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MS-7504 Micro ATX

Version: 1.1

CPU: Intel Pentium 4 Cedar Mill / Prescott , Pentium D Smithfield / Presler and Conroe / Kentsfield family processors in LGA775 Package.

System Chipset:

NVIDIA MCP73

On Board Device:

BIOS -- SPI Flash 8M
Azalia Codec -- ALC888S
LPC Super I/O -- FINTEK F71882FG
LAN -- Realtek RTL8211BL-GR
CLOCK Gen -- Integrated in MCP73
1394 Controller -- VT6308P

Main Memory:

Single-channel DDR-II * 2 (Max 4GB)

Expansion Slots:

PCI EXPRESS X16 SLOT *1
PCI EXPRESS X1 SLOT * 1
PCI SLOT * 2

Intersil PWM:

Controller: Intersil ISL6312 (3 Phases)
Driver: Intersil ISL6612

| OPT | Function | Orcad Configure | BOM |
|-----|--|-----------------|-----|
| O | MCP73 O /F71882FG/ALC888S/RTL8211BL/VT6308 | cfg-7504O | |
| PV | MCP73PV /F71882FG/ALC888S/RTL8211BL/VT6308 | cfg-7504PV | |
| | | | |
| | | | |

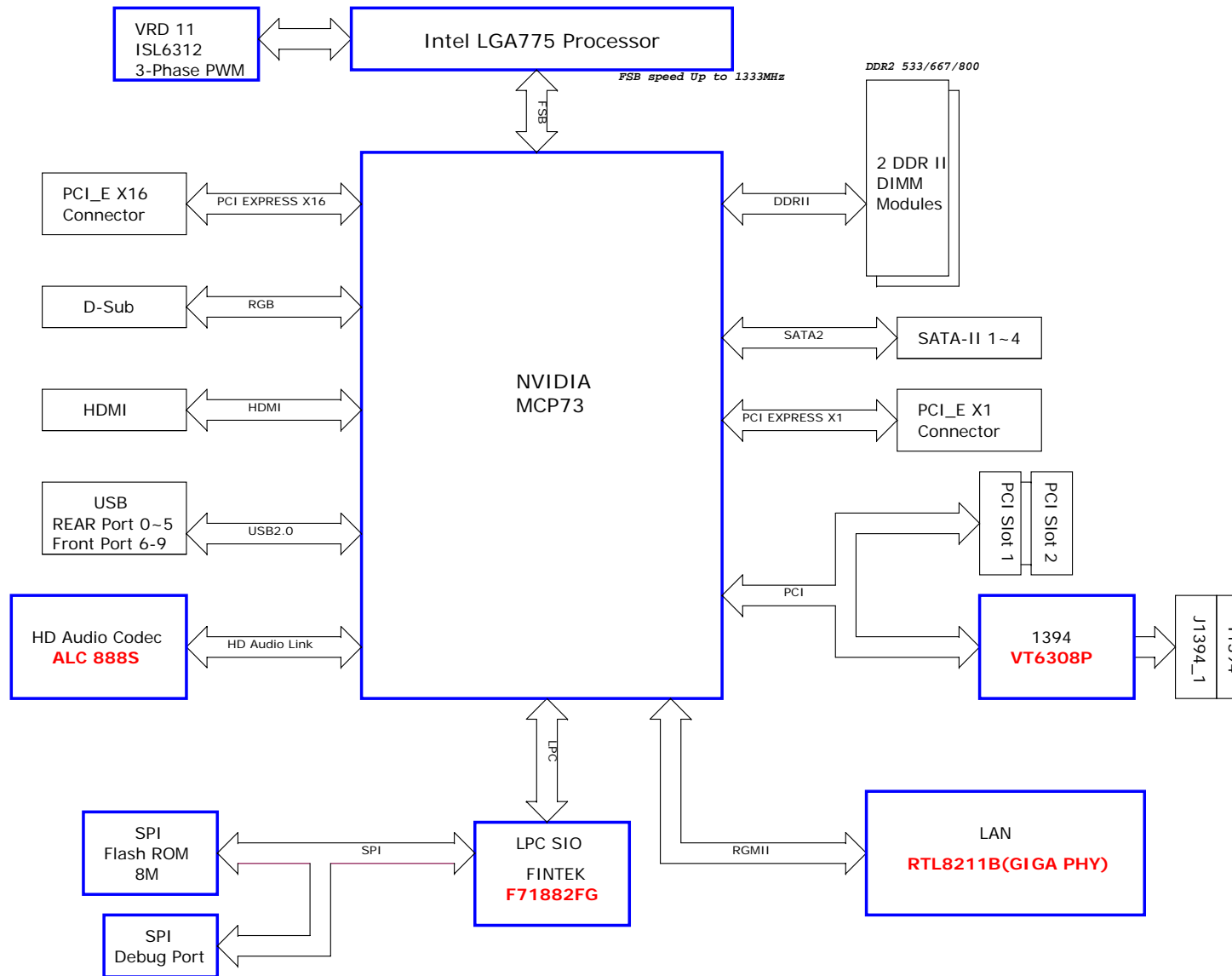


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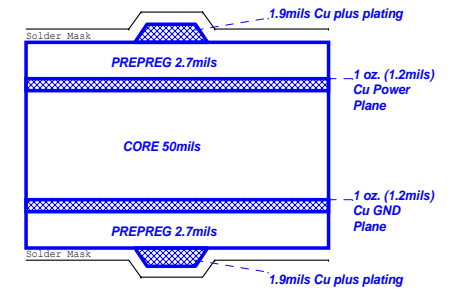
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| Size Custom | Document Description COVER SHEET | Rev 11 |
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Block Diagram



Board Stack-up

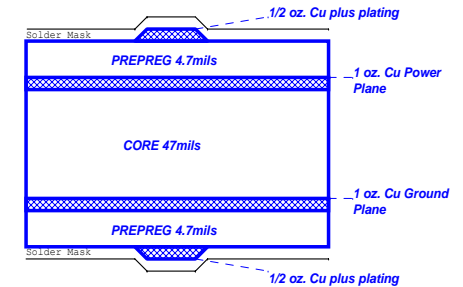
(1080 Prepreg Considerations)



Single End 50ohm Top/Bottom : 4mils
 USB2.0 - 90ohm : 15/4.5/7.5/4.5/15
 SATA - 95ohm : 15/4/8/4/15
 LAN - 100ohm : 15/4/8/4/15
 PCIE - 95ohm : 15/4/8/4/15
 IEEE1394 - 110ohm : 15/4/9/4/15

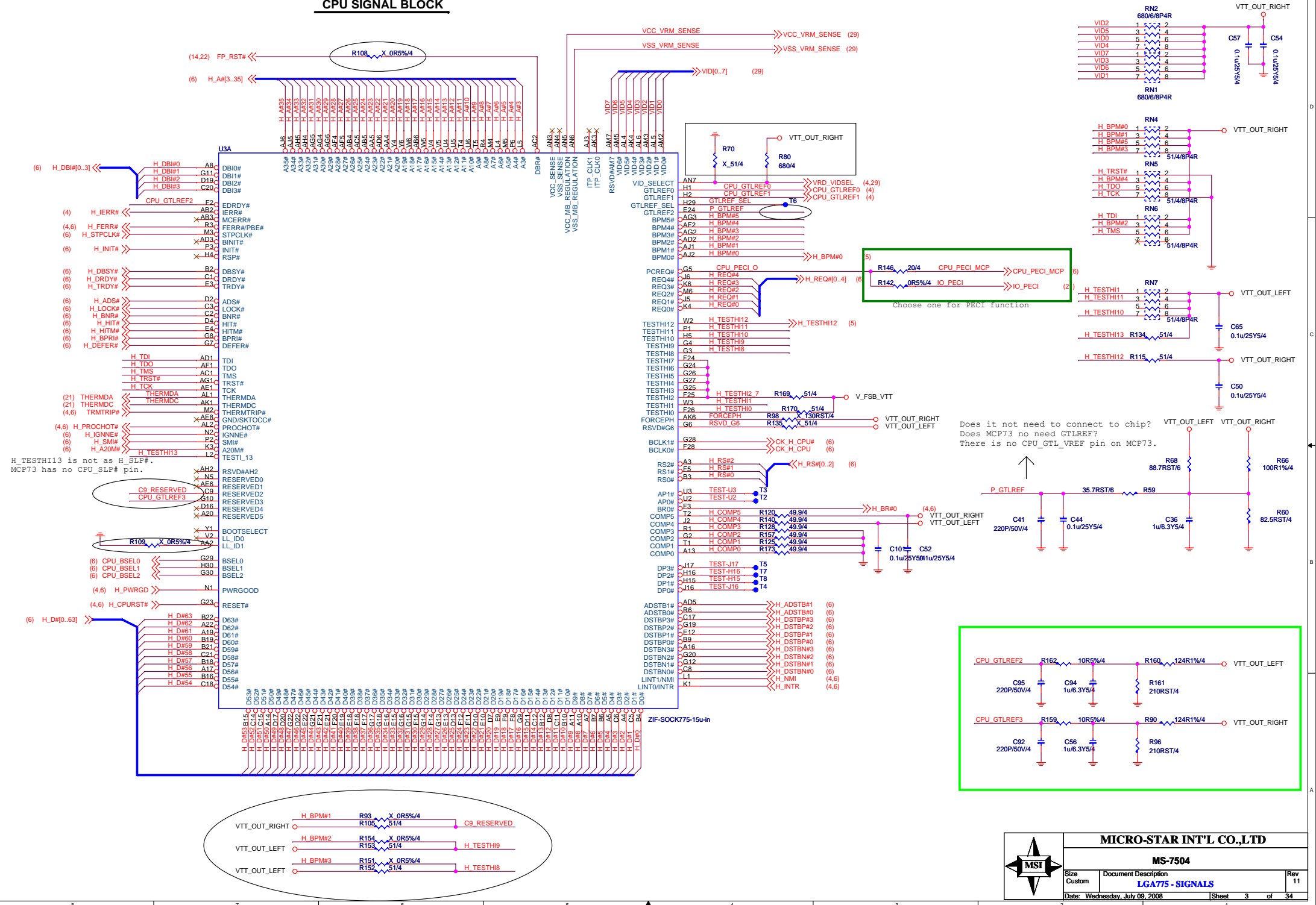
Board Stack-up

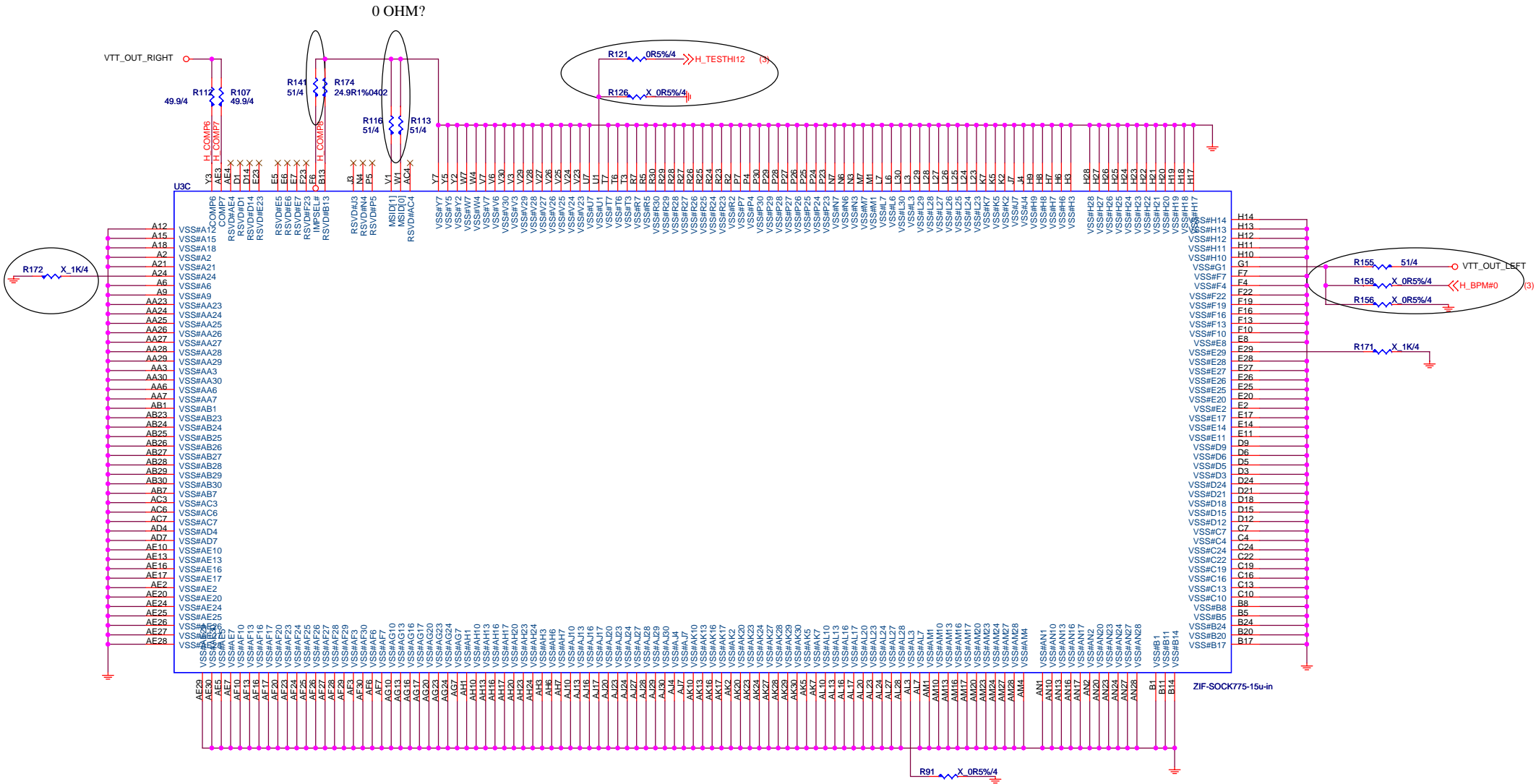
(2116 Prepreg Considerations)



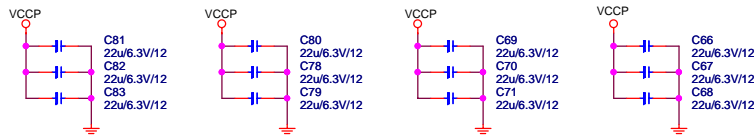
Single End 60ohm Top/Bottom : 5mils
 IEEE1394 - 110ohm Top : 5/7/5
 PCIE, LAN, SATA - 100ohm Top : 5/6/5
 USB2.0 - 90ohm Top : 7.5/7.5/7.5

CPU SIGNAL BLOCK





CPU DECOUPLING CAPACITORS



Place these caps within socket cavity

(3) H_DBI#0[0..3] >> H_DBI#0[0..3]

(3) H_DSTBP#0 >> V36 CPU_DSTBP0#
(3) H_DSTBN#0 >> W36 CPU_DSTBN0#
(3) H_DBI#0 >> W37 CPU_DBI0#
(3) H_DSTBP#1 >> N31 CPU_DSTBP1#
(3) H_DSTBN#1 >> P30 CPU_DSTBN1#
(3) H_DBI#1 >> R34 CPU_DBI1#
(3) H_DSTBP#2 >> G33 CPU_DSTBP2#
(3) H_DSTBN#2 >> G35 CPU_DSTBN2#
(3) H_DBI#2 >> H31 CPU_DBI2#
(3) H_DSTBP#3 >> M38 CPU_DSTBP3#
(3) H_DSTBN#3 >> N36 CPU_DSTBN3#
(3) H_DBI#3 >> J35 CPU_DBI3#

