



MS-7250 Ver: 20

CPU:

AMD 940 Athlon 64/Athlon 64 FX

System Chipset:

NVIDIA MCP 55P / MCP55 Ultra

On Board Chipset:

LPC Super I/O -- Winbond 83627EHG/DHG
LAN -- Vitesse VSC8601 X2
AC97 Codec --ALC883/885/888
1394 --VIA VT8237
BIOS --LPC FLASH ROM 4M

Main Memory:

DDRII * 4 (Max 4GB)

Expansion Slots:

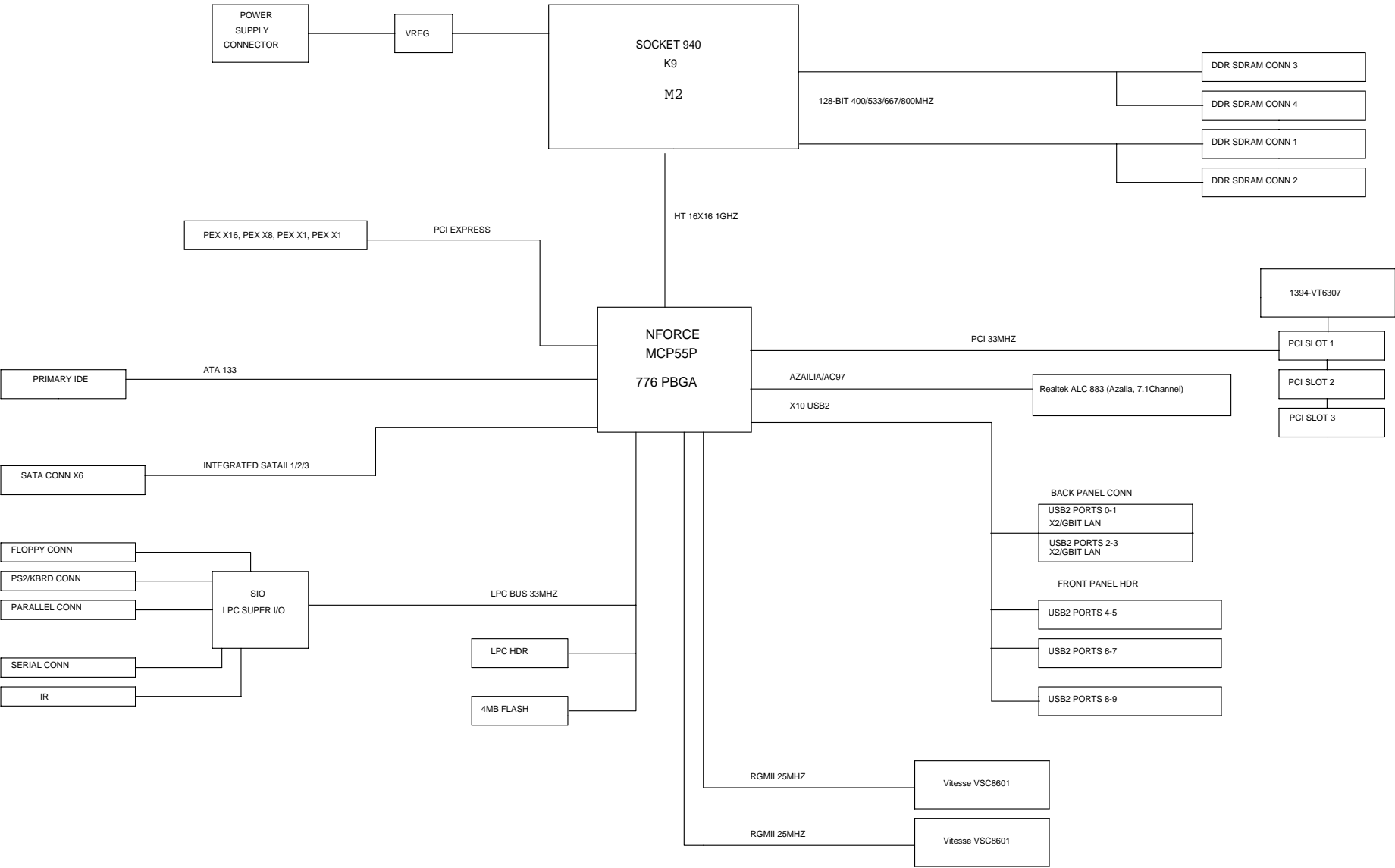
PCI-E X 16 *2
PCI-E X1 *2
PCI 2.2 Slot * 3

PWM:

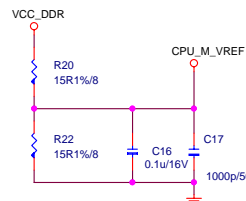
Controller--Intersil ISL6566CR 3 Phase

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BLOCK DIAGRAM



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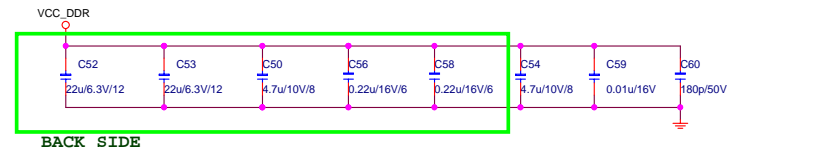
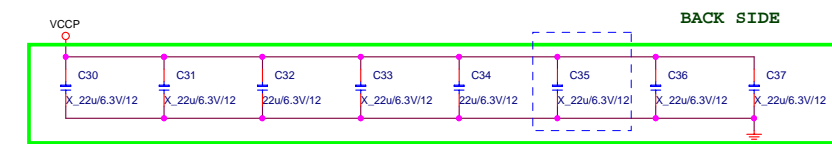
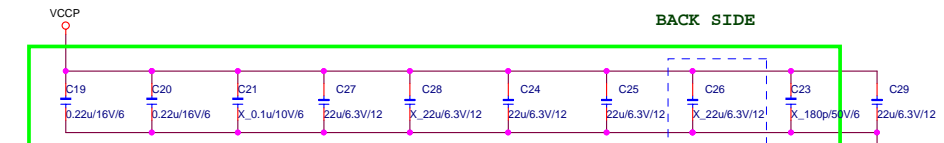
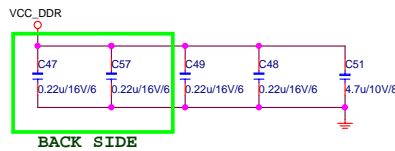
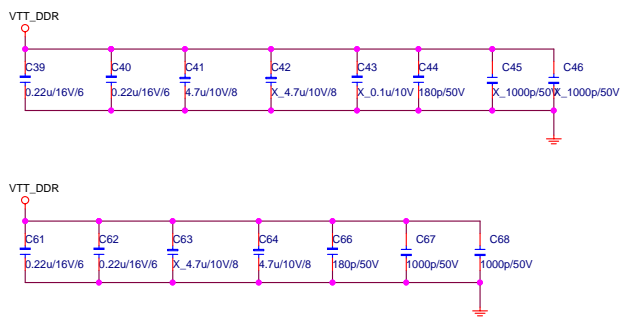
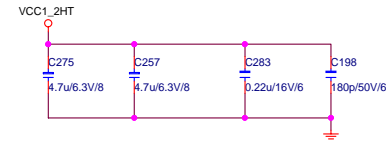
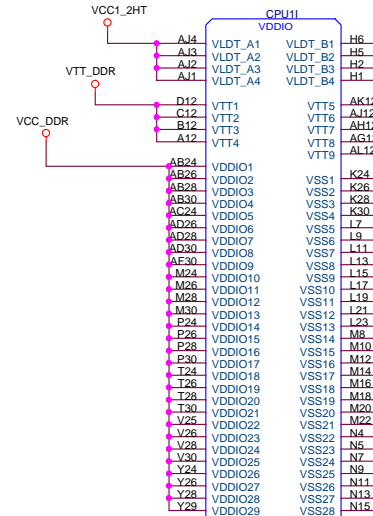
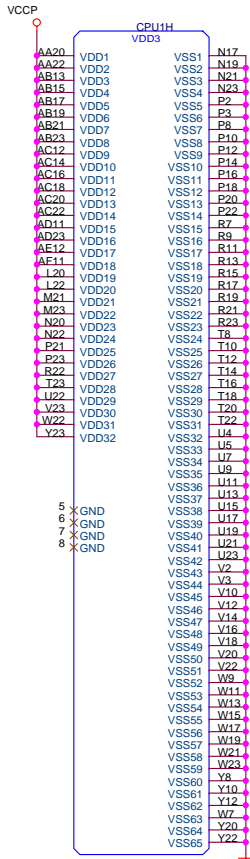
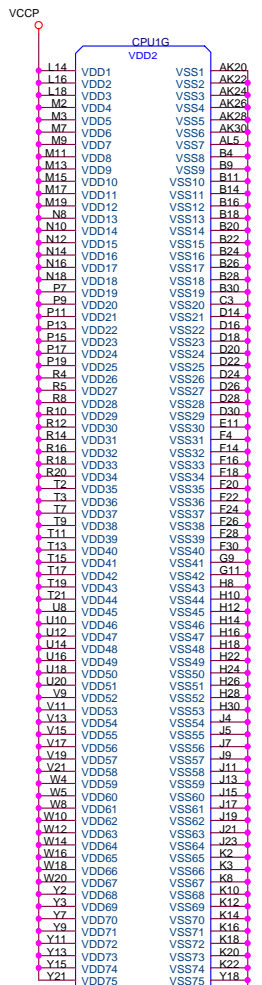
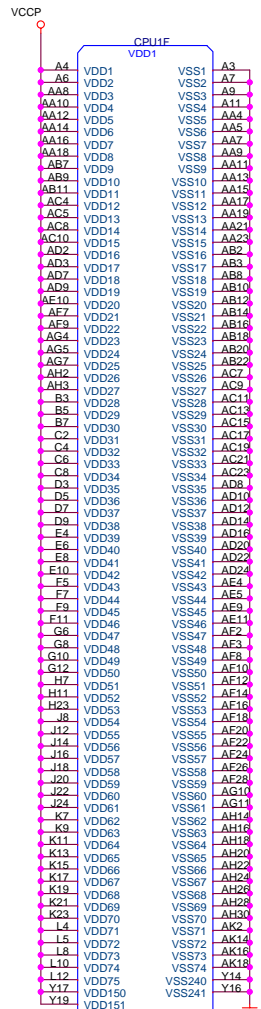


