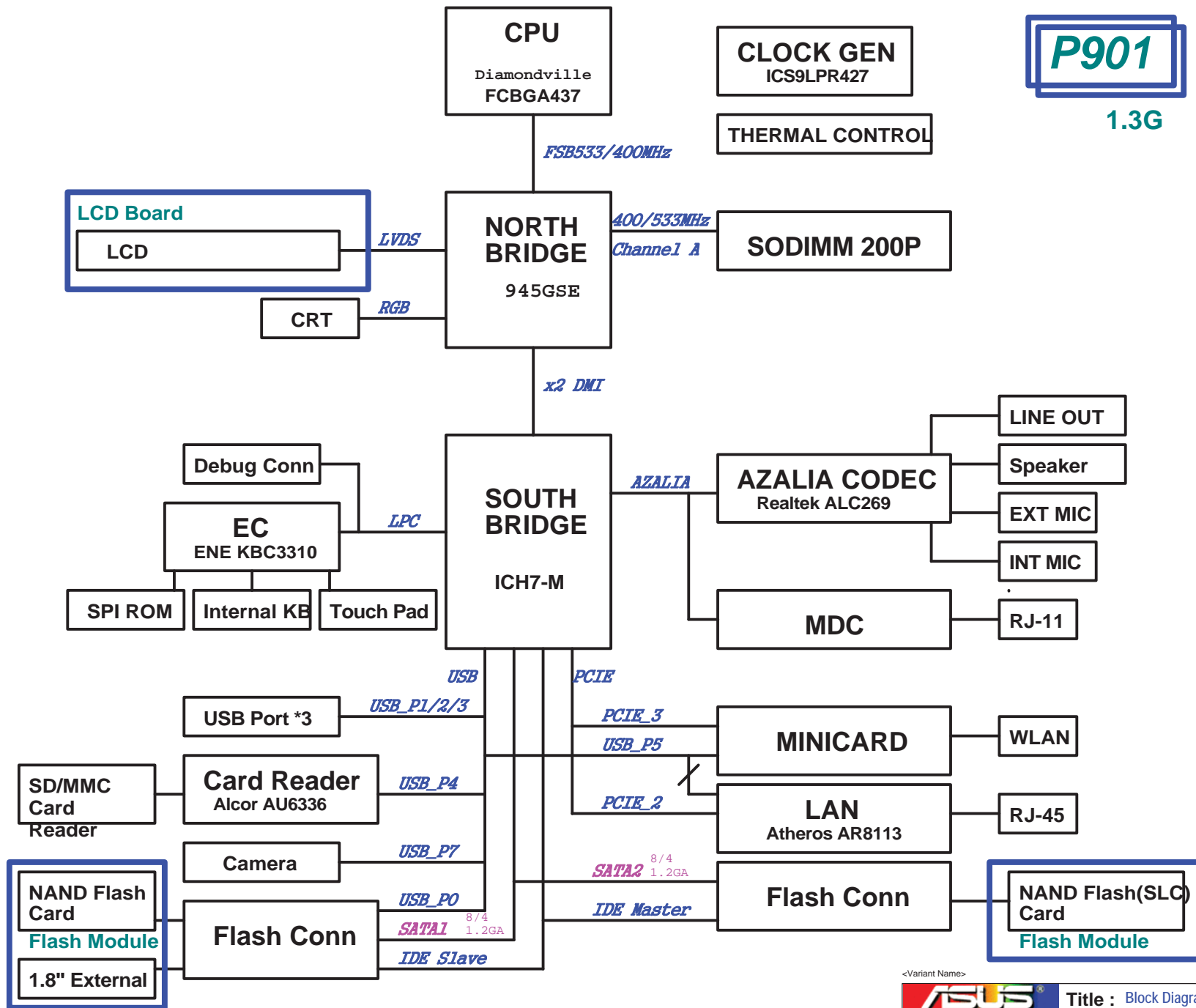


- 01_Block Diagram
- 02_System Setting
- 03_Power Sequence
- 04_Clock Gen_ICS9LPR426
- 05_Diamondville_BUS
- 06_Diamondville_PWR
- 07_NB-945GMS(HOST)
- 08_NB-945GMS(DMI)
- 09_NB-945GMS(GRAPHIC)
- 10_NB-945GMS(DDR2)
- 11_NB-945GMS(PWR)
- 12_NB-945GMS(PWR2)
- 13_NB-945GMS(GND)
- 14_SB-ICH7M(PWR)
- 15_SB-ICH7M(1)
- 16_SB-ICH7M(2)
- 17_SB-ICH7M(3)
- 18_DDR2 SODIMM
- 19_DDR2 Termination
- 20_Onboard VGA
- 21_LCD Conn_LID
- 22_PCIEx 3.5G & Ext. Antenna
- 23_Mini WIFI+ BT
- 24_LAN_Atheros AR8113
- 25_MDC_RJ11_RJ45
- 26_HD + Flash Conn
- 27_USB Port
- 28_Camera Conn
- 29_Card Reader_AU6336C52
- 30_Codec_ALC269
- 31_Audio_AMP_Jack
- 32_EC_ENE KB3310
- 33_EC_UART controller
- 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



P901

1.3G

ASUS		Title : Block Diagram	
ASUSTek Computer INC.		Engineer: Regin Chiang	
Size	Project Name	Rev	
A3	P901	1.1G	
Date: Monday, August 11, 2008	Sheet	1	of 50

EEE PC 701 PCB version

GPI37	GPI38	GPI39	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

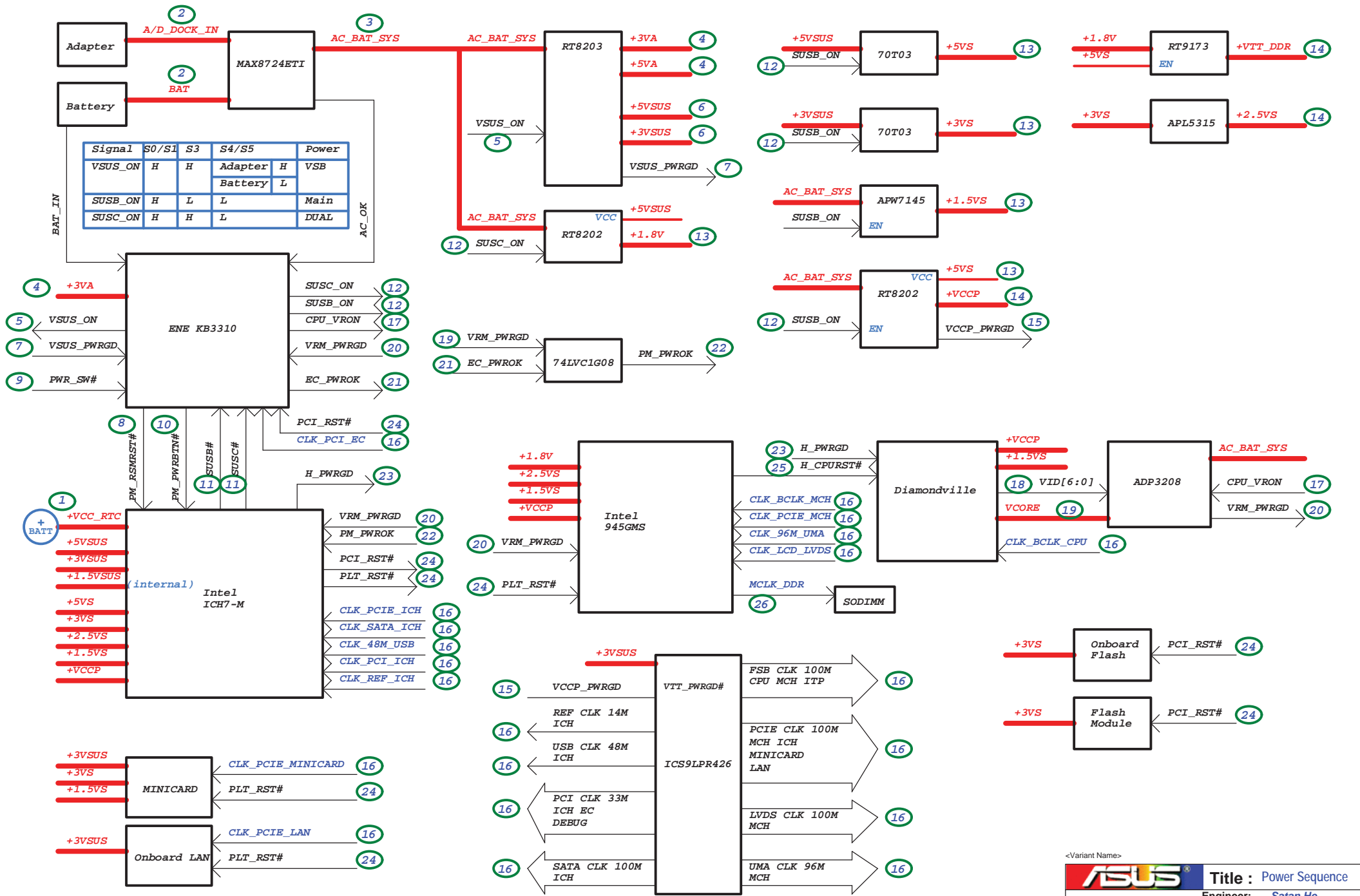
USB 0	Flash Conn
USB 1	USB Conn
USB 2	USB Conn
USB 3	USB Conn
USB 4	Card Reader
USB 5	Minicard
USB 6	NC
USB 7	Camera

PCIE

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

Azalia

ACZ_SDIN0	CODEC
ACZ_SDIN1	MODEM
ACZ_SDIN2	NC



<http://hobi-elektronika.net>

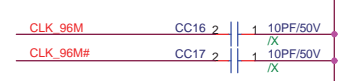
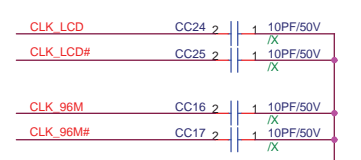
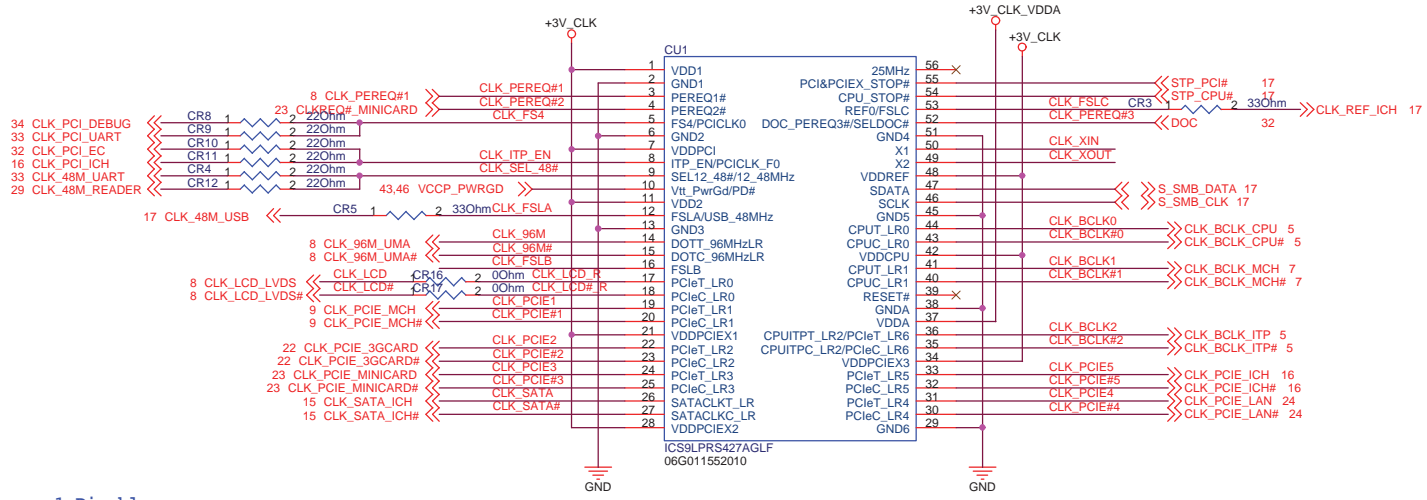
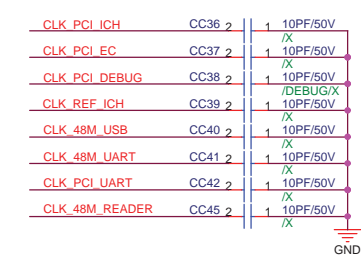
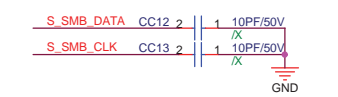
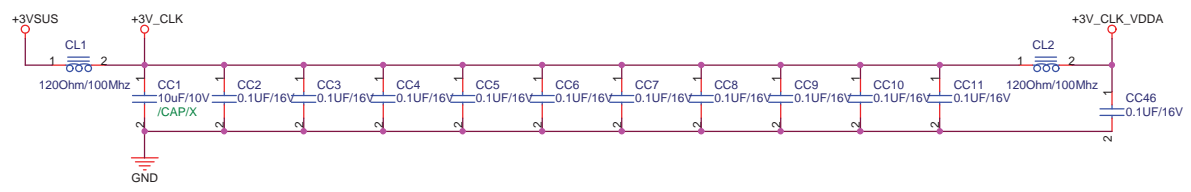
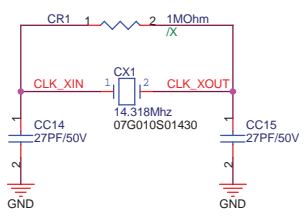
<Variant Name>

ASUS Title: Power Sequence

ASUSTek Computer INC. Engineer: Satan He

Size	Project Name	Rev
A3	P901	1.1G

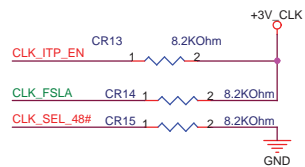
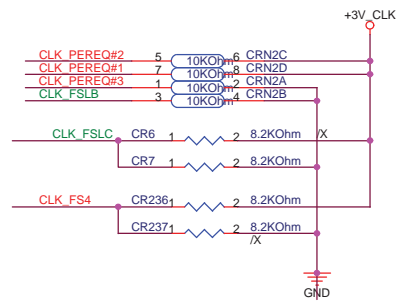
Date: Monday, August 11, 2008 Sheet 3 of 50

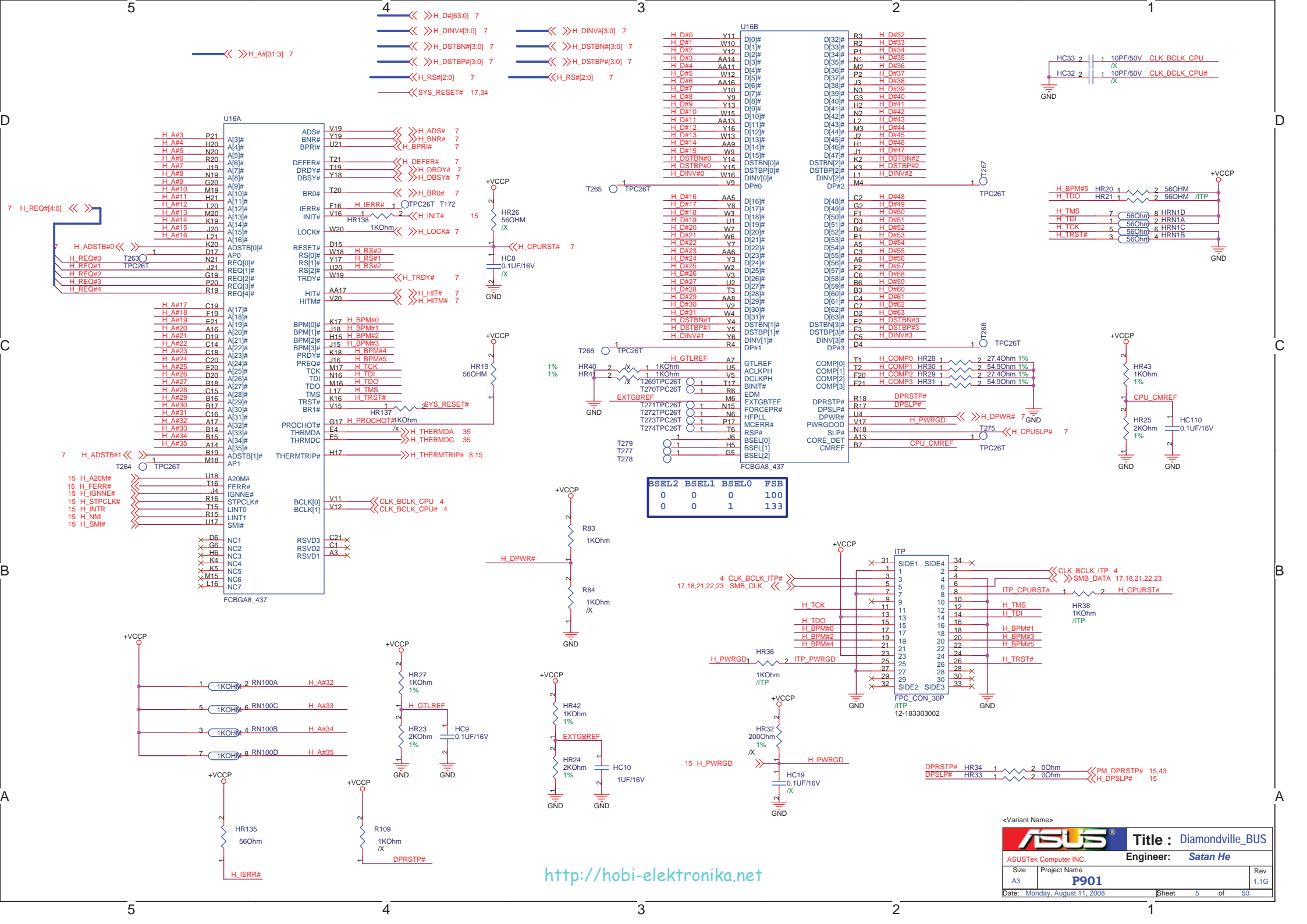


1:Disable
0:Enable

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

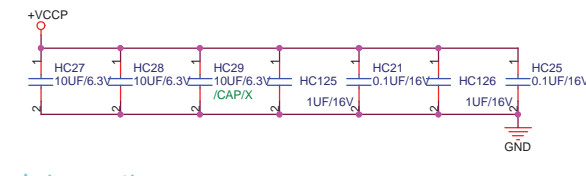
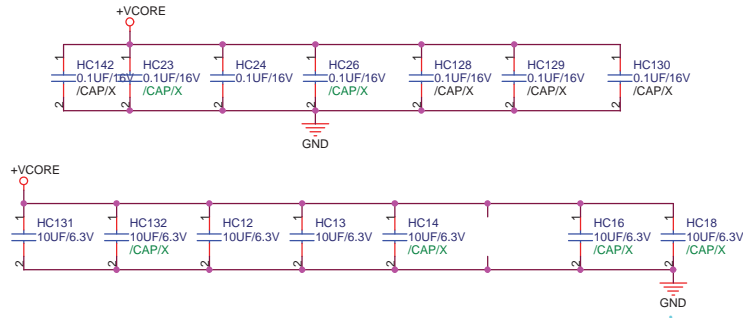
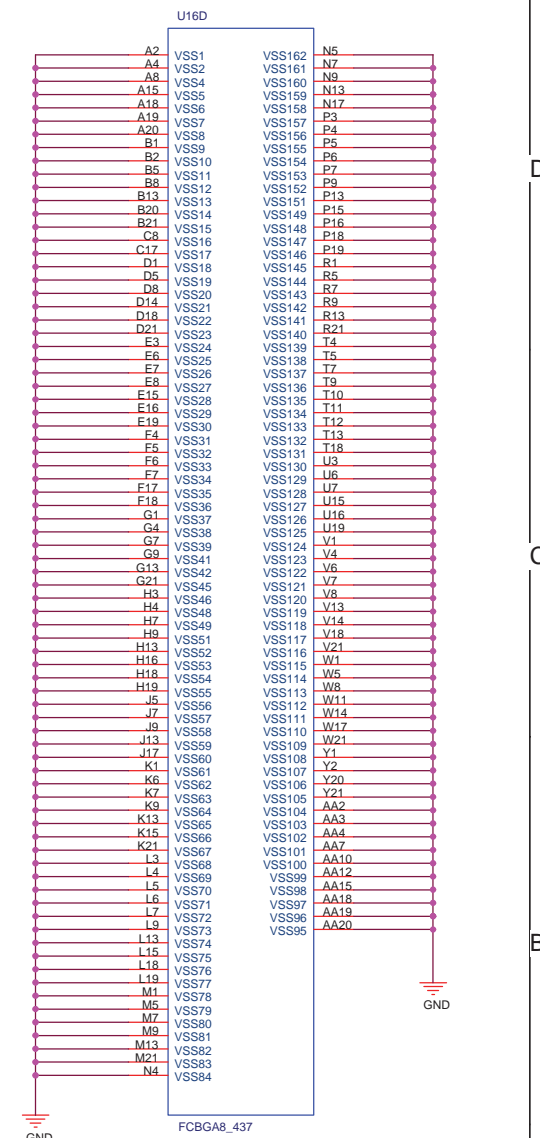
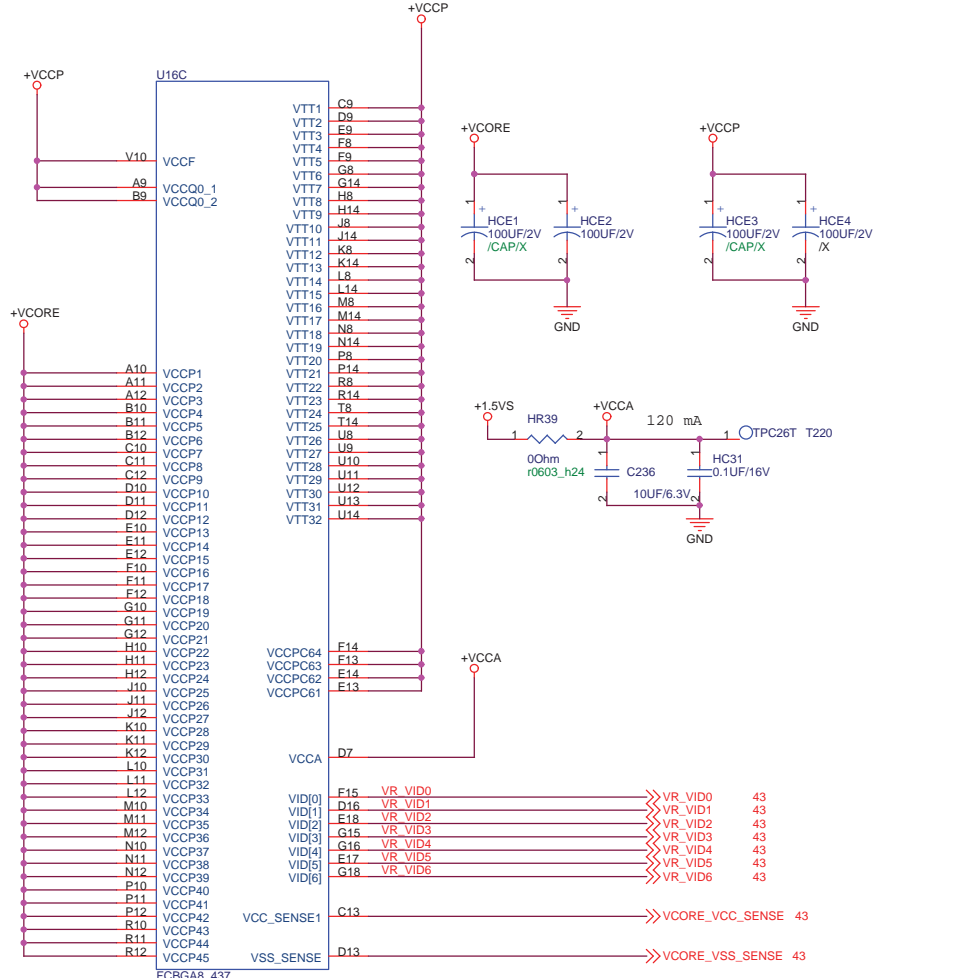
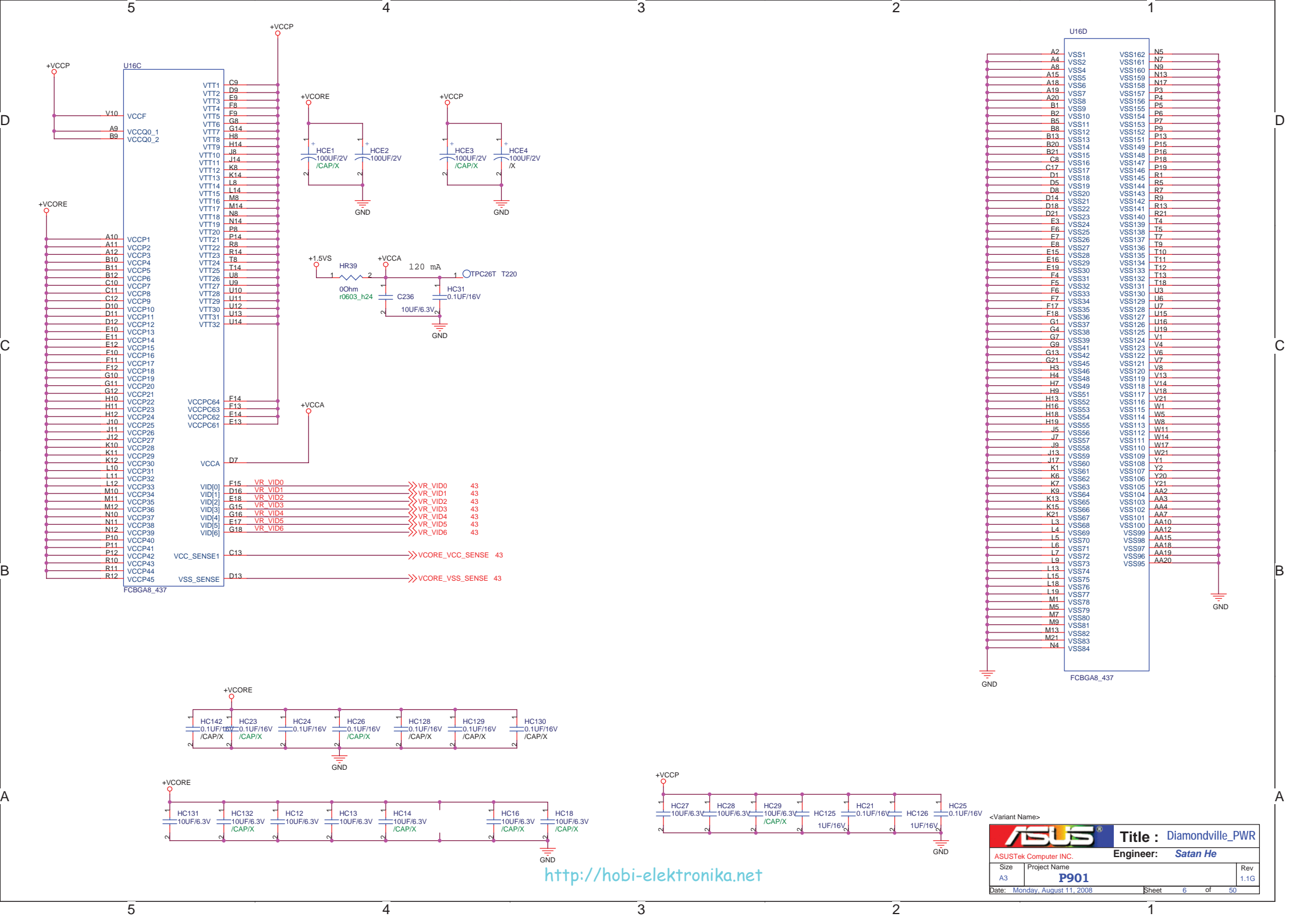
FSC	FSB	FSA	CPU	PCIE	SATA
0	0	1	133	100	100
1	0	1	100	100	100





<Variant Name>

ASUS		Title : Diamondville_BUS	
ASUSTek Computer INC.		Engineer: Satan He	
Size A3	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008	Sheet	5	of 50



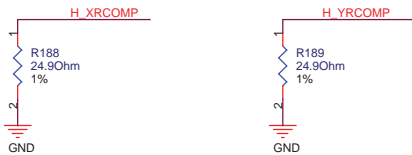
<http://hobi-elektronika.net>

ASUS		Title : Diamondville_PWR	
ASUSTek Computer INC.		Engineer: Satan He	
Size	Project Name		Rev
A3	P901		1.1G
Date: Monday, August 11, 2008	Sheet	6	of 50