(3) H_A#3[3..35] >> H_A#3 W34 CPU_A3#
H_A#4 AA34 CPU_A4#
H_A#5 W31 CPU_A5#
H_A#6 W33 CPU_A6#
H_A#7 W32 CPU_A7#
H_A#8 AA32 CPU_A8#
H_A#9 AA31 CPU_A9#
H_A#10 AB30 CPU_A10#
H_A#11 AA30 CPU_A11#
H_A#12 AC35 CPU_A12#
H_A#13 AC34 CPU_A13#
H_A#14 AC33 CPU_A14#
H_A#15 AC32 CPU_A15#
H_A#16 AC31 CPU_A16#
H_A#17 AE30 CPU_A17#
H_A#18 AC30 CPU_A18#
H_A#19 AE34 CPU_A19#
H_A#20 AE33 CPU_A20#
H_A#21 AE31 CPU_A21#
H_A#22 AG33 CPU_A22#
H_A#23 AE32 CPU_A23#
H_A#24 AG35 CPU_A24#
H_A#25 AG34 CPU_A25#
H_A#26 AF30 CPU_A26#
H_A#27 AG31 CPU_A27#
H_A#28 AG30 CPU_A28#
H_A#29 AJ32 CPU_A29#
H_A#30 AJ34 CPU_A30#
H_A#31 AJ33 CPU_A31#
H_A#32 AJ30 CPU_A32#
H_A#33 AJ31 CPU_A33#
H_A#34 AL35 CPU_A34#
H_A#35 AK30 CPU_A35#

(3) H_ADSTB#0 >> AA33 CPU_ADSTB0#
(3) H_ADSTB#1 >> AG32 CPU_ADSTB1#

(3) H_REQ#0[0..4] >> H_REQ#0 V30 CPU_REQ0#
H_REQ#1 U31 CPU_REQ1#
H_REQ#2 W30 CPU_REQ2#
H_REQ#3 W35 CPU_REQ3#
H_REQ#4 U30 CPU_REQ4#

(3) H_ADS# >> AF37 CPU_ADS#
(3) H_BNR# >> AF36 CPU_BNR#
(3,4) H_BR#0 >> AH37 CPU_BR#0
(3) H_BPR# >> AC36 CPU_BPR#
(3) H_DBSY# >> AE35 CPU_DBSY#
(3) H_DEFER# >> AC37 CPU_DEFER#
(3) H_DRDY# >> AG36 CPU_DRDY#
(3) H_HIT# >> AG38 CPU_HIT#
(3) H_HITM# >> AG37 CPU_HITM#
(3) H_LOCK# >> AE36 CPU_LOCK#
(3) H_TRDY# >> AG38 CPU_TRDY#
(3) H_RS#0[0..2] >> H_RS#0 AD36 CPU_RS0#
H_RS#1 AD37 CPU_RS1#
H_RS#2 AD35 CPU_RS2#

(3,4) H_FERR# >> H_FERR# AL38 FERR#
(3) H_A20M# >> AH38 A20M#
(3) H_IGNNE# >> AK36 IGNE#
(3) H_INIT# >> AL36 INIT#
(3) H_SMI# >> AL37 SMI#
(3,4) H_INTR# >> AH36 INTR#
(3,4) H_NMI# >> AH35 NMI#
(3,4) H_STPCLK# >> H_STPCLK# AJ36 STPCLK#
(3,4) H_PWRGD# >> AK37 PWRGD#

VTT_OUT_LEFT >> R192 49.9/4 AM38 CPU_COMP_VCC
R194 49.9/4 AM37 CPU_COMP_GND

SEC 1 OF 10

MCP73

CPU_D0# AB36 H_D#0
CPU_D1# AA36 H_D#1
CPU_D2# AB37 H_D#2
CPU_D3# Y36 H_D#3
CPU_D4# AA35 H_D#4
CPU_D5# Y35 H_D#5
CPU_D6# Y37 H_D#6
CPU_D7# Y38 H_D#7
CPU_D8# U35 H_D#8
CPU_D9# T35 H_D#9
CPU_D10# U36 H_D#10
CPU_D11# T36 H_D#11
CPU_D12# V37 H_D#12
CPU_D13# T37 H_D#13
CPU_D14# R37 H_D#14
CPU_D15# T38 H_D#15
CPU_D16# R31 H_D#16
CPU_D17# U33 H_D#17
CPU_D18# U34 H_D#18
CPU_D19# R30 H_D#19
CPU_D20# U32 H_D#20
CPU_D21# R32 H_D#21
CPU_D22# R33 H_D#22
CPU_D23# R35 H_D#23
CPU_D24# N30 H_D#24
CPU_D25# N32 H_D#25
CPU_D26# N33 H_D#26
CPU_D27# N34 H_D#27
CPU_D28# L30 H_D#28
CPU_D29# L31 H_D#29
CPU_D30# L33 H_D#30
CPU_D31# L32 H_D#31
CPU_D32# L35 H_D#32
CPU_D33# L34 H_D#33
CPU_D34# K30 H_D#34
CPU_D35# J34 H_D#35
CPU_D36# J31 H_D#36
CPU_D37# J30 H_D#37
CPU_D38# J33 H_D#38
CPU_D39# J32 H_D#39
CPU_D40# G31 H_D#40
CPU_D41# G34 H_D#41
CPU_D42# G36 H_D#42
CPU_D43# F33 H_D#43
CPU_D44# E33 H_D#44
CPU_D45# E35 H_D#45
CPU_D46# D35 H_D#46
CPU_D47# D36 H_D#47
CPU_D48# J36 H_D#48
CPU_D49# M37 H_D#49
CPU_D50# R36 H_D#50
CPU_D51# N35 H_D#51
CPU_D52# P37 H_D#52
CPU_D53# P36 H_D#53
CPU_D54# L36 H_D#54
CPU_D55# M35 H_D#55
CPU_D56# M36 H_D#56
CPU_D57# L37 H_D#57
CPU_D58# H36 H_D#58
CPU_D59# H35 H_D#59
CPU_D60# K36 H_D#60
CPU_D61# K37 H_D#61
CPU_D62# H38 H_D#62
CPU_D63# H37 H_D#63

CPU_RESET# >> C36 H_CPURST# (3,4)

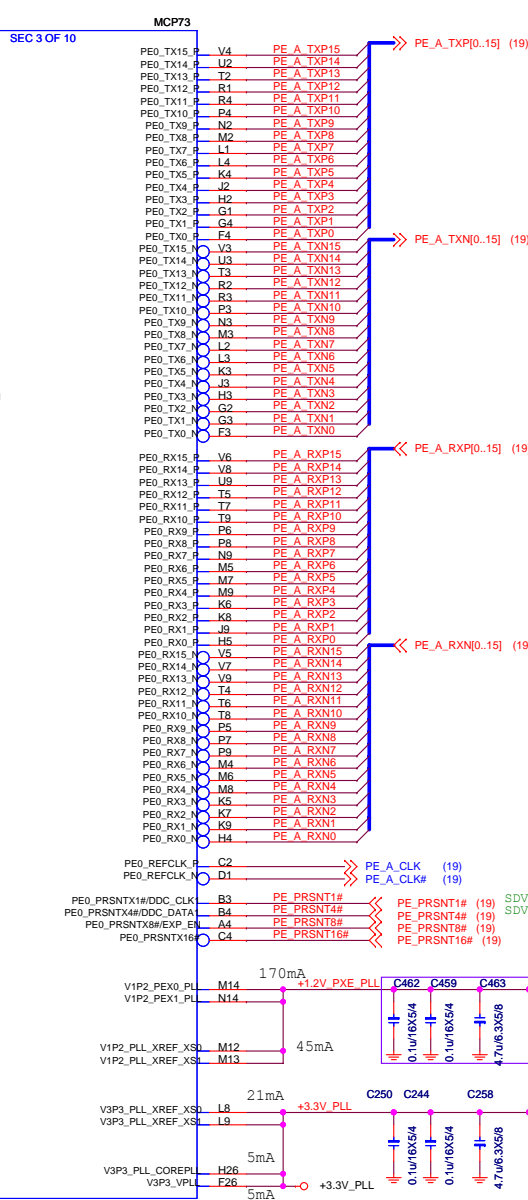
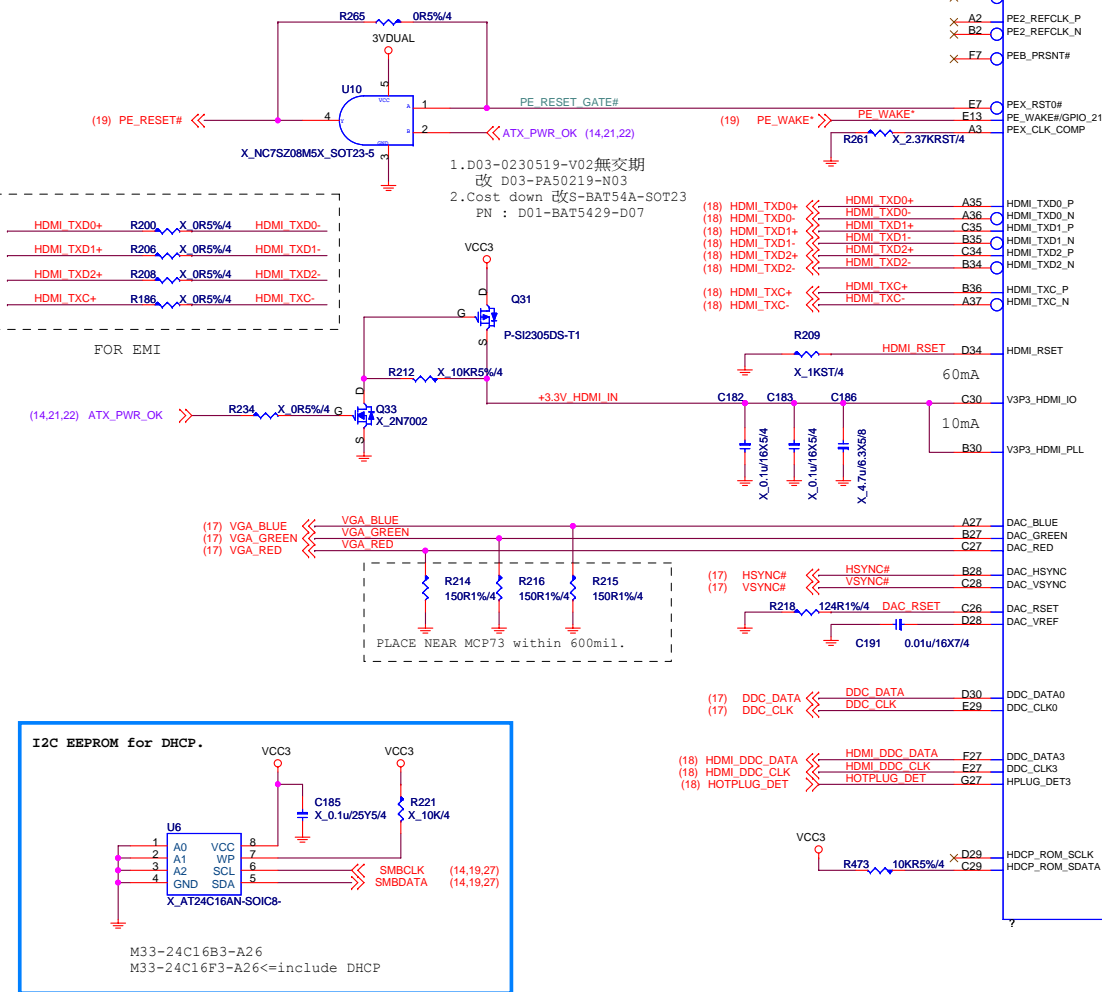
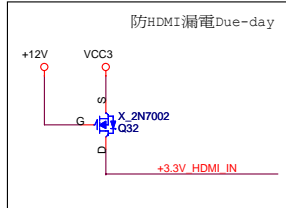
BCLK_OUT_CPU_P >> G38 CPUCLK R191 0R5%/4
BCLK_OUT_CPU_N >> G37 CPUCLK# R190 0R5%/4
BCLK_OUT_ITP_P >> AN36 CPUCLK R181 0R5%/4
BCLK_OUT_ITP_N >> AM35 CPUCLK# R189 0R5%/4
BCLK_OUT_MCP_P >> D37 BCLK_OUT MCP P R182 49.9/4
BCLK_OUT_MCP_N >> D38 BCLK_OUT MCP N R189 49.9/4
BCLK_IN_N >> C37 BLCK IN N R188 49.9/4
BCLK_IN_P >> C38 BLCK IN P R181 49.9/4
BSEL0 >> F36 CPU_BSEL0
BSEL1 >> F36 CPU_BSEL1
BSEL2 >> F37 CPU_BSEL2
PECL >> B37 CPU_PECI MCP CPU_PECI_MCP (3)
PROCHOT# >> AM36 H_PROCHOT# R TRMTRIP# (3,4)
THERMTRIP# >> AJ35 TRMTRIP# (3,4)

BCLK_COMP >> B38 R185 X 2.37KRST/4

(3) CPU_BSEL1 >> 8 V_FSB_VTT
(3) CPU_BSEL0 >> 6 2
(3) CPU_BSEL2 >> 4 3
470/4/8P4R

| BSEL[2..0] | FSB CLK (MHz) |
|------------|---------------|
| 000 | 266MHz |
| 001 | 133MHz |
| 010 | 200MHz |
| 100 | 333MHz |
| TBD | Reserved |

if CPU processor hot cause system shutdown, remove OR.



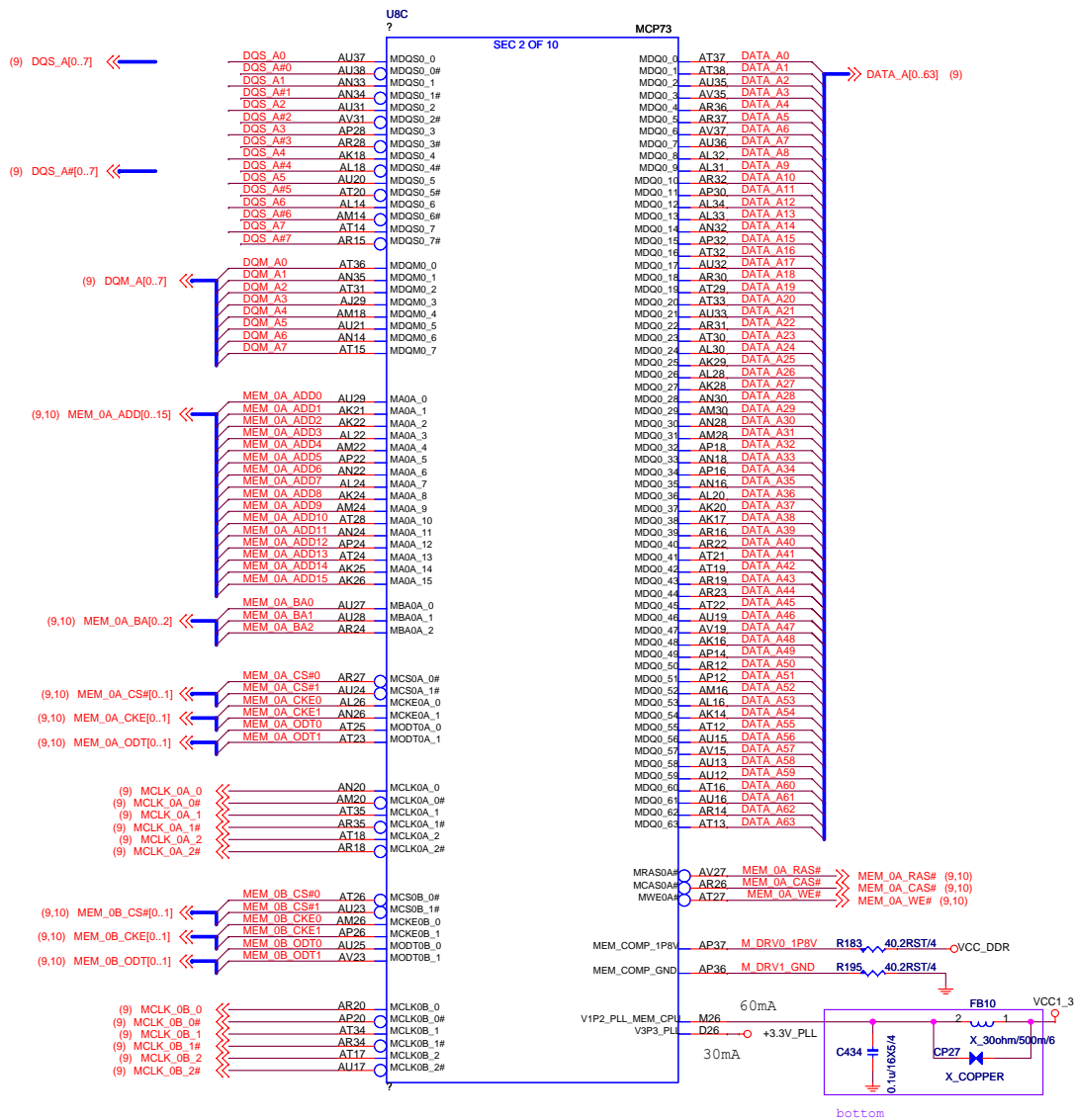
| SDVO Muxing on X16 PCI Express | | |
|--------------------------------|------------|--------------|
| PE_PRSNT1# | | SDVO_SCL# |
| | PE_PRSNT4# | SDVO_SDA# |
| PE_A_TX3 | PE_A_TX12 | SDVO_CLK# |
| PE_A_TX2 | PE_A_TX13 | SDVO_BLUE |
| PE_A_TX1 | PE_A_TX14 | SDVO_GREEN |
| PE_A_TX0 | PE_A_TX15 | SDVO_RED |
| PE_A_RX1 | PE_A_RX14 | SDVO_INTR |
| PE_A_RX0 | PE_A_RX15 | SDVO_TVCLKIN |

