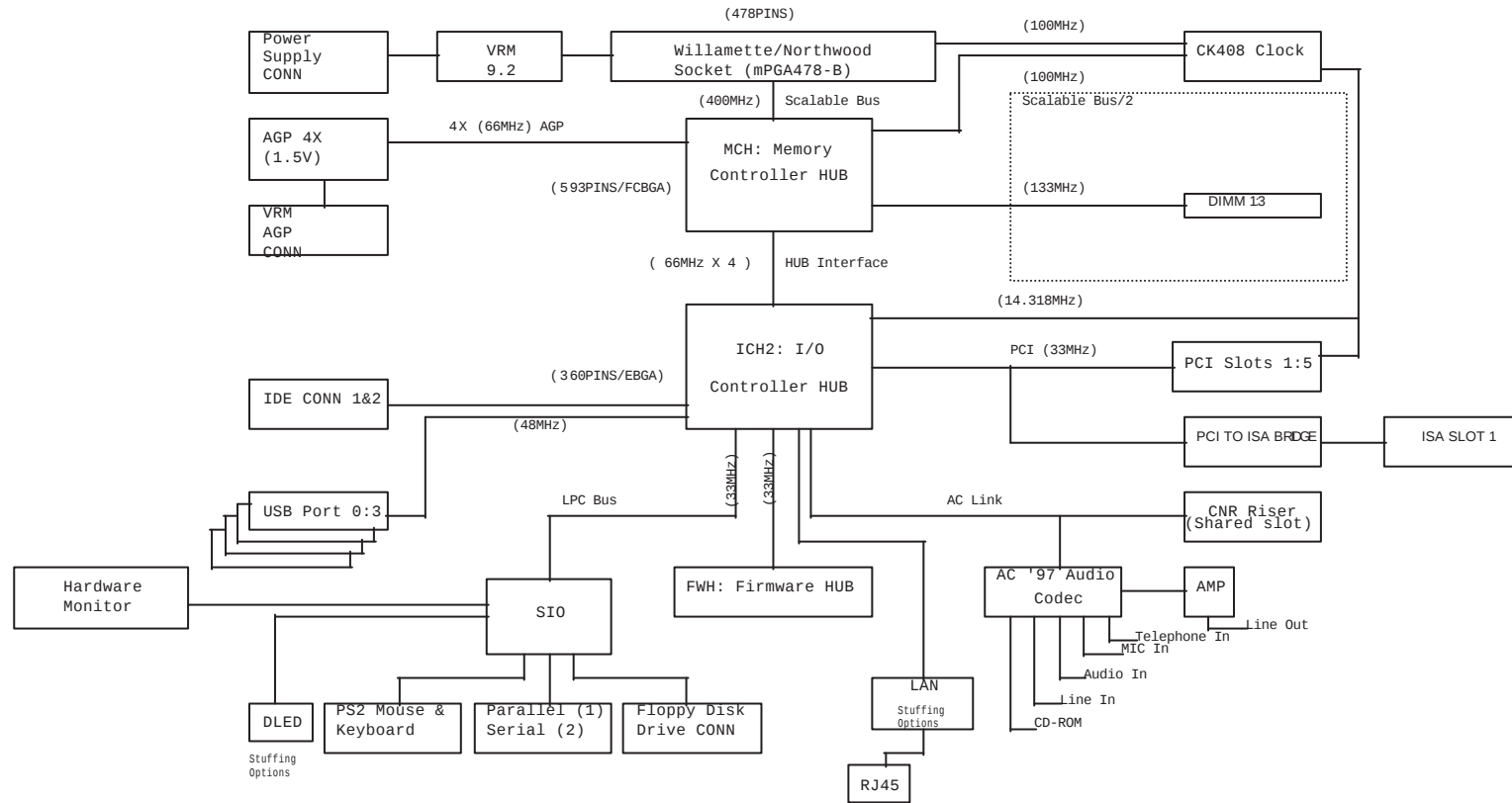


Cover Sheet	1	MS-6531 Version 1.0 06/22/2001 Update INTEL (R) Brookdale Chipset Willamette/Northwood 478pin mPGA-B Processor Schematics CPU: Willamette/Northwood mPGA-478B Processor System Brookdale Chipset: INTEL MCH (North Bridge) + INTEL ICH2 (South Bridge) On Board Chipset: BIOS -- FWH AC'97 Codec -- AD1881 LPC Super I/O -- W83627HF Clock Generation -- CY28323 LAN -- INTEL 82562EM/ET Expansion Slots: AGP2.0 SLOT * 1 PCI2.2 SLOT * 5 CNR SLOT * 1 ISA SLOT * 1 (Share PCI5)									
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AGP
4X(1.5V)
AGP CONN



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General Purpose I/O Spec.

ICH2

GPIO Pin	Type	Function
GPIO 0	I	PCI TO ISA REQA#
GPIO 1	I	Non Connect (PREQ#5)
GPIO 2	I	INTE#
GPIO 3	I	INTF#
GPIO 4	I	INTG#
GPIO 5	I	INTH#
GPIO 6	I	CNR Detect
GPIO 7	I	None
GPIO 8	I	LAN Wake Up
GPIO 9	I	AC'97 Serial Data In
GPIO 10	I	Non Connect
GPIO 11	I	Non Connect
GPIO 12	I	External SMI
GPIO 13	I	LPC PME
GPIO 14~15	I	Not Implemented
GPIO 16	O	PCI TO ISA GNTA#
GPIO 17	O	Non Connect (PGNT#5)
GPIO 18	O	Not Implemented
GPIO 19	O	Non Connect
GPIO 20	O	Non Connect
GPIO 21	O	PCI TO ISA NOGO
GPIO 22	OD	Audio 4 channel control
GPIO 23	O	BIOS Locked/Unlocked
GPIO 24	O	Non Connect
GPIO 25	O	Lan Status Input
GPIO 26	O	Non Connect
GPIO 27	I/O	Non Connect
GPIO 28	I/O	LAN ENABLE/DISABLE
GPIO 29~31	I/O	Not Implemented

FWH

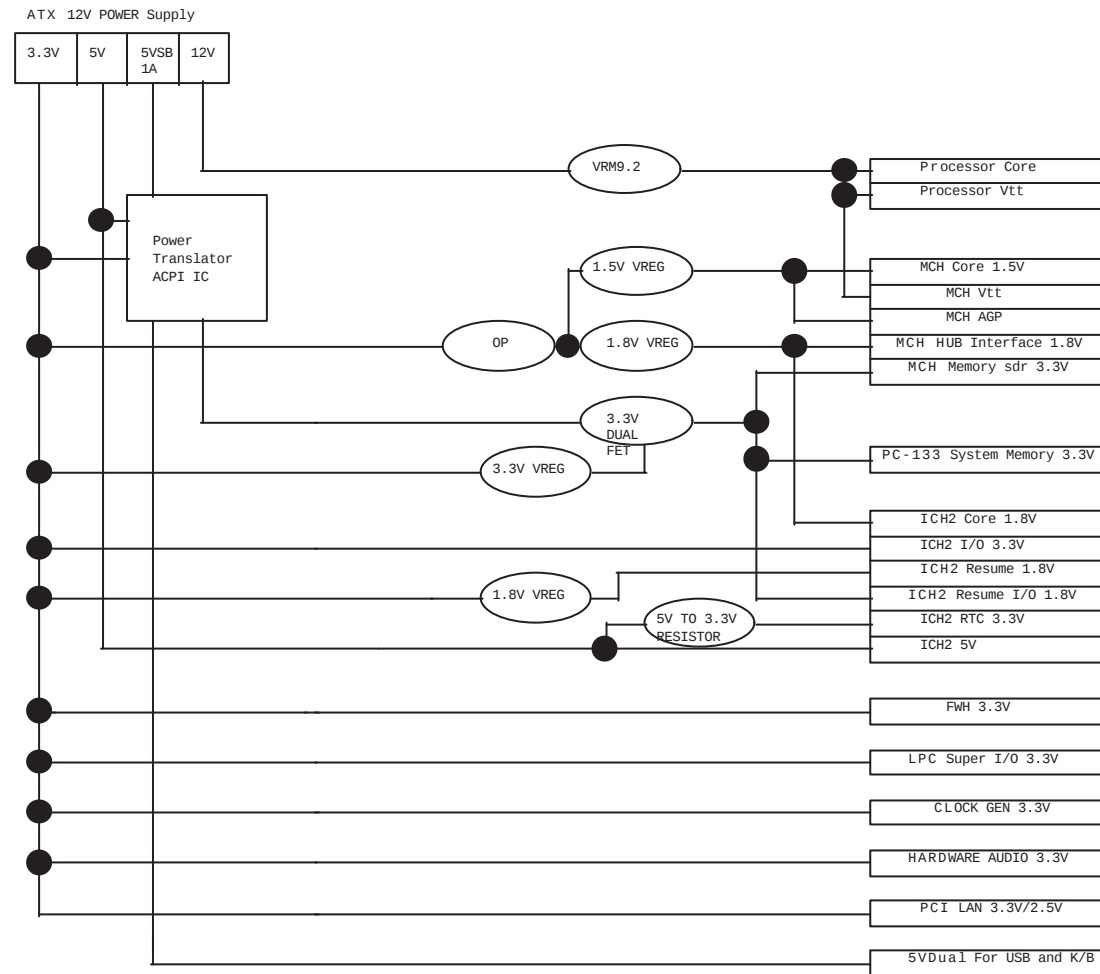
GPIO Pin	Type	Function
GPI 0	I	ATA IDE 1 Detect
GPI 1	I	ATA IDE 2 Detect
GPI 2	I	Reserved
GPI 3	I	Reserved

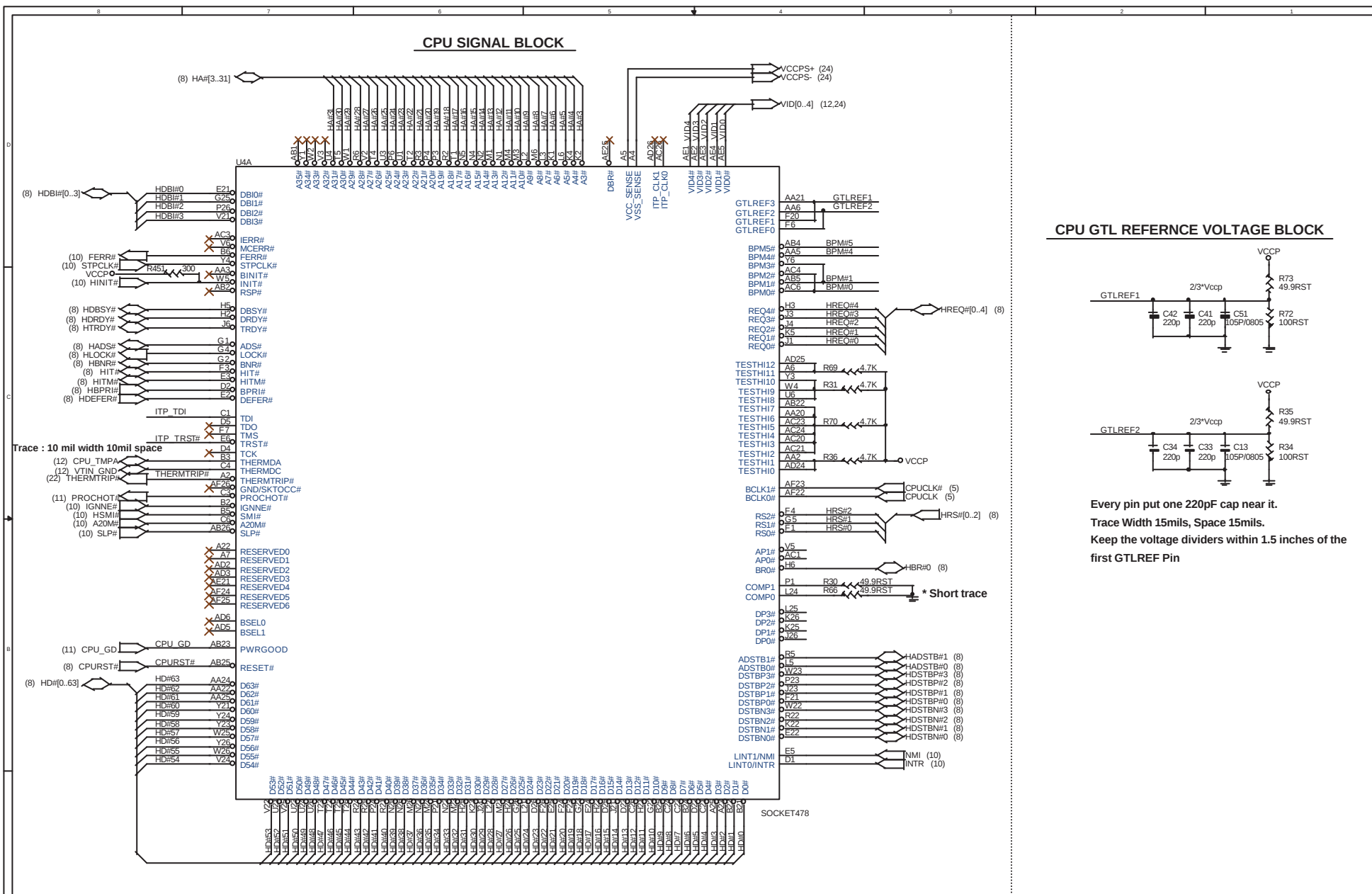
DLED

GPIO Pin	Type	Function
GP32	I/OD	DLED1
GP24	I/OD	DLED2
GP34	I/OD	DLED3
GP33	I/OD	DLED4

DEVICE	ICH INT Pin	IDSEL
PCI Slot 1	INTA# INTB# INTC# INTD#	AD16
PCI Slot 2	INTB# INTC# INTD# INTA#	AD17
PCI Slot 3	INTC# INTD# INTA# INTB#	AD18
PCI Slot 4	INTD# INTA# INTB# INTC#	AD19
PCI Slot 5	INTB# INTC# INTD# INTA#	AD21

Power Delivery Map





PROCHOT#	R32	62	
CPU GD	R67	300	
HBR#0	R50	49.9RST	
CPURST#	R71	49.9RST	
THERMTRIP#	R52	X 62	

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INTEL mPGA478-B CPU1				
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* Length must be matched within +/-0.1" of the Strobe Signals

HOST

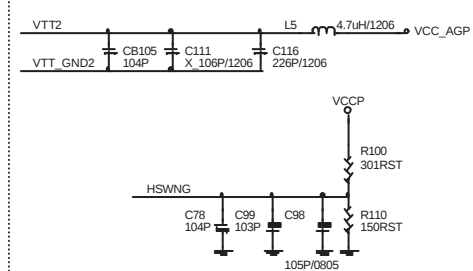
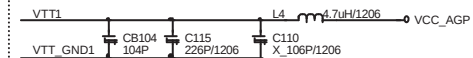
POWER

HUB LINK

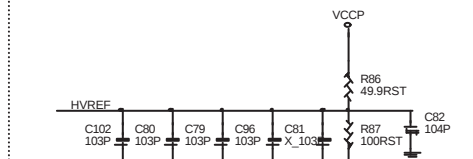
POWER

POWER

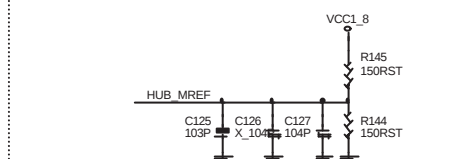
MCH REFERENCE BLOCK



Place 1 Cap. as Close as possible to every pin of MCH
Trace width use 15 mils and 15mils space

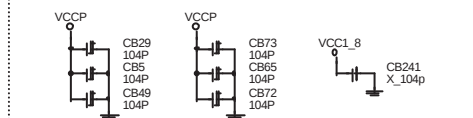


Place 1 Cap. as Close as possible to every pin of MCH
Trace width use 15 mils and 15mils space



