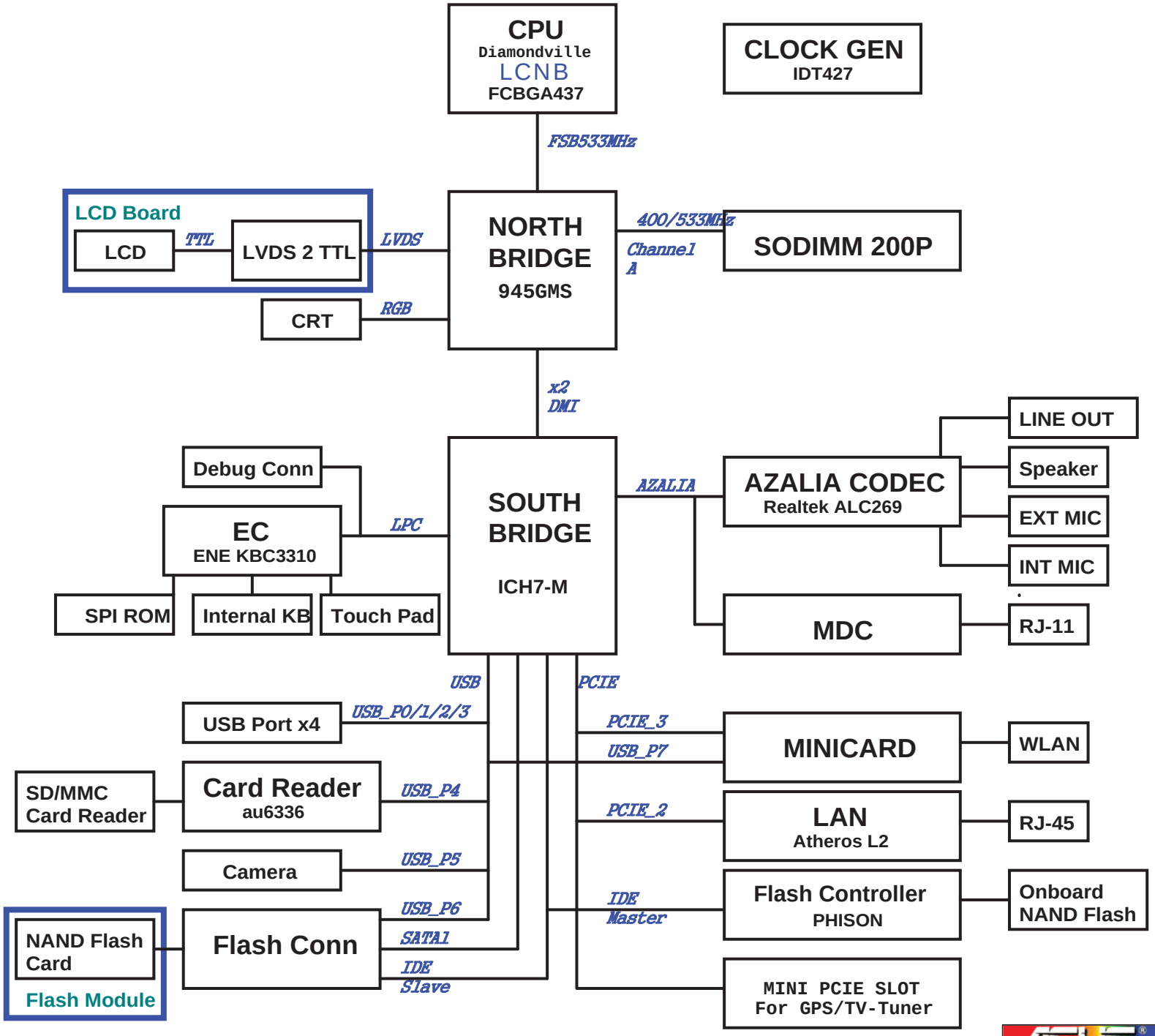
0.1 A Beta



ASUSTek Computer Inc.

Title : Cover Page

Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 1 of 51

ICH7M GPIO DEFAULT&NOW SETTING

Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
AB18	GPIO0/BM_BUSY#	I/O	3.3V	CORE	GPI	BM_BUSY#
C8	GPIO1/REQ5#	I/O	5V	CORE	GPI	REQ5#
G8	GPIO2/PIRQE#	I/OD	5V	CORE	GPI	PIRQE#
F7	GPIO3/PIRQF#	I/OD	5V	CORE	GPI	PIRQF#
F8	GPIO4/PIRQG#	I/OD	5V	CORE	GPI	PIRQG#
G7	GPIO5/PIRQH#	I/OD	5V	CORE	GPI	PIRQH#
AC21	GPIO6	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AC18	GPIO7	I/O	3.3V	CORE	GPI	GPO,WLAN_LED
E21	GPIO8	I/O	3.3V	Resume	GPI	GPI,EXTSMI#
E20	GPIO9	I/O	3.3V	Resume	GPI	GPI,No Function,10K Pull +3VS
A20	GPIO10	I/O	3.3V	Resume	GPI	GPO,WLAN_ON#
B23	GPIO11/SMBALERT#	I/O	3.3V	Resume	Native	SMBALERT#
F19	GPIO12	I/O	3.3V	Resume	GPI	GPI,KBC_SCI#
E19	GPIO13	I/O	3.3V	Resume	GPI	GPO,VCCP_DOWN
R4	GPIO14	I/O	3.3V	Resume	GPI	GPO,1.5VS_DOWN
E22	GPIO15	I/O	3.3V	Resume	GPI	GPI,No Function,10K Pull +3VSUS
AC22	GPIO16/DPRSLVR	I/O	3.3V	CORE	Native	DPRSLVR
D8	GPIO17/GNT5#	I/O	3.3V	CORE	GPO	BIOS_SEL1
AC20	GPIO18/STPPCI#	I/O	3.3V	CORE	GPO	STP_PCI#
AH18	GPIO19/SATA1GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AF21	GPIO20/STPCPU#	I/O	3.3V	CORE	GPO	STP_CPU#
AF19	GPIO21/SATA0GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
A13	GPIO22/REQ4#	I/O	3.3V	CORE	Native	REQ4#
AA5	GPIO23/LDRQ1#	I/O	3.3V	CORE	Native	LDRQ1#
R3	GPIO24	I/O	3.3V	Resume	GPO	GPO,MINICARD1_EN#
D20	GPIO25	I/O	3.3V	Resume	GPO	GPO,DUAL_DOWN

Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
A21	GPIO26	I/O	3.3V	Resume	GPO	GPO,VCORE_DOWN
B21	GPIO27	I/O	3.3V	Resume	GPO	GPO,CARD_READER_EN#
E23	GPIO28	I/O	3.3V	Resume	GPO	GPO,MODEM_EN#
C3	GPIO29/OC5#	I/O	3.3V	Resume	Native	OC5#
A2	GPIO30/OC6#	I/O	3.3V	Resume	Native	OC6#
B3	GPI031/OC7#	I/O	3.3V	Resume	Native	OC7#
AG18	GPIO32/CLKRUN#	I/O	3.3V	CORE	GPO	CLKRUN#
AC19	GPIO33/AZ_DOCK_EN#	I/O	3.3V	CORE	GPO	GPO,No Function,NC
U2	GPIO34/AZ_DOCK_RST#	I/O	3.3V	CORE	GPO	GPO,No Function,NC
AD21	GPIO35	I/O	3.3V	CORE	GPO	GPO,CAMERA_EN
AH19	GPIO36/SATA2GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AE19	GPIO37/SATA3GP	I/O	3.3V	CORE	GPI	GPI,PCB_ID0
AE20	GPIO38	I/O	3.3V	CORE	GPI	GPI,PCB_ID1
AD20	GPIO39	I/O	3.3V	CORE	GPI	GPI,PCB_ID2
NA	GPIO40	NA	NA	NA	NA	NA
NA	GPIO41	NA	NA	NA	NA	NA
NA	GPIO42	NA	NA	NA	NA	NA
NA	GPIO43	NA	NA	NA	NA	NA
NA	GPIO44	NA	NA	NA	NA	NA
NA	GPIO45	NA	NA	NA	NA	NA
NA	GPIO46	NA	NA	NA	NA	NA
NA	GPIO47	NA	NA	NA	NA	NA
A14	GPIO48/GNT4#	I/O	3.3V	CORE	Native	BIOS_SEL0
AG24	GPIO49/CPUPWRGD	I/O	V_CPU_IO	V_CPU_IO	Native	CPUPWRGD

ASUSTek Computer Inc.

Title : System Setting

Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 2 of 51

BLUE Anum FOR ADAPTER
YELLOW Bnum FOR BATTERY ONLY
GREEN FOR BOTH ADAPTER AND BATTERY

Adapter
Battery
A/D_DOCK_IN
BAT
MAX8724ETI
AC_BAT_SYS
BAT_IN
AC_OK

Signal	S0/S1	S3	S4/S5		Power
VSUS_ON	H	H	Adapter	H	SB
			Battery	L	
SUSB_ON	H	L	L		Main
SUSC_ON	H	H	L		DUAL

RT8203PA
VSUS_ON
VSUS_GD
+3VSUS
+5VSUS
+3VA
RT8202
SUSC_ON
CPU_VRON
+5VS
+1.8V
+VCCP
+1.5VS

SI4835BDY
AP9T18GH
RT9173CPSP
ASM1117
APL5315BI
SUSB_ON
+5VS
+3VS
+1.8V
+VTTDDR
+3V_LCD
+2.5VS

ENE KB3310
55ms
10ms
+3VA
VSUS_ON
VSUS_GD
O_PWR_SW#
SUSC_ON
SUSB_ON
CPU_VRON
VRM_PWRGD
PM_PWROK
S_PCIRST#
C_PCI_EC
H_CPUPWRGD
PM_RSMRST#
PM_PWRBTN#
PM_SUSB#
PM_SUSC#

Battery Mode
B10-->B11 250ms

Intel
ICH7-M
(internal)
+VCC_RTC
+5VSUS
+3VSUS
+1.5VSUS
+5VS
+3VS
+2.5VS
+1.5VS
+VCCP
VRM_PWRGD
PM_PWROK
S_PCIRST#
PLT_RST#
C_PCIE_SB
C_48M_USB
C_PCI_SB
C_REF_SB

Intel
945GMS
+1.8V
+2.5VS
+1.5VS
+VCCP
PM_PWROK
PLT_RST#
H_CPUPWRGD
H_CPURST#
C_FSB_NB
C_PCIE_NB
C_96M_NB
C_LCD_LVDS
D2_CLK
SODIMM

Diamondville
ADP3208JCPZ
+VCCP
+1.5VS
VID[6:0]
+VCORE
C_FSB_CPU
AC_BAT_SYS
CPU_VRON
VRM_PWRGD

MINICARD
AR8113
+3VSUS
+3VS
+1.5VS
C_PCIE_WIFI
PLT_RST#
C_PCIE_L2

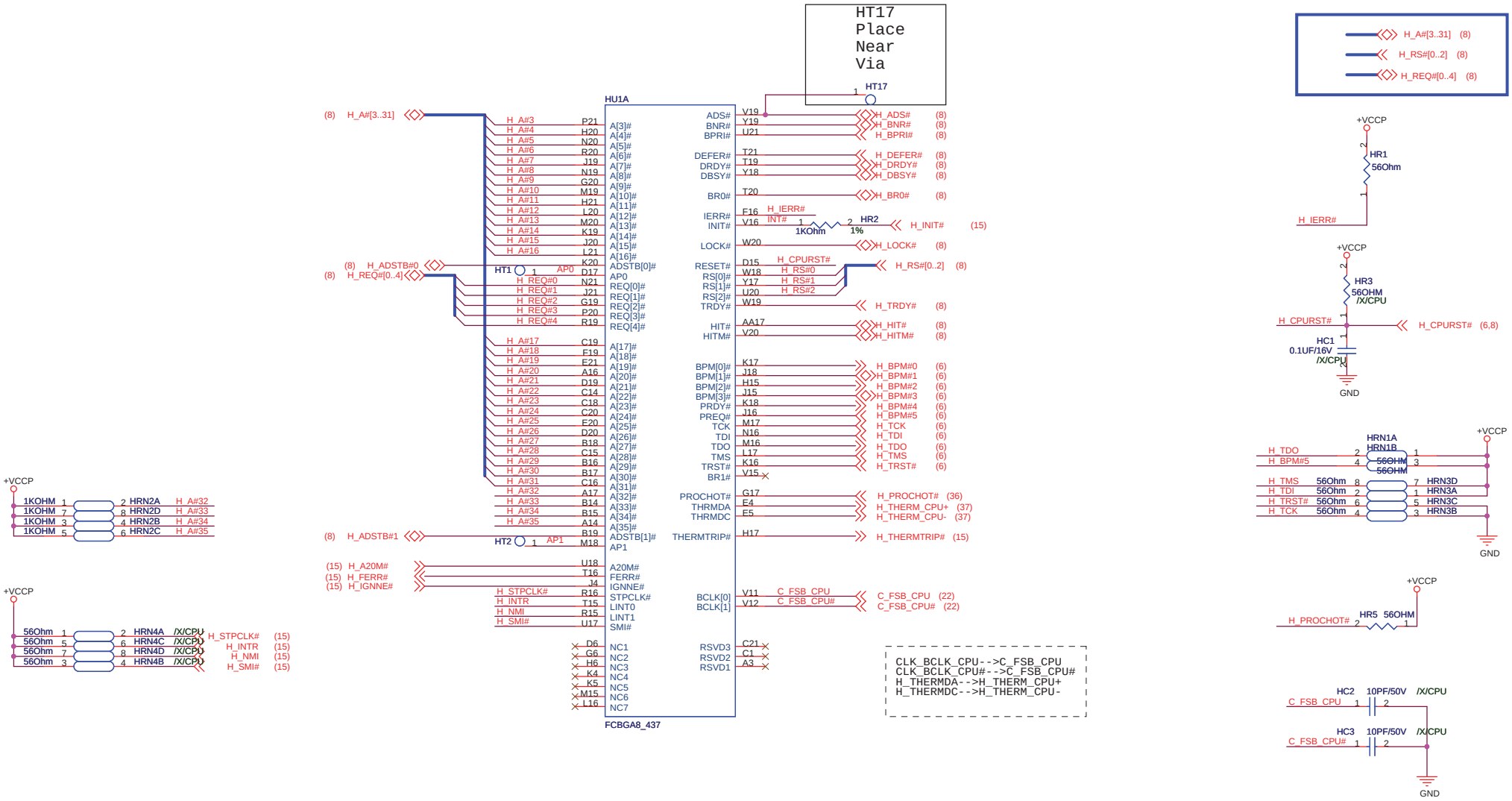
IDT427
CLK_EN
+VCCP_OK
REF CLK 14M ICH
USB CLK 48M ICH
PCI CLK 33M ICH EC DEBUG
SATA CLK 100M ICH
FSB CLK 100M CPU MCH ITP
PCIE CLK 100M MCH ICH MINICARD LAN
LVDS CLK 100M MCH
UMA CLK 96M MCH

Onboard Flash
Flash Module
+3VS
S_PCIRST#

delay
+VCCP
+VCCP_OK

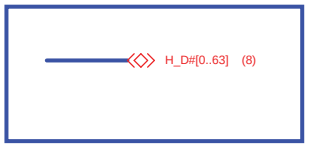
ASUSTek Computer Inc.
Title : Sequence
Engineer: Henry_Yang
Size: A3
Project Name: P703
Rev: 1.2G
Date: Tuesday, December 09, 2008
Sheet 3 of 51

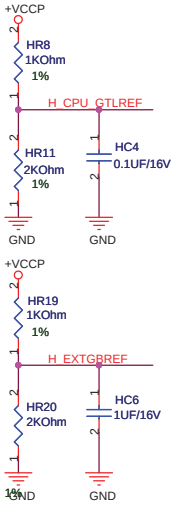
0.1 A Beta



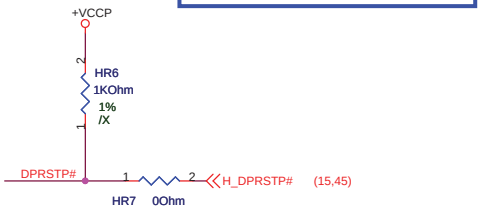
ASUSTek Computer Inc.	Title : Diamondville-1	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 4 of 51	

0.1 A Beta



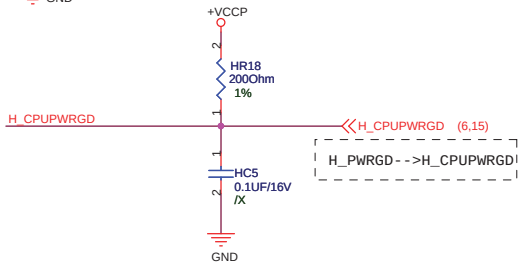


BSEL0	BSEL1	BSEL2	FSB
0	X	X	400
1	X	X	533

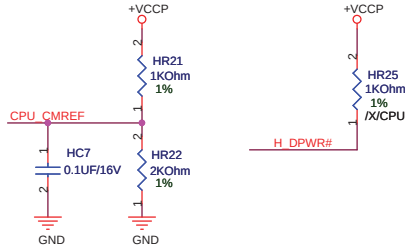


厂ノH_DPRSTP#cmH_DPSLP# ,
0 Ohmヨ ,い 1KOhm Pull up篆
い厂ノ ,惠 1 KOhm Pull up

Place within 0.5'' to processor pin

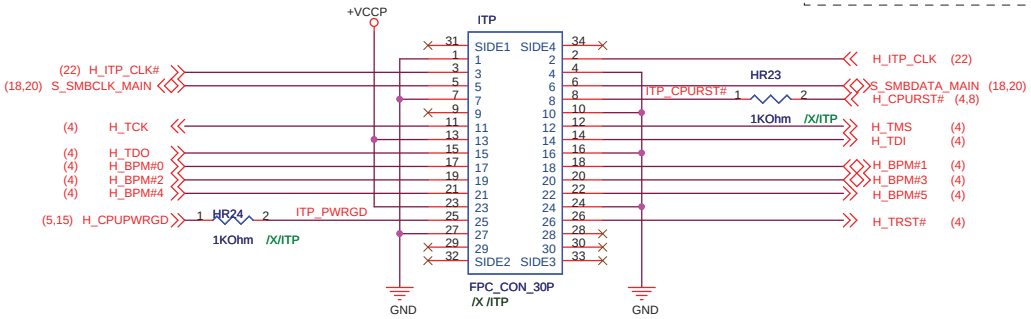


H_PWRGD-->H_CPUPWRGD

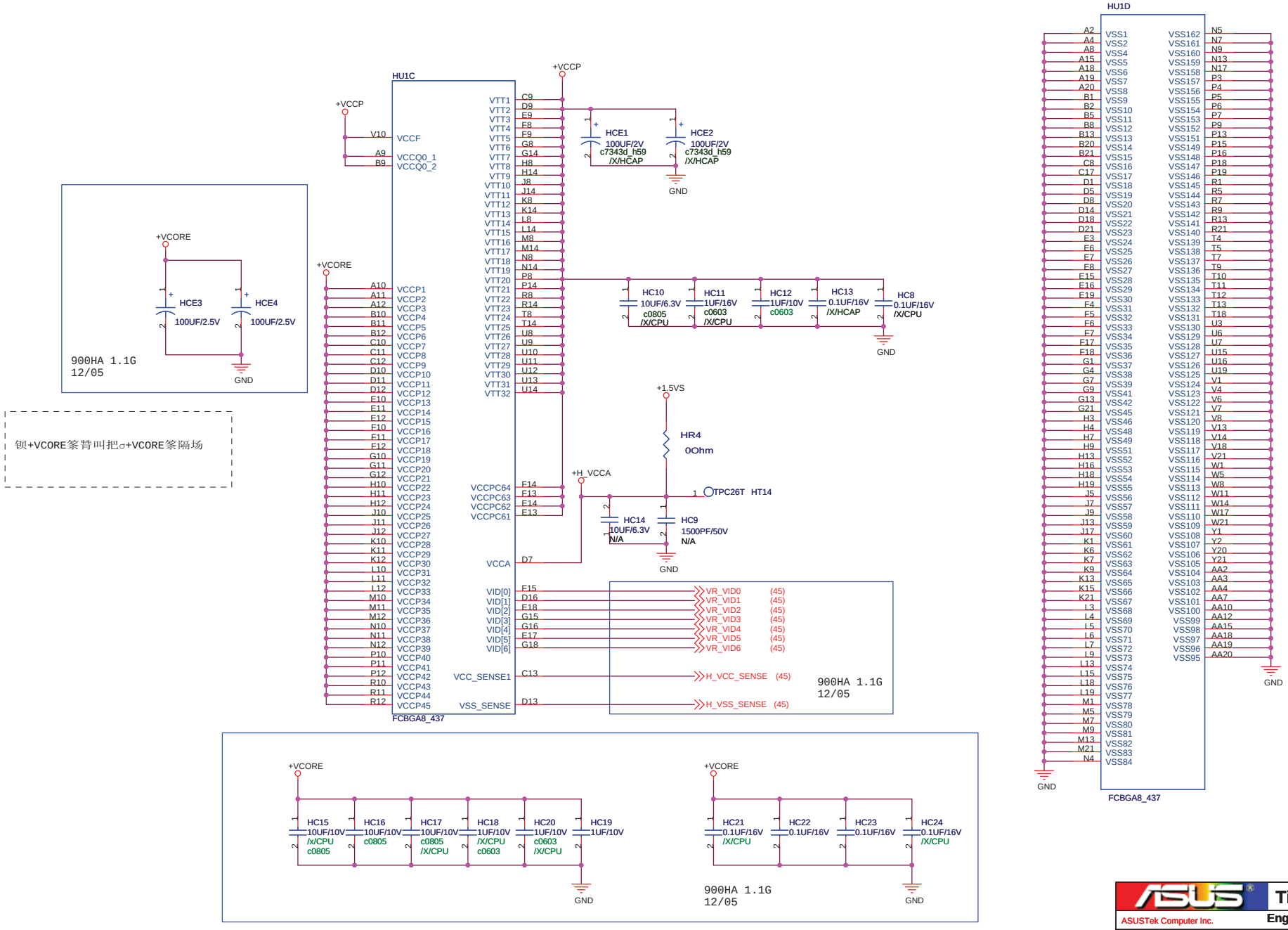


ASUSTek Computer Inc.	Title : Diamondville-2		
	Engineer: Henry_Yang		
Size: A3	Project Name: P703		Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 5 of 51		

HR23
Place
within 12'' to the connector



ASUSTek Computer Inc.	Title : ITP	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 6 of 51	



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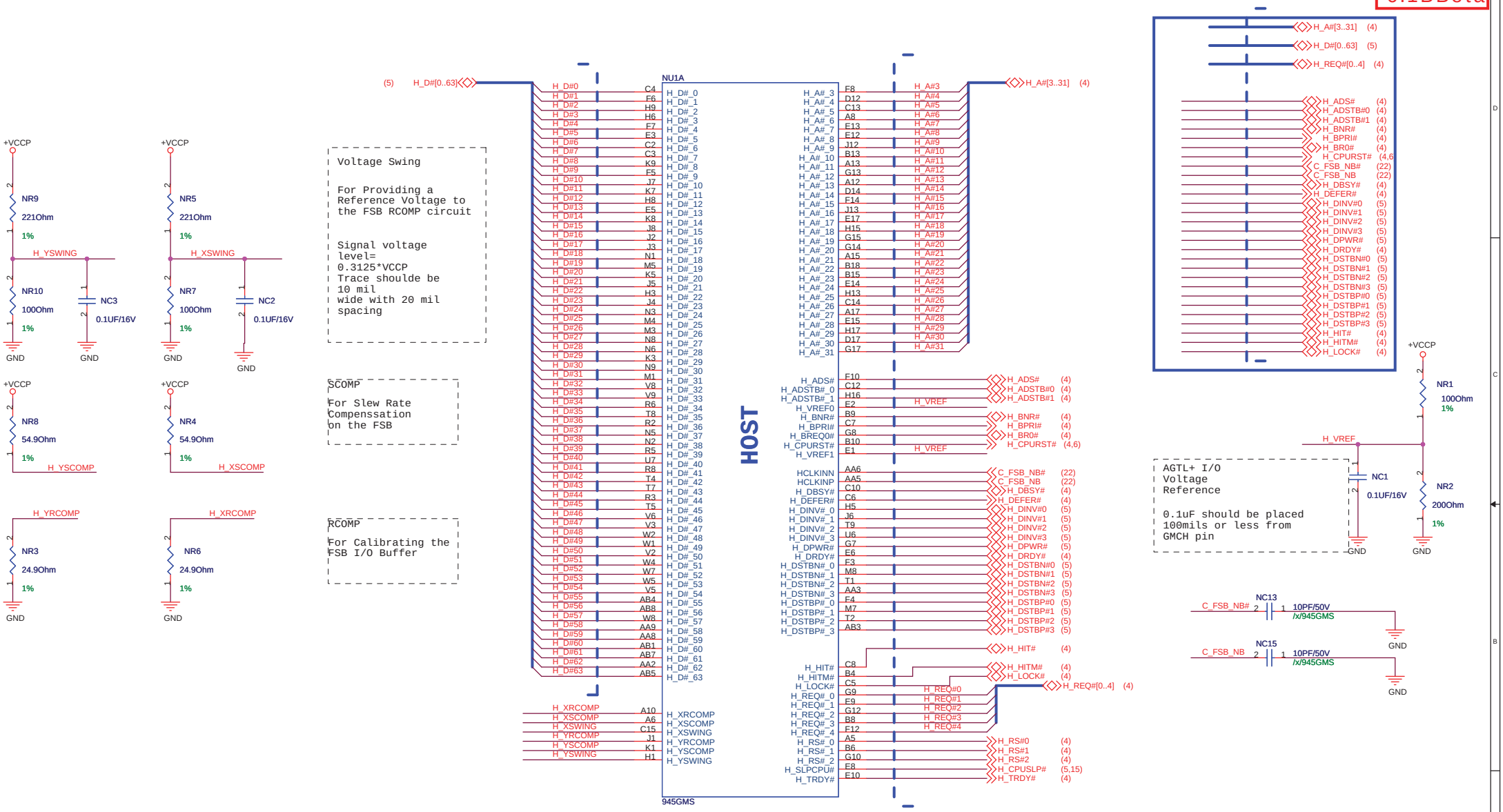
ASUSTek Computer Inc.	Title : Diamondville-PWR	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 7 of 51	

0.1BBeta



<Variant Name>

ASUSTeK COMPUTER INC.

