS Title : **NB-945GMS(HOST)**

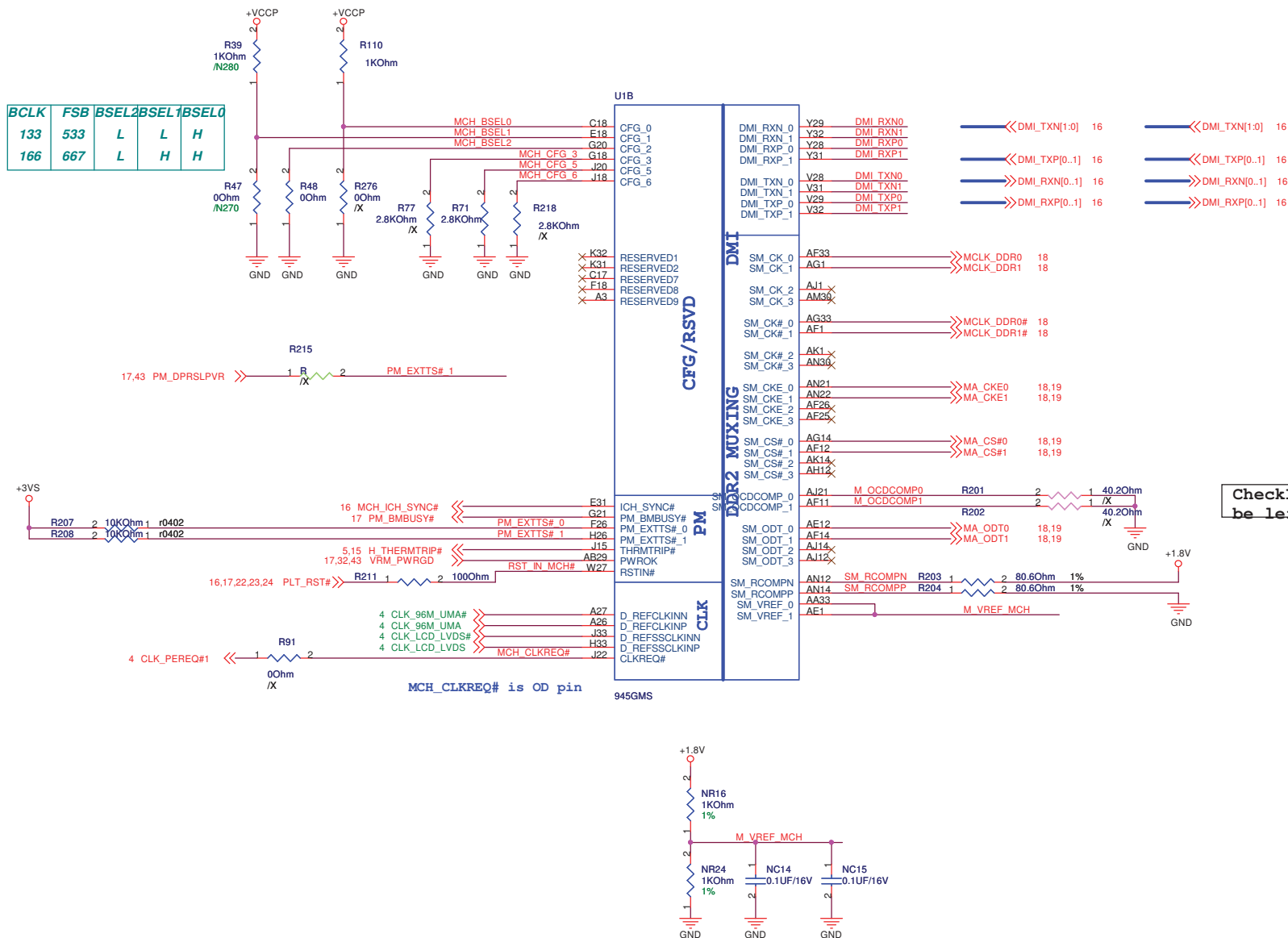
ASUSTek COMPUTER INC. Engineer: **Ryan Fan**

Size Project Name Rev

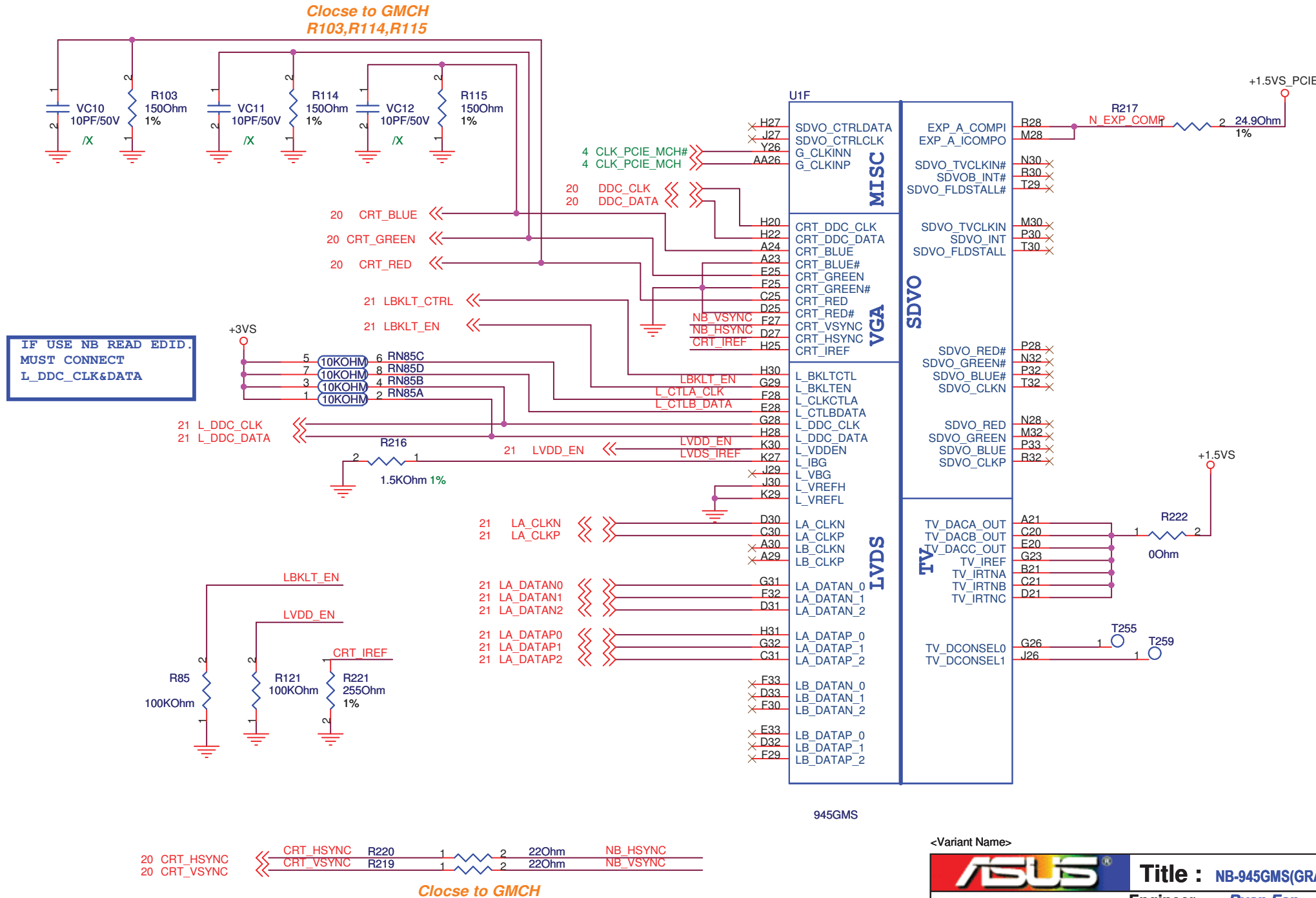
A3 1003HA 1.3G

Date: Monday, January 19, 2009 Sheet 7 of 50

BCLK	FSB	BSEL2	BSEL1	BSEL0
133	533	L	L	H
166	667	L	H	H



ASUS		Title : NB-945GMS(DMI & CFG)	
ASUSTeK COMPUTER INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	
A3	1003HA	1.3G	
Date: Monday, January 19, 2009	Sheet	8	of 50



<Variant Name>

ASUS		Title : NB-945GMS(GRAPHIC)	
ASUSTeK COMPUTER INC.		Engineer: Ryan Fan	
Size A4	Project Name 1003HA		Rev 1.3G
Date: Monday, January 19, 2009	Sheet	9 of 50	

18 MA_DQ[63:0] << >>
18 MA_DQ[63:0] << >>

U1G
MA_DQ0 AC31 SA_DQ_0
MA_DQ1 AB28 SA_DQ_1
MA_DQ2 AE33 SA_DQ_2
MA_DQ3 AF32 SA_DQ_3
MA_DQ4 AC33 SA_DQ_4
MA_DQ5 AB32 SA_DQ_5
MA_DQ6 AE31 SA_DQ_6
MA_DQ7 AE31 SA_DQ_7
MA_DQ8 AH31 SA_DQ_8
MA_DQ9 AK31 SA_DQ_9
MA_DQ10 AL28 SA_DQ_10
MA_DQ11 AK27 SA_DQ_11
MA_DQ12 AH30 SA_DQ_12
MA_DQ13 AL32 SA_DQ_13
MA_DQ14 AJ28 SA_DQ_14
MA_DQ15 AJ27 SA_DQ_15
MA_DQ16 AH32 SA_DQ_16
MA_DQ17 AF31 SA_DQ_17
MA_DQ18 AH27 SA_DQ_18
MA_DQ19 AF28 SA_DQ_19
MA_DQ20 AJ32 SA_DQ_20
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MA_DQ23 AG27 SA_DQ_23
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MA_DQ28 AL27 SA_DQ_28
MA_DQ29 AN26 SA_DQ_29
MA_DQ30 AH25 SA_DQ_30
MA_DQ31 AC26 SA_DQ_31
MA_DQ32 AM12 SA_DQ_32
MA_DQ33 AL11 SA_DQ_33
MA_DQ34 AH9 SA_DQ_34
MA_DQ35 AK9 SA_DQ_35
MA_DQ36 AM11 SA_DQ_36
MA_DQ37 AK11 SA_DQ_37
MA_DQ38 AM8 SA_DQ_38
MA_DQ39 AK8 SA_DQ_39
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MA_DQ41 AF9 SA_DQ_41
MA_DQ42 AF8 SA_DQ_42
MA_DQ43 AK6 SA_DQ_43
MA_DQ44 AF7 SA_DQ_44
MA_DQ45 AG11 SA_DQ_45
MA_DQ46 AJ6 SA_DQ_46
MA_DQ47 AH6 SA_DQ_47
MA_DQ48 AN6 SA_DQ_48
MA_DQ49 AM6 SA_DQ_49
MA_DQ50 AK3 SA_DQ_50
MA_DQ51 AL2 SA_DQ_51
MA_DQ52 AM5 SA_DQ_52
MA_DQ53 AL5 SA_DQ_53
MA_DQ54 AJ3 SA_DQ_54
MA_DQ55 AJ2 SA_DQ_55
MA_DQ56 AG2 SA_DQ_56
MA_DQ57 AF3 SA_DQ_57
MA_DQ58 AE7 SA_DQ_58
MA_DQ59 AF6 SA_DQ_59
MA_DQ60 AH5 SA_DQ_60
MA_DQ61 AG3 SA_DQ_61
MA_DQ62 AG5 SA_DQ_62
MA_DQ63 AF5 SA_DQ_63

AG19 SB_CAS#
AG21 SB_RAS#
AG20 SB_WE#

945GMS

DDR2 SYSTEM MEMORY

SA_BS_0 AK12 >>MA_BA0 18,19
SA_BS_1 AH11 >>MA_BA1 18,19
SA_BS_2 AG17 >>MA_BA2 18,19
SA_DM_0 AB30 MA_DM0
SA_DM_1 AL31 MA_DM1
SA_DM_2 AE30 MA_DM2
SA_DM_3 AK26 MA_DM3
SA_DM_4 AL9 MA_DM4
SA_DM_5 AG7 MA_DM5
SA_DM_6 AK5 MA_DM6
SA_DM_7 AH3 MA_DM7
SA_DQS_0 AC28 MA_DQS0
SA_DQS_1 AJ30 MA_DQS1
SA_DQS_2 AK33 MA_DQS2
SA_DQS_3 AL25 MA_DQS3
SA_DQS_4 AN9 MA_DQS4
SA_DQS_5 AH8 MA_DQS5
SA_DQS_6 AM2 MA_DQS6
SA_DQS_7 AE3 MA_DQS7
SA_DQS#_0 AC29 MA_DQS#0 << >>MA_DQS[7:0] 18
SA_DQS#_1 AK30 MA_DQS#1
SA_DQS#_2 AJ33 MA_DQS#2
SA_DQS#_3 AM25 MA_DQS#3
SA_DQS#_4 AN8 MA_DQS#4
SA_DQS#_5 AJ8 MA_DQS#5
SA_DQS#_6 AM3 MA_DQS#6
SA_DQS#_7 AE2 MA_DQS#7
SA_MA_0 AJ15 MA_MA0 << >>MA_MA[13:0] 18,19
SA_MA_1 AM17 MA_MA1
SA_MA_2 AM15 MA_MA2
SA_MA_3 AH15 MA_MA3
SA_MA_4 AK15 MA_MA4
SA_MA_5 AN15 MA_MA5
SA_MA_6 AF19 MA_MA6
SA_MA_7 AN17 MA_MA7
SA_MA_8 AJ18 MA_MA8
SA_MA_9 AL17 MA_MA9
SA_MA_10 AG16 MA_MA10
SA_MA_11 AL18 MA_MA11
SA_MA_12 AG18 MA_MA12
SA_MA_13 AL14 MA_MA13
SA_CAS# AJ17 >>MA_CAS# 18,19
SA_RAS# AK18 >>MA_RAS# 18,19
SA_RCVENIN# AN28 SA_RCVENIN#
SA_RCVENOUT# AM28 SA_RCVENOUT#
SA_WE# AH17 >>MA_WE# 18,19
SB_BS_0 AH21
SB_BS_1 AJ20
SB_BS_2 AE27
SB_MA_0 AN20
SB_MA_1 AL21
SB_MA_2 AK21
SB_MA_3 AK23
SB_MA_4 AL23
SB_MA_5 AH23
SB_MA_6 AG23
SB_MA_7 AF21
SB_MA_8 AM21
SB_MA_9 AE21
SB_MA_10 AL20
SB_MA_11 AE22
SB_MA_12 AE25
SB_MA_13 AE20

<< >>MA_DQS[7:0] 18
<< >>MA_DM[7:0] 18

<< >>MA_DQS[7:0] 18

<< >>MA_MA[13:0] 18,19

>>MA_CAS# 18,19
>>MA_RAS# 18,19
1 T222
>>MA_WE# 18,19

U1G

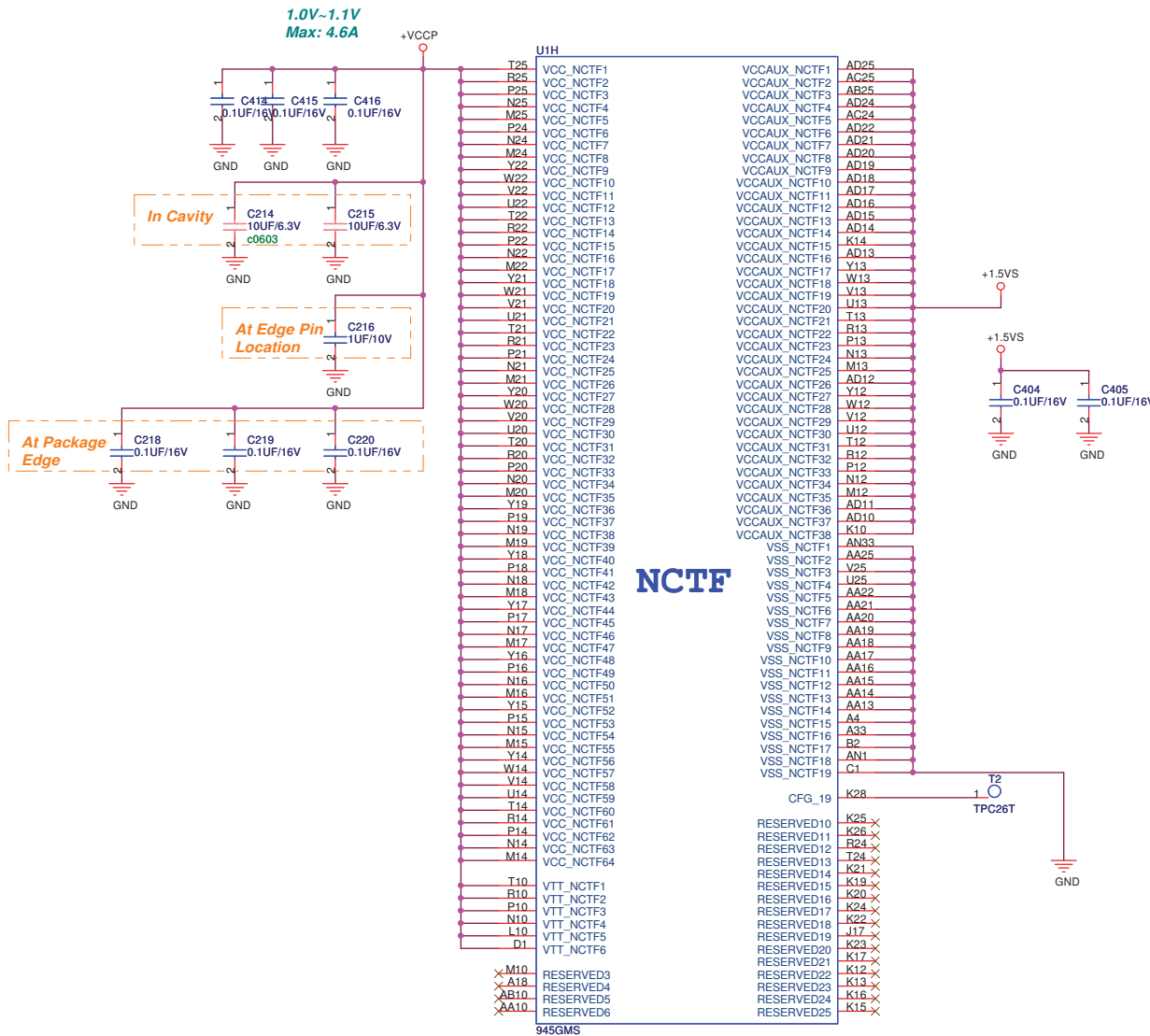
W33 NC1
AM33 NC2
AL33 NC3
C33 NC4
B33 NC5
AN32 NC6
A32 NC7
AN31 NC8
W28 NC9
V27 NC10
W29 NC11
J24 NC12
H24 NC13
W32 NC14
G24 NC15
F24 NC16
E24 NC17
D24 NC18
X33 NC19
X31 NC20
E21 NC21
C23 NC22
AN19 NC23
AM19 NC24
AL19 NC25
AK19 NC26
AJ19 NC27
AH19 NC28
AN3 NC29
Y9 NC30
J19 NC31
H19 NC32
G19 NC33
E19 NC34
D19 NC35
C19 NC36
B19 NC37
A19 NC38
Y8 NC39
G16 NC40
F16 NC41
NC42
E16 NC43
D16 NC44
C16 NC45
B16 NC46
AN2 NC47
A16 NC48
Y7 NC49
AM4 NC50
AF4 NC51
AD4 NC52
AL4 NC53
AK4 NC54
W31 NC55
AJ4 NC56
AH4 NC57
AG4 NC58
AE4 NC59
AM1 NC60
NC61
Y6
AL1
Y5
Y10
W10
W25
V24
U24
V10
U10
K18
RESERVED26
RESERVED27
RESERVED28
RESERVED29
RESERVED30
RESERVED31
RESERVED32
RESERVED33
RESERVED34
RESERVED35
RESERVED36
RESERVED37
RESERVED38
RESERVED39
RESERVED40
RESERVED41
RESERVED42
Y25
Y24
AB22
AB21
AB19
AB16
AB14
AA12
W24
AA24
AB24
AB20
AB18
AB15
AB13
AB12
AB17

NC

945GMS

<Variant Name>

ASUS		Title : NB-945GMS(DDR2)	
ASUSTeK COMPUTER INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	Rev
A3	1003HA	1.3G	
Date: Monday, January 19, 2009		Sheet	10 of 50



