

COMPAL CONFIDENTIAL

MODEL NAME : *JAL21/22*

PCB NO : *LA-4051P (DAA00000R1L)*

BOM P/N : *43153431L01 (Avia TPM)*

43153431L02 (Avia Non TPM)

43153431L11(DSC TPM)

43153431L12 (DSC Non TPM)

M09 Avia / Maybach DIS uFCPGA Mobile Penryn Intel Cantiga PM + ICH9M

2008 - 06 - 16

REV : 1.0 (A00)

@ : Nopop Component

1@ : for Avia / JAL22 (NB9P) Component

2@ : for MayDSC / JAL21 (NB9M) Component

3@ : Disable TPM

4@ : Enable TPM

Fix Function Field

MB PCB	
Part Number	Description
DAA00000R1L	PCB 63P LA-4051P REV1 M/B

<http://hobi-elektronika.net>

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.

Cover Sheet		
Title	LA-4051P	
Size	Document Number	Rev 1.0
Date: Monday, June 16, 2008	Sheet 1 of 63	

Compal confidential
Model : JAL21/22



POWER STATES

Signal State	SLP S3#	SLP S4#	SLP S5#	S4 STATE#	SLP M#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M1	LOW	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	OFF	ON
S4 (Suspend to DISK) / M1	LOW	HIGH	HIGH	LOW	HIGH	ON	ON	ON	OFF	ON
S5 (SOFT OFF) / M1	LOW	HIGH	LOW	LOW	HIGH	ON	ON	ON	OFF	ON
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

PM TABLE

power plane State	+15V_ALW +5V_ALW +3.3V_ALW_ICH +3.3V_RTC_LDO	+3.3V_SUS +1.8V_MEM	+5V_RUN +3.3V_RUN +2.5V_RUN +1.5V_RUN +0.9V_DDR_VTT +GPU_CORE +VCC_CORE +1.05V_VCCP +FBVDDQ +1.1V_GFX_PCIE	+3.3V_M +1.05V_M (M-OFF)	+3.3V_M +1.05V_M (M-OFF)
S0	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	ON	OFF
S5 S4/AC don't exist	OFF	OFF	OFF	OFF	OFF

PCI TABLE

PCI DEVICE	IDSEL	REQ#/GNT#	PIRQ
R5C847	AD17	REQ#1 / GNT#1	PIRQ[B..D]

ICH9-M	USB PORT#	DESTINATION
	0	JUSB1 (Ext Right Side Top)
	1	JUSB1 (Ext Right Side Bottom)
	2	JESA1 (Ext Left Side Bottom)
	3	JESA1 (Ext Left Side TOP)
	4	WLAN
	5	WWAN
	6	WPAN
	7	Card Bus/Express card
	8	DOCKING
	9	DOCKING
	10	USH->BIO
	11	Camera

PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	MINI CARD-3 BT/UWB
Lane 4	EXPRESS CARD
Lane 5	None
Lane 6	10/100/1G LAN