Title : 945GMS(HOST)

Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 8 of 51

0.1BBeta

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

DMIX2_SELECT
0=DMI X2(DEFAULT)
1=Reserved

If N/A NR42, NR21 need to be /X

Place NC27 close to AA33 Pin

Place NC4 close to AE1 Pin

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Title : 945GSE(DMI)			
ASUSTek Computer Inc.	Engineer: Henry_Yang		
Size: A3	Project Name: P703		Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 9 of 51		

NR29
NR30
NR32
Close to GMCH

V_BLUE — NR29 150OHM r0603 — GND
V_GREEN — NR32 150OHM r0603 — GND
V_RED — NR30 150OHM r0603 — GND

G_NBL_EN — NR40 100KOHM — GND
G_LVDD_EN — NR41 100KOHM — GND

N_LVDS_IREF — NR38 1.5KOhm 1% r0603_h24 — GND
N_CRT_IREF — NR35 255Ohm 1% — GND

C_PCIE_NB# — NC33 10PF/50V /x/945GMS — GND
C_PCIE_NB — NC36 10PF/50V /x/945GMS — GND

G_CLKN — NC71 10PF/50V /x/945GMS — GND
G_CLKP — NC72 10PF/50V /x/945GMS — GND

NU1F — 945GMS

MISC
H27 SDVO_CTRLDATA
J27 SDVO_CTRLCLK
Y26 G_CLKINN
AA26 G_CLKINP

VGA
H20 CRT_DDC_CLK
H22 CRT_DDC_DATA
A24 CRT_BLUE
A23 CRT_BLUE#
E25 CRT_GREEN
F25 CRT_GREEN#
C25 CRT_RED
D25 CRT_RED#
F27 CRT_VSYNC
D27 CRT_HSYNC
H25 CRT_IREF

LVDS
H30 L_BKLTCTL
G29 L_BKLTEN
F28 L_CLKCTLA
E28 L_CTLBDATA
G28 L_DDC_CLK
H28 L_DDC_DATA
K30 L_VDDEN
K27 L_IBG
J29 L_VBG
J30 L_VREFH
K29 L_VREFL
D30 LA_CLKN
C30 LA_CLKP
A30 LB_CLKN
A29 LB_CLKP
G31 LA_DATAN_0
F32 LA_DATAN_1
D31 LA_DATAN_2
H31 LA_DATAP_0
G32 LA_DATAP_1
C31 LA_DATAP_2
F33 LB_DATAN_0
D33 LB_DATAN_1
F30 LB_DATAN_2
E33 LB_DATAP_0
D32 LB_DATAP_1
F29 LB_DATAP_2

SDVO
EXP_A_COMPI R28
EXP_A_ICOMPO M28
SDVO_TVCLKIN# N30
SDVO_INT# R30
SDVO_FLDSTALL# T29
SDVO_TVCLKIN M30
SDVO_INT P30
SDVO_FLDSTALL T30
SDVO_RED# P28
SDVO_GREEN# N32
SDVO_BLUE# P32
SDVO_CLKN T32
SDVO_RED N28
SDVO_GREEN M32
SDVO_BLUE P33
SDVO_CLKP R32

TV
TV_DACA_OUT A21
TV_DACB_OUT C20
TV_DACC_OUT F20
TV_IREF G23
TV_IRTNA B21
TV_IRTNB C21
TV_IRTNC D21
TV_DCONSEL0 G26
TV_DCONSEL1 J26

(22) C_PCIE_NB#
(22) C_PCIE_NB
(23) V_DDC_CLK
(23) V_DDC_DATA
(23) V_BLUE
(23) V_GREEN
(23) V_RED
(23) V_VSYNC
(23) V_HSYNC
(24) G_NBL_CTRL
(24) G_NBL_EN
(24) G_LVDD_EN
(24) G_CLKN
(24) G_CLKP
(24) G_DATAN0
(24) G_DATAN1
(24) G_DATAN2
(24) G_DATAP0
(24) G_DATAP1
(24) G_DATAP2

NR33 39Ohm — N_VSYNC — N_HSYNC
N_CRT_IREF — 39Ohm — NR34

+3VS
10KOHM NRN1A N_L_CTLA_CLK
10KOHM NRN1B N_L_CTLB_DATA
10KOHM NRN1C G_DDC_CLK
10KOHM NRN1D G_DDC_DATA
N_LVDS_IREF

+1.5V_PCIE
N_EXP_COMP — NR31 24.9Ohm 1%

Place NR31 within 500mils of GMCH
Avoid rounting next to clock pins

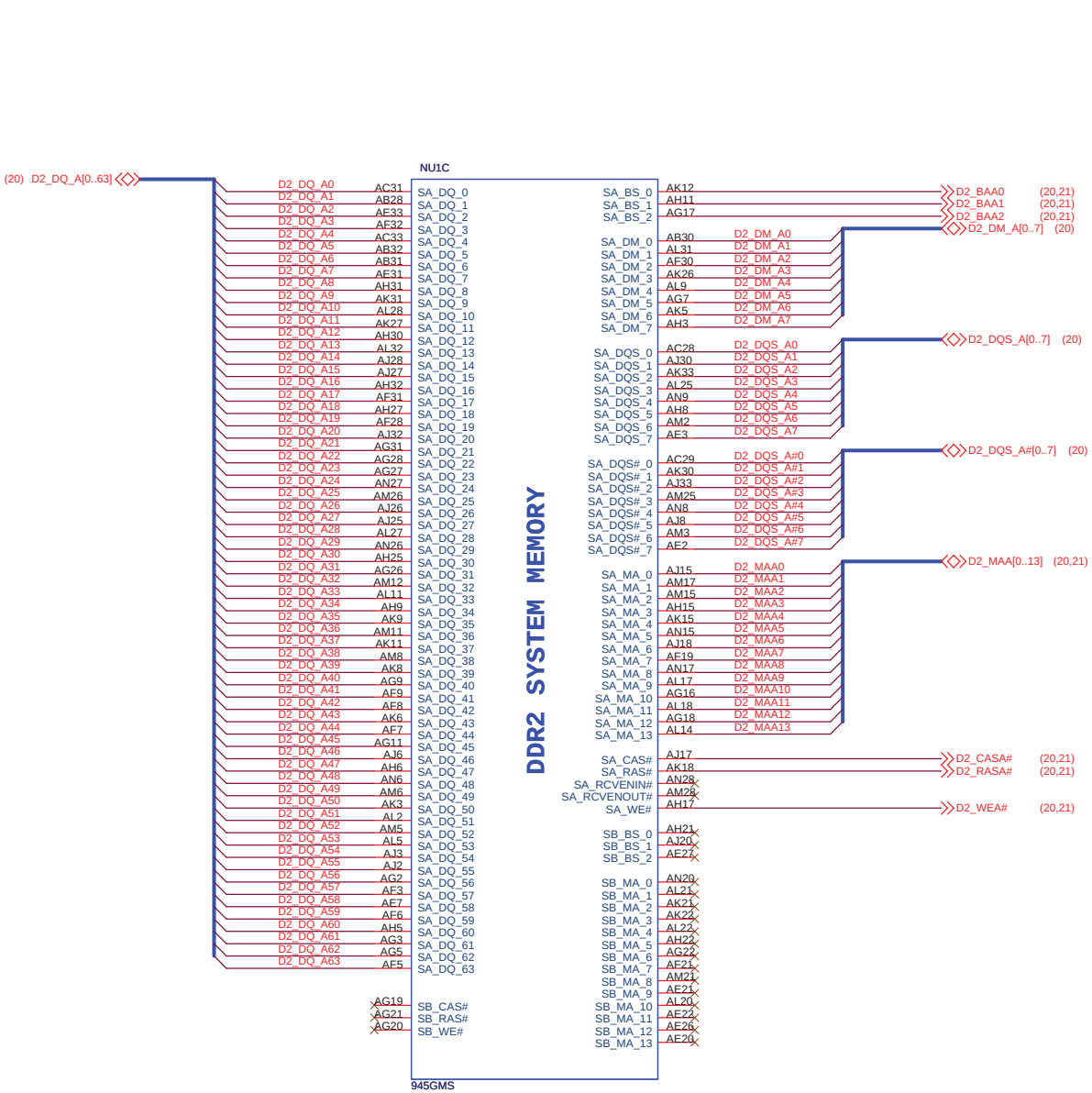
TV_DAC_OUT — NR39 0Ohm r0603_h24
+1.5VS
For Disable TV

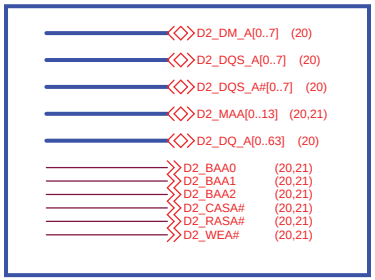
C_PCIE_NB# (22)
C_PCIE_NB (22)
V_DDC_CLK (23)
V_DDC_DATA (23)
V_BLUE (23)
V_GREEN (23)
V_RED (23)
V_VSYNC (23)
V_HSYNC (23)
G_NBL_CTRL (24)
G_NBL_EN (24)
G_LVDD_EN (24)
G_CLKN (24)
G_CLKP (24)
G_DATAN0 (24)
G_DATAN1 (24)
G_DATAN2 (24)
G_DATAP0 (24)
G_DATAP1 (24)
G_DATAP2 (24)

G_DDC_CLK (24)
G_DDC_DATA (24)

ASUSTek Computer Inc.
Title : 945GSE(GRAPHIC)
Engineer: Henry_Yang
Size A3 | Project Name P703 | Rev 1.2G
Date: Tuesday, December 09, 2008 | Sheet 10 of 51

0.1BBeta





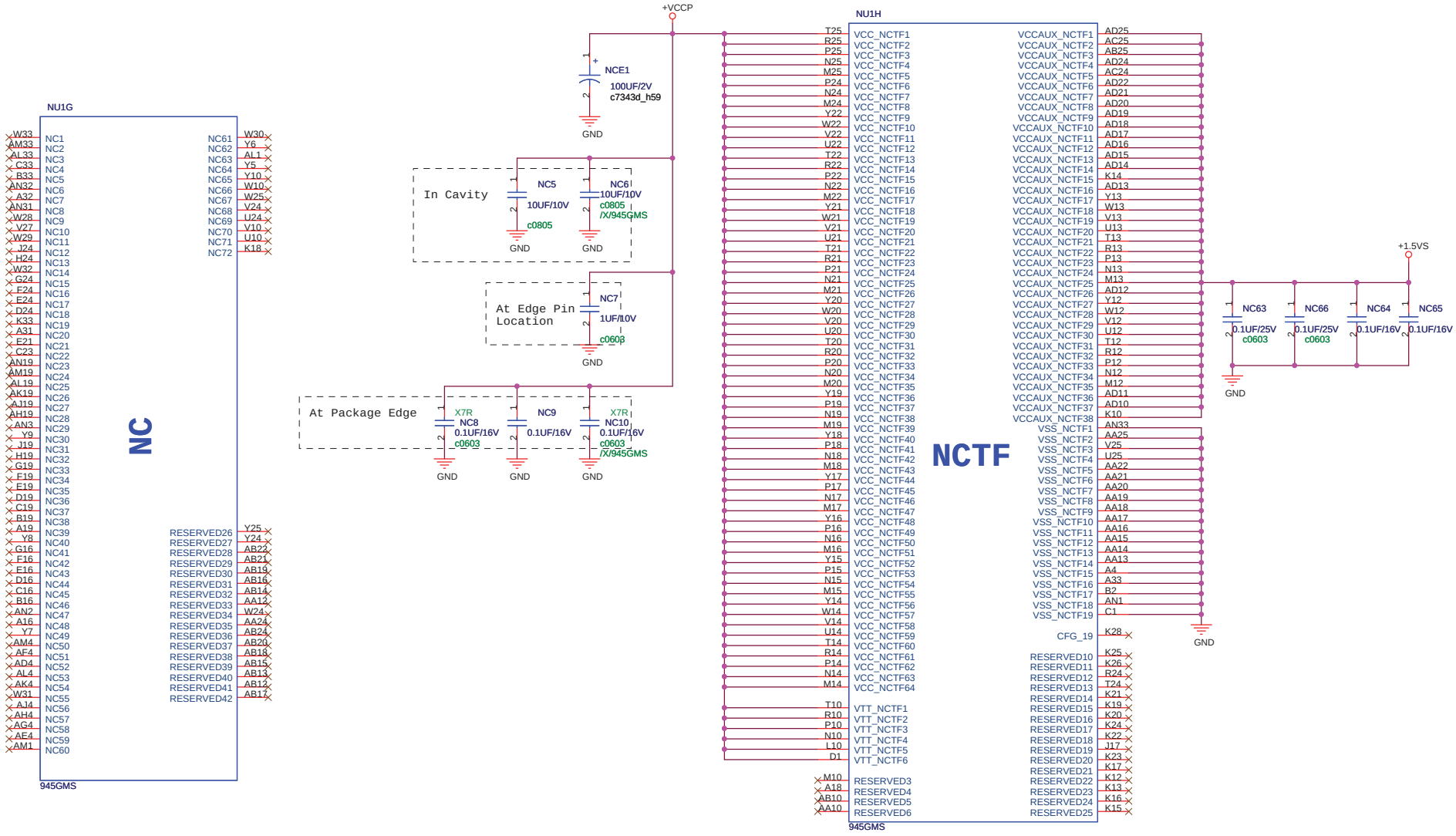
ASUSTek Computer Inc.

Title : 945GSE(DDR)

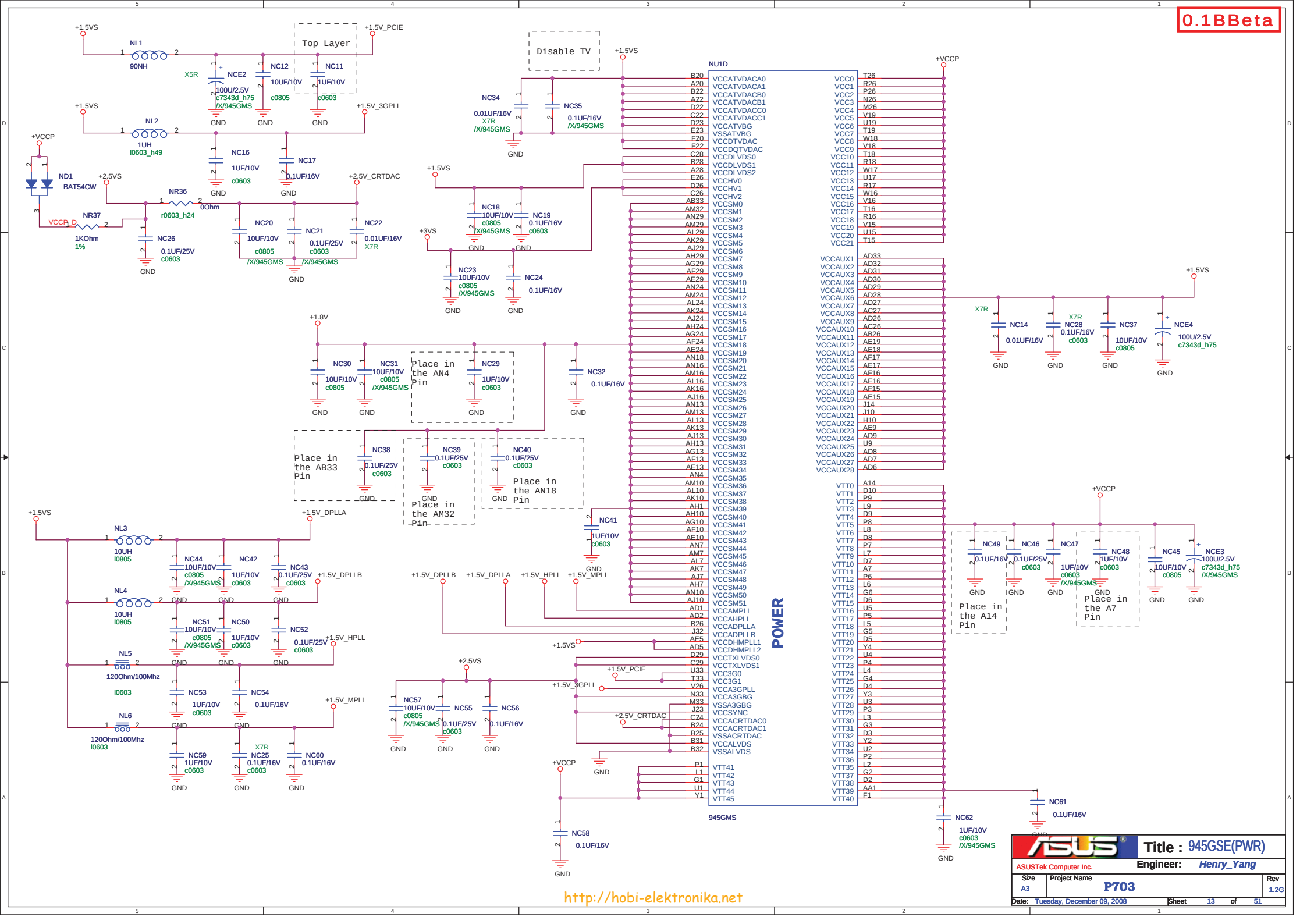
Engineer: Henry_Yang

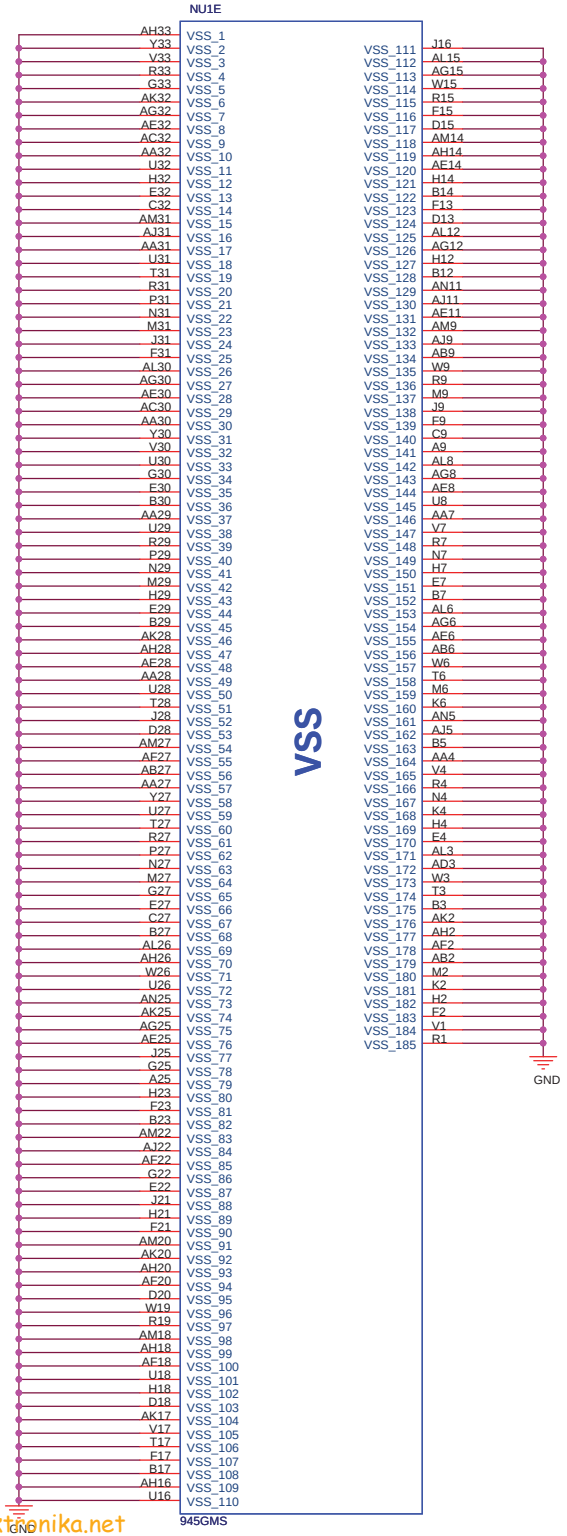
Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 11 of 51



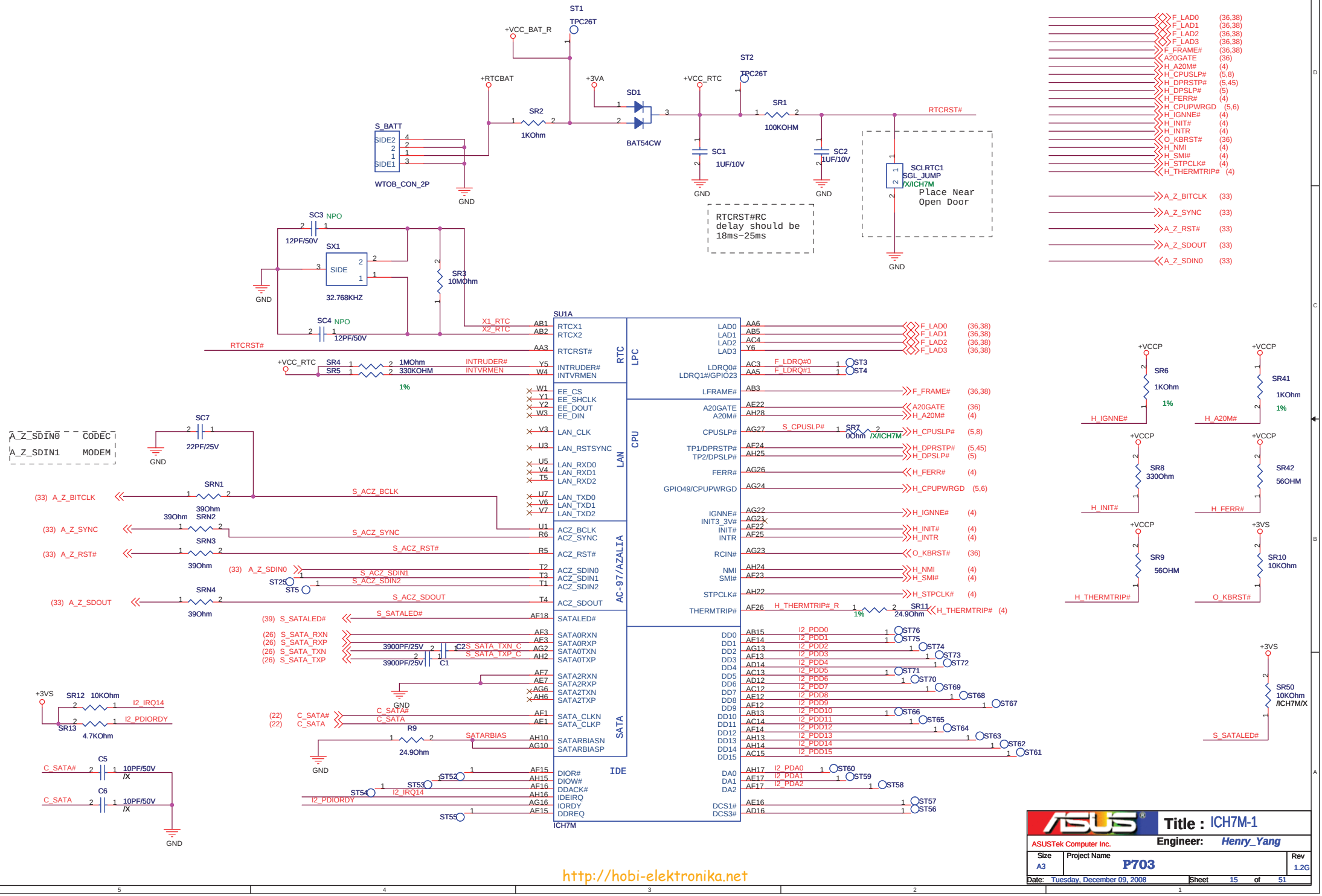
ASUSTek Computer Inc.	Title : 945GSE(NC,PWR)	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 12 of 51	


0.1BBeta
Top Layer
Disable TV
Place in the AN4 Pin
Place in the AB33 Pin
Place in the AM32 Pin
Place in the AN18 Pin
Place in the A14 Pin
Place in the A7 Pin
NU1D
945GSME
POWER
ASUSTek Computer Inc.
Title : 945GSE(PWR)
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 13 of 51
http://hobi-elektronika.net

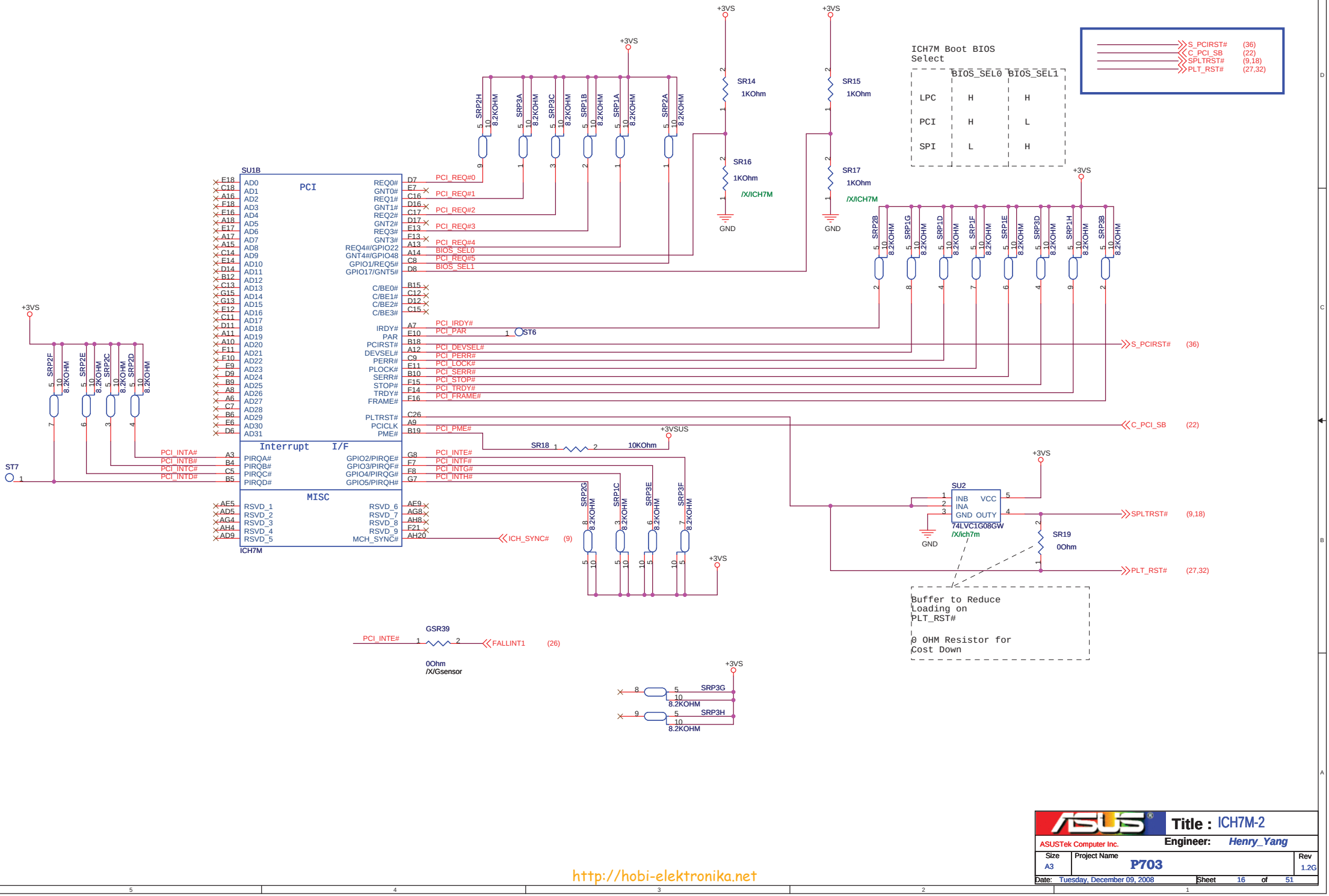


ASUSTek Computer Inc.	Title : 945GSE(GND)	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 14 of 51	