DATA 0

DIMM 1 ADDR 0A / CNTL 0A

DIMM 2 ADDR 0B / CNTL 0B

DIMM 0A

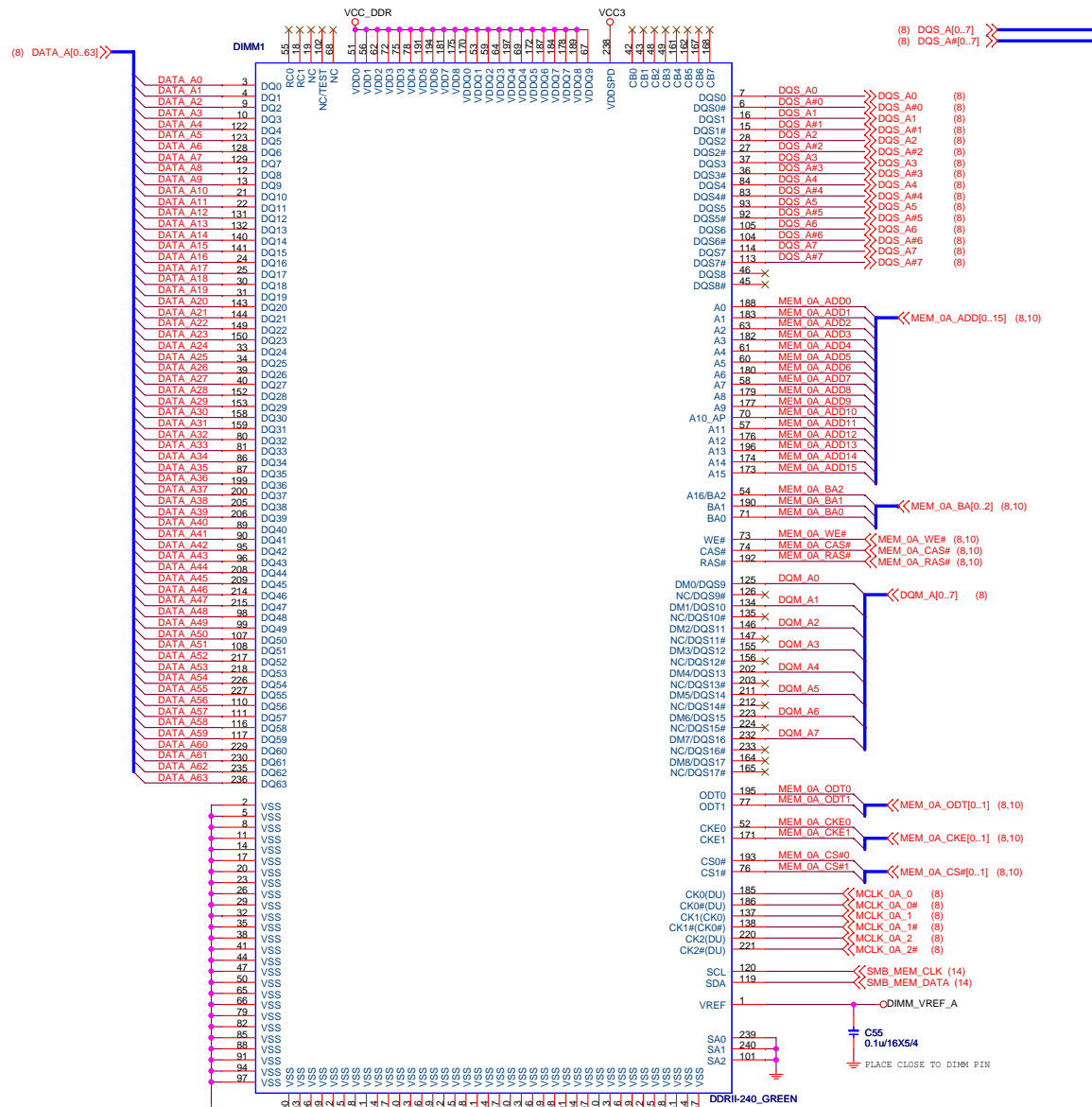


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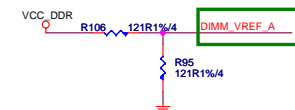
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| Size Custom | Document Description MCP73-MEM | Rev 11 |
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DIMM1 / 0A



ADDRESS: 000
0xA0

Does DIMM_VREF_A need to connect to W83110?



DIMM2 / 0B



ADDRESS: 001
0xA2

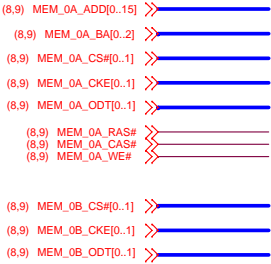
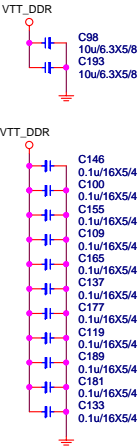


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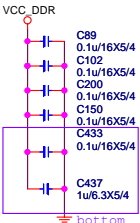
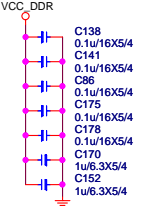
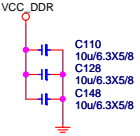
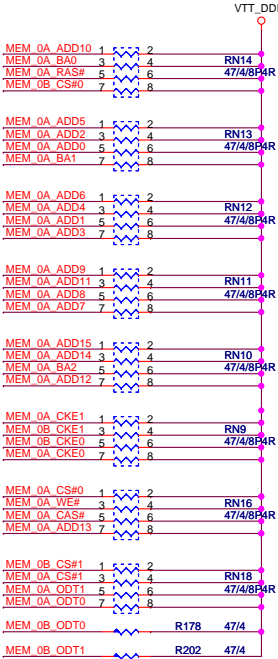
MS-7504

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|--------------------------------|-----------------------------|-----|
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| Date: Wednesday, July 09, 2008 | Sheet 9 of 34 | |

