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MS-7176

Version 100

CPU:

Intel Prescott (L2=2MB) - 3.4G & Above
Intel Cendar Mill (65nm) - 3.73G & Above
Intel Smithfield (90nm Dual core)

System Chipset:

Intel Lakeport - GMCH (North Bridge)
Intel ICH7R (South Bridge)

On Board Chipset:

BIOS -- FWH EEPROM
Aliza Codec -- ALC882
LPC Super I/O -- W83627THF
LAN-- Intel Tekoa(82573E)/EKronR(82562GZ)
CLOCK -- ICS954559
1394 Controller -- VT6307 2pots
IDE RAID Controller -- VT6410

Main Memory:

DDR II * 4 (Max 4GB)

Expansion Slots:

PCI2.3 SLOT * 3
PCI EXPRESS X1 SLOT * 2
PCI EXPRESS X16 SLOT

RickTek PWM:


Controller: RT8804 5 Phases

opt A: 945P+ICH7R+VIA1394+VIA6410+giga LAN (Cfg-STD)

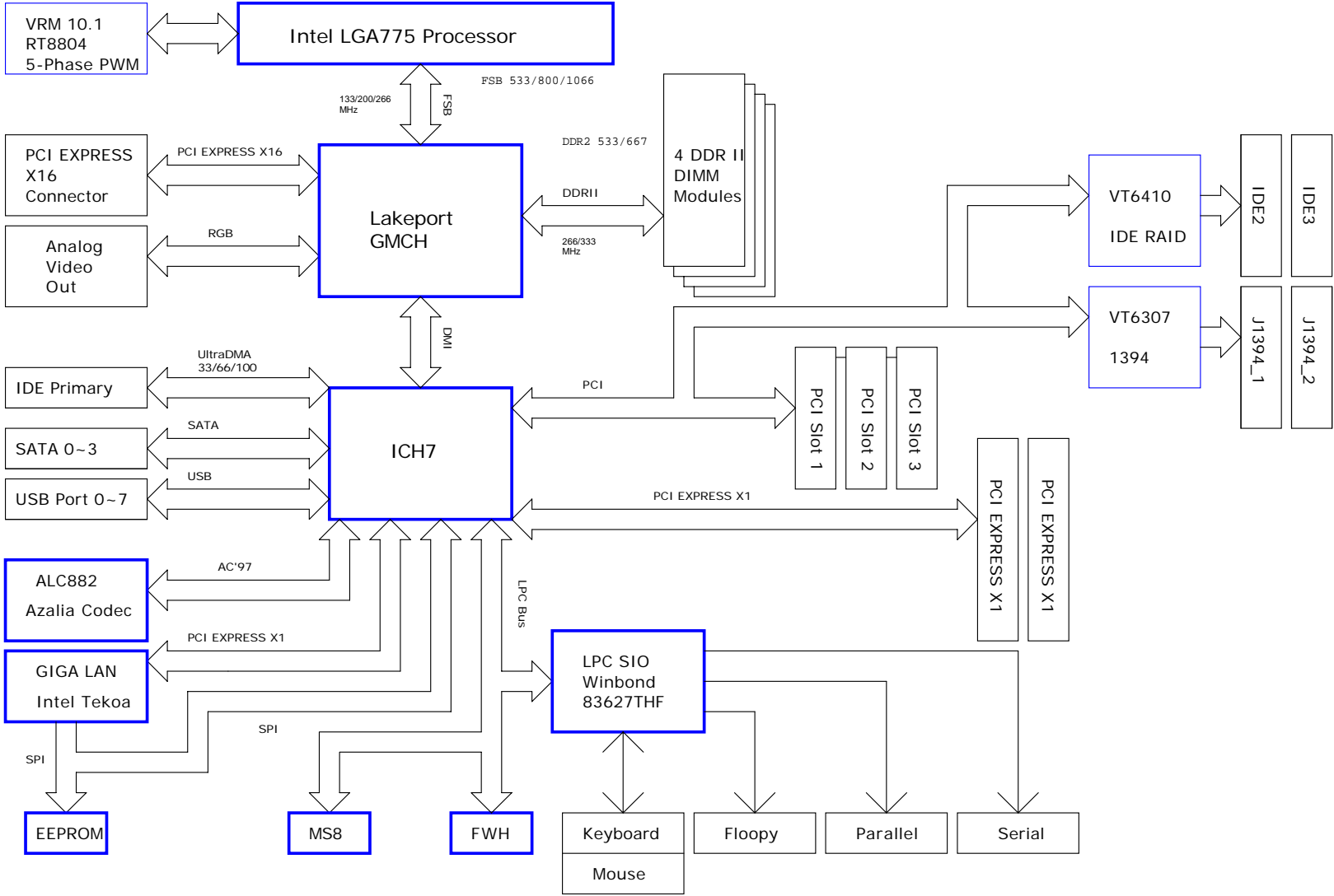
opt B: 945P+ICH7+ GIGA LAN (cfg-945P-ICH7-GL)

opt C: 945G+ICH7R+VIA1394+VIA6410+giga LAN (Cfg-945G-ICH7R-GL)

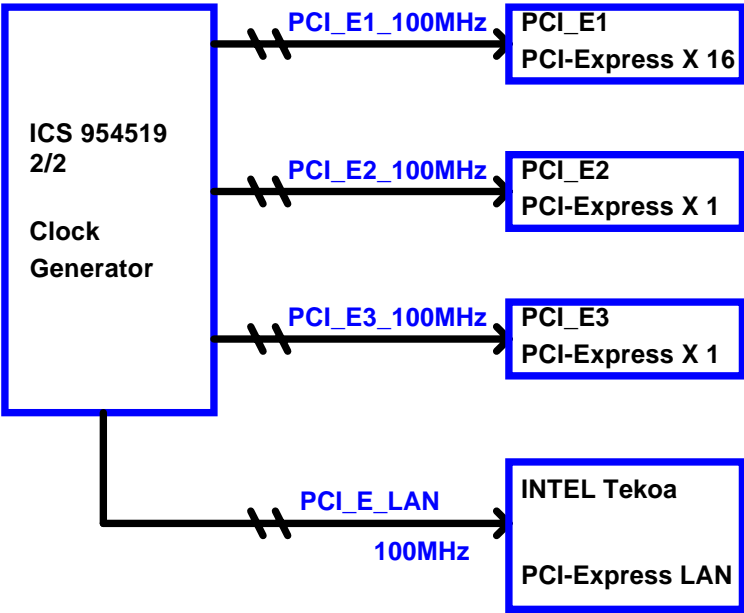
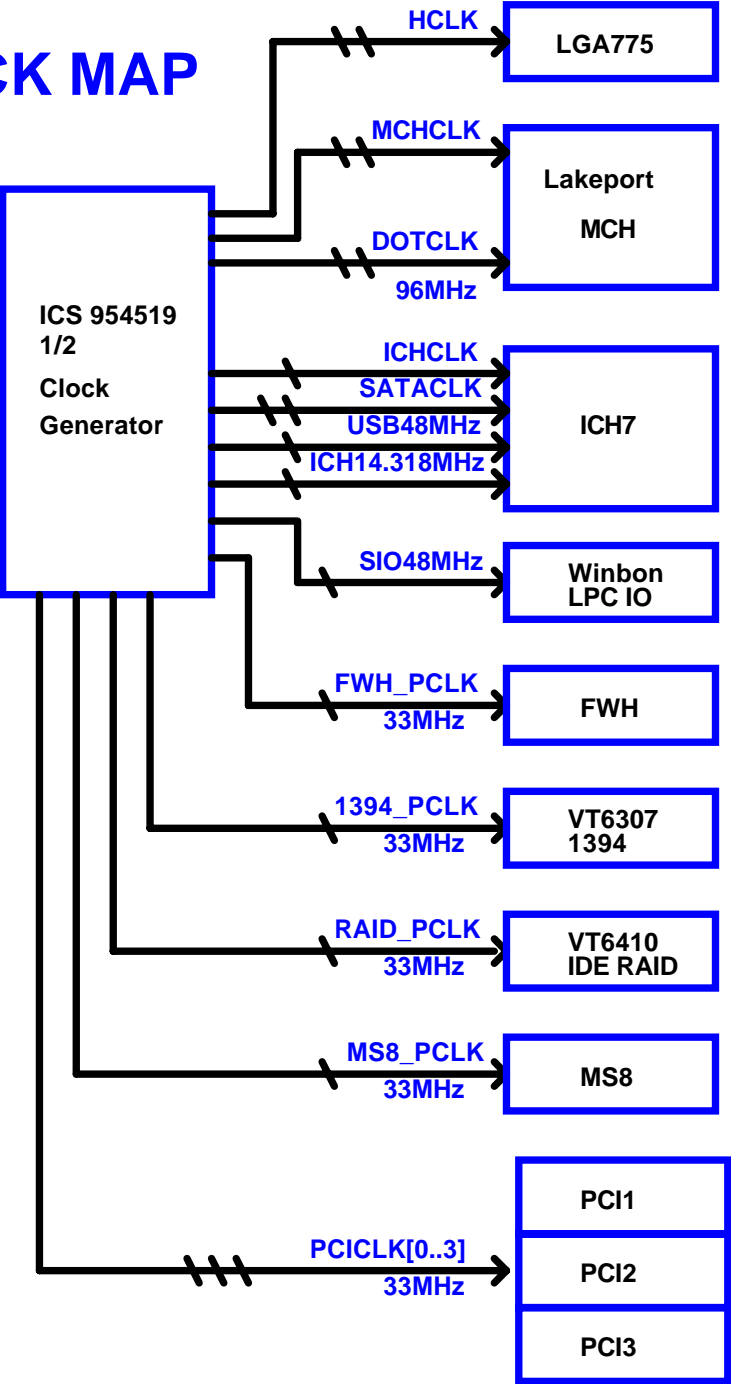
opt D: 945G+ICH7+ GIGA LAN (cfg-945G-ICH7-GL)

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Title COVER SHEET			
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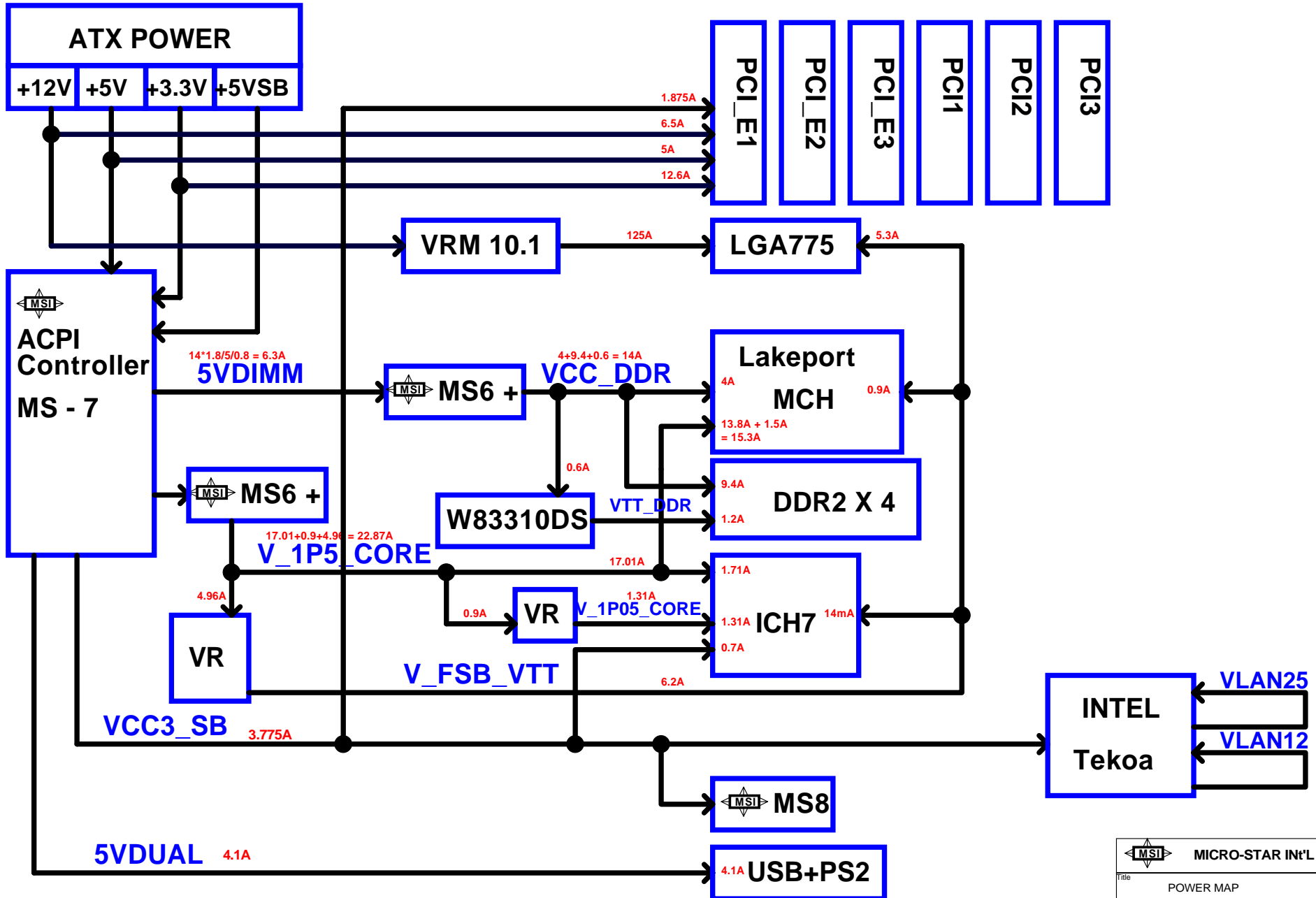
Block Diagram



