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MS-7922

Intel -Shark Bay plamform Z97

ATX

Ver:2.0

CPU:

Marswell LGA1150

System Chipset:

Lynx Point Z97

Onboard Chip:

HD Audio Codec:ALC892

LAN-Intel 218 - Reatek 8111G

SIO:Fintek NTC6792D

Flash ROM: SPI 64 MB/128MB

Main Memory:

DDRIII (800/1066/1333MHz) * 4 (Dual Channel)

ACPI:

UPI

PWM:

VRD12.5 -UP1649-8-2=6phase

Expansion Slots:

Other:

PCI Express (X16) Slot *3-2=1

PCI Express (X1) Slot * 3

PCI Express (X8) Slot * 1

PCI Express (X1) Slot * 1

PCI Slot * 2

SATA Express

SATA3.0 x6 (PCH)


REAR USB2.0 *2

FRONT USB2.0 *4

REAR USB3.0 *4

FRONT USB3.0 *2

REAL USB3.1 *2 remove



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MS-7922

Doc
Custom

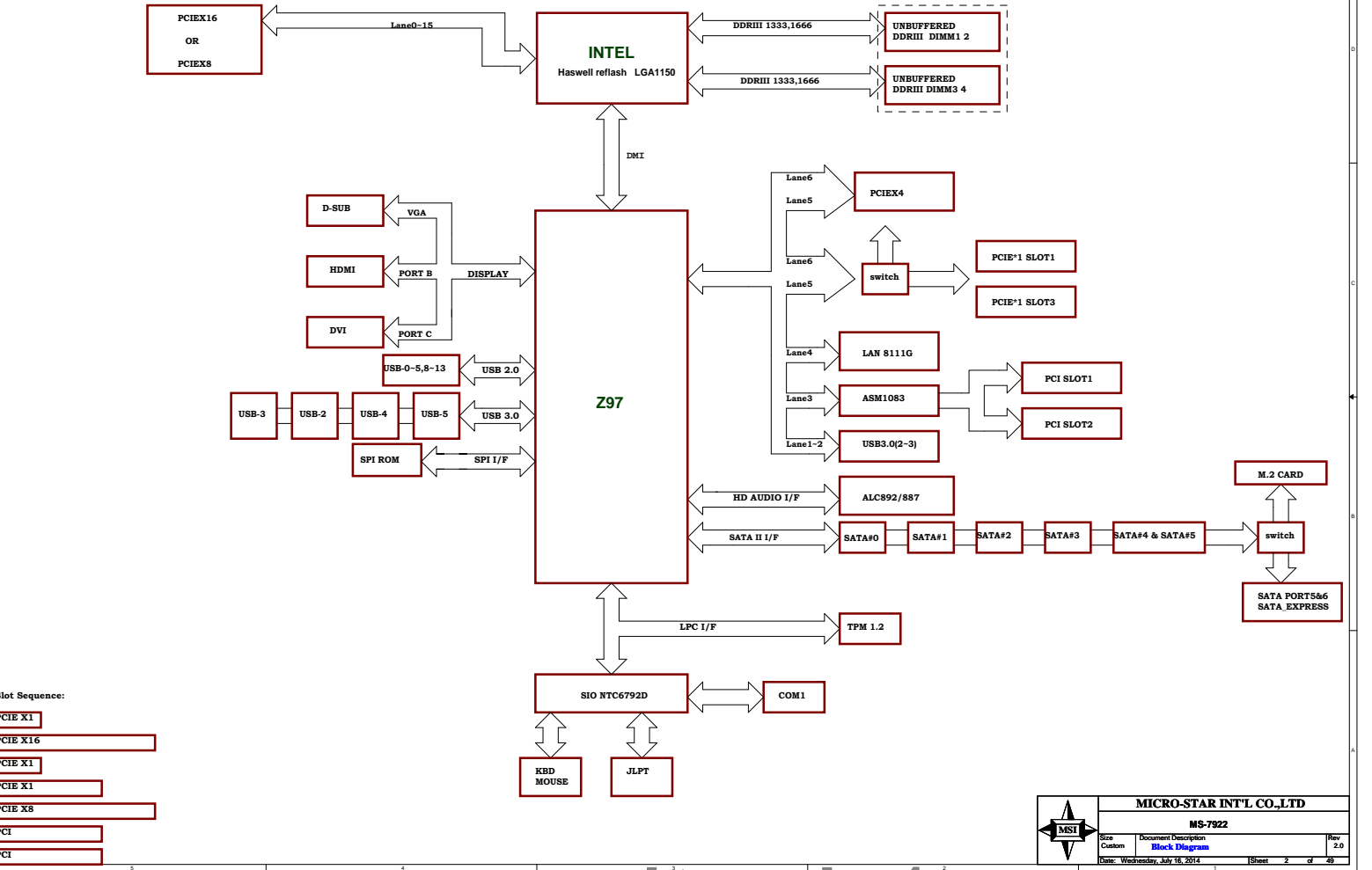
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Cover Sheet

Rev
2.0

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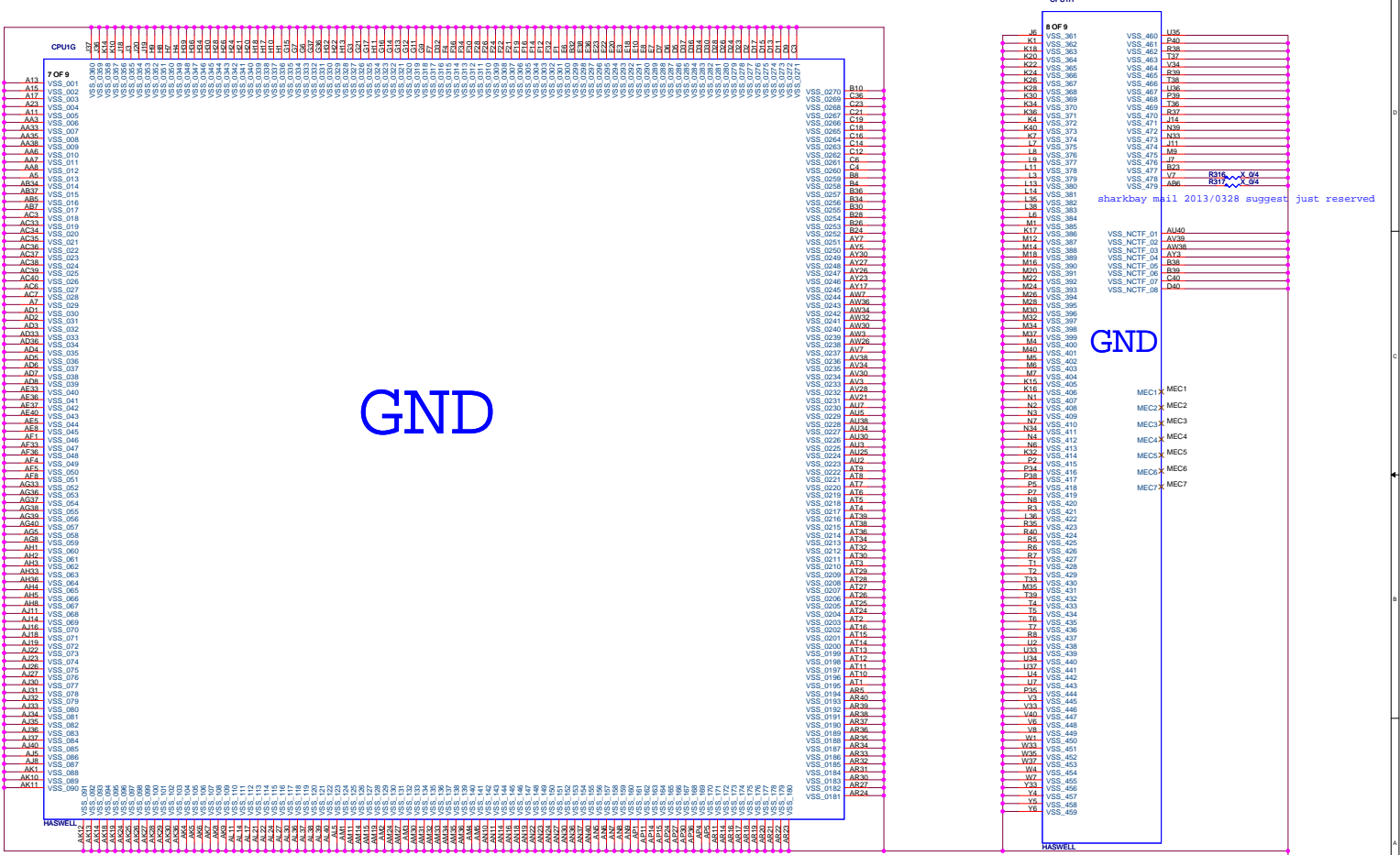
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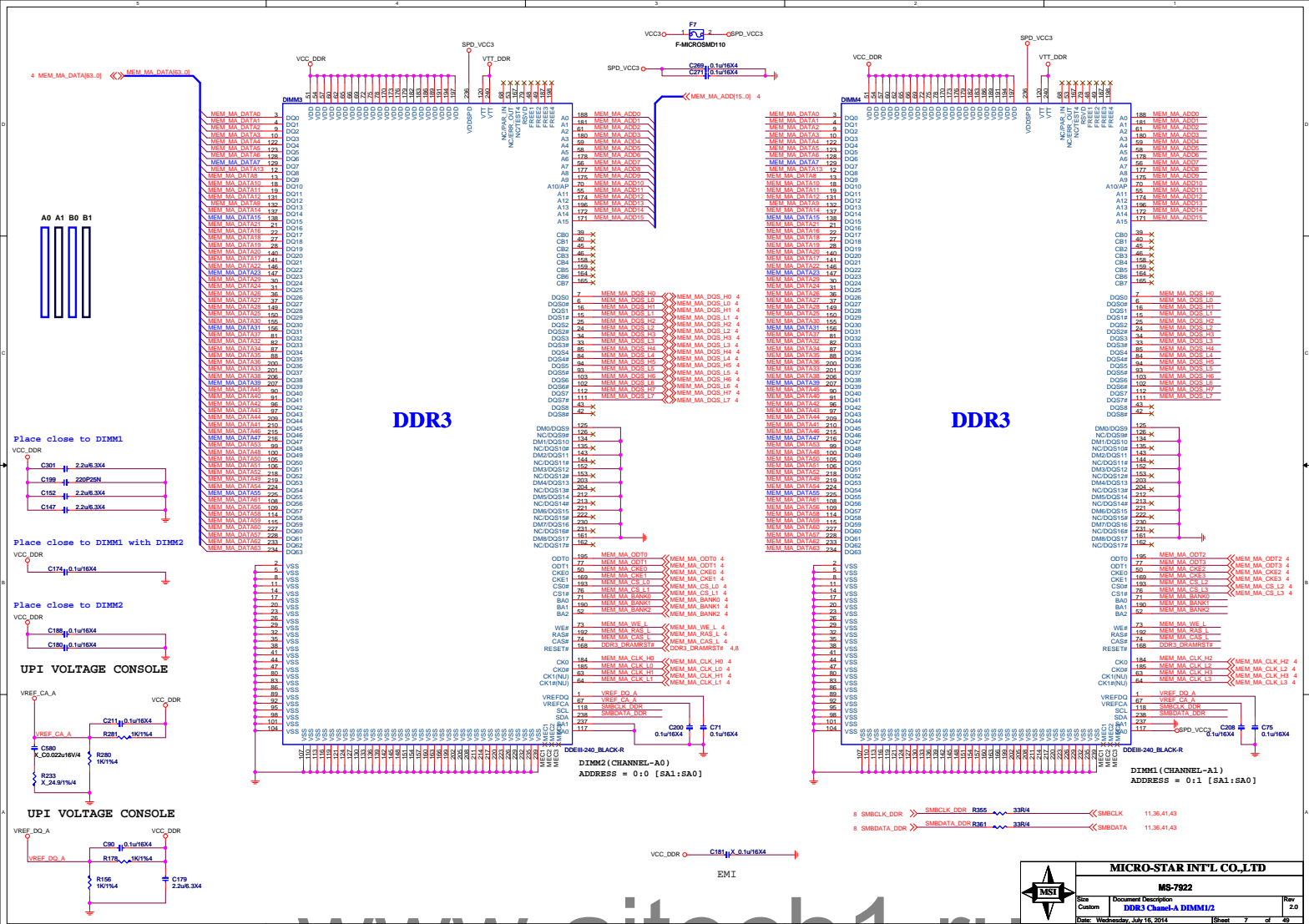
MS-7922 Block Diagram



