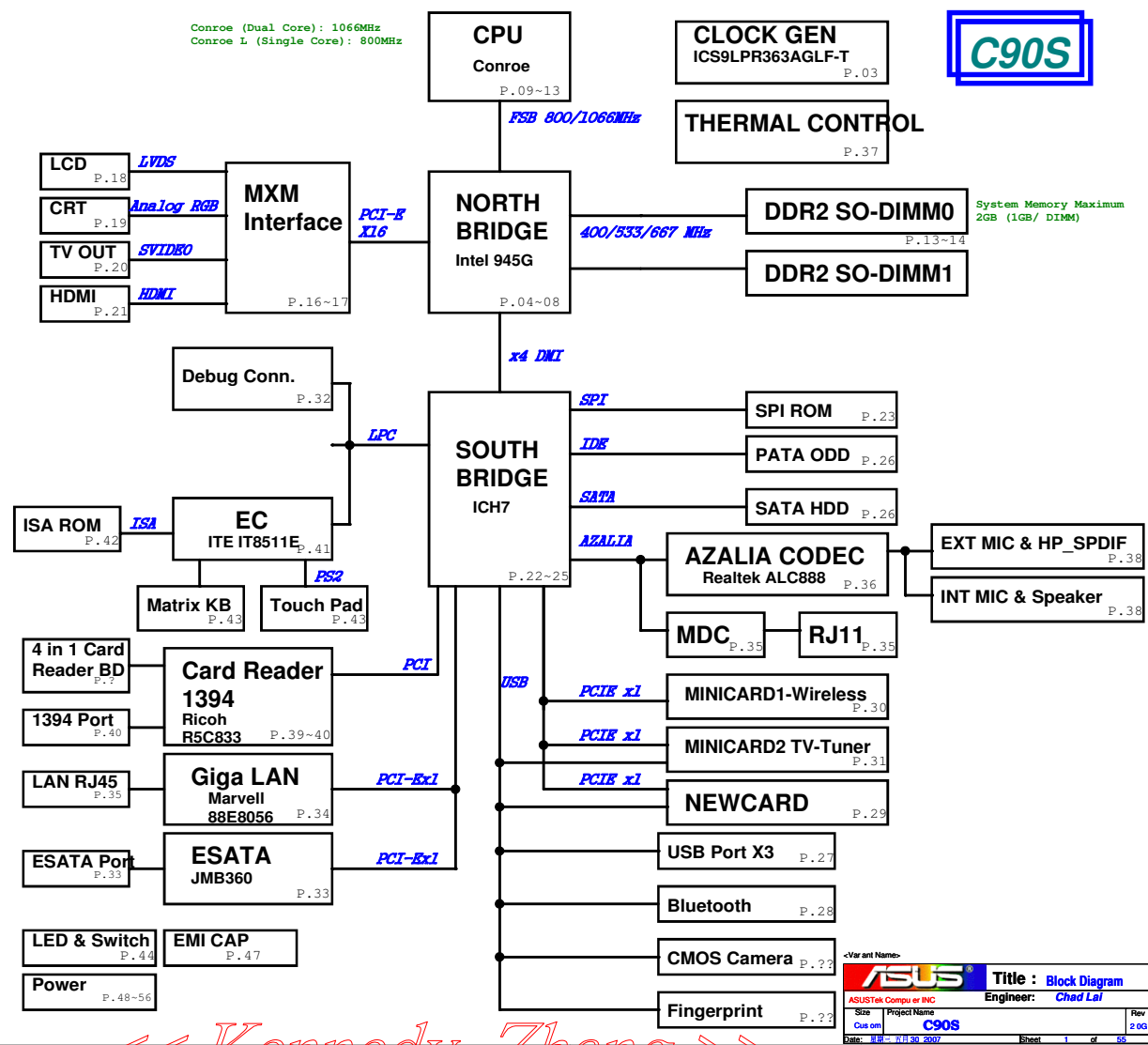


|    |                             |
|----|-----------------------------|
| 1  | BLOCK Diagram               |
| 2  | HISTORY                     |
| 3  | Power Sequence              |
| 4  | CLKGEN-ICS9LPR364AGLF-T     |
| 5  | NB-945_1                    |
| 6  | NB-945_2                    |
| 7  | NB-945_3                    |
| 8  | NB-945_4                    |
| 9  | NB-945_5                    |
| 10 | LGA775-1                    |
| 11 | LGA775-2                    |
| 12 | LGA775-3                    |
| 13 | LGA775-4                    |
| 14 | DDRII_1-DIMMs               |
| 15 | DDRII_2-Termination         |
| 16 | MXM Interface               |
| 17 | MXM Power & GND             |
| 18 | NBIO_1-LVDS & Inverter      |
| 19 | NBIO_2-CRT                  |
| 20 | NBIO_3-SVIDEO               |
| 21 | NBIO_4-HDMI Connector       |
| 22 | SB-ICH7-1                   |
| 23 | SB-ICH7-2                   |
| 24 | SB-ICH7-3                   |
| 25 | SB-ICH7-4                   |
| 26 | SBIO_1-SATA_HDD & IDE_ODD   |
| 27 | SBIO_2-USB & DAUGHTER       |
| 28 | SBIO_3-Bluetooth & G-Sensor |
| 29 | SBIO_4-EXPRESS CARD         |
| 30 | SBIO_5-Mini Card1-Wireless  |
| 31 | SBIO_6-Mini Card2-MINICARD  |
| 32 | SBIO_7-TPM/Debug/I2C_GPIO   |
| 33 | PCIE-ESATA-JMB360           |
| 34 | PCIE-GLAN-Marvell 88E8056   |
| 35 | MDC&RJ45/RJ11               |
| 36 | Audio_1-Realtek ALC888      |
| 37 | Audio_2-Speaker / MicA      |
| 38 | Audio_3-Phone Jack          |
| 39 | PCI-Reader-R5C833           |
| 40 | PCI-Reader-Connector        |
| 41 | EC-IT8511E                  |
| 42 | ECIO_1-ISA ROM & KB & TP    |
| 43 | ECIO_2-FAN                  |
| 44 | LED & SW                    |
| 45 | DC IN & BAT IN & Discharge  |
| 46 | Screw Hole & Nut            |
| 47 | EMI CAP                     |
| 48 | POWER_FLOWCHART             |
| 49 | POWER_CHARGER               |
| 50 | POWER_SYSTEM                |
| 51 | POWER_VCORE                 |
| 52 | POWER_I/O_DDR & VTT         |
| 53 | POWER_I/O_+3VA              |
| 54 | POWER_GOOD_DETECTOR         |
| 55 | POWER_LOAD SWITCH           |



| Rev  | Date       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0  | 04/10/06   | 1. Initial release.(From Z84F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.1  | 08/08/06   | 1. Change Audio Codec from AD1988B to ALC888(Page 35)<br>2. Change AJ2, AJ3 to Azalia type<br>3. Correct RN2 Connection<br>4. Add PR5312, PR5313 to fix NANYA DIMM S3 fail issue(Page 62)<br>5. MXM_PWROK : remove R80(Page 19, Page 28)<br>6. PR5308 change to 1.2K 1% 0603(Page 62)<br>7. Change Inverter Connector type (12pin) & Pin define CON7(Page 22)<br>8. Remove :<br>AR1, AR6, AR7, AR8, AR13, AR14, AR15, AR18, AR19, AR21, AR22, AR34, AC1, AC2, AC4, AC5, AC7, AC8, AC11, AC13, AC23, AC25, AC26, AC27, AU2, AQ6, AQ7, AQ9, AQ12<br>Add :<br>AC81-AC85, AR71, ARN3, AD3, AD4, AL16 |
|      | 08/10/06   | 1. Remove T100-T118(Page 41)<br>2. Add PU5901, PC5905, PC5906 for CIR Power(Page 64)<br>3. PR5308 change to 150K 1% 0603, PC5312 change to 1500PF 0603(Page 62)<br>4. Add PR5060, PR5061(Page 61)<br>5. PR5114 change to 27K 1% 0603(Page 60)<br>6. PR5722 change to 22K 1% 0603, Stuff PR5721(Page 59)<br>7. R77 change to 4.7K, Pull to +5VCHG for AC_OK(Page 20)<br>8. Change connection of L23, L24<br>9. Change CON18 P/N<br>10. Add D30, D31, D32, C175, C176, R136(Page 28)                                                                                                               |
|      | 08/11/06   | 1. Add Audio Amp. AU100, AR100-AR103, AC100-AC107, non-stuff AC41(Page 36)<br>2. AC82 change to 1uF 0603, Add AU2, AC23, AC86, AC87, AR72, AR73, AJP1, AJP2, Remove AC12<br>3. Change MXM SMBus connection to EC, SMB1_CLK, SMB1_DAT(Page 28, Page19)                                                                                                                                                                                                                                                                                                                                            |
| 1.2  | 08/29/06   | 1. Change eSATA Controller from SiI3531 to JMB360(Page 31)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1.0G | 11/03/2006 | 1. C90 1.0G Gerber out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1.1G | 11/03/2006 | ME modify<br>1. <P46>MB_PAD1 change to None PTH type<br>2. <P42>Fingerprint & TouchPad Connector change to 12G18340120F<br>3. <P27>DAUGHTER change to 40PIN 12G171010404<br>4. <P18>LVDS change to 30PIN 12G17001030P                                                                                                                                                                                                                                                                                                                                                                            |

| Rev | Date | Description |
|-----|------|-------------|
|     |      |             |

&lt;Var ant Name&gt;



Title : History

ASUSTek Computer INC

Engineer: Chad Lai

Size Project Name

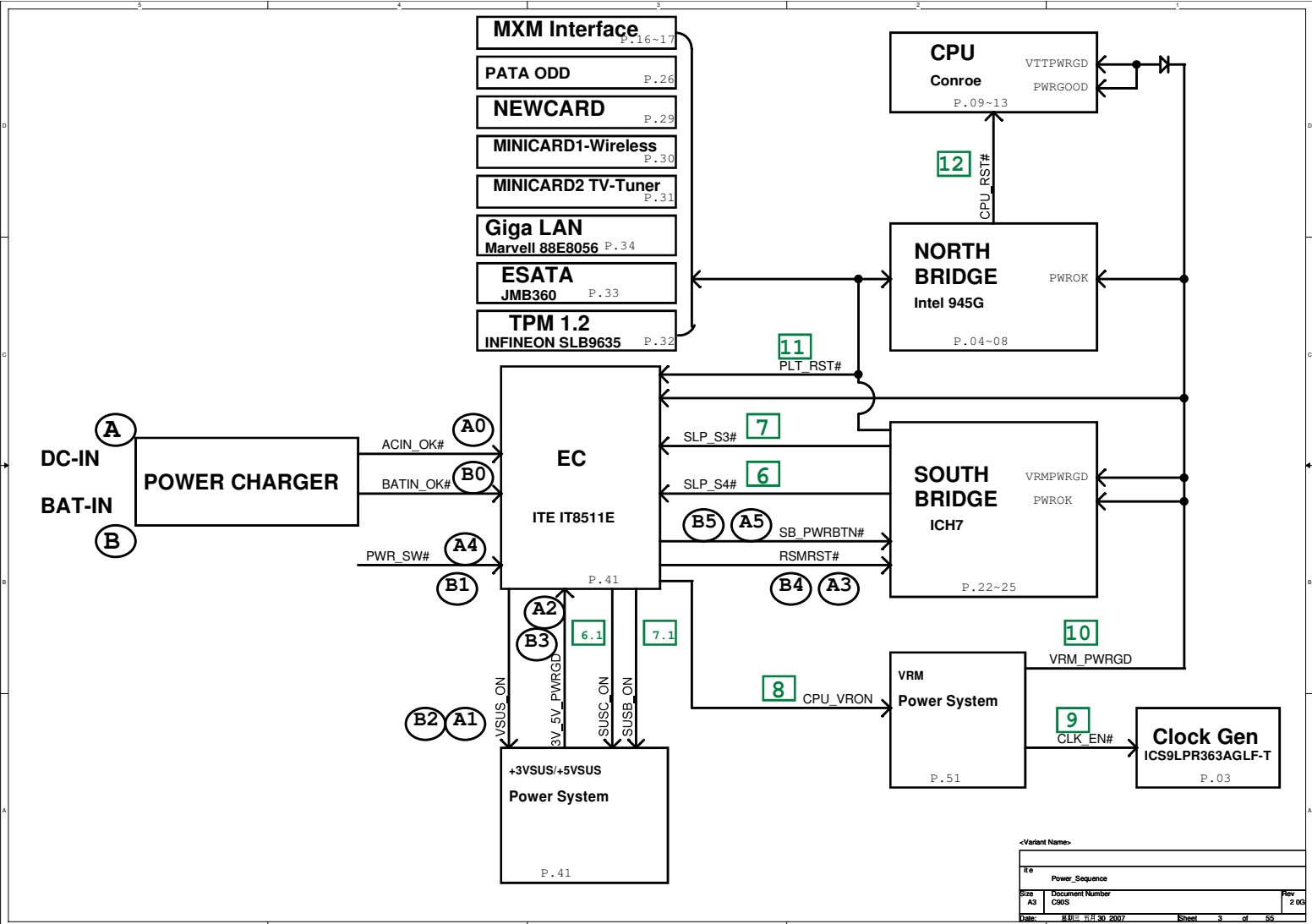
Cus on C90S

Date: 8/8/2007

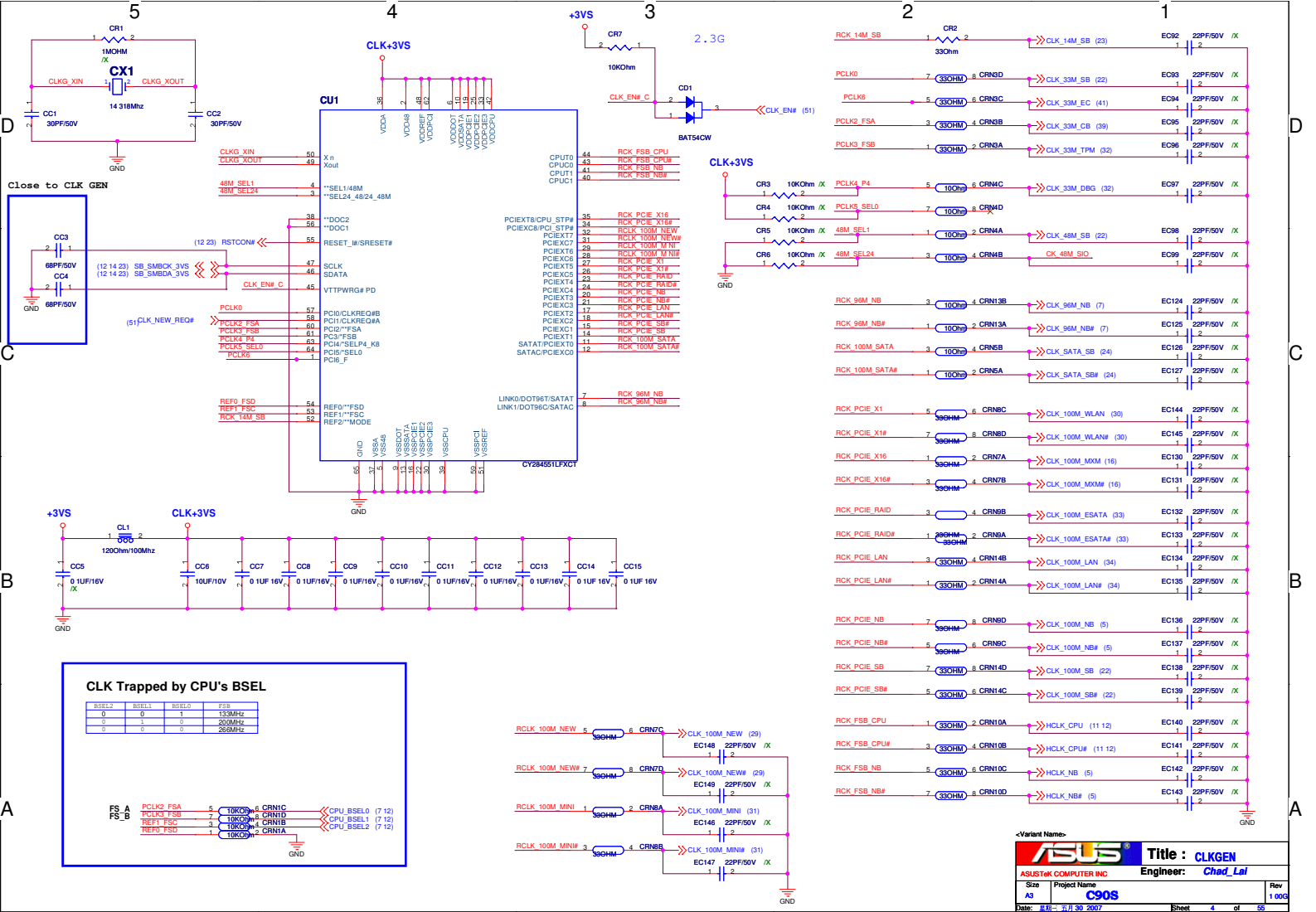
Rev 2.00

Sheet 2 of 55

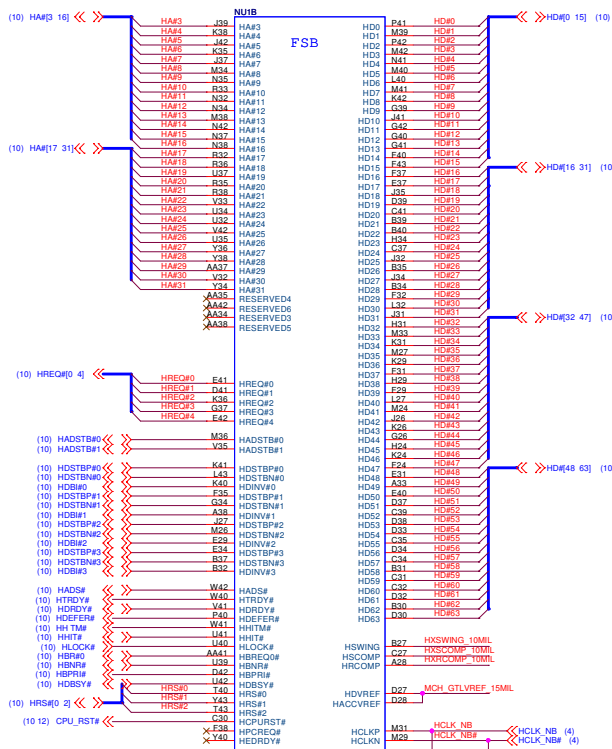
&lt;&lt; Kennedy\_Zhang &gt;&gt;



