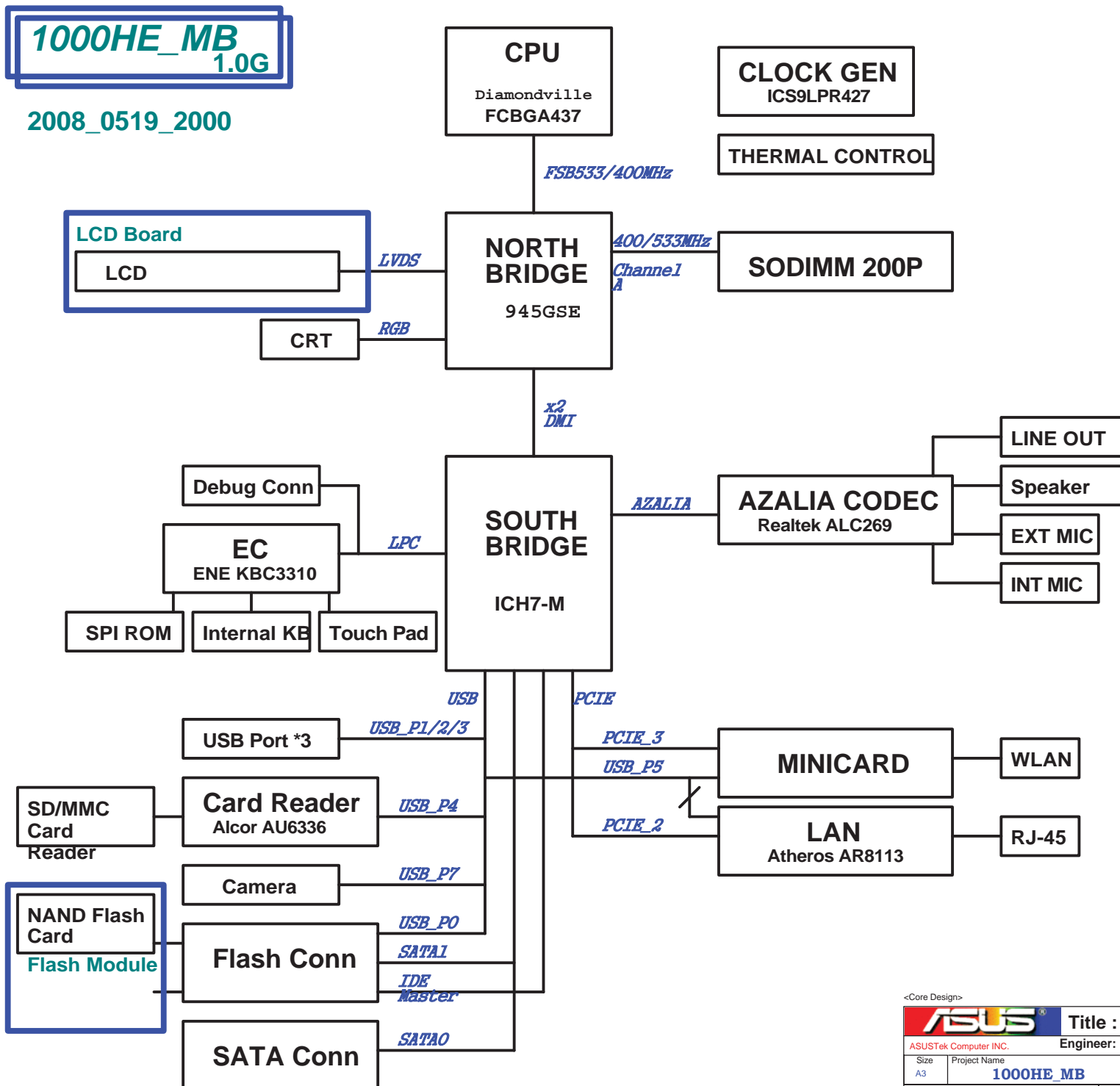
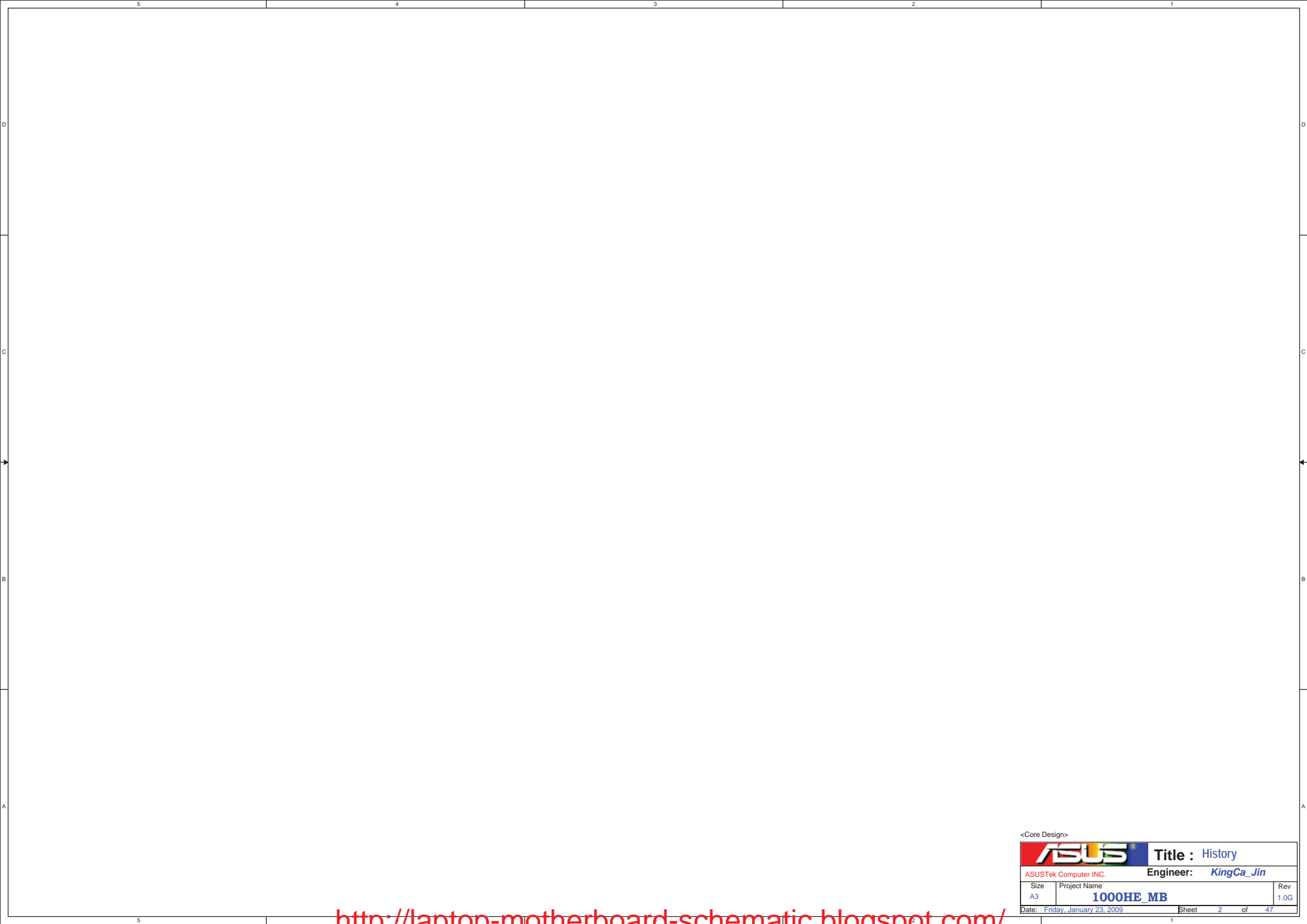



01_Block Diagram
 02_System Setting
 03_Power Sequence
 04_Clock Gen_ICS9LPR426
 05_Diamondville_BUS
 06_Diamondville_PWR
 07_NB-945GMS(HOST)
 08_NB-945GMS(DMI)
 09_NB-945GMS(GRAPHIC)
 10_NB-945GMS(DDR2)
 11_NB-945GMS(PWR)
 12_NB-945GMS(PWR2)
 13_NB-945GMS(GND)
 14_SB-ICH7M(PWR)
 15_SB-ICH7M(1)
 16_SB-ICH7M(2)
 17_SB-ICH7M(3)
 18_DDR2 SODIMM
 19_DDR2_Termination
 20_Onboard VGA
 21_LCD Conn_LID
 22_PCIE 3.5G & Ext. Antenna
 23_Mini WIFI+ BT
 24_LAN_Atheros AR8113
 25_MDC_RJ11_RJ45
 26_Flash Conn
 27_SATA Hdd
 28_USB Port
 29_Camera Conn
 30_Card Reader_AU6336C52
 31_Codec_ALC269
 32_Audio_AMP_Jack
 33_EC_ENE KB3310
 34_EC_UART controller
 35_Switch_SPI ROM_Debug Conn
 36_Thermal Sensor_FAN
 37_KB_Touch Pad
 38_LED_THERMTRIP
 39_Discharge
 40_PWR Jack
 41_Srew Hole
 42_EMI
 43_POWER FLOW
 44_Vcore
 45_Power System
 46_Power_+1.8V & VTTDDR
 47_Power_VCCP
 48_Power_+1.5VS & +2.5VS
 49_Power_Charger
 50_EC Pin Define
 51_History





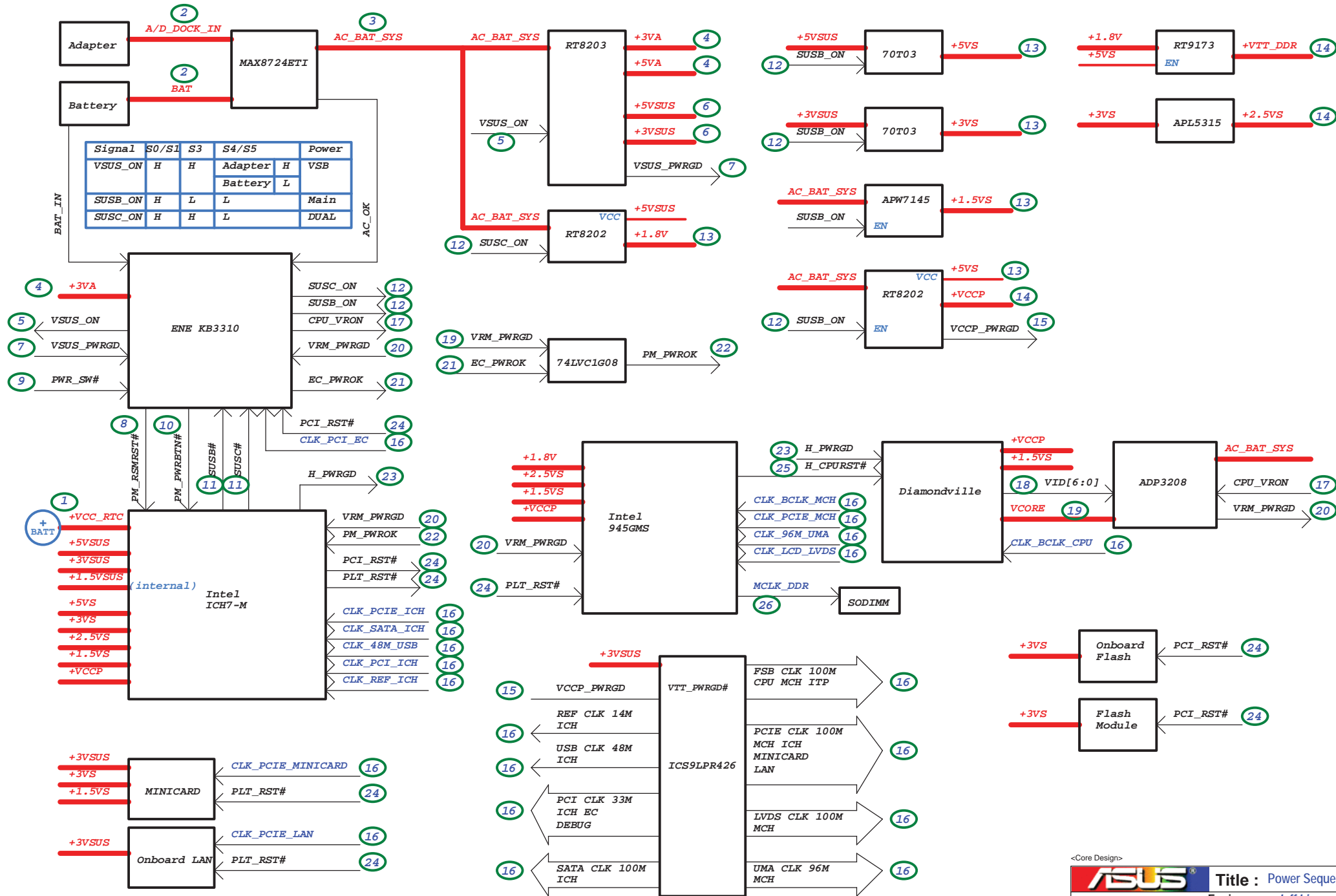
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Title : History

ASUSTek Computer INC. Engineer: KingCa_Jin

Size	Project Name	Rev
A3	1000HE_MB	1.0G
Date: Friday, January 23, 2009		Sheet 2 of 47



EC KB3310 GPIO SETTING

Pin	Pin Name	Signal Name	Type	Note
1	GPIO00/GA20	A20GATE	O	
2	GPIO01/KBRST#	RC_IN#	O	
6	GPIO04	EMAIL_SW#	I	Internal pull high
13	GPIO05/PCIRST#	PCI_RST#	I	
14	GPIO07	BAT_OTP	I	Battery over temperature
15	GPIO08	EXTSMH#	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

