

MS-7506

uATX(244mm X 205mm)

CPU:

AMD AM2 Socket940

System Chipset:

North Bridge --- MCP68S

South Bridge --- NA

OnBoard Chipset:

Clock Gen:NA

Azalia Codec:ALC888

LAN(PHY):Realtek RT8211BL

SIO:Fintek F71882

Flash ROM:4MB SPI

IEEE 1394:JMICRON JMB381

Main Memory:

DDRII (400/533/667/800MHz) * 2 (Dual Channel)

Expansion Slots:

PCI Express (X16) Slot * 1

PCI Express (X1) Slot * 1

PCI Slot * 2

PWM:

Controller:ISL6566CRZ (3-Phase)

ACPI:

UPI SOLUTION

Other:

IDE(DMA133) *1

FDD *1

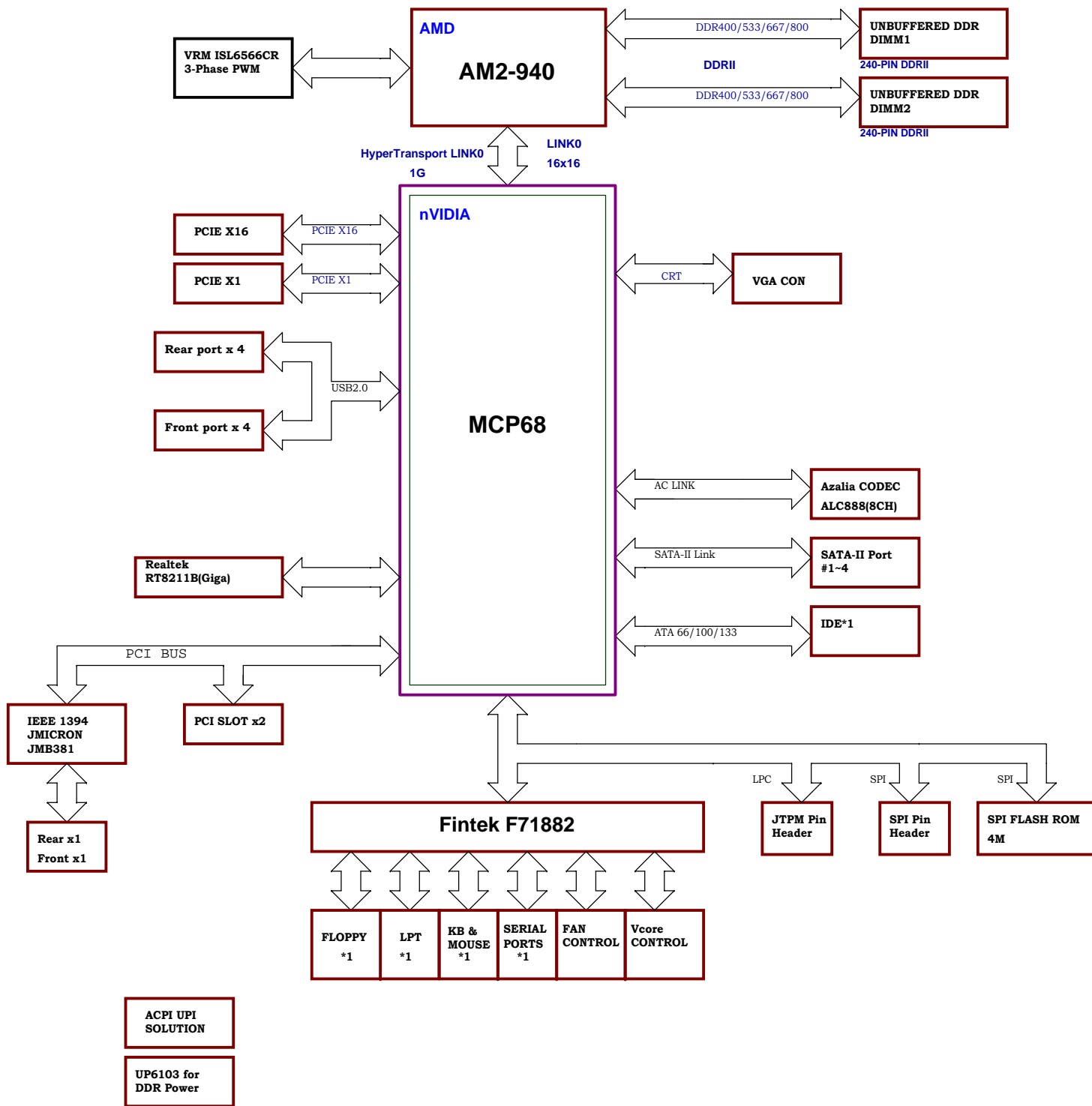
SATA(SATA2-300MB/S) *4

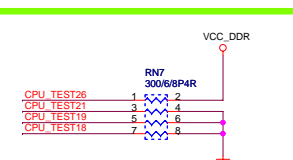
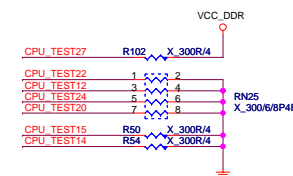
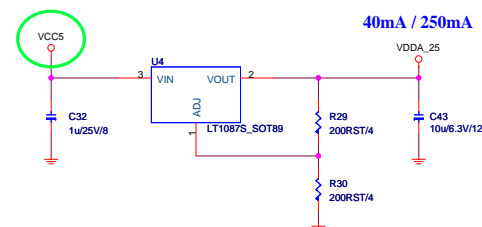
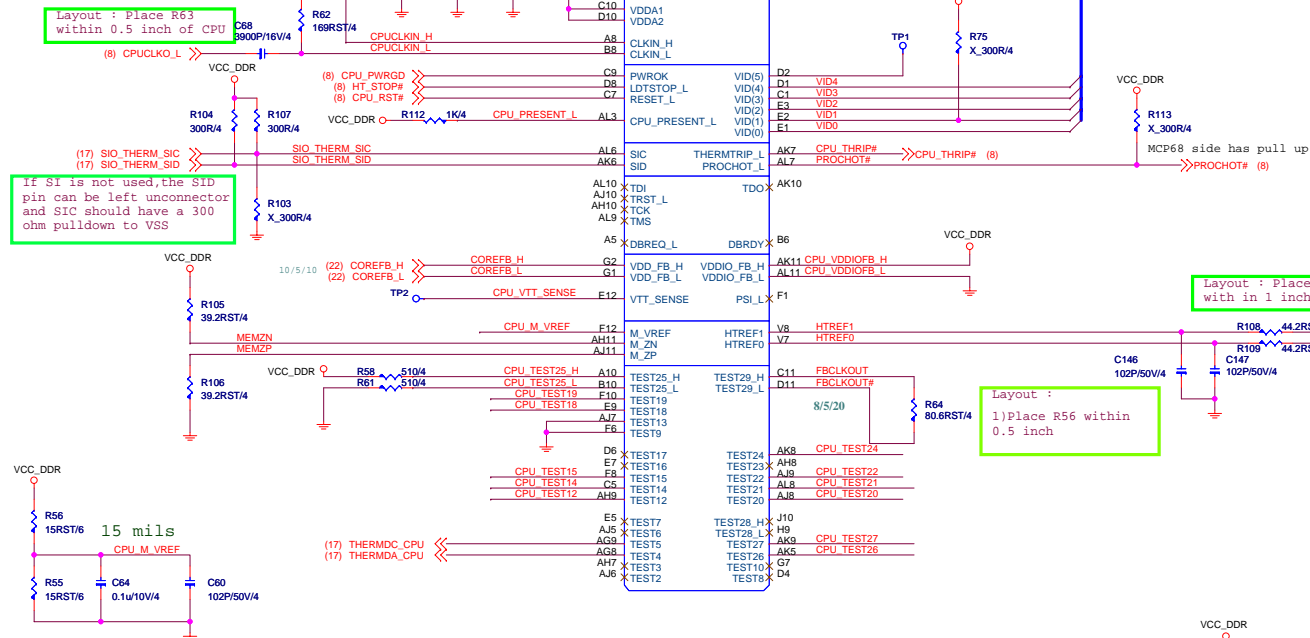
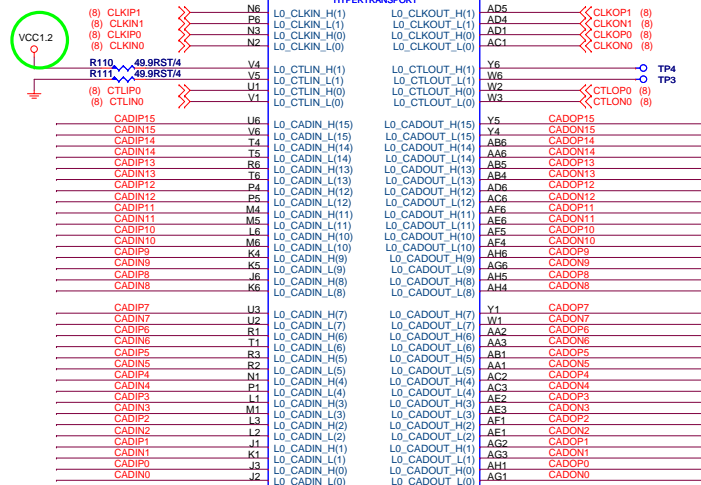
USB2.0 *8(Rear*4 Front*4)