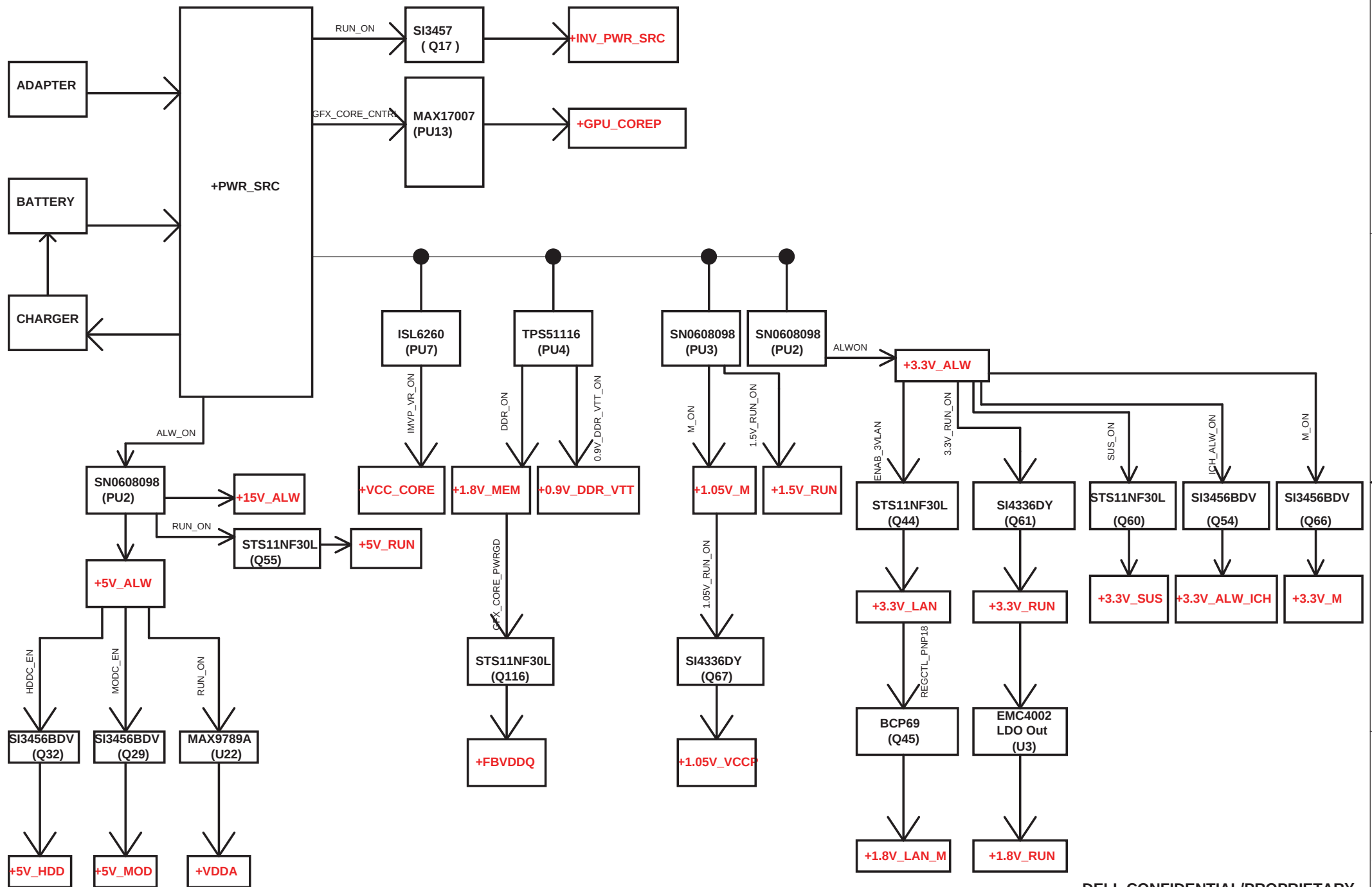
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title	Index and Config.		
Size	Document Number	Rev	1.0
Date:	Thursday, June 05, 2008	Sheet	3 of 63



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.

