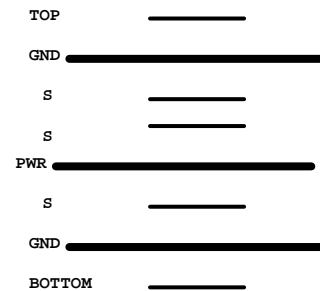


1

PCB P/N : 07260-2  
Revision : -2



<b>CHARGER</b> BQ24740		39
<b>INPUTS</b>	<b>OUTPUTS</b>	
DCBATOUT	<b>CHG_PWR</b> 18V UP+5V 5V    100mA	
<b>CPU DC/DC</b> ADP3208		
		35
<b>INPUTS</b>	<b>OUTPUTS</b>	
DCBATOUT	VCC_CORE	

## ICH9M Functional Strap Definitions

ICH9 EDS 642879 Rev.1.5

Signal	Usage/When Sampled	Comment
HDA_SDOUT	XOR Chain Entrance/ PCIE Port Config bit1, Rising Edge of PWROK	Allows entrance to XOR Chain testing when TP3 pulled low. When TP3 not pulled low at rising edge of PWROK, sets bit1 of RPC.PC(Config Registers: offset 224h). This signal has weak internal pull-down
HDA_SYNC	PCIE config1 bit0, Rising Edge of PWROK.	This signal has a weak internal pull-down. Sets bit0 of RPC.PC(Config Registers:Offset 224h)
GNT2#/GPIO53	PCIE config2 bit2, Rising Edge of PWROK.	This signal has a weak internal pull-up. Sets bit2 of RPC.PC2(Config Registers:Offset 0224h)
GPIO20	Reserved Rising Edge of PWROK.	This signal has a weak internal pull-down. Note: This signal should not be pulled high.
GNT1#/GPIO51	ESI Strap(Server Only) Rising edge of PWROK	Tying this strap low configures DMI for Sicompatible operation. This signal has a weak internal pull-up. NOTE: ESI compatible mode is for server platforms only. This signal should not be pulled low for desktop and mobile.
GNT3#/GPIO55	Top-Block Swap Override. Rising Edge of PWROK.	Sampled low: Top-Block Swap mode(inverts A16 for all cycles targeting FWB BIOS space). Note: Software will not be able to clear the Top-Swap bit until the system is rebooted without GNT3# being pulled down.
GNT0#: SPI_CS1#/ GPIO58	Boot BIOS Destination Selection 0:1. Rising Edge of PWROK.	Controllable via Boot BIOS Destination bit (Config Registers:Offset 3410h:bit 11:10). GNT0# is MSB, 01-SPI, 10-PCI, 11-LPC.
SPI_MOSI	Integrated TPM Enable, Rising Edge of CLPWROK	Sample low: the Integrated TPM will be disabled. Sample high: the MCH TPM enable strap is sampled low and the TPM disable bit is clear, the Integrated TPM will be enable.
GPIO49	DMI Termination Voltage, Rising Edge of PWROK.	The signal is required to be low for desktop applications and required to be high for mobile applications.
SATALED#	PCI Express Lane Reversal. Rising Edge of PWROK.	Signal has weak internal pull-up. Sets bit 27 of MPC.LR(Device 28:Function 0:Offset D8)
SPKR	No Reboot. Rising Edge of PWROK.	If sampled high, the system is strapped to the "No Reboot" mode(ICH9 will disable the TCO timer system reboot feature). The status is readable via the NO REBOOT bit.
TP3	XOR Chain Entrance. Rising Edge of PWROK.	This signal should not be pull low unless using XOR Chain testing.
GPIO33/ HDA_DOCK_EN#	Flash Descriptor Security Override Strap Rising Edge of PWROK	Sampled low: the Flash Descriptor Security will be overridden. If high, the security measures will be in effect. This should only be enabled in manufacturing environments using an external pull-up resistor.

## ICH9M Integrated Pull-up and Pull-down Resistors

ICH9 EDS 642879 Rev.1.5

SIGNAL	Resistor Type/Value
CL_CLK[1:0]	PULL-UP 20K
CL_DATA[1:0]	PULL-UP 20K
CL_RST0#	PULL-UP 20K
DPRSLPVR/GPIO16	PULL-DOWN 20K
ENERGY_DETECT	PULL-UP 20K
HDA_BIT_CLK	PULL-DOWN 20K
HDA_DOCK_EN#/GPIO33	PULL-UP 20K
HDA_RST#	PULL-DOWN 20K
HDA_SDIN[3:0]	PULL-DOWN 20K
HDA_SDOUT	PULL-DOWN 20K
HDA_SYNC	PULL-DOWN 20K
GLAN_DOCK#	The pull-up or pull-down active when configured for native LAN DOCK# functionality and determined by LAN controller
GNT[3:0]#/GPIO[55,53,51]	PULL-UP 20K
GPIO[20]	PULL-DOWN 20K
GPIO[49]	PULL-UP 20K
LDA[3:0]#/FWW[3:0]#	PULL-UP 20K
LAN_RXD[2:0]	PULL-UP 20K
LDRQ[0]	PULL-UP 20K
LDRQ[1]/GPIO23	PULL-UP 20K
PME#	PULL-UP 20K
PWRBTN#	PULL-UP 20K
SATALED#	PULL-UP 15K
SPI_CS1#/GPIO58/CLGPIO6	PULL-UP 20K
SPI_MOSI	PULL-DOWN 20K
SPI_MISO	PULL-UP 20K
SPKR	PULL-DOWN 20K
TACH_[3:0]	PULL-UP 20K
TP[3]	PULL-UP 20K
USB[11:0][P,N]	PULL-DOWN 15K

## Cantiga chipset and ICH9M I/O controller Hub strapping configuration

Montevina Platform Design guide 22339 0.5  
page 218

Pin Name	Strap Description	Configuration
CFG[2:0]	FSB Frequency Select	000 = FSB1067 011 = FSB667 010 = FSB800 others = Reserved
CFG[4:3] CFG8 CFG11 CFG[15:14] CFG[18:17]	Reserved	
CFG5	DMI x2 Select	0 = DMI x2 1 = DMI x4 (Default)
CFG6	iTPM Host Interface	0 = The iTPM Host Interface is enabled(Note2) 1 = The iTPM Host Interface is disabled(default)
CFG7	Intel Management engine Crypto strap	0 = Transport Layer Security (TLS) cipher suite with no confidentiality 1 = TLS cipher suite with confidentiality (default)
CFG9	PCIE Graphics Lane	0 = Reverse Lanes.15->0,14->1 ect.. 1 = Normal operation(Default):Lane Numbered in order
CFG10	PCIE Loopback enable	0 = Enable (Note 3) 1 = Disabled (default)
CFG[13:12]	XOR/ALL	00 = Reserve 10 = XOR mode Enabled 01 = ALL2 mode Enabled (Note 3) 11 = Disabled (default)
CFG16	FSB dynamic ODT	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled (Default)
CFG19	DMI Lane Reversal	0 = Normal operation(Default): Lane Numbered in Order 1 = Reverse Lanes DMI x4 mode[MCH -> ICH]: (3->0, 2->1, 1->2 and 0->3) DMI x2 mode[MCH -> ICH]: (3->0, 2->1)
CFG20	Digital Display Port (SDVO/DP/iHDMI) Concurrent with PCIe	0 = Only Digital Display Port or PCIE is operational (Default) 1 = Digital display Port and PCIE are operating simultaneously via the PEG port
SDVO_CTRLDATA	SDVO Present	0 = No SDVO Card Present (Default) 1 = SDVO Card Present
L_DDC_DATA	Local Flat Panel (LFP) Present	0 = LFP Disabled (Default) 1 = LFP Card Present/ PCIE disabled

### NOTE:

- All strap signals are sampled with respect to the leading edge of the (G)MCH Power OK (PWROK) signal.
- iTPM can be disabled by a 'Soft-Strap' option in the Flash-Descriptor section of the Firmware. This 'Soft-Strap' is activated only after enabling iTPM via CFG6.

Only one of the CFG10/CFG12/CFG13 straps can be enabled at any time.

17,33,35,36,37,39,41	DCBATOUT	DCBATOUT
7,19,29,34,36,39,40	3DV_AUX_S5	3DV_AUX_S5
7,31,33,36,39	5V_AUX_S5	5V_AUX_S5
17,20,21,22,23,24,26,29,30,31,33,34,36	3DV_S5	3DV_S5
17,22,32,33,34,36,37,38,41	5V_S5	5V_S5
10,12,13,15,16,33,37,38,41	1D8V_S3	1D8V_S3
3,7,10,11,13,15,16,17,18,19,20,21,22,23,24,25,26,28,29,31,32,33,34,35,36,37,41	3DV_S0	3DV_S0
7,13,17,18,22,23,24,25,33,34,35,41	5V_S0	5V_S0
4,5,6,8,10,11,12,13,19,22,33,37	1D05V_S0	1D05V_S0
19,20,22,31,33,38	1D5V_SB_S0	1D5V_SB_S0
3,5,13,31,33,38	1D5V_NB_S0	1D5V_NB_S0

## PCIE Routing

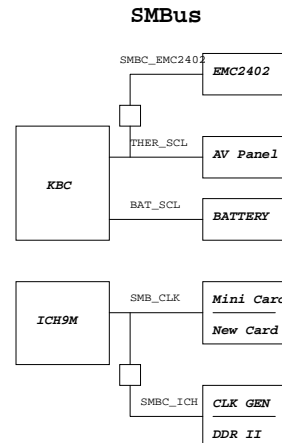
LANE1	BroadCom LAN
LANE2	MiniCard WLAN
LANE4	NewCard

## History:

LAB: 2008/01/02

## USB Table

Pair	Device
0	JACK0
1	NC
2	JACK2
3	NC
4	BLUETOOTH
5	JACK1
6	Finger Print
7	Mini Card
8	CAMERA
9	NEW CARD
10	CARDREADER
11	NC



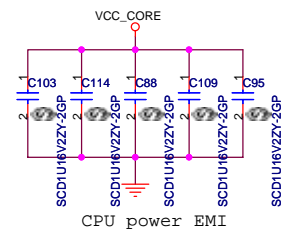
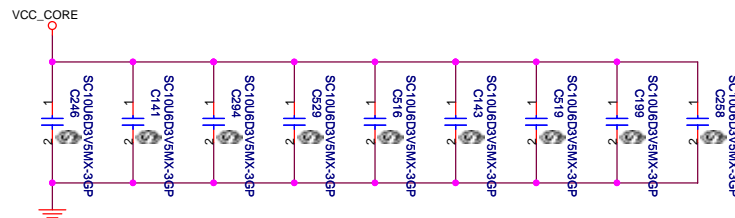
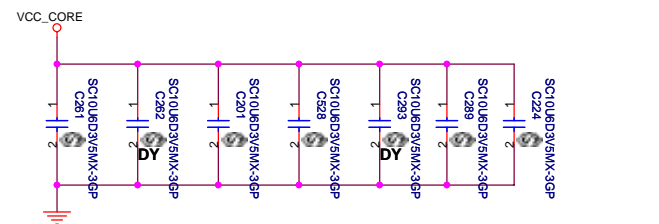
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Wistron Corporation  
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Reference		Rev
Size C	Document Number	SB
Date: Monday, June 23, 2008	LZ2	41
Sheet 2	of	

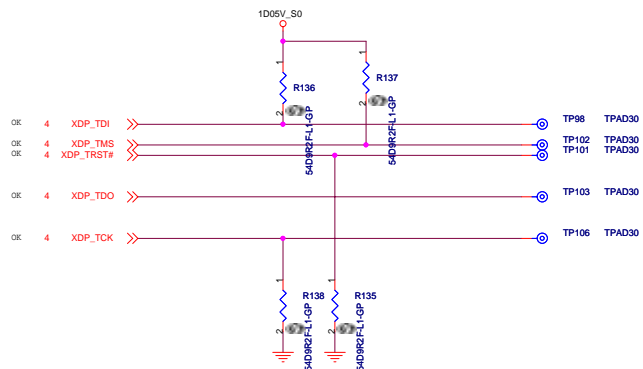






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<b>Penryn CPU(2/2)</b>			
Size A3	Document Number		Rev
	<b>LZ2</b>		<b>SB</b>
Date:	Monday, June 23, 2008	Sheet 5 of	41



Layout notice : Both DN3 and DP3 routing  
10 mil trace width and 10 mil spacing







15 M\_A\_DQ[63..0] <<>>  
15 M\_A\_DM[7..0] <<>>  
15 M\_A\_DQS[7..0] <<>>  
15 M\_A\_DQS# [7..0] <<>>  
15 M\_A\_A[14..0] <<>>

16 M\_B\_DQ[63..0] <<>>  
16 M\_B\_DM[7..0] <<>>  
16 M\_B\_DQS[7..0] <<>>  
16 M\_B\_DQS# [7..0] <<>>  
16 M\_B\_A[14..0] <<>>

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M_A_D00	AJ38	SA_D0_0	BD21	M_A_BS0	15
M_A_D01	AJ38	SA_D0_1	BD18	M_A_BS1	15
M_A_D02	AN38	SA_D0_2	AT25	M_A_BS2	15
M_A_D03	AM38	SA_D0_3			
M_A_D04	AJ38	SA_D0_4	SA_RAS#	DDR_A_RAS#	15
M_A_D05	AJ40	SA_D0_5	SA_CAS#	DDR_A_CAS#	15
M_A_D06	AM44	SA_D0_6	SA_WE#	DDR_A_WE#	15
M_A_D07	AM42	SA_D0_7			
M_A_D08	AN43	SA_D0_8			
M_A_D09	AM44	SA_D0_9			
M_A_D010	AJ40	SA_D0_10			
M_A_D011	AT38	SA_D0_11			
M_A_D012	AN41	SA_D0_12	SA_DM_0	AM37	M_A_DM0
M_A_D013	AN39	SA_D0_13	SA_DM_1	AT41	M_A_DM1
M_A_D014	AJ44	SA_D0_14	SA_DM_2	AY41	M_A_DM2
M_A_D015	AJ42	SA_D0_15	SA_DM_3	AJ39	M_A_DM3
M_A_D016	AV39	SA_D0_16	SA_DM_4	BD12	M_A_DM4
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M_A_D026	AV37	SA_D0_26	SA_DQS_5	BC8	M_A_DQS5
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M_A_D032	BD13	SA_D0_32	SA_DQS#_3	BD37	M_A_DQS#3
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M_A_D034	BC11	SA_D0_34	SA_DQS#_5	BD8	M_A_DQS#5
M_A_D035	BA12	SA_D0_35	SA_DQS#_6	AJ8	M_A_DQS#6
M_A_D036	AJ13	SA_D0_36	SA_DQS#_7	AM8	M_A_DQS#7
M_A_D037	AV13	SA_D0_37			
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M_A_D039	BC12	SA_D0_39	SA_MA_1	BC24	M_B_A1
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M_A_D042	AJ10	SA_D0_42	SA_MA_4	BA24	M_B_A4
M_A_D043	AV9	SA_D0_43	SA_MA_5	BD24	M_B_A5
M_A_D044	BA11	SA_D0_44	SA_MA_6	BD27	M_B_A6
M_A_D045	BD9	SA_D0_45	SA_MA_7	BF25	M_B_A7
M_A_D046	AY8	SA_D0_46	SA_MA_8	AW24	M_B_A8
M_A_D047	BA6	SA_D0_47	SA_MA_9	BC21	M_B_A9
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M_A_D060	AN12	SA_D0_60			
M_A_D061	AM13	SA_D0_61			
M_A_D062	AJ11	SA_D0_62			
M_A_D063	AJ12	SA_D0_63			