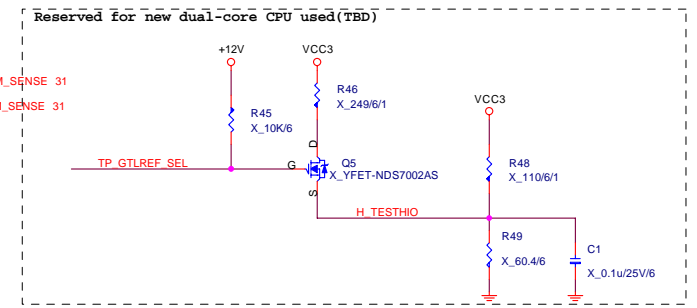
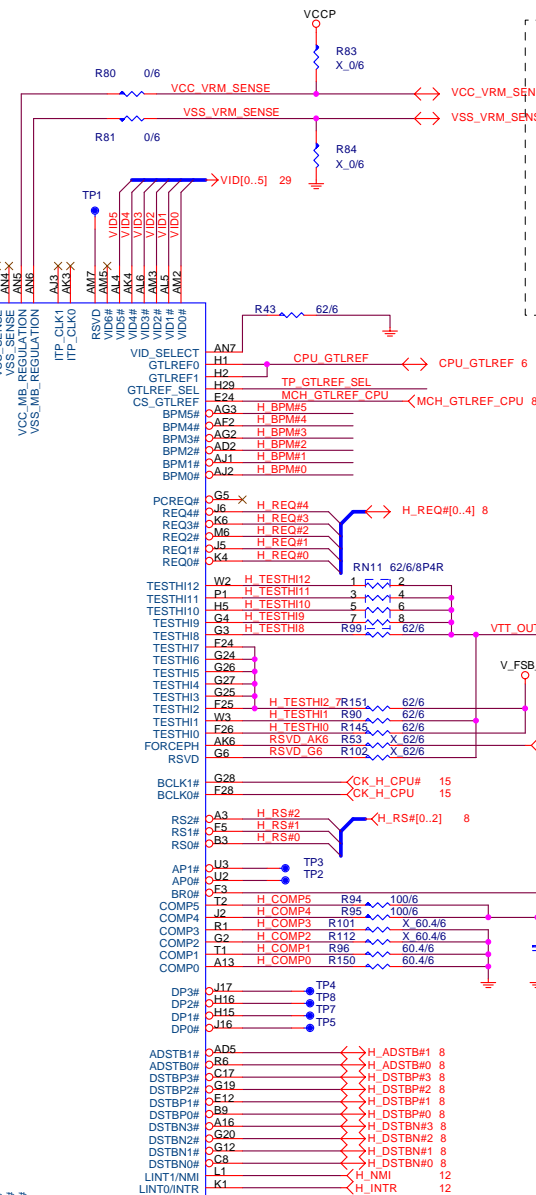
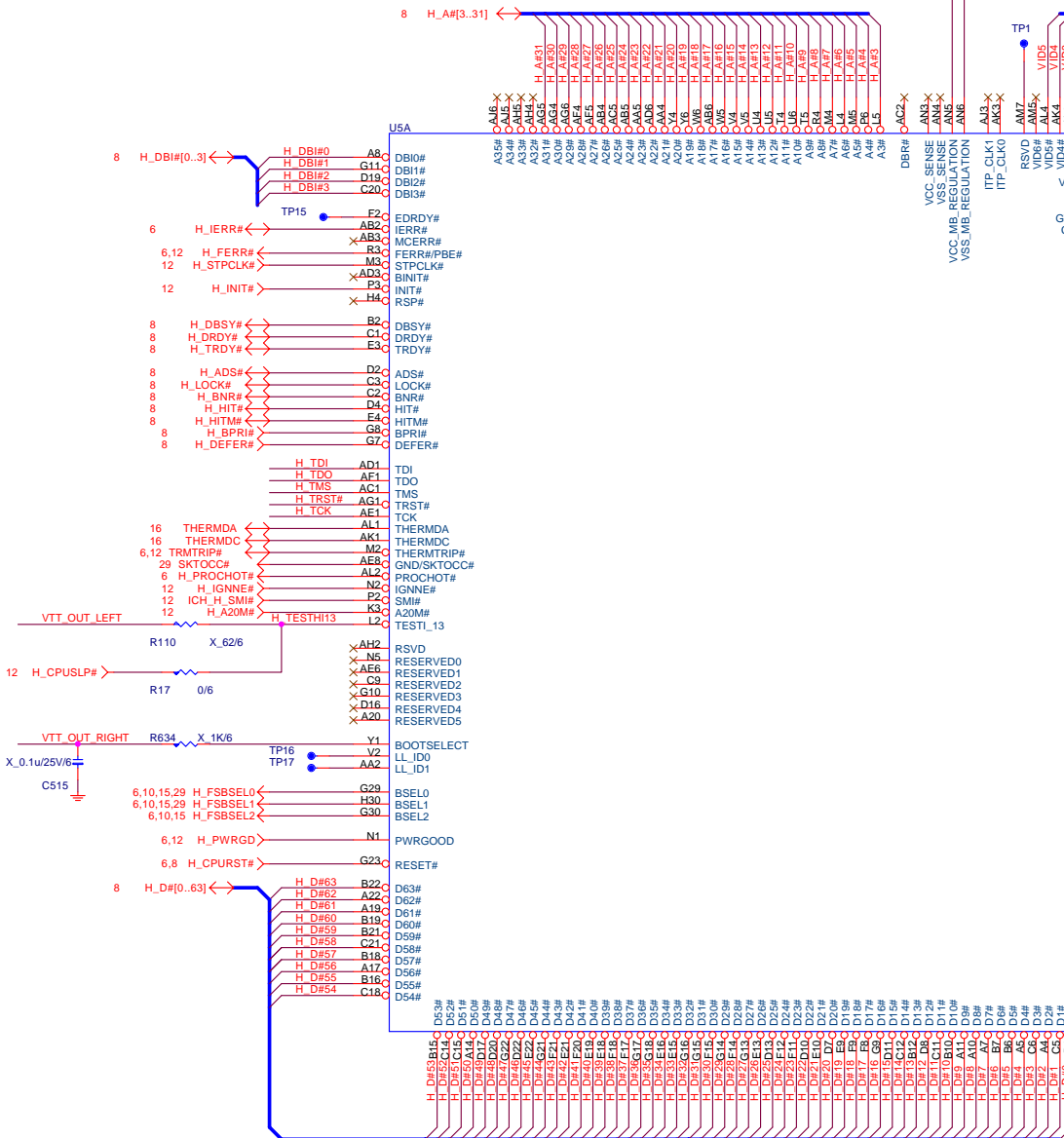
CLOCK MAP



POWER MAP

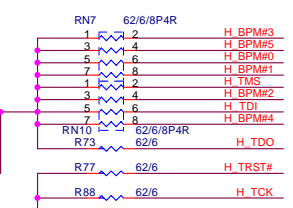
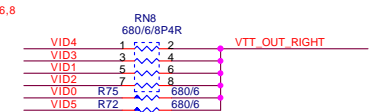


CPU SIGNAL BLOCK



BSEL			TABLE
2	1	0	FSB FREQUENCY
0	0	0	267 MHZ (1067)
0	1	0	200 MHZ (800)
0	0	1	133 MHZ (533)

```
Prescott / Cedar Mill
LL_ID[1:0] = 00
GTLREF_SEL = 0
VTT_SEL = 1
```

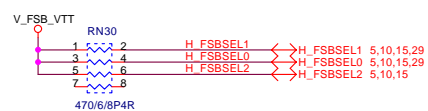
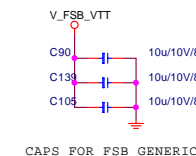


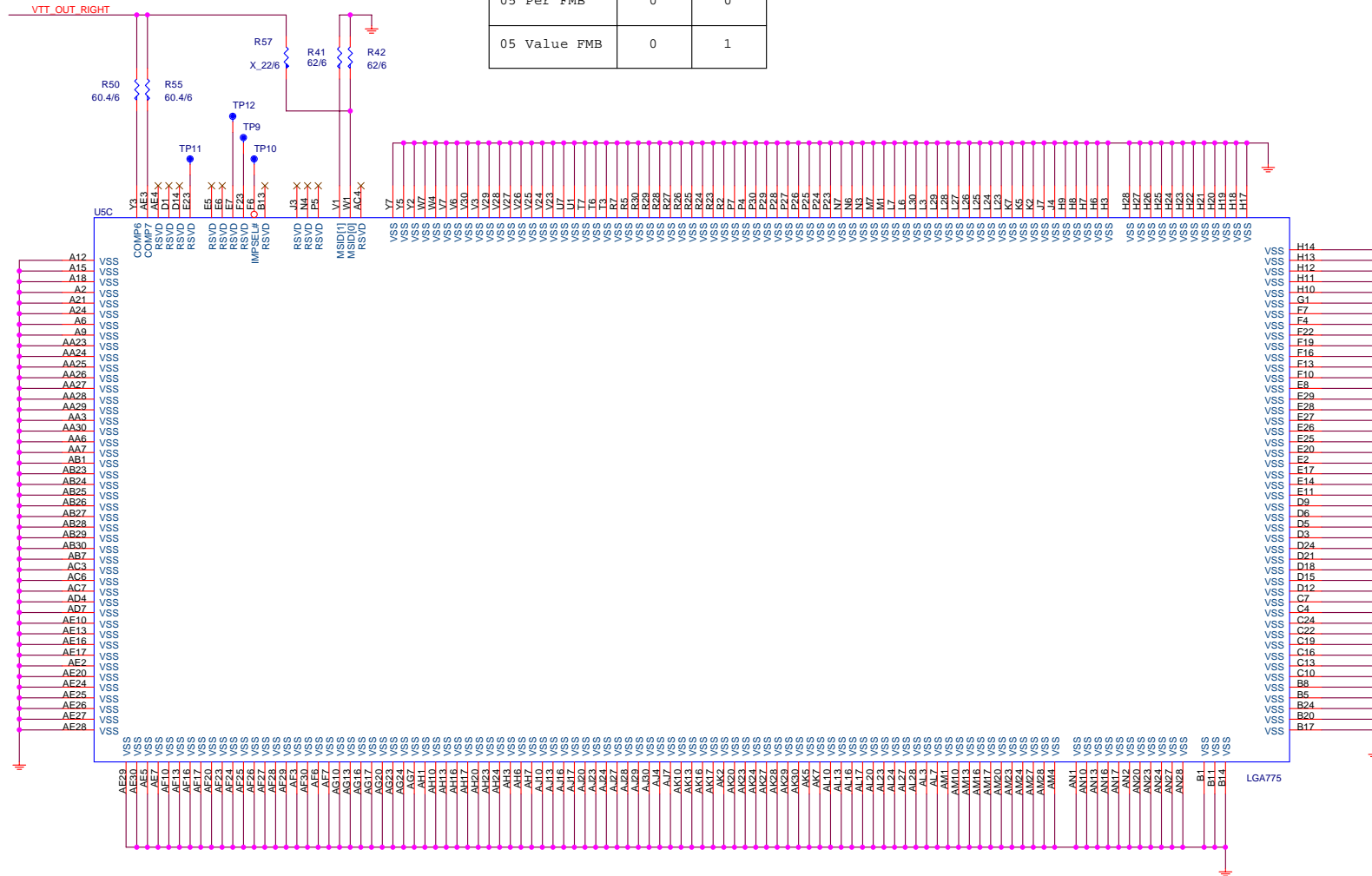
PLACE BPM/TCK/TDI/TMS TERMINATION NEAR CPU
PLACE TDO TERMINATION NEAR CONNECTOR



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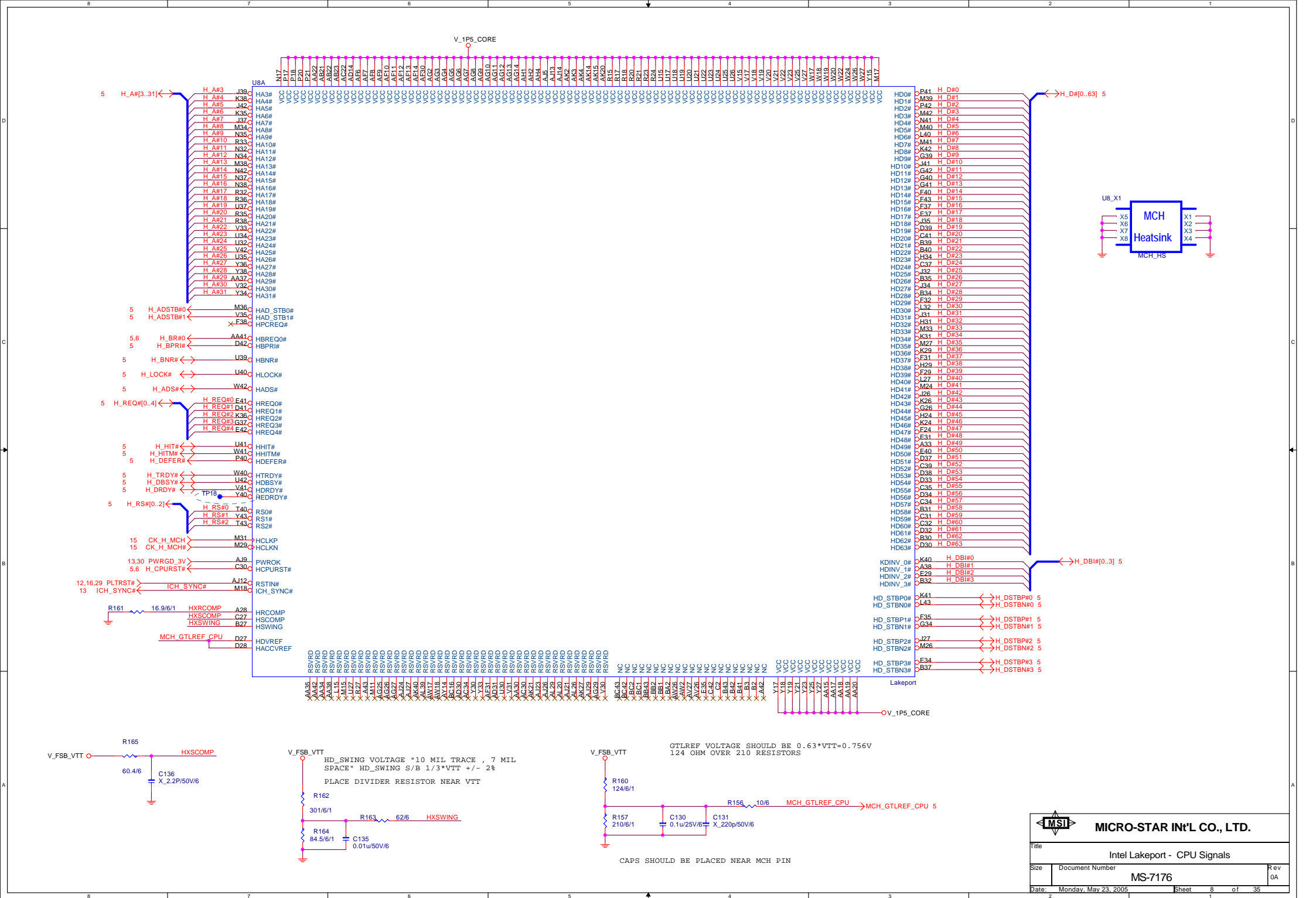
Title				Intel LGA775 CPU - Signals			
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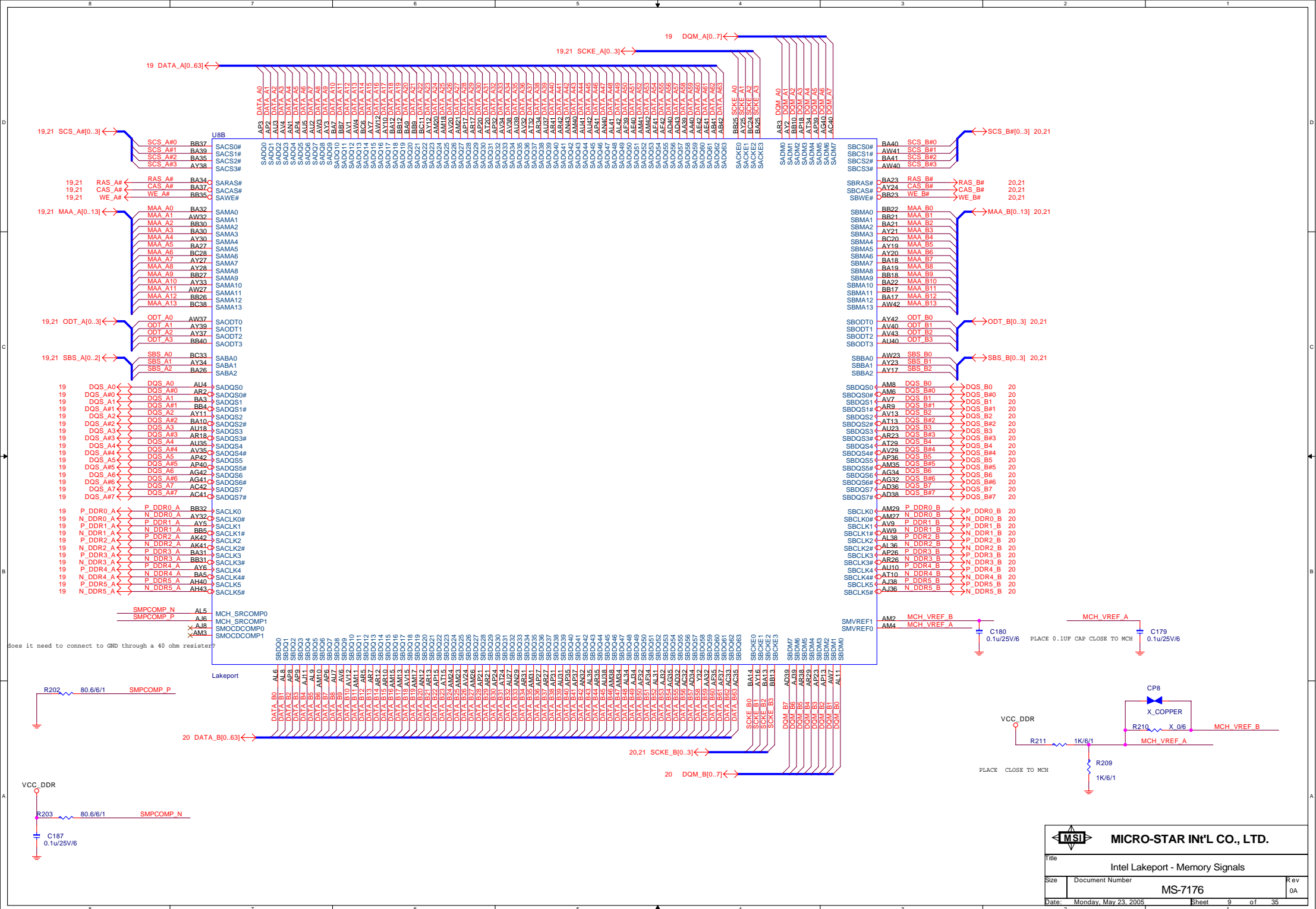