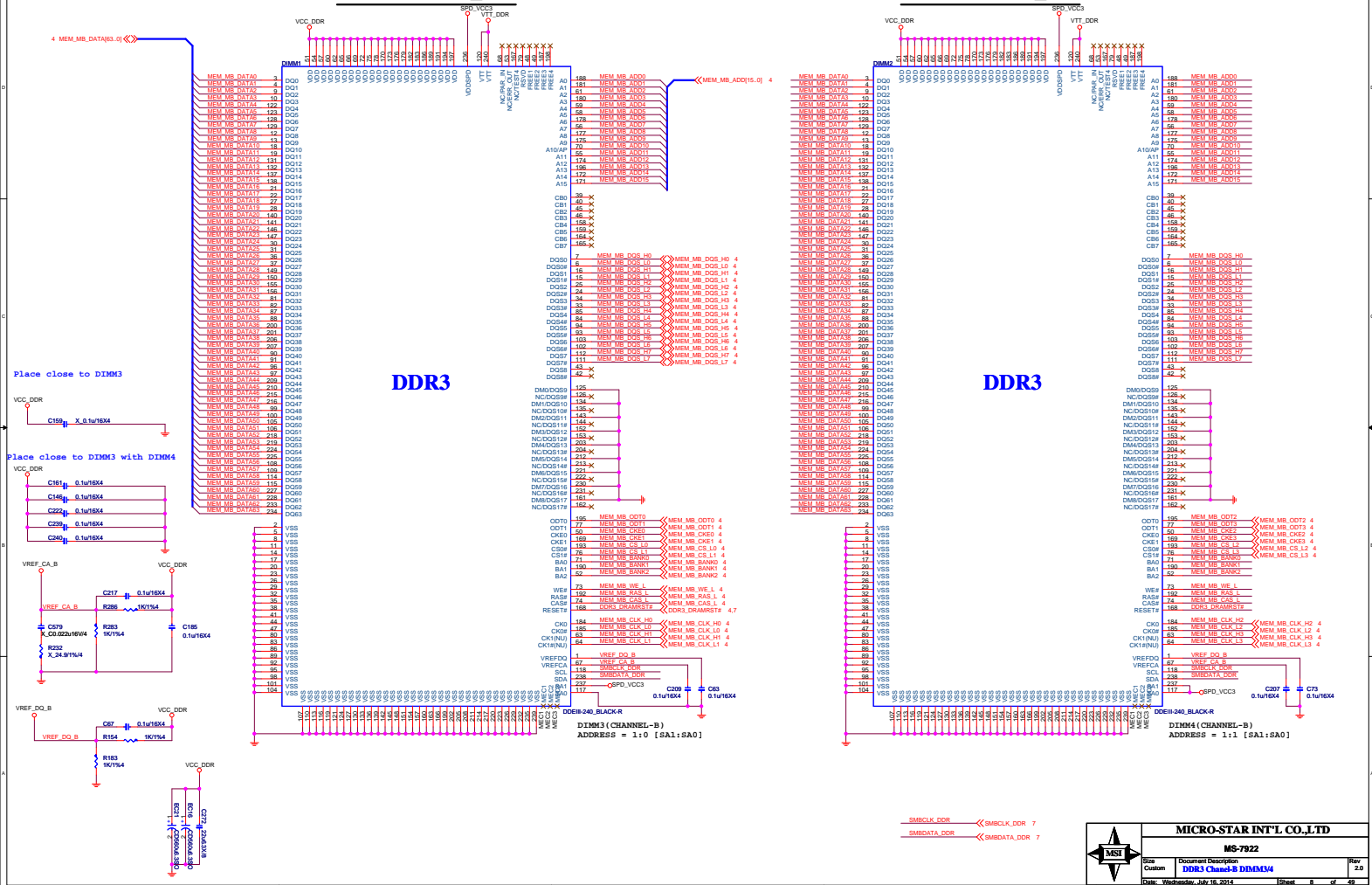
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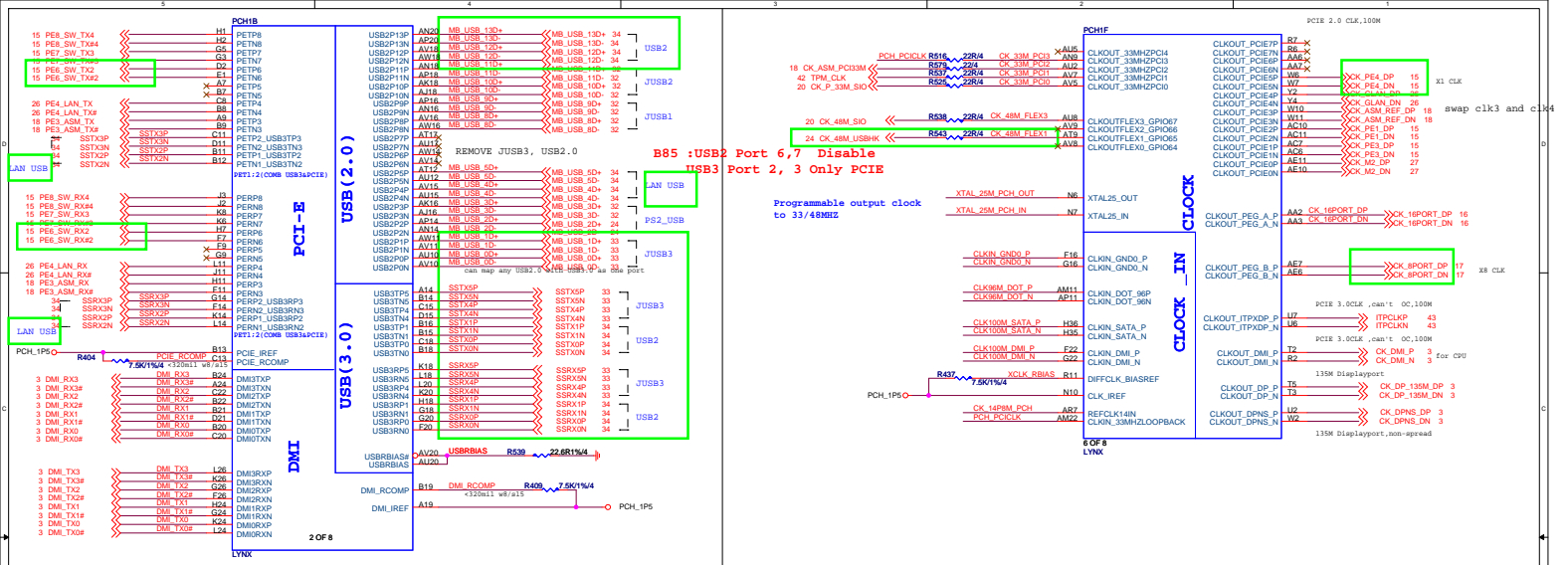
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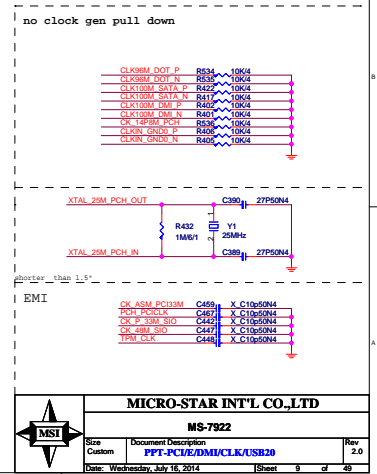