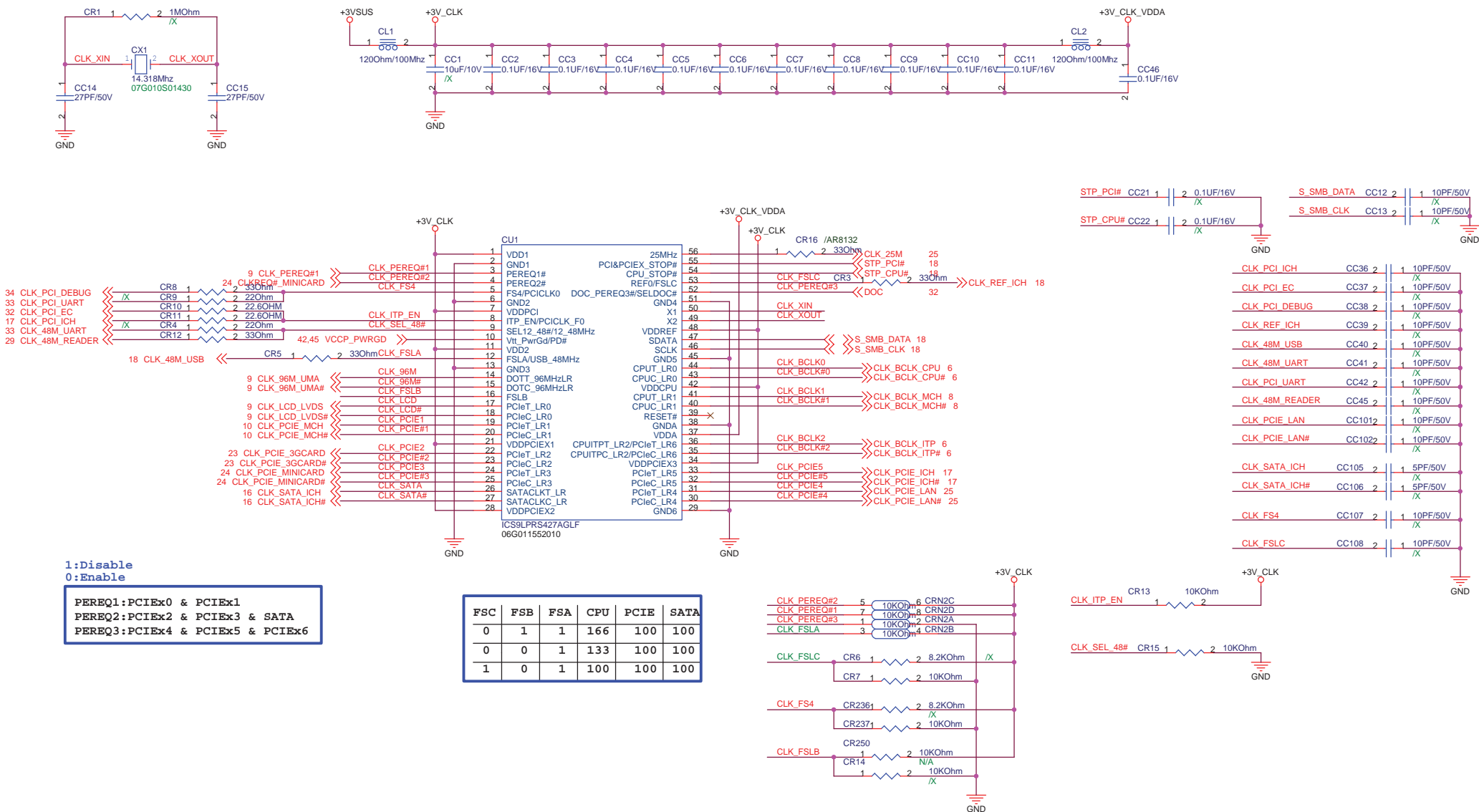
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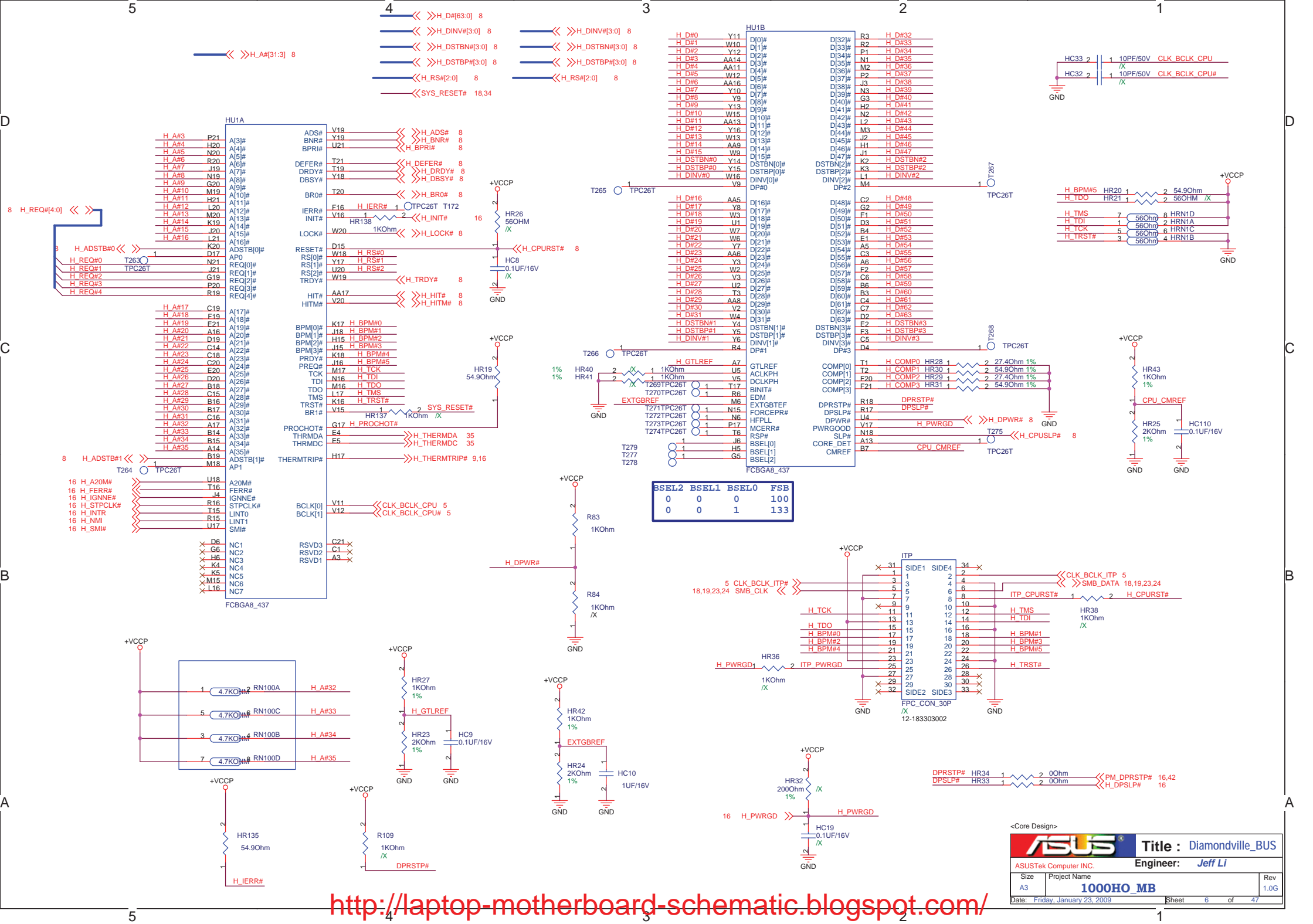
Pin	Pin Name	Signal Name	Type	Note
3	SERIRQ	INT_SERIRQ	I/O	10K pull high to +3V
4	LFRAME#	LPC_FRAME#	I	
5	LAD3	LPC_AD3	I/O	
7	LAD2	LPC_AD2	I/O	
8	LAD1	LPC_AD1	I/O	
9	VCC	+3VA_EC	P	
10	LAD0	LPC_AD0	I/O	
11	GND	GND	P	
12	PCICLK	CLK_PCI_EC	I	
22	VCC	+3VA_EC	P	
24	GND	GND	P	
33	VCC	+3VA_EC	P	
35	GND	GND	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	

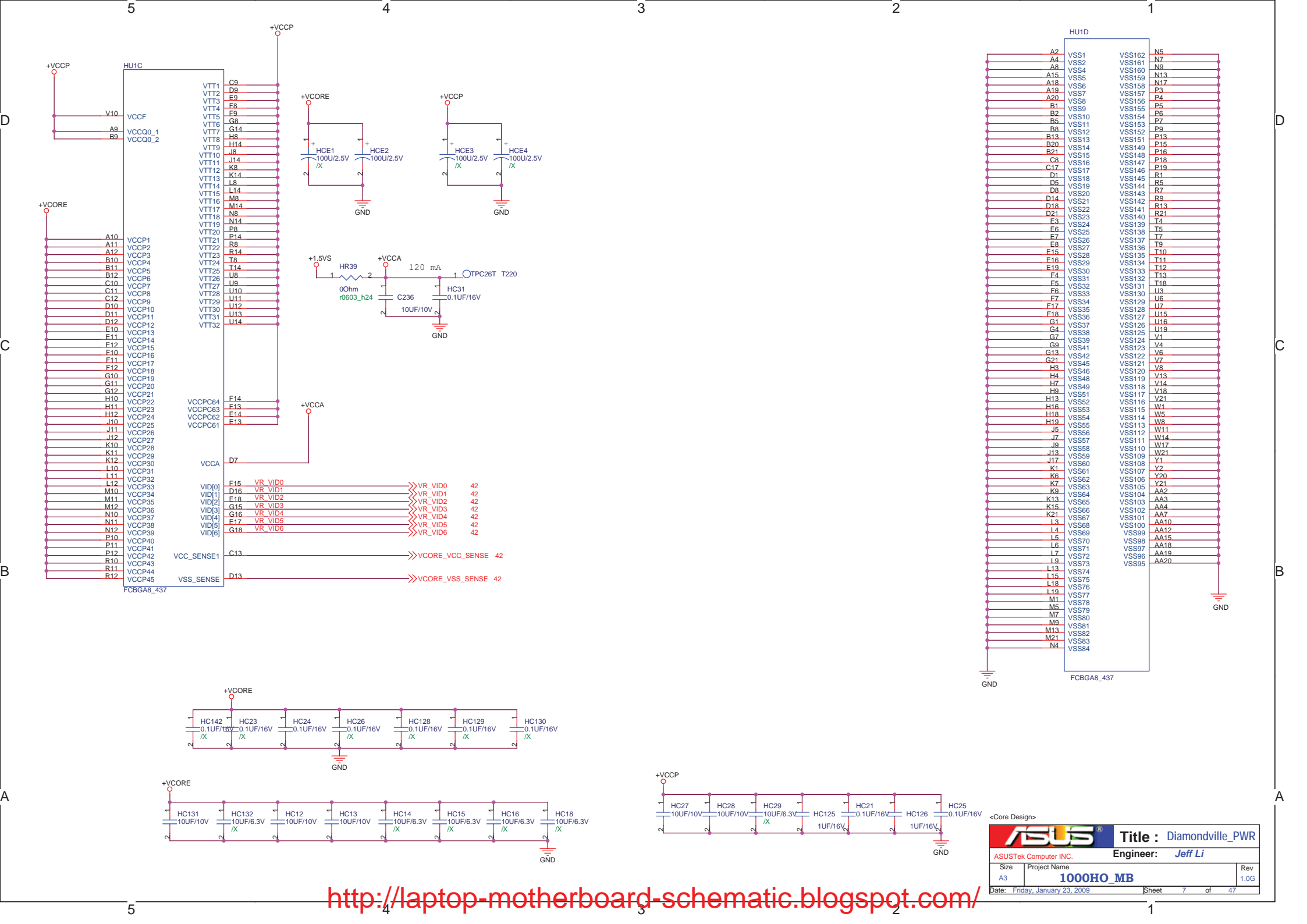
Pin	Pin Name	Signal Name	Type	Note
70	GPO3D/DA1	LCD_BACKOFF#	O	
71	GPO3E/DA2	CLK_PWRSERVE#	O	
72	GPO3F/DA3	BAT_LL#	O	Battery Low Low
73	GPIO40	AC_OK	I	AC Adaptor Plug in
74	GPIO41	PM_RSMRST#	O	10K pull down to GND
75	GPI42	BAT_IN	I	
76	GPI43	CLRTC_EC	I	
77	GPIO44/SCL1	SMB0_CLK	I/O	4.7K pull high to +3VA_EC
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_LED#	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	

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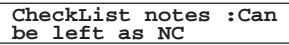
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ASUSTek Computer INC.		Engineer: Jeff Li	
Size A3	Project Name 1000HO_MB	Rev 1.0G	
Date: Friday, January 23, 2009		Sheet	4 of 47



