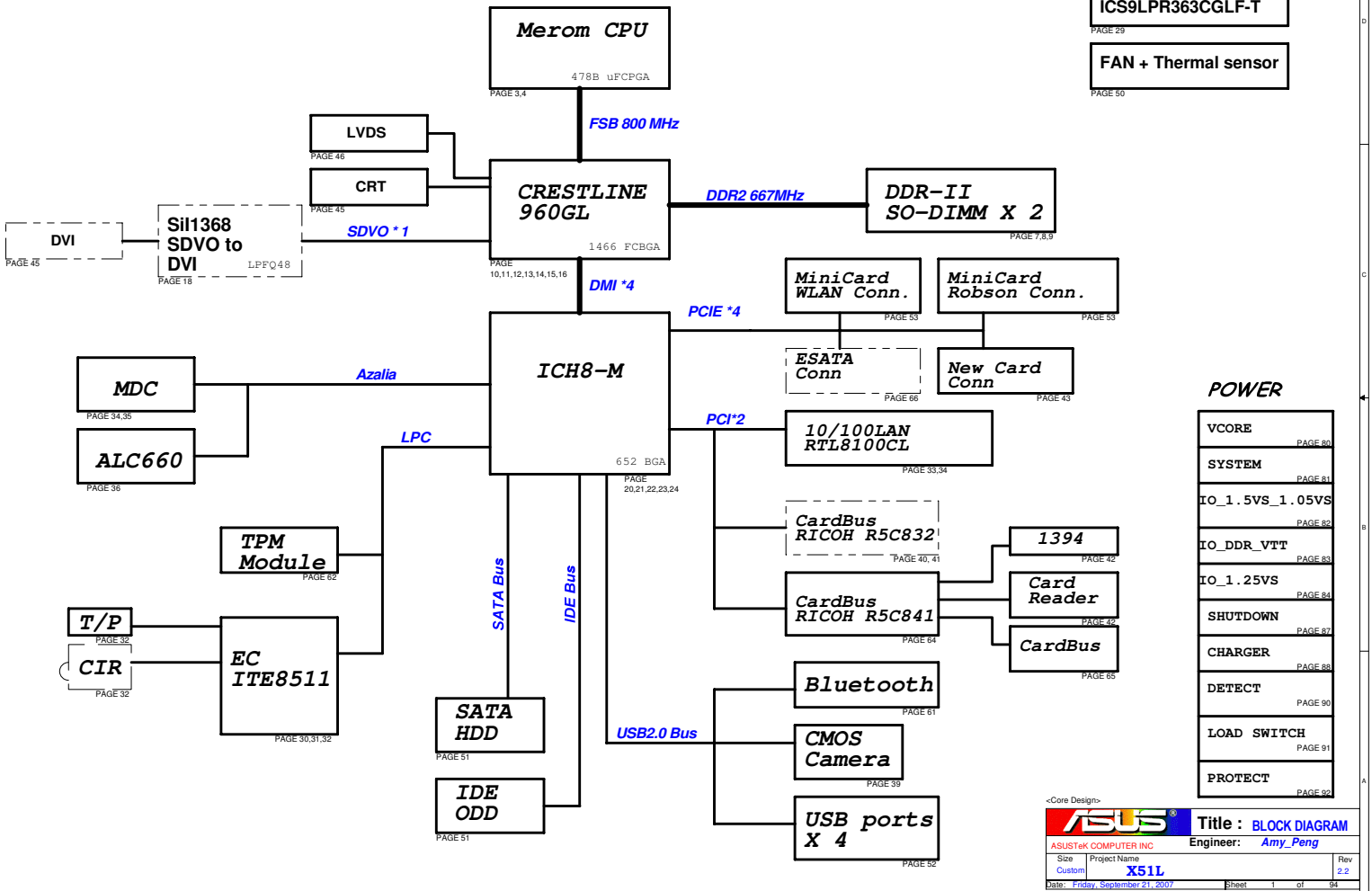


X51L Main BD. R2.0 BLOCK DIAGRAM

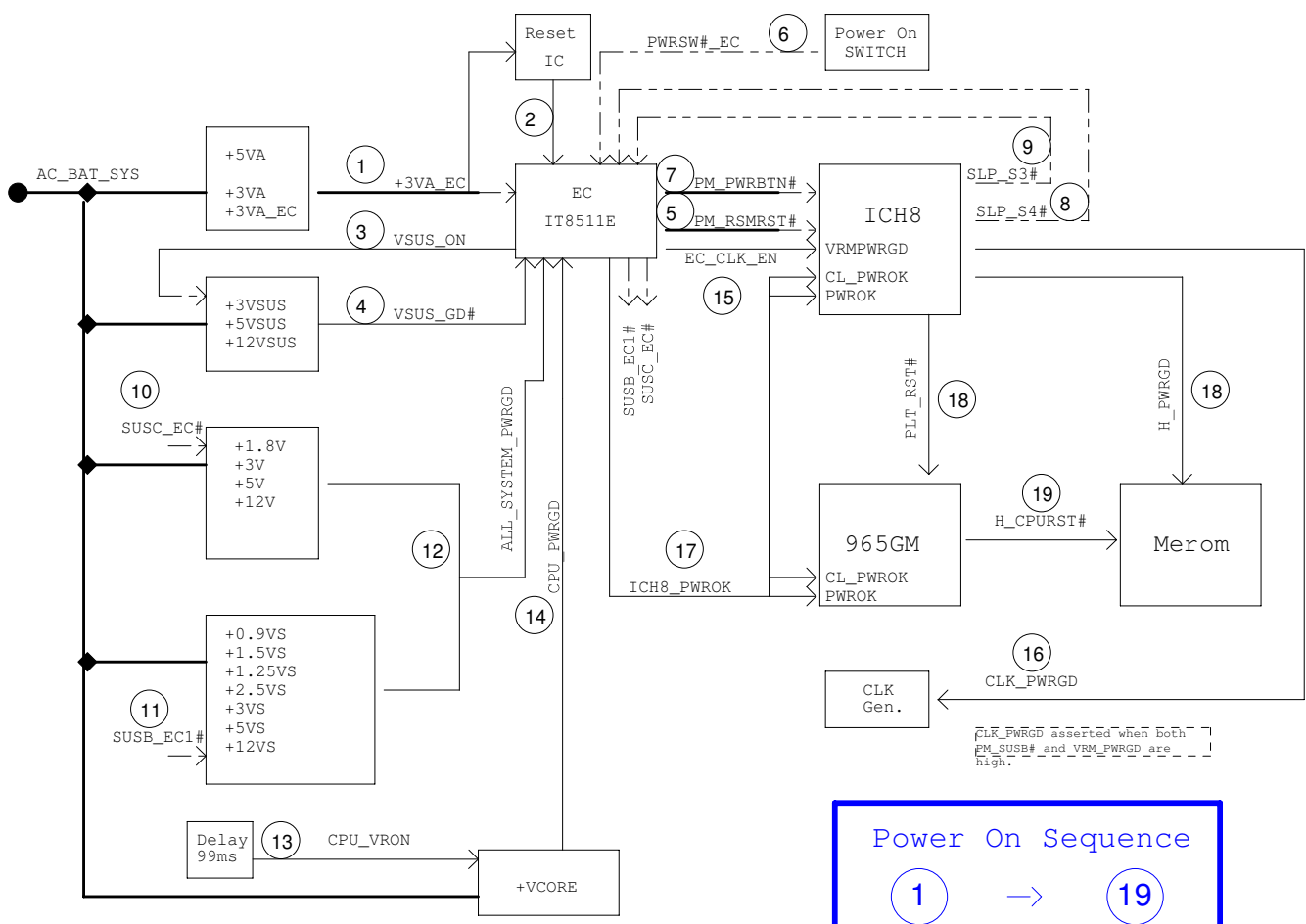
CLOCK GEN.
ICS9LPR363CGLF-T
PAGE 29

FAN + Thermal sensor
PAGE 50



<< MaryL_Liu >>

<Core Design>
ASUS
ASUSTek COMPUTER INC.
Size: Custom
Project Name: X51L
Date: Friday, September 21, 2007
Title: BLOCK DIAGRAM
Engineer: Amy_Peng
Rev: 2.2
Sheet: 1 of 84

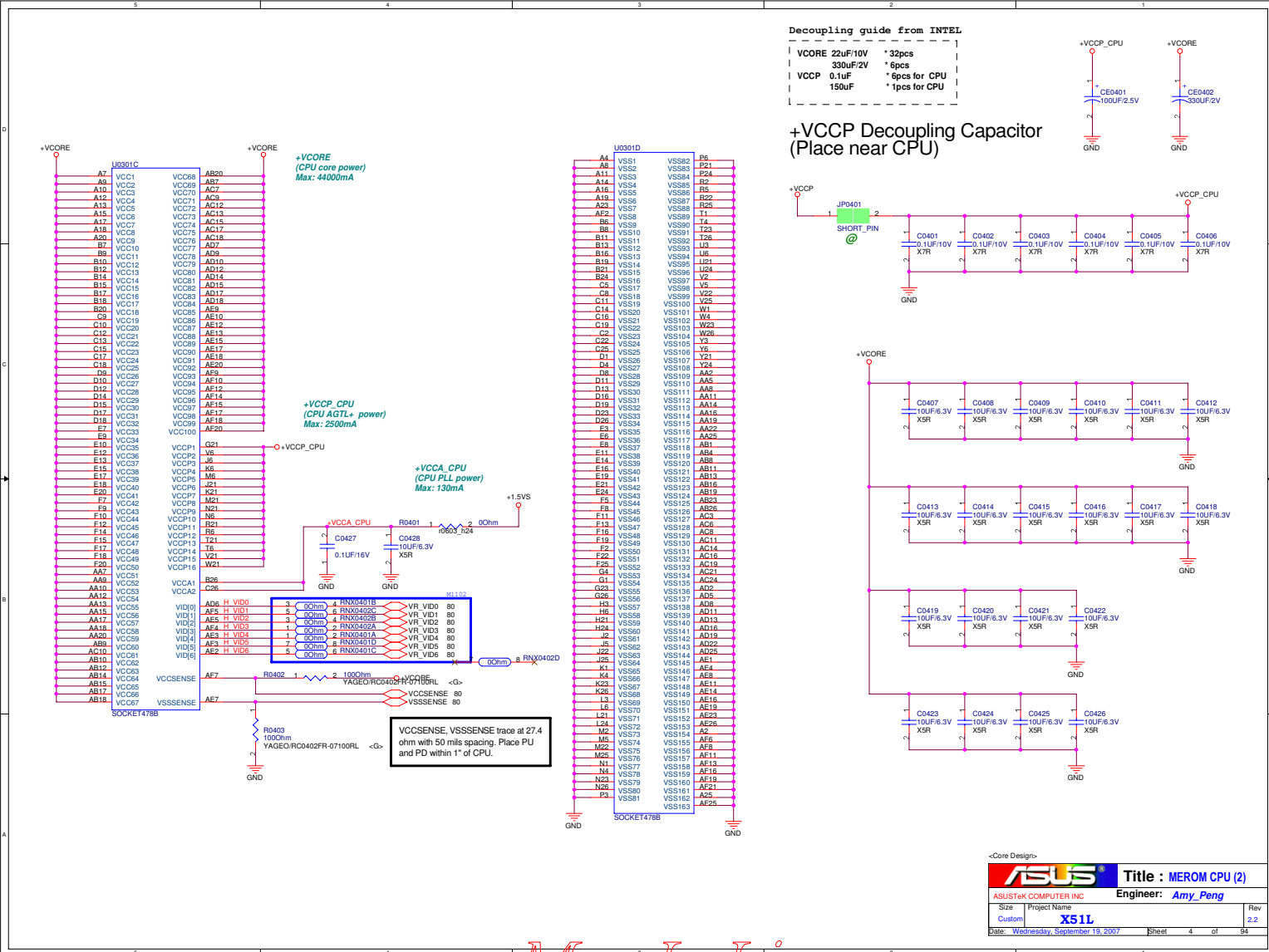


Power On Sequence

1 → 19


ASUS		Title : PowerOn sequence	
ASUSTek COMPUTER INC		Engineer: Amy Peng	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 19, 2007		Sheet 2 of 34	

<< MaryL_Liu >>



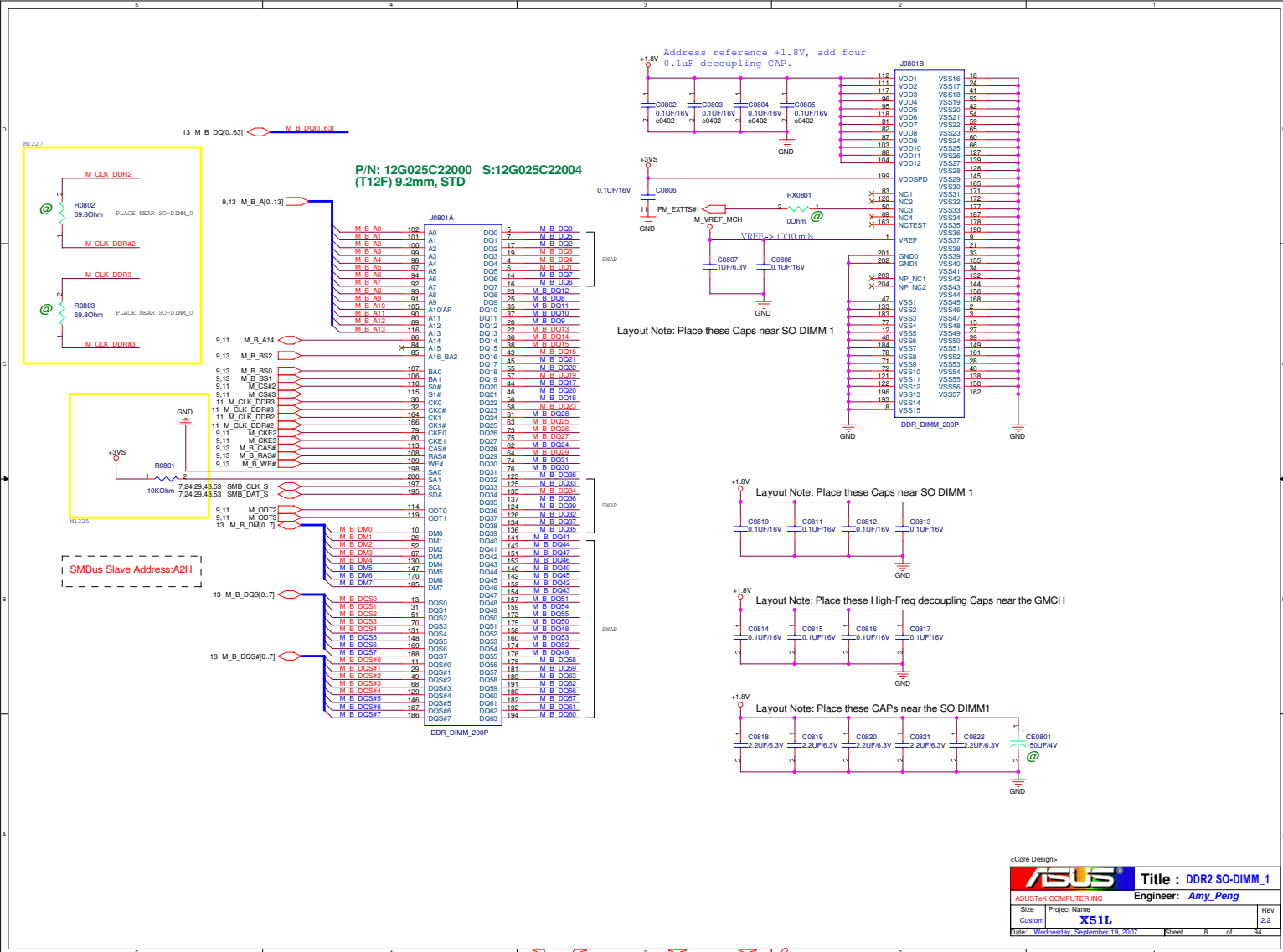
5					4					3					2					1				
D																								
C																								
B																								
A																								
															<div><Core Design></div> <div><div><div>ASUS®</div><div>ASUSTeK COMPUTER INC</div><div>Size A</div></div><div><div>Title : NULL</div><div>Engineer: Amy_Peng</div><div>Project Name X51L</div></div><div><div>Date: Wednesday, September 19, 2007</div><div>Sheet 5 of 94</div><div>Rev 2.0</div></div></div>									
5					4					3					2					1				

