

Acer Flamingo

01200_SD

CLK GEN.
ICS

PAGE:03

Mobile CPU
Tualatin
version :

PAGE:4~5

Project code:
PCB P/N:
REVISION:

HOST BUS (133M)

SO-DIMM*2

PAGE:10

(133M)
MEM BUS

Almador-M
GMCH
Version : A4

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RAM BUFFER
(2*32bit)*2

VGA
ATI Mobility
M6S
version:

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CRT

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LCD

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DOCK V

TV OUT

ATA100

PRIMARY EIDE
HDD

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HOT PLUG

SECONDARY EIDE
CDROM

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USB 1.0X2

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HUB I/F (66M)

ICH3-M

Version :

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LAN
82562EM

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PCI BUS (33M)

DOCK V

QSW

CARDBUS
OZ6933T

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POWER SW
MIC2564A

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CARDBUS
SLOT A, B

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AC-Link

LPC BUS (33M)

LINE IN

AC'97 CODEC
ALC200

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MODEM
Daughter
Card

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SMSC
SIO
LPC47N267

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KBC
M38859

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FWH
82802AB

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LPC
DEBUG
CONN.

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INT.SPKR

OP AMP
APA2020

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VR

MIC

LINE OUT

FIR

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FLOPPY

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PRINTER

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SERIAL

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FINGER
PRINTER

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TOUCH PAD

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INT. KB

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PS/2 CONN

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PCB LAYER

L1: Signal 1(X)
L2: GND
L3: Signal 2 (Y)
L4: Signal 3 (X/Y)
L5: GND
L6: POWER
L7: Signal 4(weak)
L8: Signal 5 (X)
L9: GND
L10:Signal 6 (Y)

DC/DC&CHARGER Switching Power MAX1632/MAX1772

INPUTS	OUTPUTS
DCBATOUT	+6V
AD+	+5VSB
	+3.3V
	+5V
	+12V
	CD+5V
	PAGE:32

CPU DC/DC Switching Power MAX1718/MAX1714

INPUTS	OUTPUTS
DCBATOUT	+VCC_CORE
	+VCCT
	PAGE:30/31

OTHER DC/DC MAX1644/MAX1792 MAX8863

INPUTS	OUTPUTS
+5V	+1.8V
+3.3V	+1.5V
LAN_+3.3V	+3VSB
+5VSB	+1.8VSB
	+3.3V
	PAGE:31/32

CMOS
BAT

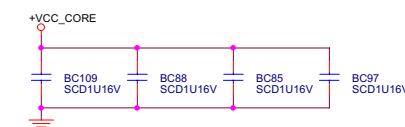
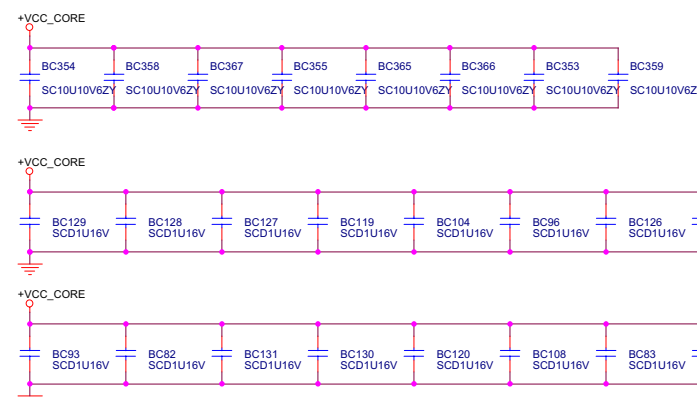
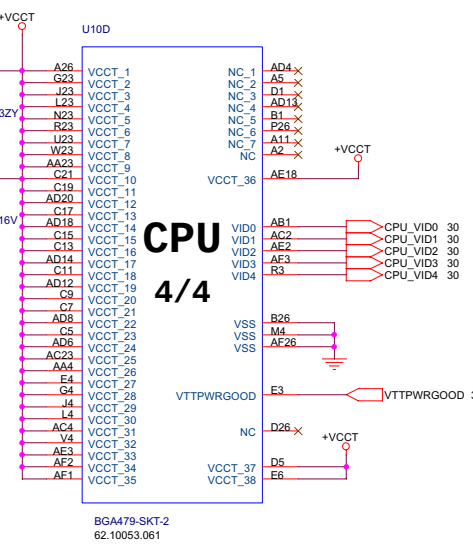
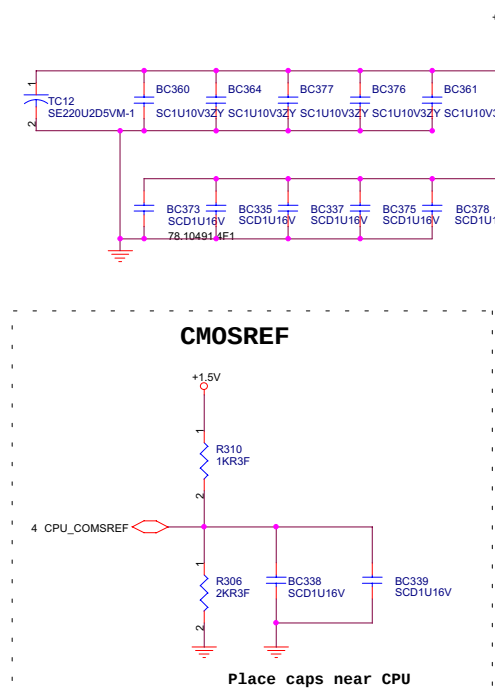
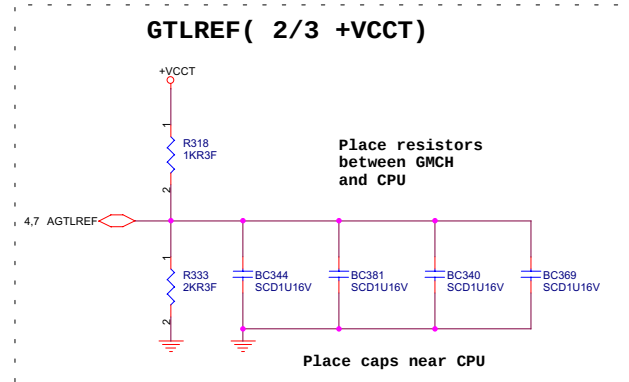
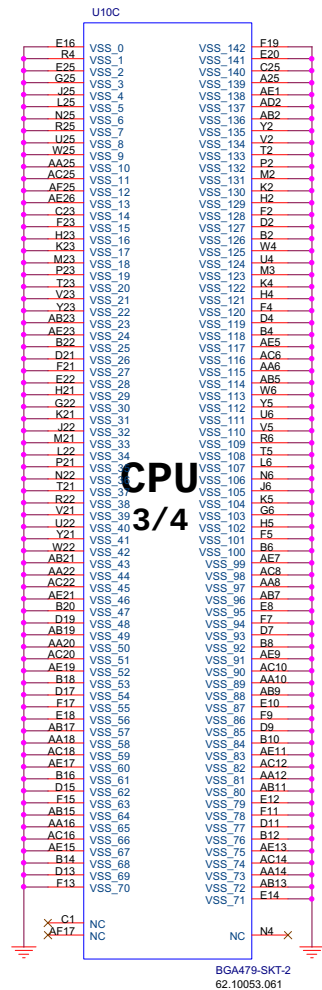


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21F, 88, Sec.1, Hsin Tai Wu Rd.,
Hsichih, Taipei Hsien 221,
Taiwan, R.O.C.

Title Block Diagram			
Size A3	Document Number Acer Flamingo	Rev SB	
Date: Thursday, July 05, 2001	Sheet 1	of 38	

Acer Flmanigo History

Rev. 0.1 : Jun. /1 / 2001 for PCB team placement



Decoupling Recommendation

VCC_CORE	Underneath balls on solder side	0.47uF * 24	Use 2-3 vias per pad for reduced inductance during layout
	On the peripheral near balls	10uF / 6.3V * 10	Placement should be near processor for all
	Bulk Caps		
VCCT	Place close to processor for all	1uF * 10	Use 2 vias per pad for reduced inductance during layout
	Bulk Caps		

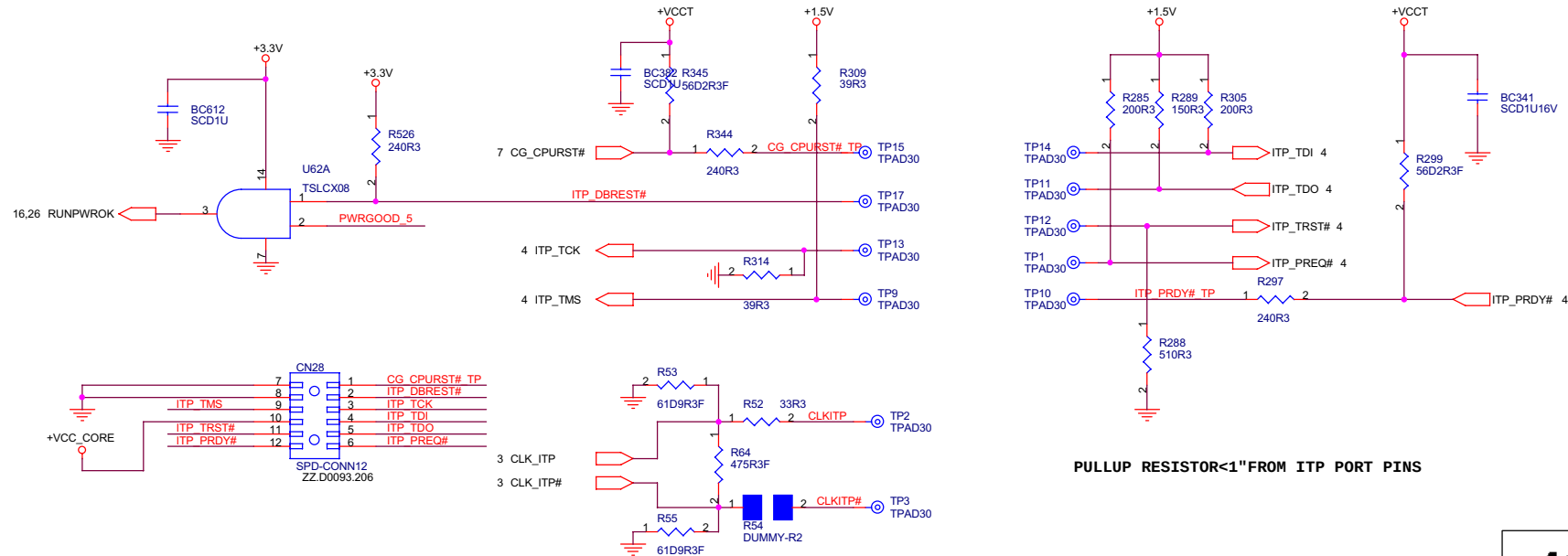
Freeza

0.1uF * 24	10uF / 6.3V * 12
10uF / 10V * 10	10uF / 6.3V * 10 + 6 * NS
220uF / 2.5V * 8	150uF / 4V * 12 + 2 * NS
1uF * 10	1uF * 10 + 2 * NS
220uF / 2.5V * 2	150uF / 4V * 5 + 1 * NS

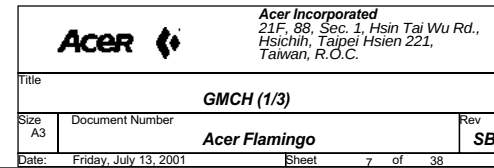
Kodiak Ver. 0.5

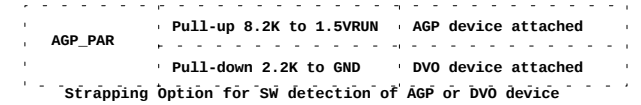
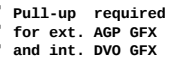
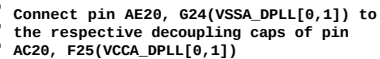
0.1uF * 24	10uF / 6.3V * 12
10uF / 10V * 10	10uF / 6.3V * 10 + 6 * NS
220uF / 2.5V * 8	150uF / 4V * 12 + 2 * NS
1uF * 10	1uF * 10 + 2 * NS
220uF / 2.5V * 2	150uF / 4V * 5 + 1 * NS

