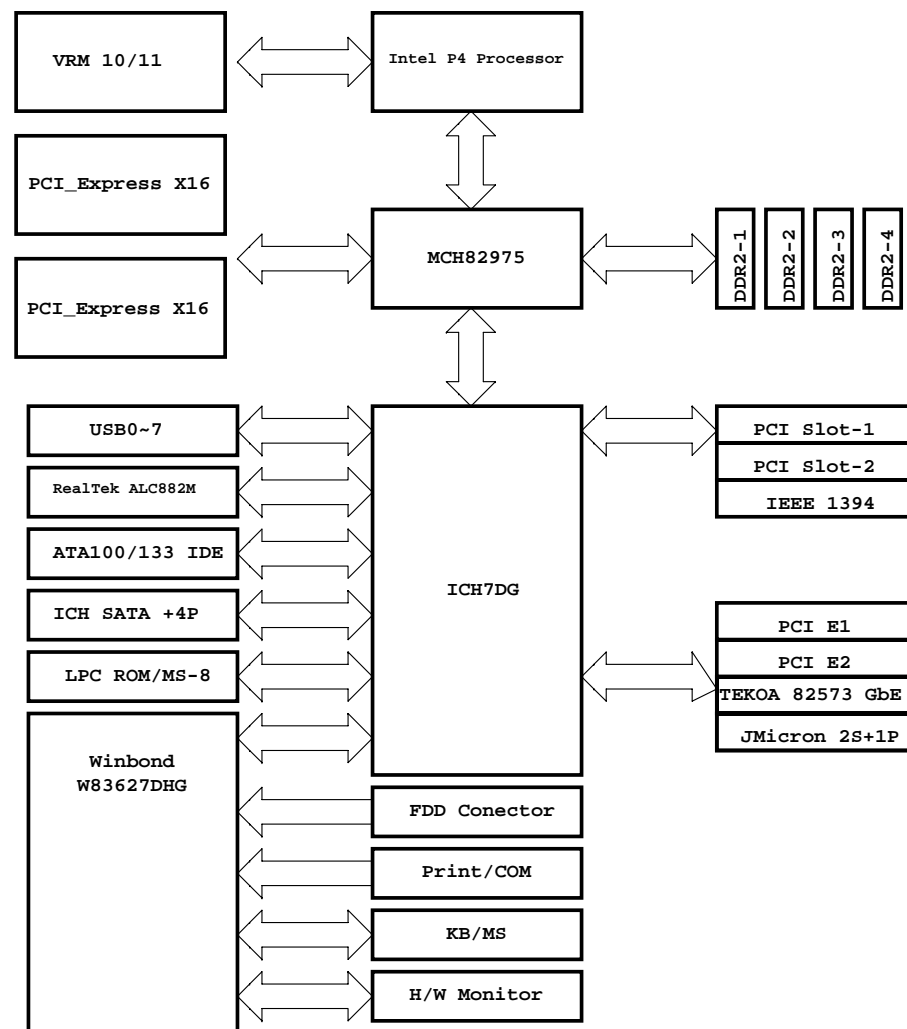


MS-7246 Version: 2.2




- 001-System Block Diagram
- 002-Power Delivery
- 003-VRD11 RT8802A 4Phase
- 004-Clock Generator
- 005-Intel LGA775 - Signals
- 006-Intel LGA775 - Power
- 007-Intel LGA775 - GND
- 008-MCH82975 CPU & PCIE Signal
- 009-MCH82975 Memory Signal
- 010-MCH82975 Misc & Power Signal
- 011-DDR II DIMM 1 & 2
- 012-DDR II DIMM 3 & 4
- 013-DDR II Termination & POWER
- 014-PEG Switch
- 015-PEGX16-1
- 016-PEGX16-2
- 017-ICH7 - PCI, DMI, CPU, IRQ
- 018- ICH7 - LPC, ATA, USB, GPIO
- 019-ICH7 - POWER & GND
- 020-RealTek ALC882M Audio
- 021-PCI Slot 1 & 2
- 022-1394 VIA VT-6307/6308P
- 023-Intel TEKOA Lan
- 024-JMicron 361/363
- 025- FWH SIO W83627EHG
- 026-MS-7 ACPI Controller
- 027-MS-8 & FirmwareHub
- 028-ATXPOWER & USB
- 029-Fintek F75334D
- 030-Fan Control
- 031-Auto BOM manual
- 032-History