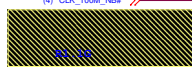
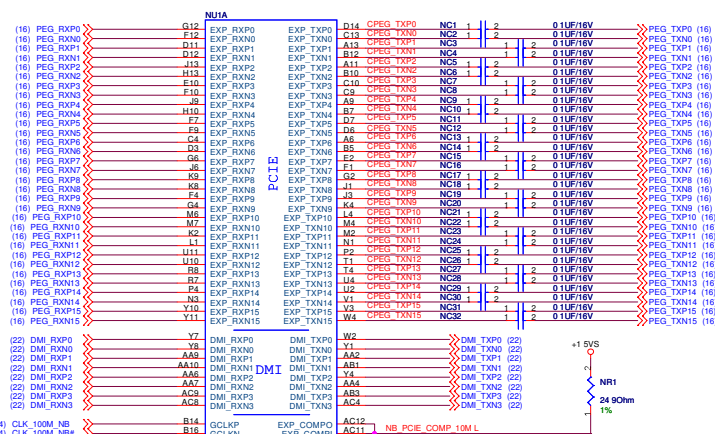
<< Kennedy\_Zhang >>



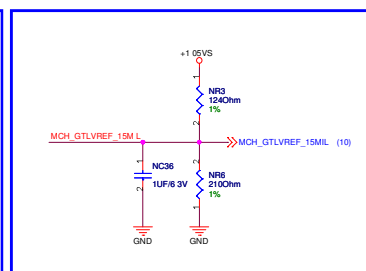
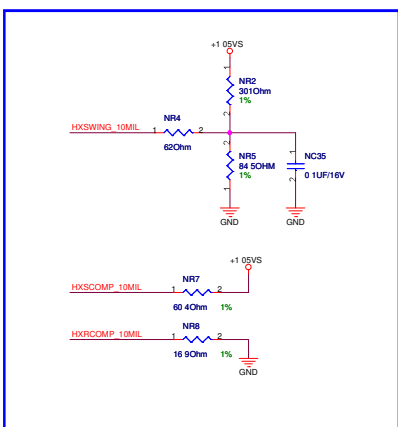
<< Kennedy\_Zhang >>



BOM stuff  
02G010009200



BOM stuff  
02G010009200



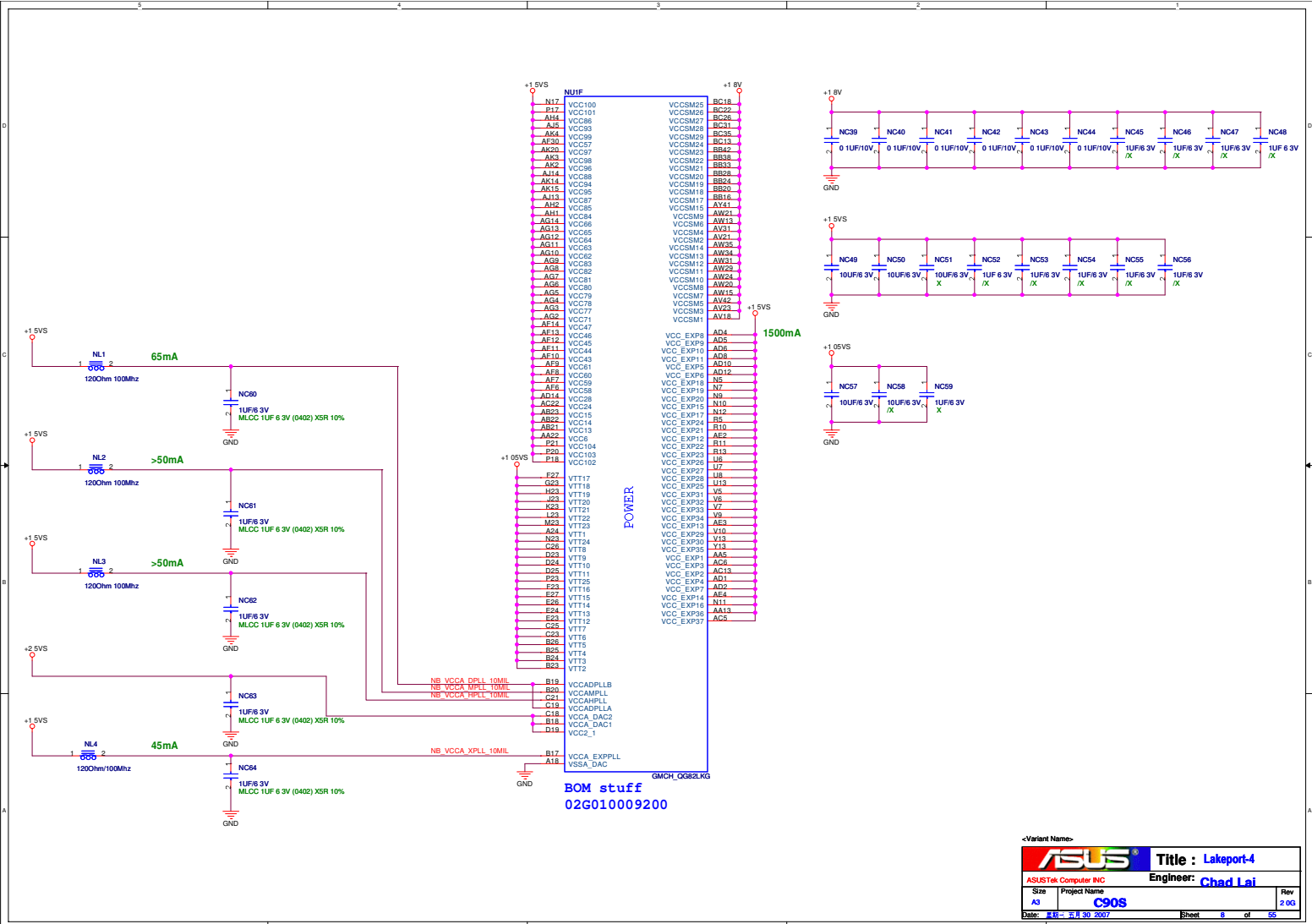
|                      |                   |                    |  |
|----------------------|-------------------|--------------------|--|
| ASUS                 |                   | Title : Lakeport-1 |  |
| ASUSTek Computer INC |                   | Engineer: Chad Lai |  |
| Size A3              | Project Name C90S | Rev 2.0G           |  |
| Date: 08-11-2007     | Sheet 6           | of 55              |  |