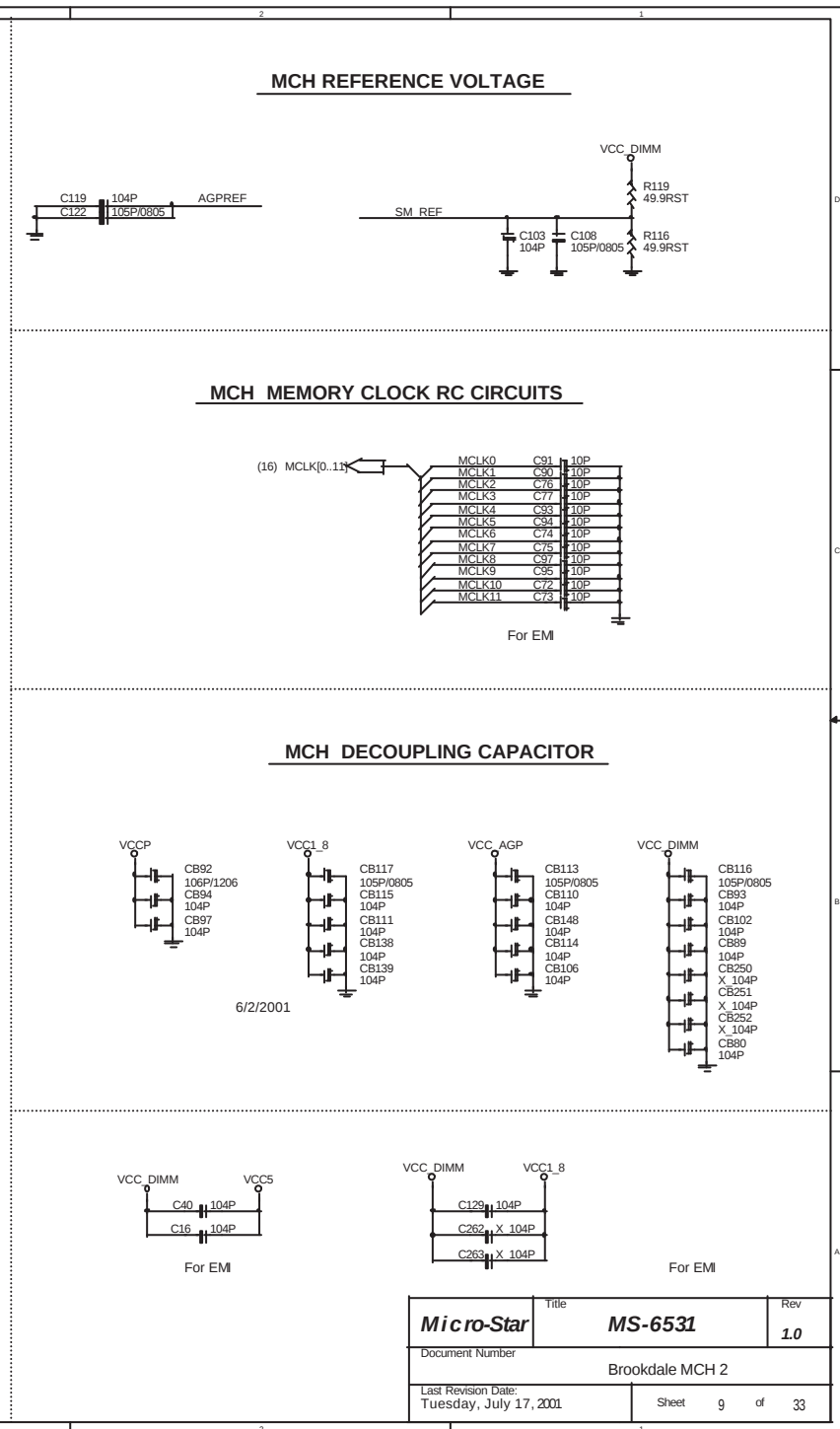
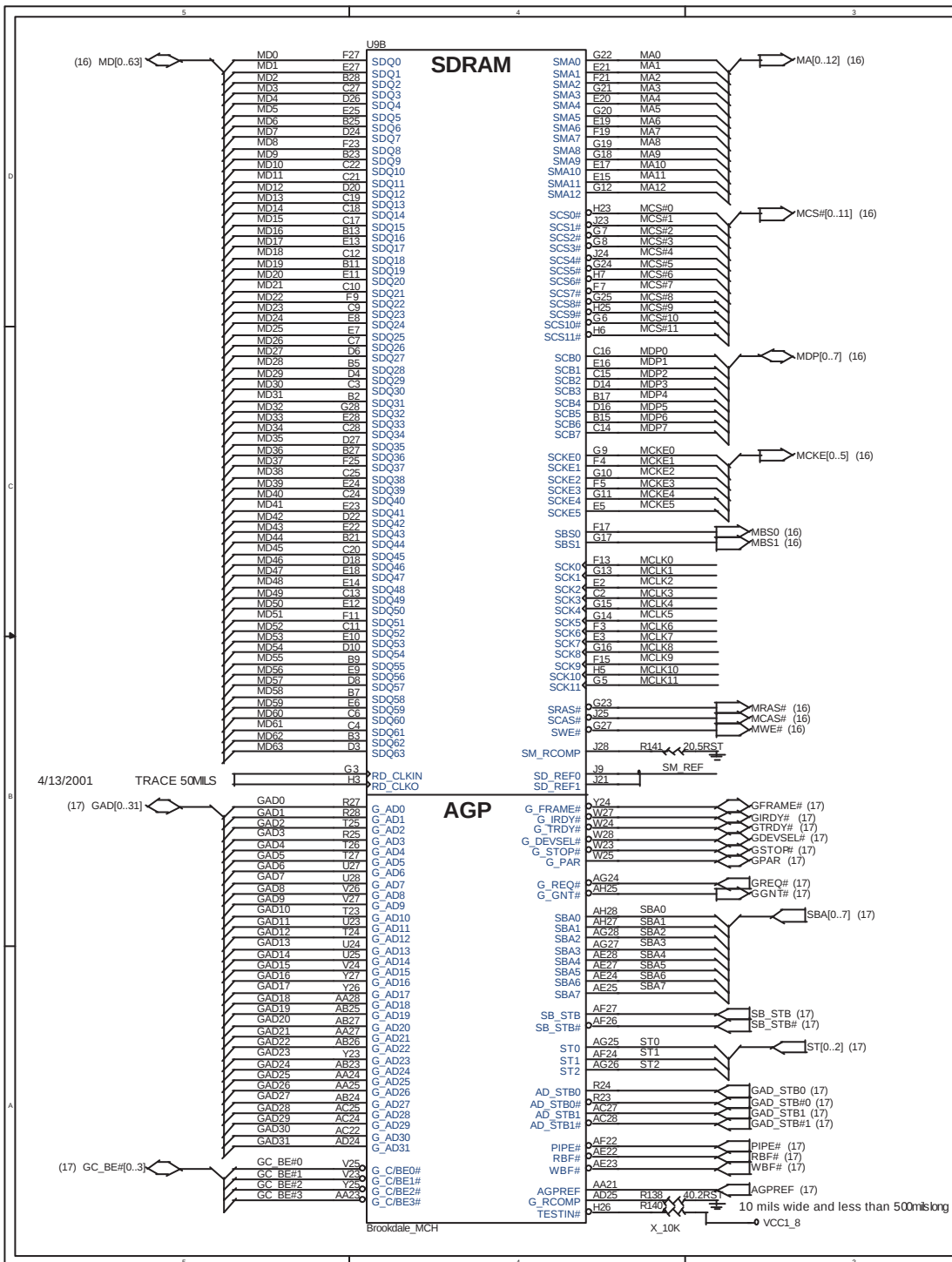
Place 0.01uF Cap. as Close as possible to MCH
Trace width use 15 mils and 15mils space

MCH Trace Decoupling Capacitors

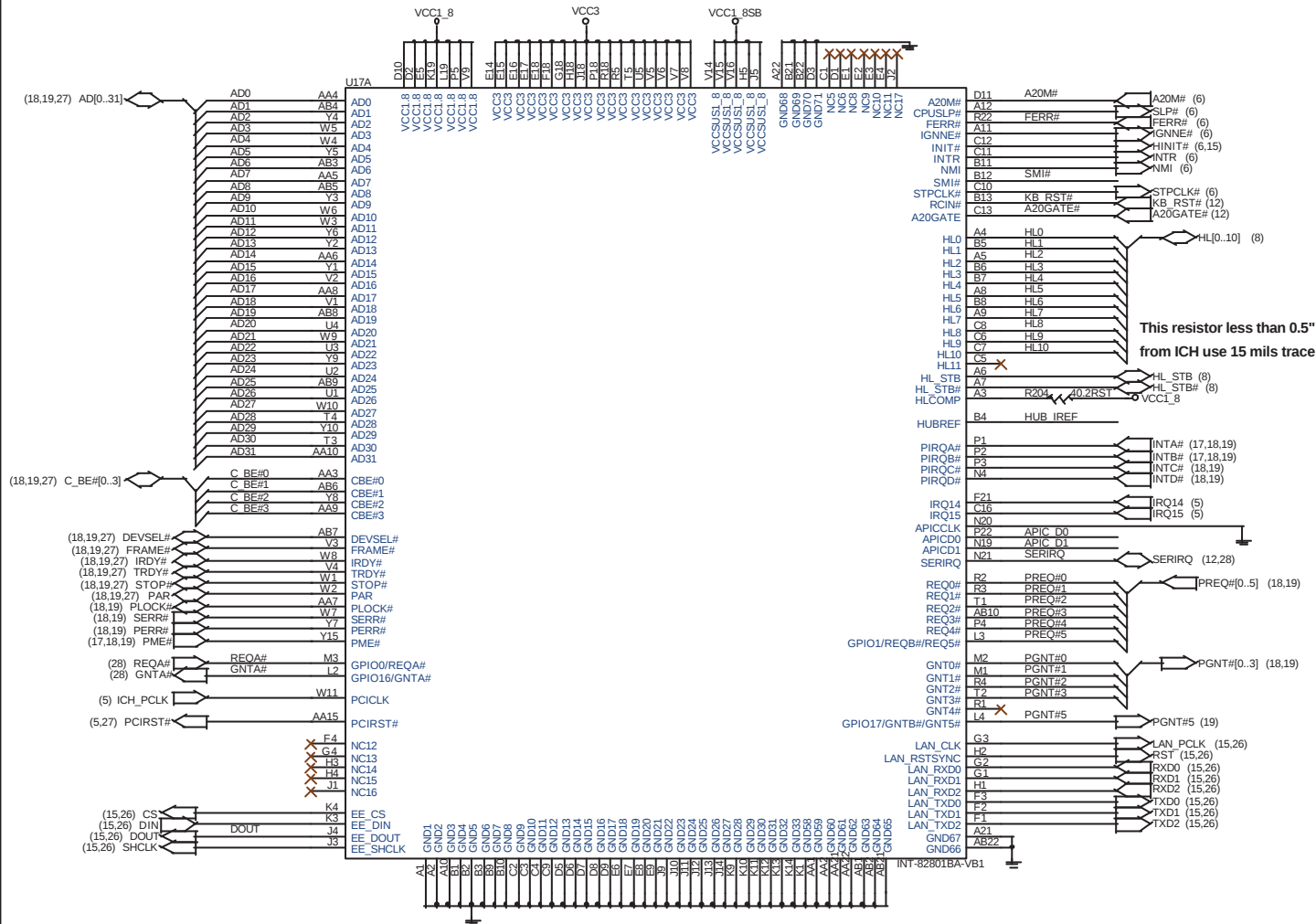


ADDRESS DATA MCH & ICH2

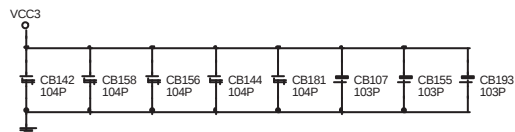
Micro-Star	Title	MS-6531	Rev	1.0
Document Number	Brookdale MCH1			
Last Revision Date:	Tuesday, July 17, 2001			
Sheet	8	of	33	



ICH2 PCI / HUB LINK / CPU / LAN / INTERRUPT SIGNALS



ICH2 DECOUPLING CAPACITORS



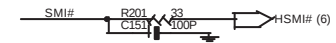
Place one 0.1U/0.01U pair in each corner and 2 on opposite sides close to ICH2 if it fit



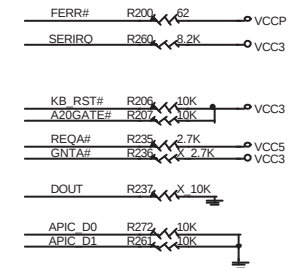
Distribute near the 1.8V power pin of the ICH2

Distribute near the VCC1_8SB Power pin of the ICH2

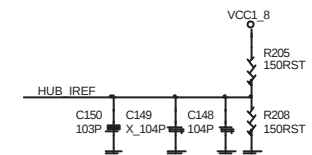
ICH2 SMI# SIGNAL



ICH2 STRAPPING RESISTORS



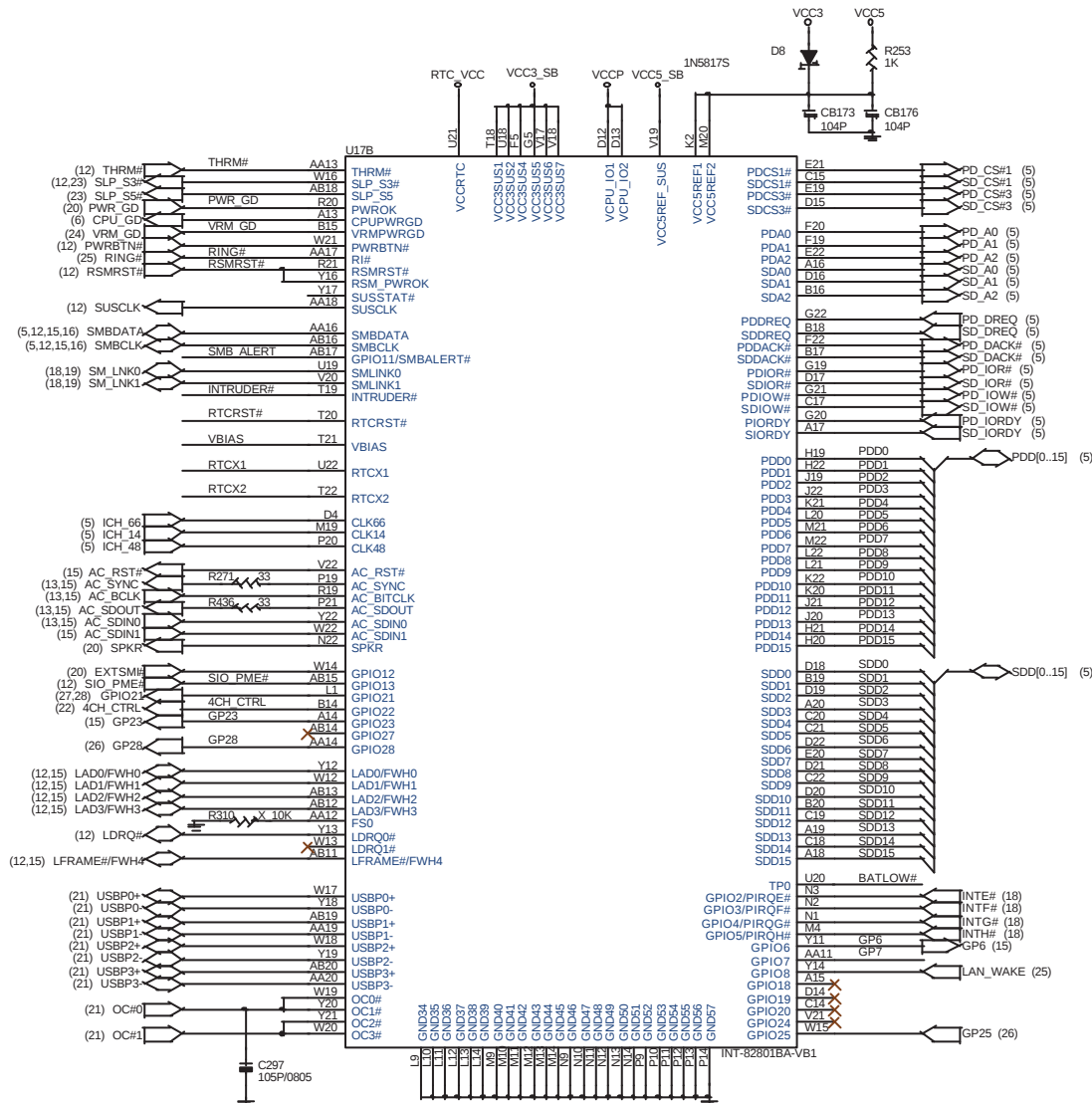
ICH2 REFERENCE VOLTAGE



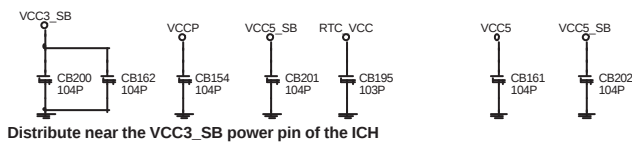
Place Cap. as Close as possible to ICH2
Trace width use 15 mils and 15mils space

Micro-Star	Title	MS-6531	Rev	1.0
	Document Number	Brookdale ICH2 PCI		
	Last Revision Date:	Tuesday, July 17, 2001	Sheet	10 of 33

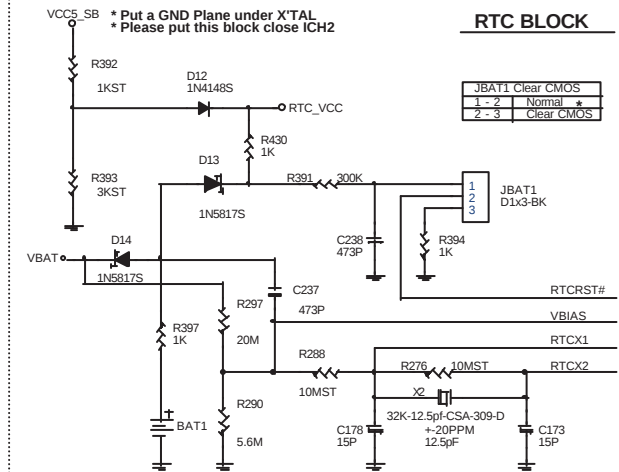
ICH2 ASIC / RTC / AC'97 / GPIO / LPC / USB / IDE SIGNALS