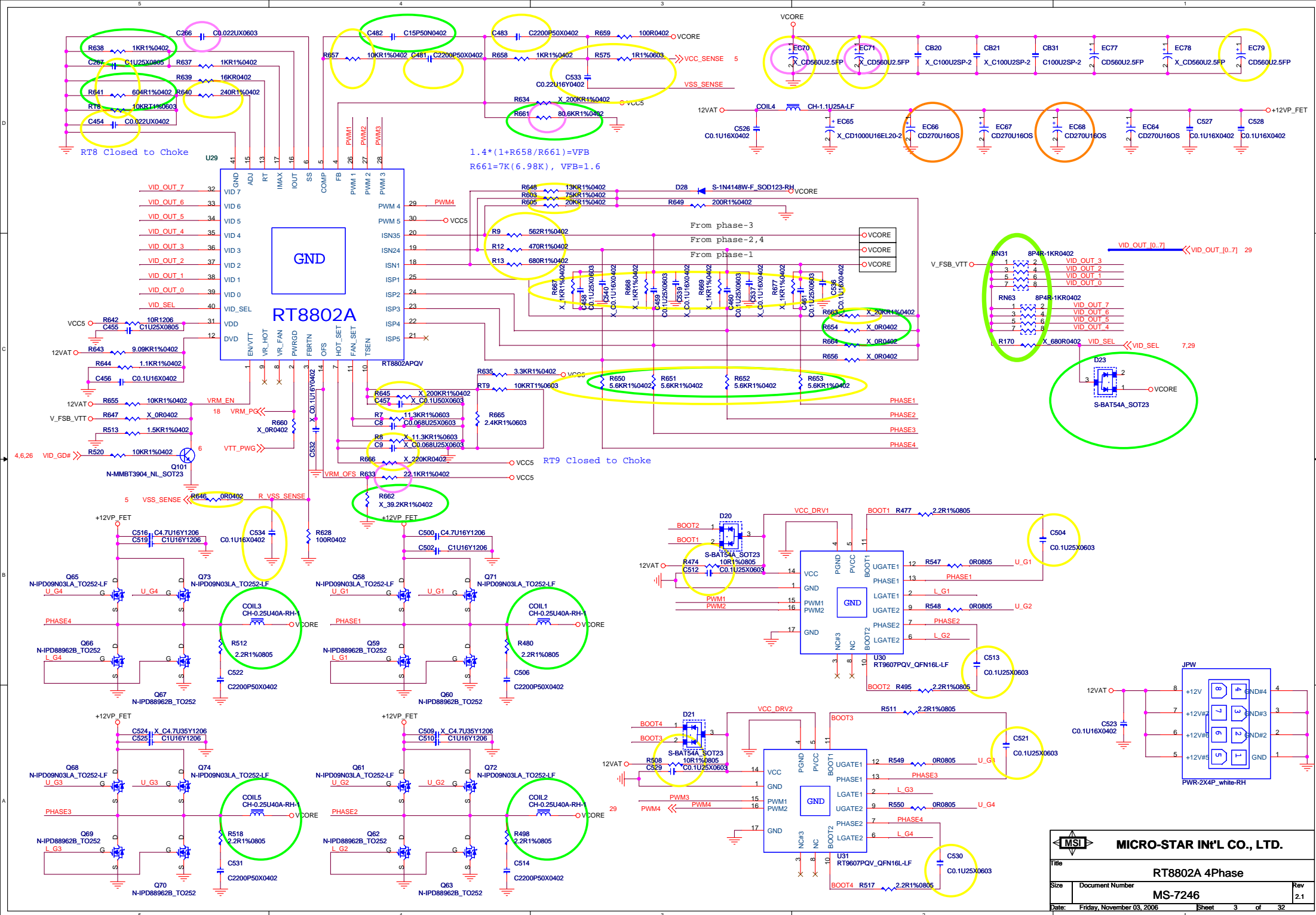


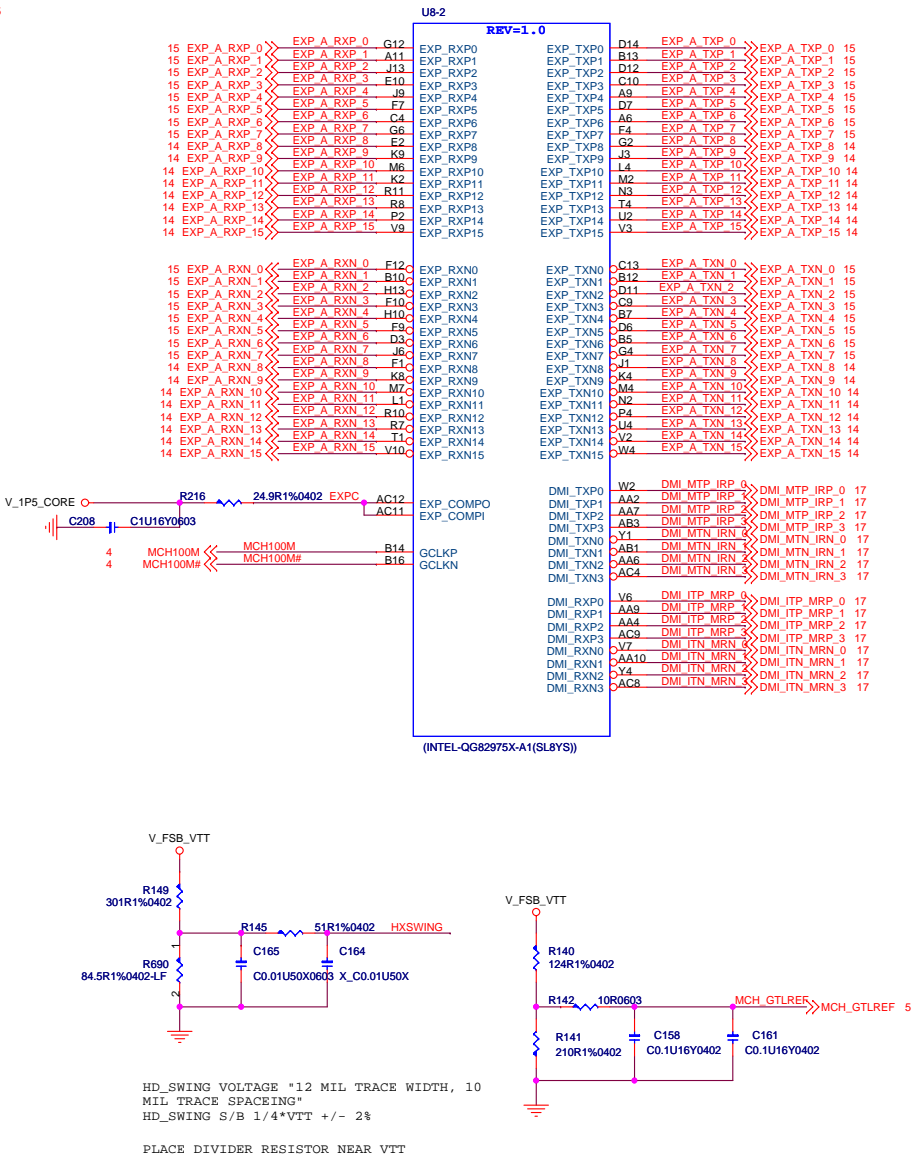
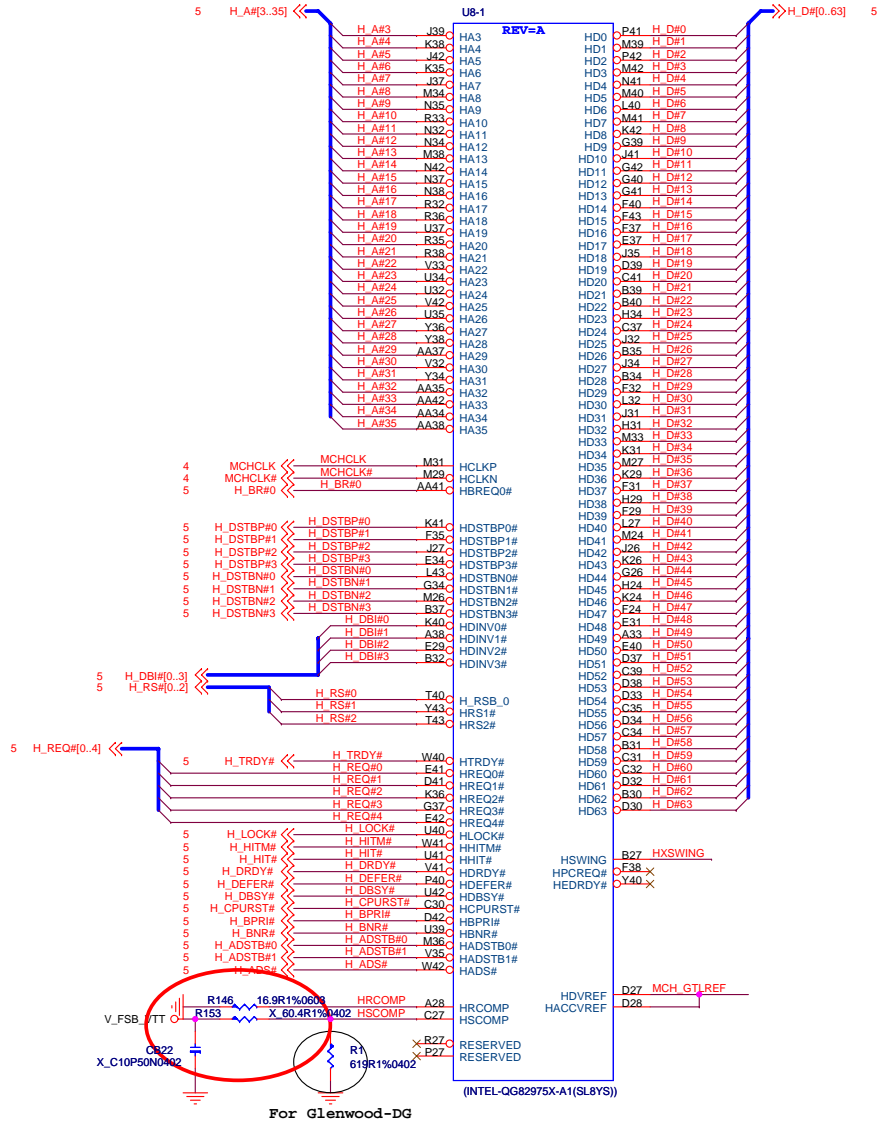
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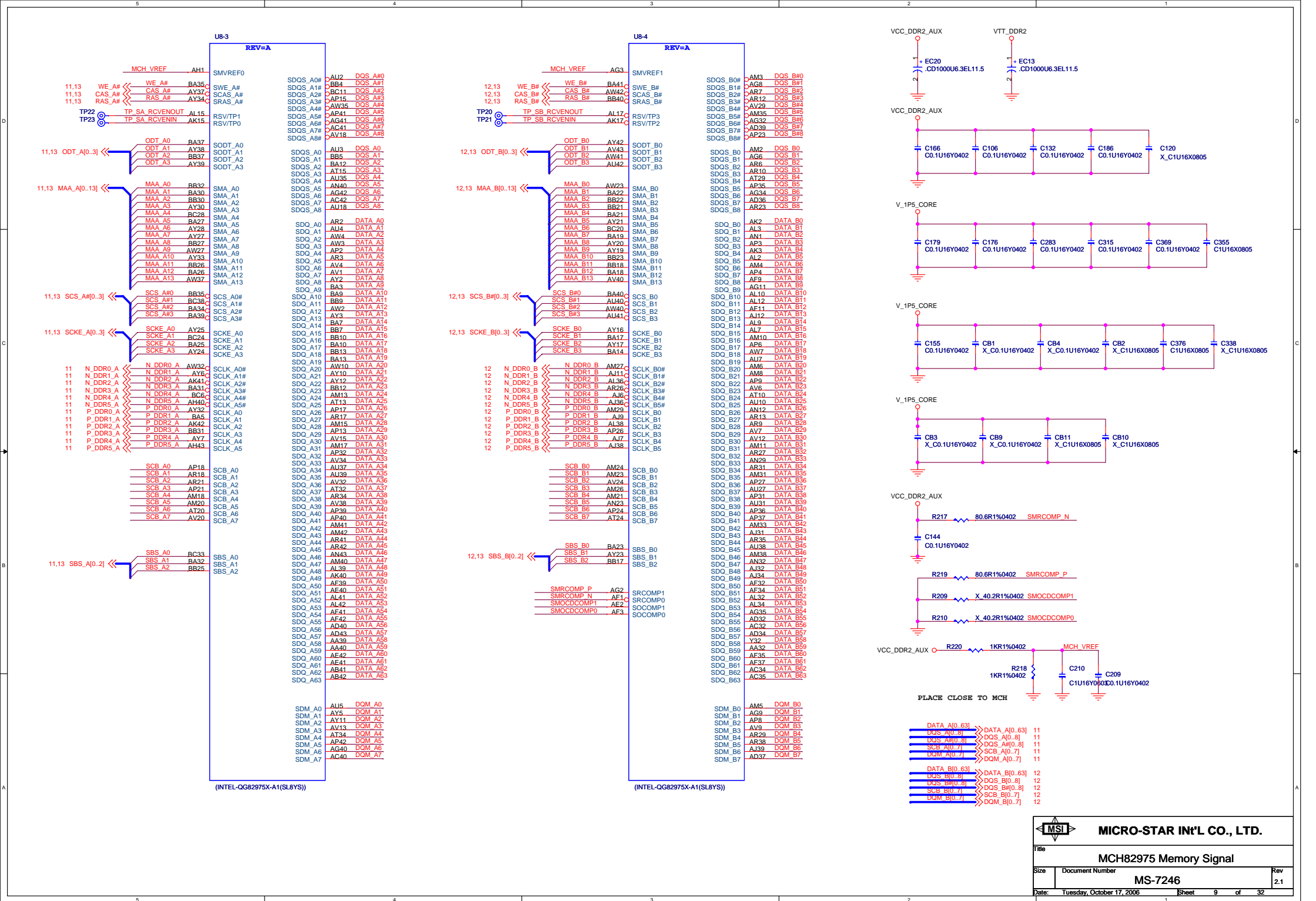
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Size	Document Number	MS-7246	
Date:	Friday, November 03, 2006	Sheet	1 of 32
			Rev 2.1