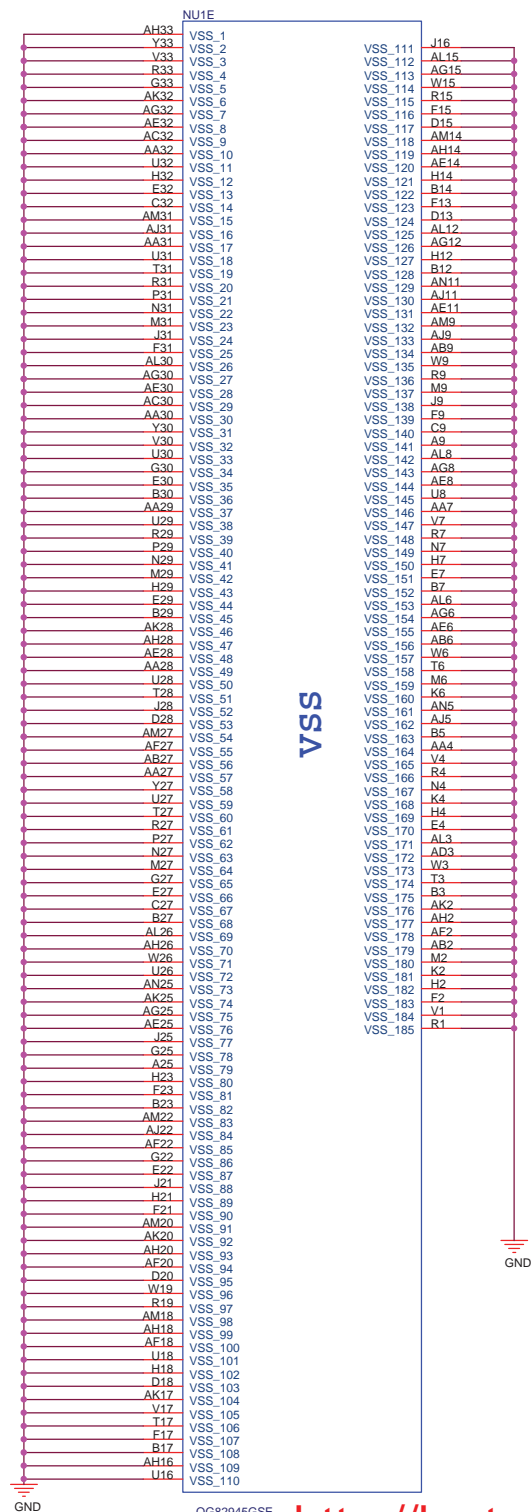




<http://laptop-motherboard-schematic.blogspot.com/>





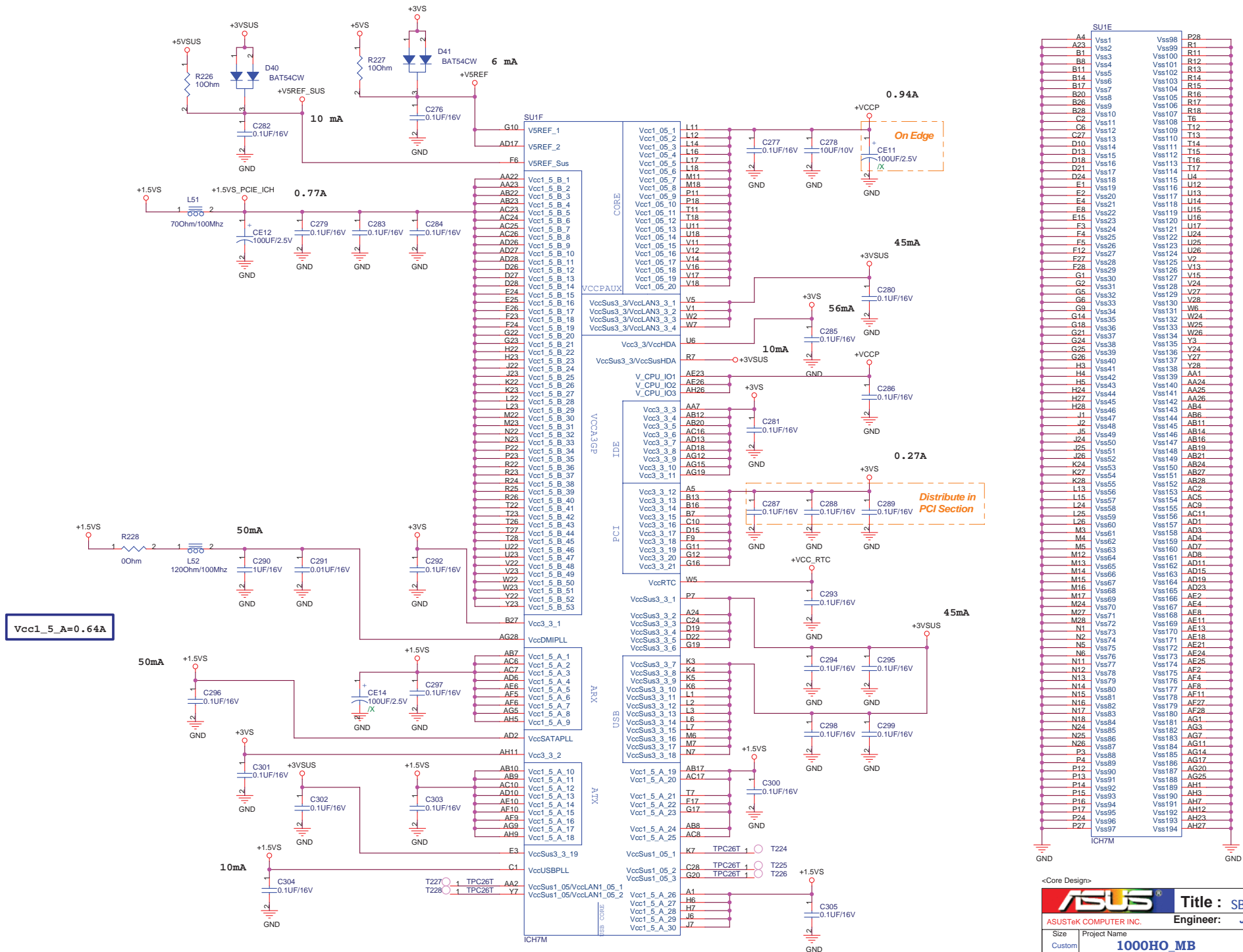


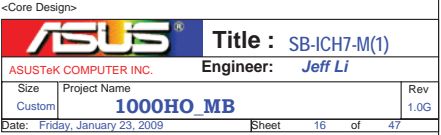
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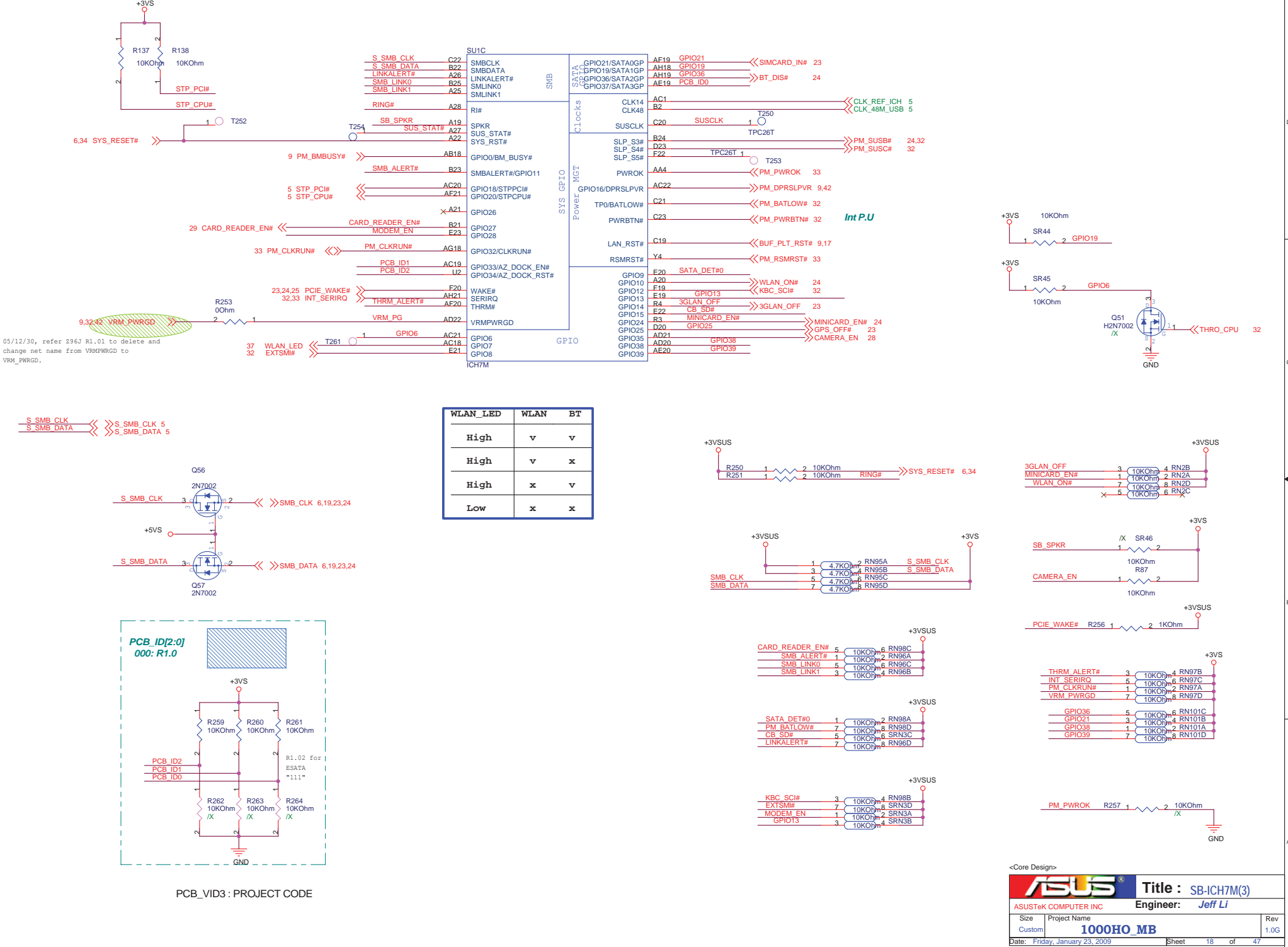
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ASUSTeK COMPUTER INC.		Engineer: Jeff Li	
Size	Project Name	Rev	
A3	1000HO_MB	1.0G	
Date: Friday, January 23, 2009		Sheet	14 of 47





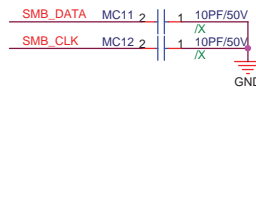
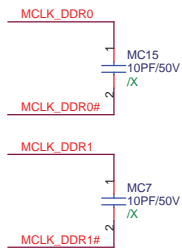


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ASUS Title : SB-ICH7M(3)

ASUSTek COMPUTER INC Engineer: Jeff Li

Size	Project Name	Rev
Custom	1000HO_MB	1.0G
Date: Friday, January 23, 2009		Sheet 18 of 47

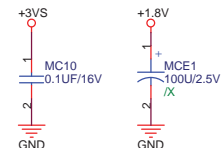
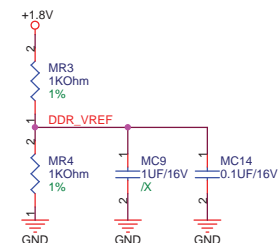
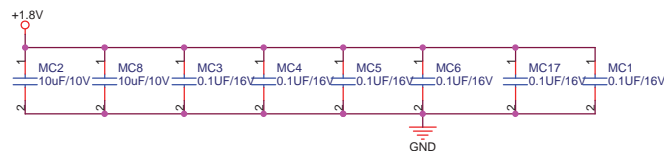


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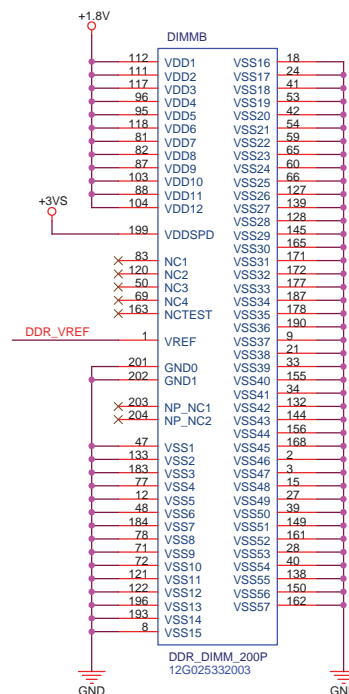
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MA_MA3	99	A3	DQ3	19	MA_DQ3	11
MA_MA4	98	A4	DQ4	4	MA_DQ4	11
MA_MA5	97	A5	DQ5	6	MA_DQ5	11
MA_MA6	94	A6	DQ6	14	MA_DQ6	11,20
MA_MA7	92	A7	DQ7	16	MA_DQ7	11,20
MA_MA8	93	A8	DQ8	23	MA_DQ8	
MA_MA9	91	A9	DQ9	25	MA_DQ9	
MA_MA10	105	A10/AP	DQ10	35	MA_DQ10	
MA_MA11	90	A11	DQ11	37	MA_DQ11	
MA_MA12	89	A12	DQ12	20	MA_DQ12	
MA_MA13	116	A13	DQ13	22	MA_DQ13	
	86	A14	DQ14	36	MA_DQ14	
	84	A15	DQ15	38	MA_DQ15	
	85	A16_BA2	DQ16	43	MA_DQ16	
MA_BA0	107	BA0	DQ17	45	MA_DQ17	
MA_BA1	106	BA1	DQ18	55	MA_DQ18	
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	79	CKE0	DQ25	73	MA_DQ25	
	80	CKE1	DQ26	75	MA_DQ26	
	113	CAS#	DQ27	62	MA_DQ27	
	108	RAS#	DQ28	64	MA_DQ28	
	109	WE#	DQ29	74	MA_DQ29	
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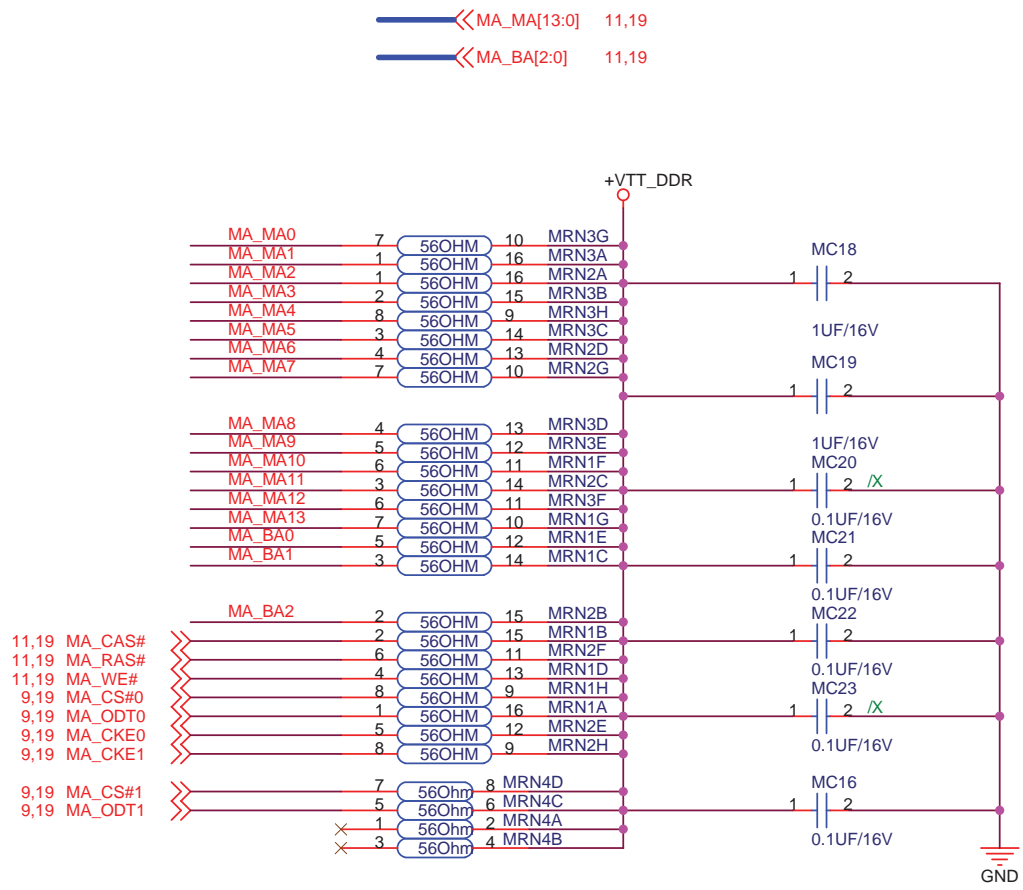