<< MaryL_Liu >>

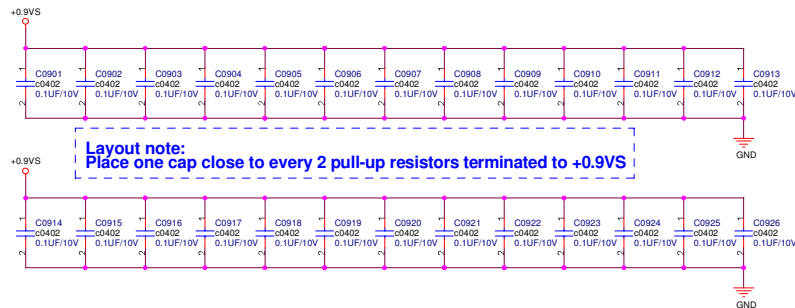
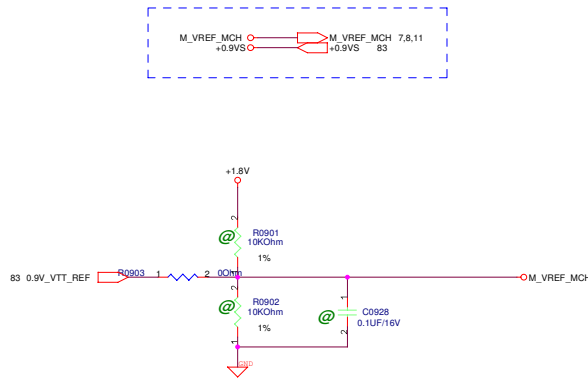
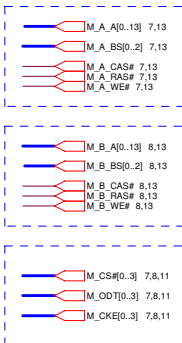
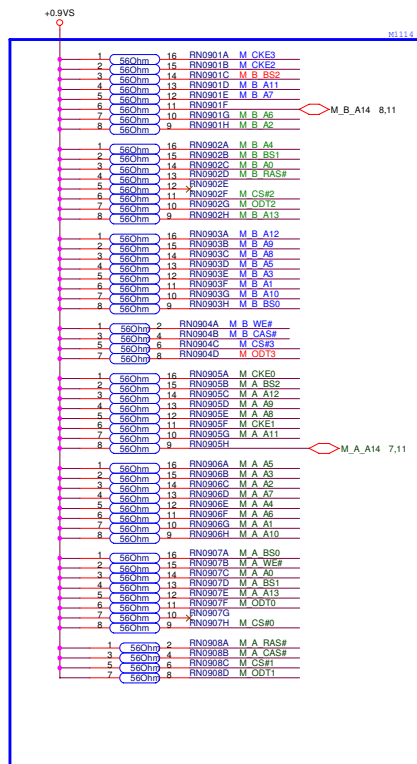
	5	4	3	2	1						
D											
C											
B											
A											
					<Core Design>						
					<div><div></div><div>Title : NULL</div></div>						
					ASUSTeK COMPUTER INC Engineer: Amy_Peng						
					<table><tr><td>Size</td><td>Project Name</td><td>Rev</td></tr><tr><td>A</td><td>X51L</td><td>2.0</td></tr></table>	Size	Project Name	Rev	A	X51L	2.0
Size	Project Name	Rev									
A	X51L	2.0									
					Date: Wednesday, September 19, 2007 Sheet 6 of 94						

<< MaryL_Liu >>

Figure 1: Segmentation of string



<< MaryL Liu >>



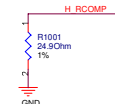
<Core Design>

ASUS		Title : DDR2 TERM	
ASUSTek COMPUTER INC.		Engineer: Amy_Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 19, 2007		Sheet	9 of 94

<< MaryL_Liu >>

For Calibrating the ESB I/O Buffer

For Calibrating the FSB I/O Buffer



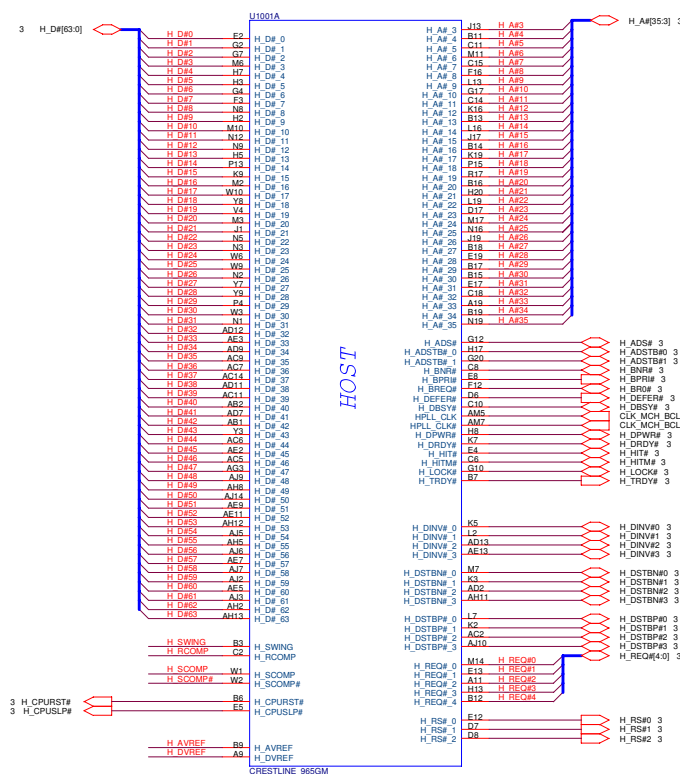
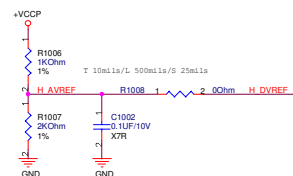
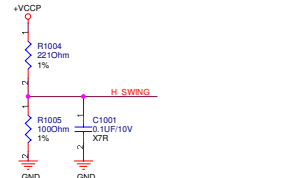
For Slew Rate Compensation on the FSB

For Slew Rate Compensation on the FSB



For Providing a Reference Voltage to The FSB RCOMP circuits

For Providing a Reference Voltage to The FSB RCOMP circuits



HOST

CRESTLINE 965GM

<Core Design>



Title : NB-965GM (HOST)