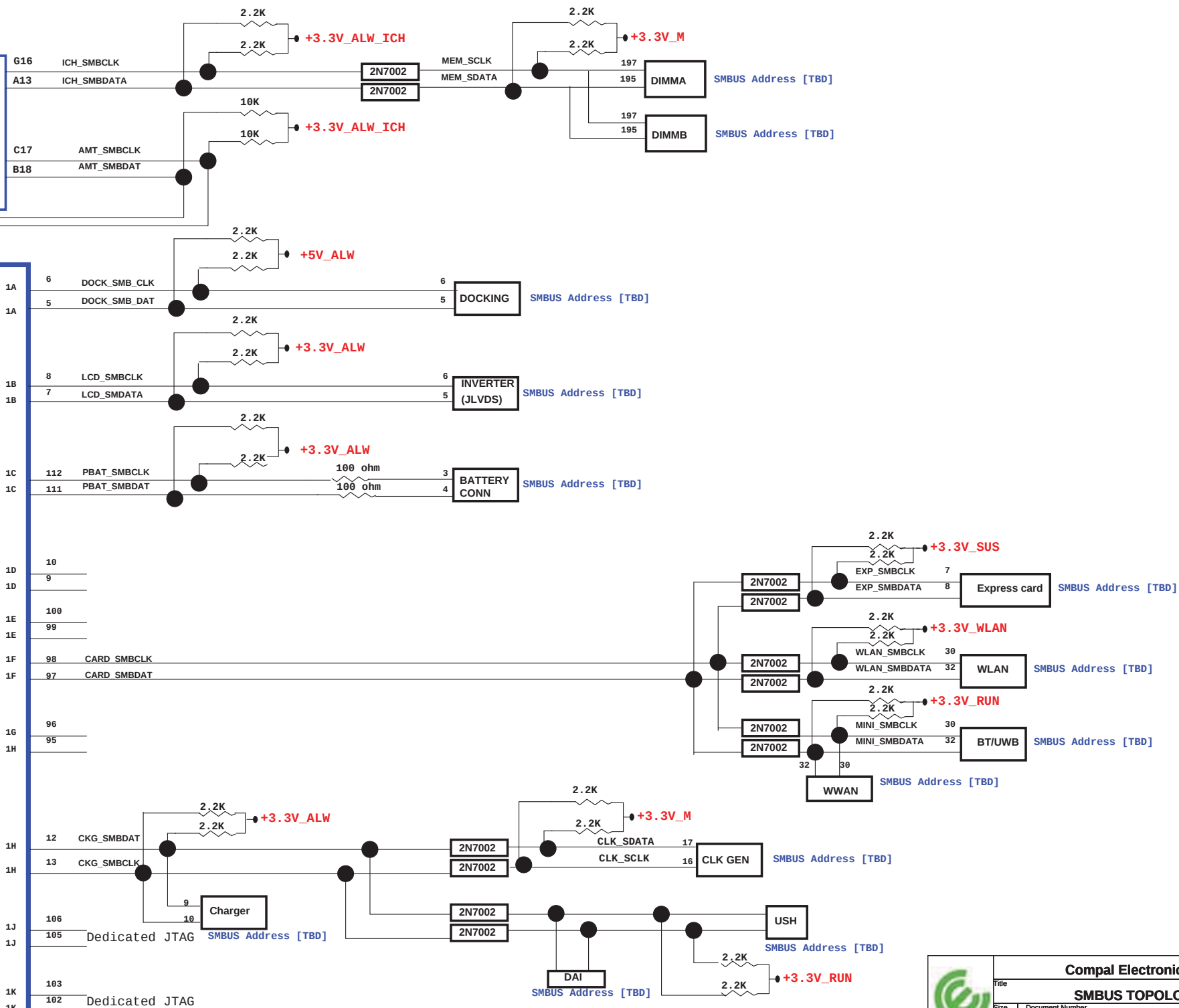


DELL CONFIDENTIAL/PROPRIETARY

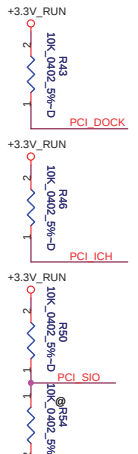
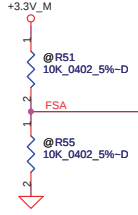
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE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



Compal Electronics, Inc.			
Title	Power Rail		
Size	Document Number	Rev	
	LA-4051P	1.0	
Date:	Thursday, June 05, 2008	Sheet	4 of 63



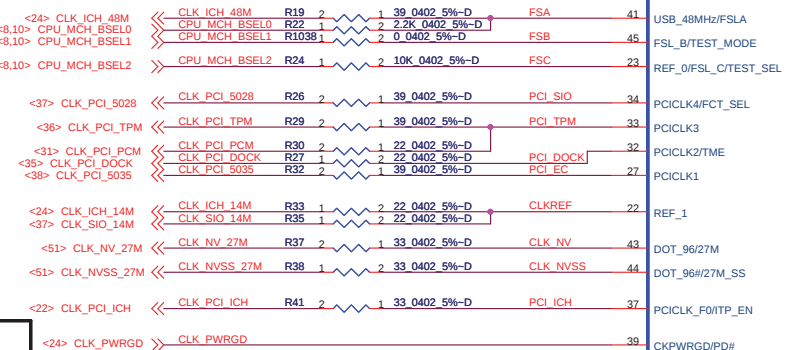
FSC	FSB	FSA	CPU	SRC	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHz	MHz	MHz
0	0	0	266	100	33.3
0	0	1	133	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3
1	0	0	333	100	33.3
1	0	1	100	100	33.3
1	1	0	400	100	33.3



