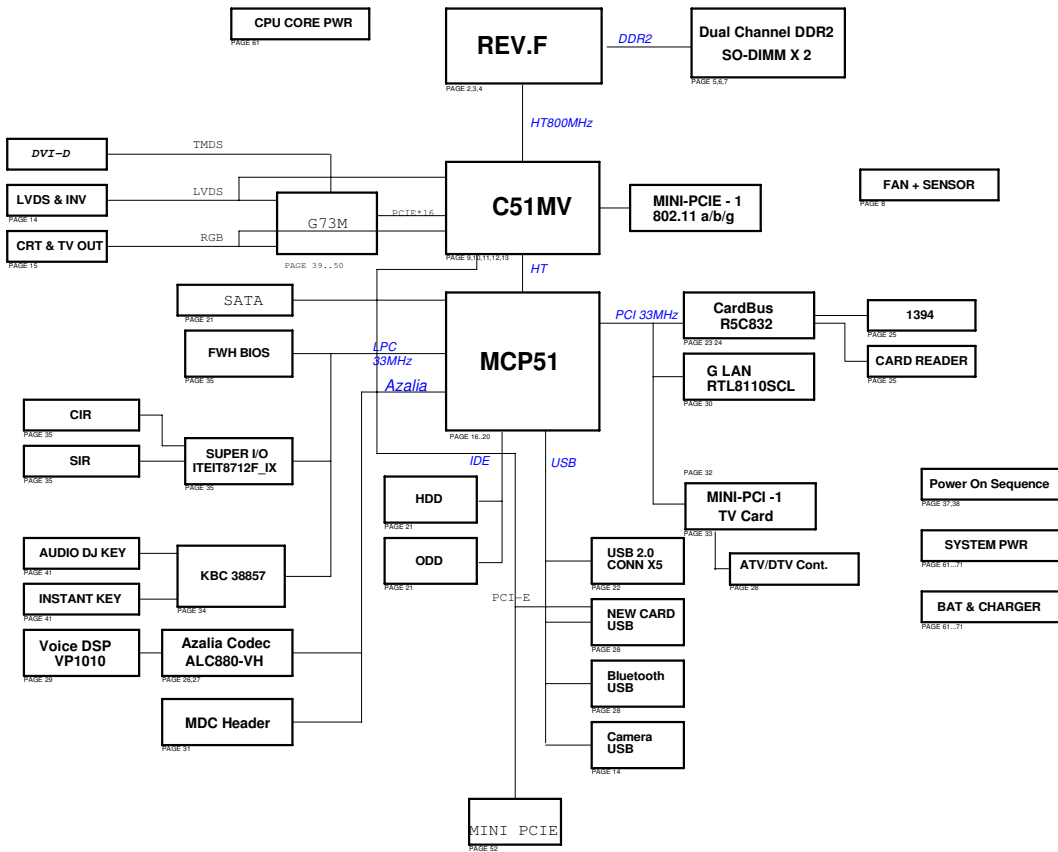


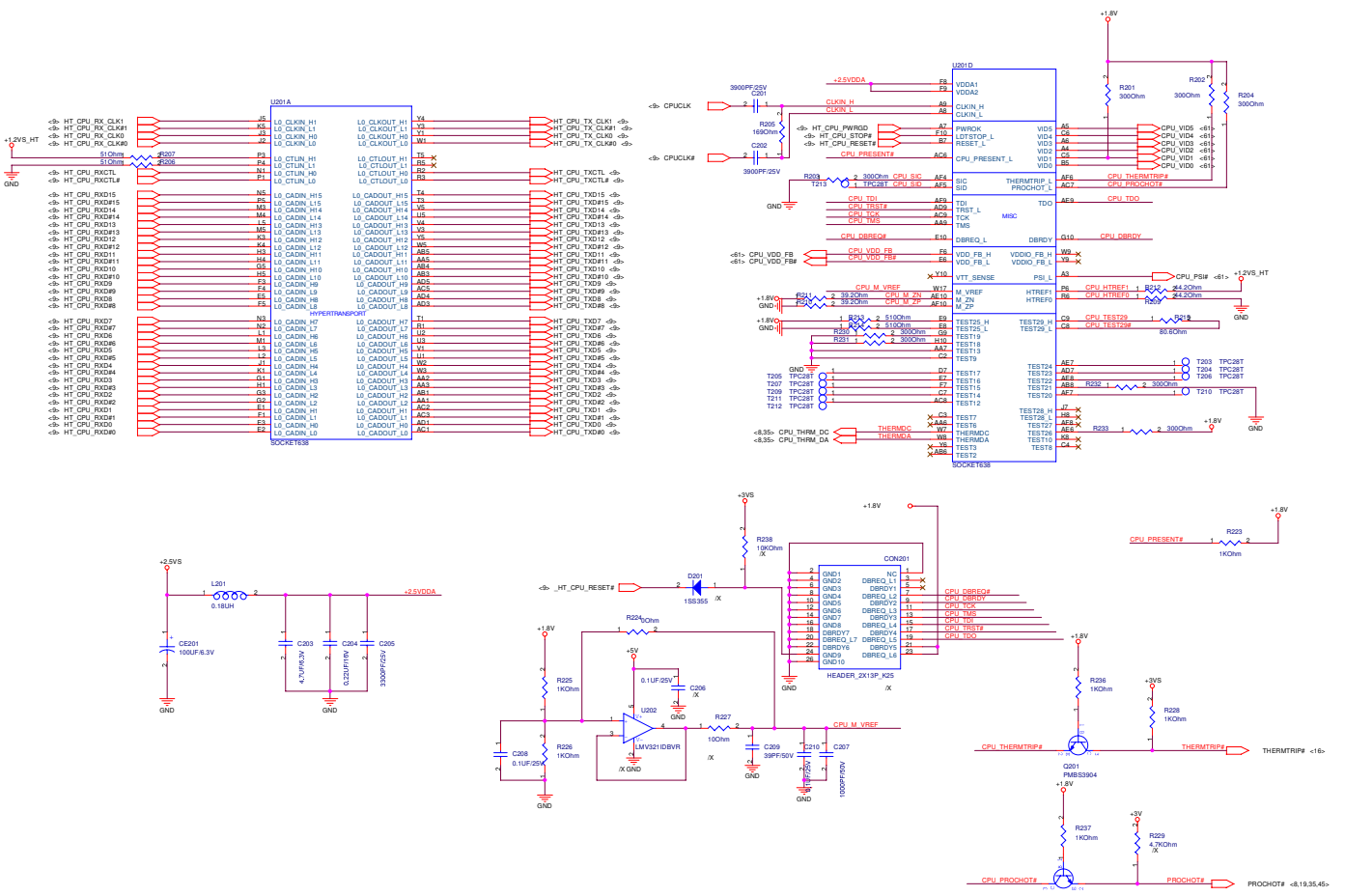
A7T/M BLOCK DIAGRAM



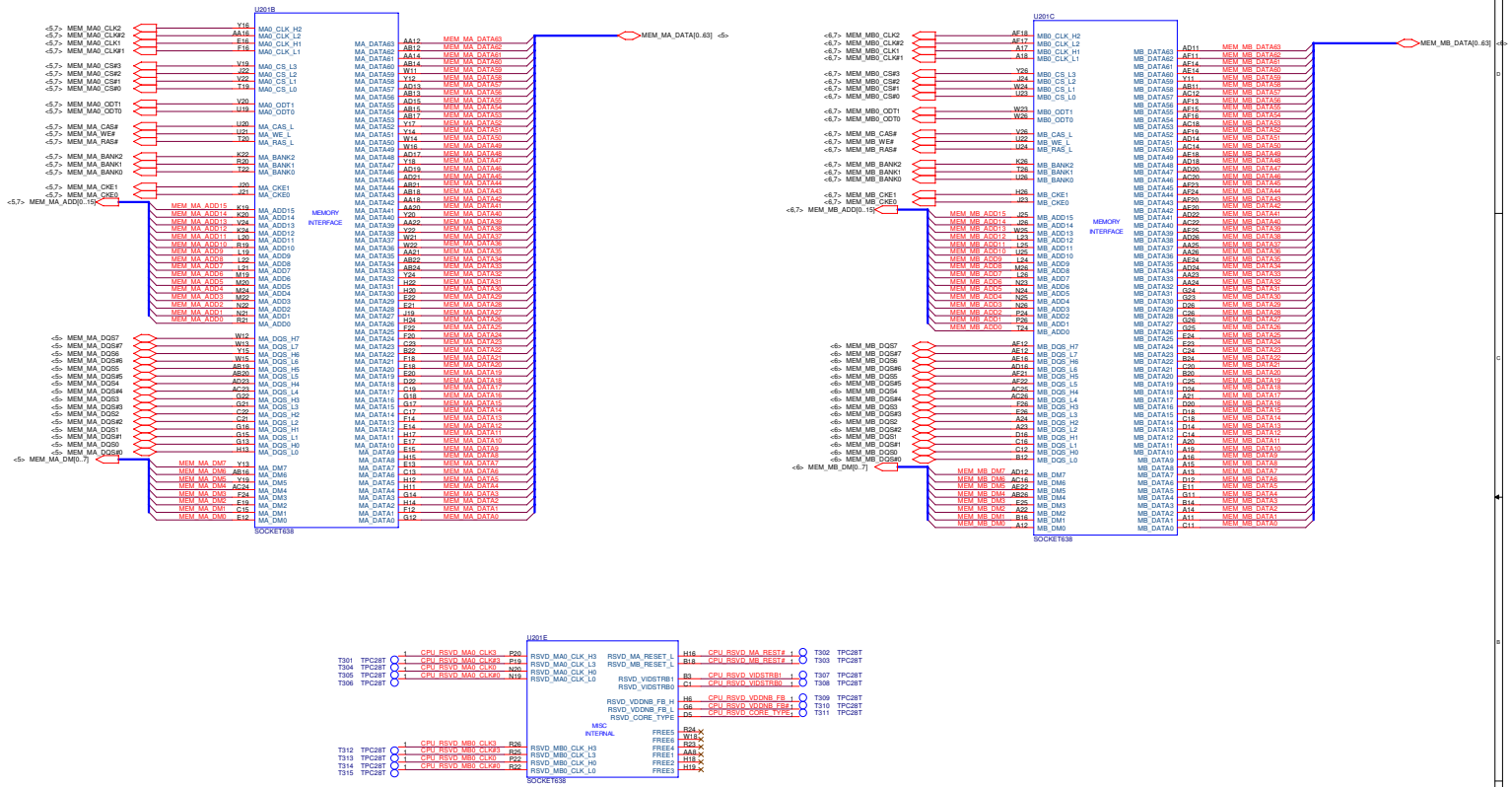
01_BLOCK DIAGRAM	41_G73M_PCIE16_1
02_AMD S1 CPU(1)	42_G73M_PCIE16_2
03_AMD S1 CPU(2)	43_G73M_DISPLAY
04_AMD S1 CPU(3)	44_G73M_BIOS&CRY
05_DDR2_SO_DIMM-1	45_G73M_GPIO
06_DDR2_SO_DIMM-2	46_G73M_STRAP
07_DDR2_SODIMMS	47_G73M_VRAM1
08_THERMAL&FAN	48_G73M_VRAM2
09_C51M HT_CPU	49_G73M_VRAM3
10_C51M HT_MCP	50_G73M_VRAM4
11_C51M_PCIE16	51_RJ11+45&MINI
12_C51M VGA OUTPUT	52_NEWCARD (802.11)
13_C51M POWER&GND	61_Vcore
14_LVDS CONNECTER	62_SYSTEM
15_CRT TV CONNECTER	63_1.2V0&+1.8V0
16_MCP51_HT I/F	64_2.5V & 0.9V_3VA
17_MCP51_PCI I/F	65_VGACORE
18_MCP51_IDE	66_1V_C51_CORE
19_MCP51_USB	67_LOAD SWITCH
20_MCP51_POWER	68_CHARGE
21_HDD&ODD	69_PIC16C54
22_USB	70_BATCONN
23_CARDBUS R5C841	71_PWRGD_SHUTDOWN#
24_CARDBUS SOCKET	53_SYSTEM RESOURCE
25_1394 CON	54_HISTORY
26_ALC880	
27_AMP	
28_BT/FM/RF	
29_VOICE_DSP	
30_LAN_RTL8100TL	
31_RJ11+45&MDC	
32_MINIPCI (802.11)	
33_MINIPCI (TV)	
34_KBC 38857	
35_SUPER I/O	
36_FUNCTION KEY	
37_PWR ON SEQ-1	
38_PWR ON SEQ-2	
39_G73M_FB_1	
40_G73M_FB_2	

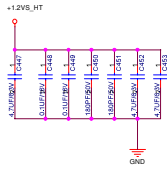
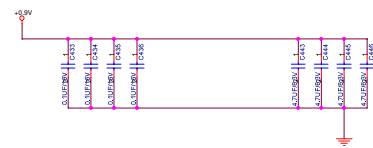
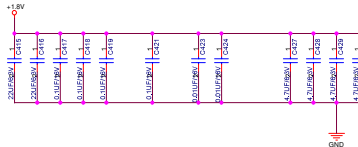
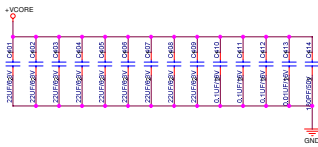
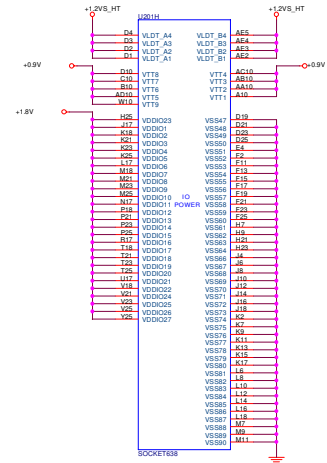
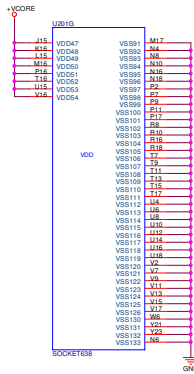
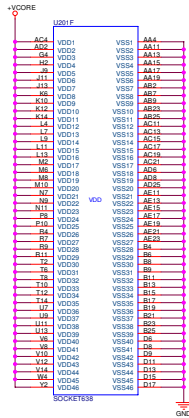
ASUS		Title : BLOCK DIAGRAM	
ASUSTeK		Engineer: DEL TAN	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2009-01-26 10:00	Sheet: 1	of	1

