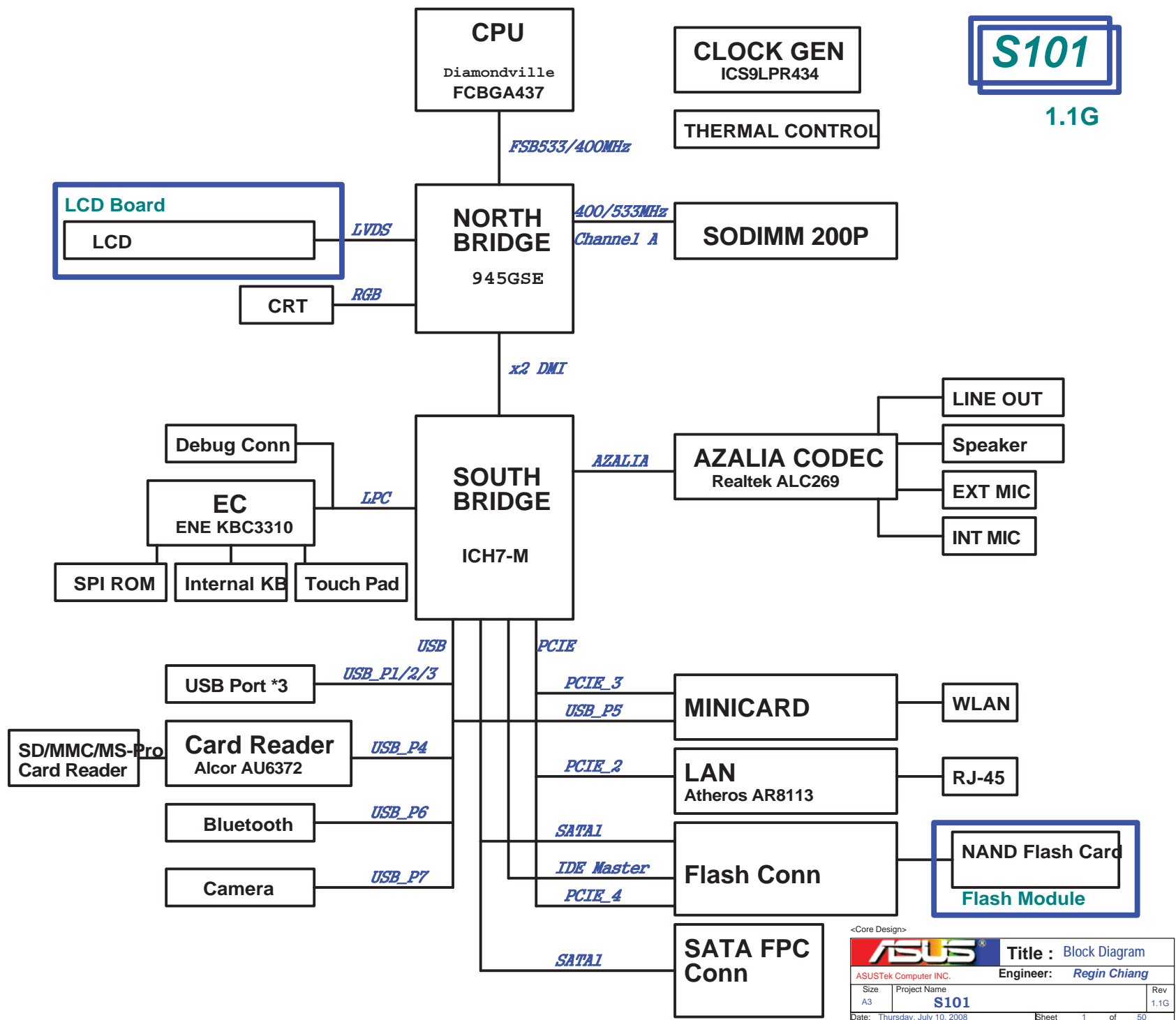


- 01_Block Diagram
- 02_System Setting
- 03_Power Sequence
- 04_Clock Gen_IC59LPR434
- 05_Diamondville_BUS
- 06_Diamondville_PWR
- 07_NB-945GMS(HOST)
- 08_NB-945GMS(DMI)
- 09_NB-945GMS(GRAPHIC)
- 10_NB-945GMS(DDR2)
- 11_NB-945GMS(PWR)
- 12_NB-945GMS(PWR2)
- 13_NB-945GMS(GND)
- 14_SB-ICH7M(PWR)
- 15_SB-ICH7M(1)
- 16_SB-ICH7M(2)
- 17_SB-ICH7M(3)
- 18_DDR2_SODIMM
- 19_DDR2_Termination
- 20_Onboard VGA
- 21_LCD Conn_LID
- 22_Blank
- 23_Mini WIFI+ BT
- 24_LAN_Atheros AR8113
- 25_RJ45
- 26_Flash Conn
- 27_USB Port
- 28_Camera Conn
- 29_Card Reader_AU6372A51
- 30_Codec_ALC269
- 31_Audio_AMP_Jack
- 32_EC_ENE KB3310
- 33_EC
- 34_Switch_SPI ROM_Debug Conn
- 35_Thermal Sensor_FAN
- 36_KB_Touch Pad
- 37_LED_THERMTRIP
- 38_Discharge
- 39_PWR Jack
- 40_Srew Hole
- 41_EMI
- 42_POWER FLOW
- 43_Vcore
- 44_Power System
- 45_Power_+1.8V & VTTDDR
- 46_Power_VCCP
- 47_Power_+1.5VS & +2.5VS
- 48_Power_Charger
- 49_EC Pin Define
- 49_History



EEE PC 701 PCB version

| GPI37 | GPI38 | GPI39 | PCB version |
|-------|-------|-------|-------------|
| 0 | 0 | 0 | |
| 0 | 0 | 0 | |
| 0 | 0 | 1 | |
| 0 | 0 | 1 | |
| 0 | 1 | 0 | |
| 0 | 1 | 0 | |
| 0 | 1 | 1 | |
| 0 | 1 | 1 | |
| 1 | 0 | 0 | |
| 1 | 0 | 0 | |
| 1 | 0 | 1 | |
| 1 | 0 | 1 | |
| 1 | 1 | 0 | |
| 1 | 1 | 0 | |
| 1 | 1 | 1 | |
| 1 | 1 | 1 | |

USB

| | |
|-------|-------------|
| USB 0 | NC |
| USB 1 | USB Conn |
| USB 2 | USB Conn |
| USB 3 | USB Conn |
| USB 4 | Card Reader |
| USB 5 | Minicard |
| USB 6 | Bluetooth |
| USB 7 | Camera |

PCIE

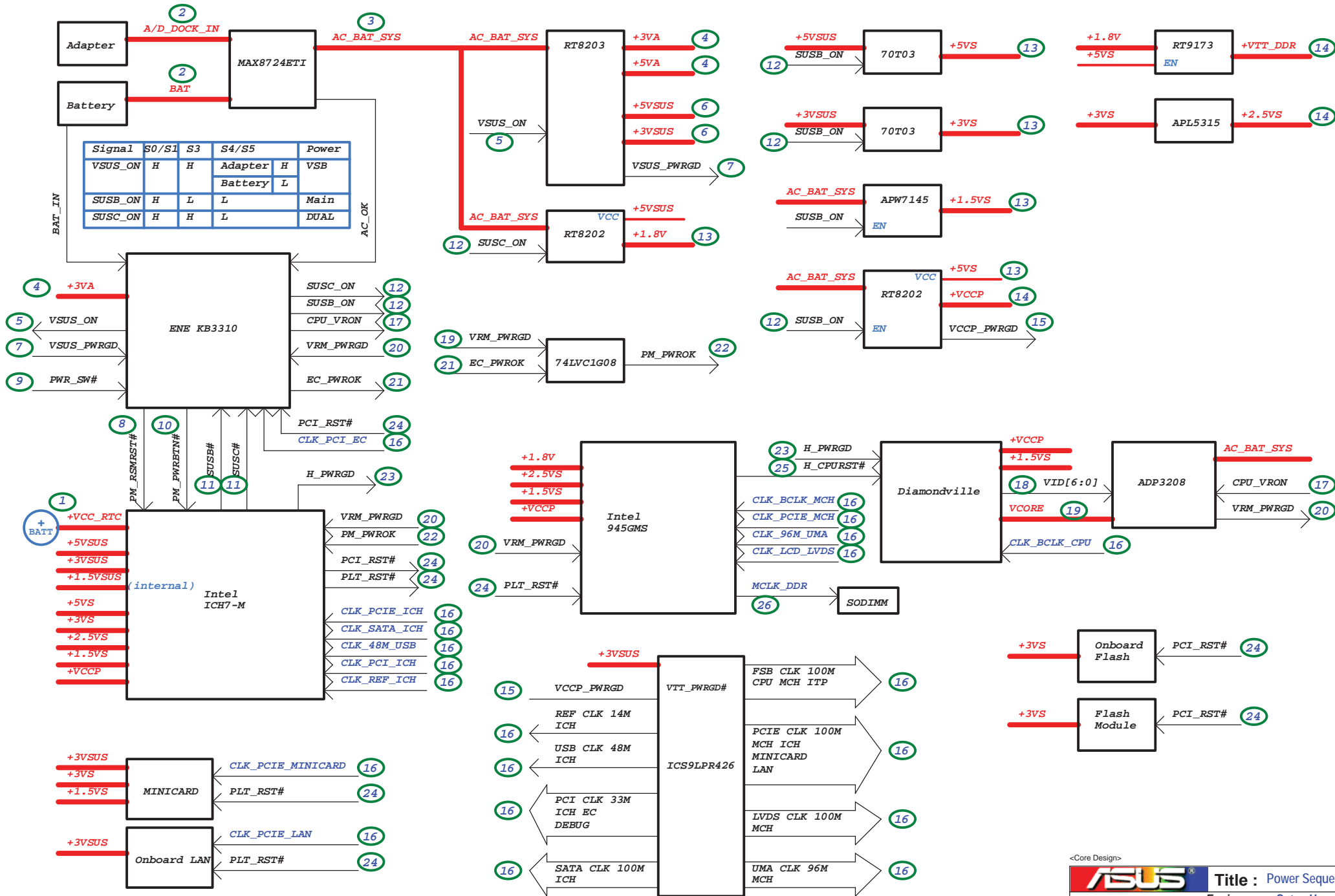
| | |
|--------|----------|
| PCIE 1 | NC |
| PCIE 2 | LAN |
| PCIE 3 | Minicard |
| PCIE 4 | SSD |

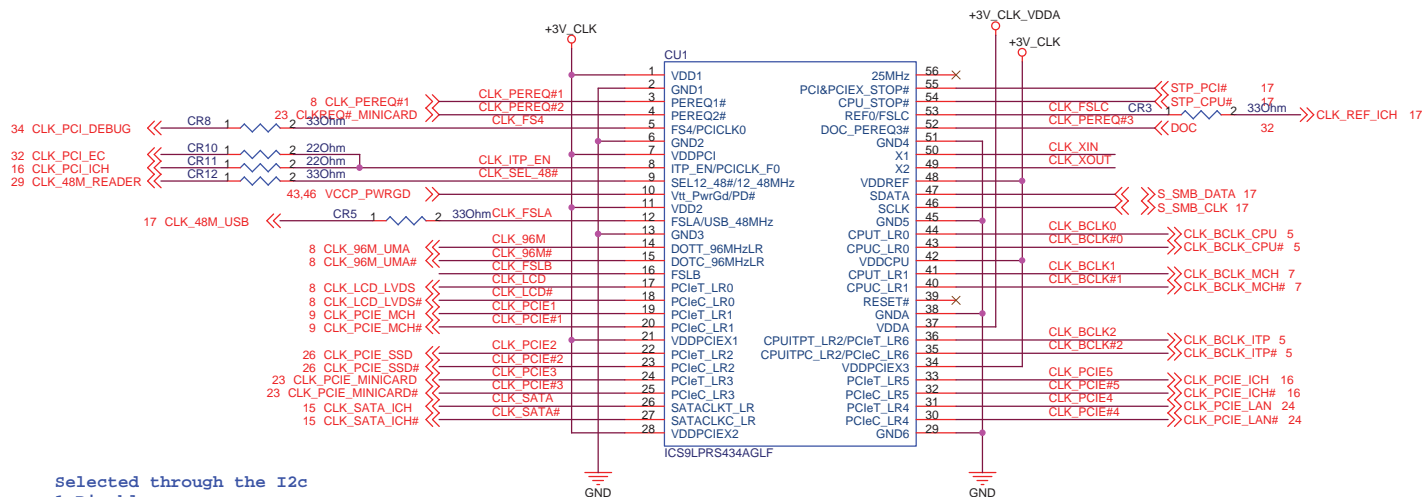
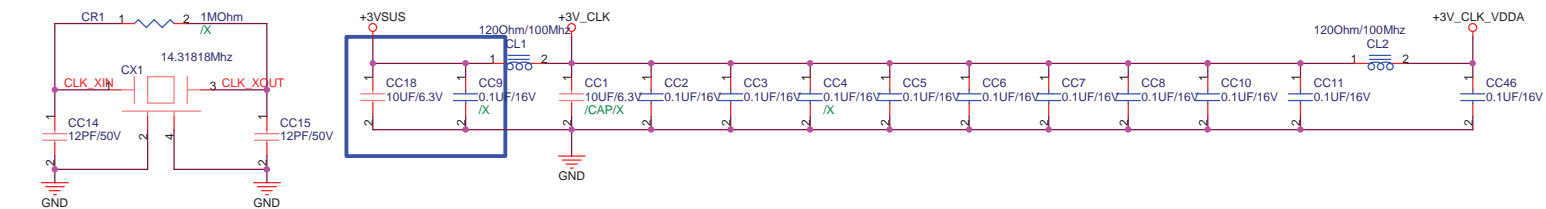
Azalia

| | |
|-----------|-------|
| ACZ_SDIN0 | CODEC |
| ACZ_SDIN1 | NC |
| ACZ_SDIN2 | NC |

<Core Design>

| | | | |
|---|--------------|-------------------------------|---------|
|  | | Title : System Setting | |
| ASUSTek Computer INC. | | Engineer: Satan_He | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet | 2 of 50 |



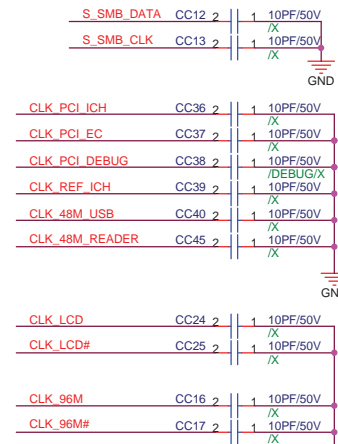
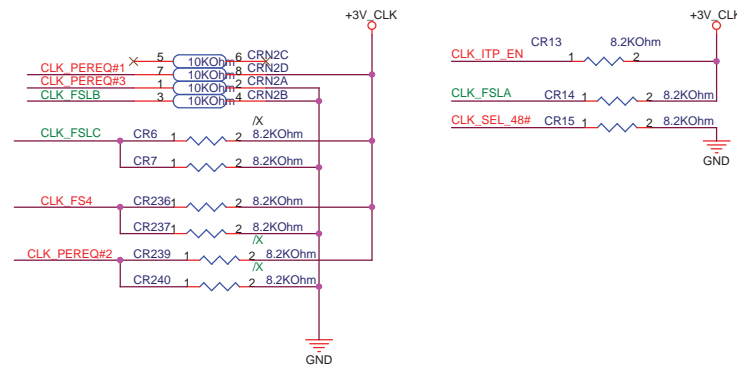
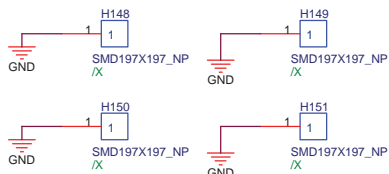


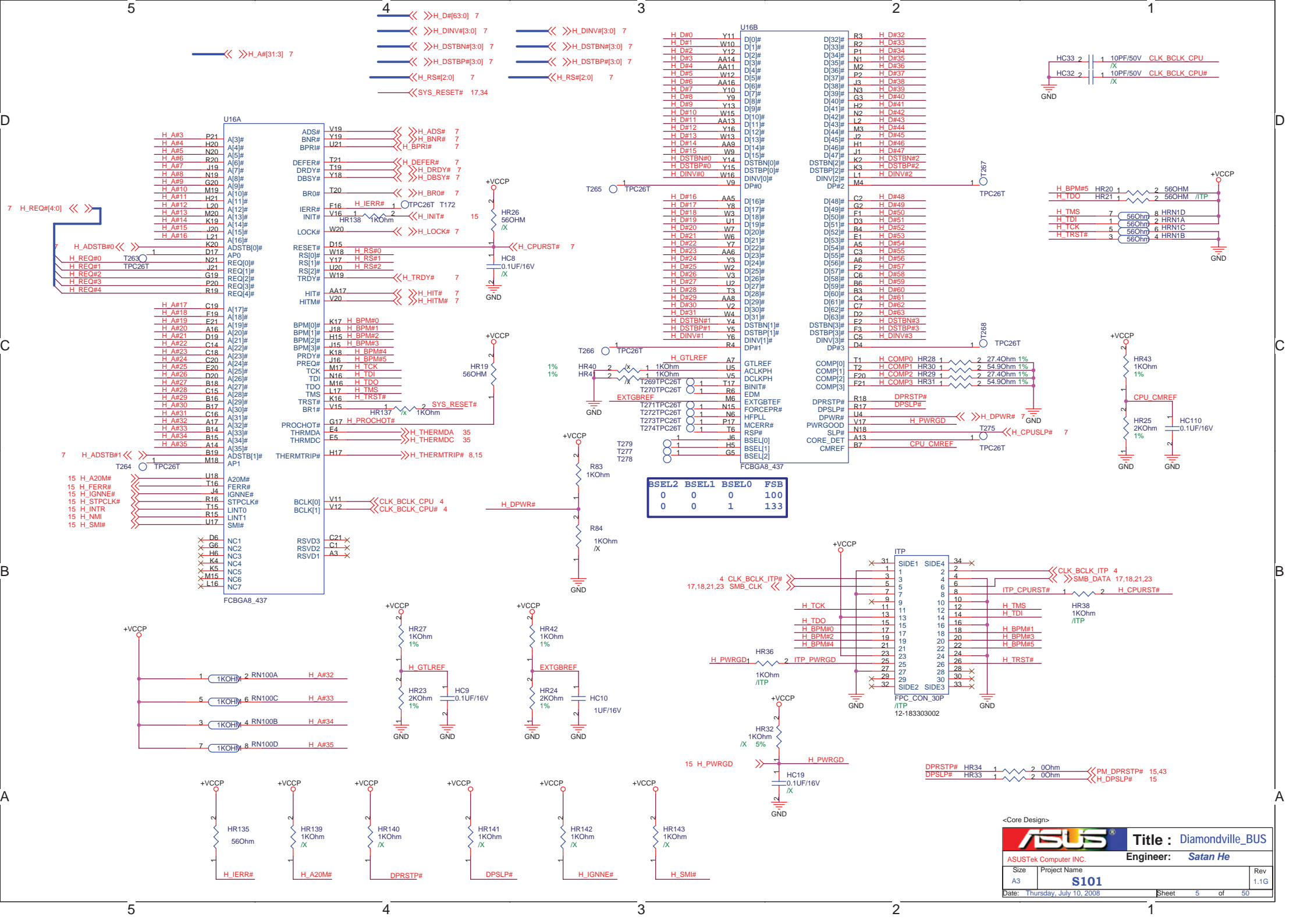
Selected through the I2c
1:Disable
0:Enable