<< Kennedy\_Zhang >>

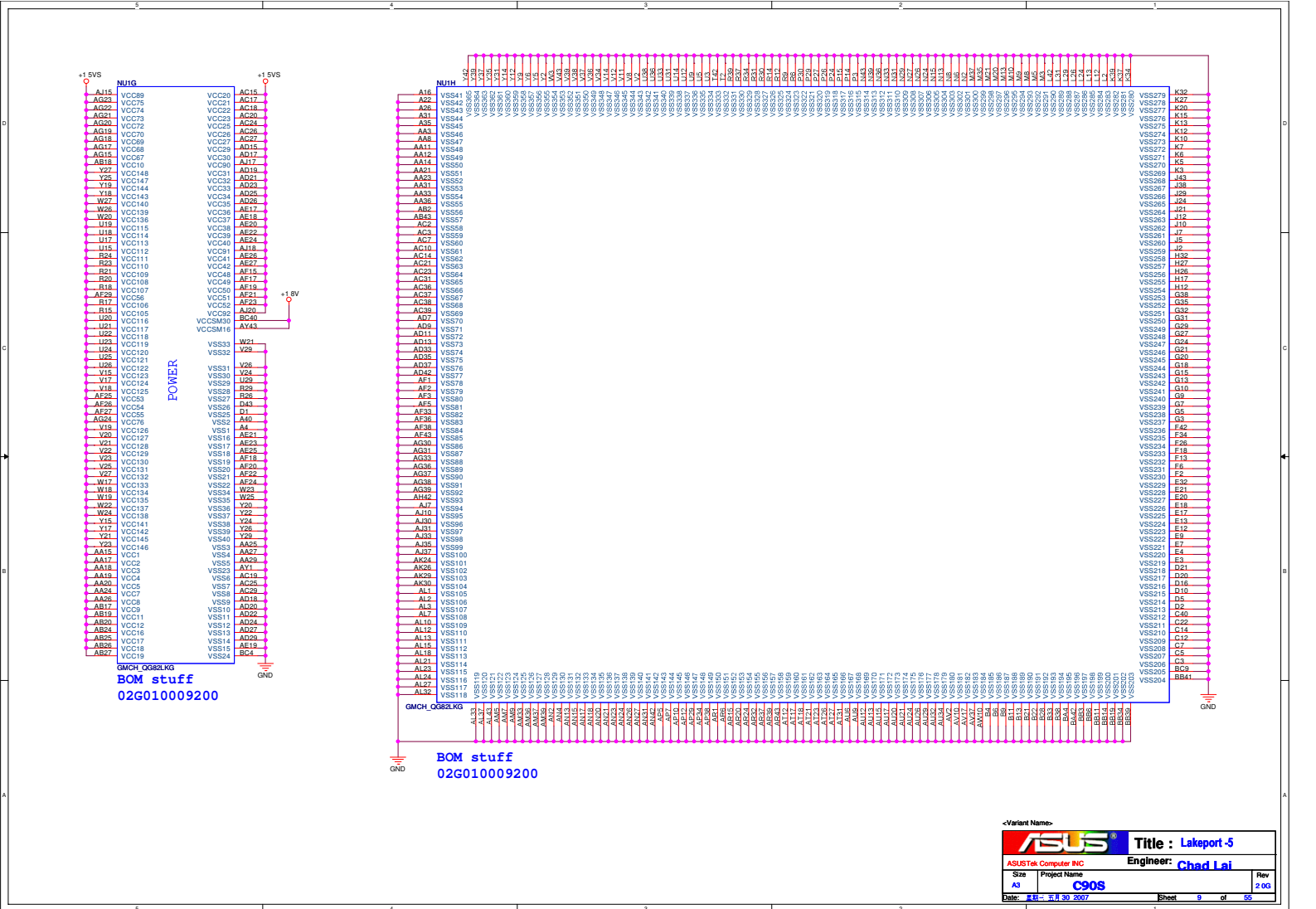




<< Kennedy\_Zhang >>



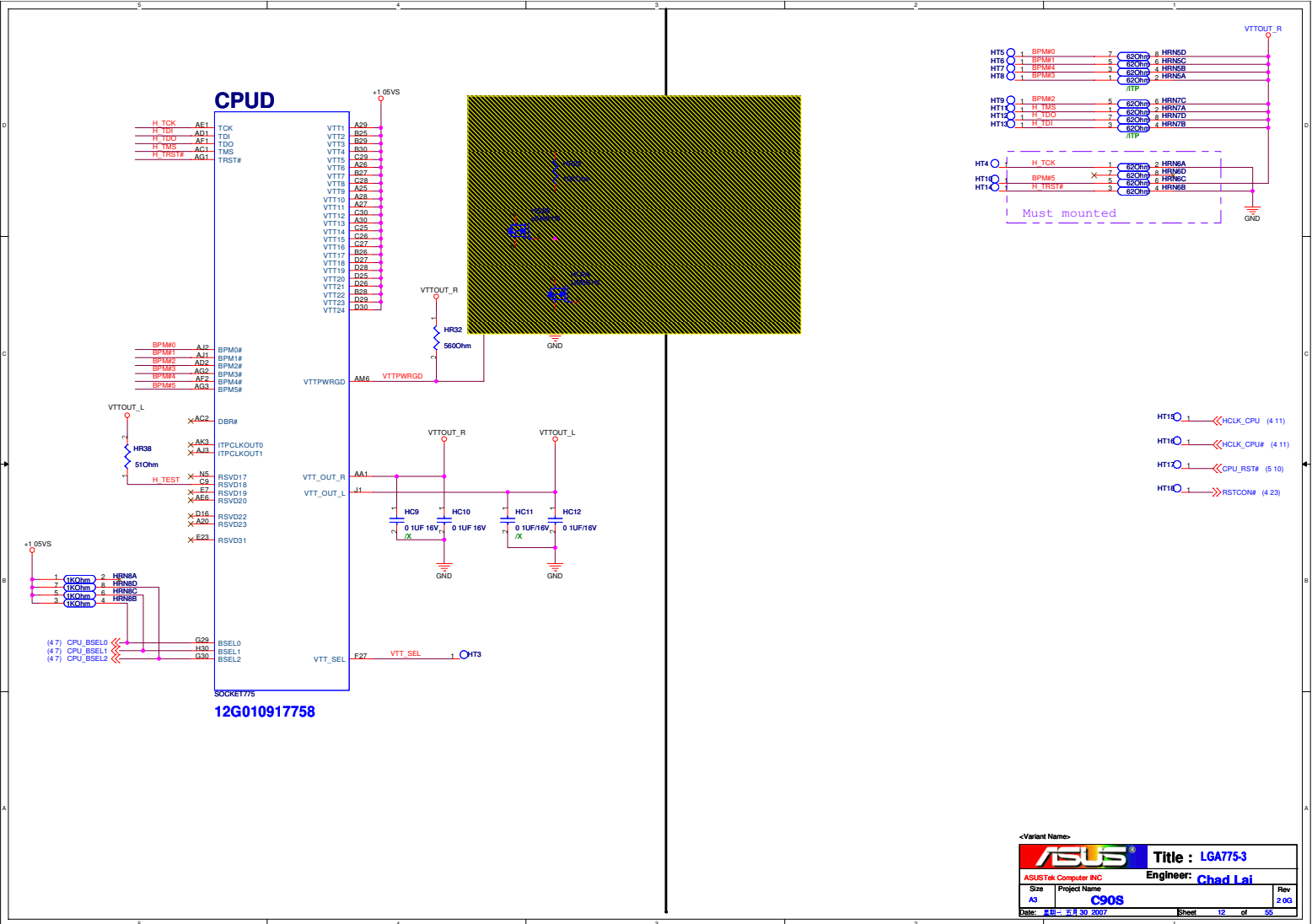
<< Kennedy\_Zhang >>



<< Kennedy\_Zhang >>

<< Kennedy\_Zhang >>



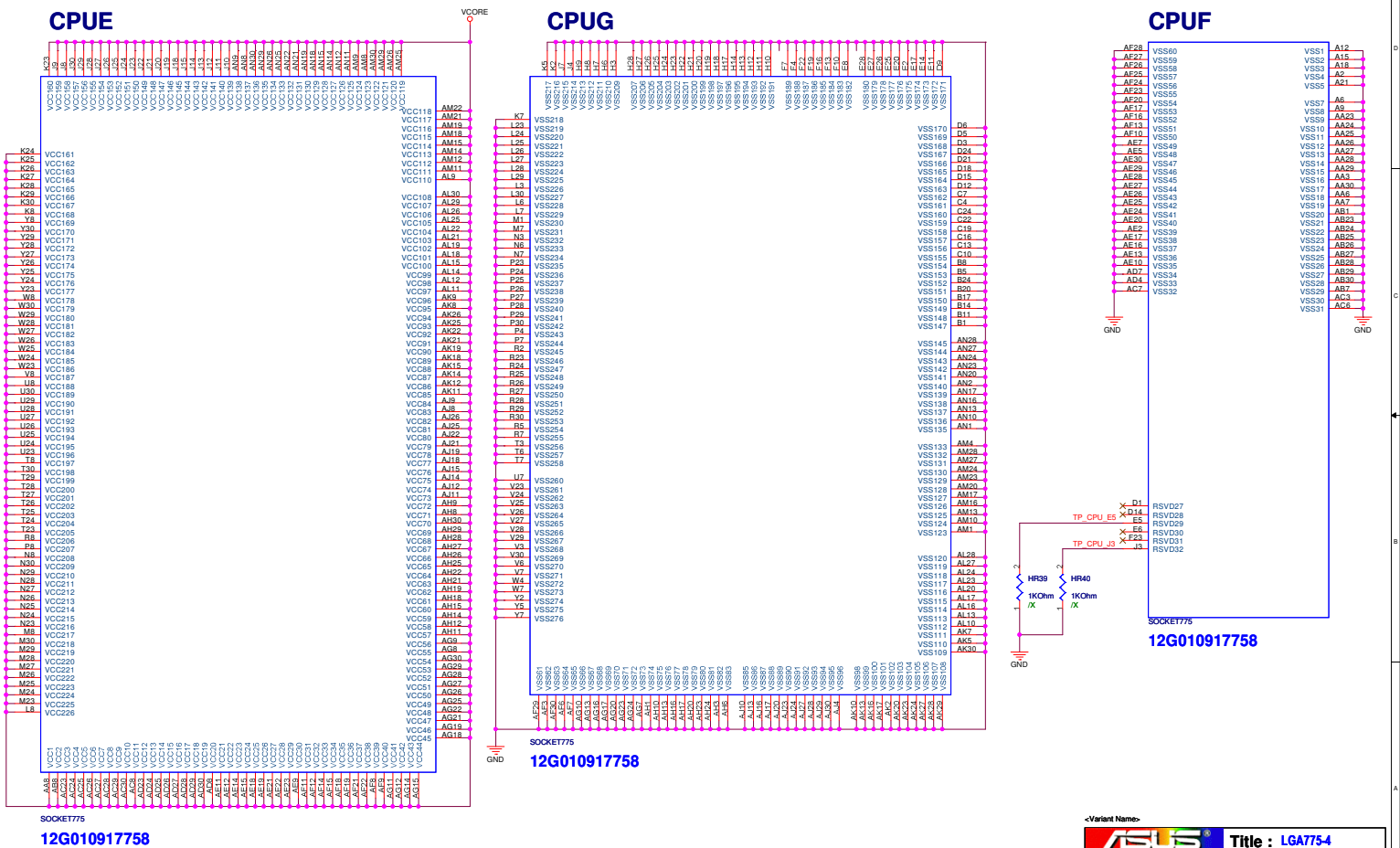


<< Kennedy\_Zhang >>

# CPU#

# CPU#

# CPU#



ASUS Title : LGA775-4  
 ASUSTek Computer INC Engineer: Chad Lai  
 Size Project Name  
 A3 C90S  
 Date: 8/8/2007 Sheet 19 of 59

<< Kennedy\_Zhang >>



<< Kennedy\_Zhang >>



MXM Connector Pin Definition

| Pin # | Signal Name | Pin # | Signal Name | Pin # | Signal Name    | Pin # | Signal Name           | Pin # | Signal Name |
|-------|-------------|-------|-------------|-------|----------------|-------|-----------------------|-------|-------------|
| 1     | PWR_SRC     | 2     | 1V8RUN      | 111   | PEX_RX1        | 112   | PEX_TX1#              | 221   | DVI_A_TX1   |
| 3     | PWR_SRC     | 4     | 1V8RUN      | 113   | GND            | 114   | PEX_TX1               | 223   | GND         |
| 5     | PWR_SRC     | 6     | 1V8RUN      | 115   | PEX_RX0#       | 116   | GND                   | 225   | DVI_A_TX0#  |
| 7     | PWR_SRC     | 8     | 1V8RUN      | 117   | PEX_RX0        | 118   | PEX_TX0#              | 227   | DVI_A_TX0   |
| 9     | PWR_SRC     | 10    | 1V8RUN      | 119   | GND            | 120   | PEX_TX0               | 229   | GND         |
| 11    | PWR_SRC     | 12    | 1V8RUN      | 121   | PEX_REFCLK#    | 122   | PRSNT1#               |       |             |
| 13    | PWR_SRC     | 14    | 1V8RUN      | 123   | PEX_REFCLK     | 124   | TV_C/HDTV_Pr          |       |             |
| 15    | PWR_SRC     | 16    | RUNPWROK    | 125   | CLK_REQ#       | 126   | GND                   |       |             |
| 17    | GND         | 18    | 5VRUN       | 127   | PEX_RST#       | 128   | TV_Y/HDTV_Y/TV_CVBS   |       |             |
| 19    | GND         | 20    | GND         | 129   | RSVD           | 130   | GND                   |       |             |
| 21    | GND         | 22    | GND         | 131   | RSVD           | 132   | TV_CVBS/HDTV_Pb       |       |             |
| 23    | GND         | 24    | GND         | 133   | SMB_DAT        | 134   | GND                   |       |             |
| 25    | PEX_RX15#   | 26    | PRSNT2#     | 135   | SMB_CLK        | 136   | VGA_RED               |       |             |
| 27    | PEX_RX15    | 28    | PEX_TX15#   | 137   | THERM#         | 138   | GND                   |       |             |
| 29    | GND         | 30    | PEX_TX15    | 139   | VGA_HSYNC      | 140   | VGA_GRN               |       |             |
| 31    | PEX_RX14#   | 32    | GND         | 141   | VGA_VSYNC      | 142   | GND                   |       |             |
| 33    | PEX_RX14    | 34    | PEX_TX14#   | 143   | DDCA_CLK       | 144   | VGA_BLU               |       |             |
| 35    | GND         | 36    | PEX_TX14    | 145   | DDCA_DAT       | 146   | GND                   |       |             |
| 37    | PEX_RX13#   | 38    | GND         | 147   | IGP_RSVD       | 148   | LVDS_UCLK#            |       |             |
| 39    | PEX_RX13    | 40    | PEX_TX13#   | 149   | IGP_RSVD       | 150   | LVDS_UCLK             |       |             |
| 41    | GND         | 42    | PEX_TX13    | 151   | IGP_RSVD       | 152   | GND                   |       |             |
| 43    | PEX_RX12#   | 44    | GND         | 153   | IGP_RSVD       | 154   | LVDS_UTX3#            |       |             |
| 45    | PEX_RX12    | 46    | PEX_TX12#   | 155   | IGP_RSVD       | 156   | LVDS_UTX3             |       |             |
| 47    | GND         | 48    | PEX_TX12    | 157   | AC/BATT#       | 158   | SPDIF                 |       |             |
| 49    | PEX_RX11#   | 50    | GND         | 159   | IGP_RSVD       | 160   | LVDS_UTX2#/DVI_C_TX5# |       |             |
| 51    | PEX_RX11    | 52    | PEX_TX11#   | 161   | IGP_RSVD       | 162   | LVDS_UTX2/DVI_C_TX5   |       |             |
| 53    | GND         | 54    | PEX_TX11    | 163   | IGP_RSVD       | 164   | GND                   |       |             |
| 55    | PEX_RX10#   | 56    | GND         | 165   | IGP_RSVD       | 166   | LVDS_UTX1#/DVI_C_TX4# |       |             |
| 57    | PEX_RX10    | 58    | PEX_TX10#   | 167   | IGP_RSVD       | 168   | LVDS_UTX1/DVI_C_TX4   |       |             |
| 59    | GND         | 60    | PEX_TX10    | 169   | IGP_RSVD       | 170   | GND                   |       |             |
| 61    | PEX_RX9#    | 62    | GND         | 171   | IGP_RSVD       | 172   | LVDS_UTX0#/DVI_C_TX3# |       |             |
| 63    | PEX_RX9     | 64    | PEX_TX9#    | 173   | IGP_RSVD       | 174   | LVDS_UTX0/DVI_C_TX3   |       |             |
| 65    | GND         | 66    | PEX_TX9     | 175   | GND            | 176   | GND                   |       |             |
| 67    | PEX_RX8#    | 68    | GND         | 177   | IGP/DVI_B_CLK# | 178   | LVDS_LCLK#/DVI_C_TXC# |       |             |
| 69    | PEX_RX8     | 70    | PEX_TX8#    | 179   | IGP/DVI_B_CLK  | 180   | LVDS_LCLK/DVI_C_TXC   |       |             |
| 71    | GND         | 72    | PEX_TX8     | 181   | DVI_B_HPD/GND  | 182   | GND                   |       |             |
| 73    | PEX_RX7#    | 74    | GND         | 183   | RSVD           | 184   | LVDS_LTX3#            |       |             |
| 75    | PEX_RX7     | 76    | PEX_TX7#    | 185   | RSVD           | 186   | LVDS_LTX3             |       |             |
| 77    | GND         | 78    | PEX_TX7     | 187   | GND            | 188   | GND                   |       |             |
| 79    | PEX_RX6#    | 80    | GND         | 189   | IGP/DVI_B_TX2# | 190   | LVDS_LTX2#/DVI_C_TX2# |       |             |
| 81    | PEX_RX6     | 82    | PEX_TX6#    | 191   | IGP/DVI_B_TX2  | 192   | LVDS_LTX2/DVI_C_TX2   |       |             |
| 83    | GND         | 84    | PEX_TX6     | 193   | GND            | 194   | GND                   |       |             |
| 85    | PEX_RX5#    | 86    | GND         | 195   | IGP/DVI_B_TX1# | 196   | LVDS_LTX1#/DVI_C_TX1# |       |             |
| 87    | PEX_RX5     | 88    | PEX_TX5#    | 197   | IGP/DVI_B_TX1  | 198   | LVDS_LTX1/DVI_C_TX1   |       |             |
| 89    | GND         | 90    | PEX_TX5     | 199   | GND            | 200   | GND                   |       |             |
| 91    | PEX_RX4#    | 92    | GND         | 201   | IGP/DVI_B_TX0# | 202   | LVDS_LTX0#/DVI_C_TX0# |       |             |
| 93    | PEX_RX4     | 94    | PEX_TX4#    | 203   | IGP/DVI_B_TX0  | 204   | LVDS_LTX0/DVI_C_TX0   |       |             |
| 95    | GND         | 96    | PEX_TX4     | 205   | DVI_A_HPD      | 206   | GND                   |       |             |
| 97    | PEX_RX3#    | 98    | GND         | 207   | DVI_A_CLK#     | 208   | DDCC_DAT              |       |             |
| 99    | PEX_RX3     | 100   | PEX_TX3#    | 209   | DVI_A_CLK      | 210   | DDCC_CLK              |       |             |
| 101   | GND         | 102   | PEX_TX3     | 211   | GND            | 212   | LVDS_PPEN             |       |             |
| 103   | PEX_RX2#    | 104   | GND         | 213   | DVI_A_TX2#     | 214   | LVDS_BL_BRGHT         |       |             |
| 105   | PEX_RX2     | 106   | PEX_TX2#    | 215   | DVI_A_TX2      | 216   | LVDS_BLEN             |       |             |
| 107   | GND         | 108   | PEX_TX2     | 217   | GND            | 218   | DDCB_DAT              |       |             |
| 109   | PEX_RX1#    | 110   | GND         | 219   | DVI_A_TX1#     | 220   | DDCB_CLK              |       |             |

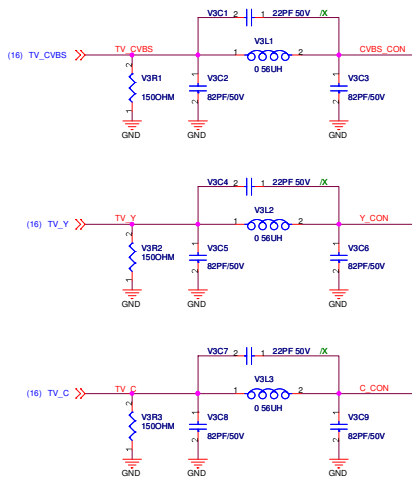
<< Kennedy\_Zhang >>

|                      |              |                       |          |
|----------------------|--------------|-----------------------|----------|
| ASUS                 |              | Title : MXM PWR & GND |          |
| ASUSTek Computer INC |              | Engineer: Chad Lai    |          |
| Size                 | Project Name |                       | Rev      |
| Custom               | C90S         |                       | 2.03     |
| Date: 2007.10.30     |              | Sheet                 | 17 of 55 |

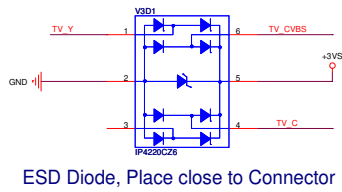
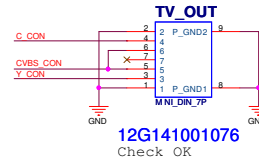
### LCD Power

<< Kennedy\_Zhang >>



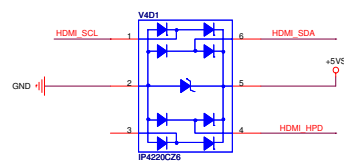


## TV OUT Connector



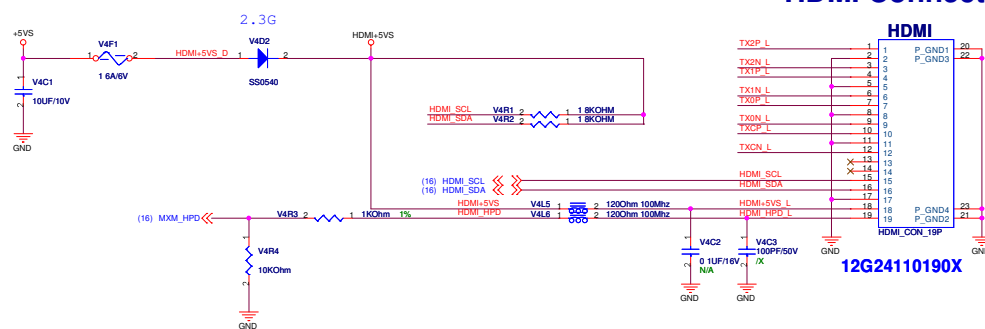
« Kennedy\_Zhang »

|                                                                                       |              |                          |      |
|---------------------------------------------------------------------------------------|--------------|--------------------------|------|
| <Var ant Name>                                                                        |              | Title : TV-OUT Connector |      |
|  |              | Engineer: Chad Lai       |      |
| ASUSTek Computer INC                                                                  |              |                          |      |
| Size                                                                                  | Project Name |                          | Rev  |
| Cus om                                                                                | C90S         |                          | 2 0G |
| Date: 星期日 - 五月 30 2007                                                                |              | Sheet 20 of 55           |      |



