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uATX Version:1.0

CPU: Intel Pentium 4, Pentium D, Core2 Duo, Wolfdale, Kentsfield and Yorkfield processors in LGA775 Package.

System Chipset:

Intel Eaglelake - G43/45 (North Bridge)
Intel ICH10/10R (South Bridge)

On Board Device:

CLOCK Gen -- ICS 9LPRS113A
LPC Super I/O -- Fintek F71889F
LAN -- Realtek 8111DL/8103E(PCIE)
HD Audio Codec -- RTL889/RTL888
1394 Controller -- VIA 6315N
PCIE to PATA -- JMB368

Main Memory:

Dual-channel DDR-II * 4

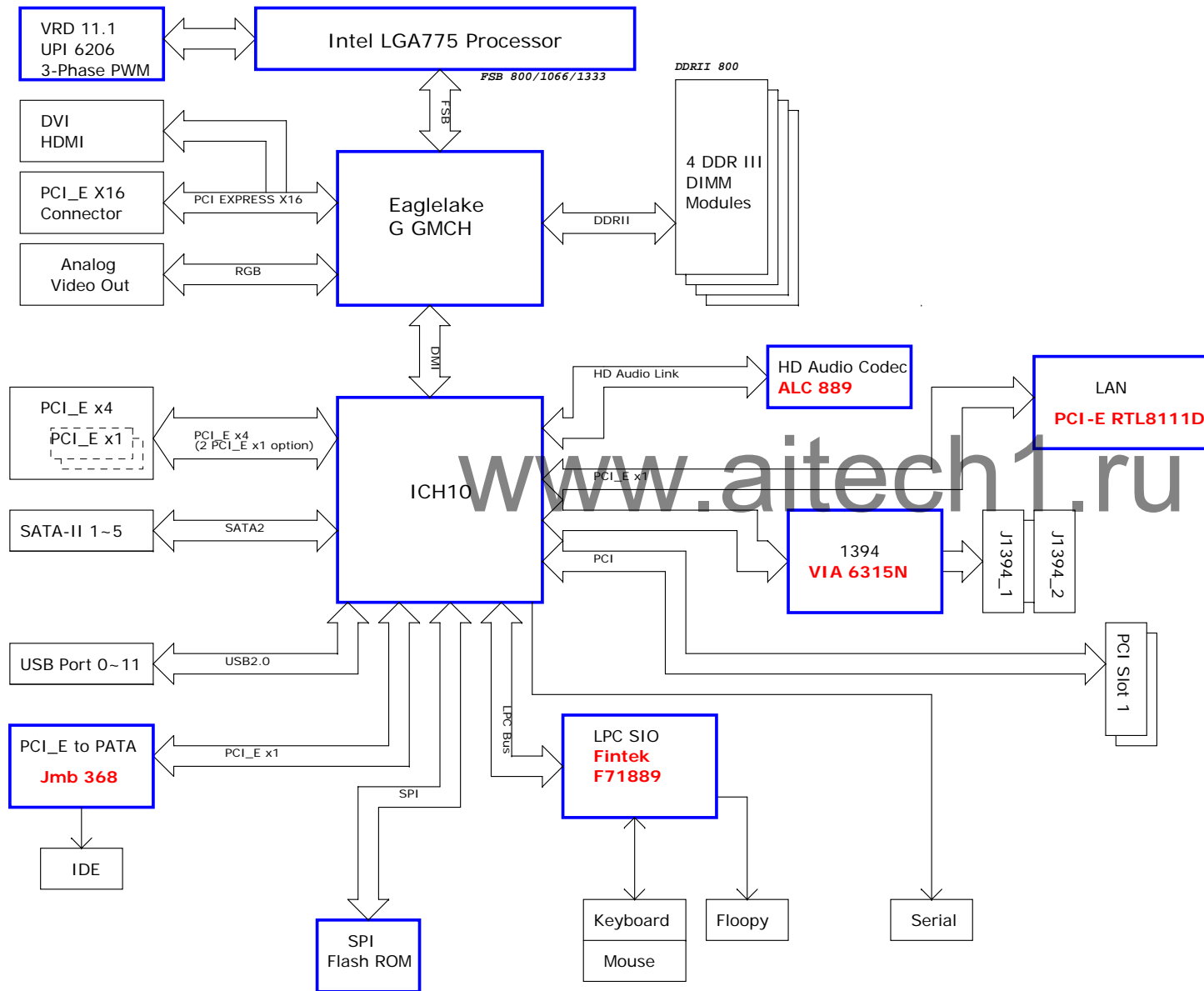
Expansion Slots:

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

PWM: UPI 6206

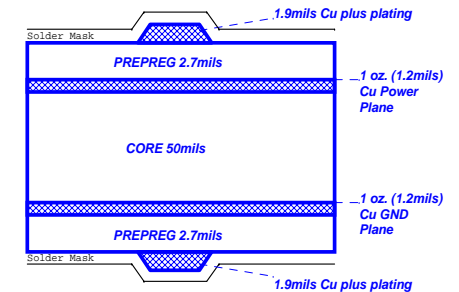
MICRO-STAR INT'L CO.,LTD		
MS-7609		
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Block Diagram



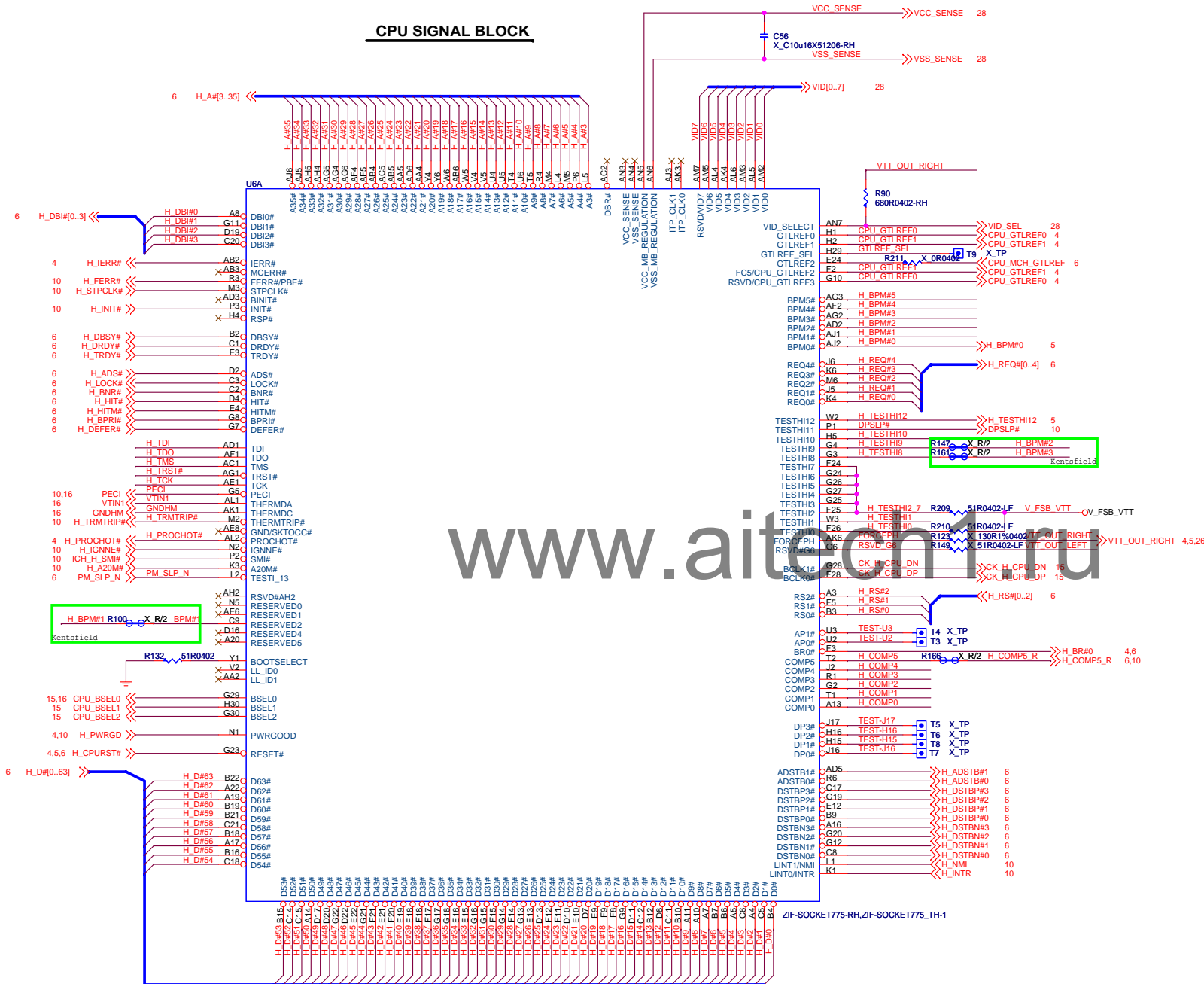
Board Stack-up

(1080 Prepreg Considerations)

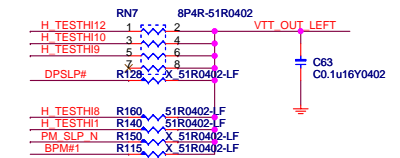
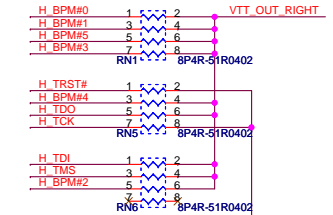
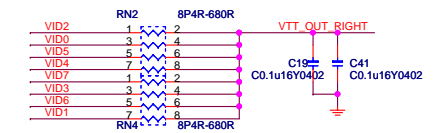


Single End 50ohm Top/Bottom : 4mils
 USB2.0 - 90ohm : 15/4.5/7.5/4.5/15
 SATA - 95ohm : 15/4/8/4/15
 LAN - 100ohm : 15/4/8/4/15
 PCIE - 95ohm : 15/4/8/4/15
 IEEE1394 - 110ohm : 15/4/9/4/15
 IDE : 15/4/8/4/15