THERMDP1/THERMDN ON THE SAME LAYER
THERMDP2/THERMDN ON THE SAME LAYER

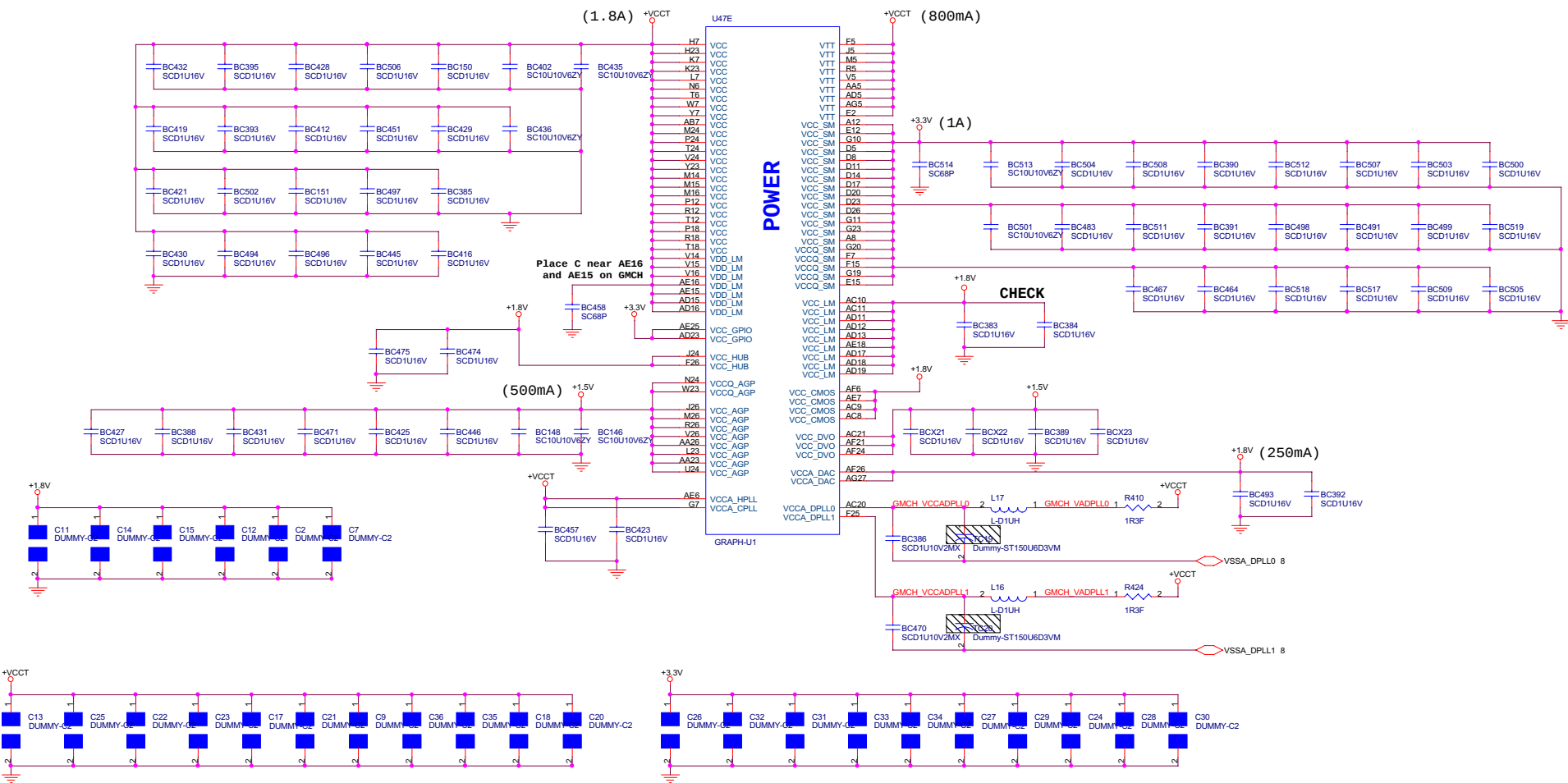


PULLUP RESISTOR<1"FROM ITP PORT PINS





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Title			
GMCH (2/3)			
Size A3	Document Number		Rev
Acer Flamingo		SB	
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Decoupling Recommendation

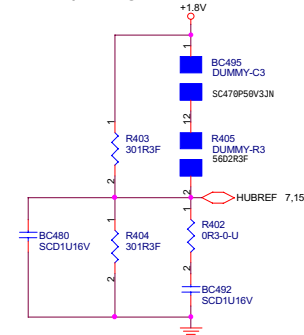
Freeza

Kodiak Ver. 0.5

V1.2S_GMCH	Decoupling Caps	0.1uF * 20	Distribute as close as possible to GMCH-M processor Quadrant	0.1uF * 20
	Bulk Caps	68pF * 1		150uF / 4V * 5 + 1 * NS
V1.2S_GMCHCORE	Decoupling Caps	0.1uF * 40	Close to VDD_LM, near pins AE15 and AE16 on Almador	68pF * 1
	Bulk Caps			150uF / 4V * 10 + 1 * NS
V1.5S_GMCH	Decoupling Caps	0.1uF * 9	Distribute as close as possible to GMCH-M AGP/DVO Quadrant	0.1uF * 9
	Bulk Caps	82pF * 4		82pF * 4
V1.8S_GMCH	Decoupling Caps	0.1uF * 4 + 4	Distribute as close as possible to GMCH-M Local Memory Quadrant	0.1uF * 4 + 2
	Bulk Caps	82pF * 2	Additional 4 * 0.1uF shall be distributed as close as possible to VCCPCMOS_LM	82pF * 2
V3_GMCH	Decoupling Caps	0.1uF * 12 + 2	Distribute as close as possible to GMCH-M System Memory Quadrant	0.1uF * 12 + 2
	Bulk Caps	82pF * 4	Additional 4 * 0.1uF shall be distributed as close as possible to IO Quadrant	82pF * 4

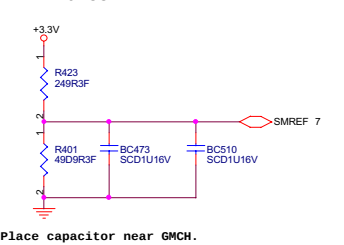
Almador-M Checklist Ver. 0.5 8/28

HUB INTERFACE REF 1/2*1.8V



Layout Note:
Place divider pair in middle of bus.
Place capacitors near GMCH.

SYSTEM MEMORY REF 0.55V

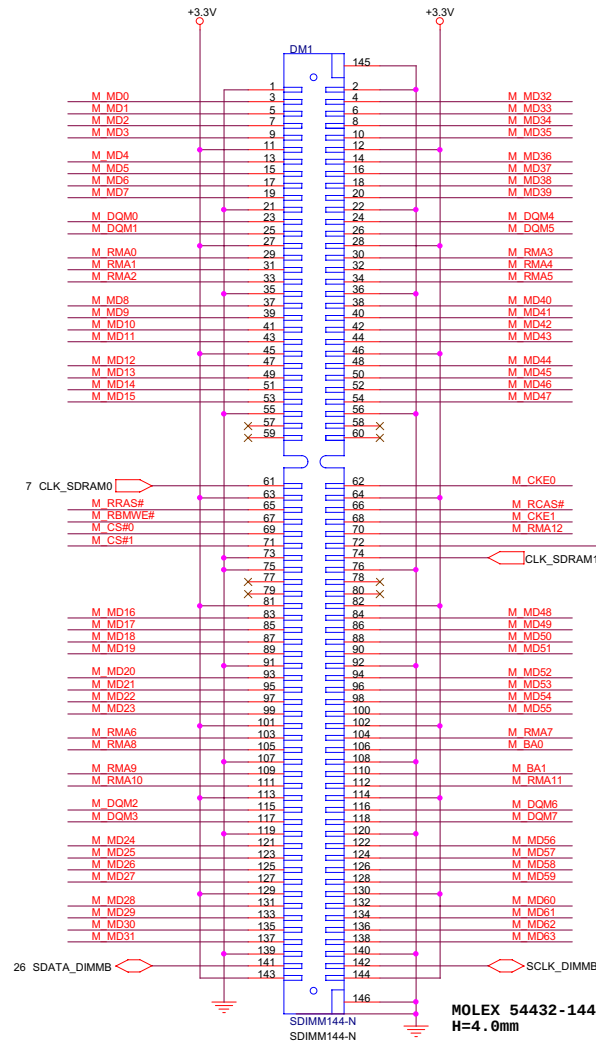


Place capacitor near GMCH.

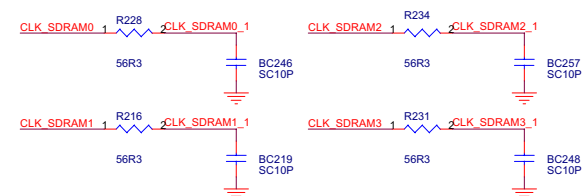
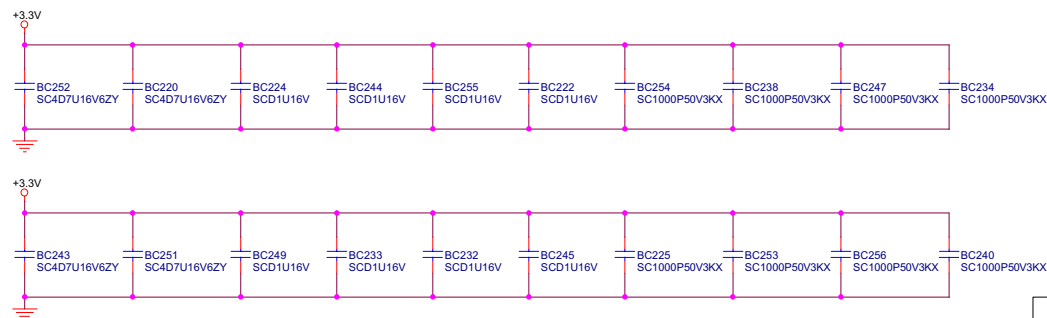
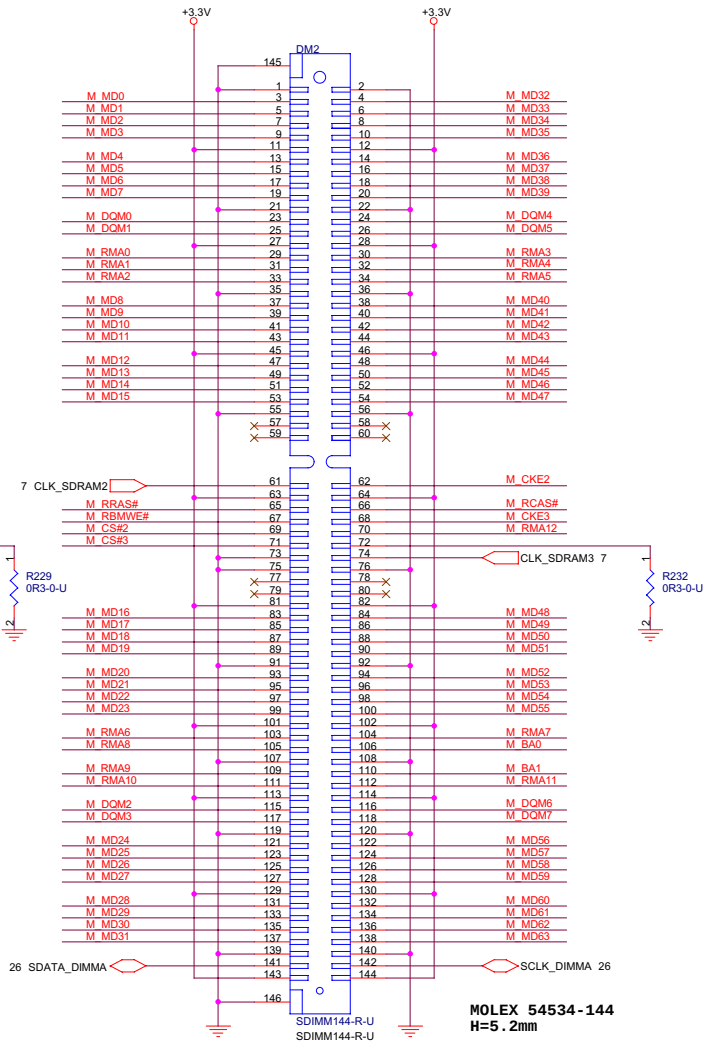
Acer Incorporated		21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
Title	GMCH(3/3)		
Size	Document Number	Acer Flamingo	Rev
Custom			SB
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7 M_RMA[0..12] 7 M_RCAS# 7 M_RRAS# 7 M_BA0 7 M_CS#0..3 7 M_BA1 7 M_DQM[0..7] 7 M_RBMWE# 7 M_CKE[0..3]

