

# MS-7369

uATX(305mm X 200mm)

## CPU:

AMD AM2 Socket940

## System Chipset:

North Bridge --- MCP65S

## OnBoard Chipset:

Clock Gen:NA

AC'97 Codec:ALC861/883, Azalia 8 channel codec(with 1 SPDIF out)

LAN(PHY):Realtek RT8201CL(10/100)/Realtek RT8111B(Giga)

SIO:Winbond w83627dhg 882(with smart fan control-3/4 pin co-lay)

Flash ROM:4MB SPI

## Main Memory:

DDRII (400/533/667/800MHz) \* 4 (Dual Channel)

## Expansion Slots:

PCI Express (X16) Slot \* 1

PCI Express (X1) Slot \* 2

PCI Slot \* 3

## PWM:

Controller:ISL6566CRZ (3-Phase)

## ACPI:

WINBOND / MS6 Ver: RBF

## Other:

IDE(DMA133) \*1

FDD \*1

SATA(SATA2-300MB/S) \*4

USB2.0 \*10(Rear\*4 Front\*6)

COM PORT \*1

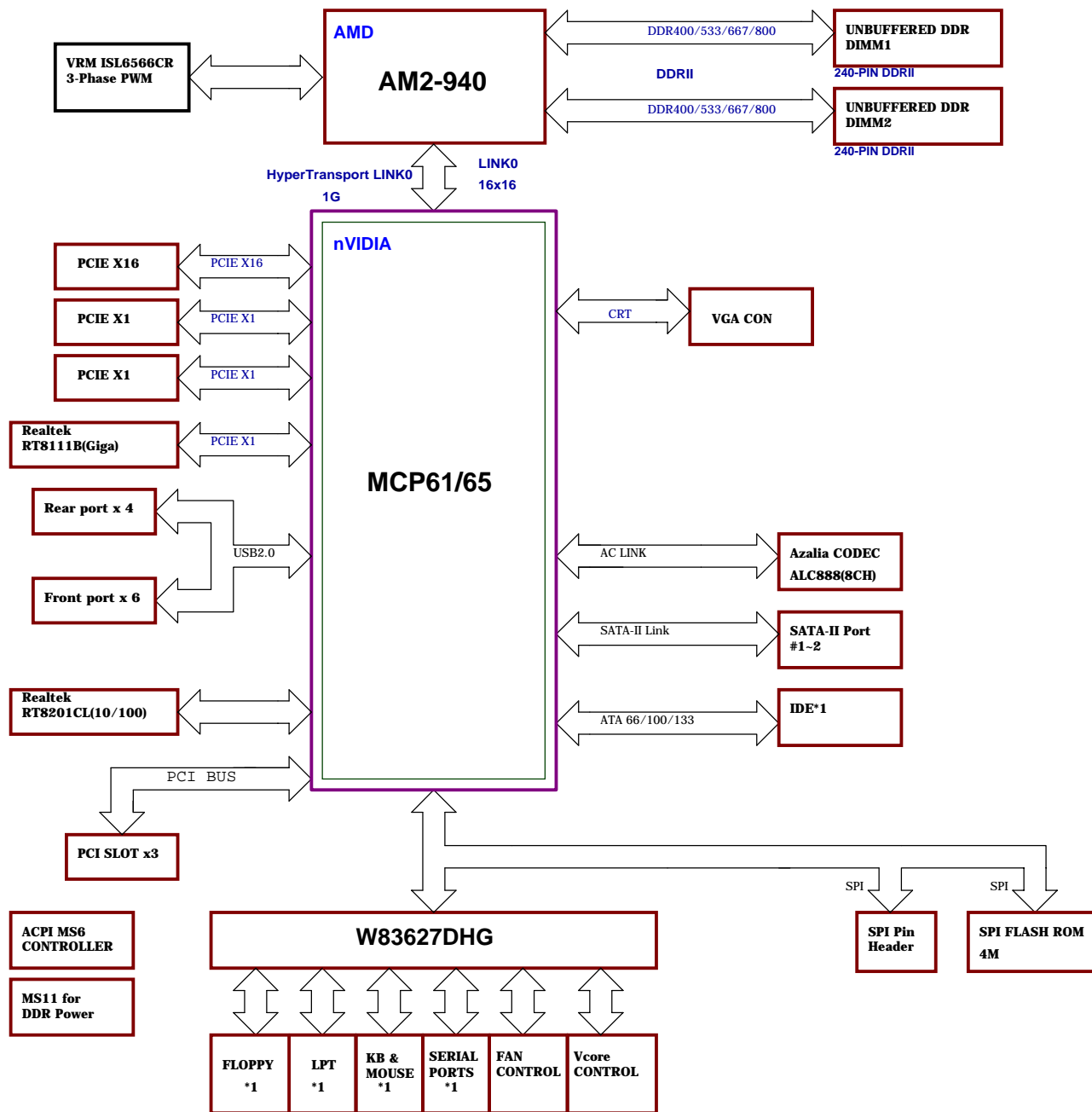
LPT PORT \*1

CFG	CFG-7369-STD	CFG-7369-G	CFG-7369-GP
CHIP	MCP520	MCP520	MCP560
LAN	RT8201CL	RT8111B	RT8211B

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CPU: AM2	6,7,8,9
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PCI RESET DEVICE

MCP61	
Signals	Target
PCI_RESET0*	PCISLOT1
PCI_RESET1*	PCISLOT2
PCI_RESET2*	PCISLOT3
PCI_RESET3*	MS6
LPC_RESET*	LPC/SIO

MS6	
Signals	Target
HDD_RST#	IDE

DDR DIMM Config.

DEVICE	ADDRESS	CLOCK
DIMM 1 CH-A	10100000B	MEM_MAO_CLK_H0/L0 MEM_MAO_CLK_H1/L1 MEM_MAO_CLK_H2/L2
DIMM 2 CH-B	10100001B	MEM_MBO_CLK_H0/L0 MEM_MBO_CLK_H1/L1 MEM_MBO_CLK_H2/L2
DIMM 3 CH-A	10100010B	MEM_MA1_CLK_H0/L0 MEM_MA1_CLK_H1/L1 MEM_MA1_CLK_H2/L2
DIMM 4 CH-B	10100011B	MEM_MB1_CLK_H0/L0 MEM_MB1_CLK_H1/L1 MEM_MB1_CLK_H2/L2

USB	Port	DATA +/-	OC#
Rear	LAN_USB1	USB0- USB0+ USB1- USB1+	USB_OC#0 ( OC#0~1 )
	USB1	USB2- USB2+ USB3- USB3+	USB_OC#1 ( OC#2~3 )
Front	JUSB1	USB4- USB4+ USB5- USB5+	USB_OC#2 ( OC#4~5 )
	JUSB2	USB6- USB6+ USB7- USB7+	USB_OC#3 ( OC#6~7 )
	JUSB3	USB8- USB8+ USB9- USB9+	USB_OC#4 ( OC#8~9 )

PCI Config.

DEVICE	MCP1 INT Pin	REQ#/GNT#	IDSEL	CLOCK
PCI Slot 1	PCI_INT#W PCI_INT#X PCI_INT#Y PCI_INT#Z	PCI_REQ0# PCI_GNT0#	AD24	PCI_CLKSLOT0 (PCICLK0)
PCI Slot 2	PCI_INT#X PCI_INT#Y PCI_INT#Z PCI_INT#W	PCI_REQ1# PCI_GNT1#	AD25	PCI_CLKSLOT1 (PCICLK1)
PCI Slot 3	PCI_INT#Y PCI_INT#Z PCI_INT#W PCI_INT#X	PCI_REQ2# PCI_GNT2#	AD26	PCI_CLKSLOT2 (PCICLK2)
SIO				SIO_PCLK

CPU VID TABLE	
VID	VOLTAGE
00000	1.5500V
00001	1.5250V
00010	1.5000V
00011	1.4750V
00100	1.4500V
00101	1.4250V
00110	1.4000V
00111	1.3750V
01000	1.3500V
01001	1.3250V
01010	1.3000V
01011	1.2750V
01100	1.2500V
01101	1.2250V
01110	1.2000V
01111	1.1750V
10000	1.1500V
10001	1.1250V
10010	1.1000V
10011	1.0750V
10100	1.0500V
10101	1.0250V
10110	1.0000V
10111	0.9750V
11000	0.9500V
11001	0.9250V
11010	0.9000V
11011	0.8750V
11100	0.8500V
11101	0.8250V
11110	0.8000V
11111	0.7750V

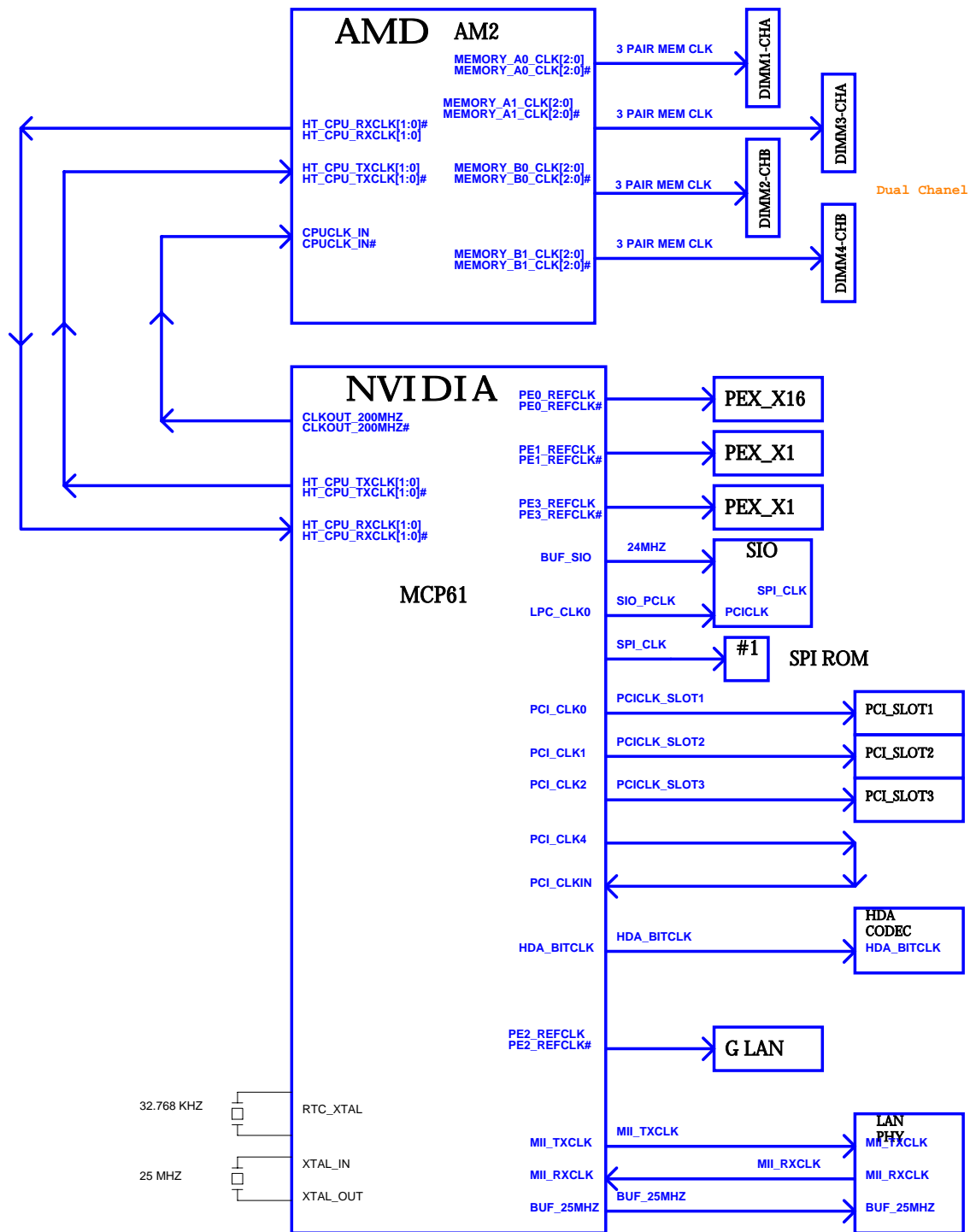
## MCP61 GPIO TABLE

[illegible]