<< Kennedy_Zhang >>



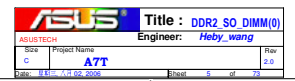
<< Kennedy_Zhang >>



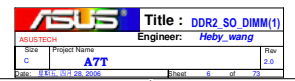


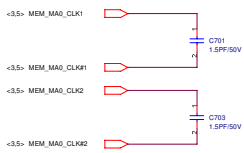
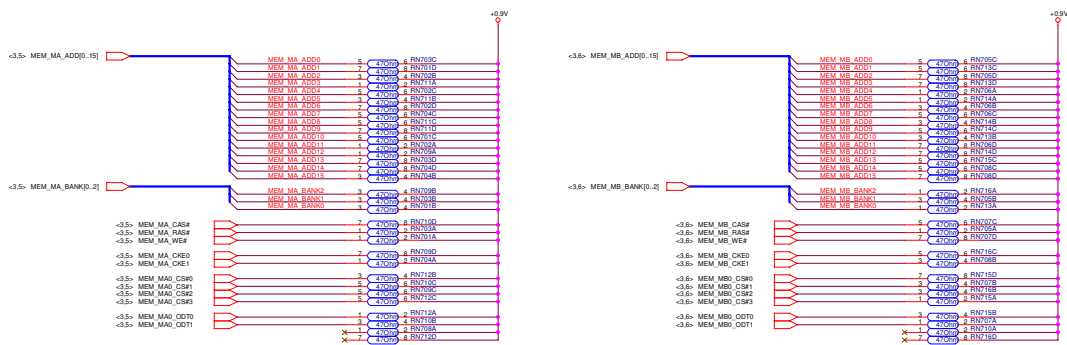
<< Kennedy_Zhang >>

<< Kennedy_Zhang >>

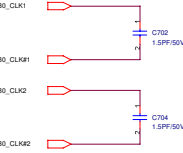


<< Kennedy_Zhang >>

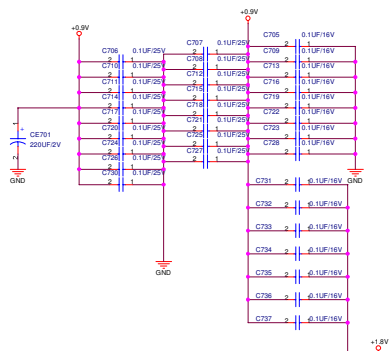




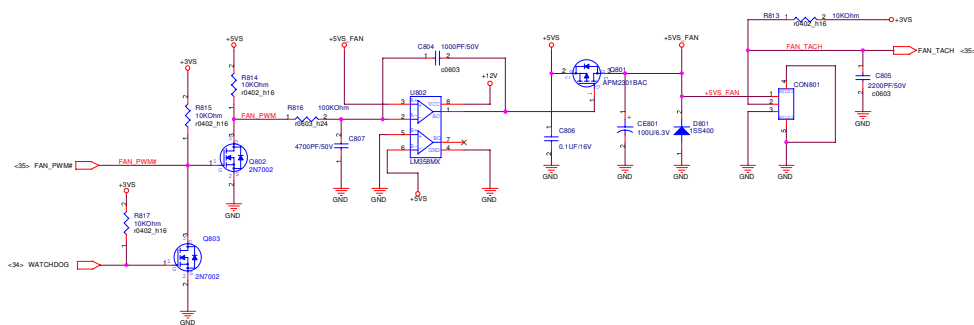
PLEASE CLOSE TO PROCESSOR WITHIN 1.5 INCH



PLEASE CLOSE TO PROCESSOR WITHIN 1.5 INCH

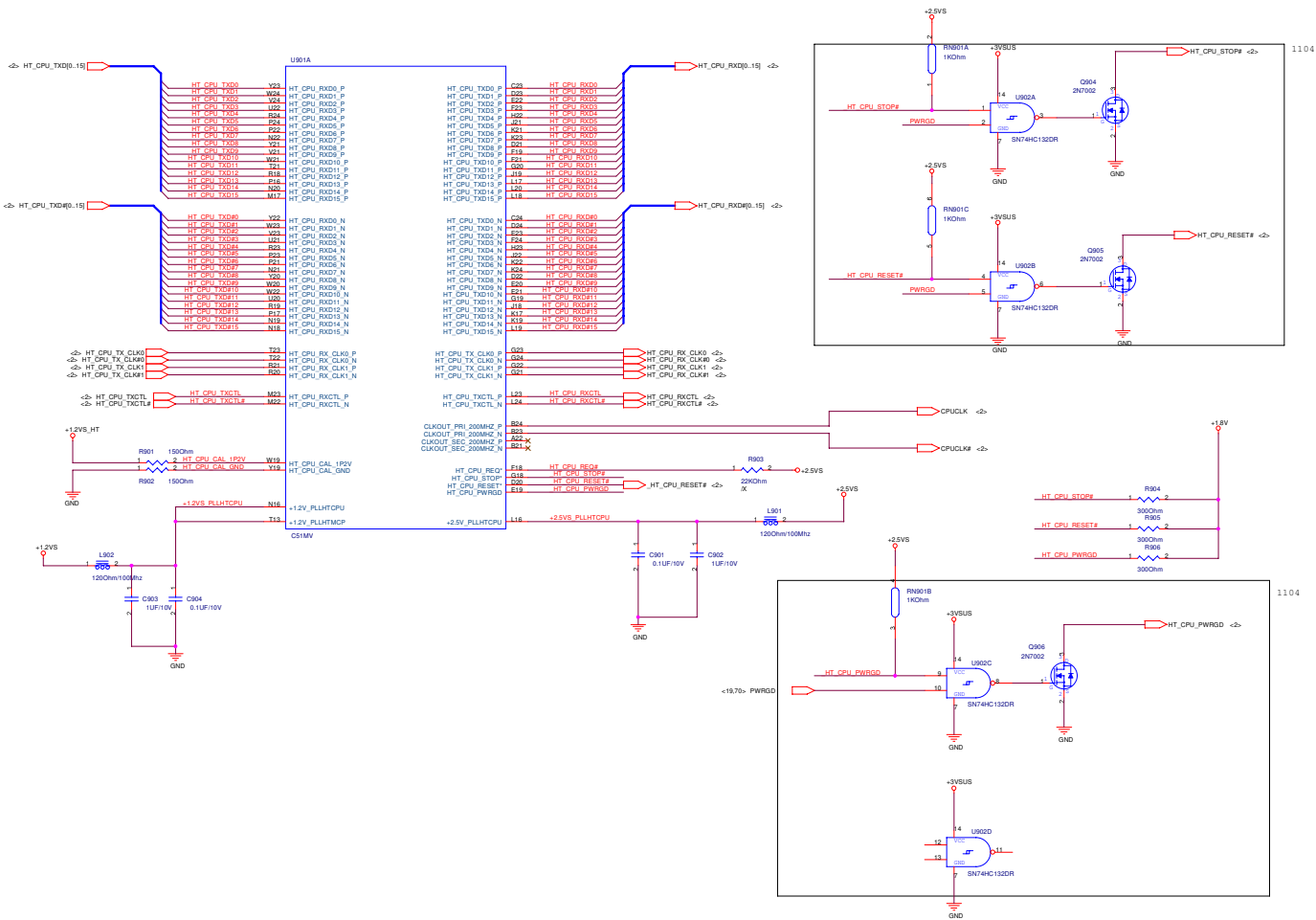


<< Kennedy_Zhang >>



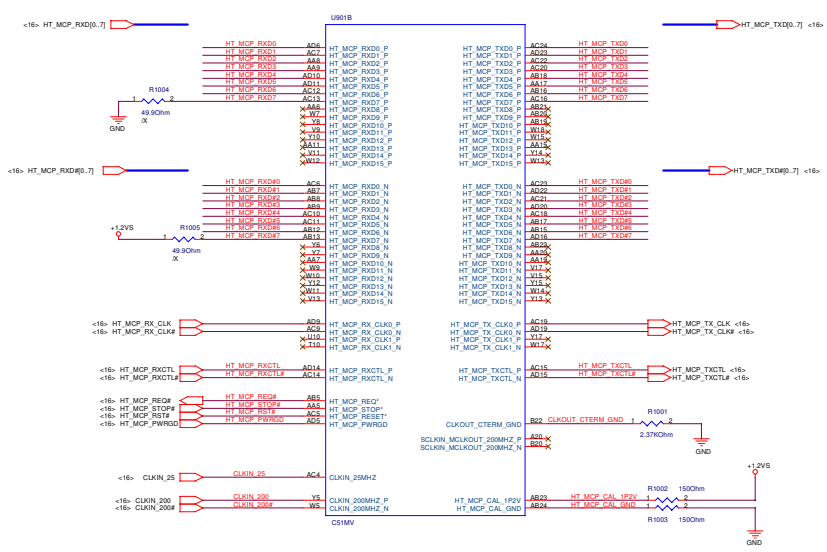
Pin 13 State	Pin 14 State	Address
0	Low (10 kΩ to GND)	0101100 (0x2C)
0	High (10 kΩ Pull-Up)	0101101 (0x2D)
1	Don't Care	0101110 (0x2E) (Default)

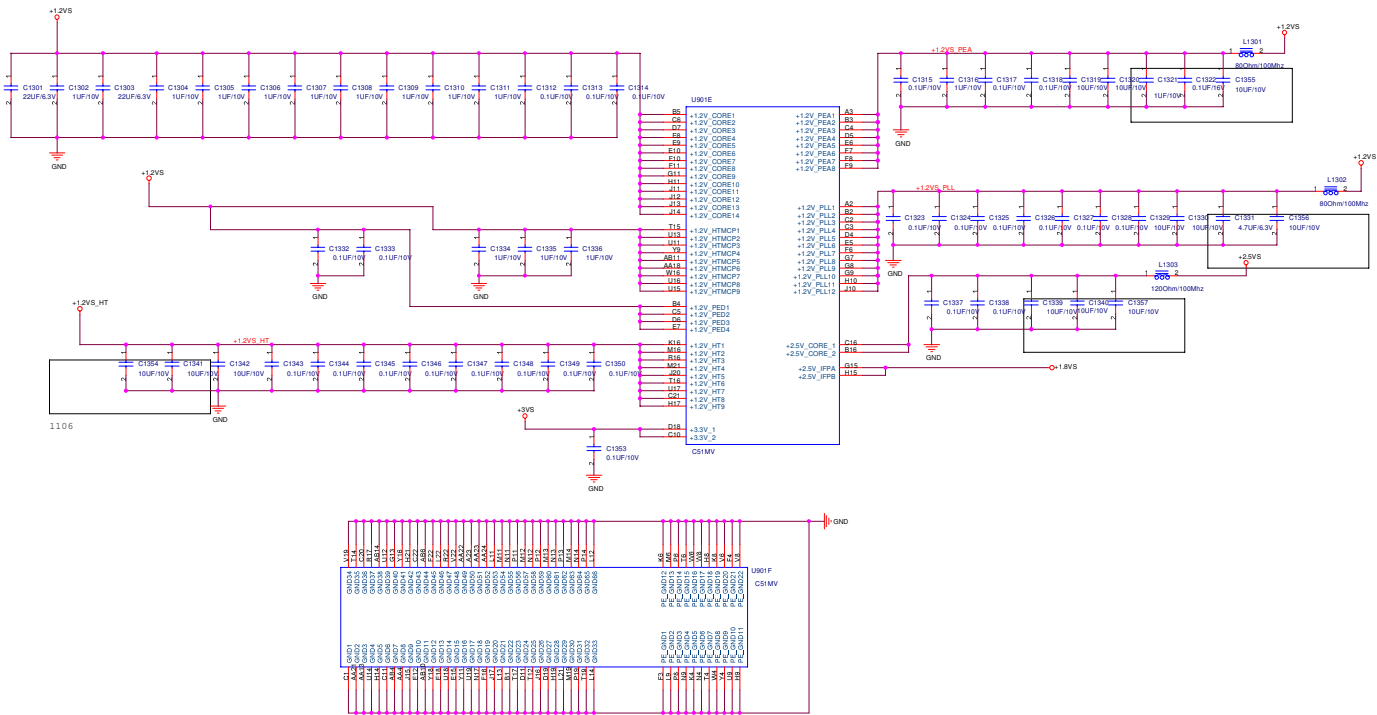
<< Kennedy_Zhang >>



<< Kennedy_Zhang >>

ASUS		Title : CS1M HT CPU	
ASUSTeK		Engineer: PENG_XIAO	
Ver	Project Name	Rev	
1.0	A7T	2.0	
Date: 2008-10-20		Sheet: 8 of 10	



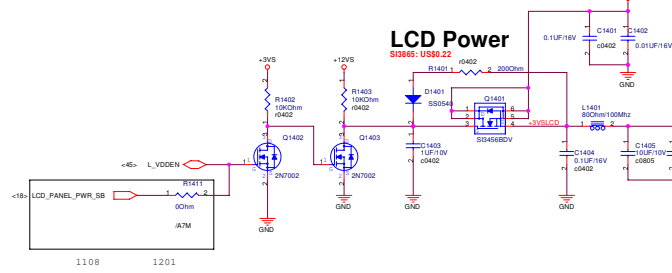


<< Kennedy_Zhang >>

LCD Backlight Control

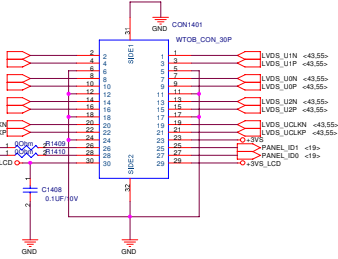
3.3V
S0-S1M:410 mA(500 mA Max.)