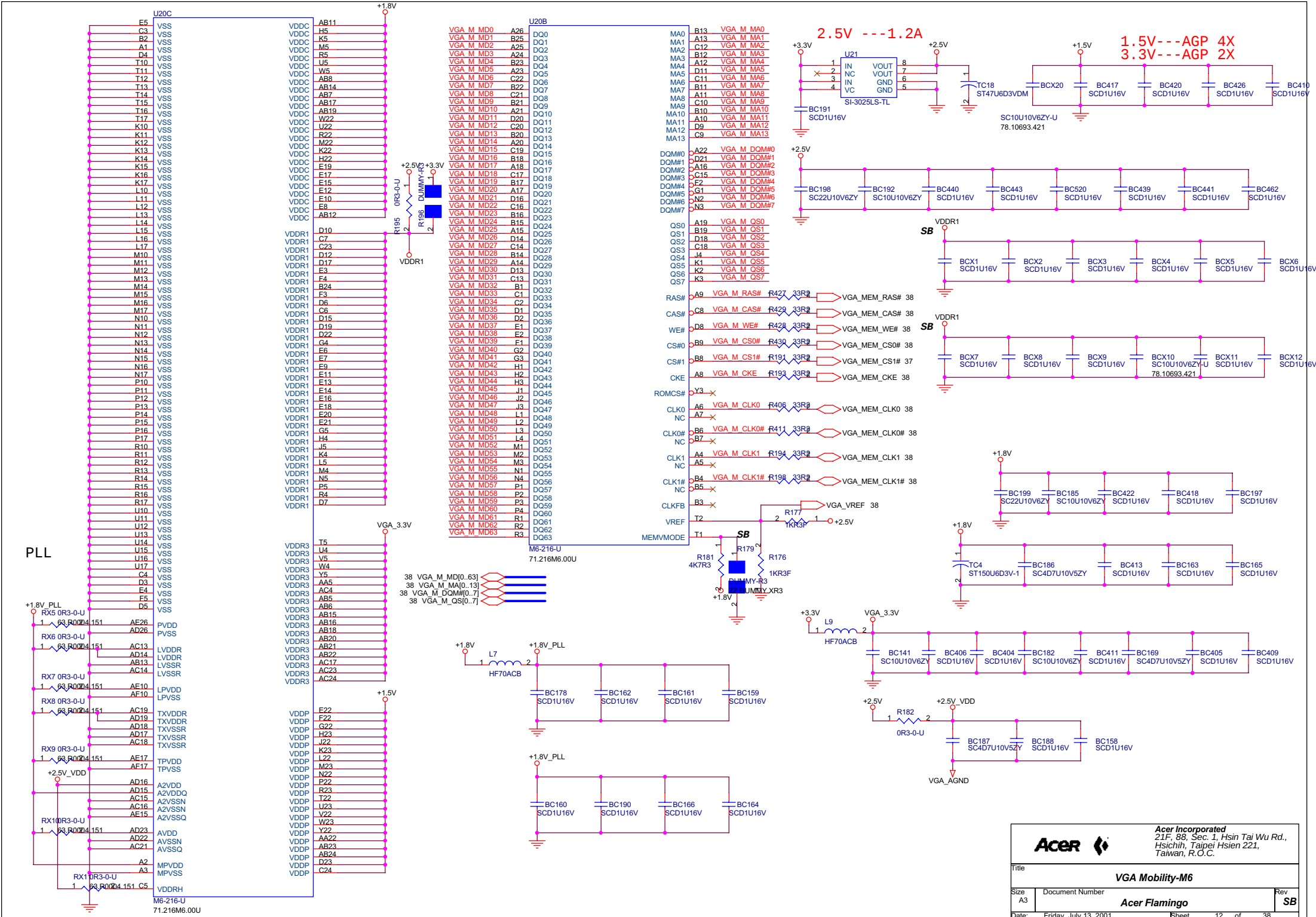
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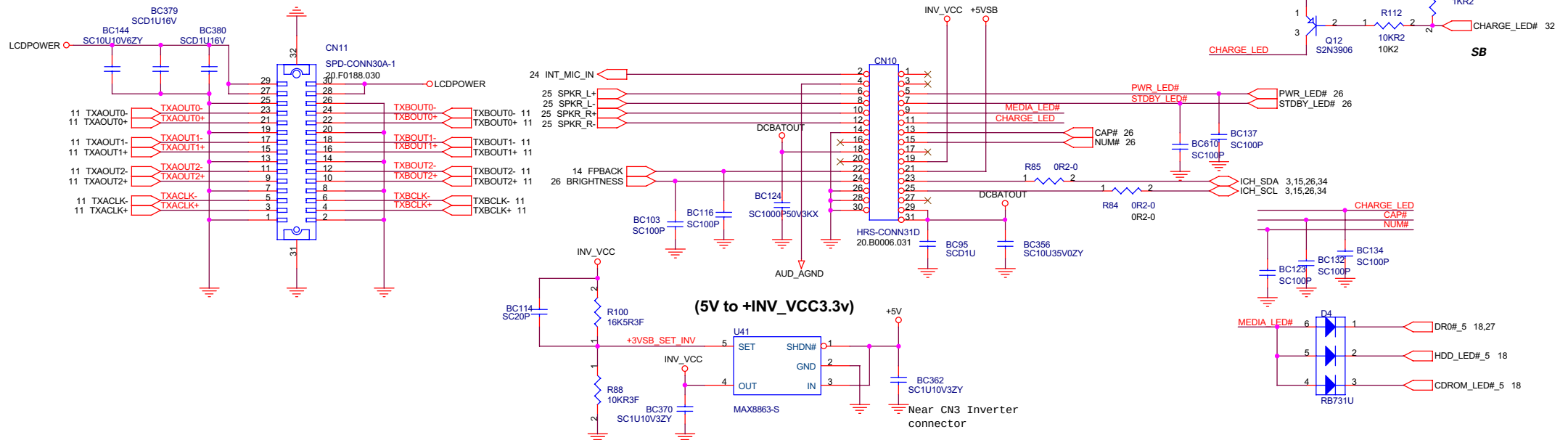
(Reverse Type)



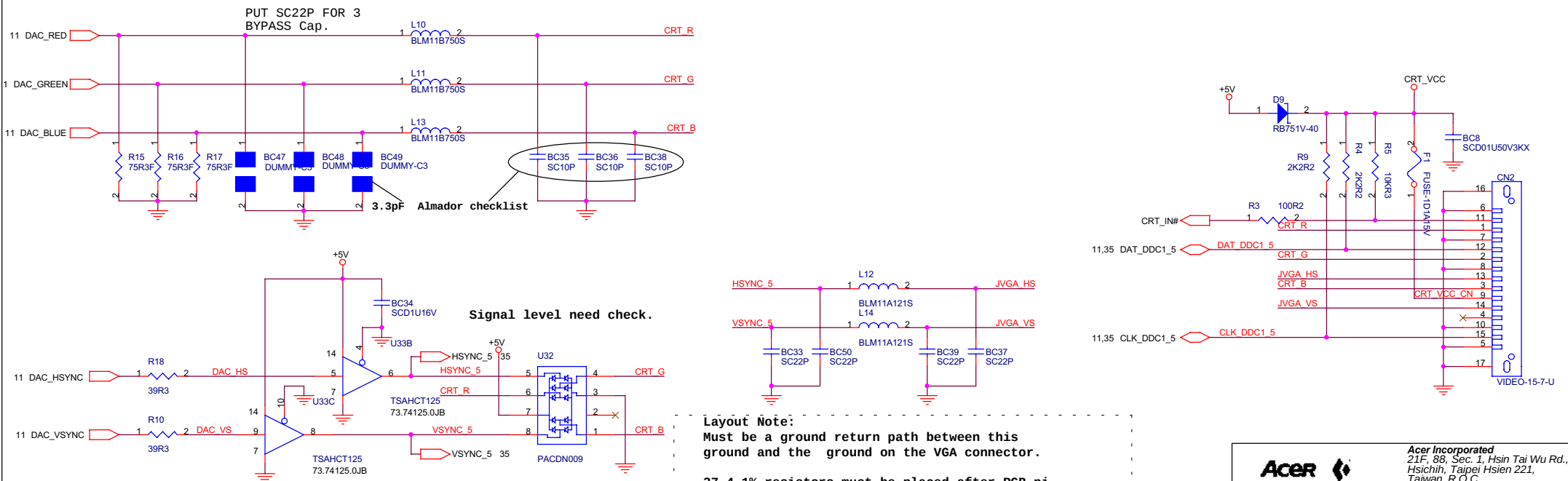
NOTE: NETWORK RESISTOR NEAR GMCH < 1.5 inch.



LCD



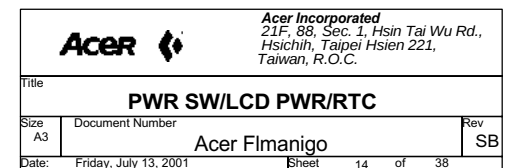
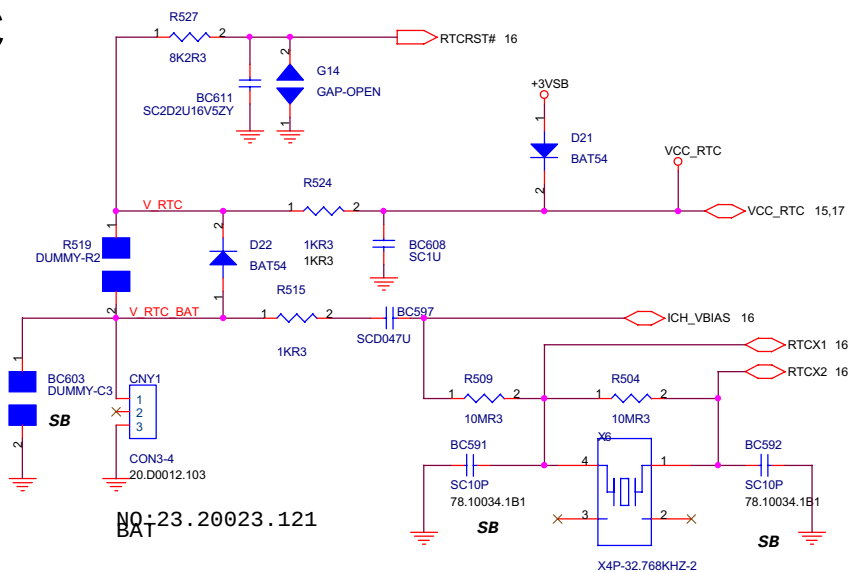
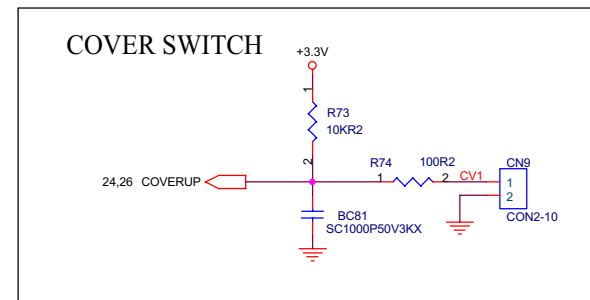
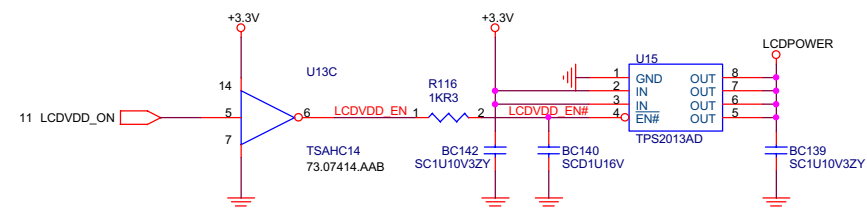
CRT



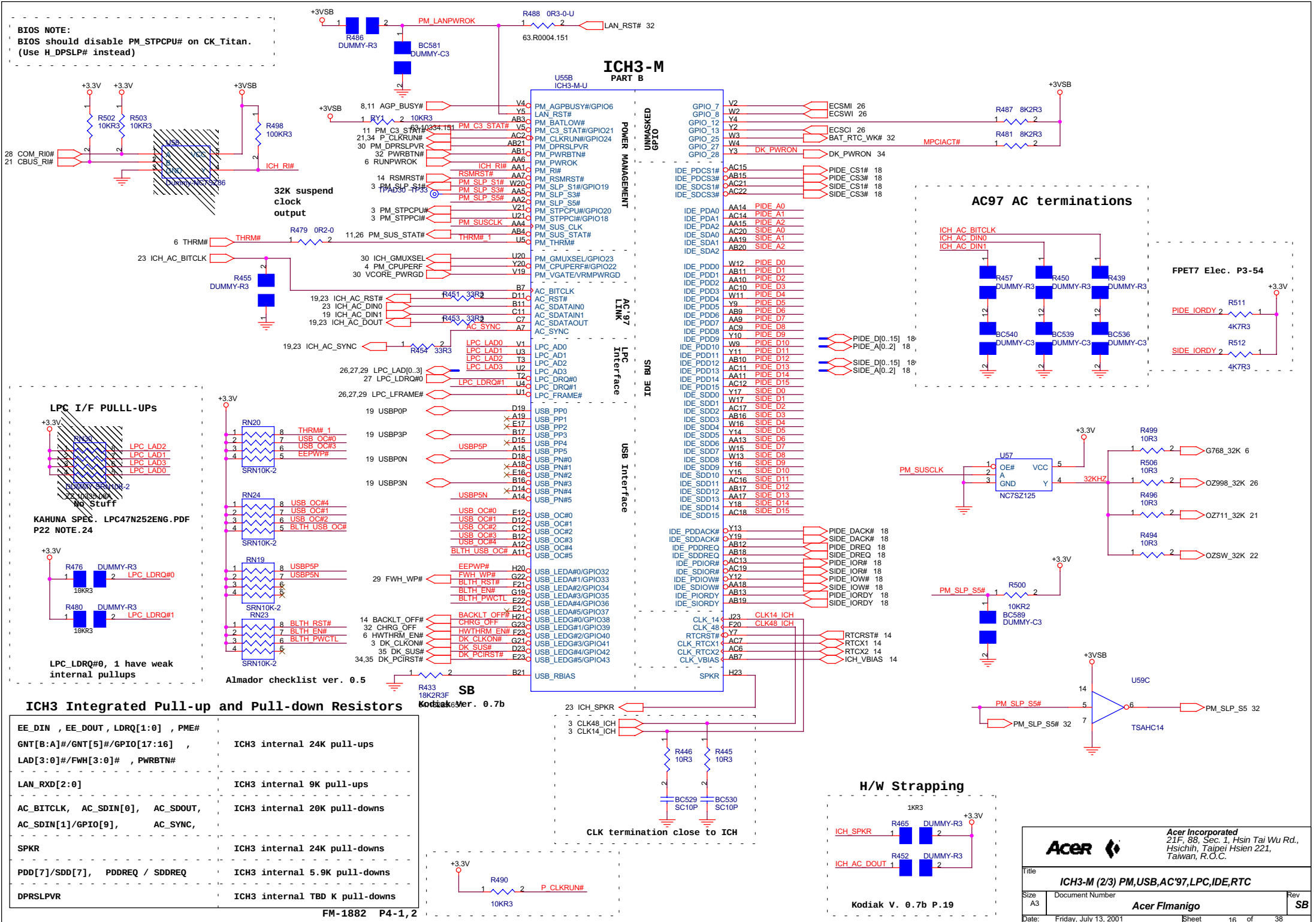
Layout Note:
Must be a ground return path between this ground and the ground on the VGA connector.

37.4_1% resistors must be placed after RGB pi filter ,near CRT connector.

