



# MS-7405 VER:0A

## CPU:

AMD M2 Athlon 64/Athlon 64 FX

## System Chipset:

ATI RS485/RS690

ATI SB460/SB600

## On Board Chipset:

Winbond Super I/O -- W83627DHG Ver.C

LAN -- RTL8110SC

HD Codec --ALC888

BIOS -- SPI ROM

## Main Memory:

DDR \* 4 (Max 4GB)

## Expansion Slots:

PCI-E X 1 \*3

PCI-E X 16 \*1

## PWM:

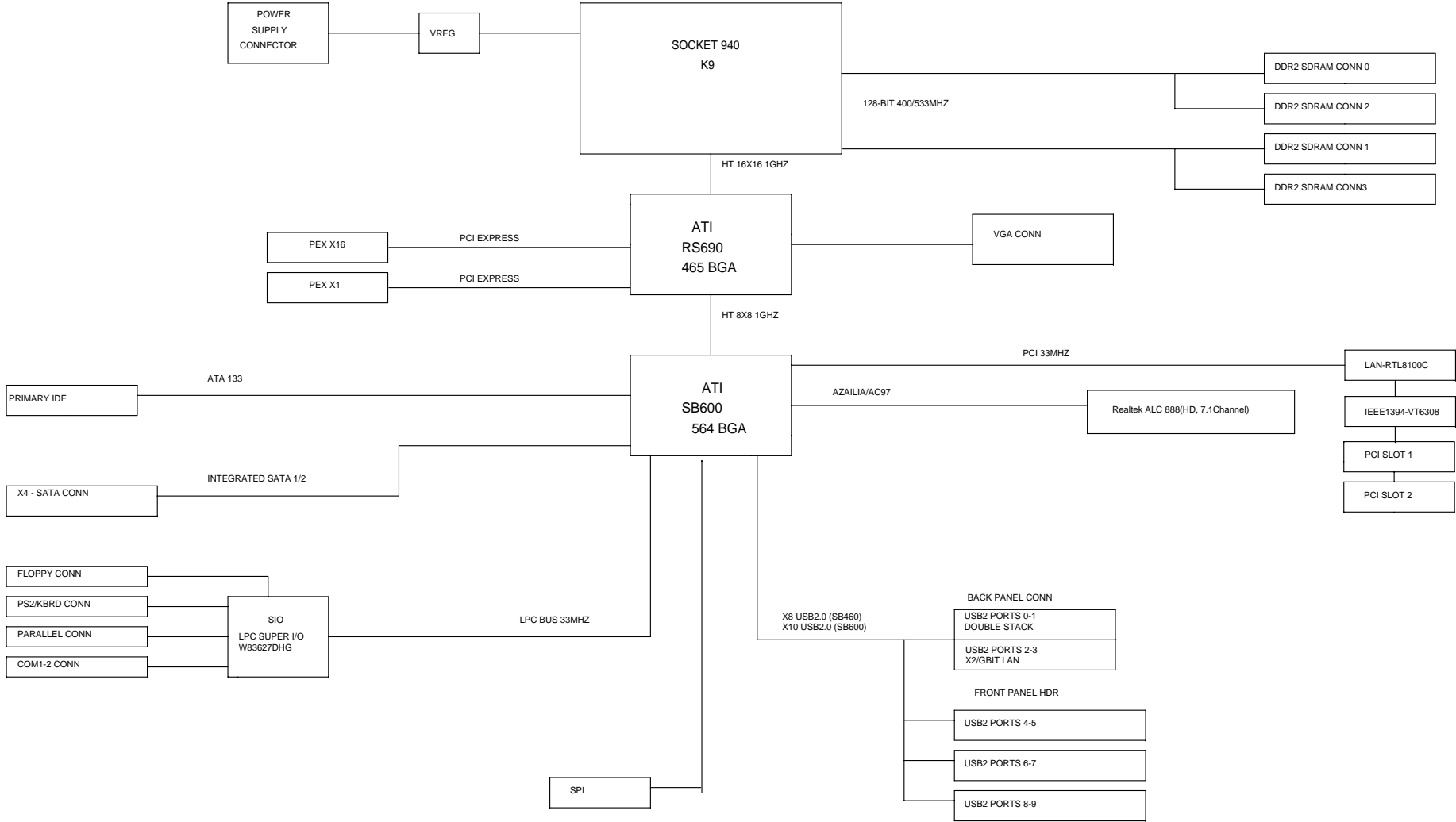
Controller--Intersil ISL6566CR 3 Phase

## Clock Generator:

Controller--RTM 870T-691

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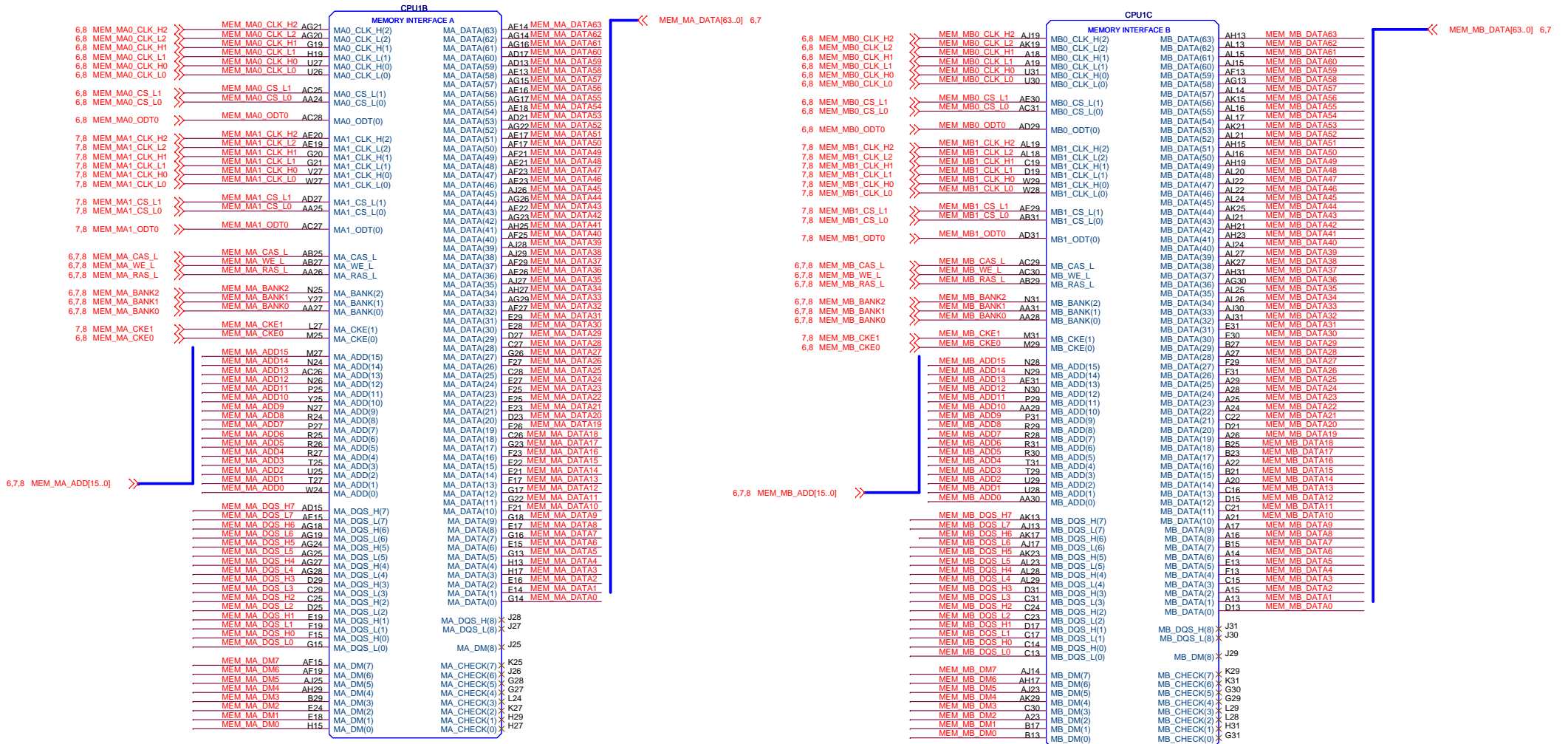
BLOCK DIAGRAM