CFG_19(K28) Strapping :

DMI LANE Reversal:

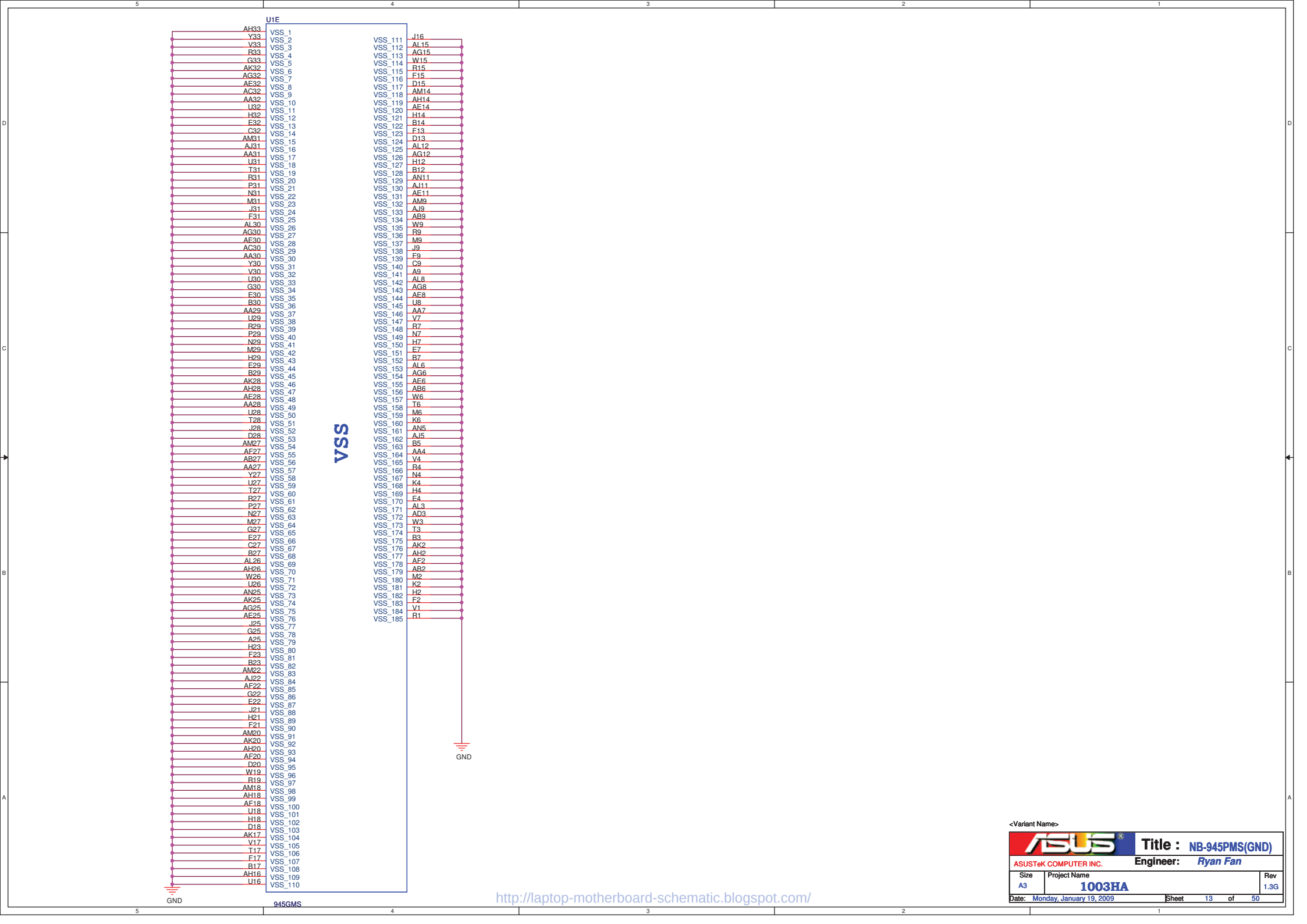
0:Normal Operation (Default)

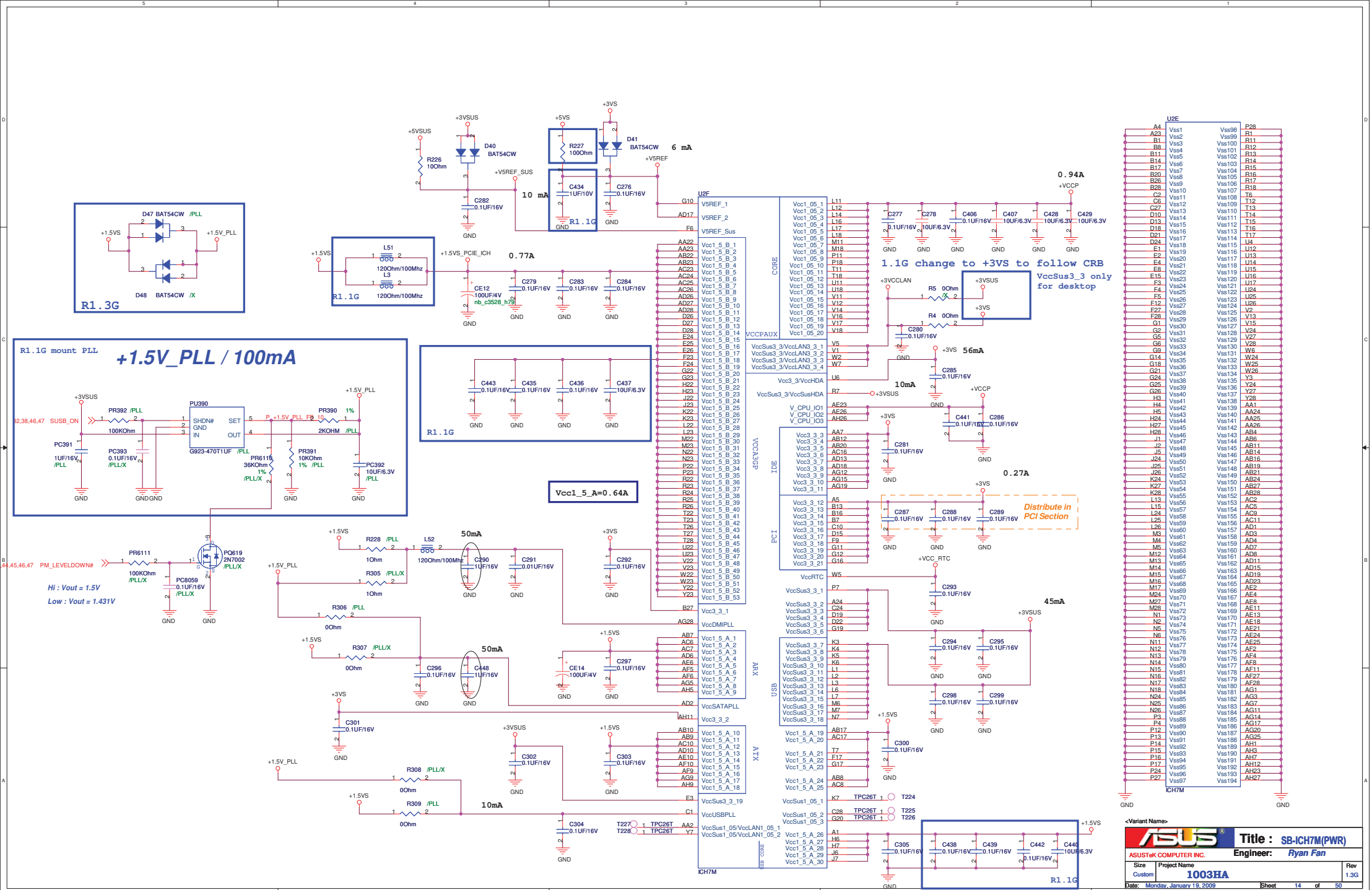
1.:Reversal Lanes, 3->0,2->1..etc

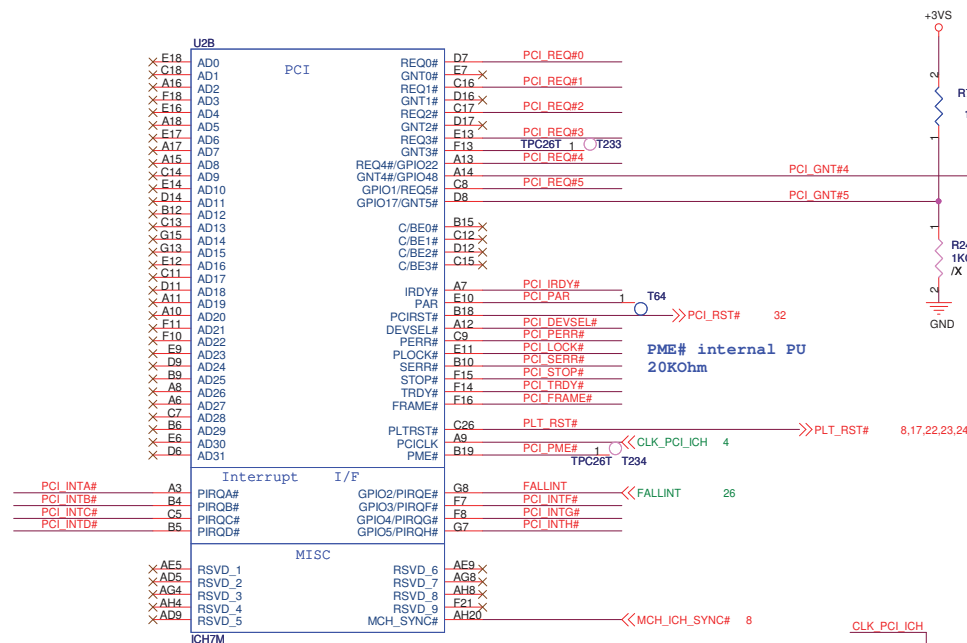
Note:945GMS doesn't support DMI Lane Reversal

<Variant Name>

ASUS		Title : NB-945GMS(PWR)	
ASUSTeK COMPUTER INC.		Engineer: Ryan Fan	
Size	Project Name		Rev
A3	1003HA		1.3G
Date: Monday, January 19, 2009		Sheet	11 of 50

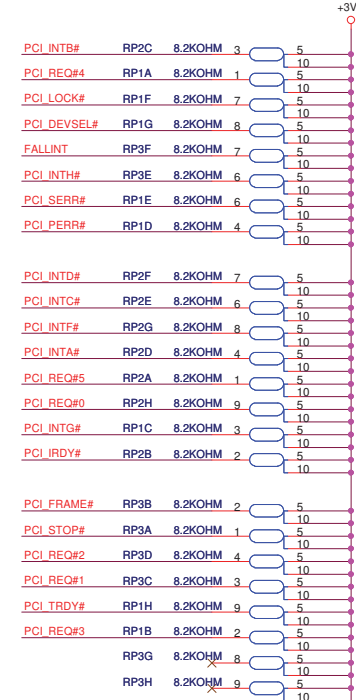






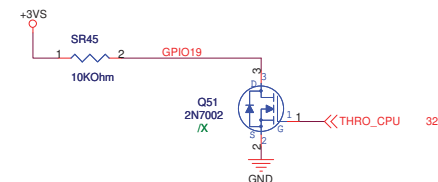
ICH7 Boot BIOS Select

	GNT#5	GNT#4
LPC	H	H
PCI	H	L
SPI	L	H



<Variant Name>

ASUS		Title : SB-ICH7M(2)	
ASUSTek COMPUTER INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	
Custom	1003HA	1.3G	
Date: Monday, January 19, 2009	Sheet	16	of 50



GPI025 Internal PU 20K
For +1.5V DIMM Power

WLAN_LED	WLAN	BT
High	v	v
High	v	x
High	x	v
Low	x	x

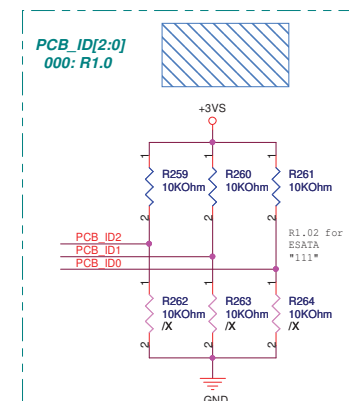
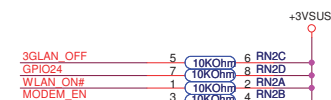
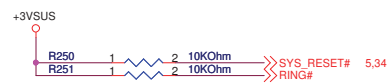
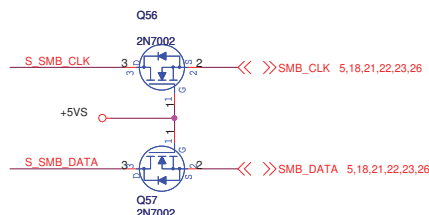
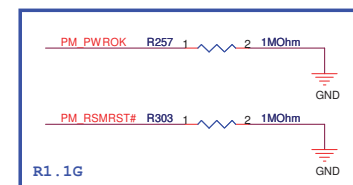
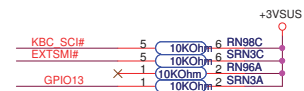
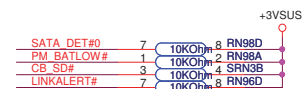
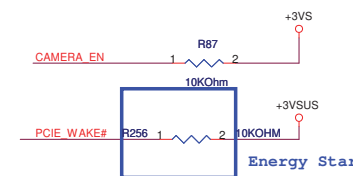
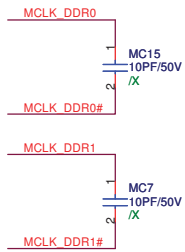


Diagram illustrating the SMBus interface connections. The interface uses four pins (1, 2, 3, 4) for the components (RN95A, RN95B, RN95C, RN95D). The connections are as follows:

- Pins 1 and 2 are connected to **SMB_CLK** (Signal SMBus Clock).
- Pins 3 and 4 are connected to **SMB_DATA** (Signal SMBus Data).
- The **SMB_CLK** lines are also connected to **+3VSUS** and **+3V**.
- The **SMB_DATA** lines are connected to **+3V** and **Ground**.



		Title : SB-ICH7M(3)	
ASUSTeK COMPUTER INC		Engineer: <i>Ryan Fan</i>	
Size Custom	Project Name 1003HA	Rev 1.3G	
Date: Monday, January 19, 2009		Sheet 17	of 50



STD Type

DIMM1A

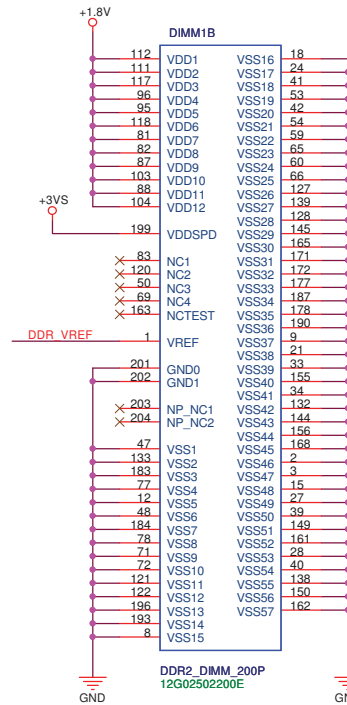
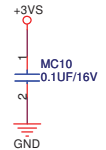
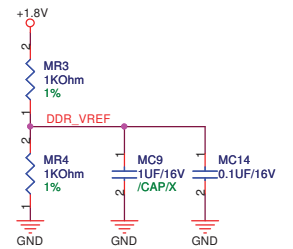
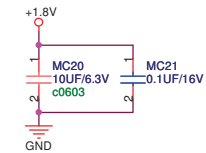
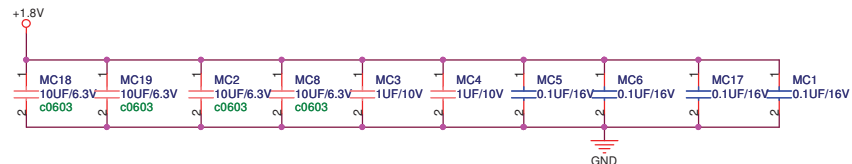
MA MA0	102	A0	DO0	5	MA DO0
MA MA1	101	A1	DO1	7	MA DO1
MA MA2	100	A2	DO2	17	MA DO2
MA MA3	99	A3	DO3	19	MA DO3
MA MA4	98	A4	DO4	6	MA DO5
MA MA5	97	A5	DO5	14	MA DO6
MA MA6	94	A6	DO6	16	MA DO7
MA MA7	92	A7	DO7		
MA MA8	93	A8	DO8	23	MA DO21
MA MA9	91	A9	DO9	25	MA DO18
MA MA10	105	A10/AP	DO10	37	MA DO19
MA MA11	90	A11	DO11	20	MA DO17
MA MA12	89	A12	DO12	22	MA DO20
MA MA13	116	A13	DO13	36	MA DO22
	86	A14	DO14	38	MA DO23
	84	A15	DO15	43	MA DO9
MA BA2	85	A16_BA2	DO16	45	MA DO12
			DO17	55	MA DO10
MA BA0	107	BA0	DO18	57	MA DO11
MA BA1	106	BA1	DO19	44	MA DO13
			DO20	46	MA DO8
8,19 MA_CS#0	110	S0#	DO21	56	MA DO14
8,19 MA_CS#1	115	S1#	DO22	58	MA DO15
8 MCLK_DDR0	30	CK0	DO23	61	
8 MCLK_DDR0#	164	CK0#	DO24	63	MA DO24
8 MCLK_DDR1	166	CK1	DO25	73	MA DO25
8 MCLK_DDR1#	79	CK1#	DO26	75	MA DO26
8,19 MA_CKE0	80	CKE0	DO27	62	MA DO28
8,19 MA_CKE1	113	CKE1	DO28	64	MA DO29
10,19 MA_CAS#	108	CAS#	DO29	74	MA DO30
10,19 MA_RAS#	109	RAS#	DO30	76	MA DO31
10,19 MA_WE#	198	WE#	DO31	123	MA DO32
	200	SA0	DO32	125	MA DO33
5,17,21,22,23,26 SMB_CLK	197	SCL	DO33	135	MA DO34
5,17,21,22,23,26 SMB_DATA	195	SDA	DO34	137	MA DO35
			DO35	124	MA DO36
8,19 MA_ODT0	114	ODT0	DO36	126	MA DO37
8,19 MA_ODT1	119	ODT1	DO37	134	MA DO38
			DO38	136	MA DO39
MA DM0	10	DM0	DO39	141	
MA DM2	26	DM1	DO40	143	MA DO40
MA DM1	52	DM2	DO41	151	MA DO41
MA DM3	67	DM3	DO42	153	MA DO42
MA DM4	130	DM4	DO43	140	MA DO43
MA DM5	147	DM5	DO44	142	MA DO44
MA DM6	170	DM6	DO45	152	MA DO45
MA DM7	185	DM7	DO46	154	MA DO46
			DO47	157	MA DO47
MA DOS0	13	DOS0	DO48	159	MA DO48
MA DOS2	31	DOS1	DO49	173	MA DO49
MA DOS1	51	DOS2	DO50	175	MA DO50
MA DOS3	70	DOS3	DO51	158	MA DO51
MA DOS4	131	DOS4	DO52	160	MA DO52
MA DOS5	148	DOS5	DO53	174	MA DO53
MA DOS6	169	DOS6	DO54	176	MA DO54
MA DOS7	188	DOS7	DO55	179	MA DO55
MA DOS#0	11	DOS#0	DO56	181	MA DO56
MA DOS#2	29	DOS#1	DO57	189	MA DO57
MA DOS#1	49	DOS#2	DO58	191	MA DO58
MA DOS#3	68	DOS#3	DO59	180	MA DO59
MA DOS#4	129	DOS#4	DO60	182	MA DO60
MA DOS#5	146	DOS#5	DO61	192	MA DO61
MA DOS#6	167	DOS#6	DO62	194	MA DO62
MA DOS#7	186	DOS#7	DO63		MA DO63