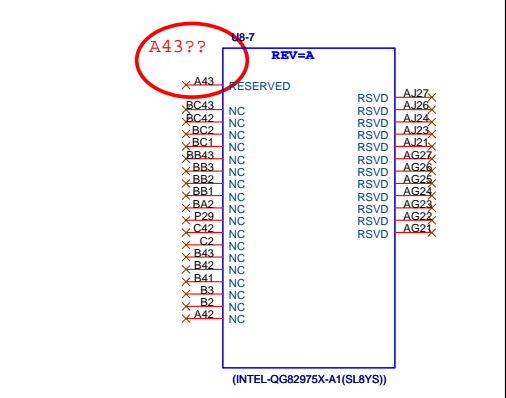
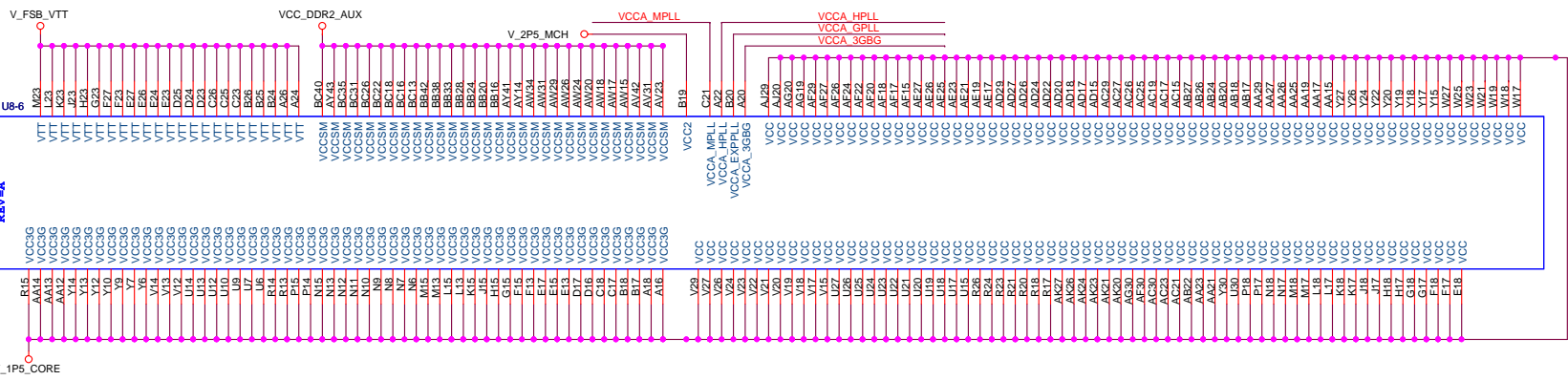
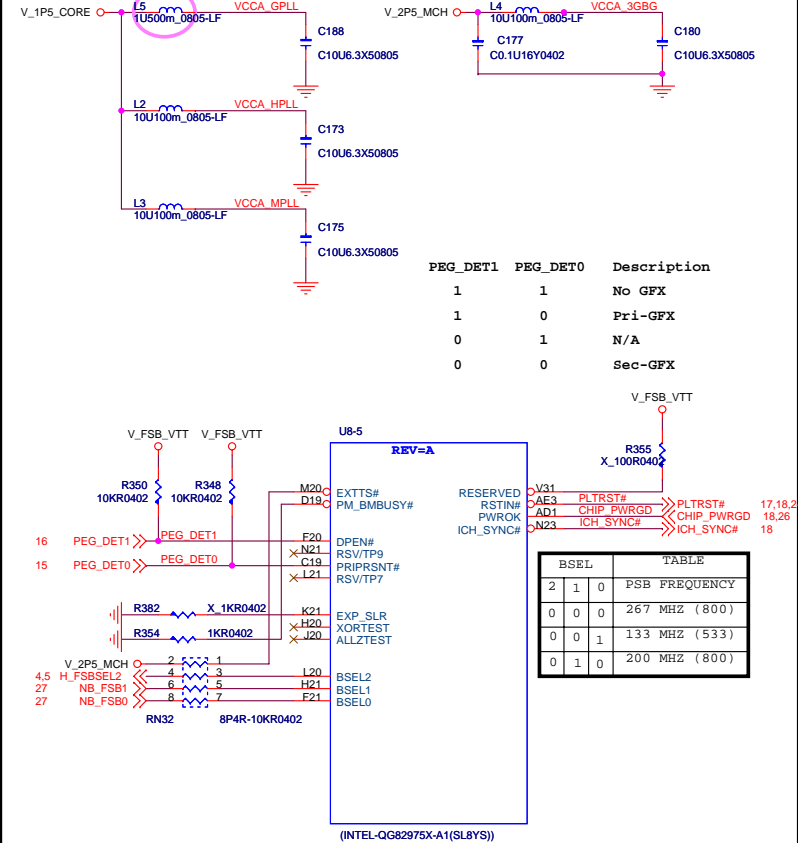
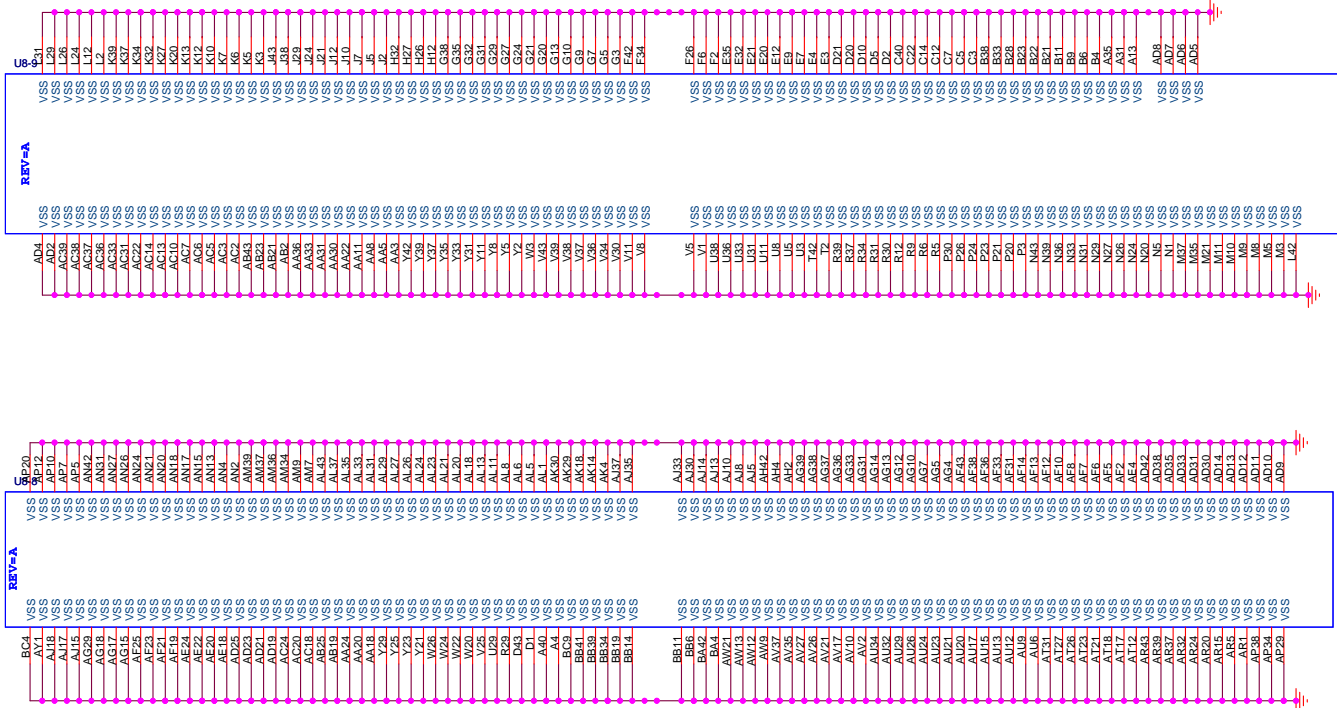
5	4	3	2	1
D				D
C				C
B				B
A				A
5	4	3	2	1

		MICRO-STAR INT'L CO., LTD.	
Title		Power Delivery	
Size	Document Number		Rev
	MS-7246		2.1
Date:	Tuesday, October 17, 2006	Sheet	2 of 32





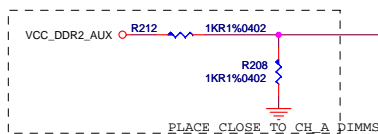




DDR2 DIMM1



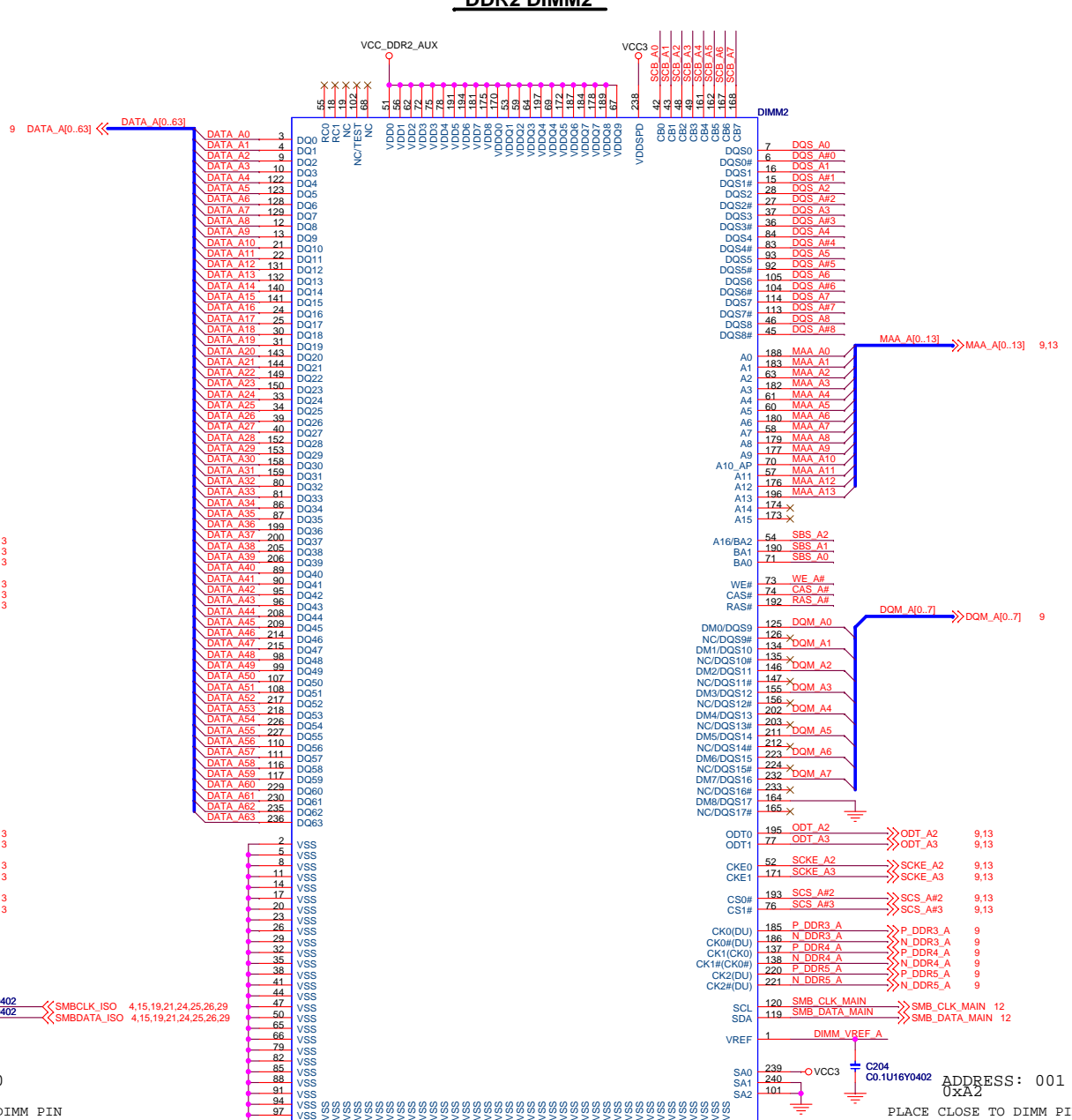
PLACE CLOSE TO DIMM PIN



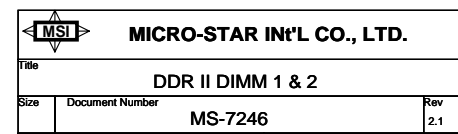
PLACE 0.1UF CAP CLOSE TO
RESISTOR DIVIDER

PLACE CLOSE TO CH A DIMMS

DDR2 DIMM2



PLACE CLOSE TO DIMM PIN



MICRO-STAR INT'L CO., LTD.