ASUSTeK COMPUTER INC. NR

Engineer: *Amy Peng*

Size	Project Name
------	--------------

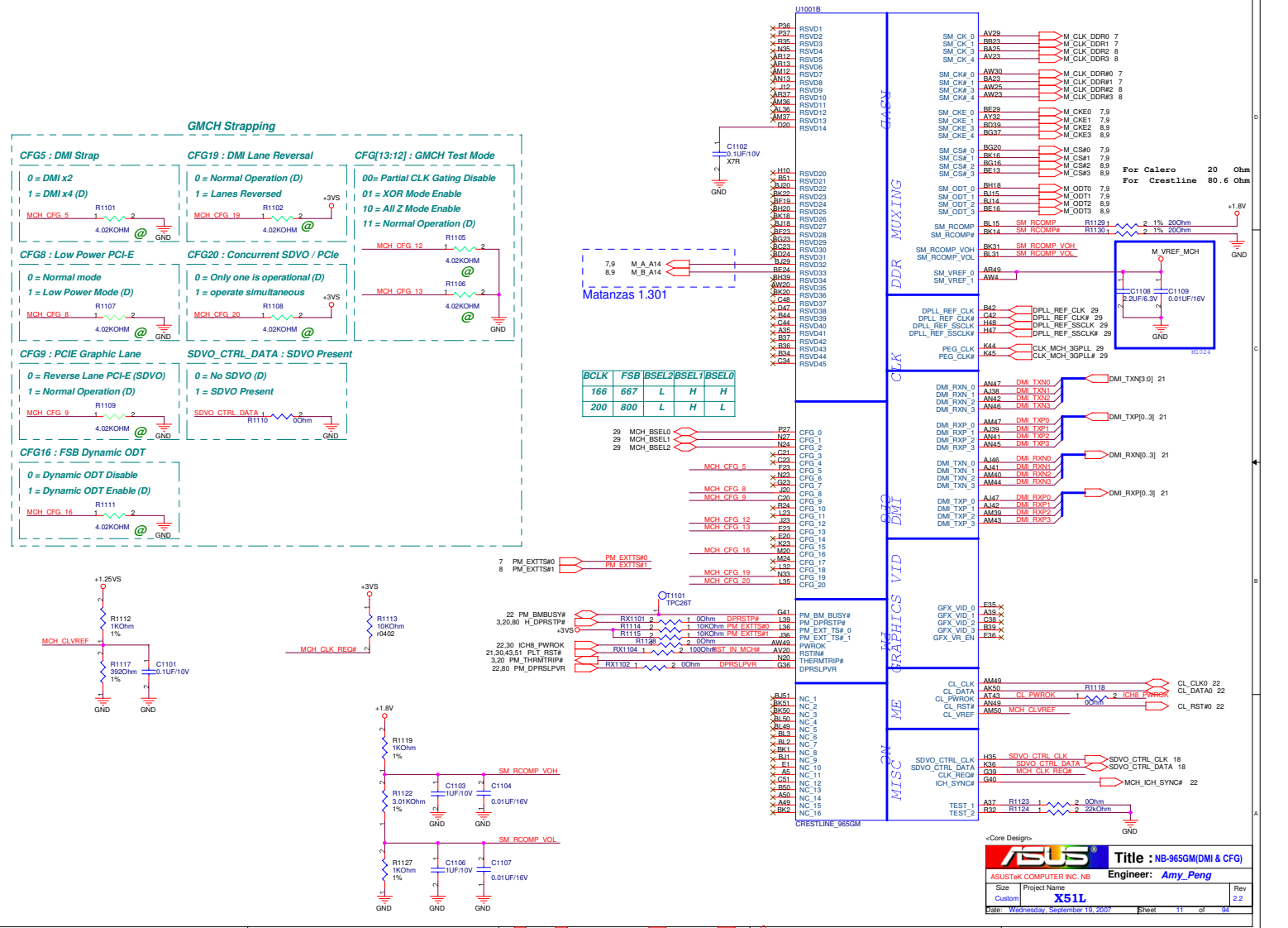
Size	Project Name
Custom	Y51U

Custom **A51L**
Date: Wednesday, September 19, 2007

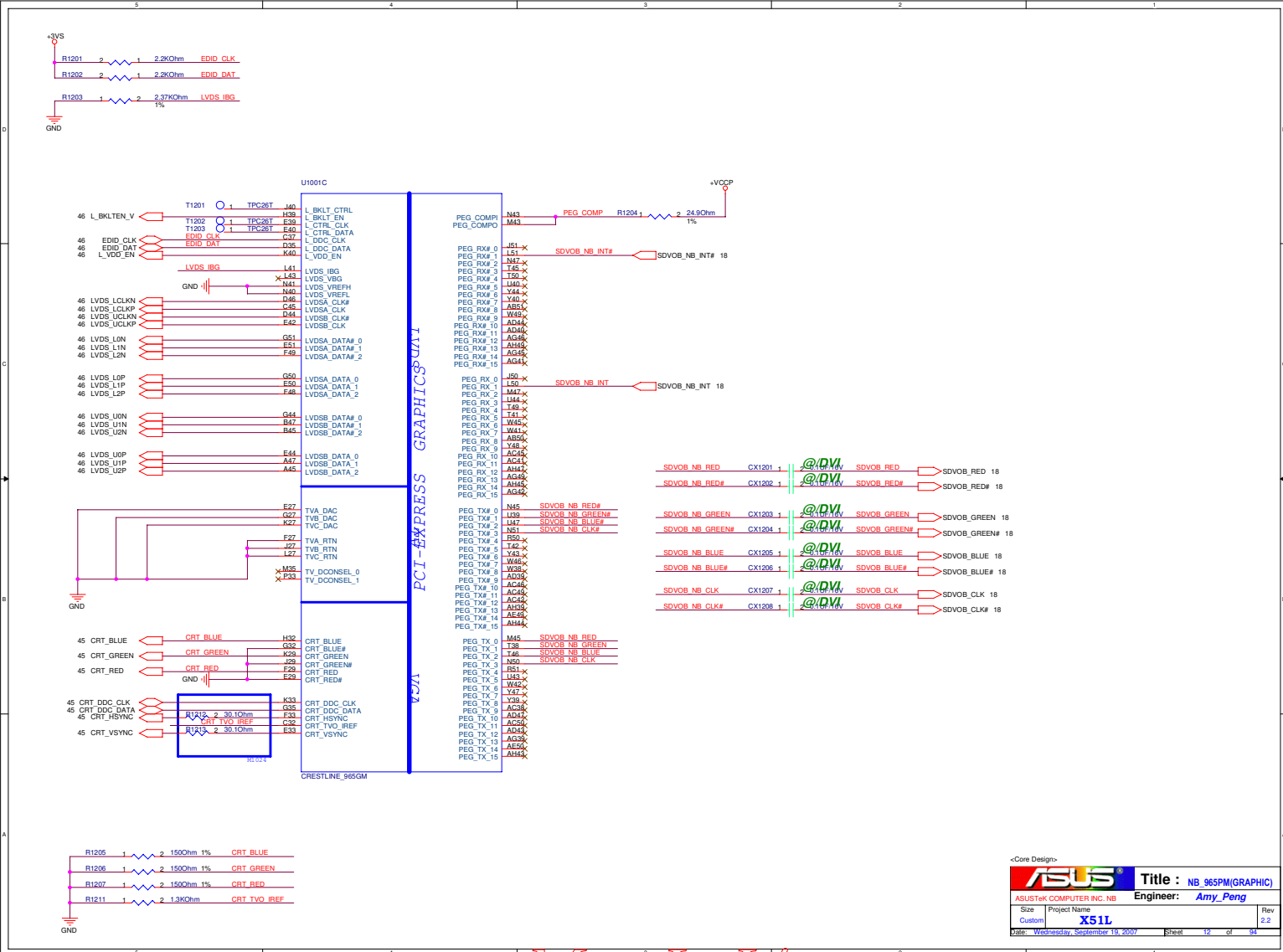
Sheet 10 of 94

Re

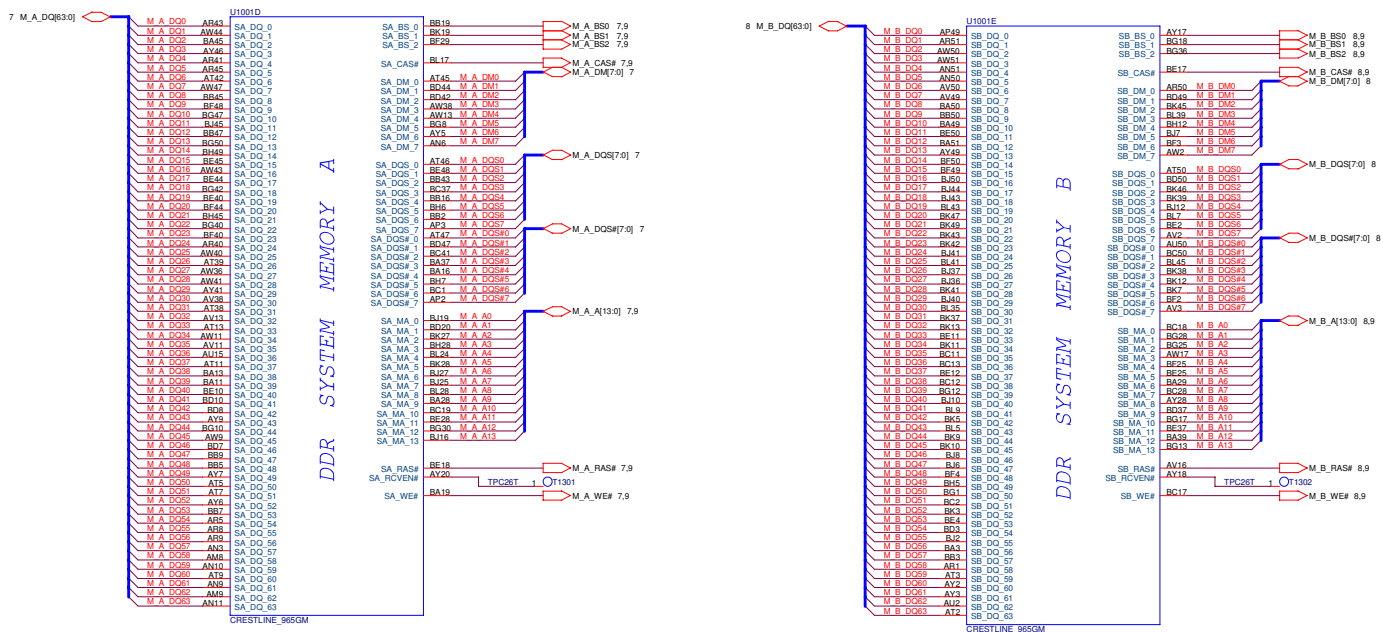
<< MaryL Liu >>



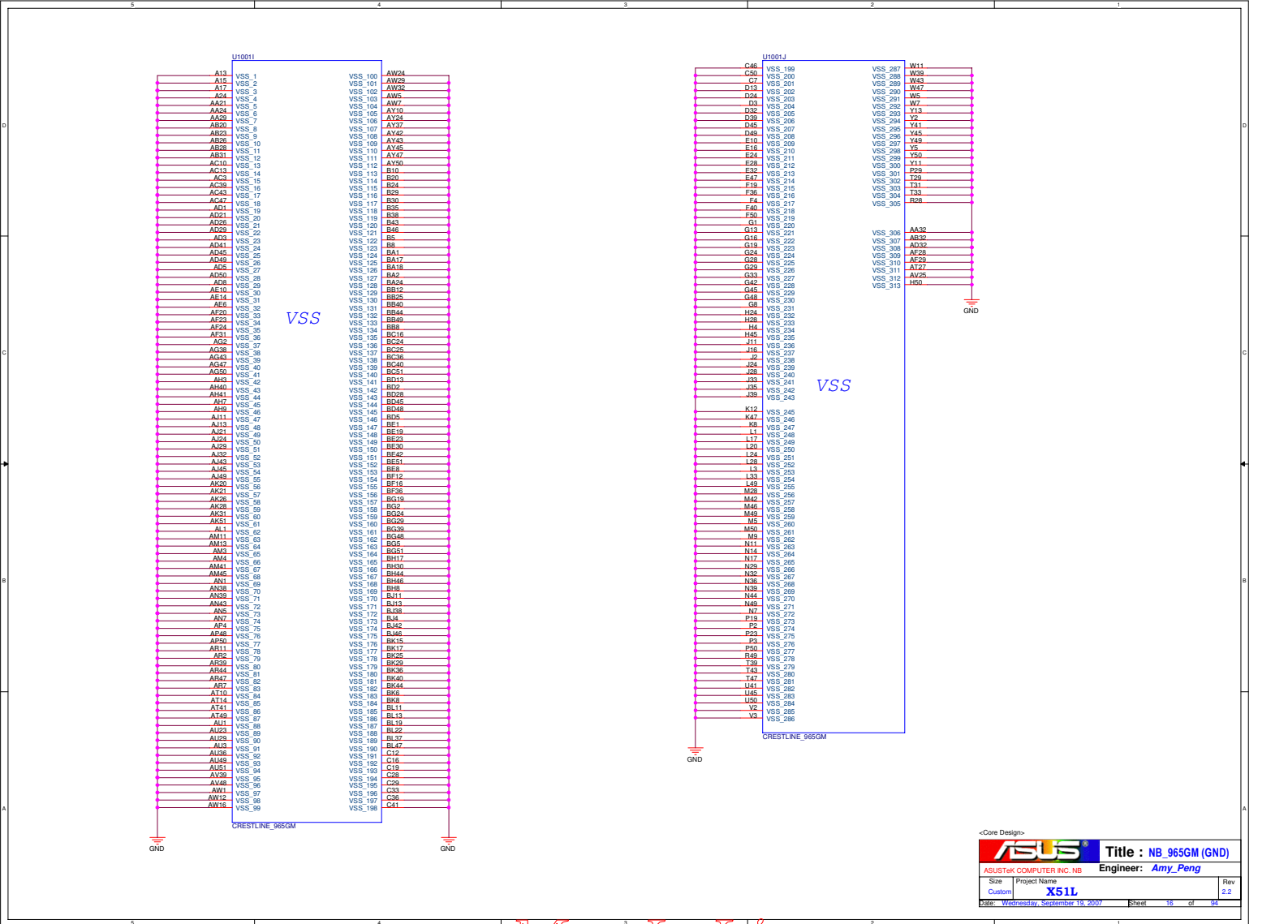
<< MaryL_Liu >>




<< MaryL Liu >>




<< MaryL_Liu >>



<< MaryL_Liu >>

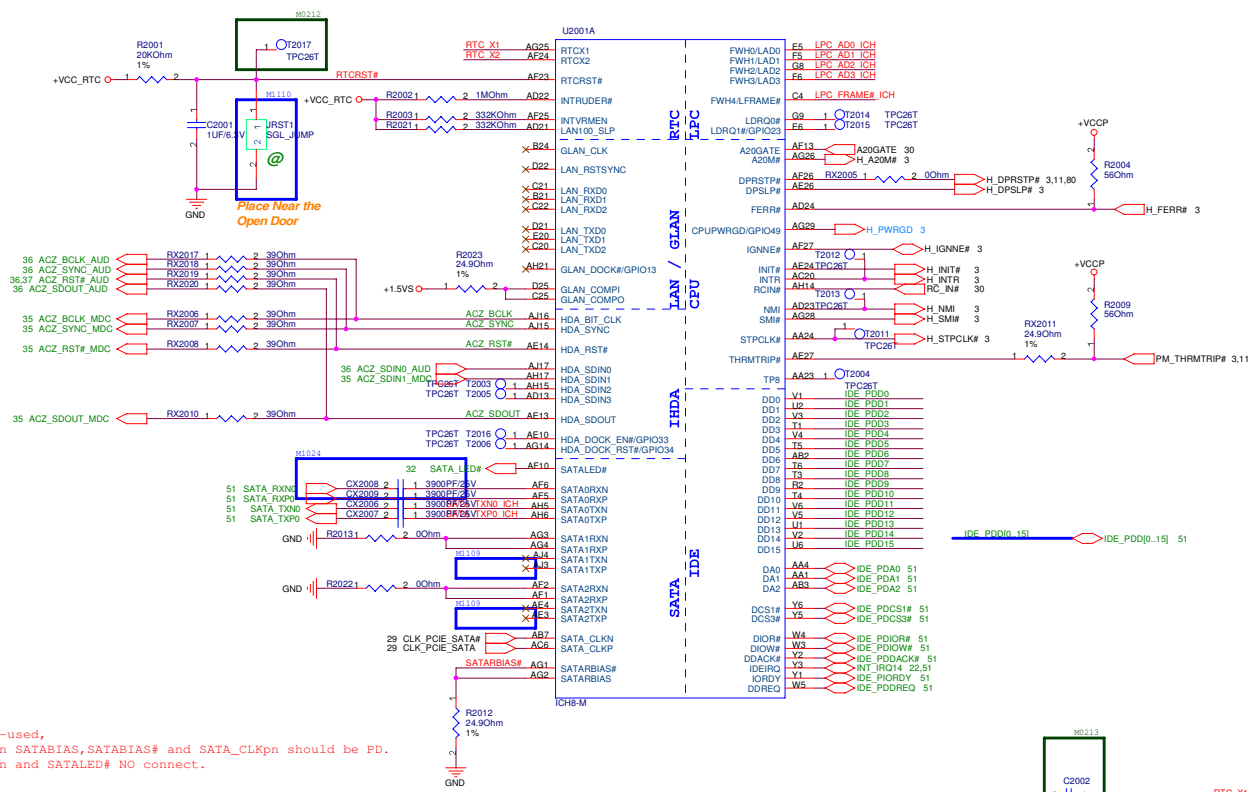
5					4					3					2					1				
D																								
C																								
B																								
A																								
															<Core Design>									
															 Title : NULL									
															ASUSTeK COMPUTER INC Engineer: Amy_Peng									
Size					Project Name															Rev				
A					X51L															2.0				
Date: Wednesday, September 19, 2007															Sheet					17 of 94				
5					4					3					2					1				

<< MaryL_Liu >>

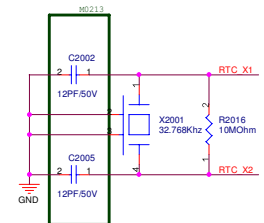
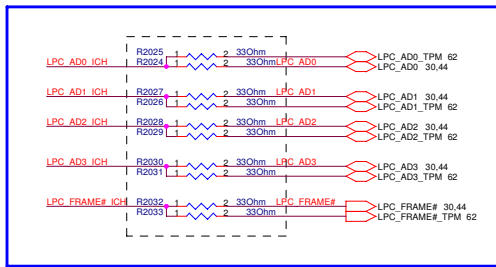
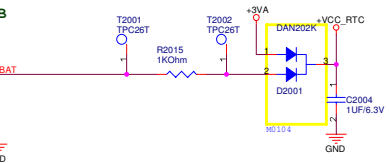
5					4					3					2					1				
D																								
C																								
B																								
A																								
															<Core Design>									
															 Title : NULL									
															ASUSTeK COMPUTER INC Engineer: Amy_Peng									
Size					Project Name															Rev				
A					X51L															2.0				
Date: Wednesday, September 19, 2007															Sheet					19 of 94				
5					4					3					2					1				

<< MaryL_Liu >>

5 4 3 2 1

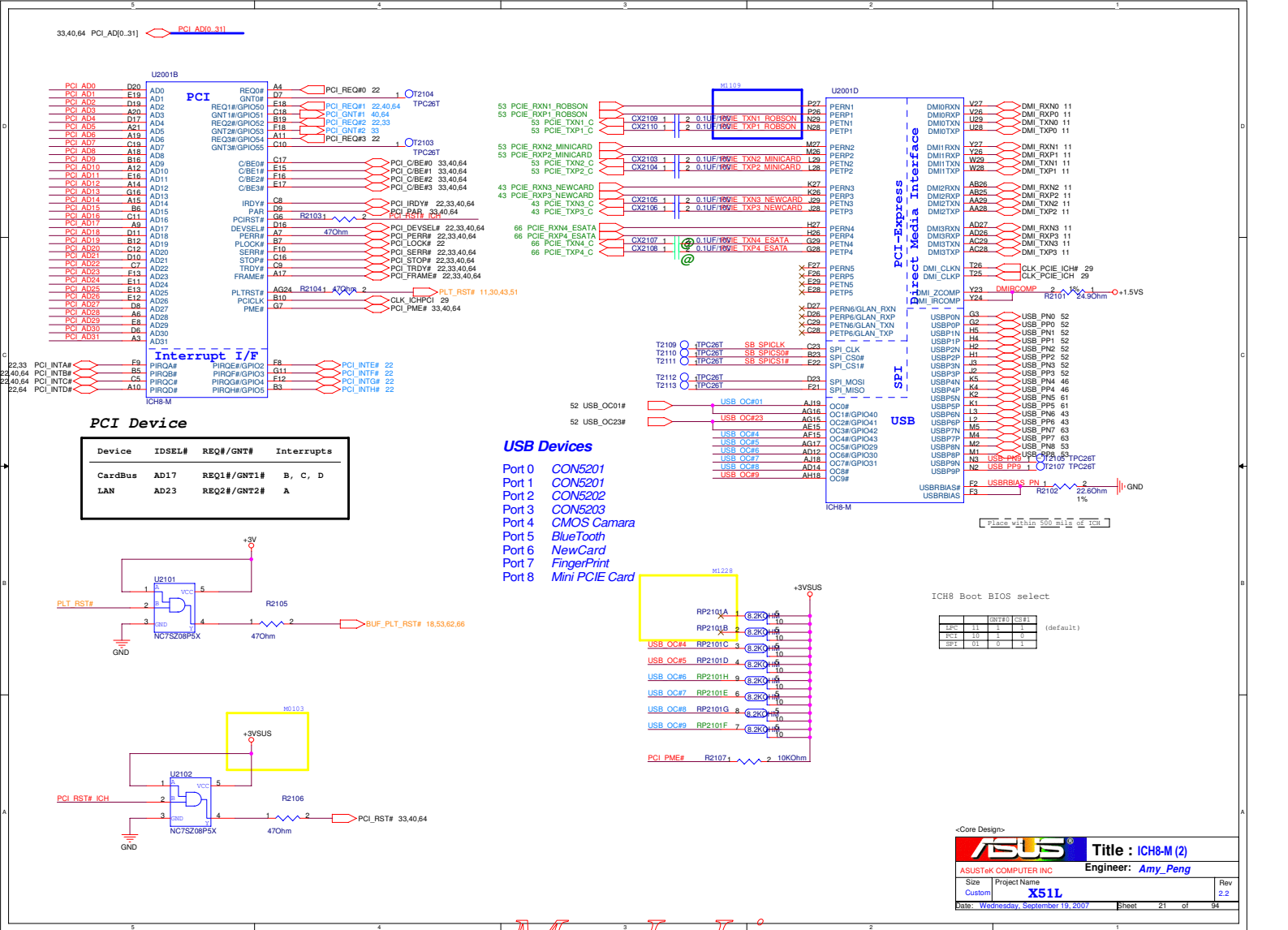


RTC BAT

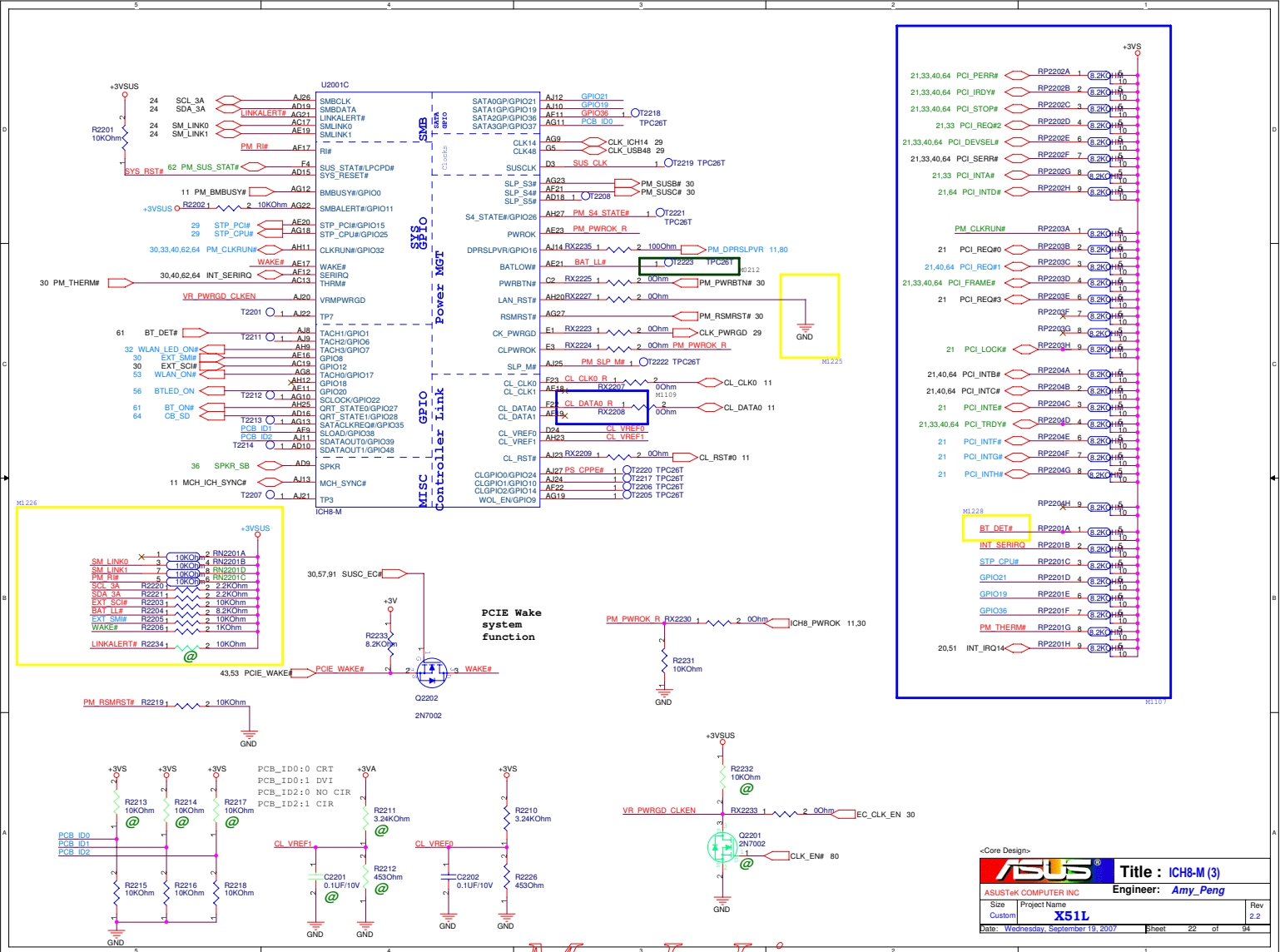


ASUS		Title : ICH8-M (1)	
ASUSTek COMPUTER INC.		Engineer: Amy_Peng	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 19, 2007	Sheet	20	of 84

<< MaryL_Liu >>

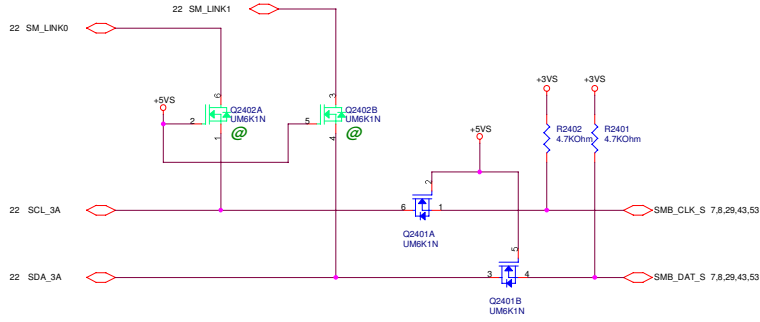


<< MaryL_Liu >>



Connect SMLINK and SMBUS
for SMBus 2.0 compliance.

