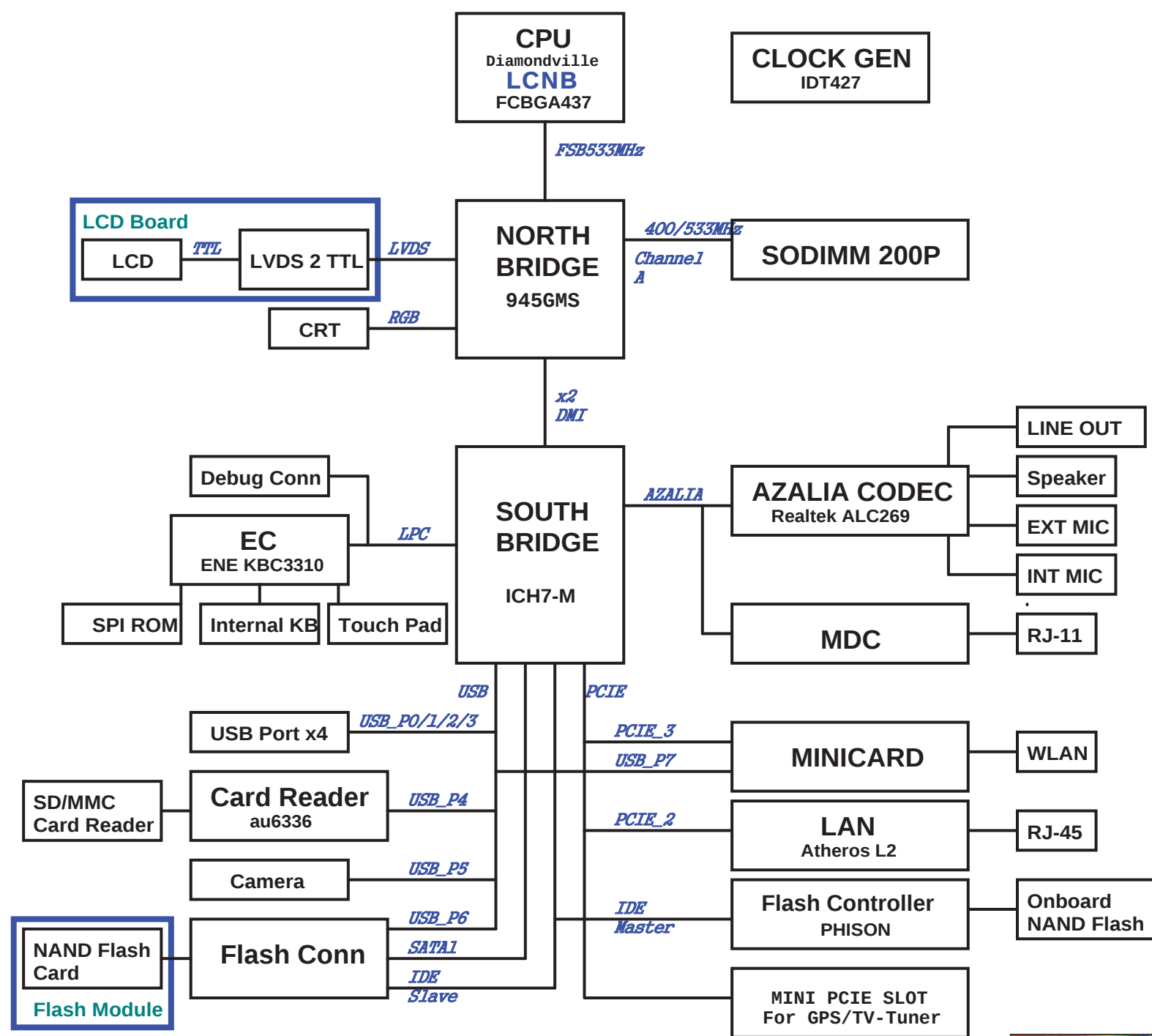


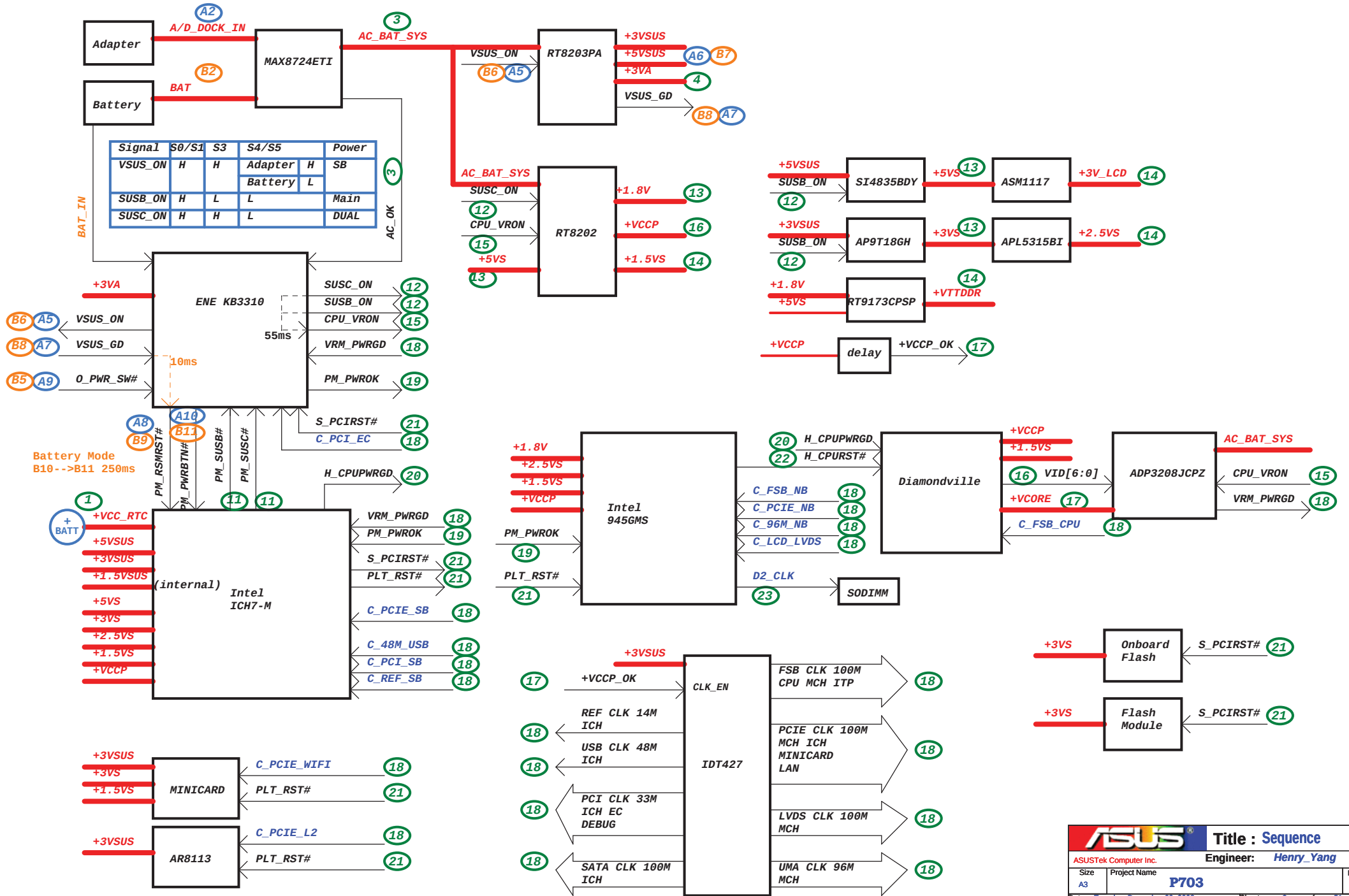


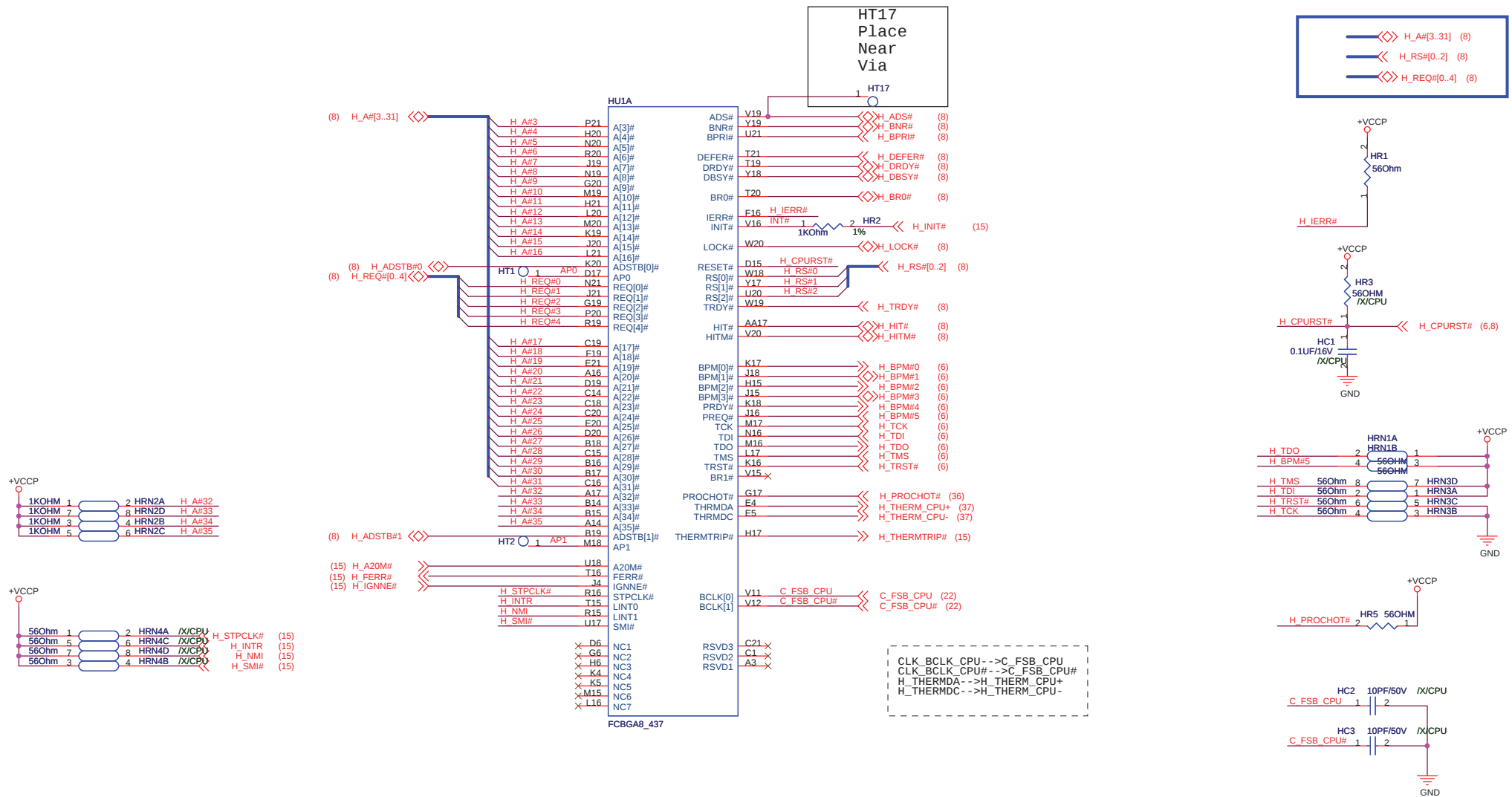
ICH7M GPIO DEFAULT&NOW
SETTING

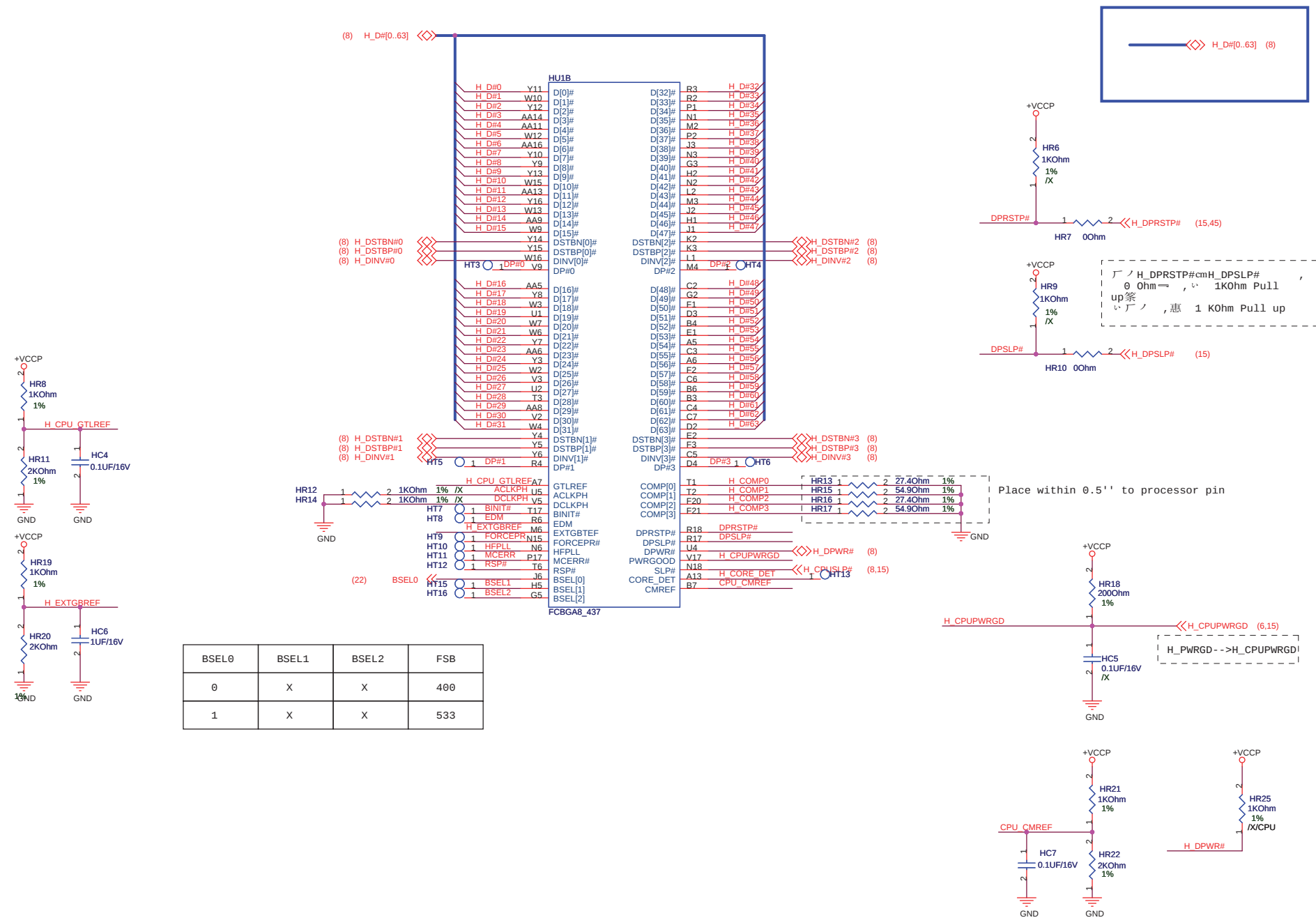
Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
AB18	GPIO0/BM_BUSY#	I/O	3.3V	CORE	GPI	BM_BUSY#
C8	GPIO1/REQ5#	I/O	5V	CORE	GPI	REQ5#
G8	GPIO2/PIRQE#	I/OD	5V	CORE	GPI	PIRQE#
F7	GPIO3/PIRQF#	I/OD	5V	CORE	GPI	PIRQF#
F8	GPIO4/PIRQG#	I/OD	5V	CORE	GPI	PIRQG#
G7	GPIO5/PIRQH#	I/OD	5V	CORE	GPI	PIRQH#
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

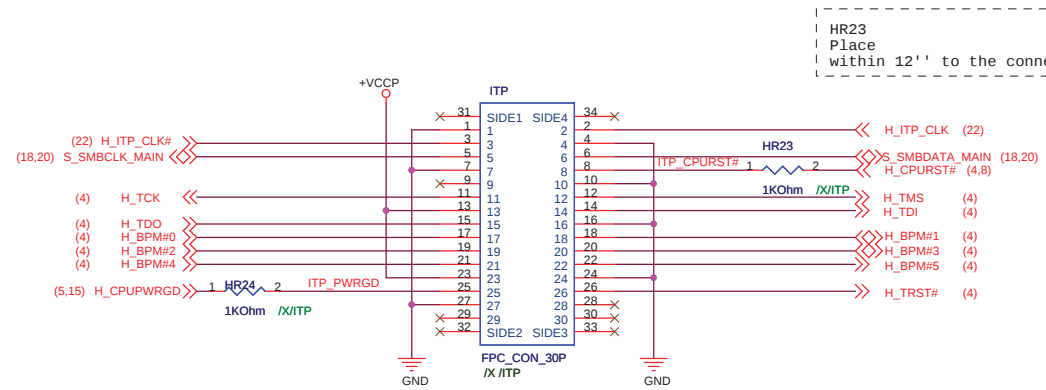
Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
A21	GPIO26	I/O	3.3V	Resume	GPO	GPO,VCORE_DOWN
B21	GPIO27	I/O	3.3V	Resume	GPO	GPO,CARD_READER_EN#
E23	GPIO28	I/O	3.3V	Resume	GPO	GPO,MODEM_EN#
C3	GPIO29/OC5#	I/O	3.3V	Resume	Native	OC5#
A2	GPIO30/OC6#	I/O	3.3V	Resume	Native	OC6#
B3	GPIO31/OC7#	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