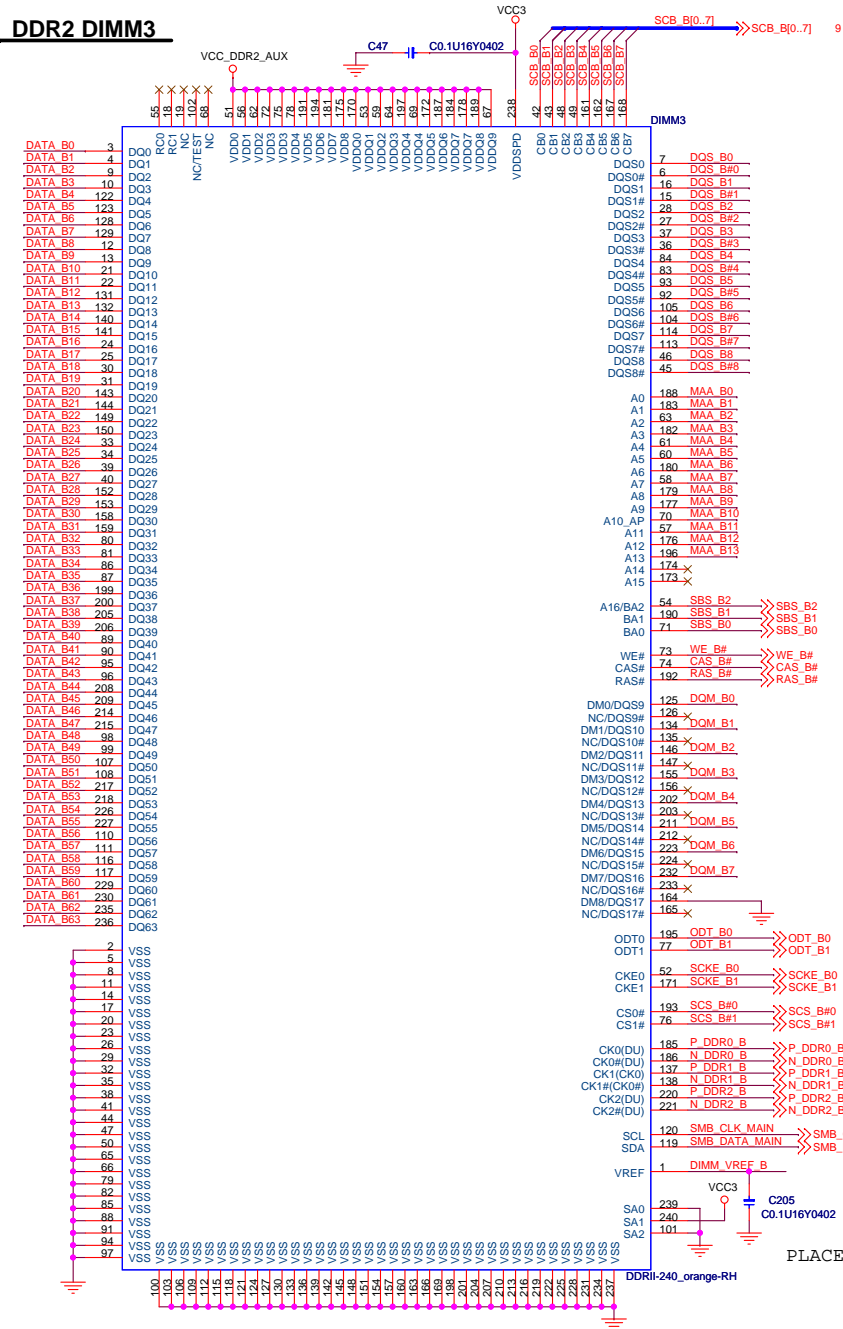
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DDR II DIMM 1 & 2		
Size	Document Number	Rev
	MS-7246	2.1

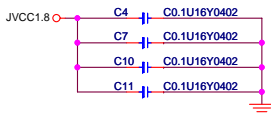
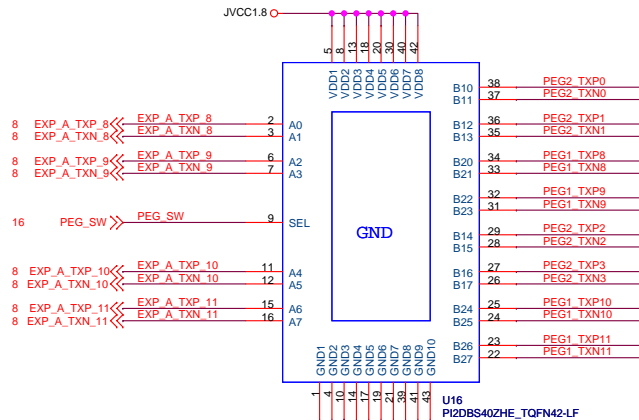
MS-7246

2.1

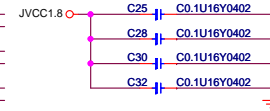
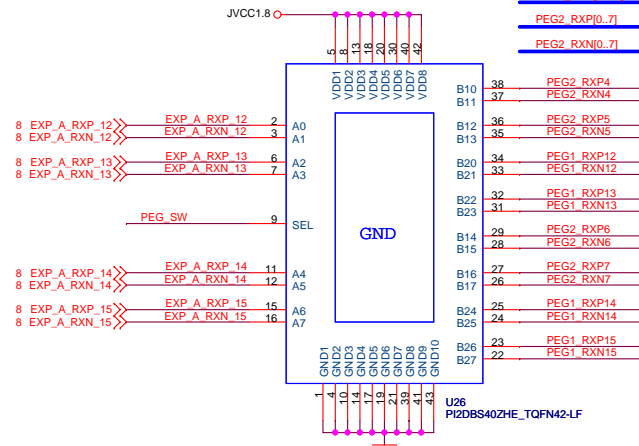
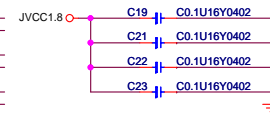
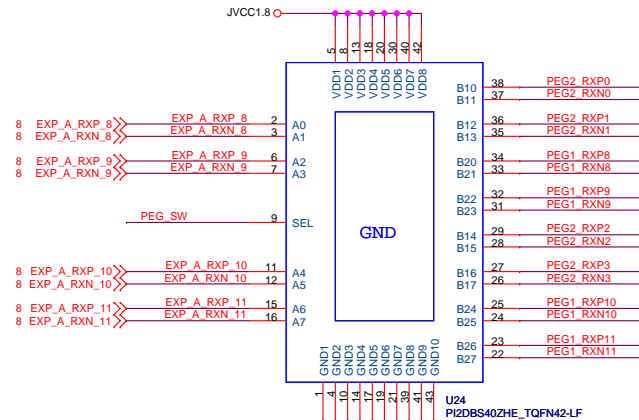
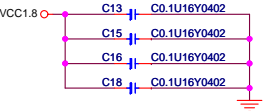
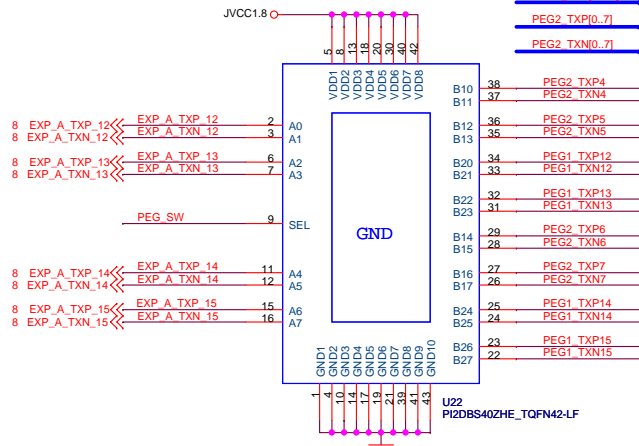
Date: Tuesday, October 17, 2006 Sheet 11 of 32