**Power :
+VCCP**

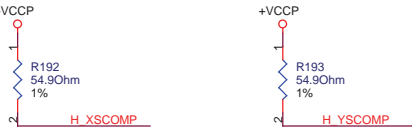
RCOMP

For Calibrating the FSB I/O Buffer



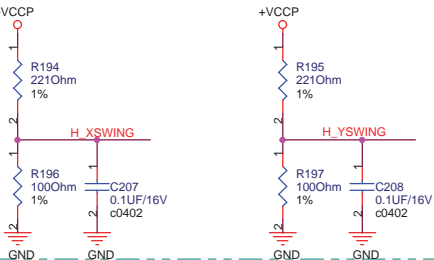
SCOMP

For Slew Rate Compensation on the FSB

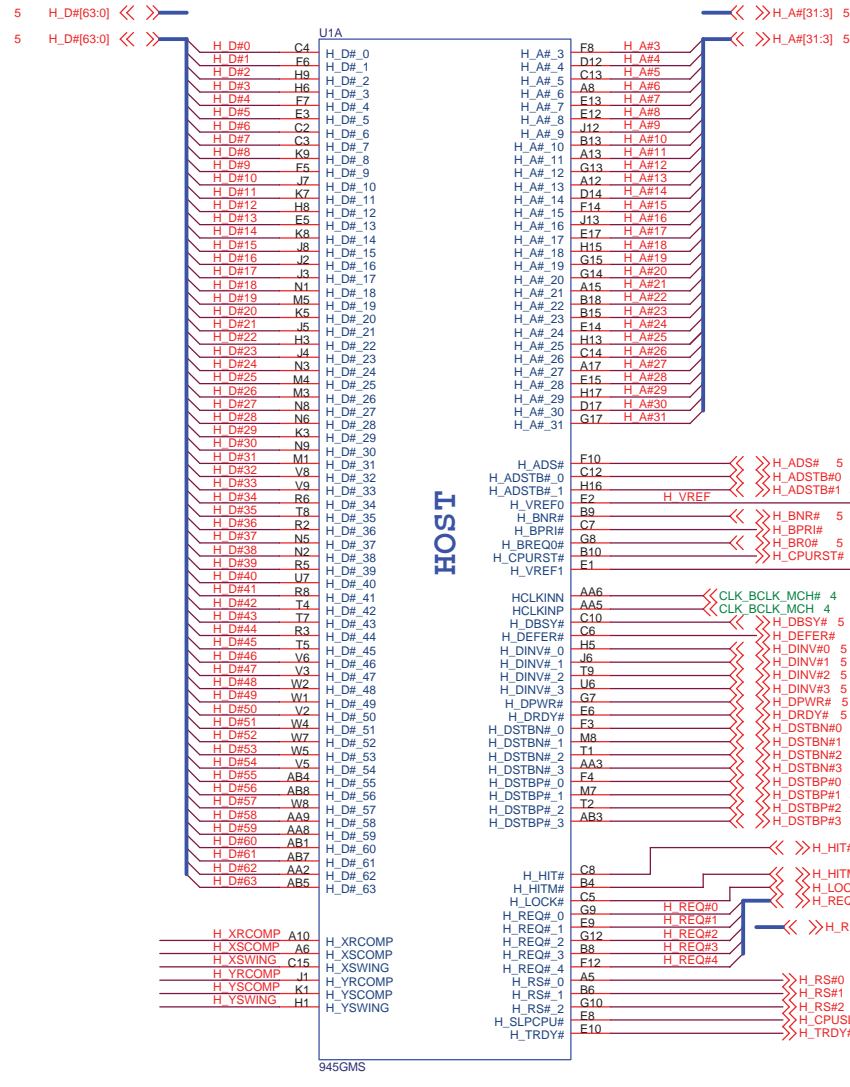


Voltage Swing

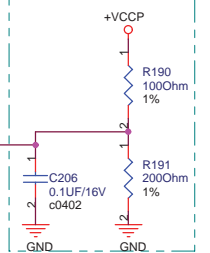
For Providing a Reference Voltage to The FSB RCOMP circuits



Signal voltage level =
0.3125*VCCP
Trace should be 10 mil wide
with 20 mil spacing

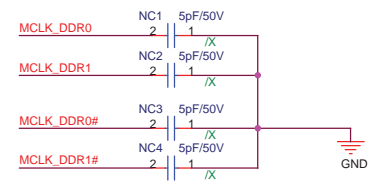
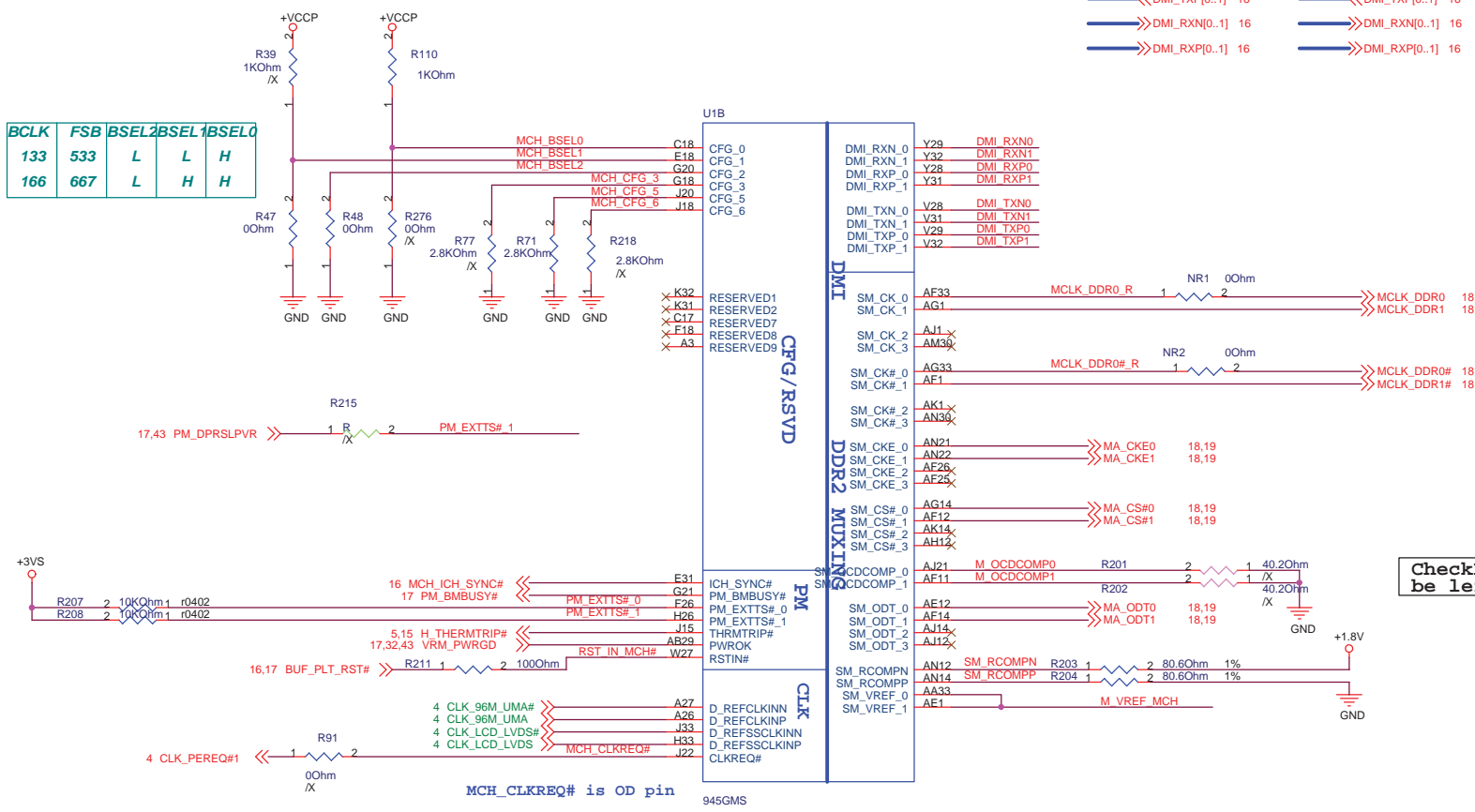


AGTL+ I/O Voltage Reference

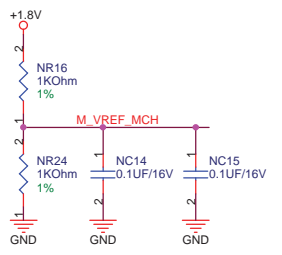


Layout Note:
0.1uF should be placed 100mils or
less from GMCH pin.

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



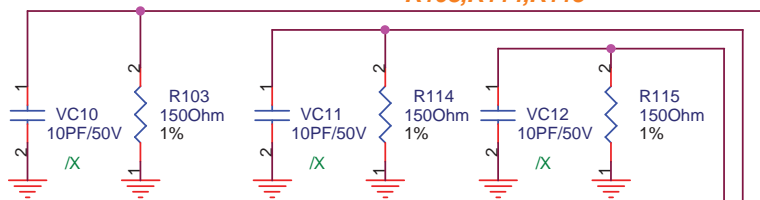
CheckList notes :Can be left as NC



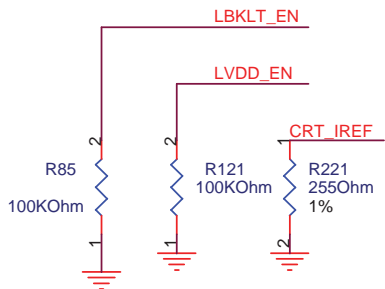
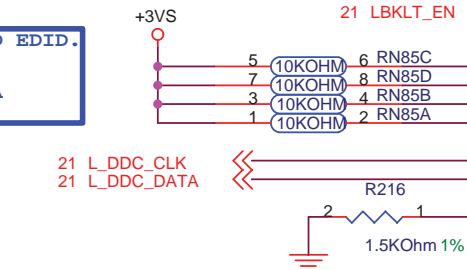
<Variant Name>

ASUS		Title : NB-945GMS(DMI & CFG)
ASUSTeK COMPUTER INC.		Engineer: Satan He
Size A3	Project Name P901	Rev 1.1G
Date: Monday, August 11, 2008	Sheet 8	of 50

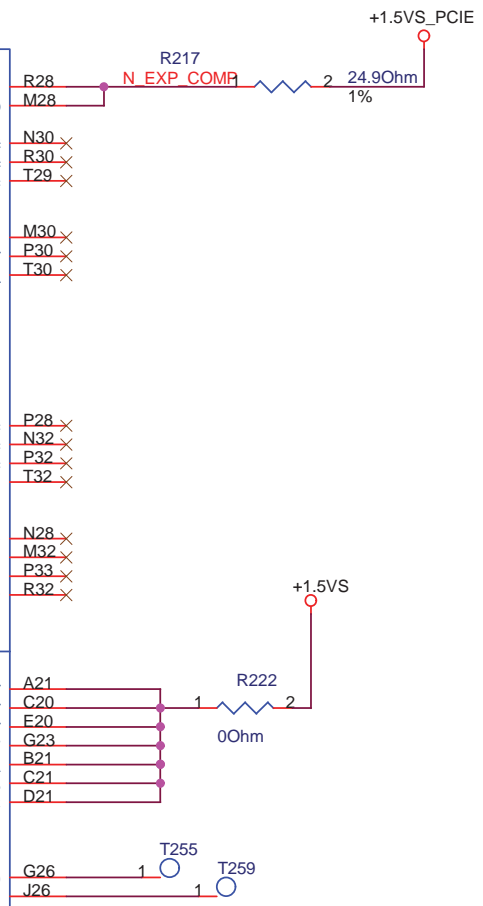
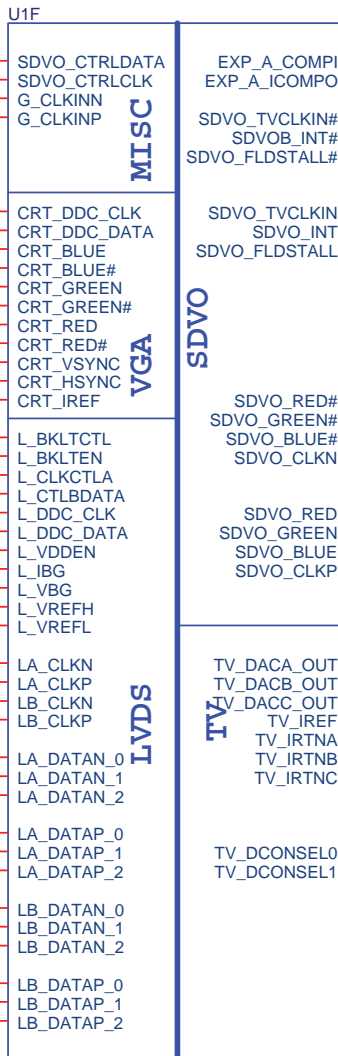
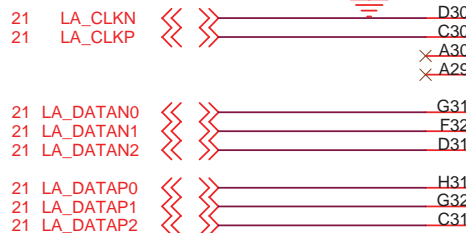
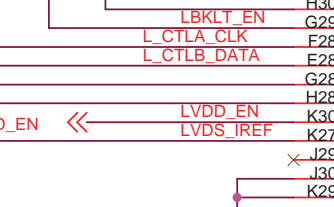
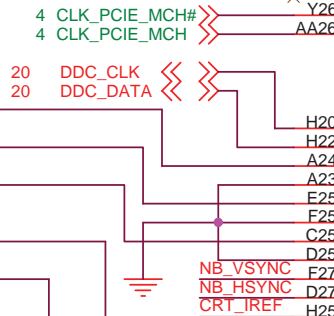
Close to GMCH
R103,R114,R115



IF USE NB READ EDID.
MUST CONNECT
L_DDC_CLK&DATA



Close to GMCH



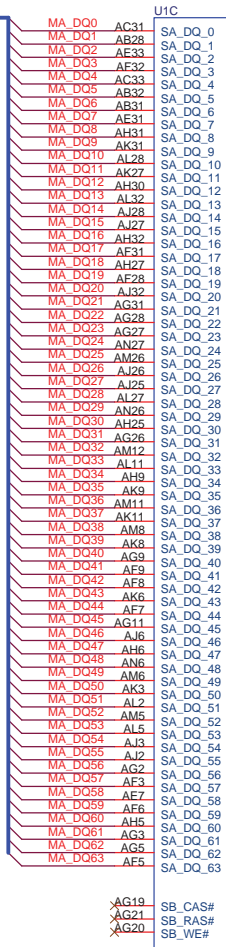
945GMS

<Variant Name>

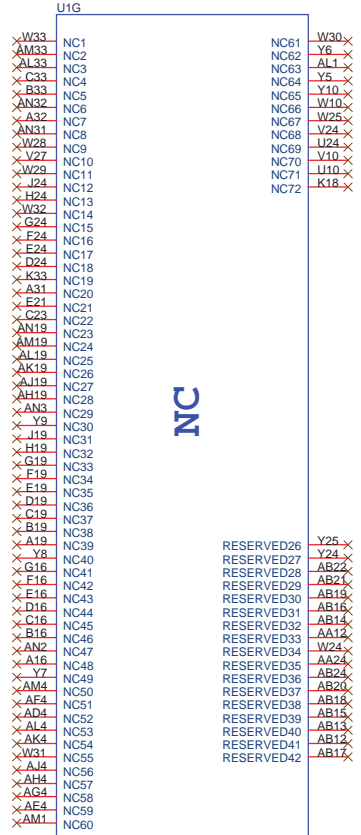
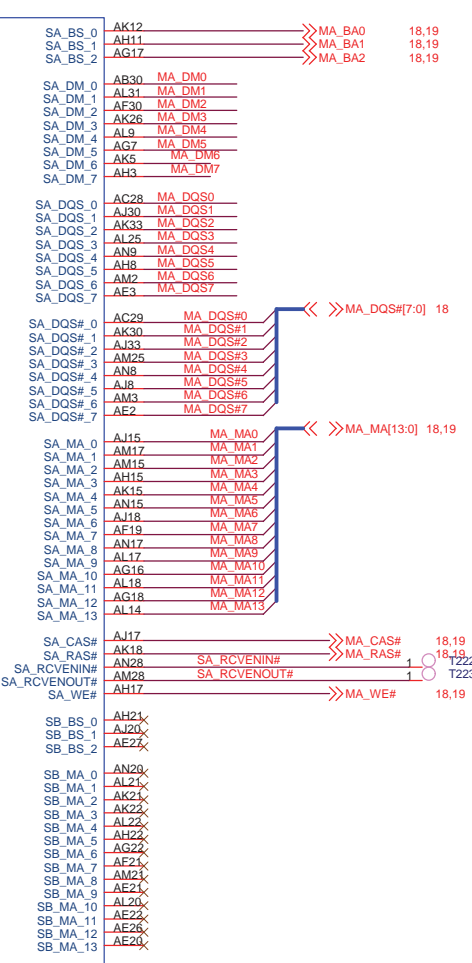
		Title : NB-945GMS(GRAPHIC)	
ASUSTeK COMPUTER INC.		Engineer: <i>Satan_He</i>	
Size A4	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008	Sheet	9	of 50

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

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



DDR2 SYSTEM MEMORY

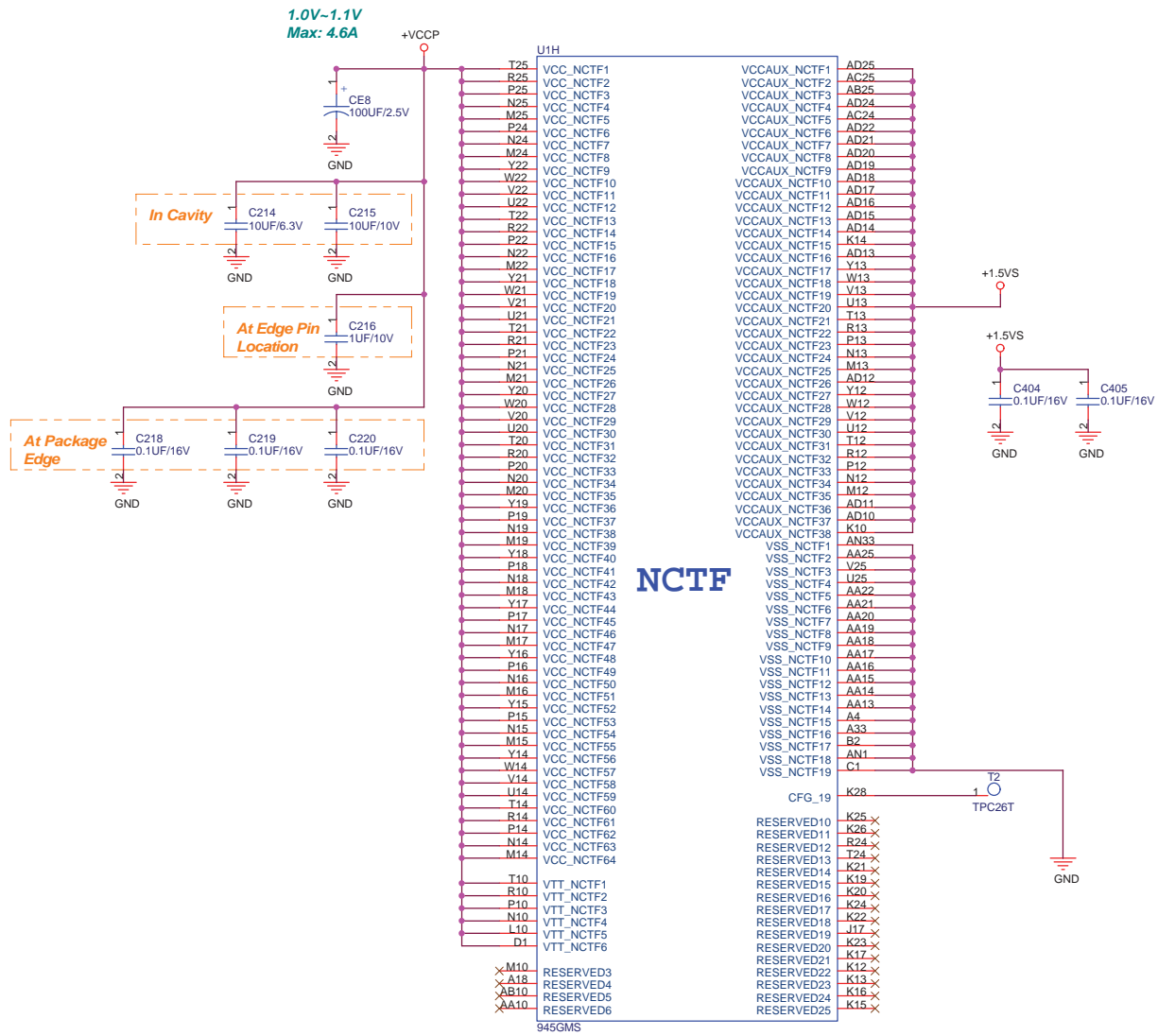


945GMS

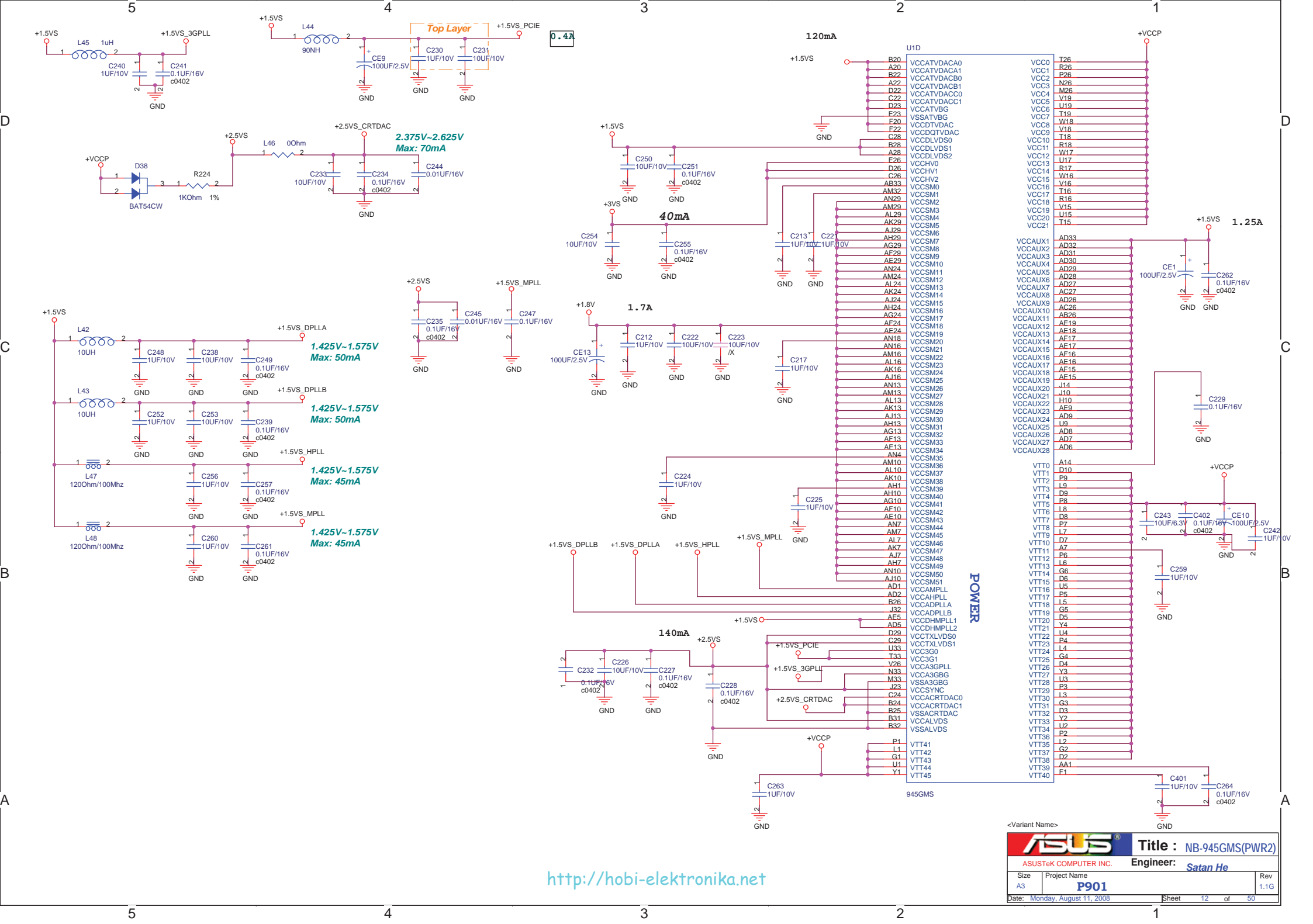
<Variant Name>

ASUS Title : NB-945GMS(DDR2)
 ASUSTek COMPUTER INC. Engineer: Satan He

Size A3	Project Name P901	Rev 1.1G
Date: Monday, August 11, 2008		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

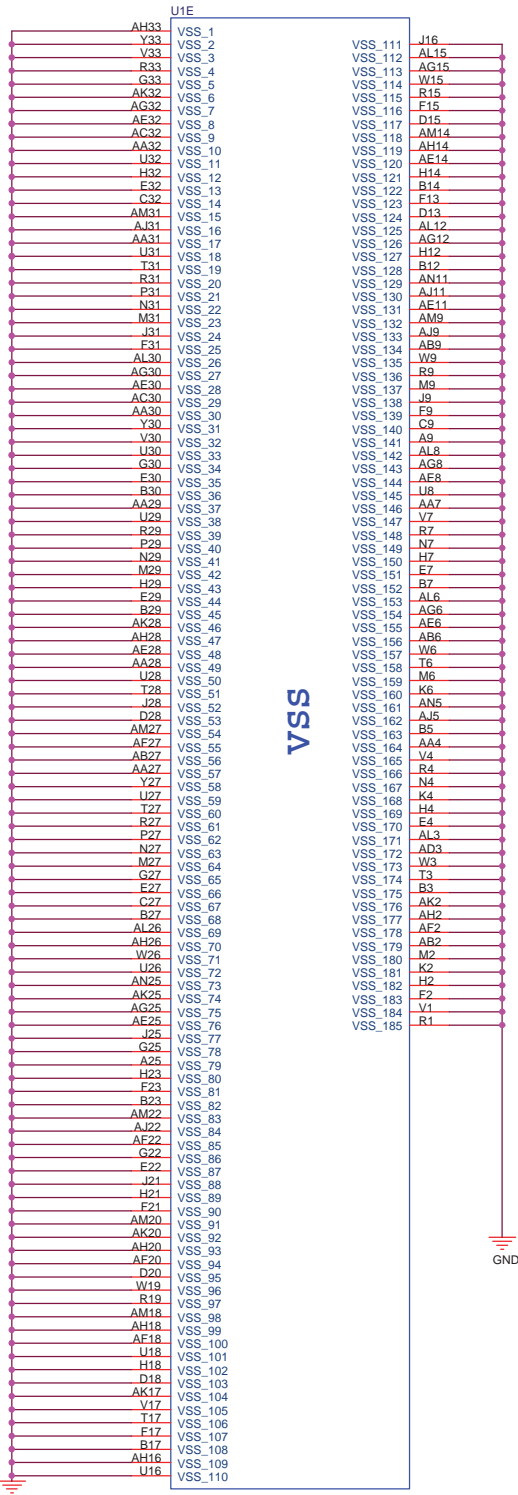


<http://hobi-elektronika.net>

<Variant Name>

ASUS Title : NB-945GMS(PWR2)
 ASUSTeK COMPUTER INC. Engineer: *Satan He*

Size A3	Project Name P901	Rev 1.1G
Date: Monday, August 11, 2008		Sheet 12 of 50

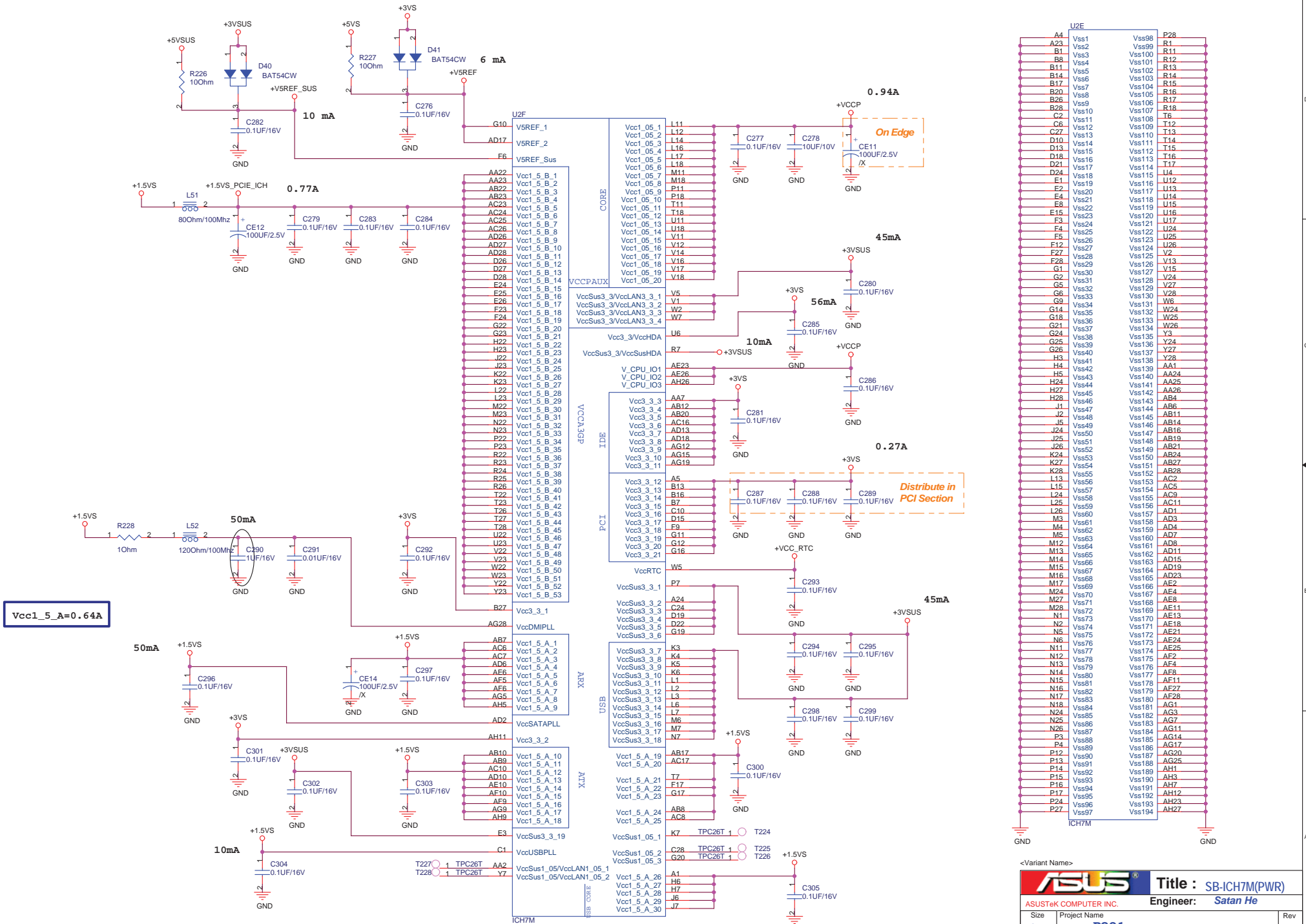


VSS

<http://hobi-elektronika.net>

<Variant Names>

		Title : NB-945PMS(GND)	
ASUSTeK COMPUTER INC.		Engineer: Satan_He	
Size	Project Name	Rev	
A3	P901	1.1G	
Date:	Monday, August 11, 2008	Sheet	13 of 50