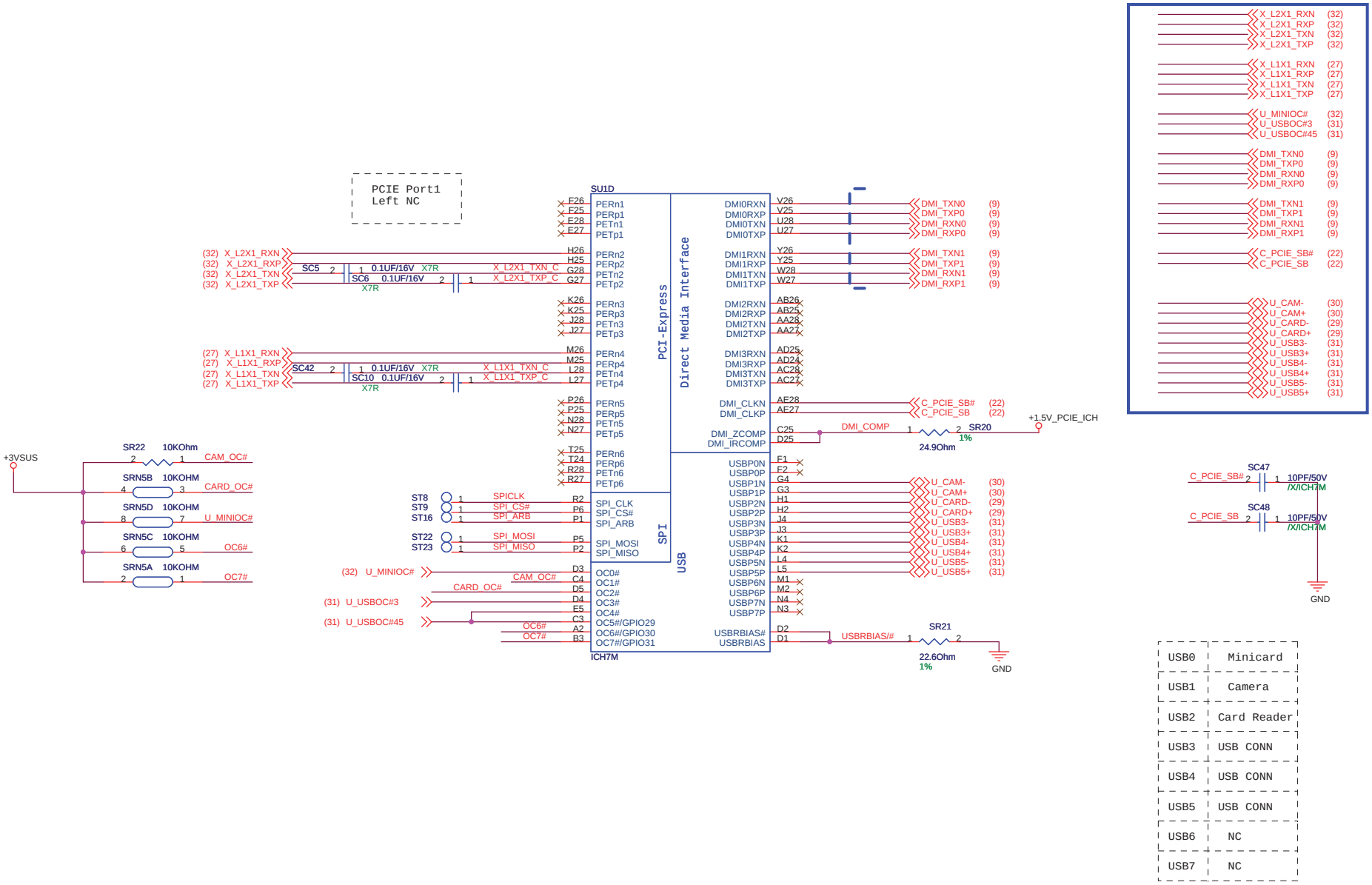
0.1BBeta



ASUSTek Computer Inc.	Title : ICH7M-1	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 15 of 51	


0.1BBeta
ICH7M Boot BIOS Select
BIOS_SEL0 BIOS_SEL1
LPC H H
PCI H L
SPI L H
S_PCIRST# (36)
C_PCI_SB (22)
SPLTRST# (9,18)
PLT_RST# (27,32)
SU1B
PCI
Interrupt I/F
MISC
ICH7M
SR14 1KOhm
SR15 1KOhm
SR16 1KOhm /X/ICH7M
SR17 1KOhm /X/ICH7M
SR18 10KOhm
SR19 0Ohm
GSR39 0Ohm /X/Gsensor
SU2 74LVC1G08GW /X/ich7m
ST6
ST7
ICH_SYNC# (9)
FALLINT1 (26)
Buffer to Reduce Loading on PLT_RST#
0 OHM Resistor for Cost Down
http://hobi-elektronika.net
Title : ICH7M-2
ASUSTek Computer Inc.
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 16 of 51

0.1BBeta



USB0	Minicard
USB1	Camera
USB2	Card Reader
USB3	USB CONN
USB4	USB CONN
USB5	USB CONN
USB6	NC
USB7	NC

ASUSTek Computer Inc.

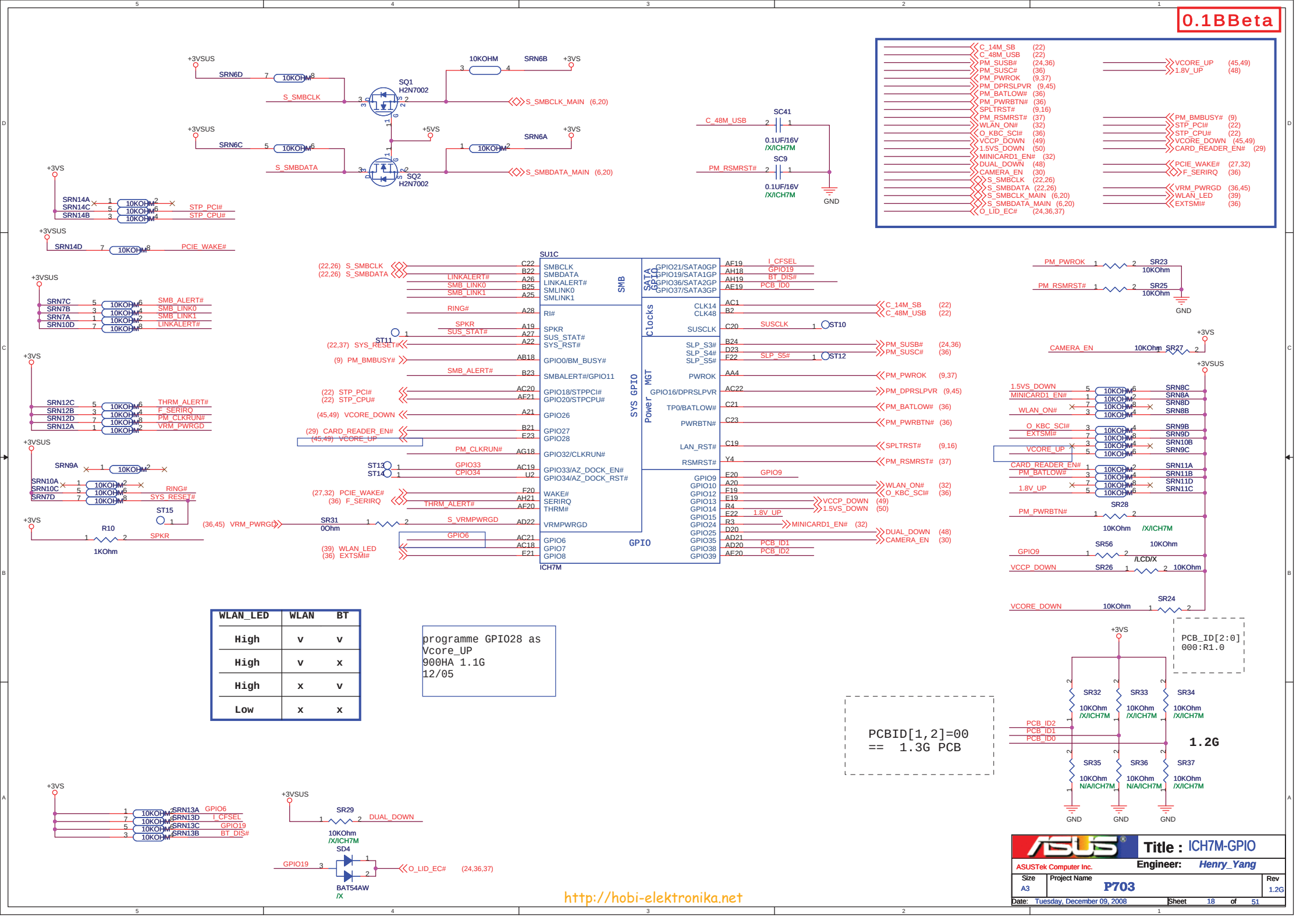
Title : ICH7M-3

Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 17 of 51

0.1BBeta



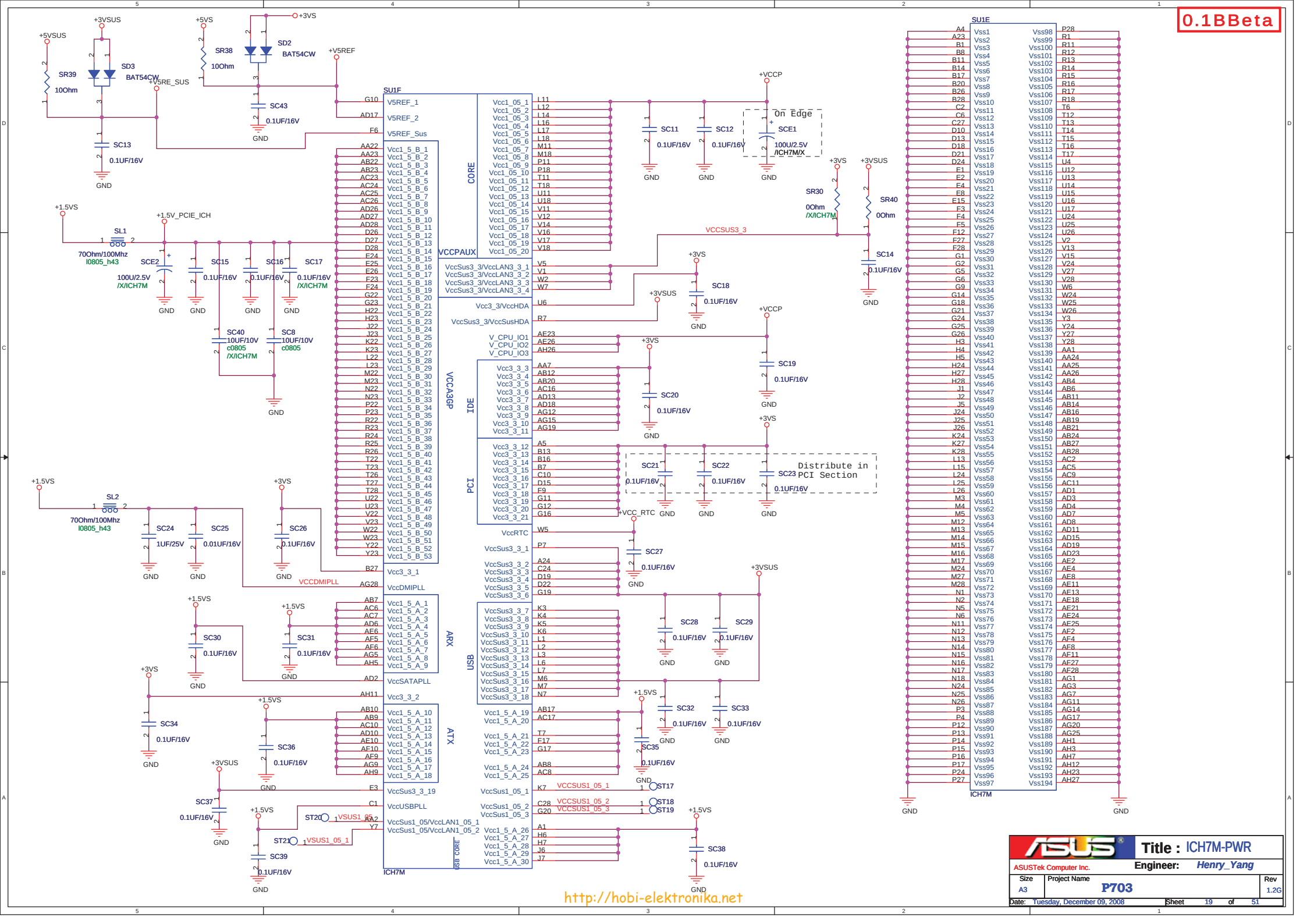
WLAN_LED	WLAN	BT
High	v	v
High	v	x
High	x	v
Low	x	x

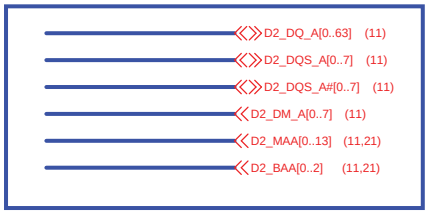
programme GPIO28 as
Vcore_UP
900HA 1.1G
12/05

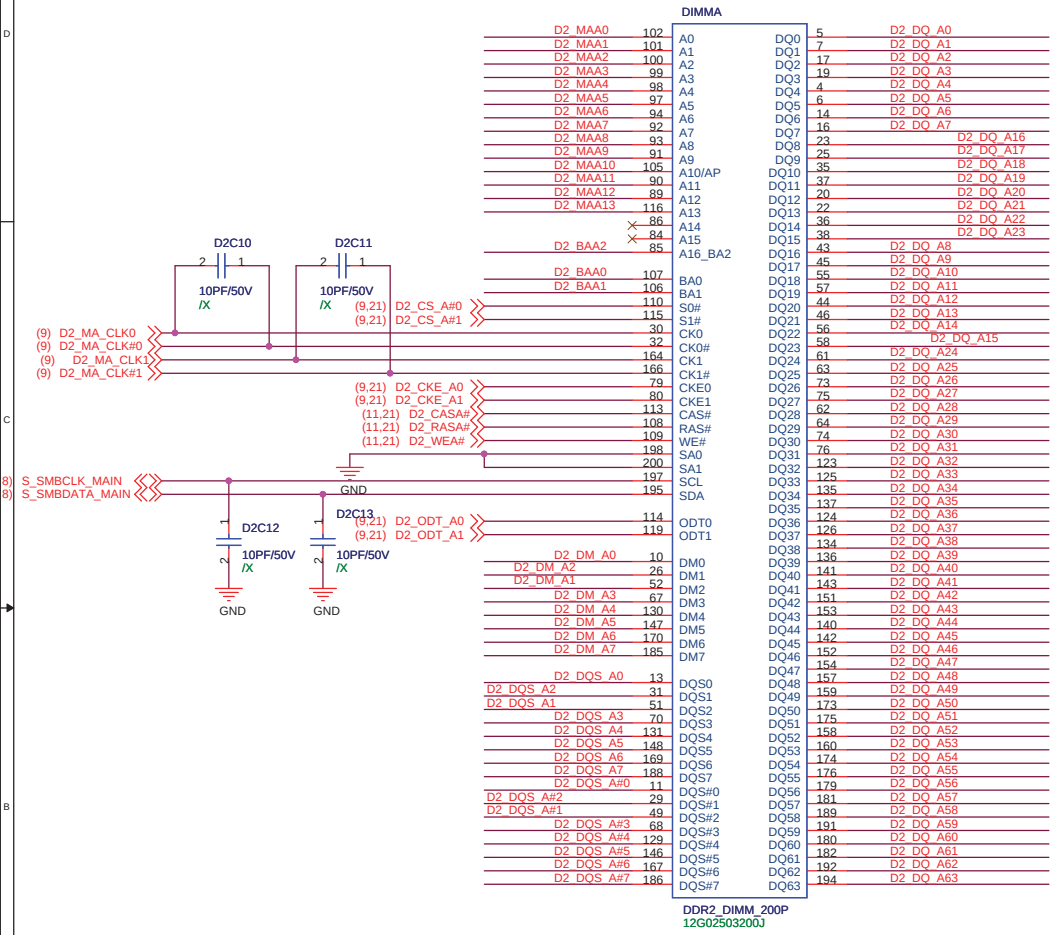
PCBID[1,2]=00
== 1.3G PCB

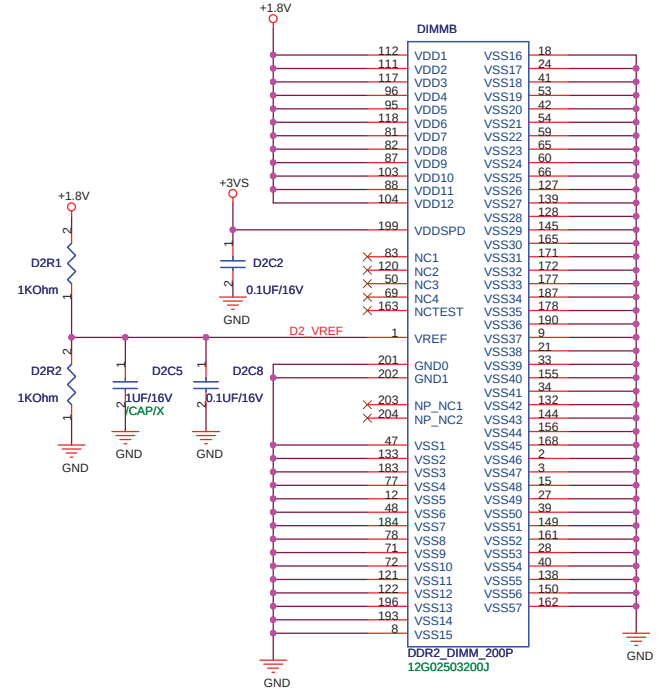
http://hobi-elektronika.net

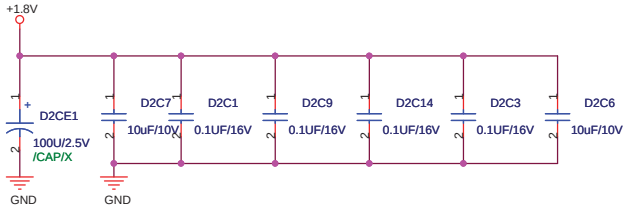
ASUSTek Computer Inc.	Title : ICH7M-GPIO	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 18 of 51	


0.1BBeta
SU1F
SU1E
ICH7M
CORE
VCCPAUX
VCCA3GP
IDE
PCI
ARX
USB
ATX
USB CORE
On Edge
SCE1
100U/2.5V
/ICH7M/X
Distribute in
PCI Section
VCCSUS3_3
+5VSUS
+3VSUS
+5VS
+3VS
+5VREF
+5RE_SUS
+1.5VS
+1.5V_PCIE_ICH
+VCCP
+VCC_RTC
SR38
10Ohm
SD2
BAT54CW
SR39
SD3
SC43
SC13
0.1UF/16V
GND
SL1
70Ohm/100Mhz
l0805_h43
SCE2
100U/2.5V
/X/ICH7M
SC15
SC16
SC17
SC40
10UF/10V
c0805
SC8
SL2
SC24
1UF/25V
SC25
0.01UF/16V
SC26
SC30
SC31
SC34
SC36
SC37
SC39
SC11
SC12
SR30
0Ohm
/X/ICH7M
SR40
SC14
SC18
SC19
SC20
SC21
SC22
SC23
SC27
SC28
SC29
SC32
SC33
SC35
SC38
ST17
ST18
ST19
ST20
ST21
VSUS1_05
VSUS1_05_1
VCCSUS1_05_1
VCCSUS1_05_2
VCCSUS1_05_3
VCCDMIPLL
ASUSTek Computer Inc.
Title : ICH7M-PWR
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 19 of 51
http://hobi-elektronika.net









ASUSTek Computer Inc.

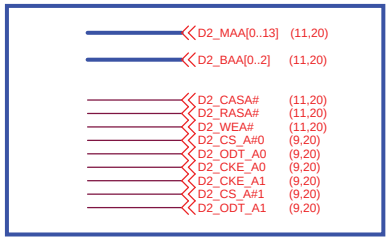
Title : SO-DIMM

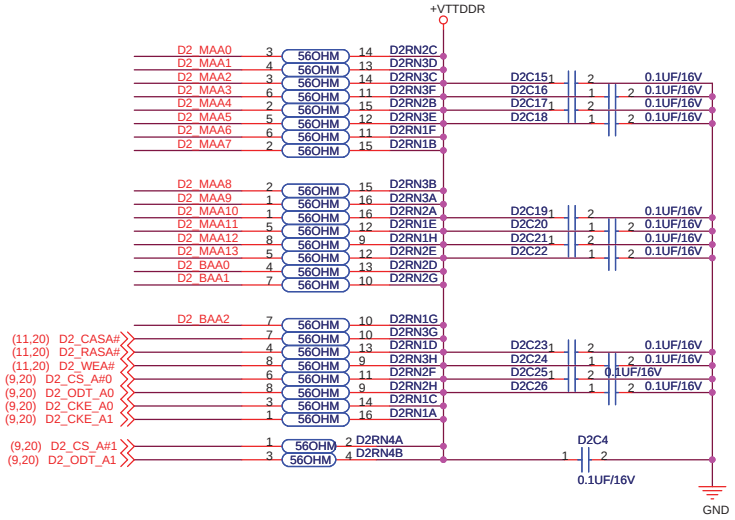
Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

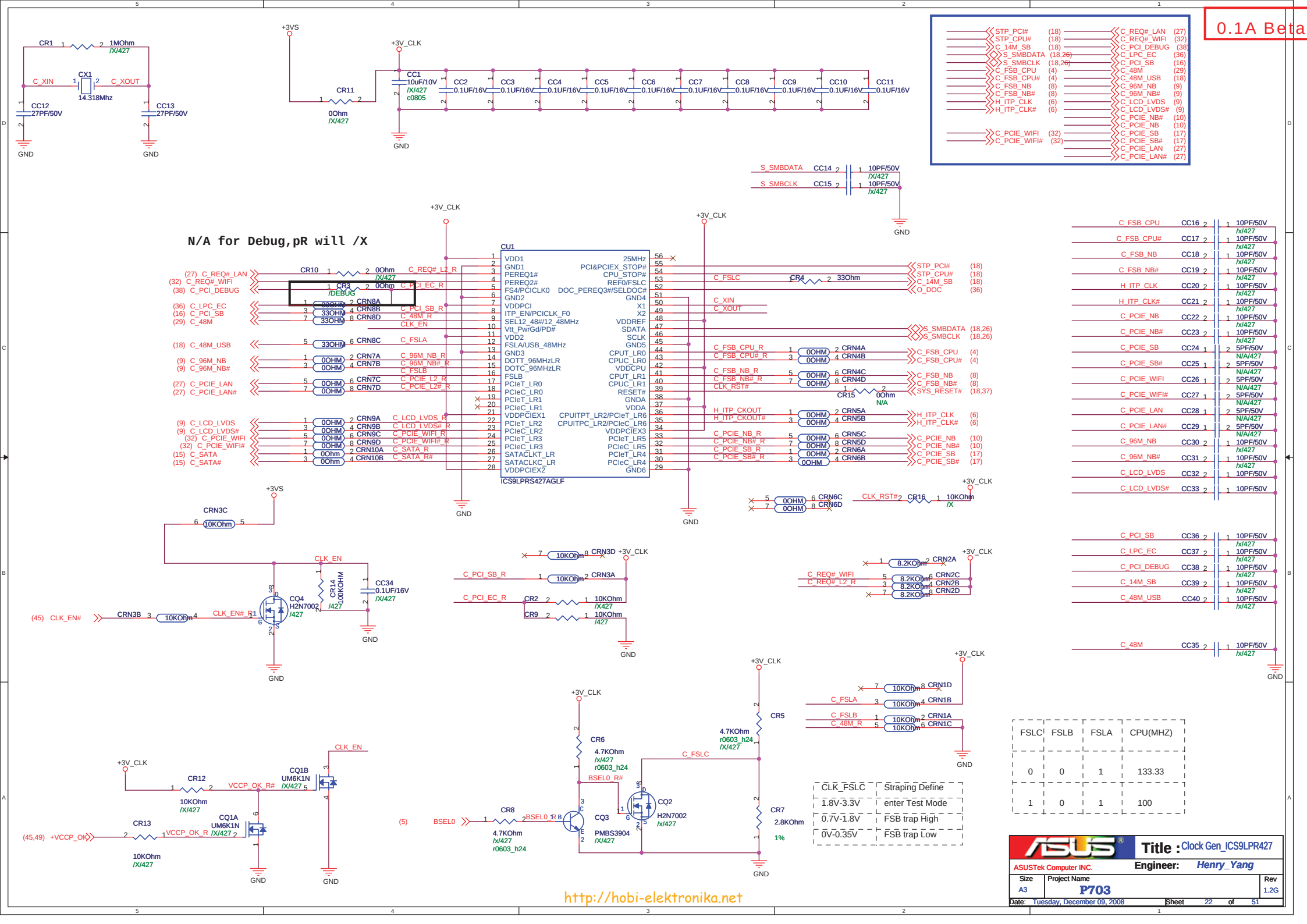
Date: Tuesday, December 09, 2008 Sheet 20 of 51