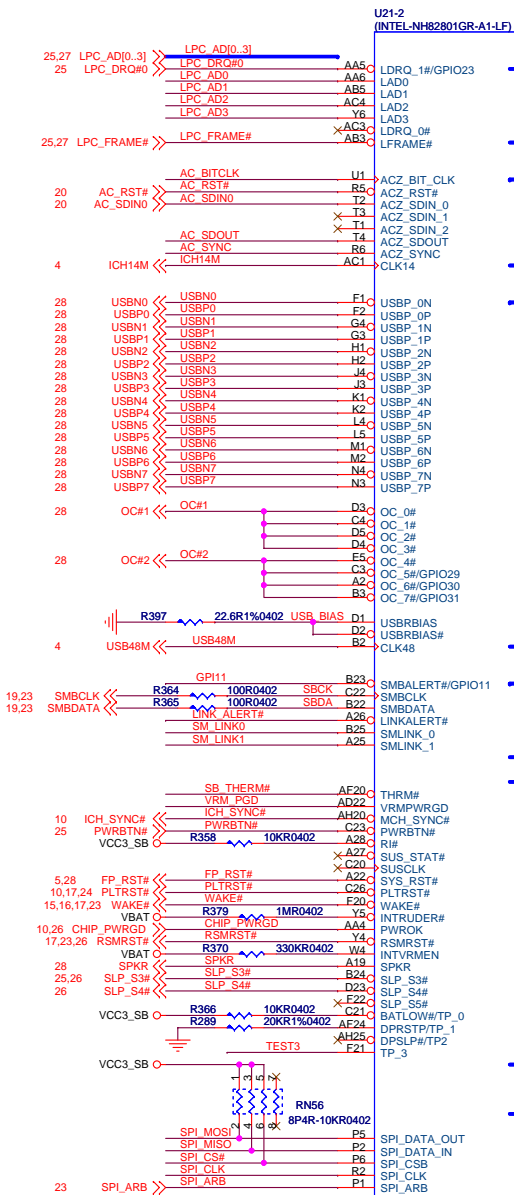
DDR2 DIMM3





PE_SLI_DET#	FUNCTION
H	An to B2n
L	An to B1n





LPC
AC-LINK

USB

SM BUS

MISC

SPI

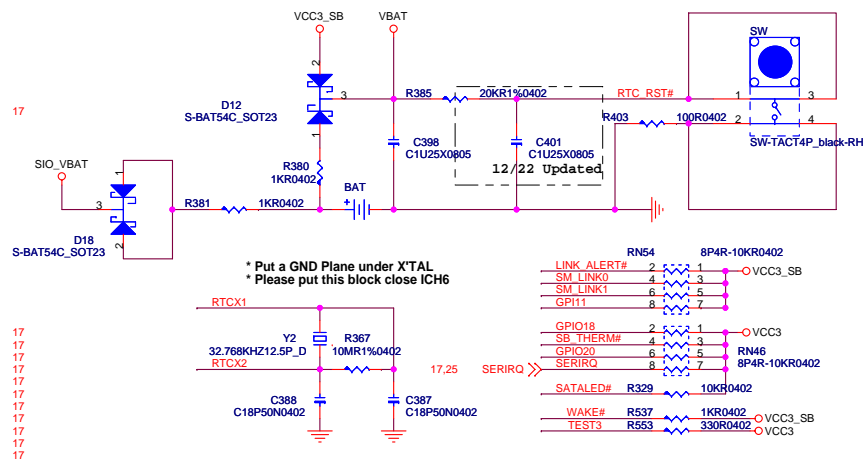
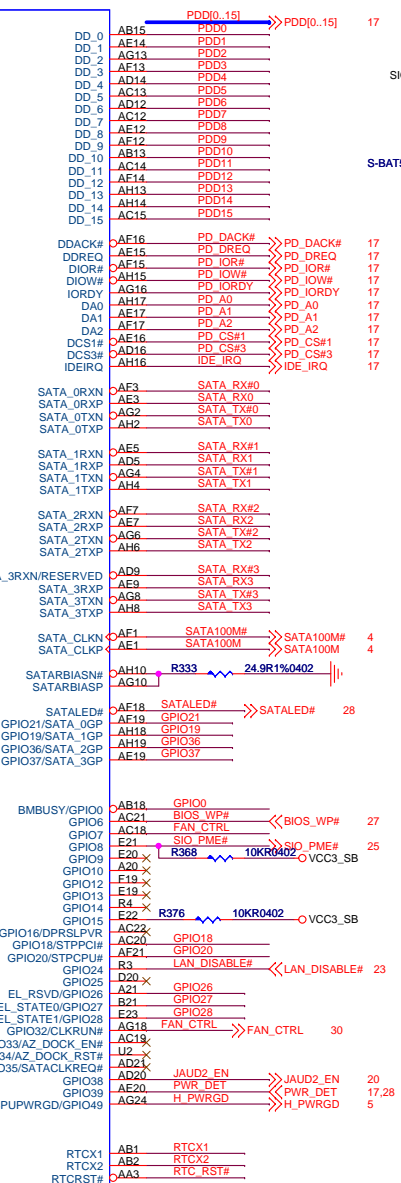
ICH 7 PART 2/4

IDE

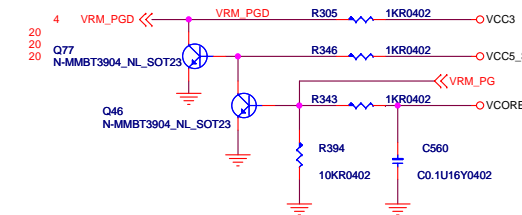
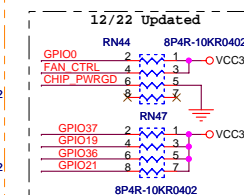
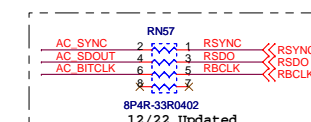
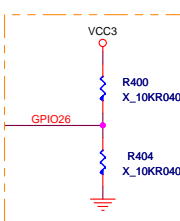
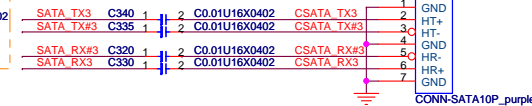
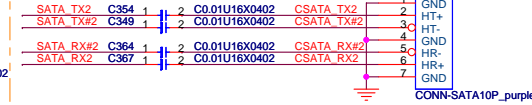
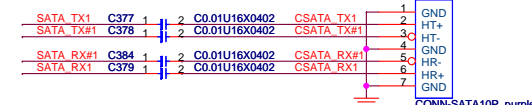
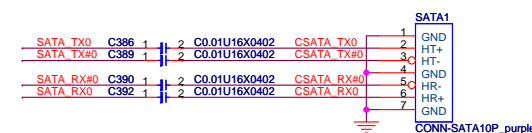
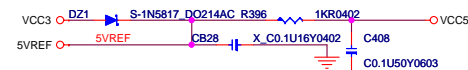
S-ATA

GPIO

RTC



5VREF Sequencing Circuit

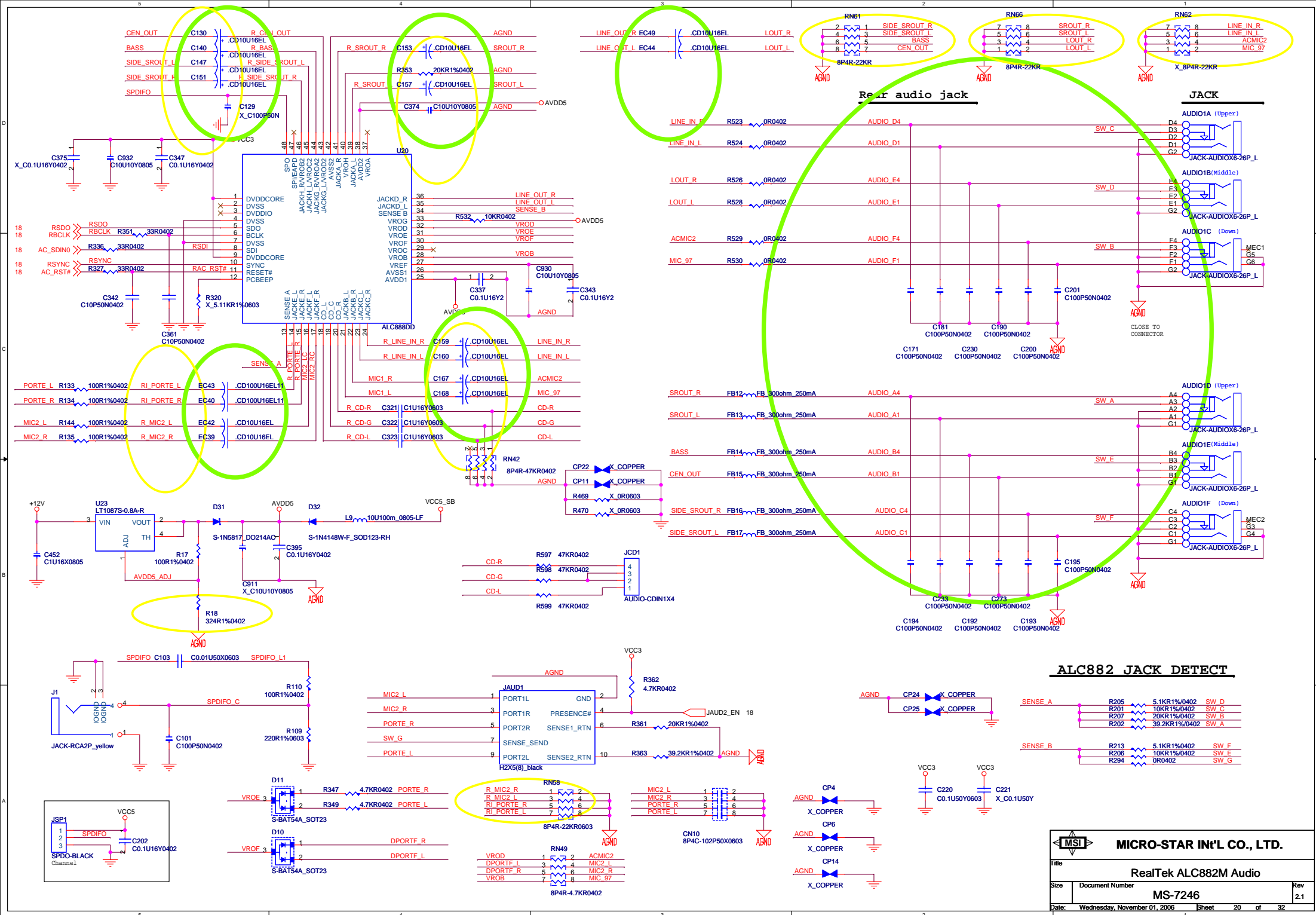


MSI MICRO-STAR INT'L CO., LTD.

