



# MS-7298

**CPU:** Ver:0A  
AMD 940 Athlon 64/Athlon 64 FX

**System Chipset:**  
NVIDIA C51G  
NVIDIA MCP51G/MCP51

**On Board Chipset:**  
LPC Super I/O -- W83627EHG/ DHG  
LAN -- RTL8201CL/VSC8601  
AC97 Codec --ALC655/ALC658  
BIOS --LPC FLASH ROM 4M

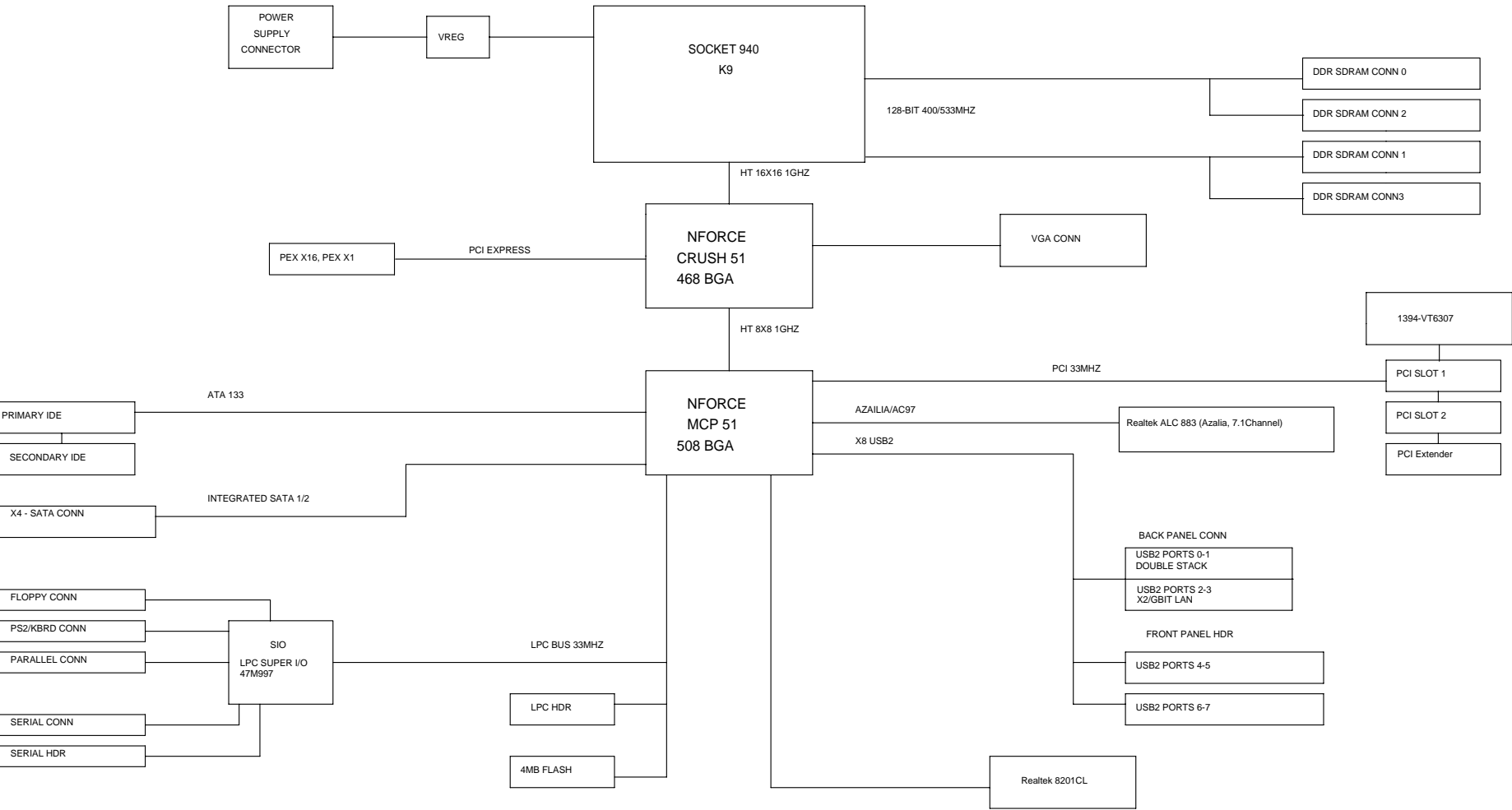
**Main Memory:**  
DDR \* 2(Max 2GB)

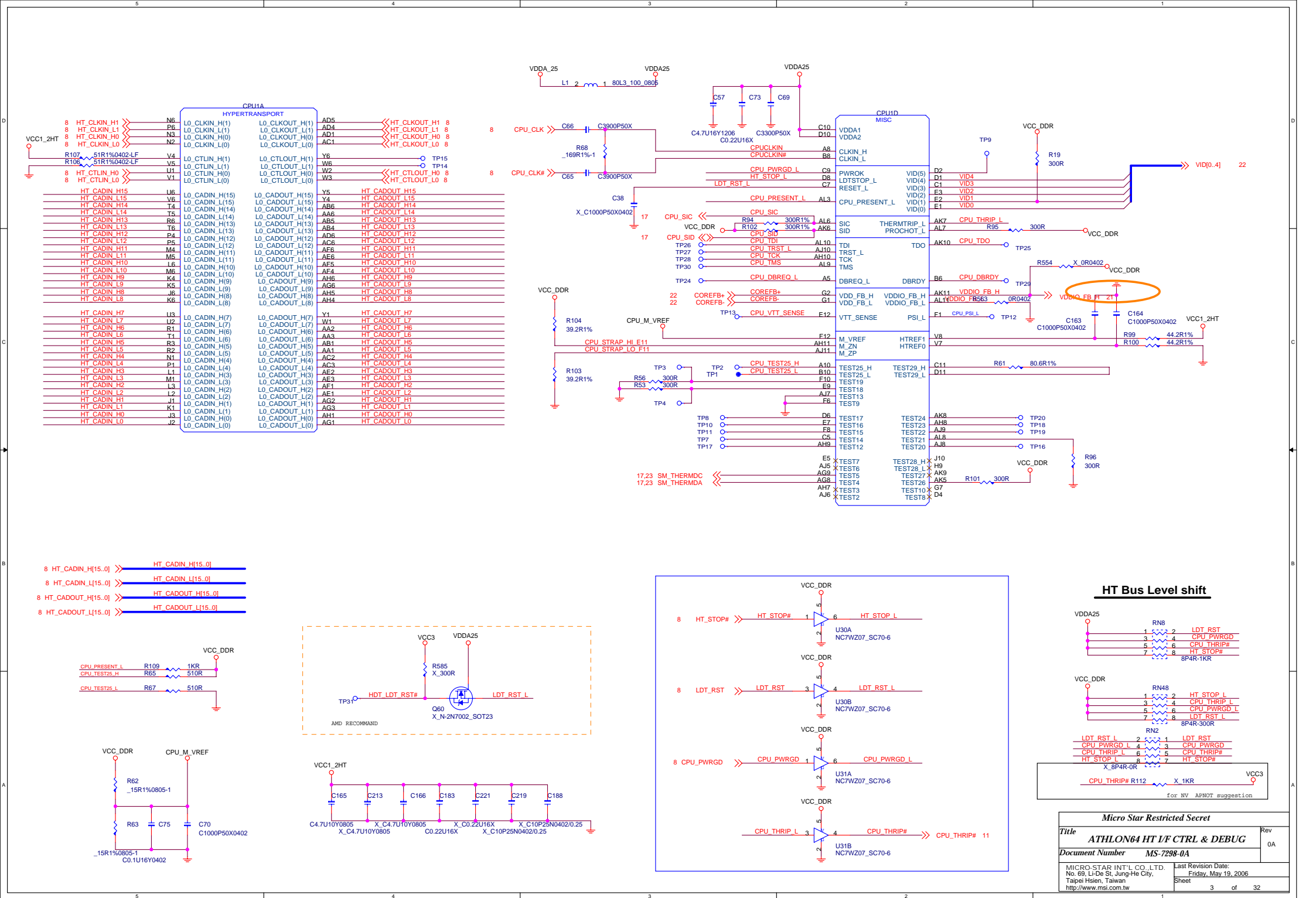
**Expansion Slots:**  
PCI-E X1 \*1  
PCI-E X 16 \*1  
PCI 2.2 Slot \* 3