ESD Diode, Place close to Connector

## HDMI Connector







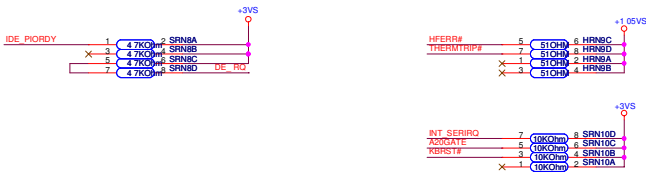
```

(INSTRUMEN, LAN100_SLP)
1 = Enabled internal VRMs for VccSusi_05, 1_5 and
VccCLI_5, 1_05 and VccLAN1_05 (*)
0 = Disabled internal VRMs

(ICH_SATALED#)
1 = LAN1-4 normal (* internal PU)
0 = LAN1-4 reverse

(SPKR)
1 = Disabled TCO Reboot
0 = Enabled TCO Reboot
(* internal PD)
(TP_GP1033) : Not used for ICH8M
1 = Enabled Descriptor Security (* internal PU)
0 = Disabled Descriptor Security

```

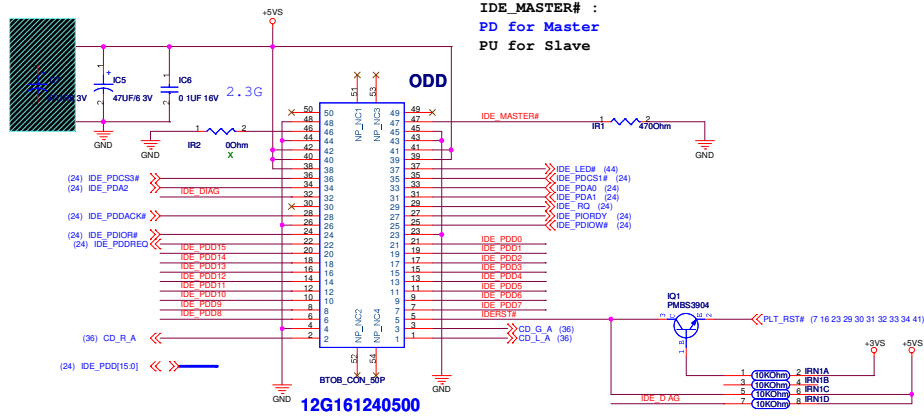


|                                                                                      |                     |                           |                 |
|--------------------------------------------------------------------------------------|---------------------|---------------------------|-----------------|
| <b>&lt;Var ant Name&gt;</b>                                                          |                     |                           |                 |
|  |                     | <b>Title : ICH7-3</b>     |                 |
| <b>ASUSTek Computer INC</b>                                                          |                     | <b>Engineer: Chad Lai</b> |                 |
| <b>S ze</b>                                                                          | <b>Project Name</b> |                           | <b>Rev</b>      |
|                                                                                      | <b>C90S</b>         |                           | <b>2 0G</b>     |
| <b>Date: 星期二 五月 30 2007</b>                                                          |                     | <b>Sheet</b>              | <b>24 of 55</b> |

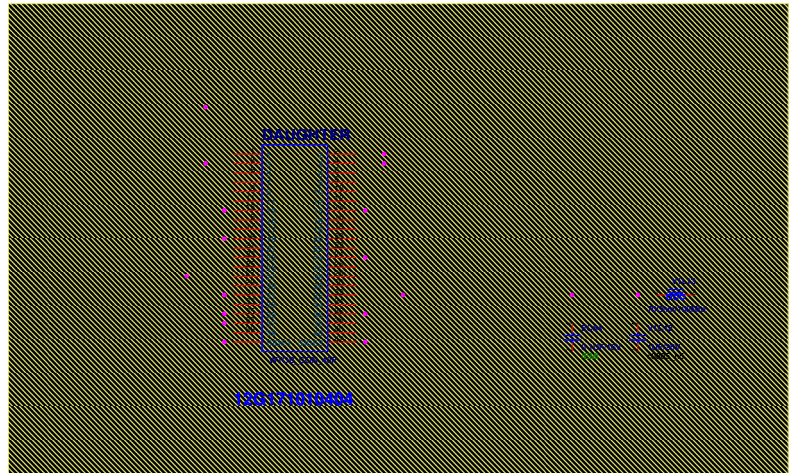
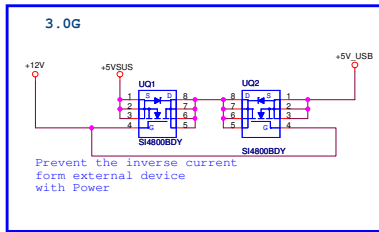
<< Kennedy\_Zhang >>



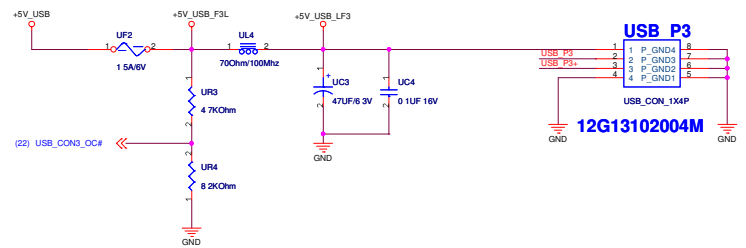
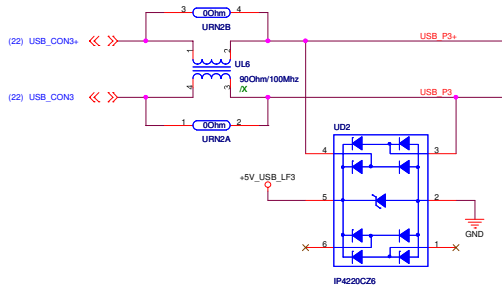
**ODD**



|                                                                                       |                     |                                          |                 |
|---------------------------------------------------------------------------------------|---------------------|------------------------------------------|-----------------|
|  |                     | <b>Title :</b> <u>SATA-HDD &amp; ODD</u> |                 |
| <b>ASUSTek Compu er INC</b>                                                           |                     | <b>Engineer:</b> <u>Chad Lai</u>         |                 |
| <b>Size</b>                                                                           | <b>Project Name</b> | <b>Rev</b>                               |                 |
| <b>Cus om</b>                                                                         | <b>C90S</b>         | <b>2.0G</b>                              |                 |
| <b>Date:</b> 星期二 五月 30 2007                                                           |                     | <b>Sheet</b>                             | <b>26 of 55</b> |



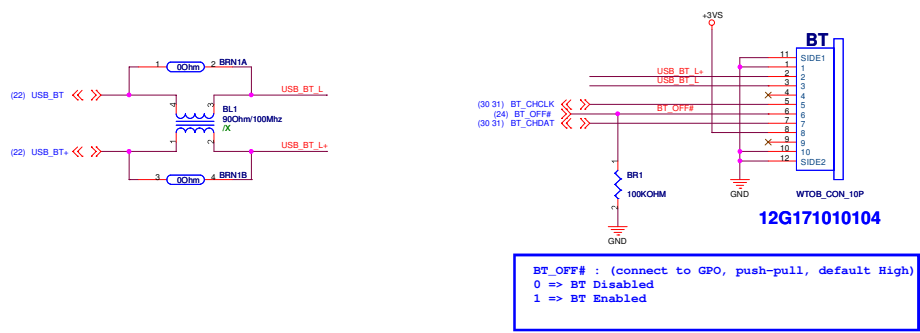
All close to USB connectors



|                      |              |                    |  |
|----------------------|--------------|--------------------|--|
| ASUS                 |              | Title : USB CONN   |  |
| ASUSTek Computer INC |              | Engineer: Chad Lai |  |
| Size                 | Project Name | Rev                |  |
| A3                   | C908         | 2.0G               |  |
| Date: 11/11/2007     | Sheet 27     | of 55              |  |

<< Kennedy\_Zhang >>

Bluetooth Connector

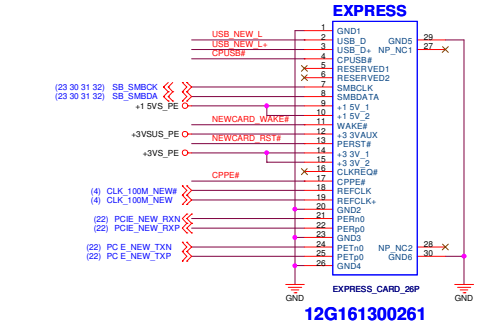
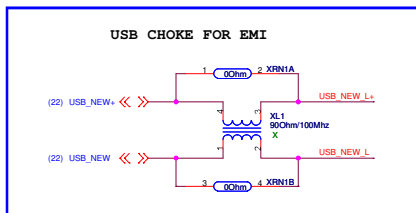
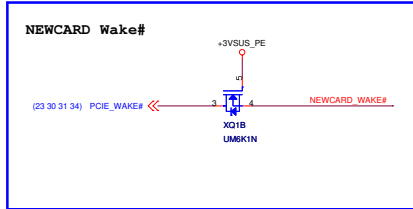
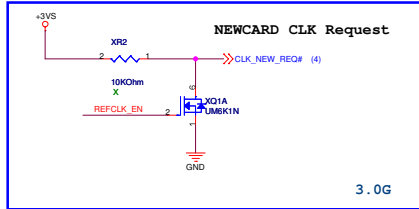
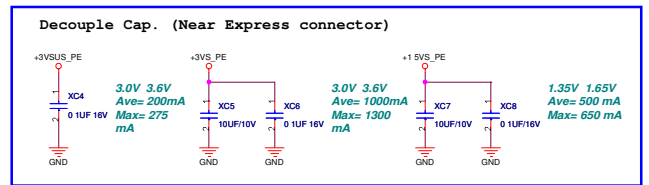
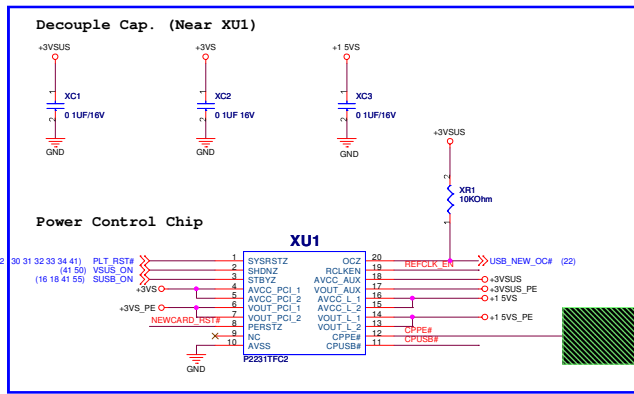


G-Sensor

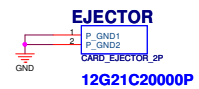
3.0G

<< Kennedy\_Zhang >>

|                       |              |                               |  |
|-----------------------|--------------|-------------------------------|--|
| <Variant Name>        |              |                               |  |
| ASUS                  |              | Title : Blue Tooth & G-Sensor |  |
| ASUSTek Computer INC. |              | Engineer: Chad Lai            |  |
| Size                  | Project Name | Rev                           |  |
| Cus on                | C90S         | 2.0G                          |  |
| Date: 8/8/2007        |              | Sheet 28 of 55                |  |

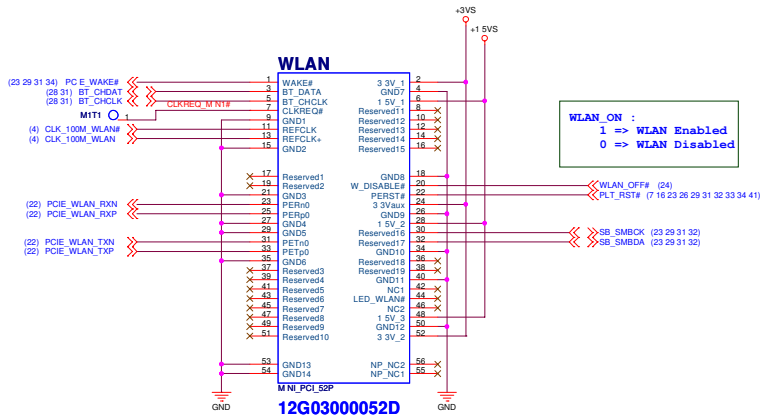
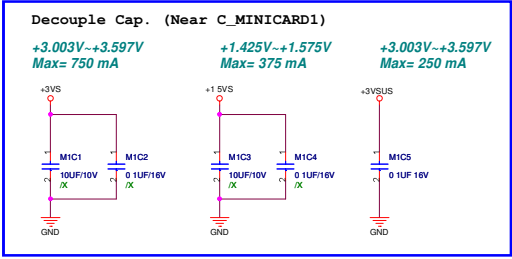


!! ExpressCard Standard 1.0:  
Change Pin7 from RESERVED to SMBCLK  
Change Pin8 from SMBCLK to SMBDATA  
Change Pin9 from SMBDATA to +1.5V



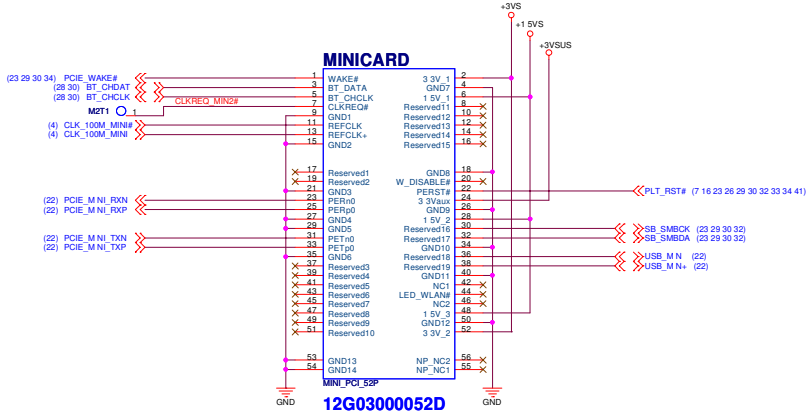
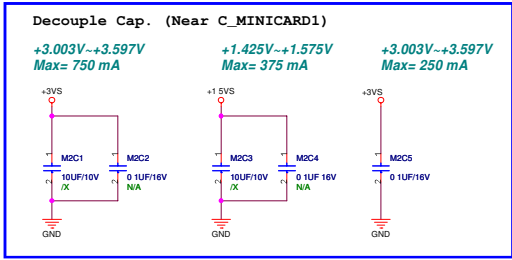
« Kennedy\_Zhang »

|                      |              |                    |    |
|----------------------|--------------|--------------------|----|
| ASUS                 |              | Title : NEWCARD    |    |
| ASUSTek Computer INC |              | Engineer: Chad Lai |    |
| Size                 | Project Name | Rev                |    |
| 0.00                 | C90S         | 2.00               |    |
| Date: 08/10/2007     | Sheet: 28    | of                 | 55 |



« Kennedy\_Zhang »

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <Variant Name>   |              | Title : MINI CARD  |  |
| ASUS             |              | Engineer: Chad Lai |  |
| Size             | Project Name | Rev                |  |
| Cus om           | C90S         | 2 00               |  |
| Date: 2007-05-30 | Sheet 30     | of 65              |  |