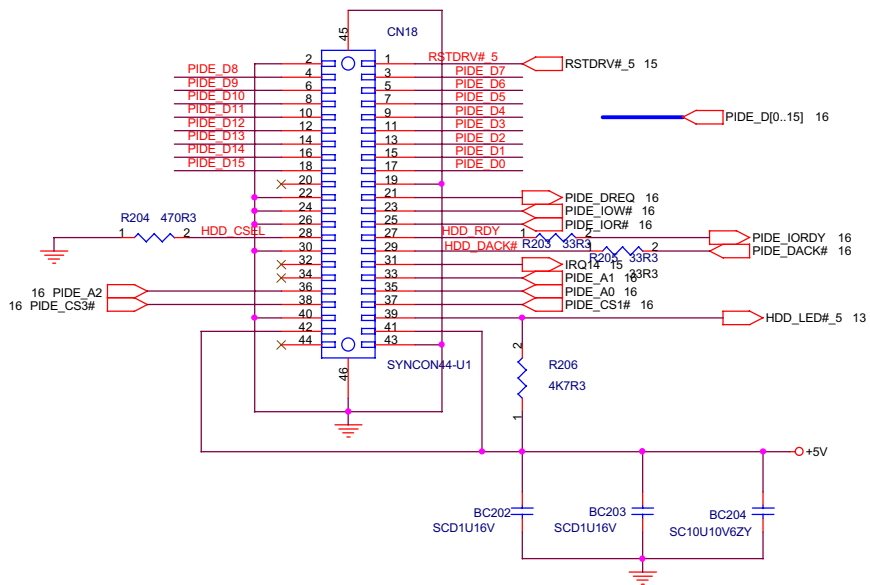
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Title			
LCD/INV/CRT CONN.			
Size A3	Document Number		Rev
Acer Flamingo		SB	
Date:	Printed: July 13, 2001	Sheet: 13	of 38



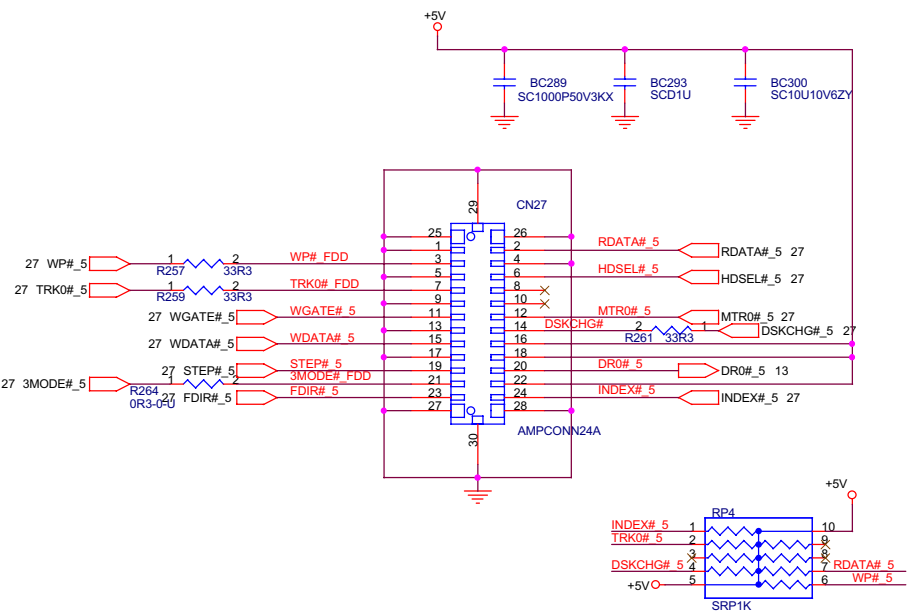
BIOS NOTE:
BIOS should disable PM_STPCPU# on CK_Titan.
(Use H_DPSLP# instead)



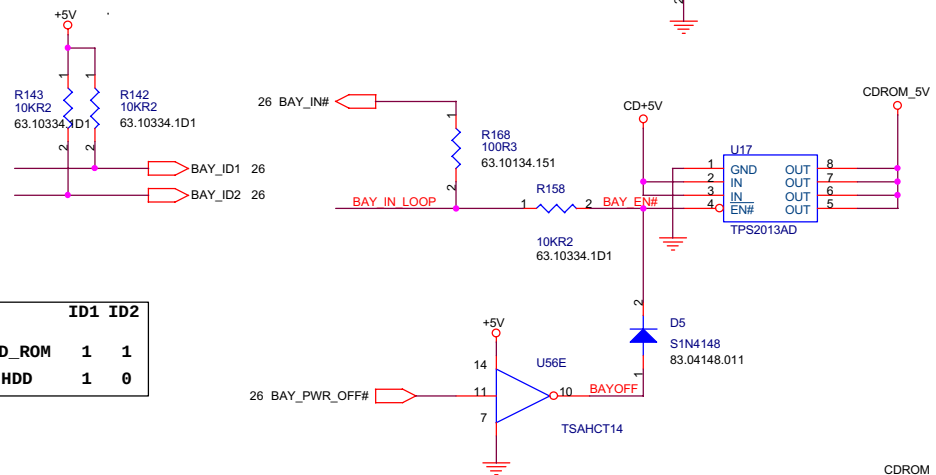
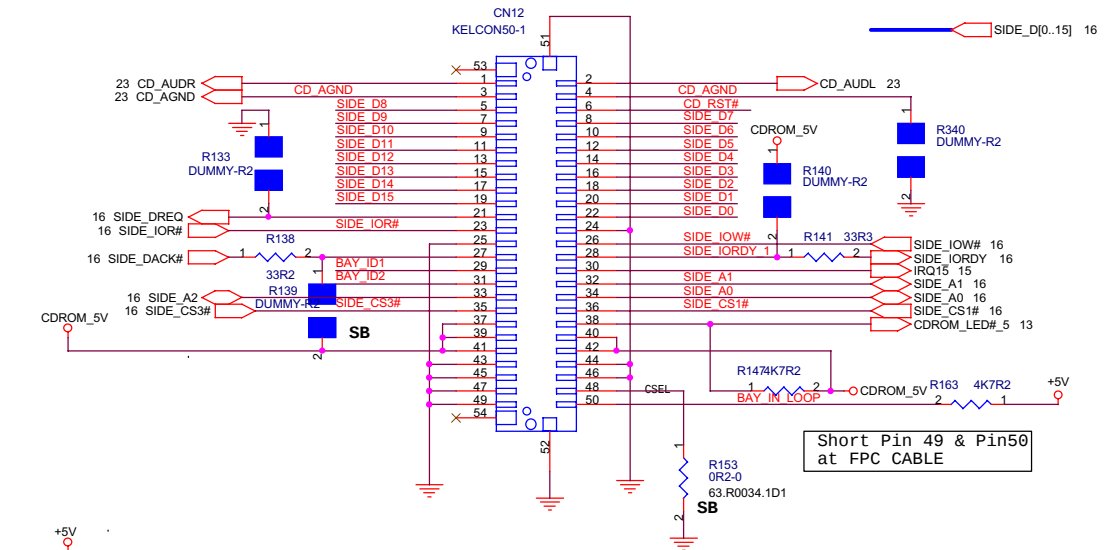
HDD



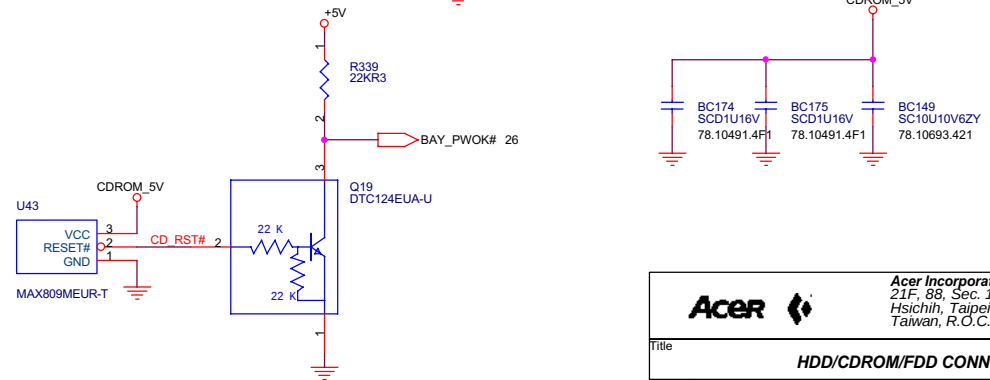
FDD

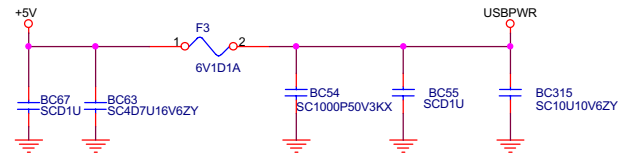


CDROM



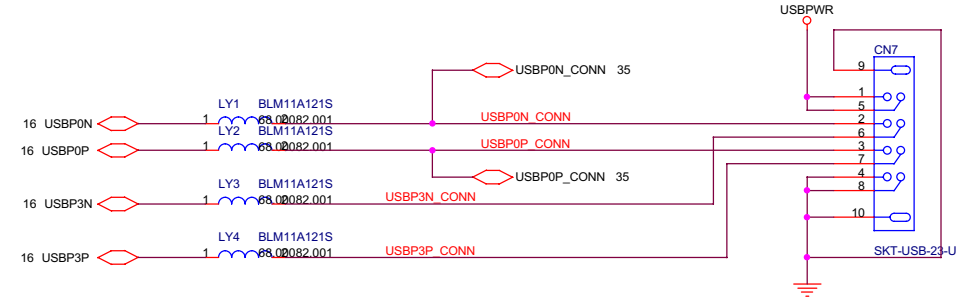
	ID1	ID2
CD_ROM	1	1
HDD	1	0





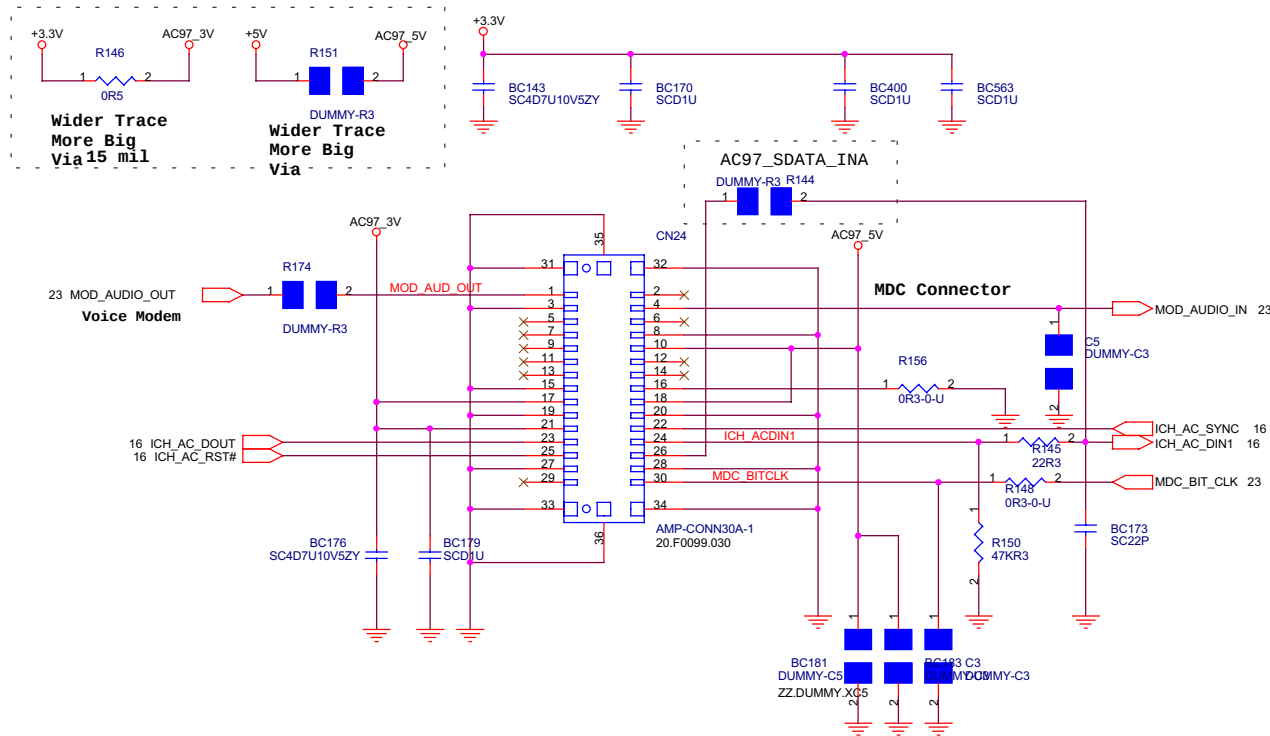
Filtering RC network located near ICH3-M
FPET7 Elec. P3-14

USB Common mode choke
MURATA
PLW3216S900SQ2



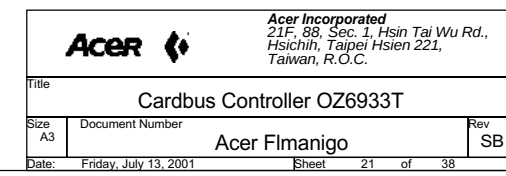
Filtering RC network located near ICH3-M
FPET7 Elec. P3-14

USB Common mode choke
MURATA
PLW3216S900SQ2



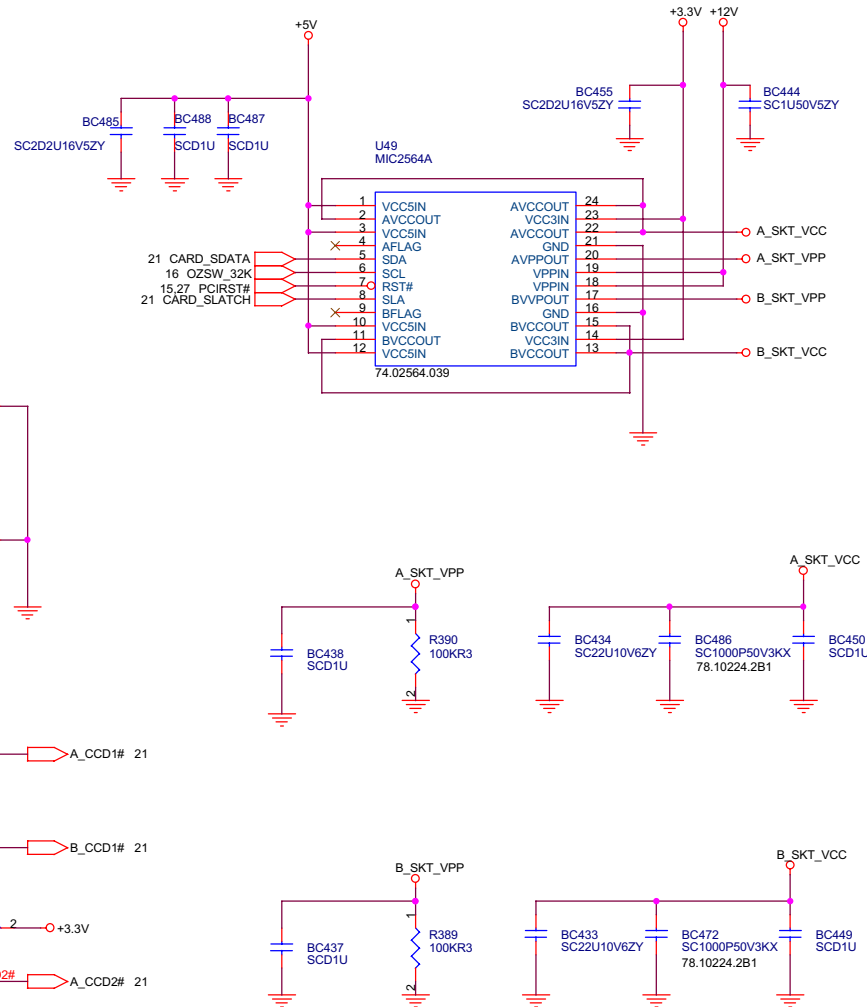
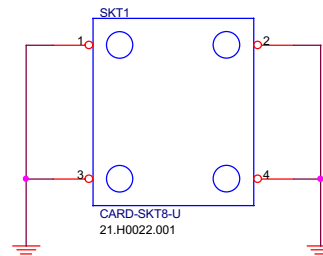
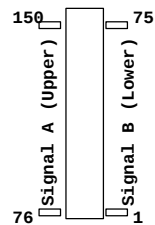
MDC