CANTIGA-GM-GP-U-NF

U56E

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M_B_D00	AK47	SB_DO_0	BC16	M_B_BS0	16
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M_B_D02	AP47	SB_DO_2	BB33	M_B_BS2	16
M_B_D03	AP46	SB_DO_3			
M_B_D04	AJ46	SB_DO_4			
M_B_D05	AJ48	SB_DO_5	SB_RAS#	AJ17	DDR_B_RAS# 16
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M_B_D010	BA48	SB_DO_10			
M_B_D011	AY48	SB_DO_11			
M_B_D012	AT47	SB_DO_12			
M_B_D013	AT47	SB_DO_13	SB_DM_0	AM47	M_B_DM0
M_B_D014	BA47	SB_DO_14	SB_DM_1	AV47	M_B_DM1
M_B_D015	BC47	SB_DO_15	SB_DM_2	BD40	M_B_DM2
M_B_D016	BC46	SB_DO_16	SB_DM_3	BC35	M_B_DM3
M_B_D017	BC44	SB_DO_17	SB_DM_4	BG11	M_B_DM4
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M_B_D032	BH14	SB_DO_32	SB_DQS#_2	BH41	M_B_DQS#2
M_B_D033	BC12	SB_DO_33	SB_DQS#_3	BH37	M_B_DQS#3
M_B_D034	BH11	SB_DO_34	SB_DQS#_4	B99	M_B_DQS#4
M_B_D035	BC8	SB_DO_35	SB_DQS#_5	BC2	M_B_DQS#5
M_B_D036	BH12	SB_DO_36	SB_DQS#_6	AT2	M_B_DQS#6
M_B_D037	BF11	SB_DO_37	SB_DQS#_7	AN6	M_B_DQS#7
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M_B_D041	AC4	SB_DO_41	SB_MA_2	BC25	M_B_A2
M_B_D042	AV3	SB_DO_42	SB_MA_3	AV25	M_B_A3
M_B_D043	AV1	SB_DO_43	SB_MA_4	AV25	M_B_A4
M_B_D044	BF8	SB_DO_44	SB_MA_5	BB28	M_B_A5
M_B_D045	BF5	SB_DO_45	SB_MA_6	AV28	M_B_A6
M_B_D046	BA1	SB_DO_46	SB_MA_7	AT33	M_B_A7
M_B_D047	BD3	SB_DO_47	SB_MA_8	AT33	M_B_A8
M_B_D048	AV2	SB_DO_48	SB_MA_9	BD33	M_B_A9
M_B_D049	AJ3	SB_DO_49	SB_MA_10	BB16	M_B_A10
M_B_D050	AR3	SB_DO_50	SB_MA_11	AW33	M_B_A11
M_B_D051	AN2	SB_DO_51	SB_MA_12	AY33	M_B_A12
M_B_D052	AY2	SB_DO_52	SB_MA_13	BH15	M_B_A13
M_B_D053	AJ1	SB_DO_53	SB_MA_14	AJ33	M_B_A14
M_B_D054	AP3	SB_DO_54			
M_B_D055	AR1	SB_DO_55			
M_B_D056	AL1	SB_DO_56			
M_B_D057	AL2	SB_DO_57			
M_B_D058	AJ1	SB_DO_58			
M_B_D059	AM1	SB_DO_59			
M_B_D060	AM2	SB_DO_60			
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M_B_D063	AJ3	SB_DO_63			

DDR SYSTEM MEMORY B

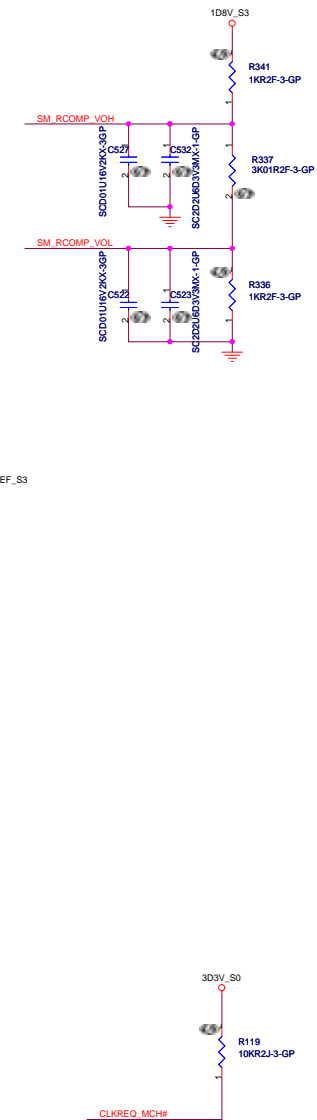
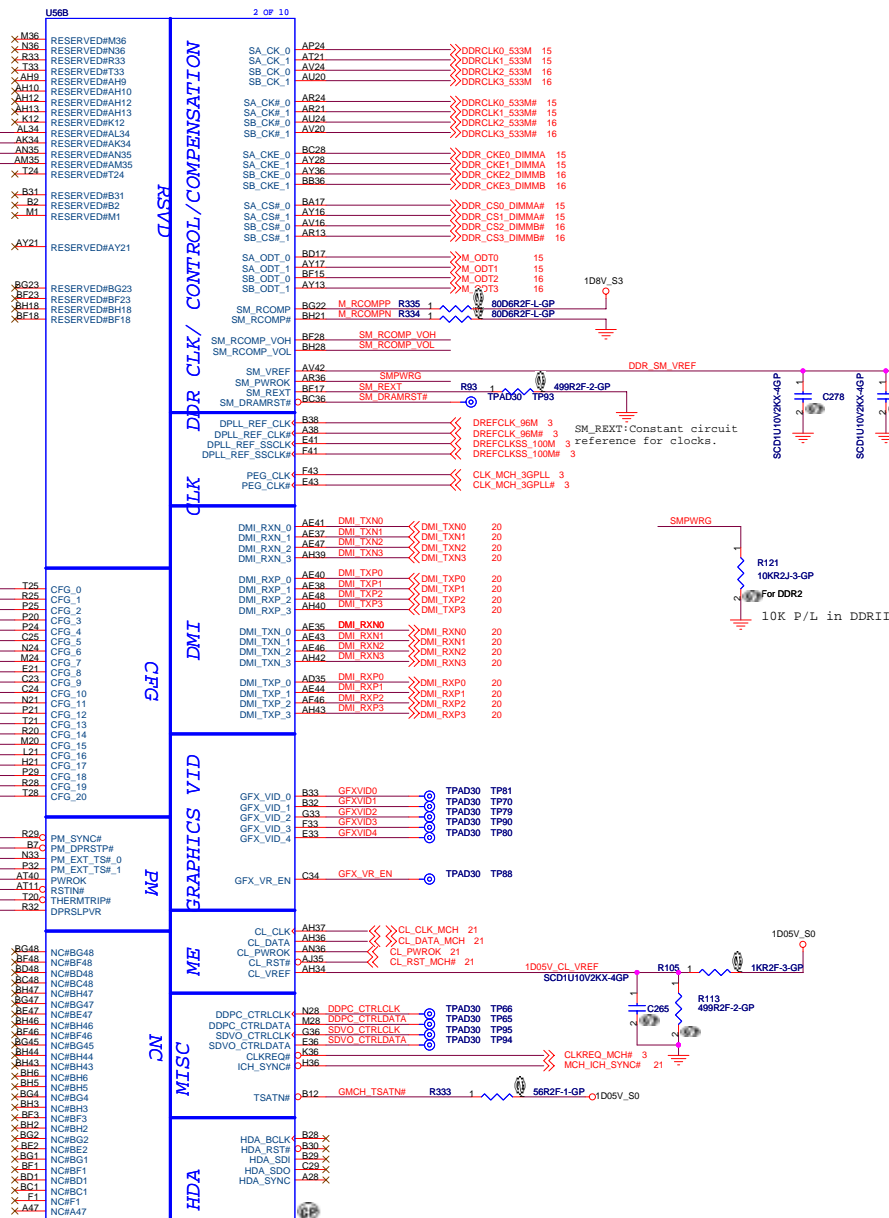
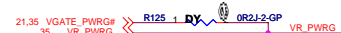
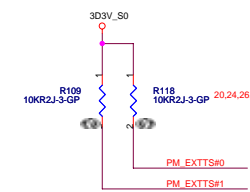
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緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

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Size	Document Number	LZ2	Rev
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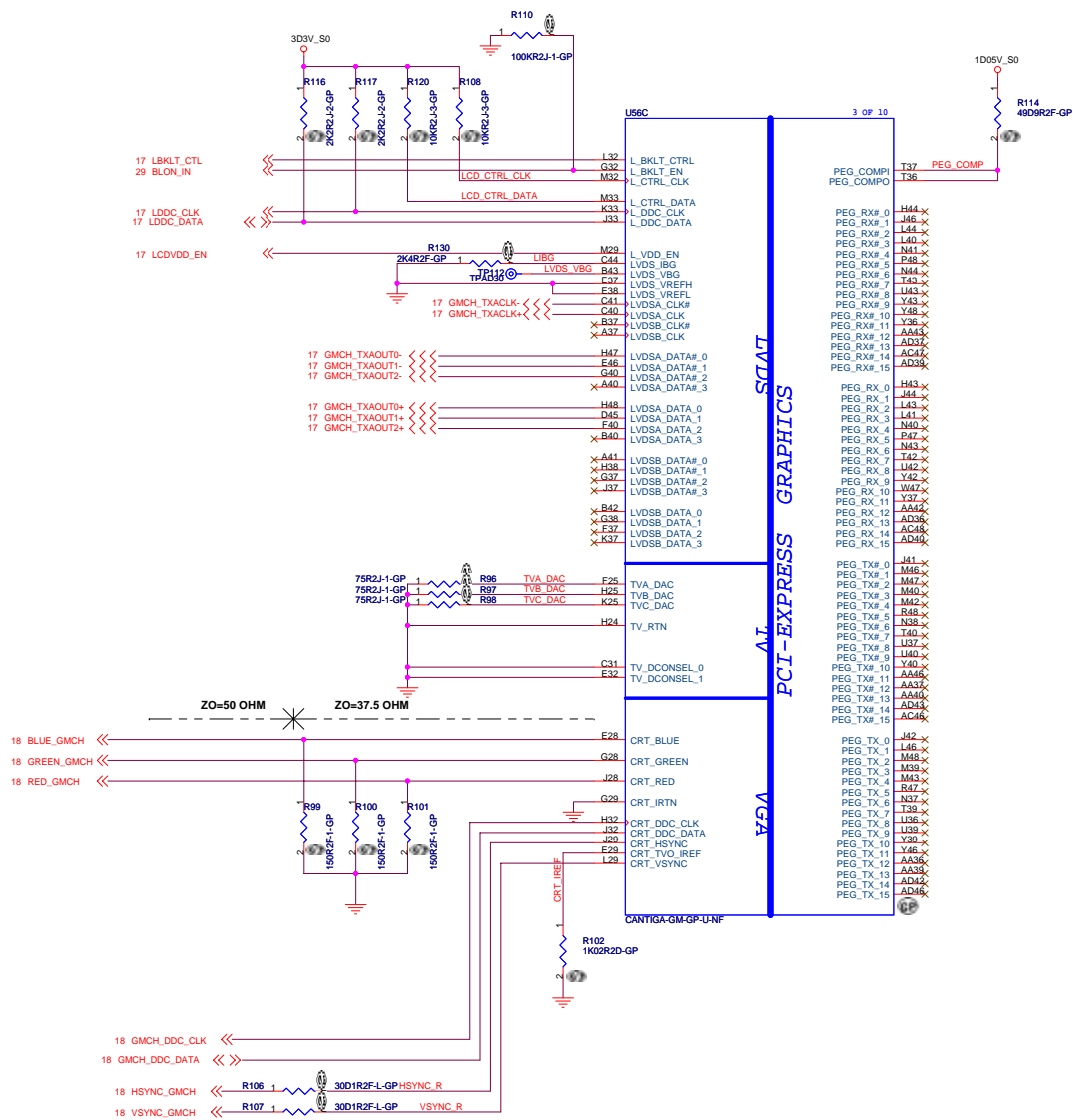
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RESERVED#AN35	ME_JTAG_TDO
RESERVED#AM35	ME_JTAG_TMS

[illegible]

緯創資通

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Title <b>Cantiga(3/7):DMI/PM/CFG/GF</b>			
Size <b>C</b>	Document Number <b>L72</b>	Rev <b>SB</b>	
Date Monday, June 23, 2008	Sheet 10	of 41	



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緯創資通

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Title

**CANTIGA(57)-VGA/LVDS**

Size

C

Document Number

**LZ2**

Rev

**SB**

Date: Monday, June 23, 2008

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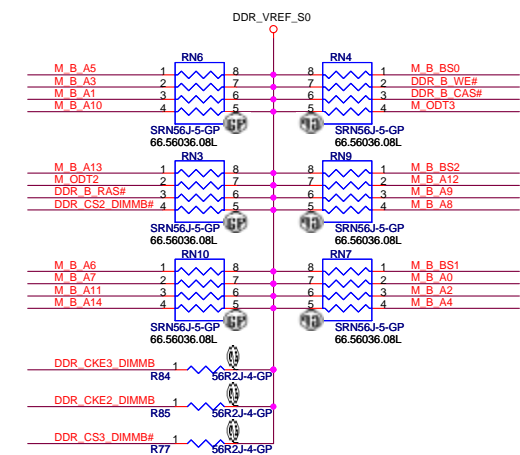






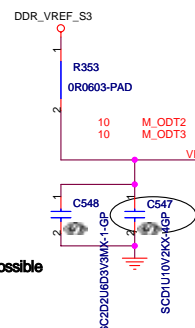






Layout Note:  
Place these resistors  
closely DM2,all  
trace length Max=1.5"

Place caps close to pin1 as possible



M B A0	102	A0
M B A1	101	A1
M B A2	100	A2
M B A3	99	A3
M B A4	98	A4
M B A5	97	A5
M B A6	94	A6
M B A7	92	A7
M B A8	93	A8
M B A9	91	A9
M B A10	105	A10/AP
M B A11	90	A11
M B A12	89	A12
M B A13	116	A13
M B A14	86	A14
	✗ 85	A15
	84	A16/A5

M B D00	5	D00
M B D01	7	D01
M B D02	17	D02
M B D03	19	D03
M B D04	2	D04
M B D05	6	D05
M B D06	14	D06
M B D07	16	D07
M B D08	22	D08
M B D09	23	D09
M B D010	35	D010
M B D011	37	D011
M B D012	22	D012
M B D013	22	D013
M B D014	36	D014
M B D015	38	D015
M B D016	43	D016
M B D017	46	D017
M B D018	55	D018
M B D019	57	D019
M B D020	44	D020
M B D021	56	D021
M B D022	56	D022
M B D023	58	D023
M B D024	61	D024
M B D025	65	D025
M B D026	73	D026
M B D027	75	D027
M B D028	62	D028
M B D029	69	D029
M B D030	74	D030
M B D031	76	D031
M B D032	123	D032
M B D033	125	D033
M B D034	125	D034
M B D035	137	D035
M B D036	124	D036
M B D037	126	D037
M B D038	126	D038
M B D039	136	D039
M B D040	141	D040
M B D041	143	D041
M B D042	150	D042
M B D043	153	D043
M B D044	140	D044
M B D045	142	D045
M B D046	146	D046
M B D047	154	D047
M B D048	157	D048
M B D049	159	D049
M B D050	173	D050
M B D051	160	D051
M B D052	158	D052
M B D053	160	D053
M B D054	174	D054
M B D055	174	D055
M B D056	179	D056
M B D057	181	D057
M B D058	189	D058
M B D059	189	D059
M B D060	180	D060
M B D061	182	D061
M B D062	192	D062
M B D063	194	D063
M B D06#0	11	D06#0
M B D06#1	29	D06#1
M B D06#2	49	D06#2
M B D06#3	49	D06#3
M B D06#4	129	D06#4
M B D06#5	146	D06#5
M B D06#6	167	D06#6
M B D06#7	167	D06#7

