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# MS-7267

Version 3.0

## CPU:

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

## System Chipset:

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

## On Board Chipset:

BIOS -- FWH EEPROM  
Azalia -- ALC883  
LPC Super I/O -- W83627D(E)HG  
LAN-- REALTEK RTL8100C Co-lay RTL8110SB\SC  
CLOCK -- ICS954519

## Main Memory:

DDR II \*2 (Max 2GB)

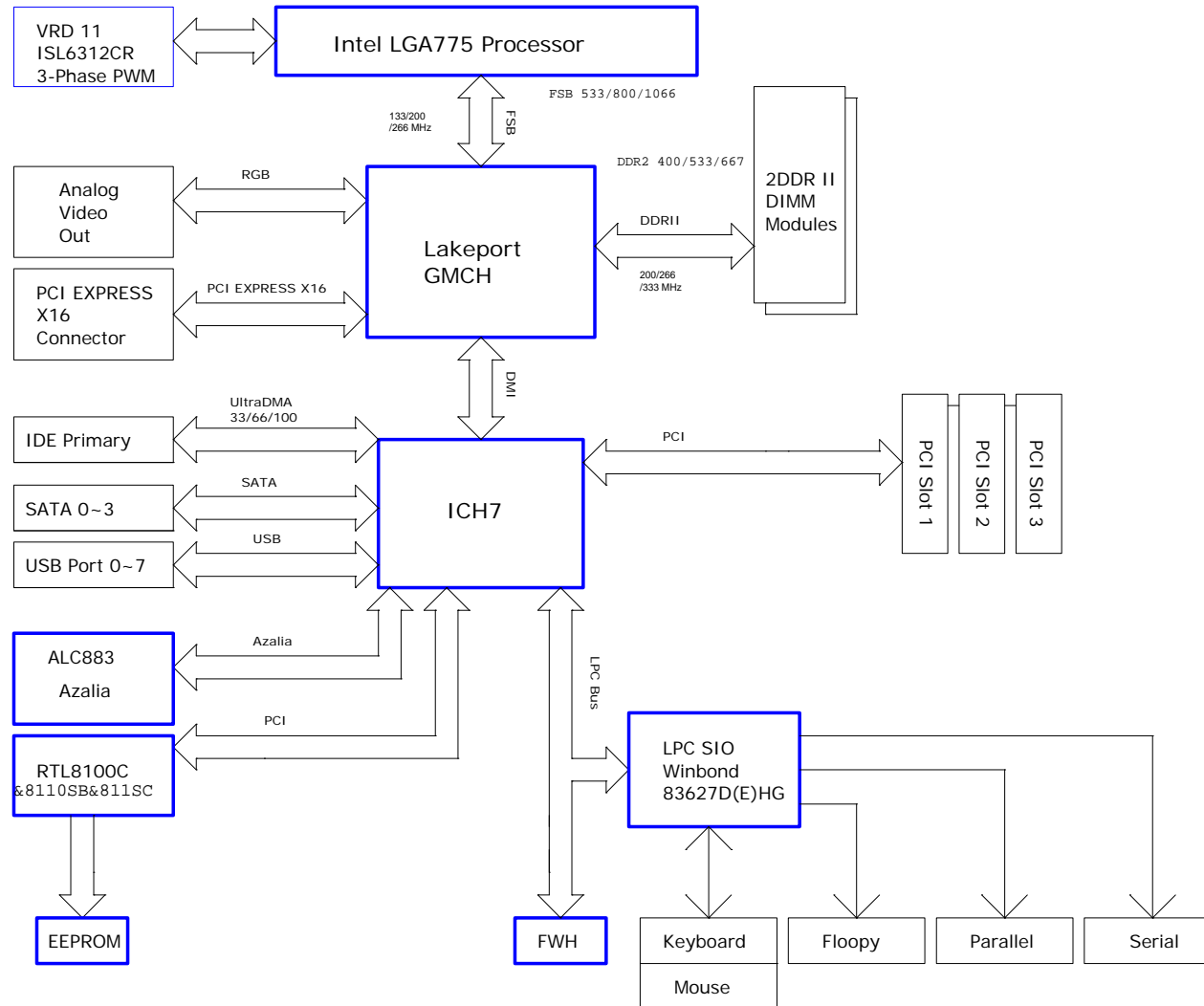
## Expansion Slots:

PCI 2.3 SLOT \* 3  
PCI EXPRESS X16 SLOT

## PWM:

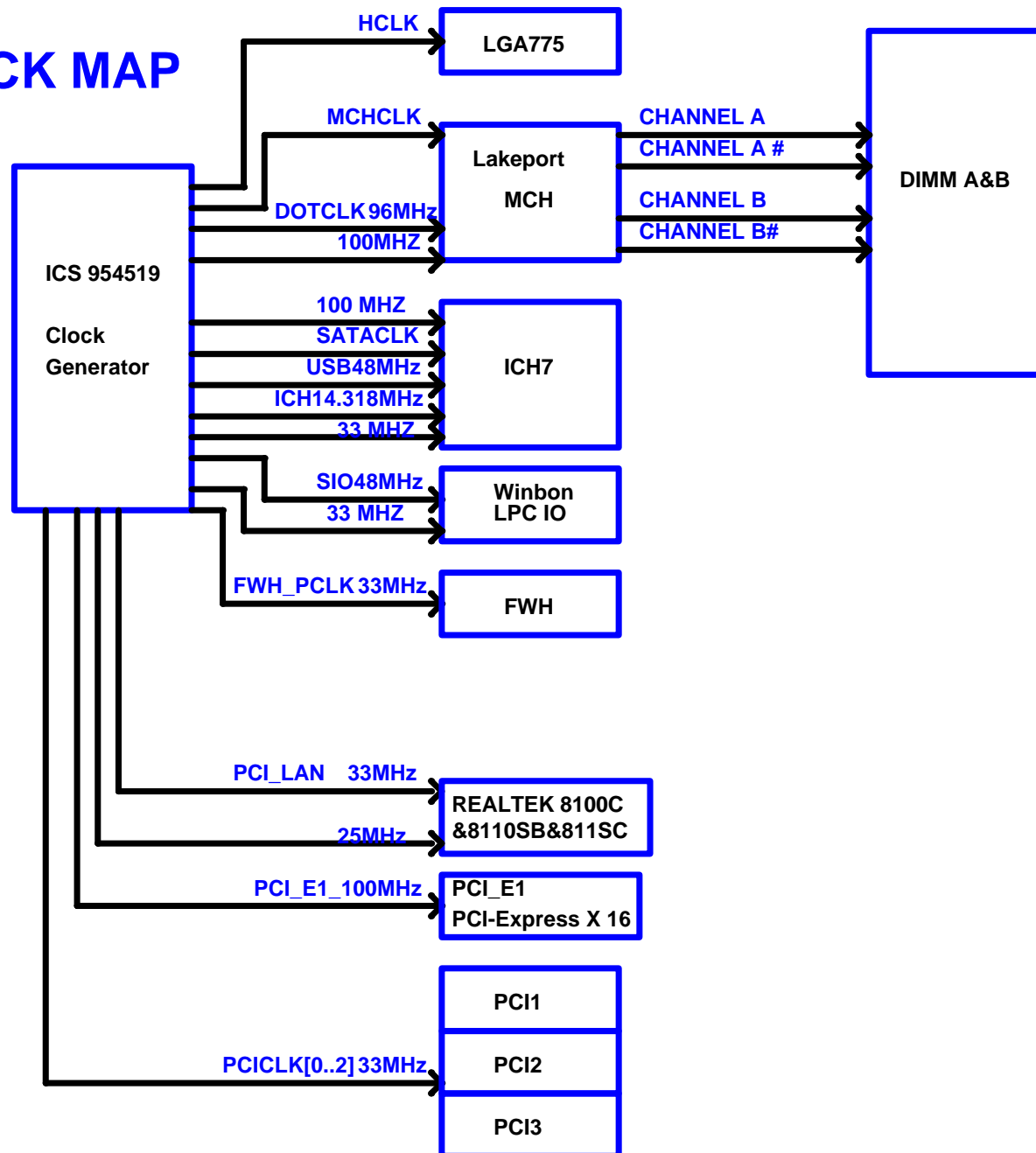
Controller: ISL6312CR 3 PHASES

# Block Diagram

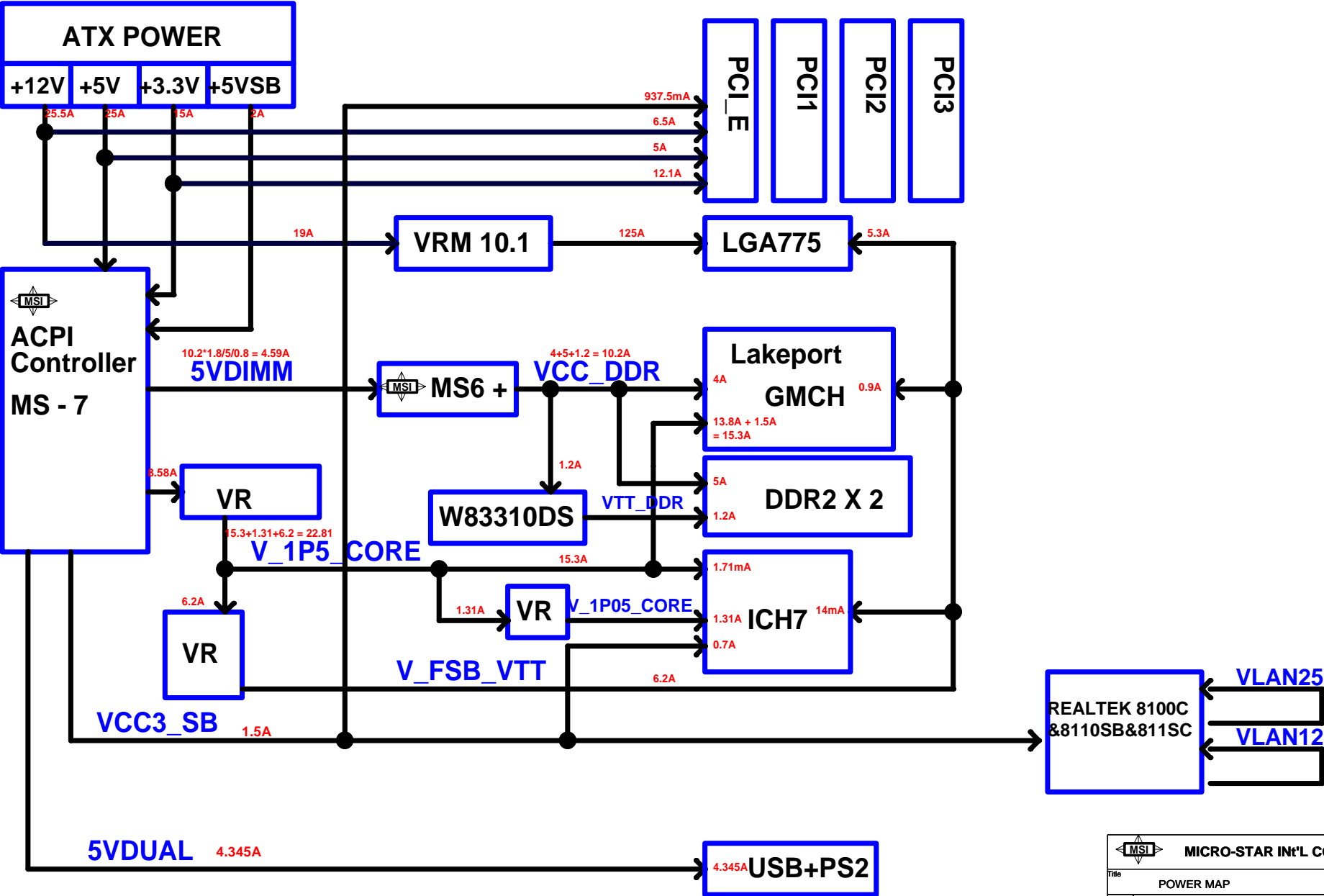


[www.schematic-x.blogspot.com](http://www.schematic-x.blogspot.com)