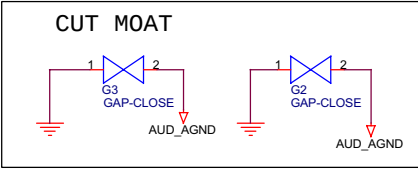
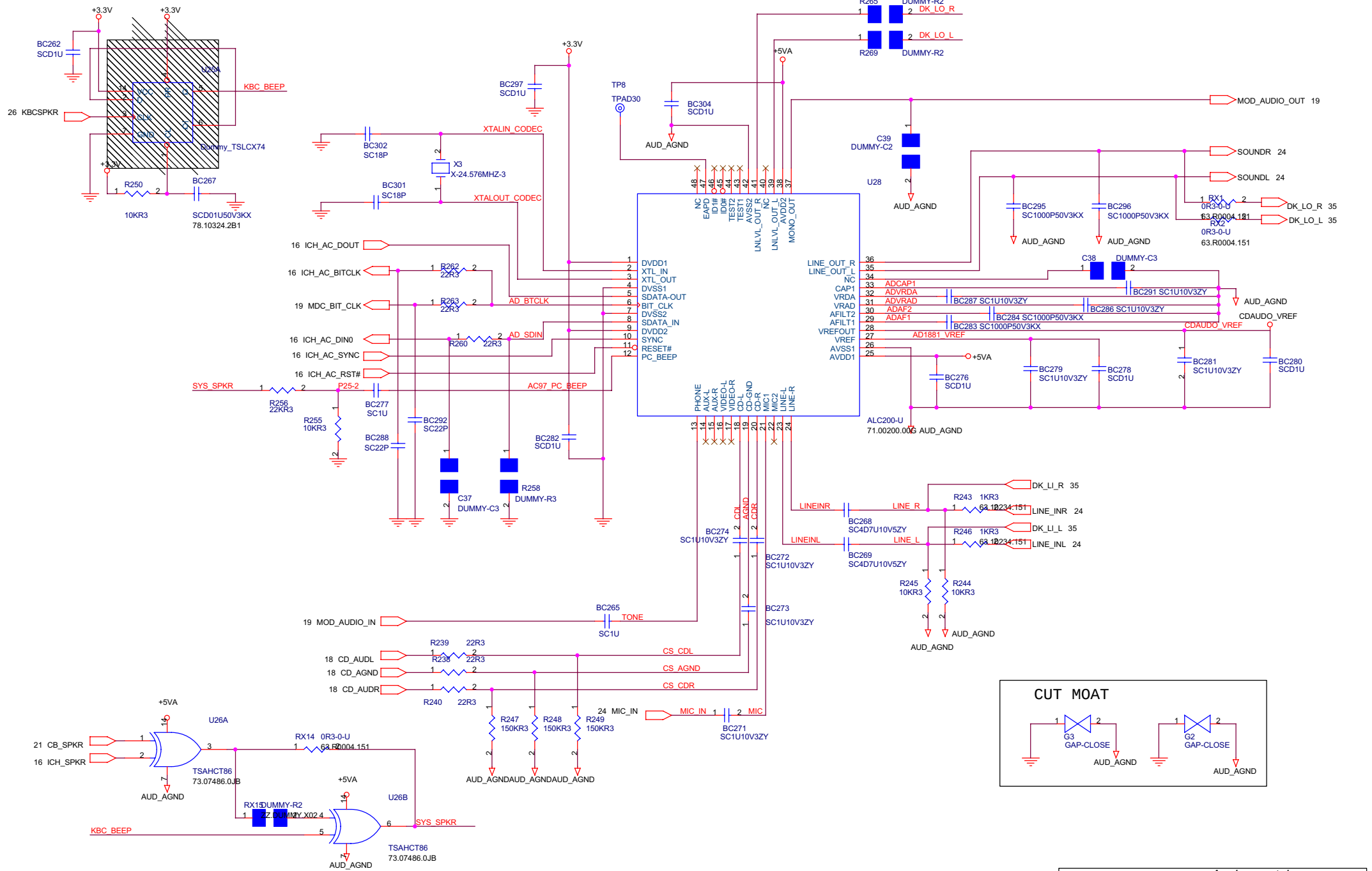
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Title			
USB / MDC CONN.			
Size A3	Document Number Acer Flmanigo		Rev SB
Date:	Friday, July 13, 2001	Sheet 19 of 38	

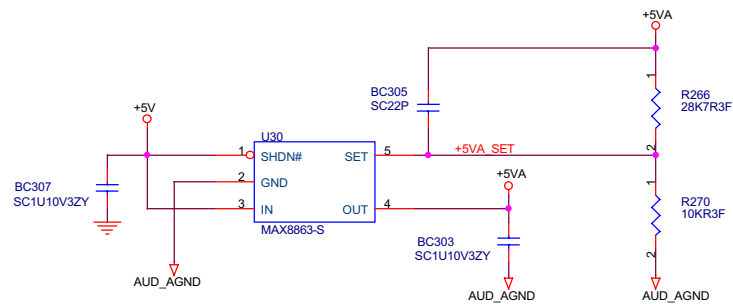


Category	Value
B1	100
B77	100

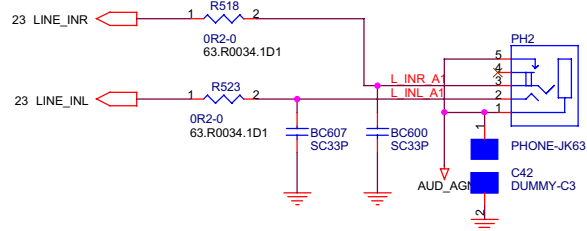
Lower = Slot1 / Signal B = Conn A



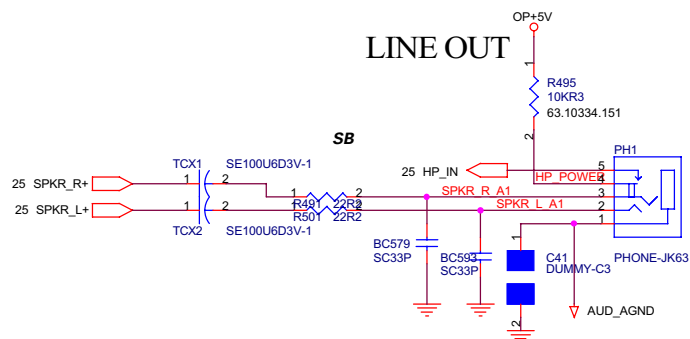




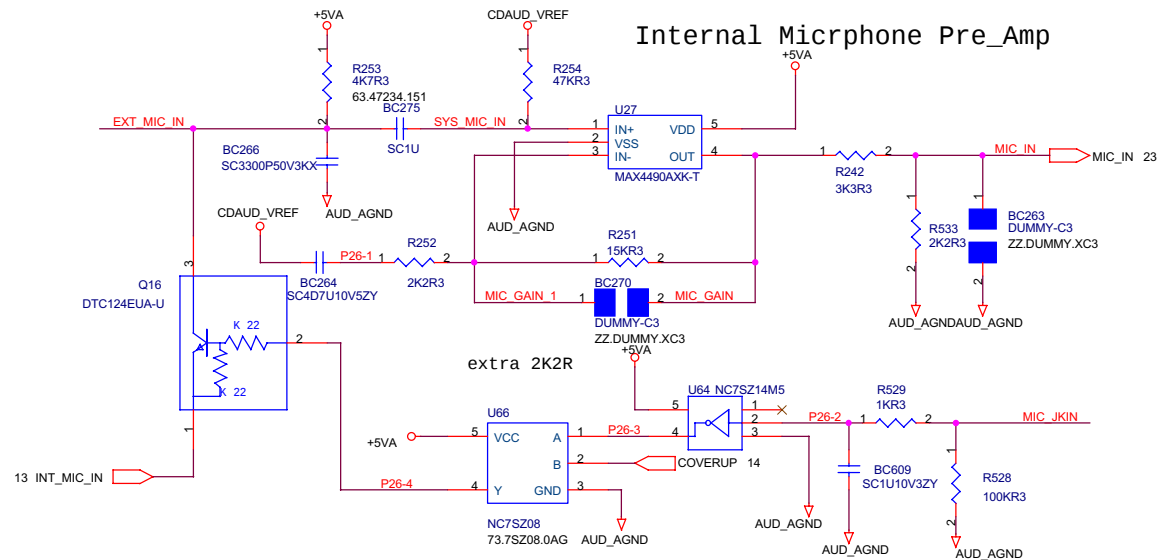
LINE IN



LINE OUT

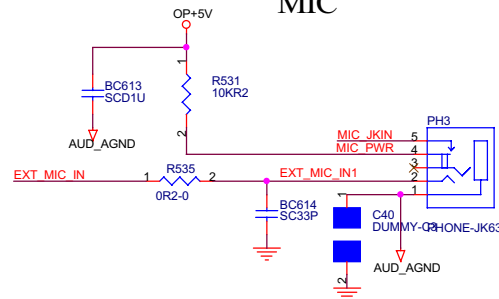


All 33pF capacitors are used for EMI concern

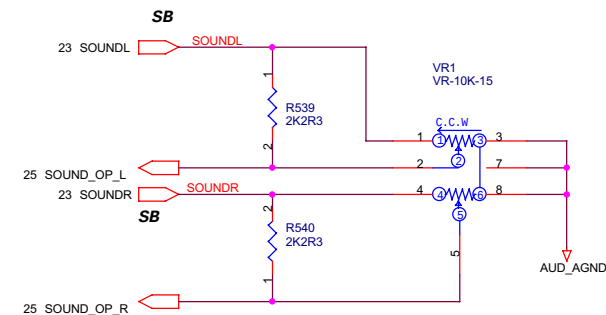


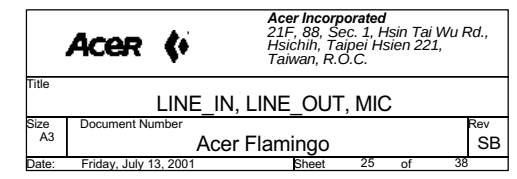
Reserve for Special Request
When LCD Off, Int Mic turn
off