CHANNEL A VTT_DDR DECOUPLING CAPS



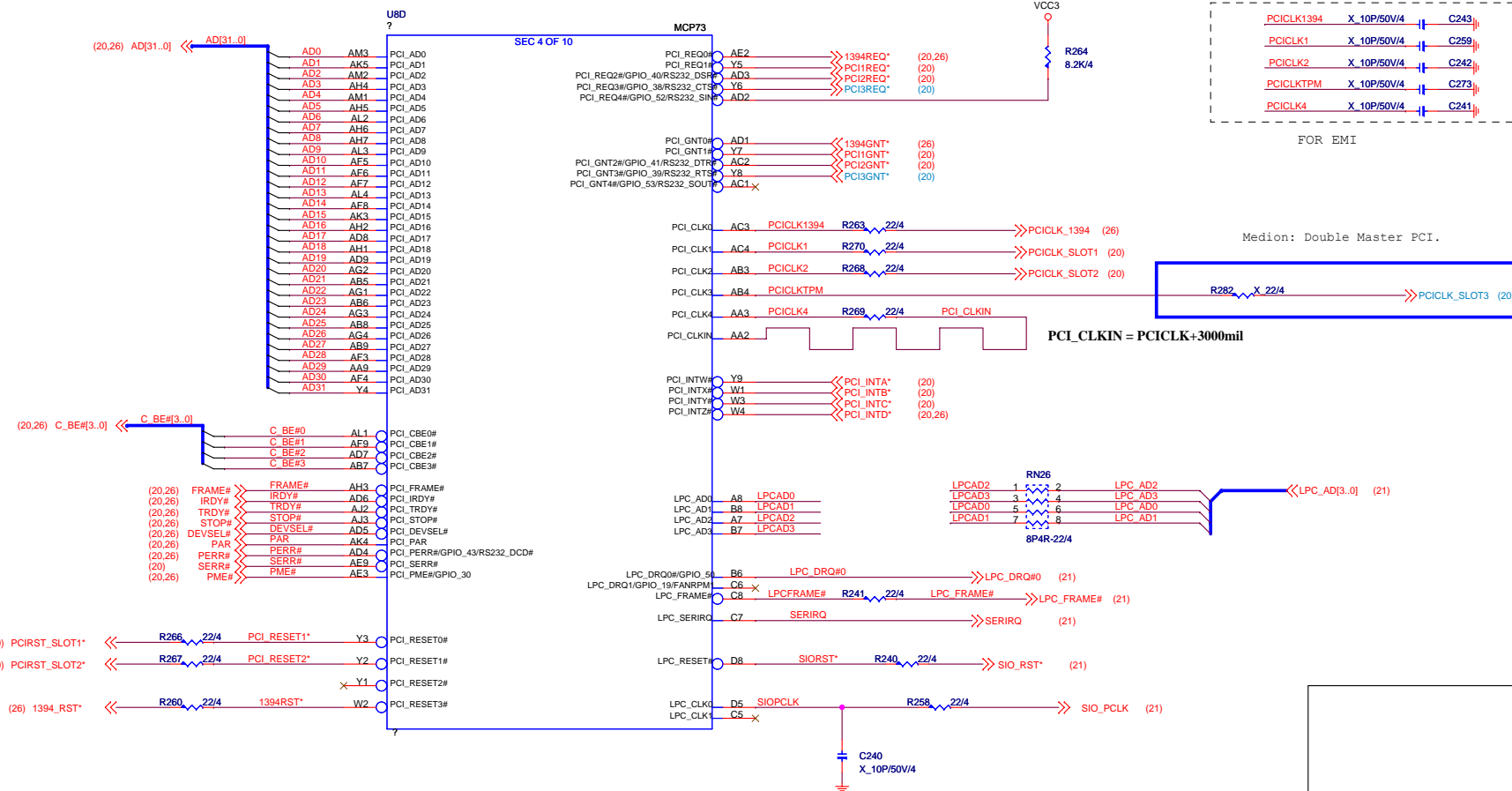
CHANNEL A ---- 0A , 0B

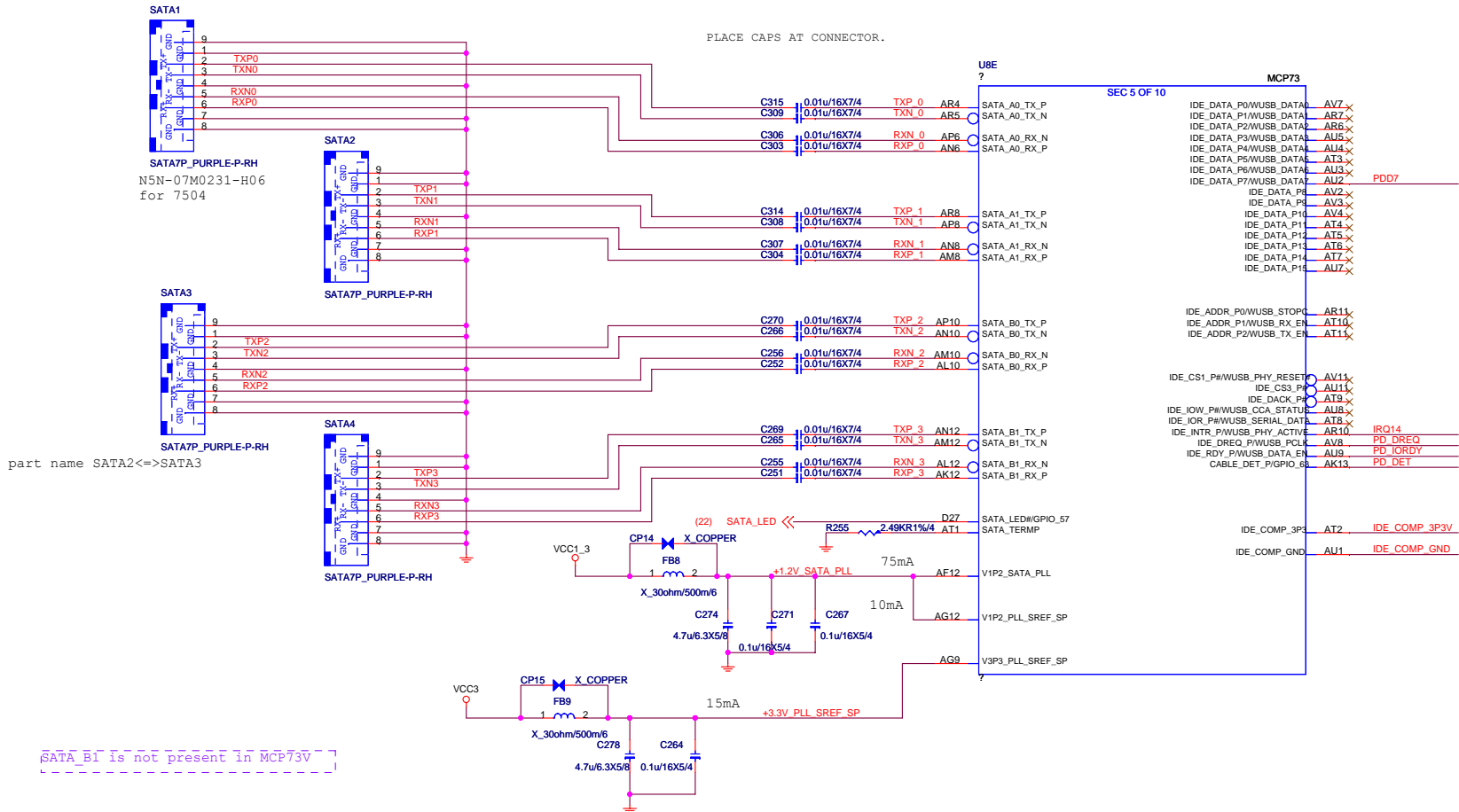


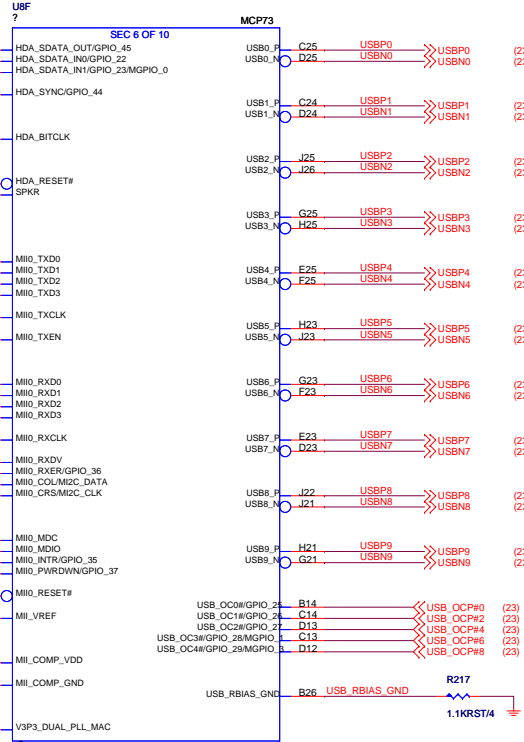
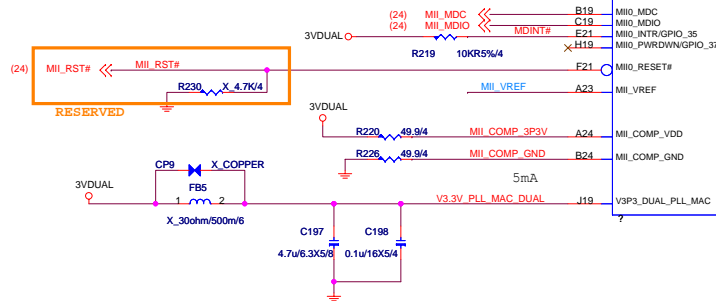
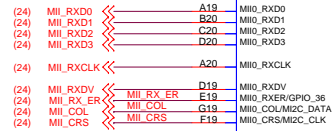
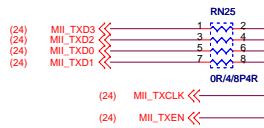
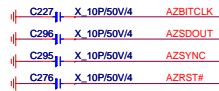
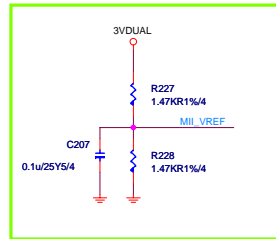
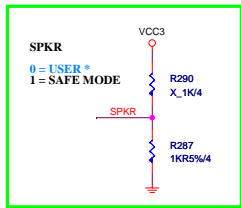
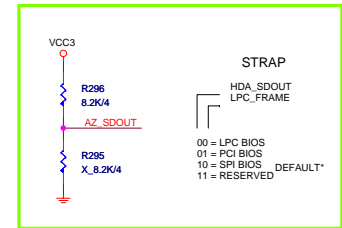
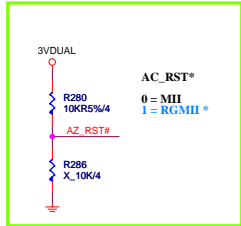
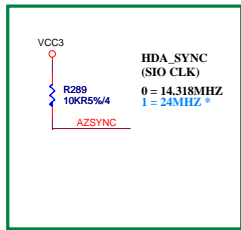
公板上0.1u X5, 1uX3, 10uX3
兩根再x2



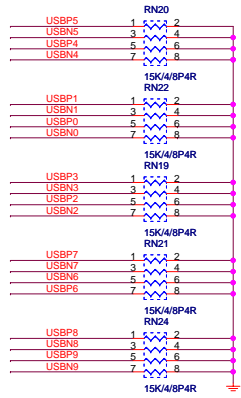
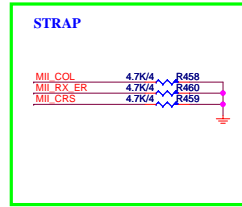
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| MS-7504 | | |
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| Custom | DDR II VTT Termination & Decoupling | 11 |
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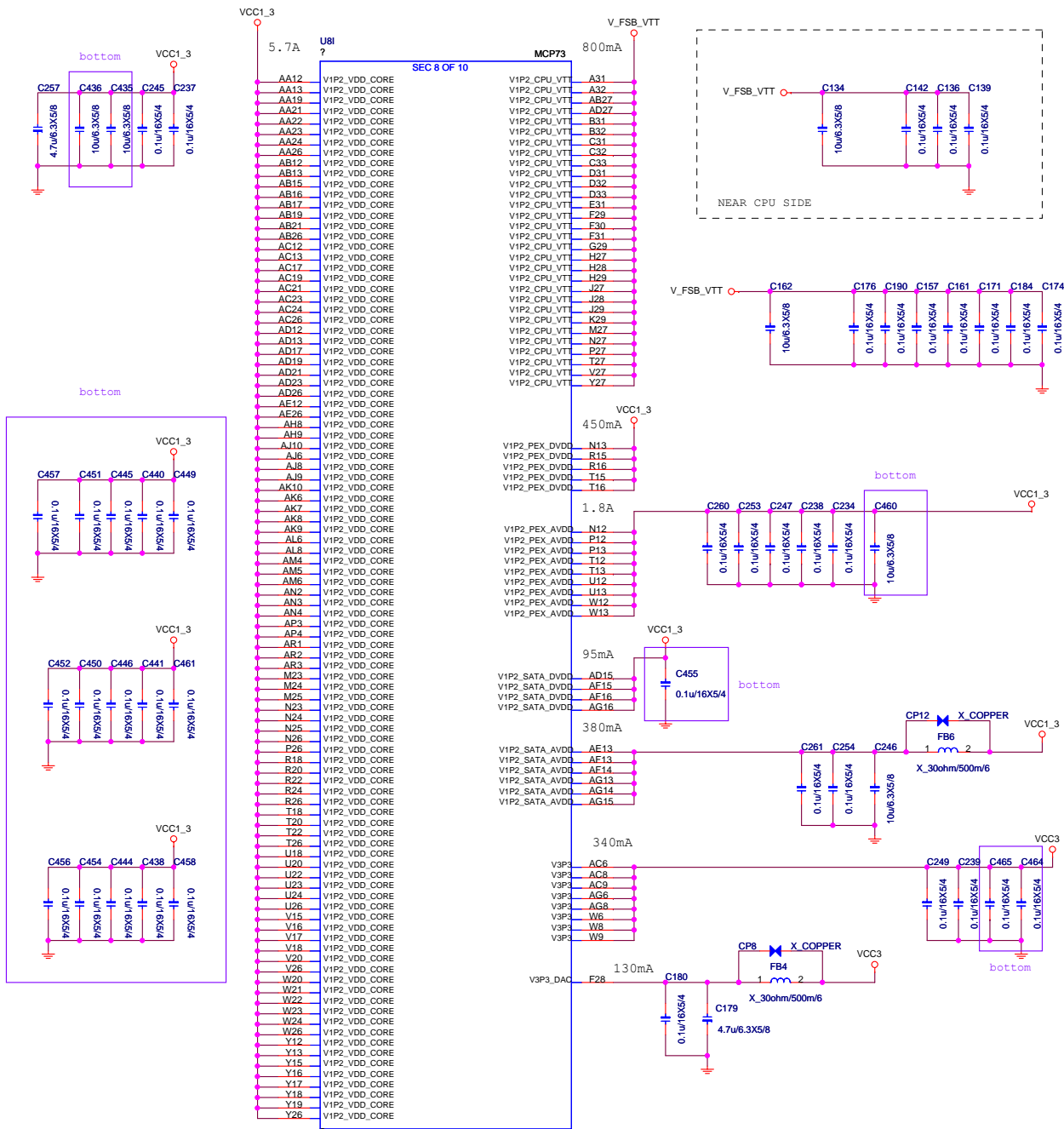




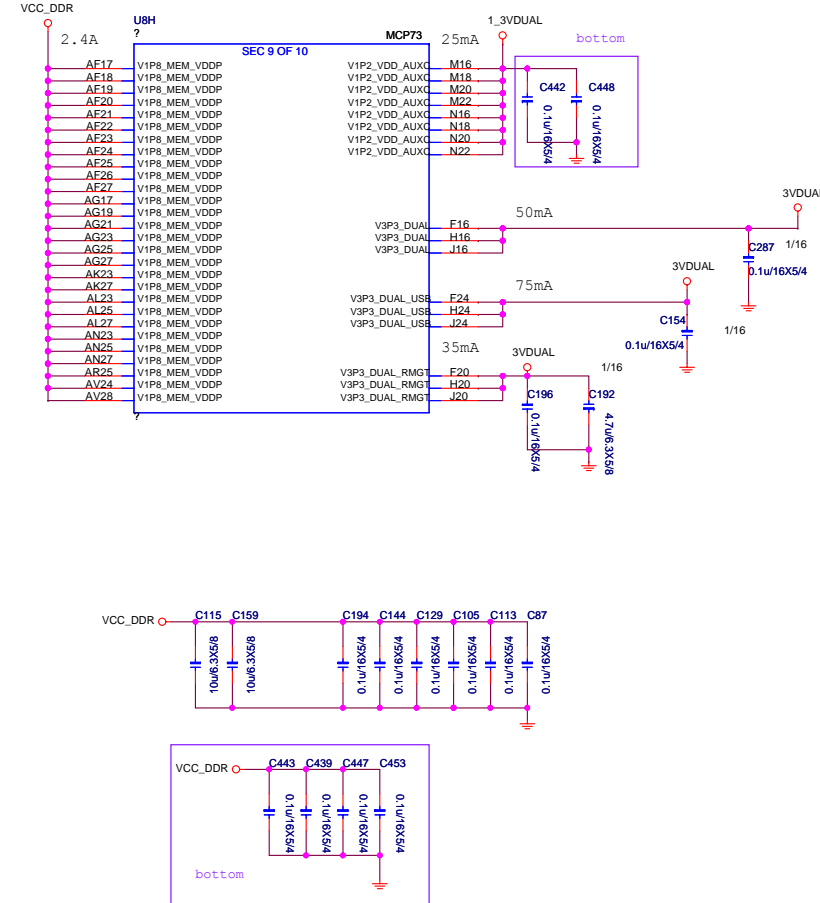


JUSB3--USB[8..9] is not present in MCP73V/D





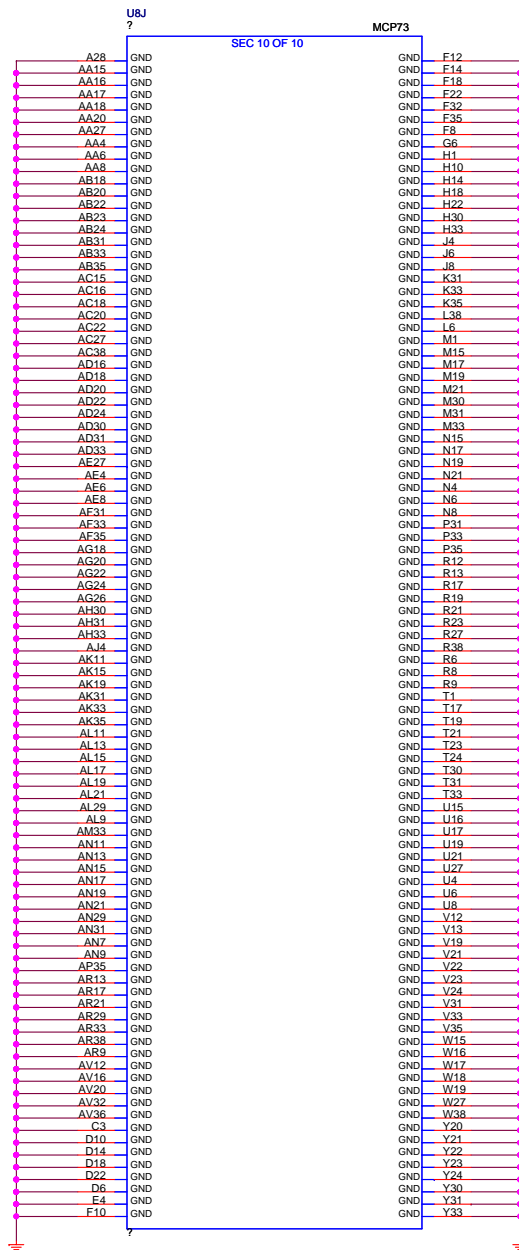
MEME POWER



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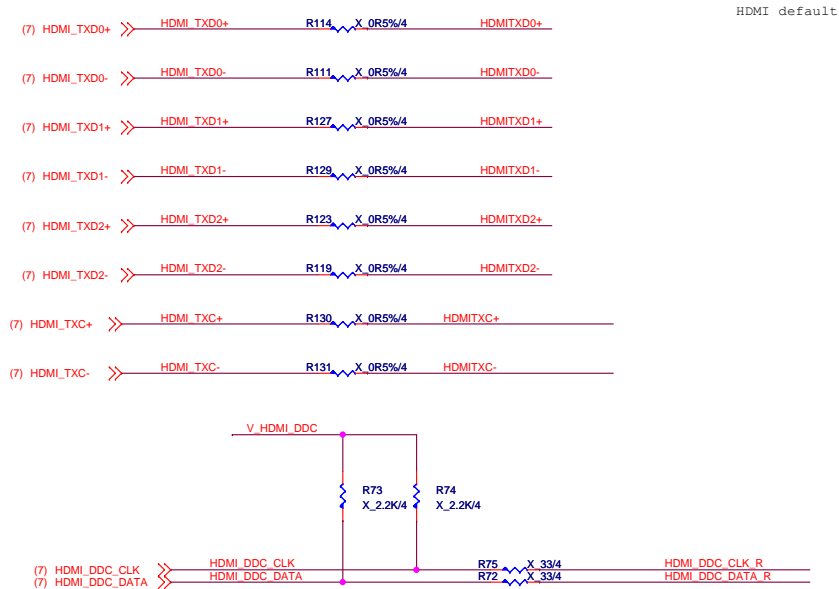
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| Custom | MCP73-POWER | 11 |
| Date: | Wednesday, July 09, 2008 | Sheet 15 of 34 |



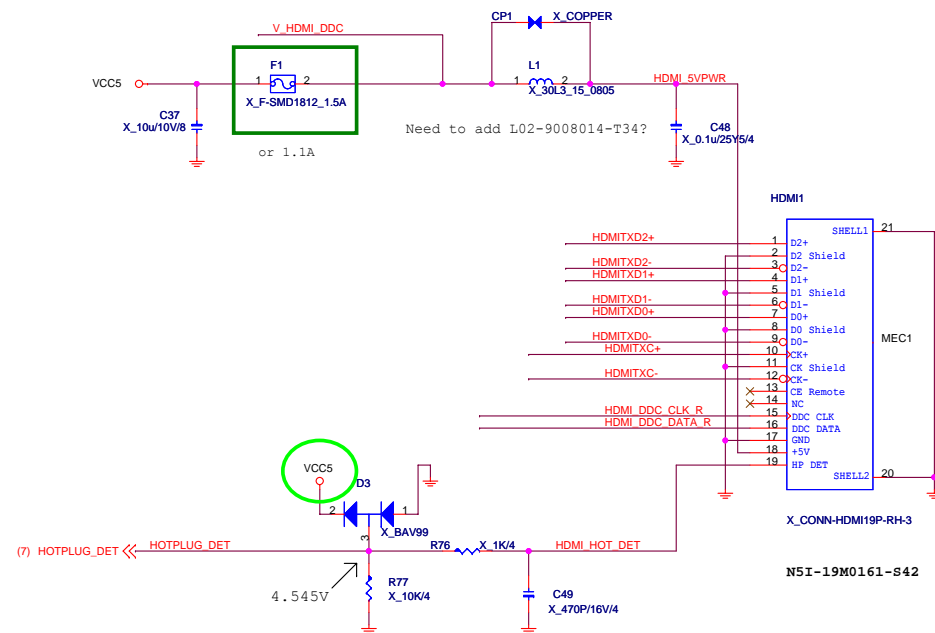
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MS-7504