DDR2_DIMM_200P
12G02502200E

DDR2 Conn. Height=4.0mm

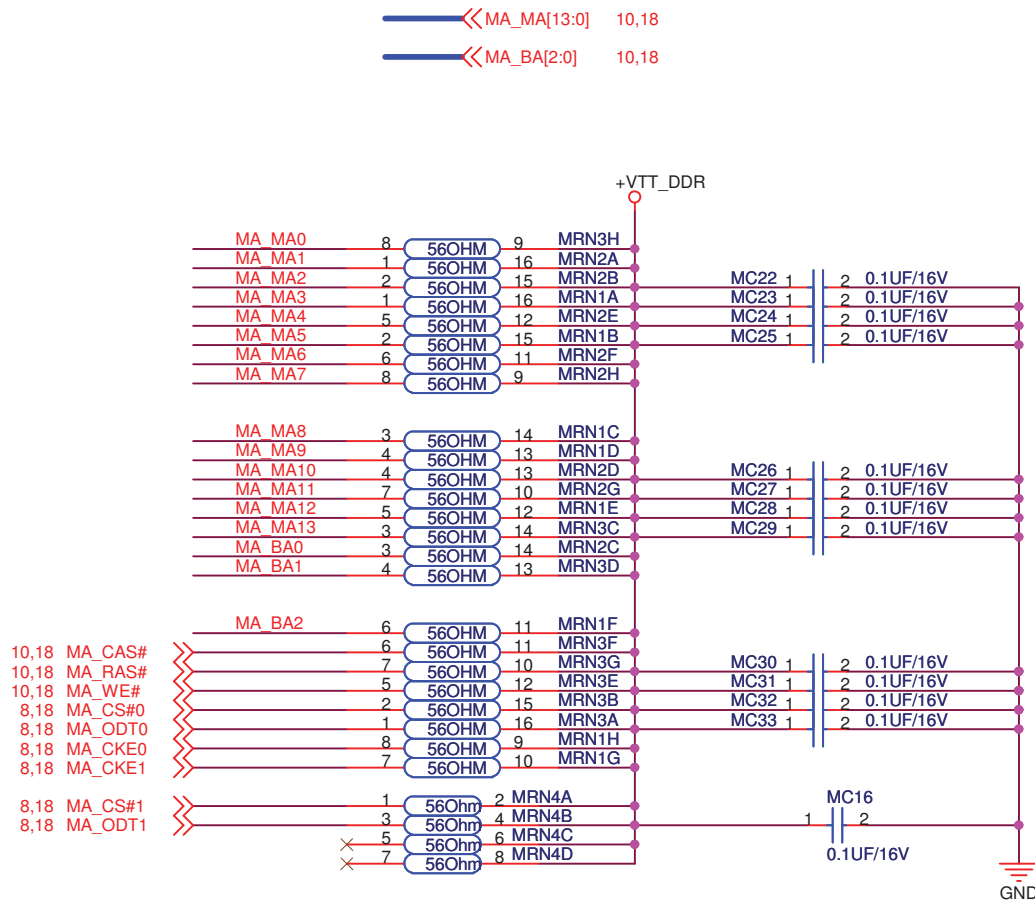
GROUP1
GROUP2
SWAP

R1.1G MC3 MC4 change to 0603 1uF



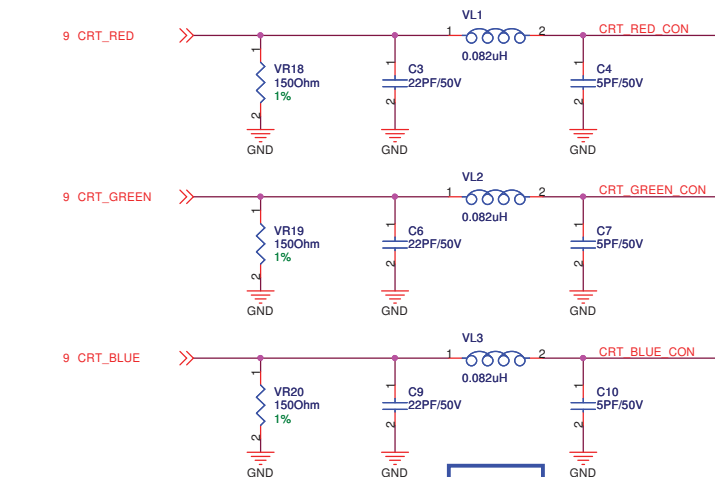
<Variant Name>

ASUS		Title : DDR2 SODIMM	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A3	Project Name 1003HA	Rev 1.3G	
Date: Monday, January 19, 2009	Sheet 18	of 50	

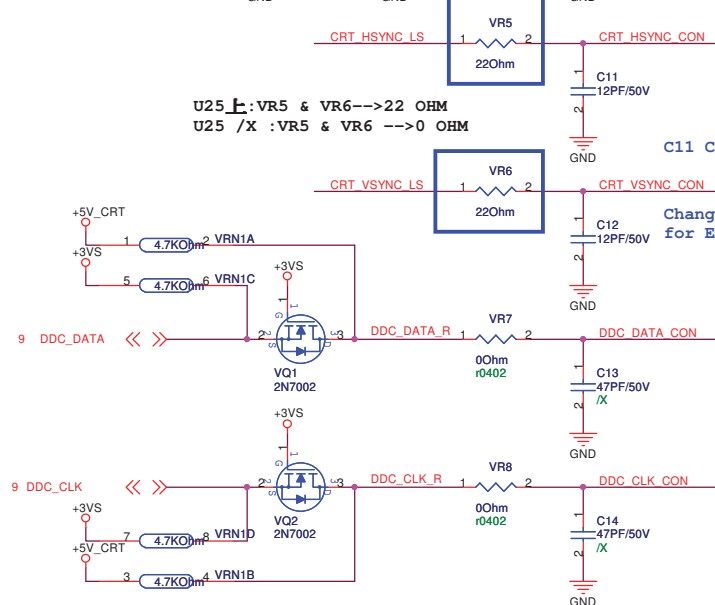


<Variant Name>

ASUS		Title : DDR2_Termination	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A4	Project Name 1003HA		Rev 1.3G
Date: Monday, January 19, 2009	Sheet	19	of 50

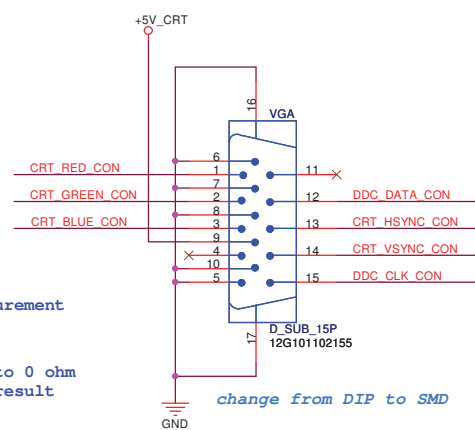


U25上:VR5 & VR6-->22 OHM
U25 /X :VR5 & VR6 -->0 OHM



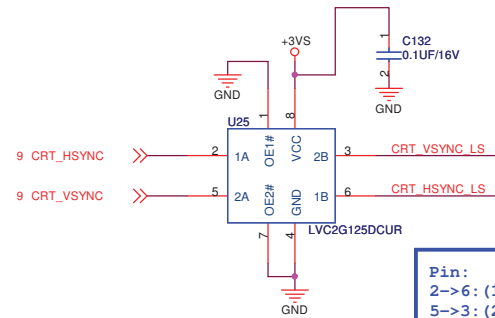
C11 C12 for EA measurement

Change VR5 and VR6 to 0 ohm
for EA measurement result

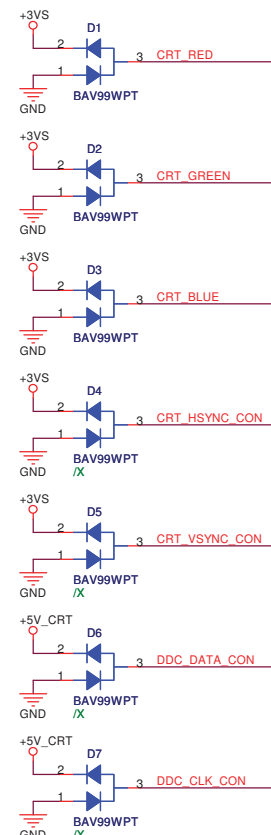
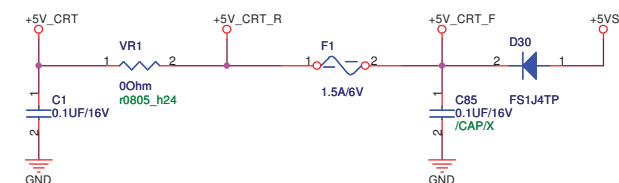


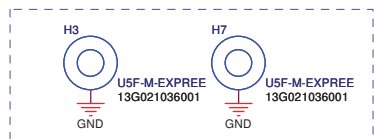
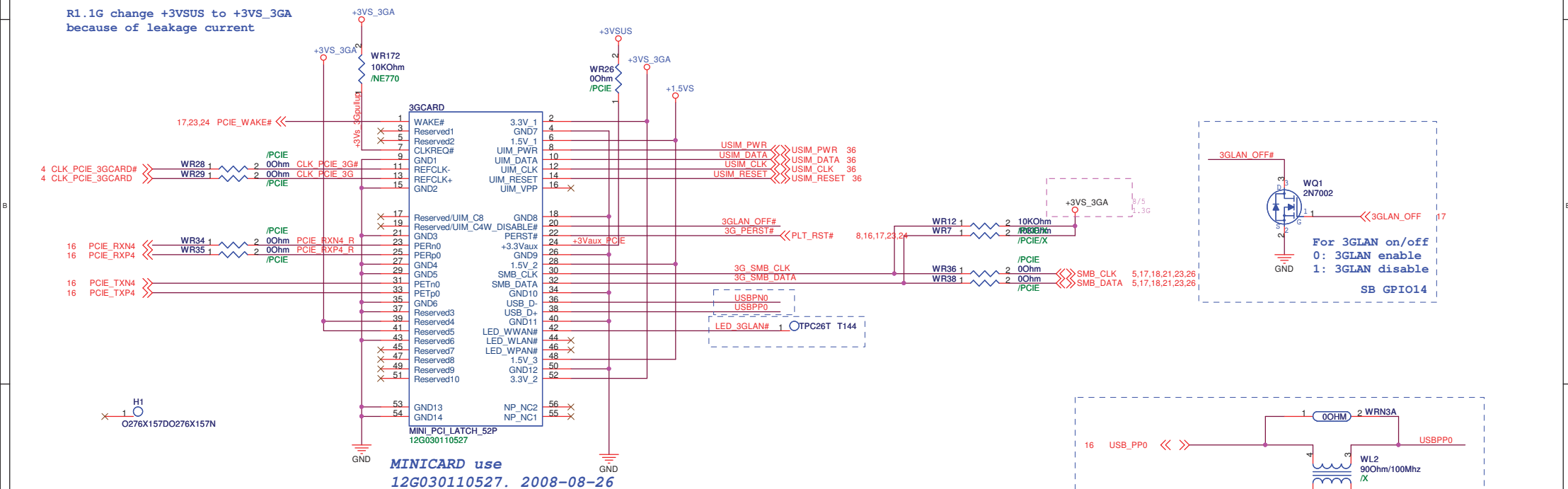
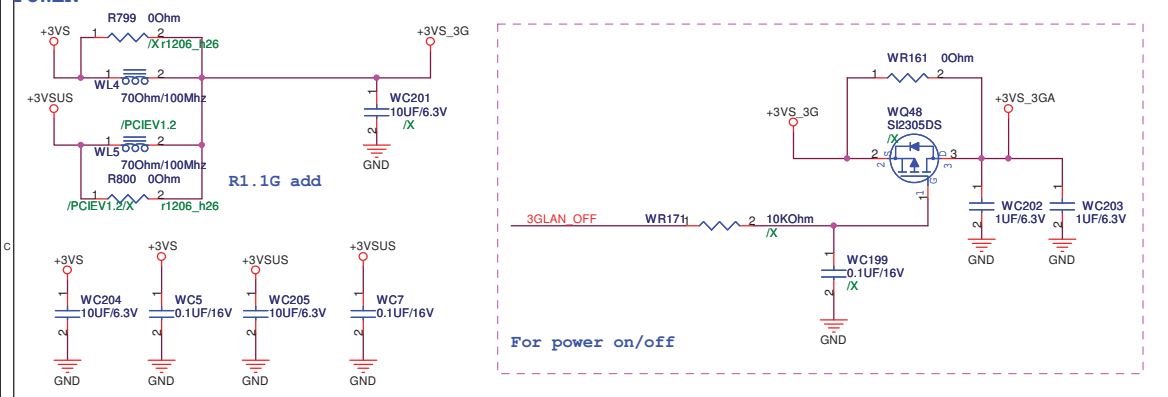
VGA use 12G10110015W

VGA use 12G101102155, but use
12G10110015W footprint



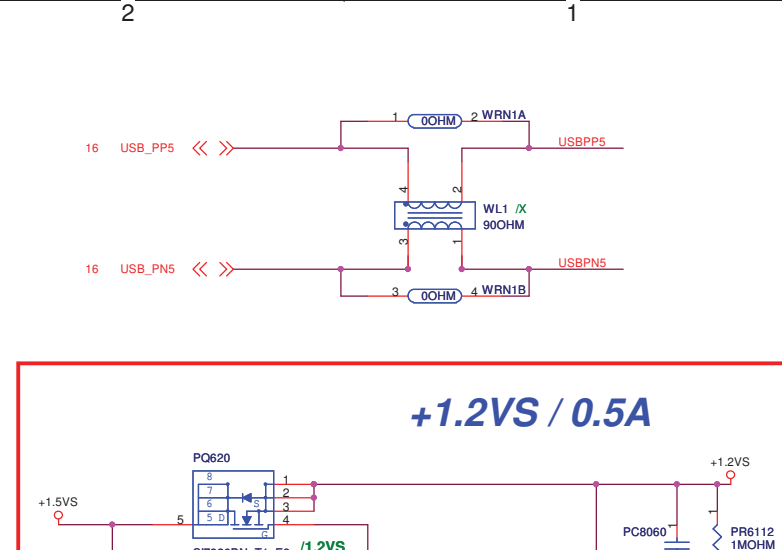
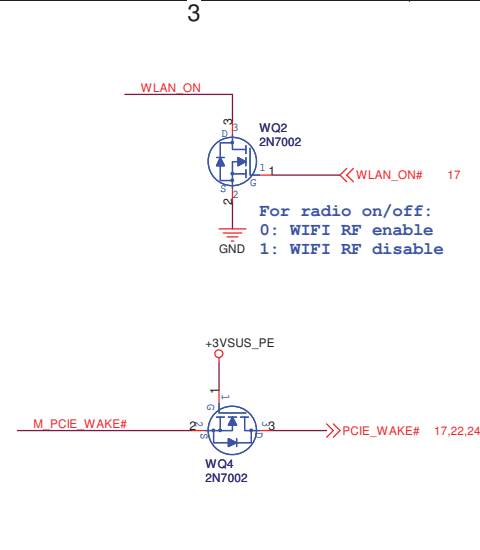
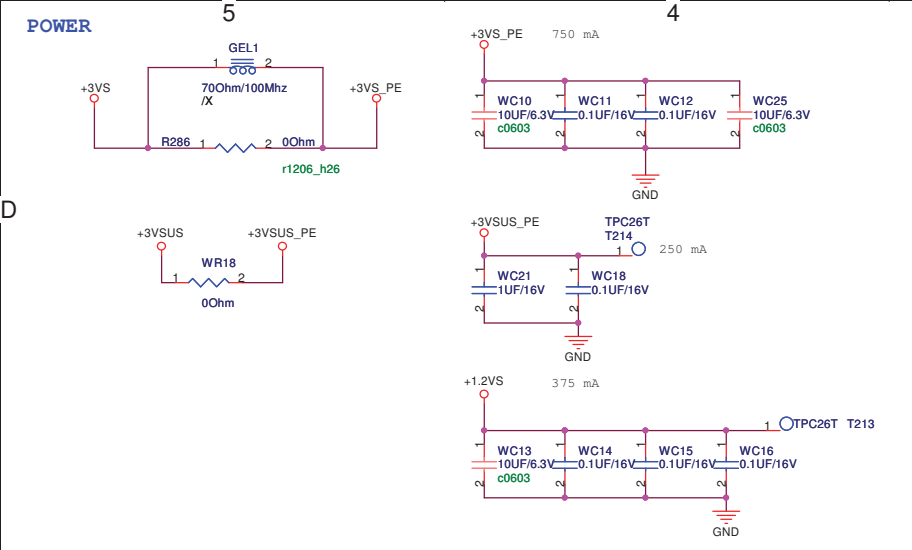
Pin:
2->6: (1A->1B)
5->3: (2A->2B)



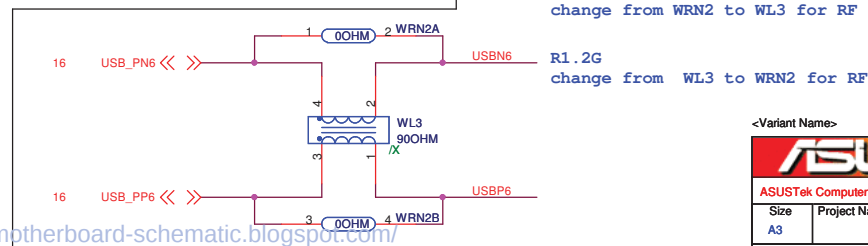
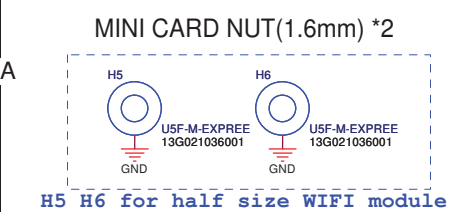
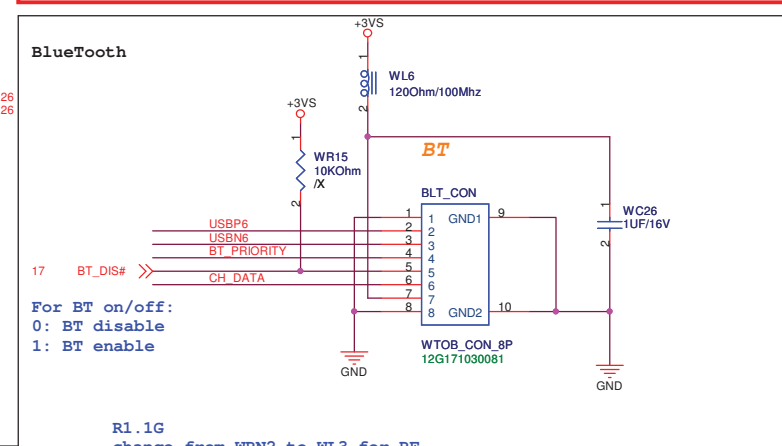
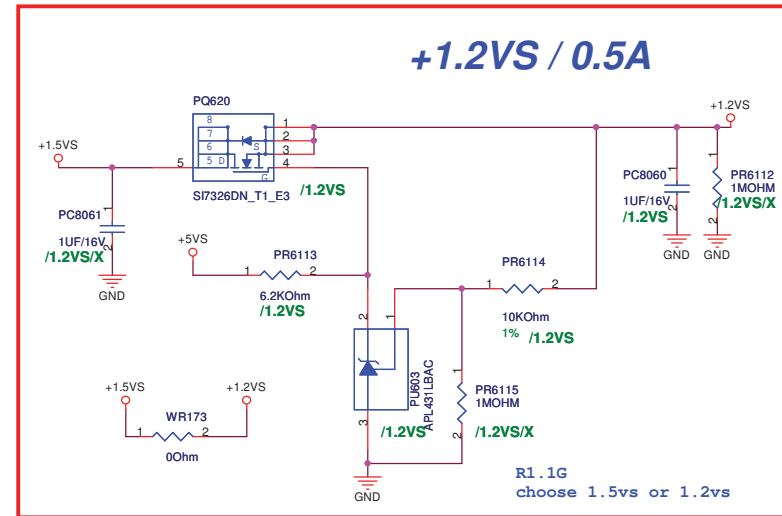
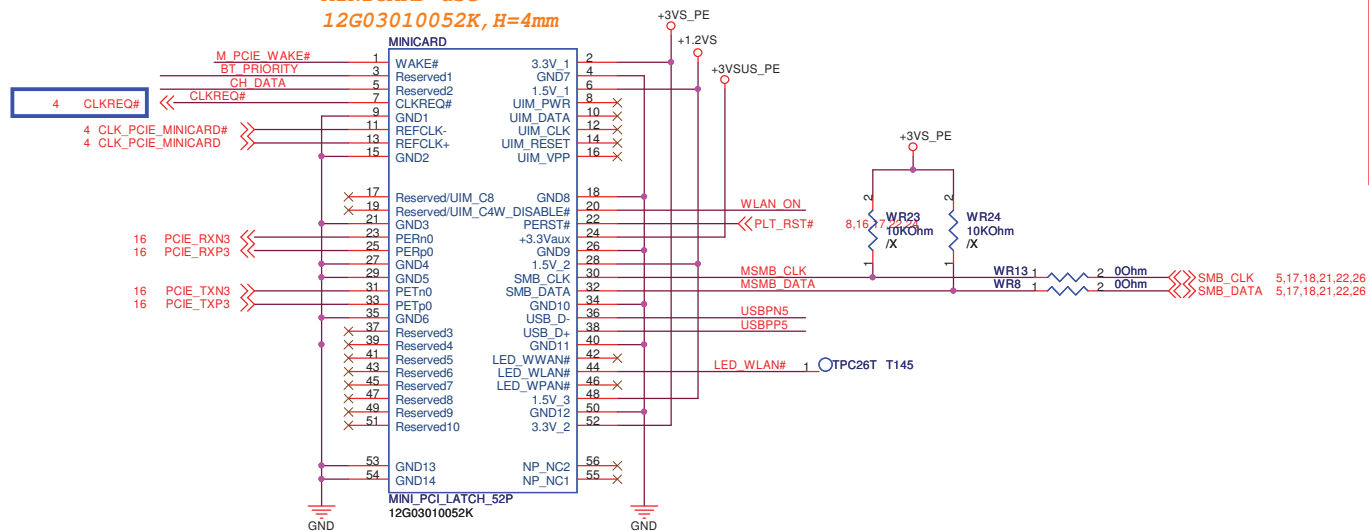


