

Model Name: KAT00 UMA
PCB NO: LA-5152P
BOM P/N: 43169631L01

Compal Confidential

Schematic Document

POITIER Montevina

2008 / 06 / 15 Rev:1.0

MB PCB

Part Number	Description
DA80000E510	PCB 080 LA-5152P REV1 UMA M/B

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL
TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT
BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION,
NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD
PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

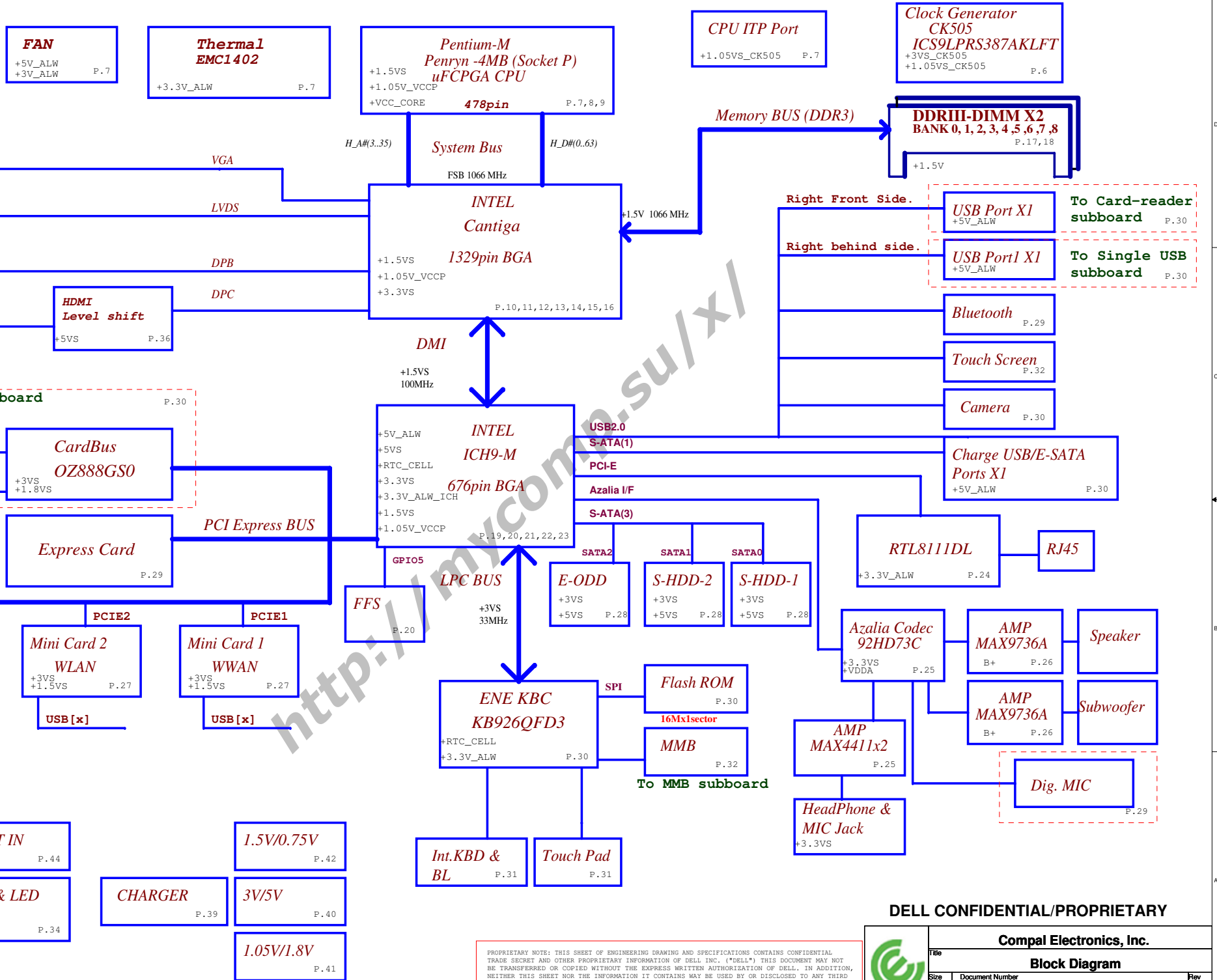
DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

Title			Cover Sheet
Size	Document Number	Rev	
	LA-5152P	A00	
Date	Monday, June 15, 2009	Sheet	1 of 51

Block Diagram
Compal confidential
Model : KAT00



PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Block Diagram			
LA-5152P	Rev A00		
Date: Monday, June 15, 2009	Sheet 2 of 51		

Voltage Rails O MEANS ON X MEANS OFF

power plane State	+B	+5VALW +3VALW	+1.5V	+5VS +3VS +1.8VS +1.5VS +1.1VS +VCCP +0.75VS +CPU_CORE
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :



: means Digital Ground



: means Analog Ground

@ : means just reserve , no build

DEBUG@ : means just reserve for debug.

USB Port	Device
0	USB&ESATA
1	Reader/BD
2	USB board
3	NC
4	WLAN
5	WWAN
6	WPAN
7	Express
8	NC
9	Touch screen
10	Bluetooth
11	Camera

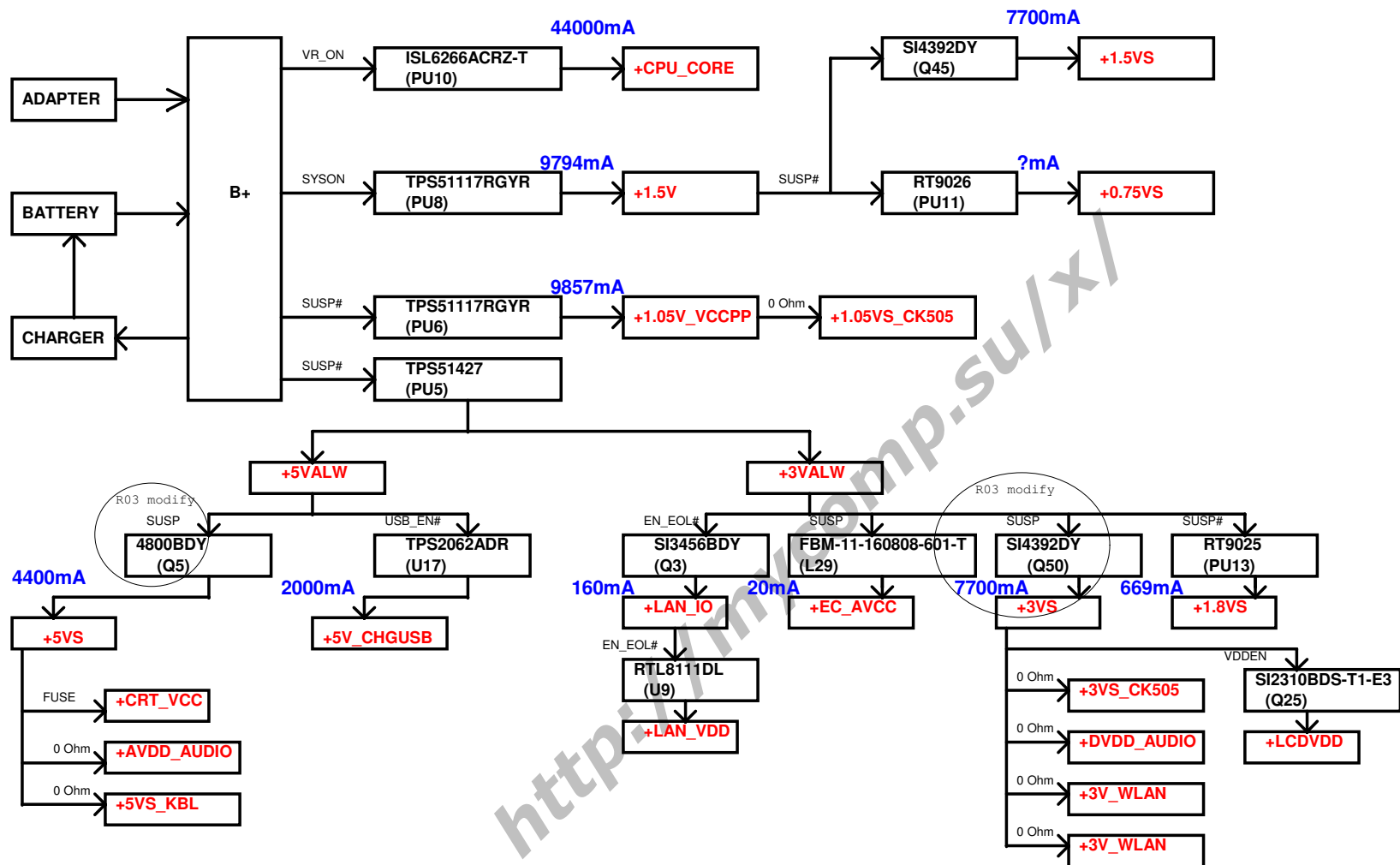
SATA Port	Device
0	JSATA2
1	JSATA1
2	JESA1
3	JODD

PCIE Port	Device
1	JWWAN1
2	JWLAN1
3	JWPAN1
4	Reader/BD (OZ888)
5	JEXP1
6	RTL8111DL

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.			
Note List			
Size	Document Number	Rev	
	LA-5152P	1A	
Date:	Monday, June 15, 2009	Sheet	3 of 45

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

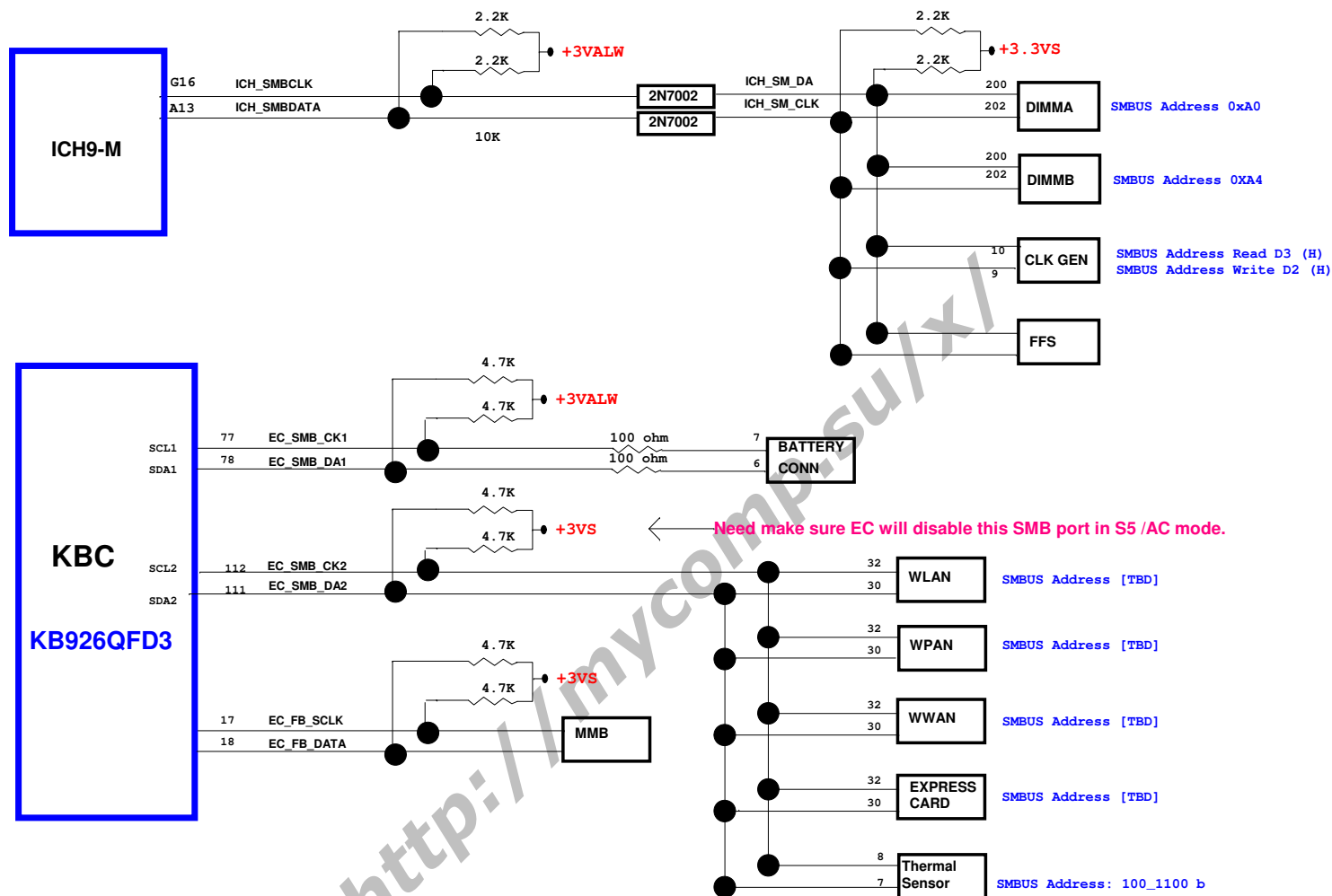


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Title		Power Rail	
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	4 of 51



I2C / SMBUS ADDRESSING

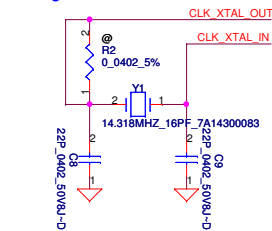
DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1 0 1 0 0 0 0 0
DDR SO-DIMM 1	A4	1 0 1 0 0 1 0 0
CLOCK GENERATOR (EXT.)	D2	1 1 0 1 0 0 1 0

DELL CONFIDENTIAL/PROPRIETARY

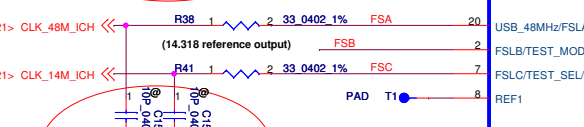
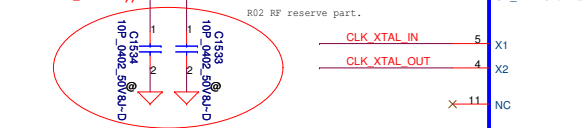
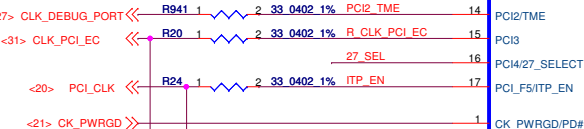
		Compal Electronics, Inc.	
		SMBUS TOPOLOGY	
Size	Document Number	Rev 3.0	
Date: Monday, June 15, 2009		Sheet 5	of 45

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Routing the trace at least 10mil



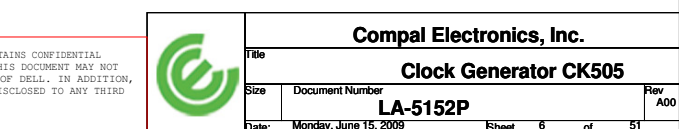
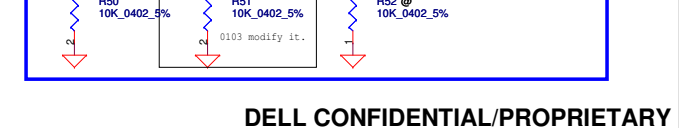
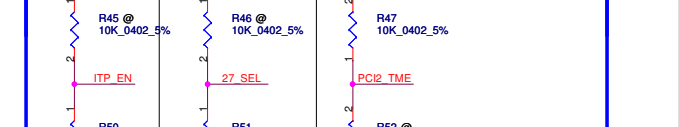
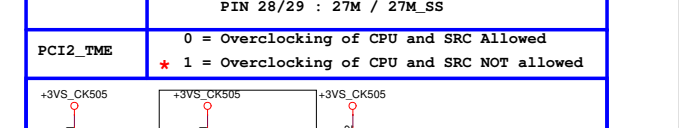
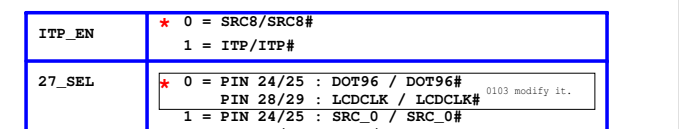
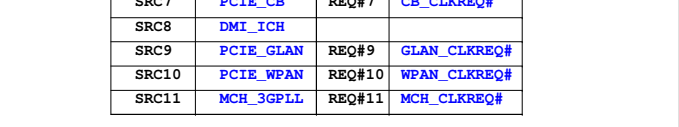
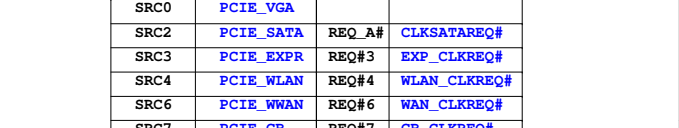
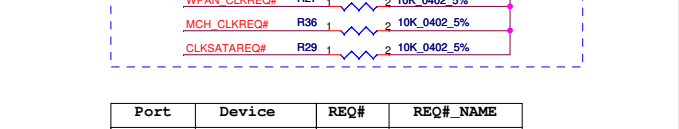
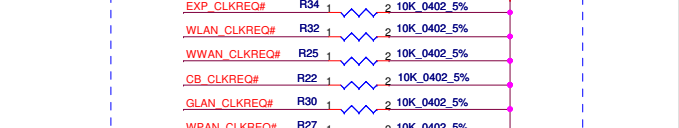
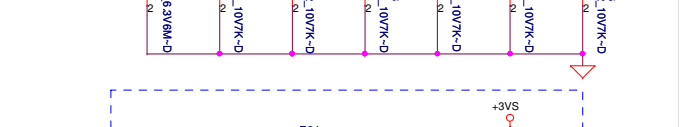
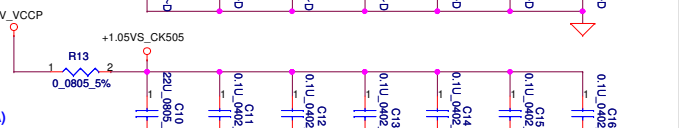
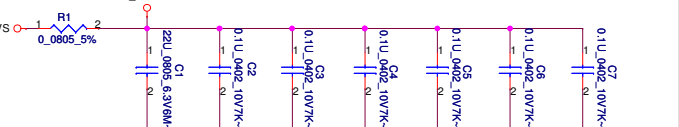
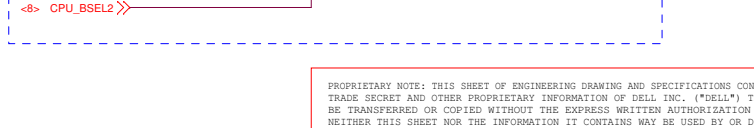
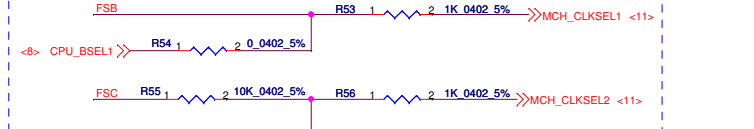
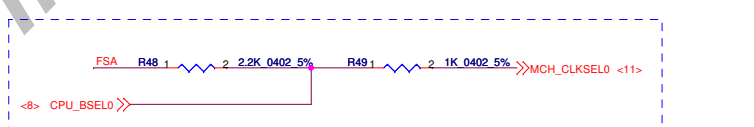
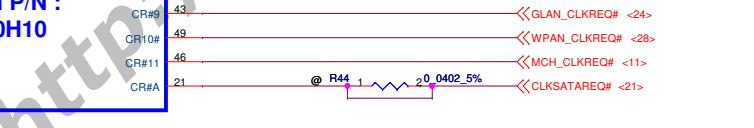
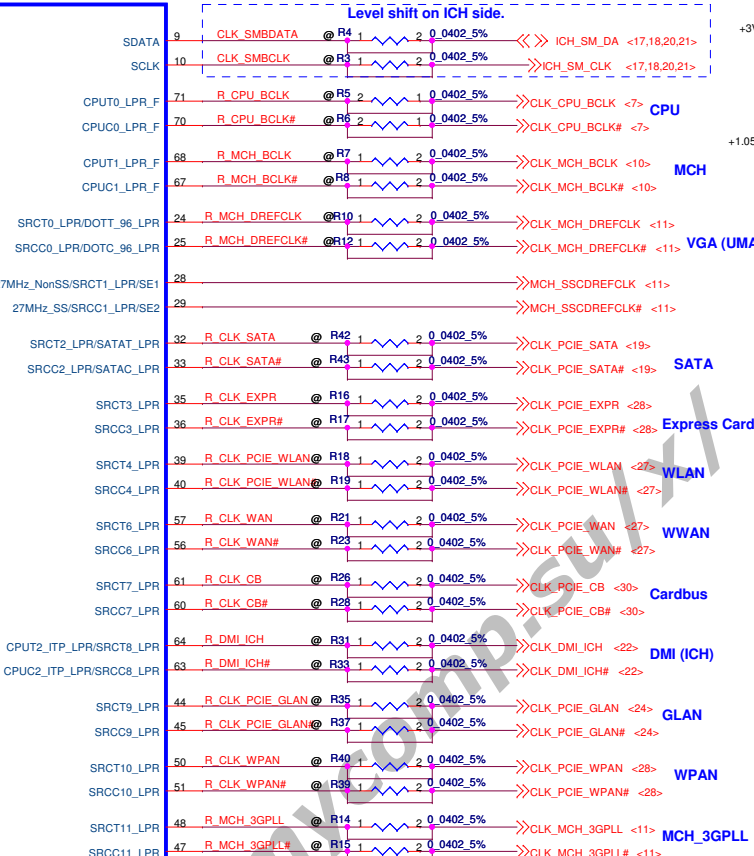
CPU_STP



B version P/N :
SA000020H10

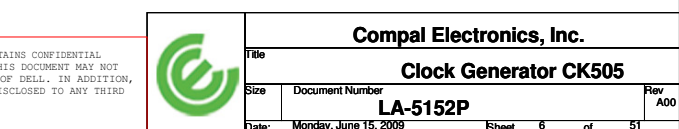
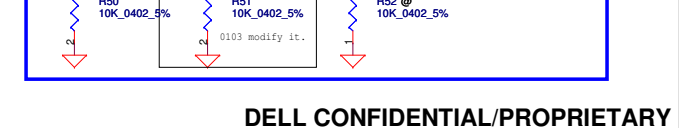
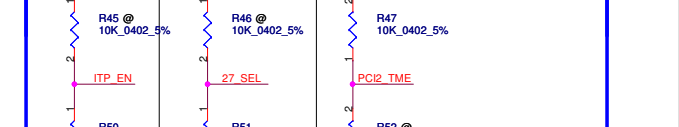
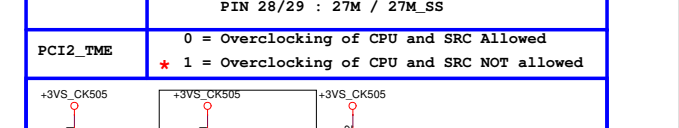
FSC CLKSEL2	FSB CLKSEL1	FSA CLKSEL0	CPU MHz	SRC MHz	PCI MHz	REF MHz	DOT_96 MHz	USB MHz
0	0	0	266	100	33.3	14.318	96.0	48.0
0	0	1	133	100	33.3	14.318	96.0	48.0
0	1	0	200	100	33.3	14.318	96.0	48.0
0	1	1	166	100	33.3	14.318	96.0	48.0
1	0	0	333	100	33.3	14.318	96.0	48.0
1	0	1	100	100	33.3	14.318	96.0	48.0
1	1	0	400	100	33.3	14.318	96.0	48.0
1	1	1						

Reserved



Port	Device	REQ#	REQ#_NAME
SRC0	PCIE_VGA		
SRC2	PCIE_SATA	REQ_A#	CLKSATAREQ#
SRC3	PCIE_EXPR	REQ#3	EXP_CLKREQ#
SRC4	PCIE_WLAN	REQ#4	WLAN_CLKREQ#
SRC6	PCIE_WWAN	REQ#6	WWAN_CLKREQ#
SRC7	PCIE_CB	REQ#7	CB_CLKREQ#
SRC8	DMI_ICH		
SRC9	PCIE_GLAN	REQ#9	GLAN_CLKREQ#
SRC10	PCIE_WPAN	REQ#10	WPAN_CLKREQ#
SRC11	MCH_3GPLL	REQ#11	MCH_CLKREQ#

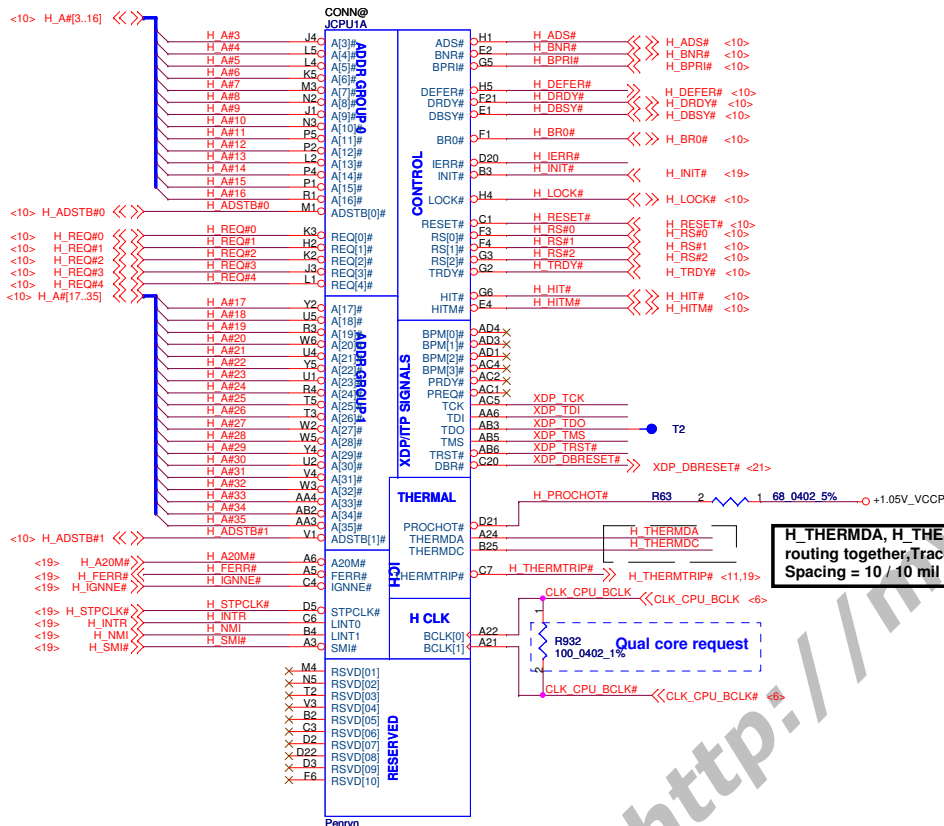
ITP_EN	★ 0 = SRC8/SRC8# 1 = ITP/ITP#
27_SEL	★ 0 = PIN 24/25 : DOT96 / DOT96# PIN 28/29 : LCDCLK / LCDCLK# 1 = PIN 24/25 : SRC_0 / SRC_0# PIN 28/29 : 27M / 27M_SS
PCI2_TME	0 = Overclocking of CPU and SRC Allowed ★ 1 = Overclocking of CPU and SRC NOT allowed