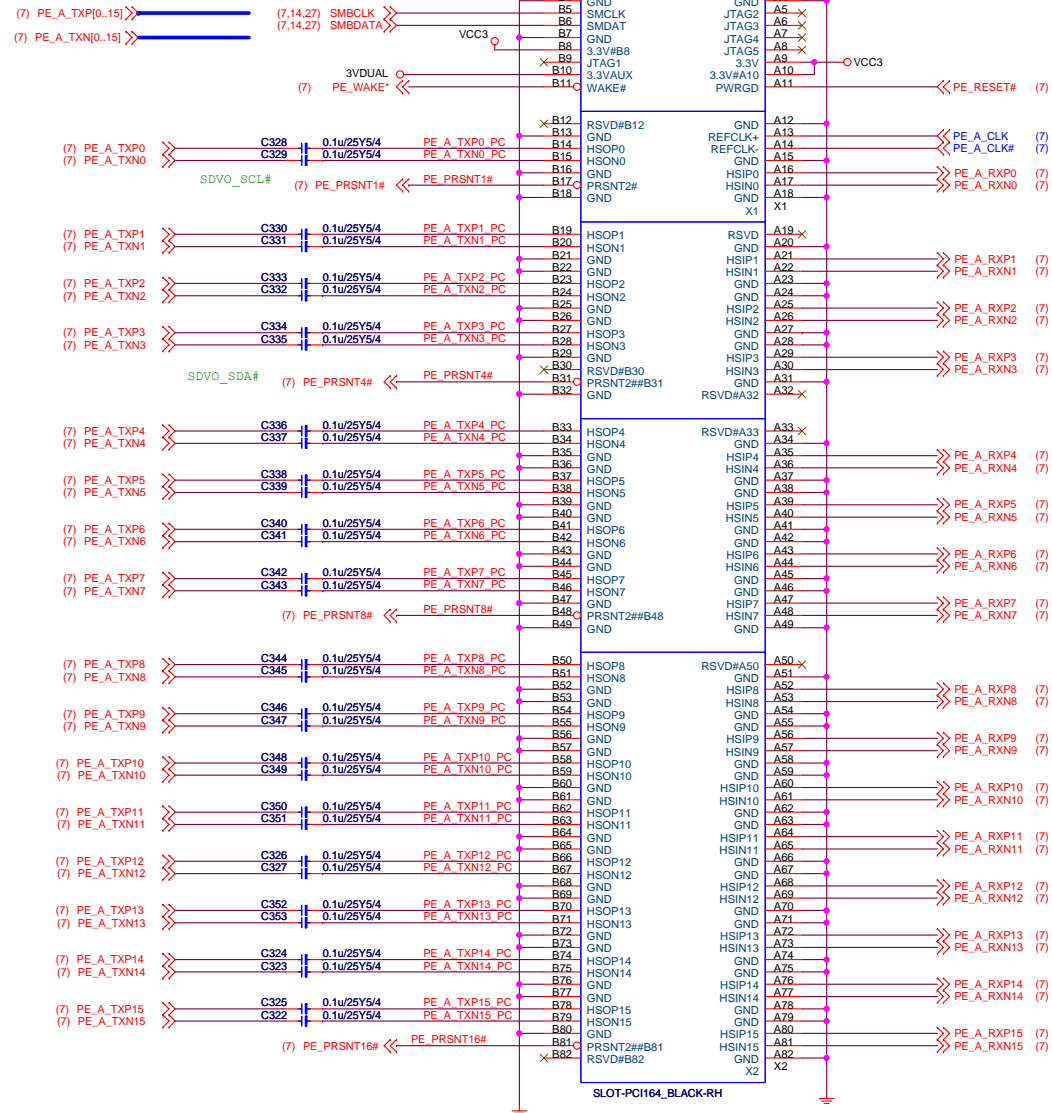
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| Date: Wednesday, July 09, 2008 | | |
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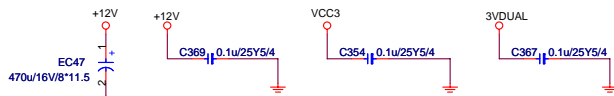
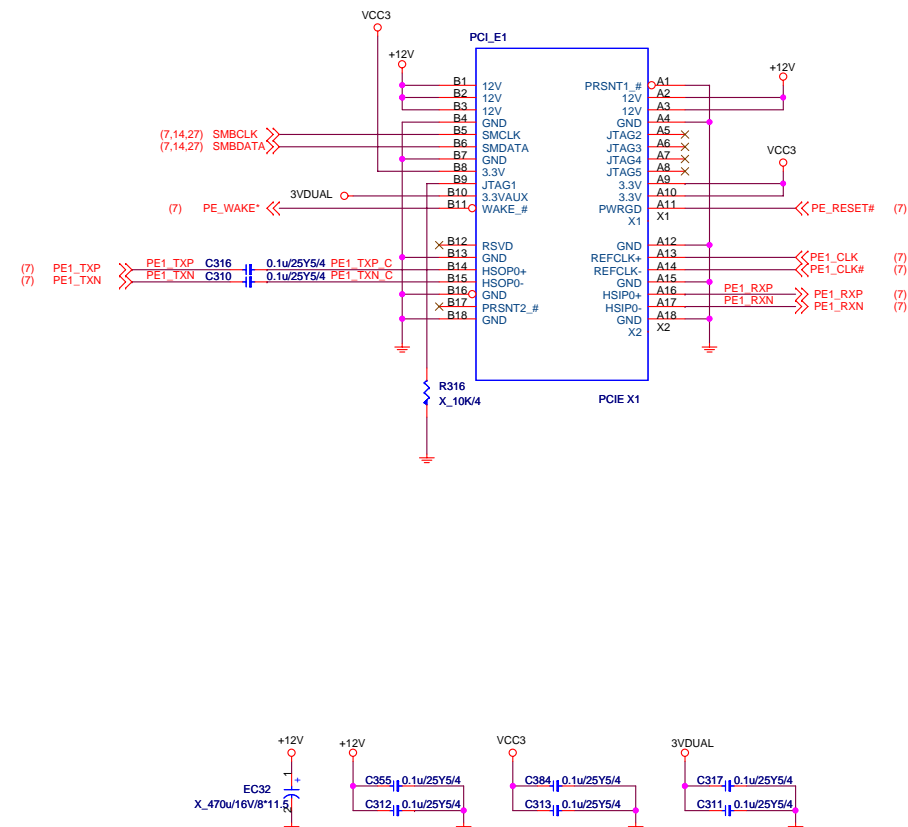
HDMI CONNECTOR



PCI-Express X16 Primary Slot X16/X8



PCI-Express x1 SLOT 1



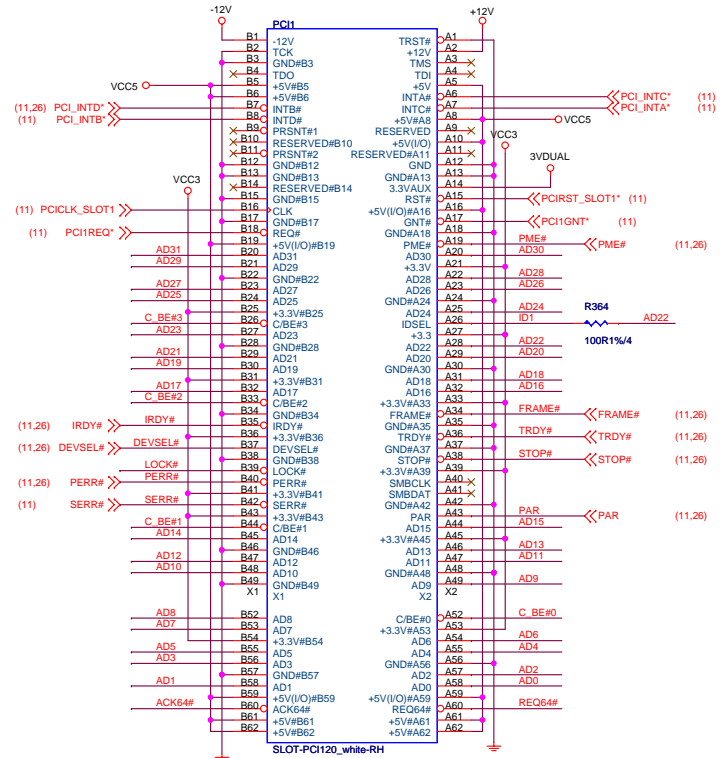
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MS-7504

| Size | Document Description | Rev |
|--------|--------------------------|----------------|
| Custom | PCI-E X16/X1 Slot | 11 |
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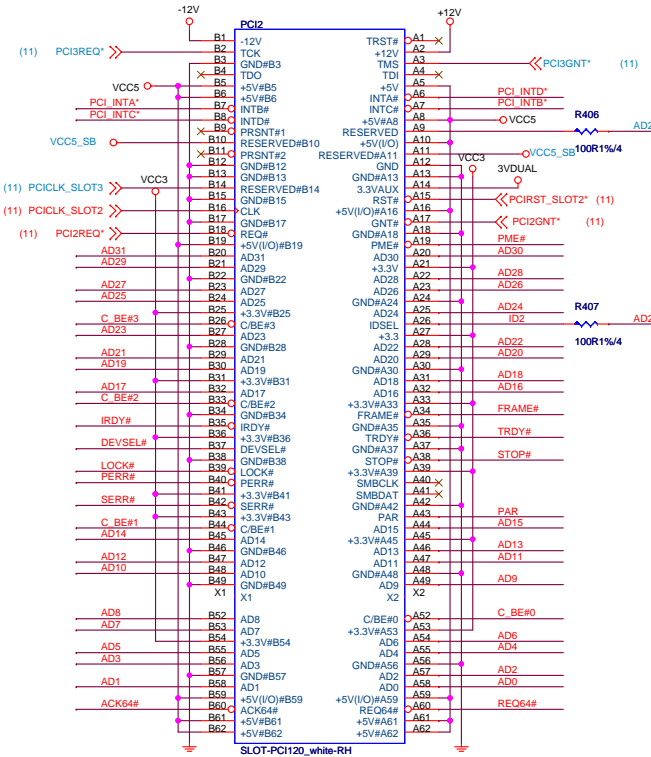
(11.26) AD[31..0] >> AD[31..0]
(11.26) C_BE#[3..0] >> C_BE#[3..0]

PCI SLOT 1 (PCI VER: 2.2 COMPLY)



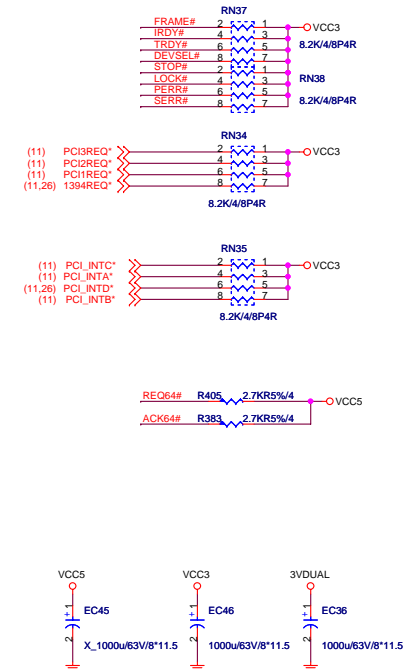
IDSEL = AD22
MASTER = PC11REQ*
PC11GNT*

PCI SLOT 2 (PCI VER: 2.2 COMPLY)



IDSEL = AD23
MASTER = PC12REQ*
PC12GNT*

PCI PULL-UP / DOWN RESISTORS



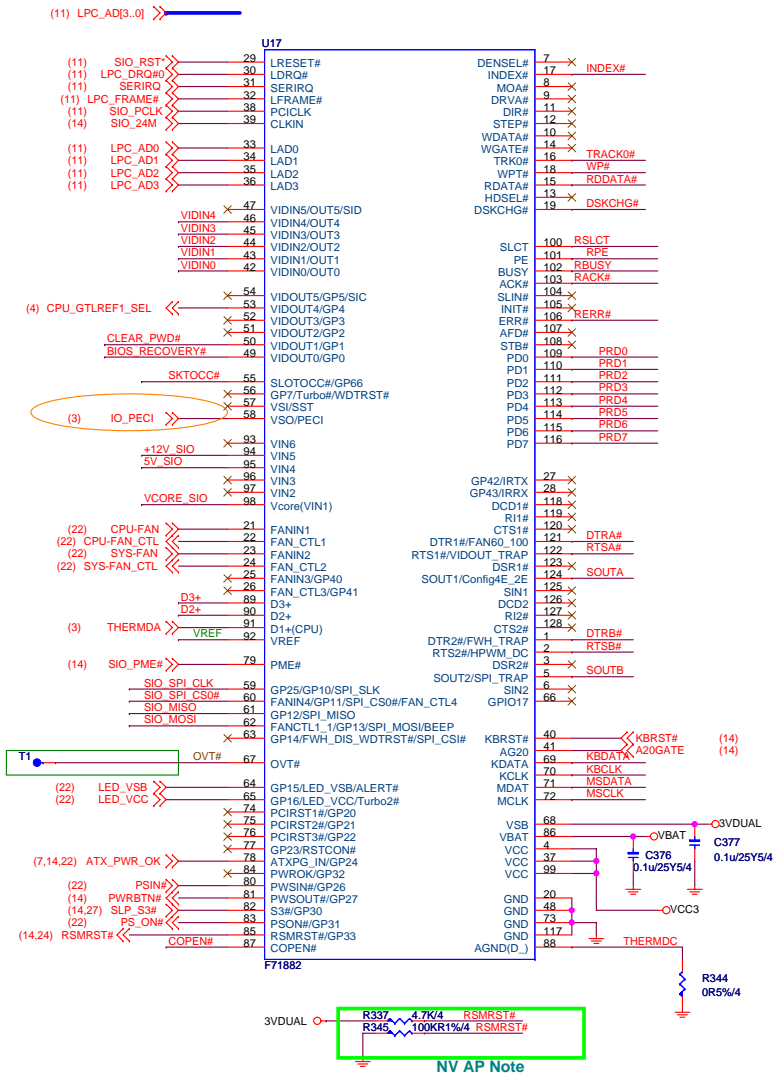
MICRO-STAR INT'L CO.,LTD

MS-7504

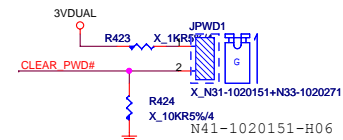
| Size | Document Description | Rev |
|--------------------------------|----------------------|----------------|
| Custom | PCI Slot 1 & 2 | 11 |
| Date: Wednesday, July 09, 2008 | | Sheet 20 of 34 |

Super I/O

LPC SUPER I/O F71882

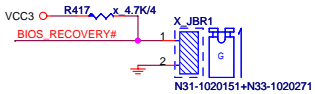


PASSWORD CLEAR JUMPER



```
Short : Normal
Open - Short : Clear Password
```

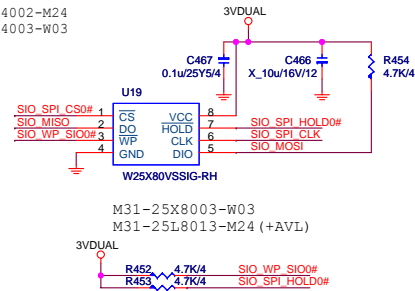
BIOS Recovery



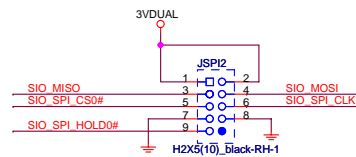
Short : Normal
Open - Short : BIOS Recovery

SPI 8M FLASH ROM

M31-25L4002-M24
M31-25X4003-W03



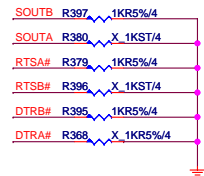
SPI DEBUG PORT



Part Number : N31-2051451-H06

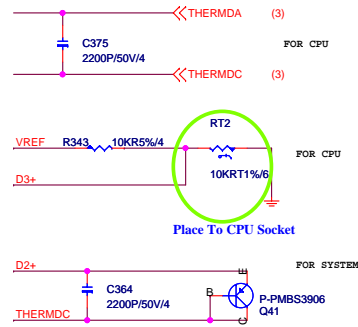
Place close to SPI ROM

Strapping



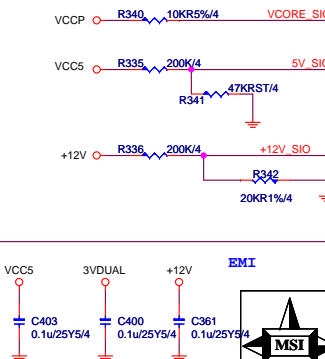
Temperature Sensing

DIODE SENSING CIRCUIT

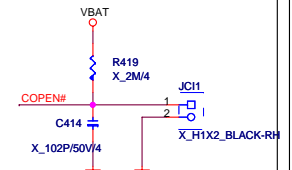


VOLTAGE SENSING(H/W Monitor).