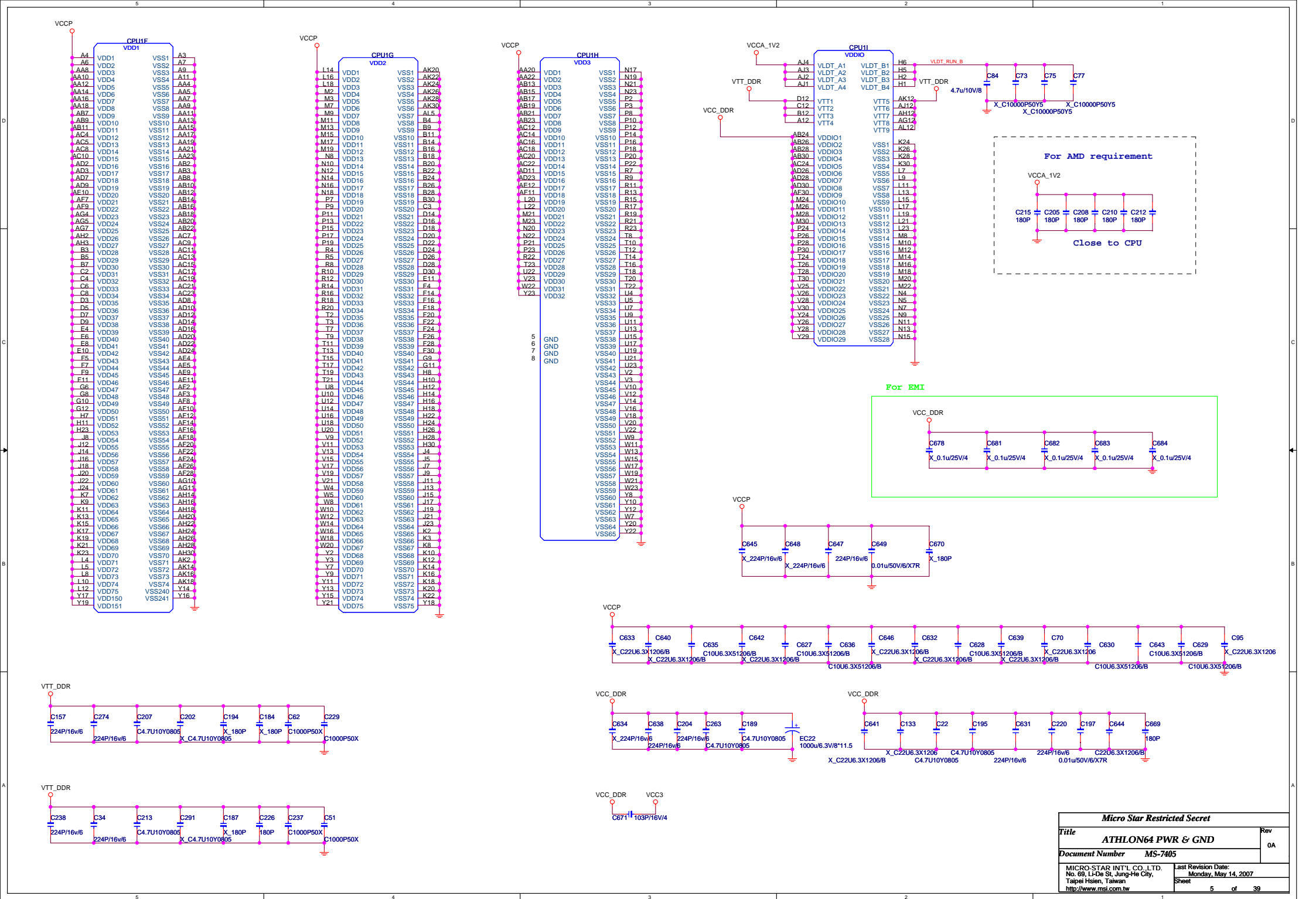


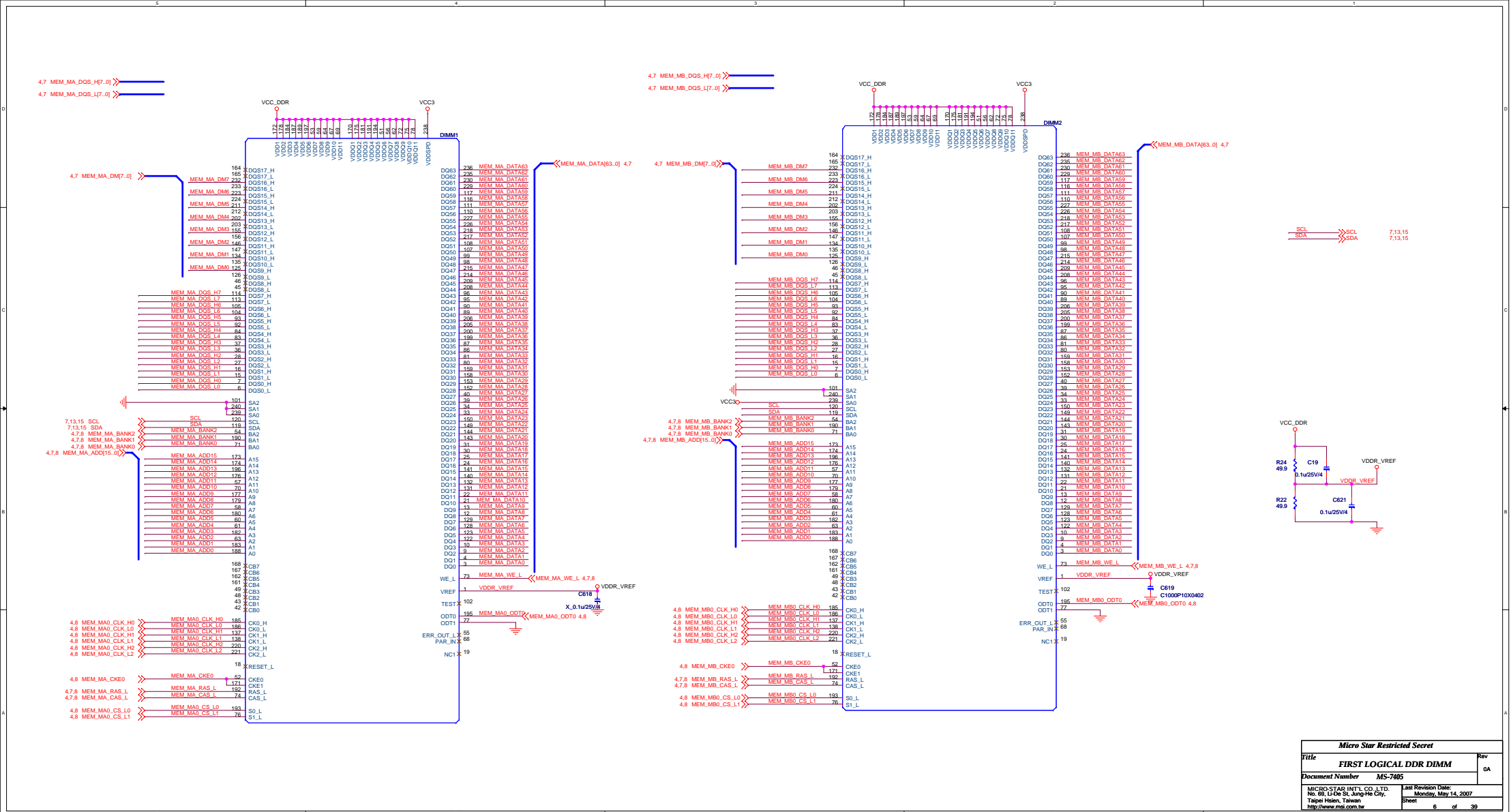


6,7 MEM\_MA\_DQS\_L[7..0] >>>  
6,7 MEM\_MA\_DQS\_H[7..0] >>>  
6,7 MEM\_MA\_DM[7..0] >>>

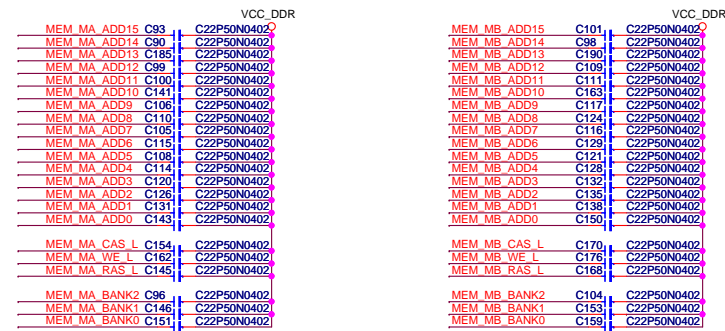
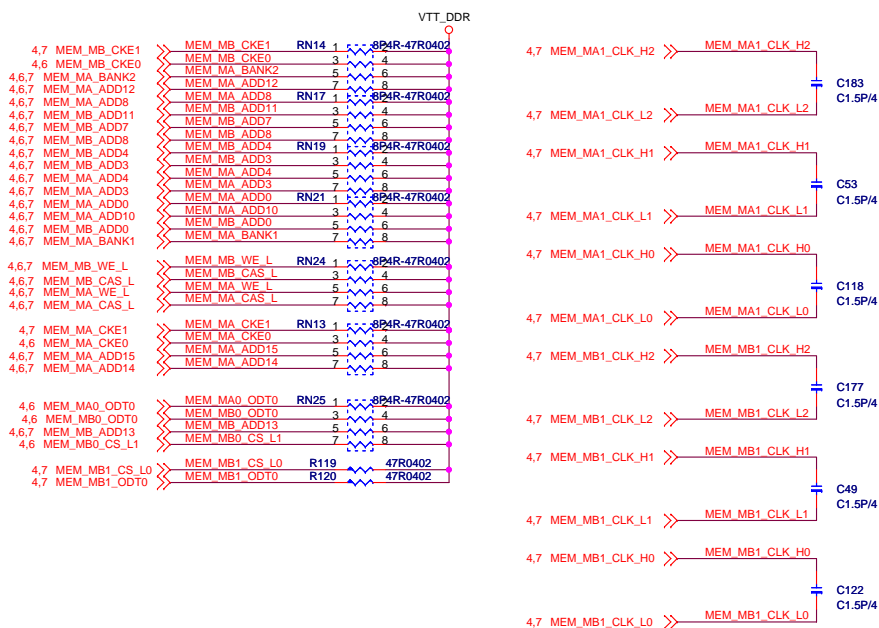
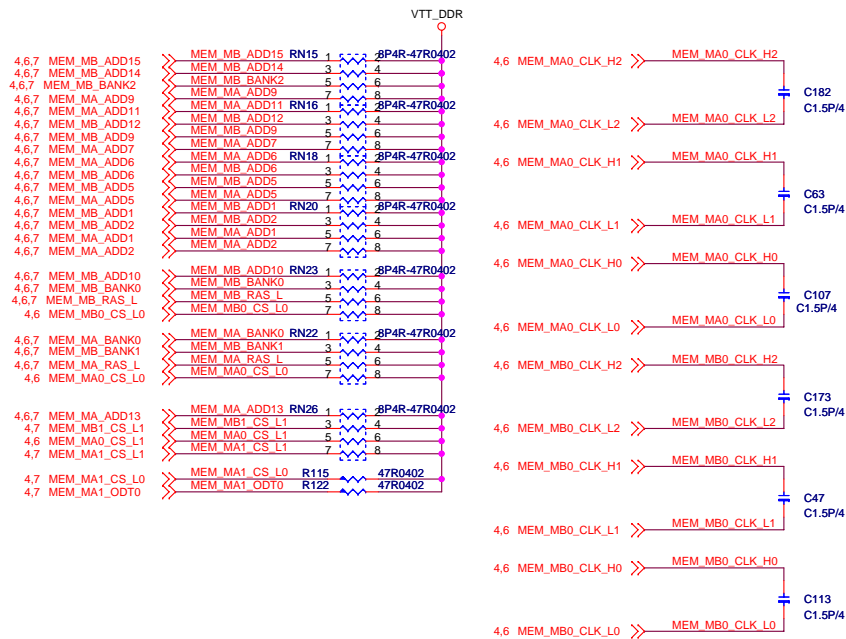
6,7 MEM\_MB\_DQS\_L[7..0] >>>  
6,7 MEM\_MB\_DQS\_H[7..0] >>>  
6,7 MEM\_MB\_DM[7..0] >>>





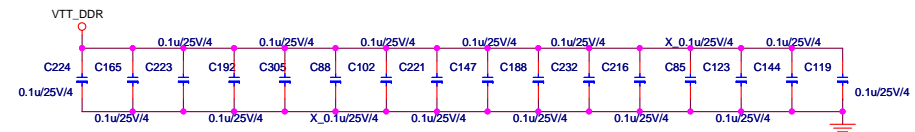




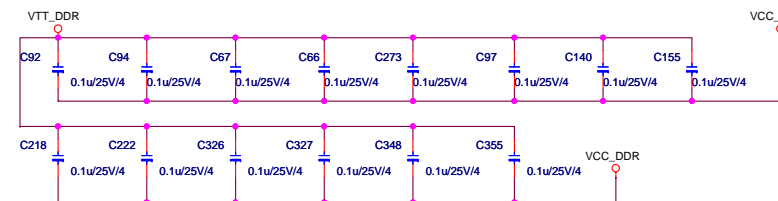
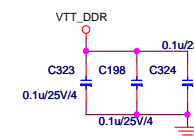
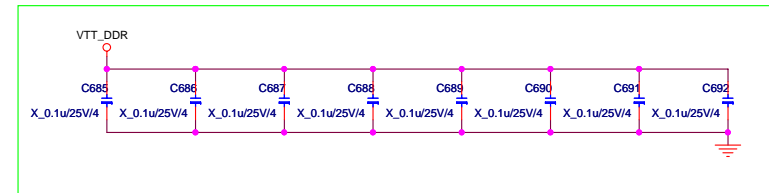


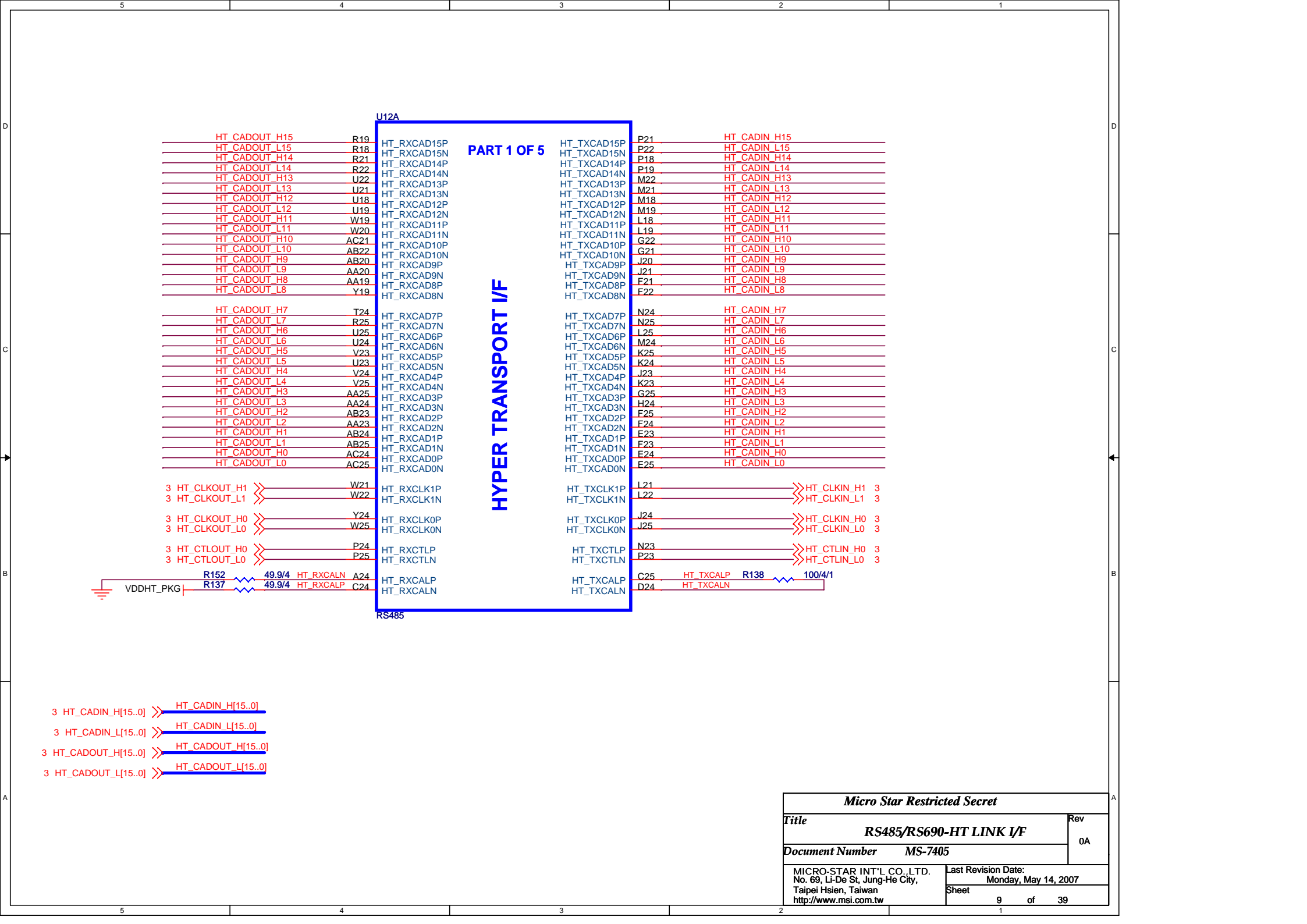
## Decoupling Between Processor and DIMMs

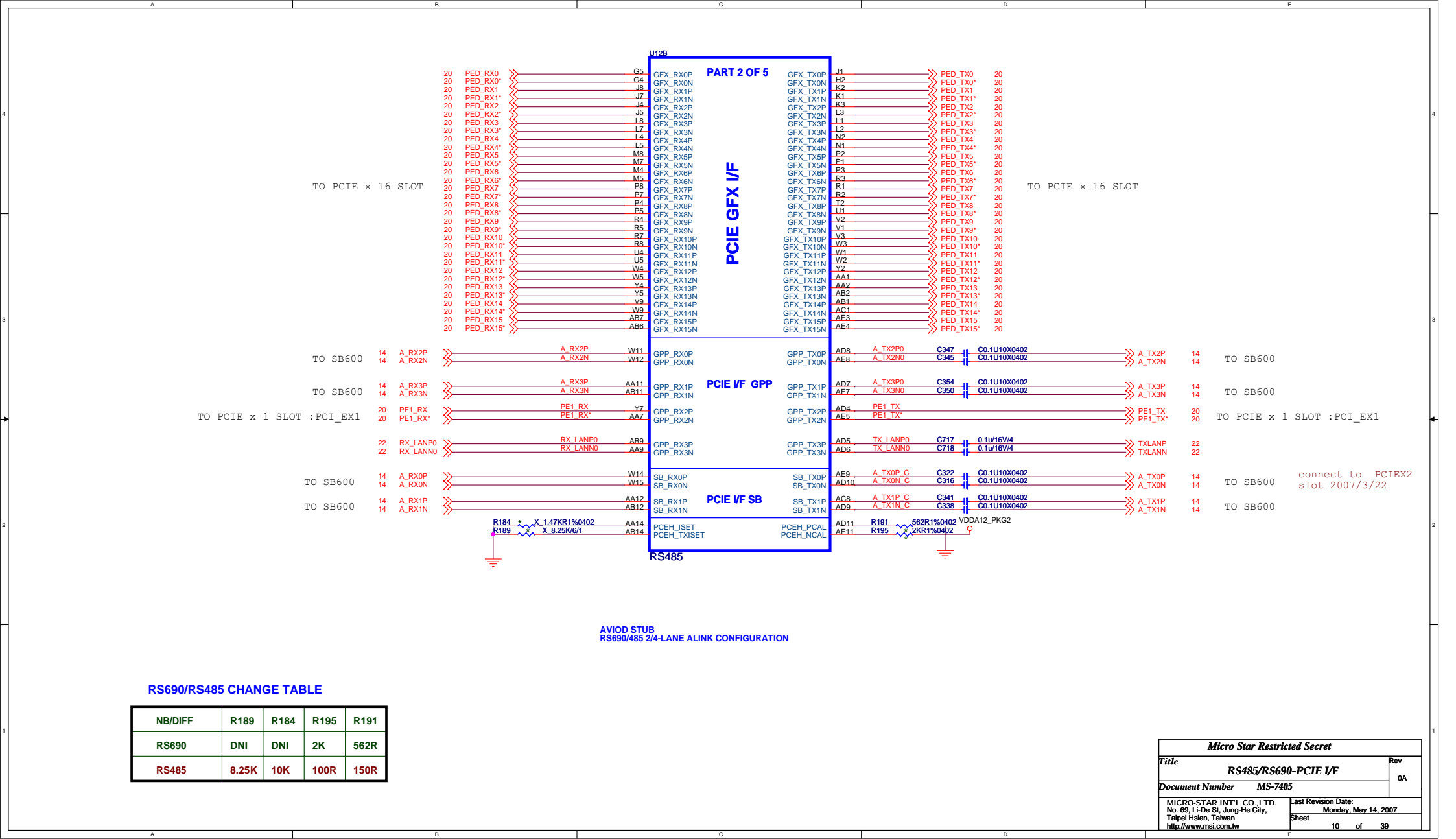
Layout: Spread out on VTT pour



For EMI







NOTE: CONNECT TO GND CLOSE TO FIRST CAP

add TV OUT interface  
2007/3/24

31 COUT  
31 YOUT  
31 COMP\_B

R230-R232 PLACED  
WITHIN 1" OF NR

2007/3/24

LOAD\_ROM#-LOAD ROM STRAP ENABLE

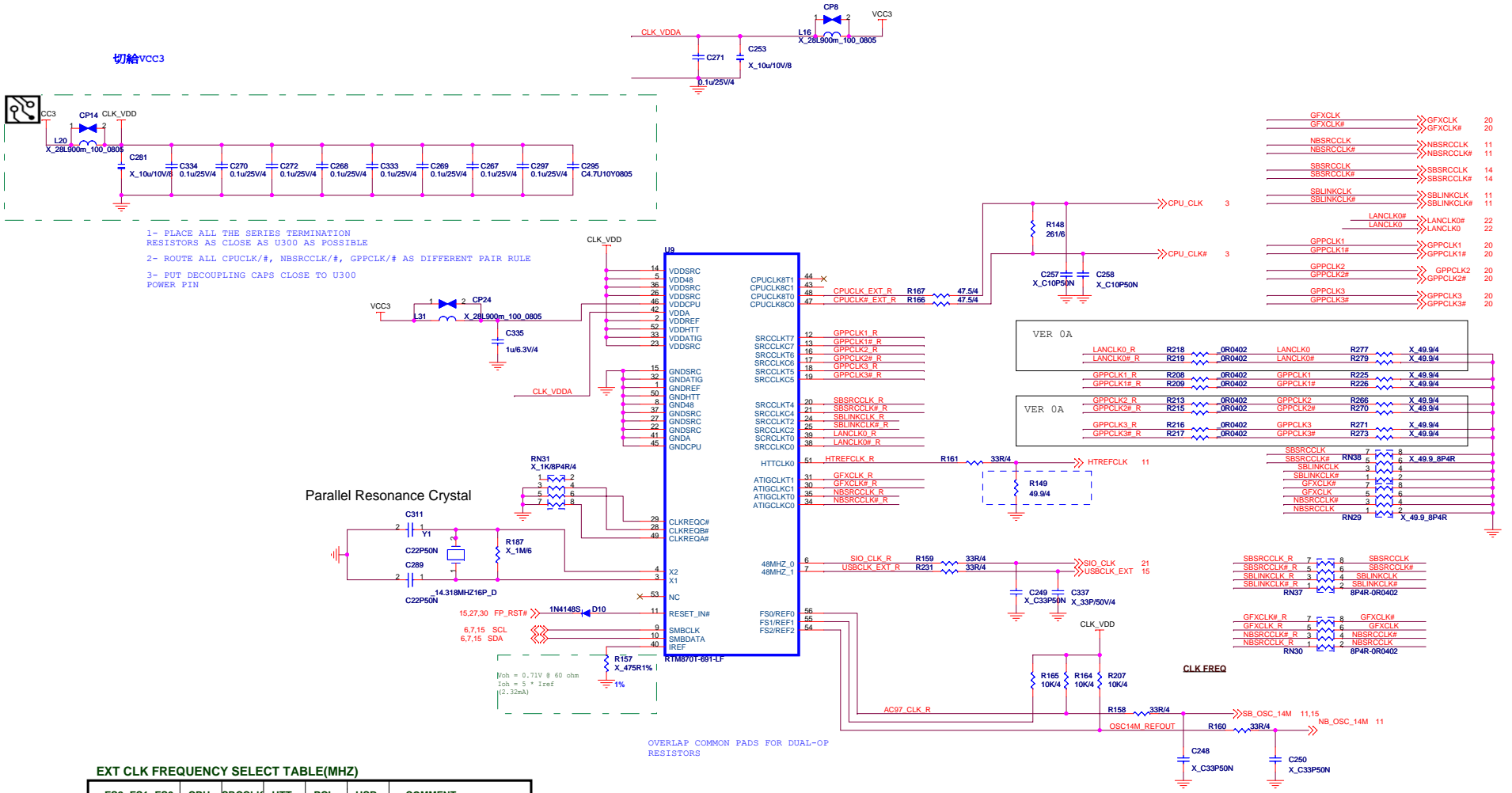
2007/3/24

NOTE: Providing access to STRAP\_DATA  
and I2C\_CLK pins is MANDATORY.