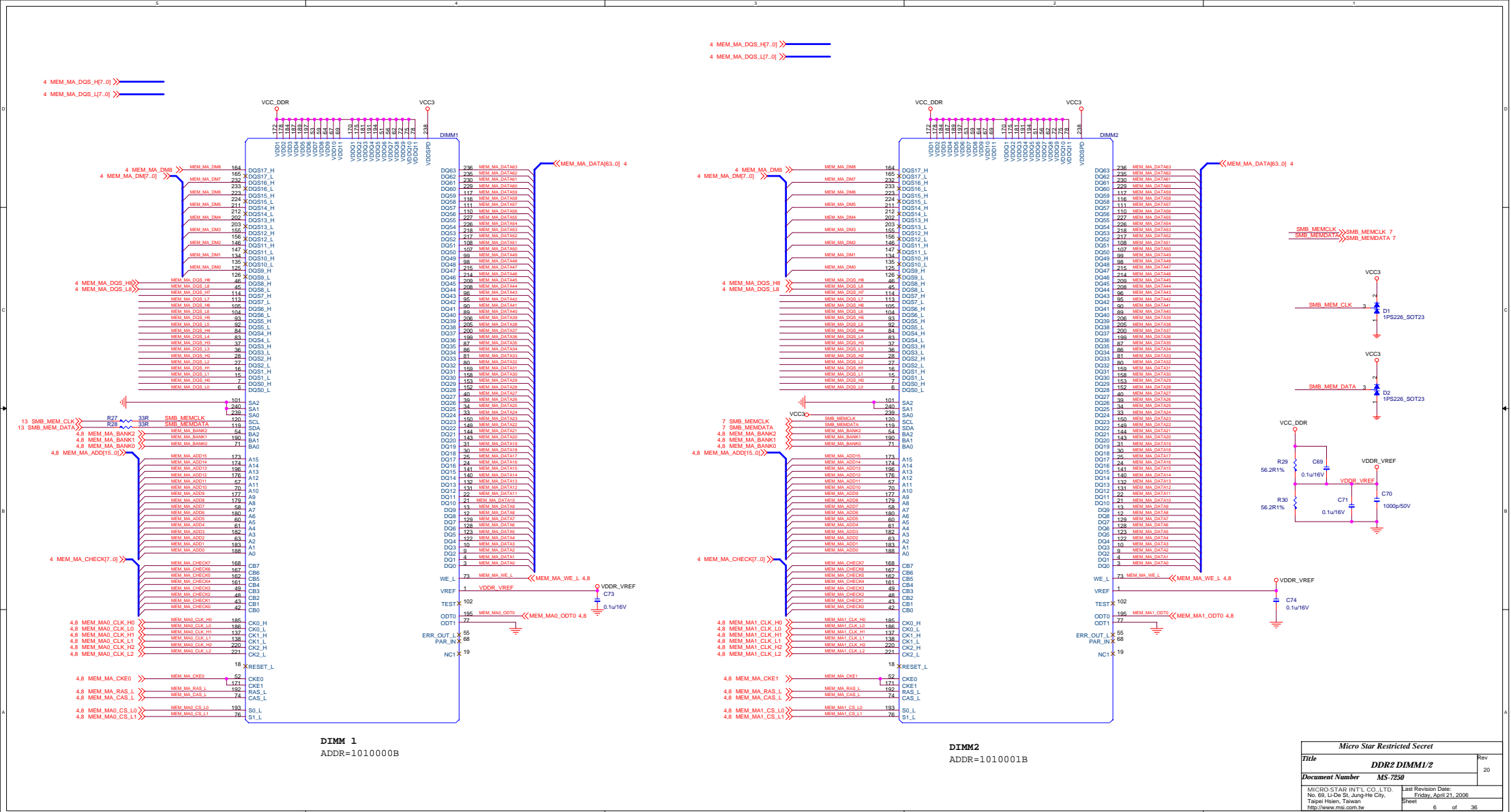
13 MCP_THERM_SIC >> R412 0R THERM_SIC

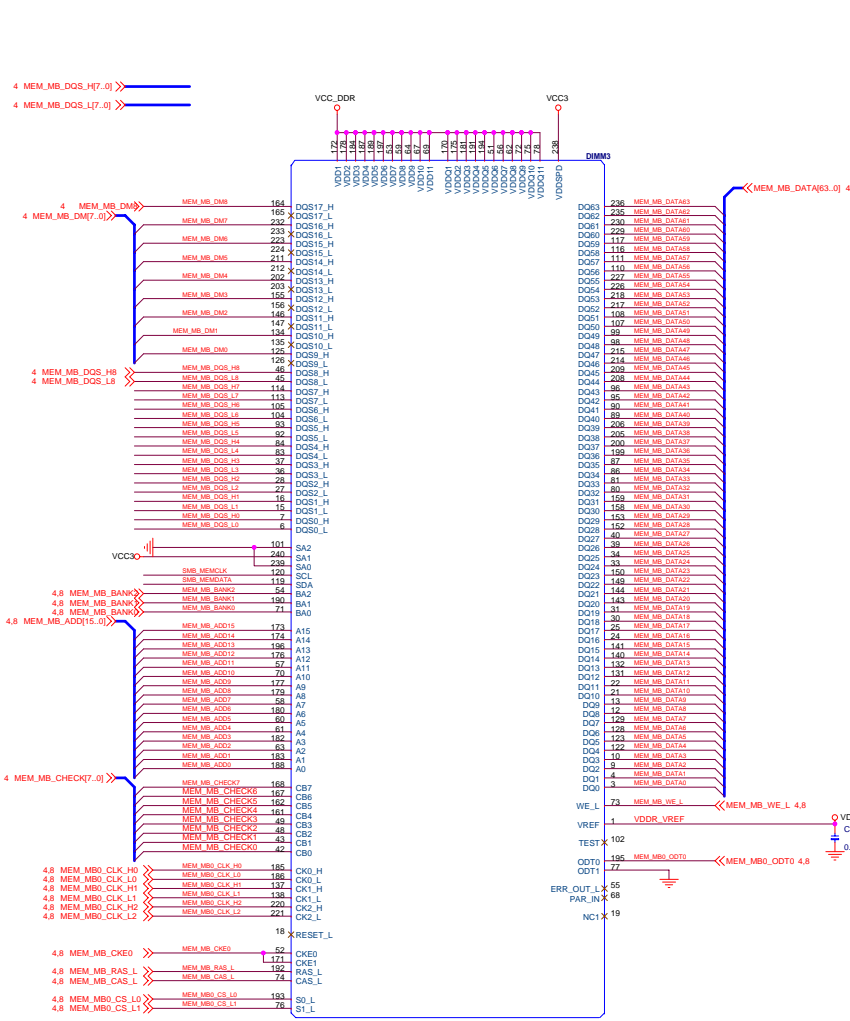
25 SIO_THERM_SIC >> R444 X 0R

13 MCP_THERM_SID >> R413 0R THERM_SID

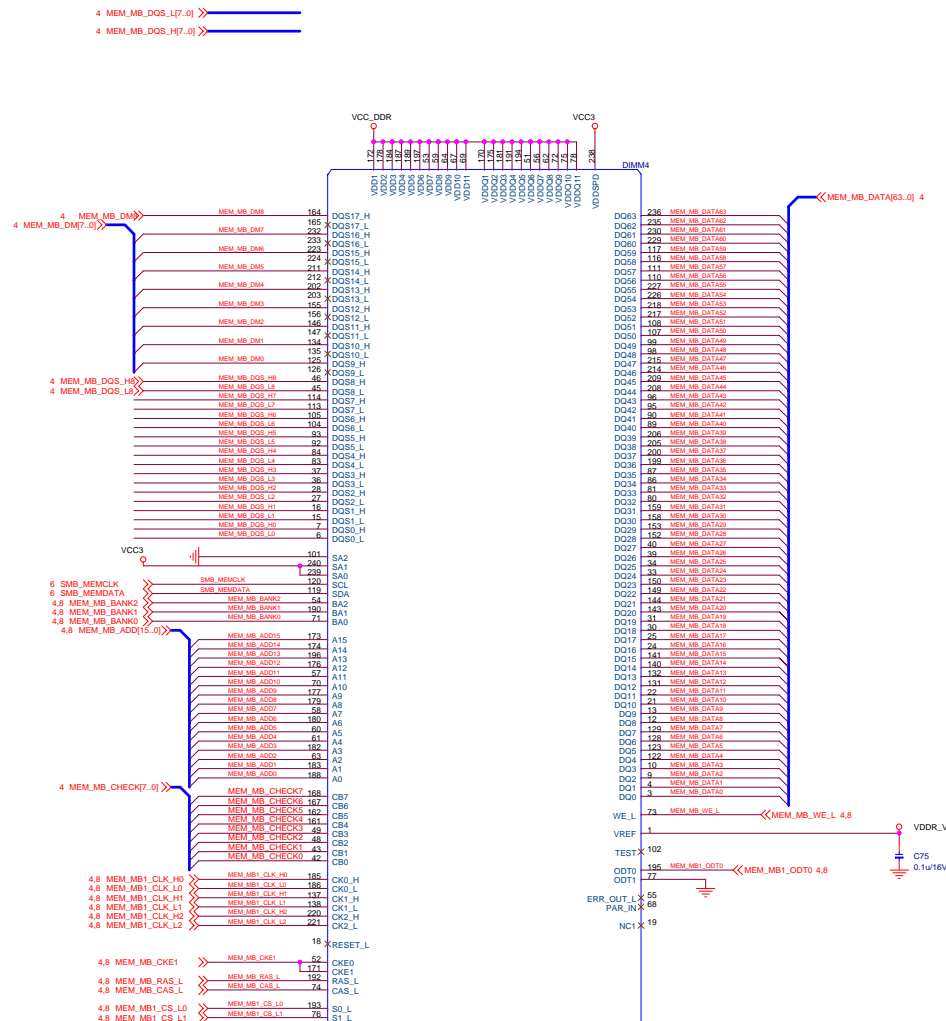
25 SIO_THERM_SID >> R415 X 0R



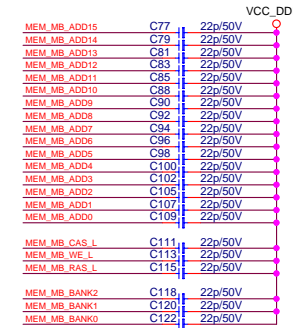
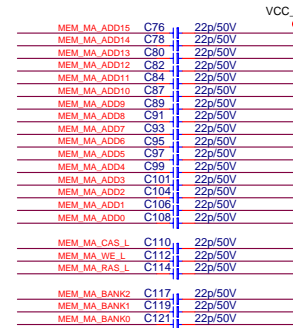
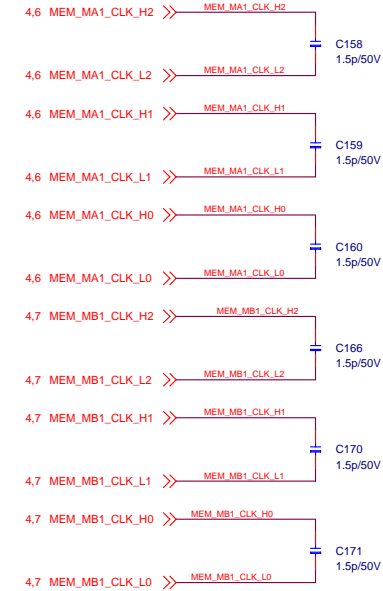
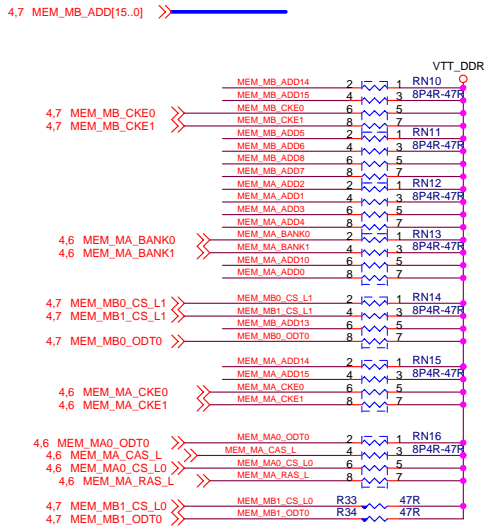
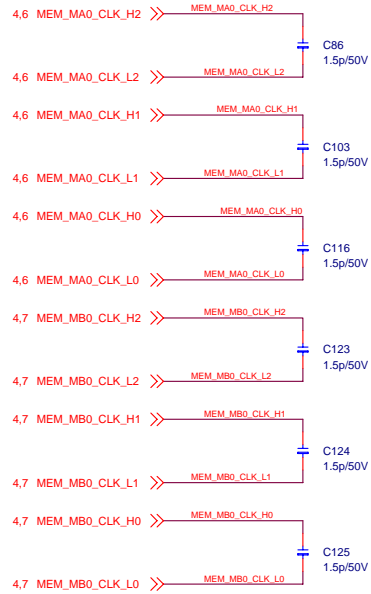
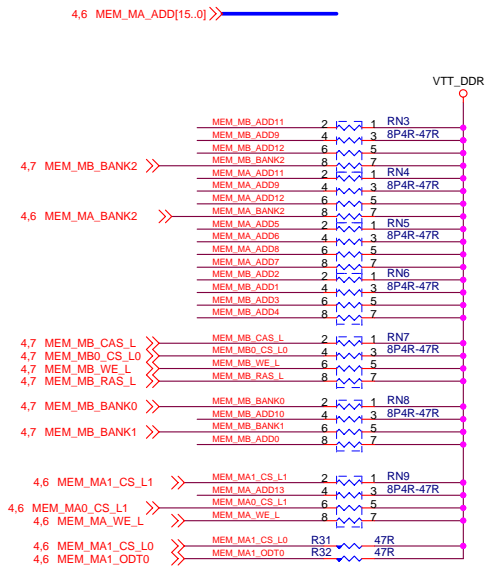




DIMM 3
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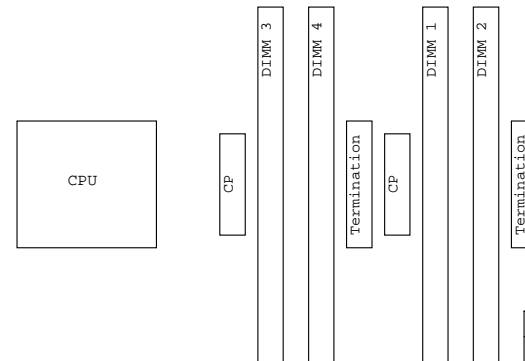
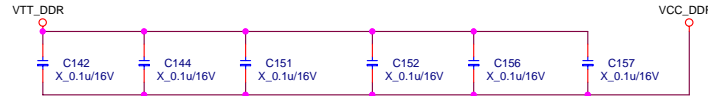
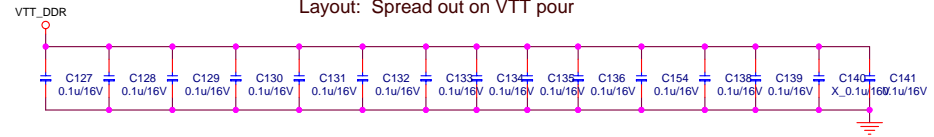


DIMM 4
ADDR=1010011B

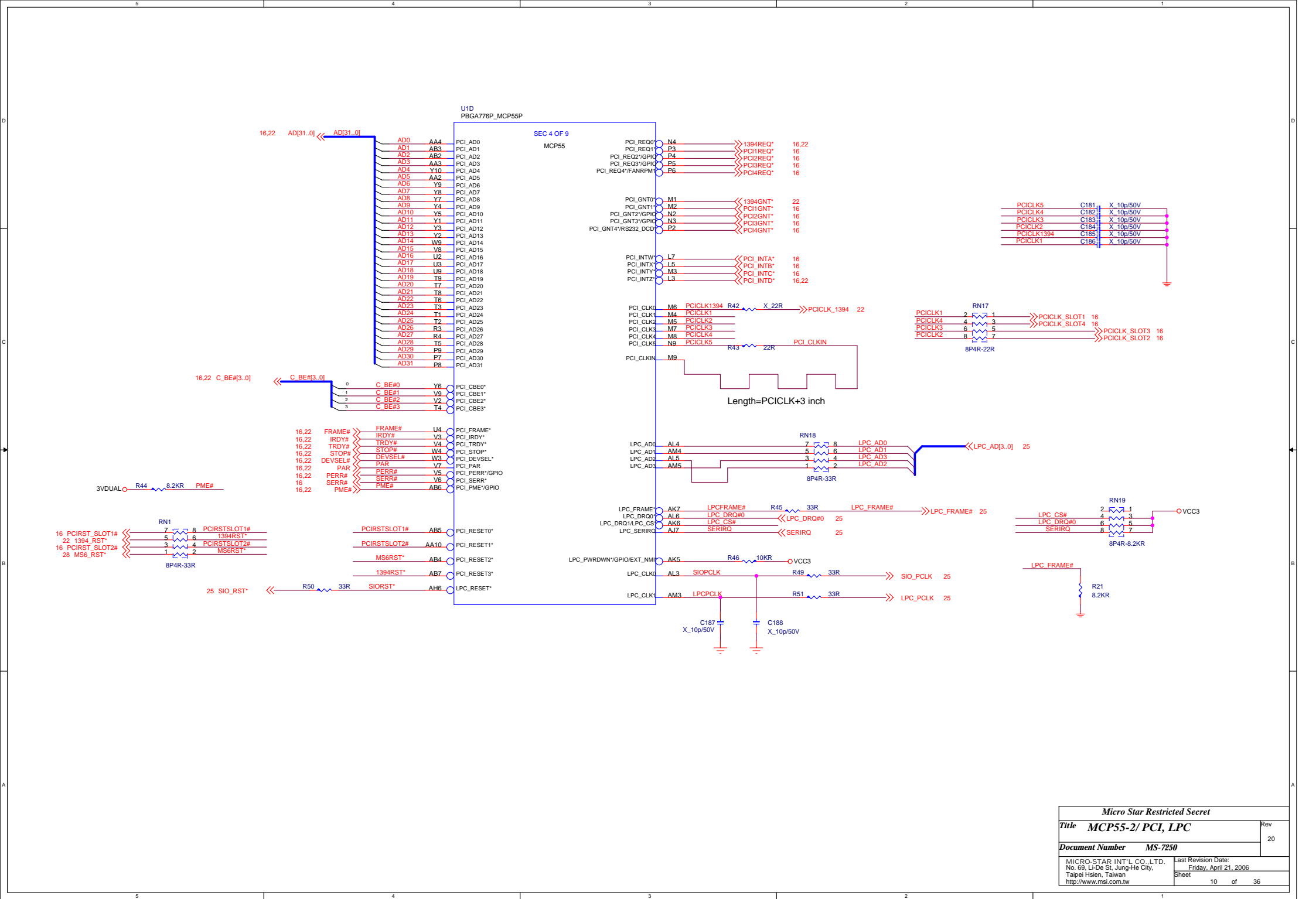


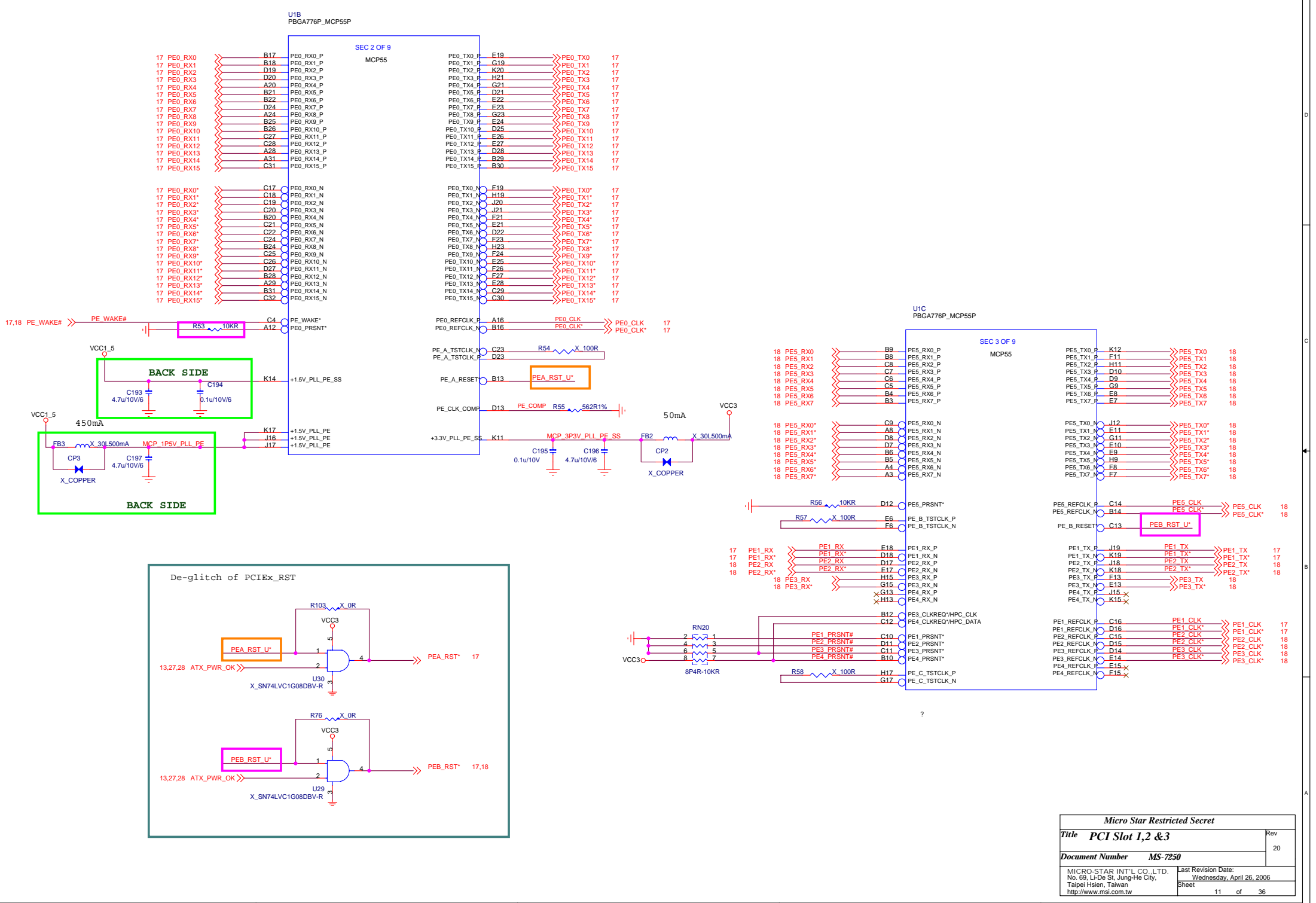
Decoupling Between Processor and DIMMs (CP)

