

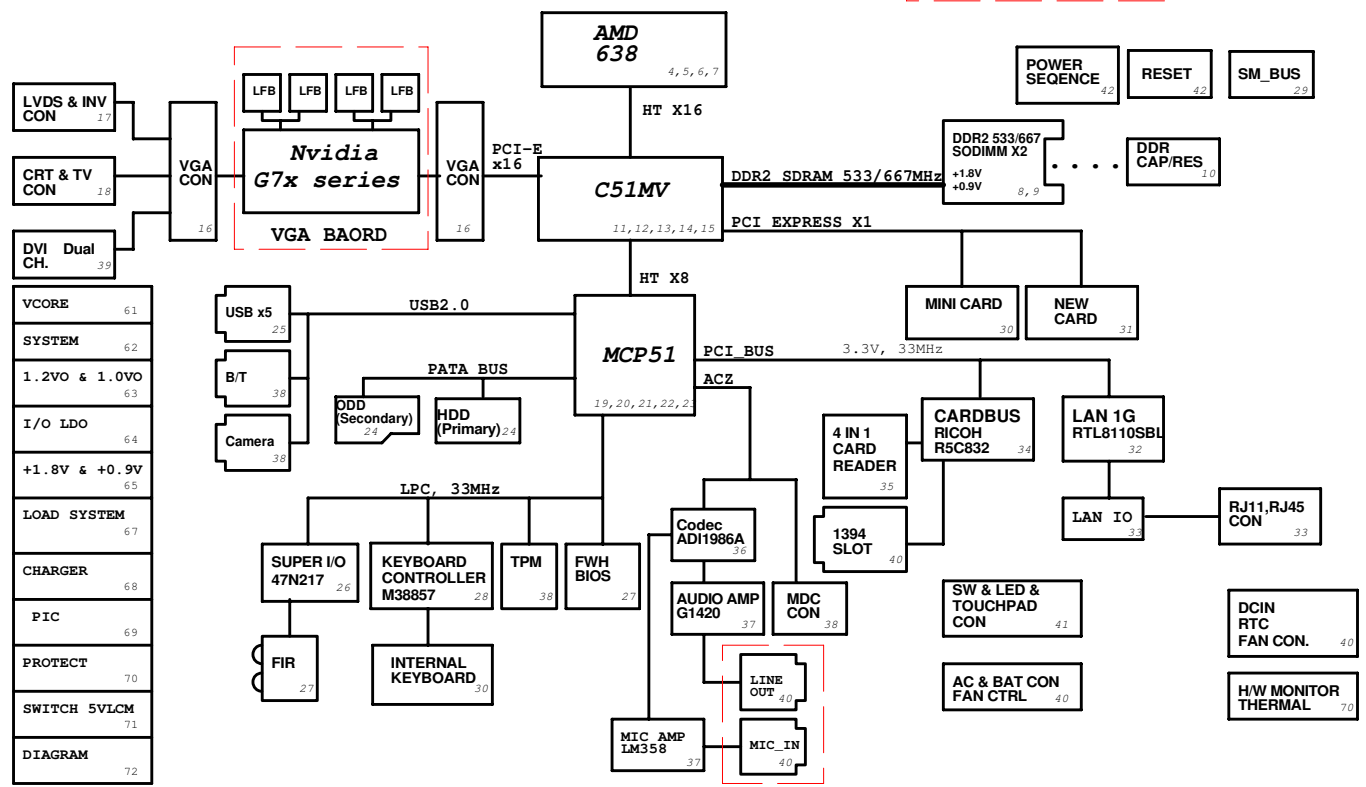
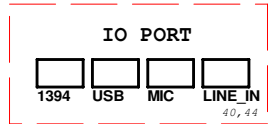
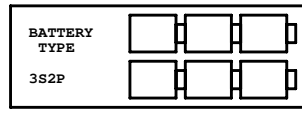
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22	MCP51--USB & HDA & GPIO		
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37	AUDIO AMP G1420		
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44	I/O PORT		

Core Design

	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>PAGE REF.</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>1</b> OF <b>55</b>		RELEASE DATE:	

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# A8T/M AMD S1/C51MV BLOCK DIAGRAM



ASUS	PROJECT: A8T	REVISION: 2.1	DATE: Friday, July 21, 2006	DESCRIPTION: BLOCK DAIGRAM	SCHEMATIC FILE NAME:	DESIGN ENGINEER: Albert Su
		SHEET 2 OF 55			RELEASE DATE:	

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PCI Device	IDSEL#	REQ/GNT#	Interrupts	PC/PCI
Chipset (Host to PCI)	(AD30 internal)	n/a	1	
LAN -- Realtek	AD17		C	
1394	AD16	0	A	
4 IN 1		0	B	

SM\_BUS ADDRESS : Thermal MAX6657 = 1001100x ( 98h )  
 DDR\_SODIMM0 = 1010000x ( A0h )  
 DDR\_SODIMM1 = 1010001x ( A2h )

MCP51_GPIO	Use As	Signal Name	Power
GPIO_1	GPI	PCB_ID2	+3VS
GPIO_2	GPI	KB_SCI#	+3VSUS
GPIO_3	GPI	PWRLMT#	+3VSUS
GPIO_4		SUS_STAT#	+3VSUS
GPIO_5	GPO	802_LED_EN#	+3VSUS
GPIO_6	GPO	MCP_TV_EN	+3VSUS
GPIO_7	GPO	CB_SD#	+3VSUS
GPIO_8		CR_VID0	+3VSUS
GPIO_9		CR_VID1	+3VSUS
GPIO_10		(CR_VID2)	+3VSUS
GPIO_11:16]		(CPD_VID[0:5])	+3VSUS
GPIO_17		(LID#)	+3VSUS
GPIO_18		BATT_TALARM#	+3VSUS
GPIO_19		USB_OC#1	+3VSUS
GPIO_20	GPO	1 Hz	+3VSUS
GPIO_21	GPO	IGP_DDC_SELECT	+3VSUS
GPIO_22		ACZ_SDINO_AUD	+3VSUS
GPIO_23		ACZ_SDINI_MDC	+3VSUS
GPIO_24	GPI	CHG_FULL_OC	+3VSUS
GPIO_25		SMB_MEM_SCL	+3VSUS
GPIO_26		SMB_MEM_SDA	+3VSUS
GPIO_27		SMB_CLK_SB	+3VSUS
GPIO_28		SMB_DAT_SB	+3VSUS
GPIO_29		(SMB_ALERT#)	+3VSUS
GPIO_30		PCI_PME#	+3VSUS
GPIO_31	GPI	STO_SMI#	+3VSUS
GPIO_32		EXTSMI#_3A	+3VSUS
GPIO_33	GPI	(K3#)	+3VSUS
GPIO_34		SUS_CLK	+3VSUS
GPIO_35	GPO	WLAN_ON#	+3VSUS
GPIO_36			+3VSUS
GPIO_37	GPO	OP_SD#	+3VSUS
GPIO_38	GPO	MXM_PWR_ON	+3VS
GPIO_39	GPI	VGA_DETECT#	+3VS
GPIO_40	GPO	BACK_OFF#	+3VS
GPIO_41	GPI	VGA_PWRGD	+3VS
GPIO_42		PM_CLKRUN#	+3VS
GPIO_43		PCI_PERR#	+3VS
GPIO_44		ACZ_SYNC	+3VS
GPIO_45		ACZ_SDOUT	+3VS
GPIO_46	GPO	BT_ON/OFF#	+3VS

MCP51_GPIO	Use As	Signal Name	Power
GPIO_47	GPI	LOAD_TEST	+3VS
GPIO_48			
GPIO_49	GPO	FWH_WP#	+3VS
GPIO_50	GPO	LCD_VDD_EN_GM	+3VS
GPIO_51	GPO	LCD_BACKEN_GM	+3VS
GPIO_52		EDID_CLK_C51M	+3VS
GPIO_53		EDID_DATA_C51M	+3VS
GPIO_54	GPO	GPU_ON	+3VS
GPIO_55		HA20GATE	+3VS
GPIO_56		KBDCPURST	+3VS
GPIO_57		SATA_LED#	+3VS
GPIO_58		CPU_THERMTRIP#	+3VS
GPIO_59		PM_THERM#	+3VS
GPIO_60	GPI	PCB_ID0	+3VS
GPIO_61	GPI	PCB_ID1	+3VS
GPIO_62	GPO	IGP_SELECT	+3VS
GPIO_63		(CABLE_DET_F)	+3VS
GPIO_64		(CABLE_DET_S)	+3VS

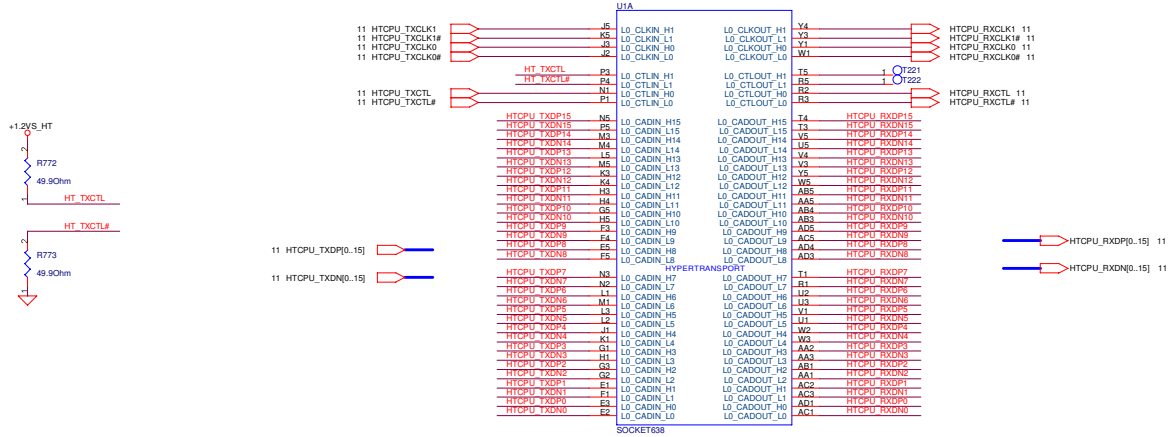
47N217_GPIO	USE_AS	SIGNAL_NAME	Power
GPIO10	GPI		+3VS
GPIO[11:12]	GPO		+3VS
GPIO[13:14]	GPI		+3VS
GPIO23	GPO		+3VS
GPIO[40:45]	GPI		+3VS
GPIO46	GPI		+3VS
GPIO47	GPI		+3VS

M38857_GPIO	USE_AS	SIGNAL_NAME	Power
P23	GPO	MSK_INSTKEY#	+3V
P22	GPO	BAT_LEARN	+3V
P21	GPO		+3V
P20	GPO	KBCRSM	+3V
P42	GPO	WATCHDOG	+3V
P43	GPI	SWDJ_EN	+3V
P44	GPO	KBCPURST_3Q	+3V
P45	GPO	KBC_GA20	+3V
P46	GPO	KBSCI_3Q	+3V
P47	GPI	PM_CLKRUN#	+3V
P50	GPI	BAT_LLOW#_OC	+3V
P51	GPI	FAN1_TACH	+3V
P52	GPO	KBDDT0	+3V
P53	GPO	KBDDT1	+3V
P54	GPI	LID_KBC#	+3V
P55	GPI	BAT_IN_OC#	+3V
P56	GPO	FAN1_DC	+3V
P57	GPO	ADJ_BL	+3V
P67	GPI	NEWCARD_OFF#	+3V
P66	GPI	PANLOCK_#	+3V
P65	GPI	MARATHON_#	+3V
P64	GPI	ACIN_OC#	+3V
P63	GPI	NEWCARD_DET#	+3V
P62	GPI	WIRELESS_#	+3V
P61	GPI	INTERNET_#	+3V
P60	GPI	BLUETOOTH_#	+3V
P76	GPIO	SMD_BAT	+3V
P77	GPIO	SMC_BAT	+3V
P27	GPO	SCR_LED#	+3V
P26	GPO	NUM_LED#	+3V
P25	GPO	CAP_LED#	+3V
P24	GPO	SET_PCIRSTNS#	+3V
P40	GPO	KBC_EXTSMI	+3V
P41	GPO	PANLOCK_LED	+3V

Core Design:

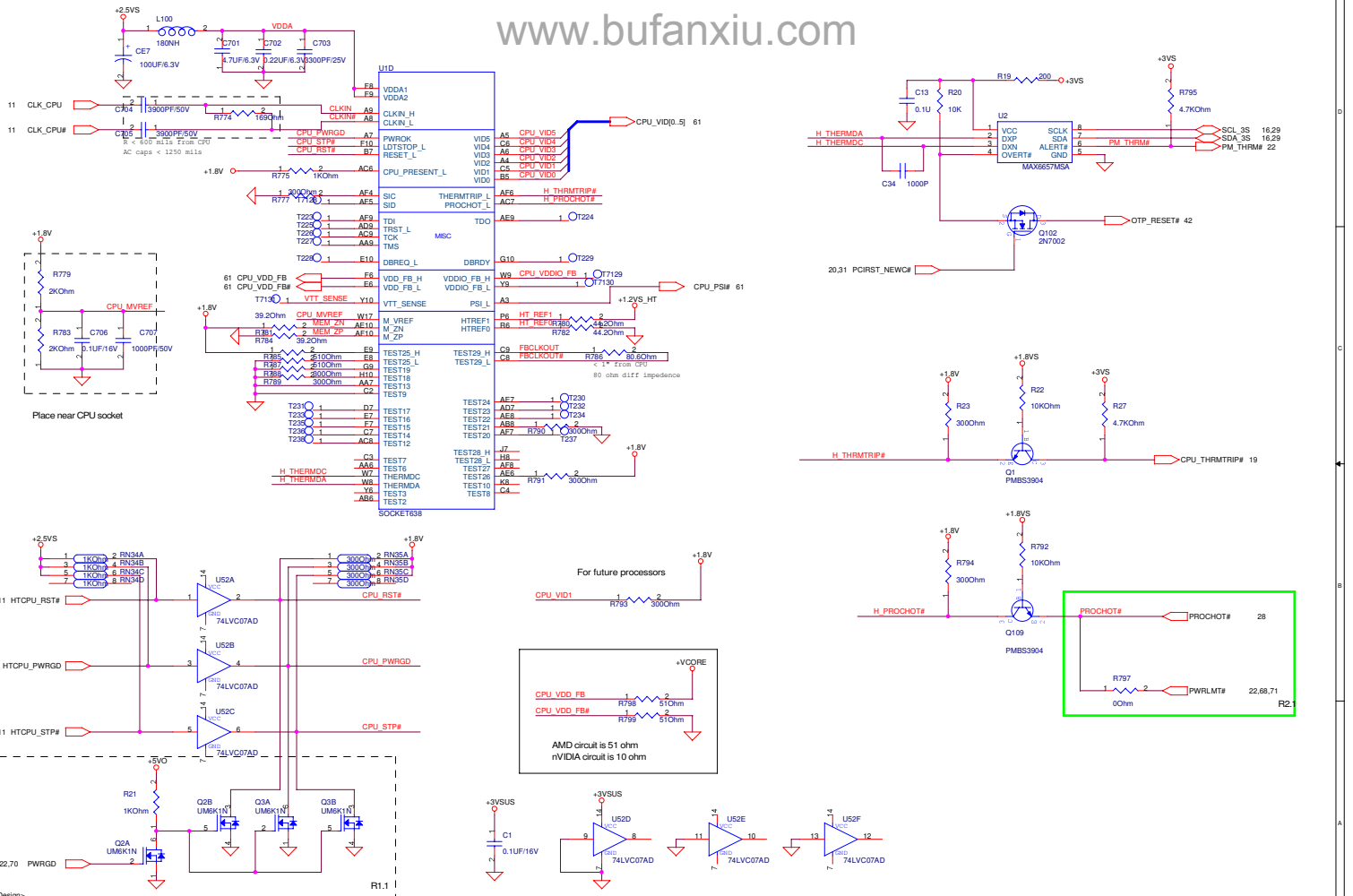
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		<b>2.1</b>	SHEET <b>3</b> OF <b>55</b>	<b>SCHEMATICS REF.</b>	RELEASE DATE:	<b>Albert Su</b>

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ASUS	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>S1 CPU HT</b>	SCHEMATIC FILE NAME :	DESIGN ENGINEER: <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>4</b> OF <b>55</b>		RELEASE DATE :	

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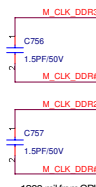
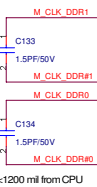
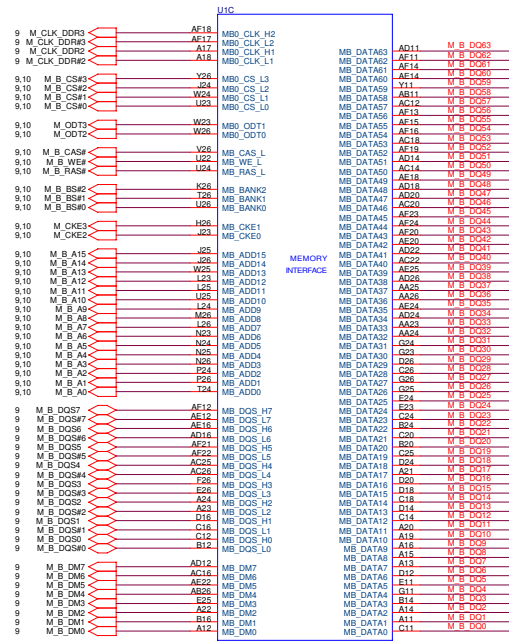
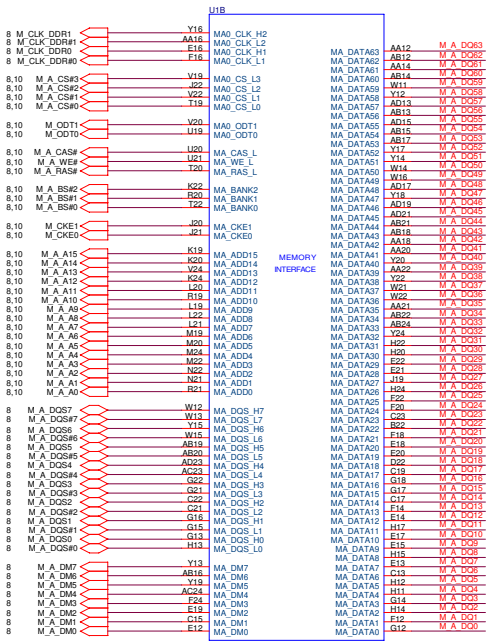


	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>S1 CPU CNTL</b>	SCHEMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>5</b>	OF: <b>55</b>		RELEASE DATE: _____	

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8 M\_A\_DQ[0..63] M A DQ[0..63]

9 M\_B\_DQ[0..63] M B DQ[0..63]

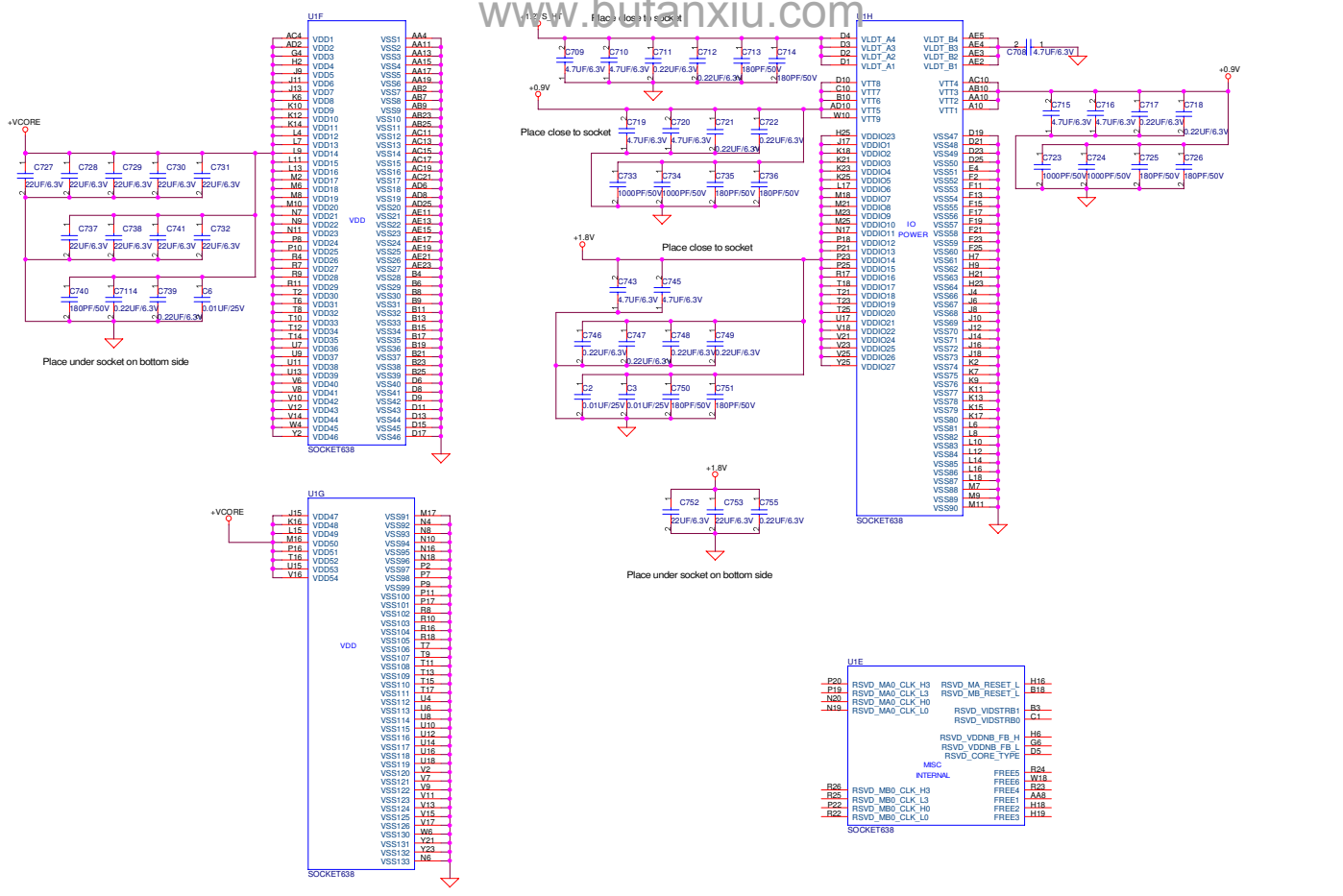


<1200 mil from CPU

<1200 mil from CPU

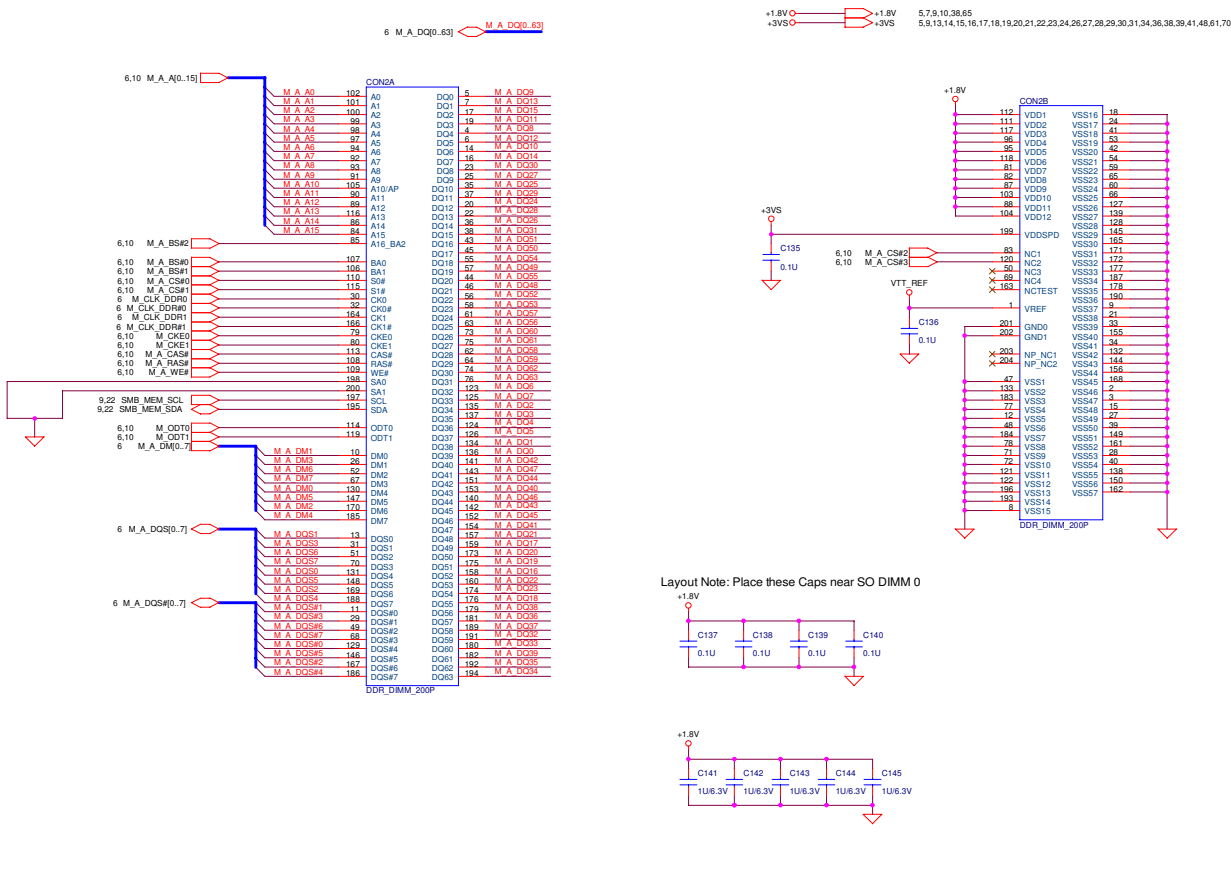
ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>S1 CPU MEM</b>	SCHEMATIC FILE NAME: <b>RELEASE DATE:</b>	DESIGN ENGINEER: <b>Albert Su</b>
			SHEET: <b>6</b> OF <b>55</b>			