U2E		P28	
A4	Vss1	Vss98	R1
A23	Vss2	Vss99	R11
B1	Vss3	Vss100	R12
B8	Vss4	Vss101	R13
B11	Vss5	Vss102	R14
B14	Vss6	Vss103	R15
B17	Vss7	Vss104	R16
B20	Vss8	Vss105	R17
B26	Vss9	Vss106	R18
B28	Vss10	Vss107	T6
C2	Vss11	Vss108	T12
C6	Vss12	Vss109	T16
C27	Vss13	Vss110	T13
D10	Vss14	Vss111	T14
D13	Vss15	Vss112	T15
D18	Vss16	Vss113	T16
D21	Vss17	Vss114	T17
D24	Vss18	Vss115	U4
E1	Vss19	Vss116	U12
E2	Vss20	Vss117	U13
E4	Vss21	Vss118	U14
E8	Vss22	Vss119	U15
F15	Vss23	Vss120	U16
F3	Vss24	Vss121	U24
F4	Vss25	Vss122	U26
F5	Vss26	Vss123	U25
F12	Vss27	Vss124	U27
F22	Vss28	Vss125	V13
F26	Vss29	Vss126	V15
G1	Vss30	Vss127	V16
G2	Vss31	Vss128	V24
G5	Vss32	Vss129	V27
G6	Vss33	Vss130	V28
G9	Vss34	Vss131	W6
G14	Vss35	Vss132	W24
G18	Vss36	Vss133	W25
G21	Vss37	Vss134	W26
G24	Vss38	Vss135	Y3
G25	Vss39	Vss136	Y24
G26	Vss40	Vss137	Y27
H3	Vss41	Vss138	Y28
H4	Vss42	Vss139	AA1
H5	Vss43	Vss140	AA24
H24	Vss44	Vss141	AA25
H27	Vss45	Vss142	AA26
H28	Vss46	Vss143	AB4
J1	Vss47	Vss144	AB6
J2	Vss48	Vss145	AB11
J5	Vss49	Vss146	AB14
J24	Vss50	Vss147	AB16
J25	Vss51	Vss148	AB19
J26	Vss52	Vss149	AB21
K24	Vss53	Vss150	AB24
K27	Vss54	Vss151	AB27
K28	Vss55	Vss152	AB28
L13	Vss56	Vss153	AC2
L15	Vss57	Vss154	AC5
L24	Vss58	Vss155	AC9
L25	Vss59	Vss156	AC11
L26	Vss60	Vss157	AD1
M3	Vss61	Vss158	AD3
M4	Vss62	Vss159	AD4
M5	Vss63	Vss160	AD7
M12	Vss64	Vss161	AD8
M13	Vss65	Vss162	AD11
M14	Vss66	Vss163	AD15
M15	Vss67	Vss164	AD19
M16	Vss68	Vss165	AD23
M17	Vss69	Vss166	AE2
M24	Vss70	Vss167	AE8
M28	Vss71	Vss168	AE11
N1	Vss72	Vss169	AE13
N2	Vss73	Vss170	AE18
N5	Vss74	Vss171	AE21
N6	Vss75	Vss172	AE24
N11	Vss76	Vss173	AE25
N12	Vss77	Vss174	AF2
N13	Vss78	Vss175	AF4
N14	Vss79	Vss176	AF8
N15	Vss80	Vss177	AF11
N16	Vss81	Vss178	AF27
N17	Vss82	Vss179	AF28
N18	Vss83	Vss180	AG1
N24	Vss84	Vss181	AG7
N25	Vss85	Vss182	AG17
N26	Vss86	Vss183	AG11
P3	Vss87	Vss184	AG14
P4	Vss88	Vss185	AG17
P12	Vss89	Vss186	AG20
P13	Vss90	Vss187	AG25
P16	Vss91	Vss188	AH1
P14	Vss92	Vss189	AH1
P15	Vss93	Vss190	AH3
P18	Vss94	Vss191	AH7
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P24	Vss96	Vss193	AH23
P27	Vss97	Vss194	AH27

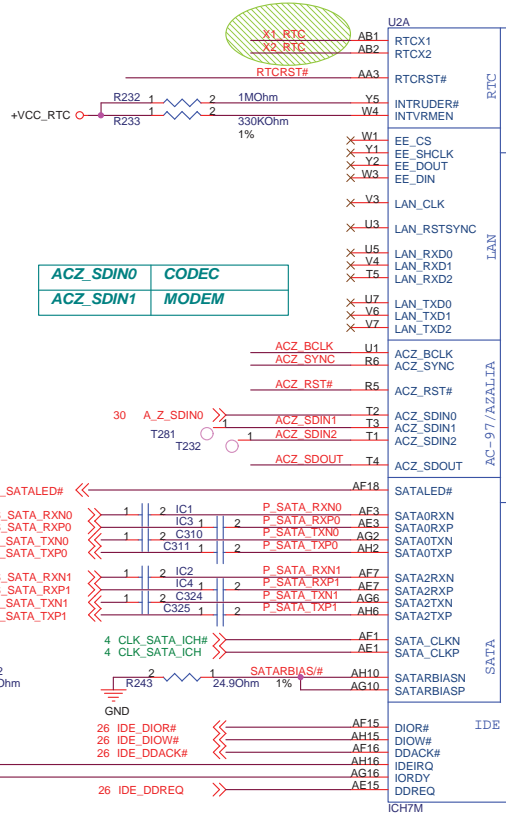
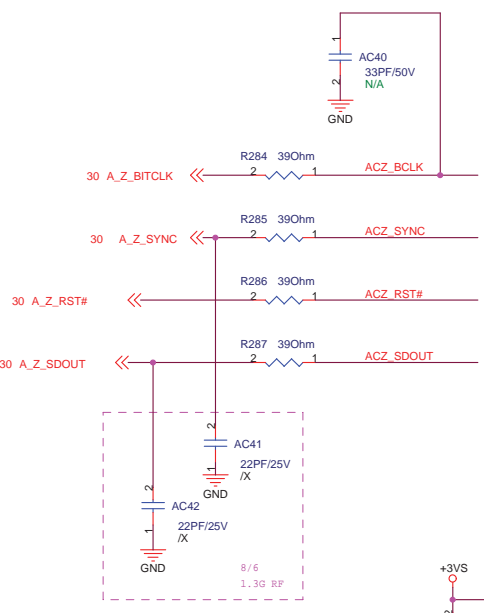
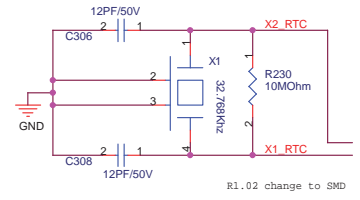
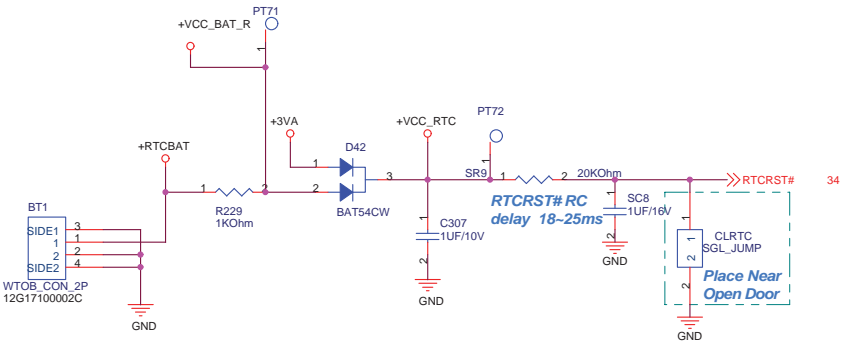
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<http://hobi-elektronika.net>

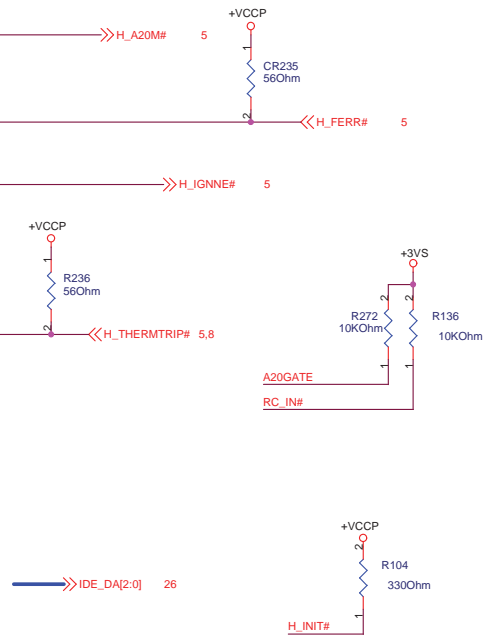
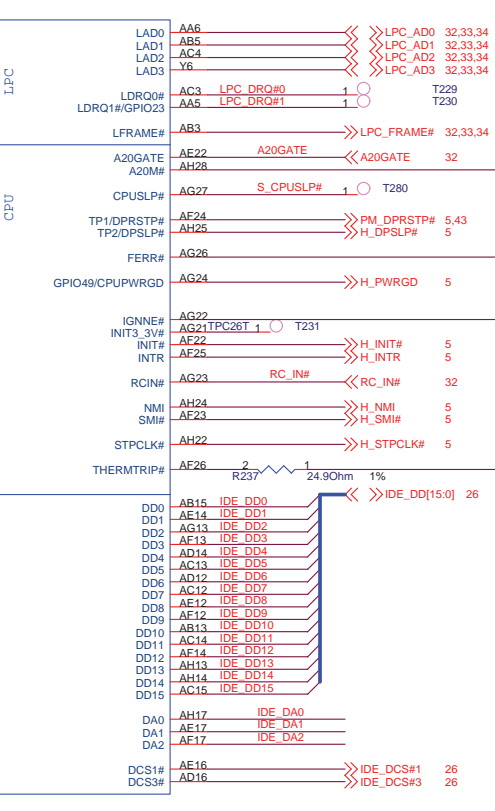
<Variant Name>

Title : SB-ICH7M(PWR)
ASUSteK COMPUTER INC. **Engineer:** Satan He

Size	Project Name	Rev
Custom	P901	1.1G
Date: Monday, August 11, 2008	Sheet 14 of 50	



ACZ_SDIN0	CODEC
ACZ_SDIN1	MODEM

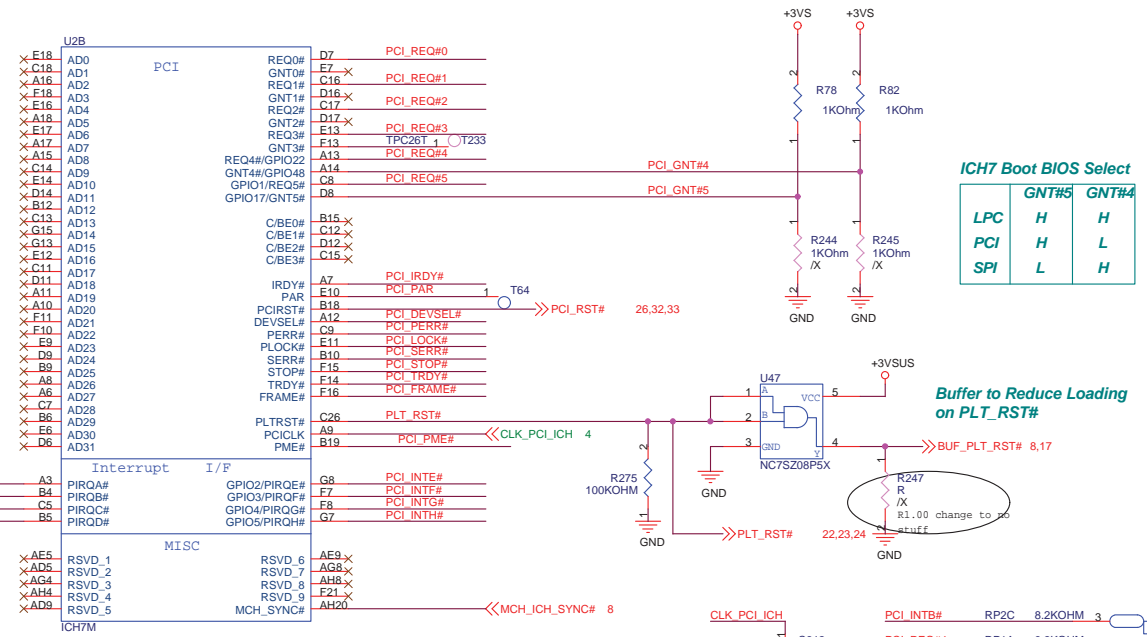


<Variant Name>

ASUS Title : SB-ICH7-M(1)

ASUSTek COMPUTER INC. Engineer: **Satan He**

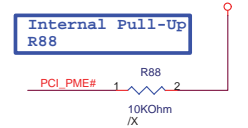
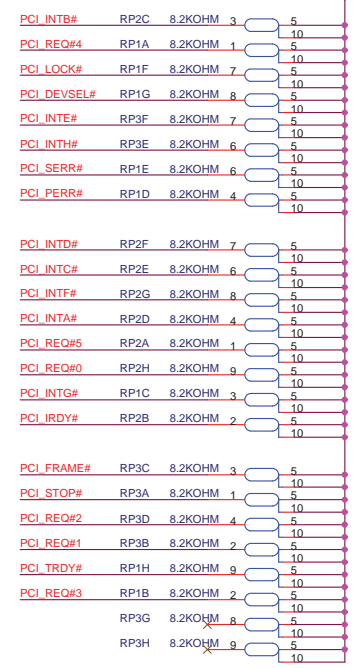
Size	Project Name	Rev
Custom	P901	1.1G
Date: Monday, August 11, 2008	Sheet	15 of 50



ICH7 Boot BIOS Select

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

Buffer to Reduce Loading on PLT_RST#

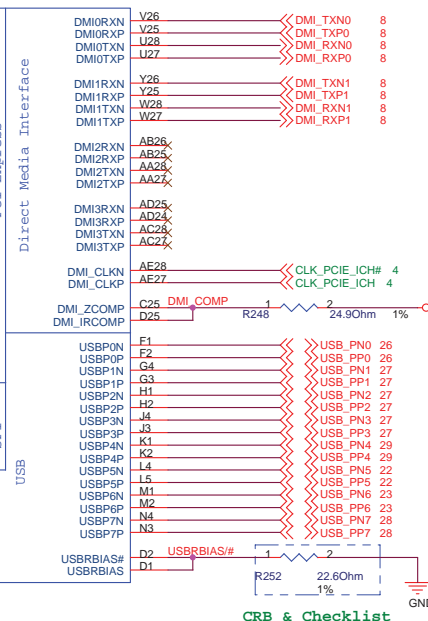
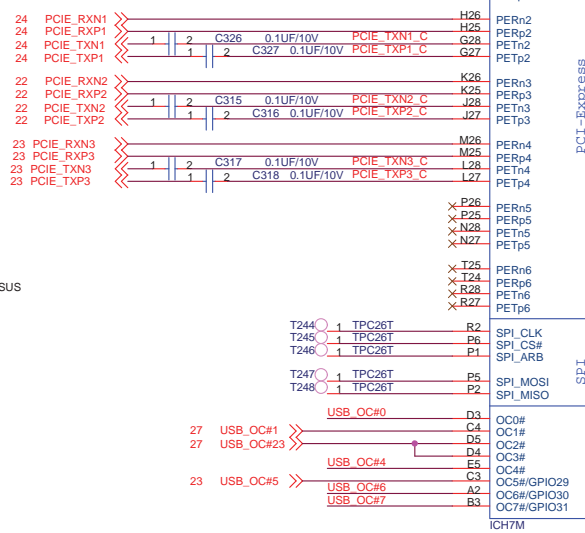
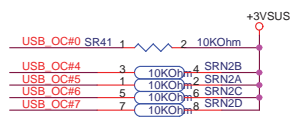


- USB 0 Flash Conn (Long Card)
- USB 1 USB Conn
- USB 2 USB Conn
- USB 3 USB Conn
- USB 4 Card Reader
- USB 5 Minicard + 3.5G
- USB 6 Bluetooth
- USB 7 Camera

LAN AR8113 IC

3.5G PCIExpress Card

WIFI PCIExpress Card



<http://hobi-elektronika.net>

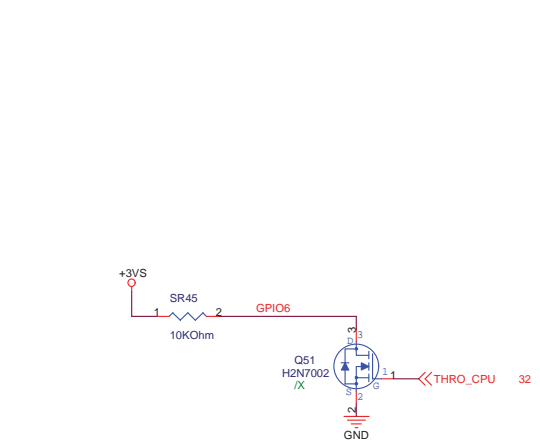
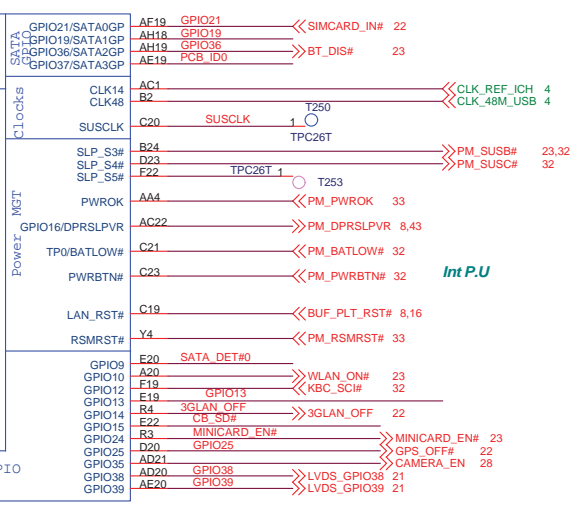
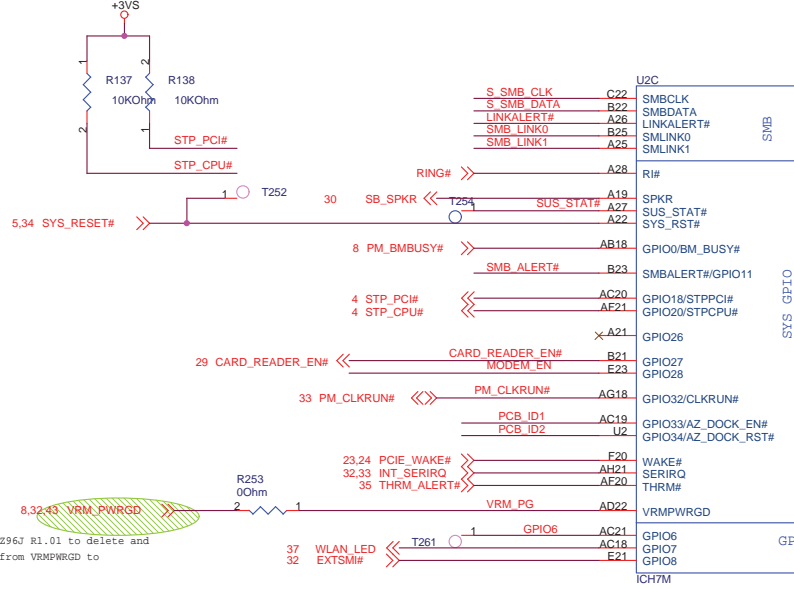
<Variant Name>

ASUS Title : SB-ICH7M(2)

ASUSTek COMPUTER INC. Engineer: Satan He

Size	Project Name	Rev
Custom	P901	1.1G

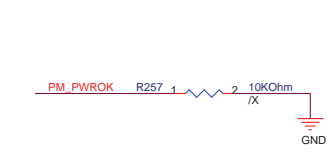
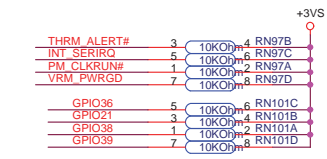
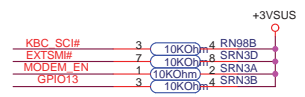
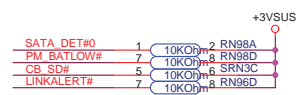
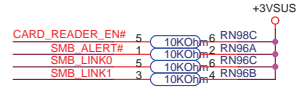
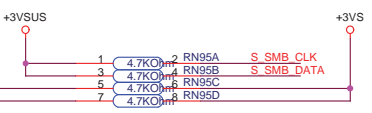
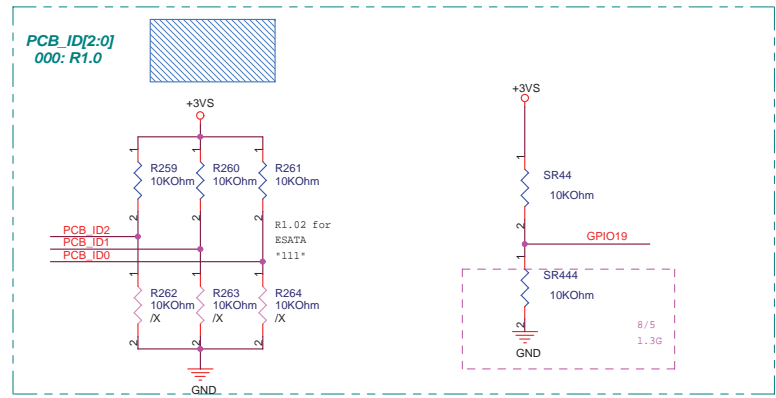
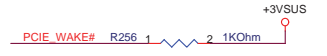
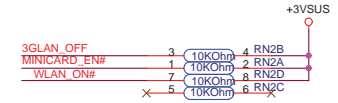
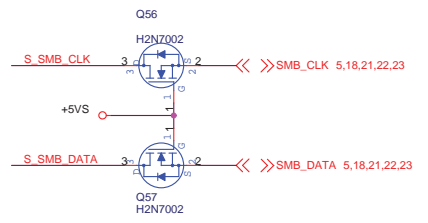
Date: Monday, August 11, 2008 Sheet 16 of 50



05/12/30, refer Z963 R1.01 to delete and change net name from VRMPWRGD to VRM_PWRGD.



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



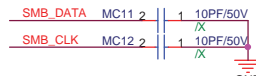
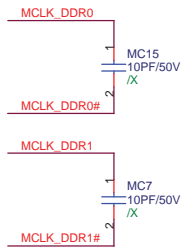
PCB_VID3 : PROJECT CODE

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ASUS Title : SB-ICH7M(3)

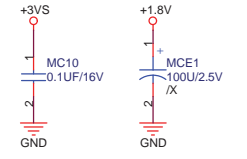
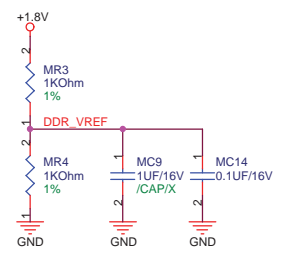
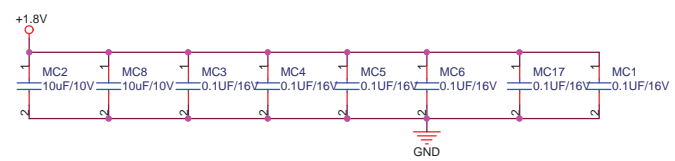
ASUSTek COMPUTER INC Engineer: **Satan He**

Size	Project Name	Rev
Custom	P901	1.1G
Date: Monday, August 11, 2008	Sheet 17 of 50	



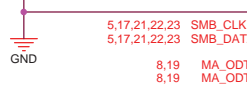
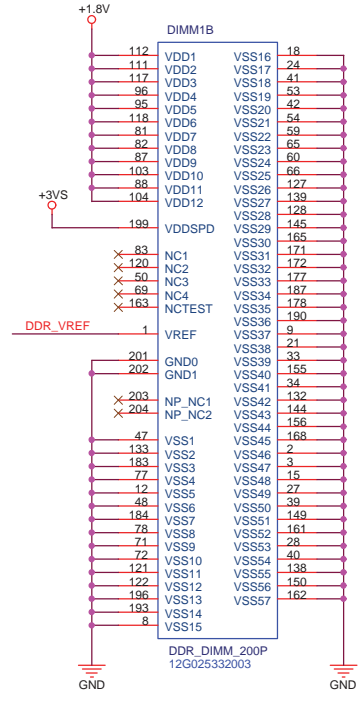
STD Type

- MA_DQ[63:0] 10
- MA_DQS[7:0] 10
- MA_DQS#[7:0] 10
- MA_DM[7:0] 10
- MA_MA[13:0] 10,19
- MA_BA[2:0] 10,19



DIMM1A		DIMM1B	
MA_MA0	102	A0	DQ0
MA_MA1	101	A1	DQ1
MA_MA2	100	A2	DQ2
MA_MA3	99	A3	DQ3
MA_MA4	98	A4	DQ4
MA_MA5	97	A5	DQ5
MA_MA6	94	A6	DQ6
MA_MA7	94	A6	DQ6
MA_MA8	92	A7	DQ7
MA_MA9	91	A8	DQ8
MA_MA10	105	A9	DQ9
MA_MA11	90	A10/AP	DQ10
MA_MA12	89	A11	DQ11
MA_MA13	89	A12	DQ12
	116	A13	DQ13
	86	A14	DQ14
MA_BA2	85	A15	DQ15
		A16_BA2	DQ16
MA_BA0	107	BA0	DQ17
MA_BA1	106	BA1	DQ18
	110	BA1	DQ18
	115	S0#	DQ20
	30	S1#	DQ21
	32	CK0#	DQ22
	164	CK1#	DQ24
	166	CK1#	DQ25
	79	CKE0	DQ26
	80	CKE1	DQ27
	113	CAS#	DQ28
	108	RAS#	DQ29
	109	WE#	DQ30
	198	SA0	DQ31
	200	SA1	DQ32
	197	SCL	DQ33
	195	SDA	DQ34
		DQ35	DQ35
		DQ36	DQ36
		DQ37	DQ37
		DQ38	DQ38
		DQ39	DQ39
		DQ40	DQ40
		DQ41	DQ41
		DQ42	DQ42
		DQ43	DQ43
		DQ44	DQ44
		DQ45	DQ45
		DQ46	DQ46
		DQ47	DQ47
		DQ48	DQ48
		DQ49	DQ49
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		DQ52	DQ52
		DQ53	DQ53
		DQ54	DQ54
		DQ55	DQ55
		DQ56	DQ56
		DQ57	DQ57
		DQ58	DQ58
		DQ59	DQ59
		DQ60	DQ60
		DQ61	DQ61
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		DQ63	DQ63