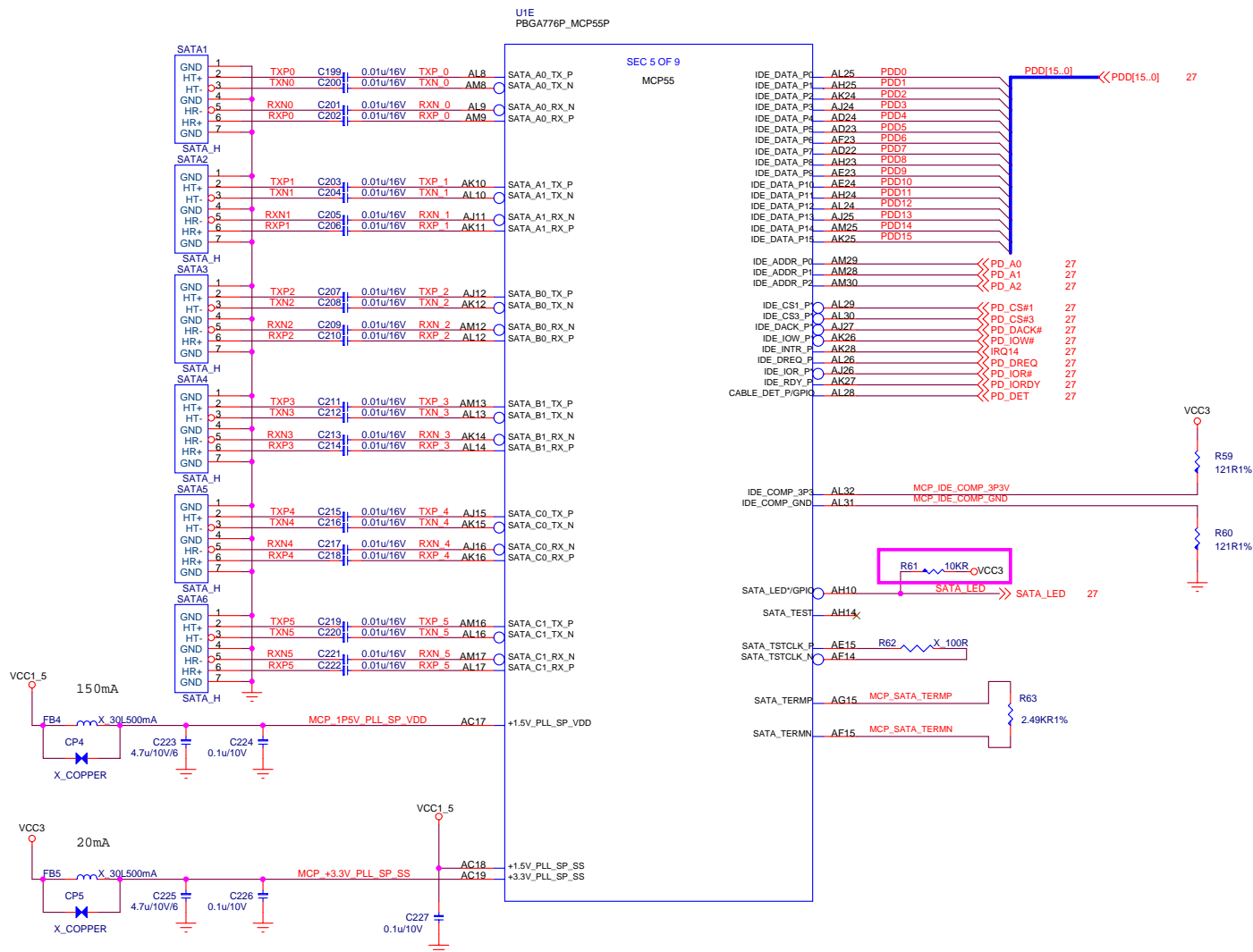
Layout: Spread out on VTT pour



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MCP55

PROG_REFCLK
HDA_BCLK

HDA_SYNC
HDA_RESET#MGPIO_3
HDA_SYNC#GPIO_44

GPIO_1/SLV_RDY4PWDRDWN
GPIO_2/CPU_SLP*/NMI
GPIO_3/CPU_CLKRUN/SMI*
GPIO_4/SUS_STAT*/SCI
GPIO_5/SYS_SHUTDOWN*/INIT*
GPIO_6/FERR*/SYS_PERR*
GPIO_7/FERR*/SYS_SERR*
GPIO_8/MSMB_CLK
GPIO_9/MSMB_DATA
GPIO_10/THERM_SID1
GPIO_11/CPU_VID0/R5232_SIN*
GPIO_12/CPU_VID1/R5232_SOUT*
GPIO_13/CPU_VID2/R5232_DTR*
GPIO_14/CPU_VID3/R5232_DSRR*
GPIO_15/CPU_VID4/R5232_RTS*
GPIO_16/CPU_VID5/R5232_CTS*
GPIO_17/SP1_DI
GPIO_18/SP1_DO
GPIO_19/SP1_CS
GPIO_20/SP1_CLK

GPIO_1/SLV_RDY4PWDRDWN
GPIO_2/CPU_SLP*/NMI
GPIO_3/CPU_CLKRUN/SMI*
GPIO_4/SUS_STAT*/SCI
GPIO_5/SYS_SHUTDOWN*/INIT*
GPIO_6/FERR*/SYS_PERR*
GPIO_7/FERR*/SYS_SERR*
GPIO_8/MSMB_CLK
GPIO_9/MSMB_DATA
GPIO_10/THERM_SID1
GPIO_11/CPU_VID0/R5232_SIN*
GPIO_12/CPU_VID1/R5232_SOUT*
GPIO_13/CPU_VID2/R5232_DTR*
GPIO_14/CPU_VID3/R5232_DSRR*
GPIO_15/CPU_VID4/R5232_RTS*
GPIO_16/CPU_VID5/R5232_CTS*
GPIO_17/SP1_DI
GPIO_18/SP1_DO
GPIO_19/SP1_CS
GPIO_20/SP1_CLK

USB0_P AL1 USBP0 USBN0 USBP0 USBN0

USB1_P AK1 USBP1 USBN1 USBP1 USBN1

USB2_P AJ1 USBP2 USBN2 USBP2 USBN2

USB3_P AJ5 USBP3 USBN3 USBP3 USBN3

USB4_P AH1 USBP4 USBN4 USBP4 USBN4

USB5_P AH3 USBP5 USBN5 USBP5 USBN5

USB6_P AG4 USBP6 USBN6 USBP6 USBN6

USB7_P AG5 USBP7 USBN7 USBP7 USBN7

USB8_P AF3 USBP8 USBN8 USBP8 USBN8

USB9_P AF4 USBP9 USBN9 USBP9 USBN9

USB_OC0*/GPIO AE4 USB_OC#0

USB_OC1*/GPIO/MGPIO AF6 USB_OC#4

USB_OC2*/GPIO/MGPIO AE3 USB_OC#6

USB_OC3*/GPIO/MGPIO AE1 USB_OC#8

USB_OC4*/GPIO/MGPIO AE2 USB_OC#6

USB_RBIAS_GND AK3 USB_RBIAS_GND R72 931R1%

A20GATE/GPIO AB9 A20GATE

INTRUDER# AL21 INTRUDER#

EXT_SMI*/GPIO AC4

R*/GPIO AF9

PWRBTN# AF10 PWRBTN#

SIO_PME*/GPIO AC3 SIO_PME#

KBRDSTN*/GPIO AB8 KBRST#

SMB_CLK0 AL20 SMB_MEM_CLK

SMB_DATA0 AK20 SMB_MEM_DATA

SMB_CLK AK19 SMBCLK

SMB_DATA AJ19 SMBDATA

+3.3V_VBAT AD21

BUF_SIO_CLK AD3

SUS_CLK/GPIO AD2 SUS_CLK

THERM*/GPIO AD8

RSTBTN# AD10 FP_RST#

SLP_S5 AK18 SLP_S5#

SLP_S3 AJ18 SLP_S3#

PWRGD_SG AC21 RSMRST#

PWRGD AF21

FANRPM/GPIO AD6

FANCTL0/GPIO AD5

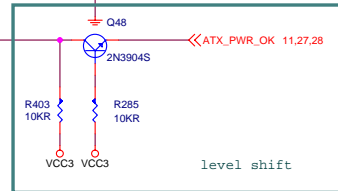
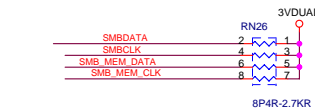
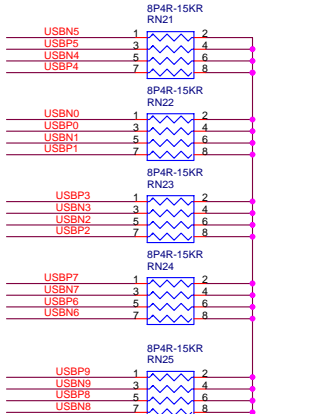
FANCTL1/GPIO AD7

THERM_SIC/GPIO AK30 MCP_THERM_SIC

THERM_SID0/GPIO AH27 MCP_THERM_SID

TEST_MODE_EN P24 SB TEST

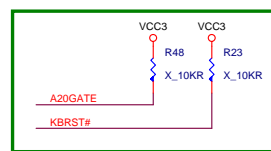
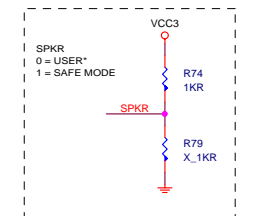
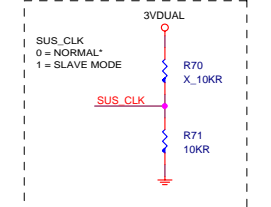
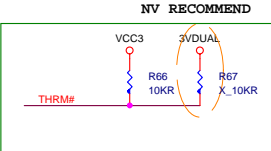
BACK SIDE



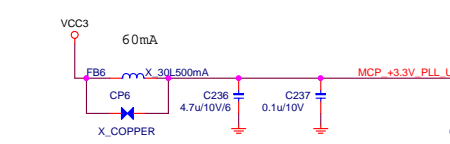
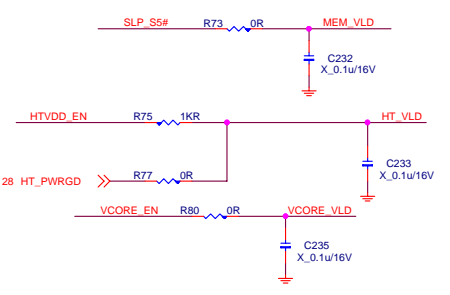
X_JUMPER-1X2A_green
JBAT1(1-2)1

CMOS CLEAR JUMPER	
JBAT1 Clear CMOS	
1 - 2	Normal
2 - 3	Clear CMOS

if used JBAT1, pls remove R82 and SW1
if used SW1, pls add R82 and remove JBAT1



POWER SEQUENCE



RTC_RST# AJ22

AG11 N/C

AF11 N/C

AH11 N/C

AD11 N/C

AE11 N/C

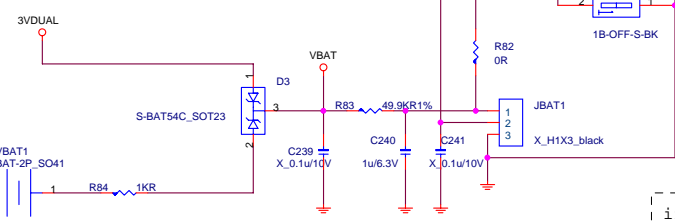
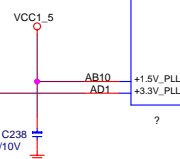
MEM_VLD AL18

HT_VLD AE21

HTVDD_EN AJ21

VCORE_VLD AH21

VCORE_EN AG21



MII_RXD / MII_RXCTL
0 OHM IF ROUTED 7/15 (60 OHM), Length<8"
22 OHM IF ROUTED 5/10 (60 OHM), Length<12"

MII_RXCLK
0 OHM IF ROUTED 7/20 (60 OHM), Length<8"
22 OHM IF ROUTED 5/10 (60 OHM), Length<12"

MII_TXD / MII_TXCTL
0 OHM IF ROUTED 7/15 (60 OHM), Length<8"
22 OHM IF ROUTED 5/10 (60 OHM), Length<12"

MII_TXCLK
0 OHM IF ROUTED 7/20 (60 OHM), Length<8"
22 OHM IF ROUTED 5/10 (60 OHM), Length<12"

U1G
PBGAT76P_MCP55P

SEC 7 OF 9

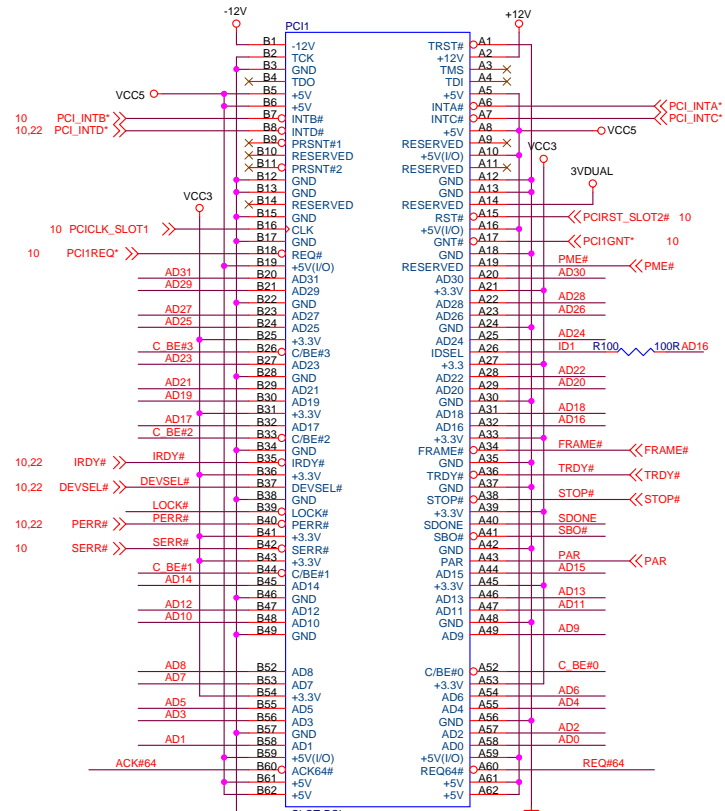
MCP55

BACK SIDE

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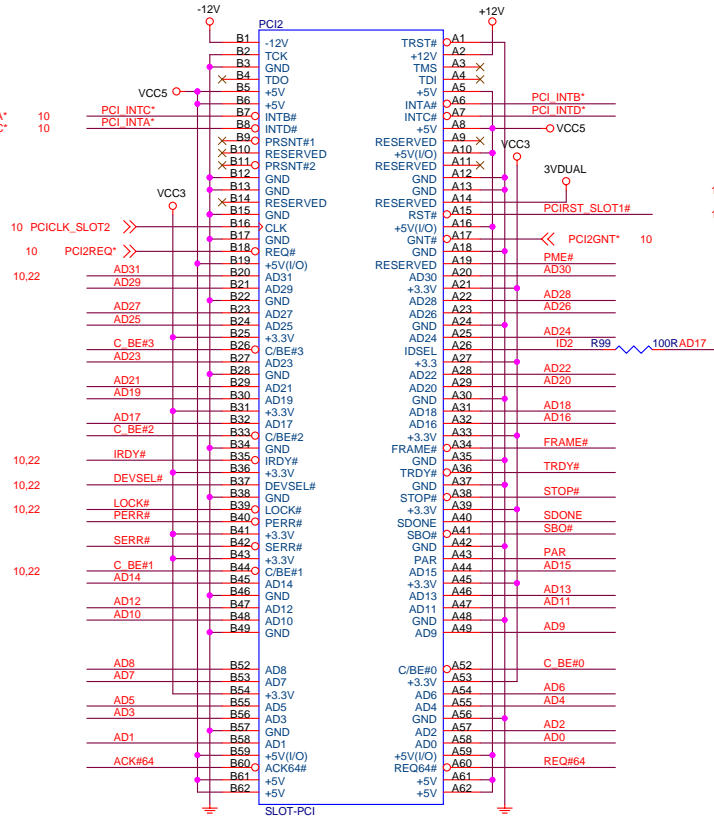
10.22 AD[31..0] >> AD[31..0]
10.22 C_BE#[3..0] >> C_BE#[3..0]

PCI SLOT 1 (PCI VER: 2.2 COMPLY)



