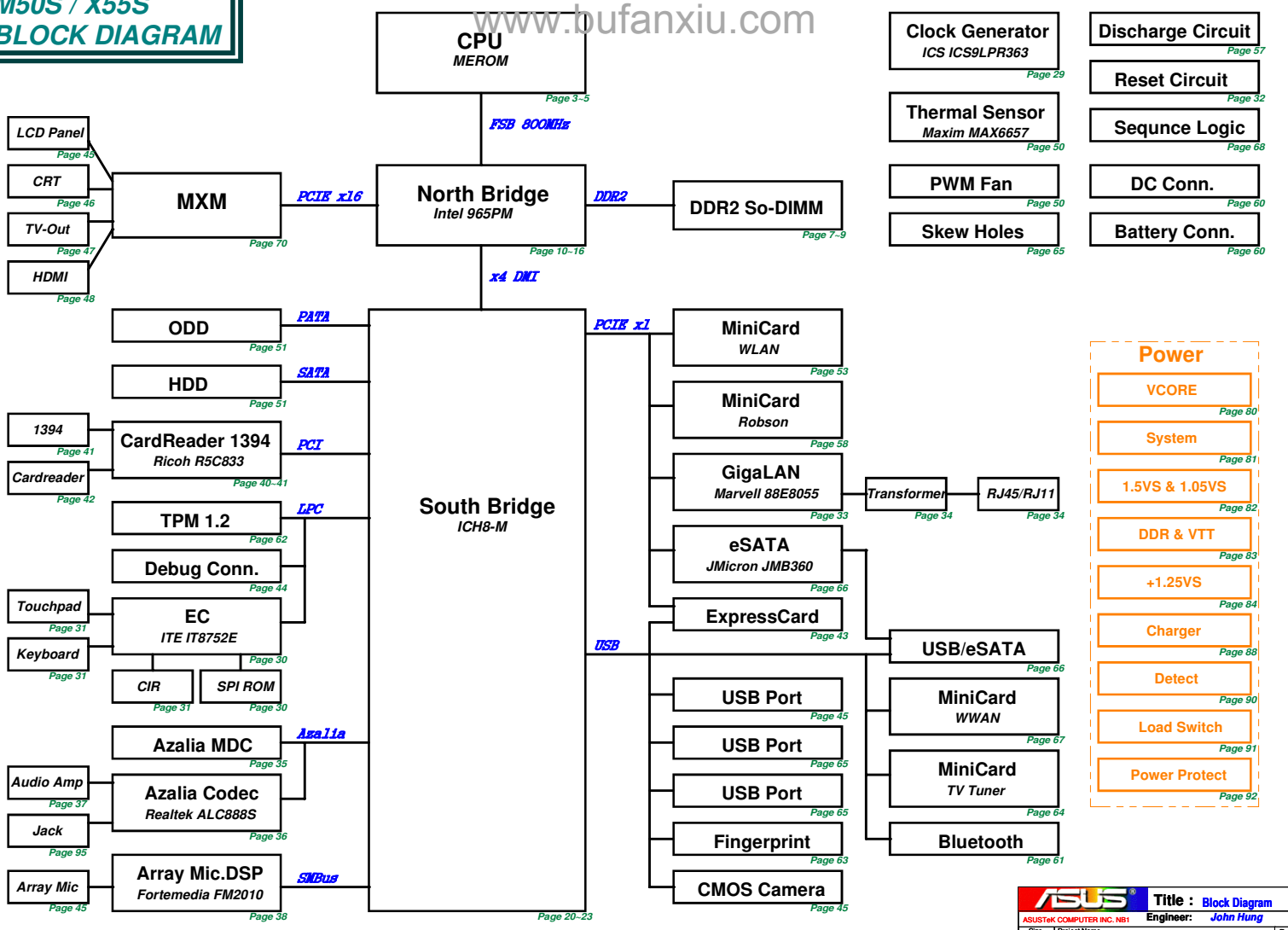


**M50S / X55S
BLOCK DIAGRAM**



« Kennedy_Zhang »

ICH8-M GPIO SETTING

EC IT8752E GPIO SETTING

965GM/PM co-layout option:

Pin	Pin Name	Signal Name	Type	Pin	Pin Name	Signal Name	Type	Pin	Pin Name	Signal Name	Type
AG12	BM_BUS/#GPIO0	PM_BMBUSY#	I	28	PWM0/GPA0	PWR_LED_UP#	O	105	CLKRUN#/GPH0	PM_CLKRUN#	I/O
AJ8	TACH1/GPIO1	BT_DECT#	I	29	PWM1/GPA1	CHG_LED_UP#	O	106	CRX1/GPH1	3G_ON#	O
F8	PIRQE#/GPIO2	PCI_INTE#	I/OD	32	PWM2/GPA2			107	CTX1/GPH2	3G_LED_ON#	O
G11	PIRQF#/GPIO3	PCI_INTF#	I/OD	33	PWM3/GPA3			108	GPH3	BAT_LEARN	I/O
F12	PIRQG#/GPIO4	PCI_INTG#	I/OD	34	PWM4/GPA4	LCD_BL_PWM	O	109	GPH4		
B3	PIRQH#/GPIO5	PCI_INTH#	I/OD	35	PWM5/GPA5	FAN_PWM	O	110	GPH5	NUM_LED	O
AJ9	TACH2/GPIO6			36	PWM6/GPA6			111	GPH6	CAP_LED	O
AH9	TACH3/GPIO7	WLAN_LED_ON	O	38	PWM7/GPA7			74	ADC0/GPI0	NV_OVERT#	I
AE16	GPIO8	EXT_SMI#	I	122	RXD/GPB0	CHG_EN#	O	75	ADC1/GPI1	SUS_PWRGD	I
AG19	WOL_EN/GPIO9			123	TXD/GPB1	PRECHG	O	76	ADC2/GPI2	ALL_SYS_PWRGD	I
AJ24	CLG_GPIO1/GPIO10			139	CTX0/GPB2			77	ADC3/GPI3	CPU_PWRGD	I
AG22	SMBALERT#/GPIO11	SMB_ALERT#	I	124	SMCLK0/GPB3	SMB0_CLK	I/O	78	ADC4/GPI4	PWR_MON	I
AC19	GPIO12	EXT_SCI#	I	125	SMDAT0/GPB4	SMB0_DAT	I/O	79	ADC5/GPI5	ALS_DA	I
AH21	GLAN_DOCK#/GPIO13			142	GA20/GPB5	A20GATE	O	80	ADC6/GPI6		
AF22	CLG_GPIO2/GPIO14			4	KBRST#/GPB6	RC_IN#	O	81	ADC7/GPI7		
AE20	STP_PC/#GPIO15	STP_PC#	I/O	126	GPB7	PM_RSMRST#	O	84	DAC0/GPJ0	EC_CLK_EN	
AJ14	DPRLSLPVR/GPIO16	PM_DPRLSLPVR	O	133	CRX0/GPC0	CRX0	I	85	DAC1/GPJ1	PM_PWROK	
AG8	TACH0/GPIO17	WLAN_ON#	O	129	SMCLK1/GPC1	SMB1_CLK	I/O	86	DAC1/GPJ2		
AH12	GPIO18			130	SMDAT1/GPC2	SMB1_DAT	I/O	87	DAC1/GPJ3		
AJ10	GPIO19/SATA1GP			64	GPC3	PM_PWRBTN#	O	88	DAC1/GPJ4		
AE11	GPIO20	BT_LED_ON	O	136	WUI2/GPC4	AC_IN_OC#	I	89	DAC1/GPJ5		
AJ12	SATA0/GPIO21			65	GPC5	OP_SD#	O	15	GPK0		
AG10	SCLK/GPIO22			140	WUI3/GPC6	BAT1_IN_OC#	I	16	GPK1		
E6	LDRQ1#/GPIO23			20	GPC7	RFON_SW#	I	17	GPK2		
AJ27	CLG_GPIO0/GPIO24			22	WUI0/GPD0	PWRLIMIT#	I	18	GPK3		
AG18	STP_CPU#/GPIO25	STP_CPU#	O	25	WUI1/GPD1	PM_SUSC#	I	48	GPK4		
AH27	S4_STATE#/GPIO26			26	WUI4/GPD2	BUF_PLT_RST#	I	49	GPK5		
AH25	QRT_STATE0/GPIO27	BT_ON#	O	27	ECSCI#/GPD3	EXT_SCI#	O	62	GPK6		
AD16	QRT_STATE1/GPIO28	CB_SD#	O	19	GPD4	EXT_SMI#	O	63	GPK7		
AG17	OC#5/GPIO29	INT_USB_OC#	I	37	GPD5	LCD_BACKOFF#	O	90	GPL0		
AD12	OC#6/GPIO30	INT_USB_OC#	I	53	TACH0 / GPD6	FANO_TACH	I	91	GPL1		
AJ18	OC#7/GPIO31	INT_USB_OC#	I	54	GPD7			92	GPL2		
AH11	CLKRUN#/GPIO32	PM_CLKRUN#	O	23	GPE0	VSUS_ON	O	93	GPL3		
AE10	AZ_DOCK_EN#/GPIO33			94	GPE1	SUSC_EC#	O	119	GPL4		
AG14	AZ_DOCK_RST#/GPIO34			95	GPE2	SUSB_EC#	O	120	GPL5		
AG13	SATACLKREQ#/GPIO35			96	GPE3	CPU_VRON	O	134	GPL6		
AF11	SATA2GP/GPIO36	EMAIL_LED#	O	141	PWRSW/GPE4	PWR_SW#	I	135	GPL7		
AG11	SATA3GP/GPIO37	PCB_ID0	I	39	WUI5/GPE5	BAT2_IN_OC#	I				
AF9	SLOAD/GPIO38	PCB_ID1	I	21	GPE6	LID_SW#	I				
AJ11	SDATAOUT0/GPIO39	PCB_ID2	I	24	GPE7	INSTANT_ON#	I				
AG16	OC#1/GPIO40	USB_CON01_OC#	I	97	PS2CLK0/GPF0						
AG15	OC#2/GPIO41	USB_CON23_OC#	I	98	PS2DAT0/GPF1	COLOREN#	I				
AE15	OC#3/GPIO42	USB_CON23_OC#	I	99	PS2CLK1/GPF2	MARATHON#	I				
AF15	OC#4/GPIO43	NEWCARD_OC#	I	100	PS2DAT1/GPF3	DISTP#	I				
AD10	SATAOUT1/GPIO48			101	PS2CLK2/GPF4	TP_CLK	I/O				
AG29	CPUPWRGD/GPIO49	H_PWRGD	O	102	PS2DAT2/GPF5	TP_DAT	I/O				
E18	REQ1#/GPIO50	PCI_REQ#1	I/O	131	SMCLK2/GPF6	THRO_CPU	O				
C18	GNT1#/GPIO51			132	SMDAT2/GPF7	TP_LED	O				
B19	REQ2#/GPIO52	PCI_REQ#2	I/O	118	WUI7/GPG0						
F18	GNT2#/GPIO53			121	GPG1	PM_SUSB#	I				
A11	REQ3#/GPIO54			112	GPG2						
C10	GNT3#/GPIO55	PCI_REQ#3	I/O	116	GPG6						

965PM

Change:
U1001 to 965PM, U3601 to ALC888S
R1213-R1219 to 0ohm
C1406, C1501-C1504, C1506-C1507, C1510, C1514 to 0ohm

Mount:
D4801-D4803
F4801
J4801, J7001
H7001-H7004
Q4801
R1112-R1117, R1203-R1212, R1502, R2910, R3618-R3620, R4801-R4804
RX2901-RX2902, RX4801-RX4810
CX1201-CX1232

Un-mount:
R1202, R1401-R1403, R1501, R1503-R1505, R2909, R3621, R7001-R7008
RN7001-RN7011
RNX1201, RNX2901, RNX2915
L1501-L1505
C1404-C1405, C1407-C1409, C1505, C1509, C1511-C1513
CE1404, CE1501-CE1503

965GM

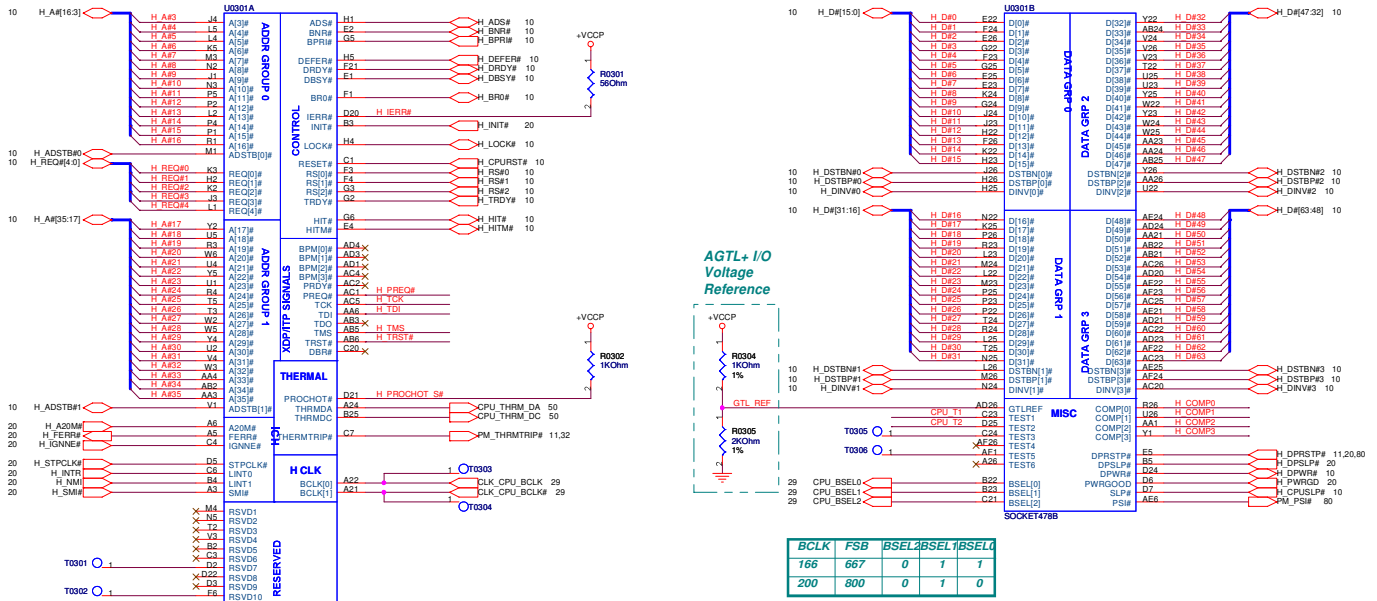
Change:
U1001 to 965GM
R1213-R1218 to 150ohm
R1219 to 1.3Kohm

Un-mount:
D4801-D4803
F4801
J4801, J7001
H7001-H7004
G4801
R1112-R1117, R1203-R1212, R1502, R2910, R3618-R3620, R4801-R4804
RX2901-RX2902, RX4801-RX4810
CX1201-CX1232

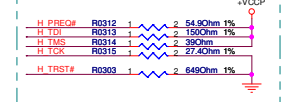
Mount:
R1202, R1401-R1403, R1501, R1503-R1505, R2909, R3621, R7001-R7008
RN7001-RN7011
RNX1201, RNX2901, RNX2915
L1501-L1505
C1404-C1409, C1501-C1507, C1509-C1514
CE1404, CE1501-CE1503

		Title : System Setting	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	2	of 35

« Kennedy_Zhang »

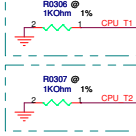


Default Strapping When XDP/ITP Not Used

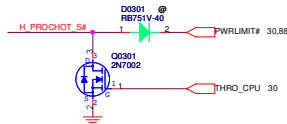
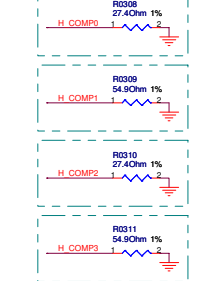


BCLK	FSB	BSEL2	BSEL1	BSEL0
166	667	0	1	1
200	800	0	1	0

CPU Test Pin

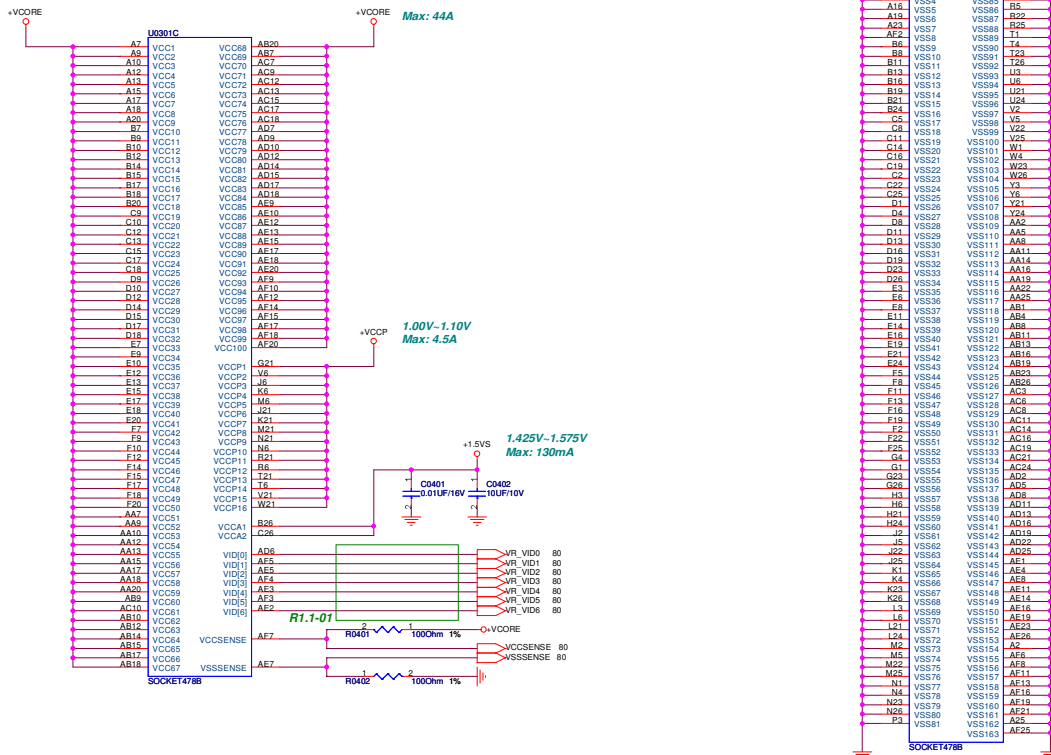


AGTL+ I/O Buffer Compensation



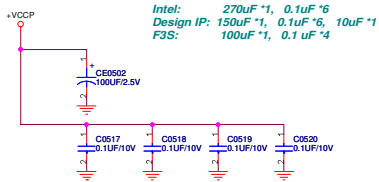
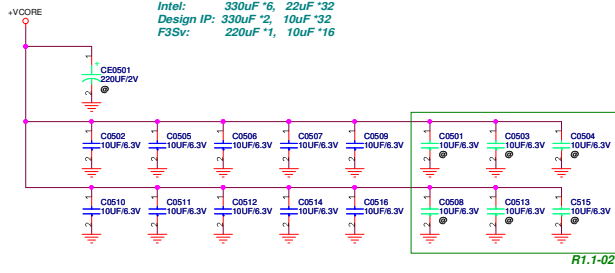
ASUS Title : CPU_Merom(Host)
 ASUSTek COMPUTER INC. NBI Engineer: John Hung
 Size Project Name
 Custom M50S/X55S Rev 2.0
 Date: Monday, September 03, 2007 Sheet 3 of 88

« Kennedy_Zhang »



ASUS Title : CPU_Merom(PWR)
 ASUSTek COMPUTER INC. NBI Engineer: John Hung
 Project Name: M50S/X55S
 Date: Monday, September 03, 2007 Sheet 4 of 55

« Kennedy_Zhang »



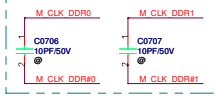
« Kennedy_Zhang »

ASUS		Title : CPU_Capacitors	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007	Sheet	5	of 55

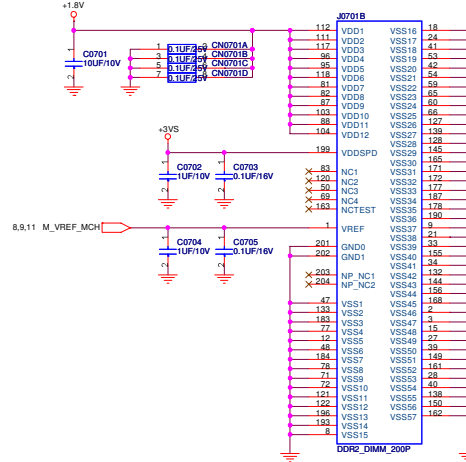
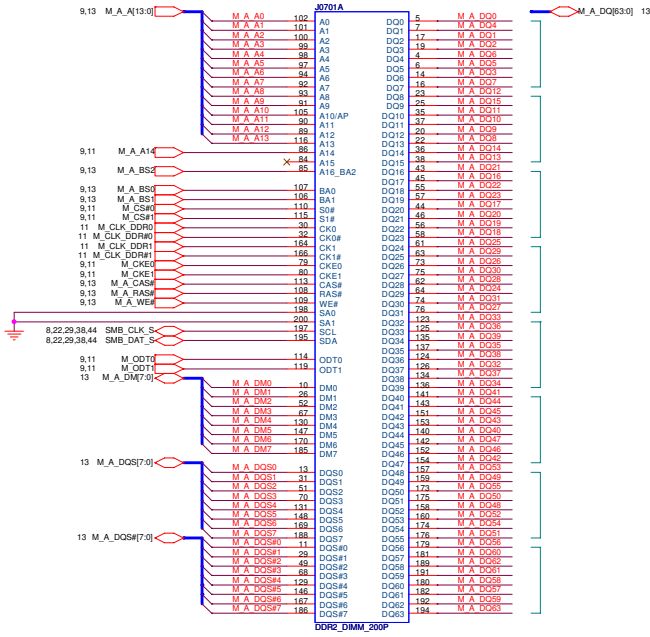
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ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	6 of 88