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

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

H148-H151 reserve to place GASKET for EMI

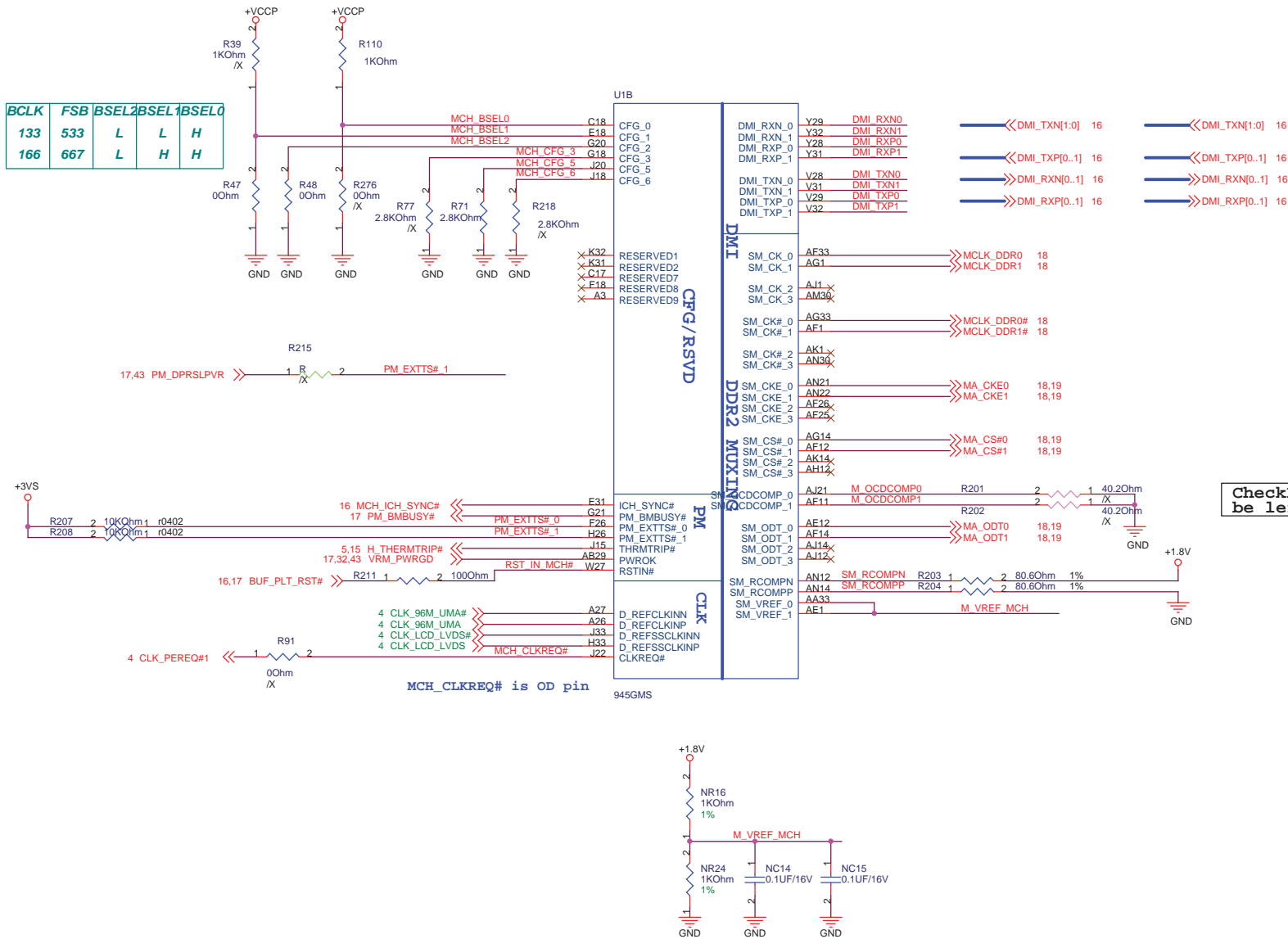




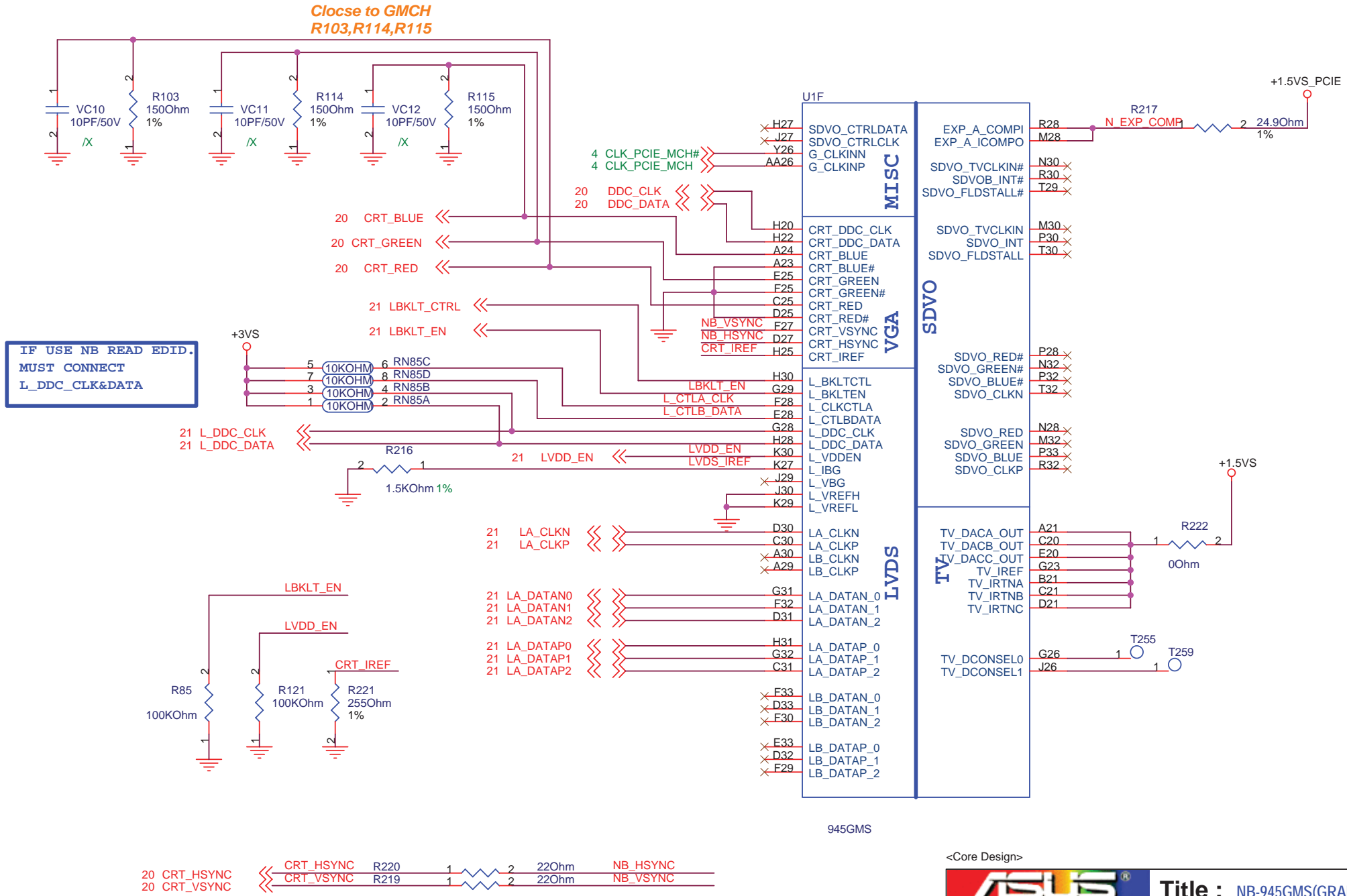





| BCLK | FSB | BSEL2 | BSEL1 | BSEL0 |
|------|-----|-------|-------|-------|
| 133 | 533 | L | L | H |
| 166 | 667 | L | H | H |



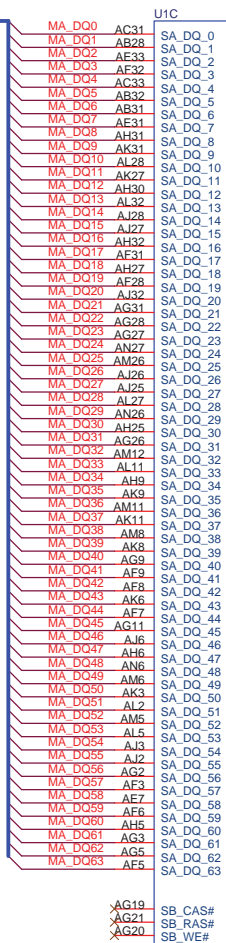
CheckList notes :Can be left as NC



<Core Design>

| | | | |
|---|-----------------------------|-----------------------------------|-------------|
|  | | Title : NB-945GMS(GRAPHIC) | |
| ASUSTeK COMPUTER INC. | | Engineer: Satan_He | |
| Size A4 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 9 of 50 |

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



945GMS

DDR2 SYSTEM MEMORY



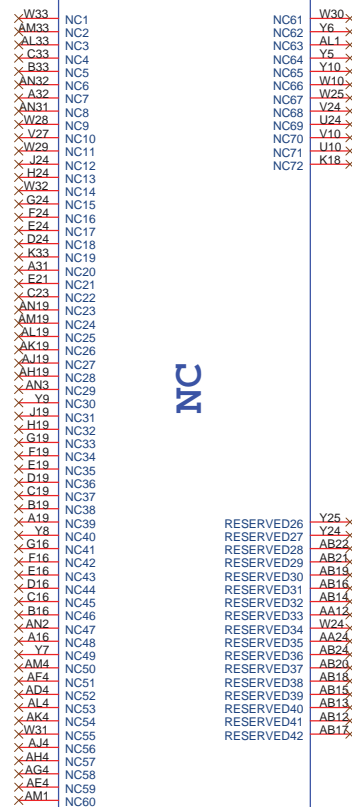
<< >> MA_DQS[7:0] 18
<< >> MA_DM[7:0] 18

