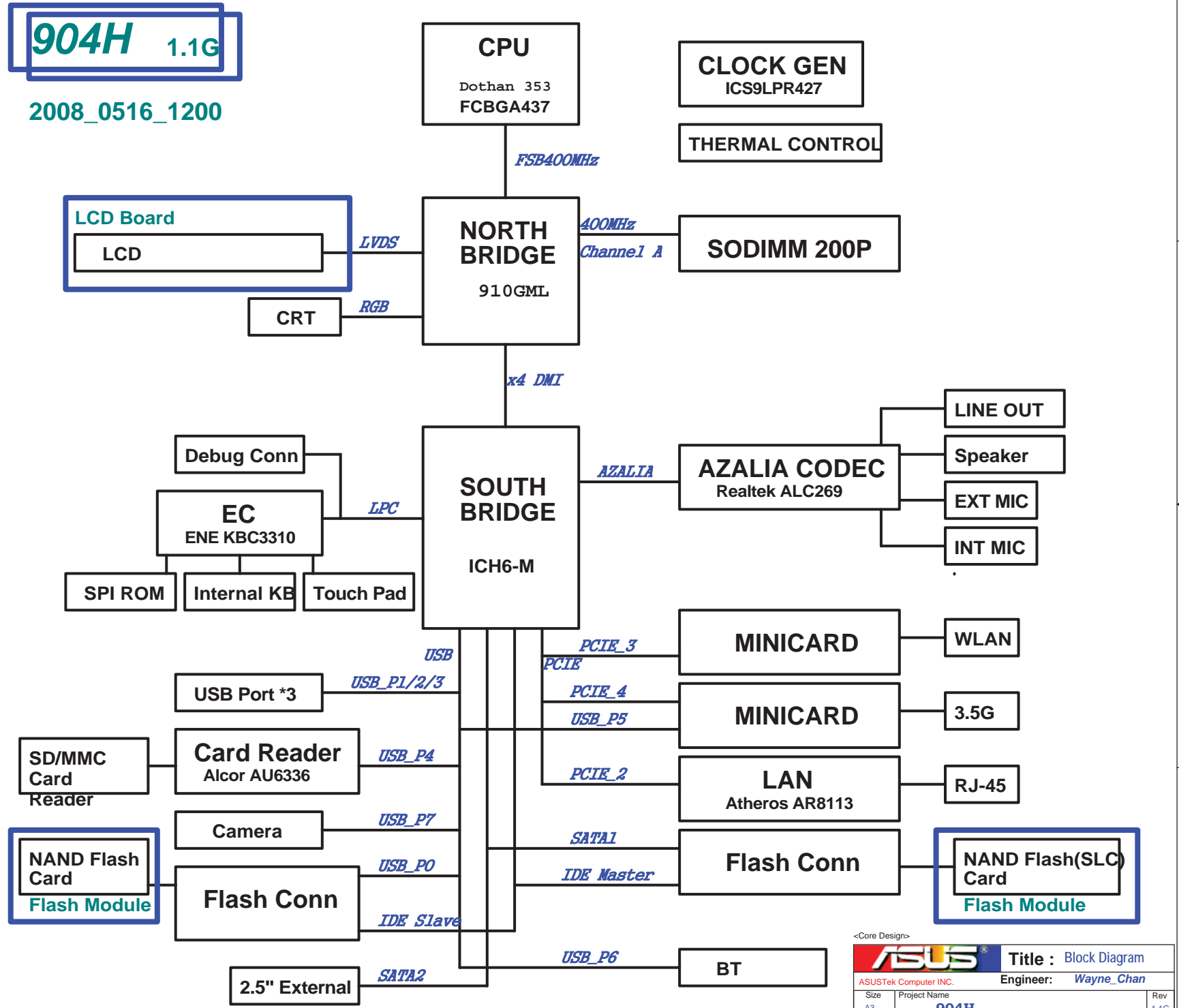


- 01_Block Diagram
- 02_System Setting
- 03_Power Sequence
- 04_EC Pin Define
- 05_History
- 06_*
- 07_Clock Gen_ICS9LPR427
- 08_Dothan_HOST
- 09_Dothan_PWR_GND
- 10_NB-910GML_HOST_DMI
- 11_NB-910GML_DRAM
- 12_NB-910GML_VGA_LVDS_TV
- 13_NB-910GML_PWR
- 14_NB-910GML_GND
- 15_SB-ICH6-M_Azalia_GPIO_PCI_LAN
- 16_SB-ICH6-M_USB_PCIE_DMI_IDE_SATA
- 17_SB-ICH6-M_PWR_GND
- 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_RJ45
- 26_Flash Conn
- 27_SATA HDD
- 28_USB Port
- 29_Camera Power
- 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
- 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



<http://hobi-elektronika.net>

<Core Design>

ASUS		Title : Block Diagram
ASUSTek Computer INC.		Engineer: Wayne_Chan
Size	Project Name	Rev
A3	904H	1.1G
Date: Friday, May 16, 2008		Sheet 1 of 49

EEE PC 904H PCB version

GPI29	GPI31	PCB version
0	0	1.0G
0	0	
0	0	
0	0	
0	1	
0	1	
0	1	
0	1	
1	0	
1	0	
1	0	
1	0	
1	1	
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	BT
USB 7	Camera

PCIE

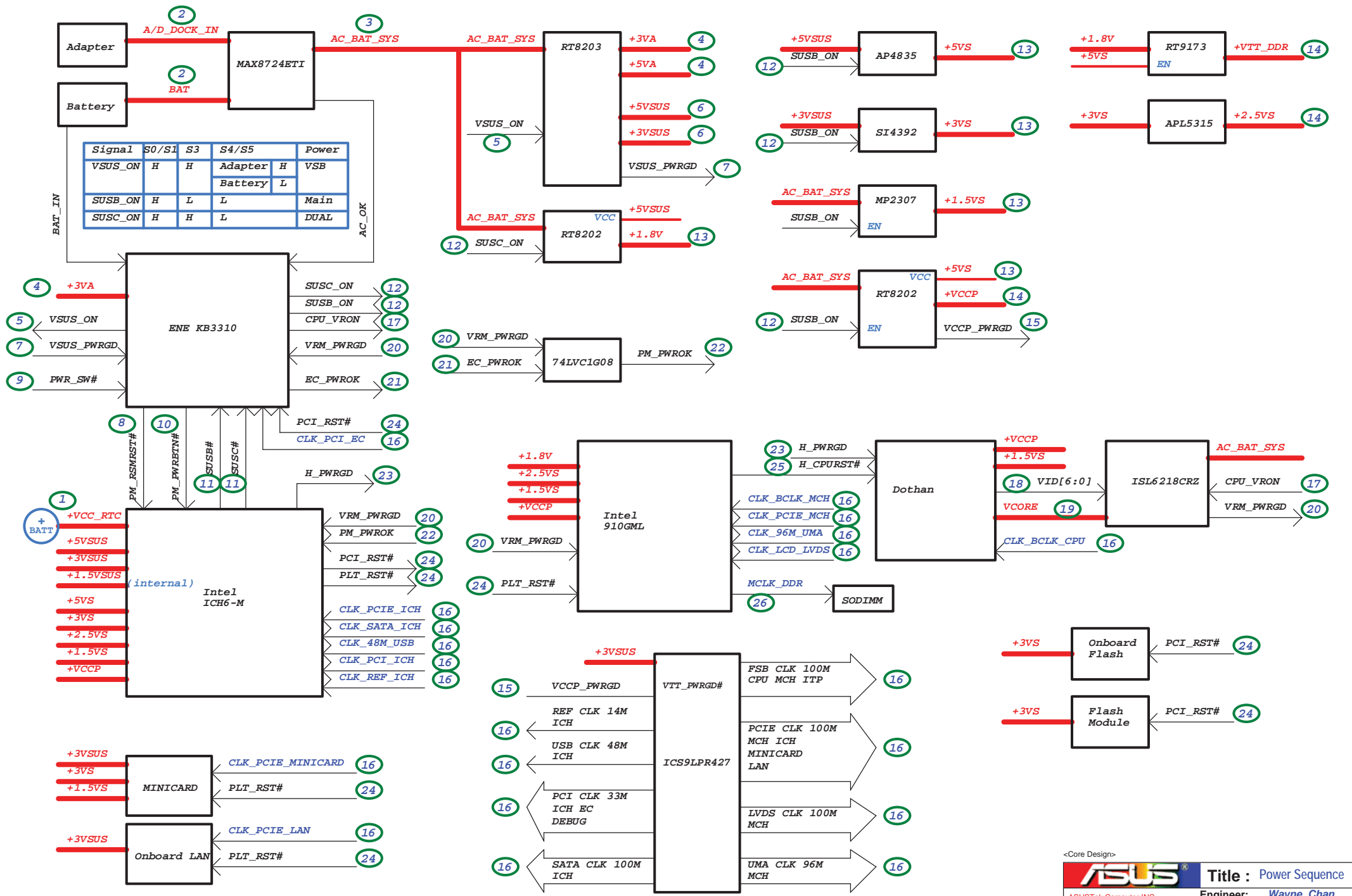
PCIE 1	NC
PCIE 2	LAN
PCIE 3	Minicard
PCIE 4	Minicard

Azalia

ACZ_SDIN0	CODEC
ACZ_SDIN1	NC
ACZ_SDIN2	NC

<Core Design>

		Title : System Setting	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008		Sheet	2 of 49



EC KB3310 GPIO SETTING


Pin	Pin Name	Signal Name	Type	Note
1	GPIO00/GA20	A20GATE	O	
2	GPIO01/KBRST#	RC_IN#	O	
6	GPIO04	HOTKEY_SW0#	I	Internal pull high
13	GPIO05/PCIRST#	PCI_RST#	I	
14	GPIO07	HOTKEY_SW1#	I	Internal pull high
15	GPIO08	EXTSM#	OD	10K pull high to +3VSB
16	GPIO0A	LID_EC#	I	LidOff, 1-LidOn. Internal Pull Up
17	GPIO0B/ESB_CLK	NC	O	
18	GPIO0C/ESB_DAT	NC	O	
19	GPIO0D	HOTKEY_SW2#	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	BATSEL_4P#	I	battery charging current setting
25	GPIO11/PWM2	PM_PWRBTN#	OD	Internal pull high in ICH
26	GPIO12/FANPWM1	FAN0_PWM	O	CPU Fan
27	GPIO13/FANPWM2	FAN1_PWM	O	VGA Fan
28	GPIO14/FANFB1	FAN0_TACH	I	CPU FanTach
29	GPIO15/FANFB2	FAN1_TACH	I	VGA FanTach
30	GPIO16/E51_TX	E51_TX	O	RS232 debug port
31	GPIO17/E51_RX	E51_RX	I	RS232 debug port
32	GPIO18	PWR_SW#	I	power button, internal pull-up
34	GPIO19/PWM3	MAIL_LED#	O	
36	GPIO1A/NUMLED	NUM_LED#	O	
38	GPIO1D/CLKRUN#	CHG_LED_GREEN#	O	Green LED for charging
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_I_CHG	I	
64	GPI39/AD1	BAT_CONFIG	I	Battery configuration
65	GPIO3A/AD2	BAT_SENSE	I	Battery Voltage Sensor
66	GPIO3B/AD3	BAT_TS	I	Battery Thermal Sensor
68	GPO3C/DA0	DOC	O	Trigger Clock Gen

EC KB3310 Other Pin SETTING

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

Pin	Pin Name	Signal Name	Type	Note
70	GPO3D/DA1	LCD_BACKOFF#	O	
71	GPO3E/DA2	CLK_PWRSERVE#	O	
72	GPO3F/DA3	BAT_LL#	O	Battery Low Low
73	GPIO40	AC_OK	I	AC Adaptor Plug in
74	GPIO41	PM_RSMRST#	O	10K pull down to GND
75	GPI42	BAT_IN	I	
76	GPI43	CLRTC_EC	I	
77	GPIO44/SCL1	SMB0_CLK	I/OD	4.7K pull high to +3VA_EC
78	GPIO45/SDA1	SMB0_DAT	I/OD	4.7K pull high to +3VA_EC
79	GPIO46/SCL2	SMB1_CLK	I/OD	10K pull high to +3V
80	GPIO47/SDA2	SMB1_DAT	I/OD	10K pull high to +3V
81	GPIO48/KSO16	KB pin 28	I	for KB type detection
82	GPIO49/KSO17	KB pin 27	I	for KB type detection
83	GPIO4A/PSCLK1	CHG_LED1#	O	Charger LED1
84	GPIO4B/PSDAT1	CHG_LED2#	O	Charger LED2
85	GPIO4C/PSCLK2	CHG_LED3#	O	Charger LED3
86	GPIO4D/PSDAT2	CHG_LED4#	O	Charger LED4
87	GPIO4E/PSCLK3	TP_CLK	I/OD	10K pull high to +3V
88	GPIO4F/PSDAT3	TP_DAT	I/OD	10K pull high to +3V
89	GPIO50/SELIO#	BATSEL_3S	O	Battery series, H:3S, L:4S
90	GPIO52/E51_CS#	CHG_LED_UP#	O	
91	GPIO53/CAPLED	CAP_LED#	O	
92	GPIO54	PWR_LED_UP	O	
93	GPIO55/SCRLED	SCRLED#	O	
95	GPIO56	HOTKEY_SW3#	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	CPU_LEVELDOWN#	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	BATSEL_LiFe	O	
121	GPIO57	HOTKEY_SW4#	I	Internal pull high
126	GPIO57/SPICLK	SPI_CLK	O	
127	GPIO59/TEST_CLK	HOTKEY_SW5#	O	Internal pull high

<Core Design>

		Title : EC Pin Define	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008		Sheet	4 of 49

1.0G From 1000H 2008.3.31.2030 circuit


- 1.Change CPU to Dothan
- 2.Change NB to 910GML
- 3.Change SB to ICH6-M
- 4.VCORE control change to ISL6218CRZ

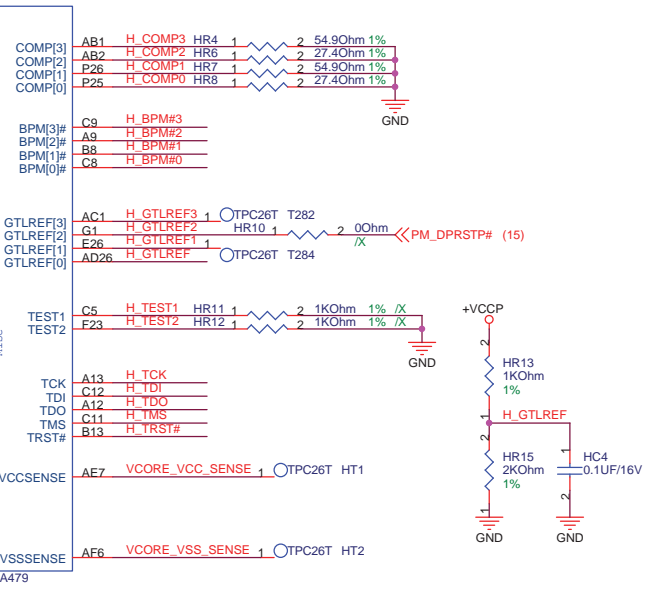
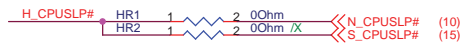
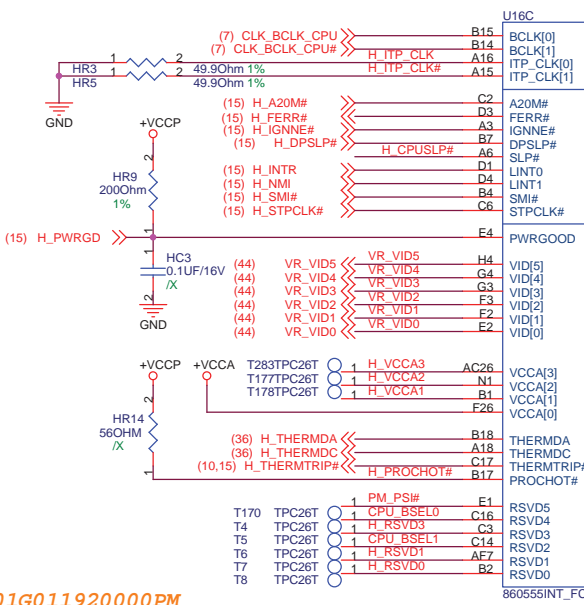
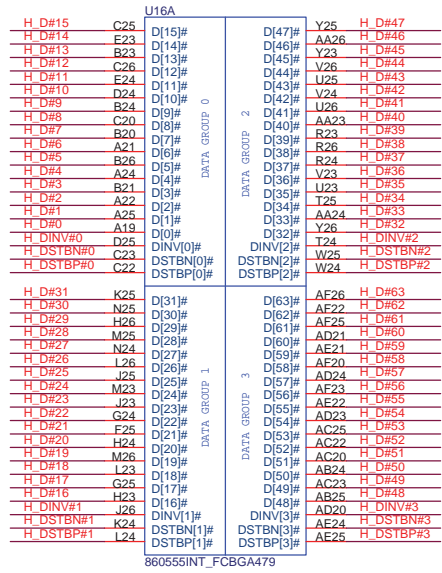
1.1G

- 1.Change Project name to 1000D
- 2.Support LiFe Battery
- 3.Add speaker connect

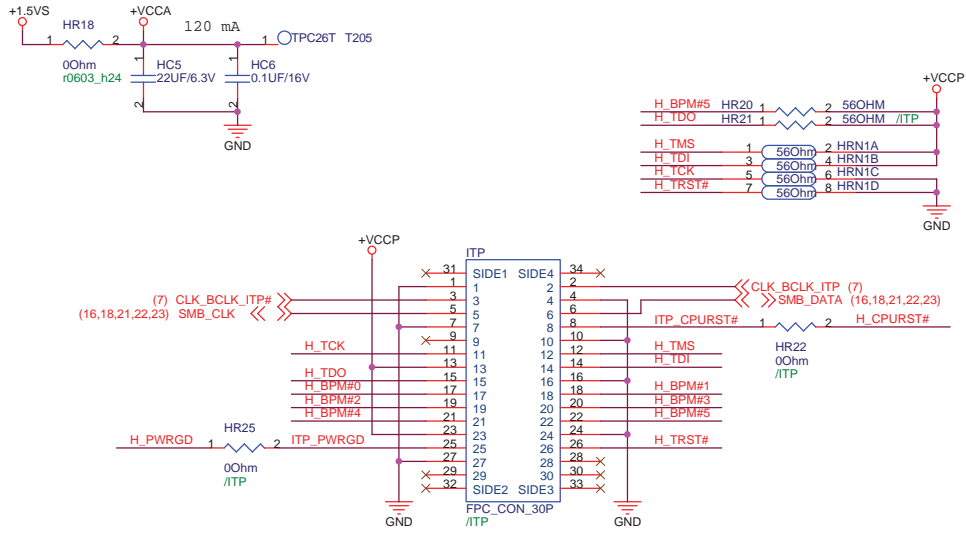
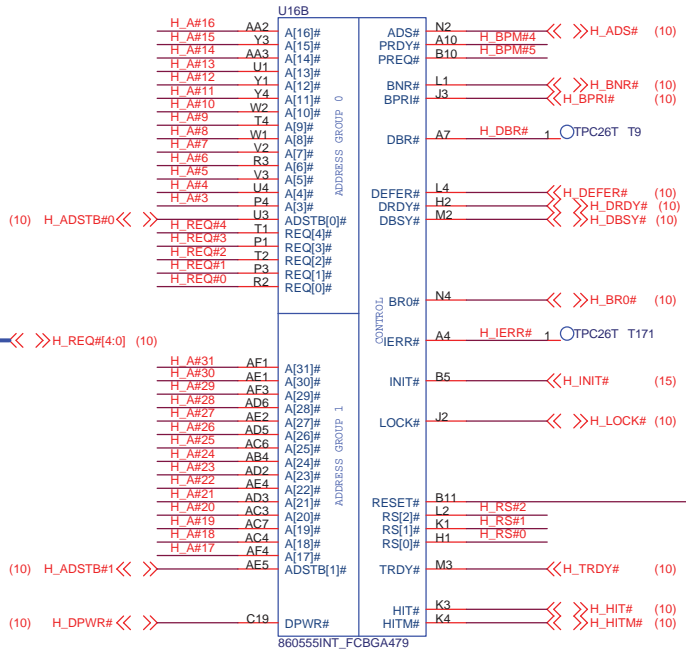