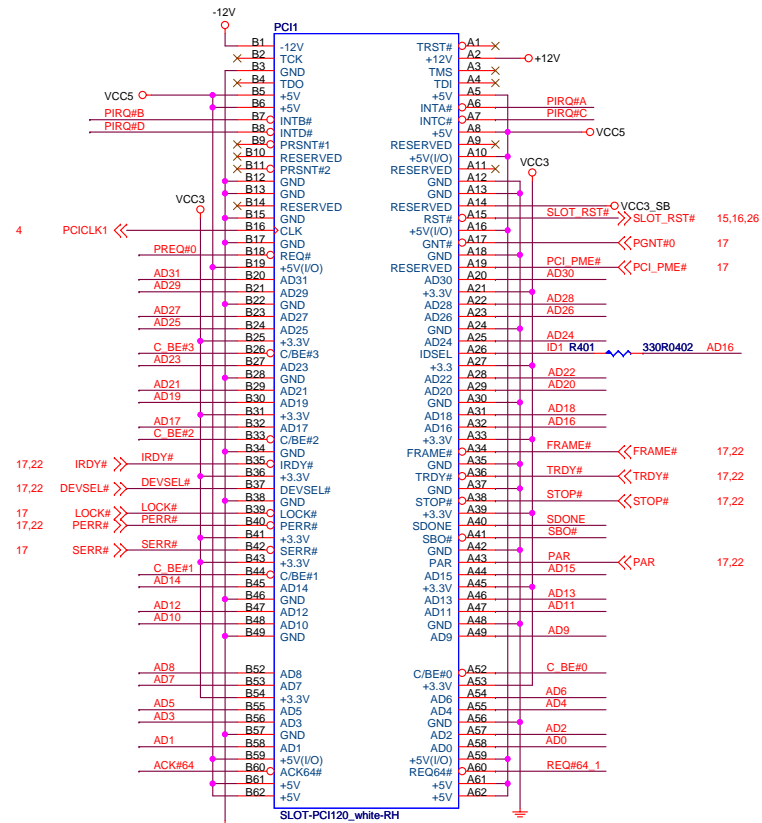
Title ICH7 - LPC, ATA, USB, GPIO

Size Document Number MS-7246 Rev 2.1

Date: Tuesday, October 24, 2006 Sheet 18 of 32

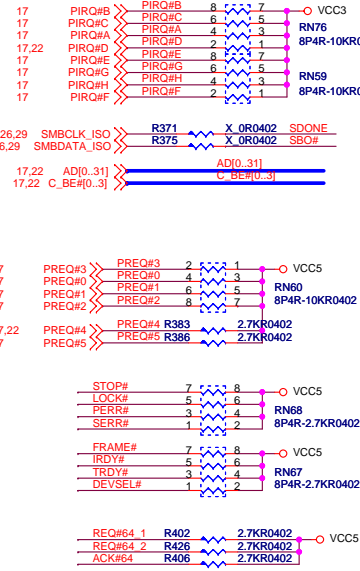


PCI SLOT 1 (PCI VER: 2.2 COMPLY)

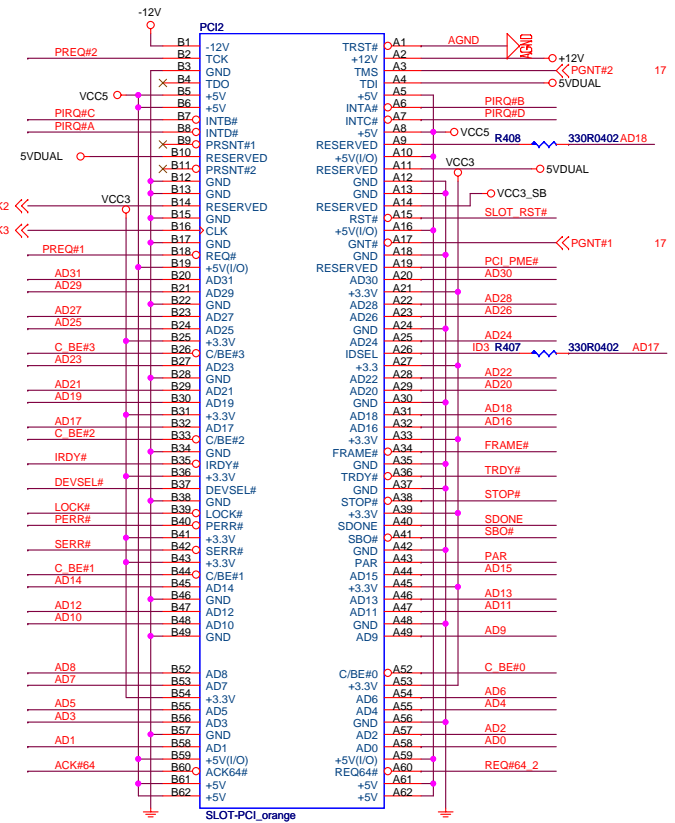


IDSEL = AD16
MASTER = PREQ#1
PIRQ#A

PCI PULL-UP / DOWN RESISTORS

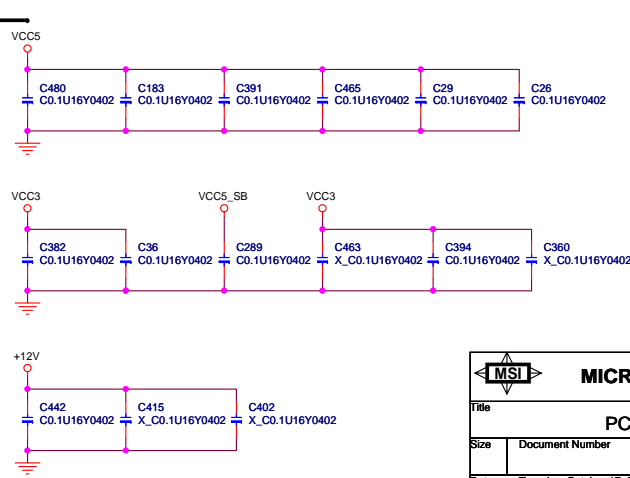
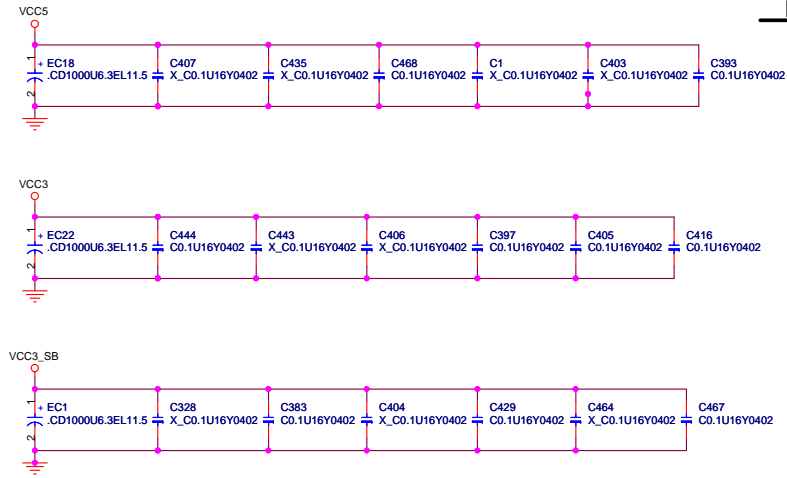


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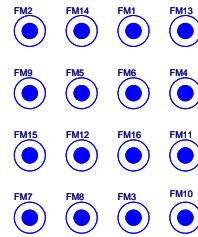


IDSEL = AD17 IDSEL = AD18
MASTER = PREQ#1 MASTER = PREQ#2
PIRQ#B

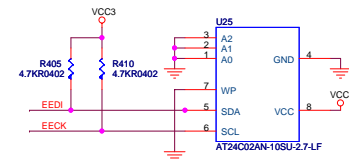
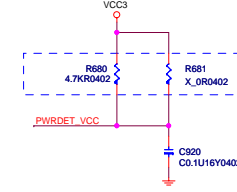
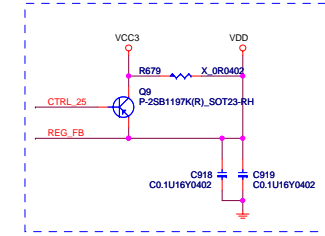
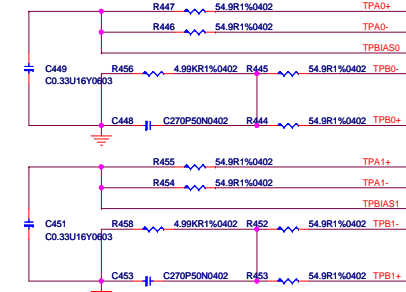
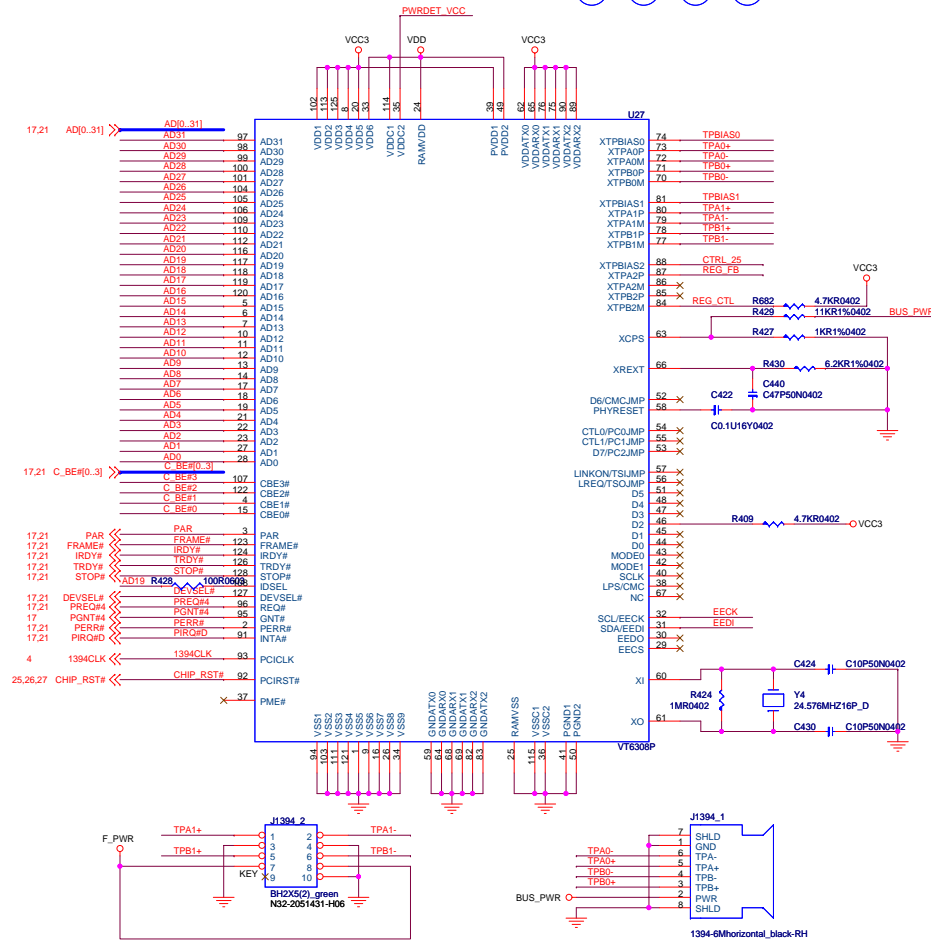
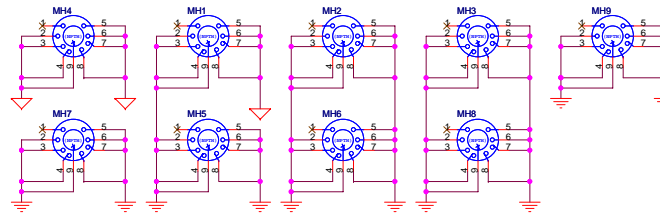
PCI SLOT DECOUPLING CAPACITORS