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

<< >> MA_MA[13:0] 18,19

>> MA_CAS# 18,19
>> MA_RAS# 18,19
>> MA_WE# 18,19

U1G

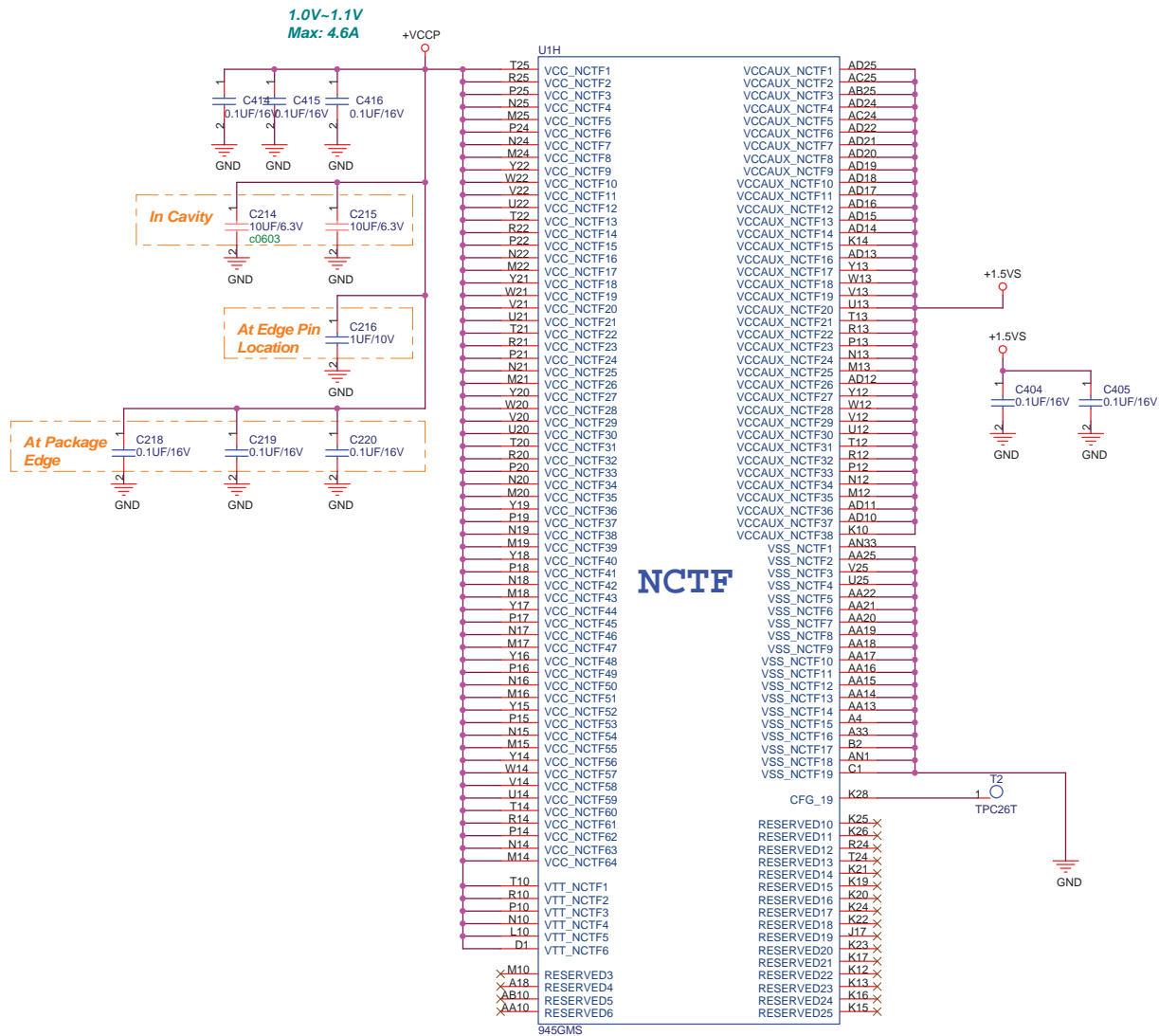


NC

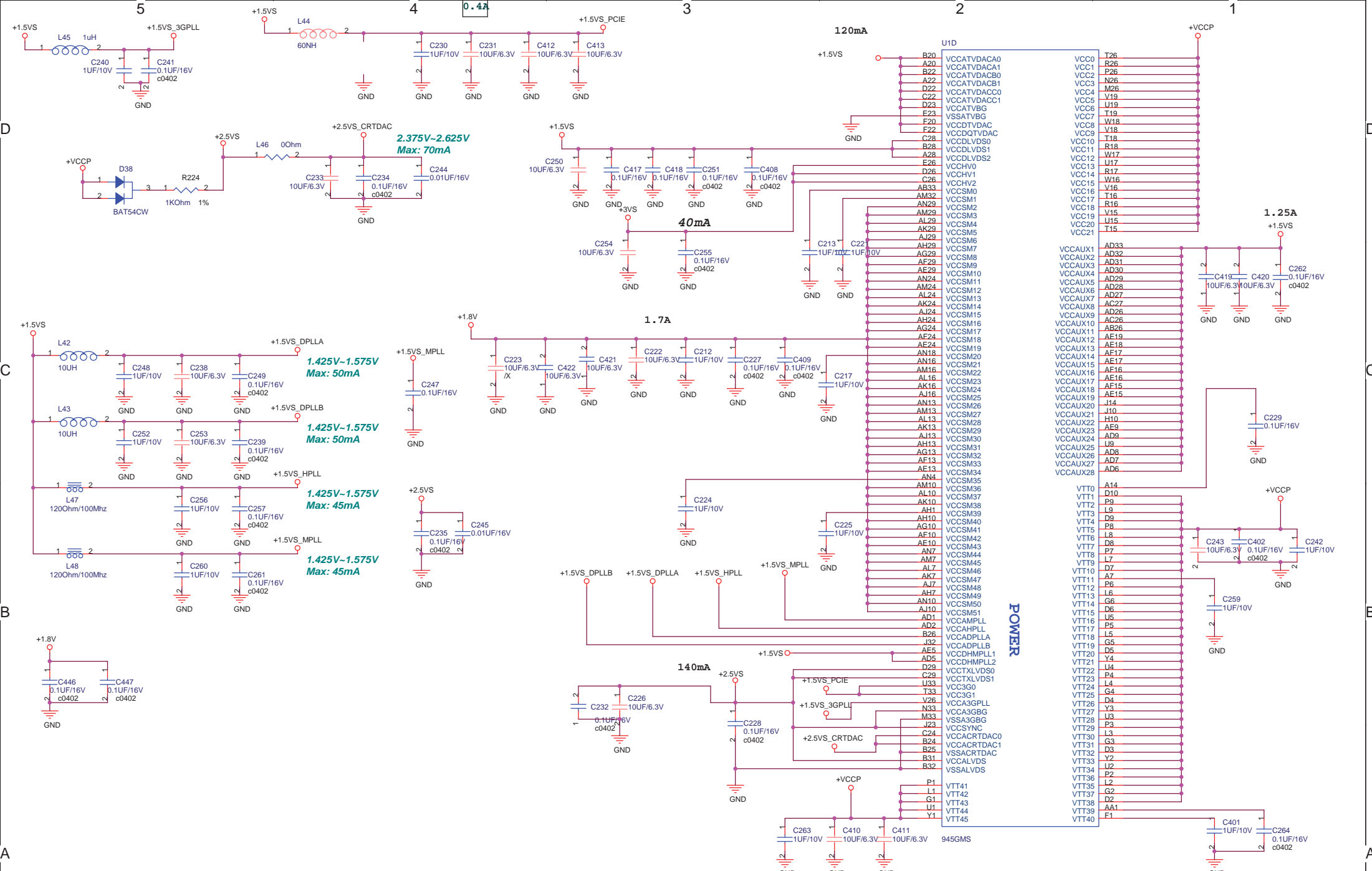
945GMS

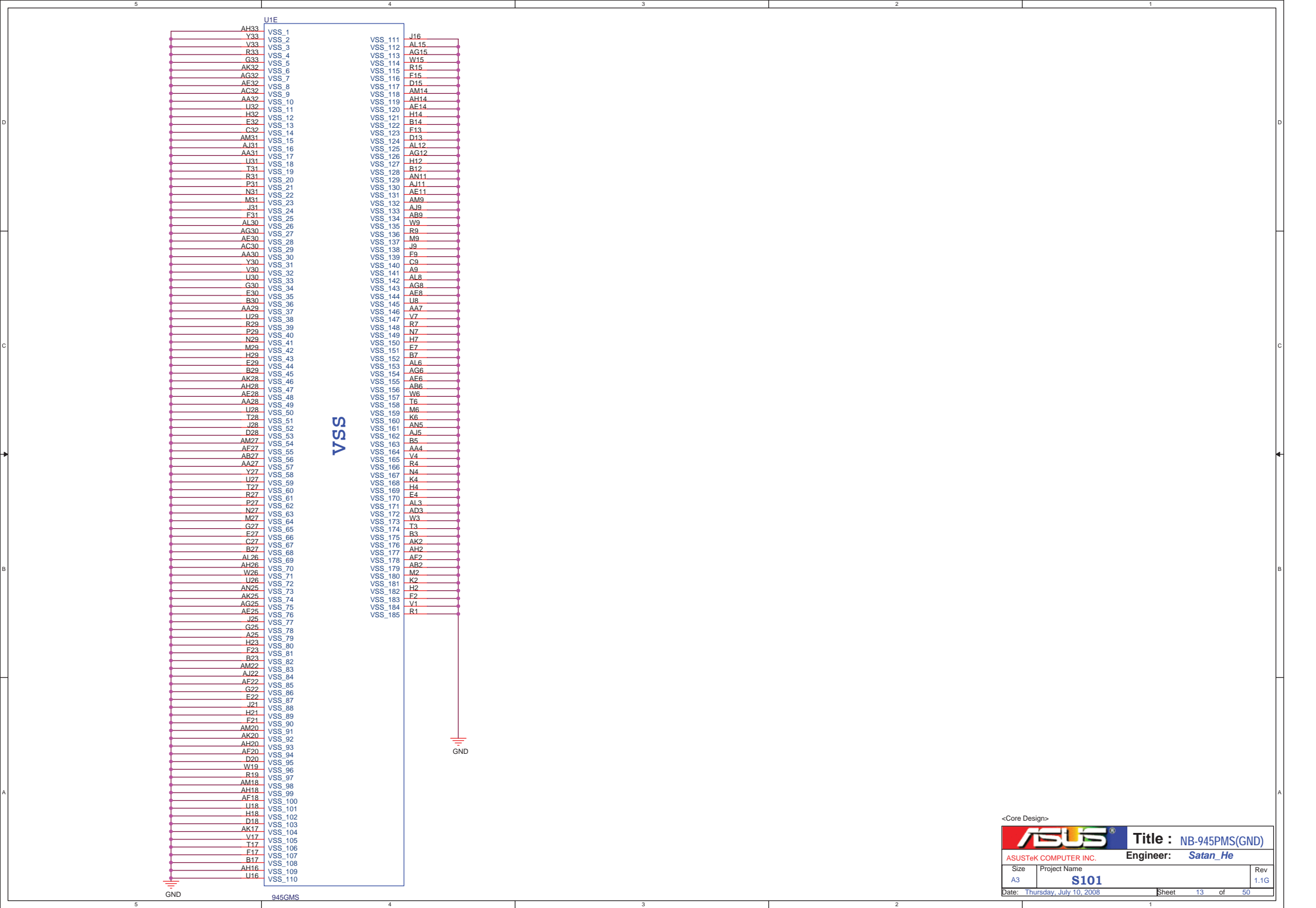
<Core Design>

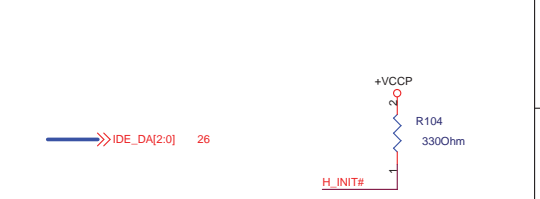
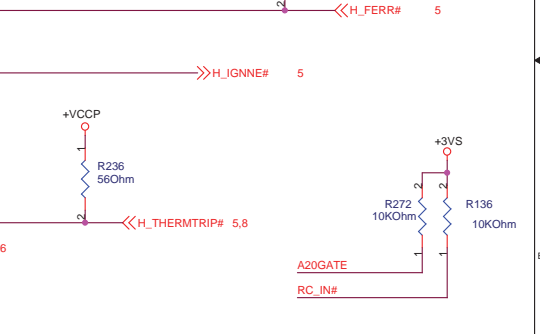
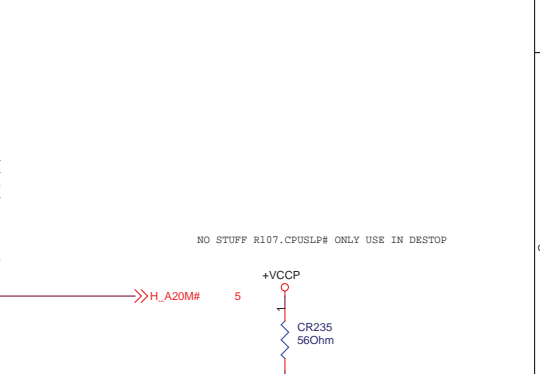
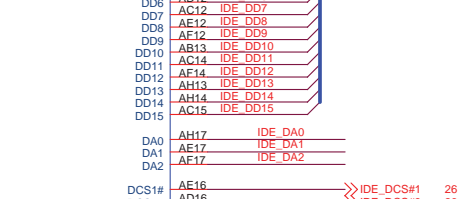
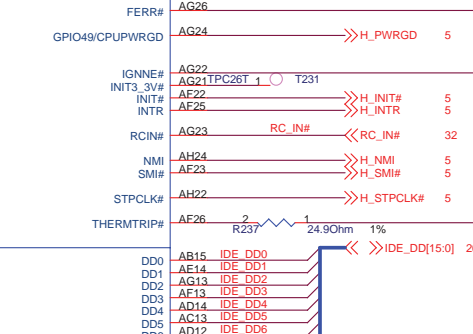
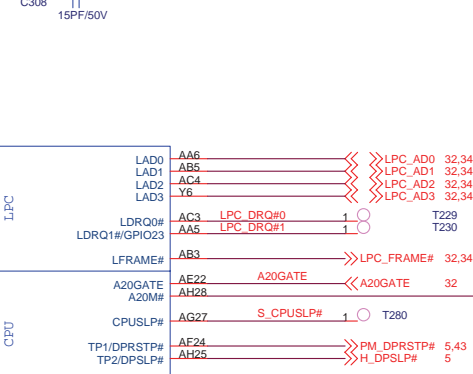
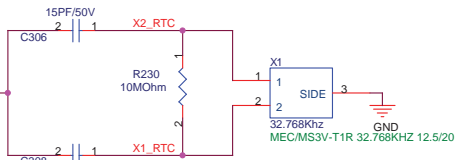
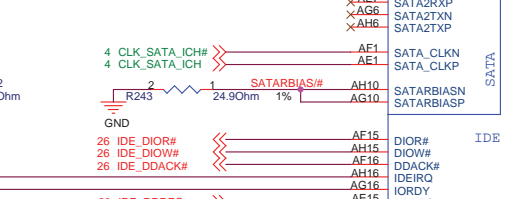
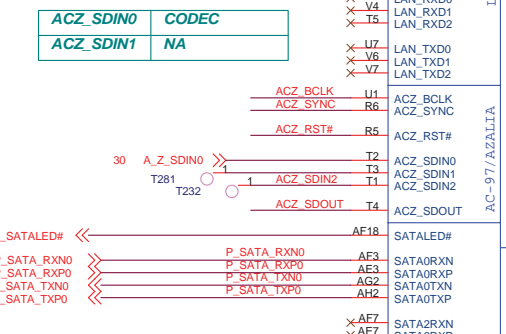
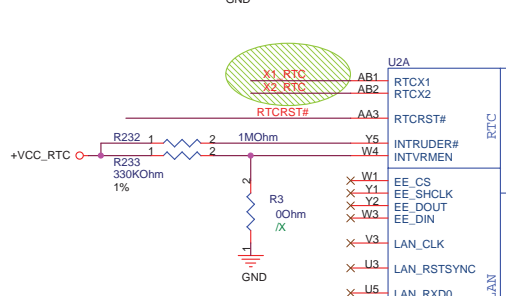
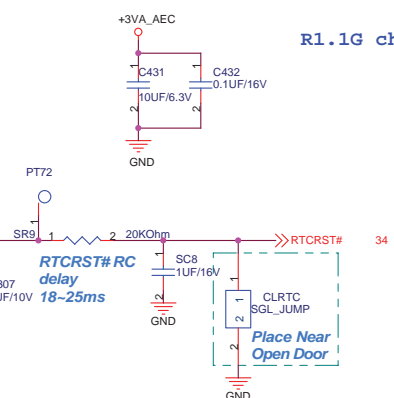
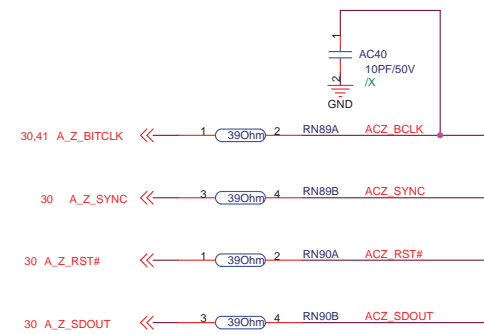
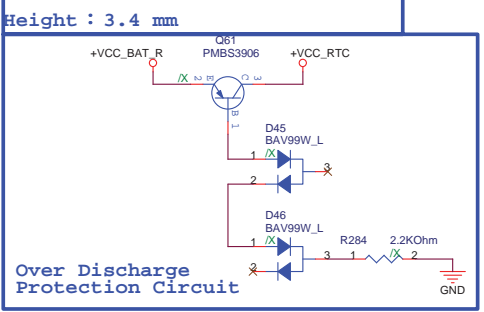
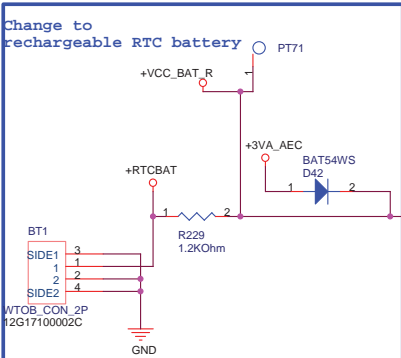
| | | | |
|-------------------------------|-----------------------------|-------------------------|-------------|
| ASUS | | Title : NB-945GMS(DDR2) | |
| ASUSTek COMPUTER INC. | | Engineer: Satan He | |
| Size A3 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet 10 of 50 | |

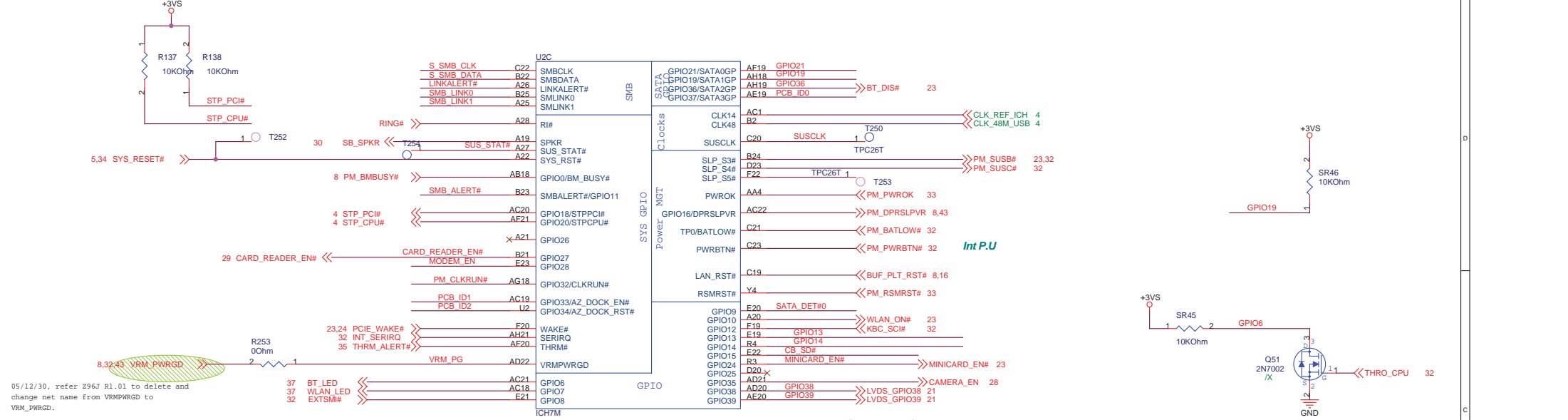


CFG_19(K28) Strapping :
DMI LANE Reversal:
0:Normal Operation (Default)
1.:Reversal Lanes, 3->0,2->1..etc
Note:945GMS doesn't support DMI Lane
Reversal

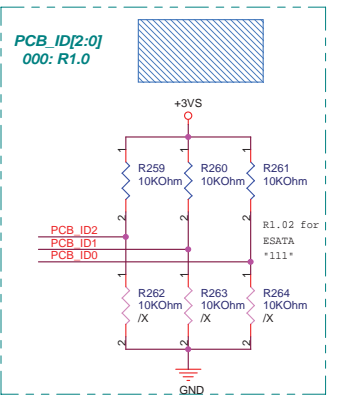
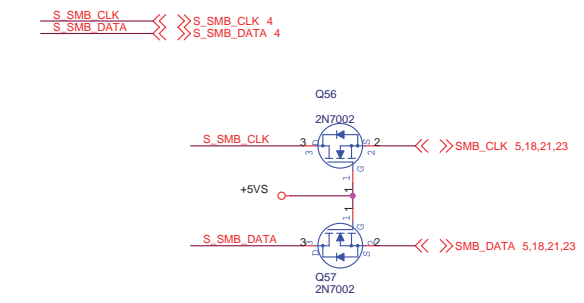






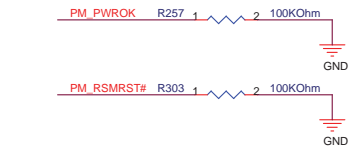
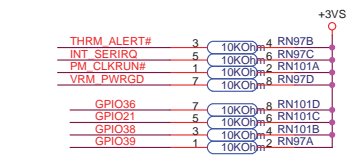
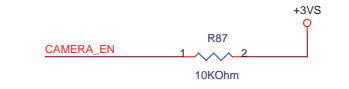
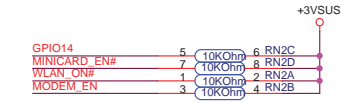
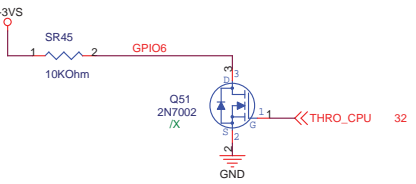
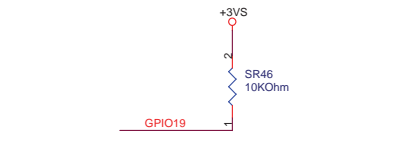
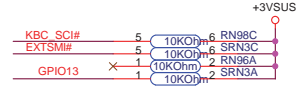
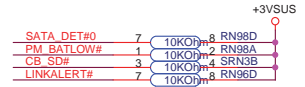
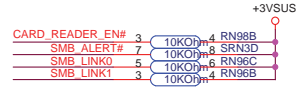
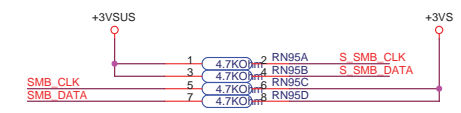
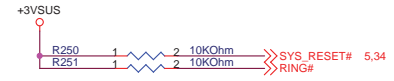


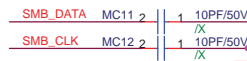
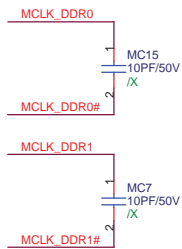
05/12/30, refer Z963 R1.01 to delete and change net name from VRMPWRGD to VRM_PWRGD.



PCB_VID3 : PROJECT CODE

| WLAN_LED | WLAN | BT |
|----------|------|----|
| High | v | v |
| High | v | x |
| High | x | v |
| Low | x | x |





STD Type

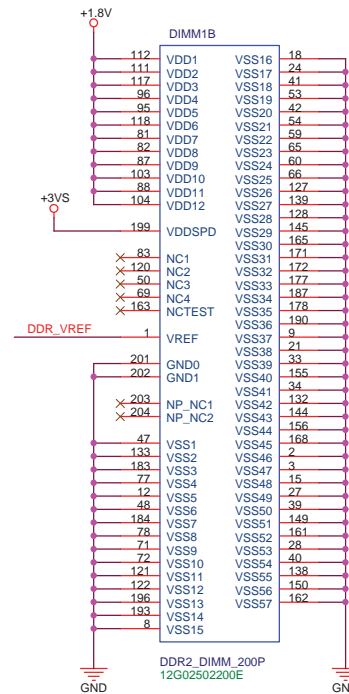
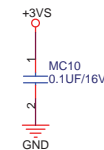
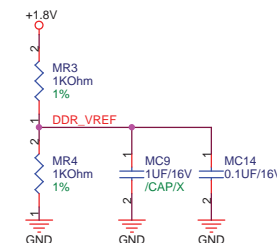
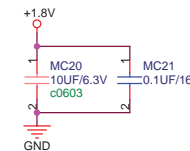
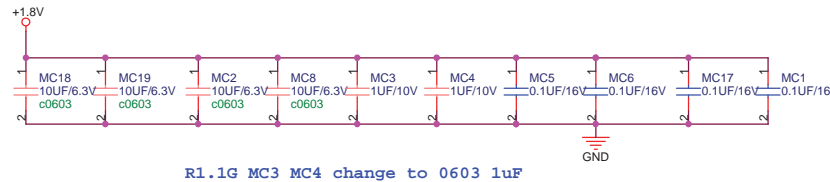
DIMM1A

| | | | | | |
|---------|-----|---------|------|-----|---------|
| MA_MA0 | 102 | A0 | DQ0 | 5 | MA_DQ0 |
| MA_MA1 | 101 | A1 | DQ1 | 7 | MA_DQ1 |
| MA_MA2 | 100 | A2 | DQ2 | 17 | MA_DQ2 |
| MA_MA3 | 99 | A3 | DQ3 | 19 | MA_DQ3 |
| MA_MA4 | 98 | A4 | DQ4 | 4 | MA_DQ4 |
| MA_MA5 | 97 | A5 | DQ5 | 6 | MA_DQ5 |
| MA_MA6 | 94 | A6 | DQ6 | 14 | MA_DQ6 |
| MA_MA7 | 92 | A7 | DQ7 | 16 | MA_DQ7 |
| MA_MA8 | 93 | A8 | | | |
| MA_MA9 | 91 | A9 | DQ8 | 23 | MA_DQ8 |
| MA_MA10 | 105 | A10/AP | DQ9 | 25 | MA_DQ9 |
| MA_MA11 | 90 | A11 | DQ10 | 35 | MA_DQ10 |
| MA_MA12 | 89 | A12 | DQ11 | 37 | MA_DQ11 |
| MA_MA13 | 116 | A13 | DQ12 | 20 | MA_DQ12 |
| | 86 | A14 | DQ13 | 22 | MA_DQ13 |
| | 84 | A15 | DQ14 | 36 | MA_DQ14 |
| | 85 | A16_BA2 | DQ15 | 38 | MA_DQ15 |
| MA_BA2 | | | | | |
| MA_BA0 | 107 | BA0 | DQ16 | 43 | MA_DQ16 |
| MA_BA1 | 106 | BA1 | DQ17 | 45 | MA_DQ17 |
| | 110 | S0# | DQ18 | 55 | MA_DQ18 |
| | 115 | S1# | DQ19 | 57 | MA_DQ19 |
| | 30 | CK0 | DQ20 | 46 | MA_DQ20 |
| | 32 | CK0# | DQ21 | 56 | MA_DQ21 |
| | 164 | CK1 | DQ22 | 58 | MA_DQ22 |
| | 166 | CK1# | DQ23 | 61 | MA_DQ23 |
| | 79 | CKE0 | DQ24 | 63 | MA_DQ24 |
| | 80 | CKE1 | DQ25 | 73 | MA_DQ25 |
| | 113 | CAS# | DQ26 | 75 | MA_DQ26 |
| | 108 | RAS# | DQ27 | 62 | MA_DQ27 |
| | 109 | WE# | DQ28 | 64 | MA_DQ28 |
| | 198 | SA0 | DQ29 | 74 | MA_DQ29 |
| | 200 | SA1 | DQ30 | 76 | MA_DQ30 |
| | 197 | SCL | DQ31 | 123 | MA_DQ31 |
| | 195 | SDA | DQ32 | 125 | MA_DQ32 |
| | | | DQ33 | 135 | MA_DQ33 |
| | | | DQ34 | 137 | MA_DQ34 |
| | | | DQ35 | 124 | MA_DQ35 |
| | | | DQ36 | 126 | MA_DQ36 |
| | | | DQ37 | 134 | MA_DQ37 |
| | | | DQ38 | 136 | MA_DQ38 |
| | | | DQ39 | 141 | MA_DQ39 |
| | | | DQ40 | 143 | MA_DQ40 |
| | | | DQ41 | 151 | MA_DQ41 |
| | | | DQ42 | 153 | MA_DQ42 |
| | | | DQ43 | 140 | MA_DQ43 |
| | | | DQ44 | 142 | MA_DQ44 |
| | | | DQ45 | 152 | MA_DQ45 |
| | | | DQ46 | 154 | MA_DQ46 |
| | | | DQ47 | 157 | MA_DQ47 |
| | | | DQ48 | 159 | MA_DQ48 |
| | | | DQ49 | 173 | MA_DQ49 |
| | | | DQ50 | 175 | MA_DQ50 |
| | | | DQ51 | 158 | MA_DQ51 |
| | | | DQ52 | 160 | MA_DQ52 |
| | | | DQ53 | 174 | MA_DQ53 |
| | | | DQ54 | 176 | MA_DQ54 |
| | | | DQ55 | 179 | MA_DQ55 |
| | | | DQ56 | 181 | MA_DQ56 |
| | | | DQ57 | 189 | MA_DQ57 |
| | | | DQ58 | 191 | MA_DQ58 |
| | | | DQ59 | 180 | MA_DQ59 |
| | | | DQ60 | 182 | MA_DQ60 |
| | | | DQ61 | 192 | MA_DQ61 |
| | | | DQ62 | 194 | MA_DQ62 |
| | | | DQ63 | | |