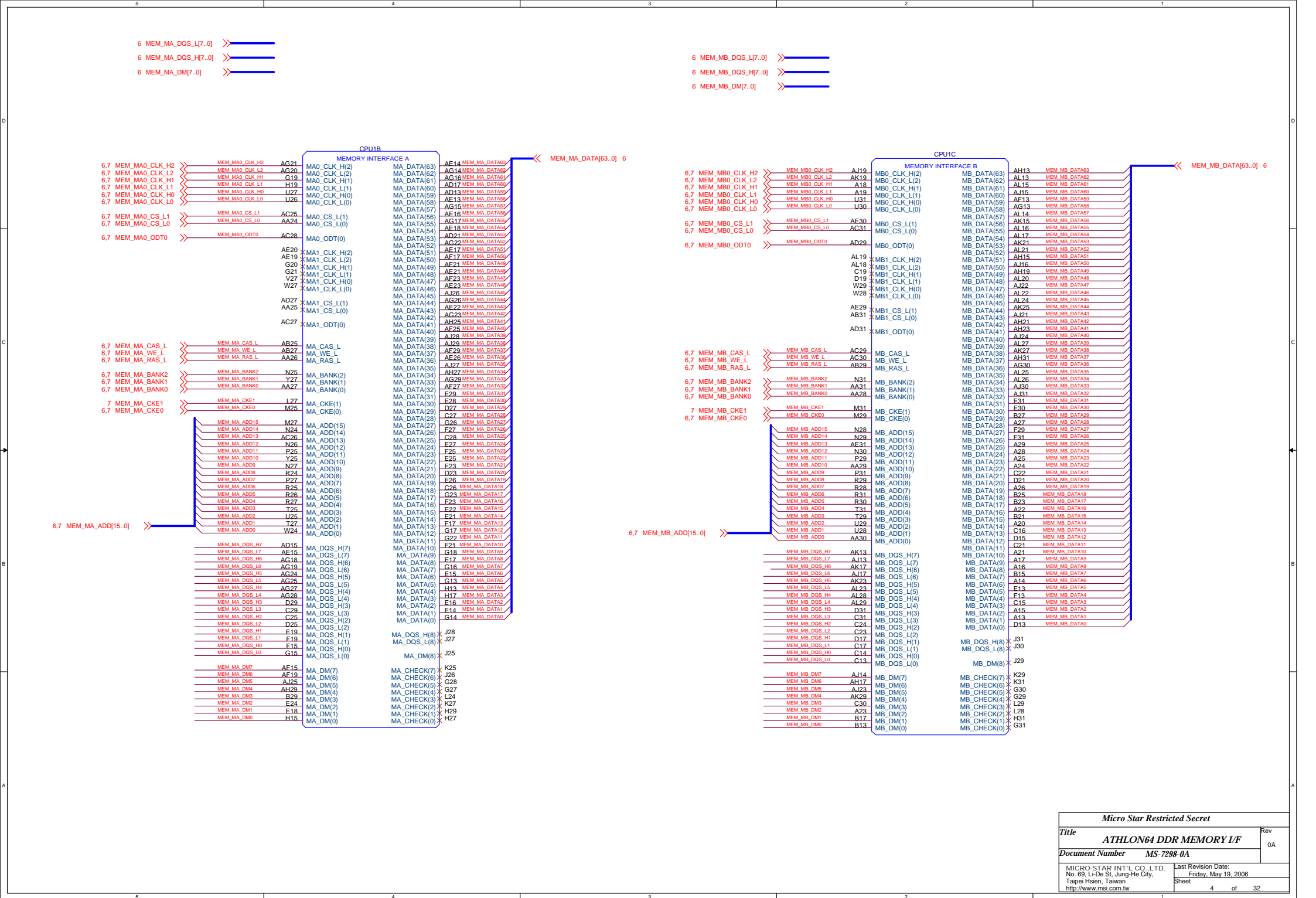
**PWM:**  
Controller--RT8800 3 Phase

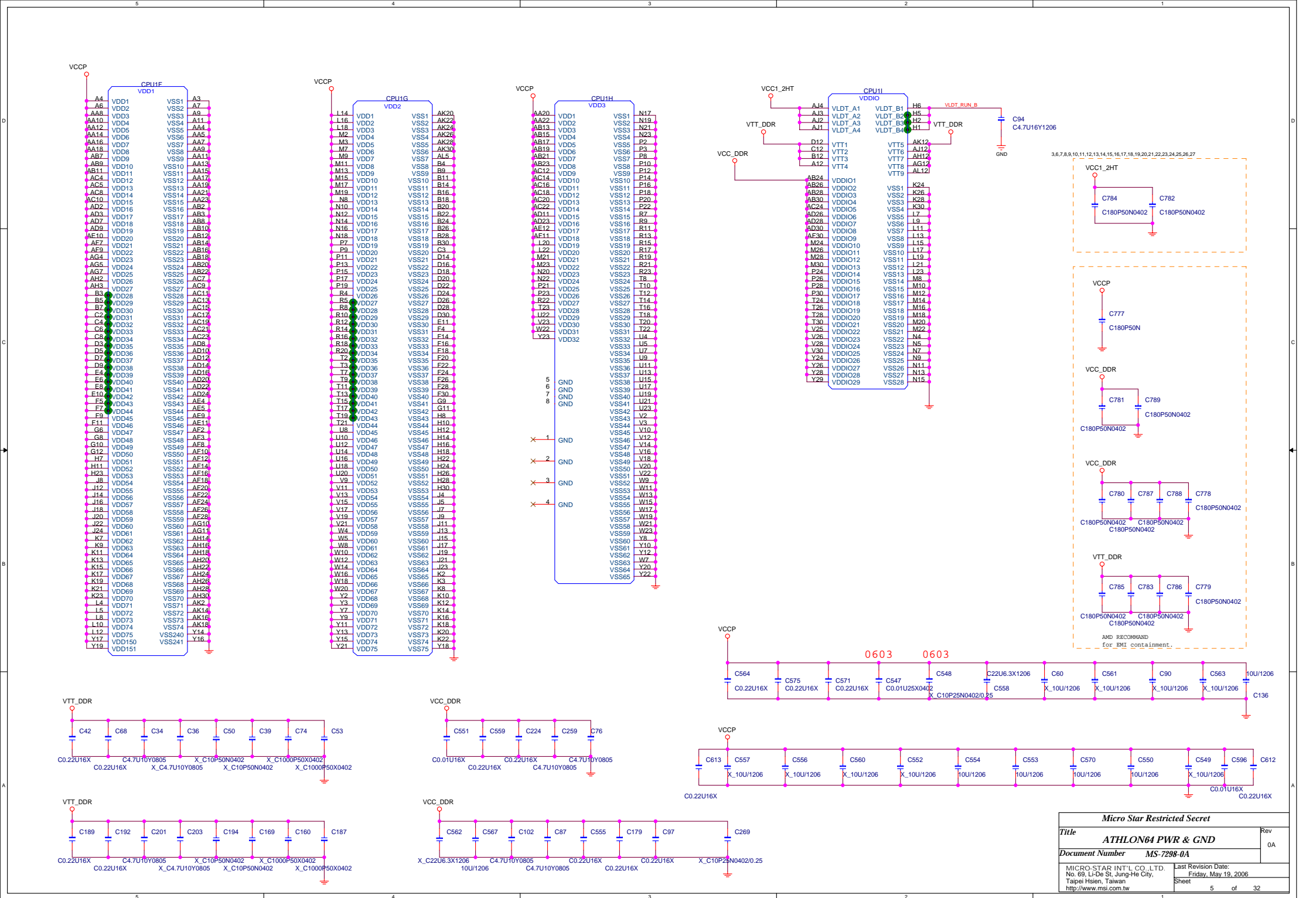
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BLOCK DIAGRAM

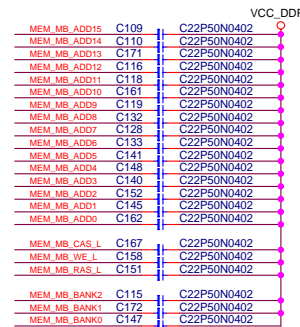
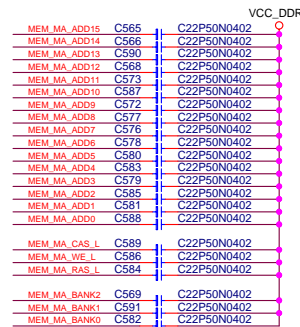
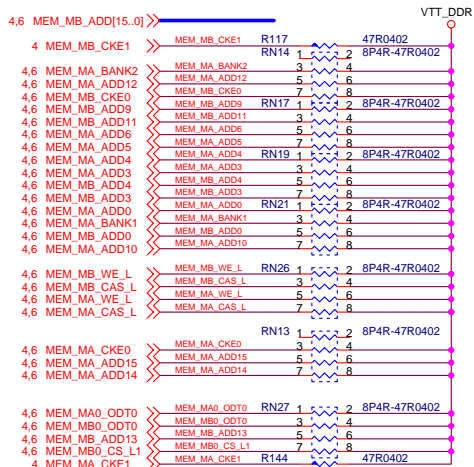
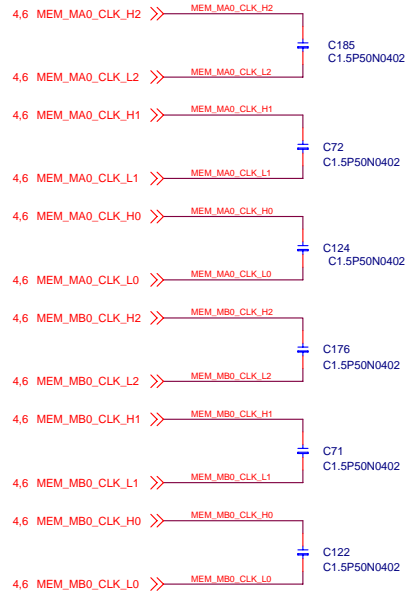
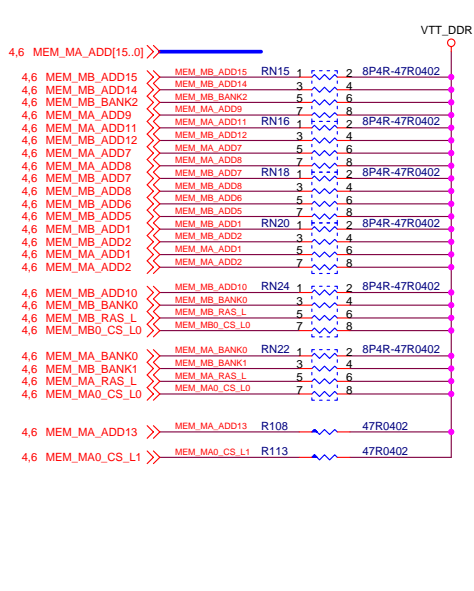