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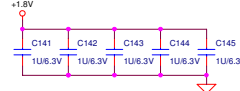
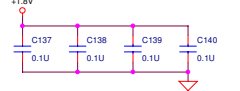


ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>S1 CPU PWR/GND</b>	SCHMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>7</b>	OF: <b>55</b>		RELEASE DATE: _____	

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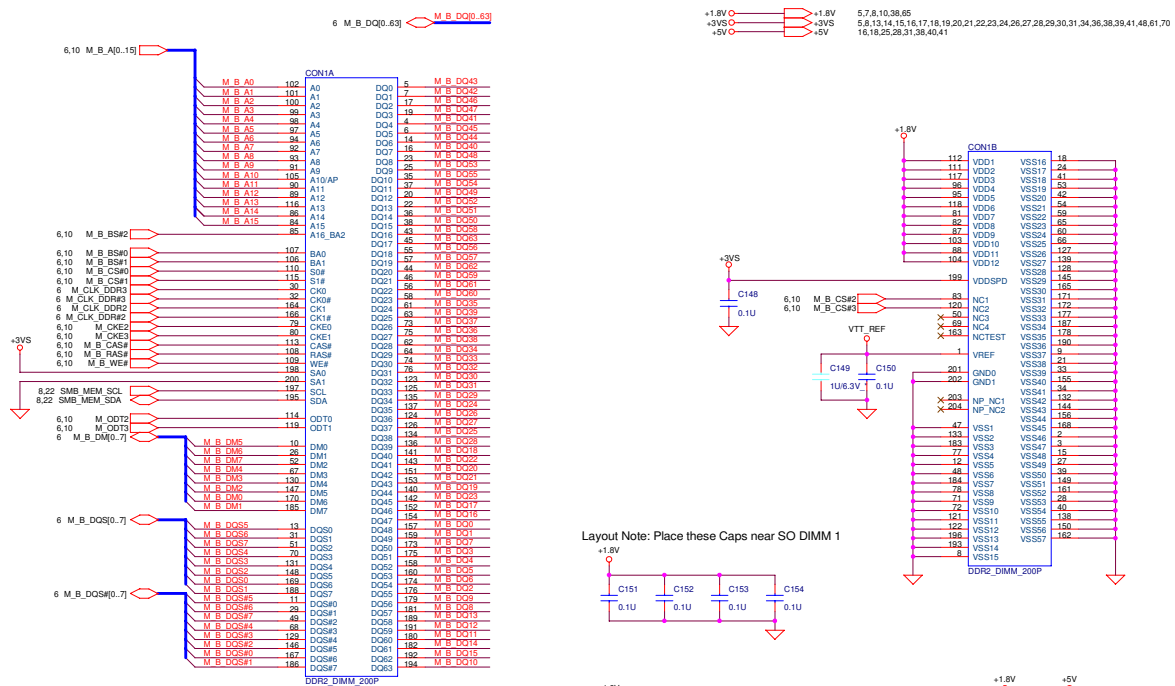
Layout Note: Place these Caps near SO DIMM 0



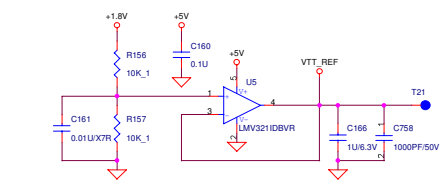
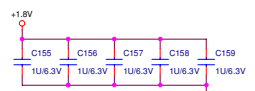
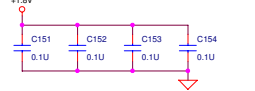
ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>DDR2 SO-DIMM0</b>	SCHMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>8</b>	OF: <b>55</b>	RELEASE DATE:		

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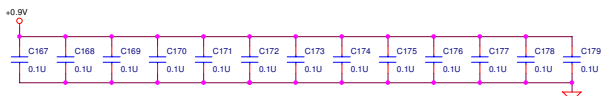


Layout Note: Place these Caps near SO DIMM 1

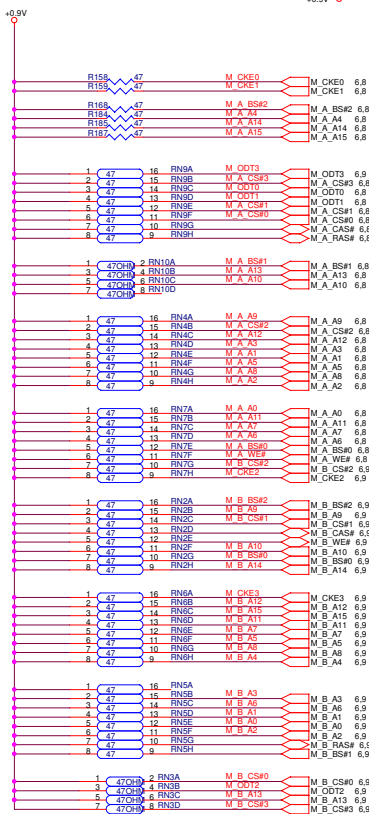
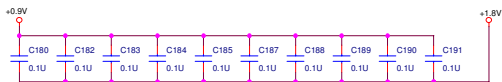


ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>DDR2 SO-DIMM1</b>	SCHMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
			SHEET: <b>9</b> OF <b>55</b>		RELEASE DATE:	

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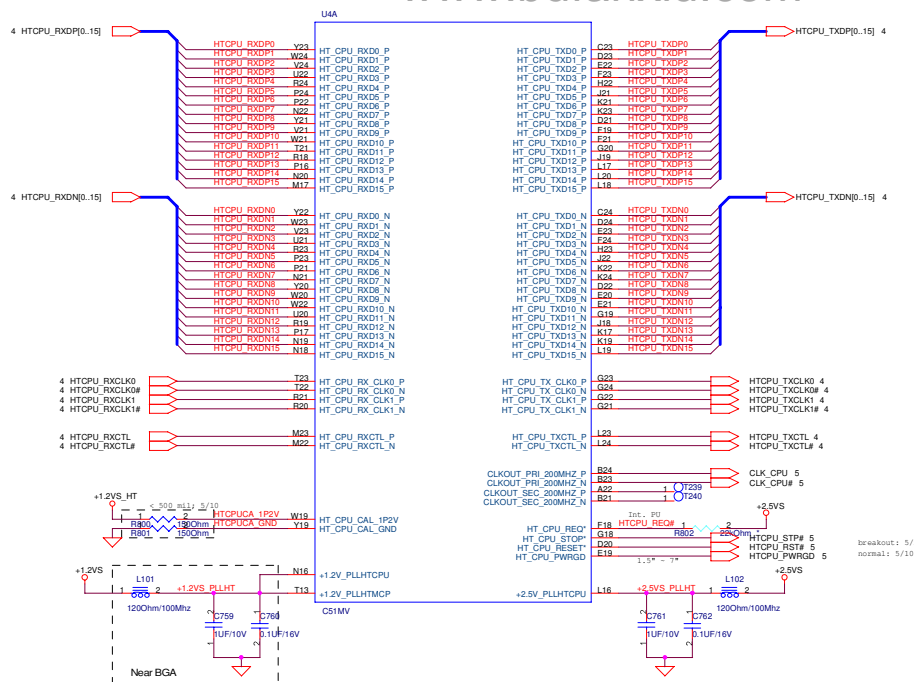
Layout note: Place one cap close to every 2 pullup resistors terminated to +0.9V



Core Designs

ASUS	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>DDR2 ADDRESS TERMINATION</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>10</b> OF <b>55</b>			

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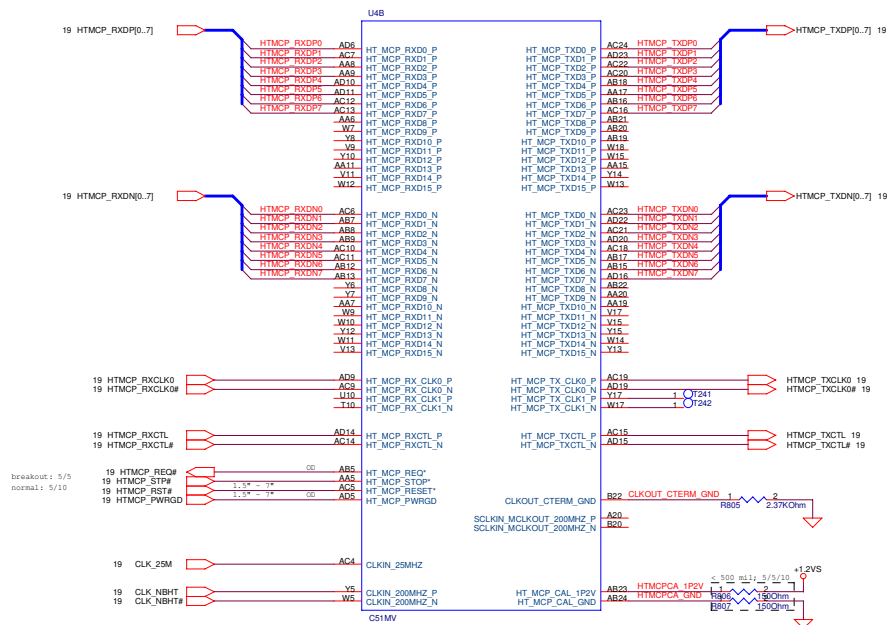


breakout: 5/5  
normal: 5/10

Core Designs

ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION:	SCHMATIC FILE NAME :	DESIGN ENGINEER :
	<b>2.1</b>	SHEET <b>11</b> OF <b>55</b>	<b>C51M HT</b>	RELEASE DATE :	<b>Albert Su</b>

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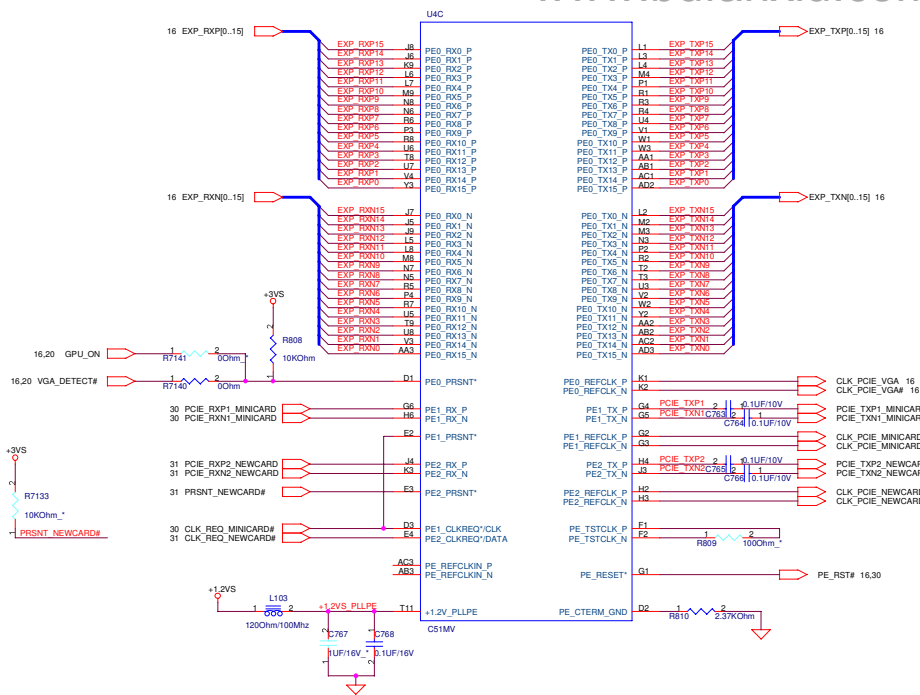


breakout: 5/5  
normal: 5/10

Core Designs

	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>C51M HT TO MCP</b>	SHEMATIC FILE NAME: <b></b>	DESIGN ENGINEER: <b>Albert Su</b>
			SHEET: <b>12</b>	OF: <b>55</b>	RELEASE DATE: <b></b>	

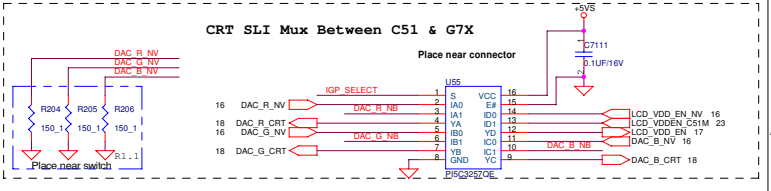
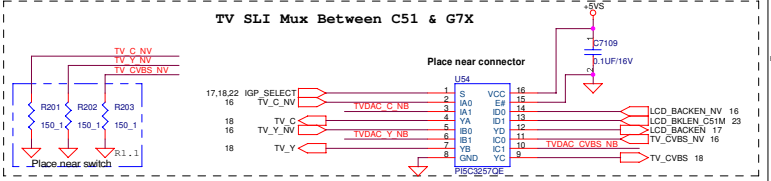
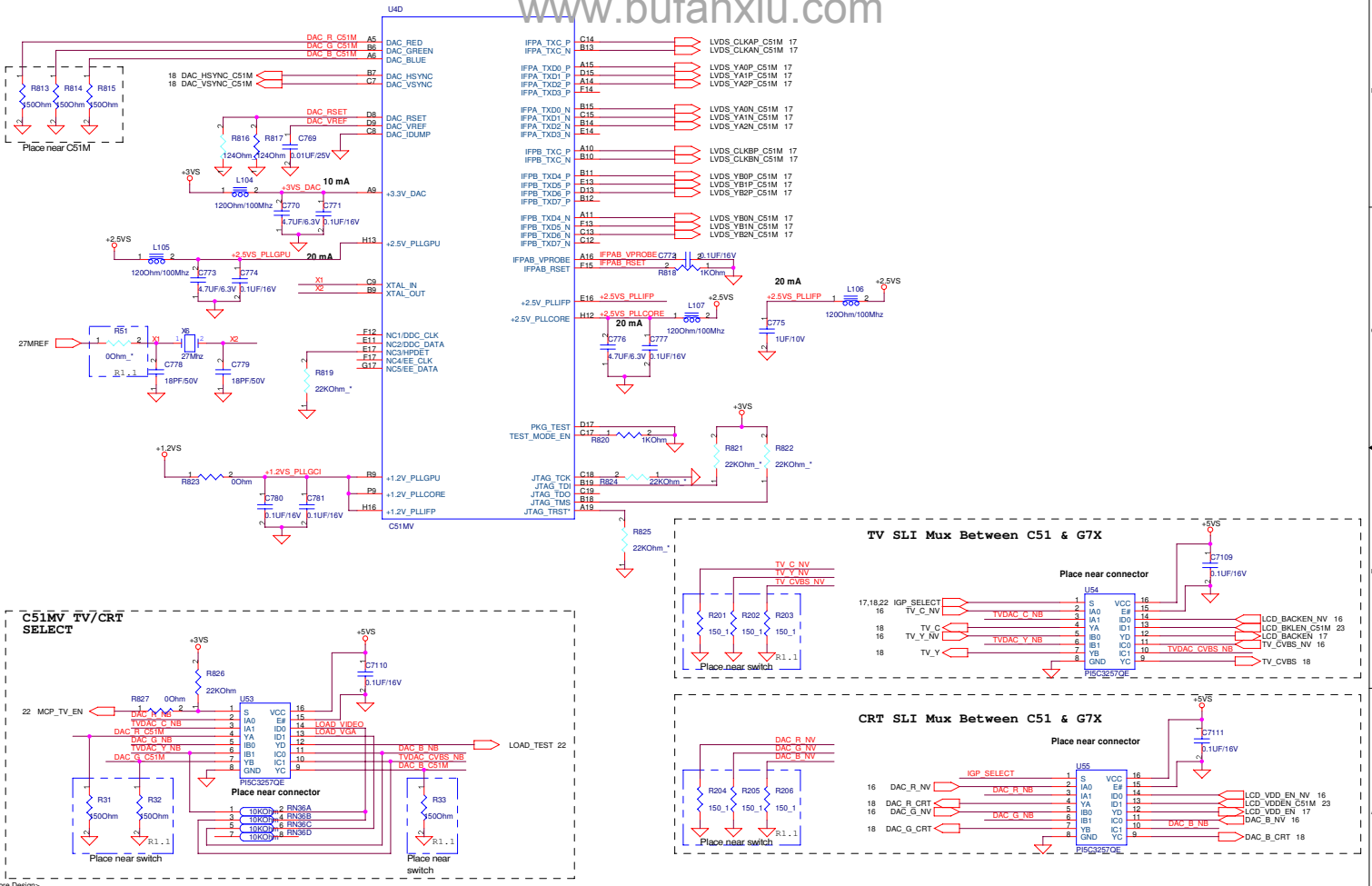
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Core Designs

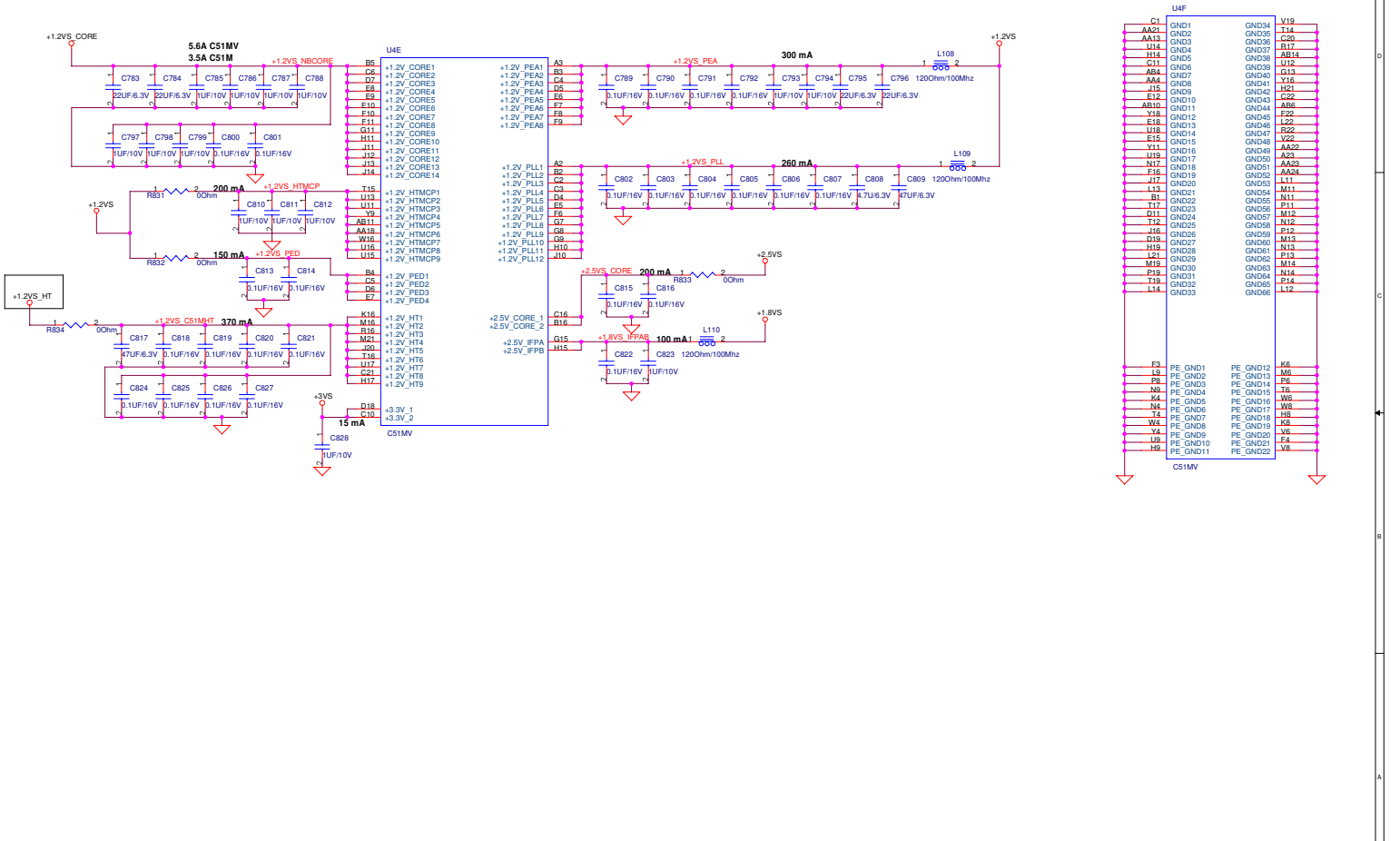
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		<b>2.1</b>	SHEET <b>13</b> OF <b>55</b>		RELEASE DATE:	