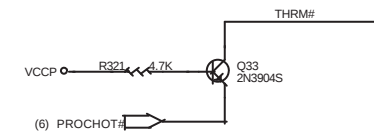
ICH2 DECOUPLING CAPACITOR



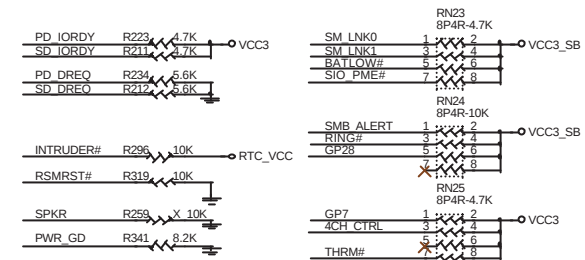
RTC BLOCK



PROCHOT BLOCK

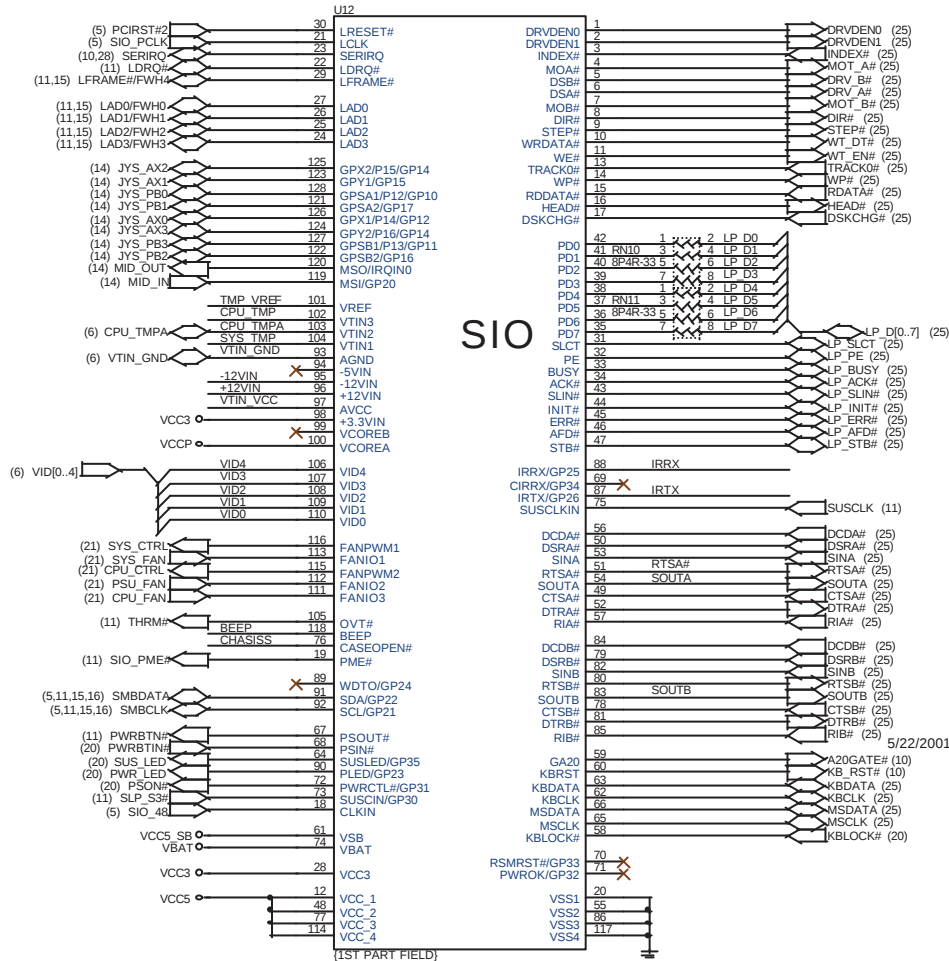


ICH2 STRAPPING RESISTORS



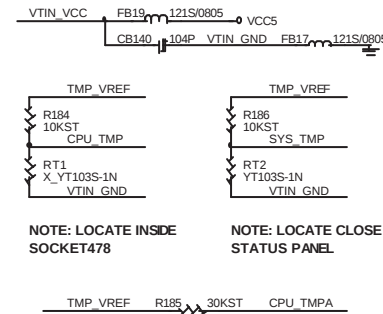
<i>Mic ro-Star</i>	Title	<i>MS-6531</i>	Rev	<i>1.0</i>
Document Number		Brookdale ICH2 Other		
Last Revision Date: Tuesday, July 17, 2001		Sheet 11 of 33		

LPC SUPER I/O W83627HF



SIO

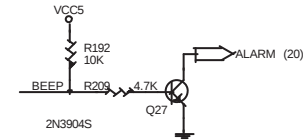
THERMAL RESISTOR BLOCK



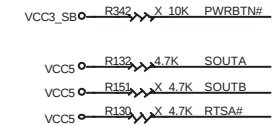
NOTE: LOCATE INSIDE SOCKET478

NOTE: LOCATE CLOSE STATUS PANEL

SPEAKER BLOCK

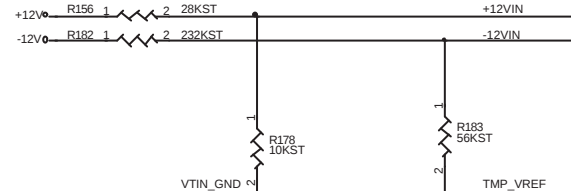
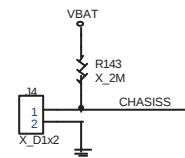


SUPER I/O STRAPPING RESISTOR

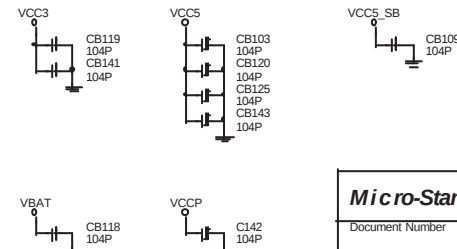


SOUTA	L: Disable KBC	H: Enable KBC
SOUTB	L: 24MHz	H: 48MHz
RTSA#	L: CFAD=2E	H: CFAD=4E
DTRA#	L: PNP Default	H: PNP no Default

CHASSIS INTRUSION HEADER

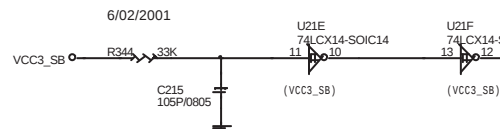


DECOUPLING CAPACITOR

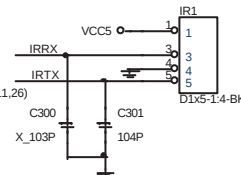


RESUME RESET CIRCUIT BLOCK

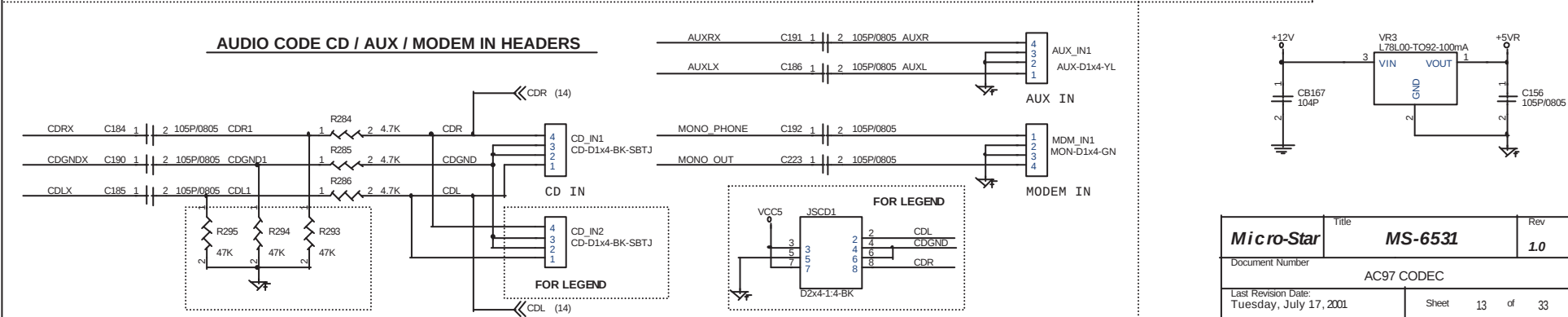
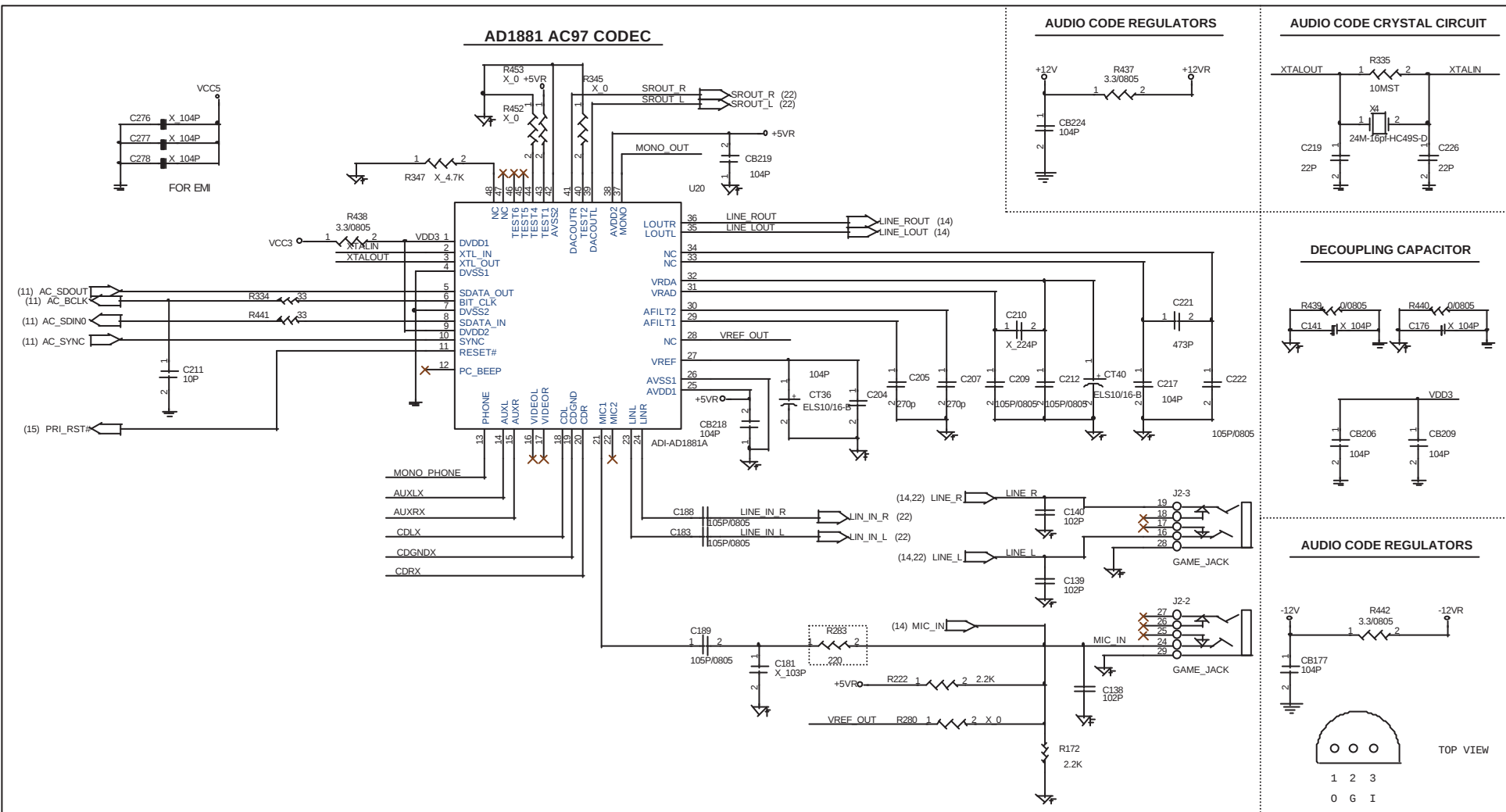
Stuff all for D Version bug



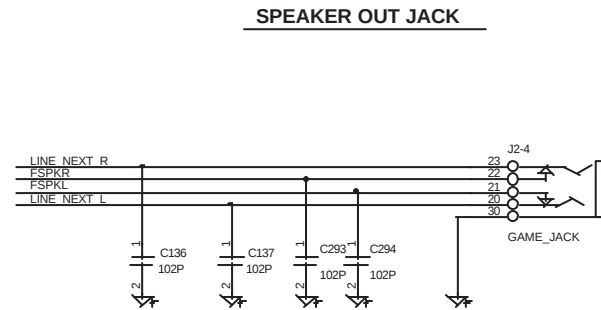
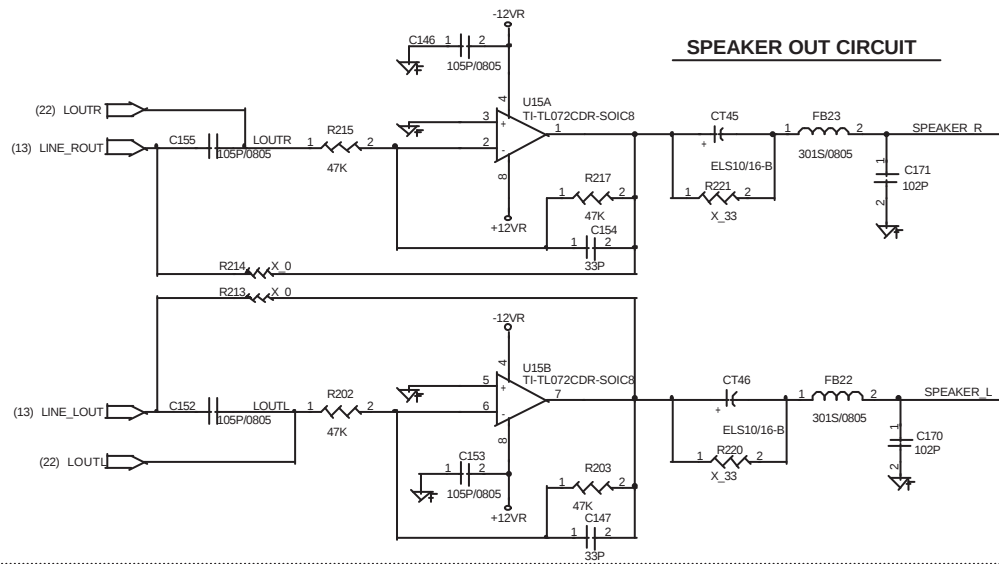
IR HEADER



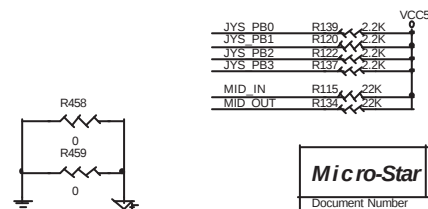
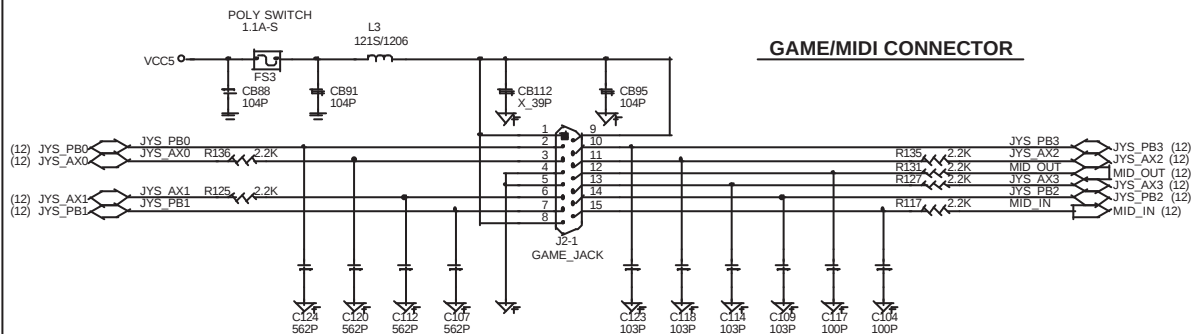
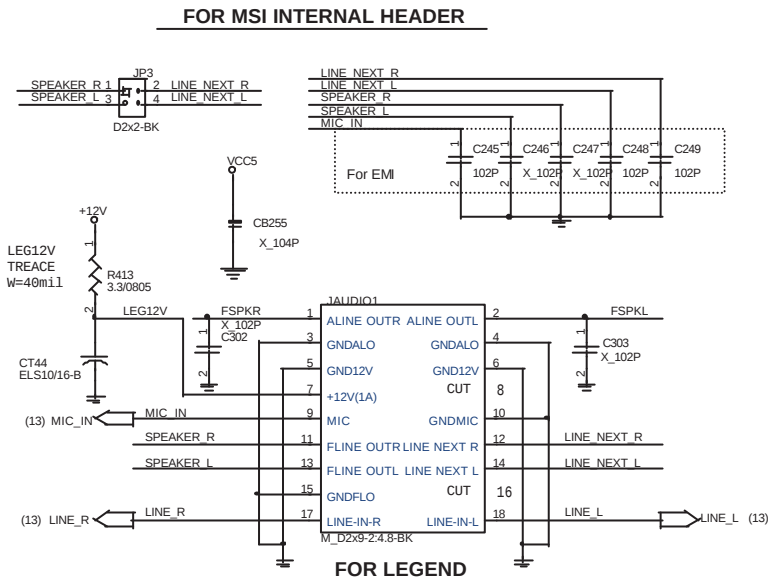
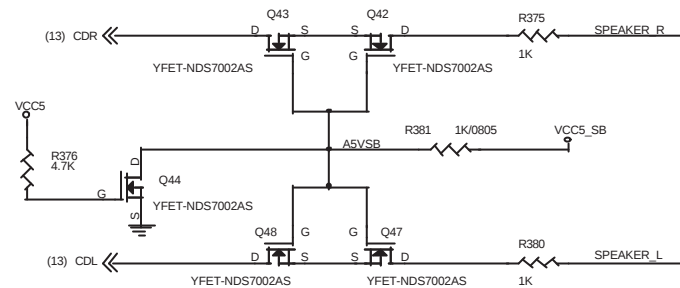
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<i>Micro-Star</i>	Title	<i>MS-6531</i>	Rev	<i>1.0</i>
Document Number		AC97 CODEC		
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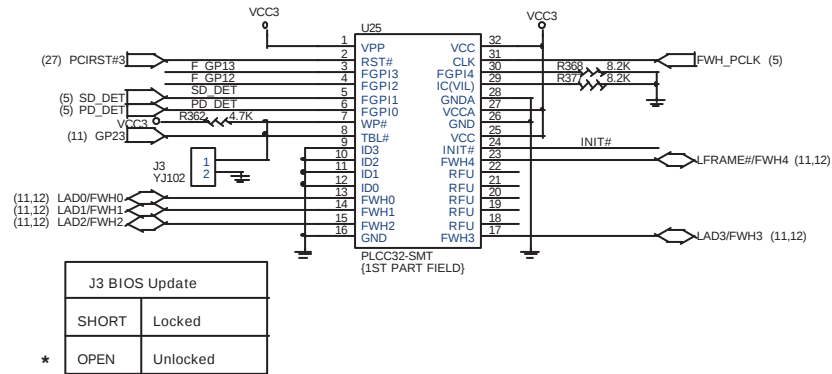