GROUP1
GROUP2
SWAP



DDR_DIMM_200P
12G025332003



<Variant Name>

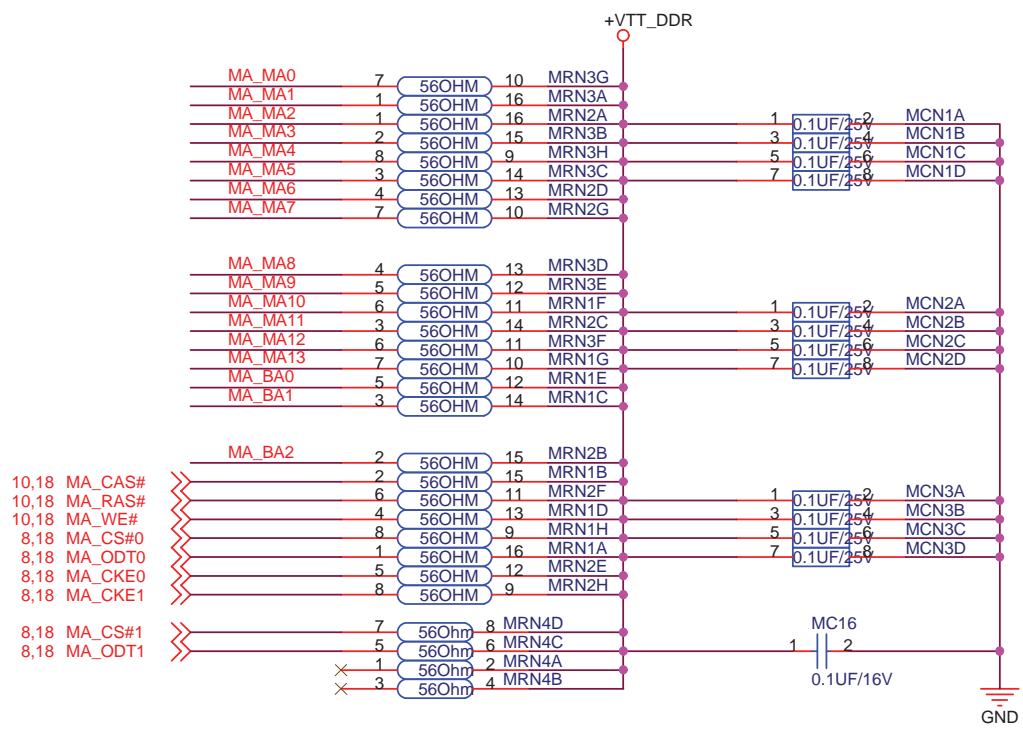
ASUS Title : DDR2 SODIMM

ASUSTek Computer INC. Engineer: *Keil_Huang*


Size	Project Name	Rev
A3	P901	1.1G

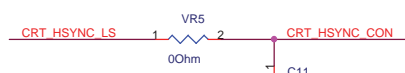
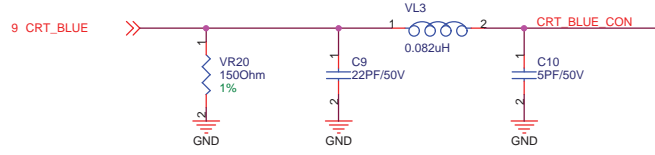
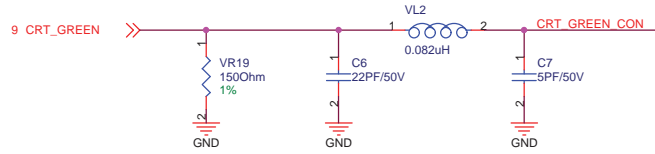
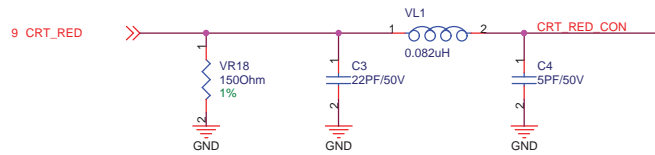
Date: Monday, August 11, 2008 Sheet 18 of 47

 << MA_MA[13:0] 10,18
 << MA_BA[2:0] 10,18

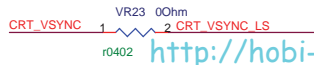
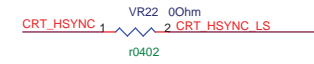
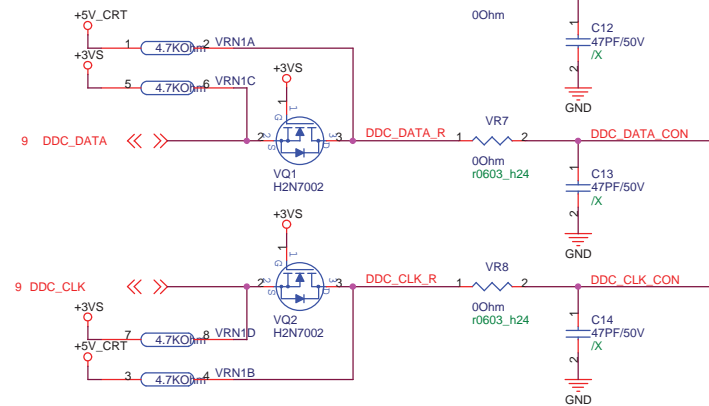


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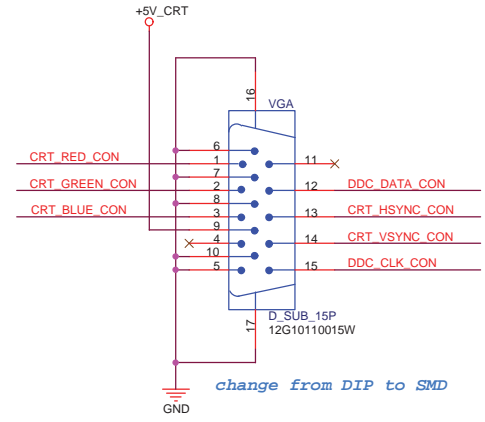
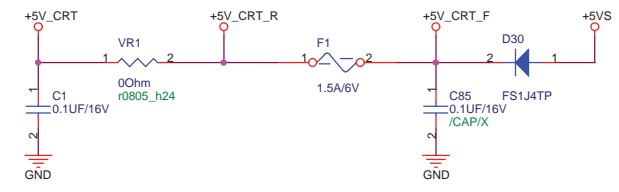
		Title : DDR2_Termination	
ASUSTek Computer INC.		Engineer: <i>Kell_Huang</i>	
Size A4	Project Name P901		Rev 1.1G
Date: Monday, August 11, 2008		Sheet	19 of 47



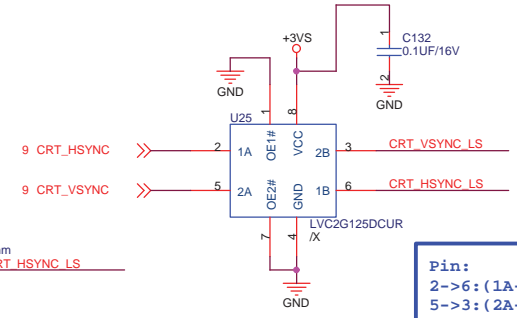
U25上:VR5 & VR6-->22 OHM
U25 /X :VR5 & VR6 -->0 OHM



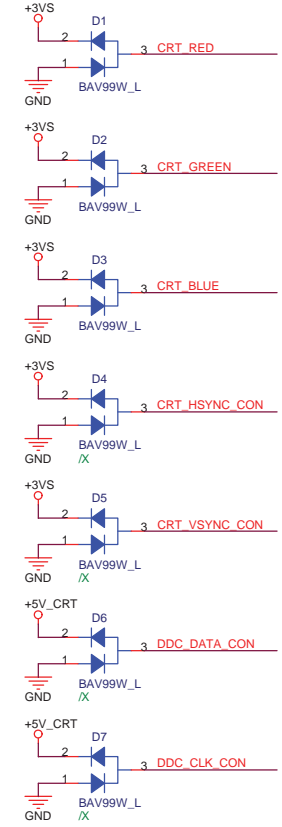
<http://hobi-elektronika.net>



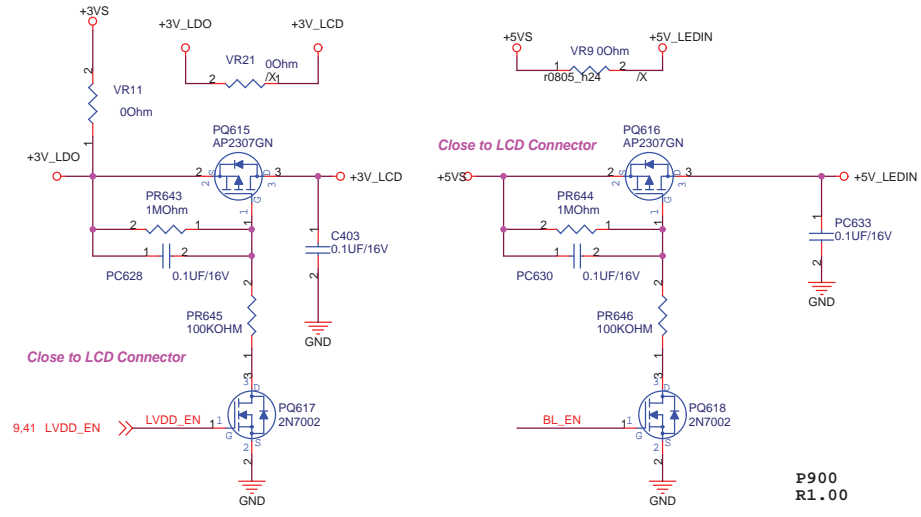
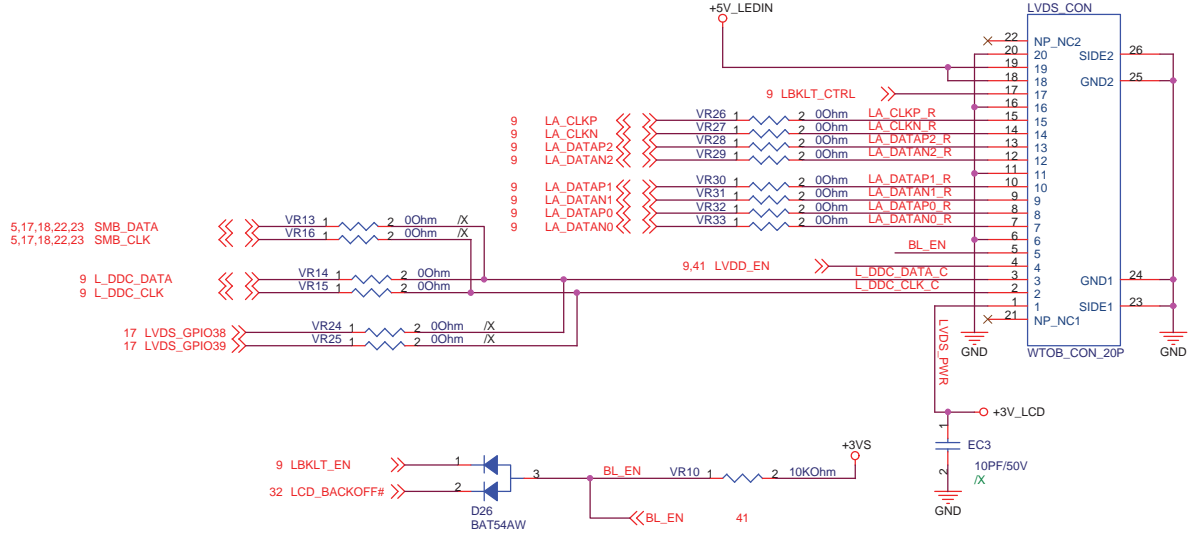
VGA use 12G10110015W & 12G10110015N



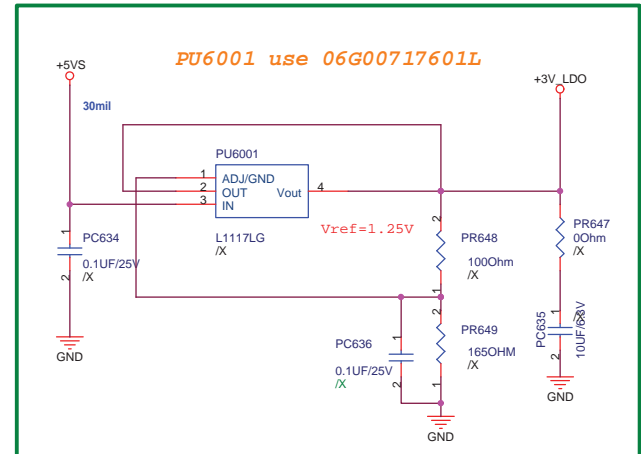
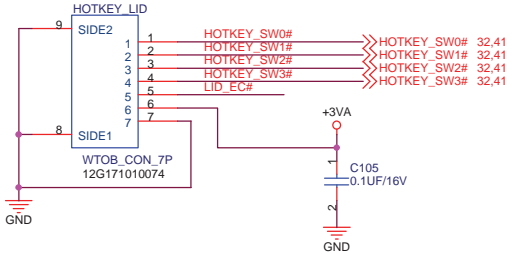
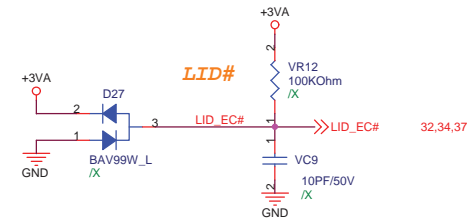
Pin:
2->6: (1A->1B)
5->3: (2A->2B)



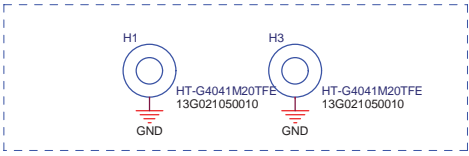
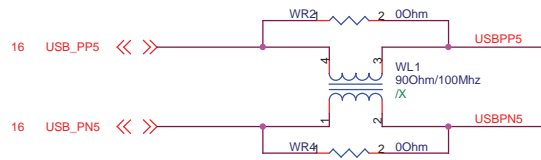
ASUS		Title : Onboard VGA	
ASUSTek Computer INC.		Engineer: Kell Huang	
Size	Project Name		Rev
A3	P901		1.1G
Date: Monday, August 11, 2008	Sheet	20 of 47	



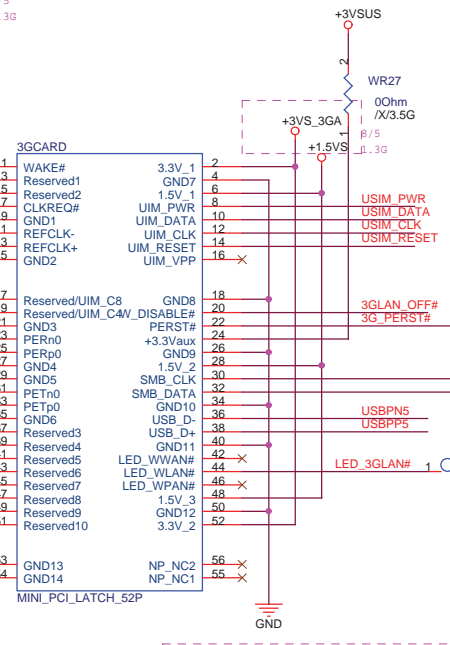
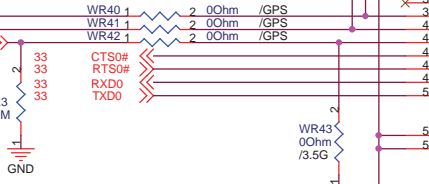
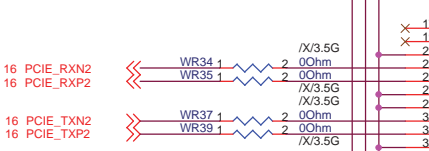
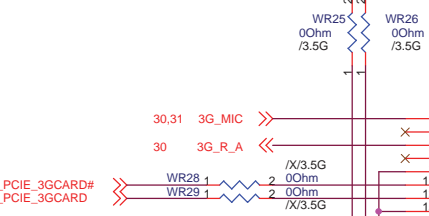
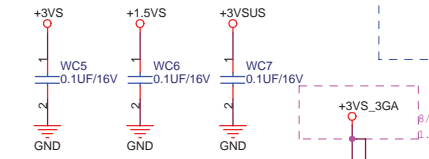
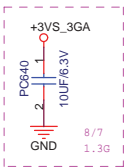
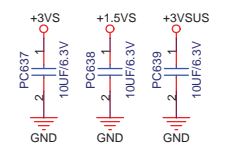
L_DDC_CLK_C	EC1	2	1	10PF/50V
L_DDC_DATA_C	EC2	2	1	10PF/50V
LA_CLKP_R	VC1	2	1	10PF/50V
LA_CLKN_R	VC2	2	1	10PF/50V
LA_DATAP2_R	VC3	2	1	10PF/50V
LA_DATAN2_R	VC4	2	1	10PF/50V
LA_DATAP1_R	VC5	2	1	10PF/50V
LA_DATAN1_R	VC6	2	1	10PF/50V
LA_DATAP0_R	VC7	2	1	10PF/50V
LA_DATAN0_R	VC8	2	1	10PF/50V



P900
R1.00

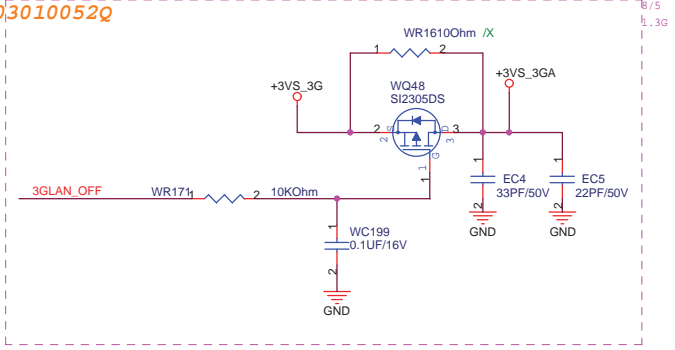
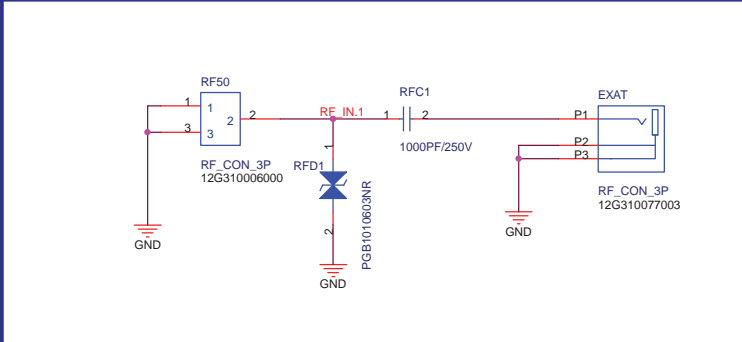


MINI CARD NUT(1.6mm) *2

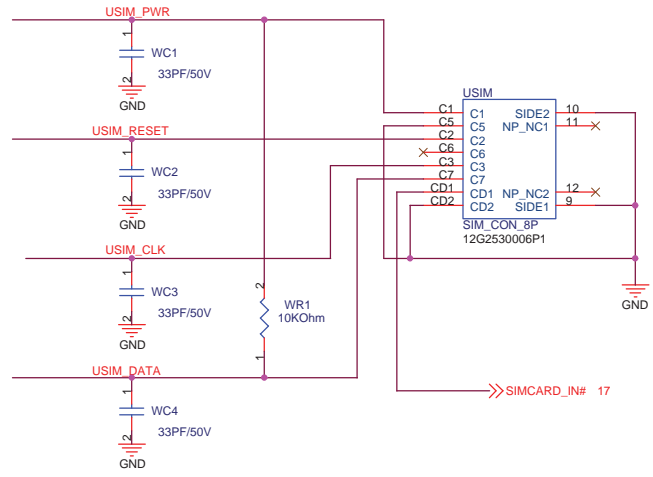


MINICARD use 12G03010052Q

External Antenna



CAP Near SIM Socket



USIM_PWR 41

SIMCARD_IN# 17

USIM_PWR USIM_DATA USIM_CLK USIM_RESET

3GLAN_OFF# 3G_PERST#

3G_SMB_CLK 3G_SMB_DATA

USBPN5 USBPP5

LED_3GLAN# 1 OPTC26T T144

3V3V_3GA

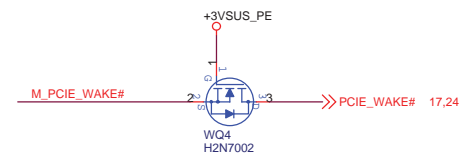
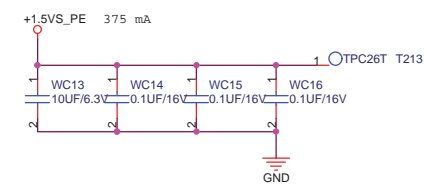
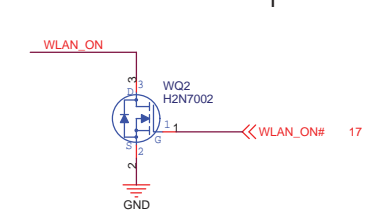
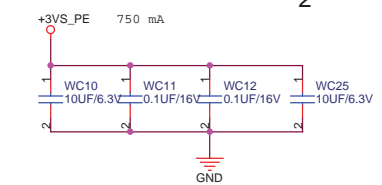
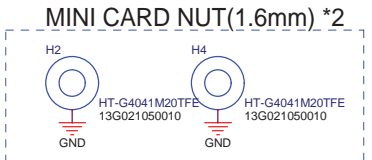
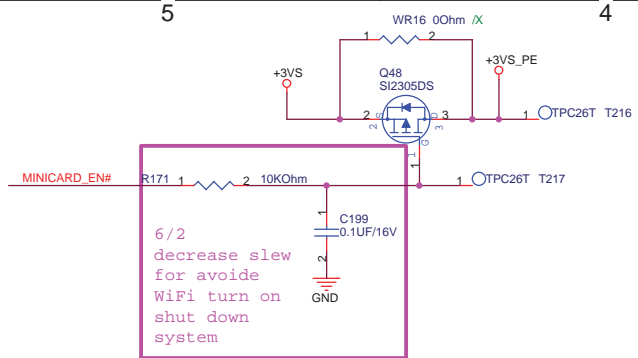
SMB_CLK SMB_DATA

3GLAN_OFF#

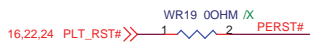
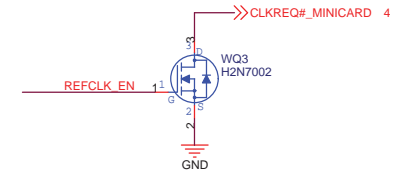
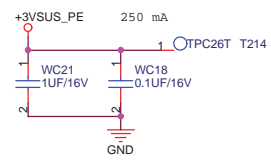
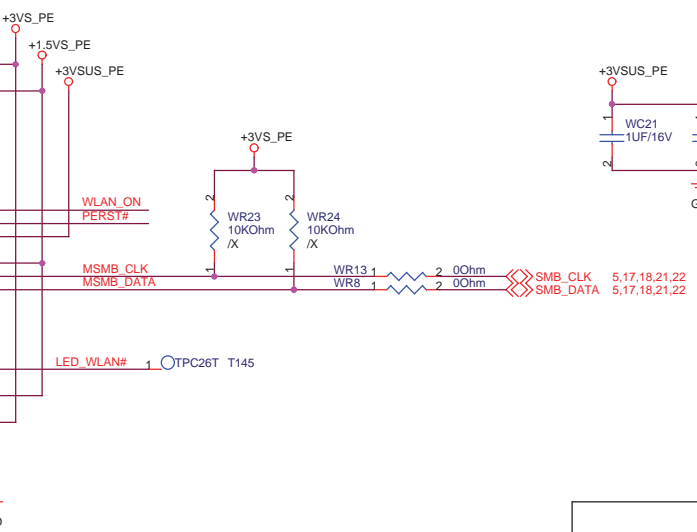
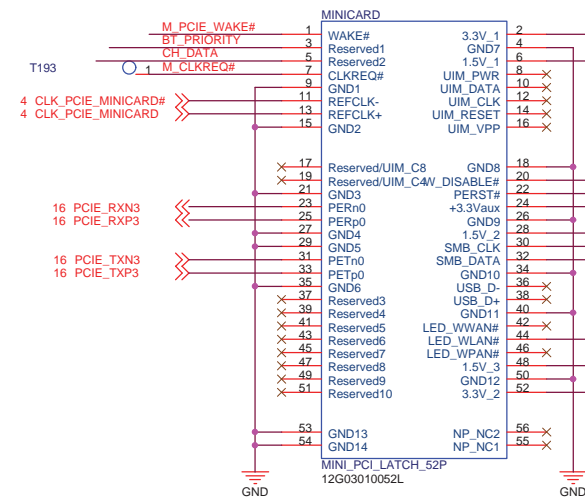
SB GPIO14

2008/03/11 change

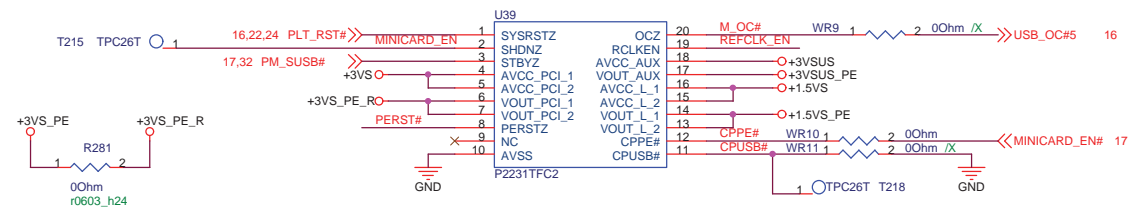




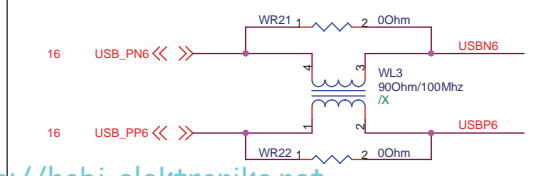
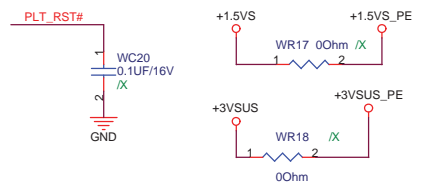
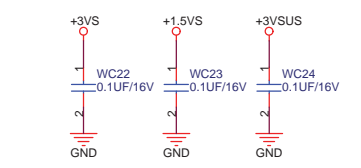
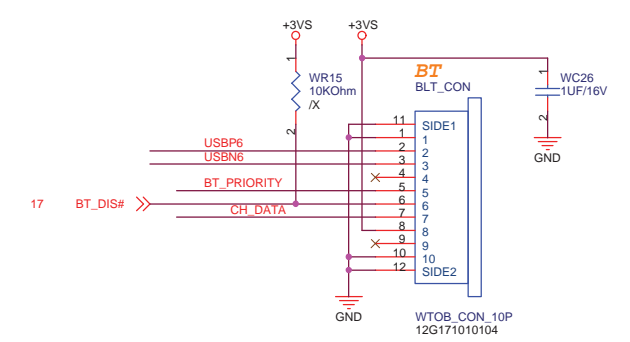
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U39 use 06G030057011