Optics Orientation Holes

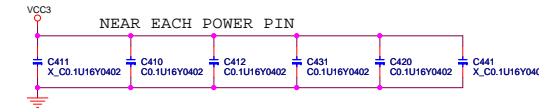
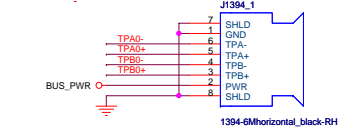
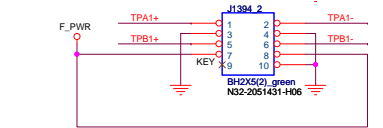


Mounting Holes

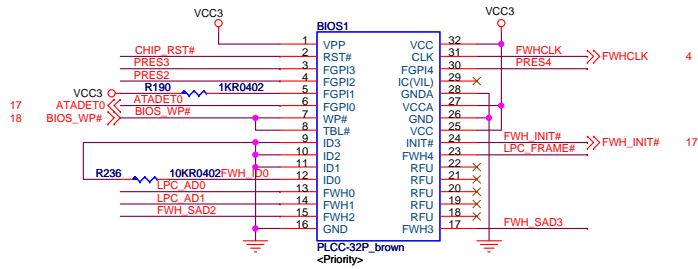


1394 CHIP	PWRDET_VCC	REG_CTL	VDD POWER
VT6307	R681	X	R679
VT6308P	R680	R682	Q9

POWER Pin		
Pin	VT6307	VT6308P
84	NC	REG_CTL
87	NC	REG_FB
88	NC	CTRL_25
35	VCC	PWRDET_VCC
39	PVD	VCC
49	PVD	VDD
24	VCC	VDD
114	VCC	VDD
33	VCC	VDD

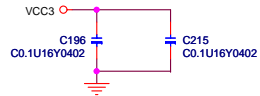


Firmware Hub (FWH)

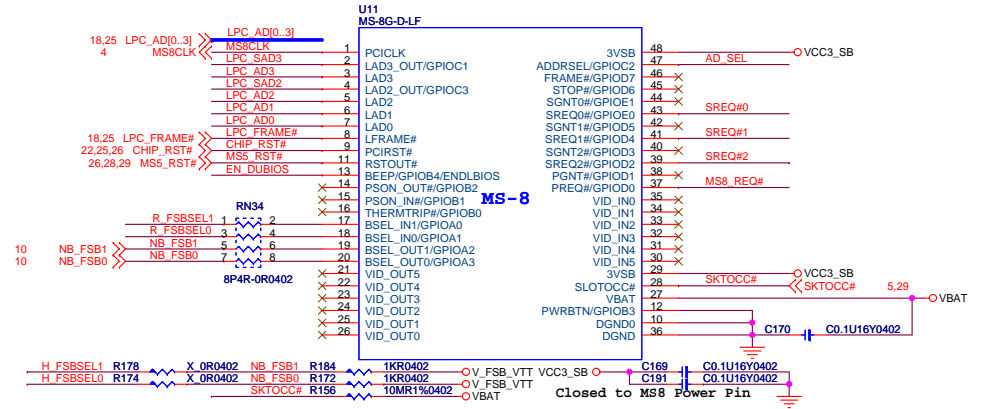
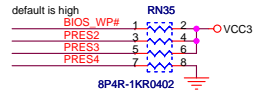


FWH DECOUPLING CAPACITORS

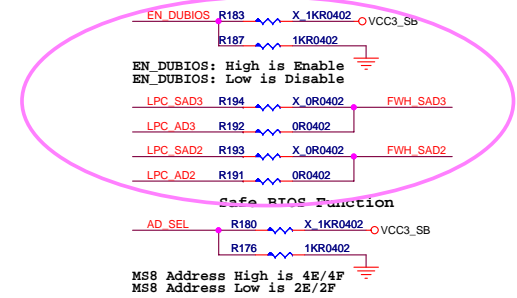
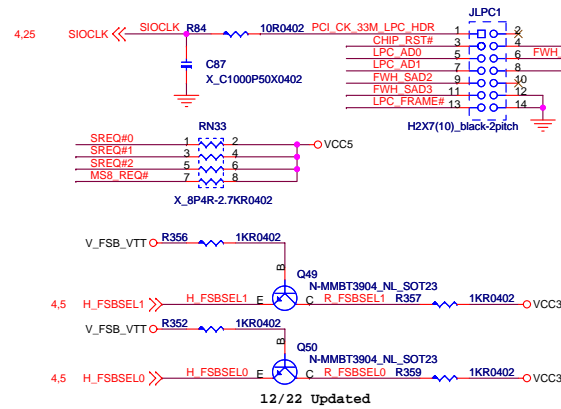
Place Cap. as Close to FWH< 350 mil



FWH Resistors



If you place the jumper very closed to FWH bios socket, please use the same clock with FWH. But if you can not place it so close, please use another clock to support it.



H_FSBSEL0	H_FSBSEL1	BSEL_CT0	BSEL_CT1	NB_FSB0	NB_FSB1
0	0	0	0	1	1
0	1	0	0	1	0
1	0	0	0	0	1
1	1	0	0	0	0
0	0	0	1	1	0
0	1	0	1	1	1
1	0	0	1	0	0
1	1	0	1	0	1
0	0	1	0	0	1
0	1	1	0	0	0
1	0	1	0	1	1
1	1	1	0	1	0
0	0	1	1	0	0
0	1	1	1	0	1
1	0	1	1	1	0
1	1	1	1	1	1