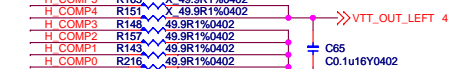
CPU SIGNAL BLOCK



PULL HIGHT PULL DOWN



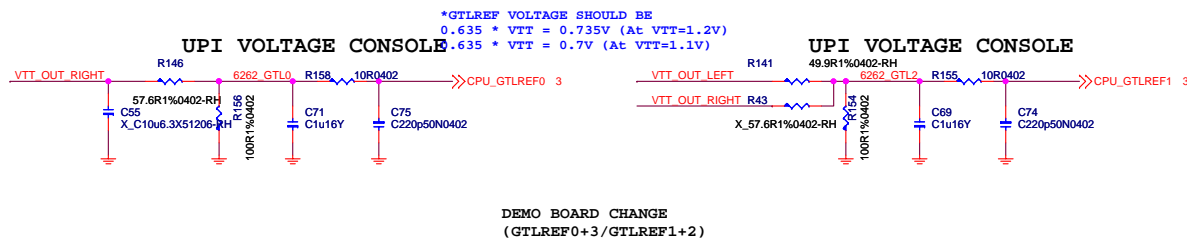
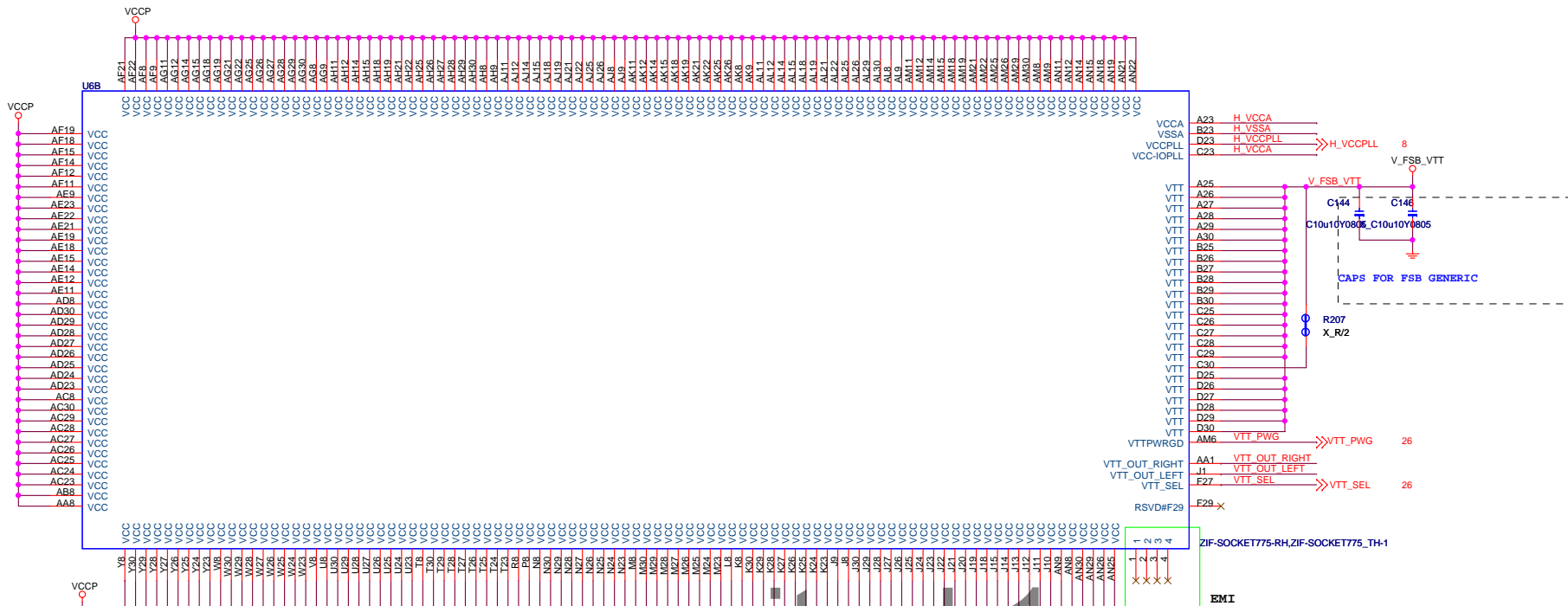
PM_SLP_N/H_TESTHI1
Demo schmatic is NC



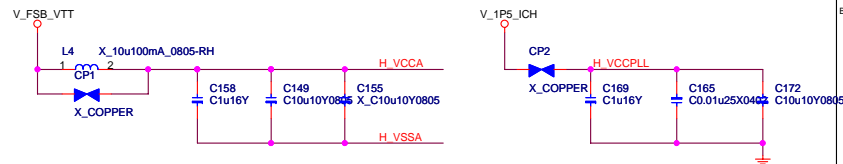
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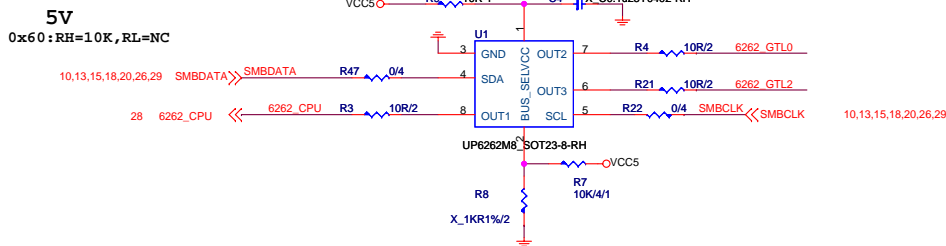