GROUP1
GROUP2
SWAP



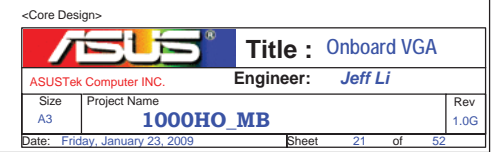
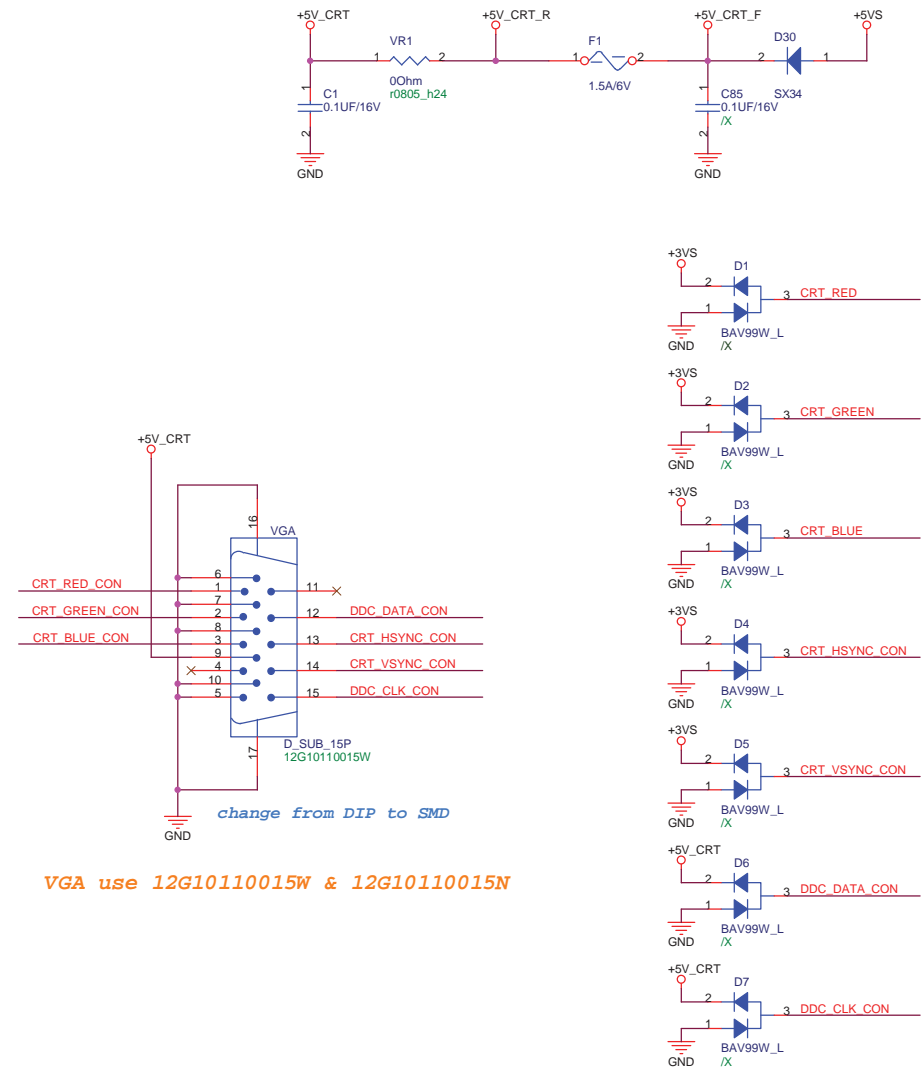
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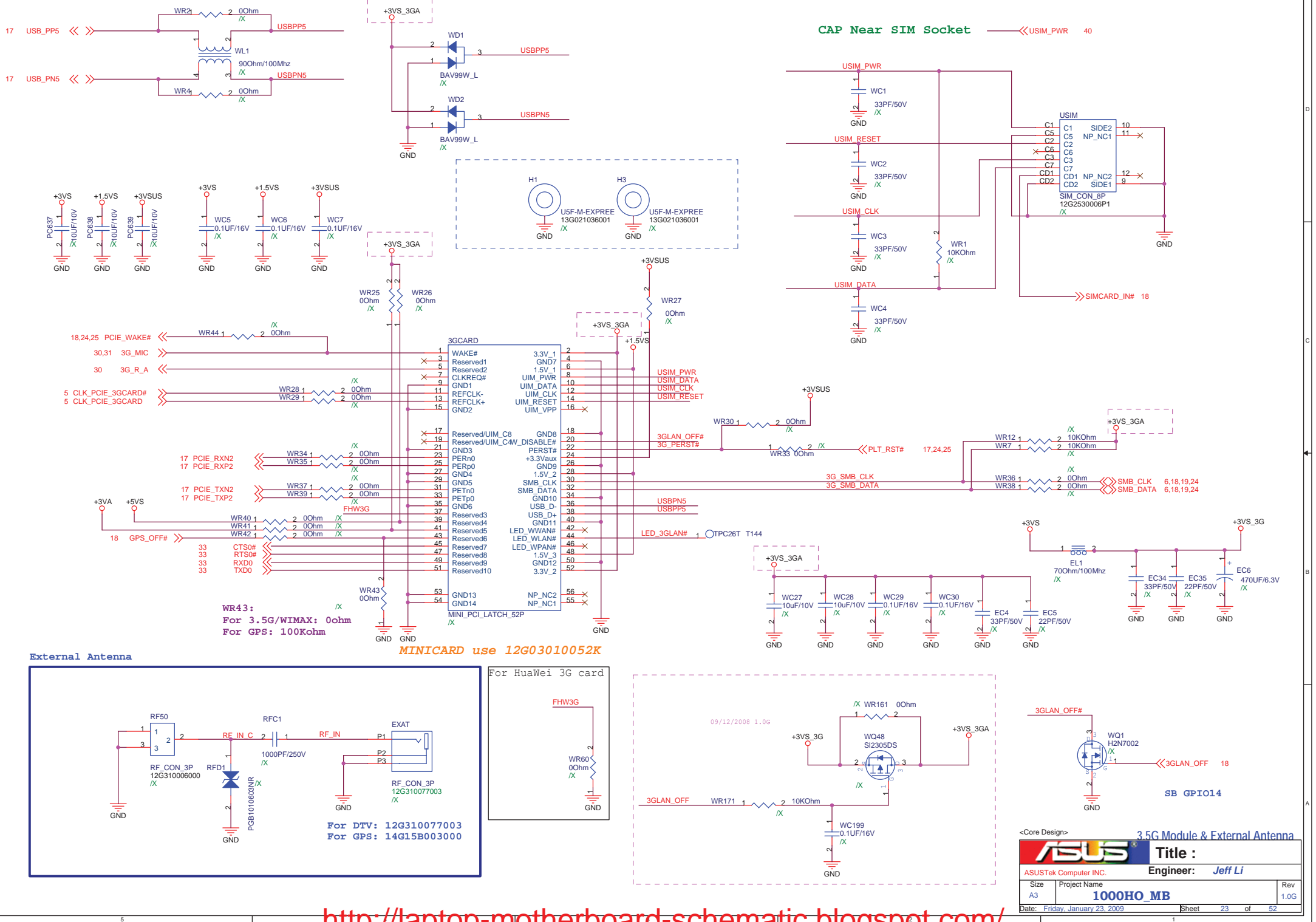
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ASUSTek Computer INC.		Engineer: Jeff Li	
Size A3	Project Name 1000HO_MB	Rev 1.0G	
Date: Friday, January 23, 2009	Sheet 19	of 52	

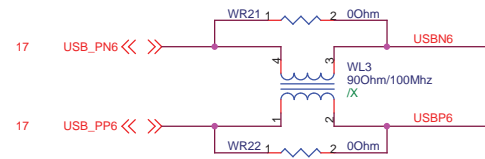
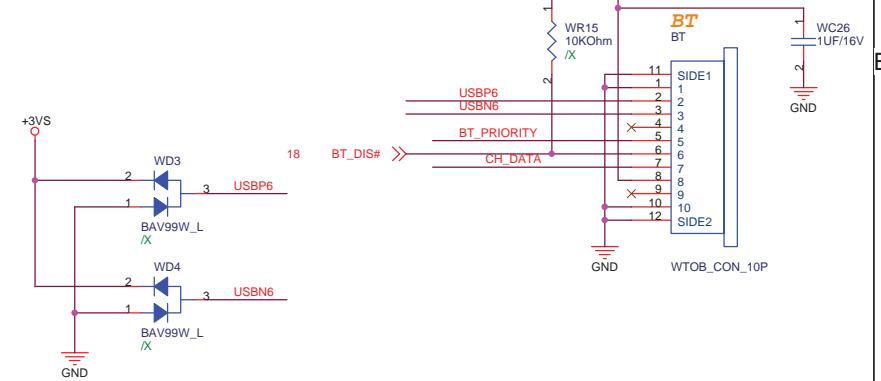
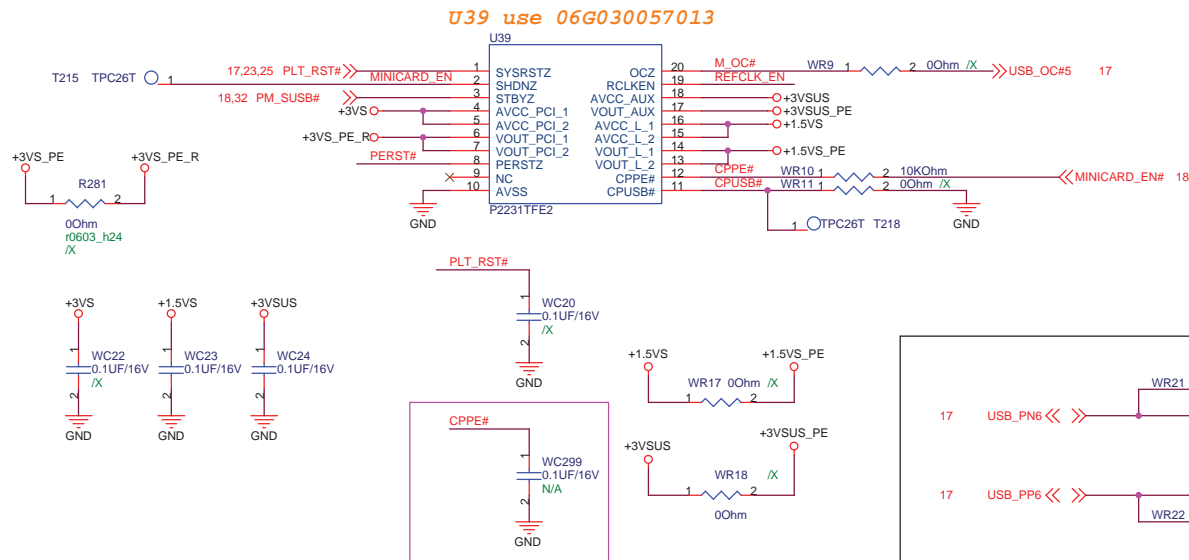
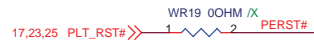
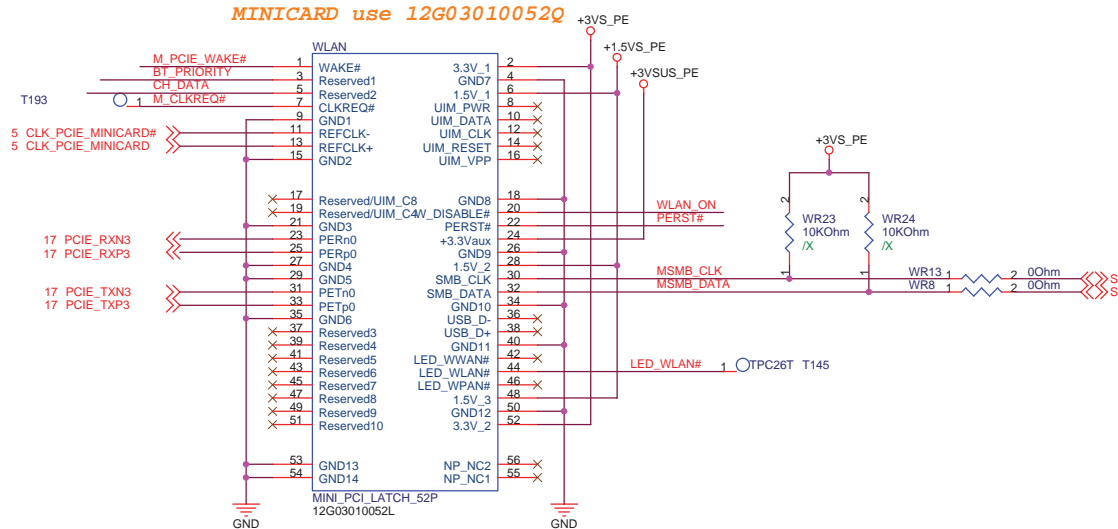
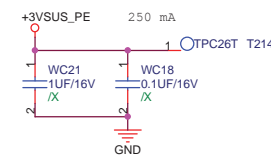
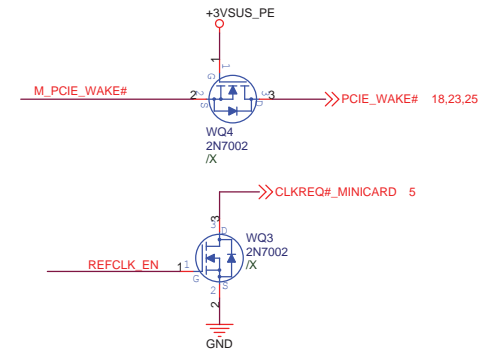
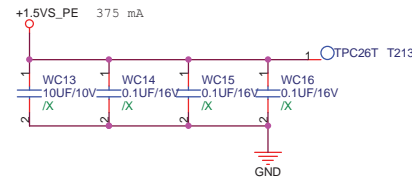
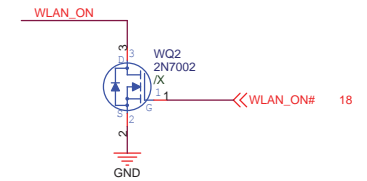
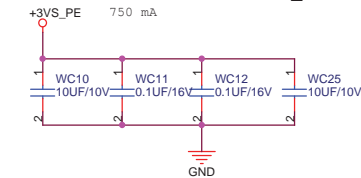
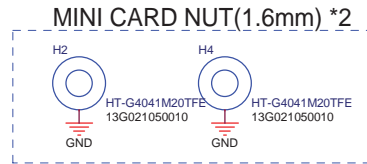
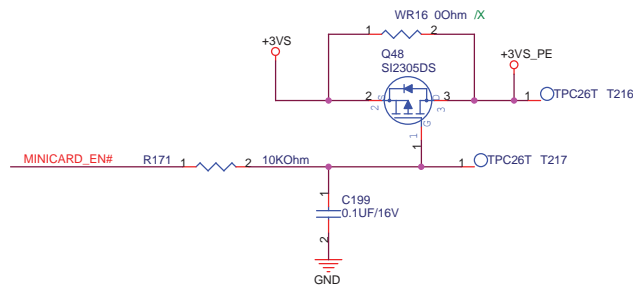


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		Title : DDR2_Termination	
ASUSTek Computer INC.		Engineer: <i>Jeff Li</i>	
Size A4	Project Name 1000HO_MB		Rev 1.0G
Date: Friday, January 23, 2009		Sheet	20 of 52