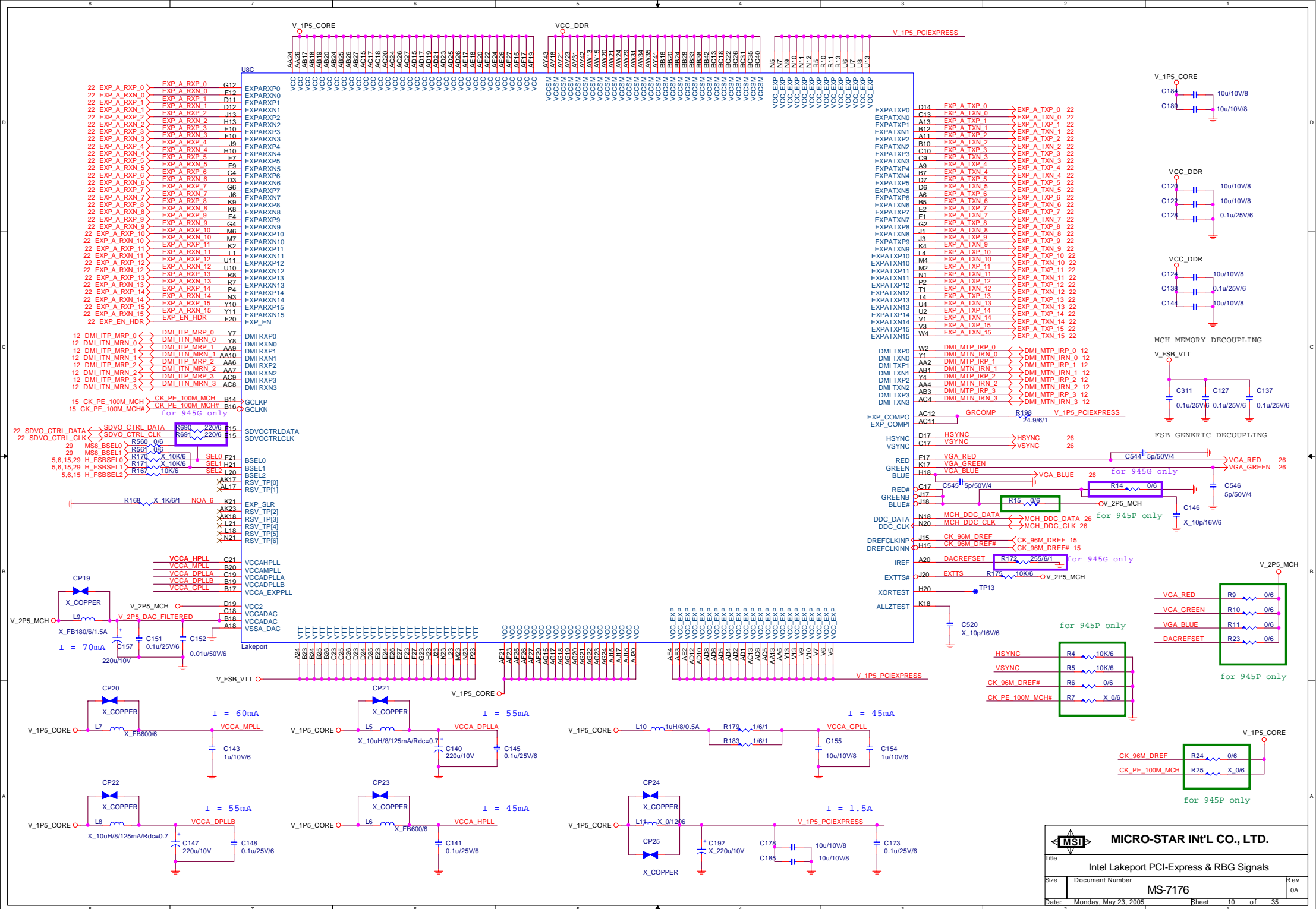


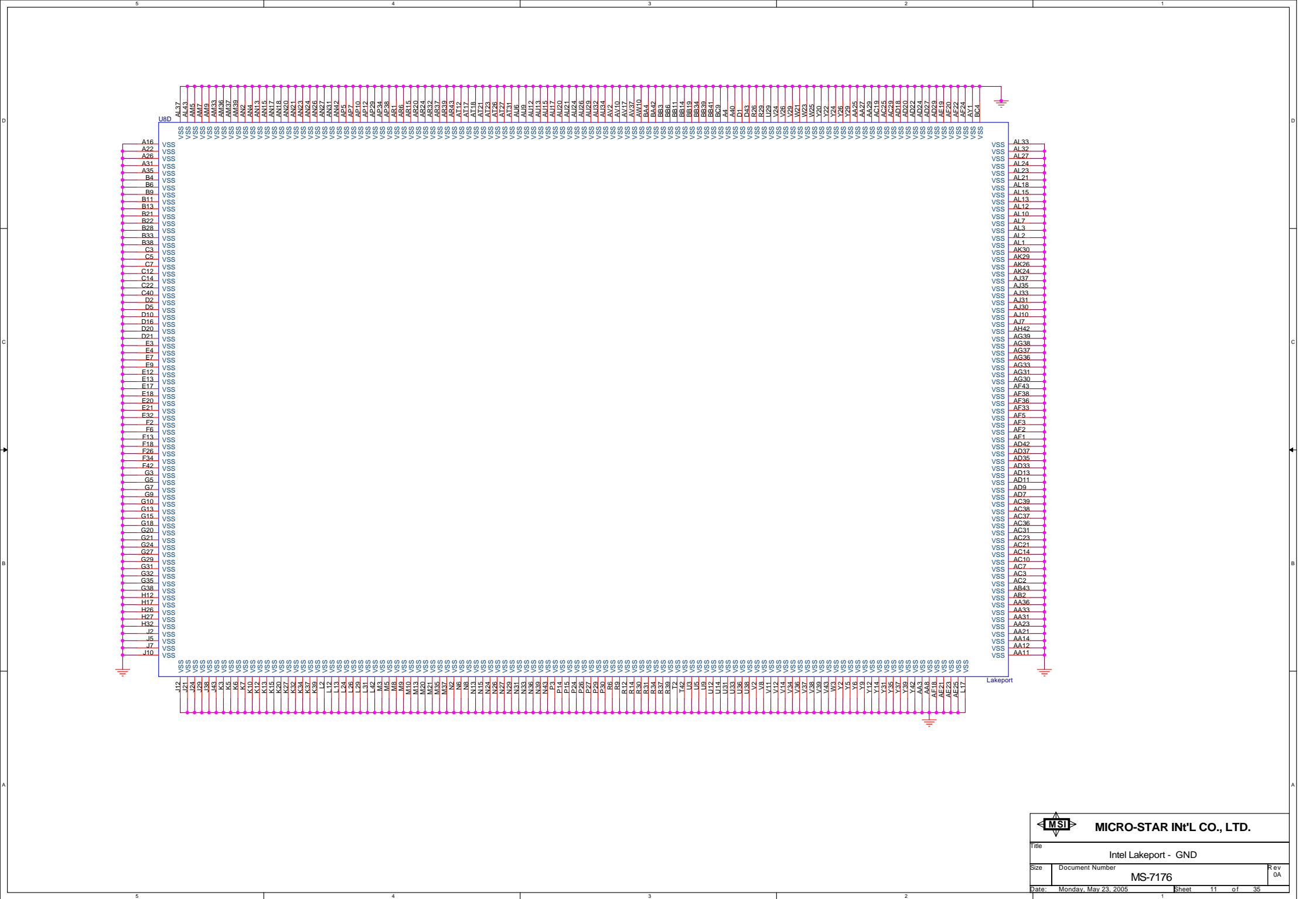
MICRO-STAR INT'L CO., LTD.

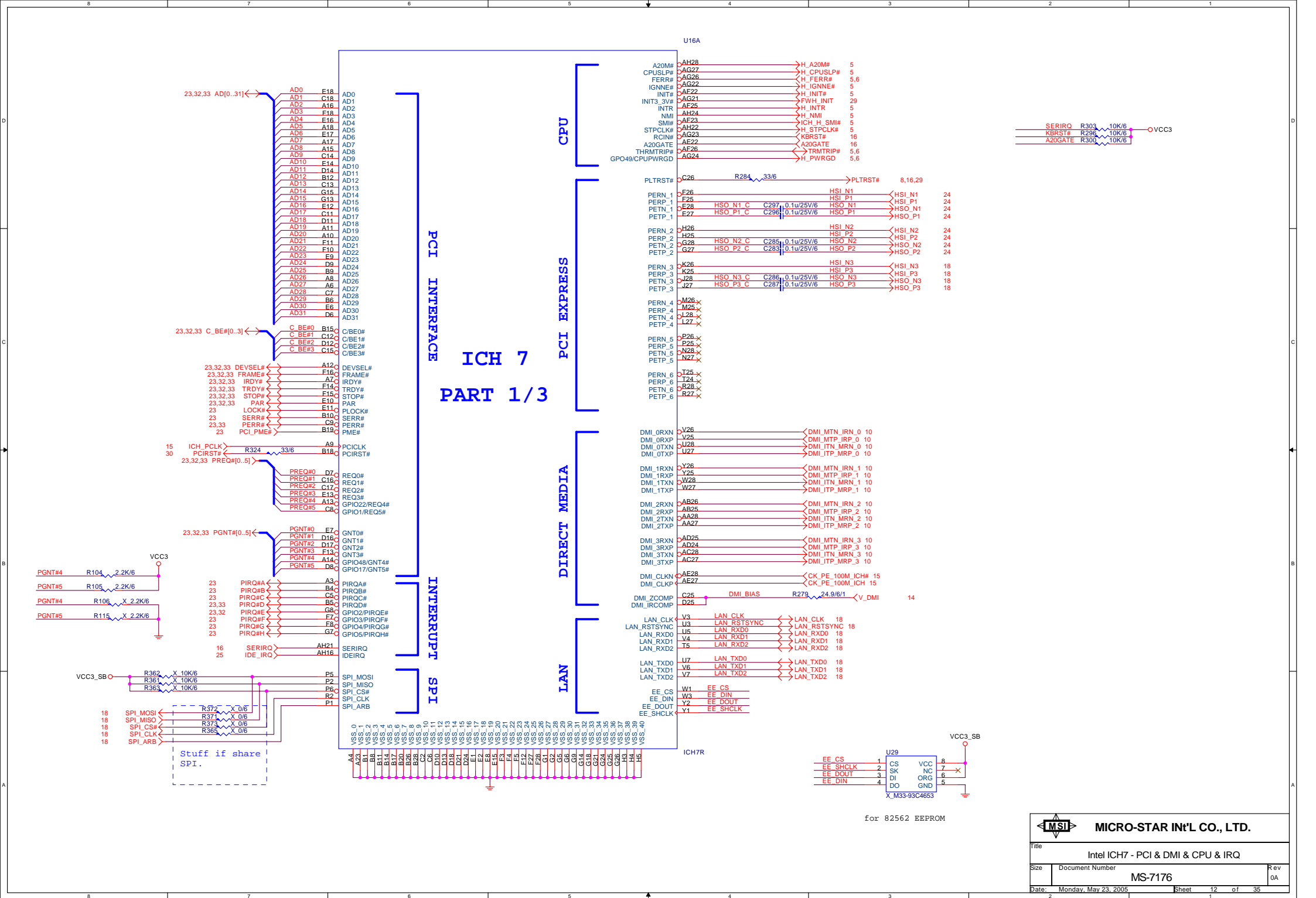
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Size	Document Number	Rev	
		MS-7176	
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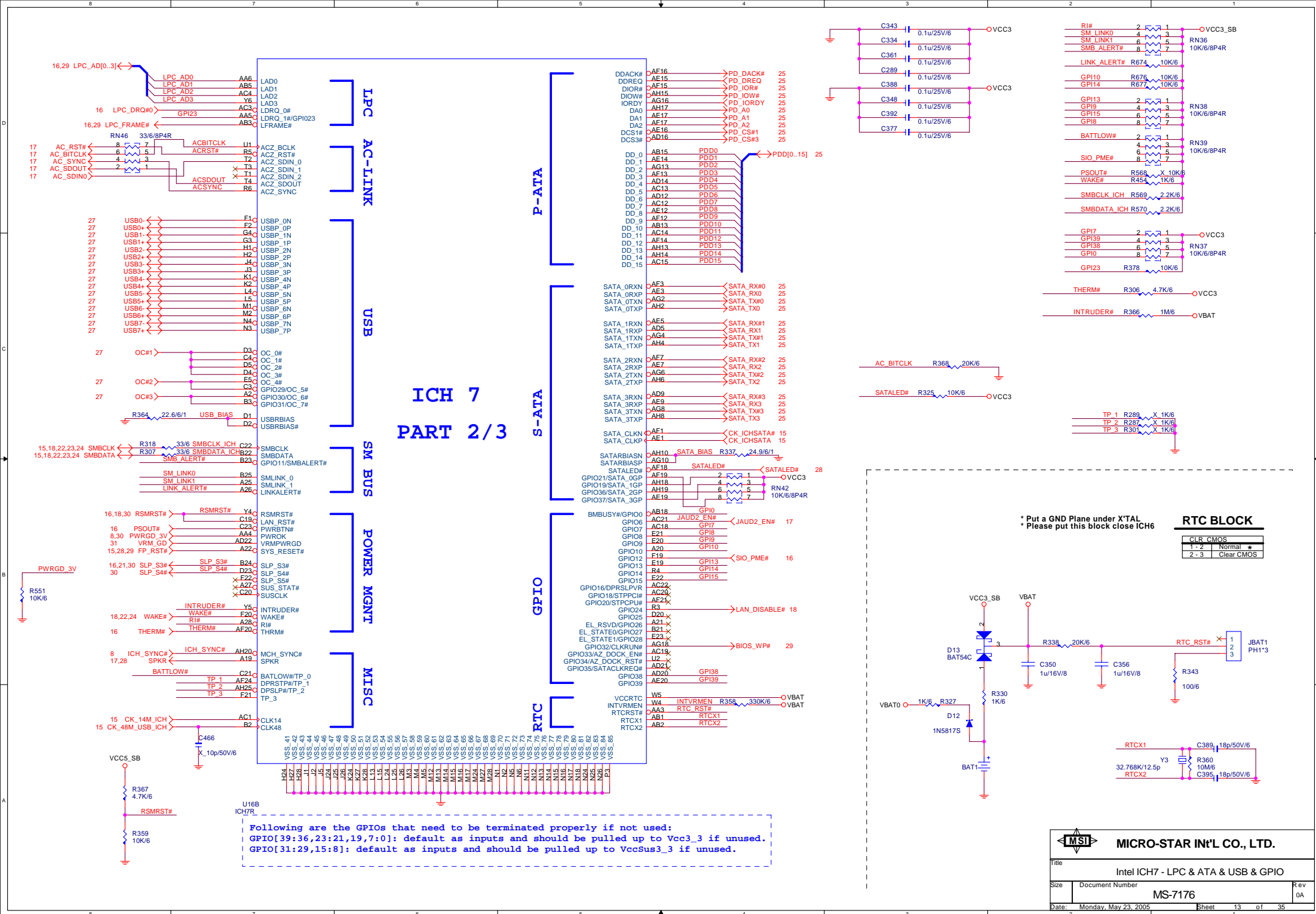