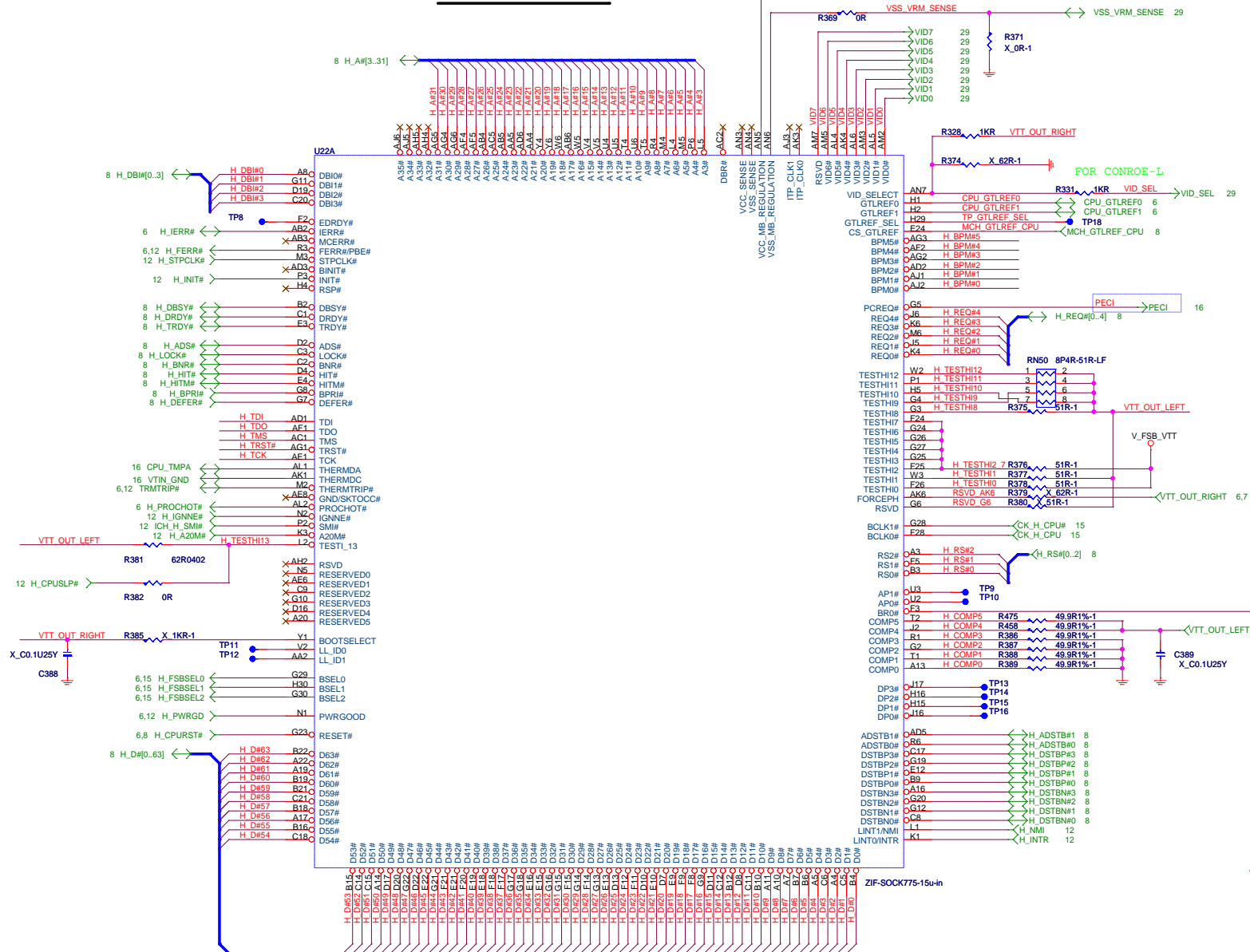
# CLOCK MAP



# POWER MAP

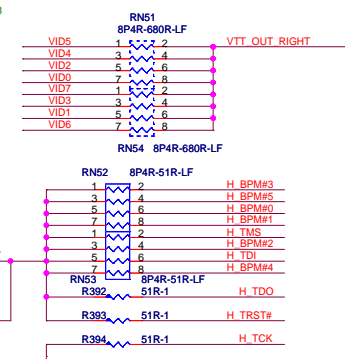


## CPU SIGNAL BLOCK

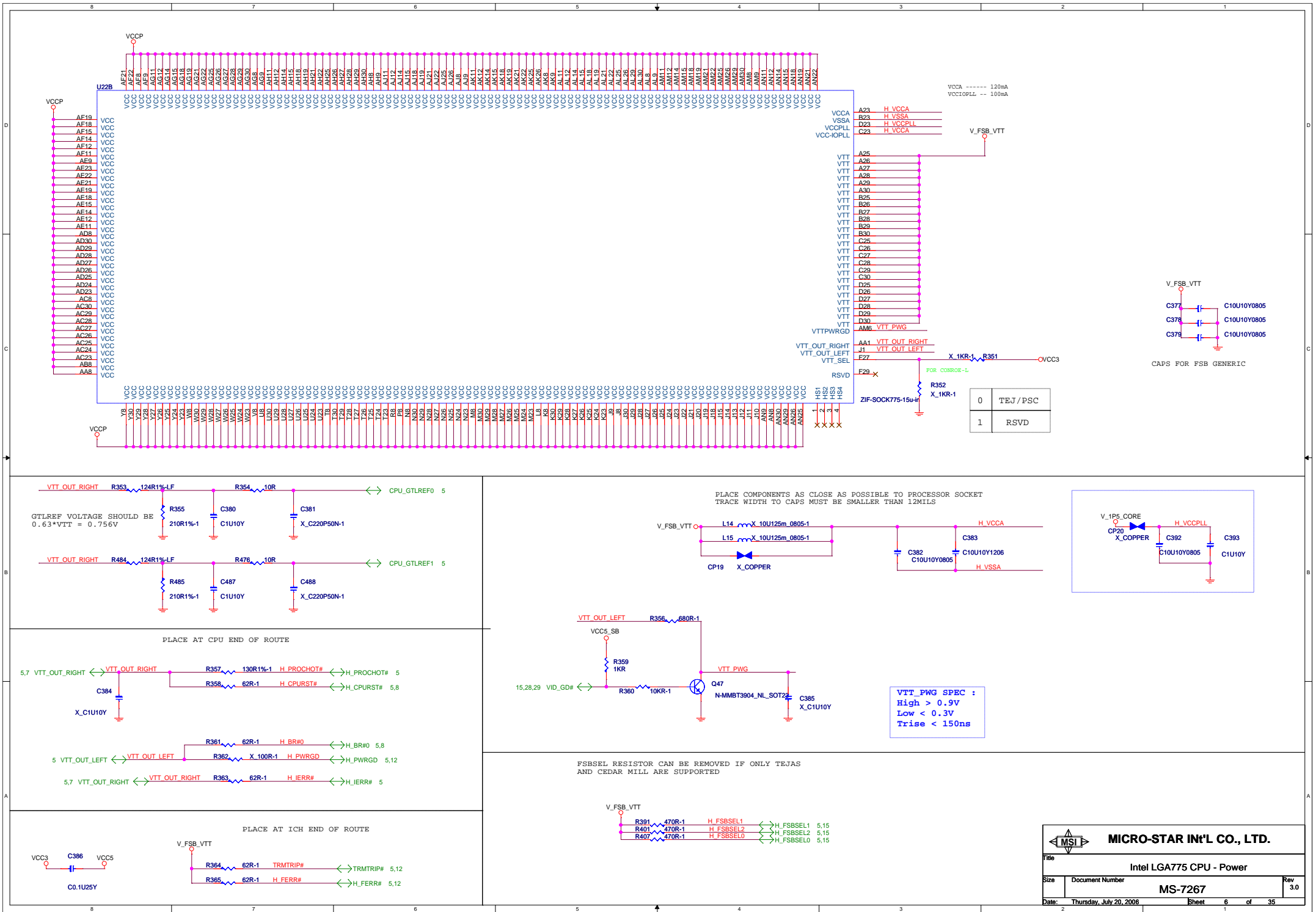


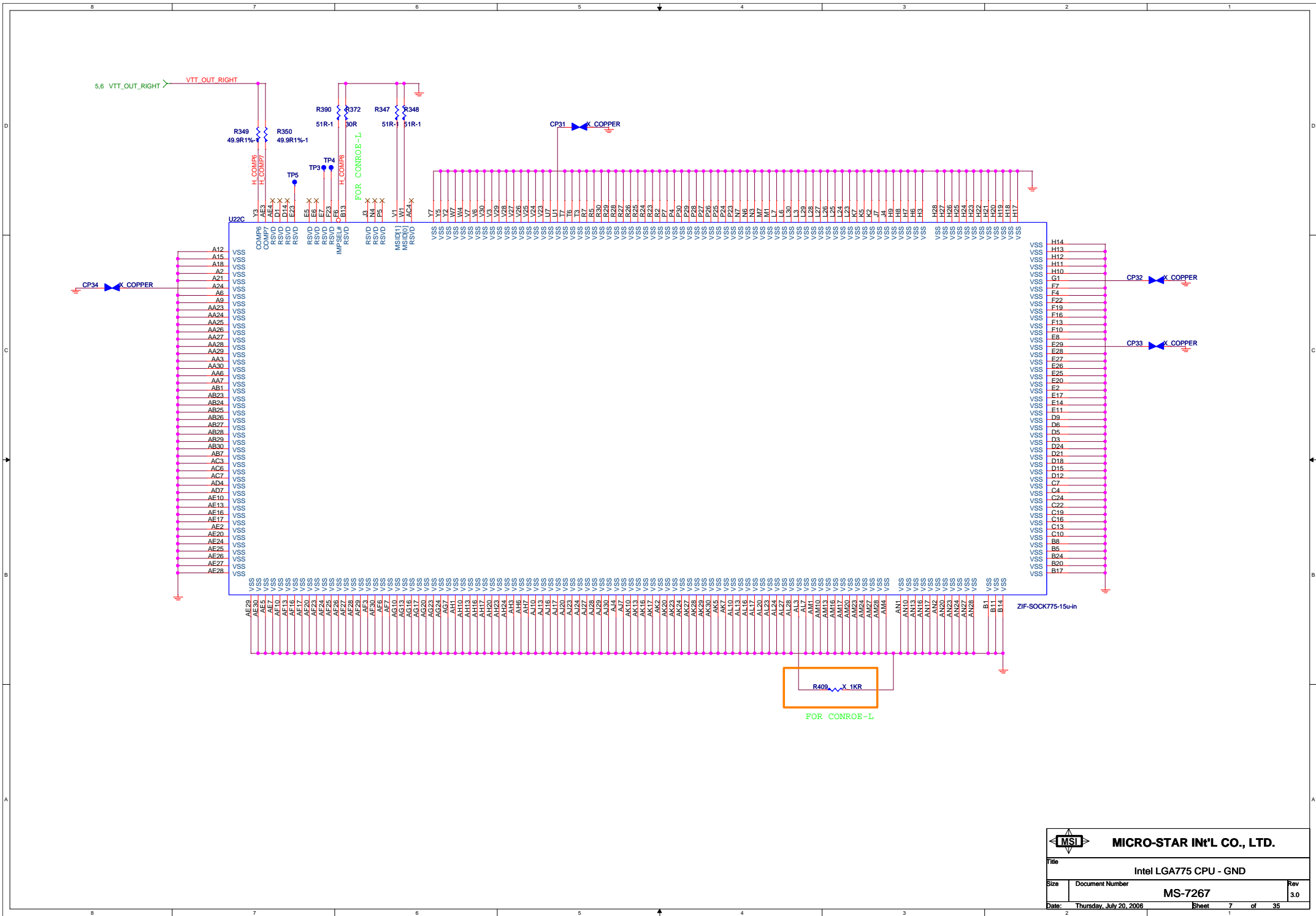