0=UMA
1=Disc. GRFX down

<http://hobi-elektronika.net>

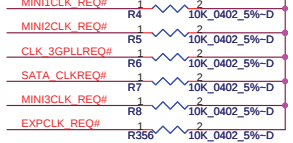
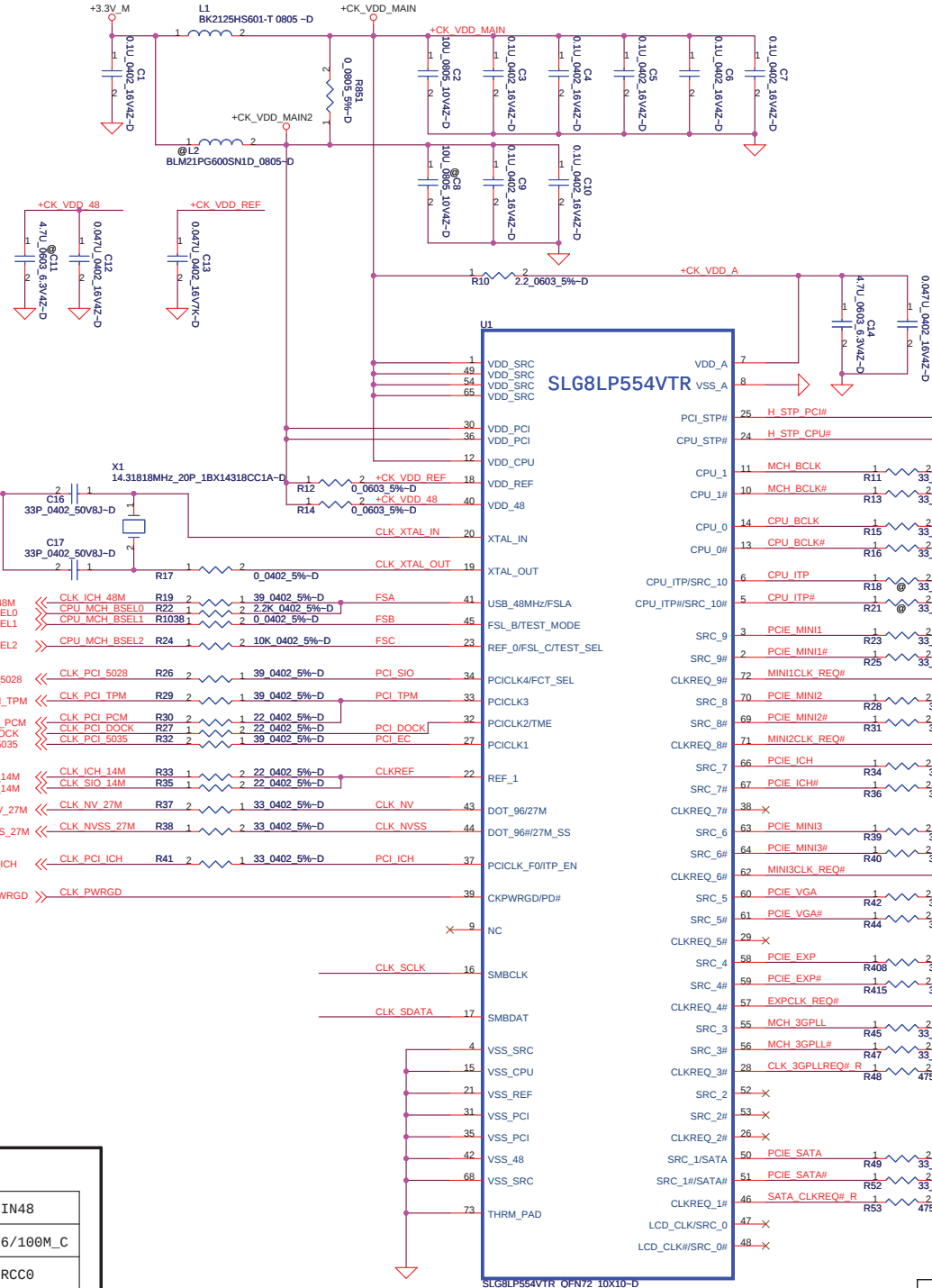
Place crystal within 500 mils of CK505