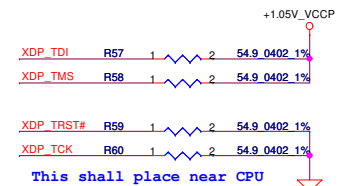
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.	
Clock Generator CK505	
Title	LA-5152P
Size	Document Number
Date	Monday, June 15, 2009
Sheet	6 of 51

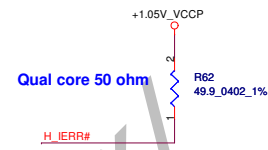
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



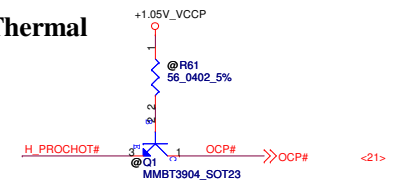
XDP / ITP



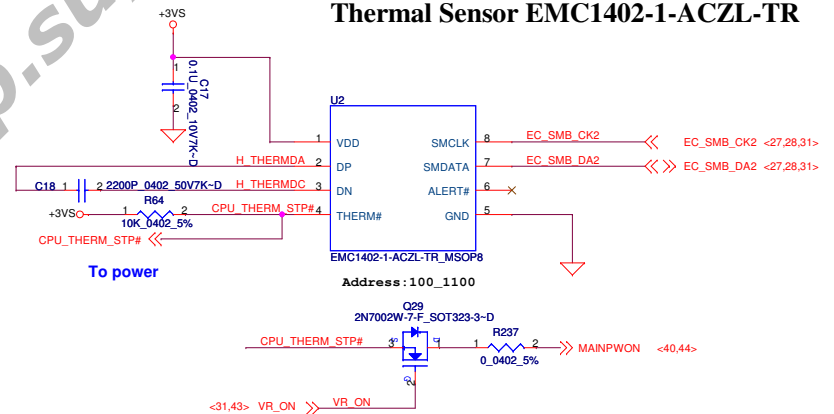
Control



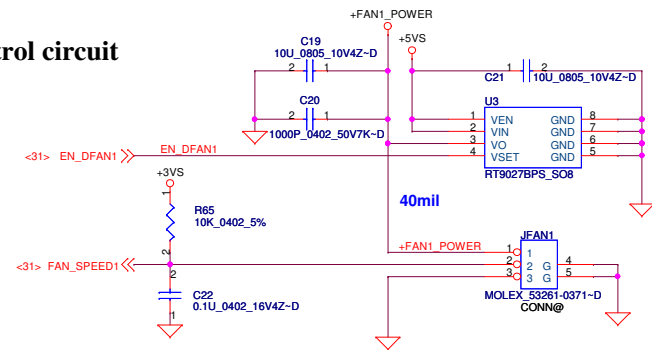
Thermal



Thermal Sensor EMC1402-1-ACZL-TR



FAN Control circuit

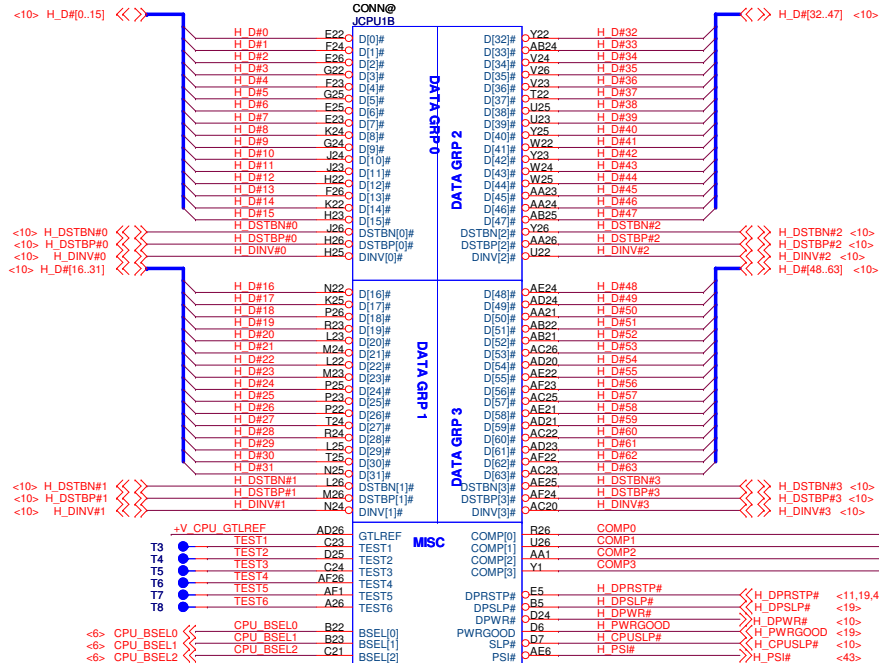


DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Title	Penryn(1/3)-AGTL+/ITP-XDP		
Size	Document Number	Rev A00	
Date	Monday, June 15, 2009	Sheet	7 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

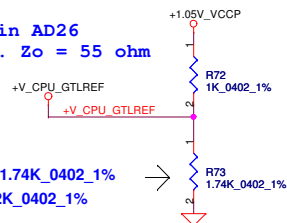


layout note: Rout H_DPRSTP# from ICH9 to IMVP6 then to GMCH & CPU

layout note: Route TEST3 & TEST5 traces on ground referenced layer to the TPs

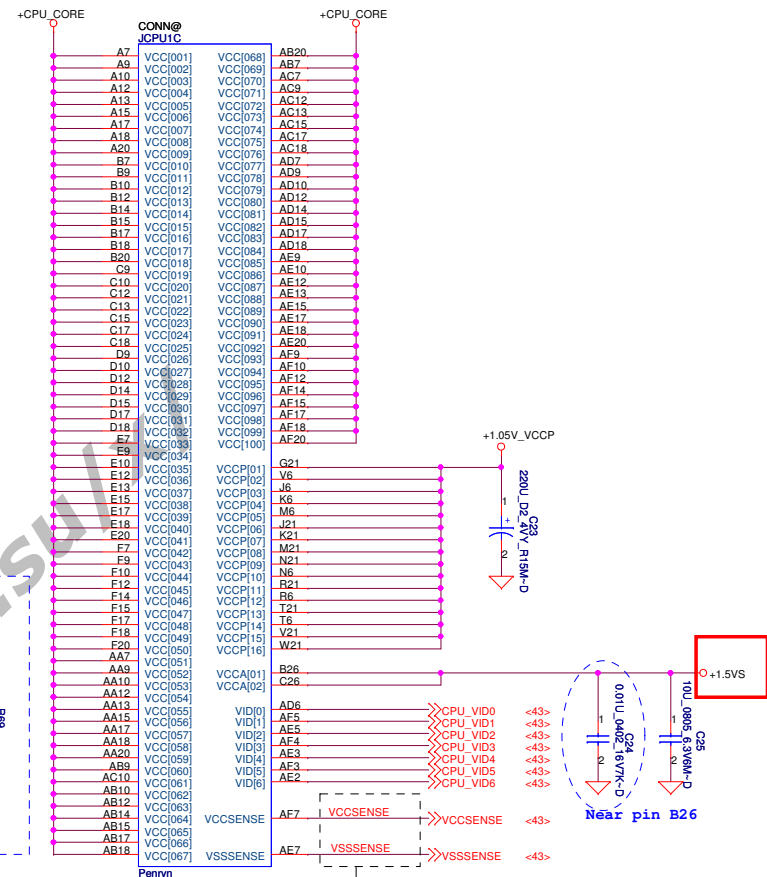
FSB	BCLK	BSEL2	BSEL1	BSEL0
533	133	0	0	1
667	166	0	1	1
800	200	0	1	0
1067	266	0	0	0

Close to CPU pin AD26
within 500mils. $Z_o = 55 \text{ ohm}$

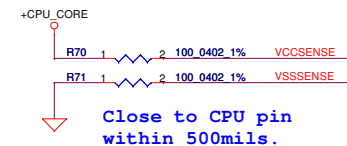


Cpu Quad Core, $R=1.74K_0402_1\%$
Cpu Dual Core, $R=2K_0402_1\%$

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



For 8 layer condition.
Length match within 25 mils.
The trace width/space/other
is 20/7/25. $Z_o = 27.4 \text{ ohm}$.



DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
File			
Penryn(2/3)-AGTL+/ITP-XDP			
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	8 of 51

High Frequency Decoupling 10uF 0805 X5R -> 85 degree.

CONN#	JCPU1D		
A4	VSS[001]	VSS[082]	P6
A8	VSS[002]	VSS[083]	P21
A11	VSS[003]	VSS[084]	P24
A14	VSS[004]	VSS[085]	R2
A16	VSS[005]	VSS[086]	R5
A19	VSS[006]	VSS[087]	R22
A23	VSS[007]	VSS[088]	R25
AF2	VSS[008]	VSS[089]	T1
B6	VSS[009]	VSS[090]	T23
B8	VSS[010]	VSS[091]	T26
B11	VSS[011]	VSS[092]	U3
B13	VSS[012]	VSS[093]	U6
B19	VSS[013]	VSS[094]	U21
B21	VSS[014]	VSS[095]	U24
B24	VSS[015]	VSS[096]	V2
C5	VSS[016]	VSS[097]	V5
C8	VSS[017]	VSS[098]	V22
C11	VSS[018]	VSS[099]	V25
C14	VSS[020]	VSS[101]	W1
C16	VSS[021]	VSS[102]	W23
C19	VSS[022]	VSS[103]	W26
C2	VSS[023]	VSS[104]	Y3
C22	VSS[024]	VSS[105]	Y6
C25	VSS[025]	VSS[106]	Y21
D1	VSS[026]	VSS[107]	Y24
D4	VSS[027]	VSS[108]	AA2
D8	VSS[028]	VSS[109]	AA5
D11	VSS[029]	VSS[110]	AA8
D13	VSS[030]	VSS[111]	AA11
D16	VSS[031]	VSS[112]	AA14
D19	VSS[032]	VSS[113]	AA16
D23	VSS[033]	VSS[114]	AA19
D26	VSS[034]	VSS[115]	AA22
E3	VSS[035]	VSS[116]	AA25
E6	VSS[036]	VSS[117]	AB1
E8	VSS[037]	VSS[118]	AB4
F11	VSS[038]	VSS[119]	AB8
F14	VSS[039]	VSS[120]	AB11
F16	VSS[040]	VSS[121]	AB13
F19	VSS[041]	VSS[122]	AB16
F21	VSS[042]	VSS[123]	AB19
F24	VSS[043]	VSS[124]	AB23
F5	VSS[044]	VSS[125]	AB26
F8	VSS[045]	VSS[126]	AC3
F11	VSS[046]	VSS[127]	AC6
F13	VSS[047]	VSS[128]	AC8
F16	VSS[048]	VSS[129]	AC11
F19	VSS[049]	VSS[130]	AC14
F2	VSS[050]	VSS[131]	AC16
F22	VSS[051]	VSS[132]	AC19
F25	VSS[052]	VSS[133]	AC21
G4	VSS[053]	VSS[134]	AC24
G1	VSS[054]	VSS[135]	AD2
G23	VSS[055]	VSS[136]	AD5
G26	VSS[056]	VSS[137]	AD8
H3	VSS[057]	VSS[138]	AD11
H6	VSS[058]	VSS[139]	AD13
H21	VSS[059]	VSS[140]	AD16
H24	VSS[060]	VSS[141]	AD19
J2	VSS[061]	VSS[142]	AD22
J5	VSS[062]	VSS[143]	AD25
J22	VSS[063]	VSS[144]	AE1
J25	VSS[064]	VSS[145]	AE4
K1	VSS[065]	VSS[146]	AE8
K4	VSS[066]	VSS[147]	AE11
K23	VSS[067]	VSS[148]	AE14
K26	VSS[068]	VSS[149]	AE16
L3	VSS[069]	VSS[150]	AE19
L6	VSS[070]	VSS[151]	AE23
L21	VSS[071]	VSS[152]	AE26
L24	VSS[072]	VSS[153]	A2
M2	VSS[073]	VSS[154]	AF6
M5	VSS[074]	VSS[155]	AF8
M22	VSS[075]	VSS[156]	AF11
M25	VSS[076]	VSS[157]	AF13
N1	VSS[077]	VSS[158]	AF16
N4	VSS[078]	VSS[159]	AF19
N23	VSS[079]	VSS[160]	AE21
N26	VSS[080]	VSS[161]	A25
P3	VSS[081]	VSS[162]	AF25
		VSS[163]	

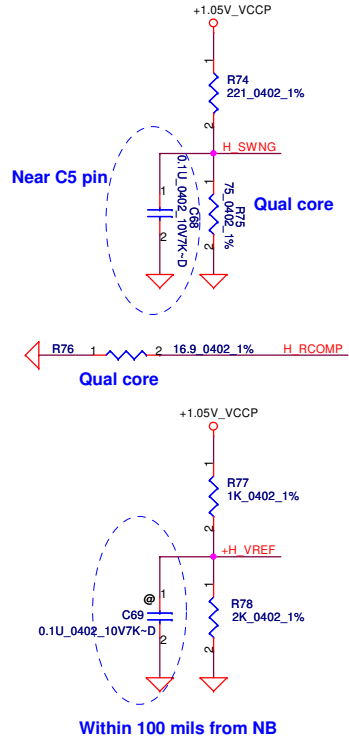


DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.			
Penryn(3/3)-AGTL+/ITP-XDP			
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	9 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Layout Note :
H_RCOMP / H_VREF / H_SWNG
Trace width and spacing is 10 / 20



H_RCOMP Dual core 24.9 ohm_1% pull down
Qual core 16.9 ohm_1% pull down
H_SWNG Dual core 100 ohm_1% pull down
Qual core 75 ohm_1% pull down

<8> H_D# [0..63] <<>

H_D#0	F2	H_D# 0
H_D#1	G8	H_D# 1
H_D#2	F8	H_D# 2
H_D#3	E5	H_D# 3
H_D#4	G2	H_D# 4
H_D#5	H6	H_D# 5
H_D#6	H2	H_D# 6
H_D#7	F6	H_D# 7
H_D#8	D4	H_D# 8
H_D#9	H3	H_D# 9
H_D#10	M5	H_D# 10
H_D#11	M11	H_D# 11
H_D#12	J1	H_D# 12
H_D#13	J2	H_D# 13
H_D#14	N12	H_D# 14
H_D#15	J6	H_D# 15
H_D#16	P2	H_D# 16
H_D#17	L2	H_D# 17
H_D#18	R2	H_D# 18
H_D#19	N9	H_D# 19
H_D#20	L6	H_D# 20
H_D#21	M5	H_D# 21
H_D#22	J3	H_D# 22
H_D#23	N2	H_D# 23
H_D#24	R1	H_D# 24
H_D#25	N5	H_D# 25
H_D#26	N6	H_D# 26
H_D#27	P13	H_D# 27
H_D#28	N8	H_D# 28
H_D#29	L7	H_D# 29
H_D#30	N10	H_D# 30
H_D#31	M3	H_D# 31
H_D#32	Y3	H_D# 32
H_D#33	AD14	H_D# 33
H_D#34	Y6	H_D# 34
H_D#35	Y10	H_D# 35
H_D#36	Y14	H_D# 36
H_D#37	Y14	H_D# 37
H_D#38	Y7	H_D# 38
H_D#39	W2	H_D# 39
H_D#40	AA8	H_D# 40
H_D#41	Y9	H_D# 41
H_D#42	AA13	H_D# 42
H_D#43	AA9	H_D# 43
H_D#44	AA11	H_D# 44
H_D#45	AD11	H_D# 45
H_D#46	AD10	H_D# 46
H_D#47	AD13	H_D# 47
H_D#48	AE12	H_D# 48
H_D#49	AC9	H_D# 49
H_D#50	AD8	H_D# 50
H_D#51	AA3	H_D# 51
H_D#52	AD3	H_D# 52
H_D#53	AD7	H_D# 53
H_D#54	AE14	H_D# 54
H_D#55	AE3	H_D# 55
H_D#56	AC1	H_D# 56
H_D#57	AE3	H_D# 57
H_D#58	AC3	H_D# 58
H_D#59	AE11	H_D# 59
H_D#60	AE8	H_D# 60
H_D#61	AG2	H_D# 61
H_D#62	AD6	H_D# 62
H_D#63		H_D# 63

H_SWNG C5
H_RCOMP E3

<7> H_RESET# H_RESET# C12
<8> H_CPUSLP# H_CPUSLP# E11

+H_VREF A11
H_DVREF B11

CANTIGA ES_FCBGA1329

H_A# 3	A14	H_A#3
H_A# 4	C15	H_A#4
H_A# 5	F16	H_A#5
H_A# 6	H13	H_A#6
H_A# 7	C18	H_A#7
H_A# 8	M16	H_A#8
H_A# 9	J13	H_A#9
H_A# 10	P16	H_A#10
H_A# 11	R16	H_A#11
H_A# 12	N17	H_A#12
H_A# 13	M13	H_A#13
H_A# 14	E17	H_A#14
H_A# 15	P17	H_A#15
H_A# 16	F17	H_A#16
H_A# 17	G20	H_A#17
H_A# 18	B19	H_A#18
H_A# 19	J16	H_A#19
H_A# 20	E20	H_A#20
H_A# 21	H16	H_A#21
H_A# 22	J20	H_A#22
H_A# 23	L17	H_A#23
H_A# 24	A17	H_A#24
H_A# 25	B17	H_A#25
H_A# 26	L16	H_A#26
H_A# 27	C21	H_A#27
H_A# 28	H20	H_A#28
H_A# 29	B18	H_A#29
H_A# 30	K17	H_A#30
H_A# 31	B20	H_A#31
H_A# 32	E21	H_A#32
H_A# 33	K21	H_A#33
H_A# 34	L20	H_A#34
H_A# 35		H_A#35

H_ADS#	H12	H_ADS#
H_ADSTB# 0	B16	H_ADSTB#0
H_ADSTB# 1	G17	H_ADSTB#1
H_BNR#	A9	H_BNR#
H_BPRI#	E11	H_BPRI#
H_BR0#	G12	H_BR0#
H_DEFER#	E9	H_DEFER#
H_DBSY#	B10	H_DBSY#
HPLL_CLK	AH7	CLK MCH BCLK
HPLL_CLK#	AH6	CLK MCH BCLK#
H_DPWR#	J11	H_DPWR#
H_DRDY#	E9	H_DRDY#
H_HIT#	H9	H_HIT#
H_HITM#	E12	H_HITM#
H_LOCK#	H11	H_LOCK#
H_TRDY#	C9	H_TRDY#

H_DINV# 0	J8	H_DINV#0
H_DINV# 1	L3	H_DINV#1
H_DINV# 2	Y13	H_DINV#2
H_DINV# 3	Y1	H_DINV#3

H_DSTBN# 0	L10	H_DSTBN#0
H_DSTBN# 1	M7	H_DSTBN#1
H_DSTBN# 2	AA5	H_DSTBN#2
H_DSTBN# 3	AE6	H_DSTBN#3

H_DSTBP# 0	L9	H_DSTBP#0
H_DSTBP# 1	M8	H_DSTBP#1
H_DSTBP# 2	AA6	H_DSTBP#2
H_DSTBP# 3	AE5	H_DSTBP#3

H_REQ# 0	B15	H_REQ#0
H_REQ# 1	K13	H_REQ#1
H_REQ# 2	E13	H_REQ#2
H_REQ# 3	B13	H_REQ#3
H_REQ# 4	B14	H_REQ#4

H_RS# 0	B6	H_RS#0
H_RS# 1	E12	H_RS#1
H_RS# 2	C8	H_RS#2

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

Title				
Cantiga(1 of 7)				
Size	Document Number			Rev
	LA-5152P			A00
Date:	Monday, June 15, 2009		Sheet 10 of 51	

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

<17> DDR_A_D[0.63] <>

DDR A D0	AJ38	SA_DQ_0
DDR A D1	AJ41	SA_DQ_1
DDR A D2	AN38	SA_DQ_2
DDR A D3	AM38	SA_DQ_3
DDR A D4	AJ36	SA_DQ_4
DDR A D5	AJ40	SA_DQ_5
DDR A D6	AM44	SA_DQ_6
DDR A D7	AM42	SA_DQ_7
DDR A D8	AN43	SA_DQ_8
DDR A D9	AN44	SA_DQ_9
DDR A D10	AU40	SA_DQ_10
DDR A D11	AT38	SA_DQ_11
DDR A D12	AN41	SA_DQ_12
DDR A D13	AN39	SA_DQ_13
DDR A D14	AU44	SA_DQ_14
DDR A D15	AU42	SA_DQ_15
DDR A D16	AV39	SA_DQ_16
DDR A D17	AY44	SA_DQ_17
DDR A D18	BA40	SA_DQ_18
DDR A D19	BD43	SA_DQ_19
DDR A D20	AV41	SA_DQ_20
DDR A D21	AY43	SA_DQ_21
DDR A D22	BB41	SA_DQ_22
DDR A D23	BC40	SA_DQ_23
DDR A D24	AY37	SA_DQ_24
DDR A D25	BD38	SA_DQ_25
DDR A D26	AV37	SA_DQ_26
DDR A D27	AT36	SA_DQ_27
DDR A D28	AY38	SA_DQ_28
DDR A D29	BB38	SA_DQ_29
DDR A D30	AV36	SA_DQ_30
DDR A D31	AW36	SA_DQ_31
DDR A D32	BD13	SA_DQ_32
DDR A D33	AU11	SA_DQ_33
DDR A D34	BC11	SA_DQ_34
DDR A D35	BA12	SA_DQ_35
DDR A D36	AU13	SA_DQ_36
DDR A D37	AV13	SA_DQ_37
DDR A D38	BD12	SA_DQ_38
DDR A D39	BC12	SA_DQ_39
DDR A D40	BB9	SA_DQ_40
DDR A D41	BA9	SA_DQ_41
DDR A D42	AU10	SA_DQ_42
DDR A D43	AV9	SA_DQ_43
DDR A D44	BA11	SA_DQ_44
DDR A D45	BD9	SA_DQ_45
DDR A D46	AY8	SA_DQ_46
DDR A D47	BA6	SA_DQ_47
DDR A D48	AV5	SA_DQ_48
DDR A D49	AV7	SA_DQ_49
DDR A D50	AT9	SA_DQ_50
DDR A D51	AN8	SA_DQ_51
DDR A D52	AU5	SA_DQ_52
DDR A D53	AU6	SA_DQ_53
DDR A D54	AT5	SA_DQ_54
DDR A D55	AN10	SA_DQ_55
DDR A D56	AM11	SA_DQ_56
DDR A D57	AM5	SA_DQ_57
DDR A D58	AJ9	SA_DQ_58
DDR A D59	AJ8	SA_DQ_59
DDR A D60	AN12	SA_DQ_60
DDR A D61	AM13	SA_DQ_61
DDR A D62	AJ11	SA_DQ_62
DDR A D63	AJ12	SA_DQ_63

CANTIGA ES_FCBGA1329

DDR SYSTEM MEMORY A

SA_BS_0
SA_BS_1
SA_BS_2
SA_RAS#
SA_CAS#
SA_WE#

SA_DM_0
SA_DM_1
SA_DM_2
SA_DM_3
SA_DM_4
SA_DM_5
SA_DM_6
SA_DM_7

SA_DQS_0
SA_DQS_1
SA_DQS_2
SA_DQS_3
SA_DQS_4
SA_DQS_5
SA_DQS_6
SA_DQS_7

SA_DQS#_0
SA_DQS#_1
SA_DQS#_2
SA_DQS#_3
SA_DQS#_4
SA_DQS#_5
SA_DQS#_6
SA_DQS#_7

SA_MA_0
SA_MA_1
SA_MA_2
SA_MA_3
SA_MA_4
SA_MA_5
SA_MA_6
SA_MA_7
SA_MA_8
SA_MA_9
SA_MA_10
SA_MA_11
SA_MA_12
SA_MA_13
SA_MA_14

BD21 DDR A BS0 >>> DDR A BS0 <17>
BG18 DDR A BS1 >>> DDR A BS1 <17>
AT25 DDR A BS2 >>> DDR A BS2 <17>
BB20 DDR A RAS# >>> DDR A RAS# <17>
BD20 DDR A CAS# >>> DDR A CAS# <17>
AY20 DDR A WE# >>> DDR A WE# <17>

AM37 DDR A DM0 >>> DDR_A_DM[0.7] <17>
AT41 DDR A DM1 >>>
AY41 DDR A DM2 >>>
AU39 DDR A DM3 >>>
BB12 DDR A DM4 >>>
AY6 DDR A DM5 >>>
AT7 DDR A DM6 >>>
AJ5 DDR A DM7 >>>