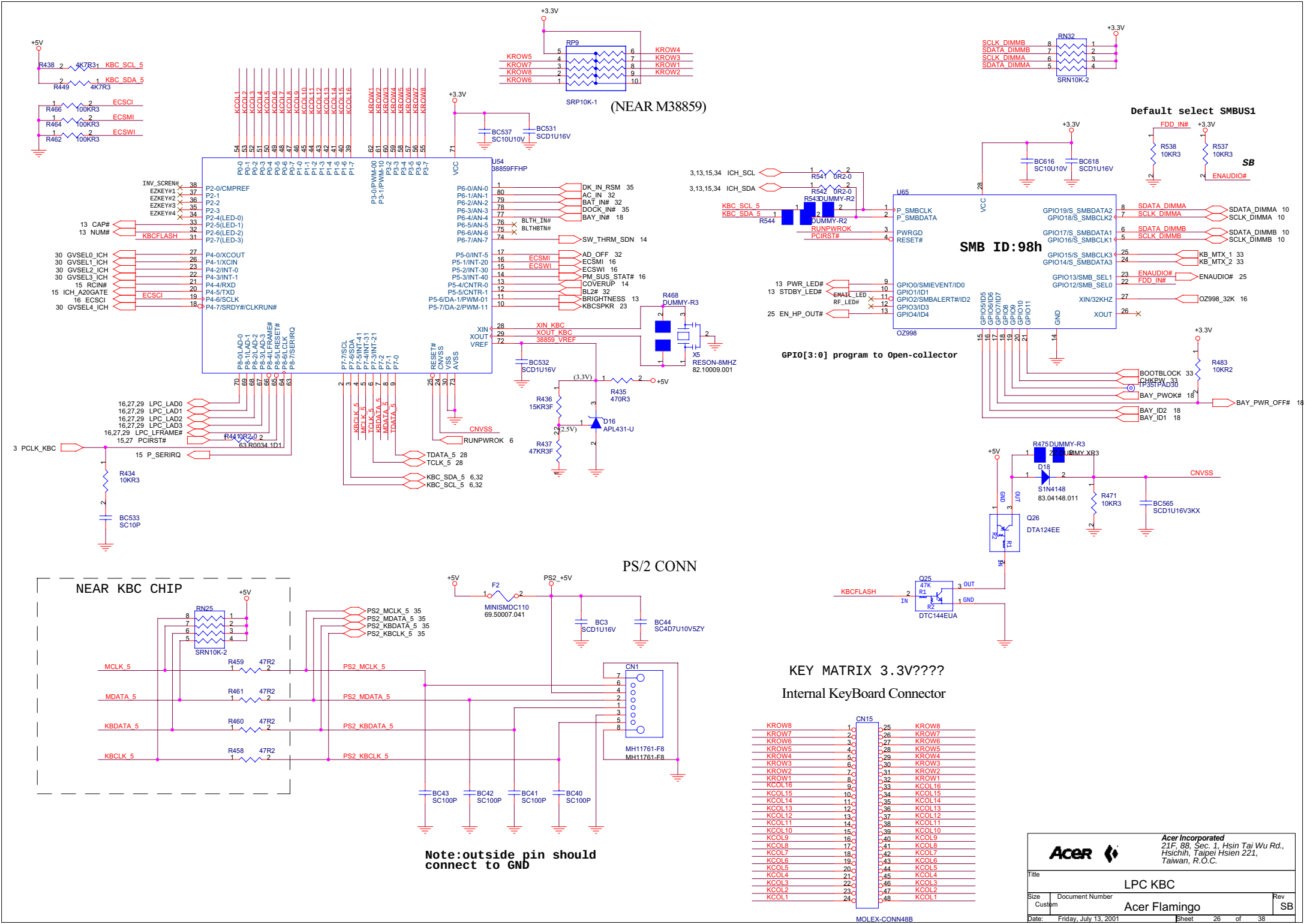
MIC

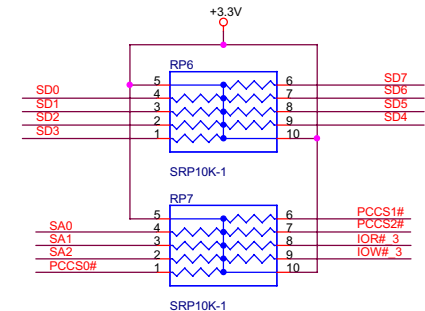
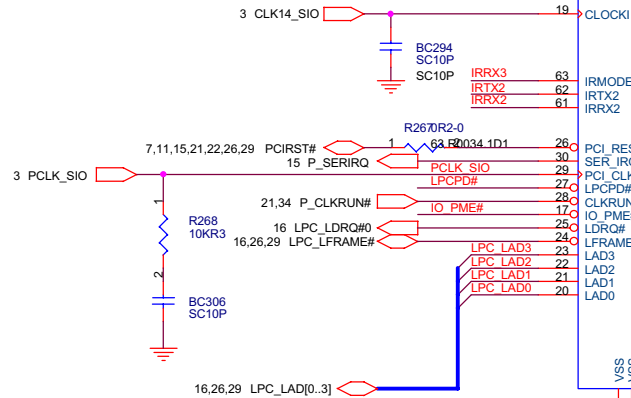
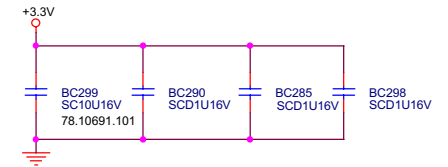
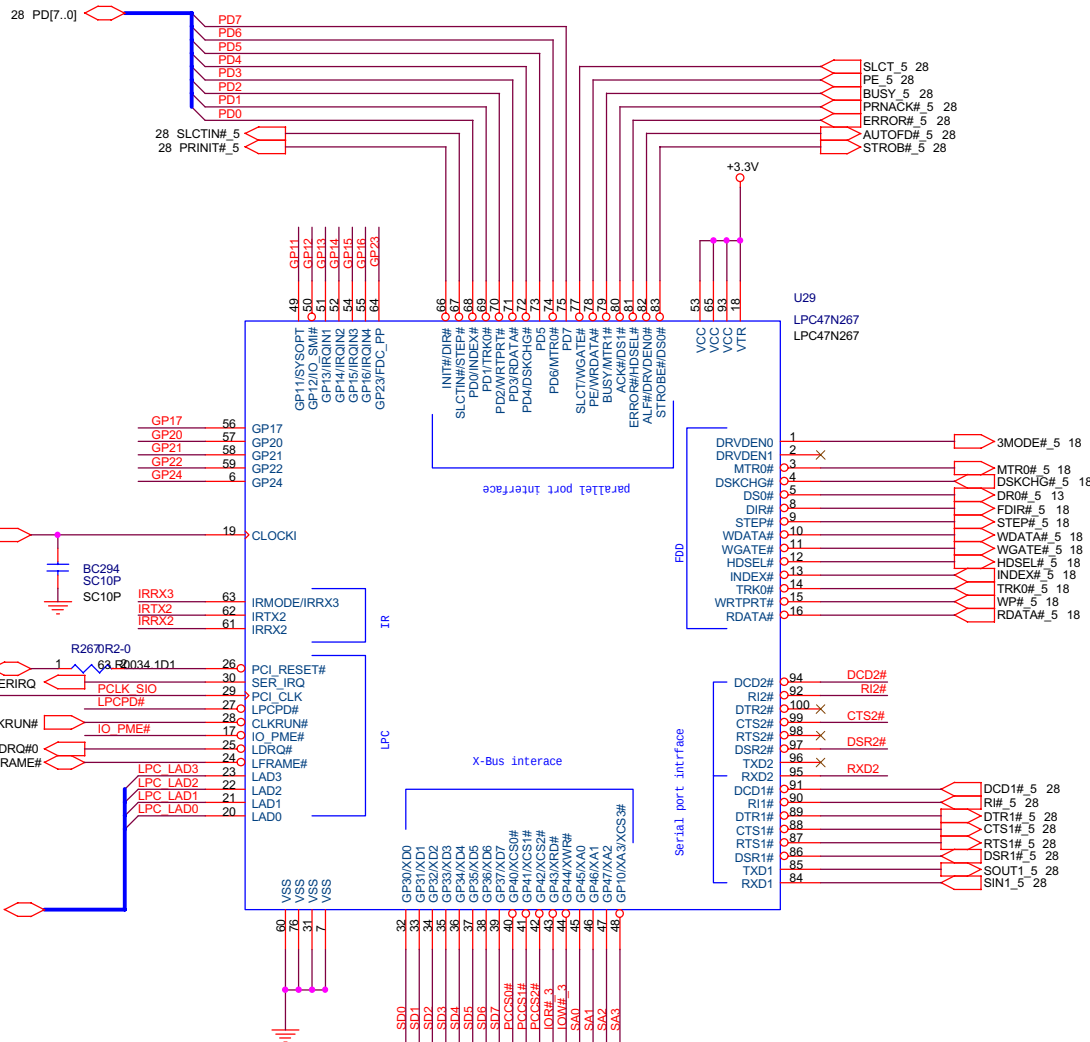
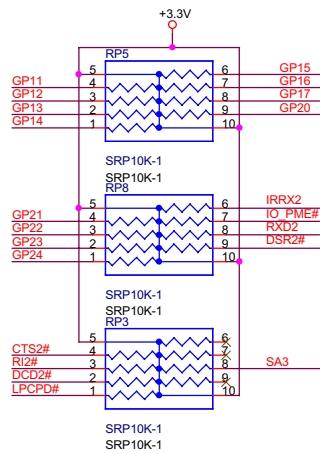


VR

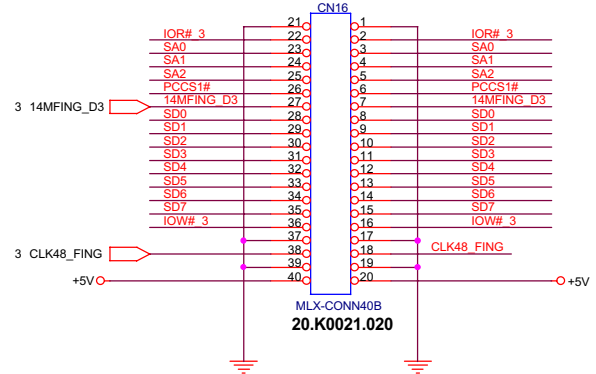




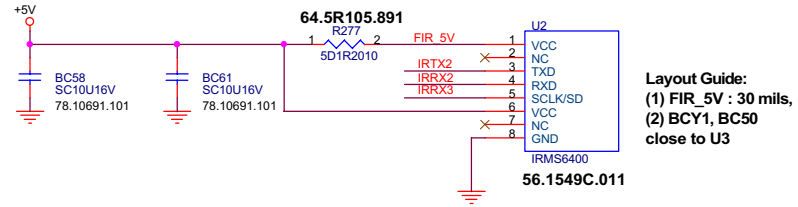




FINGER_PRINTER

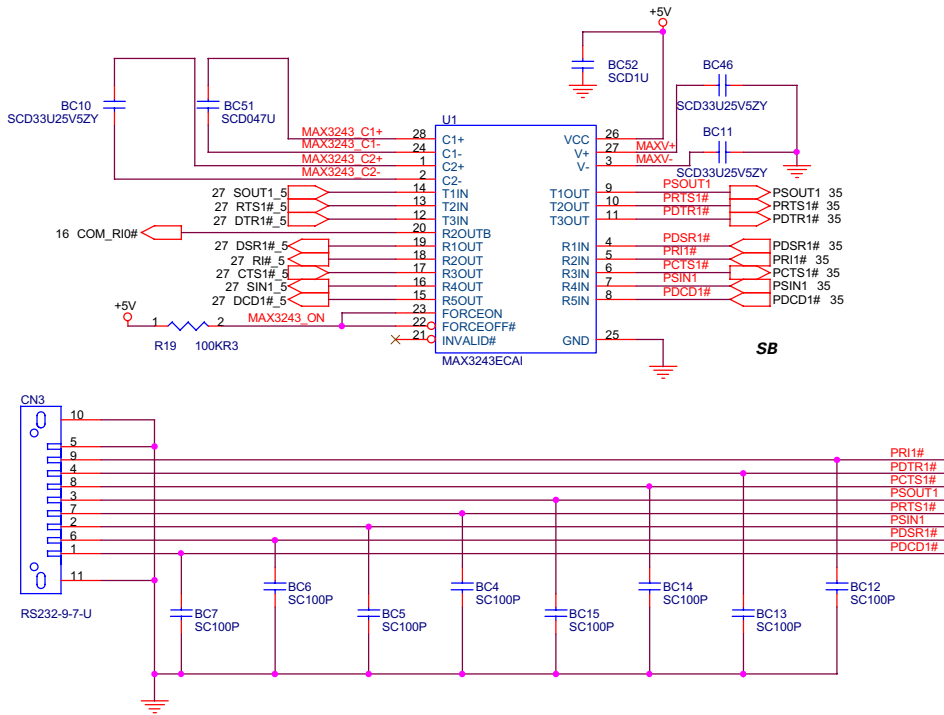


Infineon FIR Module

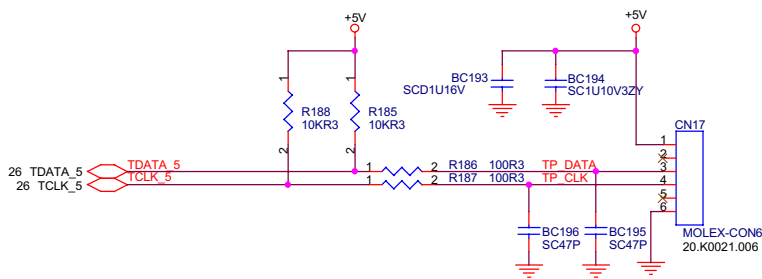


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Title		
LPC SIO		
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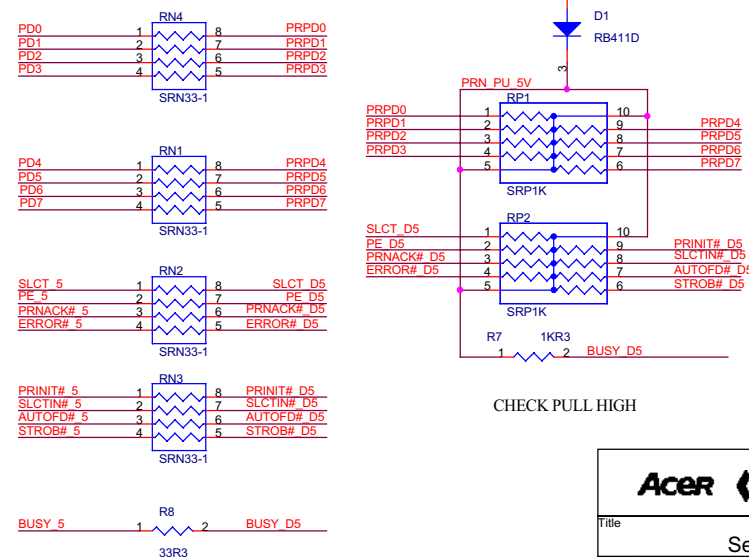
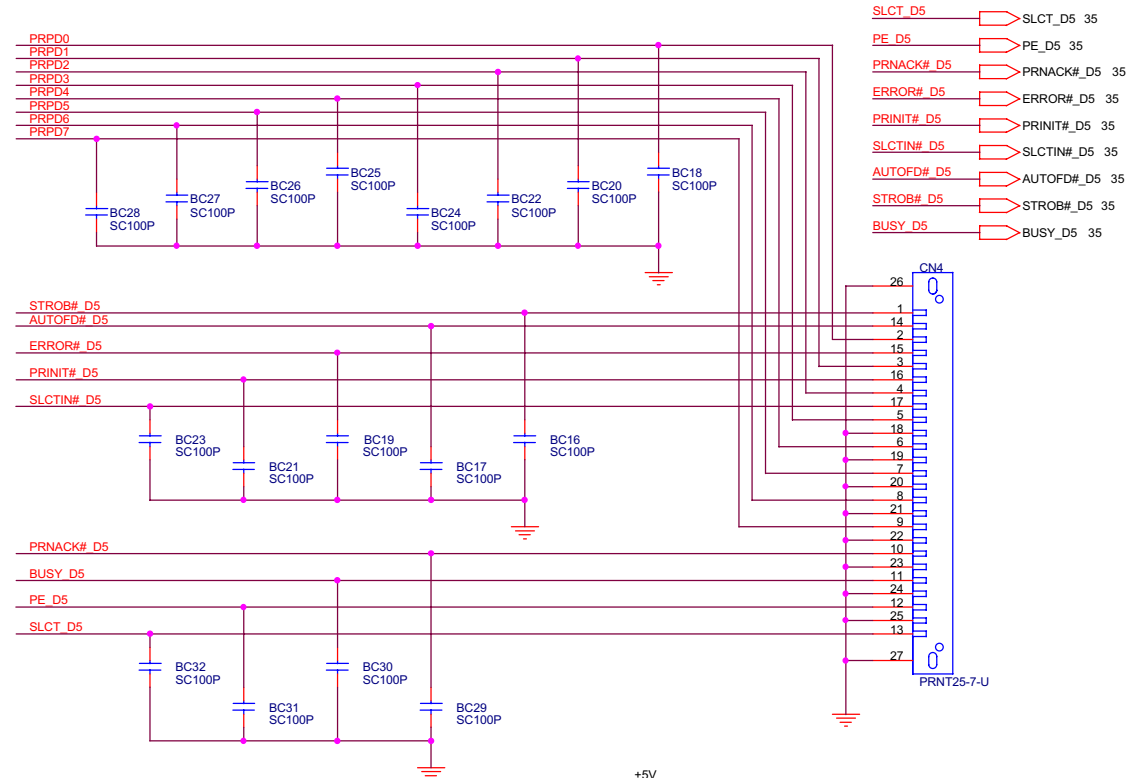
SERIAL PORT