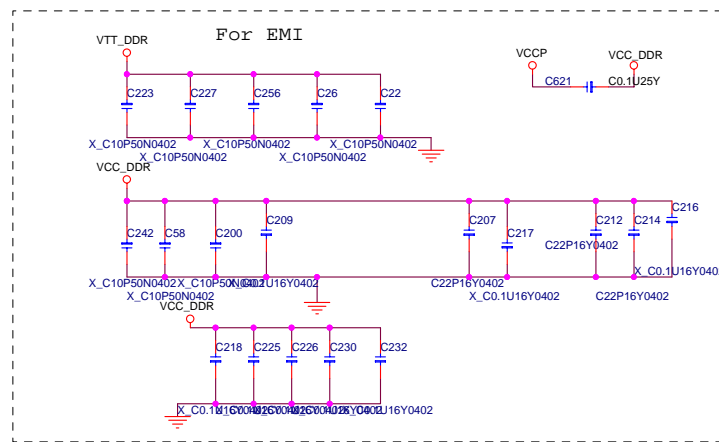
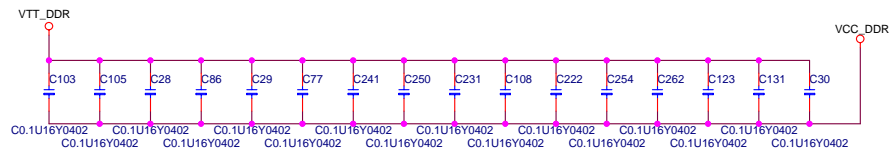
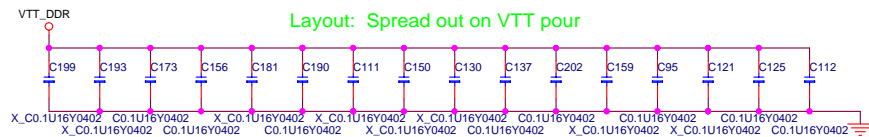




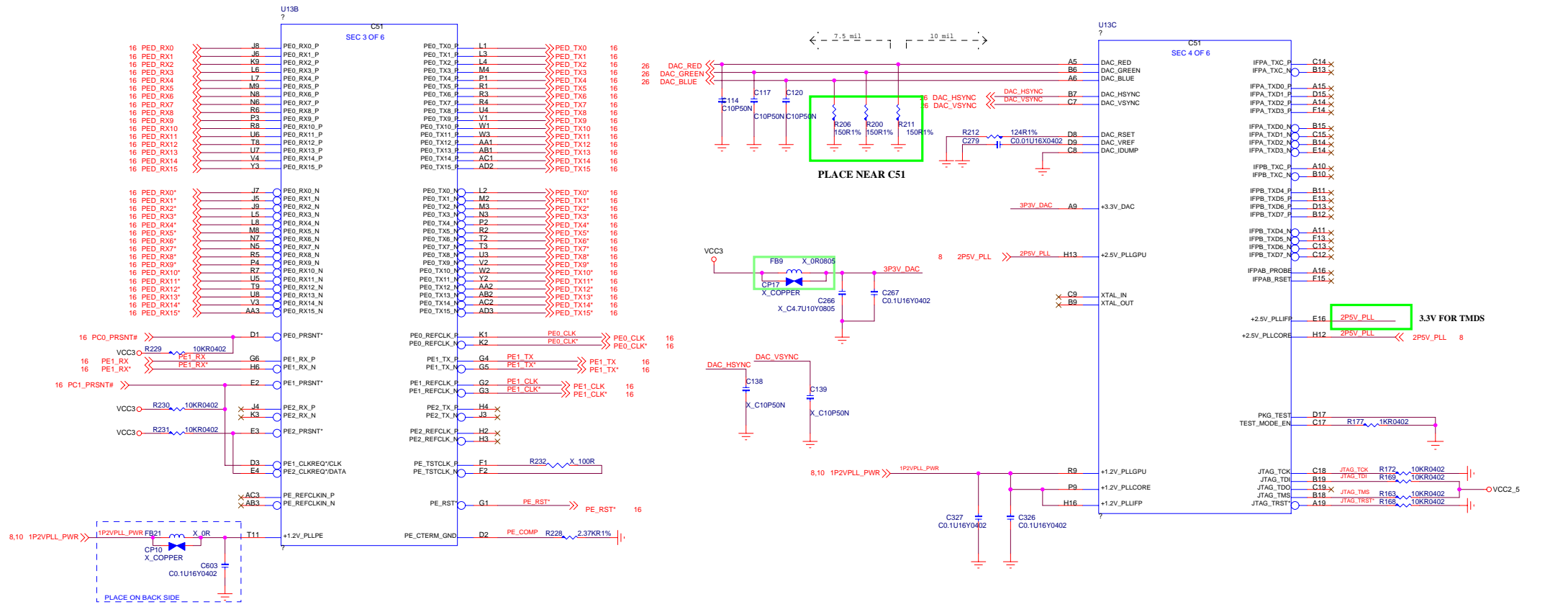




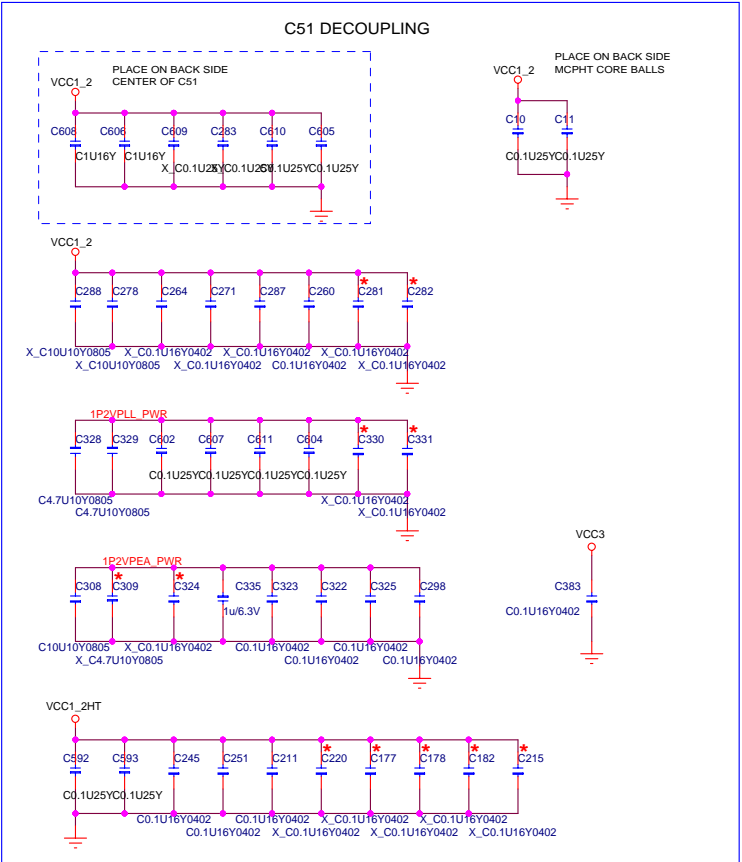
## Decoupling Between Processor and DIMMs







Micro Star Restricted Secret		
Title	C51PV-2 / PCI-E & DAC	Rev 0A
Document Number	MS-7298-0A	
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<b><i>Micro Star Restricted Secret</i></b>			
<b>Title</b> <i>C51PV-3/PWR/GND</i>			<b>Rev</b>  0A
<b>Document Number</b> <i>MS-7298-0A</i>			
MICRO-STAR INT'L CO. LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan <a href="http://www.msi.com.tw">http://www.msi.com.tw</a>		<b>Last Revision Date:</b> <div>Friday, May 19, 2006</div> <b>Sheet</b> <div>10 of 32</div>	