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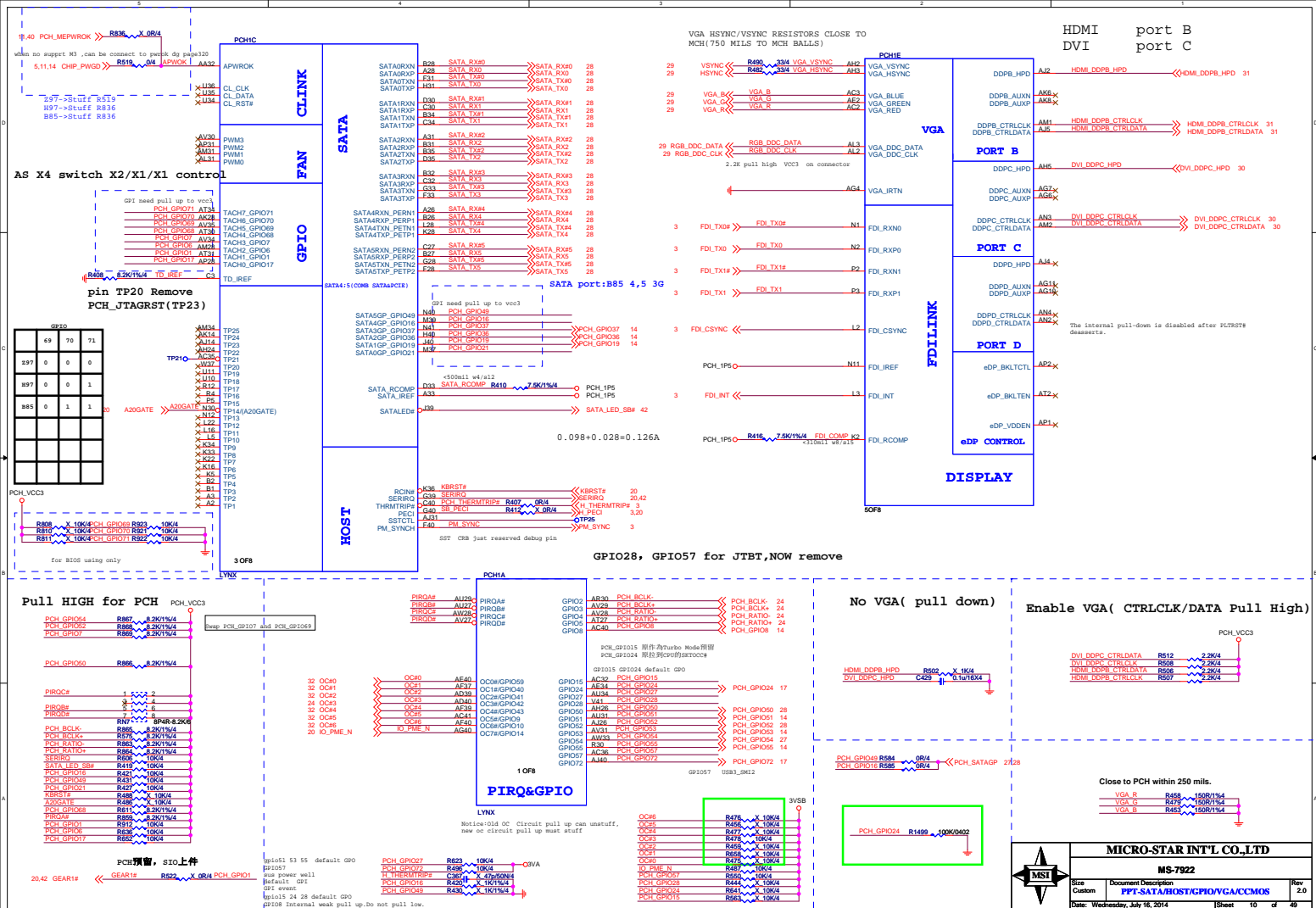
DDRIII DIMM_B1



PCB CLK BUFFER (remove)



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PCH Straps

Internal pull-down

SPKR
Default Mode:
Internal weak Pull-down.

No Reboot Mode with TCO Disabled:
Connect to Vcc3_3 with 8.2k-10k Ohm weak pullup resistor.

11.42 SPCR >> SPCR R505 X 1K04 >> PCH_VCC3

BOOT DEVICE	GPIO51	GPIO19
LPC	0	0
SPI	1	1

Default (SPI):
Left both SATA1GP/GPIO19 and GPIO51 floating.
No pull up required.

Boot from PCI:
Connect SATA1GP/GPIO19 to ground with 1k Ohm pull-down resistor.
Leave GPIO51 floating.

Boot from LPC:
Connect both SATA1GP/GPIO19 and GPIO51 to ground with 1k Ohm pull-down resistor.

10 PCH_GPIO51 >> PCH_GPIO51 R499 X 1K04 >> PCH_VCC3
10 PCH_GPIO19 >> PCH_GPIO19 R418 X 1K04 >> PCH_VCC3
10 PCH_GPIO51 >> PCH_GPIO51 R422 X 1K04 >> PCH_VCC3

Top Block Swap Mode:
Connect to ground with 4.7k Ohm weak pull-down resistor.

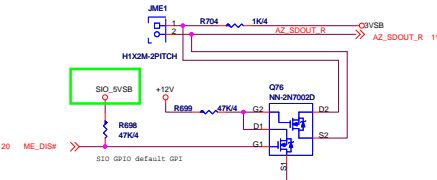
10 PCH_GPIO55 >> PCH_GPIO55 R521 X 4.7K04 >> Internal pull-up

Connect to ground with 1k Ohm pull-down resistor.

10 PCH_GPIO53 >> PCH_GPIO53 R500 X 1K04 >> Internal pull-up

10 PCH_GPIO8 >> PCH_GPIO8 R741 X 1K04 >> PCH_VCC3
R505 1K04 >> QVSSB
R425 1K04 >> Internal pull-up
follow VFE .in fact just need pull up only

3VSSB >> R617 10K04 >> PCH_GPIO8 R592 10K04 >> NV23MKT3804
30(13.3-0.95)10=7.05mA
11.05-0.2(1)=0.85mA
30(13.3-0.95)10=2.12mA
(3.3-0.2)10=0.11mA
H.CFG13 3.43



Default
Do not pull high.
Disable ME in Manufacturing Mode
Connect to VccSusHDA with 1k Ohm pull-up resistor through a jumper.

10 PCH_GPIO36 >> PCH_GPIO36 R414 X 1K04 >> PCH_VCC3
R415 X 10K15K4 >> Internal weak pull down. Do not pull high.

10 PCH_GPIO37 >> PCH_GPIO37 R544 X 1K04 >> QVSSB
R425 1K04 >> PCH_VCC3
R428 X 10K15K4 >> Internal pull down.

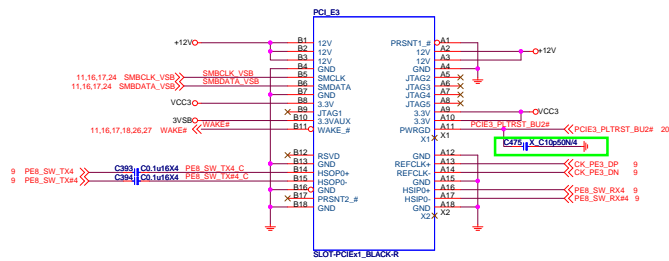
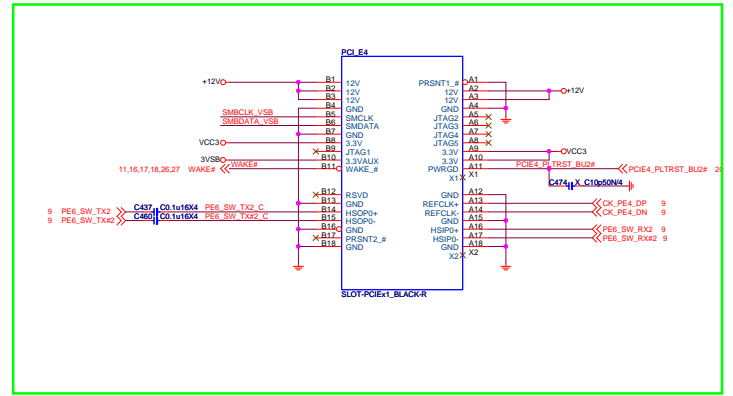
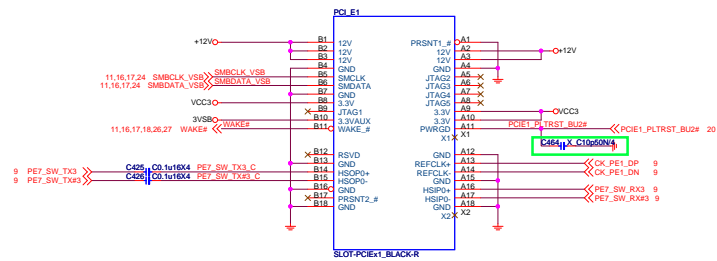