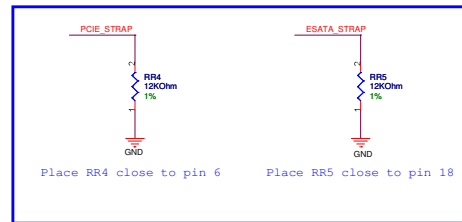
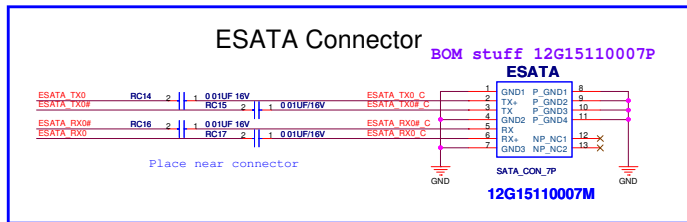
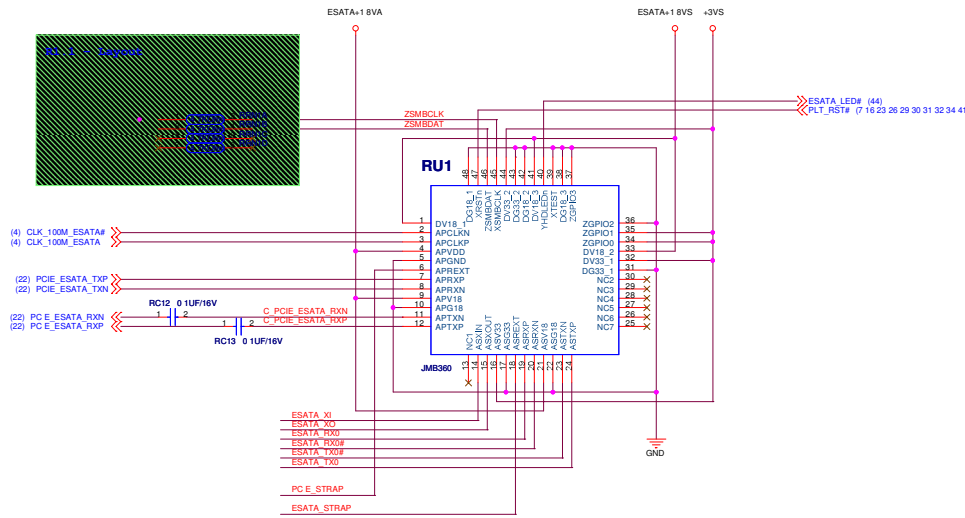
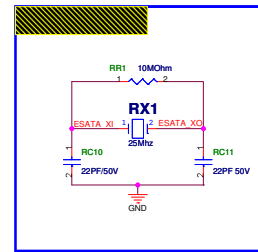
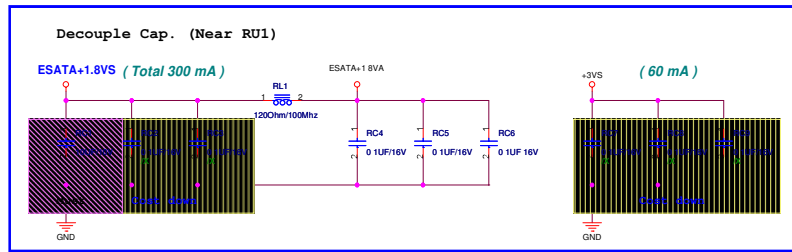


<Var ant Name>

|                      |              |                           |      |
|----------------------|--------------|---------------------------|------|
| <b>ASUS</b>          |              | <b>Title : MINI CARD</b>  |      |
| ASUSTek Computer INC |              | Engineer: <b>Chad Lai</b> |      |
| Size                 | Project Name |                           | Rev  |
| Cus om               | <b>C90S</b>  |                           | 2 00 |
| Date: 2007.05.30     |              | Sheet 31 of 65            |      |

<< Kennedy\_Zhang >>





|                      |              |                    |      |                      |                   |
|----------------------|--------------|--------------------|------|----------------------|-------------------|
| ASUS                 |              |                    |      | Title : ESATA-JMB360 |                   |
| ASUSTek Computer INC |              | Engineer: Chad Lal |      | Rev 2.0G             |                   |
| Size                 | Project Name |                    | C90S |                      | Date: FEB 20 2007 |
| Custom               |              |                    |      |                      | Sheet 33 of 56    |

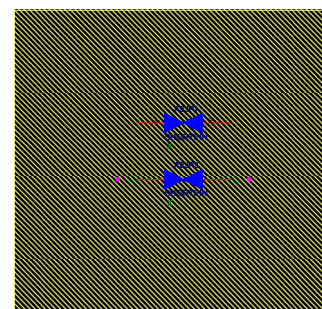
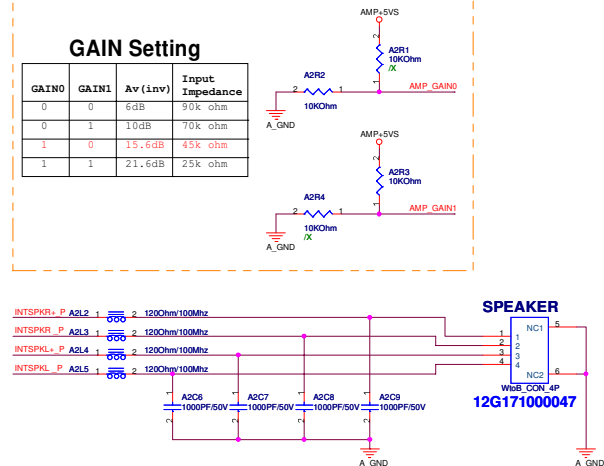
« Kennedy\_Zhang »

<< Kennedy\_Zhang >>

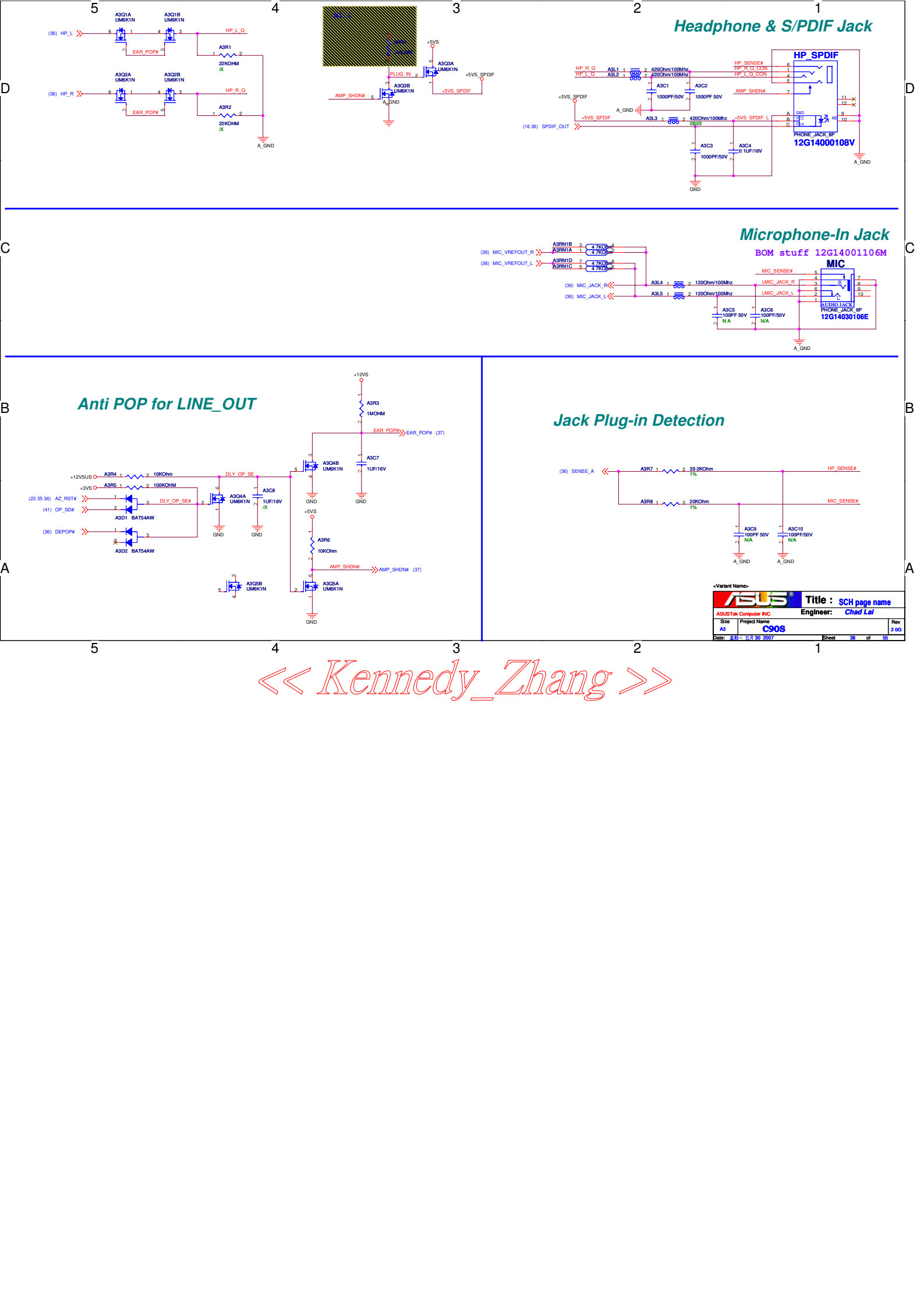


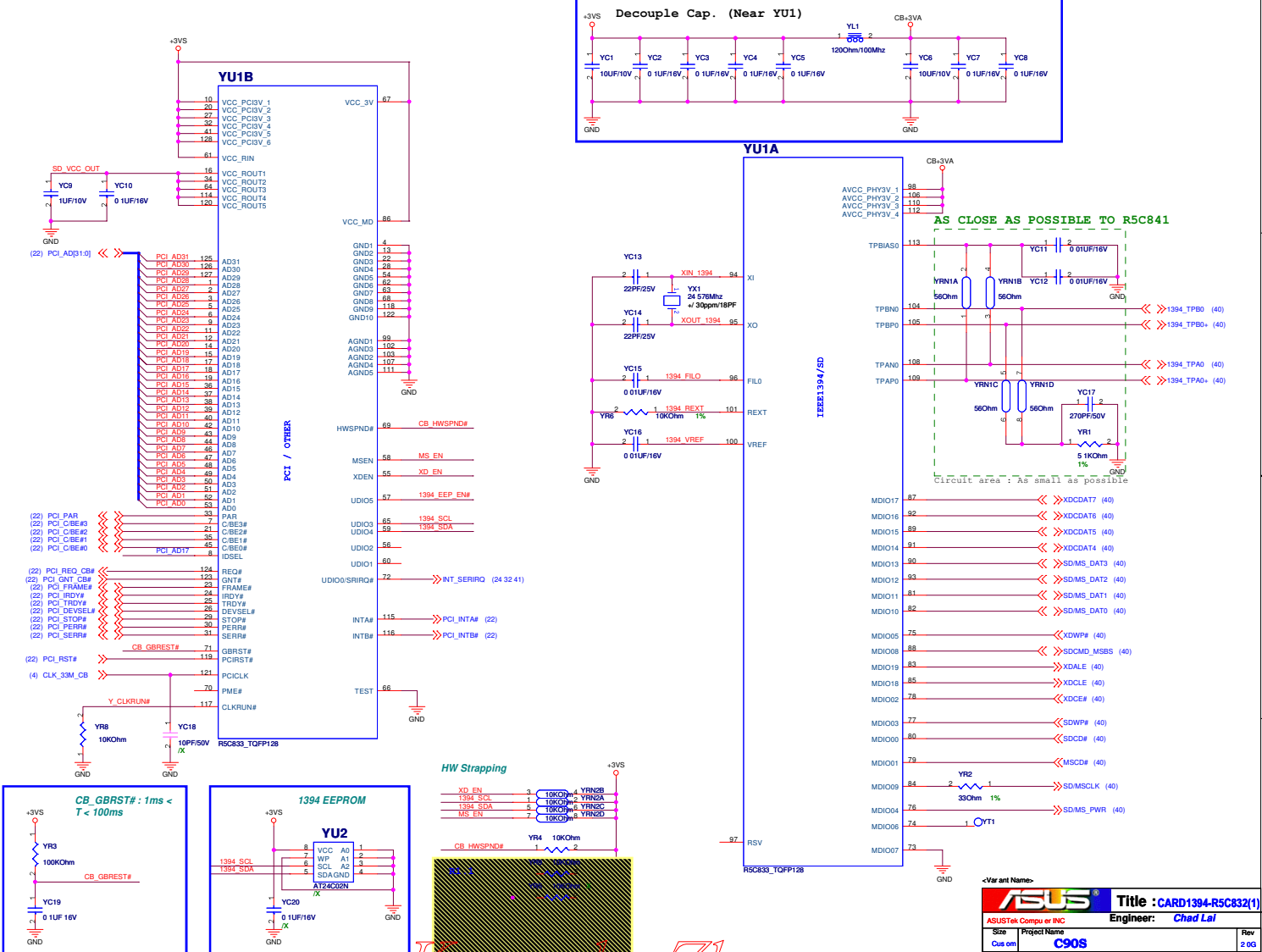


FL = 33.86kHz, FH = 22.5kHz  
**Place Near INTMIC Connector**

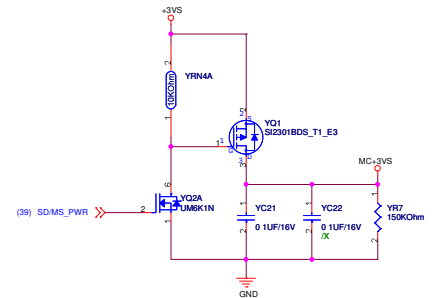
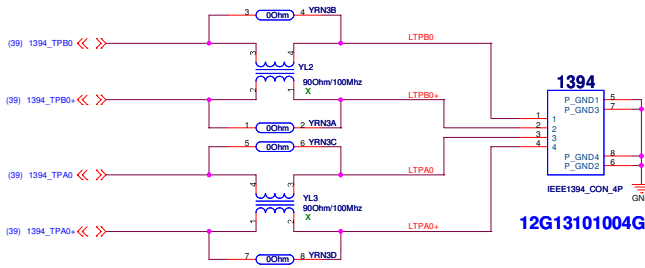


<< Kennedy\_Zhang >>

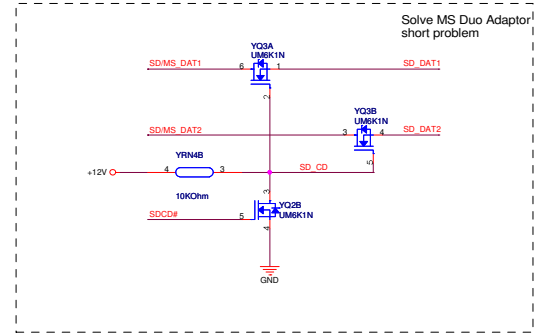
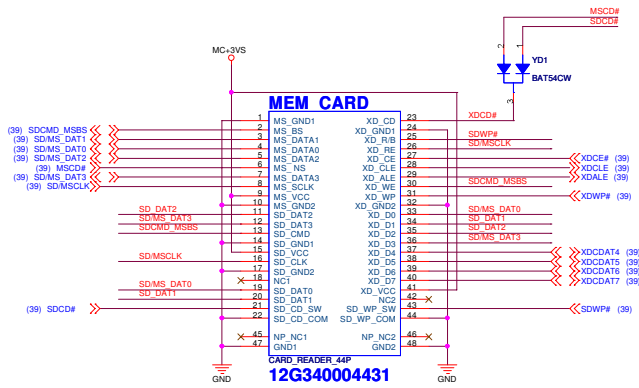
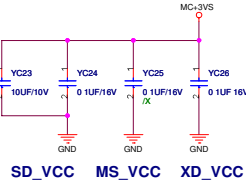




1394



Card Reader Power Switcher



|                      |                   |                    |
|----------------------|-------------------|--------------------|
| ASUS                 |                   | Title 1394 CON     |
| ASUSTek Computer INC |                   | Engineer: Chad Lal |
| Size A3              | Project Name C90S | Rev 2.0G           |
| Date: 01/05/2007     | Sheet 40          | of 52              |

<< Kennedy\_Zhang >>



**ISA ROM**

## EC Hardware Strapping

[ FA3/ BADDR1 : FA2/ BADDR0 ]

00: PNPCNG Access Register Pair Are 002Eh and 002Fh  
01: PNPCNG Access Register Pair Are 004Eh and 004Fh  
10: PNPCNG Access Register Pair Are Determined by  
EC Domain Registers SWCBALR and SWCBAHR.  
11: Reserved



**Note: Sampled at VSTBY Power Up Reset**

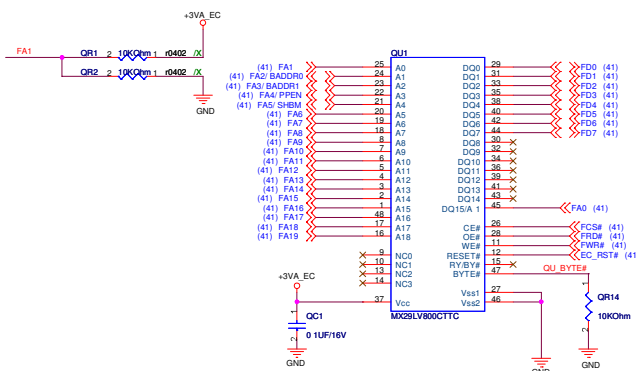
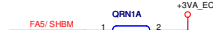
FA4/PPEN