AJ44 DDR A DQS0 >>> DDR_A_DQS[0.7] <17>
AT44 DDR A DQS1 >>>
BA43 DDR A DQS2 >>>
BC37 DDR A DQS3 >>>
AW12 DDR A DQS4 >>>
RC8 DDR A DQS5 >>>
AU8 DDR A DQS6 >>>
AM7 DDR A DQS7 >>>

AJ43 DDR A DQS#0 >>> DDR_A_DQS#[0.7] <17>
AT43 DDR A DQS#1 >>>
BA44 DDR A DQS#2 >>>
BD37 DDR A DQS#3 >>>
AY12 DDR A DQS#4 >>>
BD8 DDR A DQS#5 >>>
AU9 DDR A DQS#6 >>>
AM8 DDR A DQS#7 >>>

BA21 DDR A MA0 >>> DDR_A_MA[0.14] <17>
BC24 DDR A MA1 >>>
BG24 DDR A MA2 >>>
BH24 DDR A MA3 >>>
BG25 DDR A MA4 >>>
BA24 DDR A MA5 >>>
BD24 DDR A MA6 >>>
BG27 DDR A MA7 >>>
BF25 DDR A MA8 >>>
AW24 DDR A MA9 >>>
BC21 DDR A MA10 >>>
BG26 DDR A MA11 >>>
BH26 DDR A MA12 >>>
BH17 DDR A MA13 >>>
AY25 DDR A MA14 >>>

<18> DDR_B_D[0.63] <>

DDR B D0	AK47	SB_DQ_0
DDR B D1	AH46	SB_DQ_1
DDR B D2	AH47	SB_DQ_2
DDR B D3	AP47	SB_DQ_3
DDR B D4	AP48	SB_DQ_4
DDR B D5	AJ48	SB_DQ_5
DDR B D6	AM48	SB_DQ_6
DDR B D7	AP48	SB_DQ_7
DDR B D8	AU47	SB_DQ_8
DDR B D9	AU46	SB_DQ_9
DDR B D10	AY48	SB_DQ_10
DDR B D11	AY48	SB_DQ_11
DDR B D12	AT47	SB_DQ_12
DDR B D13	AR47	SB_DQ_13
DDR B D14	BA47	SB_DQ_14
DDR B D15	BC47	SB_DQ_15
DDR B D16	BC46	SB_DQ_16
DDR B D17	BC44	SB_DQ_17
DDR B D18	BG43	SB_DQ_18
DDR B D19	BF43	SB_DQ_19
DDR B D20	BE45	SB_DQ_20
DDR B D21	BC41	SB_DQ_21
DDR B D22	BF40	SB_DQ_22
DDR B D23	BF41	SB_DQ_23
DDR B D24	BC38	SB_DQ_24
DDR B D25	BF38	SB_DQ_25
DDR B D26	BH35	SB_DQ_26
DDR B D27	BG35	SB_DQ_27
DDR B D28	BH40	SB_DQ_28
DDR B D29	BG39	SB_DQ_29
DDR B D30	BG34	SB_DQ_30
DDR B D31	BH34	SB_DQ_31
DDR B D32	BH14	SB_DQ_32
DDR B D33	BG12	SB_DQ_33
DDR B D34	BH11	SB_DQ_34
DDR B D35	BG8	SB_DQ_35
DDR B D36	BH12	SB_DQ_36
DDR B D37	BF11	SB_DQ_37
DDR B D38	BF8	SB_DQ_38
DDR B D39	BF7	SB_DQ_39
DDR B D40	BC5	SB_DQ_40
DDR B D41	BC6	SB_DQ_41
DDR B D42	AY3	SB_DQ_42
DDR B D43	AY1	SB_DQ_43
DDR B D44	BF6	SB_DQ_44
DDR B D45	BF5	SB_DQ_45
DDR B D46	BA1	SB_DQ_46
DDR B D47	BD3	SB_DQ_47
DDR B D48	AV2	SB_DQ_48
DDR B D49	AU3	SB_DQ_49
DDR B D50	AR3	SB_DQ_50
DDR B D51	AN2	SB_DQ_51
DDR B D52	AY2	SB_DQ_52
DDR B D53	AY1	SB_DQ_53
DDR B D54	AP3	SB_DQ_54
DDR B D55	AR1	SB_DQ_55
DDR B D56	AL1	SB_DQ_56
DDR B D57	AL2	SB_DQ_57
DDR B D58	AJ1	SB_DQ_58
DDR B D59	AH1	SB_DQ_59
DDR B D60	AM2	SB_DQ_60
DDR B D61	AM3	SB_DQ_61
DDR B D62	AH3	SB_DQ_62
DDR B D63	AJ3	SB_DQ_63

SB_BS_0
SB_BS_1
SB_BS_2
SB_RAS#
SB_CAS#
SB_WE#

SB_DM_0
SB_DM_1
SB_DM_2
SB_DM_3
SB_DM_4
SB_DM_5
SB_DM_6
SB_DM_7

SB_DQS_0
SB_DQS_1
SB_DQS_2
SB_DQS_3
SB_DQS_4
SB_DQS_5
SB_DQS_6
SB_DQS_7

SB_MA_0
SB_MA_1
SB_MA_2
SB_MA_3
SB_MA_4
SB_MA_5
SB_MA_6
SB_MA_7
SB_MA_8
SB_MA_9
SB_MA_10
SB_MA_11
SB_MA_12
SB_MA_13
SB_MA_14

BC16 DDR B BS0 >>> DDR_B_BS0 <18>
BB17 DDR B BS1 >>> DDR_B_BS1 <18>
BB33 DDR B BS2 >>> DDR_B_BS2 <18>

AU17 DDR B RAS# >>> DDR_B_RAS# <18>
BG16 DDR B CAS# >>> DDR_B_CAS# <18>
BF14 DDR B WE# >>> DDR_B_WE# <18>

AM47 DDR B DM0 >>> DDR_B_DM[0.7] <18>
AY47 DDR B DM1 >>>
BD40 DDR B DM2 >>>
BF35 DDR B DM3 >>>
BG11 DDR B DM4 >>>
BA3 DDR B DM5 >>>
AP1 DDR B DM6 >>>
AK2 DDR B DM7 >>>

AL47 DDR B DQS0 >>> DDR_B_DQS[0.7] <18>
AV48 DDR B DQS1 >>>
BG41 DDR B DQS2 >>>
BG37 DDR B DQS3 >>>
BH9 DDR B DQS4 >>>
BB2 DDR B DQS5 >>>
AU1 DDR B DQS6 >>>
AN6 DDR B DQS7 >>>

AL46 DDR B DQS#0 >>> DDR_B_DQS#[0.7] <18>
AV47 DDR B DQS#1 >>>
BH41 DDR B DQS#2 >>>
BH37 DDR B DQS#3 >>>
BG9 DDR B DQS#4 >>>
BC2 DDR B DQS#5 >>>
AT2 DDR B DQS#6 >>>
AN5 DDR B DQS#7 >>>

AV17 DDR B MA0 >>> DDR_B_MA[0.14] <18>
BA25 DDR B MA1 >>>
BC25 DDR B MA2 >>>
AU25 DDR B MA3 >>>
AW25 DDR B MA4 >>>
BB28 DDR B MA5 >>>
AU28 DDR B MA6 >>>
AW28 DDR B MA7 >>>
AT33 DDR B MA8 >>>
BD33 DDR B MA9 >>>
BB16 DDR B MA10 >>>
AW33 DDR B MA11 >>>
AY33 DDR B MA12 >>>
BH15 DDR B MA13 >>>
AU33 DDR B MA14 >>>

DELL CONFIDENTIAL/PROPRIETARY

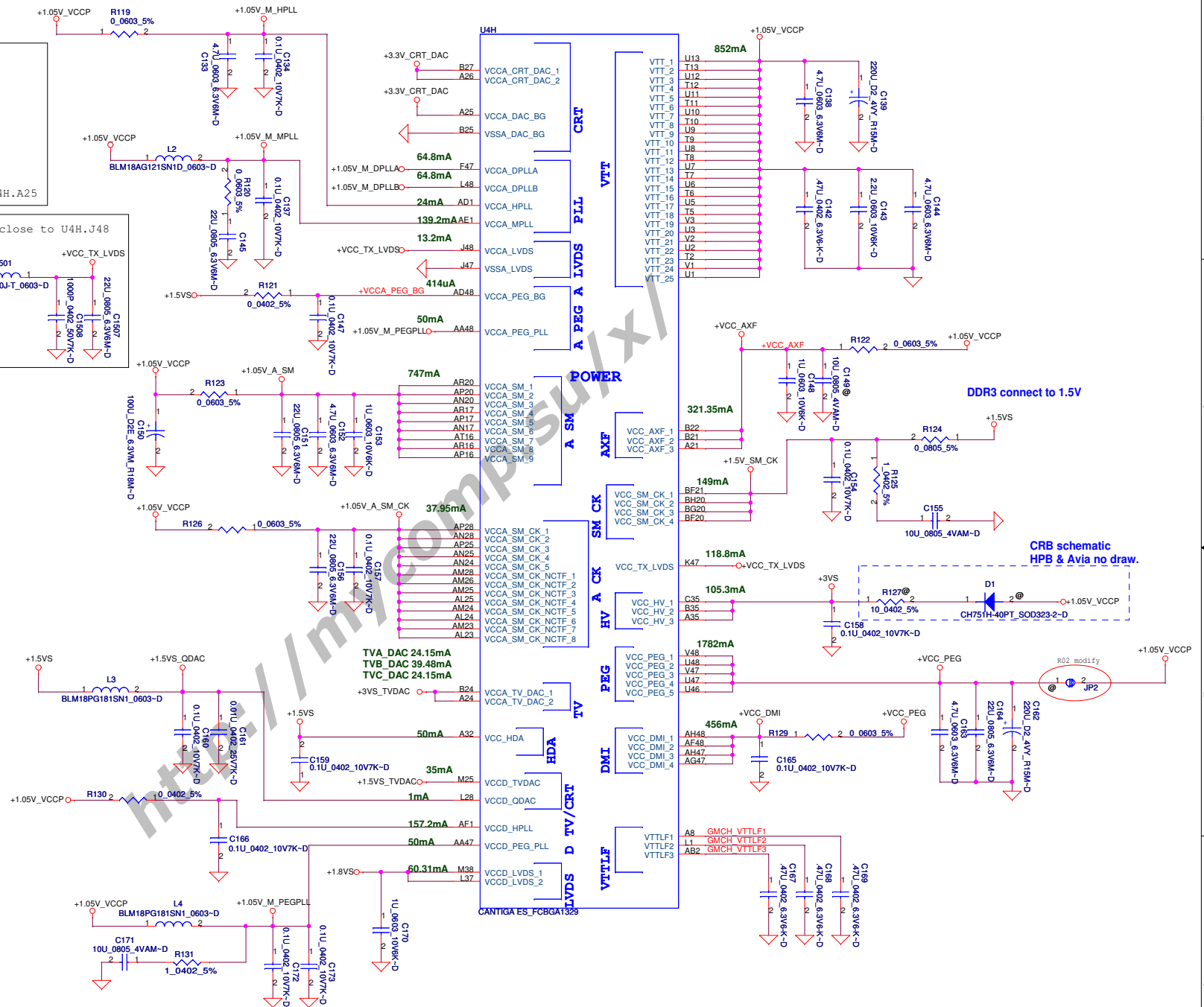
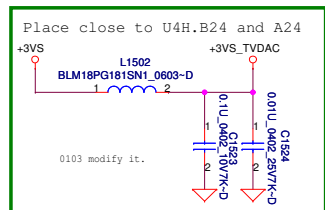
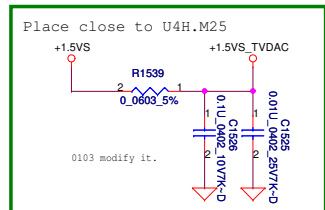
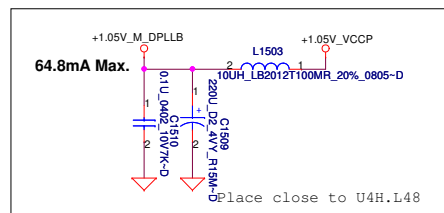
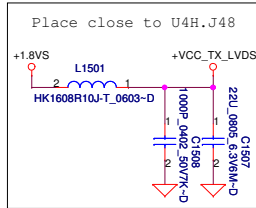
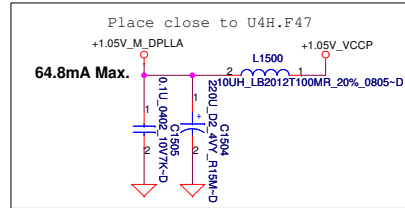
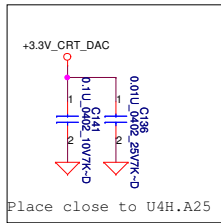
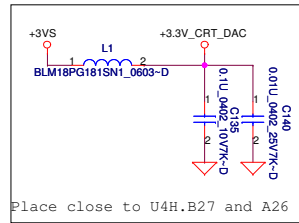
Compal Electronics, Inc.

Cantiga(4 of 7)



Title	Document Number	Rev
LA-5152P		A00
Date	Monday, June 15, 2009	Sheet 13 of 51

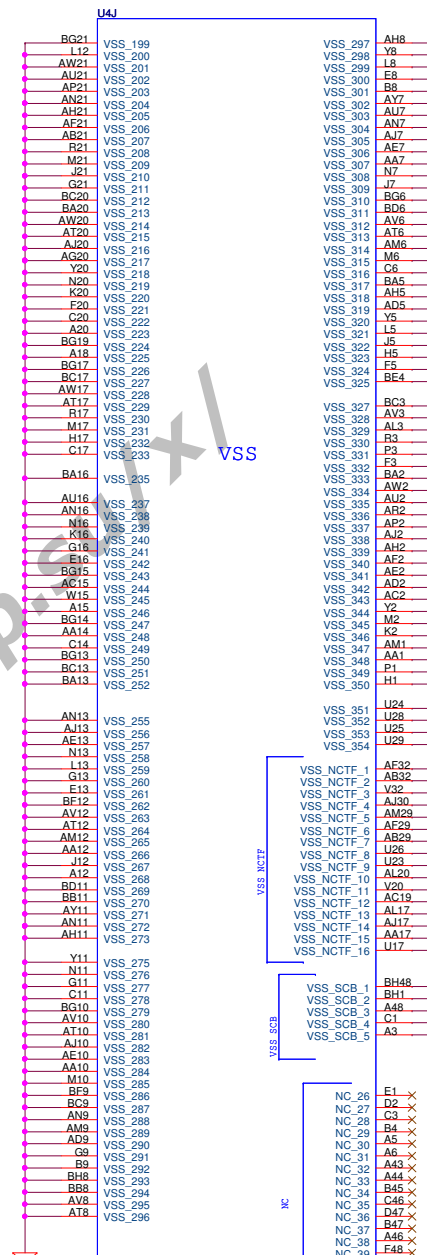
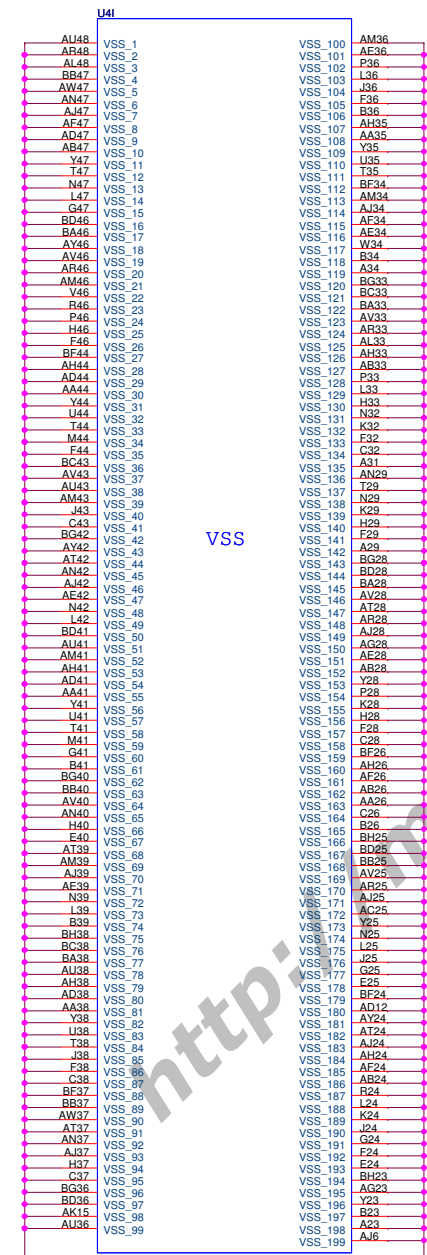
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



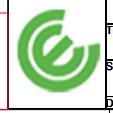
DELL CONFIDENTIAL/PROPRIETARY

		Compal Electronics, Inc.	
		Cantiga(6 of 7)	
Size	Document Number	LA-5152P	
Date	Monday, June 15, 2009	Sheet	15 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY

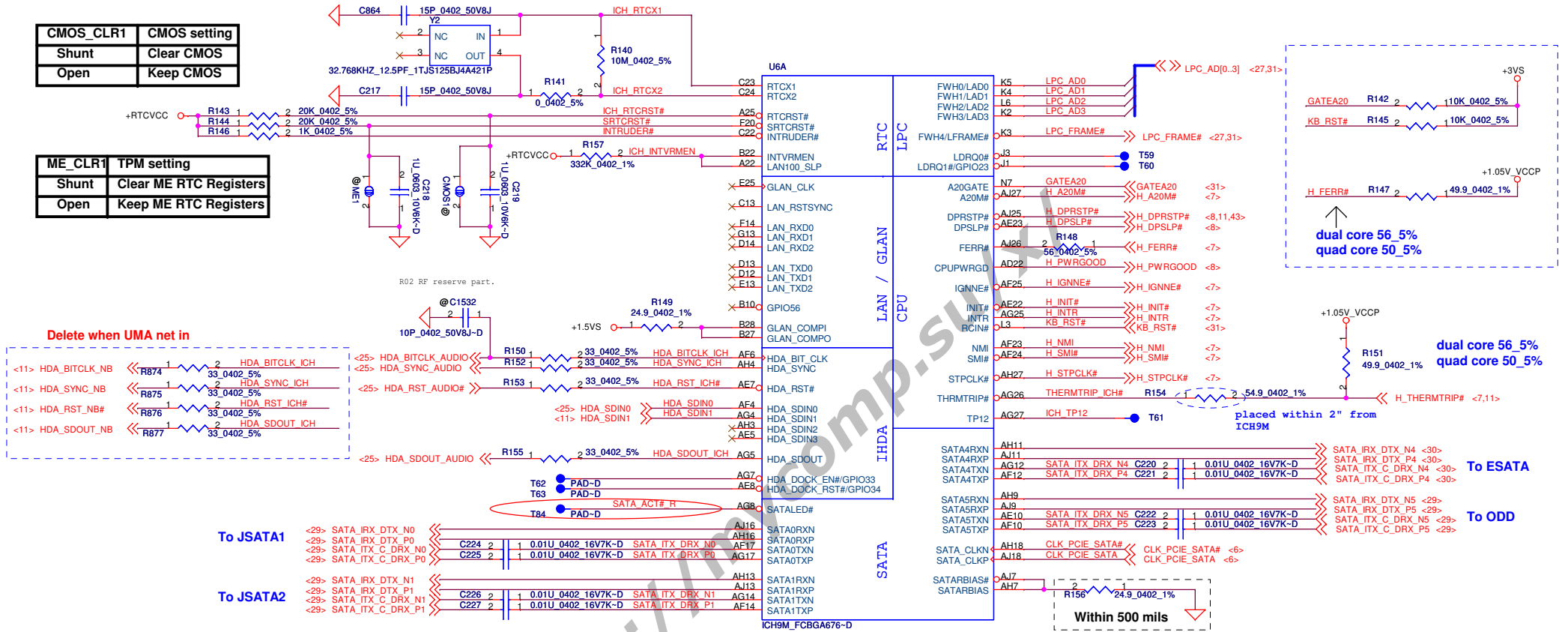


Compal Electronics, Inc.		
Cantiga(7 of 7)		
Size	Document Number	Rev
	LA-5152P	A00
Date	Monday, June 15, 2009	Sheet 16 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

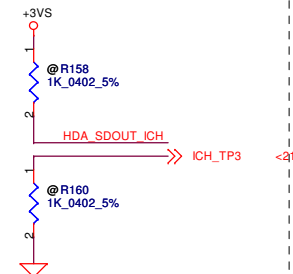
CMOS_CLR1	CMOS setting
Shunt	Clear CMOS
Open	Keep CMOS

ME_CLR1	TPM setting
Shunt	Clear ME RTC Registers
Open	Keep ME RTC Registers



P/N : SA00002G12L (S IC AF82801IEM SLB8P A3 PBGA676P ICH9ME)

XOR Chain Entrance Strap		
ICH TP3	HDA SDOOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal Operation (Default)
1	1	Set PCIE port config bit 1



DELL CONFIDENTIAL/PROPRIETARY

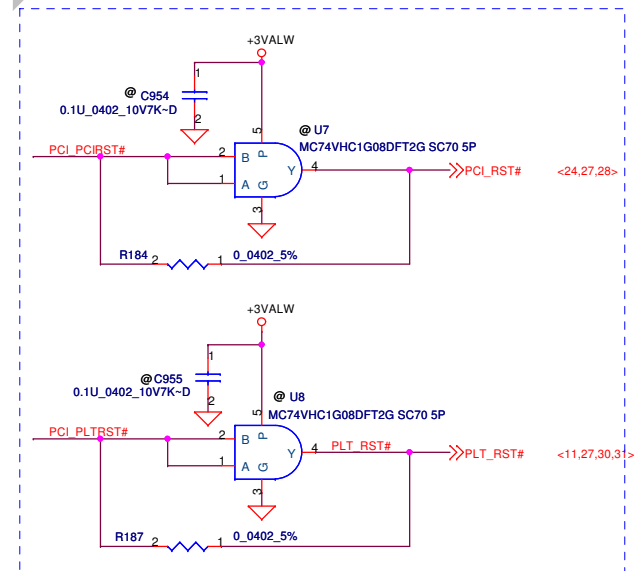
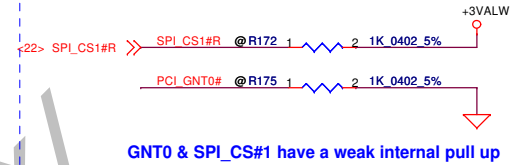
Compal Electronics, Inc.