3V 3.5V
Full
Active:
410
mA(Max.
500 mA)



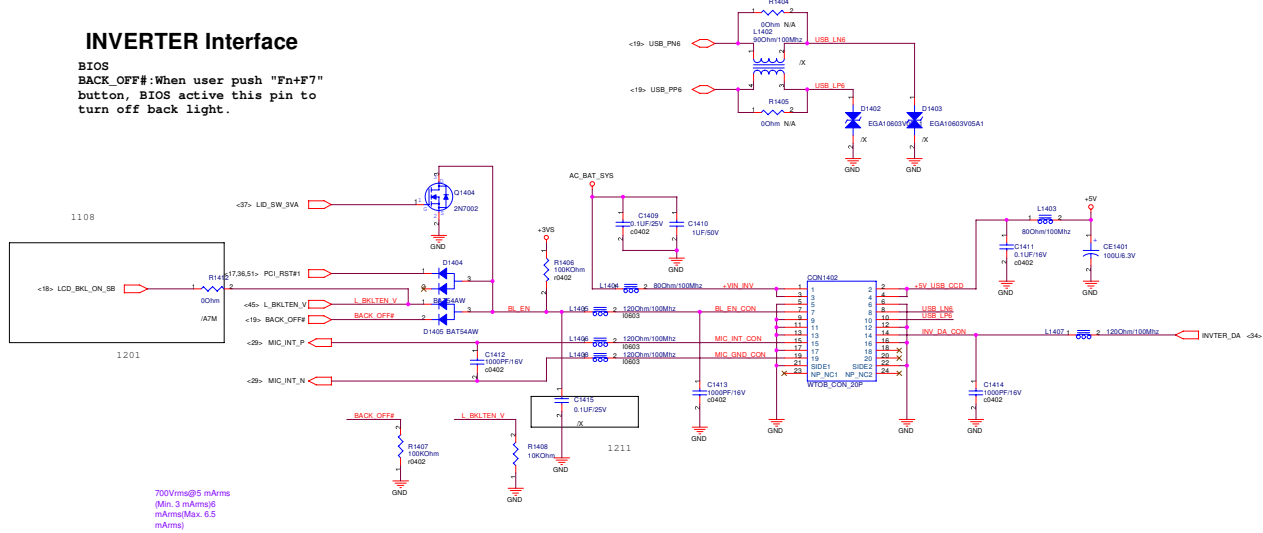
LCD LVDS Interface

Cable Requirement:
Impedance: 100 ohm +/- 10%
Length Mismatch <= 10 mils
Twisted Pair(Not Ribbon)
Maximum Length <= 10'



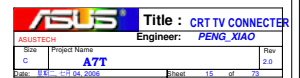
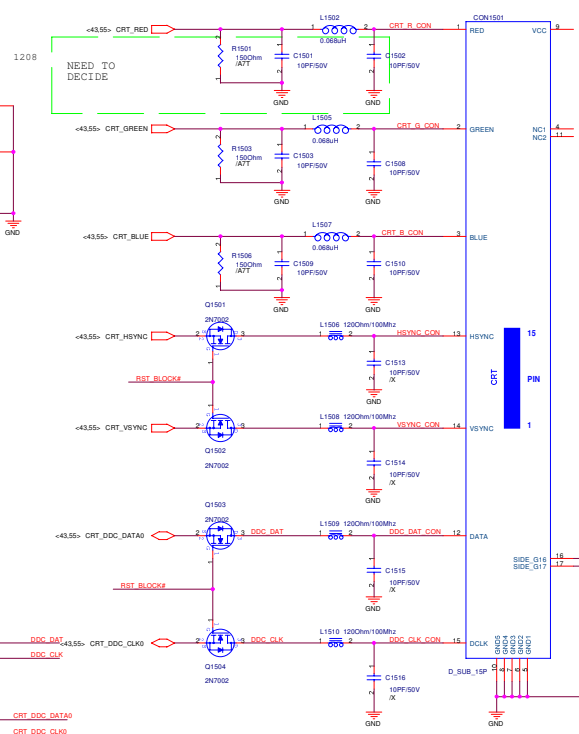
INVERTER Interface

BIOS
BACK_OFF# : When user push "Fn+F7"
button, BIOS active this pin to
turn off back light.

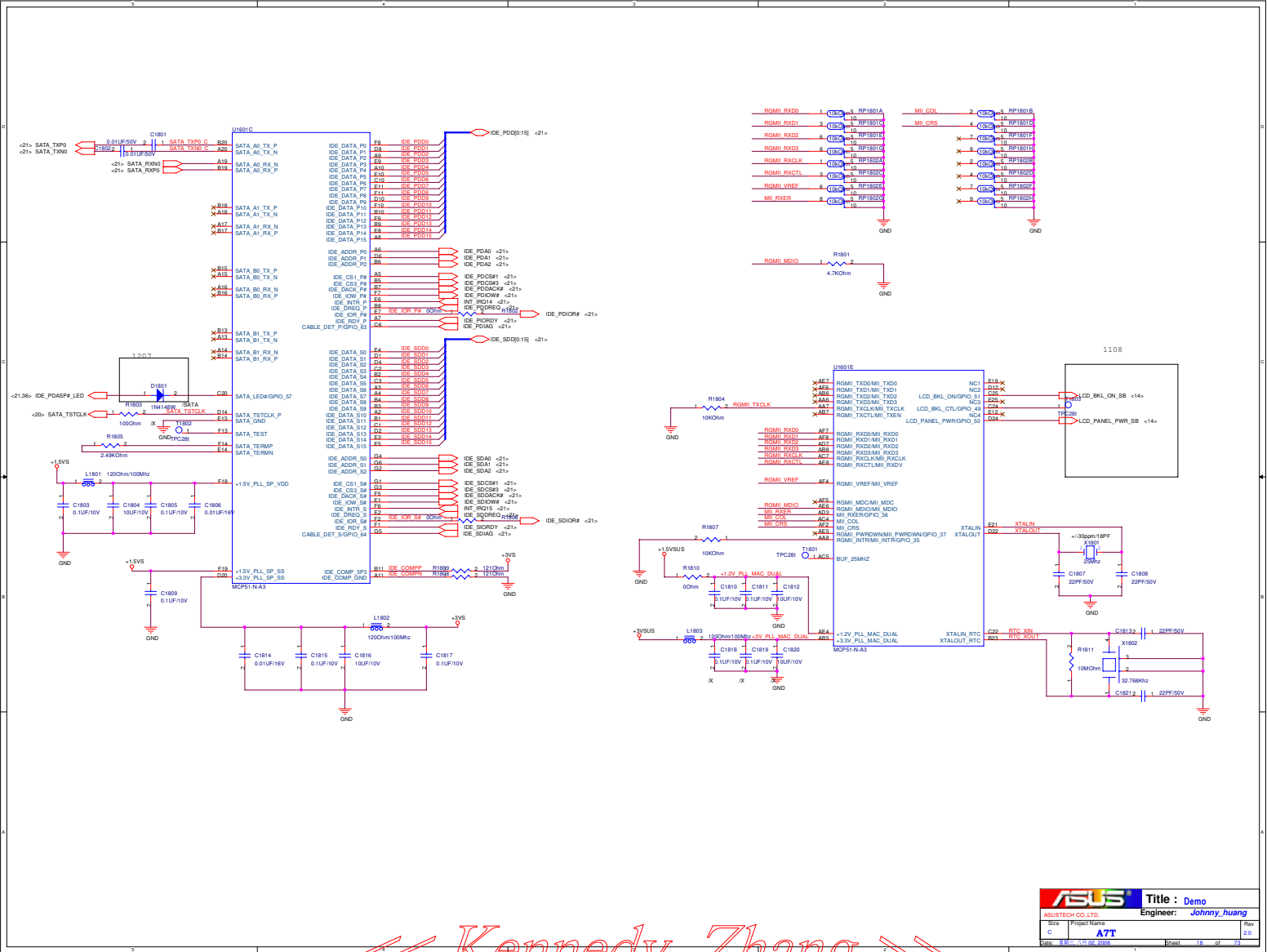


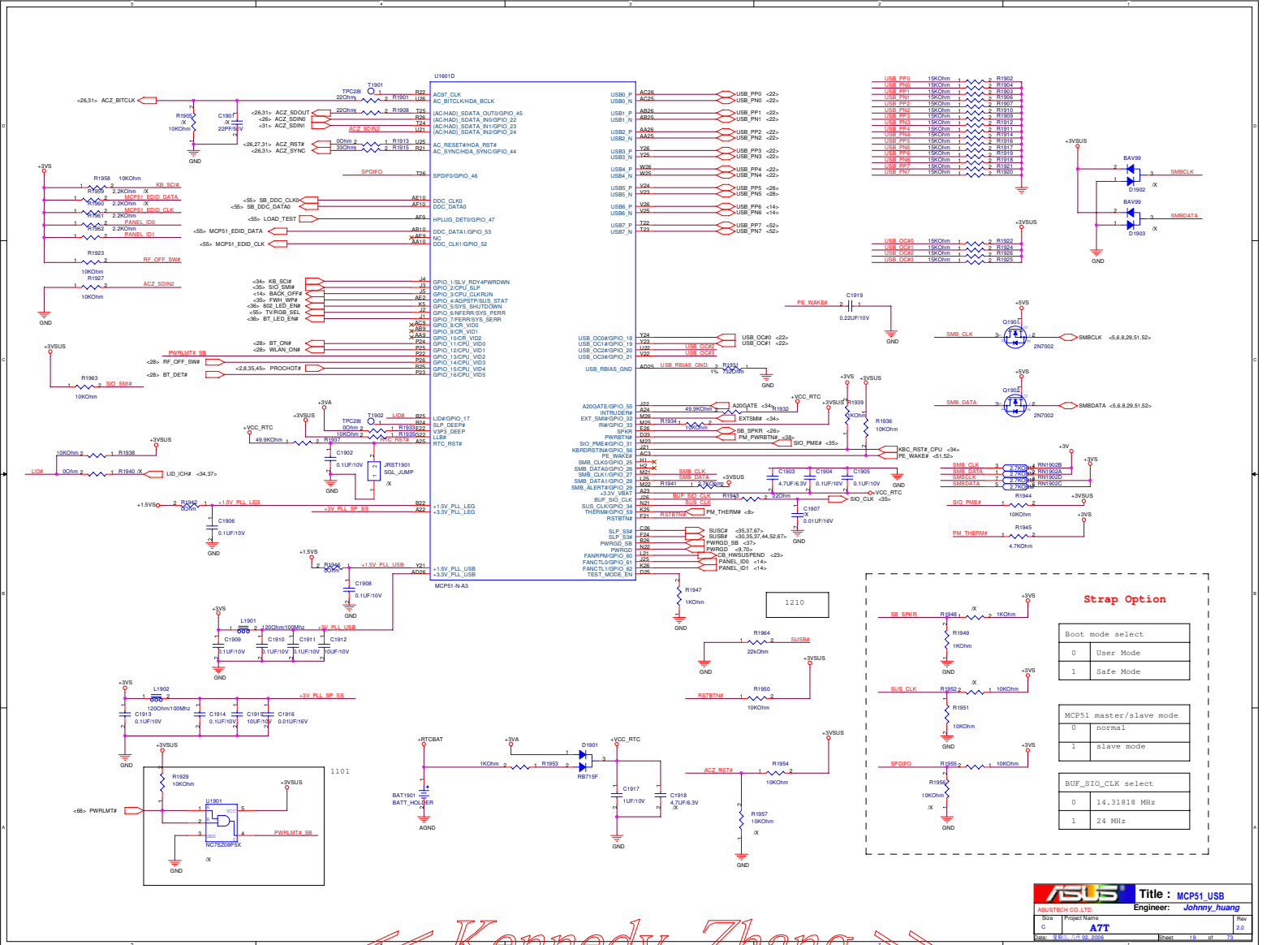
<< Kennedy_Zhang >>

CRT OUT

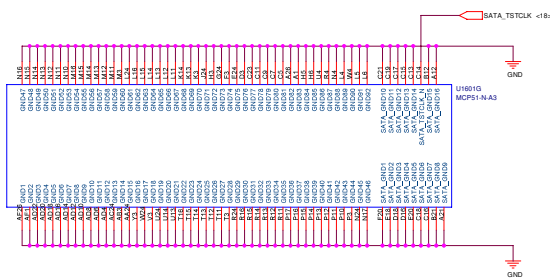
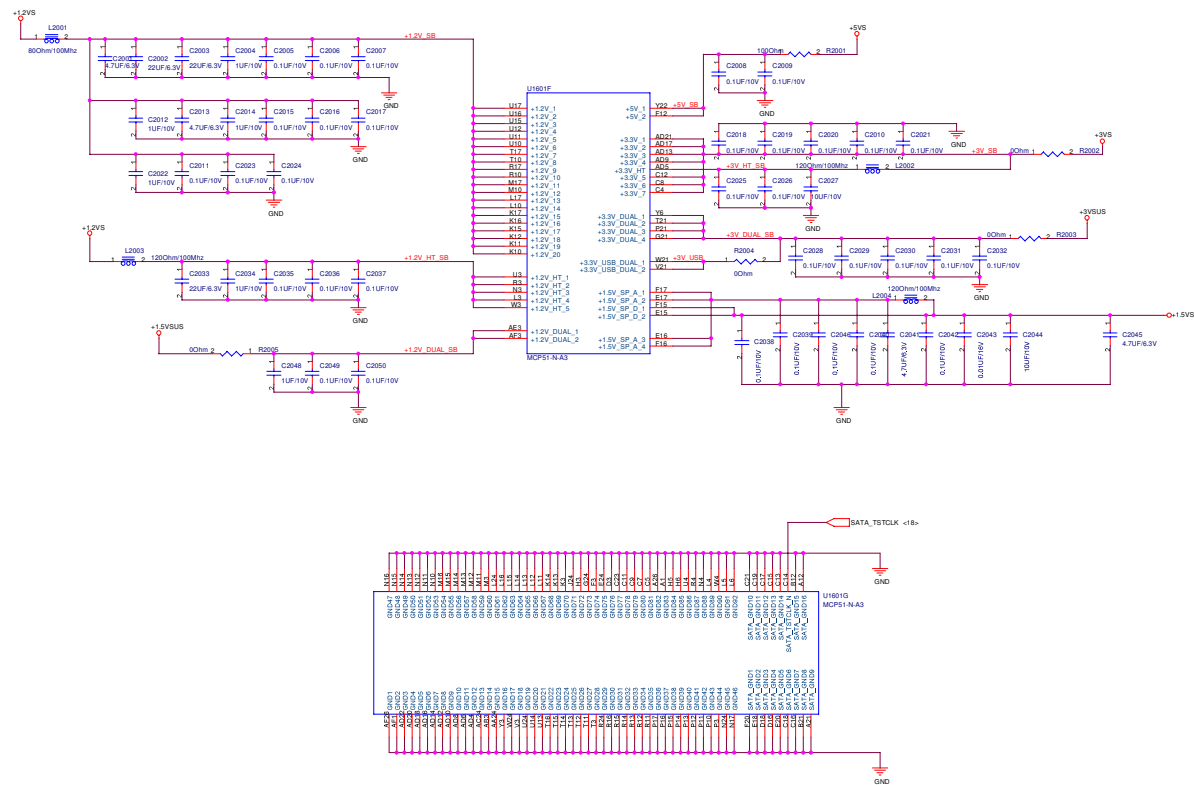