## SIO GPIO TABLE

GROUP	PIN NAME	FUNCTION
UART & SIR	IRTX/GPIO42 IRRX/GPIO43 GPIO17	-- -- --
Hardware Monitor	FANIN3/GPIO40 FAN_CTL3/GPIO41 PME#/GPIO25 GPIO10/SPISLK/FININ4 GPIO11/SPI_CS0#/FAN_CTL4 FPIO12/SPI_MISO/FANCTL1_1 GPIO13/SPI_MOSI/BEEP GPIO14/FWH_DIS/WDTRST#/SPI_CS1#	-- -- PME# SPI_SLK SPI_CS0# SPI_MISO SPI_MOSI SPI_CS1#
ACPI Function Pins	GPIO15/LED_VSB/ALERT# GPIO16/LED_VCC_Turbo2# PCIRST1#/GPIO20 PCIRST2#/GPIO21 PCIRST3#/GPIO22 GPIO23/RSTCON# ATXPG_IN/GPIO24 PWVRK/GPIO32 PWSIN#/GPIO26 PWSOUT#/GPIO27 S3#/GPIO30 PSON#/GPIO31 RSMRST#/GPIO33	-- CPU_FAN_GPO -- -- -- -- ATXPG_IN -- PWSIN# PWSOUT# S3# PSON# --
VID Controller	VIDOUT0/GPIO0 VIDOUT1/GPIO1 VIDOUT2/GPIO2 VIDOUT3/GPIO3 VIDOUT4/GPIO4 VIDOUT5/GPIO5/SIC SLOT0CC#/GPIO6 GPIO77/Turbo1#/WDTRST#	VIDOUT0 VIDOUT1 VIDOUT2 VIDOUT3 VIDOUT4 SIC SLOT0CC# --

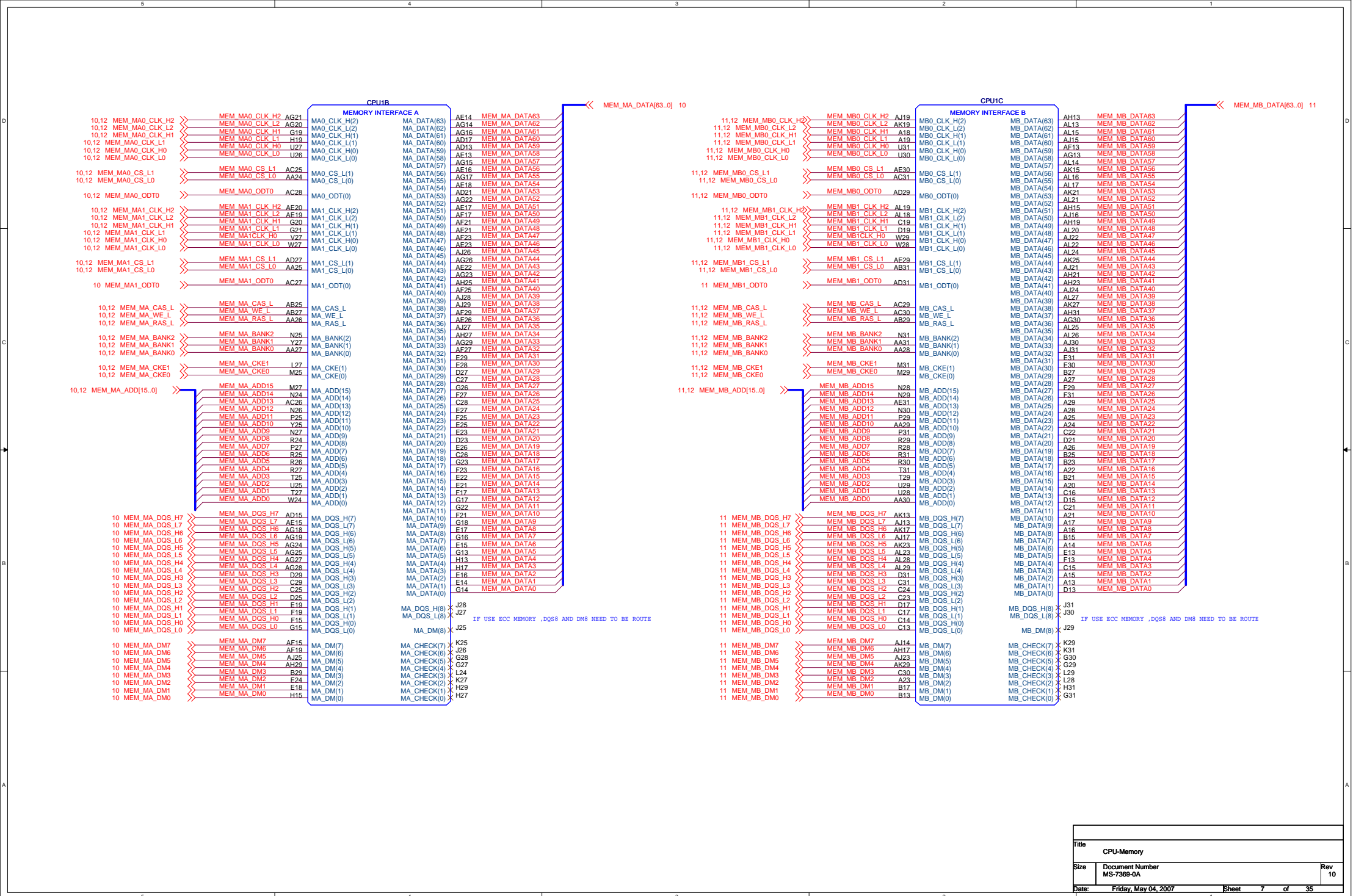
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GPIO Table			
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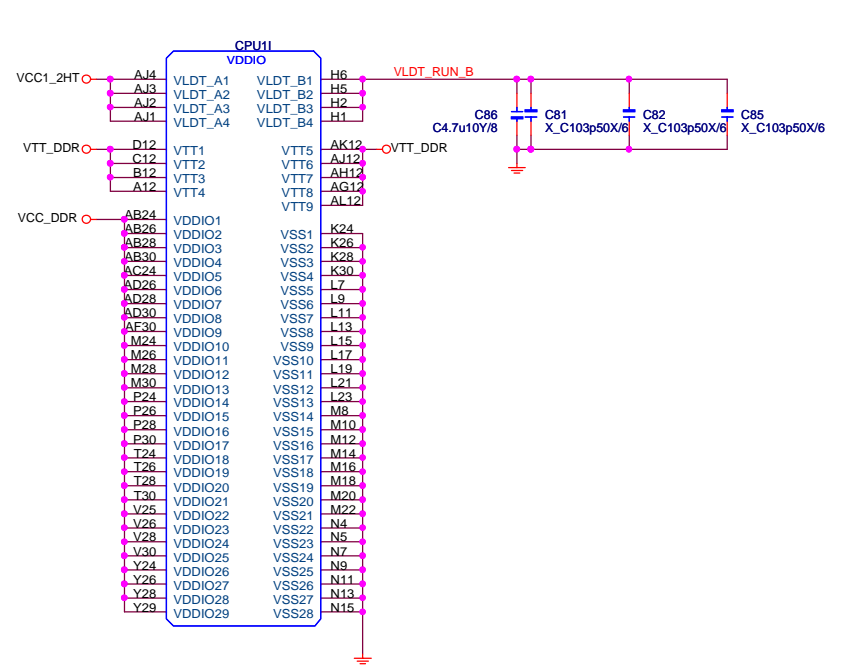
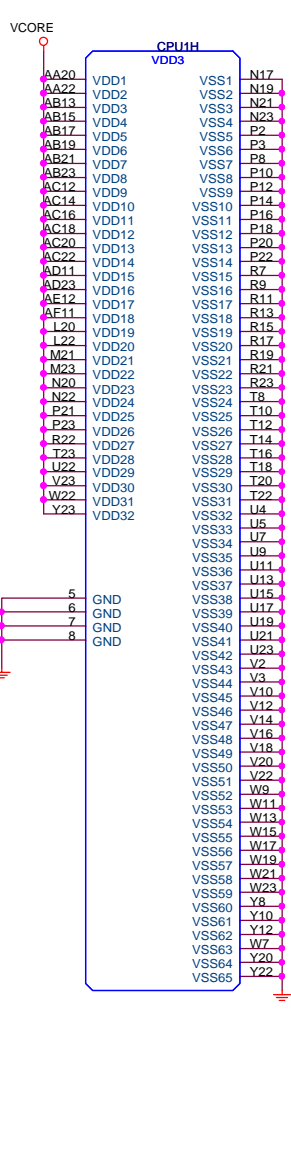
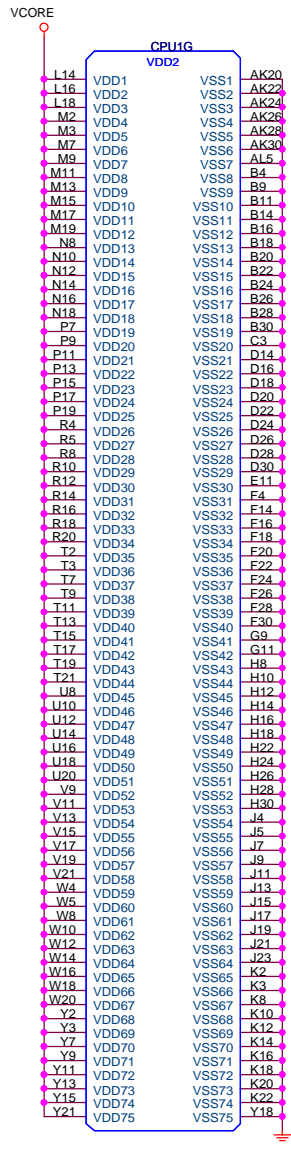
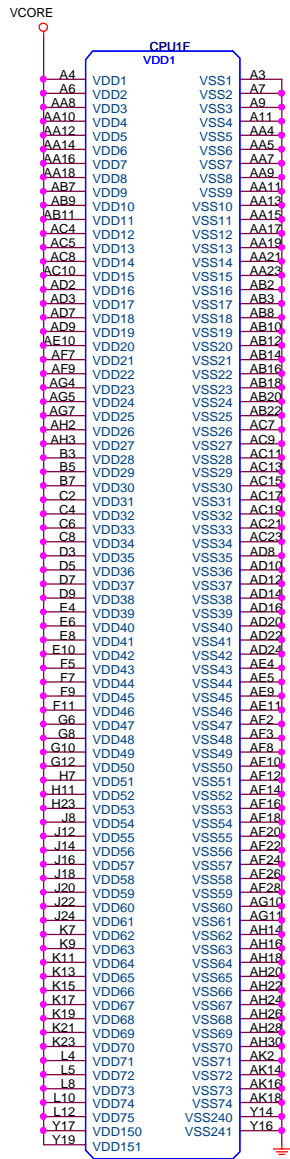
Dual Chanel

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Clock Distribution			
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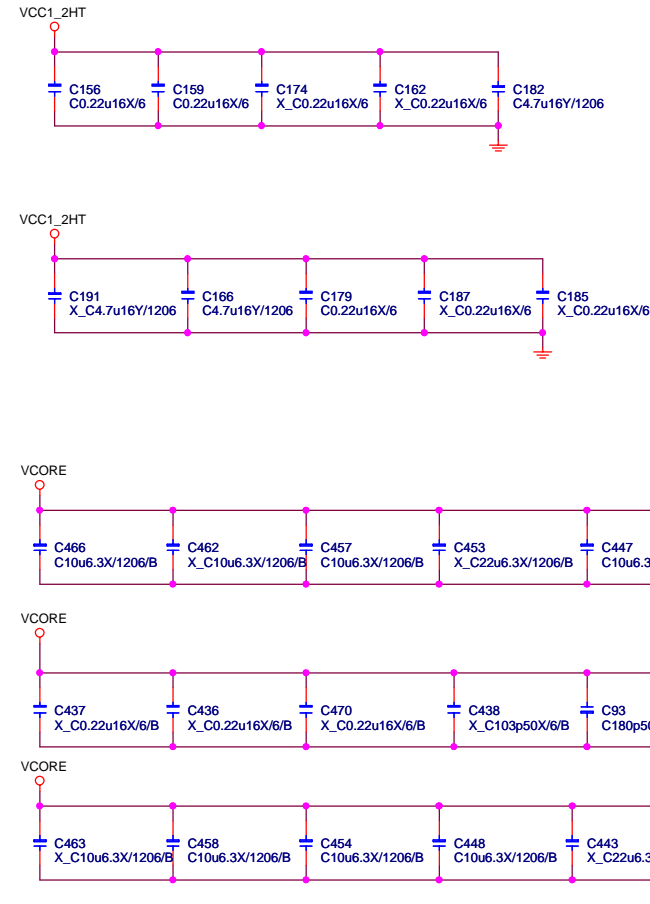
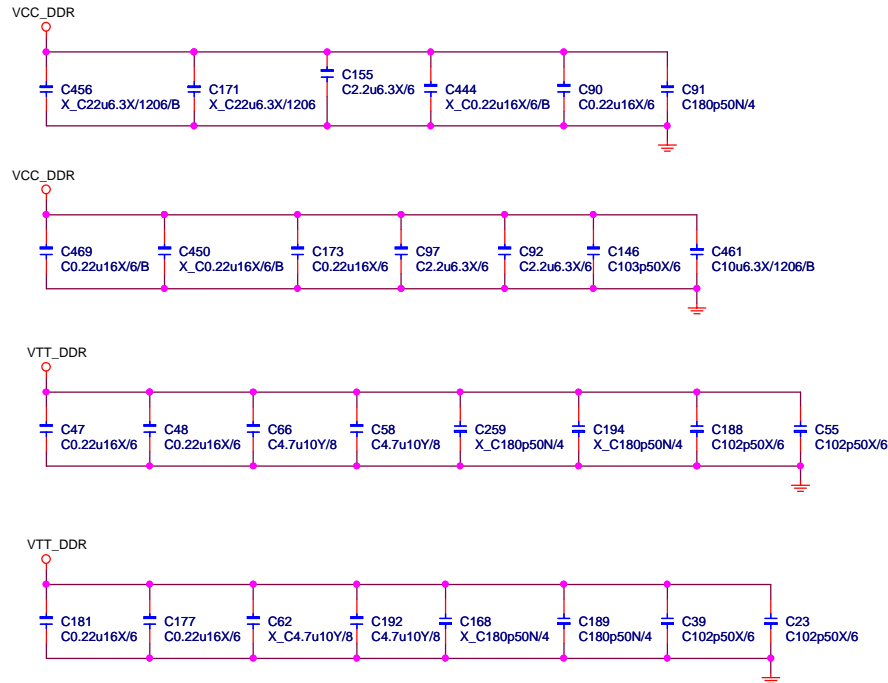