BSEL			TABLE
2	1	0	FSB FREQUENCY
0	0	0	266 MHZ (1066)
0	1	0	200 MHZ (800)
0	0	1	133 MHZ (533)

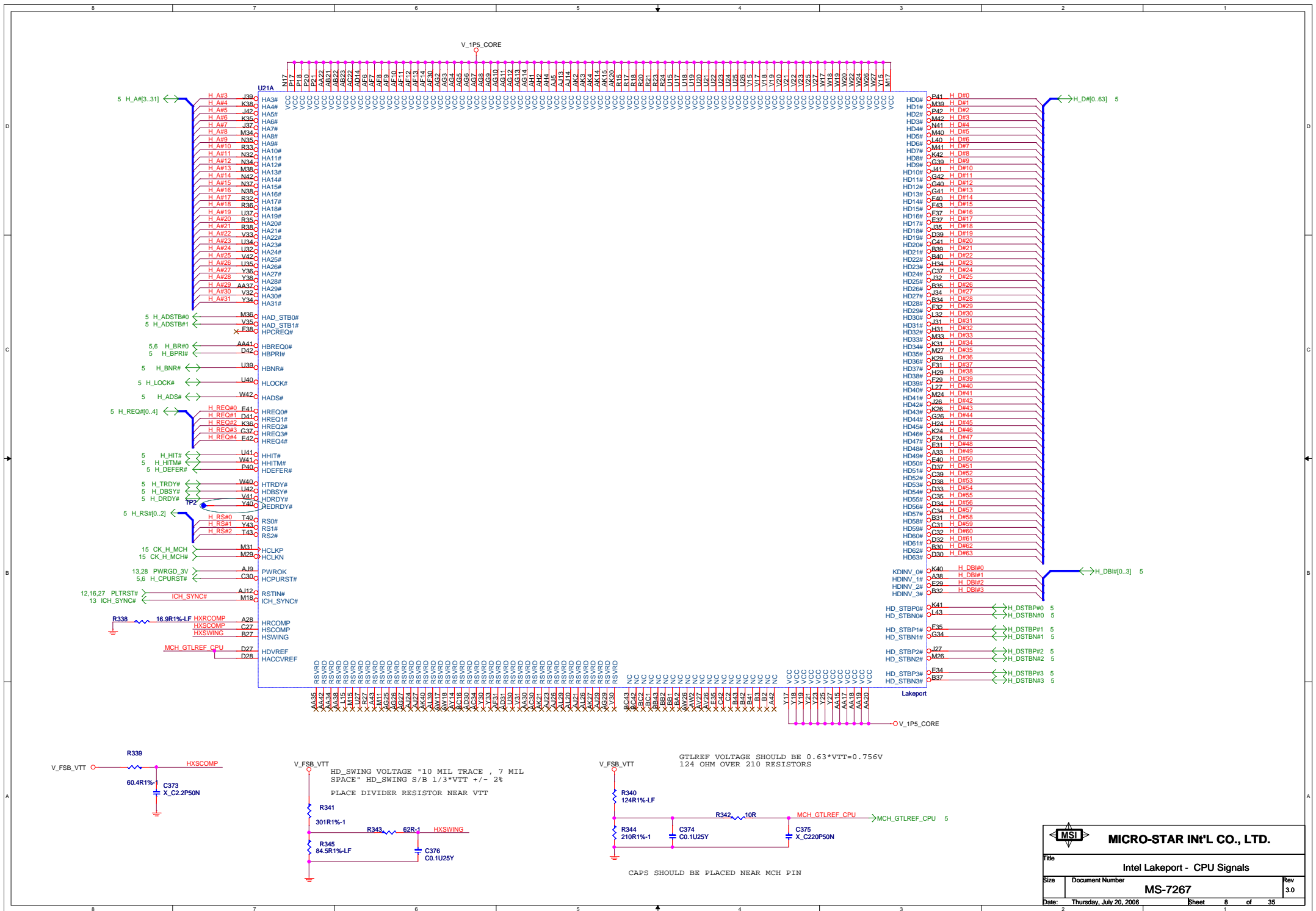
```
Prescott / Cedar Mill
LL_ID[1:0] = 00
GTLREF_SEL = 0
VTT_SEL = 1
```