DDR2_DIMM_200P
12G02502200E

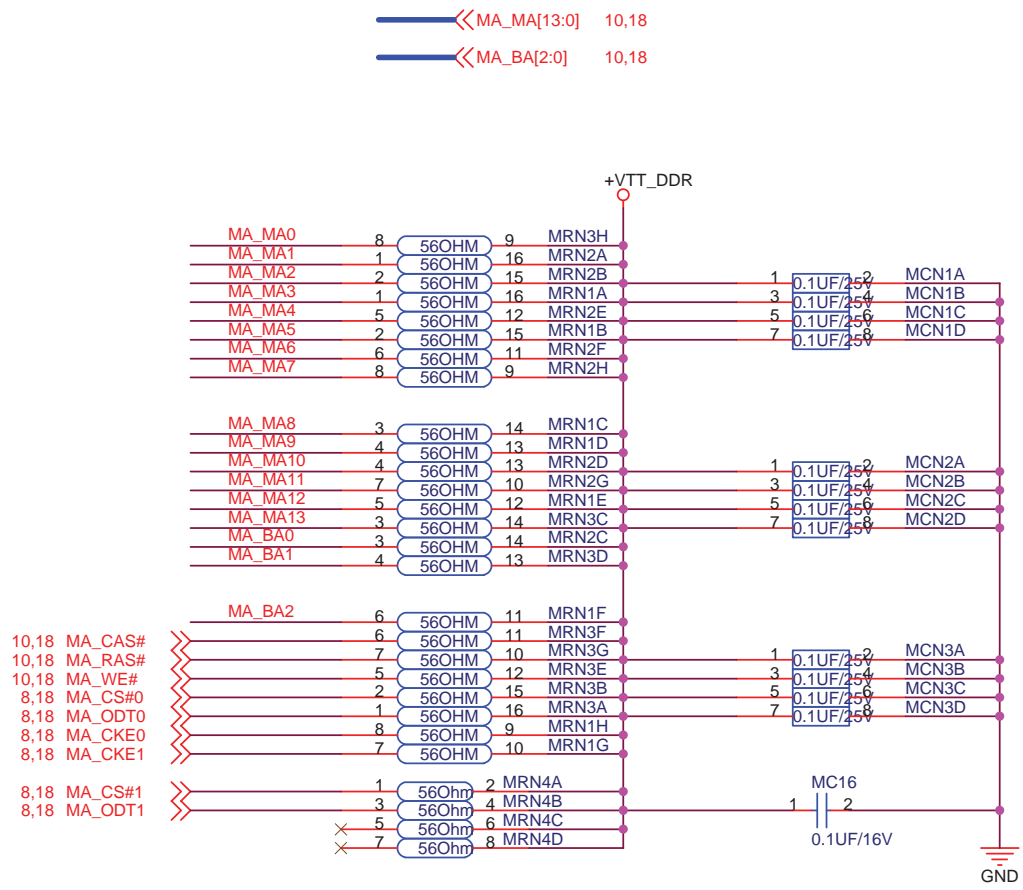
DDR2 Conn. Height=4.0mm

GROUP1
GROUP2
SWAP




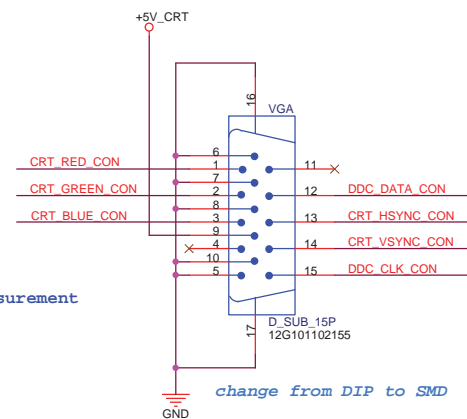
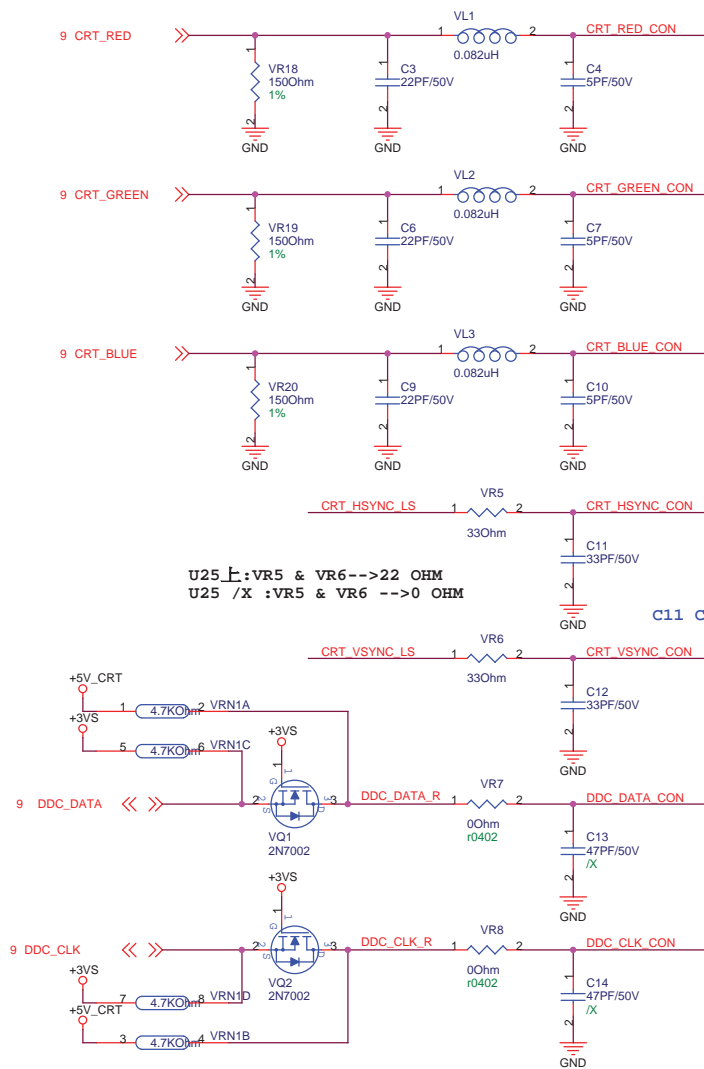
<Core Design>

| | | | |
|-------------------------------|--------------|----------------------|----------|
| ASUS | | Title : DDR2 SODIMM | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet | 18 of 50 |



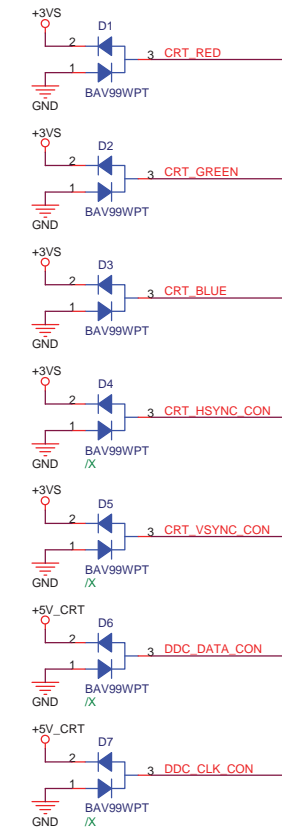
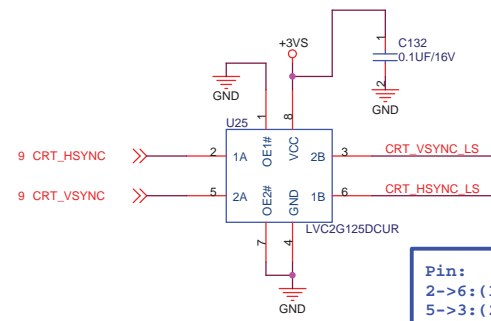
<Core Design>

| | | | |
|---|-----------------------------|---------------------------------|-------------|
|  | | Title : DDR2_Termination | |
| ASUSTek Computer INC. | | Engineer: <i>Kell_Huang</i> | |
| Size A4 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 19 of 50 |

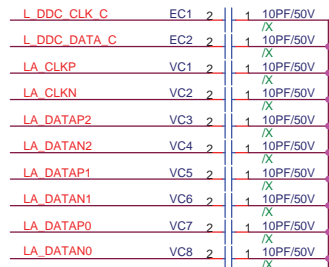
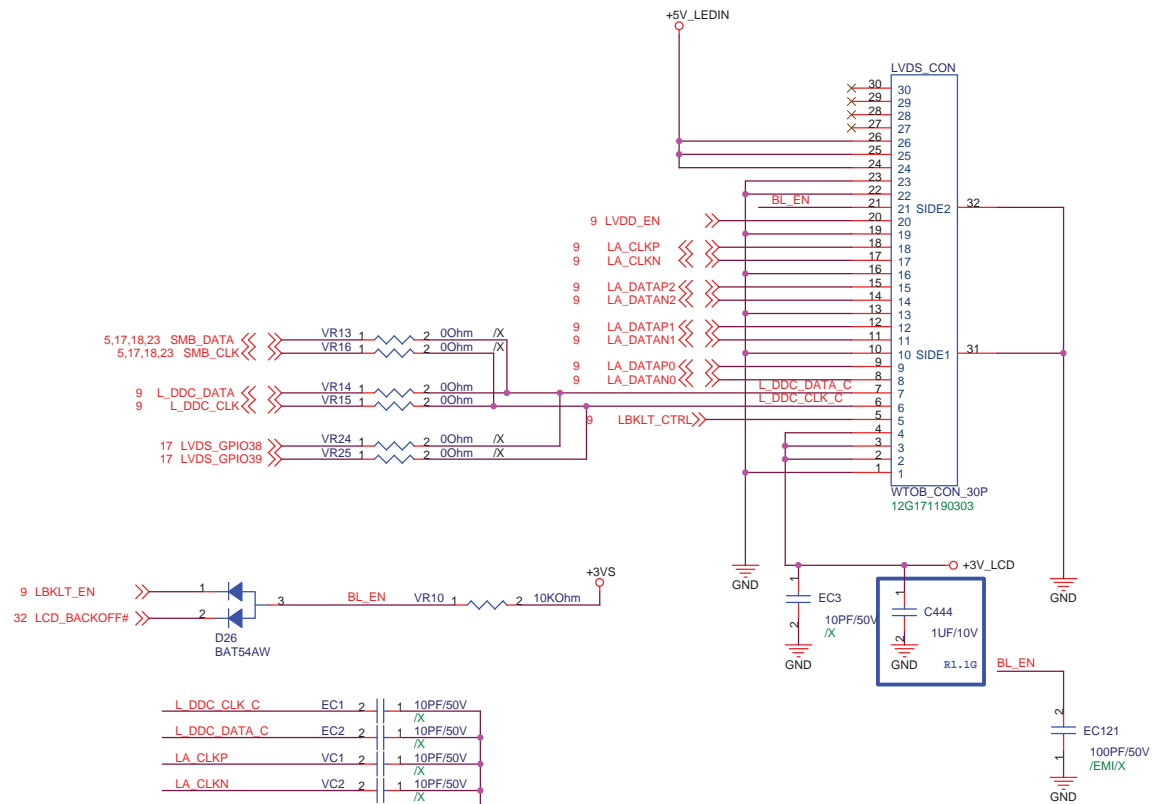


VGA use 12G10110015W

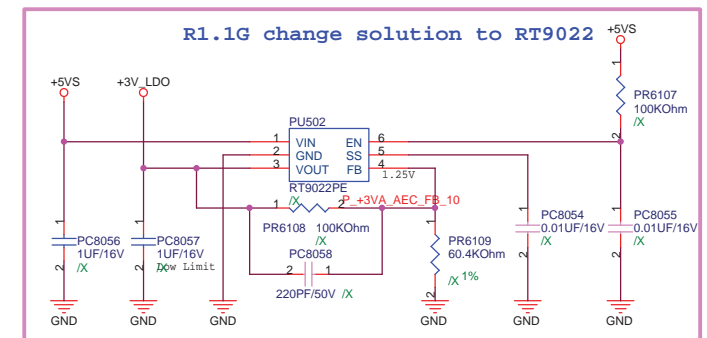
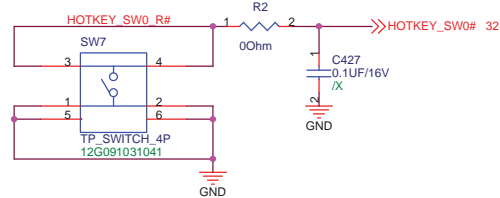
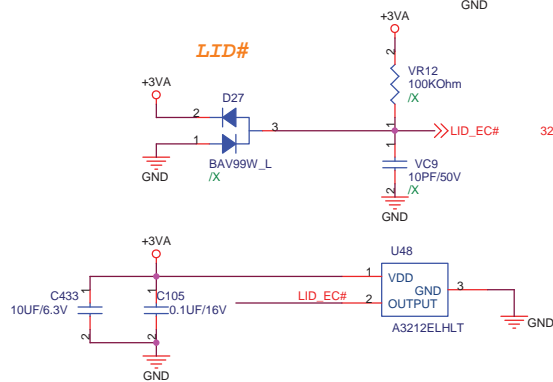
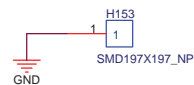
VGA use 12G101102155, but use 12G10110015W footprint




| | | | |
|-------------------------------|--------------|----------------------|-------|
| <Core Design> | | Title : Onboard VGA | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | Sheet | 20 | of 50 |

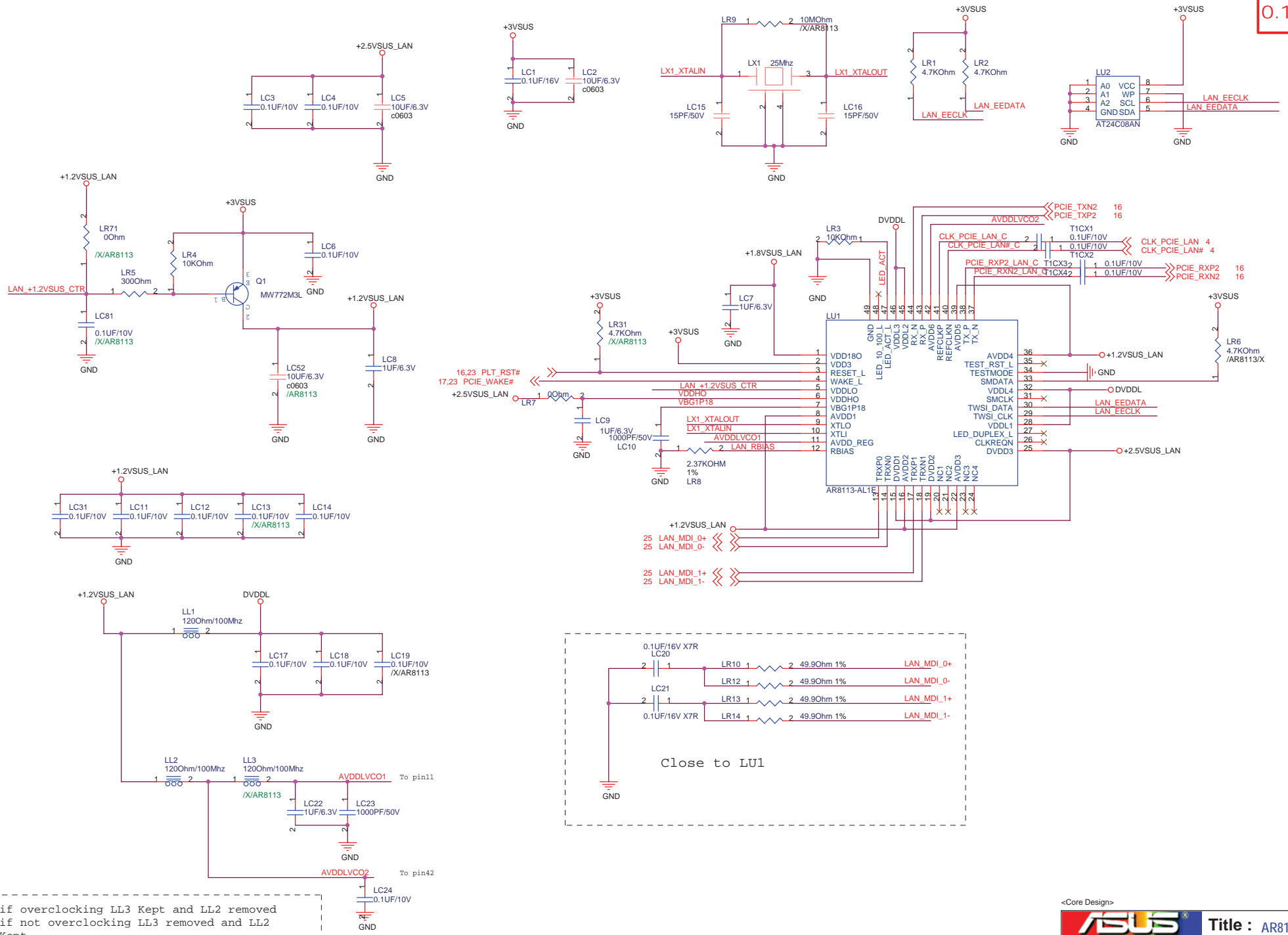


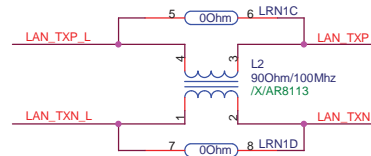
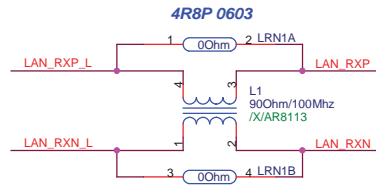
H153 : Pad for EMI



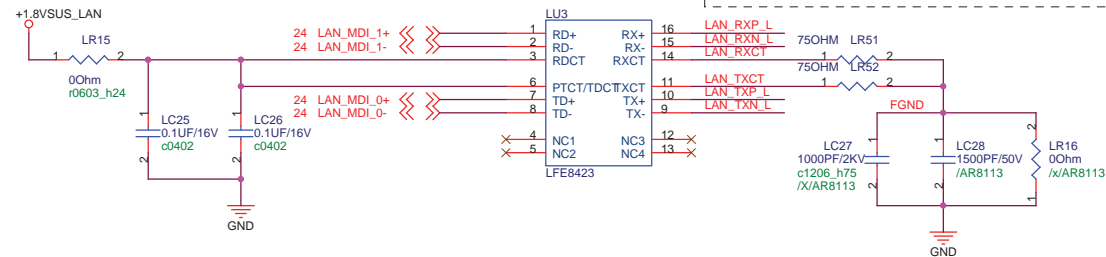
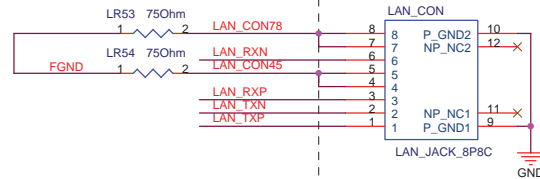
<Core Design>

| | | | |
|---|----------------------|-----------------------|-------------|
|  | | Title : LVDS Conn_LID | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size A3 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet 21 of 50 | |



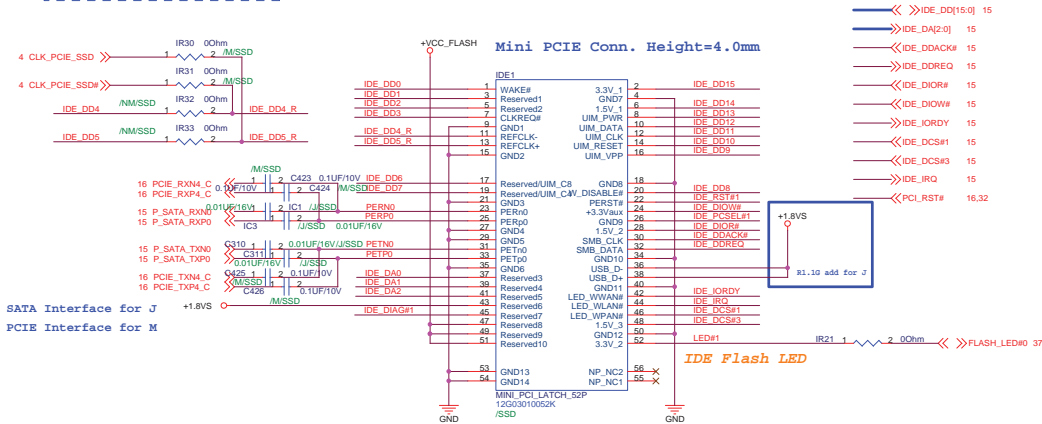
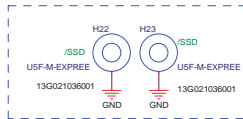


LAN connector: 12G148101086
SMT type



<Core Design>

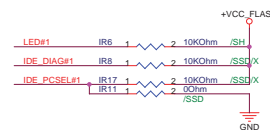
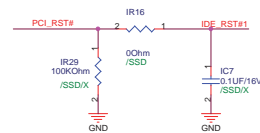
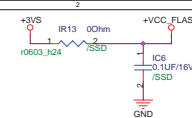
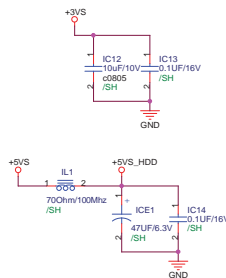
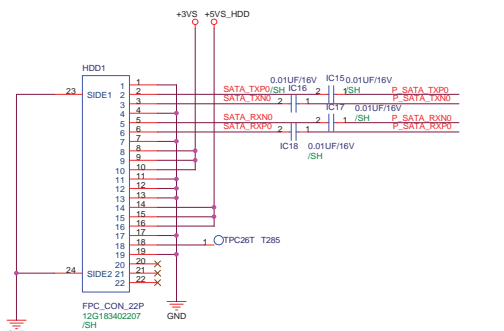
| | | | |
|-------------------------------|--------------|----------------------|----------|
| ASUS | | Title : RJ45 | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | | Rev |
| A3 | S101 | | 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 25 of 50 |



SATA Interface for J
PCIE Interface for M

SATA HDD Connector

FPC Connector with Mylar /SH for SATA HDD



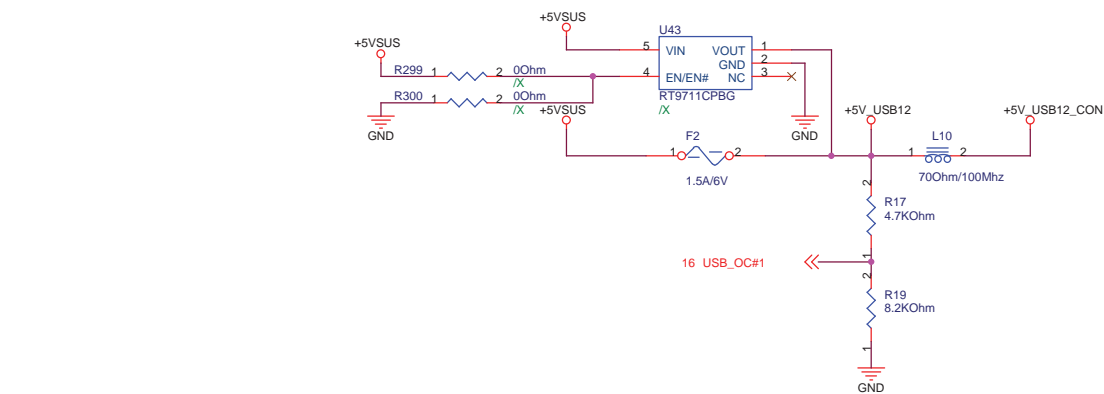
HD Master/Slave:
Master:Low
Slave:NC or
High

IDE Flash LED

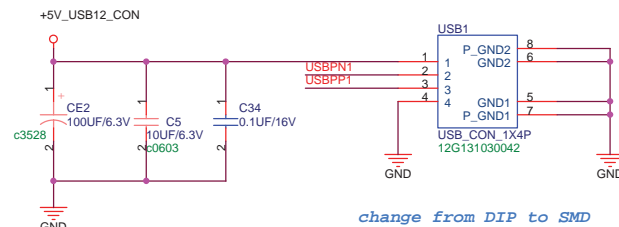
Naming Rule:
IC:IU?
R:IR?
C:IC?
L:IL?