RS690		RS690 only (NC for RS485)		
PULL HIGH (internally pulled high)	DFT_GPIO1	DFT_GPIO0	DFT_GPIO[4:2]	DFT_GPIO5
	Bypass the loading of EEPROM straps and use Hardware default values  DEFAULT	Memory side port not available  DEFAULT	These pin straps are used to configure PCI-E GPP mode: 111: register defined (register default to Config E) 110: 4-0-0-0-0 Config A 101: 4-4 Config B 100: 4-2-2 Config C 011: 4-2-1-1 Config D 010: 4-1-1-1-1 Config E others: register defined (register default to Config E)  DEFAULT	Enable debug bus via the memory IO pads, if available in the package  use default values DEFAULT
PULL LOW	I2C Master can load strap values from EEPROM if connected, or use default values if not connected	Memory side port available		use the memory data bus to output the debug bus

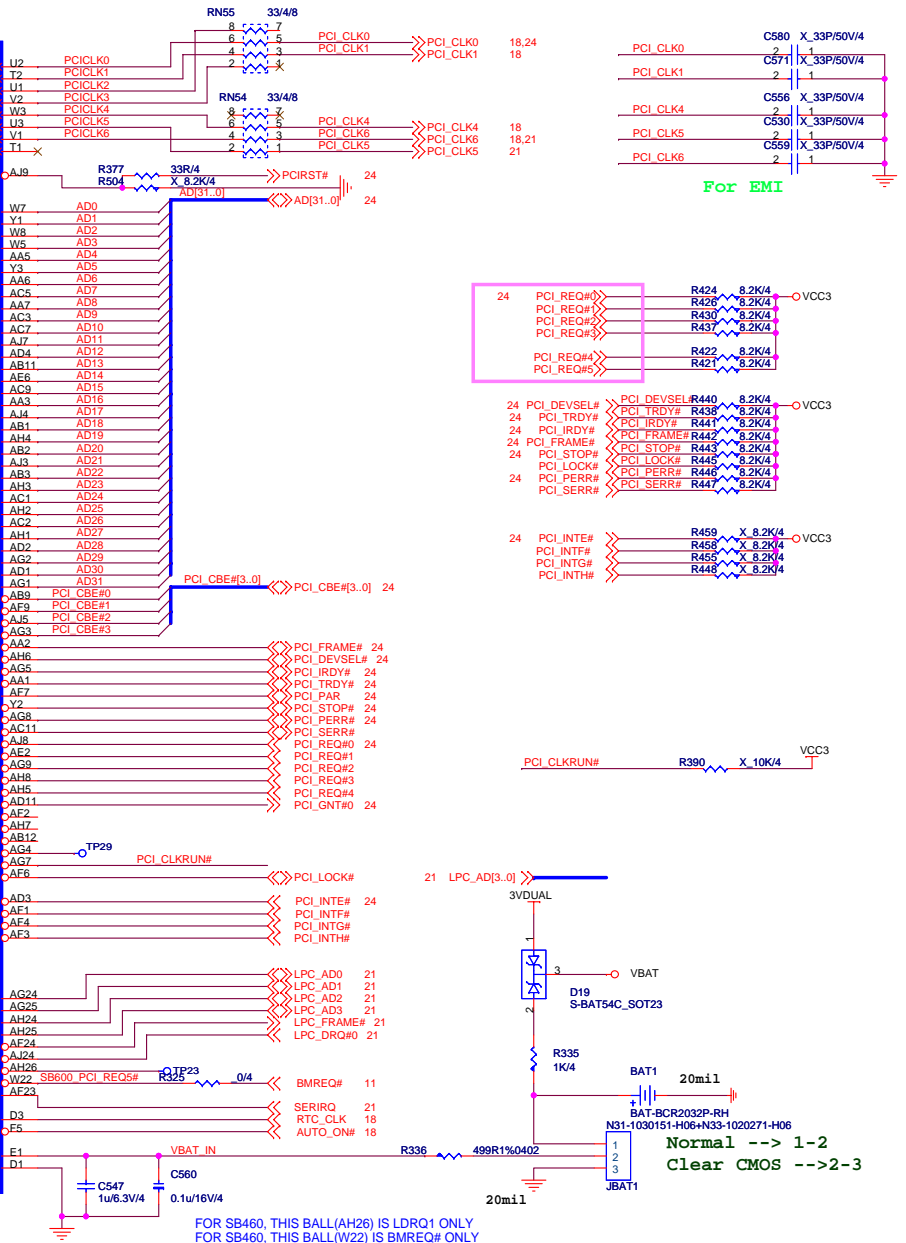
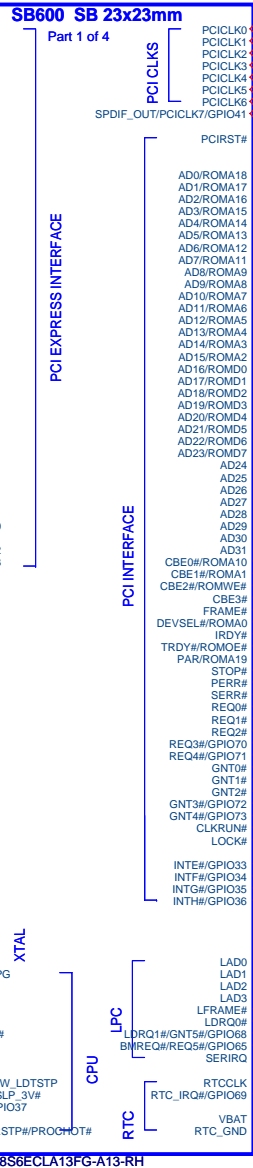
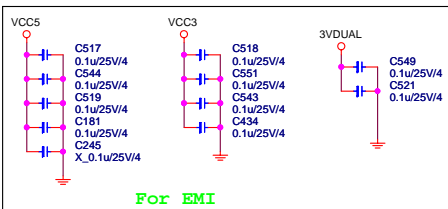
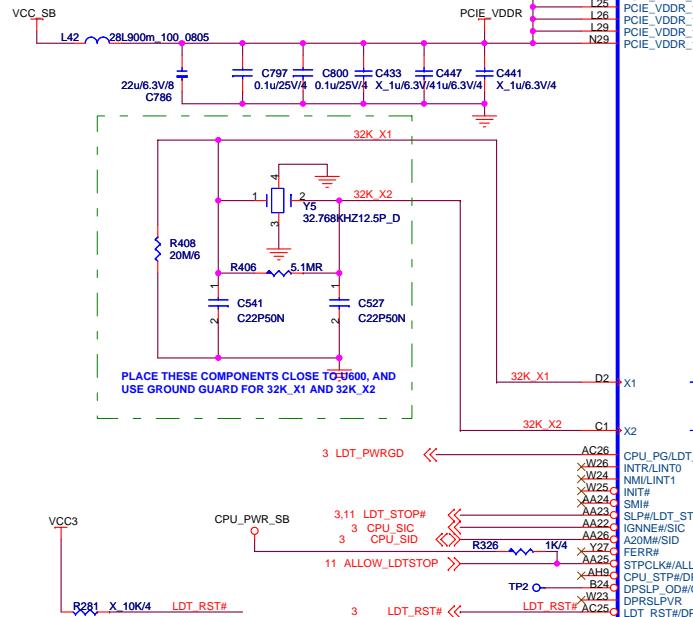
Micro Star Restricted Secret		
Title	RS485/RS690-SYSTEM I/F	Rev 0A
Document Number	MS-7405	
MICRO-STAR INT'L CO., LTD. No. 69, Li-De St, Jung-He City, Taipei Hsien, Taiwan		Last Revision Date: Monday, May 14, 2007
http://www.msi.com.tw		Sheet 11 of 39





	SB CALIBRATION RESISTOR VALUE	
	SB600	SB460
R276	562 OHM 1%	150 OHM 1%
R293	2.05K 1%	150 OHM 1%
R322	0	4.12K 1%

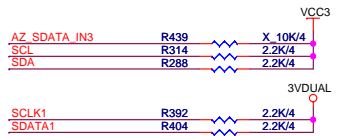
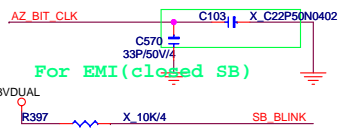
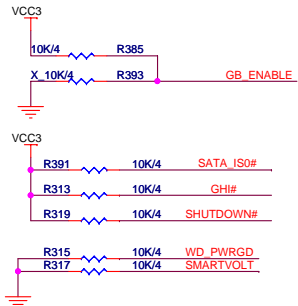
FOR SB600 VCC\_SB= 1.2V



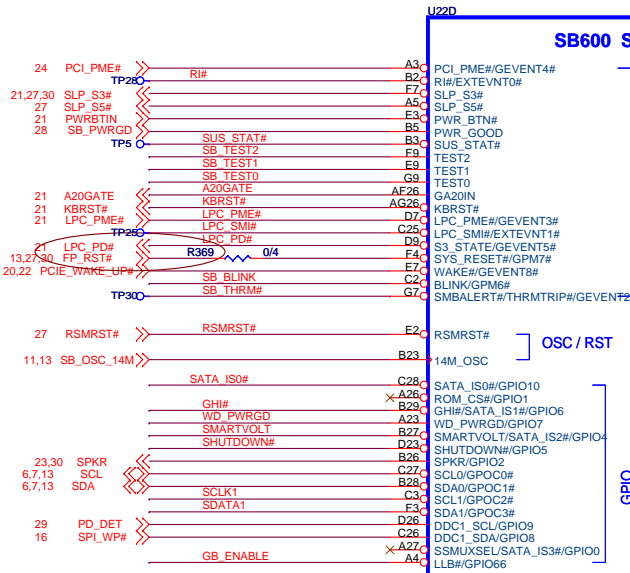
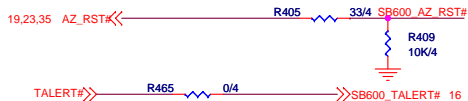
FOR SB460, THIS BALL(AH26) IS LDRQ1 ONLY  
FOR SB460, THIS BALL(W22) IS BMREQ# ONLY



add TPM, change s3\_state to lpc\_pd#  
and connect to tpm IC 2007/410



For EMI(SB460 only) for SB600 change to 10K pull down



NOTE : XPC use ACZ\_SDATA\_IN1  
2007/3/28

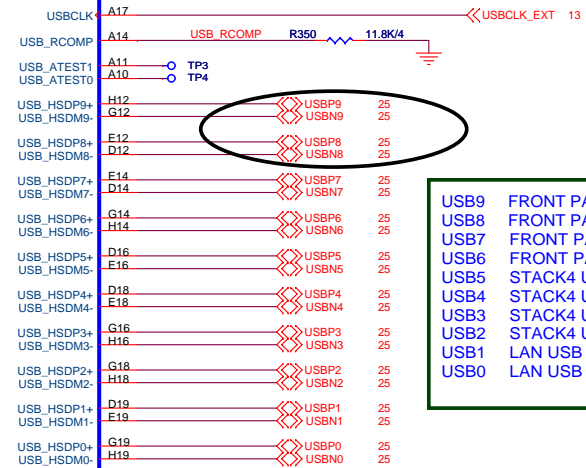
ATI-SB600-216SB600A13FG-A13-RH

### SB600 SB 23x23mm Part 4 of 4

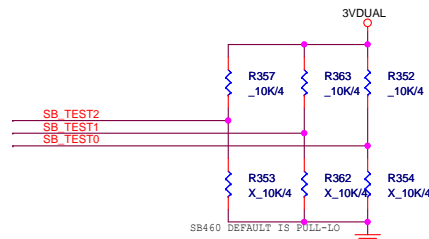
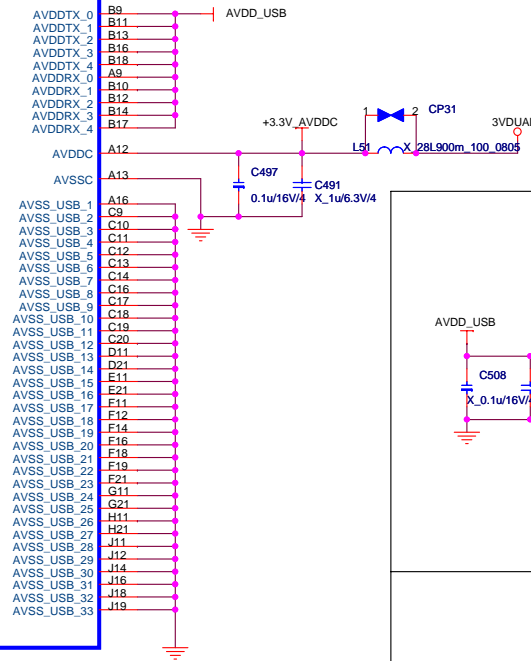
ACPI / WAKE UP EVENTS

USB INTERFACE

USB PWR



USB9	FRONT PANEL (SB600 ONLY)
USB8	FRONT PANEL (SB600 ONLY)
USB7	FRONT PANEL
USB6	FRONT PANEL
USB5	STACK4 USB4
USB4	STACK4 USB3
USB3	STACK4 USB2
USB2	STACK4 USB1
USB1	LAN USB BOTTOM
USB0	LAN USB TOP