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ASUS	PROJECT: A8T	REVISION: 2.1	DATE: Friday, July 21, 2006	DESCRIPTION: C51M CRT&LVDS	SCHMATIC FILE NAME: [ ]	DESIGN ENGINEER: Albert Su
		SHEET: 14 OF 55			RELEASE DATE: [ ]	

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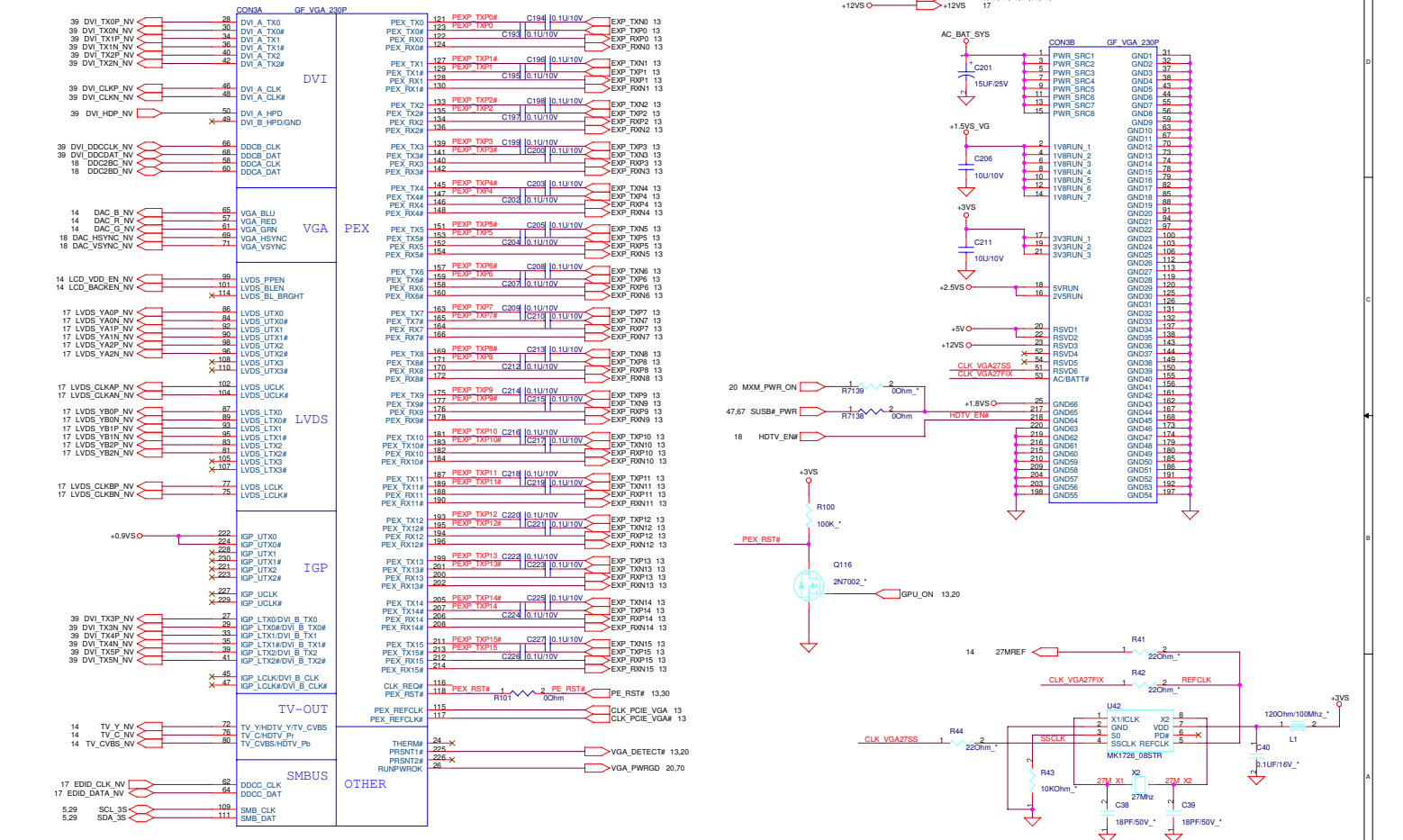
Core Designs	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>C51M PWR/GND</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>15</b>	OF: <b>55</b>		RELEASE DATE:	

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Parity Inversion:  
PEXP\_TXP0,  
6, 8, 14

www.bufanxiu.com

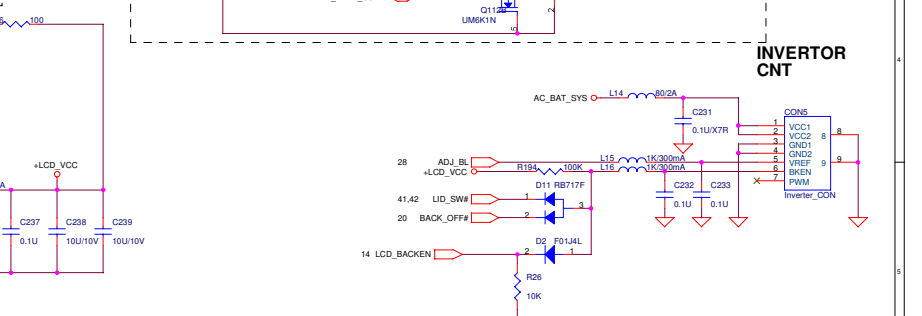
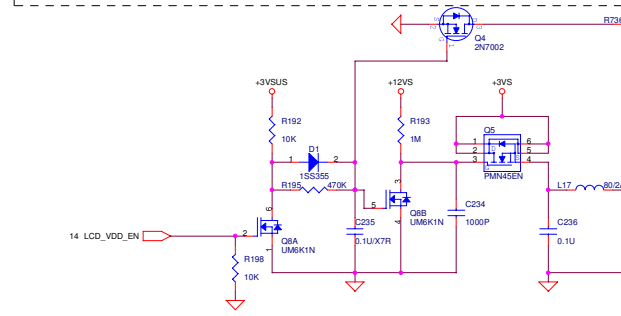
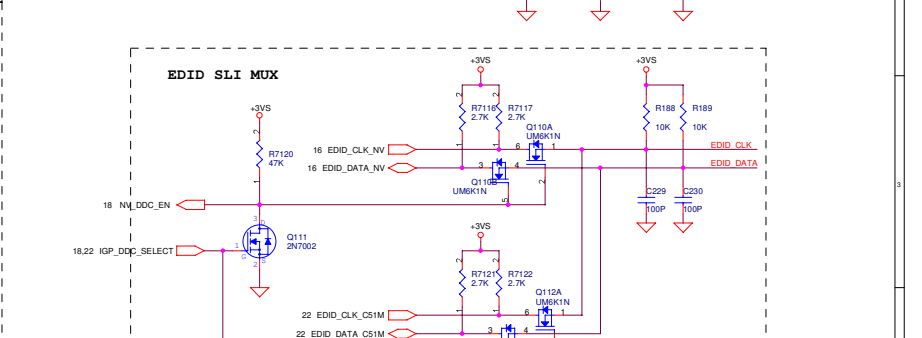
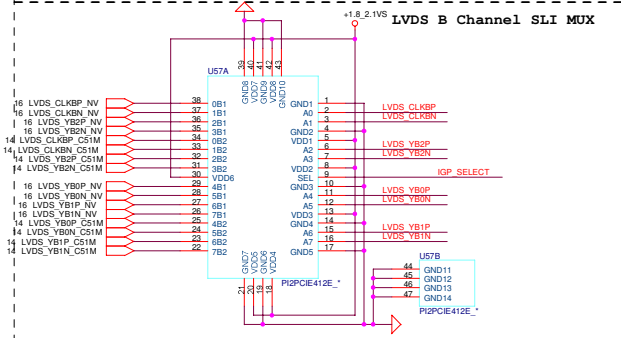
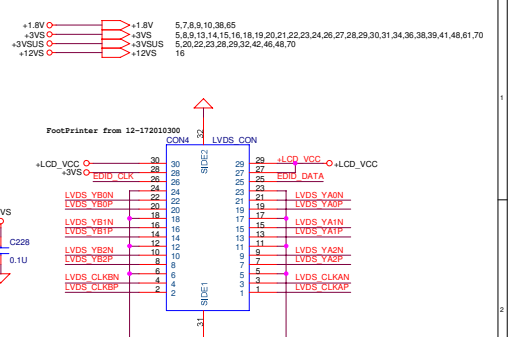
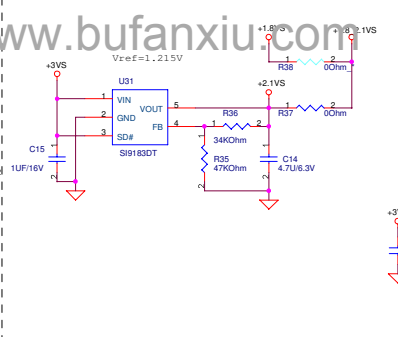
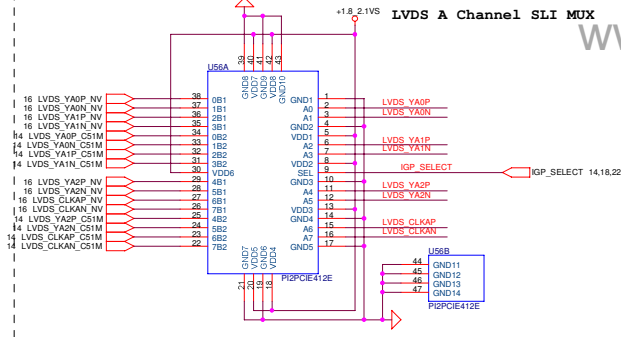
+1.5VS 19,21,22,23,30,31,38,48  
+1.8VS 5,15,17,48  
+2.5VS 5,11,14,15,18,38,48  
+3VS 5,8,9,13,14,15,17,18,19,20,21,22,23,24,26,27,28,29,30,31,34,36,38,39,41,46,61,70  
+5V 9,18,26,28,31,38,46,41  
+12VS 17



ASUS PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>VGA_CONN</b>	SCHEMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
	SHEET: <b>16</b>	OF: <b>55</b>	RELEASE DATE: _____		

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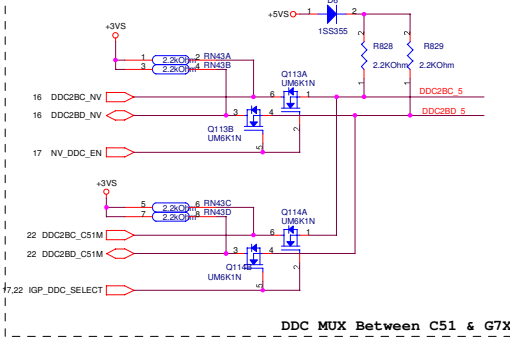




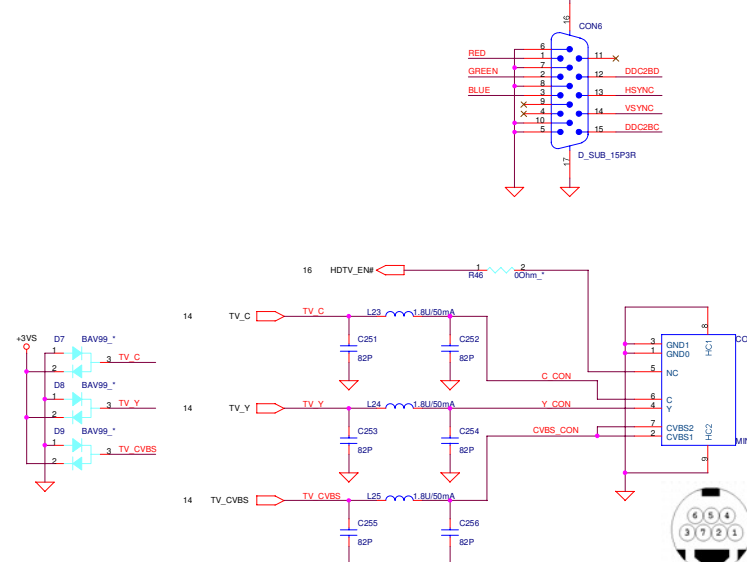
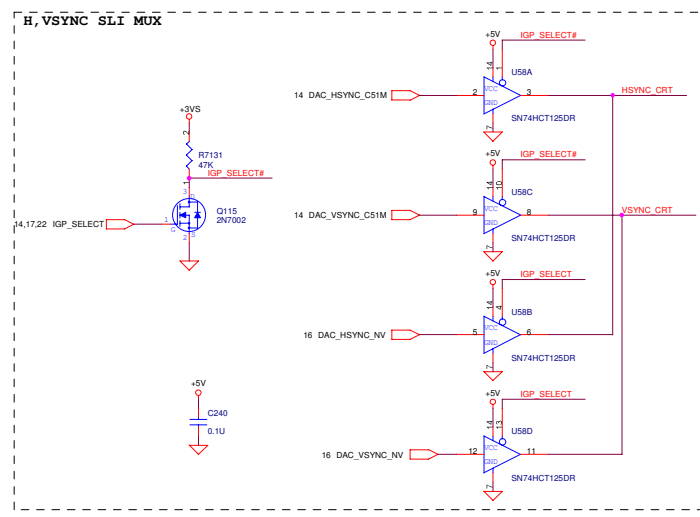
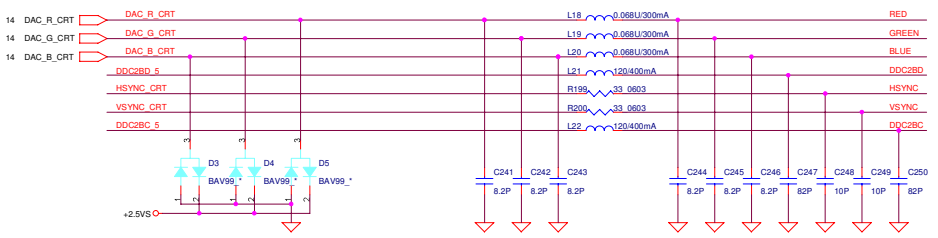
ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>LVDS, INVERTER CONN</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
			SHEET: <b>17</b> OF <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>

+2.5VS	5, 11, 14, 15, 16, 38, 48
+3VS	5, 8, 9, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 34, 36, 38, 39, 41, 48, 61, 70
+5V	9, 16, 25, 26, 31, 38, 40, 41
+5VS	14, 23, 24, 28, 29, 36, 37, 38, 39, 40, 41, 61

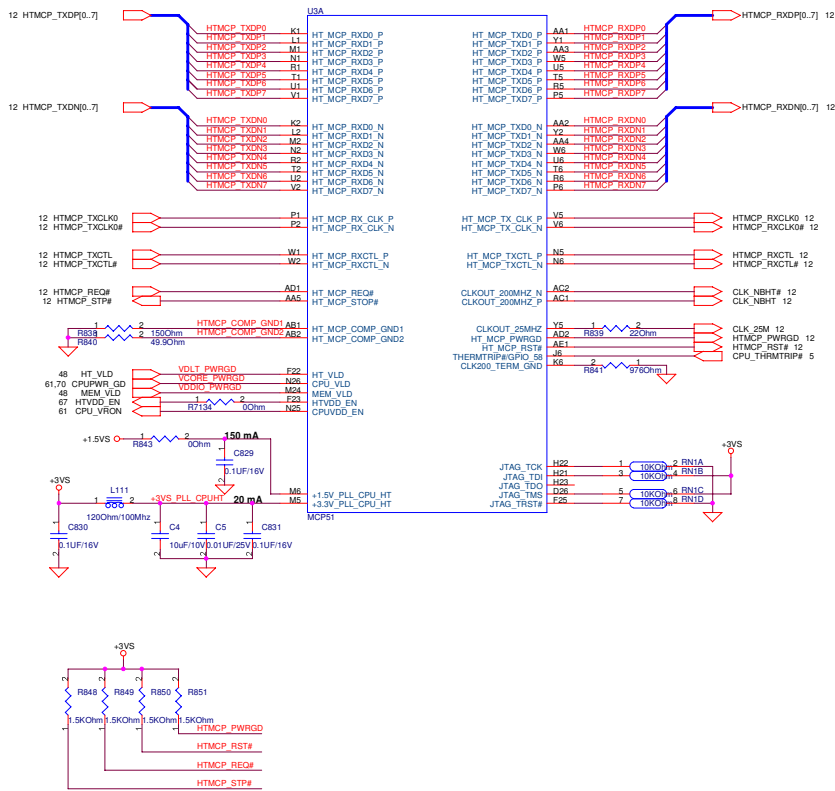


DDC MUX Between C51 & G7X



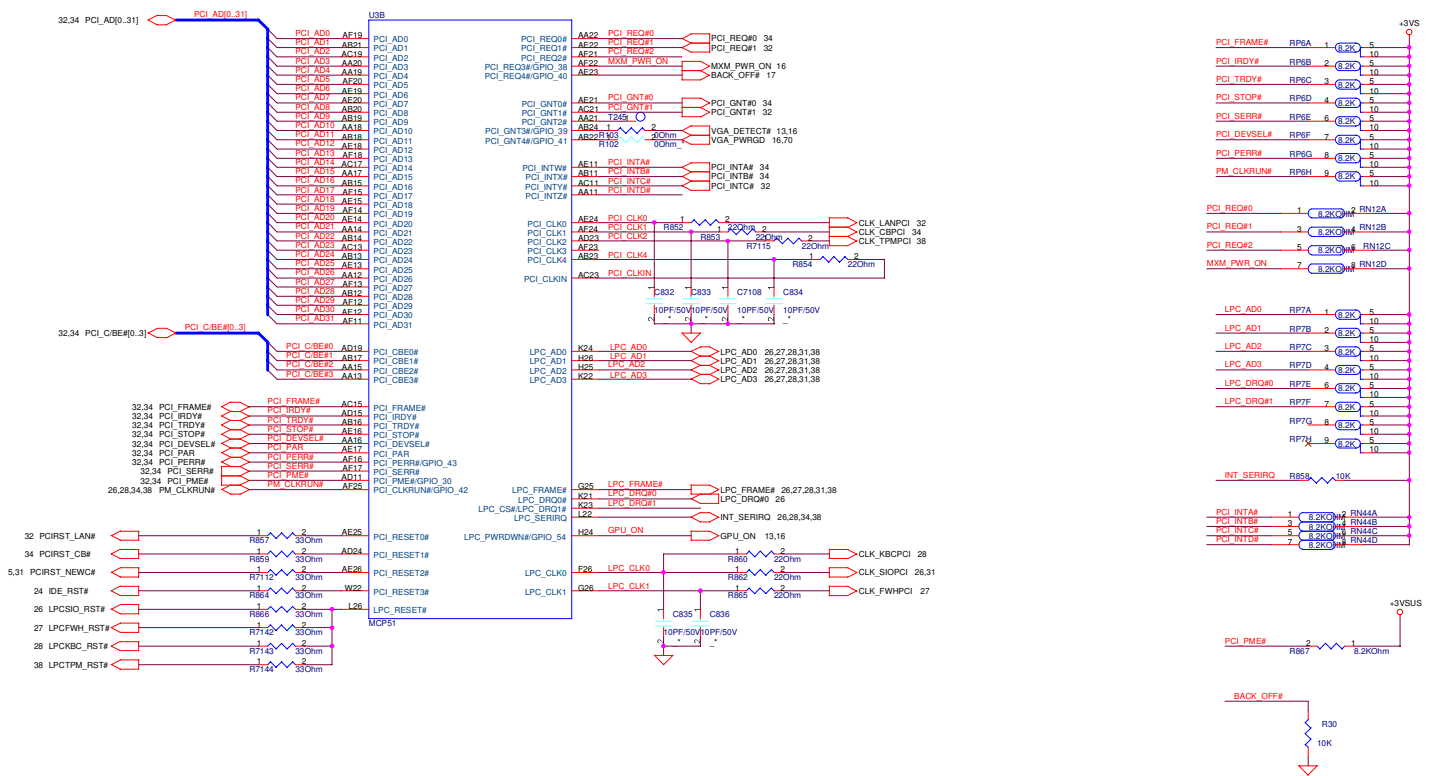
ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION:	SCHEMATIC FILE NAME :	DESIGN ENGINEER :
	2.1	SHEET <b>18</b> OF <b>55</b>	<b>CRT &amp; TV OUT</b>	RELEASE DATE :	<b>Albert Su</b>

<< Kennedy\_Zhang >>



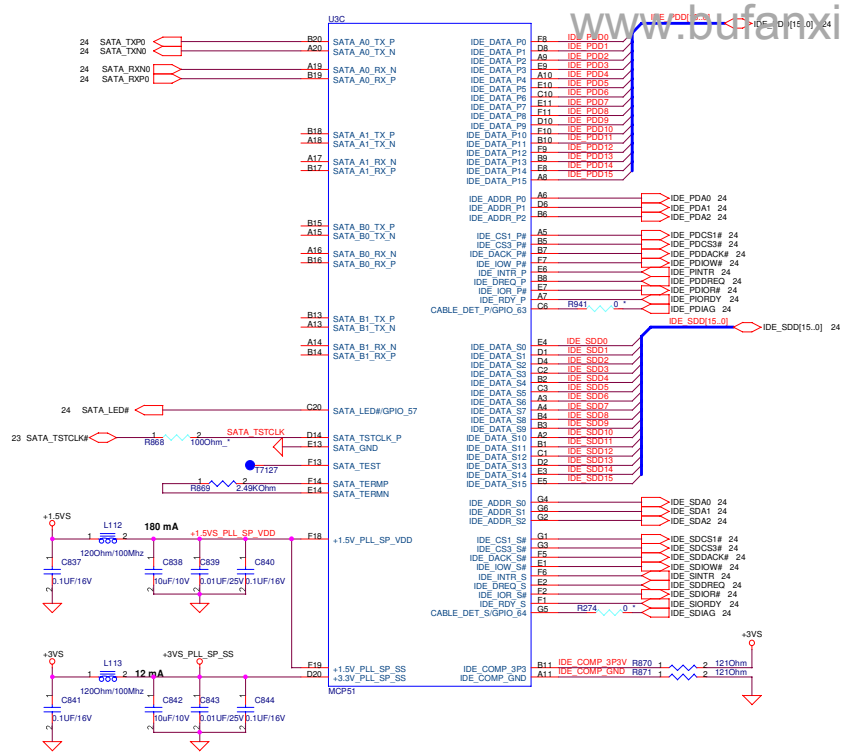
ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>MCP51 HT I/F</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>19</b>	OF: <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>