M B DQS0	13
M B DQS1	31
M B DQS2	51
M B DQS3	70
M B DQS4	131
M B DQS5	148
M B DQS6	169
M B DQS7	188

A0  
A1  
A2  
A3  
A4  
A5  
A6  
A7  
A8  
A9  
A10/AP  
A11  
A12  
A13  
A14  
A15  
A16/PA

BA0  
BA1

DQ0  
DQ1

DQ2  
DQ3  
DQ4  
DQ5  
DQ6  
DQ7  
DQ8  
DQ9  
DQ10  
DQ11  
DQ12  
DQ13  
DQ14  
DQ15  
DQ16

DQ17  
DQ18  
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DQ44

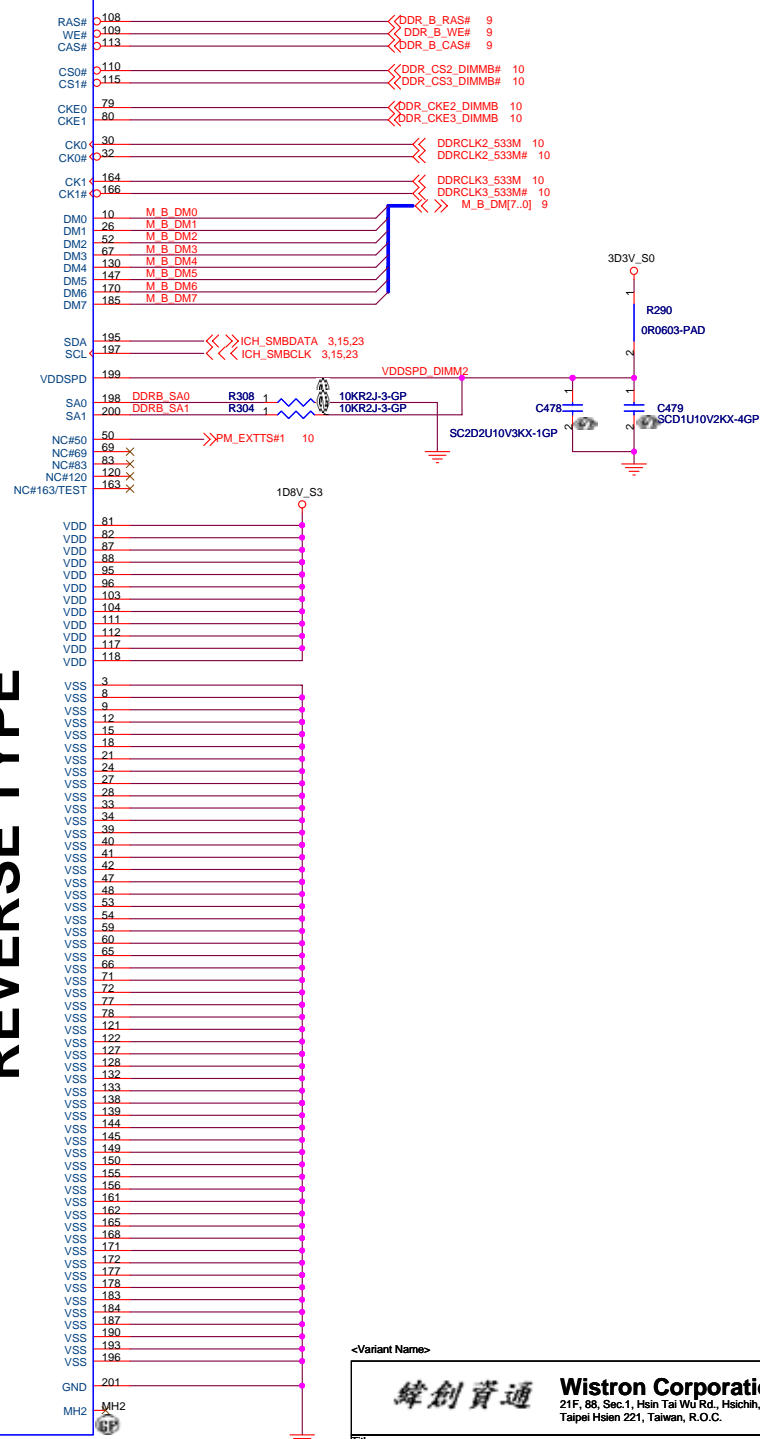
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DQ47  
DQ48  
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DQ51  
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DQ54  
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DQ56  
DQ57  
DQ58

DQ59  
DQ60  
DQ61  
DQ62  
DQ63  
  
DQS0#  
DQS1#  
DQS2#  
DQS3#  
DQS4#  
DQS5#  
DQS6#

DQS0  
DQS1  
DQS2  
DQS3  
DQS4  
DQS5  
DQS6  
DQS7

OTD0  
OTD1  
VREF  
VSS  
GND  
MH1

DDR2-200P-23-GP-U1  
62.10017.A71



<Variant Name>

緯創資通

**Wistron Corporation**

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

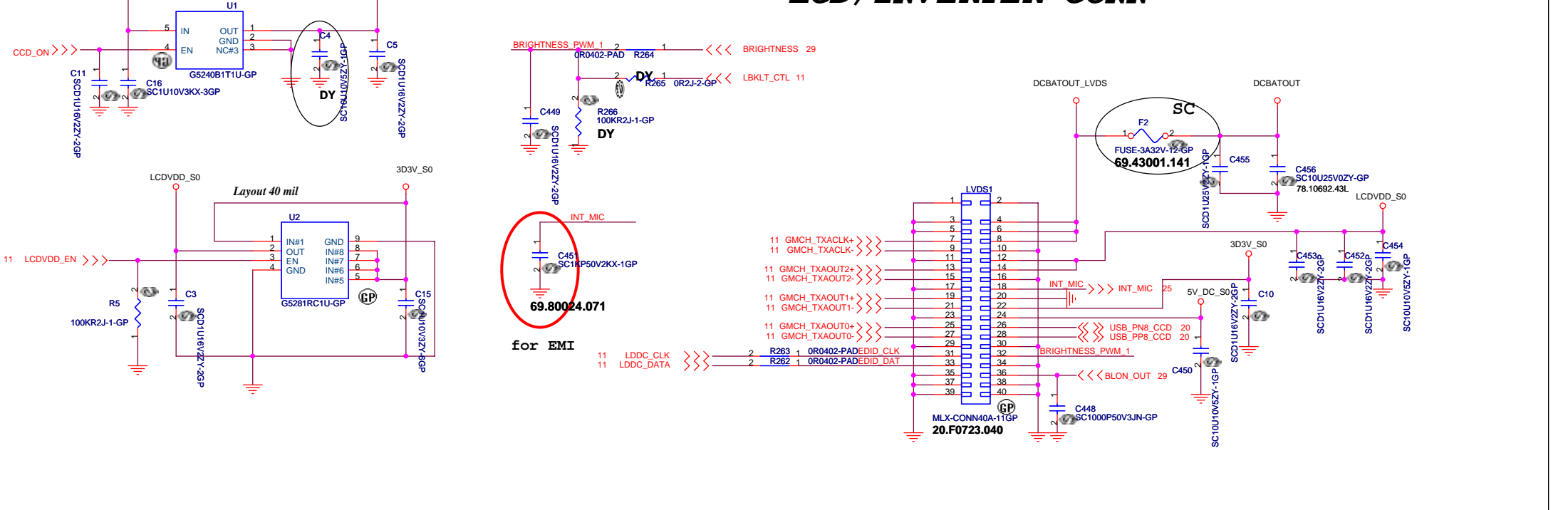
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Size	Document Number	Rev
Count		

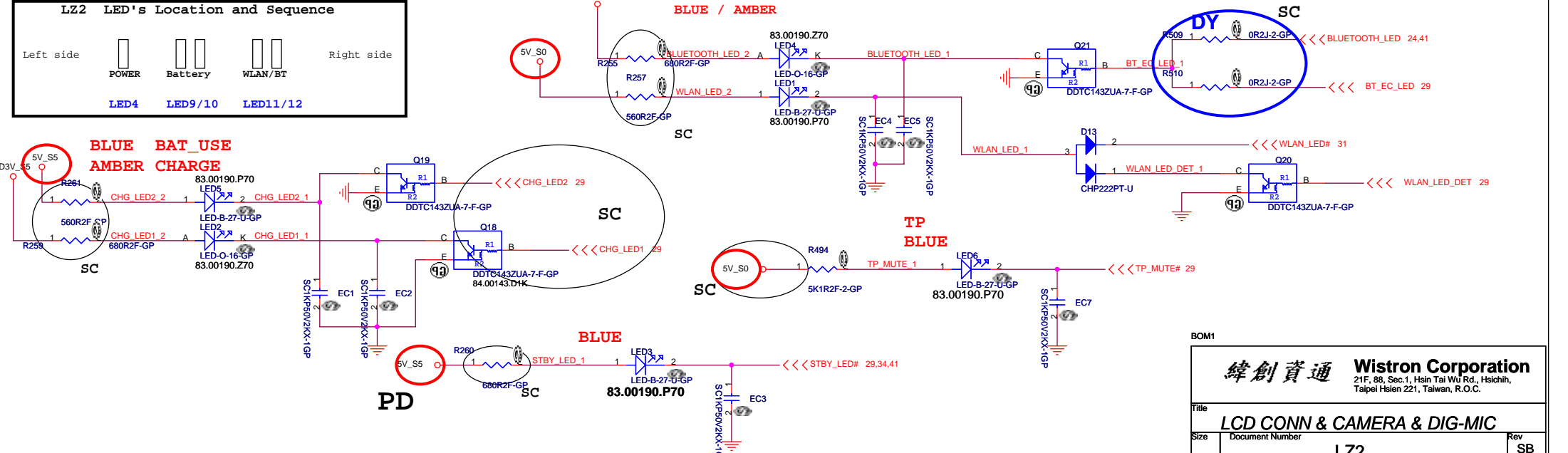
Date: Monday, June 23, 2008 Sheet 16 of 41

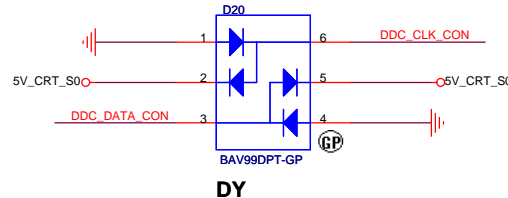
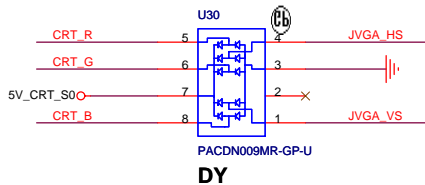
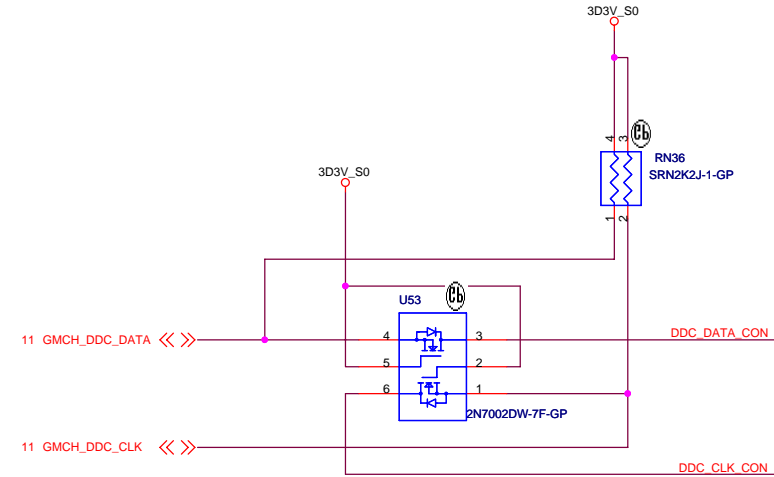
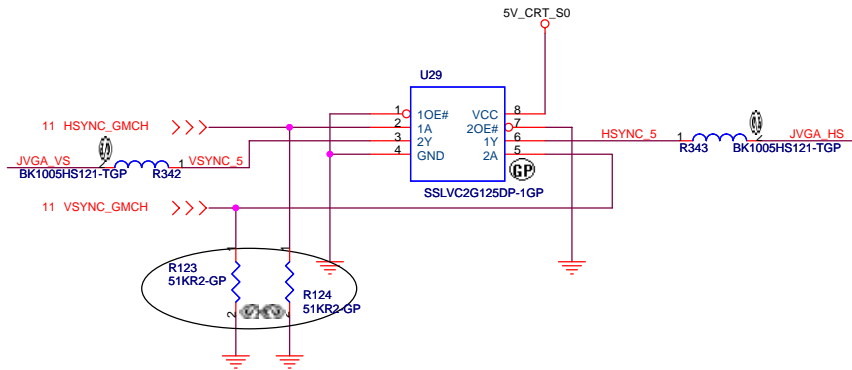
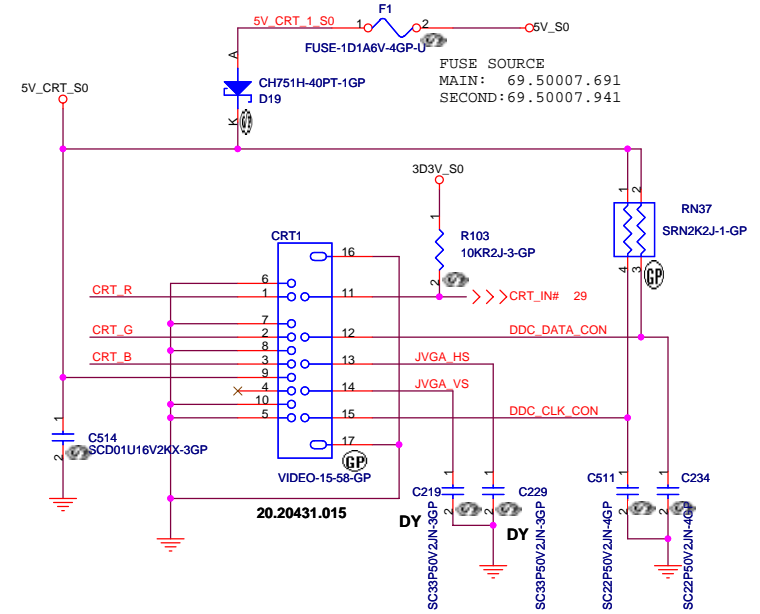
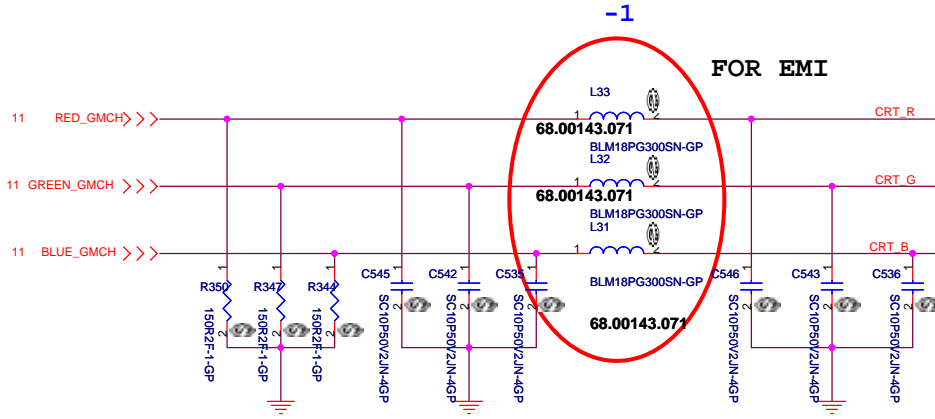