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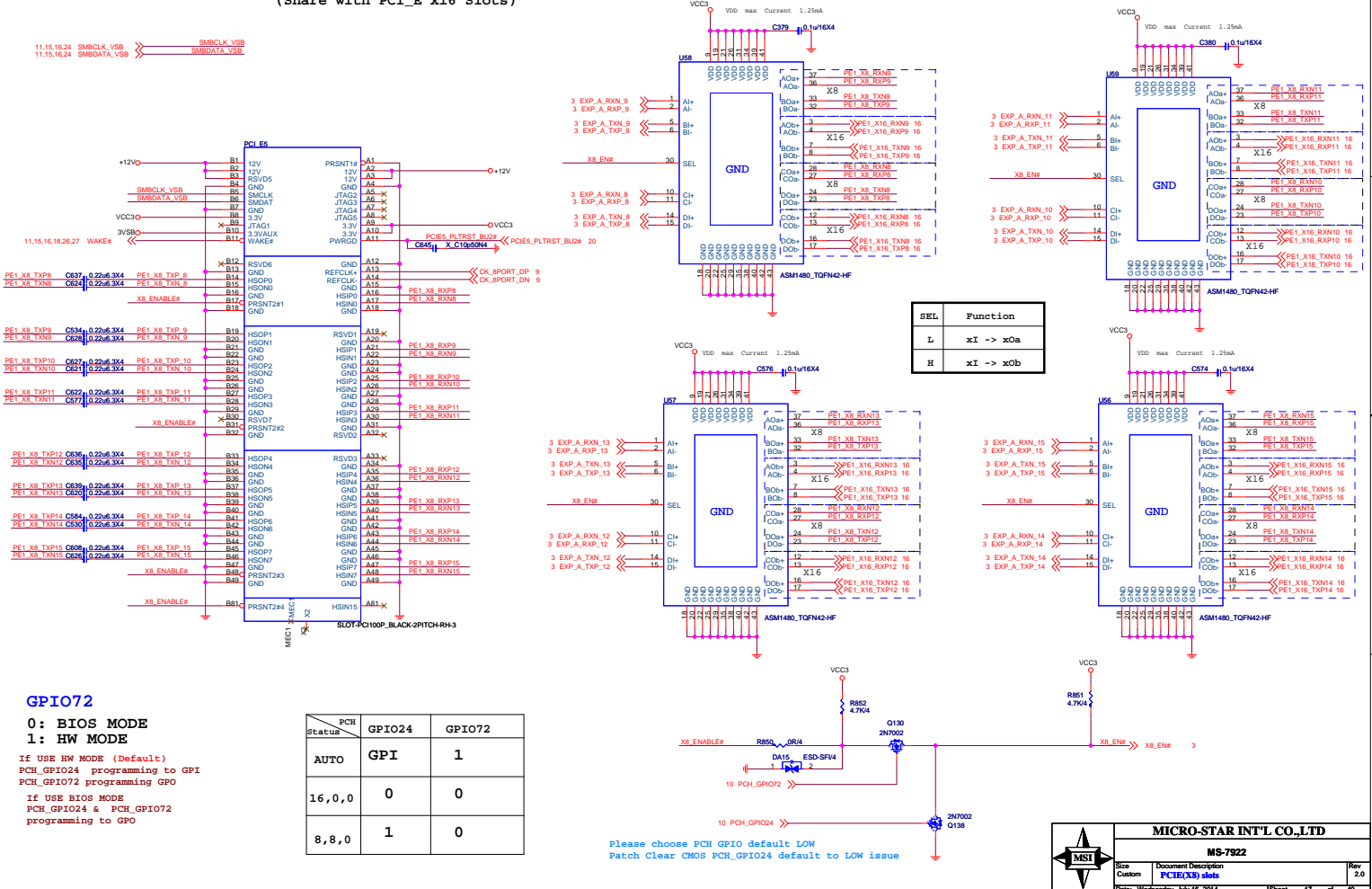
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PCI Express X8 Slot (Share with PCI E x16 slots)

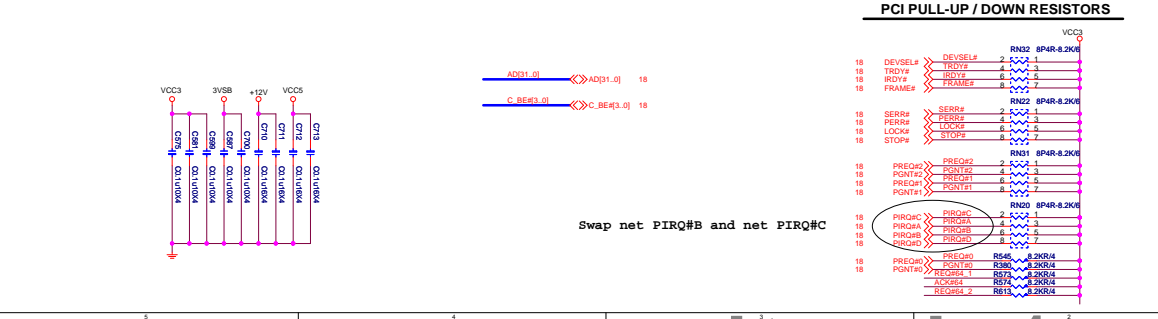


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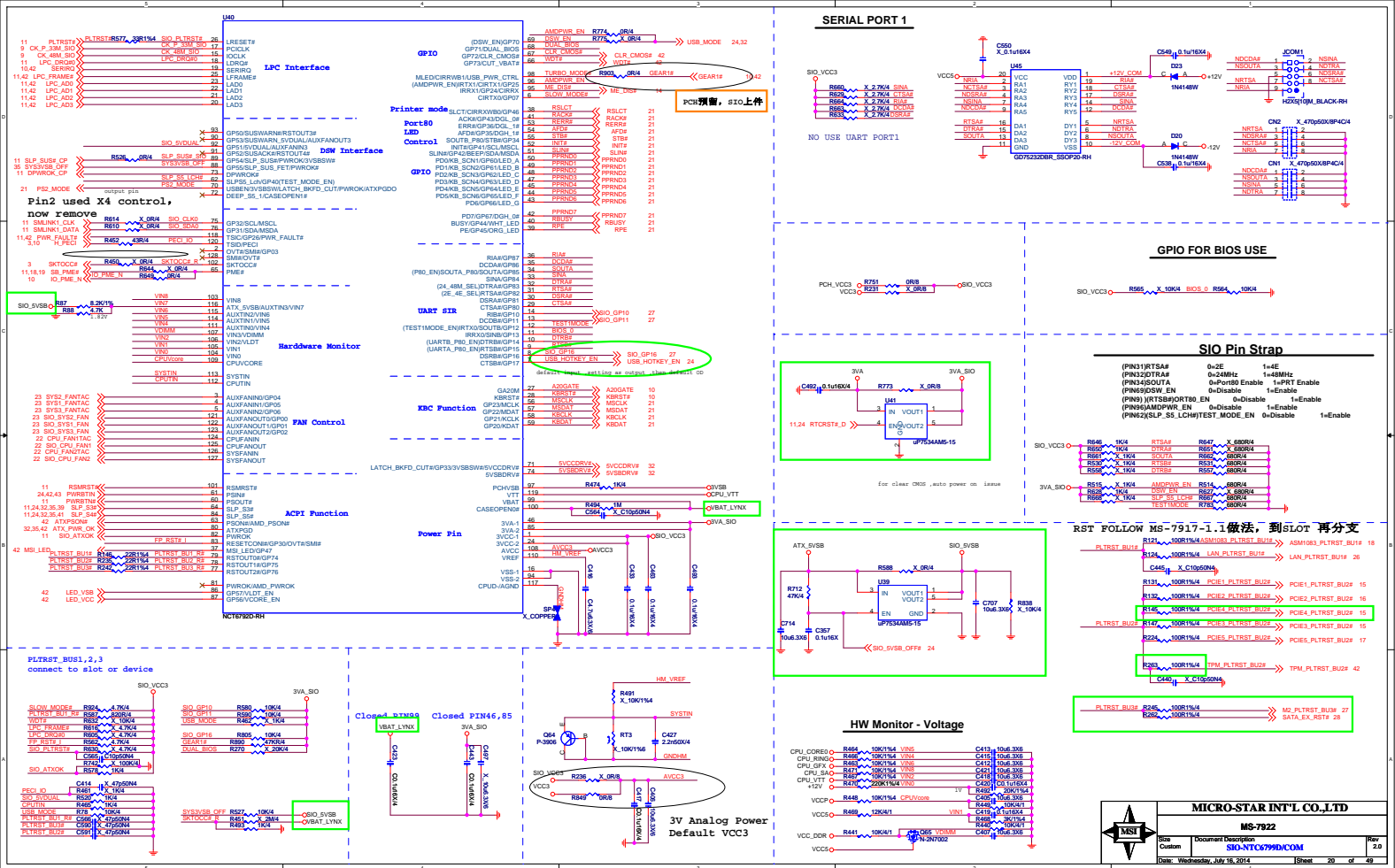