<Core Design>

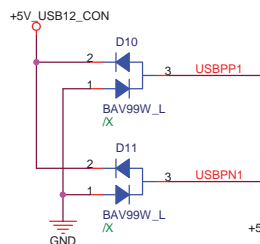
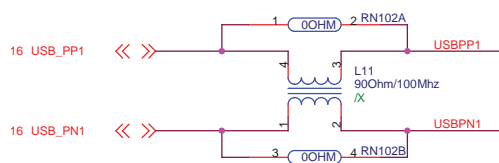
| | | | |
|-------------------------------|--------------|-------------------------|-------|
| ASUS | | Title : HD + Flash Conn | |
| ASUSTek Computer INC. | | Engineer: Keil Huang | |
| Size | Project Name | Rev | |
| A2 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | Sheet | 26 | of 50 |



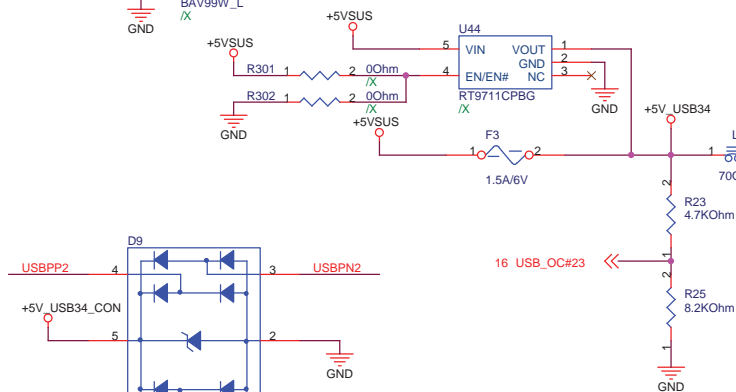
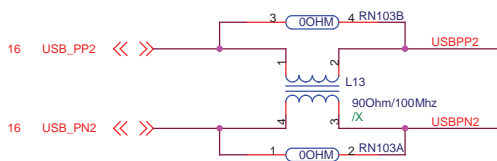
1.1G change USB con. to 12G131030042



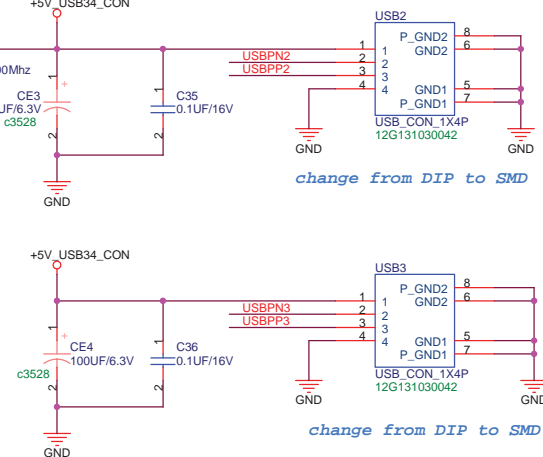
change from DIP to SMD



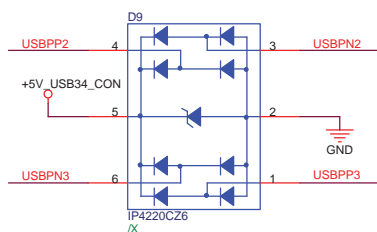
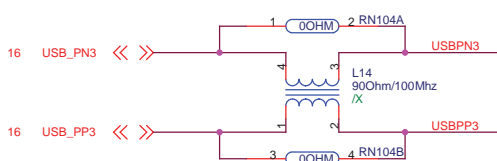
1.1G change CE2 CE3 CE4 to POSCAP, 100uF/6.3V



change from DIP to SMD



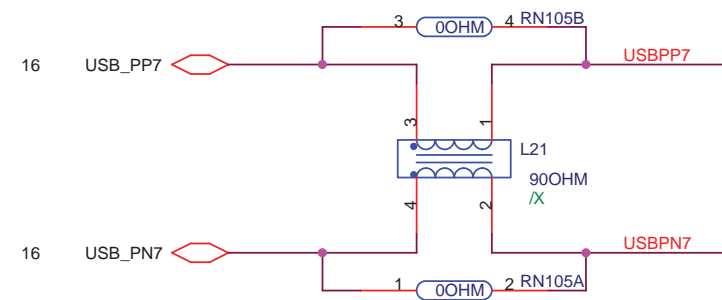
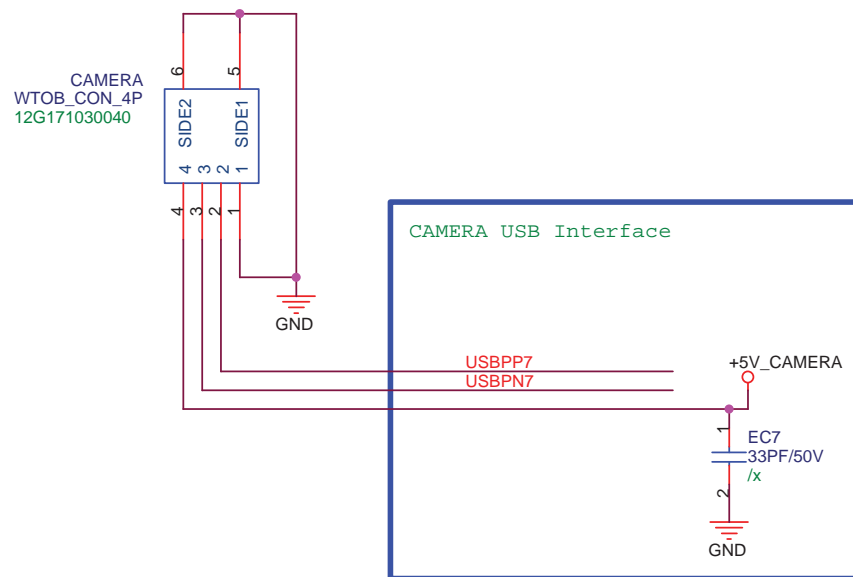
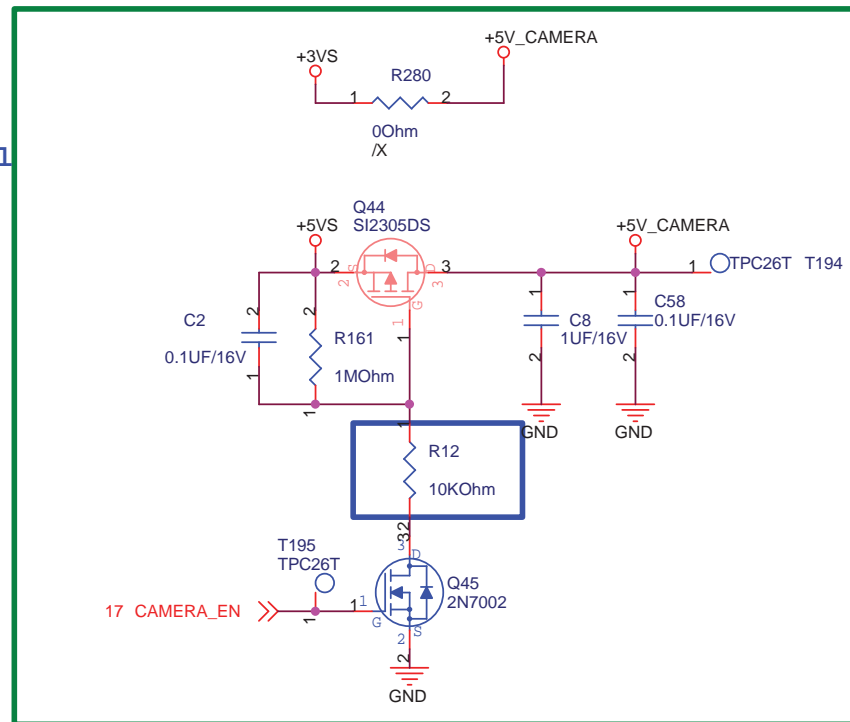
change from DIP to SMD



<Core Design>

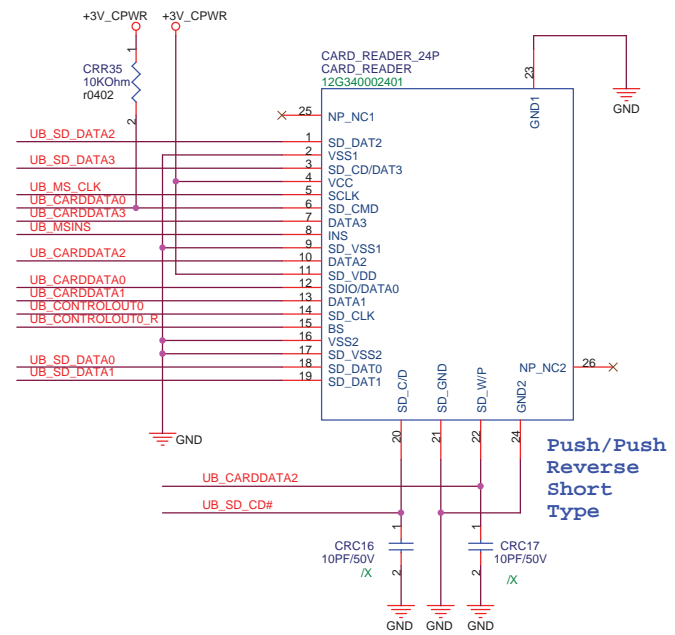
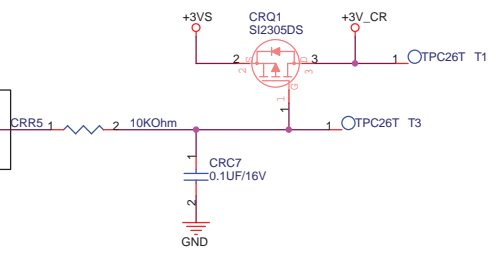
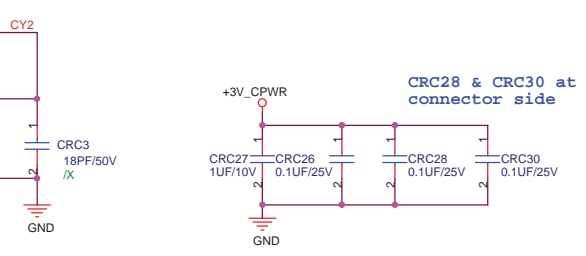
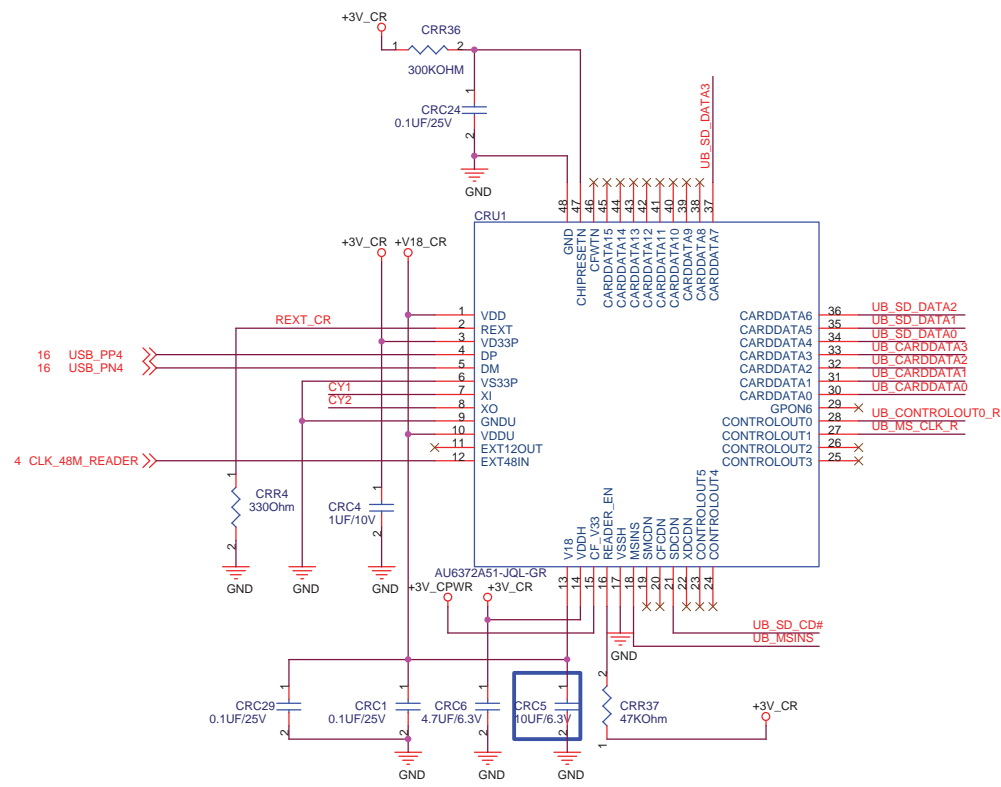
| | | | |
|-------------------------------|-----------------------------|-----------------------------|-------------|
| ASUS | | Title : USB Port | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size A3 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet 27 | of 50 |

Power Control



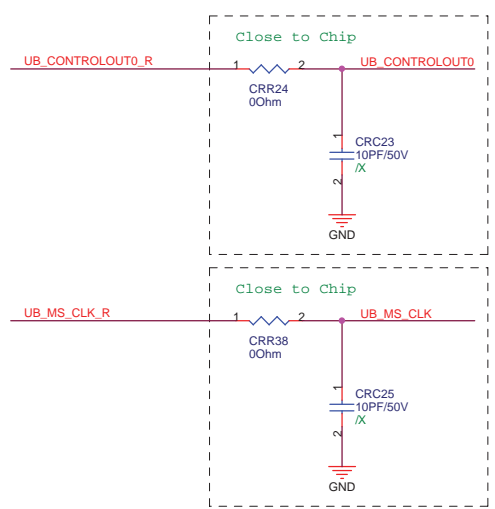
<Core Design>

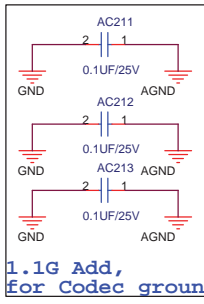
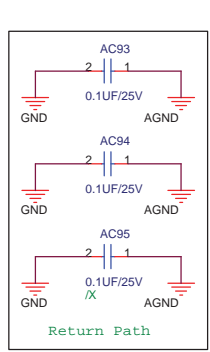
| | | | |
|-------------------------------|-----------------------------|-----------------------------|--|
| ASUS | | Title : Camera Power | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size A4 | Project Name S101 | Rev 1.1G | |
| Date: Thursday, July 10, 2008 | Sheet 28 | of 50 | |



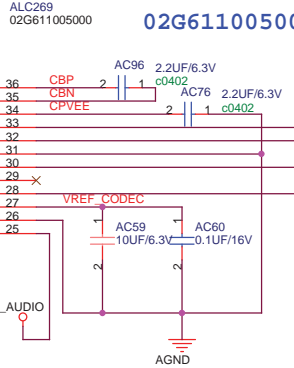
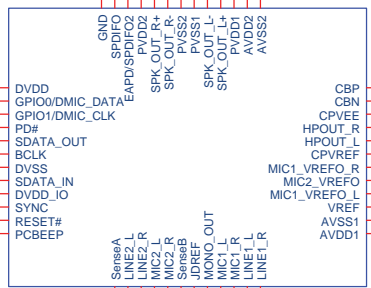
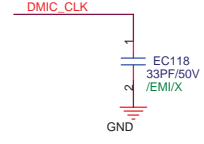
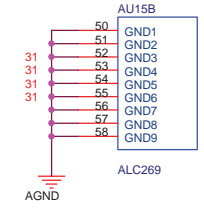
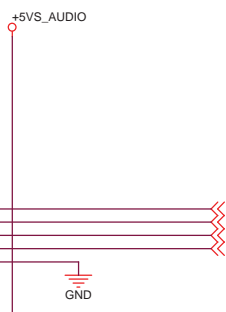
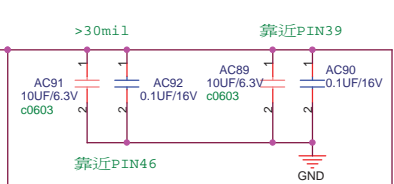
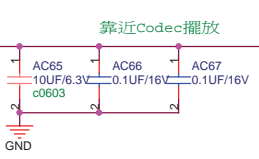
SDWP: Internal Pull-up
SDCDN: Internal Pull-up
SDWP = 1 Write protect
SDWP = 0 Write-able
SDCDN = 1 No card
SDCDN = 0 Card inserted

Card Insert: Pin.10 and Pin.12 are Shorted.
Card not Insert: Pin.10 and Pin.12 are Opened.
Write Protect: Pin.11 and Pin.12 are Opened.
Write Enable: Pin.11 and Pin.12 are Shorted.