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

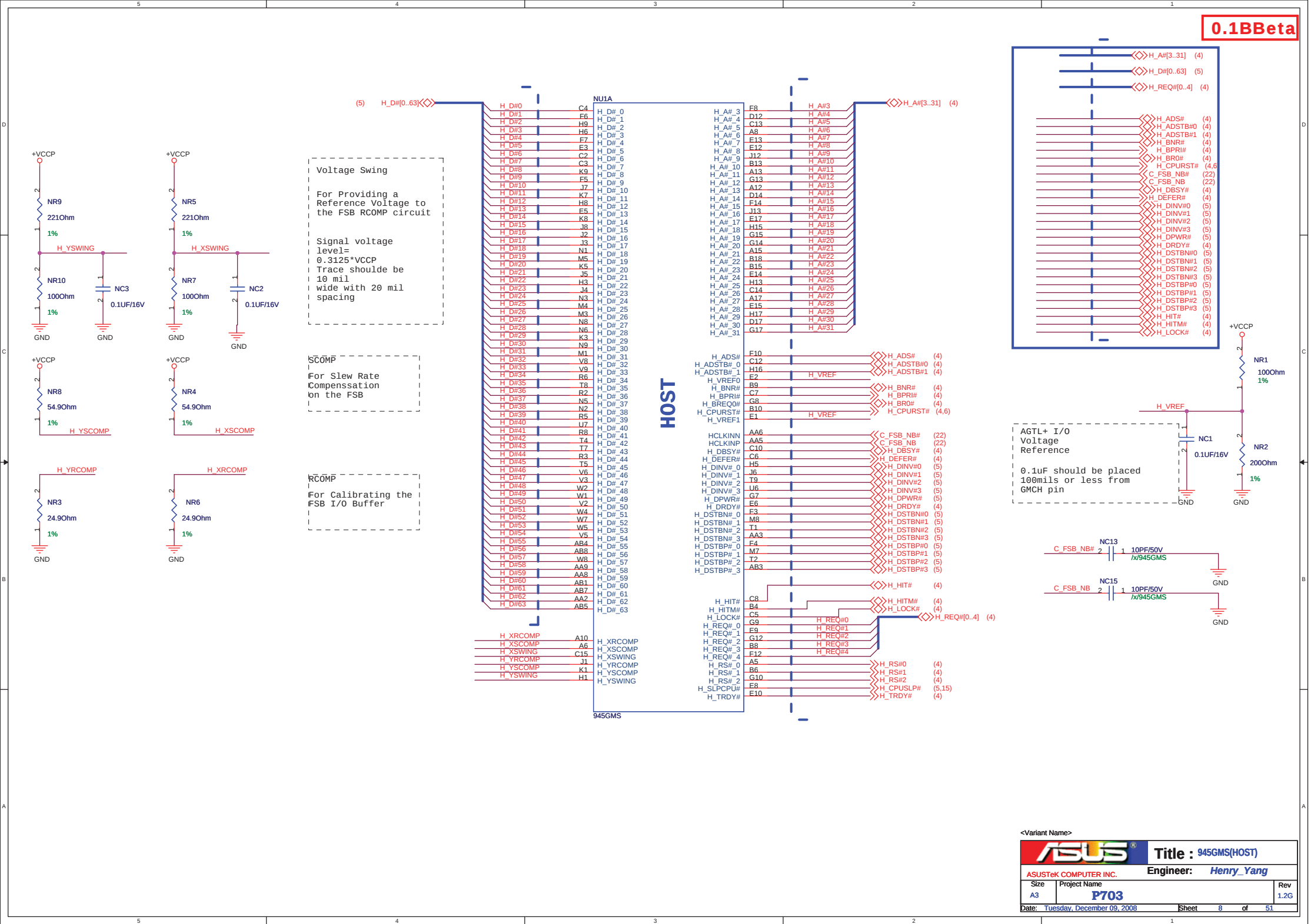






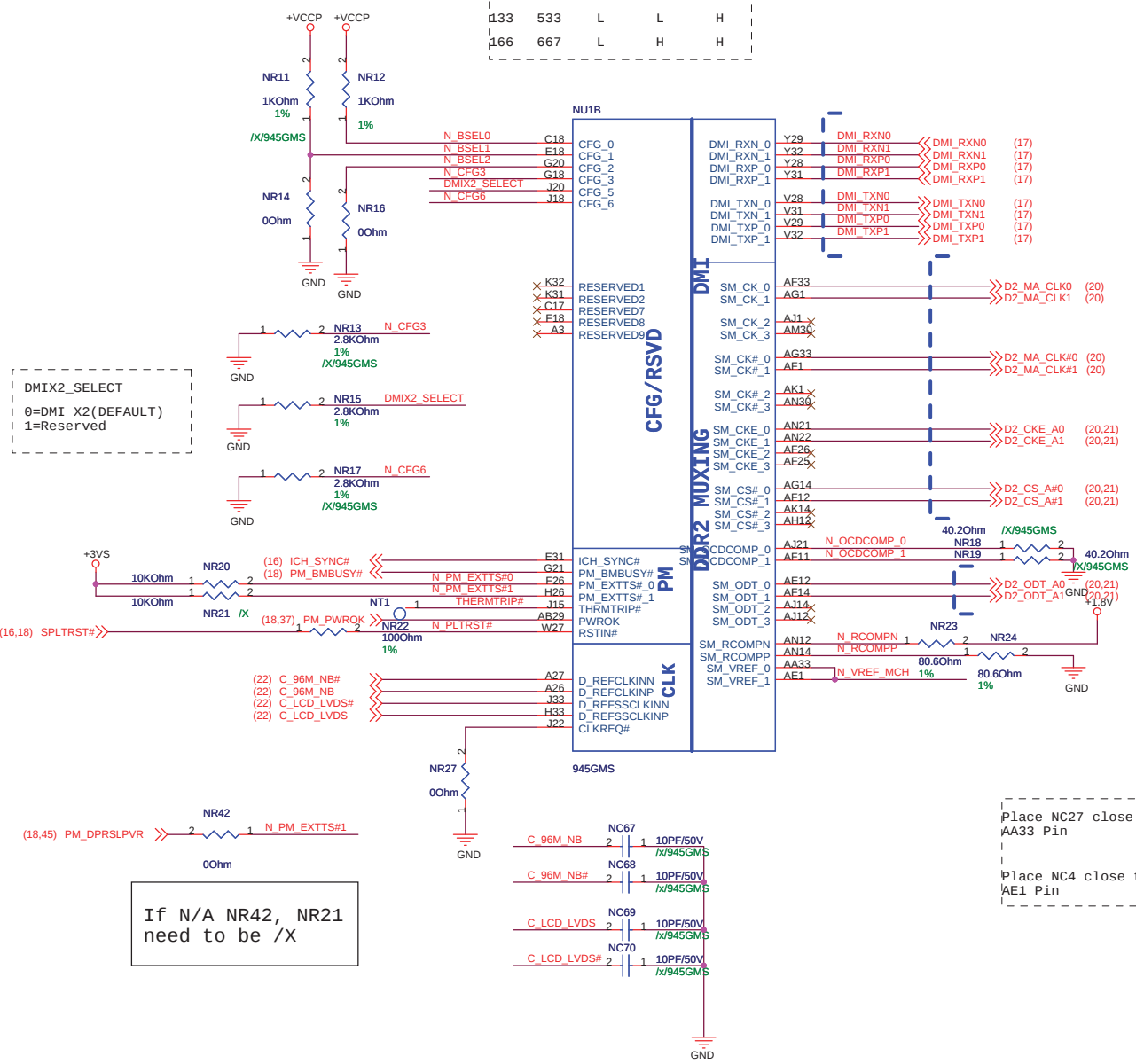


HR23
Place
within 12'' to the connector



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

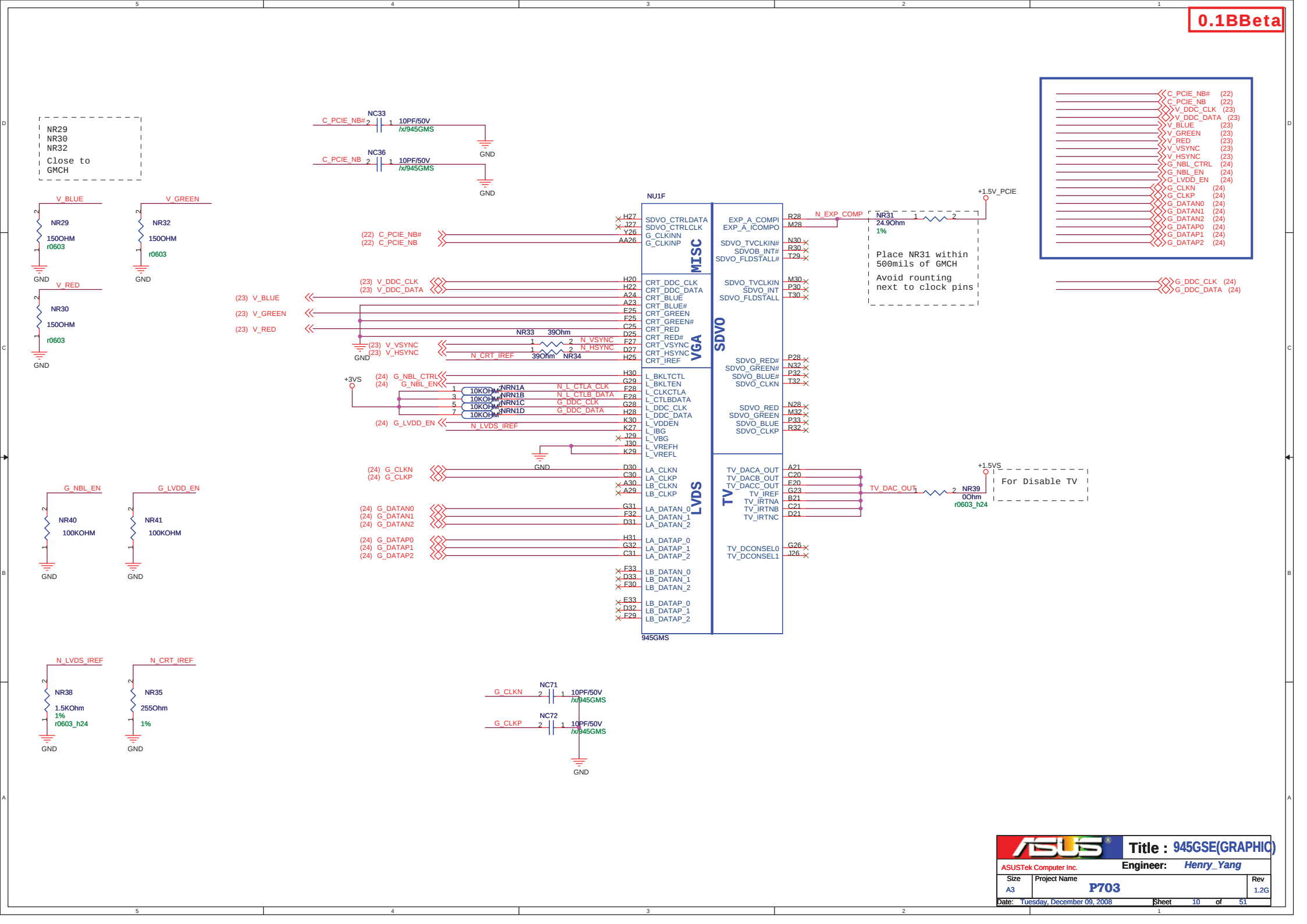
DMI_RXN0	<<	DMI_RXN0	(17)
DMI_RXN1	<<	DMI_RXN1	(17)
DMI_RXP0	<<	DMI_RXP0	(17)
DMI_RXP1	<<	DMI_RXP1	(17)
DMI_TXN0	<<	DMI_TXN0	(17)
DMI_TXN1	<<	DMI_TXN1	(17)
DMI_TXP0	<<	DMI_TXP0	(17)
DMI_TXP1	<<	DMI_TXP1	(17)
D2_MA_CLK0	<<	D2_MA_CLK0	(20)
D2_MA_CLK1	<<	D2_MA_CLK1	(20)
D2_MA_CLK#0	<<	D2_MA_CLK#0	(20)
D2_MA_CLK#1	<<	D2_MA_CLK#1	(20)
D2_CKE_A0	<<	D2_CKE_A0	(20,21)
D2_CKE_A1	<<	D2_CKE_A1	(20,21)
D2_CS_A#0	<<	D2_CS_A#0	(20,21)
D2_CS_A#1	<<	D2_CS_A#1	(20,21)
D2_ODT_A0	<<	D2_ODT_A0	(20,21)
D2_ODT_A1	<<	D2_ODT_A1	(20,21)
ICH_SYNC#	<<	ICH_SYNC#	(16)
PM_BMBUS#	<<	PM_BMBUS#	(18)
PM_PWROK	<<	PM_PWROK	(18,37)
SPLTRST#	<<	SPLTRST#	(16,18)
C_96M_NB#	<<	C_96M_NB#	(22)
C_96M_NB	<<	C_96M_NB	(22)
C_LCD_LVDS#	<<	C_LCD_LVDS#	(22)
C_LCD_LVDS	<<	C_LCD_LVDS	(22)

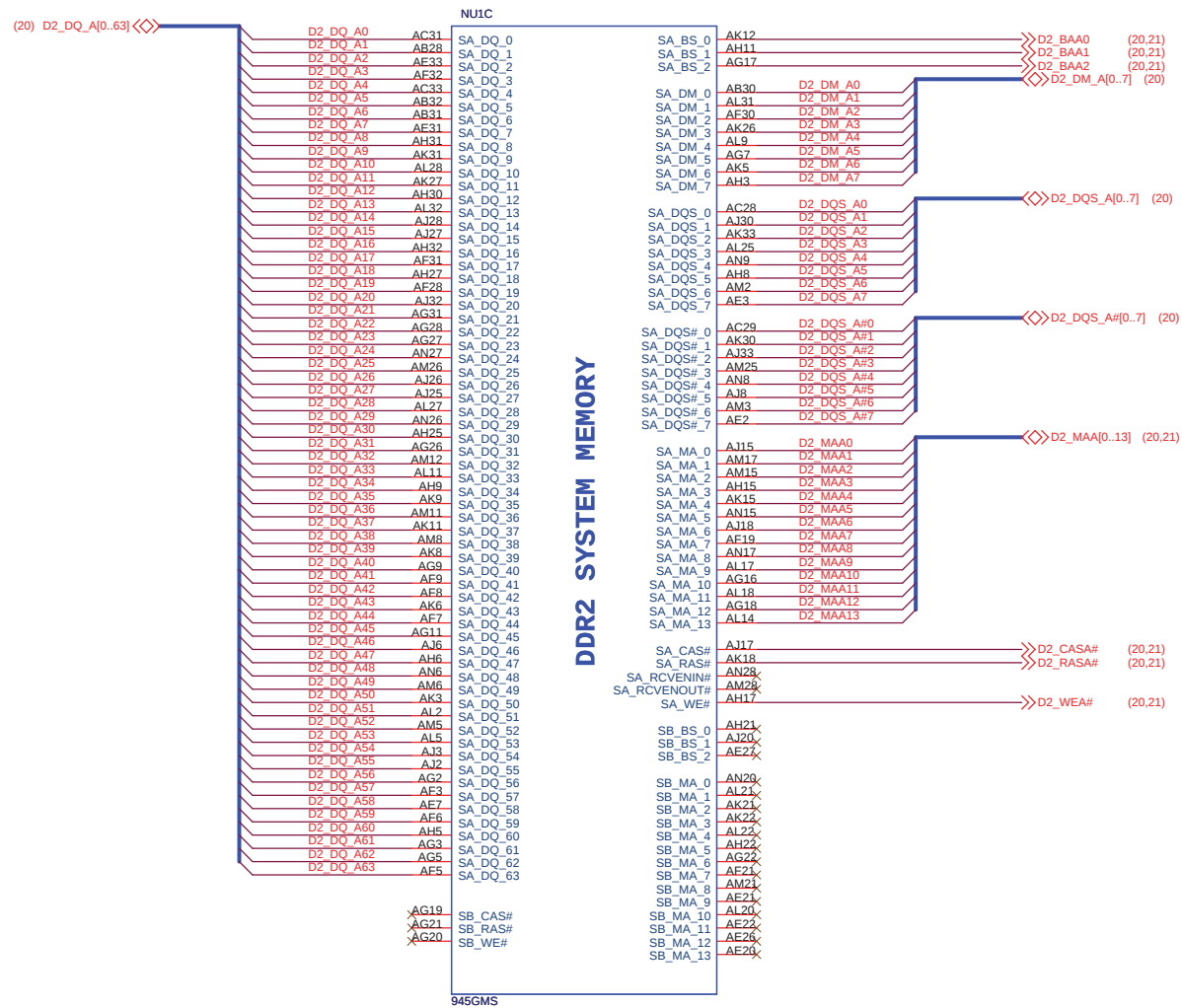


DMIX2_SELECT
0=DMI X2(DEFAULT)
1=Reserved

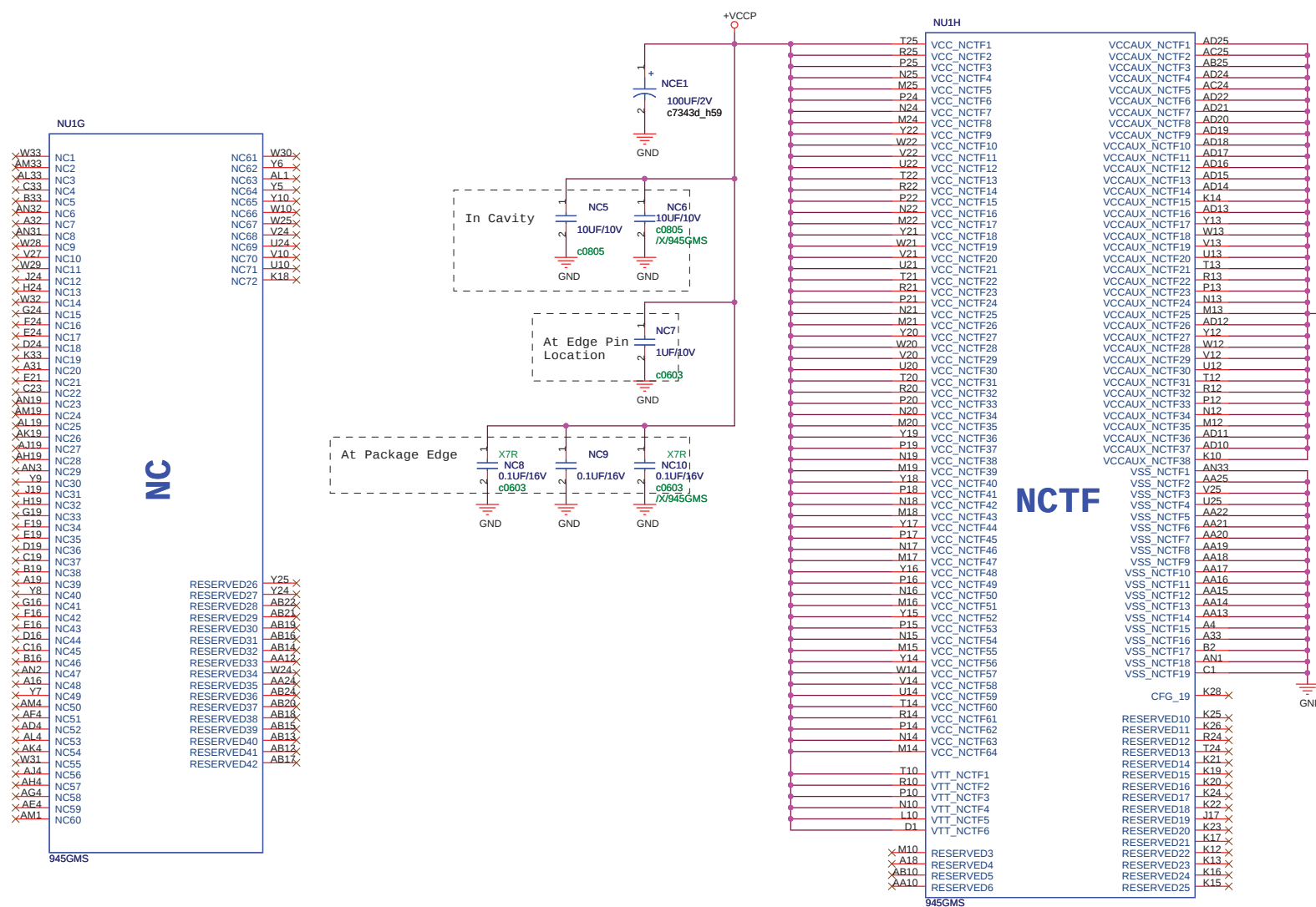
If N/A NR42, NR21
need to be /X

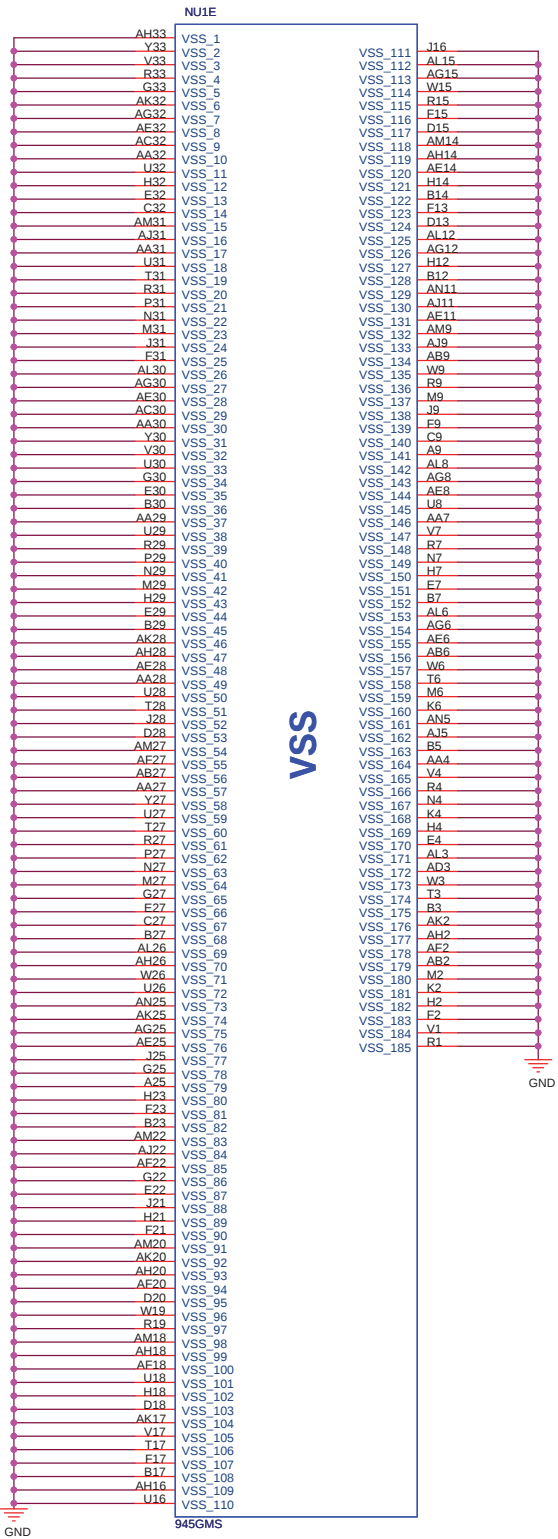
Place NC27 close to
AA33 Pin
Place NC4 close to
AE1 Pin