*PLACE COMPONENTS AS CLOSE AS POSSIBLE TO PROCESSOR SOCKET
 *TRACE WIDTH TO CAPS MUST BE NO SMALLER THAN 12MILS

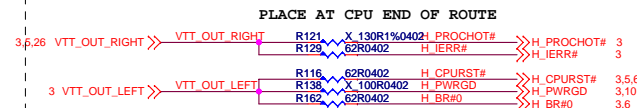


VTT_PWG SPEC :
 High > 0.9V
 Low < 0.3V
 Trise < 150ns

UPI VOLTAGE CONSOLE



VTT_PWRGOOD

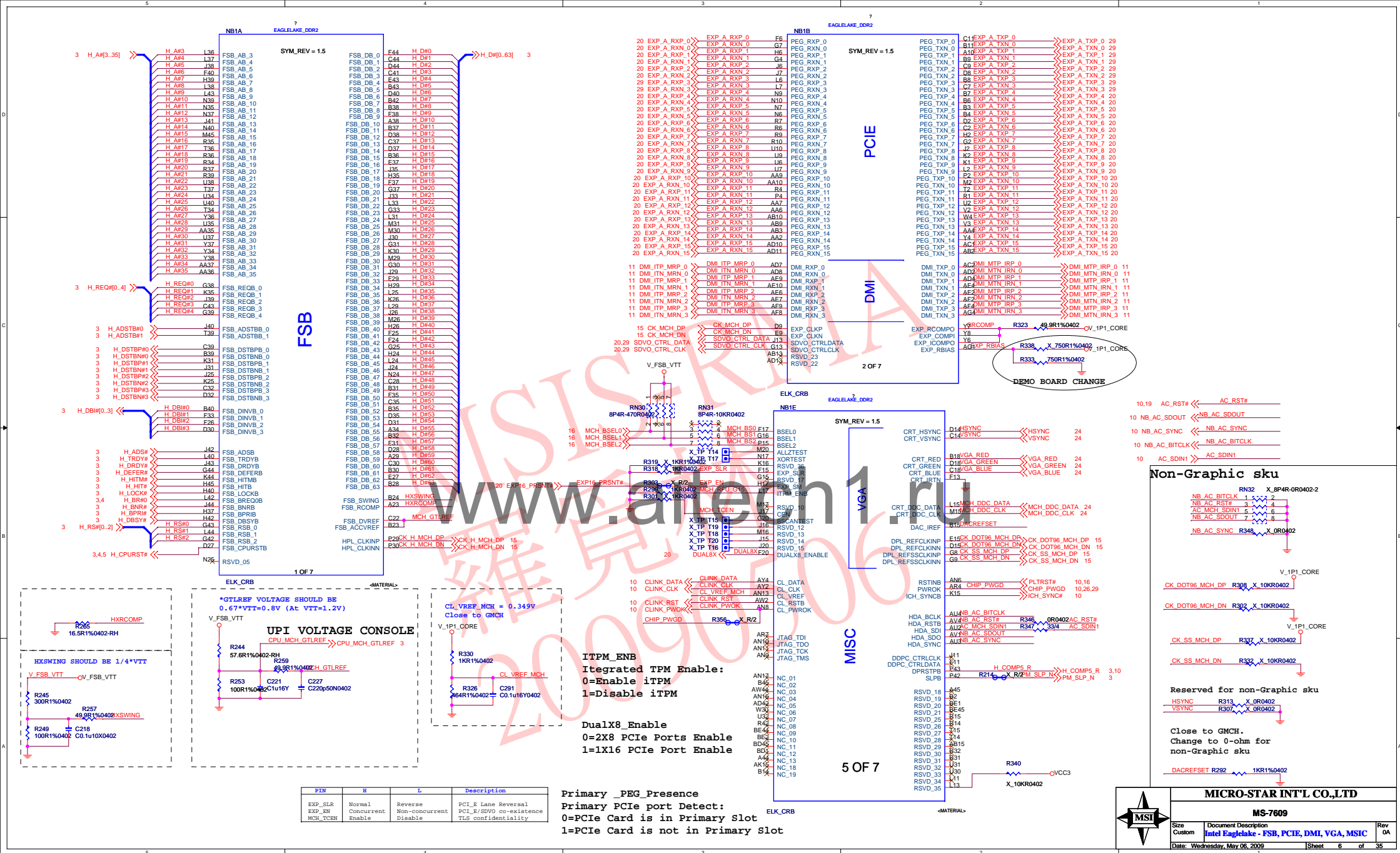


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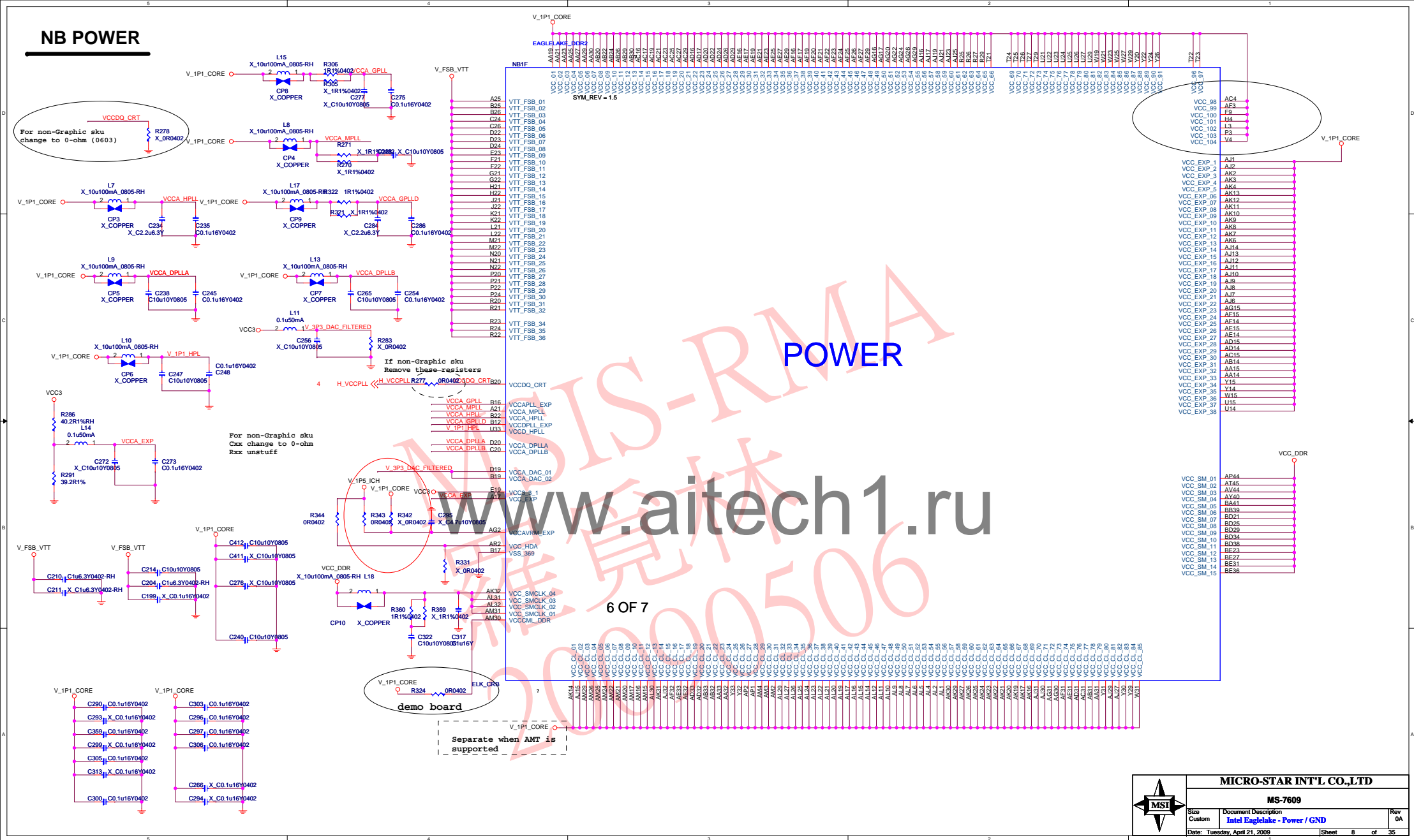
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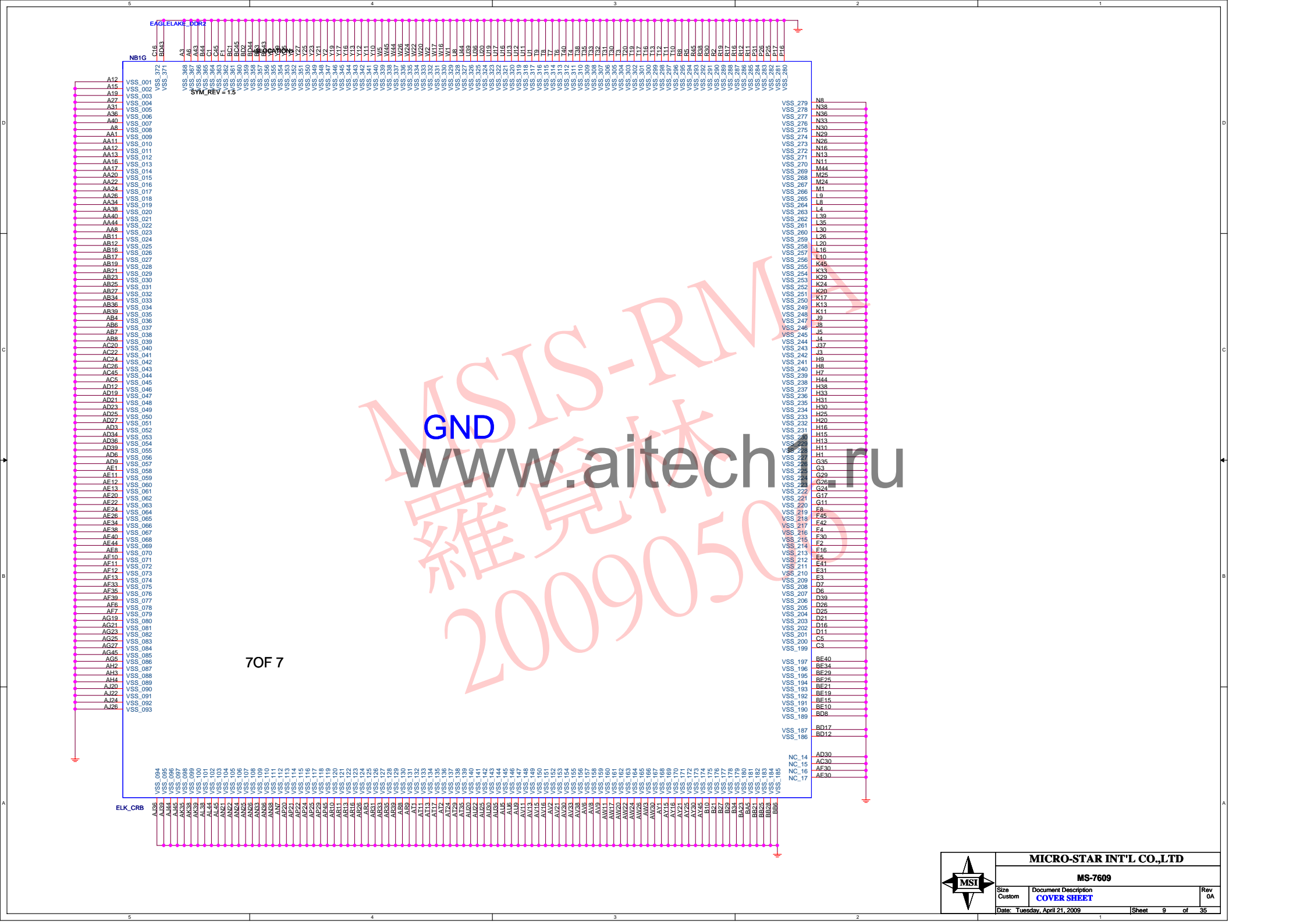
Size	Document Description	Rev
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NB POWER





EAGLE.DR2

NBIG

ELK_CRB

70F 7

GND

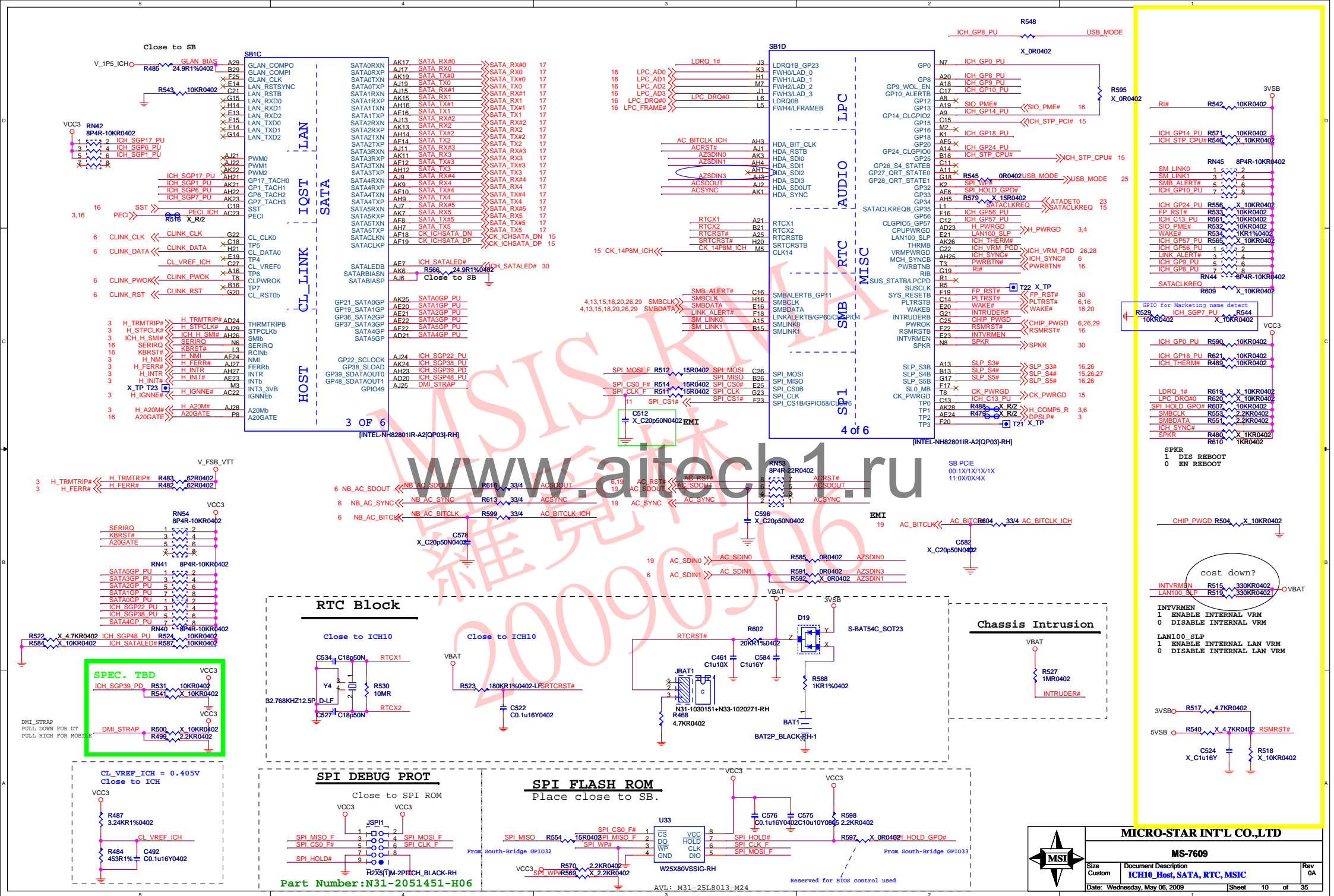
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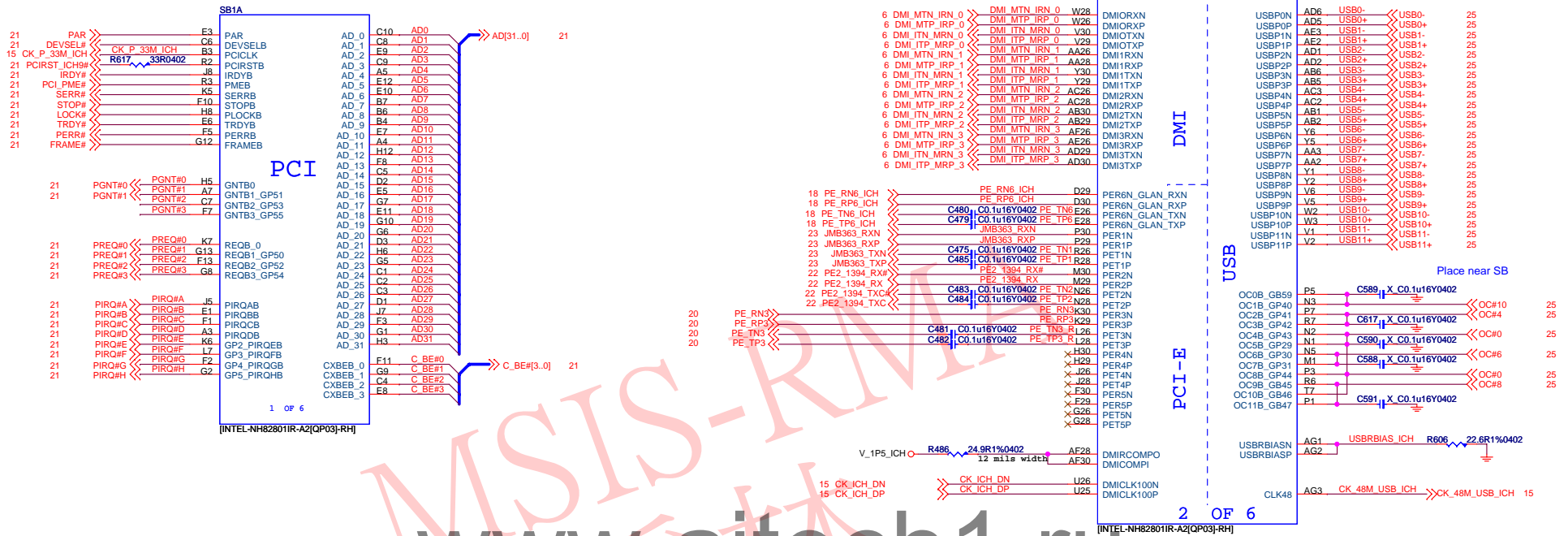
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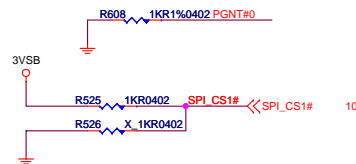


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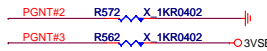
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Size	Document Description	Rev	
Custom	ICHI0_Host, SATA, RTC, MSIC	0A	
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SB STRAPPING RESISTOR



BOOT SELECT STRAPS		
BOOT DEVICE	GNT#0	SPI_CS1#
F'WH	1	1
SBI	0	X
PCI	1	0



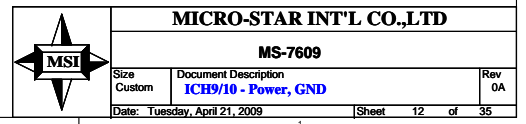
SIGNAL	H	L	DES.
GNT 3	DIS	EN	A16 OVERRIDE
GNT 2	N/A	SET BIT	PCIE PORT CONFIG 2 BIT 0 (5-6)