ICH8-M






ICH8-M




<Core Design>

ASUS		Title : ICH8M-Other	
ASUSTeK COMPUTER INC		Engineer: Amy Peng	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 19, 2007		Sheet	24 of 34




<< MaryL_Liu >>

5					4					3					2					1																																																																																																																																						
D																																																																																																																																																										
C																																																																																																																																																										
B																																																																																																																																																										
A																																																																																																																																																										
<div><Core Design></div> <table><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size</td><td colspan="15">Project Name</td><td colspan="5">Rev</td></tr><tr><td colspan="5">A</td><td colspan="15">X51L</td><td colspan="5">2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">25</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size					Project Name															Rev					A					X51L															2.0					Date: Wednesday, September 19, 2007										Sheet					25					of					94				
										Title : NULL																																																																																																																																																
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																																																
Size					Project Name															Rev																																																																																																																																						
A					X51L															2.0																																																																																																																																						
Date: Wednesday, September 19, 2007										Sheet					25					of					94																																																																																																																																	
5					4					3					2					1																																																																																																																																						

<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">26</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					26					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					26					of					94																																																																																																								
5					4					3					2					1																																																																																																													


<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">27</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					27					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					27					of					94																																																																																																								
5					4					3					2					1																																																																																																													

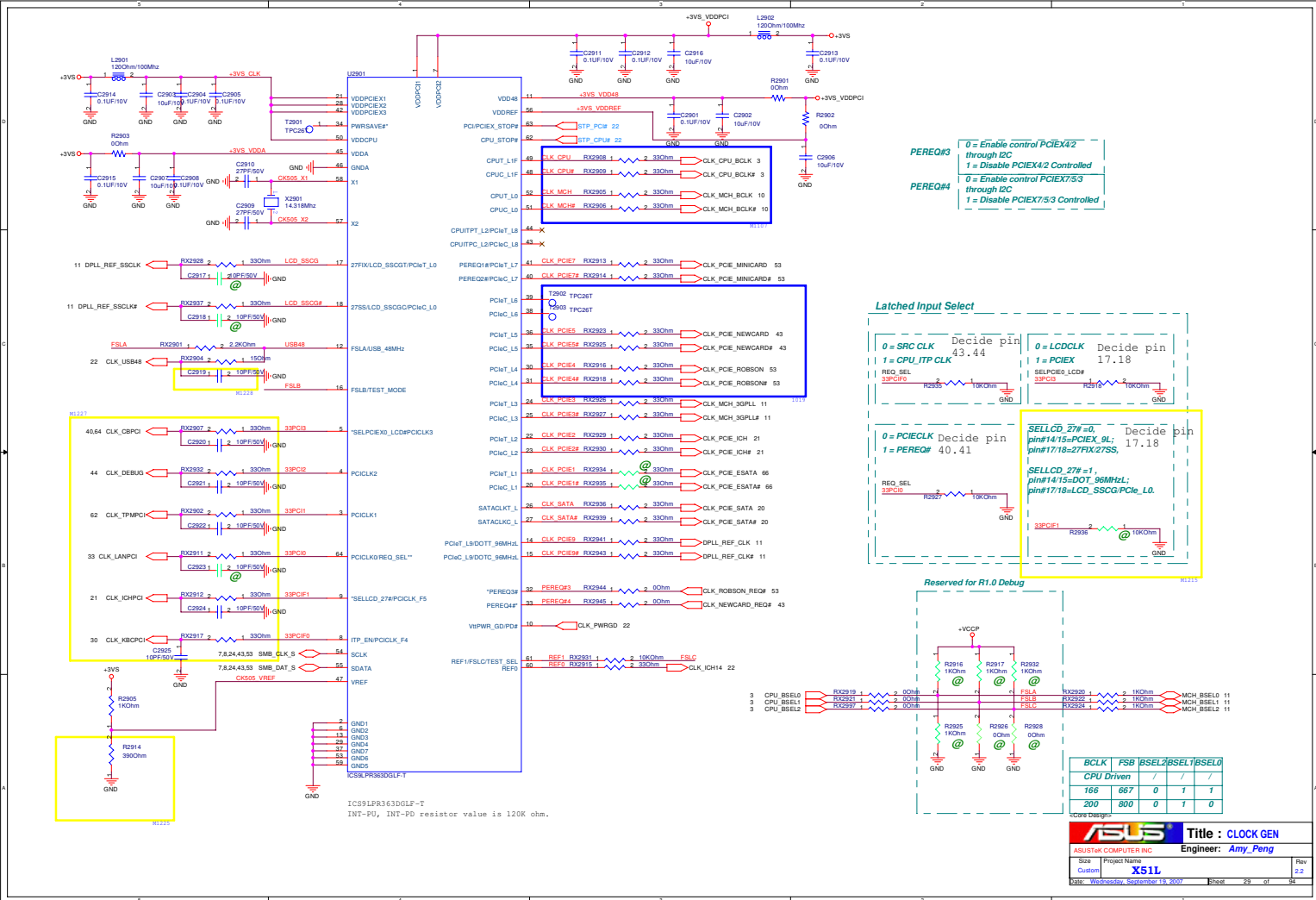
<< MaryL_Liu >>

5					4					3					2					1				
D																								
C																								
B																								
A																								
54321																								

<Core Design>

										Title : NULL																			
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																			
Size A					Project Name X51L															Rev 2.0									
Date: Wednesday, September 19, 2007										Sheet					28					of					94				

<< MaryL_Liu >>



<< MaryL_Liu >>

[illegible]

VS
 R3006 1 2 10KOhm DVD_CD_ONE
 R3007 1 2 10KOhm VY_ONE
 R3008 1 2 10KOhm TO_SPD_ONE
 R3009 1 2 10KOhm AC_IN_ONE
 R3010 1 2 100KOhm BATT_IN_ONE
 R3011 1 2 100KOhm BATT_IN_ONE
 R3012 1 2 2.7KOhm SDR0_CLK
 R3013 1 2 4.7KOhm SDR0_WOE#
 R3014 1 2 10KOhm S6_ONE
 R3015 1 2 10KOhm TP_WOE#
 R3016 1 2 10KOhm REPR_SWO
 R3017 1 2 10KOhm FWH_SWO

VSUS
 RN30040 7 1 10KOhm X PM_PWRBTN#
 RN30039 3 1 10KOhm

VS
 RN30020 6 1 10KOhm KB_IDO
 RN30020 6 1 10KOhm KB_IDI

VS
 RN30030 6 1 10KOhm 4 ASOGATE
 RN30038 3 1 10KOhm RC_W#
 RN30030 6 1 10KOhm 4
 RN30031 3 1 10KOhm 4
 RN30018 3 1 10KOhm 4 SMB1_CLK
 RN30017 3 1 10KOhm 4
 RN30017 3 1 10KOhm 4 TP_CLK

VS
 R3027 1 2 10KOhm ME_ALERT#
 1SS355
 PM_THERM 2 1 PM_THERM# PM_THERM 2
 D3001

PM_SLP_W# RN30073 3 10KOhm 4
 PM_ST_STAY# RN30074 3 10KOhm 4
 PM_S3W# RN30075 3 10KOhm 4
 PM_S3SC# RN30076 3 10KOhm 4
 SUBS_EC# RN3004 1 2 4.7KOhm
 SUBS_EC# RN3028 1 2 4.7KOhm
 SUBS_EC# RN3028 1 2 4.7KOhm
 SUBS_EC# RN3028 1 2 4.7KOhm
 SUBS_EC# RN3028 1 2 4.7KOhm
 SLP_IN_OV RN3030 1 2 4.7KOhm
 ST_STAT_OV RN3031 1 2 4.7KOhm
 PM_S3SC# RN3032 1 2 4.7KOhm
 LAN_WOL_EN RN3032 1 2 100KOhm

Note:
 These two signals, EXT_SMI#, EXT_SCI#, pull-up power plane, which according to South Bridge's GPIO.

For Instant Key
 1 10KOhm 4 MARATHON#
 1 10KOhm 4 COORDIN#
 1 10KOhm 4 INFINITE#
 1 10KOhm 4 DIST#
Note:
 Close to I

EC
 R3017 1 2 INSTANT_ON# SW#

For Xtal

Note:
 Load=12.5PF
 close to EC

For EC reset

Note:

For EC Hardware Strap

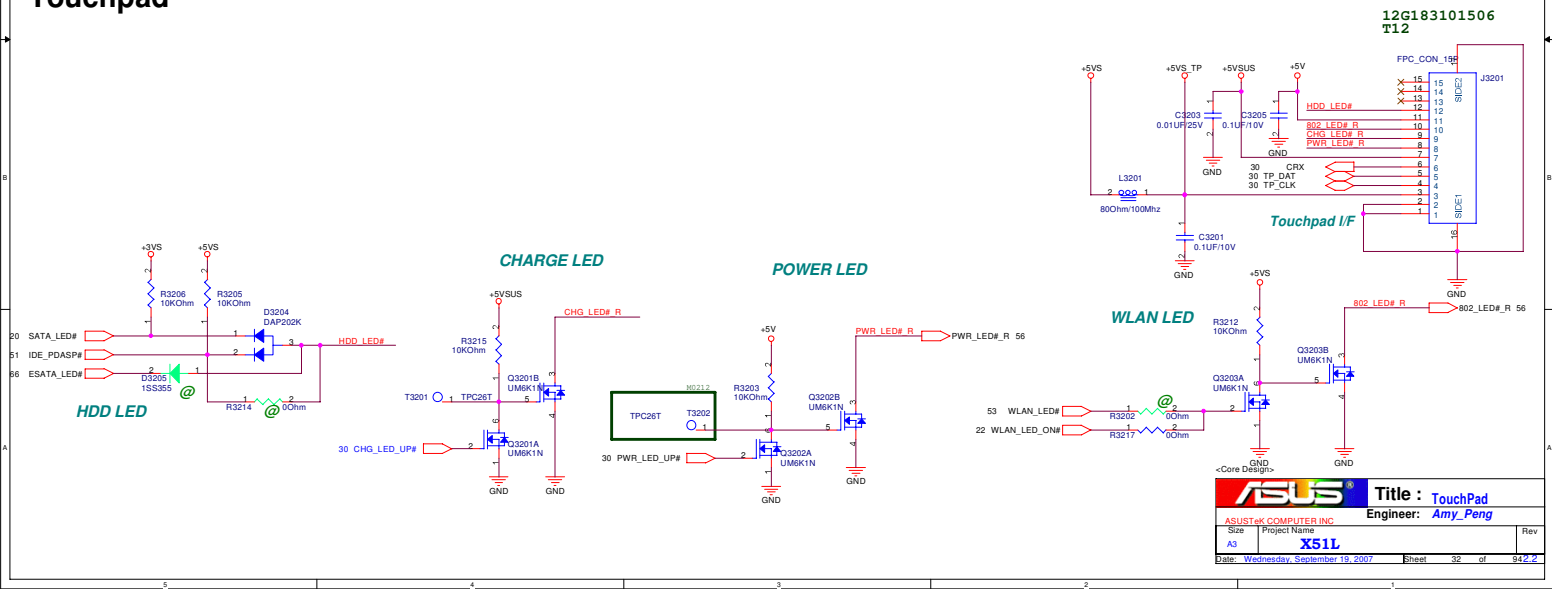
For firewire

Note:

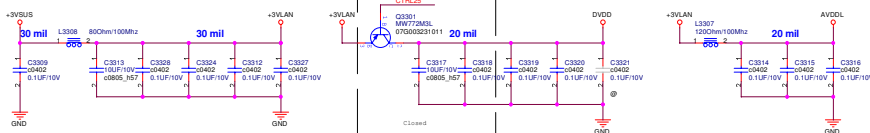
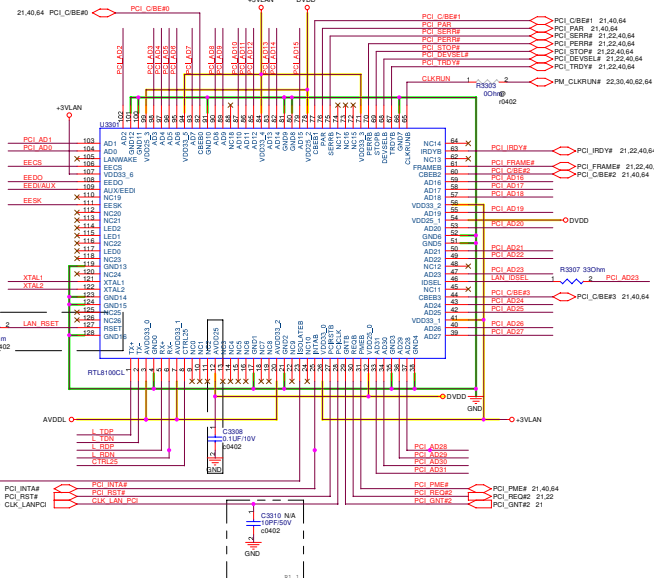
EC fireware

<< MaryL_Liu >>

Touchpad



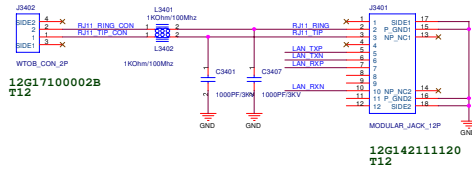
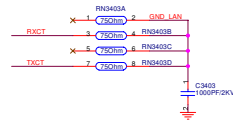
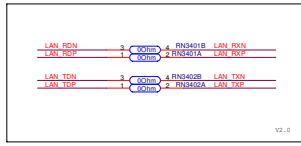
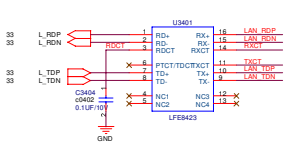
<< MaryL_Liu >>



	RTL8100C	
V_{12P}	2.5AVDD	PIN 12
AVDDL	3.3AVDD	PIN 3/7/20
VDD	3.3VDD	PIN 26/41/56/71/ 84/94/107
DVDD	2.5VDD	PIN 32/54/78/99
<65mA	3.3V	
<25mA	2.5V	

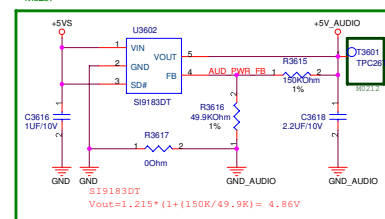
		Title : LAN_RTL8100CL	
ASUSTek COMPUTER INC		Engineer: Amy_Peng	
Size	Project Name	Rev	
C	X51L	2.0	
Date	Worked Date	Sheet	of
14 September 14, 2007		1	1

<< MaryL_Liu >>



<< MaryL_Liu >>

M0207



Reserve for Cardbus
controller that has
PCMCIA function.

FROM PCMCIA

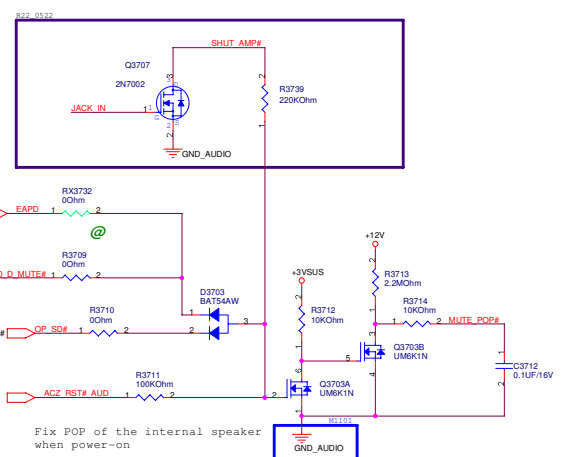
```
IF NO PCMCIA, UNMOUNT.
```

<Core Design>

		Title : CODEC ALC660(D)	
ASUSTeK COMPUTER INC. NB1		Engineer: Amy_Peng	
Size Custom	Project Name X51L		R. 2
Date: Wednesday, September 19, 2007		Sheet 36	of 94

<< MaryL_Liu >>

MUTE CONTROL



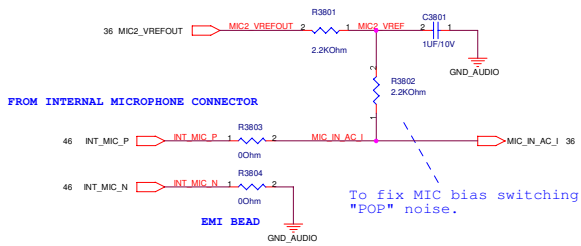
SPEAKER AMP

GAIN0	GAIN1	Av (Inv)
0	0	∞ dB
0	1	-10 dB
1	0	-15.6 dB
1	1	-21.6 dB

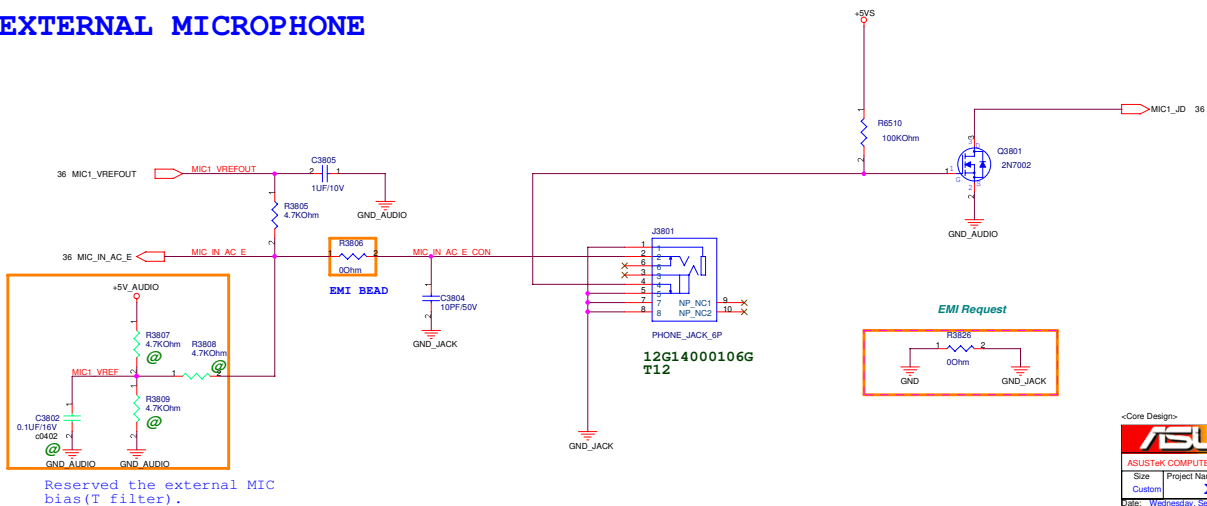
The circuit diagram shows a U9201 op-amp configured as a voltage follower. The non-inverting input (+) is connected to the output through a feedback network consisting of capacitors C3720 (1uF/16V), C3721 (0.1uF/16V), and C3722 (0.47uF/16V). The inverting input (-) is connected to the output through a feedback network consisting of capacitors C3723 (0.47uF/16V) and C3724 (0.47uF/16V). The op-amp is powered by +5VS_AMP and GND_AUDIO. The output is connected to a speaker (H SPKR) and a speaker pin (H SPKRL). The circuit also includes a gain control section with a table for GAIN0, GAIN1, and Av (Inv).