<< Kennedy_Zhang >>

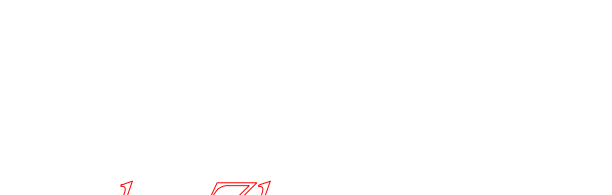
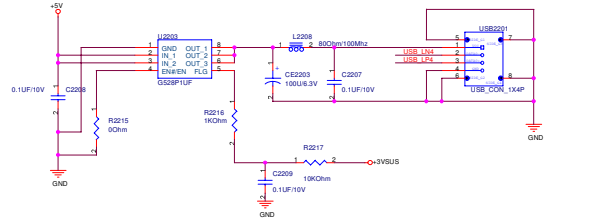
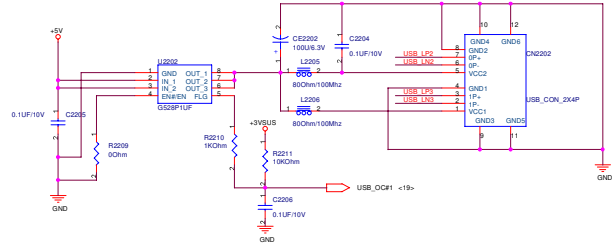
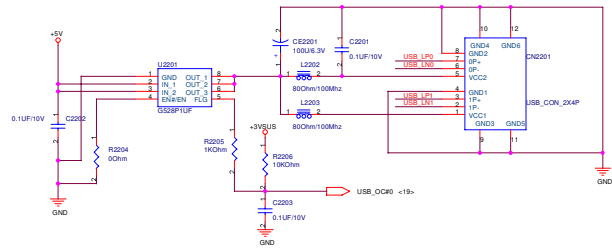
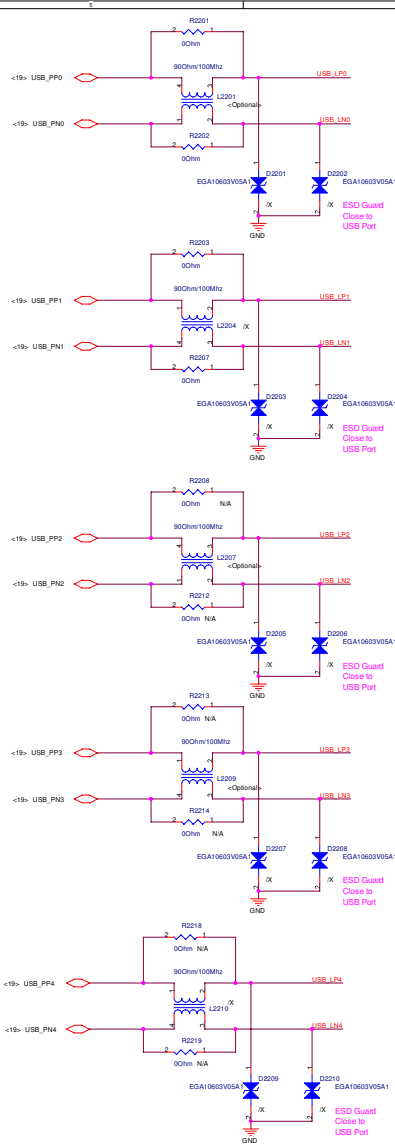




<< Kennedy_Zhang >>

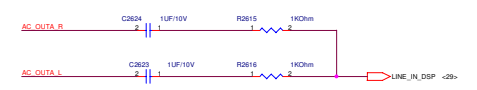
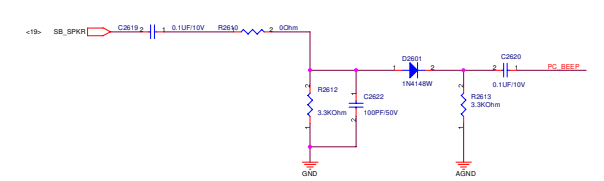
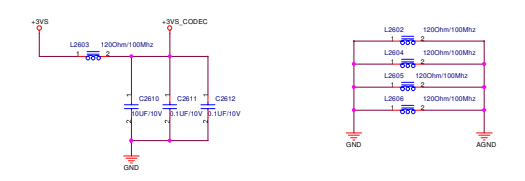
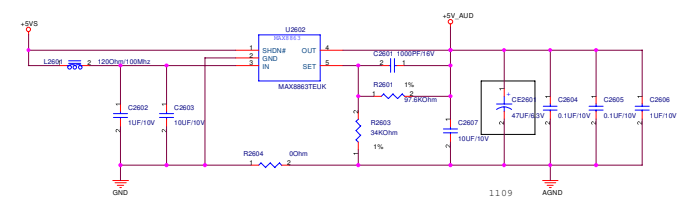
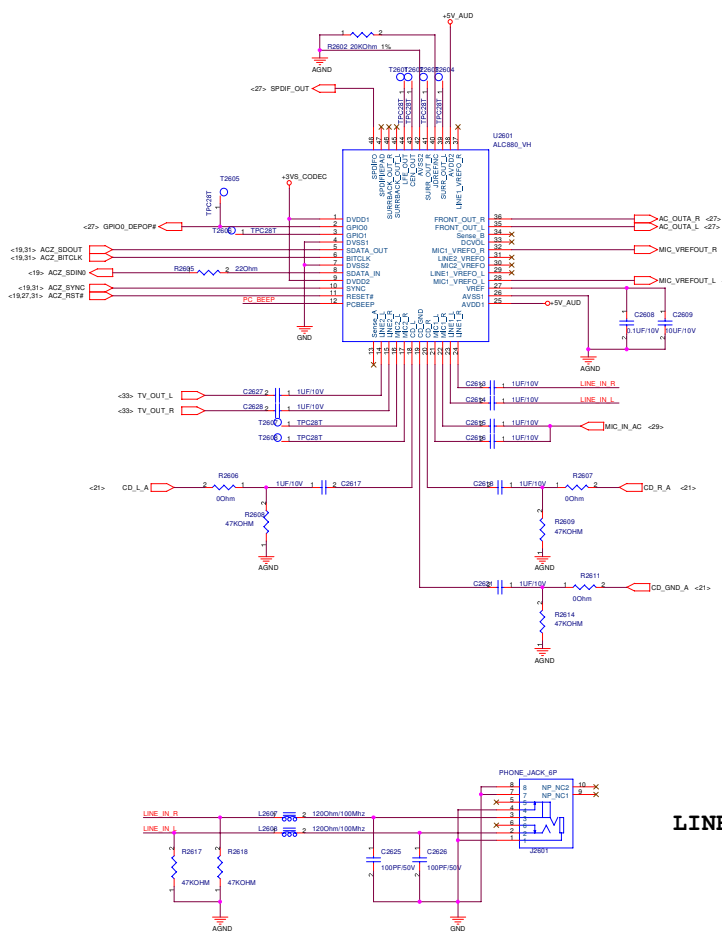


<< Kennedy_Zhang >>



« Kennedy_Zhang »

ASUS		Title : USB	
ASUSTeK CO. LTD.		Engineer: Johnny_huang	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2011-05-25	By: 2011-05-25	Rev: 2.0	

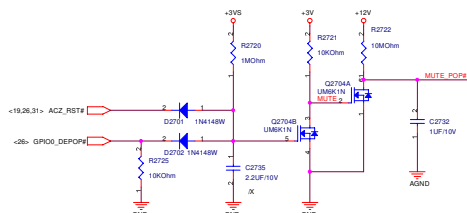


LINE_IN

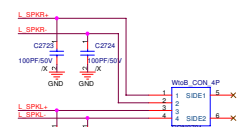
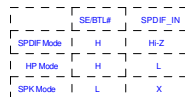
<< Kennedy_Zhang >>

ASUS		Title : ALC880	
ASUSTEK		Engineer: echo_xing	
BSZ	Project Name	Rev	
C	A7T	2.0	
Date: 2008-10-26-2009	Sheet: 25	25	

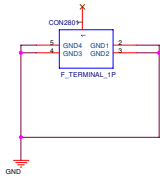
$FL = 590 \text{ Hz}$
 $FH = 23.4 \text{ KHz}$