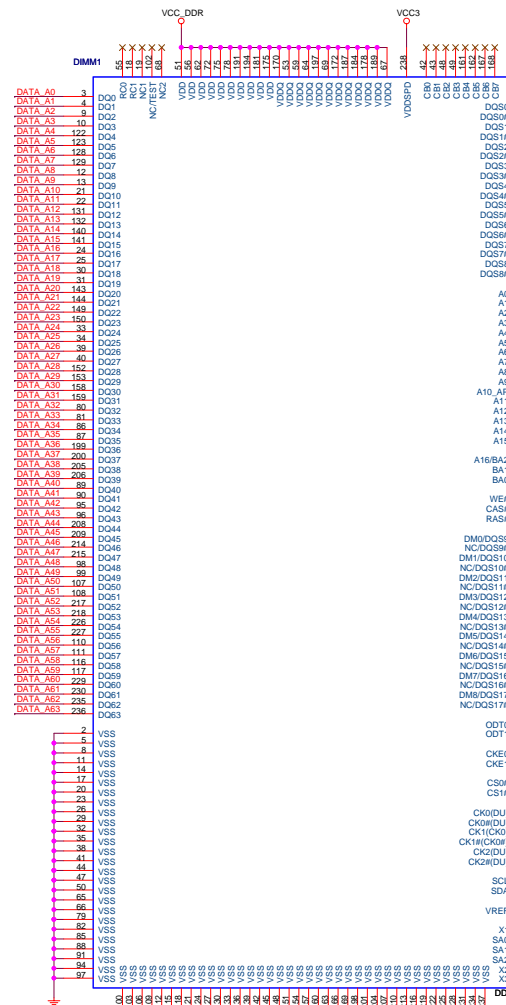


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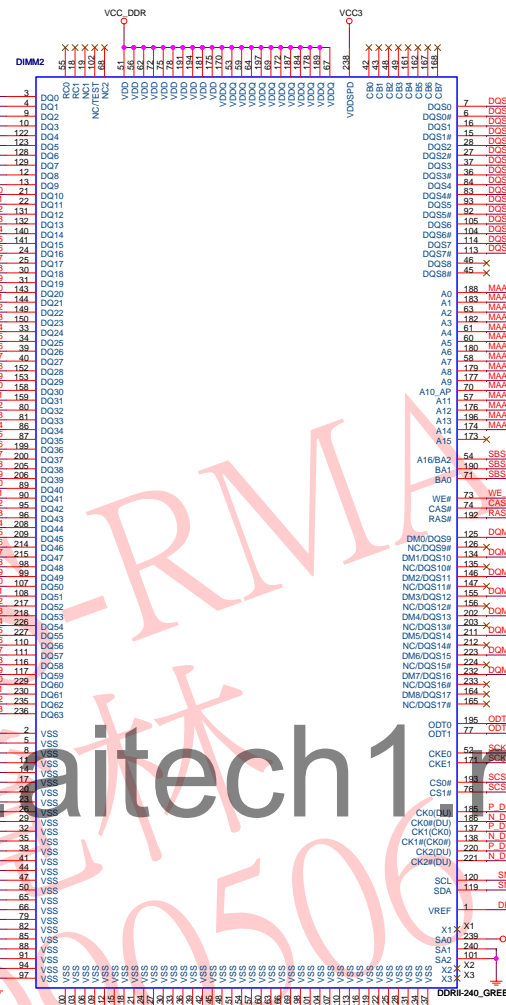
Size	Document Description	Rev
Custom	ICH10_PCI, USB, DMI, PCIe1	0A
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[illegible]