<< MaryL_Liu >>

INTERNAL MICROPHONE



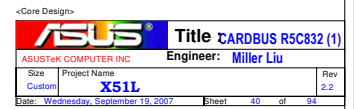
EXTERNAL MICROPHONE



<Core Design>

ASUS		Title : MIC	
ASUSTek COMPUTER INC. NB1		Engineer: Amy Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 15, 2007	Sheet	38	of 94

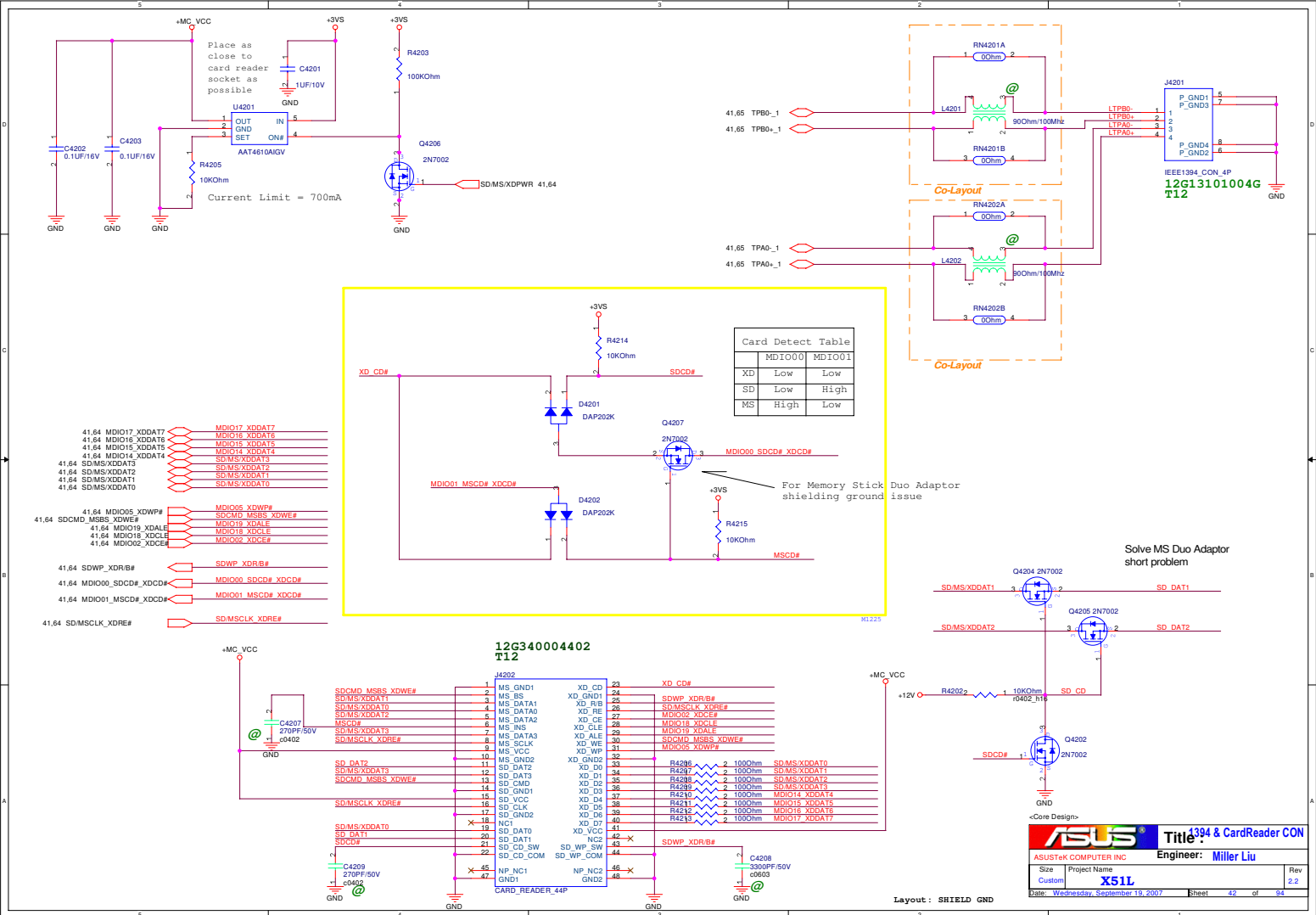
<< MaryL_Liu >>



<< MaryL_Liu >>

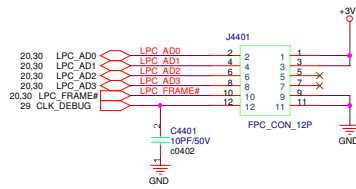


<< MaryL Liu >>



<< MaryL_Liu >>



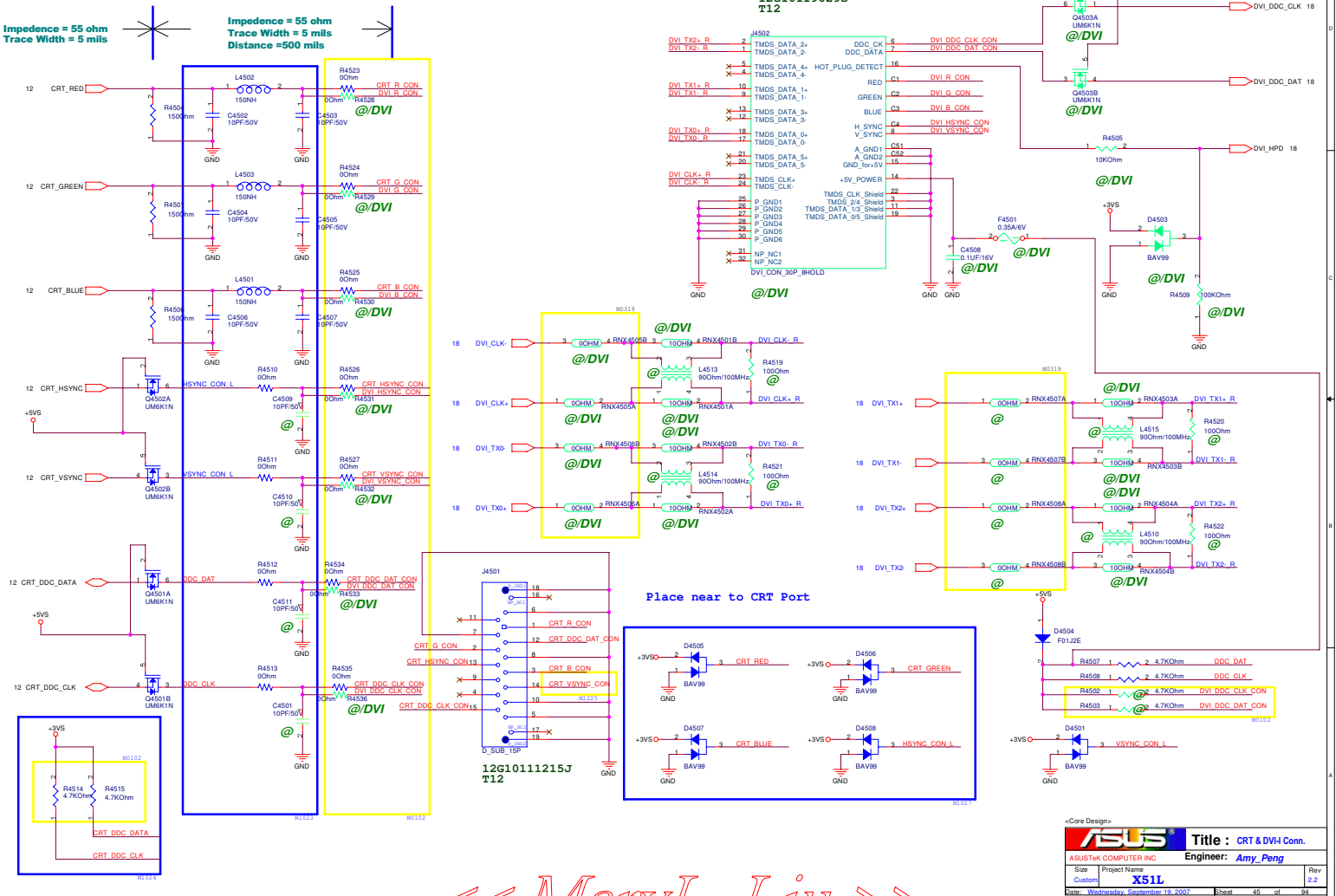


<Core Design>		Title :DEBUG	
ASUSTek COMPUTER INC. NB		Engineer: Amy_Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 19, 2007		Sheet	44 of 94

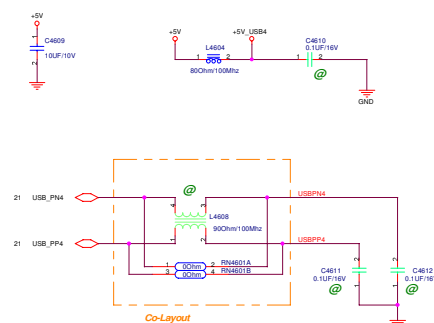
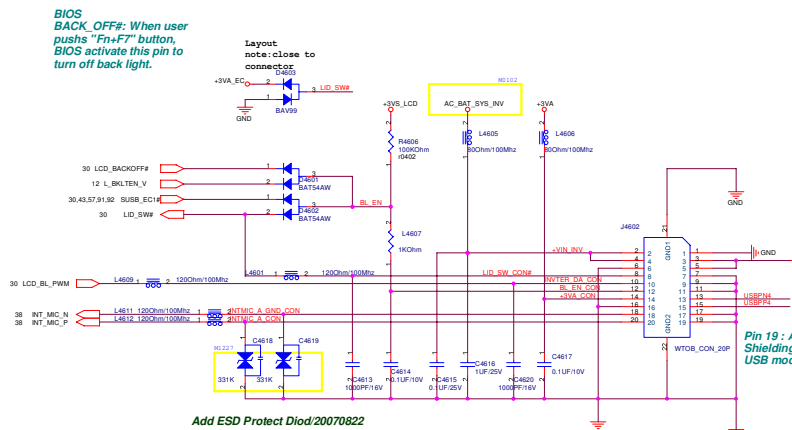
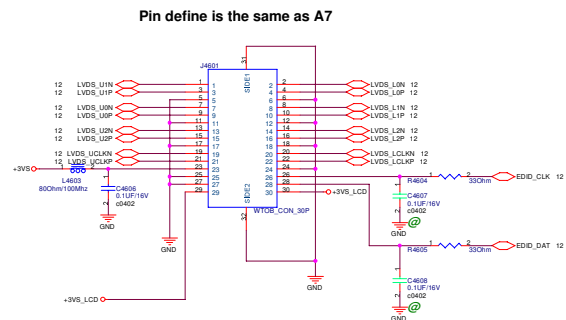
<< MaryL_Liu >>

CRT Connector




DVI-I Connector (Optional)



<< MaryL_Liu >>

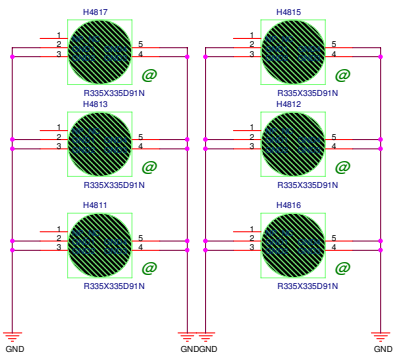


<< MaryL Liu >>

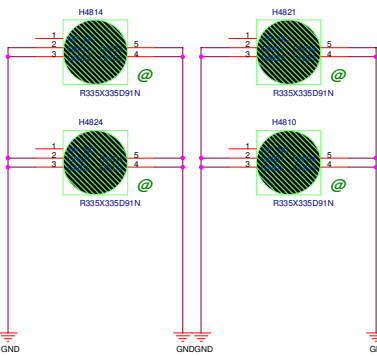
5					4					3					2					1																																																																																																																																						
D																																																																																																																																																										
C																																																																																																																																																										
B																																																																																																																																																										
A																																																																																																																																																										
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size</td><td colspan="15">Project Name</td><td colspan="5">Rev</td></tr><tr><td colspan="5">A</td><td colspan="15">X51L</td><td colspan="5">2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">47</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size					Project Name															Rev					A					X51L															2.0					Date: Wednesday, September 19, 2007										Sheet					47					of					94				
										Title : NULL																																																																																																																																																
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																																																
Size					Project Name															Rev																																																																																																																																						
A					X51L															2.0																																																																																																																																						
Date: Wednesday, September 19, 2007										Sheet					47					of					94																																																																																																																																	
5					4					3					2					1																																																																																																																																						

<< MaryL_Liu >>

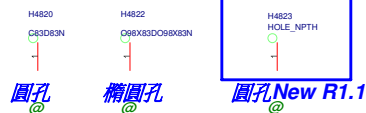
A Hole / TOP Side



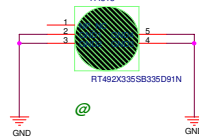
A Hole / Bottom Side



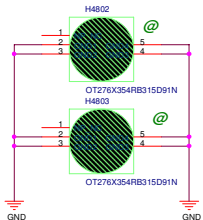
Drill Hole for Fix



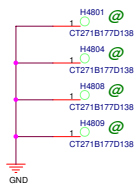
A Hole Special / Bottom Side



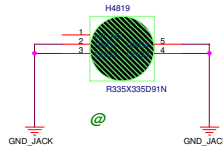
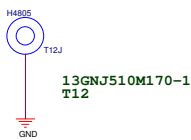
E Hole for Main board fix



F Hole for CPU



銅柱 Hole for VGA 13GNJ510M170-1




<Core Design>			
ASUS		Title :SREW HOLE	
ASUSTek COMPUTER INC. NPI		Engineer: Amy Peng	
Size	Project Name	X51L	Rev
Custom	PIN	<OrigAdd2>	2.2
Date	Wednesday, September 13, 2007	Sheet	48 of 94

<< MaryL_Liu >>

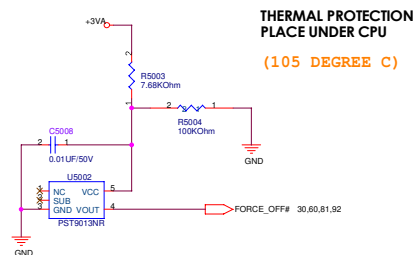
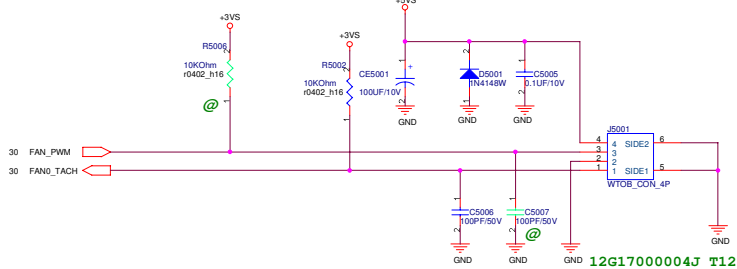
5					4					3					2					1				
D																								
C																								
B																								
A																								
54321																								

<Core Design>

										Title : NULL														
ASUSTeK COMPUTER INC										Engineer: Amy_Peng														
Size A					Project Name X51L															Rev 2.0				
Date: Wednesday, September 19, 2007										Sheet					49 of 94									