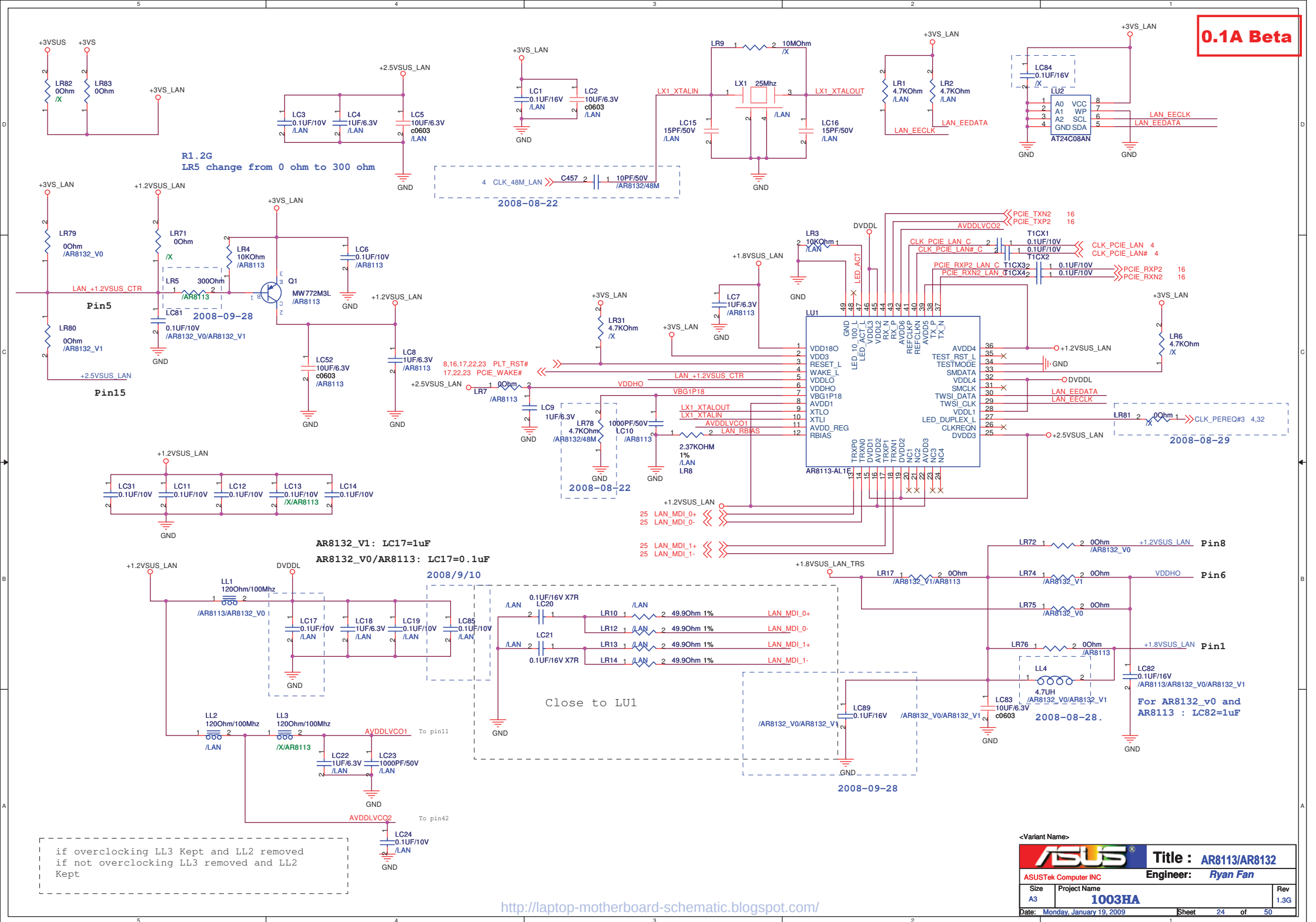
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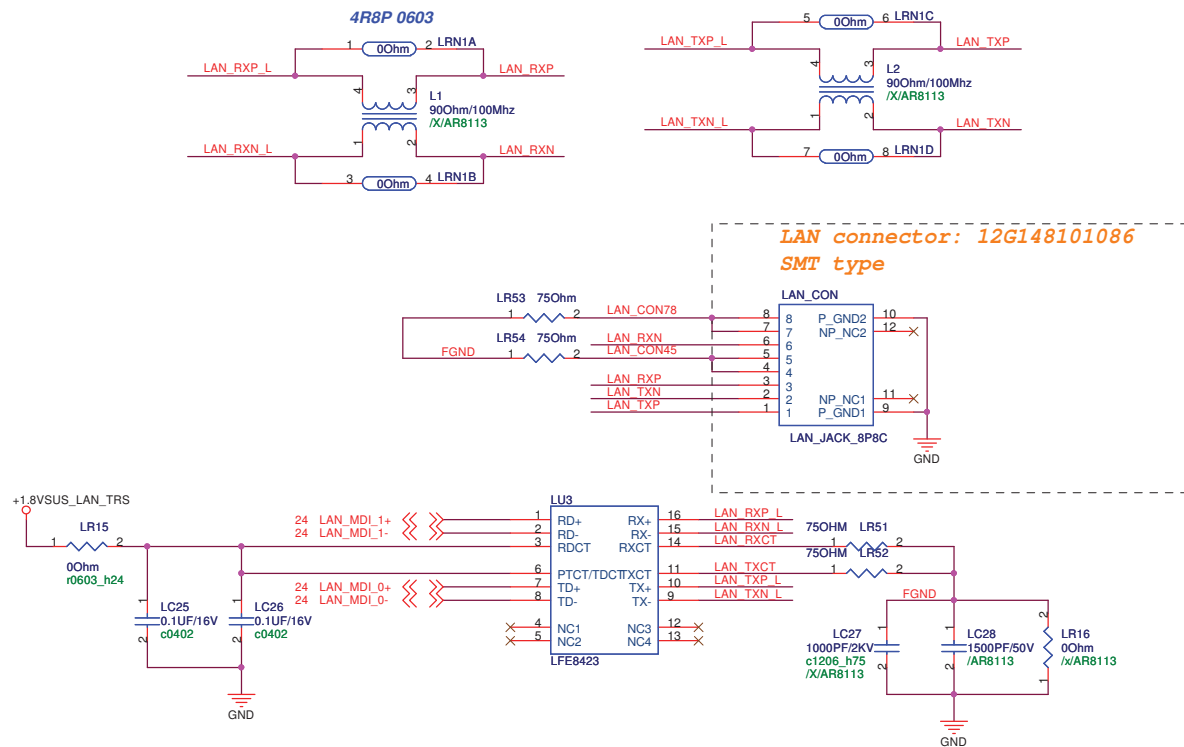
ASUS		Title : USB 3.5G LAN	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A3	Project Name 1003HA		Rev 1.3G
Date: Monday, January 19, 2009		Sheet	22 of 50



R1.2G Reserver CLKREQ# to clock gen. **MINICARD use**
12G03010052K, H=4mm



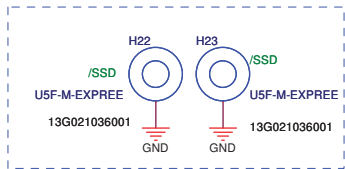
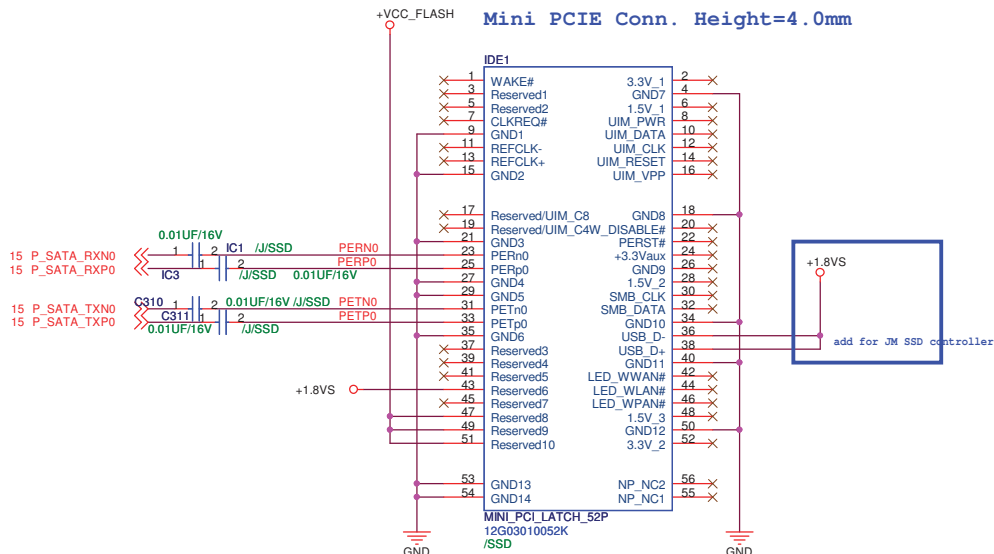
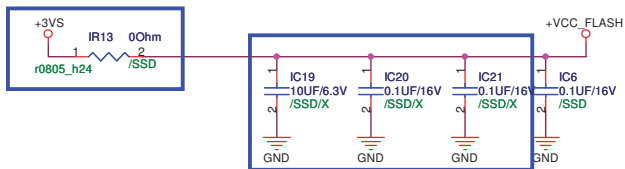




<Variant Name>

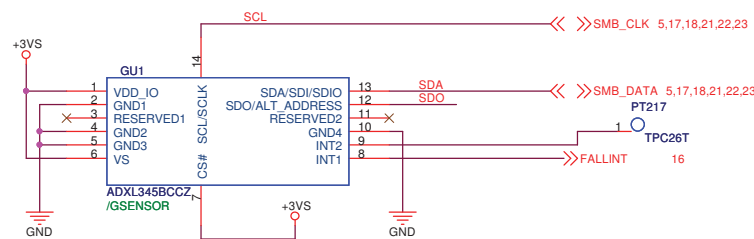
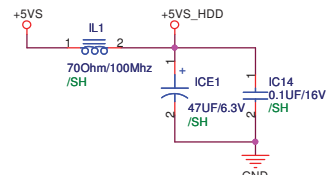
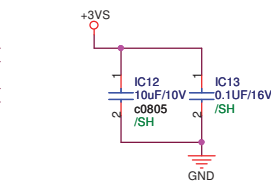
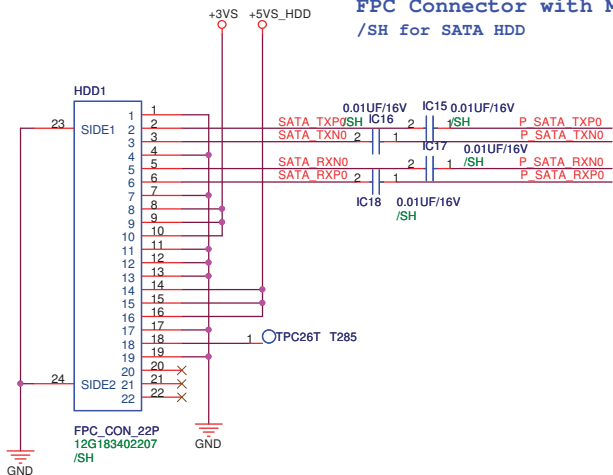
ASUS		Title : RJ45	
ASUSTek Computer INC.		Engineer: <i>Ryan Fan</i>	
Size A3	Project Name 1003HA	Rev 1.3G	
Date: Monday, January 19, 2009	Sheet	25	of 50

POWER

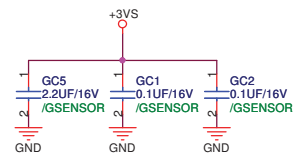
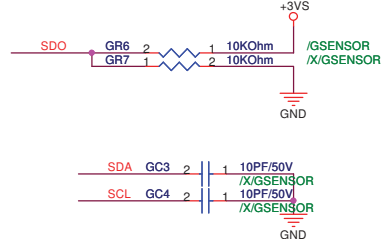


SATA HDD Connector

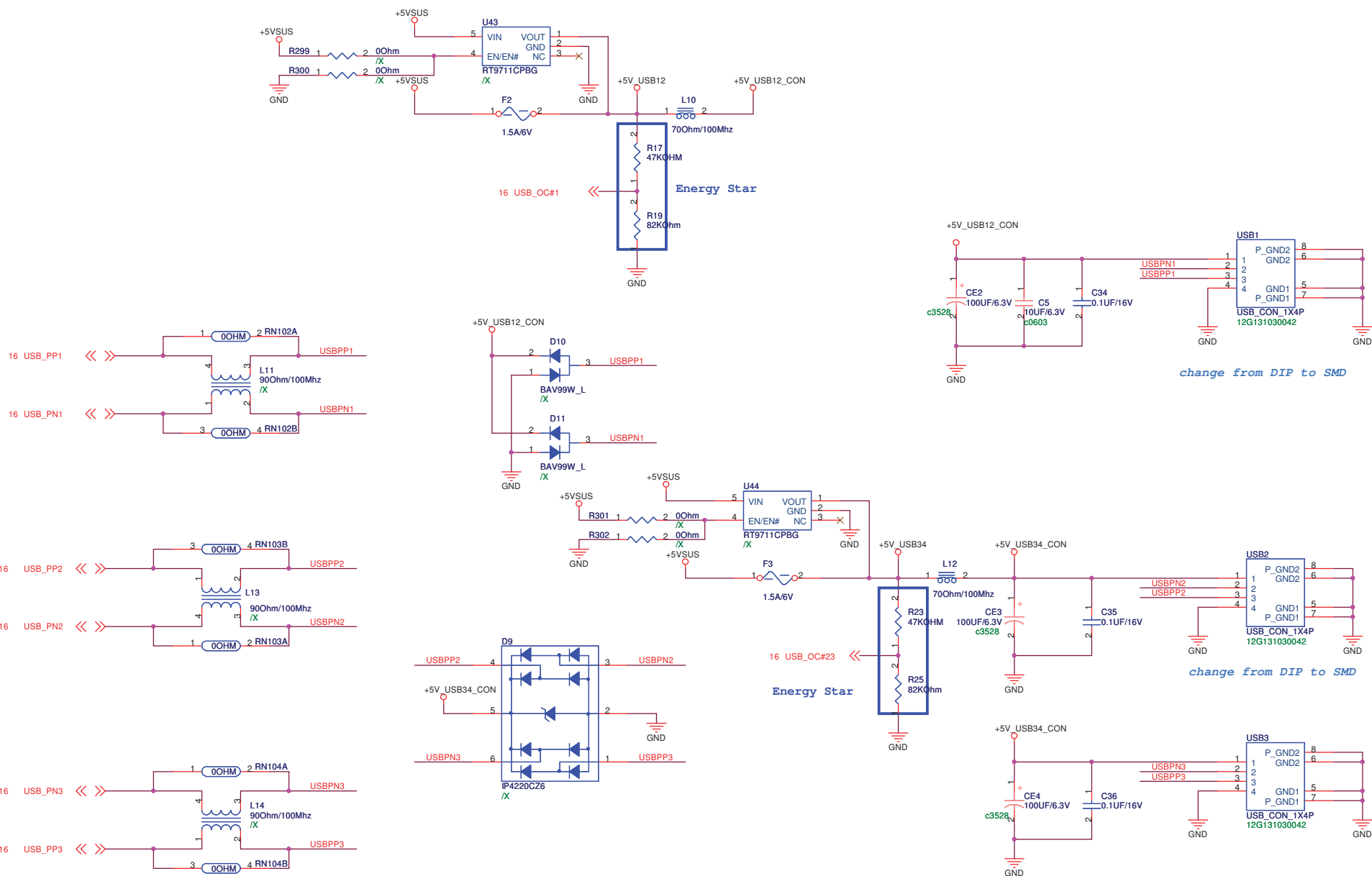
FPC Connector with Mylar
/SH for SATA HDD



Install GR6 being slaveaddr "3A"
for ADI/Freescale/ST G-sensors



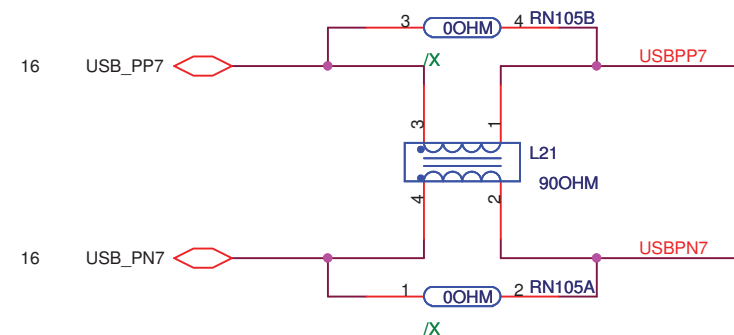
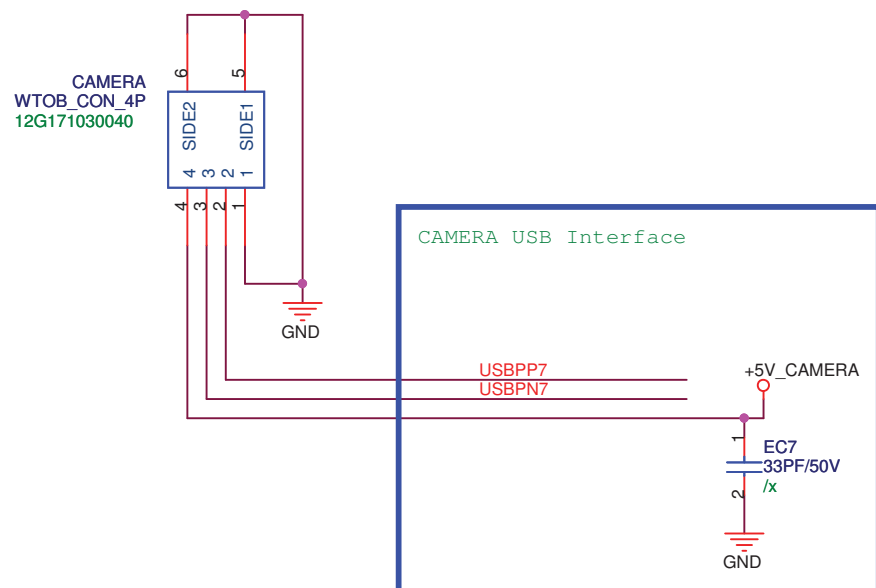
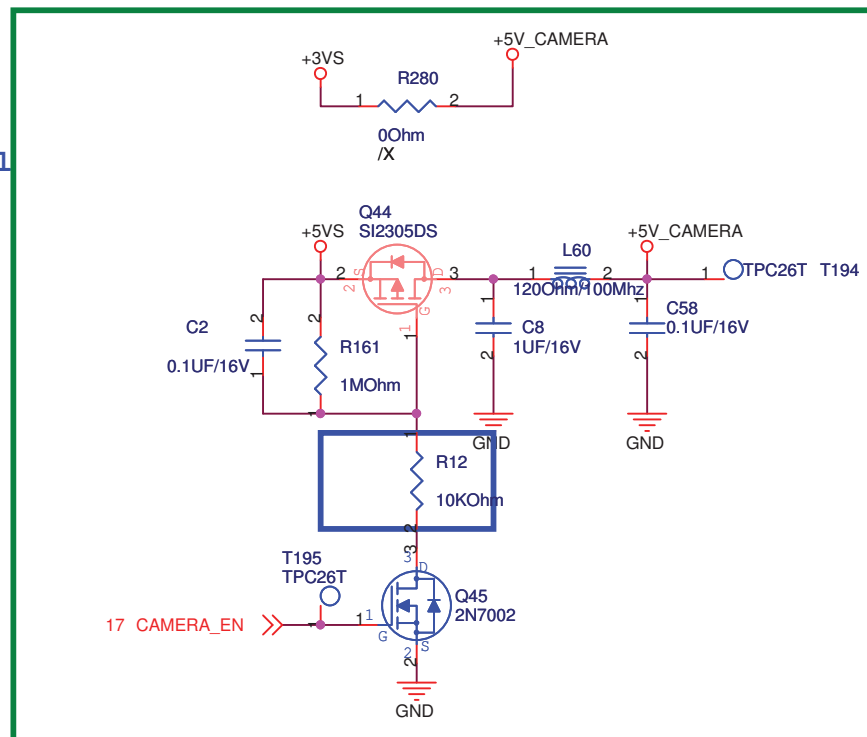
<Variant Name>		
ASUS		
ASUSTek Computer INC.		
Title : HD + Flash Conn		
Engineer: Ryan Fan		
Size	Project Name	Rev
A3	1003HA	1.3G
Date: Monday, January 19, 2009		
Sheet 26 of 50		