« Kennedy_Zhang »

Reserved for 3G



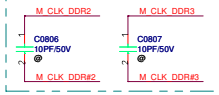
Reverse Type
H = 9.2 mm



ASUS Title : DIM So-DIMM 0
 ASUSTek COMPUTER INC. (NBI) Engineer: John Hung
 Project Name: M50S/X55S
 Date: Monday, September 03, 2007 Sheet 7 of 88

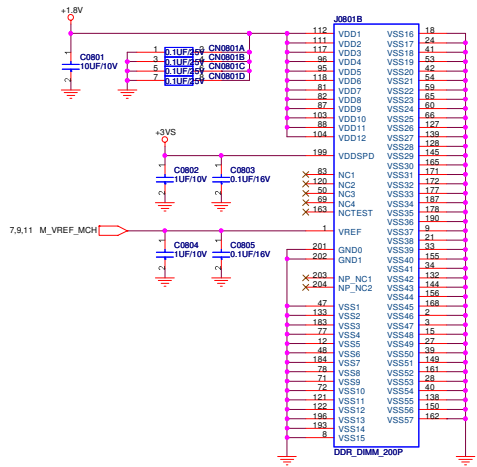
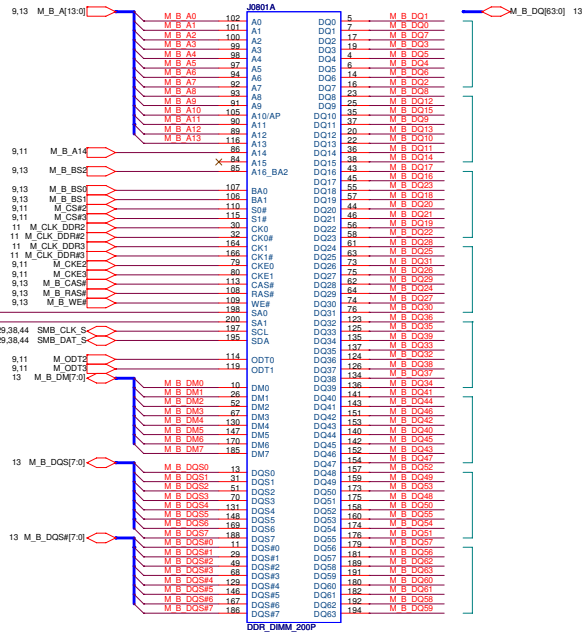
« Kennedy_Zhang »

Reserved for 3G



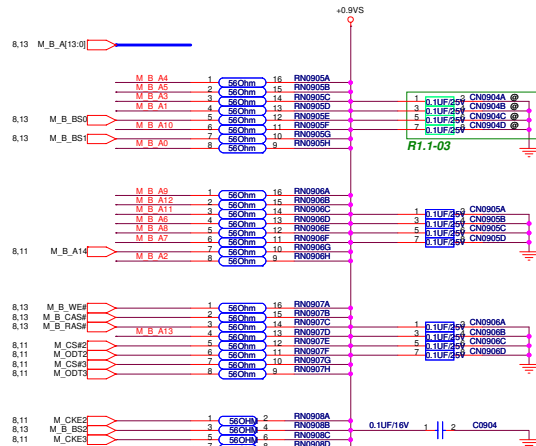
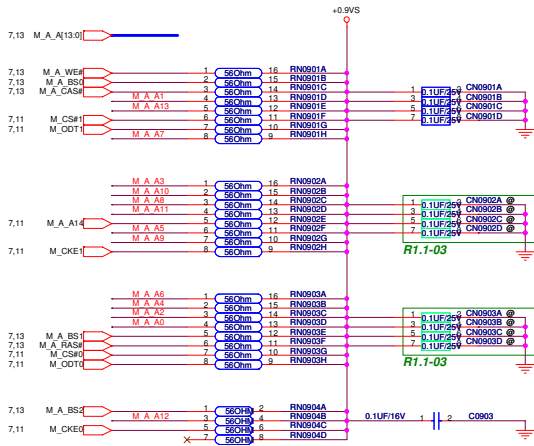
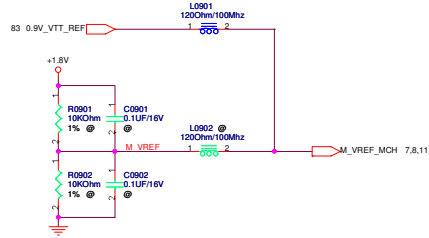
Reverse Type

H = 4.0 mm



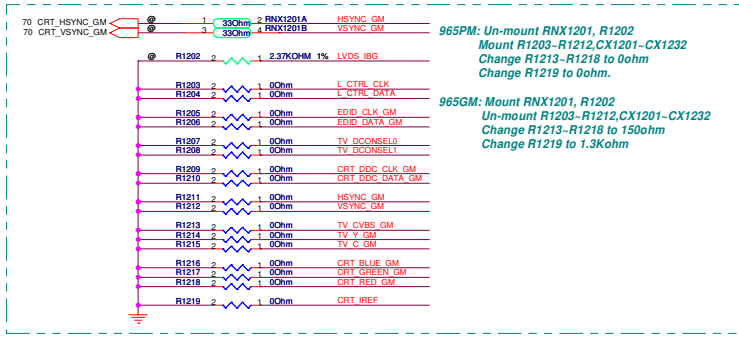
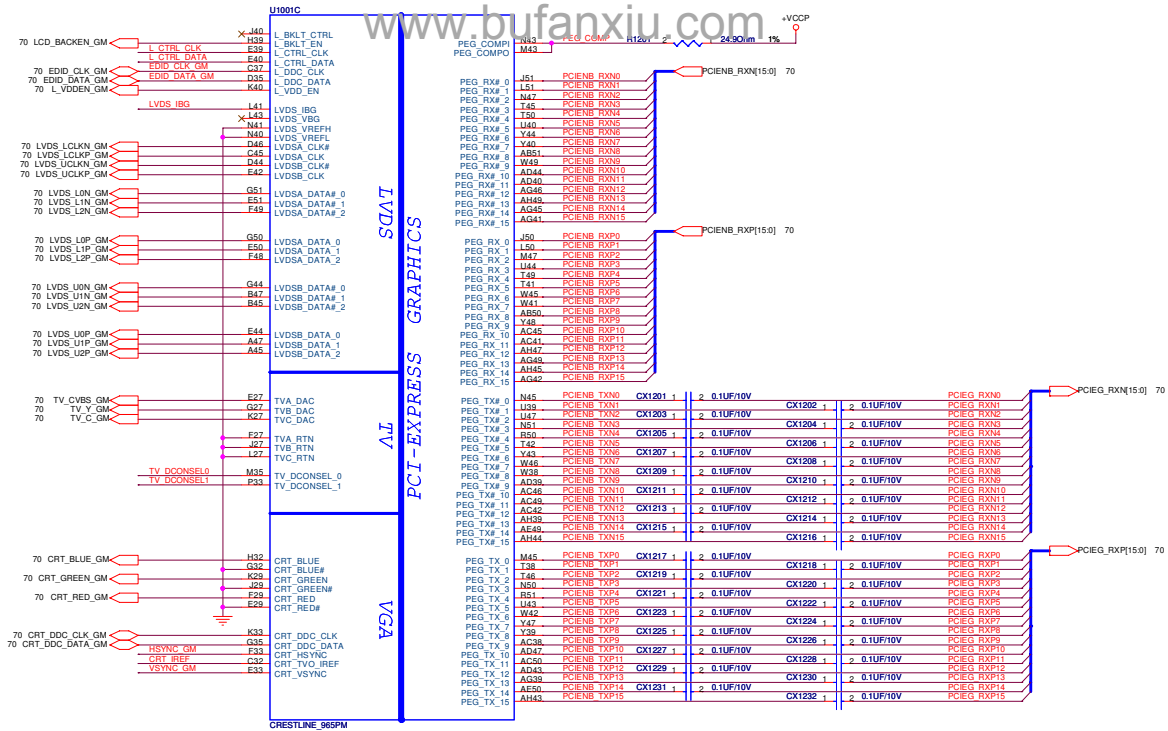
ASUS Title : DIM So-DIMM 1
 ASUSTEK COMPUTER INC. (NBI) Engineer: John Hung
 Project Name: M50S/X55S
 Sub: Custom
 Date: Monday, September 03, 2007 Sheet 8 of 88

« Kennedy_Zhang »



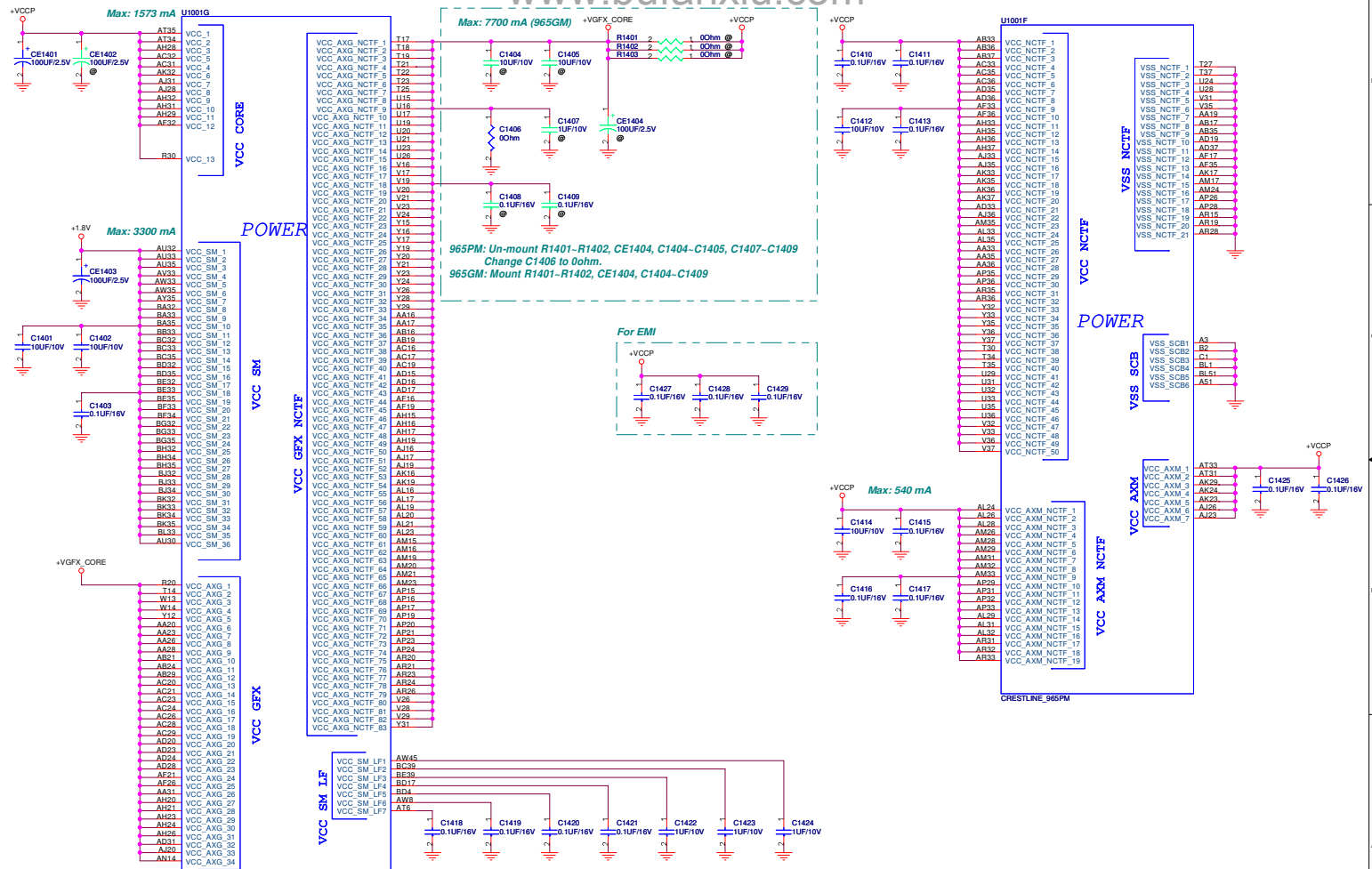
ASUS		Title : DIM_DDR2 Termination	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	9	of 88

« Kennedy_Zhang »



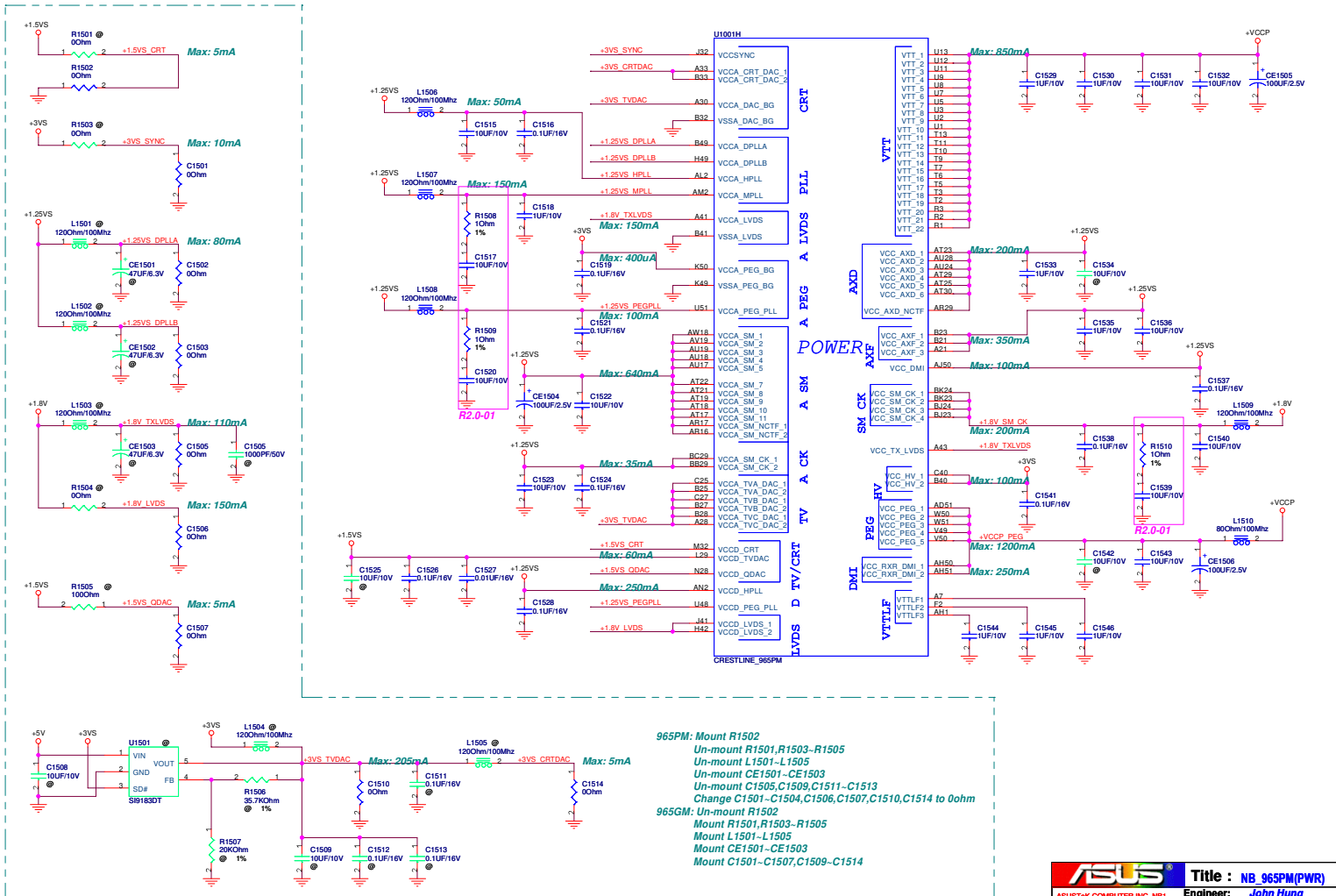
ASUS Title : NB_965PM(GFX)
 ASUSTEK COMPUTER INC. NE1 Engineer: John Hung
 Size Project Name
 Custom M50S/X55S Rev 2.0
 Date: Monday, September 03, 2007 Sheet 12 of 88

« Kennedy_Zhang »



ASUS		Title : NB_965PM(PWR)	
ASUSTek COMPUTER INC. NB1		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Tuesday, September 04, 2007	Sheet	14	of 85

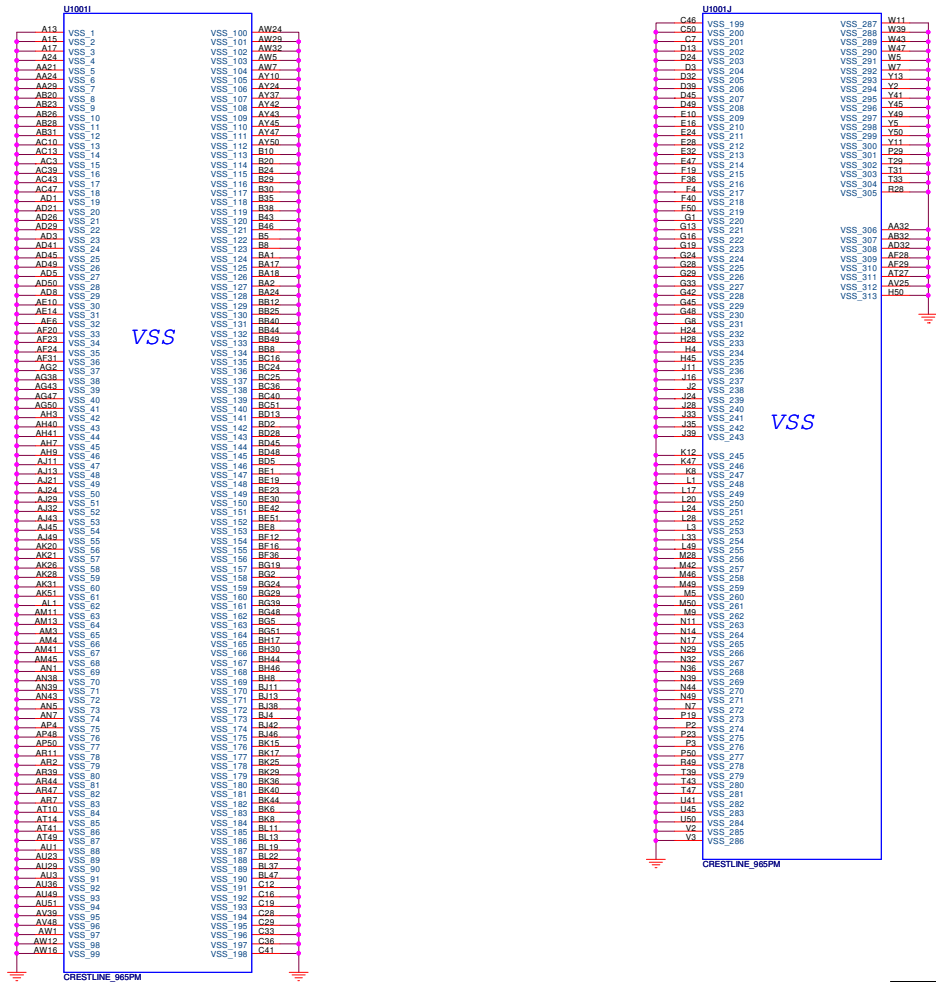
« Kennedy_Zhang »



- 965PM: Mount R1502
Un-mount R1501,R1503-R1505
Un-mount L1501-L1505
Un-mount CE1501-CE1503
Un-mount C1505,C1509,C1511-C1513
Change C1501-C1504,C1506,C1507,C1510,C1514 to 0ohm
- 965GM: Un-mount R1502
Mount R1501,R1503-R1505
Mount L1501-L1505
Mount CE1501-CE1503
Mount C1501-C1507,C1509-C1514

« Kennedy_Zhang »

ASUS		Title : NB_965PM(PWR)	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	15	of 35



ASUS Title : NB_965PM(GND)
 ASUSTEK COMPUTER INC. NBI Engineer: John Hung
 Size Project Name
 Custom M50S/X55S
 Date: Monday, September 03, 2007 Sheet 16 of 35

« Kennedy_Zhang »