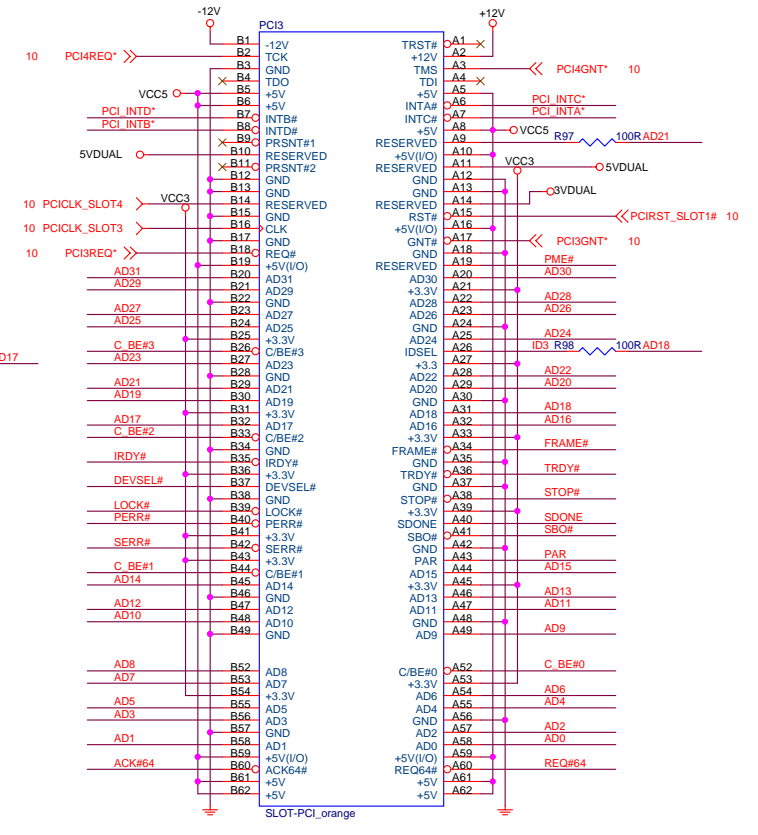
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MASTER = PCI1REQ*
PCI1GNT*

PCI SLOT 2 (PCI VER: 2.2 COMPLY)



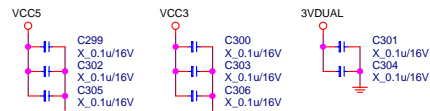
IDSEL = AD17
MASTER = PCI2REQ*
PCI2GNT*

PCI SLOT 3 (PCI VER: 2.2 COMPLY)

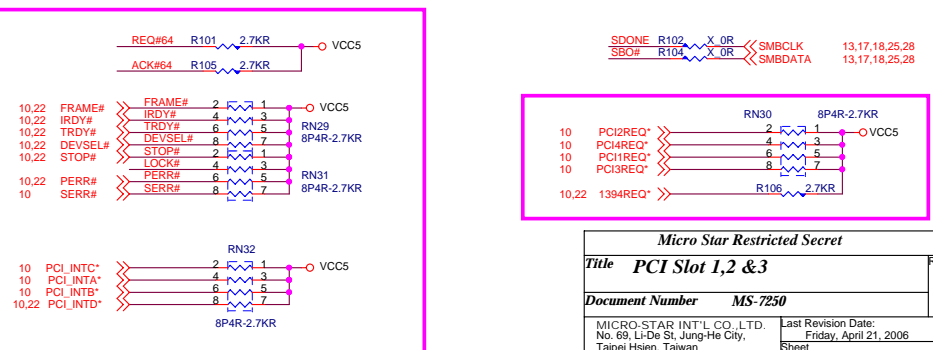


IDSEL = AD18
MASTER = PCI3REQ*
PCI3GNT*

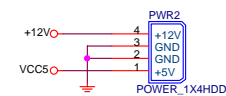
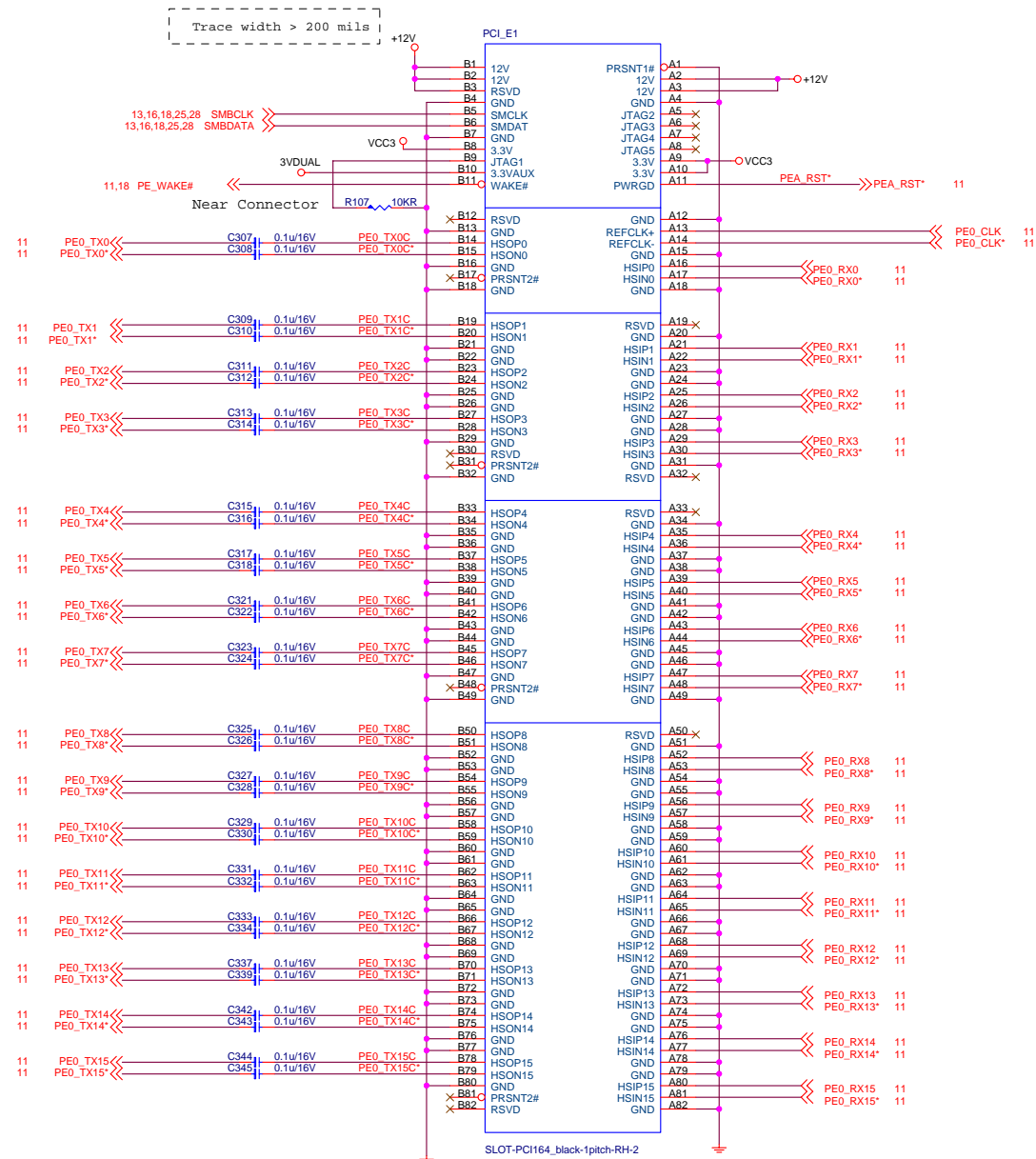
PCI SLOT DECOUPLING CAPACITORS



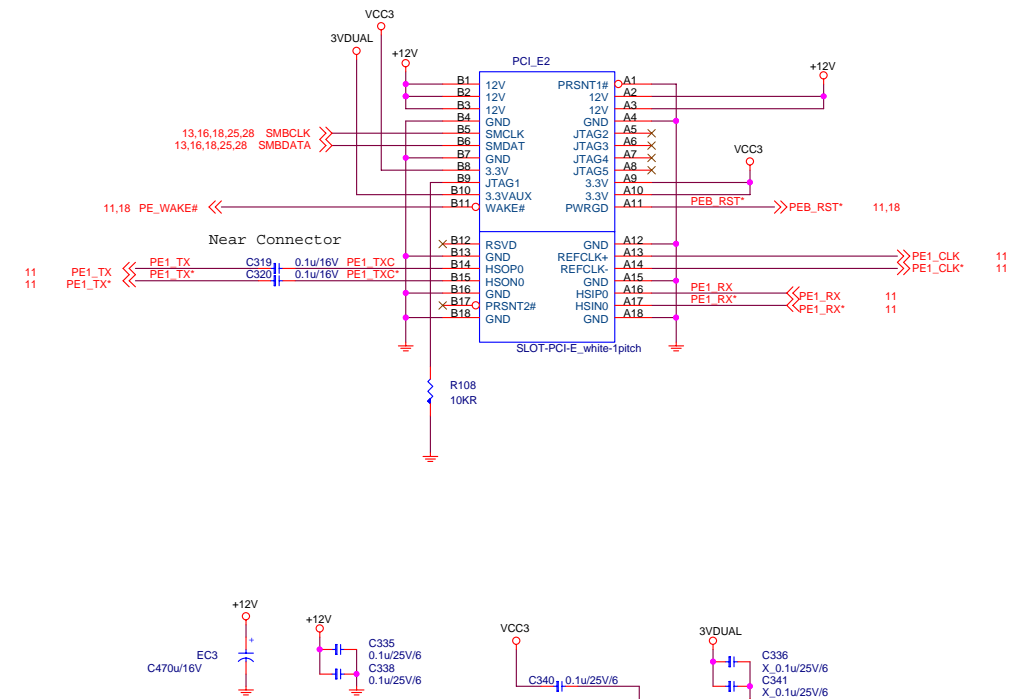
PCI PULL-UP / DOWN RESISTORS



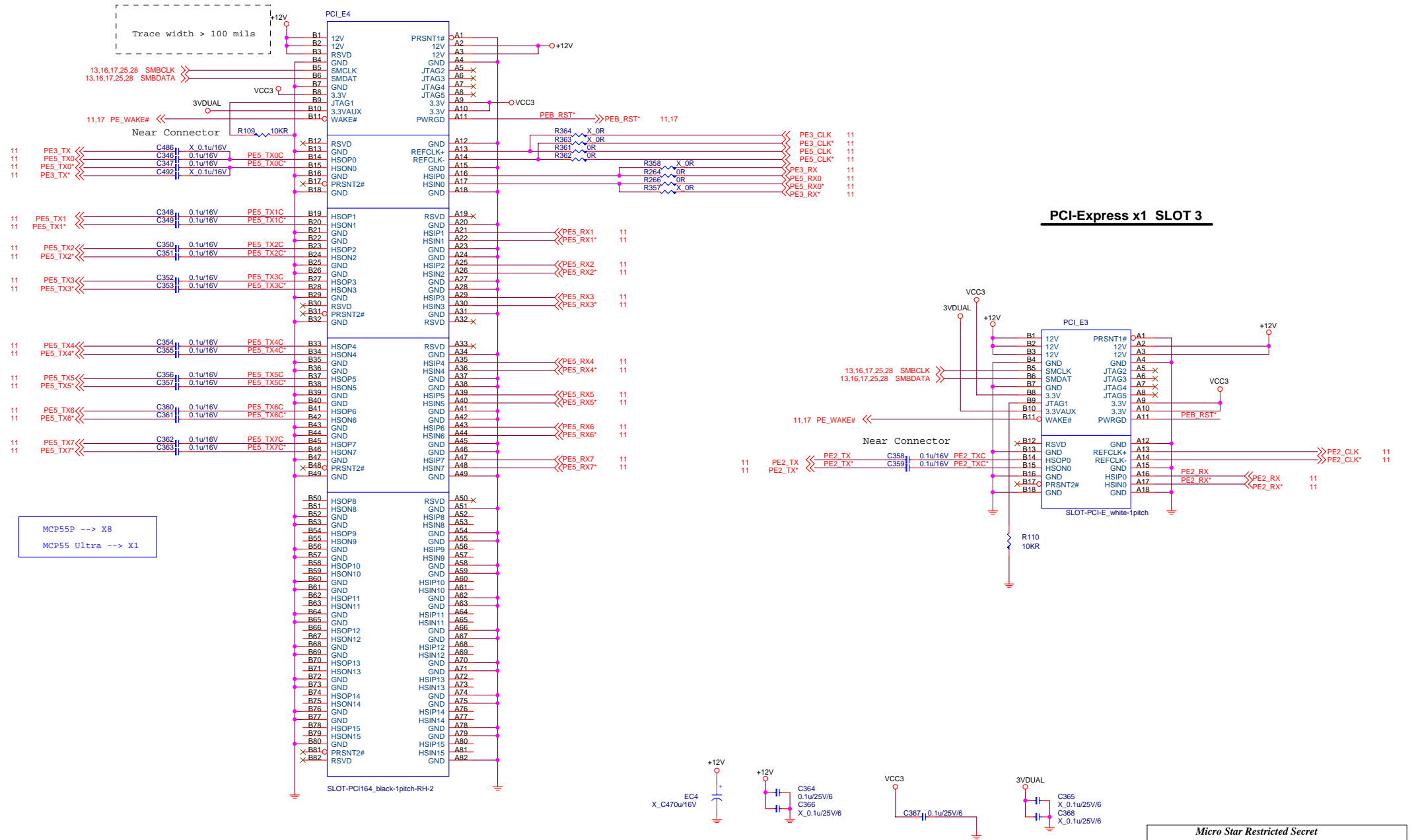
PCI EXPRESS_16



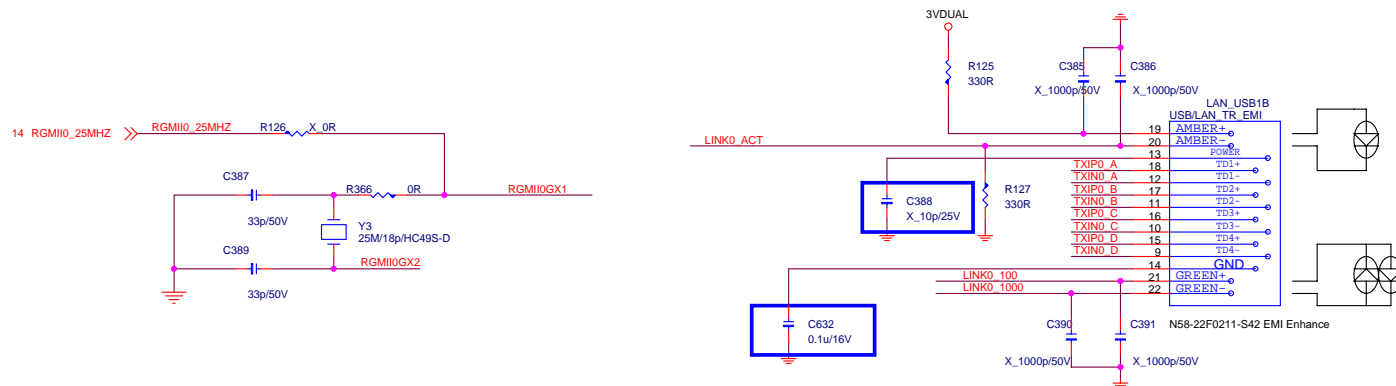
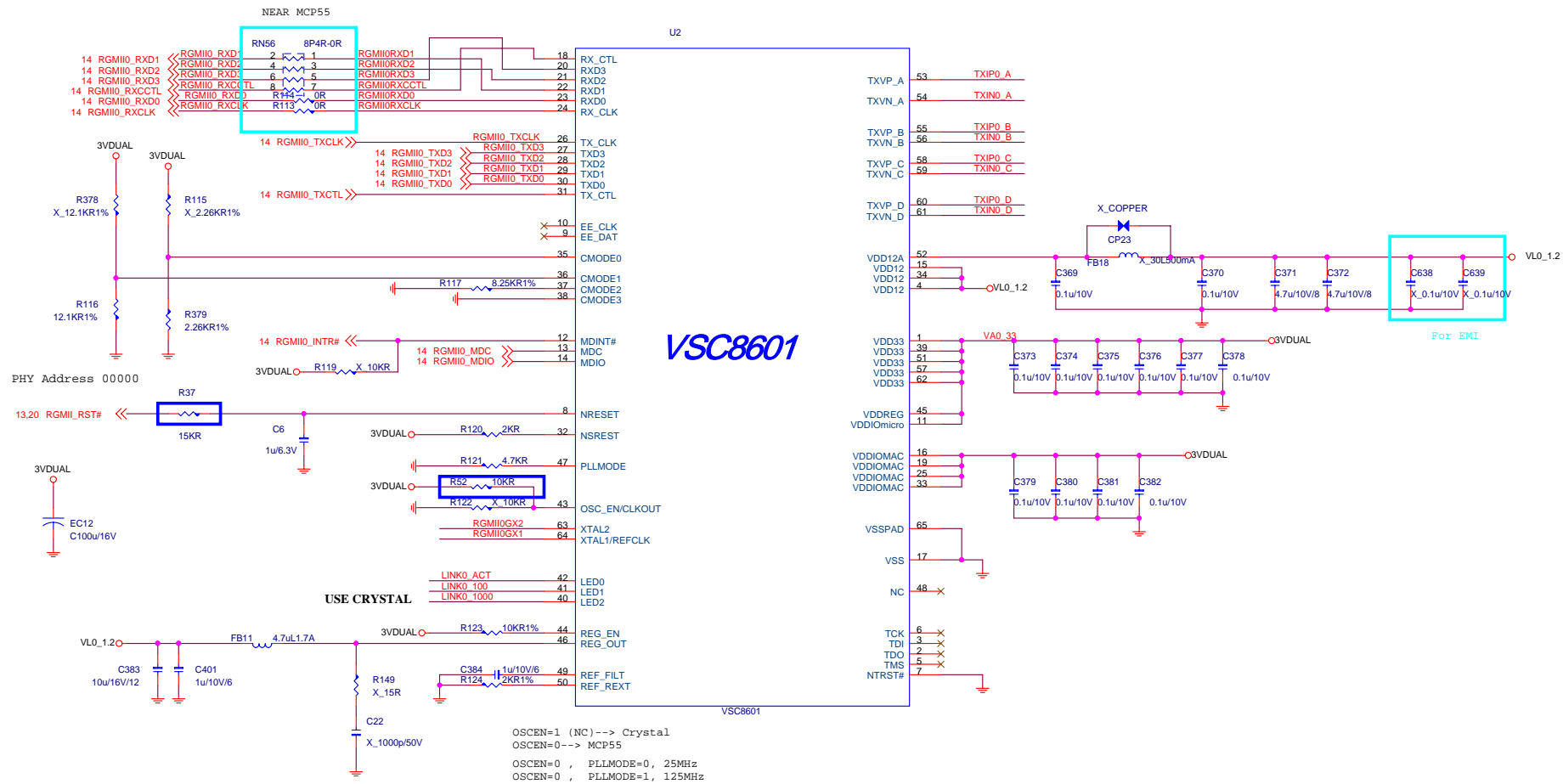
PCI-Express x1 SLOT 1