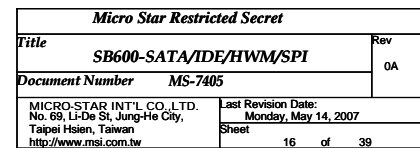
Micro Star Restricted Secret

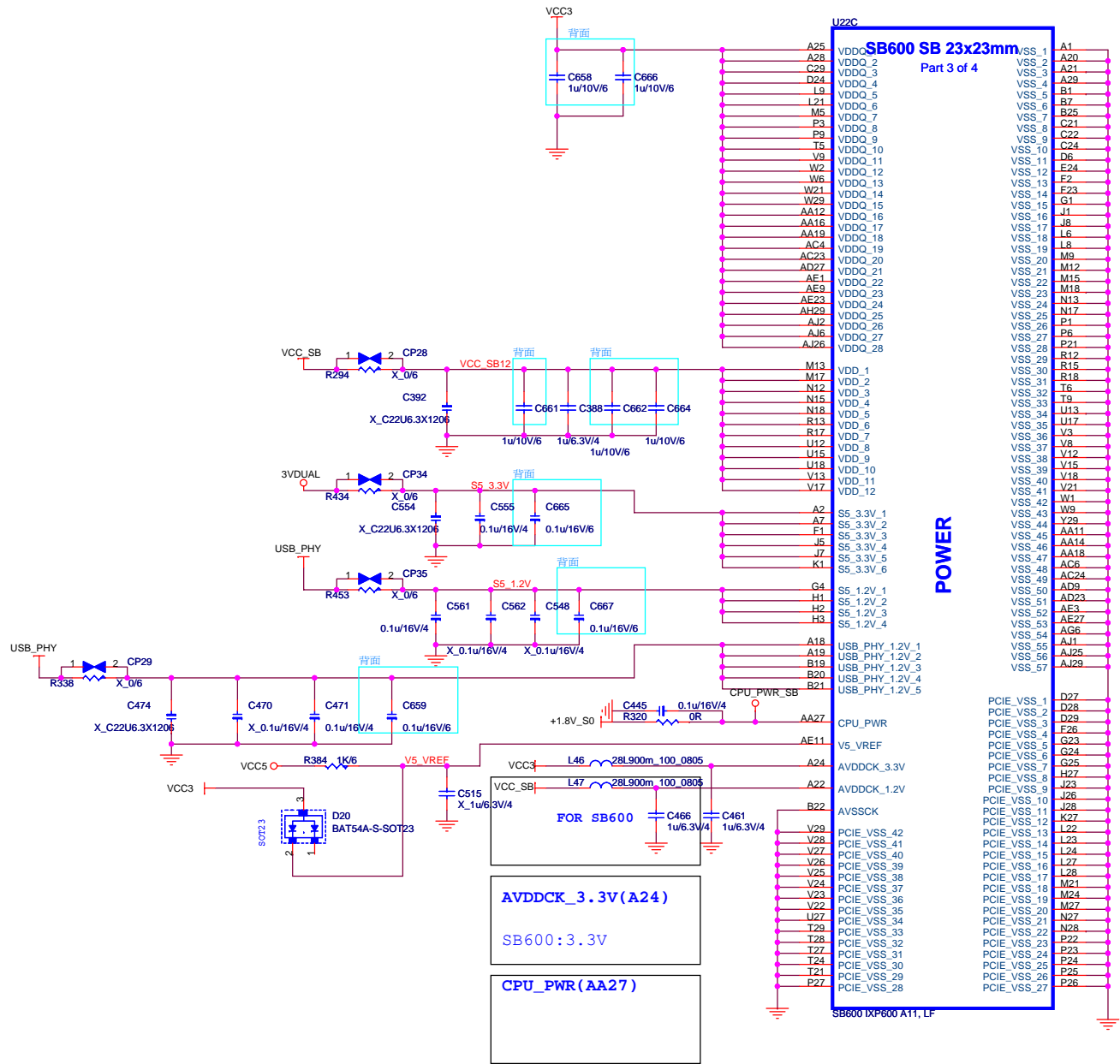
Title SB600-ACPI/GPIO/USB/AUDIO

Document Number MS-7405

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<http://www.msi.com.tw>

Last Revision Date:  
Monday, May 14, 2007  
Sheet 15 of 39



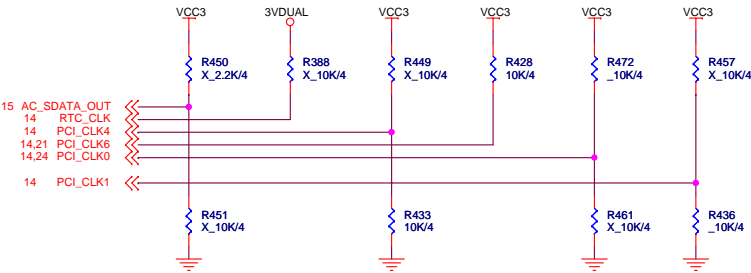




# REQUIRED STRAPS

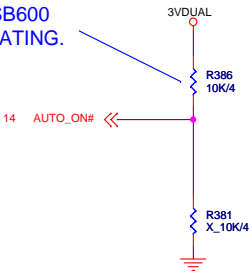
SB600 HAS 15K INTERNAL PD FOR AC\_SDATA\_OUT,  
15K PU FOR RTC\_CLK, EXTERNAL PU/PD IS  
NOT REQUIRED; FOR SB460, EXTERNAL PU/PD ARE  
REQUIRED

REV: 2.1



NOTE: R751 PU RESISTOR FOR  
RTC\_IRQ# IS REQUIRED FOR SB600  
TO KEEP THE INPUT FROM FLOATING.

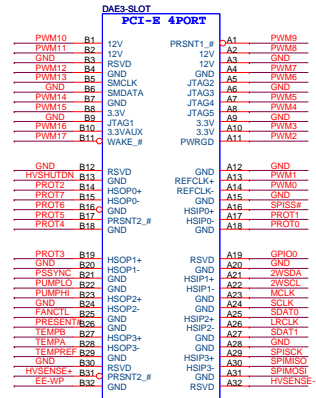
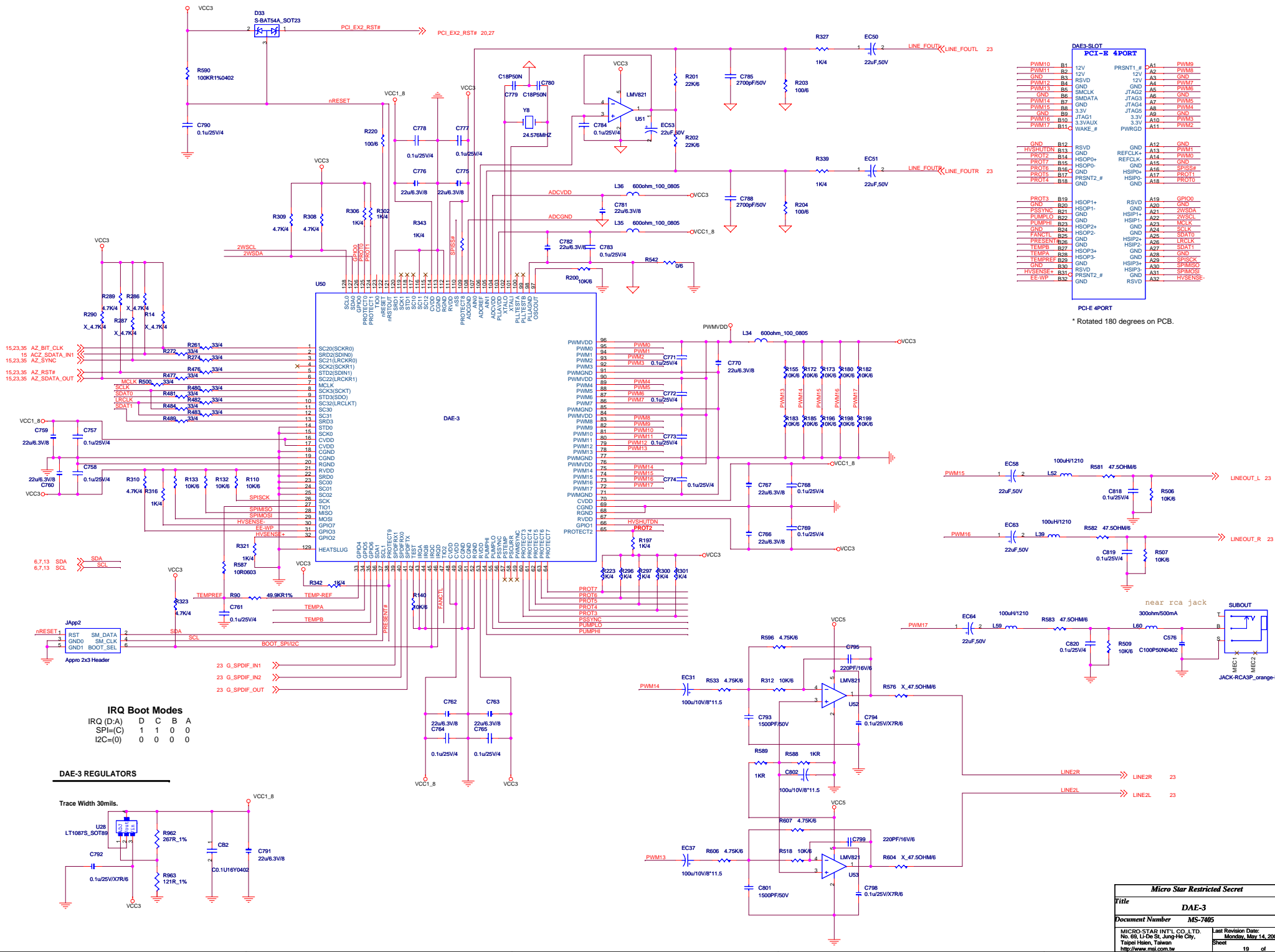
# ADDITIONAL SB460 STRAPS



		SB600					
PULL HIGH	AC_SDOUT	RTC_CLK	PCI_CLK4	PCI_CLK6	PCI_CLK0	PCI_CLK1	
	USE DEBUG STRAPS	INTERNAL RTC	USE INT. PLL48	CPU IF=K8	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM L, L = FWH ROM		
PULL LOW	IGNORE DEBUG STRAPS	EXTERNAL RTC	USE EXT. 48MHZ	CPU IF=P4	DEFAULT		

PULL HIGH	ACPWRON	SPDIF_OUT	PCI_CLK2	PCI_CLK3	PCIEXT_CLK1 (PCI_CLK5)	LFRAME#
	MANUAL PWR ON	SIO 24MHz	XTAL MODE	USB PHY POWERDOWN DISABLE	PCIE_CM_SET LOW	ENABLE THERMTRIP#
PULL LOW	AUTO PWR ON	SIO 48MHz	48MHZ OSC MODE	USB PHY POWERDOWN ENABLE	PCIE_CM_SET HIGH	DISABLE THERMTRIP#

SB460 ONLY SB460 ONLY SB460 ONLY SB460 ONLY SB460 ONLY SB460 ONLY

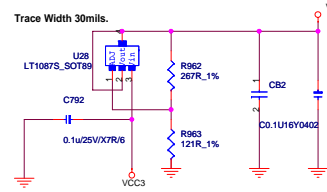


PCI-E 4PORT  
\* Rotated 180 degrees on PCB.

**IRQ Boot Modes**

IRQ (D:A)	D	C	B	A
SPI=(C)	1	1	0	0
I2C=(0)	0	0	0	0

**DAE-3 REGULATORS**

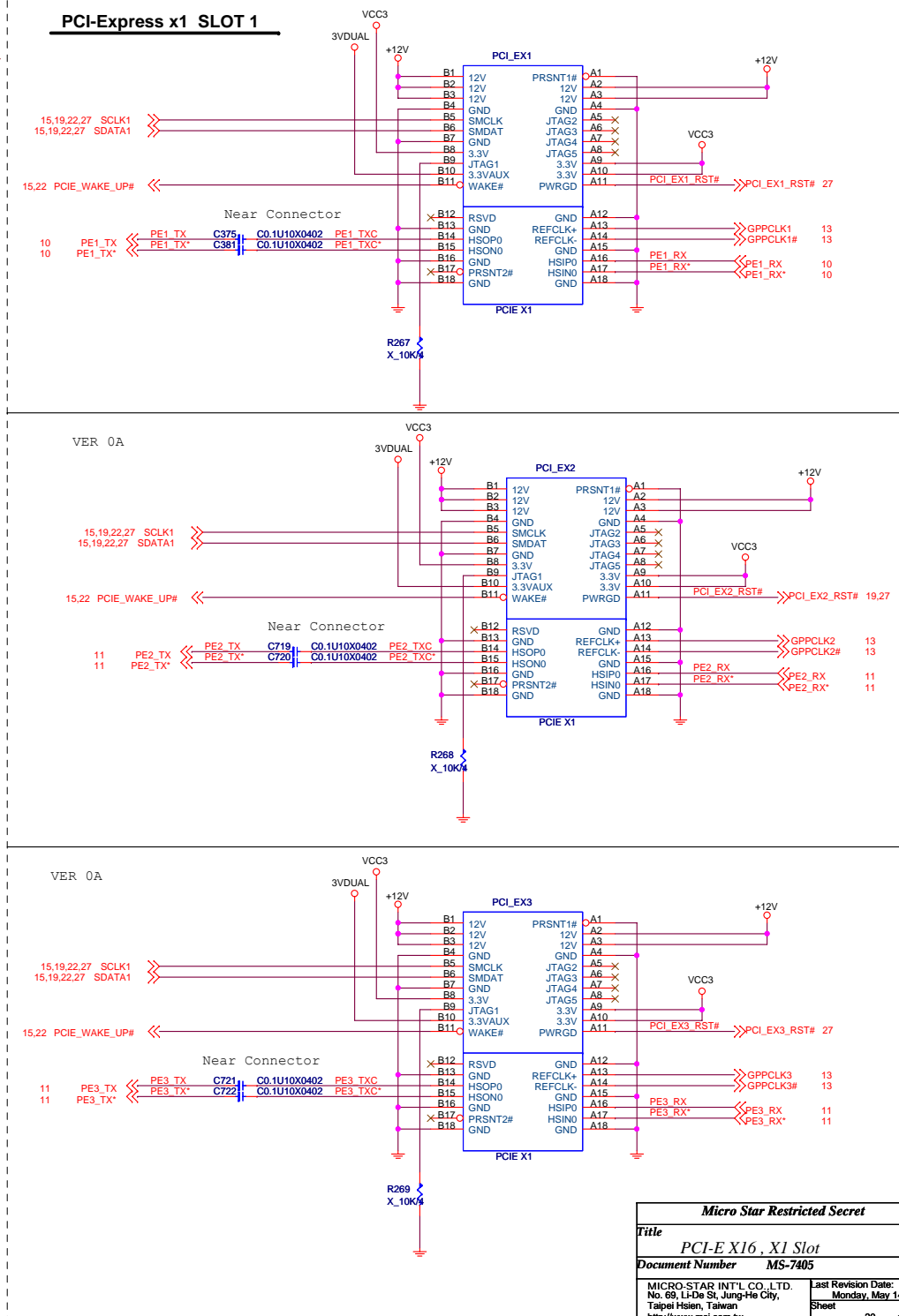


**PCI EXPRESS\_16**

Note:add two PCIe x1 slot,  
change reset singal to every slot  
2007/3/22



**PCI-Express x1 SLOTT 1**



**Micro Star Restricted Secret**

<b>Title</b>	PCI-E X16 , X1 Slot
<b>Document Number</b>	MS-7405

<p><b>MICRO-STAR INT'L CO., LTD.</b>          No. 69, Li-De St, Jung-He City,          Taipei Hsien, Taiwan  <a href="http://www.msi.com.tw">http://www.msi.com.tw</a></p>	<p>Las She</p>
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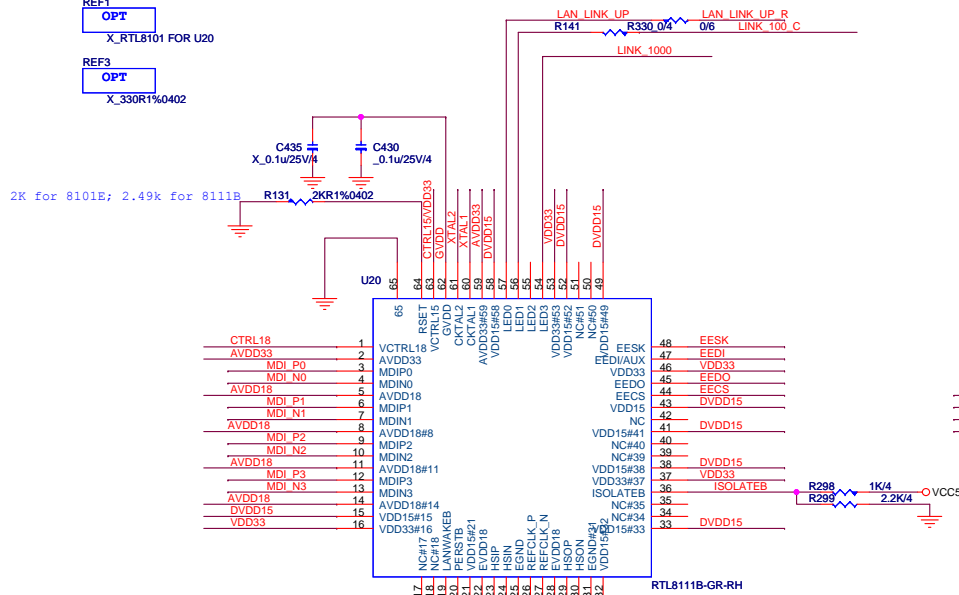
Rev  
0A