		Title : NB_****	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	17 of 88

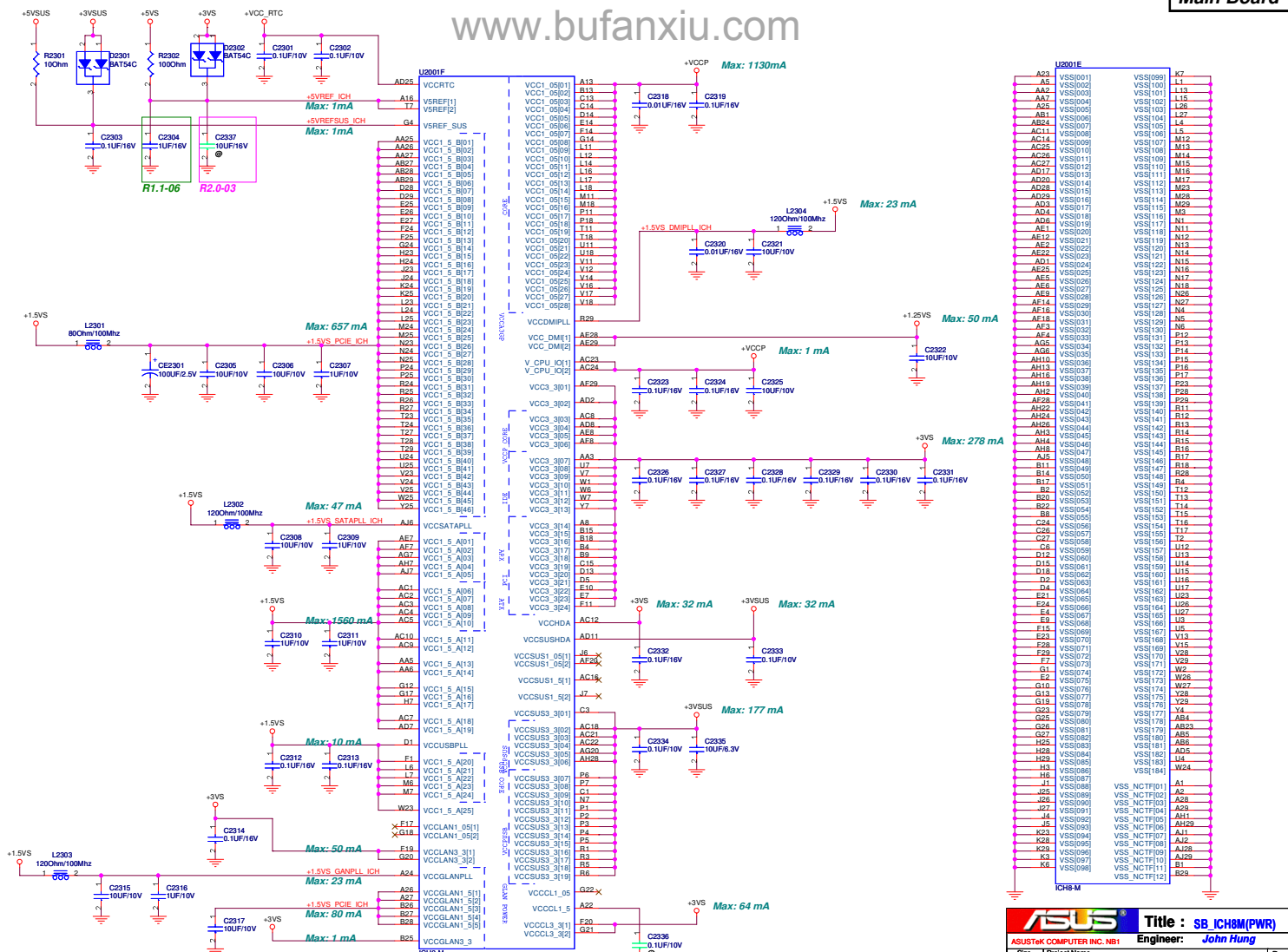
« Kennedy_Zhang »

		Title : NB_****	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Size	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	18 of 88

« Kennedy_Zhang »

		Title : MEM ****	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	19 of 88

<< Kennedy_Zhang >>



« Kennedy_Zhang »

ASUS Title : SB_ICH8M(PWR)
 ASUSTEK COMPUTER INC. NE1 Engineer: John Hung
 Size: Custom Project Name: M50S/X55S Rev: 2.0
 Date: Monday, September 03, 2007 Sheet: 23 of 35

		Title : SB_***	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	24 of 88

« Kennedy_Zhang »

		Title : SB_***	
ASUSTEK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	26 of 88

« Kennedy_Zhang »

		Title : SB_***	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	26 of 35

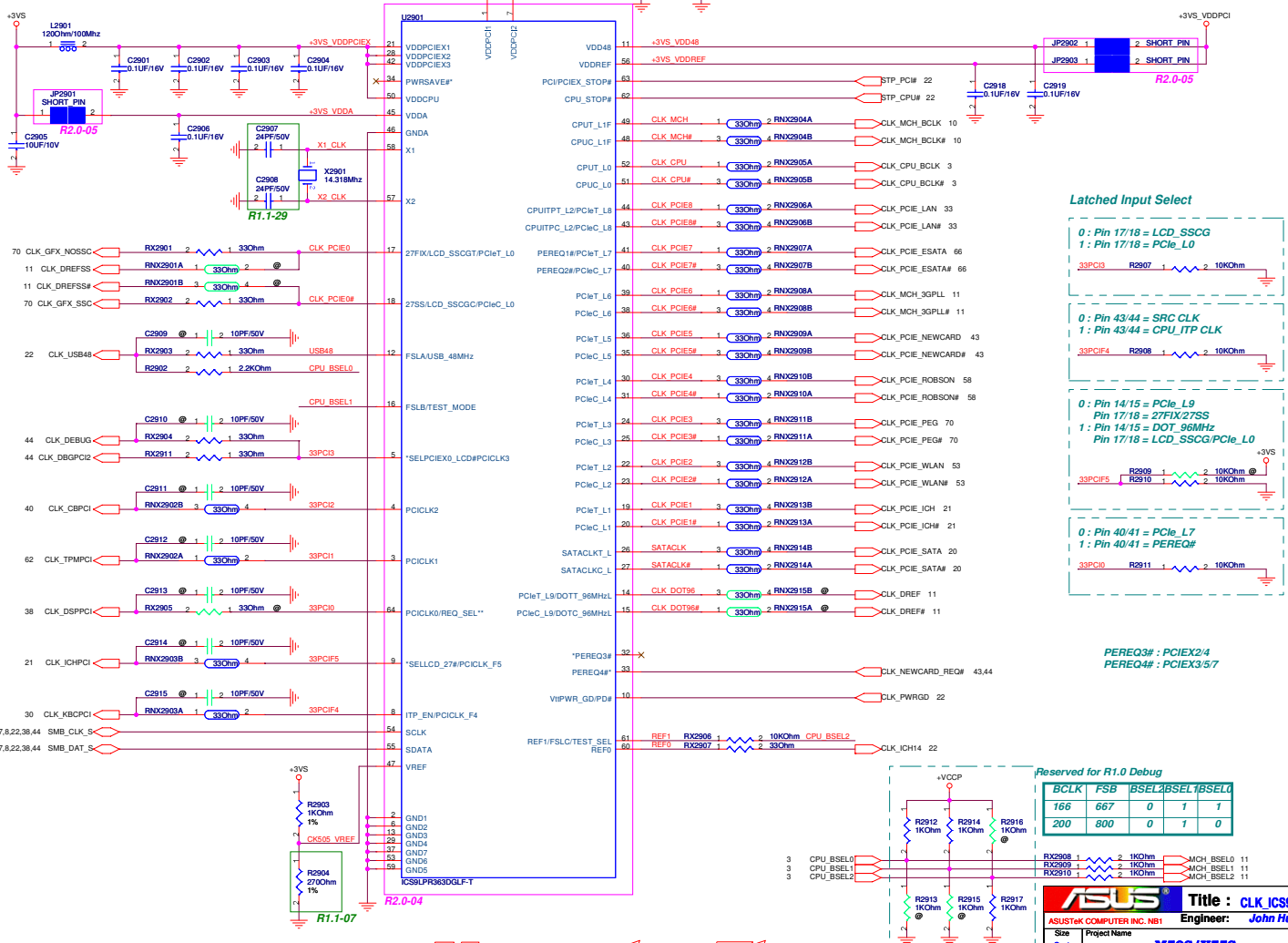
« Kennedy_Zhang »

		Title : SB_***	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	27 of 88

« Kennedy_Zhang »

		Title : SB_***	
ASUSTeK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	28 of 35

« Kennedy_Zhang »



Latched Input Select

0 : Pin 17/18 = LCD_SSCG
1 : Pin 17/18 = PCIe_L0

0 : Pin 43/44 = SRC CLK
1 : Pin 43/44 = CPU_ITP CLK

0 : Pin 14/15 = PCIe_L9
1 : Pin 17/18 = 27FX/27SS
Pin 17/18 = LCD_SSCG/PCIe_L0

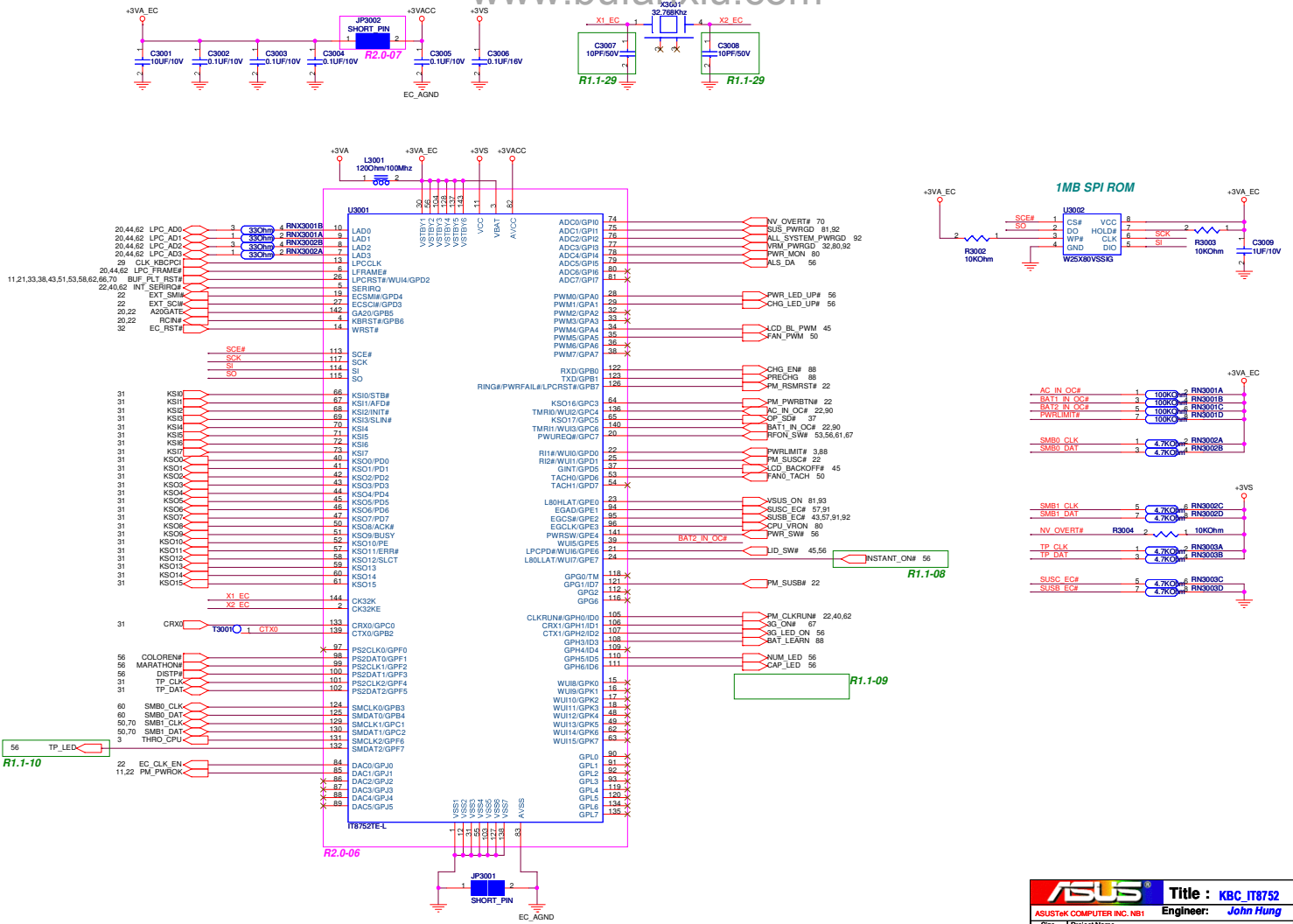
0 : Pin 40/41 = PCIe_L7
1 : Pin 40/41 = PEREQ#

Reserved for R1.0 Debug

BCLK	FSB	BSEL2	BSEL1	BSEL0
166	667	0	1	1
200	800	0	1	0

ASUS
ASUSTeK COMPUTER INC. NBI
Project Name: M50S/X55S
Engineer: John Hung
Date: Tuesday, September 04, 2017
Sheet: 29 of 35

« Kennedy_Zhang »



R1.1-10

R1.1-08

R1.1-09

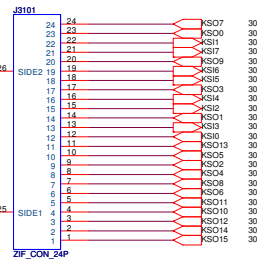
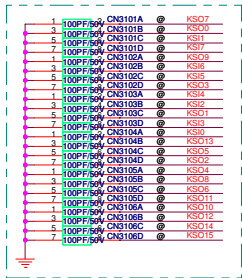
R2.0-06

ASUS Title : KBC_IT8752
 ASUSTek COMPUTER INC. NBI Engineer: John Hung
 Custom Project Name M50S/X55S
 Date: Monday, September 03, 2007 Sheet: 30 of 35

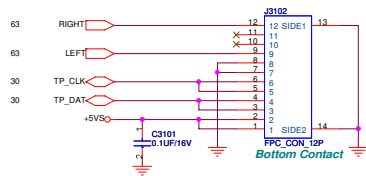
<< Kennedy_Zhang >>

Keyboard

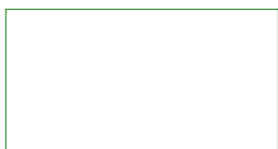
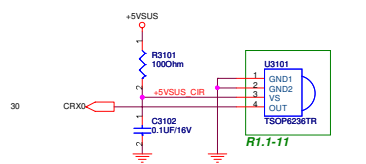
EMI



Touchpad



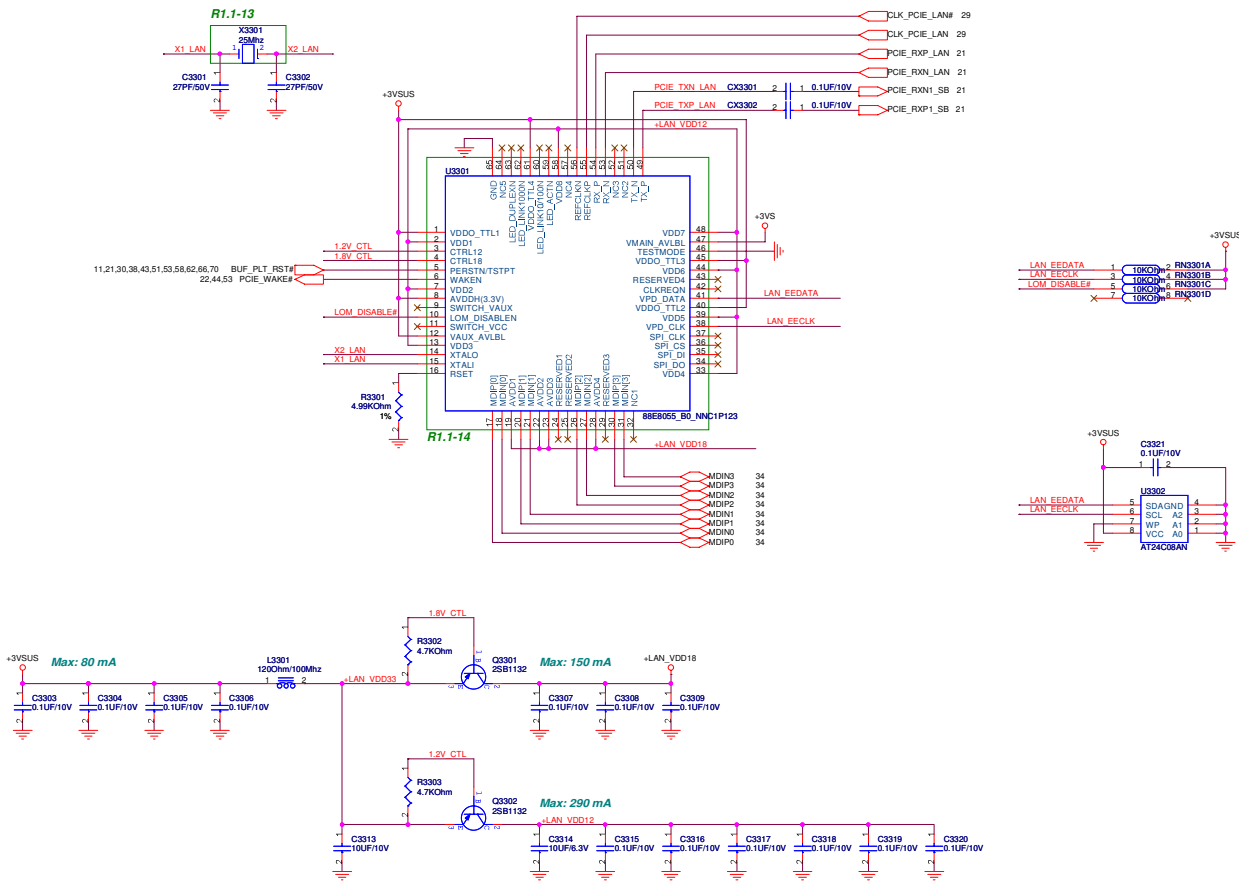
CIR



R1.1-12

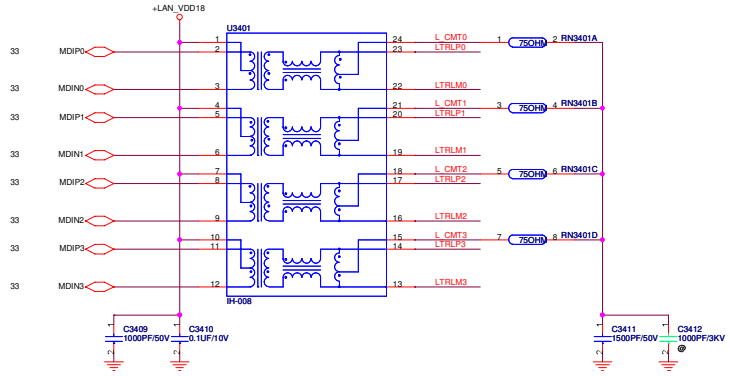
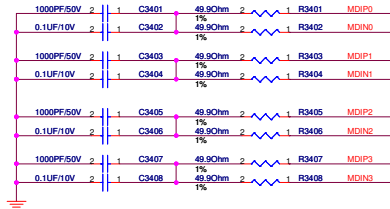
ASUS		Title : KBC, KB, TP & CIR	
ASUSTek COMPUTER INC. NE1		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	31	of 88

« Kennedy_Zhang »

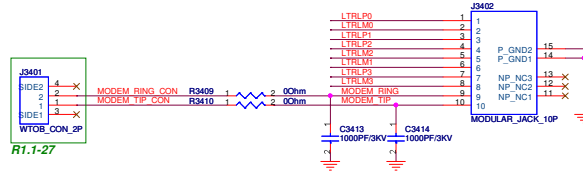


« Kennedy_Zhang »

ASUS		Title : LAN_88E8055	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	33	of 88



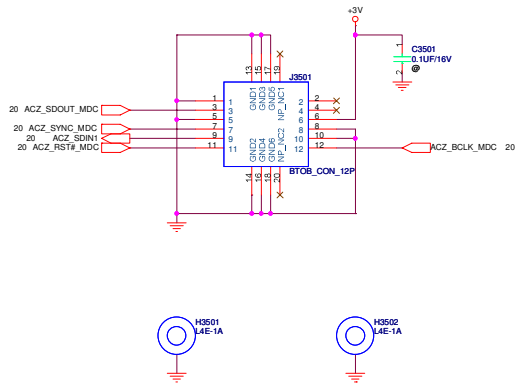
R1.1-28
R2.0-08



R1.1-27

ASUS		Title : LAN_RJ45 & RJ11	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	34	of 88