IDSEL = AD16
MASTER = PREQ#0
PIRQ#A

IDSEL = AD17
MASTER = PREQ#1
PIRQ#B

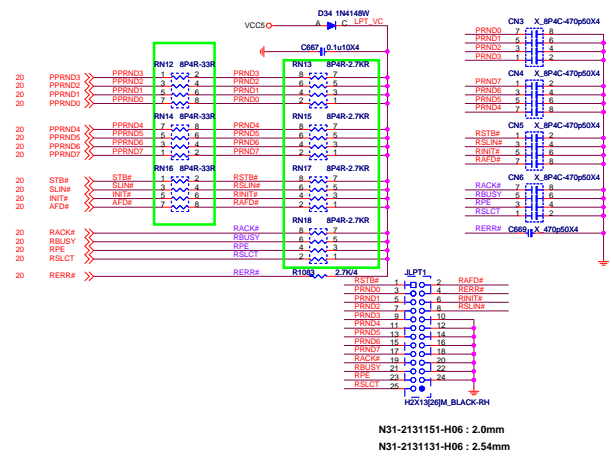


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Custom	PC1x2 Slots	2.0
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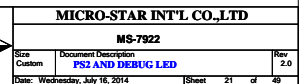


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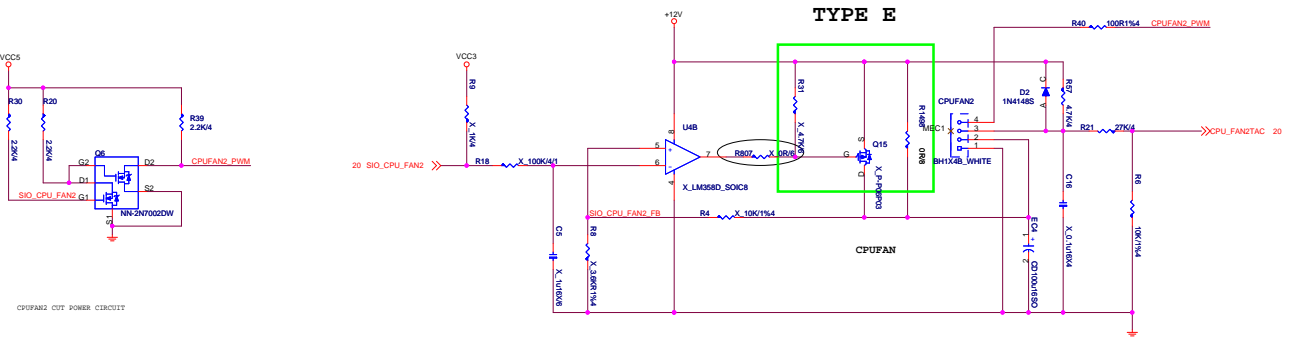
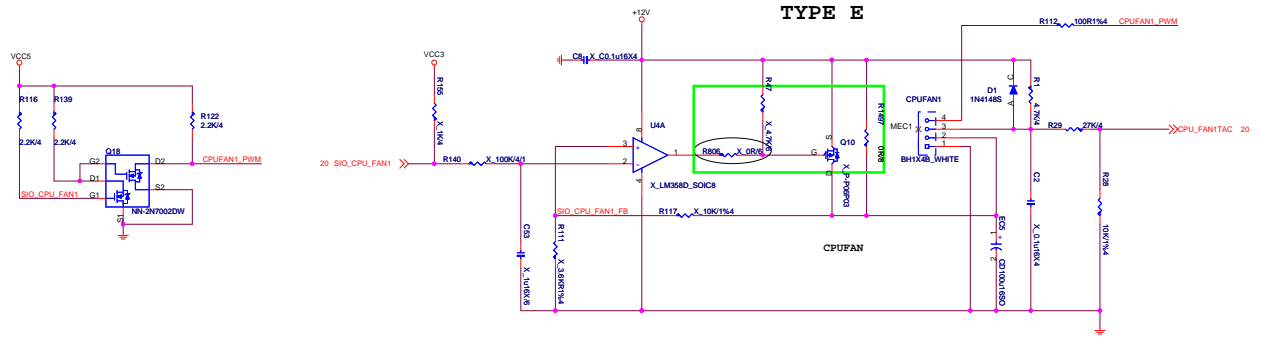
PARALLAL PORT



```
for ASML061 power control(remove)
```