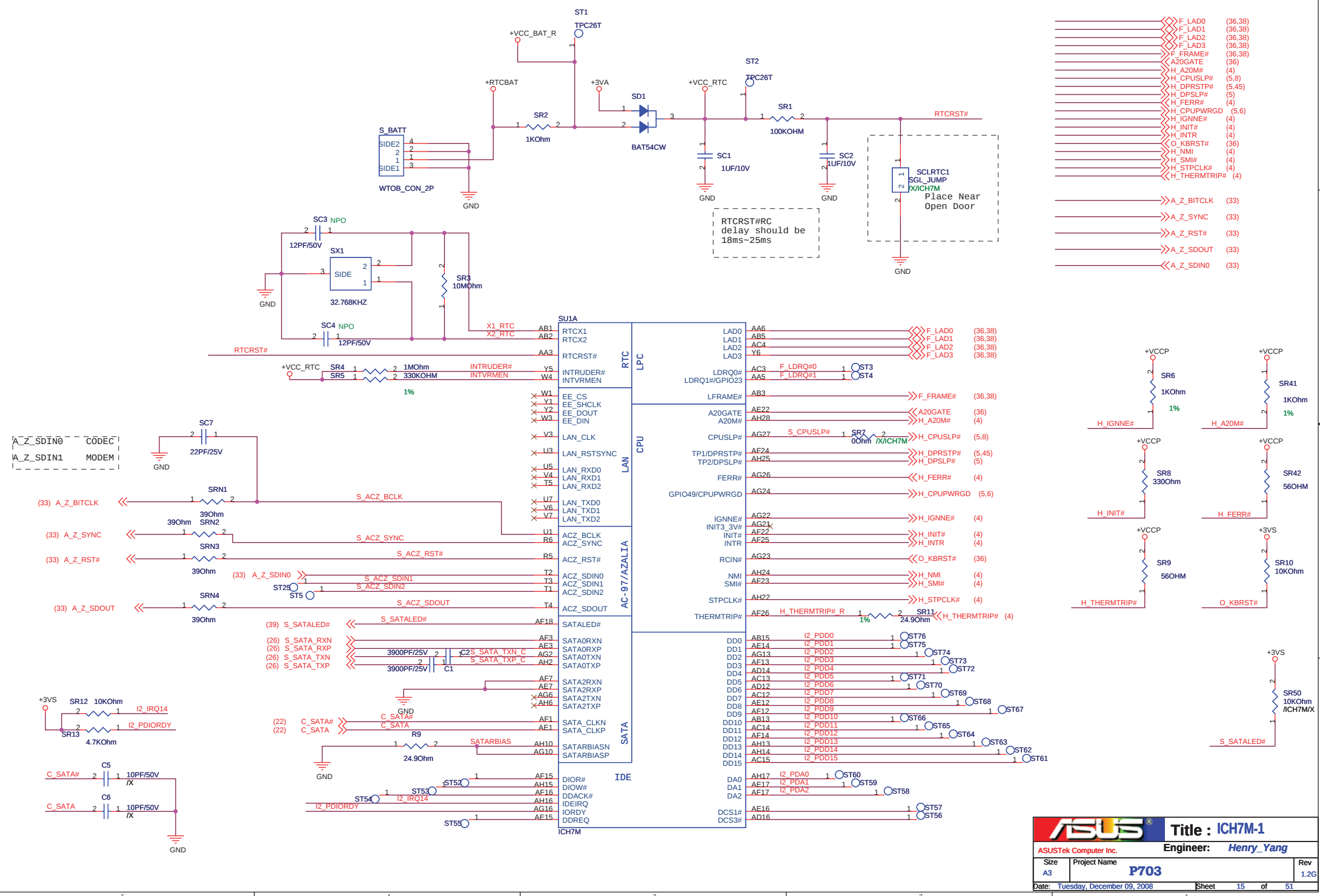


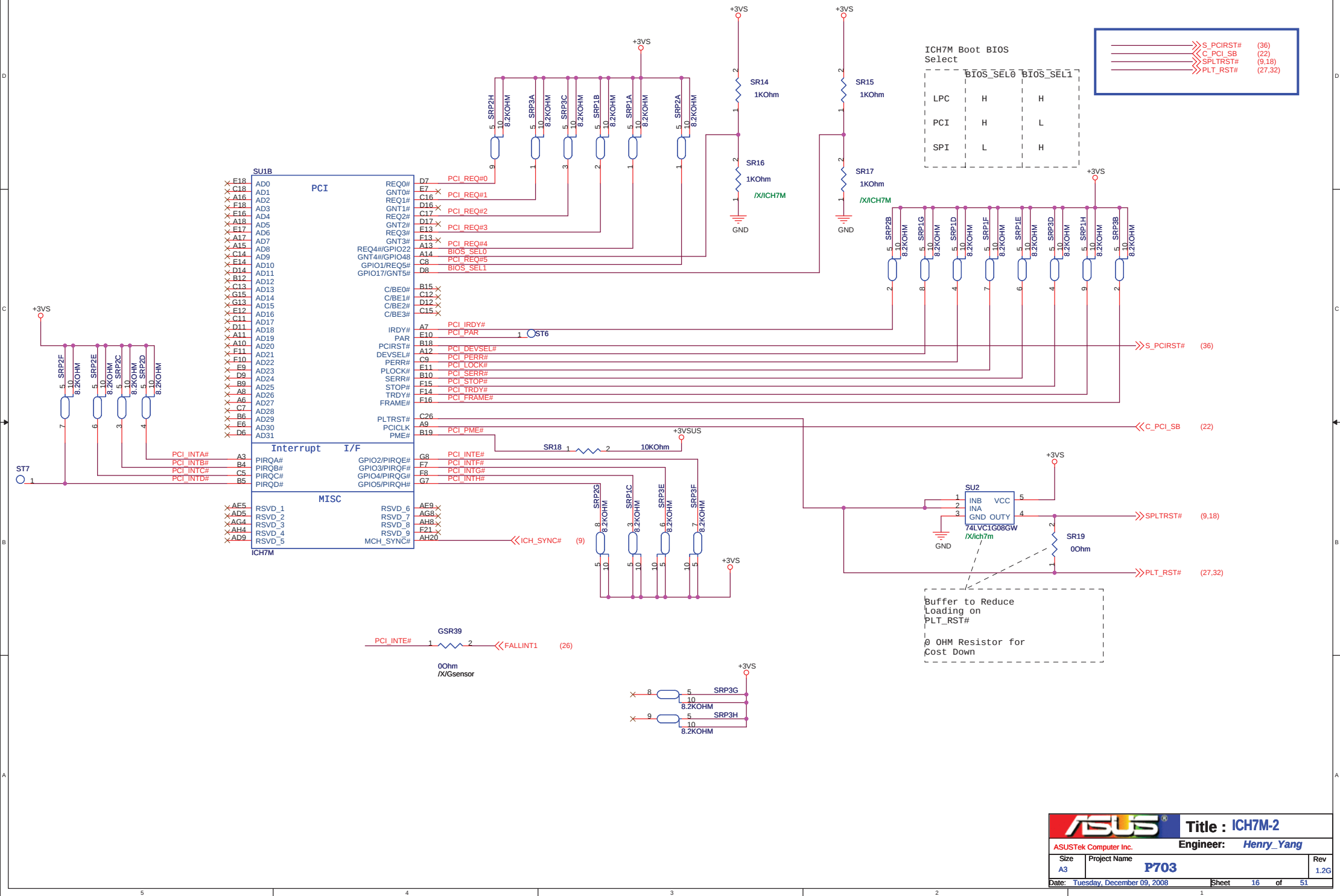


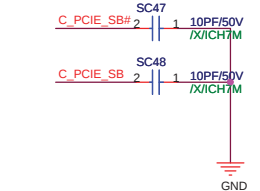
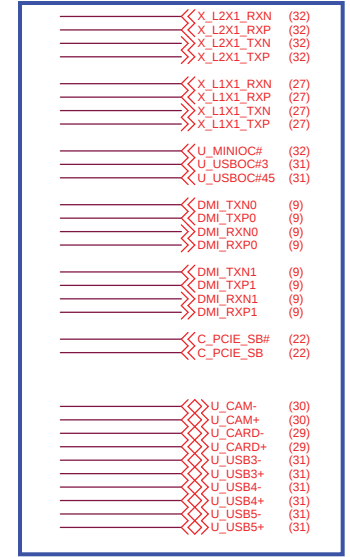
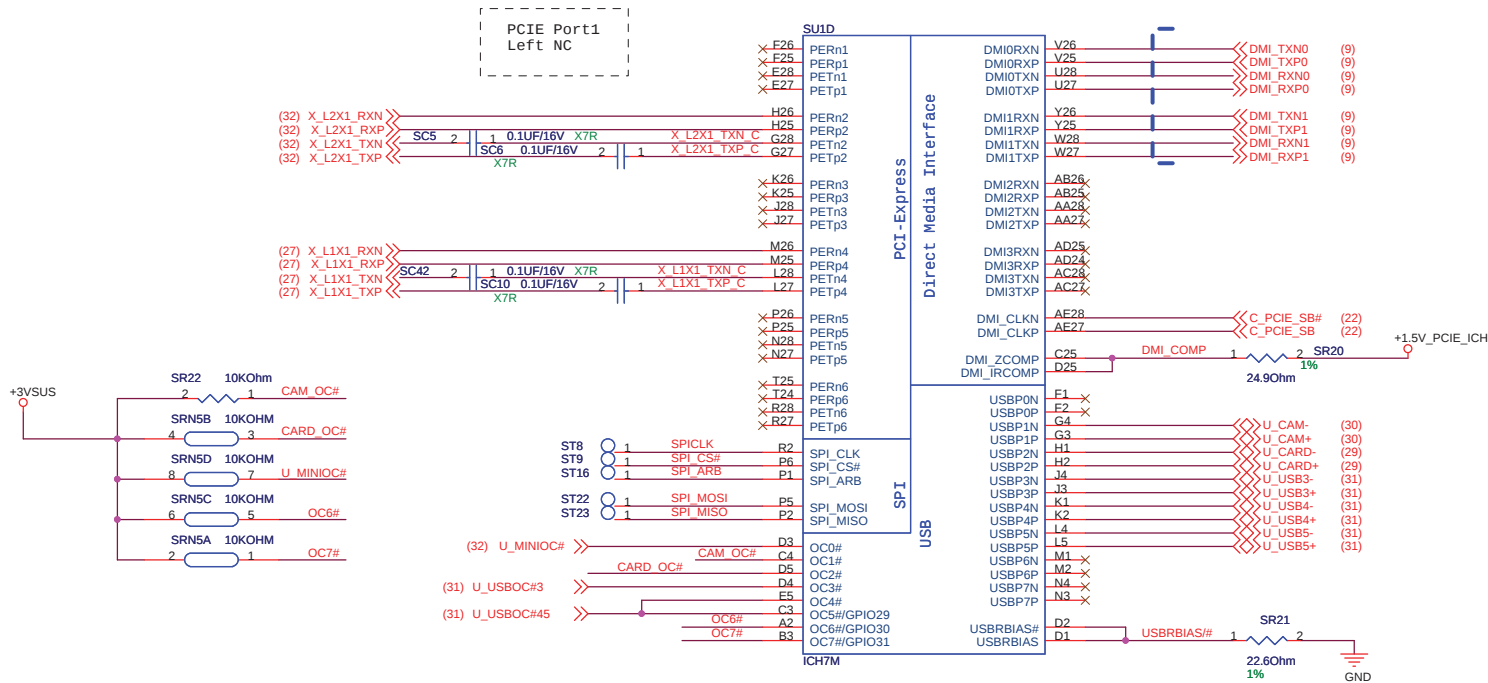
945GMS



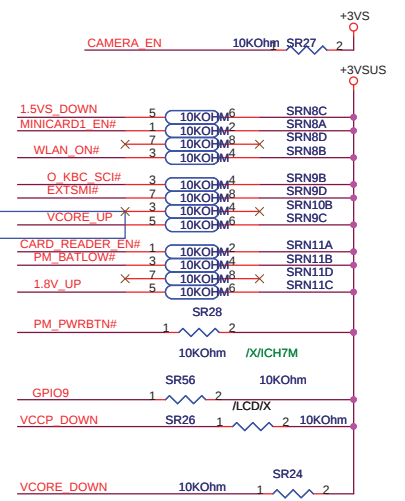
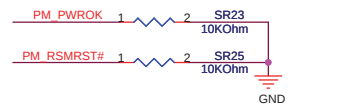
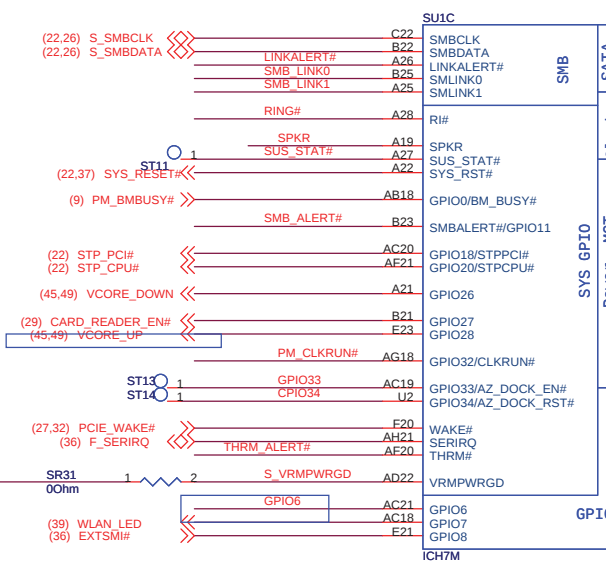
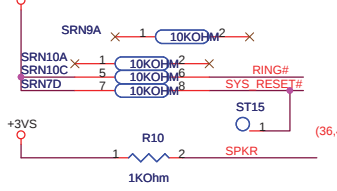
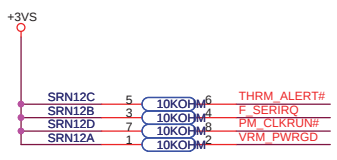
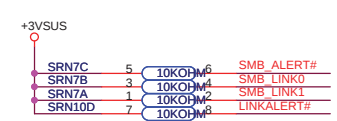
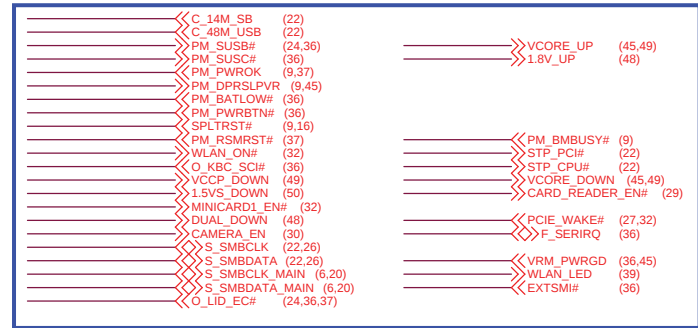
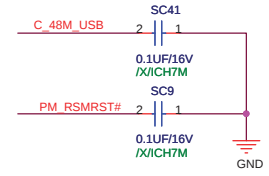
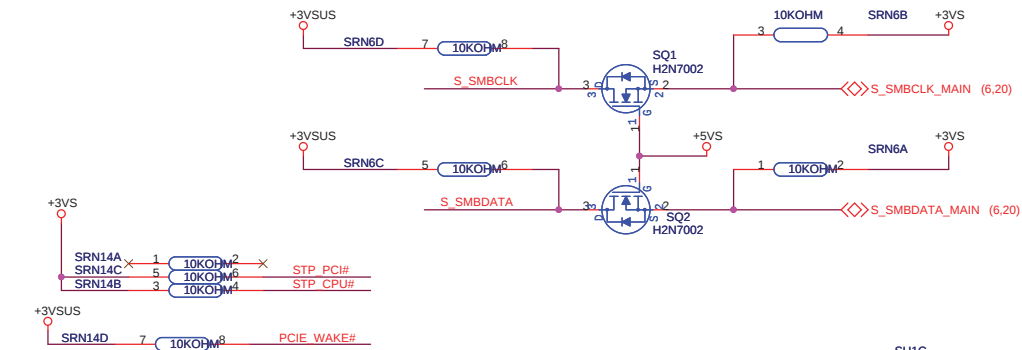








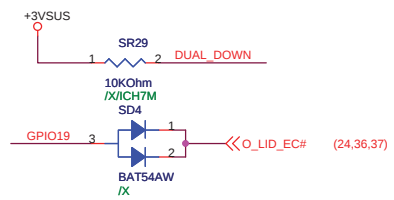
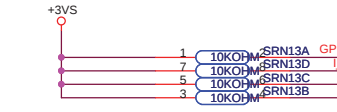
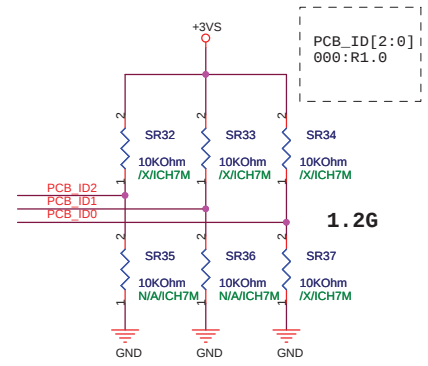
USB0	Minicard
USB1	Camera
USB2	Card Reader
USB3	USB CONN
USB4	USB CONN
USB5	USB CONN
USB6	NC
USB7	NC



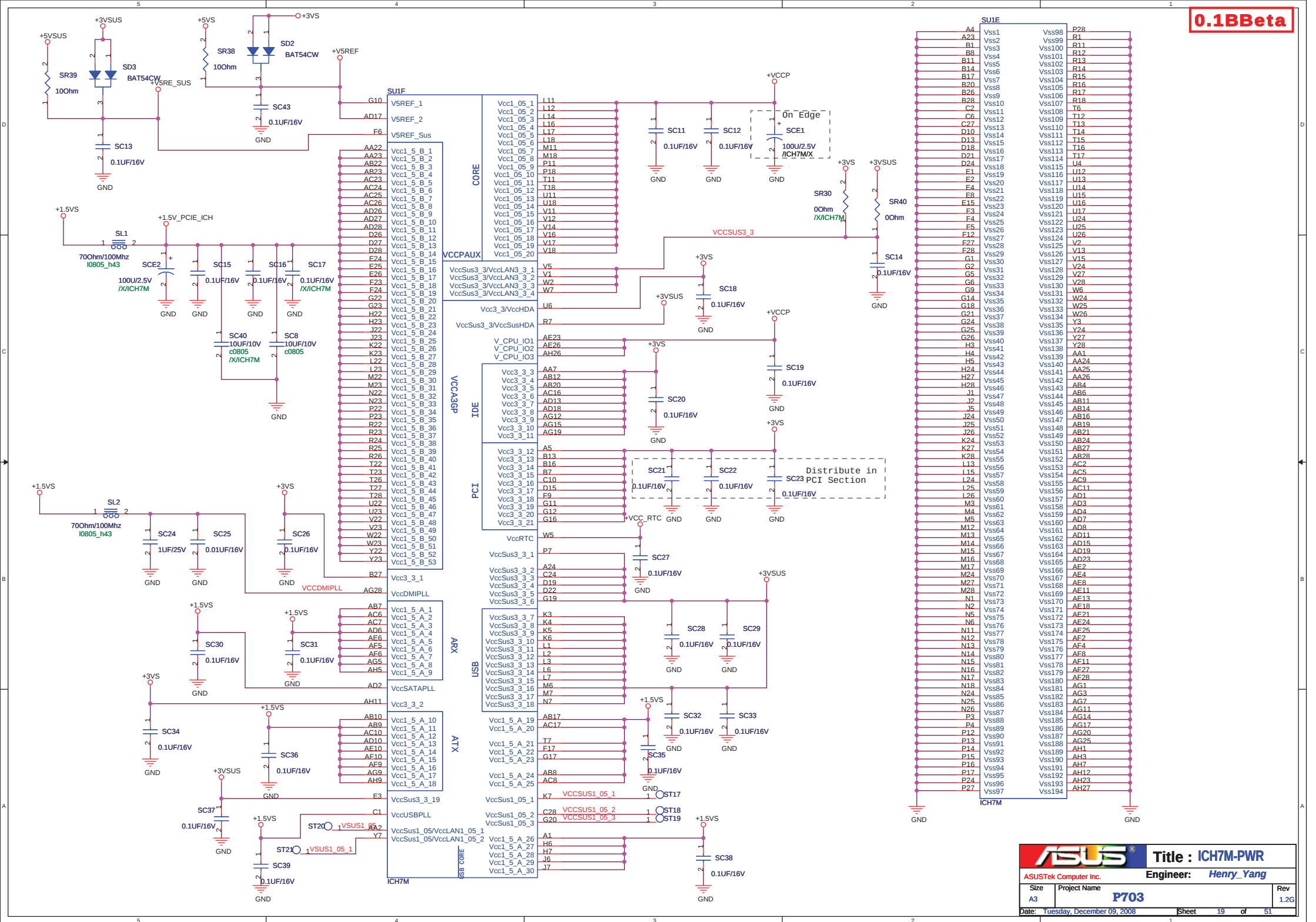
WLAN_LED	WLAN	BT
High	v	v
High	v	x
High	x	v
Low	x	x

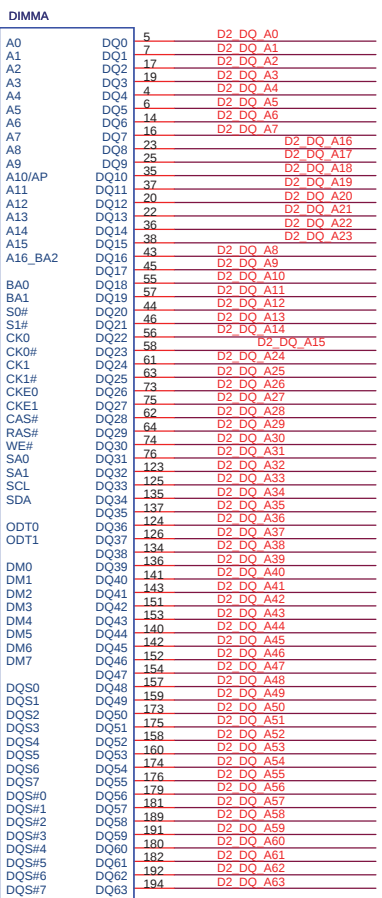
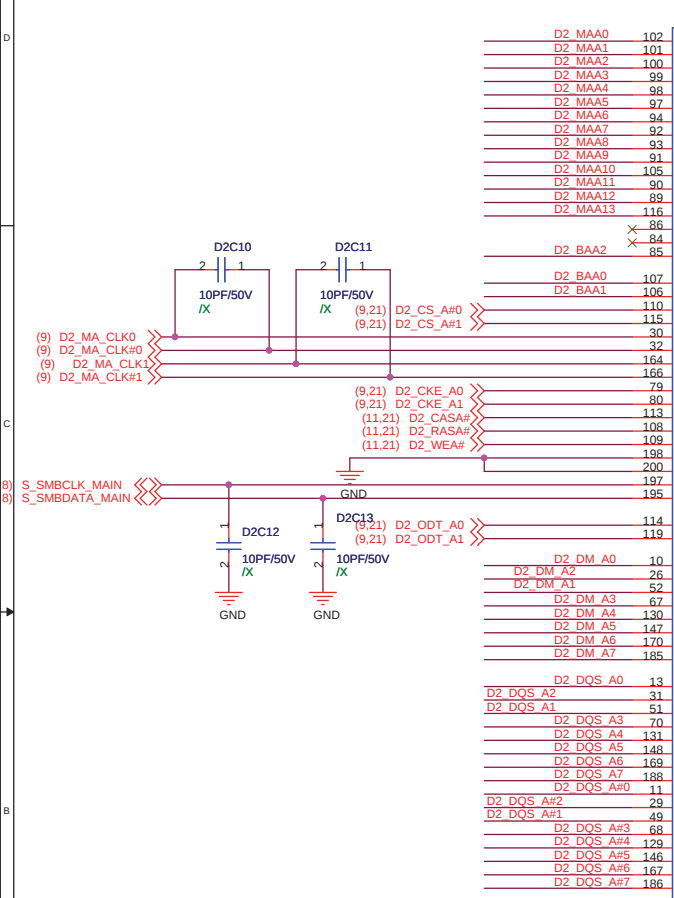
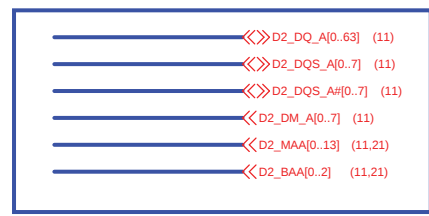
programme GPIO28 as
Vcore_UP
900HA 1.1G
12/05

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

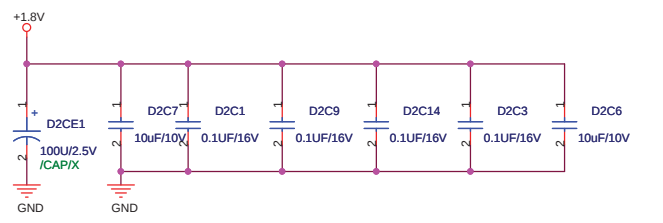
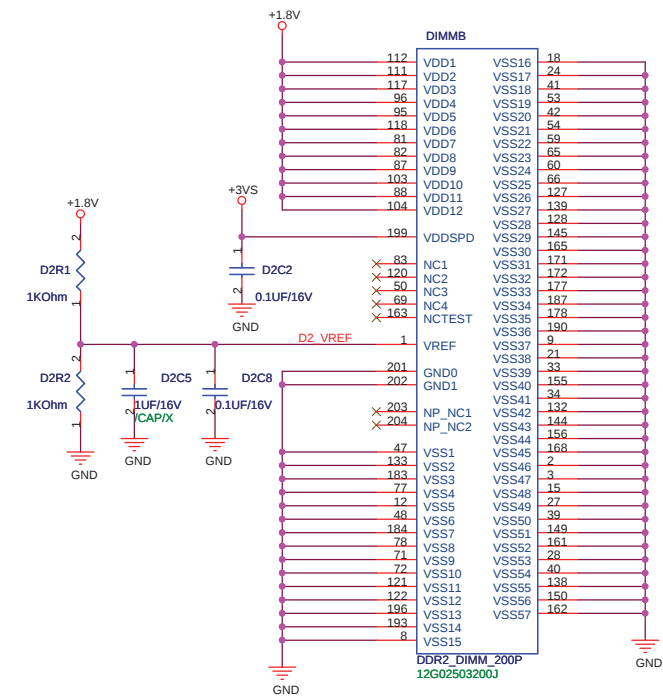


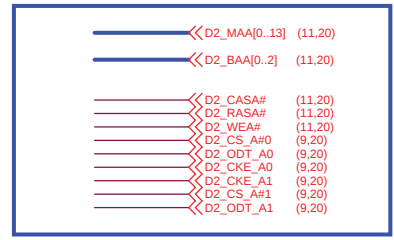
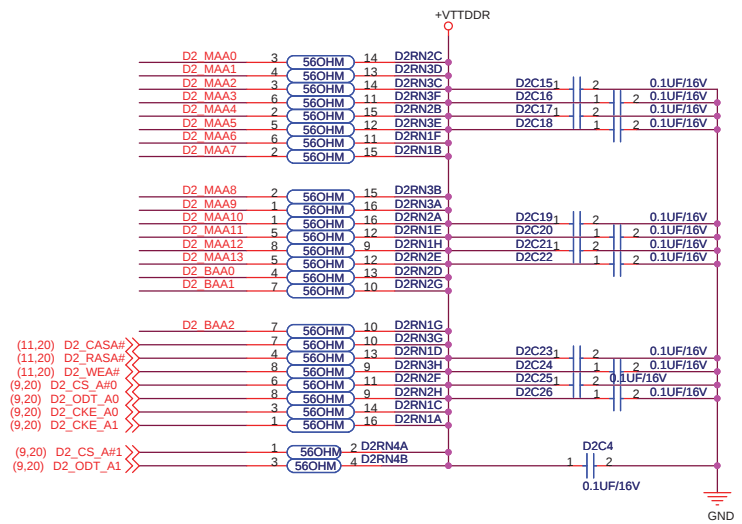
0.1BBeta