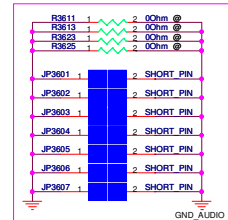
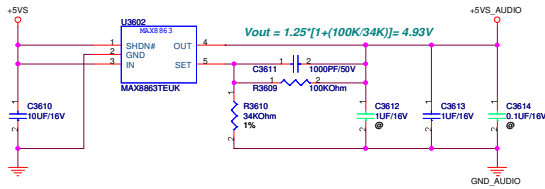
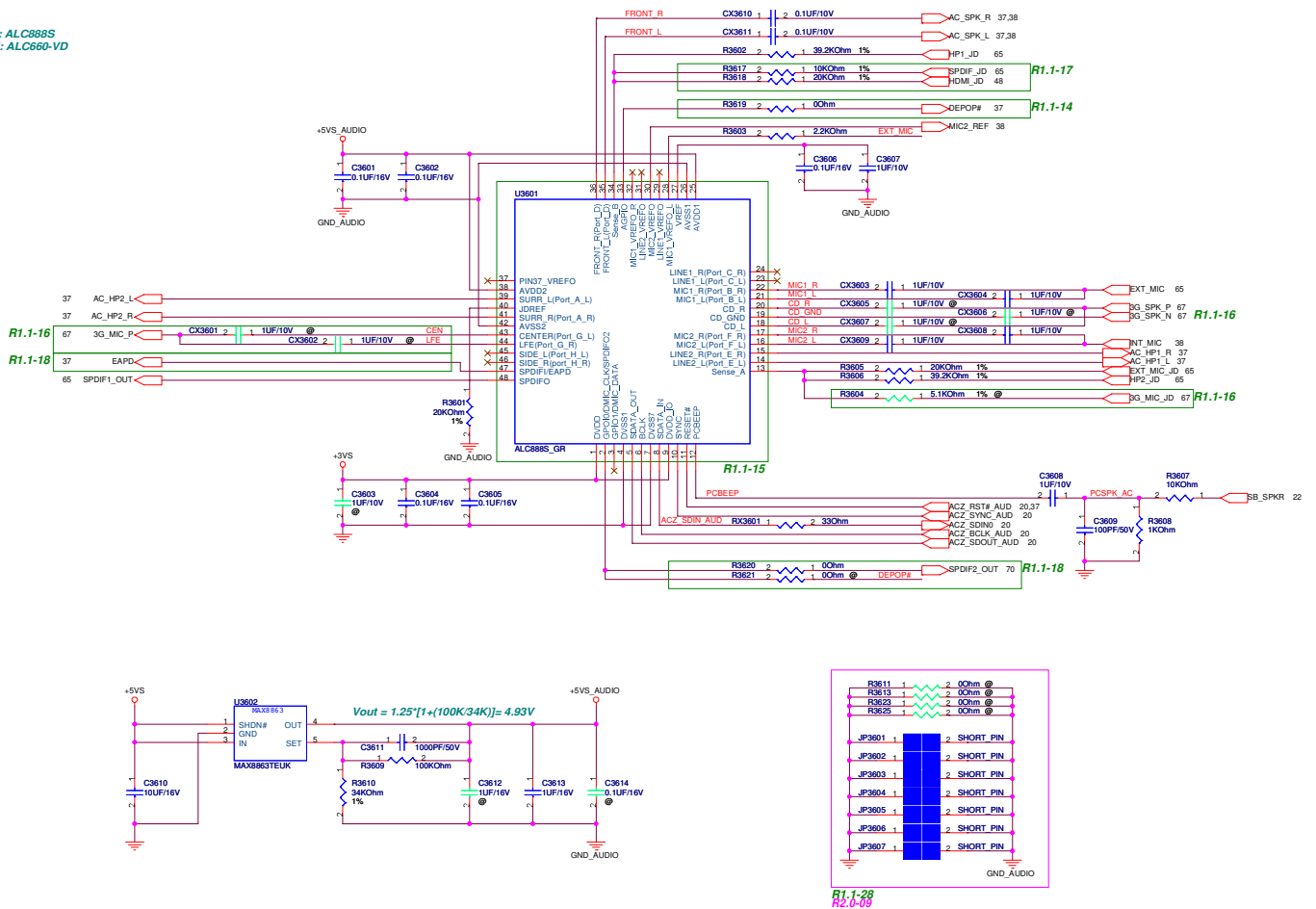
« Kennedy_Zhang »



« Kennedy_Zhang »

ASUS		Title : LAN_MDC	
ASUSTeK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	35	of 35

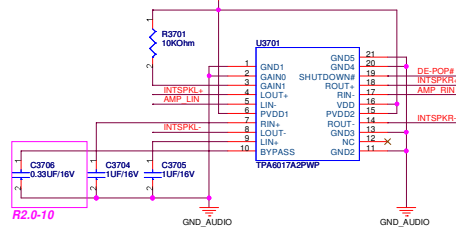
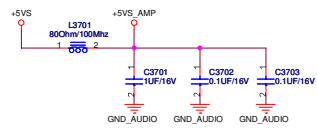
PM: ALC888S
GM: ALC660-VD



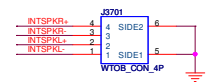
R1.1-28
R2.0-09

ASUS		Title : AUD_ALC888S	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	36	of 55

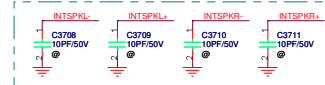
« Kennedy_Zhang »



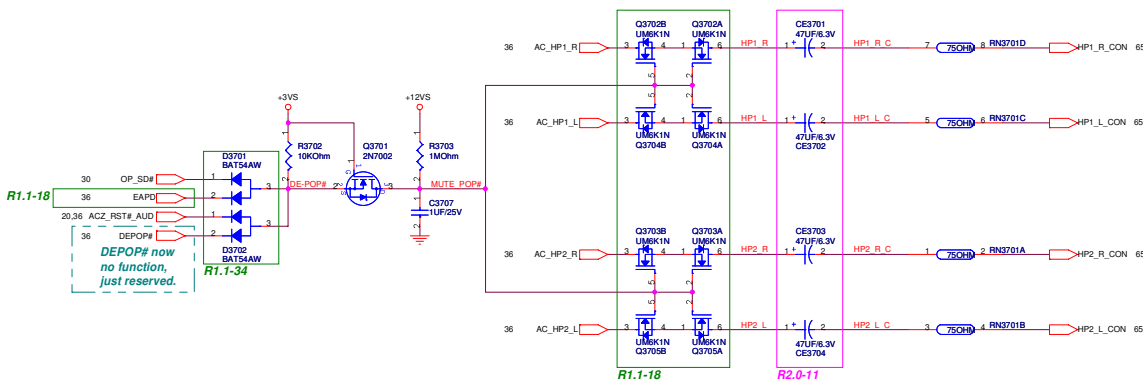
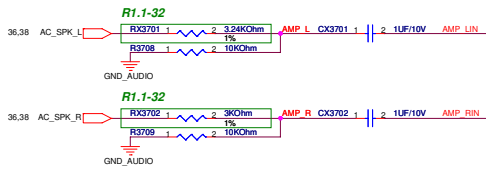
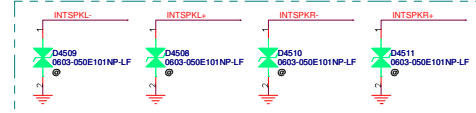
Internal Speaker Conn.



Reserved for 3G



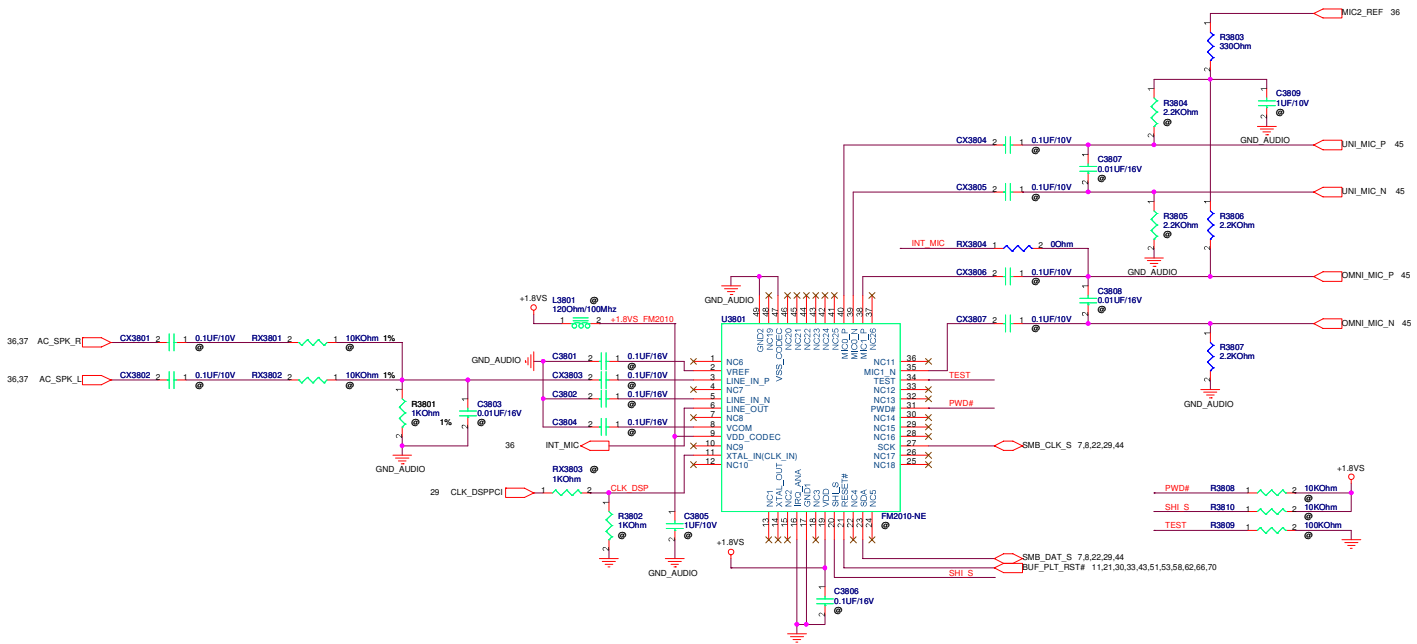
Reserved for EMI



DEPOP# now no function, just reserved.

ASUS		Title : AUD_Amp & Jack	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Wednesday, September 05, 2012	Sheet	37	of 38

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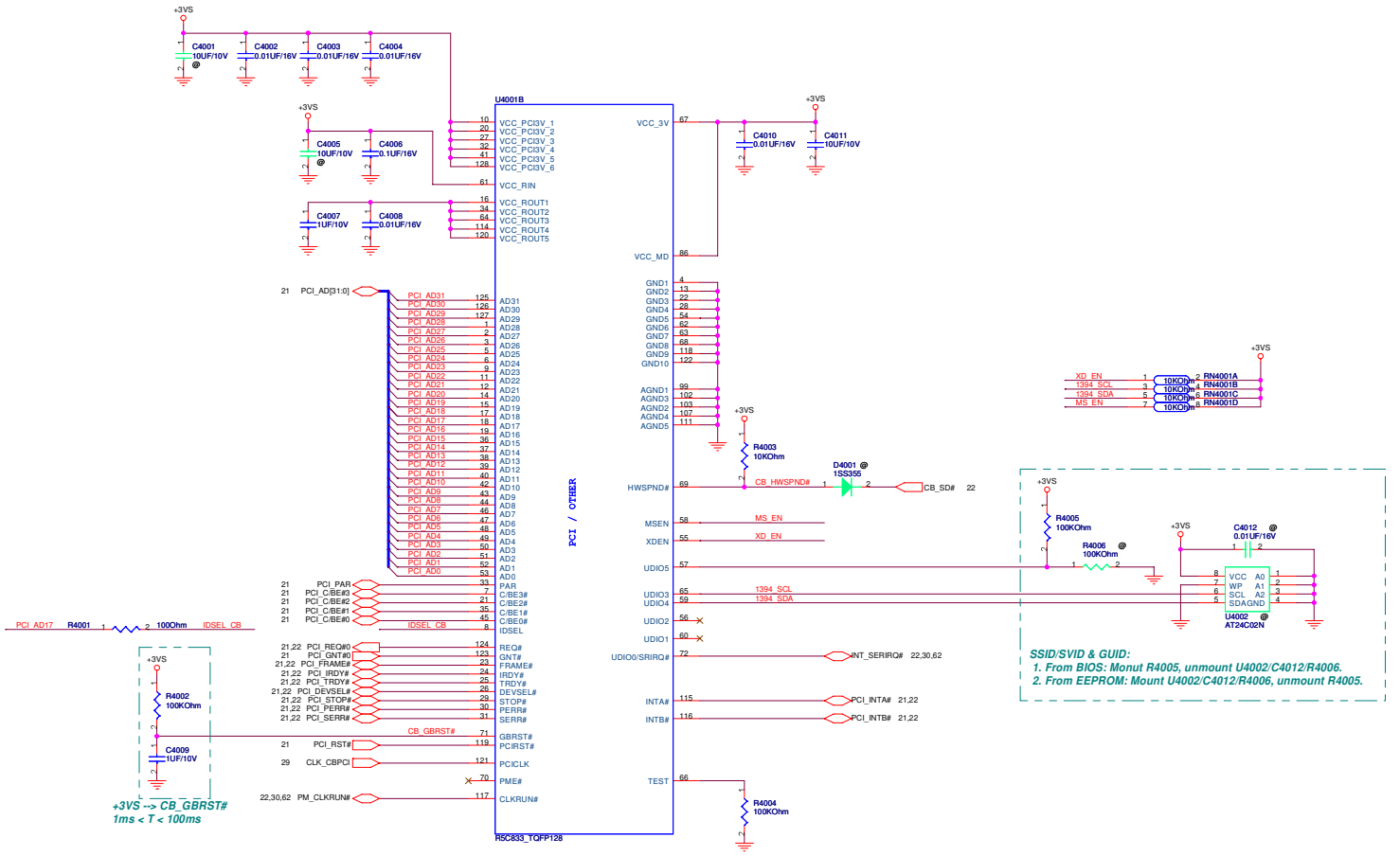


« Kennedy_Zhang »

ASUS		Title : AUD_FM2010	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Tuesday, September 04, 2017		Sheet	38 of 88

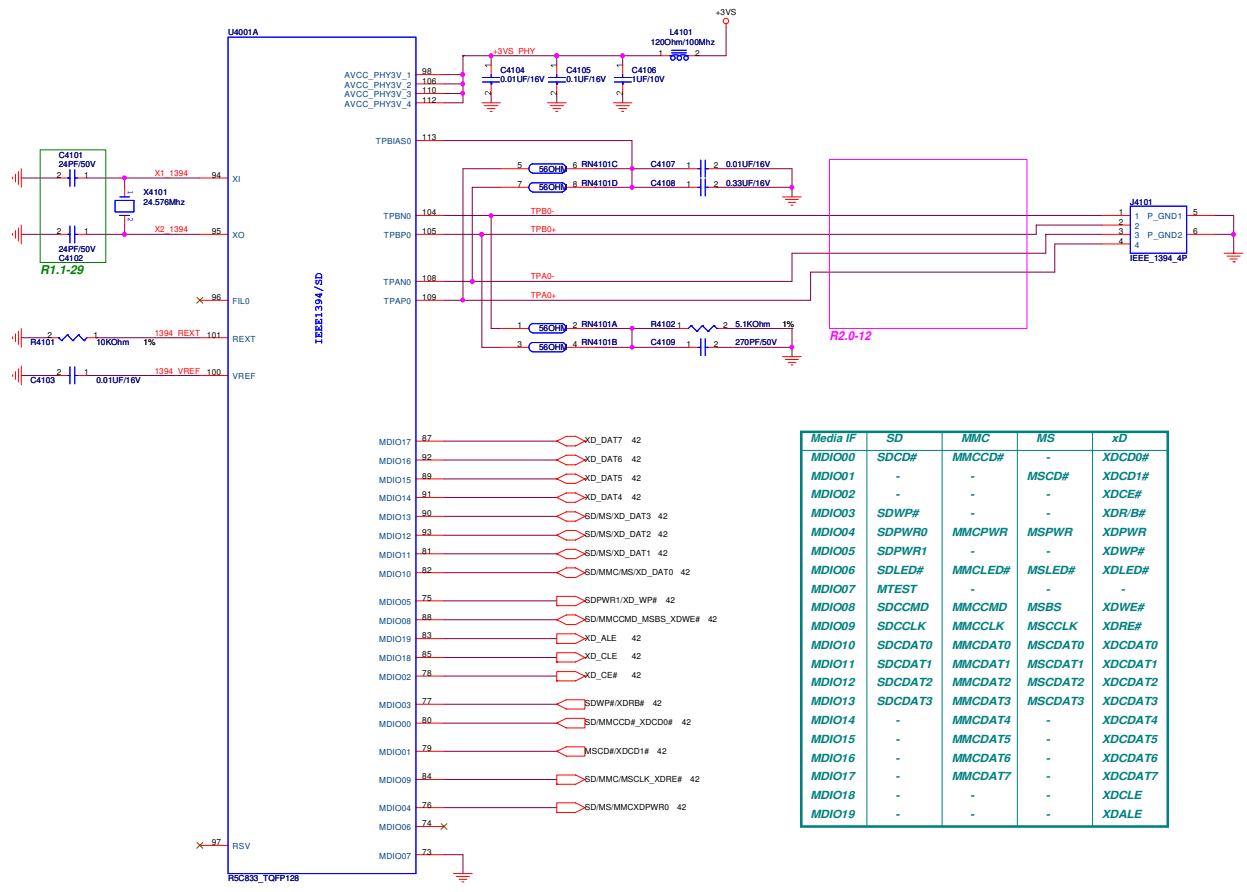
		Title : AUD ****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	39 of 39

« Kennedy_Zhang »



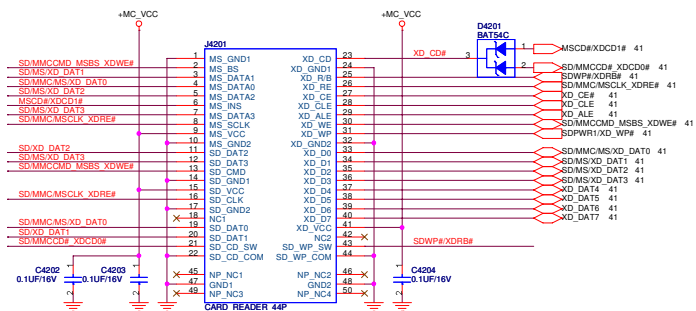
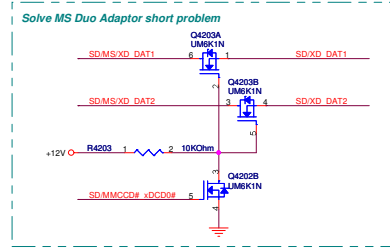
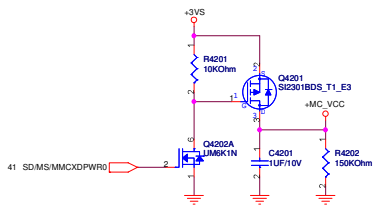
<< Kennedy_Zhang >>

ASUS		Title : CB_R5C833	
ASUSTEK COMPUTER INC. NE1		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	40	of 88



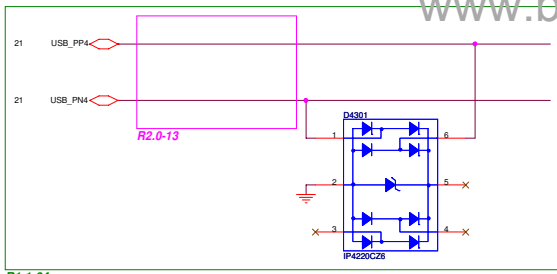
« Kennedy_Zhang »

ASUS		Title : CB_R5C833	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	41	of 88

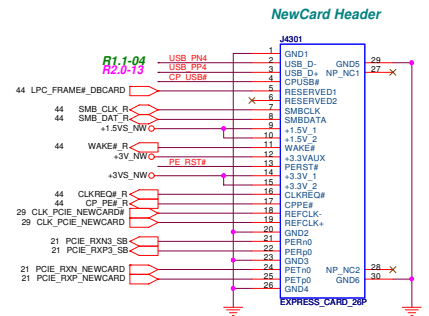
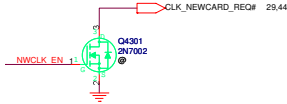
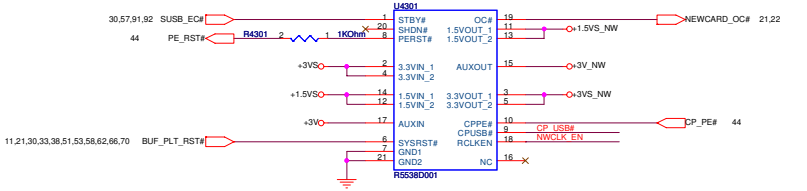


ASUS		Title : CB_4in1 CardReader	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	2.0
Custom	M50S/X55S	Date	Monday, September 03, 2007
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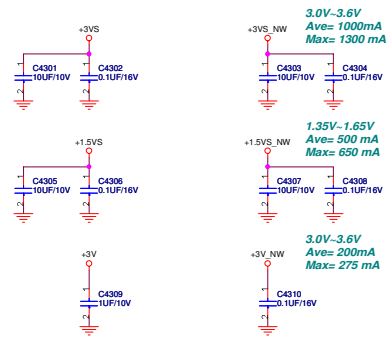
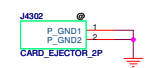
« Kennedy_Zhang »



R1.1-04



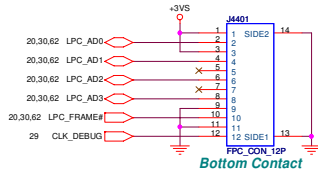
NewCard Ejector



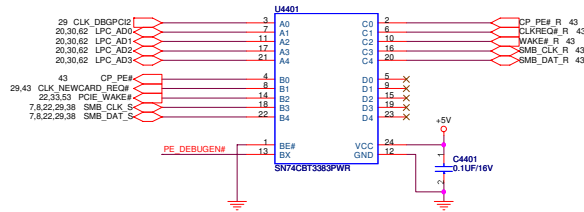
ASUS		Title : CB_NewCard	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
Date: Monday, September 03, 2007	Sheet	43	of 88