The best voltage input level is about 1V



CASE OPEN CIRCUIT



| | 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 |
| DTRB#, SOUTB | SPI_DISABLE | SPI_ENABLE |
| DTRA# | FAN_START_DUTY_60% | FAN_START_DUTY_100% |



MICRO-STAR INT'L CO.,LTD

MS-7504

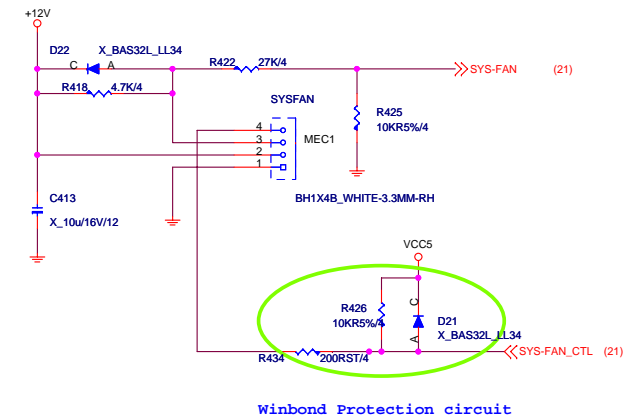
| | |
|----------------|---|
| Size Custom | Document Description LPC-Super I/O F71882FG |
|----------------|---|

| | |
|--------------------------------|----------------|
| Date: Wednesday, July 09, 2008 | Sheet 21 of 34 |
|--------------------------------|----------------|

Intel Front Panel



ATX Connector



MICRO-STAR INT'L CO.,LTD

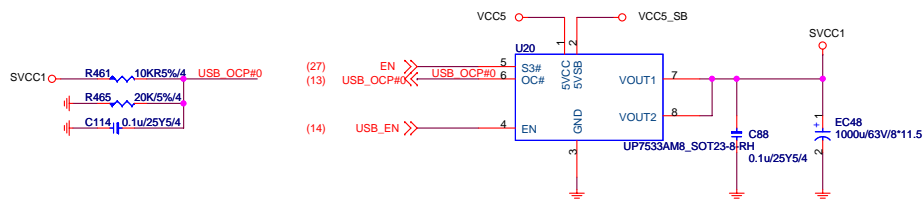
MS-7504

| | |
|--------|----------------------------|
| Size | Document Description |
| Custom | ATX/Front Panel/FAN |

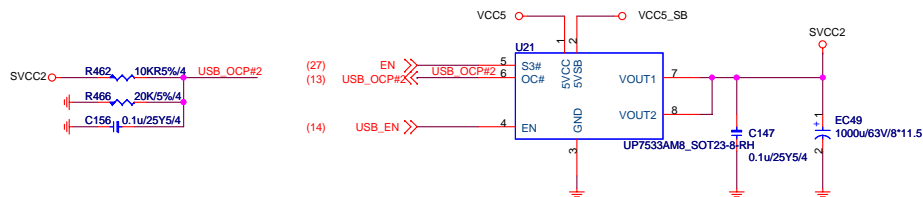
Rev

| | |
|--------------------------------|----------------|
| Date: Wednesday, July 09, 2008 | Sheet 22 of 34 |
|--------------------------------|----------------|

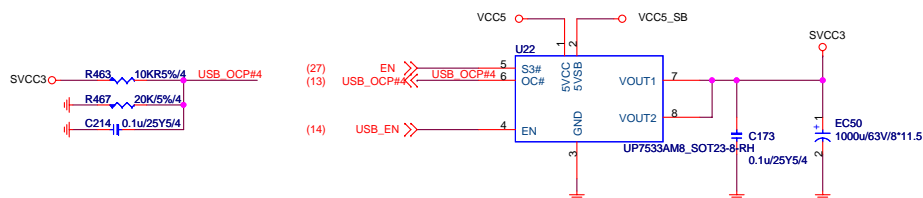
POWER CIRCUIT FOR USB PORT 0,1



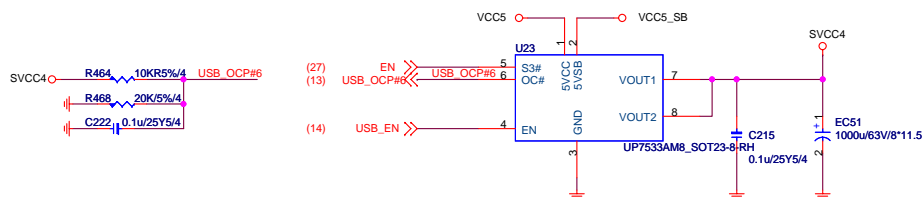
POWER CIRCUIT FOR USB PORT 2,3



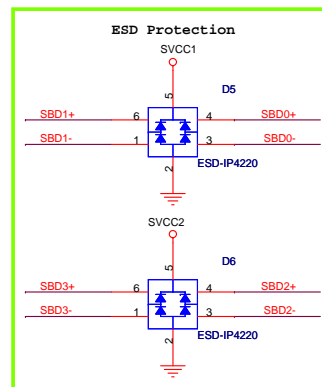
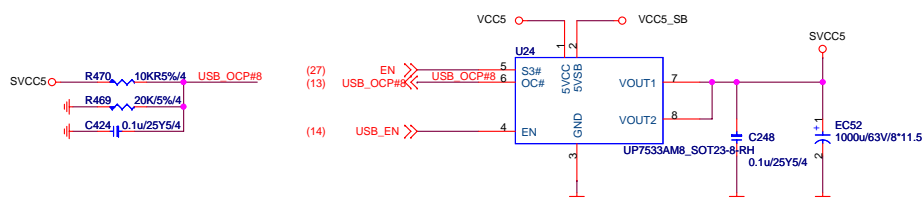
POWER CIRCUIT FOR USB PORT 4,5



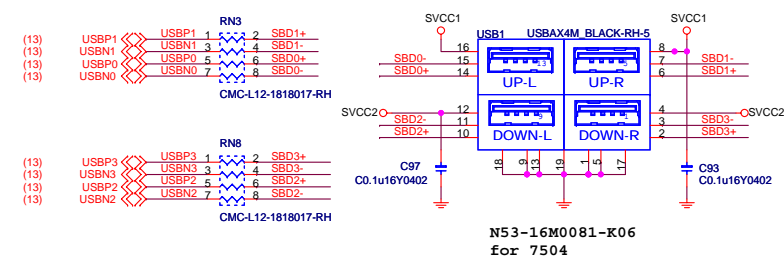
POWER CIRCUIT FOR USB PORT 6,7



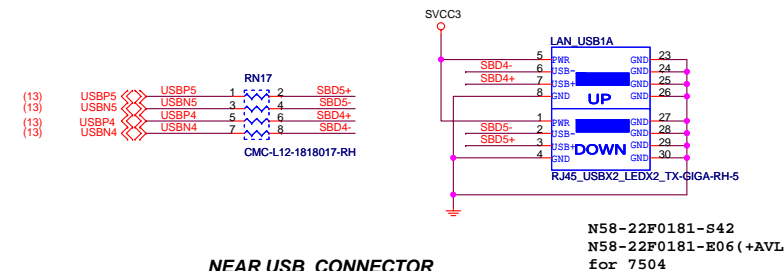
POWER CIRCUIT FOR USB PORT 8,9



REAR PANEL USB CONNECTOR FOR USB PORT 0,1,2,3

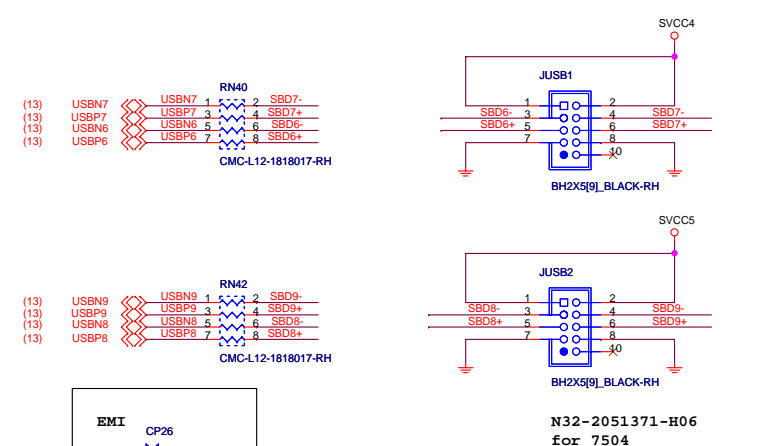
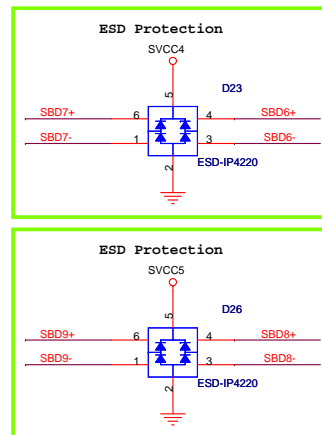


REAR PANEL USB CONNECTOR FOR USB PORT 4,5



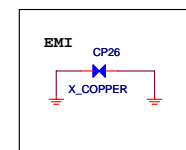
NEAR USB CONNECTOR
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

FRONT PANEL USB CONNECTOR FOR USB PORT 6,7,8,9



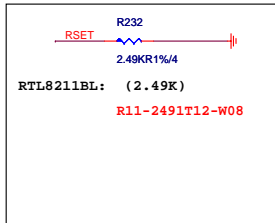
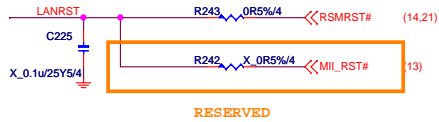
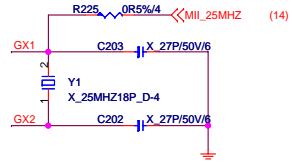
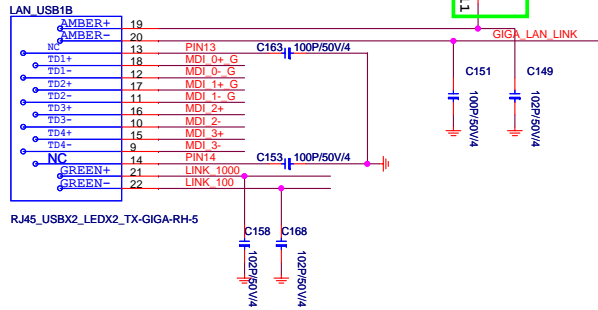
NEAR USB CONNECTOR

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

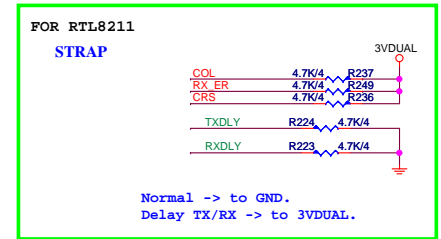
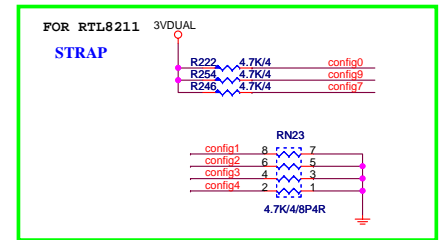
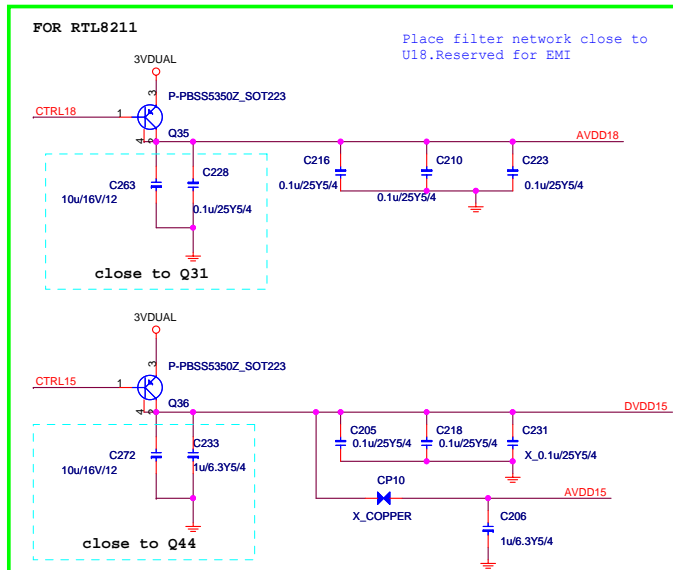