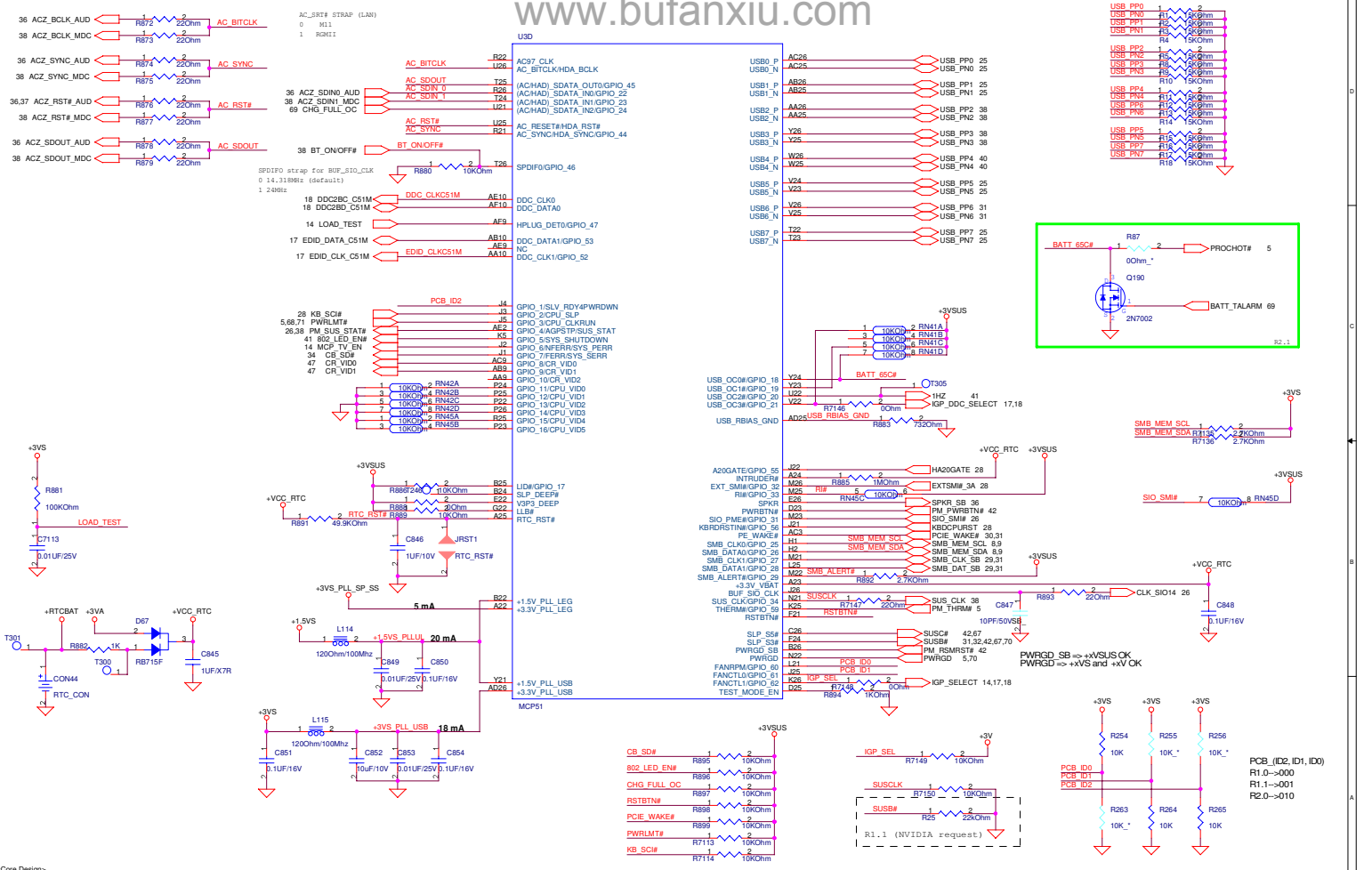
Core Designs		ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>MCP51 PCI</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
				SHEET: <b>20</b>	OF: <b>55</b>	RELEASE DATE:		

<< Kennedy\_Zhang >>



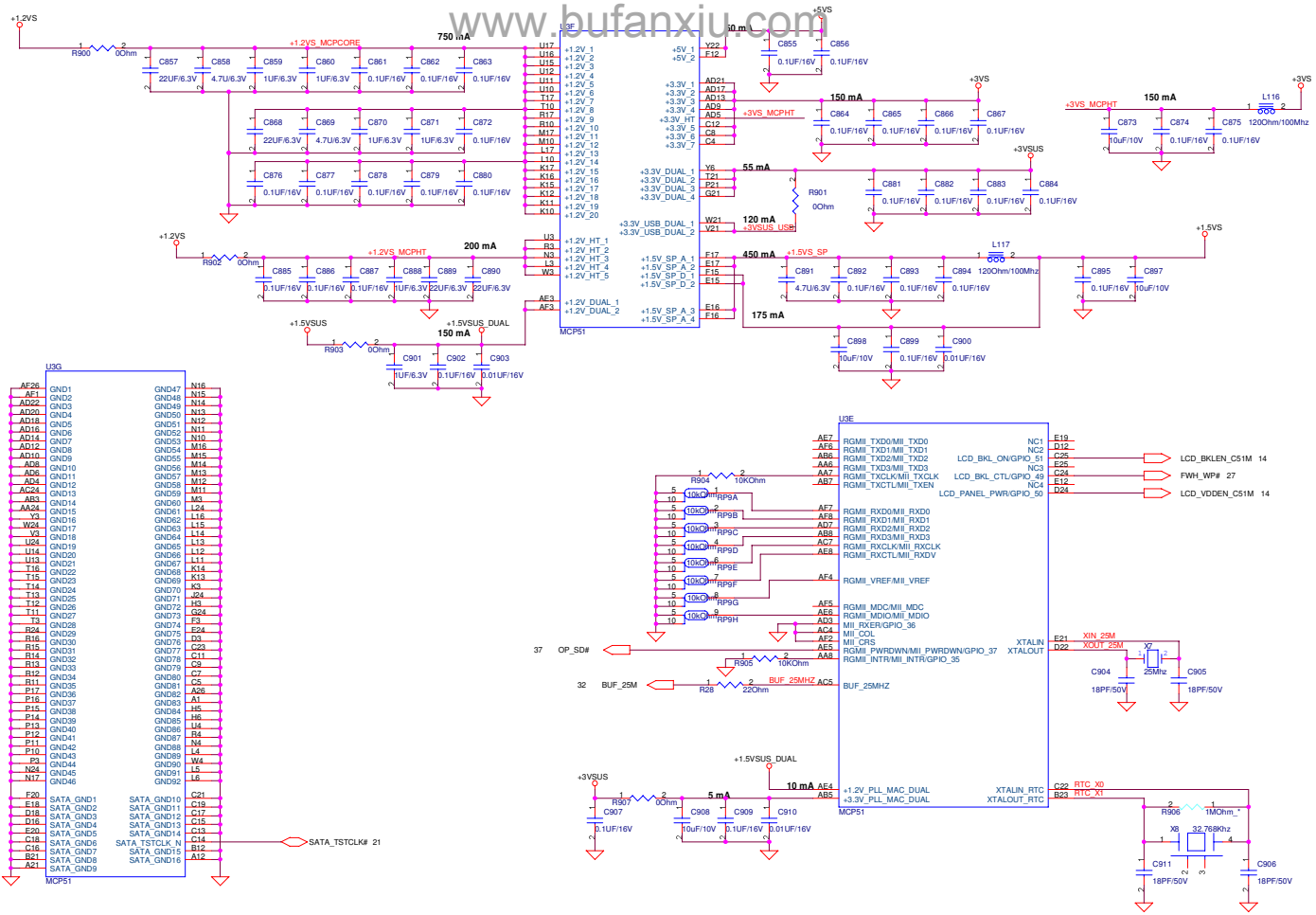
ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>MCP51 IDE</b>	SCHEMATIC FILE NAME :	DESIGN ENGINEER : <b>Albert Su</b>
		SHEET <b>21</b> OF <b>55</b>			RELEASE DATE :	

<< Kennedy\_Zhang >>



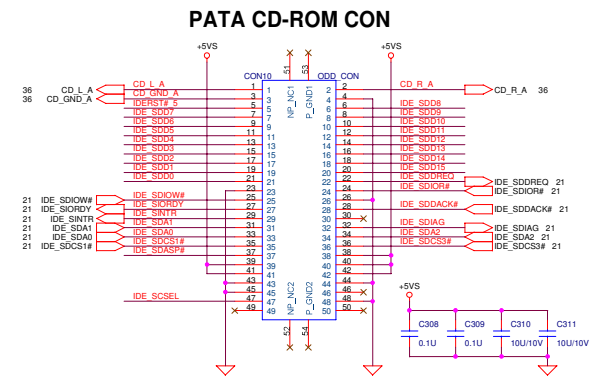
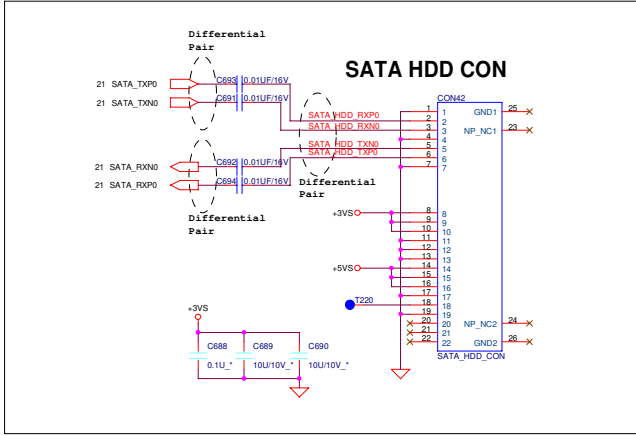
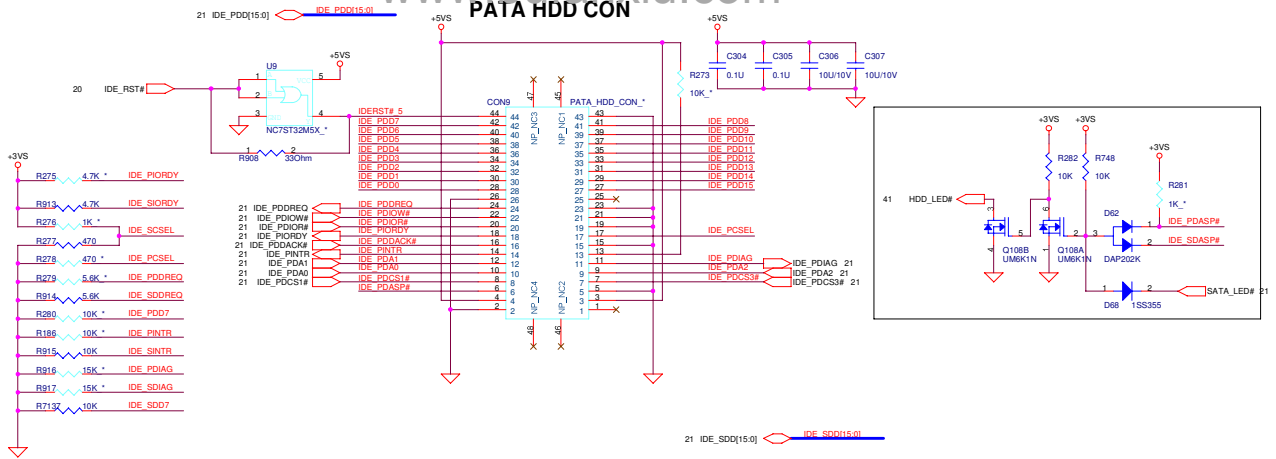
ASUS	PROJECT: A8T	REVISION: 2.1	DATE: Friday, July 21, 2006	DESCRIPTION: MCP51 USB/HDA	SCHEMATIC FILE NAME:	DESIGN ENGINEER: Albert Su
		SHEET: 22	OF: 55		RELEASE DATE:	

<< Kennedy\_Zhang >>



ASUS	PROJECT: A8T	REVISION: 2.1	DATE: Friday, July 21, 2006	DESCRIPTION: MCP51 PWR/GND	SCHEMATIC FILE NAME: [Blank]	DESIGN ENGINEER: Albert Su
		SHEET: 23	OF: 55	RELEASE DATE: [Blank]		

<< Kennedy\_Zhang >>

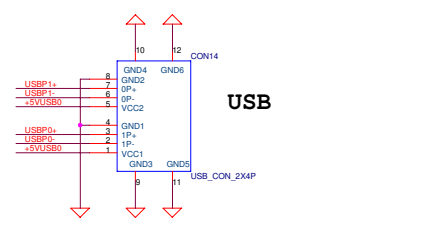
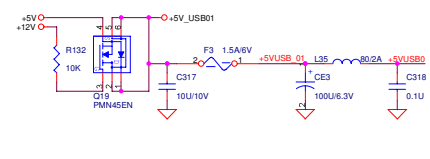
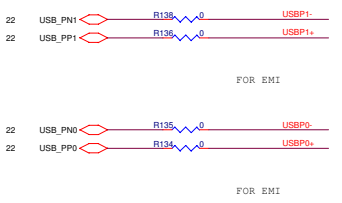
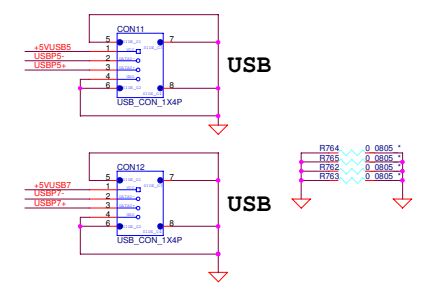
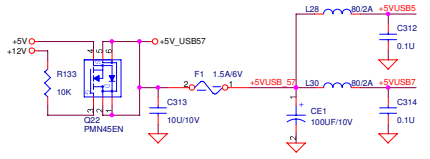
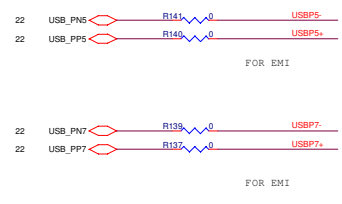


- +3VS ○ → +3VS 5,8,9,13,14,15,16,17,18,19,20,21,22,23,26,27,28,29,30,31,34,36,38,39,41,48,61,70
- +5VS ○ → +5VS 14,16,23,28,29,36,37,38,39,40,41,61
- +5V ○ → +5V 9,16,18,25,28,31,38,40,41

ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>HDD &amp; CD-ROM CONN</b>	SCHMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
	<b>2.1</b>	SHEET <b>24</b> OF <b>55</b>	RELEASE DATE:		

<< Kennedy\_Zhang >>

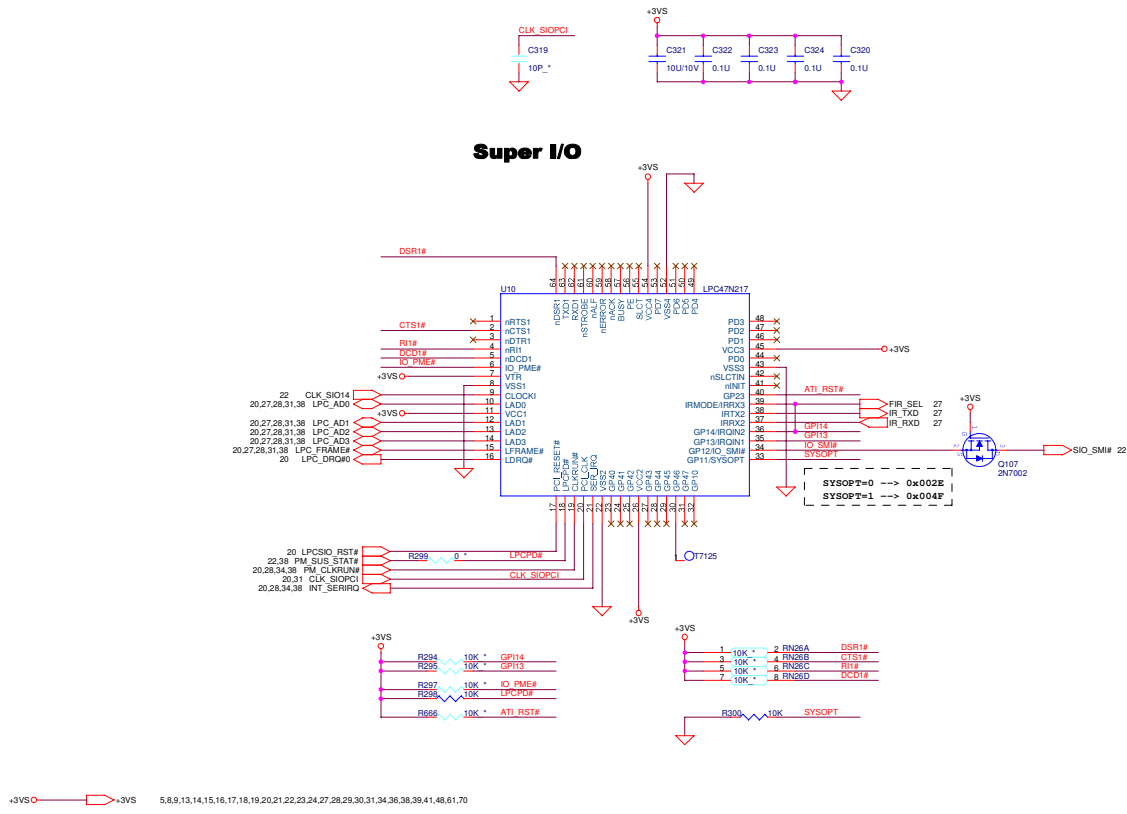




+5V → +5V 9,16,18,28,31,38,40,41

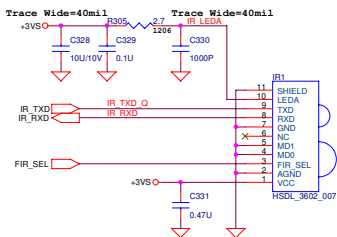
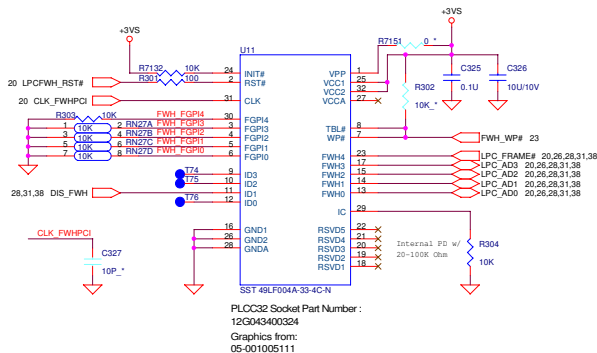
ASUS	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>USB PORTS</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>25</b> OF <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>



ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>SUPER IO LPC47N217</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
	<b>2.1</b>	SHEET <b>26</b> OF <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>



+3VS 5,8,9,13,14,15,16,17,18,19,20,21,22,23,24,26,28,29,30,31,34,36,38,39,41,48,61,70

Core Design

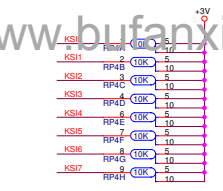
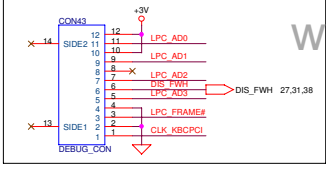
ASUS	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>BIOS , IR</b>	SCHEMATIC FILE NAME :	DESIGN ENGINEER : <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>27</b> OF <b>55</b>		RELEASE DATE :	

<< Kennedy\_Zhang >>

P2.1 Low : Power Button Override disable  
Input Event only at P54, P55, P60 - P67

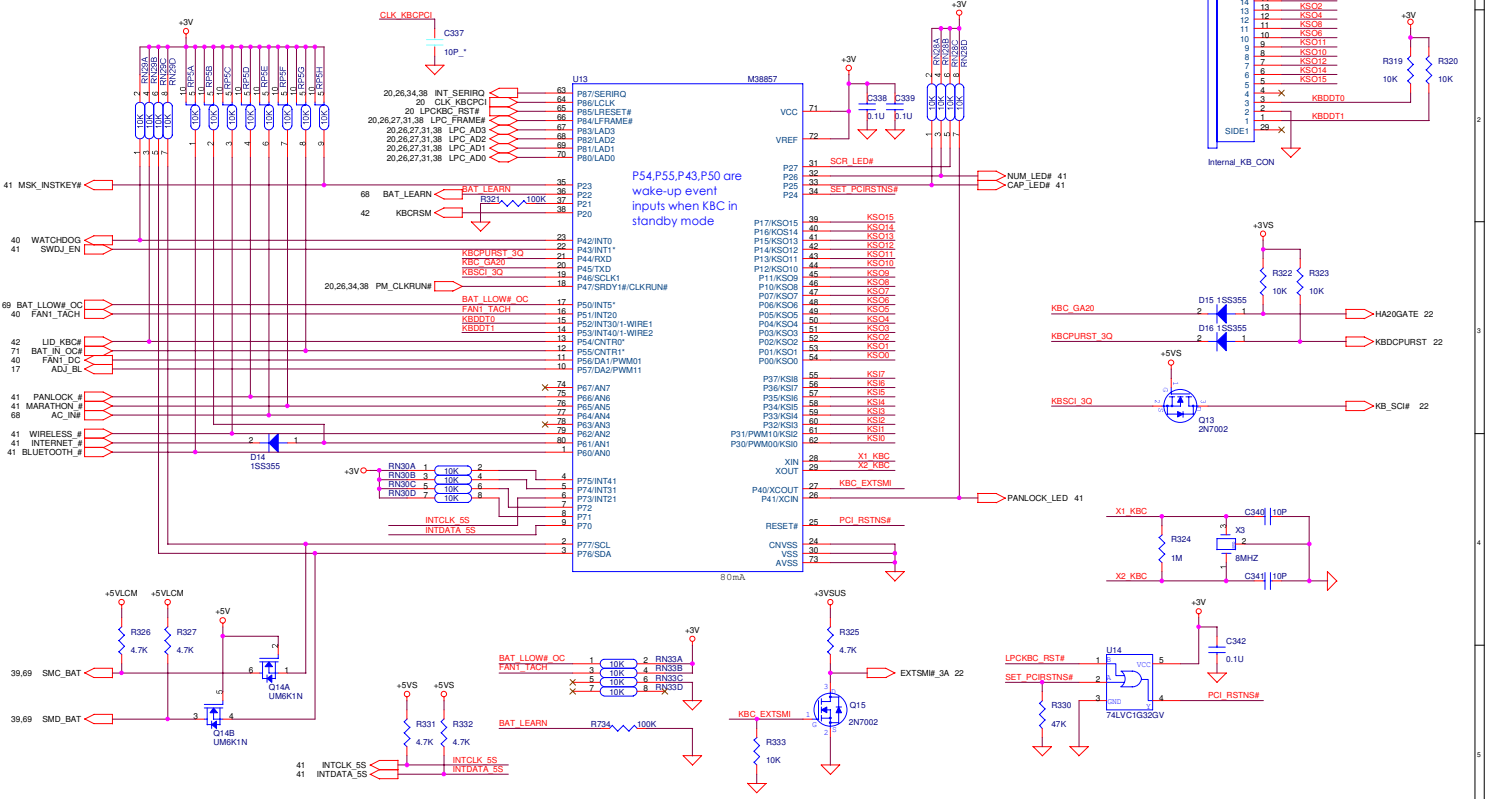
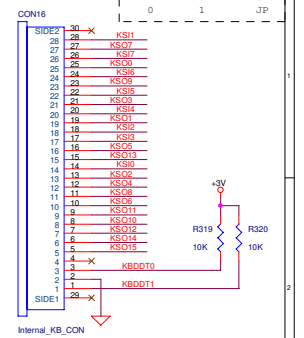
P50, P43, P54, P55 are wake-up event  
inputs when KBC in standby mode