<Variant Name>

ASUS		Title : USB Port	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A3	Project Name 1003HA	Rev 1.3G	
Date: Monday, January 19, 2009	Sheet 27	of 50	

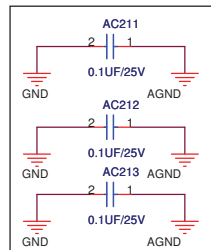
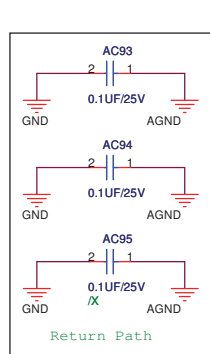
Power Control



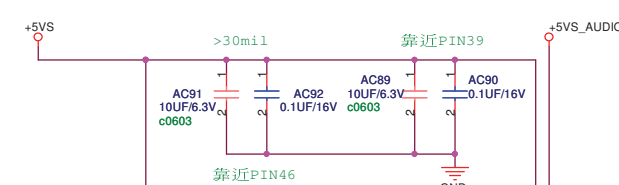
R1.2G
change from RN105 to L21 for RF

<Variant Name>

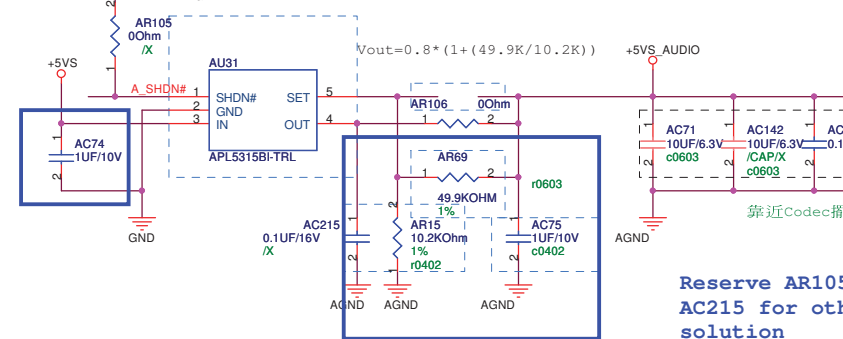
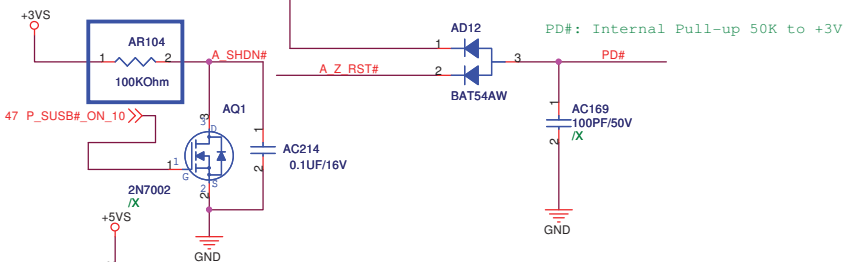
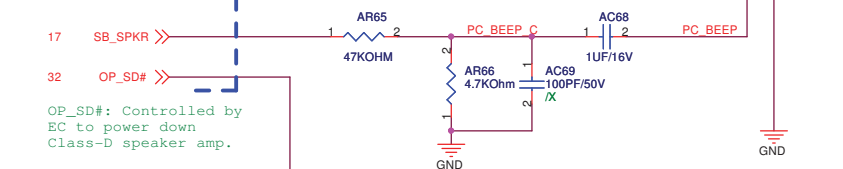
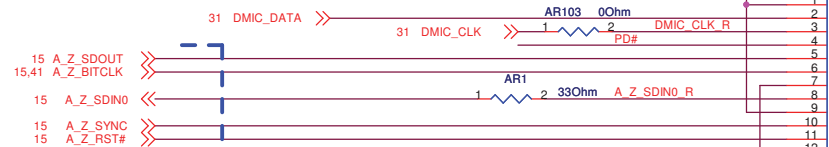
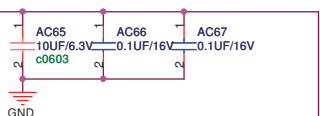
ASUS		Title : Camera Power	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size A4	Project Name 1003HA		Rev 1.3G
Date: Monday, January 19, 2009		Sheet 28 of 50	



1.1G Add,
for Codec ground ring



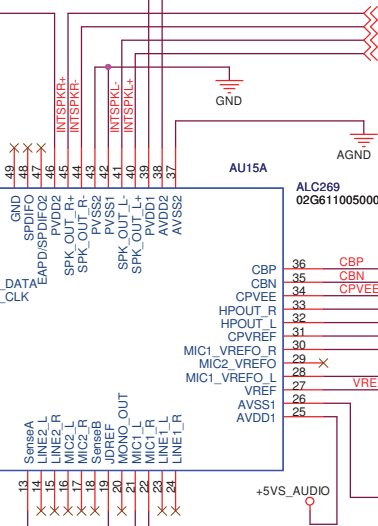
靠近Codec擺放



For Audio Noise Issue

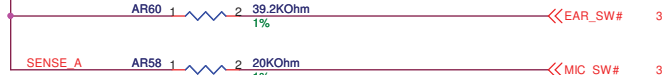
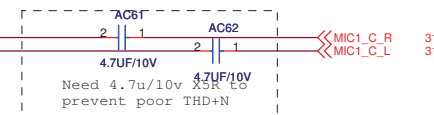
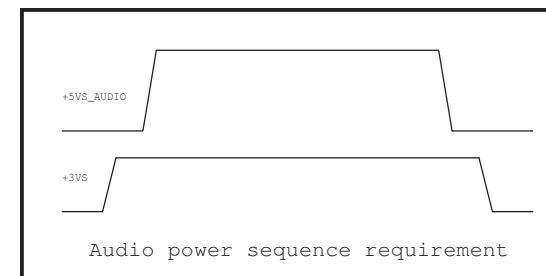
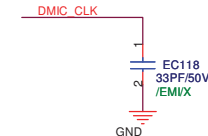
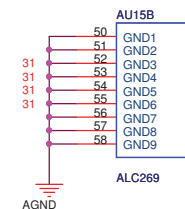
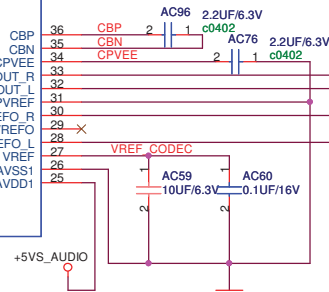
Reserve AR105 AR106
AC215 for other LDO
solution

<http://laptop-motherboard-schematic.blogspot.com/>



02G611005001 in the BOM

1.1G AC96 AC76 change to 0402 type



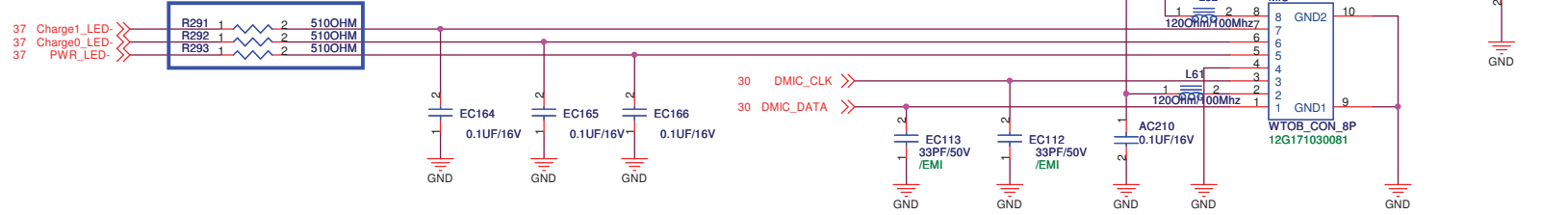
<Variant Name>

ASUS		Title : ALC269-1	
ASUSTek Computer Inc.		Engineer: Ryan Fan	
Size A3	Project Name 1003HA	Rev 1.3G	
Date: Monday, January 19, 2009	Sheet	30	of 50

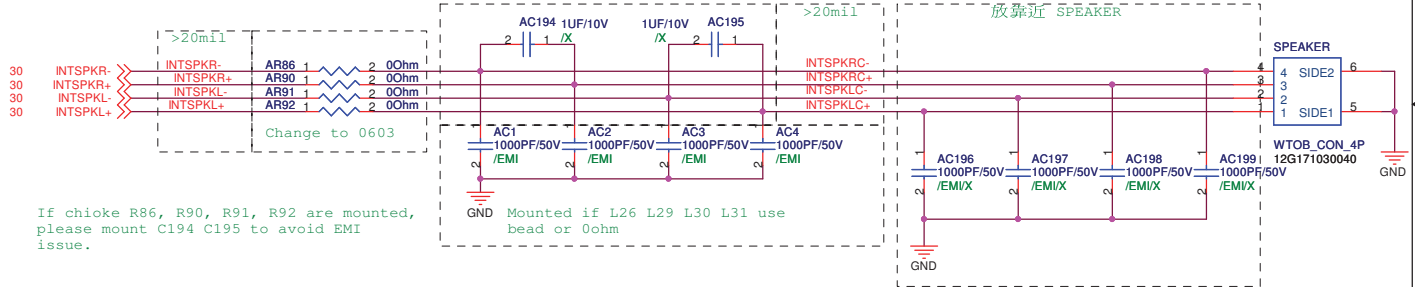
1.1G add PWR LED and Charge LED

DMIC Cable length should be less 30cm

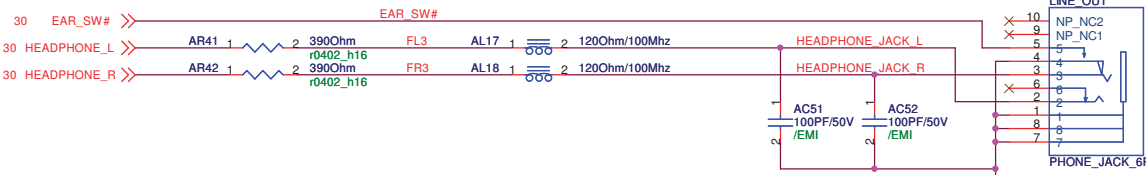
Change R291 R292 R293 to 510 Ohm



Total length from speakerR+- L+- (pin40 41 44 45) to internal speaker please as short as possible (<20cm is better)

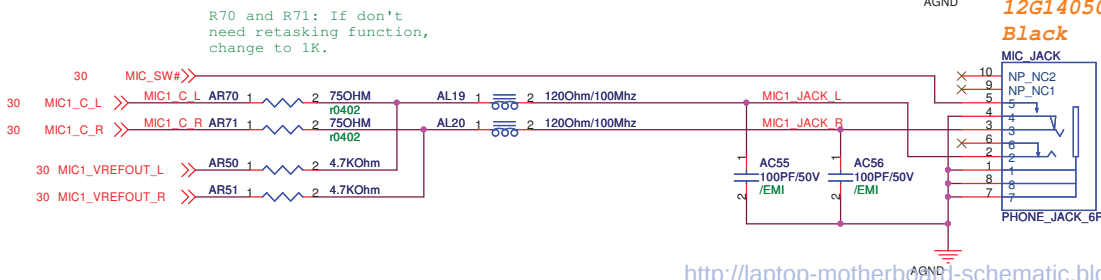


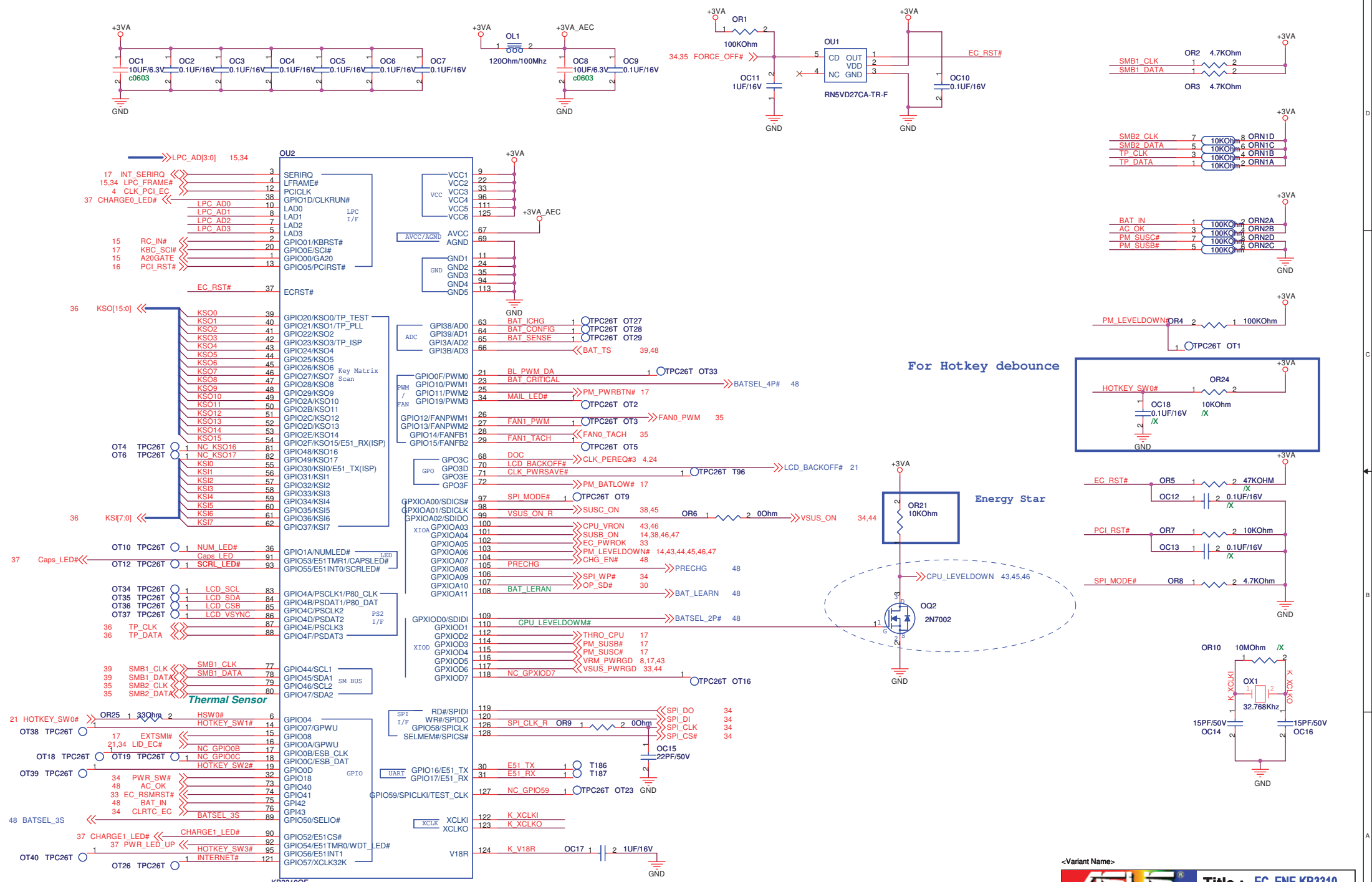
R1.2G
For France ' AR41 and AR42 mounted 390 ohm



LINE_OUT use
12G14050106P (SINGATRON)
Black

MIC_JACK use
12G14050106P (SINGATRON)
Black



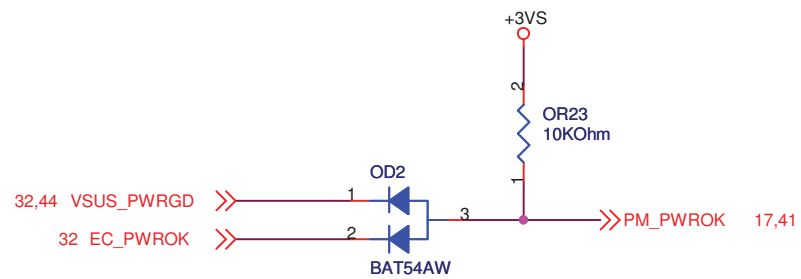
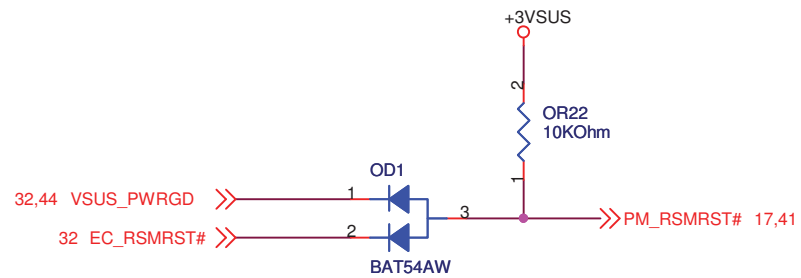


OR25 1.1G For Hotkey debounce
HOTKEY_SW0# - HOTKEY_SW3# internal PU

<http://laptop-motherboard-schematic.blogspot.com/>

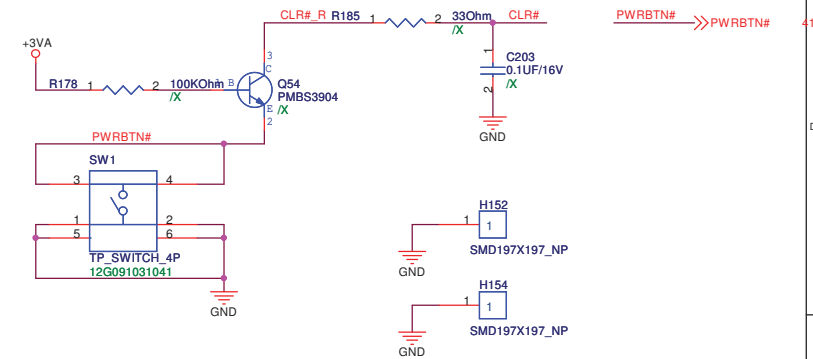
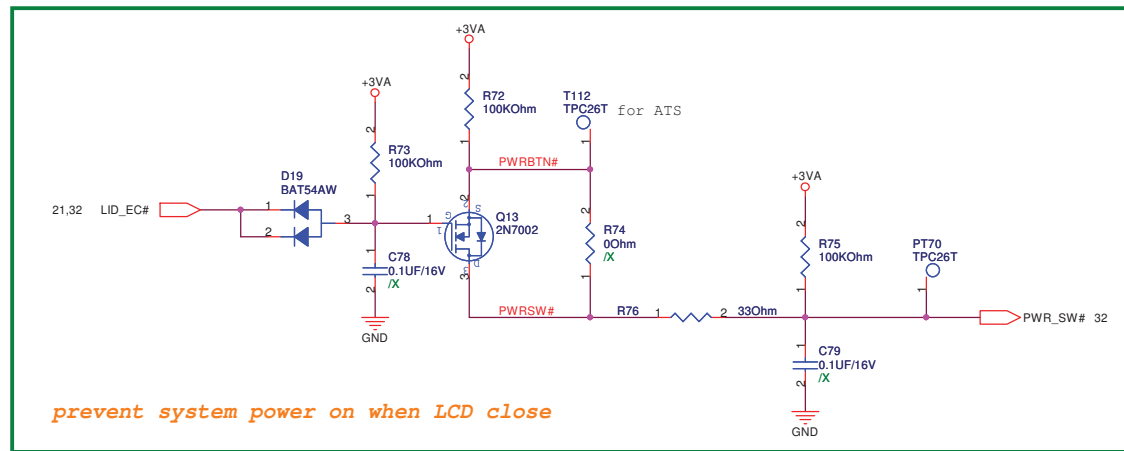
<Variant Name>