Title		ICH9-M(1/5)	
Size	Document Number	LA-5152P	
Date:	Monday, June 15, 2009	Sheet	19 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

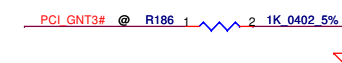
Boot BIOS Strap

PCI_GNT0#	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *



A16 swap override Strap

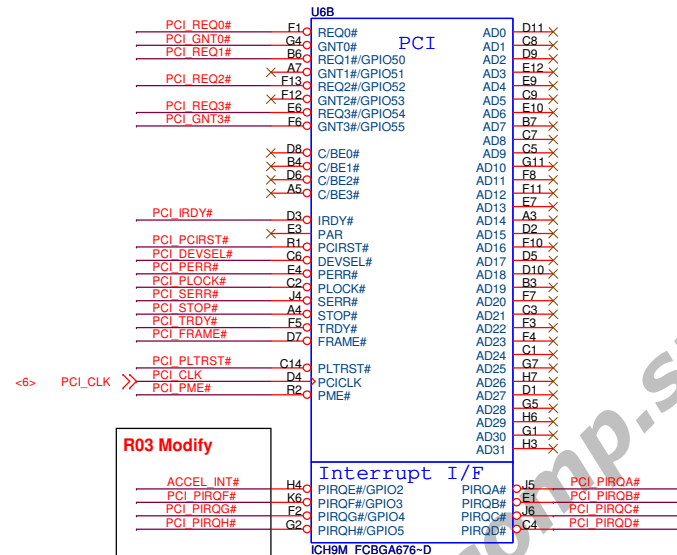
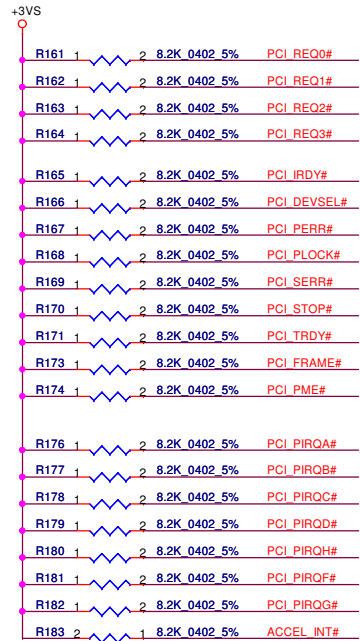
Low= A16 swap override Enble
High= Default *



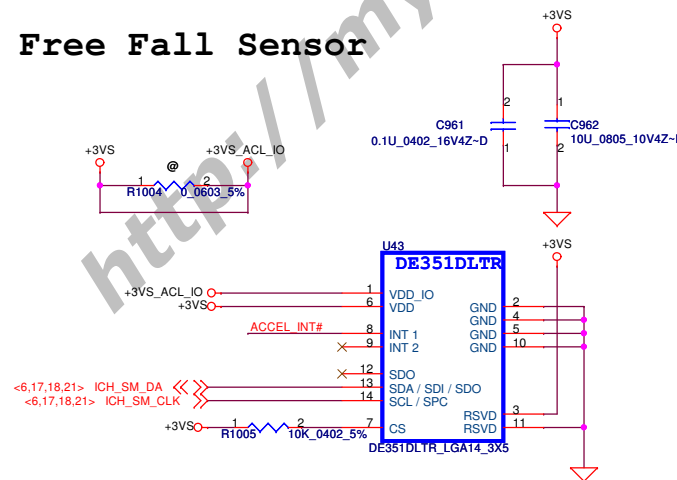
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title	ICH9-M(2/5)		
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	20 of 51



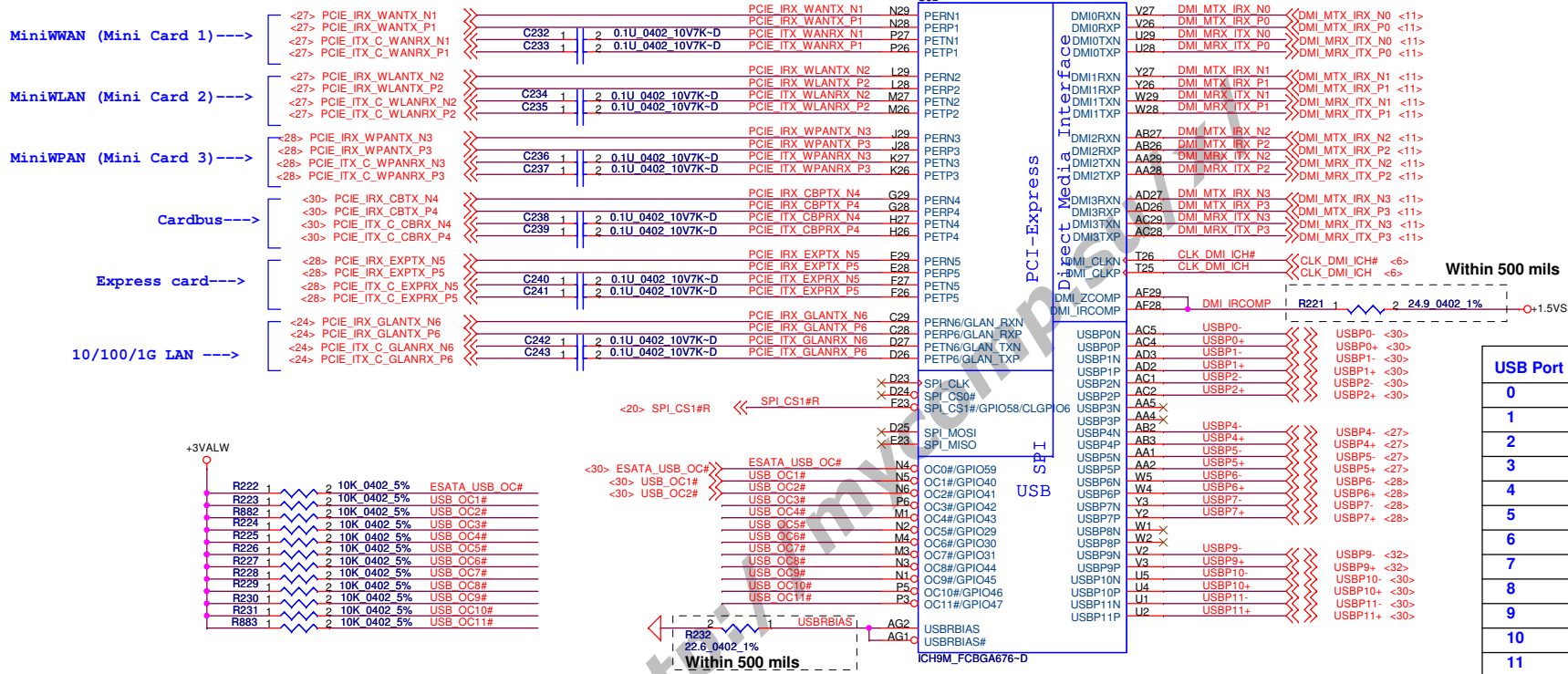
Free Fall Sensor



Must be placed in the center of the system.

P/N : SA000039C00 (S IC DE351DLTR LGA 14P MOTION SENSOR)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

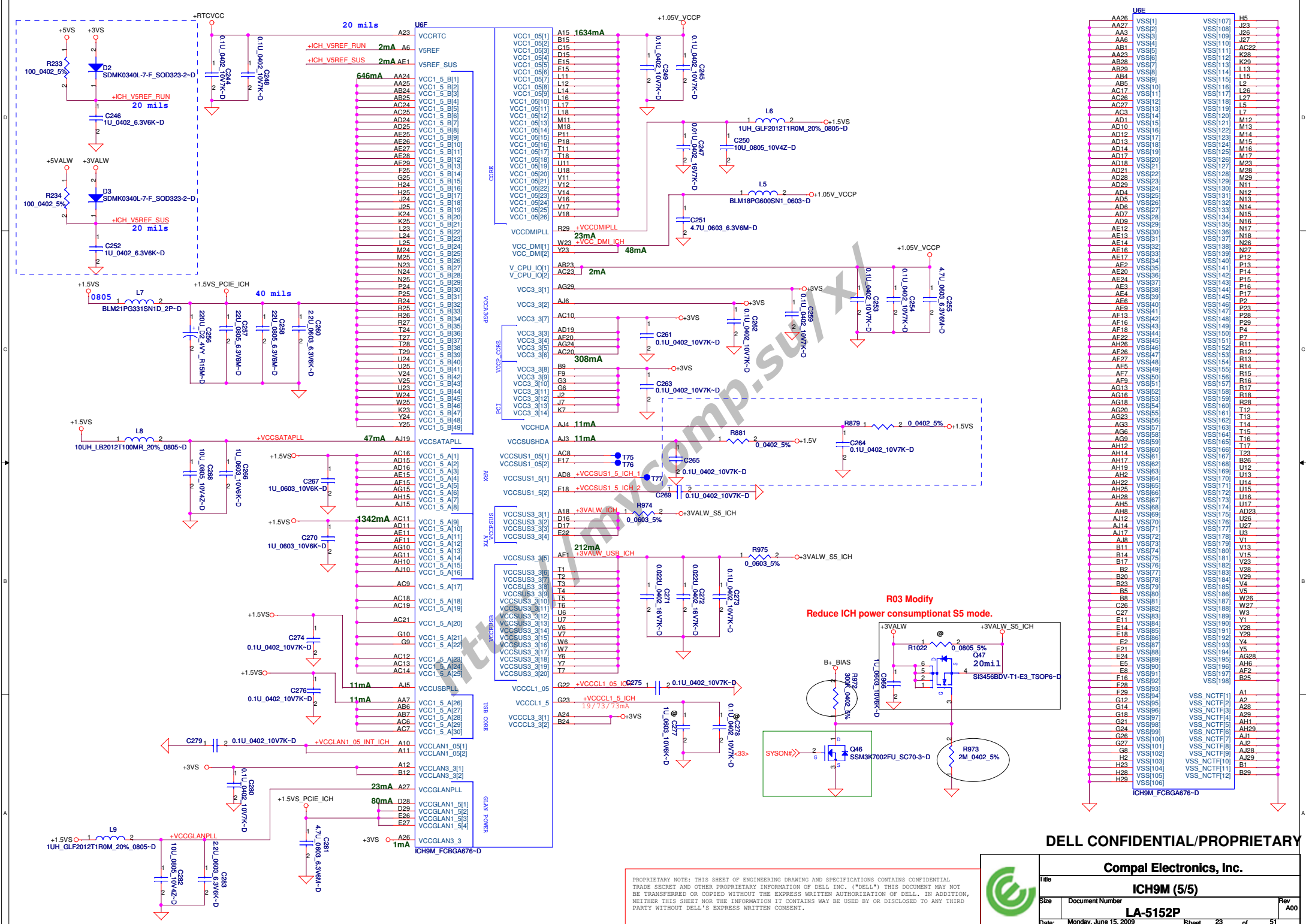


USB Port	Device
0	USB&ESATA
1	Reader board
2	USB board
3	NC
4	WLAN
5	WWAN
6	WPAN
7	Express
8	NC
9	Touch screen
10	Bluetooth
11	Camera

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



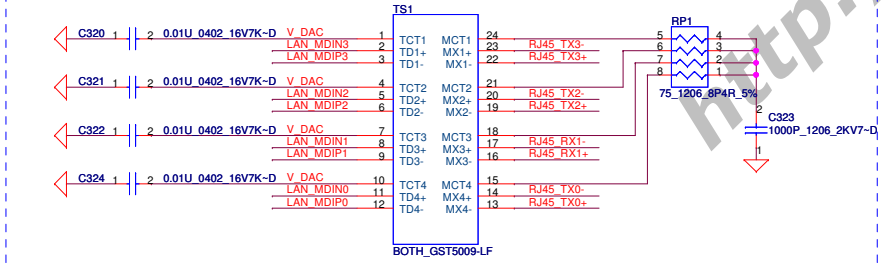
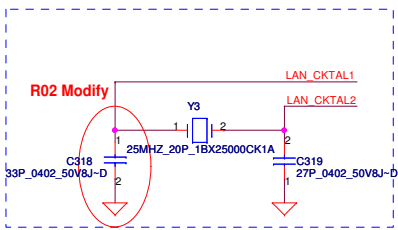
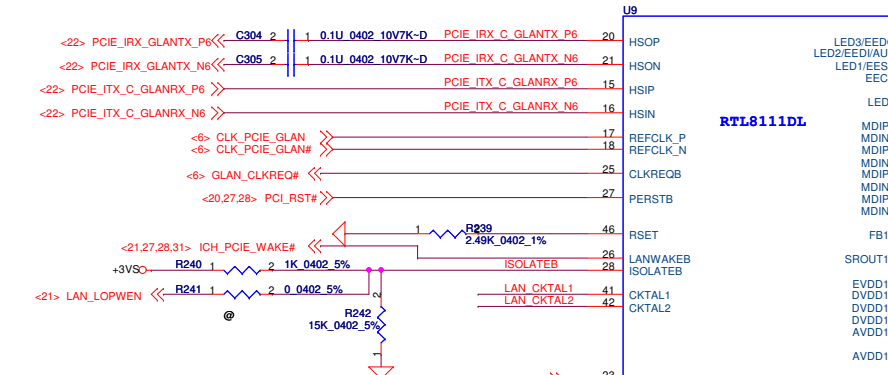
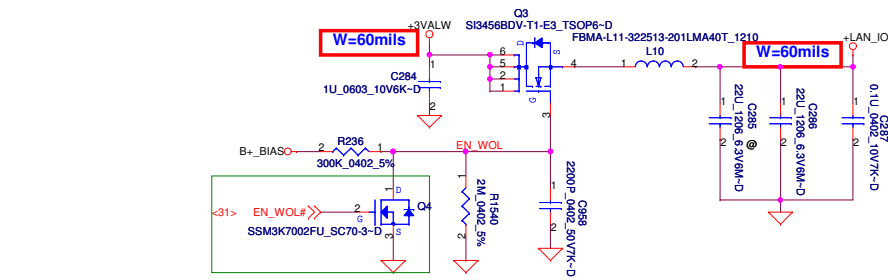
DELL CONFIDENTIAL/PROPRIETARY			
Compal Electronics, Inc.			
Title		ICH9-M(4/5)	
Size	Document Number	LA-5152P	
Date	Monday, June 15, 2009	Sheet	22 of 51



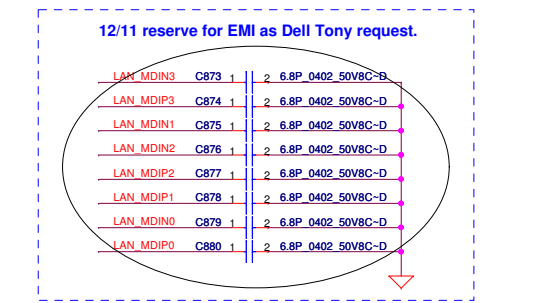
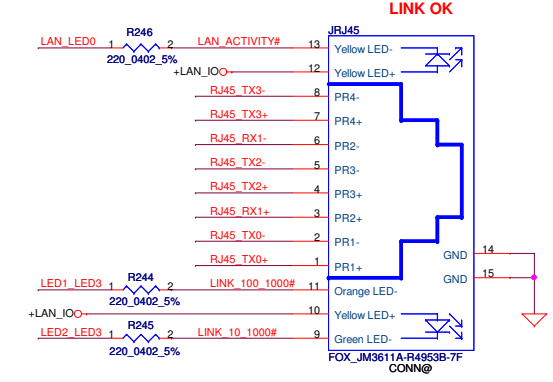
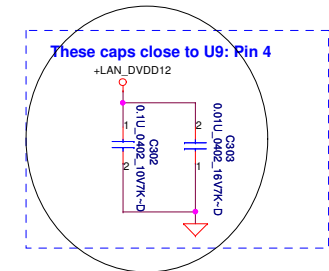
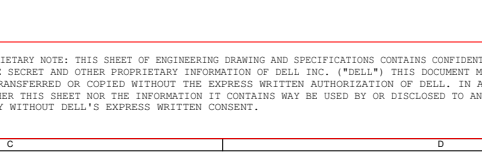
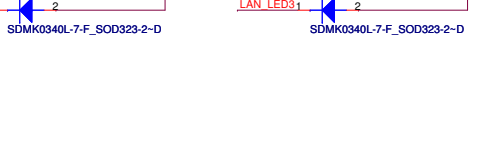
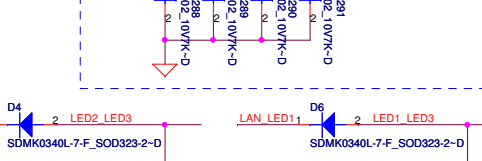
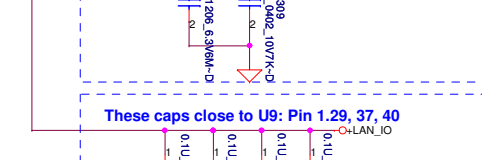
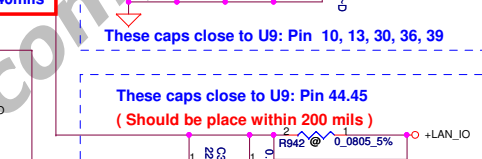
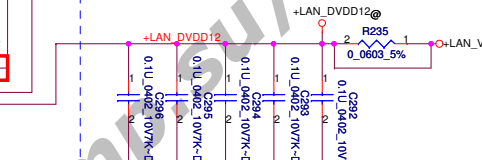
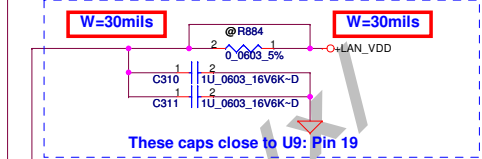
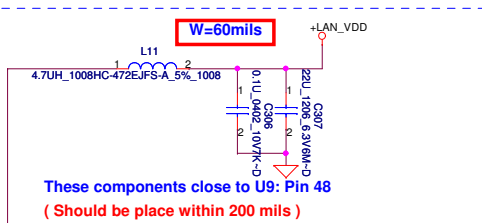
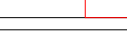
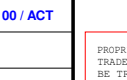
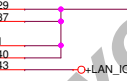
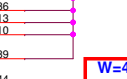
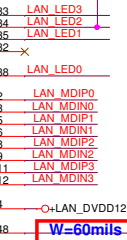
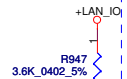
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.	
ICH9M (5/5)	
LA-5152P	
Date: Monday, June 15, 2009	Sheet 23 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



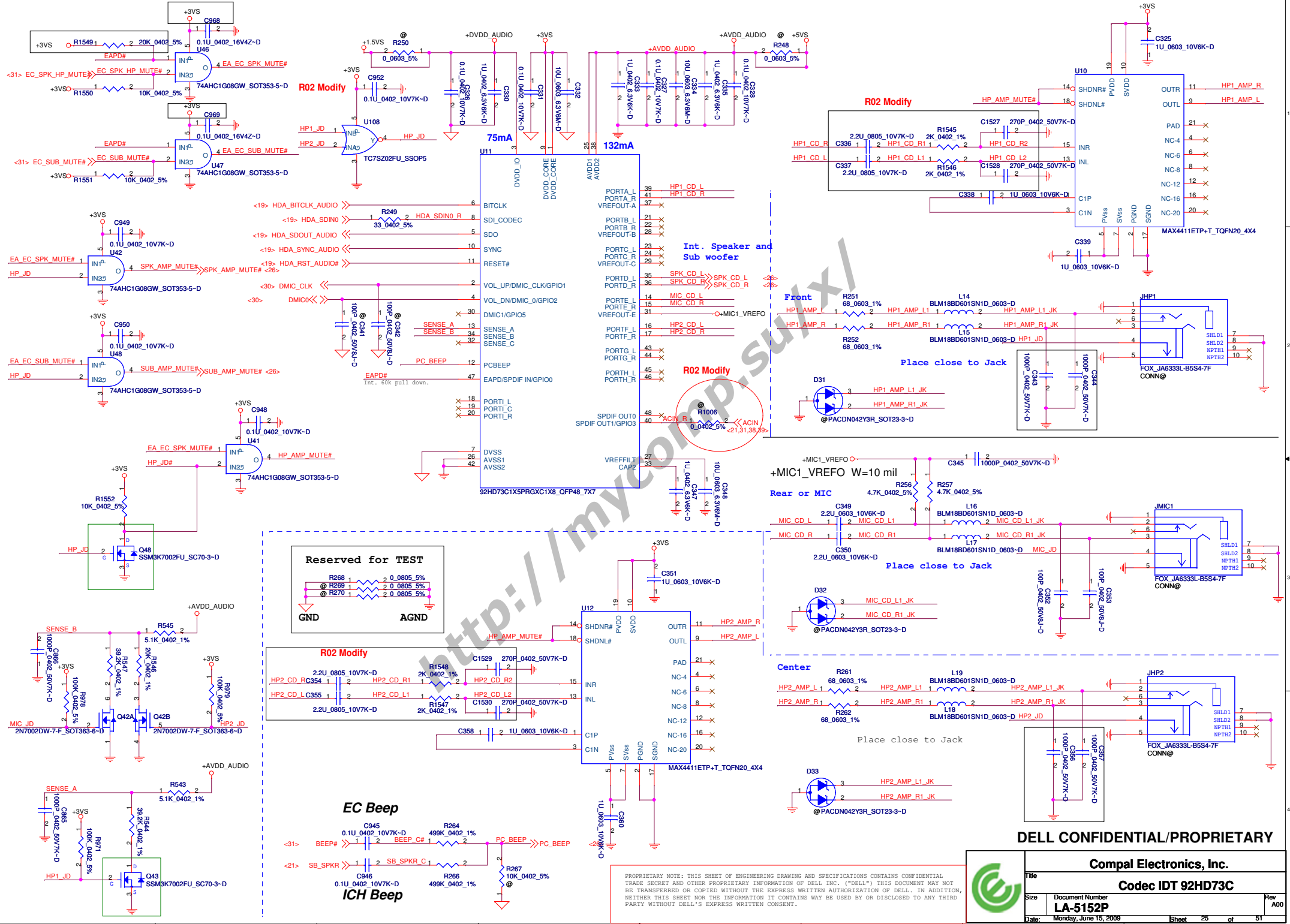
LEDS1-0	00	01	10	11
LED0	Tx / Rx	Tx / Rx	Tx	LINK10 / ACT
LED1	LINK100	LINK10 / 100 / 1000	LINK	LINK100 / ACT
LED2	LINK10	LINK10 / 100	Rx	FULL
LED3	LINK1000	LINK1000	FULL	LINK1000 / ACT



DELL CONFIDENTIAL/PROPRIETARY

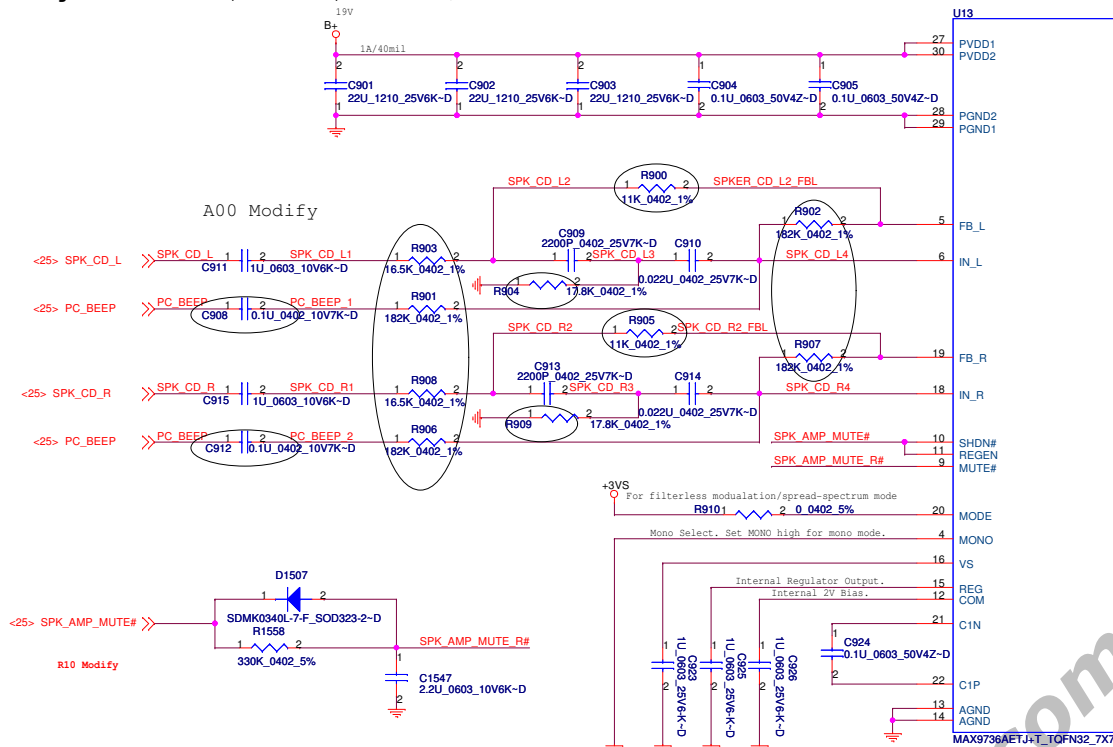
Compal Electronics, Inc.			
Title			
Gigabit LAN_RTL8111DL			
Size	Document Number	Rev	
	LA-5152P	1A	
Date	Monday, June 15, 2009	Sheet	24 of 45

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

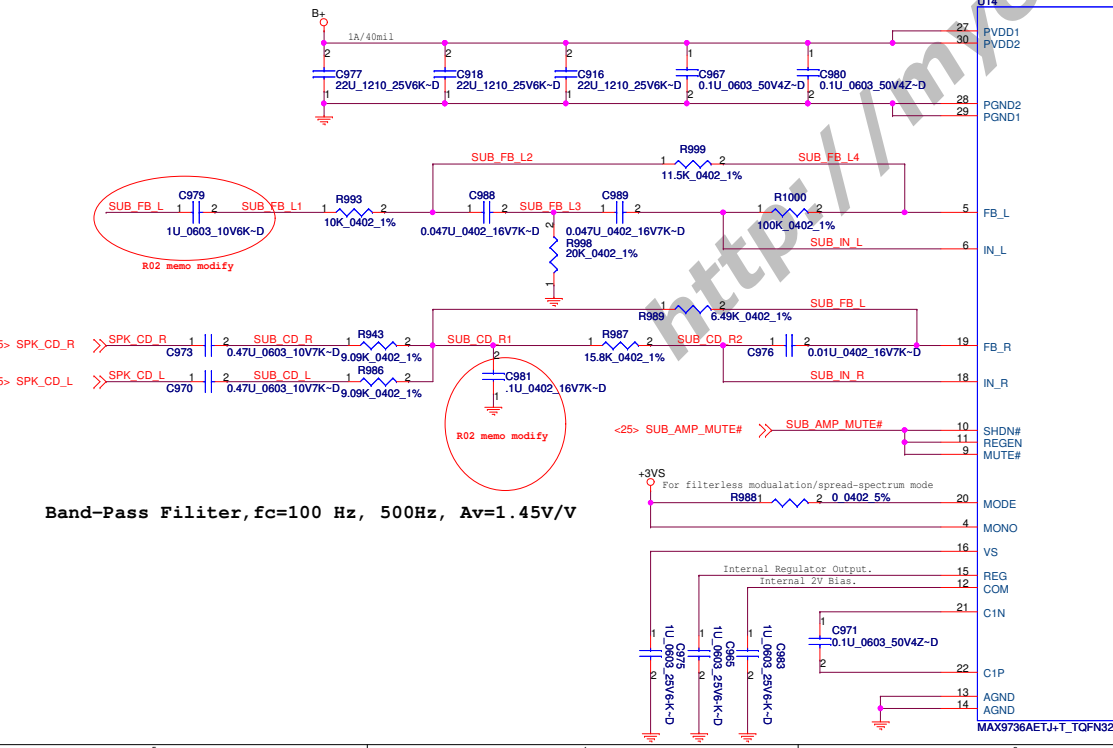
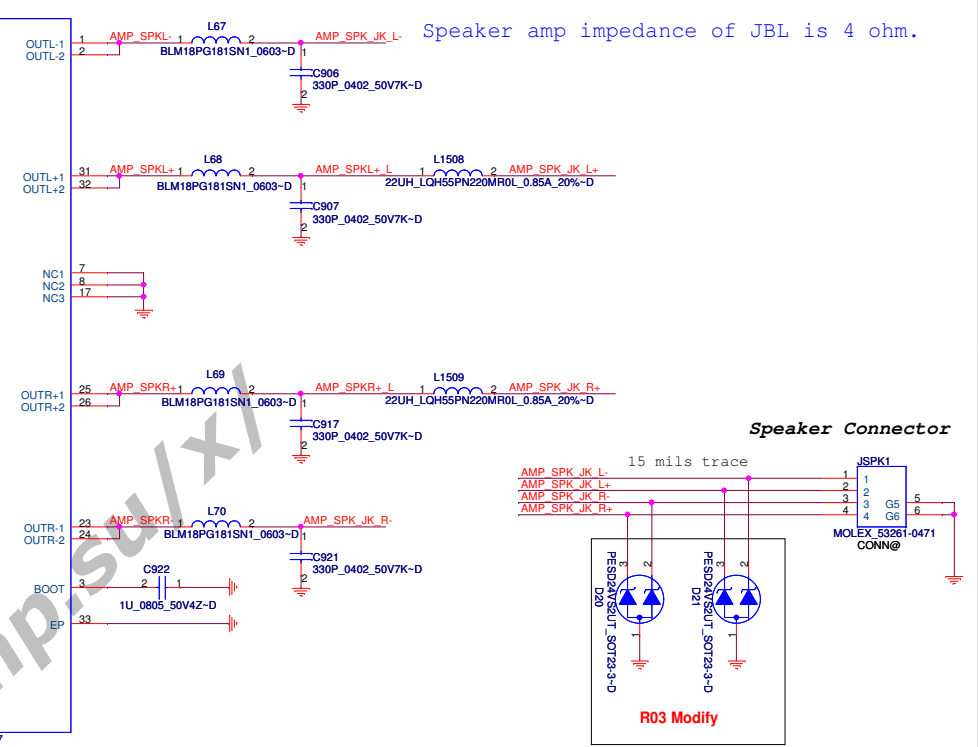


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL, INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

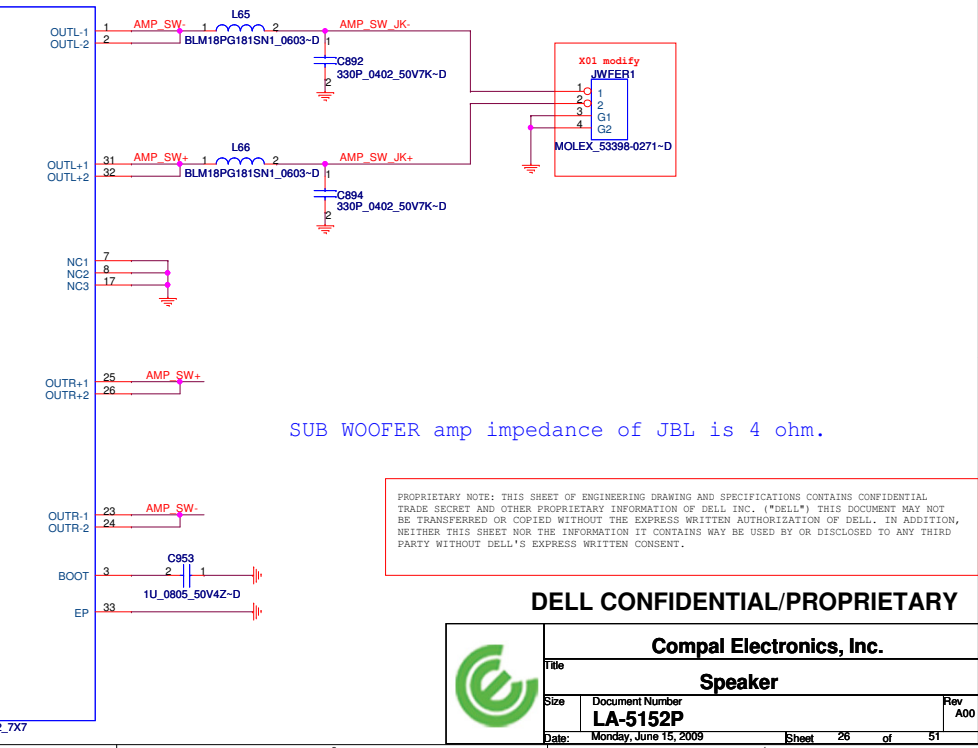
High-Pass Filiter, $f_c=500\text{Hz}$, $A_v=1.45\text{V/V}$



Speaker amp impedance of JBL is 4 ohm.