<< MaryL_Liu >>

DC
FAN
Control



<Core Design>



ASUSTeK COMPUTER INC. NB

Size	Project Name
Custom	Y51L

Date: Wednesday, September 19, 2018

Date: Wednesday, September 15, 2010

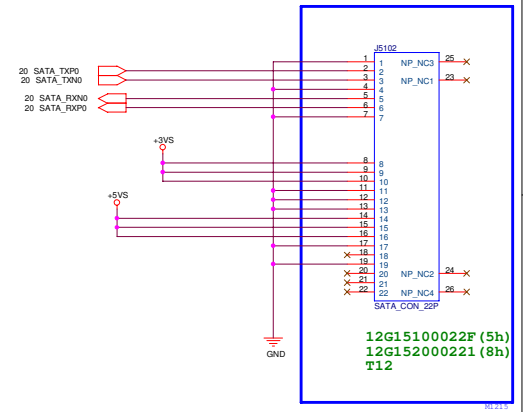
Engineer: Amy_Peng

Sheet 50 of

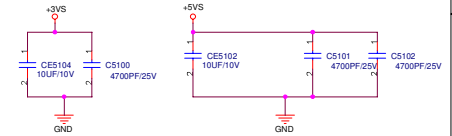
Page 33

<< MaryL_Liu >>

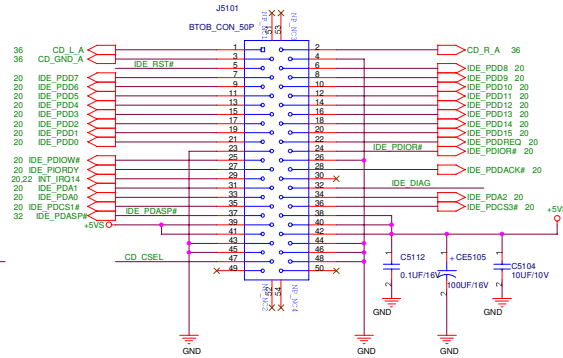
SATA HDD



12G15100022F (5h)
12G152000221 (8h)
T12



12G161210504
T12

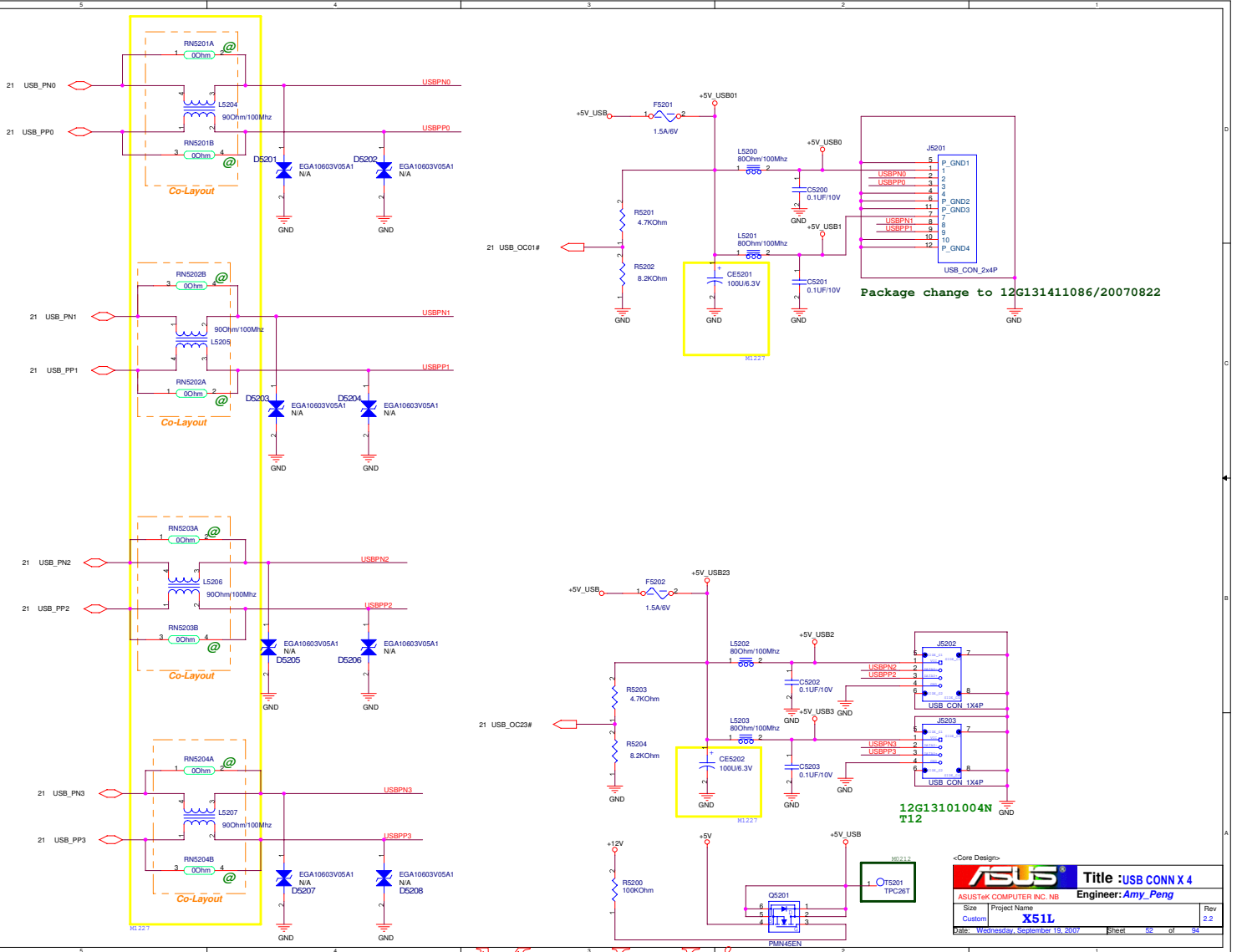


CE5105 Only use 11G041210754

<Core Design>

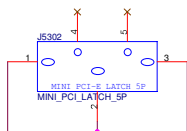
ASUS		Title : HDD & CDROM	
ASUSTeK COMPUTER INC.		Engineer: Amy_Peng	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 13, 2006	Sheet	51	of 94

<< MaryL_Liu >>

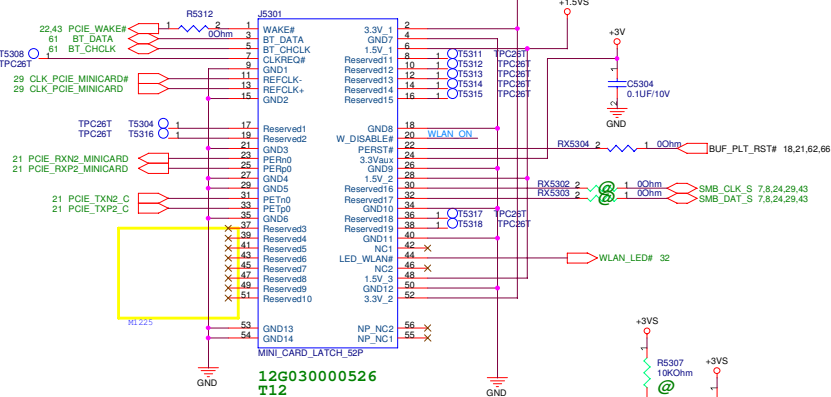
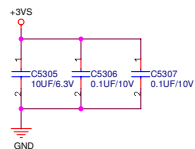
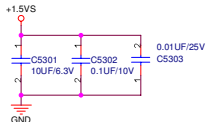


<< MaryL_Liu >>

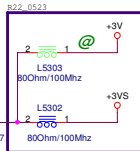
WLAN



12G0162200051
T12



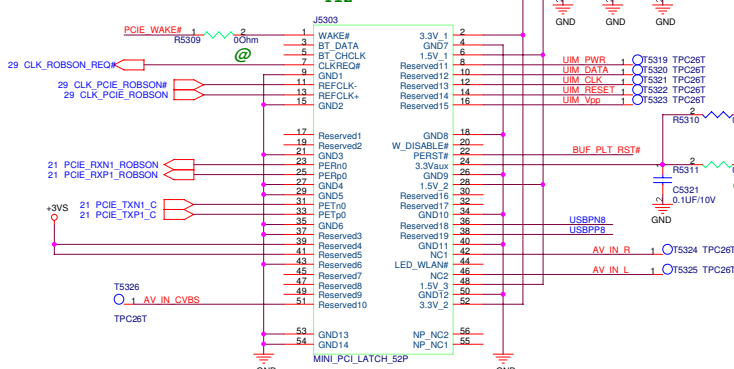
B22_0523



B22_0523

ROBSON or TV tuner

12G030100529
T12



B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523

B22_0523


B22_0523

<< MaryL_Liu >>


ASUS		Title : MINICARD *2	
ASUSTeK COMPUTER INC.		Engineer: Amy_Peng	
Size	Project Name	X51L	
Custom	Project Name	X51L	
Date: Friday, September 21, 2007	Sheet	53	of 54
	Rev	2.2	

	5	4	3	2	1
D					
C					
B					
A					
	5	4	3	2	1

<Core Design>

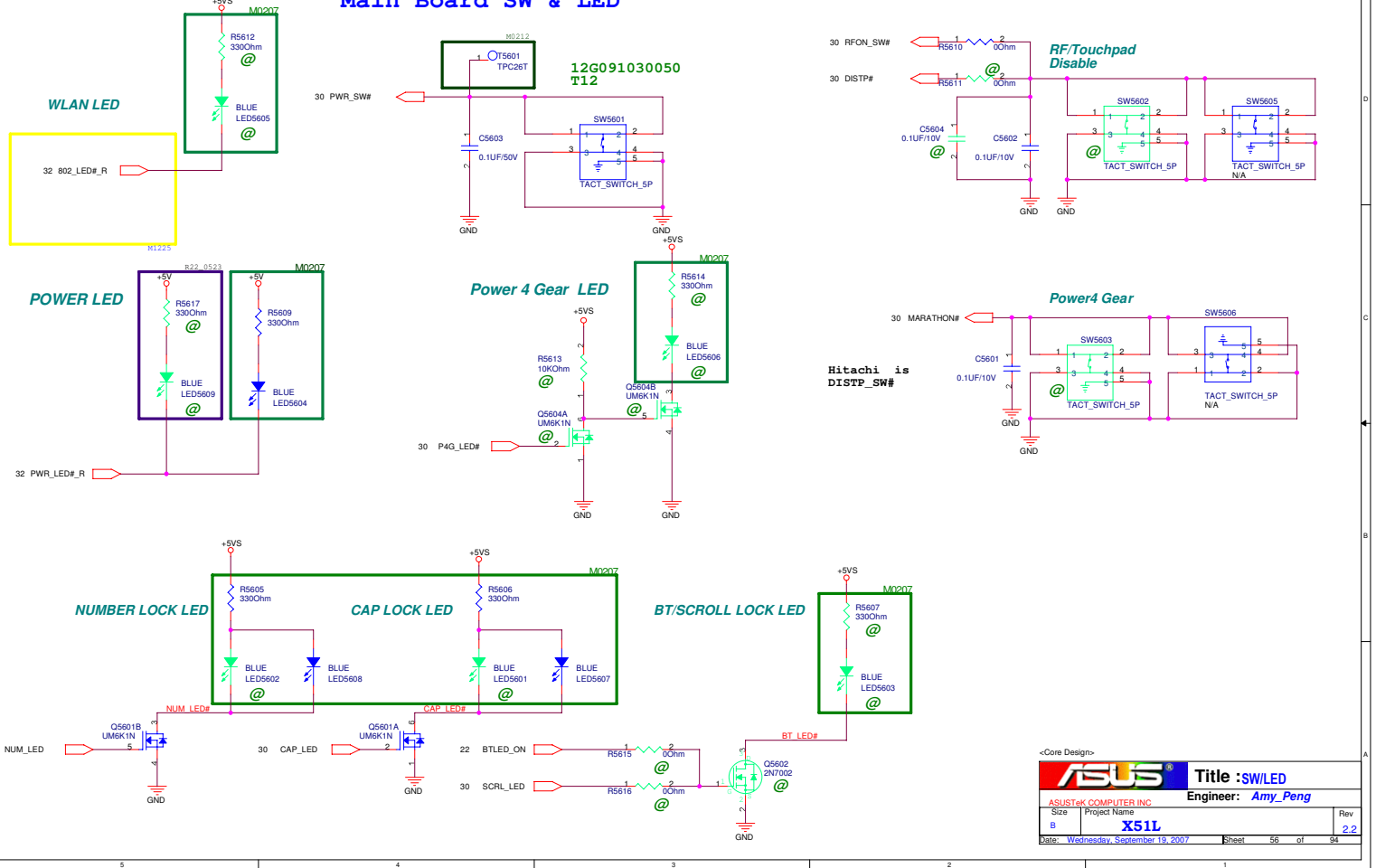
		Title : NULL	
ASUSTeK COMPUTER INC		Engineer: Amy_Peng	
Size	Project Name		Rev
A	X51L		2.0
Date: Wednesday, September 19, 2007		Sheet	54 of 94

<< MaryL_Liu >>

	5	4	3	2	1						
D											
C											
B											
A											
					<Core Design>						
					<div><div></div><div>Title : NULL</div></div>						
					ASUSTeK COMPUTER INC Engineer: Amy_Peng						
					<table><tr><td>Size</td><td>Project Name</td><td>Rev</td></tr><tr><td>A</td><td>X51L</td><td>2.0</td></tr></table>	Size	Project Name	Rev	A	X51L	2.0
Size	Project Name	Rev									
A	X51L	2.0									
					Date: Wednesday, September 19, 2007 Sheet 55 of 94						
5	4	3	2	1							

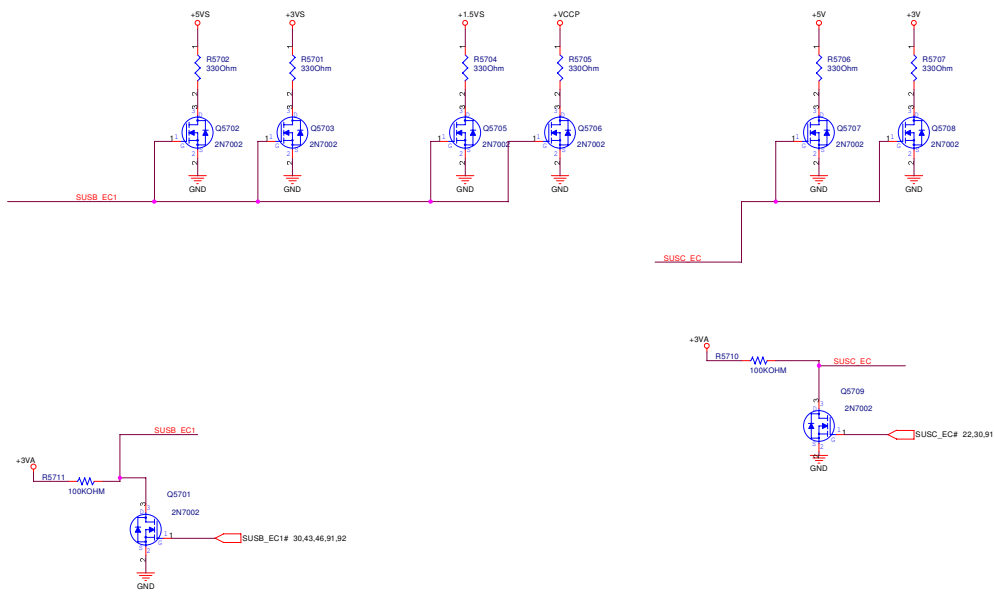
<< MaryL_Liu >>

Main Board SW & LED



<Core Design>		Title :SW/LED	
ASUSTek COMPUTER INC		Engineer: Amy_Peng	
Size	Project Name		Rev
B	X51L		2.2
Date:	Wednesday, September 19, 2007	Sheet	56 of 94


<< MaryL_Liu >>






<Core Design>

ASUS		Title :DISCHARGE	
ASUSTeK COMPUTER INC. NB		Engineer: Amy_Peng	
Size	Project Name	Rev	
Custom	XS1L	2-2	
Date: Wednesday, September 15, 2010	Sheet	37	of 38

<< MaryL_Liu >>

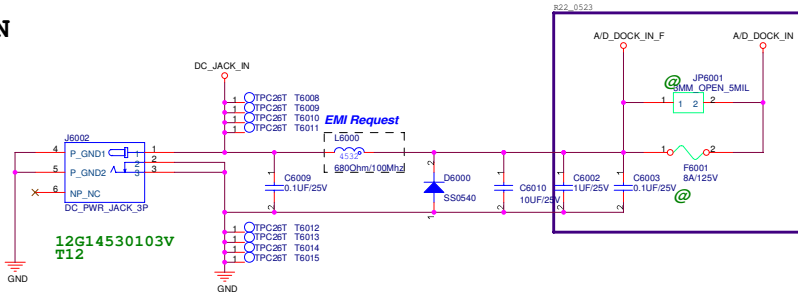
5					4					3					2					1												
D																																
C																																
B																																
A																																
<div><Core Design></div> <div><div></div><div>Title : NULL</div></div> <div><div>ASUSTeK COMPUTER INC</div><div>Engineer: Amy_Peng</div></div> <table><tr><td>Size</td><td colspan="2">Project Name</td><td>Rev</td></tr><tr><td>A</td><td colspan="2">X51L</td><td>2.0</td></tr></table> <div>Date: Wednesday, September 19, 2007Sheet 58 of 94</div>																									Size	Project Name		Rev	A	X51L		2.0
Size	Project Name		Rev																													
A	X51L		2.0																													
5					4					3					2					1												

<< MaryL_Liu >>

5					4					3					2					1																																																																																																																																						
D																																																																																																																																																										
C																																																																																																																																																										
B																																																																																																																																																										
A																																																																																																																																																										
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size</td><td colspan="15">Project Name</td><td colspan="5">Rev</td></tr><tr><td colspan="5">A</td><td colspan="15">X51L</td><td colspan="5">2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">59</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size					Project Name															Rev					A					X51L															2.0					Date: Wednesday, September 19, 2007										Sheet					59					of					94				
										Title : NULL																																																																																																																																																
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																																																
Size					Project Name															Rev																																																																																																																																						
A					X51L															2.0																																																																																																																																						
Date: Wednesday, September 19, 2007										Sheet					59					of					94																																																																																																																																	
5					4					3					2					1																																																																																																																																						

<< MaryL_Liu >>

DC-IN



For Battery

Single Battery

BAT1_CNT1#, BAT1_CNT2#,
BAT2_CNT1#, BAT2_CNT2#
don't connect to Battery
Connector.

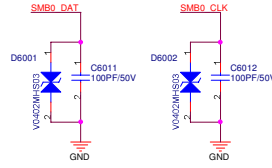
Dual Battery

BAT1_CNT1#, BAT1_CNT2#,
BAT2_CNT1#, BAT2_CNT2#
must connect to Battery
Connector.

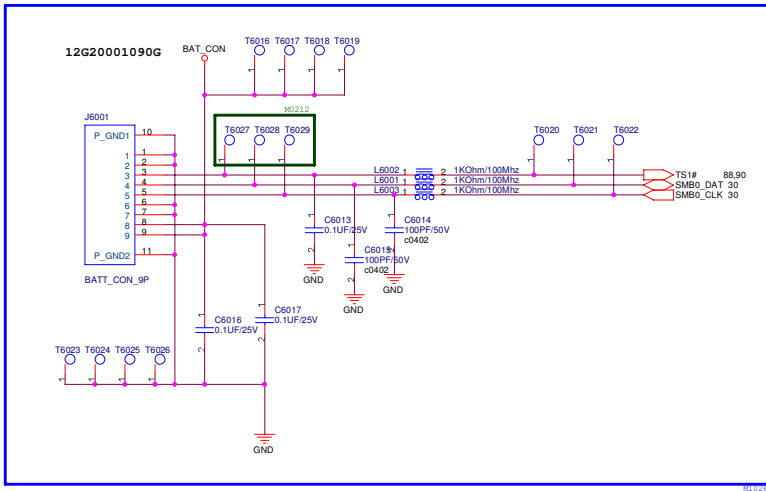
Note:

When we plug in or plug out the
battery, it may cause a spike to
damage the EC and gas gauge. It
needed to add these varistors to
protect those pins.