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



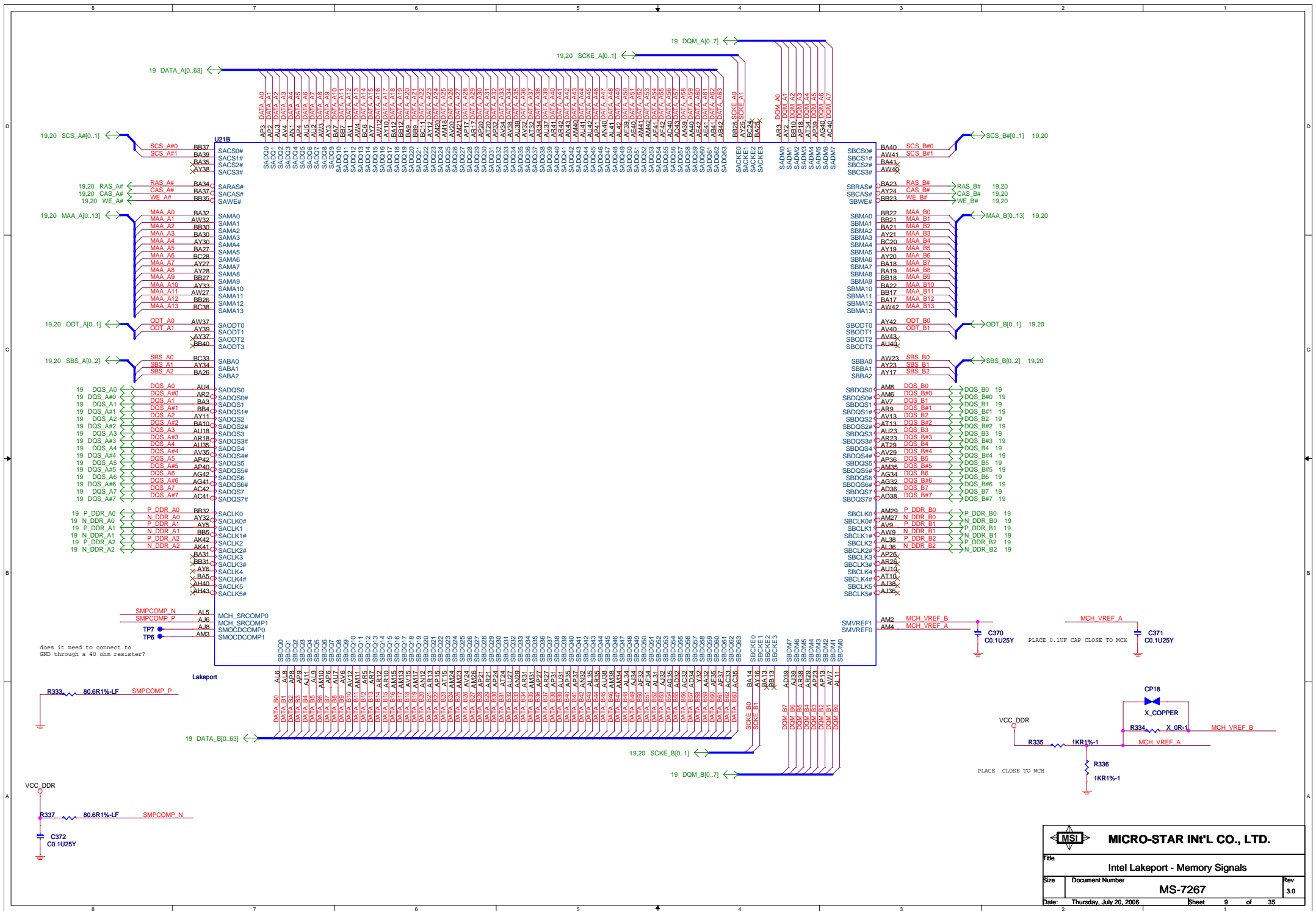


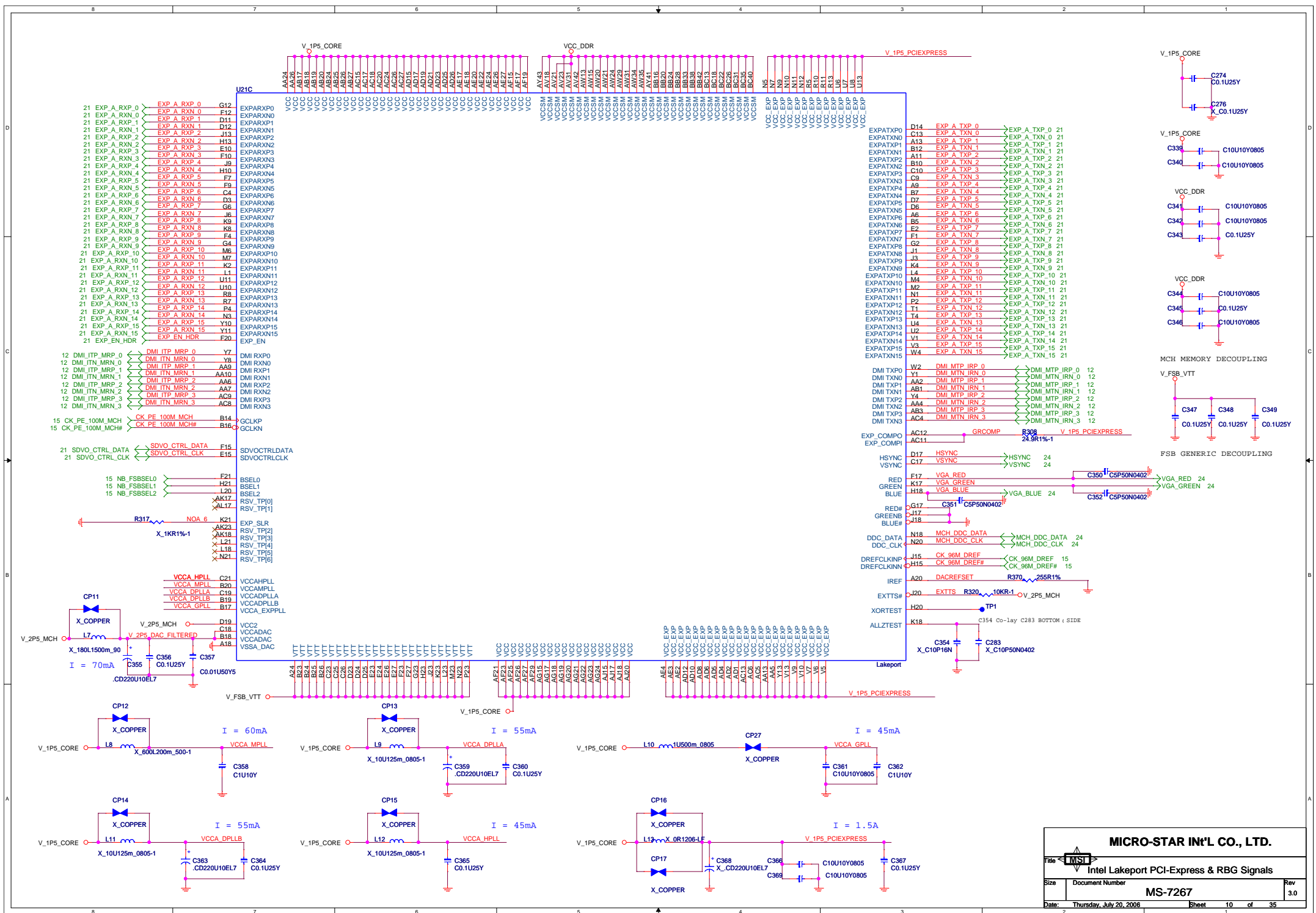


MICRO-STAR INT'L CO., LTD.

Title			Intel Lakeport - CPU Signals		
Size	Document Number				Rev
	MS-7267				3.0
Date:	Thursday, July 20, 2006				Sheet
	8				of
	35				

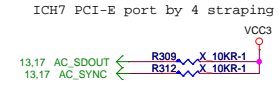
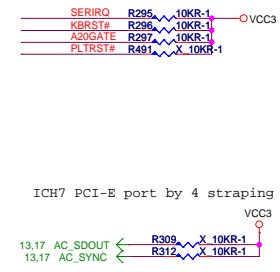
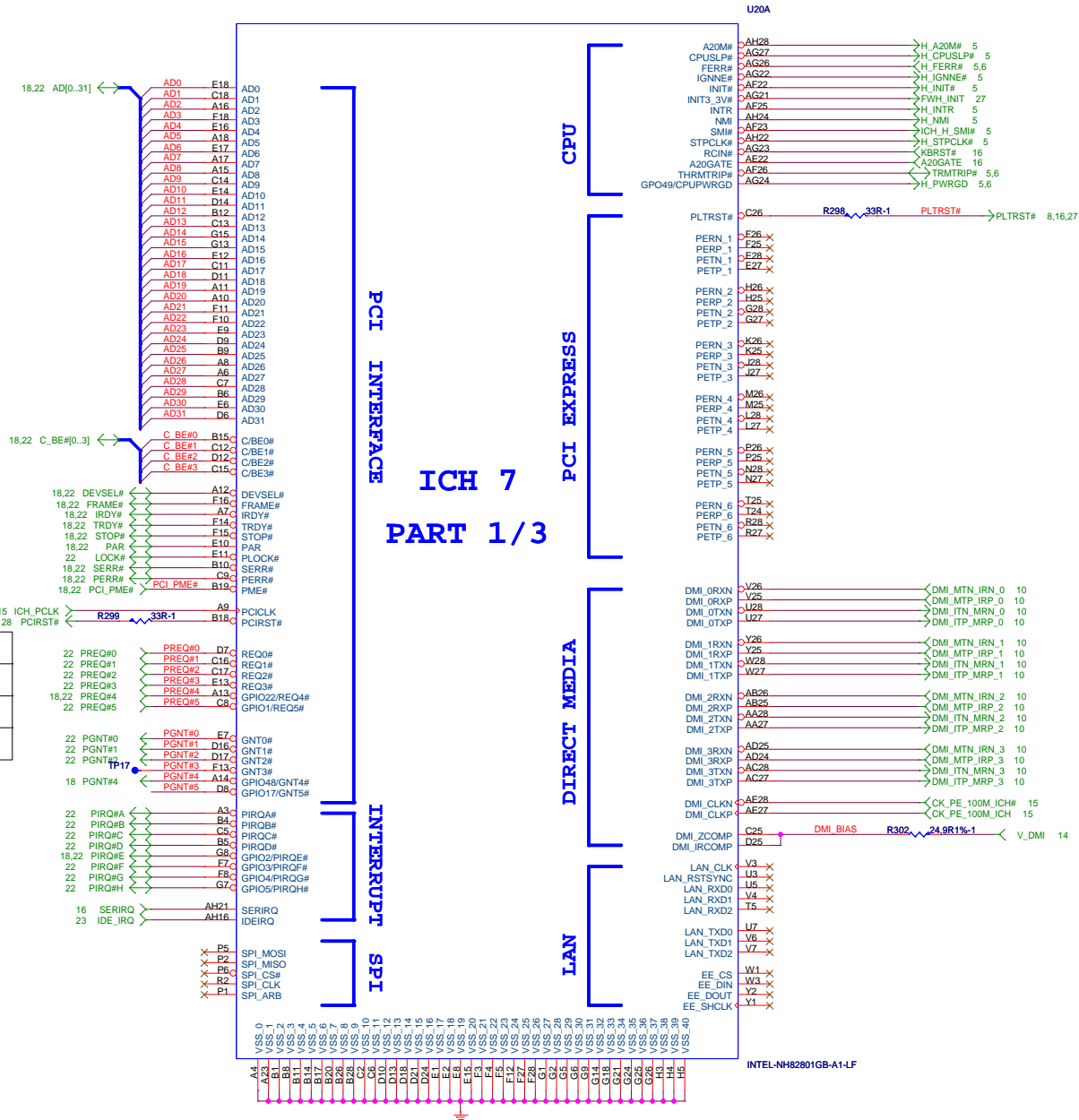