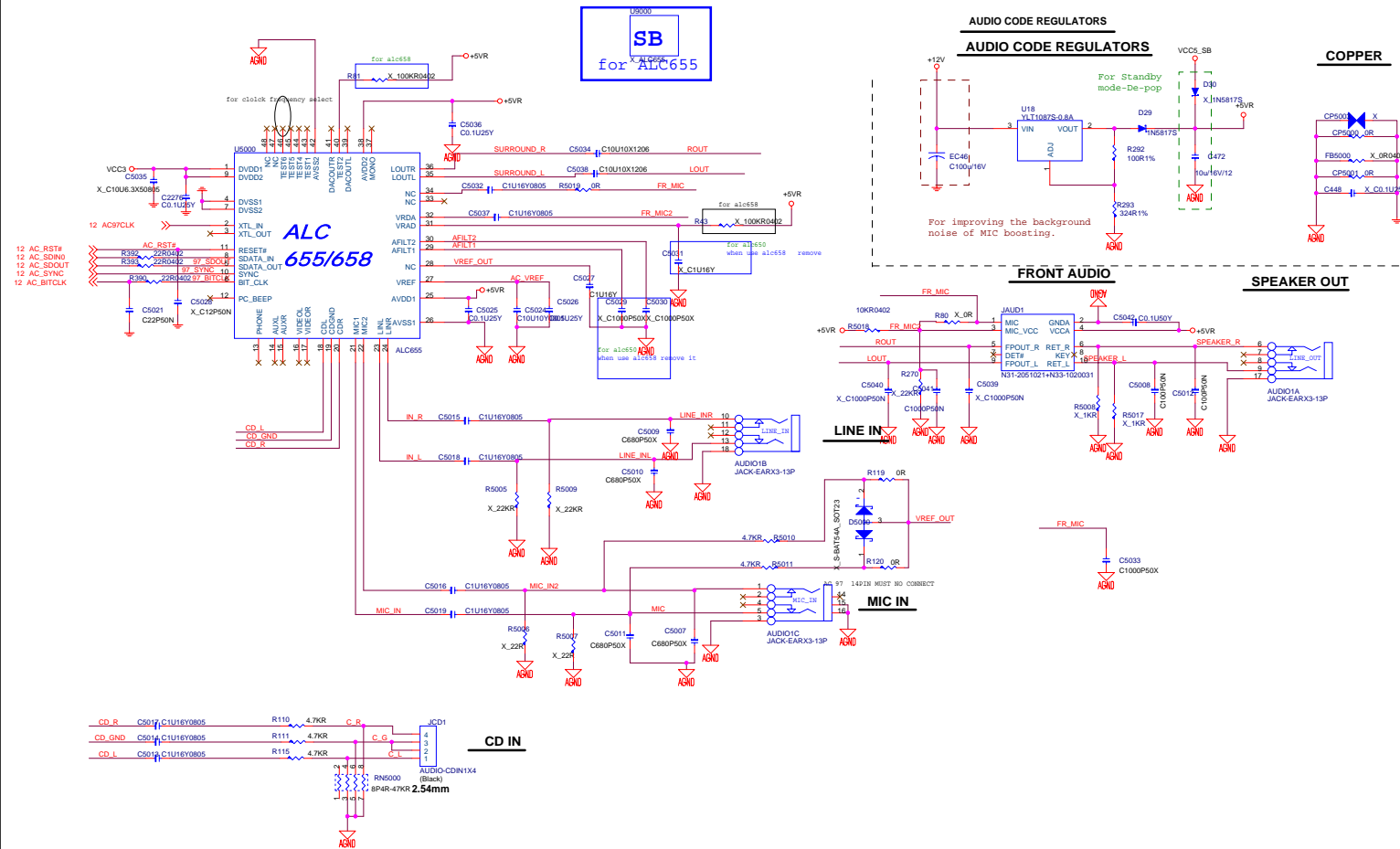




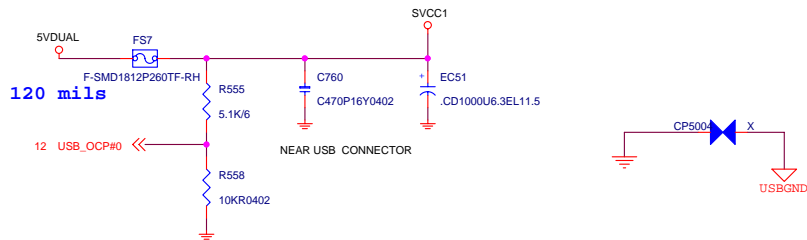




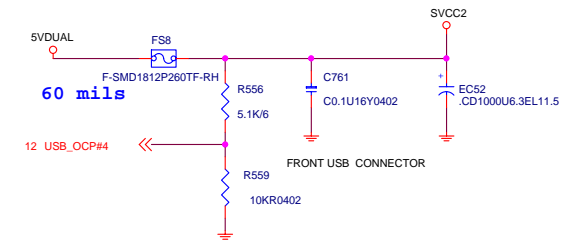




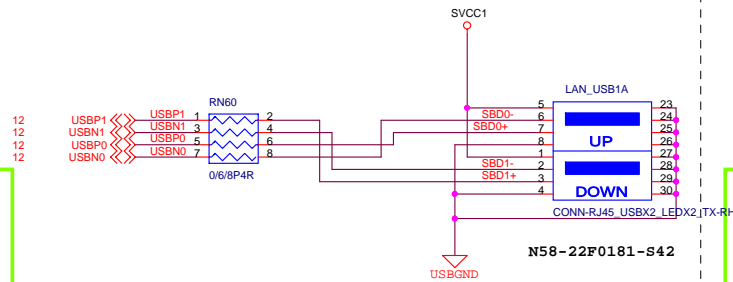
## POWER CIRCUIT FOR USB PORT 0,1,2,3



## POWER CIRCUIT FOR USB PORT 4,5



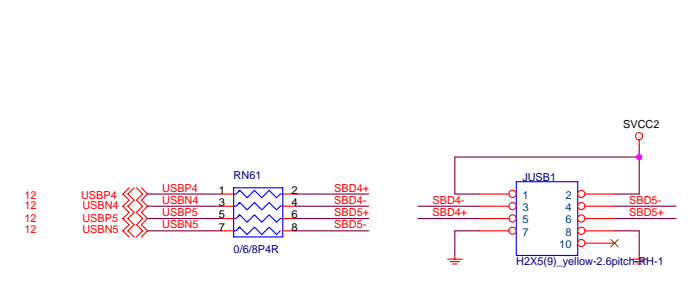
## REAR PANEL USB CONNECTOR FOR USB PORT 0,1



### NEAR USB CONNECTOR

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

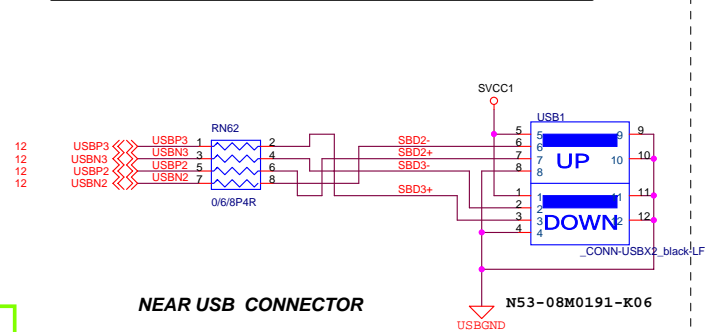
## FRONT PANEL USB CONNECTOR FOR USB PORT 4,5



### NEAR USB CONNECTOR

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

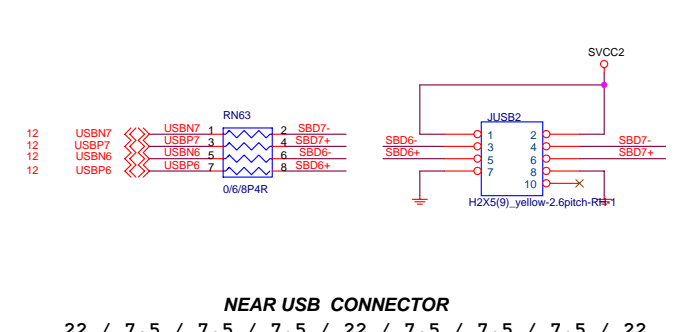
## REAR PANEL USB CONNECTOR FOR USB PORT 2,3



### NEAR USB CONNECTOR

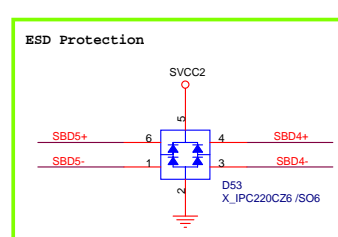
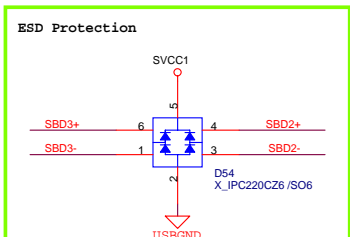
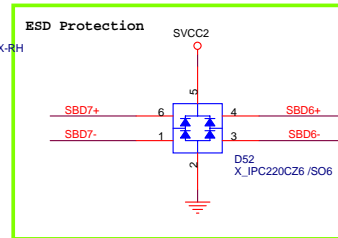
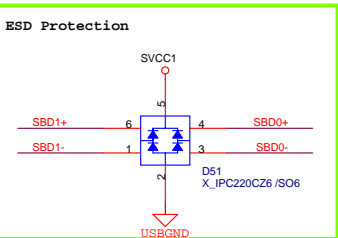
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