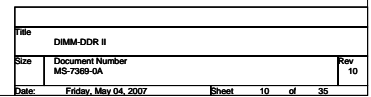
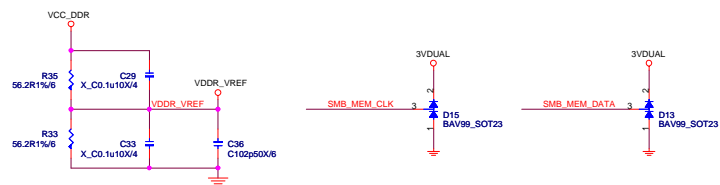
Title CPU-Memory			
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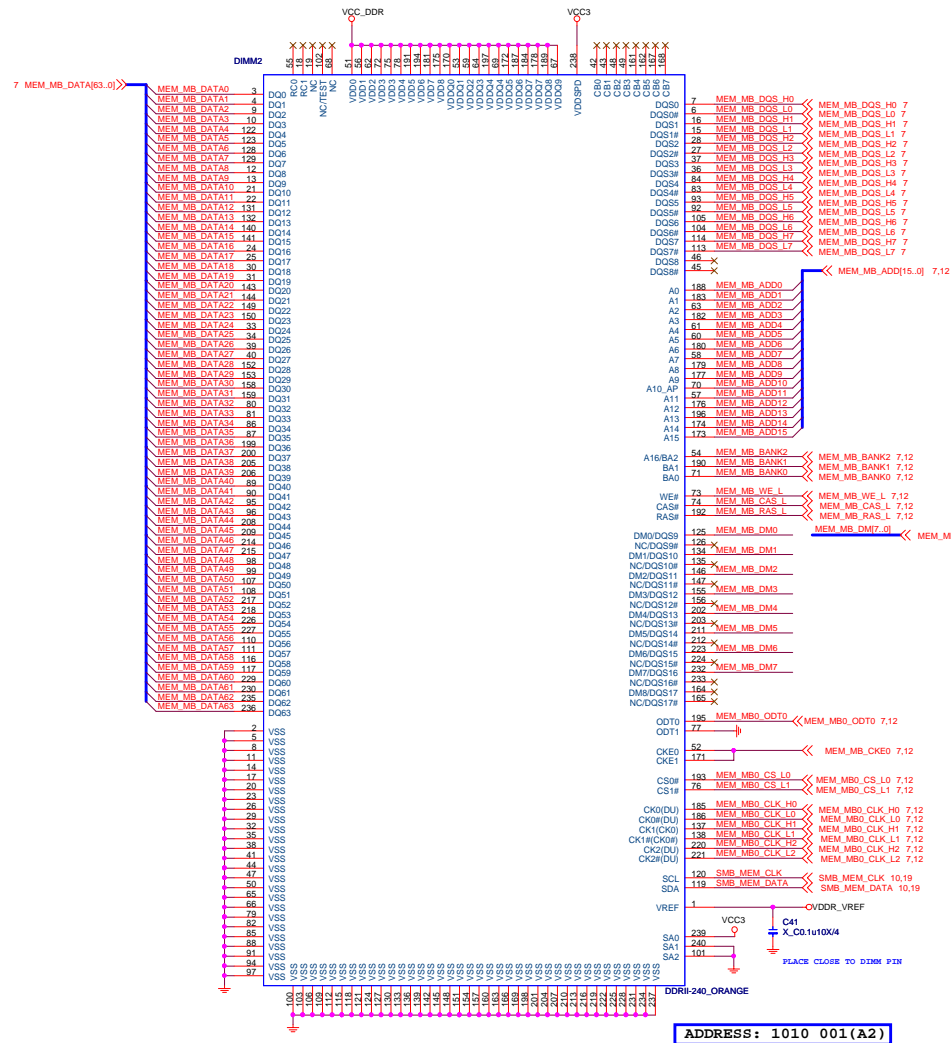




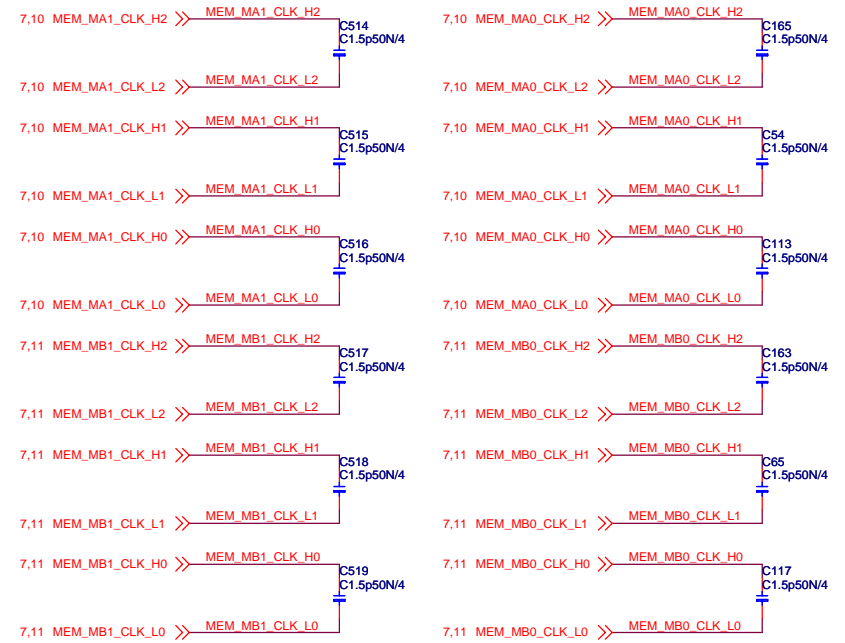
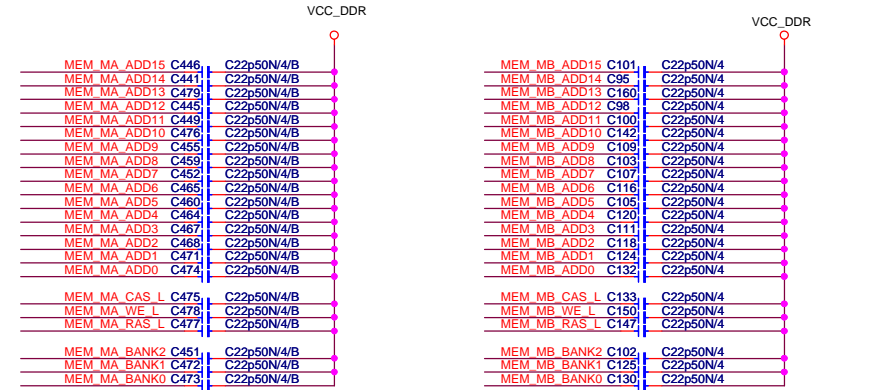


Title		
CPU-Decoupling		
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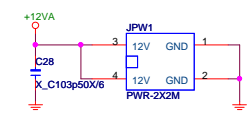
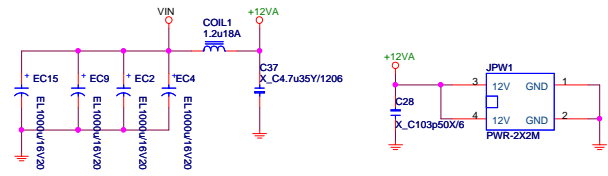
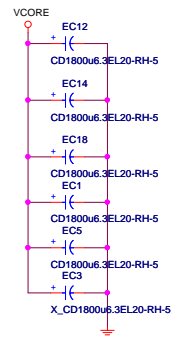
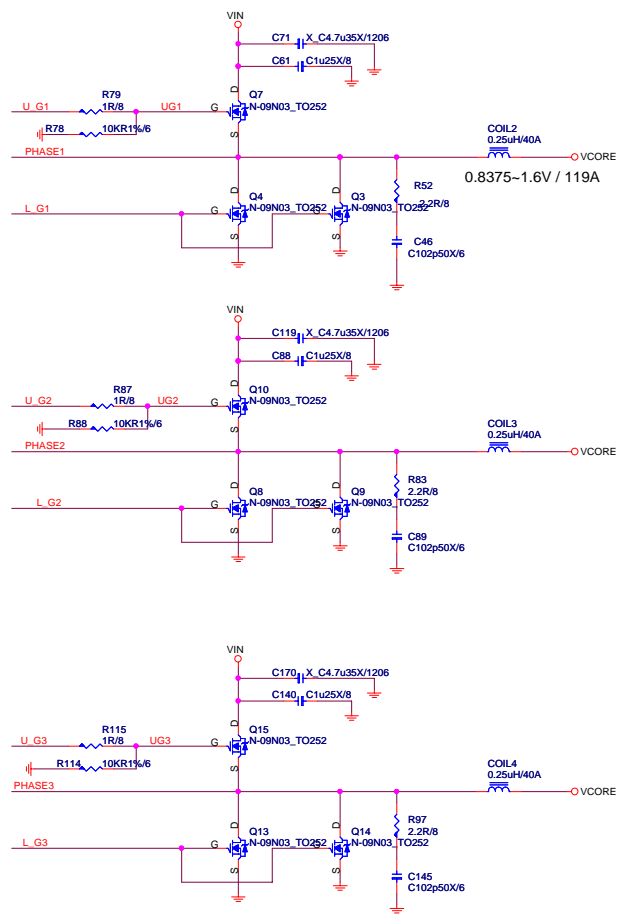
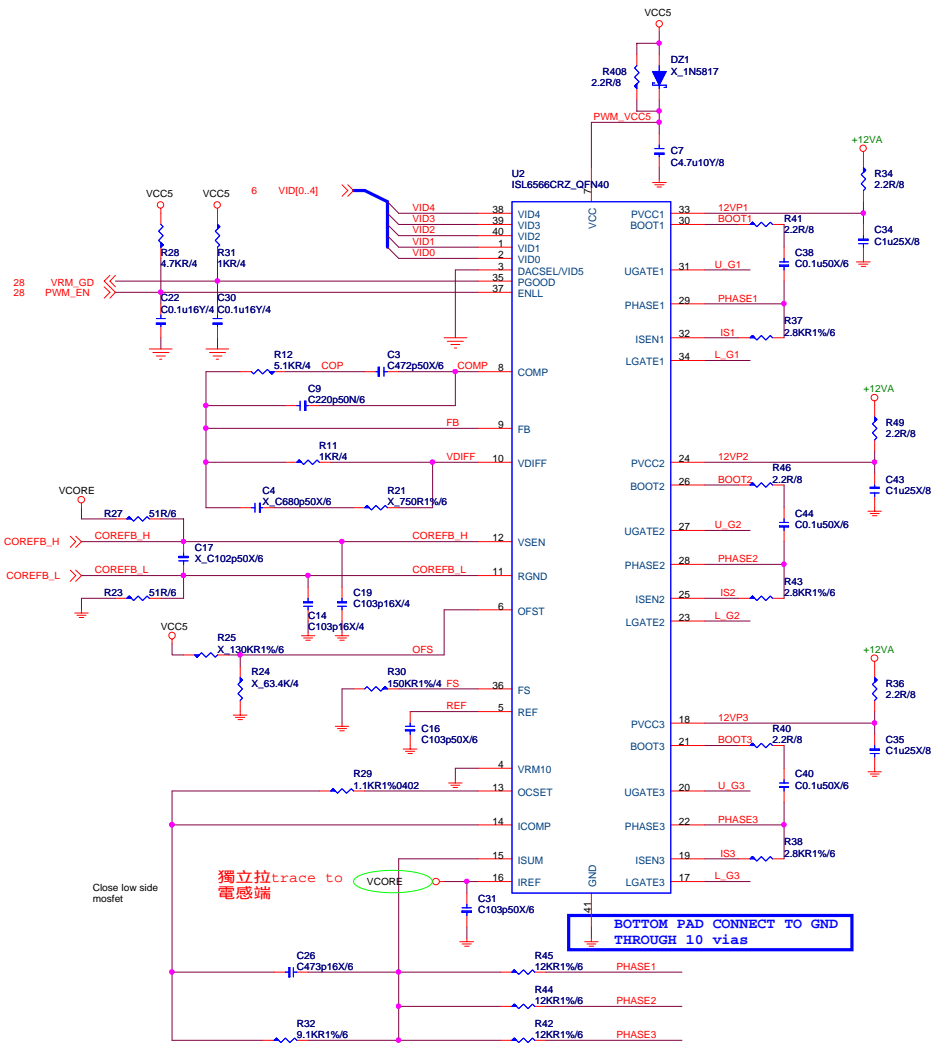