EC should set  
OP\_SD low in S3,  
keep from  
leakage

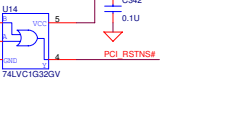
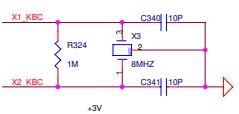
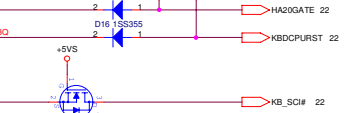


+3V	22,30,31,35,37,38,42
+3VUS	5,8,9,13,14,15,16,17,18,19,20,21,22,23,24,26,27,29,30,31,34,36,38,39,41,48,61,70
+5V	5,17,20,22,23,29,32,42,48,49,70
+5VLM	8,16,18,25,31,38,40,41
+5VLM	14,18,22,24,29,36,37,38,39,40,41,61
+5VLM	68,69,70,71

KBD0T1	1	1	US
KBD0T0	0	0	UK
	0	1	JP

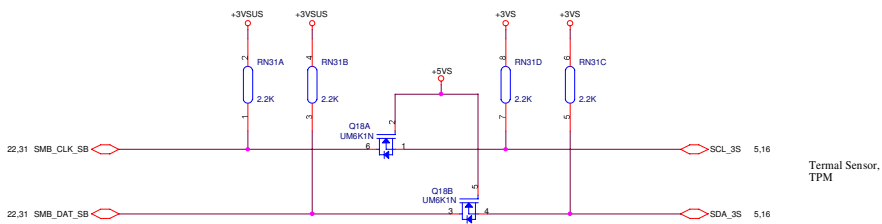


P54, P55, P43, P50 are  
wake-up event  
inputs when KBC in  
standby mode



<< Kennedy\_Zhang >>

MCP51

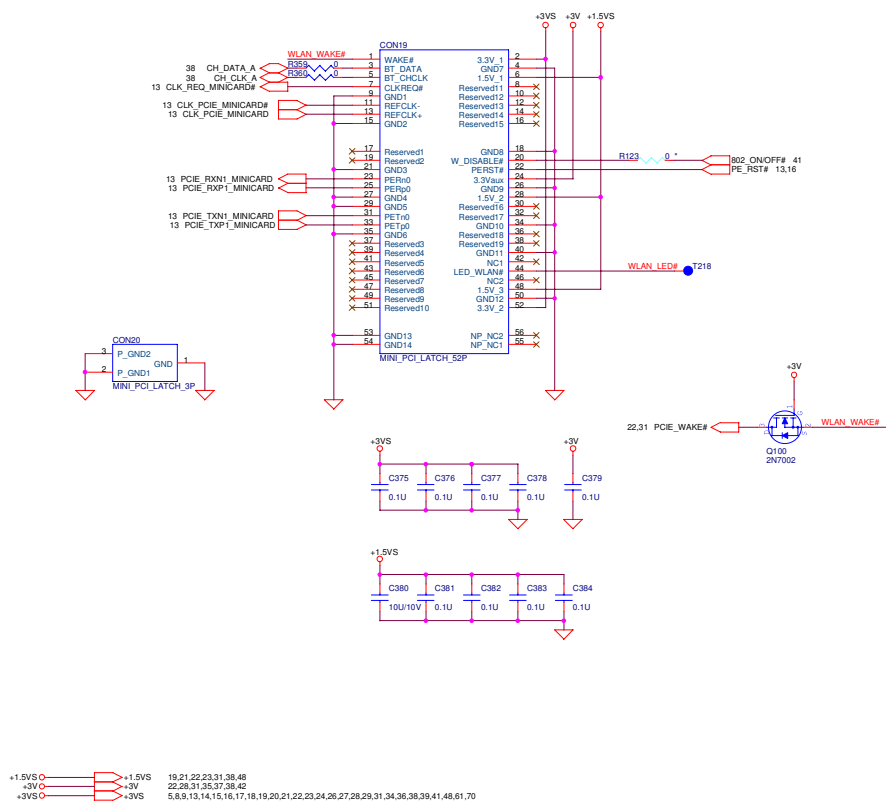


+3VA	→	+3VA	22,38,41,42,48,71
+3VSUS	→	+3VSUS	5,17,20,22,23,28,32,42,46,48,70
+0.9VS	→	+0.9VS	16
+1.5VS	→	+1.5VS	19,21,22,23,30,31,38,48
+2.5VSC	→	+2.5VSC	5,11,14,15,16,18,38,48
+3VS	→	+3VS	5,8,9,13,14,15,16,17,18,19,20,21,22,23,24,26,27,28,30,31,34,38,39,41,48,61,70
+5VS	→	+5VS	14,18,23,24,28,36,37,38,39,40,41,61
+12VS	→	+12VS	16,17
+1.8V	→	+1.8V	5,7,8,9,10,38,65
+3V	→	+3V	22,28,30,31,35,37,38,42
+5V	→	+5V	9,16,18,25,28,31,38,40,41
+12V	→	+12V	25,40
+VCCORE	→	+VCCORE	5,7,61
+5VLCM	→	+5VLCM	28,68,69,70,71

Core Designs

	PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>SM BUS &amp; POWER PORT</b>	SCHMATIC FILE NAME :	DESIGN ENGINEER : <b>Albert Su</b>
		<b>2.1</b>	SHEET <b>29</b> OF <b>55</b>		RELEASE DATE :	

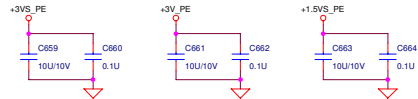
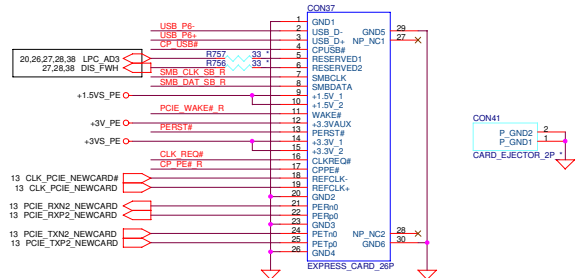
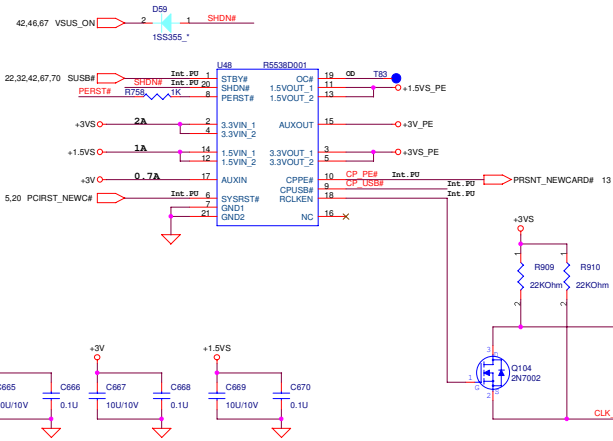
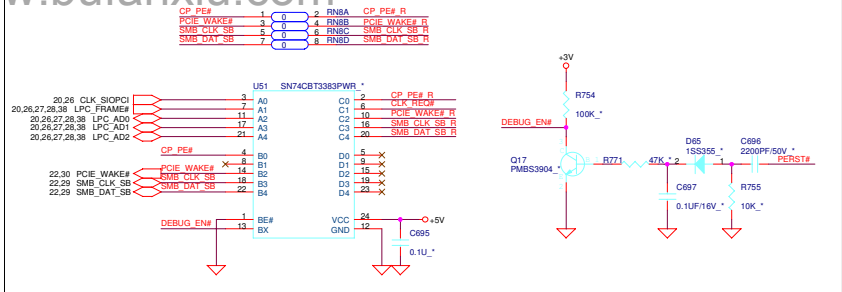
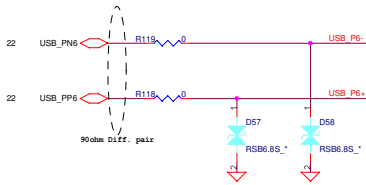
<< Kennedy\_Zhang >>



+1.5VS → +1.5VS 19,21,22,23,31,38,48  
 +3V → +3V 22,28,31,35,37,38,42  
 +3VS → +3VS 5,6,8,13,14,15,16,17,18,19,20,21,22,23,24,26,27,28,29,31,34,36,38,39,41,48,61,70

ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>MINI CARD</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>30</b>	OF: <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>

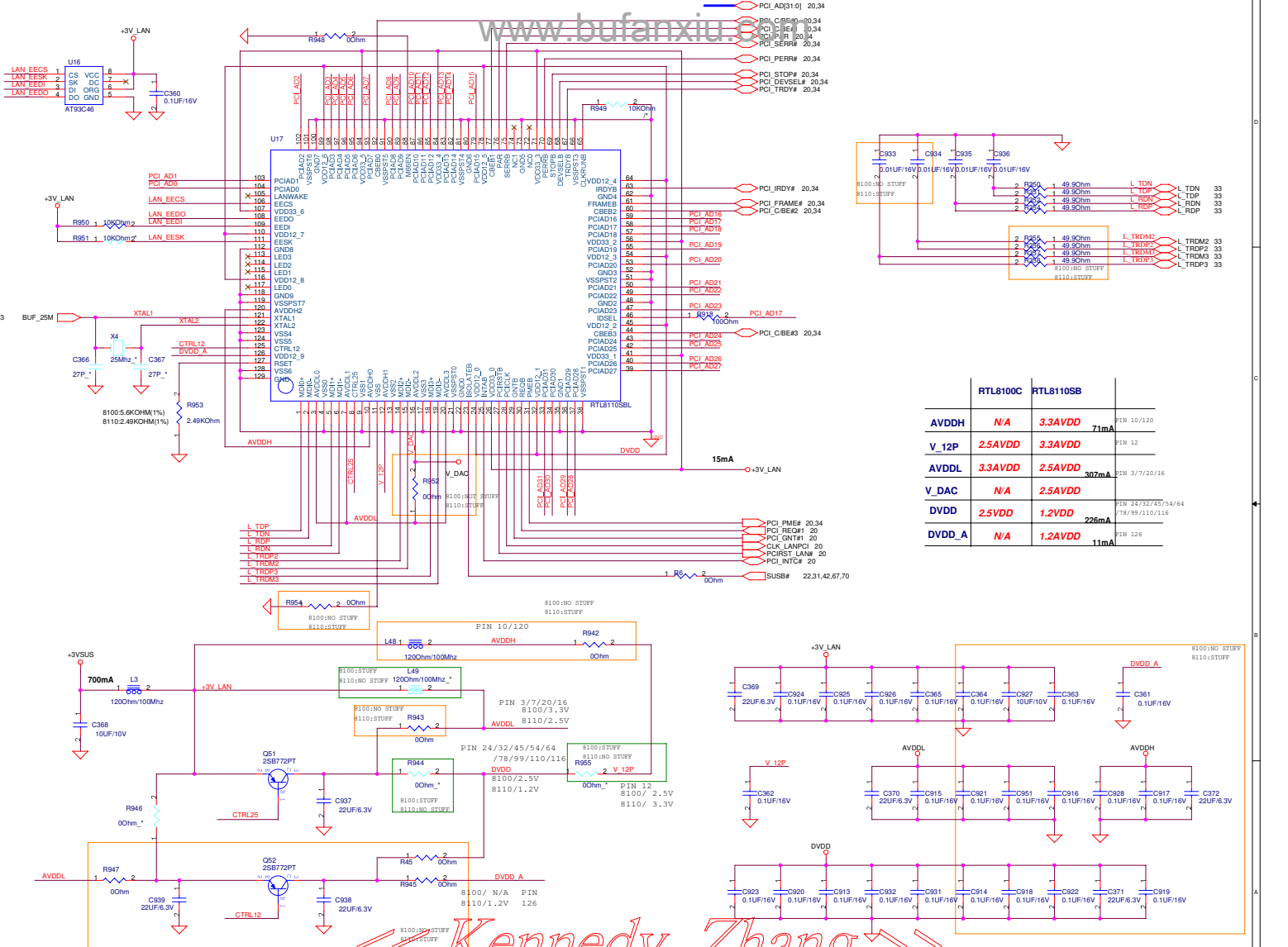


+1.5VS	19,21,22,23,30,38,48
+3VS	5,8,9,13,14,15,16,17,18,19,20,21,22,23,24,26,27,28,29,30,34,36,38,39,41,48,61,70
+3V	22,28,30,35,37,38,42

Core Designs

ASUS PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>NEW CARD</b>	SCHEMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
	SHEET: <b>31</b>	OF: <b>55</b>	RELEASE DATE: _____		

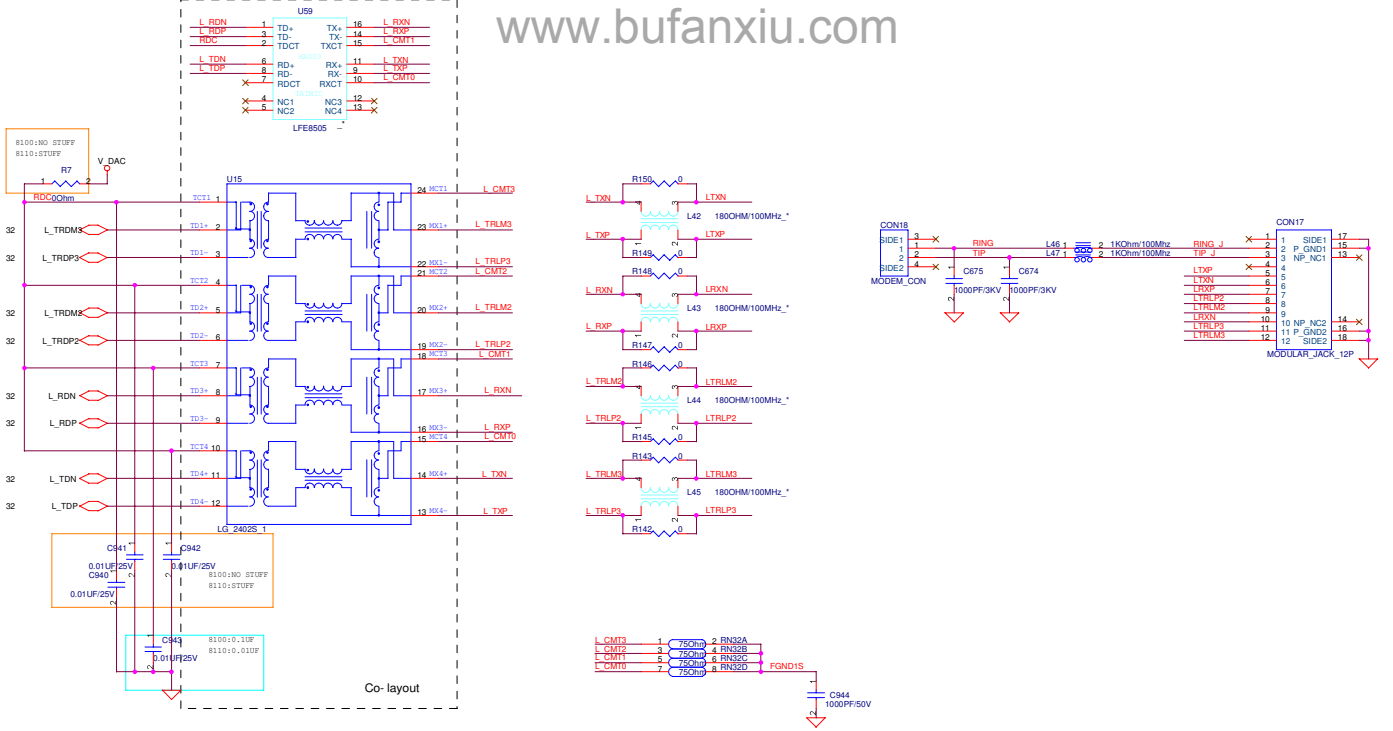
<< Kennedy\_Zhang >>



	RTL8100C	RTL8110SB	
AVDDH	N/A	3.3AVDD	PIN 10/120
V_12P	2.5AVDD	3.3AVDD	PIN 12
AVDDL	3.3AVDD	2.5AVDD	307mA PIN 3/7/20/16
V_DAC	N/A	2.5AVDD	
DVDD	2.5VDD	1.2VDD	226mA PIN 24/32/45/54/64 /78/99/110/116
DVDD_A	N/A	1.2AVDD	11mA PIN 126

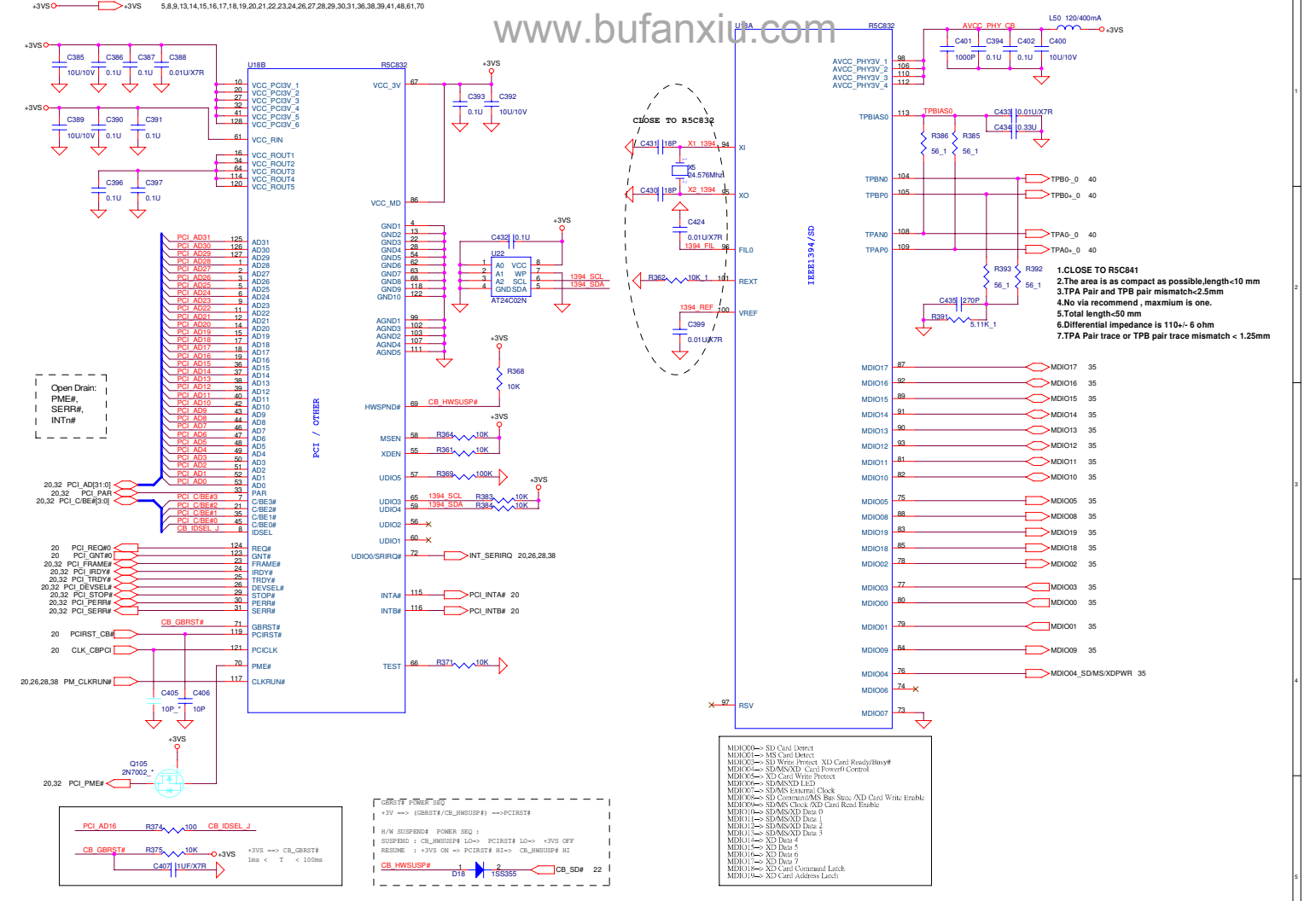
*« Kennedy Zhang »*

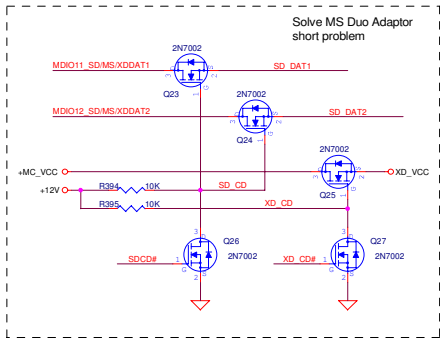
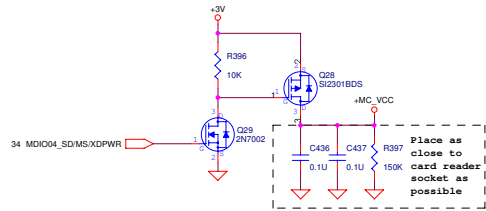




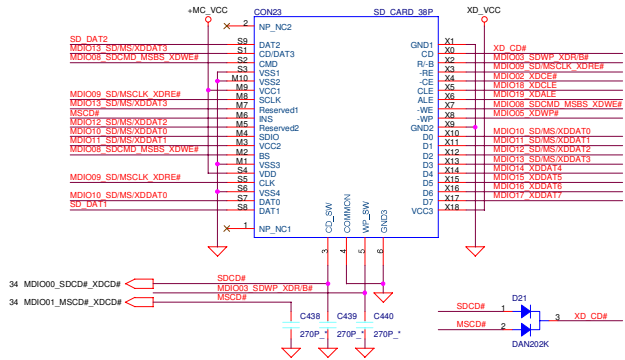
ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION:	SCHMATIC FILE NAME :	DESIGN ENGINEER :
	2.1	SHEET <b>33</b> OF <b>55</b>	<b>RJ45 &amp; RJ11</b>	RELEASE DATE :	<b>Albert Su</b>