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



### NEAR USB CONNECTOR

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



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# ACPI Controller

## PIN 47 MS6 VERSION: RBF

### VAGP SEQUENCE MODE SELECT

VAGP SEQUENCE MODE PIN 47

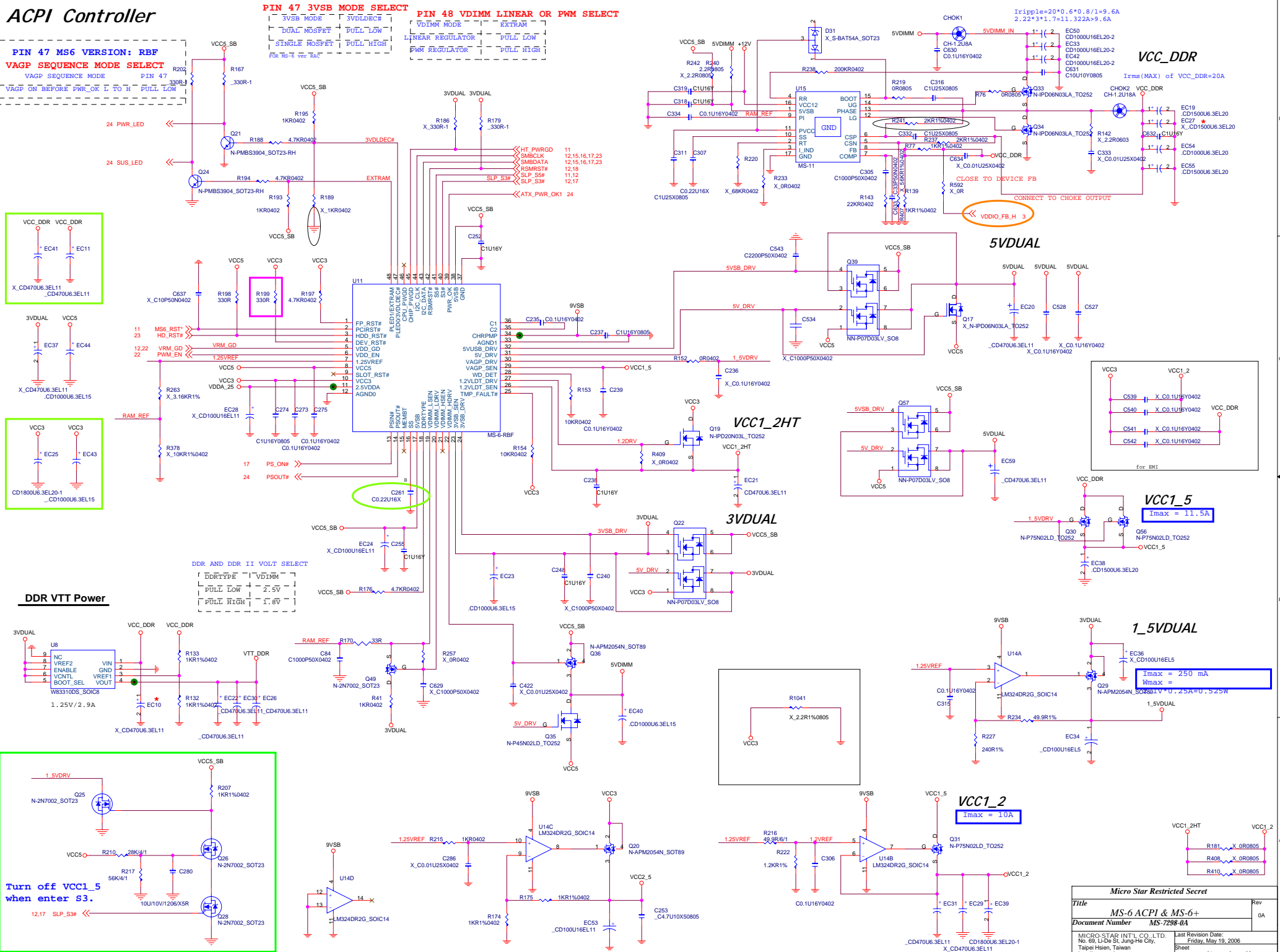
VAGP ON BEFORE PWR\_OK L TO H PULL LOW

## PIN 47 3VSB MODE SELECT

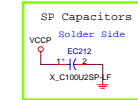
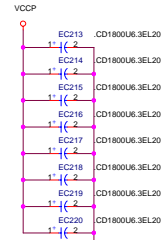
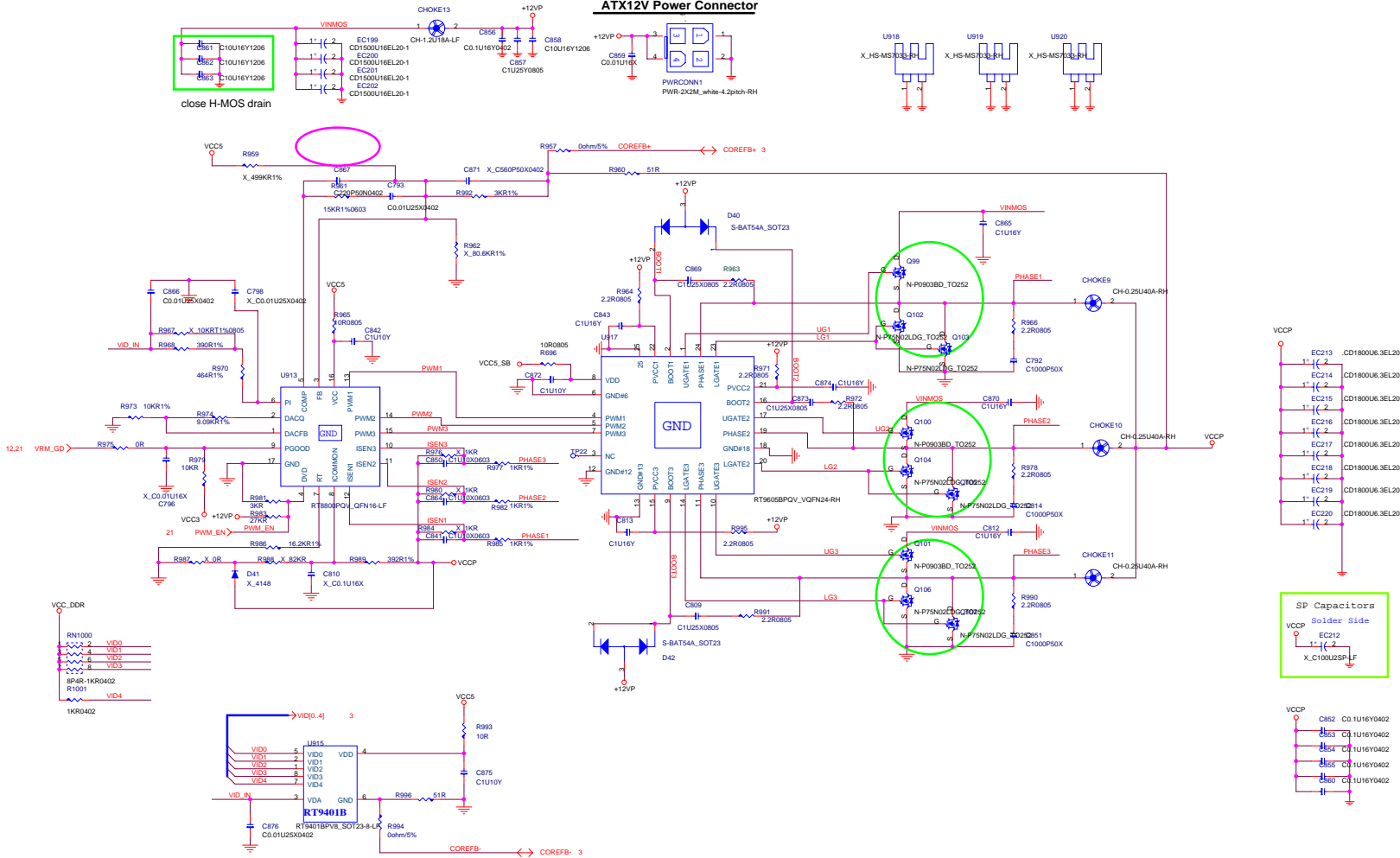
3VSB MODE  
DUAL MOSFET  
SINGLE MOSFET  
PULL LOW  
PULL HIGH