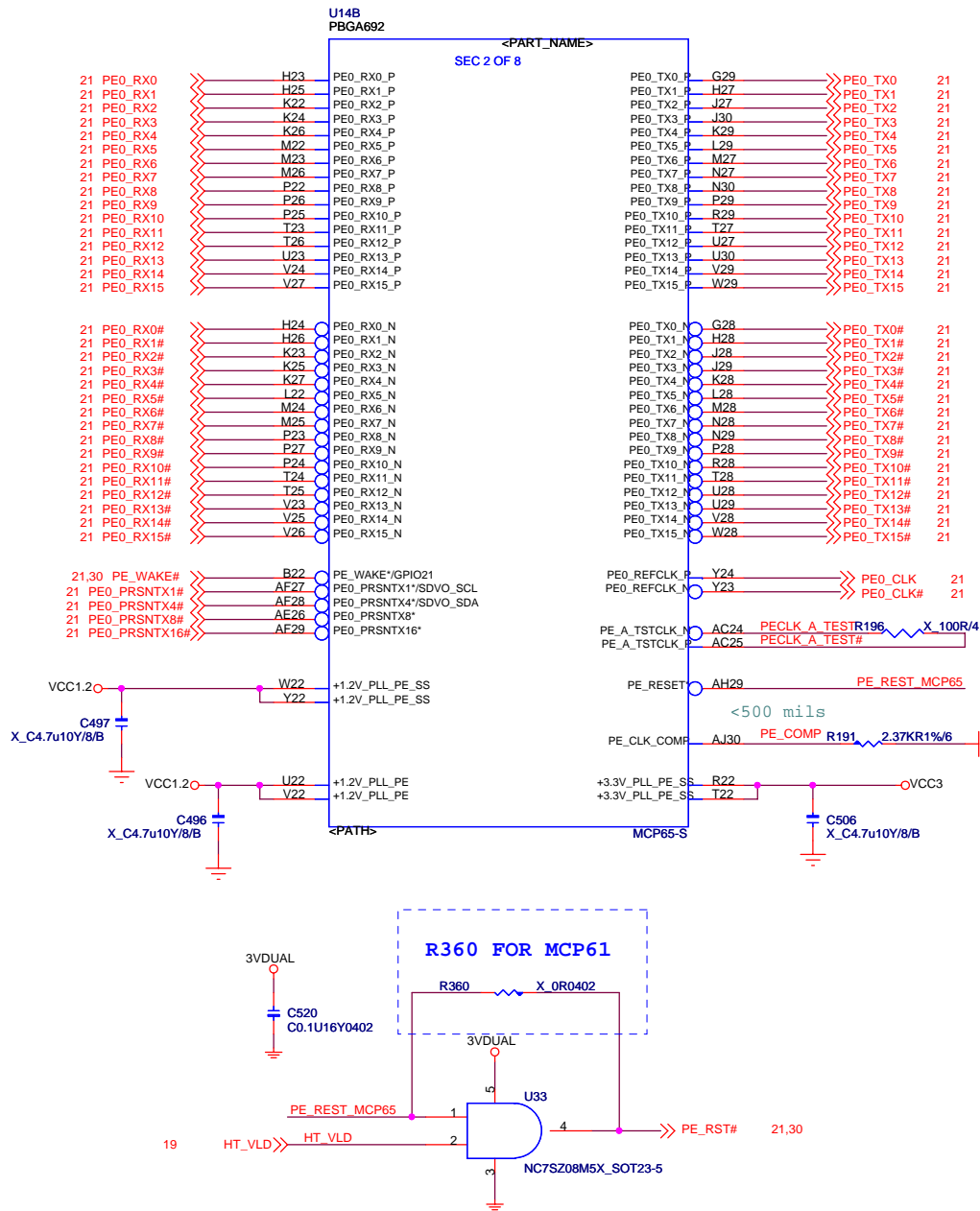
## Place Between Processor and DIMMs



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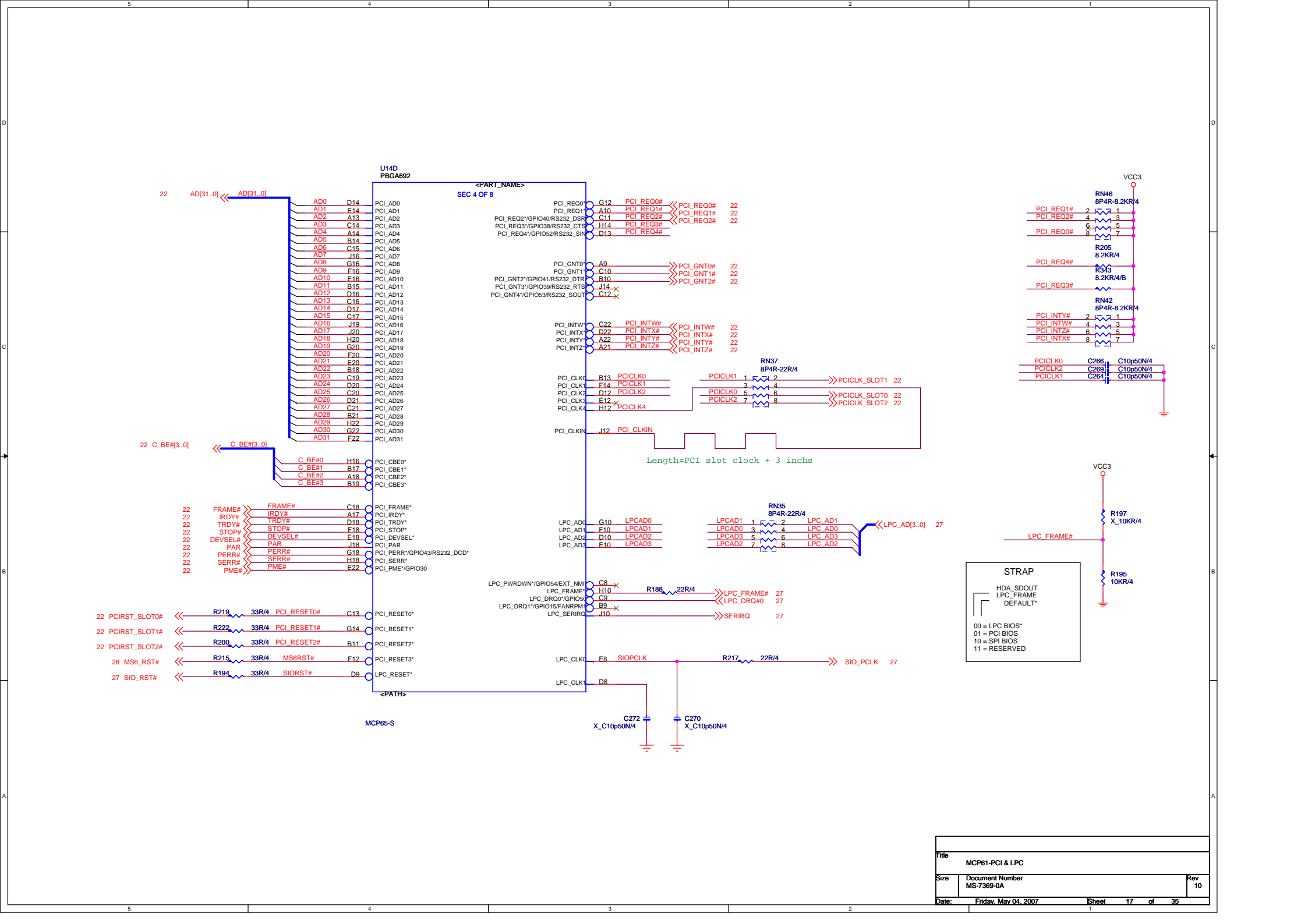