FL = 33.9 Hz
FH = 1.942 KHz

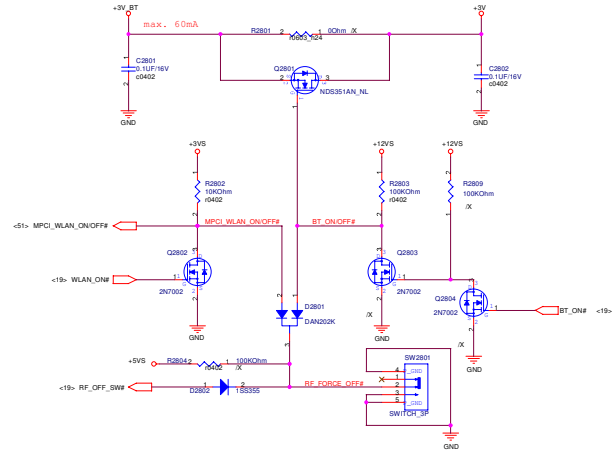


ATV_DTV_FM Antenna

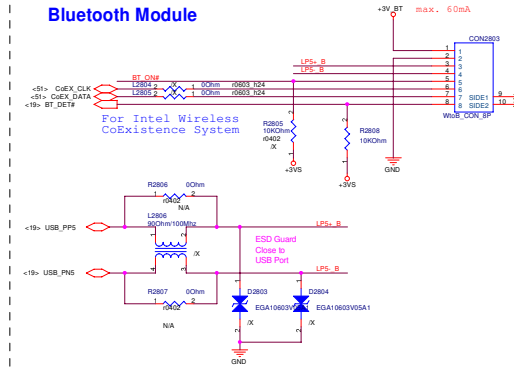


14G152075000

WLAN/BT ON/OFF Control



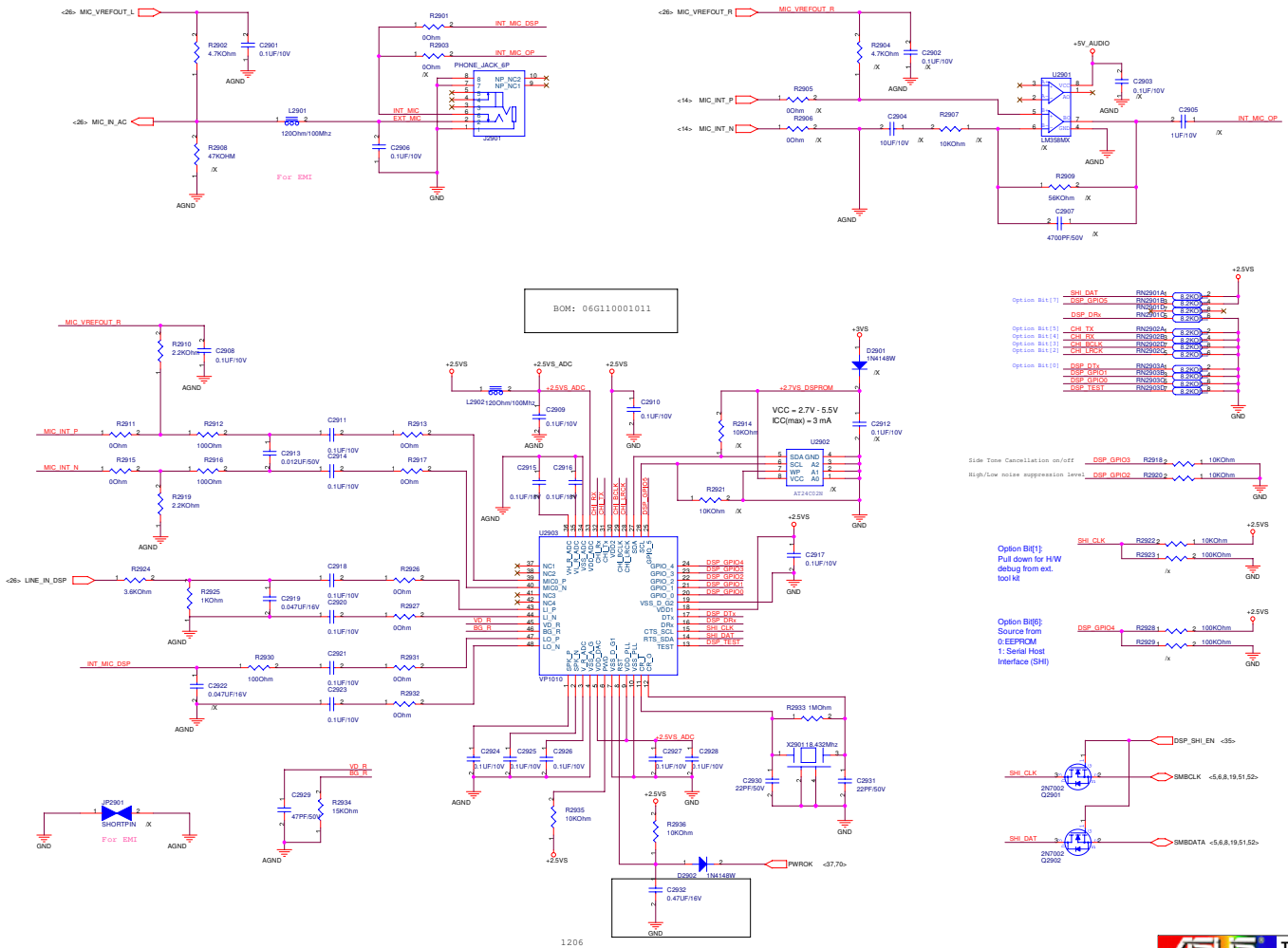
Bluetooth Module



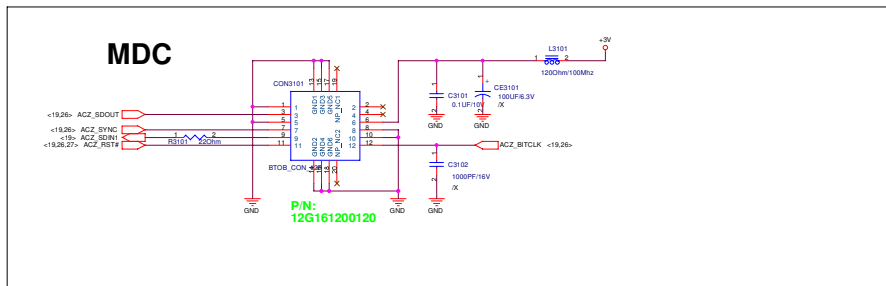
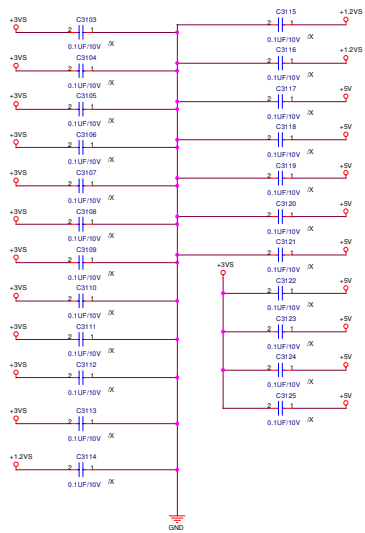
ASUS		Title : BT/RF	
ASUSTeK		Engineer: DEL_TAN	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2014-11-26-2015	Sheet: 25	of	25

<< Kennedy_Zhang >>

FL = TBD
FH = TBD Internal MIC Pre-Amplifier

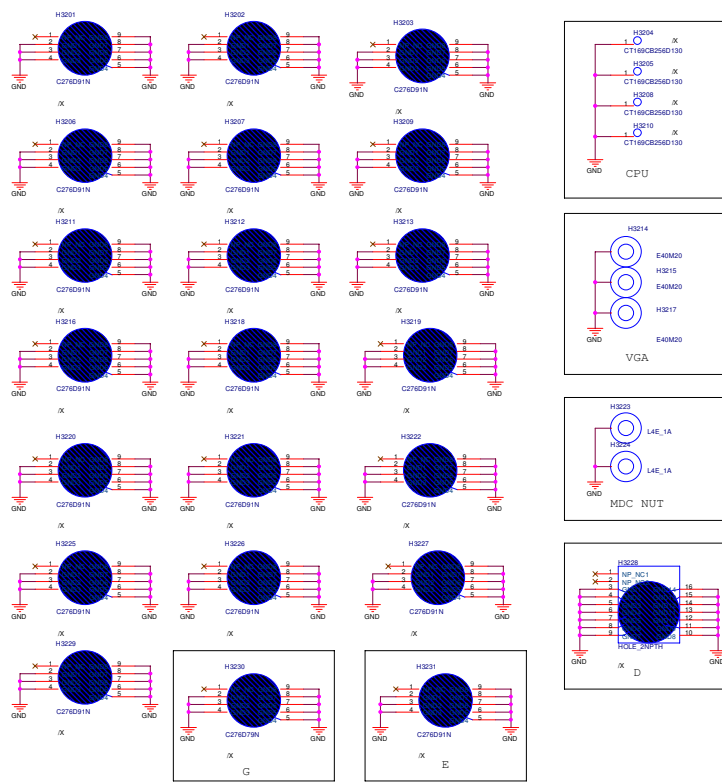


<< Kennedy_Zhang >>



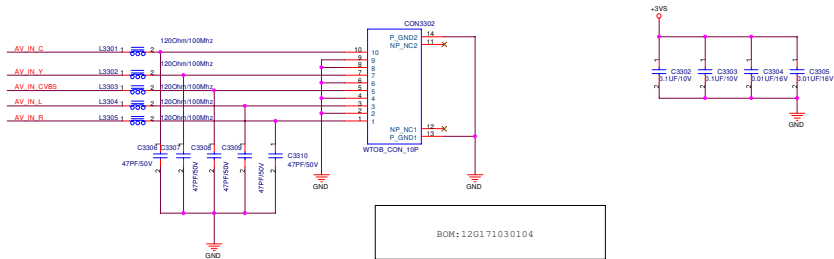
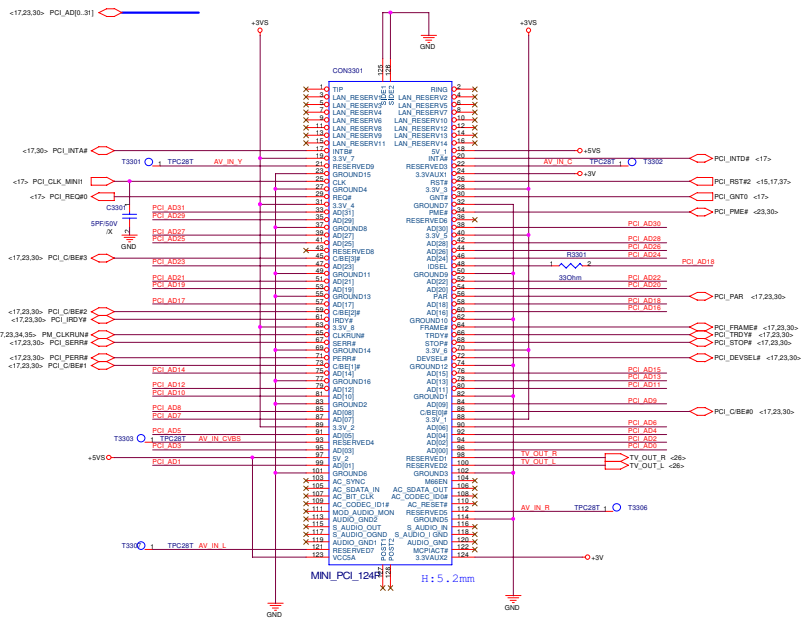
ASUS		Title : MDC	
ASUSTeK		Engineer: PENG_XIAO	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2024-05-20 10:00	Sheet: 01	of	01

<< Kennedy_Zhang >>



<< Kennedy_Zhang >>

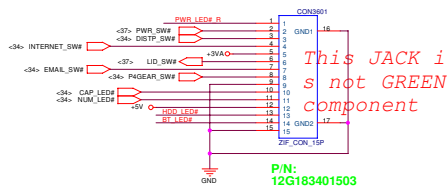
ASUS		Title : Screw Hole	
ASUSTEK		Engineer: echo_xing	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2014-01-20-2015-01-20		Sheet: 01	of 01



<< Kennedy_Zhang >>

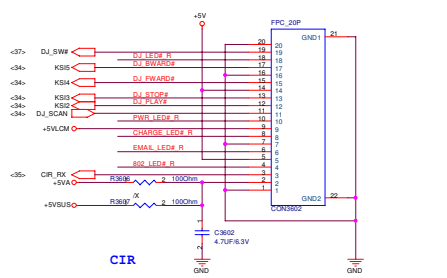
ASUS		Title : MINIPC12	
ASUSTEK	Project Name	Engineer: echo_xing	Rev
C	A7T		2.0
Date: 2014-01-20	By: 2014-01-20	Rev: 2014-01-20	Rev: 2014-01-20

Launch Board Conn.

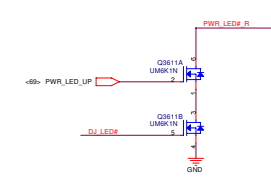
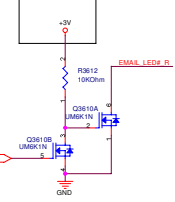
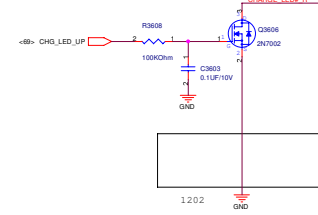
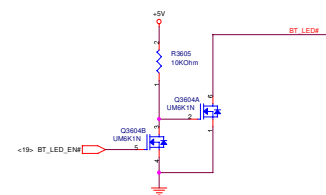
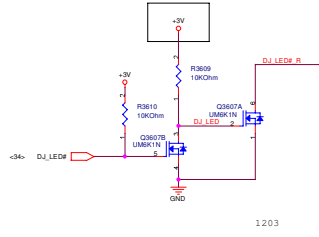
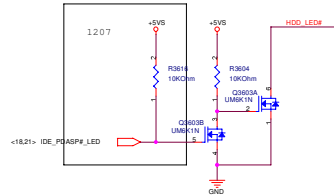
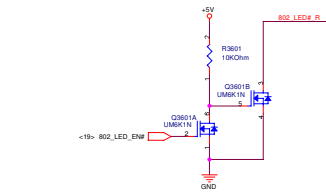
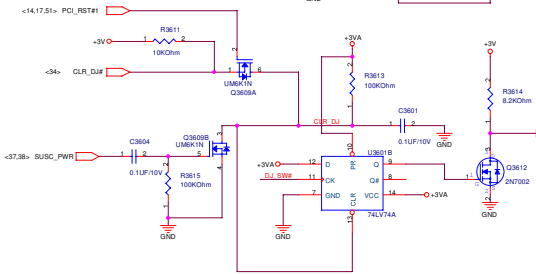


P/N: 12G183401503

DJ Board Conn.



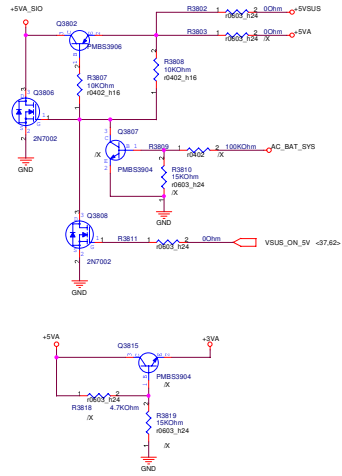
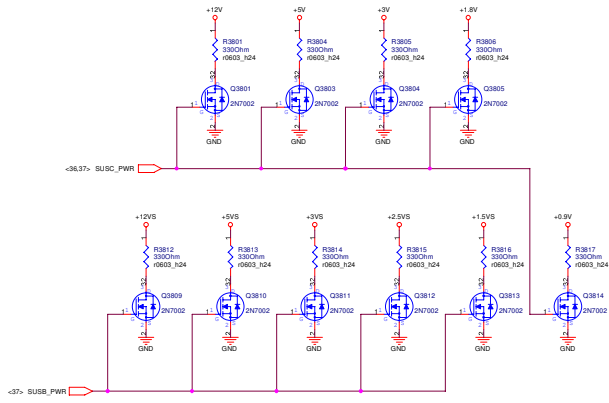
CIR



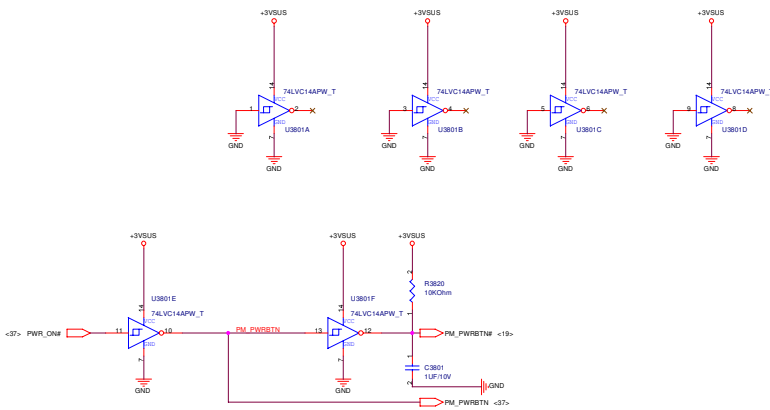
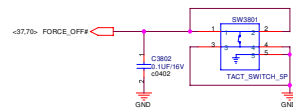
ASUS		Title: FUNCTION KEY	
ASUSTEK	Project Name	Engineer: echo_xing	Rev
B524	C	A7T	2.0
Date: 2015-10-26	By: 2015-10-26	Sheet: 25	25

<< Kennedy_Zhang >>

Discharge Ckt.