ASUS		Title : EC_ENE KB3310	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size	A3	Project Name	1003HA
Date:	Monday, January 19, 2009	Sheet	32 of 50

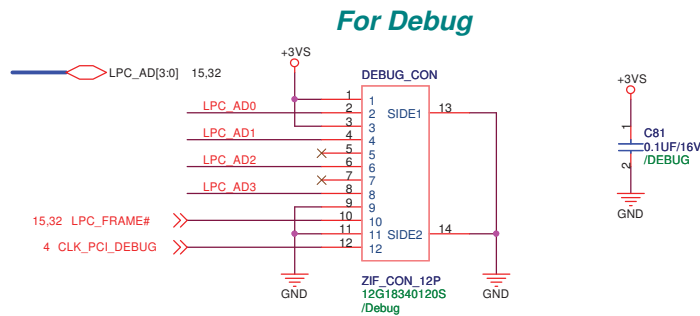
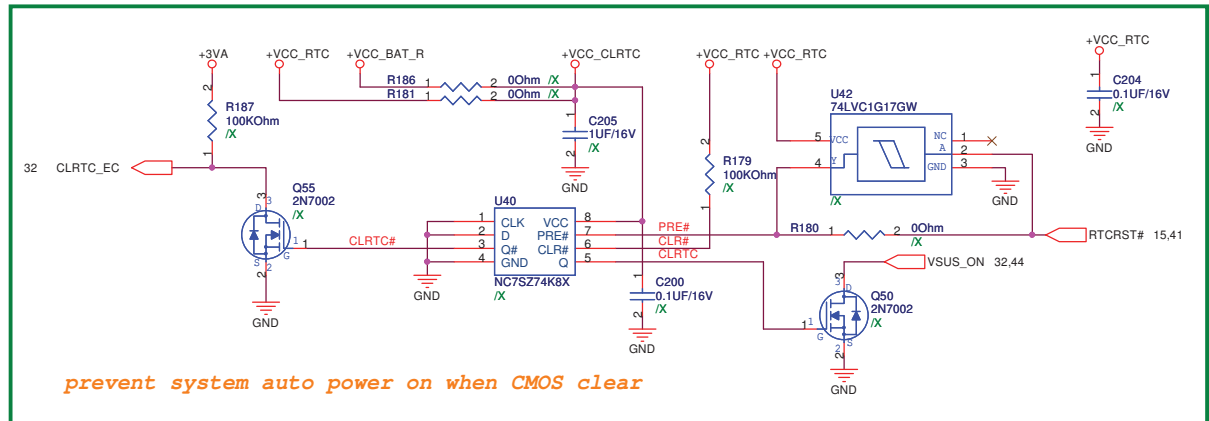
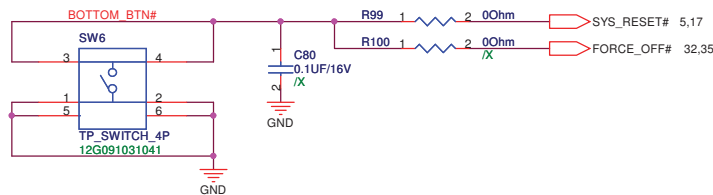


<Variant Name>

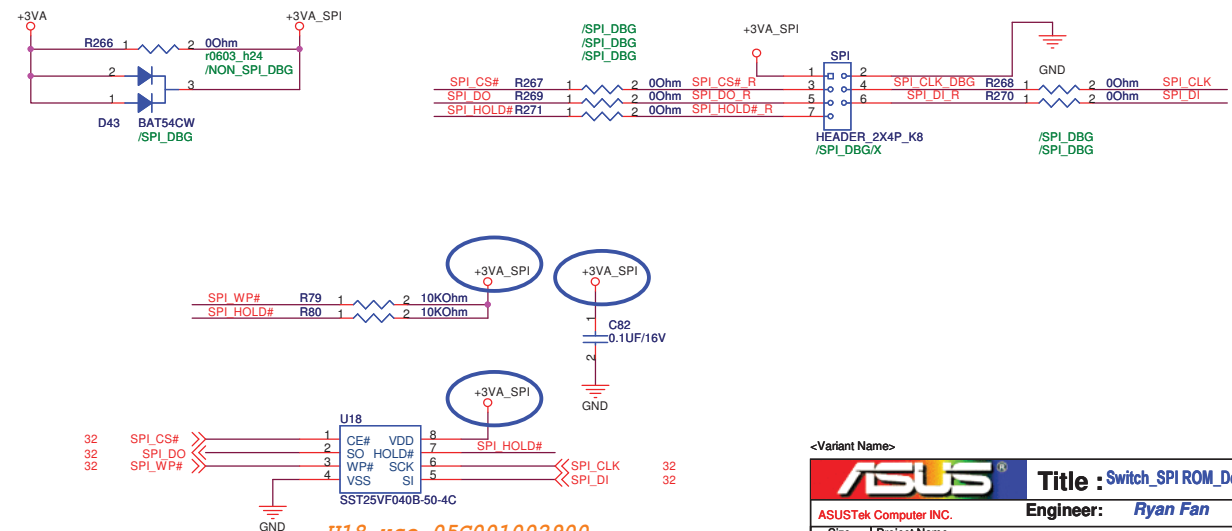
		Title : EC_UART_KC3820	
ASUSTek Computer INC.		Engineer: <i>Ryan Fan</i>	
Size A4	Project Name 1003HA		Rev 1.3G
Date: Monday, January 19, 2009		Sheet 33	of 50



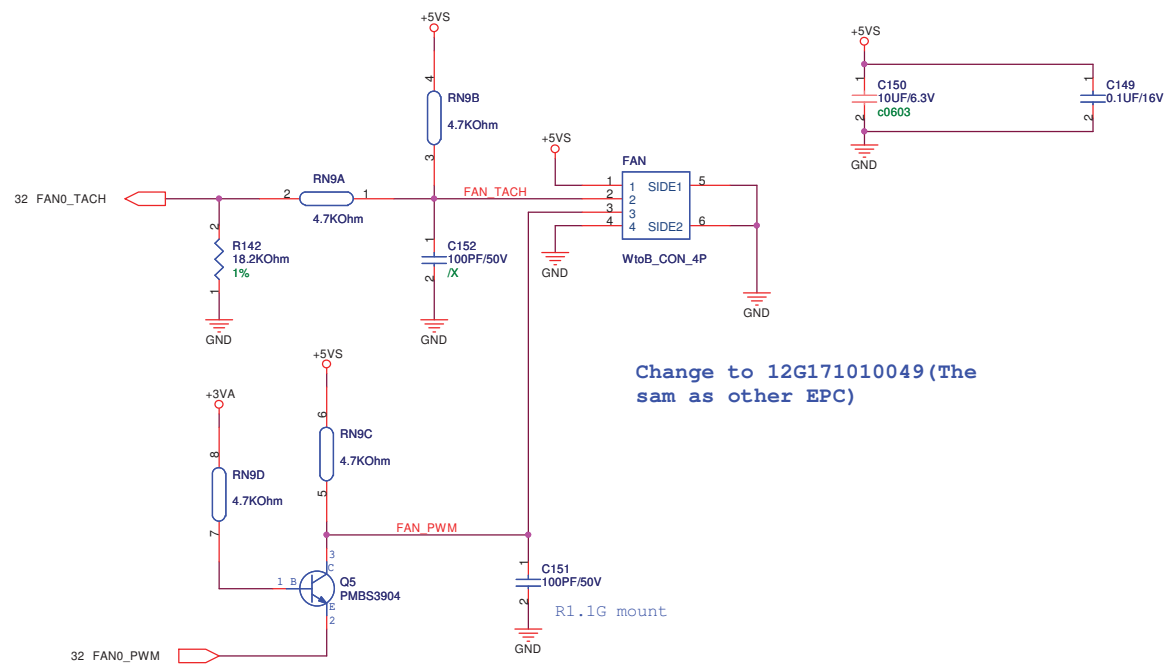
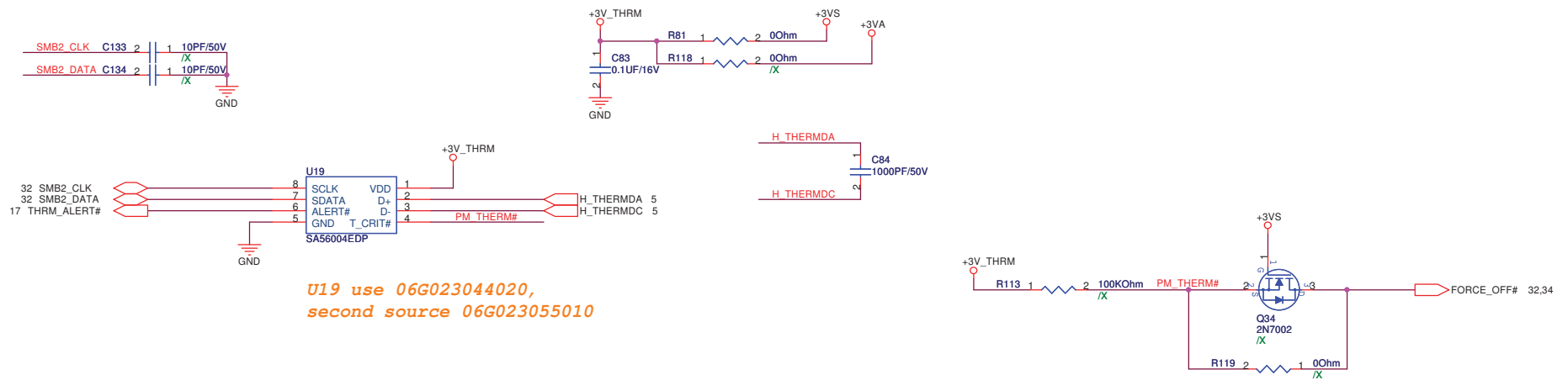
H152&H154 : Pad for EMI

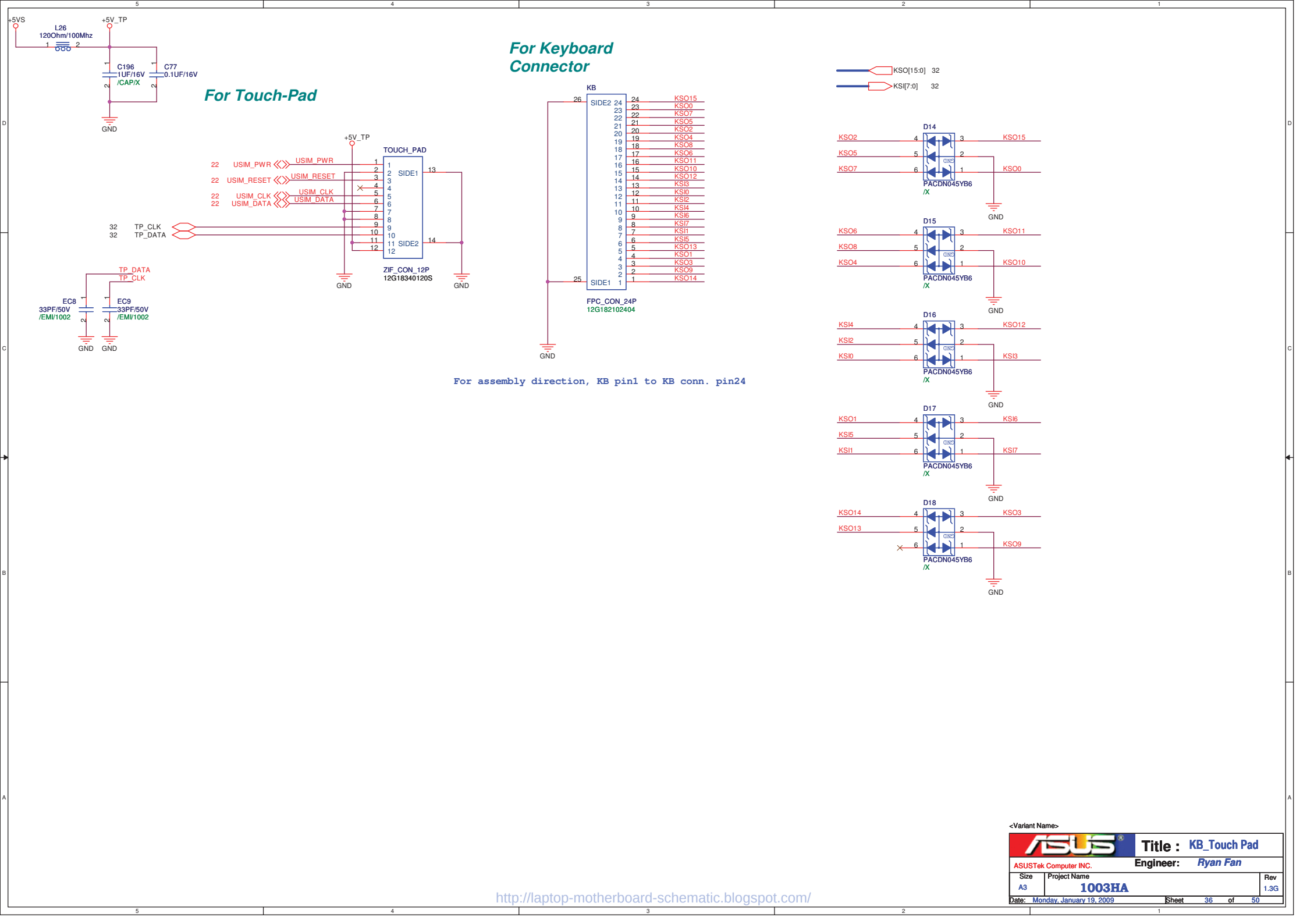


Debug Card cable use Z96 Touch Pad cable, P/N:
14G124110126, 14G124110120, 14G124110121
14G124110124, 14G124110125

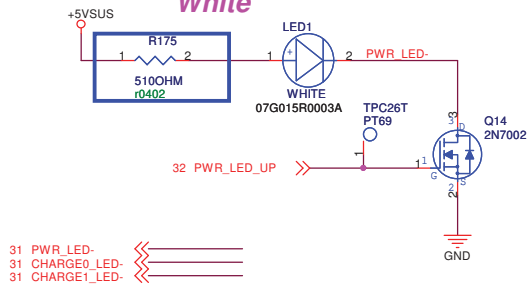


U18 use 05G001002900
& 05G00100F130

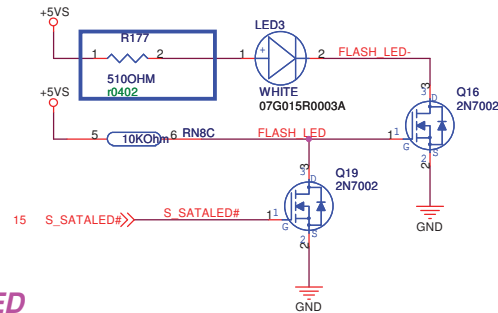




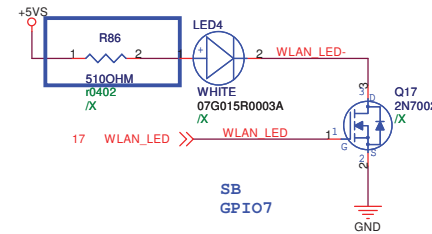
for POWER LED White



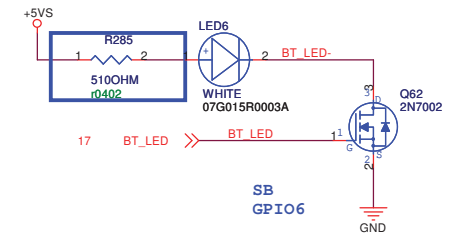
for FLASH LED White



White /X

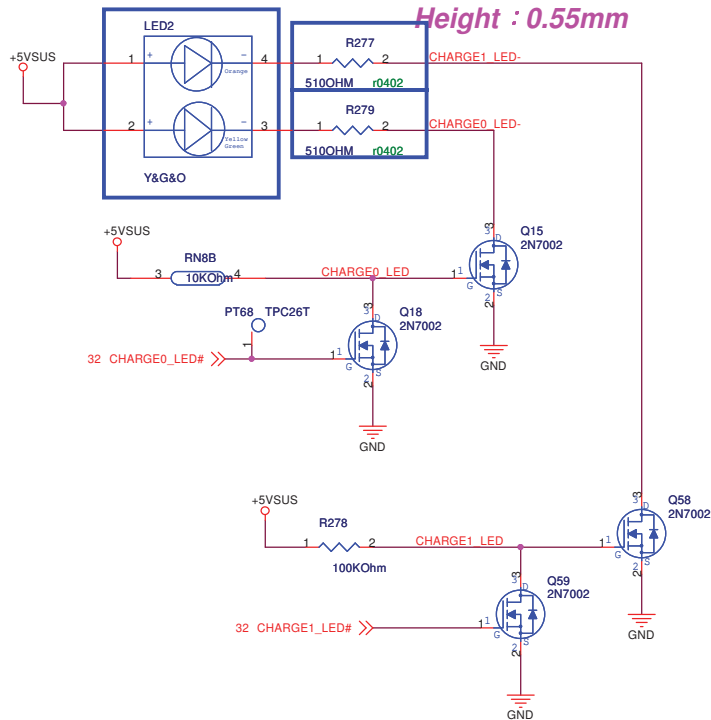


for WIFI/BlueTooth LED White



1.1G change to EVERLIGHT

for CHARGE LED Height : 0.55mm



S0/S3	接上充電器	未接上充電器
電池狀態 95%~100%	綠色燈恆亮	燈號不亮
電池為半飽狀態 11%~94%	橘色燈恆亮	燈號不亮
電力不足狀態 0%~10%	橘色燈閃爍=>橘色燈閃爍(0.5Hz)	橘色燈閃爍=>橘色燈閃爍(0.5Hz)

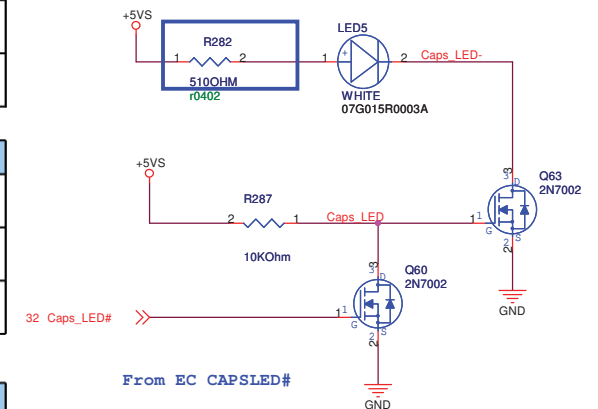
**Alarm Power Level: Default 10%. Sync. OS settings.