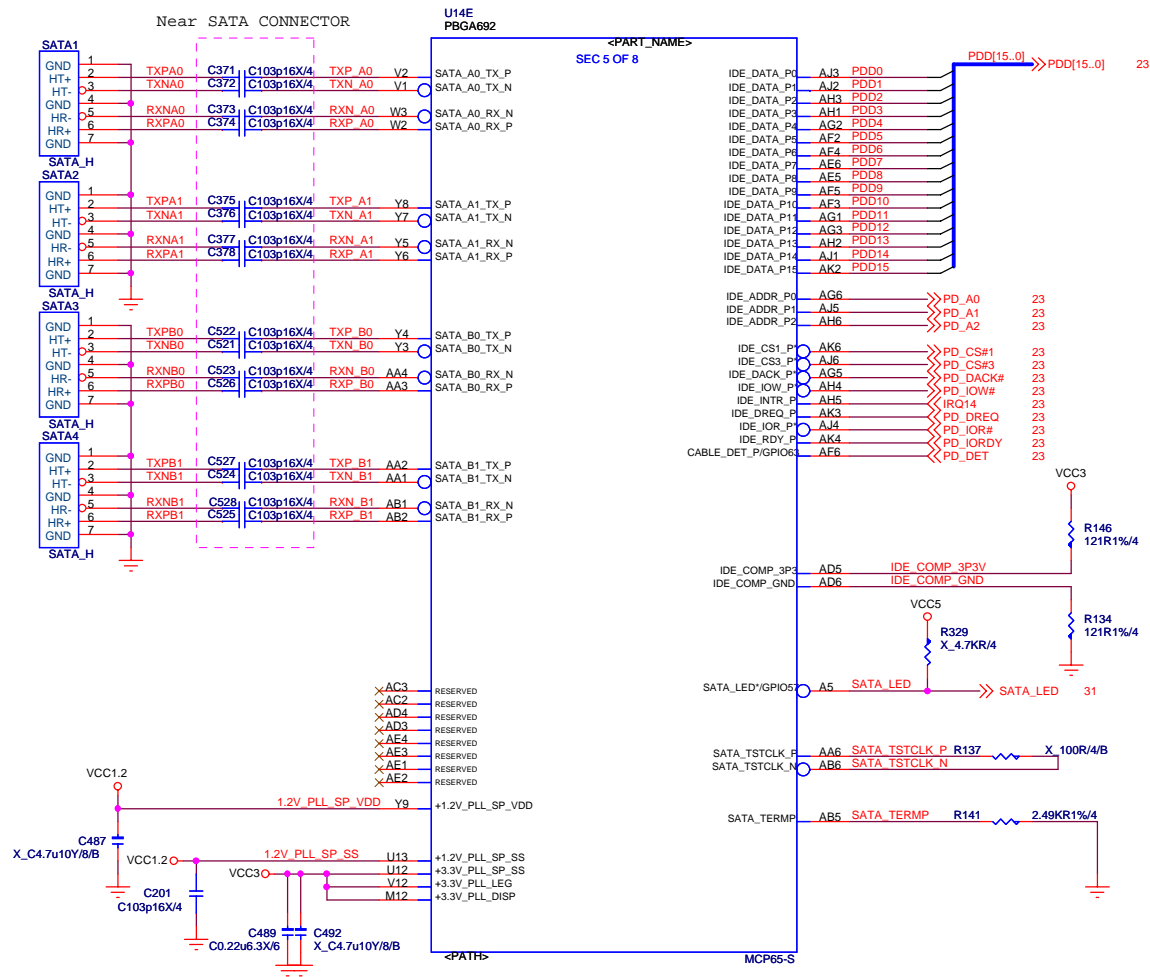


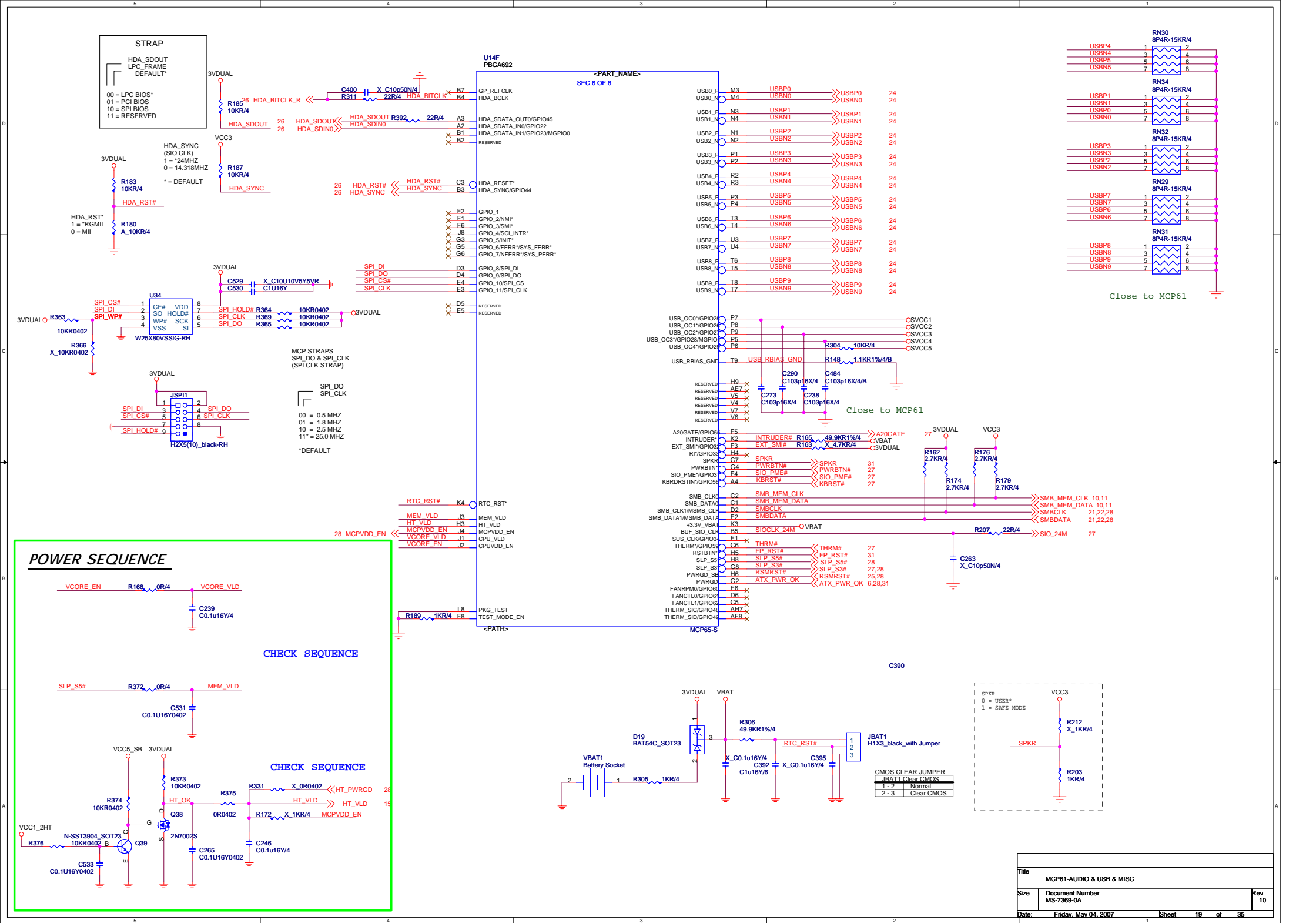


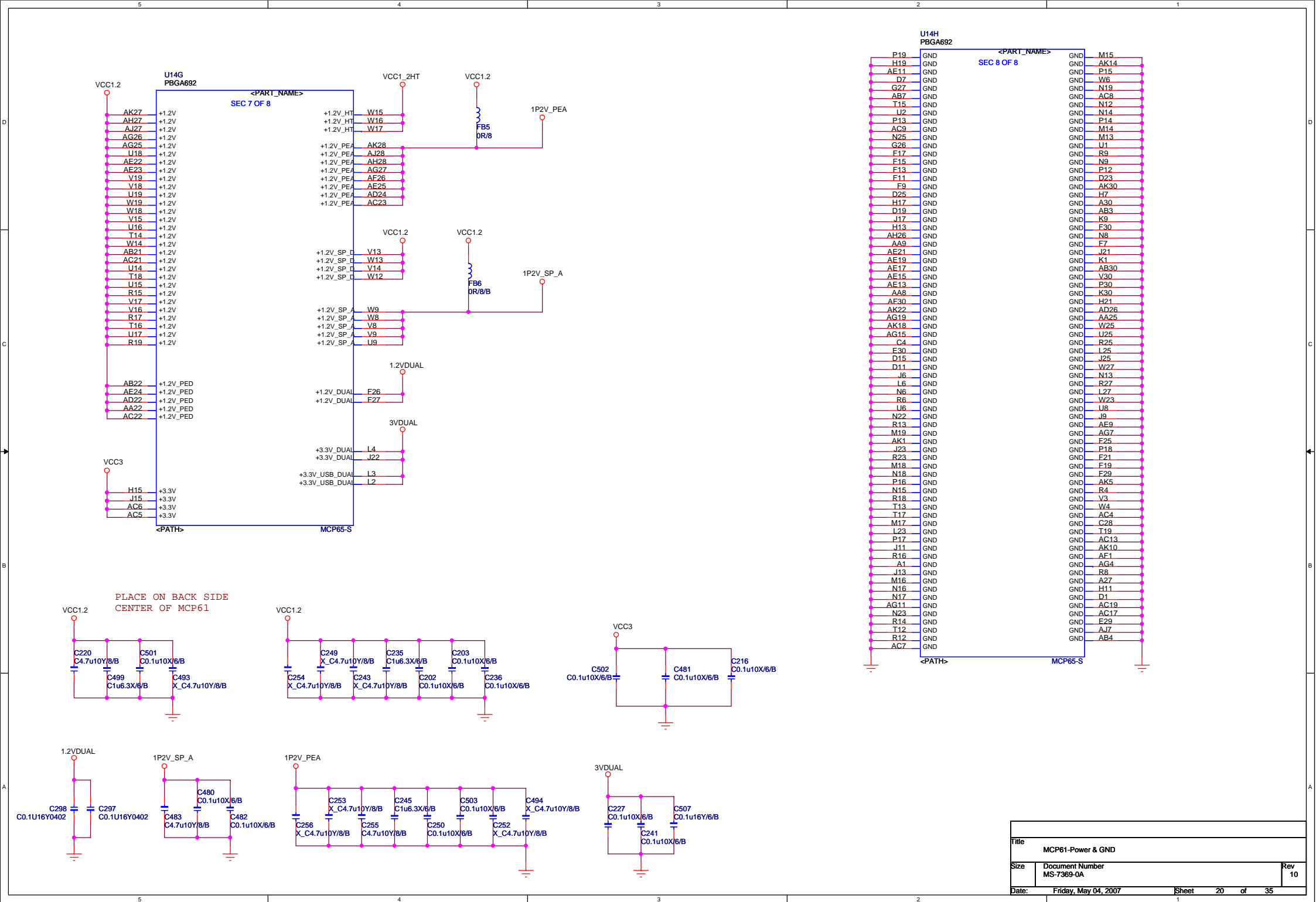












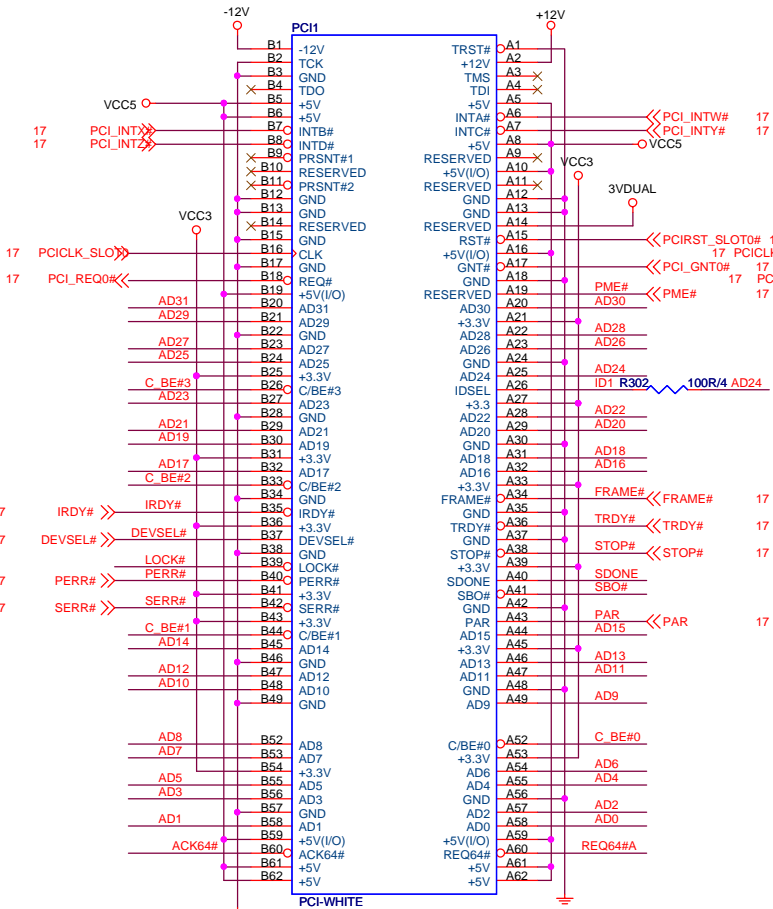
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MCP61-Power & GND		
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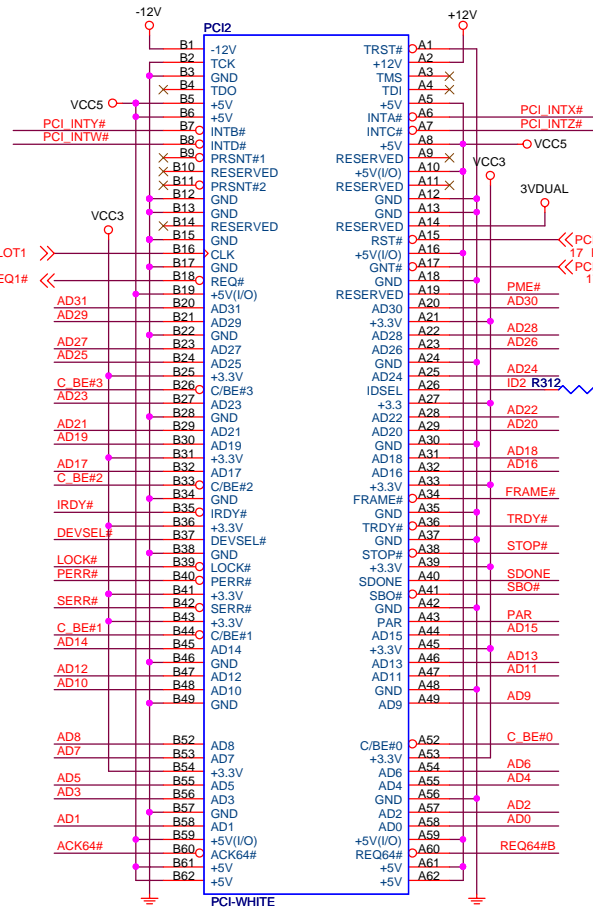
# PCI SLOT 1 (PCI VER: 2.2 COMPLY)

# PCI SLOT 2 (PCI VER: 2.2 COMPLY)

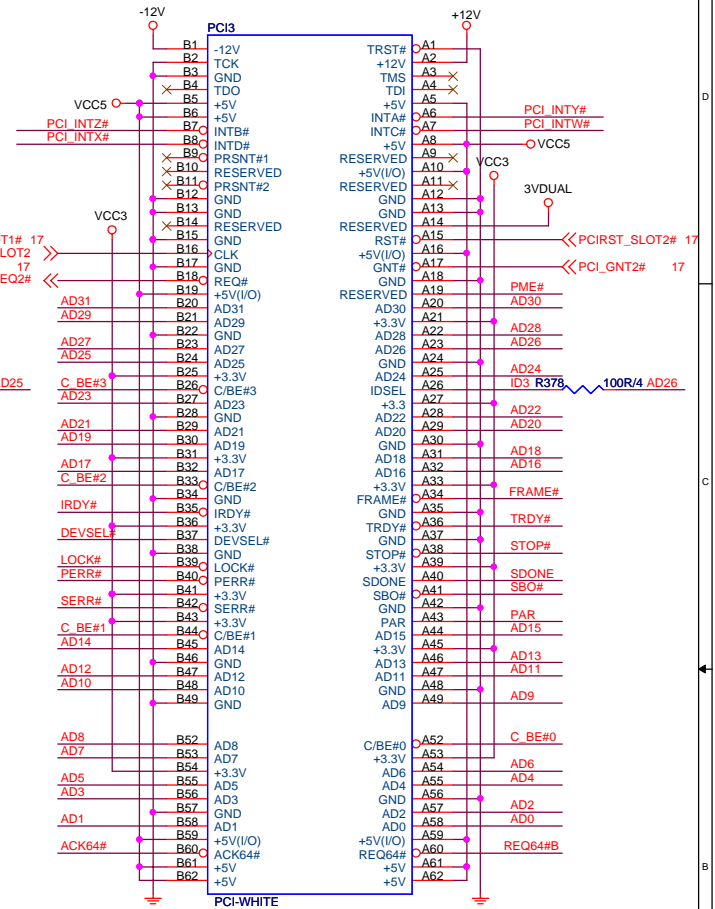
# PCI SLOT 3 (PCI VER: 2.2 COMPLY)