COM PORT *1

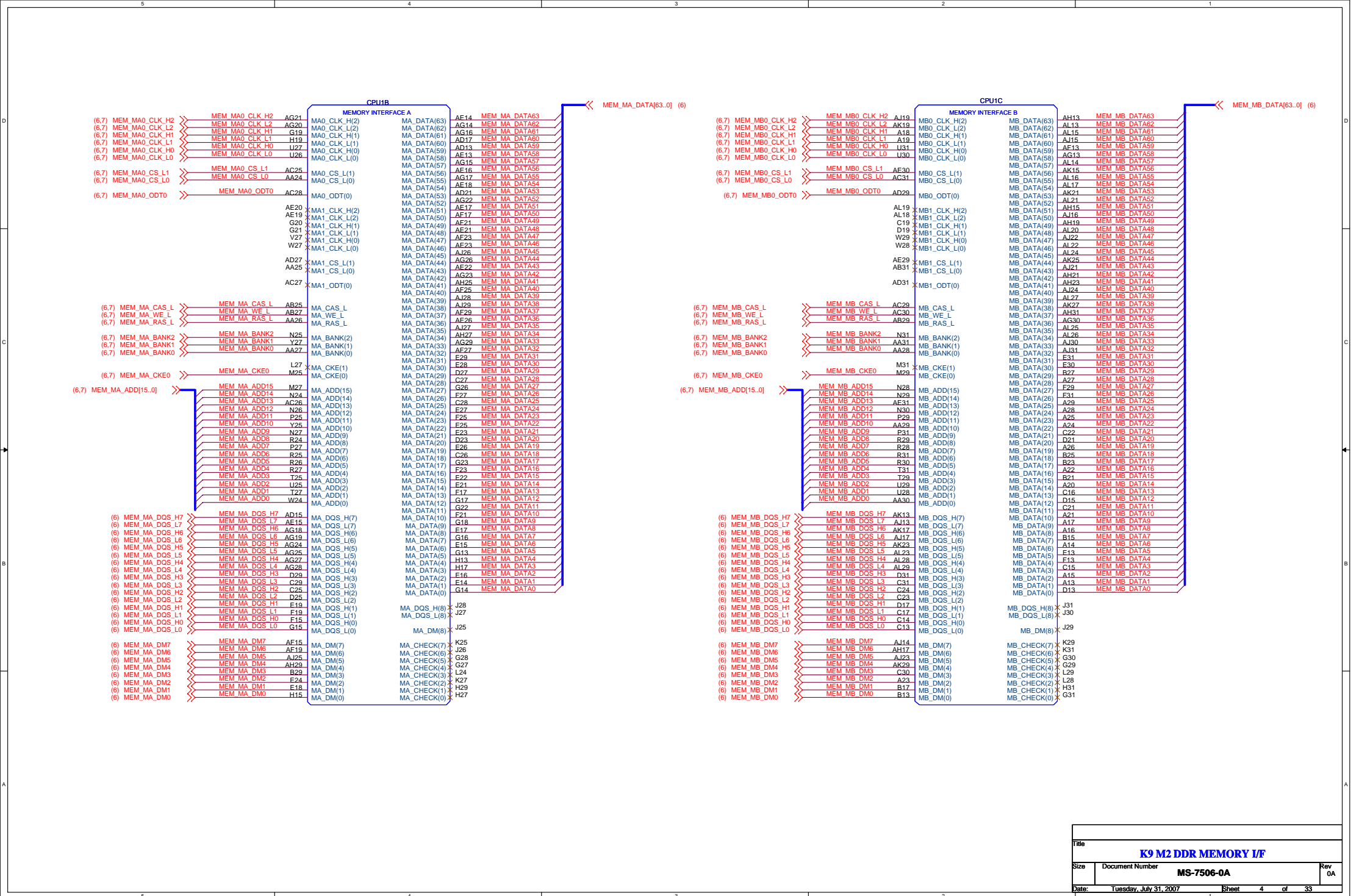
LPT PORT *1

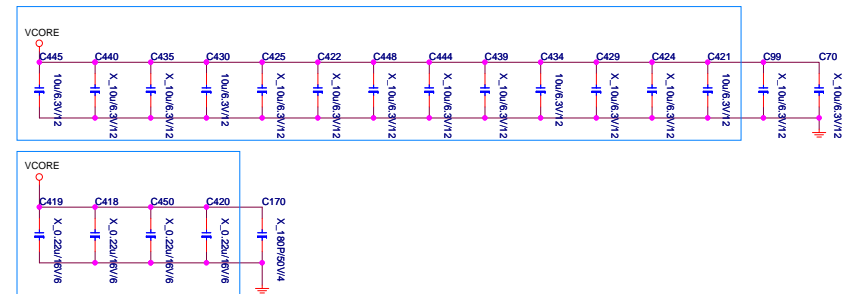
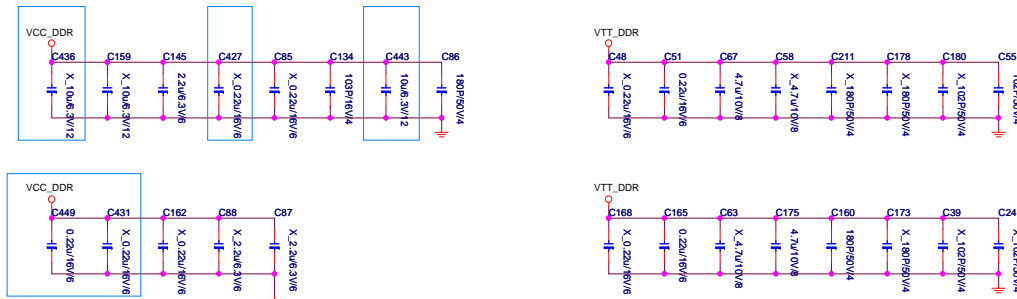
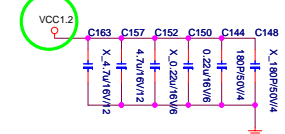
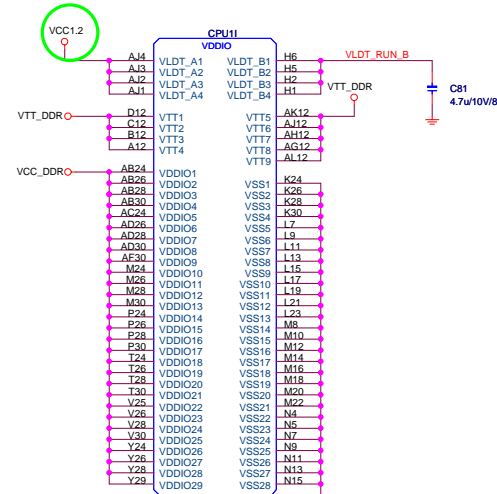
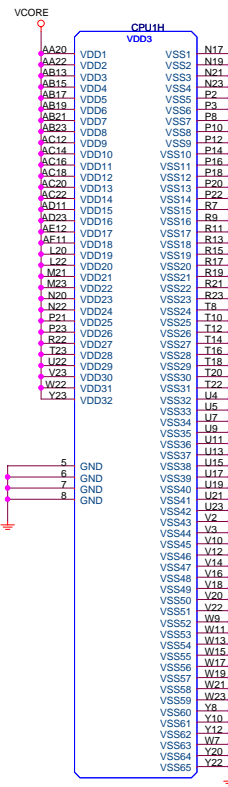
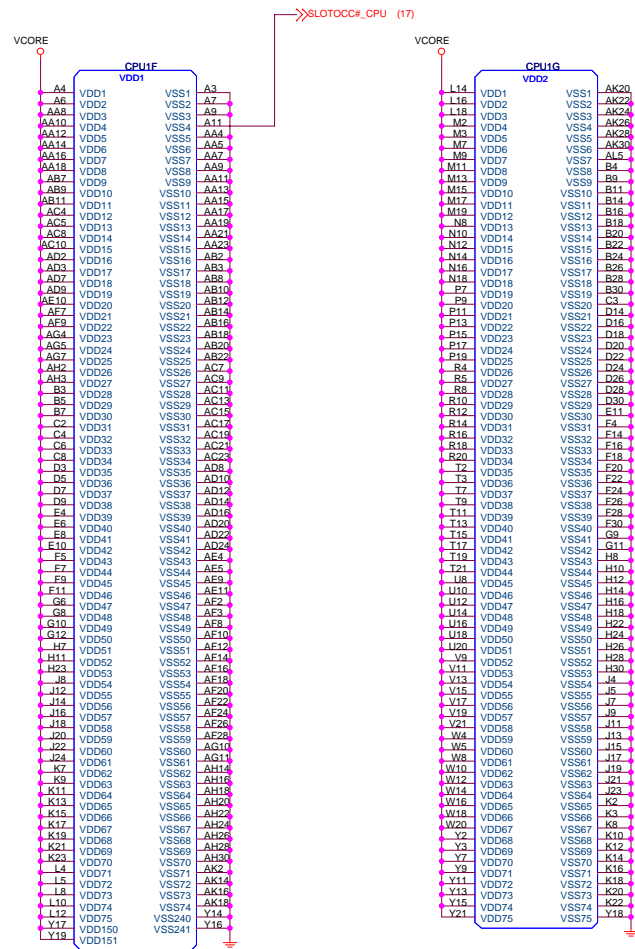
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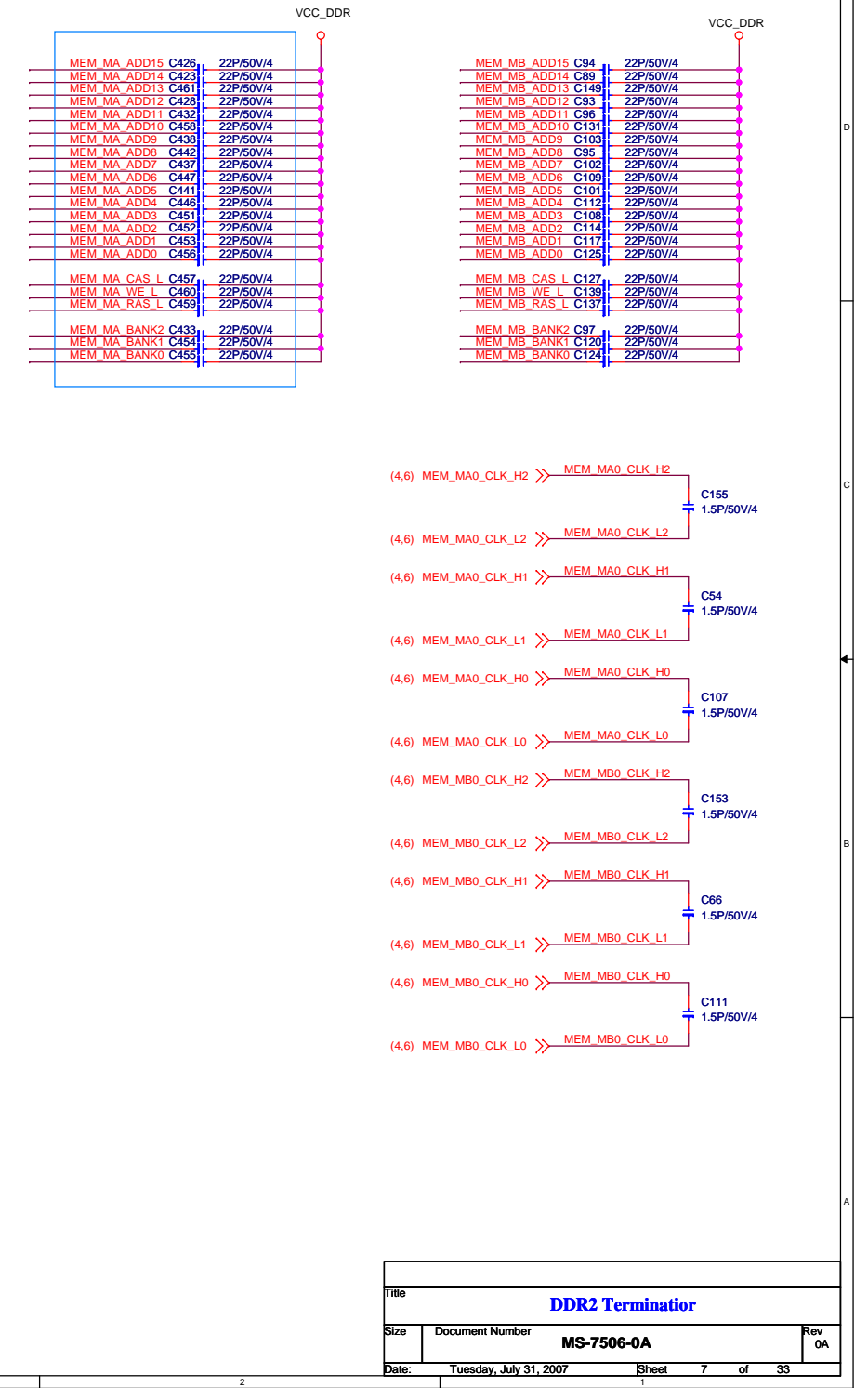
**Erratum 133, Revision Guide for AMD NPT
0Fh Processors / TEST18 19 21 26**