1.1G Add,
for Codec ground ring

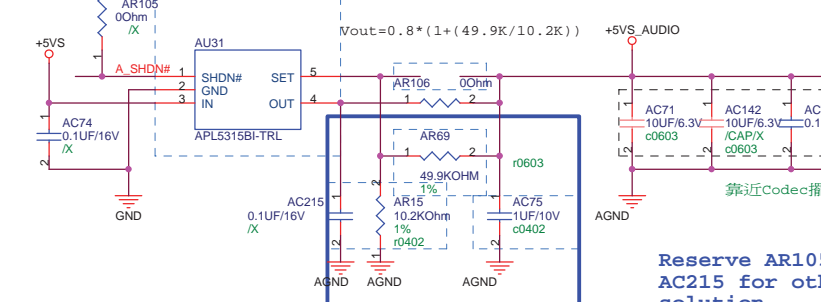
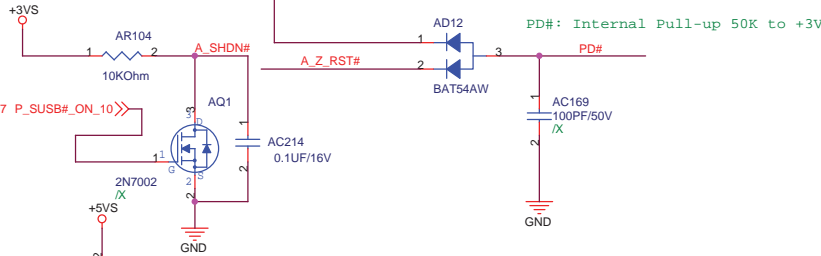


02G611005001 in the BOM

1.1G AC96 AC76 change to 0402 type

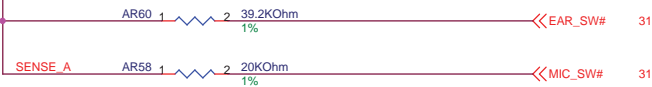
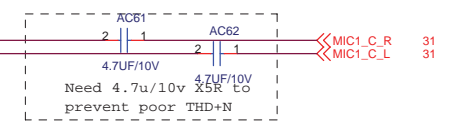
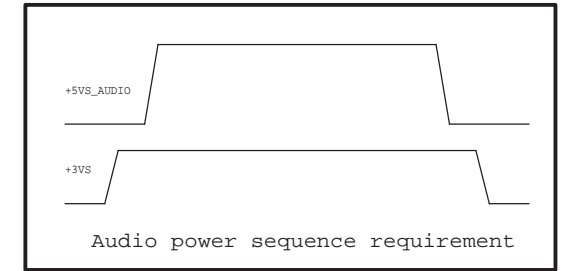
15 A_Z_SDOUT
15,41 A_Z_BITCLK
15 A_Z_SDIN0
15 A_Z_SYNC
15 A_Z_RST#

17 SB_SPKR
32 OP_SD#
OP_SD#: Controlled by EC to power down Class-D speaker amp.



Reserve AR105 AR106
AC215 for other LDO
solution

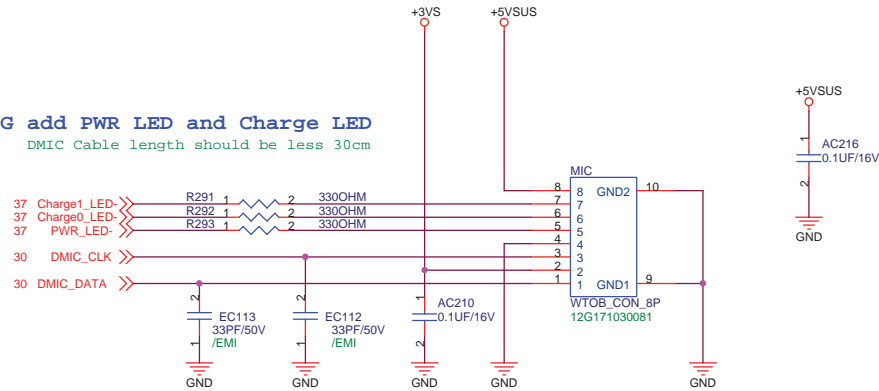
For Audio Noise Issue



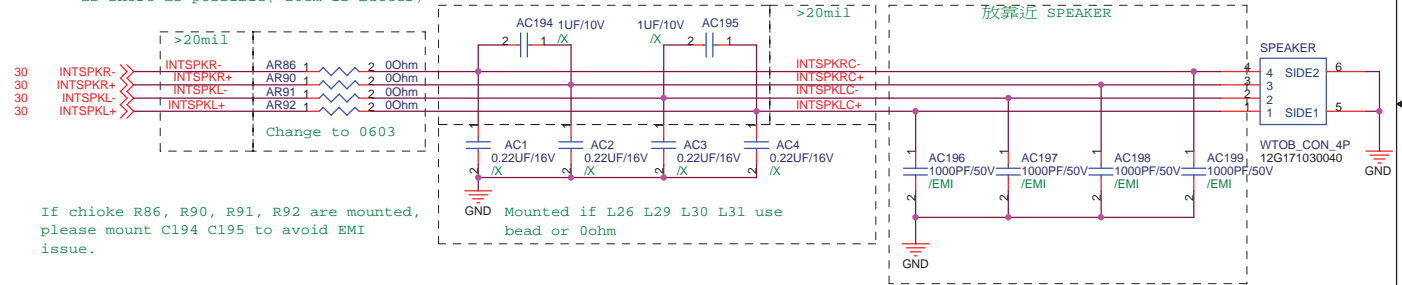
| | | | |
|-------------------------------|--------------|------------------|----------|
| ASUS | | Title : ALC269-1 | |
| ASUSTek Computer Inc. | | Engineer: Mick | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet | 30 of 50 |

1.1G add PWR LED and Charge LED

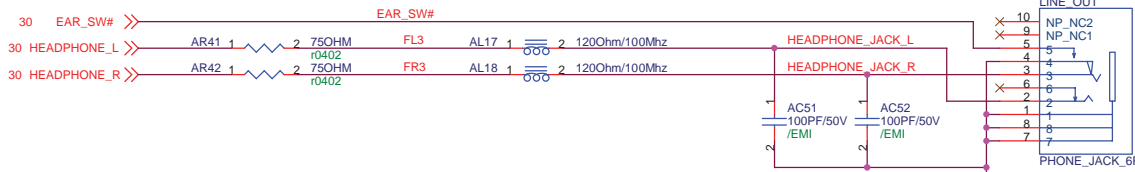
DMIC Cable length should be less 30cm



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



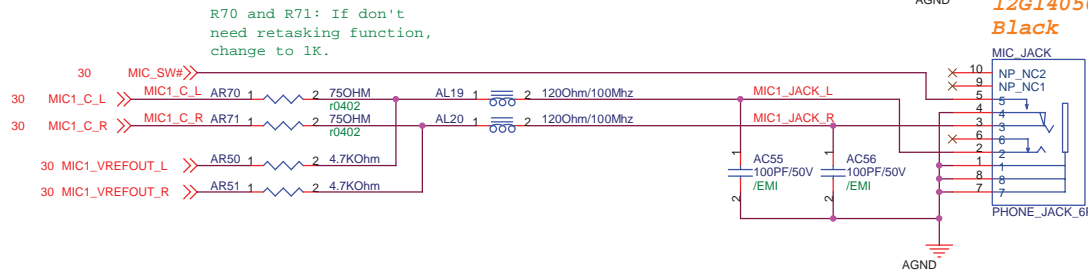
LINE_OUT use
12G14050106P(SINGATRON)
Black



1.1G Change audio con. to black

change from DIP to SMD

MIC JACK use
12G14050106P(SINGATRON)
Black

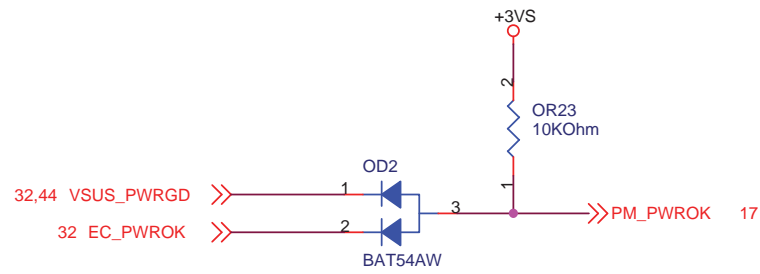
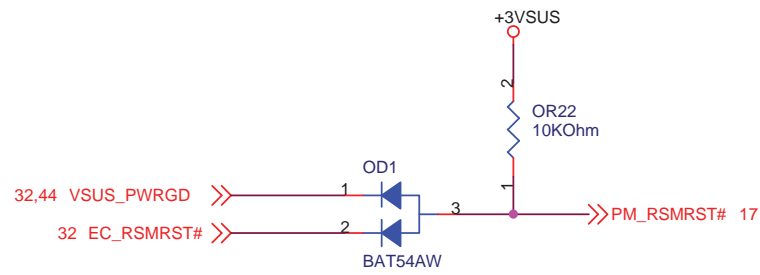


1.1G Change audio con. to black


change from DIP to SMD

<Core Design>

| | | | |
|-------------------------------|----------------------|------------------|-------------|
| ASUS | | Title : ALC269-2 | |
| ASUSTek Computer Inc. | | Engineer: MICK | |
| Size A3 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 31 of 50 |



<Core Design>

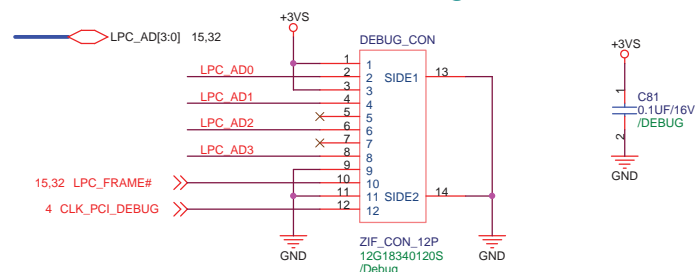
| | | | |
|---|-----------------------------|-----------------------------|-------------|
|  | | Title : EC_UART_KC3820 | |
| ASUSTek Computer INC. | | Engineer: <i>Kell_Huang</i> | |
| Size A4 | Project Name S101 | | Rev 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet 33 of 50 | |

prevent system power on when LCD close

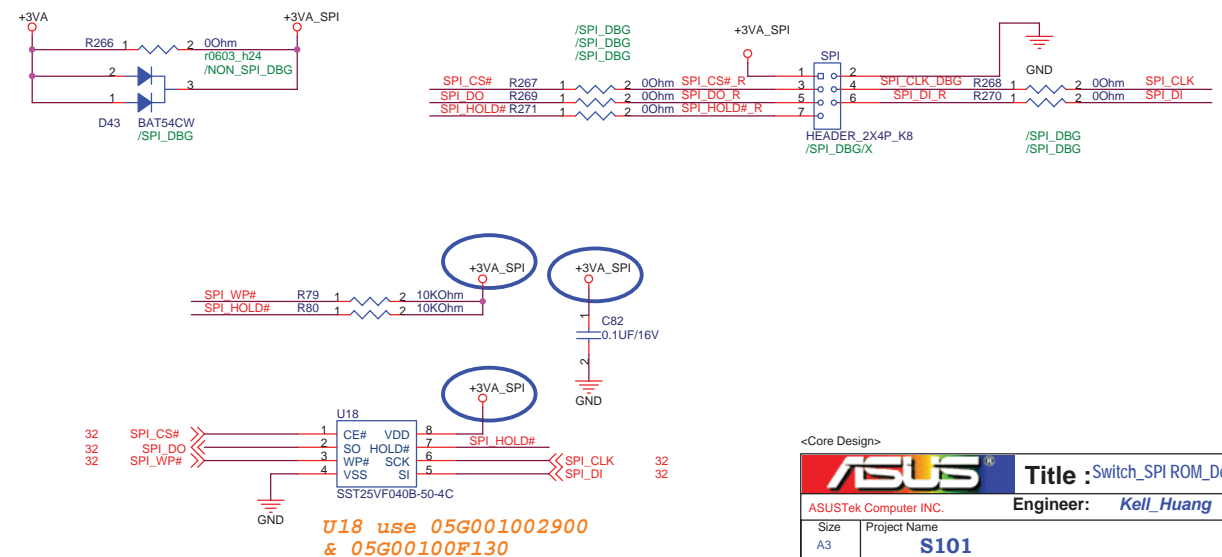
H152&H154 : Pad for EMI

prevent system auto power on when CMOS clear

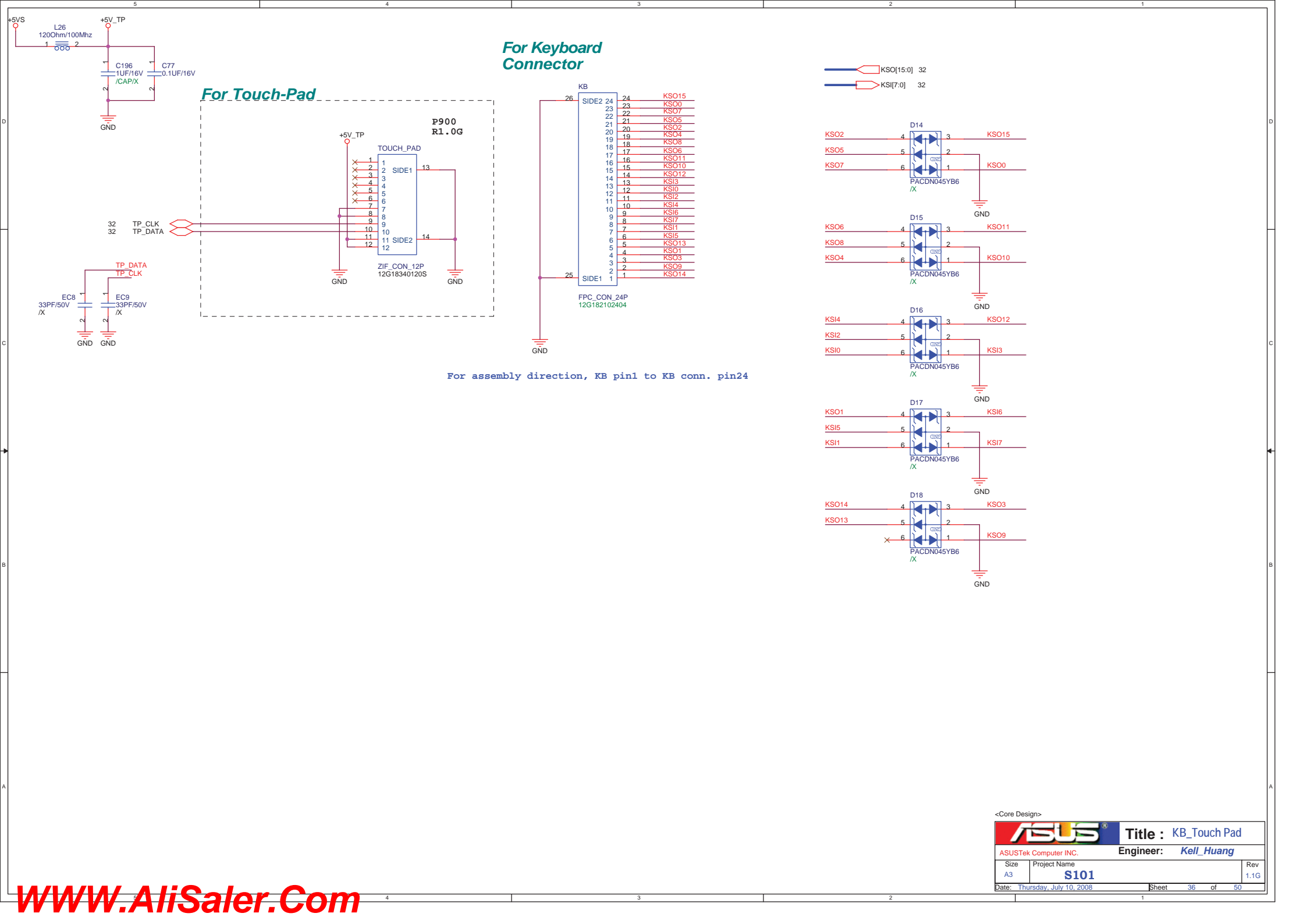
For Debug



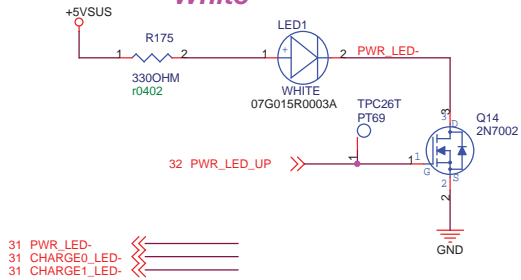
Debug Card cable use Z96 Touch Pad cable, P/N:
14G124110126, 14G124110120, 14G124110121
14G124110124, 14G124110125



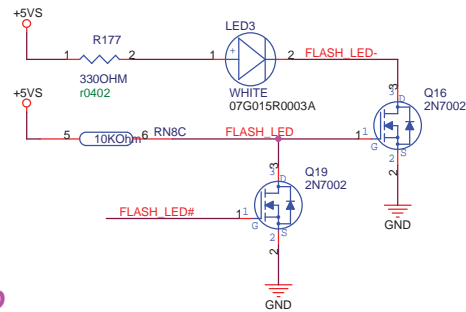
| | | | |
|-----------------------|-------------------------|------------------------------|----------|
| ASUS | | Title : Switch_SPI ROM_Debug | |
| ASUSTek Computer INC. | | Engineer: Keli_Huang | |
| Size | A3 | Project Name | S101 |
| Date: | Thursday, July 10, 2008 | Sheet | 34 of 50 |



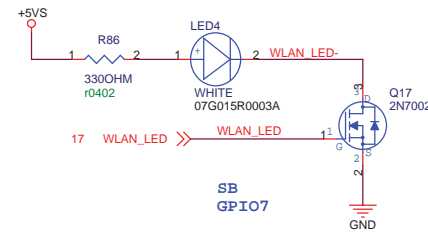
for POWER LED White



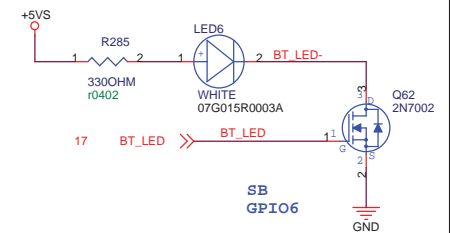
for FLASH LED White



for WLAN LED White

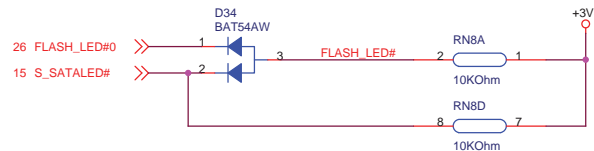
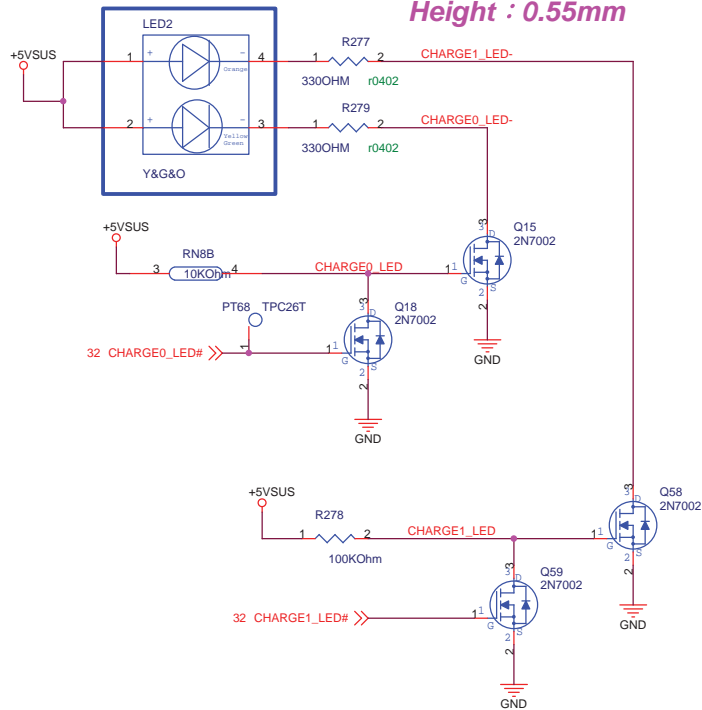


for BlueTooth LED White

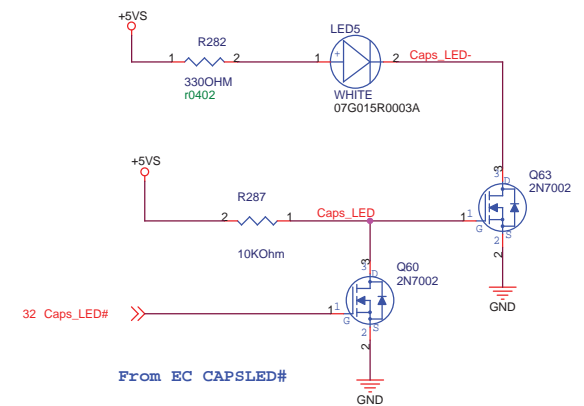


1.1G change to EVERLIGHT

for CHARGE LED Height : 0.55mm



for Caps Lock LED White



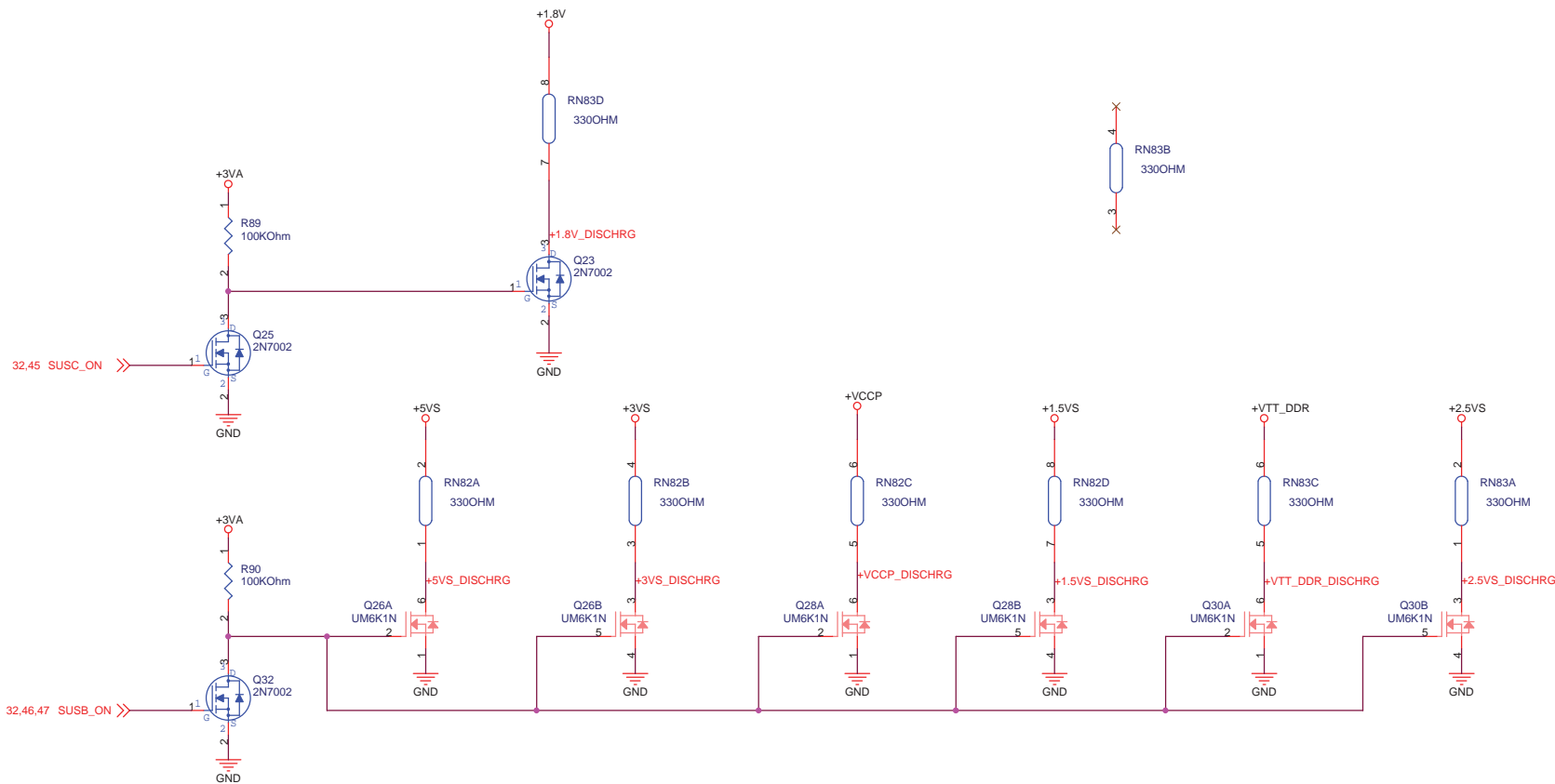
The battery charge indicator (LED) shows the status of the battery's power as follows:

| scenario | Adapter mode | Battery mode |
|-----------------------------------|----------------------------|------------------------|
| Battery power is between 100%~80% | Orange ON | Green ON |
| Battery power is between 80%~10% | Orange Blinking Slowly | Green Blinking Slowly |
| Battery power is less than 10% | Orange Blinking Quickly | Green Blinking Quickly |
| S3/S5 Mode | Scenario the same as above | Off |

Note: The BATTERY LED should be off when the machine has no battery attached.