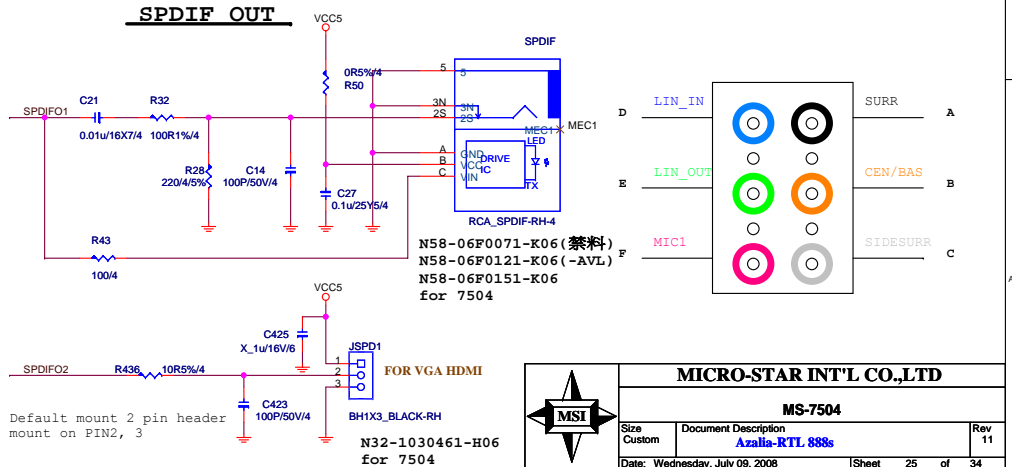
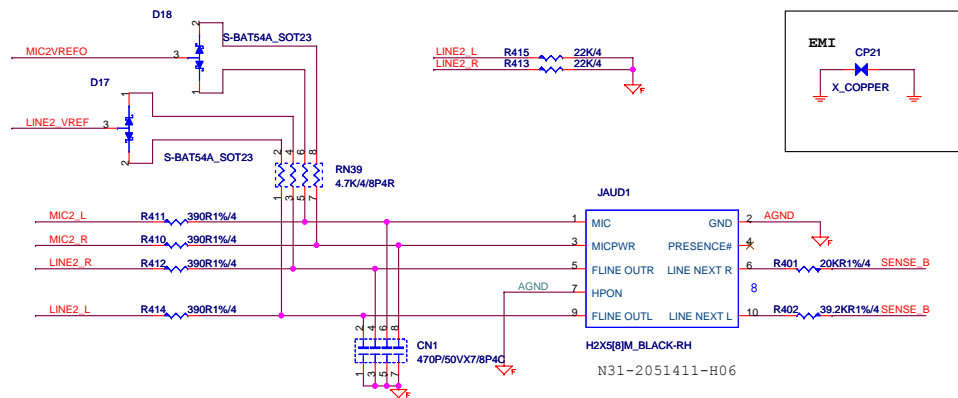
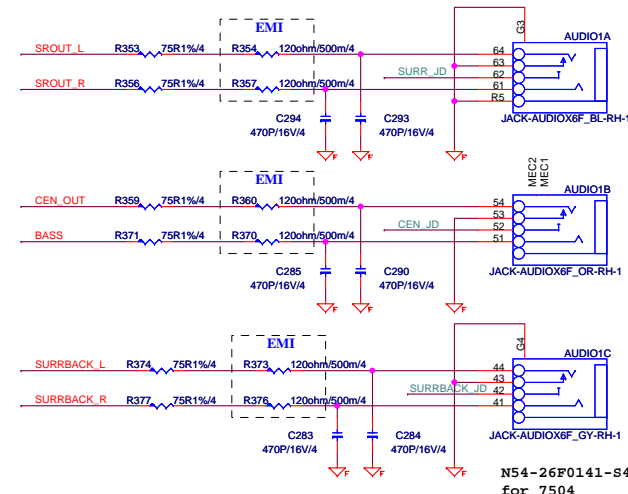
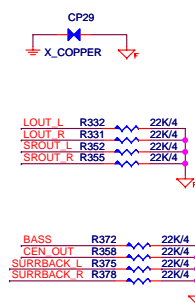
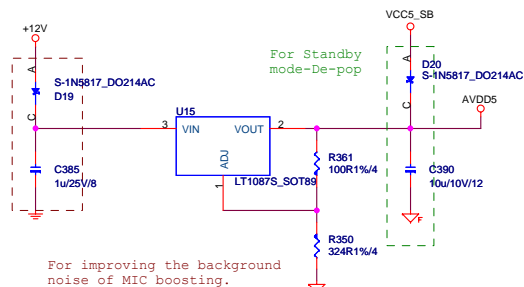
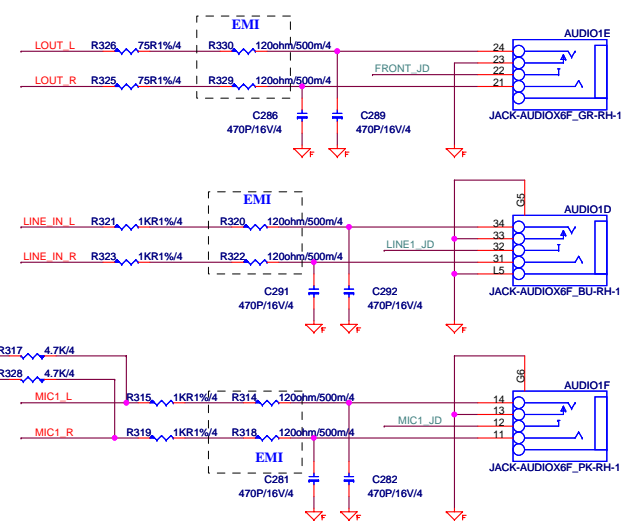
| MICRO-STAR INT'L CO.,LTD | | |
|--------------------------------|----------------------|-----|
| MS-7504 | | |
| Size | Document Description | Rev |
| Custom | USB CONNECTORS | 11 |
| Date: Wednesday, July 09, 2008 | Sheet 23 of 34 | |

N58-22F0181-S42
for 7504

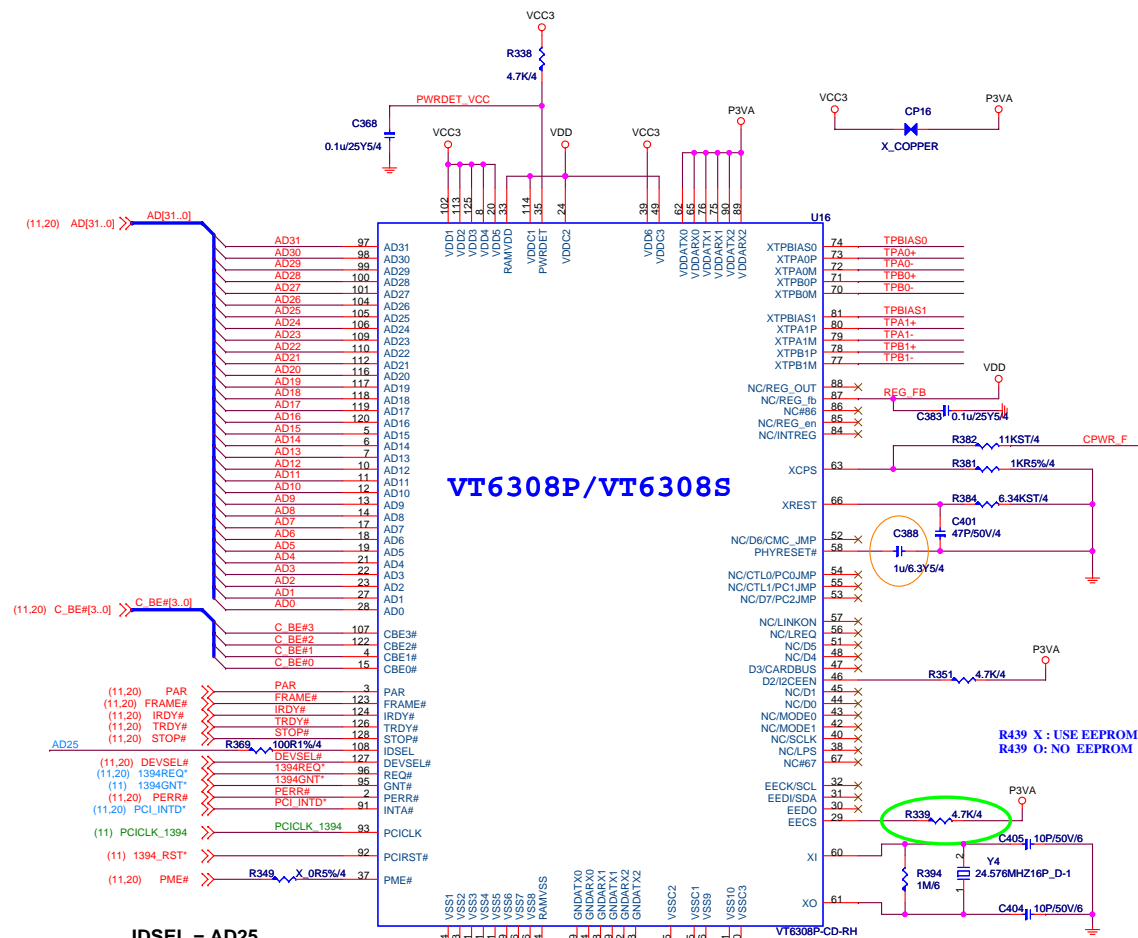


| Giga-Lan | 10/100-Lan |
|-----------------|-----------------|
| N58-22F0181-S42 | N58-22F0201-S42 |
| N58-22F0341-S42 | N58-22F0341-S42 |
| N58-22F0281-F02 | N58-22F0281-F02 |
| Link Yellow | Link Yellow |
| Active Blinking | Active Blinking |
| 1000 Orange | 100 Green |
| 100 Green | 10 None |
| 10 None | |
| 19 | 19 |
| 20 | 20 |
| 21 | 21 |
| 22 | 22 |





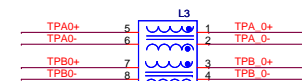
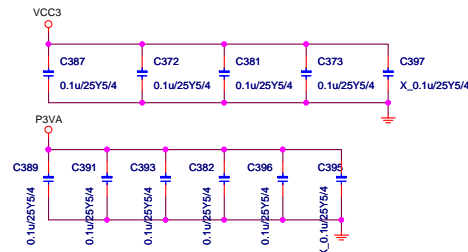
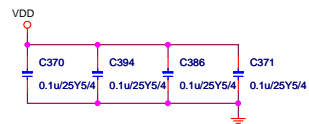
VT6308P - 1394 Controller



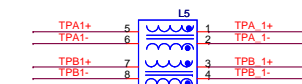
```

IDSEL = AD25
INT = PCI_INTD*
MASTER = 1394REQ*
          1394GNT*

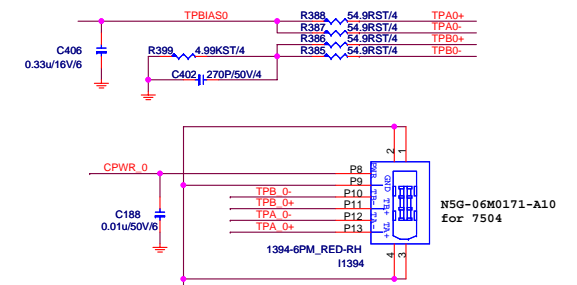
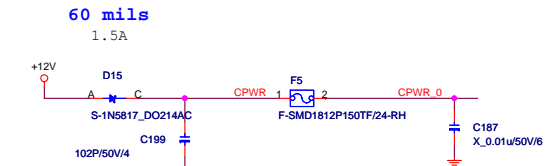
```



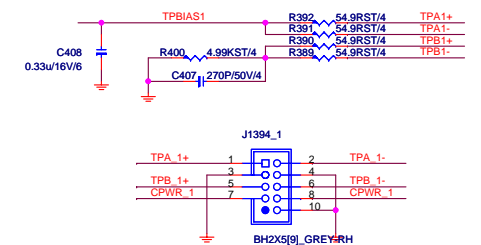
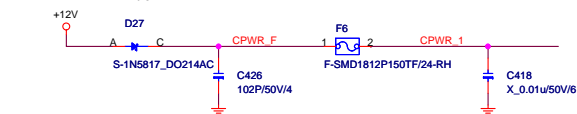
X_CMC-L12-121D017-LF



X_CMC-L12-121D017-LF



60 mils



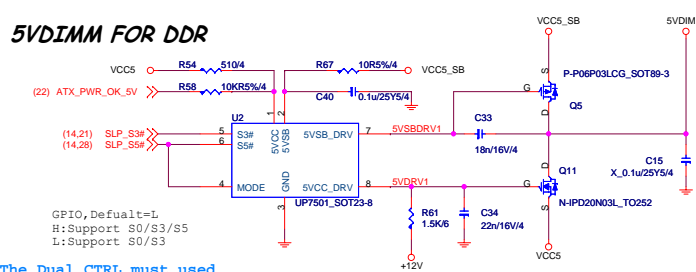
N32-2051571-H06
for MS-7504

For Intel 1394 pinheader



| | | | |
|---------------------------------|--|----------------|-----------|
| MICRO-STAR INT'L CO.,LTD | | | |
| MS-7504 | | | |
| Size Custom | Document Description 1394 Controller - 6308P | | Rev 11 |
| Date: Wednesday, July 09, 2008 | | Sheet 26 of 34 | |

The Dual_CTRL must used
default "Output- Low"



VCC_DDR

VCC3

C473_0.1u/25V4

C474_0.1u/25V4

C472_0.1u/25V4

C481_0.1u/25V4

C482_0.1u/25V4

C483_0.1u/25V4

C484_0.1u/25V4

C485_0.1u/25V4

C469_0.1u/25V4

C470_0.1u/25V4

C471_0.1u/25V4

C475_0.1u/25V4

C476_0.1u/25V4

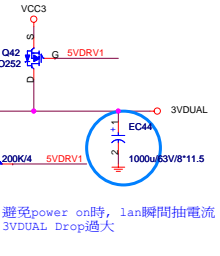
C477_0.1u/25V4

C478_0.1u/25V4

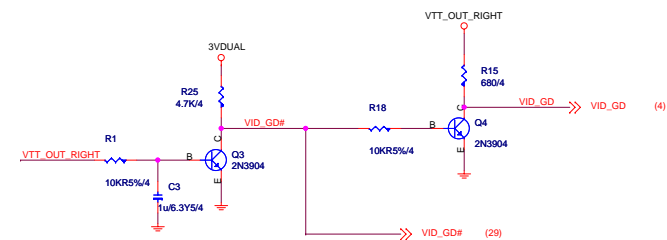
C479_0.1u/25V4

C480_0.1u/25V4

避免power on時, lan瞬間抽電流
3VDDIAL Drop過大

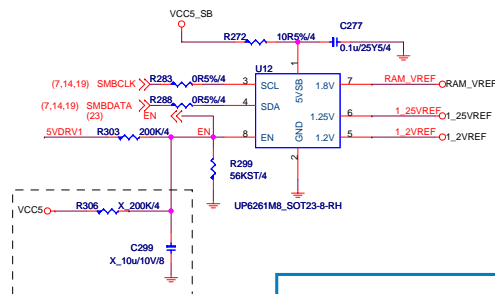


VID_GD# to PWM and VID_GD to CPU
for VRM10 power sequence.



up6261: High Precision Voltage Console

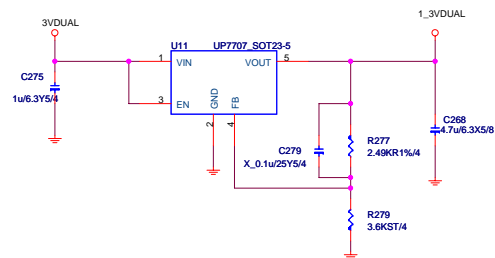
ONLY OVER DDR Voltage to 2V



EN : 0.4~1.4V

I32-0626109-U33 , delay 20 ms
避免EN比 5VDRV1早, MCP73 core power
抽到VCC5_SB

up7707: 600mA Low Dropout Linear Regulator

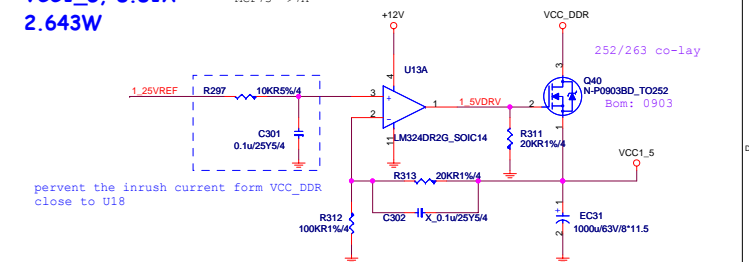


$$V_{out} = 0.8 * (R1 + R2) / R1$$

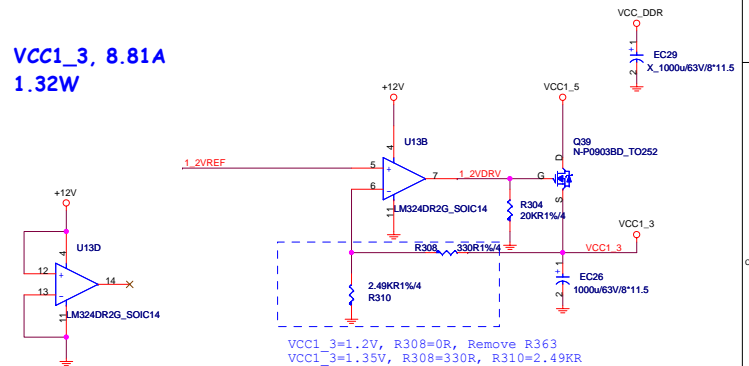
```
R277=1.8K, 1_3VDUAL=1.2V for chipset ver:A01
R279=2.47K, I_3VDUAL=1.35V for chipset ver:A02 later
```