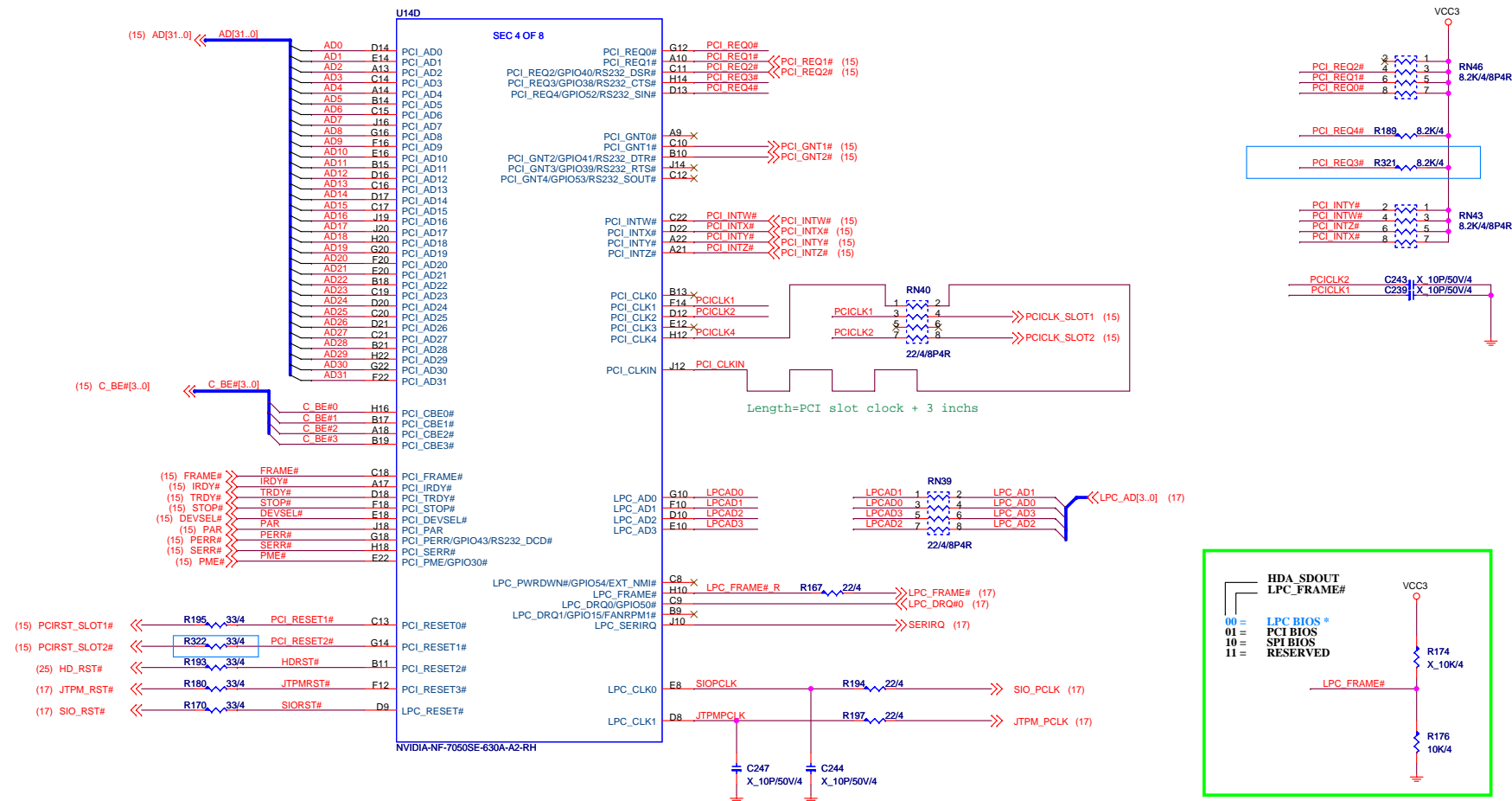


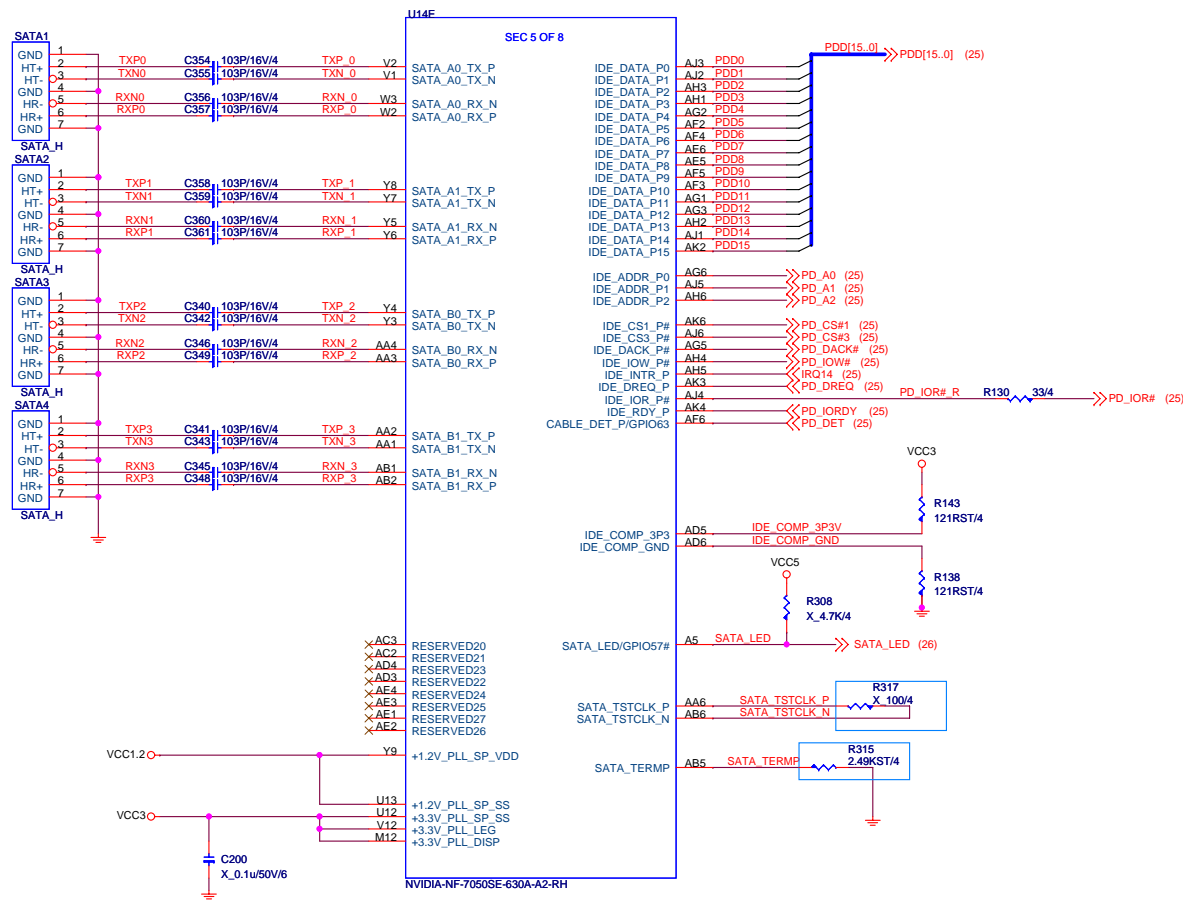


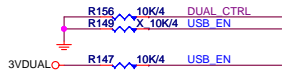
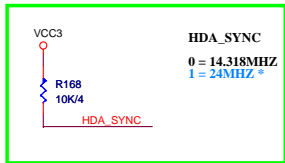
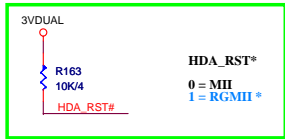
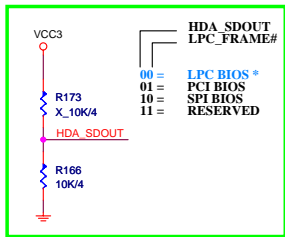


Place Between Processor and DIMMs

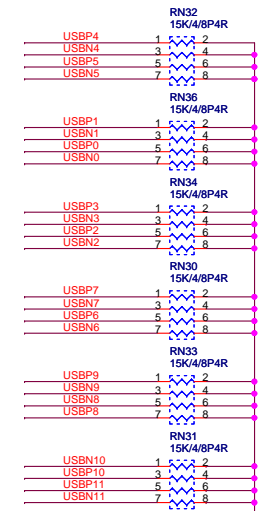
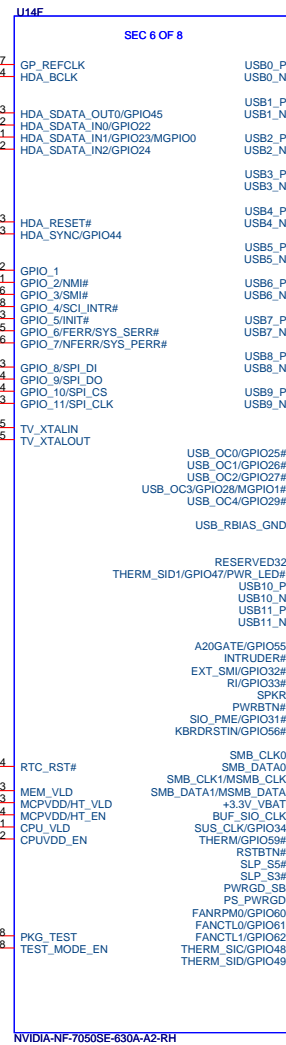
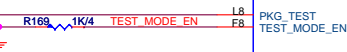
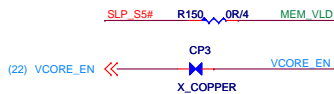




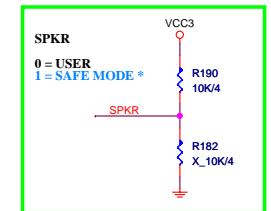
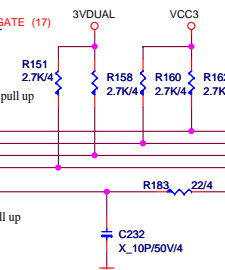
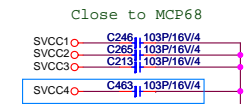




POWER SEQUENCE

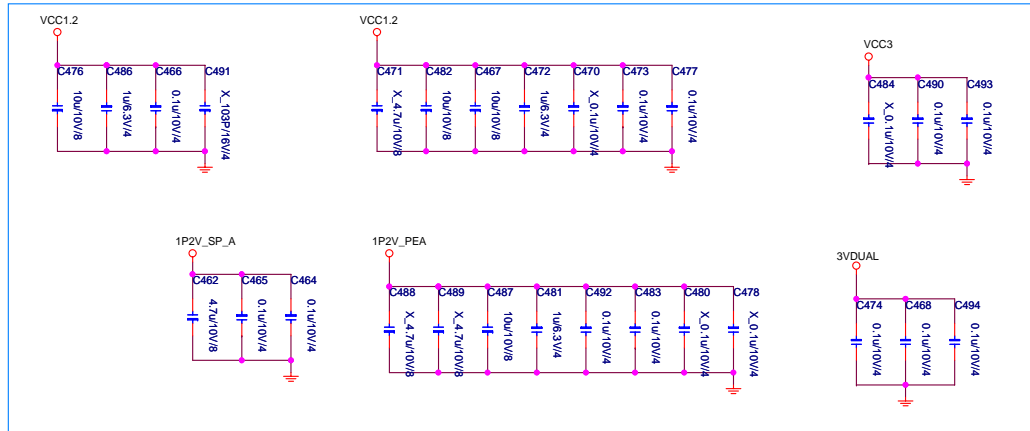
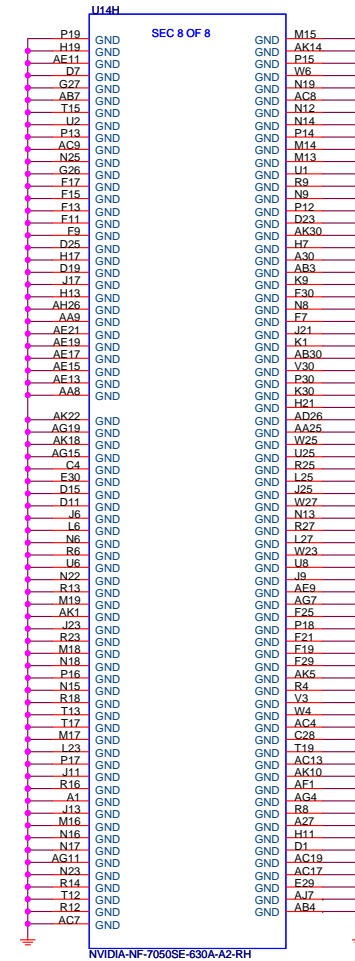
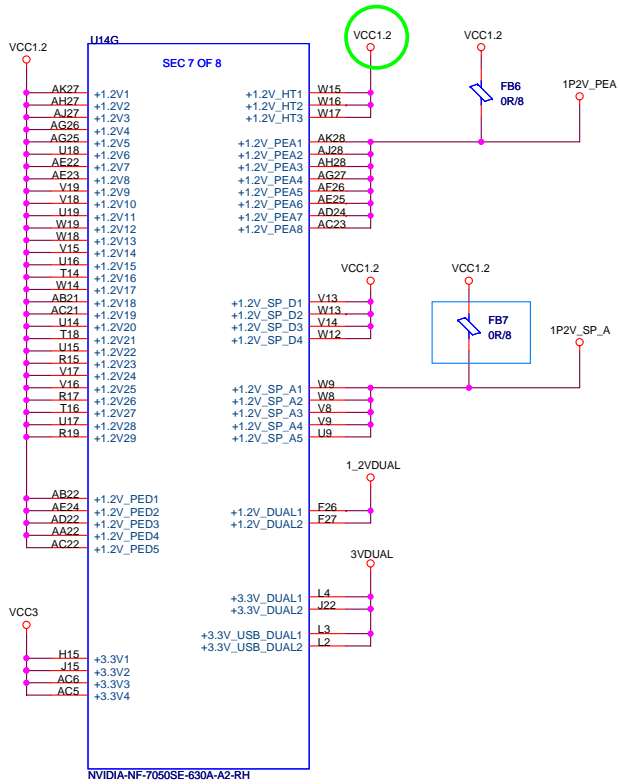