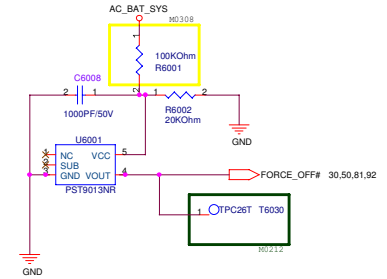
close to connector



Battery Connector



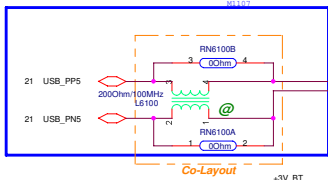
Without Battery & Pull out Adapter



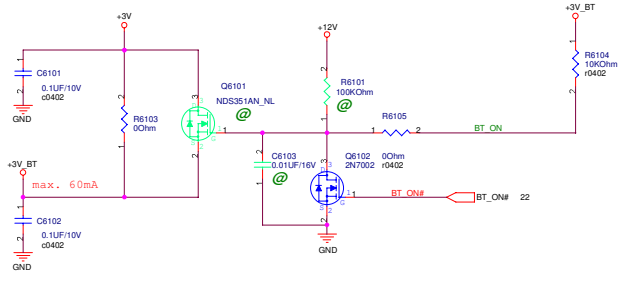
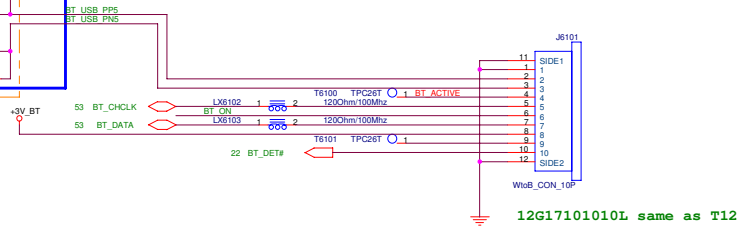
<Core Design>

ASUS		Title :DCIN/Batt conn.	
ASUSTek COMPUTER INC. NB		Engineer: Amy_Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 19, 2007		Sheet 60 of 94	

<< MaryL_Liu >>



BLUETOOTH CONNECTOR

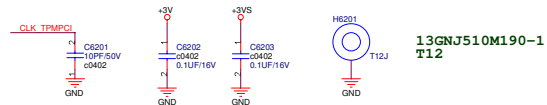
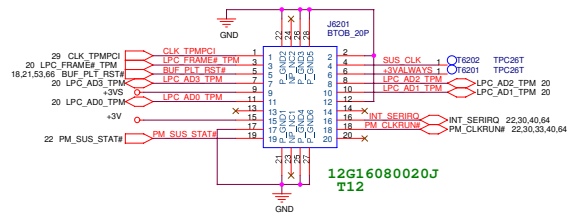


<Core Design>

ASUS		Title : Blue Tooth	
ASUSTek COMPUTER INC		Engineer: Amy_Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 16, 2009	Sheet	BT	of 94

<< MaryL_Liu >>

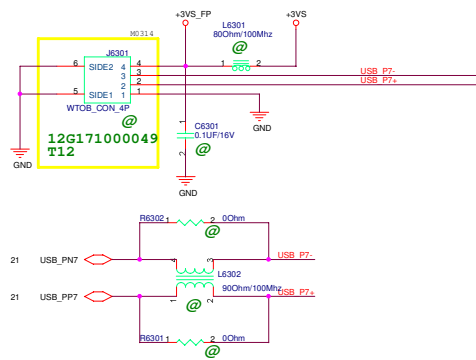
TPM Connector



<Core Design>

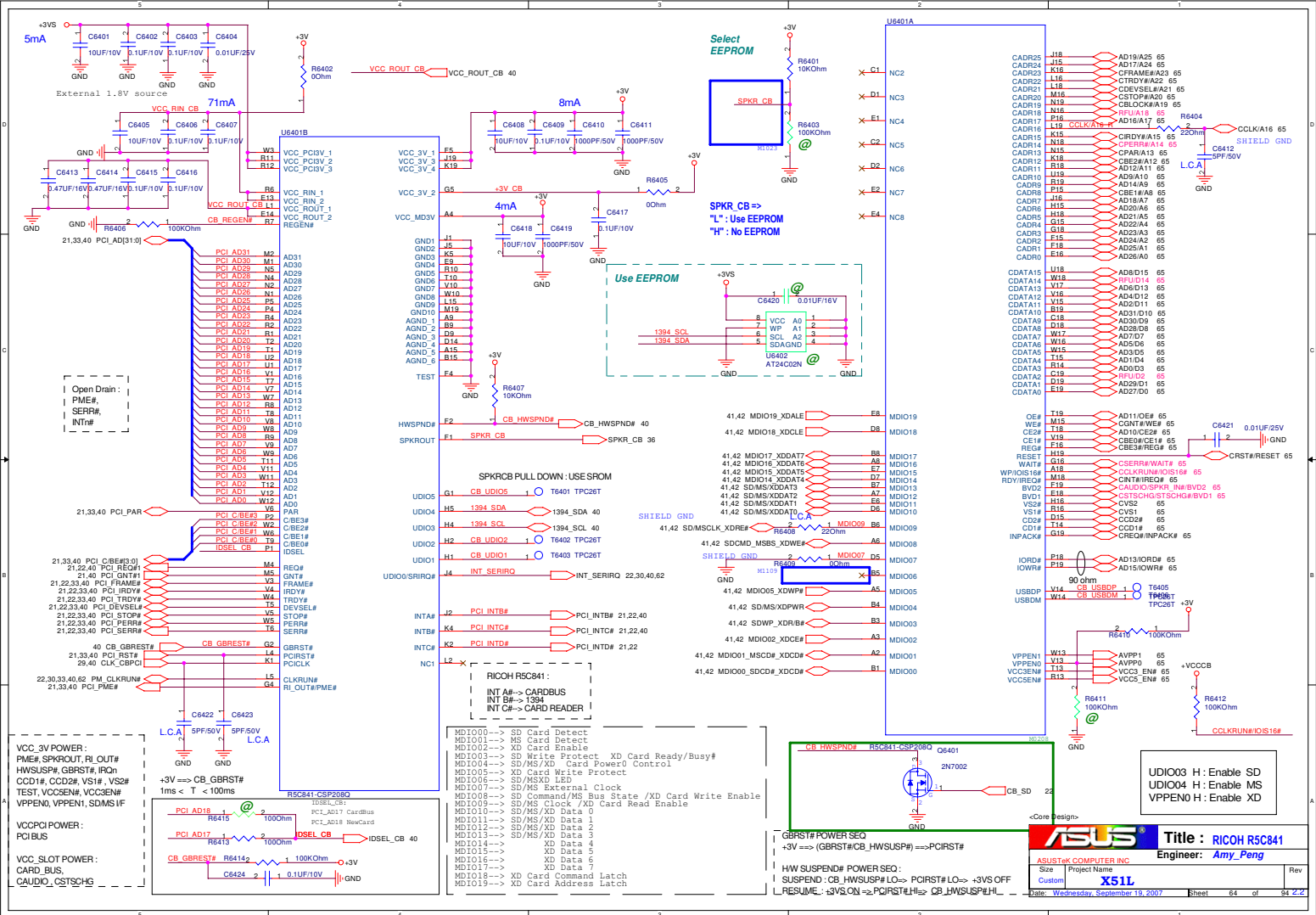
ASUS		Title :TPM	
ASUSTek COMPUTER INC. NB		Engineer: Amy Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 15, 2007	Sheet	62	of 94

<< MaryL_Liu >>



<Core Design>			
ASUS		Title : Finger Print	
ASUSTek COMPUTER INC. NB		Engineer: Amy Peng	
Size	Project Name		Rev
Custom	XS1L		2.2
Date: Wednesday, September 13, 2007		Sheet	63 of 98

<< MaryL_Liu >>




<< MaryL_Liu >>




PCI Device	IDSEL#	REQ/GNT#	Interrupts
LAN	AD23	2	A
1394 (R5C841)	AD17	1	B
CARD READER (R5C841)	AD17	1	C
CARDBUS (R5C841)	AD17	1	D
1394 (R5C832)	AD18	1	B
CARD READER (R5C832)	AD18	1	C

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x (D2)
SO-DIMM 0	1010000x (A0)
SO-DIMM 1	1010001x (A2)
Thermal Sensor (MAX6657)	1001100x (98)
SDVO to DVI (SIL1362A)	0111000x (70)




<< MaryL_Liu >>

5					4					3					2					1												
D																																
C																																
B																																
A																																
<div><Core Design></div> <div><div></div><div>Title : NULL</div></div> <div><div>ASUSTeK COMPUTER INC</div><div>Engineer: Amy_Peng</div></div> <table><tr><td>Size</td><td colspan="2">Project Name</td><td>Rev</td></tr><tr><td>A</td><td colspan="2">X51L</td><td>2.0</td></tr></table> <div>Date: Wednesday, September 19, 2007Sheet 68 of 94</div>																									Size	Project Name		Rev	A	X51L		2.0
Size	Project Name		Rev																													
A	X51L		2.0																													
5					4					3					2					1												




<< MaryL_Liu >>

5					4					3					2					1																																																																															
D																																																																																																			
C																																																																																																			
B																																																																																																			
A																																																																																																			
															<div><Core Design></div> <table><tr><td colspan="5"></td><td colspan="5">Title : NULL</td></tr><tr><td colspan="5">ASUSTeK COMPUTER INC</td><td colspan="5">Engineer: Amy_Peng</td></tr><tr><td colspan="2">Size</td><td colspan="12">Project Name</td><td>Rev</td></tr><tr><td colspan="2">A</td><td colspan="12">X51L</td><td>2.0</td></tr><tr><td colspan="15">Date: Wednesday, September 19, 2007</td><td colspan="10">Sheet 69 of 94</td></tr></table>															Title : NULL					ASUSTeK COMPUTER INC					Engineer: Amy_Peng					Size		Project Name												Rev	A		X51L												2.0	Date: Wednesday, September 19, 2007															Sheet 69 of 94									
					Title : NULL																																																																																														
ASUSTeK COMPUTER INC					Engineer: Amy_Peng																																																																																														
Size		Project Name												Rev																																																																																					
A		X51L												2.0																																																																																					
Date: Wednesday, September 19, 2007															Sheet 69 of 94																																																																																				
5					4					3					2					1																																																																															




<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">70</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					70					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					70					of					94																																																																																																								
5					4					3					2					1																																																																																																													




<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">71</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					71					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					71					of					94																																																																																																								
5					4					3					2					1																																																																																																													




<< MaryL_Liu >>

5					4					3					2					1																																																																																																								
D																																																																																																																												
C																																																																																																																												
B																																																																																																																												
A																																																																																																																												
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="15">Sheet 72 of 94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet 72 of 94														
										Title : NULL																																																																																																																		
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																		
Size A					Project Name X51L															Rev 2.0																																																																																																								
Date: Wednesday, September 19, 2007										Sheet 72 of 94																																																																																																																		
5					4					3					2					1																																																																																																								




<< MaryL_Liu >>

5					4					3					2					1																																																																																									
D																																																																																																													
C																																																																																																													
B																																																																																																													
A																																																																																																													
															<div><Core Design></div> <table><tr><td colspan="5"></td><td colspan="10">Title : NULL</td></tr><tr><td colspan="5">ASUSTeK COMPUTER INC</td><td colspan="10">Engineer: Amy_Peng</td></tr><tr><td colspan="2">Size</td><td colspan="12">Project Name</td><td>Rev</td></tr><tr><td colspan="2">A</td><td colspan="12">X51L</td><td>2.0</td></tr><tr><td colspan="15">Date: Wednesday, September 19, 2007</td><td colspan="10">Sheet 73 of 94</td></tr></table>															Title : NULL										ASUSTeK COMPUTER INC					Engineer: Amy_Peng										Size		Project Name												Rev	A		X51L												2.0	Date: Wednesday, September 19, 2007															Sheet 73 of 94									
					Title : NULL																																																																																																								
ASUSTeK COMPUTER INC					Engineer: Amy_Peng																																																																																																								
Size		Project Name												Rev																																																																																															
A		X51L												2.0																																																																																															
Date: Wednesday, September 19, 2007															Sheet 73 of 94																																																																																														
5					4					3					2					1																																																																																									




<< MaryL_Liu >>

5					4					3					2					1																																																																																																																																						
D																																																																																																																																																										
C																																																																																																																																																										
B																																																																																																																																																										
A																																																																																																																																																										
<div><Core Design></div> <table><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size</td><td colspan="15">Project Name</td><td colspan="5">Rev</td></tr><tr><td colspan="5">A</td><td colspan="15">X51L</td><td colspan="5">2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">74</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size					Project Name															Rev					A					X51L															2.0					Date: Wednesday, September 19, 2007										Sheet					74					of					94				
										Title : NULL																																																																																																																																																
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																																																
Size					Project Name															Rev																																																																																																																																						
A					X51L															2.0																																																																																																																																						
Date: Wednesday, September 19, 2007										Sheet					74					of					94																																																																																																																																	
5					4					3					2					1																																																																																																																																						




<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">75</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					75					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					75					of					94																																																																																																								
5					4					3					2					1																																																																																																													

<< MaryL_Liu >>

5					4					3					2					1																																																																																																																																						
D																																																																																																																																																										
C																																																																																																																																																										
B																																																																																																																																																										
A																																																																																																																																																										
<div><Core Design></div> <table><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size</td><td colspan="15">Project Name</td><td colspan="5">Rev</td></tr><tr><td colspan="5">A</td><td colspan="15">X51L</td><td colspan="5">2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">77</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size					Project Name															Rev					A					X51L															2.0					Date: Wednesday, September 19, 2007										Sheet					77					of					94				
										Title : NULL																																																																																																																																																
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																																																
Size					Project Name															Rev																																																																																																																																						
A					X51L															2.0																																																																																																																																						
Date: Wednesday, September 19, 2007										Sheet					77					of					94																																																																																																																																	
5					4					3					2					1																																																																																																																																						

<< MaryL_Liu >>

5					4					3					2					1																																																																																																													
D																																																																																																																																	
C																																																																																																																																	
B																																																																																																																																	
A																																																																																																																																	
<div><Core Design></div> <table border="1"><tr><td colspan="10"></td><td colspan="15">Title : NULL</td></tr><tr><td colspan="10">ASUSTeK COMPUTER INC</td><td colspan="15">Engineer: Amy_Peng</td></tr><tr><td colspan="5">Size A</td><td colspan="15">Project Name X51L</td><td colspan="5">Rev 2.0</td></tr><tr><td colspan="10">Date: Wednesday, September 19, 2007</td><td colspan="5">Sheet</td><td colspan="5">78</td><td colspan="5">of</td><td colspan="5">94</td></tr></table>																																			Title : NULL															ASUSTeK COMPUTER INC										Engineer: Amy_Peng															Size A					Project Name X51L															Rev 2.0					Date: Wednesday, September 19, 2007										Sheet					78					of					94				
										Title : NULL																																																																																																																							
ASUSTeK COMPUTER INC										Engineer: Amy_Peng																																																																																																																							
Size A					Project Name X51L															Rev 2.0																																																																																																													
Date: Wednesday, September 19, 2007										Sheet					78					of					94																																																																																																								
5					4					3					2					1																																																																																																													