**LCD/INVERTER CONN**



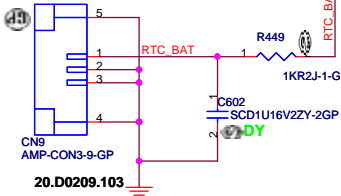
**M/B LED**      3D3V\_S0      **WLAN/ BT**



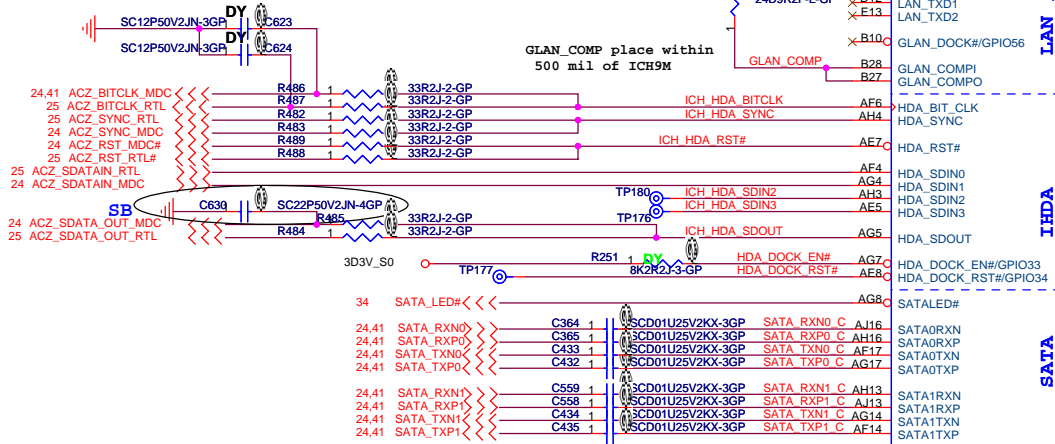


緯創資通		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
CRT/TV Connector			
Size	Document Number	Rev	
	LZ2	SB	
Date: Monday, June 23, 2008	Sheet 18	of	41

MAIN SOURCE:20.F0411.003  
SECOND SOURCE:20.D0246.103

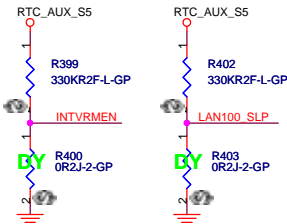


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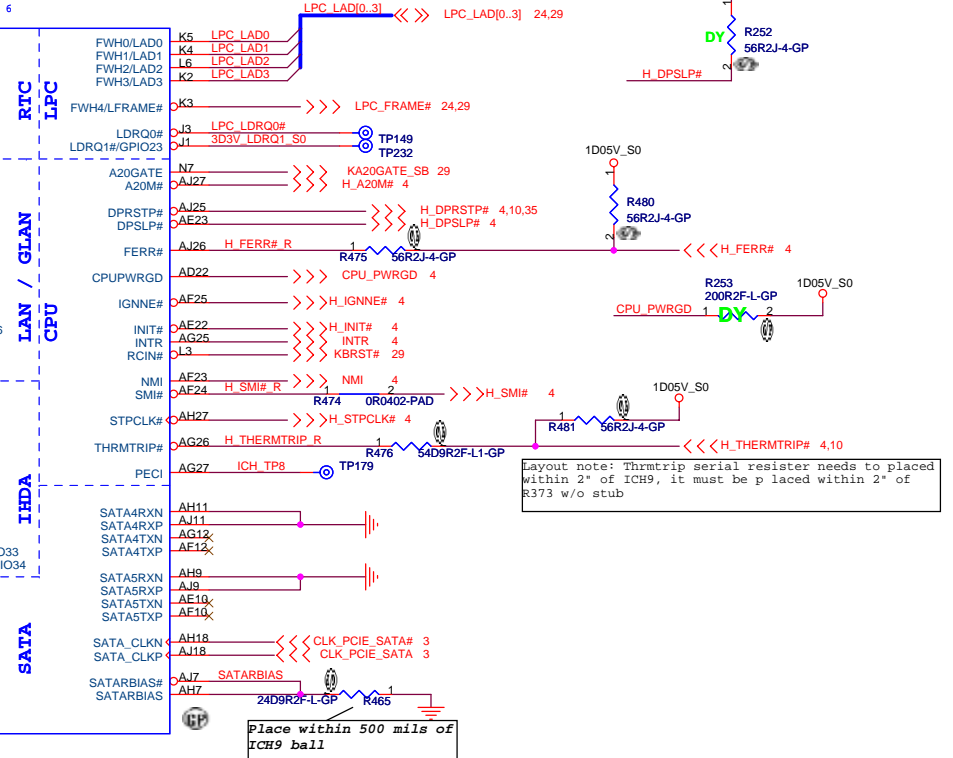


GLAN\_COMP place within  
500 mil of ICH9M

ICH9M-GP-NF



Integrated VccSusi_05,VccSusi_5,VccCl1_5		
INTVRMEN	High=Enable	Low=Disable
Integrated VccLan1_05VccCl1_05		
LAN100_SLP	High=Enable	Low=Disable



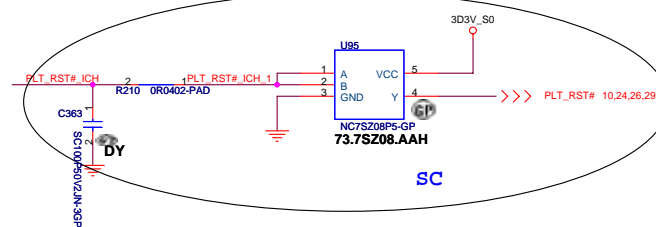
Layout note: Thrmtrip serial resister needs to be placed  
within 2" of ICH9, it must be p laced within 2" of  
R373 w/o stub

Place within 500 mils of  
ICH9 ball

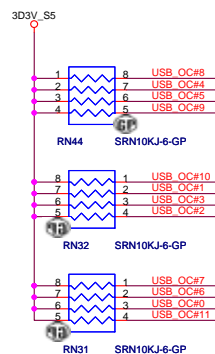
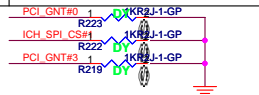
<Variant Name>

緯創資通 Wistron Corporation  
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Taipei Hsien 221, Taiwan, R.O.C.

Title			ICH9-M (1 of 4)	
Size	Document Number		Rev	SB
Date: Monday, June 23, 2008			LZ2	
Sheet			19	of 41



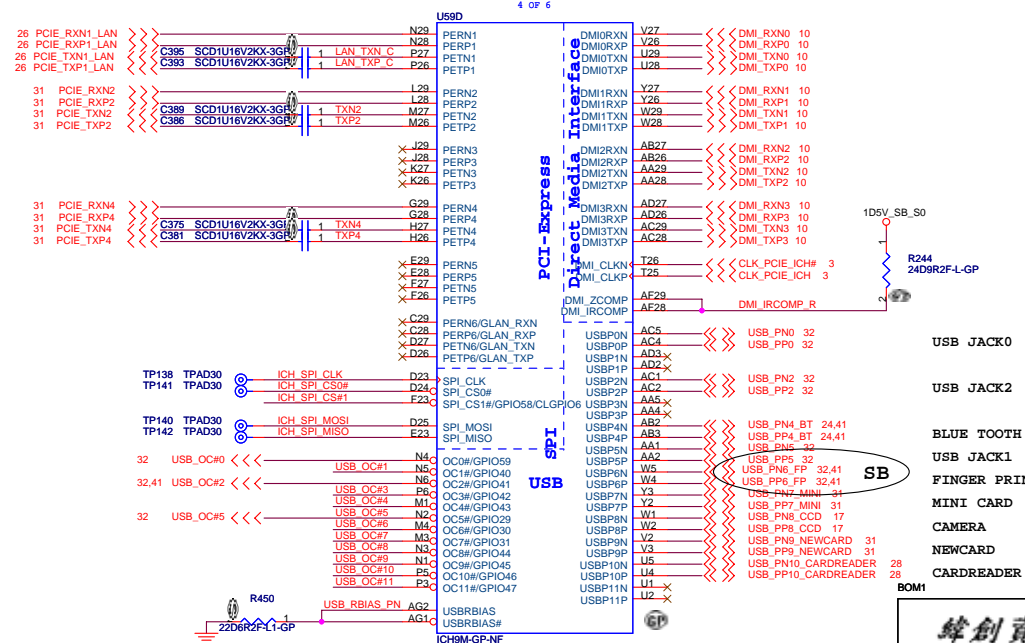
BOOT BIOS Strap		
PCI_GNT#0	SPI_CS#1	BOOT BIOS Location
0	1	SPT
1	0	PCT
1	1	LEC(Default)
A16 swap override strap		
PCI_GNT#3	low = A16 swap override enable high = default	



LAN

## MINI I/O

NEW COARD



USB JACK0

USB JACK2

BLUE TOOTH

FINGER PRINT

MINI CARD  
CAMERA

NEWCARD

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**BOM1**



Title			
<b>ICH9-M (1 of 4)</b>			
Size	Document Number		Rev
	<b>L72</b>		S
Date:	Monday, June 23, 2008		Sheet 20 of 41



VccRTC=6uA in G3

Vcc1\_5\_B=646mA

\*Within a given well, 5VREF needs to be up before the corresponding 3.3V rail

VccSATAPLL=47mA

Vcc1\_5\_A=1.342A

USBPLL=11mA

VccLAN3\_3=19mA

VccGLAN1\_5=80mA

VccGLAN3\_3=1mA

Vcc1\_05=1.634A

Layout Note:Place near ICH9M

VccDMIPLL=23mA

VccDMI=48mA

V\_CPU\_IO=2mA

VCC3\_3=308mA

VccHDA=11mA

VccSusHDA=11mA

VccSus3\_3=212mA

VccCL3\_3=19mA

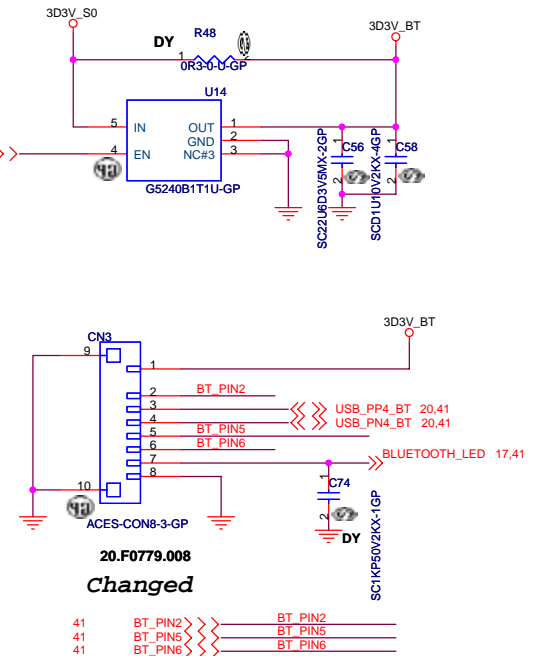
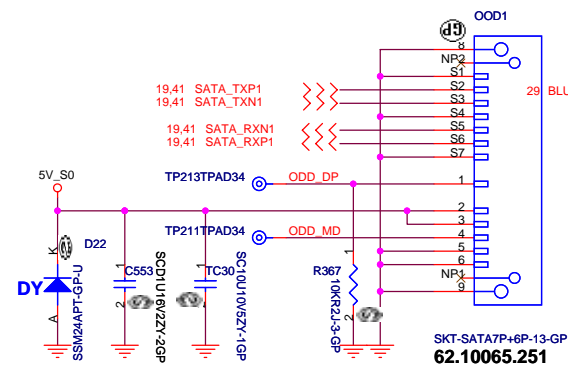
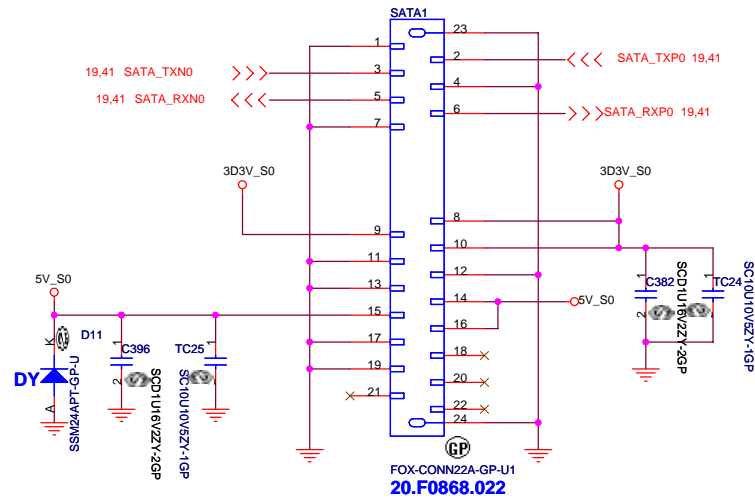
緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title				
ICH9-M (3 of 4)				
Size	Document Number			Rev
	L72			SB
Date:	Tuesday, May 13, 2008	Sheet	22	of 41

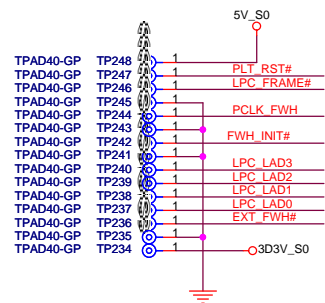
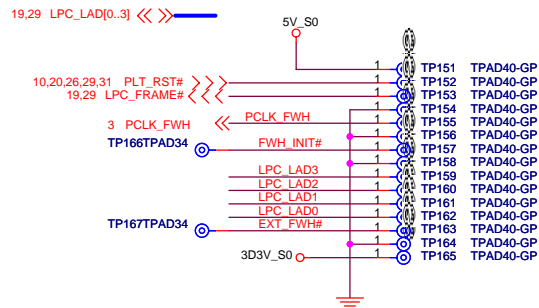