Close to MCP68

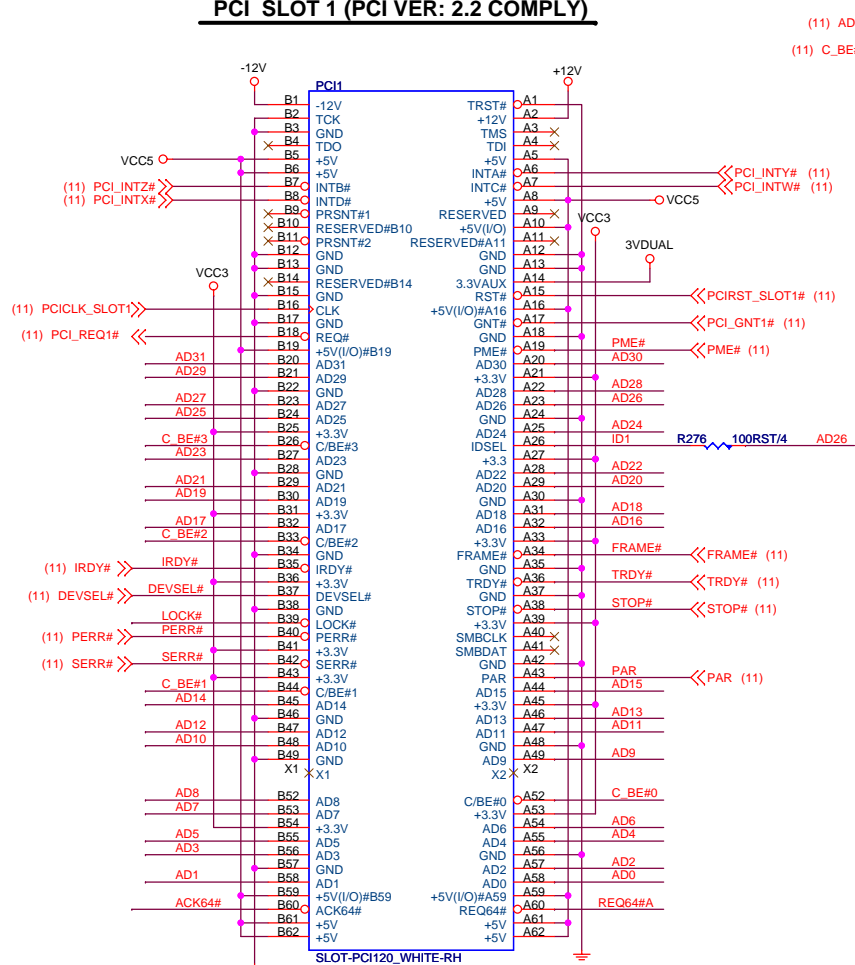


CMOS CLEAR JUMPER	
1 - 2	Normal
2 - 3	Clear CMOS

Title		
MCP68-AUDIO/USB/GPIO		
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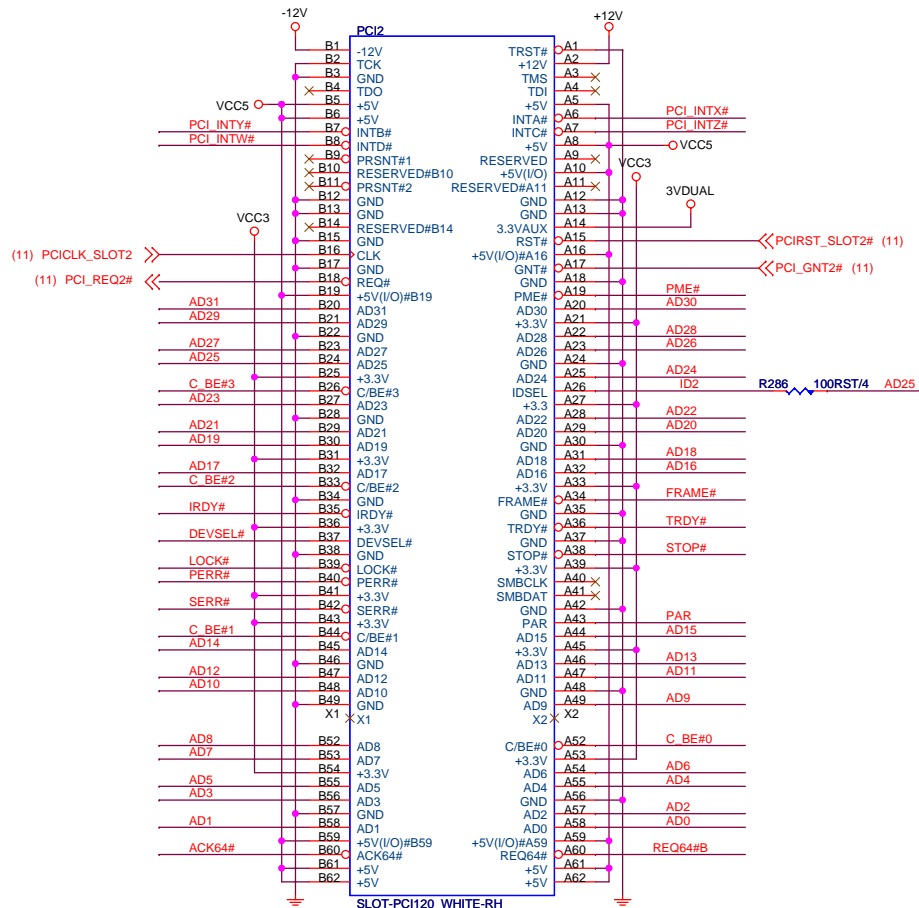


Title			MCP68-POWER/GND
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PCI SLOT 1 (PCI VER: 2.2 COMPLY)

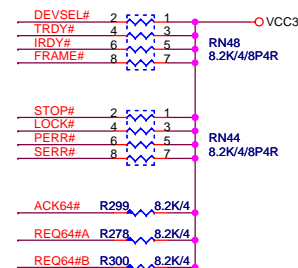
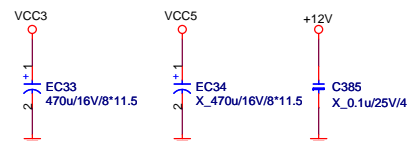
```
IDSEL = AD26
PCI_REQ1# PCI_GNT1#
INT Y# Z# W# X#
PCICLK_SLOT1
```

PCI SLOT 2 (PCI VER: 2.2 COMPLY)

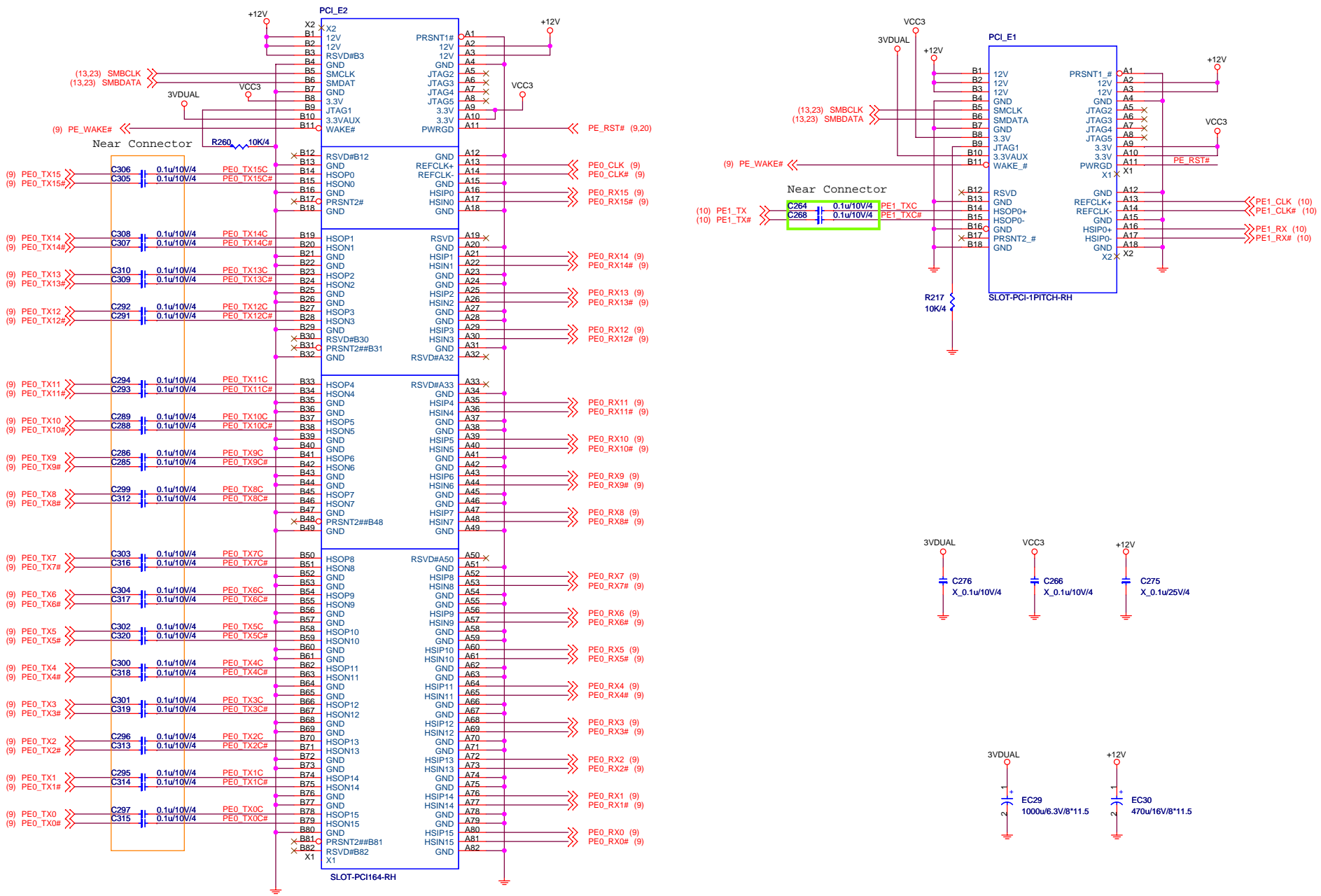


```
IDSEL = AD25
PCI_REQ2# PCI_GNT2#
INT X# Y# Z# W#
PCICLK_SLOT2
```

PCI PULL-UP / DOWN RESISTORS

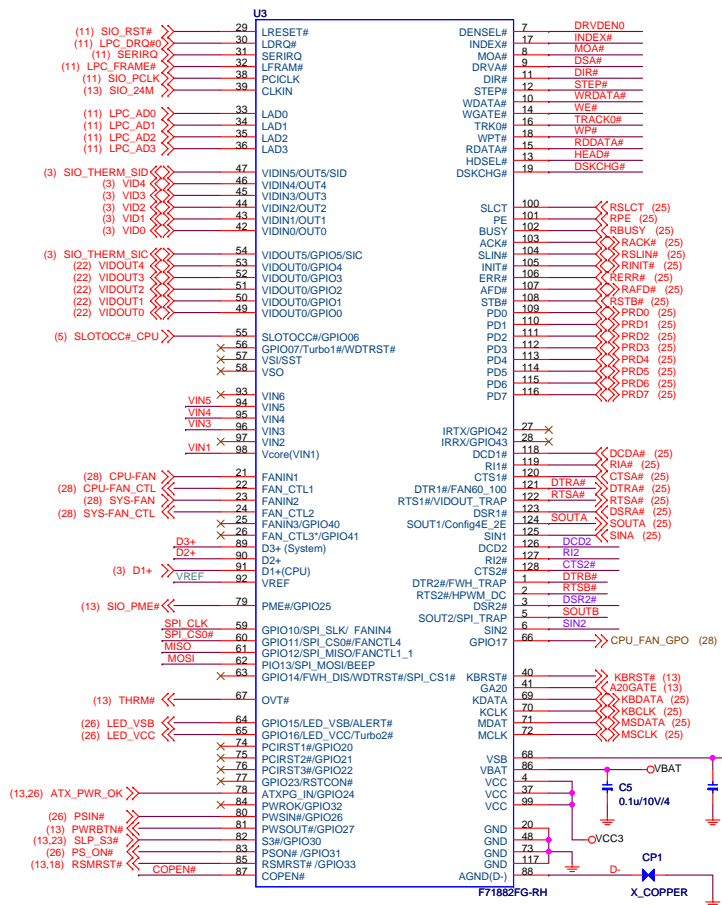


Title			
PCI SLOT 1,2			
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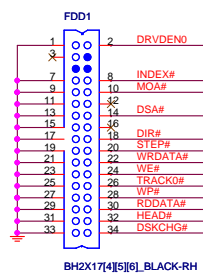


Title			PCI-E X16 / X1 SLOT
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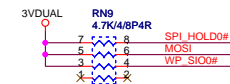
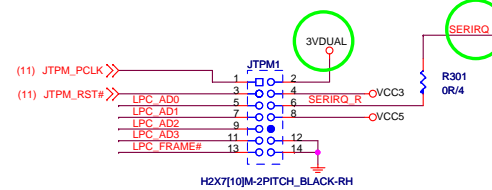
LPC SUPER I/O F71882



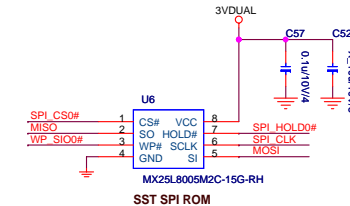
FLOPPY CONN BOLCK



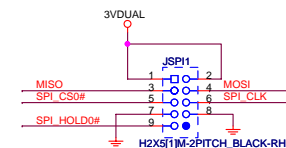
TPM PIN HEADER



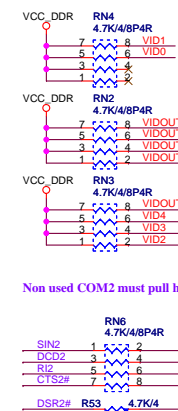
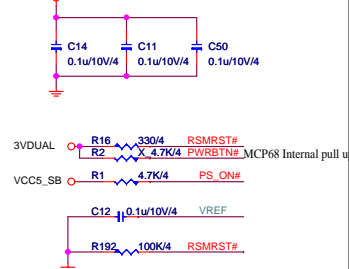
SPI 4M FLASH ROM



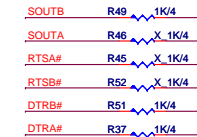
SPI DEBUG PORT



Part Number : N31-2051451-H06
Place close to SPI ROM

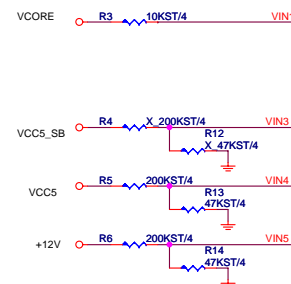


Strapping



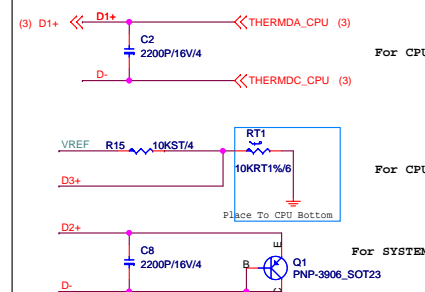
	Don't STUFF	STUFF
RTSB#	PWM_FAN	LINEAR_FAN
RTSA#	PIN49-54=VID_OUT PIN42-47=VIDIN	PIN49-54=GPIO PIN42-47=VIDIN/OUT
SOUTA	4E	2E
SOUTB/DTRB#	SPI_DISABLE	SPI_ENABLE
DTRA#	FAN_START_DUTY_60%	FAN_START_DUTY_100%

VOLTAGE SENSING(H/W Monitor).
The best voltage input level is about 1V.