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LPC Debug Port

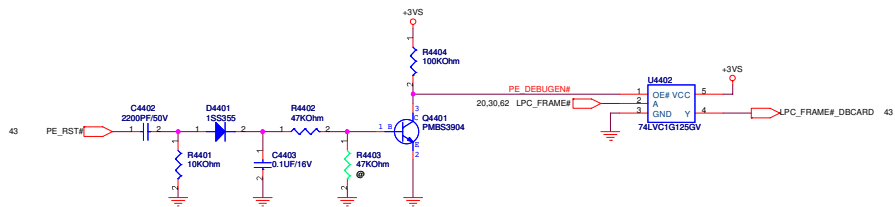


For NewCard Debug Card



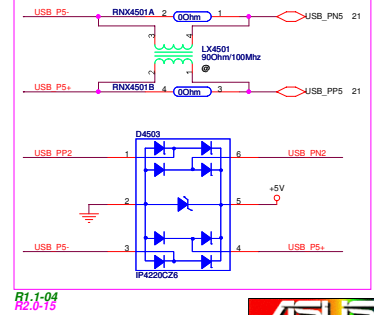
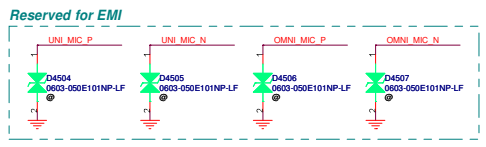
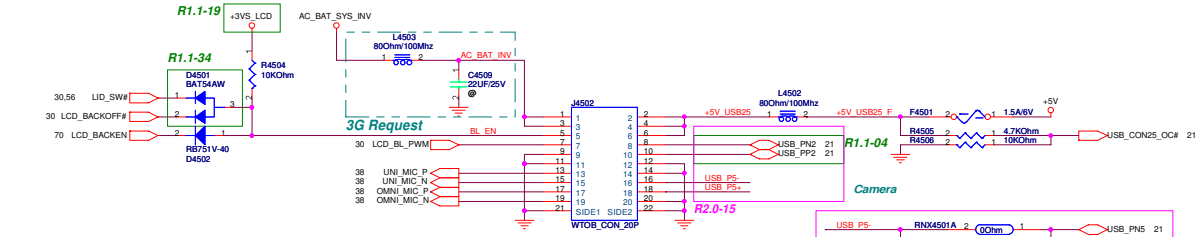
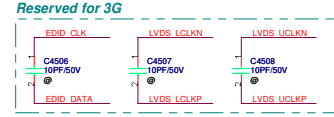
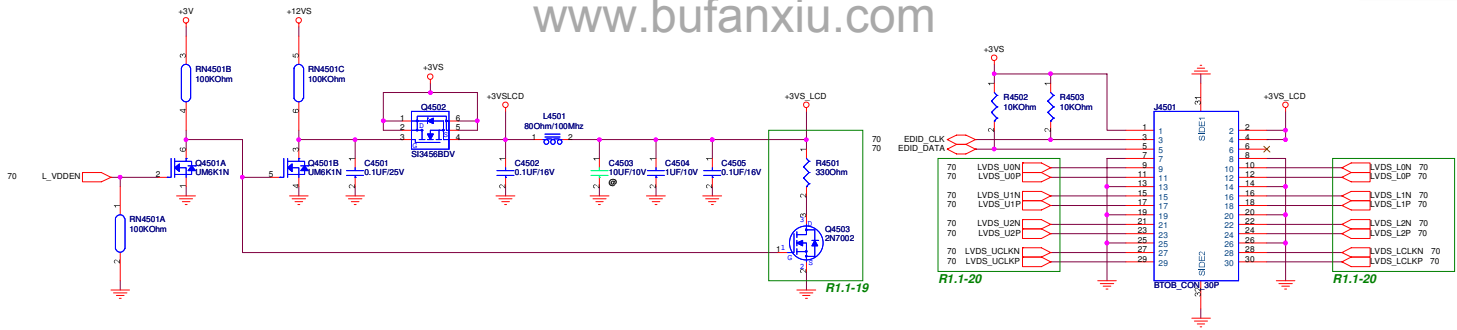
CP_PE#	@ 00hm	2	1	R4405	CP_PE# R
CLK_NEWCARD_RECV#	@	3	4	R4401B	CLK_RECV# R
PCIE_WAKE#	@	1	2	R4401A	WAKE# R
SMB_DAT# S	@	4	4	R4402B	SMB_DAT# R
SMB_CLK# S	@	1	2	00hm	SMB_CLK# R

R2.0-14



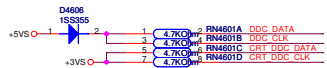
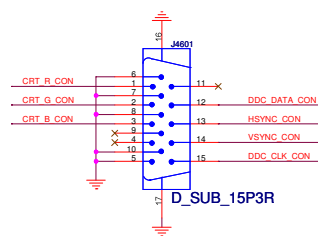
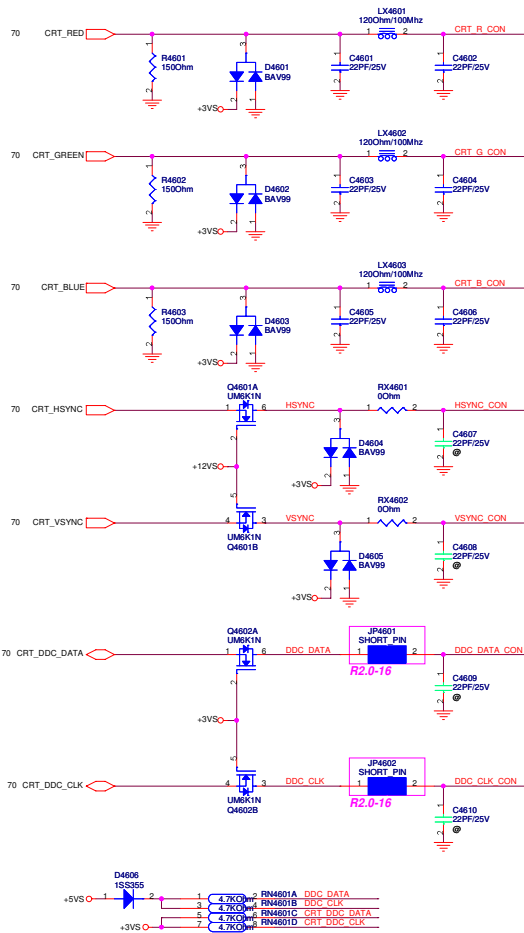
ASUS		Title : BUG_LPC Debug	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	2.0
Custom	M50S/X55S	Date	Monday, September 03, 2007
		Sheet	44 of 88

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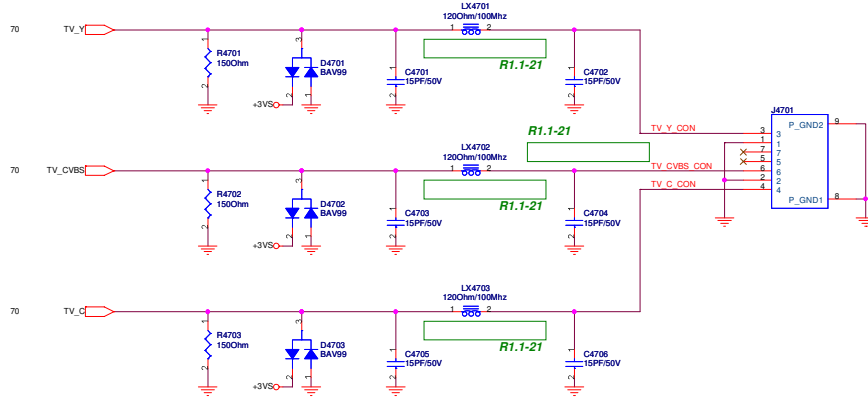
ASUS		Title : CRT_LCD Panel
ASUSTek COMPUTER INC. NB1		Engineer: John Hung
Size	Project Name	Rev
Custom	M50S/X55S	2.0
Date: Monday, September 03, 2007	Sheet	45 of 85

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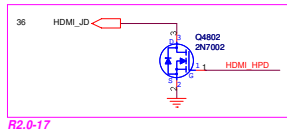
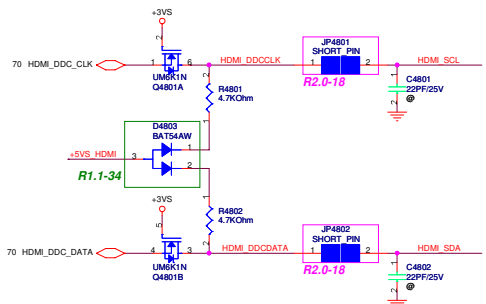
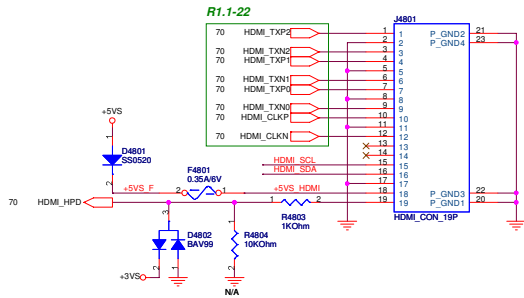
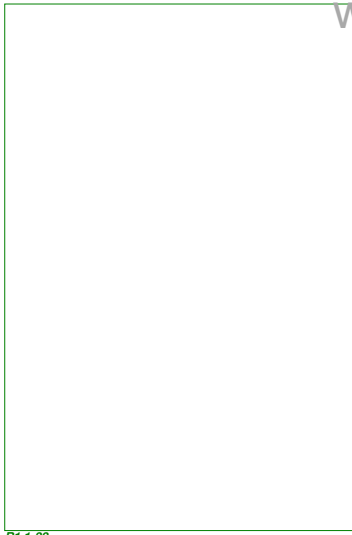
ASUS		Title : CRT_D-Sub	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	46	of 88

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		Title : TV_TV-Out	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	47 of 88



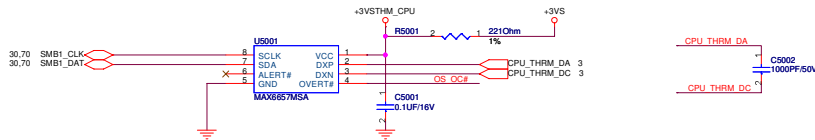
ASUS		Title : CRT_HDMI	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
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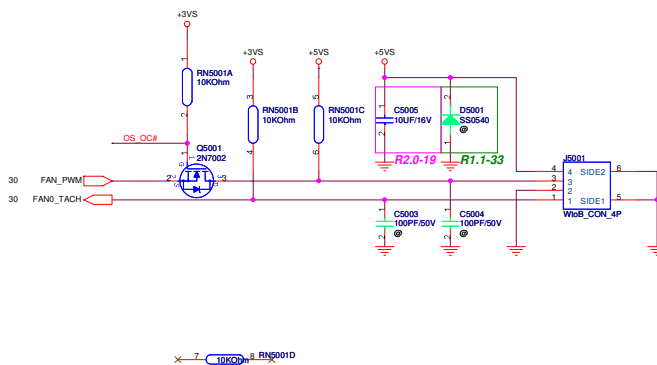
		Title : TV ***	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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CPU Thermal Sensor



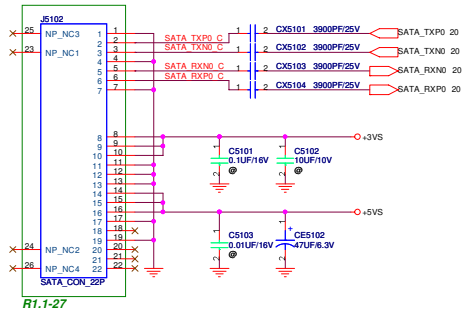
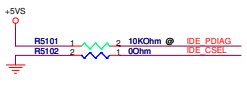
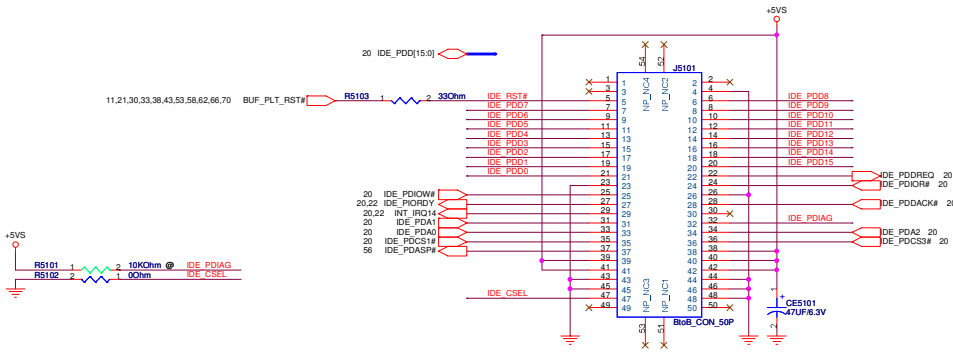
PWM Fan



7 10K Ohm RN5001D

ASUS		Title : FAN_Fan & Sensor	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
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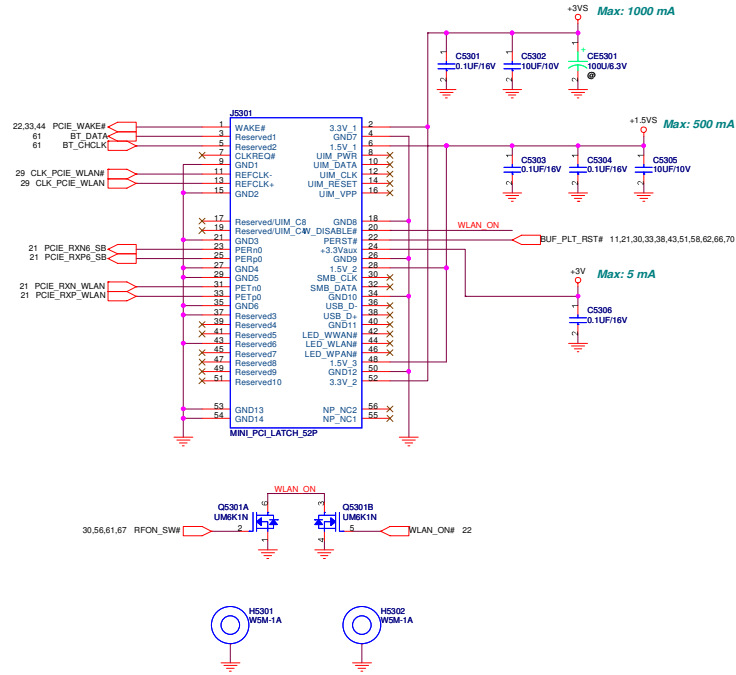
R1.1-27

		Title : XDD_HDD & ODD	
ASUSTeK COMPUTER INC. NB1		Engineer: John Hung	
Size	Project Name		Rev
Custom	M50S/X55S		2.0
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		Title : USB ****	
ASUSTeK COMPUTER INC. (NB)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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ASUS		Title : PCI WLAN	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name		Rev
Custom	M50S/X55S		2.0
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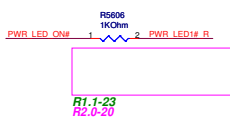
		Title : BAR_****	
ASUSTeK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	54 of 88

« Kennedy_Zhang »

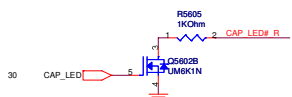
		Title : SIO ****	
ASUSTeK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	55 of 55

« Kennedy_Zhang »

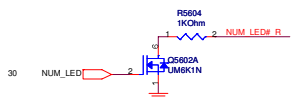
Power LED



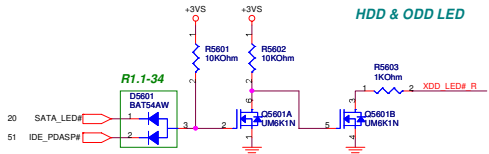
Cap Lock LED



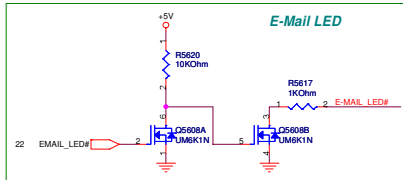
Num Lock LED



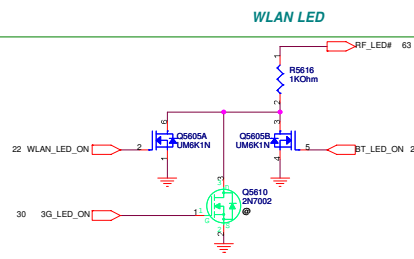
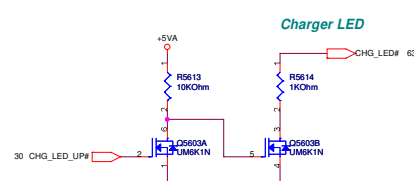
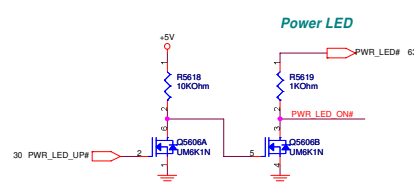
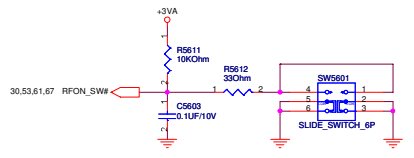
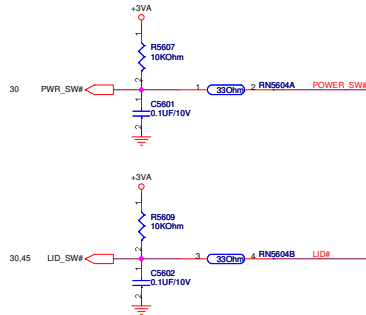
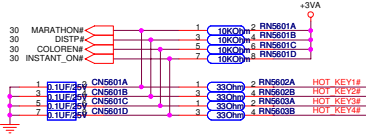
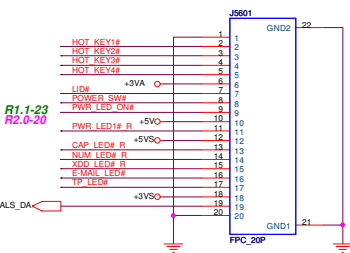
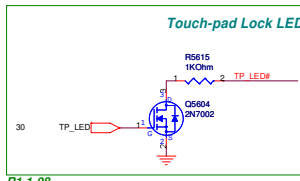
HDD & ODD LED



E-Mail LED

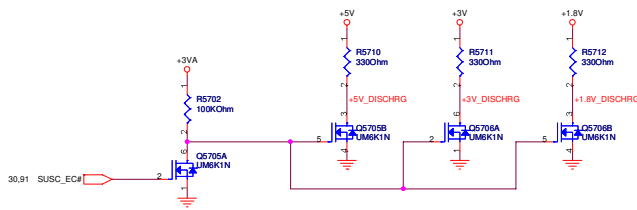
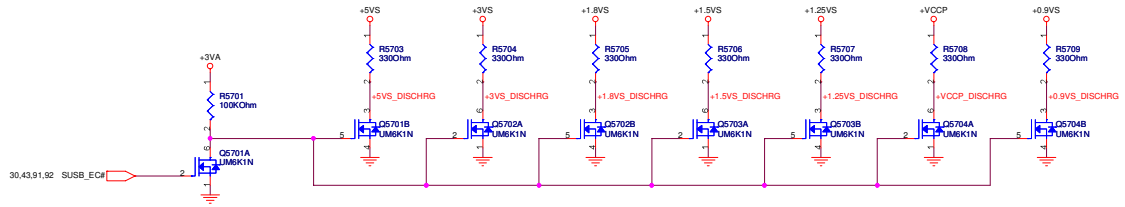


Touch-pad Lock LED



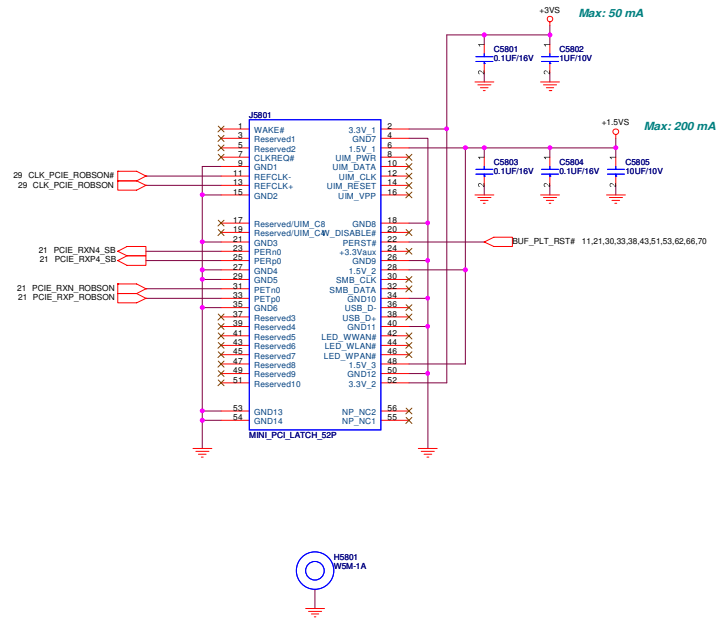
ASUS		Title : LED Indicator	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
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		Title : DSG Discharge	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
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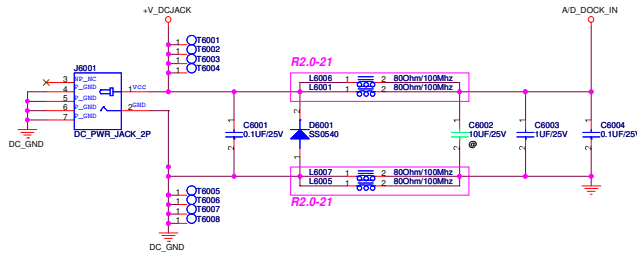
« Kennedy_Zhang »

ASUS		Title : ROB_Robson
ASUSTek COMPUTER INC. NBI		Engineer: John Hung
Size	Project Name	Rev
Custom	M50S/X55S	2.0
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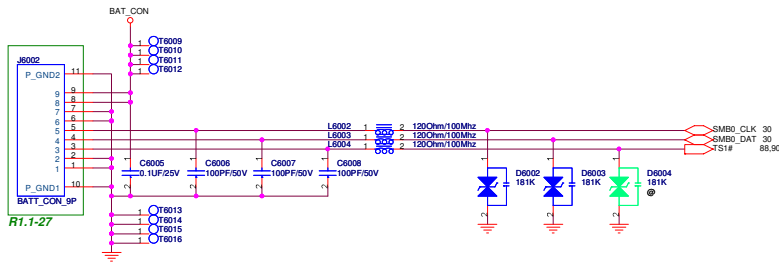
		Title : DJ ****	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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DC Jack