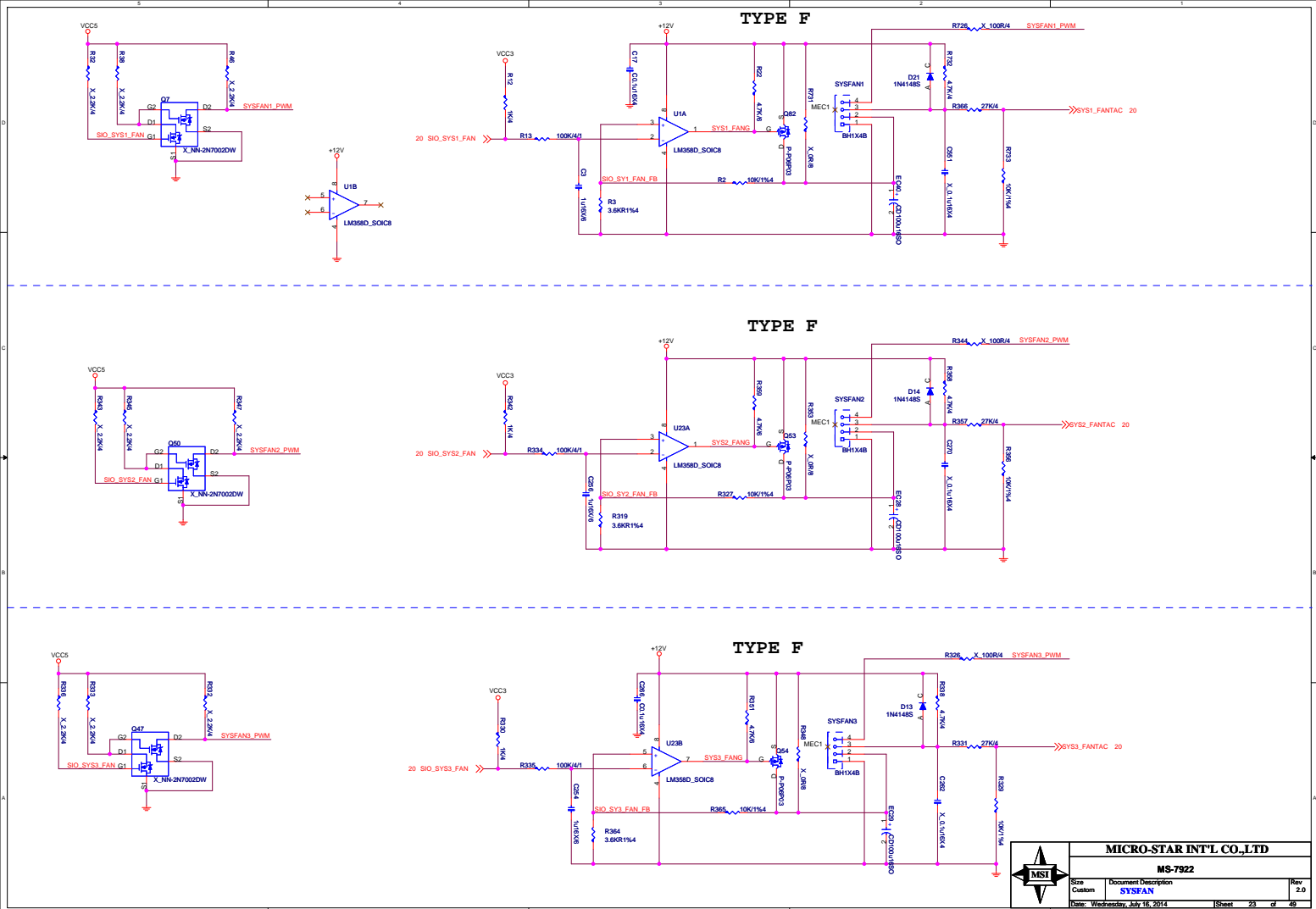


FAN-CONTROL CIRCUIT



MSI	
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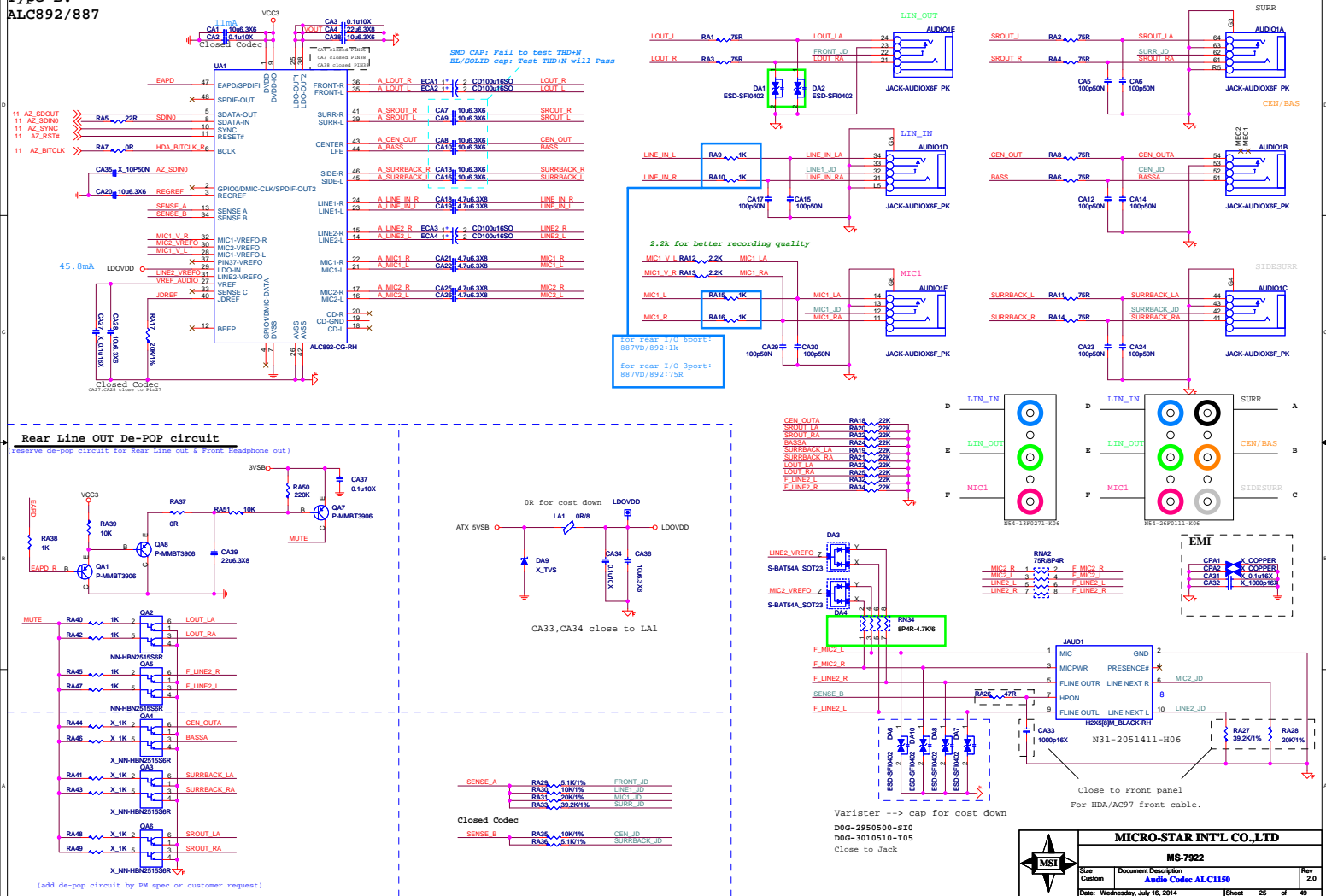
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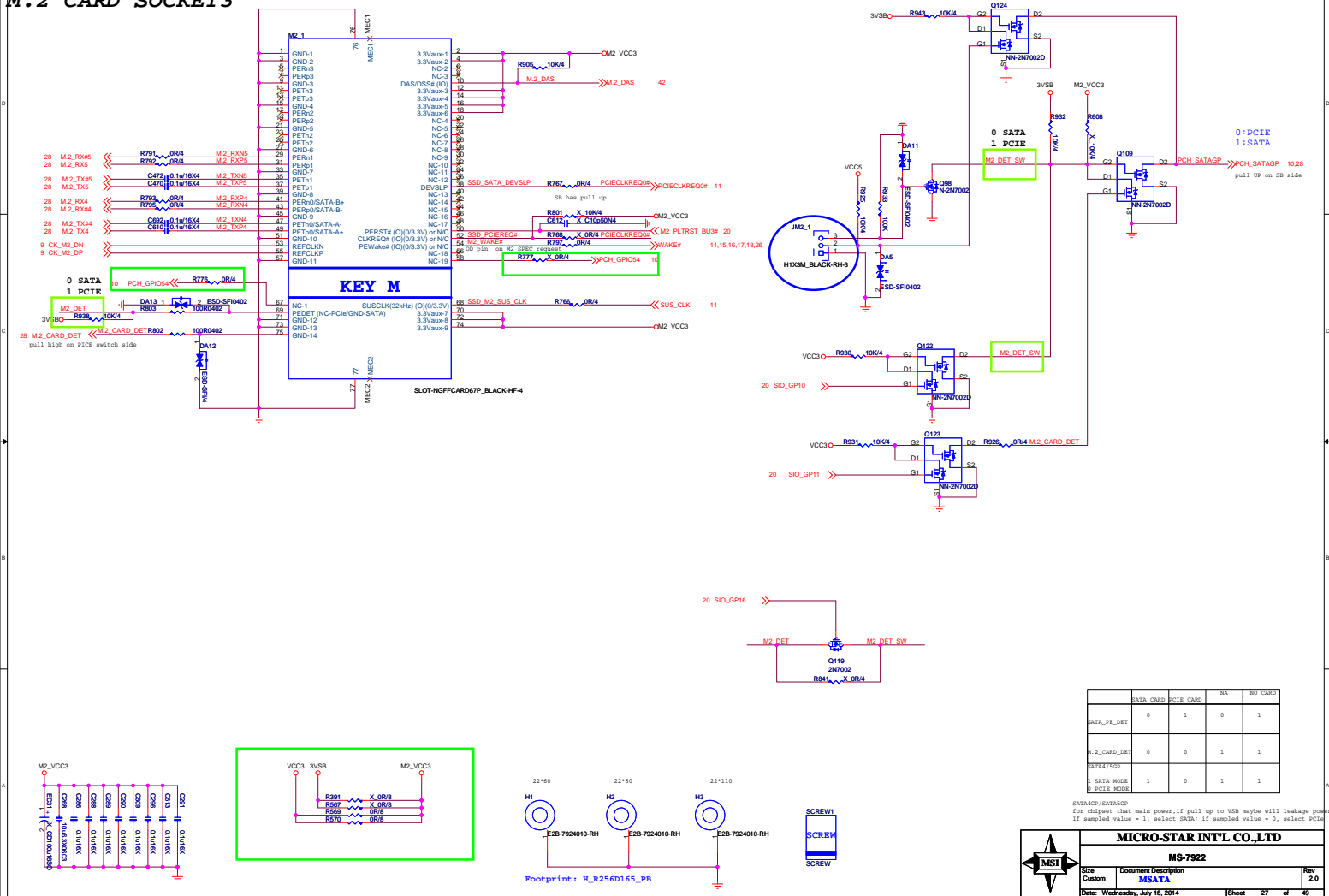
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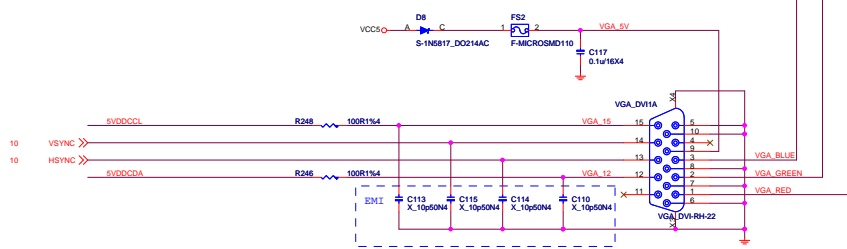
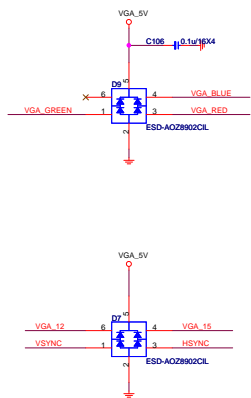
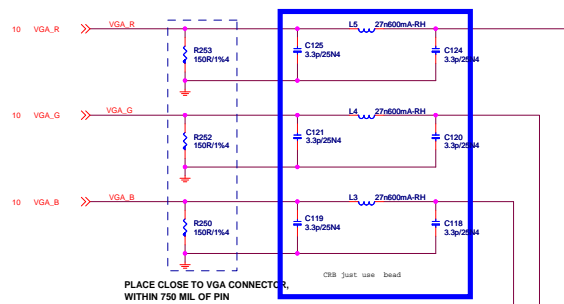
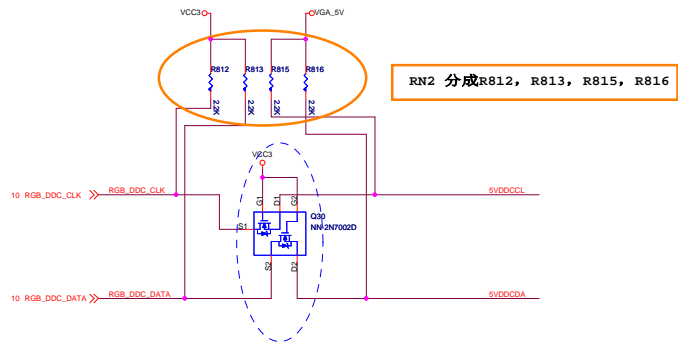