## PIN 48 VDIMM LINEAR OR PWM SELECT

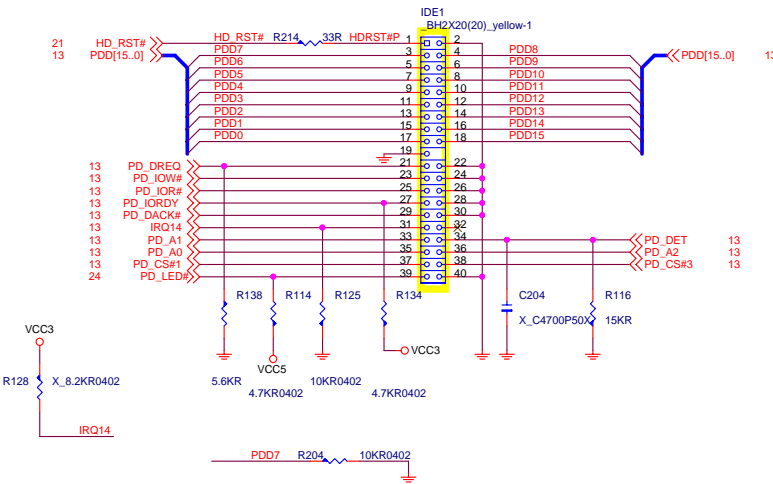
VDIMM MODE  
LINEAR REGULATOR  
PWM REGULATOR  
EXTRAM  
PULL LOW  
PULL HIGH



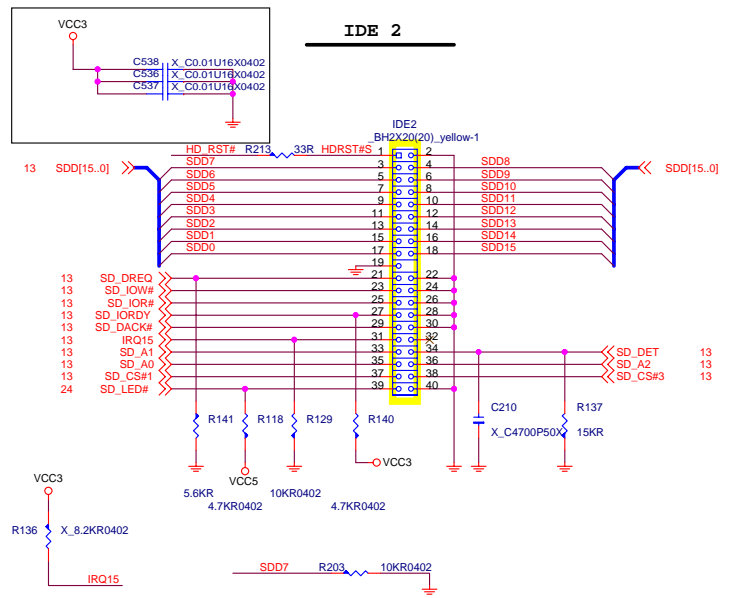
# ATX12V Power Connector



## IDE 1

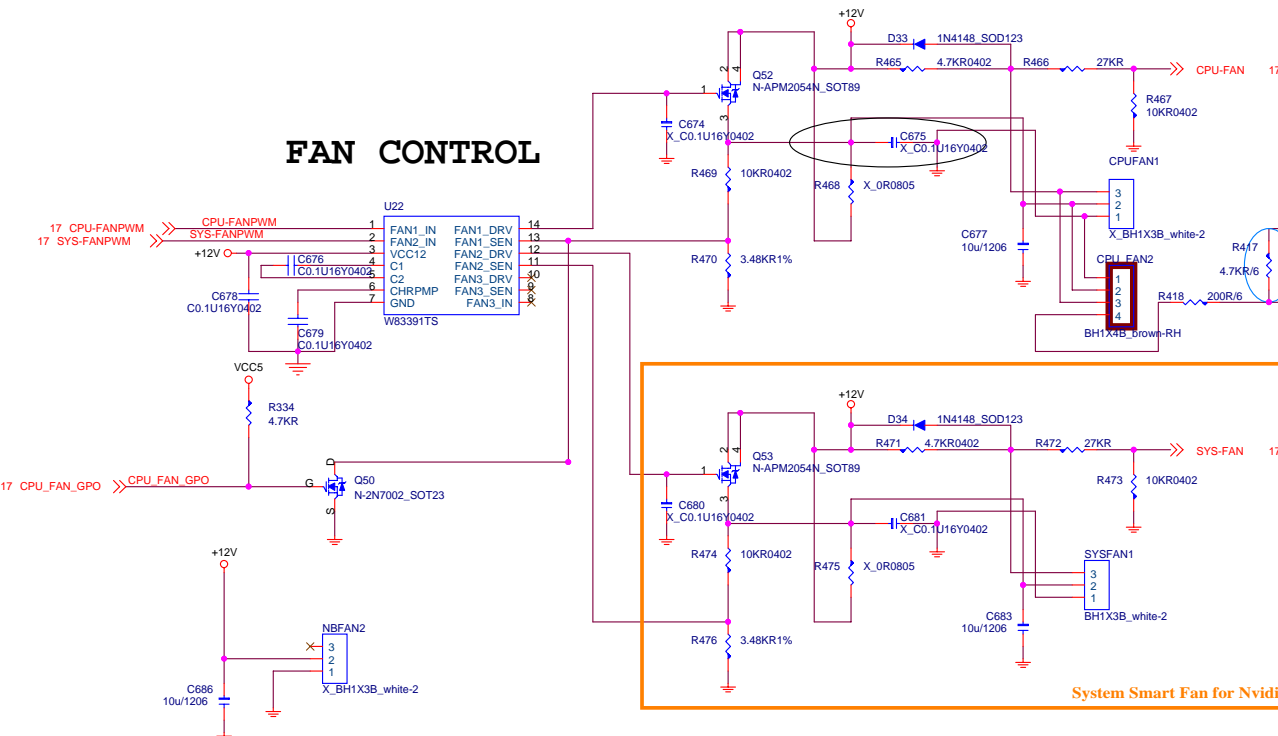


## IDE 2

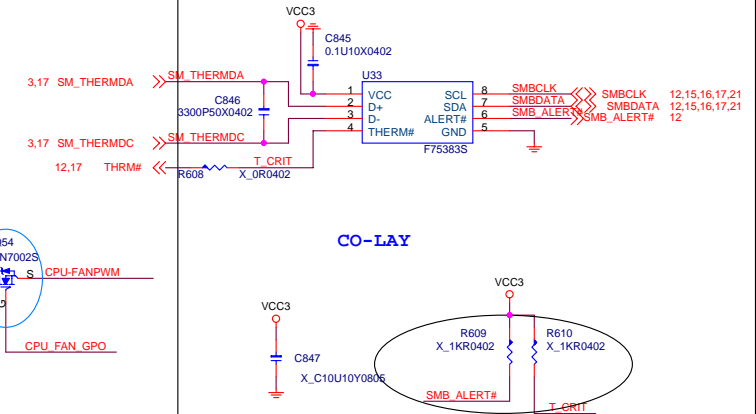


## CPU FAN

### FAN CONTROL



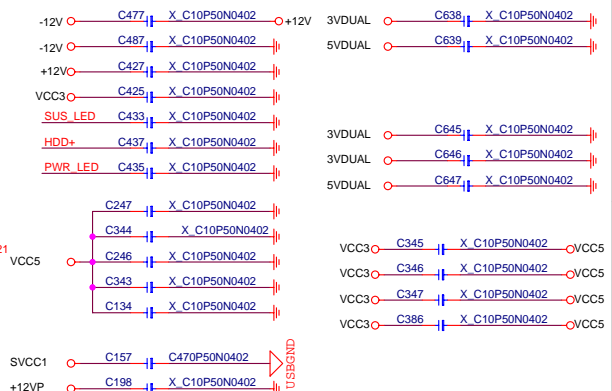
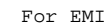
## CPU TEMPERATURE DUAL SOURCING SENSOR



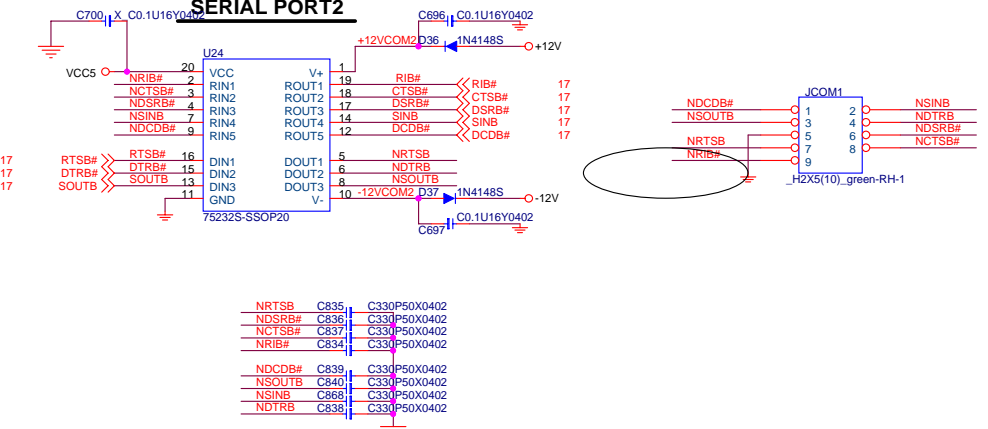
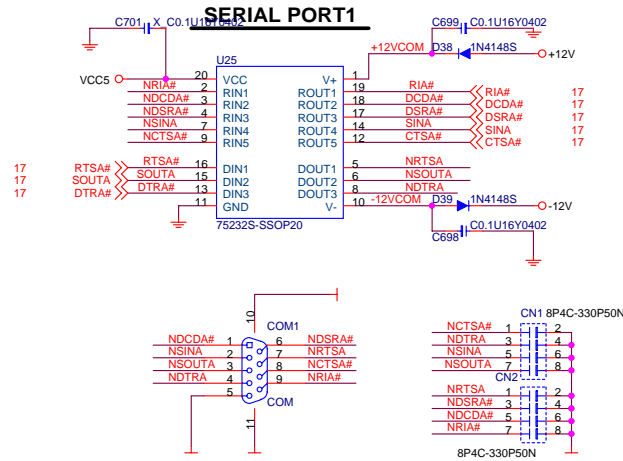
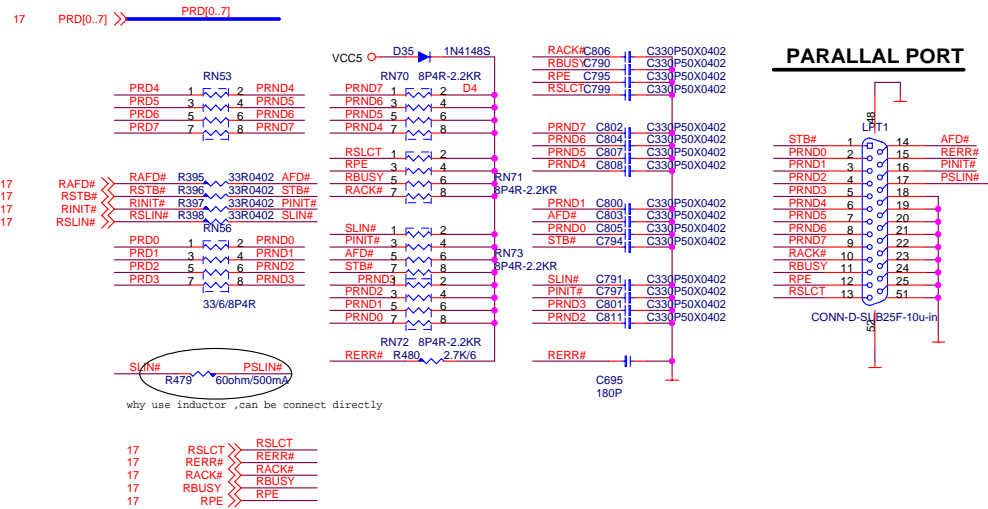
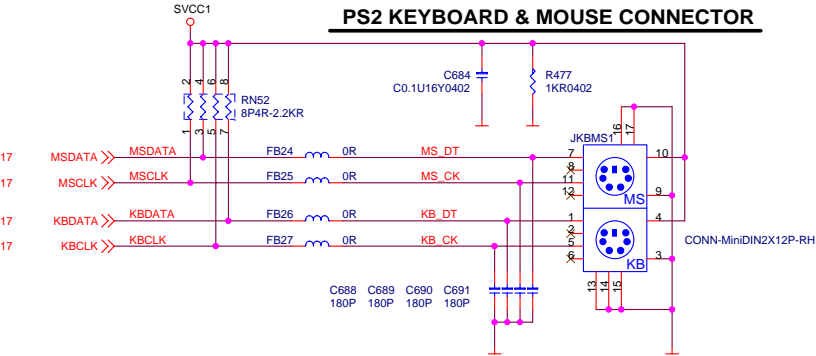
### CO-LAY