FSB_VTT, 6.1A
3.66W

H_VCCPLL=>100mA
MCP73 =>7A



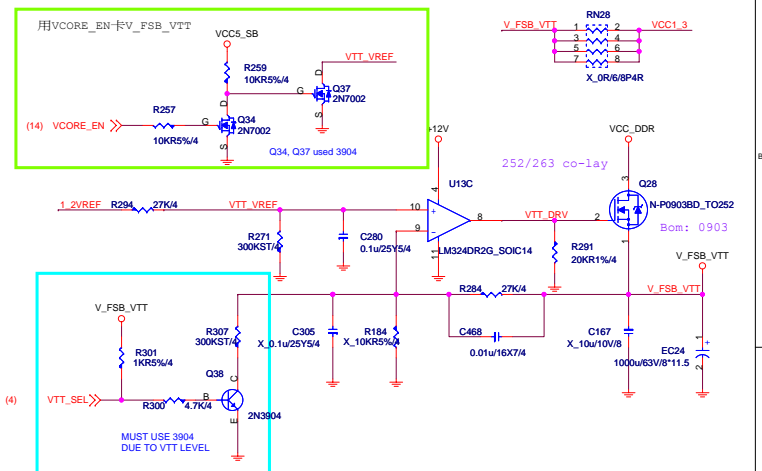
FSB_VTT, 6.1A
3.66W



U18:
I71-LM32403-T07
I71-LM32413-O05
I71-LM32413-F01
I71-LM32413-N04

Figure 6

用VCORE_EN卡V_FSB_VTT



| | | |
|-------------|----------------|--|
| VTT_SEL = L | V_FSB_VTT=1.1V | For future KENTSFIELD processor. (FSB1333, Quad-Core) |
| VTT_SEL = H | V_FSB_VTT=1.2V | For normal processors. |



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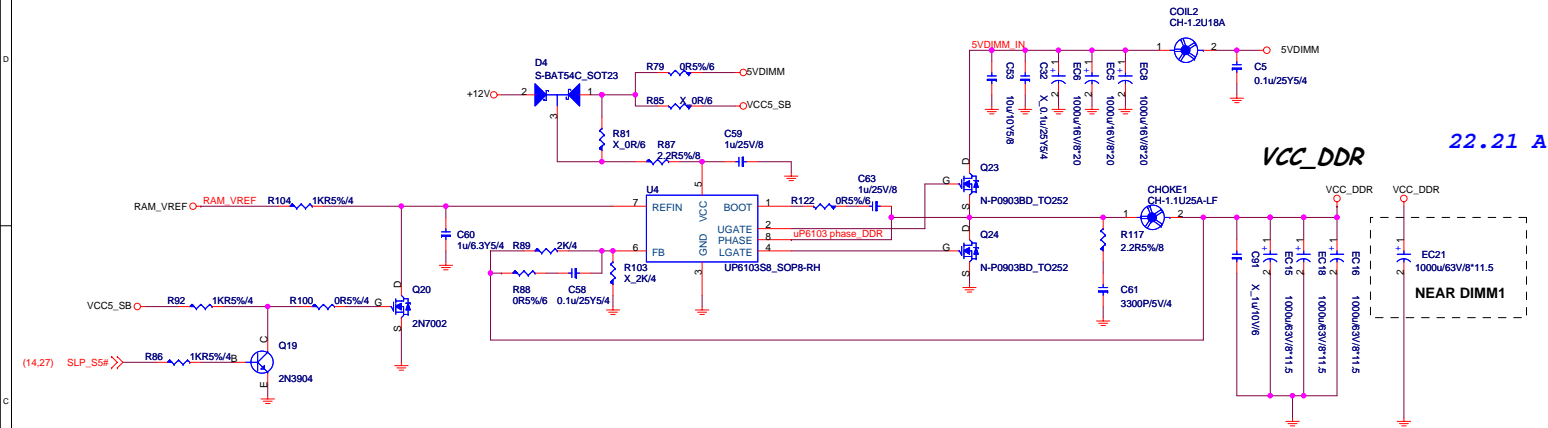
| | |
|--------|----------------------------|
| Size | Document Description |
| Custom | ACPI Controller UPI |

Date: Wednesday, July 09, 2008

Sheet 27 of 34

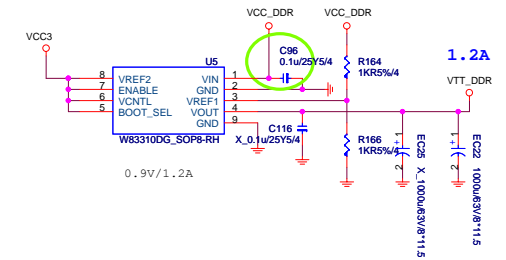
DDR II 1.8V POWER

$$I_{ripple} = 22.21 \times 0.6 \times 0.8 / 1 = 10.66A$$

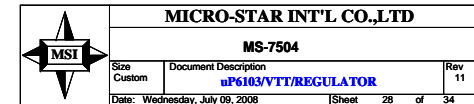
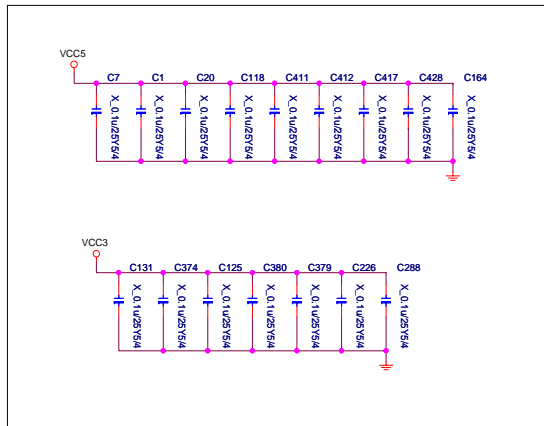
$$2.35 \times 3 \times 1.7 = 11.985A > 10.08A$$


DDR VTT Power

To CPU Copper trace width > 200mils



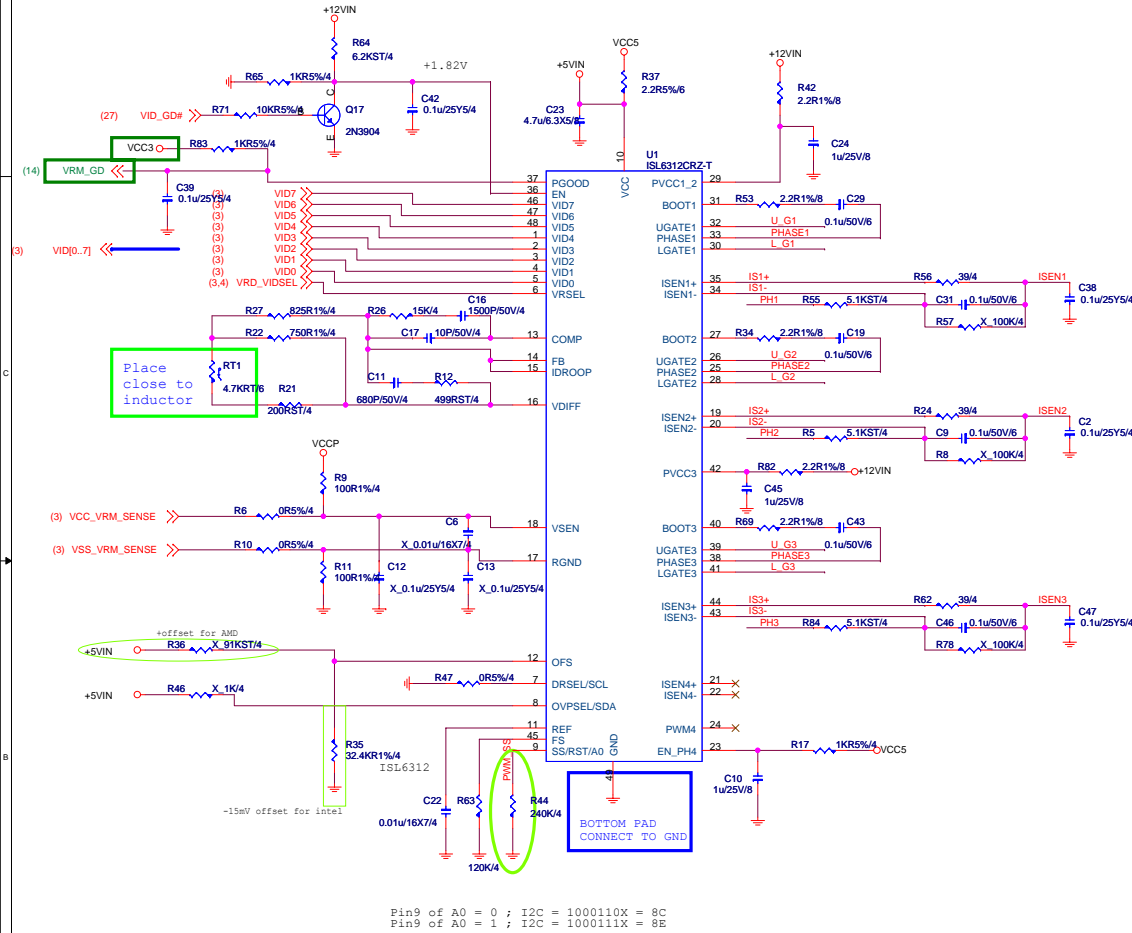
EMI

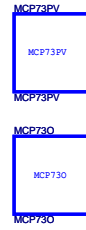
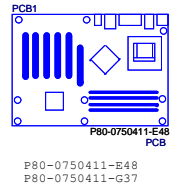
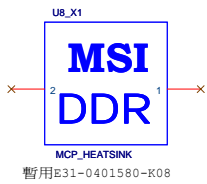


Voltage Regular Module

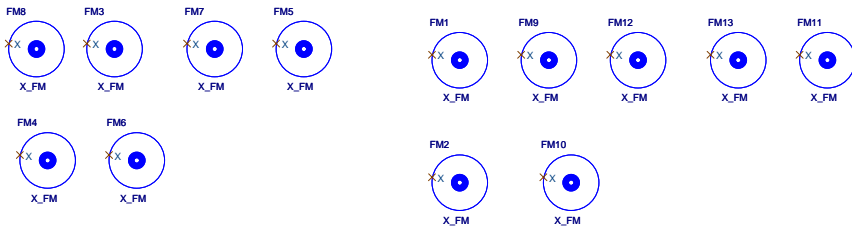
N-P0903BDG_TO252
P75N02LDG/TO252
C100U2SP
CD560U40S-2
1800UF/6.3V
0.25uH/40A
CH-1.1U25A-LF
CD1000U16EL20-2

mosfet/n-channel, P0903BDG, SMT/TO252, Rds(on)=9.5mΩ(10V/25A), Vgs(on)=1~3V, Id=50A, Ciss=1800pF, Qg=50nC, Vds=25V, Vgs=±20V, RoHS compliance
mosfet/n-channel, P75N02LDG, SMT/TO252, Rds(on)=7mΩ(10V, 30A), Vgs(on)=1~3V, Id=75A, Ciss=5000pF, Qg=140nC, Vds=25V, Vgs=±20V, RoHS compliance
ESR<13mΩ, Ripple cur.<2.7A, LC<12uA, 105C
CAP, OS-CON, 560u/4V, Dip-2/8*9/3.5mm, ESR<7mohm, Ripplecur.=6100mA, Lc. <500uA, SPEC series, RoHS compliance
ESR<12mΩ, Ripplecur<2350mA, 105C, longlife change from 2000hrs to 3000hrs, KZJ series
, IND CHOKE, 0.25uH, 20%, DIP/8.5mm, 40A, 0.6mOhm, , , PEW, FERRITE, SQUARE, RoHS COMPLIANCE
IND CHOKE, 1.1uH, 20%, DIP/9mm, 25A, 1.4mOhm, 5.5T, 0.9mmx3, PEW, IRON, , LEAD FREE
CAP, EL, 1000u, 16V, Dip-8x20/3.5mm, 20%, 12mOhm, 2350mA, 105C, 3000hrs, RoHS COMPLIANCE

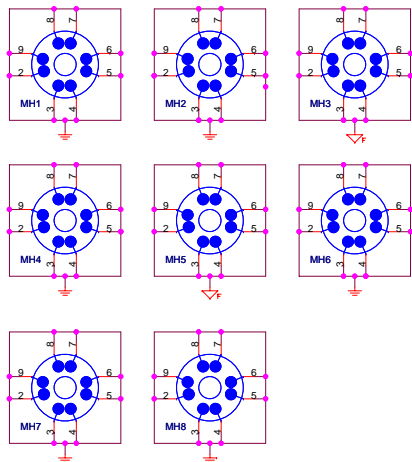




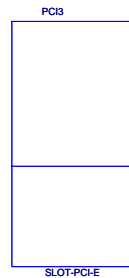
Optics Orientation Holes



Mounting Holes



Medion BLUE PCI SLOT



IDSEL = AD24
MASTER = PCI3REQ*
PCI3GNT*

Table 1-4. Comparison of Different MCP73 Models

| Features | MCP73D | MCP73PV | MCP730 | MCP73S | MCP73V |
|----------------------|--------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| IGPU | No | DX9 SM3.0 | DX9 SM3.0 | DX9 SM3.0 | DX9 SM3.0 |
| Display Interface | N/A | HDMI, DVI, RGB, sDVO | DVI, RGB, sDVO | DVI, RGB, sDVO | RGB |
| Integrated HDCP | N/A | Yes | Yes | Yes | No |
| FSB | 1333 | 1333 | 1333 | 1066 | 1066 |
| Memory | DDR2-667 64-bit | DDR2-667 64-bit | DDR2-667 64-bit | DDR2-667 64-bit | DDR2-667 64-bit |
| PCI Express | 1 x16, 2 x1 | 1 x16, 2 x1 | 1 x16, 2 x1 | 1 x16, 2 x1 | 1 x16, 2 x1 |
| USB Ports | 8 | 10 | 10 | 10 | 8 |
| Networking | 10/100/1000 | 10/100/1000 | 10/100/1000 | 10/100/1000 | 10/100 |
| SATA II Ports | 4 | 4 | 4 | 4 | 4 |
| RAID | 0, 1 | 0, 1, 0+1, 5 | 0, 1, 0+1, 5 | 0, 1, 0+1, 5 | 0, 1 |
| PATA-133 | Two devices | Two devices | Two devices | Two devices | Two devices |
| iGPU Dev-ID | N/A | 0x7E0 | 0x7E1 | 0x7E2 | 0x7E3 |
| Marketing Brand Name | NVIDIA nForce 630i | NVIDIA nForce 630i GeForce 7050 | NVIDIA nForce 630i GeForce 7050 | NVIDIA nForce 630i GeForce 7025 | NVIDIA nForce 610i GeForce 7025 |

Table 1. MCP73 SKU Definition

| Features | MCP73PV | MCP73S | MCP73V |
|-----------------------|----------------------|-----------------|-----------------|
| FSB | 1333 | 1333 | 1066 |
| Memory | DDR2-800 64 bit | DDR2-667 64 bit | DDR2-667 64 bit |
| Display | HDMI, DVI, RGB, sDVO | DVI, RGB, sDVO | RGB |
| Integrated HDCP | Yes | Yes | No |
| Integrated Networking | 10/100/1000 | 10/100/1000 | 10/100 |
| Vista Premium | Yes | Yes | Yes |
| PCI-E | 1 x16, 2 x1 | 1 x16, 2 x1 | 1 x16, 2 x1 |
| USB Ports | 10 | 10 | 8 |
| SATA II Ports | 4 | 4 | 4 |
| RAID | 0,1,0+1,5 | 0,1,0+1,5 | 0, 1 |
| PATA Drives | 2 | 2 | 2 |

Simulation