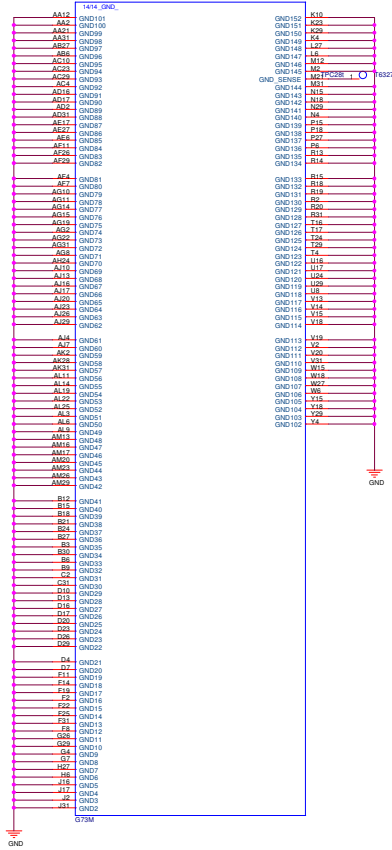
RESET SW.



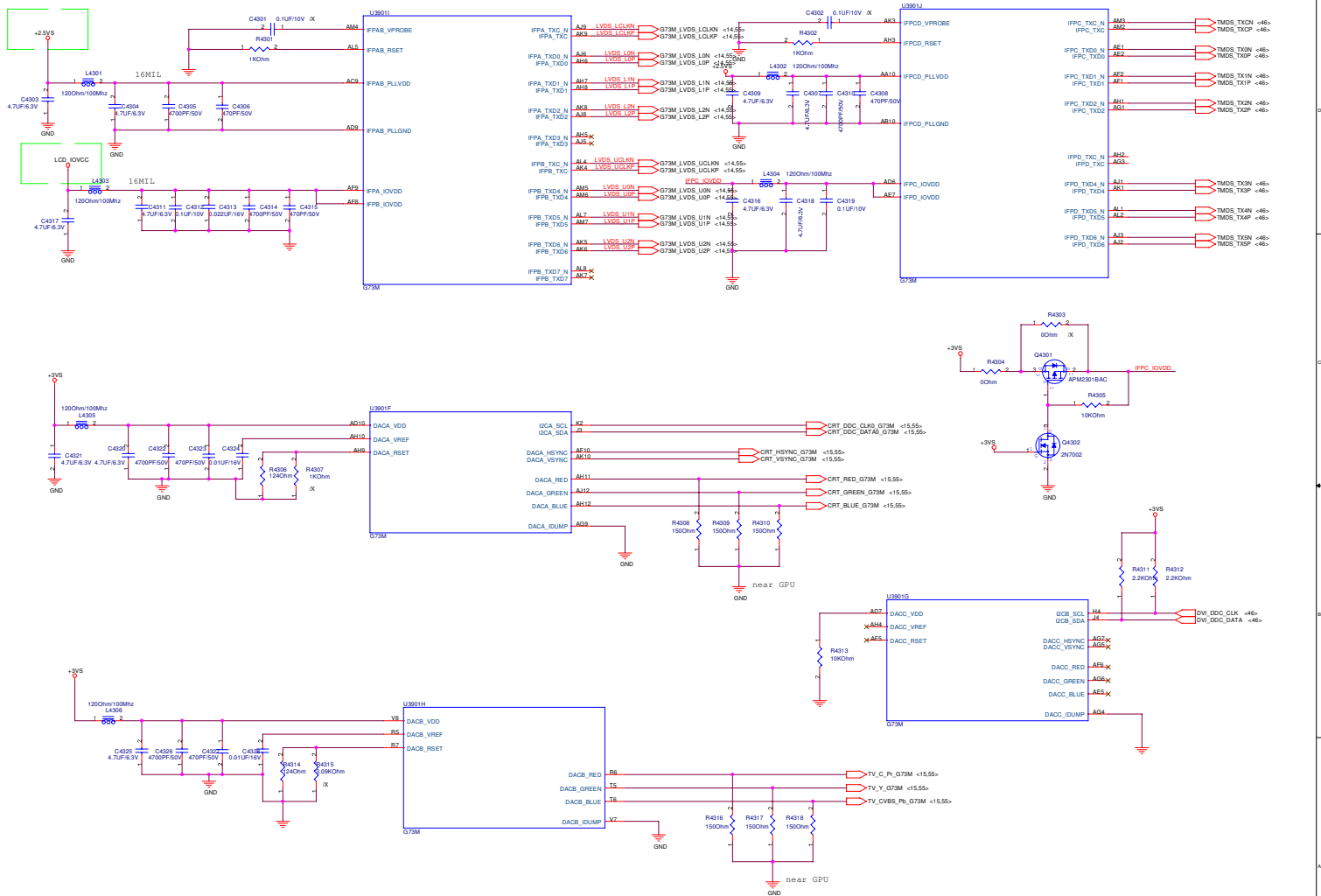
<< Kennedy_Zhang >>

ASUS		Title : PWR ON SEQ	
ASUSTeK		Engineer: DEL TAN	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2014-01-26 10:00	Sheet: 38	of	39

U3801D

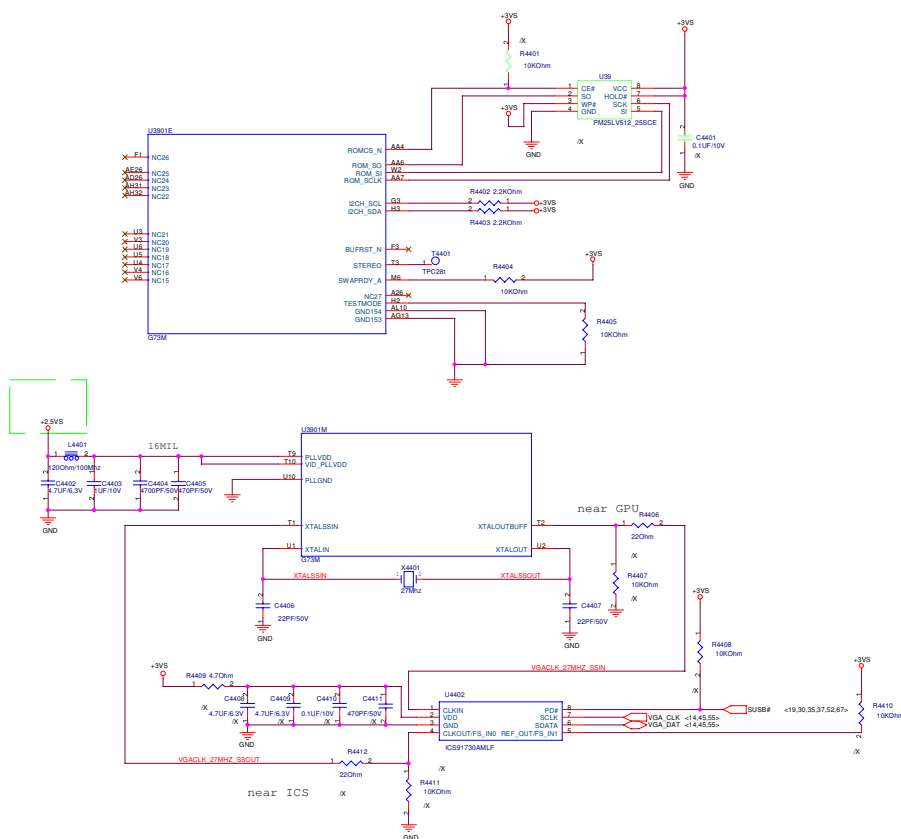


<< Kennedy_Zhang >>



<< Kennedy_Zhang >>

ASUS		Title : G73M 4 DISPLAY	
ASUSTeK	Project Name	Engineer: PENG_XIAO	Rev
C	A7T		2.0
Date: 2015-10-26-2005	Sheet: 45	of	75

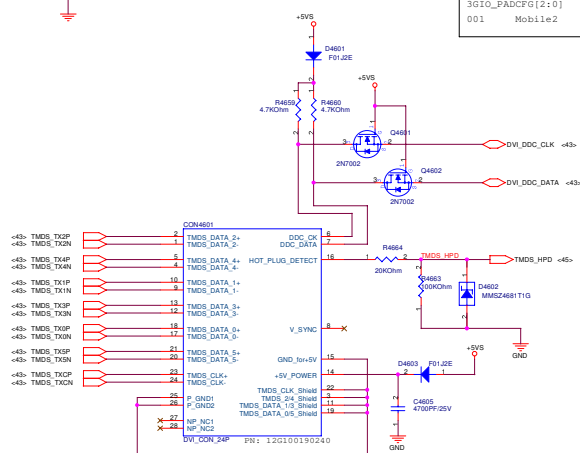
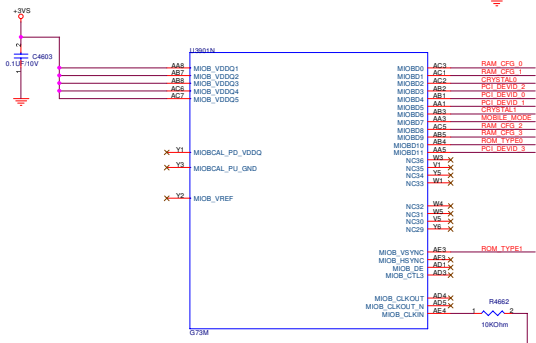
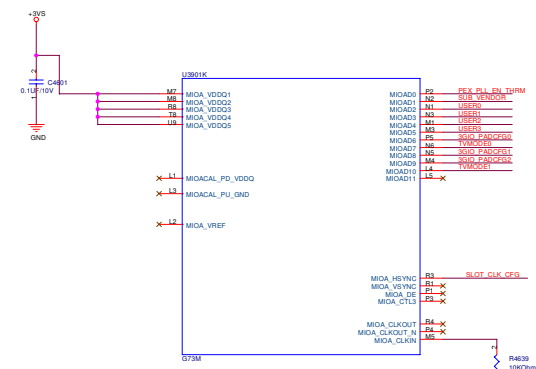


<< Kennedy_Zhang >>

ASUS		Title : G73M-BIOS&CRY	
ASUSTeK		Engineer: PENG_XIAO	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2011-11-16 10:00	Sheet: 41	of	41



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```

SUB_VENDOR 0:SYSTEM BIOS 1:ADAPTER
RAM_CFG[3..0]
0001:8*16M*16 DDR2 SAMSUNG

RAM_CFG[3] 0: Full width of the frame buffer
1: Half width of the frame buffer

CRYSTAL[1:0] 00 13.5MHz
01 14.318MHz
10 27.0MHz* (Default)
11 Reserved

TVMODE[1:0] 00 SECAM
01 NTSC (Default)
10 PAL
11 VGA

PCI_DEVID[3..0] 1 0 0 0 : G73M
0 1 1 1 : G73M-V

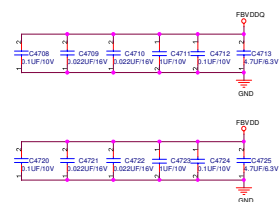
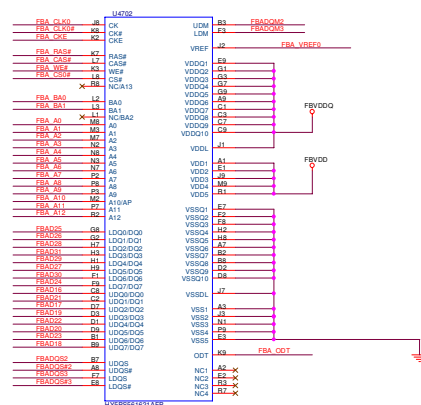
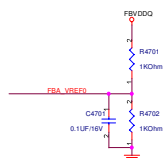
ROMTYPE[1:0] 00 Parallel
01 Serial (Default)
10 Reserved
11 LPC

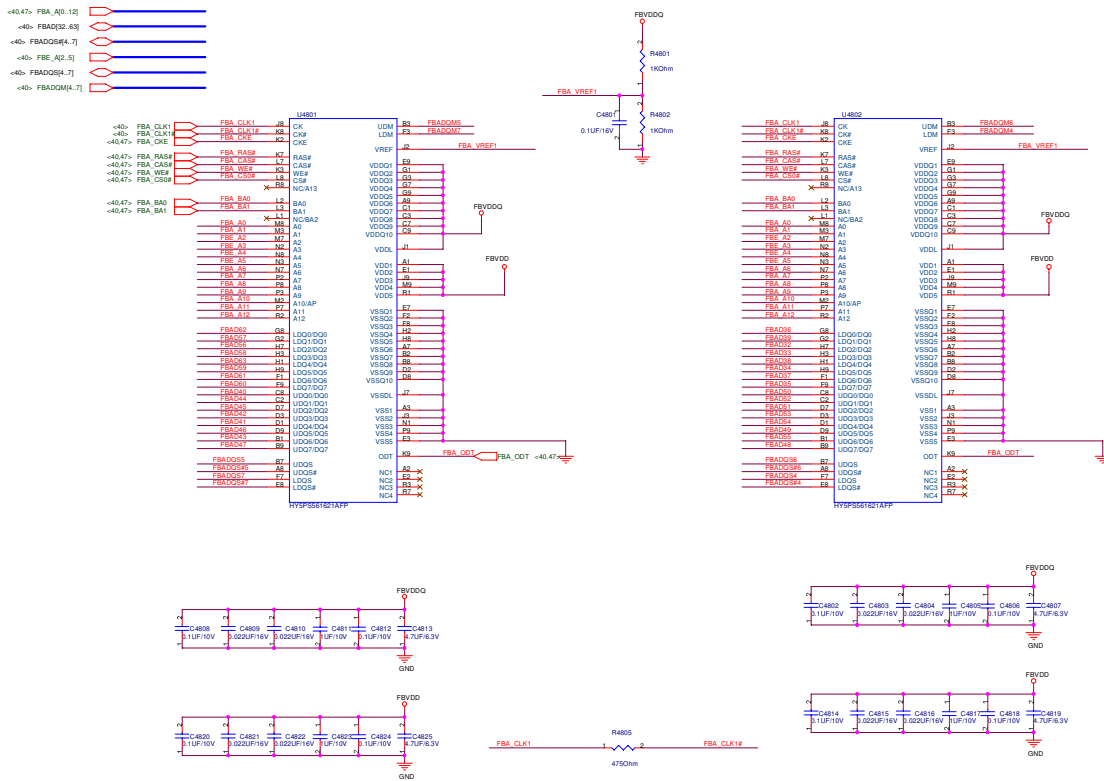
ROM_TYPE 0:PARALLEL 1: SERIAL
MOBILE_MODE 0 Enable (Default)
SLOT_CLK_CFG 1 GPU and MCH share a common reference clock.
(Default)