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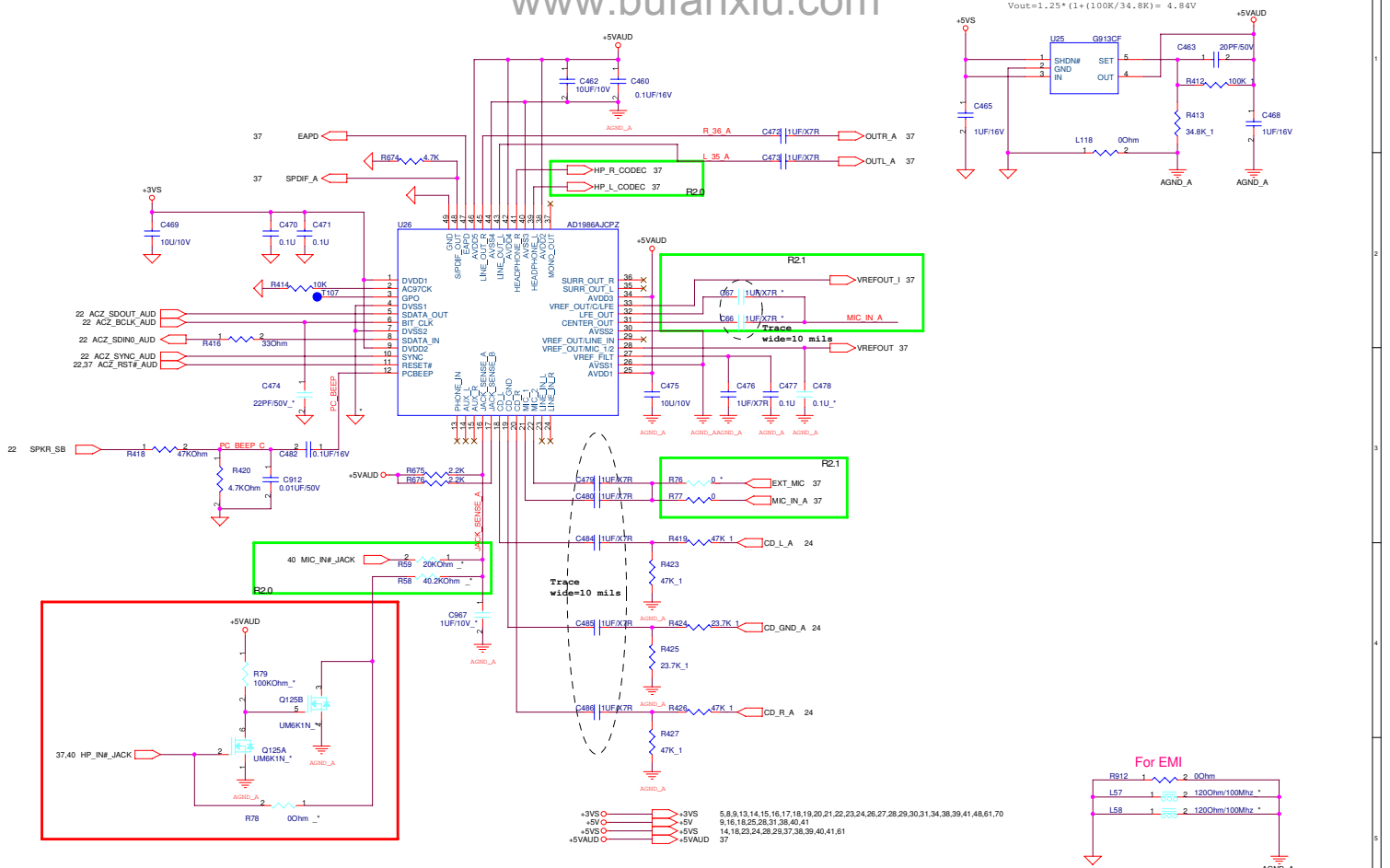
+3V O → +3V 22,28,30,31,37,38,42  
 +12V O → +12V 25,37,40,67



Core Design

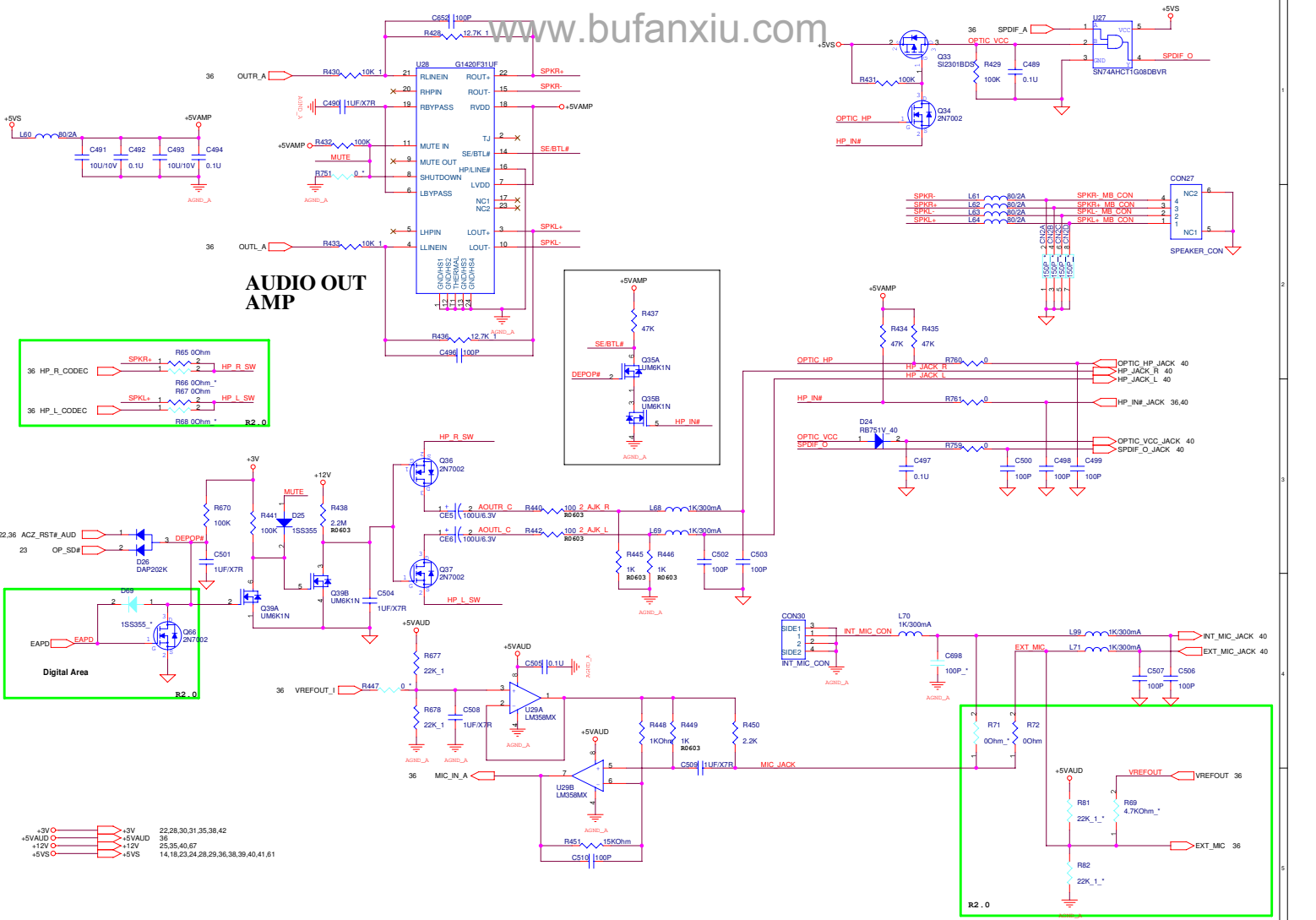
ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>4 IN 1 CONN</b>	SCHMATIC FILE NAME :	DESIGN ENGINEER : <b>Albert Su</b>
	2.1	SHEET <b>35</b> OF <b>55</b>		RELEASE DATE :	

<< Kennedy\_Zhang >>

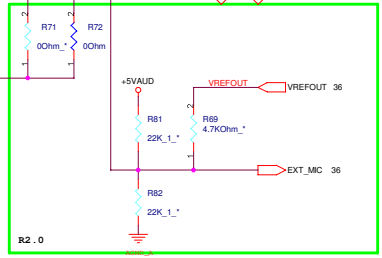
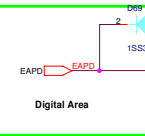
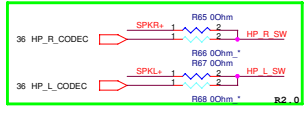


Core Design:		ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>CODEC_ADI1986A</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
				SHEET: <b>36</b>	OF: <b>55</b>		RELEASE DATE:	

<< Kennedy\_Zhang >>

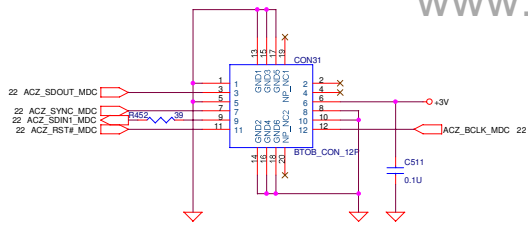


**AUDIO OUT AMP**

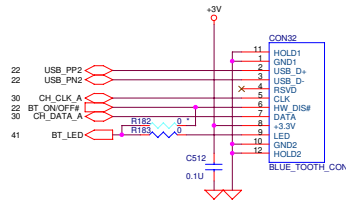


Core Design:	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>AUDIO AMP (G1420)</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>37</b>	OF: <b>55</b>		RELEASE DATE:	

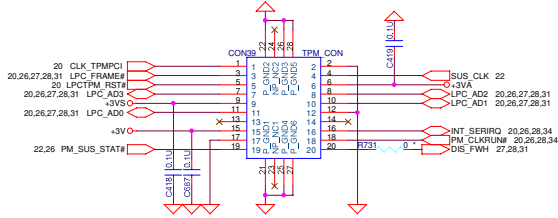
« Kennedy\_Zhang »



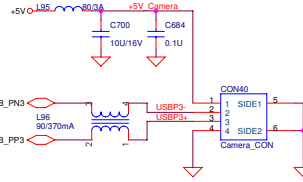
Azalia MDC MODEM CON



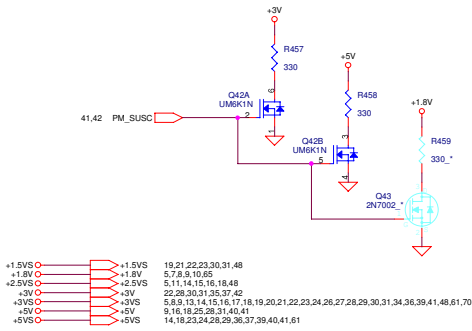
Bluetooth Module CON



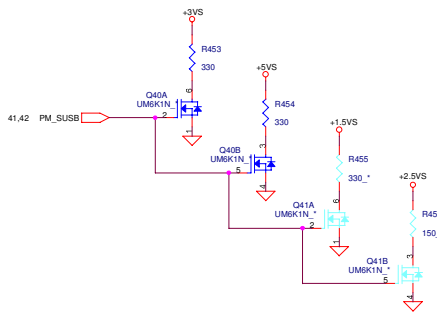
TPM Module CON



Camera Module CON



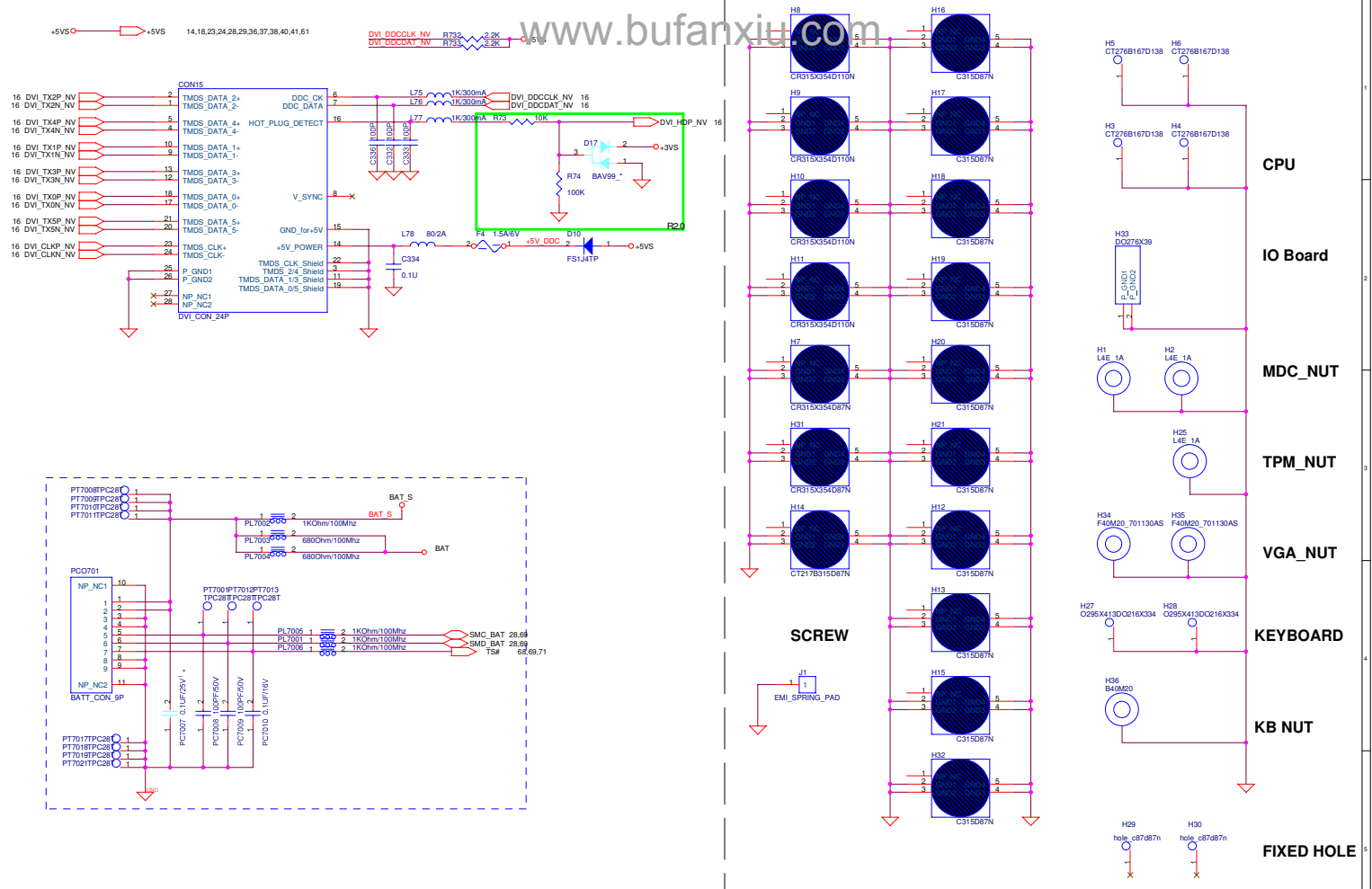
+1.5VS	+1.5V	19,21,22,23,30,31,48
+1.8V	+1.8V	5,7,8,9,10,65
+2.5VS	+2.5V	5,11,14,15,16,18,48
+3V	+3V	22,29,30,31,35,37,42
+3VS	+3V	5,8,9,13,14,15,16,17,18,19,20,21,22,23,24,26,27,28,29,30,31,34,36,39,41,48,61,70
+5V	+5V	3,16,18,25,28,31,40,41
+5VS	+5V	14,18,23,24,28,29,36,37,39,40,41,61



Core Design

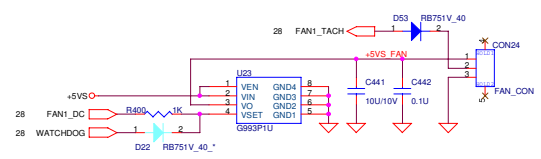
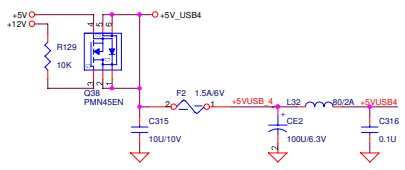
ASUS PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION:	SCHMATIC FILE NAME :	DESIGN ENGINEER :
	<b>2.1</b>	SHEET <b>38</b> OF <b>55</b>	<b>MDC, B/T, TPM, Camera &amp; DISCHG</b>	RELEASE DATE :	<b>Albert Su</b>

<< Kennedy\_Zhang >>

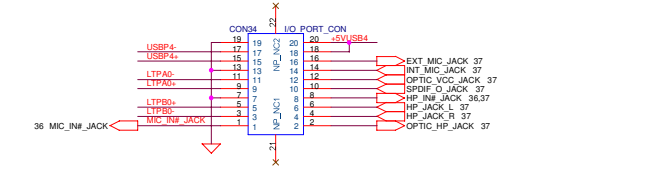
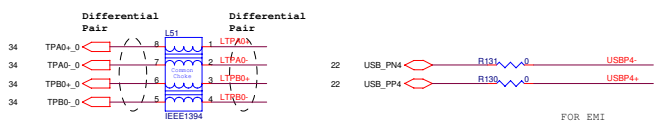


ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>DVI CONN &amp; HOLE</b>	SCHMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>39</b>	OF: <b>55</b>		RELEASE DATE: _____	

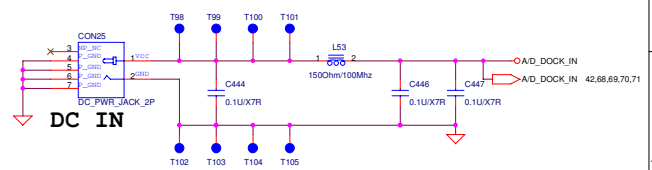
<< Kennedy\_Zhang >>



FAN CONTROL



I/O PORT



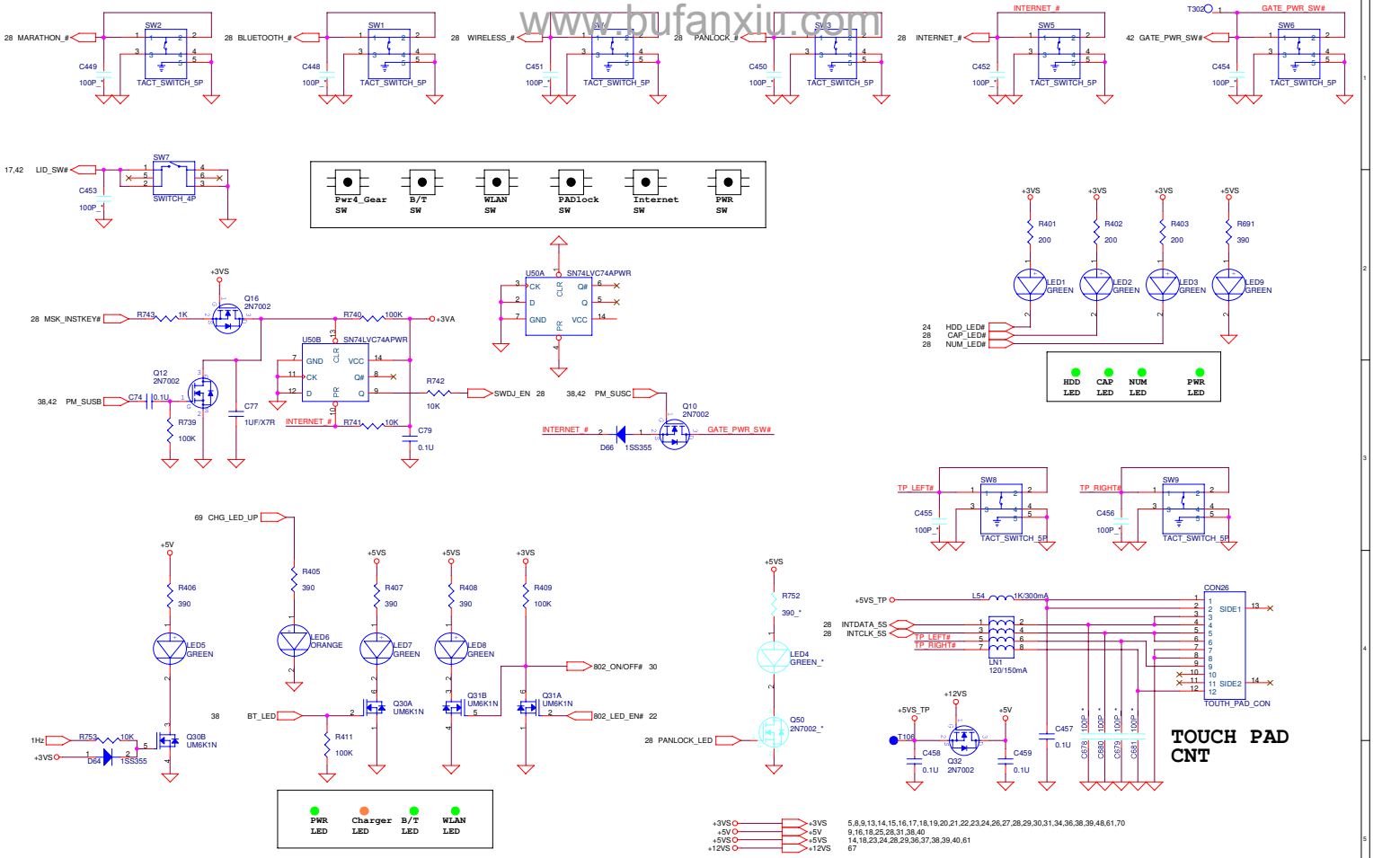
ACIN\_CONN

+5V 9,16,18,25,28,31,38,41  
 +5VS 14,16,23,24,28,29,36,37,38,39,41,61

ASUS	PROJECT: A8T	REVISION	DATE: Friday, July 21, 2006	DESCRIPTION: FAN_CTRL & ACIN	SCHEMATIC FILE NAME:	DESIGN ENGINEER: Albert Su
		2.1	SHEET 40 OF 55		RELEASE DATE:	

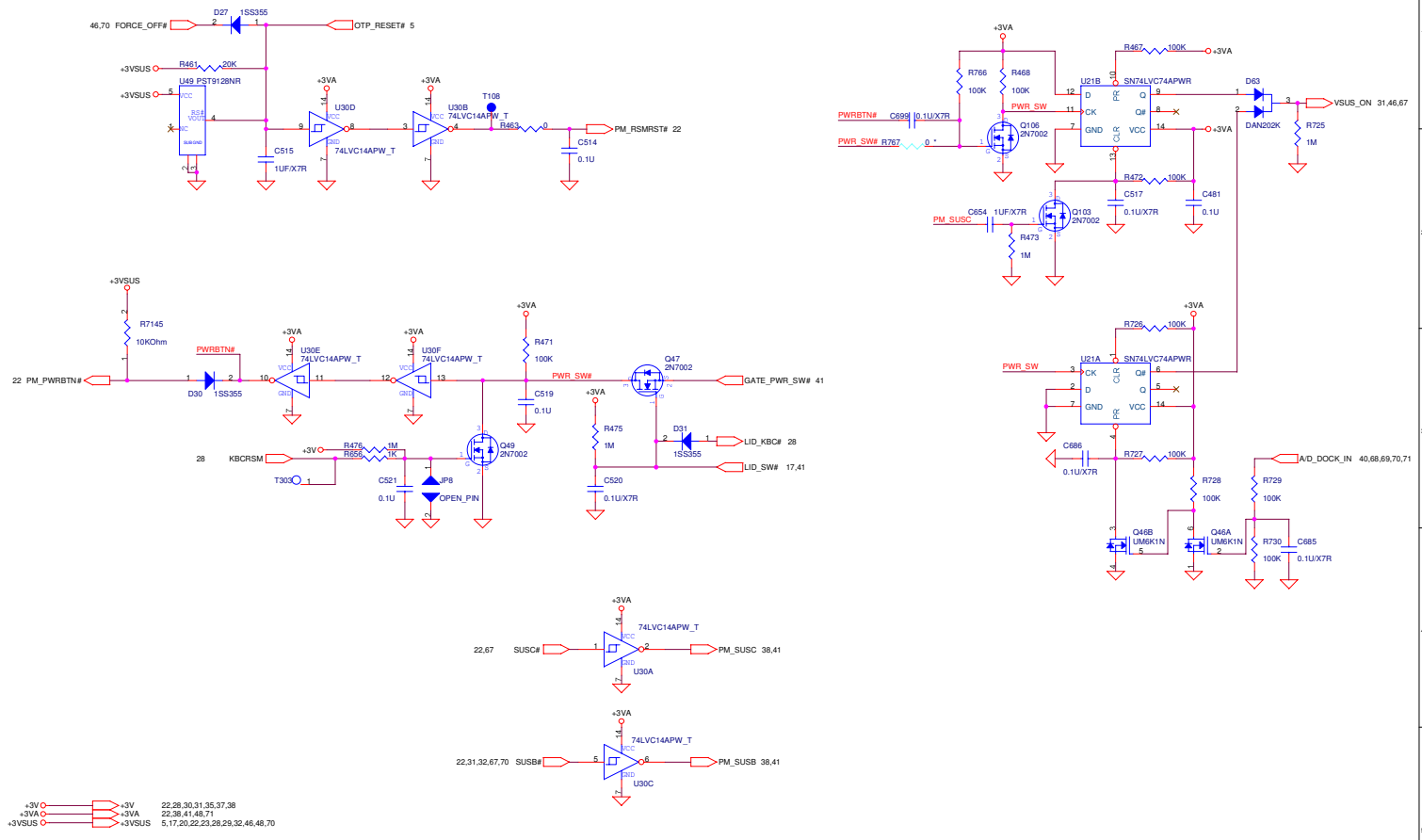
<< Kennedy\_Zhang >>





ASUS	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>SW &amp; LED &amp; TP</b>	SCHEMATIC FILE NAME:	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>41</b>	OF: <b>55</b>	RELEASE DATE:		