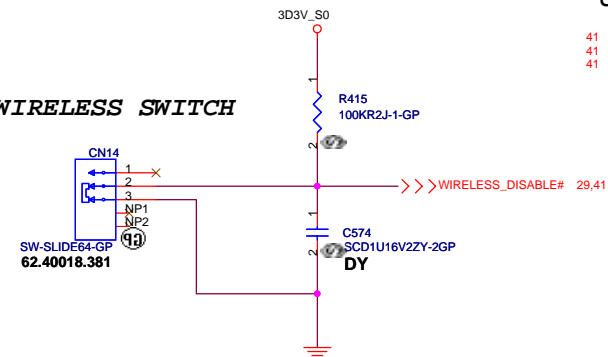
## BT CONNECTOR



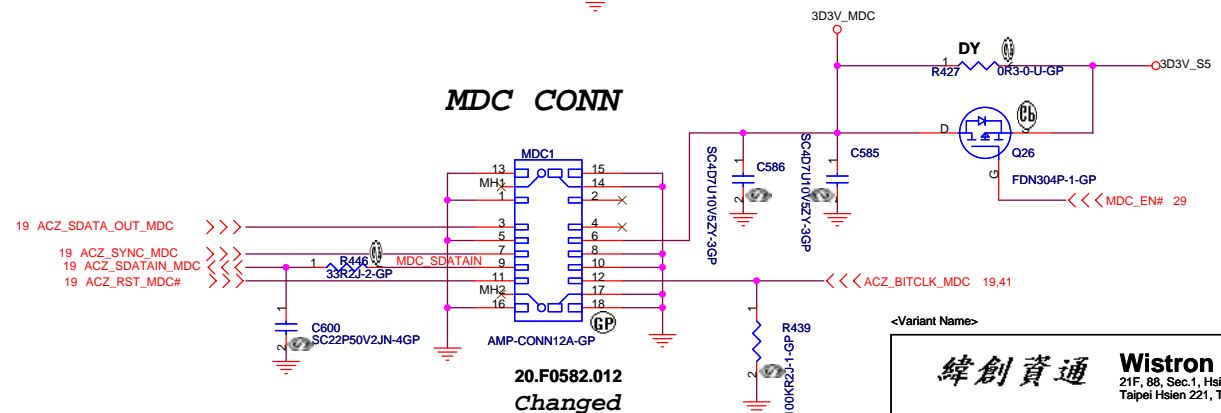
## GOLDEN FINGER FOR DEBUG BOARD



## WIRELESS SWITCH



***MDC CONN***



<Variant Name>

緯創資通

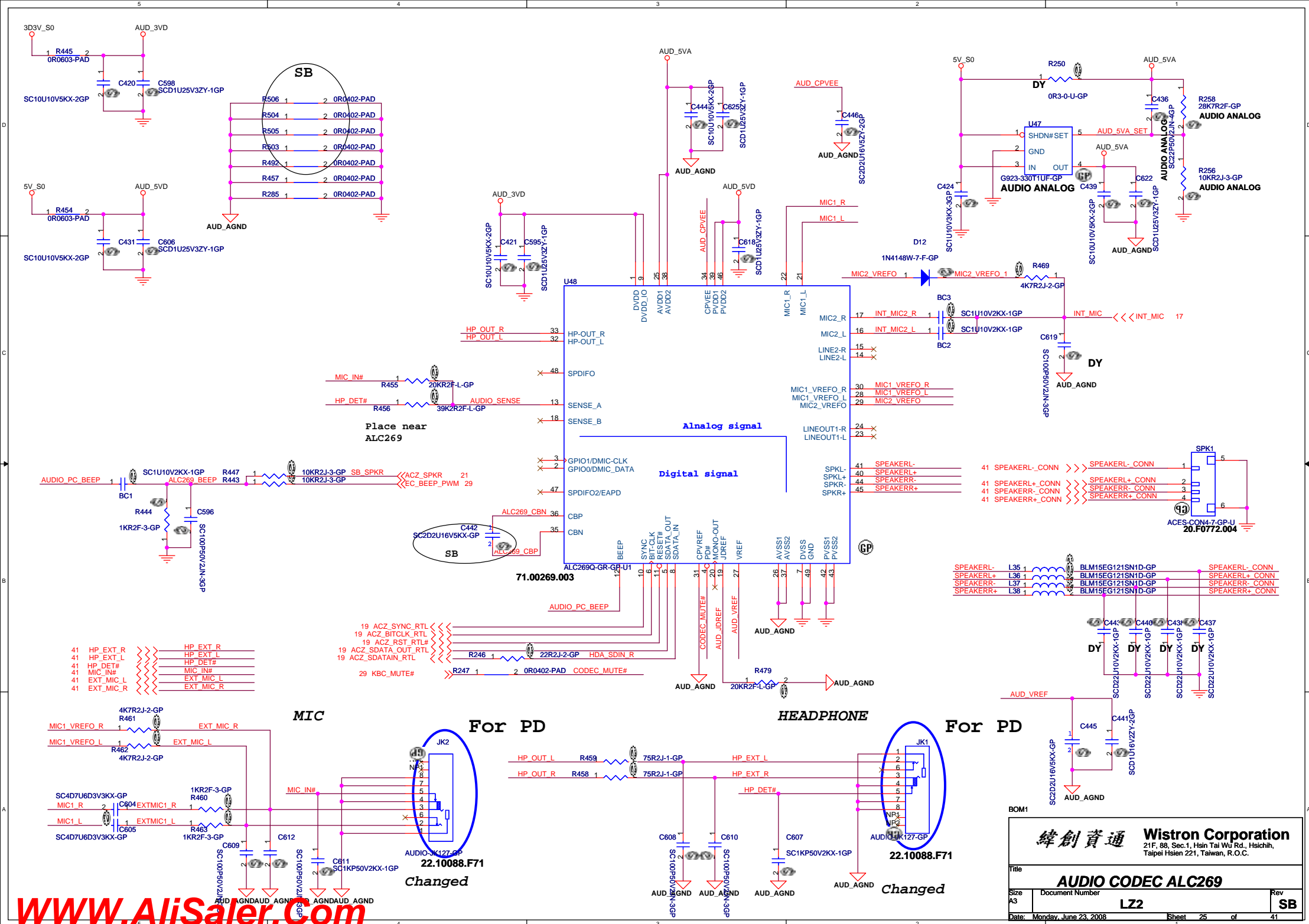
**Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

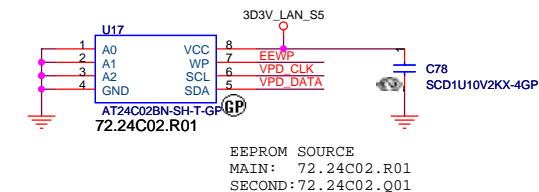
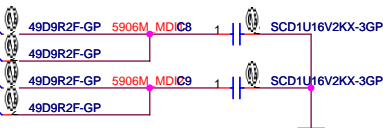
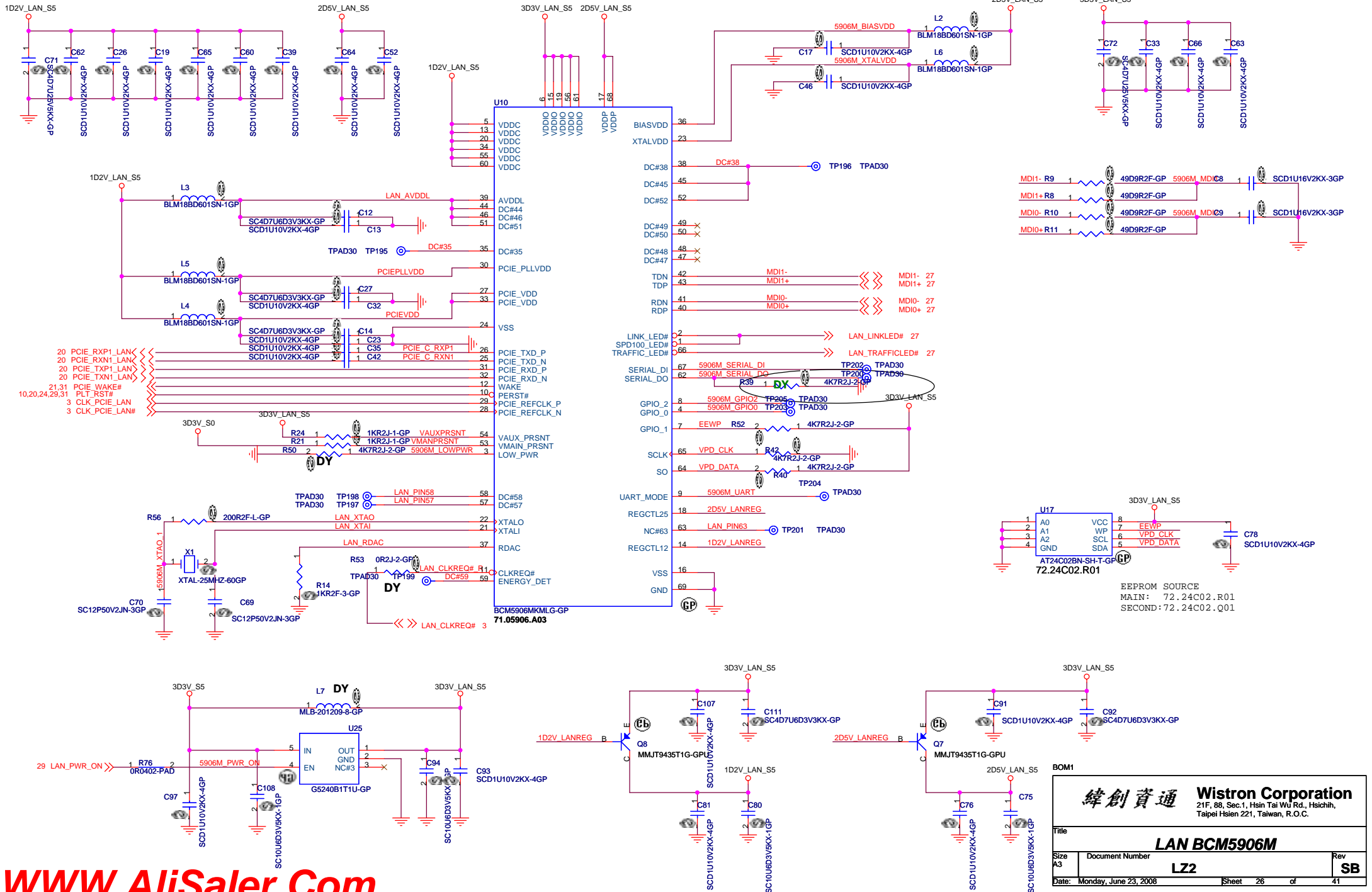
Title
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HDD/CDROM/DEBUG /MODEM/WIRELESS SW/BT		
Size	Document Number	Rev

	<b>LZ2</b>	<b>SB</b>
Date: Monday, June 23, 2008	Sheet 24 of 41	







緯創資通

Wistron Corporation

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Taipei Hsien 221, Taiwan, R.O.C.

Title			LAN BCM5906M		
Size	Document Number	Rev			
A3	LZ2	SB			
Date:	Monday, June 23, 2008	Sheet	26	of	41

- 4



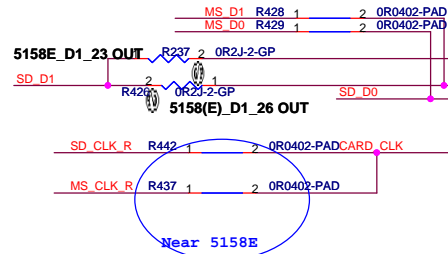
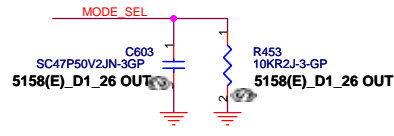
2

1

Sheet 27 of 41

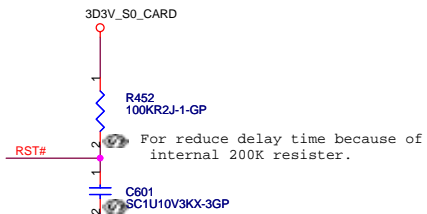
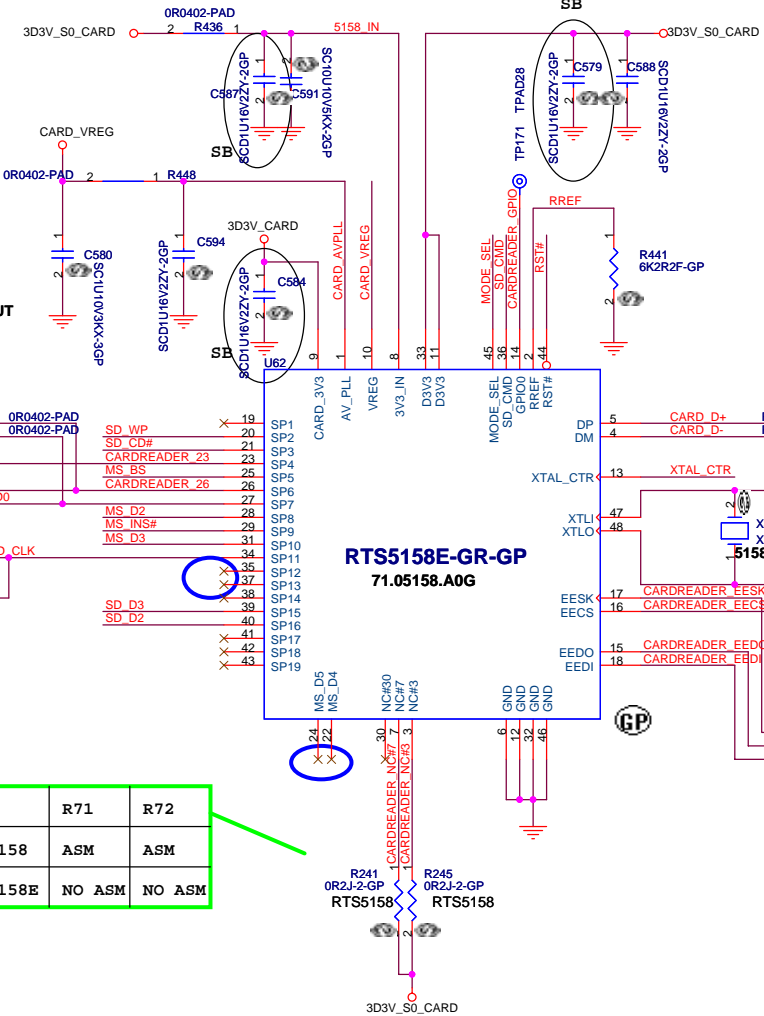
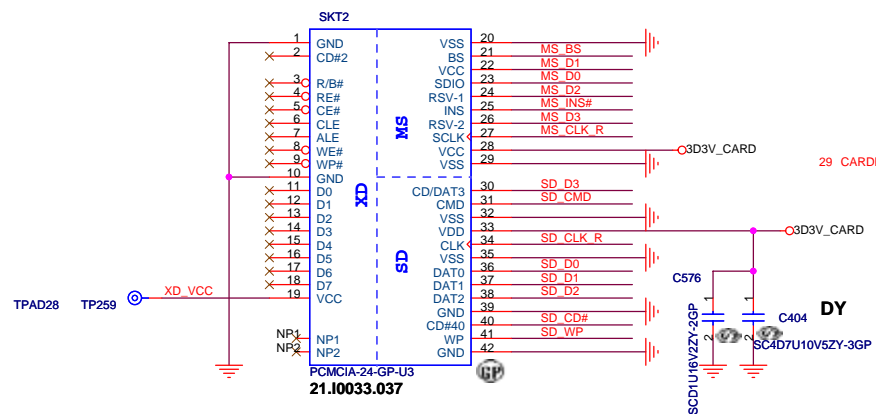
For 3in1  
SD/MMC/MS CARD

R1302	C38	SD_D1 OUT FROM	IC P/N
10K	47 PF	PIN 26(MS_D1)	5158&5158E
NC	NC	PIN 23	5158E

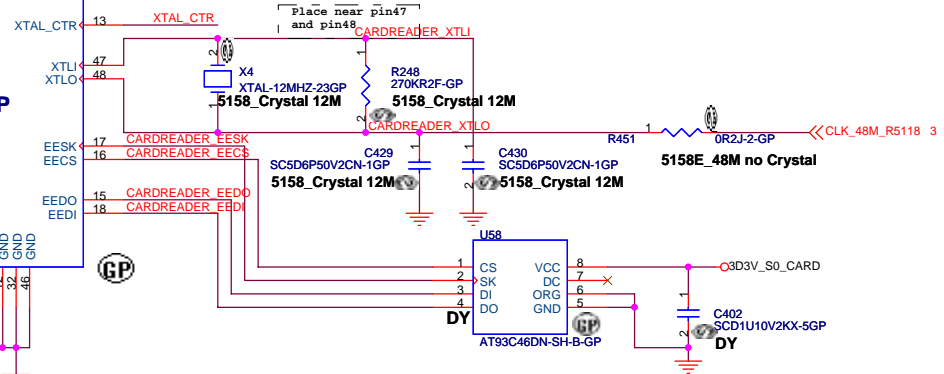


\*Vendor suggest: SD section--pin 28(D7),31(D6),  
\*\*35(D5),37(D4) RESERVED FOR 8PIN SD CARD

	R71	R72
RTS5158	ASM	ASM
RTS5158E	NO ASM	NO ASM



Pull XTAL\_CTR to high, 48MHz input mode be  
choosed;Float XTAL\_CTR,external 12MHz XTAL  
input mode be choosed.