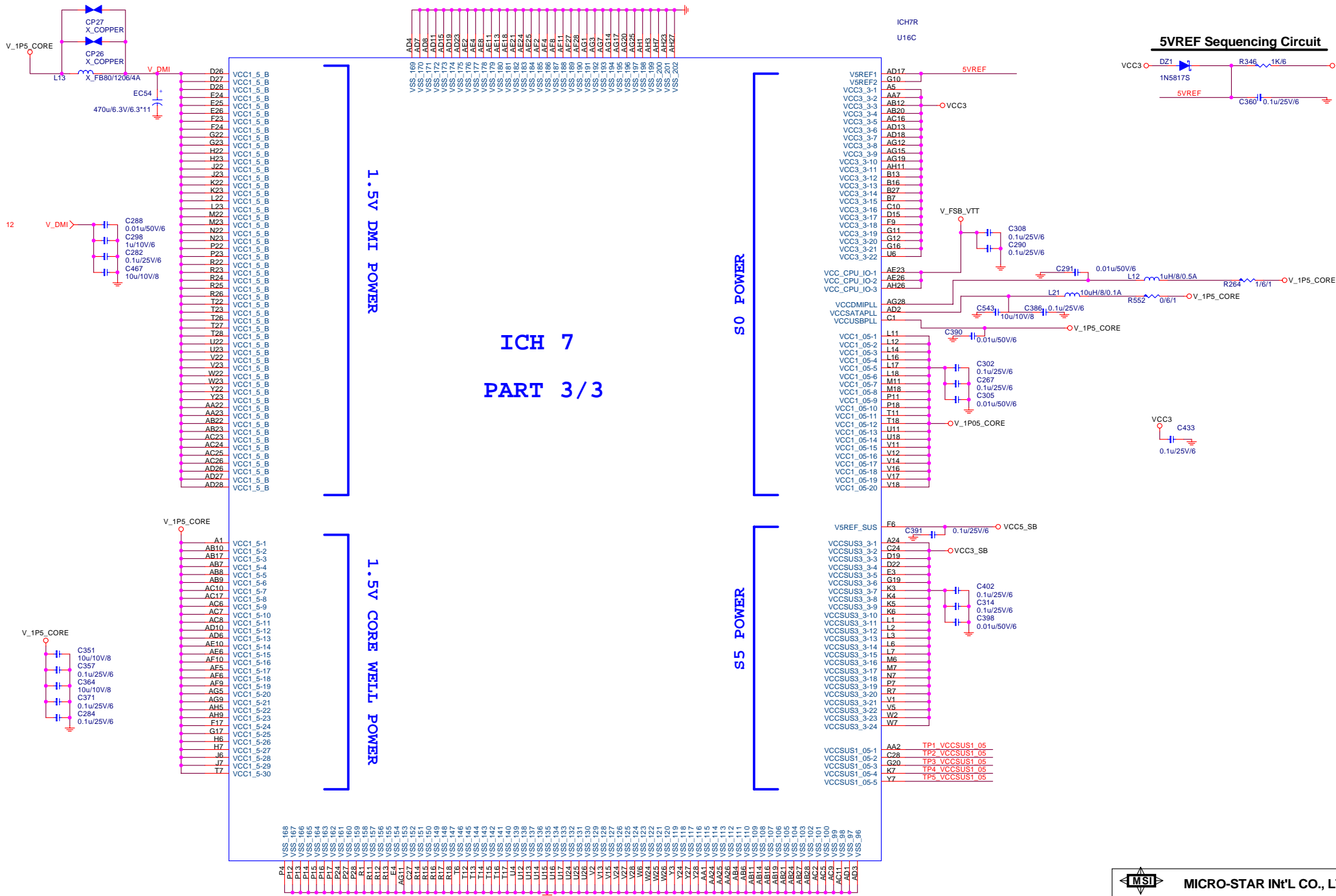






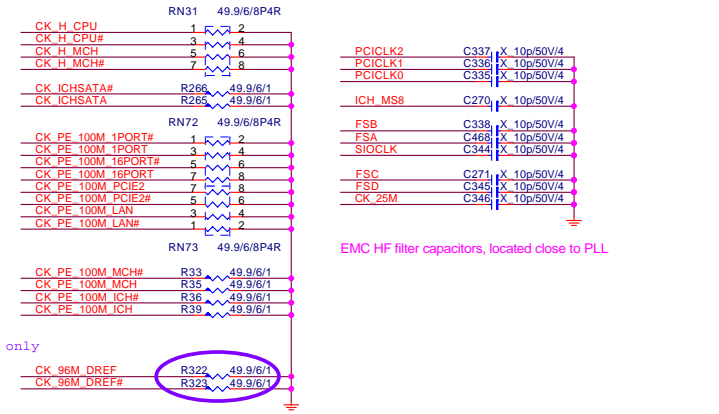
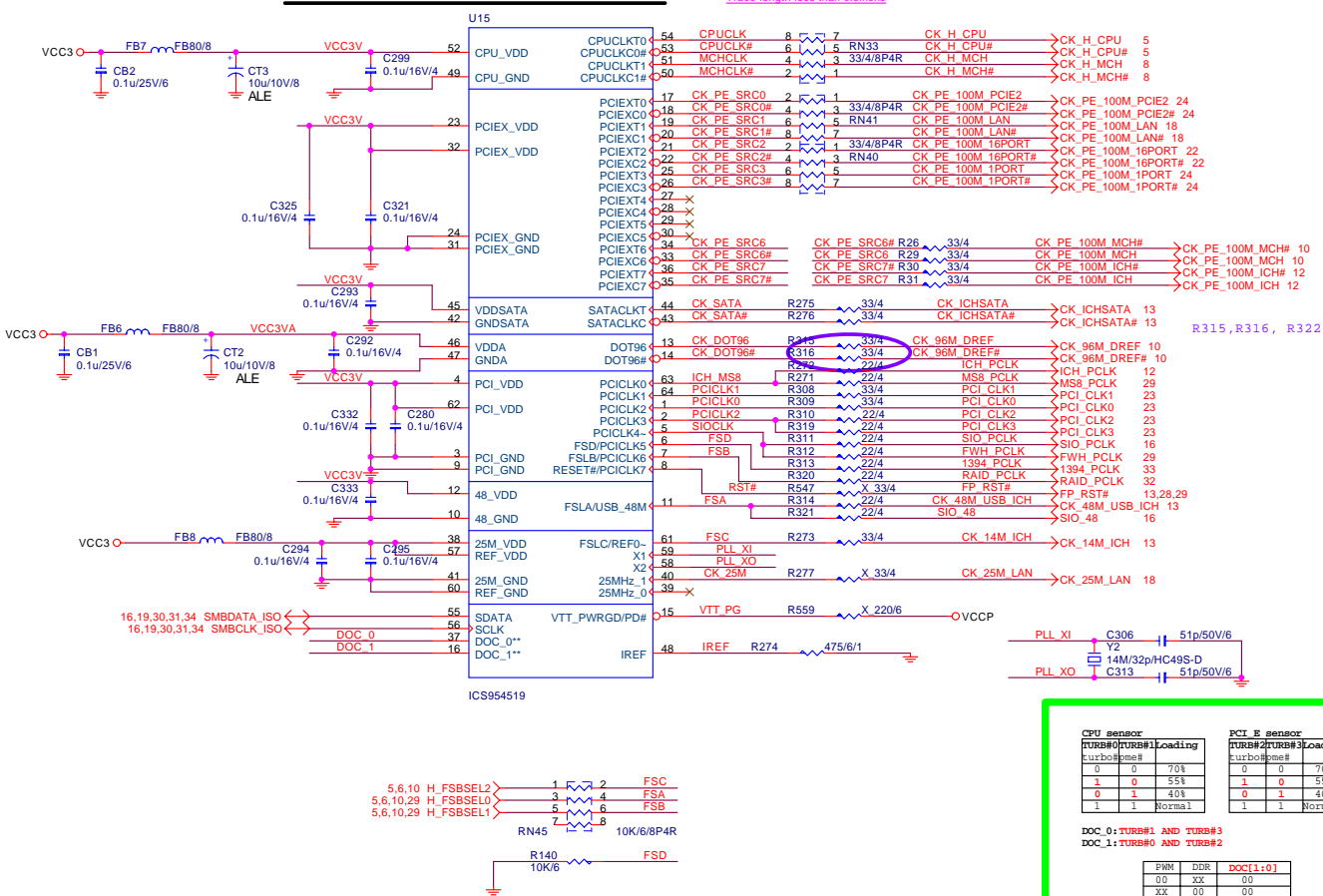






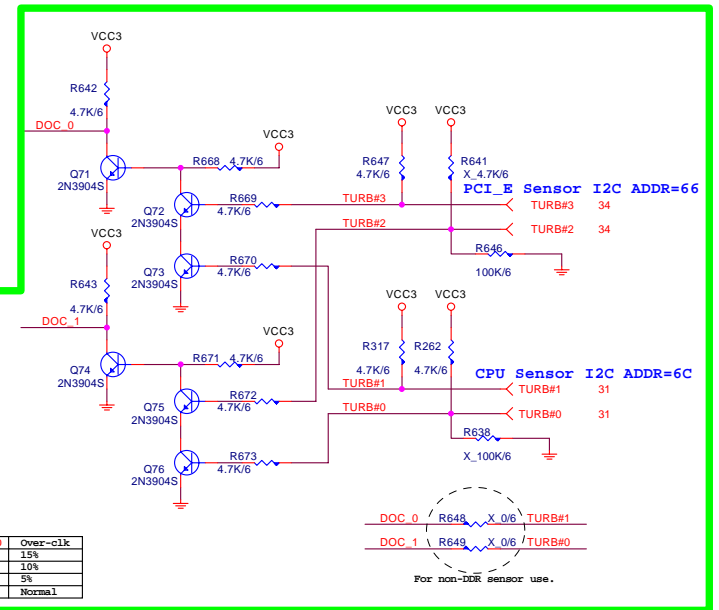
Clock Generator - ICS954519

Trace length less than 0.5inches



EMC HF filter capacitors, located close to PLL

R315, R316, R322, R323 for 9450 only

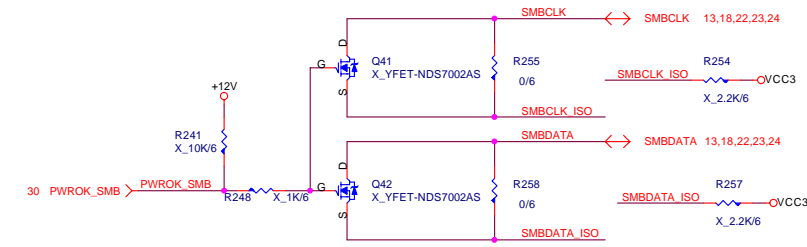
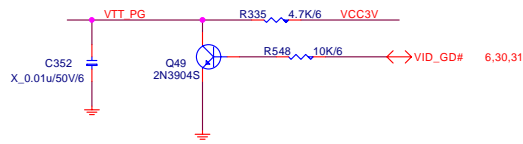


CPU sensor			PCI E sensor		
turb#	pin#	loading	turb#	pin#	loading
0	0	70%	0	0	70%
1	0	55%	1	0	55%
0	1	40%	0	1	40%
1	1	Normal	1	1	Normal

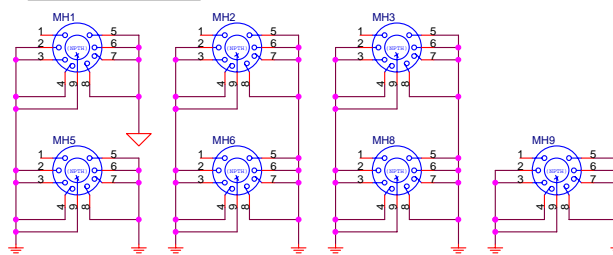
PWM	DDR	DOC[1:0]
00	XX	00
XX	00	00
01	01	01
01	10	00
01	11	01
10	01	00
10	10	10
10	11	10
11	01	01
11	10	10
11	11	11

DOC 1	DOC 0	Over-clk
0	0	15%
1	0	10%
0	1	5%
1	1	Normal

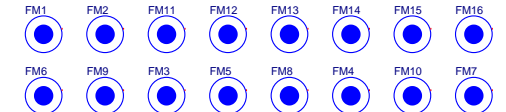
Clock Generator VTT PowerGood



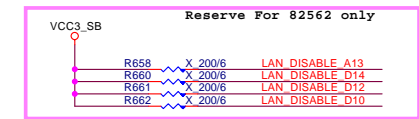
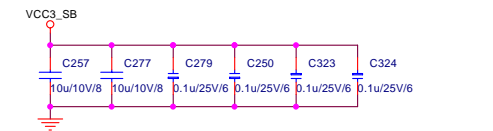
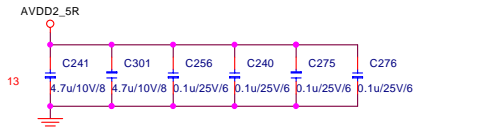
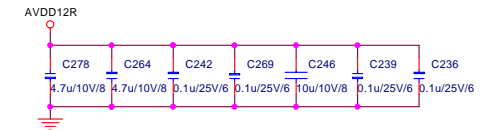
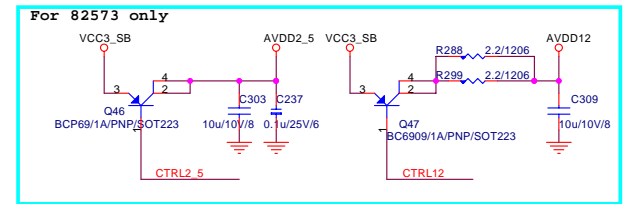
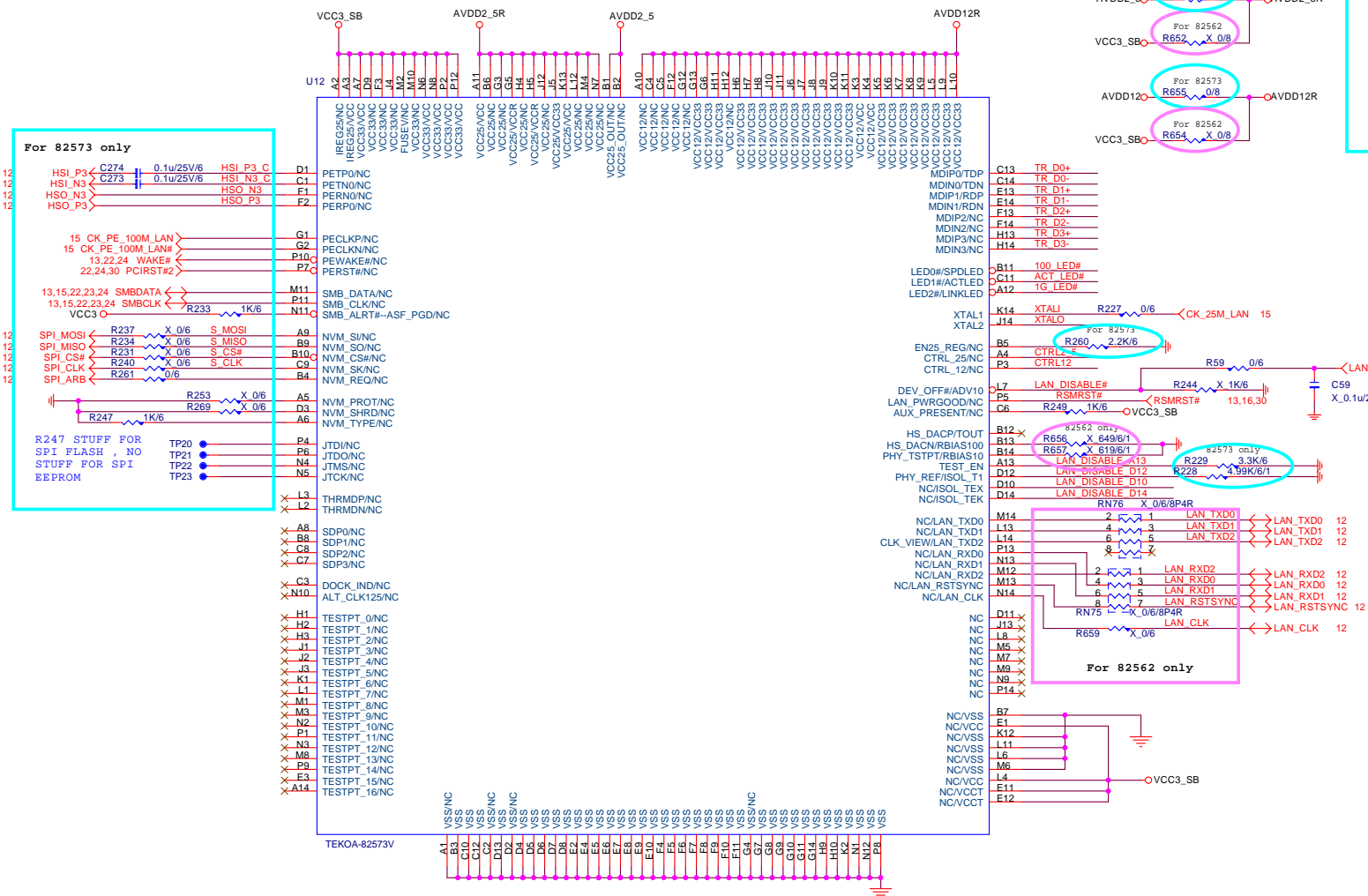
Mounting Holes