<Core Design>

		Title : Blank
ASUSTek Computer INC.		Engineer: <i>Wayne_Chan</i>
Size	Project Name	Rev
A3	904H	1.1G
Date: Friday, May 16, 2008	Sheet 6 of 49	



U16 use 01G01192000PM



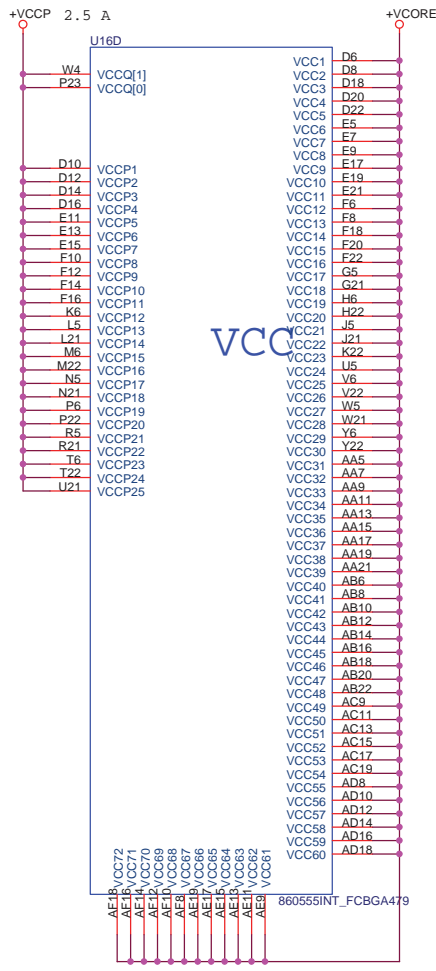
<Core Design>

ASUS Title : Dothan_HOST

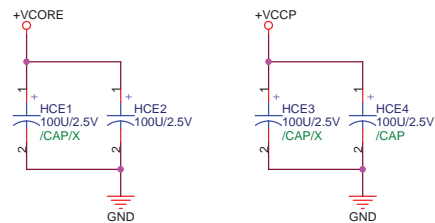
ASUSTek Computer INC. Engineer: Wayne_Chan

Size	Project Name	Rev
A3	904H	1.1G

Date: Friday, May 16, 2008 Sheet 8 of 49

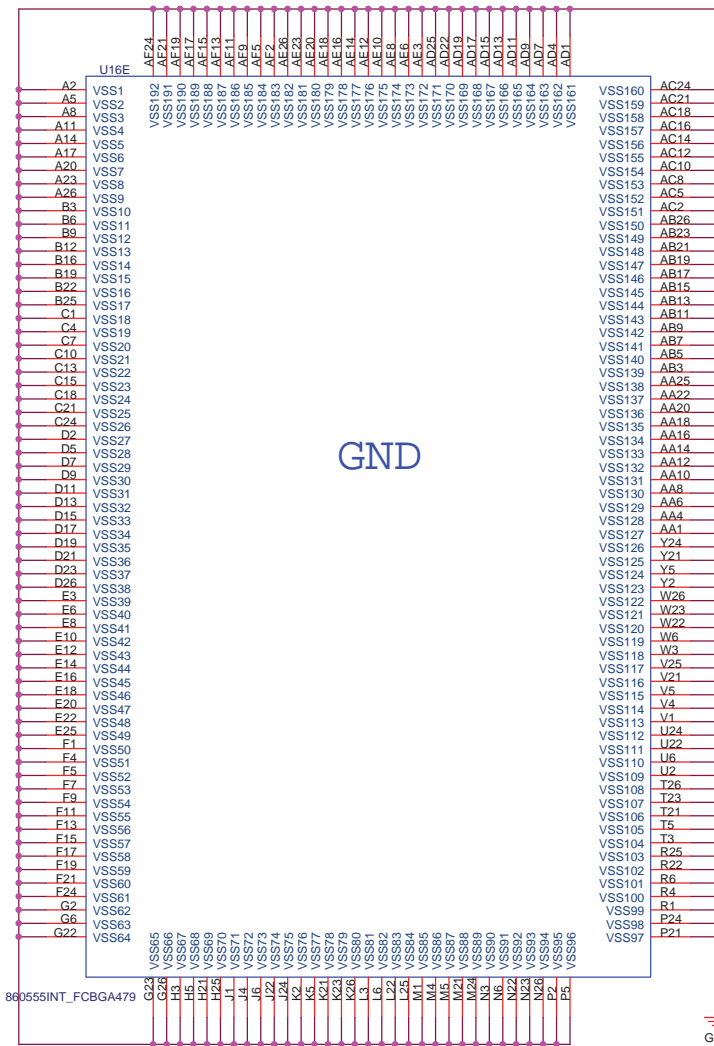
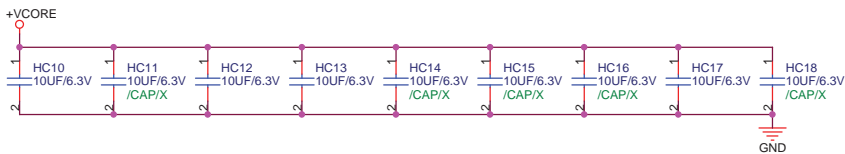
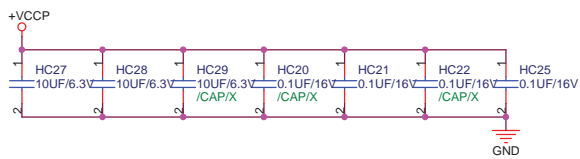
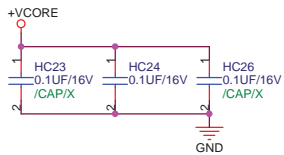


Celeron-M(Dothan) ULV max 7 A



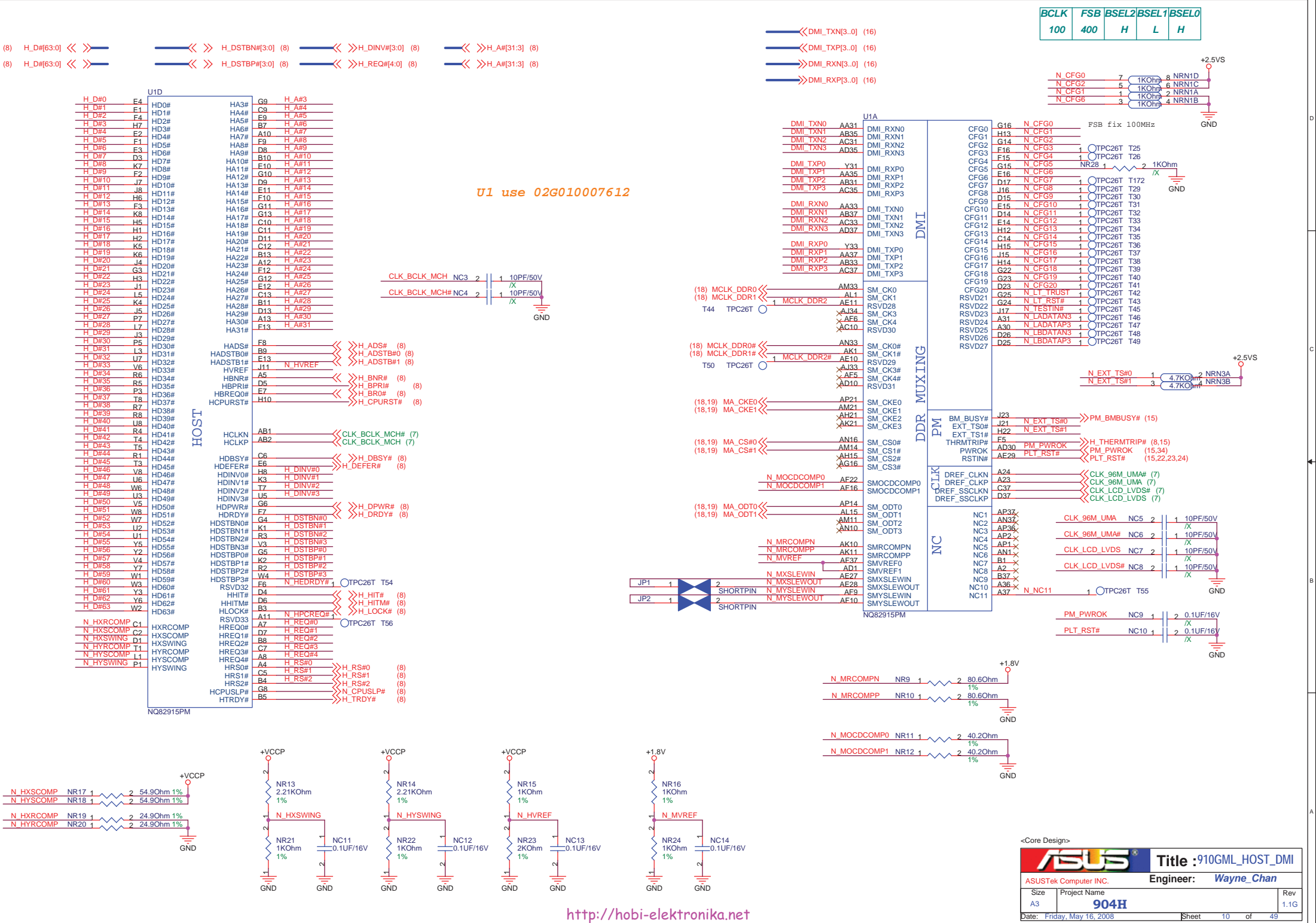
U16 use 01G011920000PM

0.1U All X7R



<Core Design>

ASUS		Title : Dothan_PWR_GND	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name		Rev
A3	904H		1.1G
Date: Friday, May 16, 2008	Sheet	9	of 49



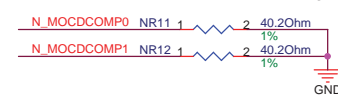
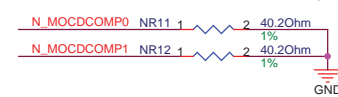
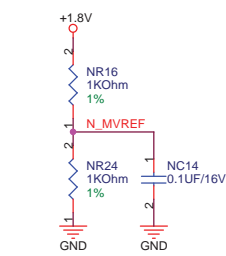
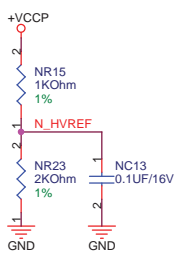
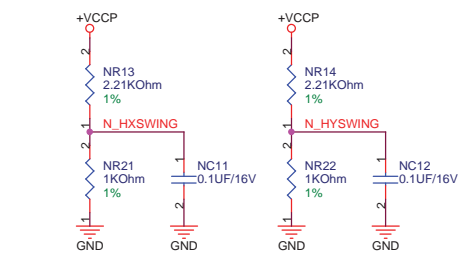
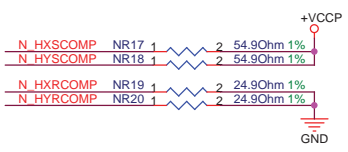
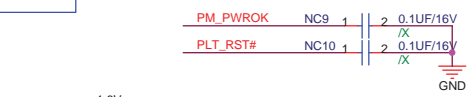
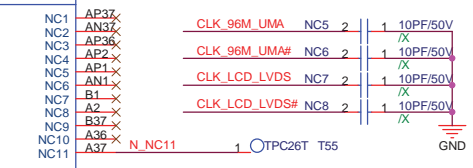
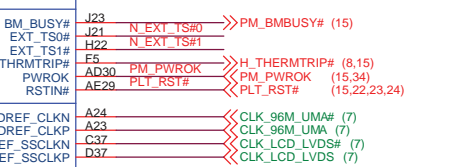
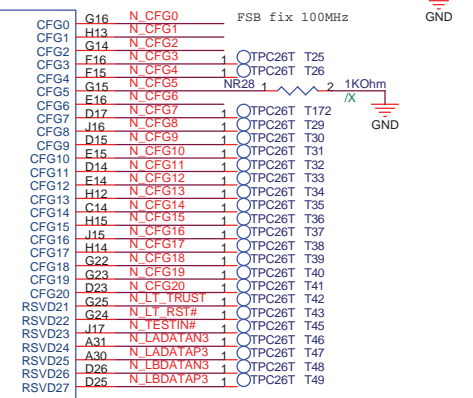
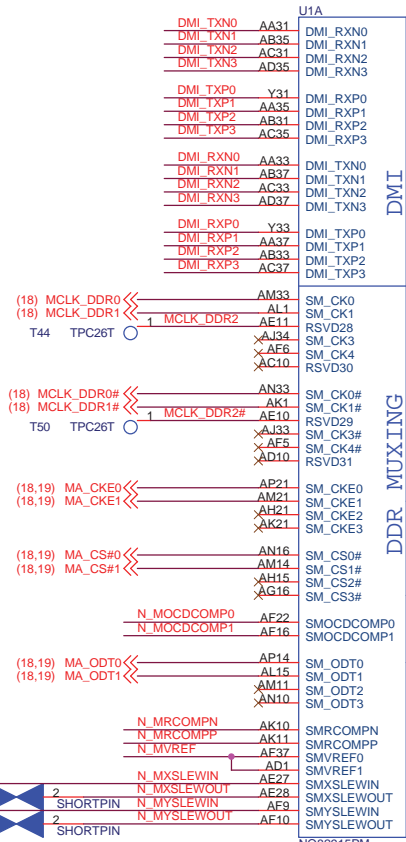
BCLK	FSB	BSEL2	BSEL1	BSEL0
100	400	H	L	H

(8) H_D#[63:0] << >> H_DSTBN#[3:0] (8) << >> H_DINV#[3:0] (8) << >> H_A#[31:3] (8)
 (8) H_D#[63:0] << >> H_DSTBP#[3:0] (8) << >> H_REQ#[4:0] (8) << >> H_A#[31:3] (8)

<< >> DML_TXN[3..0] (16)
 << >> DML_TXP[3..0] (16)
 << >> DML_RXN[3..0] (16)
 << >> DML_RXP[3..0] (16)



U1 use 02G010007612



<Core Design>

Title : 910GML_HOST_DMI

ASUSTek Computer INC. Engineer: Wayne_Chan

Size	Project Name	Rev
A3	904H	1.1G

Date: Friday, May 16, 2008 Sheet 10 of 49

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

U1B

MA_D00	AG35	SA_D00
MA_D01	AH35	SA_D01
MA_D02	AL35	SA_D02
MA_D03	AL37	SA_D03
MA_D04	AH36	SA_D04
MA_D05	AJ35	SA_D05
MA_D06	AK37	SA_D06
MA_D07	AL34	SA_D07
MA_D08	AM36	SA_D08
MA_D09	AN35	SA_D09
MA_D10	AP32	SA_DQ10
MA_D11	AM31	SA_DQ11
MA_D12	AM34	SA_DQ12
MA_D13	AM35	SA_DQ13
MA_D14	AL32	SA_DQ14
MA_D15	AM32	SA_DQ15
MA_D16	AN31	SA_DQ16
MA_D17	AP31	SA_DQ17
MA_D18	AN28	SA_DQ18
MA_D19	AP28	SA_DQ19
MA_D20	AL30	SA_DQ20
MA_D21	AM30	SA_DQ21
MA_D22	AM28	SA_DQ22
MA_D23	AL28	SA_DQ23
MA_D24	AP27	SA_DQ24
MA_D25	AM27	SA_DQ25
MA_D26	AM23	SA_DQ26
MA_D27	AM22	SA_DQ27
MA_D28	AL23	SA_DQ28
MA_D29	AM24	SA_DQ29
MA_D30	AN22	SA_DQ30
MA_D31	AP22	SA_DQ31
MA_D32	AM9	SA_DQ32
MA_D33	AL9	SA_DQ33
MA_D34	AL6	SA_DQ34
MA_D35	AP7	SA_DQ35
MA_D36	AP11	SA_DQ36
MA_D37	AP10	SA_DQ37
MA_D38	AL7	SA_DQ38
MA_D39	AM7	SA_DQ39
MA_D40	AN5	SA_DQ40
MA_D41	AN6	SA_DQ41
MA_D42	AP3	SA_DQ42
MA_D43	AN3	SA_DQ43
MA_D44	AP6	SA_DQ44
MA_D45	AM6	SA_DQ45
MA_D46	AL4	SA_DQ46
MA_D47	AM3	SA_DQ47
MA_D48	AK2	SA_DQ48
MA_D49	AK3	SA_DQ49
MA_D50	AG2	SA_DQ50
MA_D51	AG1	SA_DQ51
MA_D52	AL3	SA_DQ52
MA_D53	AM2	SA_DQ53
MA_D54	AH3	SA_DQ54
MA_D55	AG3	SA_DQ55
MA_D56	AE3	SA_DQ56
MA_D57	AE3	SA_DQ57
MA_D58	AD6	SA_DQ58
MA_D59	AC4	SA_DQ59
MA_D60	AE2	SA_DQ60
MA_D61	AE1	SA_DQ61
MA_D62	AD4	SA_DQ62
MA_D63	AD5	SA_DQ63

NQ82915PM

DDR SYSTEM MEMORY A

SA_BS0	AK15	MA_BA0	>>MA_BA0	(18,19)
SA_BS1	AK16	MA_BA1	>>MA_BA1	(18,19)
SA_BS2	AL21	MA_BA2	>>MA_BA2	(18,19)
SA_DM0	AJ37	MA_DM0		
SA_DM1	AP35	MA_DM1		
SA_DM2	AL29	MA_DM2		
SA_DM3	AP24	MA_DM3		
SA_DM4	AP9	MA_DM4		
SA_DM5	AP4	MA_DM5		
SA_DM6	AJ2	MA_DM6		
SA_DM7	AD3	MA_DM7		
SA_DQS0	AK36	MA_DQS0	>>MA_DQS[7:0] (18)	
SA_DQS1	AP33	MA_DQS1		
SA_DQS2	AN29	MA_DQS2		
SA_DQS3	AP23	MA_DQS3		
SA_DQS4	AM8	MA_DQS4		
SA_DQS5	AM4	MA_DQS5		
SA_DQS6	AJ1	MA_DQS6		
SA_DQS7	AE5	MA_DQS7		
SA_DQS#0	AK35	MA_DQS#0	>>MA_DQS#[7:0] (18)	
SA_DQS#1	AP34	MA_DQS#1		
SA_DQS#2	AN30	MA_DQS#2		
SA_DQS#3	AN23	MA_DQS#3		
SA_DQS#4	AN8	MA_DQS#4		
SA_DQS#5	AM5	MA_DQS#5		
SA_DQS#6	AH1	MA_DQS#6		
SA_DQS#7	AE4	MA_DQS#7		
SA_MA0	AL17	MA_MA0	>>MA_MA[13:0] (18,19)	
SA_MA1	AP17	MA_MA1		
SA_MA2	AP18	MA_MA2		
SA_MA3	AM17	MA_MA3		
SA_MA4	AN18	MA_MA4		
SA_MA5	AM18	MA_MA5		
SA_MA6	AL19	MA_MA6		
SA_MA7	AP20	MA_MA7		
SA_MA8	AM19	MA_MA8		
SA_MA9	AL20	MA_MA9		
SA_MA10	AM16	MA_MA10		
SA_MA11	AN20	MA_MA11		
SA_MA12	AM20	MA_MA12		
SA_MA13	AM15	MA_MA13		
SA_CAS#	AN15		>>MA_CAS# (18,19)	
SA_RAS#	AP16		>>MA_RAS# (18,19)	
SA_RCVENOUT#	AE29	MA_RCVENOUT# 1	OTPC26T T57	
SA_WE#	AE28	MA_RCVENOUT# 4	OTPC26T T58	
	AP15		>>MA_WE# (18,19)	