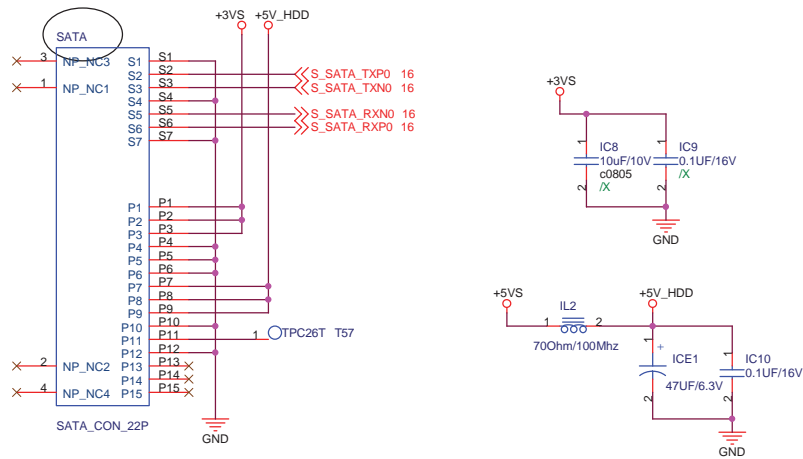






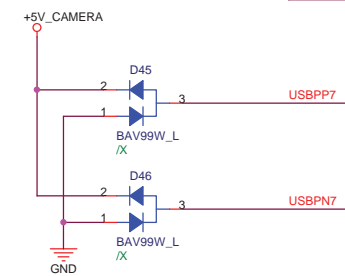
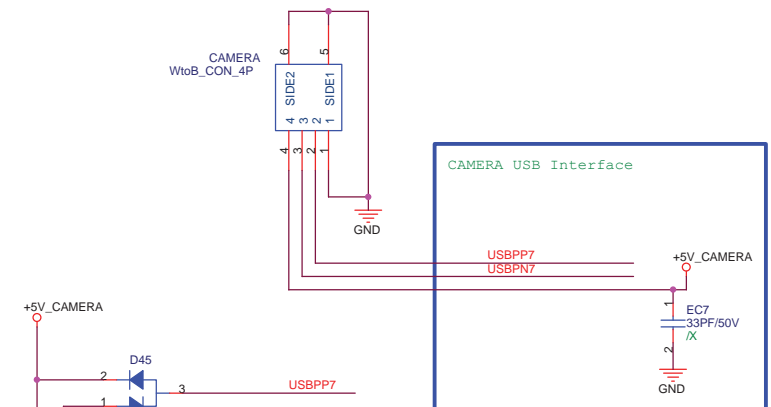
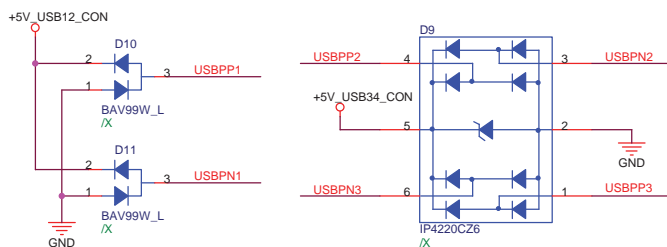
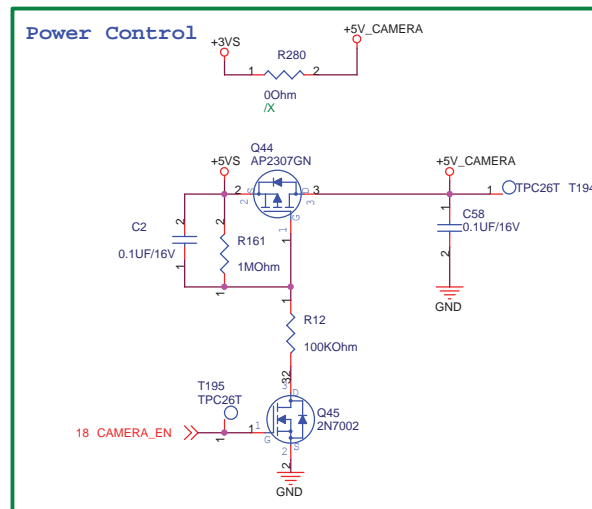
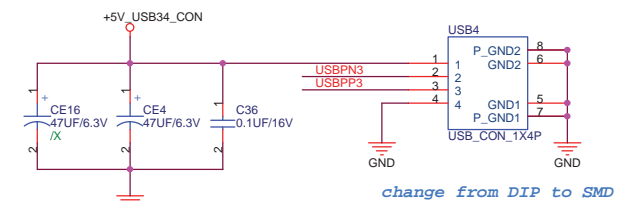
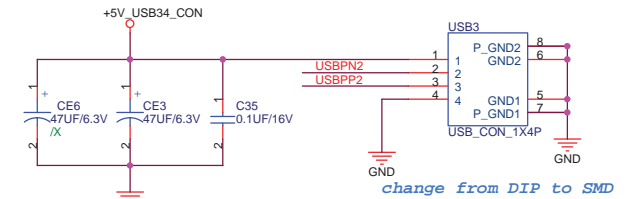
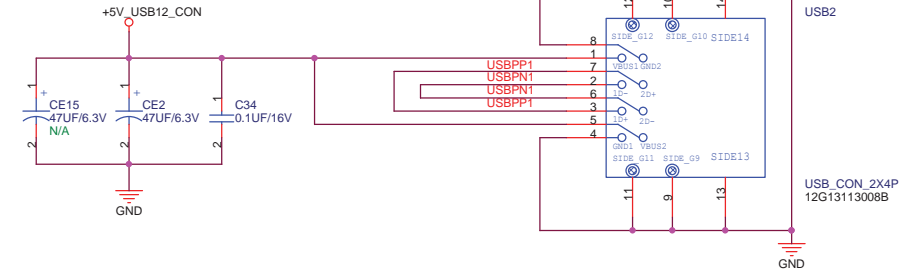
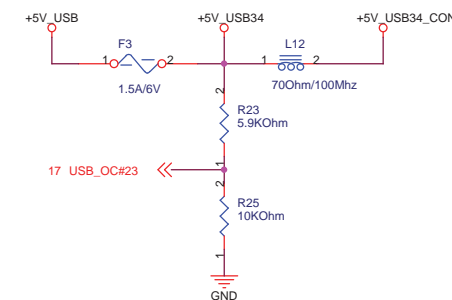
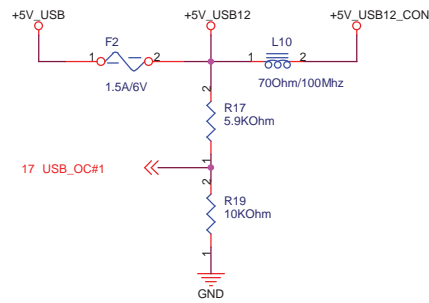
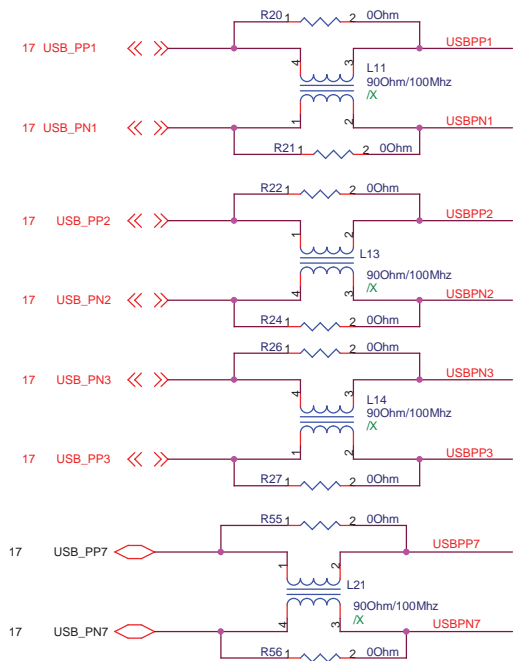


SATA HDD Connector

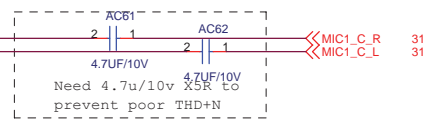
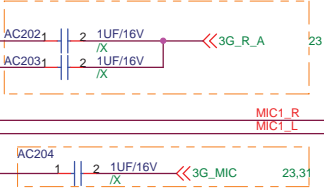
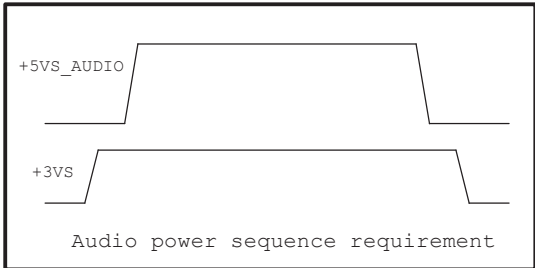
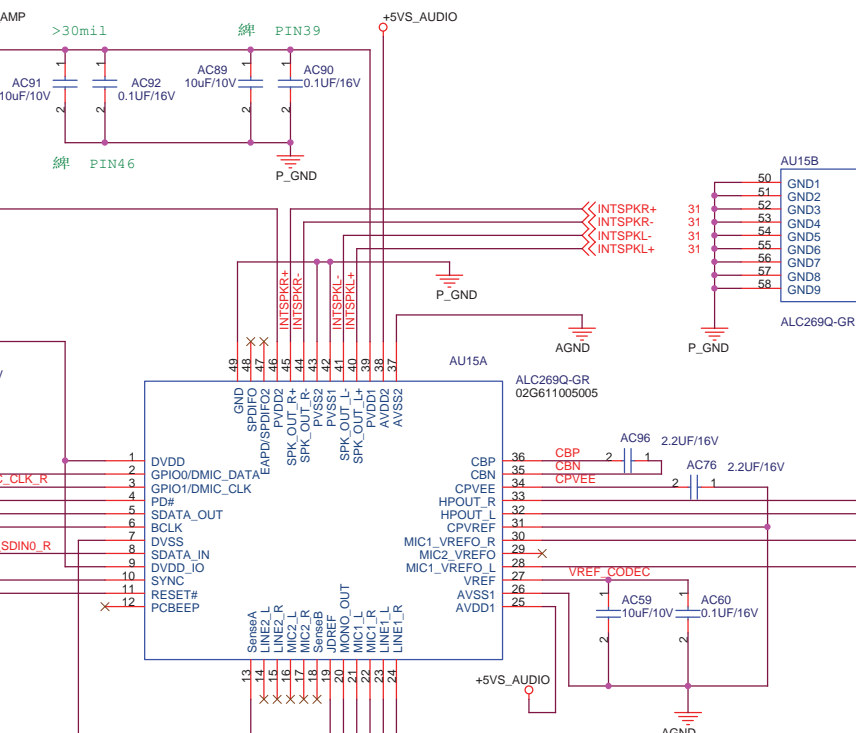
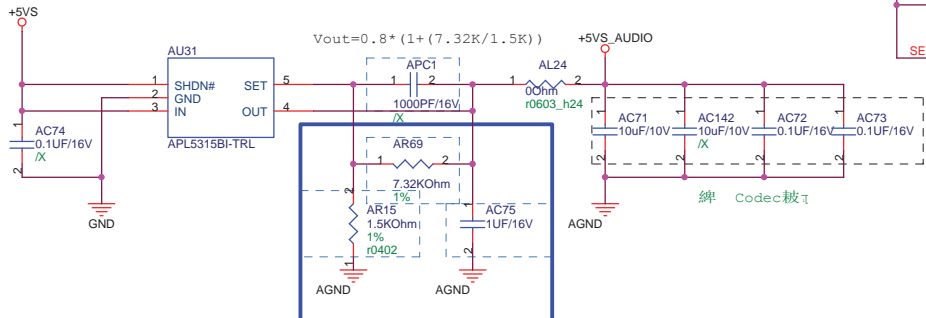
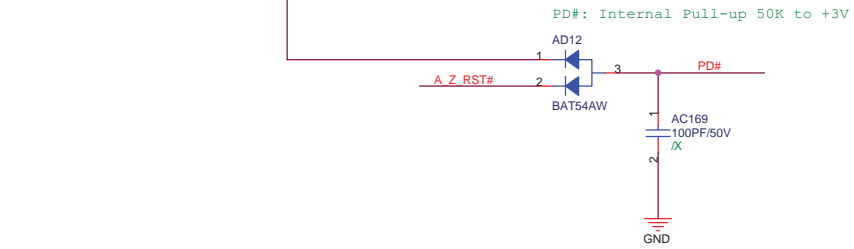
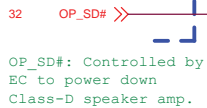
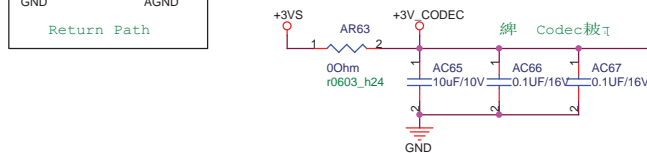
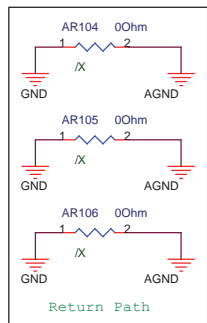


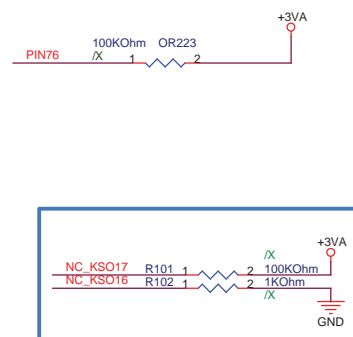
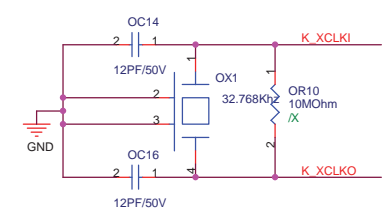
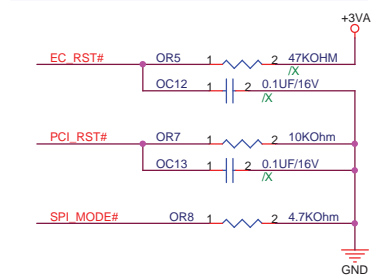
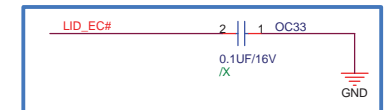
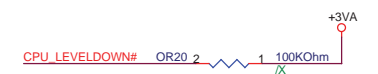
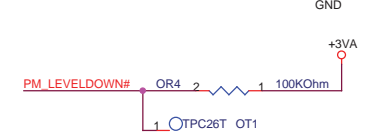
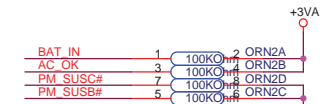
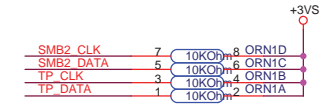
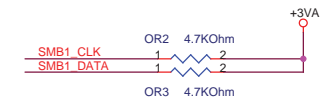
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ASUS		Title : HDD	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size A3	Project Name 1000HO_MB	Rev 1.0G	
Date: Friday, January 23, 2009	Sheet 27 of 47		



ASUS		Title : USB Port	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size	Project Name	Rev	
A3	1000HO_MB	1.0G	
Date: Friday, January 23, 2009	Sheet	28	of 52