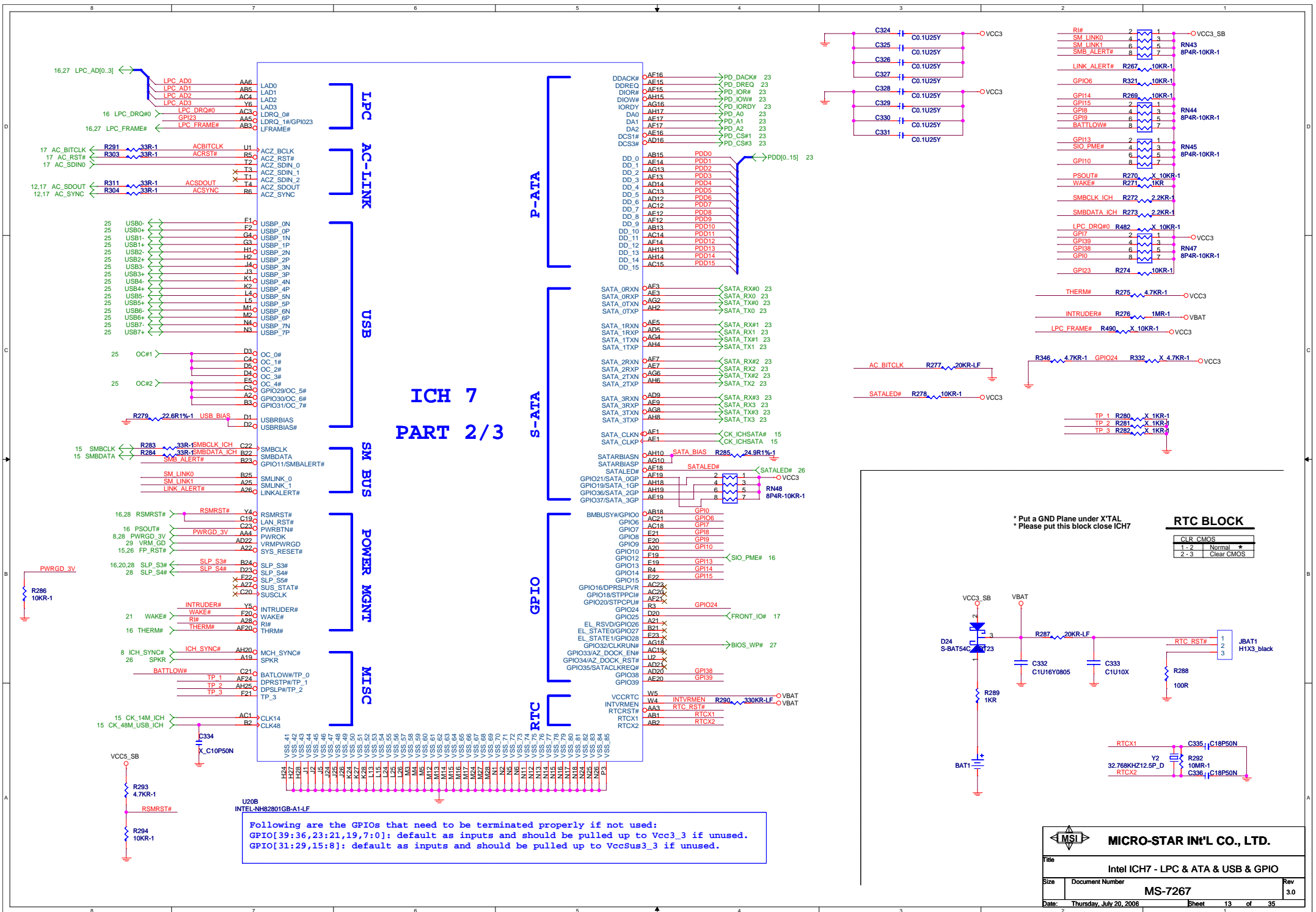


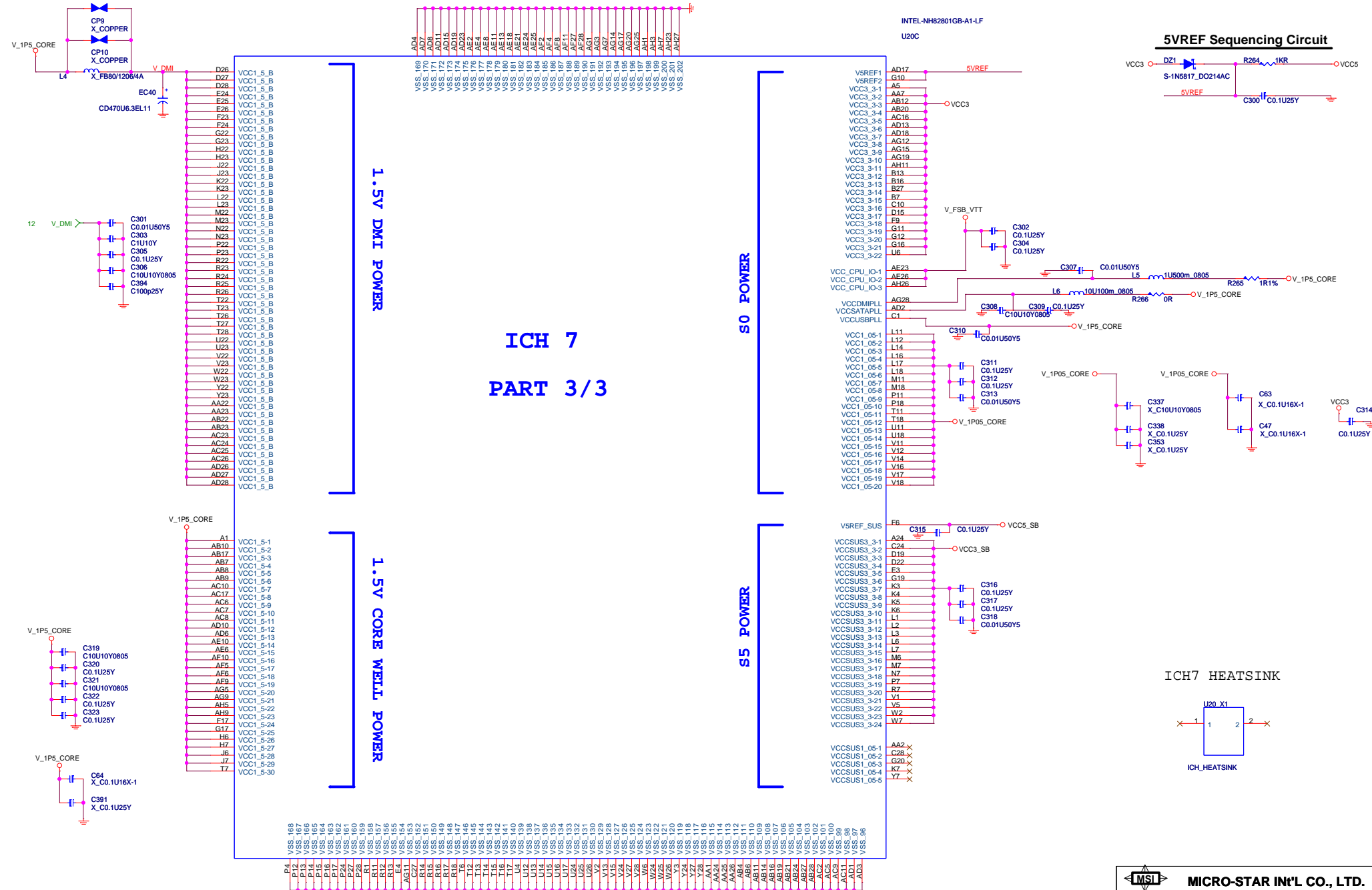




GNT5#	GNT4#	ROUTING
0	1	Flash Cycles Routed to SPI
1	0	Flash Cycles Routed to PCI
1	1	Flash Cycles Routed to LPC







C

B

A

## Clock Generator - ICS954519

Trace length less than 0.5inches

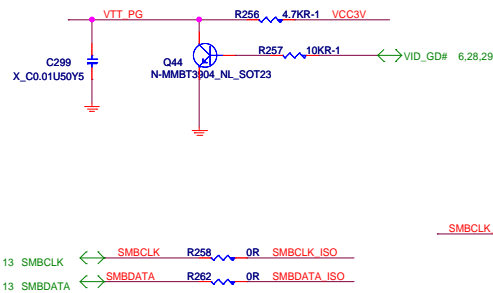


### CPU Frequency Selection

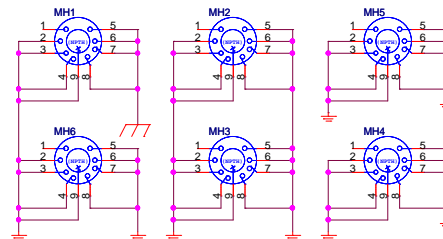
H_FSBSEL0	1	2	CPU Frequency
0	0	0	266MHz
0	1	0	200MHz
1	0	0	133MHz

Only the selection in the table is valid

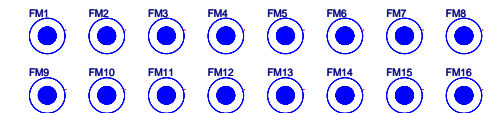
## Clock Generator VTT PowerGood



## Mounting Holes



## Optics Orientation Holes



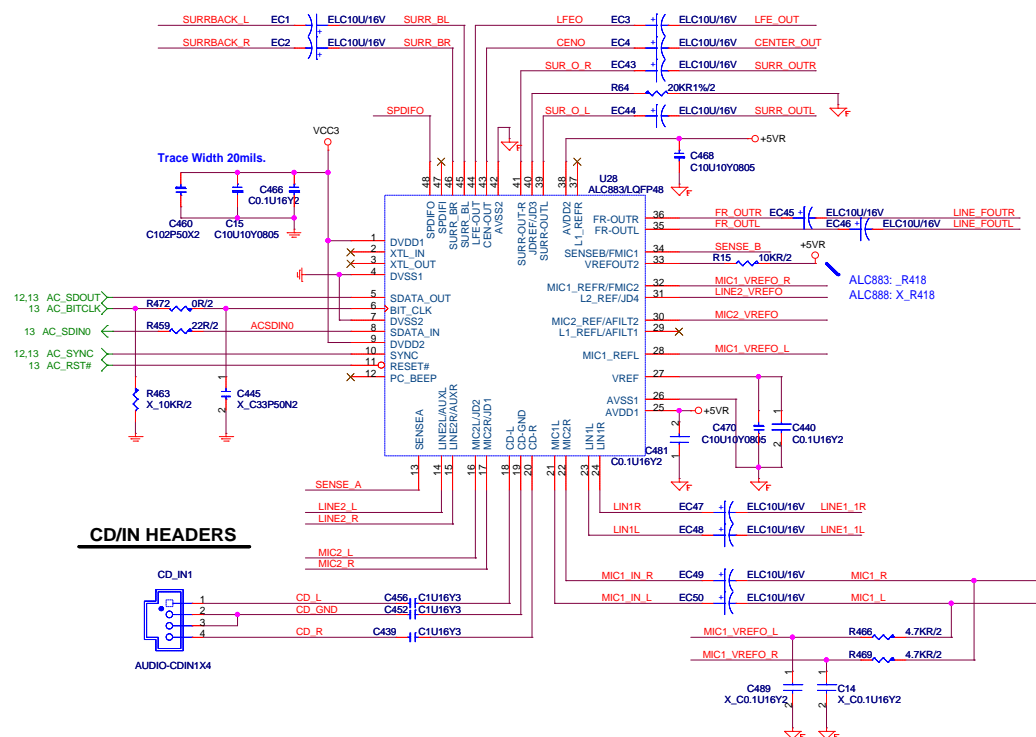
MICRO-STAR IN'L CO., LTD.		
Title: Clock - ICS954519		
Size:	Document Number:	Rev: 3.0
Date: Thursday, July 20, 2006		Sheet 15 of 35