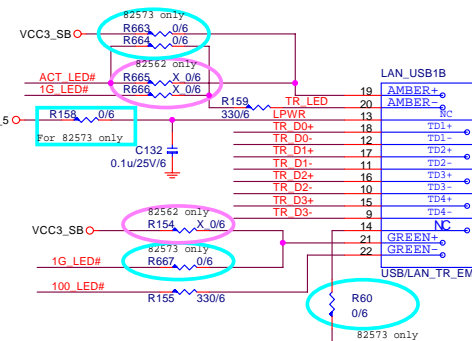
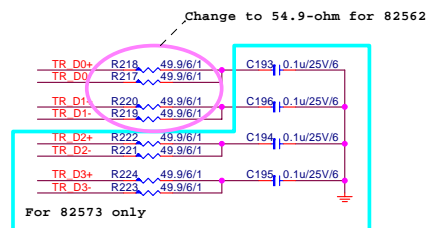
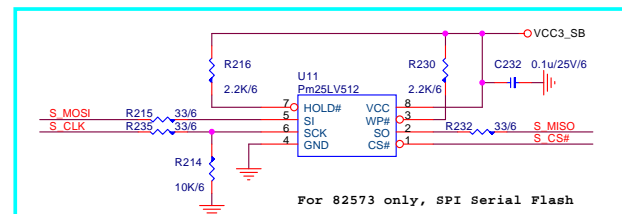
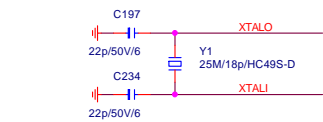
Optics Orientation Holes





Tekoa(82573V)/EKronR(82562GZ)



A13	D14	D12	D10	Mode
0	0	0	0	82562G family mode0
0	0	1	1	82562G family model
1	0	1	0	Testing mode
0	1	1	1	isolate, tri-state and power down mode
1	1	1	1	Power down mode
1	0	0	0	XOR tree
1	0	0	1	82562G family mode2
1	0	1	1	82562G family mode3
1	1	0	0	82562G family mode4
1	1	1	0	Reserved
1	1	1	1	Reserved, Testina



LAN CONNECTOR

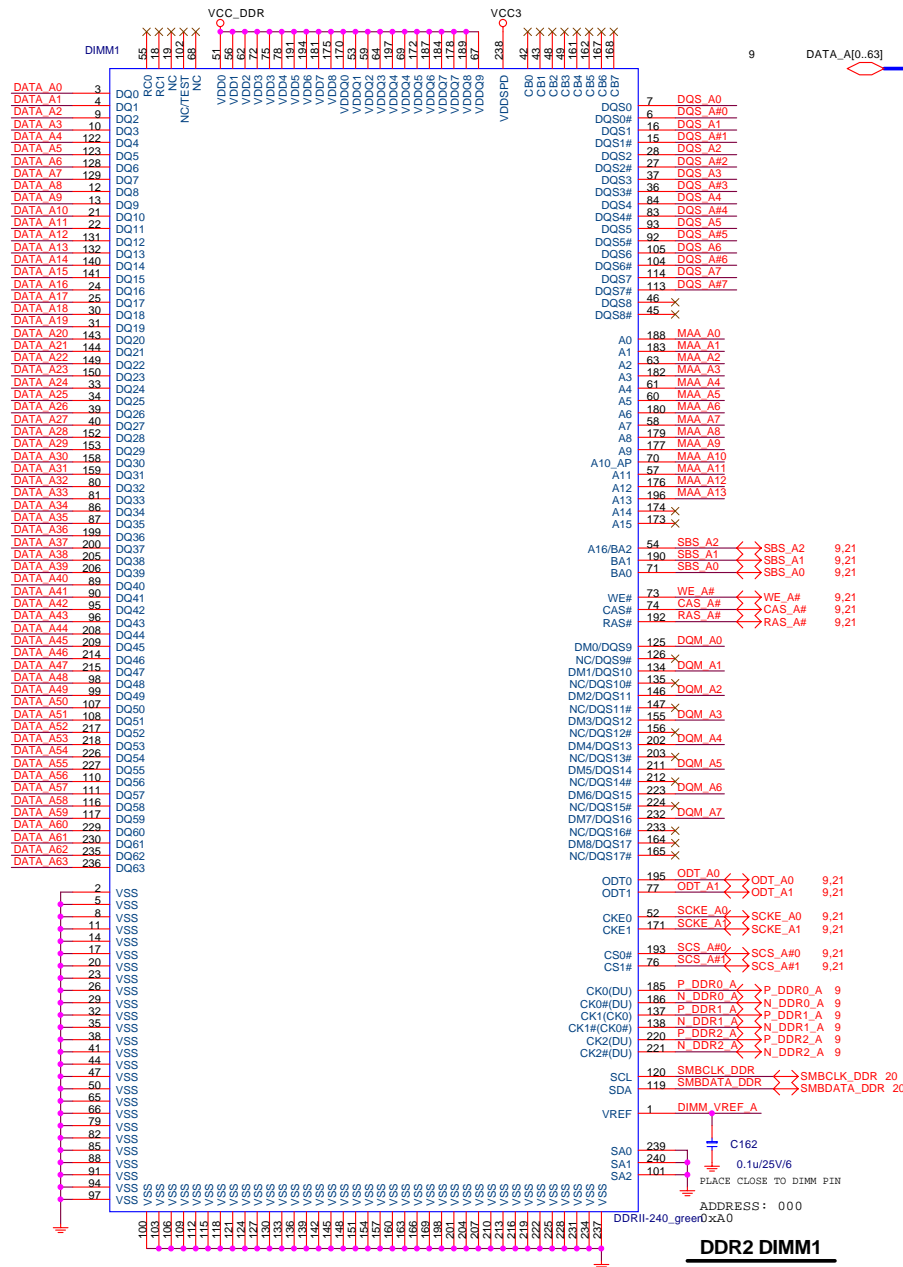
Giga-Lan		10/100-Lan	
N58-22F0081-S42		N58-22F0061-S42 N58-22F0061-F02	
Link Active 1000 100 10	Yellow Blinking Orange Green None	Link Active 100 10	Yellow Blinking Green None
19		19	
20	Yellow	20	Yellow
21	Orange	21	
22	Green	22	Green

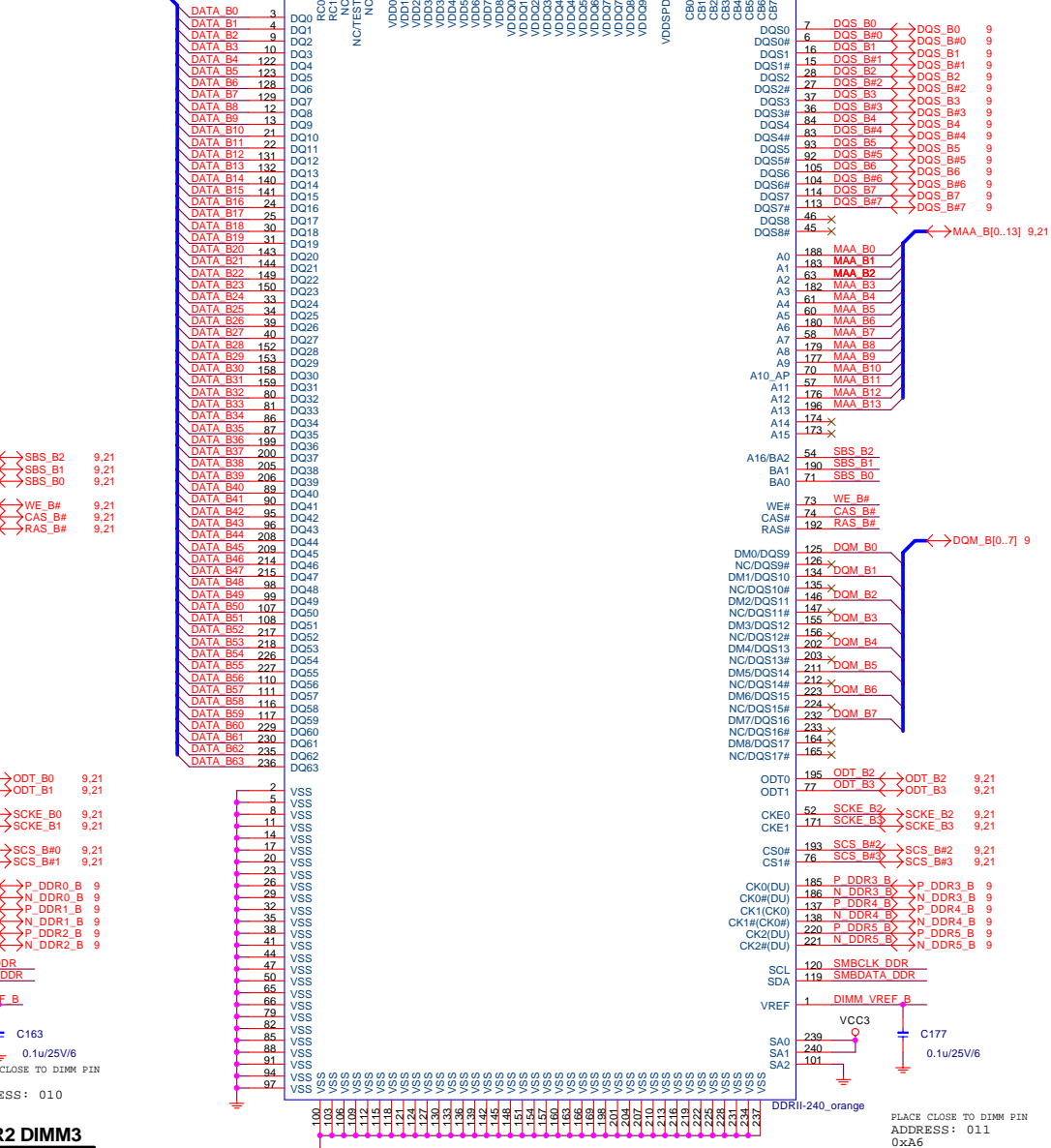
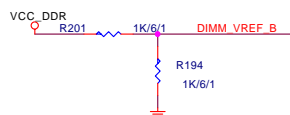
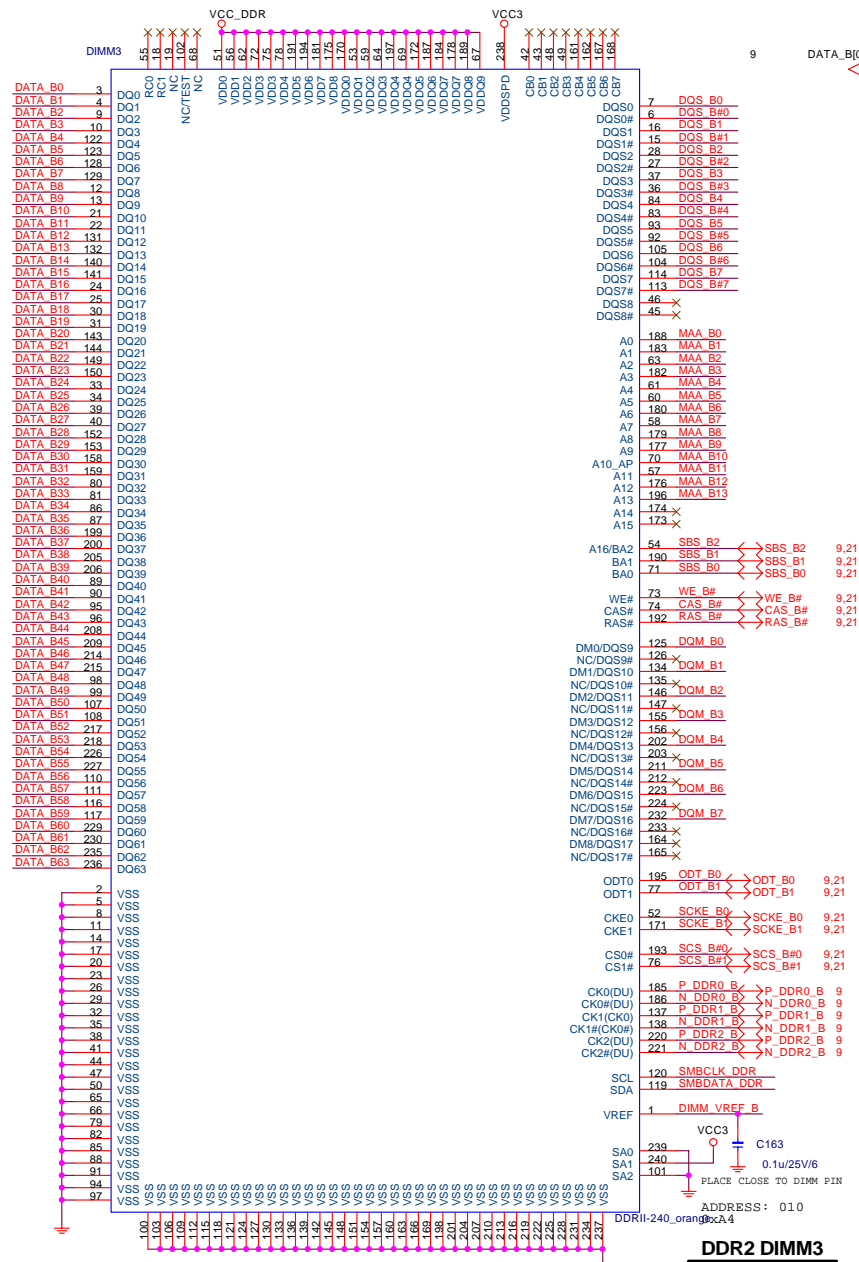