PCI EXPRESS_16

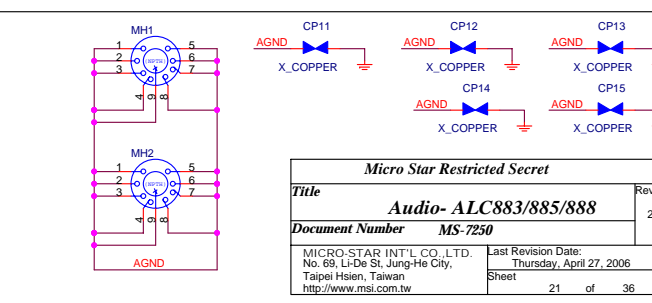
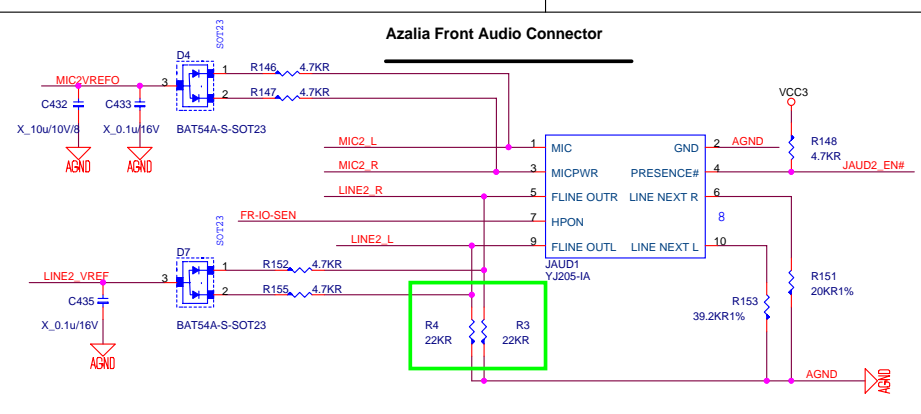
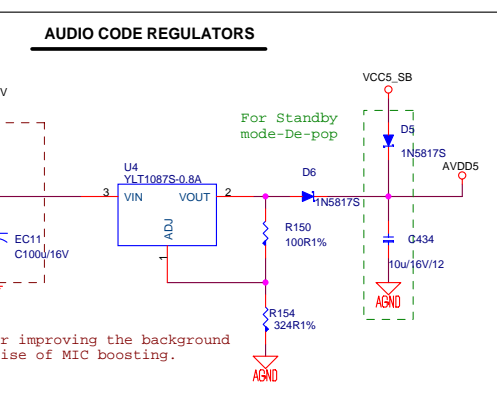
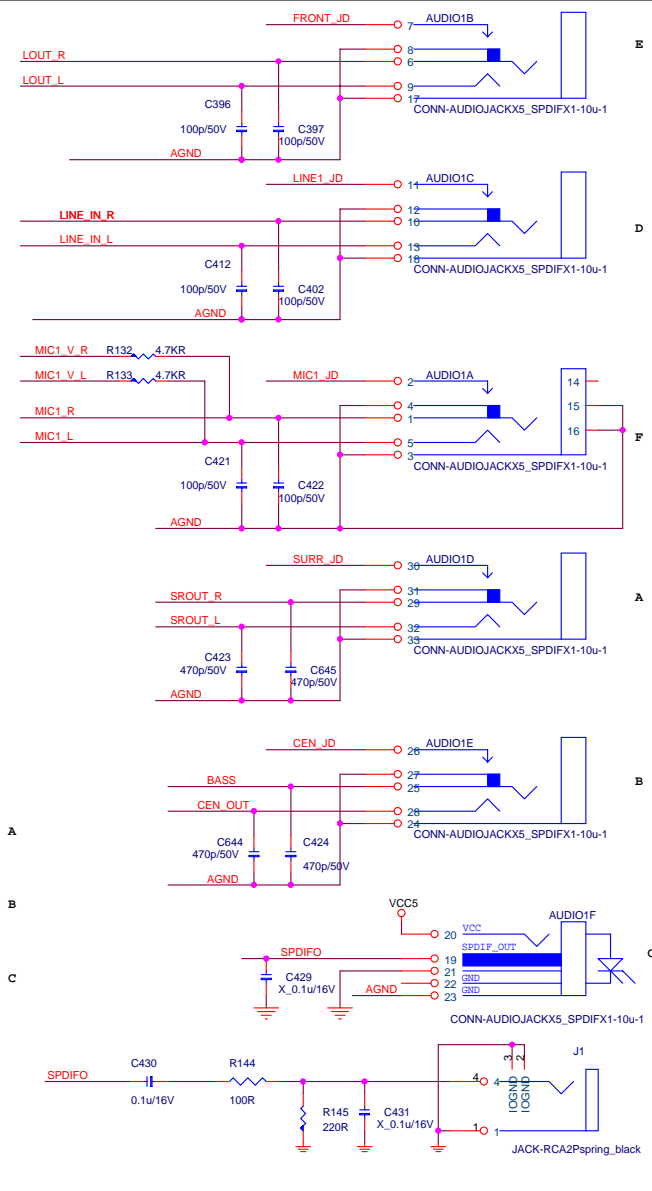
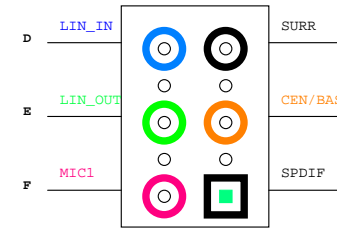
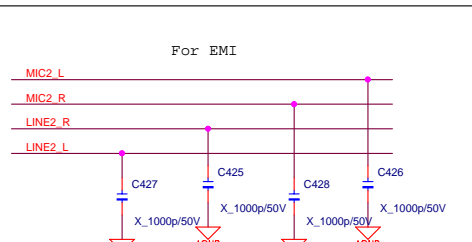
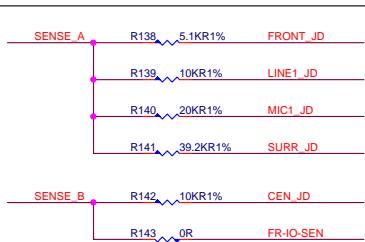
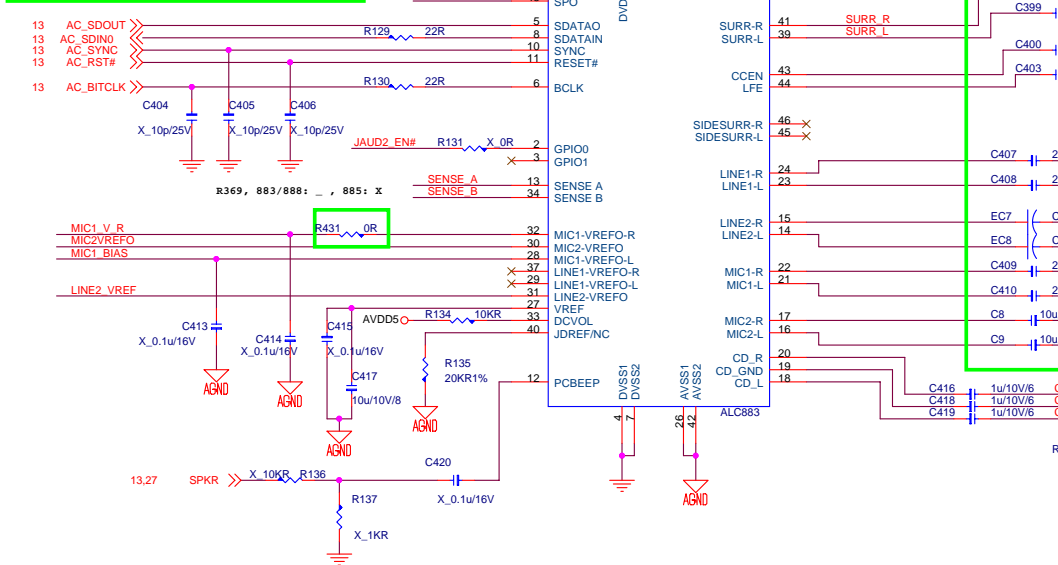
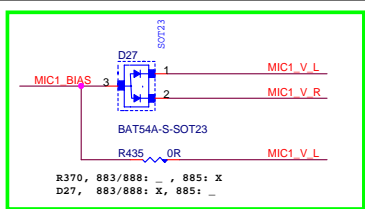


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Document Number MS-7250			20
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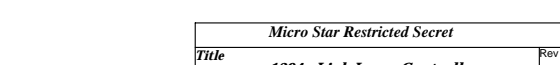
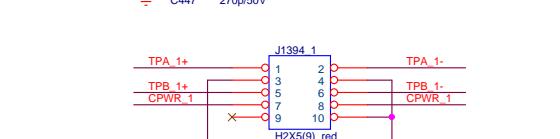
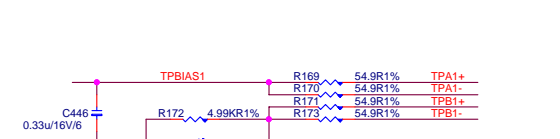
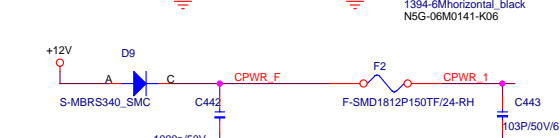
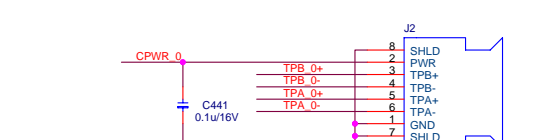
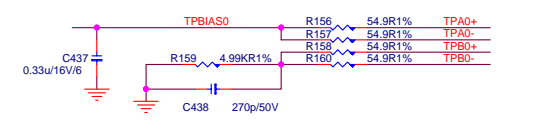
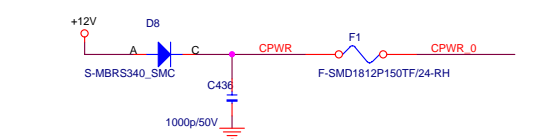
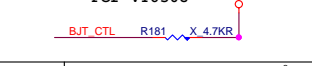
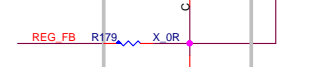
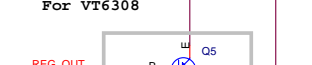
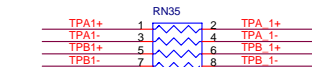
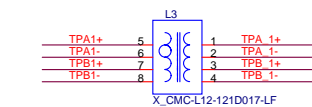
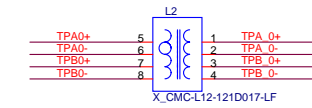
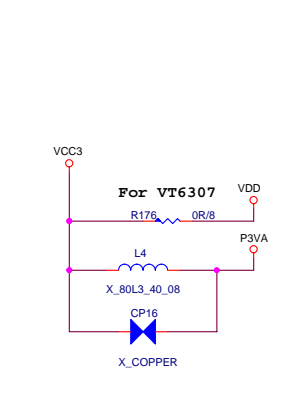
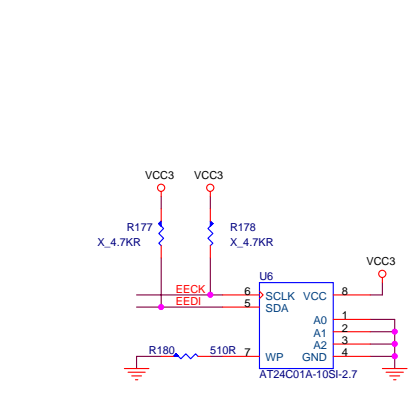
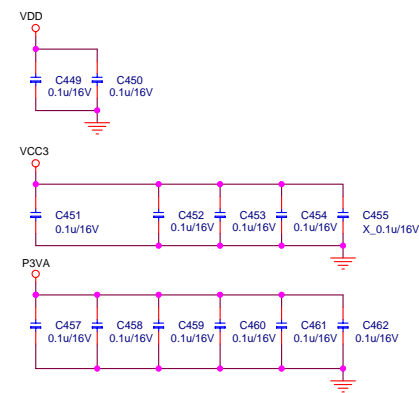
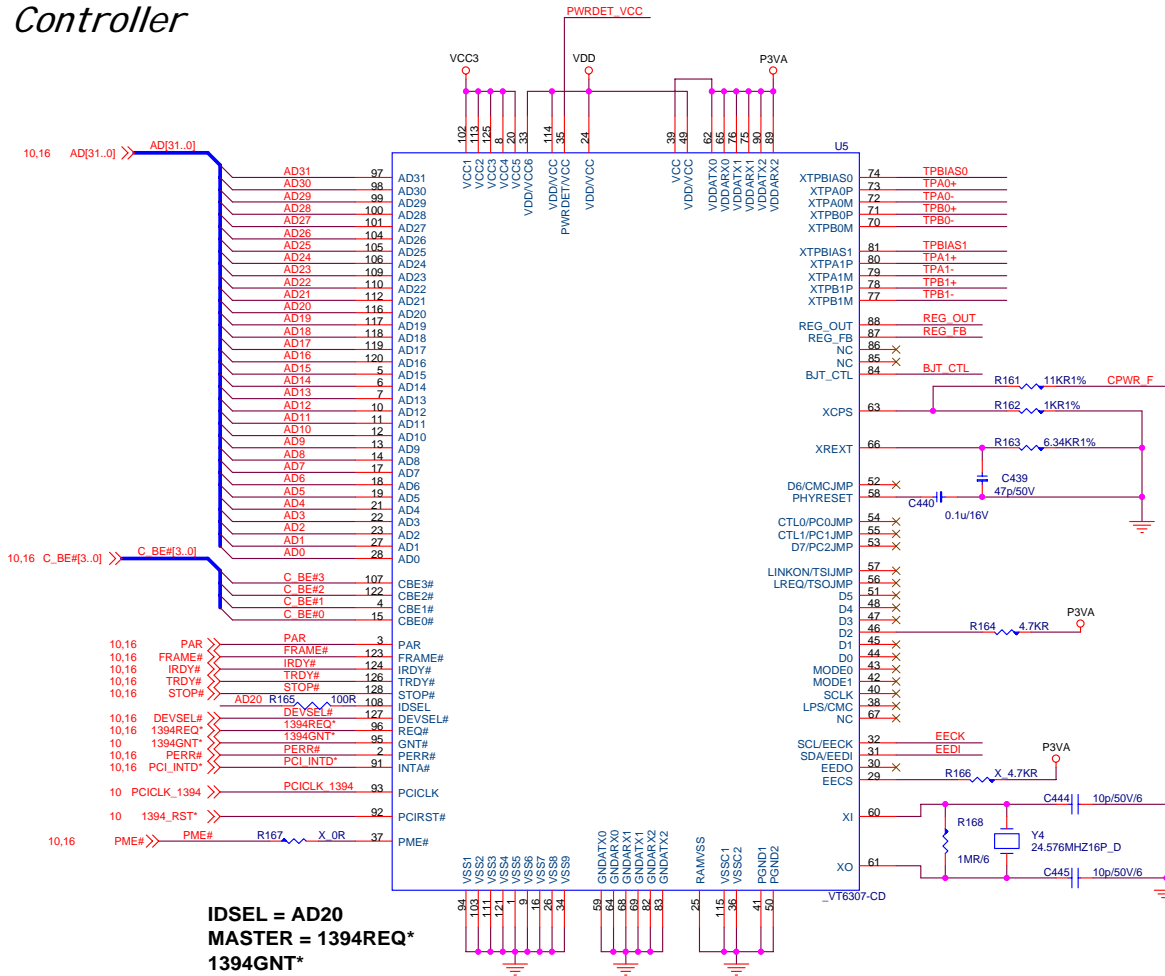
Giga-Lan	
N58-22F0081-S42	
Link	Yellow
Active	Blinking
1000	Orange
100	Green
10	None
19	Yellow
20	Yellow
21	Orange
22	Green