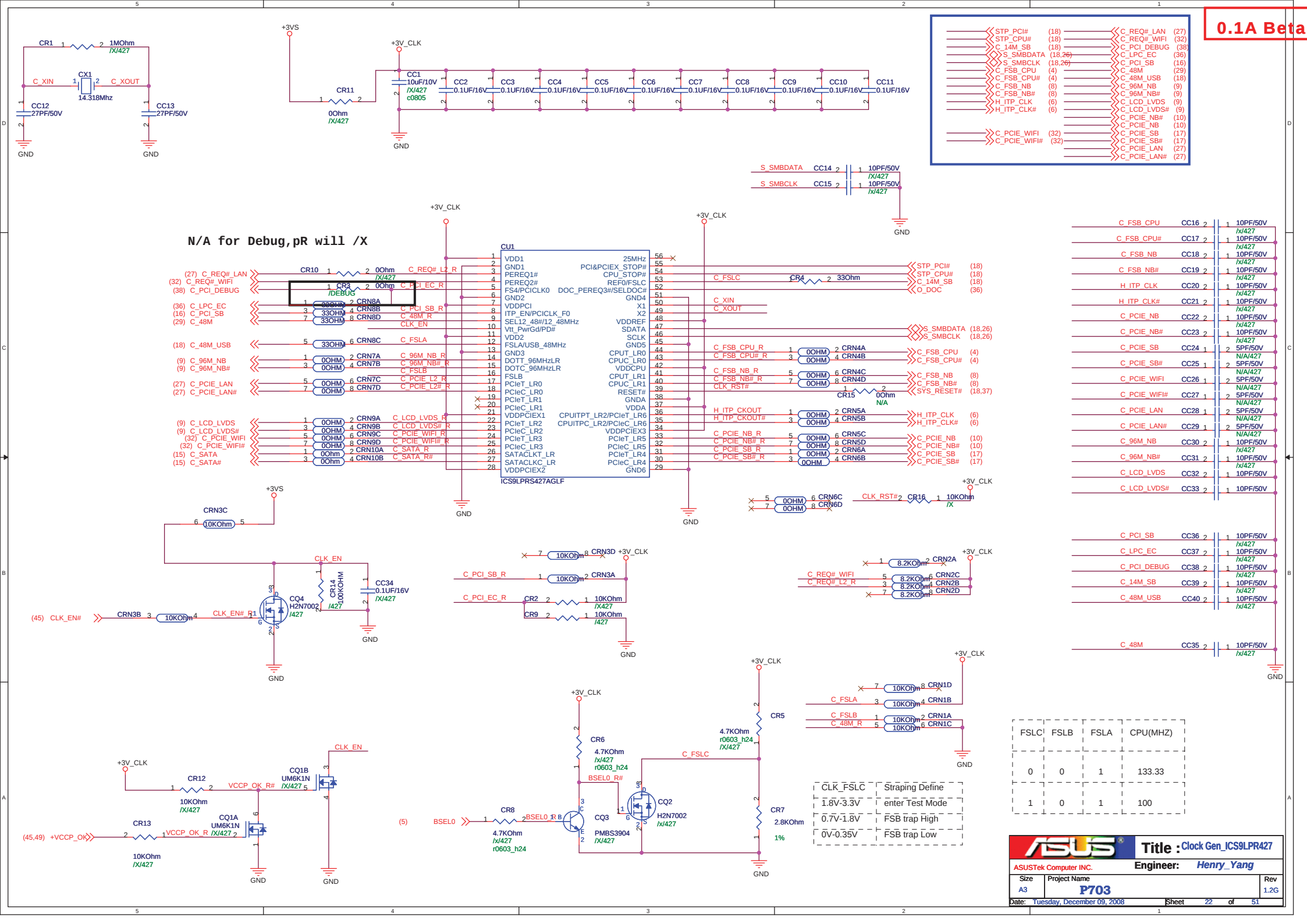




DDR2_DIMM_200P
12G02503200J

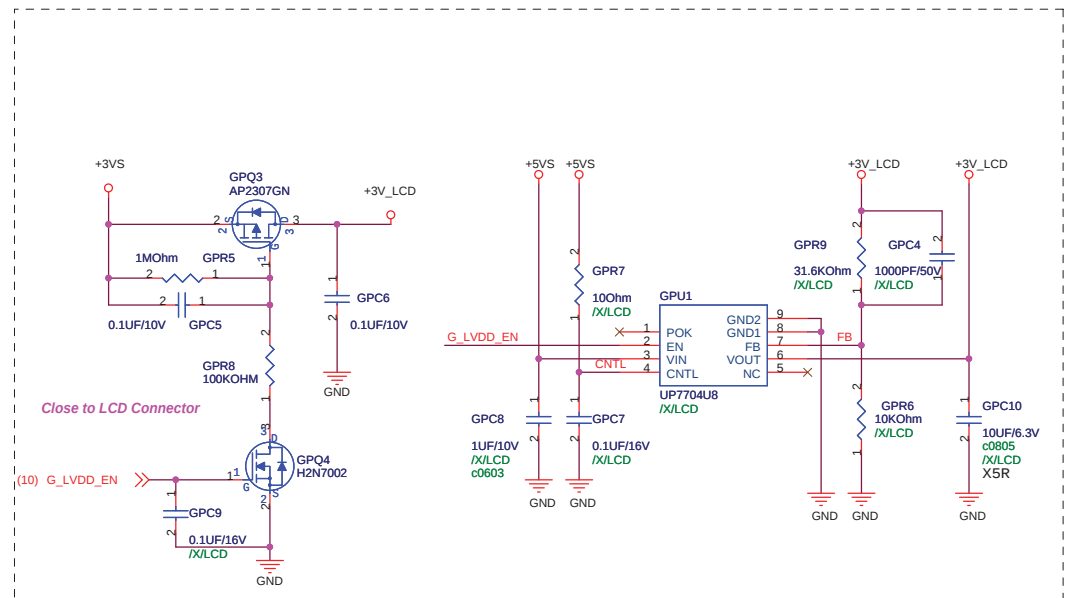
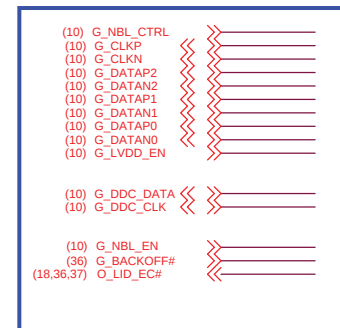
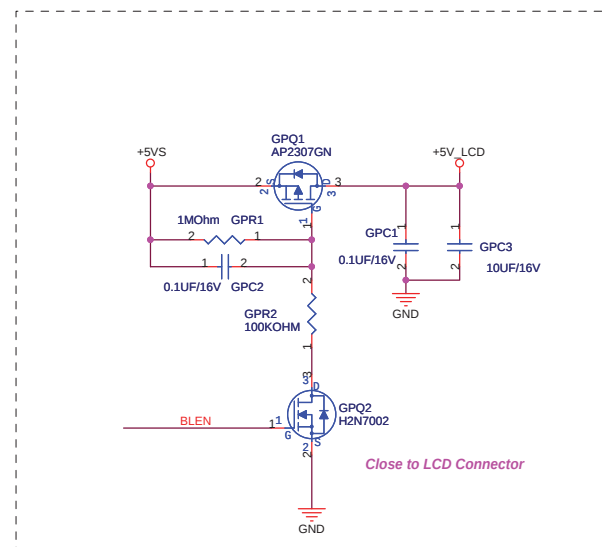
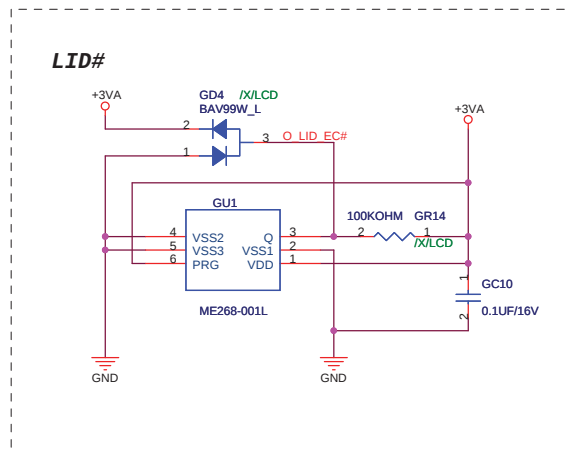






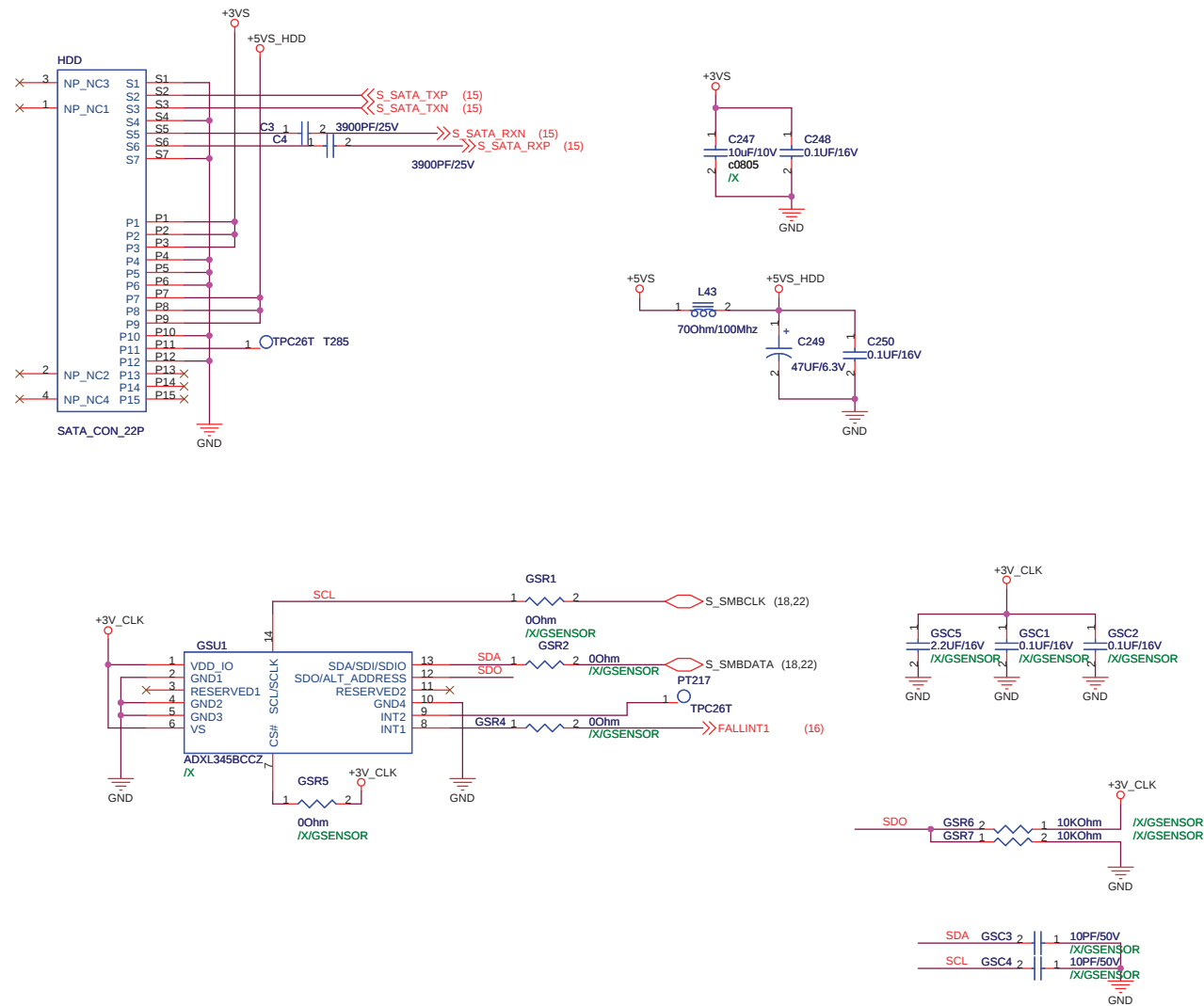
N/A for Debug,pR will /X

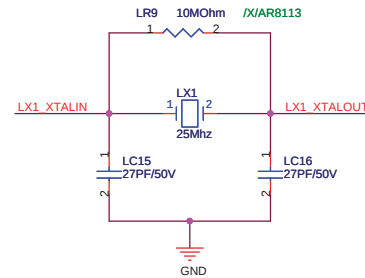
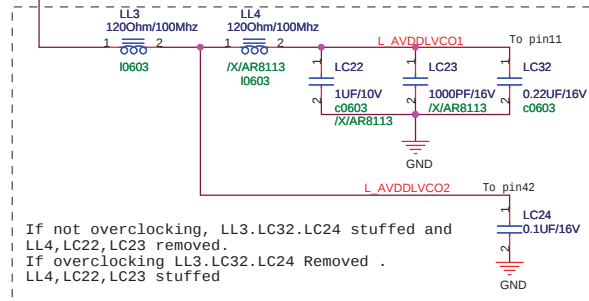
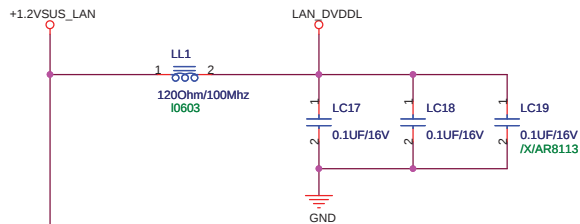
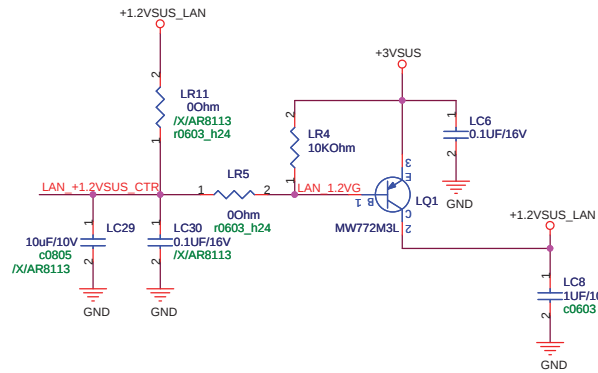
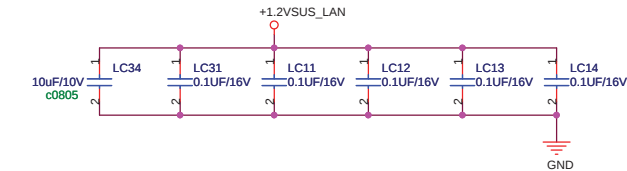
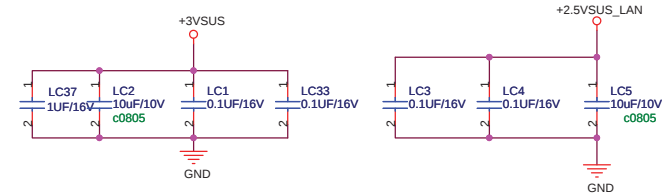
FSLC	FSLB	FSLA	CPU(MHZ)
0	0	1	133.33
1	0	1	100



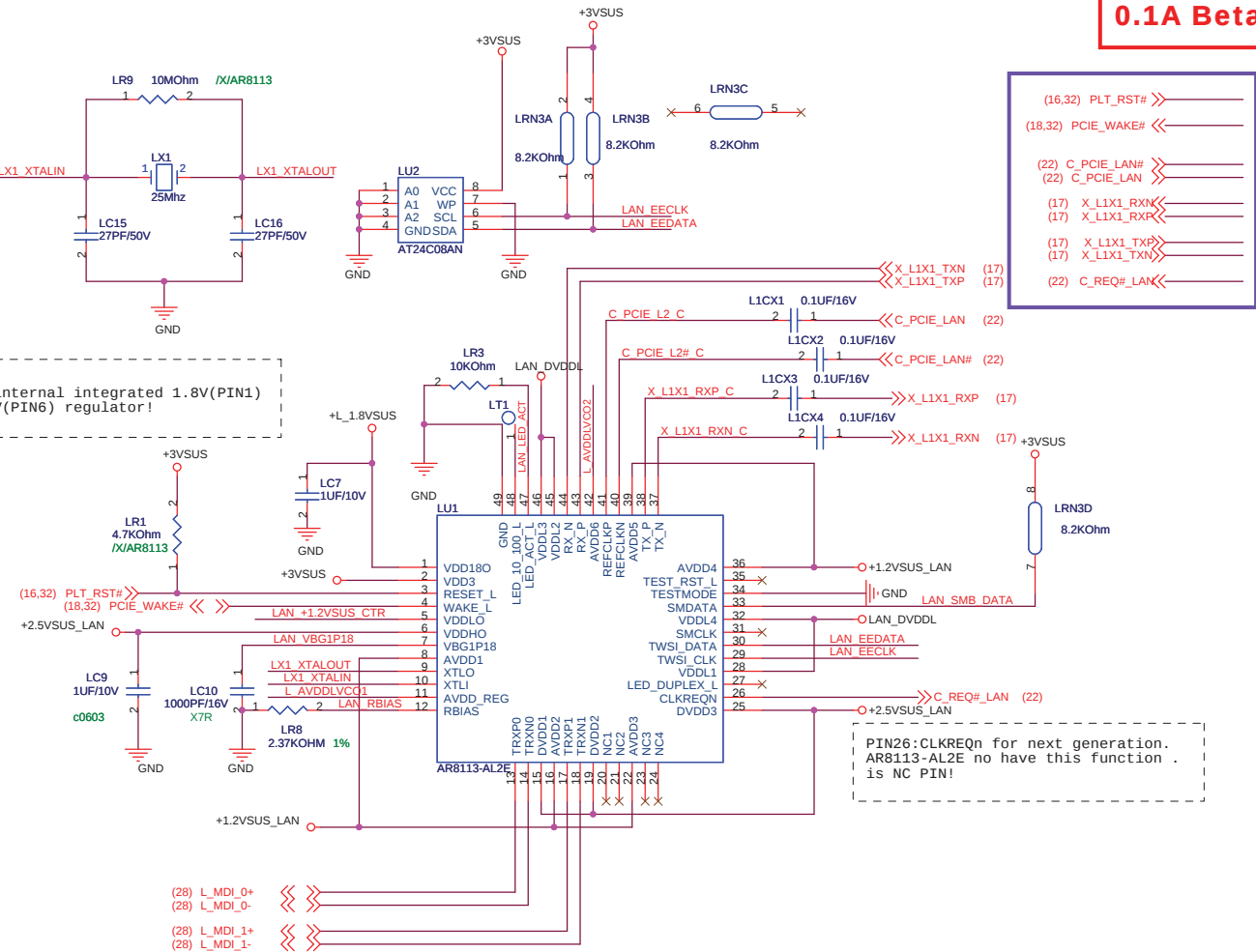


SATA HDD Connector

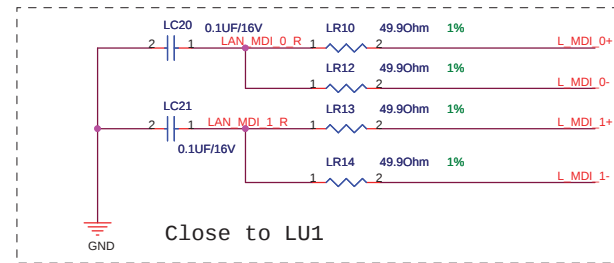


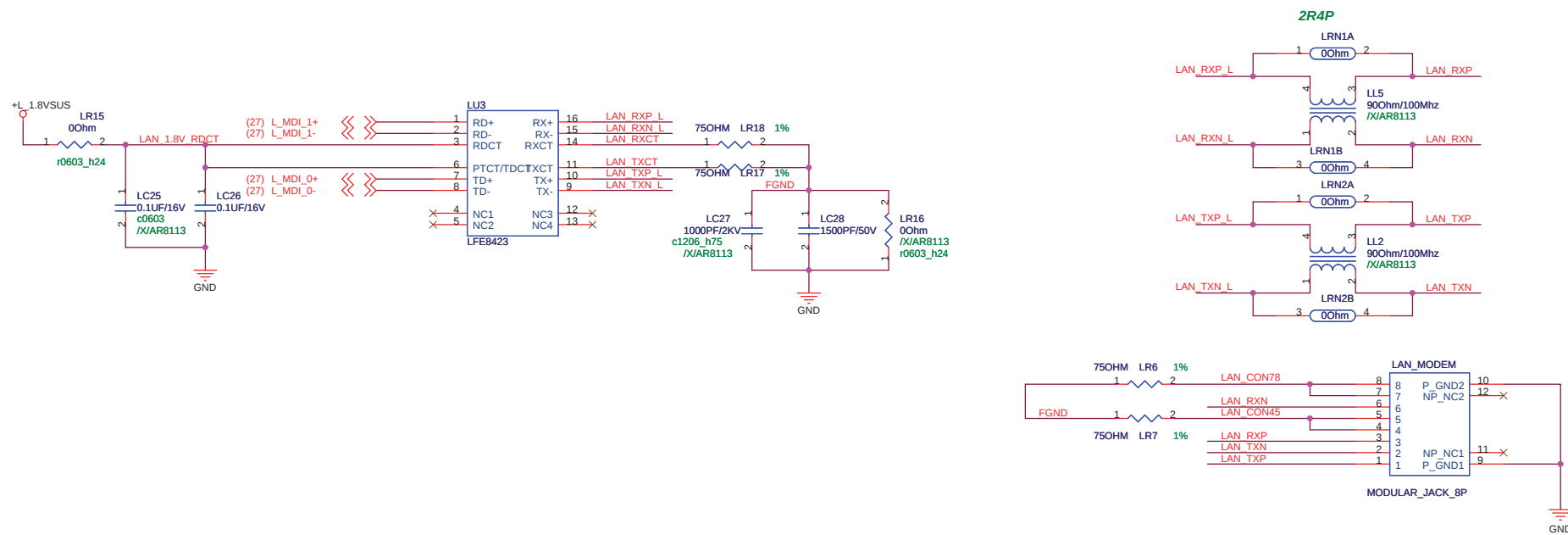


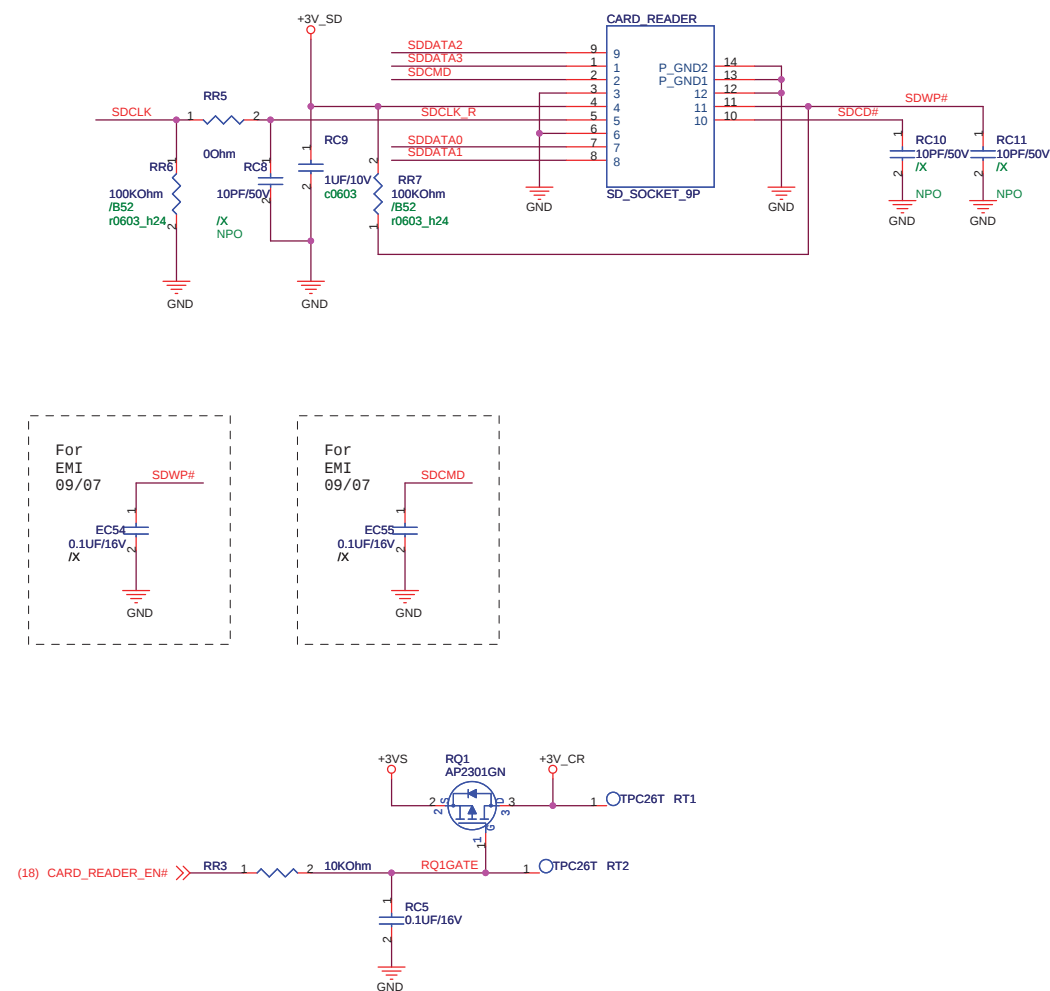
AR8113 internal integrated 1.8V(PIN1) and 2.5V(PIN6) regulator!