TME	PIN 32
0	overclocking enabled
1	overclocking disabled

ITP_EN	PIN 37
0	Pin 5/6 as SRC_10
1	Pin 5/6 as CPU_ITP

FCTSEL1	PIN43	PIN44	PIN47	PIN48
0=UMA	DOT96T	DOT96C	96/100M_T	96/100M_C
1=DIS	27M_out	27M SSout	SRCT0	SRCC0



DELL CONFIDENTIAL/PROPRIETARY

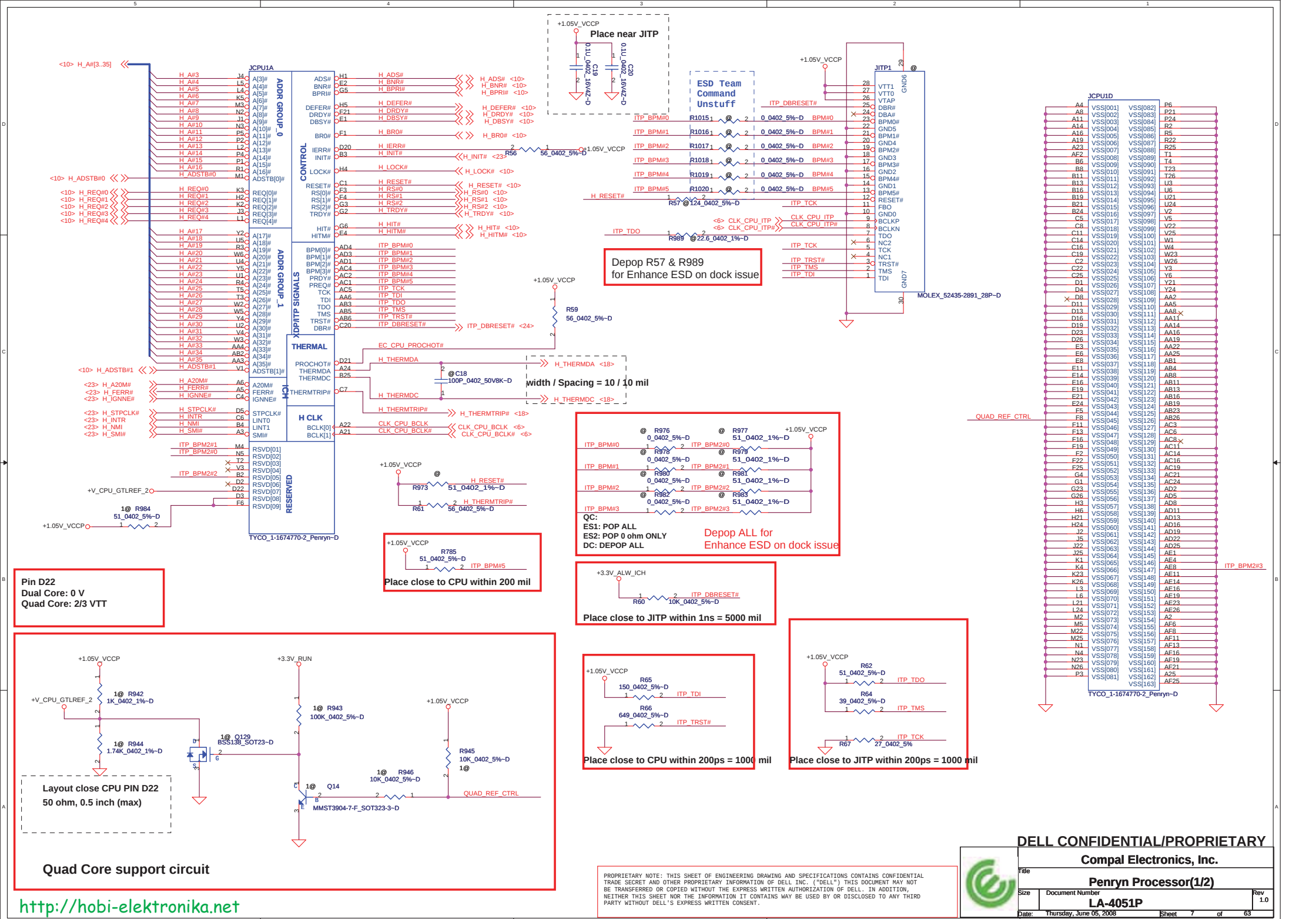
Compal Electronics, Inc.