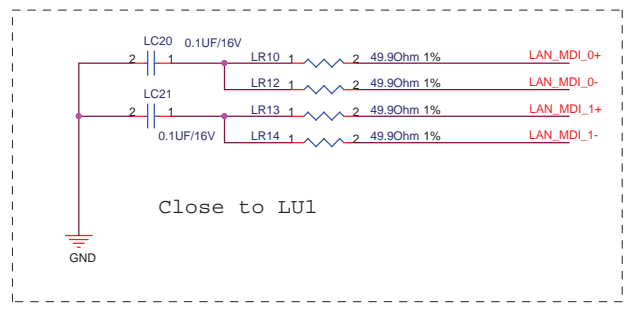
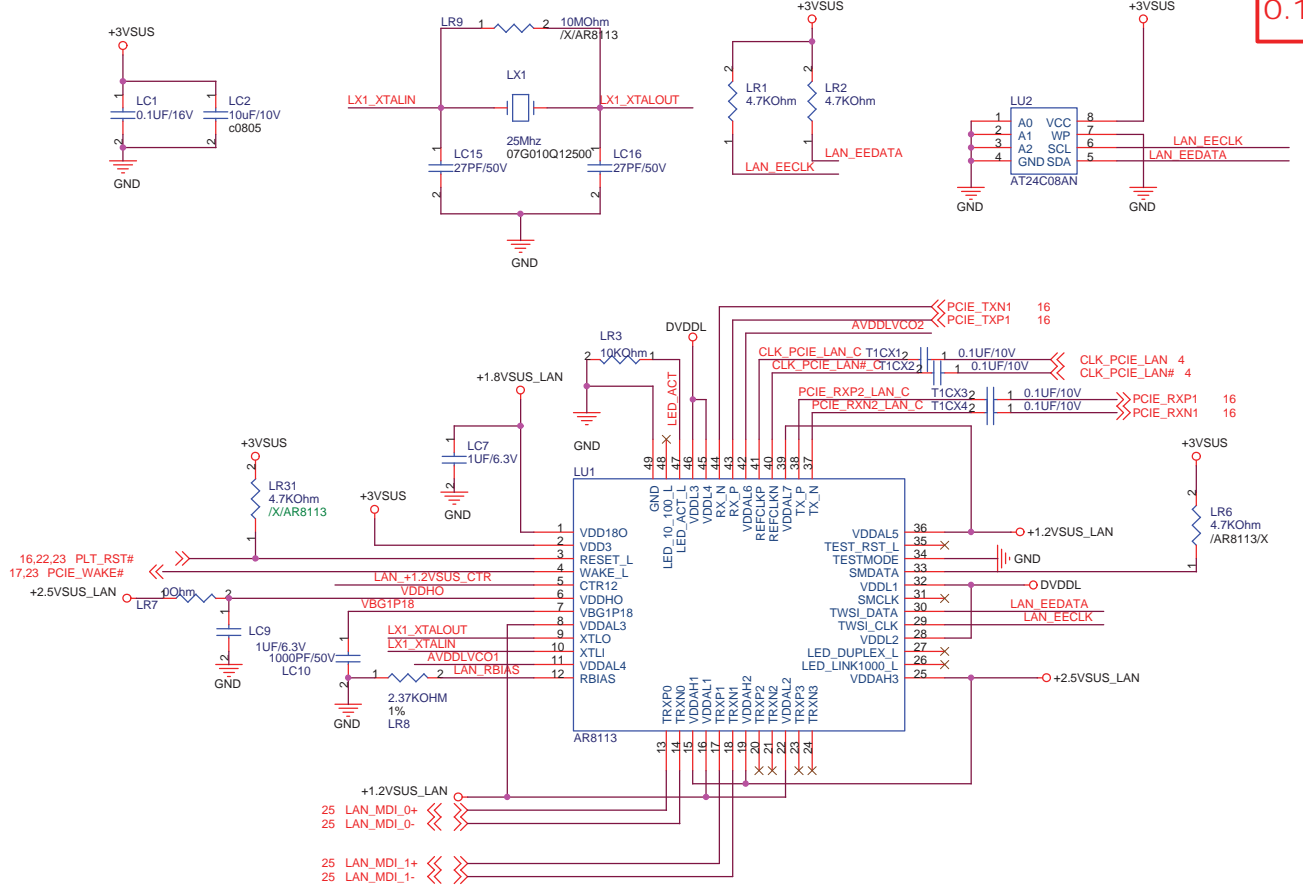
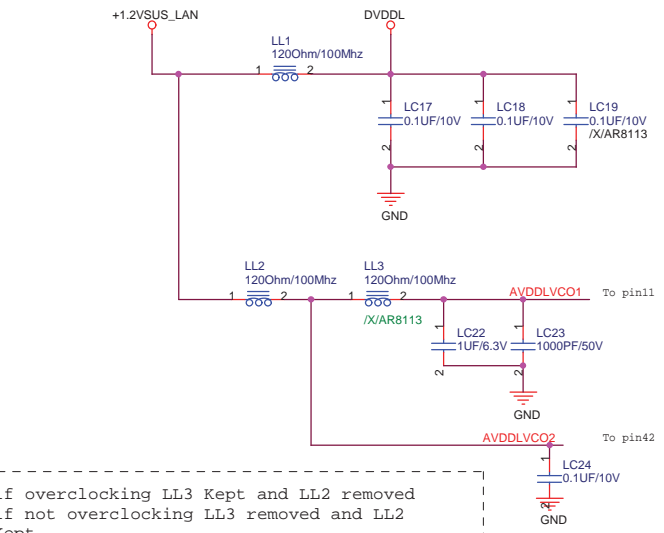
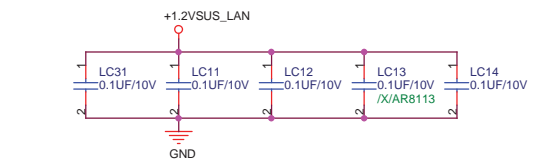
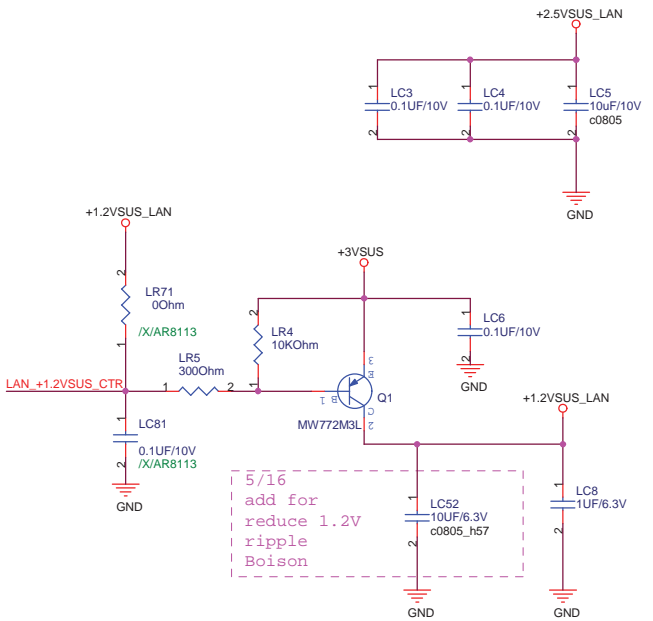
BlueTooth



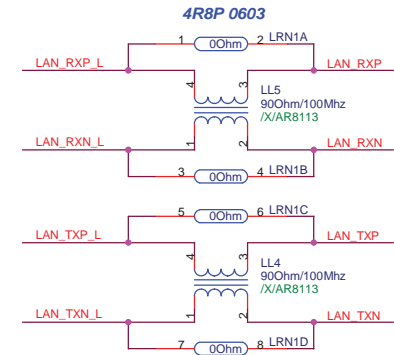
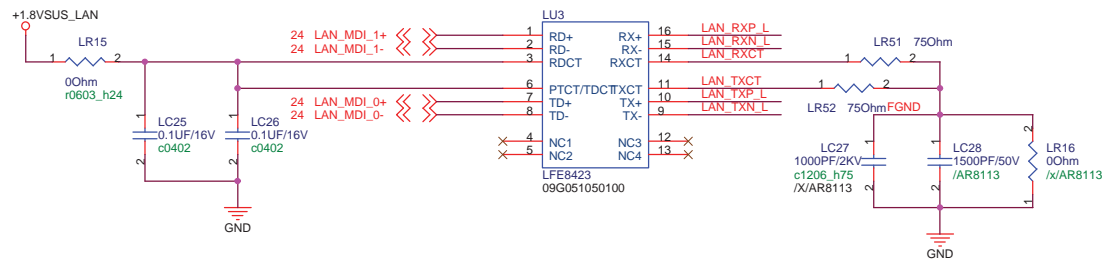
<Variant Name>

Title : Minicard
ASUSTek Computer INC. Engineer: Tiansen_Wu

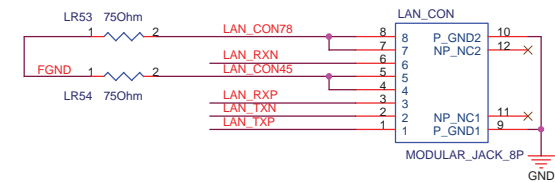
Size A3	Project Name P901	Rev 1.1G
Date: Monday, August 11, 2008	Sheet 23 of 50	

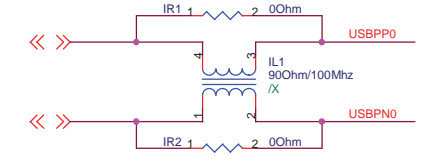
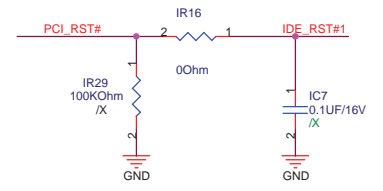
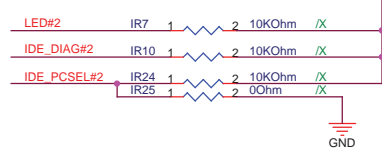
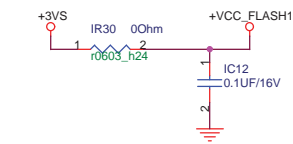
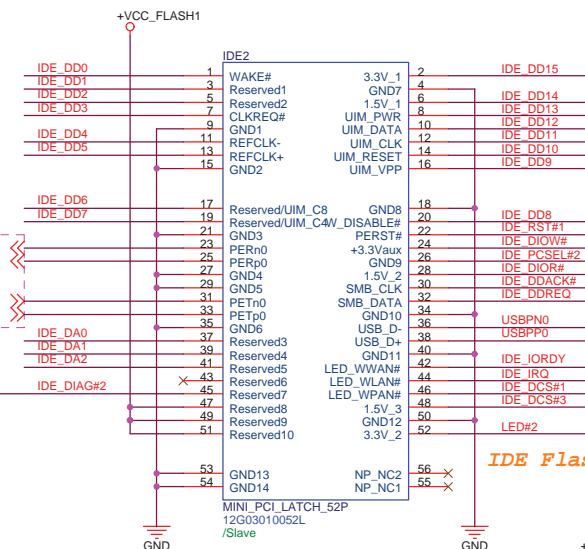
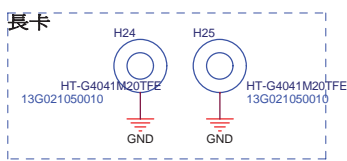
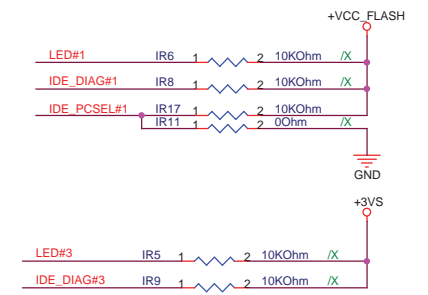
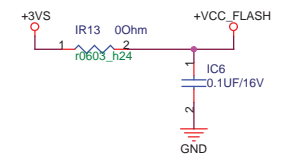
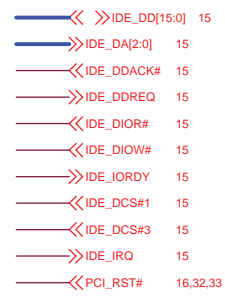
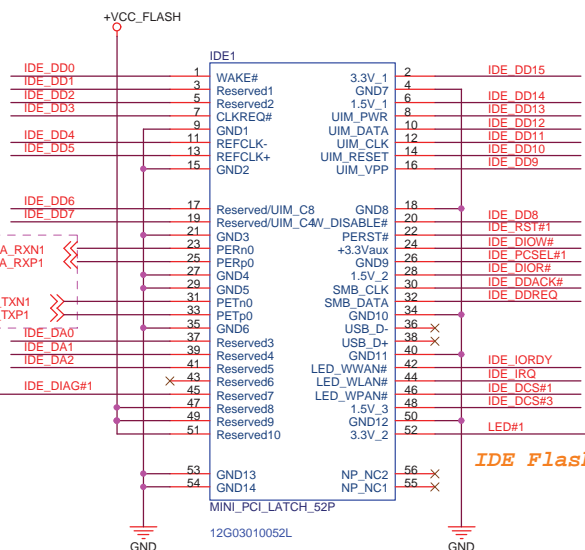
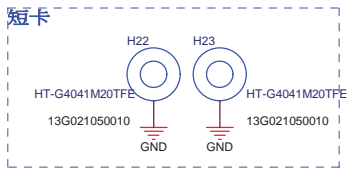


ASUS		Title : AR8113	
ASUSTek Computer INC		Engineer: Jenen_wang	
Size	Project Name	Rev	
A3	P901	1.1G	
Date: Monday, August 11, 2008		Sheet	24 of 50

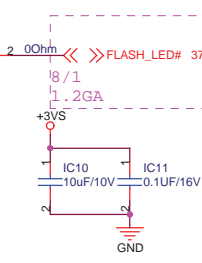
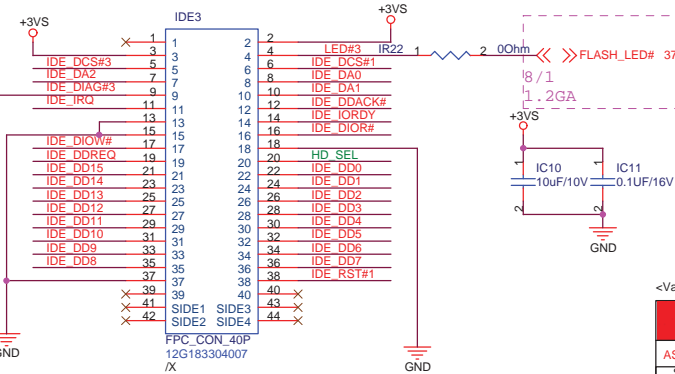
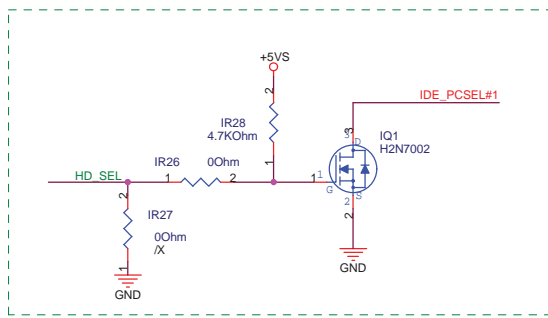


LAN connector: 12G148301086

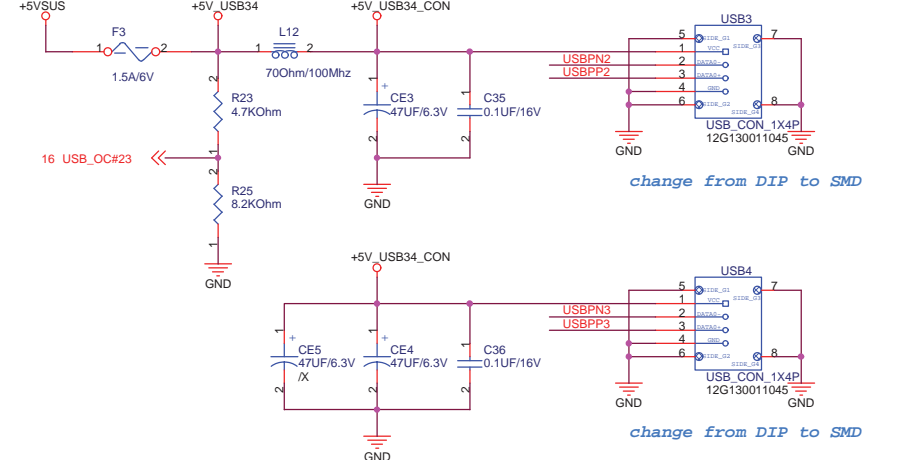
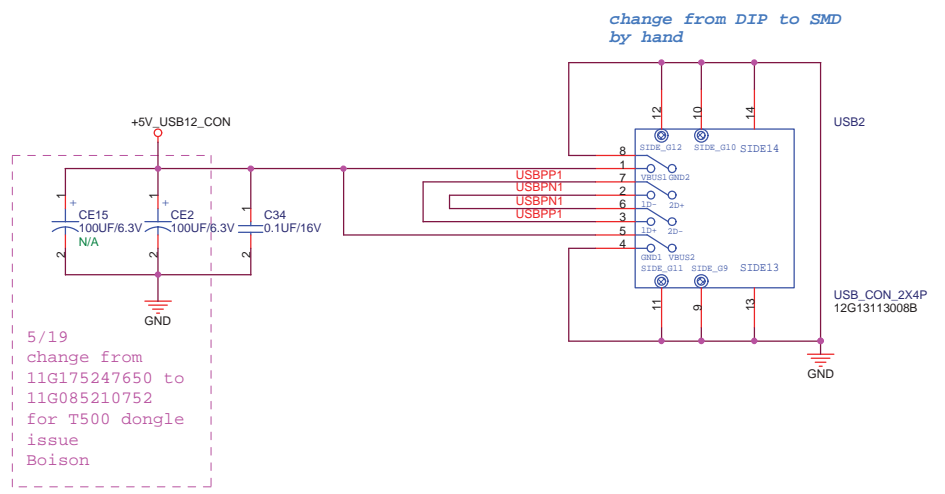
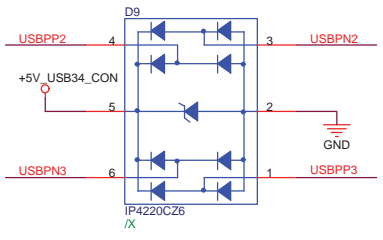
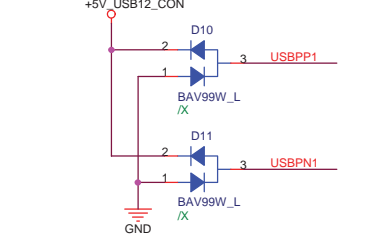
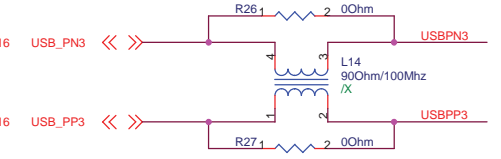
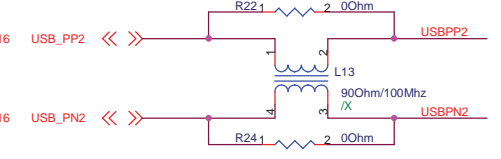
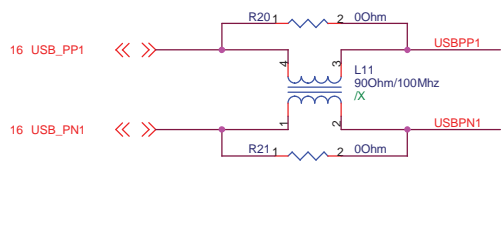




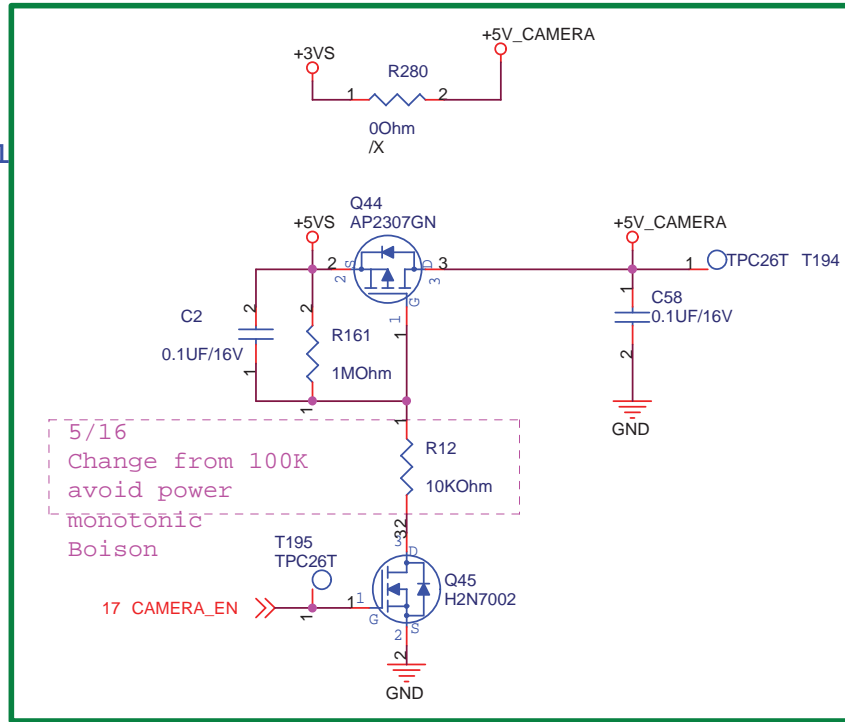
HD Master/Slave:
Master:Low
Slave :NC or High
Default :High



Naming Rule:
IC: IU?
R: IR?
C: IC?
L: IL?

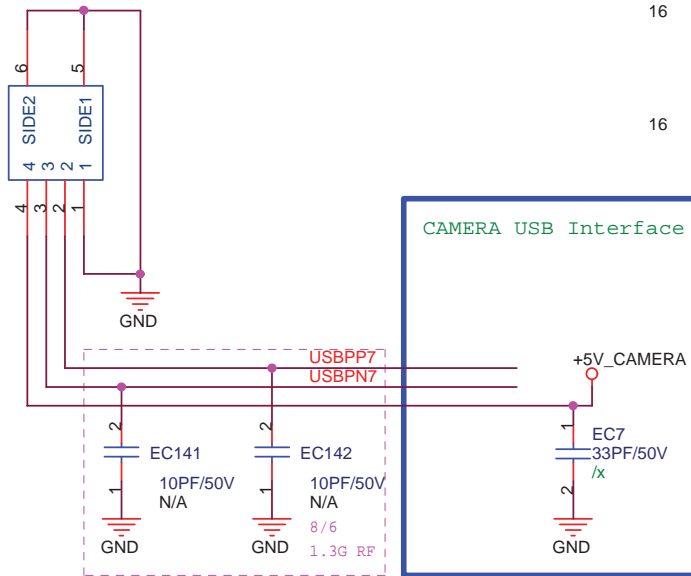


Power Control

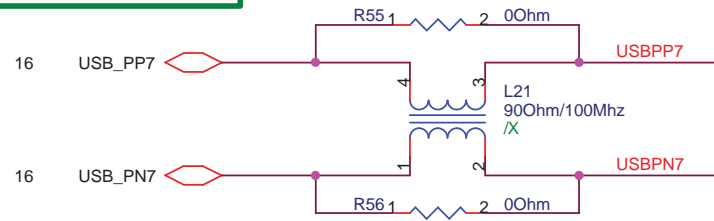


5/16
Change from 100K
avoid power
monotonic
Boison

CAMERA
WtoB_CON_4P



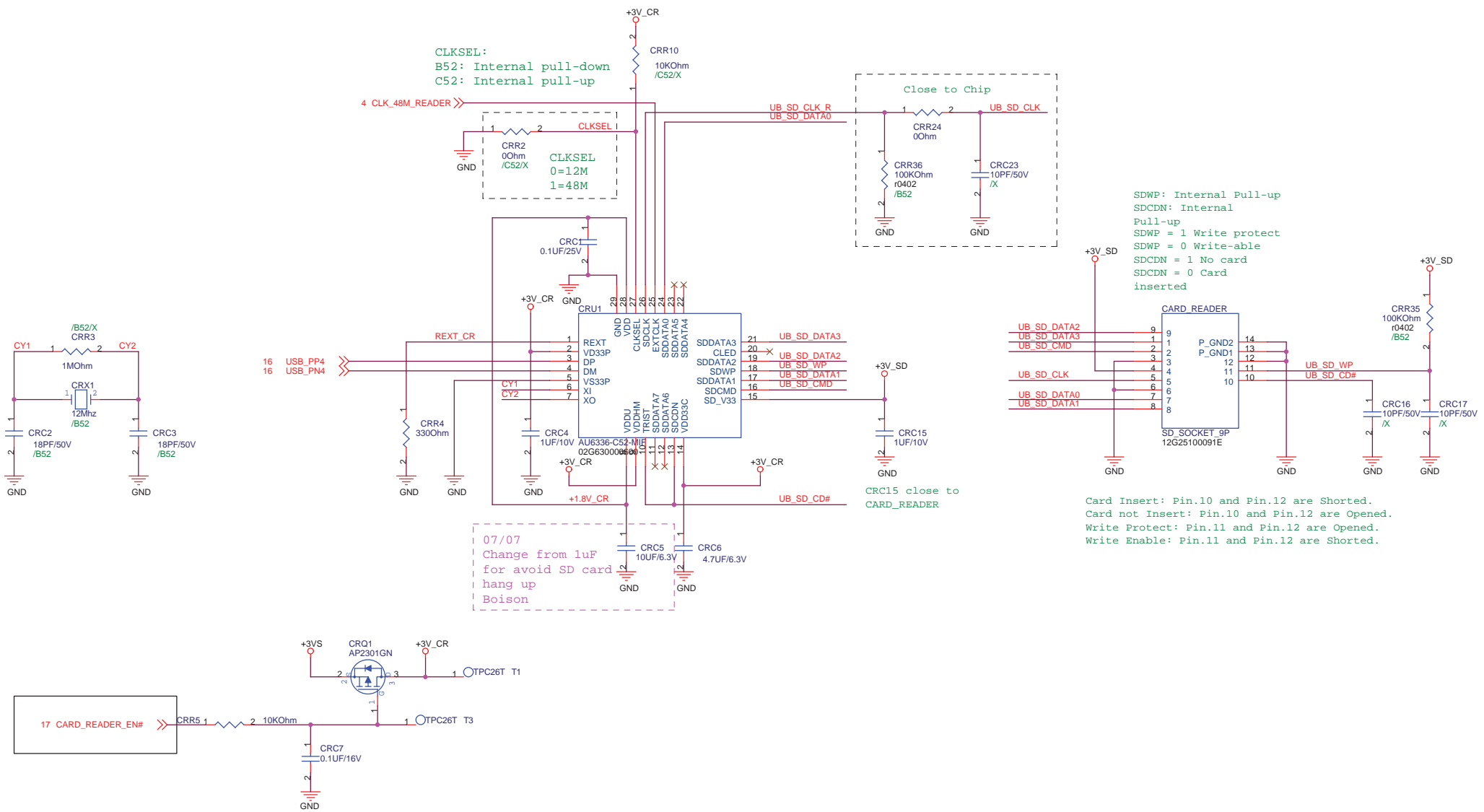
CAMERA USB Interface

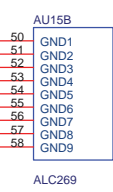
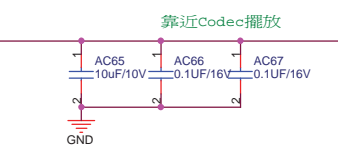
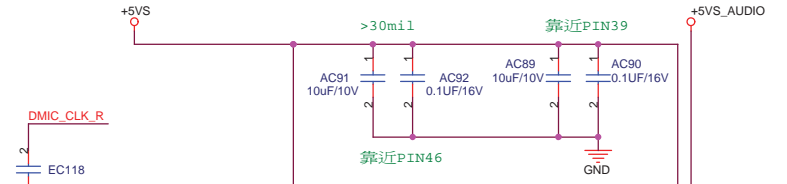
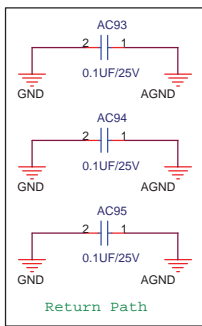


<http://hobi-elektronika.net>

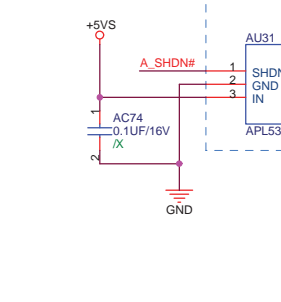
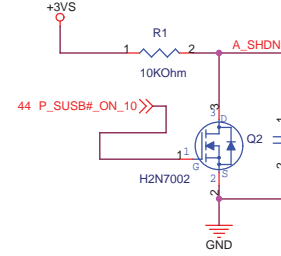
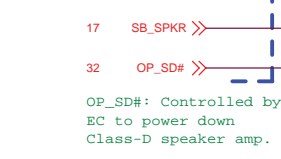
<Variant Name>

ASUS		Title : Camera Power	
ASUSTek Computer INC.		Engineer: Kell_Huang	
Size A4	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008		Sheet 28 of 47	

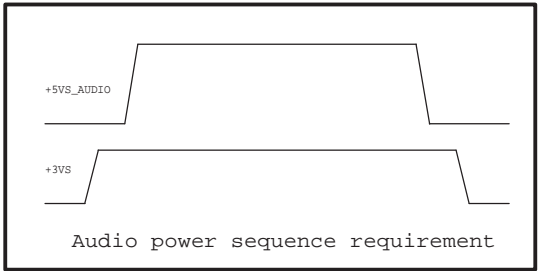
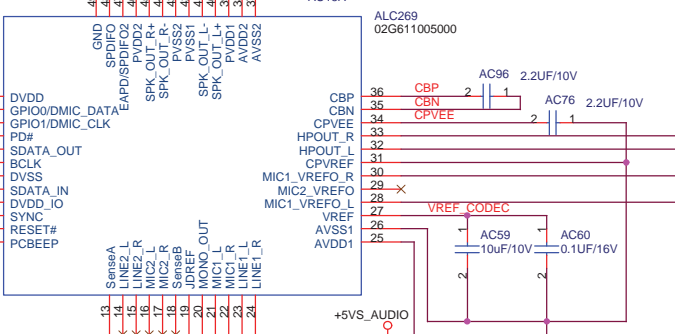
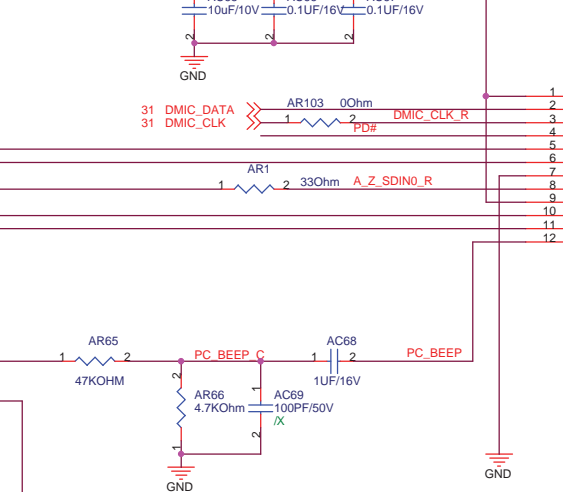