SUB WOOFER amp impedance of JBL is 4 ohm.

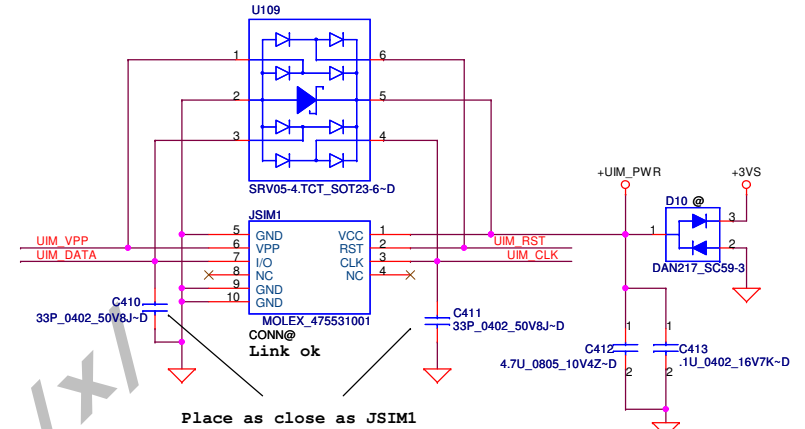
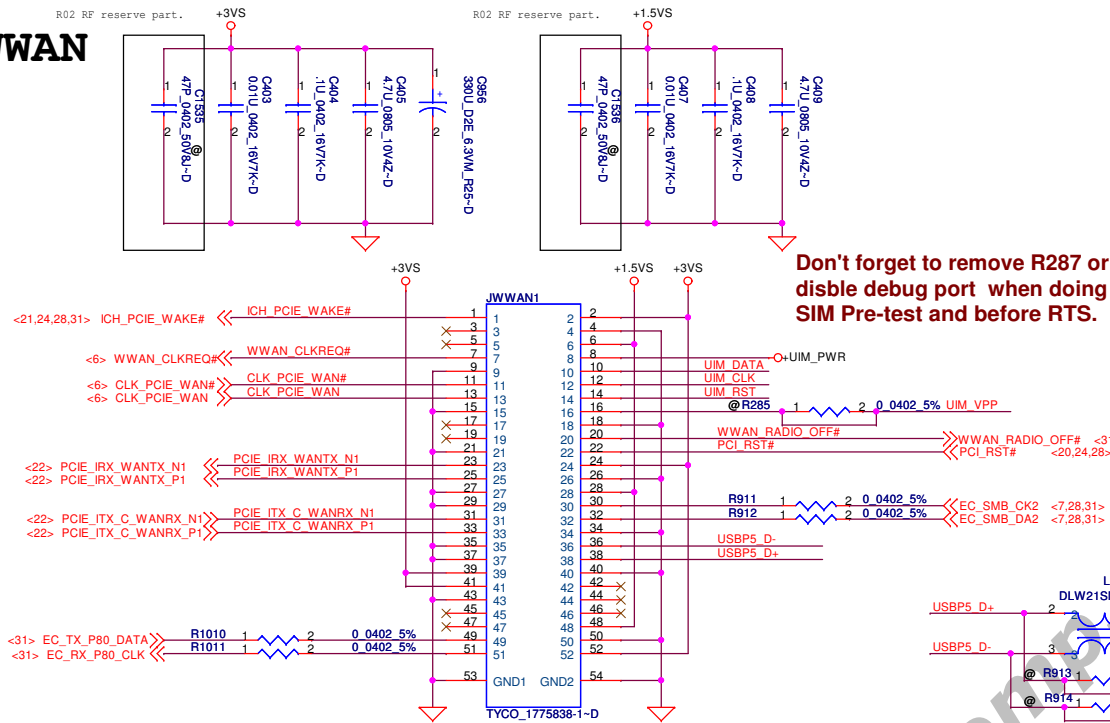


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

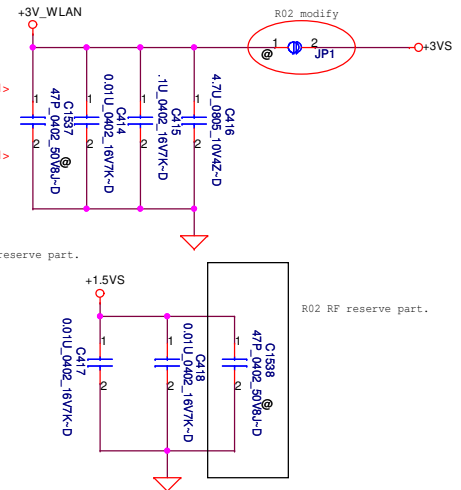
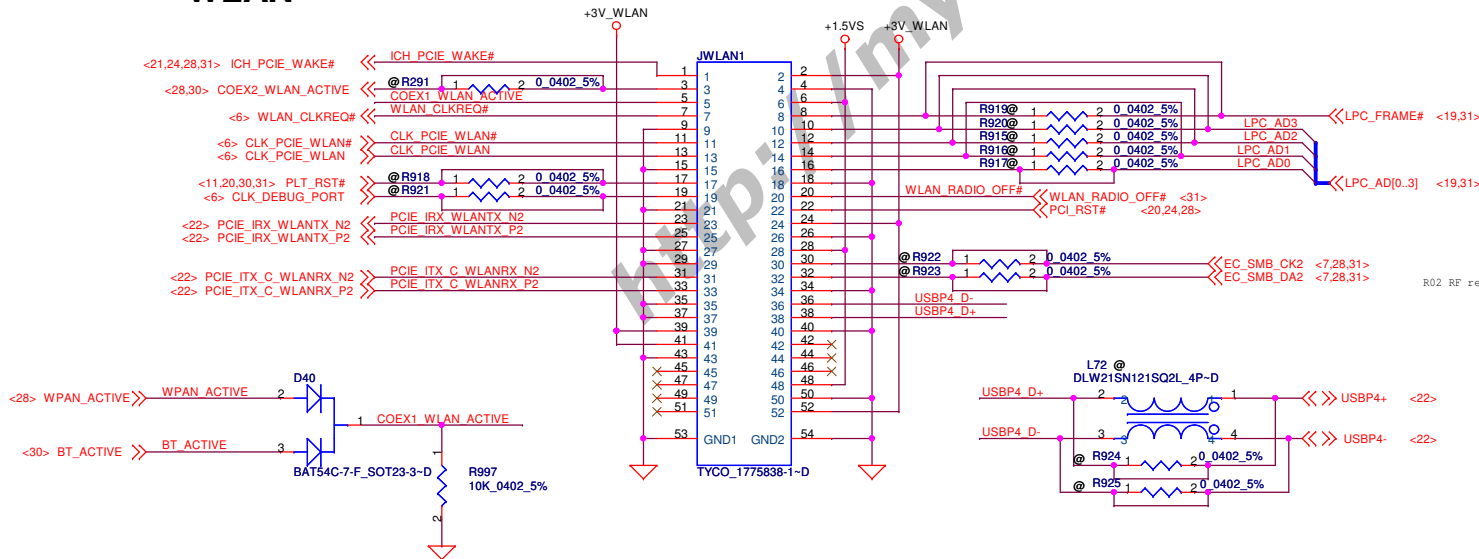
DELL CONFIDENTIAL/PROPRIETARY

	Compal Electronics, Inc.	
	Speaker	
Size	Document Number	Rev
	LA-5152P	A00
Date:	Monday, June 15, 2009	Sheet 26 of 51

WWAN



WLAN



DELL CONFIDENTIAL/PROPRIETARY

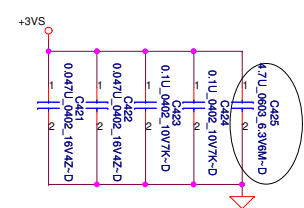
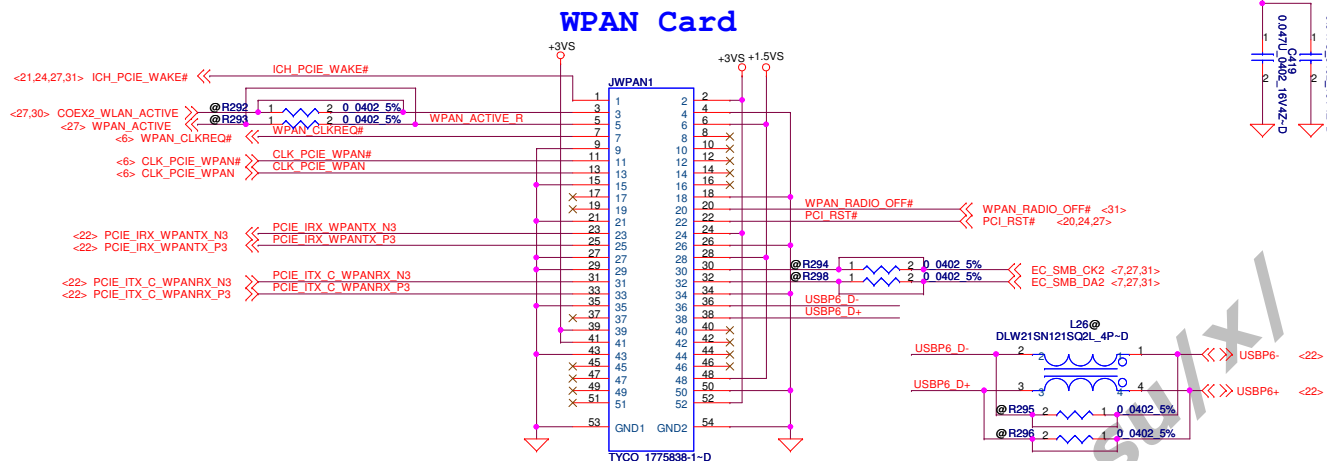


Compal Electronics, Inc.

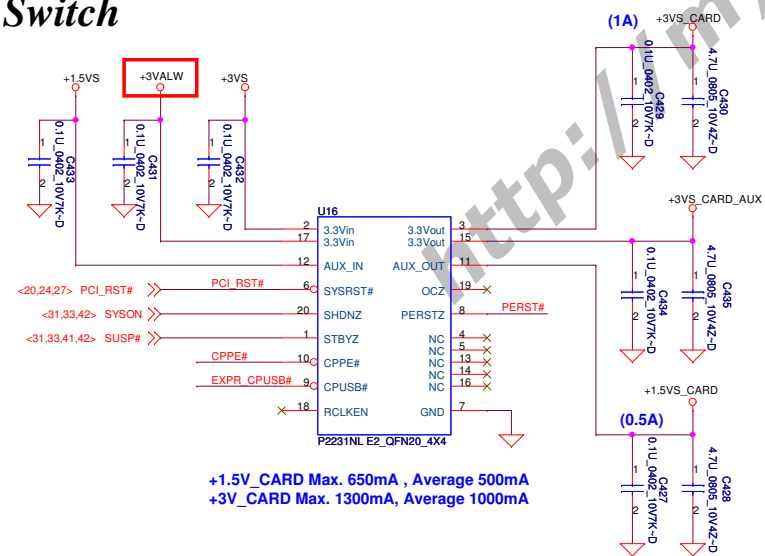
Mini Card WLAN/WWAN

Size	Document Number	Rev
LA-5152P		A00
Date:	Monday, June 15, 2009	Sheet 27 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

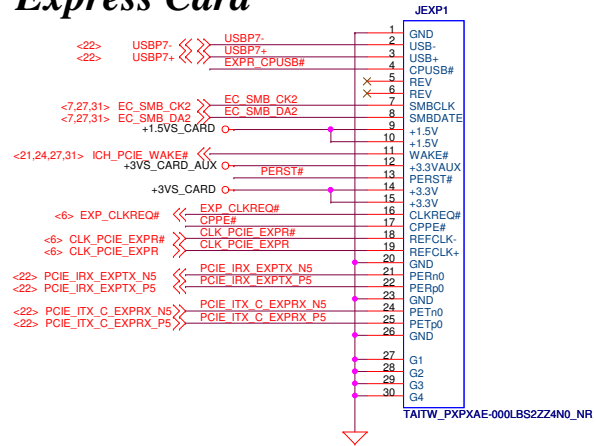


Express Card Power Switch



+1.5V_CARD Max. 650mA , Average 500mA
+3V_CARD Max. 1300mA, Average 1000mA

Express Card

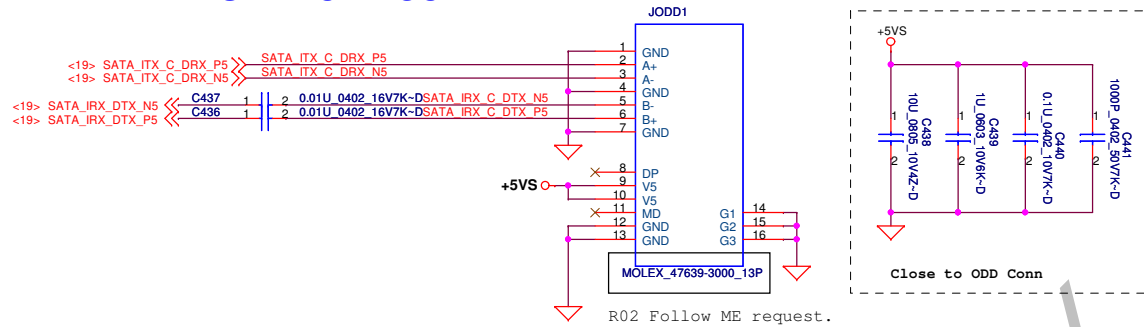


DELL CONFIDENTIAL/PROPRIETARY

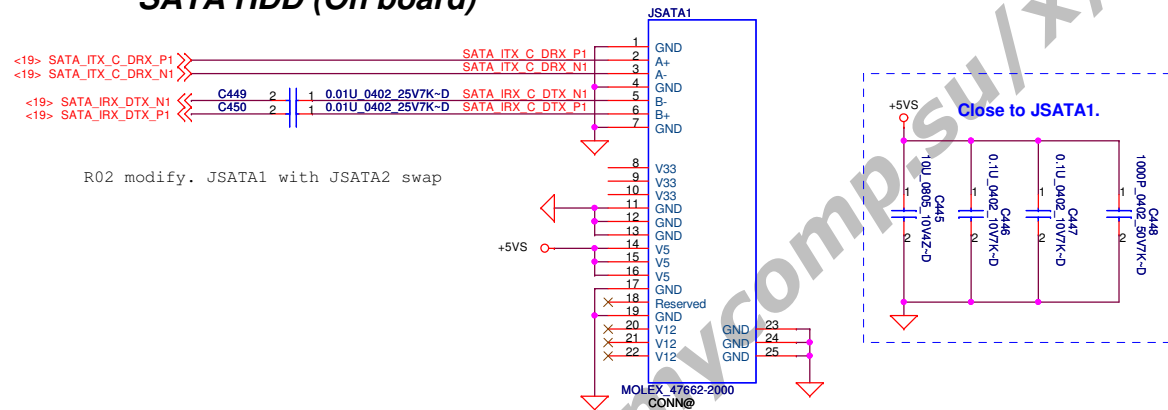
		Compal Electronics, Inc.	
		WPAN / Express Card	
Title LA-5152P	Document Number LA-5152P	Rev A00	
Date Monday, June 15, 2009	Sheet 28	of 51	

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

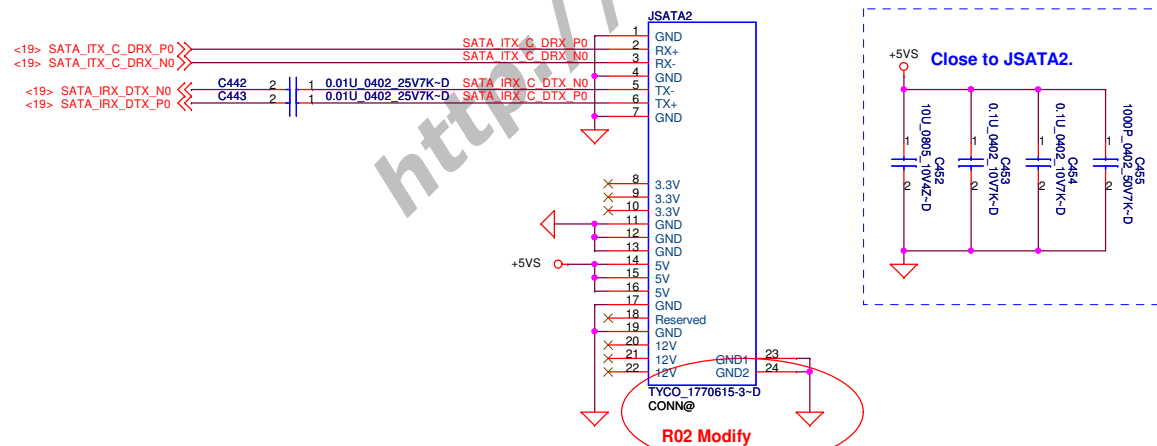
SATA ODD CONN



SATA HDD (On board)



SATA HDD



由於Kink pin尺寸大於kink hole，將導致零件干涉，也同時會使pin腳空焊。
因此將 原HDD Conn.(REV.) -FOXCONN-SP01000LC0L layout 改成Tyco-SP01000E70L layout
即可解決造成pin腳空焊的問題

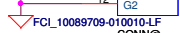
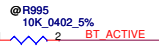
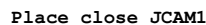
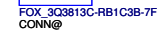
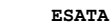
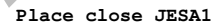
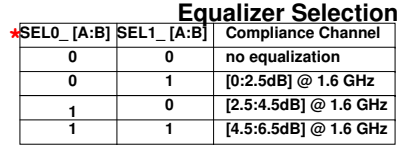
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Title			
ODD / SATA CONN			
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	29 of 51

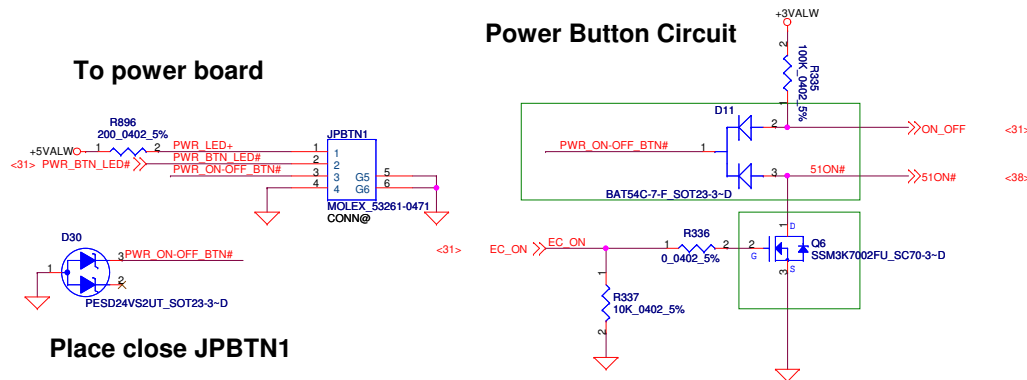
SEL3_ [A:B]	De-emphasis
0	0dB
1	-3.5dB



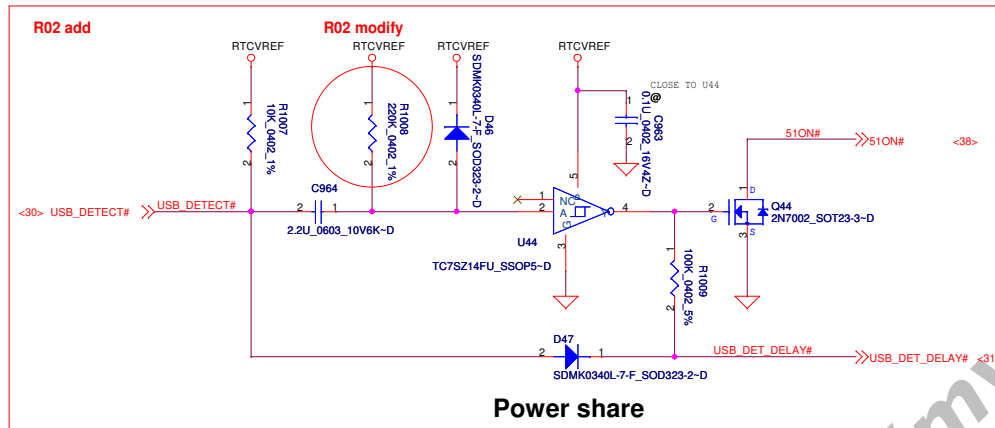
Title		USB / ESATA / BT / CAMARA	
Size	Document Number	Rev	
	LA-5152P	A0	
Date:	Monday, June 15, 2009	Sheet	30 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