Micro Star Restricted Secret	
Title	LAN VSC8601-1
Document Number	MS-7250
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan http://www.msi.com.tw	Last Revision Date: Friday, April 21, 2006 Sheet 19 of 36



<i>Micro Star Restricted Secret</i>		
<i>Title</i>	<i>Audio- ALC883/885/888</i>	Rev 2
<i>Document Number</i>	<i>MS-7250</i>	
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Thursday, April 27, 2006
Sheet		21 of 36

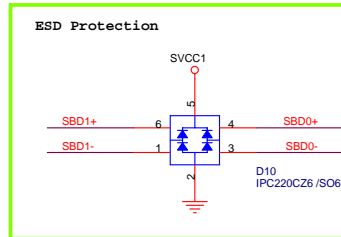
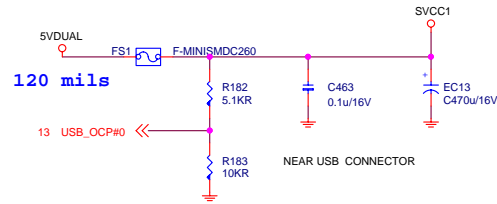
1394a OHCI Link Layer Controller



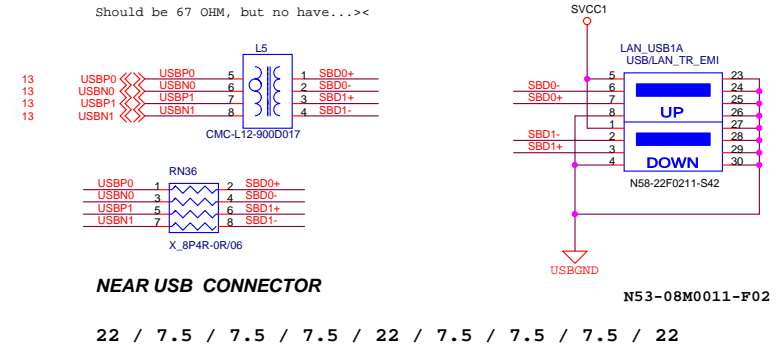
For Intel 1394 pinheader

Micro Star Restricted Secret		
Title	1394a Link Layer Controller	Rev
Document Number	MS-7250	20
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		
Last Revision Date:		22 of 36
Tuesday, April 25, 2006		

POWER CIRCUIT FOR USB PORT 0,1,2,3



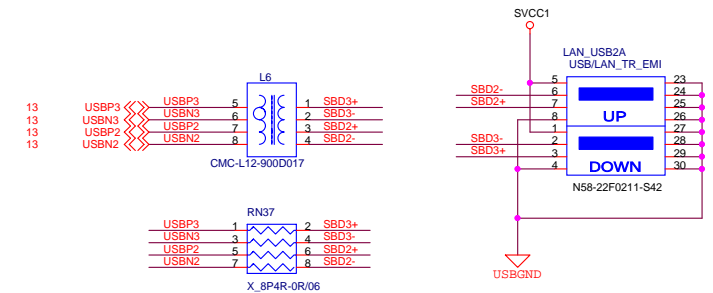
REAR PANEL USB CONNECTOR FOR USB PORT 0,1



NEAR USB CONNECTOR

22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

REAR PANEL USB CONNECTOR FOR USB PORT 2,3



NEAR USB CONNECTOR

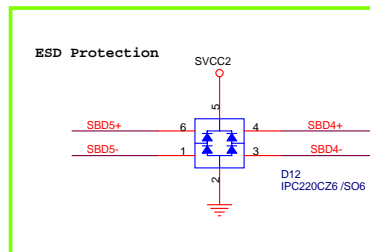
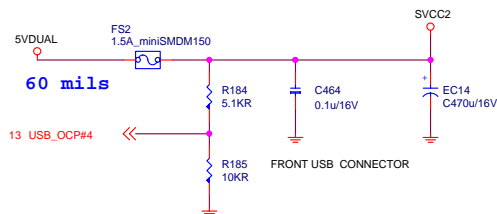
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

EMI TEST

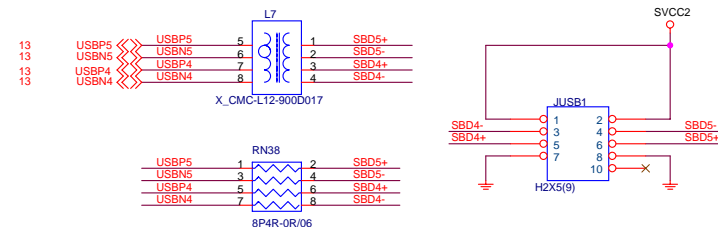


Micro Star Restricted Secret		
Title	REAR USB PORTS	Rev
Document Number	MS-7250	20
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Wednesday, April 26, 2006 Sheet 23 of 36

POWER CIRCUIT FOR USB PORT 4,5



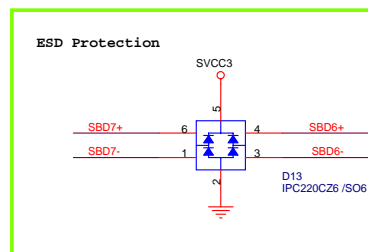
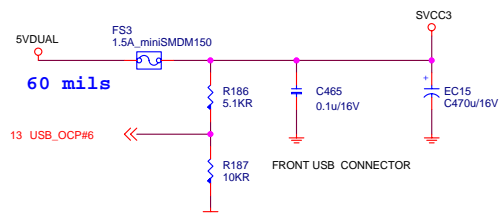
FRONT PANEL USB CONNECTOR FOR USB PORT 4,5



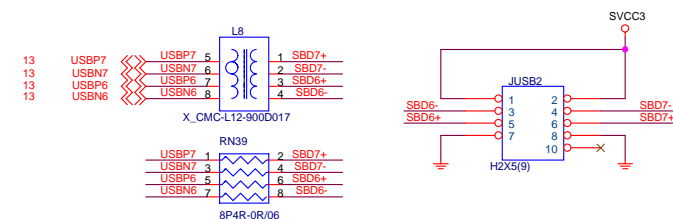
NEAR USB CONNECTOR

22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

POWER CIRCUIT FOR USB PORT 6,7



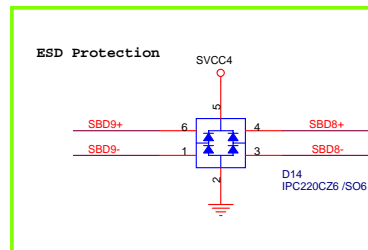
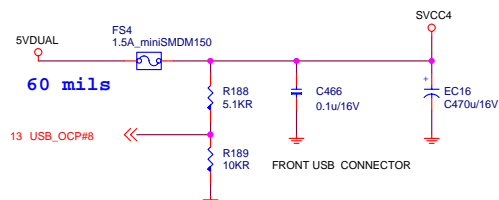
FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



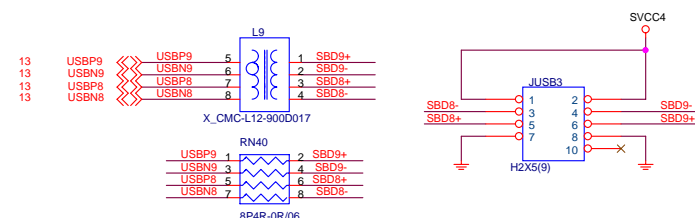
NEAR USB CONNECTOR

22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

POWER CIRCUIT FOR USB PORT 8,9



FRONT PANEL USB CONNECTOR FOR USB PORT 8,9

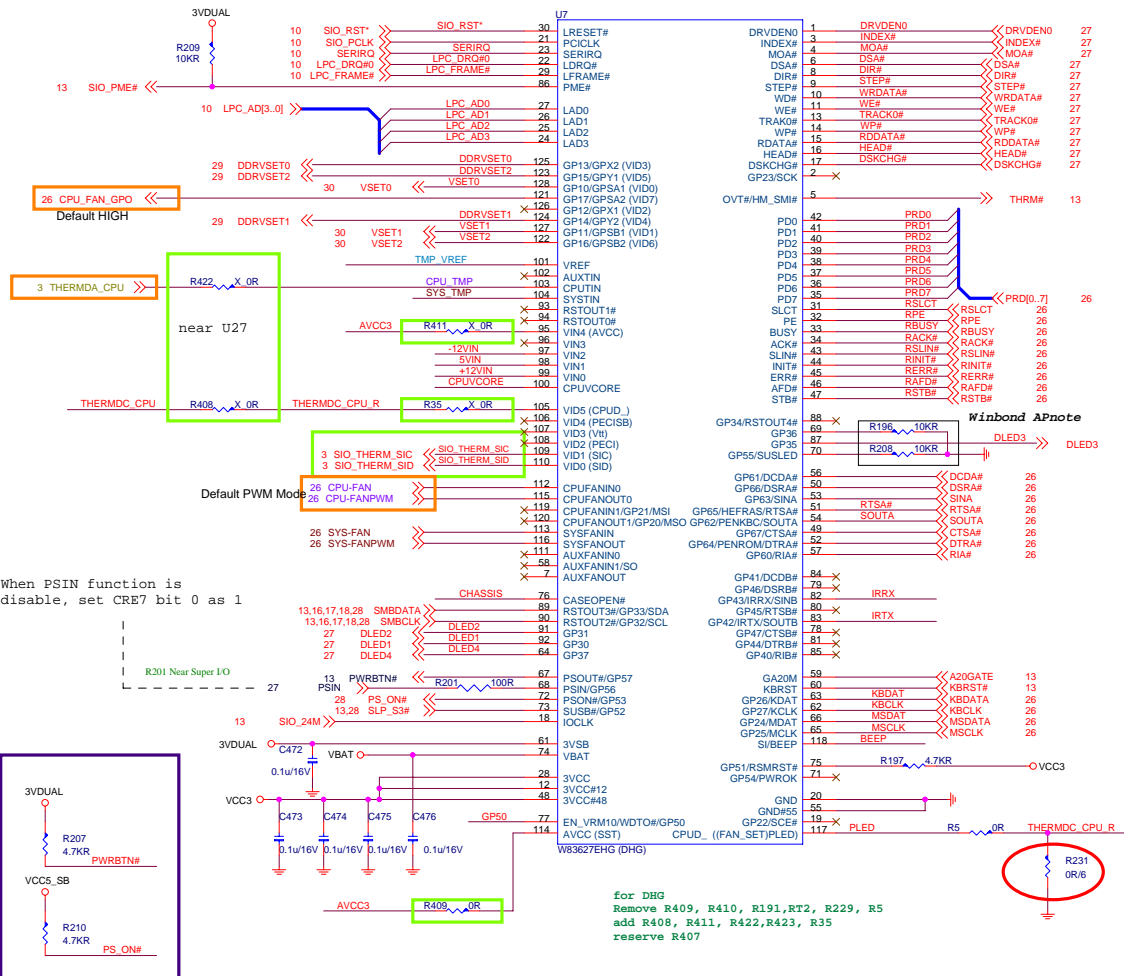


NEAR USB CONNECTOR

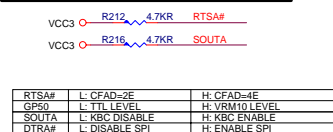
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

Micro Star Restricted Secret		
Title	FRONT USB PORT	Rev
Document Number	MS-7250	20
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan		Last Revision Date: Friday, April 21, 2006
http://www.msi.com.tw		Sheet 24 of 36

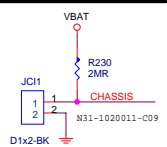
Super I/O



LPC I/O STRAPPING RESISTOR



Chassis Intrusion

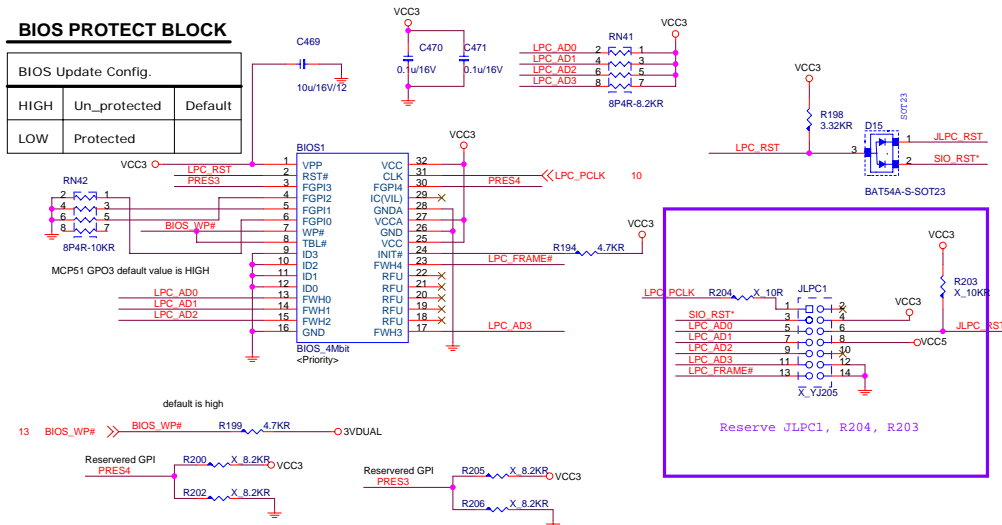


SPEAKER BLOCK

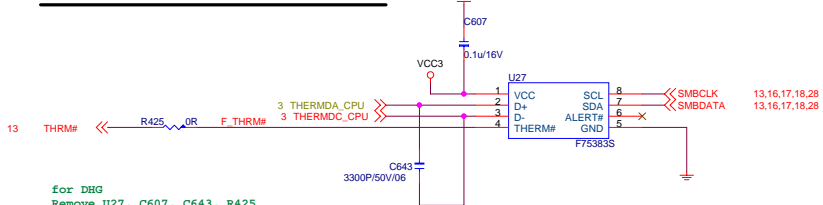


BIOS PROTECT BLOCK

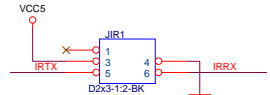
BIOS Update Config.		
HIGH	Un_protected	Default
LOW	Protected	