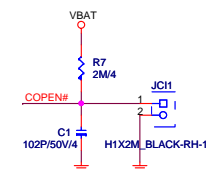


Temperature Sensing

DIODE SENSING CIRCUIT



CASE OPEN CIRCUIT

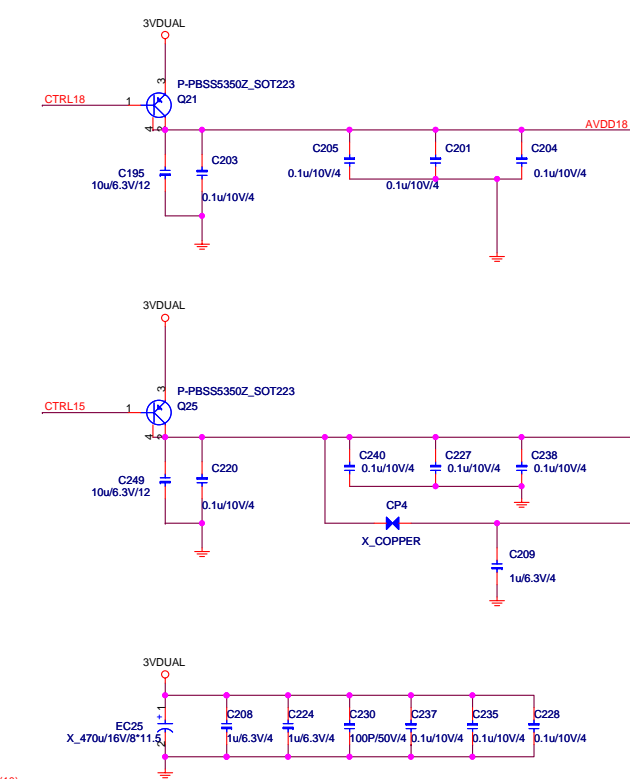
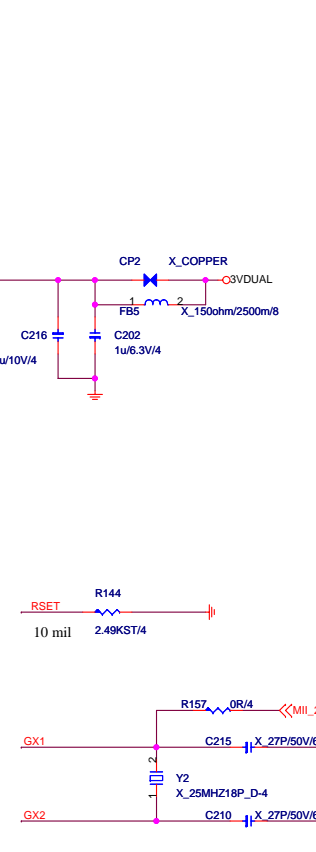
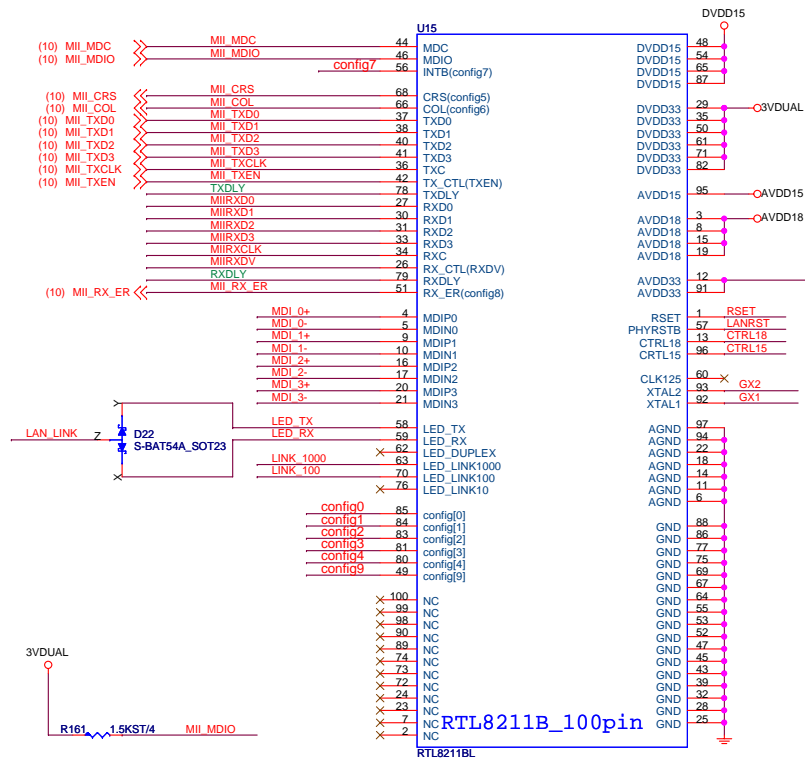


CPU VID reset

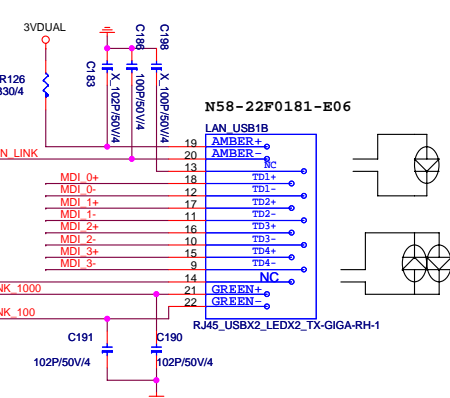
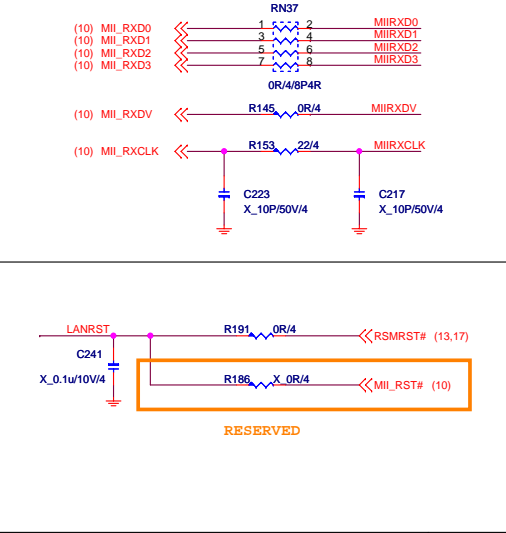


Title			
LPC-Super I/O F71882FG			
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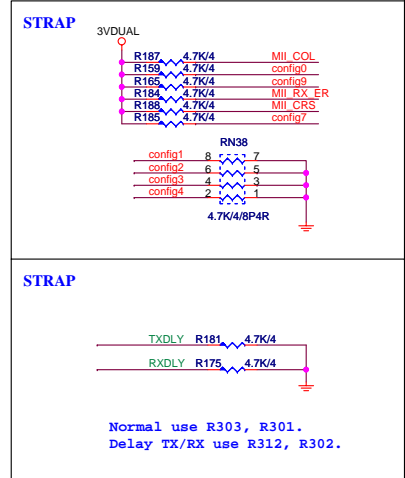
RTL8211B RGMII PHY



EMI

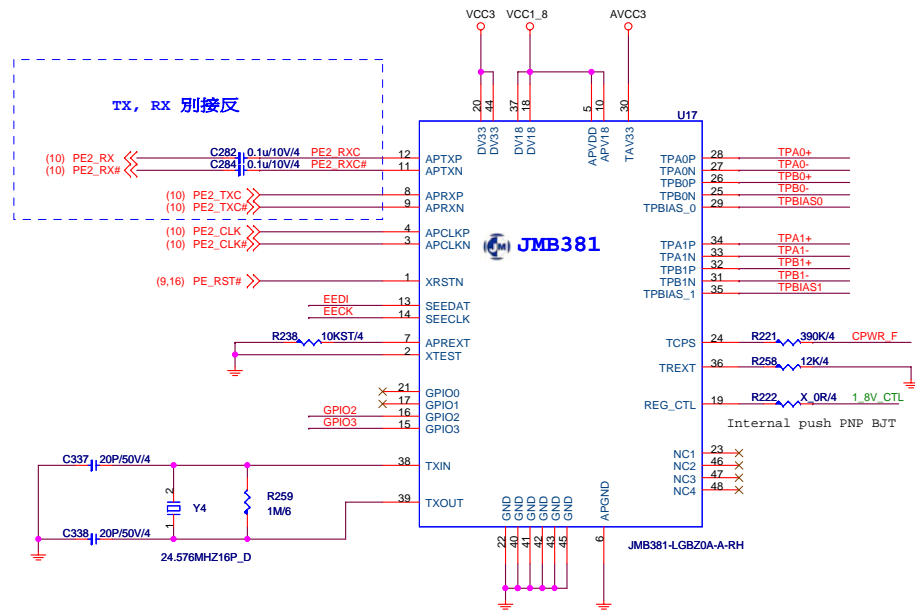


Giga-Lan	
N58-22F0181-942	N58-22F0181-E06
Link	Yellow
Active	Blinking
1000	Orange
100	Green
10	None
19	Yellow
20	Yellow
21	Orange
22	Green

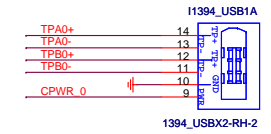
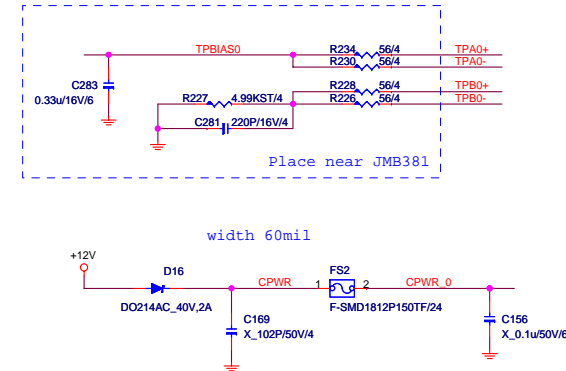


Title		
LAN-RTL8211BL		
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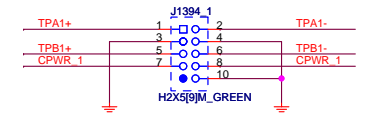
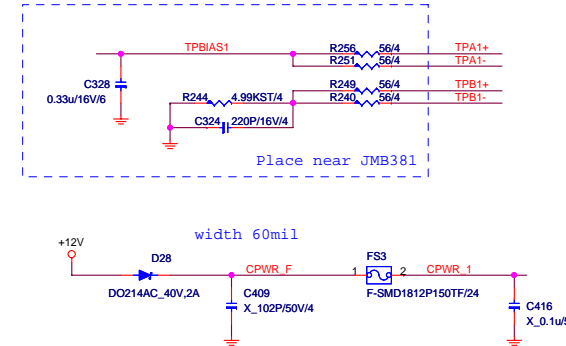
1394 CONTROLLER



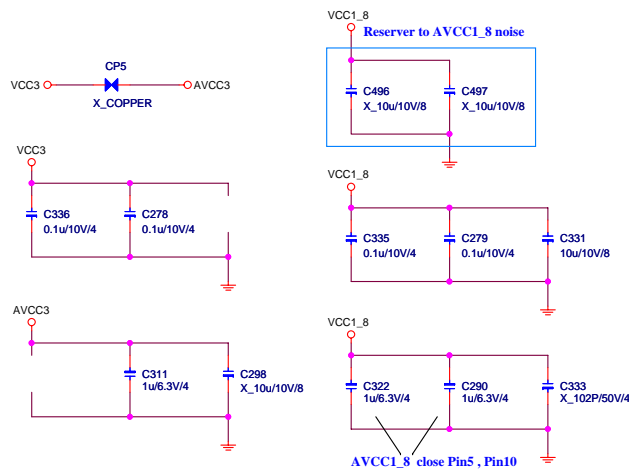
Rear 1394 port



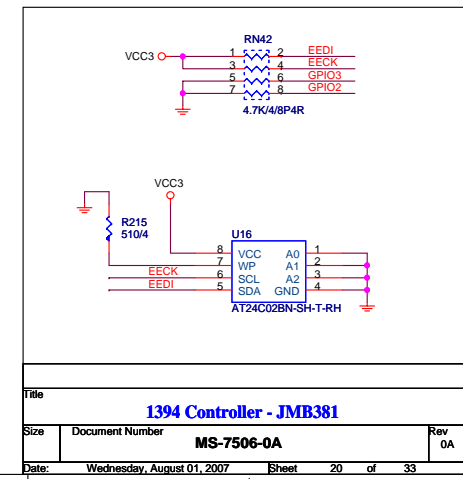
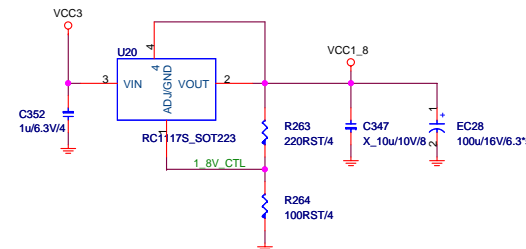
Front 1394 pin header