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- +3V → 22.28, 30.31, 35, 37, 38
- +3VA → 22.38, 41, 45, 71
- +3VSUS → 5, 17, 20, 22, 23, 28, 29, 32, 46, 48, 70

ASUS PROJECT: <b>A8T</b>		REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>POWER-ON SEQUENCE</b>	SCHEMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
		SHEET: <b>42</b>	OF: <b>55</b>		RELEASE DATE: _____	


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Revision History

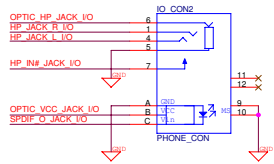
Power:

System:

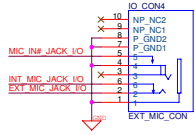
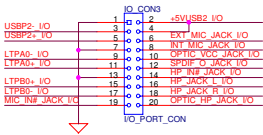
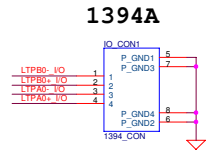
Core Design

 PROJECT: <b>A8T</b>	REVISION	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>HISTORY</b>	SCHEMATIC FILE NAME :	DESIGN ENGINEER : <b>Albert Su</b>
	<b>2.1</b>	SHEET <b>43</b> OF <b>55</b>		RELEASE DATE :	

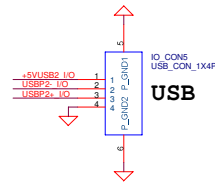
<< Kennedy\_Zhang >>



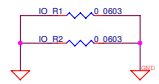
**LINE\_OUT  
SPDIF**



**MIC**



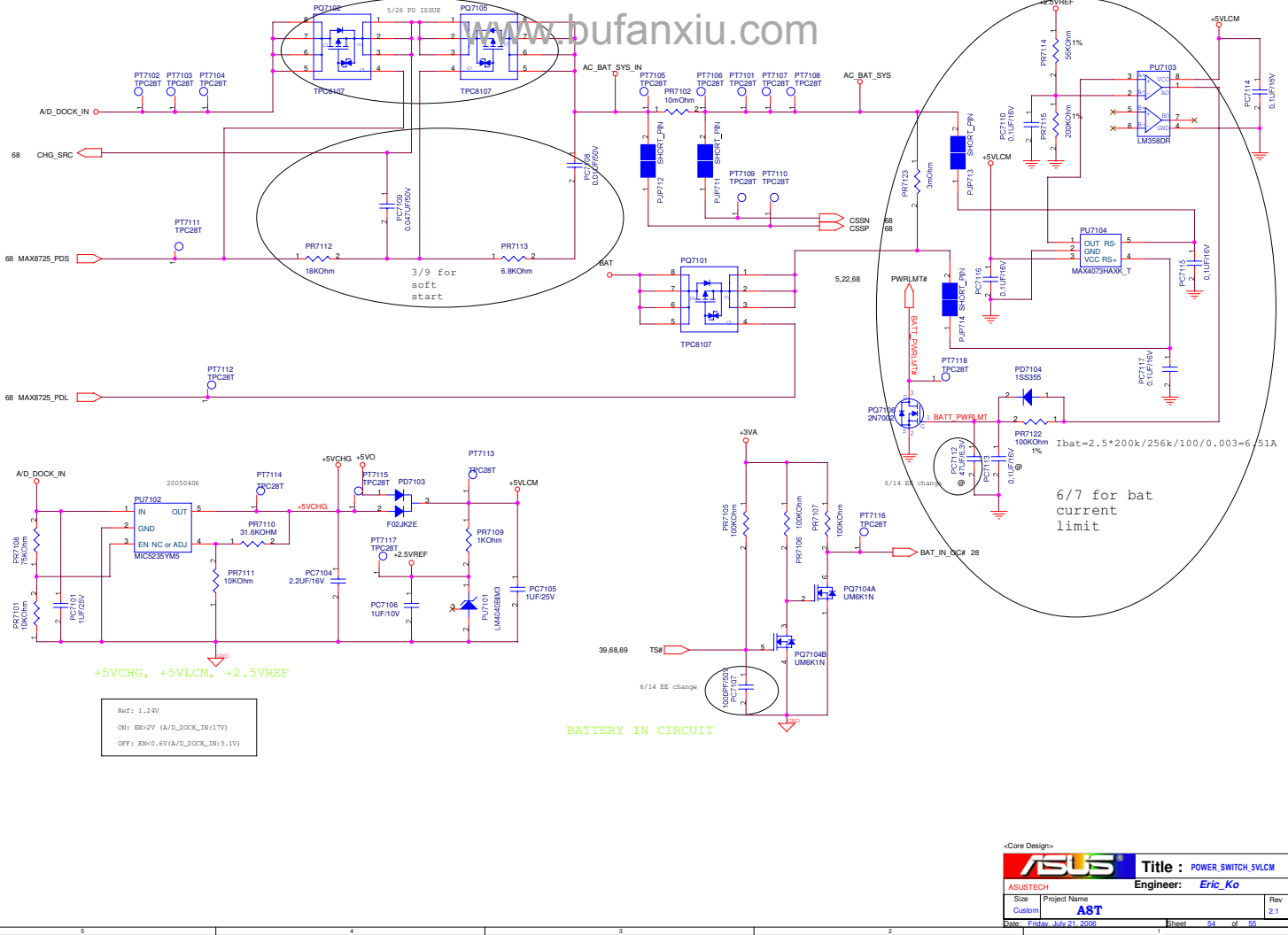
**USB**



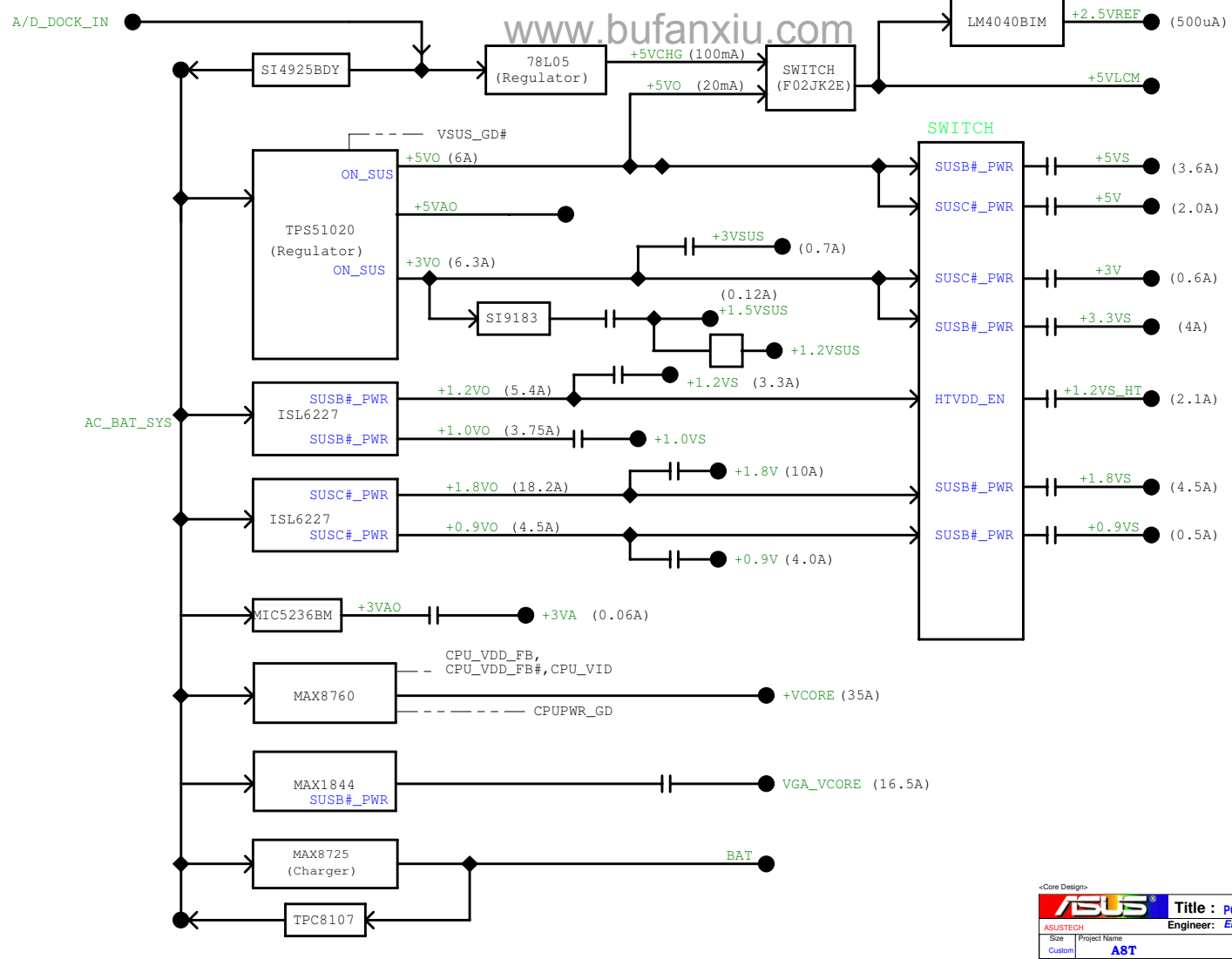
Core Designs

	PROJECT: <b>A8T</b>	REVISION: <b>2.1</b>	DATE: <b>Friday, July 21, 2006</b>	DESCRIPTION: <b>I/O PORT</b>	SCHEMATIC FILE NAME: _____	DESIGN ENGINEER: <b>Albert Su</b>
			SHEET: <b>44</b> OF <b>55</b>		RELEASE DATE: _____	

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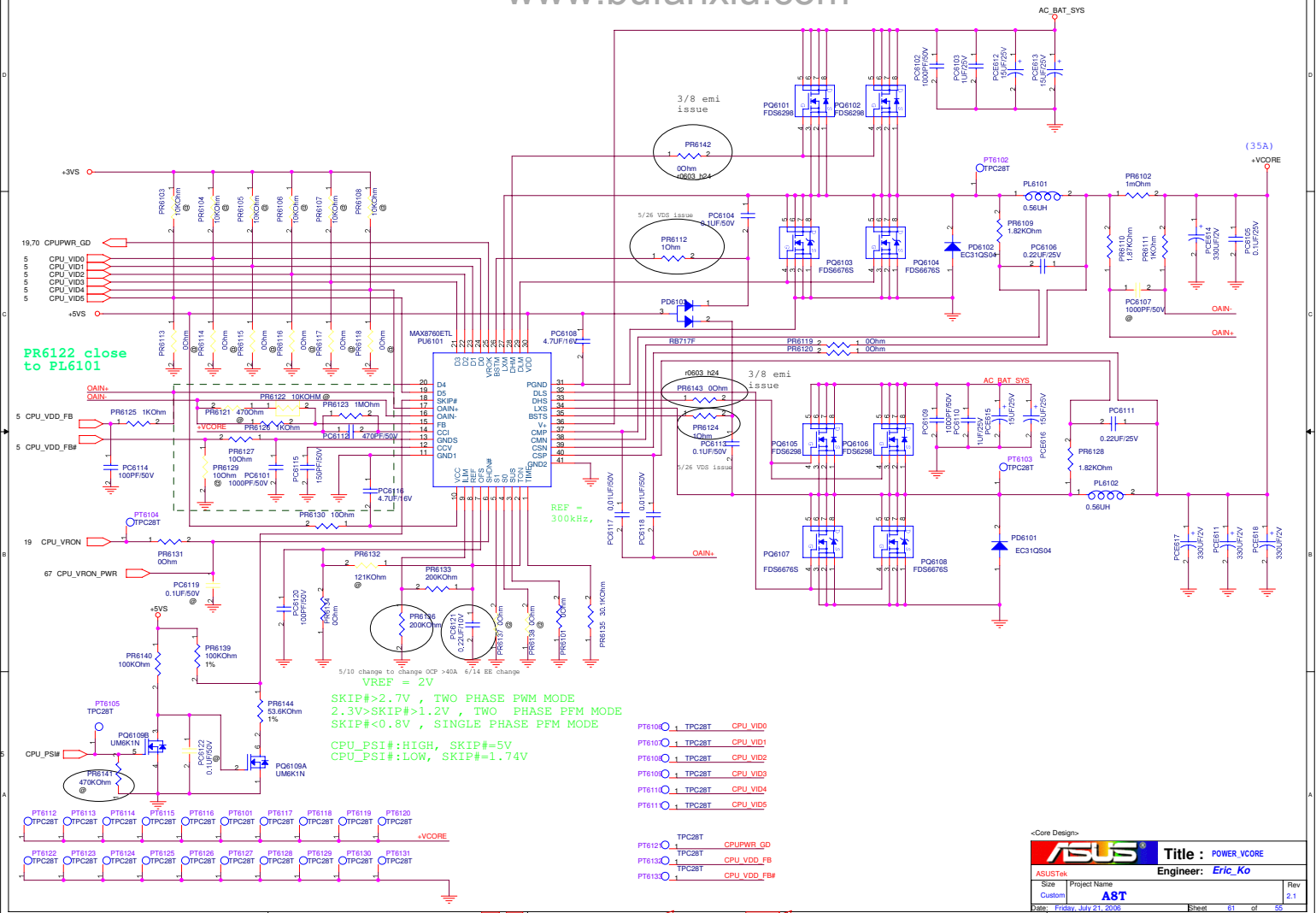
<< Kennedy\_Zhang >>



<Core Design>

<b>ASUS</b>		<b>Title : POWER DIAGRAM</b>	
ASUSTECH	Project Name	Engineer: Eric_Ko	Rev
Size	Custom	ABT	2.1
Date: Friday, July 23, 2006	Sheet	66	of 66

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PR6122 close to PL6101

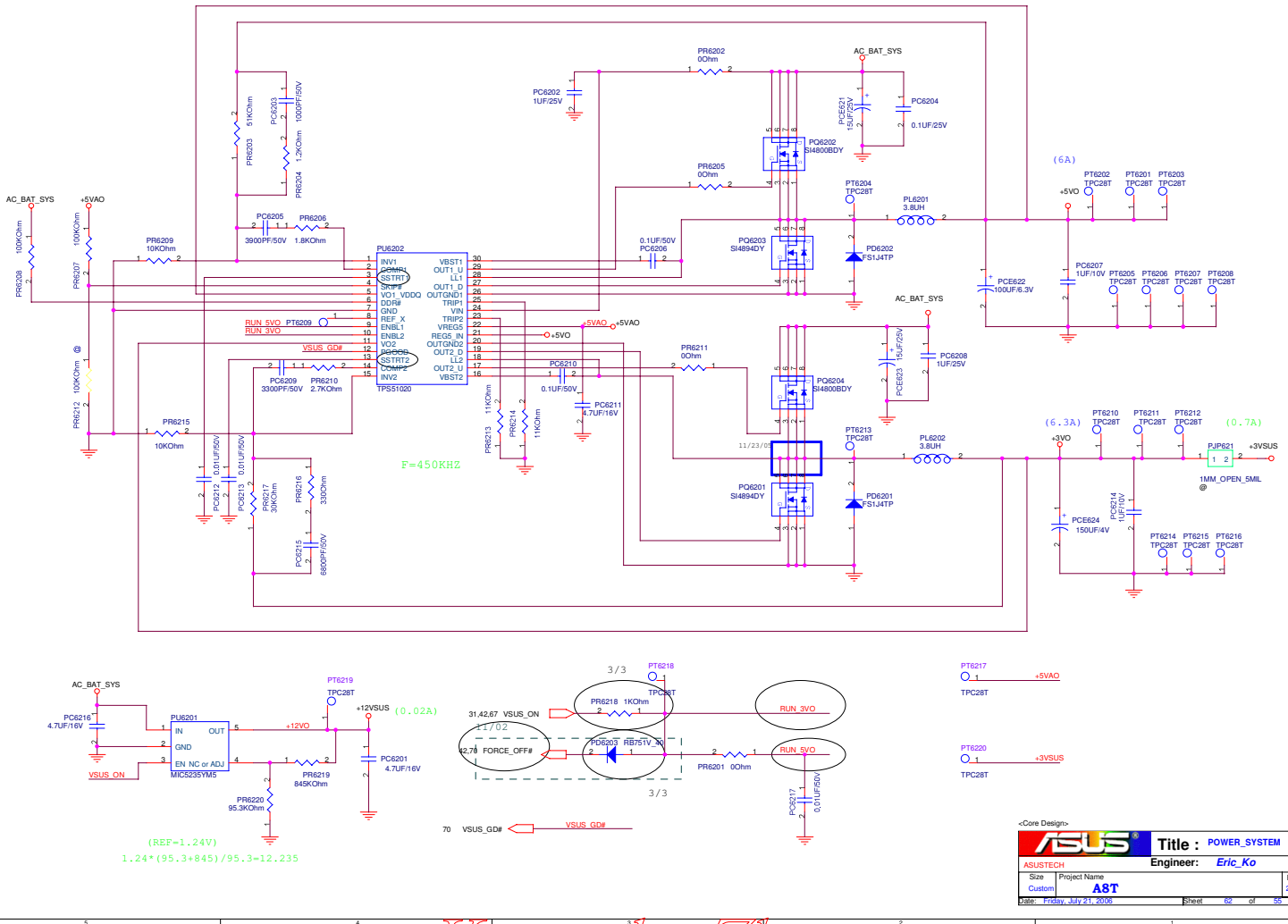
SKIP#>2.7V, TWO PHASE PWM MODE  
2.3V>SKIP#>1.2V, TWO PHASE PWM MODE  
SKIP#<0.8V, SINGLE PHASE PWM MODE  
CPU\_PSI#:HIGH, SKIP#=5V  
CPU\_PSI#:LOW, SKIP#=1.74V

- PT6100 1 TPC28T CPU\_VID0
- PT6100 1 TPC28T CPU\_VID1
- PT6100 1 TPC28T CPU\_VID2
- PT6100 1 TPC28T CPU\_VID3
- PT6110 1 TPC28T CPU\_VID4
- PT6111 1 TPC28T CPU\_VID5
- PT612 1 TPC28T CPU\_PWR\_GD
- PT613 1 TPC28T CPU\_VDD\_FB
- PT613 1 TPC28T CPU\_VDD\_FB#

<Core Design>

		<b>Title :</b> POWER_VCORE
ASUSTek	Project Name	Engineer: Eric_Ko
Size	Custom	ABT
Date: Friday, July 21, 2006	Sheet: 61	of 66

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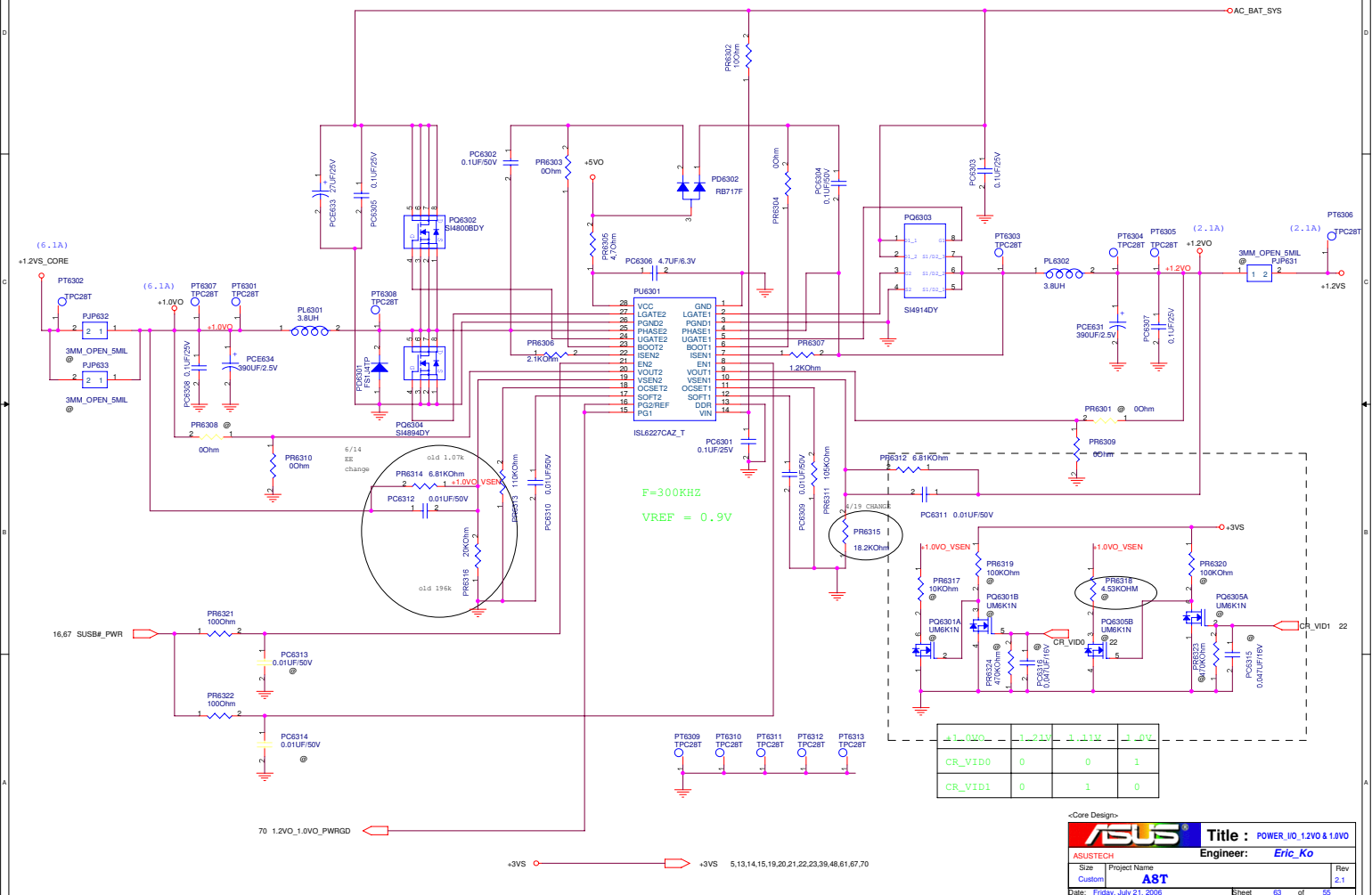