0: Normal  
1: KBS Interface Pins Are Switched to Parallel Port Interface for In-System Programming



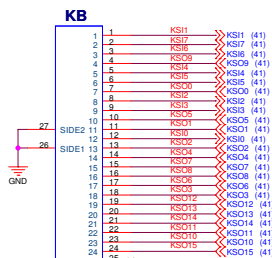
FA5/ SHBM

0: Disable Shared Memory with Host BIOS  
1: Enable Shared Memory with Host BIOS



BIOS: 05G001204043

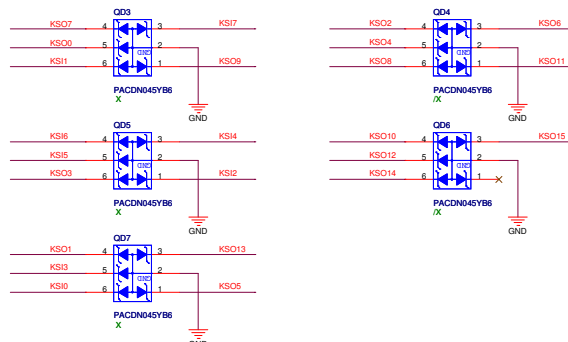
## Keyboard Connector



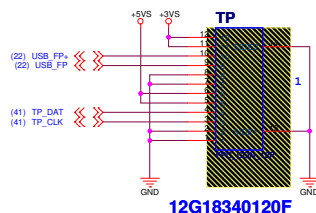
12G182002501

RI.1.G : Change to 120182002501  
same with 237 & 298

FOR EMI/ESD



## Fingerprint & TouchPad Connector



«Var ant Name»

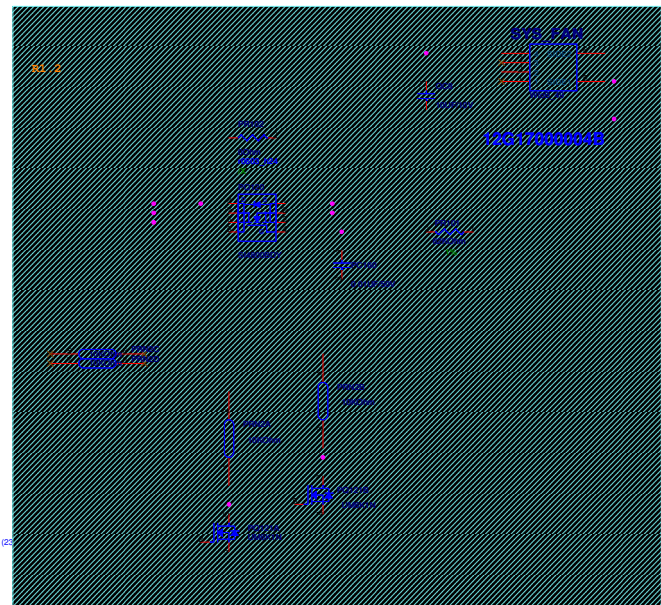
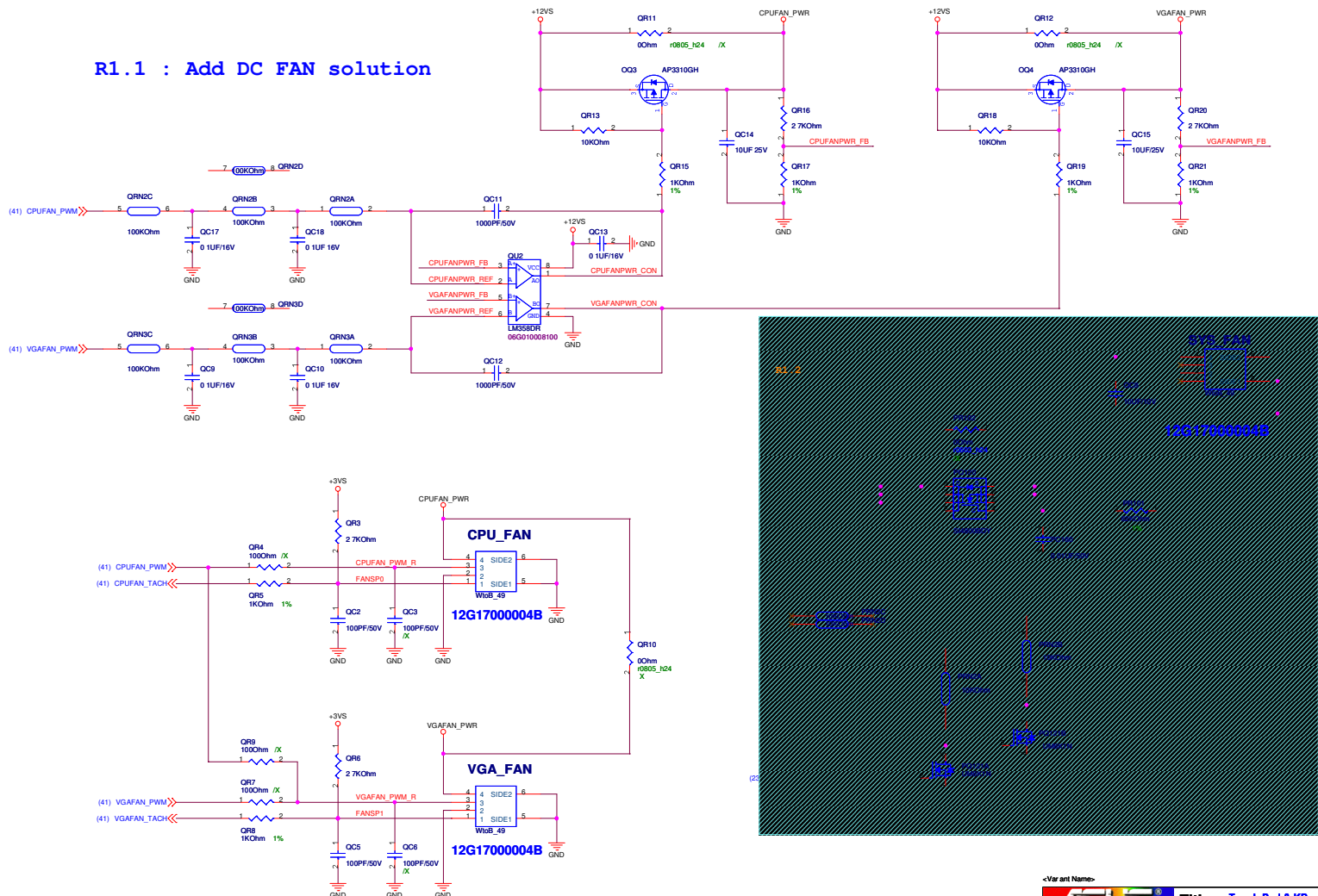


**Title :** ISA FLASH ROM

|                      |                             |           |          |
|----------------------|-----------------------------|-----------|----------|
| ASUSTek Computer INC |                             | Engineer: | Chad Lai |
| Size<br>Custom       | Project Name<br><b>C90S</b> |           |          |
| Date: 2007-10-30     | Sheet                       |           | 42 of    |

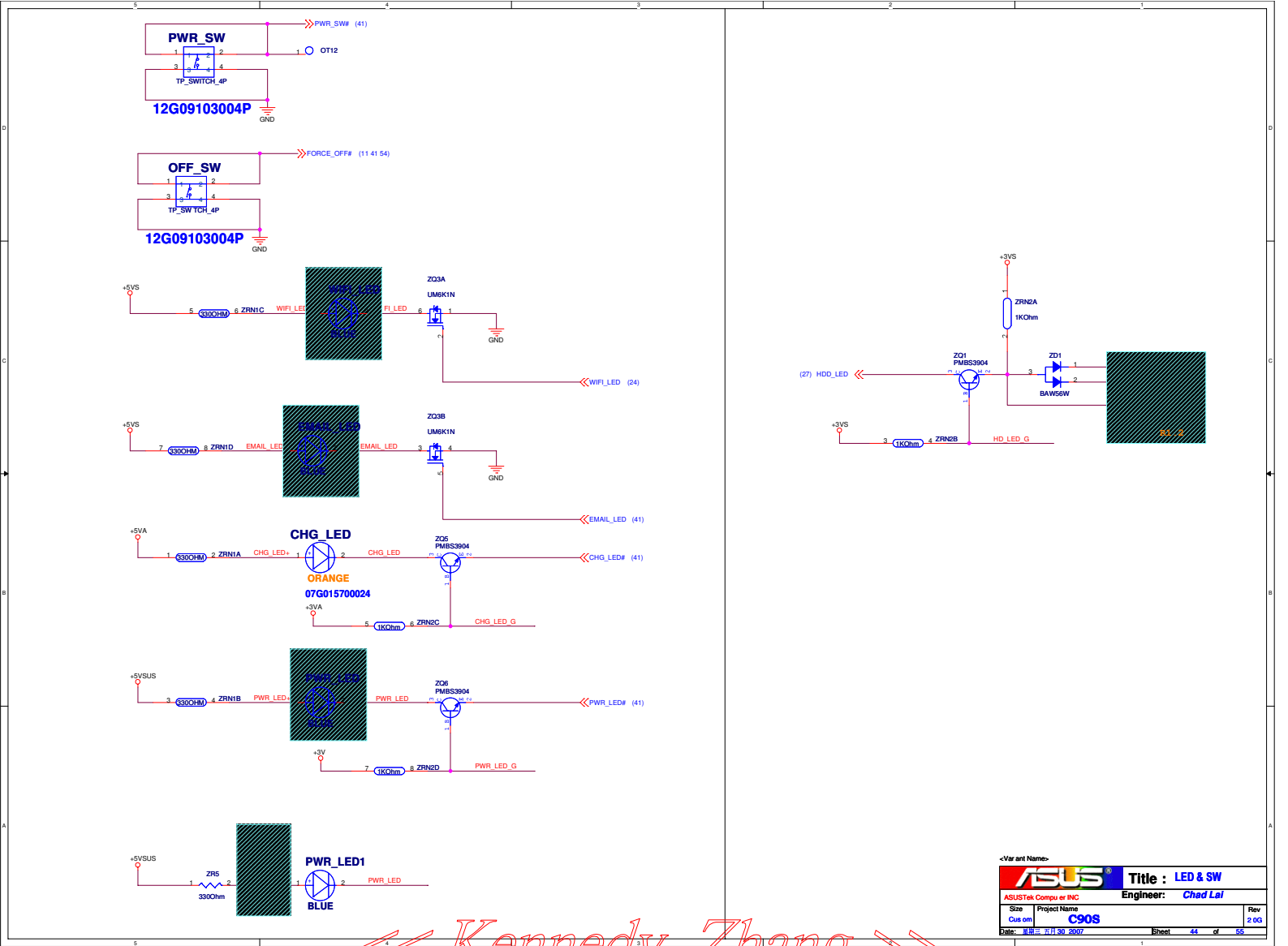
<< Kennedy\_Zhang >>

# R1.1 : Add DC FAN solution



|                      |              |                        |      |
|----------------------|--------------|------------------------|------|
| ASUS                 |              | Title : Touch Pad & KB |      |
| ASUSTek Computer INC |              | Engineer: Chad Lai     |      |
| Size                 | Project Name | Cus om                 | Rev  |
| C90S                 |              |                        | 2.00 |
| Date: 11/11/2007     | Sheet 43     | of 65                  |      |

<< Kennedy\_Zhang >>



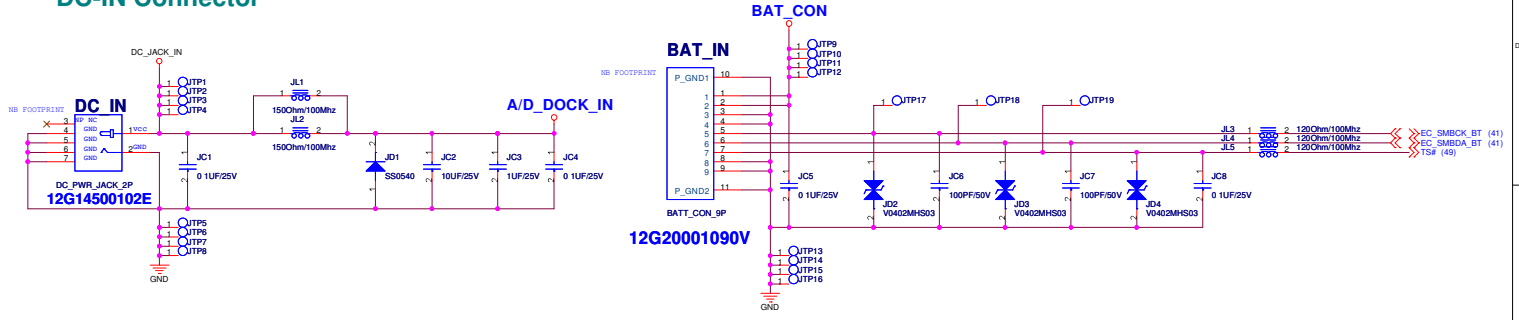
« Kennedy\_Zhang »

<Variant Name>

|                      |              |                    |  |
|----------------------|--------------|--------------------|--|
| ASUS                 |              | Title : LED & SW   |  |
| ASUSTek Computer INC |              | Engineer: Chad Lai |  |
| Size                 | Project Name | Rev                |  |
| Cus om               | C90S         | 2.0G               |  |
| Date: 11/11/2007     | Sheet 44     | of 55              |  |

## BAT-IN Connector

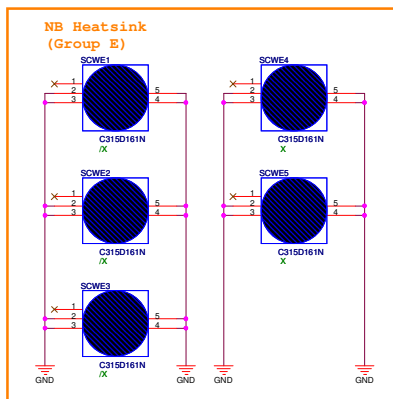
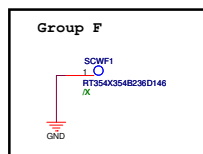
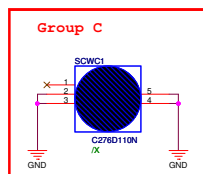
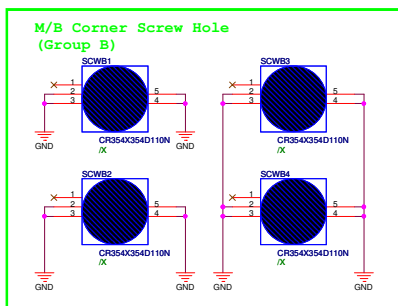
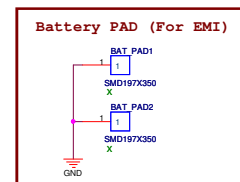
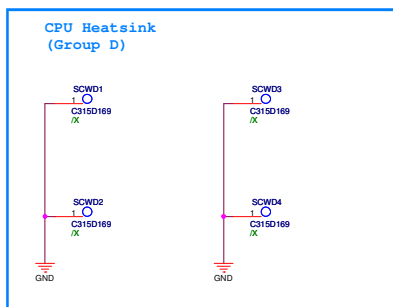
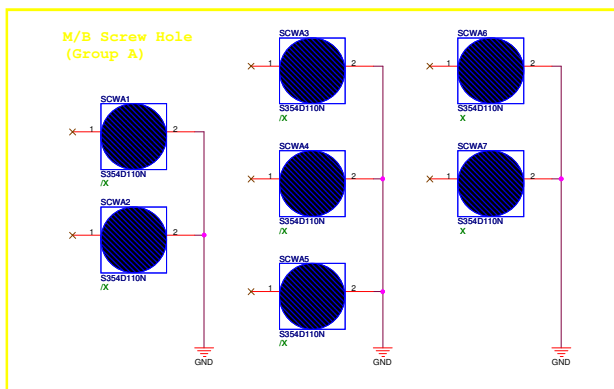
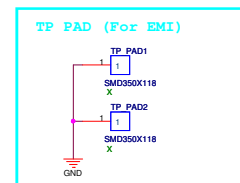
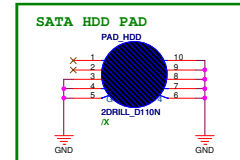
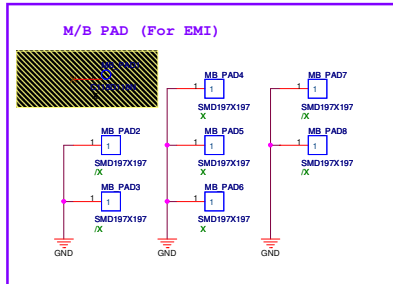
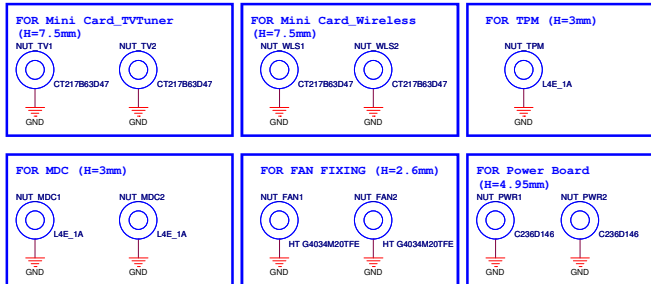
## DC-IN Connector