CD PANEL PLAY WITHOUT PC POWER_ON

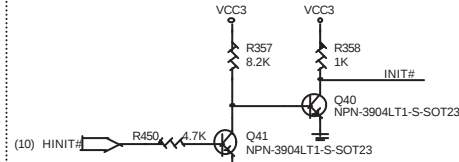


Micro-Star	Title MS-6531	Rev 1.0
Document Number	Audio Amp TL072 & GAME	
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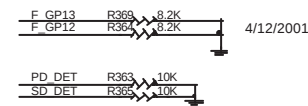
Firmware Hub (FWH)



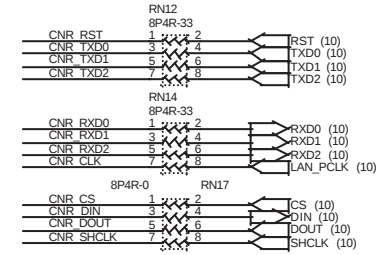
FWH INIT Signal Voltage Translation Block



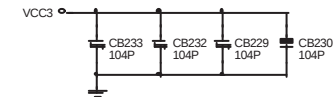
FWH RESISTORS



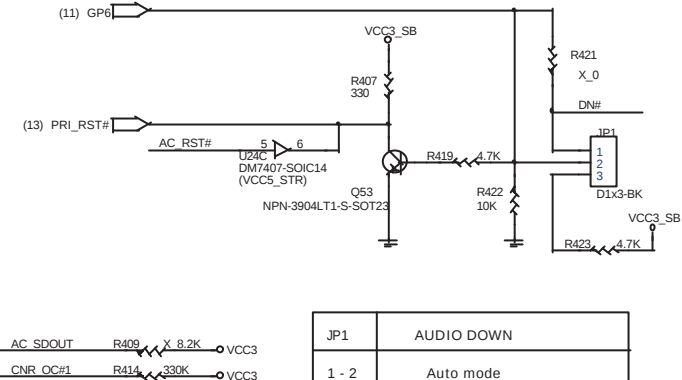
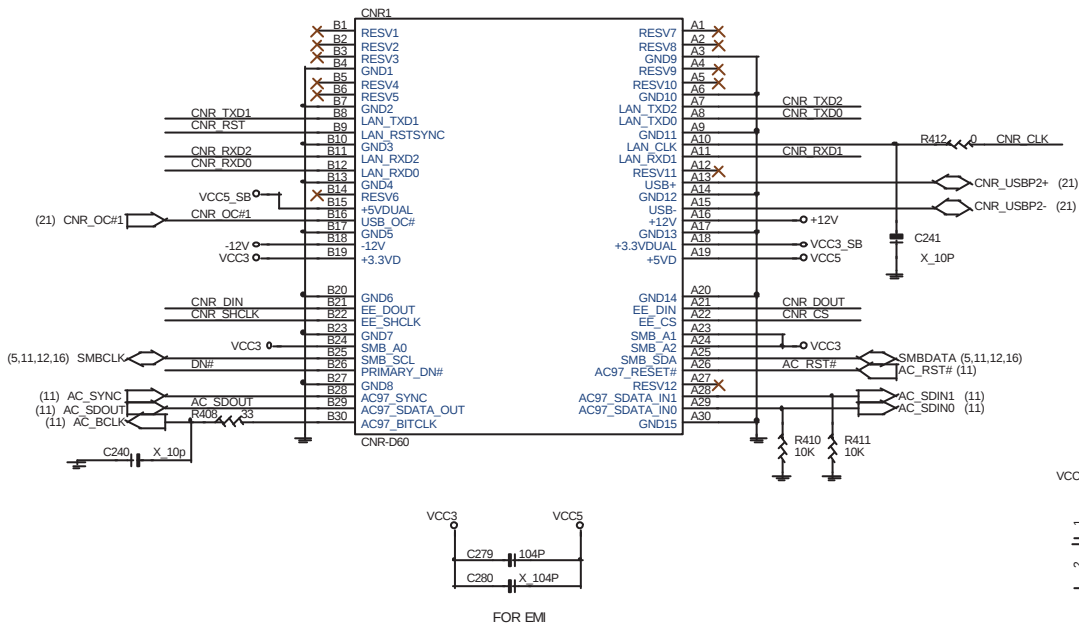
CNR Damping Resistor Net



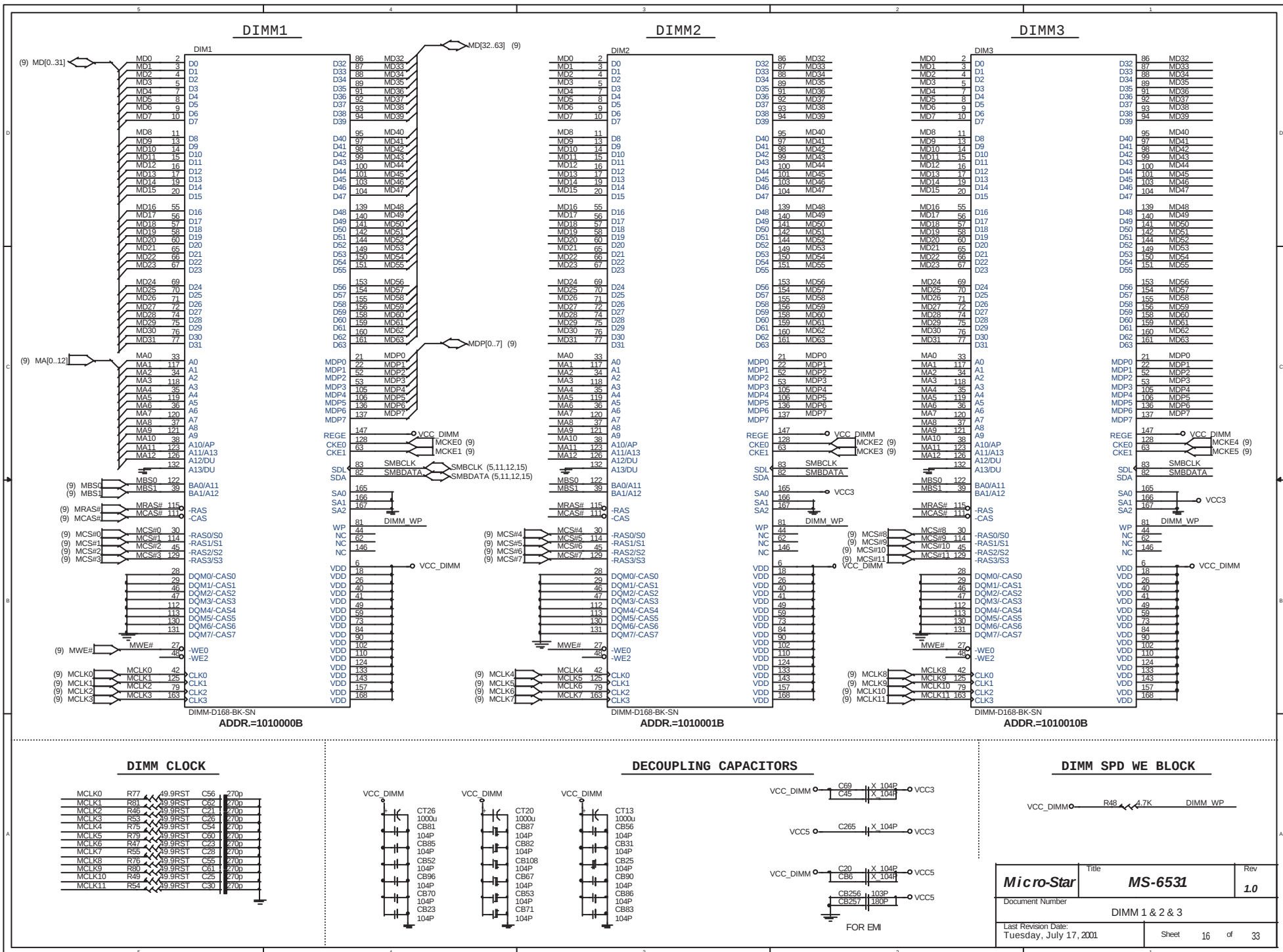
FWH DECOUPLING CAPACITORS



CNR RISER



Micro-Star	Title	MS-6531	Rev	1.0
Document Number	FWH & CNR RISER			
Last Revision Date:	Tuesday, July 17, 2001			Sheet 15 of 33

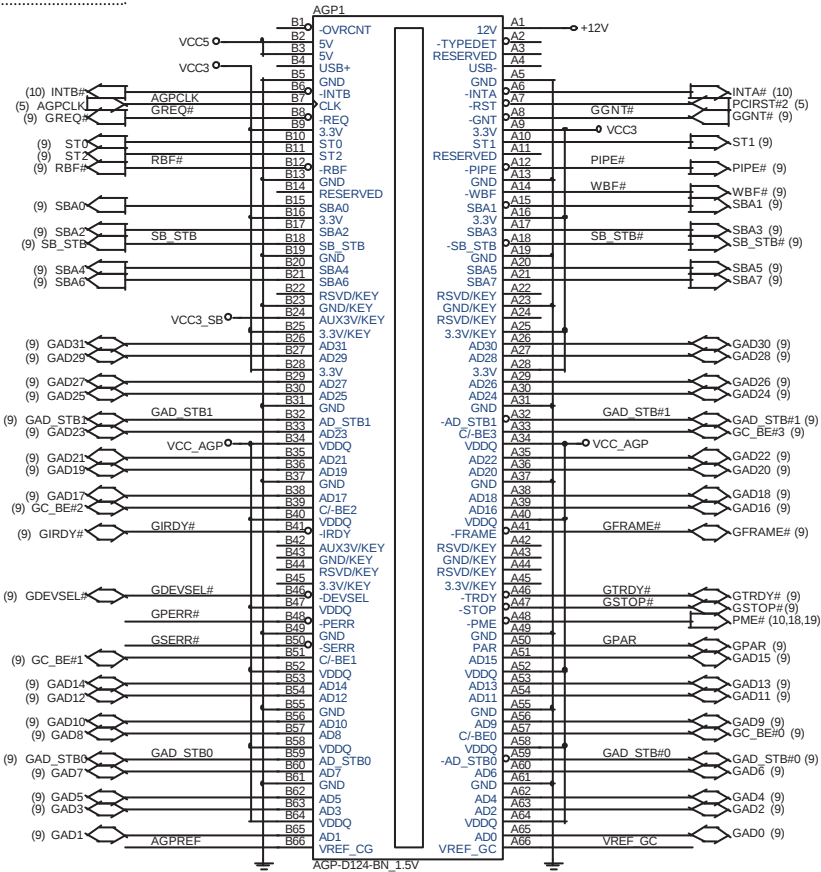


AGP UNIVERSAL 2X/4X SLOT(AGP VER:2.0 COMPLY)

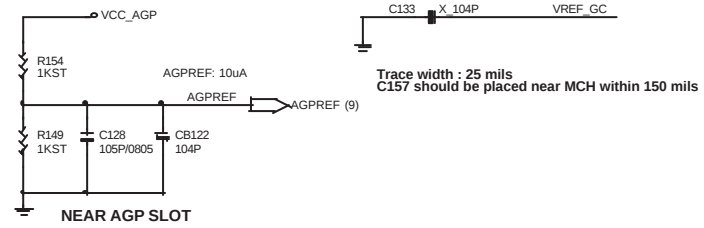
VCC5 = 60mils trace / 15 mils space

AGP Slot max
VCC AGP 8.0A
VCC3 6.0A
VCC12 1.0A
VCC5 2.0A

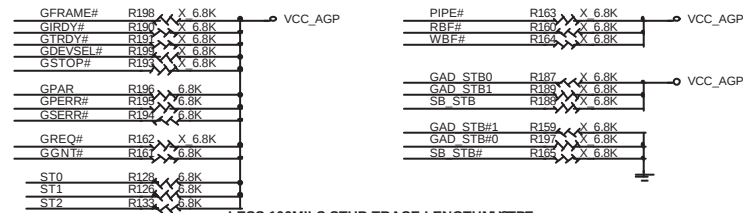
INTA#
INTB#



AGP SIGNAL REFERENCE CIRCUIT



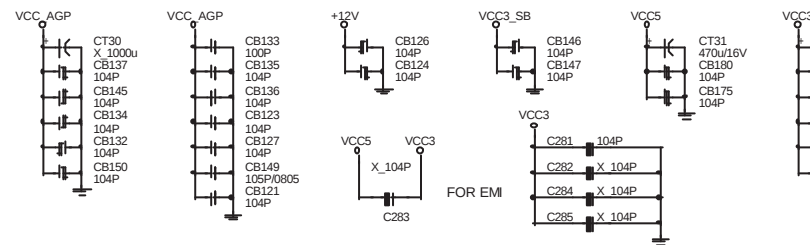
AGP TERMINATION RESISTORS



LESS 100MILS STUB TRACE LENGTH MUST BE FOLLOWING.