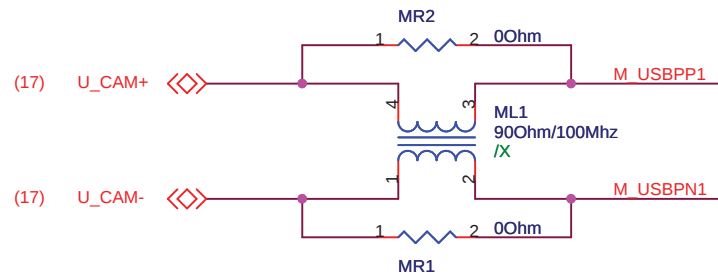


PIN26:CLKREQn for next generation.
AR8113-AL2E no have this function .
is NC PIN!

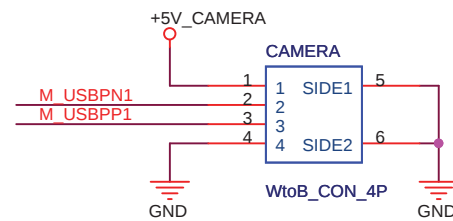
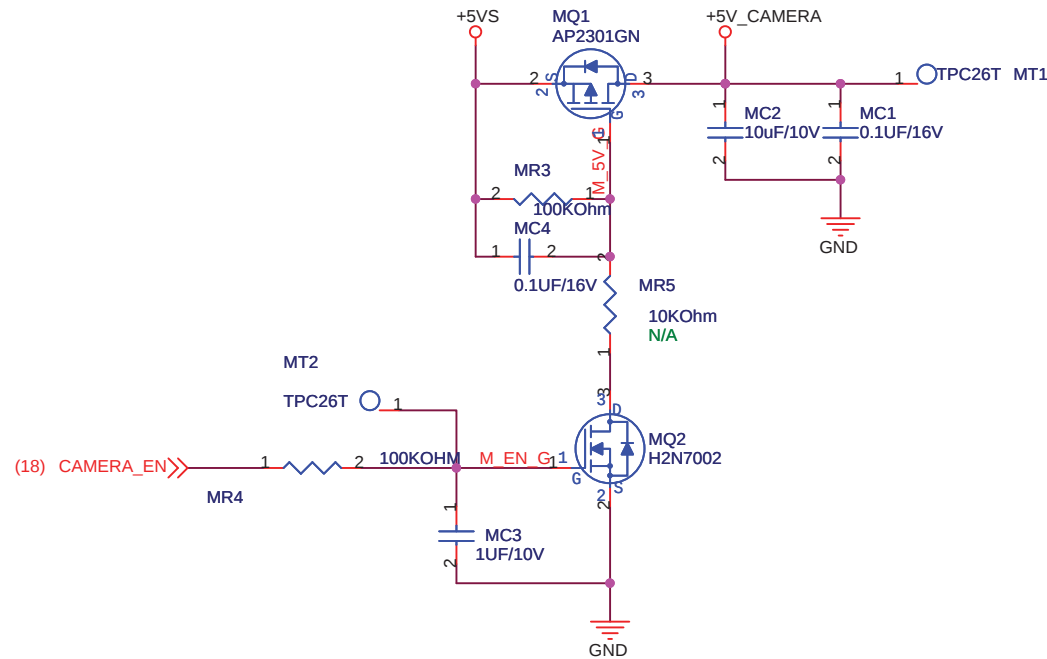


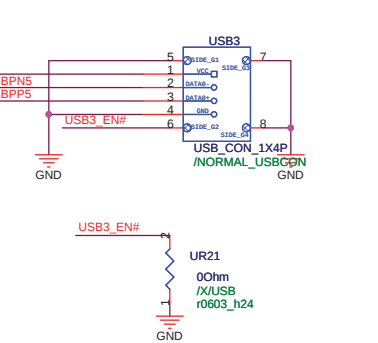
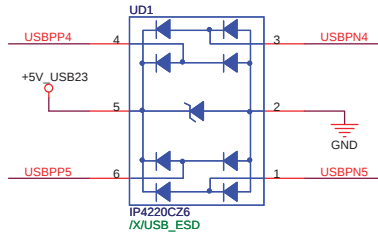
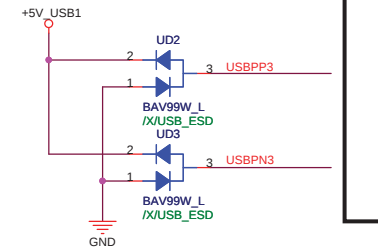
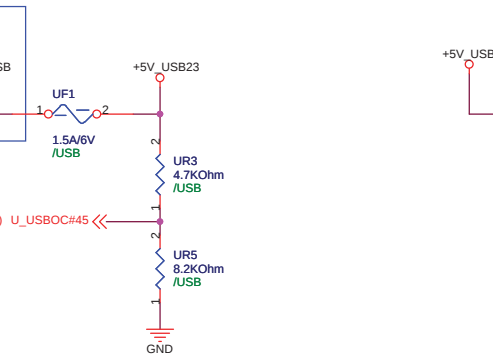
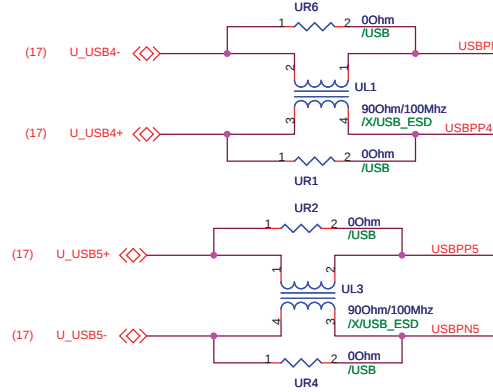
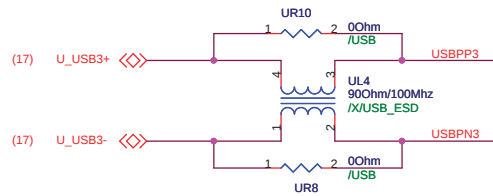




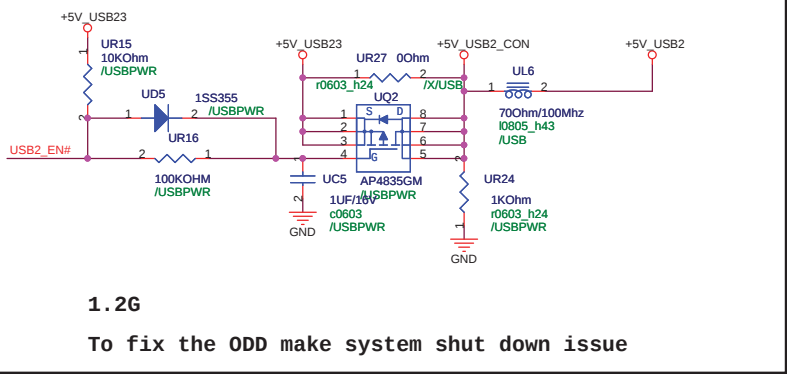
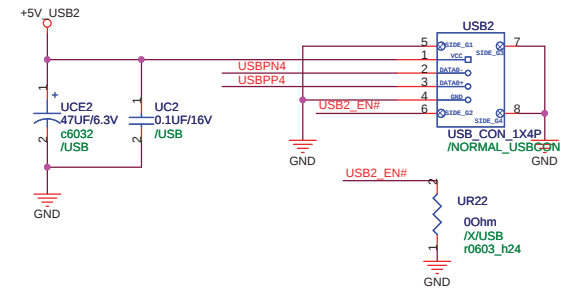
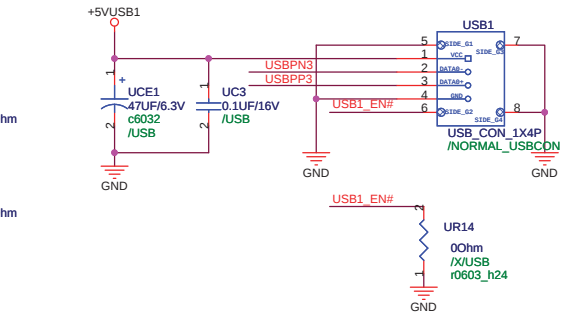
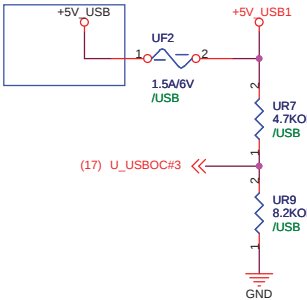


(17) U_CAM+ <<>
 (17) U_CAM- <<>
 (18) CAMERA_EN>>





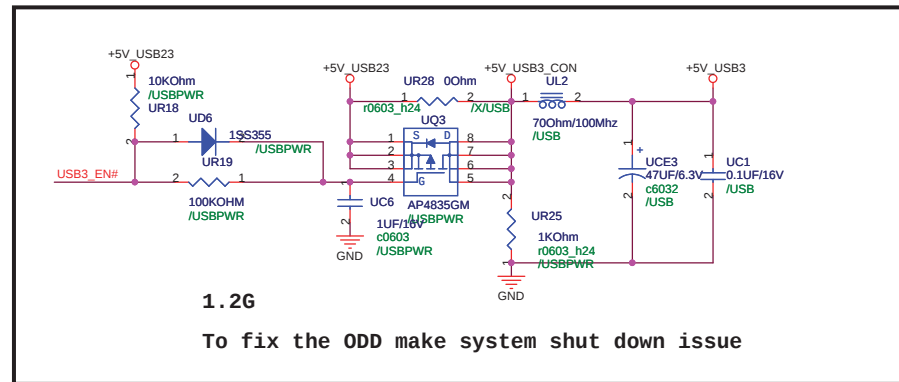
1.2G
To fix the ODD make system shut down issue



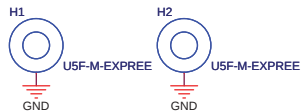
1.2G
To fix the ODD make system shut down issue

- (17) U_USB3+ <>>
- (17) U_USB3- <>>
- (17) U_USB4- <>>
- (17) U_USB4+ <>>
- (17) U_USB5+ <>>
- (17) U_USB5- <>>
- (17) U_USBOC#45 <<<

+5VSUS change to
+5V_USB
900HA 1.1G
12/05

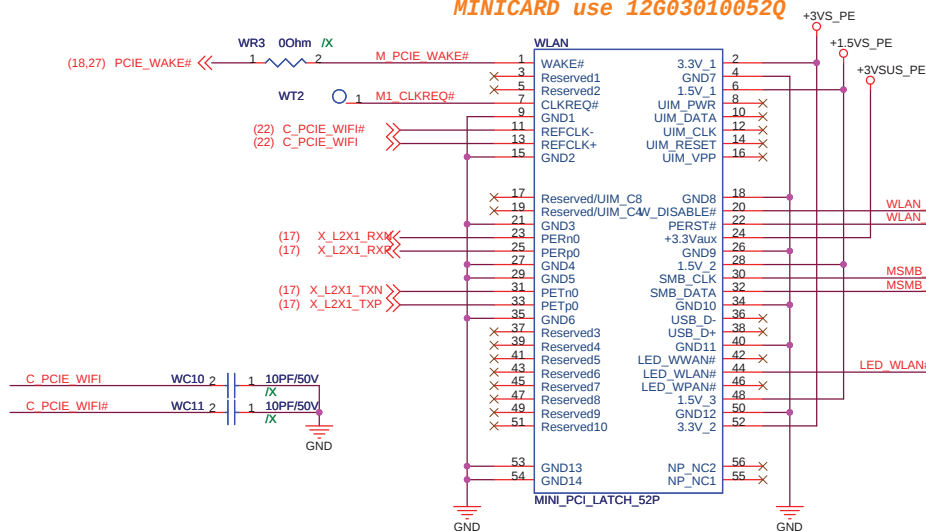


1.2G
To fix the ODD make system shut down issue

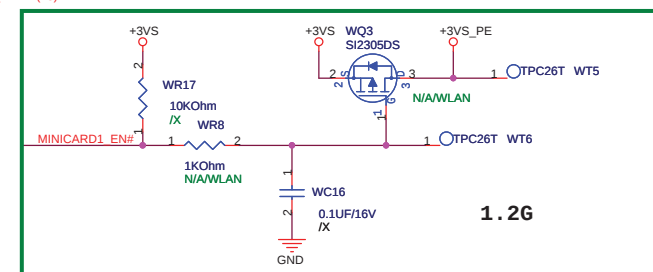
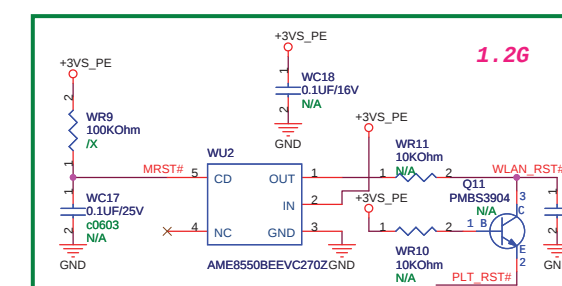
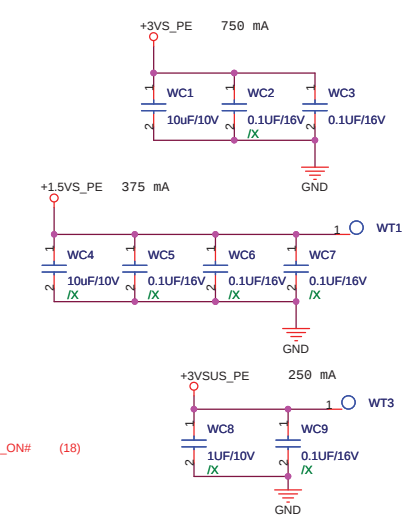
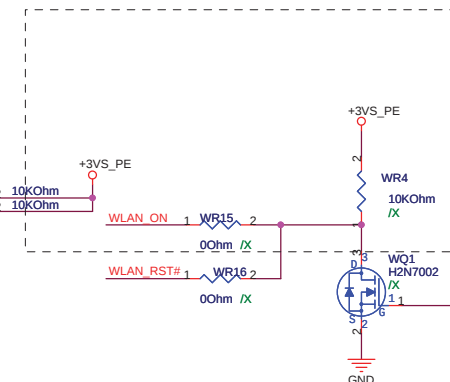
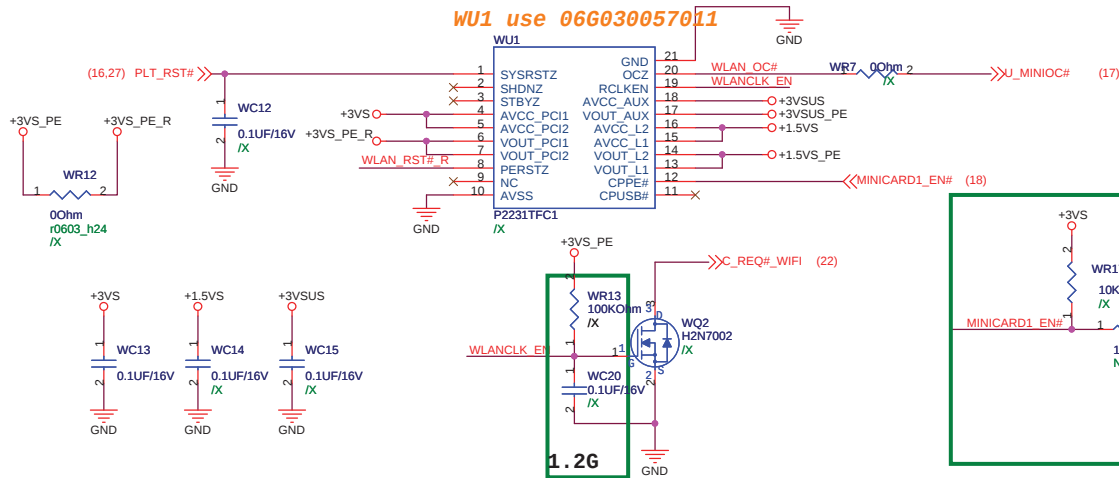


MINI CARD NUT(1.6mm) *2

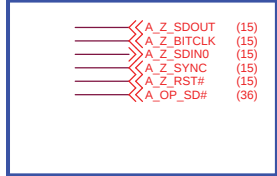
MINICARD use 12G03010052Q

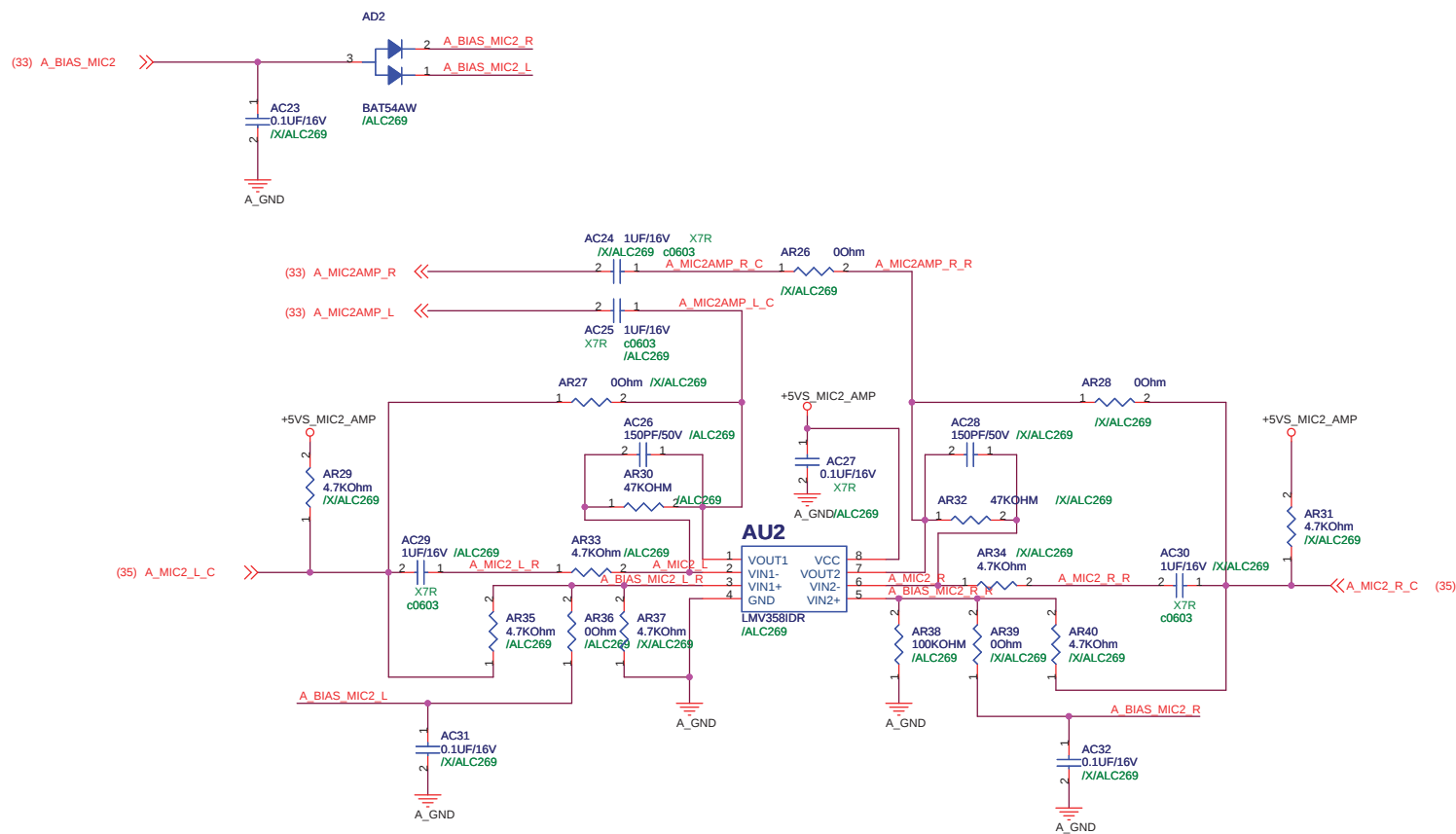


WU1 use 06G030057011



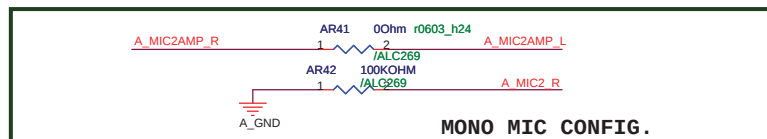
<Variant Name>		ASUS® Title : WLAN	
ASUSTek Computer INC.		Engineer: Henry_Yang	
Size	Project Name	Rev	
A3	P703	1.2G	
Date: Tuesday, December 09, 2008	Sheet	32	of 51



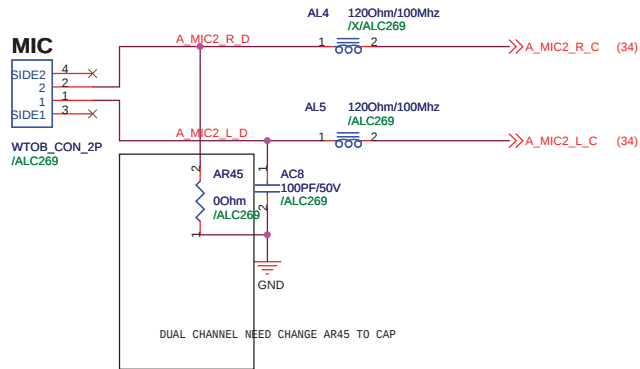


Internal MIC Amp.