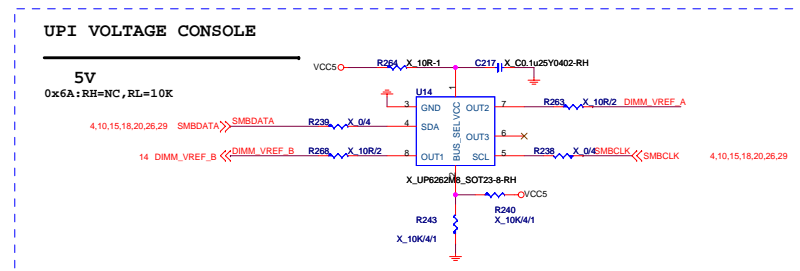
DDRII DIMM_A1

ADDRESS: 000
0xA0

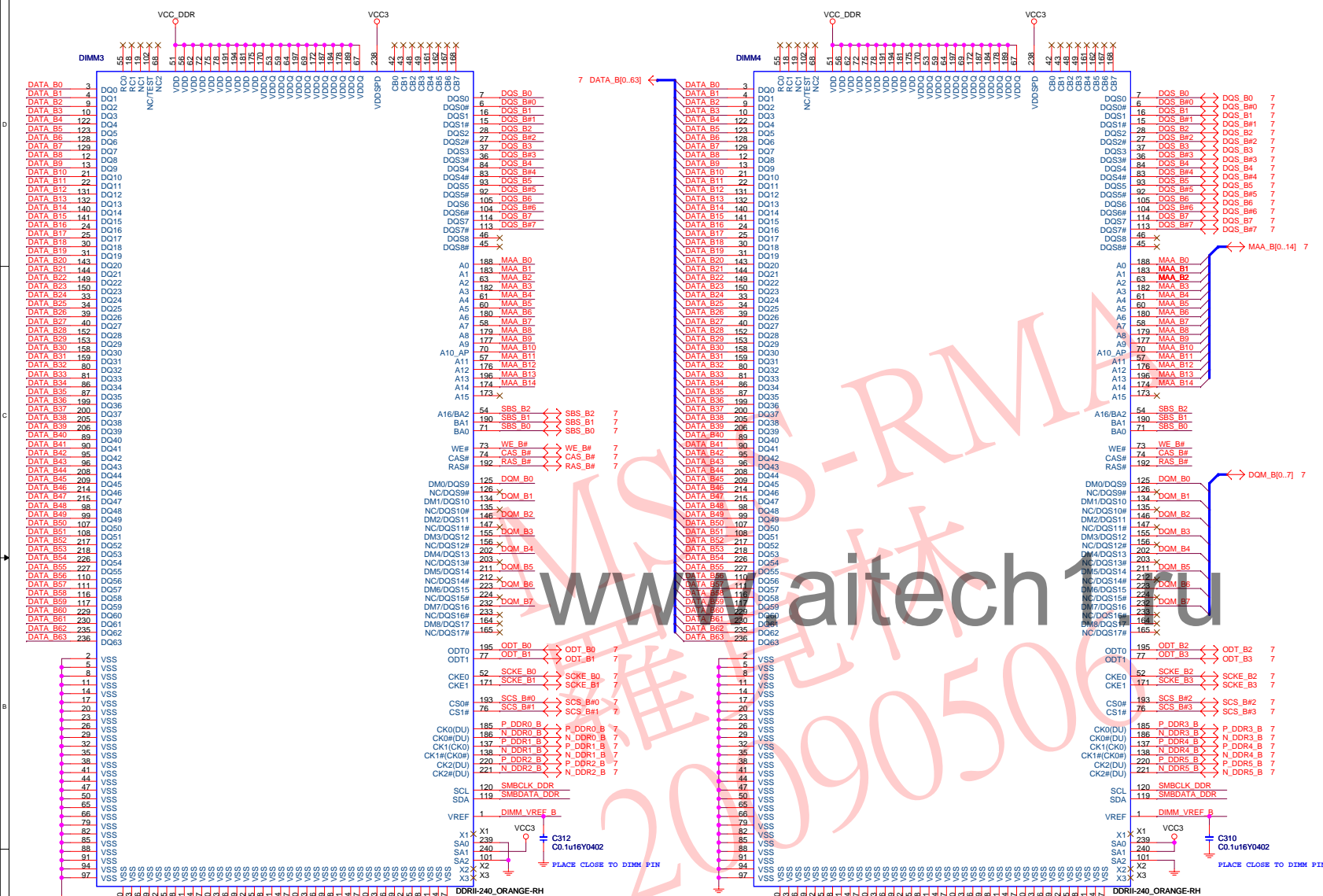


DDRII DIMM_A2

ADDRESS: 001
0xA2

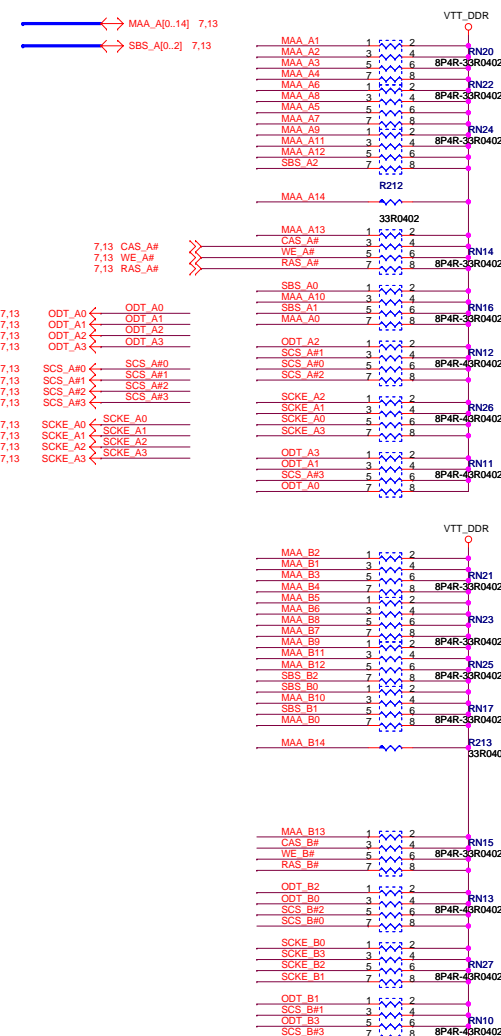


DDR II Termination



DDRII DIMM_B1

DDRII DIMM_B2

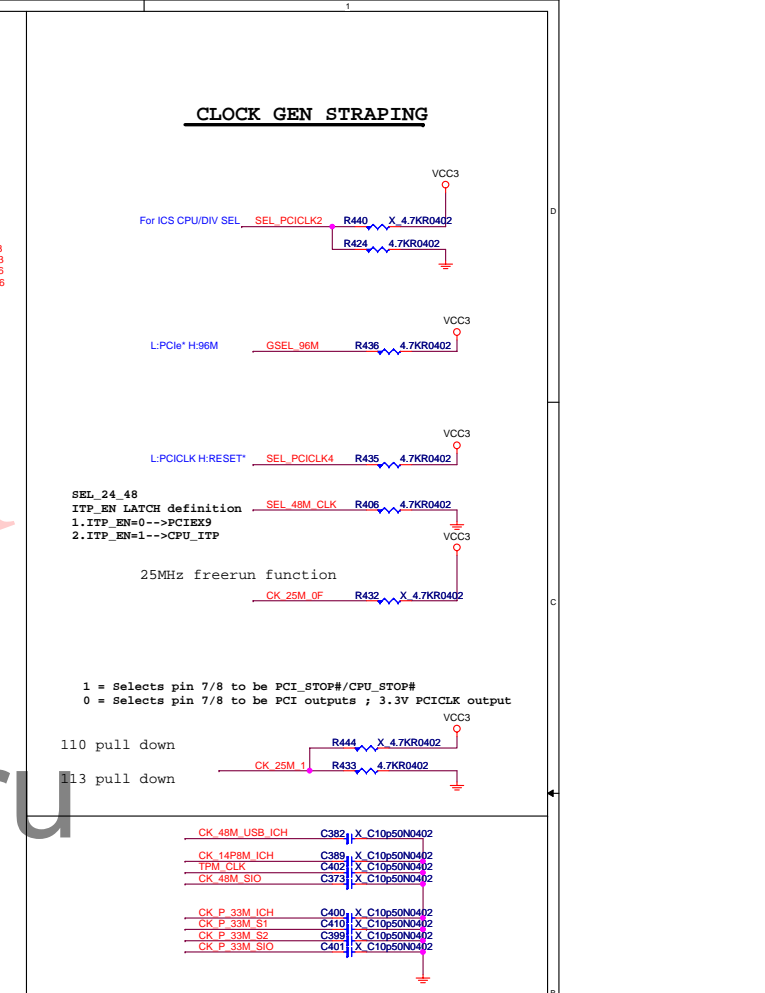


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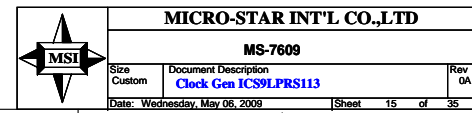
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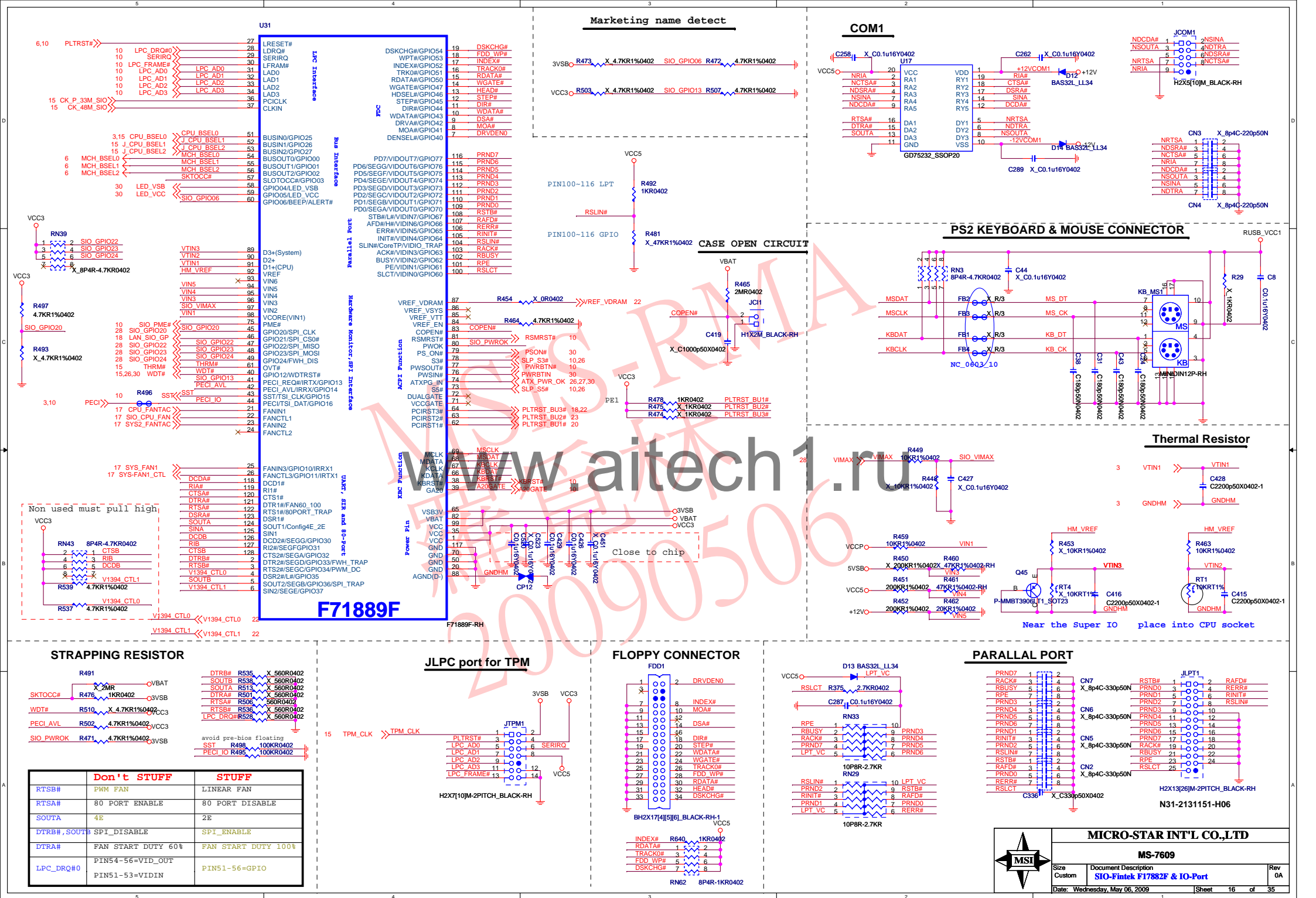
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Custom	DDR3 Chanel-A / Chanel-B

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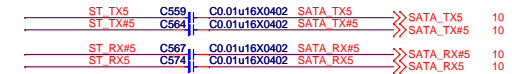
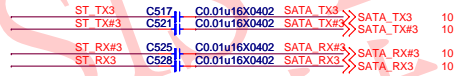
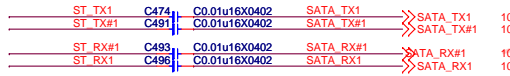
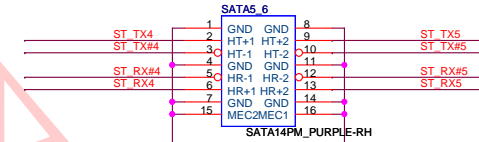
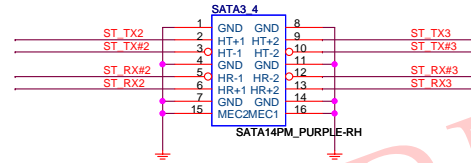
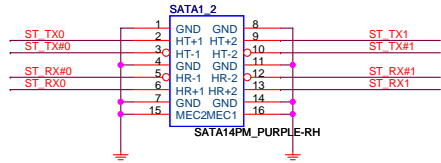
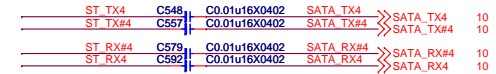
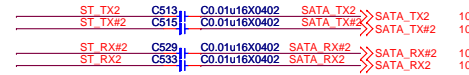


FS_C	FS_B	FS_A	CPU
0	0	1	133M
0	1	0	200M
0	0	0	266M
1	0	0	333M
1	1	0	333M



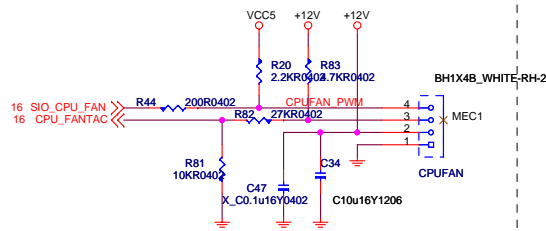


SATA

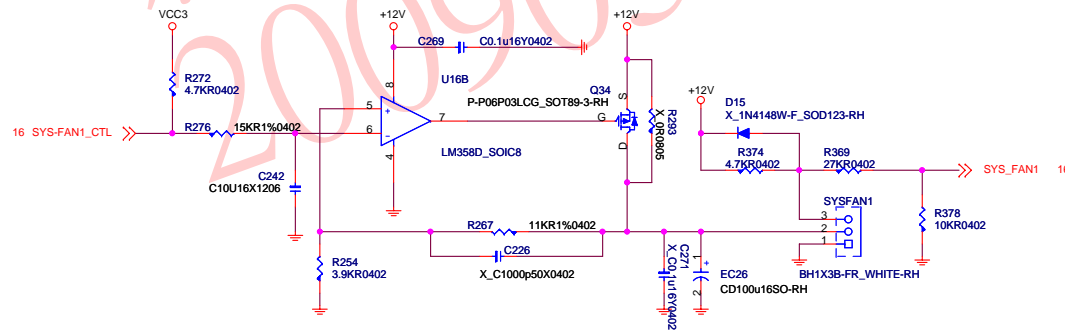


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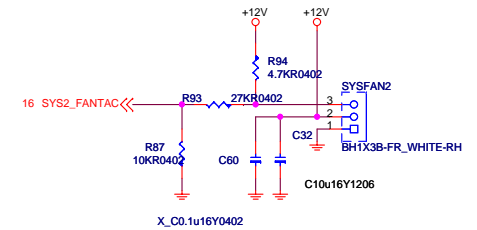
CPU FAN



SYSTEM FAN



PWR-FAN

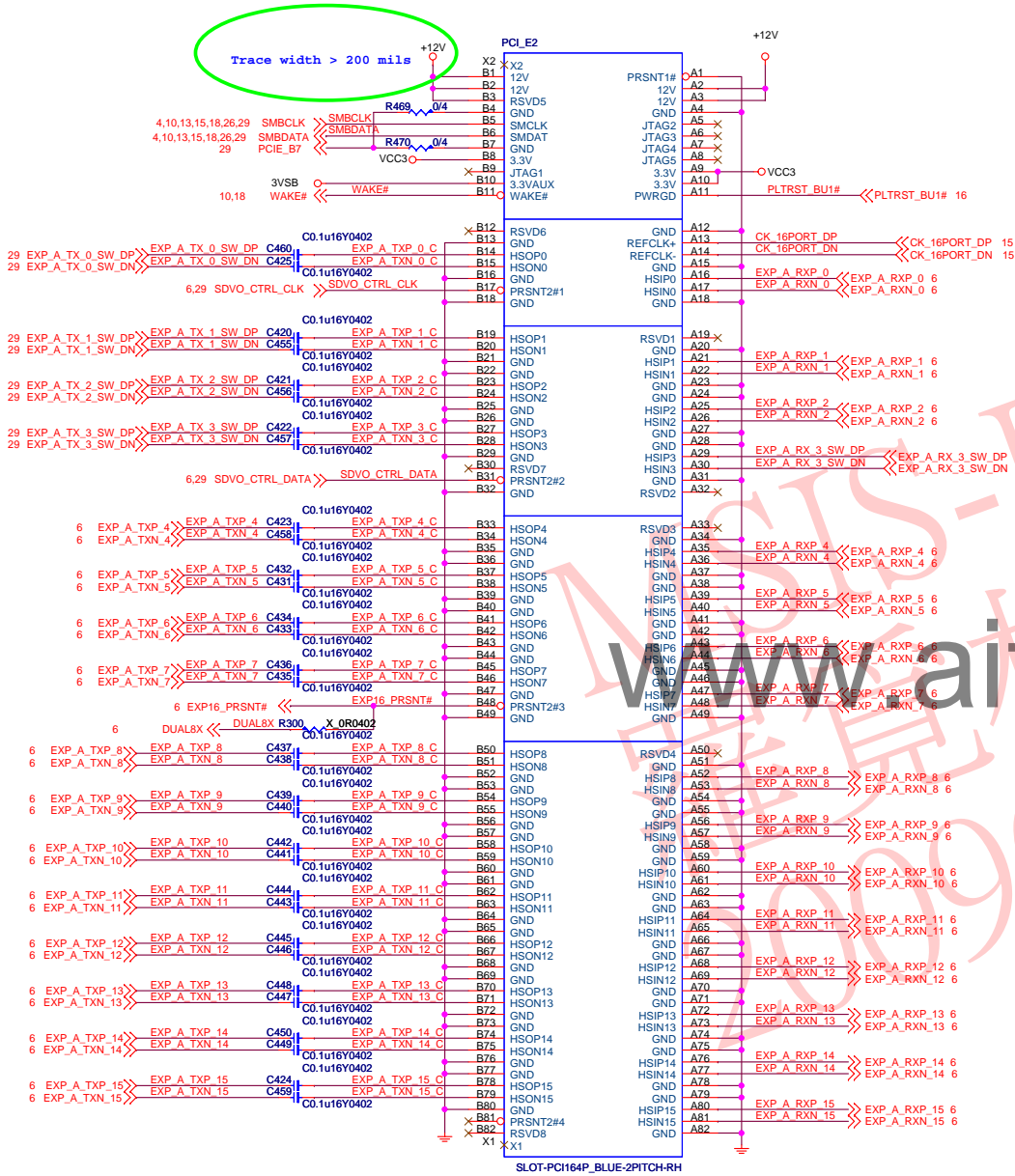


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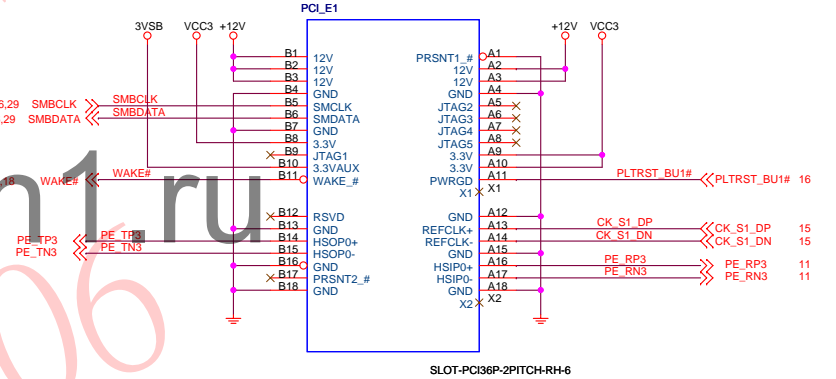
MS-7609