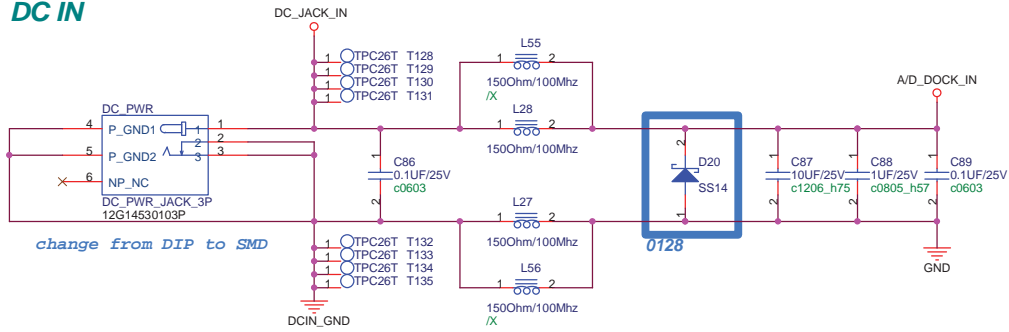
<Core Design>

| | | | |
|-------------------------------|--------------|----------------------|-------|
| ASUS | | Title : LED | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | Sheet | 37 | of 50 |

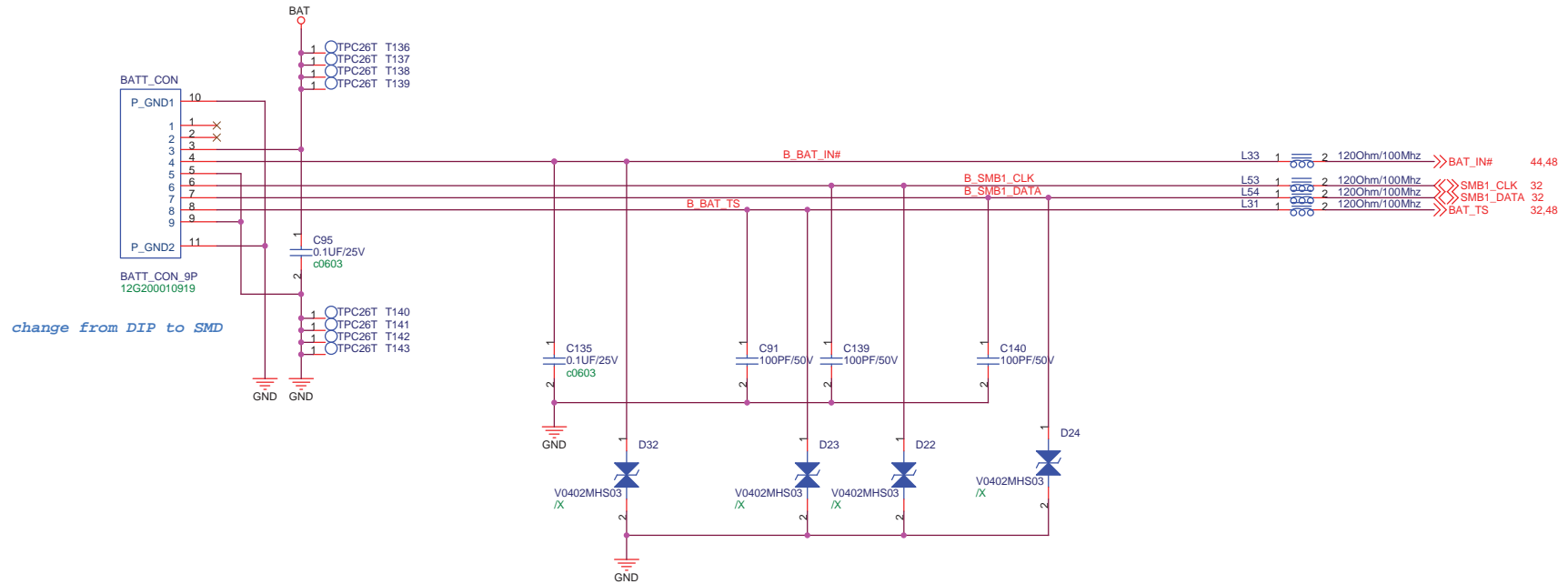


| | | | |
|-------------------------------|--------------|----------------------|----------|
| <Core Design> | | | |
| ASUS | | Title : Discharge | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | | Rev |
| A3 | S101 | | 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 38 of 50 |

DC IN

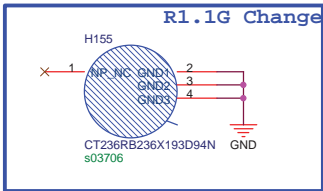
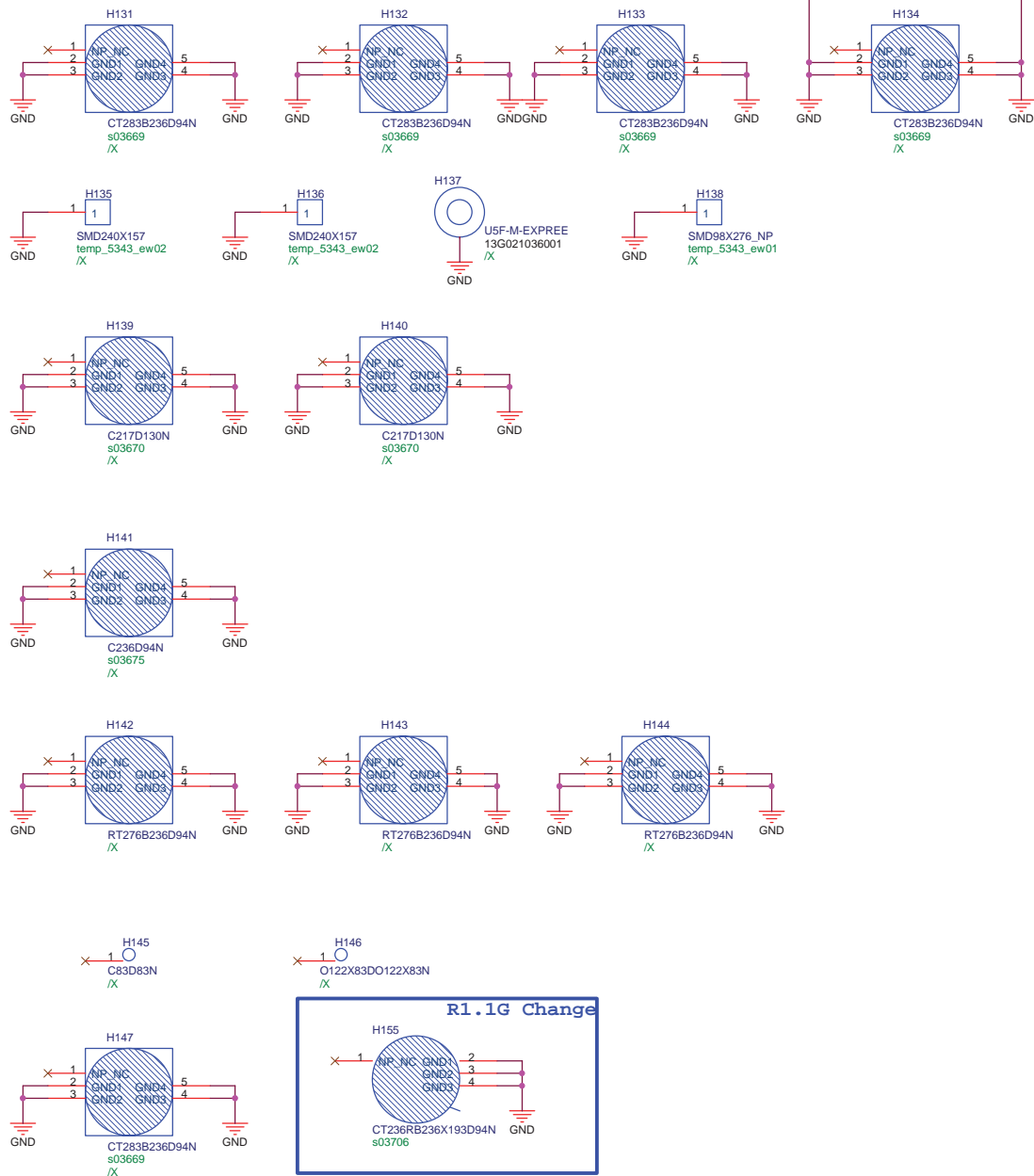


BAT IN



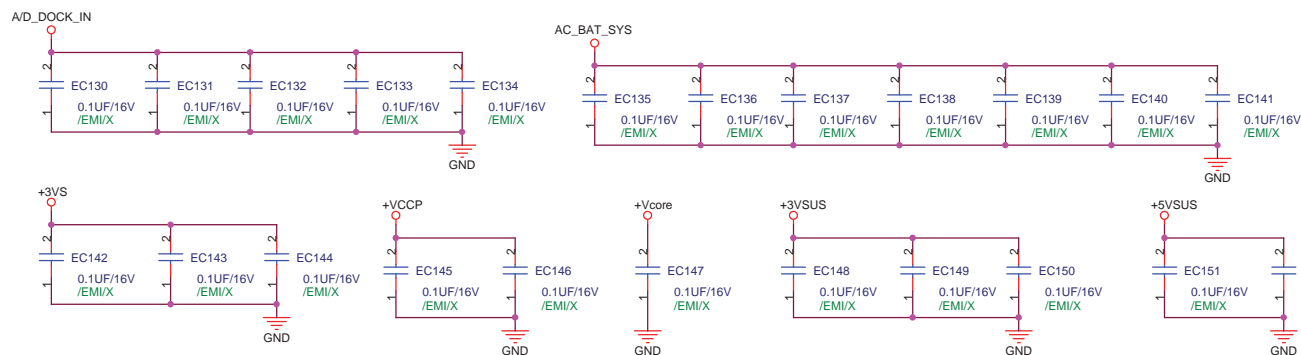
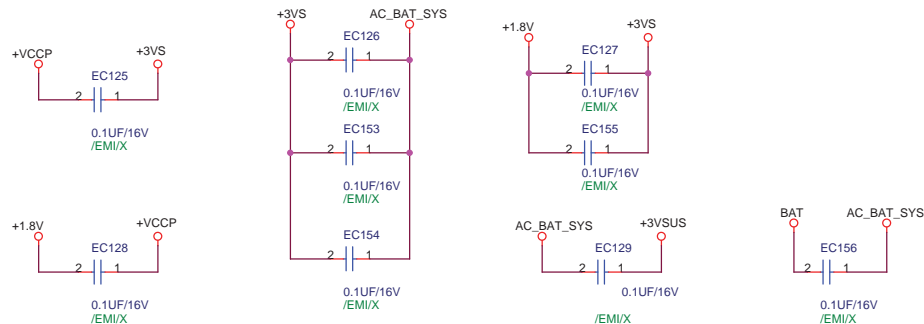
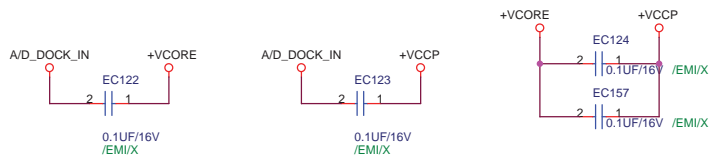
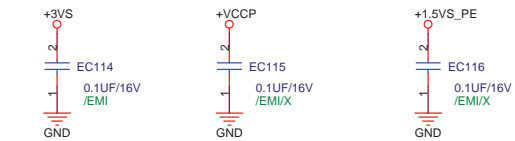
<Core Design>

| | | | |
|-------------------------------|--------------|-----------------------------|----------|
| ASUS | | Title : PWR Jack | |
| ASUSTek Computer INC. | | Engineer: Kell_Huang | |
| Size | Project Name | | Rev |
| A3 | S101 | | 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 39 of 50 |



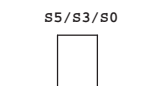
<Core Design>

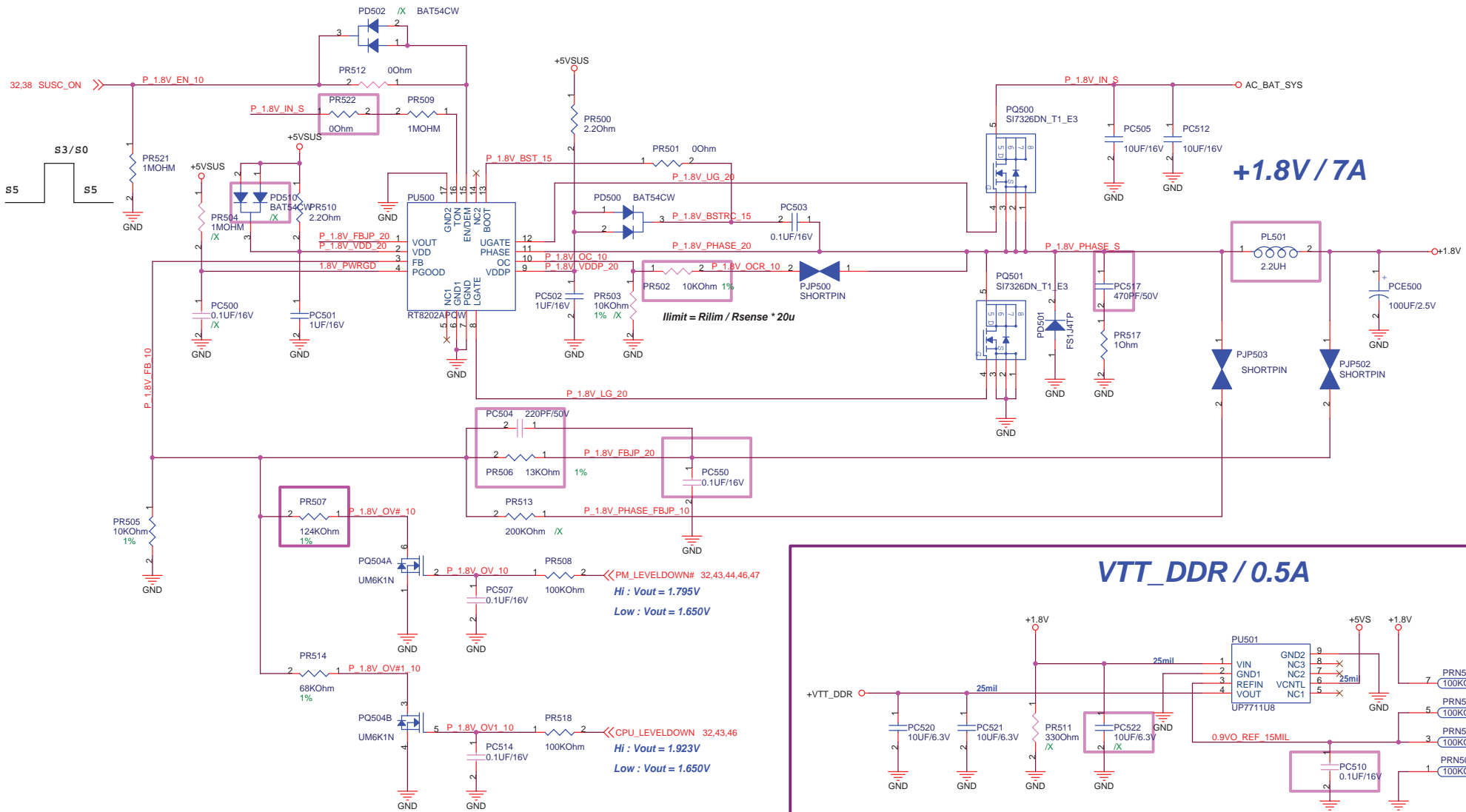
| | | | |
|-------------------------------|--------------|-----------------------------|----------|
| ASUS | | Title : Screw Hole | |
| ASUSTek Computer INC. | | Engineer: <i>Kell_Huang</i> | |
| Size | Project Name | | Rev |
| A3 | S101 | | 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 40 of 50 |



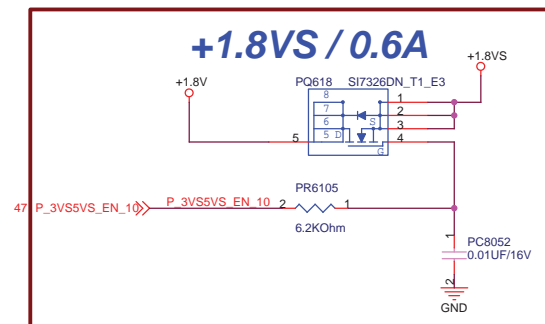
<Core Design>

| | | | |
|-------------------------------|--------------|-----------------------------|----------|
| ASUS | | Title : EMI | |
| ASUSTek Computer INC. | | Engineer: <i>Kell_Huang</i> | |
| Size | Project Name | Rev | |
| A3 | S101 | 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet | 41 of 50 |





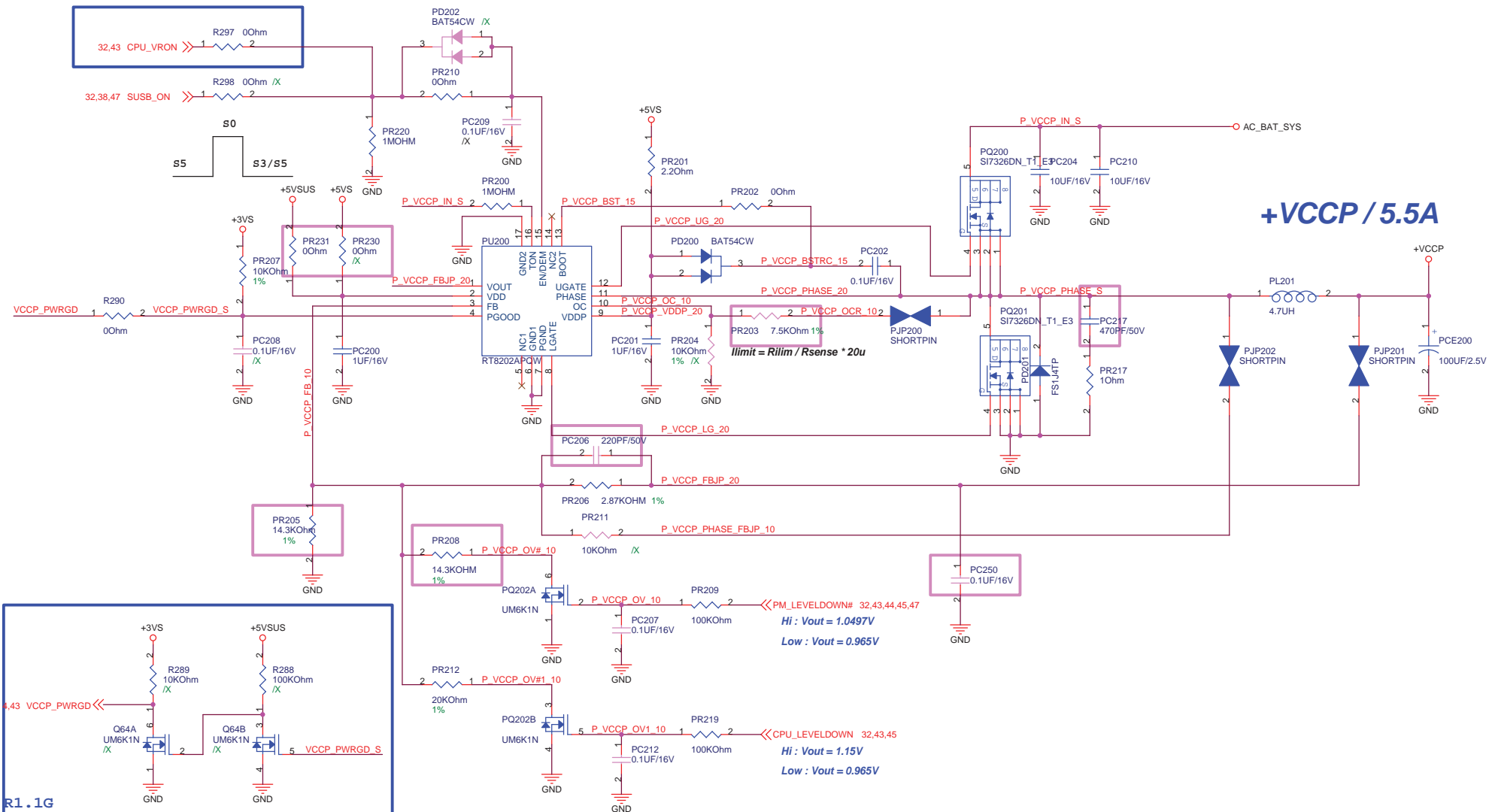
| PM_LEVELDOWN# | CPU_LEVELDOWN | CPU_LEVELDOWN# | Voltage | Status |
|---------------|---------------|----------------|---------|--------------|
| L | L | H | 1.72V | Power Saving |
| H | L | H | 1.795V | Normal |
| H | H | L | 1.927V | Performance |
| L | H | L | 1.782V | N/A |