<Var ant Name>

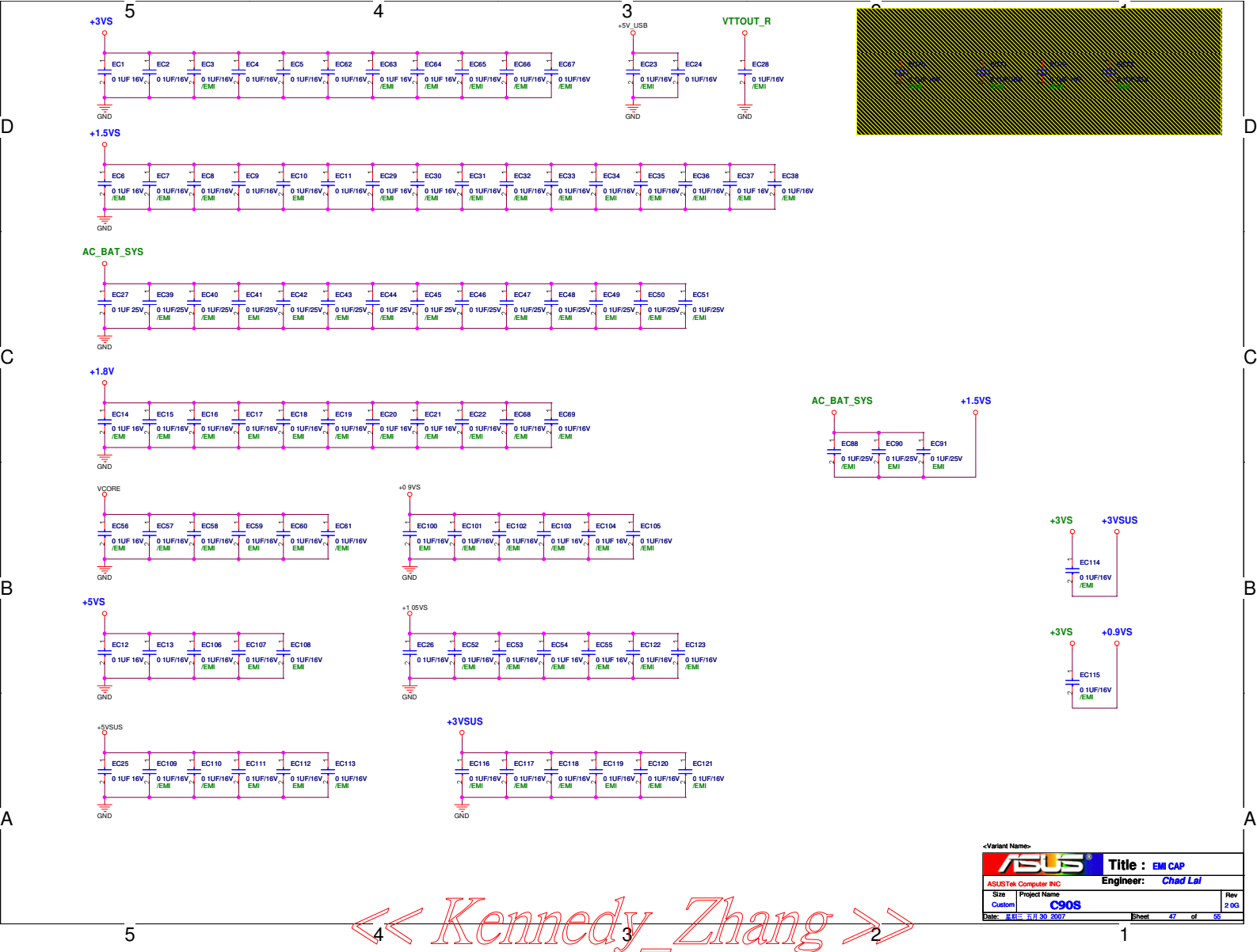
|                      |              |                                   |          |
|----------------------|--------------|-----------------------------------|----------|
| <b>ASUS</b>          |              | <b>Title : DC IN &amp; BAT IN</b> |          |
| ASUSTek Computer INC |              | Engineer: <b>Chad Lai</b>         |          |
| Size                 | Project Name | Rev                               |          |
| Qus on               | <b>C90S</b>  | 2.00                              |          |
| Date: 2022. 05. 30   | 2022.        | Sheet                             | 45 of 55 |

<< Kennedy\_Zhang >>

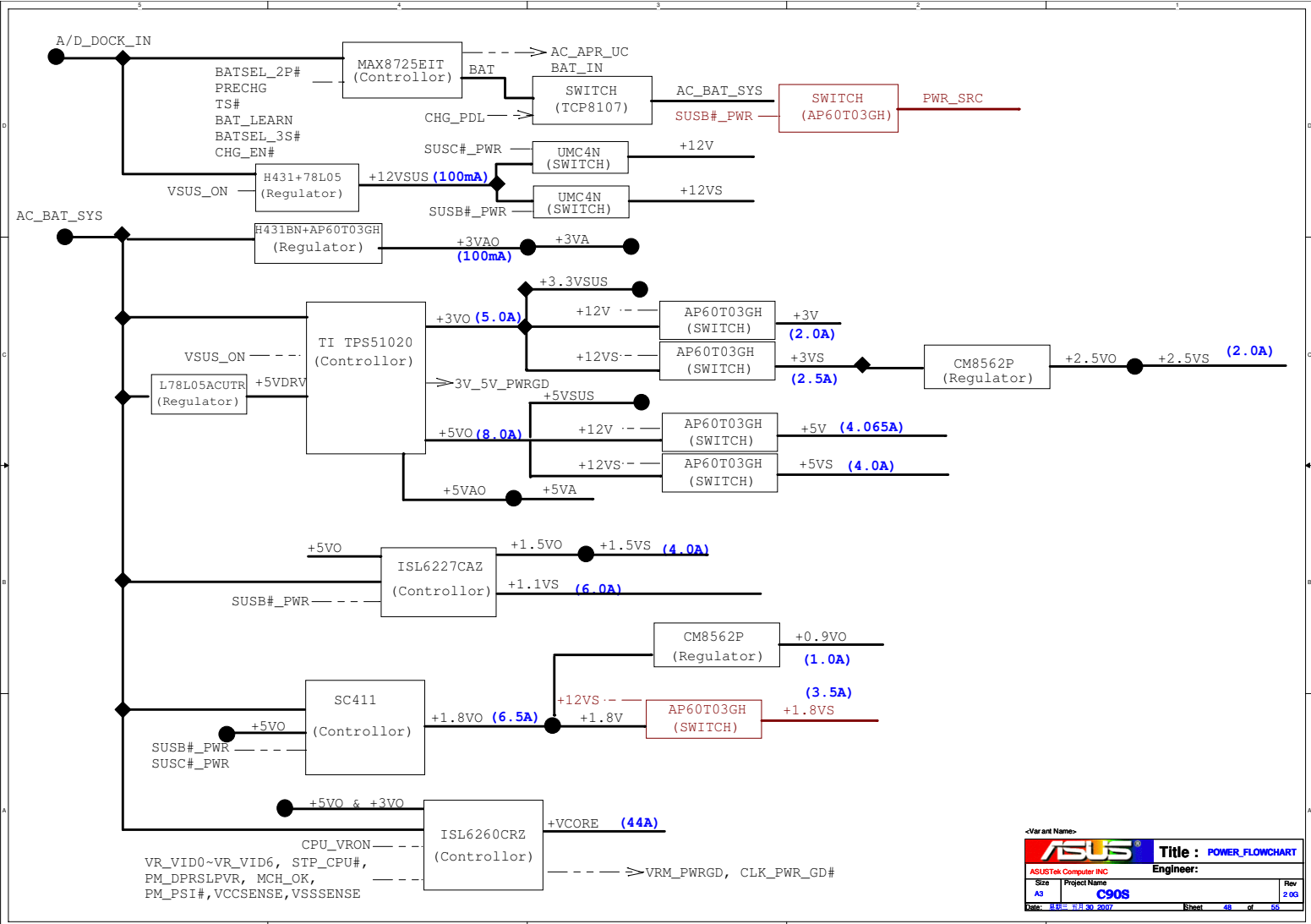


« Kennedy\_Zhang »

|                      |              |                    |  |
|----------------------|--------------|--------------------|--|
| ASUS                 |              | Title : Screw Hole |  |
| ASUSTek Computer INC |              | Engineer: Chad Lai |  |
| Size                 | Project Name | Rev                |  |
| Cus on               | C90S         | 2.00               |  |
| Date: 8/12/2007      | Sheet: 46    | of 55              |  |



|                      |              |                    |      |
|----------------------|--------------|--------------------|------|
| -Variant Name-       |              |                    |      |
| ASUS                 |              | Title : EMI CAP    |      |
| ASUSTek Computer INC |              | Engineer: Chad Lal |      |
| Size                 | Project Name |                    | Rev  |
| Custom               | C90S         |                    | 2.03 |
| Date: 2007.10.20     |              | Sheet 47 of 55     |      |



<< Kennedy\_Zhang >>

AC\_IN Threshold 2 048Vmax AD\_DOCK\_IN > 17.44V active

### Setting the Adapter Input Current Limit

Adapter lin(max) = [0 075V/Rsense(ADin)]\*[VCLS/VREF]  
VCLS= 2 865V

### Adapter Max. Current :

PR807~20K PR812 = 178K; I limit = 4.5A; 81W  
PR807~27K PR812 = 47K; I limit = 3.175A; 60W

### Setting the Charge Voltage

Vbatt = Cell \* ( Vref + [(VCTL 1 8V) / 9 52] )  
VCTL= 1 588V => Vbatt = 4.2V

### Setting the Charge Current

Charge Current Ichg = [0 075V/Rsense(CHG)]\*[VICTL/3 6V]  
Rsense(CHG)= 15m Ohm

### Pre-Charging Mode :

Precharging current = 148 ~ 152mA  
Vctl = 0 107V ~ 0 109V

### Battery Cell Selection :

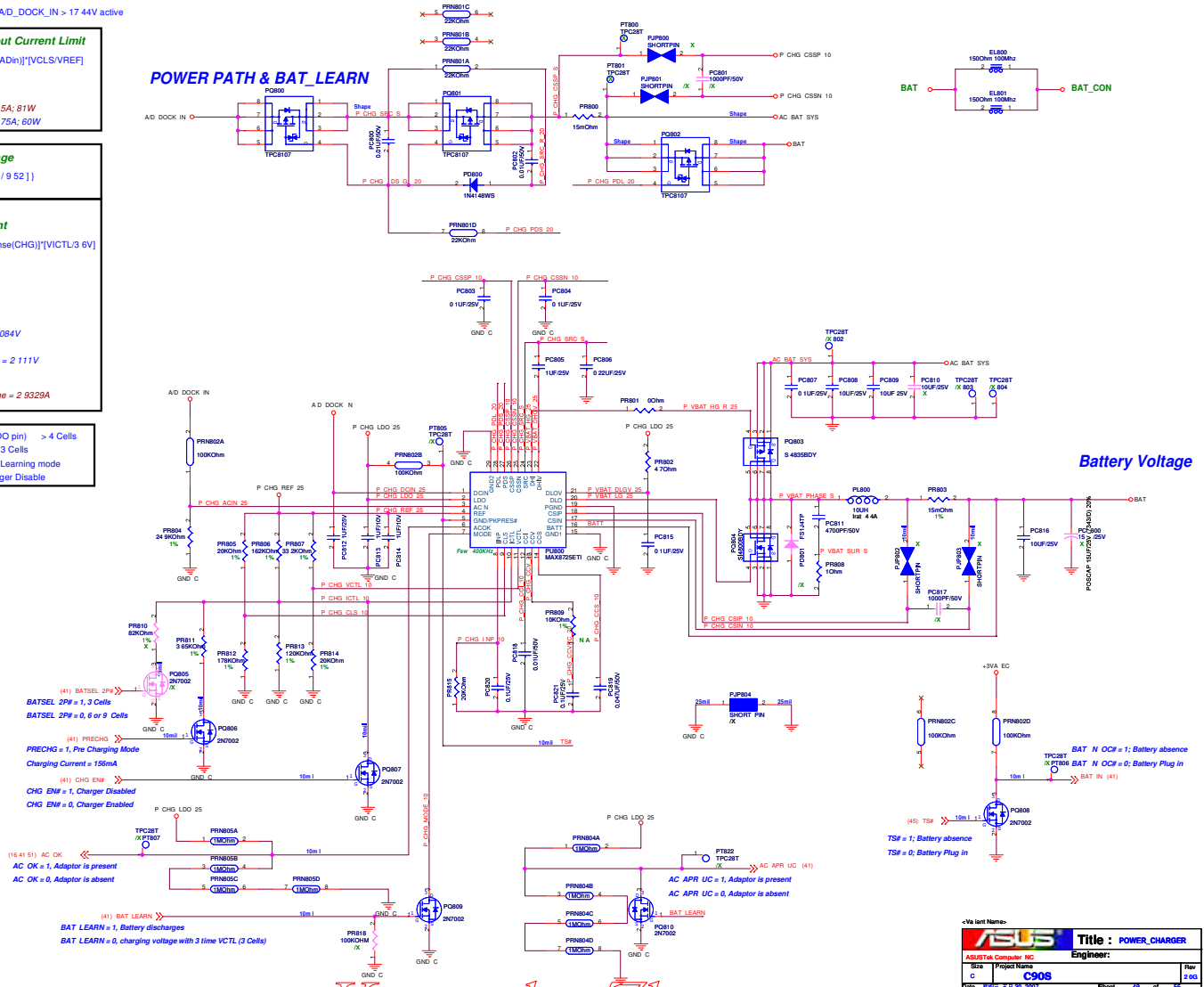
BATSEL\_2P# = 1, 3 Cells; Vctl = 2 084V  
=> Icharge = 1 6933A  
BATSEL\_2P# = 0, 6 or 9 Cells; Vctl = 2 111V  
=> Icharge = 2 9329A