<Core Design>

<b>ASUS</b>		<b>Title : POWER_SYSTEM</b>	
ASUSTECH		Engineer: <b>Eric_Ko</b>	
Size	Project Name		Rev
Custom	<b>ABT</b>		2.1
Date: Friday, July 21, 2006		Sheet	62 of 65

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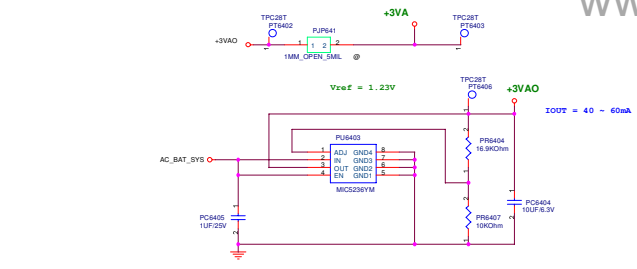




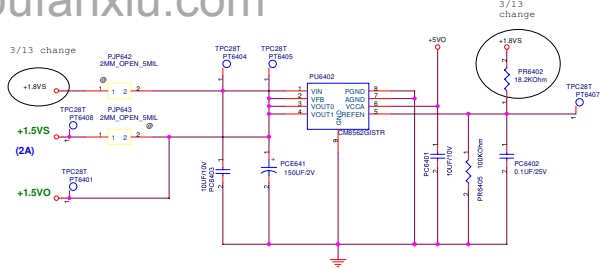
<Core Design>

**ASUS** Title: POWER\_IO\_1.2V0 & 1.0V0  
 ASUSTECH Engineer: Eric\_Ko  
 Size: Custom Project Name: AST Rev: 2.1  
 Date: Friday, July 21, 2006 Sheet: 63 of 69

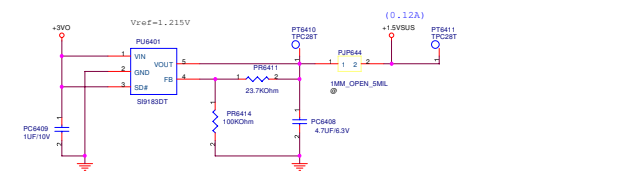
<< Kennedy\_Zhang >>



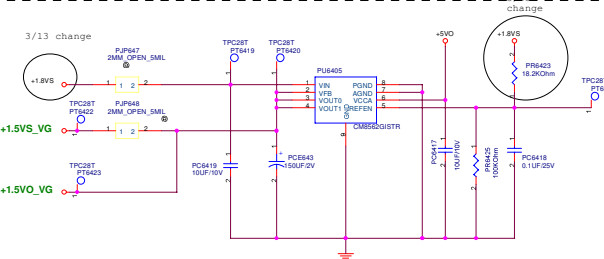
+3VA



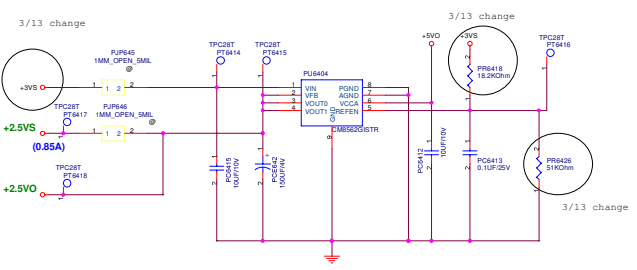
+1.5VS



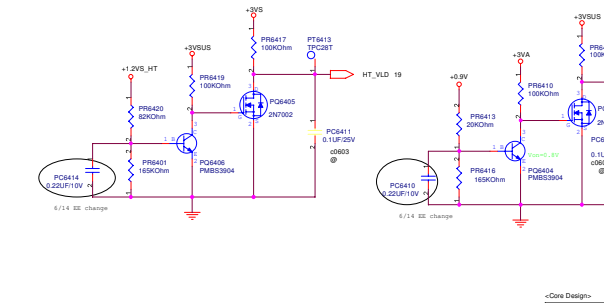
+1.5VSUS



+1.5VS\_VG



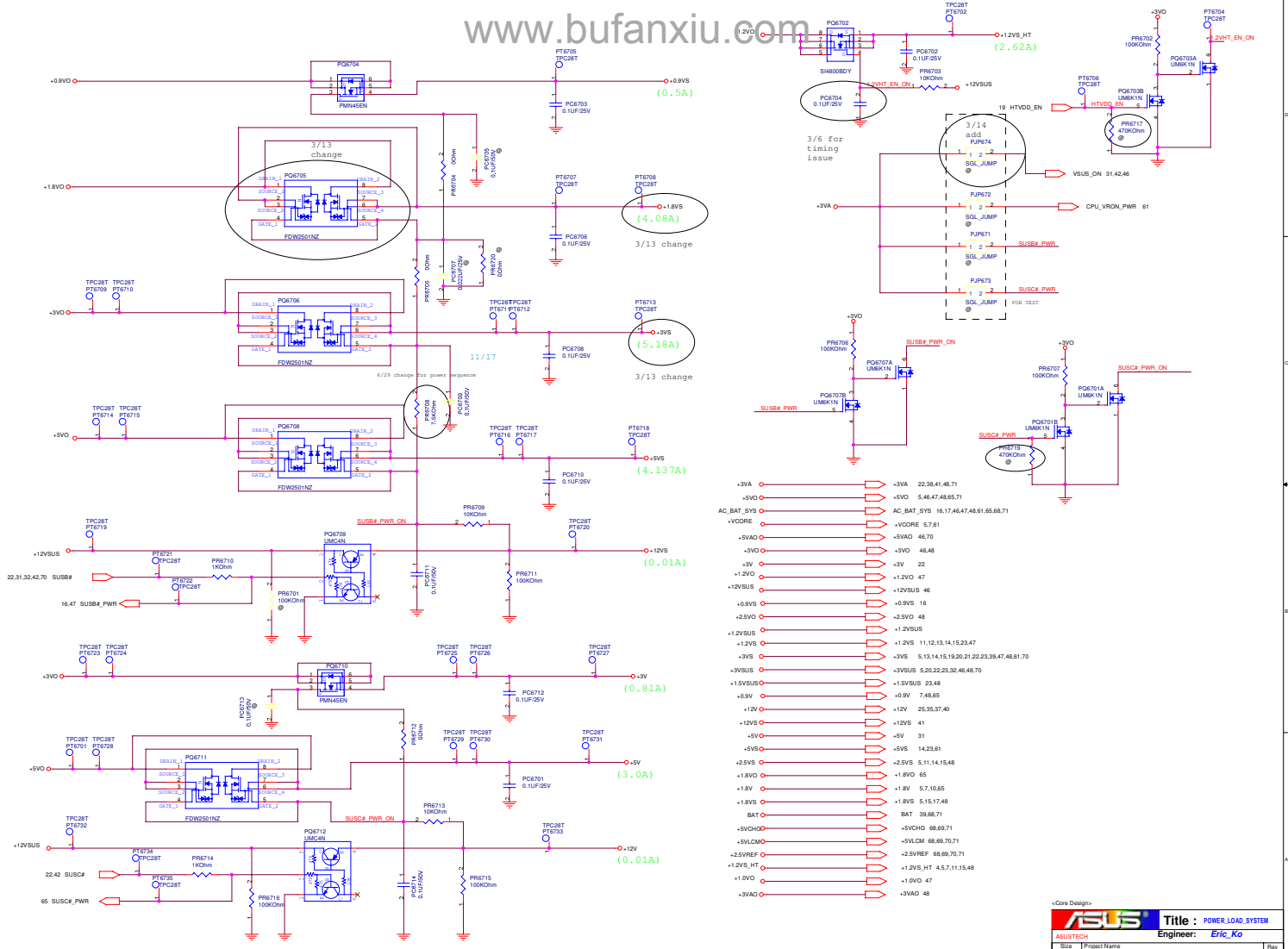
+2.5VS



ASUS		Title : POWER_IO_LDO	
ASUSTECH	Project Name	Engineer: Eric_Ko	
Rev	Rev	Rev	Rev
1.0	1.0	1.0	1.0
Date: 2009-09-21-2009	Sheet: 64	of	65

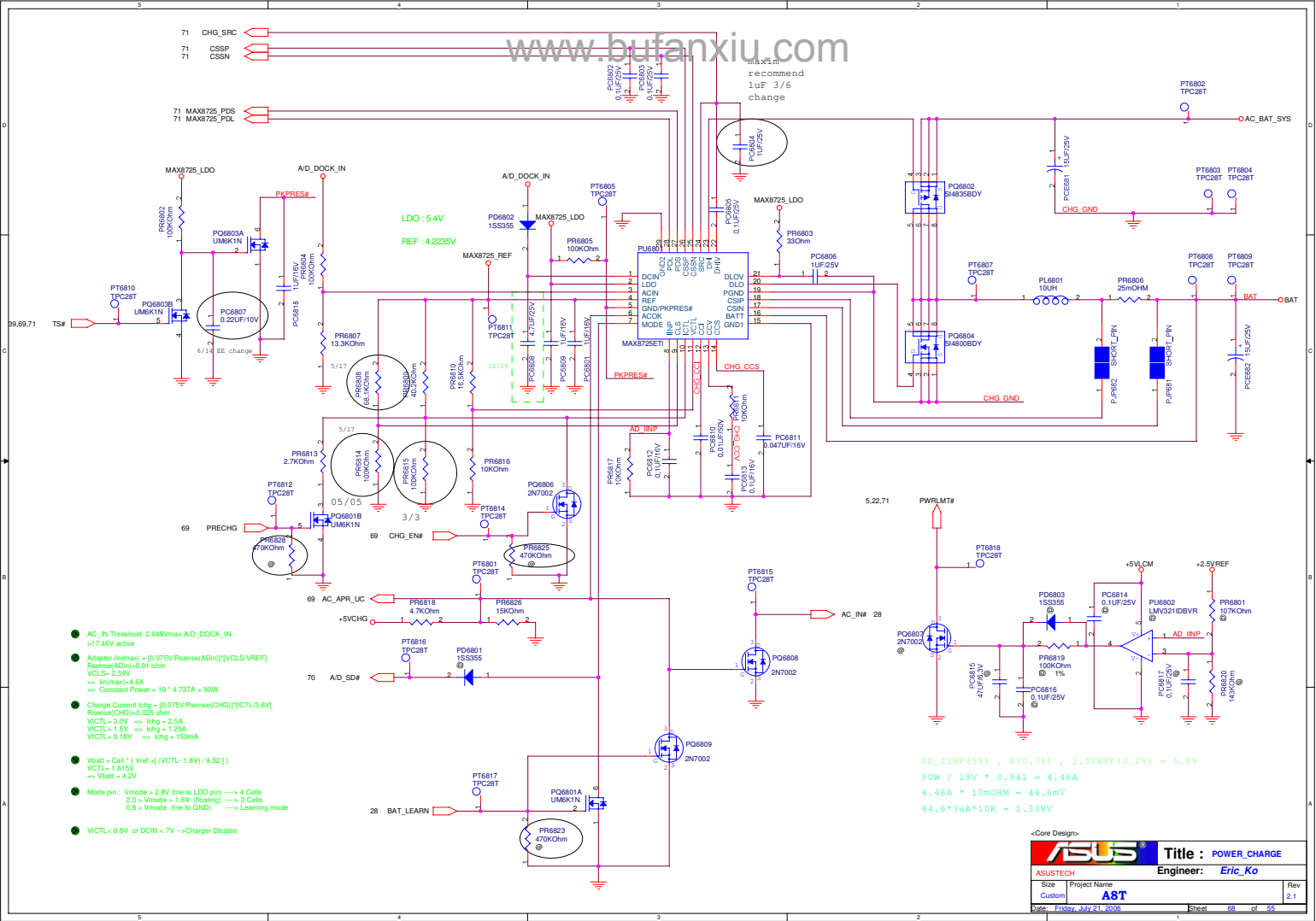
<< Kennedy\_Zhang >>





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ASUS Title : POWER\_LOAD\_SYSTEM  
 Engineer: Eric\_Ko  
 Project Name:  
 Rev: 2.1  
 Date: Friday, July 21, 2006  
 EScan: 87 of 88



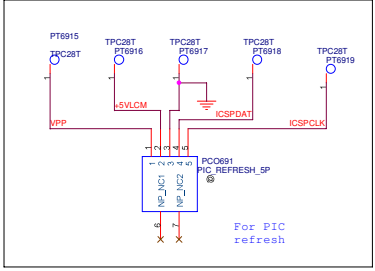
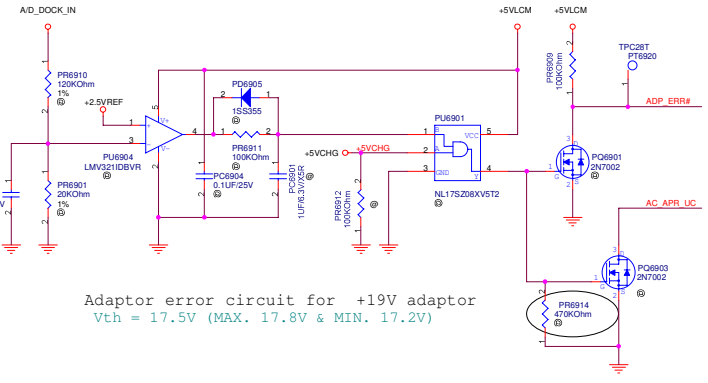
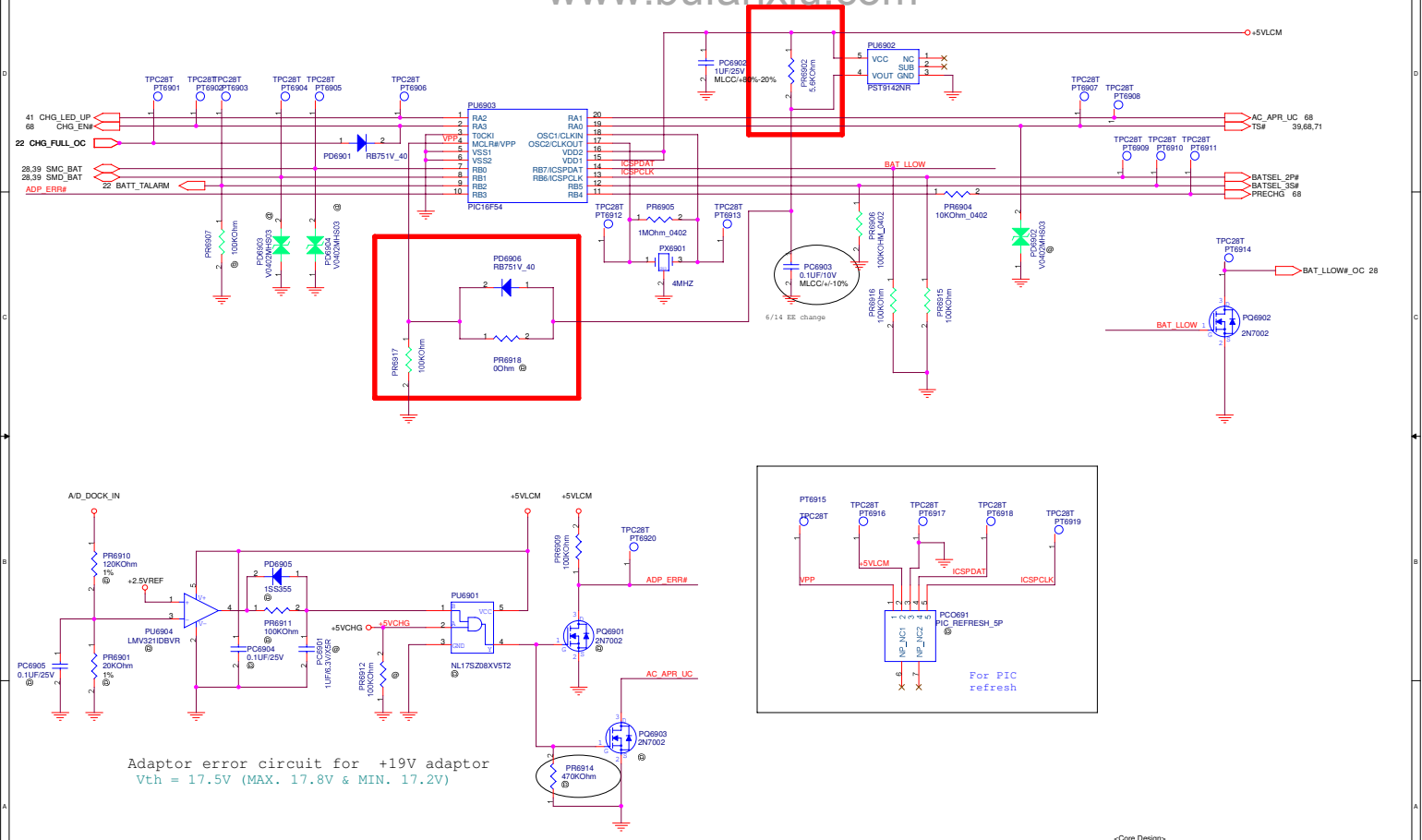
- AC\_IN\_Threshold 2.048Vmax A/D\_DOCK\_IN >1746V active
- Adapter Ilimax = 10.075V/Rsense(ADin)/[VCLS/VREF] Rsense(ADin)=0.01 ohm VCLS= 2.55V => Ilimax=4.6A => Constant Power = 19 \* 4.737A = 90W
- Charge Current Ichg = [0.075V/Rsense(CHG)]/[VCTL0.6V] Rsense(CHG)=0.025 ohm VICTL= 3.0V => Ichg = 2.5A VICTL= 1.5V => Ichg = 1.25A VICTL= 0.18V => Ichg = 150mA
- Vbatt = Cell \* [Vref + (VCTL-1.8V)/9.52] VCTL= 1.815V => Vbatt = 4.2V
- 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

AD\_IINP (5%), R(0.7%), 2.5VERF(0.2%) = 5.9%  
 90W / 19V \* 0.941 = 4.46A  
 4.46A \* 10mOHM = 44.6mV  
 44.6\*3uA\*10K = 1.338V

<Core Design>

<b>ASUS</b>		<b>Title : POWER_CHARGE</b>	
Size	Project Name	Engineer:	Eric_Ko
Custom	ABT		
Date:	Friday, July 23, 2006	Sheet	68 of 55
			Rev 2.1

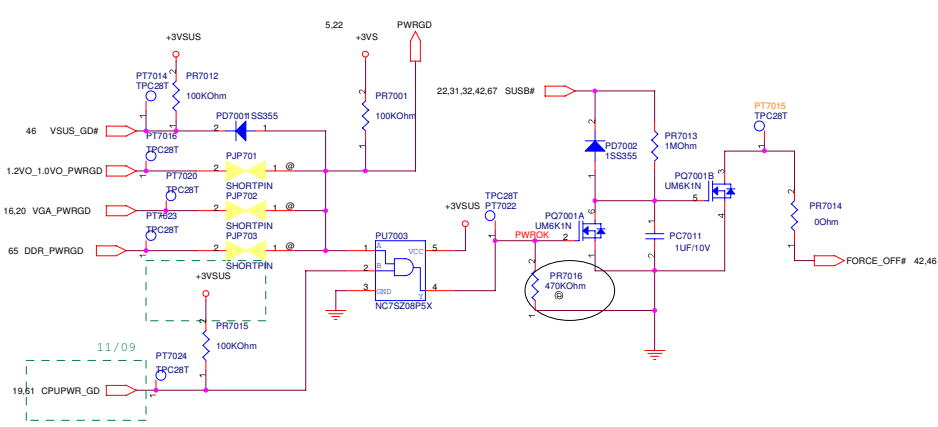
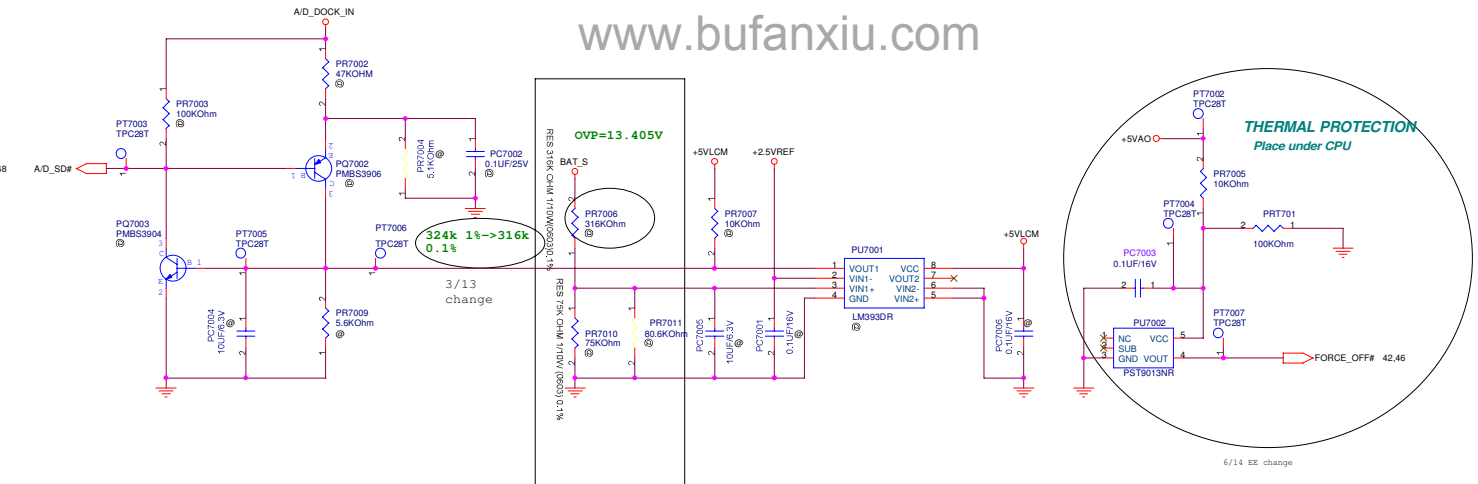
<< Kennedy\_Zhang >>



<Core Design>

<b>ASUS</b>		<b>Title : POWER PIC</b>
<OrigName>		<b>Engineer: Eric_Ko</b>
Size	Project Name	Rev
Custom	<b>ABT</b>	2.1
Date: Friday, July 21, 2006		Sheet 69 of 95

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~Core Design~

<b>ASUS</b>		<b>Title : POWER_PROTECT</b>
ASUSTECH	Project Name	Engineer: Eric_Ko
Size	Project Name	Rev 2.1
Custom	<b>A8T</b>	
Date: Friday, July 21, 2006	Sheet 70	of 55

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