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Title	LAN - Intel Tekoa/EKronR
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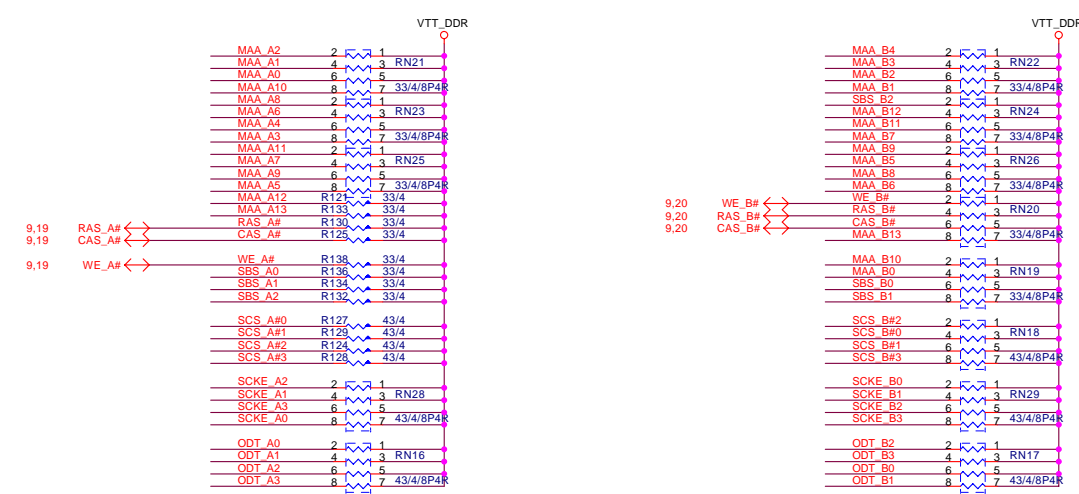
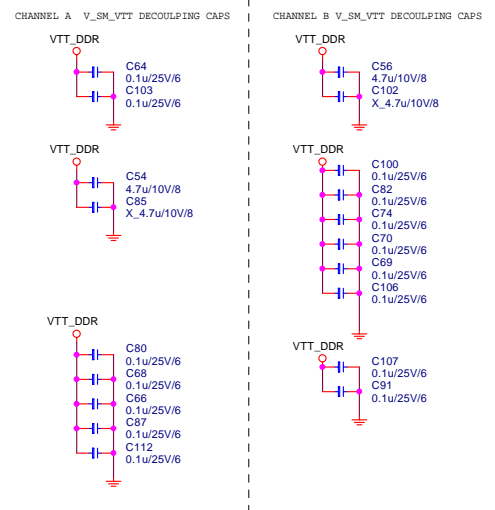
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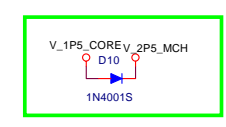
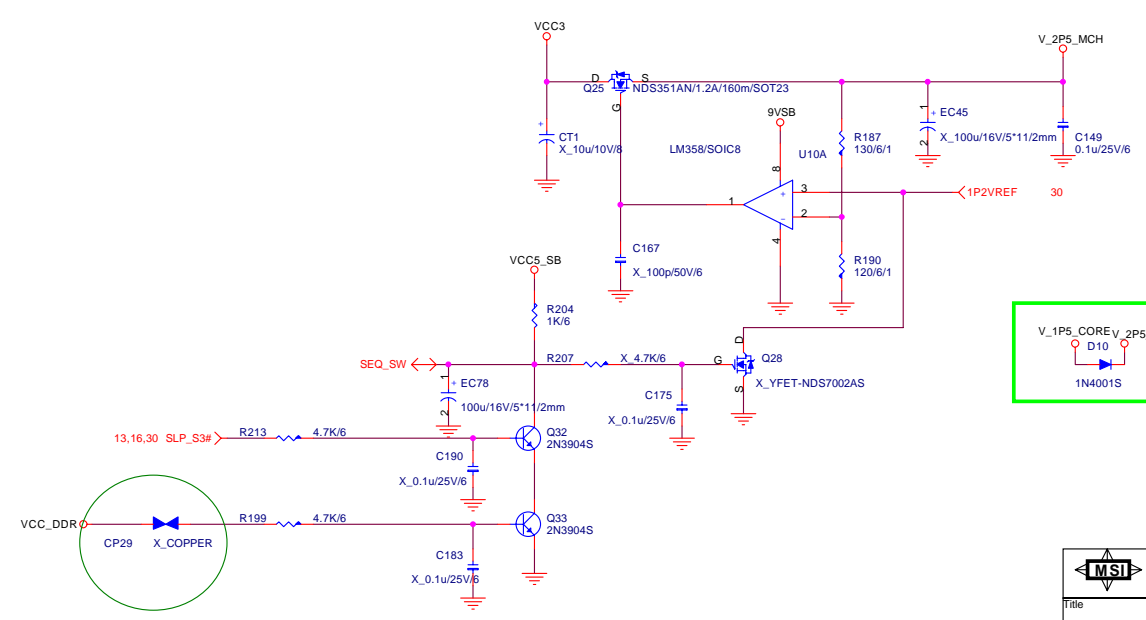
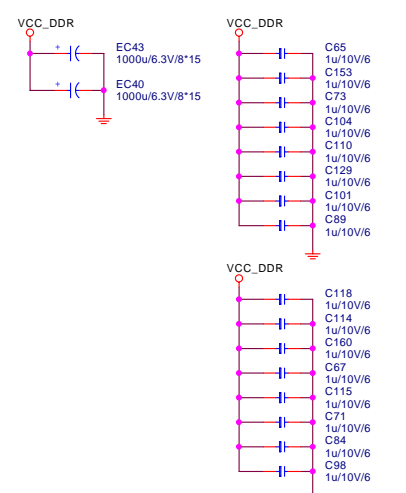


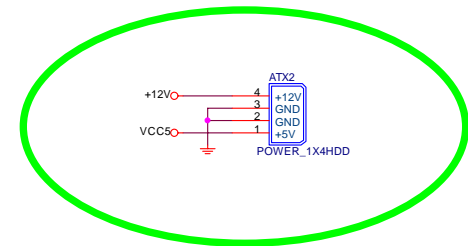
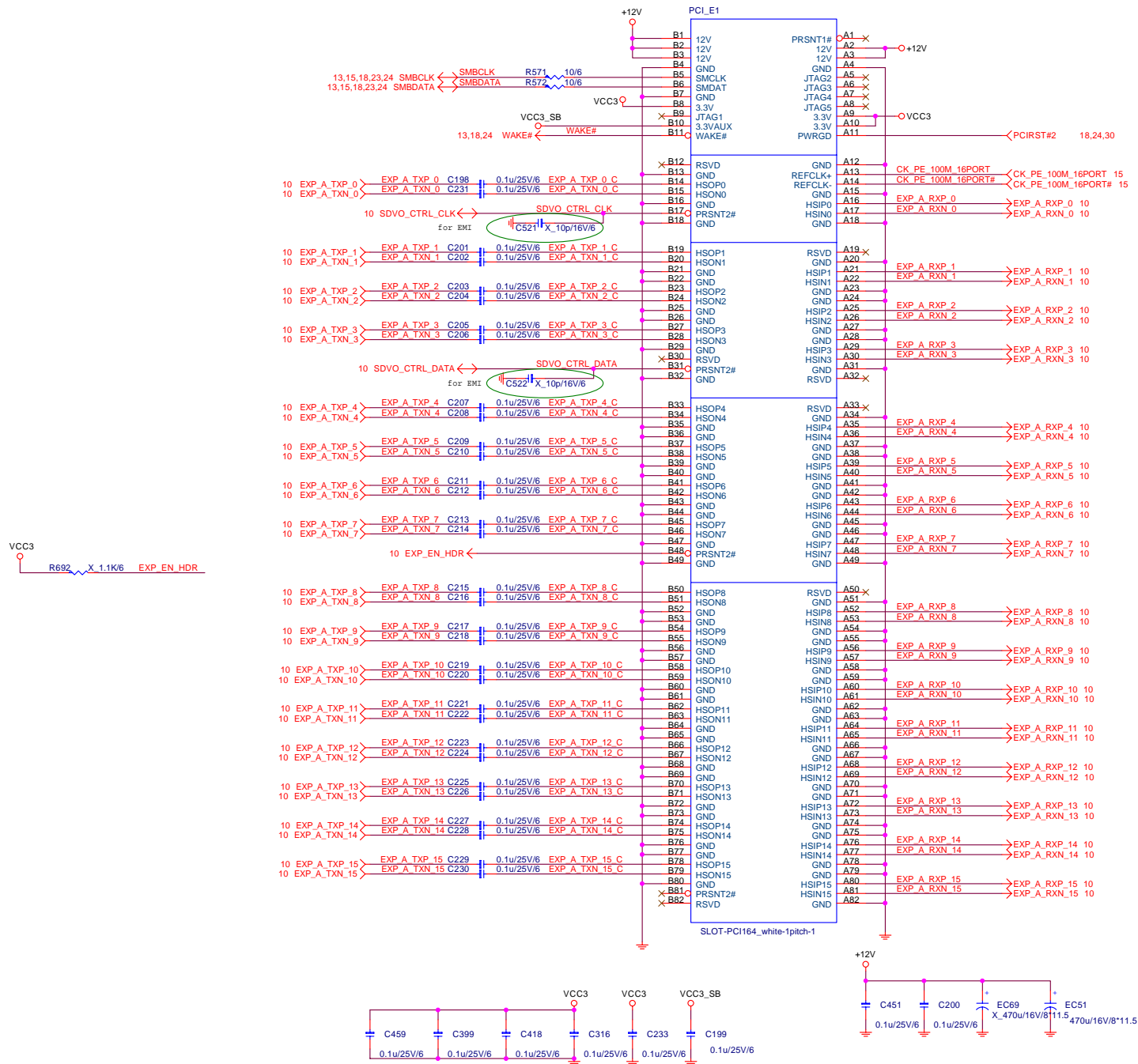
MICRO-STAR INT'L CO., LTD.

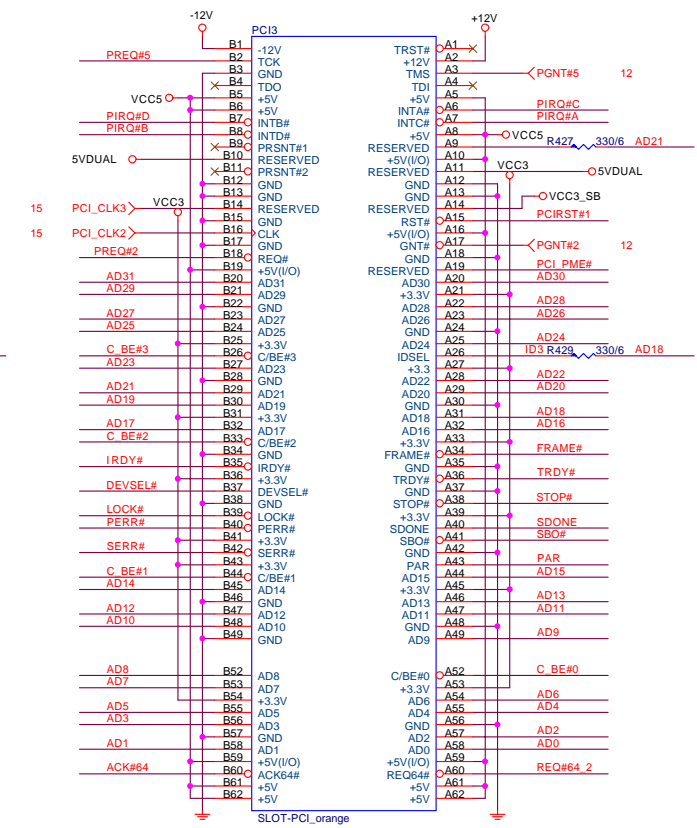
Title				DDR II DIMM 3 & 4			
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Grantsdale GMCH Power Sequencing Requirement Between 1.5V Core and 2.5V DAC





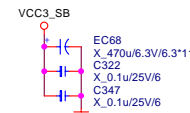
PCI SLOT 2 (PCI VER: 2.2 COMPLY)

```

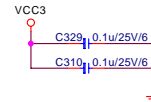
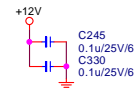
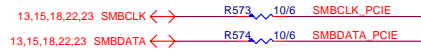
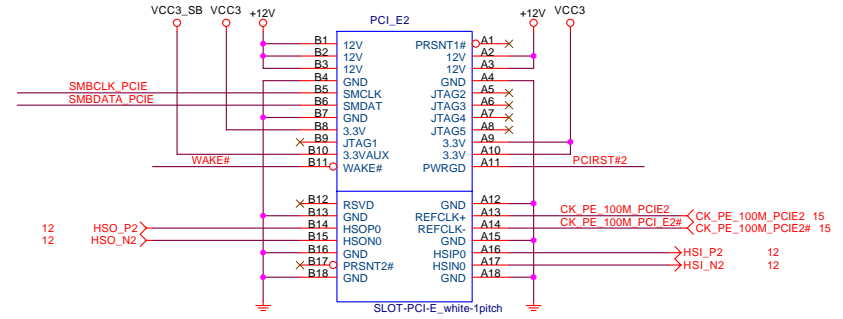
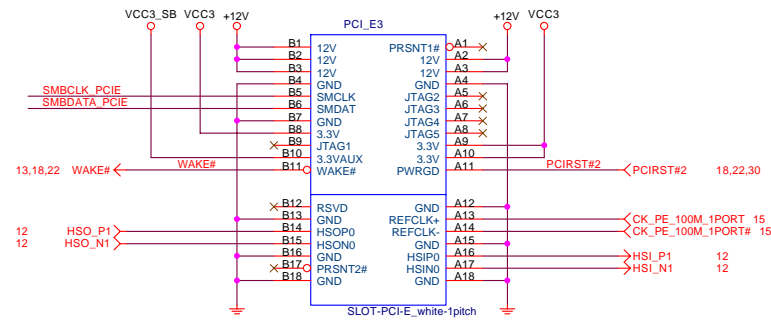
IDSEL = AD21
2 MASTER = PREQ#5

```

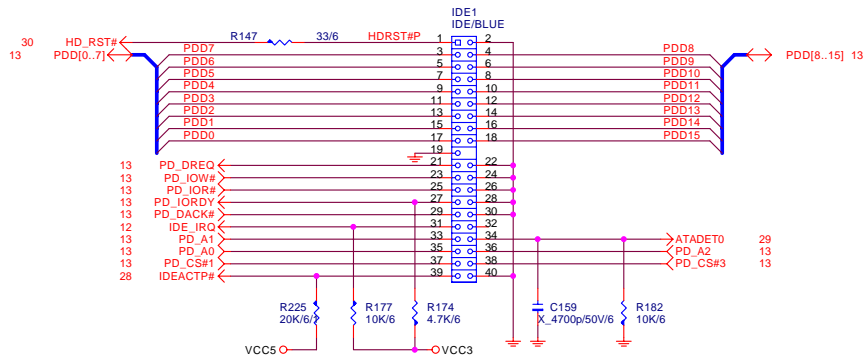
PCI SLOT DECOUPLING CAPACITORS



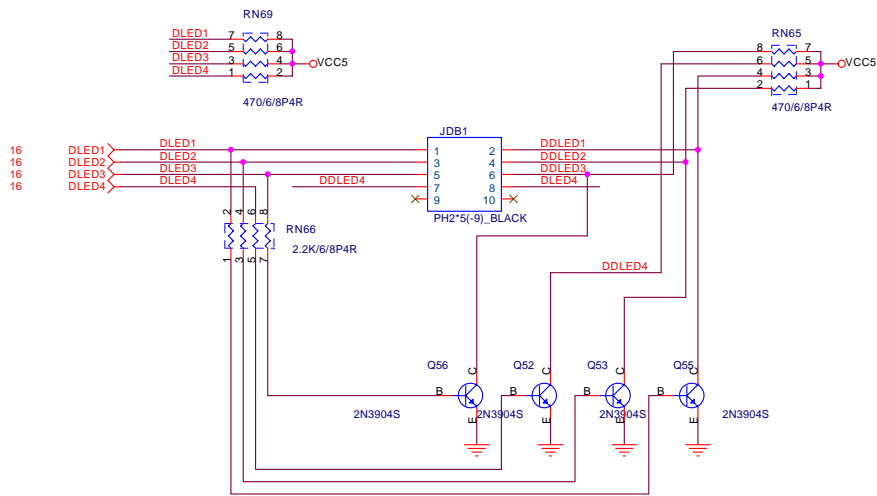
PCI EXPRESS 1-PORT



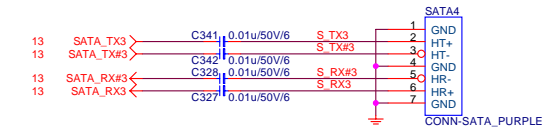
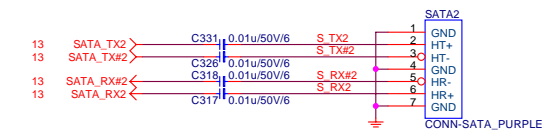
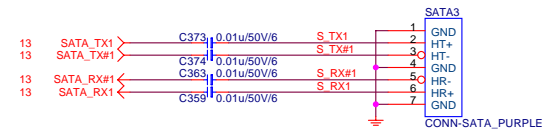
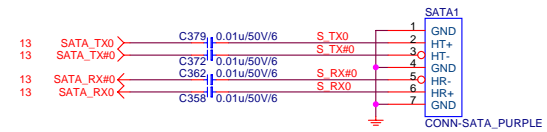
ATA 33/66/100 IDE Connectors