FL = 33.86kHz, FH = 22.5kHz



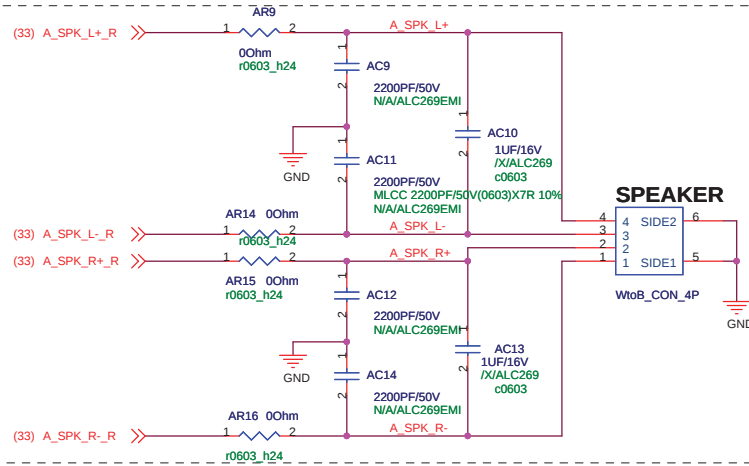
Internal MIC



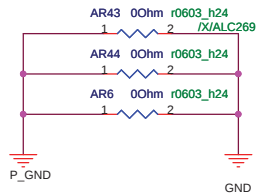
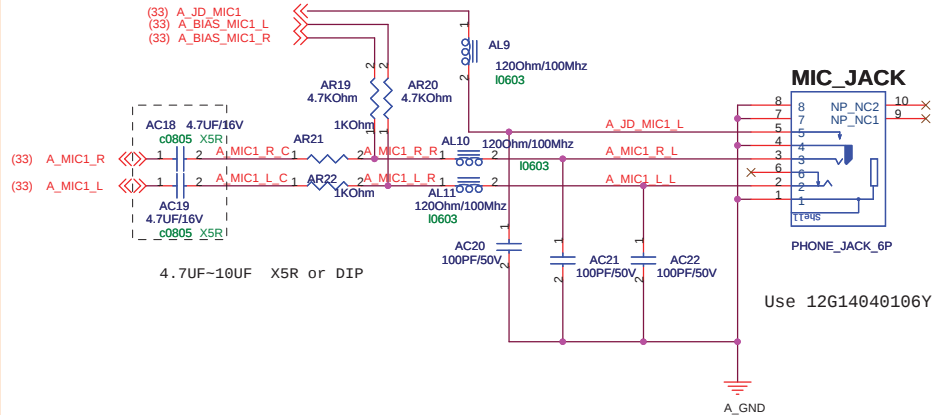
SPEAKER

Demodulation Filter
Placement near
Audio Codec

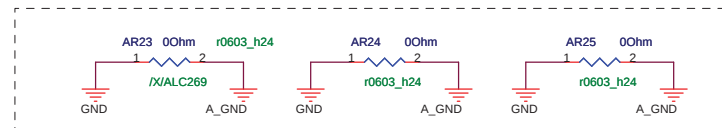
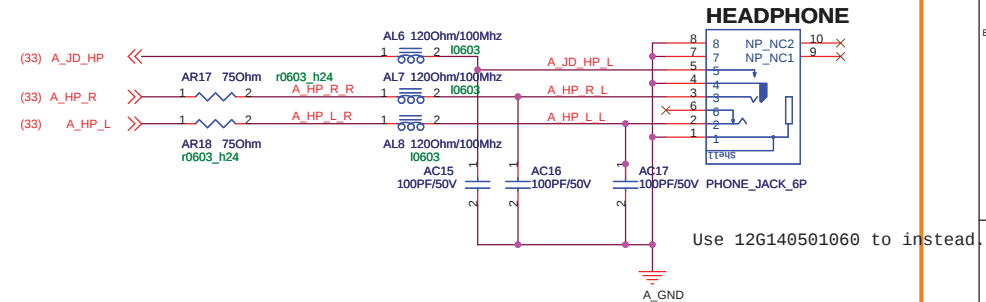
<<Attention>>
you can use LC filter(AR9,AR14,AR15,AR16
mount 8.2uH L ;and mount AC10,AC13) to
eliminate the EMI(please don't use
general beads,because they may influence
the THD+N quality) , AC9/AC11/AC12/AC14
are reserved for EMI fine-tune ; For EMI
issue, All L and C should near to codec



MIC JACK

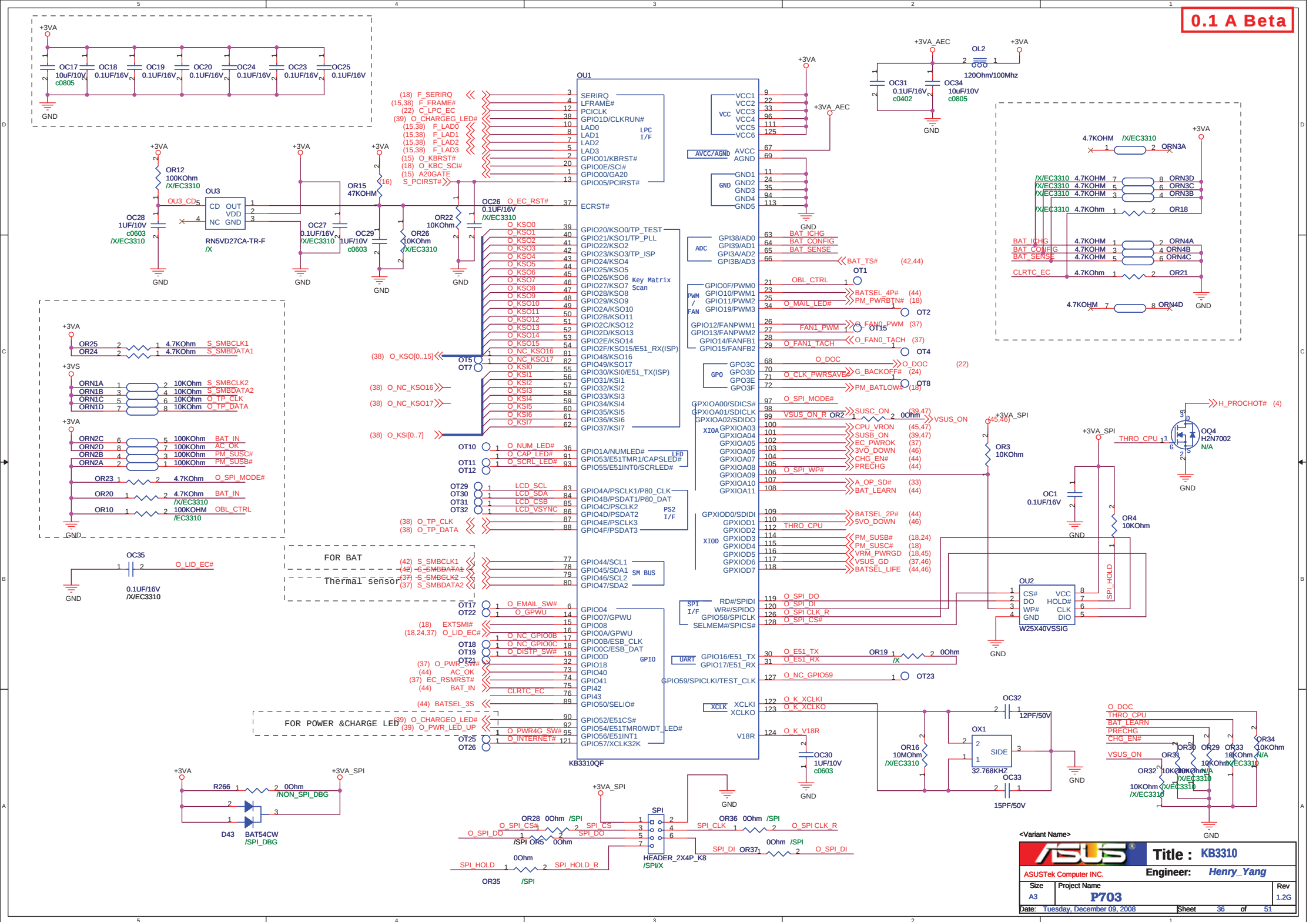


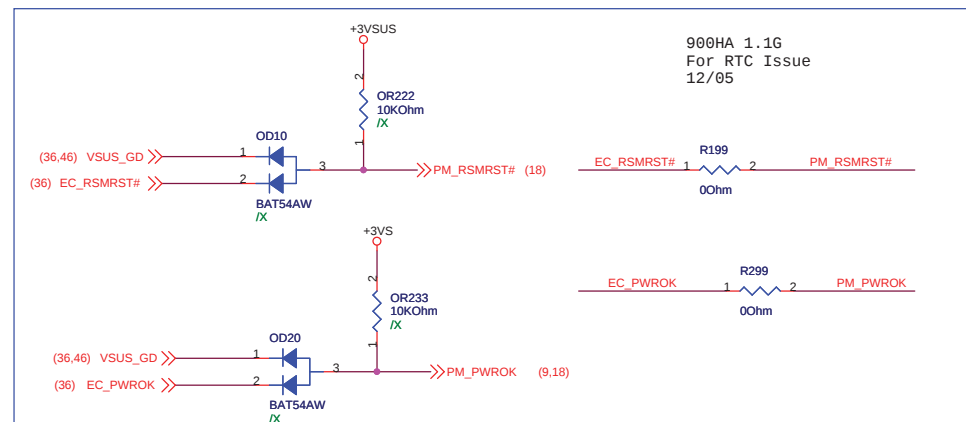
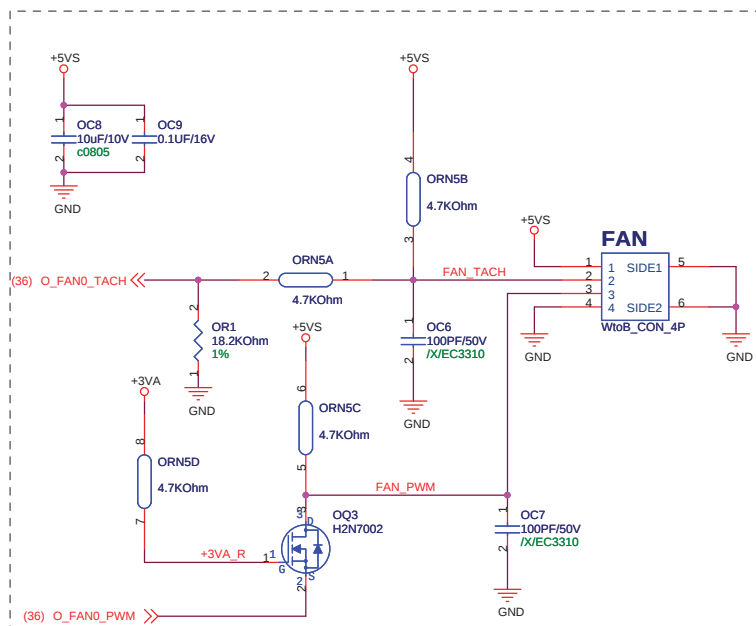
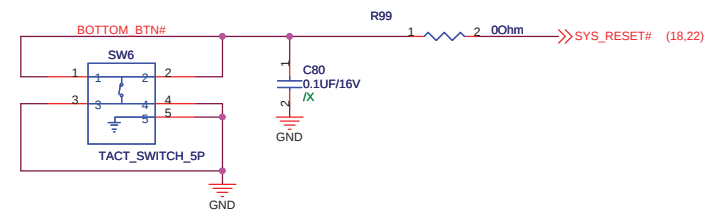
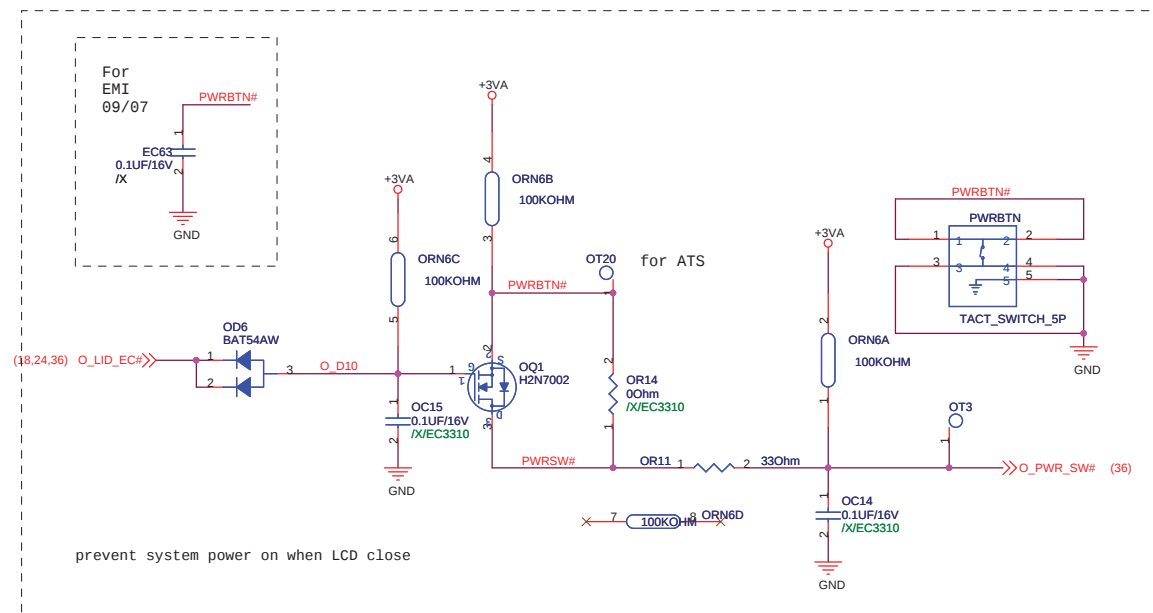
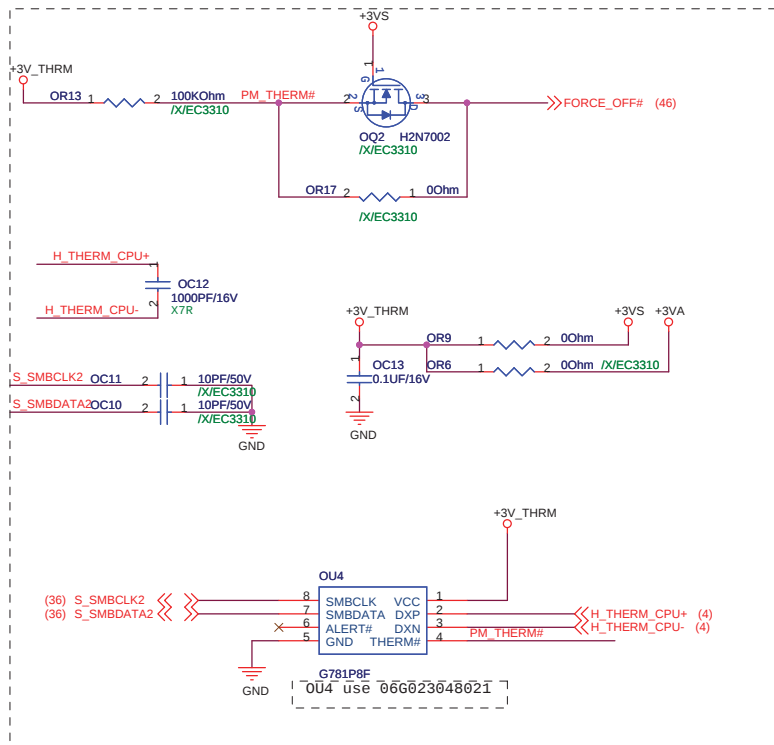
HEADPHONE



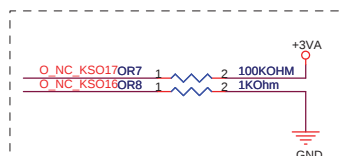
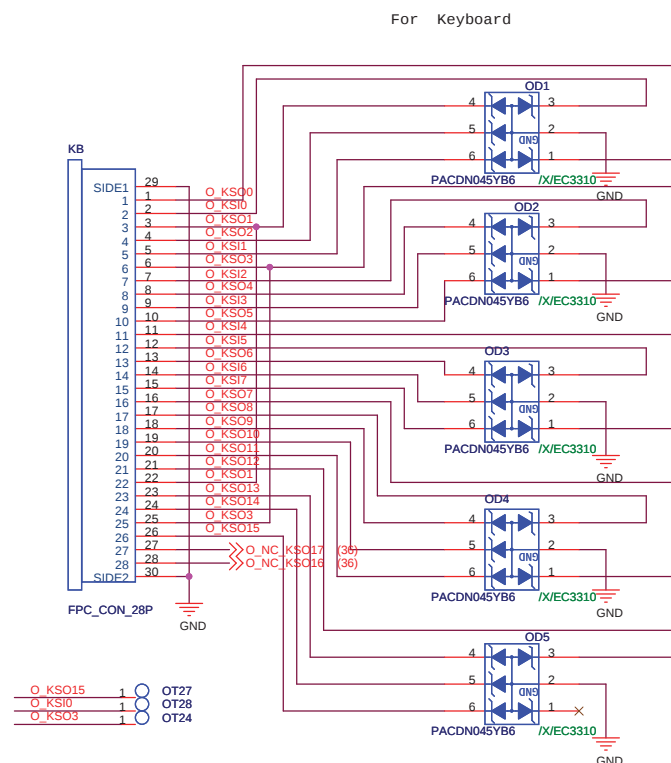
AR24, AR25 can use
0.1UF 11G23331043230
for EMI

<Variant Name>

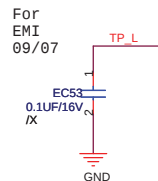
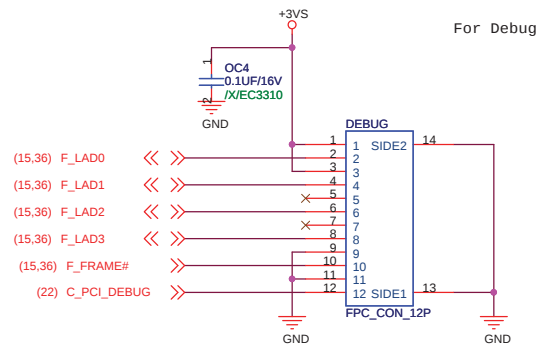
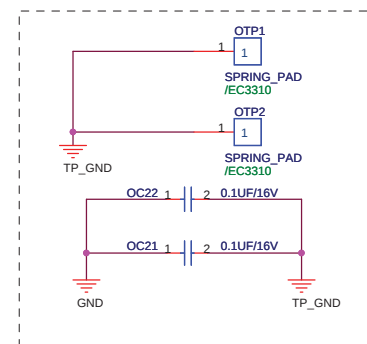
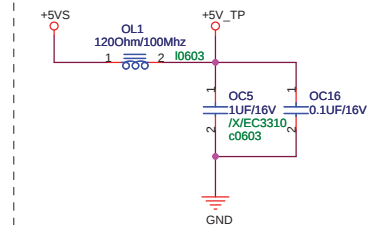
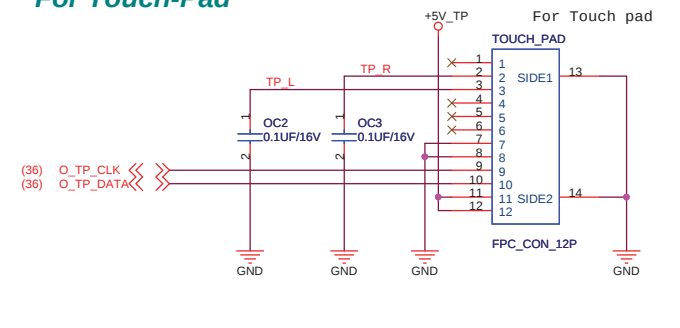




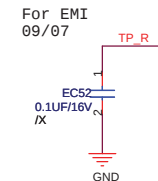
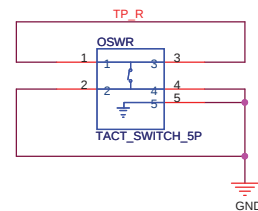
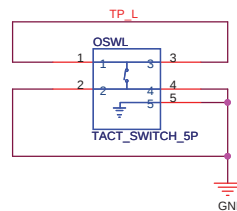
$\gg$ O_KSO[0..15] (36)
 $\ll$ O_KSI[0..7] (36)