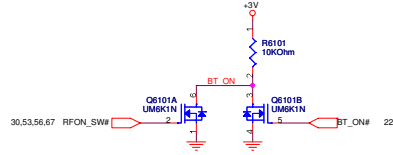
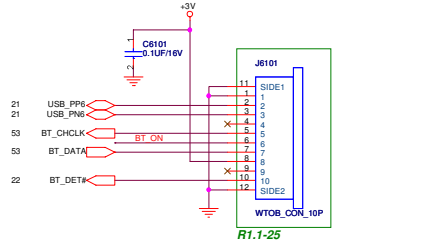


Battery Connector



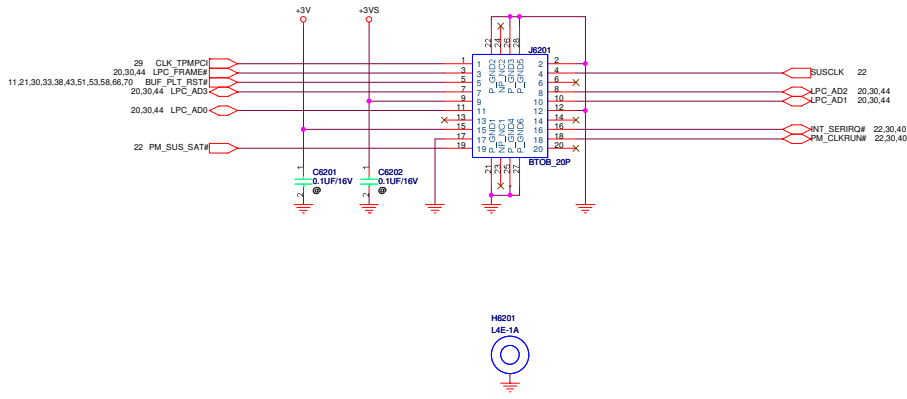
ASUS		Title : DC_DC & BAT Conn.	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
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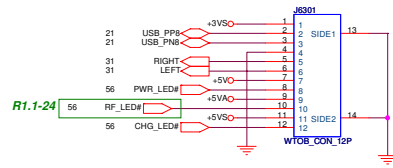
« Kennedy_Zhang »

ASUS		Title : BT Bluetooth	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007	Sheet	61	of 88



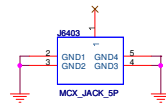
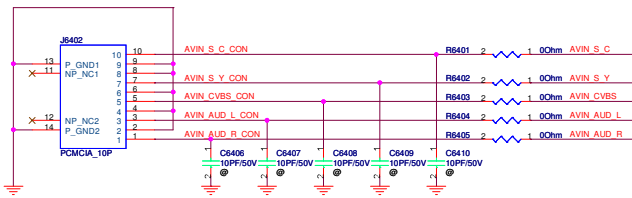
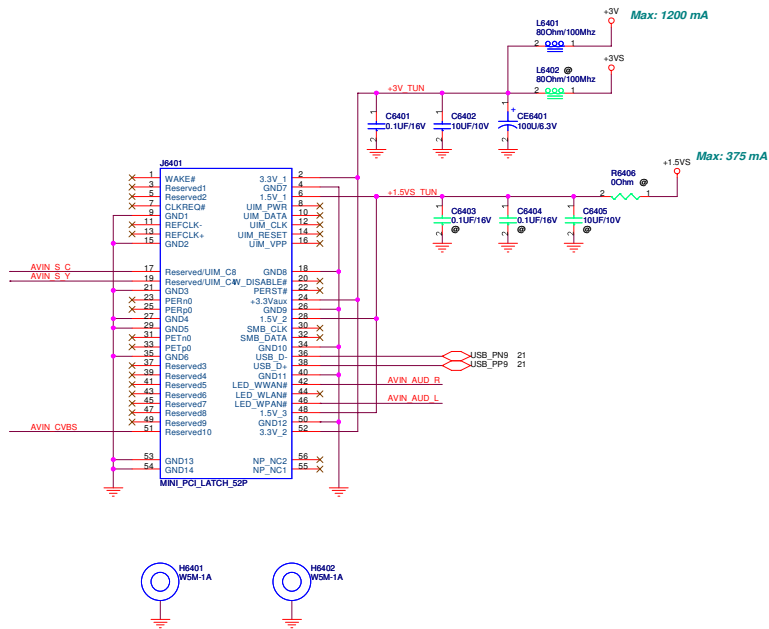
« Kennedy_Zhang »

ASUS		Title : TPM TPM 1.2	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	62	of 88



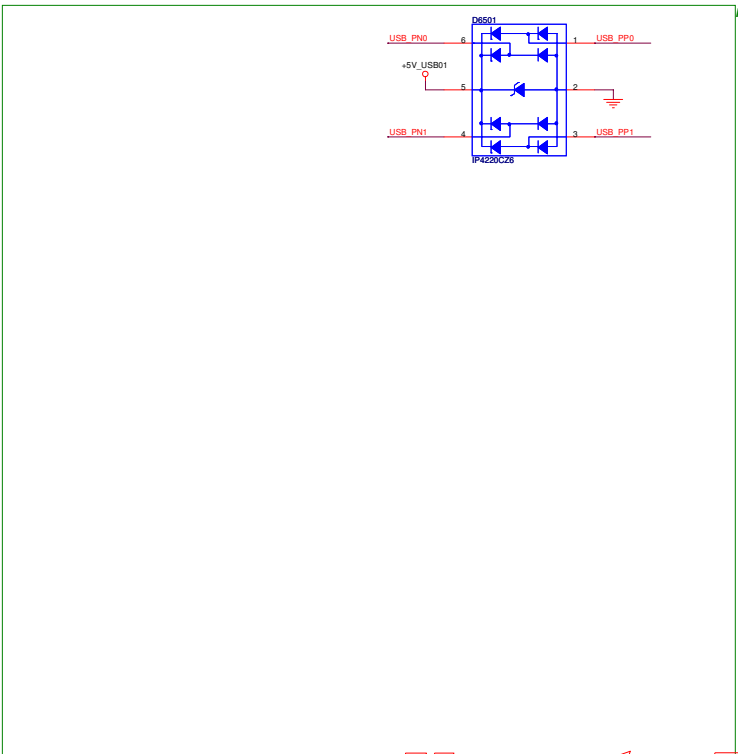
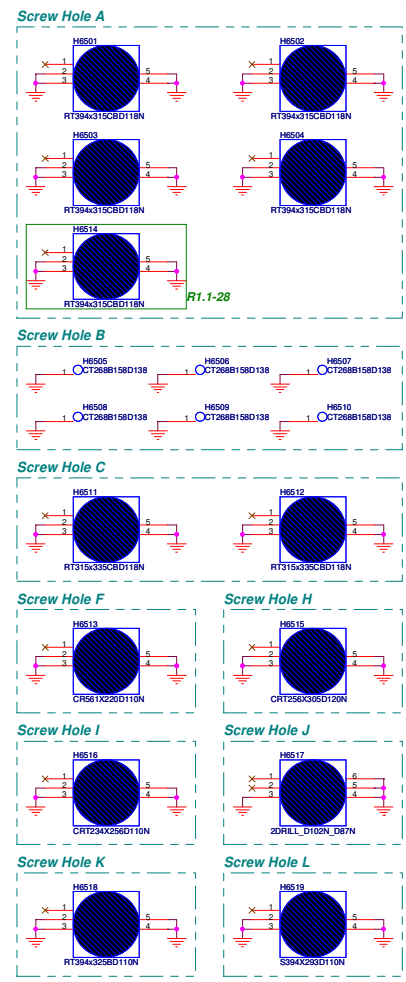
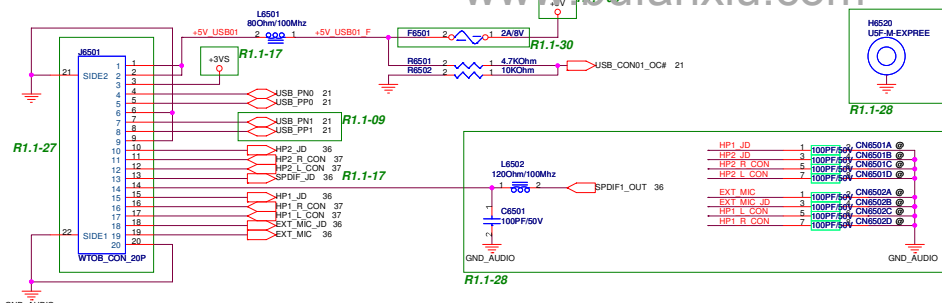
« Kennedy_Zhang »

ASUS		Title : FP_Fingerprint Conn.	
ASUSTeK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	63	of 88



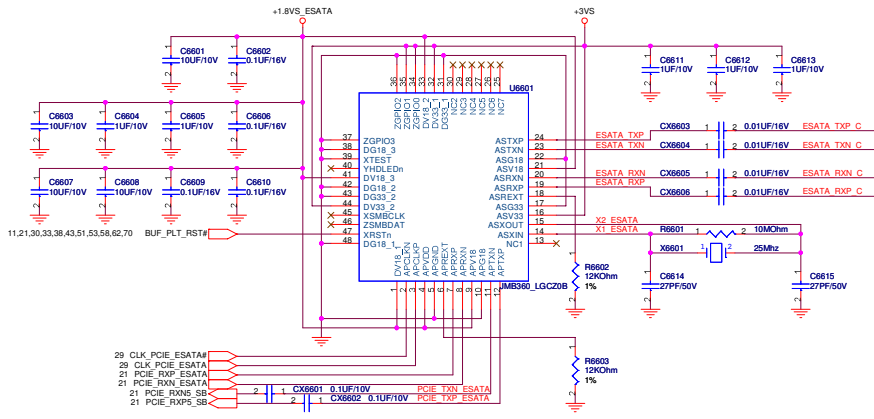
ASUS		Title : TUN_TV Tuner	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	Rev
Custom	M50S/X55S	2.0	2.0
Date	Tuesday, September 04, 2007	Sheet	84 of 88

« Kennedy_Zhang »



ASUS		Title : ME_Conn & Screw Holes	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	65	of 85

« Kennedy_Zhang »

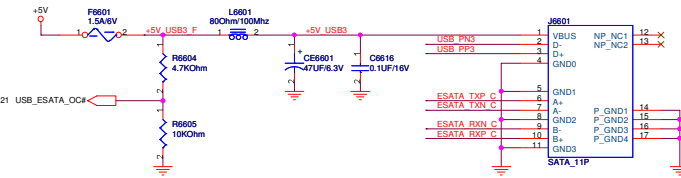
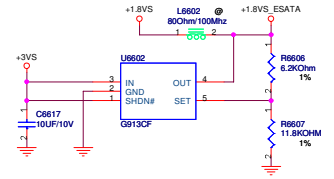
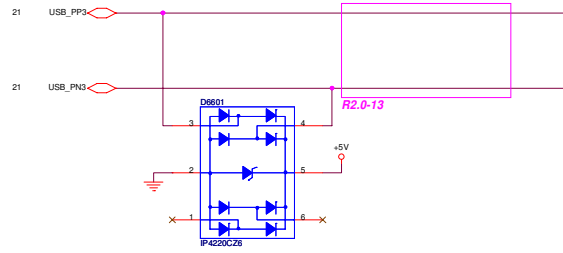


ZGPIO : Clock Type of PCI Express
 0 = 25MHz Oscillator (D)
 1 = 100MHz from PCI Express Finger

ZGP11 : Clock Source of SATA II
 0 = from Internal Clock Source (D)
 1 = from ASXIN & ASXOUT

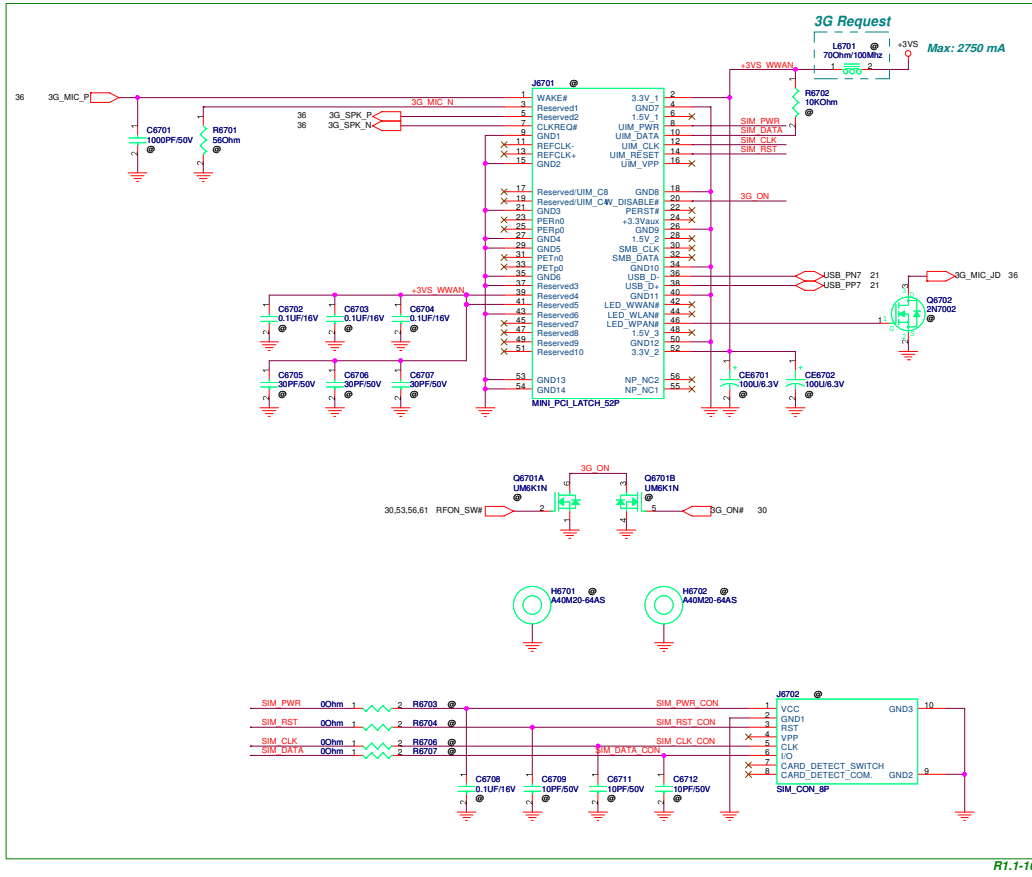
ZGP12 : Interface to Debug Registers
 0 = SMBus I/F (D)
 1 = Reserved

ZGP12 : SMBus ID Address
 0 = 8'h44 (D)
 1 = 8'h4A



ASUS		Title : ESA_JMB360	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	
Custom	M50S/X55S	2.0	
Date: Monday, September 03, 2007	Sheet	66	of 88

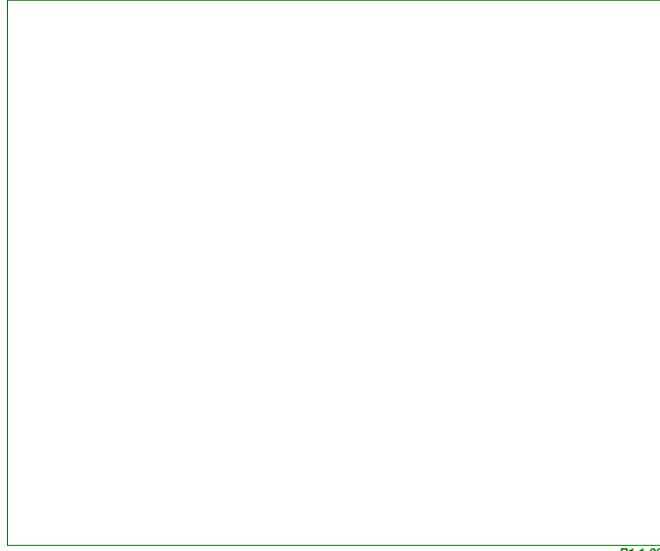
« Kennedy_Zhang »



R1.1-16

ASUS		Title : WAN WWAN	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
Size	Project Name	Rev	2.0
Custom	M50S/X55S	Date	Monday, September 03, 2007
		Sheet	67 of 88

« Kennedy_Zhang »



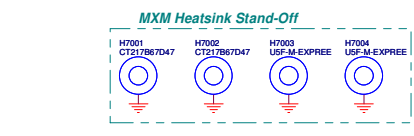
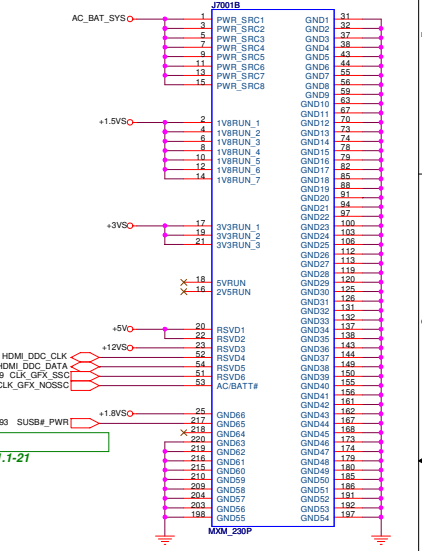
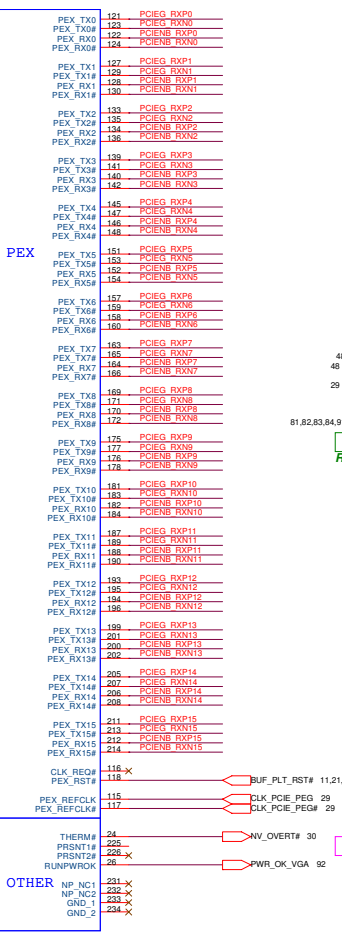
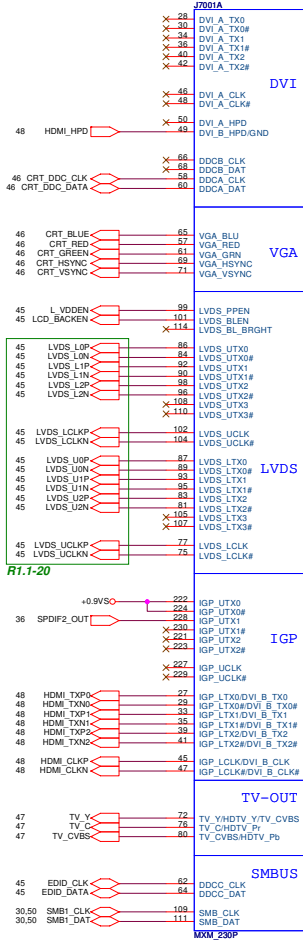
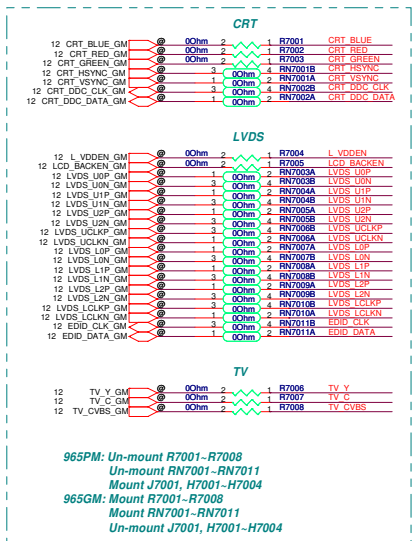
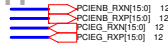
R1.1-26

« Kennedy_Zhang »

		Title : OTH_****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	68 of 88

		Title : OTH_****	
ASUSTEK COMPUTER INC. NB1		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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« Kennedy_Zhang »



ASUS logo and project information: Title: VGA_MXM, ASUSTek COMPUTER INC. H61, Engineer: John Hung, Project Name: M50S/X55S, Date: Monday, September 03, 2007, Sheet: 70 of 85.