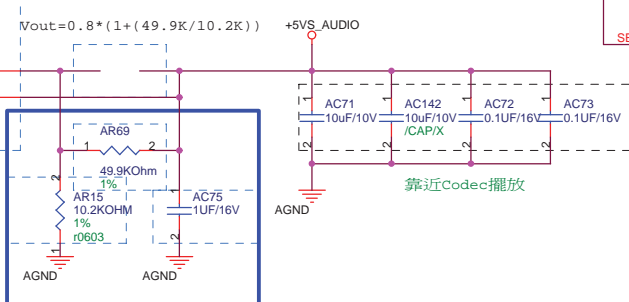
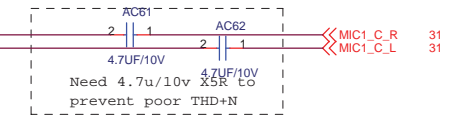
- Change Note
1. Remove AR34, AR63 for cost down
 2. Add +5VS_AUDIO shut_down control
 3. Remove net name +3VS_AUDIO
 4. Add diagram for power sequence requirement



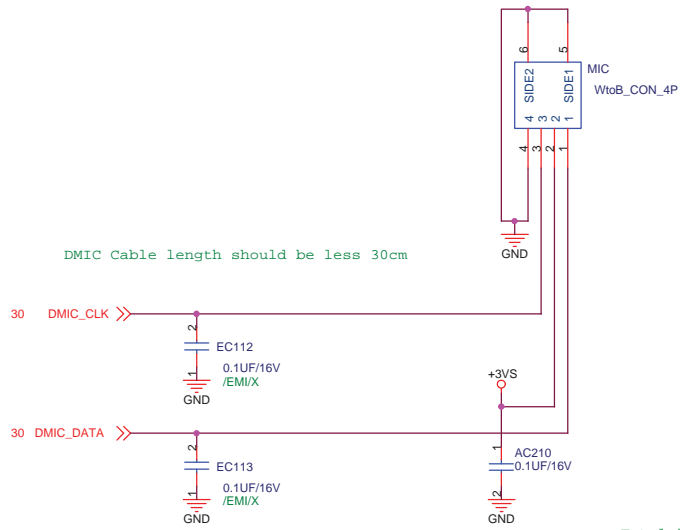
For Audio Noise Issue



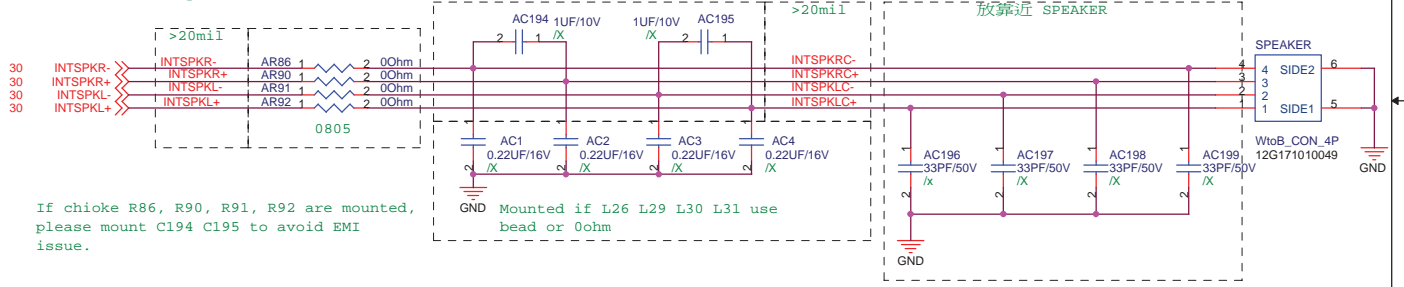
Analog: Pin.13~Pin.38
Digital: Pin.1~Pin.12
and Pin.39~Pin.48



ASUS		Title : ALC269-1	
ASUSTek Computer Inc.		Engineer: Mick	
Size A3	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008	Sheet 30	of 50	

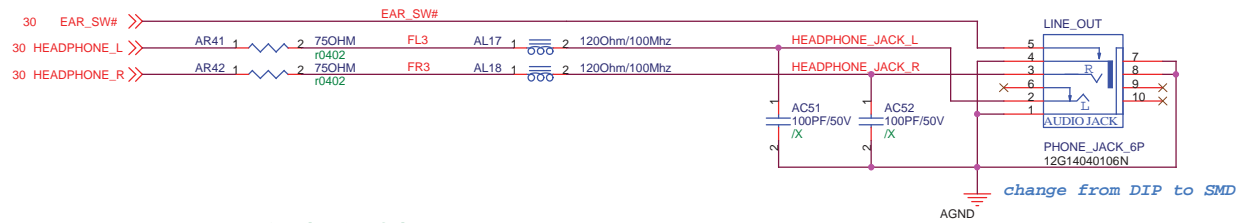


Total length from speakerR+- L+- (pin40 41 44 45) to internal speaker please as short as possible (<20cm is better)



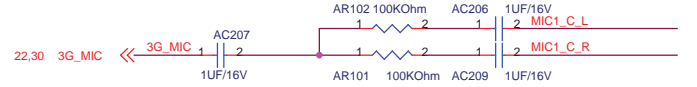
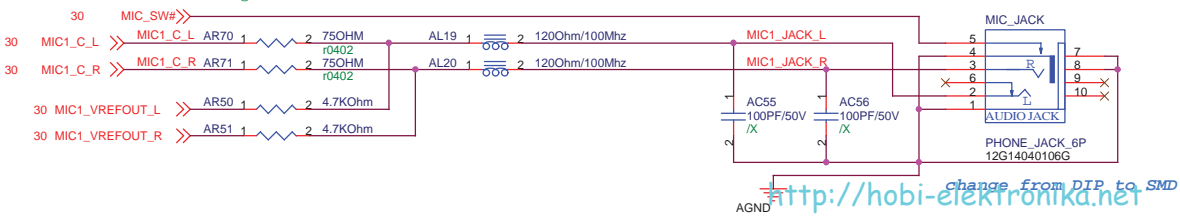
If choke R86, R90, R91, R92 are mounted, please mount C194 C195 to avoid EMI issue.

LINE_OUT use 12G14040106N

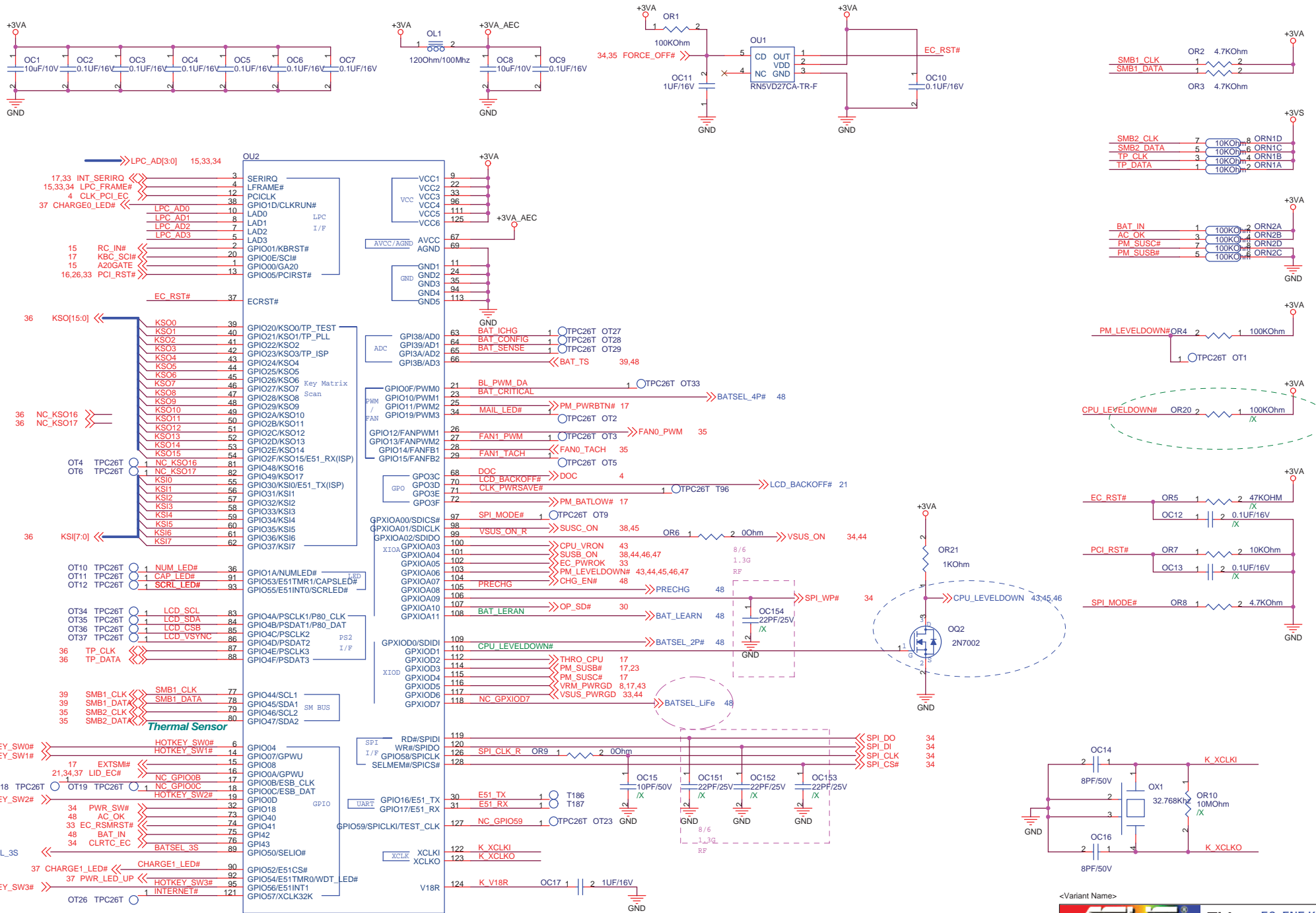


R70 and R71: If don't need retasking function, change to 1K.

MIC_JACK use 12G14040106G



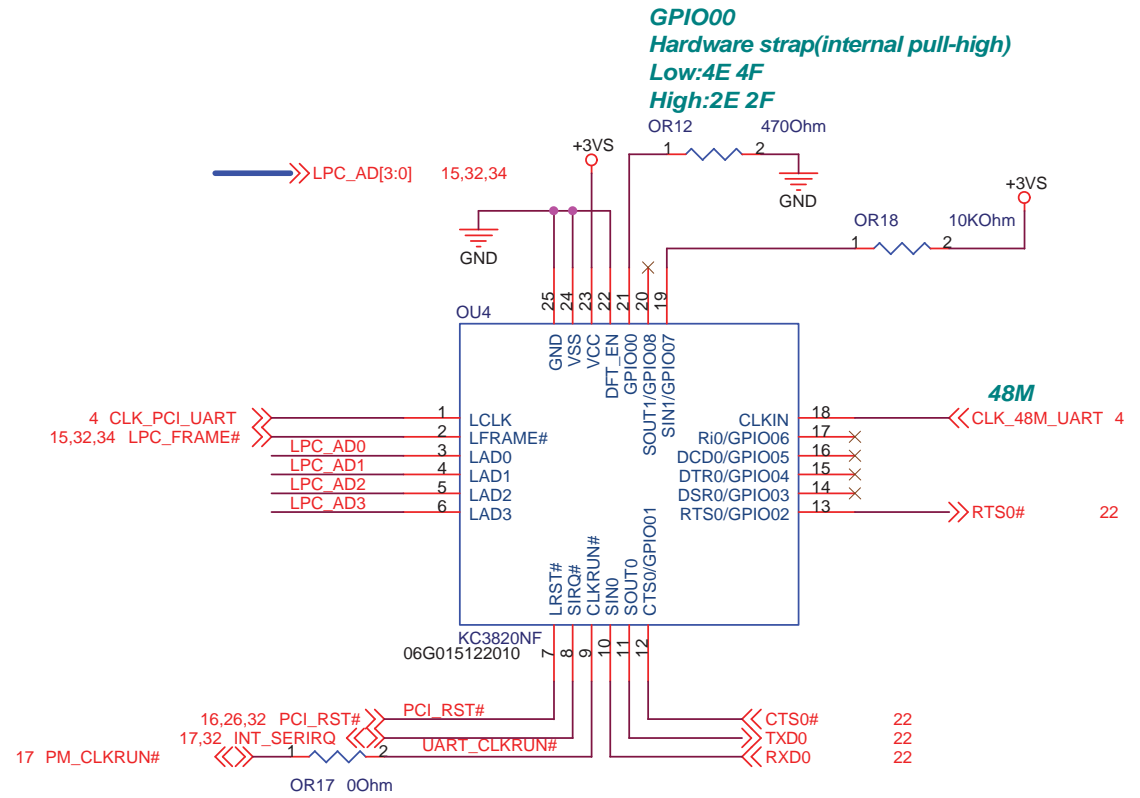
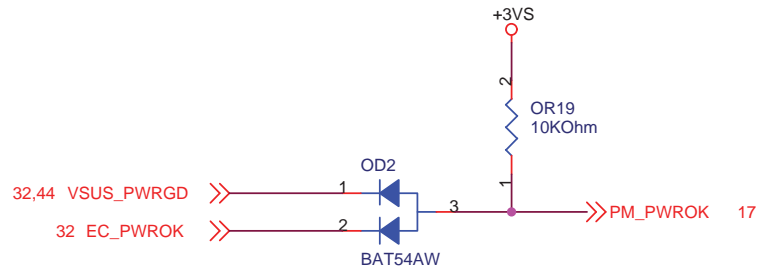
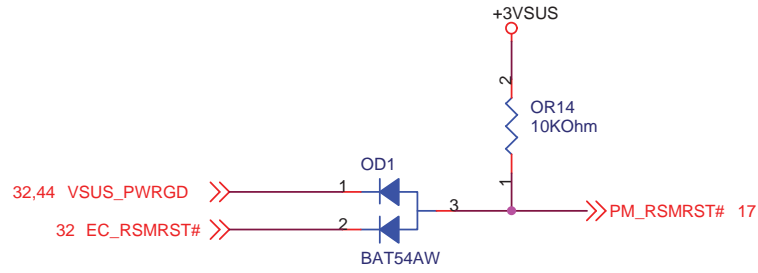
ASUS		Title : ALC269-2	
ASUSTek Computer Inc.		Engineer: MICK	
Size A3	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008	Sheet	31	of 50



<Variant Name>

ASUS		Title : EC_ENE KB3310	
ASUSTek Computer INC.		Engineer: Keil_Huang	
Size A3	Project Name P901	Rev 1.1G	
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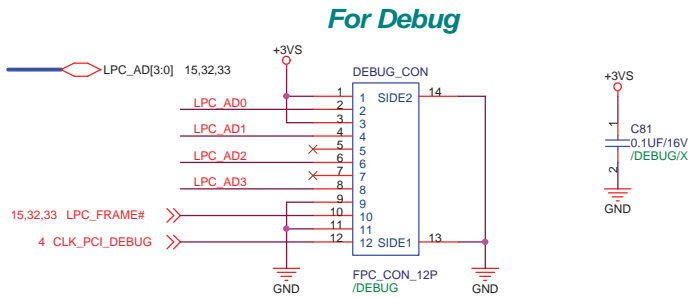
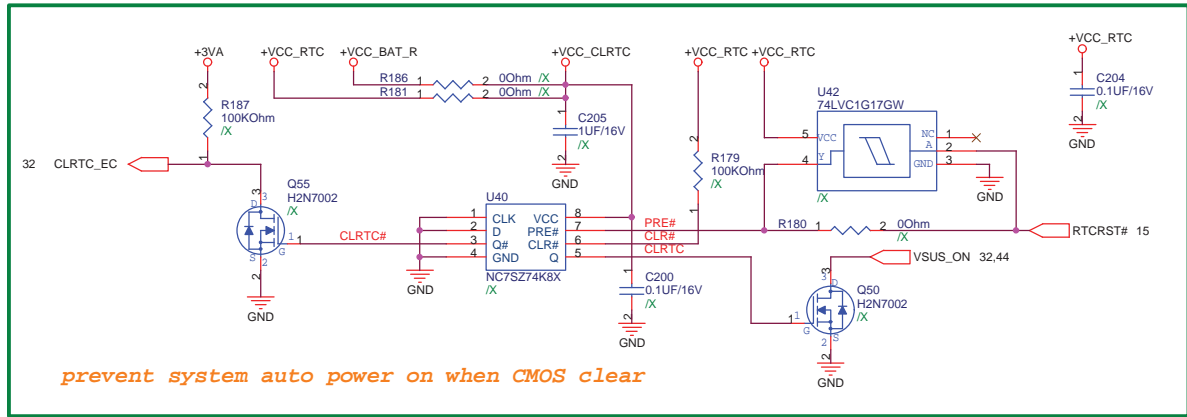
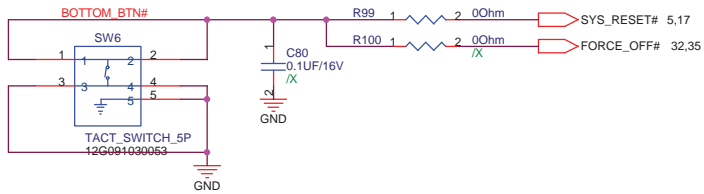
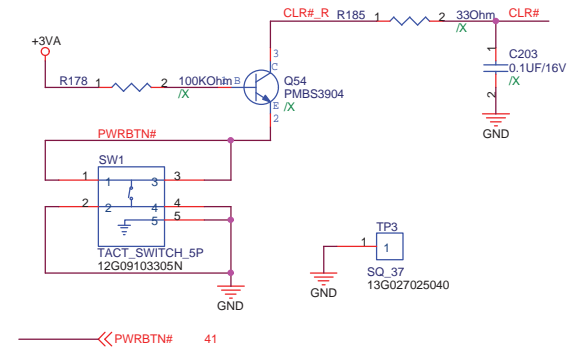
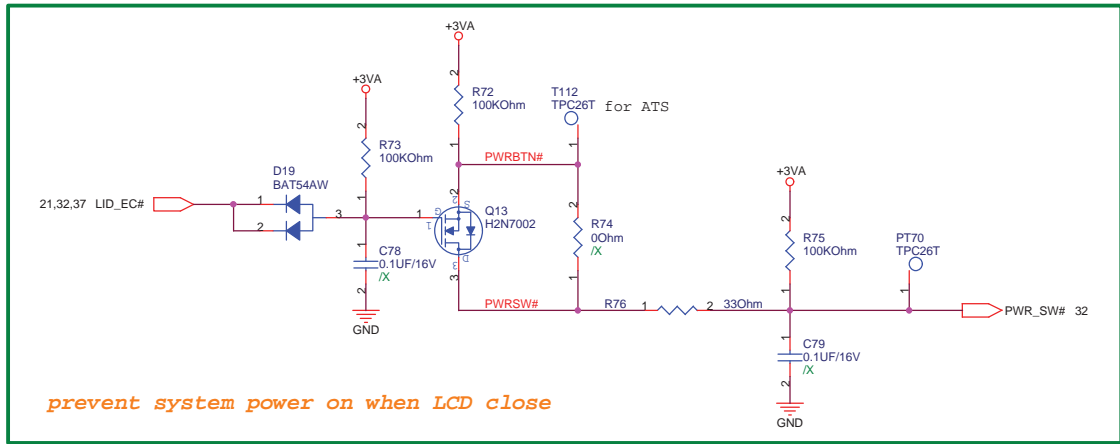
R1.2G to resolve auto-boot issue



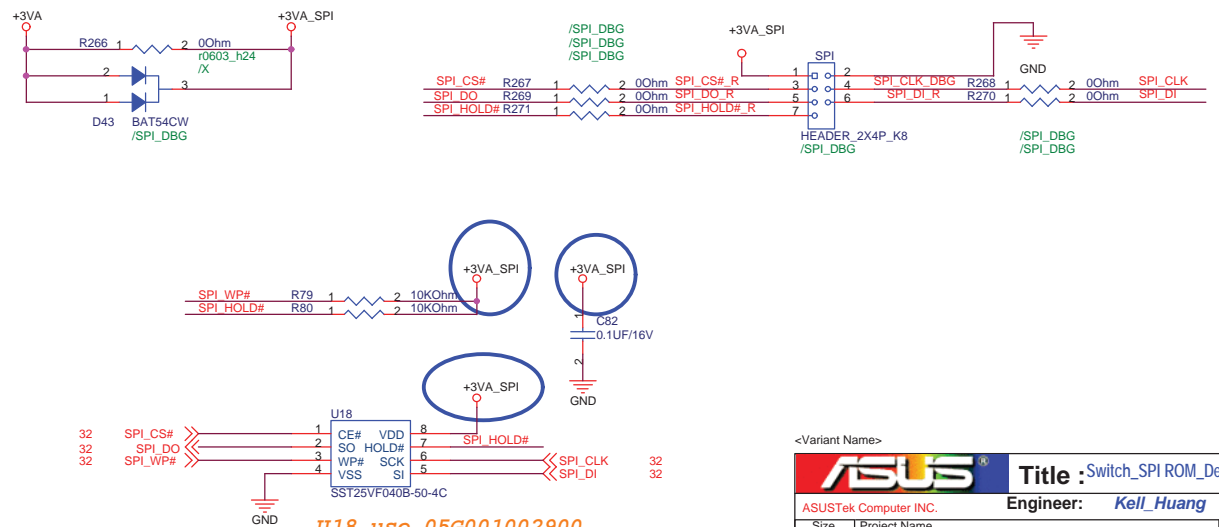
UART Control
IC for using
GPS module due
to no UART on
ENE EC

<Variant Name>

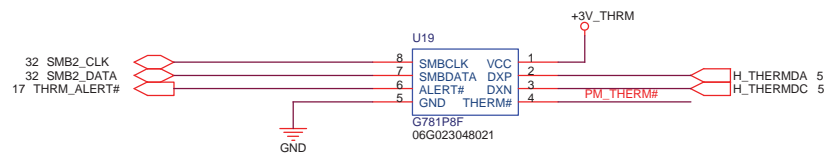
ASUS		Title : EC_UART_KC3820	
ASUSTek Computer INC.		Engineer: Kell Huang	
Size A4	Project Name P901	Rev 1.1G	
Date: Monday, August 11, 2008		Sheet 33 of 50	



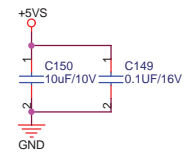
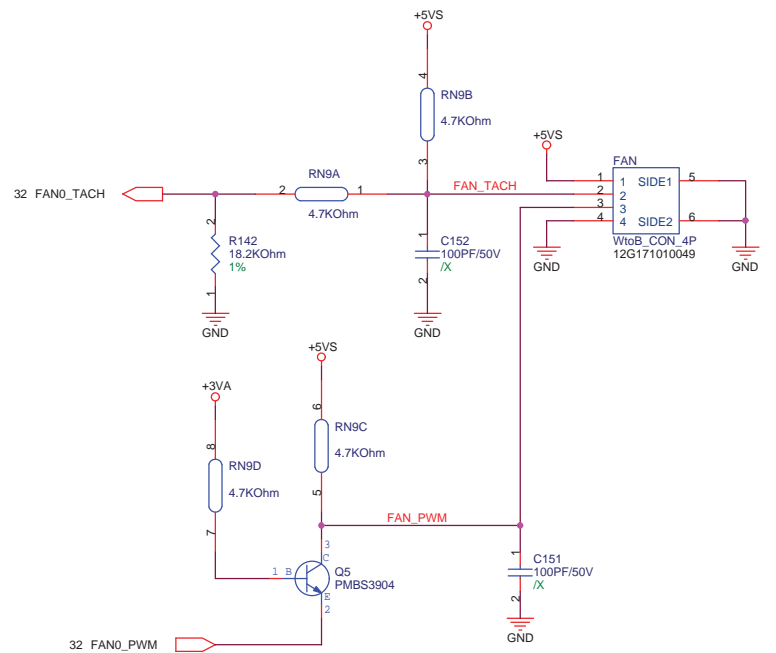
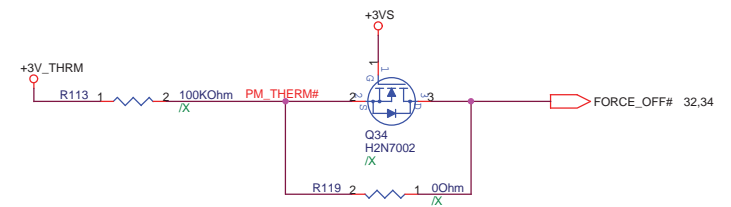
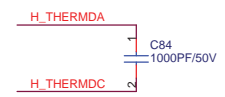
Debug Card cable use Z96 Touch Pad cable, P/N:
 14G124110126, 14G124110120, 14G124110121
 14G124110124, 14G124110125



ASUS		Title : Switch_SPI ROM_Debug	
ASUSTek Computer INC.		Engineer: Kel_Huang	
Size	Project Name		Rev
A3	P901		1.1G
Date: Monday, August 11, 2008	Sheet	34 of 47	



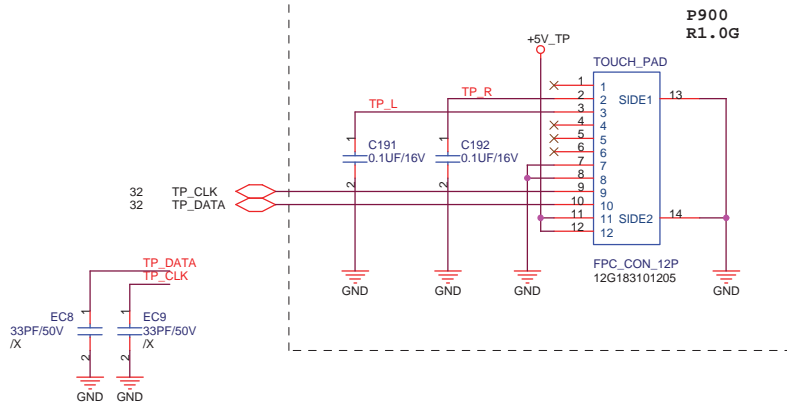
U19 use 06G023048021



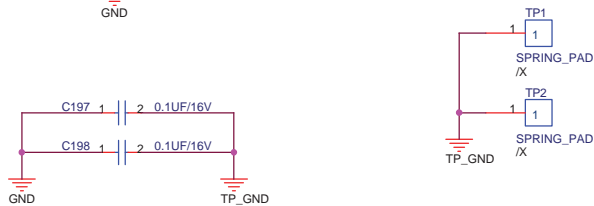
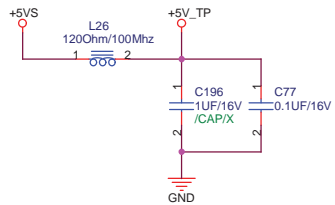
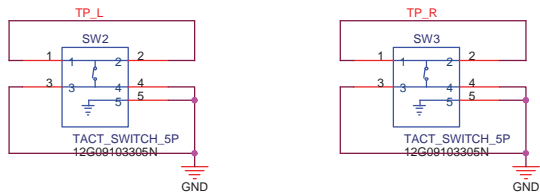
<http://hobi-elektronika.net>

ASUS		Title : Thermal Sensor_FAN	
ASUSTek Computer INC.		Engineer: Keli_Huang	
Size	Project Name		Rev
A3	P901		1.1G
Date: Monday, August 11, 2008	Sheet	35 of 47	

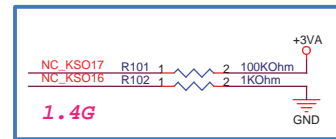
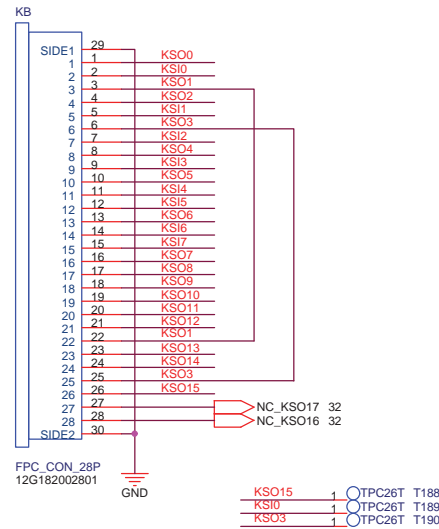
For Touch-Pad