<< >>MA_DM[7:0] (18) U1 use 02G010007612

U1C

AE31	SB_D00	AJ15
AE32	SB_D01	AG17
AG32	SB_D02	SB_BS2
AG36	SB_D03	AG21
AE34	SB_D04	
AE33	SB_D05	SB_DM0
AE31	SB_D06	SB_DM1
AE30	SB_D07	SB_DM2
AH33	SB_D08	SB_DM3
AH32	SB_D09	SB_DM4
AK31	SB_DQ10	SB_DM5
AG30	SB_DQ11	SB_DM6
AG34	SB_DQ12	SB_DM7
AG33	SB_DQ13	
AH31	SB_DQ14	AF34
AJ31	SB_DQ15	SB_DQ51
AK30	SB_DQ16	SB_DQ52
AJ30	SB_DQ17	SB_DQ53
AH29	SB_DQ18	SB_DQ54
AH28	SB_DQ19	SB_DQ55
AK29	SB_DQ20	SB_DQ56
AH30	SB_DQ21	SB_DQ57
AH27	SB_DQ22	
AG28	SB_DQ23	AF35
AE24	SB_DQ24	SB_DQS#
AG23	SB_DQ25	SB_DQS#
AJ22	SB_DQ26	SB_DQS#
AK22	SB_DQ27	SB_DQS#
AH24	SB_DQ28	SB_DQS#
AH23	SB_DQ29	SB_DQS#
AG22	SB_DQ30	SB_DQS#
AJ21	SB_DQ31	SB_DQS#
AG10	SB_DQ32	SB_MA0
AG9	SB_DQ33	SB_MA1
AG8	SB_DQ34	SB_MA2
AH8	SB_DQ35	SB_MA3
AH11	SB_DQ36	SB_MA4
AH10	SB_DQ37	SB_MA5
AJ8	SB_DQ38	SB_MA6
AK9	SB_DQ39	SB_MA7
AJ7	SB_DQ40	SB_MA8
AK6	SB_DQ41	SB_MA9
AJ4	SB_DQ42	SB_MA10
AH5	SB_DQ43	SB_MA11
AK8	SB_DQ44	SB_MA12
AJ6	SB_DQ45	SB_MA13
AE5	SB_DQ46	
AK4	SB_DQ47	SB_CAS#
AG5	SB_DQ48	SB_RAS#
AG4	SB_DQ49	SB_RCVENIN#
AD8	SB_DQ50	SB_RCVENOUT#
AD9	SB_DQ51	SB_WE#
AH4	SB_DQ52	
AG6	SB_DQ53	
AE7	SB_DQ54	
AD7	SB_DQ55	
AC5	SB_DQ56	
AB8	SB_DQ57	
AB6	SB_DQ58	
AB8	SB_DQ59	
AC8	SB_DQ60	
AC7	SB_DQ61	
AA4	SB_DQ62	
AA5	SB_DQ63	

NQ82915PM

<Core Design>

ASUS Title : 910GML_DRAM

ASUSTek Computer INC. Engineer: Wayne_Chan

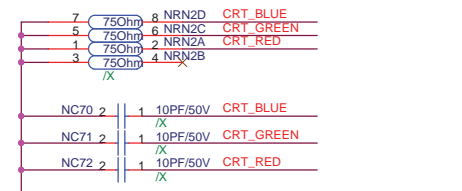
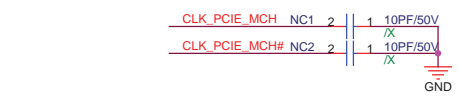
Size	Project Name	Rev
A3	904H	1.1G

Date: Friday, May 16, 2008 Sheet 11 of 49

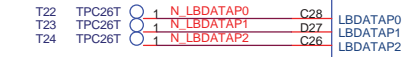
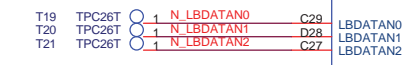
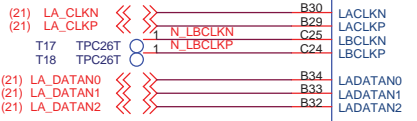
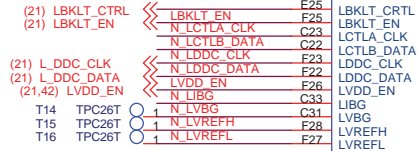
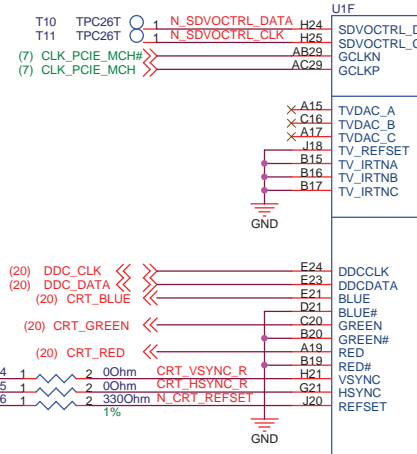
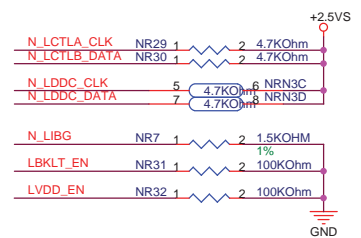
SDVO SMBus have internal pull down

SDVOCRTL_DATA Int PD
 0 : No SDVO device
 1 : SDVO device present

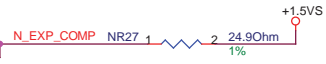
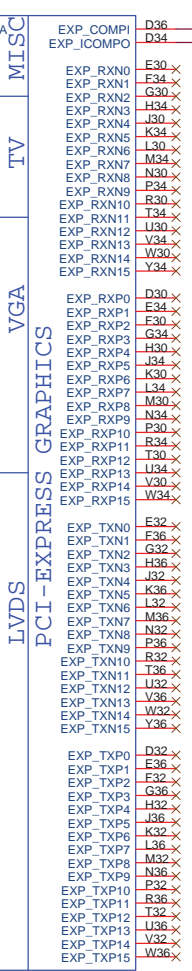
U1 use 02G010007612



(20) CRT_VSYNC
 (20) CRT_HSYNC



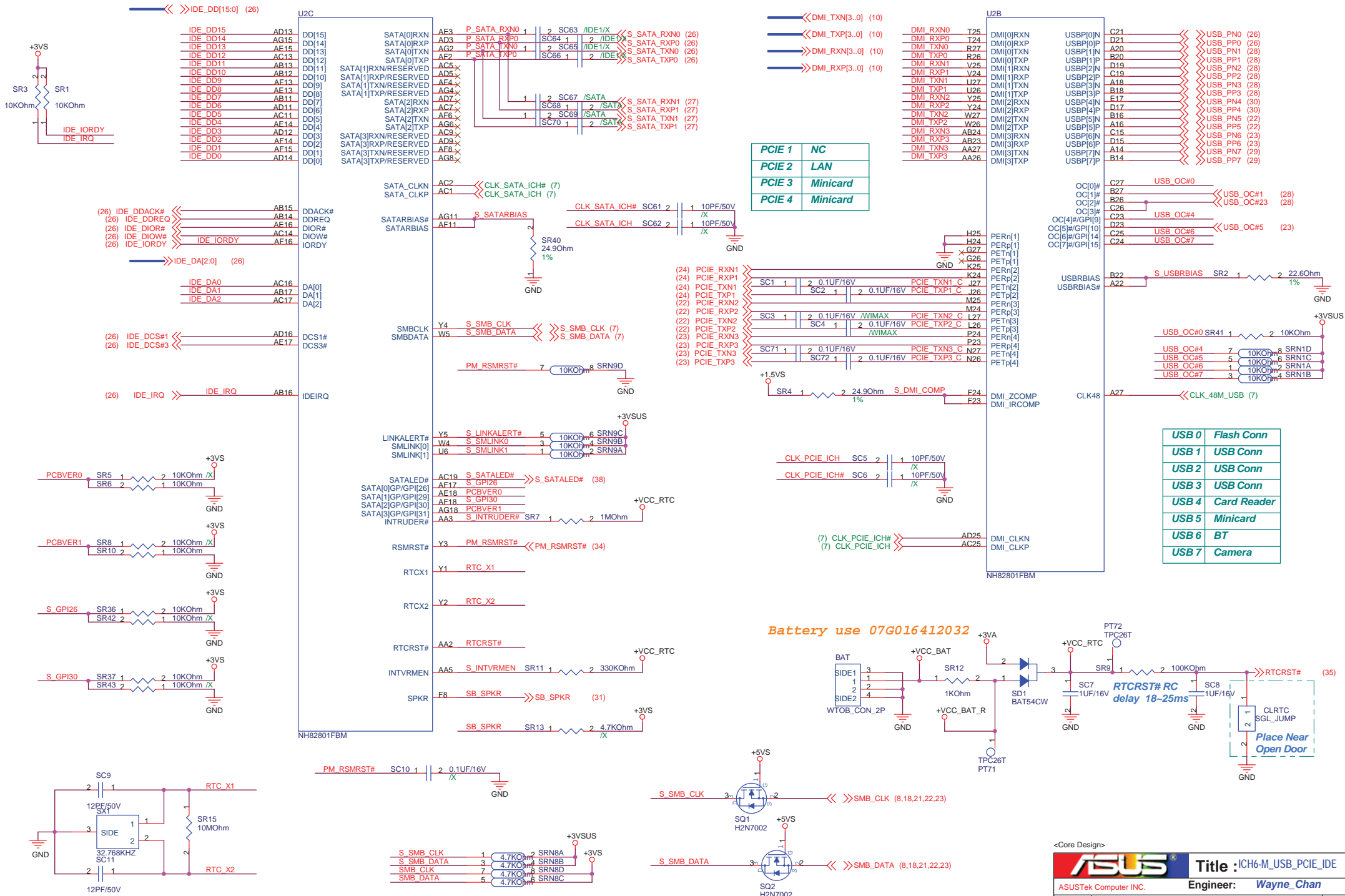
NQ82915PM



PCI-E signals can be left NC, if unused!

<Core Design>

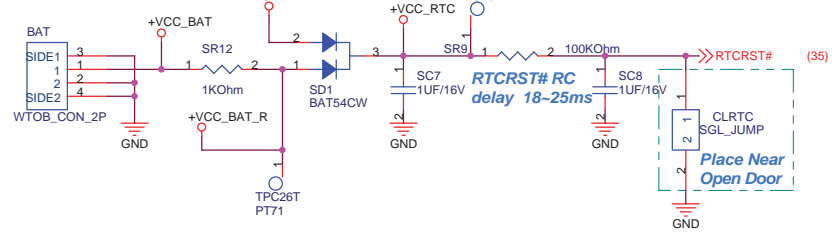
ASUS		Title : 910GML_VGA_LVDS	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008	Sheet	12	of 49



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

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

Battery use 07G016412032

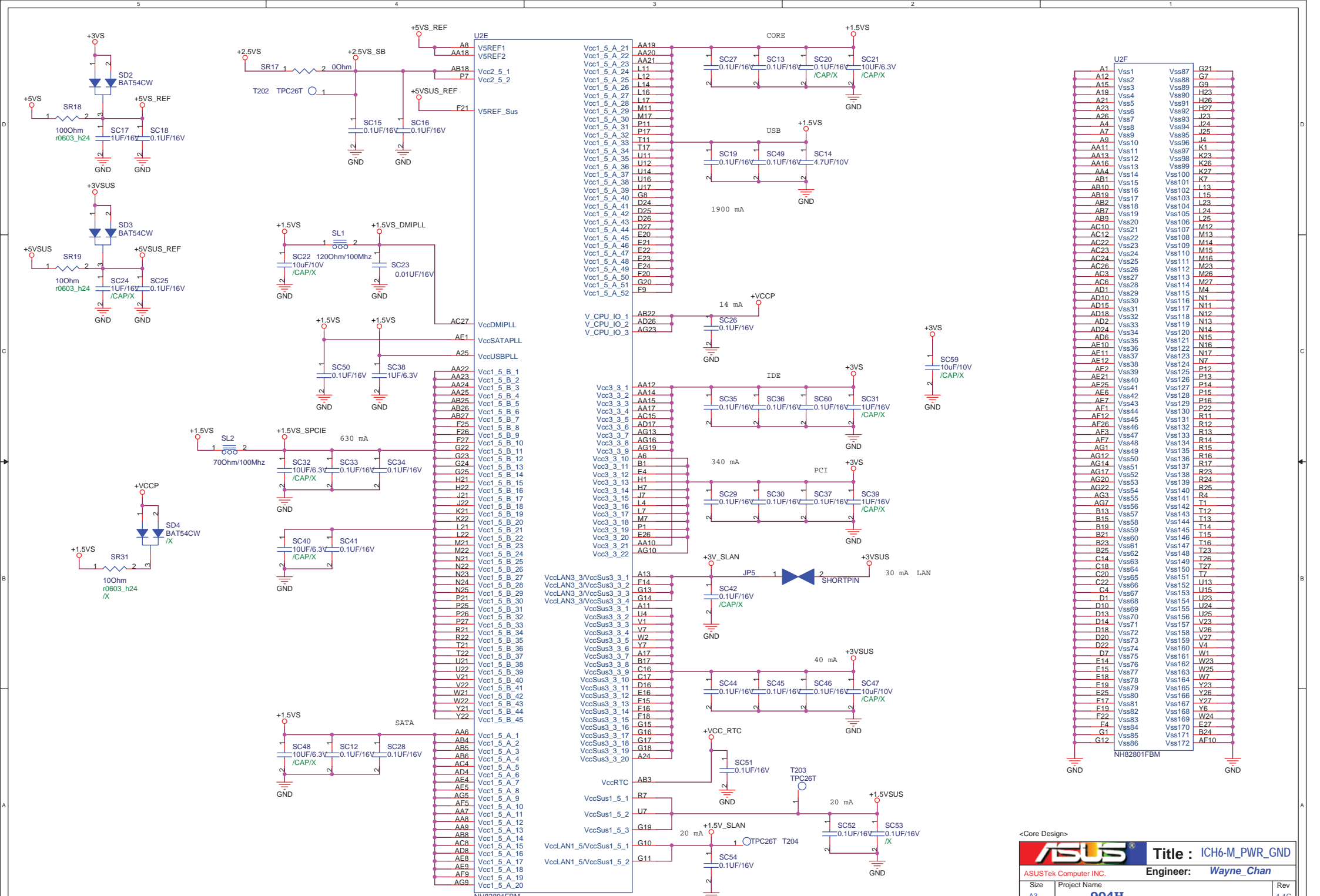


ASUS Title : ICH6-M_USB_PCIE_IDE

ASUSTek Computer INC. Engineer: Wayne Chan


Size	Project Name	Rev
A3	904H	1.1G

Date: Friday, May 16, 2008 Sheet 16 of 49



<http://hobi-elektronika.net>

<Core Design>

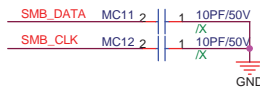
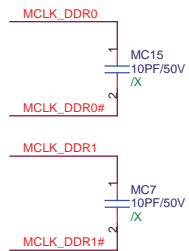


Title : ICH6-M_PWR_GND

ASUS **Engineer :** Wayne_Chan

Size	Project Name	Rev
A3	904H	1.1G

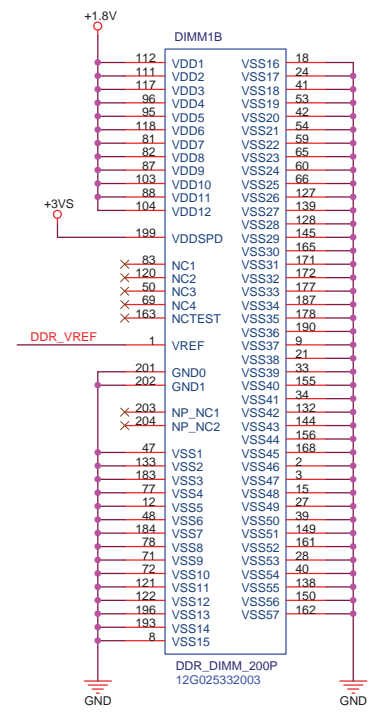
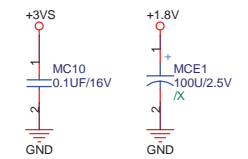
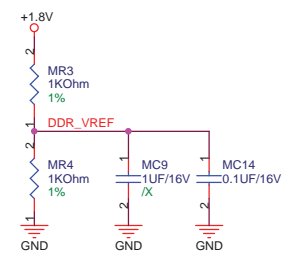
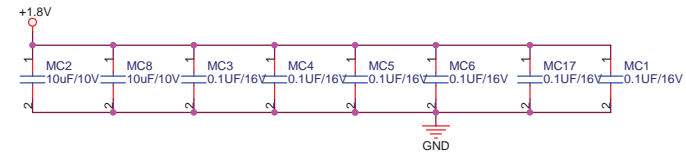
Date: Friday, May 16, 2008 Sheet 17 of 49



STD Type

DIMM1A			
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	92	A7	DQ7
MA_MA8	93	A8	DQ8
MA_MA9	105	A9	DQ9
MA_MA10	90	A10/AP	DQ10
MA_MA11	89	A11	DQ11
MA_MA12	116	A12	DQ12
MA_MA13	86	A13	DQ13
	84	A14	DQ14
	85	A15	DQ15
		A16_BA2	DQ16
MA_BA0	107	BA0	DQ17
MA_BA1	106	BA1	DQ18
		BA2	DQ19
		BA3	DQ20
		BA4	DQ21
		BA5	DQ22
		BA6	DQ23
		BA7	DQ24
		BA8	DQ25
		BA9	DQ26
		BA10	DQ27
		BA11	DQ28
		BA12	DQ29
		BA13	DQ30
		BA14	DQ31
		BA15	DQ32
		BA16	DQ33
		BA17	DQ34
		BA18	DQ35
		BA19	DQ36
		BA20	DQ37
		BA21	DQ38
		BA22	DQ39
		BA23	DQ40
		BA24	DQ41
		BA25	DQ42
		BA26	DQ43
		BA27	DQ44
		BA28	DQ45
		BA29	DQ46
		BA30	DQ47
		BA31	DQ48
		BA32	DQ49
		BA33	DQ50
		BA34	DQ51
		BA35	DQ52
		BA36	DQ53
		BA37	DQ54
		BA38	DQ55
		BA39	DQ56
		BA40	DQ57
		BA41	DQ58
		BA42	DQ59
		BA43	DQ60
		BA44	DQ61
		BA45	DQ62
		BA46	DQ63