USER[3..0] 1101 WXGA 1280x800 -/-

FEX_PLL_EN_THRM 0 Enable (Default)
3GIO_PADCFG[2:0] 1 Disable
001 Mobile2 for G7x, NV42
  
```

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PCI Device	IDSEL#	REQ/GNT#	Interrupts
10/100 RTL8100CL	AD16	2	A
CARD READER	AD17	1	C
1394	AD17	1	B
MINIPCI (802.11a/b/g)	AD19	3	B,C
MINIPCI (TV)	AD18	0	A,D

Host	SM-Bus Device	SM-Bus Address	Device
MCP51	Voice DSP	1100000x (C2H)	VP1010
MCP51	SO-DIMM 0	1010000x (A0H)	DDR SOCKET1
MCP51	SO-DIMM 1	1010010x (A4H)	DDR SOCKET2
MCP51	Thermal Sensor	0101110x (5CH)	ADT7463 (Optional)
	PIC	1001001x (92H)	Charge IC
	M38857	0001000x (10H)	KBC control IC
	BQ2060	16H-17H	Battery sensor IC

MCP51 GPIO	I/O Mode	Signal	Active	S0 Default	S3/S4	PWR Well
GPIO 1	INPUT	KB_SCI#				+3VS
GPIO 2	INPUT	SIO_SMI#				+3VS
GPIO 3	OUTPUT	BACK_OFF#	LOW	HIGH	Off	+3VS
GPIO 4	OUTPUT	FWH_WP#	LOW	LOW	Off	+3VS
GPIO 5	OUTPUT	802_LED_EN#	LOW	HIGH	Driven	+3VSUS
GPIO 6						
GPIO 7	OUTPUT	BT_LED_EN#	LOW	HIGH	Driven	+3VSUS
GPIO 8						
GPIO 9						
GPIO 10						
GPIO 11	OUTPUT	BT_ON#	LOW	LOW	Off	+3VS
GPIO 12	OUTPUT	WLAN_ON#	LOW	LOW	Off	+3VS
GPIO 13						
GPIO 14						
GPIO 15	INPUT	PROCHOT#	LOW	HIGH	Off	
GPIO 16						
GPIO 17		LID#				+3VSUS
GPIO 18		USB_OC#0				+3VSUS
GPIO 19		USB_OC#1				+3VSUS
GPIO 20		USB_OC#2				+3VSUS
GPIO 21		USB_OC#3				+3VSUS
GPIO 22		ACZ_SDIN0				+3VSUS
GPIO 23		ACZ_SDIN1				+3VSUS
GPIO 24						
GPIO 25						
GPIO 26						
GPIO 27		SMB_CLK				+3VSUS
GPIO 28		SMB_DATA				+3VSUS
GPIO 29		SMB_ALERT#				+3VSUS
GPIO 30		PCI_PME#				+3VSUS
GPIO 31		SIO_PME#				+3VSUS
GPIO 32		EXTSMI#				+3VSUS
GPIO 33		RT#				+3VSUS
GPIO 34		SUS_CLK	PULL-DOWN: Normal mode select			
GPIO 40						
GPIO 41						
GPIO 46		SPDIFO	PULL-HIGH: SIO_CLK select 24MHz			
GPIO 47	INPUT	RF_OFF_SW#	LOW	HIGH	Off	+3VS
GPIO 61	INPUT	PANEL_ID0			Off	+3VS
GPIO 62	INPUT	PANEL_ID1			Off	+3VS


KBC GPIO	I/O Mode	Signal	Active	S0 Default	S3
P23(Pin 35)					
P22(Pin 36)	OUTPUT	BAT_LEARN	HIGH	LOW	LOW
P21(Pin 37)		KBC_P21			
P20(Pin 38)	OUTPUT	KBCRSM	HIGH	LOW	LOW
P42(Pin 23)	OUTPUT	WATCHDOG	HIGH	LOW	LOW
P43(Pin 22)	INPUT	LID_KBC#			
P44(Pin 21)					
P45(Pin 20)	OUTPUT	KB_GATEA20			
P46(Pin 19)	OUTPUT	KBSCI#			
P47(Pin 18)		PM_CLKRUN#			
P50(Pin 17)	INPUT	BAT_LOW#_OC			
P51(Pin 16)	INPUT	KB_ID0			
P52(Pin 15)	INPUT	KB_ID1			
P53(Pin 14)	OUTPUT	CLR_DJ#	LOW	LOW	Driven
P54(Pin 13)	INPUT	BAT_SEL#			
P55(Pin 12)	INPUT	BATI_IN#_OC			
P56(Pin 11)	OUTPUT	FAN_DAI(Optional)	Analog	Analog	Driven
P57(Pin 10)	OUTPUT	INVTIER_DA	Analog	Analog	Driven
P67(Pin 74)	OUTPUT	DJ_LED#	LOW	HIGH	HIGH
P66(Pin 75)	INPUT	SWD)_EN#			
P65(Pin 76)	INPUT	CHG_FULL_OC			
P64(Pin 77)	INPUT	ACIN_OC			
P63(Pin 78)	INPUT	DISTP_SW#			
P62(Pin 79)	INPUT	P4GEAR_SW#			
P61(Pin 80)	INPUT	EMAIL_SW#			
P60(Pin 1)	INPUT	INTERNET_SW#			
P75(Pin 4)		KB_CLK			
P74(Pin 5)		MS_CLK			
P73(Pin 6)		TPAD_CLK			
P72(Pin 7)		KB_DAT			
P71(Pin 8)		MS_DAT			
P70(Pin 9)		TPAD_DAT			
P77(Pin 2)		SMC_BAT			
P76(Pin 3)		SMD_BAT			
P27(Pin 31)					
P26(Pin 32)	OUTPUT	NUM_LED#	LOW	Define	HIGH
P25(Pin 33)	OUTPUT	CAP_LED#	LOW	Define	HIGH
P24(Pin 34)	OUTPUT	SET_PLTRSTNS#	LOW		
P40(Pin 27)	OUTPUT	EXT_SMI	LOW		
P41(Pin 26)	OUTPUT	EMAL_LED#	LOW	HIGH	HIGH

MCP51 GPIO	I/O Mode	Signal	Active	S0 Default	S3/S4	PWR Well
GPIO 16	OUTPUT	DSP_SHL_EN	HIGH	HIGH	Off	+5VS
GPIO 53	INPUT	SUSC#	LOW	HIGH	H/L	+5VS
GPIO 45	INPUT	SUSB#	LOW	HIGH	LOW	+5VS
GPIO 11	INPUT	PROCHOT#	LOW	HIGH	Off	+5VS


		Title : SYS RESOU	
ASUSTeK		Engineer: DEL TAN	
Size	Project Name	Rev	
C	A7T	2.0	
Date: 2014-01-20	Drawn: 01-20-14		

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		Title : HISTORY	
ASUSTeK		Engineer: DEL_TAN	
Size	Project Name		Rev
C	ATT		2.0
Date: 2019-10-26-2020		Sheet: 05 of 05	

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		Title : HISTORY	
ASUSTeK		Engineer: DEL_TAN	
Size	Project Name	Rev	
C	ATT	2.0	