0.1BBeta



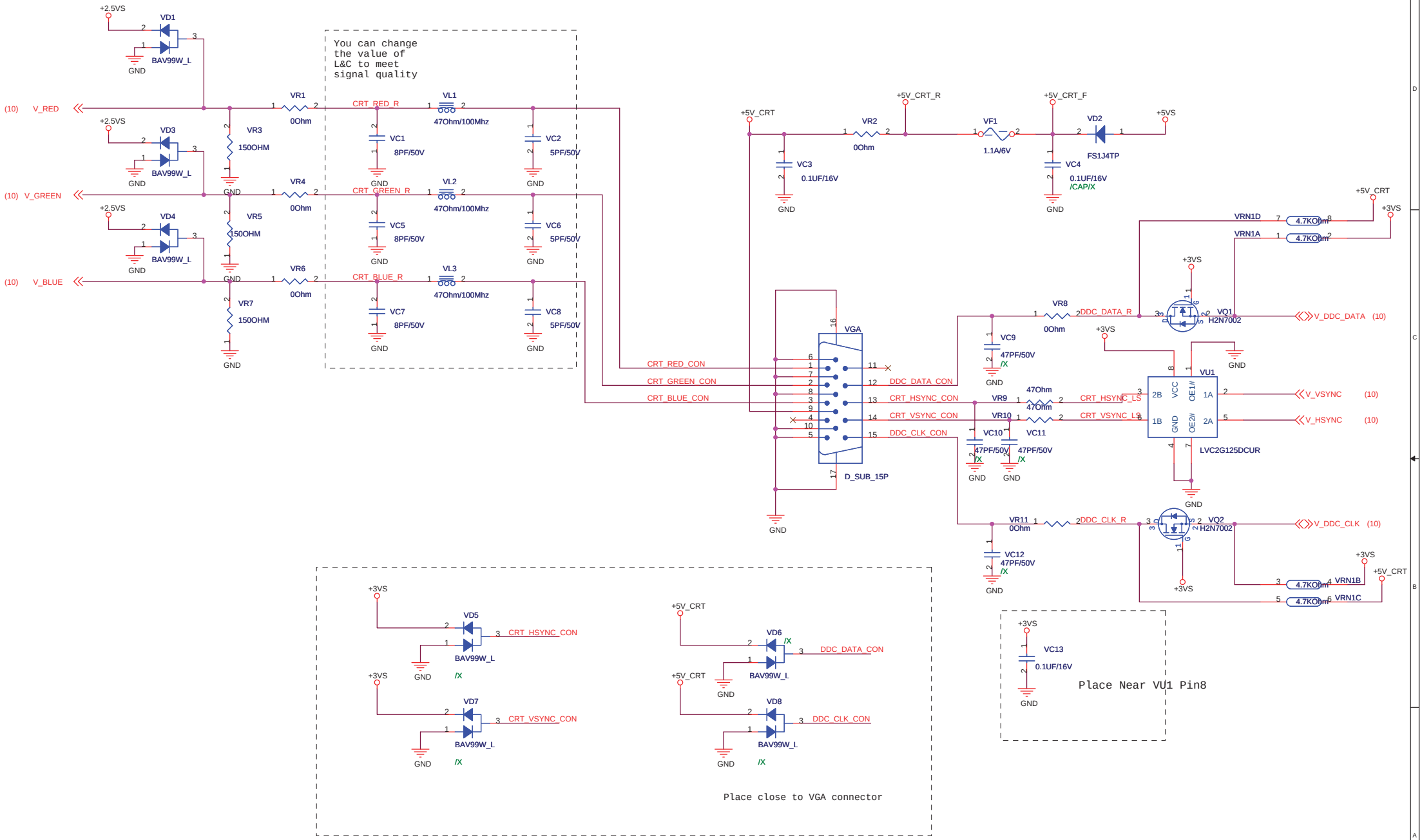


ASUSTek Computer Inc.	Title : DDR-Termination	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 21 of 51	



FSLC	FSLB	FSLA	CPU(MHZ)
0	0	1	133.33
1	0	1	100

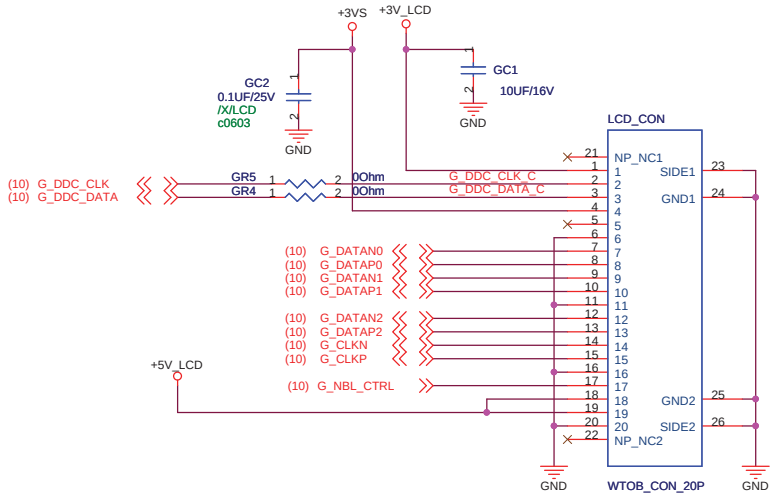
CLK_FSLC	Straping Define
1.8V-3.3V	enter Test Mode
0.7V-1.8V	FSB trap High
0V-0.35V	FSB trap Low

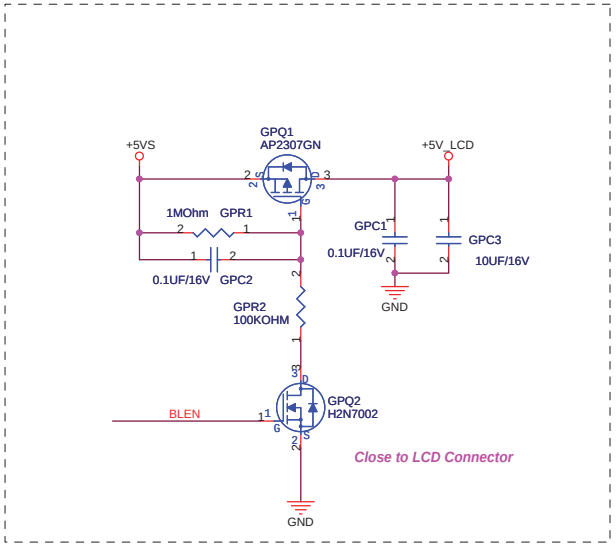


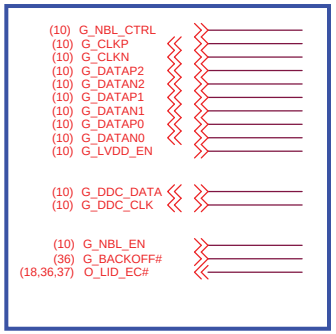
http://hobi-elektronika.net

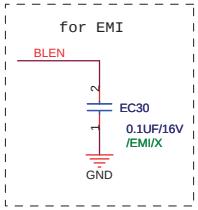
ASUSTek Computer Inc.	Title : VGA	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 23 of 51	

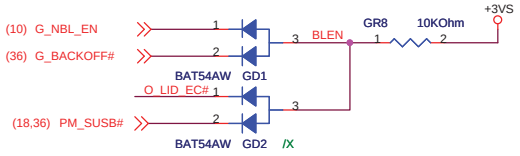
0.1 B Beta

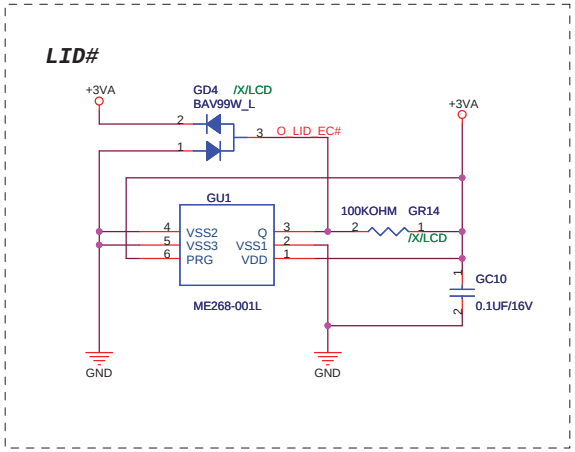


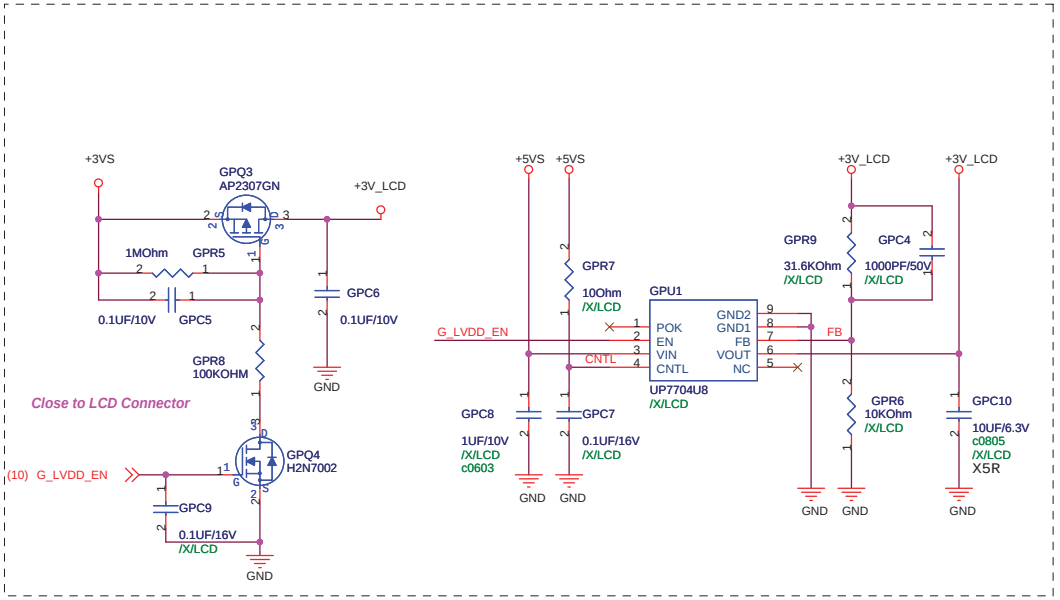








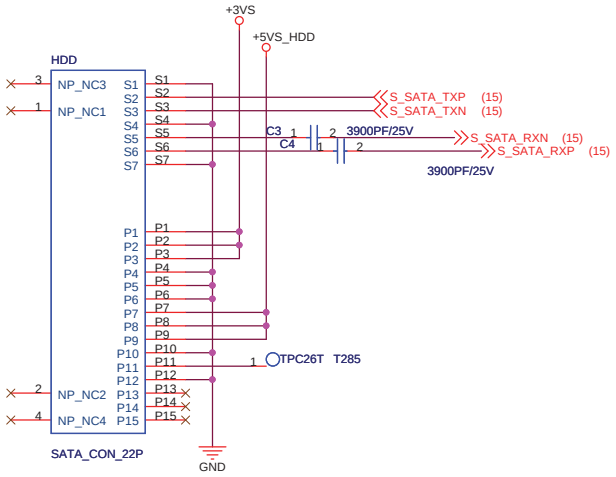


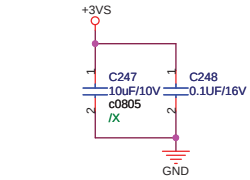


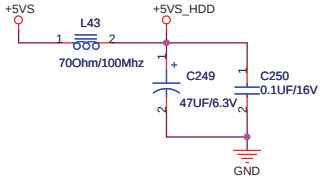
ASUSTek Computer Inc.	Title : LCD-CON for 10inch	
	Engineer: SUSAN_SHI	
Size: A3	Project Name: Standard Circiut	Rev: 0.1B
Date: Tuesday, December 09, 2008	Sheet 24 of 51	

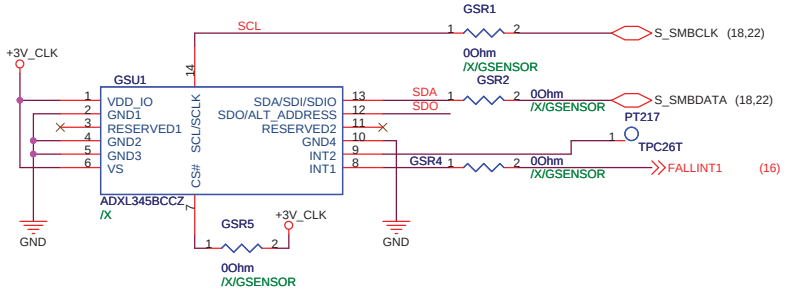
Title :	onboard flash
ASUSTek Computer Inc.	Engineer: SUSAN_SHI
Size: A3	Project Name: Standard Circiut
Rev: 0.1B	
Date: Tuesday, December 09, 2008	Sheet 25 of 51

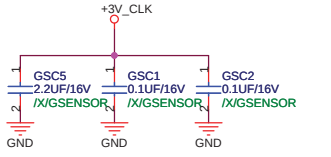
SATA HDD Connector

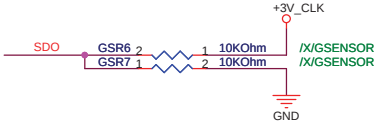






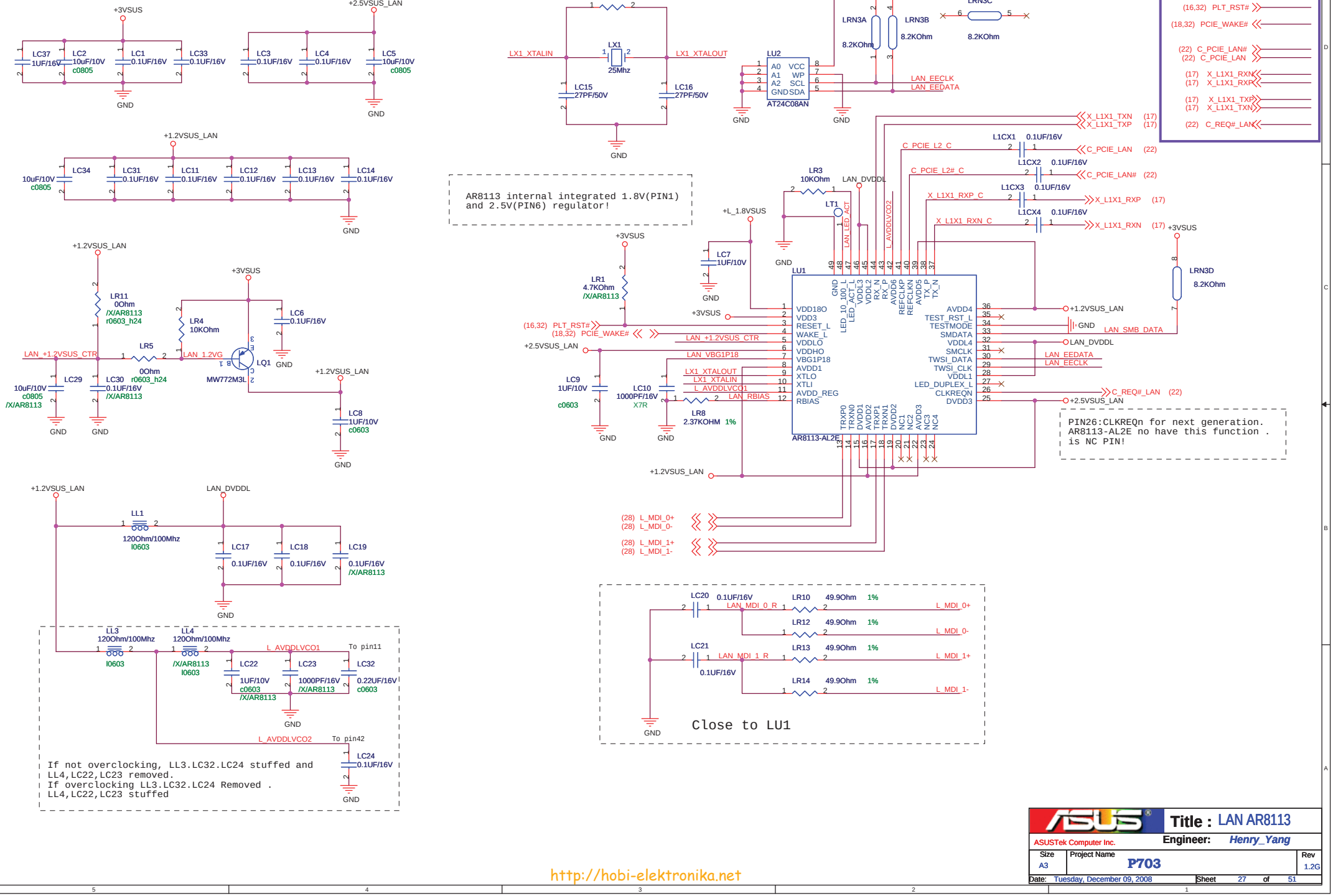






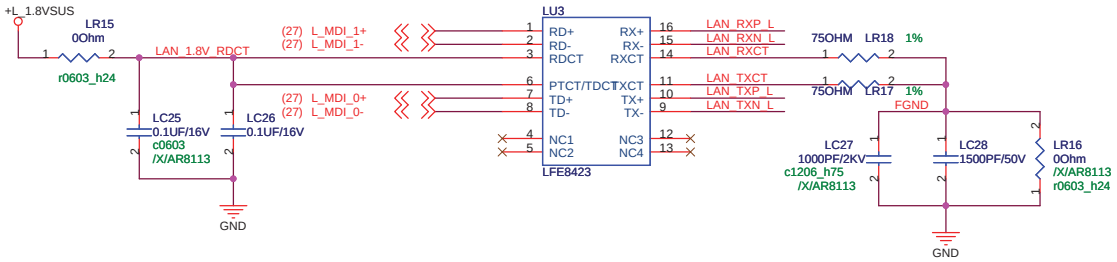
ASUSTek Computer Inc.	Title : Flash-CON	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Wednesday, December 10, 2008	Sheet 26 of 51	

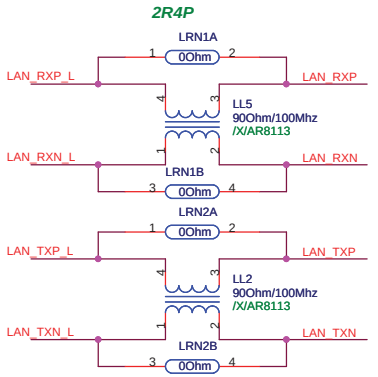
0.1A Beta

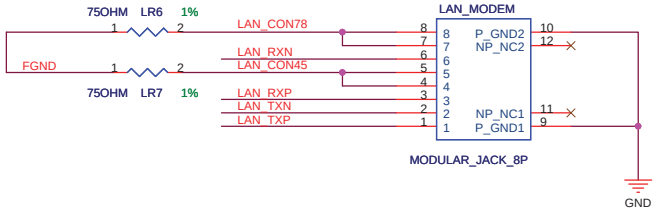


Title :	LAN AR8113
ASUSTek Computer Inc.	Engineer: Henry_Yang
Size: A3	Project Name: P703
Rev: 1.2G	
Date: Tuesday, December 09, 2008	Sheet 27 of 51

0.1A Beta

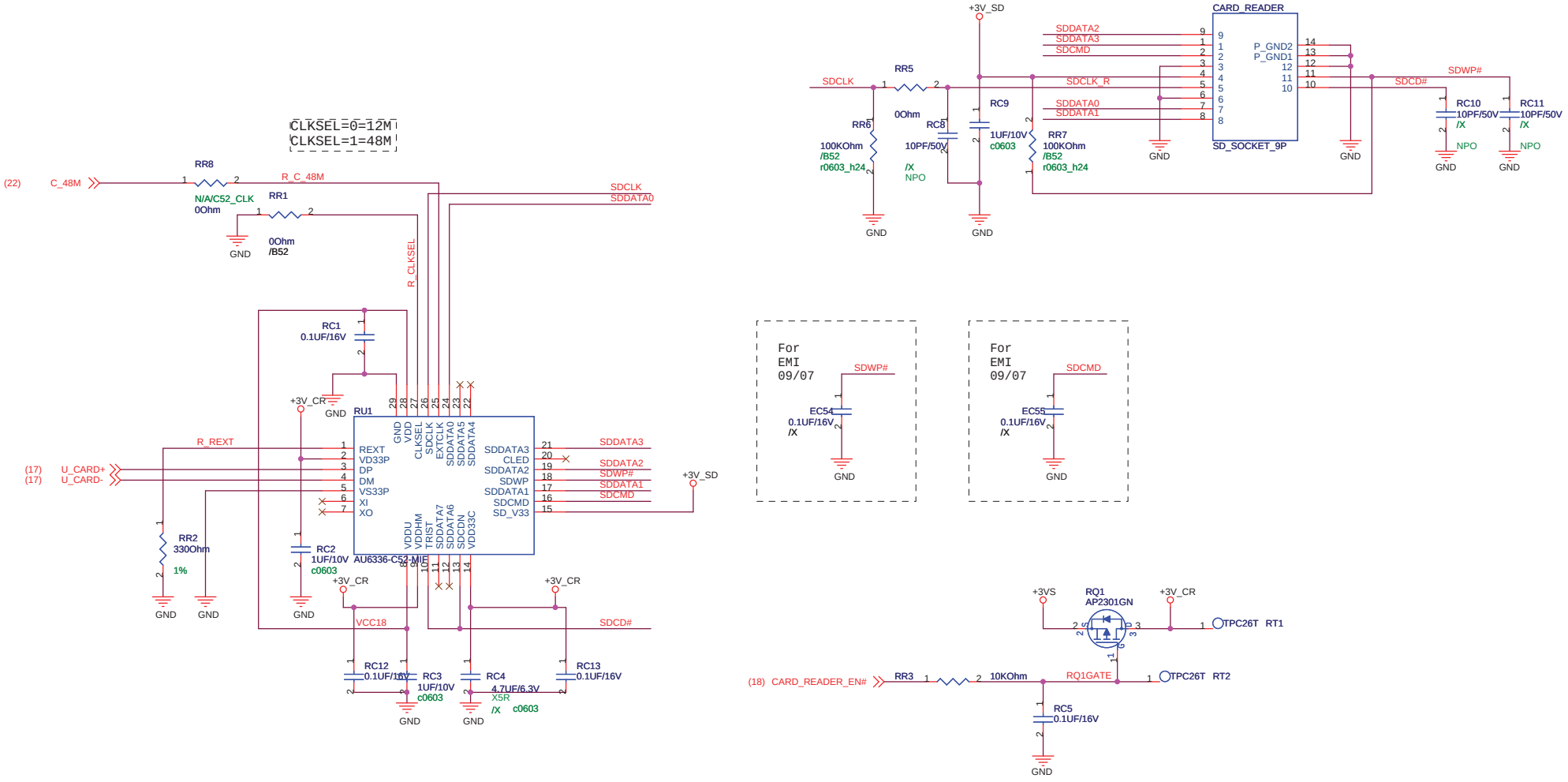




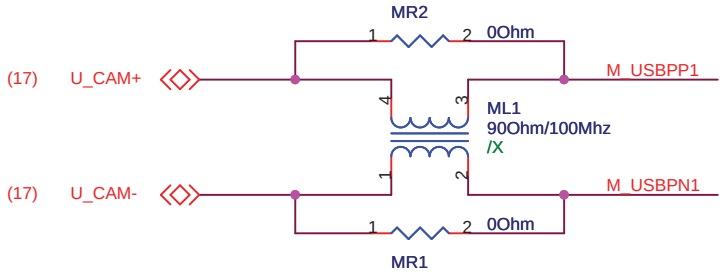


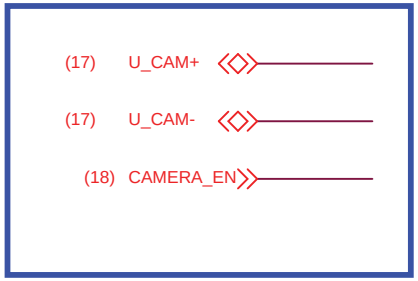
ASUSTek Computer Inc.	Title : RJ45,RJ11,MDC	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 28 of 51	

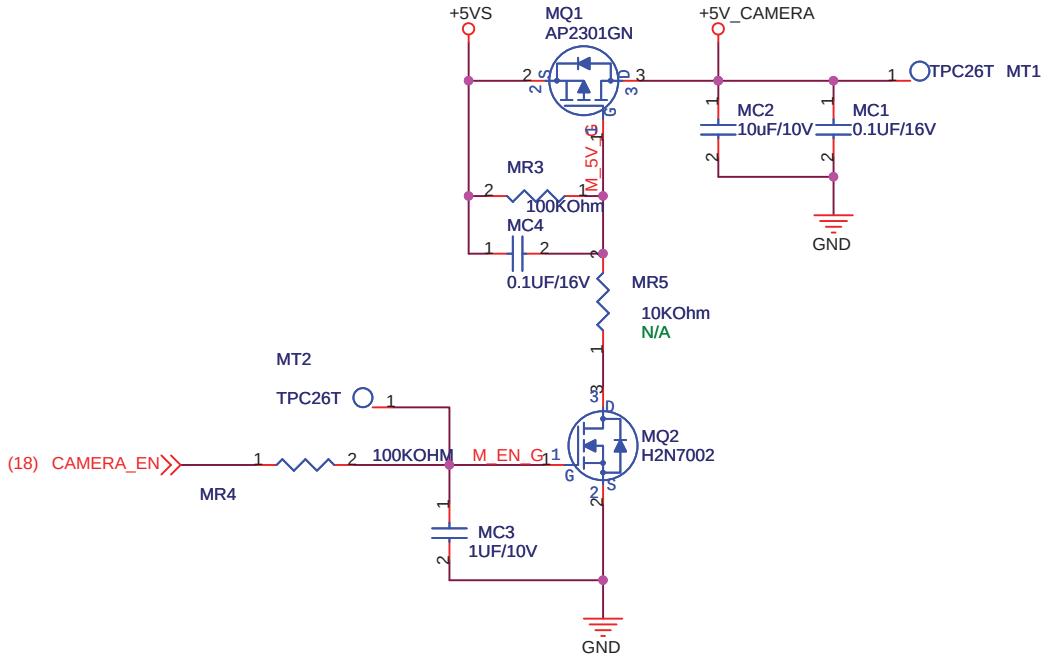
0.1A Beta

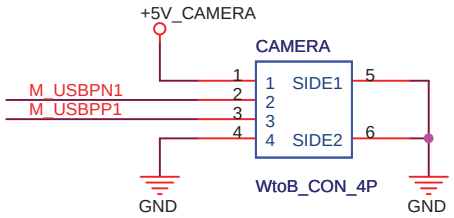


ASUSTek Computer Inc.	Title : Card Reader	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 29 of 51	

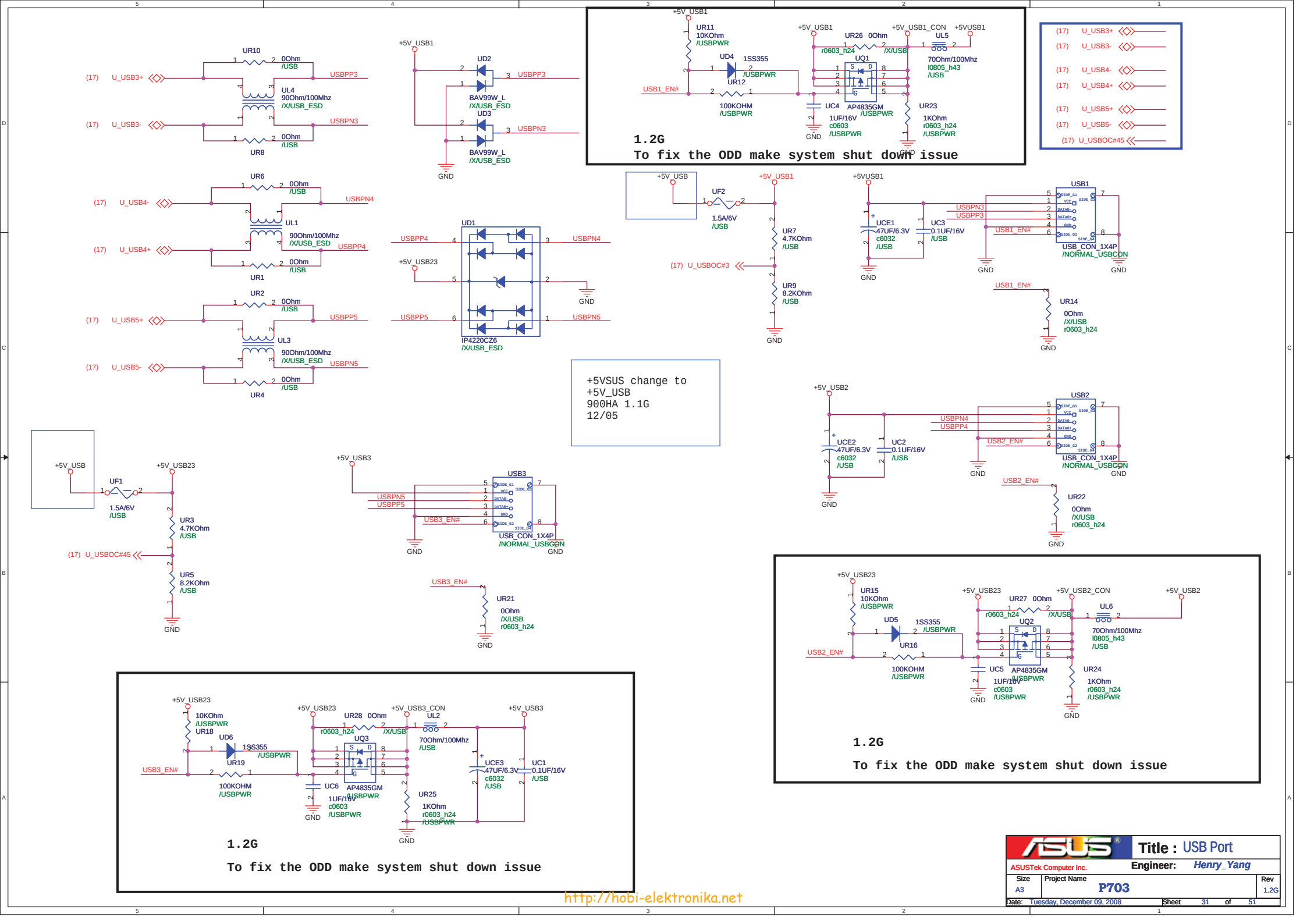








ASUSTek Computer Inc.	Title : Camera CONN	
	Engineer: Henry_Yang	
Size: A4	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 30 of 51	