GROUP1
GROUP2
SWAP

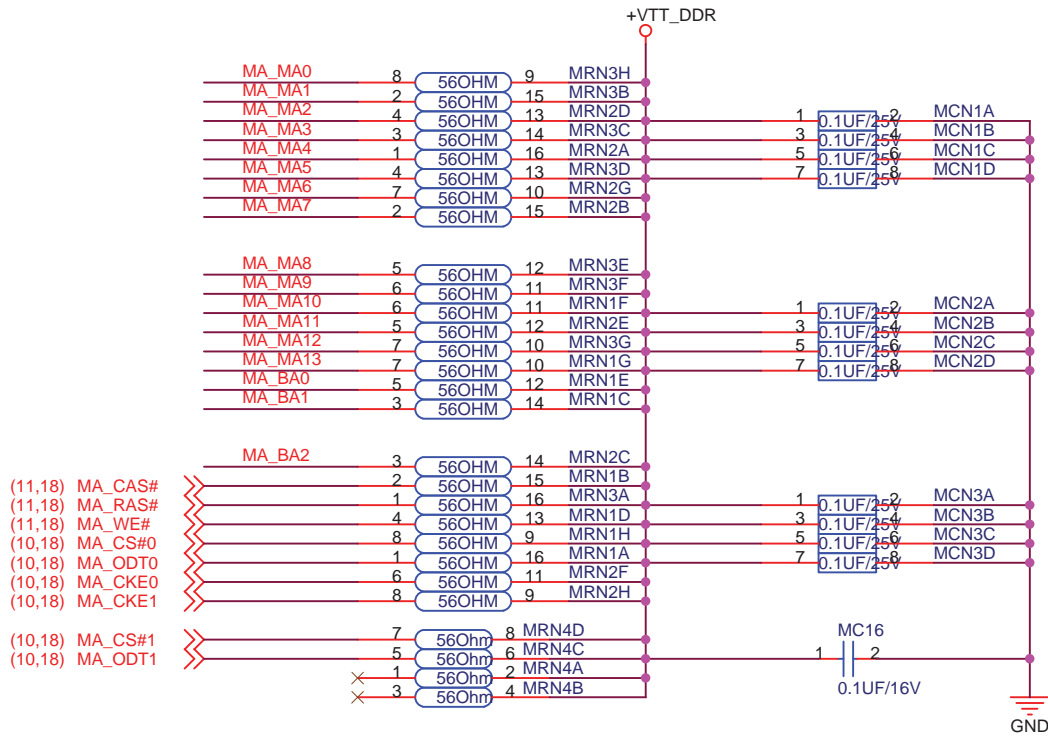


DDR_DIMM_200P
12G025332003


<Core Design>

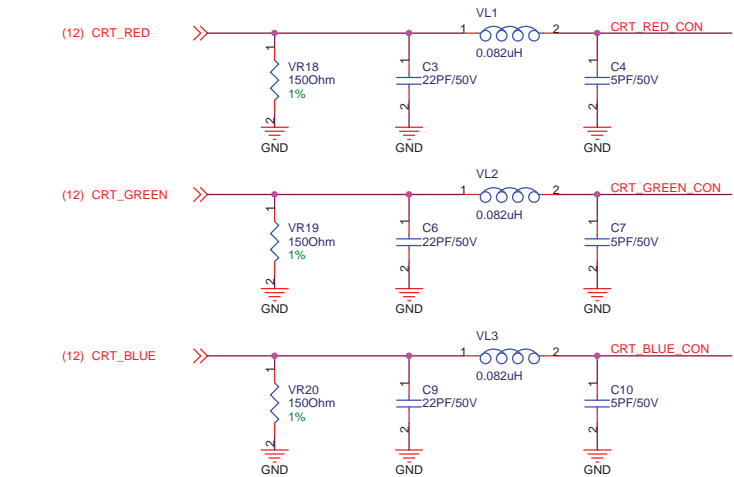
		Title : DDR2 SODIMM	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008	Sheet	18	of 49

 MA_MA[13:0] (11,18)
 MA_BA[2:0] (11,18)

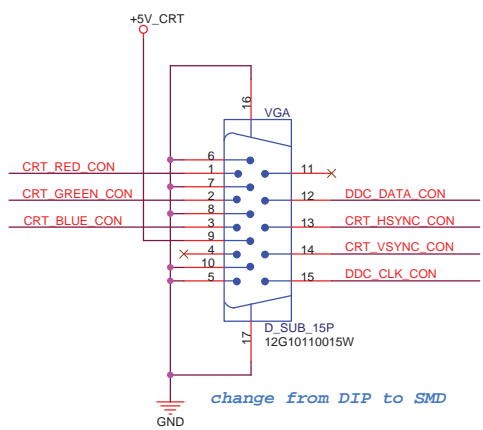
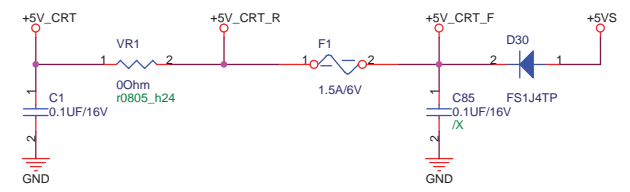
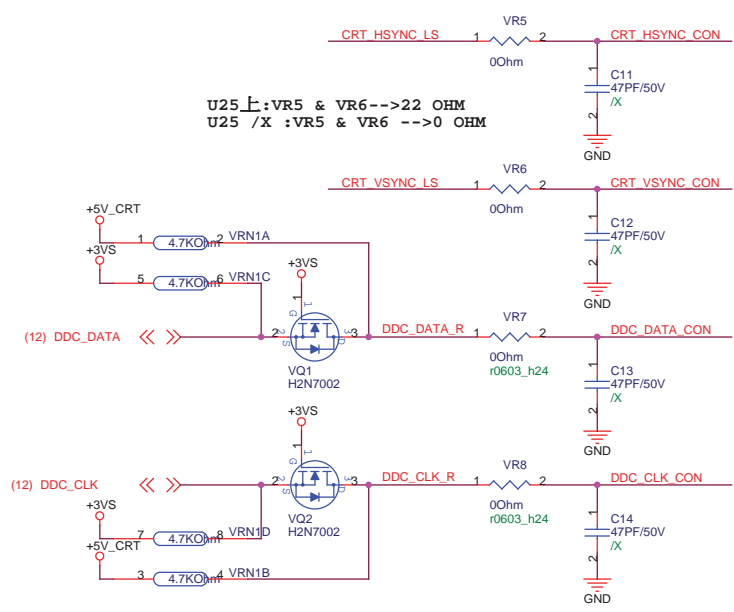


<Core Design>

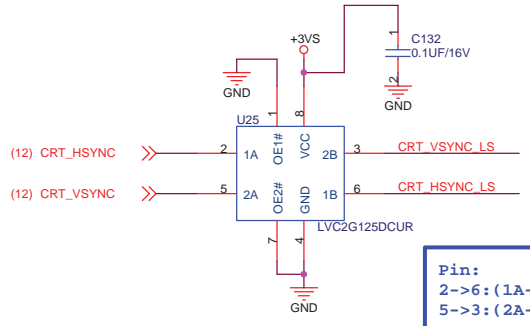
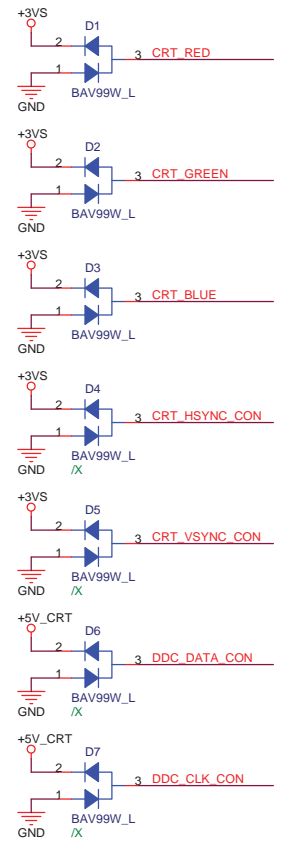
		Title : DDR2_Termination	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size A4	Project Name 904H	Rev 1.1G	
Date: Friday, May 16, 2008		Sheet 19 of 49	



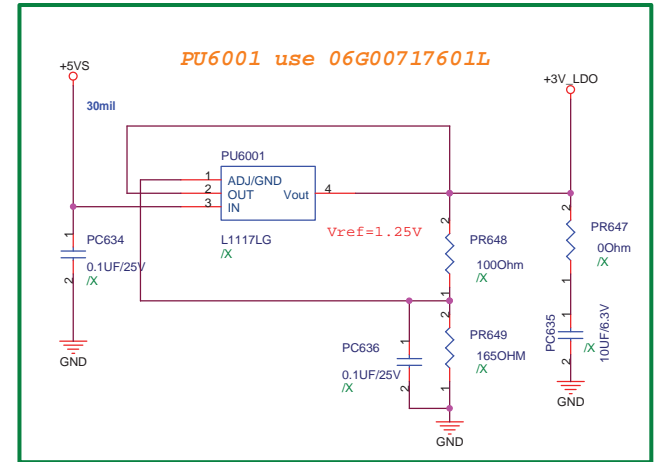
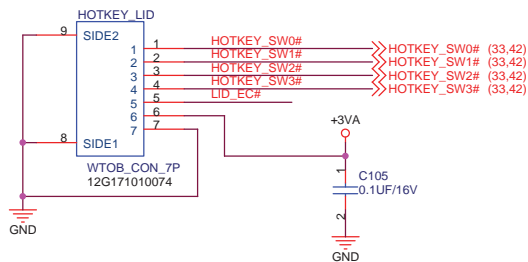
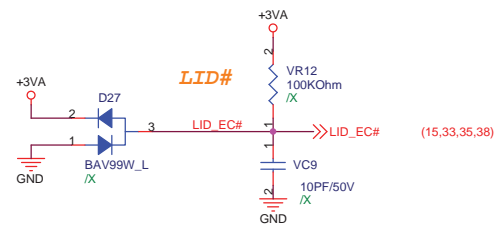
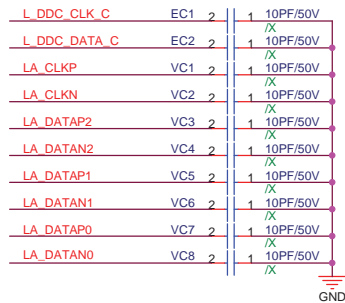
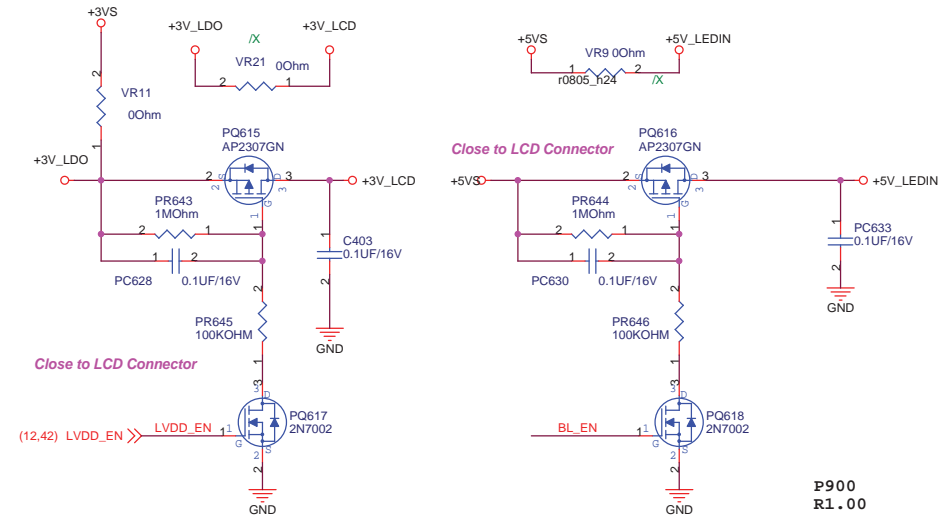
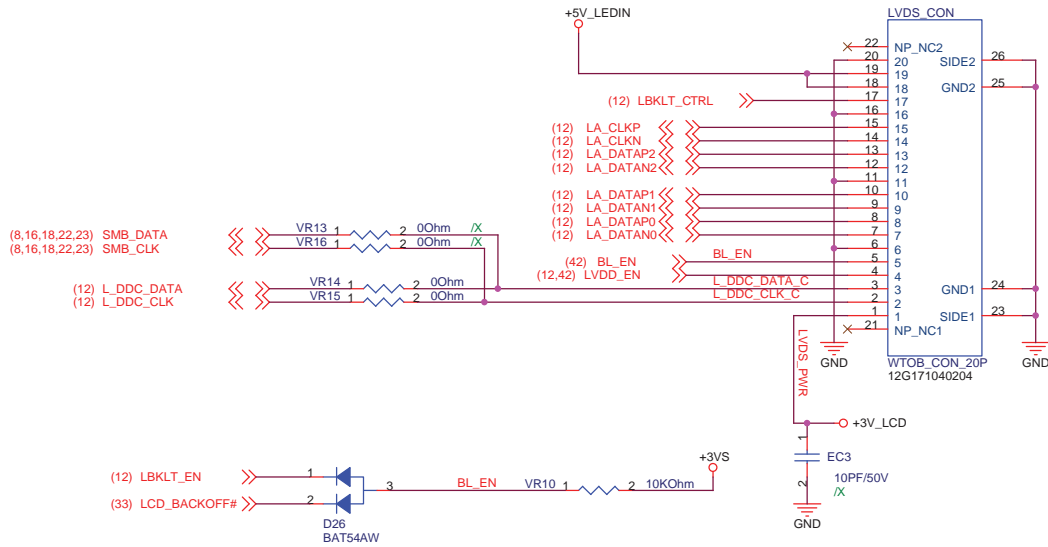
U25上:VR5 & VR6-->22 OHM
 U25 /X :VR5 & VR6 -->0 OHM

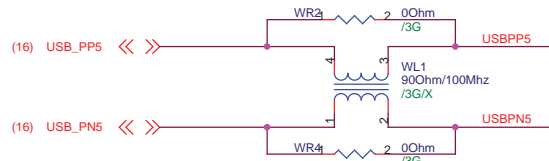


VGA use 12G10110015W & 12G10110015N

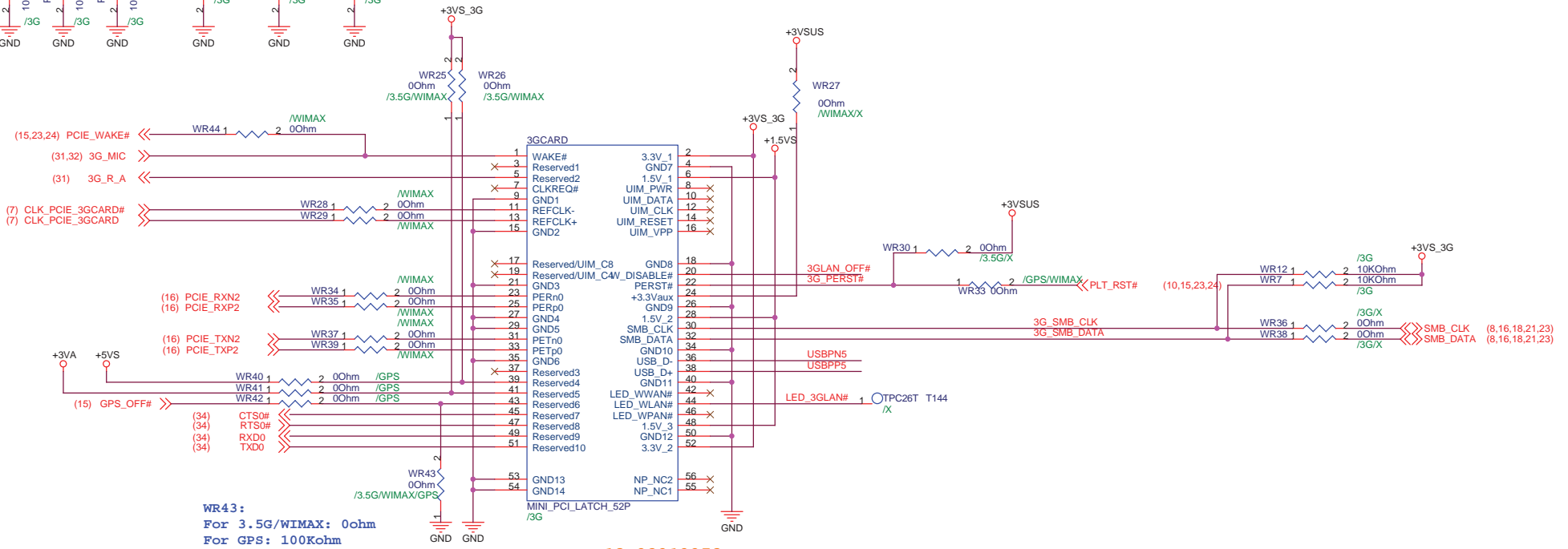
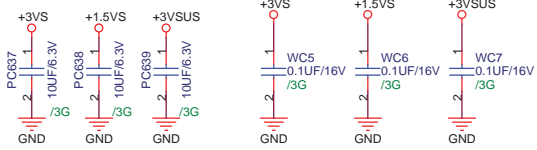
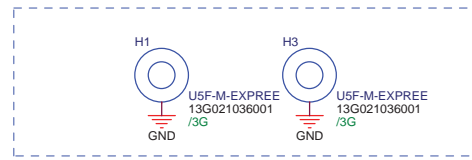


Pin:
 2->6: (1A->1B)
 5->3: (2A->2B)





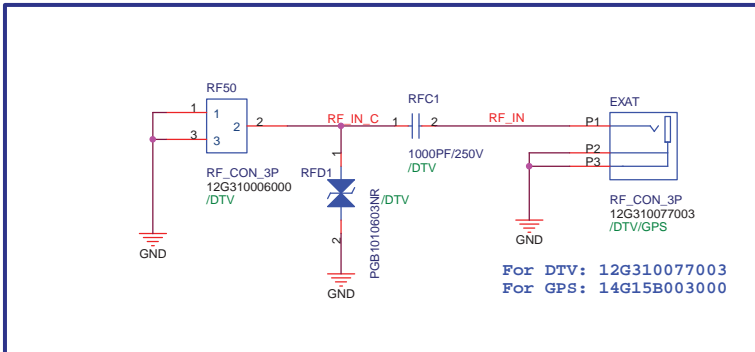
/GPS: AW GPS-M09
 /DTV: ASUS MC3100U
 /3.5G: SIERRA 8780
 /WIMAX: INTEL5050



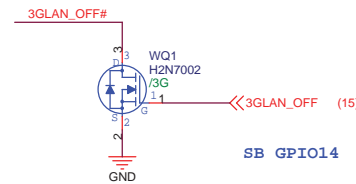
WR43:
 For 3.5G/WIMAX: 0ohm
 For GPS: 100Kohm

MINICARD use 12G03010052K

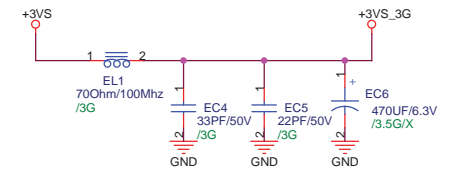
External Antenna



For DTV: 12G310077003
 For GPS: 14G15B003000

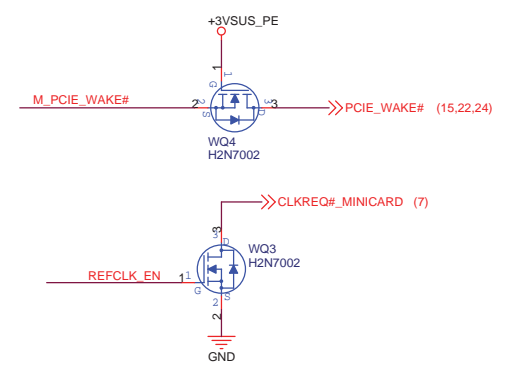
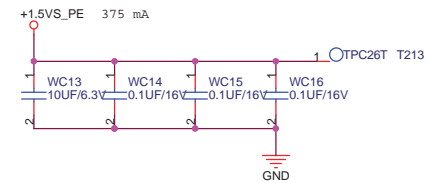
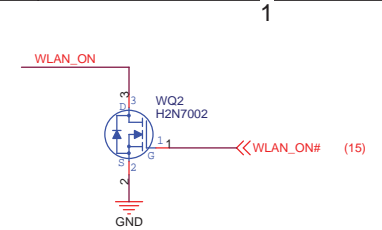
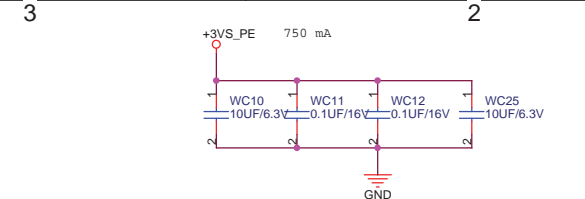
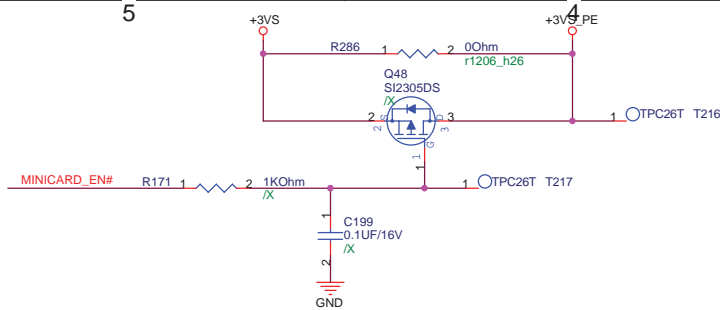