<Core Design>



Title : EC_ENE KB3310

ASUSTek Computer INC

Engineer: *Jeff Li*

Size

Project Name	
--------------	--

A3

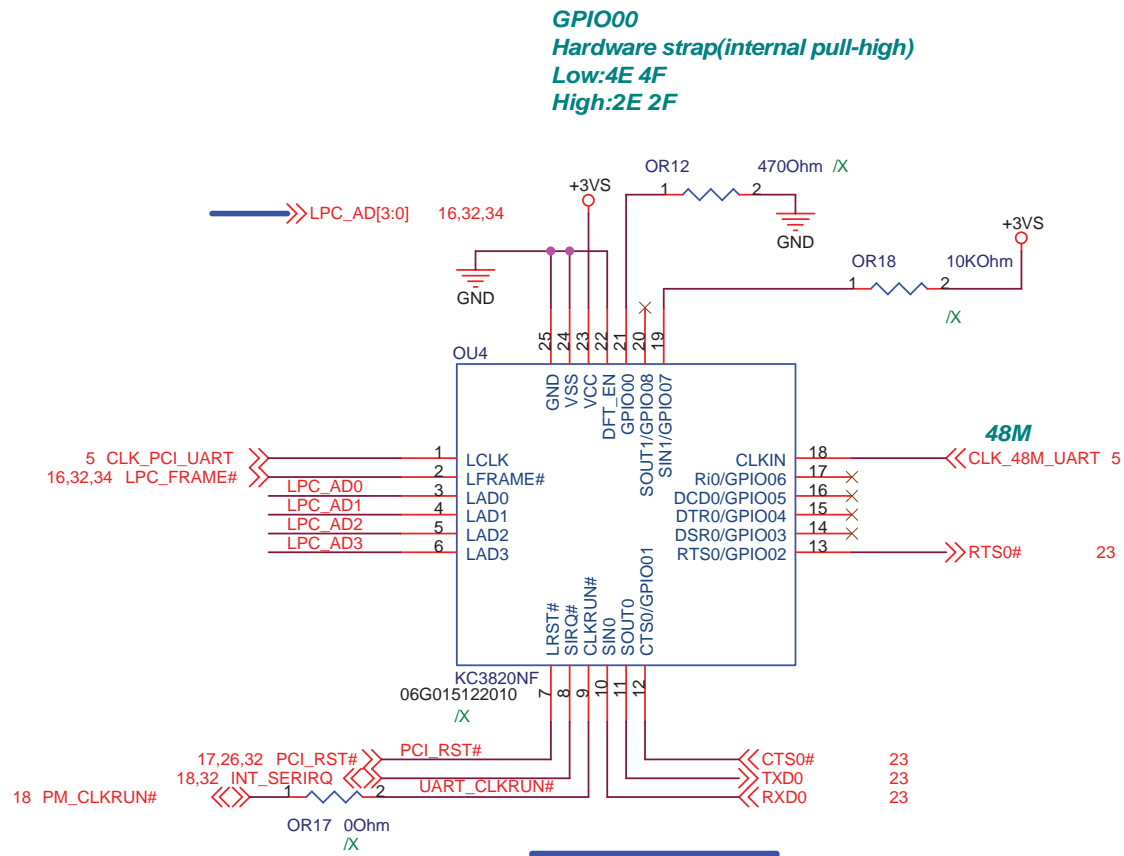
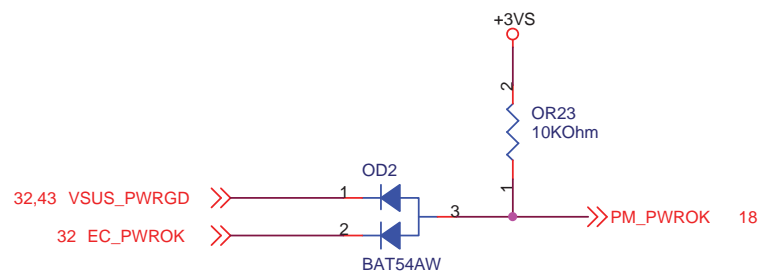
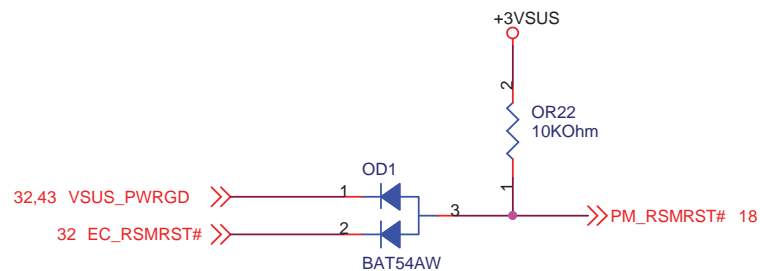
10

Date: Friday, January 23, 2009

Sheet 32 of 47

Date: Friday, January 29, 2005

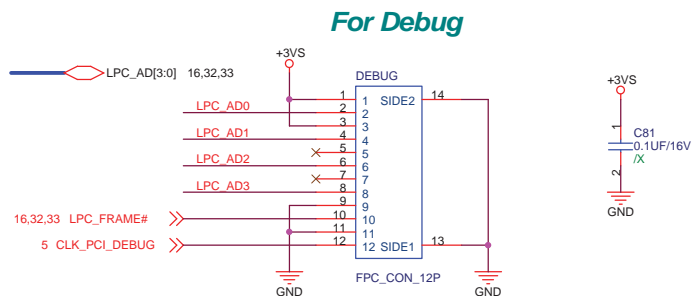
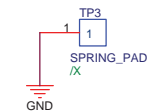
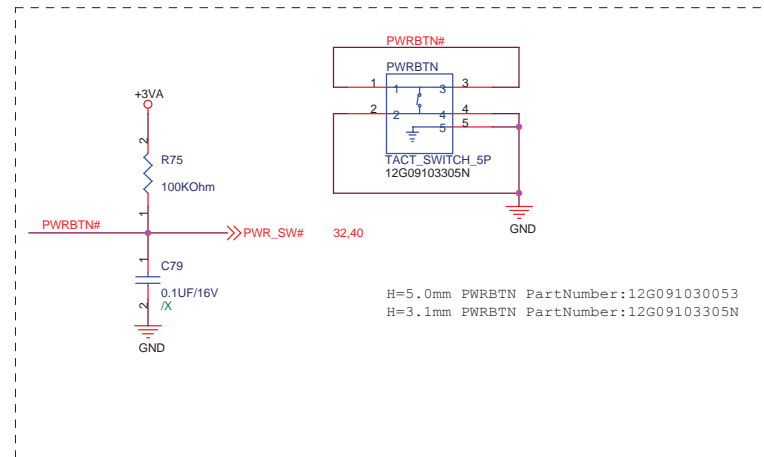
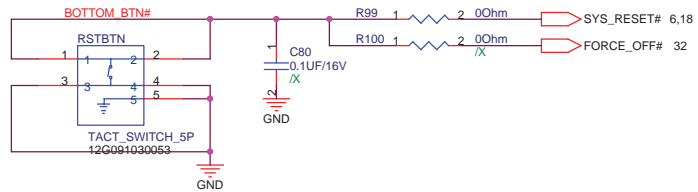
Sheet 52 of 47



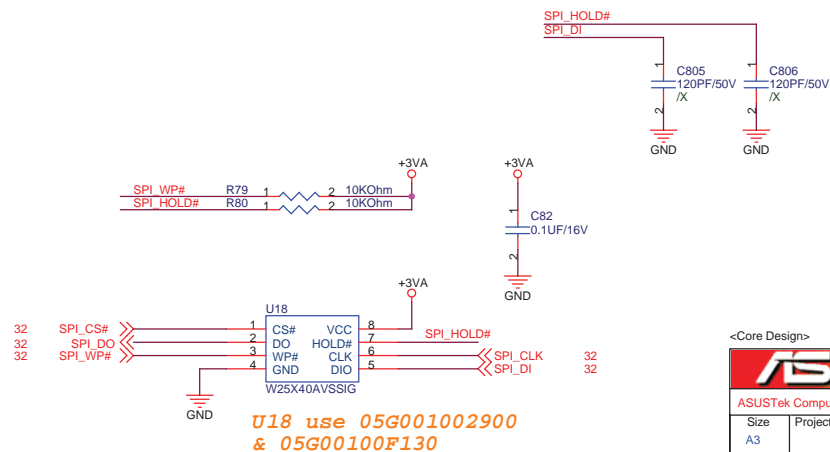
UART Control
IC for using
GPS module due
to no UART on
ENE EC

<Core Design>

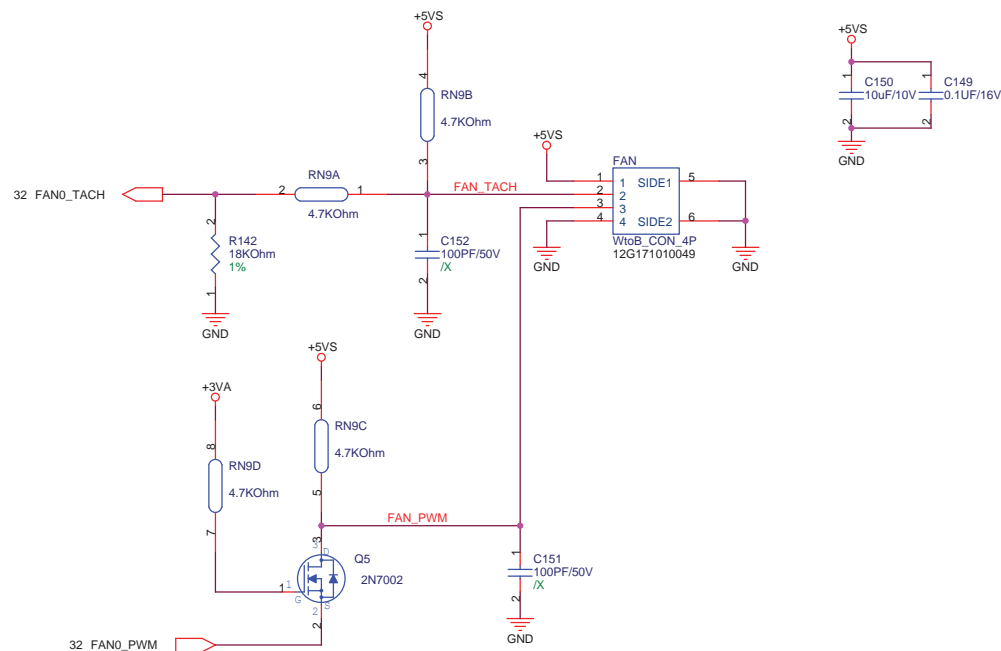
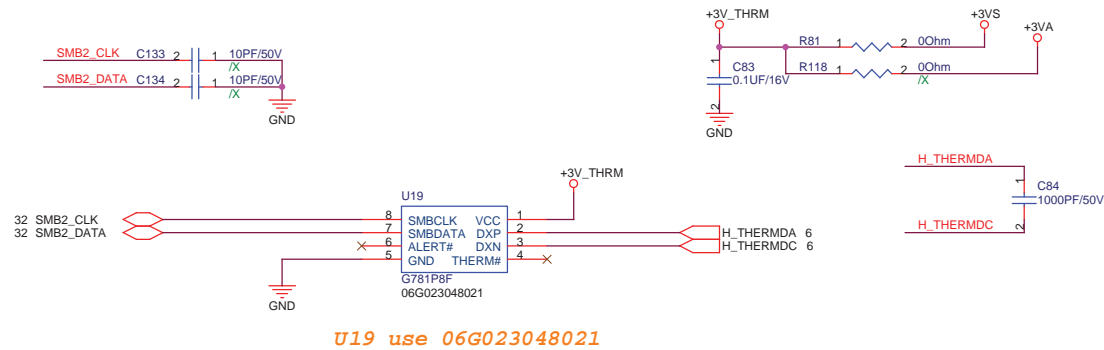
ASUS		Title : EC_UART_KC3820	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size A4	Project Name 1000HO_MB	Rev 1.0G	
Date: Friday, January 23, 2009		Sheet 33 of 47	



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

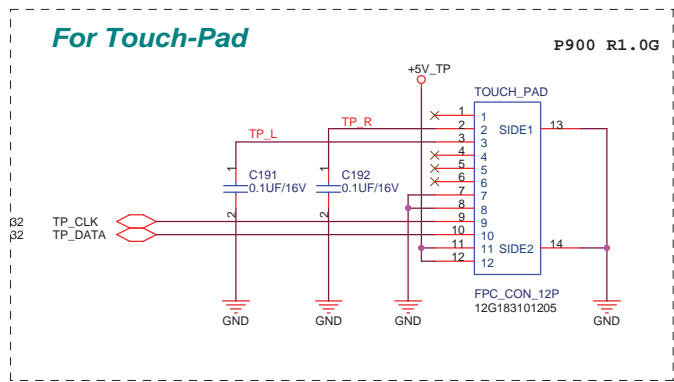


<Core Design>		ASUS®		Title : Switch_SPI ROM_Debug	
ASUSTek Computer INC.		Engineer: Jeff Li			
Size	Project Name				Rev
A3	1000HO_MB				1.0G
Date: Friday, January 23, 2009		Sheet 34 of 52			

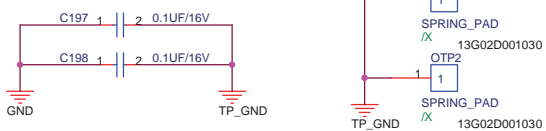
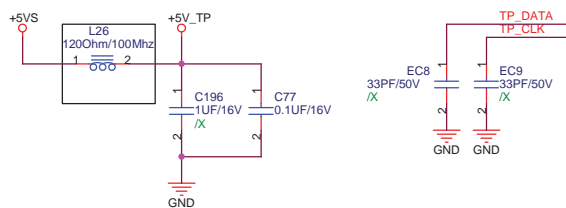
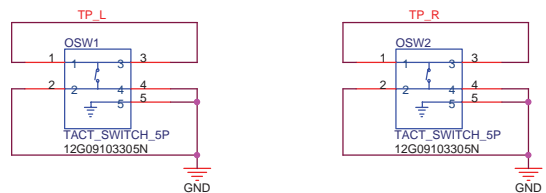


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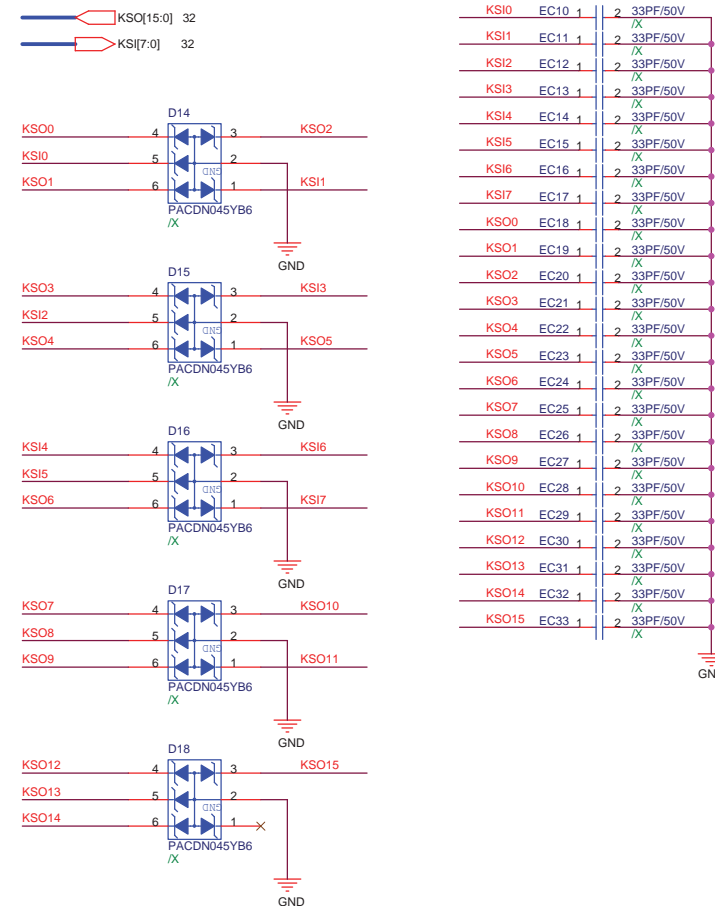
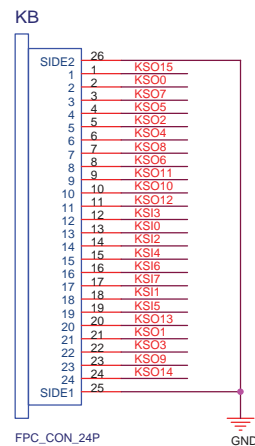
ASUS		Title : Thermal Sensor_FAN	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size	Project Name	Rev	
A3	1000HO_MB	1.0G	
Date: Friday, January 23, 2009	Sheet	35	of 52