To power board

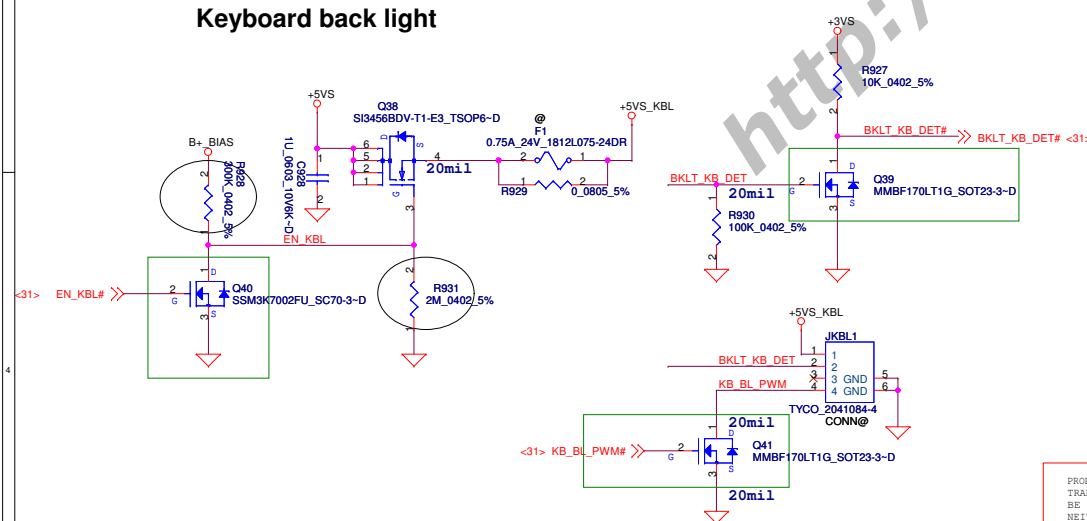


Place close JPBTN1

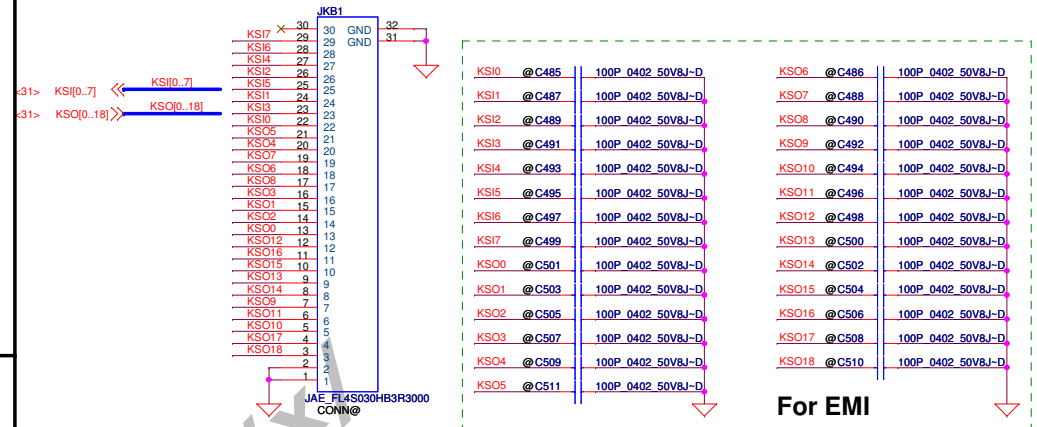


Power share

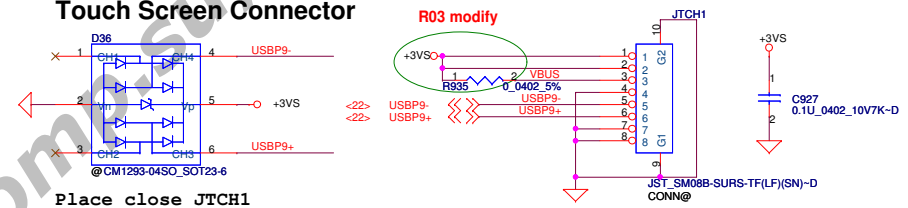
Keyboard back light



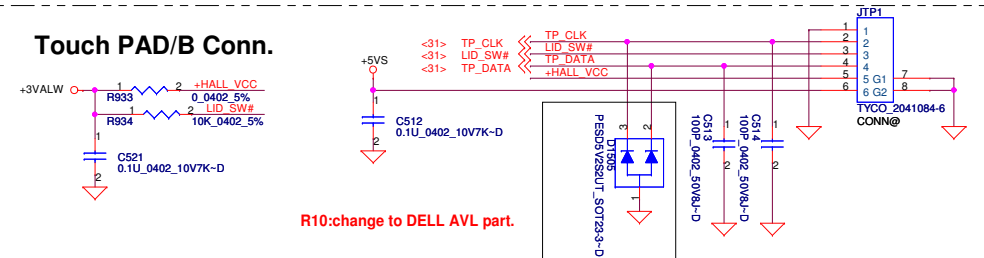
INT_KB_Conn.1



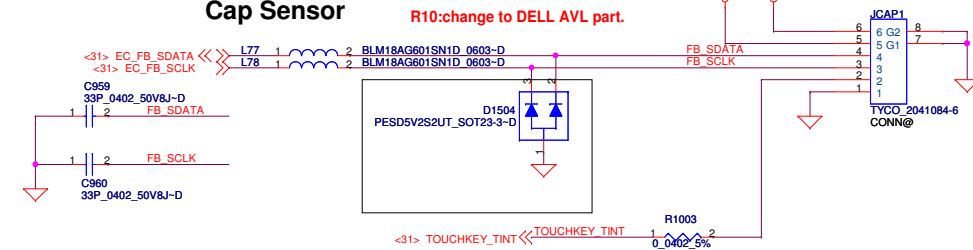
Touch Screen Connector



Touch PAD/B Conn.



Cap Sensor



DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

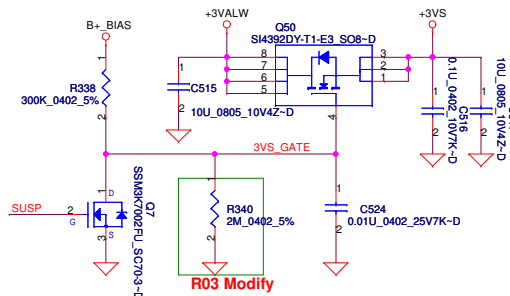
PWROK/BTN/KB/Touch Pad

Document Number
LA-5152P

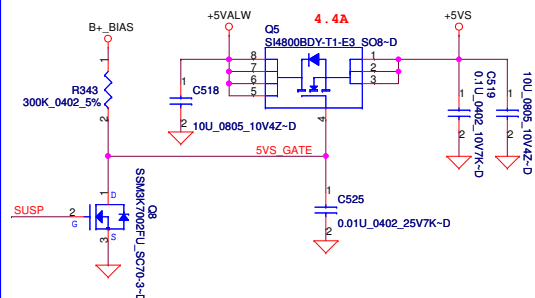
Date: Monday, June 15, 2009 Sheet 32 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

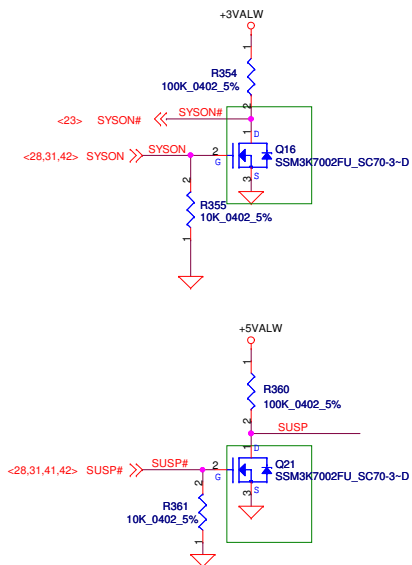
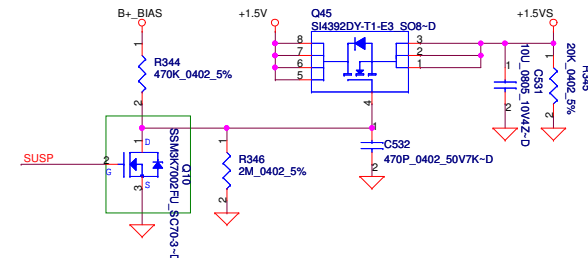
+3VALW to +3VS Transfer



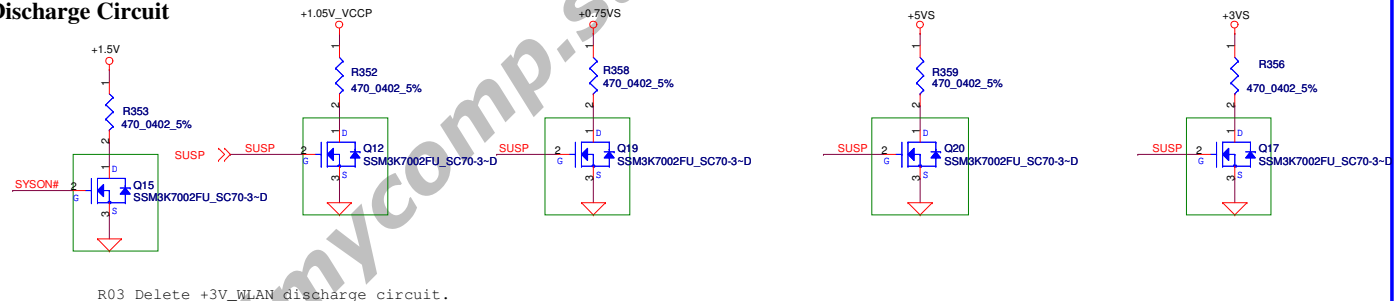
+5VALW to +5VS Transfer



+1.5V to +1.5VS Transfer



Discharge Circuit



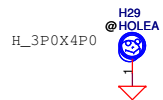
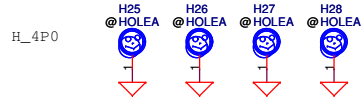
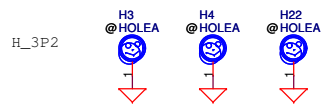
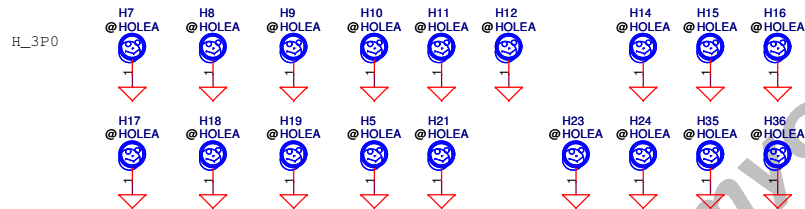
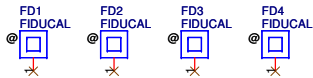
R03 Delete +3V_WLAN discharge circuit.

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Title	DC/DC Circuits		
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	33 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



<http://mycomp.su/xl>

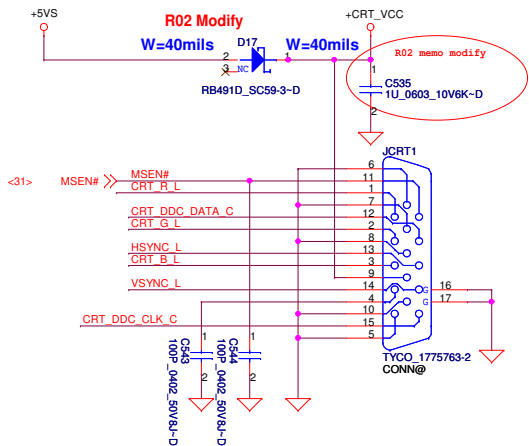
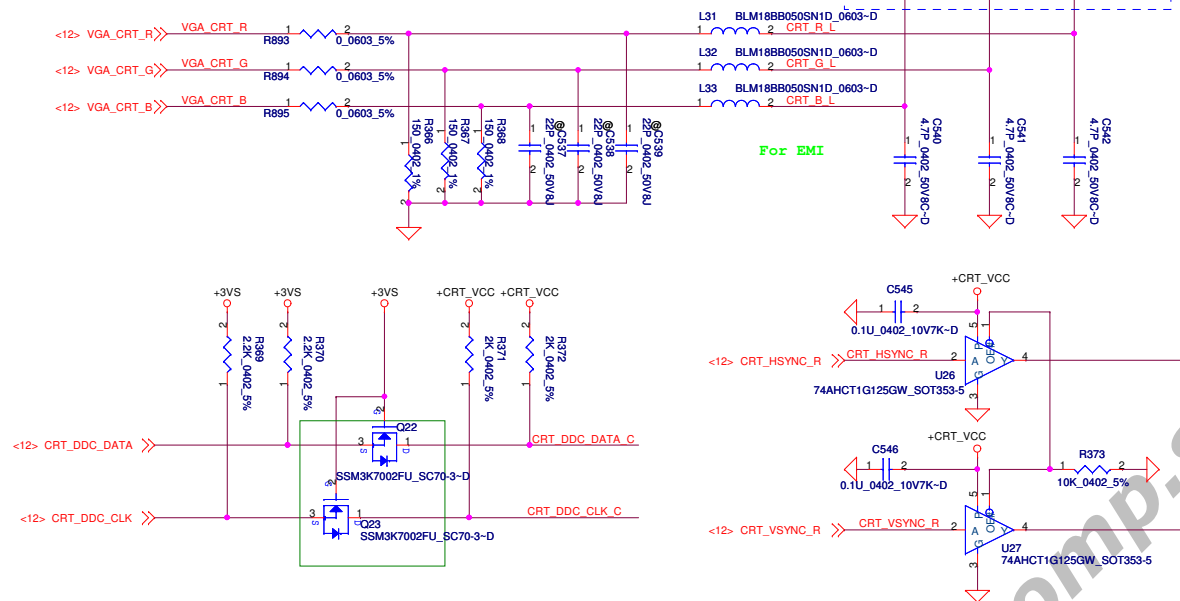
DELL CONFIDENTIAL/PROPRIETARY



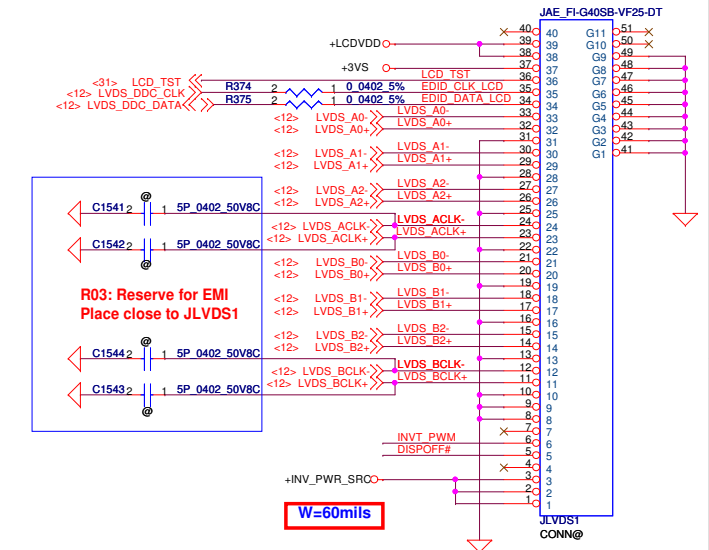
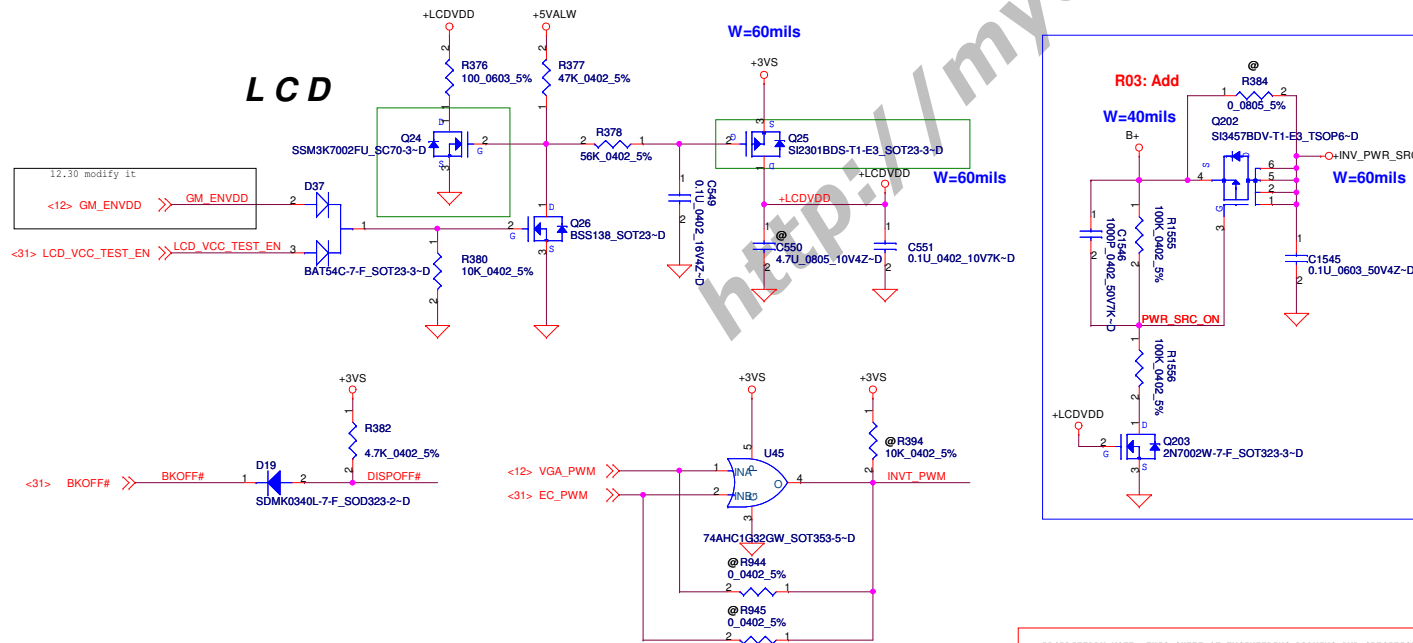
Compal Electronics, Inc.		
Title		
Screw		
Size	Document Number	
	LA-5152P	
Date:	Monday, June 15, 2009	Sheet 34 of 51
		Rev A00

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS WAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

CRT



LCD

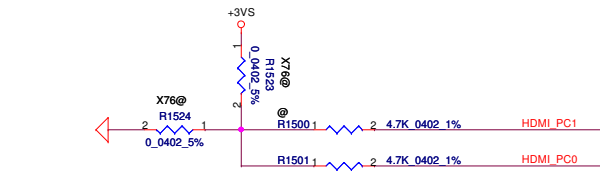


DELL CONFIDENTIAL/PROPRIETARY

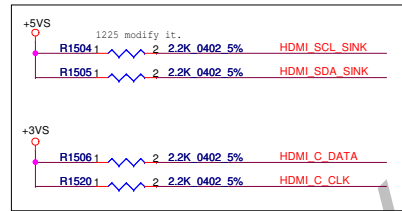
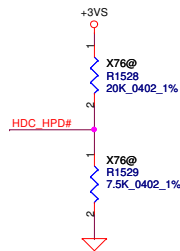
Compal Electronics, Inc.	
CRT / LVDS CONN	
LA-5152P	Rev A00
Monday, June 15, 2009	Sheet 35 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

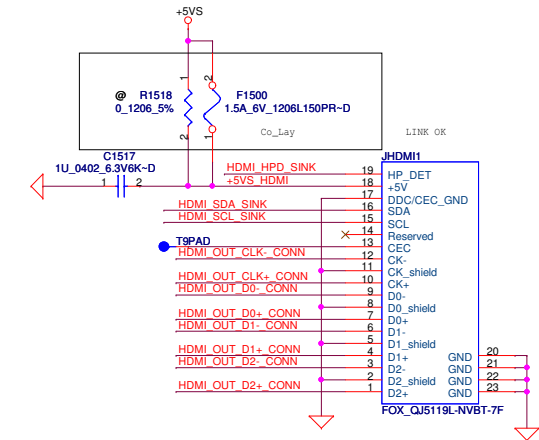
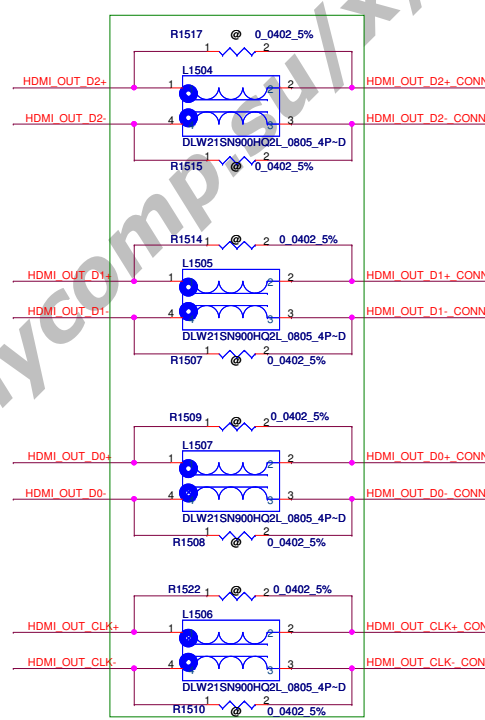
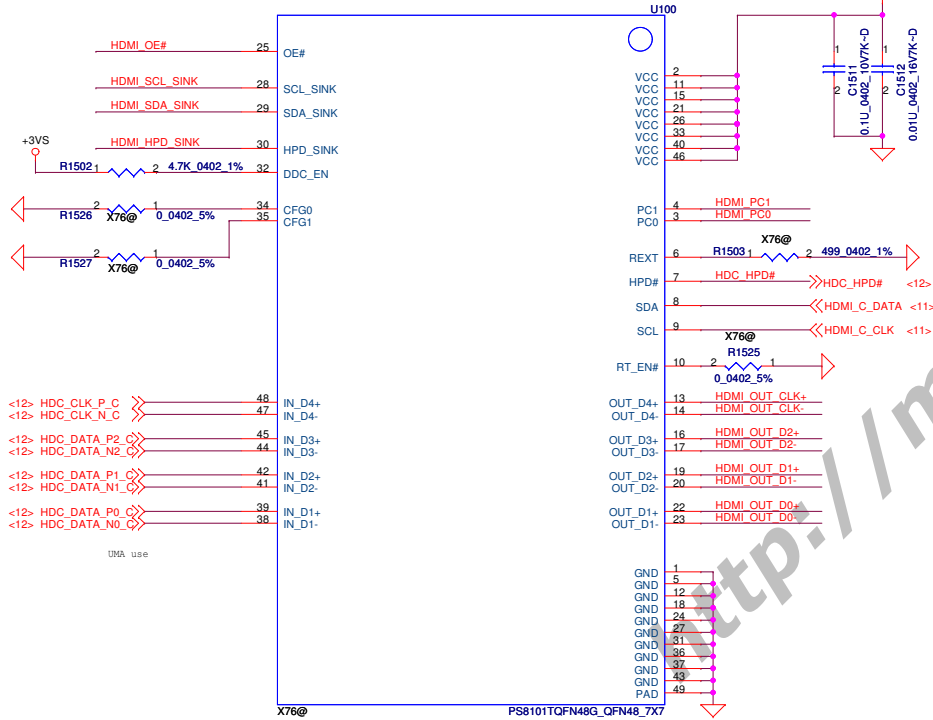
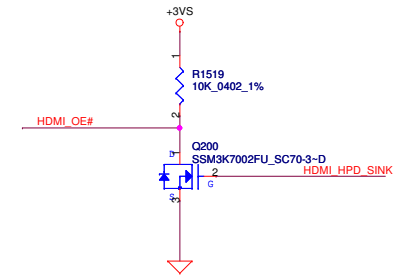
Recommended Equalization: [PC1,PC0]=01, 4dB



ST	Parade
R1523	X
R1524	V
R1503	4.3K 499
R1525	V
R1526	V
R1527	V
R1528	V
R1529	V
U100	V
R1500	V
R1516	V
R1511	V
R1512	V
R1513	V
C1513	V
C1514	V
C1515	V
C1516	V



Vendor's suggestion for power saving.