SB GPIO14

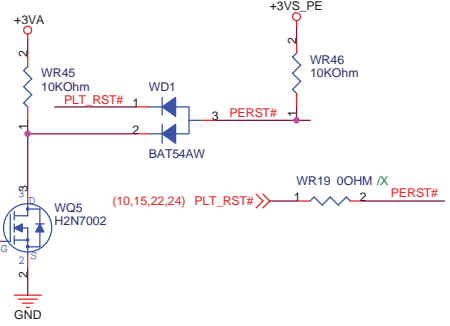
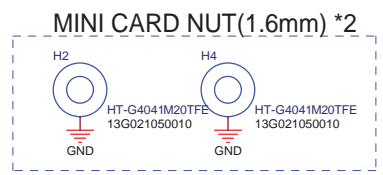
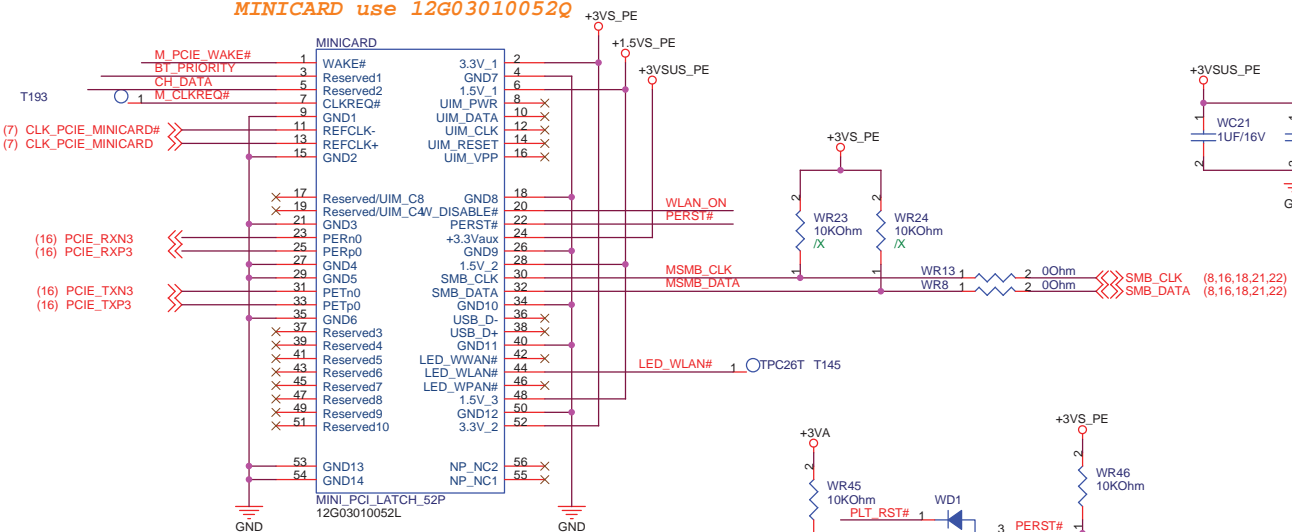


<Core Design> 3.5G Module & External Antenna

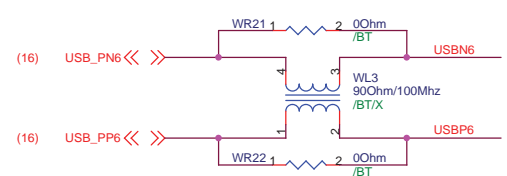
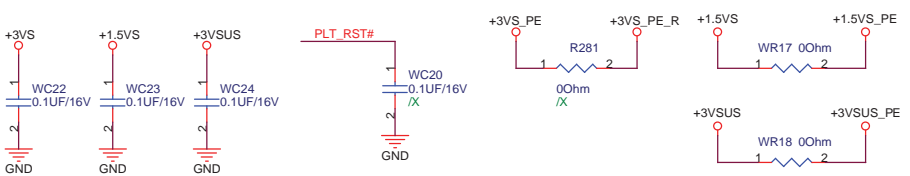
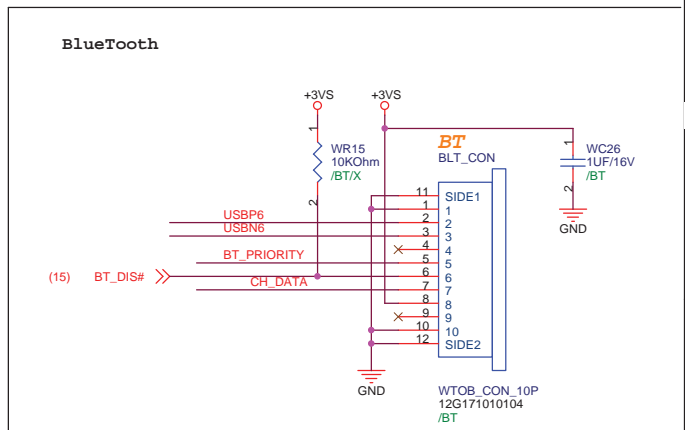
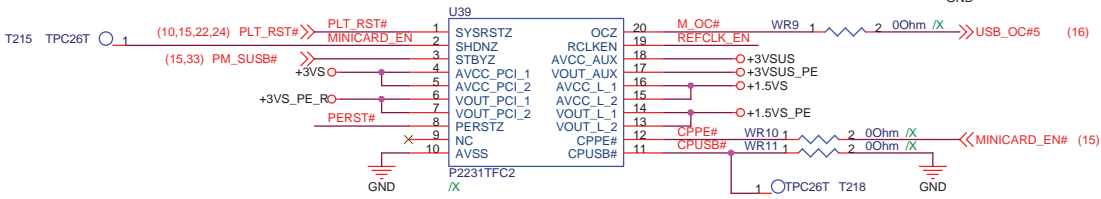
ASUS		Title :	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008	Sheet	22	of 49

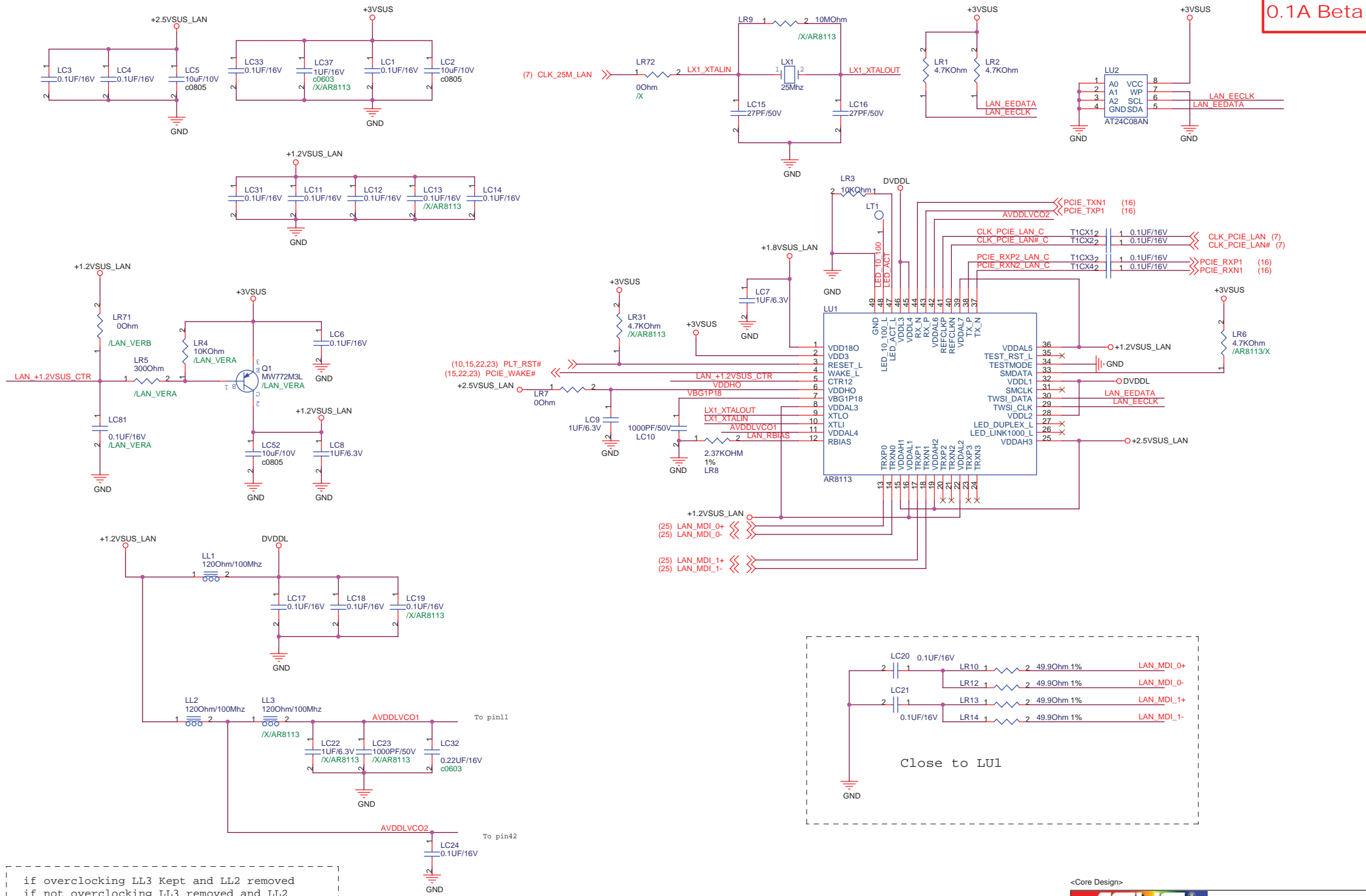


MINICARD use 12G03010052Q

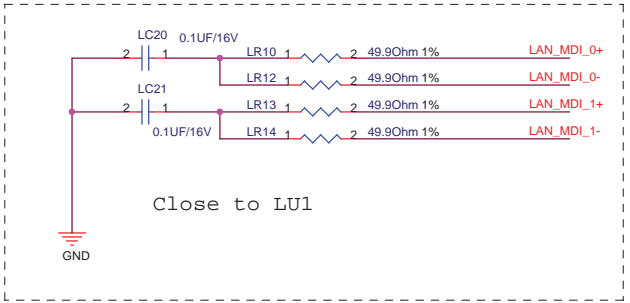


U39 use 06G030057011





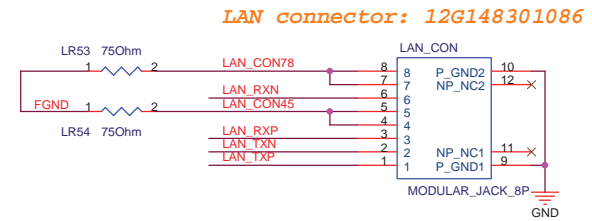
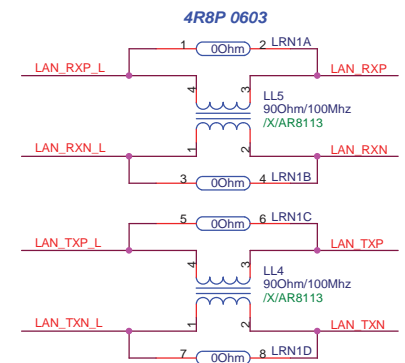
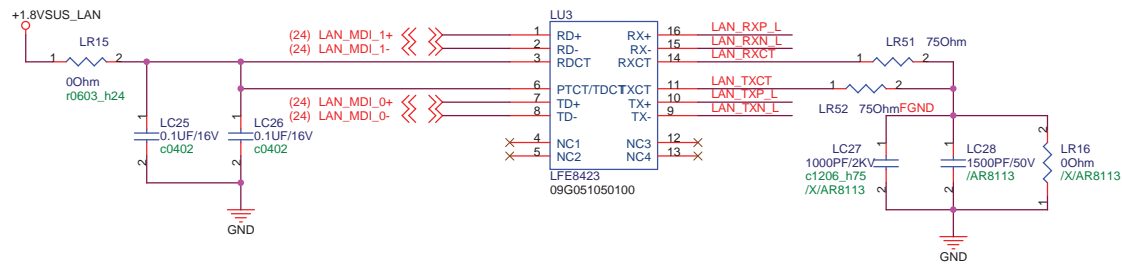
if overclocking LL3 Kept and LL2 removed
 if not overclocking LL3 removed and LL2 Kept



<Core Design>

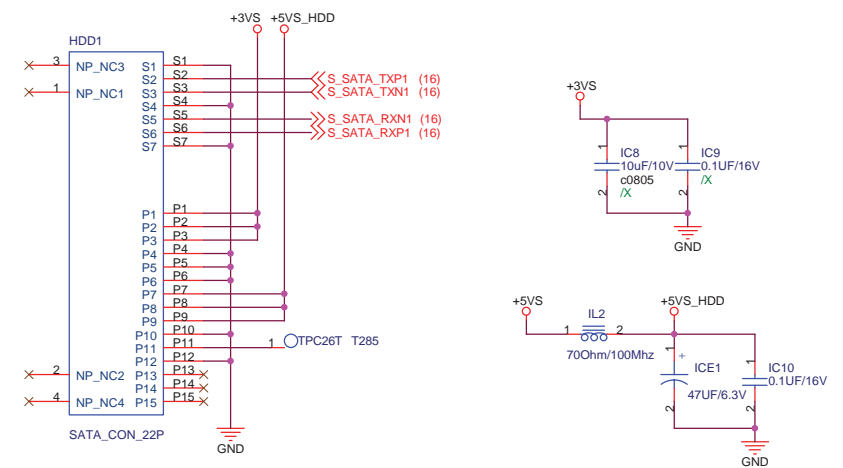
ASUS Title : AR8113
 ASUSTek Computer INC. Engineer: Wayne_Chan

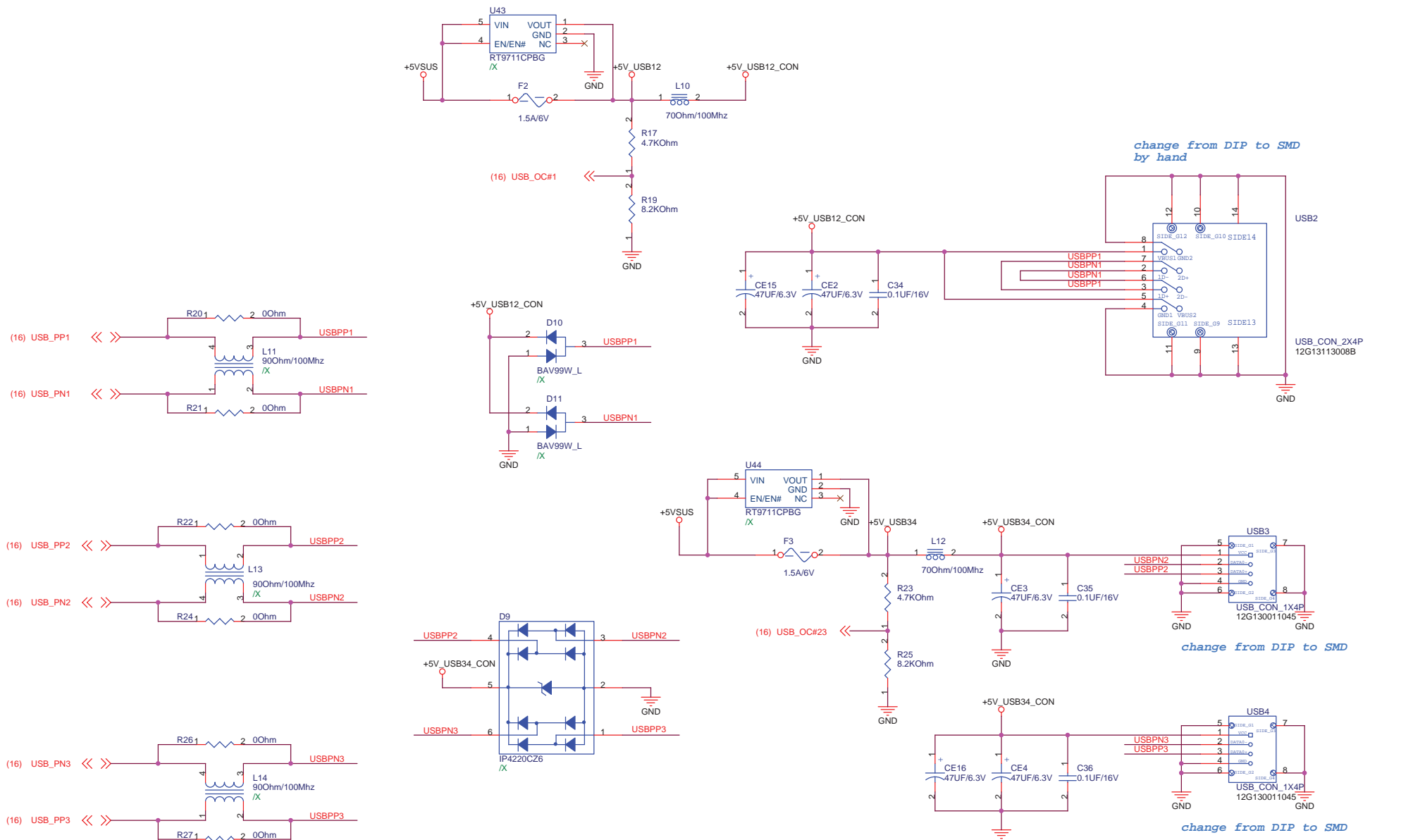
Size	Project Name	Rev
A3	904H	1.1G
Date: Friday, May 16, 2008		Sheet 24 of 49



Change ODD to
SATA_IF

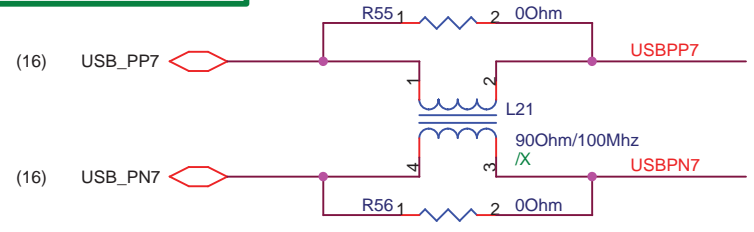
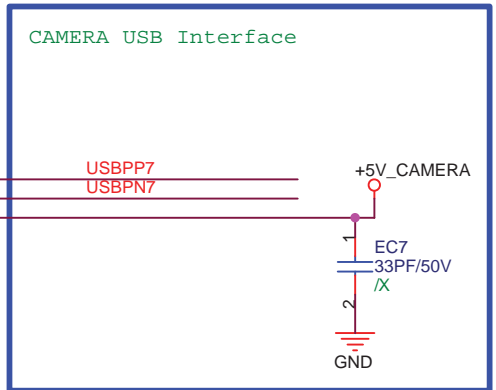
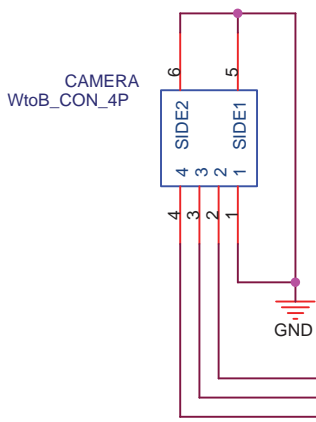
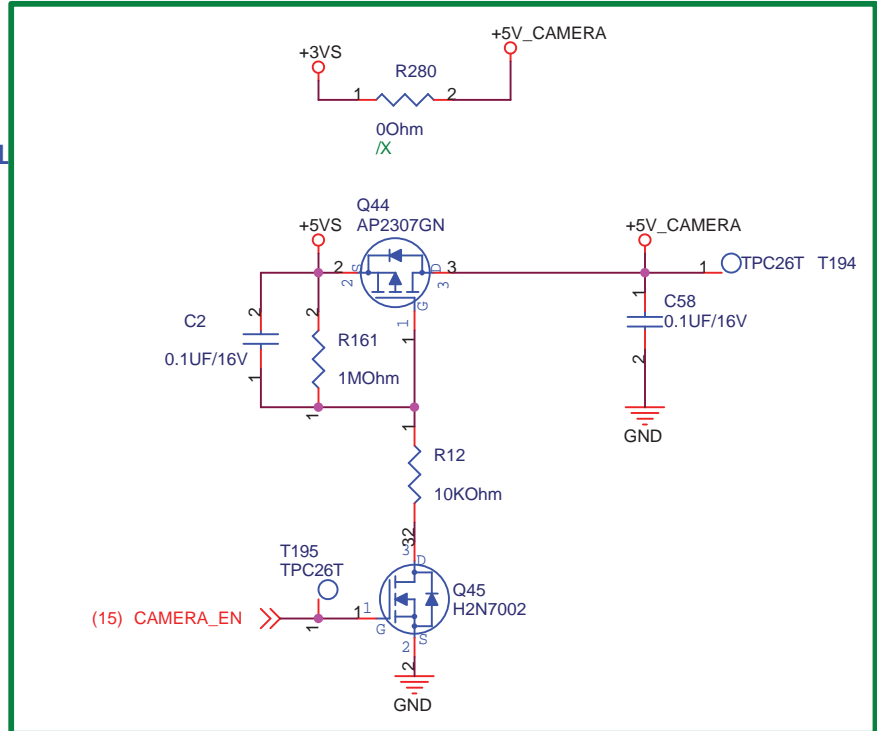
SATA HDD Connector