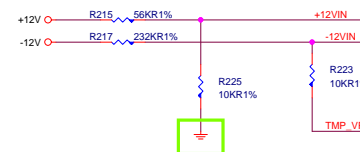
CPU TEMPERATURE SENSOR



Intel Front IR Header



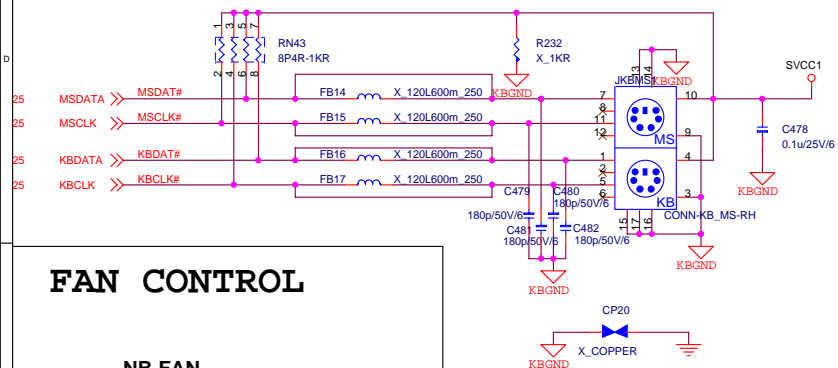
Thermal Resistor



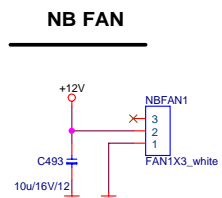
<i>Micro Star Restricted Secret</i>		
Title	<i>SIO-W83627EHG,IR,LPC</i>	Rev
Document Number	<i>MS-7250</i>	20
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Friday, April 21, 2006
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NOTE: LOCATE CLOSE STATUS
PANEL back-side