UR10
0Ohm
/USB
(17) U_USB3+
USBPP3
UL4
90Ohm/100Mhz
/X/USB_ESD
(17) U_USB3-
USBPN3
UR8
+5V_USB1
UD2
BAV99W_L
/X/USB_ESD
UD3
GND
UR6
(17) U_USB4-
USBPN4
UL1
(17) U_USB4+
USBPP4
UR1
UR2
(17) U_USB5+
USBPP5
UL3
(17) U_USB5-
USBPN5
UR4
UD1
+5V_USB23
IP4220CZ6
/X/USB_ESD
+5V_USB
UF1
1.5A/6V
/USB
UR3
4.7KOhm
/USB
(17) U_USBOC#45
UR5
8.2KOhm
/USB
+5V_USB3
USB3
USB_CON_1X4P
/NORMAL_USBCON
USB3_EN#
UR21
0Ohm
/X/USB
r0603_h24
UR11
10KOhm
/USBPWR
UD4
1SS355
/USBPWR
UR12
100KOHM
/USBPWR
USB1_EN#
UR26 0Ohm
r0603_h24
/X/USB
+5V_USB1_CON
+5VUSB1
UL5
70Ohm/100Mhz
l0805_h43
/USB
UQ1
AP4835GM
/USBPWR
UC4
1UF/16V
c0603
/USBPWR
UR23
1KOhm
r0603_h24
/USBPWR
1.2G
To fix the ODD make system shut down issue
(17) U_USB3+
(17) U_USB3-
(17) U_USB4-
(17) U_USB4+
(17) U_USB5+
(17) U_USB5-
(17) U_USBOC#45
UF2
1.5A/6V
/USB
UR7
4.7KOhm
/USB
UR9
8.2KOhm
/USB
+5VUSB1
UCE1
47UF/6.3V
c6032
/USB
UC3
0.1UF/16V
/USB
USBPN3
USBPP3
USB1
USB_CON_1X4P
/NORMAL_USBCON
USB1_EN#
UR14
0Ohm
/X/USB
r0603_h24
+5V_USB2
USB2
UCE2
47UF/6.3V
c6032
/USB
UC2
0.1UF/16V
/USB
USBPN4
USBPP4
USB2_EN#
UR22
0Ohm
/X/USB
r0603_h24
+5V_USB23
UR15
10KOhm
/USBPWR
UD5
1SS355
/USBPWR
UR16
100KOHM
/USBPWR
USB2_EN#
UR27 0Ohm
r0603_h24
/X/USB
+5V_USB2_CON
UL6
70Ohm/100Mhz
l0805_h43
/USB
UQ2
AP4835GM
/USBPWR
UC5
1UF/16V
c0603
/USBPWR
UR24
1KOhm
r0603_h24
/USBPWR
1.2G
To fix the ODD make system shut down issue
+5V_USB23
UR18
10KOhm
/USBPWR
UD6
1SS355
/USBPWR
UR19
100KOHM
/USBPWR
USB3_EN#
+5V_USB3_CON
UR28 0Ohm
r0603_h24
/X/USB
UL2
70Ohm/100Mhz
/USB
UQ3
AP4835GM
/USBPWR
UC6
1UF/16V
c0603
/USBPWR
UR25
1KOhm
r0603_h24
/USBPWR
UCE3
47UF/6.3V
c6032
/USB
UC1
0.1UF/16V
/USB
1.2G
To fix the ODD make system shut down issue
+5VSUS change to
+5V_USB
900HA 1.1G
12/05
Title : USB Port
ASUSTek Computer Inc.
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 31 of 51
http://hobi-elektronika.net

H1 U5F-M-EXPREE GND

H2 U5F-M-EXPREE GND

MINI CARD NUT(1.6mm) *2

MINICARD use 12G030010052Q

WLAN

MINI_PCI_LATCH_52P

WU1 use 06G030057011

P2231TFC1 /X

AME8550BEEVC270Z

1.2G

<Variant Name>

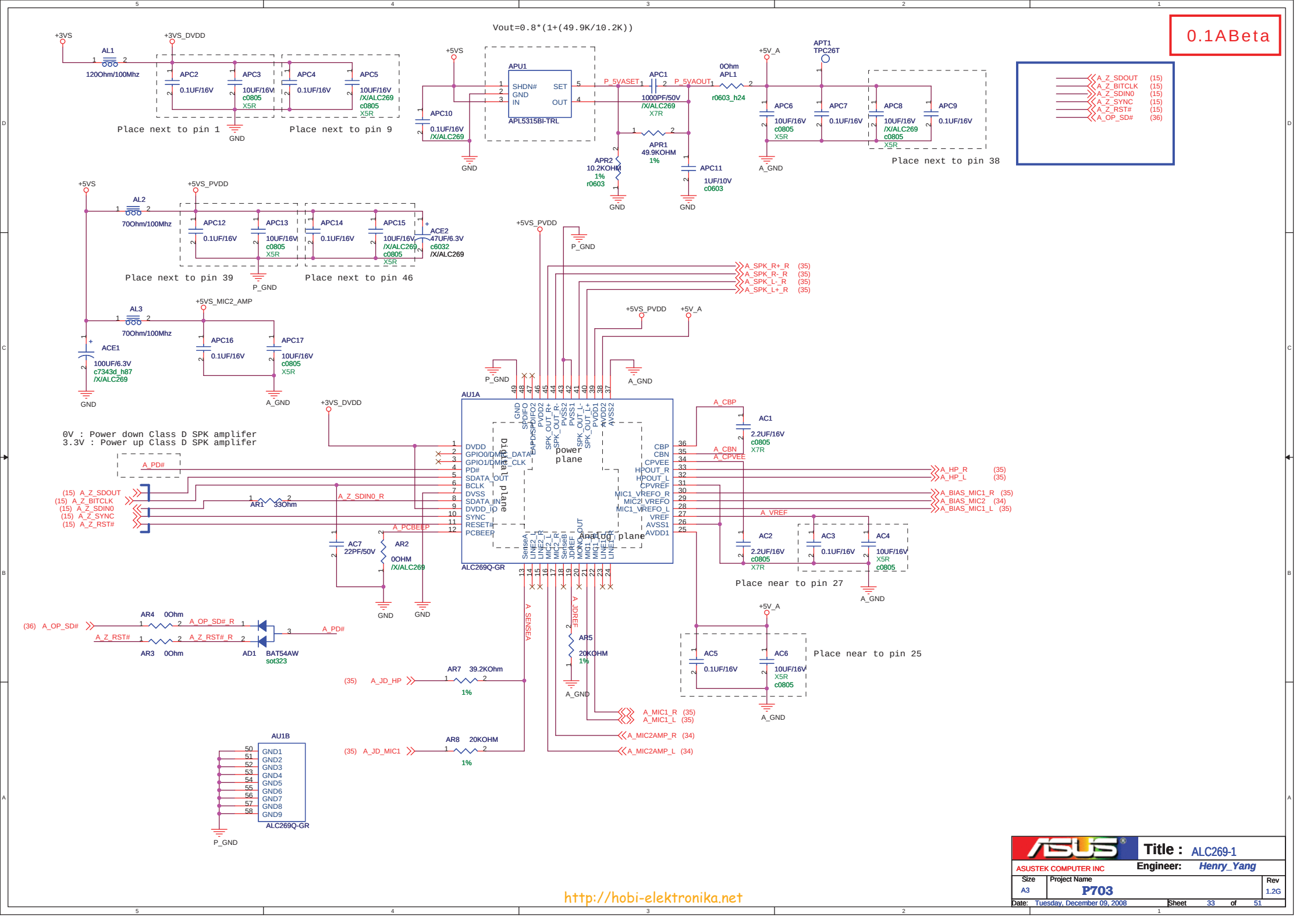
Title : WLAN

ASUSTek Computer INC.

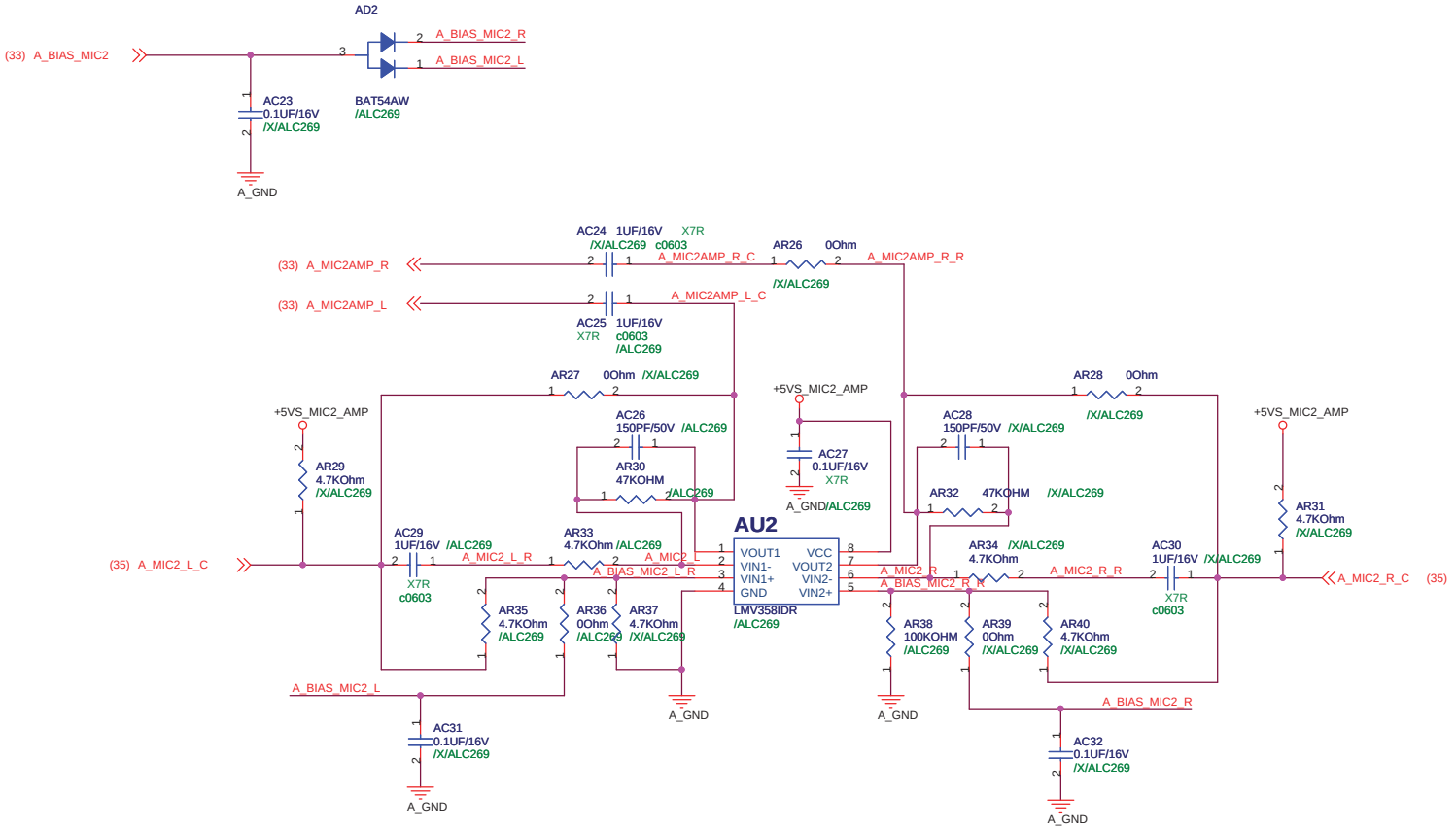
Engineer: Henry_Yang

Size A3 | Project Name P703 | Rev 1.2G

Date: Tuesday, December 09, 2008 | Sheet 32 of 51

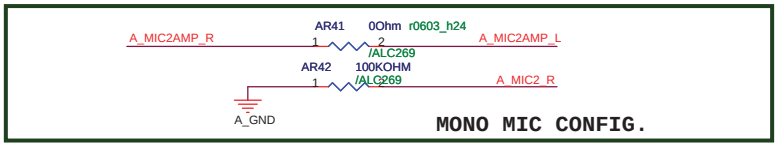

0.1ABeta
Vout=0.8*(1+(49.9K/10.2K))
+3VS
+3VS_DVDD
AL1
120Ohm/100Mhz
APC2
0.1UF/16V
APC3
10UF/16V
c0805
X5R
APC4
0.1UF/16V
APC5
10UF/16V
/X/ALC269
c0805
X5R
Place next to pin 1
Place next to pin 9
GND
+5VS
APU1
SHDN#
GND
IN
SET
OUT
APL5315BI-TRL
APC10
0.1UF/16V
/X/ALC269
P_5VASET
APC1
1000PF/50V
/X/ALC269
X7R
P_5VAOUT
0Ohm
APL1
r0603_h24
APR1
49.9KOHM
1%
APR2
10.2KOHM
1%
r0603
APC11
1UF/10V
c0603
+5V_A
A_GND
APT1
TPC26T
APC6
10UF/16V
c0805
X5R
APC7
0.1UF/16V
APC8
10UF/16V
/X/ALC269
c0805
X5R
APC9
0.1UF/16V
Place next to pin 38
A_Z_SDOUT (15)
A_Z_BITCLK (15)
A_Z_SDIN0 (15)
A_Z_SYNC (15)
A_Z_RST# (15)
A_OP_SD# (36)
+5VS_PVDD
AL2
70Ohm/100Mhz
APC12
0.1UF/16V
APC13
10UF/16V
c0805
X5R
APC14
0.1UF/16V
APC15
10UF/16V
/X/ALC269
c0805
X5R
ACE2
47UF/6.3V
c6032
/X/ALC269
Place next to pin 39
Place next to pin 46
P_GND
+5VS_MIC2_AMP
AL3
70Ohm/100Mhz
ACE1
100UF/6.3V
c7343d_h87
/X/ALC269
APC16
0.1UF/16V
APC17
10UF/16V
c0805
X5R
A_SPK_R+_R (35)
A_SPK_R-_R (35)
A_SPK_L-_R (35)
A_SPK_L+_R (35)
0V : Power down Class D SPK amplifer
3.3V : Power up Class D SPK amplifer
A_PD#
(15) A_Z_SDOUT
(15) A_Z_BITCLK
(15) A_Z_SDIN0
(15) A_Z_SYNC
(15) A_Z_RST#
AR1
33Ohm
A_Z_SDIN0_R
A_PCBEEP
AC7
22PF/50V
AR2
0OHM
/X/ALC269
AU1A
DVDD
GPIO0/DMIC_DATA
GPIO1/DMIC_CLK
PD#
SDATA_OUT
BCLK
DVSS
SDATA_IN
DVDD_IO
SYNC
RESET#
PCBEEP
power plane
digital plane
Analog plane
CBP
CBN
CPVEE
HPOUT_R
HPOUT_L
CPVREF
MIC1_VREFO_R
MIC2_VREFO
MIC1_VREFO_L
VREF
AVSS1
AVDD1
ALC269Q-GR
A_CBP
AC1
2.2UF/16V
c0805
X7R
A_CBN
A_CPVEE
A_HP_R (35)
A_HP_L (35)
A_BIAS_MIC1_R (35)
A_BIAS_MIC2 (34)
A_BIAS_MIC1_L (35)
A_VREF
AC2
2.2UF/16V
c0805
X7R
AC3
0.1UF/16V
AC4
10UF/16V
X5R
c0805
Place near to pin 27
AR4 0Ohm
AR3 0Ohm
A_OP_SD#_R
A_Z_RST#_R
AD1 BAT54AW
sot323
(36) A_OP_SD#
A_Z_RST#
A_PD#
A_SENSE
A_JDREF
AR5
20KOHM
1%
AR7 39.2KOhm
1%
(35) A_JD_HP
AR8 20KOHM
1%
(35) A_JD_MIC1
A_MIC1_R (35)
A_MIC1_L (35)
A_MIC2AMP_R (34)
A_MIC2AMP_L (34)
AC5
0.1UF/16V
AC6
10UF/16V
X5R
c0805
Place near to pin 25
AU1B
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
ALC269Q-GR
http://hobi-elektronika.net
ASUSTEK COMPUTER INC
Title : ALC269-1
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 33 of 51

0.1ABeta



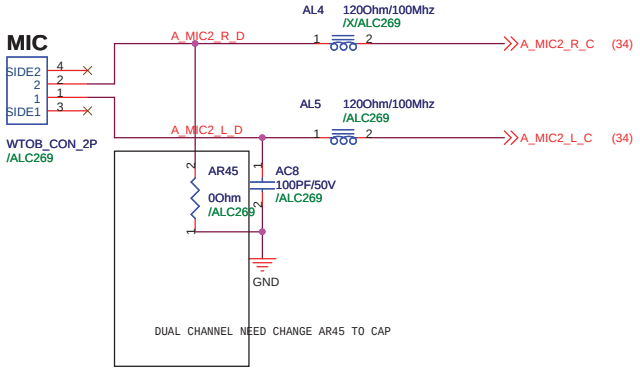
Internal MIC Amp.

FL = 33.86kHz, FH = 22.5kHz



ASUSTEK COMPUTER INC	Title : Internal MIC AMP	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 34 of 51	

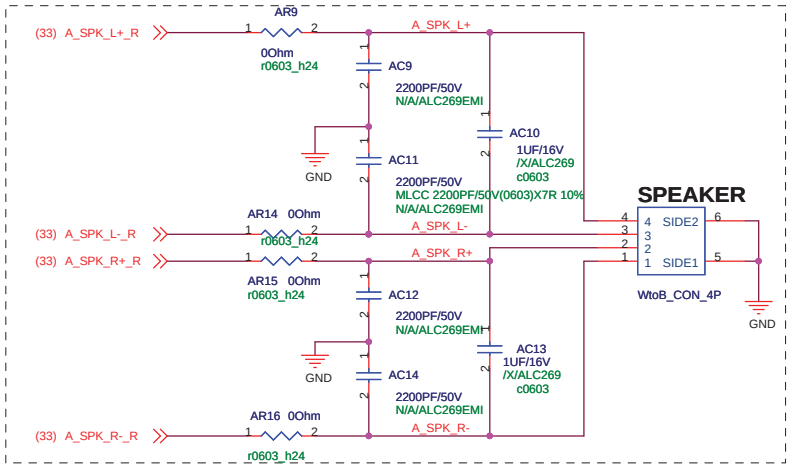
Internal MIC



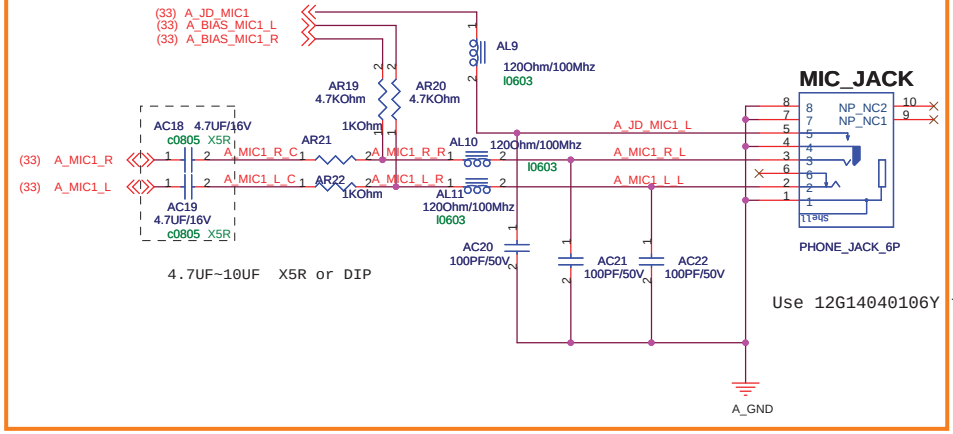
SPEAKER

Demodulation Filter
Placement near
Audio Codec

<<Attention>>
you can use LC filter(AR9,AR14,AR15,AR16 mount 8.2uH L ;and mount AC10,AC13) to eliminate the EMI(please don't use general beads,because they may influence the THD+N quality) , AC9/AC11/AC12/AC14 are reserved for EMI fine-tune ; For EMI issue, All L and C should near to codec

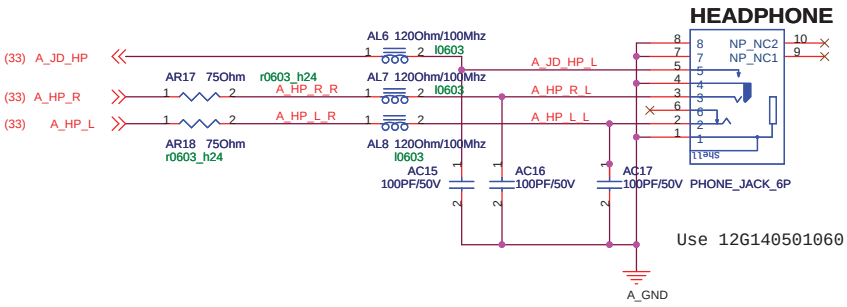


MIC JACK

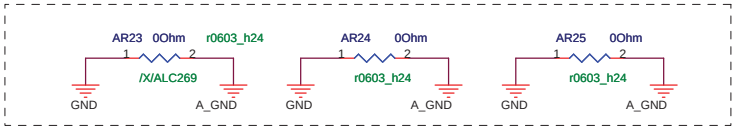


Use 12G14040106Y to instead.

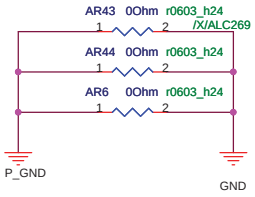
HEADPHONE



Use 12G140501060 to instead.