<http://hobi-elektronika.net>

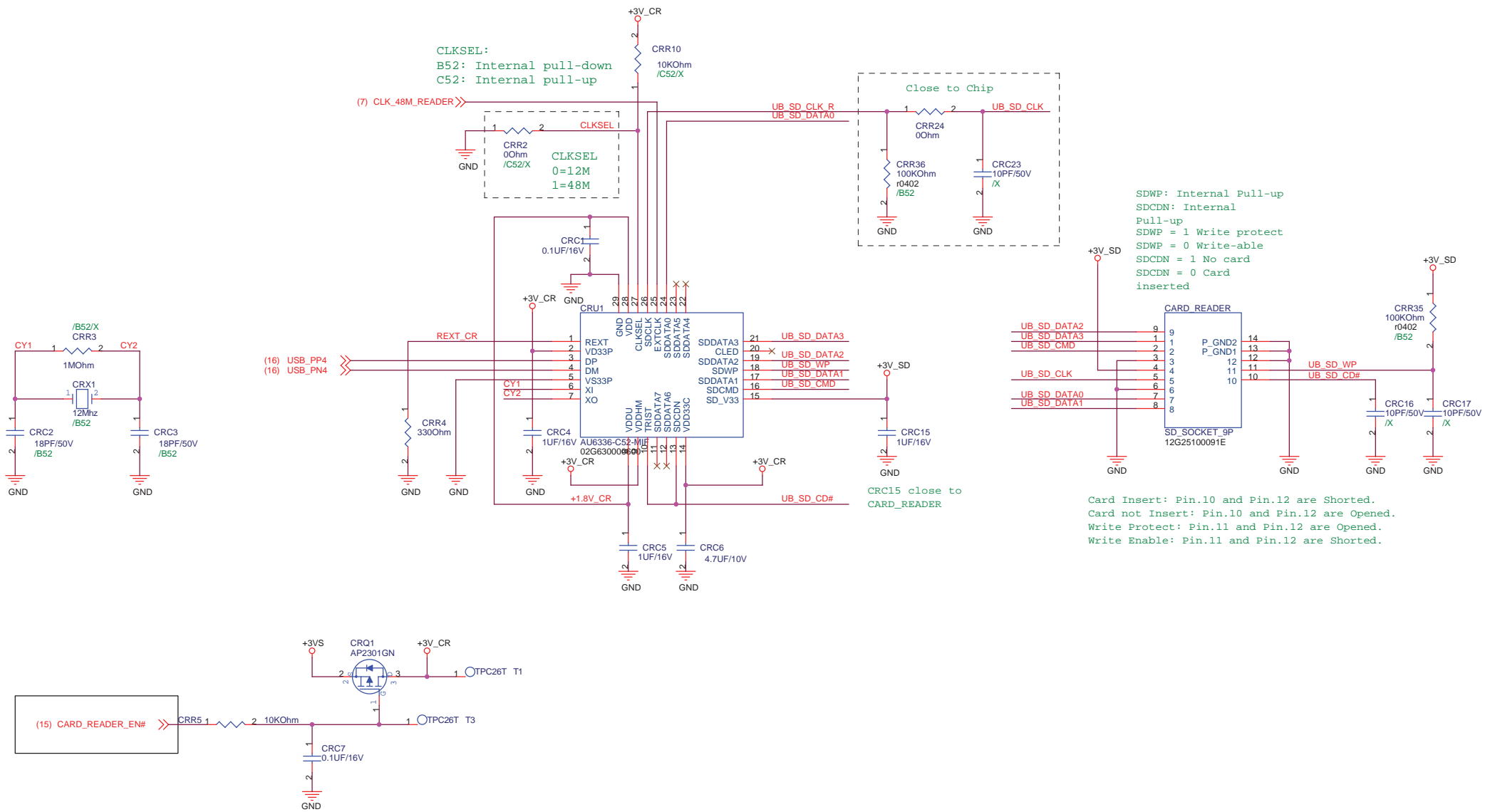
Power Control

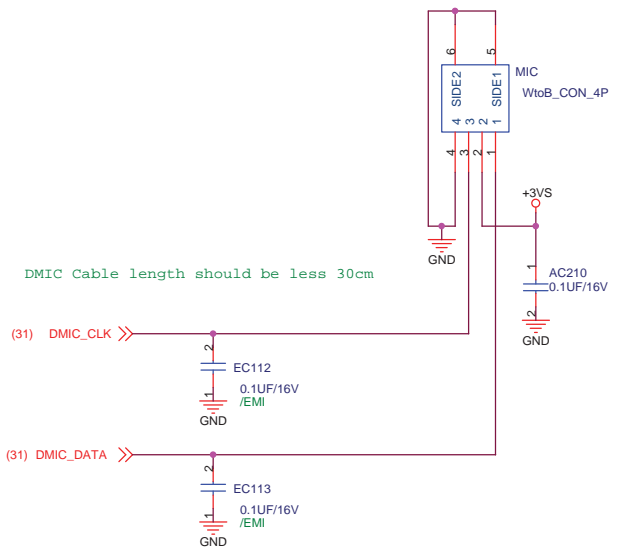


<http://hobi-elektronika.net>

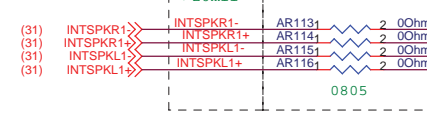
<Core Design>

		Title : Camera Power	
ASUSTek Computer INC.		Engineer: <i>Wayne_Chan</i>	
Size A4	Project Name 904H	Rev 1.1G	
Date: Friday, May 16, 2008	Sheet 29 of 49		

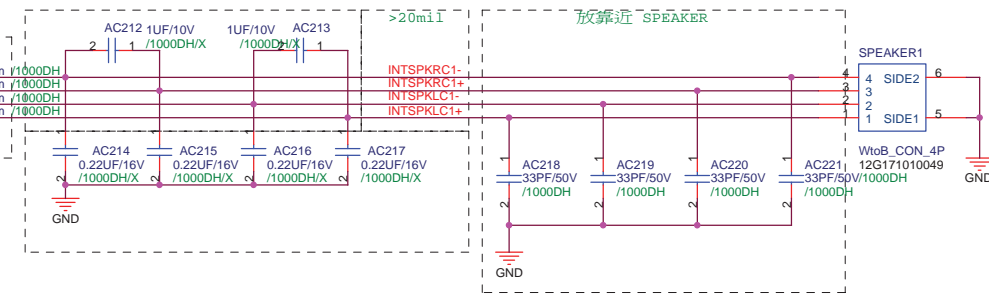




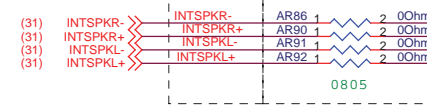
Total length from speakerR+- L+-(pin40 41 44 45) to internal speaker please as short as possible (<20cm is better) >20mil



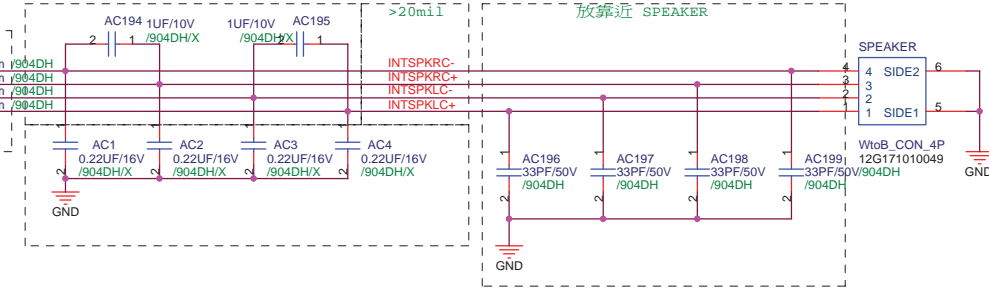
If choke AR113, AR114, AR115, AR116 are mounted, please mount AC212 AC213 to avoid EMI issue.



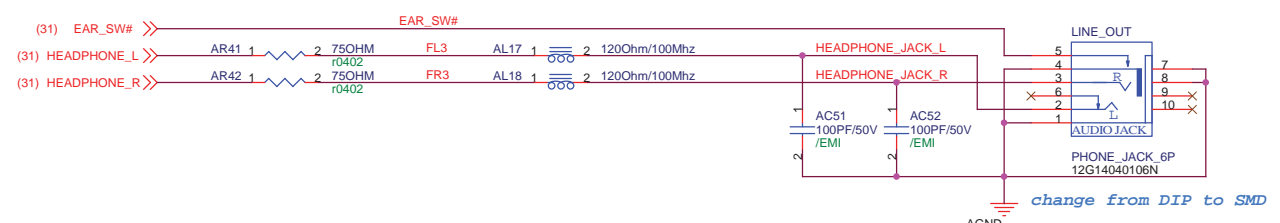
Total length from speakerR+- L+-(pin40 41 44 45) to internal speaker please as short as possible (<20cm is better) >20mil



If choke AR86, AR90, AR91, AR92 are mounted, please mount AC194 AC195 to avoid EMI issue.

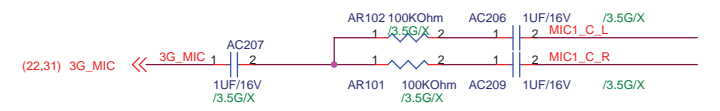
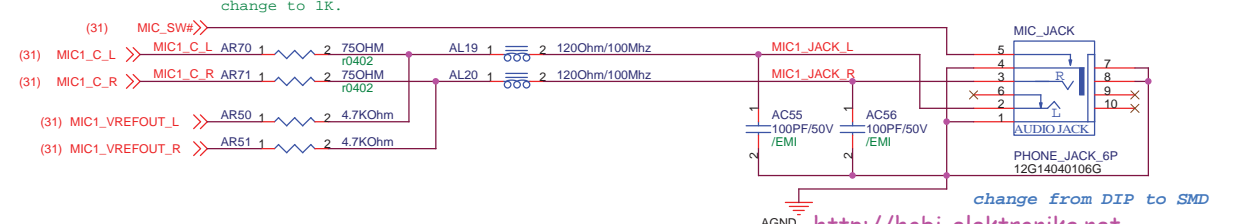


LINE_OUT use 12G140501060



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

MIC_JACK use 12G14040106Y



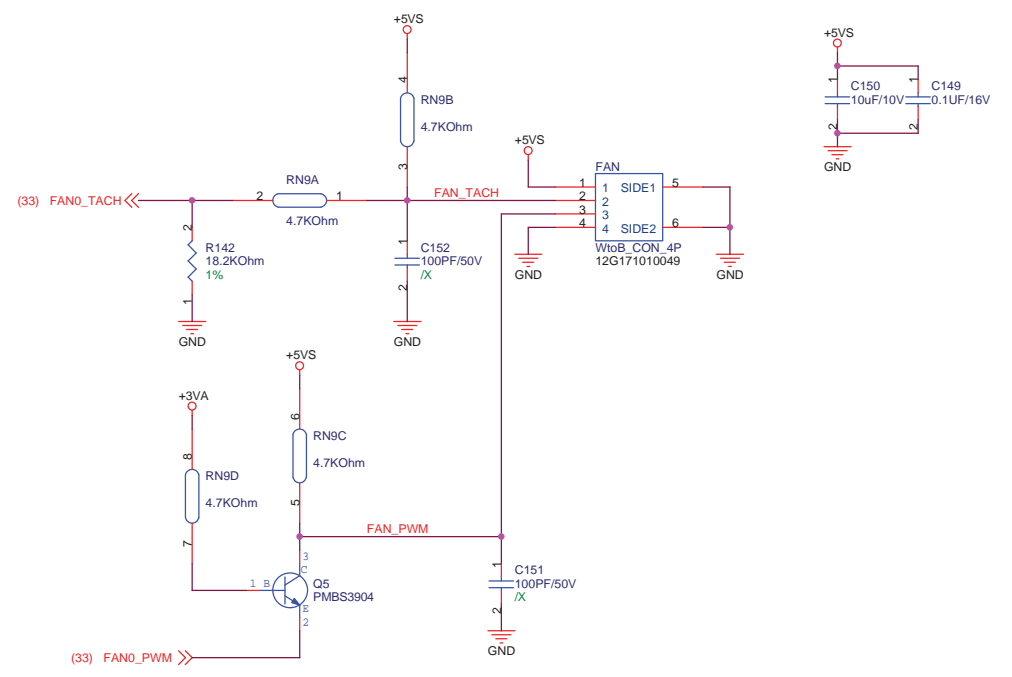
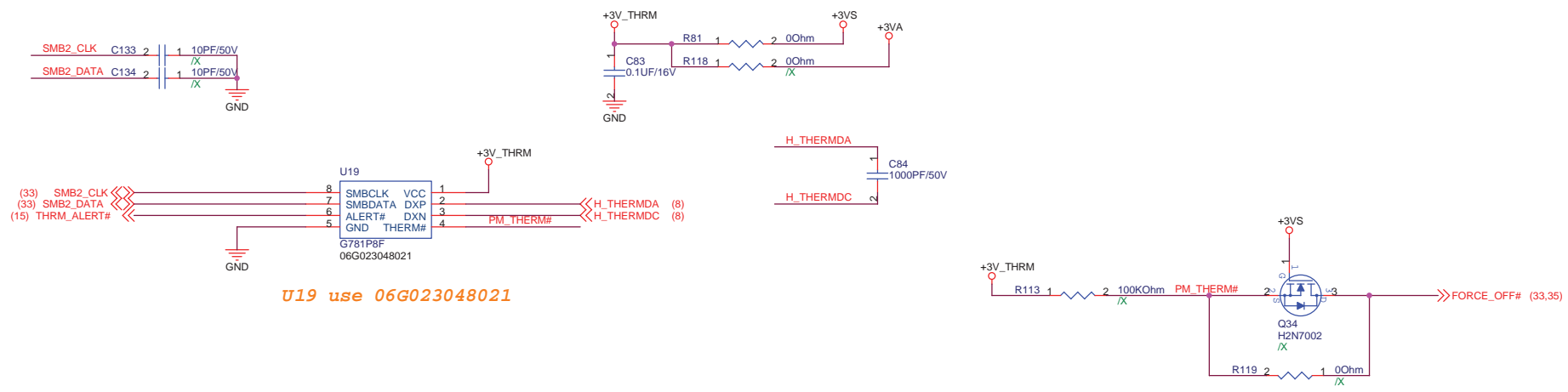
<Core Design>

Title : ALC269-2

ASUSTek Computer INC. Engineer: **Wayne_Chan**

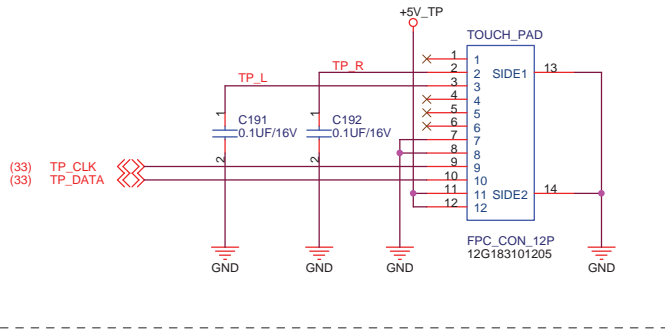
Size	Project Name	Rev
A3	904H	1.0G

Date: Friday, May 16, 2008 Sheet 32 of 49

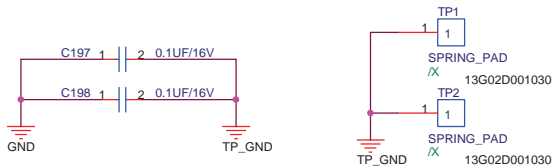
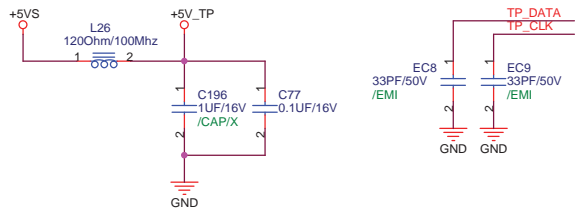
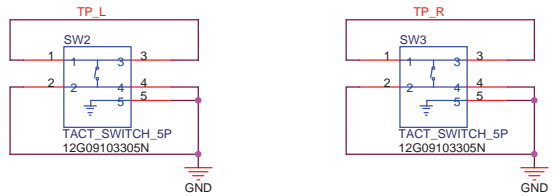


For Touch-Pad

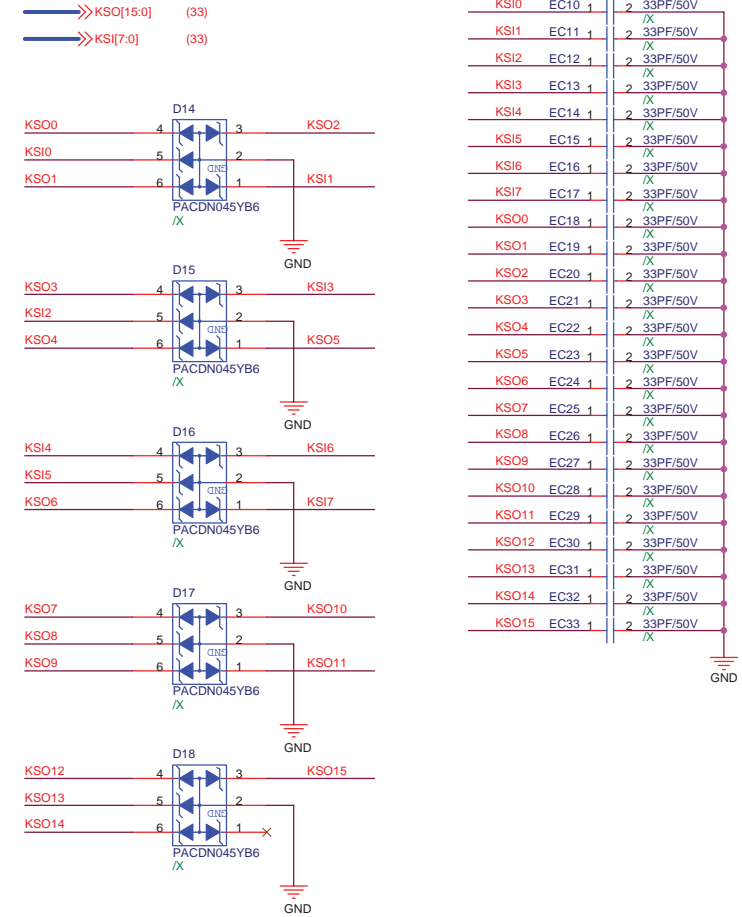
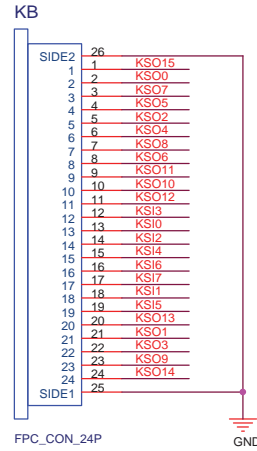
P900 R1.0G