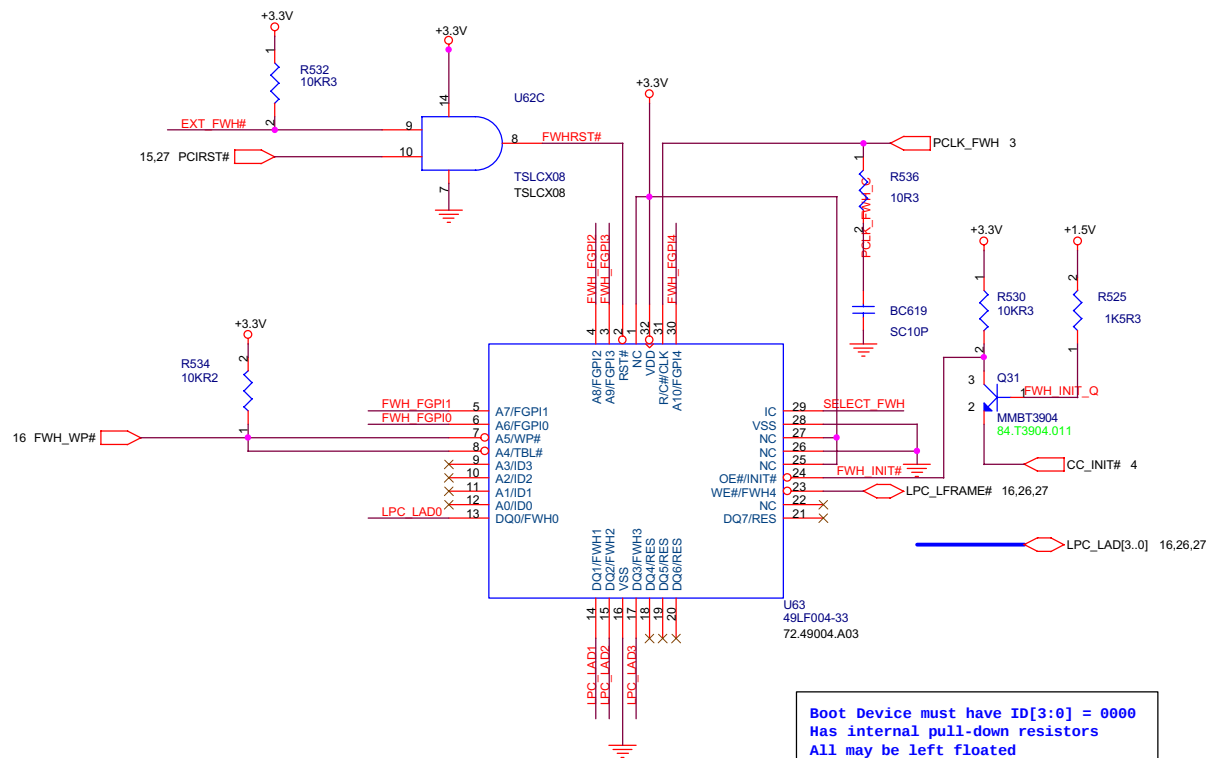
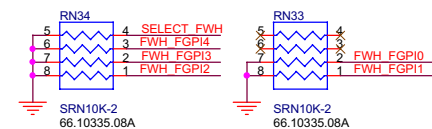
TOUCH PAD



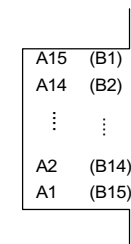
PRINTER PORT



Unused FGPI pins must not be float

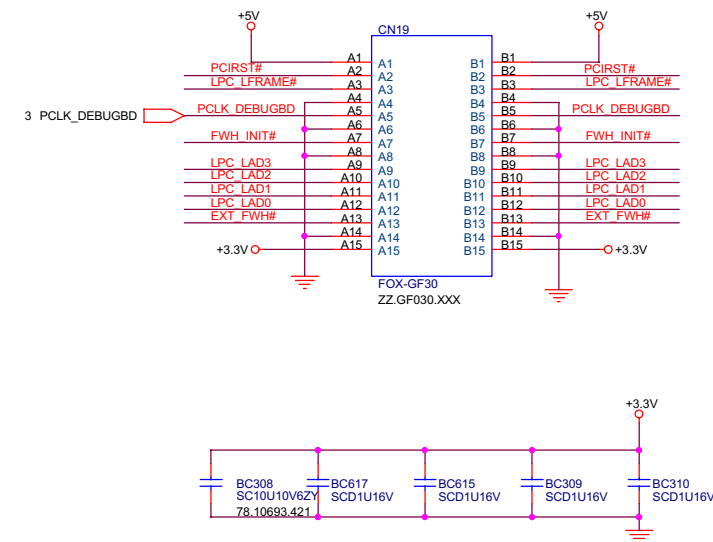


TOP VIEW



(BOTTOM VIEW)

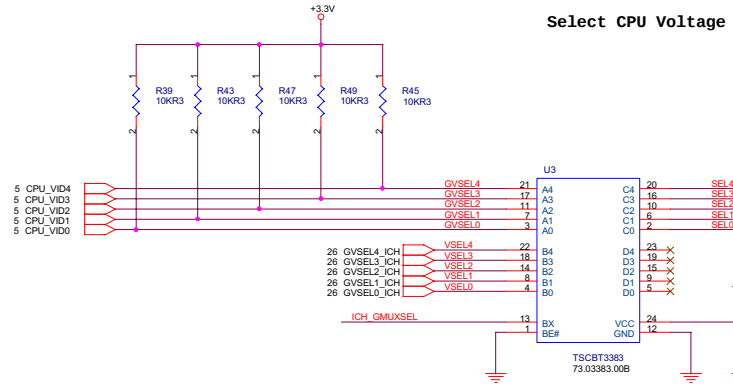
GOLDEN FINGER FOR DEBUG BOARD



Mode	Tualitin	Copermine-T	Celeron-T
PERFORMANCE	1.40V	1.70V	1.70V
BATTERY	1.15V	1.35V	1.35V
Deep Sleep	0.85V	Non	Non

D4	D3	D2	D1	D0	
0	0	0	0	1	1.70V
0	0	1	0	1	1.50V
0	0	1	1	1	1.40V
0	1	0	0	1	1.30V
0	1	0	1	0	1.25V
0	1	1	0	0	1.15V

S1	S0	
REF	REF	0.850V
REF	FLOAT	0.825V
REF	VCC	0.800V
FLOAT	FLOAT	0.725V
FLOAT	VCC	0.700V
VCC	FLOAT	0.625V



TRUE TABLE

BE#	BX	A0~A4	B0~B4
H	X	HIGH-Z	HIGH-Z
L	L	C0~C4	D0~D4
L	H	D0~D4	C0~C4

Offset Truth Table

PM DPRSLPVR	CC_DPSLP#	ICH_GMUXSEL	Voffset
1	X	X	0mV
0	0	0	-59mV
0	0	1	-52mV
0	1	0	-29mV
0	1	1	-3mV

Acer

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21F, 88, Sec. 1, Hsin Tai Wu Rd.,
Hsichih, Taipei Hsien 221,
Taiwan, R.O.C.

File CPU VCORE		
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CHKPW

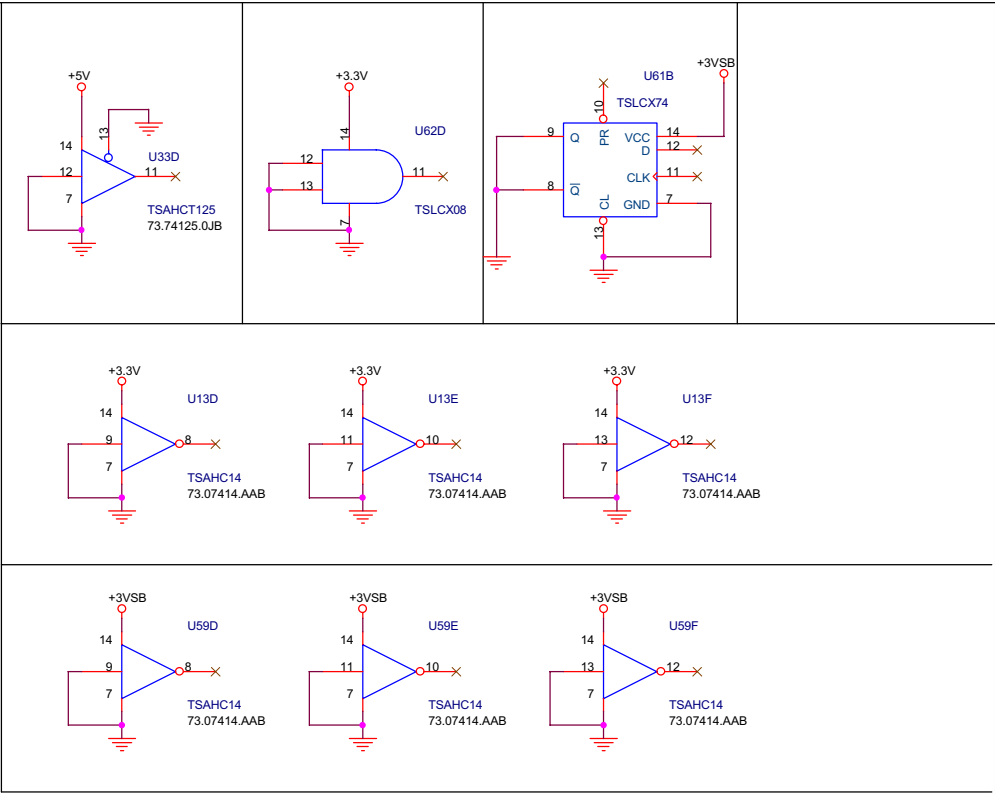
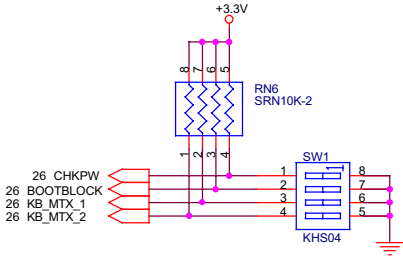
	Enable	Disable
SW1-1	ON	OFF