CLK CONTROL	R1303 R1301	X7,R1373, C842,C843
48MHZ	ASM	NO ASM
12MHZ	NO ASM	ASM

VENDOR SUGGEST USE 5.6PF  
OR USE 48MHZ DIRECTLY BY CLK GEN.

Pin 13 (XTAL CTL)	Clock source	Remark
Floating	12MHz crystal input	
Full high	Clock generator's 48MHz input	Input to RTS5158E(Pin 48)

<Core Design>

**緯創資通**  
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Taipei Hsien 221, Taiwan, R.O.C.

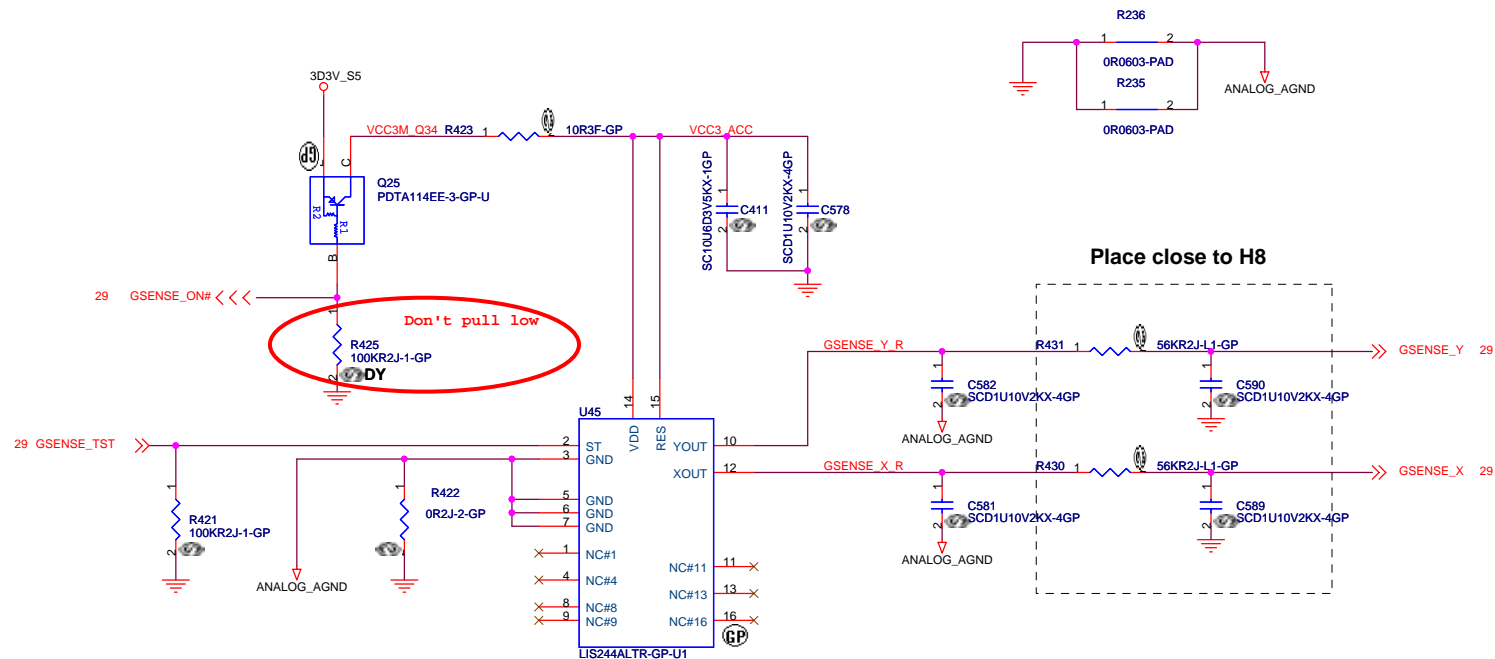
**Wistron Corporation**

Title: **CARD READER**

Size: A3 Document Number: **LZ2** Rev: **SB**

Date: Monday, June 23, 2008 Sheet: 28 of 41





Primary : STMicro LIS244AL  
2nd: ADI ADXL322

Width = 6 mil & Spacing = 10 mil  
for three Output traces

	ADXL322 LIS244AL	No Accel
R545	NO_ASM	ASM
R547	ASM	ASM
All other	ASM	NO_ASM

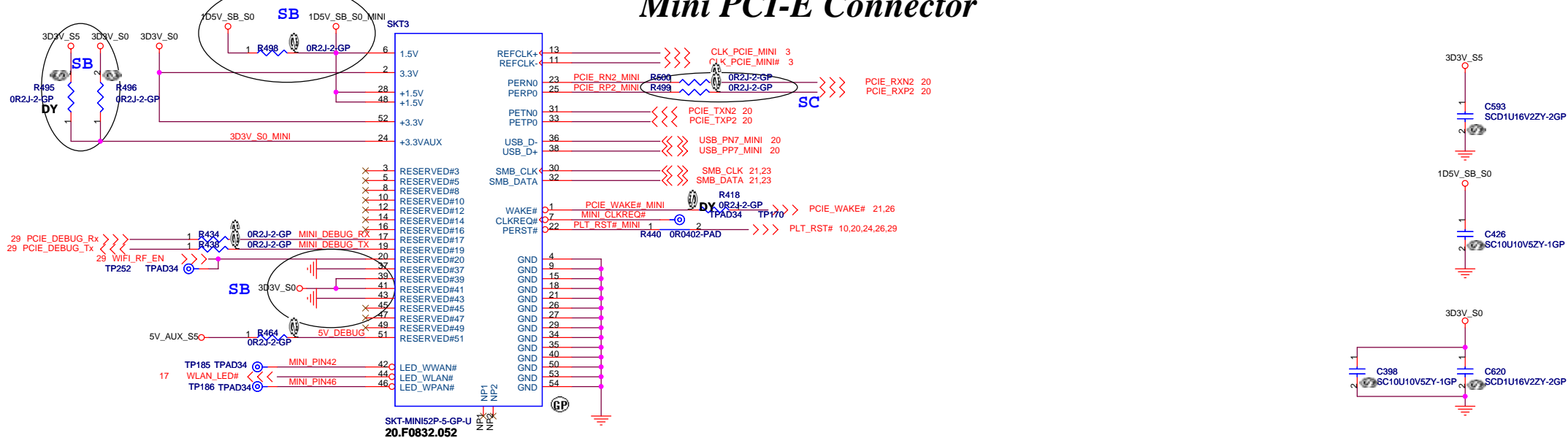
#### Layout Comment :

- (1) Place C148, C149, Q18, R116, R121, C126, C130, R107, R106 close to U18.
- (2) Avoid routing under DCDC switching area.

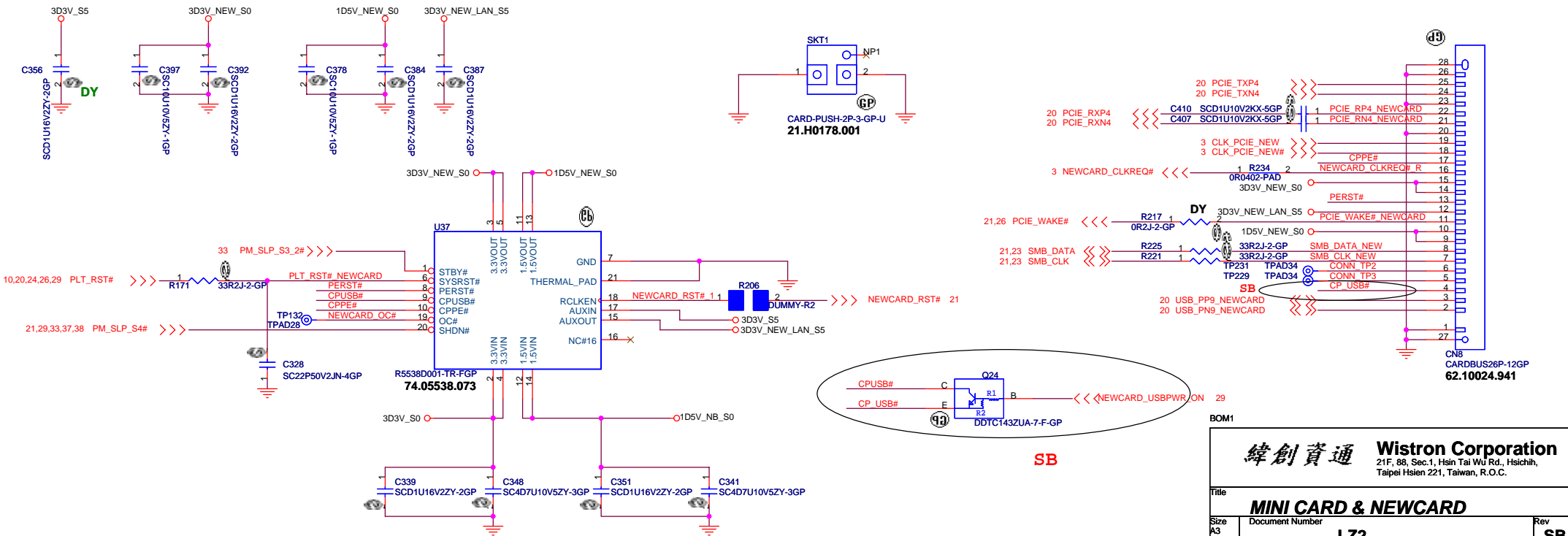
BOM1

<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title: <b>GSENSOR</b>	
Size: <b>LZ2</b>	Rev: <b>SB</b>
Date: Monday, June 23, 2008	Sheet 30 of 41

# Mini PCI-E Connector



## .N.E.W.C.A.R.D. C.O.N.N.



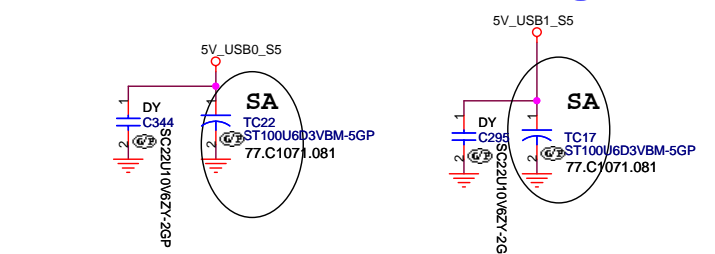
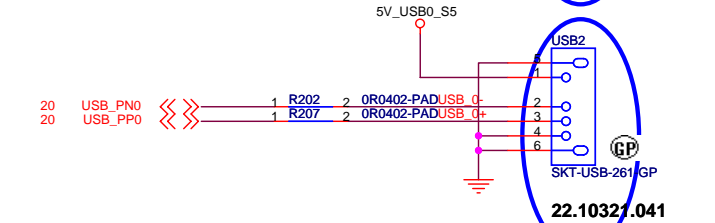
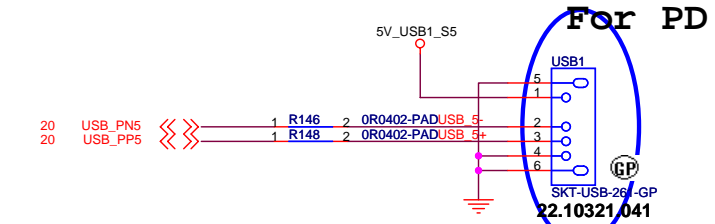
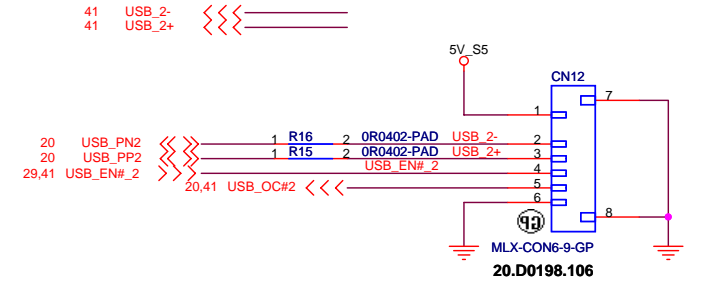
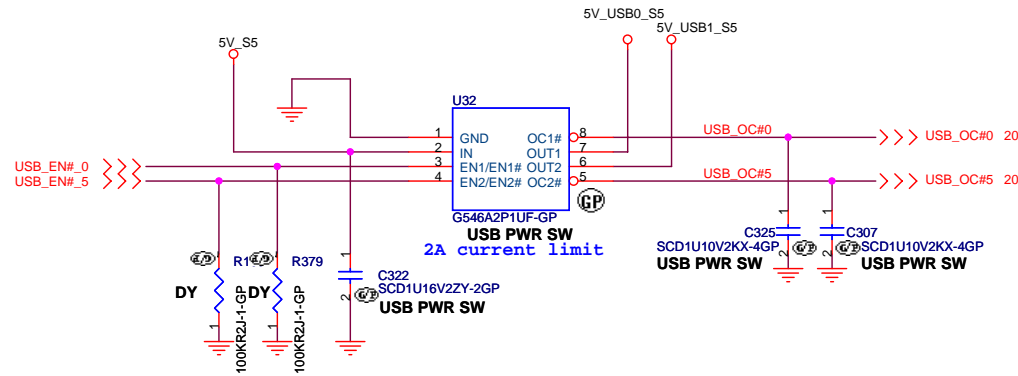
緯創資通

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

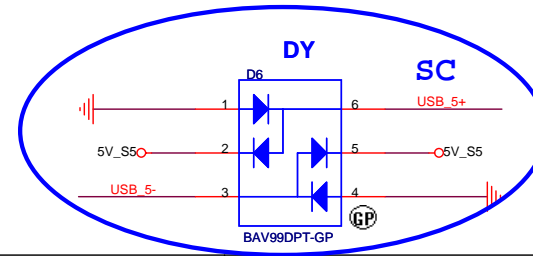
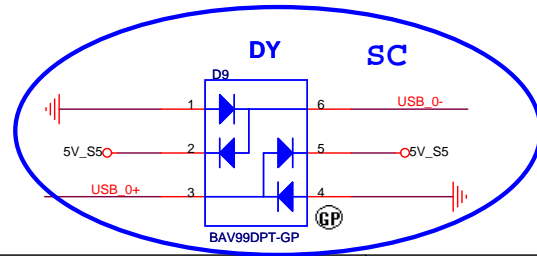
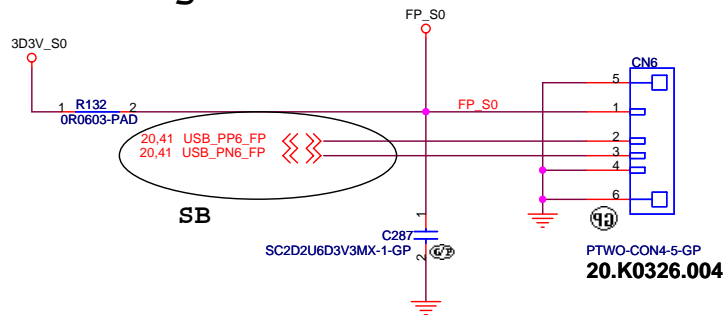
Title			
MINI CARD & NEWCARD			
Size	Document Number	Rev	
A3	LZ2	SB	
Date:	Monday, June 23, 2008	Sheet	31 of 41