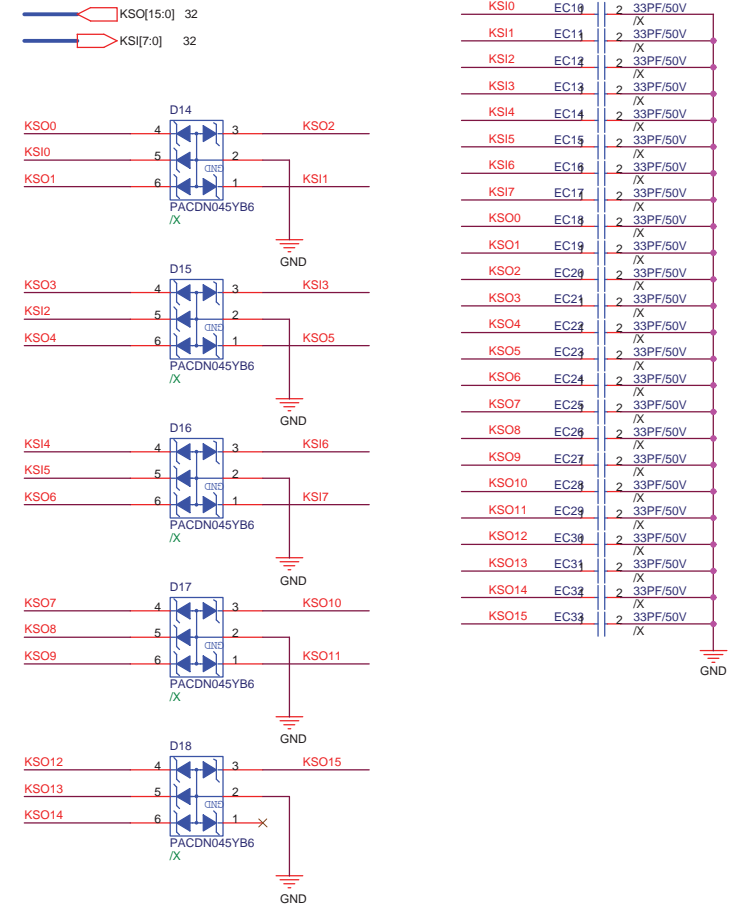
SW2, SW3 use 12G09103305N



For Keyboard Connector



1.4G

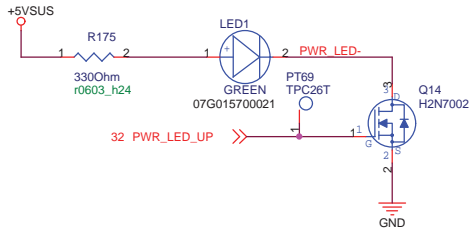


KSI0	EC19	2	33PF/50V
KSI1	EC11	2	33PF/50V
KSI2	EC12	2	33PF/50V
KSI3	EC13	2	33PF/50V
KSI4	EC14	2	33PF/50V
KSI5	EC15	2	33PF/50V
KSI6	EC16	2	33PF/50V
KSI7	EC17	2	33PF/50V
KSO0	EC18	2	33PF/50V
KSO1	EC19	2	33PF/50V
KSO2	EC20	2	33PF/50V
KSO3	EC21	2	33PF/50V
KSO4	EC22	2	33PF/50V
KSO5	EC23	2	33PF/50V
KSO6	EC24	2	33PF/50V
KSO7	EC25	2	33PF/50V
KSO8	EC26	2	33PF/50V
KSO9	EC27	2	33PF/50V
KSO10	EC28	2	33PF/50V
KSO11	EC29	2	33PF/50V
KSO12	EC30	2	33PF/50V
KSO13	EC31	2	33PF/50V
KSO14	EC32	2	33PF/50V
KSO15	EC33	2	33PF/50V

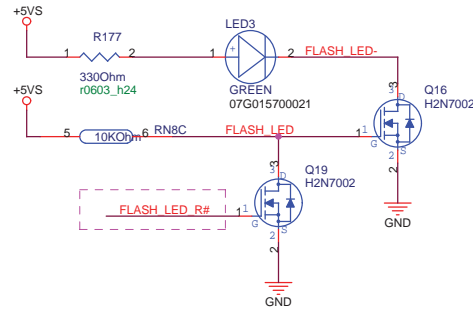
<Variant Name>

ASUS		Title : KB_Touch Pad	
ASUSTek Computer INC.		Engineer: Kell_Huang	
Size	A3	Project Name	P901
Date:	Monday, August 11, 2008	Sheet	36 of 47
Rev	1.1G		

for POWER LED

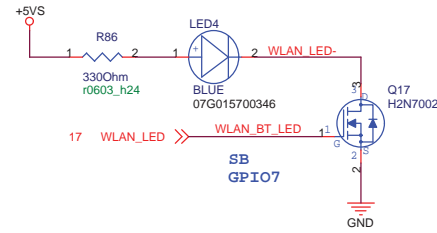


for FLASH LED

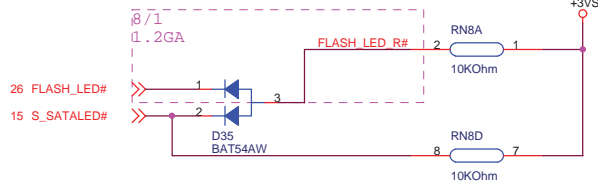
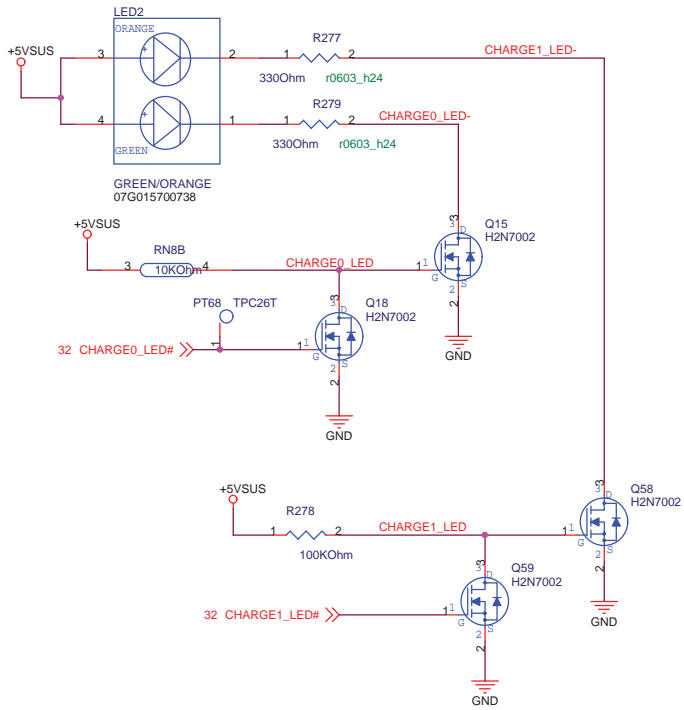


for WLAN/BlueTooth LED

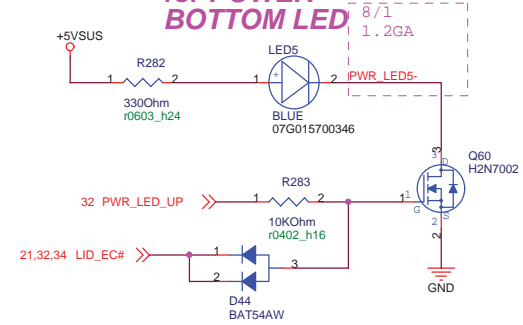
R86 use 4.7K OHm 10G213472003030



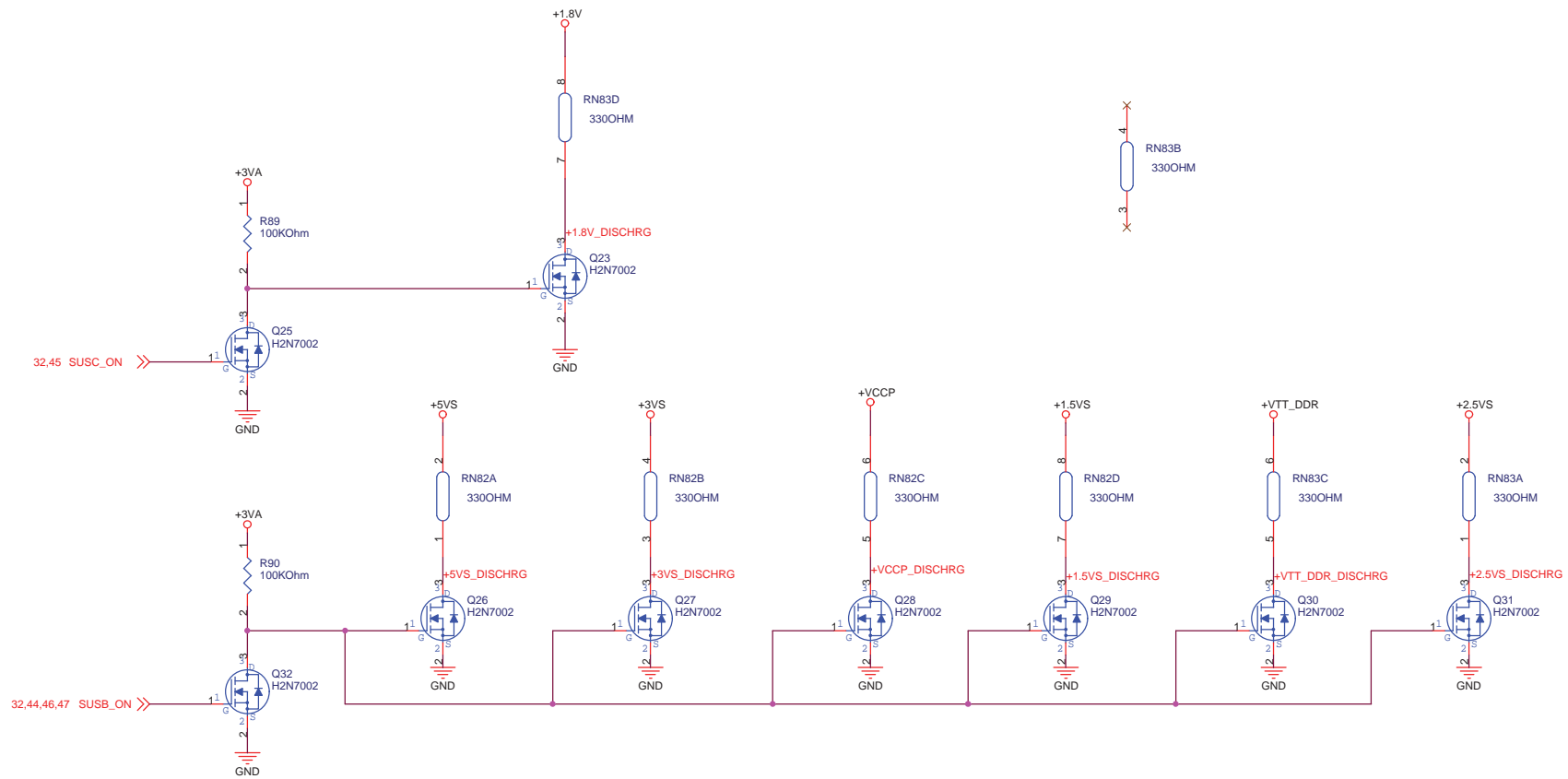
for CHARGE LED



for POWER BOTTOM LED



<Variant Name>		ASUS Title : LED	
ASUSTek Computer INC.		Engineer: Kell_Huang	
Size A3	Project Name P901	Date: Monday, August 11, 2008	Rev 1.1G
		Sheet	37 of 47

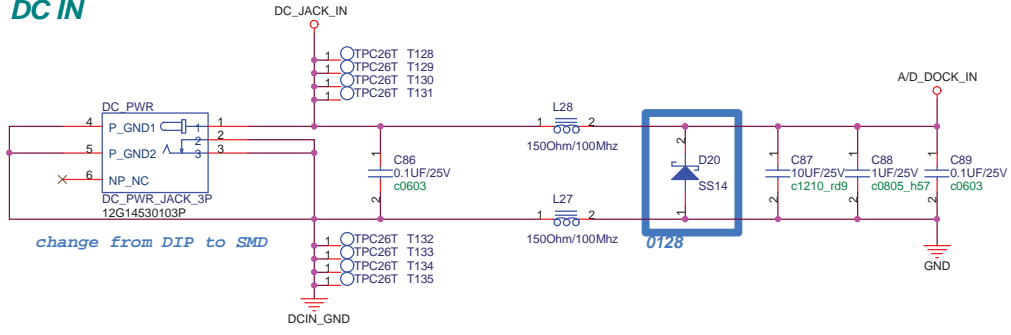


<http://hobi-elektronika.net>

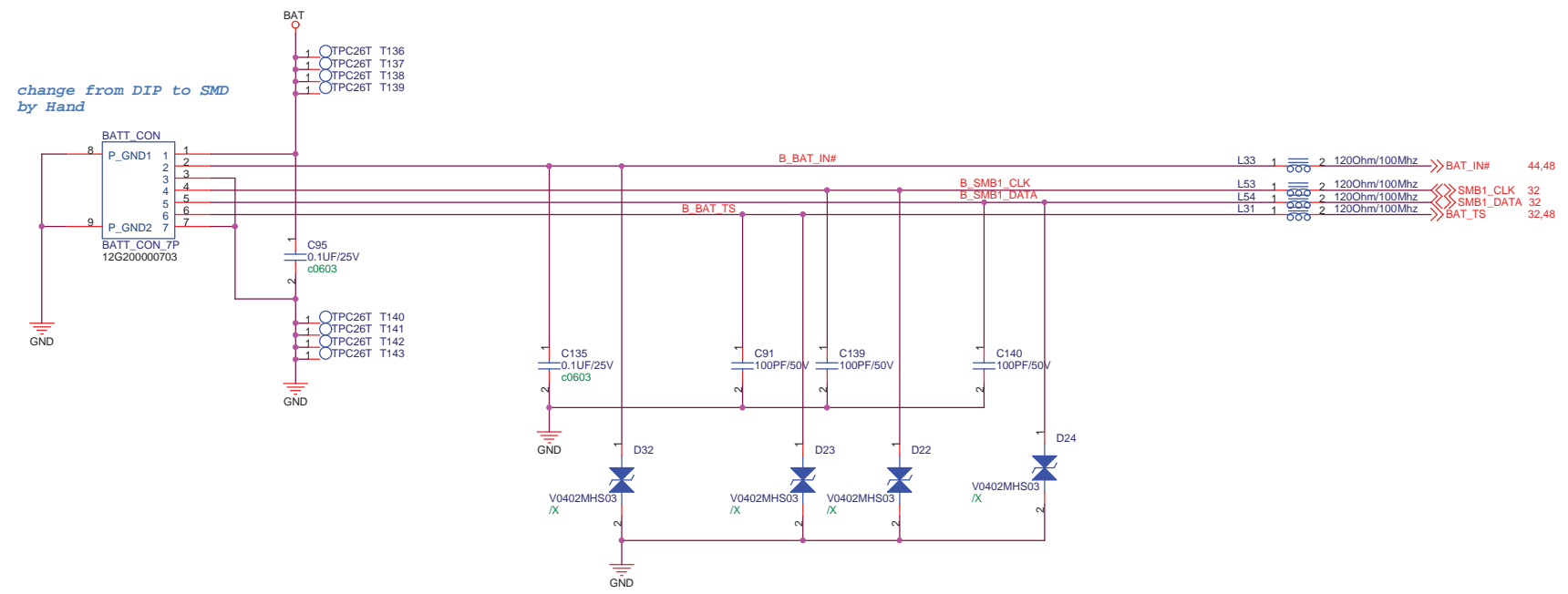
<Variant Name>

ASUS		Title : Discharge	
ASUSTek Computer INC.		Engineer: <i>Kell_Huang</i>	
Size	Project Name	Date	Rev
A3	P901	Monday, August 11, 2008	1.1G
Date: Monday, August 11, 2008		Sheet	38 of 47

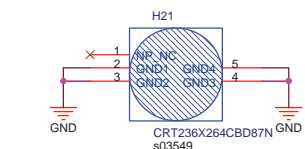
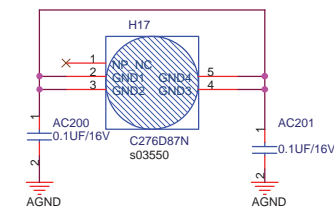
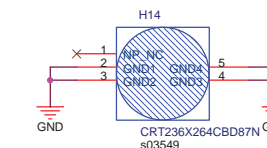
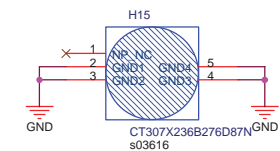
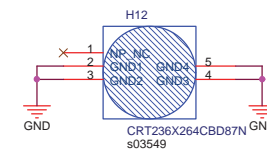
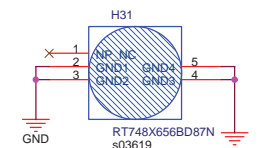
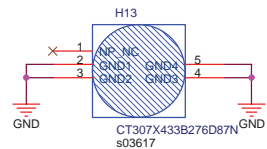
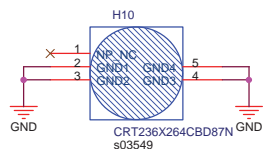
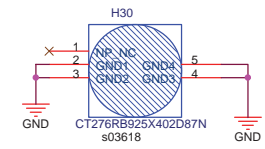
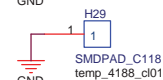
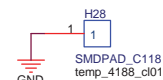
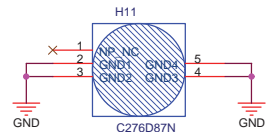
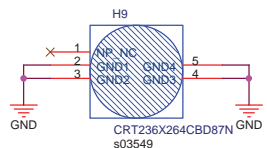
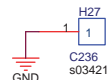
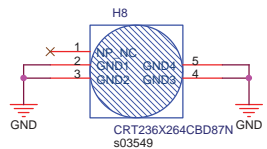
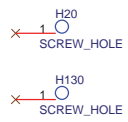
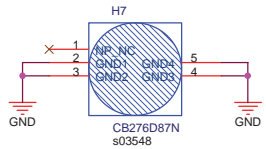
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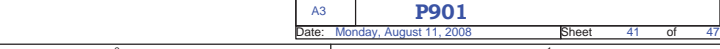
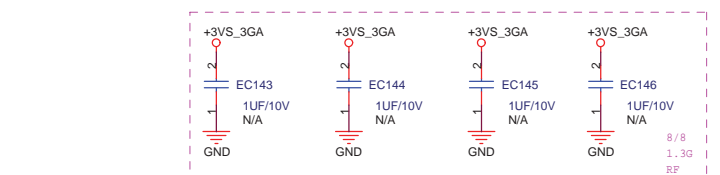
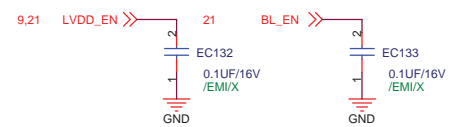
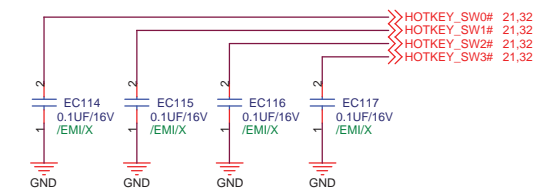
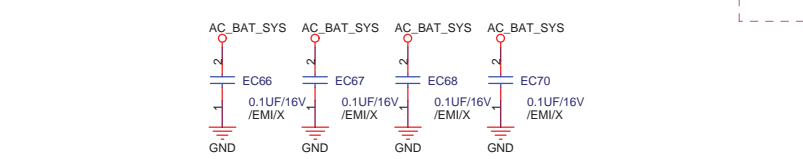
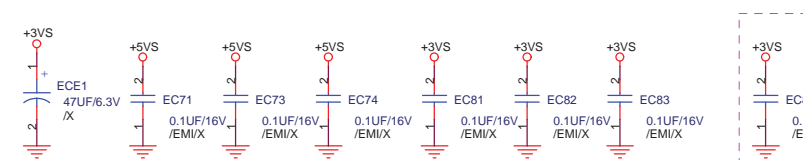
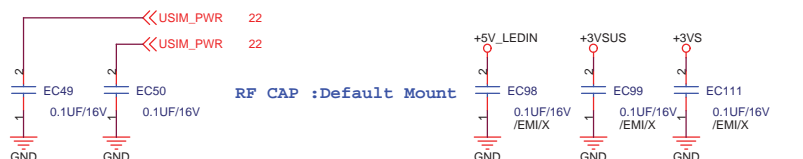
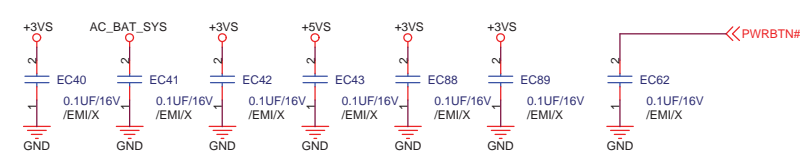
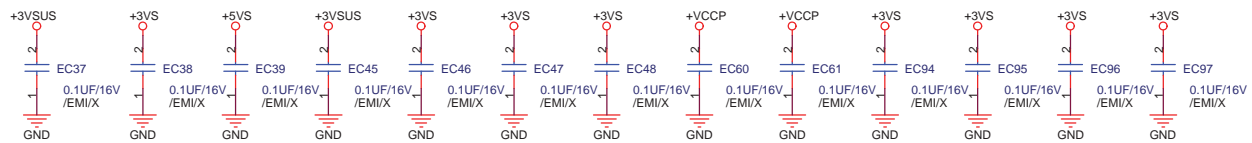
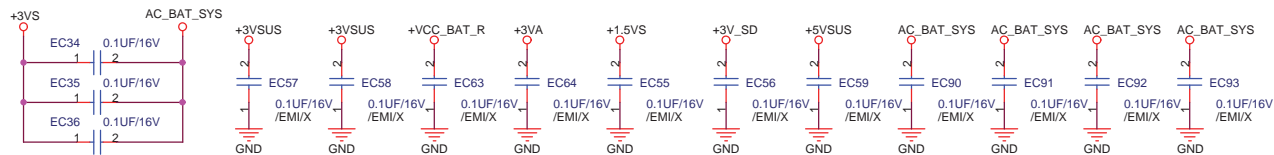
BAT IN



ASUS		Title : PWR Jack	
ASUSTek Computer INC.		Engineer: Keli_Huang	
Size	Project Name	Rev	
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Date: Monday, August 11, 2008	Sheet	39 of 47	

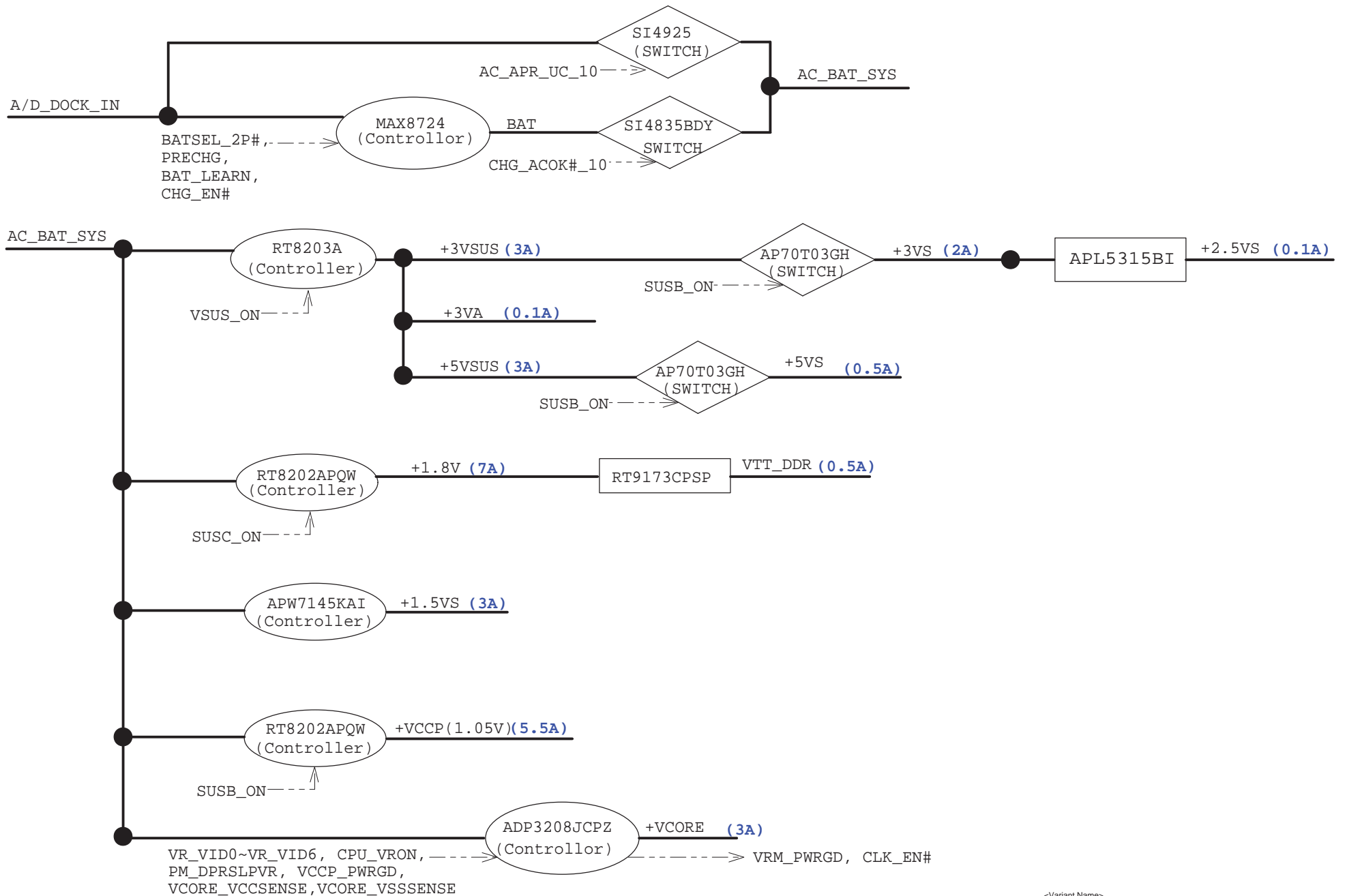


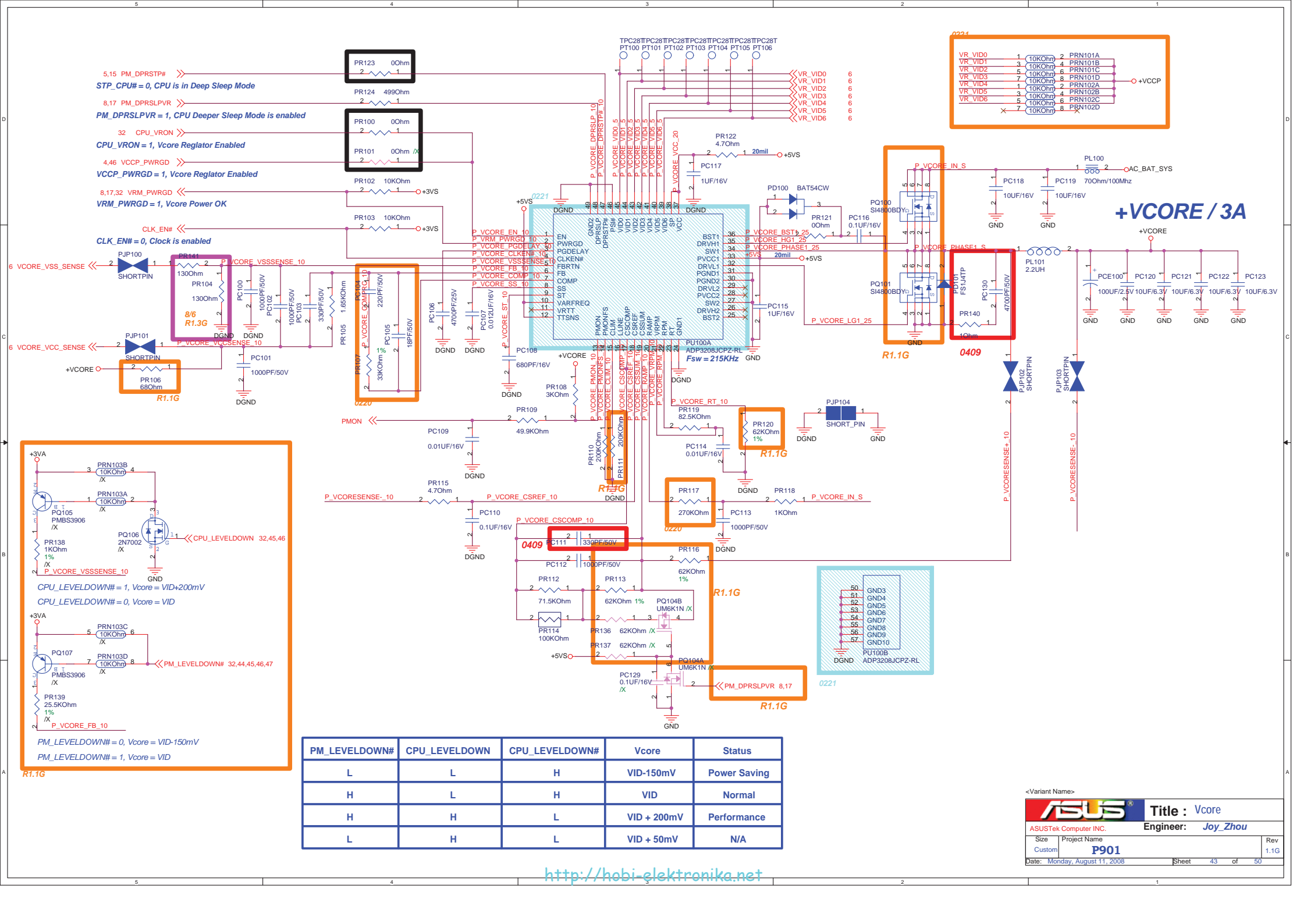
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ASUSTek Computer INC.		Engineer: Kell_Huang			
Size	Project Name			Rev	
A3	P901			1.1G	
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ASUS		Title : EMI	
ASUSTek Computer INC.		Engineer: Kell Huang	
Size	Project Name		Rev
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5.15 PM_DPRSTP# >>>
STP_CPU# = 0, CPU is in Deep Sleep Mode