BS_Change

133Mhz

200Mhz

266Mhz

133Mhz

266Mhz

200Mhz

200Mhz

266Mhz

133Mhz

266Mhz

200Mhz

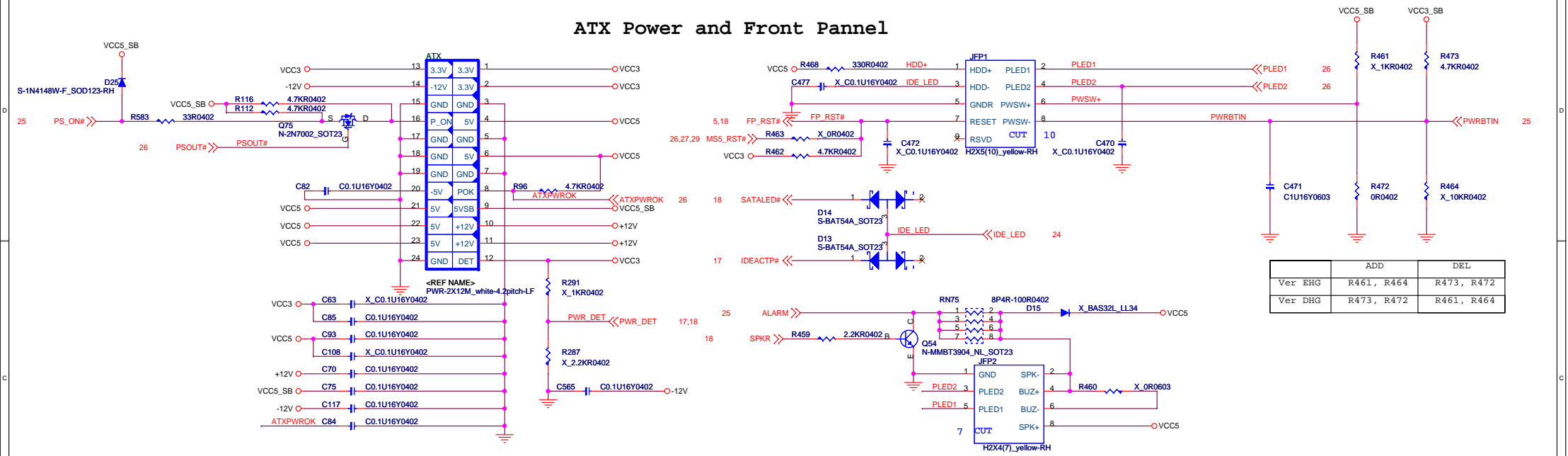
133Mhz

CK410 Specification

NB_FSB0	NB_FSB1	NB_FSB_OUT
0	0	266Mhz
0	1	200Mhz
1	1	133Mhz

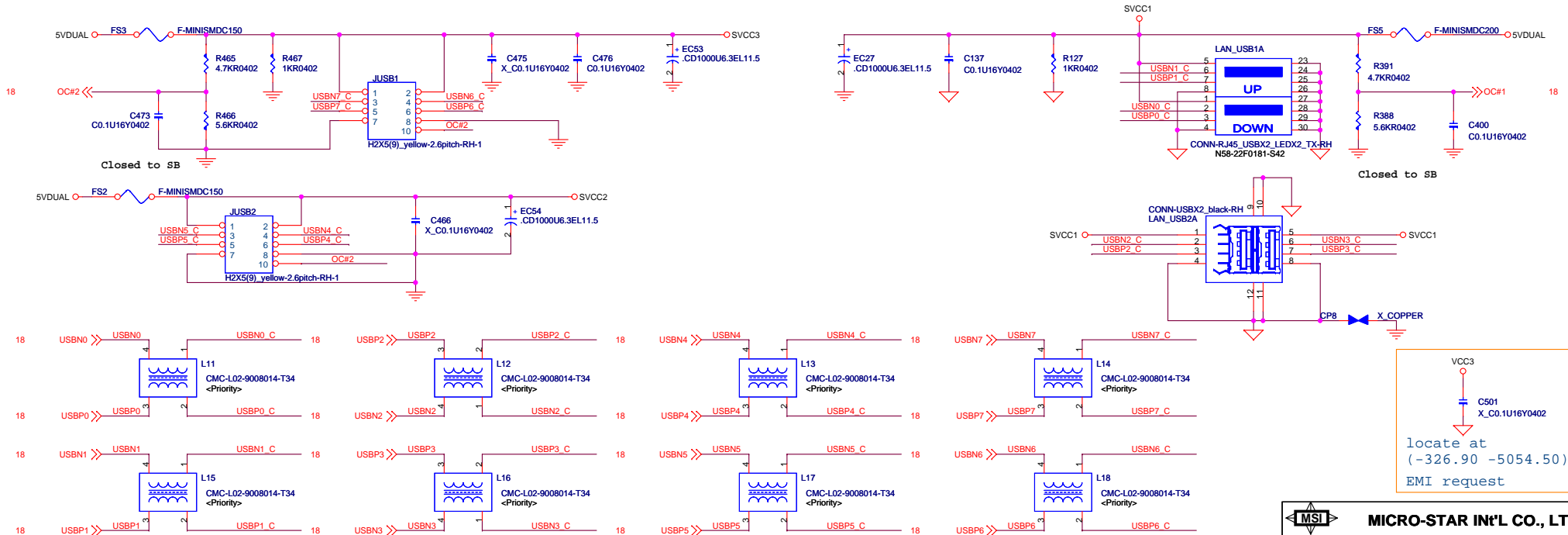
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MICRO-STAR INT'L CO., LTD.		
Title MS-8 & FirmwareHub		
Size	Document Number MS-7246	Rev 2.1
Date:	Tuesday, October 17, 2006	Sheet 27 of 32

ATX Power and Front Panel

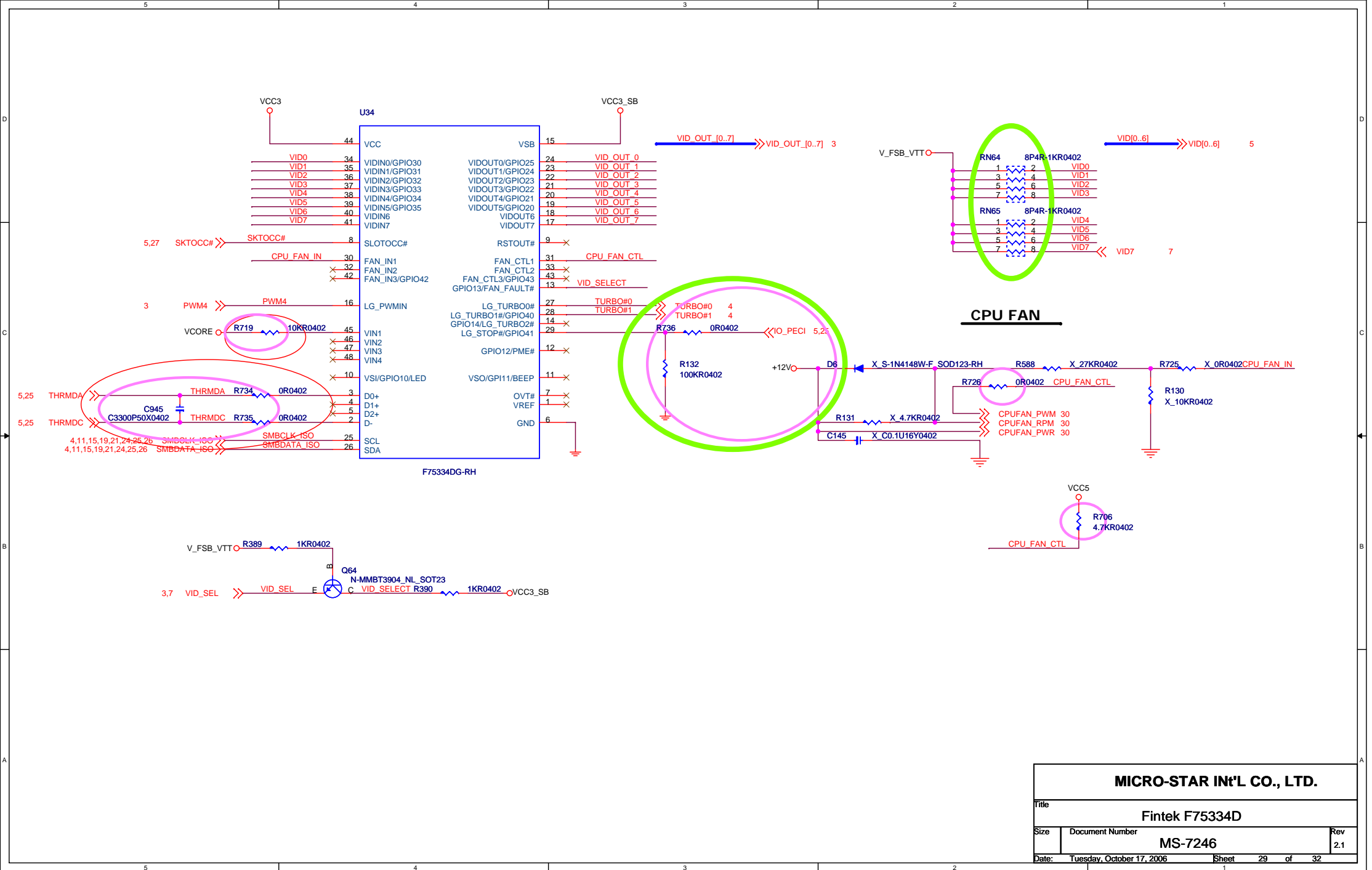


	ADD	DEL
Ver EHG	R461, R464	R473, R472
Ver DHG	R473, R472	R461, R464

USB Connector

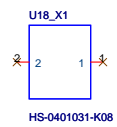
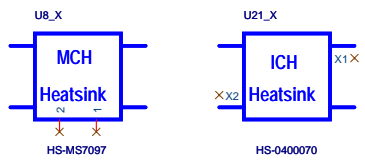


locate at
(-326.90 -5054.50)
EMI request

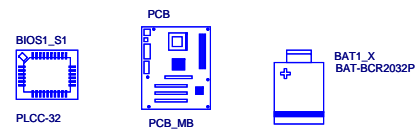


Auto-BOM Manual Parts

HEAT SINK



MANUAL PART



5					4					3					2					1				
First modify					Third modify:					4th modify														
For FSB VTT					For VRM					For Smart Fan														
Add 10k ohm between pin3 and pin 4 of U2					1.R640變更爲240R					Add:					0 ohm: R726, R736, R734, R735 (R11-0000012-W08)									
For conroe					2.R641變更爲590R										4.7K ohm: R706 (R11-0472012-W08)									
R115: 51 ohm					3.C454變更爲22nF										10K ohm: R719 (R11-0103012-W08)									
D23 p/n D01-BAT54A9-P03 (BAT54A)					4.R657變更爲10K										100K ohm: R132 (R11-0104012-W08)									
					5.C481變更爲2.2nF										0 ohm RN: RN79 (R31-0000012-W08)									
For hardware monitor					6.C483變更爲2.2nF										3300pF: C945 (P/N: C11-3322012-W08)									
Add: R582					7.R648變更爲13K										Del:									
22.1K ohm					8.R605變更爲20K										0 ohm: R730, R509									
					9.R9變更爲562R										210 ohm: R731									
					10.R12變更爲470R										3.5K ohm: R722									
					11.R13變更爲680R										10Kohm: R720									
					12.C458,C459,C460,C461變更爲0.1uF										15Kohm:R584									
					13.R650,R651,R652,R653變更爲5.6K										Q104									
					14.R8,C9,C457變更爲NC										5th modify									
Second modify					15.R633變更爲22.1K										Del Dual BIOS function									
For Support Q core CPU:					16.VCC_SENSE to R658之間增加一顆電阻1R(0603), 此電阻與R658之間增加一顆電容對VSS_SENSE, 0.1uF										Del: R183 1k ohm									
(1)Remove R123;					17.VSS_SENSE to FBRTN之間增加一顆電容對GND, 0.1uF										Add: R187 1k ohm									
(2) Add R11-0000012-W08---- R118, R119, R120, R77,					18.R474,R508變更爲10R										Del: R193, R194 0 ohm									
(3) Add R11-0102032-W08 -----R117					19.C512,C529變更爲0.1uF										ADD:R191, R192 0 ohm									
					20.C504,C513,C521,C530變更爲0.1uF																			
					21.EC15,EC16,EC79,EC7,EC8,EC9--560uF OS-CON																			
Before and after 2A					22.EC70,EC71--1800uF EC- dont add (from power team)																			
Red circle OOOOO					23.22uF MLCCX12PCS																			
Green circle OOOOO					24.100uF SP-CAP																			
After 2B					25. Add R661---> 80.6 KOhm/1%																			
Yellow circle OOOOO					26. Change C266---> 22nF/X7R																			
After 2.1					27. C512, C513, C529, C530--->0.1uF																			
Purple circle OOOOO					28. C506, C514, C522, C531--->2.2nF																			
					29. R646, R636 ----> Short; R645, R666 ---->NC																			