For Intel 1394 pinheader

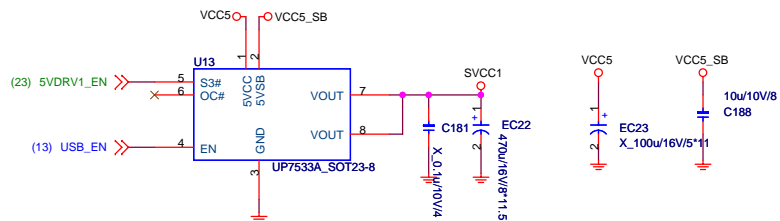


A1117 CO-LAY SOT223 (TO_261) PNP BJT

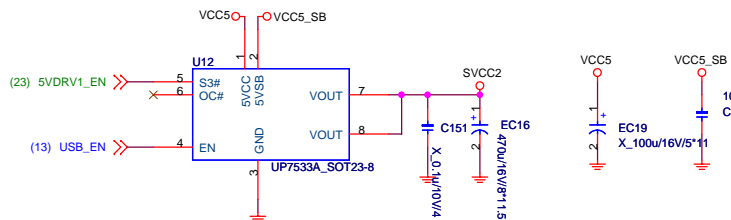


Title			1394 Controller - JMB381
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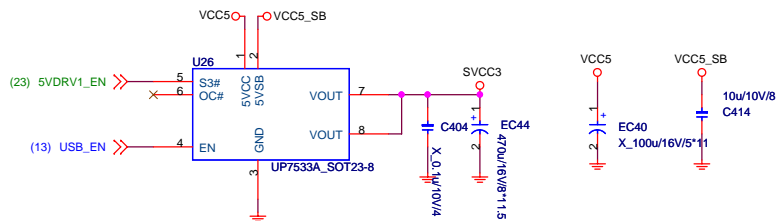
POWER CIRCUIT FOR USB PORT 0,1



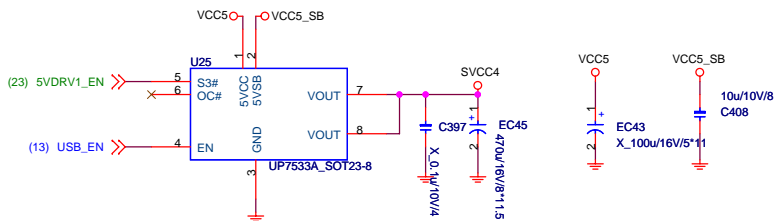
POWER CIRCUIT FOR USB PORT 2,3



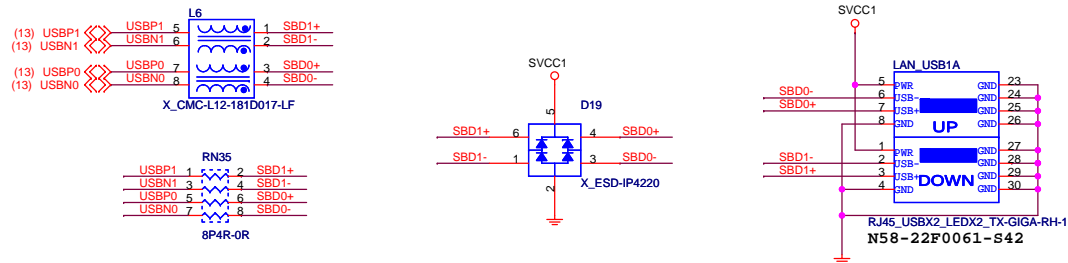
POWER CIRCUIT FOR USB PORT 4,5



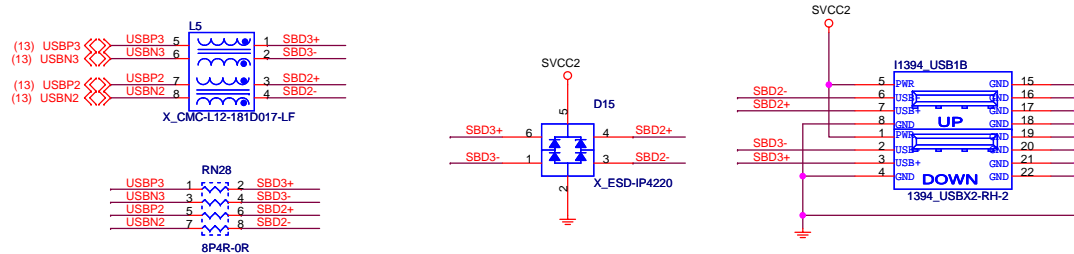
POWER CIRCUIT FOR USB PORT 6,7



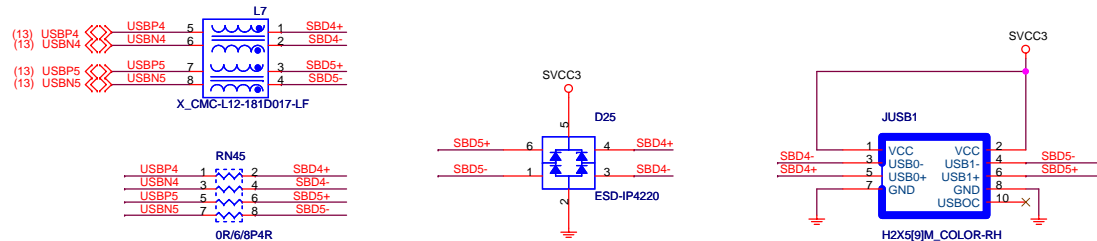
REAR PANEL USB CONNECTOR FOR USB PORT 0,1



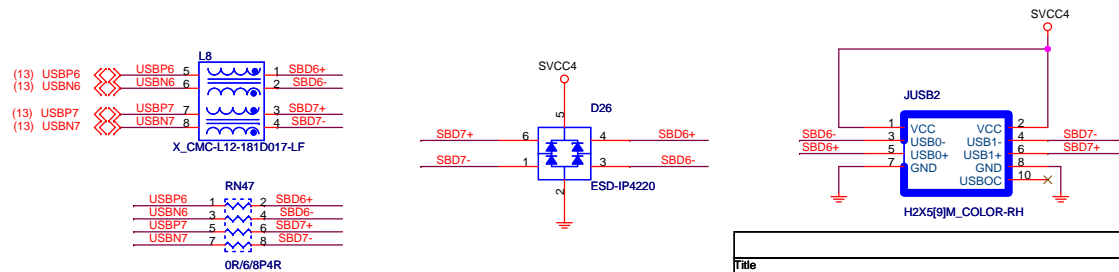
REAR PANEL USB CONNECTOR FOR USB PORT 2,3



FRONT PANEL USB CONNECTOR FOR USB PORT 4,5

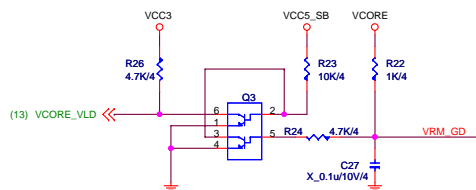


FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



NEAR USB CONNECTOR

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USB CONNECTORS			
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(17) VIDOUT[0..4]

(13) VCORE_EN

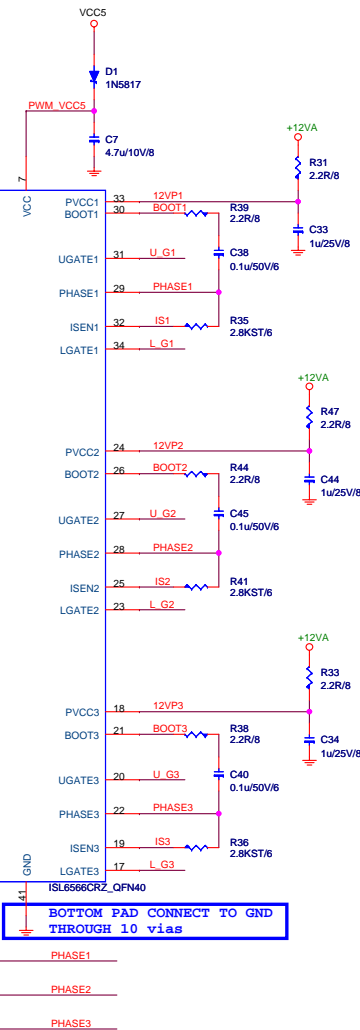
VCORE

(3) COREFB_H

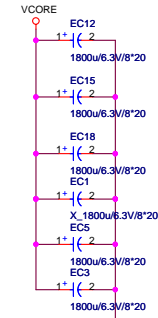
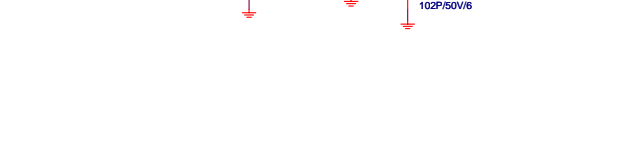
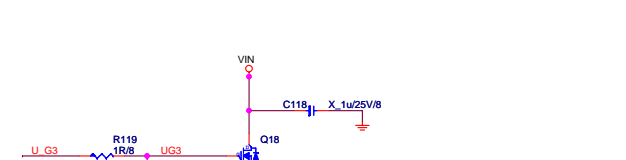
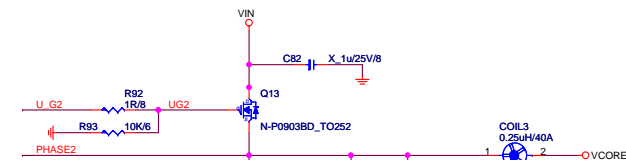
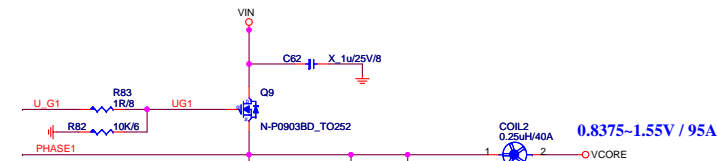
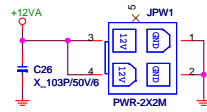
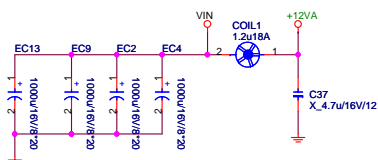
(3) COREFB_L

Close low side mosfet

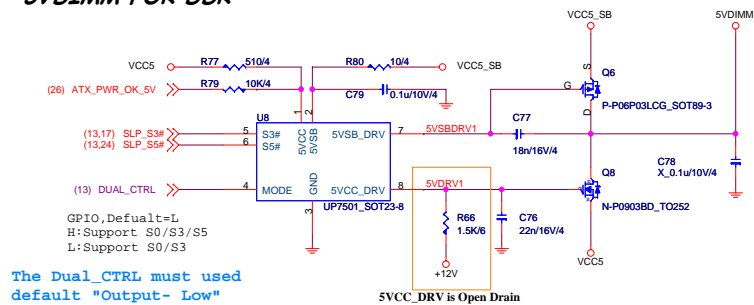
獨立拉trace 到電感端



BOTTOM PAD CONNECT TO GND THROUGH 10 vias



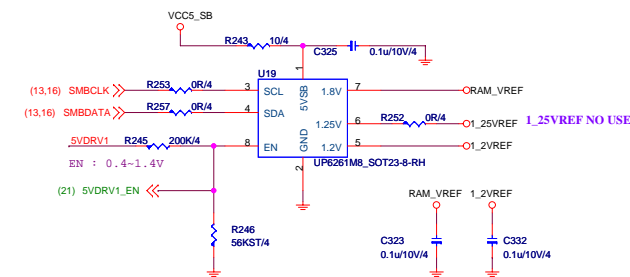
5VDIMM FOR DDR



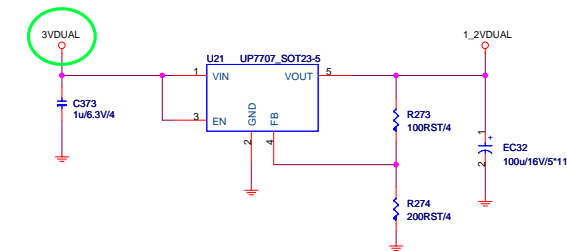
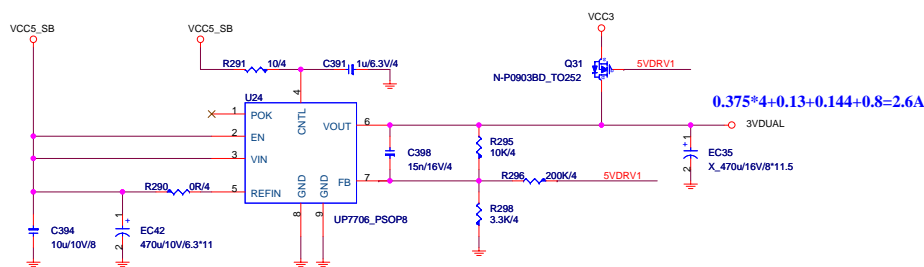
	S0	S3	S4	S5
DUAL_CTRL	X	X	0 1	0 1
5VSBDRV1	1	0	1 0	1 0
5VDRV1	1	0	0 0	0 0
5VDIMM	Y	Y	N Y	N Y