<Core Design>

| | | | |
|-------------------------------|-----------------------------|-----------------------------------|--|
| ASUS | | Title : +1.8V & VTTDDR | |
| ASUSTek Computer INC. | | Engineer: Joy_Zhou | |
| Size A3 | Project Name 1001 | Rev 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet 45 of 50 | |

1.1G change Enable signal from CPU_VRON



| PM_LEVELDOWN# | CPU_LEVELDOWN | CPU_LEVELDOWN# | Voltage | Status |
|---------------|---------------|----------------|---------|--------------|
| L | L | H | 0.965V | Power Saving |
| H | L | H | 1.048V | Normal |
| H | H | L | 1.157V | Performance |
| L | H | L | 1.072V | N/A |

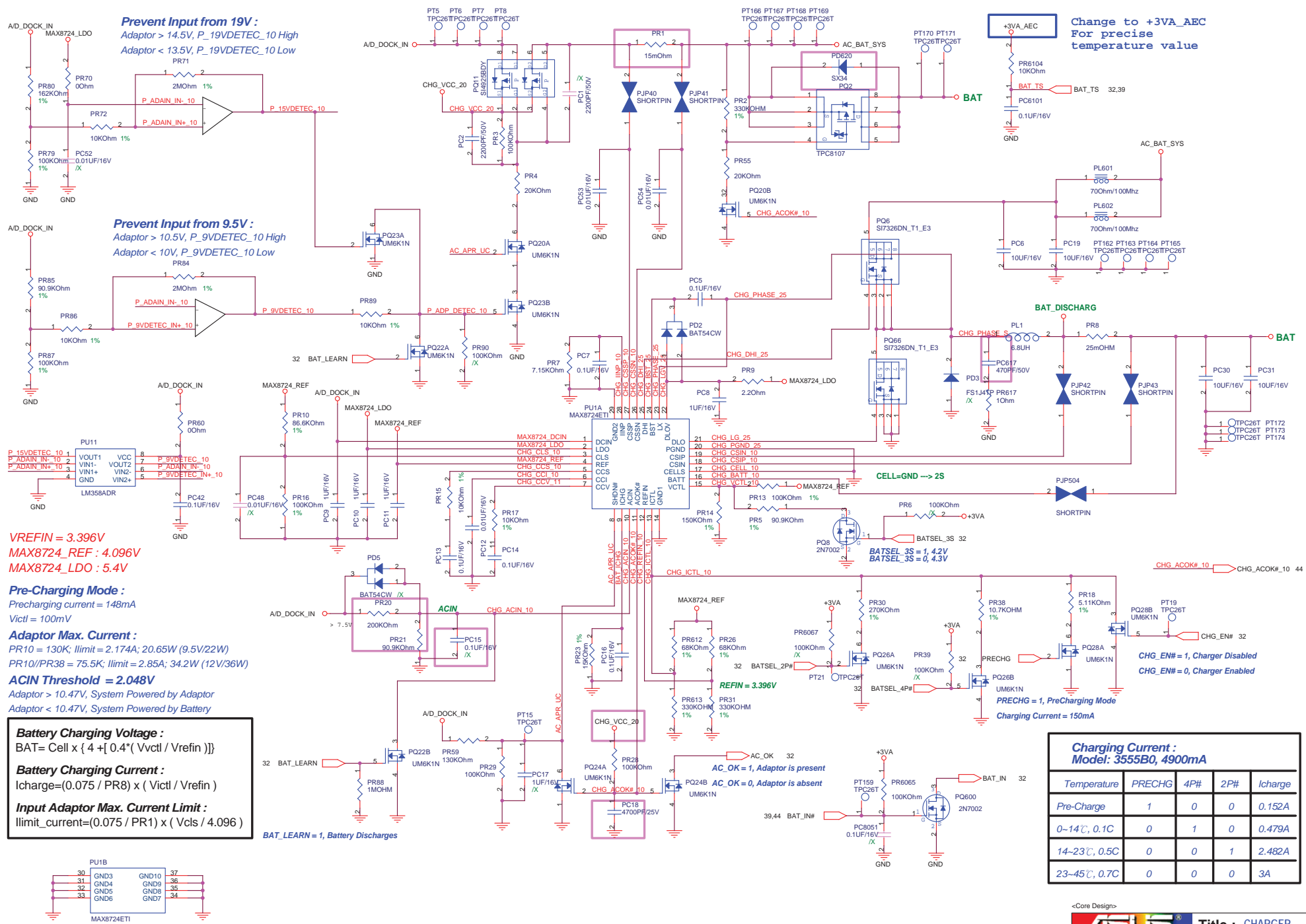
<Core Design>

ASUS Title : VCCP

ASUSTek Computer INC. Engineer: Joy_Zhou

| | | |
|------------|-----------------------------|-------------|
| Size A3 | Project Name 1001 | Rev 1.1G |
|------------|-----------------------------|-------------|

Date: Thursday, July 10, 2008 Sheet 46 of 50



VREFIN = 3.396V
MAX8724_REF = 4.096V
MAX8724_LDO = 5.4V

Pre-Charging Mode :
Precharging current = 148mA
Vicl = 100mV

Adaptor Max. Current :
PR10 = 130K; Ilimit = 2.174A; 20.65W (9.5V/22W)
PR10/PR38 = 75.5K; Ilimit = 2.85A; 34.2W (12V/36W)

ACIN Threshold = 2.048V
Adaptor > 10.47V, System Powered by Adaptor
Adaptor < 10.47V, System Powered by Battery

Battery Charging Voltage :
 $BAT = Cell \times \{ 4 + [0.4 * (V_{vct} / V_{refin})] \}$

Battery Charging Current :
 $I_{charge} = (0.075 / PR8) \times (V_{icl} / V_{refin})$

Input Adaptor Max. Current Limit :
 $I_{limit_current} = (0.075 / PR1) \times (V_{cls} / 4.096)$

| Charging Current : Model: 3555B0, 4900mA | | | | |
|---|--------|-----|-----|---------|
| Temperature | PRECHG | 4P# | 2P# | Icharge |
| Pre-Charge | 1 | 0 | 0 | 0.152A |
| 0~14℃, 0.1C | 0 | 1 | 0 | 0.479A |
| 14~23℃, 0.5C | 0 | 0 | 1 | 2.482A |
| 23~45℃, 0.7C | 0 | 0 | 0 | 3A |

Title : CHARGER

ASUSTek Computer INC. Engineer: Winnie_Chen

Size Project Name Custom S101

Date: Thursday, July 10, 2008 Sheet 48 of 50

Rev 1.1G

EC KB3310 GPIO SETTING


| Pin | Pin Name | Signal Name | Type | Note |
|-----|---------------------|-------------|------|----------------------------------|
| 1 | GPIO00/GA20 | A20GATE | O | |
| 2 | GPIO01/KBRST# | RC_IN# | O | |
| 6 | GPIO04 | HOTKEY_SW0# | I | Internal pull high |
| 13 | GPIO05/PCIRST# | PCI_RST# | I | |
| 14 | GPIO07 | HOTKEY_SW1# | I | Internal Pull Up |
| 15 | GPIO08 | EXTSMIH# | OD | 10K ohm Pull Up to +3VSU |
| 16 | GPIO0A | LID_EC# | I | Internal pull high |
| 17 | GPIO0B/ESB_CLK | NC | O | |
| 18 | GPIO0C/ESB_DAT | NC | O | |
| 19 | GPIO0D | HOTKEY_SW2# | I | Internal pull high |
| 20 | GPIO0E/SC# | KBC_SC# | OD | 10K ohm Pull Up to +3VSUS |
| 21 | GPIO0F/PWM0 | BL_PWM_DA | O | |
| 23 | GPIO10/PWM1 | BATSEL_4P# | O | Battery charging current setting |
| 25 | GPIO11/PWM2 | PM_PWRBTN# | OD | Internal pull high in ICH |
| 26 | GPIO12/FANPWM1 | FAN0_PWM | O | CPU Fan |
| 27 | GPIO13/FANPWM2 | FAN1_PWM | O | VGA Fan |
| 28 | GPIO14/FANFB1 | FAN0_TACH | I | CPU FanTach |
| 29 | GPIO15/FANFB2 | FAN1_TACH | I | VGA FanTach |
| 30 | GPIO16/E51_TX | E51_TX | O | RS232 debug port |
| 31 | GPIO17/E51_RX | E51_RX | O | RS232 debug port |
| 32 | GPIO18 | PWR_SW# | I | Internal pull high |
| 34 | GPIO19/PWM3 | MAIL_LED# | O | |
| 36 | GPIO1A/NUMLED | NUM_LED# | O | |
| 38 | GPIO1D/CLKRUN# | NC | O | |
| 39 | GPIO20/KSO0/TP_TEST | KSO0 | O | |
| 40 | GPIO21/KSO1/TP_PLL | KSO1 | O | |
| 41 | GPIO22/KSO2 | KSO2 | O | |
| 42 | GPIO23/KSO3 | KSO3 | O | |
| 43 | GPIO24/KSO4 | KSO4 | O | |
| 44 | GPIO25/KSO5 | KSO5 | O | |
| 45 | GPIO26/KSO6 | KSO6 | O | |
| 46 | GPIO27/KSO7 | KSO7 | O | |
| 47 | GPIO28/KSO8 | KSO8 | O | |
| 48 | GPIO29/KSO9 | KSO9 | O | |
| 49 | GPIO2A/KSO10 | KSO10 | O | |
| 50 | GPIO2B/KSO11 | KSO11 | O | |
| 51 | GPIO2C/KSO12 | KSO12 | O | |
| 52 | GPIO2D/KSO13 | KSO13 | O | |
| 53 | GPIO2E/KSO14 | KSO14 | O | |
| 54 | GPIO2F/KSO15 | KSO15 | O | |
| 55 | GPIO30/KSI0 | KSI0 | I | Internal pull high |
| 56 | GPIO31/KSI1 | KSI1 | I | Internal pull high |
| 57 | GPIO32/KSI2 | KSI2 | I | Internal pull high |
| 58 | GPIO33/KSI3 | KSI3 | I | Internal pull high |
| 59 | GPIO34/KSI4 | KSI4 | I | Internal pull high |
| 60 | GPIO35/KSI5 | KSI5 | I | Internal pull high |
| 61 | GPIO36/KSI6 | KSI6 | I | Internal pull high |
| 62 | GPIO37/KSI7 | KSI7 | I | Internal pull high |
| 63 | GPI38/AD0 | BAT_ICHG | I | |
| 64 | GPI39/AD1 | BAT_CONFIG | I | Battery configuration |
| 65 | GPIO3A/AD2 | BAT_SENSE | I | Battery Voltage Sensor |
| 66 | GPIO3B/AD3 | BAT_TS | I | Battery Thermal Sensor |
| 68 | GPO3C/DA0 | DOC | O | Trigger Clock Gen |

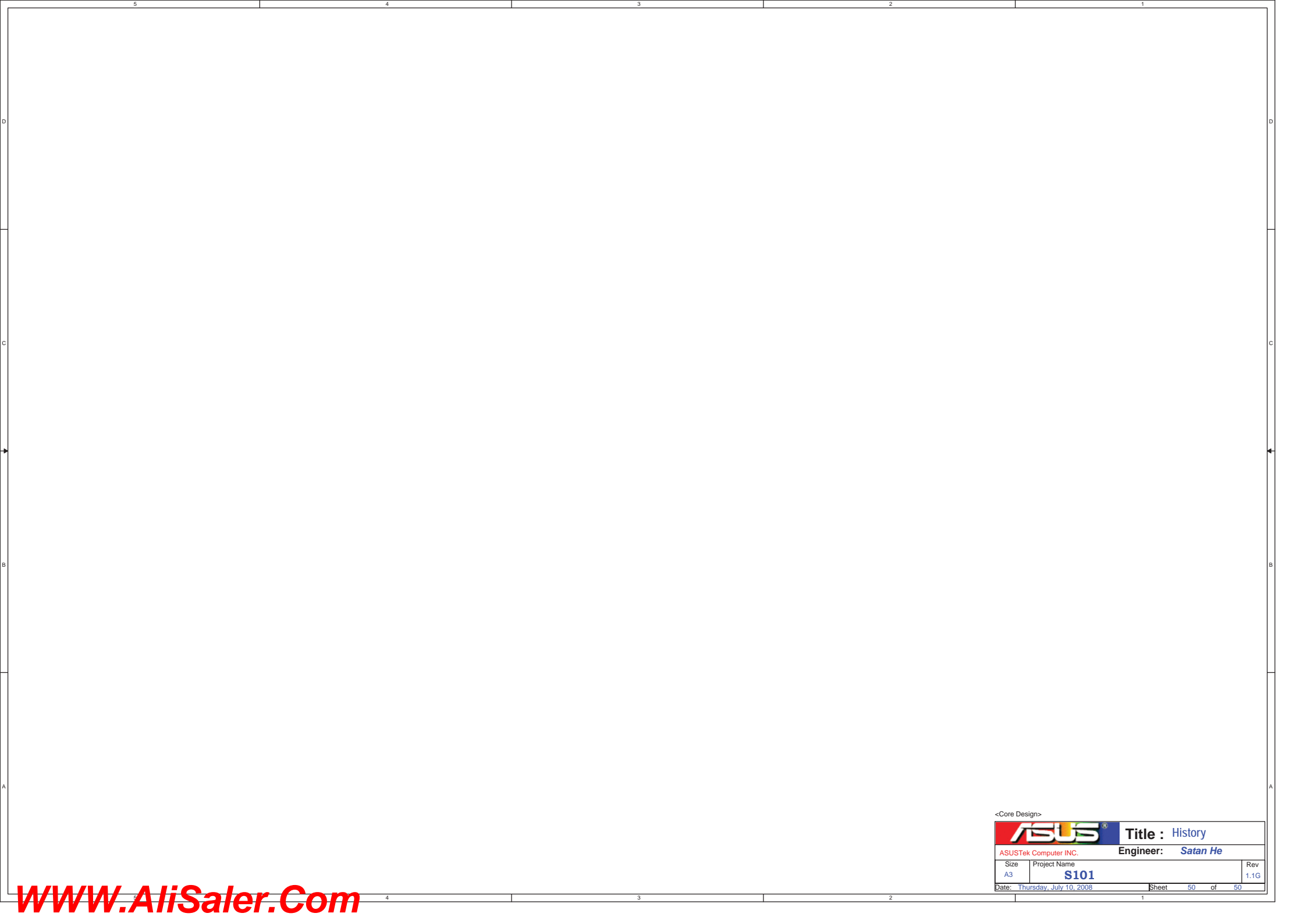
EC KB3310 Other Pin SETTING

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


| Pin | Pin Name | Signal Name | Type | Note |
|-----|-----------------|---------------|------|-------------------------------------|
| 70 | GPO3D/DA1 | LCD_BACKOFF# | O | |
| 71 | GPO3E/DA2 | CLK_PWRSERVE# | O | |
| 72 | GPO3F/DA3 | BAT_LL# | O | Battery Low Low |
| 73 | GPIO40 | AC_OK | I | AC Adaptor Plug in |
| 74 | GPIO41 | PM_RSMRST# | O | 10K pull down to GND |
| 75 | GPI42 | BAT_IN | I | |
| 76 | GPI43 | CLRTC_EC | I | |
| 77 | GPIO44/SCL1 | SMB0_CLK | I/O | 4.7K pull high to +3VA_EC |
| 78 | GPIO45/SDA1 | SMB0_DAT | I/O | 4.7K pull high to +3VA_EC |
| 79 | GPIO46/SCL2 | SMB1_CLK | I/O | 10K pull high to +3V |
| 80 | GPIO47/SDA2 | SMB1_DAT | I/O | 10K pull high to +3V |
| 81 | GPIO48/KSO16 | KB pin 28 | I | for KB type detection |
| 82 | GPIO49/KSO17 | KB pin 27 | I | for KB type detection |
| 83 | GPIO4A/PSCLK1 | AUO_SCL | O | for AUO, default H at S0 |
| 84 | GPIO4B/PSDAT1 | AUO_SDA | O | for AUO, default L at S0 |
| 85 | GPIO4C/PSCLK2 | AUO_CSB | O | for AUO, default H at S0 |
| 86 | GPIO4D/PSDAT2 | LVDD_EN | I | for AUO 7" Panel |
| 87 | GPIO4E/PSCLK3 | TP_CLK | I/O | 10K pull high to +3V |
| 88 | GPIO4F/PSDAT3 | TP_DAT | I/O | 10K pull high to +3V |
| 89 | GPIO50/SELIO# | BATSEL_3S | O | Battery series, H:3S, L:4S |
| 90 | GPIO52/E51_CS# | CHG_LED_UP# | O | |
| 91 | GPIO53/CAPLED | CAP_LED# | O | |
| 92 | GPIO54 | PWR_LED_UP | O | |
| 93 | GPIO55/SCRLED | SCRLED | O | |
| 95 | GPIO56 | PWR4G_SW# | I | Internal pull high |
| 97 | GPXOA00/SDICS# | SPI_MODE# | O | 4.7K pull down to GND |
| 98 | GPXOA01/SDICLK | SUSC_ON | O | |
| 99 | GPXOA02/SDIDO | VSUS_ON | O | |
| 100 | GPXOA03 | CPU_VRON | O | |
| 101 | GPXOA04 | SUSB_ON | O | |
| 102 | GPXOA05 | ICH_PWROK | O | |
| 103 | GPXOA06 | VOLT_CTRL | O | |
| 104 | GPXOA07 | CHG_EN# | O | Battery charging enabled |
| 105 | GPXOA08 | PRECHG | O | |
| 106 | GPXOA09 | SPI_WP# | O | |
| 107 | GPXOA10 | OP_SD# | O | Audio OP |
| 108 | GPXOA11 | BAT_LEARN | O | |
| 109 | GPXID0/SDIDI | BATSEL_2P# | O | Battery parallel, H:1P, L:2P~3P |
| 110 | GPXID1 | NC | O | |
| 112 | GPXID2 | THRO_CPU | O | Active if CPU temperature over spec |
| 114 | GPXID3 | SUSB# | I | 100K pull down to GND |
| 115 | GPXID4 | SUSC# | I | 100K pull down to GND |
| 116 | GPXID5 | CPUPWR_GD | I | Pull high to +3V |
| 117 | GPXID6 | VSUS_GD | I | |
| 118 | GPXID7 | NC | O | |
| 121 | GPIO57 | INTERNET# | I | Internal pull high |
| 126 | GPIO57/SPICLK | SPI_CLK | O | |
| 127 | GPIO59/TEST_CLK | NC | O | |

<Core Design>

| | | | |
|---|-----------------------------|---------------------------|----------|
|  | | Title : EC Pin Define | |
| ASUSTek Computer INC. | | Engineer: Satan He | |
| Size A3 | Project Name S101 | Rev 1.1G | |
| Date: Thursday, July 10, 2008 | | Sheet | 49 of 50 |



<Core Design>

| | | | |
|---|--------------|--------------------|----------|
|  | | Title : History | |
| ASUSTek Computer INC. | | Engineer: Satan He | |
| Size | Project Name | | Rev |
| A3 | S101 | | 1.1G |
| Date: Thursday, July 10, 2008 | | Sheet | 50 of 50 |