Date: 2019-10-26-2020		Sheet: 01 of 01	


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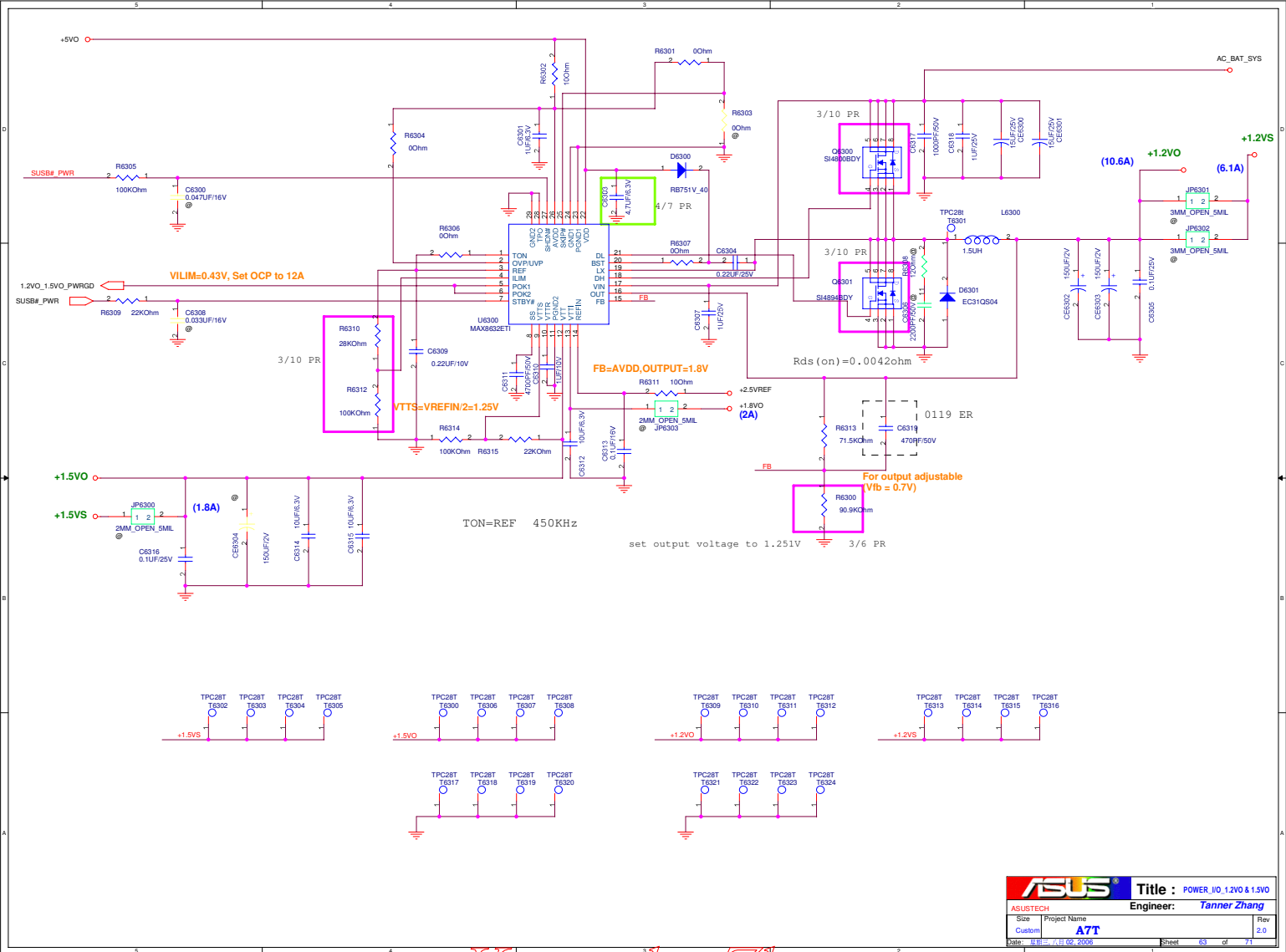
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ASUSTeK		Engineer: DEL_TAN	
Size	Project Name	Rev	
C	ATT	2.0	
Date: 2014-10-26 12:00		Sheet: 01 of 01	

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		Title : HISTORY	
ASUSTeK		Engineer: DEL_TAN	
Size	Project Name	Rev	
C	ATT	2.0	
Date: 2019-10-25-2020		Sheet: 01 of 01	

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		Title : HISTORY	
ASUSTeK		Engineer: DEL TAN	
Size	Project Name		Rev
C	ATT		2.0
Date: 2019-01-25-2020		Sheet: 01 of 01	



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C

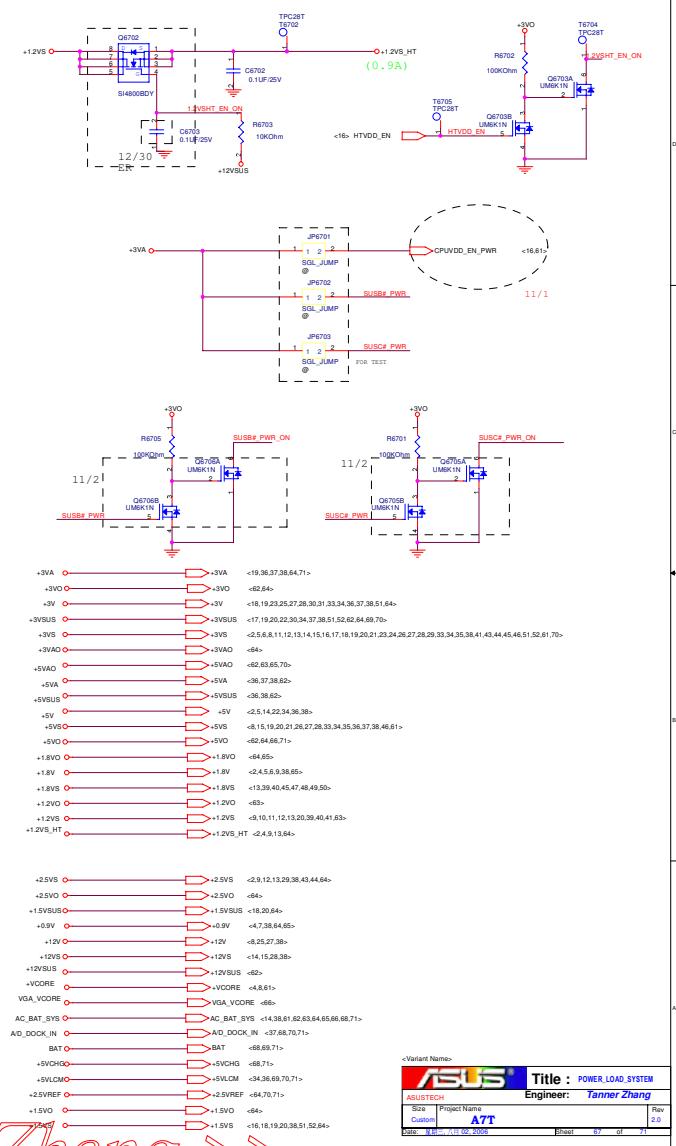
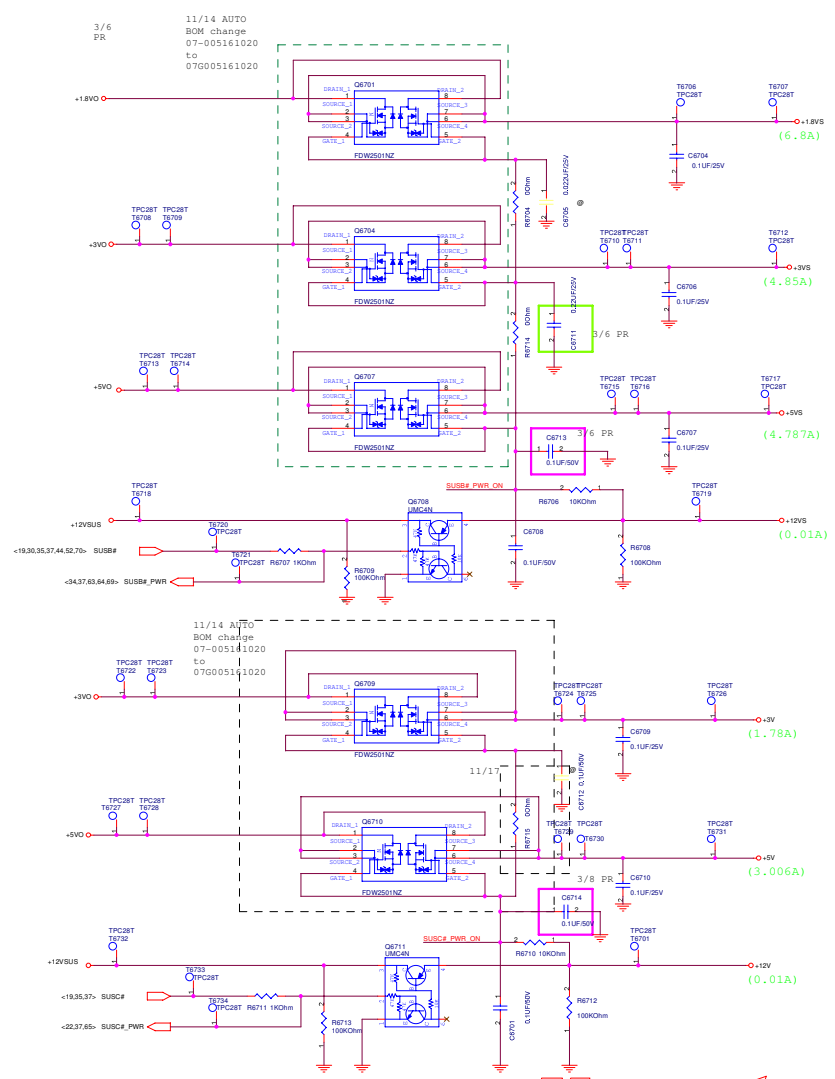


+2.5VS



		Title : POWER_IIO_LDO	
ASUSTECH		Engineer: Tanner Zhang	
Size	Project Name		Rev
C	A7T		2.0
Date: 08/01/2006		Sheet	64 of 71

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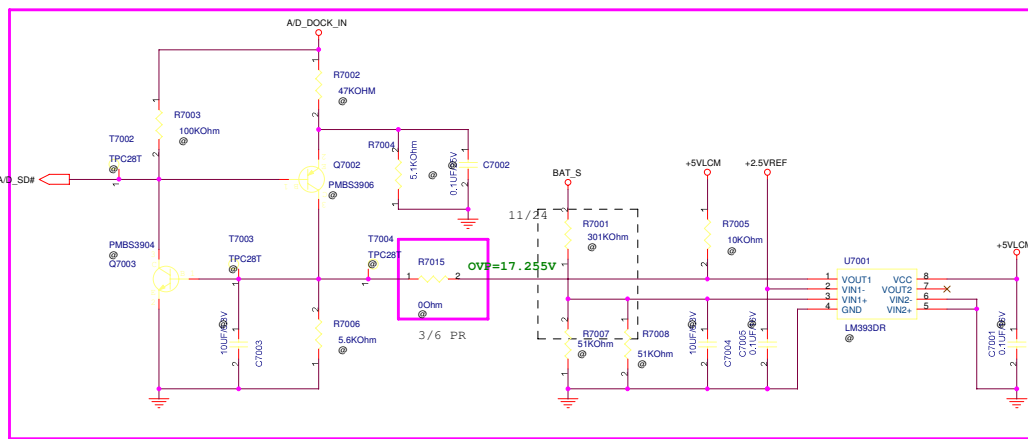


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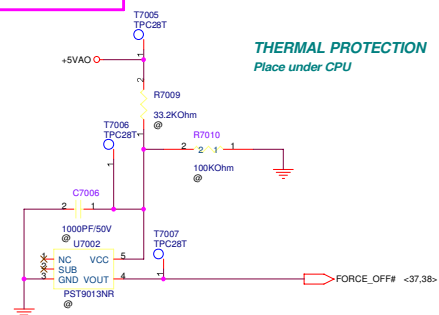
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ASUS		Engineer: Tanner Zhang
Size	Project Name	Rev
Custom	A77	2.0
Date: 2023-11-16 09:00	By: at	11



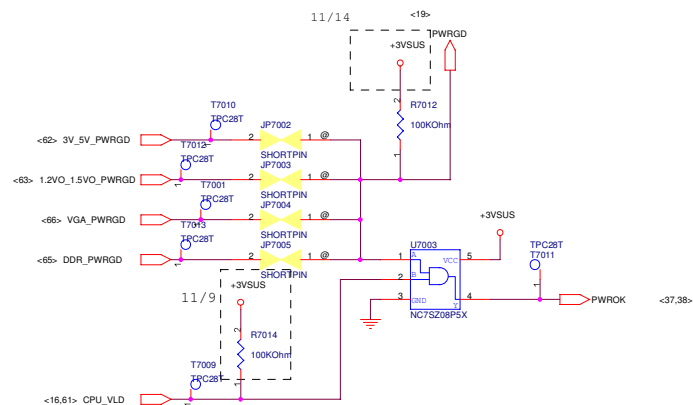
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3/7 PR

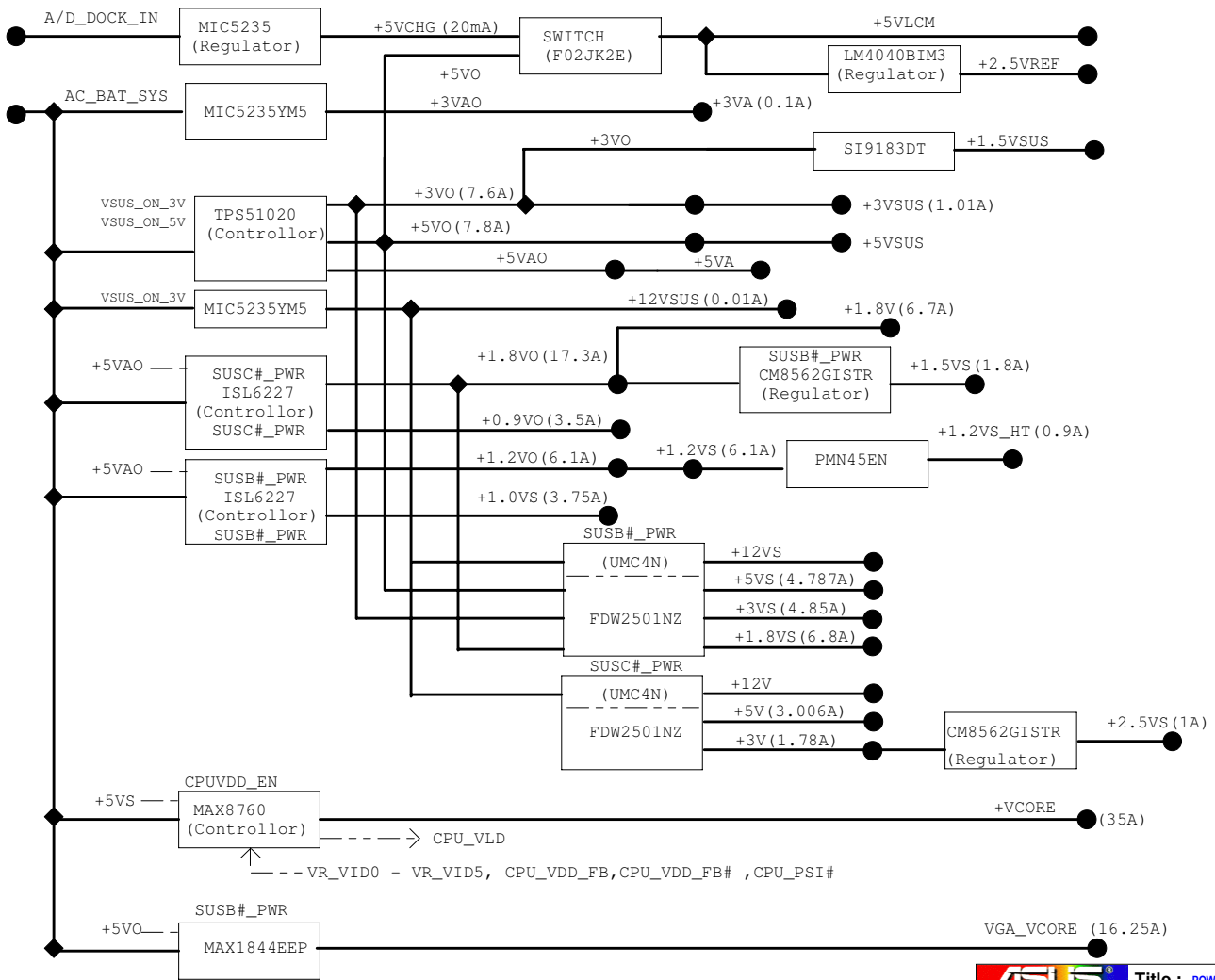


THERMAL PROTECTION
Place under CPU



ASUS		Title : POWER_PROTECT	
ASUSTECH		Engineer: Tanner Zhang	
Size	Project Name	Rev	
Custom	A7T	2.0	
Date: 11/11/2006	Sheet 70 of 71		

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Power

R1.0

2006.01.03

- 1.add 100uF/4V (1500uF) to +3VD output for the gate Req. is wrong.
- 2.change C6700.1 to Q6710.2 for +5v's gate softstart.
- 3.change R6135 to 120K for Vcore OCP set
- 4.Add 1uF/25V to VDDCORE input for gate noise.
- 5.change C6703 to N/A for load switch 1.2VS_MT gate
- 6.Change R6506 to 470ohm.and R6509 to 100ohm for 1.8V csp set
- 7.add R6825 15Kohm and change R6818 to 4.7ohm for AC_IN wrong motion.
- 8.Change C6807 to 4.7uF/25V for AD_IN noise
- 9.Remove J96303
- 10.Change R6602 60hm to 2.7ohm(0603 5K) for vgaocore high side gate noise
- 11.Change Q6702 to 814800 for 1.2vs_MT low voltage.
- 12.Change R6606 to 1K(0603 1K) for VDDCORE output 1.02V
- 13.Change R6807 to 29.4K(0603 1K) for current share point set.
- 14.For PMU_LPTN 114u,change R6823 to 100K(0603 0.1K),and change R6824 to 90.9K(0603 1K)
- 15.change R6511 to 9.76K(0603 1K) for 1.8vs voltage set.
- 16.Change R6312 R6314 to 7.5K(0603 1K) for 1.2vs voltage set.
- 17.Change R6411 to 24.3K(0603 1K) for 1.5VDDVS voltage set.
- 18.C6411 change to 8

Revision History

2006.01.04

- 1.change C6217 to 4.70uF/25v(0805)11G235247512320
- 2.change C6807 to 1uF/25V(0805) 11G235310512360
- 3.change C7105 to 10F/25V(1206) 11G236110512320

2006.01.05

- 1.Change PAGE 68 MAX8725_LDO to MAX8725_REF.
- 2.change R6814 (49.3K) to 97.6K(1K)10G213976213030
- Change R6812(1.5K) to 1.91K(1K) 10G213191113030
- Change R6811(22.6K) to 36.5K(1K) 10G21365213010
- Change R6809(53.6K) to 40.2K(1K) 10G213402213030
- Change R6815(22.6K) to 24.3K(1K) 10G213243213030
- Change R6807(40.2K) to 14.3K(1K) 10G213143213030
- Change R6813(55.1K) to 40.2K(1K) 10G213402213030

2006.01.06

- 1.change L6501 to 1.80H(09022X183100) for 0.9 transit ripple.
- 2.for battery GVP 17.25u, change R7003(200K 0.1K) to 301K(0.1K) 10G213301323030
- Change R7007(100K 0.1K) to 51K(0.1K) 10G213510223030
- Set R7008 to 8 When A/M bom
- 3.change L6202 to 2.8uH. (09022X183100)
- 4. add Q6807 for auto battery learning error.

System

R1.0

ASUS		Title : HISTORY	
ASUSTECH		Engineer: Tanner_Zhang	
Size	Project Name		Rev
Custom	A7T		2.0
Date	2006.01.02	Sheet	73 of 73

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