M.2 CARD SOCKET3



Level shift

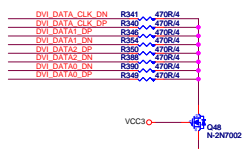


DVI level shifter

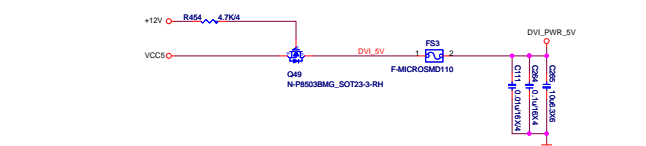
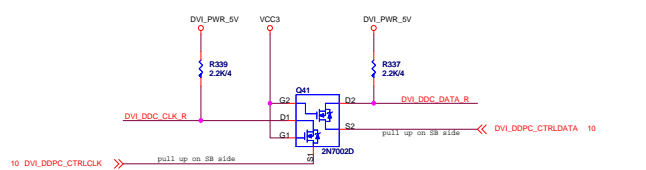
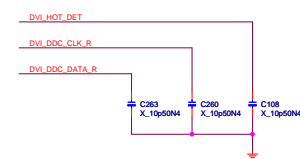
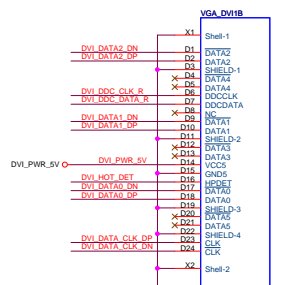
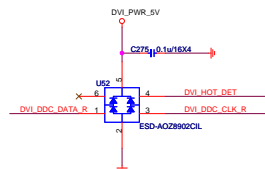
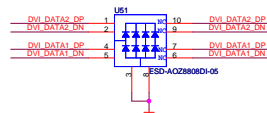
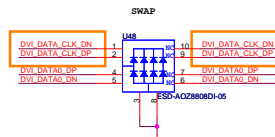
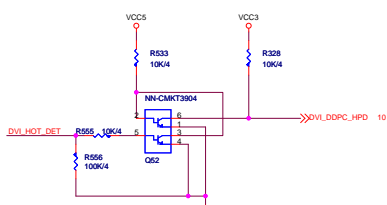
3 DVI_DDPCK_CLK_N << DVI_DDPCK_CLK_N C267 0.1u/16K4 DVI_DATA_CLK_DN
 3 DVI_DDPCK_CLK_P << DVI_DDPCK_CLK_P C243 0.1u/16K4 DVI_DATA_CLK_DP
 3 DVI_DDPCK_TXP2 << DVI_DDPCK_TXP2 C246 0.1u/16K4 DVI_DATA2_DP
 3 DVI_DDPCK_TXN2 << DVI_DDPCK_TXN2 C253 0.1u/16K4 DVI_DATA2_DN
 3 DVI_DDPCK_TXP1 << DVI_DDPCK_TXP1 C250 0.1u/16K4 DVI_DATA1_DP
 3 DVI_DDPCK_TXN1 << DVI_DDPCK_TXN1 C247 0.1u/16K4 DVI_DATA1_DN
 3 DVI_DDPCK_TXN0 << DVI_DDPCK_TXN0 C241 0.1u/16K4 DVI_DATA0_DN
 3 DVI_DDPCK_TXP0 << DVI_DDPCK_TXP0 C248 0.1u/16K4 DVI_DATA0_DP

For EMI

DVI_DATA0_DN << R27 X_243R11/4
 DVI_DATA0_DP << R113 X_243R11/4
 DVI_DATA1_DN << R138 X_243R11/4
 DVI_DATA1_DP << R144 X_243R11/4
 DVI_DATA2_DN << R138 X_243R11/4
 DVI_DATA2_DP << R144 X_243R11/4
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 DVI_DATA_CLK_DP << R113 X_243R11/4



HPD

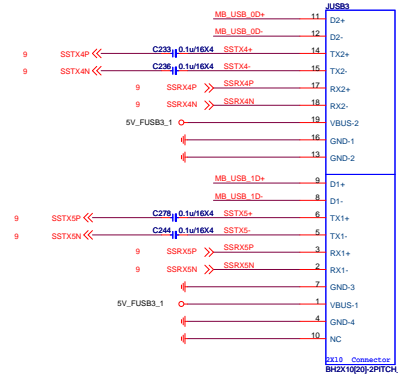
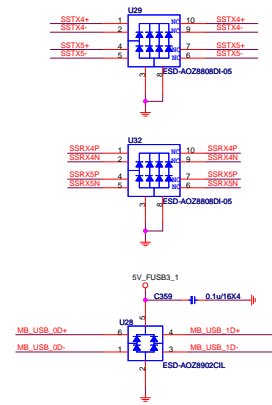
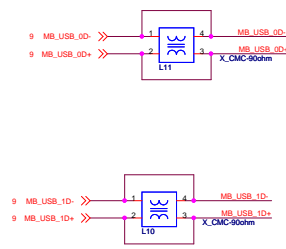


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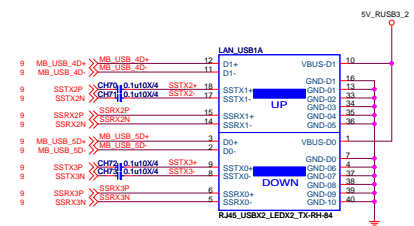
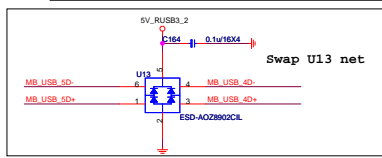
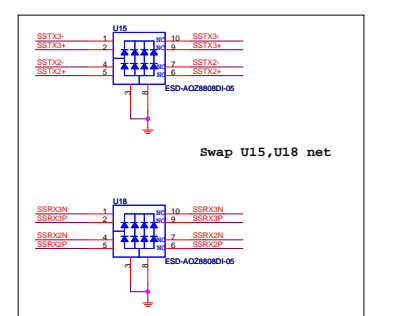
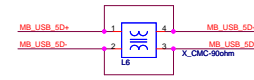
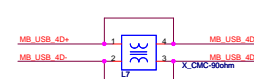
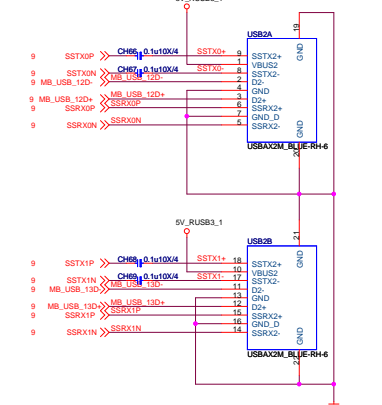
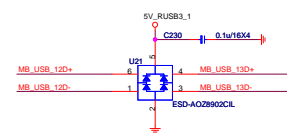
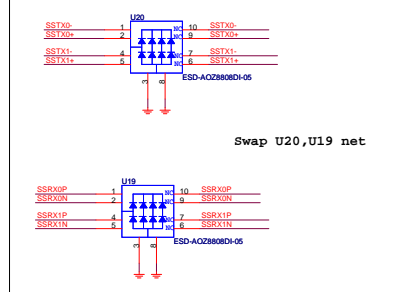
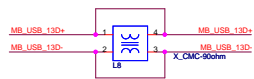
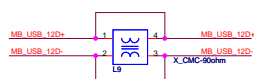
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Black to Blue 180° Connector

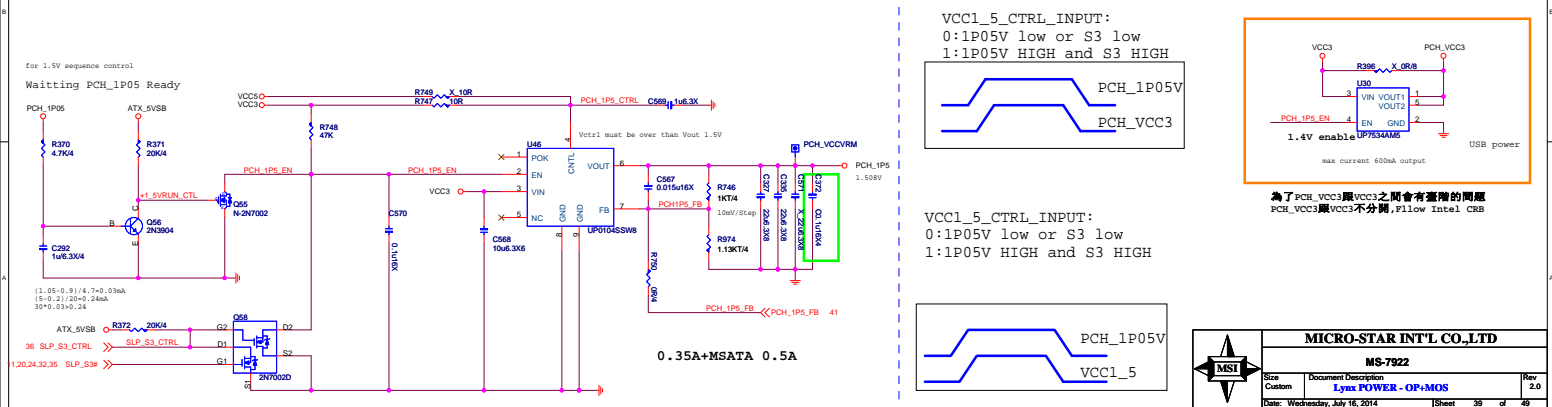
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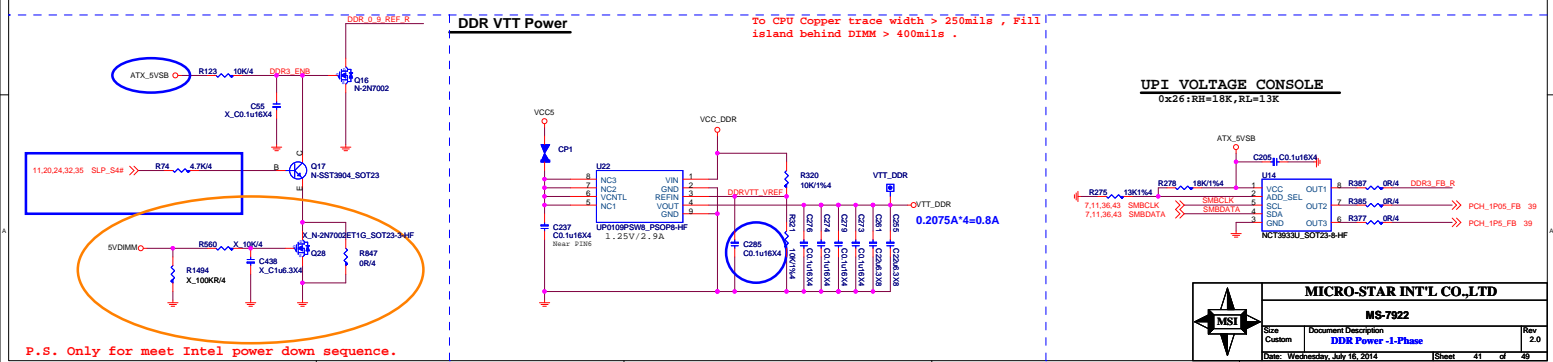
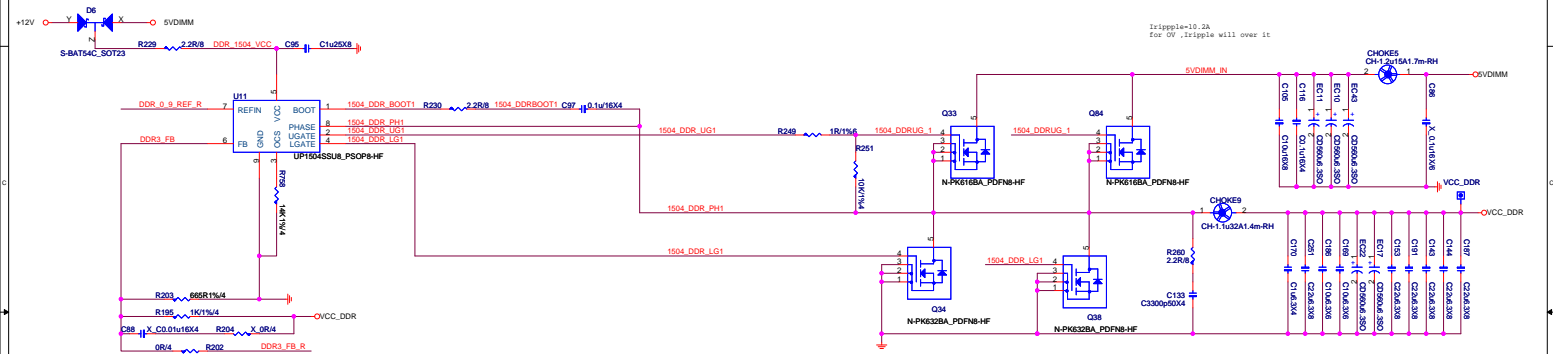