SW2, SW3 use 12G09103305N



For Keyboard Connector

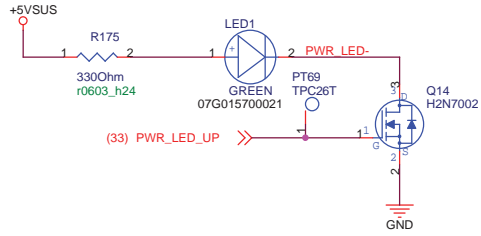


KSI0	EC10	1	2	33PF/50V
KSI1	EC11	1	2	33PF/50V
KSI2	EC12	1	2	33PF/50V
KSI3	EC13	1	2	33PF/50V
KSI4	EC14	1	2	33PF/50V
KSI5	EC15	1	2	33PF/50V
KSI6	EC16	1	2	33PF/50V
KSI7	EC17	1	2	33PF/50V
KSO0	EC18	1	2	33PF/50V
KSO1	EC19	1	2	33PF/50V
KSO2	EC20	1	2	33PF/50V
KSO3	EC21	1	2	33PF/50V
KSO4	EC22	1	2	33PF/50V
KSO5	EC23	1	2	33PF/50V
KSO6	EC24	1	2	33PF/50V
KSO7	EC25	1	2	33PF/50V
KSO8	EC26	1	2	33PF/50V
KSO9	EC27	1	2	33PF/50V
KSO10	EC28	1	2	33PF/50V
KSO11	EC29	1	2	33PF/50V
KSO12	EC30	1	2	33PF/50V
KSO13	EC31	1	2	33PF/50V
KSO14	EC32	1	2	33PF/50V
KSO15	EC33	1	2	33PF/50V

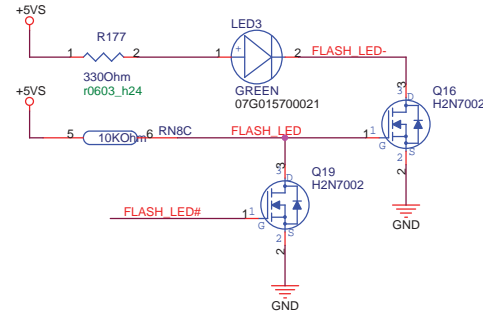
<Core Design>

		Title : KB_Touch Pad	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008	Sheet	37	of 49

for POWER LED

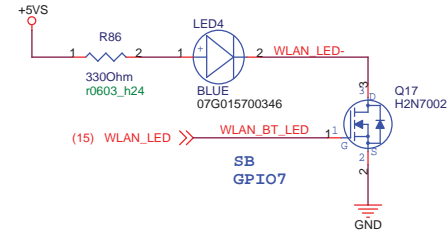


for FLASH LED

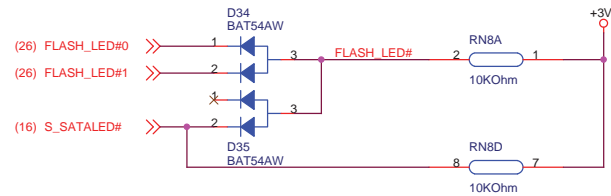
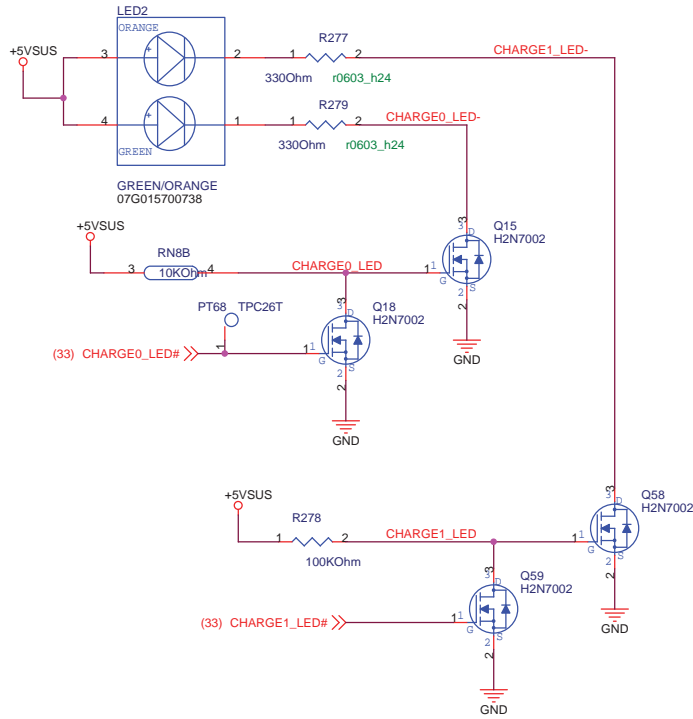


for WLAN/BlueTooth LED

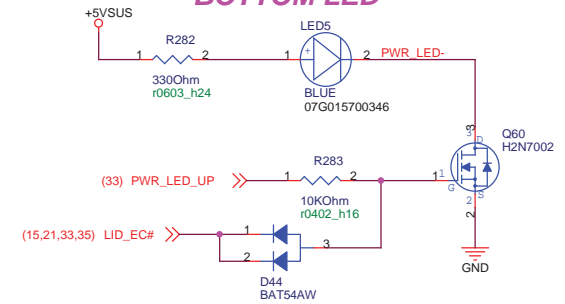
R86 use 4.7K OHm 10G213472003030

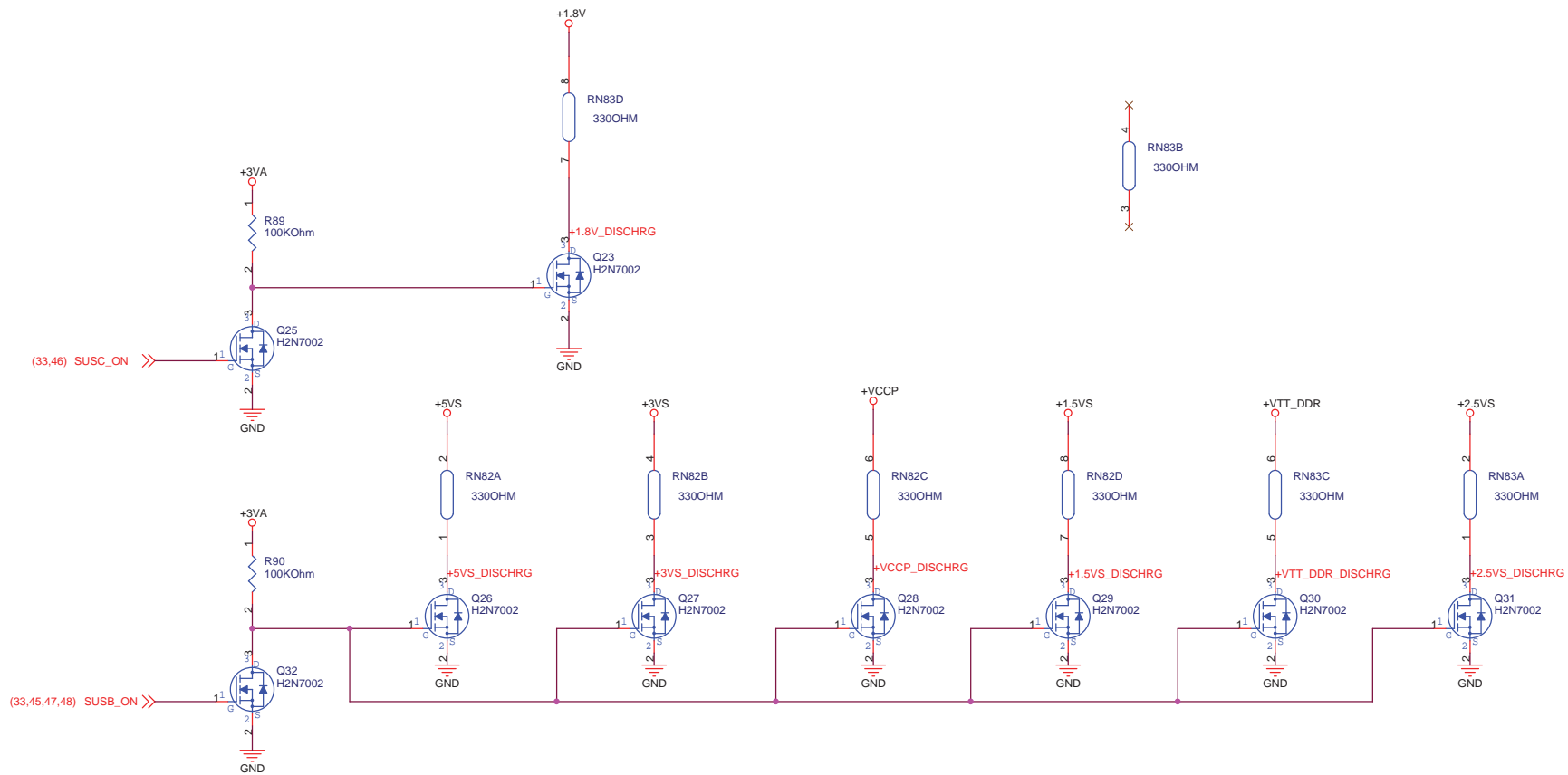


for CHARGE LED

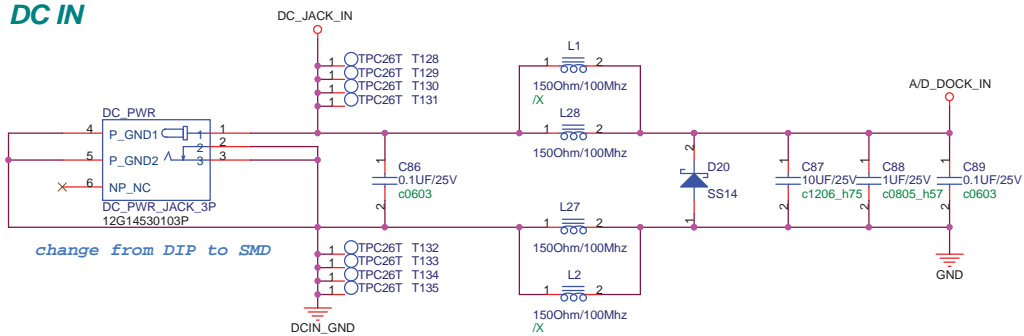


for POWER BOTTOM LED

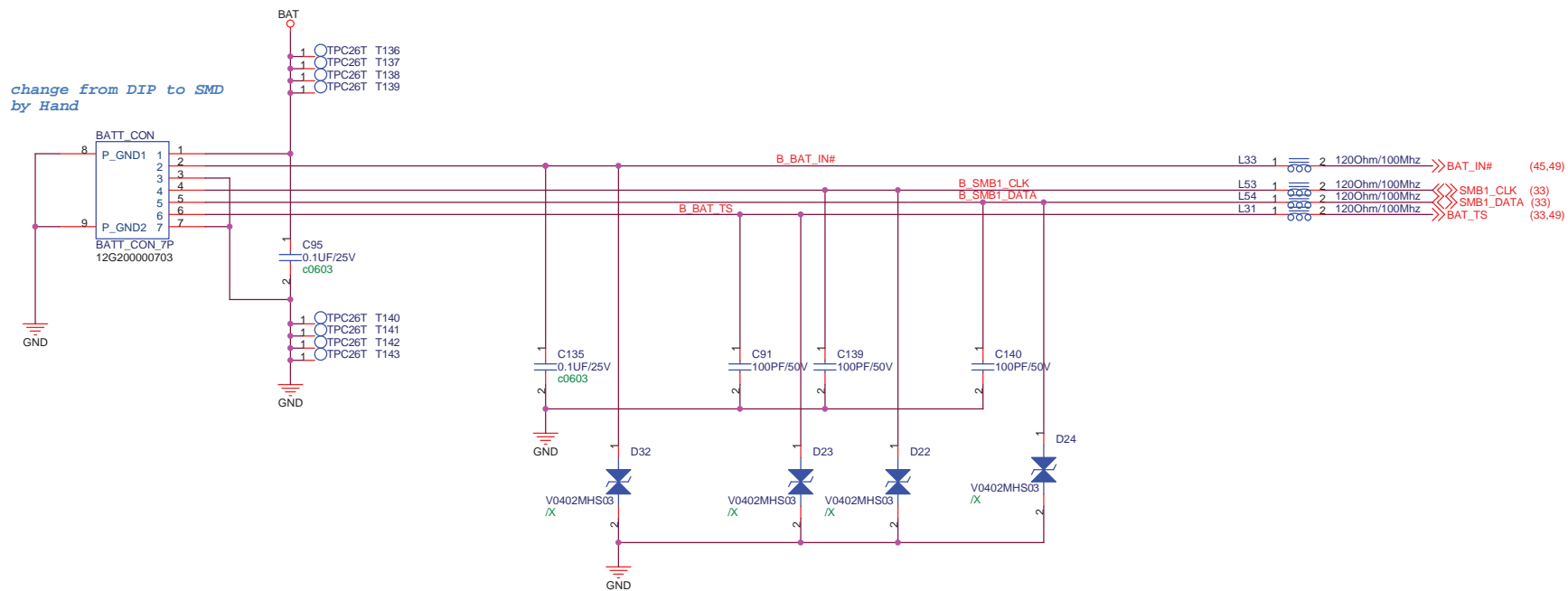




DC IN

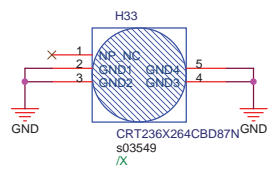
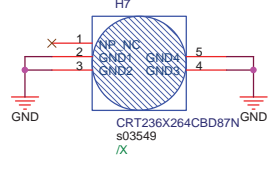
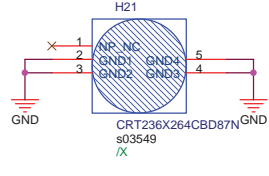
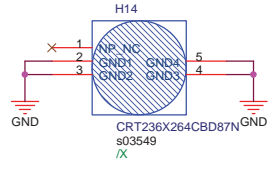
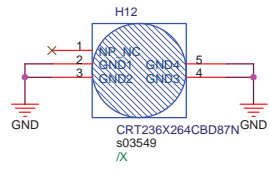
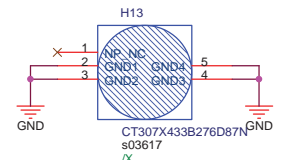
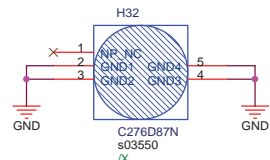
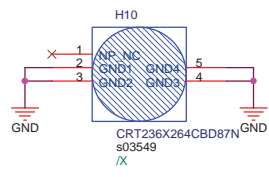
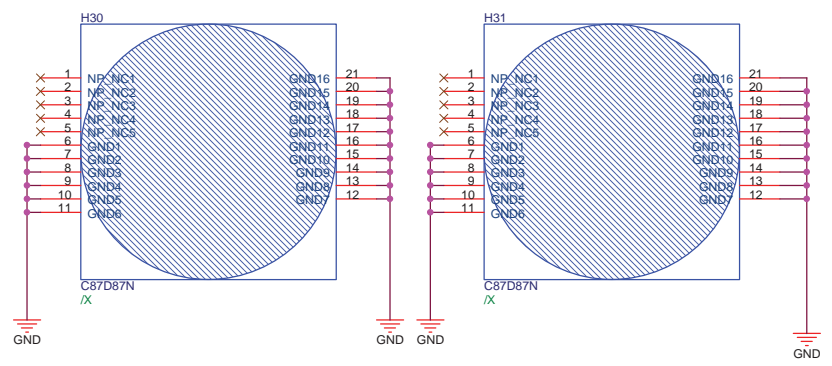
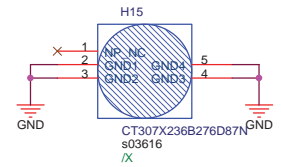
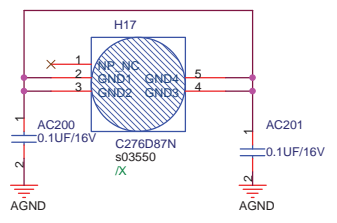
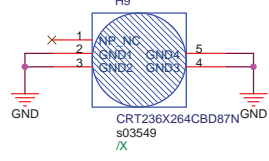
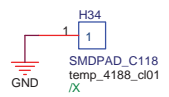
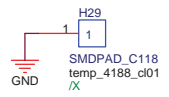
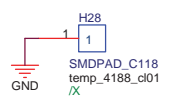
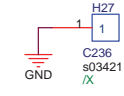
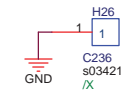
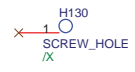
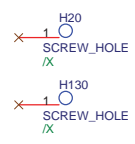
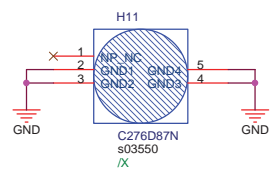
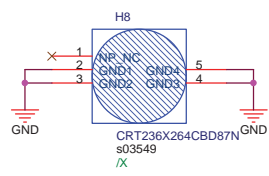