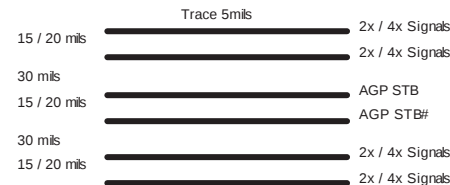
Place these resistors between PCI and AGP slot

AGP SLOT DECOUPLING CAPACITORS

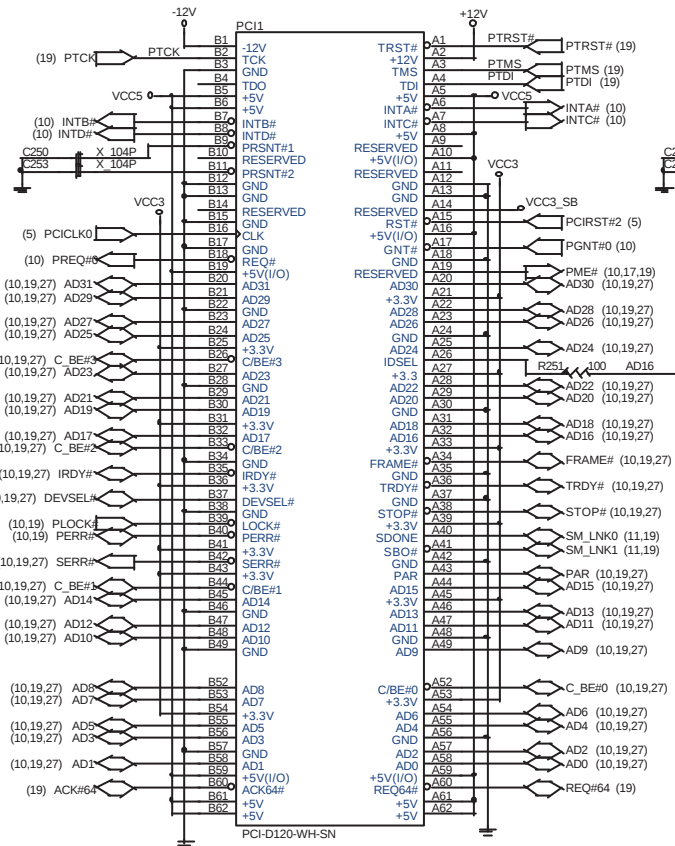


1X Timing group	2X/4X Timing group
AGPCLK	SET#1 GAD[15..0] GC_BE#[1..0] GAD_STB0 GAD_STB0#
PIPE#	SET#2 GAD[31..16] GC_BE#[3..2] GAD_STB1 GAD_STB1#
RBF#	SET#3 SBA[7..0] SB_STB SB_STB#
ST[2..0]	
GFRAME#	
GIRDY#	
GTRDY#	
GDEVSEL#	
GREQ#	
GGNT#	
GPAR	

SIGNALS	Maximum Length	Width	Space	Dismatch Length	Relative b
1X Timing group	7.5"	5 mil	5 mil	X	X
2X/4X Timing group SET#1	7.25"	5 mil	20 mil	+/- 0.125"	GAD_STB0 GAD_STB0#
2X/4X Timing group SET#2	7.25"	5 mil	20 mil	+/- 0.125"	GAD_STB1 GAD_STB1#
2X/4X Timing group SET#3	7.25"	5 mil	20 mil	+/- 0.125"	SB_STB SB_STB#
2X/4X Timing group SET#1	6"	5 mil	15 mil	+/- 0.25"	GAD_STB0 GAD_STB0#
2X/4X Timing group SET#2	6"	5 mil	15 mil	+/- 0.25"	GAD_STB1 GAD_STB1#
2X/4X Timing group SET#3	6"	5 mil	15 mil	+/- 0.25"	SB_STB SB_STB#

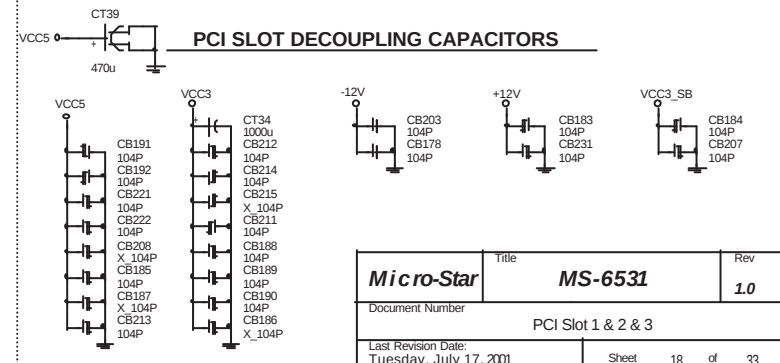


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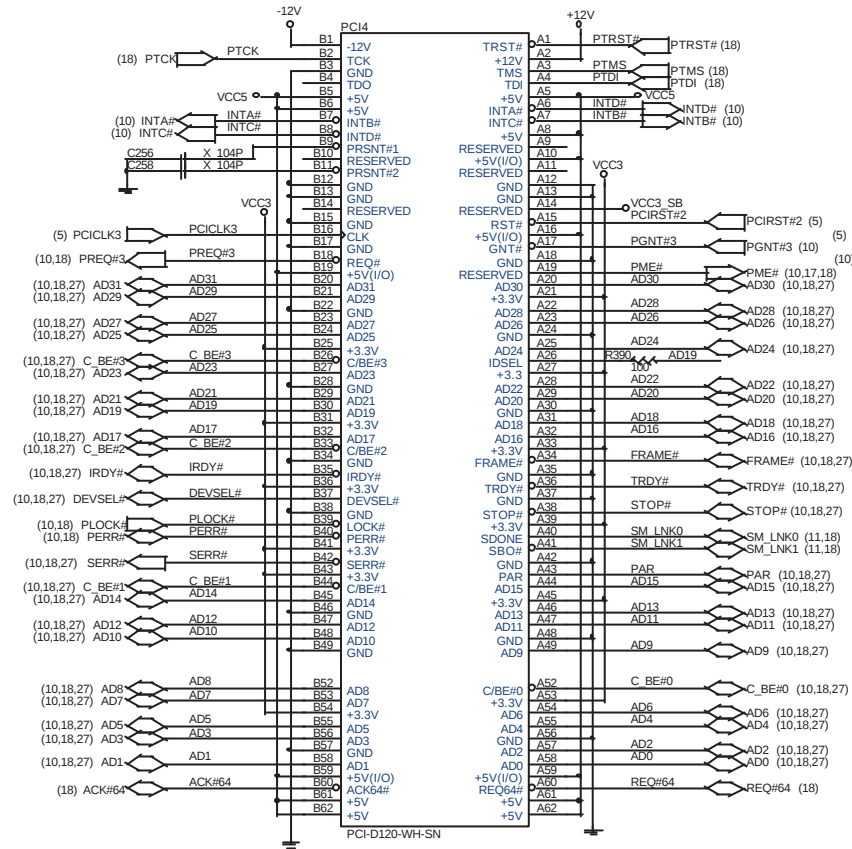


The diagram illustrates the internal wiring of the PCI-D120-WH-SN board, showing the connection between the PCI-D120-WH-SN and the PCI-D120-WH-SN. The board is a 32-bit PCI card with a 3.3V core and 5V I/O. It features a 32-bit PCI bus, 16MB of DRAM, and a 3.3V/5V LDO regulator. The diagram shows the connection between the two boards, including the PCI bus, power, and ground connections. The PCI-D120-WH-SN is connected to the PCI-D120-WH-SN via a 32-bit PCI bus. The power and ground connections are also shown. The diagram is a detailed schematic of the PCI-D120-WH-SN board.

Figure 1: Pin connections for the ADXL345. The top diagram shows the connection for RN19, which is a 10PBR-2.7K resistor. It connects DEVSEL# to pin 1, TRDY# to pin 2, IRDY# to pin 3, FRAME# to pin 4, SERR# to pin 6, PERR# to pin 7, PLOCK# to pin 8, and STOP# to pin 9. Pin 5 is connected to VCC5, and pin 10 is connected to ground. The bottom diagram shows the connection for RN29, which is a 10PBR-2.7K resistor. It connects PREQ#0 to pin 1, PREQ#1 to pin 2, PREQ#2 to pin 3, PREQ#3 to pin 4, PREQ#4 to pin 6, and PREQ#5 to pin 7. Pin 5 is connected to VCC5, and pin 10 is connected to ground. The right diagram shows the connection for the ADXL345 chip. It connects REQ#64 to pin 1, ACK#64 to pin 2, PTMS to pin 3, PTDI to pin 4, PTCK to pin 6, and PTRST# to pin 7. Pin 5 is connected to VCC5, and pin 10 is connected to ground. All connections are made using 4.7K resistors.

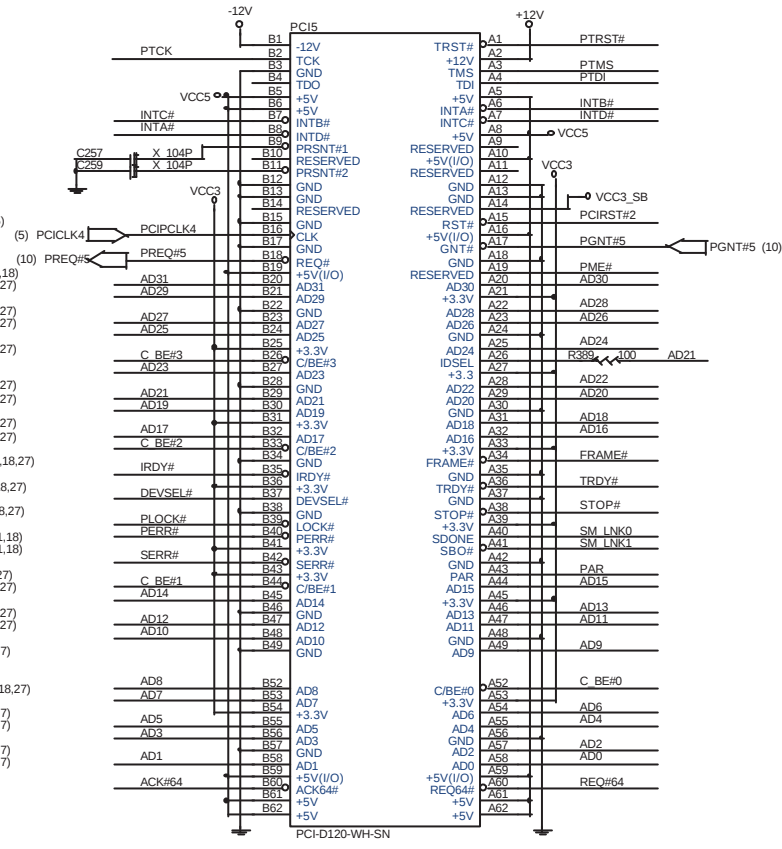


PCI SLOT 4 (PCI VER: 2.2 COMPLY)



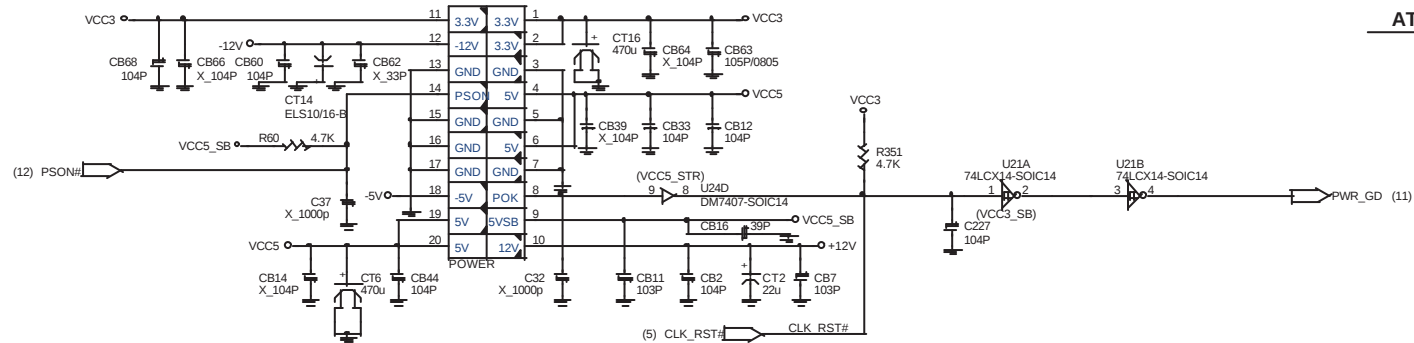
IDSEL = AD19
MASTER = PREQ3
INTD#

PCI SLOT 5 (PCI VER: 2.2 COMPLY)

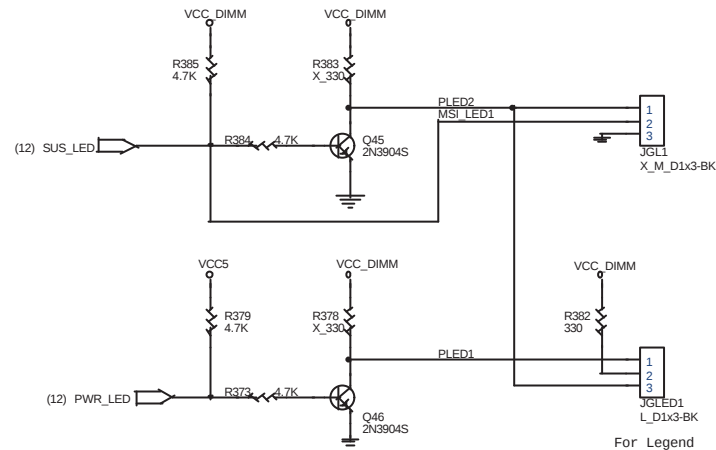
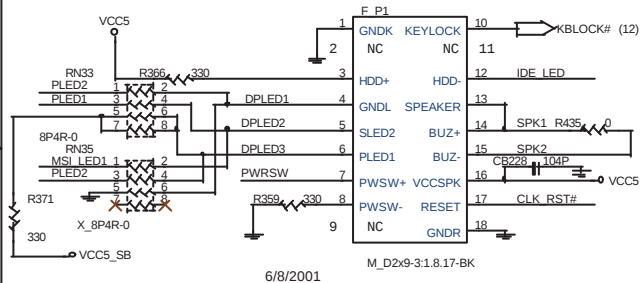


IDSEL = AD21
MASTER = PREQ5
INTB#

Micro-Star	Title MS-6531	Rev 1.0
Document Number PCI Slot 4 & 5		
Last Revision Date: Tuesday, July 17, 2001		Sheet 19 of 33



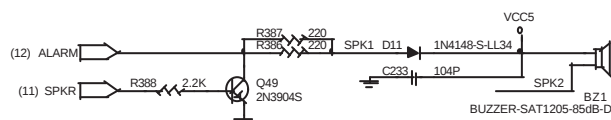
Brookdale FRONT PANEL-M



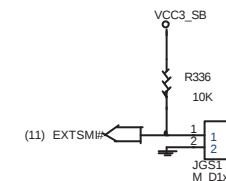
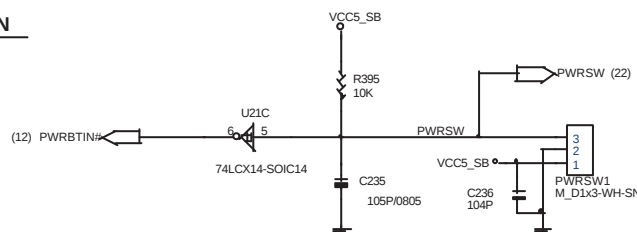
Front Panel LED Circuit component selection

	LEGEND	MSI
R371	ON	OFF
R373	ON	OFF
R378	OFF	OFF
R379	ON	OFF
R382	ON	OFF
R383	OFF	ON
R384	ON	ON
R385	4.7K	330
RN33	ON	OFF
RN35	OFF	ON
Q45	ON	ON
Q46	ON	OFF
JGL1	OFF	ON
JGLE1	ON	OFF

SPEAKER

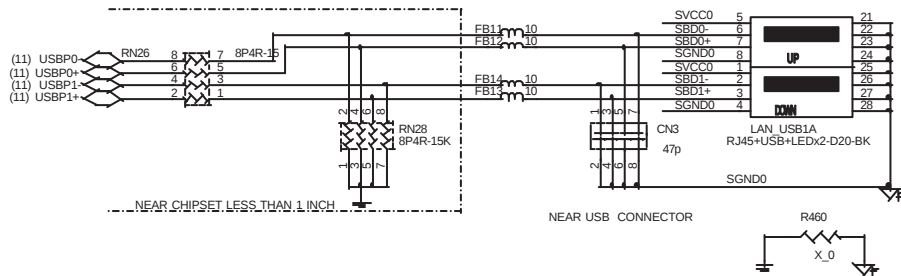


POWER BUTTON

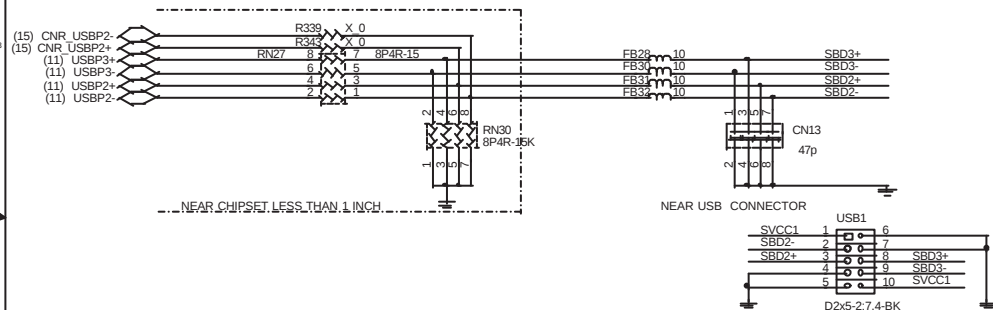


Micro-Star	Title	MS-6531	Rev
Document Number	Front Panel & Connector		
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Sheet	20	of	33

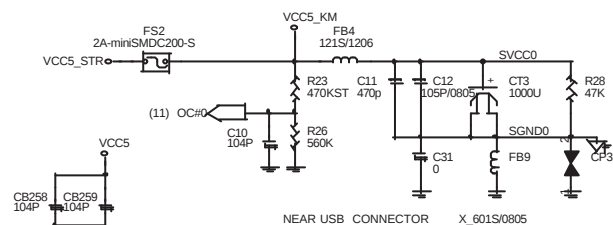
BACK PANEL USB CONNECTOR FOR USB PORT 0,1



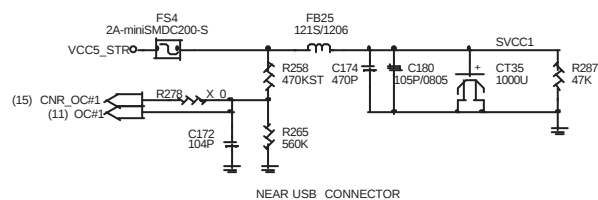
FRONT PANEL USB CONNECTOR FOR USB PORT 2,3