Micro Star Restricted Secret		
Title	IDE Conn & FAN & FDD	Rev
Document Number	MS-7298-0A	0A
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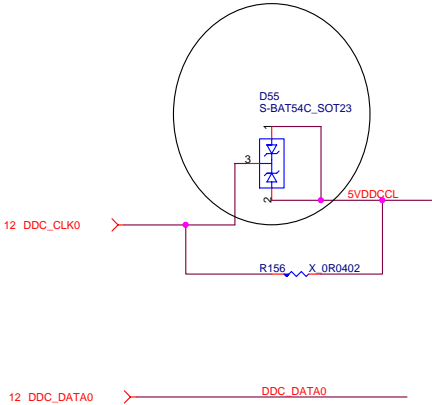
## Intel Front Panel



KB/MS/LPT/COM Port



Video Connector

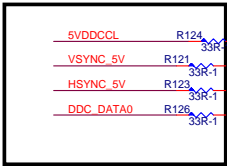


Thw R ,G ,B route lengths should be length match to 200mils.

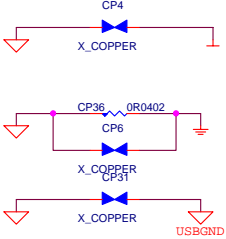
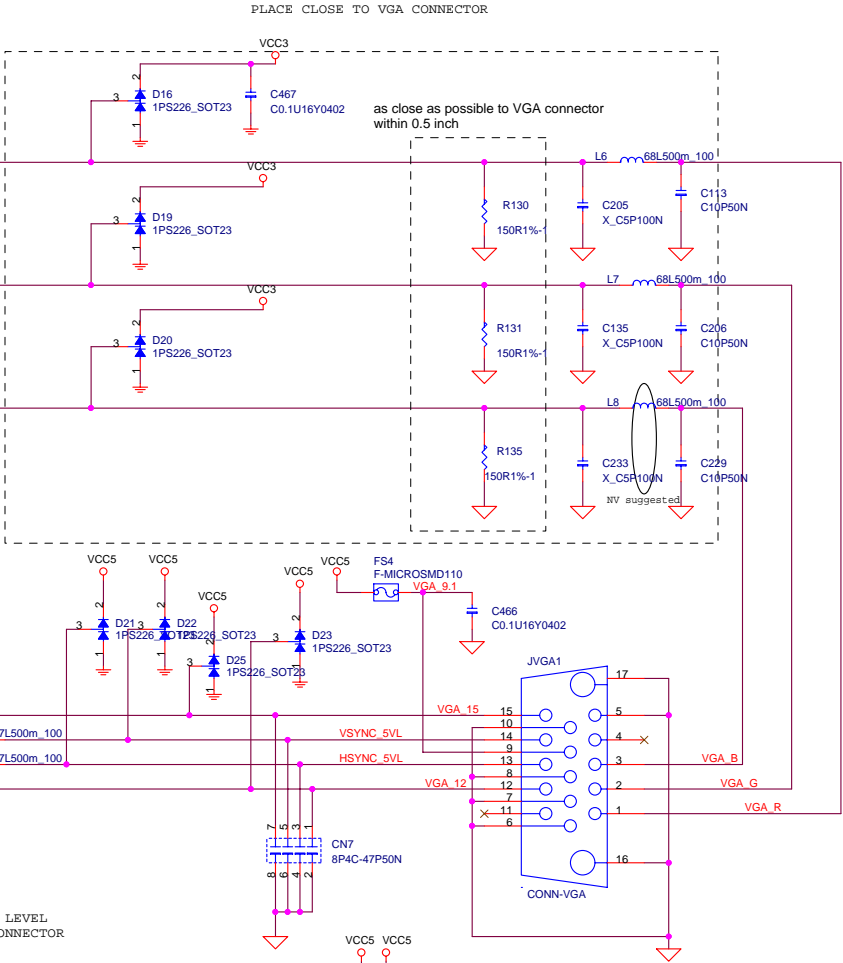
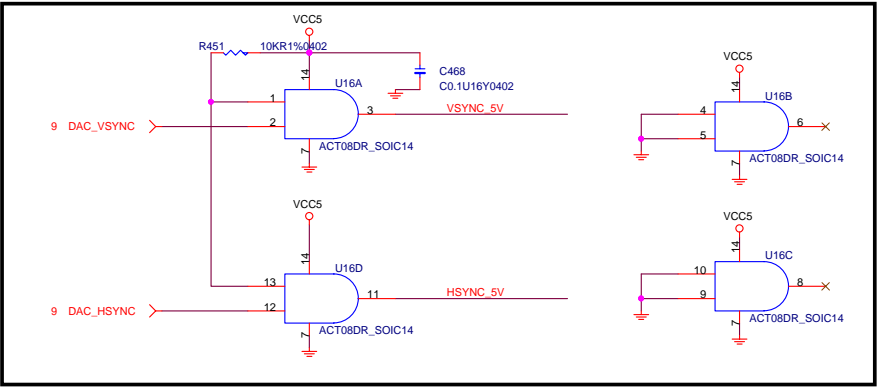
9 DAC\_RED > DAC\_RED

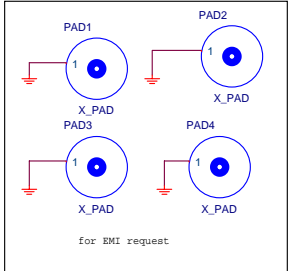
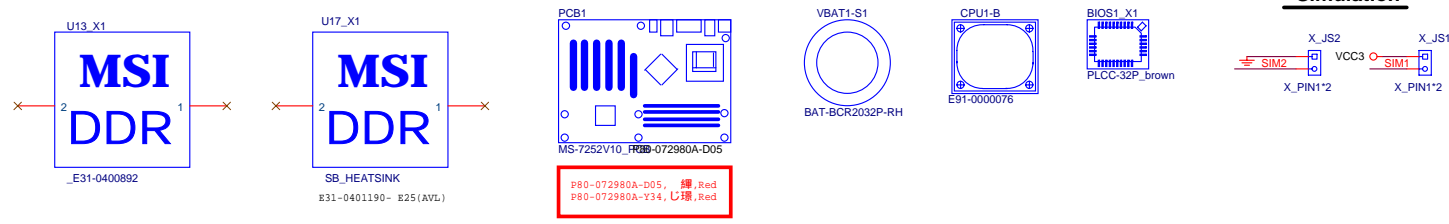
9 DAC\_GREEN > DAC\_GREEN

9 DAC\_BLUE > DAC\_BLUE

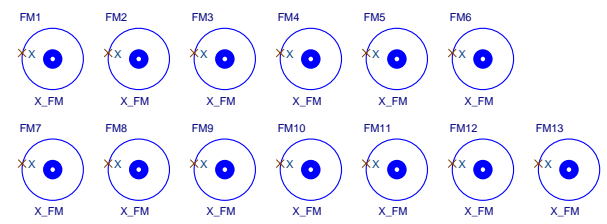


PLACE CLAMPING COMPONENT AND LEVEL SHIFT CIRCUIT CLOSE TO VGA CONNECTOR

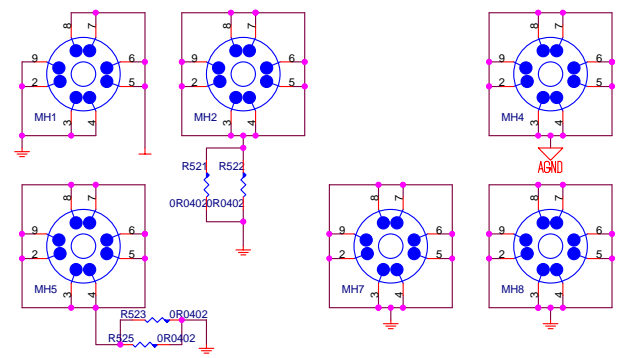




### Optics Orientation Holes



### Mounting Holes



### Model option table

Model type	Function	BOM Option	ERP BOM No.
MS-7298	C51G+MCP51+W83627EHG_HI+VSC8601+ALC655+PCI * 3+PCI-E X16 * 1+PCI-E * 1+DDR2 * 2+SATA*4+PS2+USB * 8+COM PORT * 1+VGA+AUDIO(5.1)+LPT+RJ45	GLC	
	C51G+MCP51G+W83627EHF_H+RTL8201+ALC658+PCI * 3+PCI-E X16 * 1+PCI-E * 1+DDR2 * 2+SATA*2+PS2+USB * 8+COM PORT * 1+VGA+AUDIO(5.1)+LPT+RJ45	GIL	