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REF  
OPT  
X\_2.49K FOR R131  
REF1  
OPT  
X\_RTL8101 FOR U20  
REF3  
OPT  
X\_330R1%0402

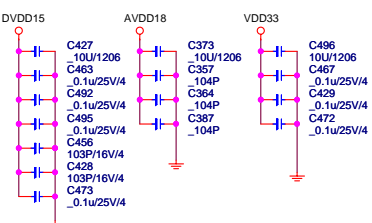
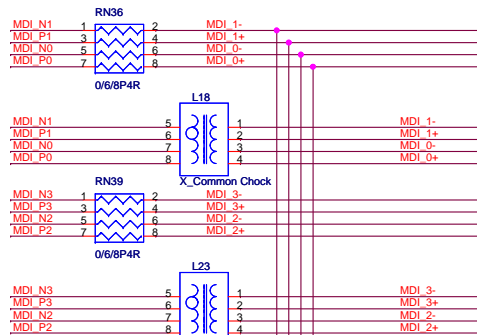
CFG001 For RTL8101E  
CFG002 For RTL8111B



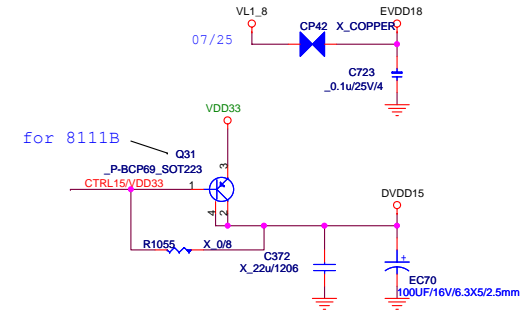
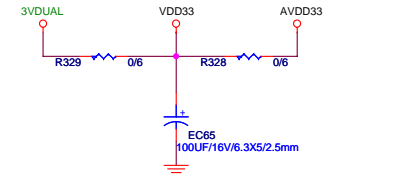
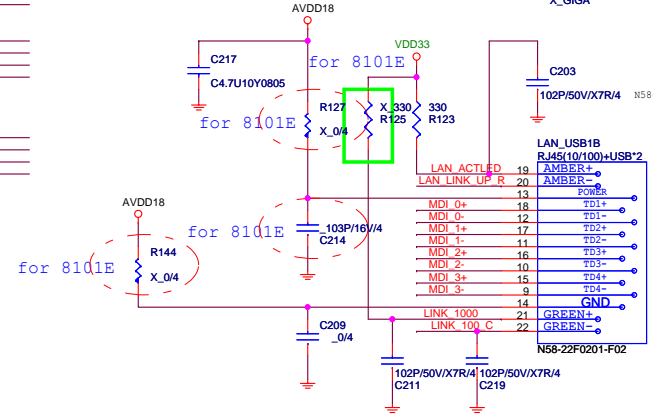
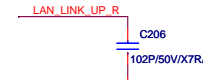
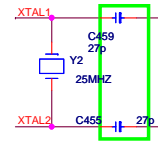
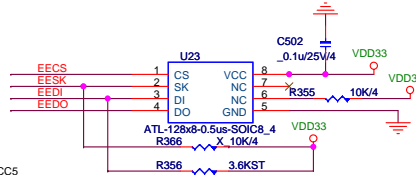
Power domain chart

	RTL8111B / RTL8101E
AVDD33	3.3V
AVDD18	1.8V
EVDD18	1.8V
DVDD15	1.5V

	Q31	Q32
RTL8111B	Need	Need
RTL8101E	N/A	N/A



For 8111B remove

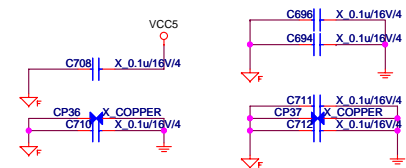
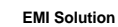
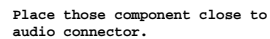


Power consumption

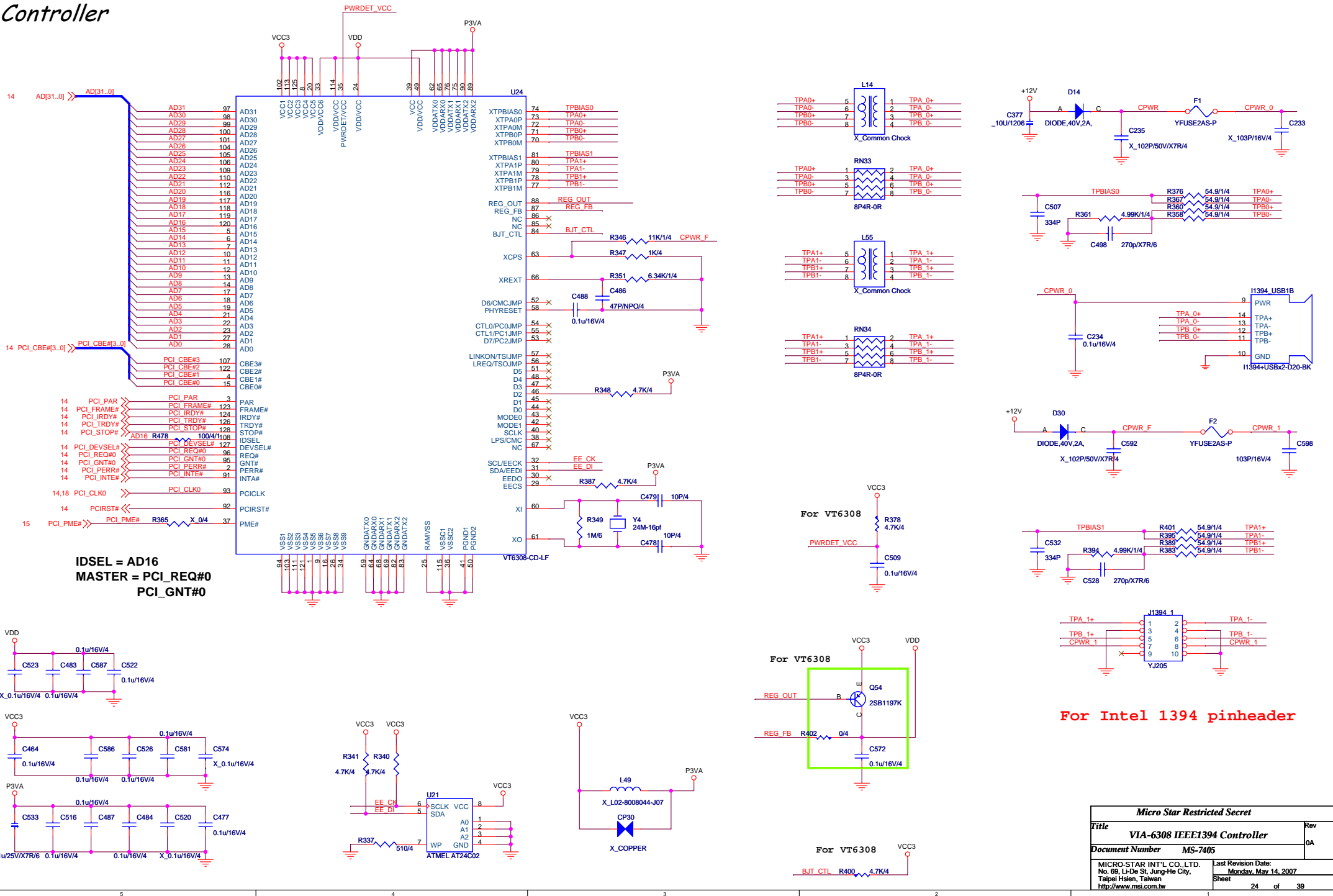
	1G	100M
3.3V	103mA	TBD
1.5V	367mA	TBD
1.8V	198mA	TBD

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

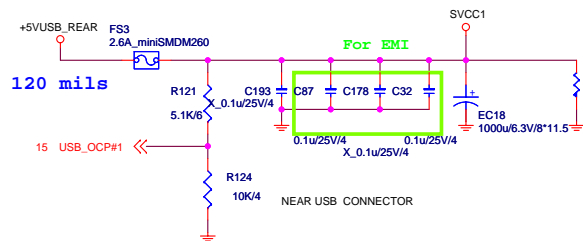
## R479 FOR ALC861 VER.D



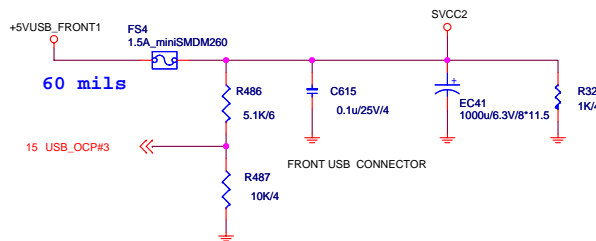
1394a OHCI Link Layer  
Controller



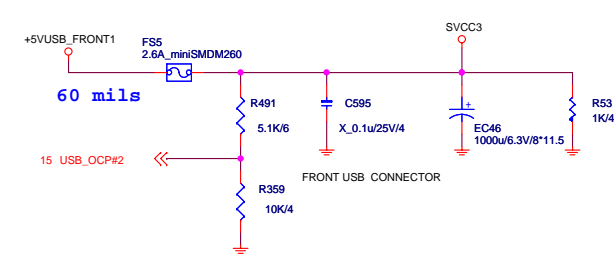
## POWER CIRCUIT FOR USB PORT 0,1



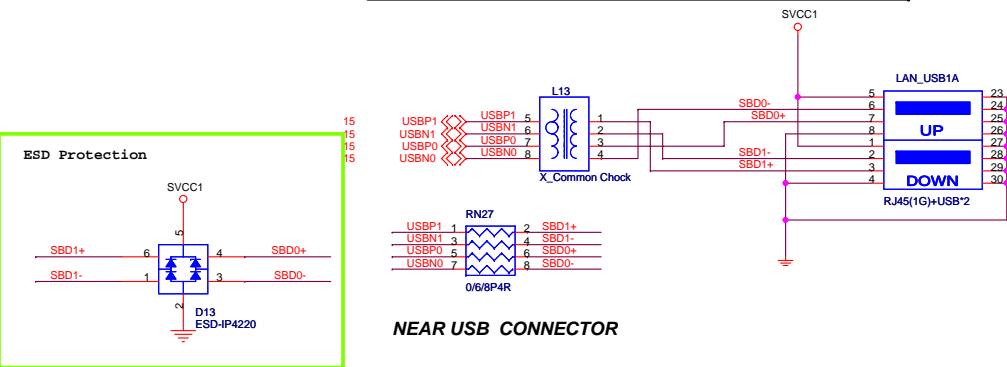
## POWER CIRCUIT FOR USB PORT 4,5,6,7



## POWER CIRCUIT FOR USB PORT 2,3



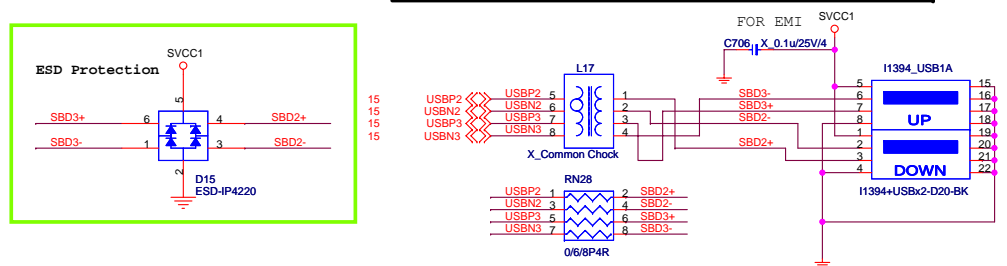
## REAR PANEL USB CONNECTOR FOR USB PORT 0,1



### NEAR USB CONNECTOR

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

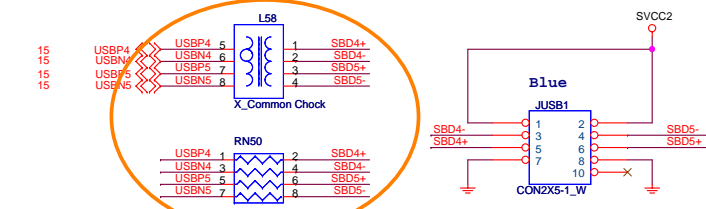
## REAR PANEL USB CONNECTOR FOR USB PORT 2,3



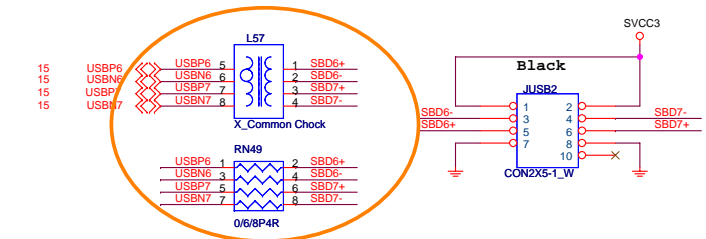
22 / 7.5 / 7.5 / 7.5 / 22 / 7.5 / 7.5 / 7.5 / 22

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

Reserved, can be taken off riser card within bead

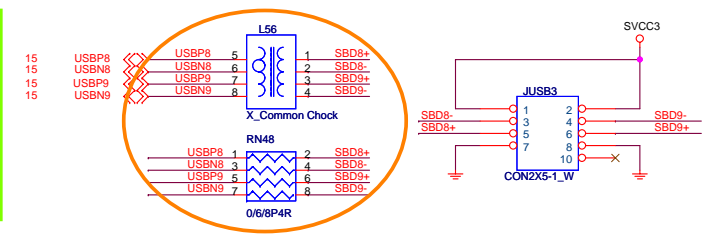


## FRONT PANEL USB CONNECTOR FOR USB PORT 6,7

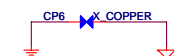


## FRONT PANEL USB CONNECTOR FOR USB PORT 8,9

(RESERVE FOR SB600)