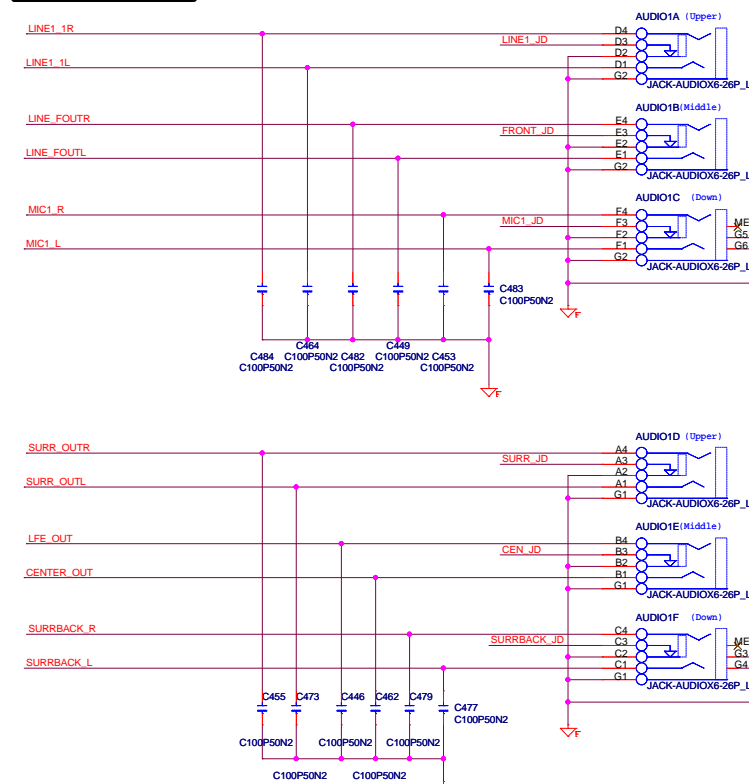




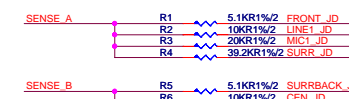
## ALC883 CODEC



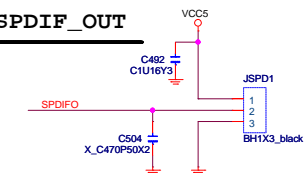
ALC883 JACK



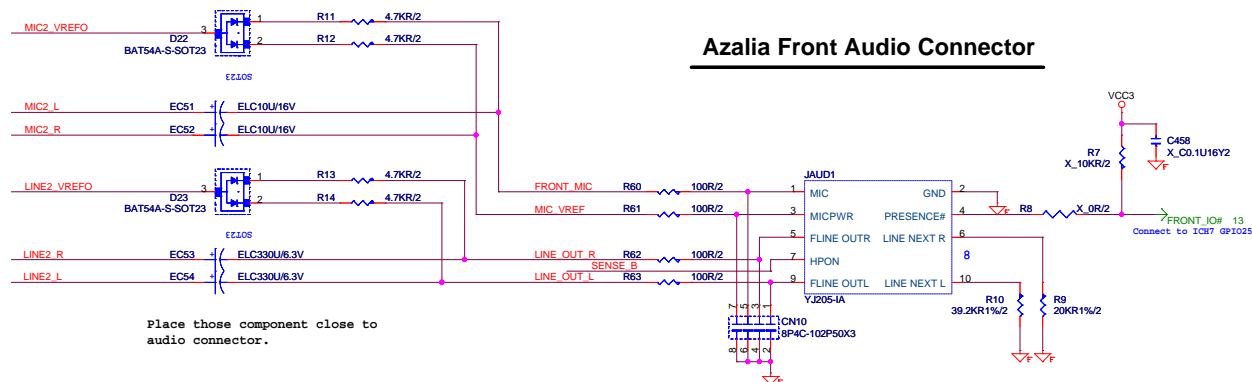
ALC883 JACK DETECT



## SPDIF OUT

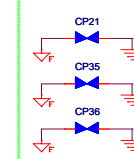


## Azalia Front Audio Connector

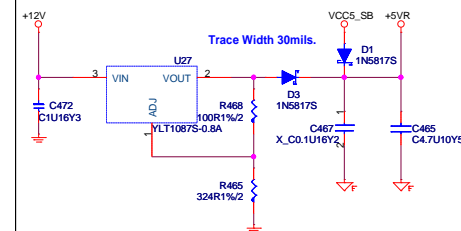


Place those component close to  
audio connector.

For EMI



## AUDIO CODE REGULATORS



**MICRO-STAR INT'L CO.,LTD**

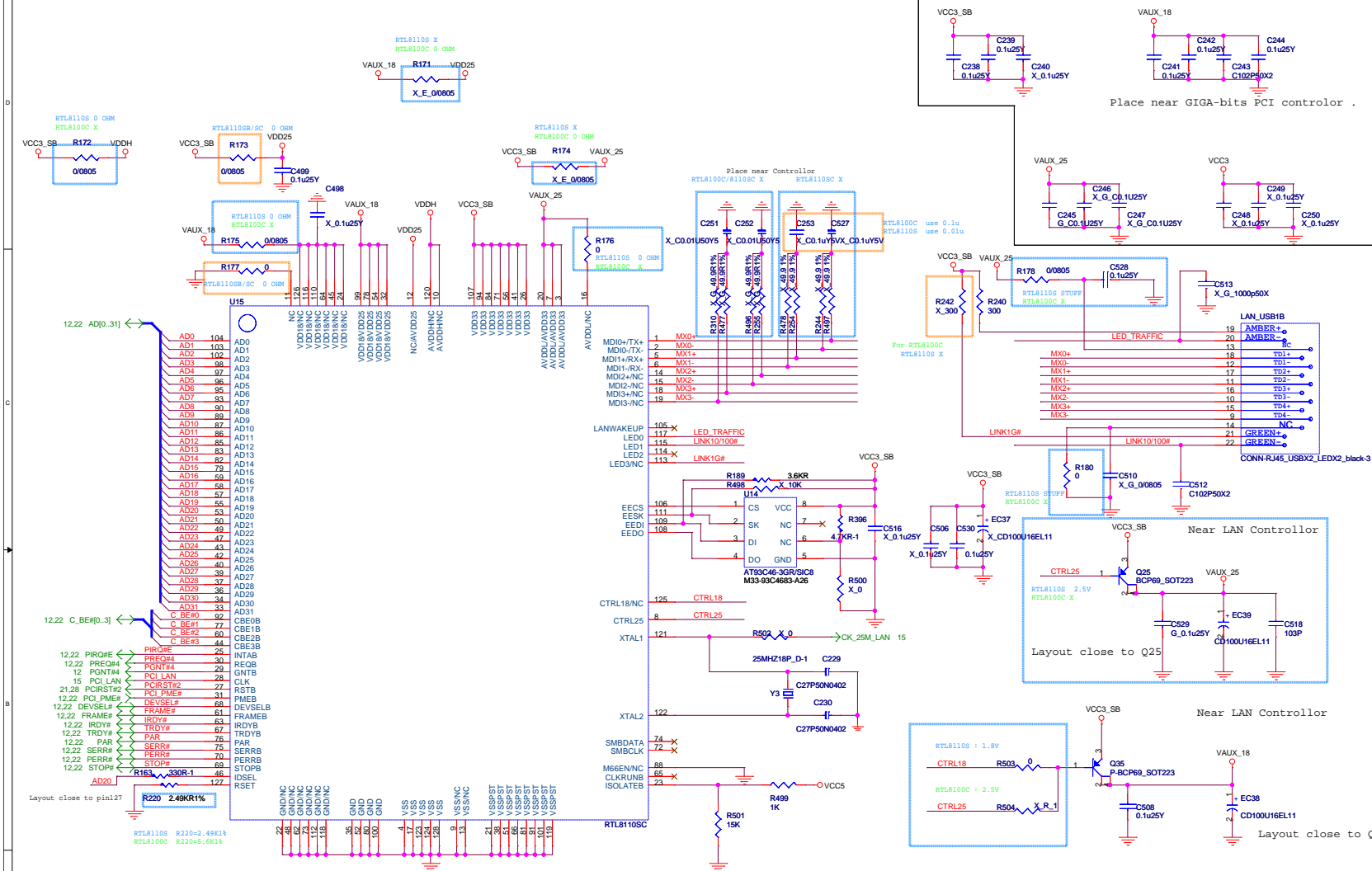
MS-7267

Size Custom	Document Description <b>Azalia CODEC(ALC883)</b>
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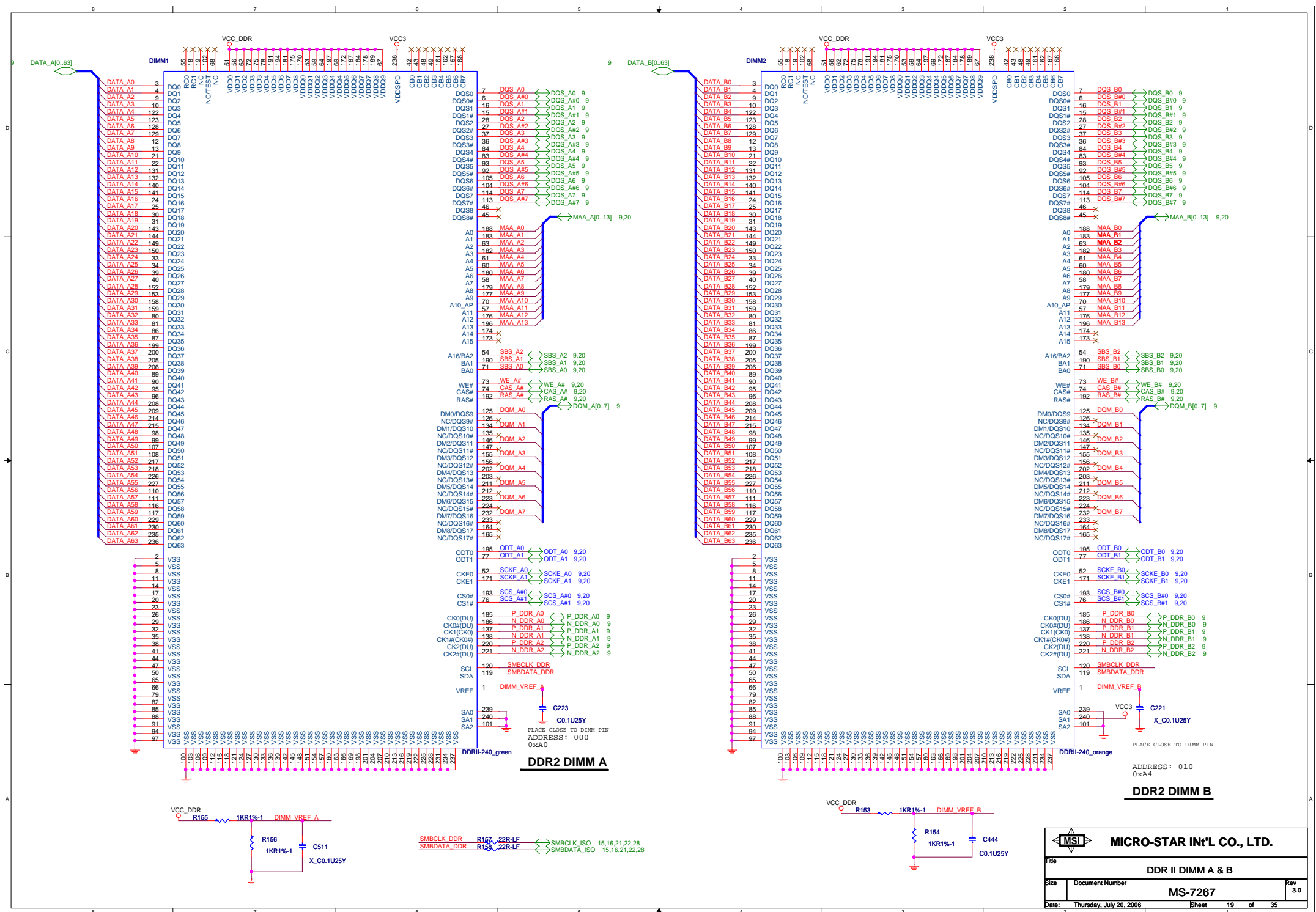
Date: Thursday, July 20, 2006