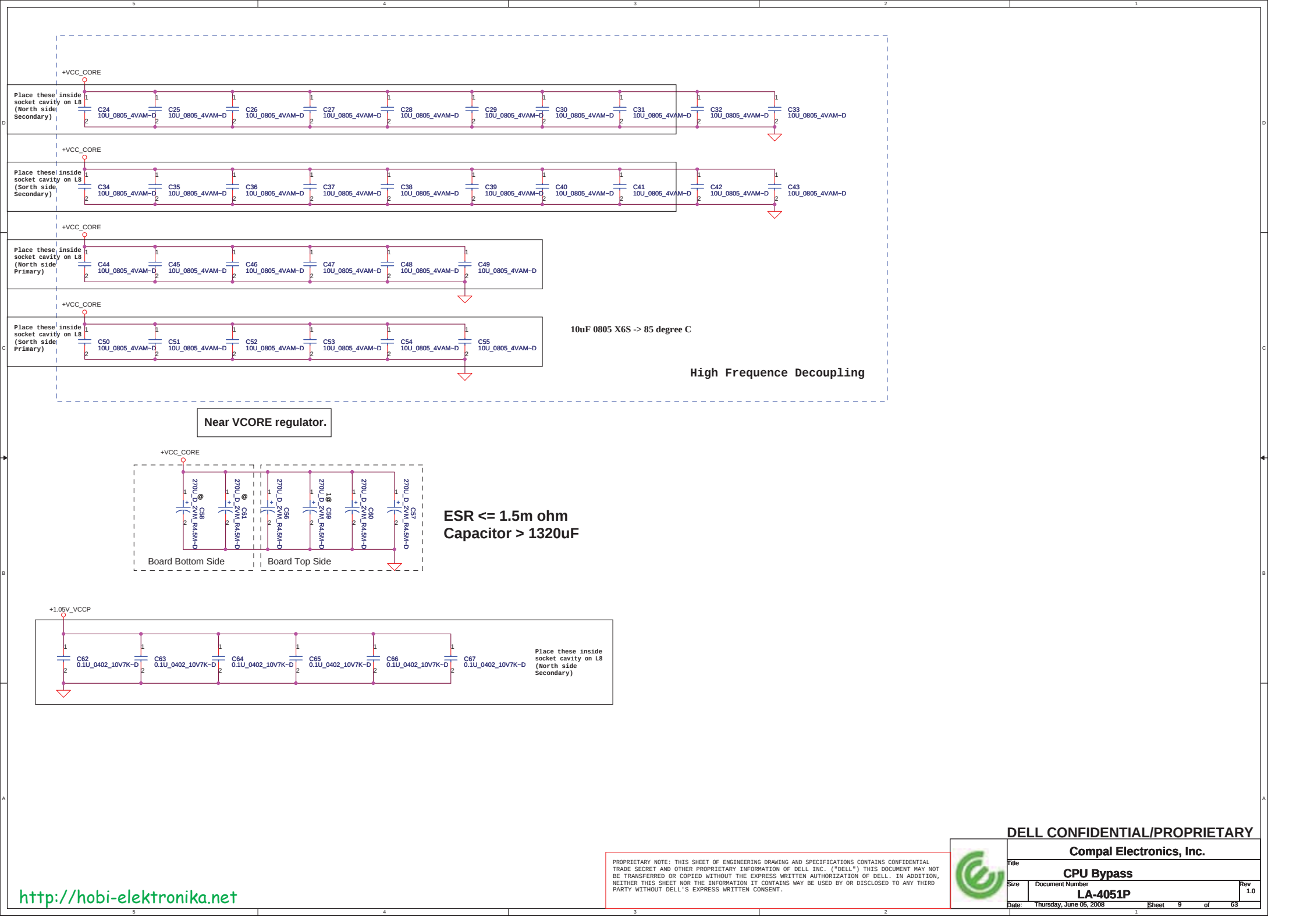
Clock Generator

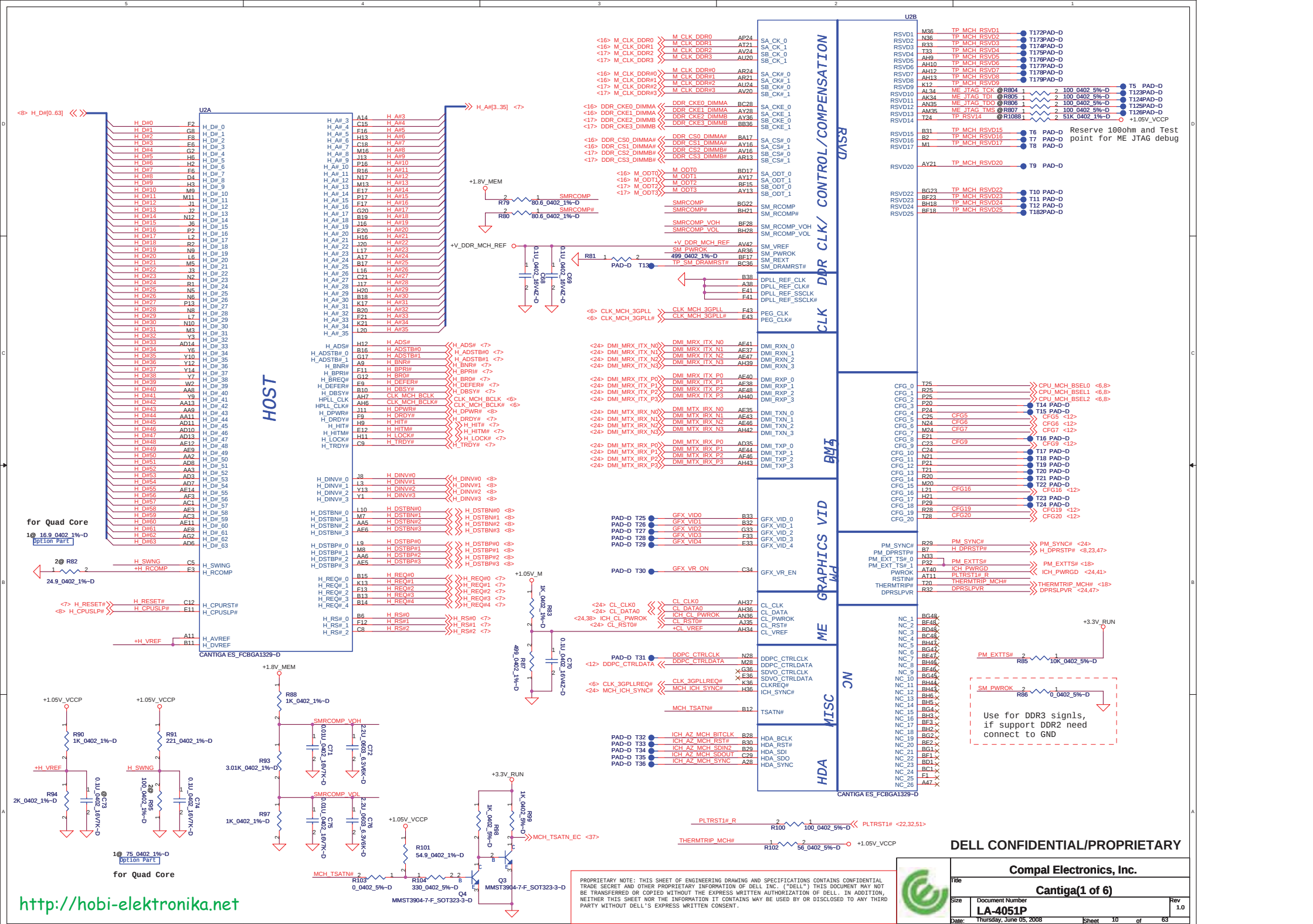
LA-4051P

Friday, June 13, 2008 Sheet 6 of 63

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.







<16> DDR_A_BS0 << DDR A BS0 BD21 SA_BS_0
 <16> DDR_A_BS1 << DDR A BS1 BG18 SA_BS_1
 <16> DDR_A_BS2 << DDR A BS2 AT25 SA_BS_2

 <16> DDR_A_RAS# << DDR A RAS# BB20 SA_RAS#
 <16> DDR_A_CAS# << DDR A CAS# BD20 SA_CAS#
 <16> DDR_A_WE# << DDR A WE# AY20 SA_WE#

 <16> DDR_A_DM[0..7] << DDR A DM0 AM37 SA_DM_0
 <16> DDR_A_DM1 << DDR A DM1 AT41 SA_DM_1
 <16> DDR_A_DM2 << DDR A DM2 AY41 SA_DM_2
 <16> DDR_A_DM3 << DDR A DM3 AU39 SA_DM_3
 <16> DDR_A_DM4 << DDR A DM4 BB12 SA_DM_4
 <16> DDR_A_DM5 << DDR A DM5 AT16 SA_DM_5
 <16> DDR_A_DM6 << DDR A DM6 AT17 SA_DM_6
 <16> DDR_A_DM7 << DDR A DM7 AJ5 SA_DM_7