SW2, SW3 use 12G09103305N



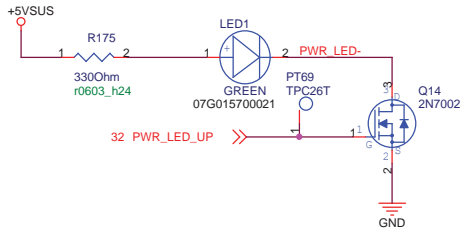
For Keyboard Connector



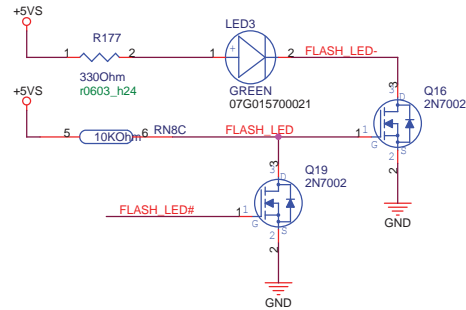
<Core Design>

ASUS		Title : KB_Touch Pad	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size	Project Name	Rev	
A3	1000HO_MB	1.0G	
Date: Friday, January 23, 2009		Sheet	52

for POWER LED

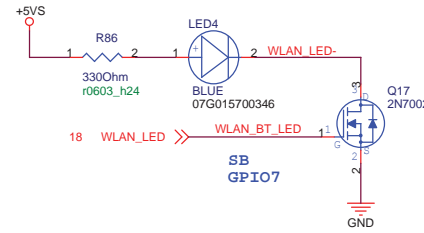


for FLASH LED

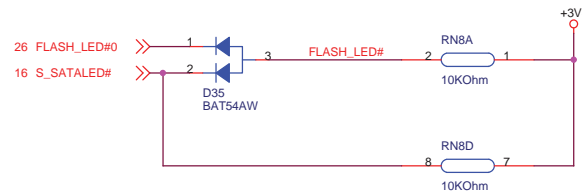
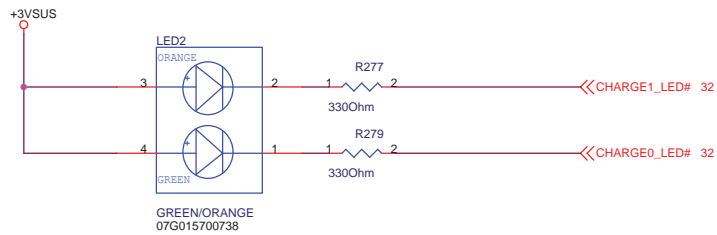


for WLAN/BlueTooth LED

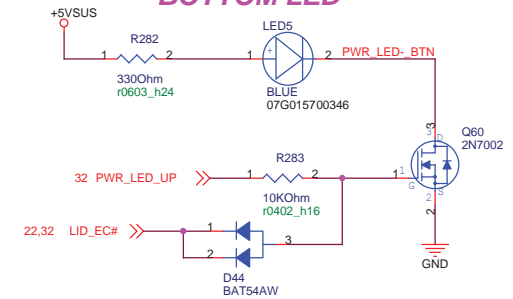
R86 use 4.7K OHm 10G213472003030



for CHARGE LED

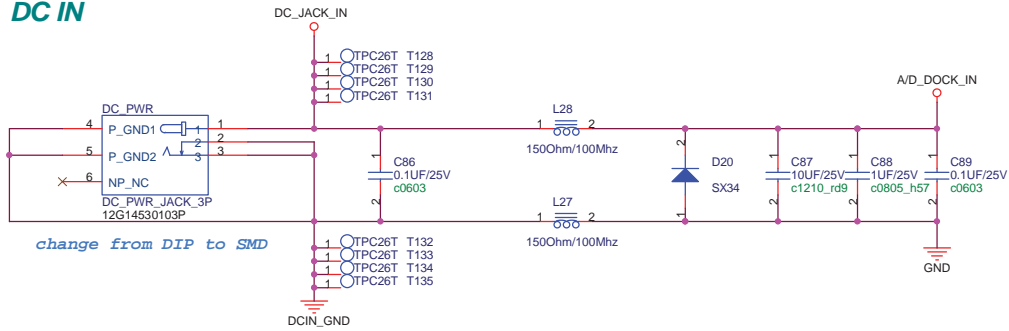


for POWER BOTTOM LED

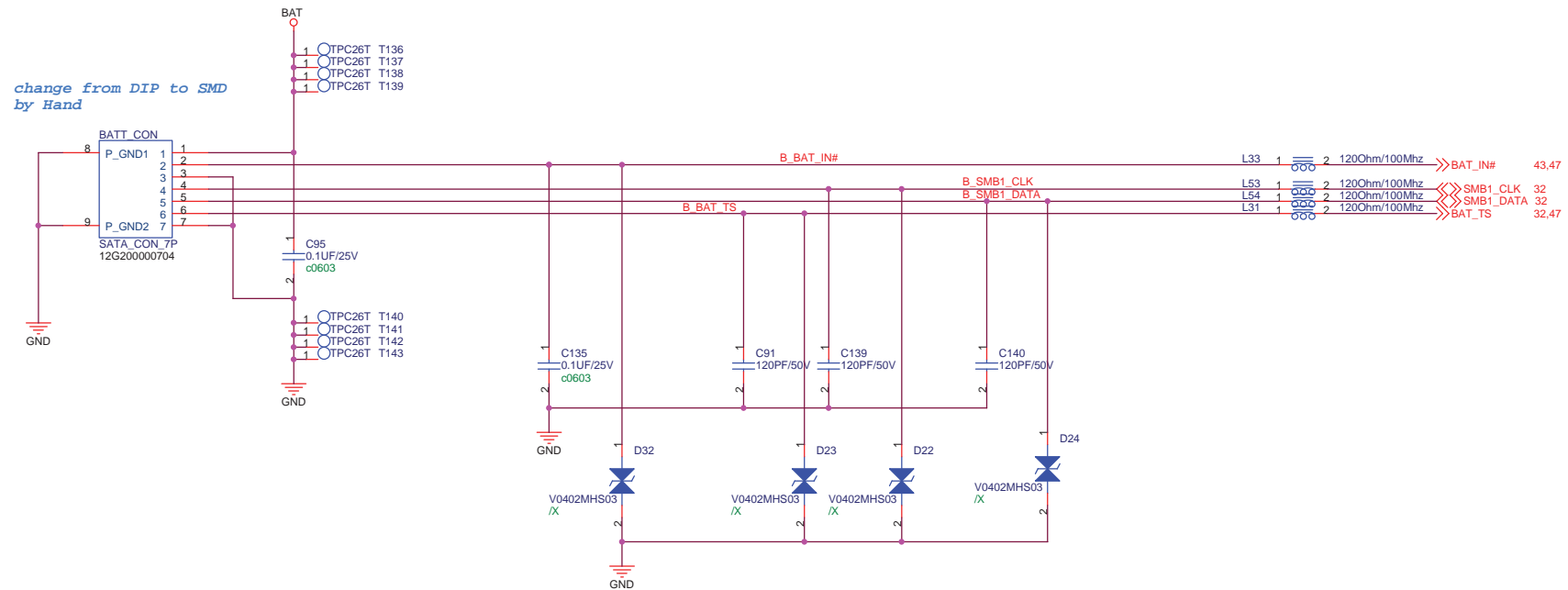


<Core Design>			
ASUS		Title : LED	
ASUSTek Computer INC.		Engineer: Kell_Huang	
Size	Project Name		Rev
A3	1000H_MB		1.1G
Date: Friday, January 23, 2009		Sheet	37 of 47

DC IN

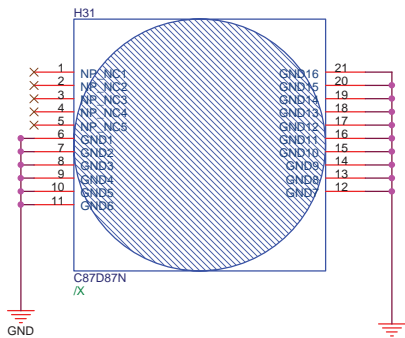
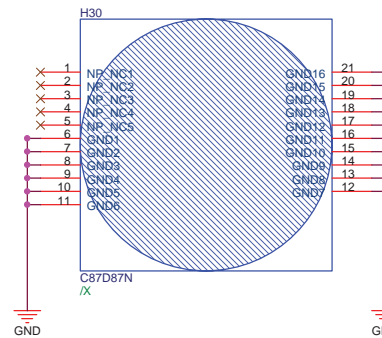
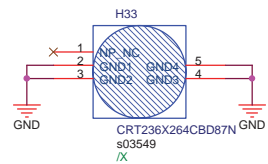
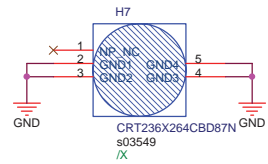
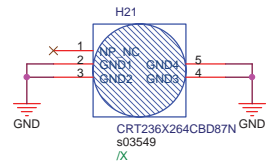
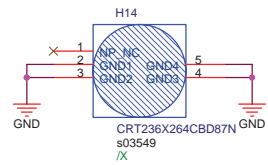
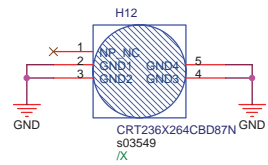
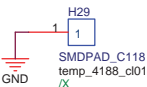
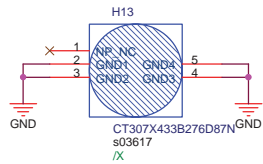
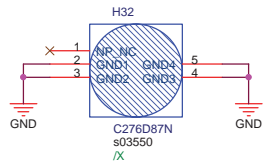
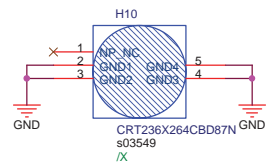
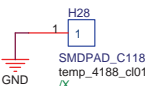
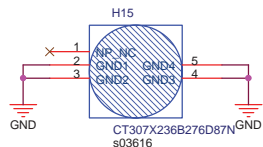
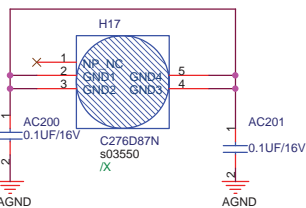
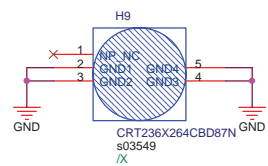
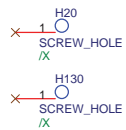
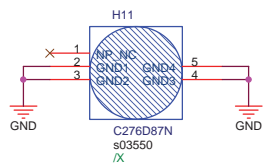
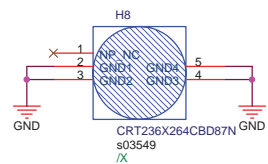