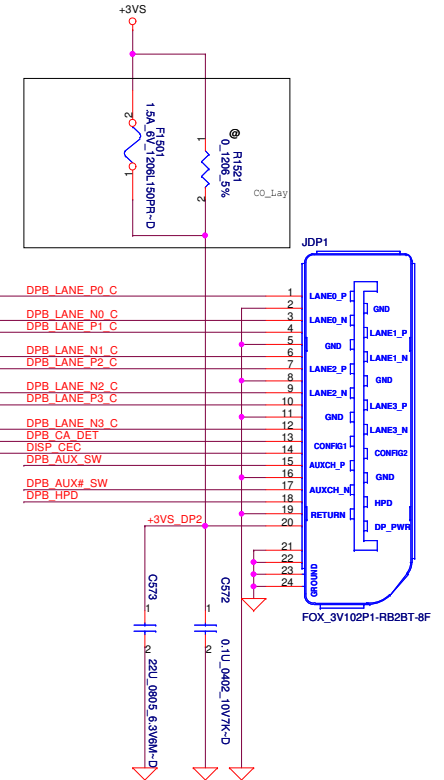
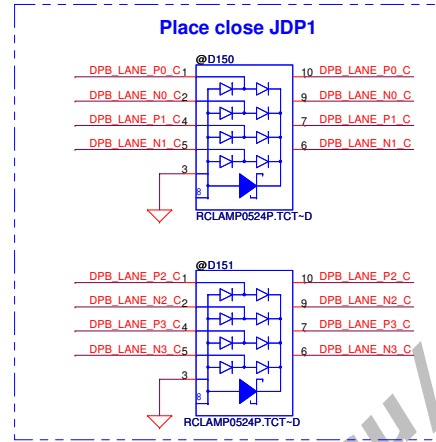
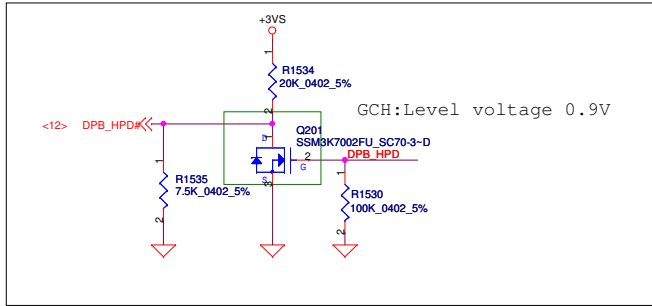


HDMI_OUT_D2+	@R1516 1	2	HDMI_OUT_D2+	@C1514 1	2	HDMI_OUT_D2-
HDMI_OUT_D1+	@R1511 1	2	HDMI_OUT_D1+	@C1513 1	2	HDMI_OUT_D1-
HDMI_OUT_D0+	@R1513 1	2	HDMI_OUT_D0+	@C1516 1	2	HDMI_OUT_D0-
HDMI_OUT_CLK+	@R1512 1	2	HDMI_OUT_CLK+	@C1515 1	2	HDMI_OUT_CLK-

DELL CONFIDENTIAL/PROPRIETARY

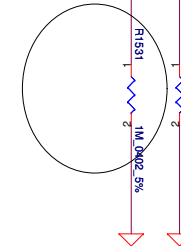
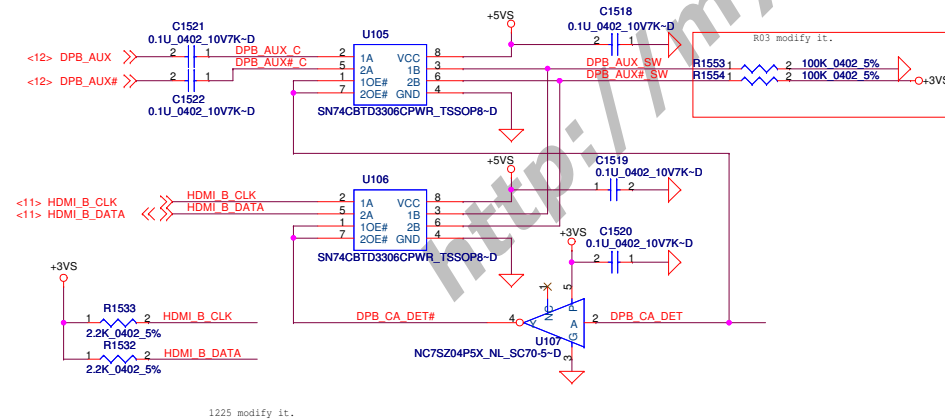
Compal Electronics, Inc.	
HDMI CONN	
File	LA-5152P
Size	Document Number
Date	Monday, June 15, 2009
Sheet	36 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



SW for MB side

DPB_CA_DET= 1 TMDs Signaling
DPB_CA_DET= 0 DP Signaling

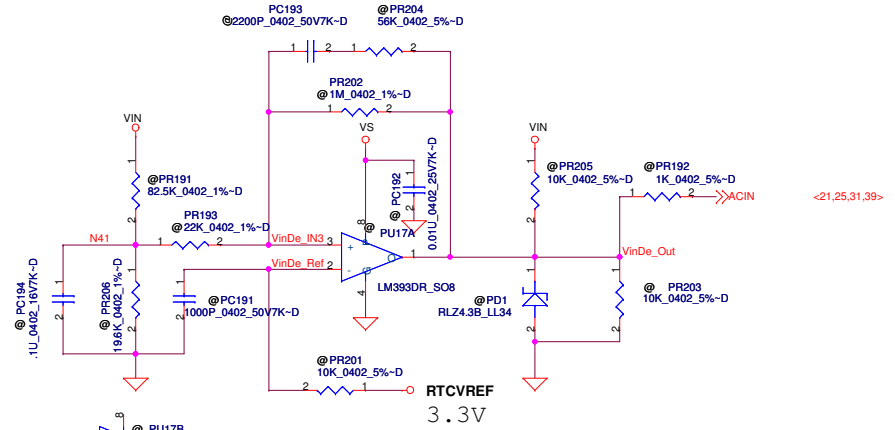
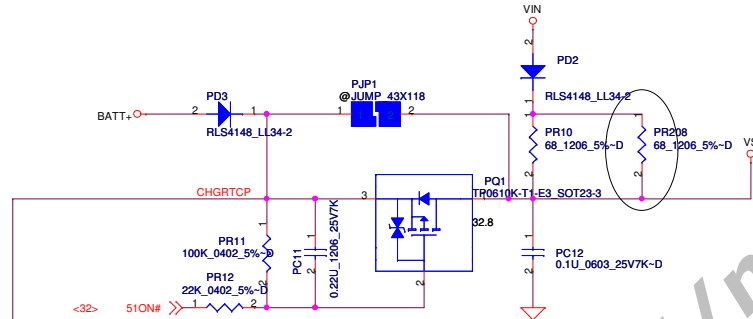
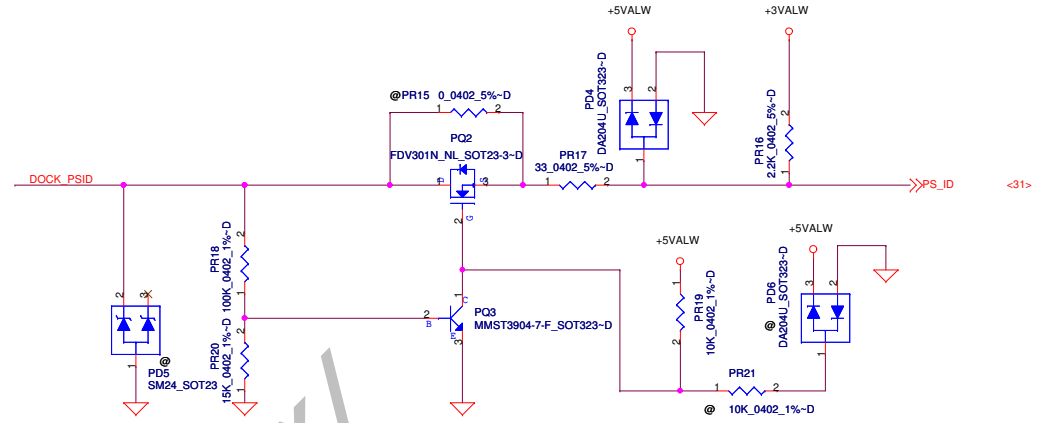
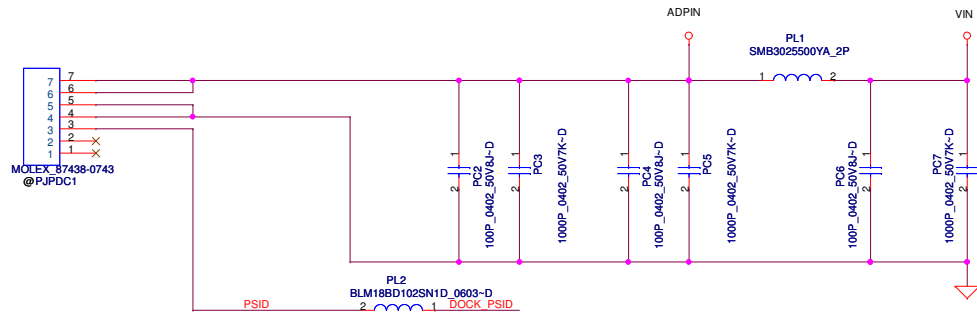


DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.			
Title	Display Port		
Size	Document Number	Rev	
	LA-5152P	A00	
Date	Monday, June 15, 2009	Sheet	37 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



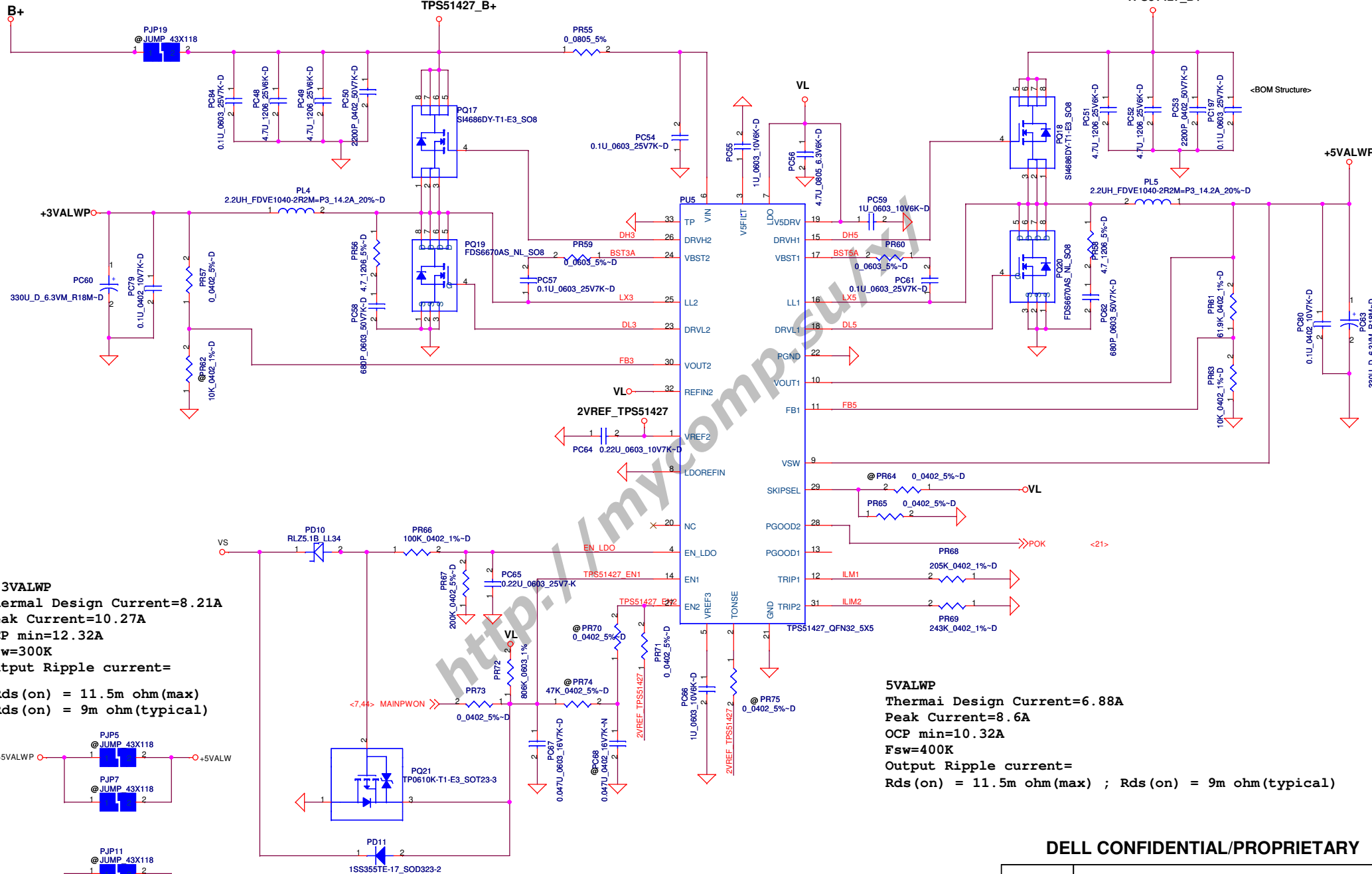
	Max.	typ.	Min.
L-->H	18.234	17.841	17.449
H-->L	17.597	17.210	16.813

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.		
Title		
DCIN/Precharge		
Size	Document Number	Rev
	LA-5152P	A00
Date:	Monday, June 15, 2009	Sheet 38 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

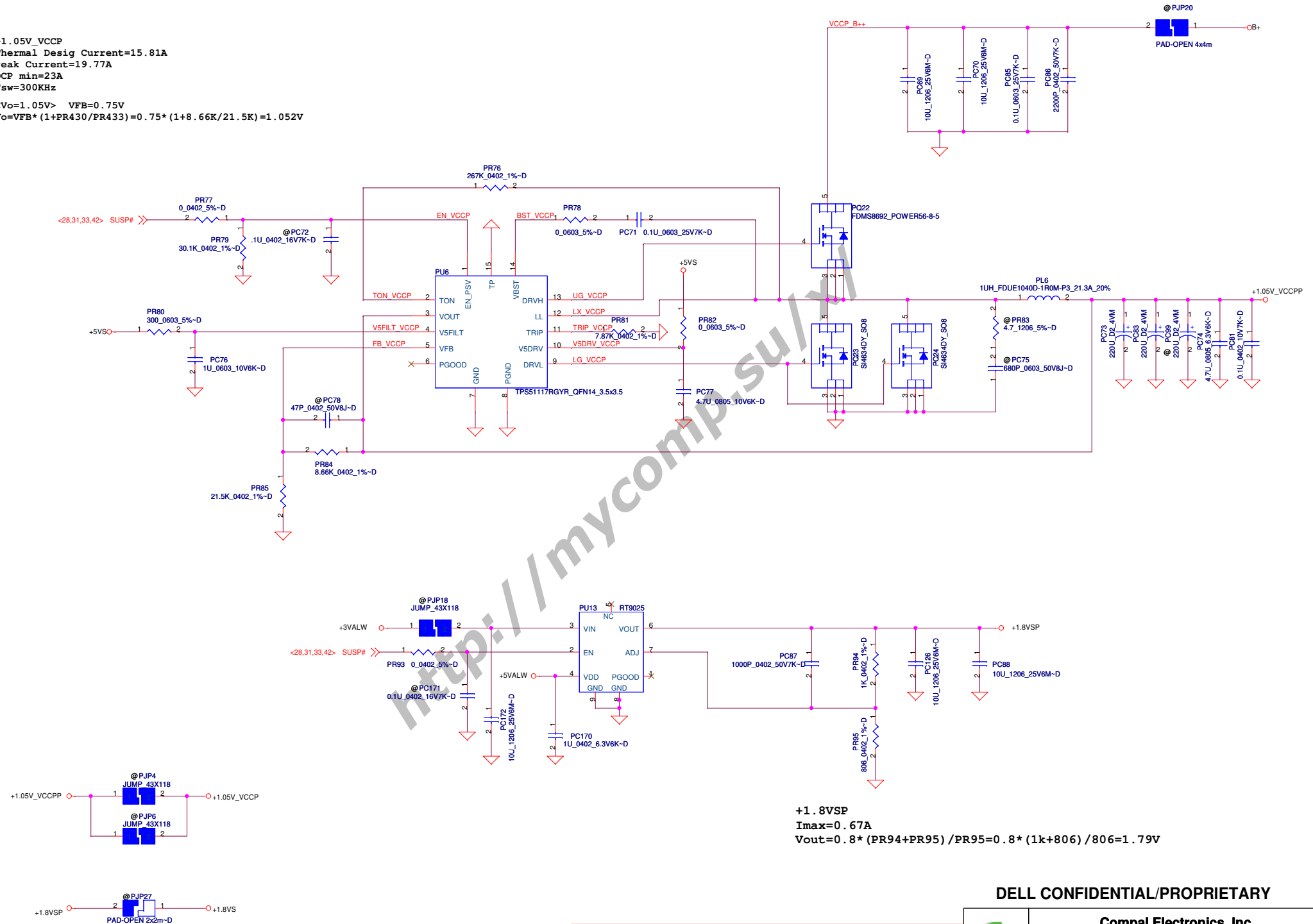


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.		
Title	+3VALWP/+5VALWP	
Size	Document Number	Rev
	LA-5152P	A00
Date	Monday, June 15, 2009	Sheet 40 of 51

+1.05V_VCCP
 Thermal Desig Current=15.81A
 Peak Current=19.77A
 OCP_min=23A
 Fsw=300KHz
 <Vo=1.05V> VFB=0.75V
 Vo=VFB*(1+PR430/PR433)=0.75*(1+8.66K/21.5K)=1.052V



+1.8VSP
 I_{max}=0.67A
 V_{out}=0.8*(PR94+PR95)/PR95=0.8*(1k+806)/806=1.79V

DELL CONFIDENTIAL/PROPRIETARY

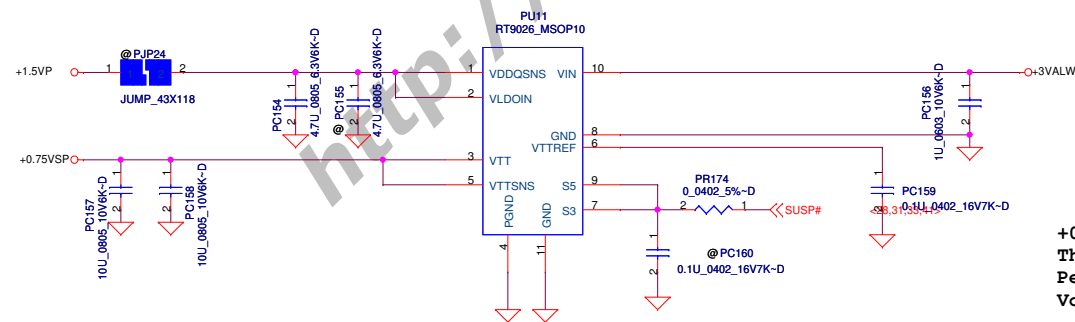
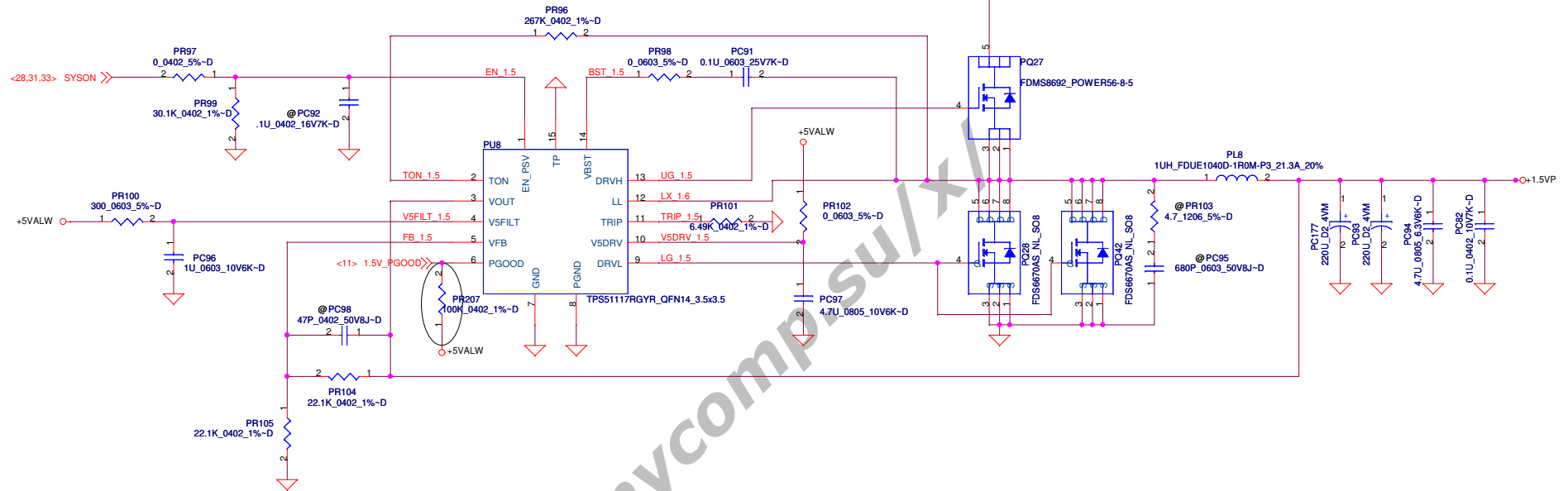


Compal Electronics, Inc.		
Title		
+1.05V_VCCP/+1.8VSP		
Size	Document Number	Rev
	LA-5152P	A00
Date:	Monday, June 15, 2009	Sheet 41 of 51

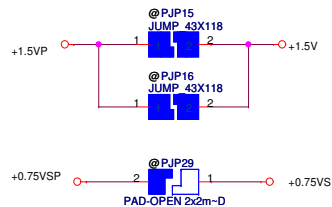
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

1.5V
Thermal Design Current=10.56A
Peak Current=13.2A
OCP min=15.84A
Fsw=298KHz

<Vo=1.5V> VFB=0.75V
Vo=VFB*(1+PR104/PR105)=0.75*(1+22.1K/22.1K)=1.5V



+0.75VSP
Thermal Design Current:0.7A
Peak current:1A
Vout=VDDQSNS/2=1.5V/2=0.75V



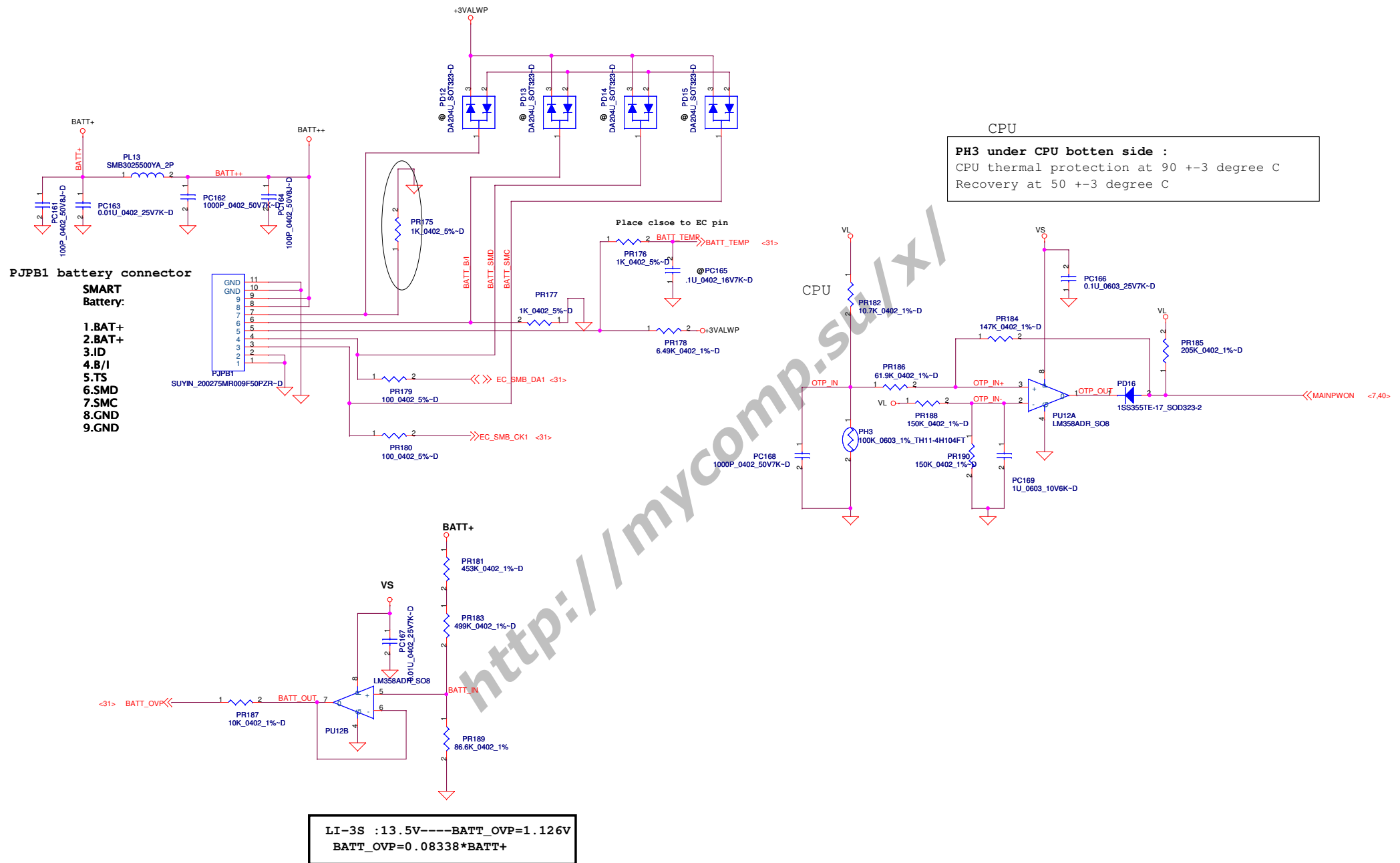
DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.		
Title	+1.5VSP/+0.75VSP	
Size	Document Number	Rev
	LA-5152P	A00
Date:	Monday, June 15, 2009	Sheet 42 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Battery Connect/OTP



DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

BATTERY CONN

Document Number
LA-5152P

Rev	A00
-----	-----

Date: Monday, June 15, 2009 Sheet 44 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Version Change List (P. I. R. List)