BAT IN



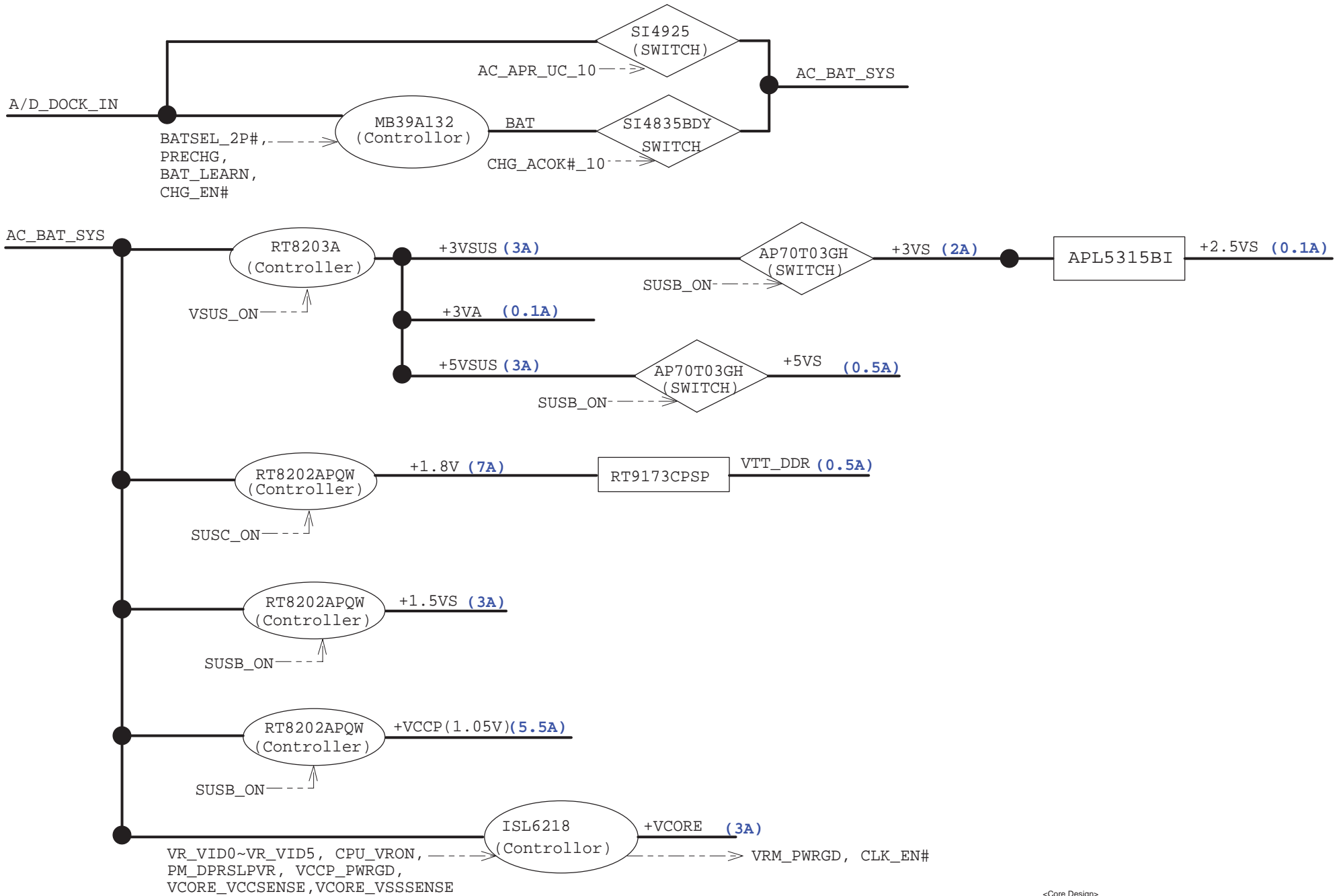
<Core Design>

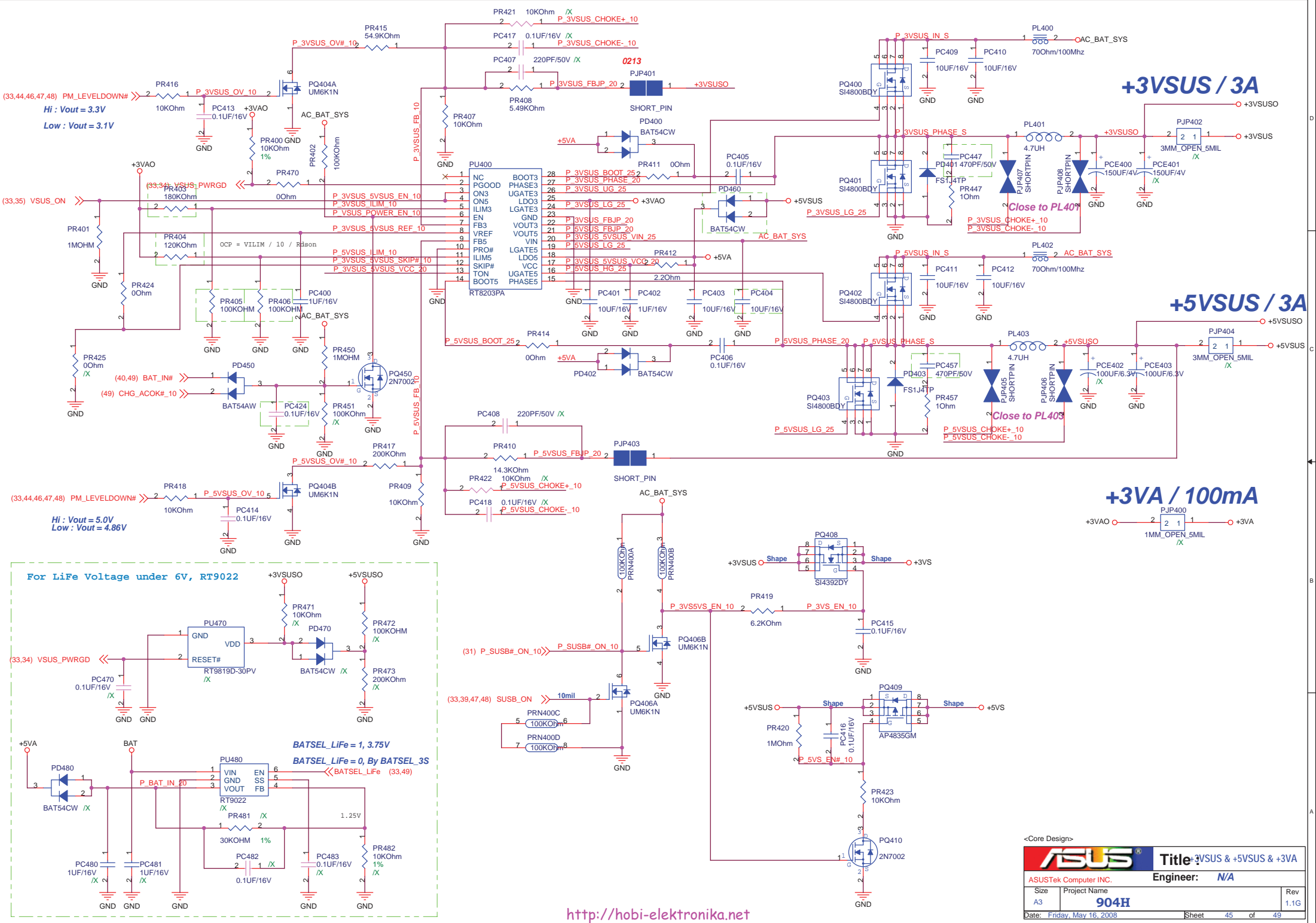
		Title : PWR Jack	
		ASUSTek Computer INC. Engineer: Wayne_Chan	
Size	Project Name	Rev	
A3	904H	1.1G	
Date: Friday, May 16, 2008	Sheet	40	of 49



<Core Design>

ASUS		Title : Srew Hole	
ASUSTek Computer INC.		Engineer: Wayne_Chan	
Size A3	Project Name 904H	Rev 1.1G	
Date: Friday, May 16, 2008	Sheet	41	of 49

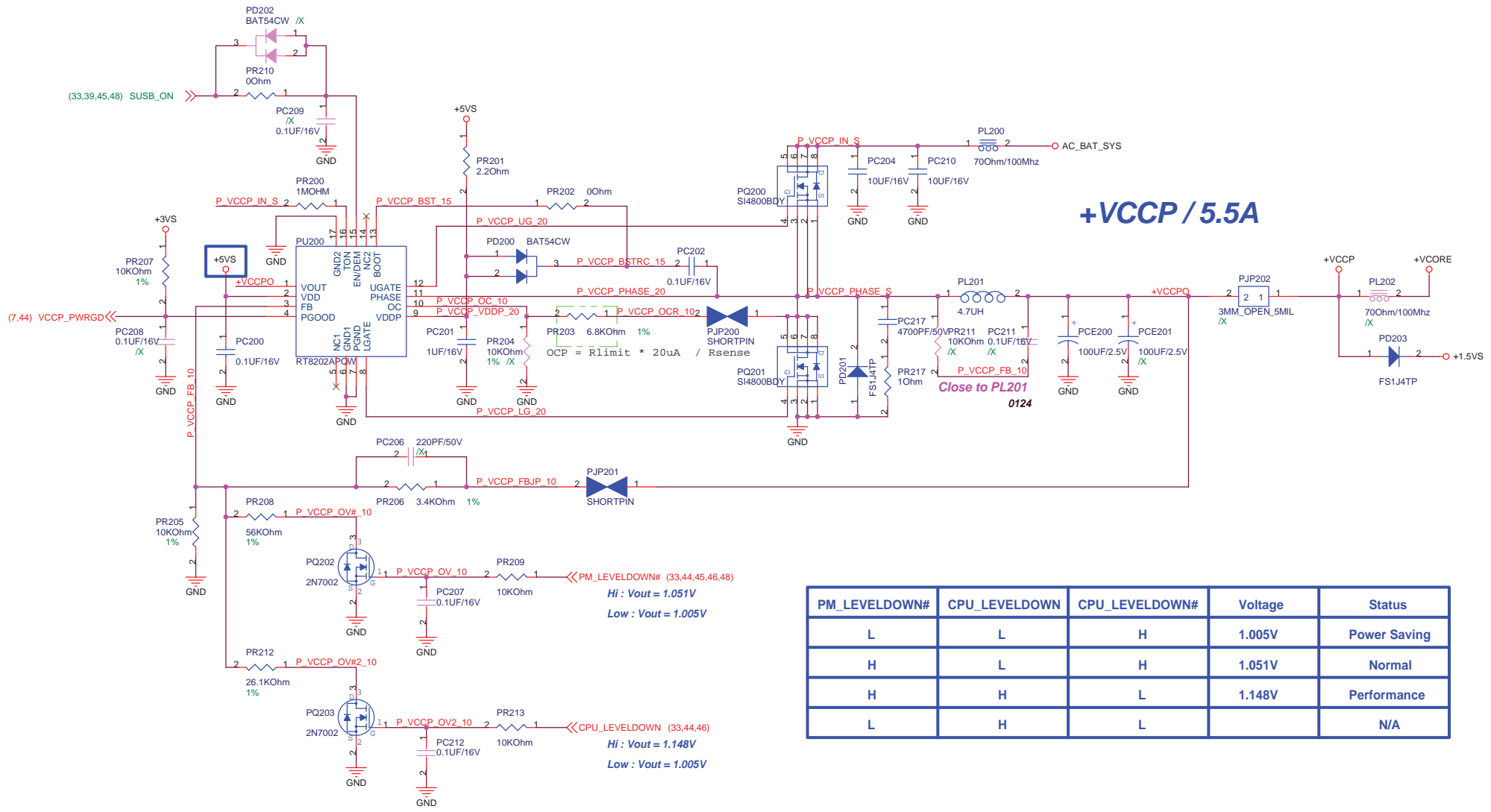




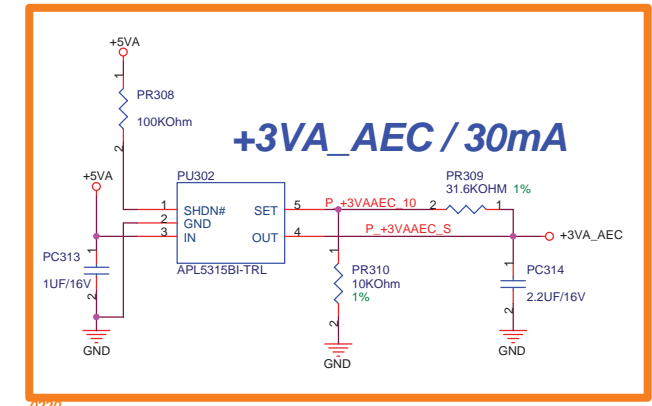
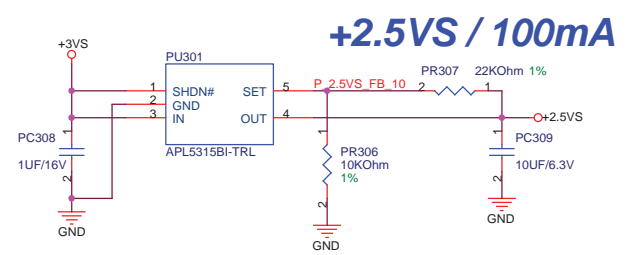
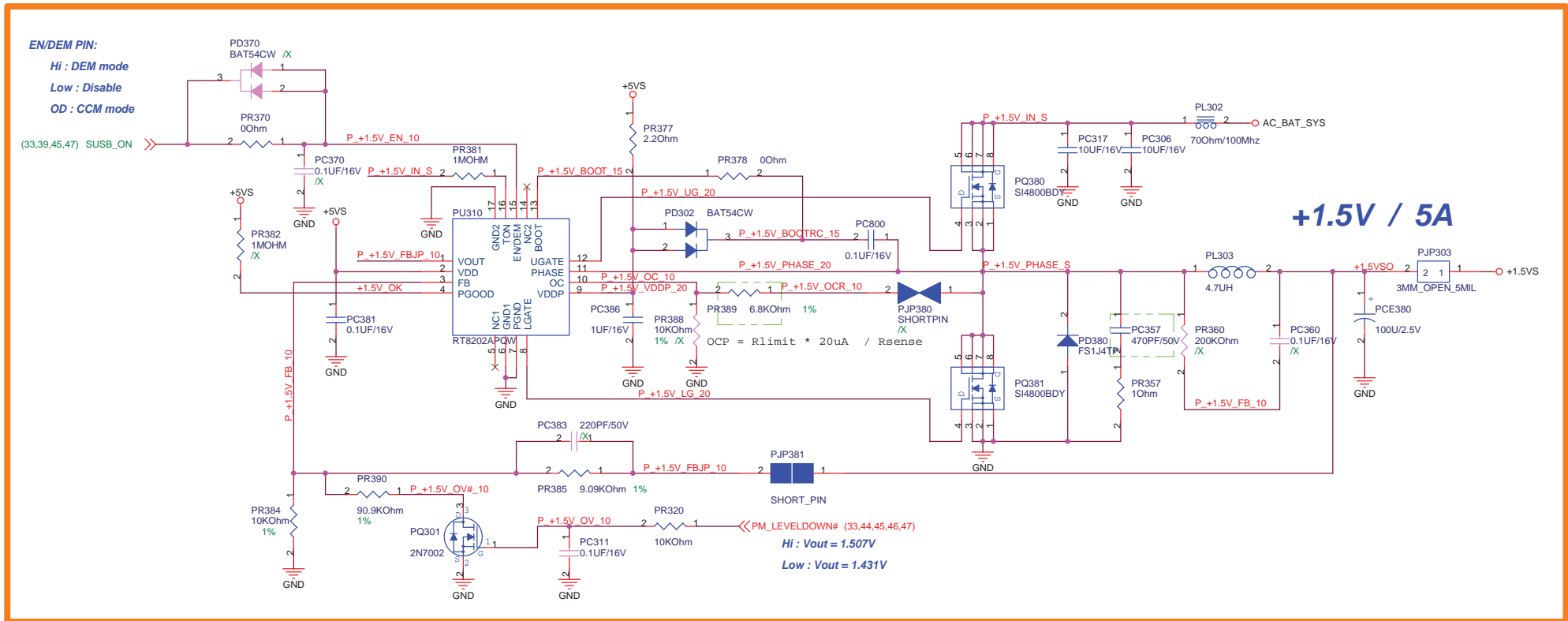
<http://hobi-elektronika.net>

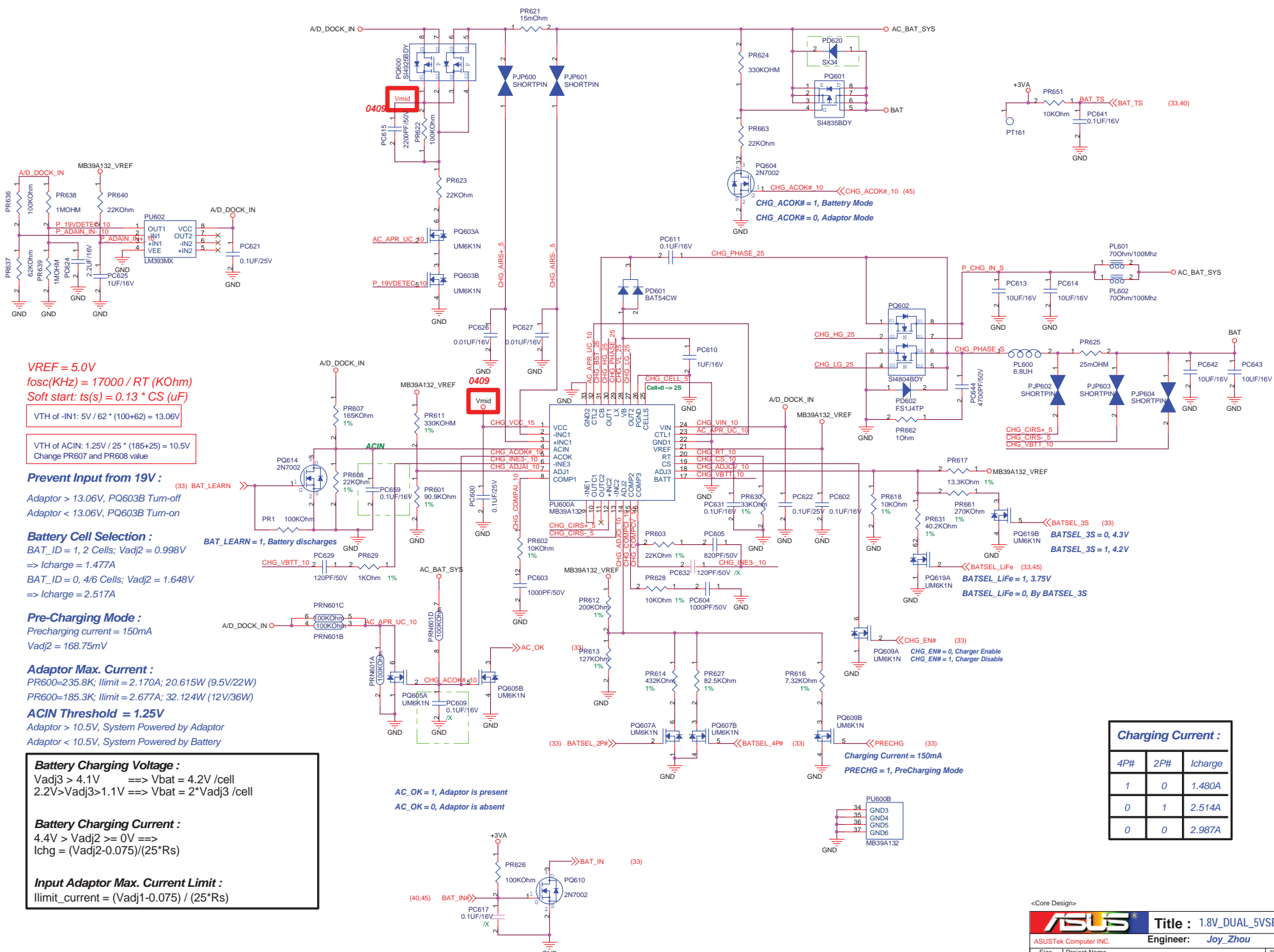
-Core Designs-

		Title: 3VSUS & +5VSUS & +3VA	
ASUSTek Computer INC.		Engineer: N/A	
Size	Project Name		Rev
A3	904H		1.1G
Date: Friday, May 16, 2008		Sheet 45 of 49	



PM_LEVELDOWN#	CPU_LEVELDOWN	CPU_LEVELDOWN#	Voltage	Status
L	L	H	1.005V	Power Saving
H	L	H	1.051V	Normal
H	H	L	1.148V	Performance
L	H	L		N/A





VREF = 5.0V
 $fosc(KHz) = 17000 / RT (KOhm)$
 Soft start: $t_s(s) = 0.13 * CS (\mu F)$
 $VTH \text{ of } -IN1: 5V / 62 * (100+62) = 13.06V$
 $VTH \text{ of } ACIN: 1.25V / 25 * (185+25) = 10.5V$
 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 Cells; $Vadj2 = 0.998V$
 $\Rightarrow Icharge = 1.477A$
 BAT_ID = 0, 4/6 Cells; $Vadj2 = 1.648V$
 $\Rightarrow Icharge = 2.517A$

Pre-Charging Mode:
 Precharging current = 150mA
 $Vadj2 = 168.75mV$

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

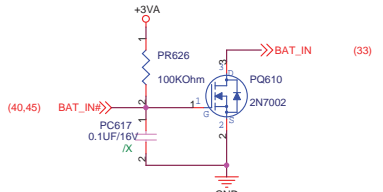
ACIN Threshold = 1.25V
 Adaptor > 10.5V, System Powered by Adaptor
 Adaptor < 10.5V, System Powered by Battery

Battery Charging Voltage:
 $Vadj3 > 4.1V \Rightarrow Vbat = 4.2V / cell$
 $2.2V > Vadj3 > 1.1V \Rightarrow Vbat = 2 * Vadj3 / cell$

Battery Charging Current:
 $4.4V > Vadj2 \geq 0V \Rightarrow Ichg = (Vadj2 - 0.075) / (25 * Rs)$

Input Adaptor Max. Current Limit:
 $Ilimit_current = (Vadj1 - 0.075) / (25 * Rs)$

AC_OK = 1, Adaptor is present
 AC_OK = 0, Adaptor is absent



Charging Current:

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