BIOS Bootblock erasable

	Enable	Disable
SW1-2	ON	OFF

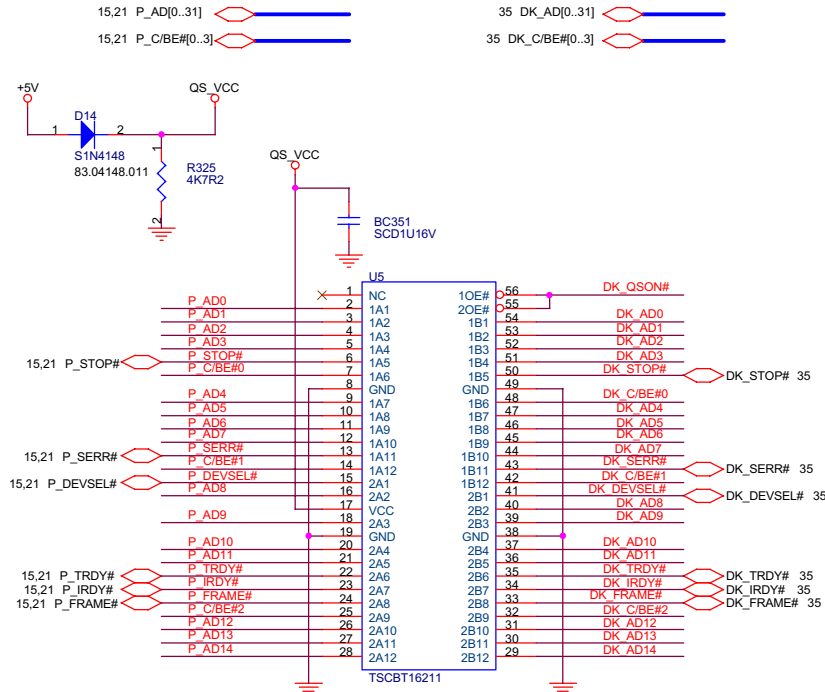
Keyboard matrix

	US	Jap	Europe	US international
SW1-3	OFF	ON	OFF	OFF
SW1-4	OFF	OFF	ON	OFF

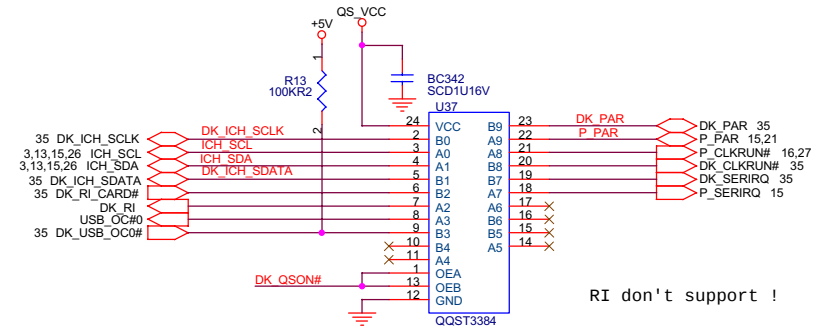
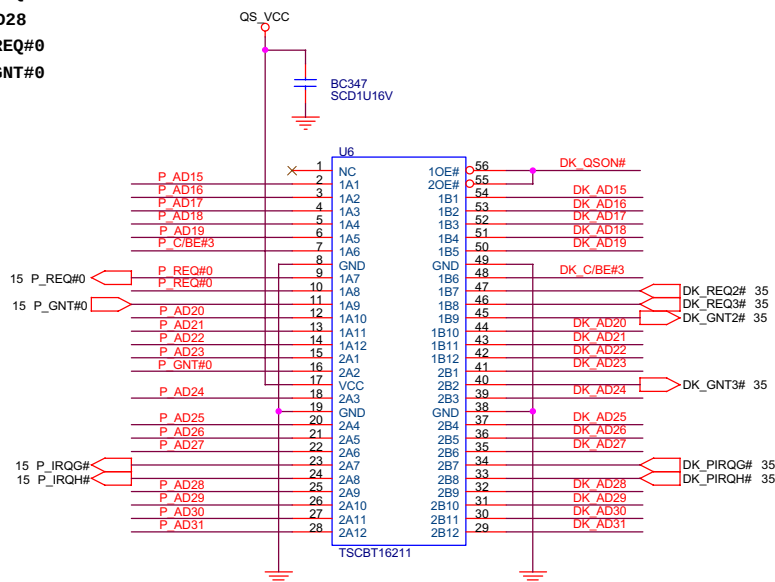


OEM Logo setting					
COOLING SYSTEM SELECT			ACER	HITACHI	OEM2
SW1-4	Enable	Disable	OFF	ON	OFF
SW1-5	ACER	HITACHI	OFF	OFF	ON

(CHANGE TO TSSOP PACKAGE)

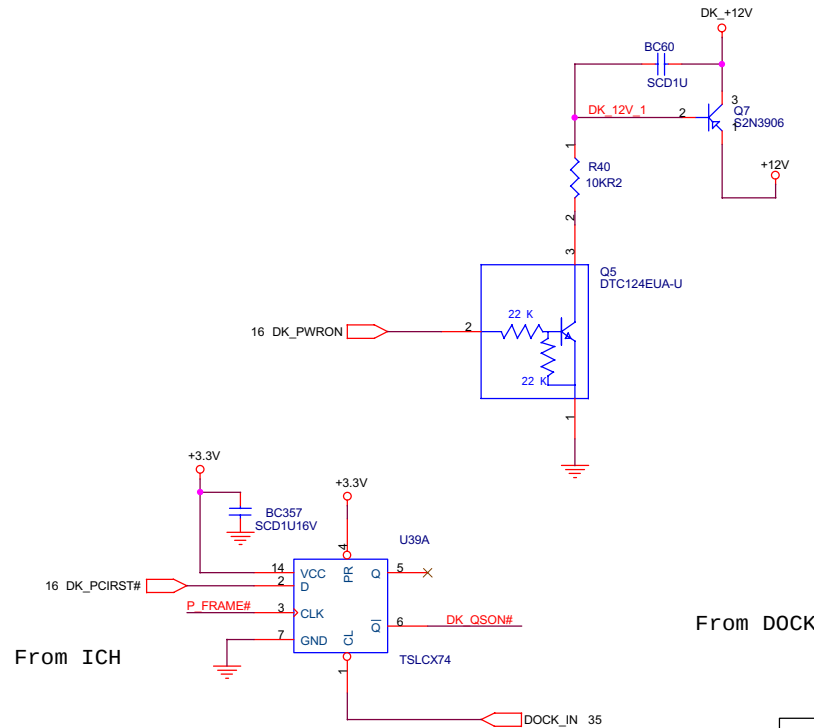


P_IRQG#
P_IRQH#
AD28
P_REQ#0
P_GNT#0



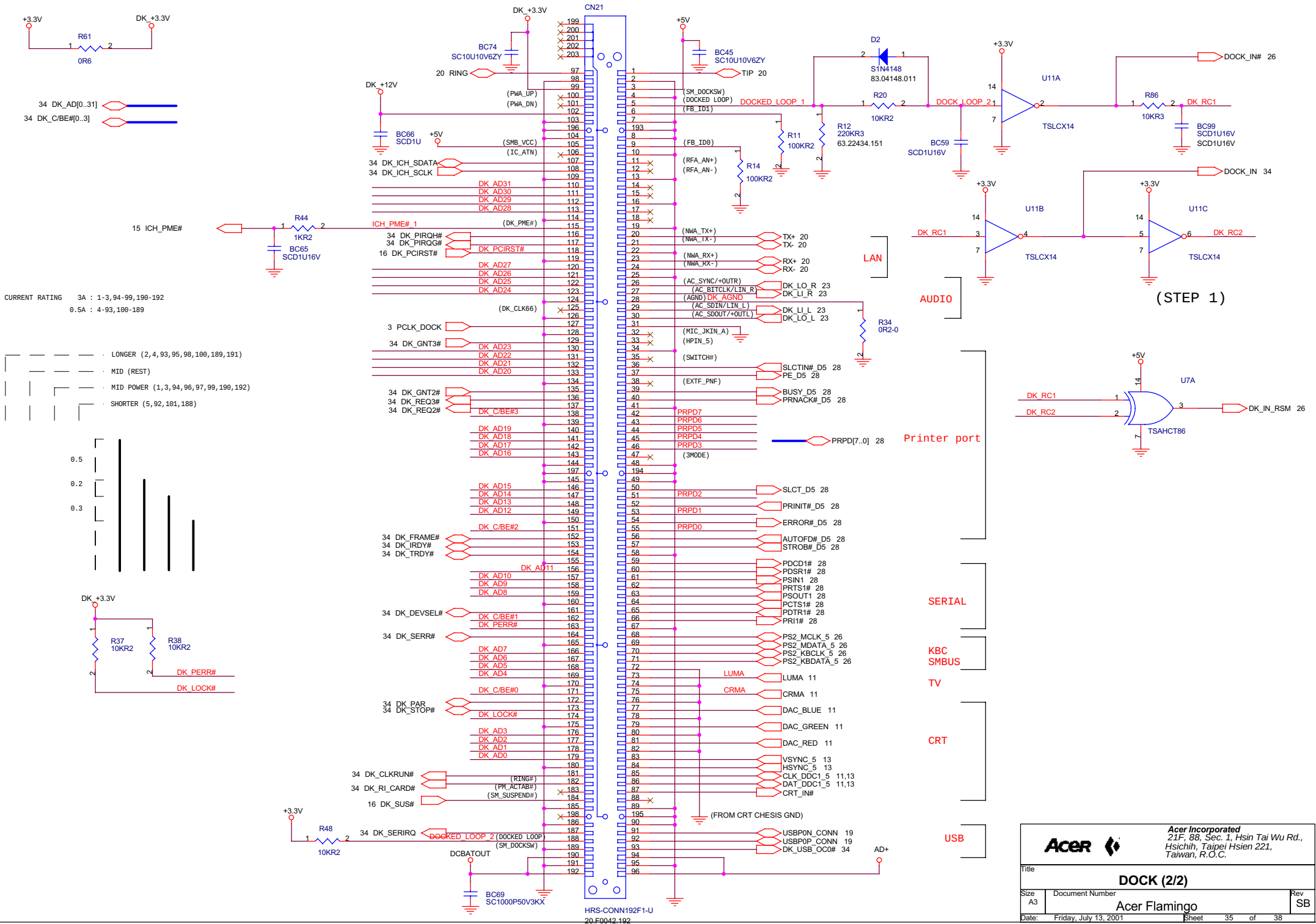
RI don't support !

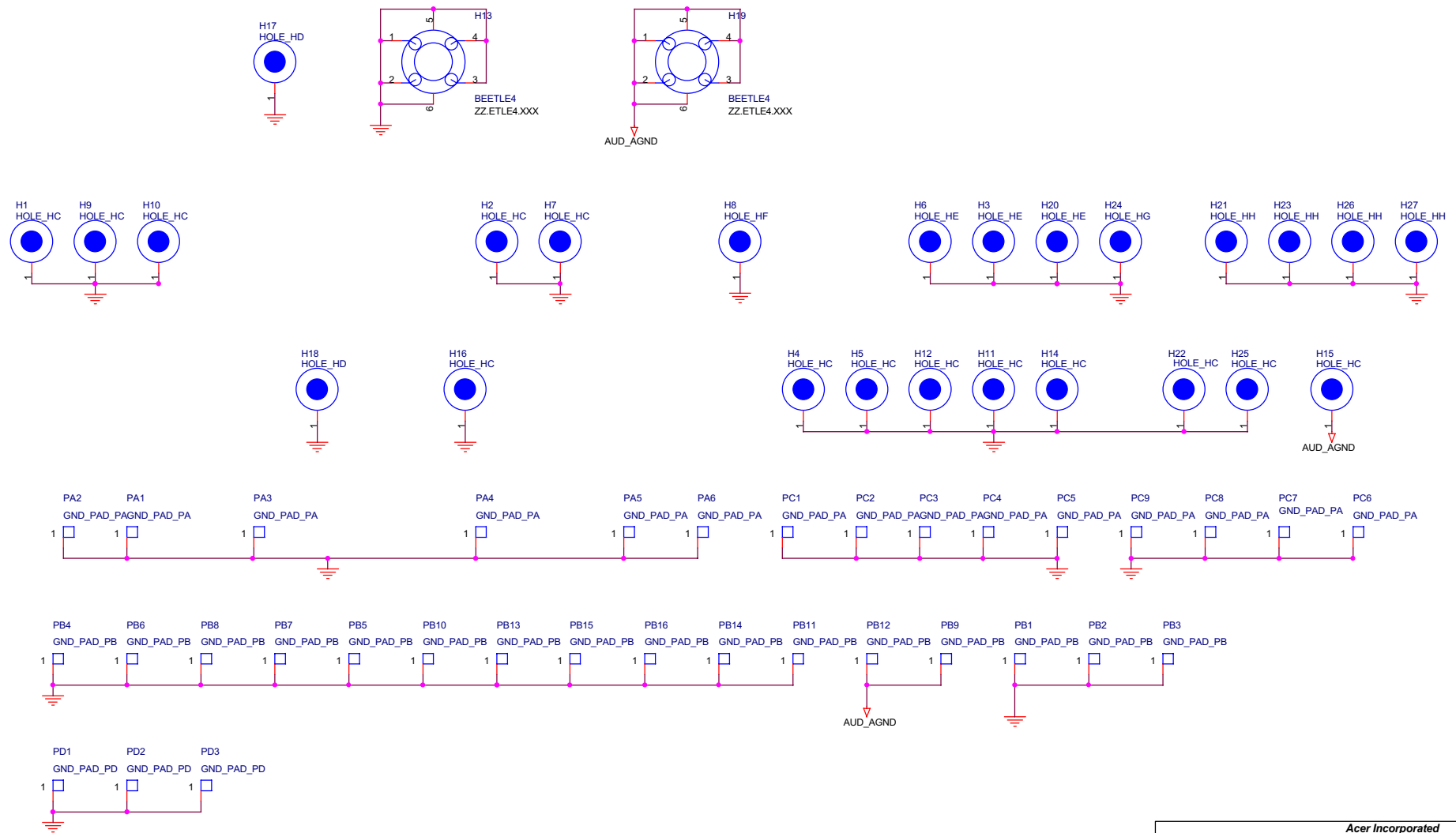
- | | | |
|----------|----------------------------|--|
| (STEP 1) | SYSTEM CONTACT TO DOCK | (GPIO[16] / DK_IN_5) |
| (STEP 2) | TURN ON POWER | (GPIO[14] / DK_PWR_ON_5) (POWER MOS AT DOCKING SIDE) |
| (STEP 3) | CLK GEN. TURN ON DK PCICLK | (KBC P61 / DK_CLK_ON#_3) |
| (STEP 4) | GPO GENERATE PCIRST# | (KBC P63 / DK_PCIRST) |
| (STEP5) | TURN ON Q-SW | |



From DOCK

 		Acer Incorporated 21F, 88, Sec. 1 Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
DOCK (1/2)			
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NEAR CPU

TP23 TPAD30
ZZ.PAD30.XXX CC_SMI# 15

NEAR GMCH

NEAR VGA

TP22 TPAD30
ZZ.PAD30.XXX VGA_MEM_CS1# 12

NEAR ICH3-M

TP24 TPAD30
ZZ.PAD30.XXX P_IRQC# 15 15 P_REQ#2 TP25 TPAD30
ZZ.PAD30.XXX
TP26 TPAD30
ZZ.PAD30.XXX P_IRQE# 15 15 P_REQ#3 TP27 TPAD30
ZZ.PAD30.XXX
TP28 TPAD30
ZZ.PAD30.XXX P_IRQF# 15 15 P_REQ#4 TP29 TPAD30
ZZ.PAD30.XXX
15 P_GNT#2 TP30 TPAD30
ZZ.PAD30.XXX
15 P_GNT#3 TP31 TPAD30
ZZ.PAD30.XXX
15 P_GNT#4 TP32 TPAD30
ZZ.PAD30.XXX

NEAR IEEE1394

NEAR CARDBUS