Page 1

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	06	Clock Generator	2009/03/03	Benson_Tung	Error connection of clock gne I2C.	Correct CLK_SMBDATA connect to U1.9 , CLK_SMBCLK connect to U1.10.	Rev02 (X01)
2	06	Clock Generator	2009/03/03	Benson_Tung	Error connection of CLK_PCIE_WPAN & CLK_PCIE_WPAN#	Correct WPAN CLK +/- signal of U1.	Rev02 (X01)
3	30	JCARD1	2009/03/03	COMPAL	1. Change JCARD1 pin 1 location to prevent cable twist. 2. Connect contact current rating is only 0.3 Ampere max.	1. Modify JCARD1 symbol 2. Add +5VALW pin count from 2 to 7 pins.	Rev02 (X01)
4	32	Keyboard	2009/03/03	Benson_Tung	Keyboard connector Pin 1 location is different with Keyboard module.	Correct keyboard pin 1 location to fit keyboard module.	Rev02 (X01)
5	32	Power share	2009/03/03	Benson_Tung	Power share didn't work.	Add power share schematic.	Rev02 (X01)
6	12	Cantiga (3 of 7)	2009/03/03	Benson_Tung	Error connection of LVDS CLK +/-.	1. Correct LVDS_ACLK+ connect to U4C.C40 2. Correct LVDS_ACLK- connect to U4C.C41 3. Correct LVDS_BCLK+ connect to U4C.A37 4. Correct LVDS_BCLK- connect to U4C.B37	Rev02 (X01)
7	33	DC/DC Interface	2009/03/03	Benson_Tung	Change DC to DC transfer of MOS parts	1. +3VALW to +3VS Ttransfer MOS change to U21 SI4800BDY-TI-E3 2. +5VALW to +5VS Ttransfer MOS change to U22 SI4800BDY-TI-E3 3. +1.5V to +1.5VS Ttransfer MOS change to Q45 SI4392DY-T1-E3	Rev02 (X01)
8	20	FFS	2009/03/03	Compal	Add FFS function	Add FFS circuit in page 20	Rev02 (X01)
9	4	Power Rail	2009/02/25	Bill_Huang	Correct error item.	Correct +3VS, +5VS Power consumption.	Rev02 (X01)
10	36	HDMI	2009/03/03	Benson_Tung	Error connection of Q200.3 and C1517.1 GND net name.	1. Change Q200.3 net form GND SIGNAL to GND. 2. Change C1517.1 net form GND SIGNAL to GND.	Rev02 (X01)
11	19-23	ICH9M	2009/03/04	Bill_Huang	Change ICH to consign P/N.	Change U6 P/N: form SA00002G11L to SA00002G12L.	Rev02 (X01)
12	35	CRT RGB EA	2009/03/10	Benson_Tung	CRT RGB signals EA failed on Rising / Falling time.	Change L31~L33 from SM01000AL00 (S SUPPRE_CHENG-HANN MBK1608301YZF 0603) to SM01000BP0L (BLM18BB050SN1D_0603-D)	Rev02 (X01)
13	35	CRT Diode	2009/03/03	Benson_Tung	CRT diode forward current is about 1Amp, need to change part to prevent damage.	Change D17 from SC1B411D010 (S DIO RB411DT146 SOT23) to SCSB491DA0L (S SCH DIO RB491D SC59-3 ROHM)	Rev02 (X01)
14	37 35 26	Display Port VGA / LVDS Sub woofer / Speaker AMP	2009/03/04	Jan_Chang	Change JDP1,JLVDS1 and JWOOFER1 symbol.	1. Update JDP1 symbol. 2. Change JLVDS1 symbol to JAE_FI-G40SB-VF25-DT 3. Change JWOOFER1 symbol to MOLEX_53398-0271-D	Rev02 (X01)
15	31 19 24	EC_KB926/BIOS/Reed SW ICH9M(1/5)_LAN,HD,SATA,LPC Gigabit LAN_RTL8111DL	2009/03/04	Benson_Tung	Meet Xtal EA spec.	1. Change C479,C481 from 15P_0402_50V8J to 22P_0402_50V8J 2. Change C217,C864 from 12P_0402_50V8J to 15P_0402_50V8J 3. Change C318 from 27P_0402_50V8J to 33P_0402_50V8J	Rev02 (X01)
16	25	HD Audio_IDT92HD73C	2009/03/04	Benson_Tung	1. SPK_MUTE# change to controlled by HP1_JD or HP2_JD. 2. Meet HP EA spec.	1. Add U108 OR gate. 2. Change C336, C337, C349, C350 , C354, C355 from 1U_0603 to 2.2U_0805.	Rev02 (X01)
17	27	Mini Card_WLAN/WWAN	2009/03/06	Compal	To supprot EC TX/RX debug card.	Change EC_TX_P80_DATA & EC_RX_P80_CLK connect to JWWAN1 pin 49 & 51	Rev02 (X01)
22	30	USB/BlueTooth/Camera	2009/03/06	Compal	To prevent antenna effect at E-SATA re-driver.	Add R1012 & R1013 place close U40 Pin2 & Pin3 Add R1014 & R1015 place close U40 Pin 21 & Pin22	Rev02 (X01)
23	32	PWROK/BTN/KB/Touch Pad	2009/03/06	Compal	Add powershare schematic.	Add powershare schematic.	Rev02 (X01)
24	33	DC/DC	2009/03/06	Compal	1. To fit power budget	1a. Change U21 & U22 from DMN3030LSS-13 to SI4800BDY 1b. Change U25 SI4800BDY to Q45 SI4329DY	Rev02 (X01)
25		Market / Capacitor	2009/03/06	Compal	Due to Janpan produce Y5V no more in the fucture.	change C133,C138,C144,C152,C163,C251,C255,C281,C425 from SE000009W0L to SE107475M0L	Rev02 (X01)
26	23	ICH9M(5/5)_POWER&GND	2009/03/06	Compal	ICH conect to ALW power rail have power wastage at S5 mode	Add MOSFET control circuit to reduce ICH power wastage at S5 mode.	Rev02 (X01)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		
EE PIR-1		
Size	Document Number	Rev
	LA-5152P	A00
Date:	Monday, June 15, 2009	Sheet 45 of 51

Version Change List (P. I. R. List)

Page 2

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
27	24	Gigabit LAN_RTL8111DL	2009/03/06	Compal	1. Prevent B+ BIAS damage Q3 2. Correct +LAN_DVDD12 power name 3. Meet LAN EMI test.	1. Add R1006 (1.5M_0402) 2. Correct C302 & C303 power source from +LAN_VDD12 to +LAN_DVDD12 3. Pop C873 ~ C880 , SE07168AC0L(S CER CAP 6.8P 50V C NPO 0402)	Rev02 (X01)
28	35	VGA / LVDS	2009/03/06	Compal	1. LCD panel need to be turned backlight under this crisis recovery mode. 2. when FN+ D is pressed during POST, the LCD will perform the LCD BIST test and boot to PSA directly	add a gate to OR VGA_PWM and EC_PWM signals	Rev02 (X01)
28	21	ICH9M(3/5)_PM,GPIO	2009/03/06	Compal	Error net name PBTN_OUT#	Correct U6C.R3 net to PBTN_OUT#	Rev02 (X01)
29	4	Power Rail	2009/03/06	Compal	Correct +1.5V to +1.5VS.DC/DC Interface chip name	Form 4800BDY change to SI4392DY	Rev02 (X01)
30	25	HD Audio_IDT92HD73C	2009/03/11	Compal	Meet audio HP EA spec	1.C354,C355,C336,C337 change to 2.2uF 0805 size X7R 2.Add a series 2k ohm resistor between these caps and the maxim amp U10,U12., 3.At the pin of the maxim amp U10,U12 Pin 15 and U10,U12 Pin13 add a 220pF cap 0603 NPO to ground.	Rev02 (X01)
31	26	Speaker/Sub woofer AMP	2009/03/11	DELL	Gain setting to 20.6dB	1. C913,C914,C910,C909 form 6800P_0402_16V7K~D change to 2200P_0402_25V7K~D 2. R907,R902 100K_0402_1% to 280K 3. Delete C951,C952 0.015U_0402_16V7K part. 4.R900,R905 form 4.87K_0402 change to 43.2K_0402 5. U14 form MAX9736B change to MAX9736A 5.R901,R903,R906,R908 form 20K_0402 change to 25.5K_0402	Rev02 (X01)
32	34	Screws/LED/Switch	2009/03/11	ME	Modify MB drawing.	1. H2 change to NON-PTH 1.6mm. 2,. Delete H13 part	Rev02 (X01)
33	26 31 32	Speaker/Sub woofer AMP EC_KB926/BIOS/Reed SW PWROK/BTN/KB/Touch Pad	2009/03/11	EMC	Follow EMC request.	1. D20,D21 (PACDN042Y3R_SOT23-3) change to POP. 2. R330 (0_0402), C483 (0.1U_0402) change to POP. 3. Reserve ESD diode D1505 PJDLC05_SOT23-3 on touchpad 4. Change D1504 part to PJDLC05_SOT23-3.	Rev02 (X01)
34	29	ODD/SATA HDD	2009/03/11	ME	Follow ME request.	JODD1 form MOLEX_47639-4000_NR change to MOLEX_47639-3000_13P	Rev02 (X01)
35	26	Speaker/Sub woofer AMP	2009/03/11	COMPAL	Band-Pass Filiter,fc=100 Hz, 500Hz, Av=1.45V/V	form MAX9737 change to MAX9736A. please see page 26	Rev02 (X01)
36	27	Display Port	2009/03/11	COMPAL	Meet HDMI test	1. R1518 0_1206 change to non-pop. 2. F1500 1.5A_6V_1206L150PR~D change to POP.	Rev02 (X01)
37	6 19 27 31	Clock Generator CK505 ICH9M(1/5)_LAN,HD,SATA,LPC Mini Card_WLAN/WWAN EC_KB926/BIOS/Reed SW	2009/03/13	Compal RF	Follow RF request.	RF reserve 1.C1531 part. CLK_14M_ICH need close U1 2.C1532 part. HDA_BITCLK_AUDIO need close U6 3.C1533 part.PCI_CLK need close U1 4.c1534 part. CLK_PCI_EC need close U1 5. C1535,C1536 part. Reserve 47 pF for +1.5V and +3V 6. C1537, C1538 part. Reserve 47 pF for +1.5V and +3V 7. Move R333 close to U19 and need reserve C1539 part.	Rev02 (X01)
38	27	USB/BlueTooth/Camera	2009/03/13	COMPAL	Delete E-SATA by-pass R.	Delete R1012,R1013,R949,R950,R951,R952,R1014,R1015 part .	Rev02 (X01)
39	25	HD Audio_IDT92HD73C	2009/03/13	COMPAL	Modify Audio control circuit.	please see page 25 about U46,U42,U108,U48,U47,U41,Q48 parts.	Rev02 (X01)
40	33	DC/DC Interface	2009/03/13	COMPAL	For reduce power consumption	1.R344 change to 470K. 2.R346 change to 2M.	Rev02 (X01)
41	31	EC_KB926/BIOS/Reed SW	2009/03/14	COMPAL	correct SPI_CLK_R non_pop parts.	R330,C483 change to non_pop.	Rev02 (X01)
42	36	HDMI	2009/03/16	COMPAL	Meet HDMI chip spec. X7616831L04 ALT. GROUP PARTS S-(SA00002C610) KAT00	R1500 change to pop part..	Rev02 (X01)
43	11	Cantiga (2 of 7)	2009/04/27	COMPAL	Correct HDMI CLK/DATA part B and C connect	DDPC_CTRLCK should be connecting HDMI_C_CLK. =>Port C DDPC_CTRLDATA should be connecting HDMI_C_DATA. =>Port C SDVO_CTRLCLK should be connecting HDMI_B_CLK. =>Port B SDVO_CTRLDATA should be connecting HDMI_B_DATA. =>Port B	Rev03 (X02)

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.



Title		EE PIR-2	
Size	Document Number	Rev A00	
	LA-5152P		
Date:	Monday, June 15, 2009	Sheet	46 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
44	36	HDMI Conn	2009/04/27	COMPAL	Follow EMI request of HDMI	L1504,L1505, L1506, L1507 parts change to DLW21SN900HQ2L	Rev03 (X02)
45	37	Display Port	2009/04/27	COMPAL	Follow INTEL Design Guide DP AUX circuit.	DPB_AUX_SW need connect R1553 (100kohm) to pull down. DPB_AUX#_SW need connect R1554 (100Kohm) to pull up +3VS.	Rev03 (X02)
46	33	DC/DC Interface	2009/04/28	COMPAL	Delete +3V_WLAN discharge circuit.	Delete +3V_WLAN discharge circuit.	Rev03 (X02)
47	28	Mini Card_WPAN / Express	2009/04/28	COMPAL	Chagne JEXP1 symbol.	JEXP1 change to TAITW_PXPXAE-000LBS2ZZ4N0_NR part.	Rev03 (X02)
48	34	Screws/LED/Switch	2009/04/29	COMPAL	Original H1 is fan alignment pin , but now cancel this function.	Delete H1 part.	Rev03 (X02)
49	25	HD Audio_IDT92HD73C	2009/04/29	COMPAL	Change EAPD# pull up to (+3VALW).	Change R1549.1, U46.5 and U47.5 to +3VALW power	Rev03 (X02)
50	23	ICH9M(5/5)_POWER&GND	2009/04/29	COMPAL	Change +ICH_V5REF_RUN and SUS resistance	R233,R234 form 10_0402_5% change to 100_0402_5%	Rev03 (X02)
51	32	PWROK/BTN/KB/Touch Pad	2009/04/30	COMPAL	follow EMC request.	1.Change L77 and L78 from 120 ohms to 600 ohms bead. 2. Implement ESD diode on cap sensor D1504 PJDLCO5_SOT23-3 3. Implement ESD diode on TP_CLK and TP_DATA for touchpad D1505 PJDLCO5_SOT23-3 4. Reserve PES24VS2UT_SOT23-3 ESD diode for speaker connector of D20, D21	Rev03 (X02)
52	23 24 35	ICH9M(5/5)_POWER&GND Gigabit LAN_RTL8111DL CRT / LVDS CONN	2009/04/30	COMPAL	Change to PSL parts	D2,D3,D4,D5,D6,D7,D19 form SC1H751H01L S DIO CH751H-40PT SOD-323 Change to SCS0340L01L SDMK0340L-7-F_SOD323-2-D	Rev03 (X02)
53	07 30	Penryn(1/3)-AGTL+/ITP-XDP USB/Bluetooth/Camera	2009/04/30	COMPAL	C19,C21,C463,C935 form S CER CAP 10U 16V Z F(Y5V) 1206 H1.15 change to SE053106Z8L S CER CAP 10U 10V Z Y5V0805 H1.25		Rev03 (X02)
53	07 30	Penryn(1/3)-AGTL+/ITP-XDP USB/Bluetooth/Camera	2009/04/30	COMPAL	Modify DC to DC circuit.	Modify +3VALW to +3VS and +5VALW to +5VS circuit.	Rev03 (X02)
54	23	ICH9M (5/5)	2009/05/01	COMPAL	Reduce ICH power consumption at S5 mode.	Populate Q47 and non-populate R1022	Rev03 (X02)
55	30	USB/Bluetooth/Camera	2009/05/01	COMPAL	Change E-SATA Output Swing Control TO 1.2x	1.Non-populate R958, R959 2. R953 change to 390 ohm.	Rev03 (X02)
56	30	USB/Bluetooth/Camera	2009/05/01	COMPAL	Solve USB Power Share fail issue.	Swap GPIO for USB_DET_DELAY# and EC_SPK_HP_MUTE#.	Rev03 (X02)
57	31	EC_KB926/BIOS/Reed SW	2009/05/04	COMPAL	Support S5 Power on when CRT insert	Pull-up MSEN# from +3VS to +3VALW	Rev03 (X02)
58	31	EC_KB926/BIOS/Reed SW	2009/05/04	COMPAL	FFS alert signal will change to other GPIO. Because original PIRQH is by USB controller used.	FFS change int to PIRQ setting from PIRQH to PIRQE	Rev03 (X02)
59	25	HD Audio_IDT92HD73C	2009/05/04	COMPAL	Change package form 0603 to 0402.	C1527, C1528, C1529, C1530 Change to 270P_0402_50V7K--D	Rev03 (X02)
60	35	VGA / LVDS	2009/05/05	COMPAL	Add MOSFET circuit for LVDS converter power		Rev03 (X02)
61	24	ICH9M(5/5)_POWER&GND	2009/05/06	COMPAL	Modify +3VALW_S5_ICH circuit.	R972 form 470Kohm change to 300Kohm. R973 form 1.5Mohm change to 2M ohm.	Rev03 (X02)
62	35	VGA / LVDS	2009/05/06	COMPAL	Modify Keyboard back light circuit.	R928 form 470Kohm change to 300Kohm. R931 form 1.5Mohm change to 2M ohm.	Rev03 (X02)
63	24	Gigabit LAN_RTL8111DL	2009/05/07	COMPAL	Modify LAN_IO power circuit.	R236 form 470Kohm change to 300Kohm. R1540 form 1.5Mohm change to 2M ohm.	Rev03 (X02)
64	26	Speaker/Sub woofer AMP	2009/06/04	COMPAL	For Part source	C901, C902, C903, C916, C918, C977 form SE00000NZ0L (S CER CAP 22U 25V K X7R 1210 H2.5) change to SE00000GF8L (S CER CAP 22U 25V K X5R 1210 H2.5)	Rev10 (A00)
65	30	USB/Bluetooth/Camera	2009/06/04	COMPAL	due to E-SATA connector doesn't support E-SATA detect function.	De_pop SB00000960L (S TR SSM3K7002FU 1N SC70-3) Location: Q11	Rev10 (A00)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		EE PIR-3	
Size	Document Number	Rev A00	
LA-5152P			
Date:	Monday, June 15, 2009	Sheet	47 of 51

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
66	32	PWROK/BTN/KB/Touch Pad	2009/06/04	Compal	Change to DELL AVL Part	Change PN: SCA00000A00 (S ZEN ROW PJDLC05 3P C/A SOT23) to SCA00000J0L (S ZEN ROW PESD5V2S2UT 3P C/A SOT23 ESD) Location: D1504, D1505	Rev10 (A00)
67	25	HD Audio_IDT92HD73C	2009/06/04	Compal	Solve S0 to S3 pop noise of HP.	R1549 change to De_POP.	Rev10 (A00)
68	12	CANTIGA((3/7)-VGA/LVDS/TV	2009/06/04	Compal	CRT_HSYNC and CRT_VSYNC net name error	1. R116.1 net change to CRT_HSYNC_R 2. R117.1 net change to CRT_VSYNC_R	Rev10 (A00)
69	36	HDMI	2009/06/04	Compal	Cancel solder mask of by pass 0 ohm	1. Cancel solder mask R1517,R1515,R1514,R1507,R1509,R1508,R1522,R1510 parts. 2. Cancel solder mask R1521 part. 3. Cancel solder mask L26,L71,L72,L27 parts.	Rev10 (A00)
70	31	EC_KB926/BIOS/Reed SW	2009/06/04	Compal	Change Board ID	R312 change to 33Kohm	Rev10 (A00)
71			2009/06/04	Compal	Short by-pass 0 ohm	short parts of R2,R4,R3,R5,R6,R7,R8,R10,R12,R42,R43,R16,R17,R18,R19,R21,R23,R26,R28,R31,R33,R35,R37,R40,R39,R14,R15,R44,R99,R94,R134,R1004,R884,R235,R942,R248,R250,R285,R911,R912,R913,R914,R291,R918,R921,R919,R920,R915,R916,R917,R922,R923,R924,R925,R292,293,R292,R293,R294,R298,R295,R296	Rev10 (A00)
72	26	Speaker/Sub woofer AMP	2009/06/08	Compal	Main speaker AMP gain setting to 13dB	1. Change C908,C912 form 0.22uF to 0.1uF. 2. Change R903,R908 form 25.5Kohm to 16.5Kohm 3. Change R901,R906,R902,R907 form 280Kohm to 182Kohm 4. Change R904,R909 form 16.9ohm to 17.8Kohm 5. Change R900,R905 form 43.2K ohm to 11Kohm	Rev10 (A00)
73	26	Speaker/Sub woofer AMP	2009/06/08	Compal	Modify Main speaker AMP SHDN and mute # control circuit	1. Add D1507, R1558, C1547 diode and RC delay time of MUTE# pin.	Rev10 (A00)
74	30	USB/BlueTooth/Camera	2009/06/08	Compal	Solve E-SATA re-driver issue	Chagne U40 from SA00002D80L (S IC PI2EQX3201BZFEX TQFN 36P) to SA00002YQ0L (S IC PI2EQX3201BLZFEX TQFN 36P)	Rev10 (A00)
75	25	HD Audio_IDT92HD73C	2009/06/08	Compal	Support unboot pc-beep sound function	Pop R1549	Rev10 (A00)
76	27	Mini Card_WLAN/WWAN	2009/06/15	Compal	delete short trace of jump	Delete R1010,R1011,R911,R912 pin1 and pin2 connect trace.	Rev10 (A00)

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		EE PIR-4	
Size	Document Number	LA-5152P	
Date:	Monday, June 15, 2009	Sheet	48 of 51

Rev
A00

Version Change List (P. I. R. List)

Page 1

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
01	40	+3VALWP/+5VALWP	01/22	Compal Mike	Setiing +5VALW OCP to 13.56A	Change PR68 from P/N:SD03429438L (294K +-1% 0402) to SD03433238L (332K +-1% 0402)	X01
02	40	+3VALWP/+5VALWP	01/22	Compal Mike	Setiing +3VALW OCP to 14.26A	Change PR69 from P/N: SD03424938L (249K +-1% 0402) to SD03434038L (340K +-1% 0402)	X01
03	41	+1.05V_VCCP/ +1.8VSP	01/22	Compal Mike	Setiing +1.05V_VCCP OCP to 23A	Change PR81 from P/N: SD03480618L (8.06K +-1% 0402) to SD03493118L (9.31K +-1% 0402)	X01
04	42	+1.5VSP/+0.75VSP	01/22	Compal Mike	Setiing +1.5VSP OCP to 15.84A	Change PR101 from P/N: SD03413728L (13.7K +-1% 0402) to SD03410528L (10.5K +-1% 0402)	X01
05	38	DCIN/Precharger	01/22	Compal Mike	Common circuit design modify	Change PR10 from P/N: SD00103308L (33 +-5% 1206) to SD011680A8L (68 +-5% 1206) Add PR208 SD011680A8L (68 +-5% 1206) parallel with PR10	X01
06	42	+1.5VSP/0.75VSP	01/22	Compal Mike	HW need to use +1.5VSP PGOOD signal,so need to add a pull high resister.	Add PR207 SD03410038L (100K +-1% 0402) between PU8 pin6 and PR97 pin 2.	X01
07	46	Charger	02/09	Compal Mike	Take off Cells selector function.	Populate PR88,take off PR37 and PQ10,change PR175 from 47K to SD02810018L(1K +-5% 0402)	X01
08	43	CPU_CORE	02/24	Compal Mike	Change CPU_CORE low-side MOSFET	Change PQ34,PQ35,PQ36,PQ37 from (SI4430BDY-T1-E3 1N SO-8) to SB00000DA00(SI4634DY-T1-E3 1N SO8)	X01
09	43	CPU_CORE	02/24	Compal Mike	HW don't need to use VR_TT# signal,so depopulate pull high resister.	Depopulate PR145 SD03449908L(499 +-1% 0402)	X01
10	43	CPU_CORE	02/24	Compal Mike	Change input cap from X7R(85°C) to X6S(105°C)	Change PC123,PC124,PC125,PC133,PC134,PC135 from (10U 25V M X5R1206 H1.6) to SE153106K8L(10U 25V K X6S 1206 H1.6)	X01
11	40	+3VALWP/+5VALWP	02/24	Compal Mike	Take off Manufacturer:COMPOSTAR from PC64	Change PC64 from P/N: SE080224K8L (.22U 10V K X7R 0603) to SE080224M8L (.22U 10V K X7R 0603)	X01
12	44	BATTERY CONN	02/24	Compal Mike	Take off non-PSL Manufacturer:Panjit	Change PQ45,PQ46 from P/N: SB000006800 (2N7002W T/R7 1N SOT-323) to SB00000B30L (PMF3800SN 1N SC70-3)	X01
13	39	Charger	02/24	Compal Mike	Take off non-Lead Free material.	Change PR29 from P/N: SD021200D0L (S RES 1W .02 +-1% 2512) to SD0000001F0L (S RES 1W .02 +-1% 2512 50PPM/C)	X01
14	41	+1.05V_VCCP	02/24	Compal Mike	Change choke setting	Change PL6 from SH00000BQ0L (2.2UH +-20% MPLC1040L2R2 11A) to SH000009U00 (1UH +-20% FDUE1040D-1ROM=P3 21.3A)	X01
15	40	+3VALWP/+5VALWP	02/24	Compal Mike	Change choke reated current from 11A to 14.2A	Change PL4,PL5 from SH00000BQ0L (2.2UH +-20% MPLC1040L2R2 11A) to SH00000CG0L (2.2UH 20% FDVE1040-2R2M=P3 14.2A)	X01
16	38	DCIN / Precharge	03/03	Compal Antony	Prevent diode breakdown from battery inrush current	Change PD3 from SCS00002G00 to SC11N414880	X01

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

PWR PIR-1

Size

Document Number
LA-5152PRev
A00

Date: Monday, June 15, 2009 Sheet 49 of 51

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL, INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

Version Change List (P. I. R. List)

Page 2

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
17	38	DCIN / Precharge	03/03	Compal Antony	Change part number to L-end	Change PD4 part number from SC1A204U000 to SC1A204U00L	X01
18	40	+3VALWP/+5VALWP	03/03	Compal Antony	Change Rtrip resistance to meet OCP setting	Change PR68 from 332K ohm to 205K ohm	X01
19	40	+3VALWP/+5VALWP	03/03	Compal Antony	Change Rtrip resistance to meet OCP setting	Change PR69 from 340K ohm to 243K ohm	X01
20	41	+1.05V_VCCP/ +1.8VSP	03/03	Compal Antony	Change Rtrip resistance to meet OCP setting	Change PR81 from 9.31K ohm to 7.87K ohm	X01
21	41	+1.05V_VCCP/ +1.8VSP	03/03	Compal Antony	Stabilize output voltage	Add PC83 220uF Capand Reserve PC99 Cap space to output	X01
22	42	+1.5VSP/+0.75VSP	03/03	Compal Antony	Change Rtrip resistance to meet OCP setting	Change PR101 from 10.5K ohm to 6.49K ohm	X01
23	43	CPU_CORE	03/03	Compal Antony	To avoid noise	Add PC176、PC179 0.1uF Cap to +CPU_B+	X01
24	43	CPU_CORE	03/03	Compal Antony	To avoid noise	Add PC178、PC180 2200pF Cap to +CPU_B+	X01
25	43	CPU_CORE	03/03	Compal Antony	Reserve space for load line shift control	Reserve PR194 space	X01
26	43	CPU_CORE	03/16	Compal Antony	To improve transient response	Change PC151 from 0.068uF to 0.1uF	X01
27	43	CPU_CORE	03/16	Compal Antony	Let difference of CPU Load Line and Spec smaller than 2mV	Change PR173 from 3.57K ohm to 3.74K ohm	X01
28	44	BATTERY CONN	03/16	Compal Antony	Disable Hardware CPU OTP circuit	Reserve PQ45、PQ46、PR199、PR200 space	X01
29	39	Charger	03/20	Compal Antony	Change 65W CP setting	Changer PR89 from PR89 from 143K ohm to 97.6K ohm	X01
30	41	+1.05V_VCCP/ +1.8VSP	03/20	Compal Antony	For phash margin improved	Add PC87 1000pF capacitor between PU13 pin6 and pin7	X01
31	41	+1.05V_VCCP/ +1.8VSP	03/20	Compal Antony	For phash margin improved	Add PC126 10uF capacitor between PU13 pin6 and GND	X01
32	39	Charger	05/06	Compal Antony	TI FAE request	Reserve PQ26,PD19,PD20,PC203,PR115,PR133 space	X02

DELL CONFIDENTIAL/PROPRIETARY

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.

		Compal Electronics, Inc.	
Title		PWR PIR-1	
Size	Document Number	Rev	
	LA-5152P	A00	
Date:	Monday, June 15, 2009	Sheet	50 of 51

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.



7

2

D

Document Number
LA 5150B

LA-5152P
Monday, June 15, 2009

1-3

5

1

PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT DELL'S EXPRESS WRITTEN CONSENT.