S4/S5	接上充電器	未接上充電器
電池狀態 95%~100%	綠色燈恆亮	燈號不亮
電池為半飽狀態 11%~94%	橘色燈恆亮	燈號不亮
電力不足狀態 0%~10%	橘色燈閃爍=>橘色燈閃爍(0.5Hz)	燈號不亮

**Alarm Power Level: Default 10%. Sync. OS settings.

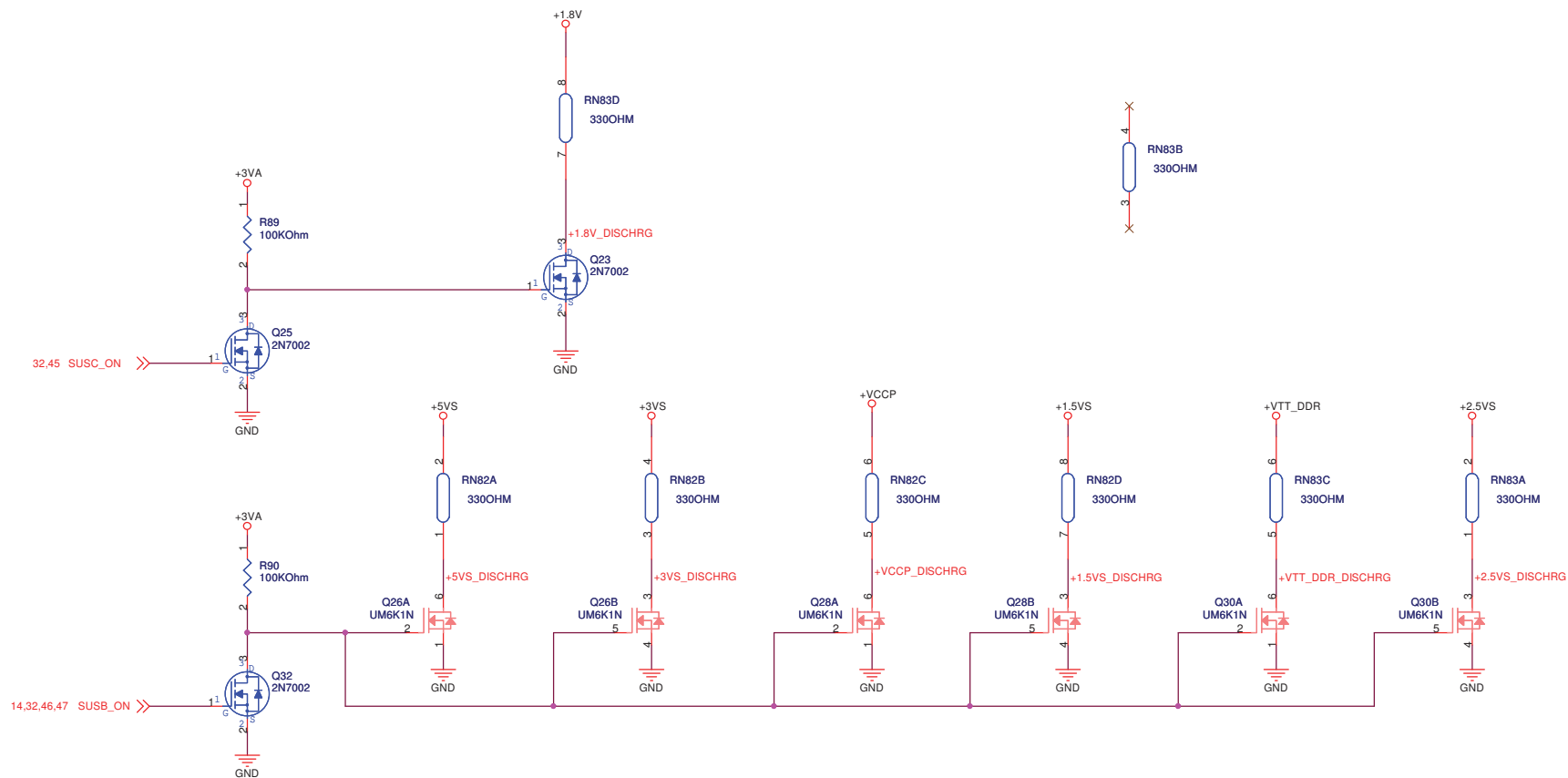
S0/S3/S4/S5	接上充電器	未接上充電器
沒有放入電池	燈號不亮	燈號不亮

for Caps Lock LED White



From EC CAPSLED#

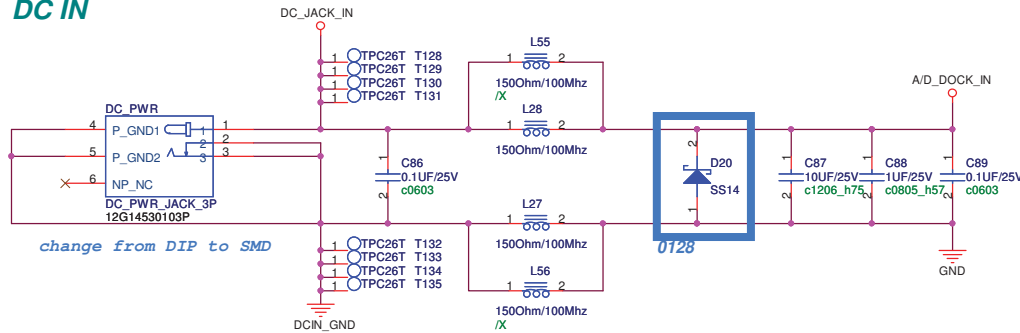
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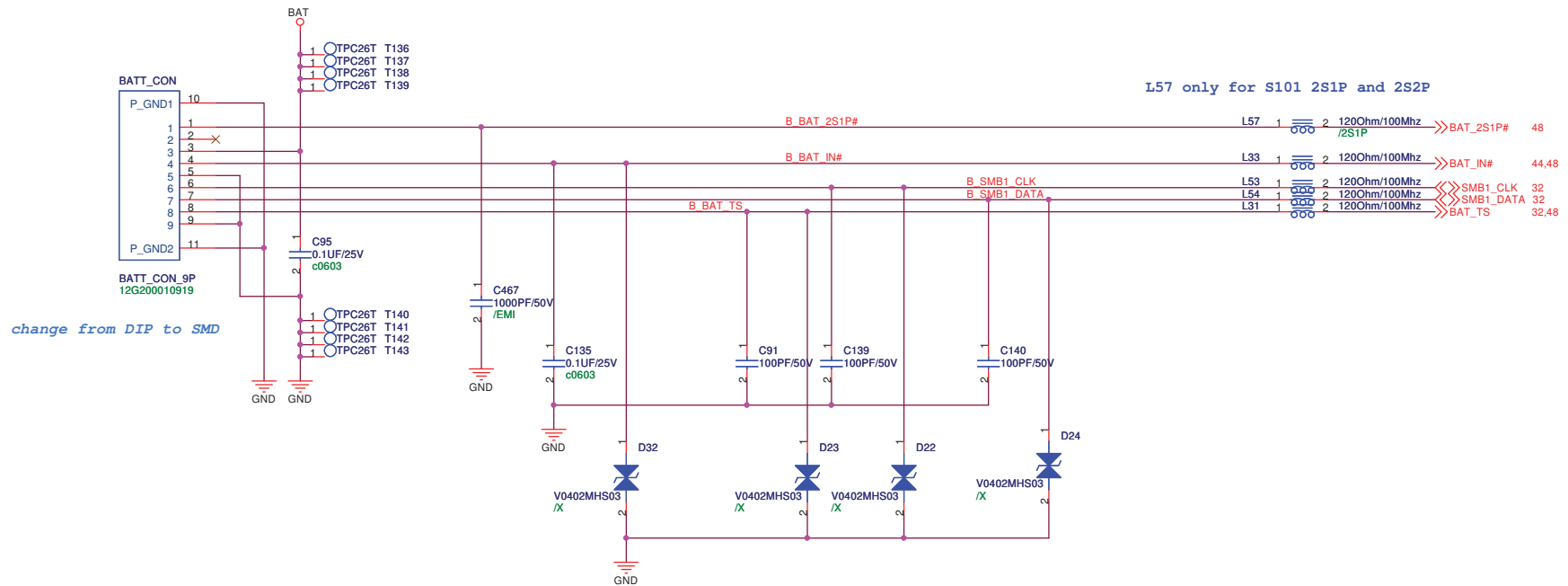
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ASUS		Title : Discharge	
ASUSTek Computer INC.		Engineer: <i>Ryan Fan</i>	
Size A3	Project Name 1003HA		Rev 1.3G
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DC IN

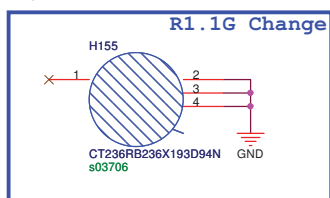
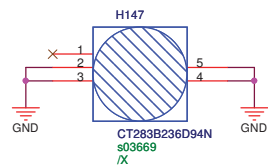
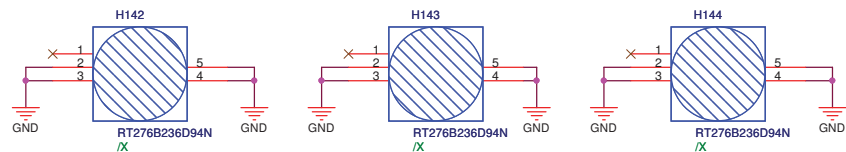
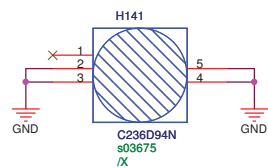
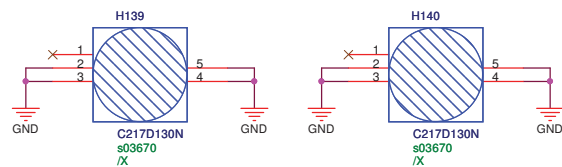
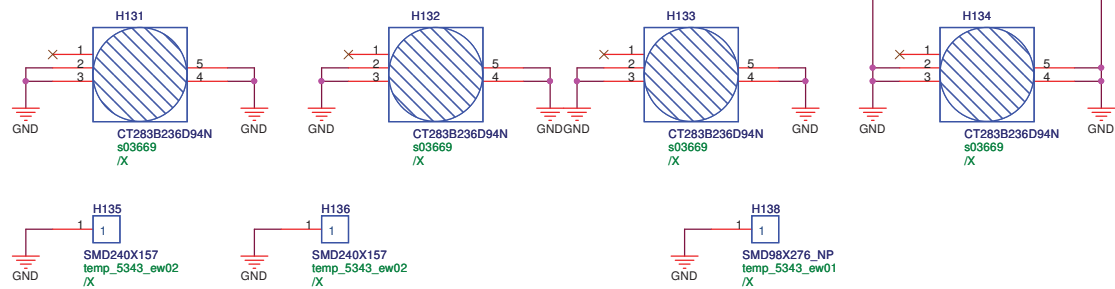


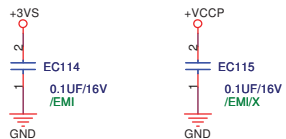
BAT IN



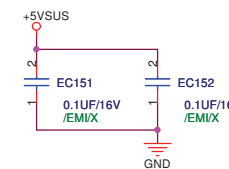
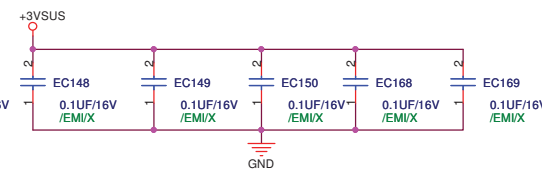
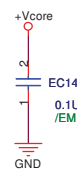
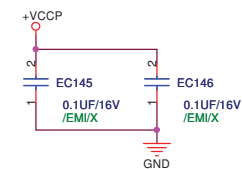
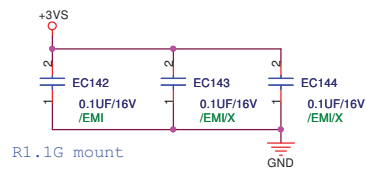
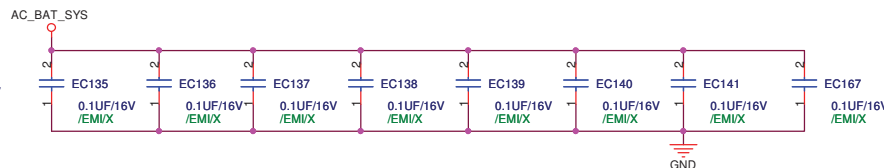
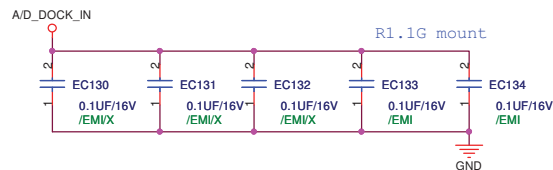
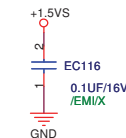
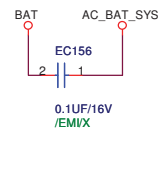
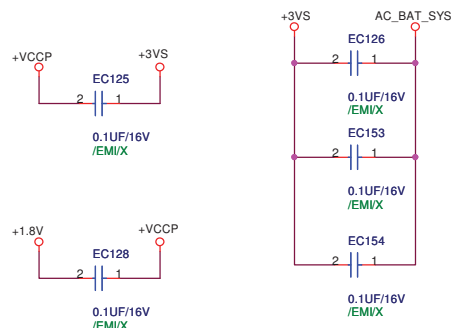
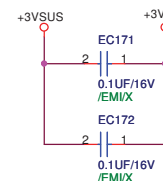
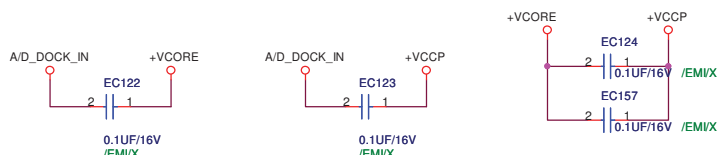
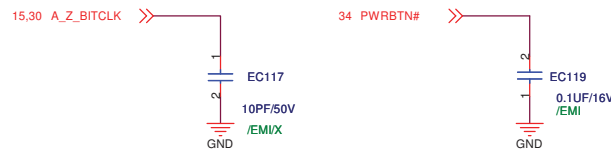
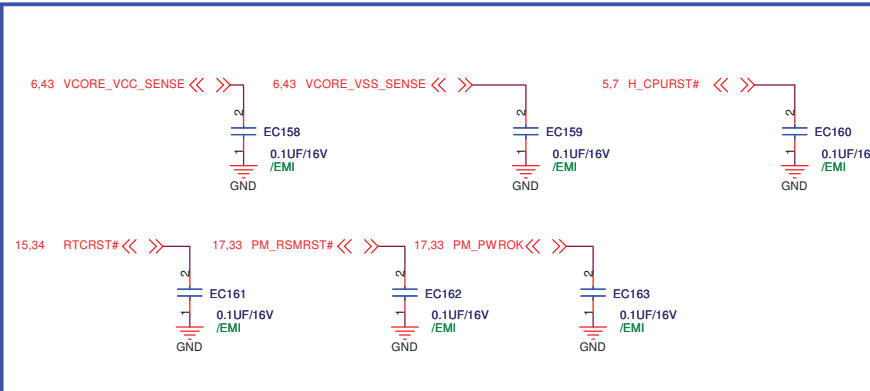
<Variant Name>

ASUS		Title : PWR Jack	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	
A3	1003HA	1.3G	
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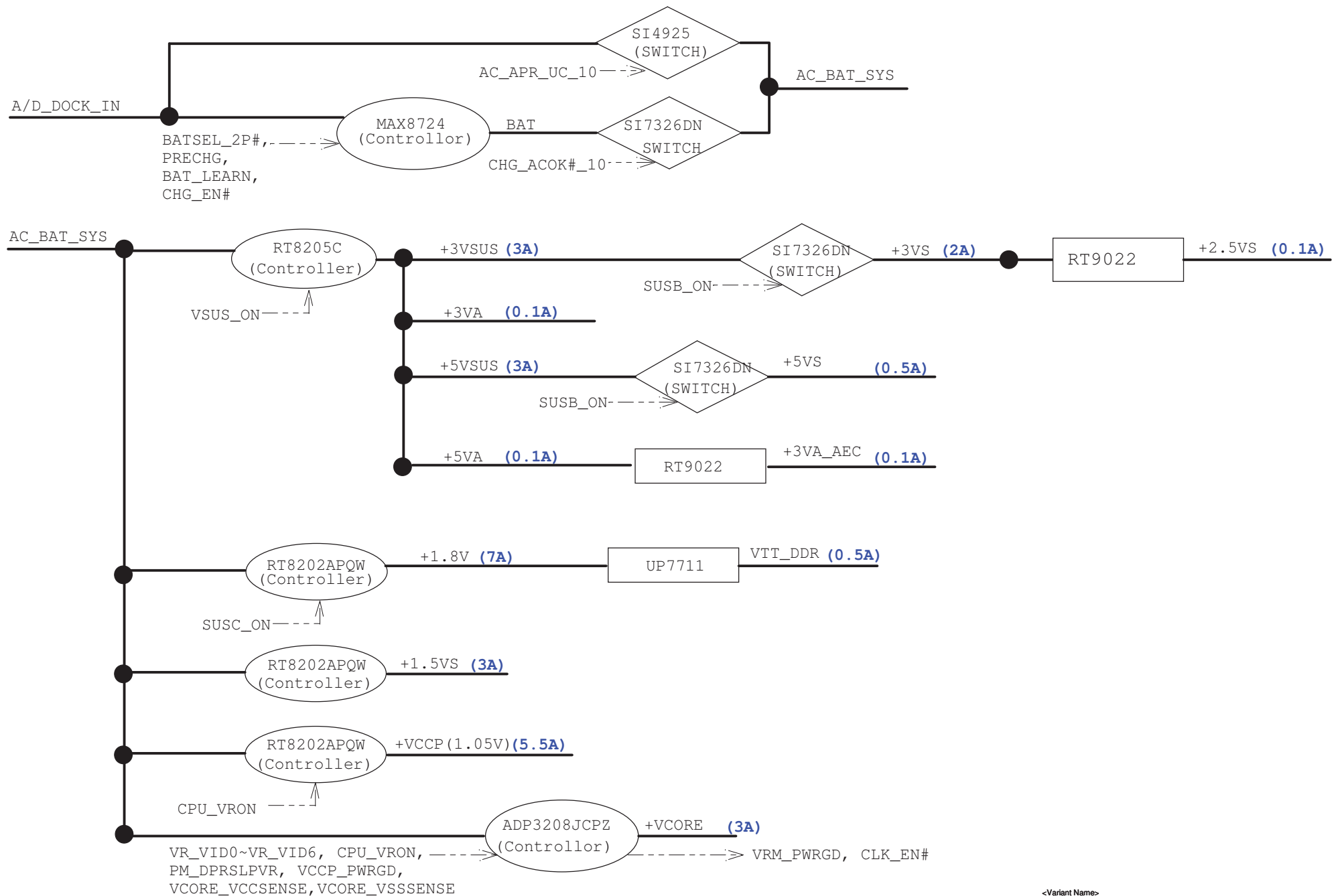