**IDSEL = AD24**  
**PCI\_REQ0# PCI\_GNT0#**  
**INT W# X# Y# Z#**  
**PCICLK\_SLOT1**



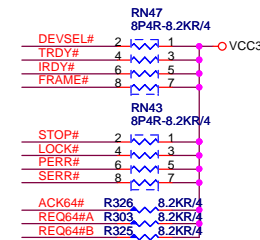
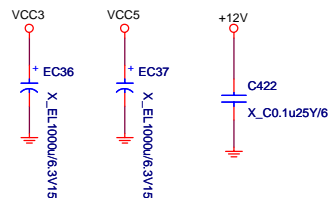
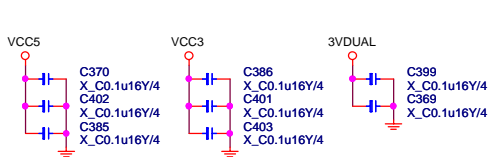
**IDSEL = AD25**  
**PCI\_REQ1# PCI\_GNT1#**  
**INT X# Y# Z# W#**  
**PCICLK\_SLOT2**



**IDSEL = AD26**  
**PCI\_REQ2# PCI\_GNT2#**  
**INT Y# Z# W# X#**  
**PCICLK\_SLOT3**

## PCI PULL-UP / DOWN RESISTORS

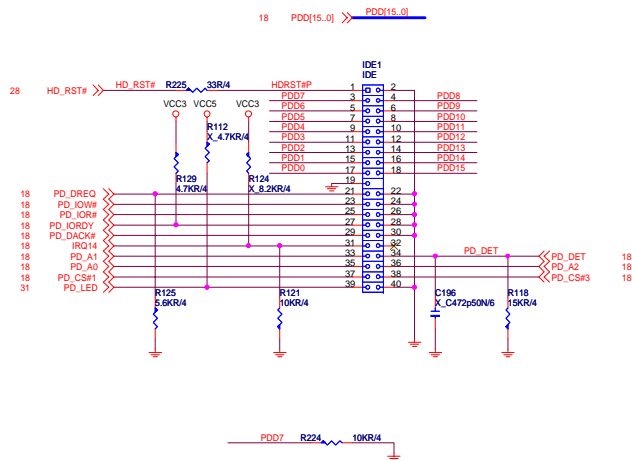
## PCI SLOT DECOUPLING CAPACITORS



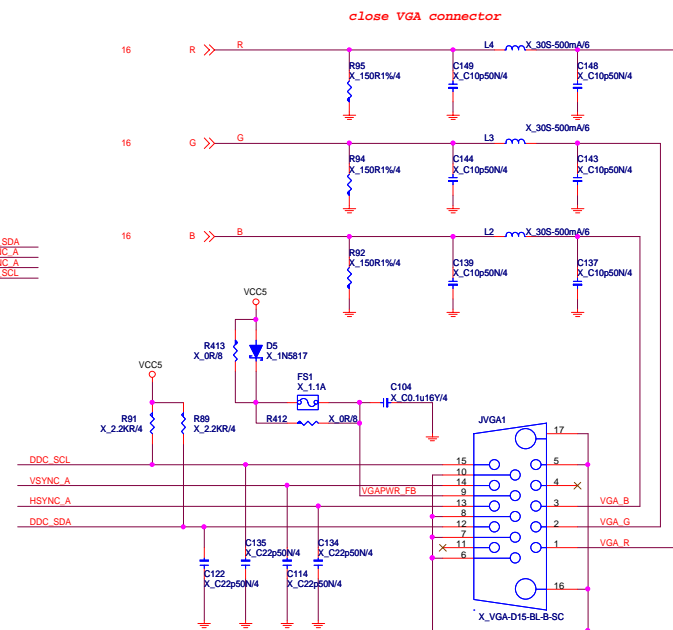
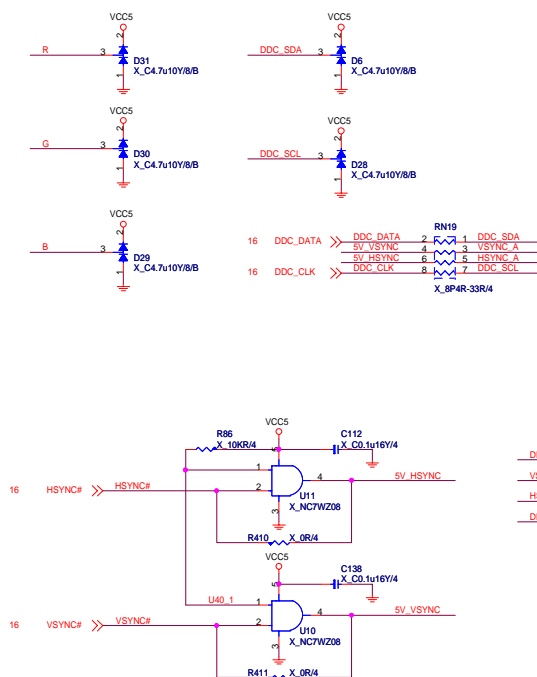
**SDONE R309 X 0R/4** **SMBCLK** 19,21,28  
**SBO# R310 X 0R/4** **SMBDATA** 19,21,28

Title		
PCI CONN 1&2		
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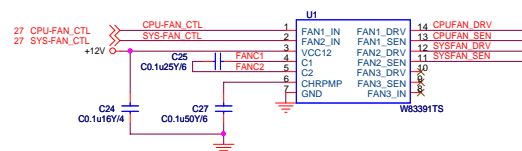
## PRIMARY IDE BLOCK



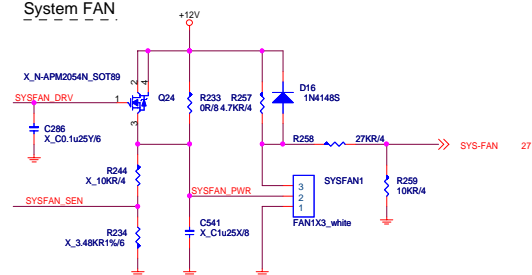
## VGA CONN BLOCK FOR MCP61



## FAN BOLCK



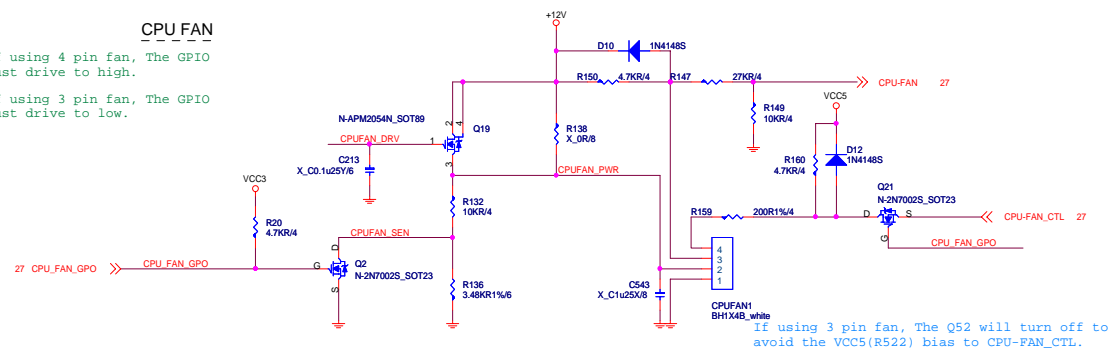
## System FAN



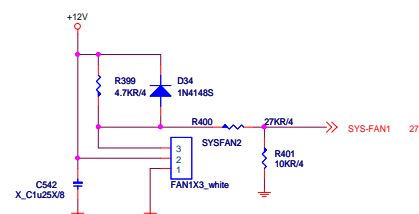
## CPU FAN

If using 4 pin fan, The GPIO must drive to high.

If using 3 pin fan, The GPIO must drive to low.

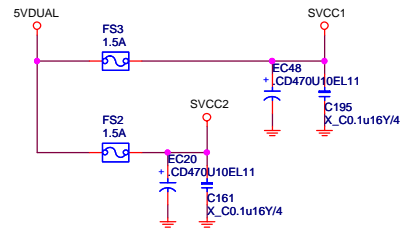


## System FAN

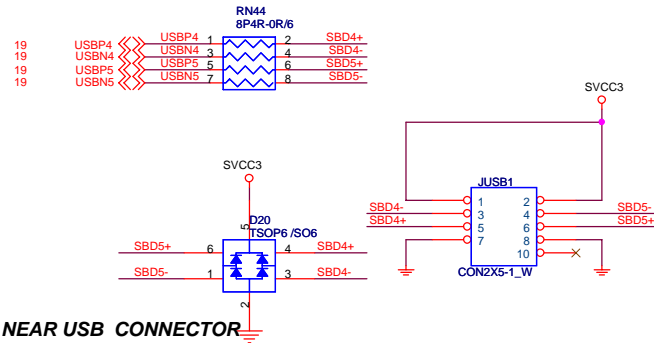


## POWER CIRCUIT FOR USB PORT 0,1,2,3

40 mils



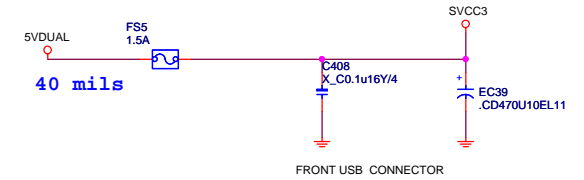
## FRONT PANEL USB CONNECTOR FOR USB PORT 4,5



## NEAR USB CONNECTOR

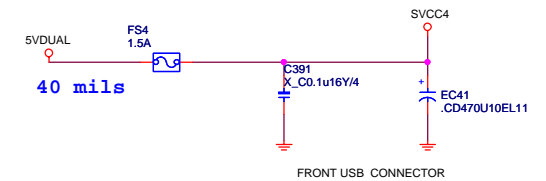
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

## POWER CIRCUIT FOR USB PORT 4,5



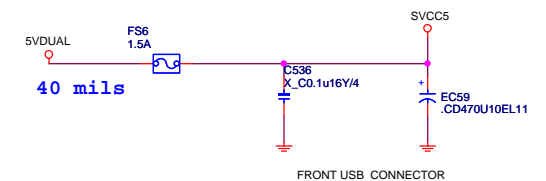
FRONT USB CONNECTOR

## POWER CIRCUIT FOR USB PORT 6,7



FRONT USB CONNECTOR

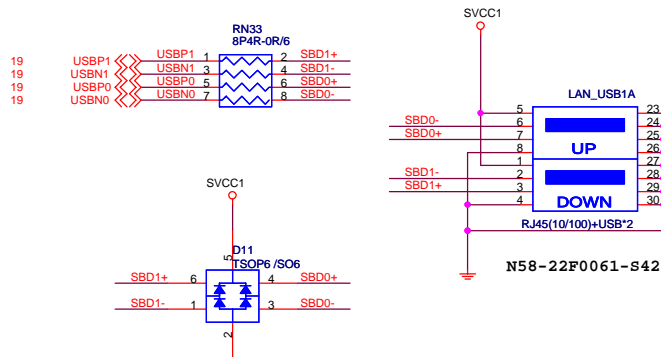
## POWER CIRCUIT FOR USB PORT 6,7



FRONT USB CONNECTOR

Title		
USB		
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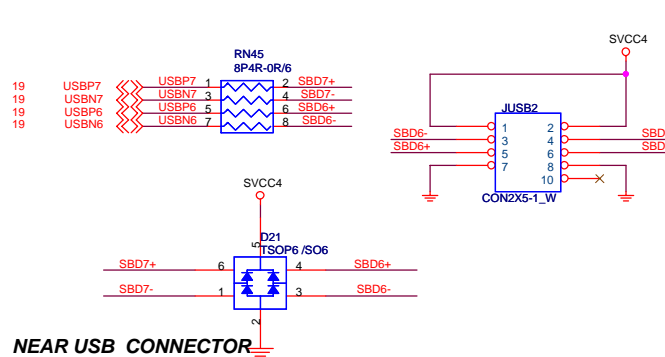
## REAR PANEL USB CONNECTOR FOR USB PORT 0,1