BAT IN

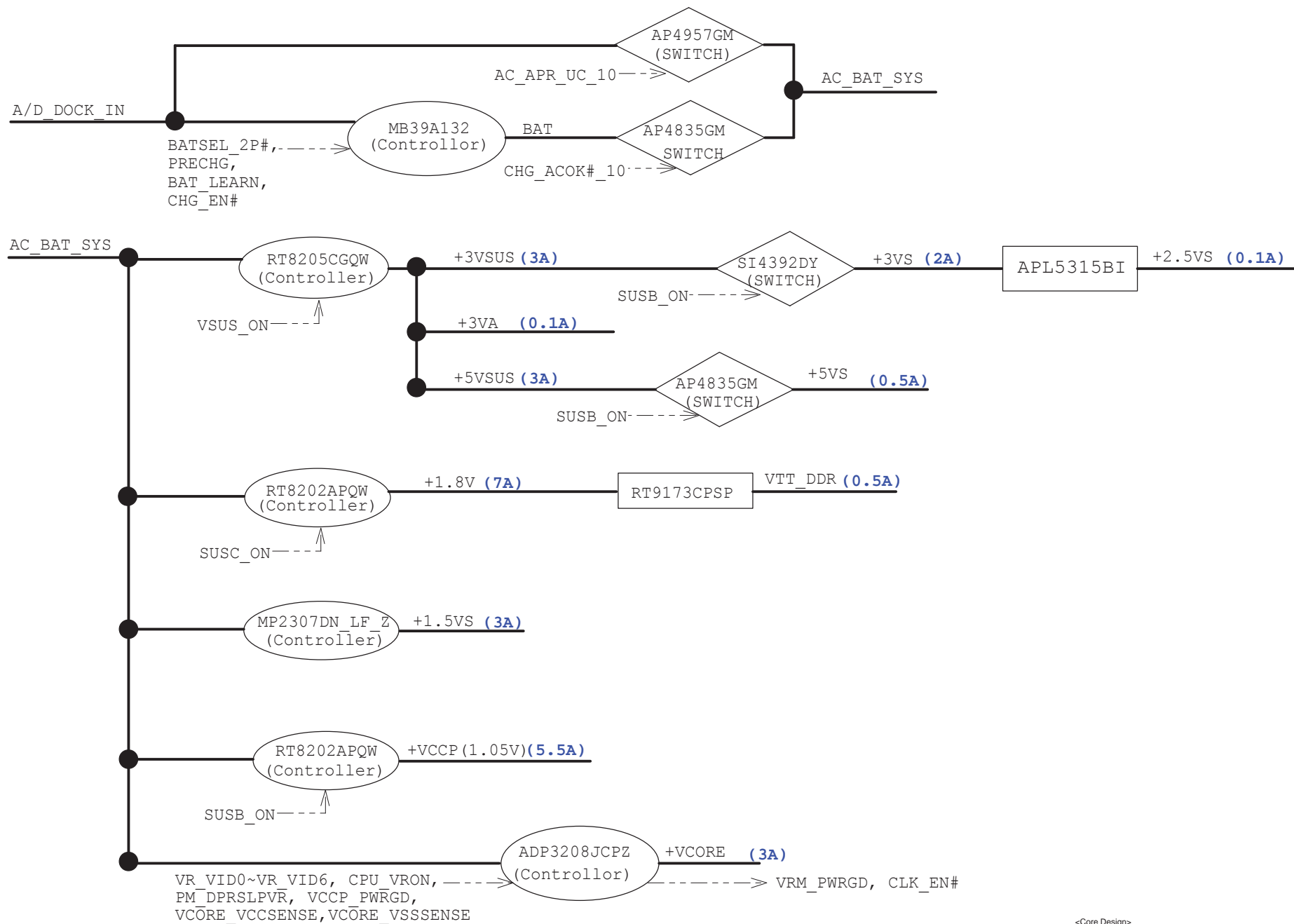


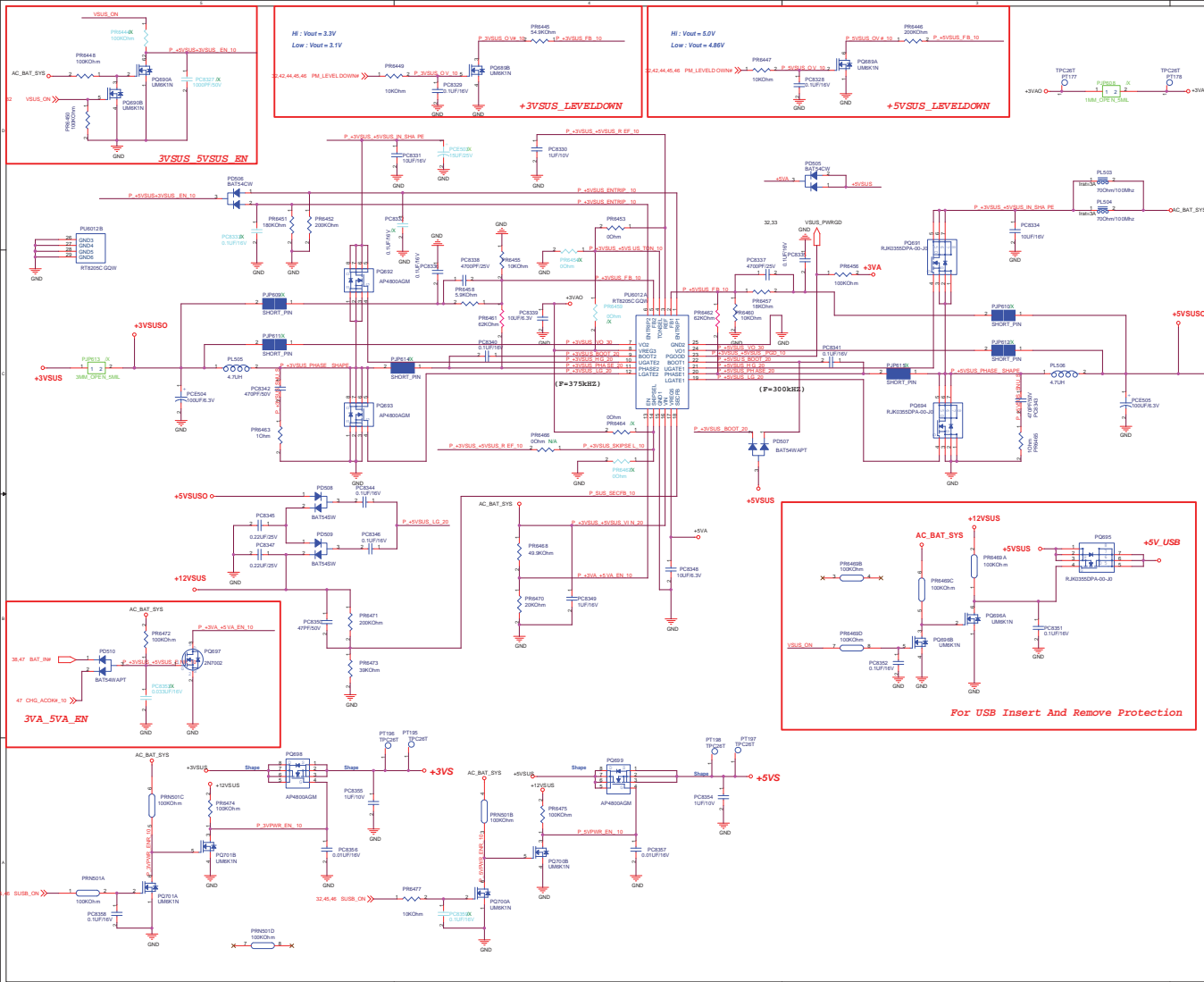
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		Title : PWR Jack	
ASUSTek Computer INC.		Engineer: Jeff Li	
Size A3	Project Name 1000HO_MB		Rev 1.0G
Date: Friday, January 23, 2009		Sheet	38 of 52



<Core Design>			
ASUS		Title : Screw Hole	
ASUSTek Computer INC.		Engineer: Kell_Huang	
Size	Project Name	Rev	
A3	1000H_MB	1.1G	
Date: Friday, January 23, 2009	Sheet	39	of 47





Power stage	+3VSUS	Power stage	+5VSUS
1. I/P Current: I in = Vo*Io/(0.75 * Vin) =1.1A		1. I/P Current: I in = Vo*Io/(0.75 * Vin) =1.67A	
2. Ripple Current: I rip =1.36A I spec=2.5A @1 pcs		2. Ripple Current: I rip =2.07A I spec=2.5A @1 pcs	
3. Dynamic: I peak=3A ESR / 1 pcs =18 mohm) V =54mV		3. Dynamic: I peak=3A ESR / 1 pcs =18 mohm) V =54mV	
4. Inductor Spec: I sat=10 A I dc =5.5 A DCR=37 mohm		4. Inductor Spec: I sat=10 A I dc =5.5 A DCR=37 mohm	
5. MOSFET Spec: H-side MOSFET: AP4800AGM Rds(ON)= 21 mohm (Vgs=4.5 V) I cont = 9.6 A (T=25) I peak = 40 A L-side MOSFET: RAP4800AGM Rds(ON)= 21 mohm (Vgs=4.5 V) I cont = 9.6 A (T=25) I peak = 40 A		5. MOSFET Spec: H-side MOSFET: RJK0355DPA-00-J0 WPAK Rds(ON)= 10.7 mohm (Vgs=10 V) I cont = 30 A (T=25) I peak = 120 A (Pause ≥10 us) L-side MOSFET: RJK0355DPA-00-J0 WPAK Rds(ON)= 10.7 mohm (Vgs=10 V) I cont = 30 A (T=25) I peak = 120 A (Pause ≥10 us)	

Controller	+3VSUS	Controller	+5VSUS
1. Voltage & Current: +3VSUS=3.3V @3A		1. Voltage & Current: +5VSUS=5V @3A	
2. Frequency: fosc=375KHz		2. Frequency: fosc=300KHz	
3. OCP: Set PR112=10Kohm Iocp=11.1A		3. OCP: Set PR112=10Kohm Iocp=11.1A	
4. POR: V on =2.5V		4. POR: V on =4.35-4.5 V V off =3.9-4.25 V	
5. UVP: V uvp= 70% Vout		5. UVP: V uvp= 70% Vout	
6. OVP: V ovp=115%Vout		6. OVP: V ovp=115%Vout	
7. Enable Voltage: V rising = 1V V falling = 0.4 V		7. Enable Voltage: V rising = 1V V falling = 0.4 V	
8. Soft start time: Tss=2ms		8. Soft start time: Tss=2ms	
9. Phase selection: /X		9. Phase selection: /X	
10.Inrush Current: C total = 110 uF I inrush= 0.165 A		10.Inrush Current: C total = 110 uF I inrush= 0.275 A	

+3VSUS		+5VSUS	
1. Voltage & Current: +3VSUS=3.3V @3A		1. Voltage & Current: +5VSUS=5V @3A	
2. Frequency: fosc=375KHz		2. Frequency: fosc=300KHz	
3. OCP: Set PR112=10Kohm Iocp=11.1A		3. OCP: Set PR112=10Kohm Iocp=11.1A	
4. POR: V on =2.5V		4. POR: V on =4.35-4.5 V V off =3.9-4.25 V	
5. UVP: V uvp= 70% Vout		5. UVP: V uvp= 70% Vout	
6. OVP: V ovp=115%Vout		6. OVP: V ovp=115%Vout	
7. Enable Voltage: V rising = 1V V falling = 0.4 V		7. Enable Voltage: V rising = 1V V falling = 0.4 V	
8. Soft start time: Tss=2ms		8. Soft start time: Tss=2ms	
9. Phase selection: /X		9. Phase selection: /X	
10.Inrush Current: C total = 110 uF I inrush= 0.165 A		10.Inrush Current: C total = 110 uF I inrush= 0.275 A	

+3VSUS		+5VSUS	
1. Voltage & Current: +3VSUS=3.3V @3A		1. Voltage & Current: +5VSUS=5V @3A	
2. Frequency: fosc=375KHz		2. Frequency: fosc=300KHz	
3. OCP: Set PR112=10Kohm Iocp=11.1A		3. OCP: Set PR112=10Kohm Iocp=11.1A	
4. POR: V on =2.5V		4. POR: V on =4.35-4.5 V V off =3.9-4.25 V	
5. UVP: V uvp= 70% Vout		5. UVP: V uvp= 70% Vout	
6. OVP: V ovp=115%Vout		6. OVP: V ovp=115%Vout	
7. Enable Voltage: V rising = 1V V falling = 0.4 V		7. Enable Voltage: V rising = 1V V falling = 0.4 V	
8. Soft start time: Tss=2ms		8. Soft start time: Tss=2ms	
9. Phase selection: /X		9. Phase selection: /X	
10.Inrush Current: C total = 110 uF I inrush= 0.165 A		10.Inrush Current: C total = 110 uF I inrush= 0.275 A	

+3VSUS		+5VSUS	
1. Voltage & Current: +3VSUS=3.3V @3A		1. Voltage & Current: +5VSUS=5V @3A	
2. Frequency: fosc=375KHz		2. Frequency: fosc=300KHz	
3. OCP: Set PR112=10Kohm Iocp=11.1A		3. OCP: Set PR112=10Kohm Iocp=11.1A	
4. POR: V on =2.5V		4. POR: V on =4.35-4.5 V V off =3.9-4.25 V	
5. UVP: V uvp= 70% Vout		5. UVP: V uvp= 70% Vout	
6. OVP: V ovp=115%Vout		6. OVP: V ovp=115%Vout	
7. Enable Voltage: V rising = 1V V falling = 0.4 V		7. Enable Voltage: V rising = 1V V falling = 0.4 V	
8. Soft start time: Tss=2ms		8. Soft start time: Tss=2ms	
9. Phase selection: /X		9. Phase selection: /X	
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4. POR: V on =2.5V		4. POR: V on =4.35-4.5 V V off =3.9-4.25 V	
5. UVP: V uvp= 70% Vout		5. UVP: V uvp= 70% Vout	
6. OVP: V ovp=115%Vout		6. OVP: V ovp=115%Vout	
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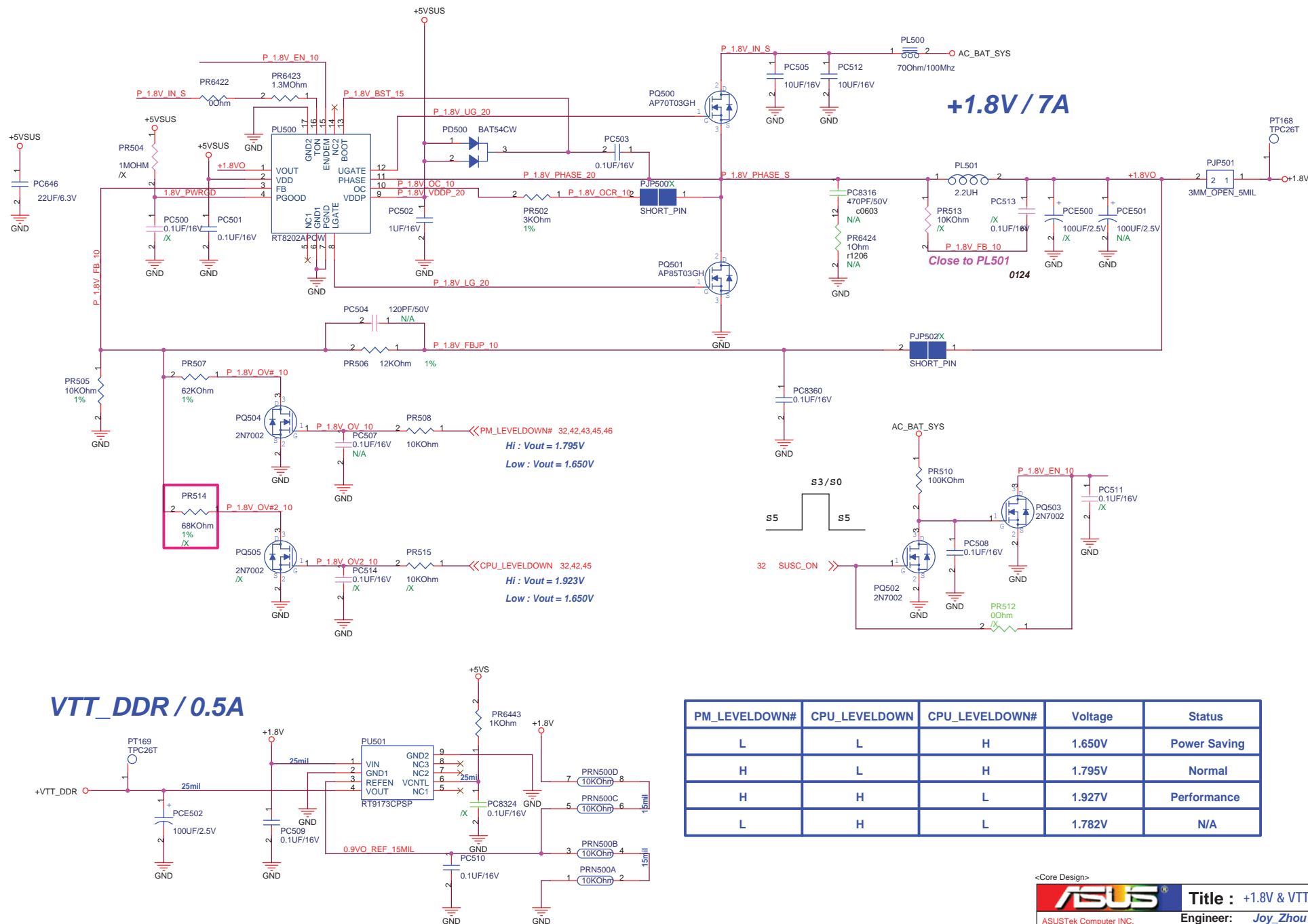
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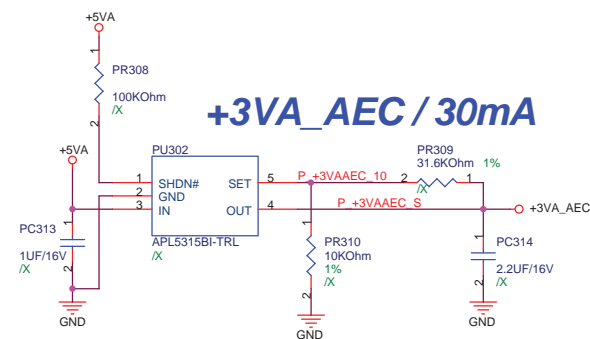
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Battery Charging Voltage :
 $V_{adj3} > 4.1V \Rightarrow V_{bat} = 4.2V / \text{cell}$
 $2.2V > V_{adj3} > 1.1V \Rightarrow V_{bat} = 2 * V_{adj3}$
Battery Charging Current :
 $4.4V > V_{adj2} \geq 0V \Rightarrow$
 $I_{chg} = (V_{adj2} - 0.075) / (25 * R_s)$
Input Adaptor Max. Current Limit :
 $I_{limit_current} = (V_{adj1} - 0.075) / (25 * R_s)$

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

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

ACIN Threshold = 1.25V
 Adaptor > 8.63V, System Powered by Adaptor
 Adaptor < 8.63V, System Powered by Battery

Prevent Input from 19V :

Adaptor > 13.06V, PQ603B Turn-off
 Adaptor < 13.06V, PQ603B Turn-on

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

$V_{REF} = 5.0V$
 $f_{osc}(KHz) = 17000 / RT (K\Omega hms)$
 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

Charging Current :

4P#	2P#	Icharge
1	0	0.56A
0	1	1.6A
0	0	2.8A

<Core Design>

ASUSTek Computer INC.

Size Project Name
 Custom 1000H MB
 Date: Friday, January 23, 2009


Title : Charger
 Engineer: Joy Zhou

Rev 1.1G
 Sheet 47 of 47

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



<Core Design>



Title : Note

ASUSTek Computer INC. Engineer: KingCa_Jin

Size	Project Name	Rev
A3	1000HE_MB	1.0G
Date: Friday, January 23, 2009		Sheet 48 of 47