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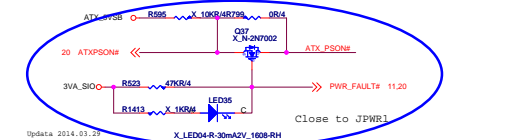
$CP ((5*10^6*R758)/(3.4/2)m\ ohm)=36.47A>22.3*1.5A$



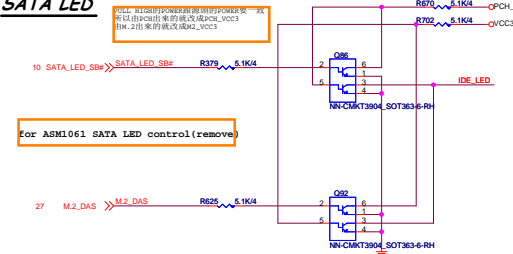
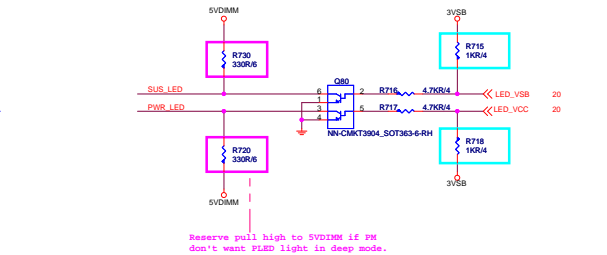
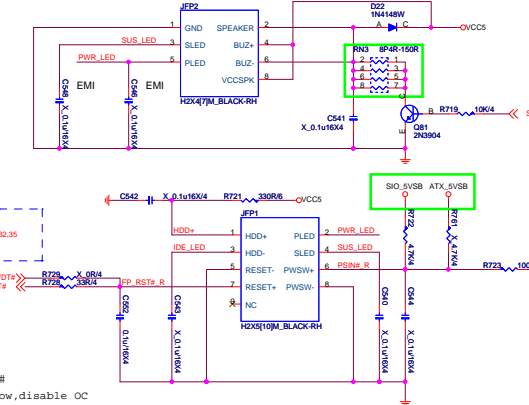
P.S. Only for meet Intel power down sequence.

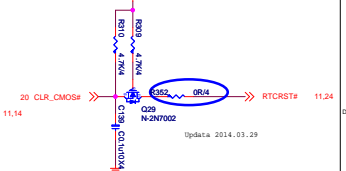
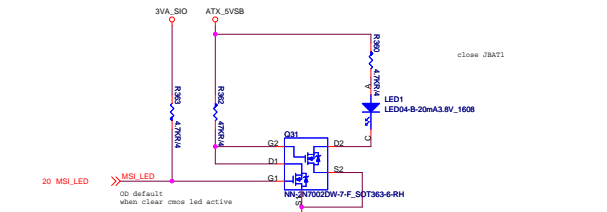
change the damping from 100 to 0 ohm
of PSON signal to solved some PSU compatibility issue

change the damping from 100 to 0 ohm
of PSON signal to solved some PSU compatibility issue

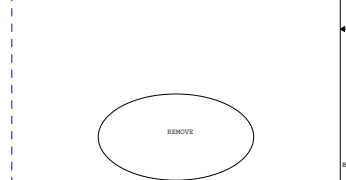


SATA LED

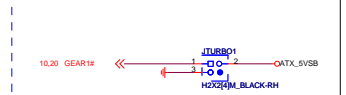
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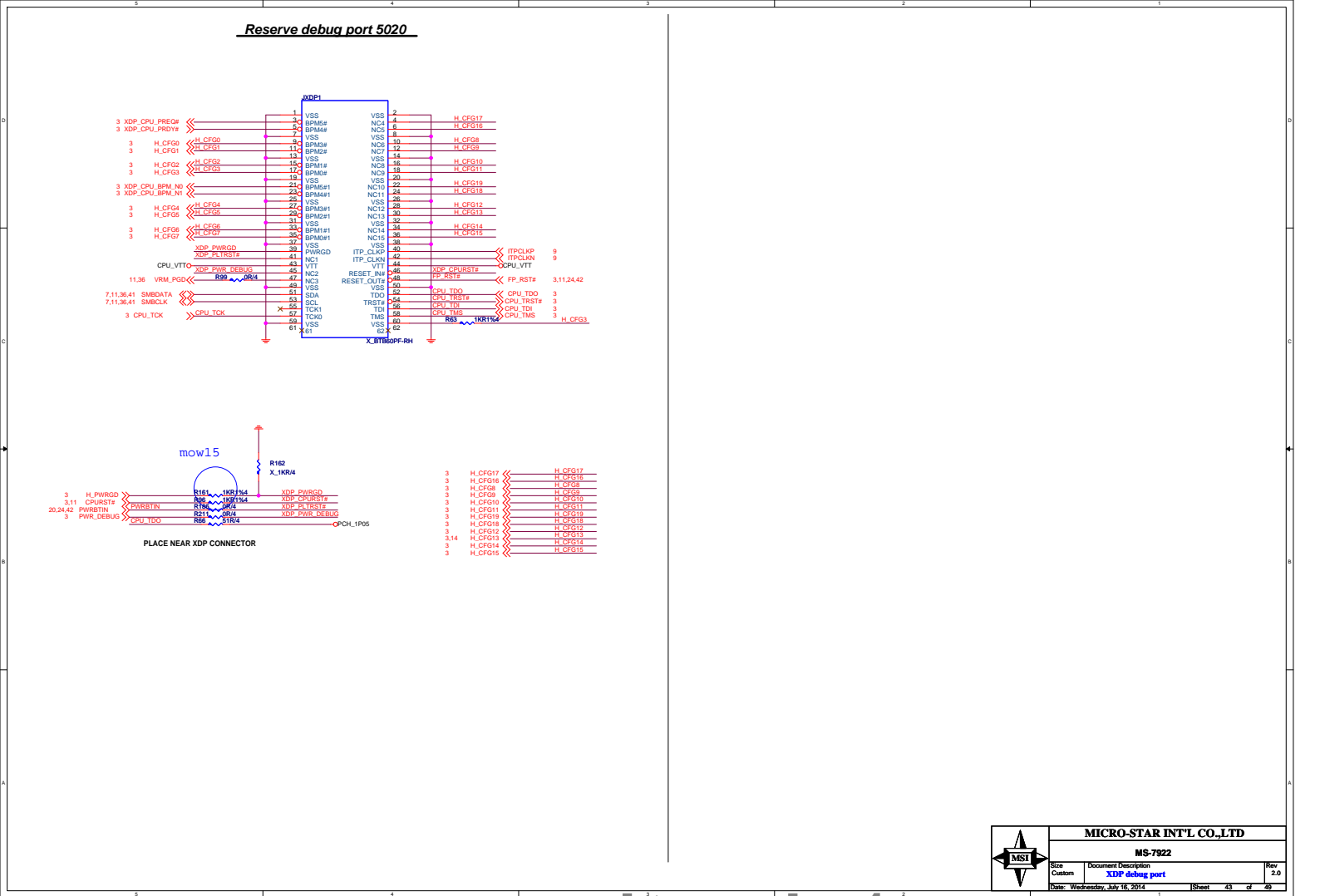
1. *Journal of the American Medical Association*, 1997; 278: 1019-1024.



TURBO_MODE# change to GEAR1#



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