# USB \* 3 PORT



## Finger Print



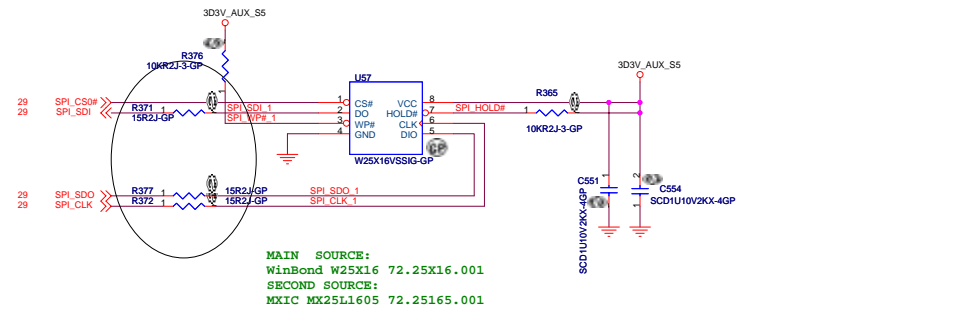
BOM1

緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
USB CONN/FINGER PRINT			
Size B	Document Number	LZ2	Rev SB
Date:	Monday, June 23, 2008	Sheet 32 of	41

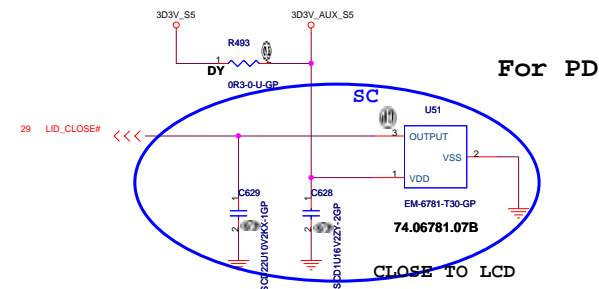




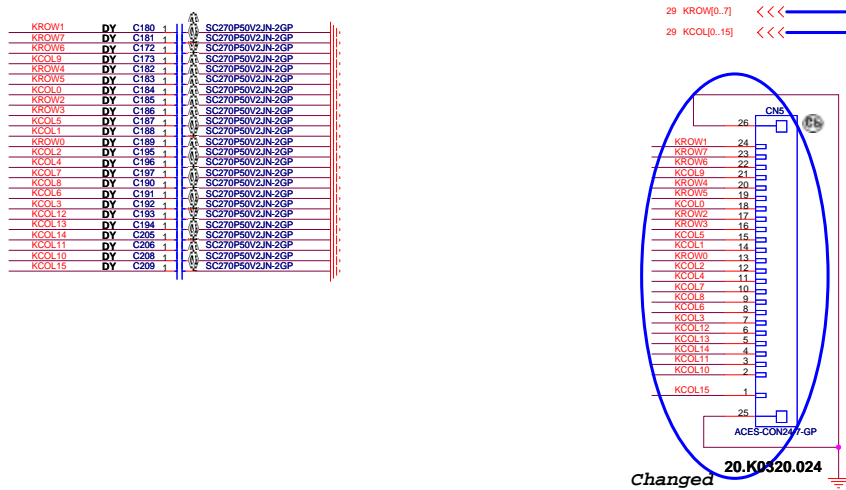
## SPI Flash



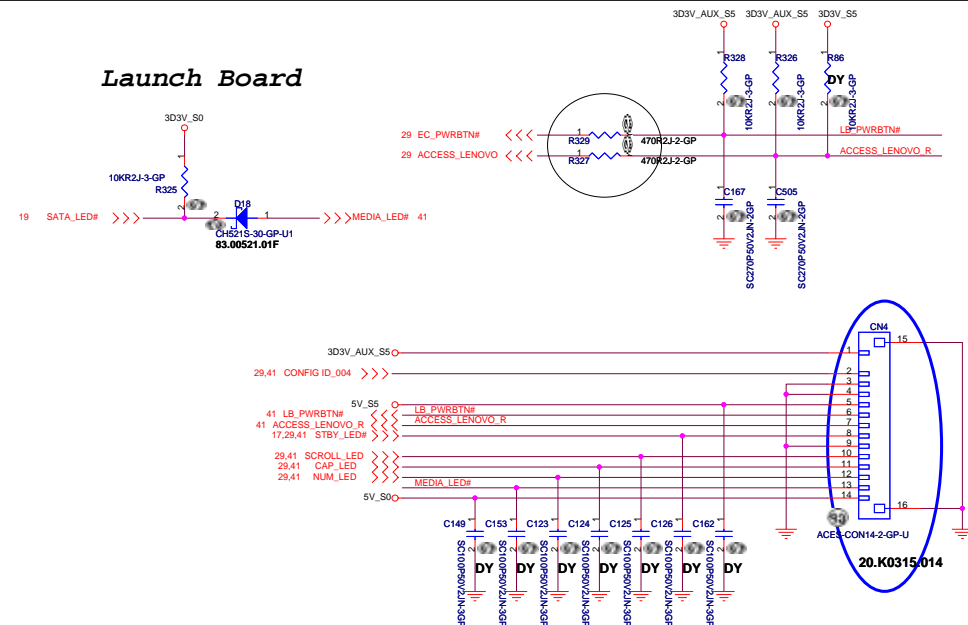
### Lid Switch



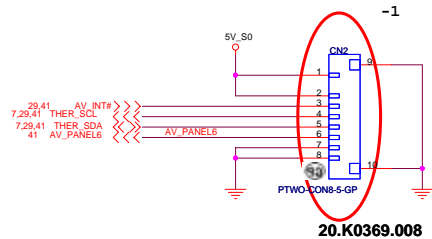
### Keyboard Connector



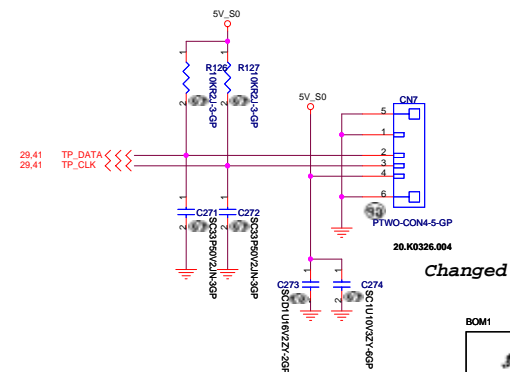
## Launch Board



*AV Panel*



## TouchPad Connector

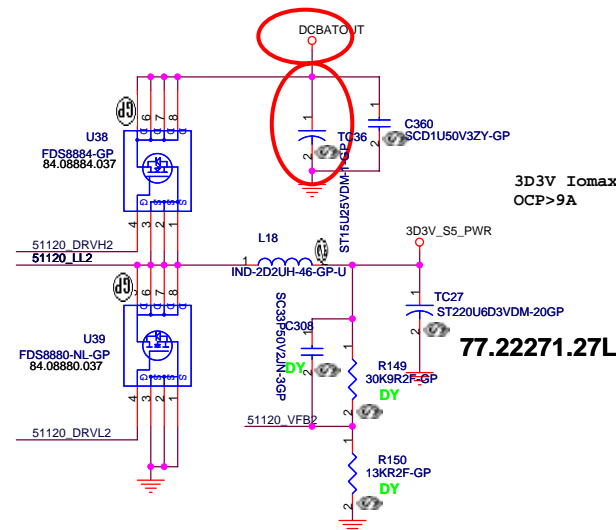
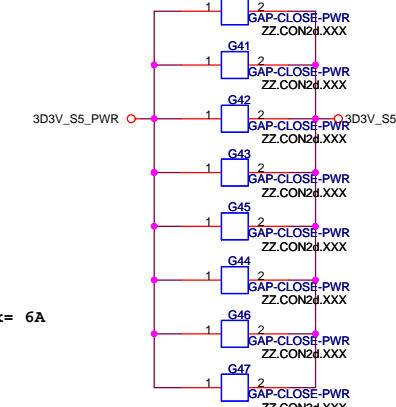
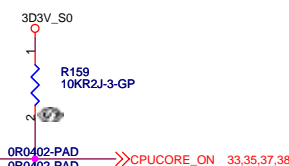
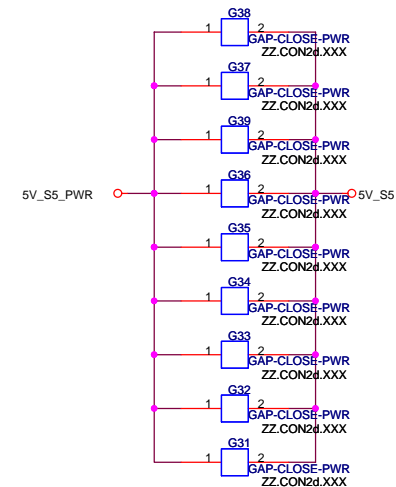
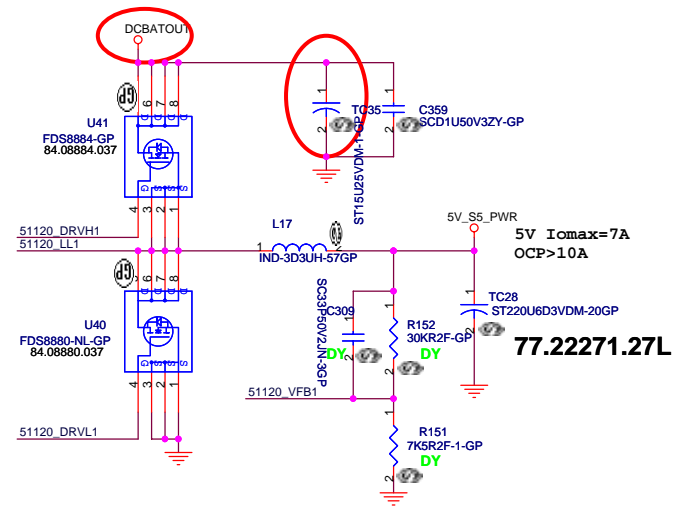
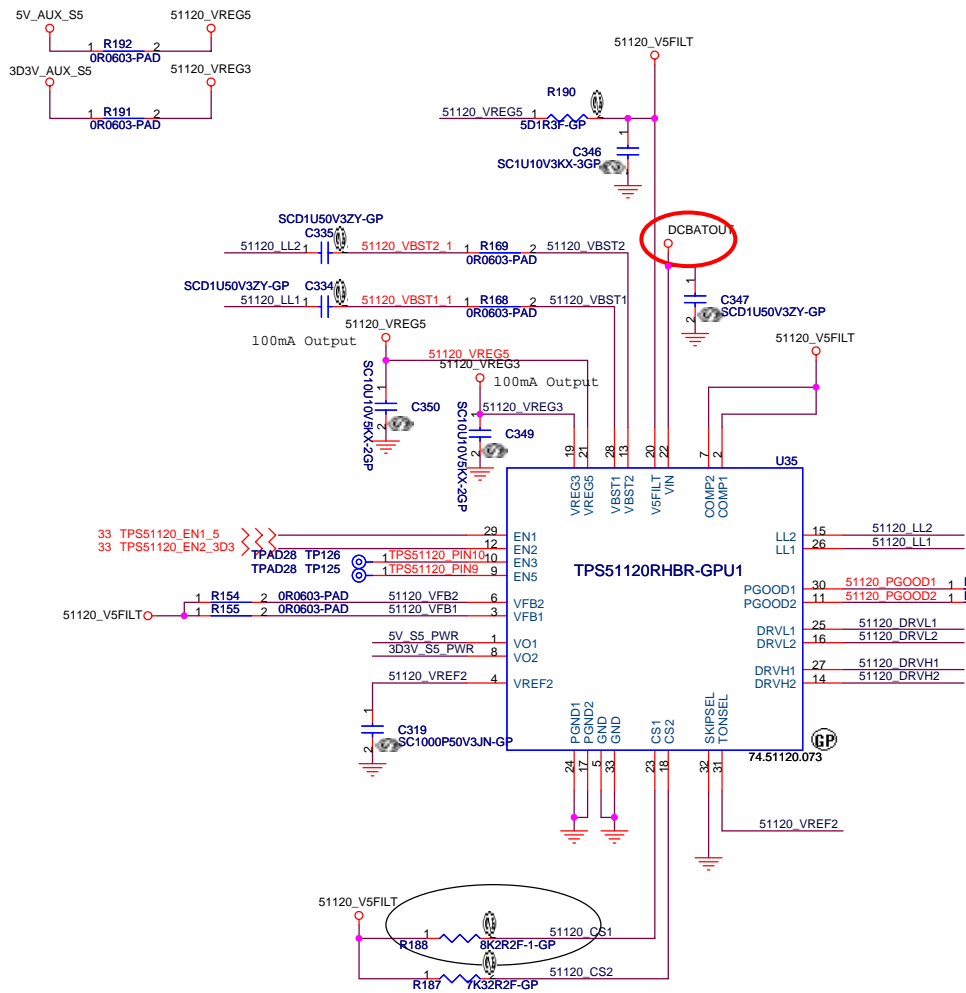


BOM1

**緯創資通** **Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title			
<b>KB/TP/SPI/AV/Charger</b>			
Size	Document Number	Rev	
	<b>L72</b>		<b>SB</b>
Date: Monday, June 23, 2008	Sheet 34	of	41





	GND	VREF2	FLOAT	V5FILT
SKIPSEL	AUTOSKIP	AUTOSKIP / FAULTS OFF	PWM	PWM
	N/A	N/A	CURRENT MODE	D-Cap MODE
	380k/CH1 590k/CH2	280k/CH1 430k/CH2	220k/CH1 330k/CH2	180k/CH1 280k/CH2
	N/A	not use	ADJ.	5V Fixed Output
	N/A	not use	ADJ.	3.3V Fixed Output
	switcher OFF	not use	Switchchr ON	Switcher ON
	not use	not use	LDO ON	REG3 on

For TPS51120,  
Vout=5V

1. If you use a 6.8uH inductor, the minimum ESR is 70m ohm.
2. If you use a 4.7uH inductor, the minimum ESR is 48m ohm.
3. If you use a 3.3uH inductor, the minimum ESR is 34m ohm.

Vout=3.3V

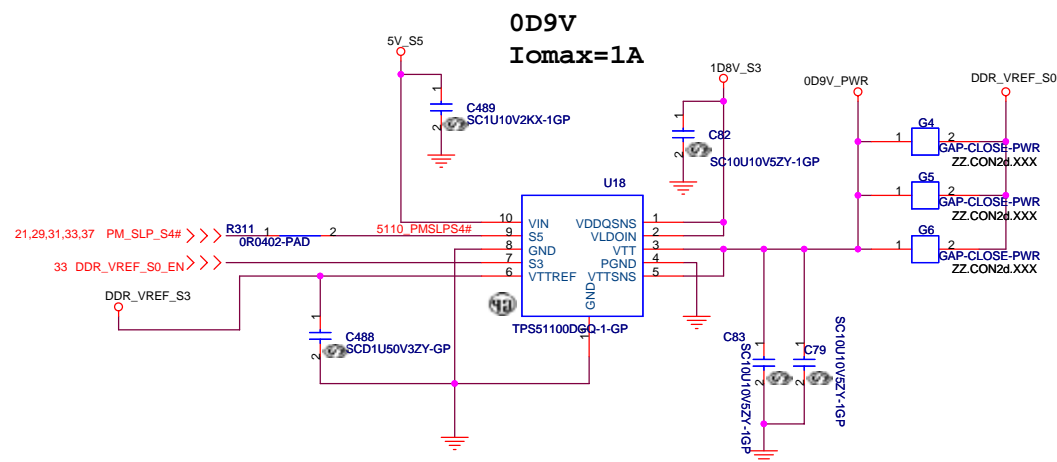
1. If you use a 4.7uH inductor, the minimum ESR is 51m ohm.
2. If you use a 3.3uH inductor, the minimum ESR is 36m ohm.
3. If you use a 2.5uH inductor, the minimum ESR is 27m ohm.