## NEAR USB CONNECTOR

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

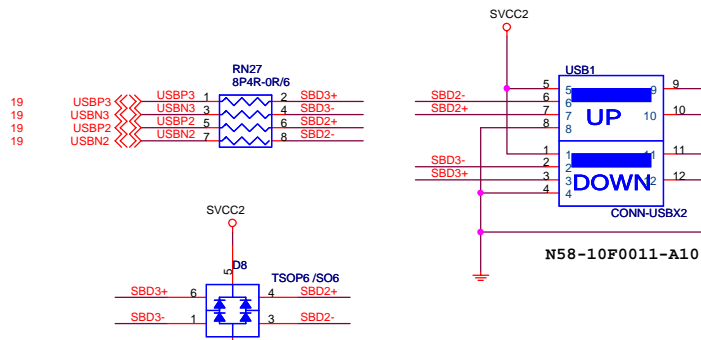
## FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



## NEAR USB CONNECTOR

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

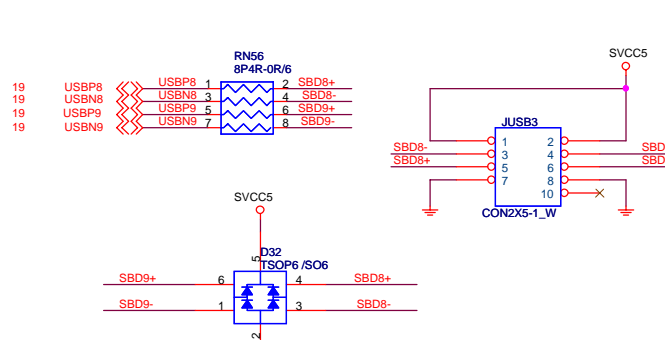
## REAR PANEL USB CONNECTOR FOR USB PORT 2,3



## NEAR USB CONNECTOR

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

## FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



## NEAR USB CONNECTOR

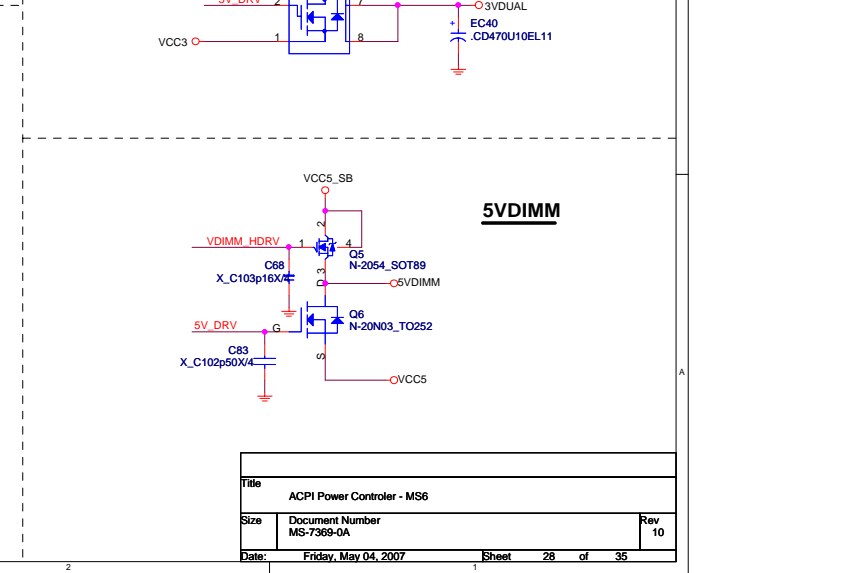
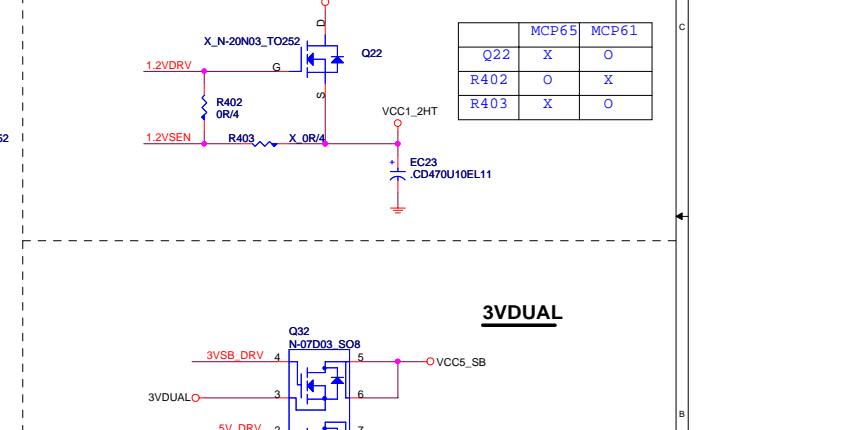
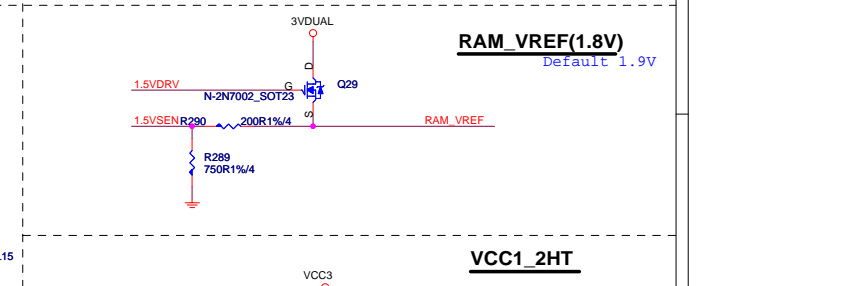
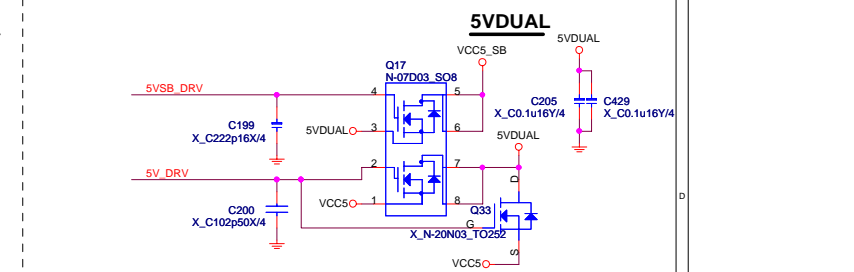
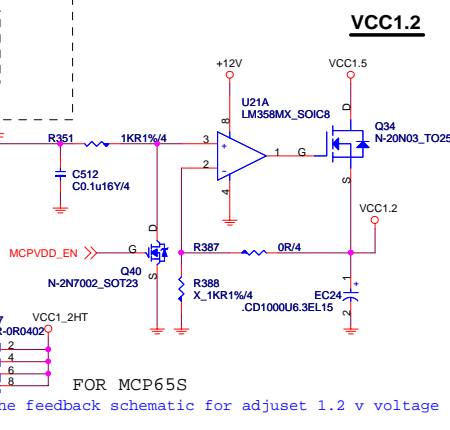
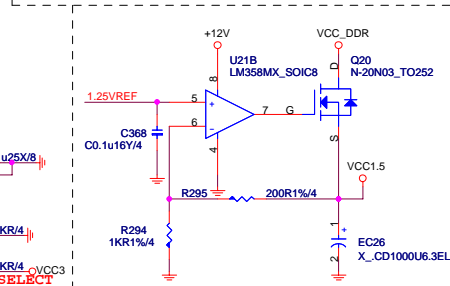
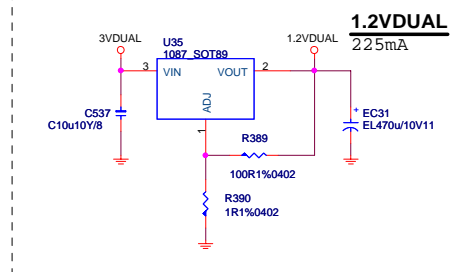
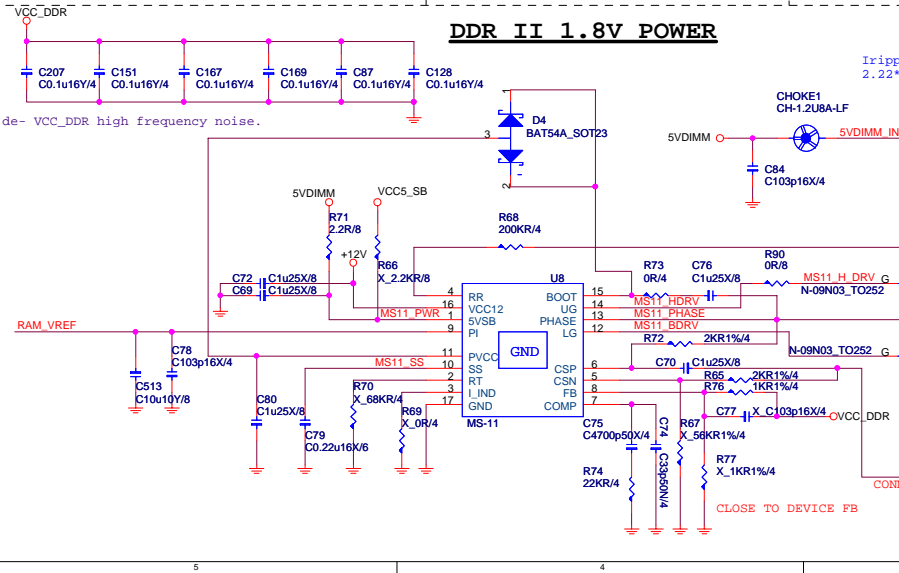
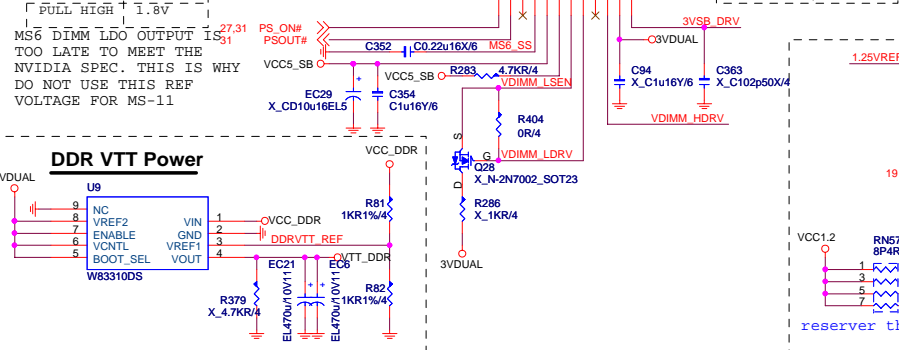
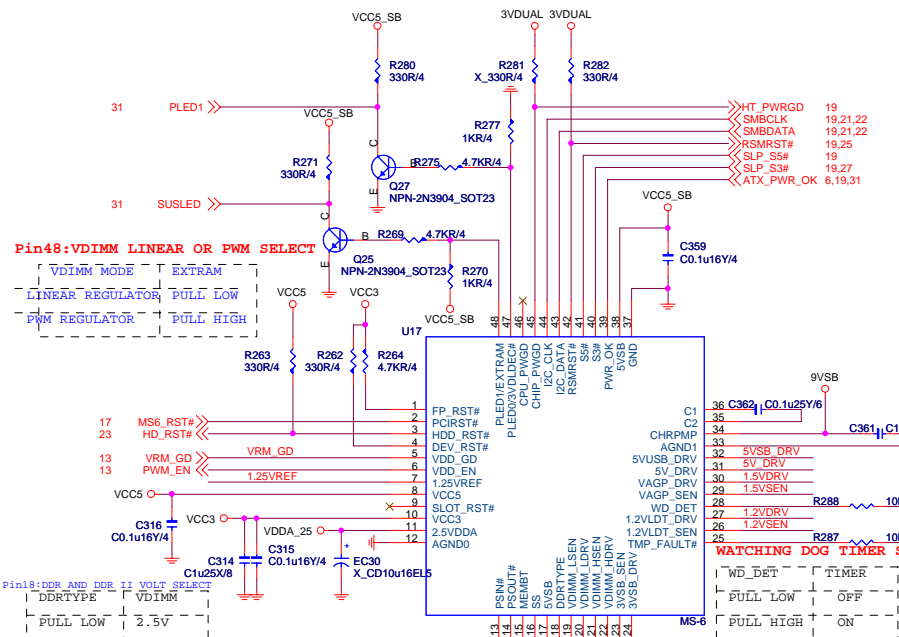
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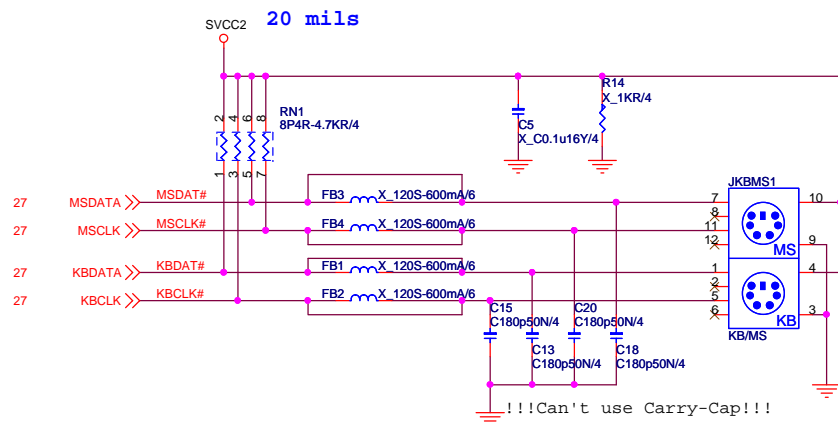