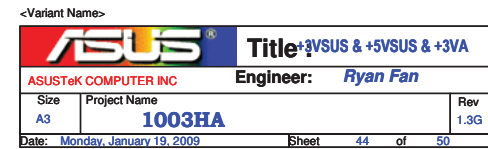
For ESD

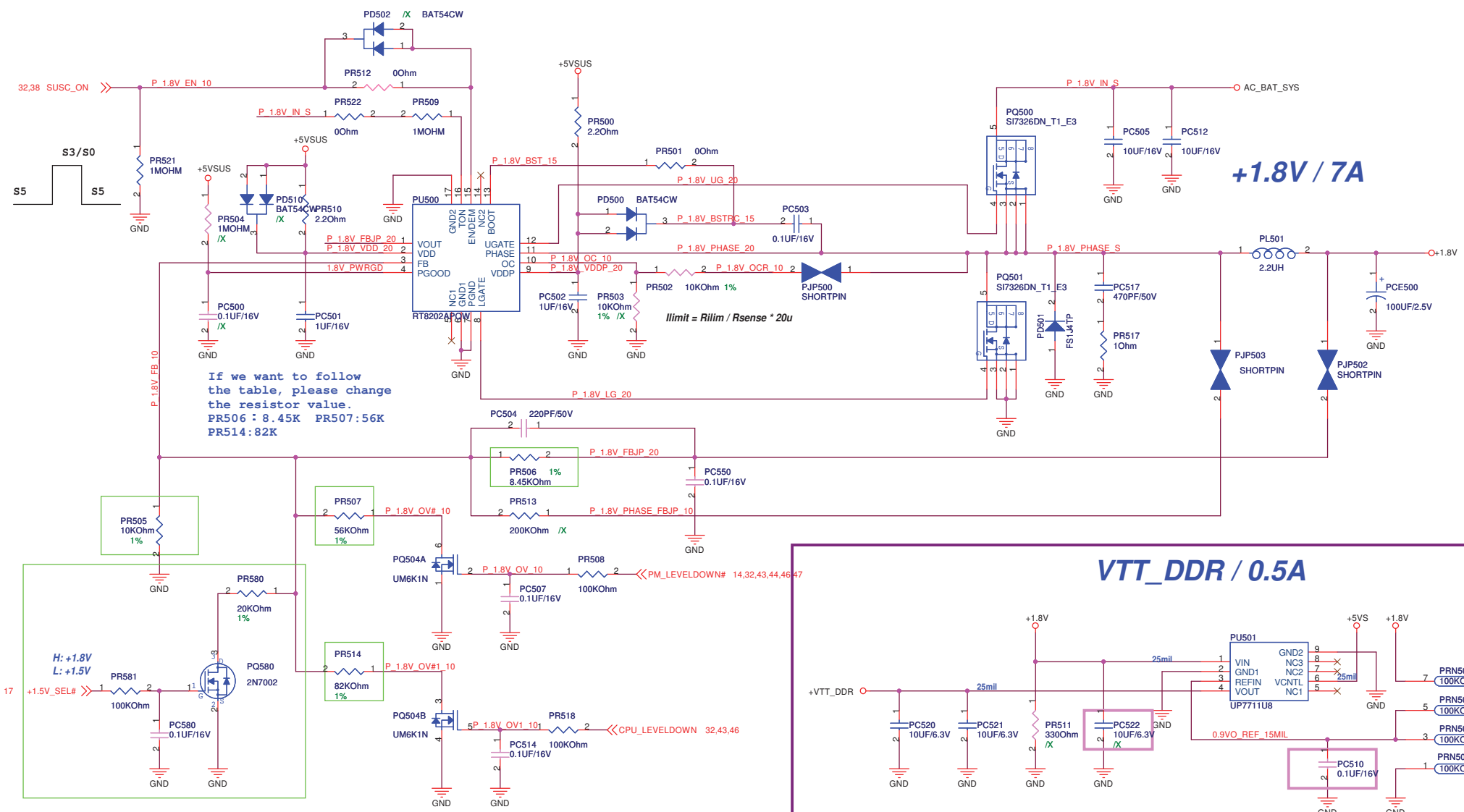


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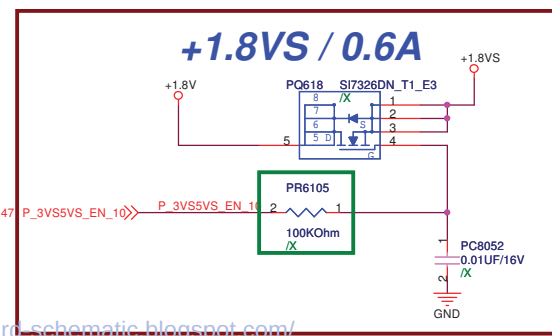
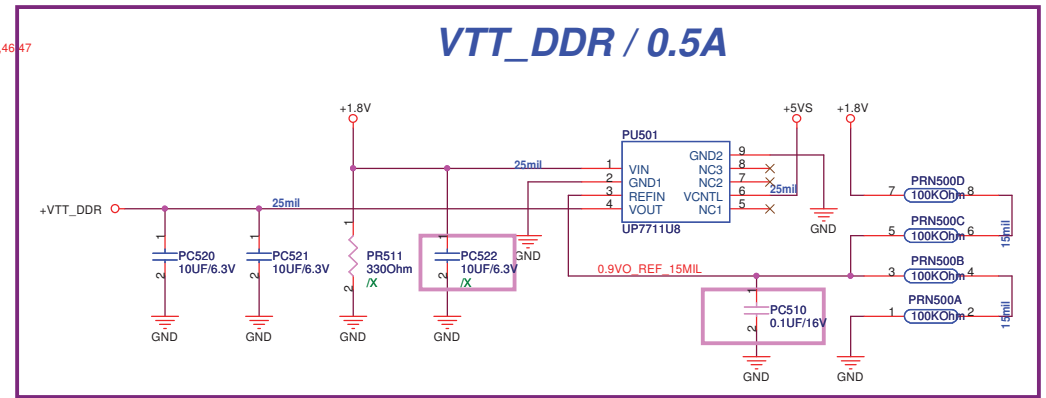
ASUS		Title : EMI	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size	Project Name	Rev	
A3	1003HA	1.3G	
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+1.5V_SEL#	PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
H	L	L	H	1.72V	Power Saving
H	H	L	H	1.84V	Normal
H	H	L	H	1.84V	Performance
H	L	H	L	1.782V	N/A
L	L	L	H	1.4V	Power Saving
L	H	L	H	1.5V	Normal
L	H	H	L	1.58V	Performance



<Variant Name>

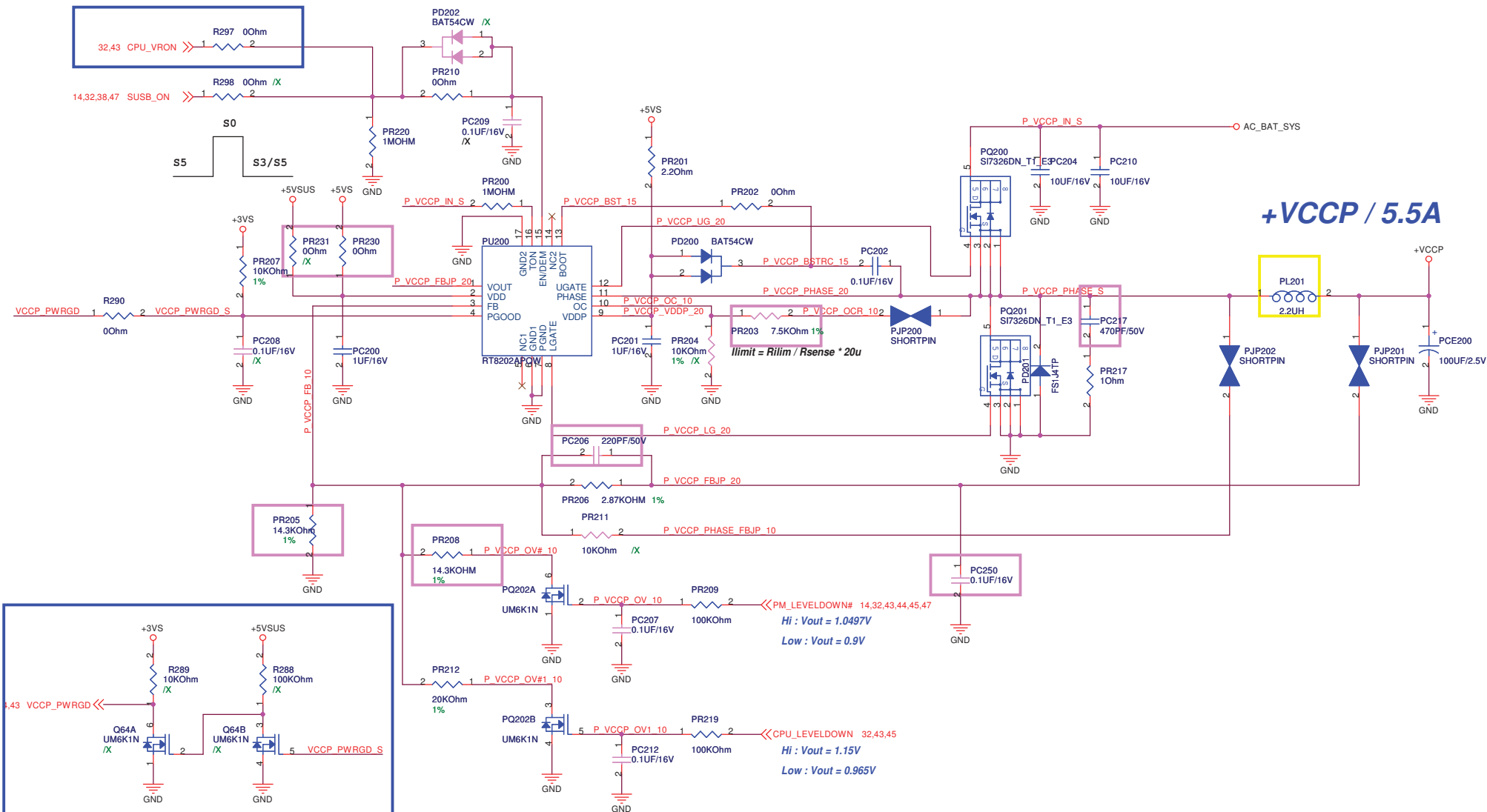
ASUS Title : **+1.8V & VTTDDR**

ASUSTek Computer INC. Engineer: **Ryan Fan**

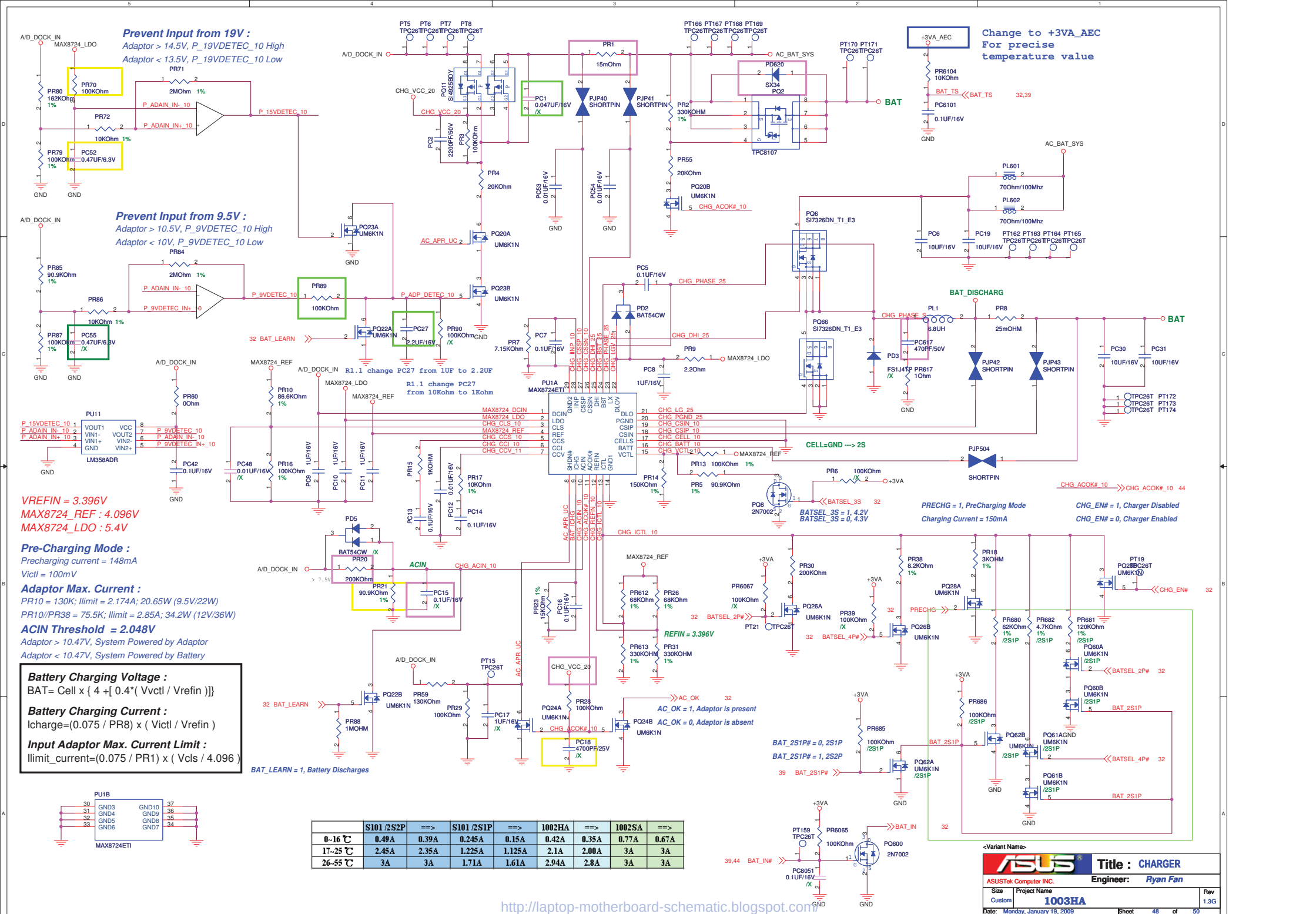
Size	Project Name	Rev
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1.1G change Enable signal from CPU_VRON



PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	0.89V	Power Saving
H	L	H	1.04V	Normal
H	L	H	1.04V	Performance
L	H	L	1.072V	N/A



EC KB3310 GPIO SETTING

Pin	Pin Name	Signal Name	Type	Note
1	GPIO00/GA20	A20GATE	O	
2	GPIO01/KBRST#	RC_IN#	O	
6	GPIO04	HOTKEY_SW0#	I	Internal pull high
13	GPIO05/PCIRST#	PCI_RST#	I	
14	GPIO07	HOTKEY_SW1#	I	Internal Pull Up
15	GPIO08	EXTSMI#	OD	10K ohm Pull Up to +3VSU
16	GPIO0A	LID_EC#	I	Internal pull high
17	GPIO0B/ESB_CLK	NC	O	
18	GPIO0C/ESB_DAT	NC	O	
19	GPIO0D	HOTKEY_SW2#	I	Internal pull high
20	GPIO0E/SCI#	KBC_SCI#	OD	10K ohm Pull Up to +3VSUS
21	GPIO0F/PWM0	BL_PWM_DA	O	
23	GPIO10/PWM1	BATSEL_4P#	O	Battery charging current setting
25	GPIO11/PWM2	PM_PWRBTN#	OD	Internal pull high in ICH
26	GPIO12/FANPWM1	FAN0_PWM	O	CPU Fan
27	GPIO13/FANPWM2	FAN1_PWM	O	VGA Fan
28	GPIO14/FANFB1	FAN0_TACH	I	CPU FanTach
29	GPIO15/FANFB2	FAN1_TACH	I	VGA FanTach
30	GPIO16/E51_TX	E51_TX	O	RS232 debug port
31	GPIO17/E51_RX	E51_RX	O	RS232 debug port
32	GPIO18	PWR_SW#	I	Internal pull high
34	GPIO19/PWM3	MAIL_LED#	O	
36	GPIO1A/NUMLED	NUM_LED#	O	
38	GPIO1D/CLKRUN#	NC	O	
39	GPIO20/KSO0/TP_TEST	KSO0	O	
40	GPIO21/KSO1/TP_PLL	KSO1	O	
41	GPIO22/KSO2	KSO2	O	
42	GPIO23/KSO3	KSO3	O	
43	GPIO24/KSO4	KSO4	O	
44	GPIO25/KSO5	KSO5	O	
45	GPIO26/KSO6	KSO6	O	
46	GPIO27/KSO7	KSO7	O	
47	GPIO28/KSO8	KSO8	O	
48	GPIO29/KSO9	KSO9	O	
49	GPIO2A/KSO10	KSO10	O	
50	GPIO2B/KSO11	KSO11	O	
51	GPIO2C/KSO12	KSO12	O	
52	GPIO2D/KSO13	KSO13	O	
53	GPIO2E/KSO14	KSO14	O	
54	GPIO2F/KSO15	KSO15	O	
55	GPIO30/KSI0	KSI0	I	Internal pull high
56	GPIO31/KSI1	KSI1	I	Internal pull high
57	GPIO32/KSI2	KSI2	I	Internal pull high
58	GPIO33/KSI3	KSI3	I	Internal pull high
59	GPIO34/KSI4	KSI4	I	Internal pull high
60	GPIO35/KSI5	KSI5	I	Internal pull high
61	GPIO36/KSI6	KSI6	I	Internal pull high
62	GPIO37/KSI7	KSI7	I	Internal pull high
63	GPI38/AD0	BAT_IHG	I	
64	GPI39/AD1	BAT_CONFIG	I	Battery configuration
65	GPIO3A/AD2	BAT_SENSE	I	Battery Voltage Sensor
66	GPIO3B/AD3	BAT_TS	I	Battery Thermal Sensor
68	GPO3C/DA0	DOC	O	Trigger Clock Gen

EC KB3310 Other Pin SETTING

Pin	Pin Name	Signal Name	Type	Note
3	SERIRQ	INT_SERIRQ	I/OD	10K pull high to +3V
4	LFRAME#	LPC_FRAME#	I	
5	LAD3	LPC_AD3	I/O	
7	LAD2	LPC_AD2	I/O	
8	LAD1	LPC_AD1	I/O	
9	VCC	+3VA_EC	P	
10	LAD0	LPC_AD0	I/O	
11	GND	GND	P	
12	PCICLK	CLK_PCI_EC	I	
22	VCC	+3VA_EC	P	
24	GND	GND	P	
33	VCC	+3VA_EC	P	
35	GND	GND	P	
37	ECRST#	EC_RST#	I	100K pull high to +3VA_EC
67	AVCC	+3VACC	P	
69	AGND	AGND	P	
94	GND	GND	P	
96	VCC	+3VA_EC	P	
111	VCC	+3VA_EC	P	
113	GND	GND	P	
119	RD#/SPIDI	SPI_SO	I	
120	WR#/SPIDO	SPI_SI	O	
112	XCLKI	32KXCLKI	I	
123	XCLKO	32KXCLKO	O	
124	V18R	V18R	P	Reserved 1uF to GND
125	VCC	+3VA_EC	P	
128	SPICS#/SELMEM#	SPI_CE#	O	

Pin	Pin Name	Signal Name	Type	Note
70	GPO3D/DA1	LCD_BACKOFF#	O	
71	GPO3E/DA2	CLK_PWRSERVE#	O	
72	GPO3F/DA3	BAT_LL#	O	Battery Low Low
73	GPIO40	AC_OK	I	AC Adaptor Plug in
74	GPIO41	PM_RSMRST#	O	10K pull down to GND
75	GPI42	BAT_IN	I	
76	GPI43	CLRTC_EC	I	
77	GPIO44/SCL1	SMB0_CLK	I/OD	4.7K pull high to +3VA_EC
78	GPIO45/SDA1	SMB0_DAT	I/OD	4.7K pull high to +3VA_EC
79	GPIO46/SCL2	SMB1_CLK	I/OD	10K pull high to +3V
80	GPIO47/SDA2	SMB1_DAT	I/OD	10K pull high to +3V
81	GPIO48/KSO16	KB pin 28	I	for KB type detection
82	GPIO49/KSO17	KB pin 27	I	for KB type detection
83	GPIO4A/PSCLK1	AUO_SCL	O	for AUO, default H at S0
84	GPIO4B/PSDAT1	AUO_SDA	O	for AUO, default L at S0
85	GPIO4C/PSCLK2	AUO_CSB	O	for AUO, default H at S0
86	GPIO4D/PSDAT2	LVDD_EN	I	for AUO 7" Panel
87	GPIO4E/PSCLK3	TP_CLK	I/OD	10K pull high to +3V
88	GPIO4F/PSDAT3	TP_DAT	I/OD	10K pull high to +3V
89	GPIO50/SELIO#	BATSEL_3S	O	Battery series, H:3S, L:4S
90	GPIO52/E51_CS#	CHG_LED_UP#	O	
91	GPIO53/CAPLED	CAP_LED#	O	
92	GPIO54	PWR_LED_UP	O	
93	GPIO55/SCRLED	SCRLED#	O	
95	GPIO56	PWR4G_SW#	I	Internal pull high
97	GPXOA00/SDICS#	SPI_MODE#	O	4.7K pull down to GND
98	GPXOA01/SDICLK	SUSC_ON	O	
99	GPXOA02/SDIDO	VSUS_ON	O	
100	GPXOA03	CPU_VRON	O	
101	GPXOA04	SUSB_ON	O	
102	GPXOA05	ICH_PWROK	O	
103	GPXOA06	VOLT_CTRL	O	
104	GPXOA07	CHG_EN#	O	Battery charging enabled
105	GPXOA08	PRECHG	O	
106	GPXOA09	SPI_WP#	O	
107	GPXOA10	OP_SD#	O	Audio OP
108	GPXOA11	BAT_LEARN	O	
109	GPXID0/SDIDI	BATSEL_2P#	O	Battery parallel, H:1P, L:2P~3P
110	GPXID1	NC	O	
112	GPXID2	THRO_CPU	O	Active if CPU temperature over spec
114	GPXID3	SUSB#	I	100K pull down to GND
115	GPXID4	SUSC#	I	100K pull down to GND
116	GPXID5	CPUPWR_GD	I	Pull high to +3V
117	GPXID6	VSUS_GD	I	
118	GPXID7	NC	O	
121	GPIO57	INTERNET#	I	Internal pull high
126	GPIO57/SPICLK	SPI_CLK	O	
127	GPIO59/TEST_CLK	NC	O	

<Variant Name>

		Title : EC Pin Define	
ASUSTek Computer INC.		Engineer: Ryan Fan	
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<Variant Name>

		Title : History	
ASUSTek Computer INC.		Engineer: Ryan Fan	
Size	Project Name		Rev
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