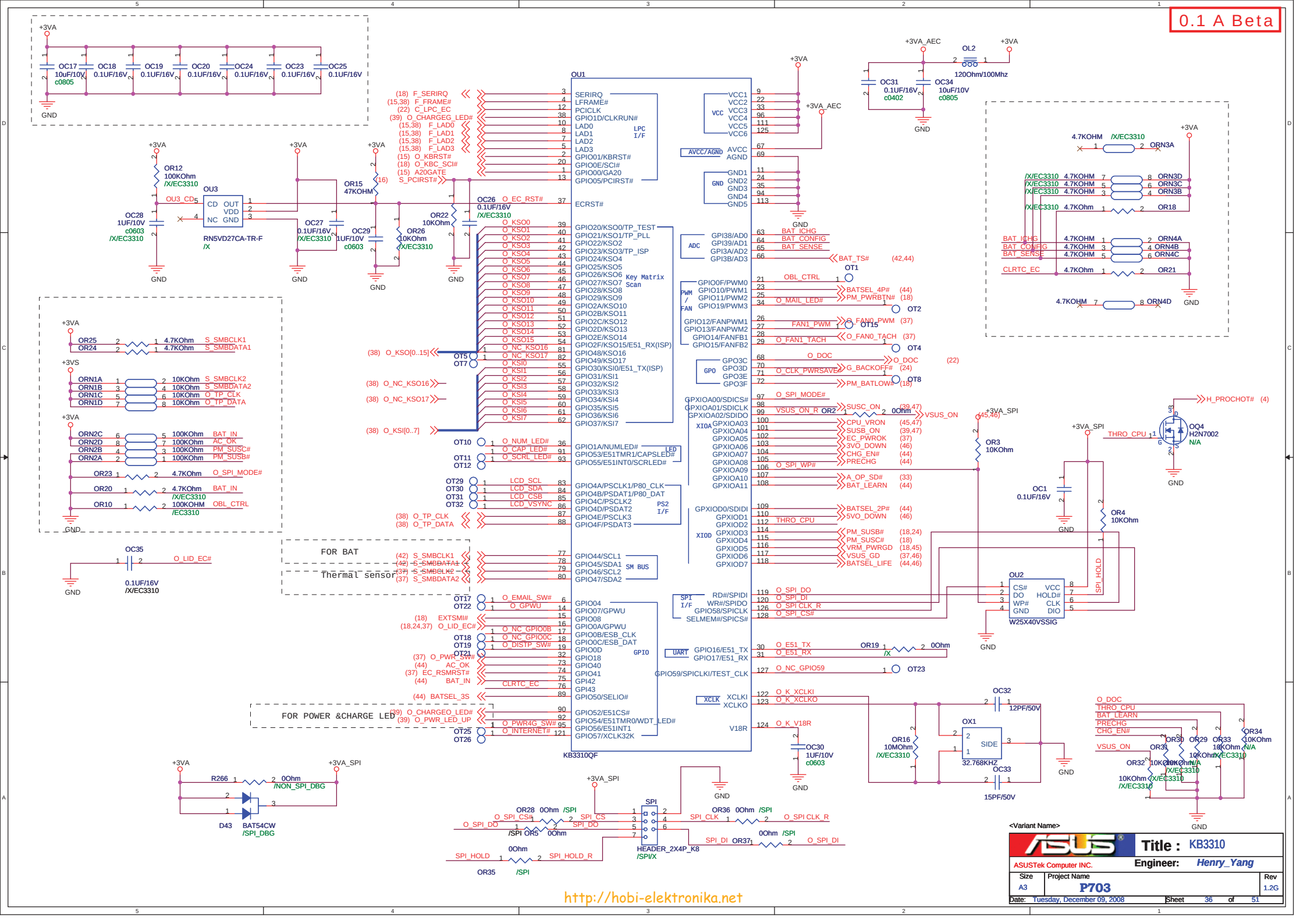


AR24, AR25 can use
0.1UF 11G2333310432320
for EMI

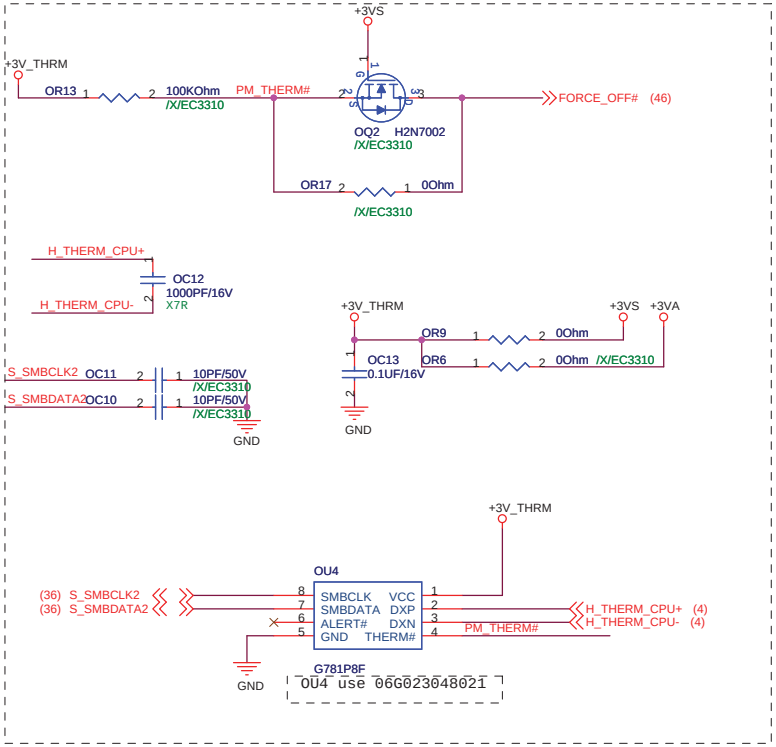


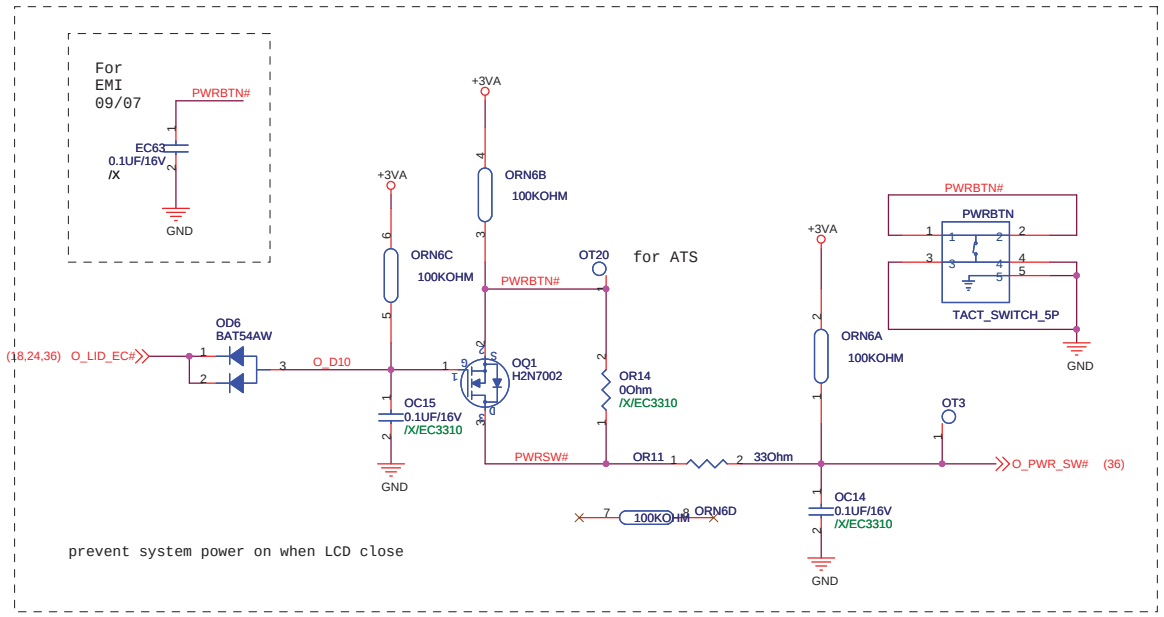
ASUSTEK COMPUTER INC	Title : Jack&Speaker	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 35 of 51	

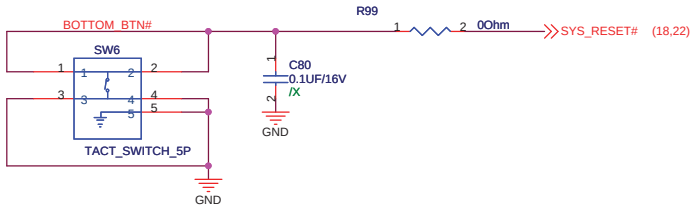
0.1 A Beta

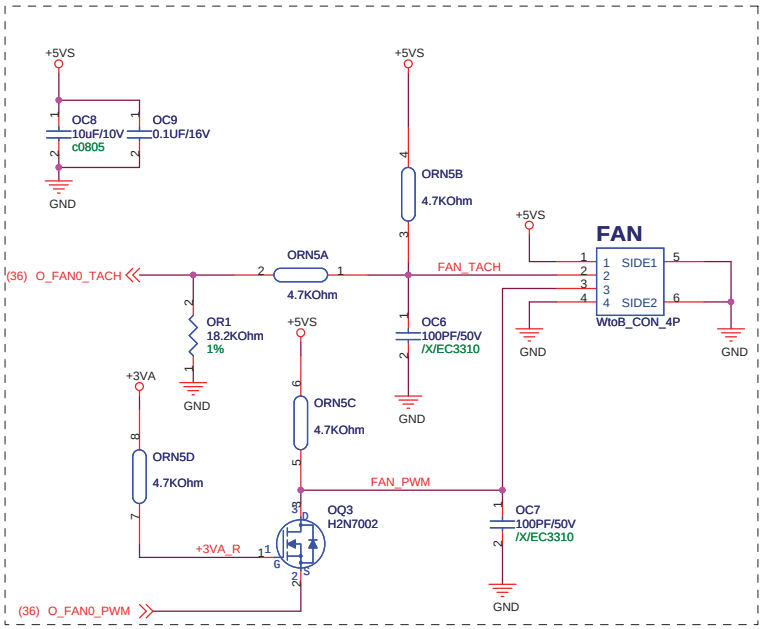

OU1
KB3310QF
OU2
W25X40VSSIG
OU3
RN5VD27CA-TR-F
OT1
OT2
OT4
OT5
OT7
OT8
OT10
OT11
OT12
OT15
OT17
OT22
OT18
OT19
OT21
OT23
OT25
OT26
OQ4
H2N7002
N/A
OX1
32.768KHZ
HEADER_2X4P_K8
/SPI/X
D43
BAT54CW
/SPI_DBG
FOR BAT
Thermal sensor
FOR POWER &CHARGE LED
+3VA
+3VA_AEC
+3VA_SPI
+3VS
GND
LPC I/F
Key Matrix Scan
PS2 I/F
SM BUS
SPI I/F
LED
PWM / FAN
ADC
GPO
XIOA
XIOD
UART
SPI
XCLK
VCC
AVCC/AGND
SERIRQ
LFRAME#
PCICLK
GPIO1D/CLKRUN#
LAD0
LAD1
LAD2
LAD3
GPIO01/KBRST#
GPIO0E/SCI#
GPIO00/GA20
GPIO05/PCIRST#
ECRST#
GPIO20/KSO0/TP_TEST
GPIO21/KSO1/TP_PLL
GPIO22/KSO2
GPIO23/KSO3/TP_ISP
GPIO24/KSO4
GPIO25/KSO5
GPIO26/KSO6
GPIO27/KSO7
GPIO28/KSO8
GPIO29/KSO9
GPIO2A/KSO10
GPIO2B/KSO11
GPIO2C/KSO12
GPIO2D/KSO13
GPIO2E/KSO14
GPIO2F/KSO15/E51_RX(ISP)
GPIO48/KSO16
GPIO49/KSO17
GPIO30/KSI0/E51_TX(ISP)
GPIO31/KSI1
GPIO32/KSI2
GPIO33/KSI3
GPIO34/KSI4
GPIO35/KSI5
GPIO36/KSI6
GPIO37/KSI7
GPIO1A/NUMLED#
GPIO53/E51TMR1/CAPSLED#
GPIO55/E51INT0/SCRLED#
GPIO4A/PSCLK1/P80_CLK
GPIO4B/PSDAT1/P80_DAT
GPIO4C/PSCLK2
GPIO4D/PSDAT2
GPIO4E/PSCLK3
GPIO4F/PSDAT3
GPIO44/SCL1
GPIO45/SDA1
GPIO46/SCL2
GPIO47/SDA2
GPIO04
GPIO07/GPWU
GPIO08
GPIO0A/GPWU
GPIO0B/ESB_CLK
GPIO0C/ESB_DAT
GPIO0D
GPIO18
GPIO40
GPIO41
GPI42
GPI43
GPIO50/SELIO#
GPIO52/E51CS#
GPIO54/E51TMR0/WDT_LED#
GPIO56/E51INT1
GPIO57/XCLK32K
GPIO59/SPICLKI/TEST_CLK
GPIO0F/PWM0
GPIO10/PWM1
GPIO11/PWM2
GPIO19/PWM3
GPIO12/FANPWM1
GPIO13/FANPWM2
GPIO14/FANFB1
GPIO15/FANFB2
GPIO3C
GPIO3D
GPIO3E
GPIO3F
GPIXIOA00/SDICS#
GPIXIOA01/SDICLK
GPIXIOA02/SDIDO
GPIXIOA03
GPIXIOA04
GPIXIOA05
GPIXIOA06
GPIXIOA07
GPIXIOA08
GPIXIOA09
GPIXIOA10
GPIXIOA11
GPIXIOD0/SDIDI
GPIXIOD1
GPIXIOD2
GPIXIOD3
GPIXIOD4
GPIXIOD5
GPIXIOD6
GPIXIOD7
RD#/SPIDI
WR#/SPIDO
GPIO58/SPICLK
SELMEM#/SPICS#
GPIO16/E51_TX
GPIO17/E51_RX
XCLKI
XCLKO
V18R
GPI38/AD0
GPI39/AD1
GPI3A/AD2
GPI3B/AD3
VCC1
VCC2
VCC3
VCC4
VCC5
VCC6
AVCC
AGND
GND1
GND2
GND3
GND4
GND5
CD
VDD
NC
OUT
GND
CS#
DO
WP#
HOLD#
CLK
DIO
SIDE
SPI_HOLD
SPI_CS
SPI_DO
SPI_CLK
SPI_DI
R266
D43
OR12 100KOhm /X/EC3310
OR15 47KOHM
OR22 10KOhm
OR26 10KOhm /X/EC3310
OR25 4.7KOhm S_SMBCLK1
OR24 4.7KOhm S_SMBDATA1
ORN1A 10KOhm S_SMBCLK2
ORN1B 10KOhm S_SMBDATA2
ORN1C 10KOhm O_TP_CLK
ORN1D 10KOhm O_TP_DATA
ORN2C 100KOhm BAT_IN
ORN2D 100KOhm AC_OK
ORN2B 100KOhm PM_SUSC#
ORN2A 100KOhm PM_SUSB#
OR23 4.7KOhm O_SPI_MODE#
OR20 4.7KOhm /X/EC3310 BAT_IN
OR10 100KOHM /EC3310 OBL_CTRL
OR3 10KOhm
OR4 10KOhm
OR16 10MOhm /X/EC3310
OR19 0Ohm /X
OR28 0Ohm /SPI
OR36 0Ohm /SPI
OR37 0Ohm /SPI
OR35 0Ohm /SPI
OR5 0Ohm /SPI
R266 0Ohm /NON_SPI_DBG
OR30 10KOhm /X/EC3310
OR29 10KOhm /X/EC3310
OR33 10KOhm N/A
OR34 10KOhm N/A
OR32 10KOhm /X/EC3310
OR31 10KOhm /X/EC3310
ORN3A 4.7KOHM /X/EC3310
ORN3D 4.7KOHM /X/EC3310
ORN3C 4.7KOHM /X/EC3310
ORN3B 4.7KOHM /X/EC3310
OR18 4.7KOhm /X/EC3310
ORN4A 4.7KOHM BAT_ICHG
ORN4B 4.7KOHM BAT_CONFIG
ORN4C 4.7KOHM BAT_SENSE
OR21 4.7KOhm CLRTC_EC
ORN4D 4.7KOHM
OC1 0.1UF/16V
OC2 0.1UF/16V /X/EC3310
OC17 10uF/10V c0805
OC18 0.1UF/16V
OC19 0.1UF/16V
OC20 0.1UF/16V
OC24 0.1UF/16V
OC23 0.1UF/16V
OC25 0.1UF/16V
OC26 0.1UF/16V /X/EC3310
OC27 0.1UF/16V /X/EC3310
OC28 1UF/10V c0603 /X/EC3310
OC29 1UF/10V c0603
OC30 1UF/10V c0603
OC31 0.1UF/16V c0402
OC32 12PF/50V
OC33 15PF/50V
OC34 10uF/10V c0805
OC35 0.1UF/16V /X/EC3310
OL2 120Ohm/100Mhz
O_LID_EC#
O_EC_RST#
O_KSO[0..15]
O_KSI[0..7]
O_NC_KSO16
O_NC_KSO17
O_NUM_LED#
O_CAP_LED#
O_SCRL_LED#
LCD_SCL
LCD_SDA
LCD_CSB
LCD_VSYNC
O_TP_CLK
O_TP_DATA
S_SMBCLK1
S_SMBDATA1
S_SMBCLK2
S_SMBDATA2
O_EMAIL_SW#
O_GPWU
EXTSMI#
O_LID_EC#
O_NC_GPIO0B
O_NC_GPIO0C
O_DISTP_SW#
O_PWR_SW#
AC_OK
EC_RSMRST#
BAT_IN
CLRTC_EC
BATSEL_3S
O_CHARGEO_LED#
O_PWR_LED_UP
O_PWR4G_SW#
O_INTERNET#
F_SERIRQ
F_FRAME#
C_LPC_EC
O_CHARGEG_LED#
F_LAD0
F_LAD1
F_LAD2
F_LAD3
O_KBRST#
O_KBC_SCI#
A20GATE
S_PCIRST#
BAT_ICHG
BAT_CONFIG
BAT_SENSE
BAT_TS#
OBL_CTRL
BATSEL_4P#
PM_PWRBTN#
O_MAIL_LED#
O_FAN0_PWM
O_FAN0_TACH
FAN1_PWM
FAN1_TACH
O_DOC
O_CLK_PWRSAVE#
G_BACKOFF#
PM_BATLOW#
O_SPI_MODE#
SUSC_ON
VSUS_ON_R
VSUS_ON
CPU_VRON
SUSB_ON
EC_PWROK
3VO_DOWN
CHG_EN#
PRECHG
O_SPI_WP#
A_OP_SD#
BAT_LEARN
BATSEL_2P#
5VO_DOWN
THRO_CPU
PM_SUSB#
PM_SUSC#
VRM_PWRGD
VSUS_GD
BATSEL_LIFE
O_SPI_DO
O_SPI_DI
O_SPI_CLK_R
O_SPI_CS#
O_E51_TX
O_E51_RX
O_NC_GPIO59
O_K_XCLKI
O_K_XCLKO
O_K_V18R
H_PROCHOT#
SPI_HOLD_R
SPI_CS
SPI_DO
SPI_CLK
SPI_DI
O_SPI_CS#
O_SPI_DO
O_SPI CLK_R
O_SPI_DI
SPI_HOLD
SPI_HOLD_R
VSUS_ON
THRO_CPU
BAT_LEARN
PRECHG
CHG_EN#
O_DOC
(4)
(16)
(22)
(37)
(38)
(39)
(42)
(44)
(45,46)
(42,44)
(45,47)
(39,47)
(18,24)
(37,46)
(44,46)
<Variant Name>
Title : KB3310
ASUSTek Computer INC.
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 36 of 51
http://hobi-elektronika.net

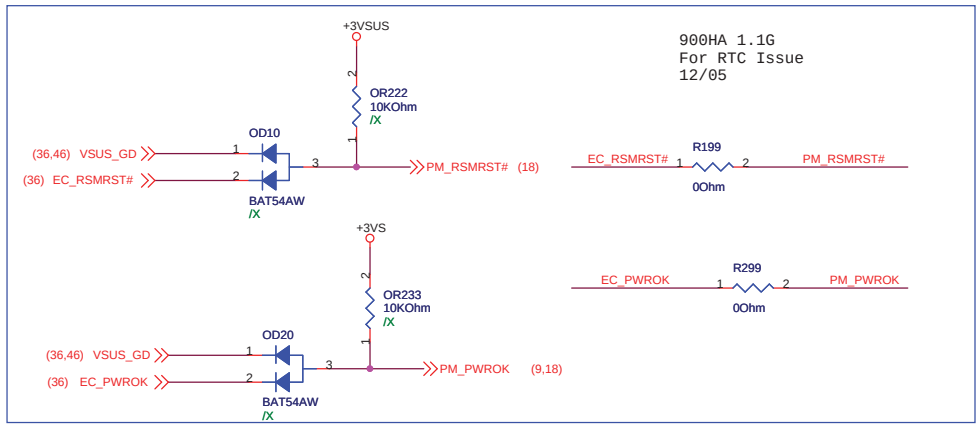
0.1 A Beta







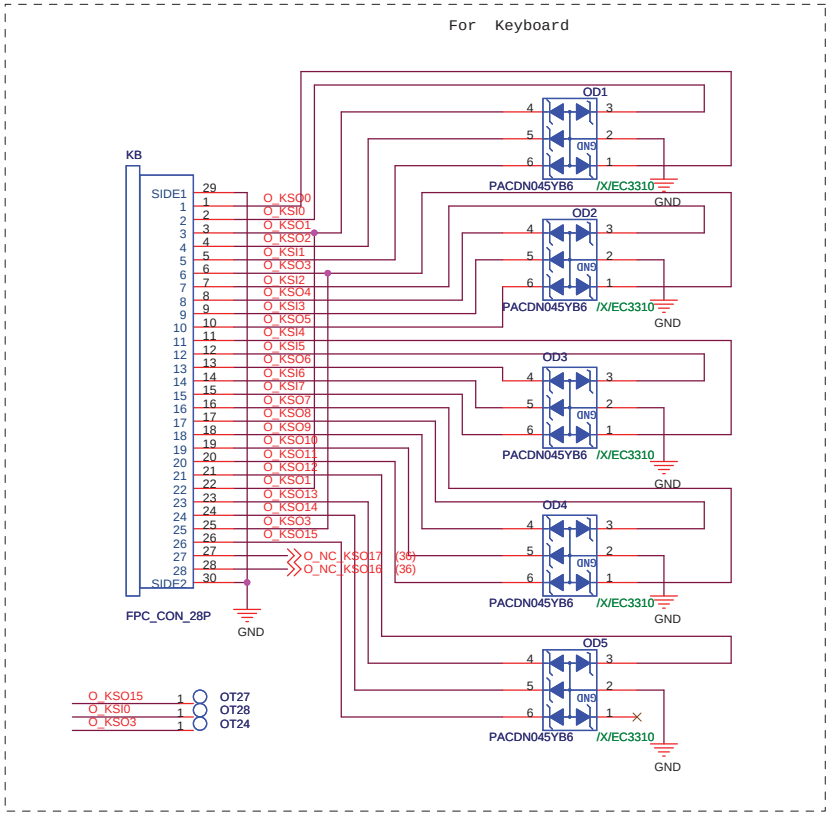


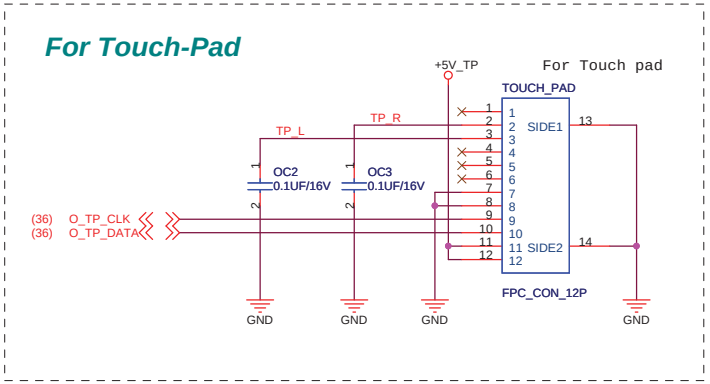


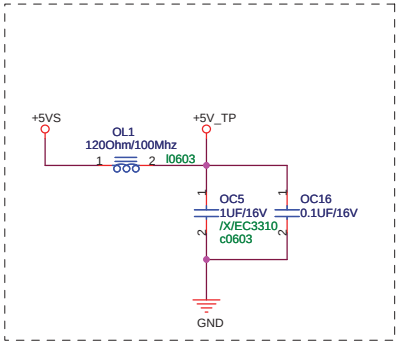
<Variant Name>

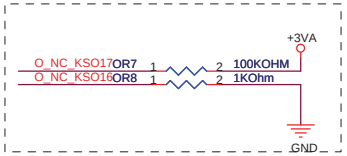
ASUSTek Computer INC.	Title : THermal&FAN	
	Engineer: Henry_Yang	
Size A3	Project Name P703	Rev 1.2G
Date: Tuesday, December 09, 2008	Sheet 37 of 51	