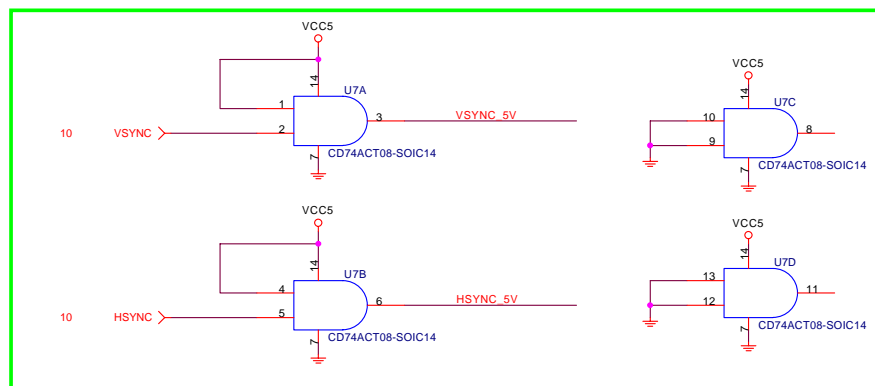
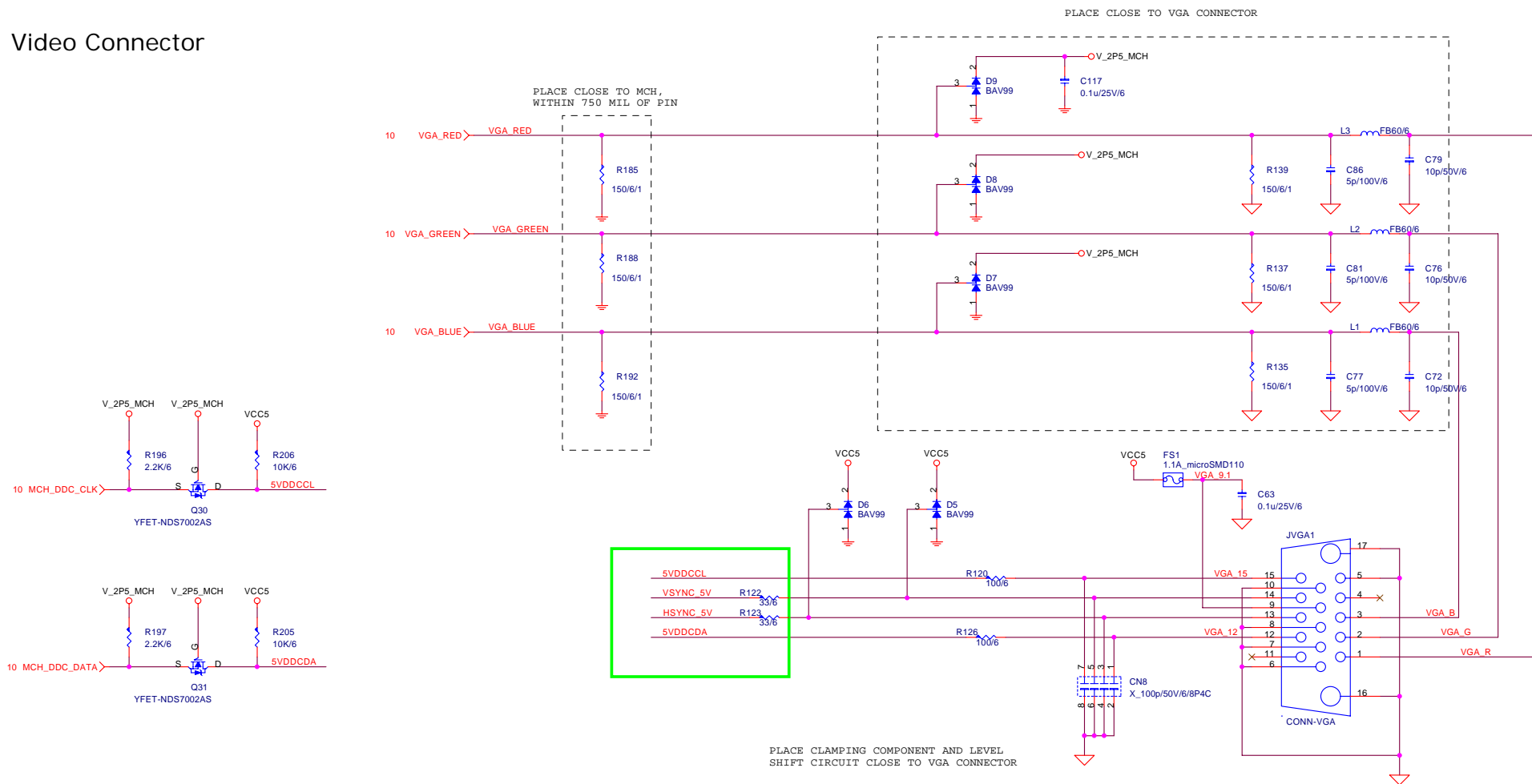
Diag LED Pin Header



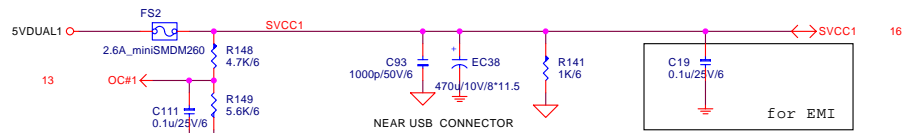
SERIAL ATA CONNECTOR BLOCK



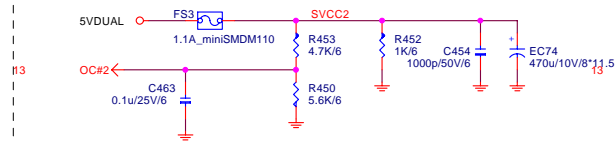
Video Connector



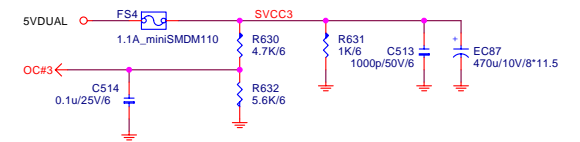
POWER CIRCUIT FOR USB PORT 0,1,2,3 (REAR)



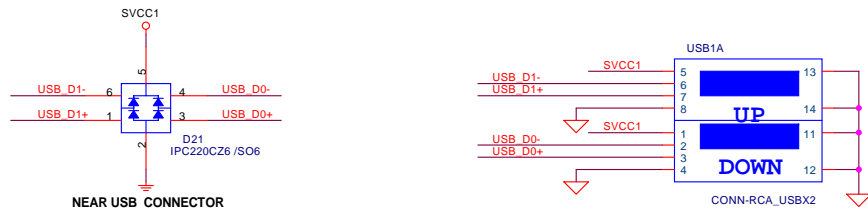
POWER CIRCUIT FOR USB PORT 4,5 (FRONT)



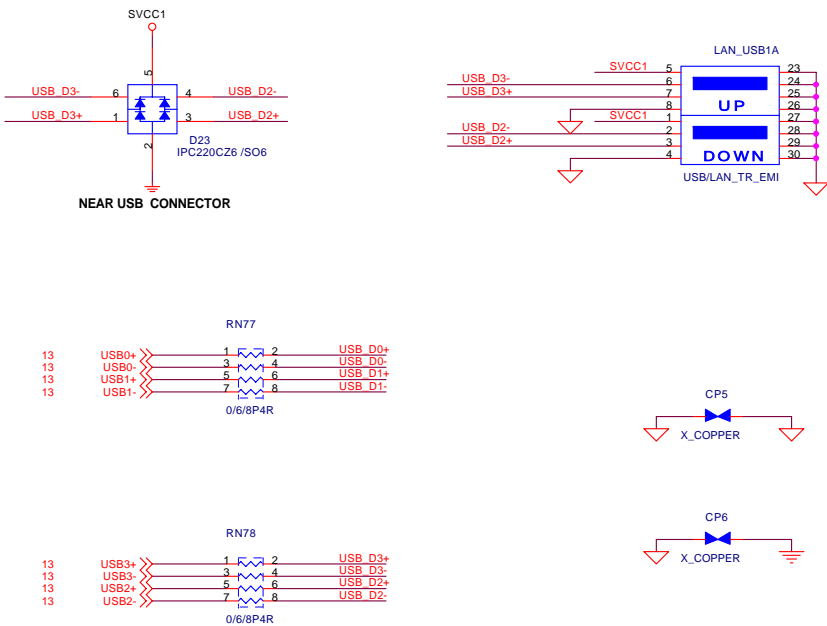
POWER CIRCUIT FOR USB PORT 6,7 (FRONT)



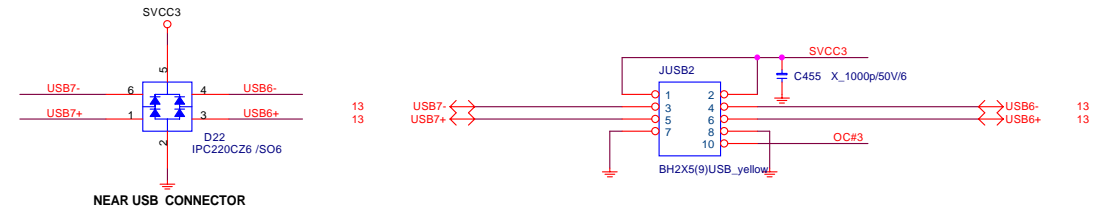
REAR PANEL USB CONNECTOR FOR USB PORT 0,1



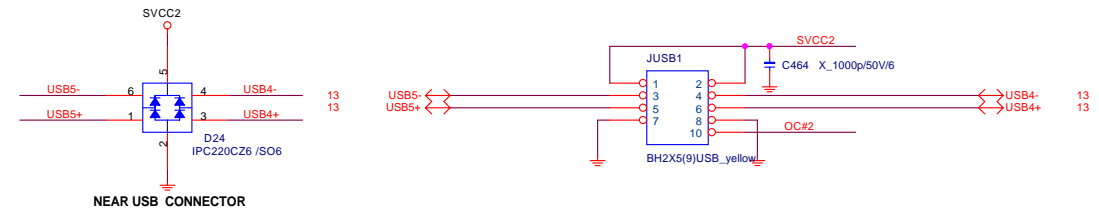
REAR PANEL USB CONNECTOR FOR USB PORT 2,3

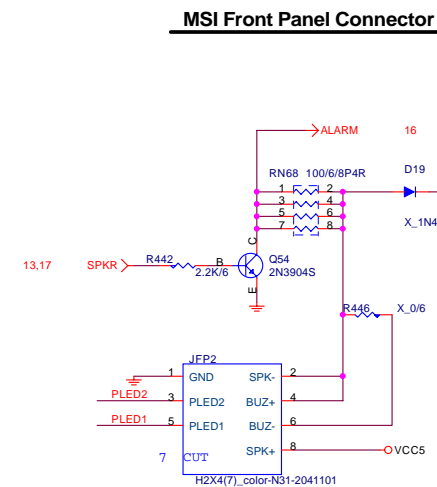
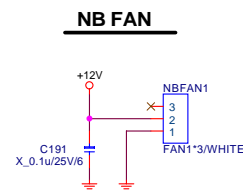
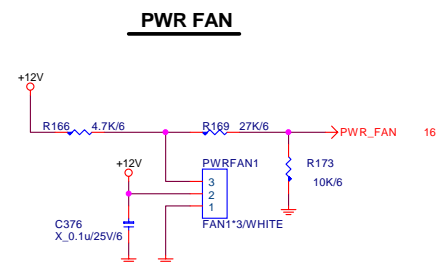
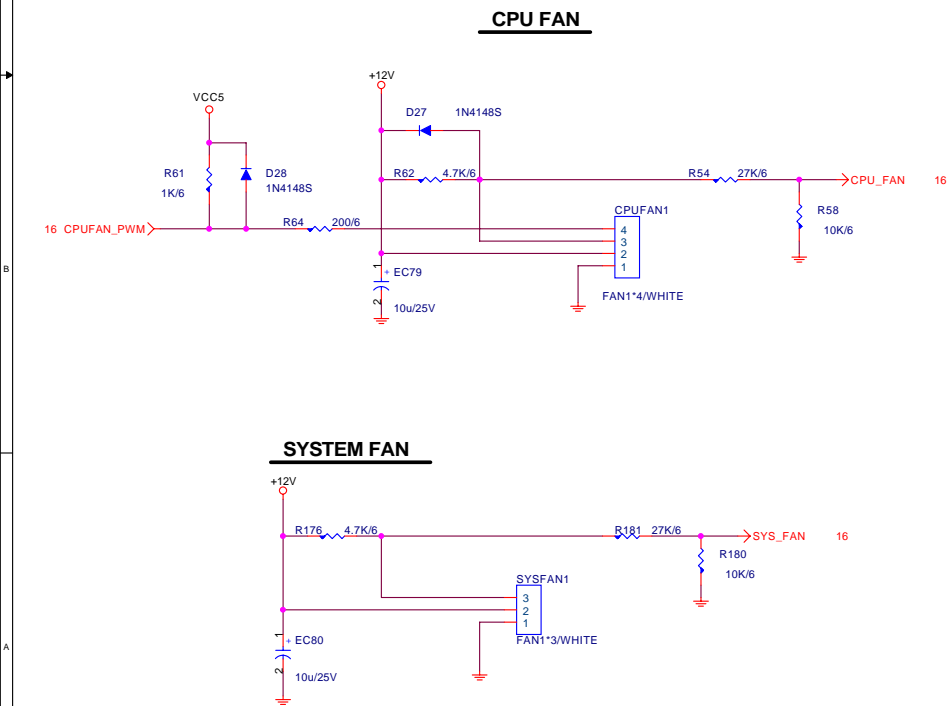
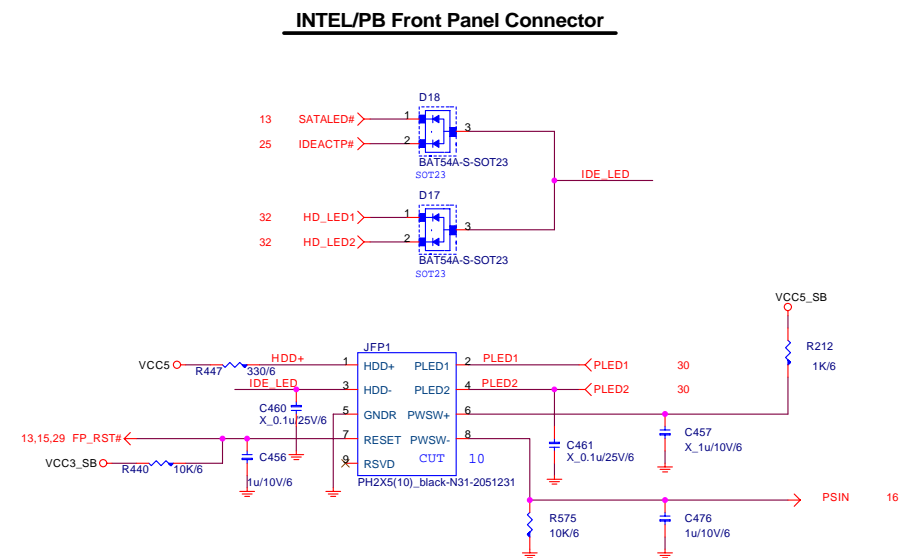
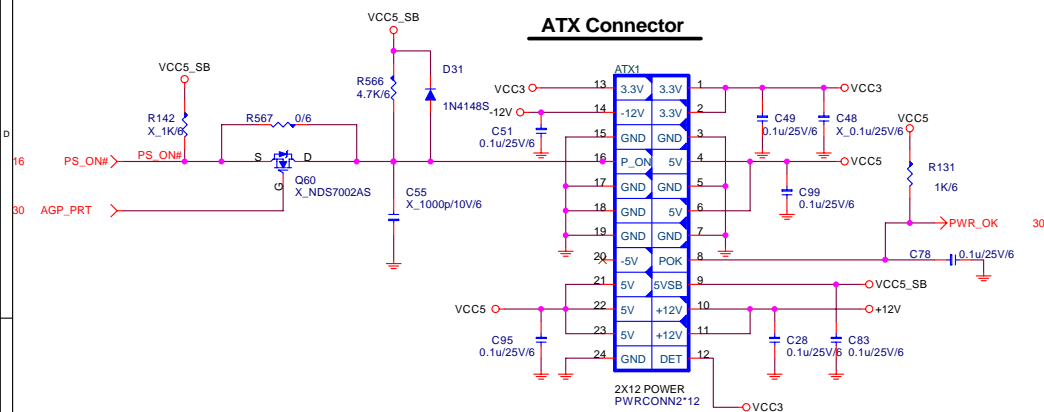