POWER CIRCUIT FOR USB PORT 0,1

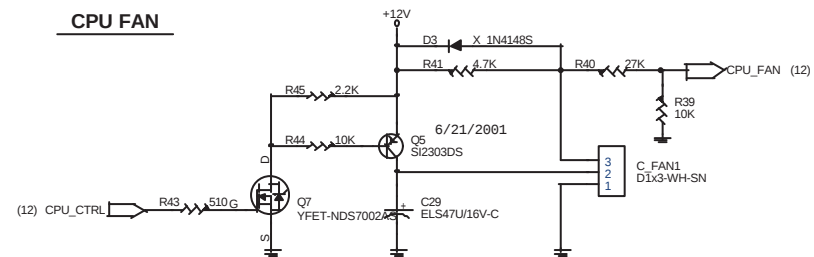


POWER CIRCUIT FOR USB PORT 2, 3

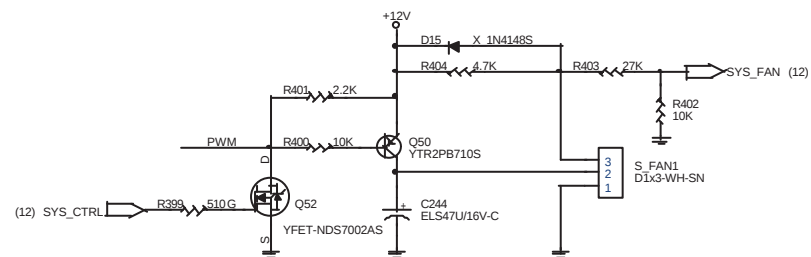


- * USB Trace width : 9 mils
- * USB Trace Spacing : 25 mils
- * Differential USB Signals Trace Spacing : 18 mils
- * USB Power Trace must be 40mils width

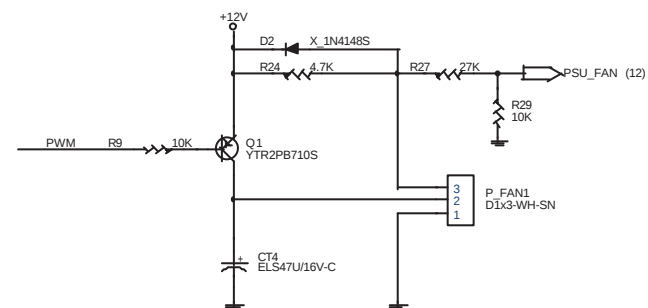
CPU FAN



SYSTEM FAN

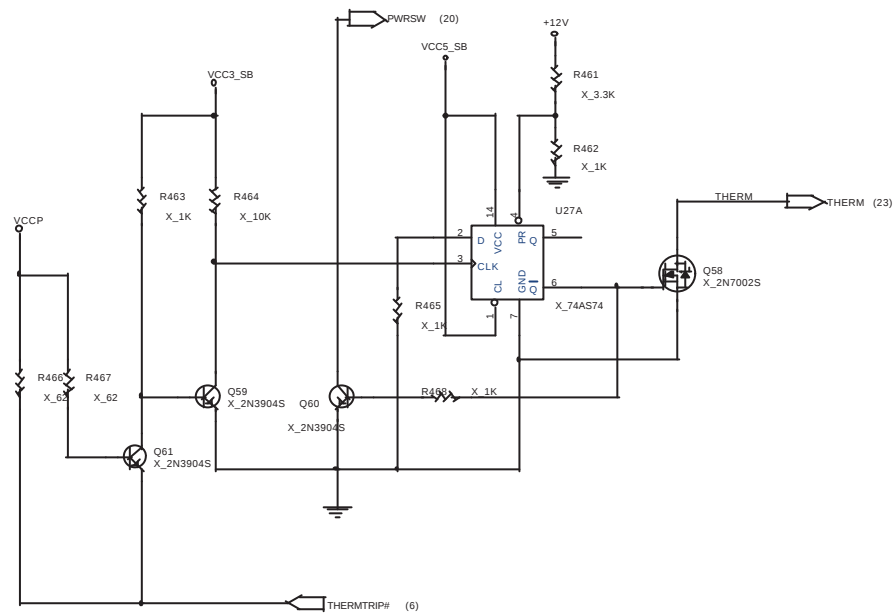
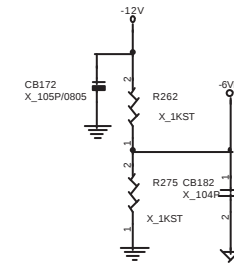
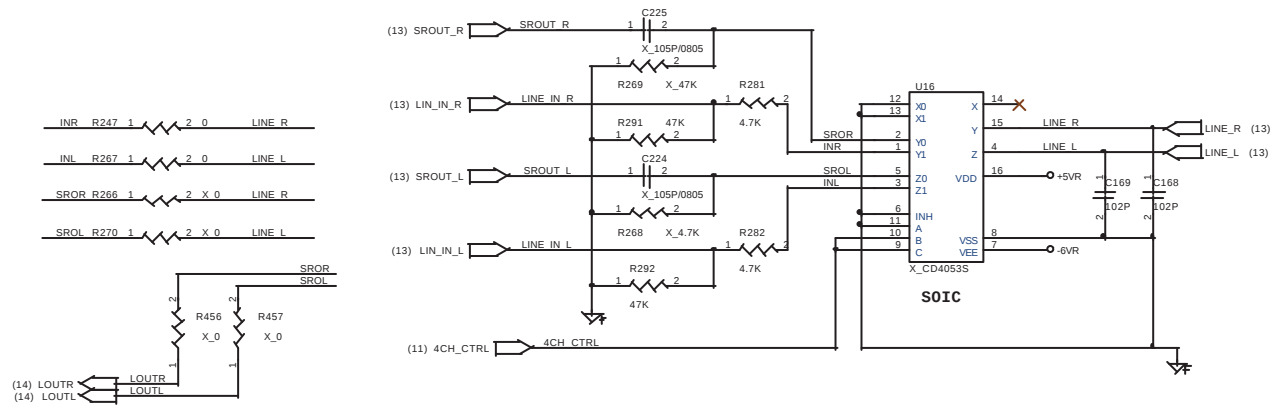


ATX PSU FAN ON/OFF CONTROL



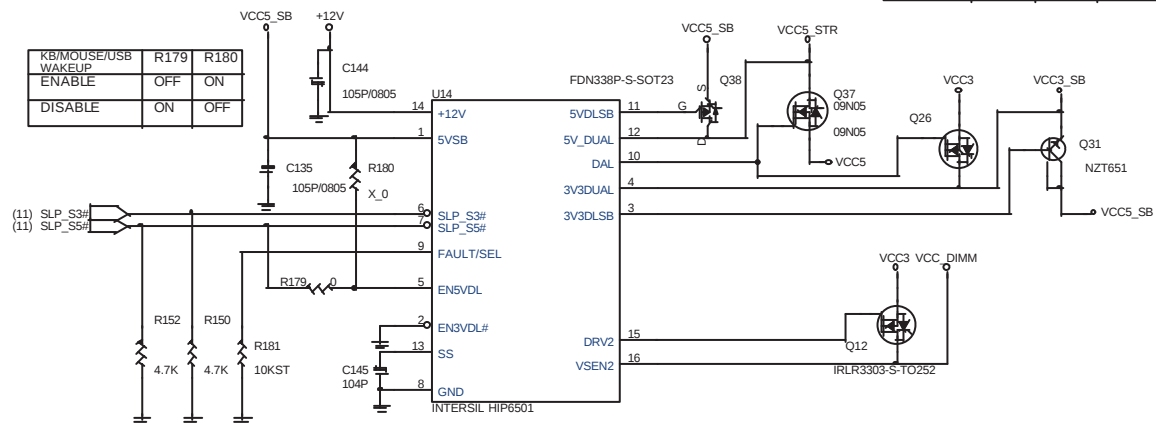
Micro-Star	Title	MS-6531	Rev	1.0
Document Number	USB & FAN Connectors			
Last Revision Date:	Tuesday, July 17, 2001			
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4 CHANNEL CONTROLLER



Micro-Star	Title	MS-6531	Rev	10
Document Number				
4 CHANNEL CONTROL				
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Power	S0	S3	S5
VCC3_SB	Main	Standby	Standby
VCC5_STR	Main	Standby	0V
VCC_DIMM	Main	Standby	0V

[illegible]

1.8V/3.3V SEQUENCE CIRCUIT

VCC3

R170 200RST

R167 470RST

R168 200RST

Q23 2N3904S

Q24 2N3906S

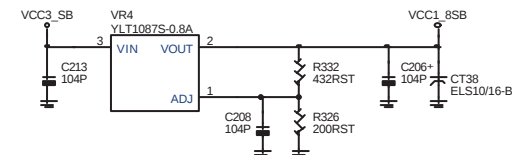
$I_c=200mA$

$V_{be}=5V$

$V_{ceo}=40V$

VCC1

(40mils trace / 20 mils space)

[illegible]

NOTE1 --- MCH
VCC_AGP = VCC1_5 (1.5A) + VCC_AGP (0.37A)

NOTE2 --- DIMM
S0 STATE --- 2.0A * 3 = 6.0A ---> VCC3

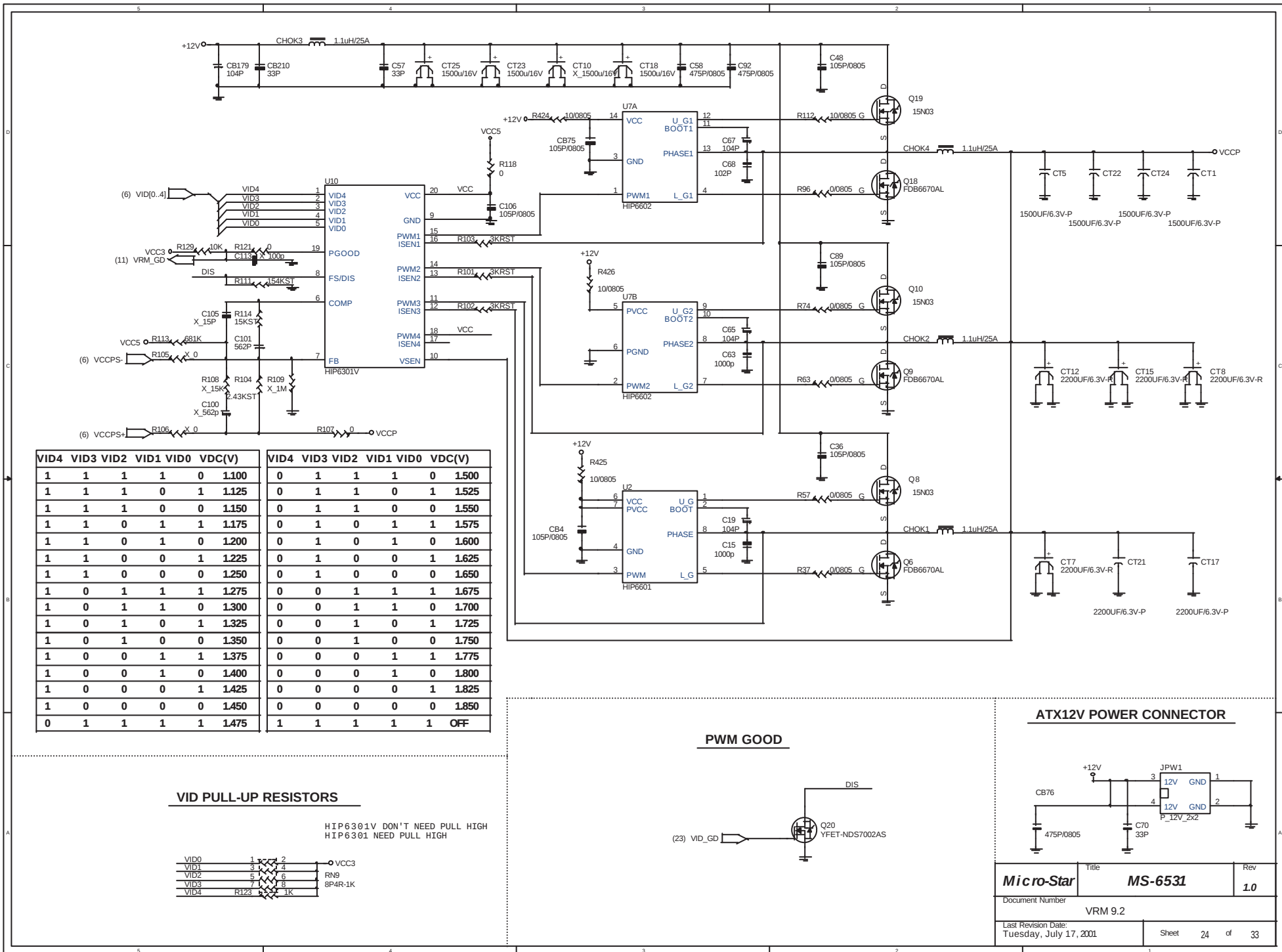
VCC3 SB → 600mA*3.3V/5V=396mA → VCC5 SB

NOTE3 --- ICH2

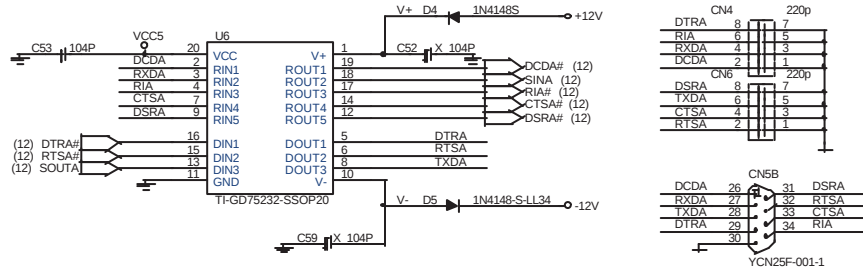
Power	S0	S1	S3/S4/S5
1.8V	300mA	100mA	N/A
1.8V_LAN	36mA	28mA	N/A
VCC1_8SB	45mA	30mA	7mA
VCC3	410mA	5mA	N/A
VCC3+562ET	230mA	210mA	N/A
VCC3_S3	25mA	0.6mA	N/A

$$\begin{aligned} VCC3_SB &= \\ VCC1_8SB &= \\ VCC5_SB &= VCC3_SB + VCC1_8SB \end{aligned}$$

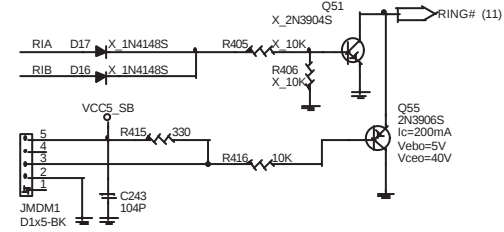
Document Number	Title	Rev
	MS-6531	1.0
Voltage Regulator		
Last Revision Date: Tuesday, July 17, 2001		Sheet 23 of 33