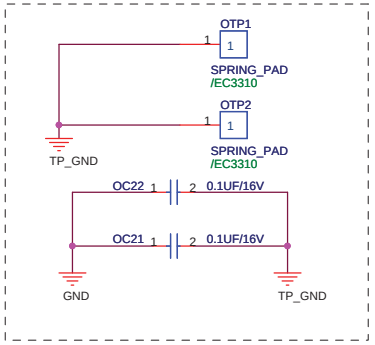
0.1 A Beta

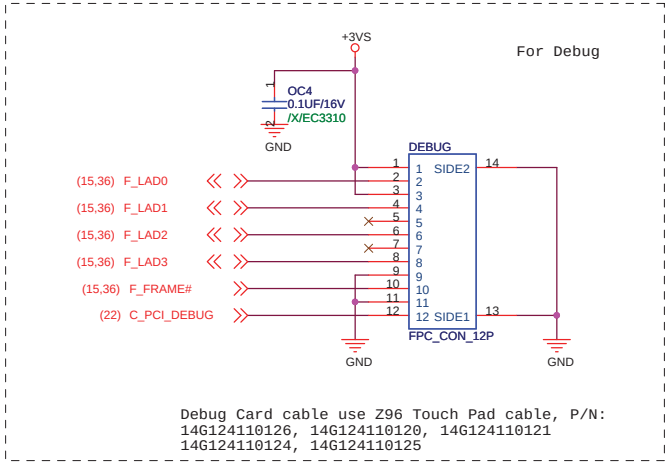


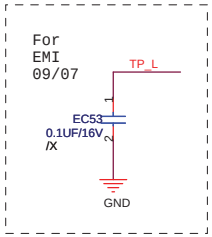


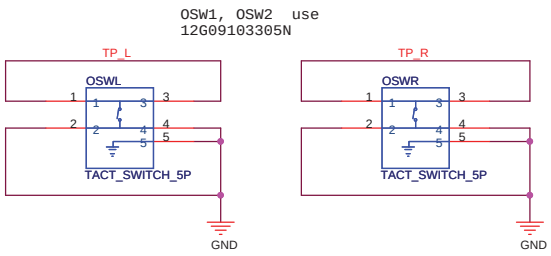


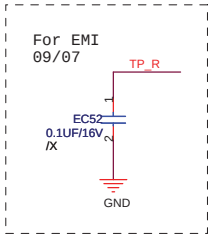






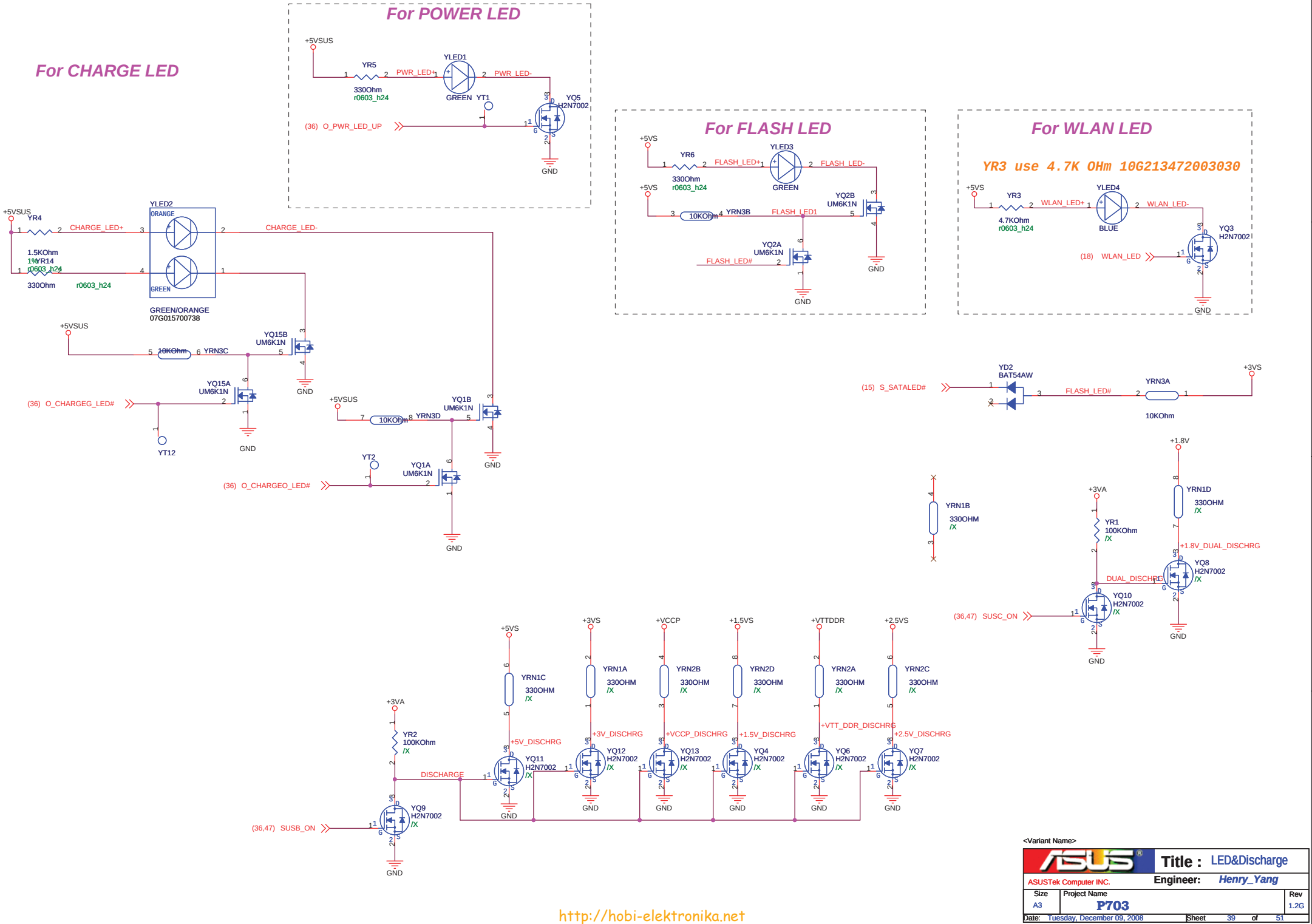


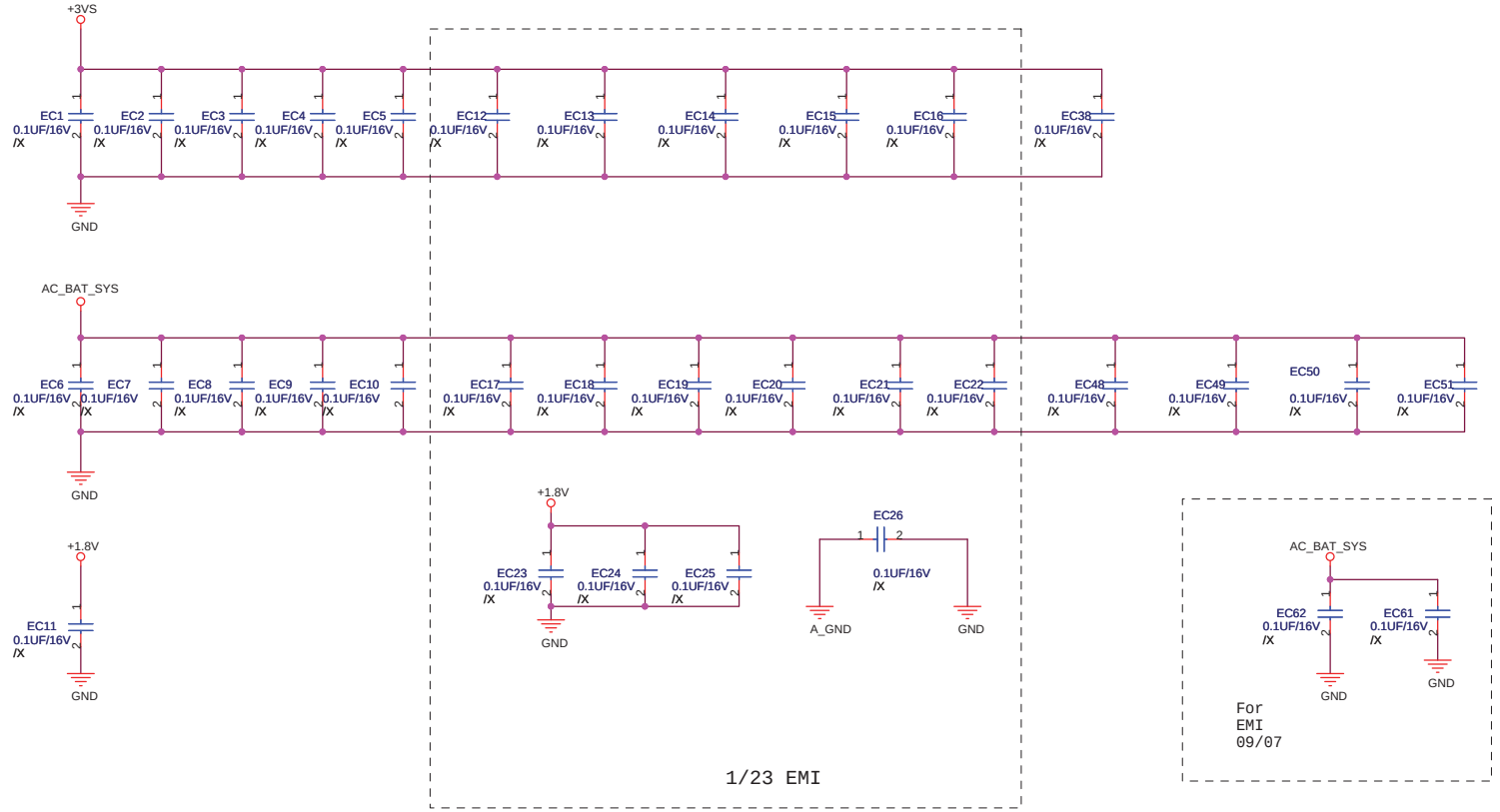




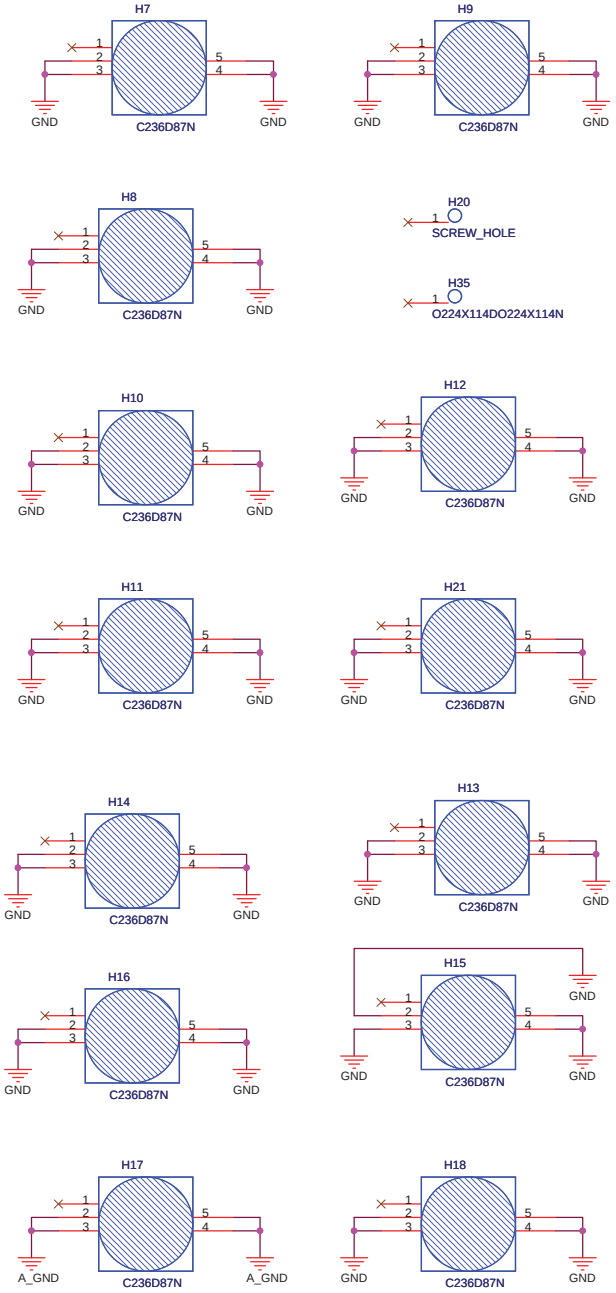
<Variant Name>

ASUSTek Computer INC.	Title : KB&TP	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 38 of 51	


For CHARGE LED
For POWER LED
+5VSUS
YR5
330Ohm
r0603_h24
PWR_LED+
YLED1
GREEN
PWR_LED-
YT1
YQ5
H2N7002
(36) O_PWR_LED_UP
GND
For FLASH LED
+5VS
YR6
330Ohm
r0603_h24
FLASH_LED+
YLED3
GREEN
FLASH_LED-
YRN3B
10KOhm
FLASH_LED1
YQ2B
UM6K1N
YQ2A
UM6K1N
FLASH_LED#
For WLAN LED
YR3 use 4.7K OHm 10G213472003030
YR3
4.7KOhm
r0603_h24
WLAN_LED+
YLED4
BLUE
WLAN_LED-
YQ3
H2N7002
(18) WLAN_LED
YR4
1.5KOhm
1%
YR14
r0603_h24
330Ohm
r0603_h24
CHARGE_LED+
YLED2
ORANGE
GREEN
CHARGE_LED-
GREEN/ORANGE
07G015700738
YQ15B
UM6K1N
YRN3C
10KOhm
YQ15A
UM6K1N
(36) O_CHARGEG_LED#
YT12
YQ1B
UM6K1N
YRN3D
10KOhm
YT2
YQ1A
UM6K1N
(36) O_CHARGEO_LED#
(15) S_SATALED#
YD2
BAT54AW
YRN3A
10KOhm
YRN1B
330OHM
/X
YRN1D
330OHM
/X
+1.8V_DUAL_DISCHRG
YR1
100KOhm
/X
DUAL_DISCHRG
YQ8
H2N7002
/X
YQ10
H2N7002
/X
(36,47) SUSC_ON
YR2
100KOhm
/X
DISCHARGE
YRN1C
330OHM
/X
+5V_DISCHRG
YQ11
H2N7002
/X
YRN1A
330OHM
/X
+3V_DISCHRG
YQ12
H2N7002
/X
YRN2B
330OHM
/X
+VCCP_DISCHRG
YQ13
H2N7002
/X
YRN2D
330OHM
/X
+1.5V_DISCHRG
YQ4
H2N7002
/X
YRN2A
330OHM
/X
+VTT_DDR_DISCHRG
YQ6
H2N7002
/X
YRN2C
330OHM
/X
+2.5V_DISCHRG
YQ7
H2N7002
/X
YQ9
H2N7002
/X
(36,47) SUSB_ON
GND
http://hobi-elektronika.net
<Variant Name>
Title : LED&Discharge
ASUSTek Computer INC.
Engineer: Henry_Yang
Size A3
Project Name P703
Rev 1.2G
Date: Tuesday, December 09, 2008
Sheet 39 of 51



ASUSTEK COMPUTER INC	Title : EMI	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 40 of 51	



<Variant Name>

Title : Srew Hole

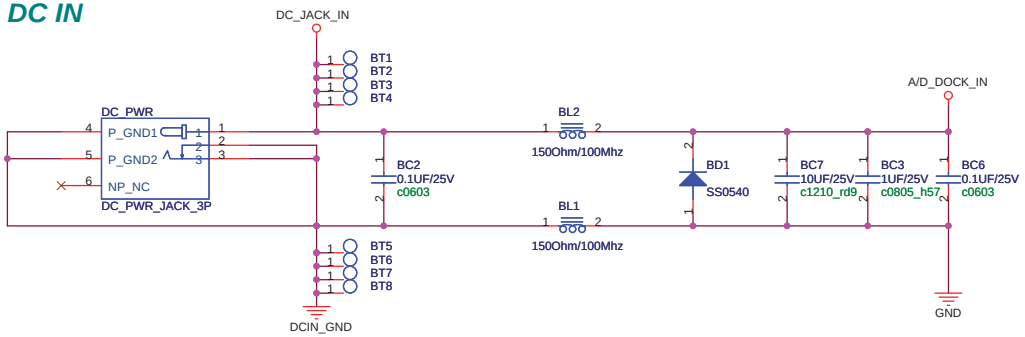
ASUSTek Computer INC.

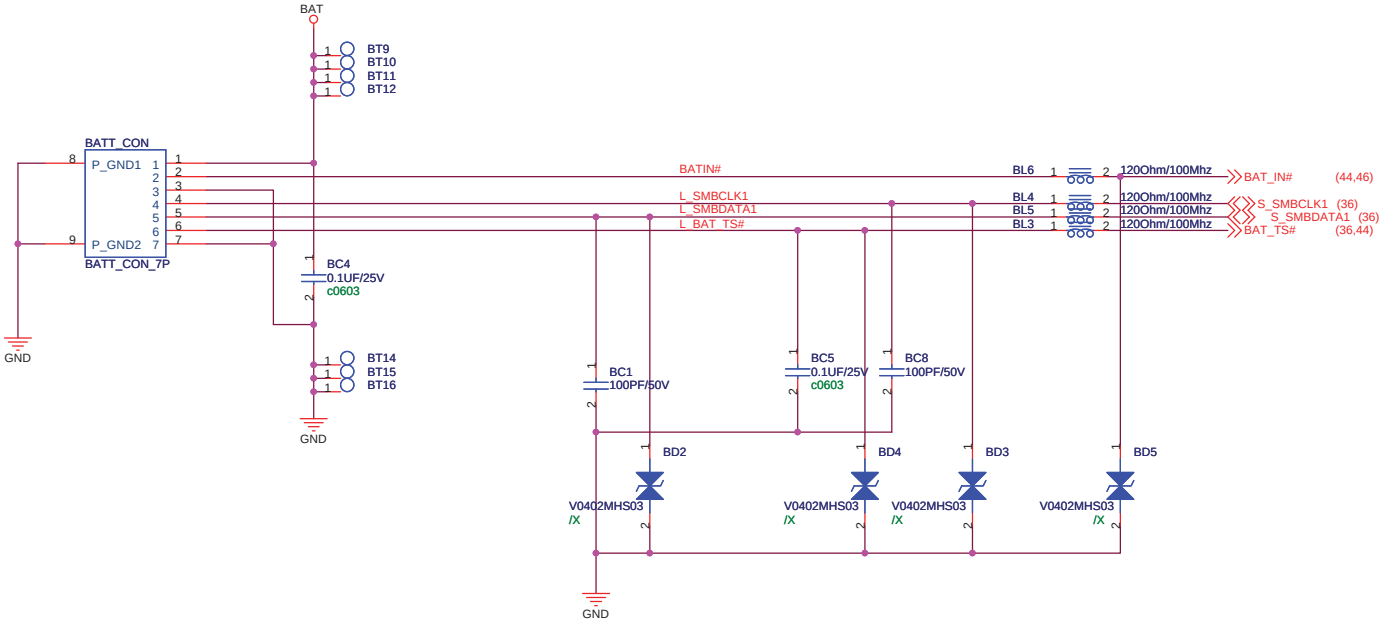
Engineer: Henry_Yang

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 41 of 51

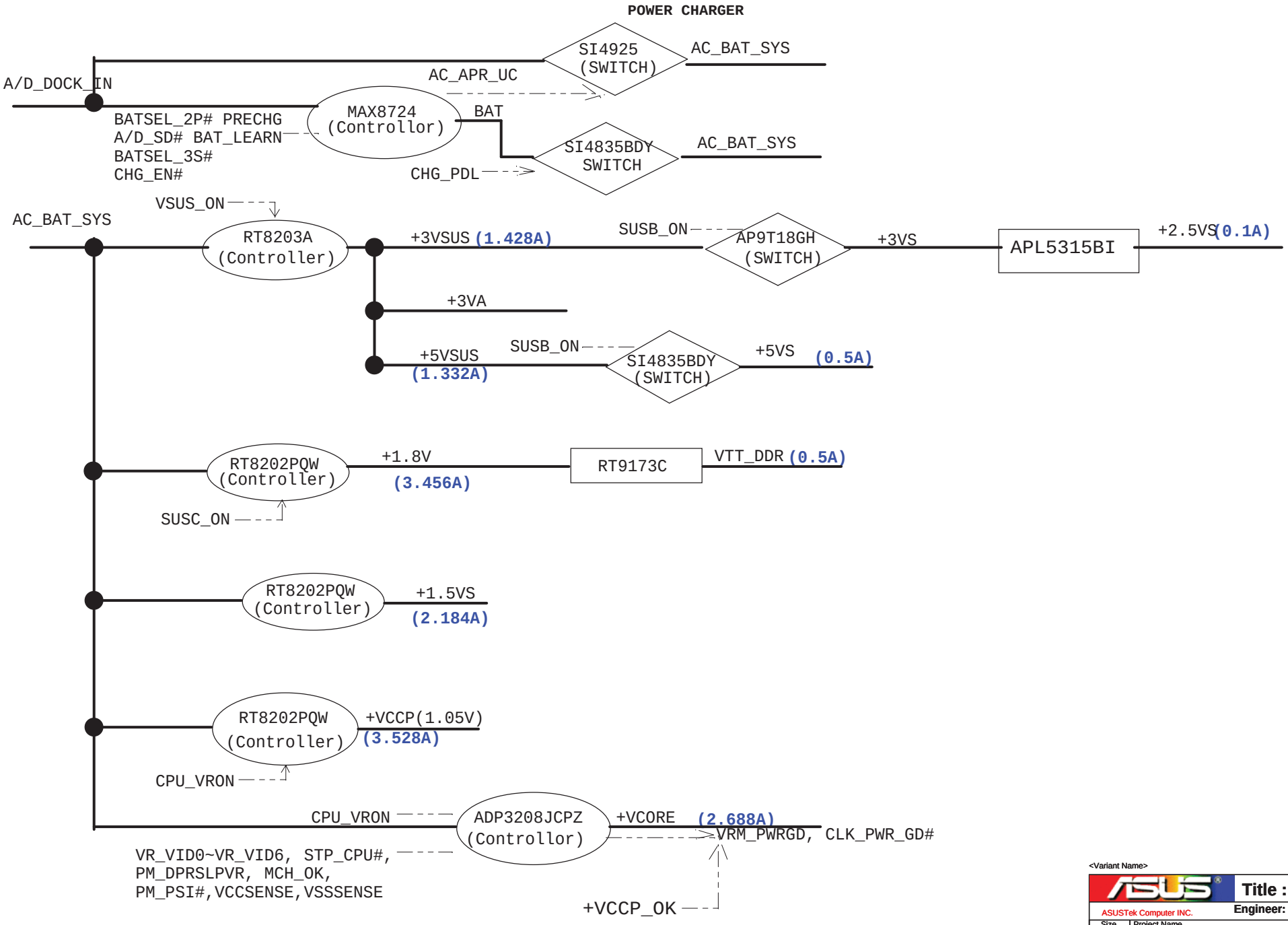
DC IN





<Variant Name>

ASUSTek Computer INC.	Title : PWR Jack	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 42 of 51	



<Variant Name>

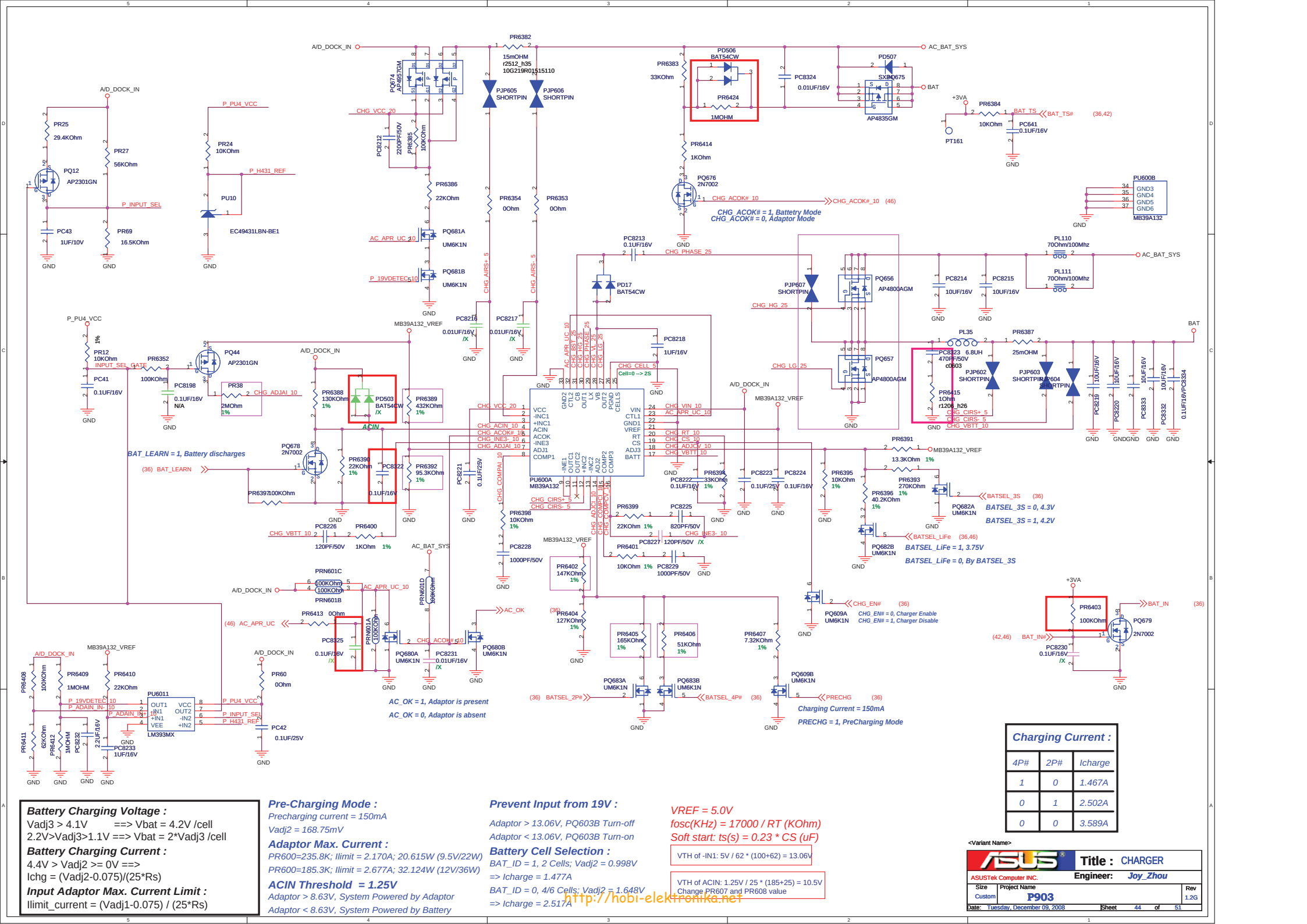
ASUSTek Computer INC.

Title : Power Flow

Engineer: Joy_Zhou

Size	Project Name	Rev
A3	P703	1.2G

Date: Tuesday, December 09, 2008 Sheet 43 of 51



Charging Current :		
4P#	2P#	Icharge
1	0	1.467A
0	1	2.502A
0	0	3.589A

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

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

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

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 > 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 Cells; Vadj2 = 0.998V
=> Icharge = 1.477A
BAT_ID = 0, 4/6 Cells; Vadj2 = 1.648V
=> Icharge = 2.517A

VREF = 5.0V
fosc(KHz) = 17000 / RT (KOhm)
Soft start: ts(s) = 0.23 * CS (uF)

VTH of -IN1: 5V / 62 * (100+62) = 13.06V

VTH of ACIN: 1.25V / 25 * (185+25) = 10.5V
Change PR607 and PR608 value

<Variant Name>

ASUSTek Computer INC.

Title : CHARGER
Engineer: Joy_Zhou

Size	Project Name	Rev
Custom	P903	1.2G

Date: Tuesday, December 09, 2008 Sheet 44 of 51

PRN603C swap to PRN603D
PRN603D swap to PRN603C
12/08

Power Stage

1. I/P Current:
   I in = Vo*Io/(0.8 * Vin) =1.95A
2. Ripple Current:
   I rip =3.29A
   I spec=2.5A ⊙2 pcs
3. Dynamic:
   I peak=8.5A
   ESR/2PCS =9 mohm
   〉V =76.5mV
4. Inductor Spec:
   I sat=14 A
   I dc =8 A
   DCR=18 mohm
5. MOSFET Spec:

H-side MOSFET: RJK0355DPA-00-J0 WPAK

Rds(ON)= 11.8 mohm (Vgs=4.5 V)
I cont = 30 A (T =25)
I peak = 120 A (Pause ≦10 us)

L-side MOSFET: RJK0355DPA-00-J0 WPAK

Rds(ON)= 11.8 mohm (Vgs=4.5 V)
I cont = 30 A (T =25)
I peak = 120 A (Pause ≦10 us)

Controller

1. Voltage & Current:
   VCORE=0.6-1.2V@8.5A
2. Frequency:
   Set PR58=220Kohm
   Fosc=204KHz for RPM
   Set PR57=180Kohm
   Fosc=333KHz for CCM
3. OCP:
   Set PR60=1MKOHM
   Iocp=33A
4. POR:
   POR Hysteresis =0.15V
   V on =4.4-4.5 V
   V off =4.0-4.2 V
5. UVP:
   VID-300mV
6. OVP:
   VID+200mV
7. Enable Voltage:
   V rising = 4.4V
   V falling = 4.2V
8. Soft start time:
   2.7ms
9. Phase selection:
   SP=VCC
   sigle phase
10. Inrush Current:
    C total = 140uF
    I inrush= 0.056 A
11. Loadline:
    30mOhm

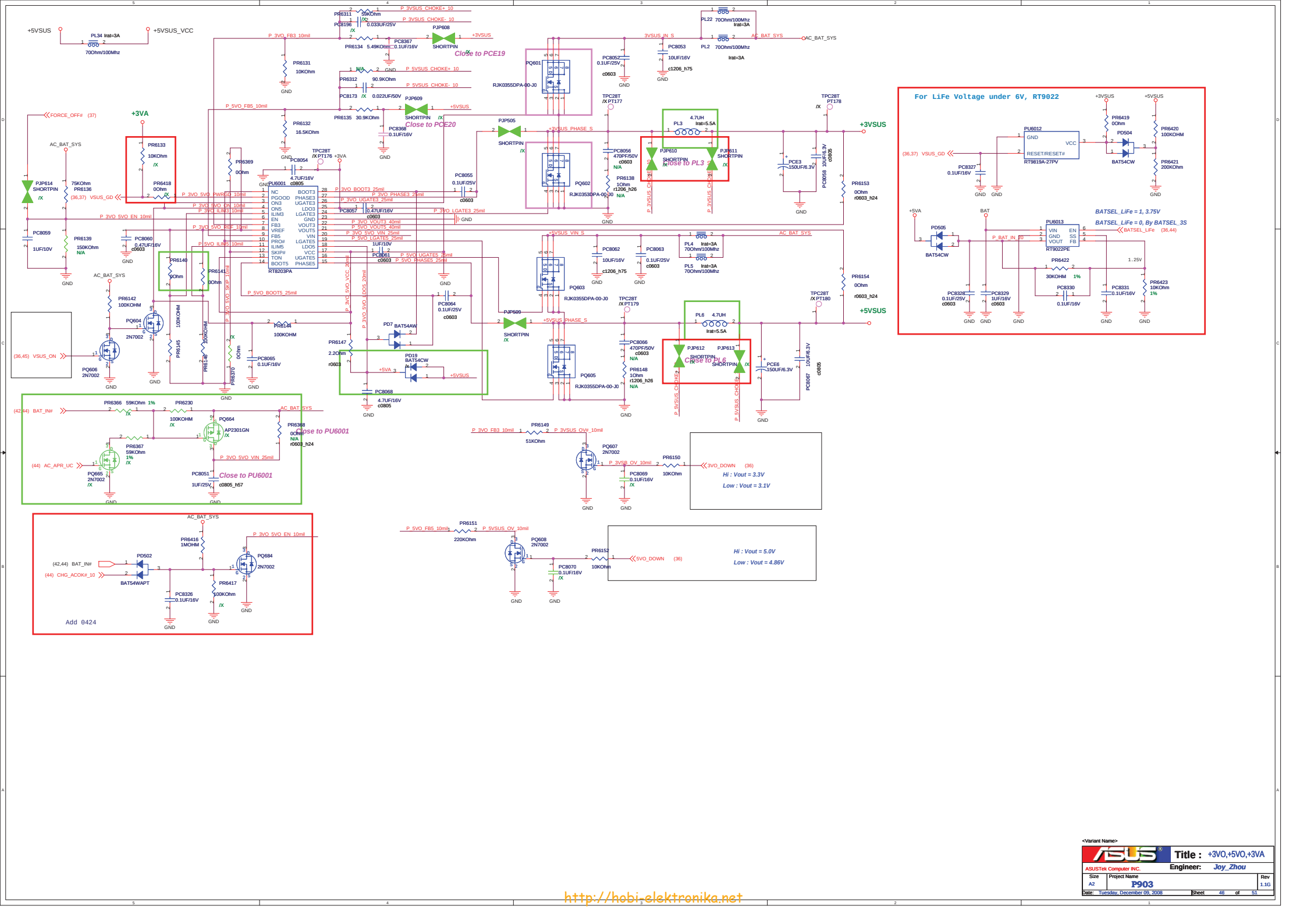
VCORE_DOWN	VCORE_UP	Vcore	Status
L	L	VID-150mV	Power Saving
H	L	VID	Normal
H	H	VID + 200mV	Performance
L	H	VID + 50mV	N/A