Size	Document Description	Rev
Custom	SATA & e-SATA Ports and Fan Control	0A
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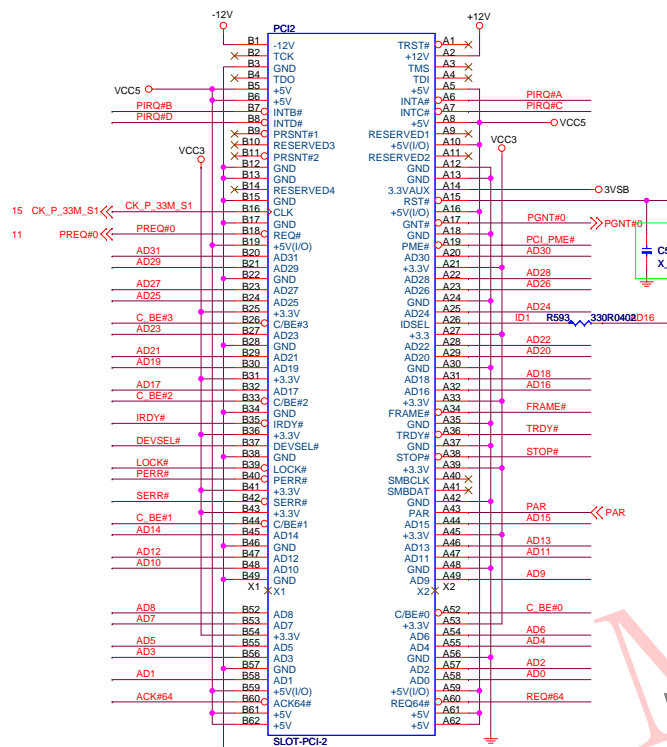
PCI_Express X16 Slot



PCI EXPRESS x1-PORT



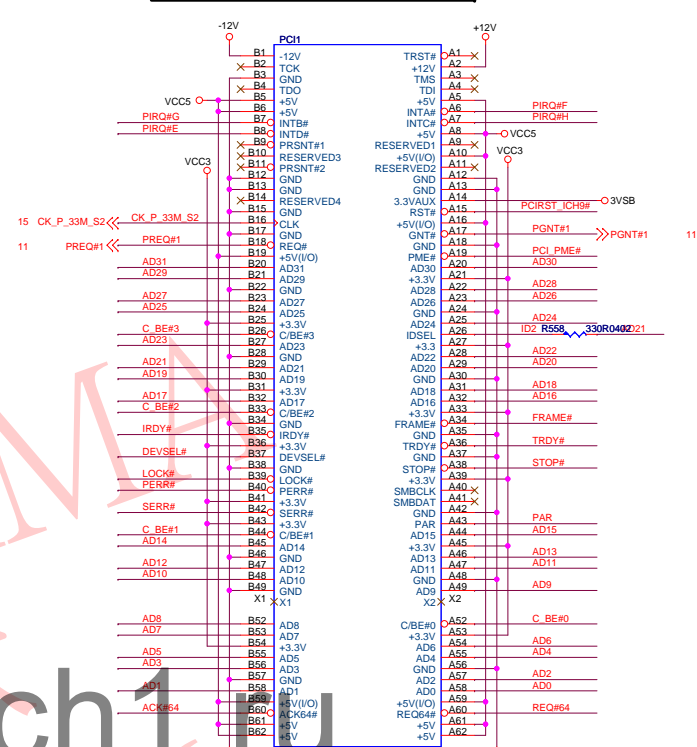
PCI SLOT 2 (PCI VER: 2.2 COMPLY)



```

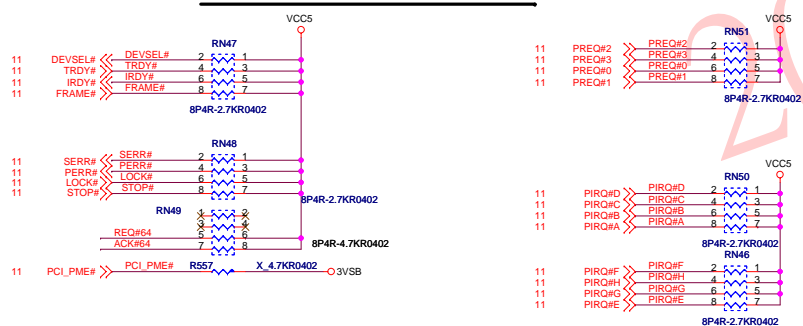
IDSEL = AD16
MASTER = PREQ#0
PIRQ#A

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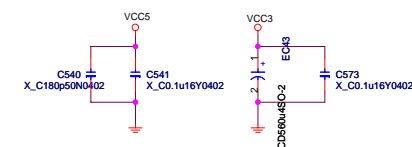