« Kennedy_Zhang »

		Title : VGA ****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
Date: Monday, September 03, 2007		Sheet	71 of 88

« Kennedy_Zhang »

		Title : VGA_****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
Date: Monday, September 03, 2007		Sheet	72 of 88

« Kennedy_Zhang »

		Title : VGA ****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
Date: Monday, September 03, 2007		Sheet	73 of 88

« Kennedy_Zhang »

		Title : VGA_****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
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« Kennedy_Zhang »

		Title : VGA_****	
ASUSTEK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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« Kennedy_Zhang »

		Title : VGA_****	
ASUSTeK COMPUTER INC. (NBI)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	76 of 88

<< Kennedy_Zhang >>

		Title : VGA_****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
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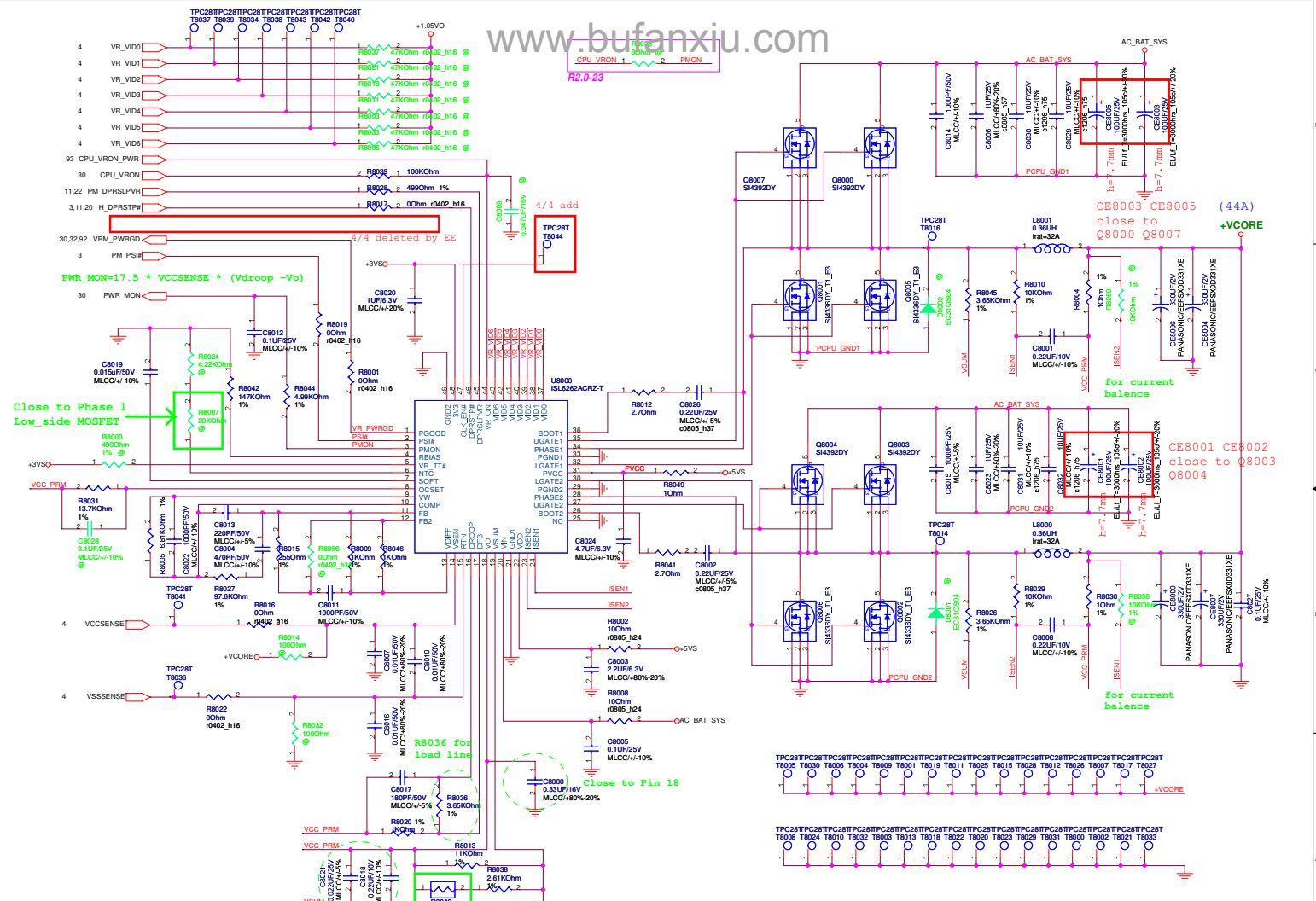
« Kennedy_Zhang »

		Title : VGA_****	
ASUSTEK COMPUTER INC. (NB)		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	78 of 88

« Kennedy_Zhang »

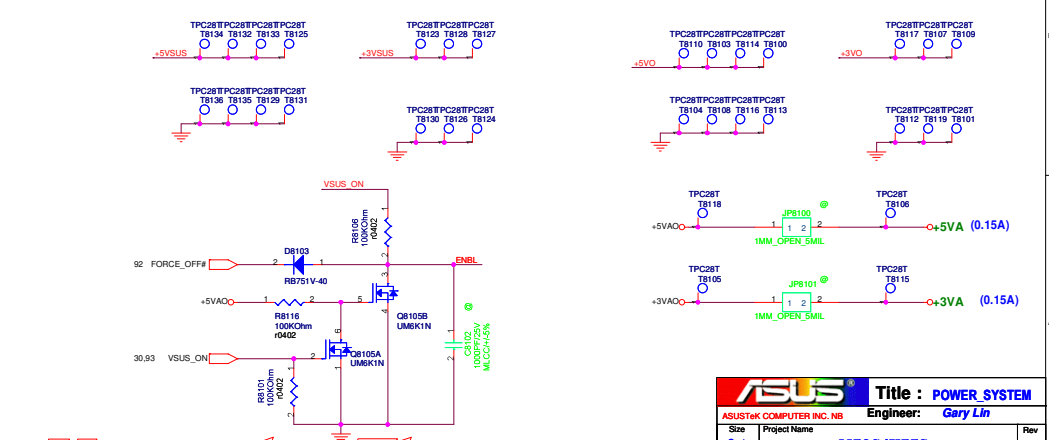
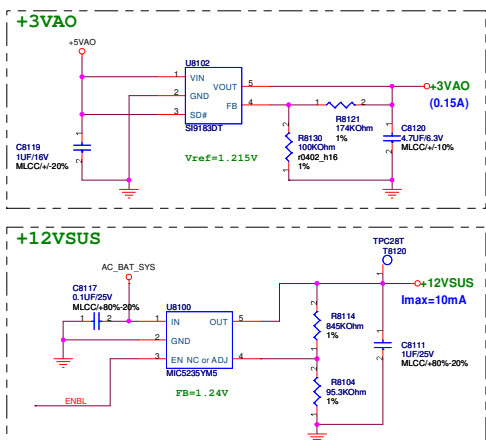
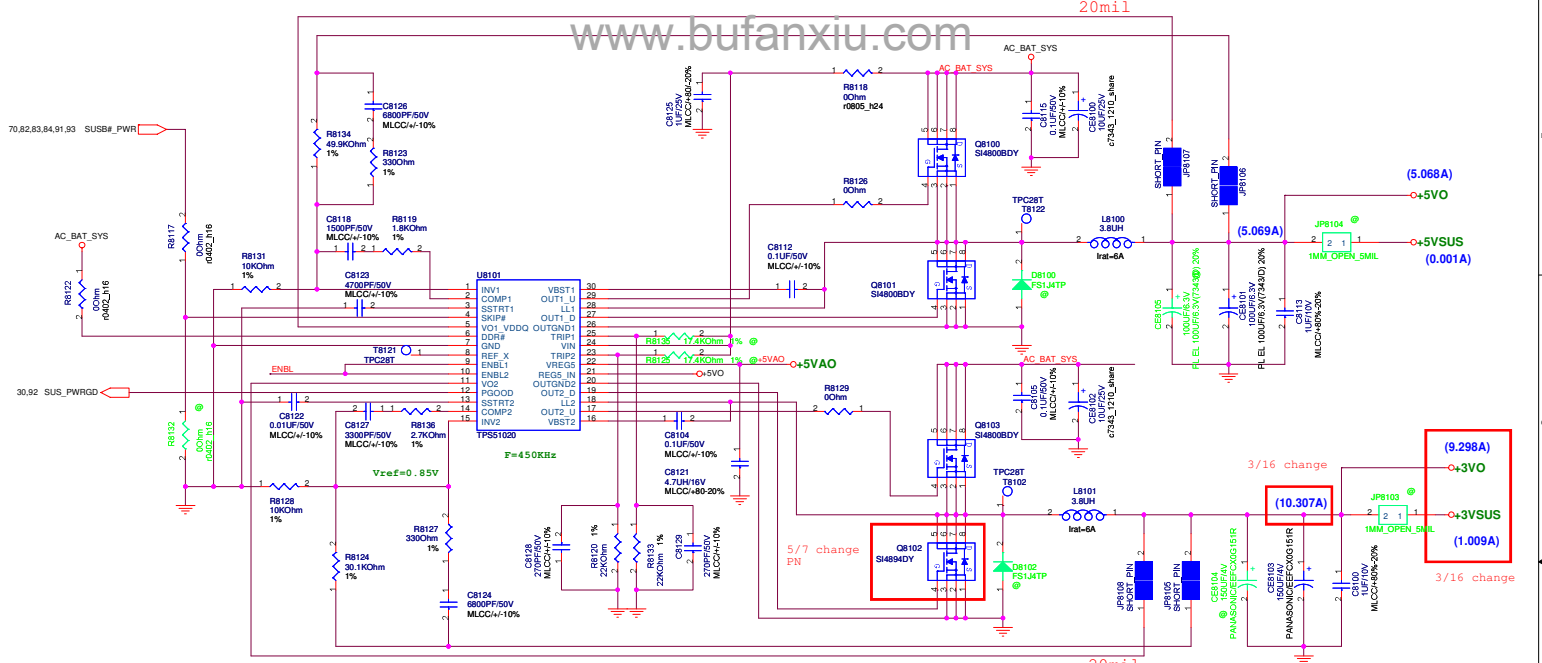
		Title : VGA_****	
ASUSTEK COMPUTER INC. NBI		Engineer: John Hung	
Site	Project Name		Rev
Custom	M50S/X55S		2.0
Date: Monday, September 03, 2007		Sheet	79 of 88

<< Kennedy_Zhang >>



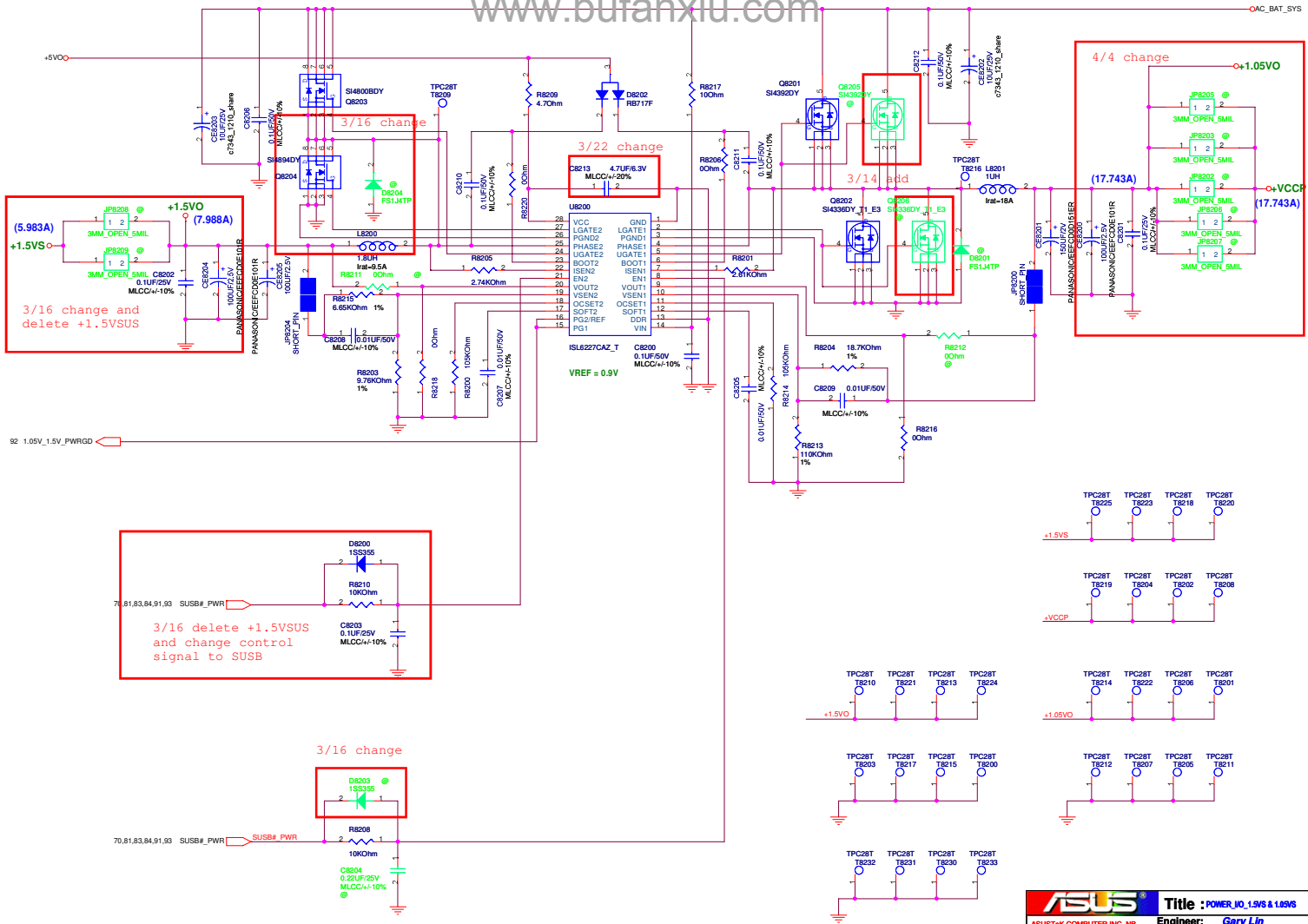
ASUS		Title : POWER_VCORE	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
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« Kennedy_Zhang »



ASUS		Title : POWER_SYSTEM	
ASUSTEK COMPUTER INC. NB	Engineer: Gary Lin		
Customer	Project Name		
	M50S/X55S		
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« Kennedy_Zhang »

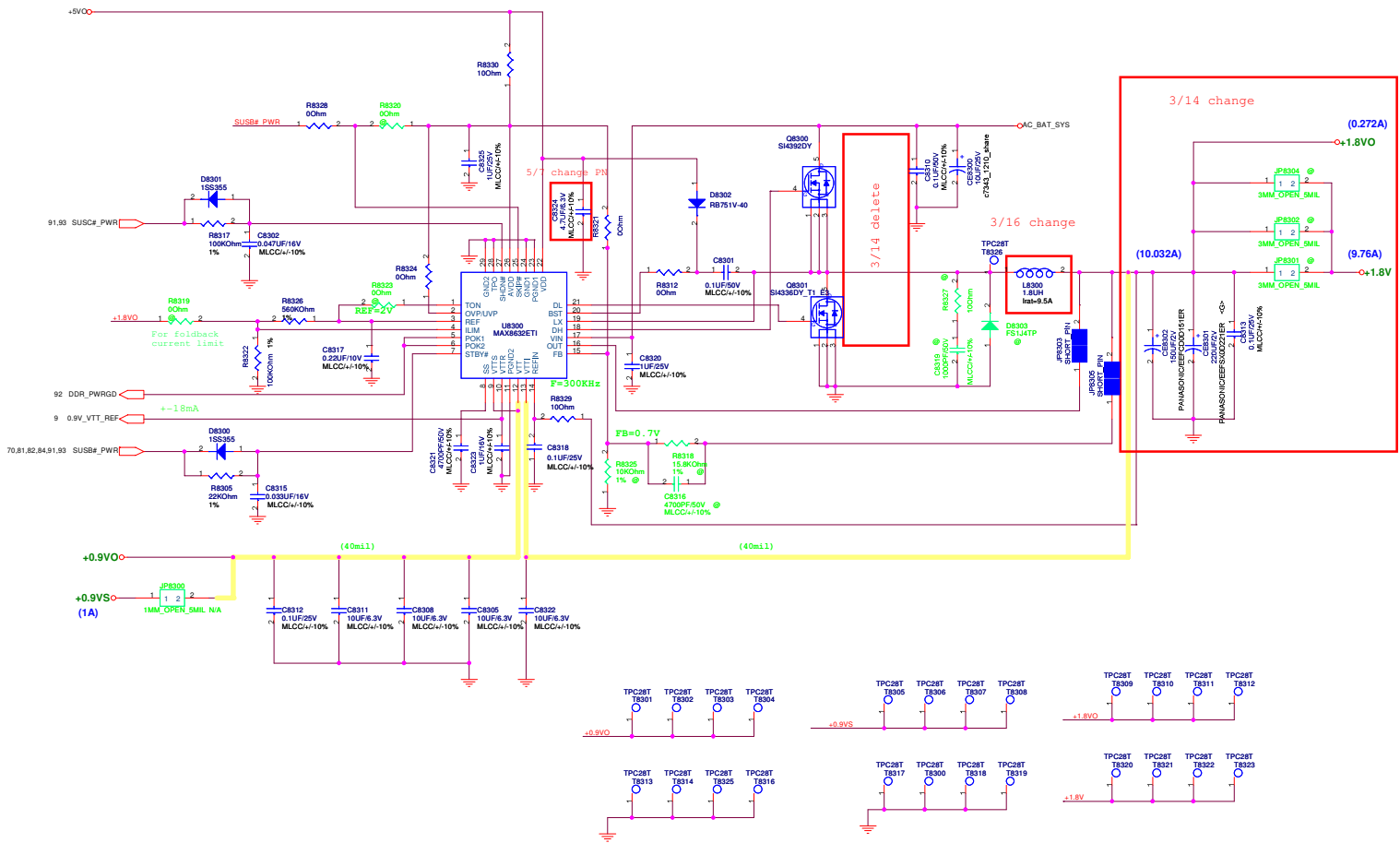


3/16 delete +1.5VSUS and change control signal to SUSB

3/16 change

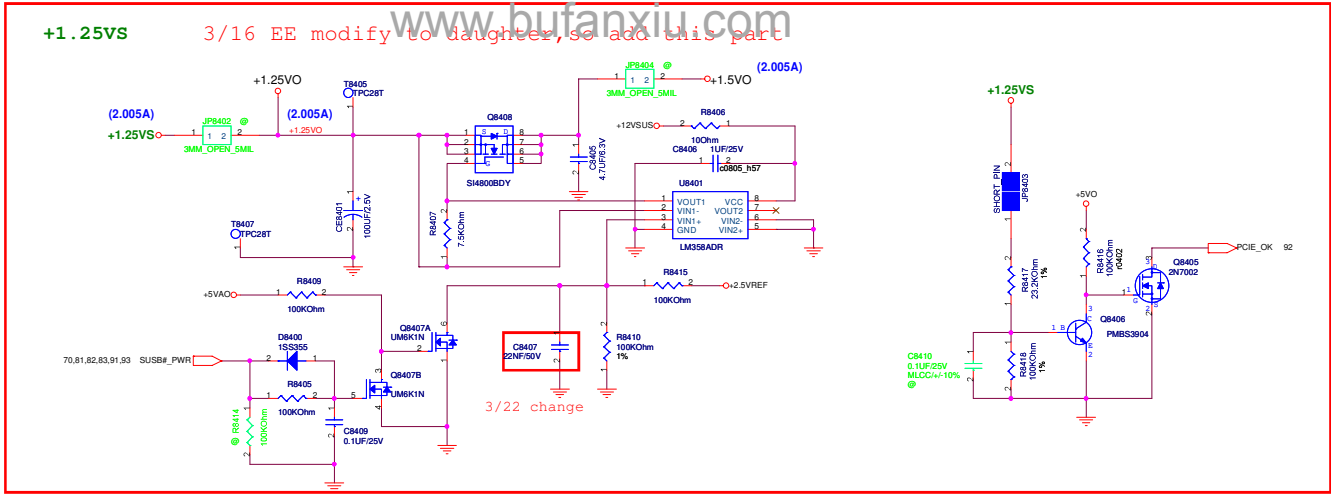
ASUS		Title : POWER_IO_1.5V5 & 1.05V	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Custom	Rev
	M50S/X55S		1.0
Date: Monday, September 03, 2007	Sheet	82	of 88

« Kennedy_Zhang »



ASUS		Title : POWER_IO_DDR & VTT	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	1.0
Custom	M50S/X55S	Date	Monday, September 03, 2007
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3/16 delete +2.5VSUS

« Kennedy_Zhang »

ASUS		Title : POWER_IO_+1.25VS	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
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3/14 EE modify to daughter,so delete this page

« Kennedy_Zhang »

		Title : N/A	
ASUSTeK COMPUTER INC. NB		Engineer: Gary Lin	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
Date: Monday, September 03, 2007	Sheet	85	of 88

		Title : N/A	
ASUSTeK COMPUTER INC. NB		Engineer: Gary Lin	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
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« Kennedy_Zhang »

		Title : N/A
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin
Site	Project Name	Rev
Custom	M50S/X55S	1.0
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« Kennedy_Zhang »

90 WATT

4/17 DELETE BAT_S WITHOUT SHUTDOWN FUNCTION

AC_BAT_SYS_INV to Inverter connect, Power Issue +Email(mail), Put JP8805 close to Q8800

AC_IN Threshold $\geq 0.049V_{max} AD_DOCK_IN > 17.44V$ active
 Adapter In(mA) = $(0.075V/Rsense(Adm)) / (VCL5 - VREF)$
 $Rsense(Adm) = 0.000m$
 $VCL5 = 2.534V$
 $\Rightarrow I_{IN} = 16.45A$
 $\Rightarrow Constant Power = 13.45 \times 85.5W$
 $\Rightarrow RST to 200mS(15.530K)$
 Charge Current Ichg = $(0.075V/Rsense(CHG)) / (VCTL3 - Vref)$
 $Rsense(CHG) = 0.0020m$
 $VCTL3 = 3V \Rightarrow I_{chg} = 2.5A$
 $VCTL1 = 5.88V \Rightarrow I_{chg} = 1.4A$
 Mode pin: Vinode > 2.8V (to LDO pin) \rightarrow 4 Cells
 2.0 Vinode > 1.8V (Booting) \rightarrow 3 Cells
 0.8 Vinode (pin to DND) \rightarrow Learning mode
 VICT < 0.8V or DCIN < 7V \rightarrow Charger Disable
 Precharge current = 150mA

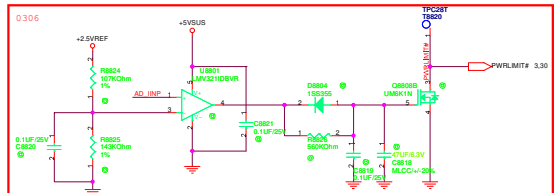
3/6 change for 3S2P/3S3P only 4/4 deleted