	S0	S3	S4	S5
USB_EN	1	1	1 0	1 0
USB power	Y	Y	Y N	Y N

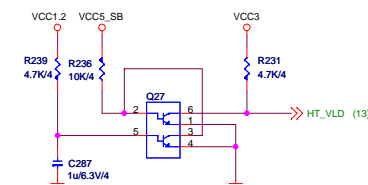
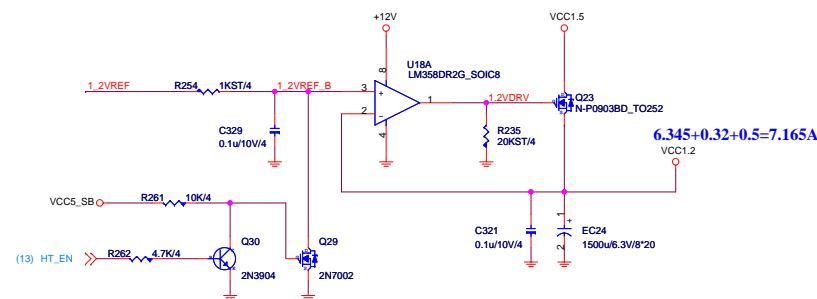
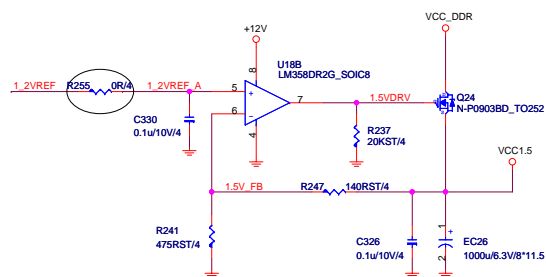
Reference Voltage



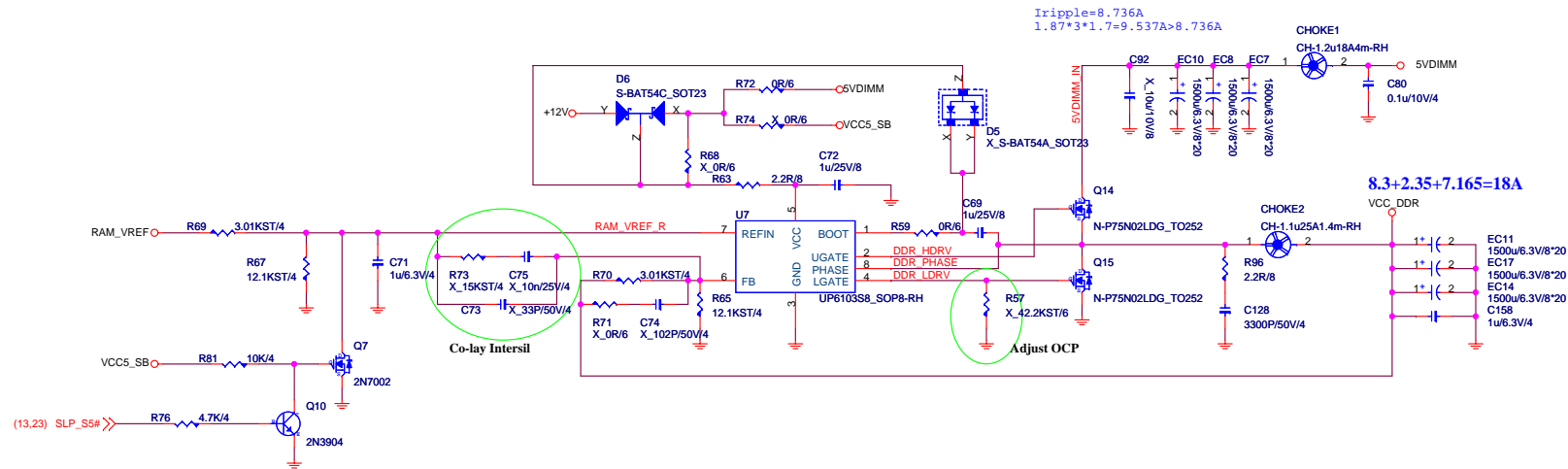
3VDUAL CONTROLLER



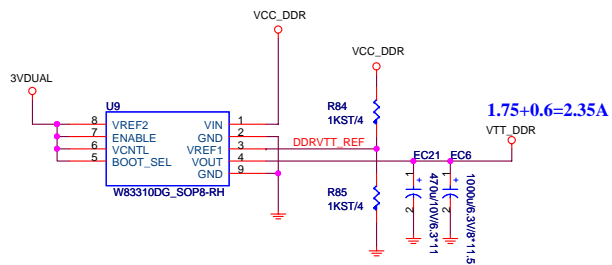
MCP68 1.2V CORE POWER



DDR II 1.8V POWER

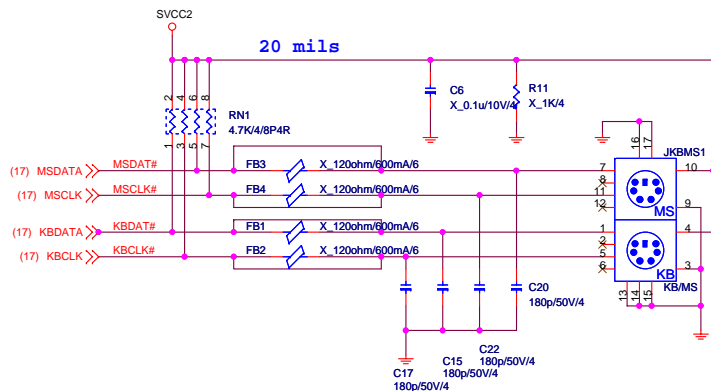


DDR VTT Power

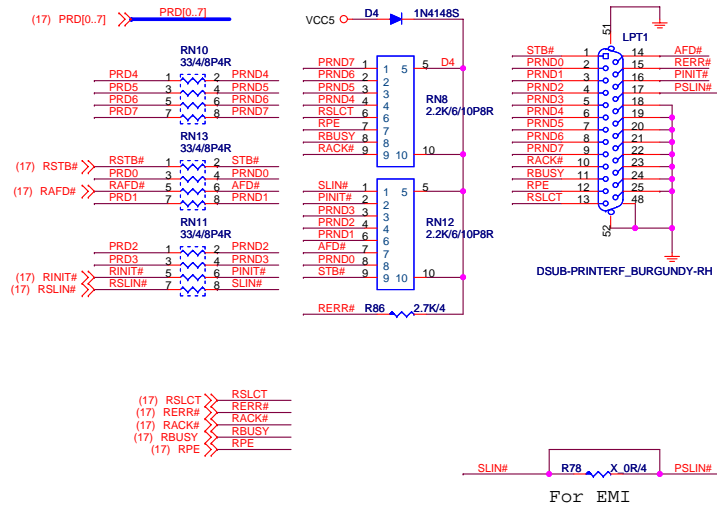


Title			
DDR-uP6103/VTT POWER			
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		Rev 0A	
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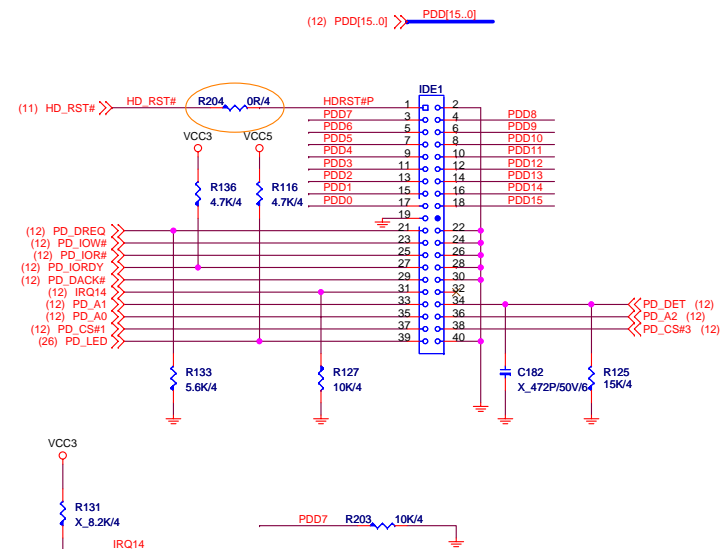
PS2 KEYBOARD & MOUSE CONNECTOR