## MCP-51G GPIO FUNCTION

NAME	Function Description
GPIO_1	NC
GPIO_2/CPU_SLP*	Clear Password
GPIO_3/CPU_CLKRUN*	BIOS WRITE PROTECT
GPIO_4/SUS_STAT*	LAN Link LED Control
GPIO_5/SYS_SHUTDOWN*	LAN Active LED Control
GPIO60	for bios use
GPIO61	for bios use
FANRPM/GPIO	Clear CMOS#

## PCI Config.

DEVICE	MCP1 INT Pin	REQ#/GNT#	IDSEL	CLOCK
PCI Slot 1	PIRQA PIRQB PIRQC PIRQD	PCI_REQ#0 PCI_GNT#0	AD16	PCICLK1
PCI Slot 2	PIRQB PIRQC PIRQA PIRQD	PCI_REQ#1 PCI_GNT#1	AD17	PCICLK2
PCI Slot 3	PIRQC PIRQD PIRQA PIRQB	PCI_REQ#2 PCI_GNT#2	AD18	PCICLK3

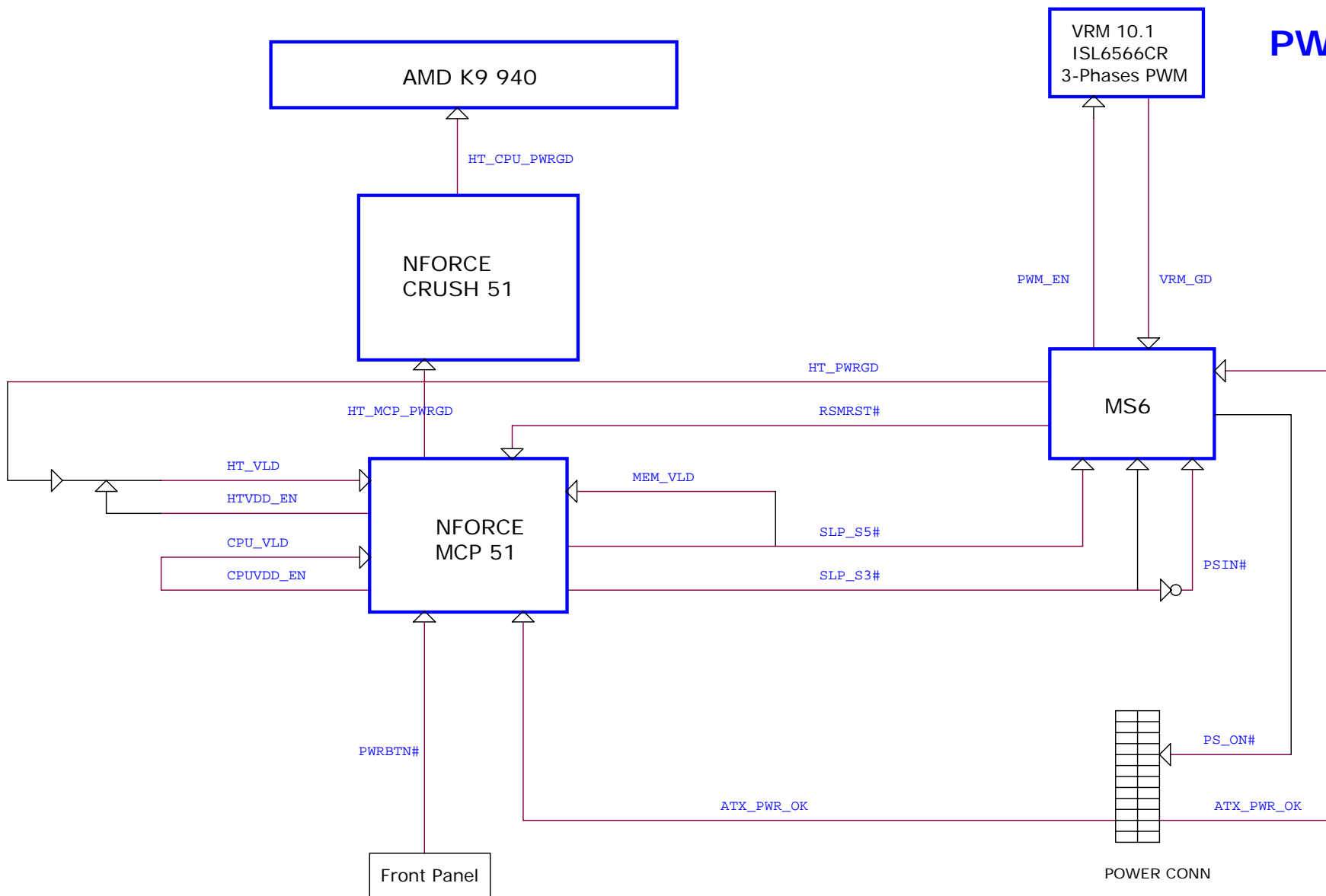
## SIO GPIO FUNCTION

NAME	Function Description
GP10	NC
GP11	NC
GP12	NC
GP13	NC
GP14	NC
GP16	NC
GP17	NC
GP20	NC
GP31	for bios use
GP31	for bios use

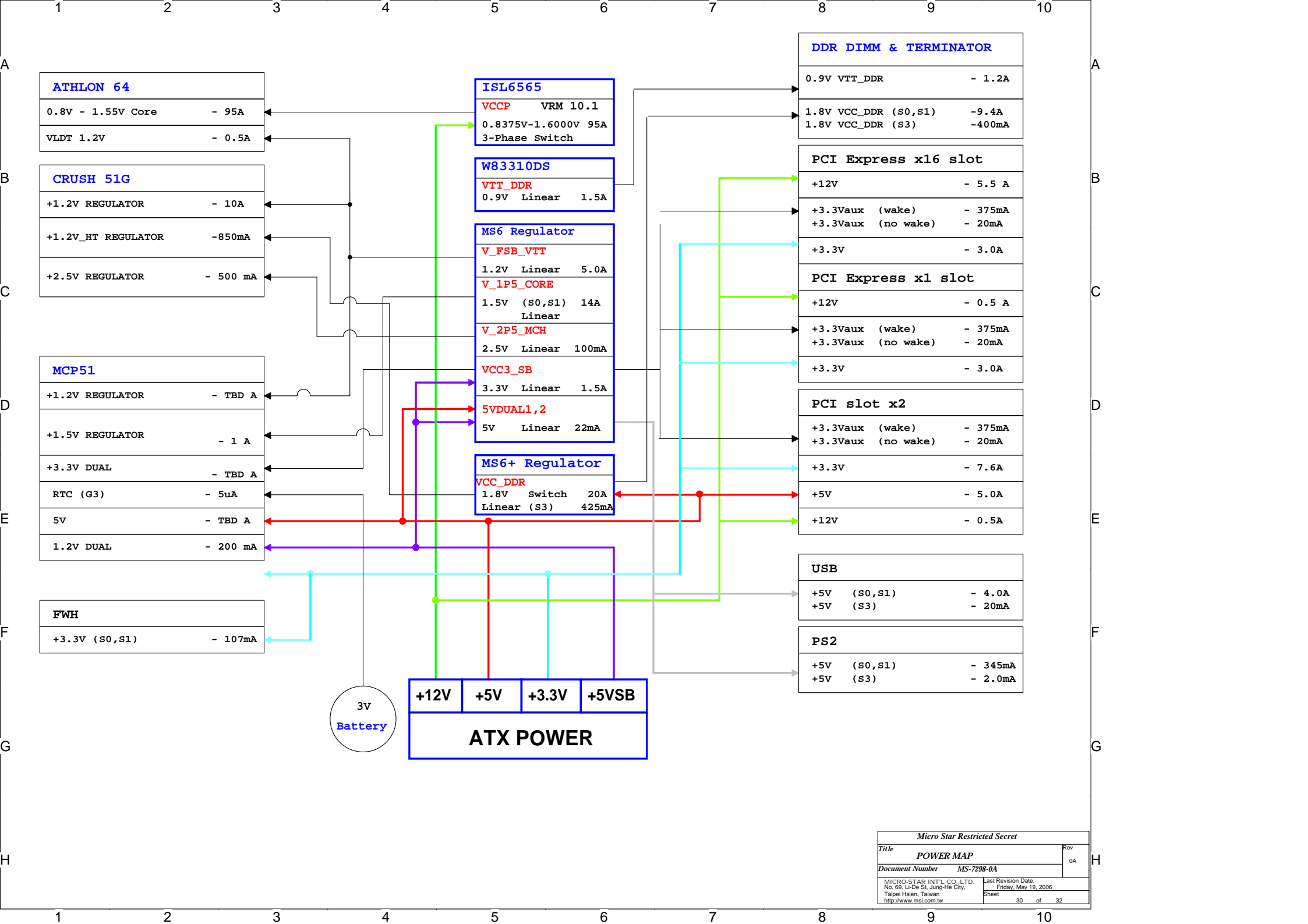
## DDRII DIMM Config.

DEVICE	ADDRESS
DIMM 1	1010000B
DIMM 2	1010001B

Micro Star Restricted Secret		
Title	GPIO SPEC	Rev 0A
Document Number	MS-7298-0A	
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# PWROK MAP





7298-0A

- from 0 A TO 1.0
- 1 AUDIO PART LET PIN46 NO CONNECT FOR FREQUENCY SELECT
- 2 change the pwrpd of sb connect to vrmgd

Micro Star Restricted Secret		
Title	HISTORY	Rev 0A
Document Number	MS-7298-0A	
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan <a href="http://www.msi.com.tw">http://www.msi.com.tw</a>		Last Revision Date: Friday, May 19, 2006 Sheet 32 of 32