PR814=120K PR813 = 120K; Icharge = 2 9329A

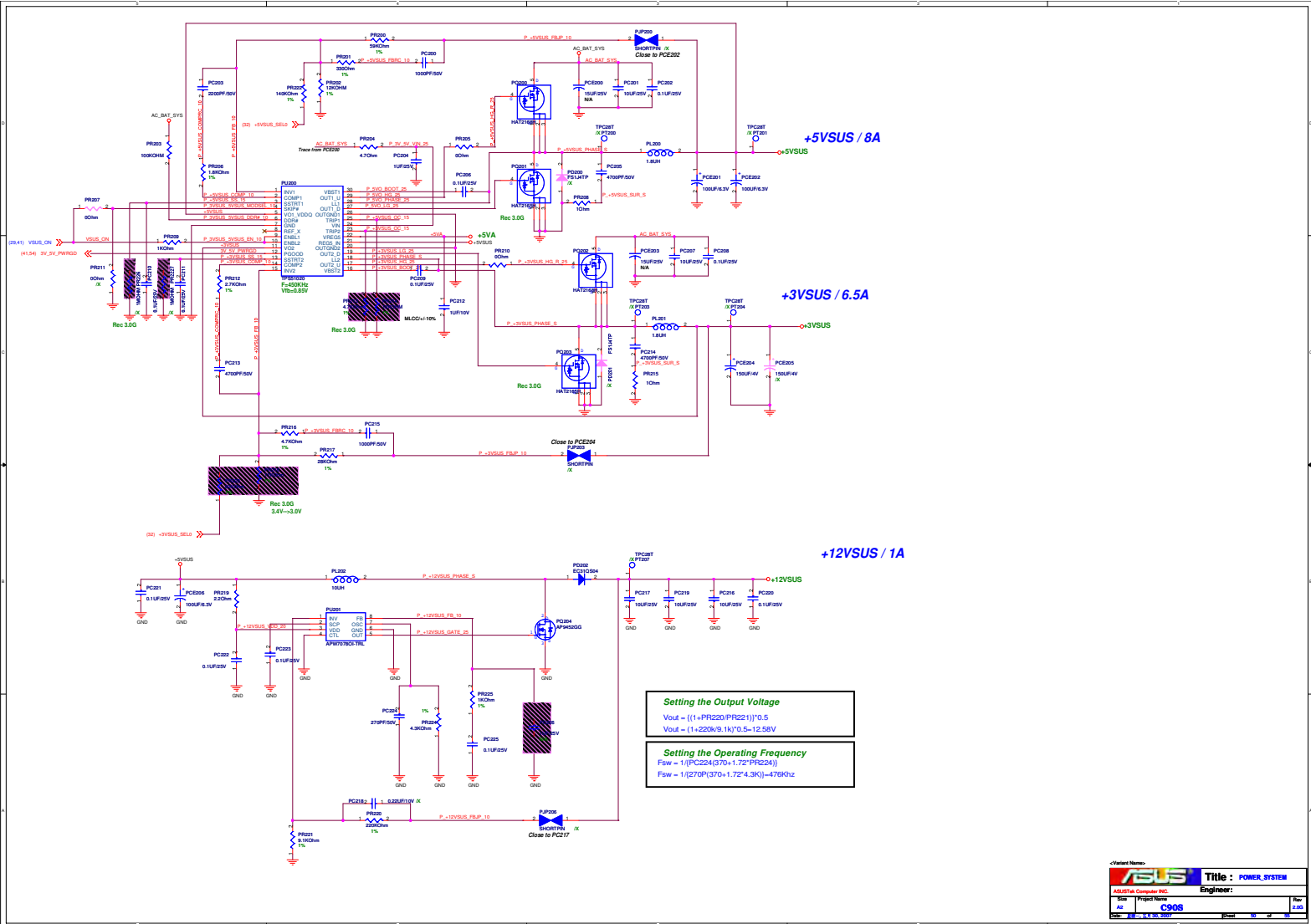
Mode pin Vmode > 2.8V (tie to LDO pin) > 4 Cells  
2.0 > Vmode > 1.6V (floating) > 3 Cells  
0.8 > Vmode (tie to GND) > Learning mode  
VICTL< 0.8V or DCIN < 7V >Charger Disable

MAX8725\_REF : 4.2235V  
MAX8725\_LDO : 5.4V

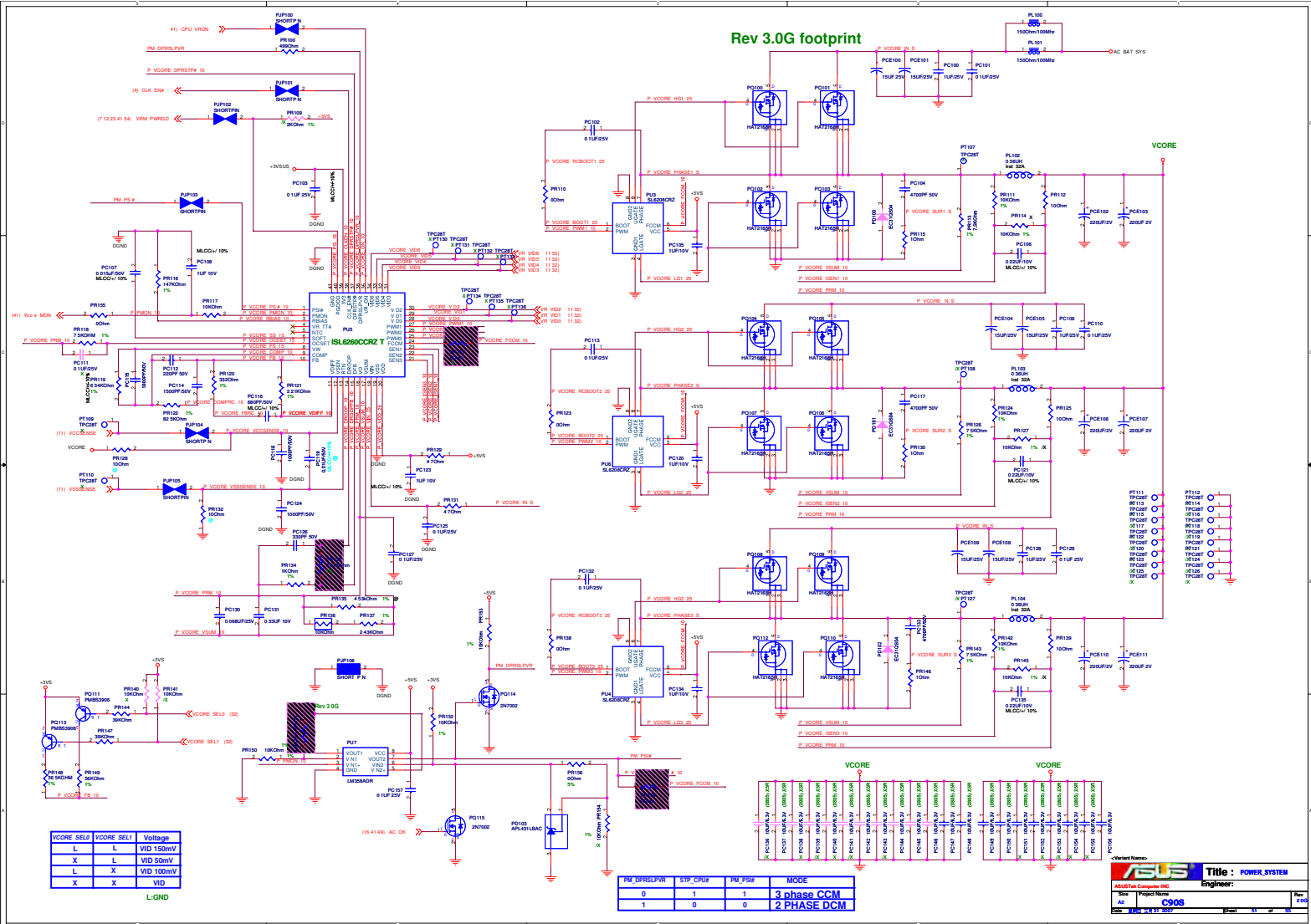
## POWER PATH & BAT LEARN



<< Kennedy\_Zhang >>



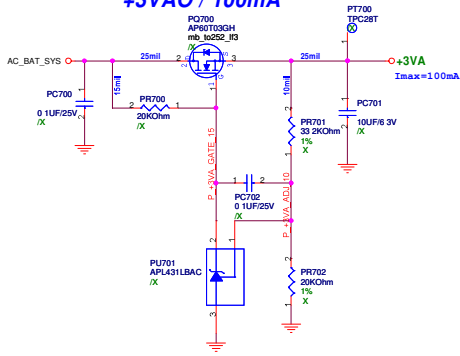
<< Kennedy\_Zhang >>



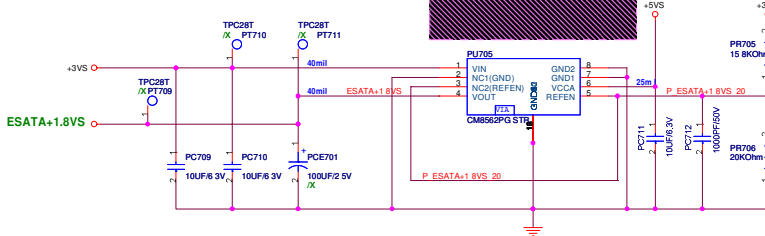
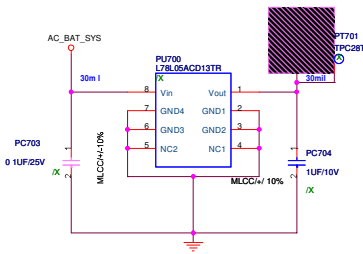
*<< Kennedy\_Zhang >>*



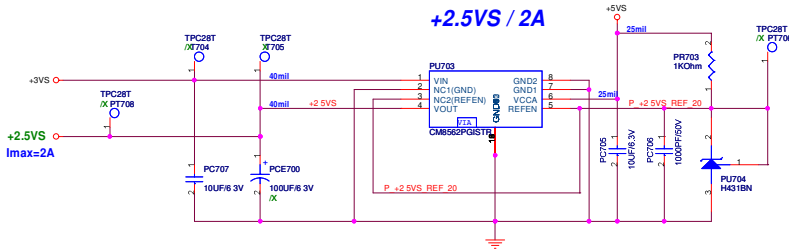
# **+3VAO / 100mA**



# **For CIR Power**



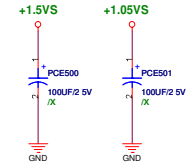
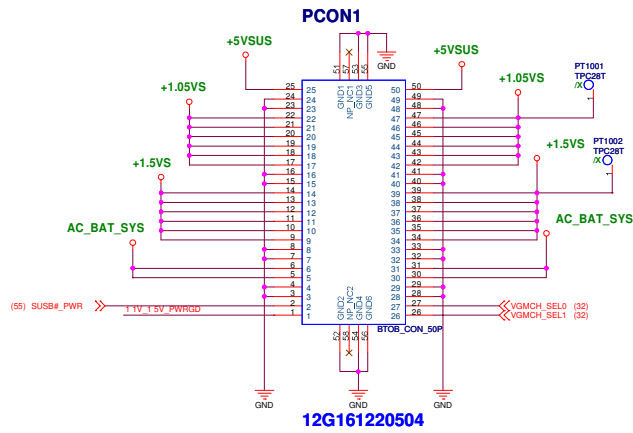
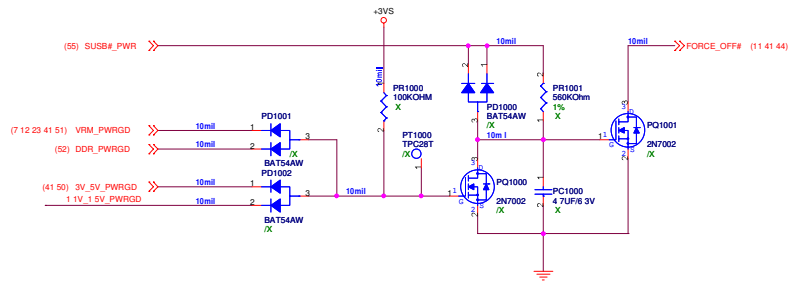
# **+2.5VS / 2A**



|                      |              |           |      |                               |      |
|----------------------|--------------|-----------|------|-------------------------------|------|
| ASUS                 |              |           |      | Title : POWER_IQ_+3VA & +2.5V |      |
| ASUSTek Computer INC |              | Engineer: |      | Rev                           |      |
| Size                 | Project Name |           | C90S |                               | 2.00 |
| Date: 8/2/2007       | Sheet        |           | 53   | of                            |      |

« Kennedy\_Zhang »

## Power Good Detector



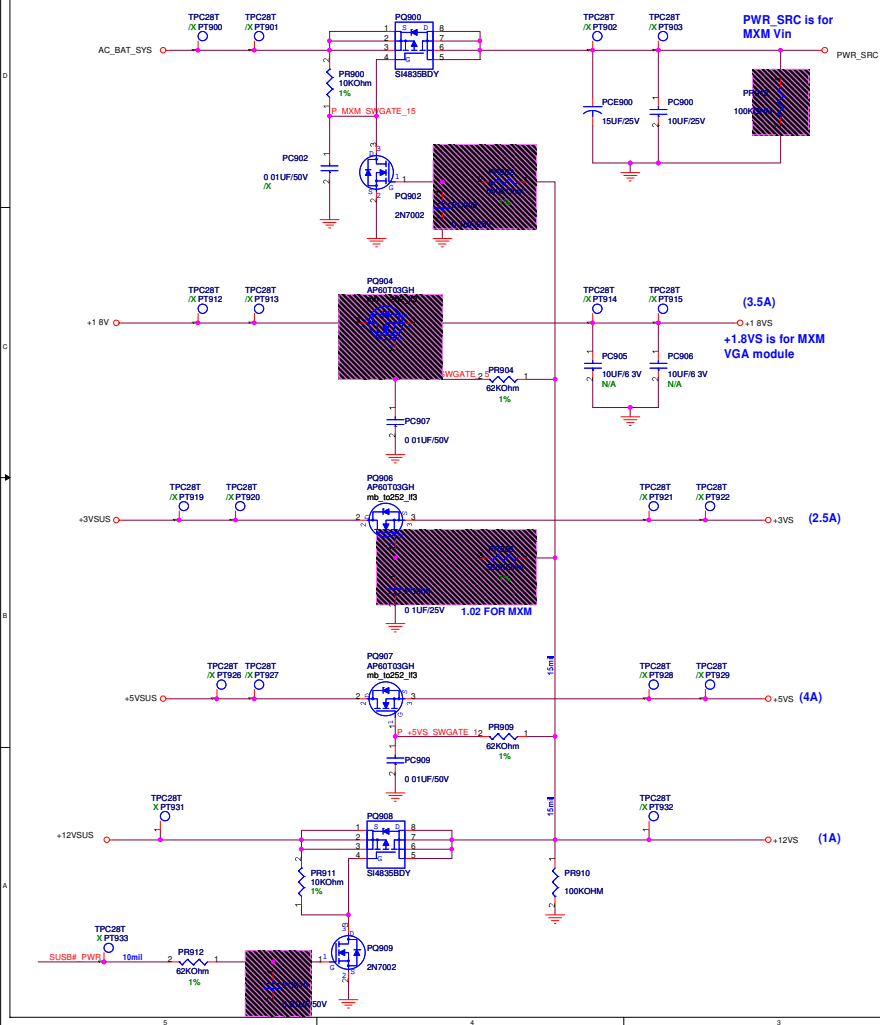
Near NB & SB

<Var ant Name>

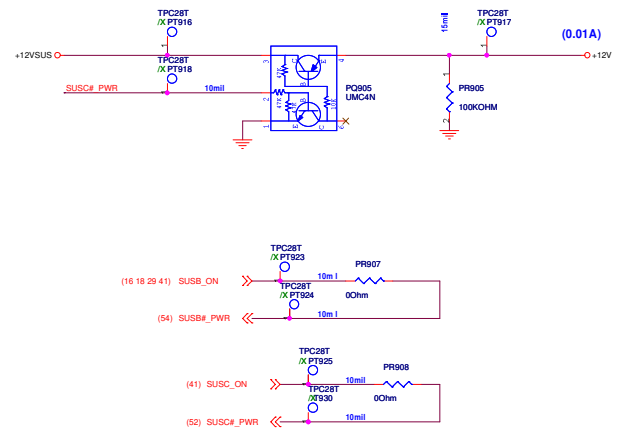
|                         |              |                              |       |
|-------------------------|--------------|------------------------------|-------|
| <b>ASUS</b>             |              | <b>Title : POWER_PROTECT</b> |       |
| ASUSTek Computer INC    |              | Engineer:                    |       |
| Size                    | Project Name | Rev                          |       |
| Cus. on                 | C90S         | 2.00                         |       |
| Date: 2022. 05. 30 2022 | Sheet        | 54                           | of 55 |

<< Kennedy\_Zhang >>

## SUSB#\_PWR POWER



## SUSC#\_PWR POWER



|                  |              |                           |  |
|------------------|--------------|---------------------------|--|
| -Var ant Name-   |              | Title : POWER_LOAD SWITCH |  |
| ASUS             |              | Engineer:                 |  |
| Site             | Project Name | Rev                       |  |
| A3               | C90S         | 2.0G                      |  |
| Date: 11/13/2007 | Sheet 55     | of 55                     |  |

<< Kennedy\_Zhang >>