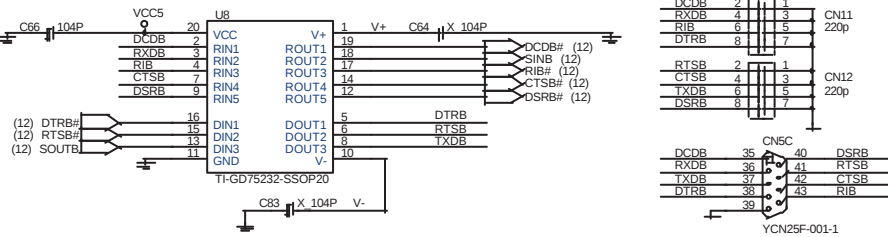
SERIAL PORT 1



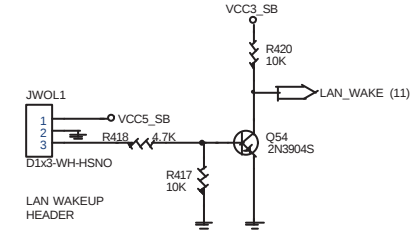
MODEM RING BLOCK



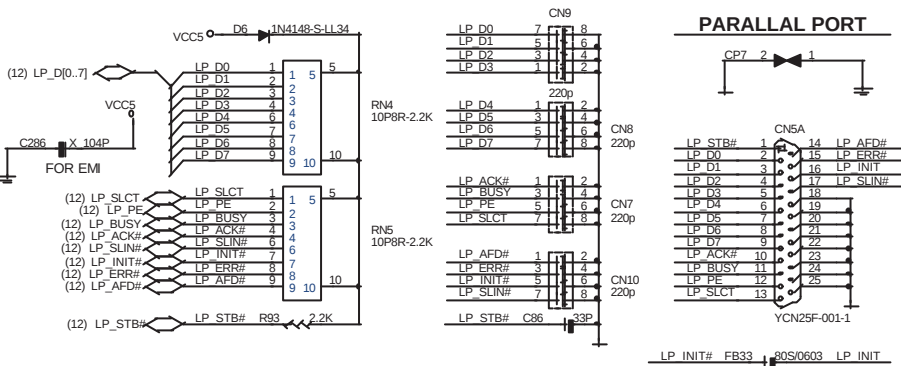
SERIAL PORT 2



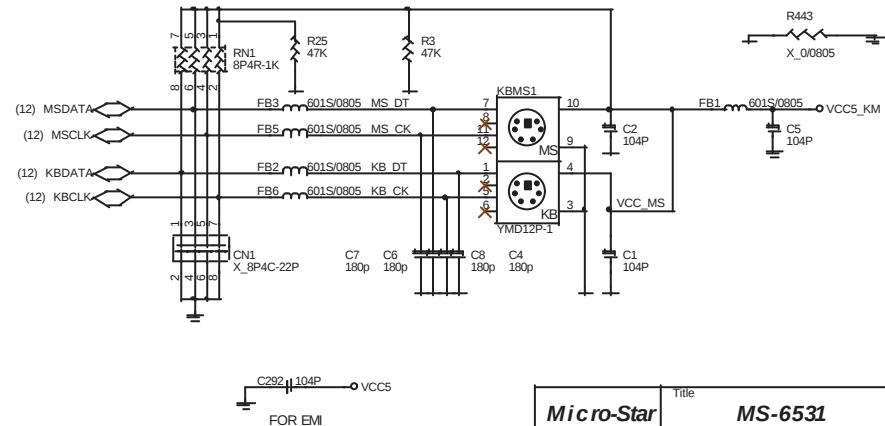
LAN WAKEUP BLOCK



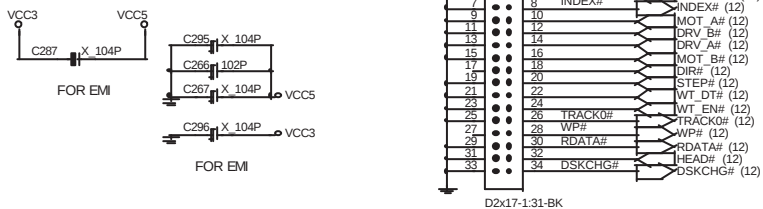
PARALLAL PORT



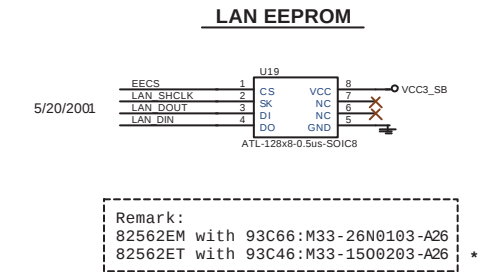
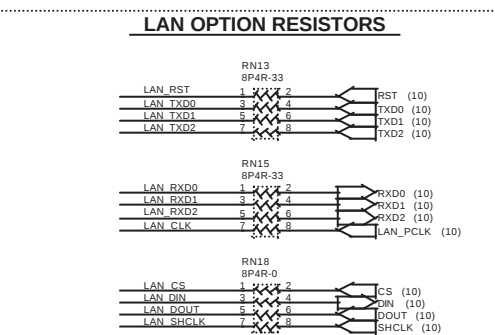
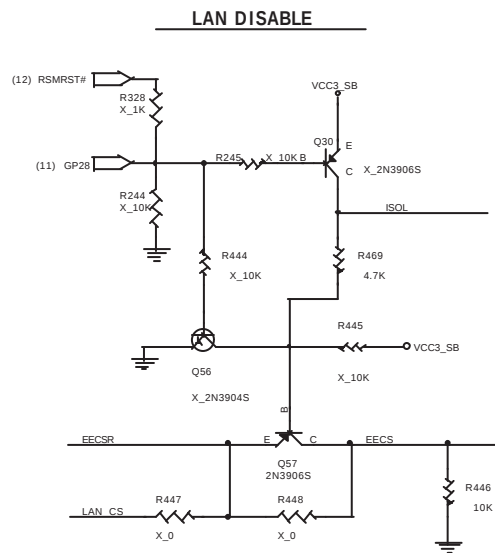
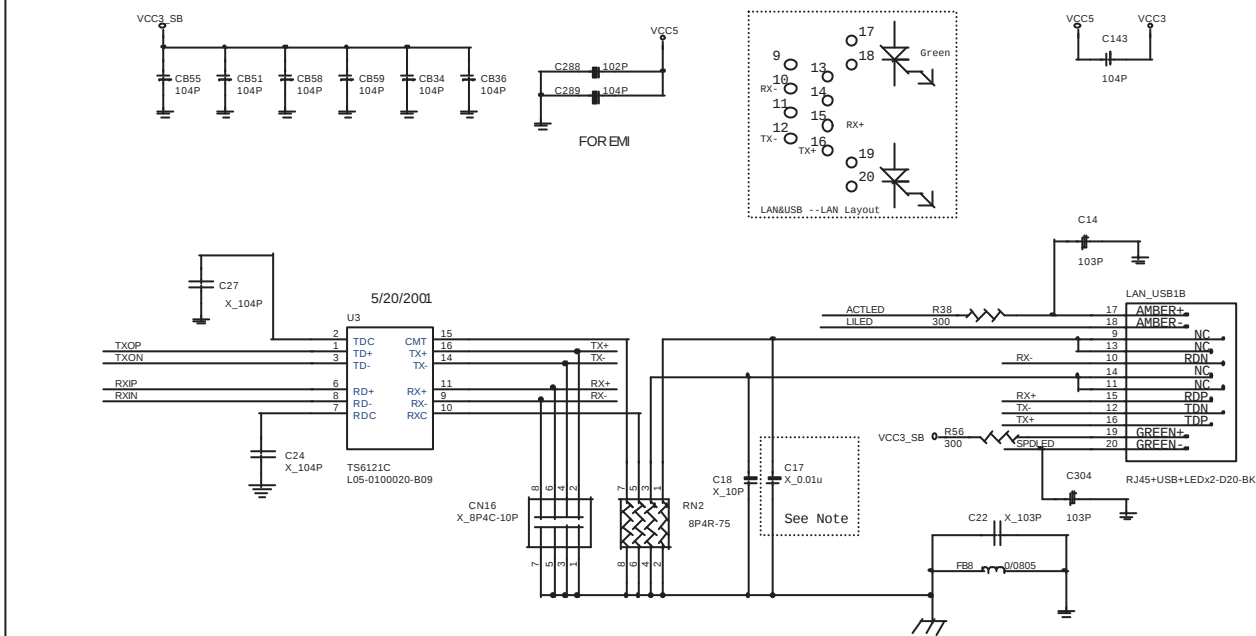
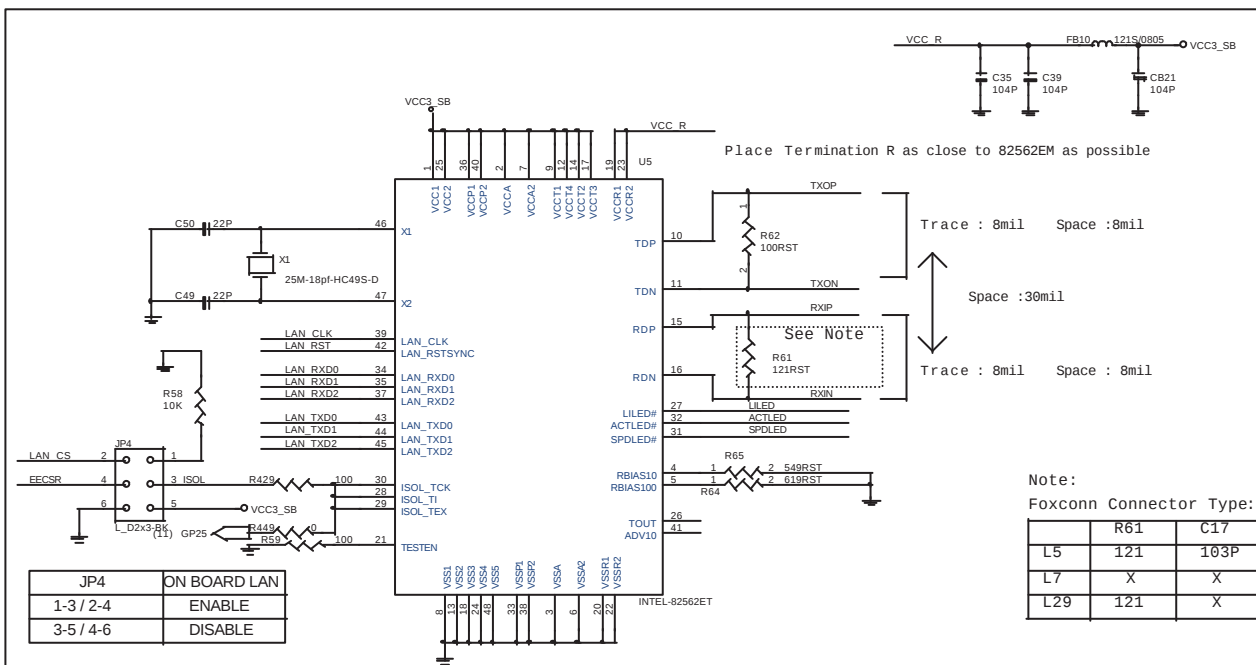
PS2 KEYBOARD & MOUSE CONNECTOR



FLOPPY CONNECTOR

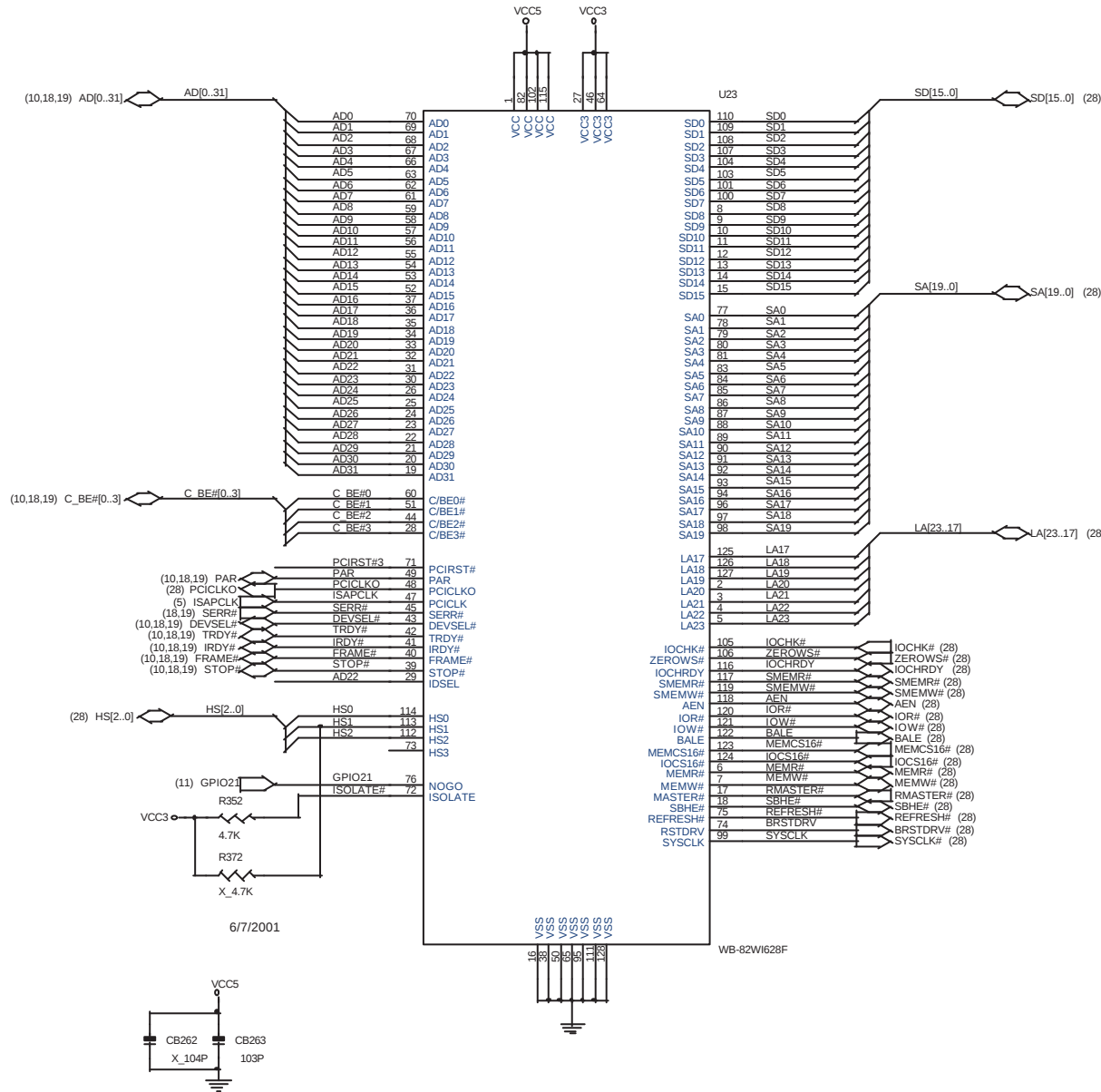


Micro-Star	Title	MS-6531	Rev
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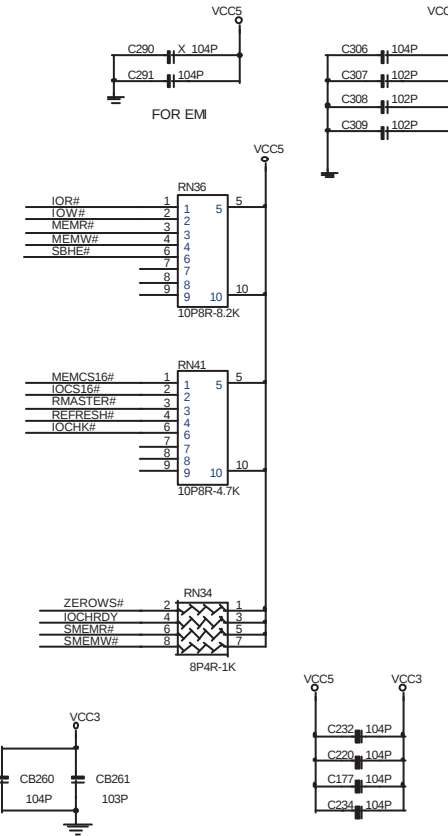


Micro-Star	Title	MS-6531	Rev	10
Document Number	LAN INTEL 82562EM/ET			
Last Revision Date:	Tuesday, July 17, 2001			
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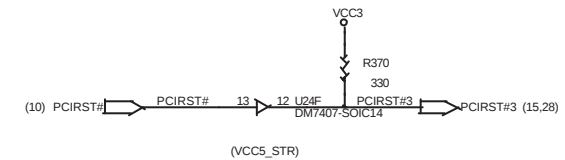
PCI To ISA Bridge, Part 1



PCI to ISA Bridge Pull Up / Low

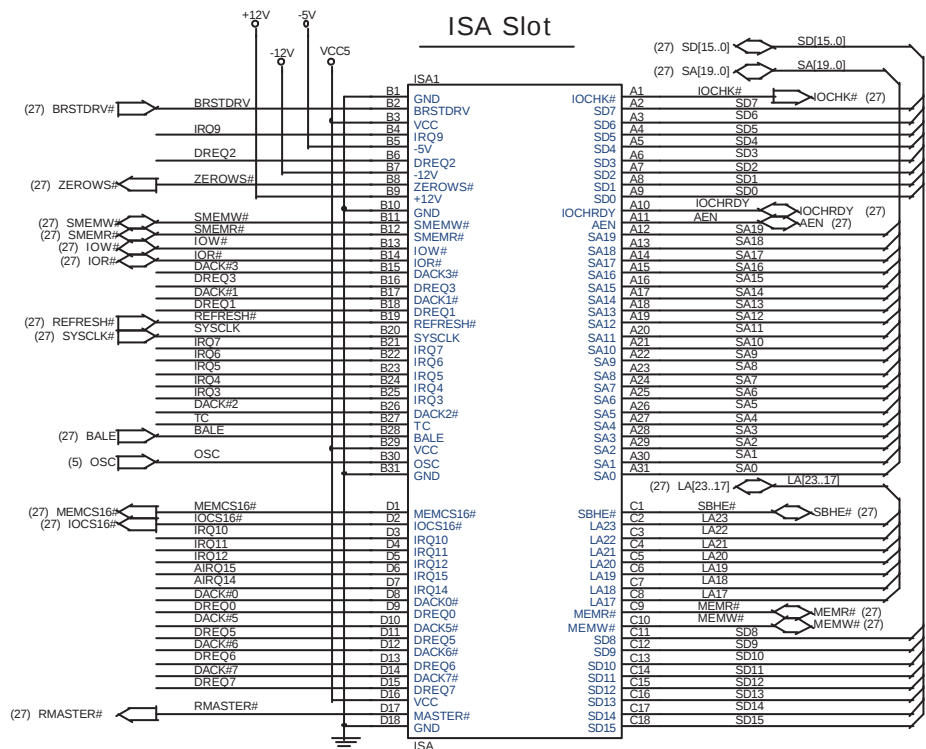
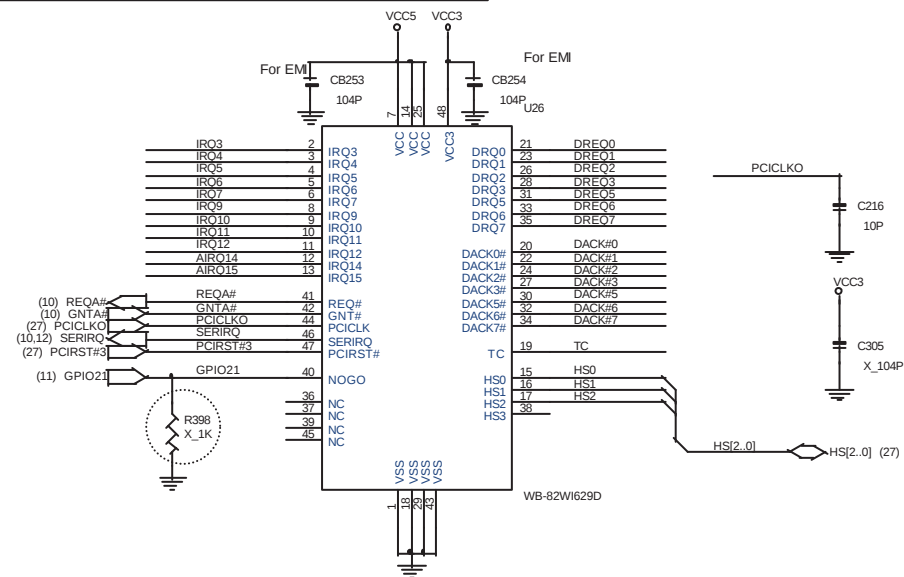