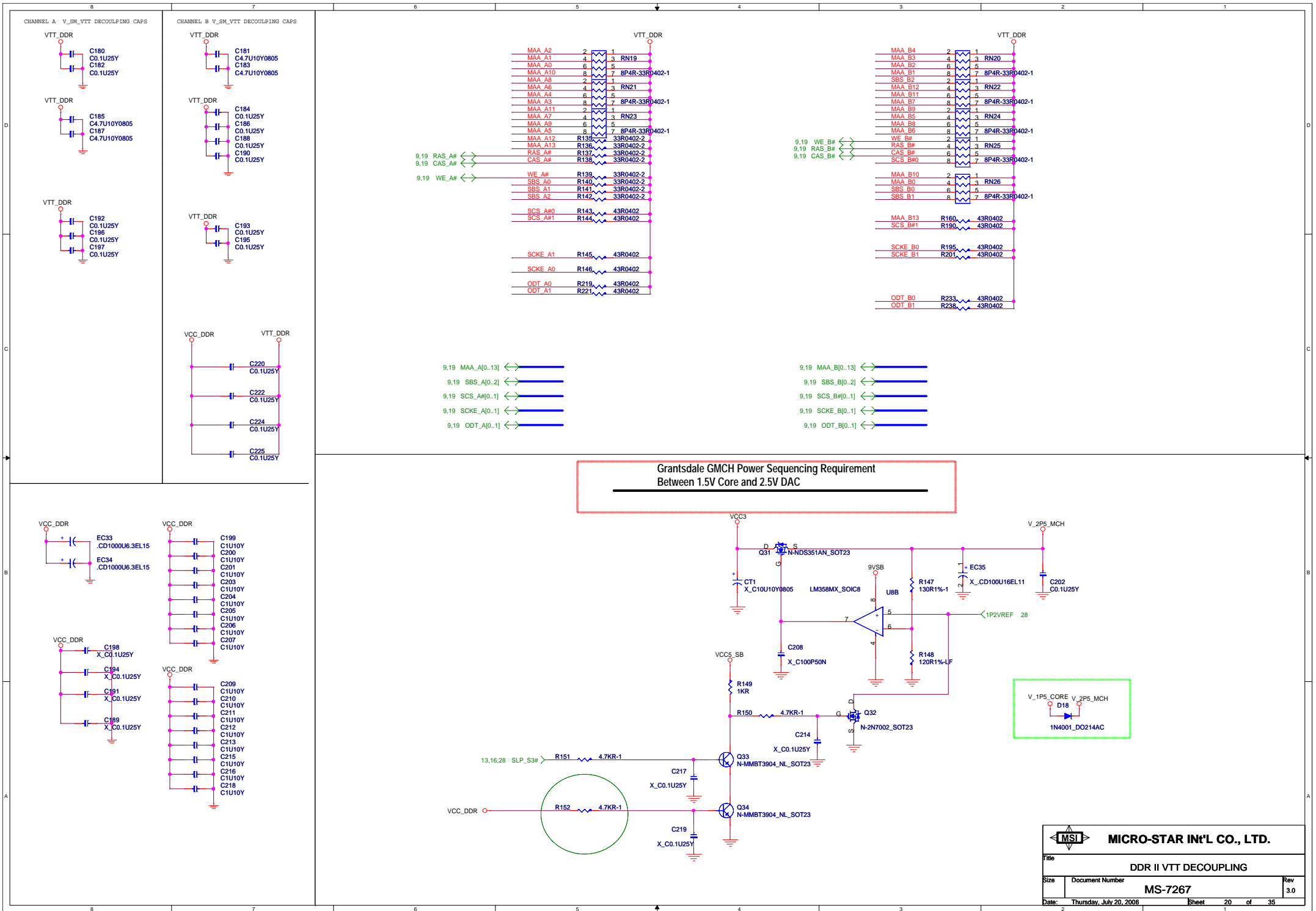
Sheet 17 of 35

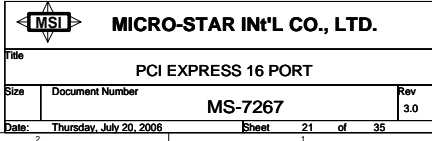
**BOM Default: 8110SC**



<b>Micro Star Restricted Secret</b>		
<b>Title</b>	<b>RTL8100C/8110SB/8110SC</b>	<b>Rev</b>
<b>Document Number</b>	<b>MS-7267</b>	<b>3.0</b>
MICRO-STAR INT'L CO., LTD. No. 60, Li-De St., Jung-Hsi City, Taipei Hsien, Taiwan <a href="http://www.msi.com.tw">http://www.msi.com.tw</a>		Last Revision Date: <b>Thursday, July 20, 2006</b> Sheet 18 of 35



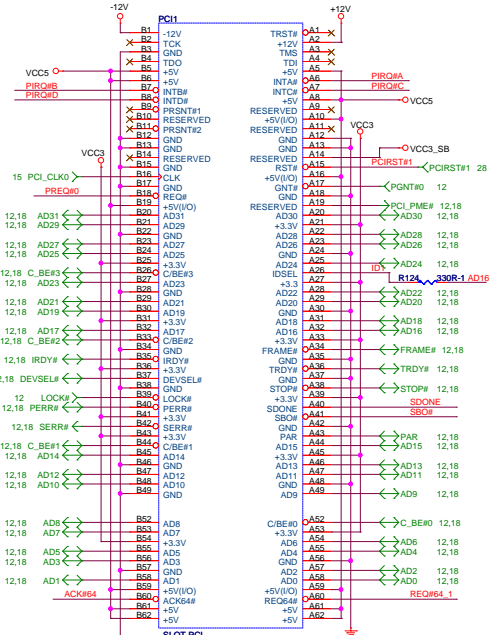




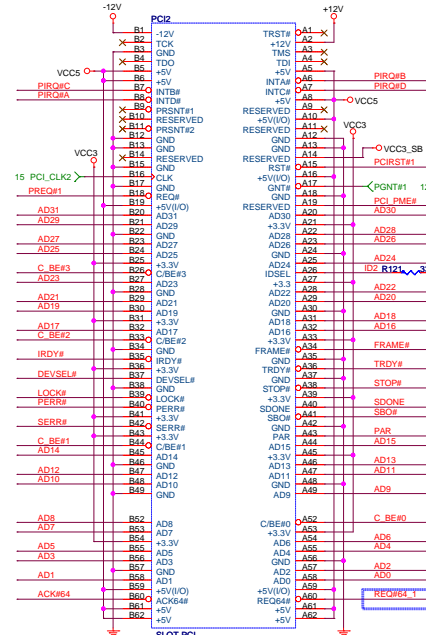
# PCI SLOT 1 (PCI VER: 2.2 COMPLY)

# PCI SLOT 2 (PCI VER: 2.2 COMPLY)

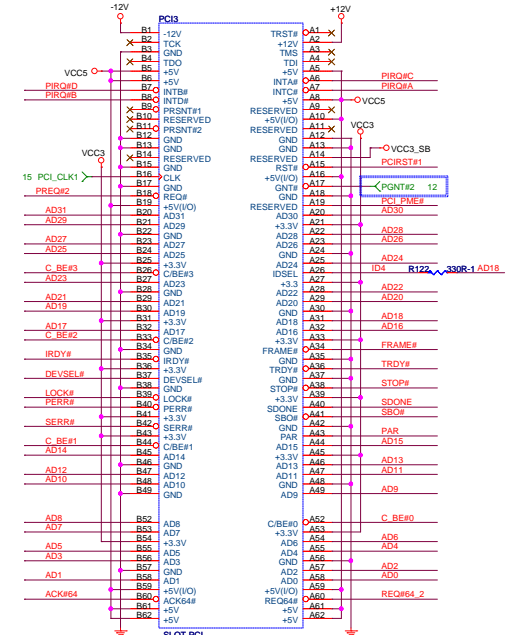
# PCI SLOT 3 (PCI VER: 2.2 COMPLY)