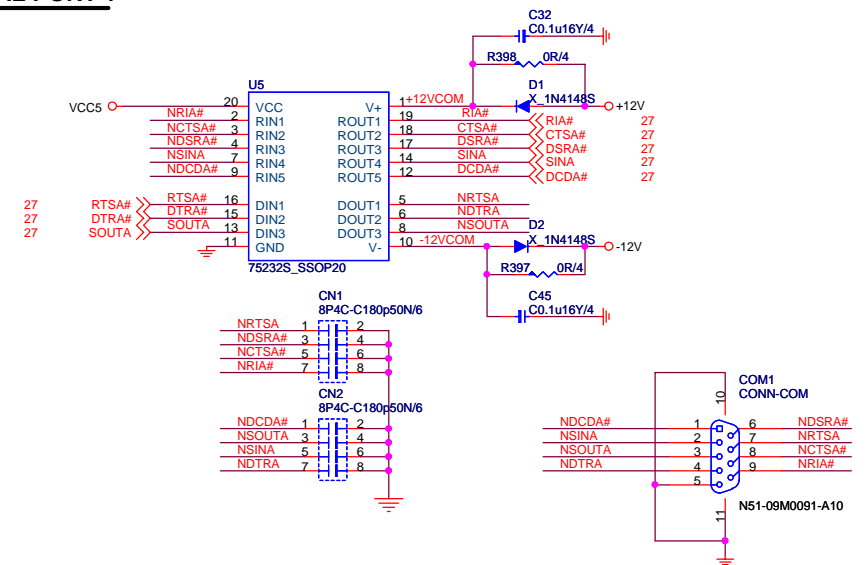




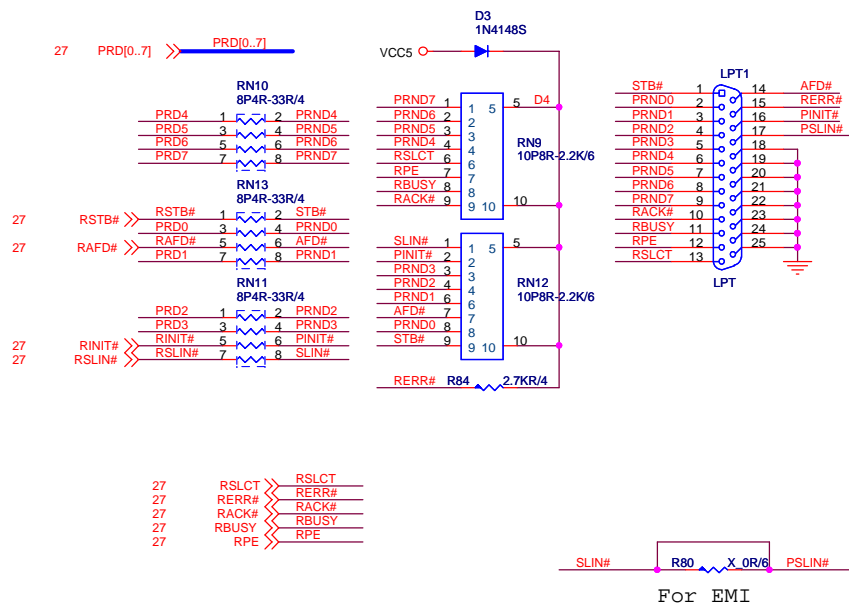
## PS2 KEYBOARD & MOUSE CONNECTOR



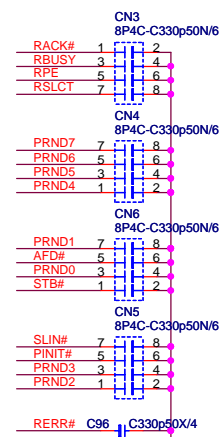
## SERIAL PORT 1



## PARALLAL PORT

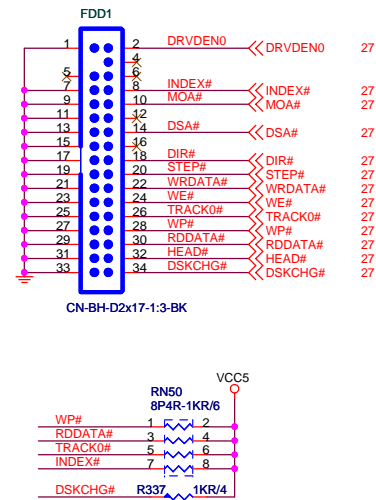


For EMI



For EMI

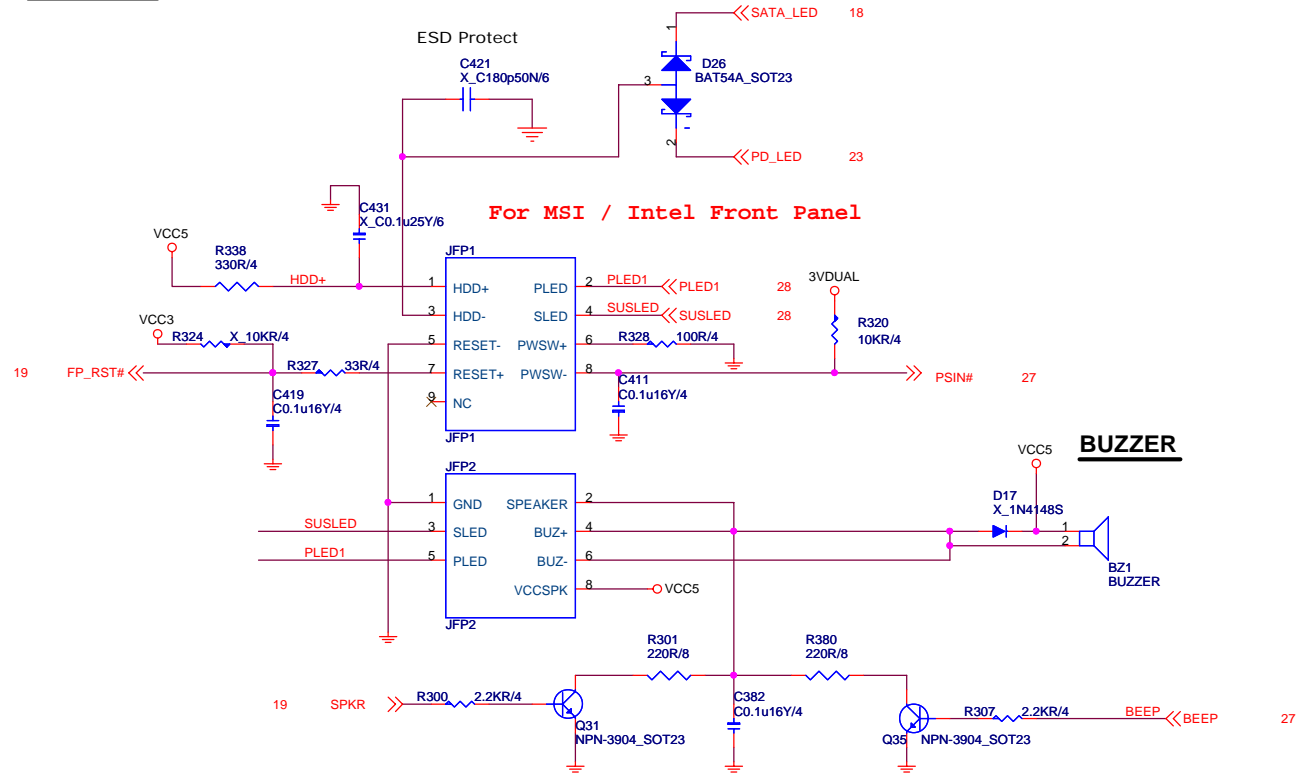
**FLOPPY CONN BOLCK**



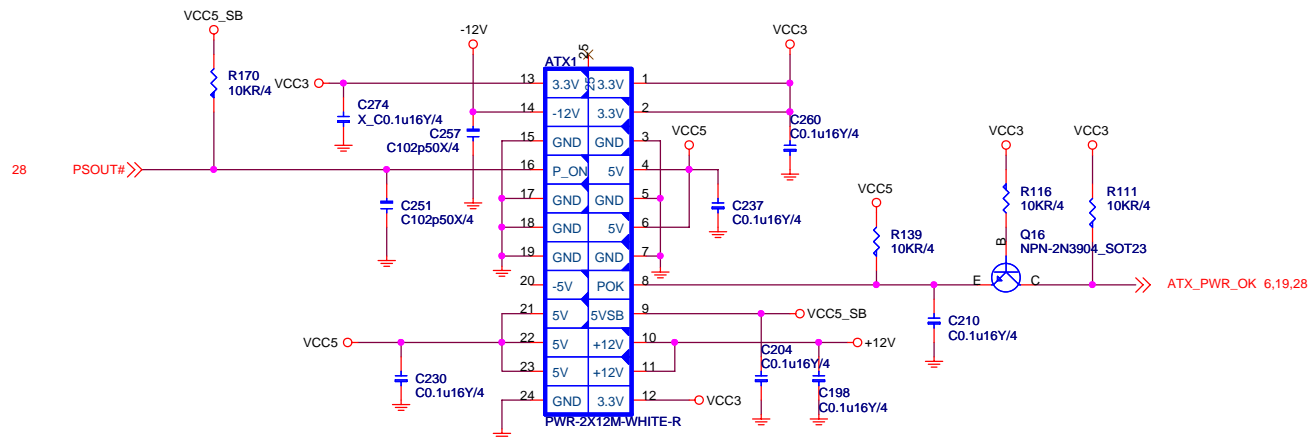
Title			
KB/MS,LPT,COM,Floppy CONN			
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## Front Panel



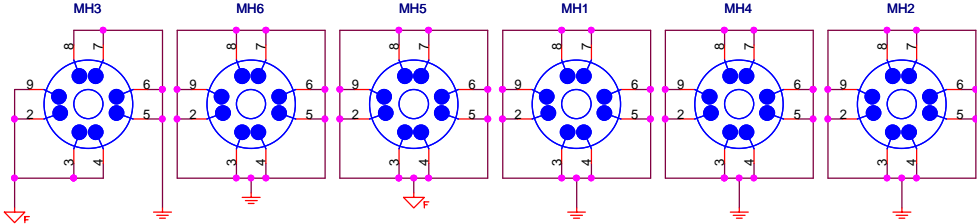
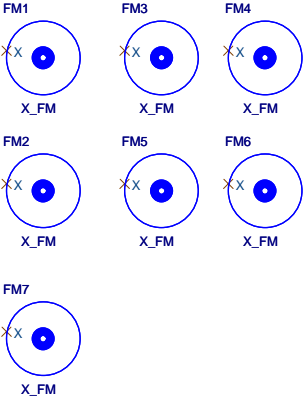
## ATX Connector



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Front Pannel		
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Optics Orientation Holes

Mounting Holes

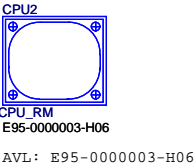
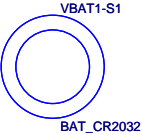
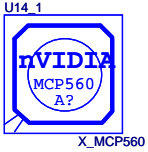


NB FAN/HEAT-SINK

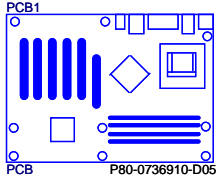
BATTERY

CPU RM

Simulation



PCB



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2006/7/4

Split VCC1\_2HT to VCC1\_2HT & VCC1.2  
Change USB\_RBIAS\_GND resister from 931ohm to 1.1K for DG(05) change  
Change LPC\_CLK termination resister from 22ohm to 33ohm for DG(04) change  
don't stuff cap on LPC\_CLK for DG(05) change  
Change BUF\_25MHZ to MII\_PHY termination resister from 22ohm to 0ohm for DG(05) change  
Change CLK200\_TERM\_GND resister from 562ohm to 2.37K for DG(05) change

2006/7/5

Change DAC\_RSET resister from 124ohm to 105ohm for better signal

2006/7/6

Update 1394 circuit for VIA FAE recommend

2006/7/7

Update Audio circuit for Vista

2006/8/14

Change EC23 from 1000uF to 470uF for Power issue  
Stuff EC36(1000uF) for Power issue

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# ATX Power Supply