```
IDSEL = AD21
MASTER = PREQ#1
PIRQ#F
```

PCI PULL-UP / DOWN RESISTORS



PCI SLOT DECOUPLING CAPACITORS



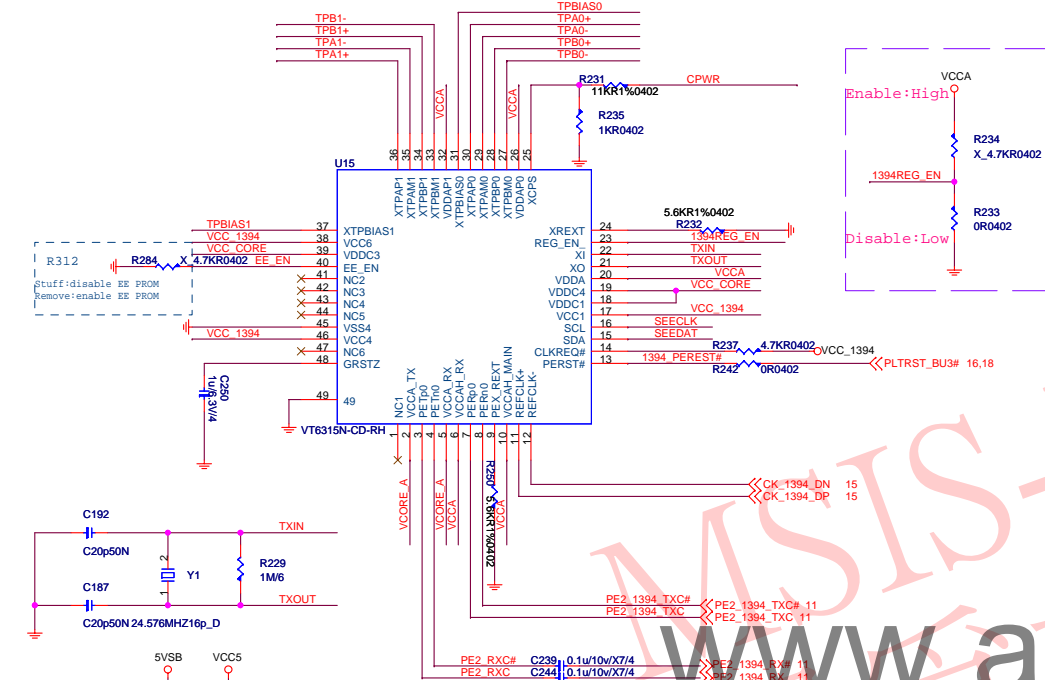
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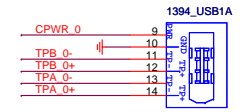
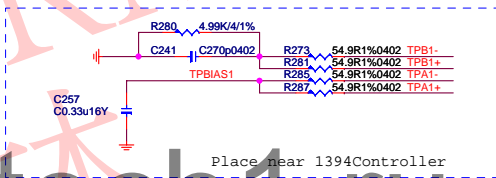
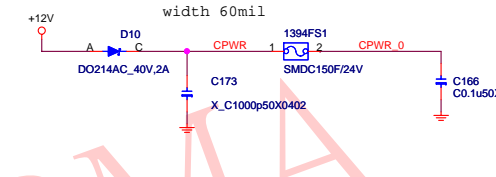
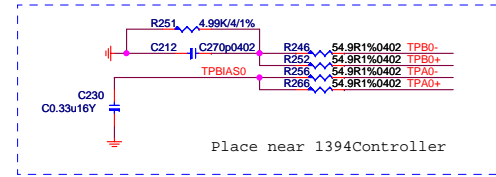
Size Custom	Document Description PCI Slot 1 & 2	Rev 0A
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1394 CONTROLLER

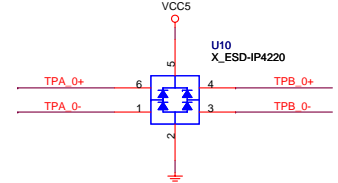
Rear 1394 port



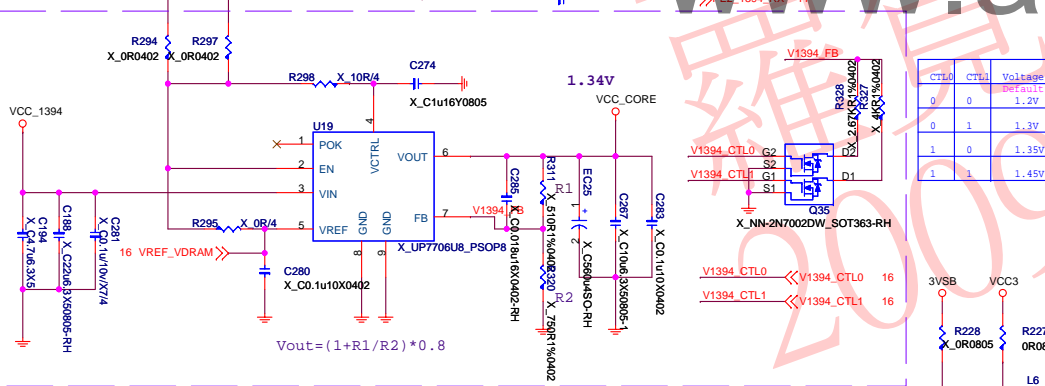
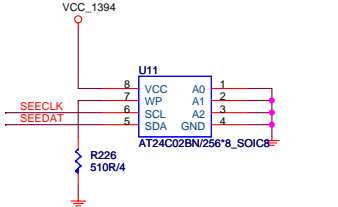
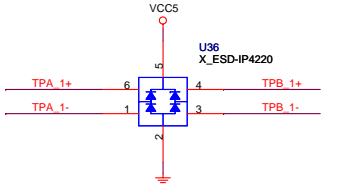
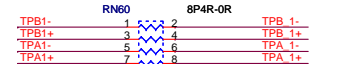
Front 1394 pin header



N58-14M0031-L06



N31-2051551-H06



CTL0	CTL1	Voltage
0	0	1.2V
0	1	1.3V
1	0	1.35V
1	1	1.45V

V1394 CTL0 G2
V1394 CTL1 G2
V1394 CTL0 S2
V1394 CTL1 S2
V1394 CTL0 S1
V1394 CTL1 S1

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

V1394 CTL0 16
V1394 CTL1 16

VT6315N Power domain chart

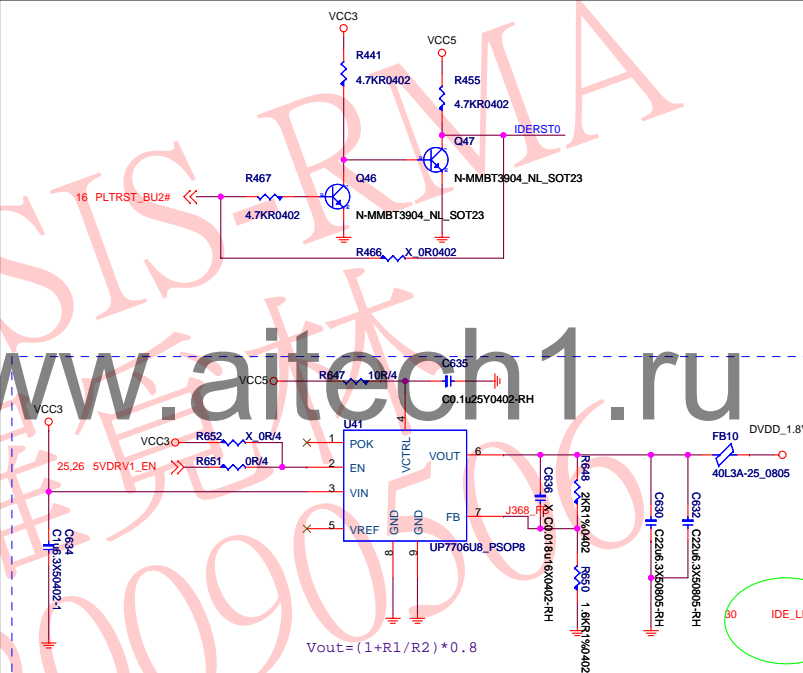
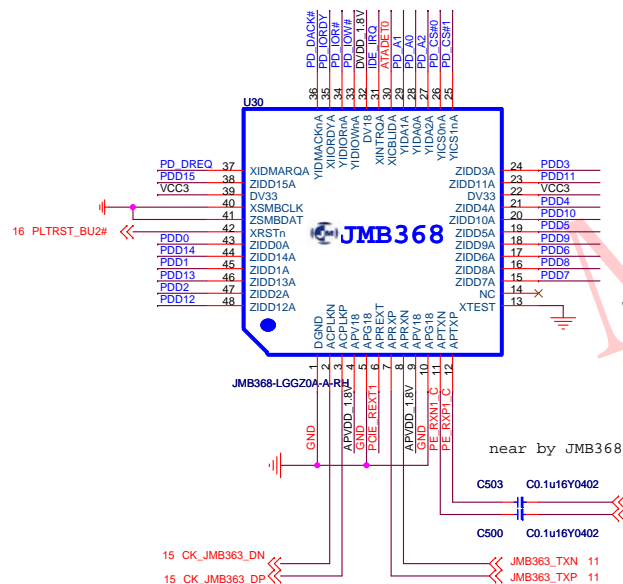
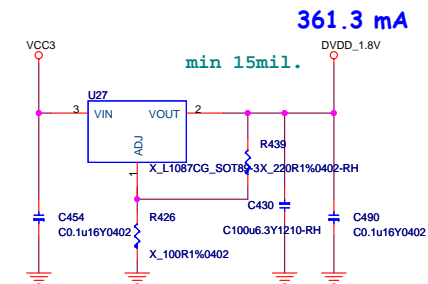
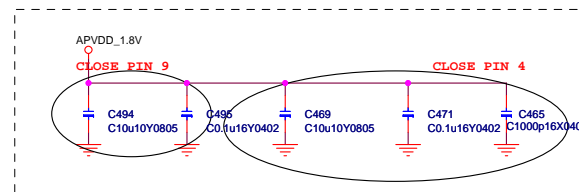
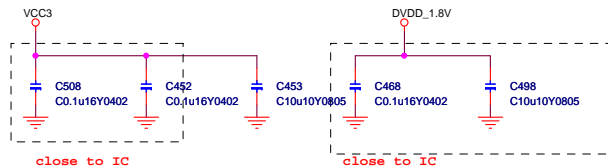
PIN Name	PIN NO.	Description
VCC_1394	17,46,38	PCIE power 3.3V
VCCA	6,10,20,26,32	Analog power 3.3V
VCC_CORE	18,19,39	Core power 1.2V