PCI to ISA Bridge Reset

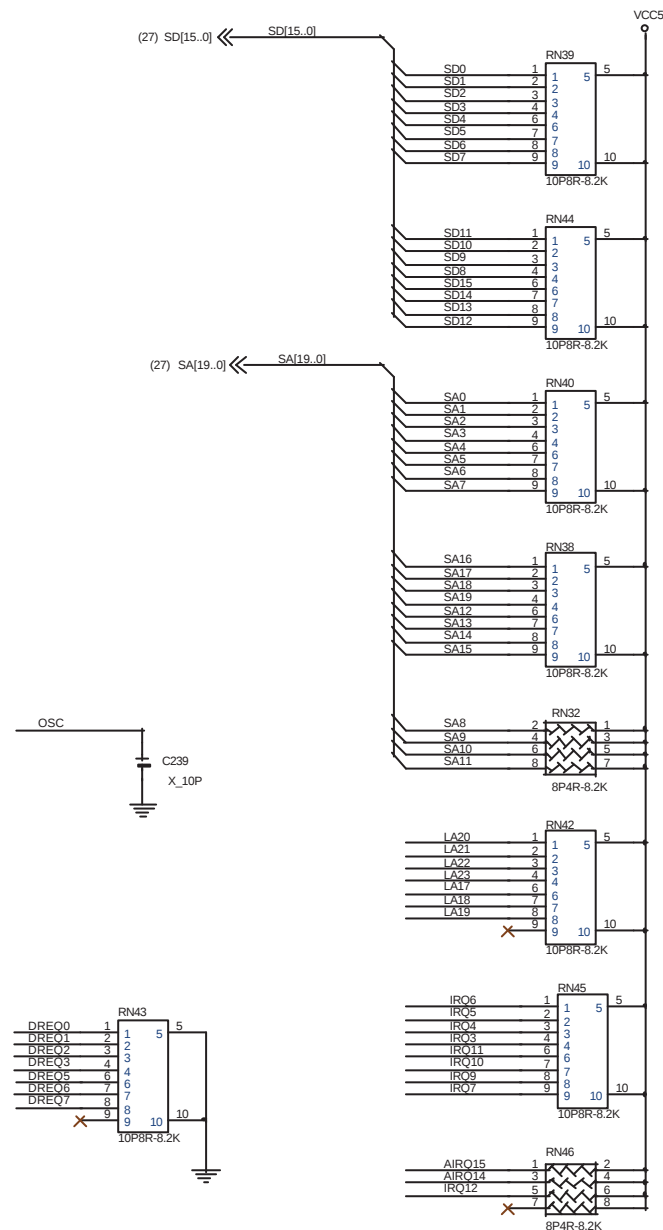


Micro-Star	Title	MS-6531	Rev	1.0
Document Number	ISA Bridge Part 1			
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PCI To ISA Bridge, Part 2



PCI to ISA Bridge Pull Up / Low



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Document Number				
ISA Bridge Part 2 / ISA SLOT				
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Jumper Setting & Connector Setting

Jumper

Jumper	Description
J1	INTERUDER HEADER
J2	CHASSIS INTRUSION HEADER
J3	AUDIO REAR PHONE JACK (LINE_IN, LINE_OUT, MIC_IN)
J4	AUDIO AUX HEADER
J5	AUDIO FRONT PANEL HEADPHONE JACK HEADER
J6	AUDIO INTERNAL SPEAKER HEADER (ATAPI)
J8	CPU SIMULATION PIN
J9	DDR SIMULATION PIN
J10	AGP SIMULATION PIN
J11	BIOS function
1-2	Normal (Default)
2-3	Configuration Mode
JBAT1	CLEAR CMOS
1-2	NORMAL (Default)
2-3	CLEAR CMOS
JP2	CNR RISER CODEC SELECT HEADER
1-2	AUTO MODE (Default)
2-3	PRIMARY AUDIO CODEC ONBOARD
JP3	LEGEND AUDIO HEADER

Connector

Connector	Description
U3	INTEL mPGA478-B CPU
IDE1	Primary
IDE2	Secondary
DIM1	SDRAM DIMM1
DIM2	SDRAM DIMM2
AGP1	AGP Slot
PCI1	PCI Slot1
PCI2	PCI Slot2
PCI3	PCI Slot3
PCI4	PCI Slot4
PCI5	PCI Slot5
COM1	Serial Port
COM2	Serial Port
LPT	Parallel Port
FDD1	Floppy
JMDM1	MODEM RING HEADER
JWOL1	LAN WAKEUP HEADER
KBMS1	PS/2 Keyboard and PS/2 mouse
C_FAN1	CPU FAN HEADER
S_FAN	System FAN HEADER
USB1	USB REAR CONNECTOR
USB2	USB INTERNAL HEADER
POWER	ATX Power
F_P1	Front Panel
C_FAN1	CPU FAN HEADER
S_FAN1	SYS FAN HEADER
P_FAN1	ATX FAN HEADER
JAUDIO1	AUDIO HEADER FOR LEGEND
CD_IN1	CD IN HEADER
CD_IN2 / JSCD1	CD-IN HEADER FOR LEGEND
AUX_IN1	AUX_IN HEADER
MDM_IN1	MODEM_IN HEADER
IR1	IR HEADER
JPW1	ATX12V Power

Micro-Star	Title MS-6531	Rev 0A
Document Number JUMPER SETTING		
Last Revision Date: Saturday, June 02, 2001		Sheet 29 of 33

JBAT1 Clear CMOS		
1 - 2	Normal	*
2 - 3	Clear CMOS	



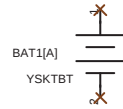
LEGEND AUDIO



JP3	AUDIO DOWN
OPEN	Auto mode
SHORT	Disabled onboard audio codec



BAT SOCKET



J7 BIOS Update	
SHORT	Locked
OPEN	Unlocked *



JP4	ON BOARD LAN
1-3 / 2-4	ENABLE
3-5 / 4-6	DISABLE



MS6531 PCB



AGP RM

AGP1			
B1	-OVRCNT	12V	A1
B2	5V	-TYPEDET	A2
B3	5V	RESERVED	A3
B4	USB+	RESERVED	A4
B5	GND	USB-	A5
B6	-INTB	GND	A6
B7	CLK	-INTA	A7
B8	-REQ	-RST	A8
B9	3.3V	-GNT	A9
B10	ST1	3.3V	A10
B11	ST2	3.3V	A11
B12	-RBF	RESERVED	A12
B13	GND	-PIPE	A13
B14	-WBF	GND	A14
B15	SBA0	RESERVED	A15
B16	3.3V	SBA1	A16
B17	3.3V	SBA2	A17
B18	SBA3	-SB_STB	A18
B19	GND	GND	A19
B20	SBA4	SBA5	A20
B21	SBA6	SBA7	A21
B22	RSVD/KEY	RSVD/KEY	A22
B23	GND/KEY	GND/KEY	A23
B24	AUX3V/KEY	AUX3V/KEY	A24
B25	3.3V/KEY	3.3V/KEY	A25
B26	AD31	AD30	A26
B27	AD29	AD28	A27
B28	3.3V	3.3V	A28
B29	AD27	AD26	A29
B30	AD25	AD24	A30
B31	GND	GND	A31
B32	AD_STB1	-AD_STB1	A32
B33	AD23	C/-BE3	A33
B34	VDDQ	VDDQ	A34
B35	AD21	AD22	A35
B36	AD19	AD20	A36
B37	GND	GND	A37
B38	AD17	AD18	A38
B39	C/-BE2	AD16	A39
B40	VDDQ	VDDQ	A40
B41	-IRDY	-FRAME	A41
B42	AUX3V/KEY	RSVD/KEY	A42
B43	GND/KEY	GND/KEY	A43
B44	RSVD/KEY	RSVD/KEY	A44
B45	3.3V/KEY	3.3V/KEY	A45
B46	-DEVSEL	-TRDY	A46
B47	VDDQ	-STOP	A47
B48	-PERR	-PME	A48
B49	GND	GND	A49
B50	-SERR	PAR	A50
B51	C/-BE1	AD15	A51
B52	VDDQ	AD14	A52
B53	AD12	AD11	A53
B54	GND	GND	A54
B55	VDDQ	C/-BE0	A55
B56	AD10	AD9	A56
B57	AD8	C/-BE0	A57
B58	VDDQ	VDDQ	A58
B59	AD_STB0	-AD_STB0	A59
B60	AD7	AD6	A60
B61	GND	GND	A61
B62	AD5	AD4	A62
B63	AD3	AD2	A63
B64	VDDQ	VDDQ	A64
B65	AD1	AD0	A65
B66	VREF.CG	VREF.CG	A66

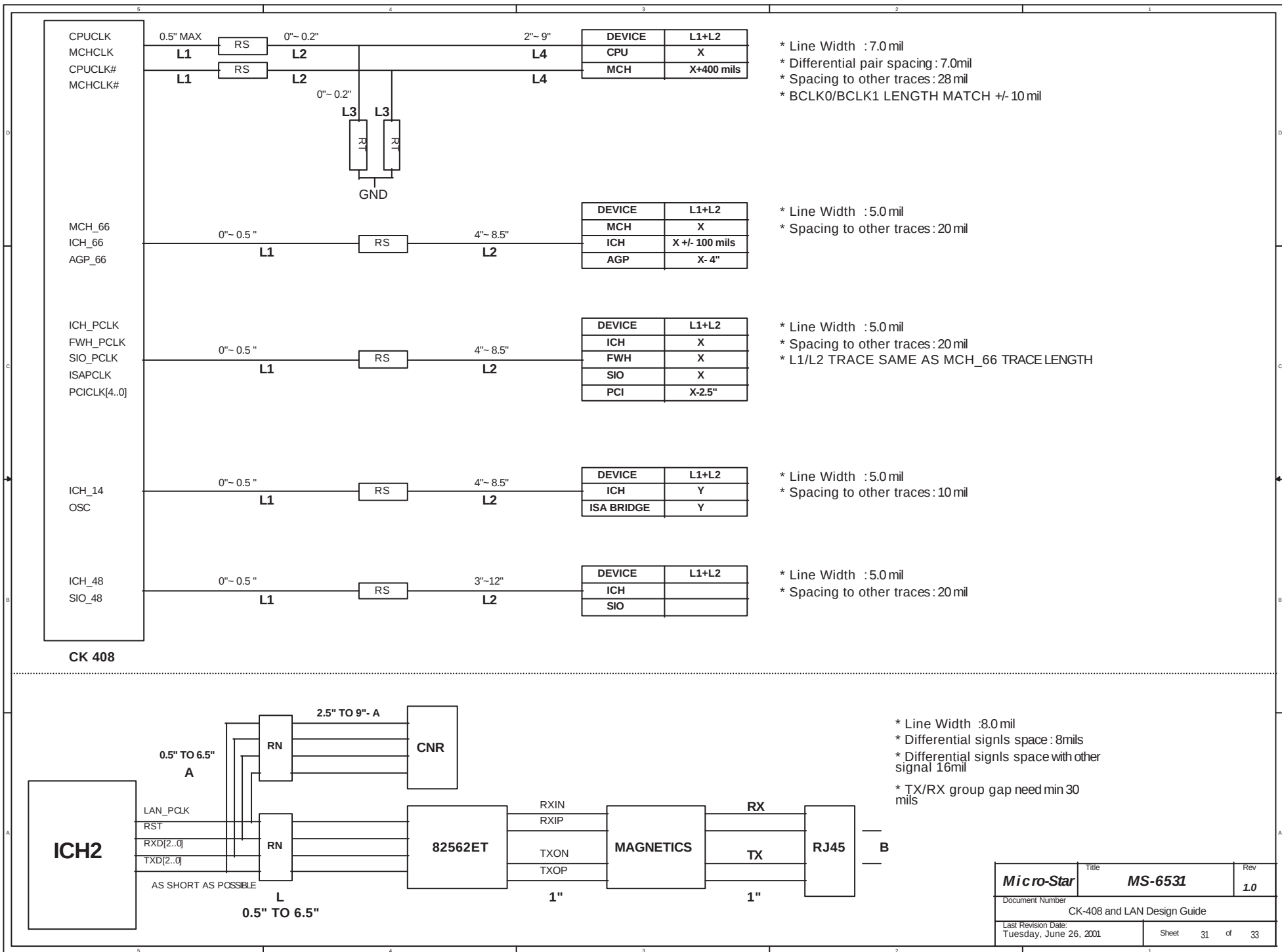
AGP-D124-BN_1.5V

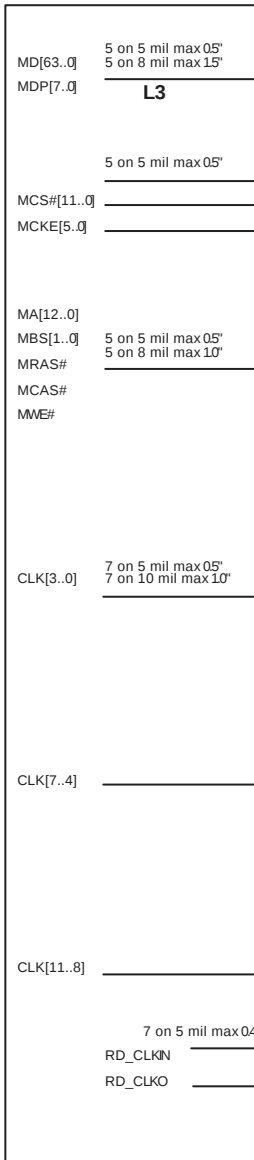
BIOS

U25[1]			
1	VPP	VCC	32
2	RST#	CLK	31
3	FGPI3	FGPI4	30
4	FGPI2	IC(VIL)	29
5	GND	FGPI1	28
6	FGPI0	VCCA	27
7	WP#	GND	26
8	TBL#	VCC	25
9	ID3	INIT#	24
10	ID2	FWH4	23
11	ID1	RFU	22
12	ID0	RFU	21
13	FWH0	RFU	20
14	FWH1	RFU	19
15	FWH2	RFU	18
16	GND	FWH3	17

SST49LF002A

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Micro-Star	MS-6531	0A
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MANUAL		
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MCH

* Trace Width : 7 mils
* Trace spacing : 15 mils
* A+C < 1.5" +/- 0.1"

DIMM1

DIMM2

DIMM3

* Trace Width : 5 mils
* Trace spacing : 12 mils

* Trace Width : 5 mils
* Trace spacing : 12 mils
MCS#
* Trace Width : 10 mils
* Trace spacing : 12 mils
MCKE

* Trace Width : 5 mils
* Trace spacing : 12 mils

* Trace Width : 7 mils
* Trace spacing : 20 mils
* A+C < 5.9" +/- 0.05"
* 5.85" < A+C+D < 5.95"

Micro-Star	Title MS-6531	Rev 1.0
Document Number PC133 DIMM DG		
Last Revision Date: Tuesday, June 26, 2001		Sheet 32 of 33

Revision Initial ver: 0A on 06/04/01

Schematic Initial Revision 0A

A large empty rectangular area for a schematic diagram, bounded by a grid with labels A, B, C, D on the left and 1, 2, 3, 4, 5 on the top.

Micro-Star	Title MS-6531	Rev 1.0
Document Number	Revision History - 1	
Last Revision Date: Tuesday, June 26, 2001	Sheet	33 of 33

Revision Initial ver: 0A on 06/04/01

Schematic Initial Revision 0A

The diagram area is a large rectangle with a grid. The left side is labeled with letters A, B, C, and D from bottom to top. The top side is labeled with numbers 1, 2, 3, 4, and 5 from right to left. The interior of the rectangle is empty, except for a small table in the bottom right corner.

Micro-Star	Title	MS-6531	Rev	1.0
Document Number	Revision History - 1			
Last Revision Date: Tuesday, June 26, 2001		Sheet	33	of 33

Revision Initial ver: 0A on 06/04/01

Schematic Initial Revision 0A

The diagram area is a large rectangle with a grid. The left side is labeled with letters A, B, C, and D from bottom to top. The top side is labeled with numbers 1, 2, 3, 4, and 5 from right to left. The interior of the rectangle is empty, except for a small table in the bottom right corner.

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