## EMI TEST



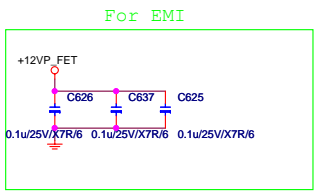
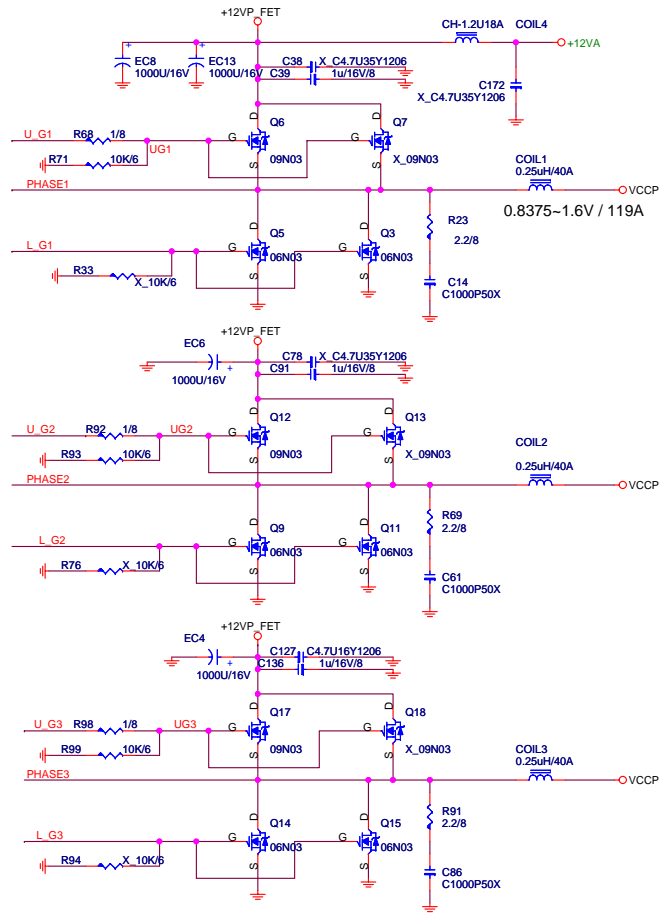
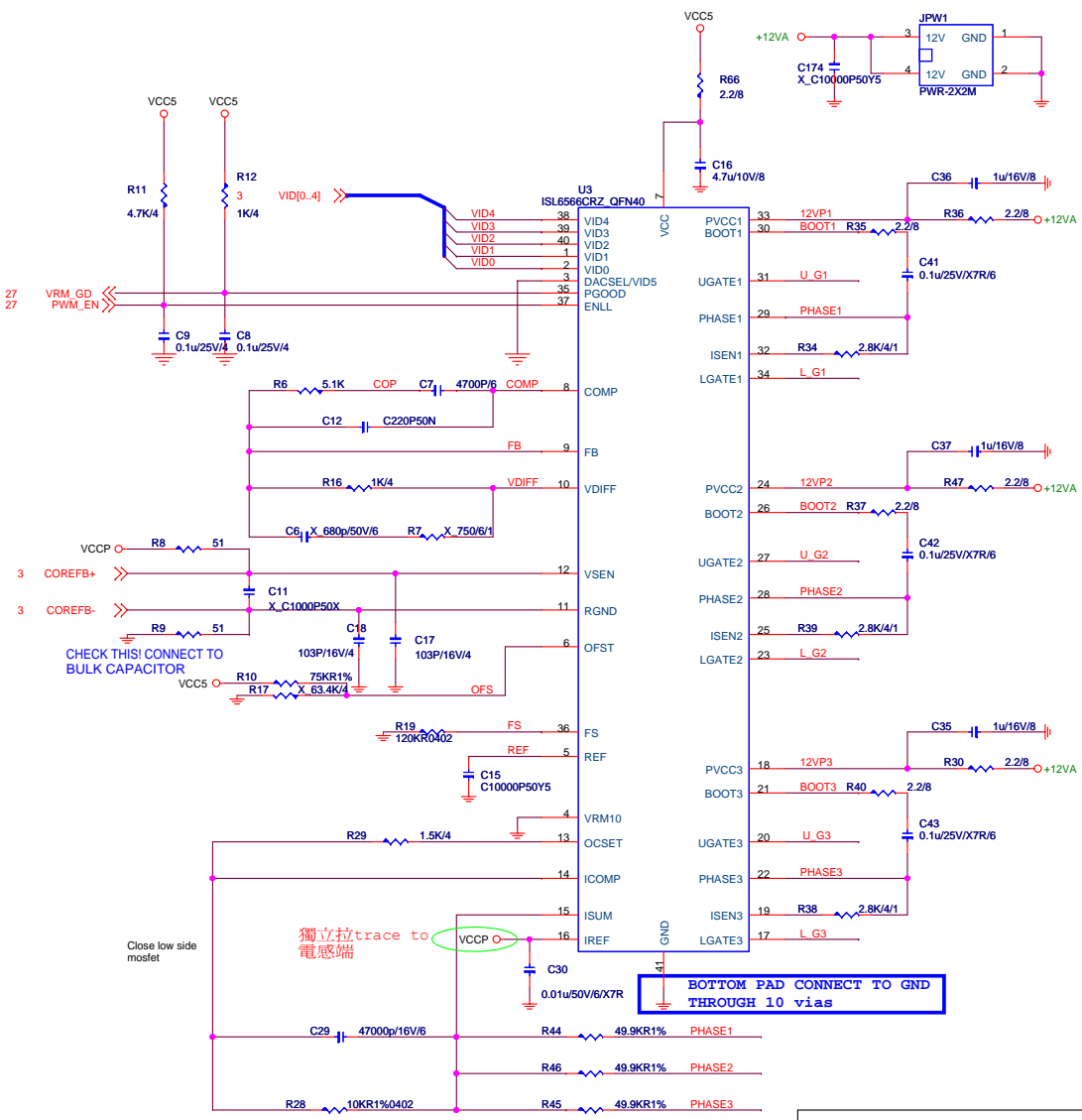
		<b>MICRO-STAR INT'L CO., LTD.</b>	
Title		USB CONNECTORS	
Size	Document Number	MS-7405	
Date:	Monday, May 14, 2007	Sheet	25 of 39

# Voltage Regular Module

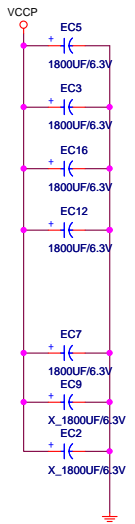
IPF06N03LA Rds(on)=8.7mΩ (@4.5V, 30A), Vgs(on)=1.2~2V, Id=50A, Ciss=3110pf, Qg=10nC, Vds=25V, Vgs=±20V  
C100U2SP ESR<13mΩ, Ripple cur.<2.7A, LC<12uA, 105C  
.CD3300U6.3EL25 ESR<12mΩ, Ripplecur.<2800mA, 105C, longlife3000hrs, KZGSeries  
560u\_2.5V ESR=6mΩ, Ripplecur.=4400mA, Lc.<500uA, 105C/2000hrs  
1800UF/6.3V ESR<12mΩ, Ripplecur<2350mA, 105C, longlife change from 2000hrs to 3000hrs, KZJ series  
0.6uH/40A 0.6u/20%, Isat=40A, Rdc=1.2m ohm, PEW wire  
CH-1.2U18A 1.2u/20%, Dip-2/vertical7.5mm, 1.2ψ/5.5turns, 18A

TDP = 115 W  
VR\_TDC = 101 A  
Icc(max) = 119 A  
Tejas Tcase = [P x 0.213] + 43.3  
Prescott Tcase = [P x 0.25] + 43.3

MOSFET Heatsinks



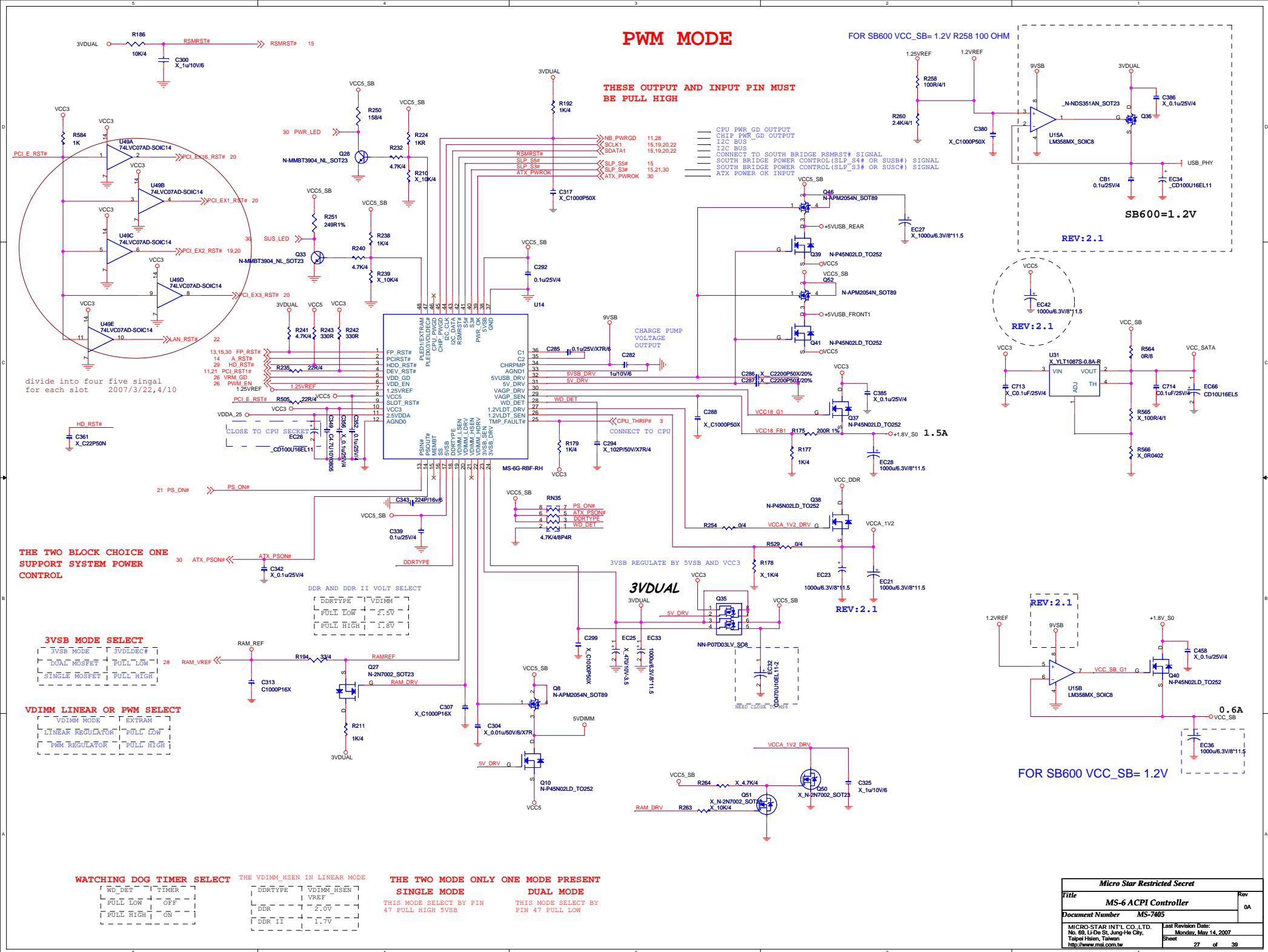
EL Capacitors

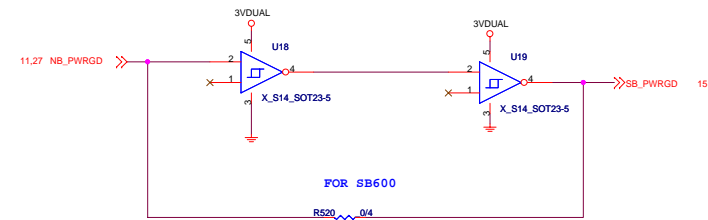
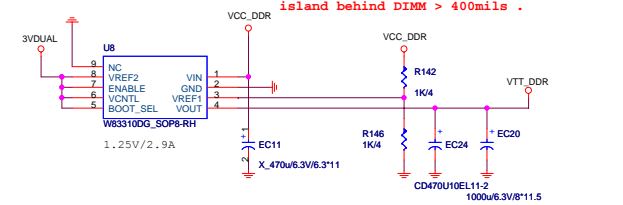
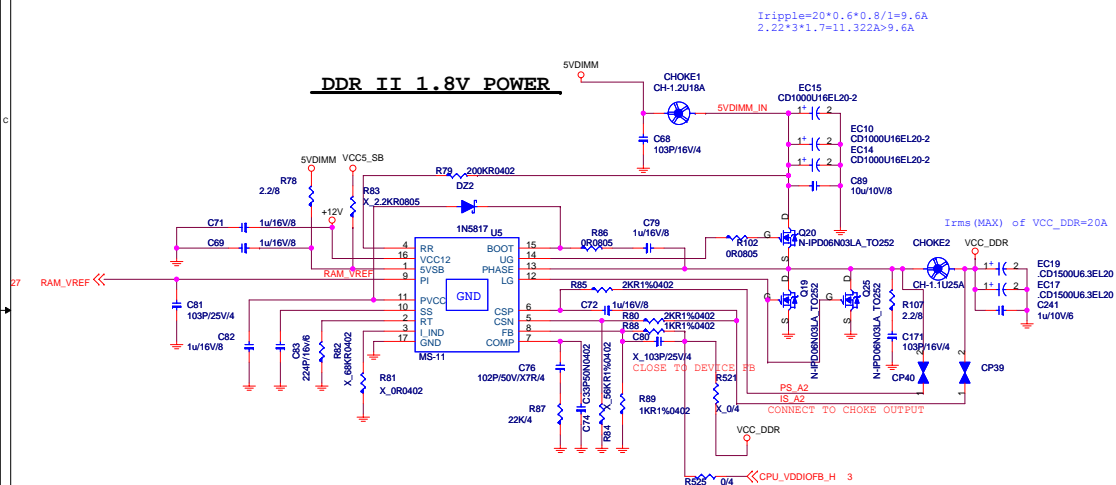
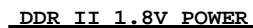


VER : 0A JVID4 only for factory test

Without CPU the Vccp is 1.175V after use jumper short JVID4

MICRO-STAR INT'L CO., LTD.			
Intersil 6565ACV 3 Phase			
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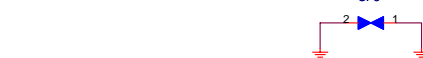