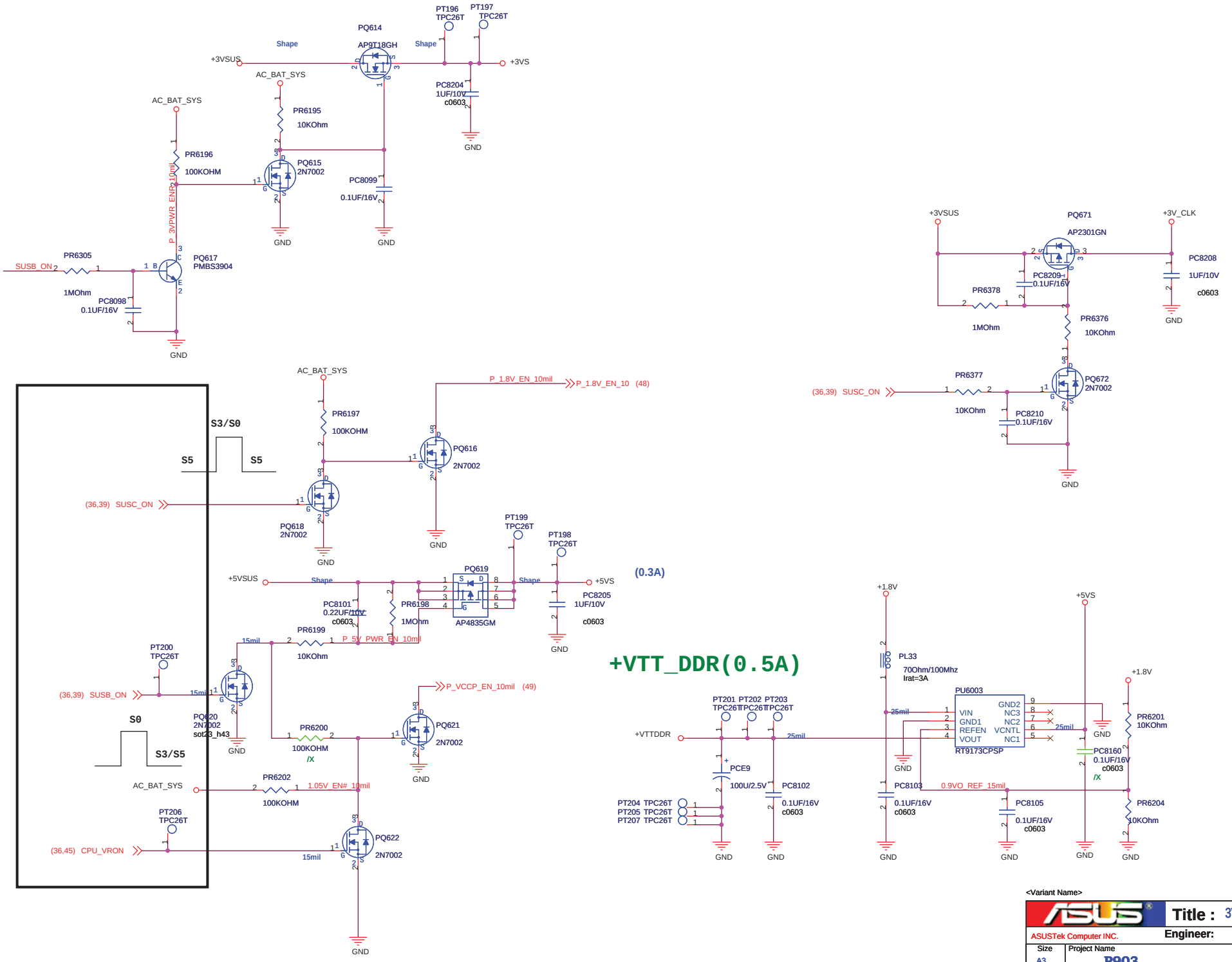
Vcore Level Down

For USB Insert And Remove Protection

<Variant Name>

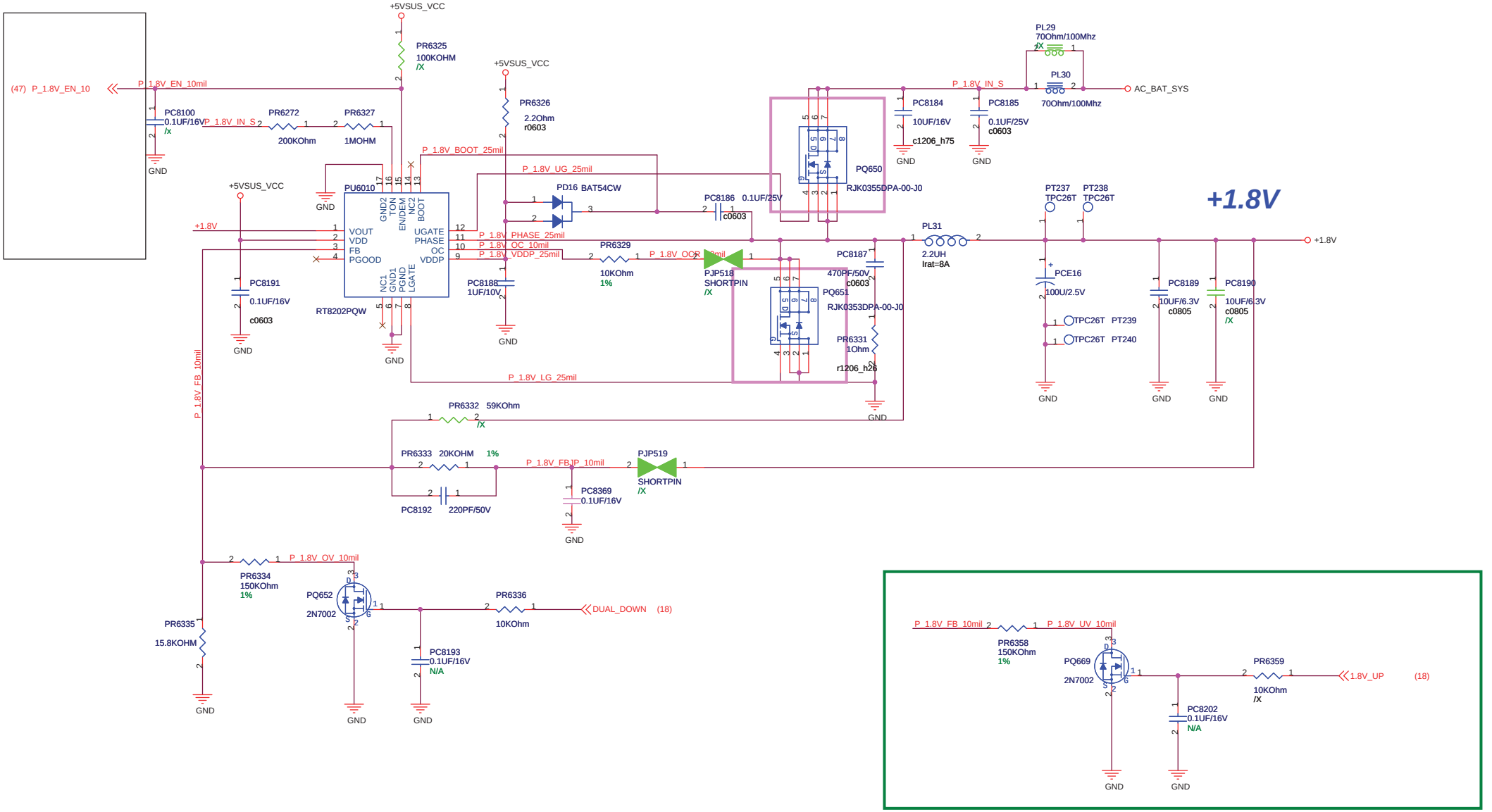
ASUSTek Computer INC.
Title : Vcore
Engineer: Joy_Zhou
Size: A2 | Project Name | Rev: 1.3G
Date: Tuesday, December 09, 2008 | Sheet 45 of 51


+5VSUS
+5VSUS_VCC
PL34 Irat=3A
70Ohm/100Mhz
PR6311 39KOhm
PC8196 0.033UF/25V
PR6134 5.49KOhm
PC8367 0.1UF/16V
PJP608 SHORTPIN
Close to PCE19
PR6131 10KOhm
PR6312 90.9KOhm
PC8173 0.022UF/50V
PR6135 30.9KOhm
PJP609 SHORTPIN
Close to PCE20
PR6132 16.5KOhm
PC8368 0.1UF/16V
PJP505 SHORTPIN
PQ601
RJK0355DPA-00-J0
PC8052 0.1UF/25V
PC8053 10UF/16V
PL22 70Ohm/100Mhz Irat=3A
PL2 70Ohm/100Mhz Irat=3A
AC_BAT_SYS
3VSUS_IN_S
+3VSUS_PHASE_S
PJP610 SHORTPIN
PJP611 SHORTPIN
Close to PL3
PL3 4.7UH Irat=5.5A
PQ602
RJK0353DPA-00-J0
PC8056 470PF/50V
PR6138 1Ohm r1206_h26
PCE3 150UF/6.3V
PC8058 10UF/6.3V
PR6153 0Ohm r0603_h24
+3VSUS
TPC28T PT177
TPC28T PT178
FORCE_OFF# (37)
+3VA
AC_BAT_SYS
PR6133 10KOhm
PJP614 SHORTPIN
PR6418 0Ohm
PR6136 75KOhm
(36,37) VSUS_GD
PR6369 0Ohm
PC8054 4.7UF/16V
PC8055 0.1UF/25V
PU6001 RT8203PA
PC8059 1UF/10V
PR6139 150KOhm N/A
PC8060 0.47UF/16V
PR6140 0Ohm
PR6141 0Ohm
PC8057 0.47UF/16V
PC8061 1UF/10V
PC8064 0.1UF/25V
PD7 BAT54AW
PR6147 2.2Ohm r0603
PD19 BAT54CW
PC8068 4.7UF/16V c0805
PQ603
RJK0355DPA-00-J0
PC8062 10UF/16V
PC8063 0.1UF/25V
PL4 Irat=3A 70Ohm/100Mhz
PL5 Irat=3A 70Ohm/100Mhz
PJP509 SHORTPIN
PQ605
RJK0355DPA-00-J0
PC8066 470PF/50V
PR6148 1Ohm r1206_h26
PJP612 SHORTPIN
PJP613 SHORTPIN
Close to PL6
PL6 4.7UH Irat=5.5A
PCE6 150UF/6.3V
PC8067 10UF/6.3V
PR6154 0Ohm r0603_h24
+5VSUS
TPC28T PT179
TPC28T PT180
(36,45) VSUS_ON
PQ606 2N7002
PR6142 100KOHM
PQ604 2N7002
PR6144 100KOHM
PR6145 100KOHM
PR6146 100KOHM
PR6370 0Ohm
PC8065 0.1UF/16V
(42,44) BAT_IN#
PR6366 59KOhm 1%
PR6230 100KOHM
PQ664 AP2301GN
PR6368 0Ohm N/A r0603_h24
Close to PU6001
(44) AC_APR_UC
PR6367 59KOhm 1%
PQ665 2N7002
PC8051 1UF/25V c0805_h57
Close to PU6001
P_3VO_5VO_VIN_25mil
P_3VO_FB3_10mil
PR6149 51KOhm
PQ607 2N7002
P_3VSB_OV_10mil
PR6150 10KOhm
PC8069 0.1UF/16V
3VO_DOWN (36)
Hi : Vout = 3.3V
Low : Vout = 3.1V
P_5VO_FB5_10mil
PR6151 220KOhm
PQ608 2N7002
P_5VSUS_OV_10mil
PR6152 10KOhm
PC8070 0.1UF/16V
5VO_DOWN (36)
Hi : Vout = 5.0V
Low : Vout = 4.86V
PR6416 1MOHM
PD502 BAT54WAPT
PQ684 2N7002
PR6417 100KOhm
PC8326 0.1UF/16V
(42,44) BAT_IN#
(44) CHG_ACOK#_10
Add 0424
For LiFe Voltage under 6V, RT9022
PU6012 RT9819A-27PV
PR6419 0Ohm
PD504 BAT54CW
PR6420 100KOHM
PR6421 200KOhm
PC8327 0.1UF/16V
PU6013 RT9022PE
PD505 BAT54CW
BATSEL_LiFe = 1, 3.75V
BATSEL_LiFe = 0, By BATSEL_3S
BATSEL_LiFe (36,44)
PR6422 30KOHM 1%
PR6423 10KOhm 1%
PC8328 0.1UF/25V c0603
PC8329 1UF/16V c0603
PC8330 0.1UF/16V
PC8331 0.1UF/16V
1.25V
P_3VO_5VO_EN_10mil
P_3VO_5VO_PWRGD_10mil
P_3VO_5VO_ON_10mil
P_3VO_ILIM3_10mil
P_5VO_ILIM5_10mil
P_3VO_5VO_REF_10mil
P_5VO_BOOT5_25mil
P_3VO_BOOT3_25mil
P_3VO_PHASE3_25mil
P_3VO_UGATE3_25mil
P_3VO_LGATE3_25mil
P_3VO_VOUT3_40mil
P_5VO_VOUT5_40mil
P_3VO_5VO_VIN_25mil
P_5VO_LGATE5_25mil
P_5VO_UGATE5_25mil
P_5VO_PHASE5_25mil
P_3VO_5VO_VCC_20mil
P_3VO_5VO_LDO5_20mil
P_3VO_5VO_5V_10mil
P_3VSUS_CHOKE+_10
P_3VSUS_CHOKE-_10
P_5VSUS_CHOKE+_10
P_5VSUS_CHOKE-_10
P_BAT_IN_20
http://hobi-elektronika.net
<Variant Name>
Title : +3VO,+5VO,+3VA
ASUSTek Computer INC.
Engineer: Joy_Zhou
Size A2
Project Name P903
Rev 1.1G
Date: Tuesday, December 09, 2008
Sheet 46 of 51



<Variant Name>

ASUSTek Computer INC.	Title : 3V_5V_VTT_DDR	
	Engineer: Joy_Zhou	
Size: A3	Project Name: P903	Rev: 1.1G
Date: Tuesday, December 09, 2008	Sheet 47 of 51	



DUAL_DOWN	1.8V_UP	+1.8V
0	0	+1.7V
0	1	+1.8V
1	0	+1.8V
1	1	+1.9V

<Variant Name>

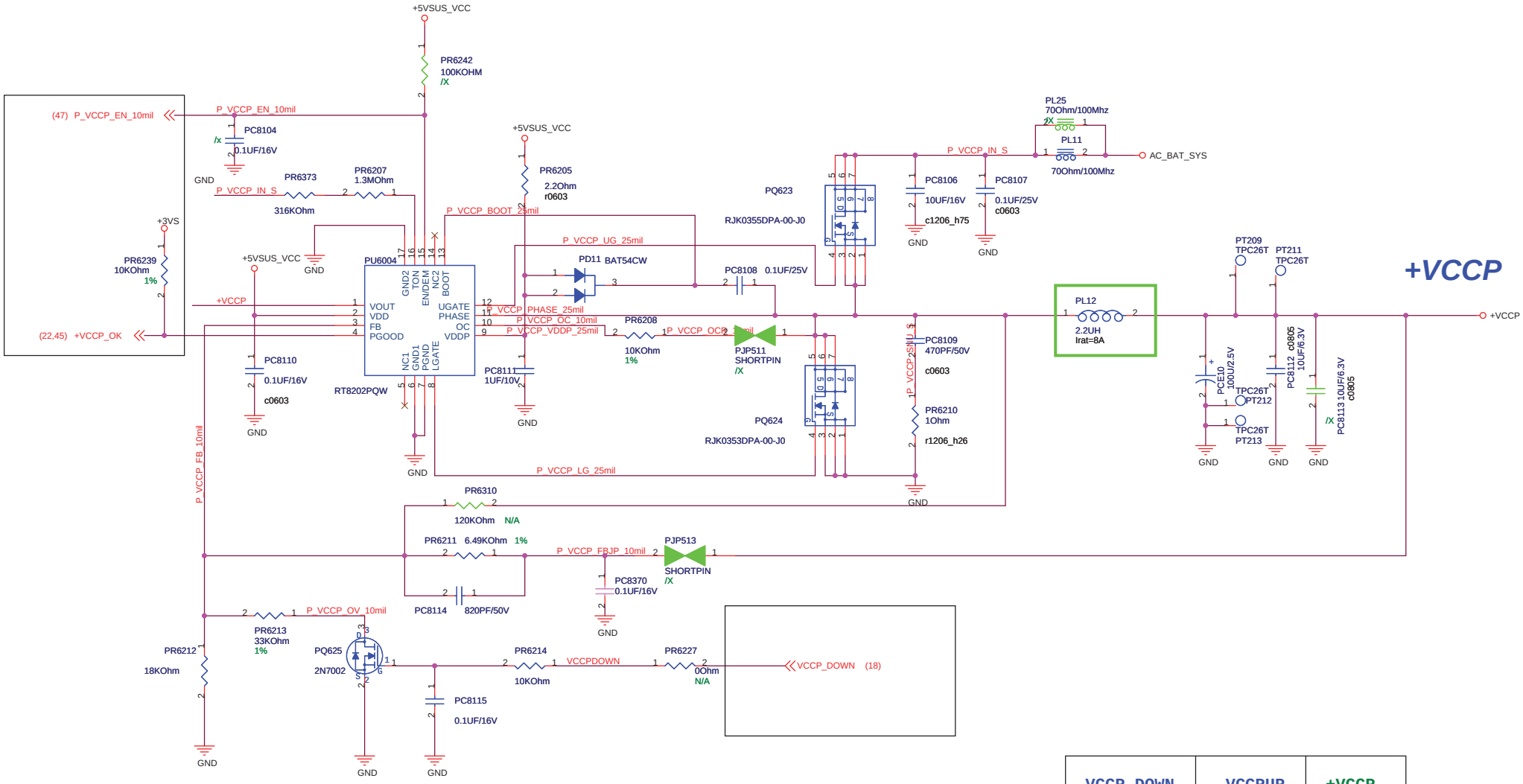
ASUSTek Computer INC.

Title : +1.8V

Engineer: Joy_Zhou

Size	Project Name	Rev
A3	P903	1.1G

Date: Tuesday, December 09, 2008 Sheet 48 of 51



VCCP_DOWN	VCCPUP	+VCCP
0	0	+0.95V
0	1	+1V
1	0	+1.05V
1	1	+1.1V

<Variant Name>

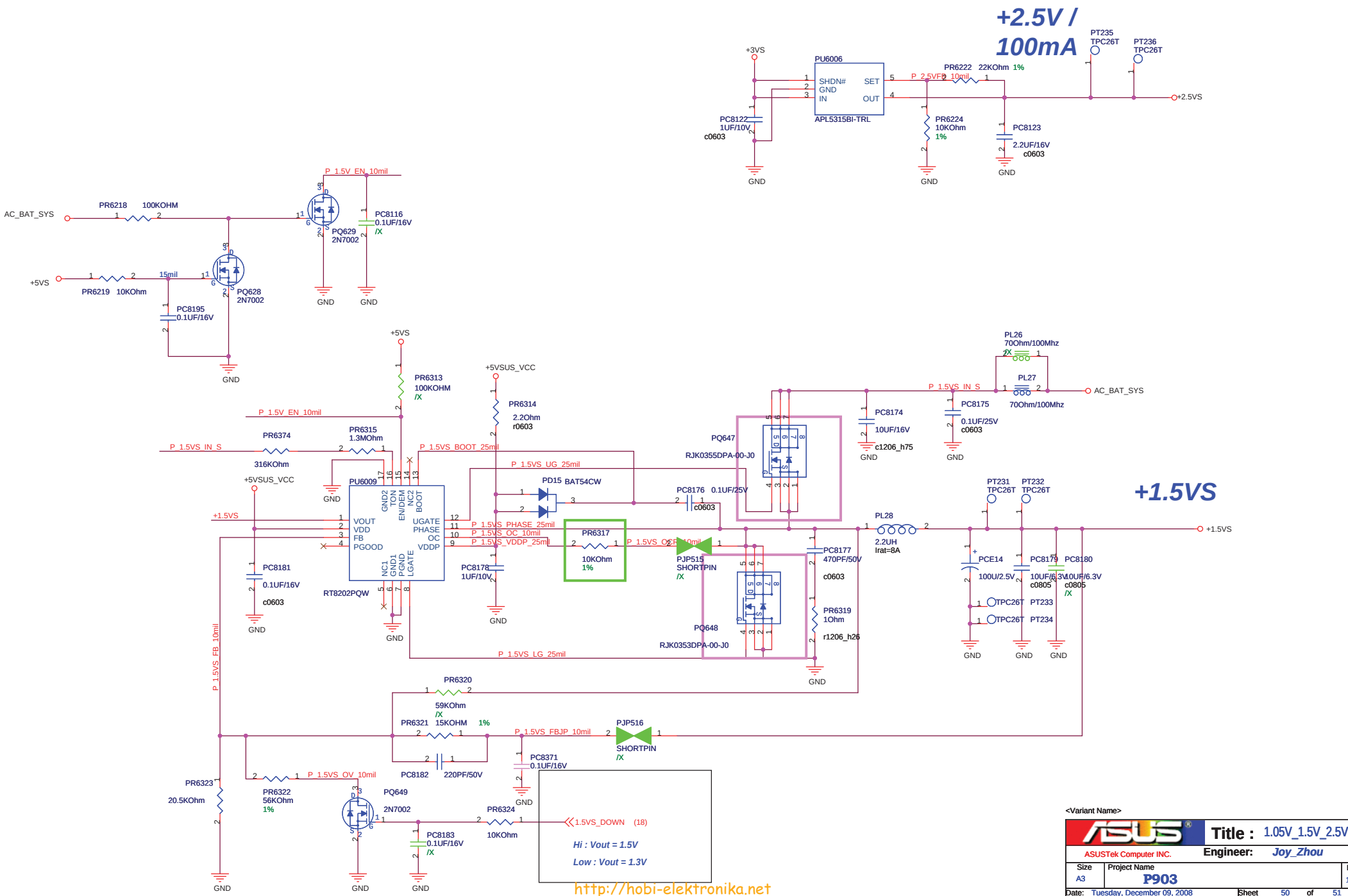
ASUSTek Computer INC.

Title : VCCP

Engineer: Joy_Zhou

Size	Project Name	Rev
A3	P703	1.1G

Date: Tuesday, December 09, 2008 Sheet 49 of 51


+2.5V / 100mA
PU6006
SHDN#
GND
IN
SET
OUT
APL5315BI-TRL
+3VS
PC8122 1UF/10V c0603
PR6222 22KOhm 1%
P_2.5VFB_10mil
PR6224 10KOhm 1%
PC8123 2.2UF/16V c0603
PT235 TPC26T
PT236 TPC26T
+2.5VS
GND
+1.5VS
PU6009
VOUT
VDD
FB
PGOOD
UGATE
PHASE
OC
VDDP
LGATE
RT8202PQW
PR6313 100KOHM /X
PR6314 2.2Ohm r0603
PR6315 1.3MOhm
PR6317 10KOhm 1%
PR6319 1Ohm r1206_h26
PR6320 59KOhm /X
PR6321 15KOHM 1%
PR6322 56KOhm 1%
PR6323 20.5KOhm
PR6324 10KOhm
PR6374 316KOhm
PR6218 100KOHM
PR6219 10KOhm
PQ628 2N7002
PQ629 2N7002
PQ647 RJK0355DPA-00-J0
PQ648 RJK0353DPA-00-J0
PQ649 2N7002
PD15 BAT54CW
PJP515 SHORTPIN /X
PJP516 SHORTPIN /X
PC8116 0.1UF/16V /X
PC8174 10UF/16V c1206_h75
PC8175 0.1UF/25V c0603
PC8176 0.1UF/25V c0603
PC8177 470PF/50V c0603
PC8178 1UF/10V
PC8179 10UF/6.3V c0805
PC8180 10UF/6.3V c0805 /X
PC8181 0.1UF/16V c0603
PC8182 220PF/50V
PC8183 0.1UF/16V /X
PC8195 0.1UF/16V
PC8371 0.1UF/16V
PCE14 100U/2.5V
PL26 70Ohm/100Mhz /X
PL27 70Ohm/100Mhz
PL28 2.2UH Irat=8A
PT231 TPC26T
PT232 TPC26T
PT233 TPC26T
PT234 TPC26T
AC_BAT_SYS
+5VS
+5VSUS_VCC
P_1.5V_EN_10mil
P_1.5VS_IN_S
P_1.5VS_BOOT_25mil
P_1.5VS_UG_25mil
P_1.5VS_PHASE_25mil
P_1.5VS_OC_10mil
P_1.5VS_VDDP_25mil
P_1.5VS_LG_25mil
P_1.5VS_FB_10mil
P_1.5VS_FBJP_10mil
P_1.5VS_OV_10mil
1.5VS_DOWN (18)
Hi : Vout = 1.5V
Low : Vout = 1.3V
http://hobi-elektronika.net
<Variant Name>
Title : 1.05V_1.5V_2.5V
ASUSTek Computer INC.
Engineer: Joy_Zhou
Size A3
Project Name P903
Rev 1.1G
Date: Tuesday, December 09, 2008
Sheet 50 of 51

1.Change the Audio Jack.

2.Add BD5 for BAT_IN# ESD, modify the BATIN to BATIN#.

3.Add PM_DPRSLPVR to 945GSE,
if use this signal you need /X NR21

4.Change PR6406 to 51K

5.Change YLED4 to BLUE and change yr6 to 4.7K

6.Change YLED2 to orange&green and add a circuit to support it.

7.Add the circuit of blue tooth on page32

8.Add the circuit to support sata flash module.(sata signal,sata clock and satarbias.)

9.remove modem ang change the lan&modem connector.

10.change HC14 to 10uf and modify HC9 to /X

11.add a dip spi and correlative circuit for RD debug on page36.

12.add a 24pin KB connector on page 38 to compatible with 906

13.change HR4 from 0 ohm to 300 ohm/100MHZ

14.REMOVE 24PIN KB CIRCUIT

15.update power p44-p50

16.add test point pt235 pt236 for 2.5v

17.add gr19 for lcd sense on P24

18.add sys_reset on p37

19,ADD EMI C P40

20.touch pad update

<Variant Name>

ASUSTek Computer INC.	Title : modify	
	Engineer: Henry_Yang	
Size: A3	Project Name: P703	Rev: 1.2G
Date: Tuesday, December 09, 2008	Sheet 51 of 51	