<< MaryL_Liu >>

	5	4	3	2	1
Change Note:					
R1.1 :					
1.	Change CON0801 SM-Bus address to A2.				
2.	Unmount R2936.(SELLCD_27# =1)				
3.	RX2227 connect to GND.(Do not use Intel LAN)				
4.	Add R6415 to connect PCI_AD18(for R5C832).				
5.	Remove CON5301 Debug Pin.				
6.	Change CON4501.14 to VSYNC_CON.				
7.	Change CON3702 pin define(RL SWAP).				
8.	Change R2914 from 220 ohm to 390 ohm.				
9.	Mount C2920-22,C2924,C2925,C4618-19,L5204-07, Unmount RN5201-04 for EMI request.				
10.	Add R4517,R4517,R4518 to prevent CON4501 short ground issue.				
11.	Change C0701,C0706,C0801,C0809 to R0701,R0702,R0802,R0803(68.9 ohm) .				
12.	Change RNX4501-04 from 0 to 22ohm, and add R4519-4522(100 ohm) .				
13.	SWAP SUSB_EC1#,SUSB_EC2#.				
R2.0 :					
1.	Change Audio LDO(P36) and Audio AMP(P37) .				
2.	Change CB_SD# to CB_SD (high active) to fix windows progress bar issue(P64) .				
3.	Change LED color from Green to Blue (P56) .				
4.	Change +3VS_832 to connect +3V to fix 1394 S3 issue (P41) .				
5.	Change C6522,C6523 from 20pf to 18pf (ITTI suggestion). (P65) .				
6.	Change C2002,C2005 from 22pf to 12pf (FUJICOM suggestion). (P20) .				
7.	Change C3016,C3017 from 5pf to 15pf (FUJICOM suggestion). (P30) .				
8.	Change R3313 from 2.49K to 2.43K to fix LAN low output peak voltage issue.(P33) .				
R2.1:					
1.	Change SIIL362 to SIIL368 to support DVI-HDCP(P18) .				
2.	Change R3717,R3718 from 75ohm to 100ohm for EMI request(P18) .				
3.	Add RNX 4505~4508 for EMI request(P18) .				
R2.2:					
1.	Add Power LED(LED5609) for Sotec(P56) .				
2.	Change Audio AMP mute control circuit(P37) .				
3.	Update Choke&Res Colay symbol(LAN,1394,CAMERA,USB,BT) .				
4.	Add Fuse(F6001) and JUMP(JP6001) for Sotec(P60) .				
5.	Add +3V power for TV-tuner card(P53) .				
R2.2 /EPSON:					
1.	J4401 debug connector delete(20070822)				
2.	J5201 USB package chanbe to 12G131411086(20070822)				
3.	C4618,C4619 add ESD protect diode 07G028011010(20070822)				
4.	C3311,C3319,C3330, Capacitor 10UF/10V change to 22UF/6.3V to reduce power noise meet Common Mode Voltage Spec(<50mV).(20070907)				
5.	C3307,C3313 Capacitor 10UF/10V change to 22UF/6.3V to reduce power noise meet Common Mode Voltage Spec(<50mV).(20070907)				
<Core Design>					
	Title : NULL				
ASUSTek COMPUTER INC	Engineer: Amy_Peng				
Size Custom	Project Name X51L	Rev 2.2			
Date: Wednesday, September 18, 2007	Sheet	79	of	84	

		Title : NULL	
ASUSTek COMPUTER INC		Engineer: Amy_Peng	
Size Custom	Project Name X51L		Rev 2.2
Date: Wednesday, September 19, 2007		Sheet 79 of 94	

<< MaryL Liu >>



		Title : POWER_IO_1.25VS	
<OrgName>		Engineer:	
Size Custom	Project Name X51L	Rev 2.2	
Date: Wednesday, September 10, 2003		Sheet 3.4	of 3.4

<< MaryL Liu >>



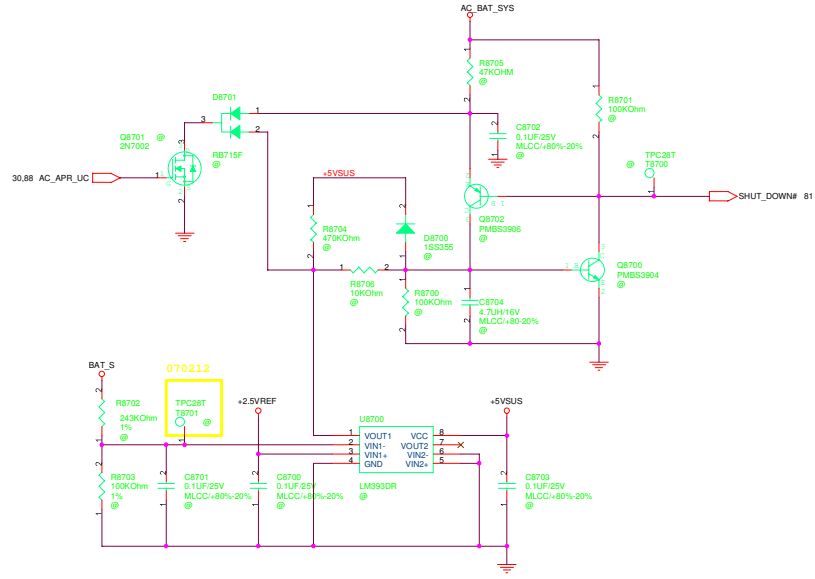
<< MaryL_Liu >>

<Core Design>				Title :POWER_VGA_CORE & RAM	
<OrigName>		Engineer:			
Size	Project Name			Rev	
C	X51L			1.1	
Date: Wednesday, September 19, 2007		Sheet		85	of 94

5					4					3					2					1												
D																																
C																																
B																																
A																																
<div><Core Design></div> <div><div></div><div>Title : NA</div></div> <div><div><OrigName></div><div>Engineer:</div></div> <table border="1"><tr><td>Size</td><td colspan="2">Project Name</td><td>Rev</td></tr><tr><td>B</td><td colspan="2">X51L</td><td>2.2</td></tr></table> <div>Date: Wednesday, September 19, 2007 Sheet 66 of 94</div>																									Size	Project Name		Rev	B	X51L		2.2
Size	Project Name		Rev																													
B	X51L		2.2																													
5					4					3					2					1												

<< *MaryL_Liu* >>

PIC only

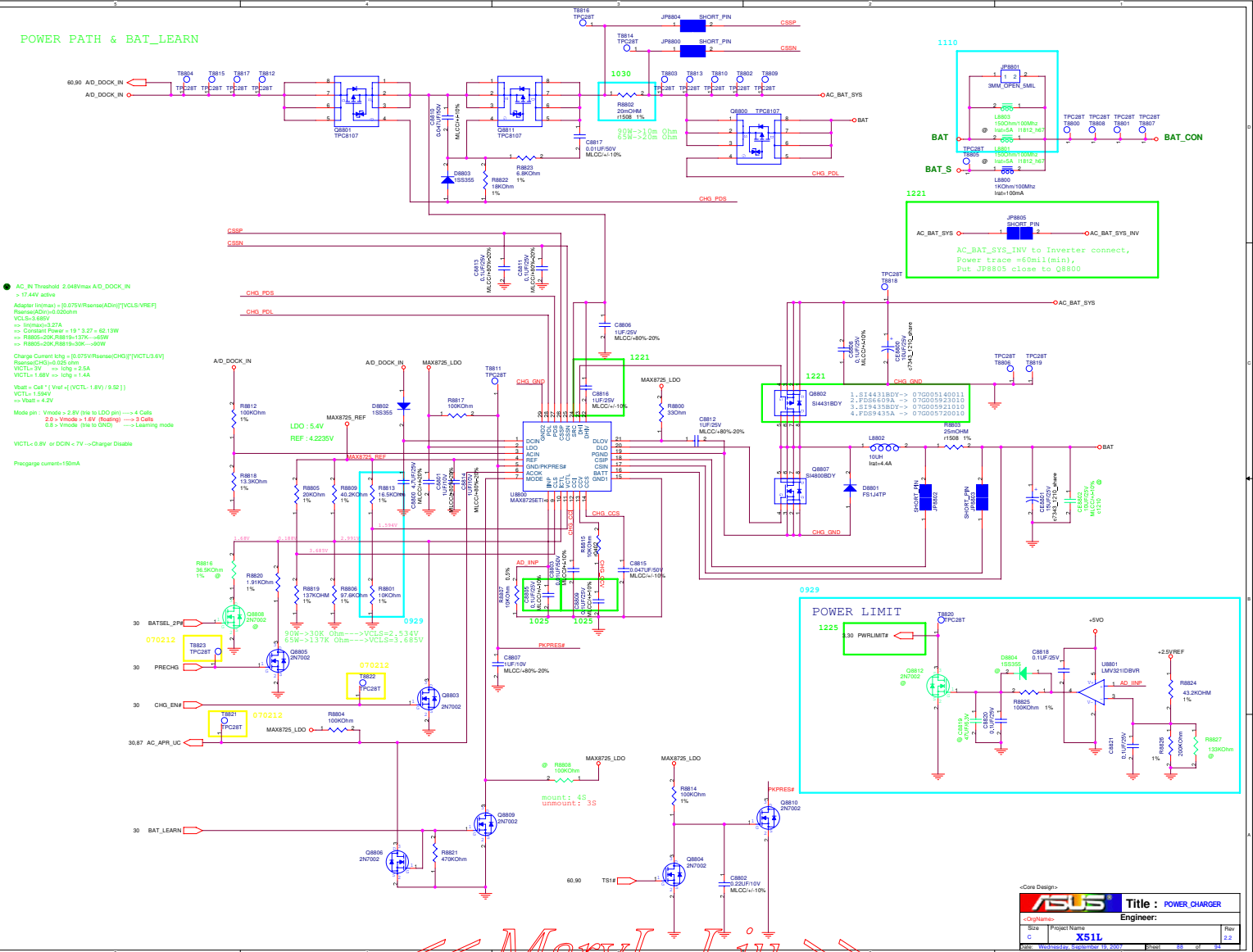



<Core Design>

ASUS		Title : POWER_SHUTDOWN#	
<OrgName>		Engineer:	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 15, 2007	Sheet	87	of 94

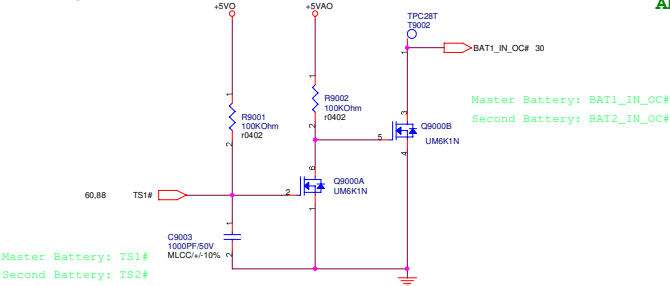
<< MaryL_Liu >>

POWER_PATH & BAT_LEARN

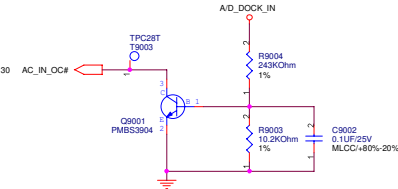


<Core Design>			
		Title : N/A	
<OrgNames>		Engineer:	
Size	Project Name		Rev.
Custom	X51L		1.1
Date:	Wednesday, September 19, 2007	Sheet	89 of 94

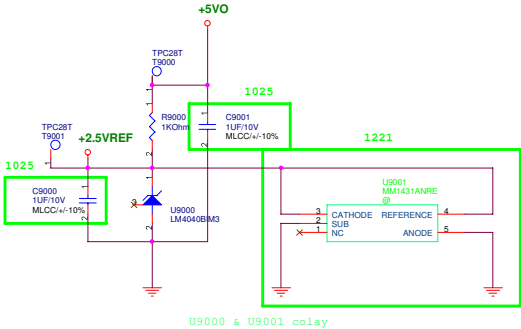
BATTERY IN DETECT



ADAPTER IN DETECT



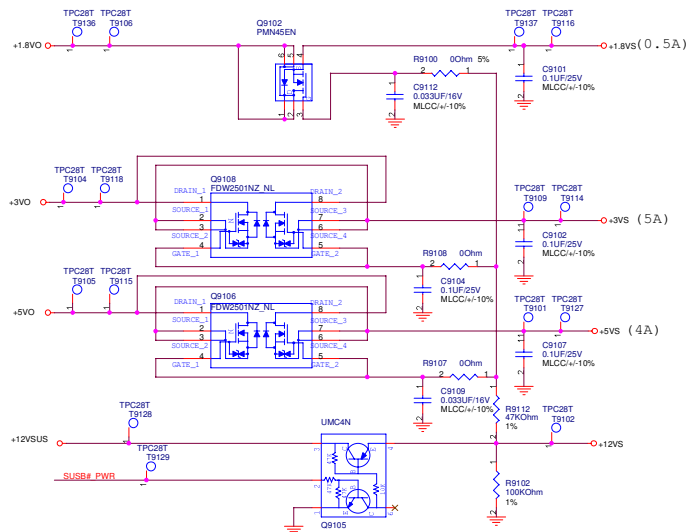
+2.5VREF



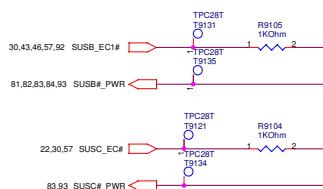
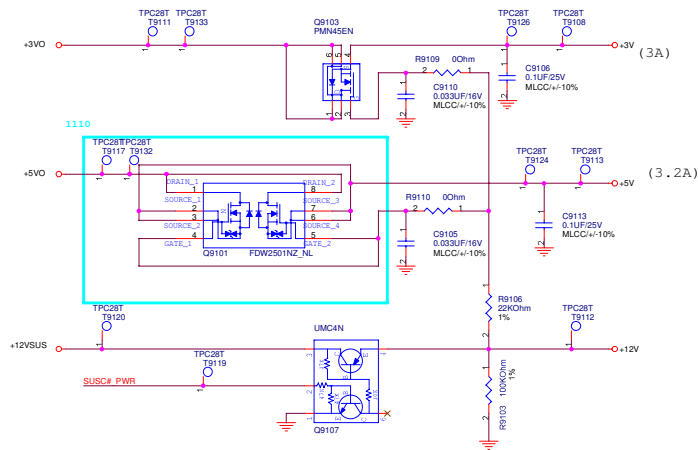
<Core Design>			
		Title : POWER_DETECT	
<OrgName>		Engineer:	
Size	Project Name	Rev	
Custom	X51L	2.2	
Date: Wednesday, September 15, 2007		Sheet	60 of 94

<< MaryL_Liu >>

SUSB#_PWR POWER



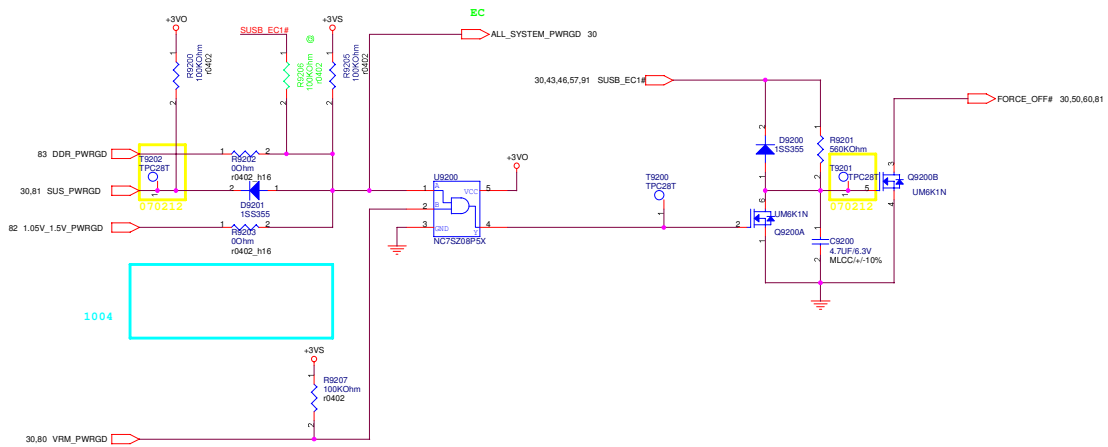
SUSC#_PWR POWER



ASUS		Title : POWER_LOAD_SWITCH	
Engineer:		Rev	
Size	Project Name	2.2	
Custom	X51L	Date: Wednesday, September 15, 2007	
Sheet		81	of 94

<< MaryL_Liu >>

POWER GOOD DETECTER

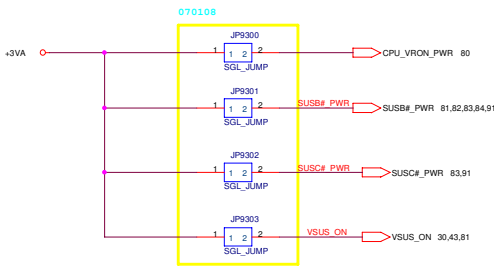


<Core Design>		ASUS		Title : POWER_PROTECT	
<OrgName>		Project Name		Engineer:	
Size	Custom	X51L		Rev	2.2

AC_BAT_SYS	AC_BAT_SYS	60,80,81,82,83,87,88
BAT	BAT	88
BAT_CON	BAT_CON	60,88
+2.5VREF	+2.5VREF	84,87,88,90
+3VA	+3VA	20,22,30,46,50,57,81
+5VAD	+5VAD	81,84,90
+5VO	+5VO	81,82,83,84,88,90,91
+5VSUS	+5VSUS	23,32,81,87
+5V	+5V	15,32,46,52,56,57,65,91
+5VS	+5VS	23,24,32,36,37,38,45,50,51,56,57,80,91
+3VO	+3VO	81,91,92
+3VSUS	+3VSUS	21,22,23,30,33,37,43,81
+3V	+3V	21,22,35,40,41,44,53,57,61,62,64,65,91
+3VS	+3VS	3,7,8,11,12,15,18,22,23,24,29,30,32,33,36,40,42,43,45,46,50,51,53,57,62,63,64,66,80,91,92
+12VSUS	+12VSUS	81,91
+12V	+12V	37,42,52,61,84,91
+12VS	+12VS	46,91
+1.8VO	+1.8VO	83,91
+1.8V	+1.8V	7,8,9,11,14,15,83,84
+1.8VS	+1.8VS	18,66,91
+0.9VS	+0.9VS	9,83
+0.9VO	+0.9VO	83
+1.05VDO	+1.05VDO	80,82
+VCCP	+VCCP	4,10,12,14,15,20,23,29,57,82
+1.5VO	+1.5VO	82
+1.5VS	+1.5VS	4,15,20,21,23,43,53,57,82
+VOCORE	+VOCORE	4,80

+1.25VSO	+1.25VS	11,15,23,84
----------	---------	-------------

FOR POWER TEST



<Core Design>			
		Title : POWER_SIGNAL	
<OrgName>		Engineer: Amy_Peng	
Size	Project Name		Rev
Custom	X51L		2.2
Date: Wednesday, September 15, 2007	Sheet	89	of 94

<< MaryL_Liu >>