<Core Design>

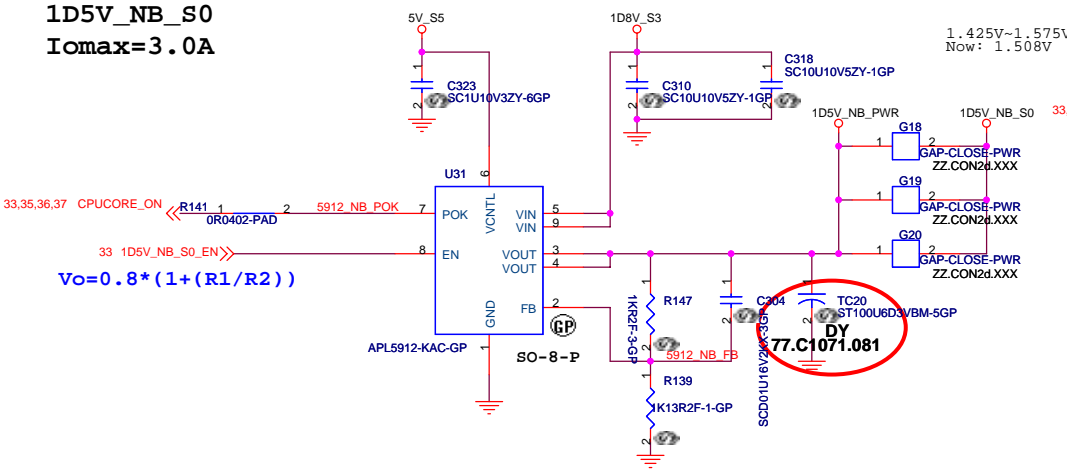
緯創資通 Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title	TPS51120 5V / 3D3V		
Size	Document Number	Rev	
A3	LZ2	SB	
Date: Monday, June 23, 2008	Sheet 36	of 41	

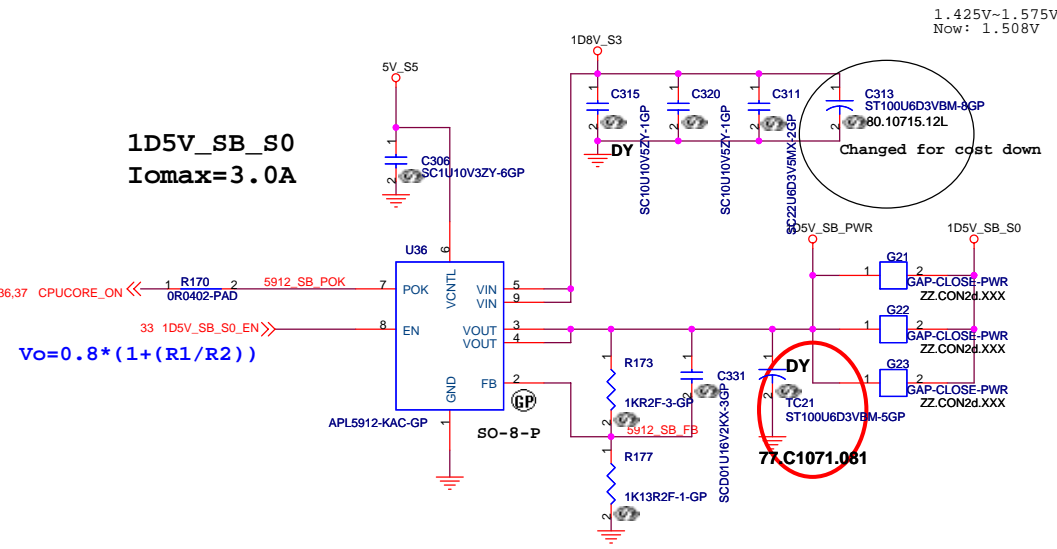




**1D5V\_NB\_S0**  
**Iomax=3.0A**

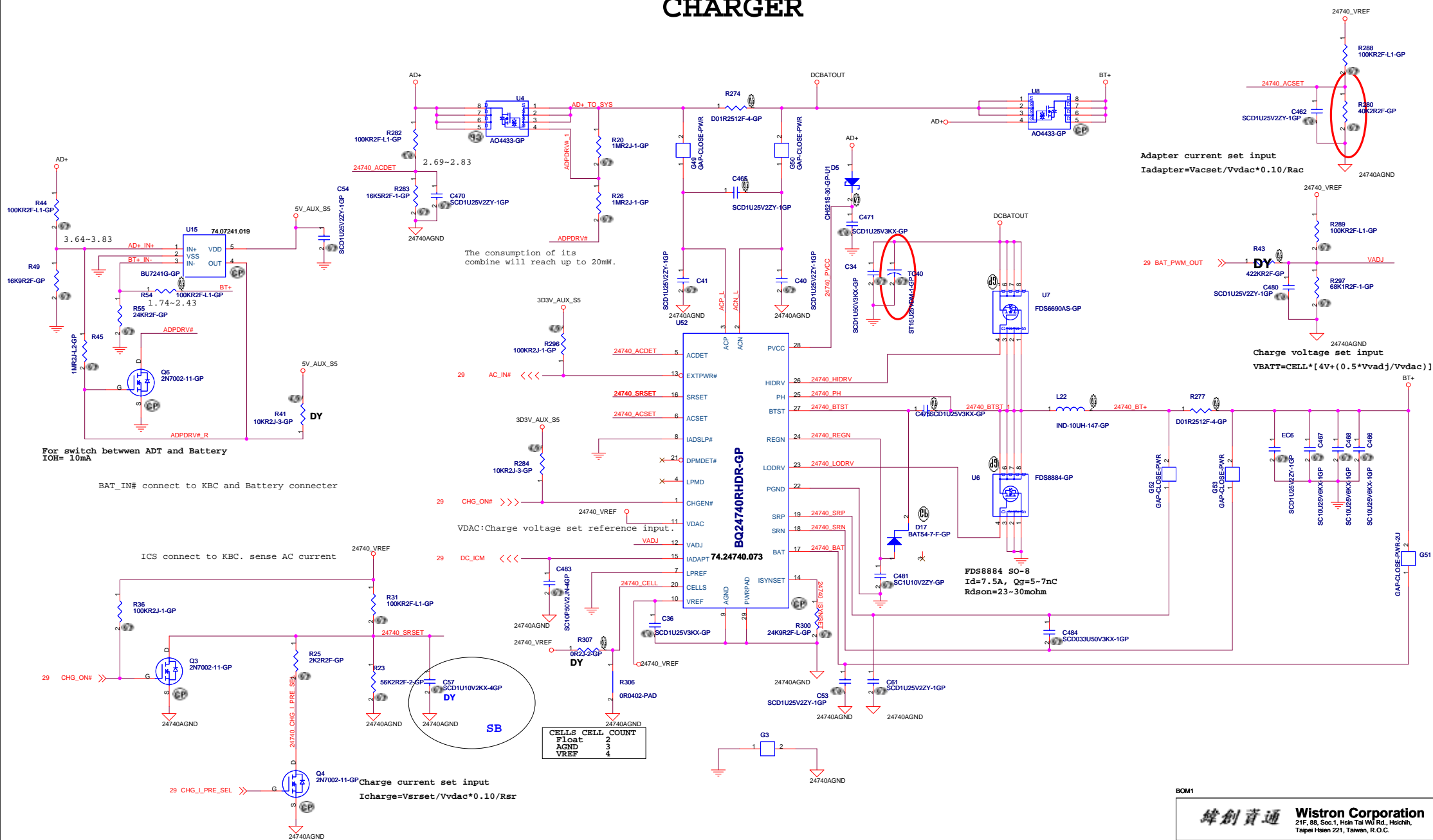


**1D5V\_SB\_S0**  
**Iomax=3.0A**



<div> <div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div> </div>			
Title			
LDO 0D9V / 1D5V_S0			
Size	Document Number	Rev	
A3	LZ2	SB	
Date: Monday, June 23, 2008		Sheet 38	of 41

## CHARGER

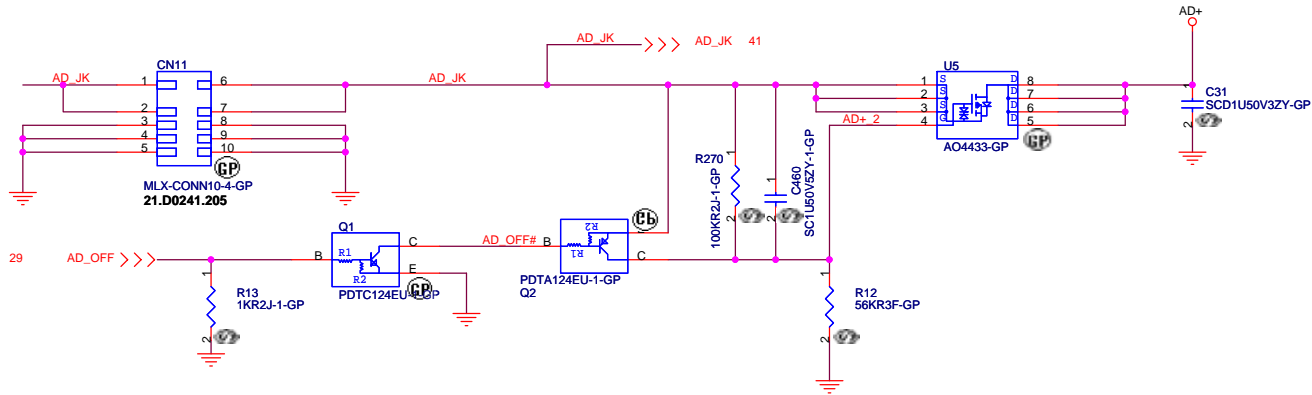


**BOM1**

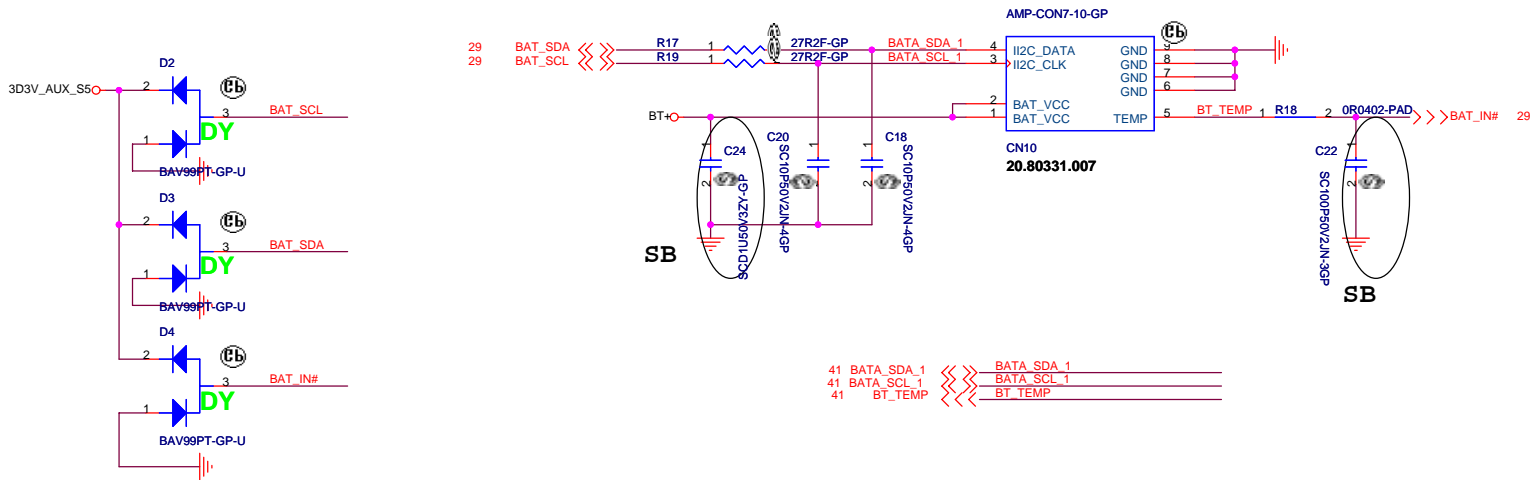
**緯創資通** **Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title			
Charger BQ24740			
Size	Document Number		Rev
	L72		SI
Date: Monday, June 23, 2008	Sheet	39	of 41

## Adaptor in to generate DCBATOUT



## BATTERY CONNECTOR



## <Core Design>

緯創資通

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

Title	<b><i>PTH FOR SCREW HOLES</i></b>
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Size	Document Number
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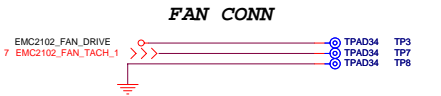
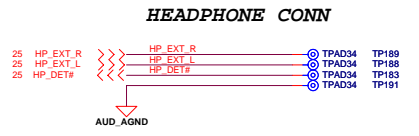
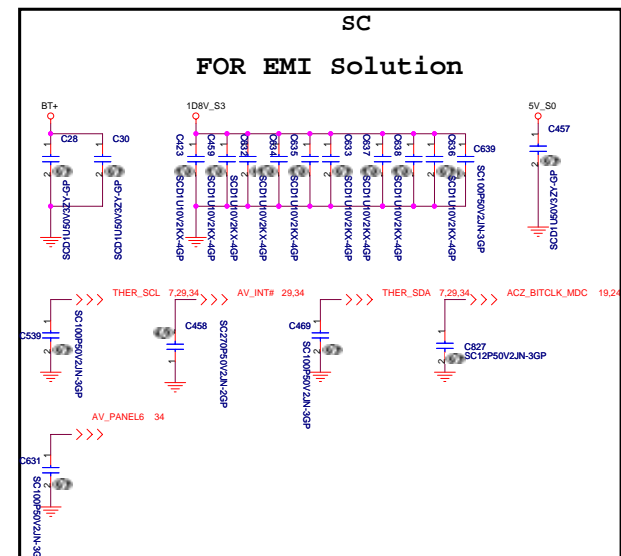
**LZ2**Rev  
SB

Date: Monday, June 23, 2008

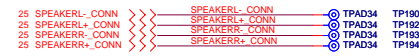
Sheet 40 of 41

41	
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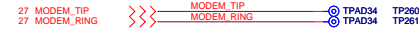




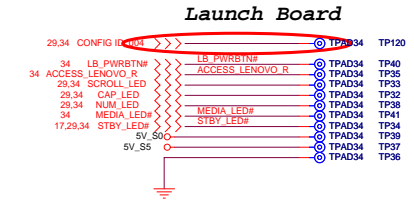
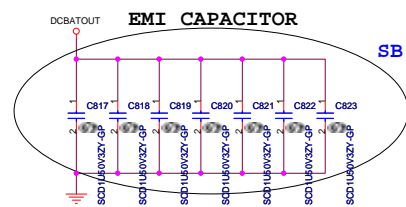
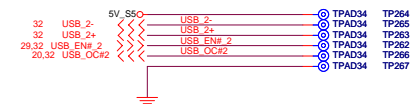
SPEAKER CONN



## MODEM CABLE CONN



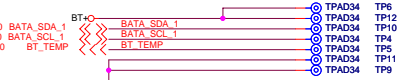
## USB BOARD CONN



## ADT BOARD CONN



## BATTERY CONN



*Finger Print* CONN