For Touch-Pad



OSW1, OSW2 use
12G09103305N



<Variant Name>

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

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

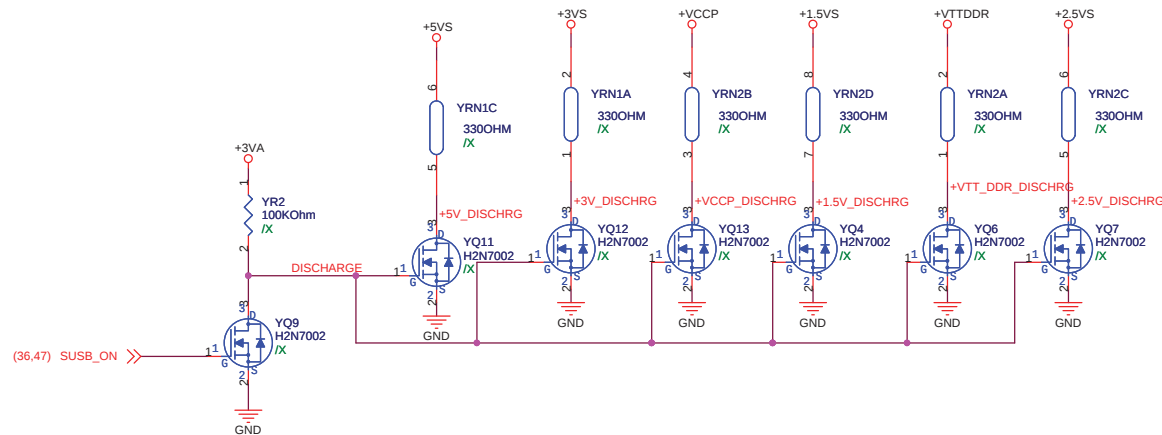
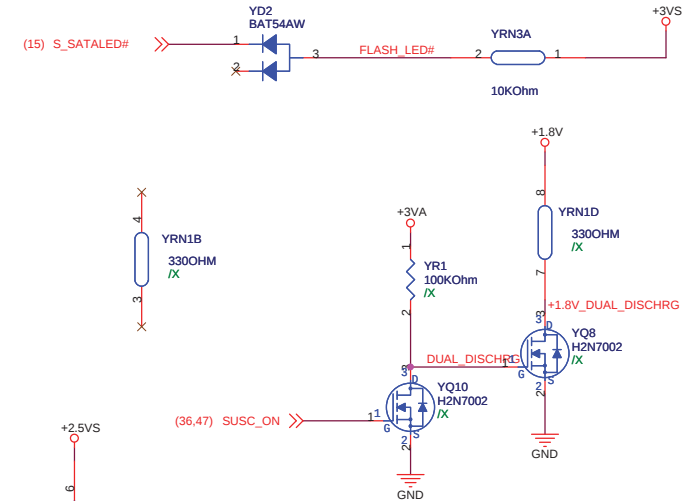
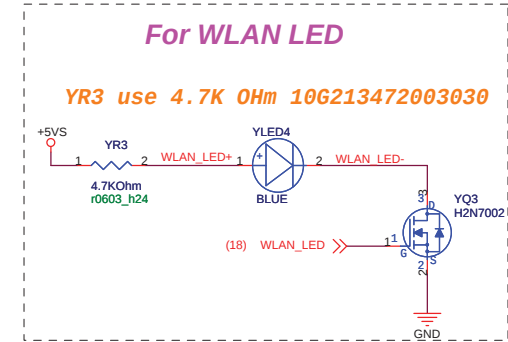
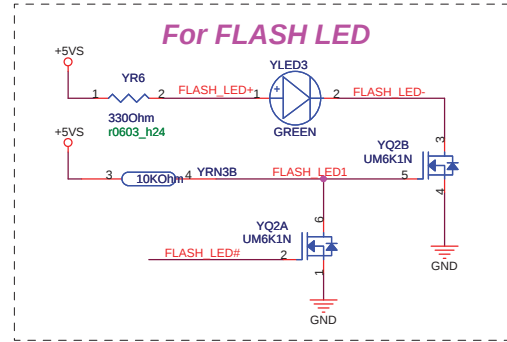
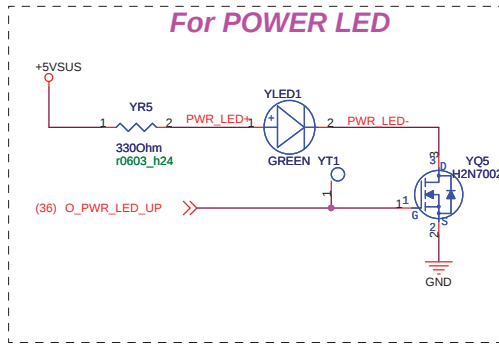
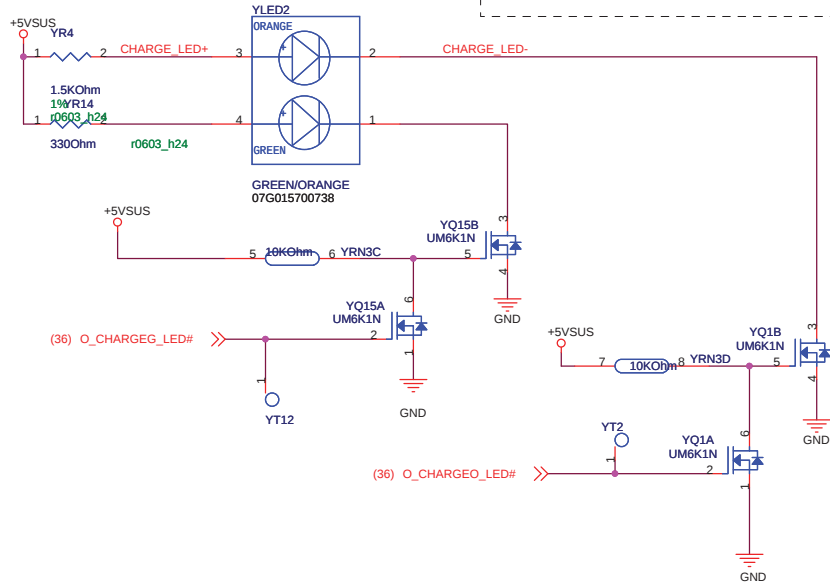
For CHARGE LED

For POWER LED

For FLASH LED

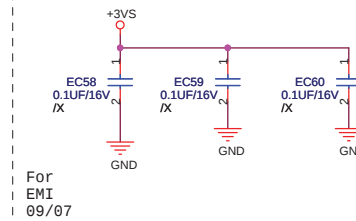
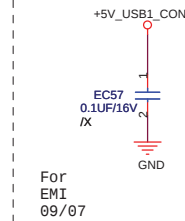
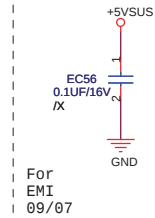
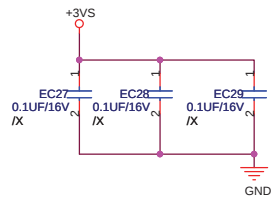
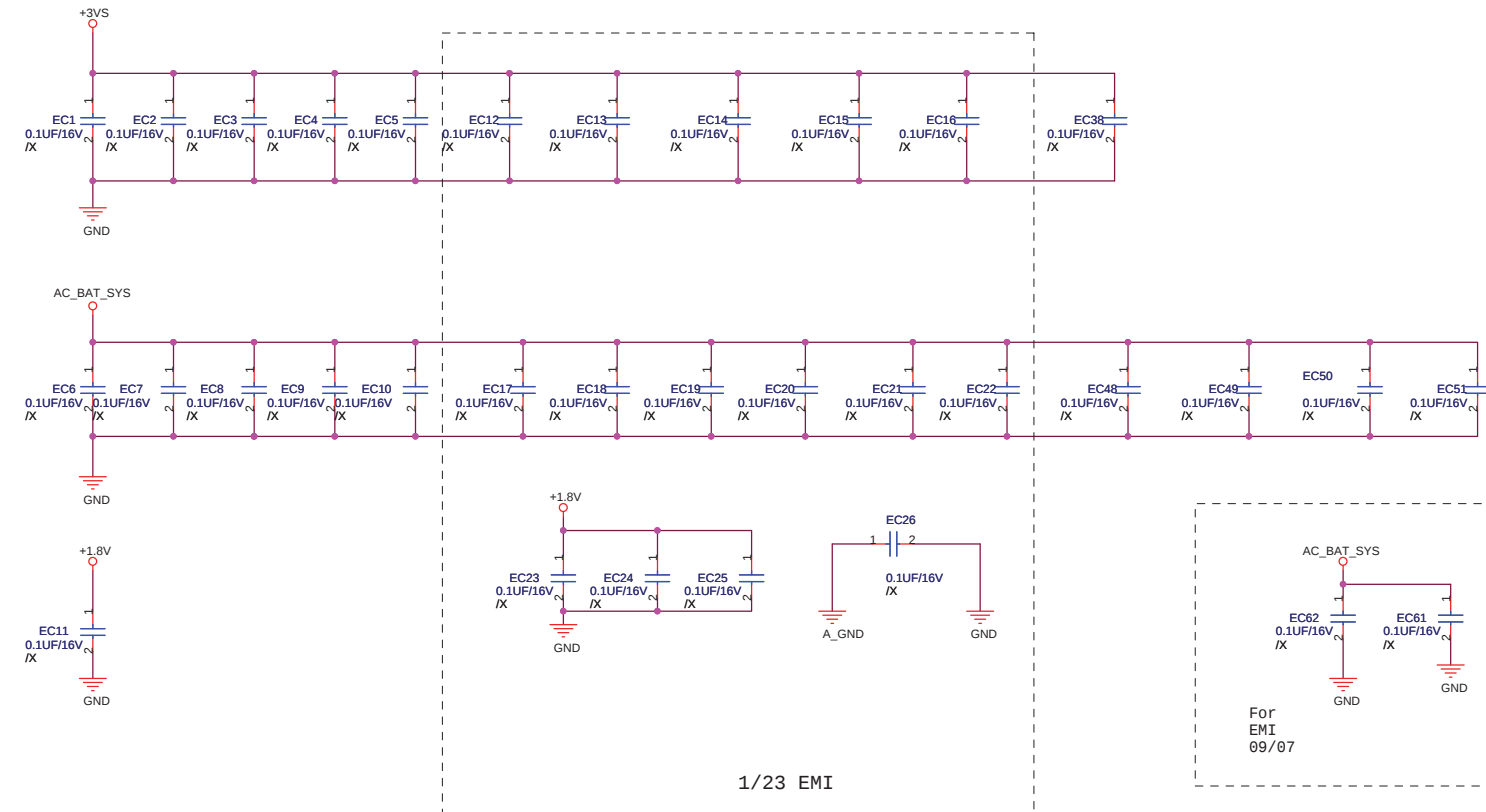
For WLAN LED

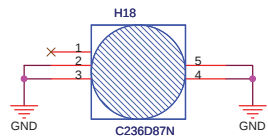
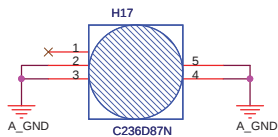
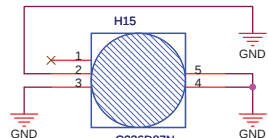
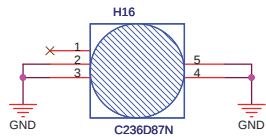
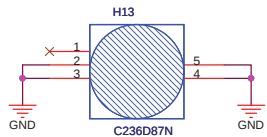
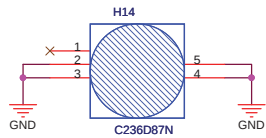
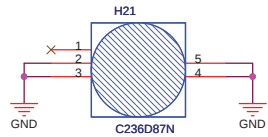
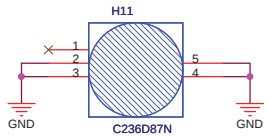
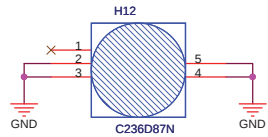
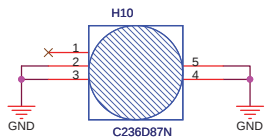
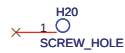
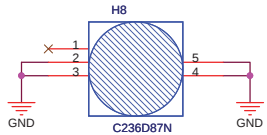
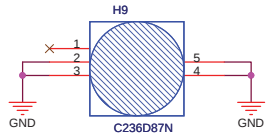
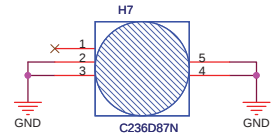
YR3 use 4.7K OHm 10G213472003030



<Variant Name>

ASUS		Title : LED&Discharge	
ASUSTek Computer INC.		Engineer: Henry_Yang	
Size	Project Name		Rev
A3	P703		1.2G
Date: Tuesday, December 09, 2008	Sheet 39 of 51		

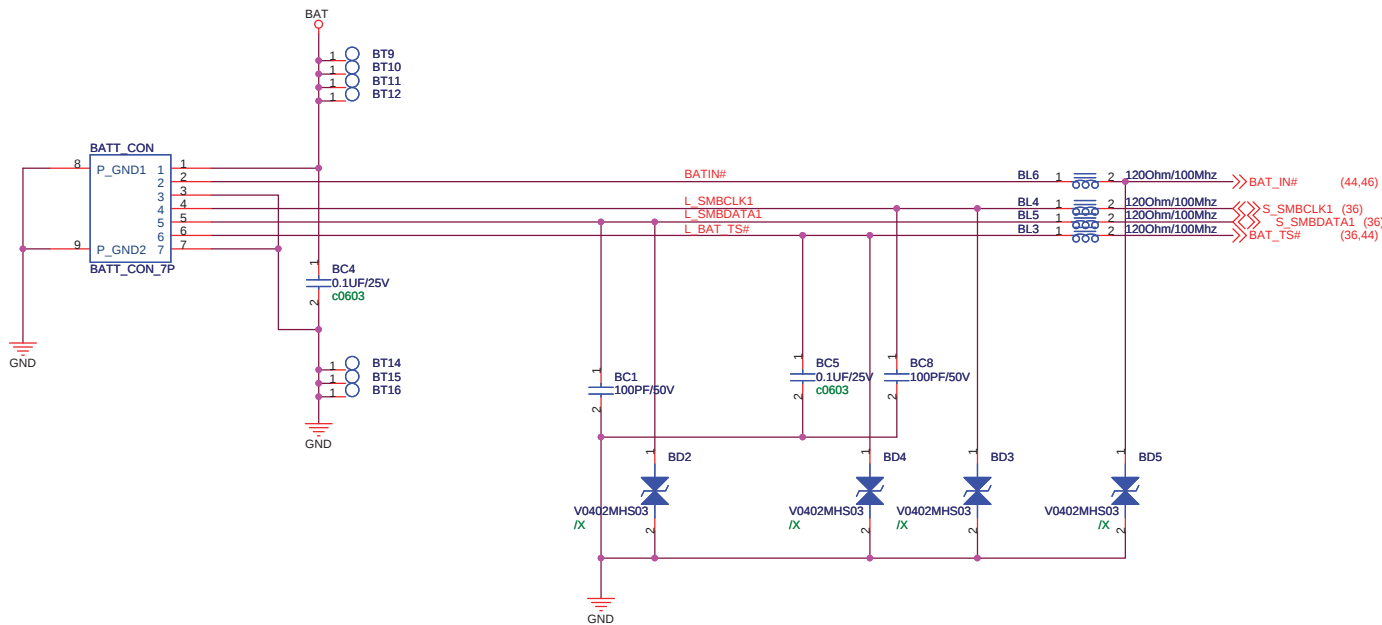
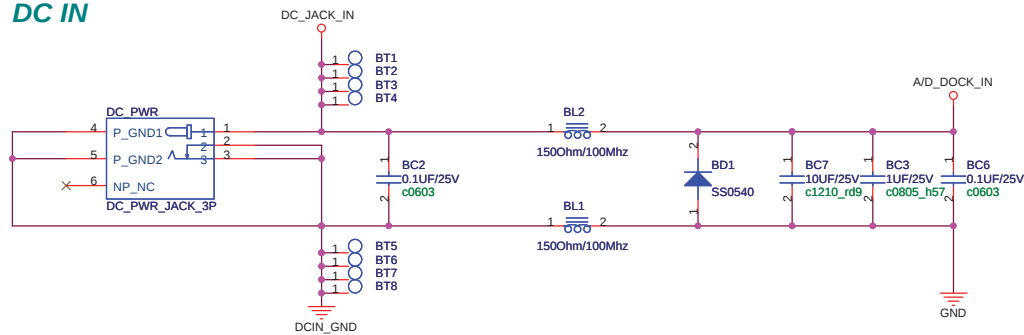




<Variant Name>

		Title : Srew Hole	
ASUSTek Computer INC.		Engineer: Henry_Yang	
Size A3	Project Name P703		Rev 1.2G
Date: Tuesday, December 09, 2008		Sheet	41 of 51

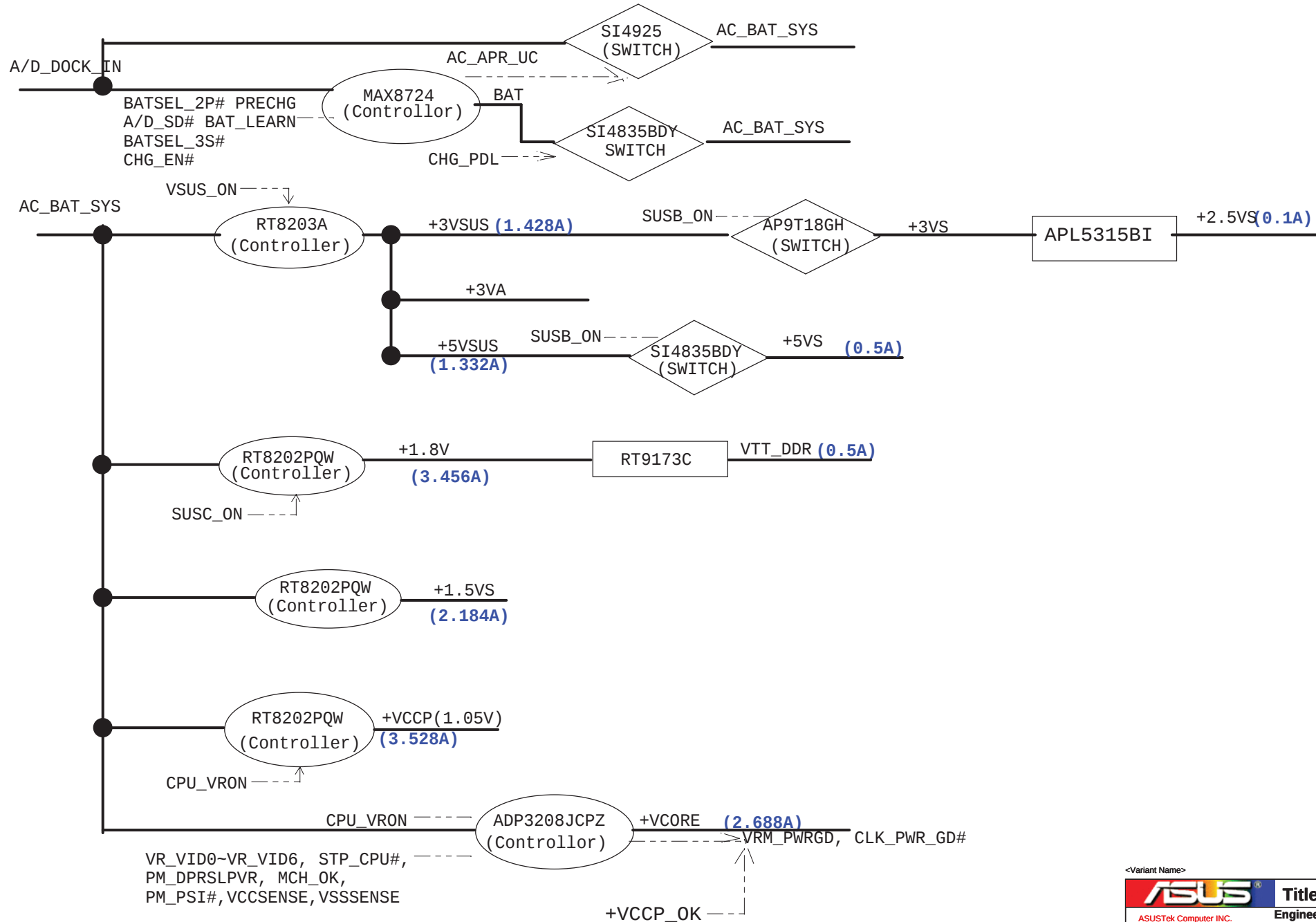
DC IN



<Variant Name>

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

POWER CHARGER



<Variant Name>

ASUS		Title : Power Flow	
ASUSTek Computer INC.		Engineer: Joy_Zhou	
Size	Project Name		Rev
A3	P703		1.2G
Date: Tuesday, December 09, 2008		Sheet 43 of 51	

Battery Charging Voltage :
 $V_{adj3} > 4.1V \implies V_{bat} = 4.2V / \text{cell}$
 $2.2V > V_{adj3} > 1.1V \implies V_{bat} = 2 * V_{adj3} / \text{cell}$

Battery Charging Current :
 $4.4V > V_{adj2} > 0V \implies$
 $I_{chg} = (V_{adj2} - 0.075V) / (25 * R_s)$

Input Adaptor Max. Current Limit :
 $I_{limit_current} = (V_{adj1} - 0.075V) / (25 * R_s)$

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

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

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

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

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

VREF = 5.0V
 $f_{osc}(KHz) = 17000 / RT (KOhm)$
 Soft start: $t_s(s) = 0.23 * CS (\mu F)$

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

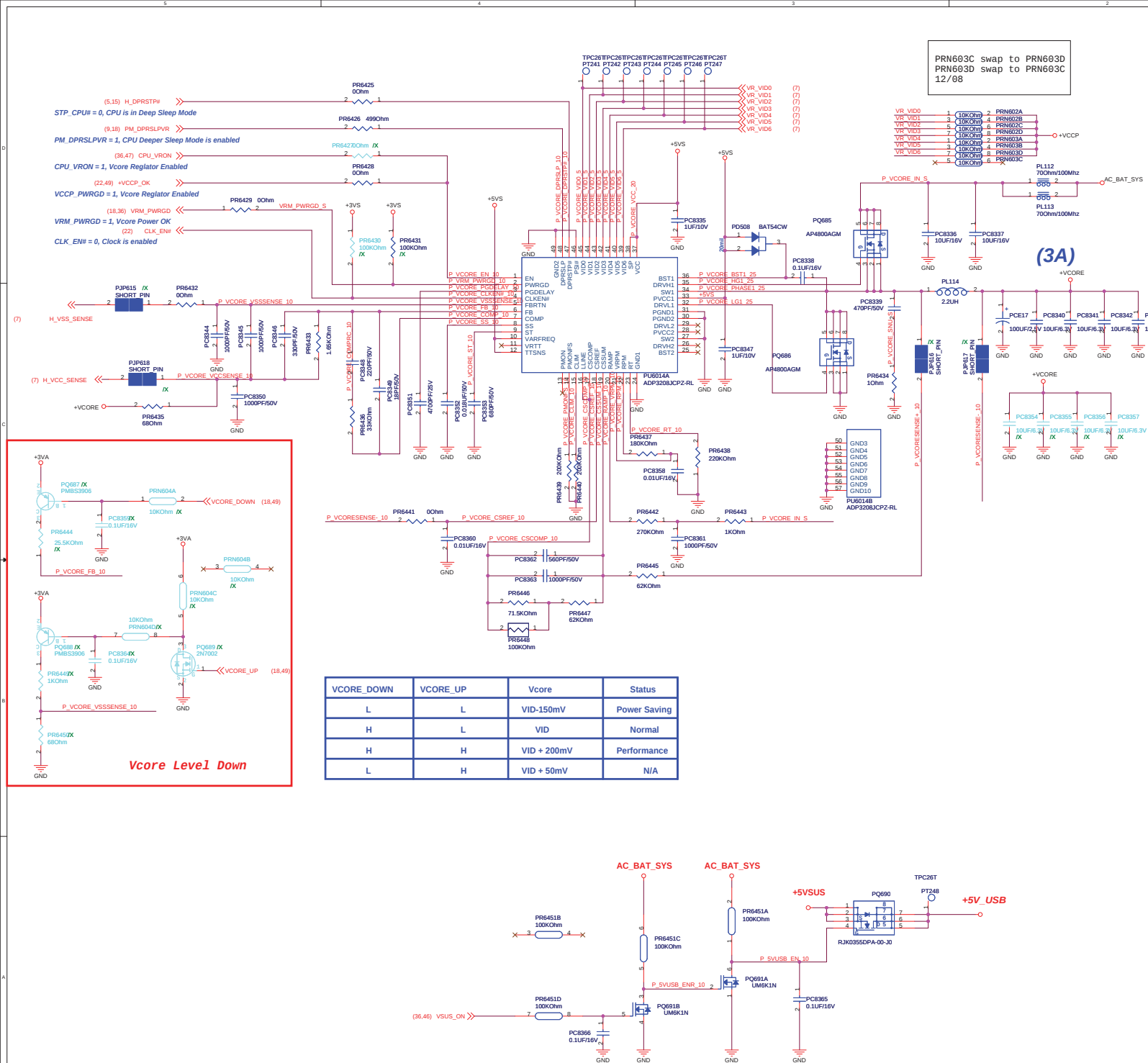
VTH of ACIN: $1.25V / 25 * (185 + 25) = 10.5V$
 Change PR607 and PR608 value

Charging Current :

4P#	2P#	Icharge
1	0	1.467A
0	1	2.502A
0	0	3.589A

<Variant Name>

ASUS		Title : CHARGER	
ASUSTek Computer INC.		Engineer: Joy_Zhou	
Size	Project Name	Rev	
Custom	P903	1.2G	
Date: Tuesday, December 09, 2008	Sheet	44	of 51



Power Stage

- 1. I/P Current:
 $I_{in} = V_o * I_o / (0.8 * V_{in}) = 1.95A$
- 2. Ripple Current:
 $I_{rip} = 3.29A$
 $I_{spec} = 2.5A \text{ } \phi 2 \text{ pcs}$
- 3. Dynamic:
 $I_{peak} = 8.5A$
 $ESR/2PCS = 9 \text{ mohm}$
 $V = 76.5mV$
- 4. Inductor Spec:
 $I_{sat} = 14A$
 $I_{dc} = 8A$
 $DCR = 18 \text{ mohm}$
- 5. MOSFET Spec:

H-side MOSFET: RJK0355DPA-00-J0 WPAK

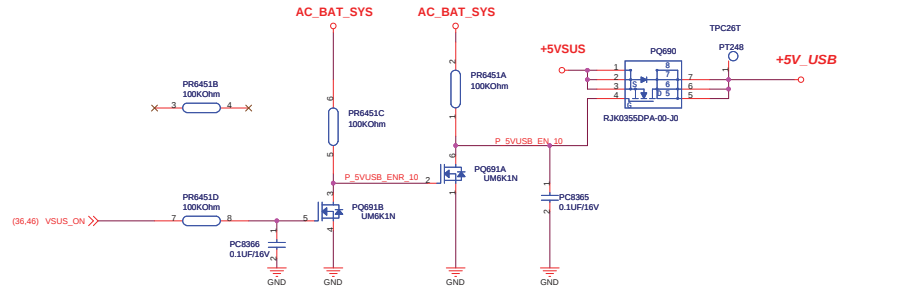
 $R_{ds(ON)} = 11.8 \text{ mohm}$ ($V_{gs} = 4.5V$)
 $I_{cont} = 30A$ ($T = 25^\circ C$)
 $I_{peak} = 120A$ (Pause $\leq 10us$)

L-side MOSFET: RJK0355DPA-00-J0 WPAK

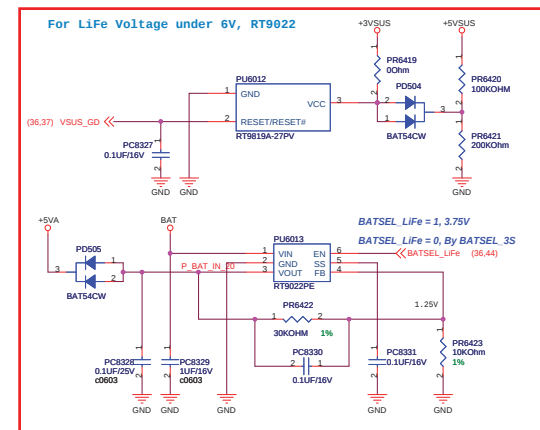
 $R_{ds(ON)} = 11.8 \text{ mohm}$ ($V_{gs} = 4.5V$)
 $I_{cont} = 30A$ ($T = 25^\circ C$)
 $I_{peak} = 120A$ (Pause $\leq 10us$)

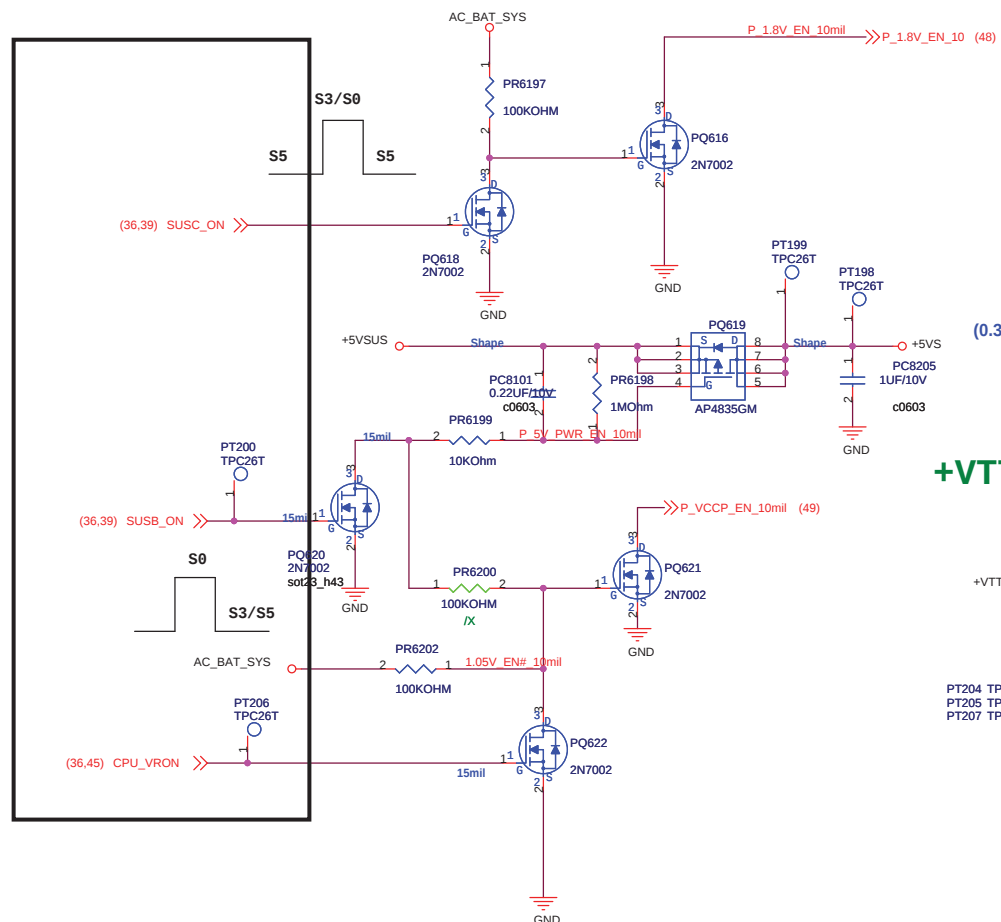
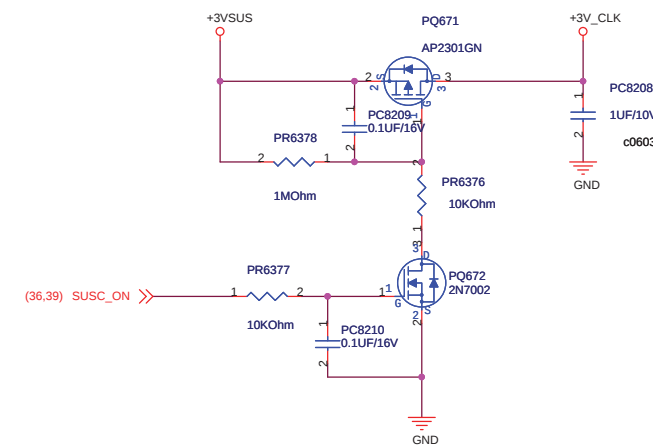
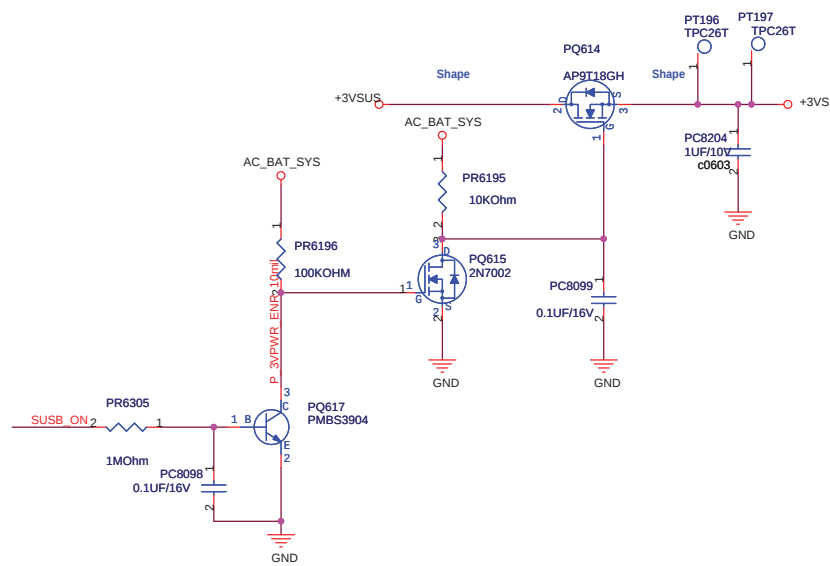
Controller

- 1. Voltage & Current:
 $V_{CORE} = 0.6 - 1.2V @ 8.5A$
- 2. Frequency:
Set $PR58 = 220Kohm$
 $F_{osc} = 204KHz$ for RPM
Set $PR57 = 180Kohm$
 $F_{osc} = 333KHz$ for CCM
- 3. OCP:
Set $PR60 = 1MKOHM$
 $I_{ocp} = 33A$
- 4. POR:
 $POR \text{ Hysteresis} = 0.15V$
 $V_{on} = 4.4 - 4.5V$
 $V_{off} = 4.0 - 4.2V$
- 5. UVP:
 $VID = 300mV$
- 6. OVP:
 $VID = 200mV$
- 7. Enable Voltage:
 $V \text{ rising} = 4.4V$
 $V \text{ falling} = 4.2V$
- 8. Soft start time:
 $2.7ms$
- 9. Phase selection:
 $SP = VCC$
single phase
- 10. Inrush Current:
 $C_{total} = 140uF$
 $I_{inrush} = 0.056A$
- 11. Loadline:
 $30mOhm$

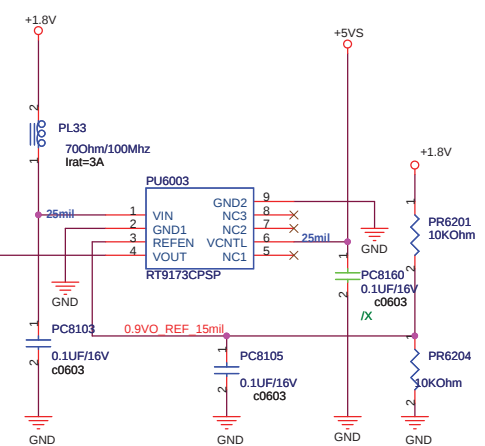
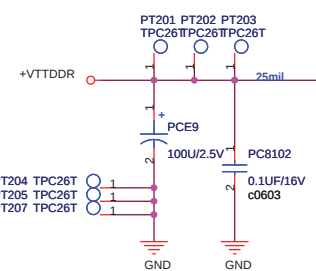


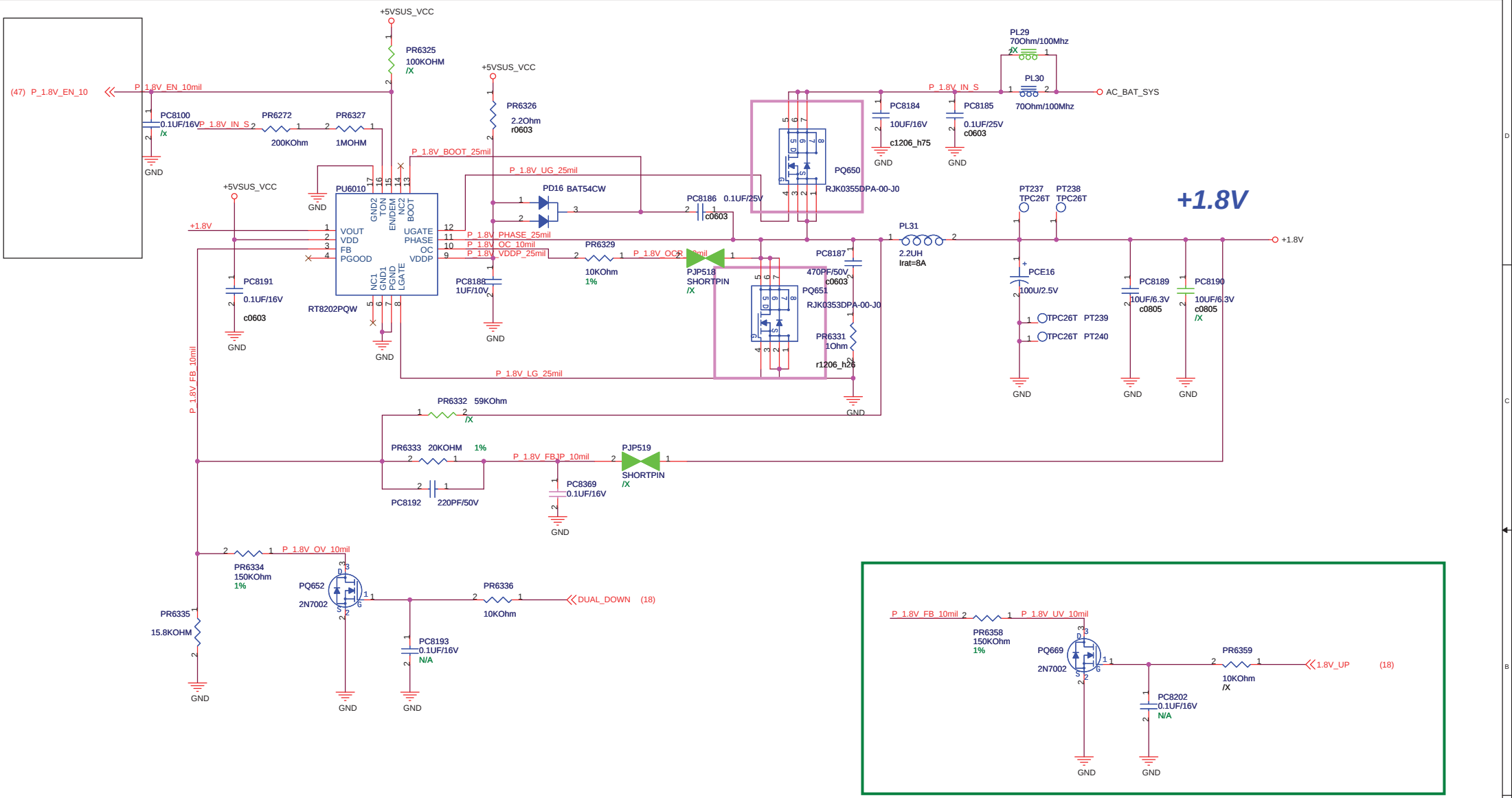
For USB Insert And Remove Protection





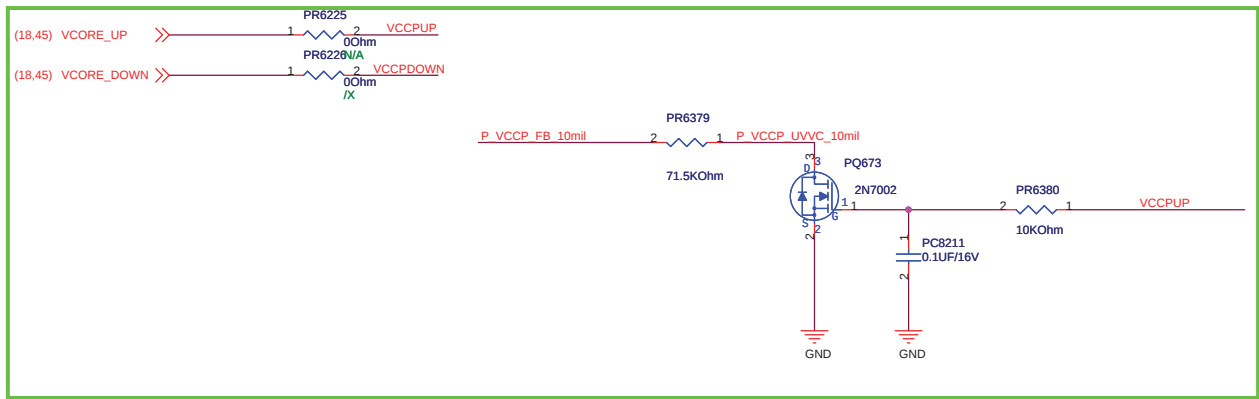
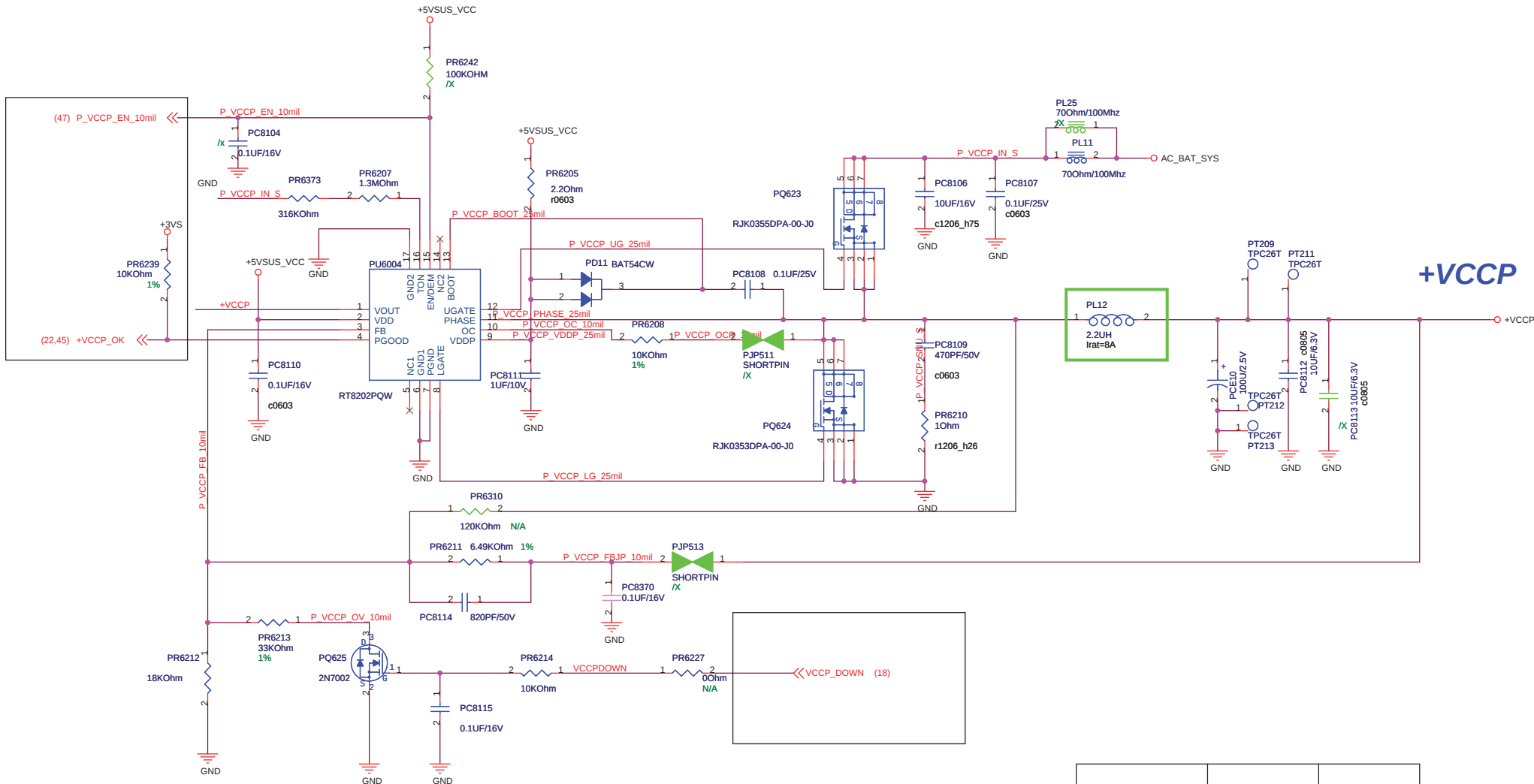
+VTT_DDR(0.5A)





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

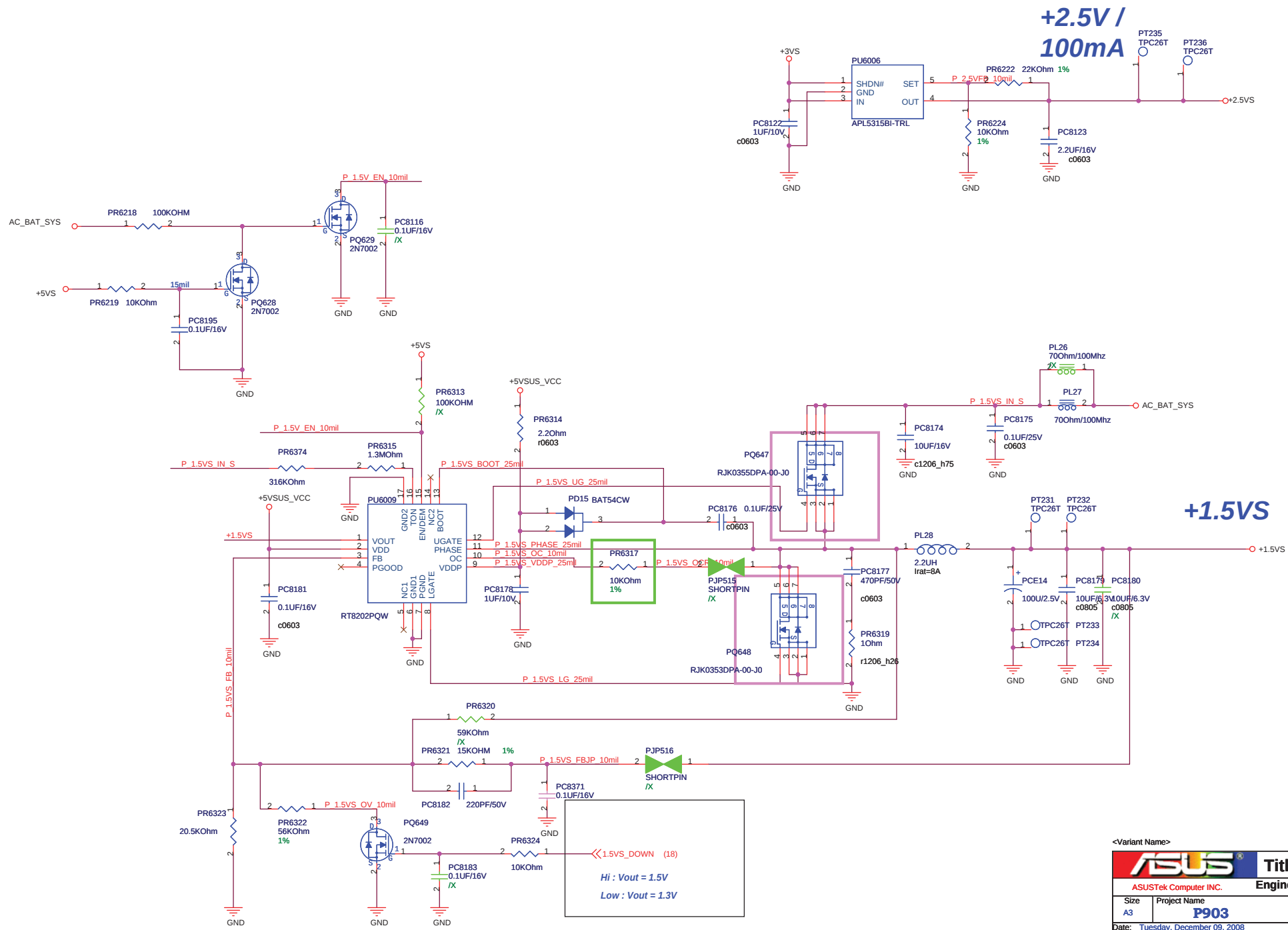
<Variant Name>



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

<Variant Name>

ASUS		Title : VCCP	
ASUSTek Computer INC.		Engineer: Joy_Zhou	
Size A3	Project Name P703		Rev 1.1G
Date: Tuesday, December 09, 2008		Sheet	49 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>

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