3/16 change

CLOSE TO BAT CON

4/4 deleted by EE

4/4 deleted



ASUS		Title : POWER CHARGER	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	
C	M50S / X5SS	1.0	
Date:	Monday, September 16, 2008	Sheet:	85 of 95

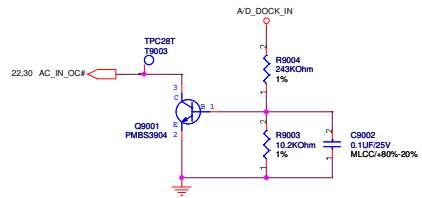
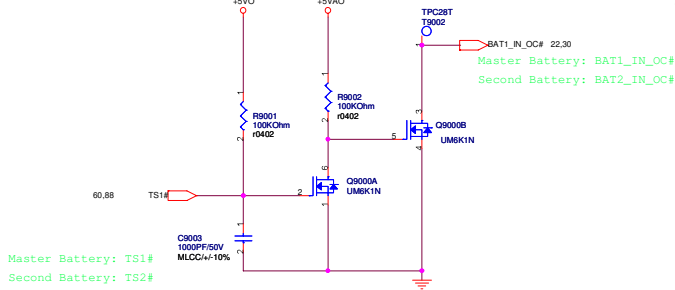
« Kennedy_Zhang »

		Title : N/A	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Site	Project Name		Rev
Custom	M50S/X55S		1.0
Date: Monday, September 03, 2007		Sheet	89 of 89

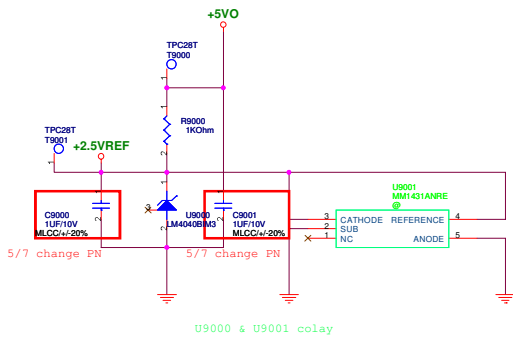
« Kennedy_Zhang »

BATTERY IN DETECT

ADAPTER IN DETECT



+2.5VREF

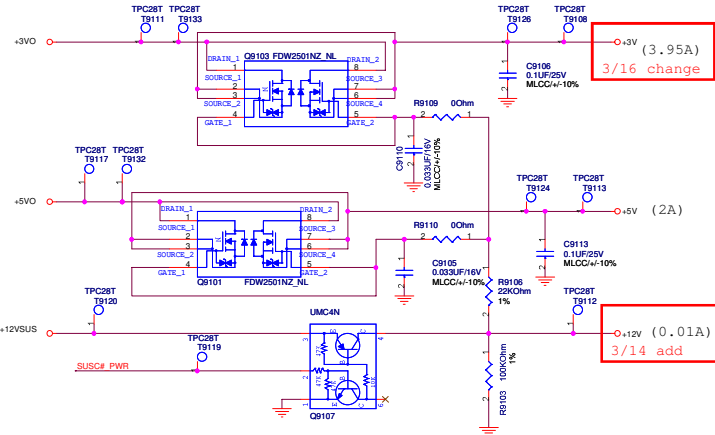
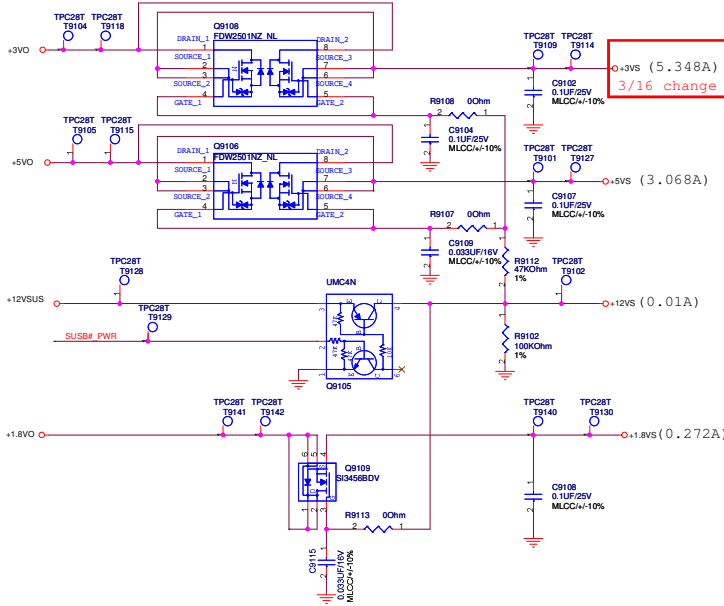


ASUS		Title : POWER_DETECT	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
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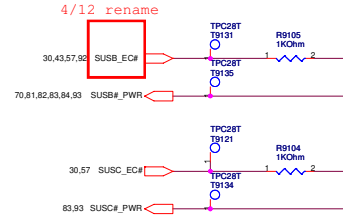
« Kennedy_Zhang »

3/16 delete +1.5VS from load switch

3/14 delete +VRAM



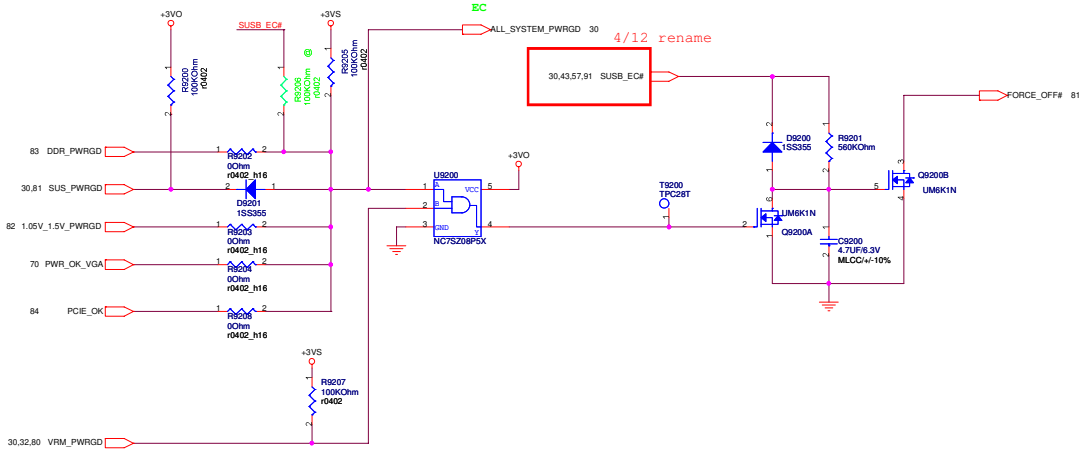
3/16 delete +1.5V



ASUS		Title : POWER_LOAD_SWITCH	
ASUSTEK COMPUTER INC. NB		Engineer: Gary Lin	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
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POWER GOOD DETECTOR

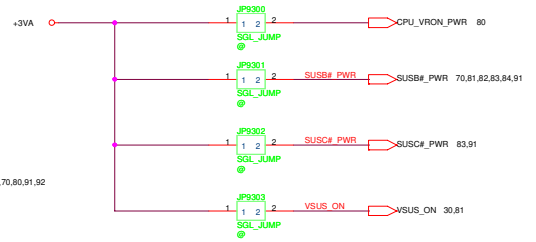


ASUS Title: POWER_PROTECT
 ASUSTek COMPUTER INC. NB Engineer: Gary Lin
 Site: Project Name: M50S/X55S Rev: 1.0
 Custom: M50S/X55S
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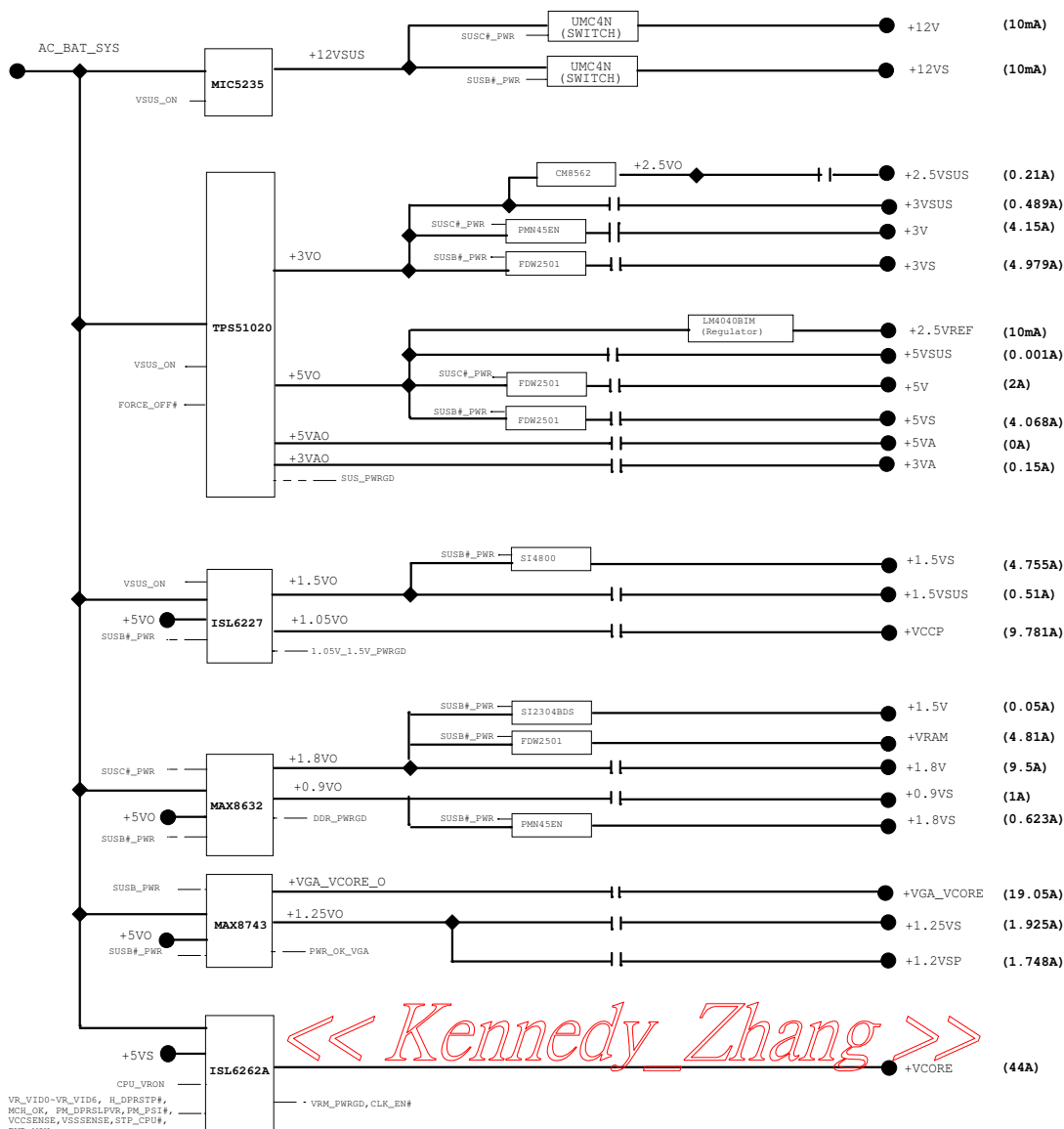
FOR POWER TEST

AC_BAT_SYS_INV	AC_BAT_SYS_INV	45,88
AC_BAT_SYS	AC_BAT_SYS	70,80,81,82,83,88
BAT_CON	BAT	88
BAT_CON	BAT_CON	60,88
+2.5VREF	+2.5VREF	84,88,90
+3VA	+3VA	20,30,56,57,81
+5VAD	+5VAD	81,84,90
+5VVO	+5VVO	81,82,83,84,90,91
+5VSUS	+5VSUS	23,31,81,88
+5V	+5V	15,44,45,56,57,63,65,66,70,91
+5VS	+5VS	22,23,31,36,37,46,48,50,51,56,57,63,80,91
+3VVO	+3VVO	81,91,92
+3VSUS	+3VSUS	22,23,33,81
+3V	+3V	35,43,45,53,57,61,62,64,91
+3VS	+3VS	7,8,11,15,21,22,23,29,30,32,33,36,37,40,41,42,43,44,45,46,47,48,50,51,53,56,57,58,62,63,64,65,66,67,70,80,91,92
+5VAD	+5VAD	56,63,81
+12VSUS	+12VSUS	81,84,91
+12V	+12V	42,91
+12VS	+12VS	37,45,46,70,91
+1.8VVO	+1.8VVO	83,91
+1.8V	+1.8V	7,8,9,11,14,15,57,83
+1.8VS	+1.8VS	38,57,66,70,91
+0.9VVO	+0.9VVO	9,57,70,83
+0.9V	+0.9V	83
+1.05VVO	+1.05VVO	80,82
+VCCP	+VCCP	3,4,5,10,12,14,15,20,23,29,57,82
+1.5VVO	+1.5VVO	82,84
+1.5VS	+1.5VS	4,15,21,23,43,53,57,58,64,70,82
+VDORE	+VDORE	4,5,80
+1.25VVO	+1.25VVO	11,15,23,57,84



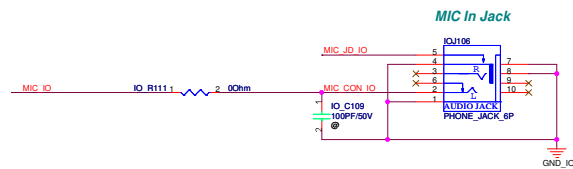
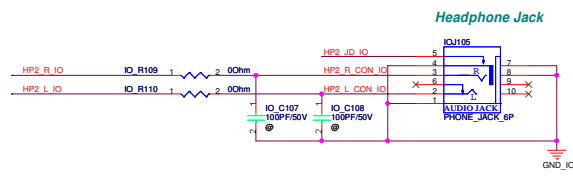
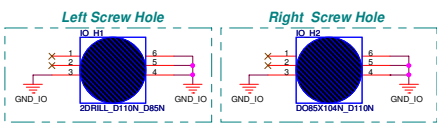
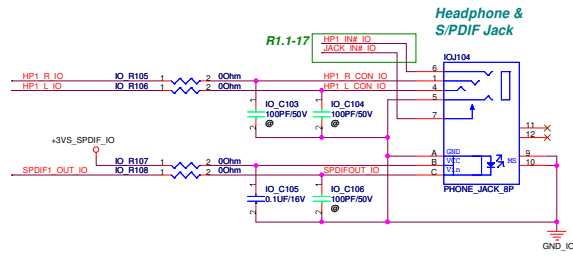
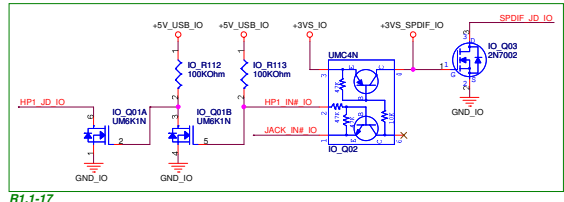
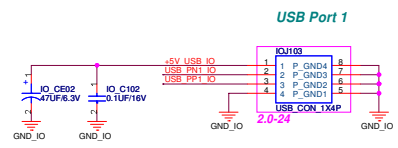
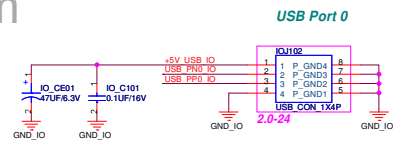
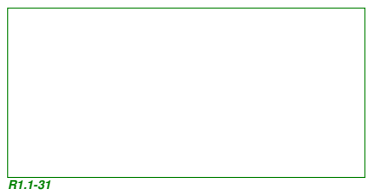
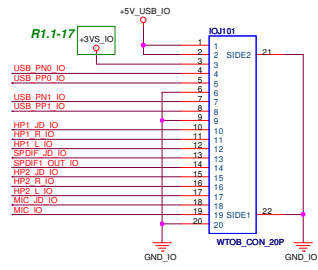
ASUS		Title : POWER_SIGNAL	
ASUSTek COMPUTER INC. NB		Engineer: LSBY LIR	
Size	Project Name	Rev	
Custom	M50S/X55S	1.0	
Date: Monday, September 03, 2007	Sheet	83	of 88

« Kennedy_Zhang »



<< Kennedy Zhang >>

VR_VID0-VR_VID6, H_DPRSTP#, MCH_OK, PM_DPRS1PVR, PM_PSI#, VCCSENSE, VSSSENSE, STP_CPU#, PWR_MON



ASUS		Title : USB & Audio Jack
ASUSTek COMPUTER INC. NBI		Engineer: Wenchi Shen
Site	Project Name	Rev
Customer	M50S/X55S	2.0
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« Kennedy_Zhang »

Rev	Date	Description
R1.0		First Release!
R1.1 Green Block		** Merge IO board into main board PCB. Page 95. 01.Remove VR_VID[6:0] testing series 0 0hm. Page 4. 02.Change 6pcs +VCCORE capacitors to No-Stuff for cost down. Page 5. 03.Change 3pcs +0.9VS capacitors to No-Stuff for cost down. Page 9. 04.Change N1Sv USB port to follow N2Sv, and modify USB_OC#. Page 21,43,45. 05.PM Request: Change Bluetooth LED tp E-Mail LED. Page 22,56. 06.Follow Intel to change C2304 to 1uF/16V(XR). Page 23. 07.Follow R1E to change R2904 to 270ohm. Page 29. 08.Follow ITR8752/8512 EC Common Hardware Pin Assignment v0.005, change GPE7 to INSTANT_ON# and GPG0 to PM_THERM#. Page 30. 09.PM REquest: Remove USB port charger function. Page 30,65. 10.PM change WLAN LED to touch-pad lock LED. Page 30,56. 11.Change IR to 36KHz to meet Vista remote control Min. range requirement. Page 31. 12.Remove testing 2nd CIR design. Page 31. 13.Change X3301 to 49S type for cost down. Page 33. 14.LAN chip version change. Page 33. 15.Audio codec chip change version. Page 36. 16.N1Sv/X55 will not supprot 3G function. Page 36,67. 17.Add S/PDIF & HDMI jack detect by Realtek sugesstion. Page 36,65,70,95. 18.Modify audio de-pop circuit. Page 36,37. 19.Modify LVDS power sequence failed bug. Page 45. 20.Modify LCD abnormal display bug due to LVDS pair mismatch. Page 45,70. 21.Remove HDIV support function. Page 47,70. 22.Remove HDMI EMI filter design. Page 48. 23.X55 need two pwer LEDs. Page 56. 24.PM change WLAN LED to RF LED. Page 56,63. 25.Bluetooth pin define error. Page 61. 26.Remove co-layout sequence logic control circuit. Page 68. 27.ME change parts: J3401,J5102,J6002,J6501. Page 34,51,60,65. 28.EMI modification. Page 34,36,65. 29.Crystal accuracy fine-tune. Page 30.USB droop test fail. Page 65. 31.Remove IO board USB common choke design. Page 95. 32.Speaker fine-tune. Page 37. 33.Cost down for 4-wire PWM fan. Page 50. 34.Cost down: Change RB717F to BAT54AW. Page 37,45,48,56.
R2.0 Pink Block		01.Change +1.25VS_MPLL, +1.25VS_PEGPLL & +1.8V_SM_CK PLL design. Page 15. 02.Add CMOS crack protection circuit. Page 22. 03.Reserve C2337 (10UF/16V) for +5VREF_ICH. Page 23. 04.Change ICS9LPR363 version from D to E for SATA clock jitter improve. Page 29. 05.With EMI's confirmation, replace R2901, R2905, R2906 with short-pad JP2901, JP2902, JP2903. Page 29. 06.With EC's confirmation, change ITE8752 P/N to 06G042016011. Page 30. 07.With EMI's confirmation, replace R3001 with short-pad JP3002. Page 30. 08.With EMI RD's confirmation, remove reserved LAN common choke circuit. Page 34. 09.With EMI's confirmation, change R3612, R3614, R3615, R3616, R3622, R3624, R3626 to short-pad JP3601-JP3607. And change R3611, R3613, R3623, R3625 to No-Stuff. Page 36. 10.Post wave sounds abnormal when audio amplifier use GMT G1431. Change C3706 to 0.33UF to shorten audio amplifier start-up time. Page 37.

Rev	Date	Description
		11.For cost down, change CE3701-CE3704 to 47UF. And after EA test, these can pass Vista audio criteria. Page 37. 12.With EMI's confirmation, remove reserved 1394 common choke circuit. Page 41. 13.With EMI's confirmation, remove reserved NewCard USB common choke circuit. Page 43. 14.Add NewCard debug card co-layout circuit. Page 44. 15.EMI modification: change reserved common choke circuit from USB port to internal camera port. Page 45. 16.With EMI's confirmation, replace RX4603, RX4604 with JP4601, JP4602. Page 46. 17.HDMI jack detection modification. Page 48,70. 18.With EMI's confirmation, replace RX4809, RX4810 with JP4801, JP4802. Page 48. 19.Change PWM FAN capacitors to 10UF. Page 50. 20.Modify X55S power LED design. Page 56. 21.Modify DC_IN bead for 120W design. Page 60. 22.With EMI's confirmation, remove reserved e-SATA/USB combo port USB common choke circuit. Page 66. 23.Reserve R8023 for shortage issue of ISL6262A. Page 80. 24.QTR USB plug test failed, change USB connector. Page 95.

		Title : Revision History	
ASUSTek COMPUTER INC. NBI		Engineer: John Hung	
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« Kennedy_Zhang »