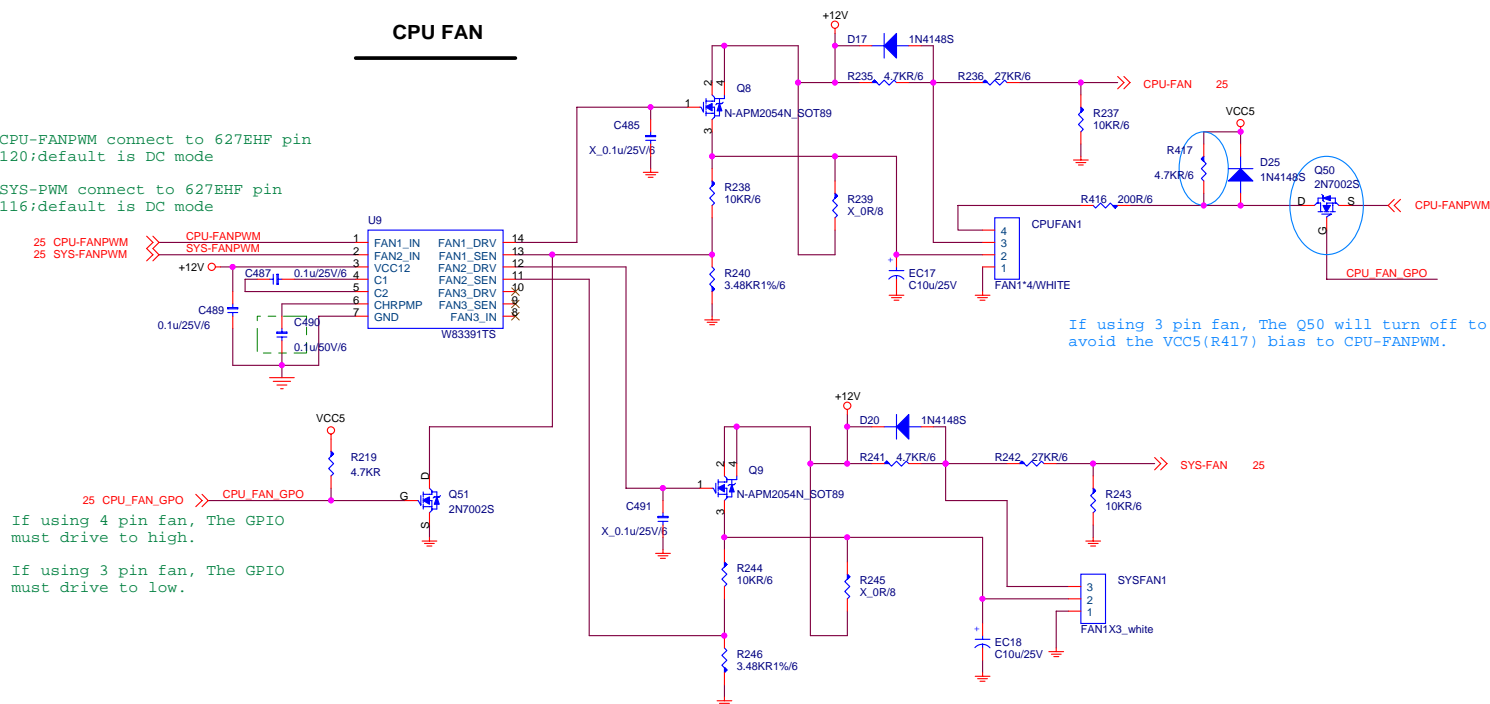
PS2 KEYBOARD & MOUSE CONNECTOR



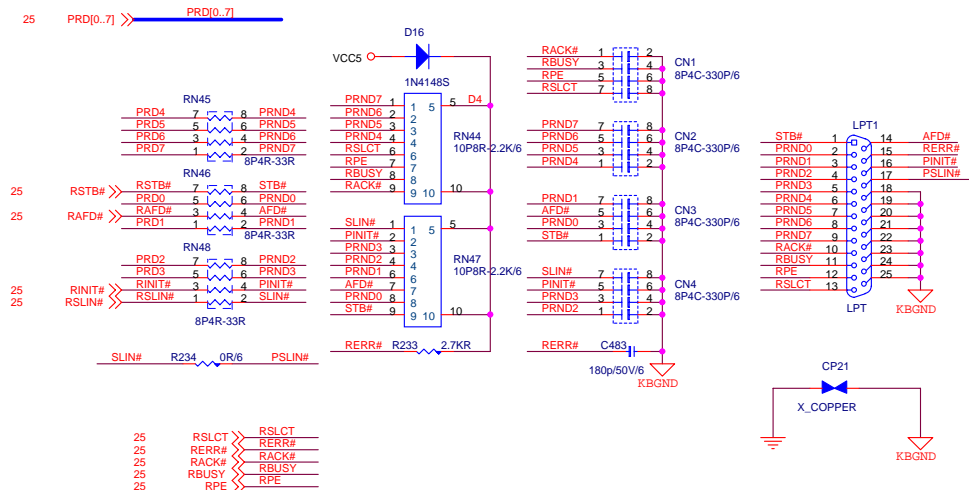
FAN CONTROL



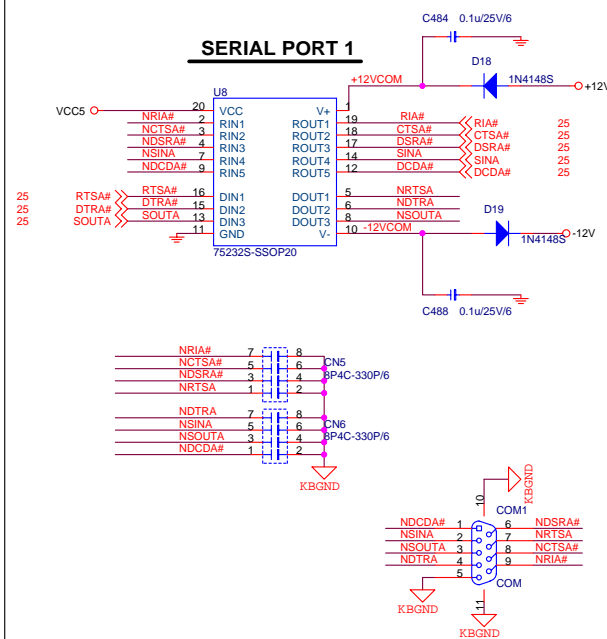
CPU FAN



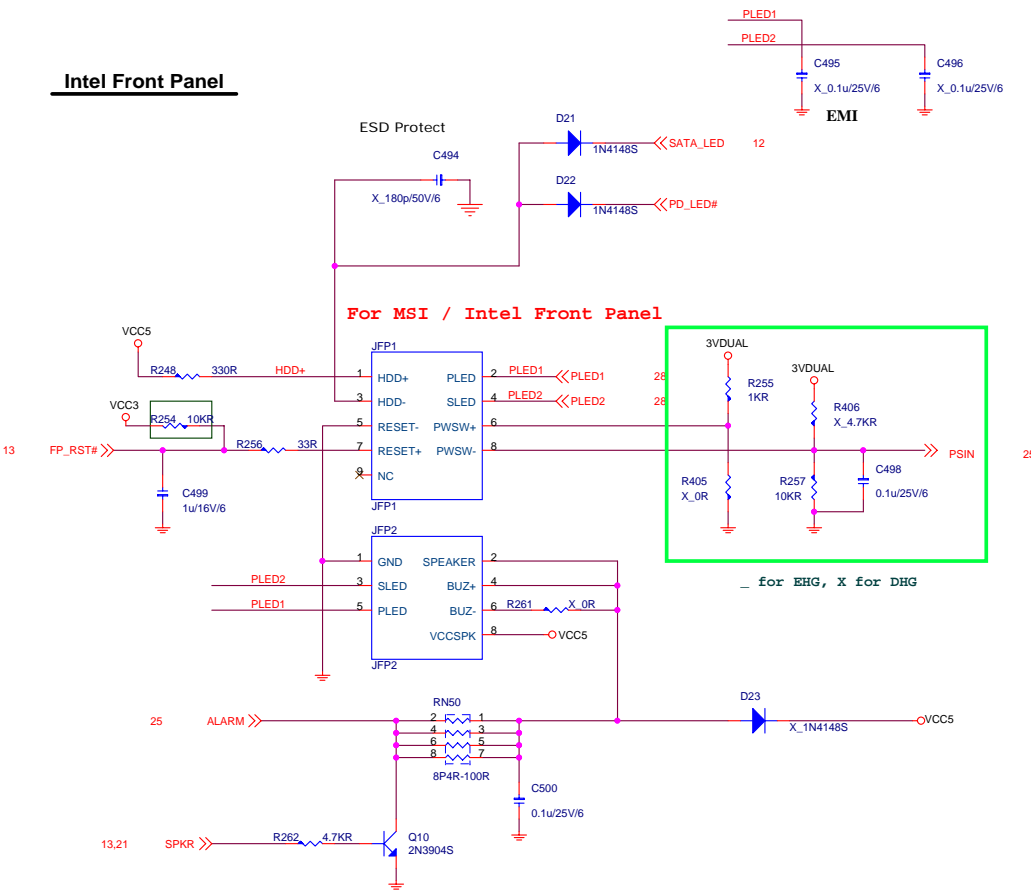
PARALLAL PORT



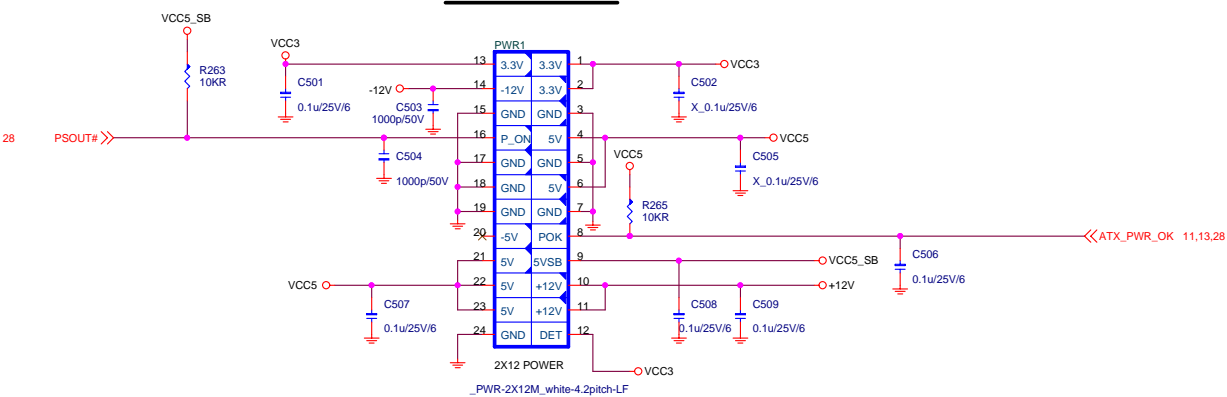
SERIAL PORT 1



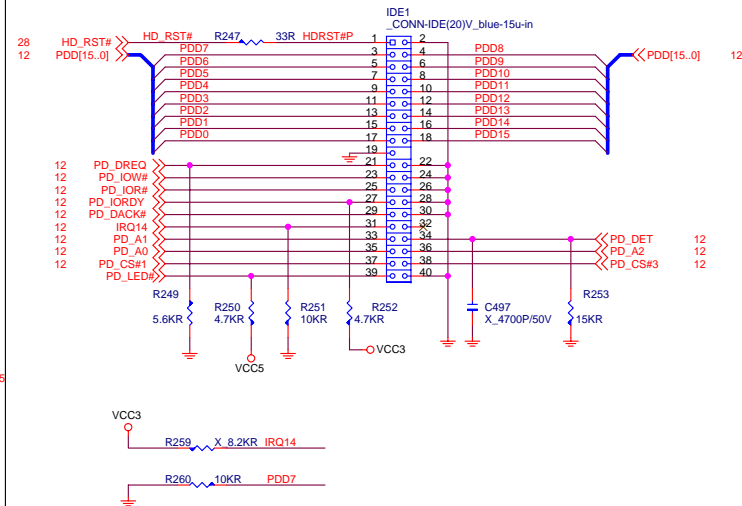
Intel Front Panel



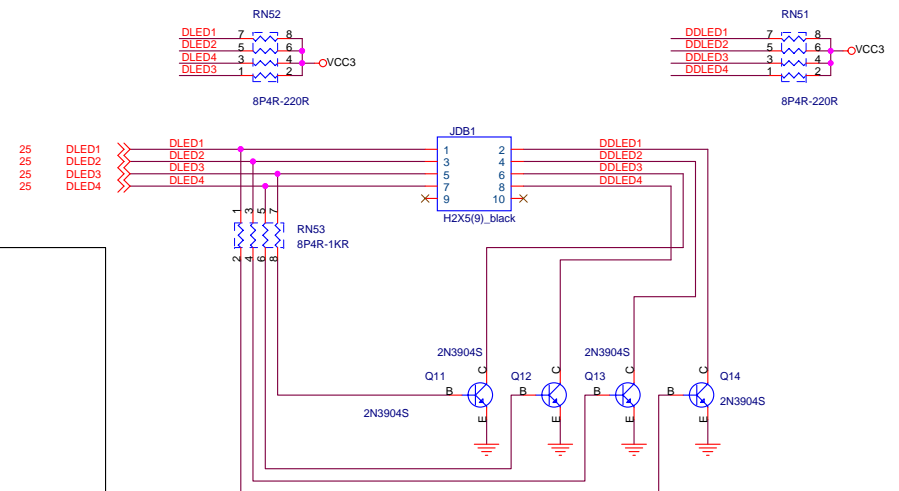
ATX Connector



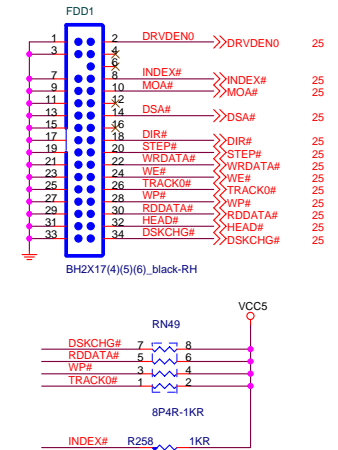
IDE 1



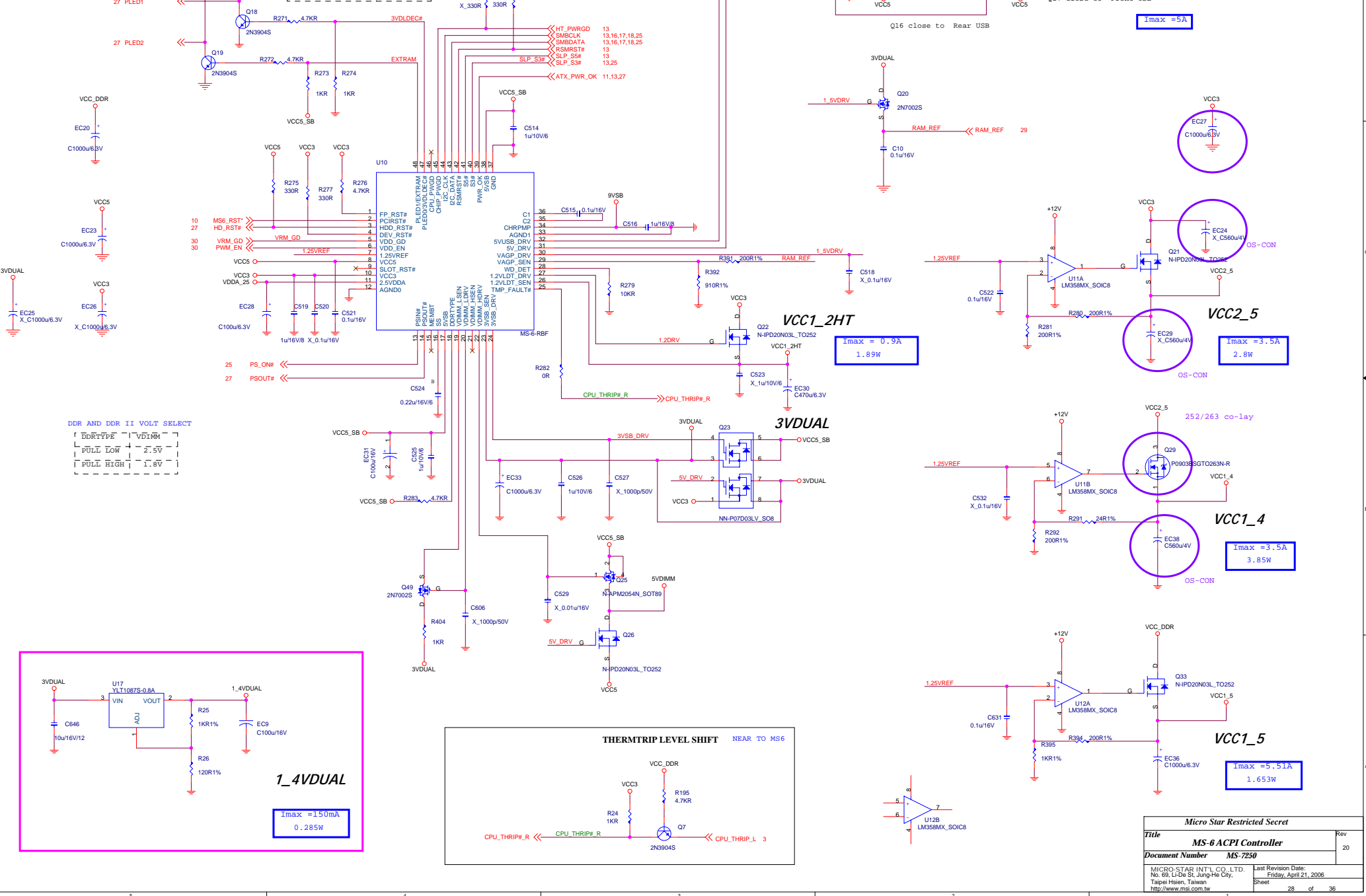
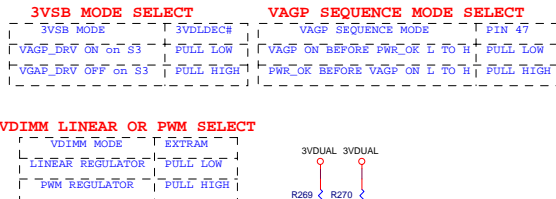
D-Bracket



Floppy

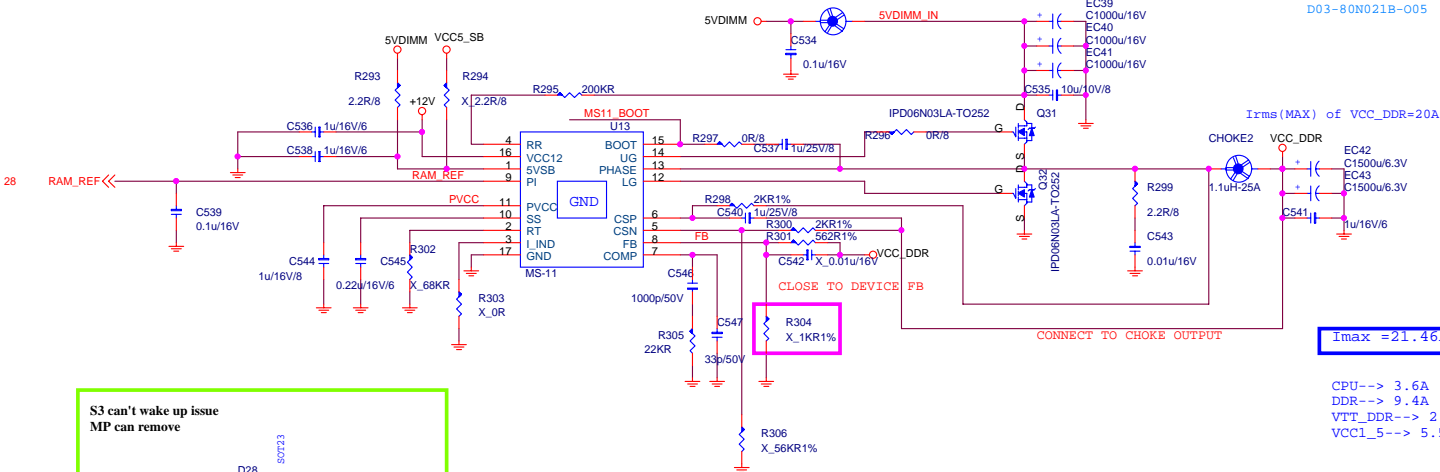


ACPI Controller

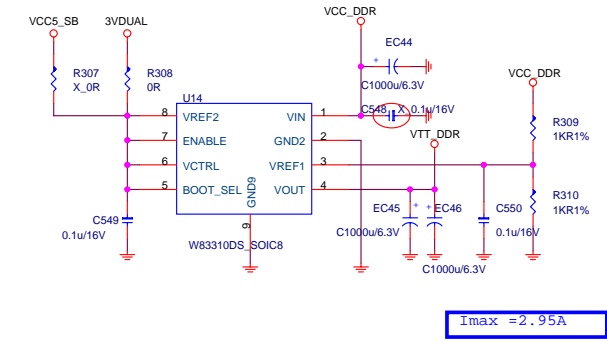


Micro Star Restricted Secret	
Title	MS-6 ACPI Controller
Document Number	MS-7250
MICRO-STAR INT'L CO., LTD. No. 89, L-D St. Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw	
Last Revision Date: Friday, April 21, 2006	
Sheet	28 of 36

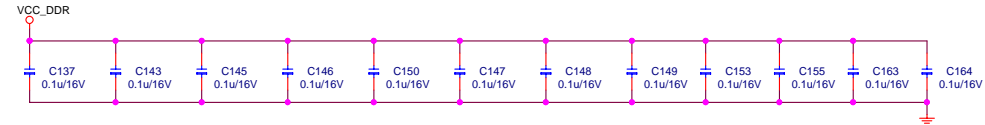
DDR II 1.8V POWER



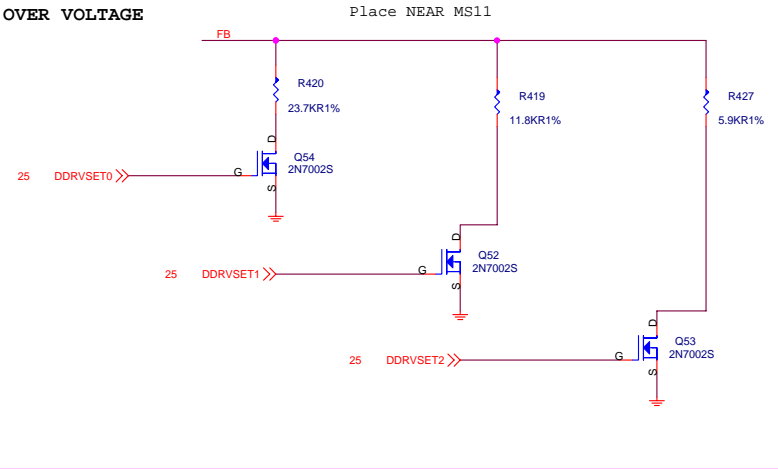
DDR II VTT POWER



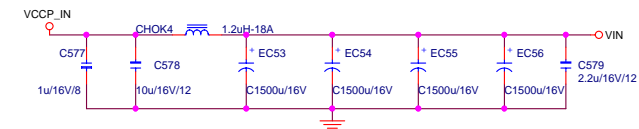
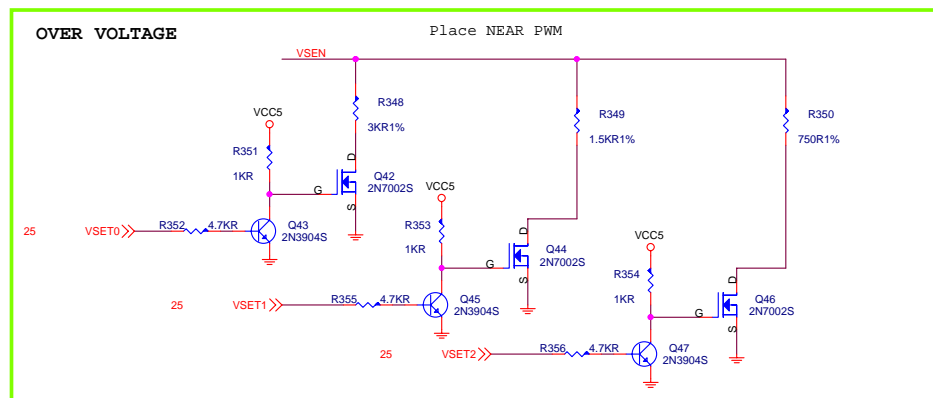
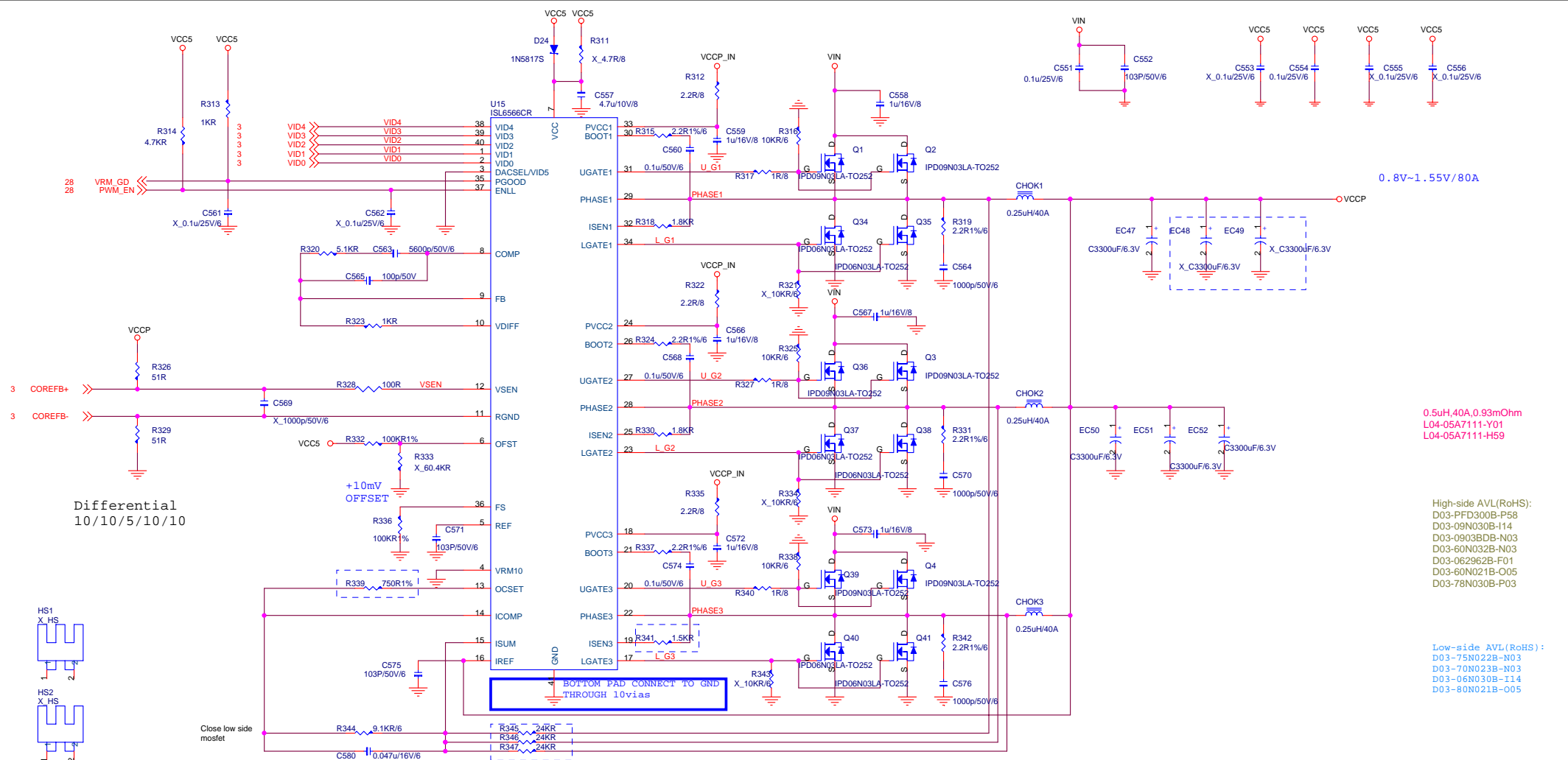
de- VCC_DDR high frequency noise.



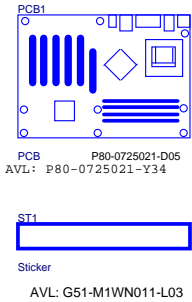
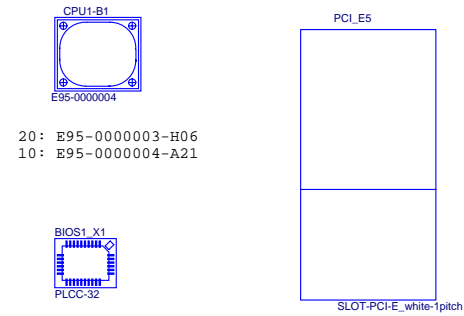
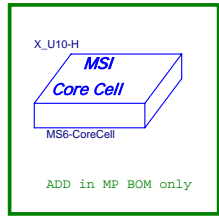
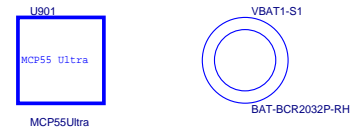
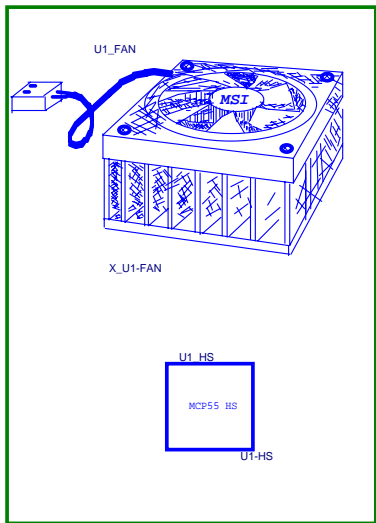
DDR OVER VOLTAGE



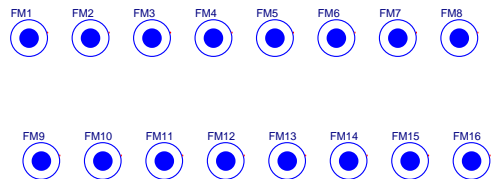
Micro Star Restricted Secret		
Title	MS-11 DDR2 Power	Rev
Document Number	MS-7250	20
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Wednesday, April 26, 2006 Sheet 29 of 36



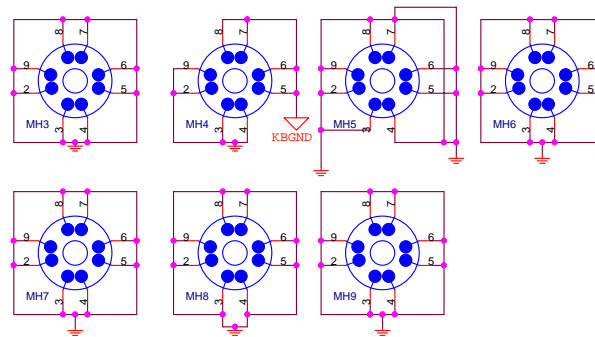
Micro Star Restricted Secret		
Title	Intersil 6566 3 Phase	Rev
Document Number	MS-7250	20
MICRO-STAR INT'L CO.,LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Tuesday, April 25, 2006
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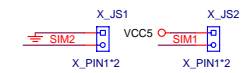
Optics Orientation Holes



Mounting Holes



Simulation



Model option table

Model type	Function	BOM Config	ERP BOM No.
MS-7250	MCP55P / VSC6801x2/ ALC883/ W83627EHG/ ISL6566CR	Cfg-A	601-7250-03S
MS-7250	MCP55 Ultra/ VSC6801x2/ ALC883/ W83627EHG/ ISL6566CR	Cfg-B	601-7250-04S