VCORE_A	2,5	Analog core power 1.2V

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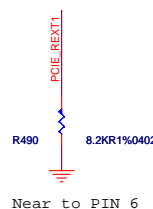
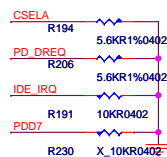
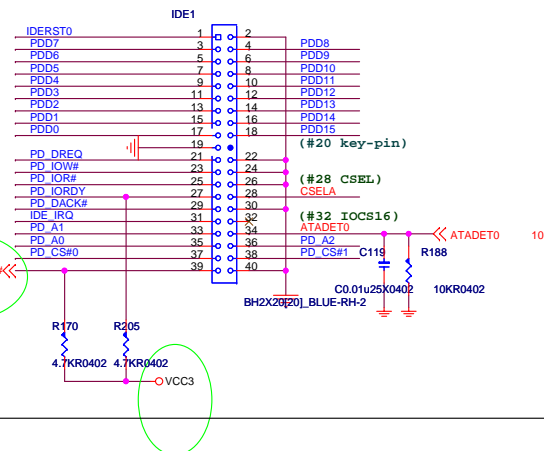
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Size Custom Document Description **VIA 1394** Rev 0A

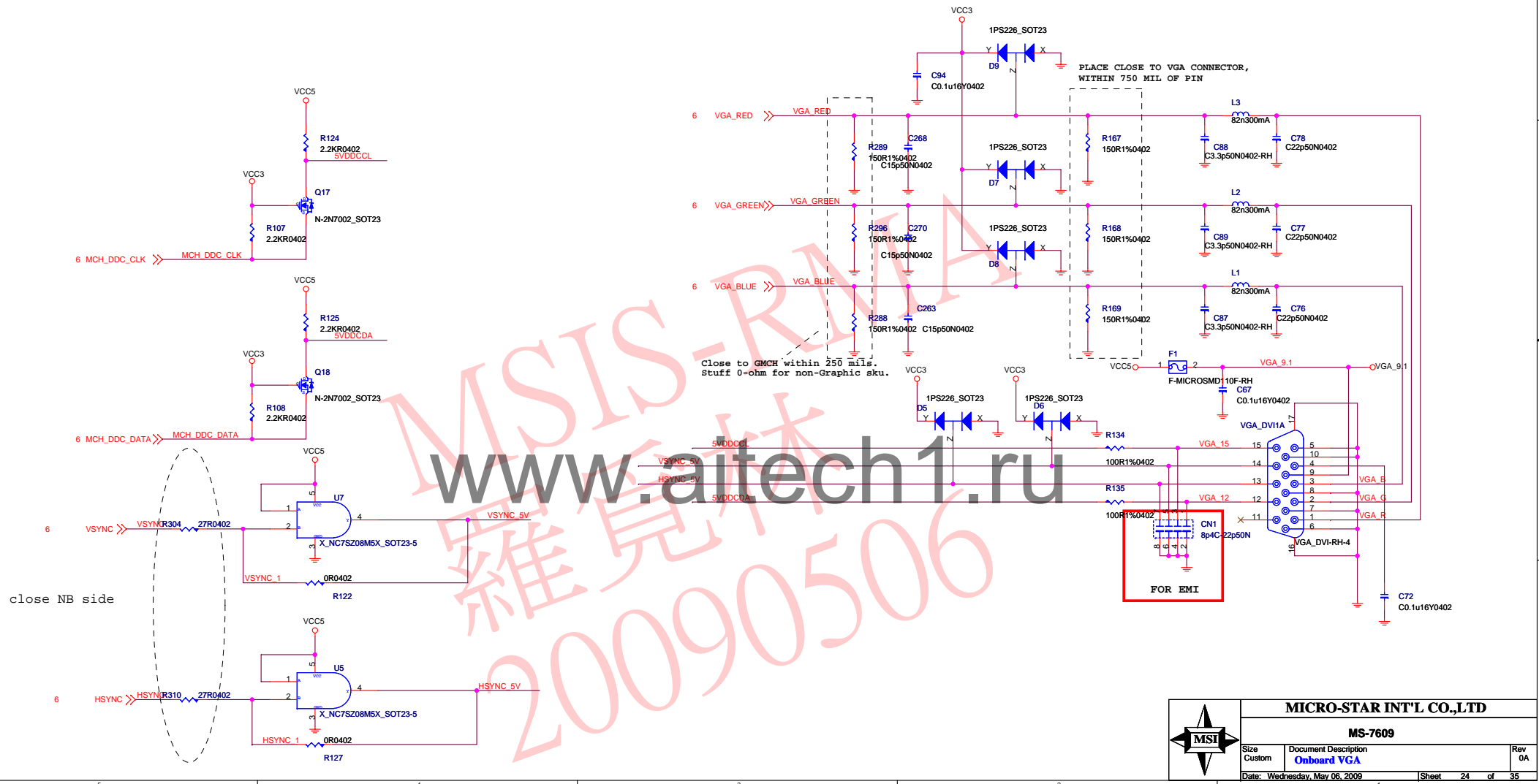
Date: Thursday, April 23, 2009 (Sheet 22 of 35)



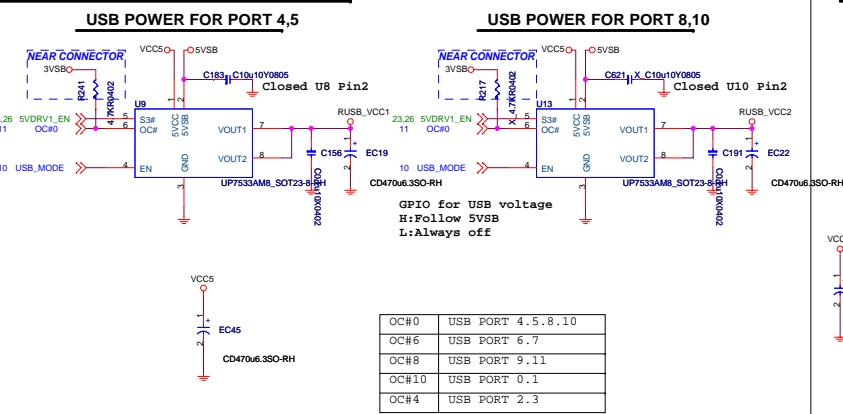
IDE Connector



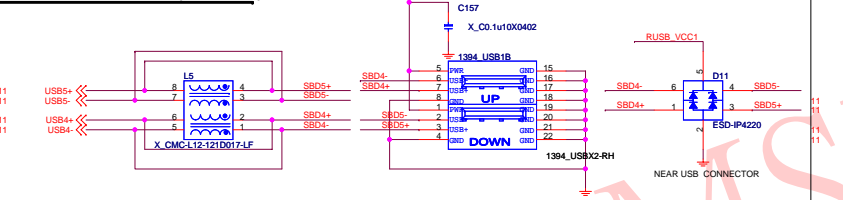
Video Connector



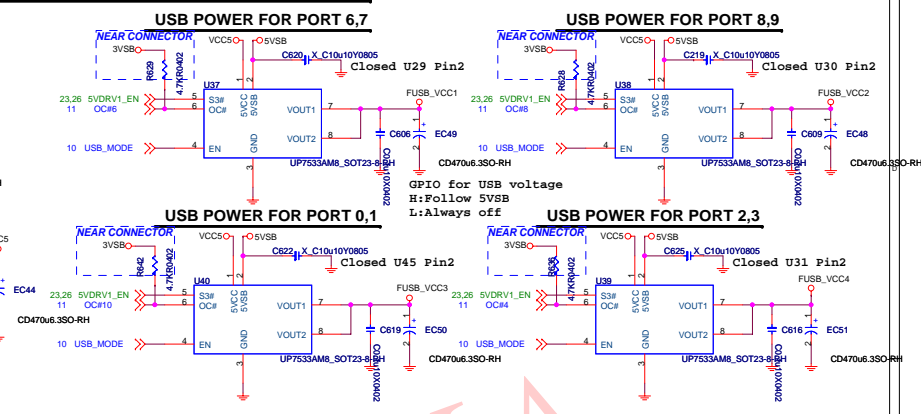
Rear USB Connector



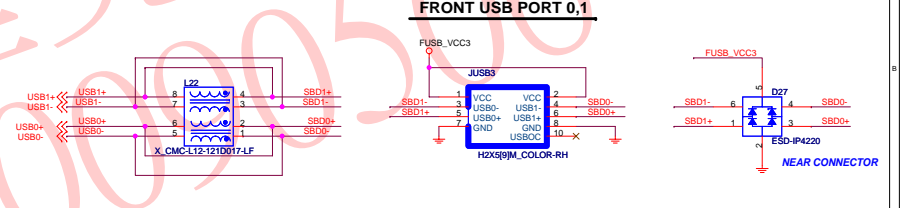
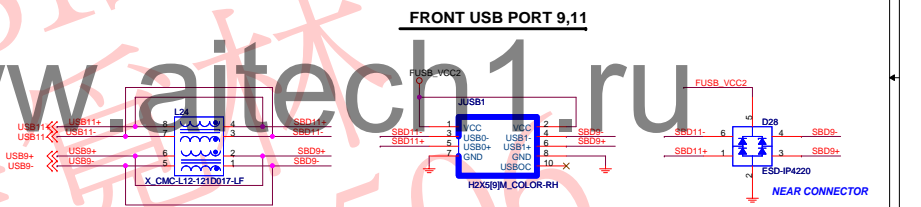
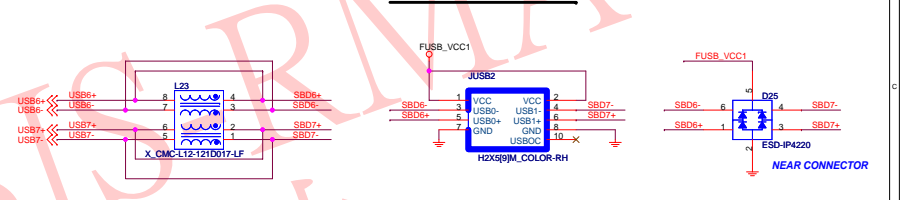
REAR USB PORT 4,5(With 1394)

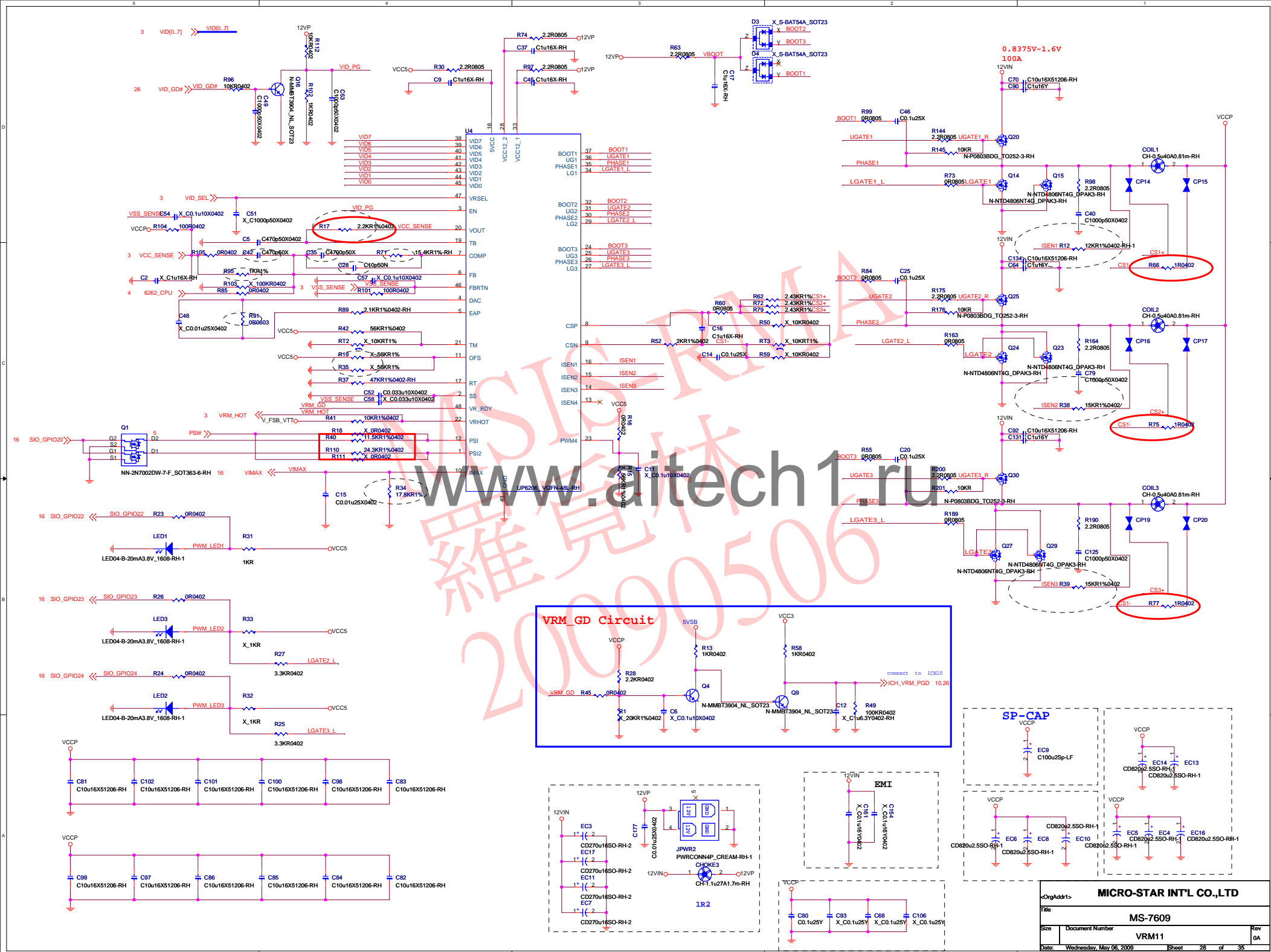


Front USB Connector



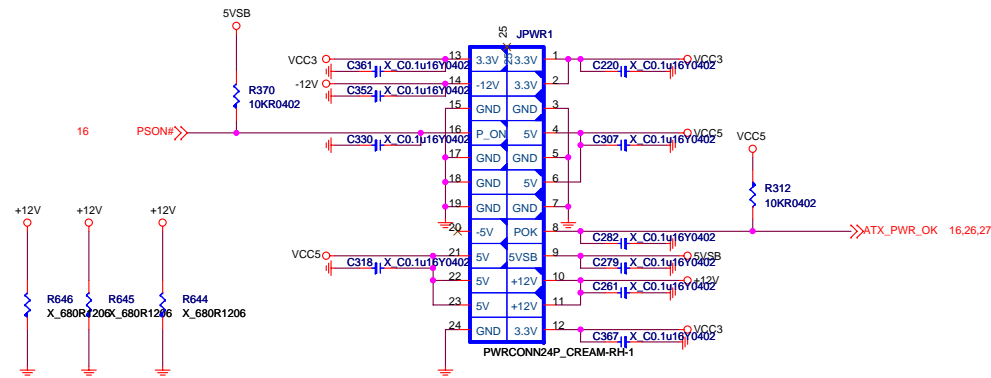
FRONT USB PORT 6,7







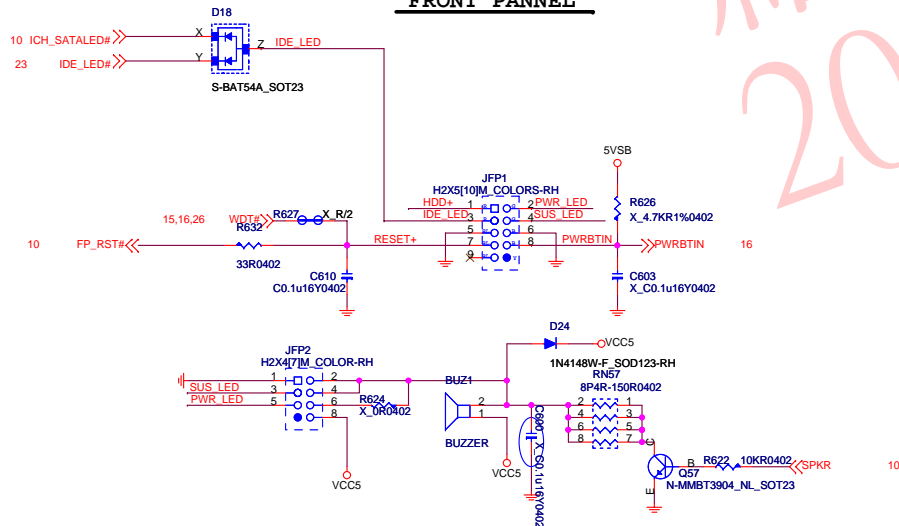
ATX POWER CONNECTOR



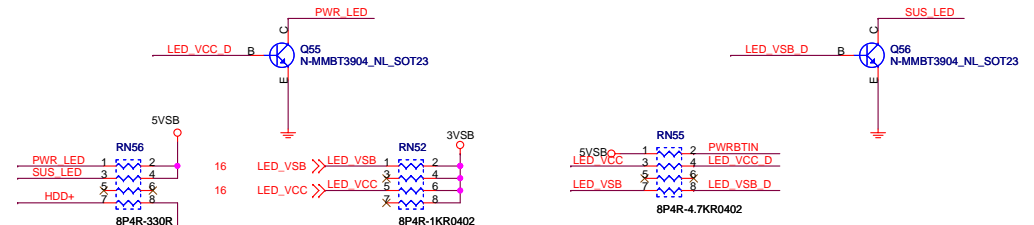
Cap. for EMI & Power



FRONT PANNEL



LED (for Fintek 71889)

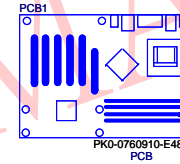
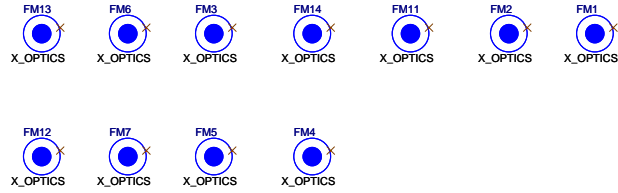


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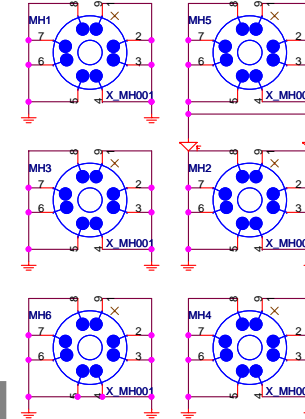
MS-7609

Size	Document Description	Rev
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Optics Orientation Holes



Mounting Holes



Simulation