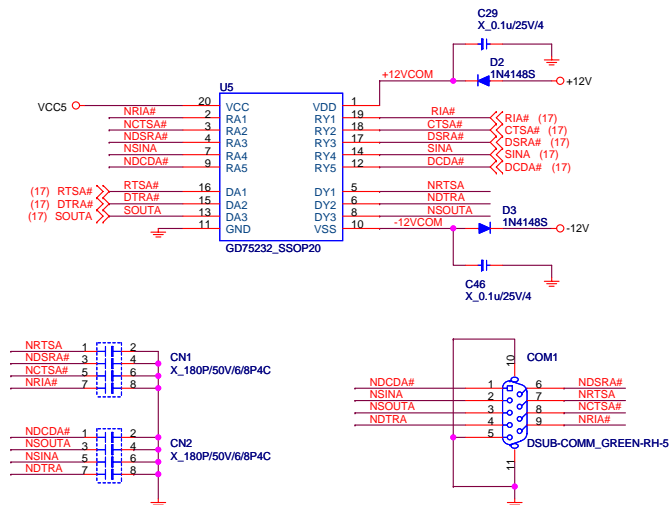
PARALLAL PORT



PRIMARY IDE BLOCK

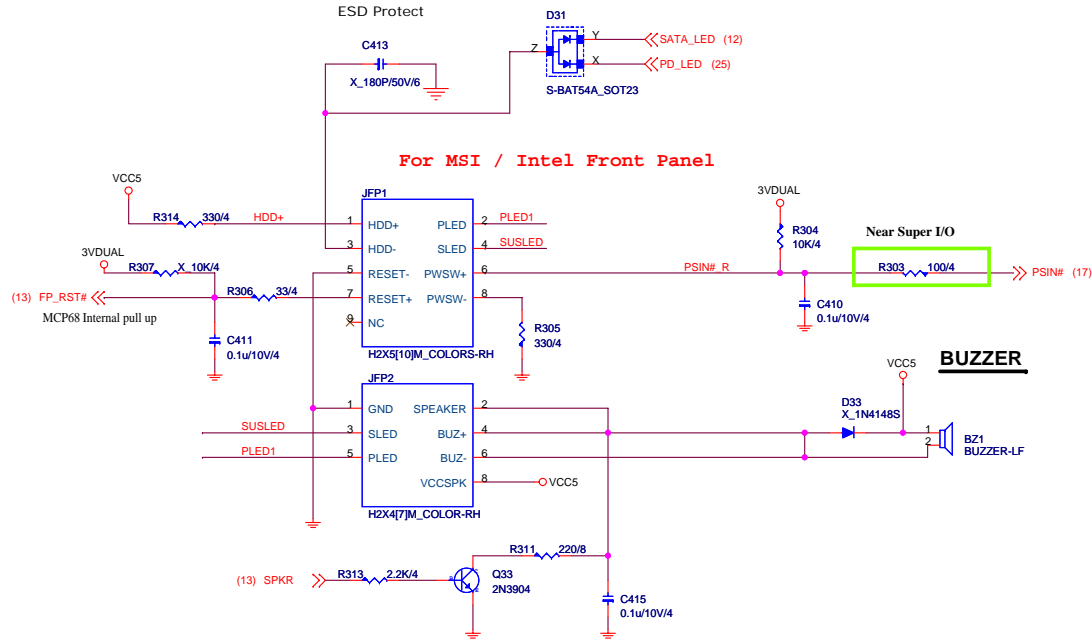


SERIAL PORT 1

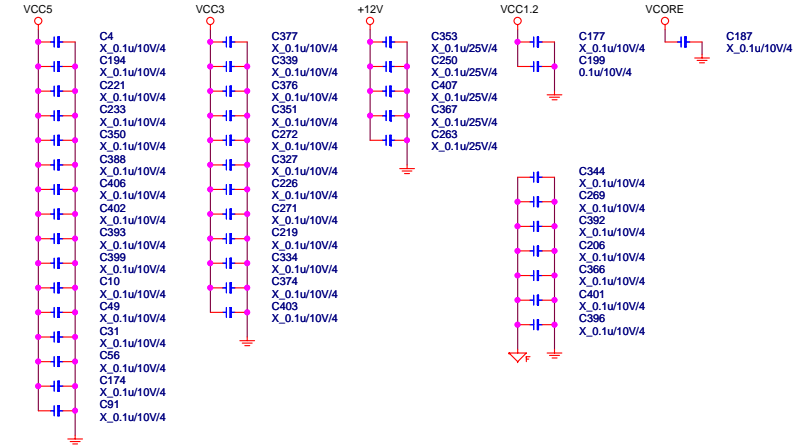


Title				
KB/COM1/LPT/IDE				
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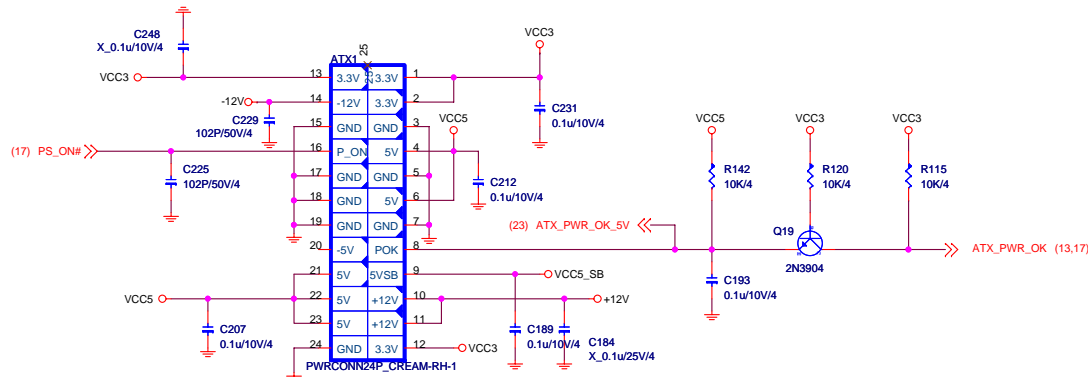
Front Panel



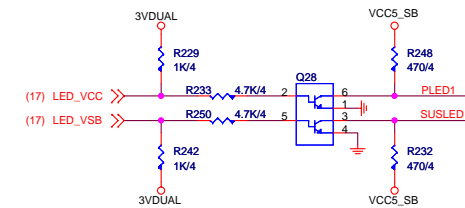
EMI



ATX Connector

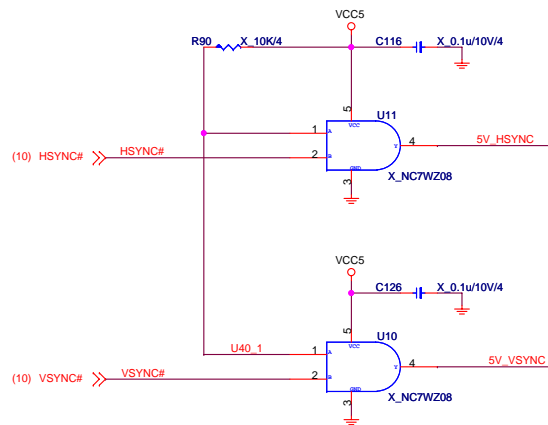
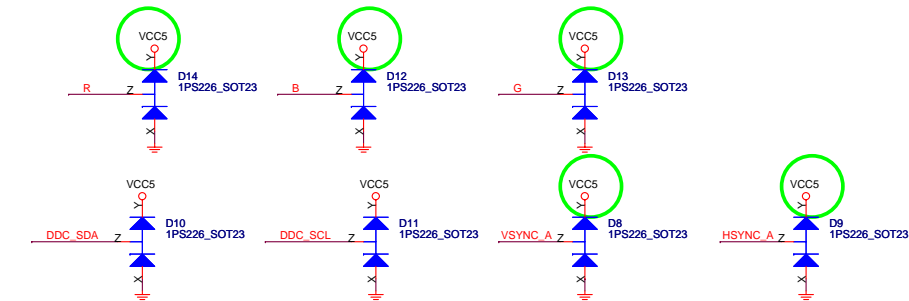


LED (By Fintek 71882)



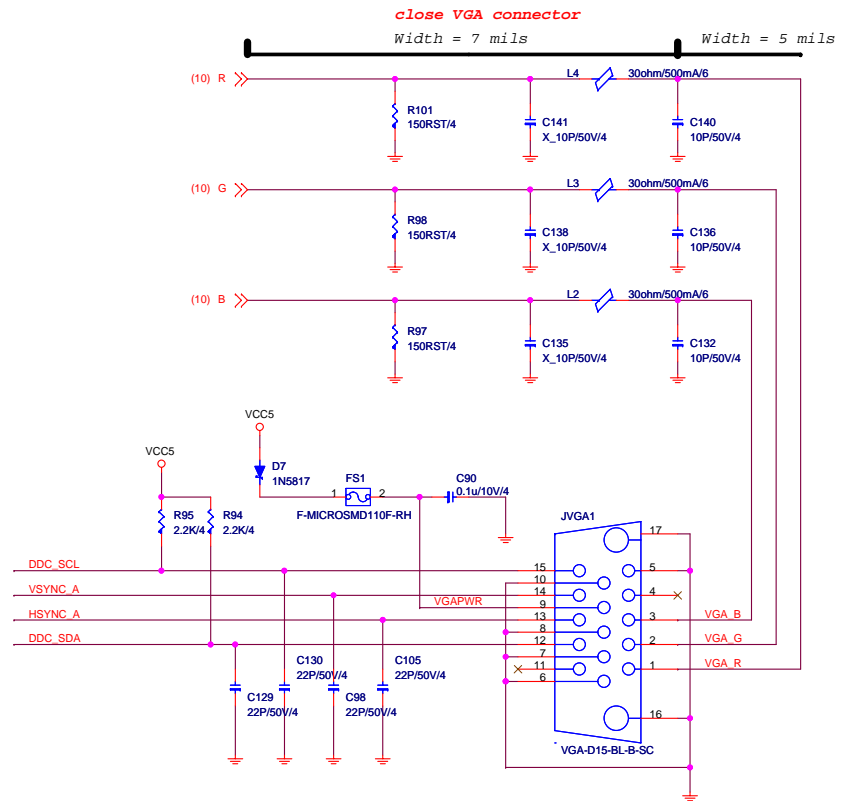
Title		
ATX/Front Panel		
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D-SUB CONNECTOR



HSYNC# R91 0R/4 5V_HSYNC
VSYNC# R89 0R/4 5V_VSYNC

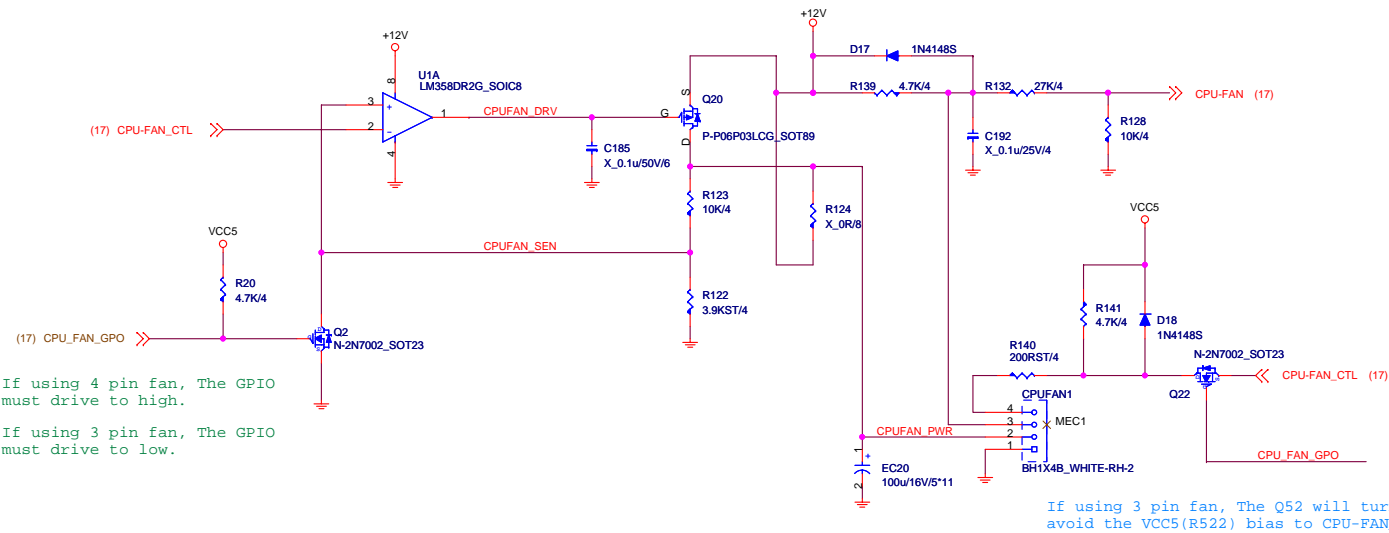
RH15
5V_VSYNC 2 1 VSYNC_A
5V_HSYNC 4 3 HSYNC_A
DDC_DATA 6 5 DDC_SDA
(10) DDC_CLK 8 7 DDC_SCL
33/4/8P4R



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FAN BOLCK

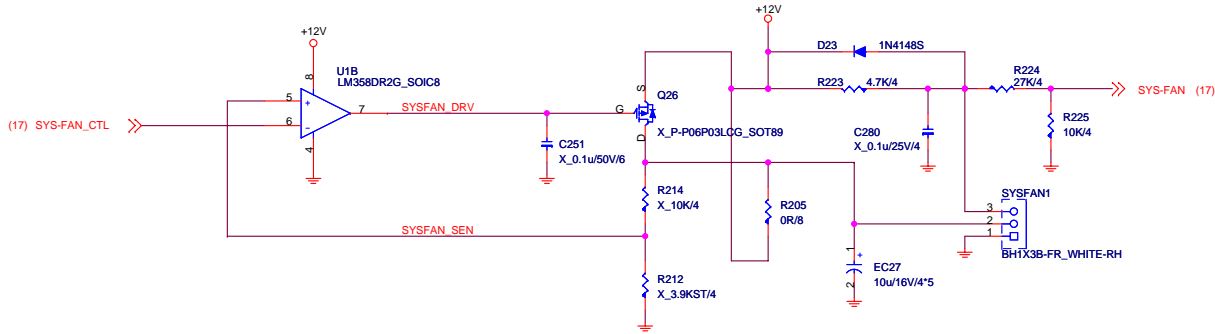
CPU FAN



If using 4 pin fan, The GPIO must drive to high.
If using 3 pin fan, The GPIO must drive to low.

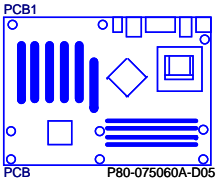
If using 3 pin fan, The Q52 will turn off to avoid the VCC5(R522) bias to CPU-FAN_CTL.

System FAN



Title			FAN
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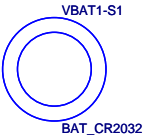
PCB



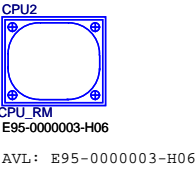
NB FAN/HEAT-SINK



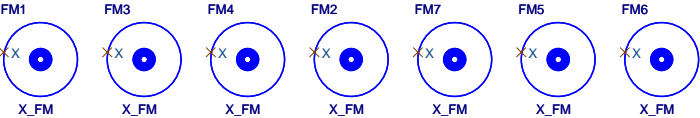
BATTERY



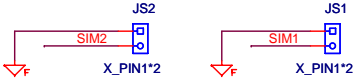
CPU RM



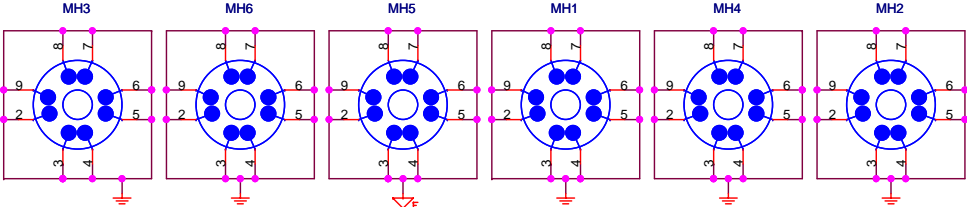
Optics Orientation Holes



Simulation



Mounting Holes



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