## Intel Front Panel

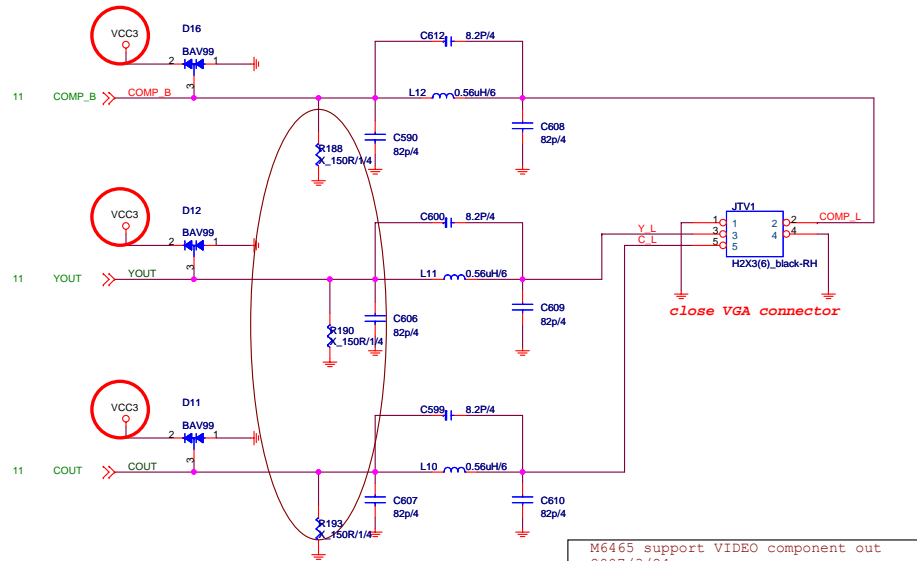


## SERIAL PORT 2

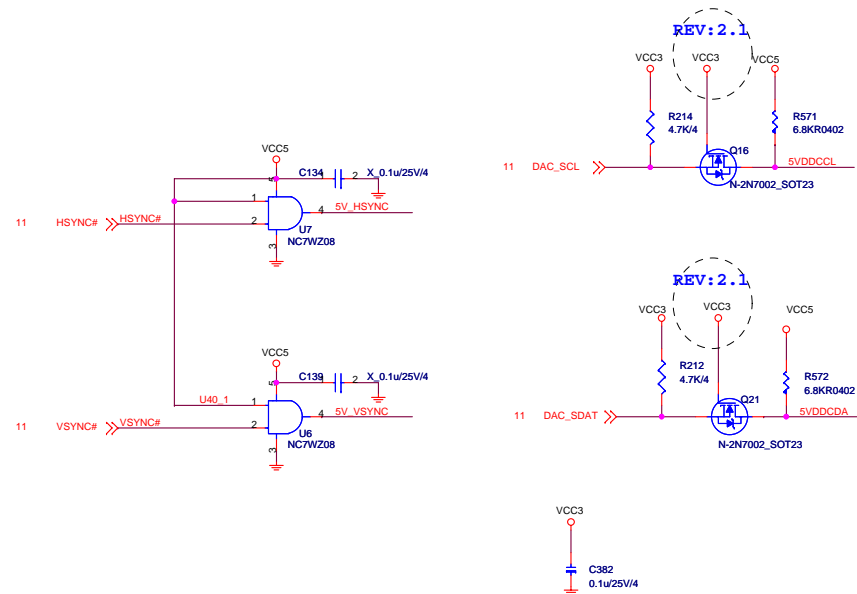
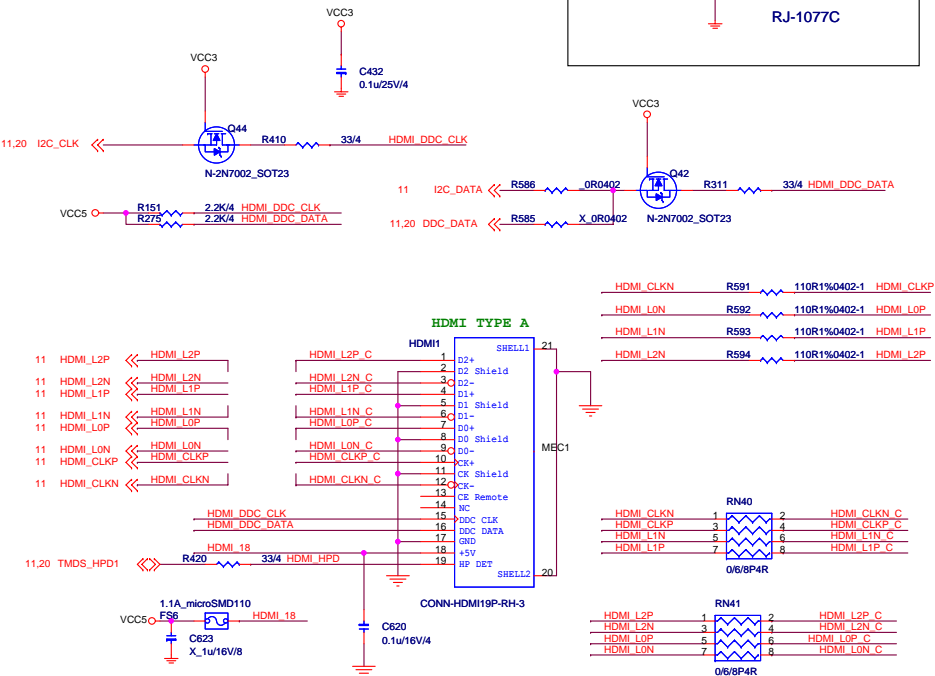
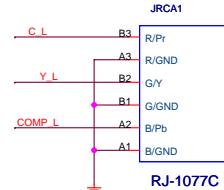


# TV\_OUT CONNECTOR

NOTE : reserve R188,R190,R193 2007/3/28

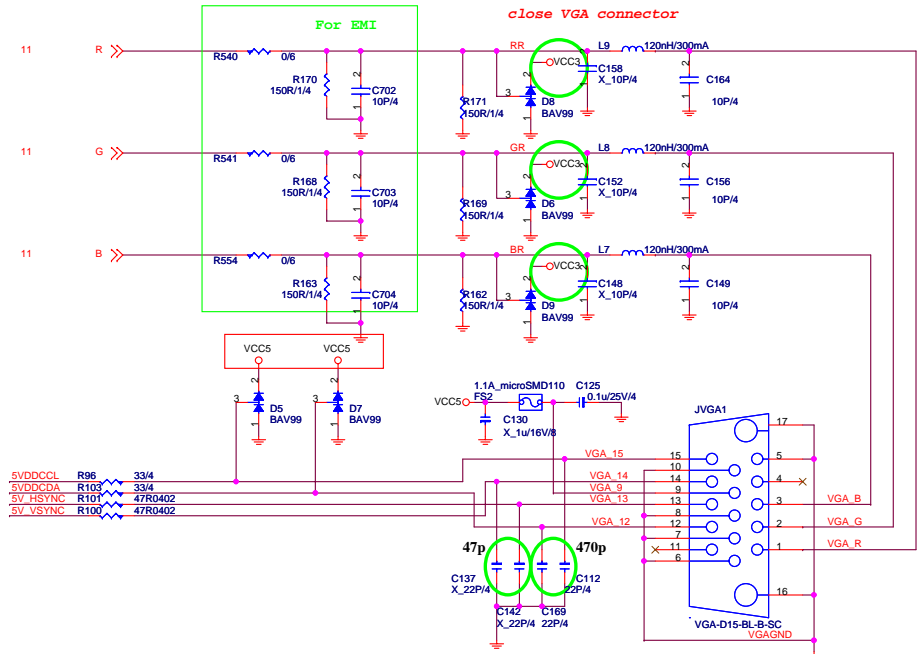


M6465 support VIDEO component out  
2007/3/24



# VGA CONNECTOR

Closed NB



Micro Star Restricted Secret		
Title	VGA CONNECTOR	Rev
Document Number	MS-7405	0A
MICRO-STAR INT'L CO.,LTD. No. 68, Li-De St, Jung-He City, Taipei Hsien, Taiwan http://www.msi.com.tw		Last Revision Date: Monday, May 14, 2007
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## SB600 GPIO Config.

GPIO Pin	Type	Function
SATA_IS3#/GPIO0	I/O(3.3V)	Unused
ROM_CS#/GPIO1	I/O(3.3V)	Unused
SPKR/GPIO2	I/O(3.3V)	<b>SPKR</b>
FANOUT0/GPIO3	I/O(3.3V)	Unused
SATA_IS2#/GPIO4	I/O(3.3V)	Unused
SHUTDOWN#/GPIO5	I/O(3.3V)	Unused
GHI#/SATA_IS1#/GPIO6	I/O(3.3V)	Unused
WD_PWRGD/GPIO7	I/O(3.3V)	Unused
DDC1_SDA/GPIO8	I/O(3.3V)	<b>SPI_WP#</b>
DDC1_SCL/GPIO9	I/O(3.3V)	<b>ATADETO</b>
SATA_IS0#/GPIO10	I/O(3.3V)	Unused
SPI_DO/GPIO11	I/O(S5_3.3V)	<b>SPI_DO</b>
SPI_DI/GPIO12	I/O(S5_3.3V)	<b>SPI_DI</b>
LAN_RST#/GPIO13	I/O(3.3V)	Unused
ROM_RST#/GPIO14	I/O(3.3V)	Unused
IDE_D[0..15]/GPIO[15..30]	I/O(3.3V)	<b>PDD[0..15]</b>
SPI_HOLD#/GPIO31	I/O(S5_3.3V)	<b>SPI_HOLD#</b>
SPI_CS#/GPIO32	I/O(S5_3.3V)	<b>SPI_CS#</b>
INTE#/GPIO33	I/O(3.3V)	<b>PCI_INTA#</b>
INTF#/GPIO34	I/O(3.3V)	<b>PCI_INTB#</b>
INTG#/GPIO35	I/O(3.3V)	<b>PCI_INTC#</b>
INTH#/GPIO36	I/O(3.3V)	<b>PCI_INTD#</b>
DPSLP_OD#/GPIO37	I/O(3.3V)	Unused
AC_BITCLK/GPIO38	I/O(3.3V)	Unused
AC_SDOUT/GPIO39	I/O(3.3V)	<b>STRAP PIN PULL LOW</b>
AC_SYNC/GPIO40	I/O(3.3V)	Unused
SPDIF_OUT/PCICLK7/GPIO41	I/O(3.3V)	Unused
ACZ_SDIN0/GPIO42	I/O(S5_3.3V)	Unused
ACZ_SDIN1/GPIO43	I/O(S5_3.3V)	Unused
ACZ_SDIN2/GPIO44	I/O(S5_3.3V)	Unused
AC_RST#/GPIO45	I/O(S5_3.3V)	Unused
AC_SDIN3/GPIO46	I/O(S5_3.3V)	Unused
SPI_CLK/GPIO47	I/O(S5_3.3V)	<b>SPI_CLK</b>
FANOUT1/GPIO48	I/O(3.3V)	Unused
FANOUT2/GPIO49	I/O(3.3V)	Unused
FANINO/GPIO50	I/O(3.3V)	Unused
FANIN1/GPIO51	I/O(3.3V)	Unused
FANIN2/GPIO52	I/O(3.3V)	Unused
VIN[0..7]/GPIO[53..60]	I/O(3.3V)	Unused
TEMPIN0/GPIO61	I/O(3.3V)	Unused
TEMPIN1/GPIO62	I/O(3.3V)	Unused
TEMPIN2/GPIO63	I/O(3.3V)	Unused
TEMPIN3/TALERT#/GPIO64	I/O(3.3V)	<b>SB600_TALERT#</b>
BMREQ#/REQ5#/GPIO65	I/O(3.3V)	<b>BMREQ#</b>
LLB#/GPIO66	I/O(S5_3.3V)	<b>GB_ENABLE#</b>
SATA_ACT#/GPIO67	OD(3.3V)	<b>SATALED#</b>
LDRQ1#/GNT5#/GPIO68	I/O(3.3V)	Unused
RTC_IRQ#/GPIO69	I/O(S5_3.3V)/VBAT	Unused
REQ3#/GPIO70	I/O(3.3V)	<b>PREQ#3</b>
REQ4#/GPIO71	I/O(3.3V)	<b>PREQ#4</b>
GNT3#/GPIO72	I/O(3.3V)	<b>PGNT#3</b>
GNT4#/GPIO73	I/O(3.3V)	Unused

## SB600 GPM Config.

GPM Pin	Type	Function
USB_OC0#/GPM#0	I/O(S5_3.3V)	<b>OC#1</b>
USB_OC1#/GPM#1	I/O(S5_3.3V)	<b>OC#1</b>
USB_OC2#/GPM#2	I/O(S5_3.3V)	<b>OC#2</b>
USB_OC3#/GPM#3	I/O(S5_3.3V)	<b>OC#2</b>
USB_OC4#/GPM#4	I/O(S5_3.3V)	<b>OC#3</b>
USB_OC5#/DDR3_RST#/GPM#5	I/O(S5_3.3V)	<b>OC#3</b>
BLINK/GPM#6	I/O(S5_3.3V)	Unused
SYS_RESET#/GPM#7	I/O(S5_3.3V)	<b>FP_RST#</b>
USB_OC8#/AZ_DOCK_RST#/GPM#8	I/O(S5_3.3V)	<b>OC#2</b>
USB_OC9#/SLP_S2#/GPM#9	I/O(S5_3.3V)	<b>OC#2</b>

## SB600 GPOC Config.

GPOC Pin	Type	Function
SCL0/GPOC0#	I/O(3.3V)	<b>SCLK</b>
SDA0/GPOC1#	I/O(3.3V)	<b>SDATA</b>
SCL1/GPOC2#	I/O(S5_3.3V)	<b>SMB_CLK</b>
SDA1/GPOC3#	I/O(S5_3.3V)	<b>SMB_DATA</b>

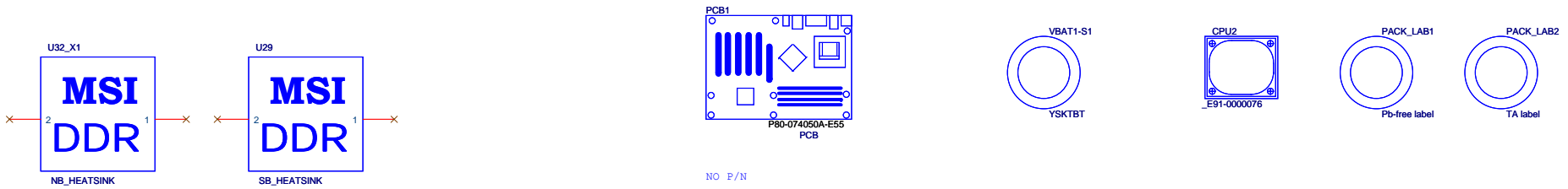
## SB600 EXTEVENT & GEVENT Config.

GPM Pin	Type	Function
RI#/EXTEVENT0#	I/O(S5_3.3V)	Unused
LPC_SMI#/EXTEVENT1#	I/O(3.3V)	<b>LPC_SMI#</b>
SMBALERT#/THRMTRIP#/GEVENT2#	I/O(S5_3.3V)	<b>H_THERMTRIP#</b>
LPC_PME#/GEVENT3#	I/O(S5_3.3V)	Unused
PCI_PME#/GEVENT4#	I/O(S5_3.3V)	<b>PCI_PME#</b>
S3_STATE/GEVENT5#	I/O(S5_3.3V)	Unused
USB_OC6#/GEVENT6#	I/O(S5_3.3V)	<b>OC#3</b>
USB_OC7#GEVENT7#	I/O(S5_3.3V)	<b>OC#3</b>
WAKE#/GEVENT8#	I/O(S5_3.3V)	<b>WAKE#</b>

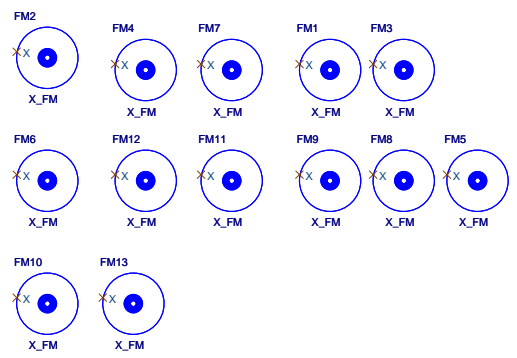
## PCI Config.