IDSEL = AD16  
MASTER = PREQ#0  
PIRQ#A

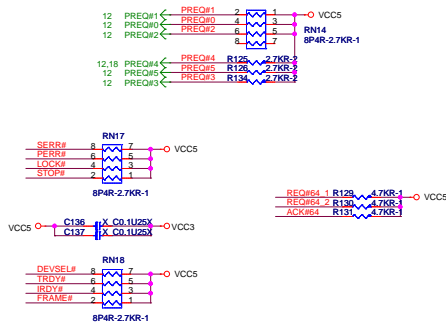


IDSEL = AD17  
MASTER = PREQ#1  
PIRQ#B

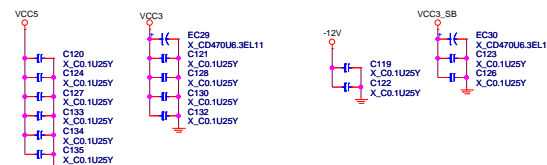


IDSEL = AD18  
MASTER = PREQ#2  
PIRQ#C

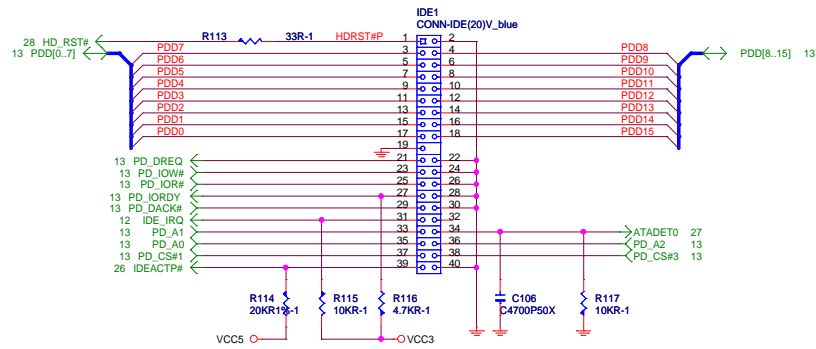
## PCI PULL-UP / DOWN RESISTORS



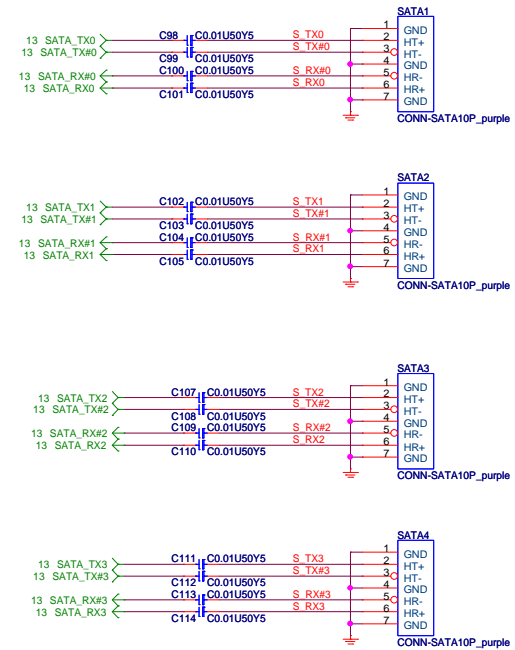
## PCI SLOT DECOUPLING CAPACITORS



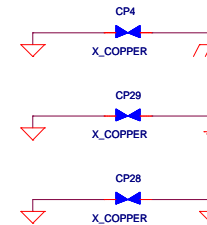
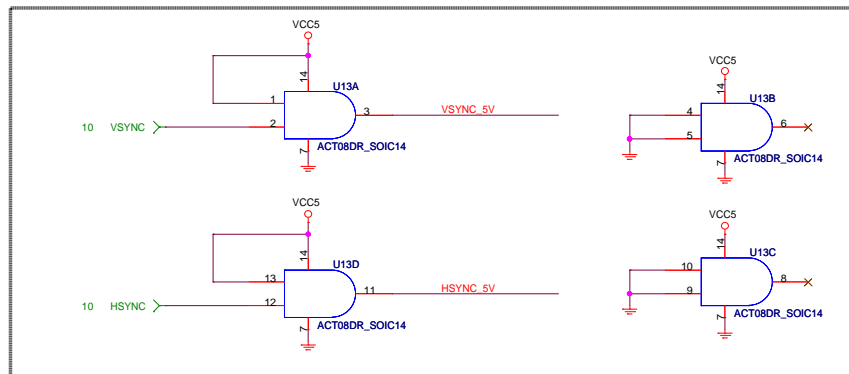
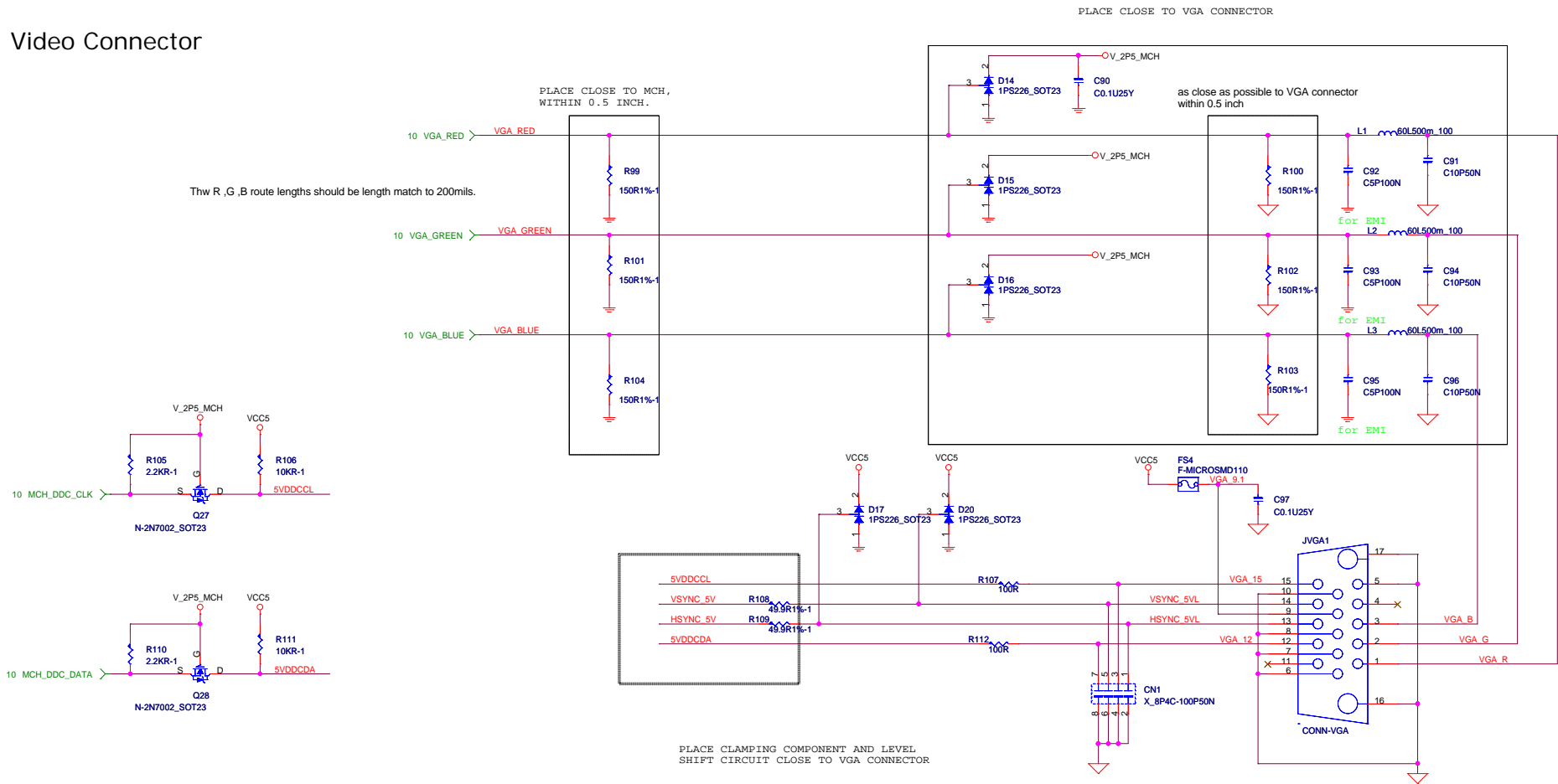
## ATA 33/66/100 IDE Connectors



## SERIAL ATA CONNECTOR BLOCK

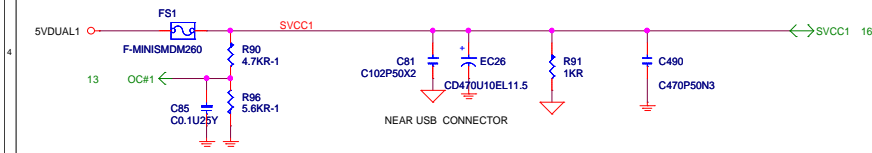


## Video Connector

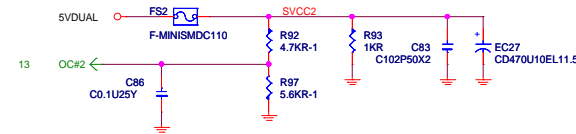




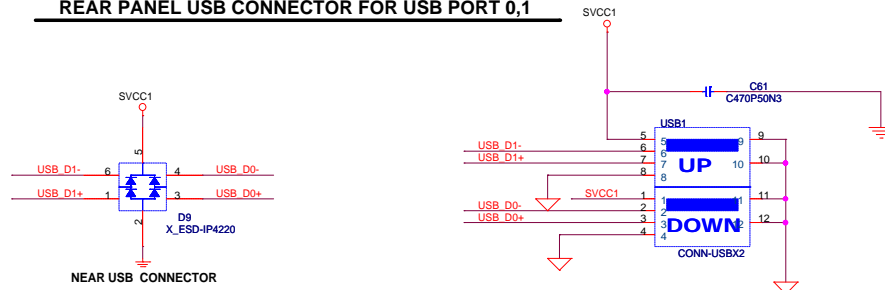
## POWER CIRCUIT FOR USB PORT 0,1,2,3 (REAR)



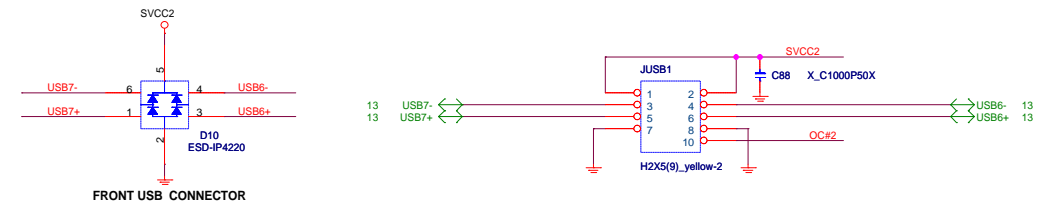
## POWER CIRCUIT FOR USB PORT (FRONT)



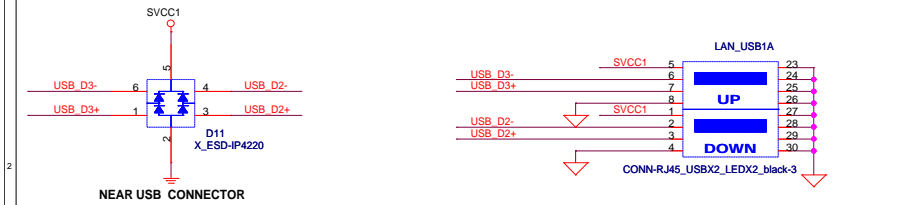
## REAR PANEL USB CONNECTOR FOR USB PORT 0,1



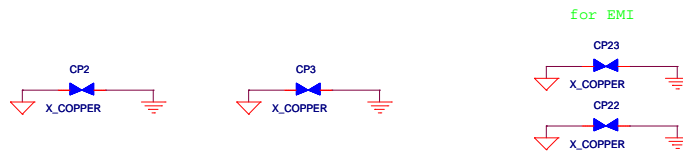
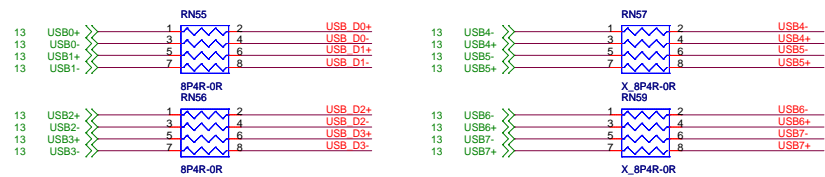
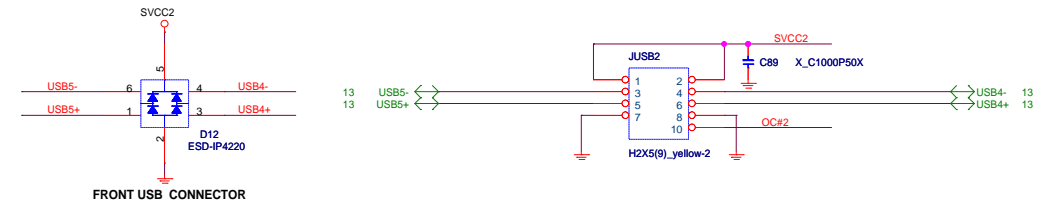
## FRONT PANEL USB CONNECTOR FOR USB PORT 6,7



## REAR PANEL USB CONNECTOR FOR USB PORT 2,3



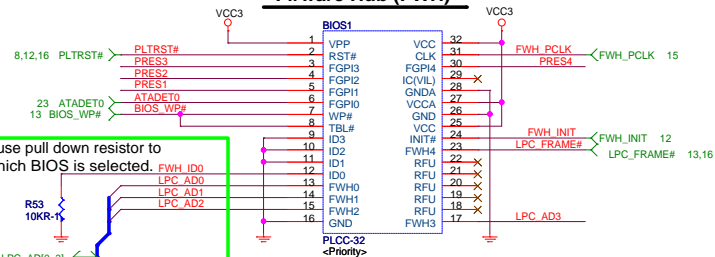
## FRONT PANEL USB CONNECTOR FOR USB PORT 4,5





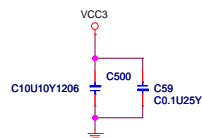
13,16 LPC\_AD[0..3]

### Firmware Hub (FWH)

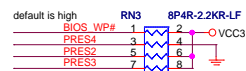


### FWH DECOUPLING CAPACITORS

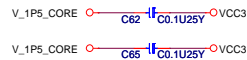
Place Cap. as Close to FWH< 350 mil



### FWH Resistors



### FOR EMI



# ACPI Controller