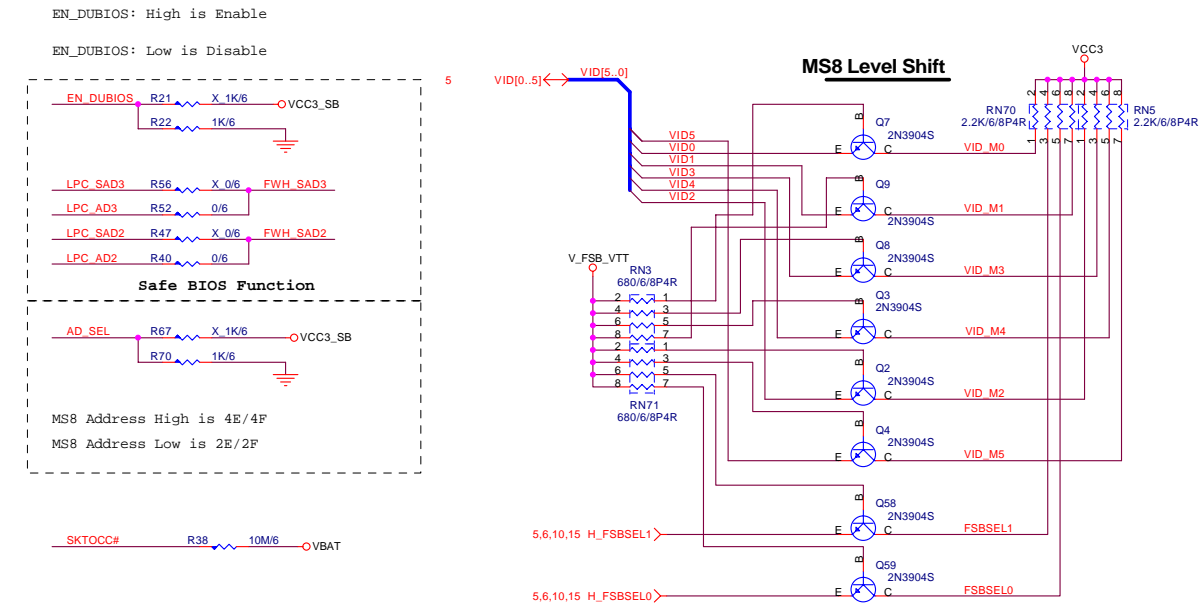
FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



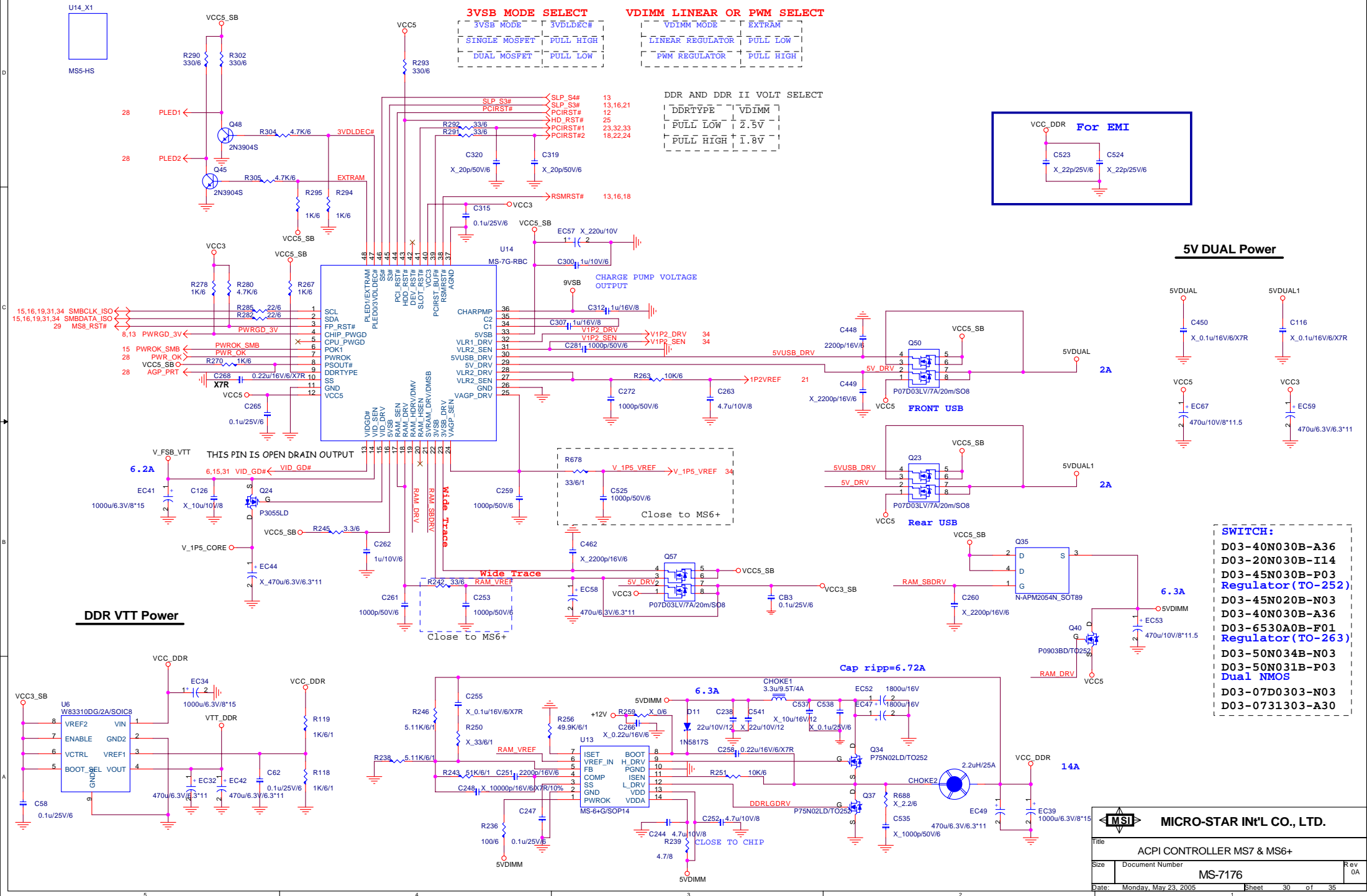
FRONT PANEL USB CONNECTOR FOR USB PORT 4,5

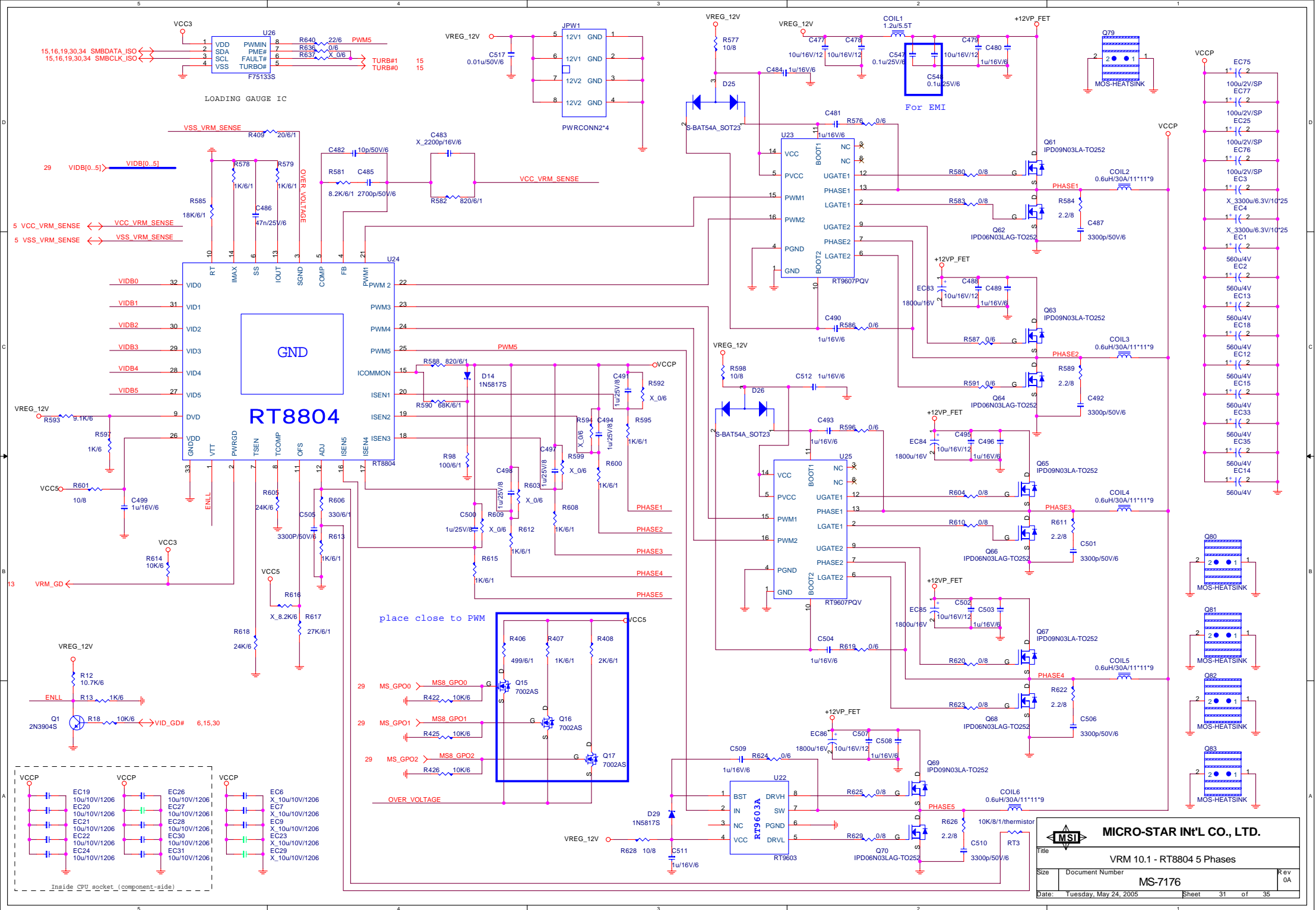


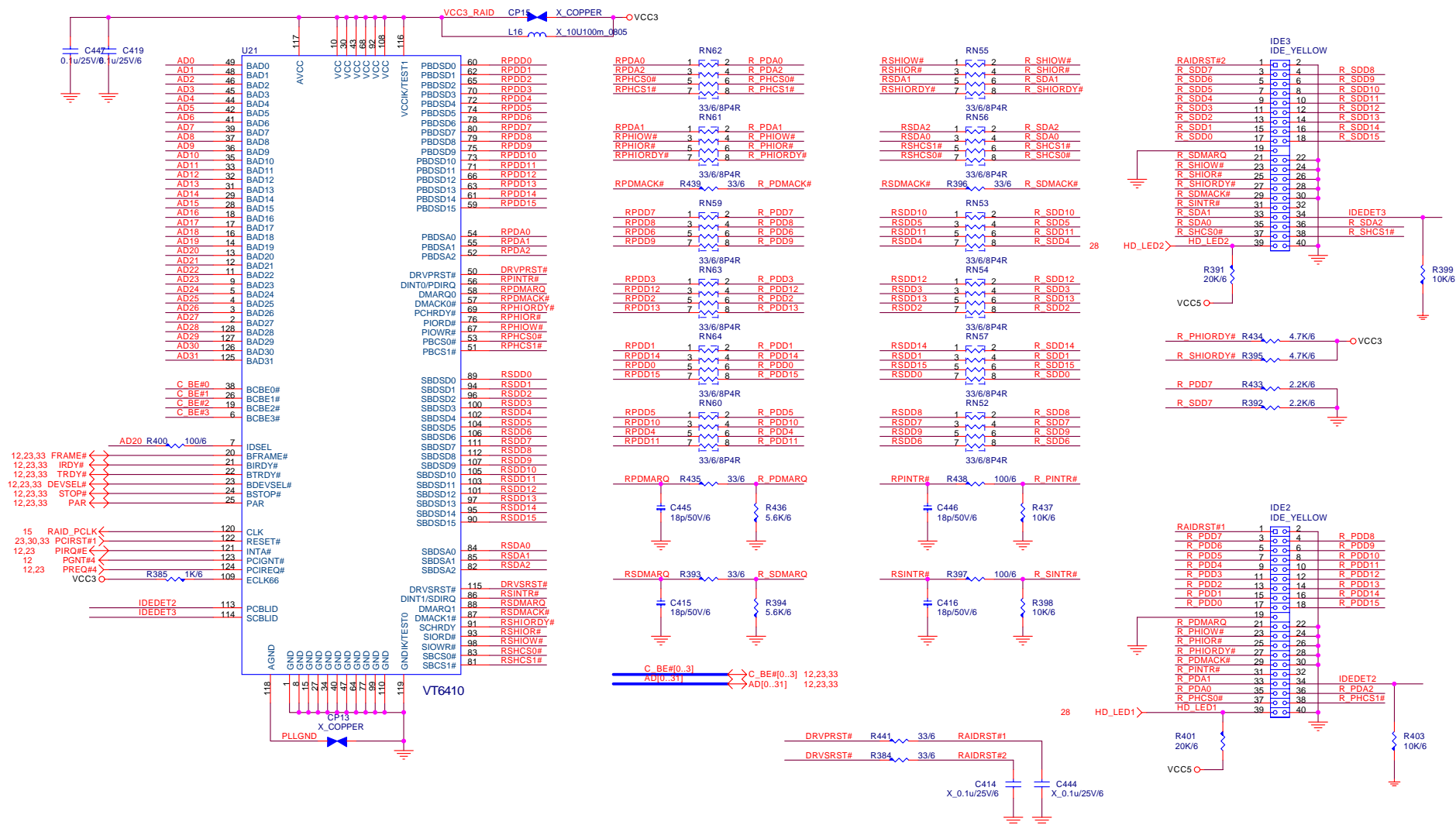




ACPI Controller

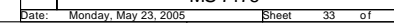






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MS_GPO2	MS_GPO1	MS_GPO0	VCORE
1	1	1	1.95V
1	1	0	1.9V
1	0	1	1.85V
1	0	0	1.8V
0	1	1	1.75V
0	1	0	1.7V
0	0	1	1.65V
0	0	0	1.6V

NOTE:
SET (VID0-5) 010101 to PWM_VID (1.6V) ,
then use MS_GPO2,1,0 to set Vcore to 1.95V