	CLOCK	REQ#	GNT#	IDSEL	INTA#	INTB#	INTC#	INTD#
IEEE 1394	PCICLK0	REQ#0	GNT#0	AD16	INT#E	N/A	N/A	N/A
GIGA LAN	PCICLK1	REQ#1	GNT#1	AD17	INT#F	N/A	N/A	N/A
PCI1	PCICLK2	REQ#2	GNT#2	AD18	INT#G	INT#H	INT#E	INT#F
PCI2	PCICLK4	REQ#3	GNT#3	AD19	INT#H	INT#E	INT#F	INT#G
Super I/O	PCICLK6	N/A	N/A	N/A	N/A	N/A	N/A	N/A

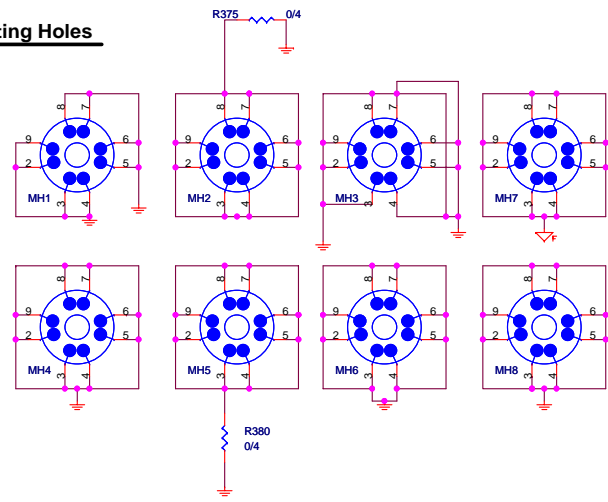
Micro Star Restricted Secret		
Title	<b>GPIO</b>	Rev 0A
Document Number	<b>MS-7405</b>	
MICRO-STAR INT'L CO., LTD. No. 68, Li-De St, Jung-Ho City, Taipei Hsien, Taiwan <a href="http://www.msi.com.tw">http://www.msi.com.tw</a>		Last Revision Date: Monday, May 14, 2007 Sheet 32 of 39



Optics Orientation Holes



Mounting Holes



Simulation



Model option table

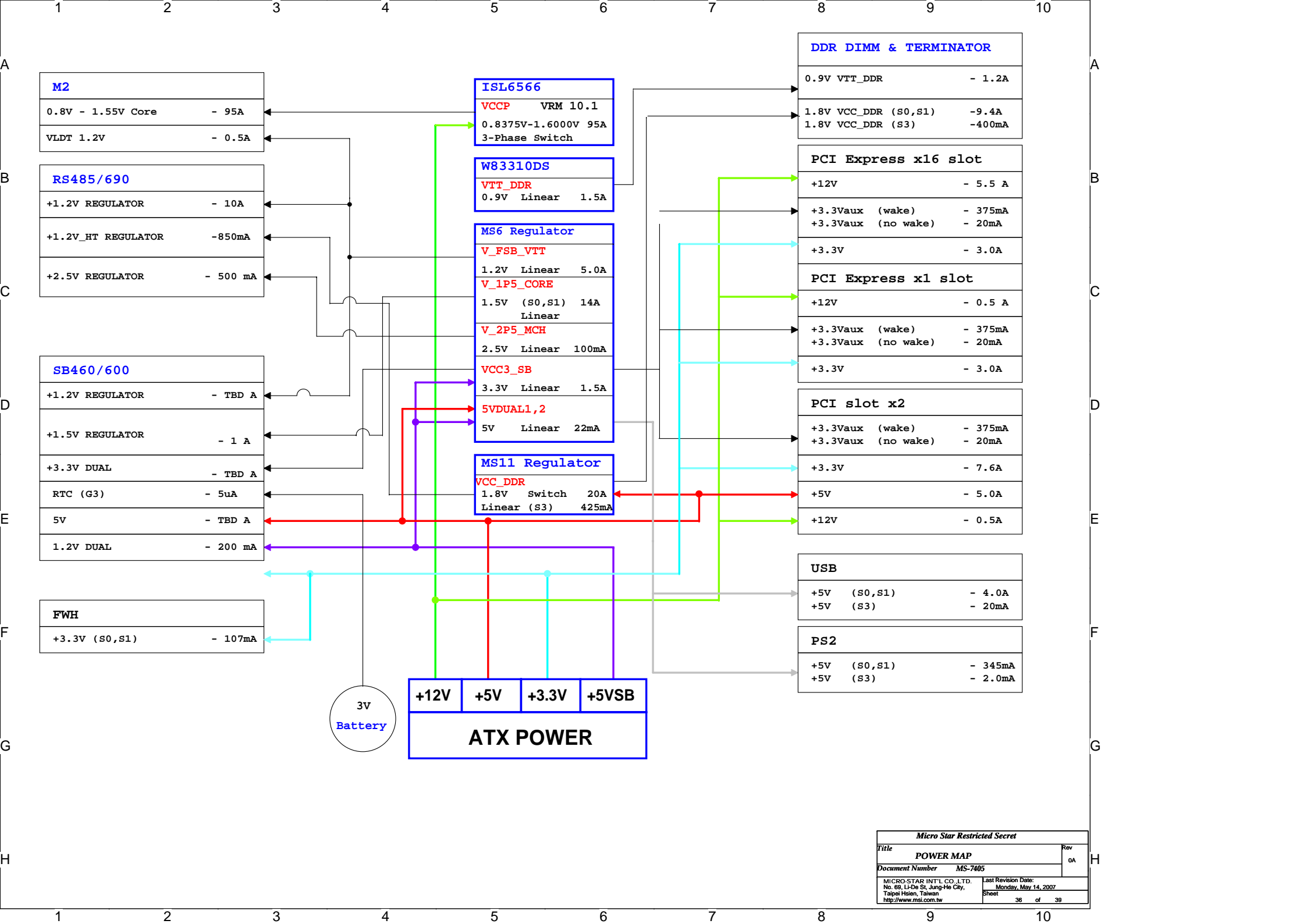
Model type	Function	BOM Config	ERP BOM No.
MS-7327	RS690+SB600RTL8110SC+ALC888+2PCI+u-ATX +2PS2+10USB+2COM+VGA+1Audio+LPT+RJ45+1394	Cfg-7327-200	601-7327-01S

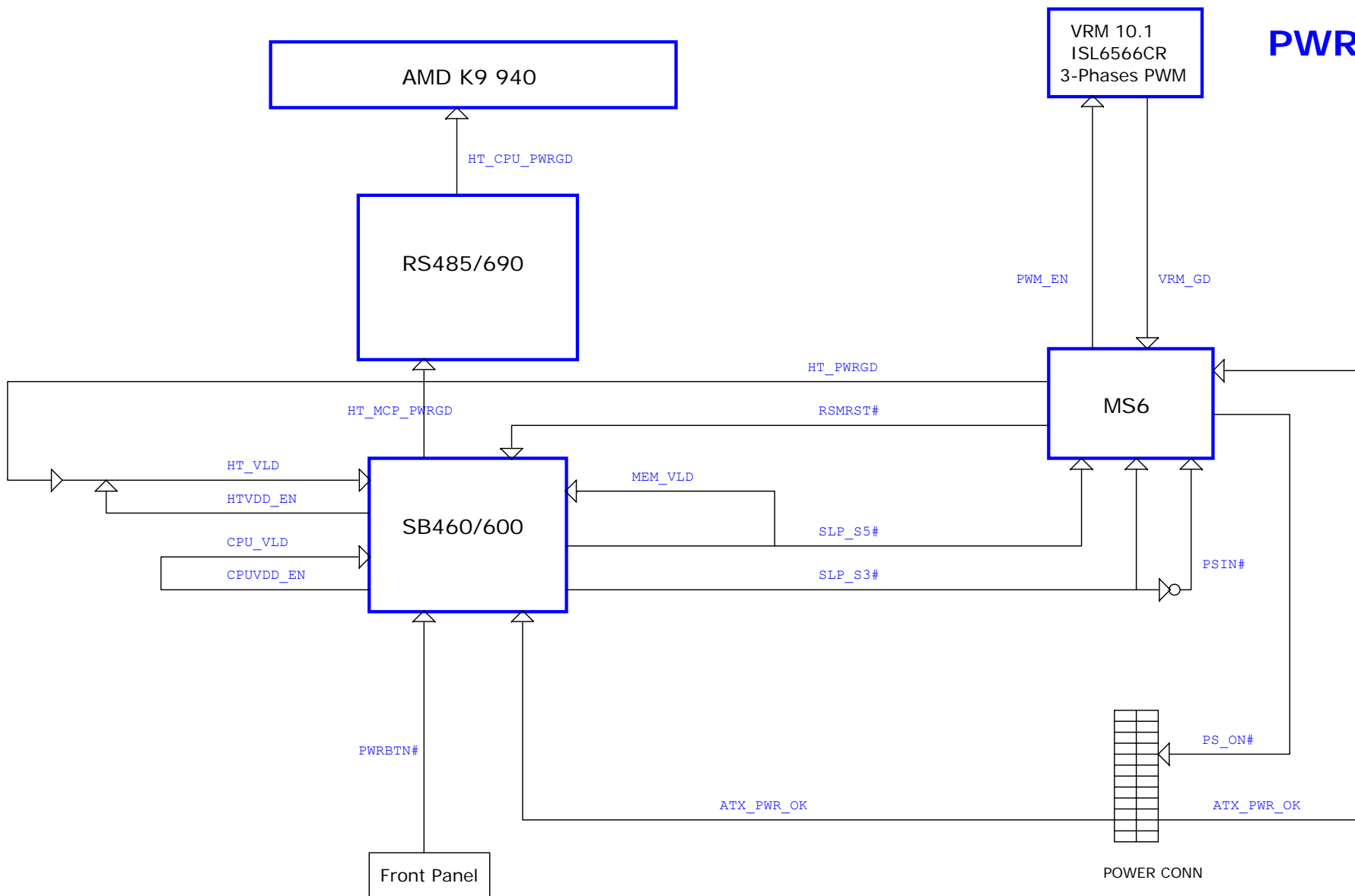
MS-7327 Revision History List			
Ver.	DATE	Schematic Change List	Page
20	2006.09.26	1. Create MS-7327 Project for LG design	
	2004.10.12	2MS-7327-20 Gerber out	
21	2007.02.28	1. Fix USB_PHY power issue.	27
		2. Added EC42 for VCC5	27
		3. Change Q16,Q21 Gate to VCC3 power.	31
		4. Add C218,C222,C326,C327,C348,C355 for AMD requirement.	8
		5.Change net SYS-FANPWM & SYS-FA to U4 pin119,pin 120 for Level 10 fan requirement.	21
		6.Add R578 for Audio requirement	23
		7.The CPU power solution as below, Change value R10 to 75KR 1% Change value R19 to 120KR Change value R10 to 10KR 1% Change value R44,R45,R46 to 49.9KR 1% Change value C12 to 220pF . Del EC2,EC9,Q5,Q11,Q15 Change value C635,C627,C636,C628,C630,C643,C629 to10uF/6.3V	26
		8. Add C215,C205,C208,C210,C212 for AMD requirement.	5
		9.Change net CPU_VDDIOFB_H for AMD requirement	5
		10.Add R424,R426 for PCI	3
		11.Change Value D23 to 1N5817 for Audio requirement.	19
		12.Add C200 for EMI requirement.	23
		12.Add C200 for EMI requirement.	30
	2007.02.28	13.Add Q46,Q39,Q52,Q41 for USB drop issue	27
	2007.03.01	14.Add R356 499 ohm for RTC vBAT issue.	14
		15.Change Value RN58 from 20K to 680ohm for CPU sideband on K8 platform.	3
		16.Add R506,R507,R539,R562,R563,R567,R568,R569,R570,R581,R582,R583 75 ohm for Audio requirement	23

Micro Star Restricted Secret		
Title	HISTORY	Rev 20
Document Number	MS-7405	
MICRO-STAR INT'L CO., LTD. No. 68, Li-De St, Jung-He City, Taipei Hsien, Taiwan <a href="http://www.msi.com.tw">http://www.msi.com.tw</a>	Last Revision Date: Monday, May 14, 2007	
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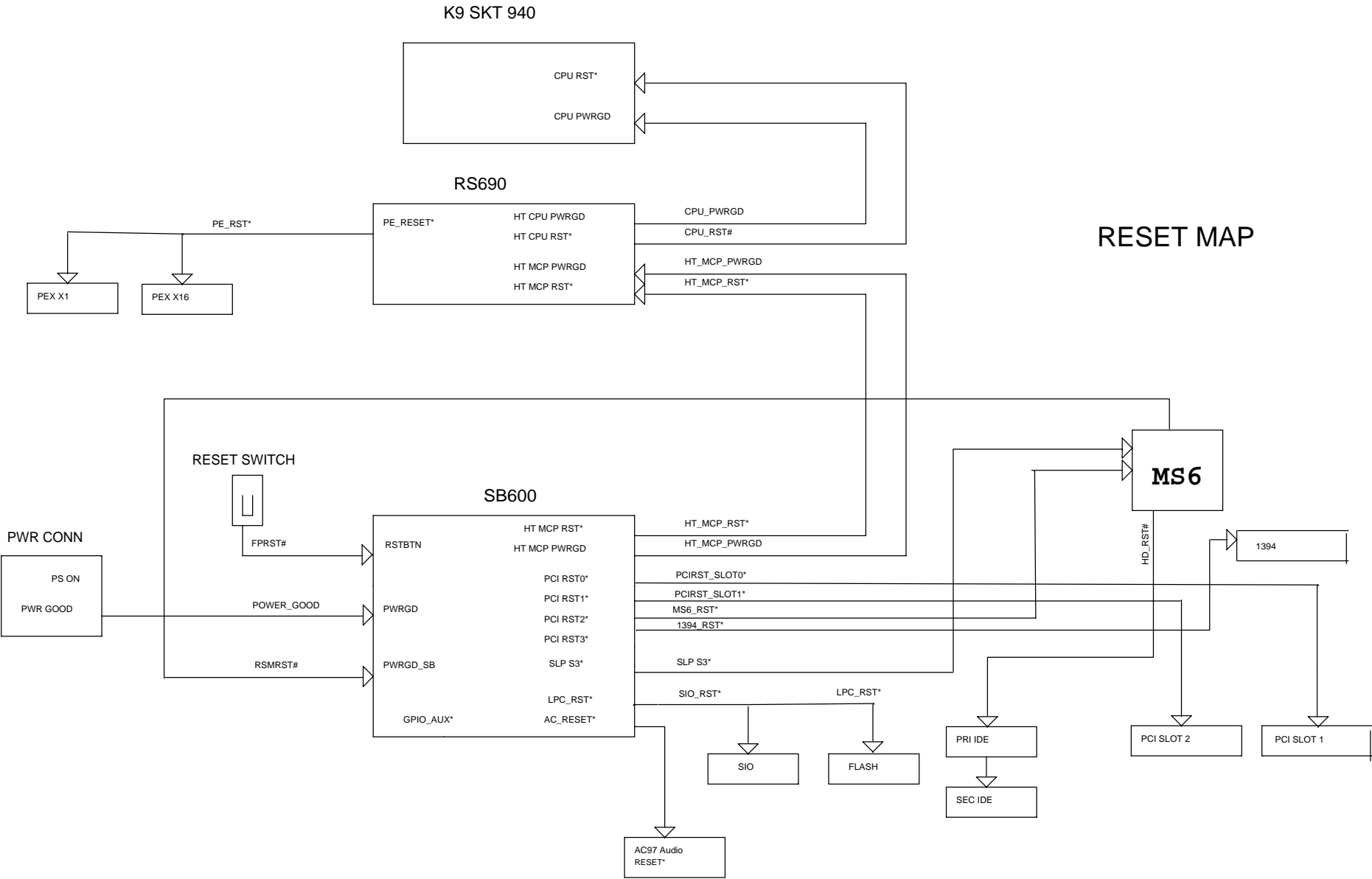
M6465 XPC Audio Connector







# PWROK MAP



Micro Star Restricted Secret		
Title	Reset Map	Rev
Document Number	MS-7405	0A
MICRO-STAR INT'L CO., LTD. No. 68, 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: Monday, May 14, 2007
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Modify history

- 1.Add PCIE x1      Page10,Page11,Page13,Page20  
2007/3/22  
2. Add TV/HDMI/D-SUB connector,and change cfg to cfg-7327-210-a Page31 2007/3/23  
3.Add HDMI,composite ,and add JRCA,and add c612,c590,c600,c606,c599,c607  
change NB P/N to :B01-RS69065-A13      set U49 cfg to cfg-7327-210-a  
Page11,page31,page 27,2007/3/24
- 4.add 1394 fuction,EEPROM U21 no stuff, add cp30      page22  
add XPC connector:change ACZ\_SDATA\_IN1 for XPC      page36      2007/3/27
- 5.add ec54 ,ec55:1000uf for adding two pcie slot      page20      2007/3/28

Micro Star Restricted Secret		
Title	History	Rev
Document Number	MS-7405	0A
MICRO-STAR INT'L CO.,LTD. No. 69, 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: Monday, May 14, 2007 Sheet 39 of 39