8.17 PM_DPRSLPVR >>>
PM_DPRSLPVR = 1, CPU Deeper Sleep Mode is enabled

32 CPU_VRON >>>
CPU_VRON = 1, Vcore Reglator Enabled

4.46 VCCP_PWRGD >>>
VCCP_PWRGD = 1, Vcore Reglator Enabled

8.17.32 VRM_PWRGD >>>
VRM_PWRGD = 1, Vcore Power OK

CLK_EN# >>>
CLK_EN# = 0, Clock is enabled

6 Vcore_VSS_SENSE <<< 2
8/6 R1.1G

6 Vcore_VCC_SENSE <<< 2
R1.1G

+3VA

PRN103B 10kOhm /X
 PRN103A 10kOhm /X
 PQ105 PMBS3906 /X
 PR138 1kOhm 1%
 PQ106 2N7002 /X
 CPU_LEVELDOWN 32,45,46

P_VCORE_VSSSENSE_10

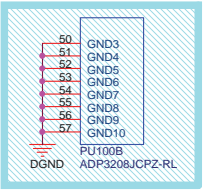
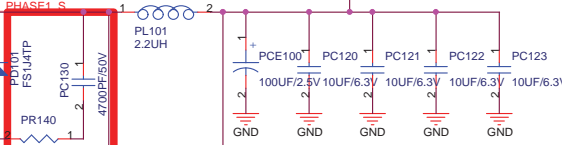
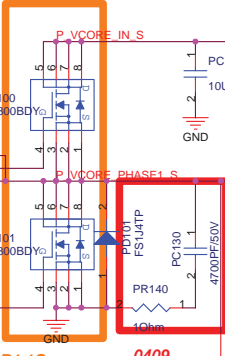
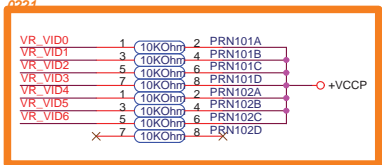
CPU_LEVELDOWN# = 1, Vcore = VID+200mV
 CPU_LEVELDOWN# = 0, Vcore = VID

+3VA

PRN103C 10kOhm /X
 PRN103D 10kOhm /X
 PQ107 PMBS3906 /X
 PR139 25.5kOhm 1%
 P_VCORE_FB_10

PM_LEVELDOWN# = 0, Vcore = VID-150mV
 PM_LEVELDOWN# = 1, Vcore = VID

PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Vcore	Status
L	L	H	VID-150mV	Power Saving
H	L	H	VID	Normal
H	H	L	VID + 200mV	Performance
L	H	L	VID + 50mV	N/A

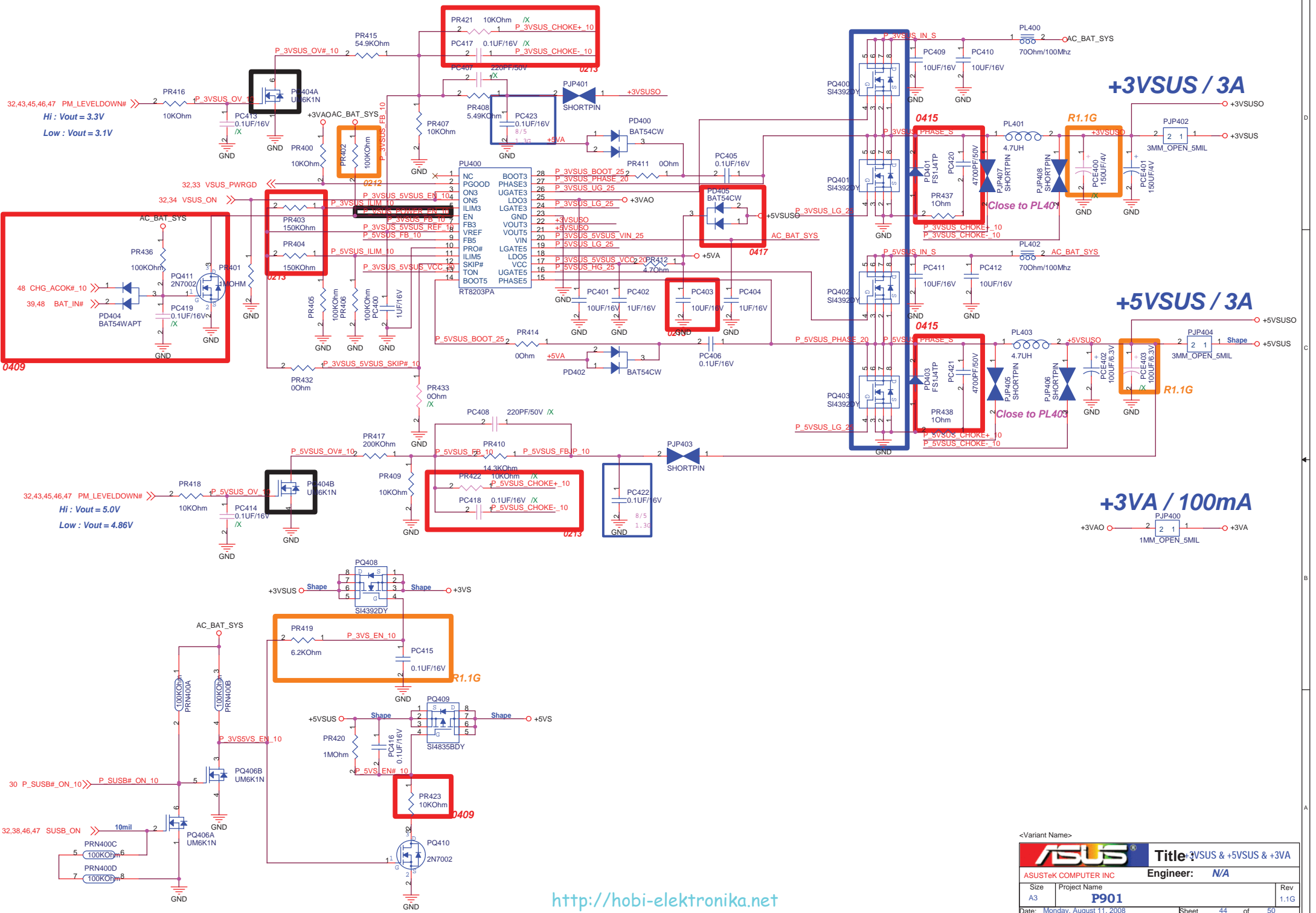


-Variant Names-

ASUS Title : Vcore
 ASUSTek Computer INC. Engineer: Joy_Zhou

Size Project Name
 Custom P901

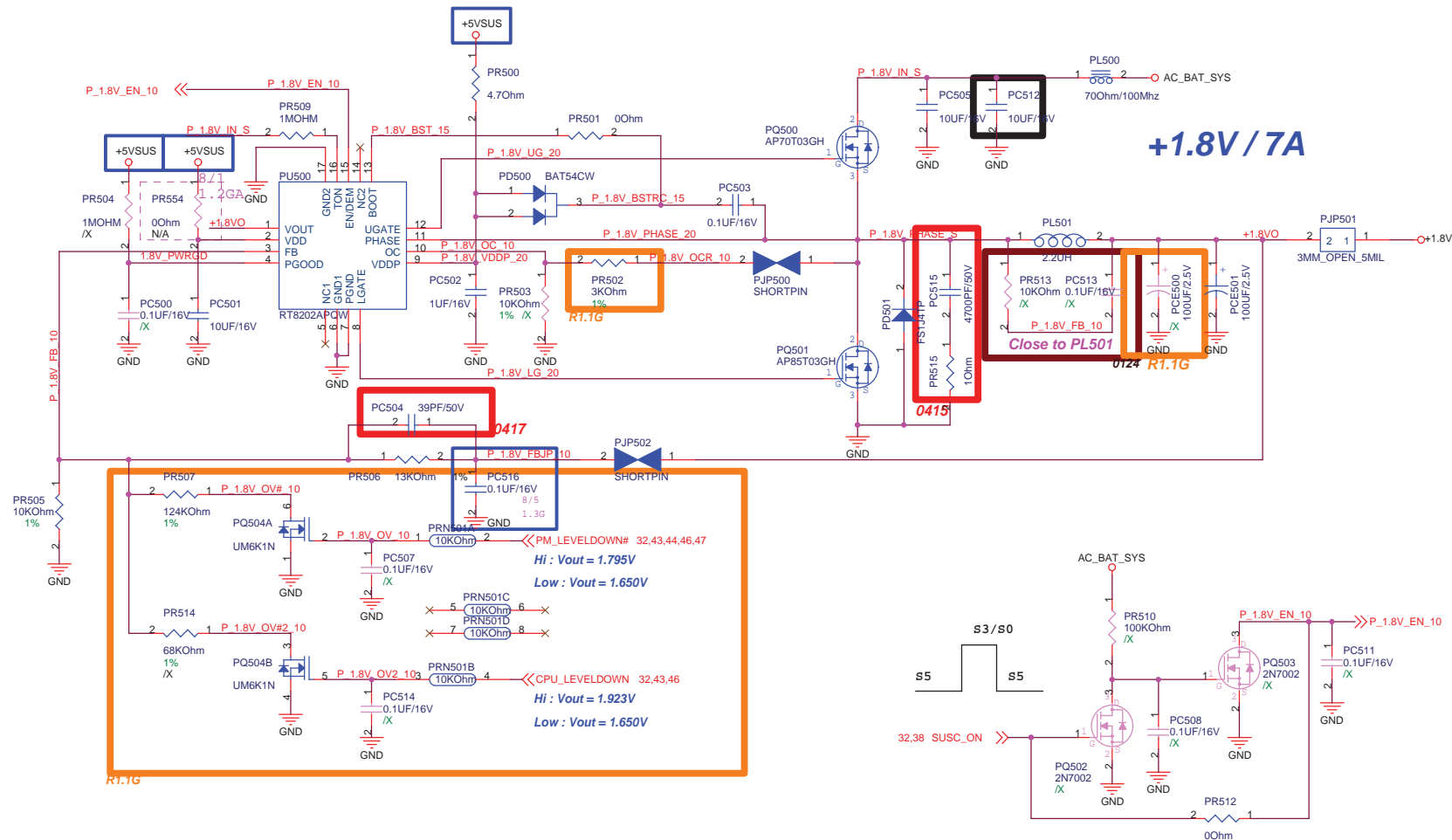
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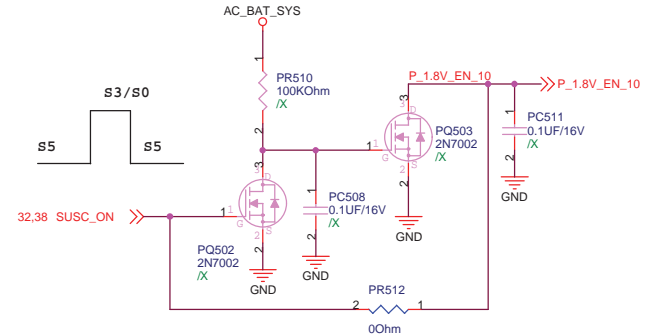
<http://hobi-elektronika.net>

<Variant Name>

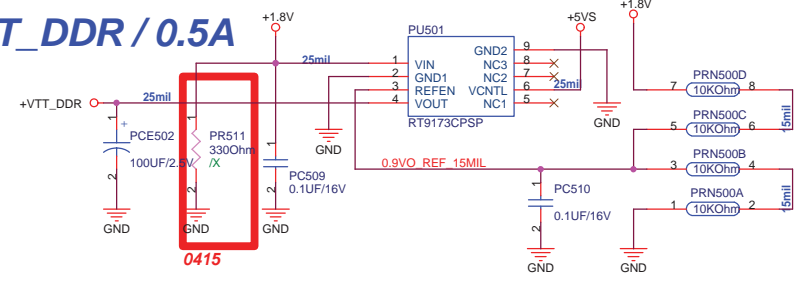
ASUS		Title: 3VSUS & +5VSUS & +3VA	
ASUSTeK COMPUTER INC		Engineer: N/A	
Size	Project Name	Rev	
A3	P901	1.1G	
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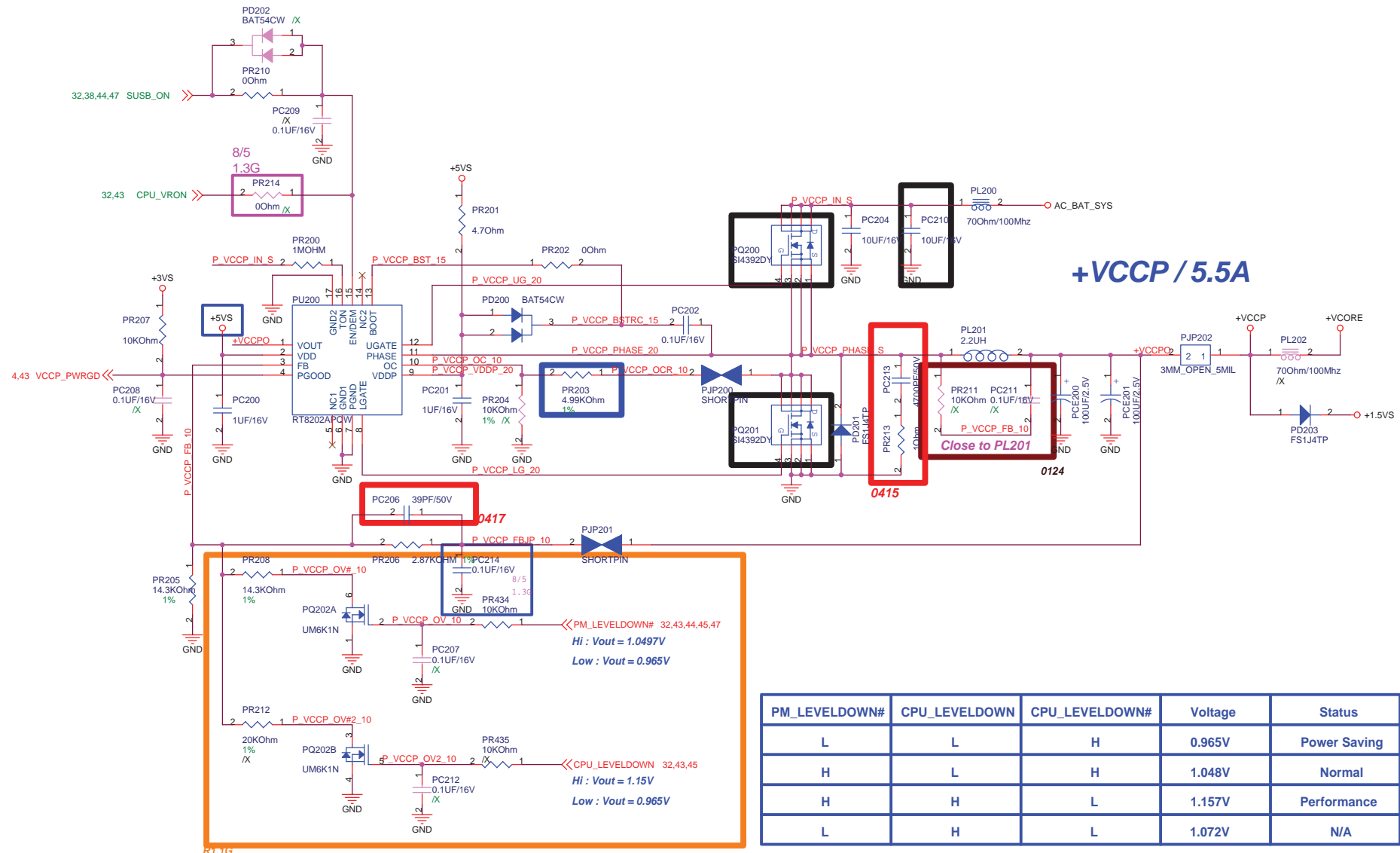
+1.8V / 7A

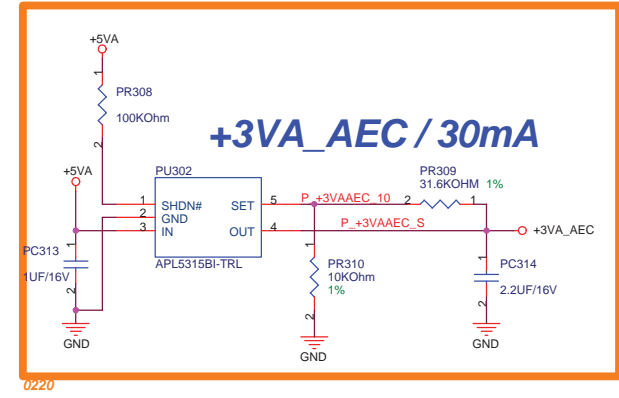
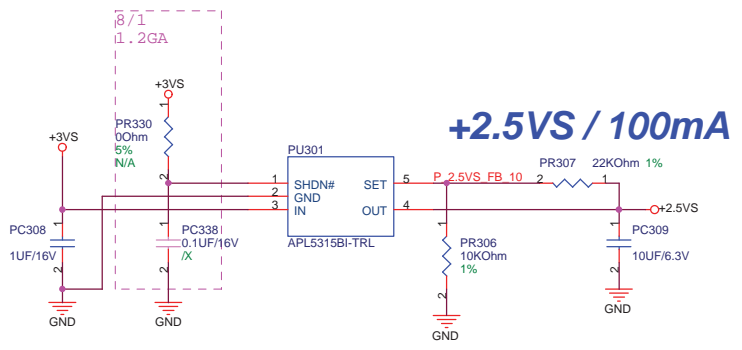
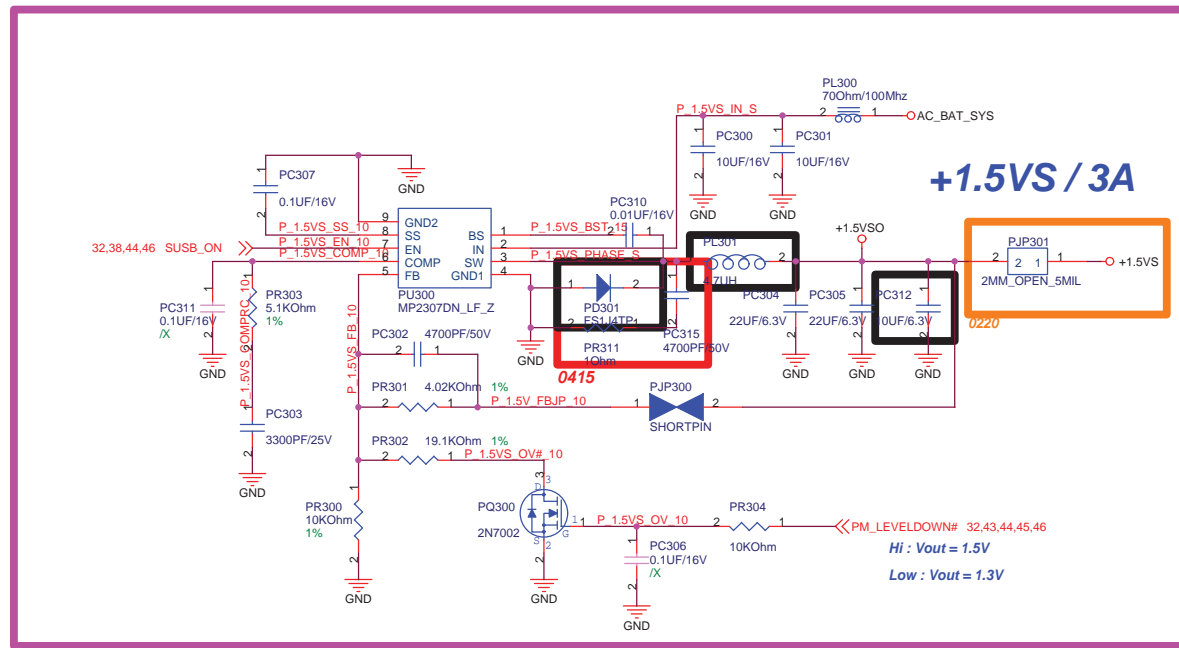


VTT_DDR / 0.5A



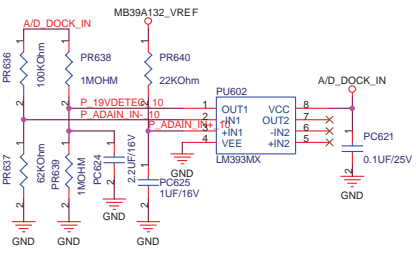
PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	1.650V	Power Saving
H	L	H	1.795V	Normal
H	H	L	1.927V	Performance
L	H	L	1.782V	N/A





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ASUS		Title : +1.5VS & +2.5VS	
ASUSTek Computer INC.		Engineer: Joy_Zhou	
Size	Project Name		Rev
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VREF = 5.0V
 $f_{osc}(KHz) = 17000 / RT (KOhm)$
 Soft start: $t_s(s) = 0.13 * CS (\mu F)$
 $V_{TH} \text{ of } -IN1: 5V / 62 * (100+62) = 13.06V$
 $V_{TH} \text{ of } ACIN: 1.25V / 25 * (185+25) = 10.5V$
 Change PR607 and PR608 value

Prevent Input from 19V :
 Adaptor > 13.06V, PQ603B Turn-off
 Adaptor < 13.06V, PQ603B Turn-on

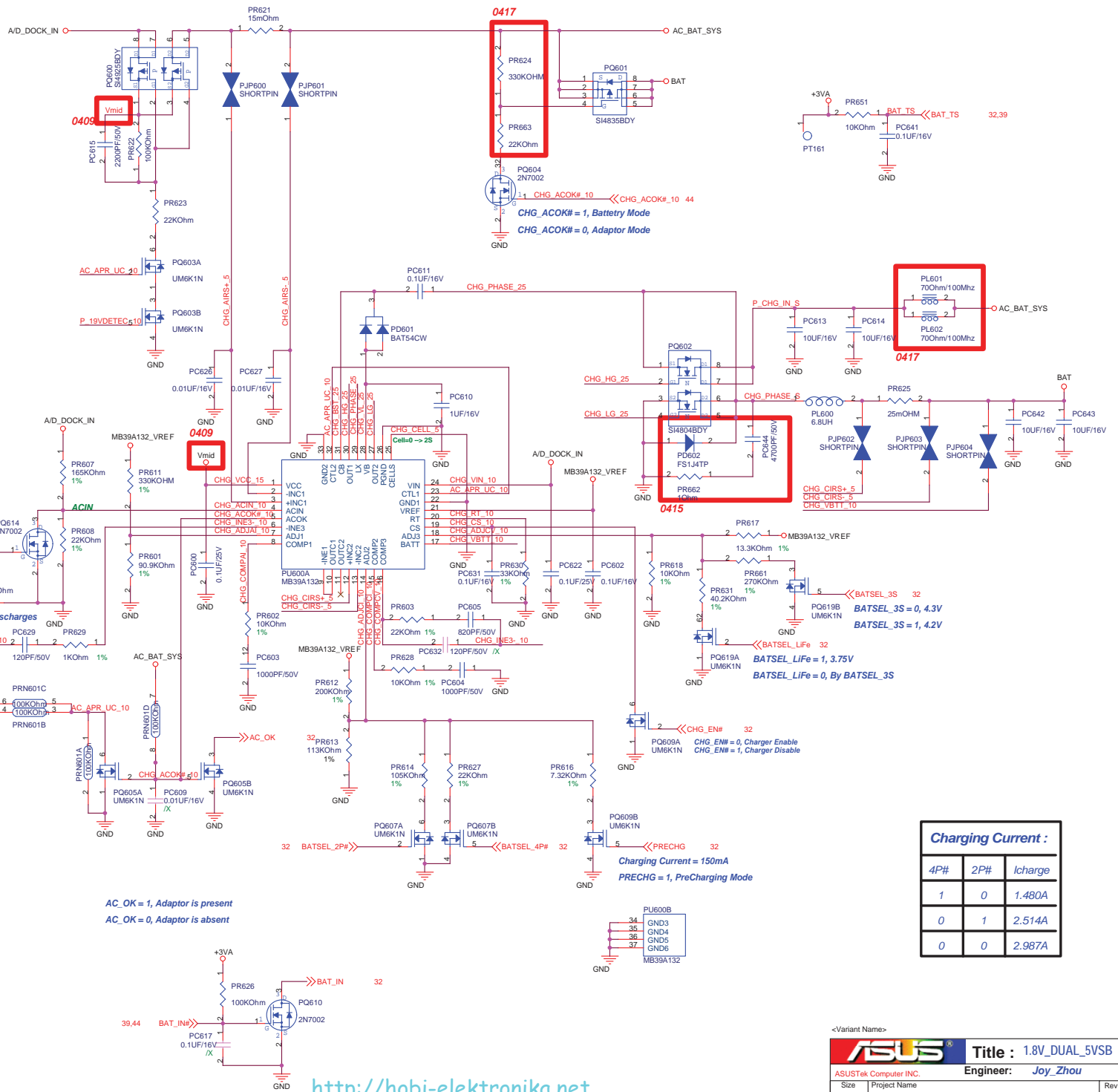
Battery Cell Selection :
 $BAT_ID = 1, 2 \text{ Cells; } V_{adj2} = 0.998V$
 $\Rightarrow I_{charge} = 1.477A$
 $BAT_ID = 0, 4/6 \text{ Cells; } V_{adj2} = 1.648V$
 $\Rightarrow I_{charge} = 2.517A$

Pre-Charging Mode :
 Precharging current = 150mA
 $V_{adj2} = 168.75mV$

Adaptor Max. Current :
 $PR600 \sim 235.8K; I_{limit} = 2.170A; 20.615W (9.5V/22W)$
 $PR600 \sim 185.3K; I_{limit} = 2.677A; 32.124W (12V/36W)$

ACIN Threshold = 1.25V
 Adaptor > 10.5V, System Powered by Adaptor
 Adaptor < 10.5V, System Powered by Battery

Battery Charging Voltage :
 $V_{adj3} > 4.1V \Rightarrow V_{bat} = 4.2V / \text{cell}$
 $2.2V > V_{adj3} > 1.1V \Rightarrow V_{bat} = 2 * V_{adj3}$
Battery Charging Current :
 $4.4V > V_{adj2} > 0V \Rightarrow$
 $I_{chg} = V_{adj2} / 0.075V / 25 * R_s$
Input Adaptor Max. Current Limit :
 $I_{limit_current} = (V_{adj1} - 0.075) / (25 * R_s)$



Charging Current :

4P#	2P#	Icharge
1	0	1.480A
0	1	2.514A
0	0	2.987A

<Variant Name>

ASUS Title : 1.8V_DUAL_5VSB

ASUSTek Computer INC. Engineer: Joy Zhou

Size	Project Name	Rev
Custom	P901	1.1G

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EC KB3310 GPIO SETTING

Pin	Pin Name	Signal Name	Type	Note
1	GPIO0/GA20	A20GATE	O	
2	GPIO01/KBRST#	RC_IN#	O	
6	GPIO4	EMAIL_SW#	I	Internal pull high
13	GPIO05/PCIRST#	PCI_RST#	I	
14	GPIO07	BAT_OTP	I	Battery over temperature
15	GPIO08	EXTSMIH#	OD	10K pull high to +3VSB
16	GPIO0A	LID_EC#	I	Internal pull high
17	GPIO0B/ESB_CLK	NC	O	
18	GPIO0C/ESB_DAT	NC	O	
19	GPIO0D	DISTP_SW#	I	Internal pull high
20	GPIO0E/SC#	EXT_SC#	O	10K pull high to +3VSB
21	GPIO0F/PWM0	BL_PWM_DA	O	
23	GPIO10/PWM1	BAT_CRITICAL	I	Battery critical capacity
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	I	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_ICHG	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


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/O	4.7K pull high to +3VA_EC
78	GPIO45/SDA1	SMB0_DAT	I/O	4.7K pull high to +3VA_EC
79	GPIO46/SCL2	SMB1_CLK	I/O	10K pull high to +3V
80	GPIO47/SDA2	SMB1_DAT	I/O	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/O	10K pull high to +3V
88	GPIO4F/PSDAT3	TP_DAT	I/O	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	

EC KB3310 Other Pin SETTING

Pin	Pin Name	Signal Name	Type	Note
3	SERIRQ	INT_SERIRQ	I/O	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_PCL_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	SPL_SO	I	
120	WR#/SPIDO	SPL_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	


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<Variant Name>

		Title : EC Pin Define	
ASUSTek Computer INC.		Engineer: Satan He	
Size	Project Name	Rev	
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<Variant Name>

		Title : History	
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