 <16> DDR_A_DQS[0..7] << DDR A DQS0 AJ44 SA_DQS_0
 <16> DDR_A_DQS1 << DDR A DQS1 AT44 SA_DQS_1
 <16> DDR_A_DQS2 << DDR A DQS2 BA43 SA_DQS_2
 <16> DDR_A_DQS3 << DDR A DQS3 BC37 SA_DQS_3
 <16> DDR_A_DQS4 << DDR A DQS4 AW12 SA_DQS_4
 <16> DDR_A_DQS5 << DDR A DQS5 BC3 SA_DQS_5
 <16> DDR_A_DQS6 << DDR A DQS6 AU8 SA_DQS_6
 <16> DDR_A_DQS7 << DDR A DQS7 AM7 SA_DQS_7
 <16> DDR_A_DQS#0 << DDR A DQS#0 AJ43 SA_DQS#_0
 <16> DDR_A_DQS#1 << DDR A DQS#1 AT43 SA_DQS#_1
 <16> DDR_A_DQS#2 << DDR A DQS#2 BA44 SA_DQS#_2
 <16> DDR_A_DQS#3 << DDR A DQS#3 BD37 SA_DQS#_3
 <16> DDR_A_DQS#4 << DDR A DQS#4 AY12 SA_DQS#_4
 <16> DDR_A_DQS#5 << DDR A DQS#5 BB12 SA_DQS#_5
 <16> DDR_A_DQS#6 << DDR A DQS#6 AT16 SA_DQS#_6
 <16> DDR_A_DQS#7 << DDR A DQS#7 AM8 SA_DQS#_7

 <16> DDR_A_MA[0..14] << DDR A MA0 BA21 SA_MA_0
 <16> DDR_A_MA1 << DDR A MA1 BC24 SA_MA_1
 <16> DDR_A_MA2 << DDR A MA2 BG24 SA_MA_2
 <16> DDR_A_MA3 << DDR A MA3 BH24 SA_MA_3
 <16> DDR_A_MA4 << DDR A MA4 BG25 SA_MA_4
 <16> DDR_A_MA5 << DDR A MA5 BA24 SA_MA_5
 <16> DDR_A_MA6 << DDR A MA6 BD24 SA_MA_6
 <16> DDR_A_MA7 << DDR A MA7 BG27 SA_MA_7
 <16> DDR_A_MA8 << DDR A MA8 BF25 SA_MA_8
 <16> DDR_A_MA9 << DDR A MA9 AW24 SA_MA_9
 <16> DDR_A_MA10 << DDR A MA10 BC21 SA_MA_10
 <16> DDR_A_MA11 << DDR A MA11 BG26 SA_MA_11
 <16> DDR_A_MA12 << DDR A MA12 BH26 SA_MA_12
 <16> DDR_A_MA13 << DDR A MA13 BH17 SA_MA_13
 <16> DDR_A_MA14 << DDR A MA14 AY25 SA_MA_14

DDR SYSTEM MEMORY A

CANTIGA ES_FCBGA1329-D

U2D <<< DDR_A_D[0..63] <16>
 AJ38 DDR A D0
 AJ41 DDR A D1
 AN38 DDR A D2
 AM3R DDR A D3
 AJ36 DDR A D4
 AJ40 DDR A D5
 AM44 DDR A D6
 AM42 DDR A D7
 AM43 DDR A D8
 AN44 DDR A D9
 AU40 DDR A D10
 AT38 DDR A D11
 AM41 DDR A D12
 AN39 DDR A D13
 AU44 DDR A D14
 AU42 DDR A D15
 AV39 DDR A D16
 AY44 DDR A D17
 BA40 DDR A D18
 BD43 DDR A D19
 AV41 DDR A D20
 AY43 DDR A D21
 BA41 DDR A D22
 BC40 DDR A D23
 AY37 DDR A D24
 BD38 DDR A D25
 AV37 DDR A D26
 AT36 DDR A D27
 AY38 DDR A D28
 BB38 DDR A D29
 AV36 DDR A D30
 AW36 DDR A D31
 BD13 DDR A D32
 AU11 DDR A D33
 BC11 DDR A D34
 BA12 DDR A D35
 AU13 DDR A D36
 AV13 DDR A D37
 BD12 DDR A D38
 BC12 DDR A D39
 BB9 DDR A D40
 BA9 DDR A D41
 AU10 DDR A D42
 AV9 DDR A D43
 BA11 DDR A D44
 BD9 DDR A D45
 AY8 DDR A D46
 BA6 DDR A D47
 AV5 DDR A D48
 AV7 DDR A D49
 AT9 DDR A D50
 AN8 DDR A D51
 AU5 DDR A D52
 AU6 DDR A D53
 AT5 DDR A D54
 AN10 DDR A D55
 AM11 DDR A D56
 AM5 DDR A D57
 AJ9 DDR A D58
 AJ8 DDR A D59
 AN12 DDR A D60
 AM13 DDR A D61
 AJ11 DDR A D62
 AT12 DDR A D63

<17> DDR_B_BS0 << DDR B BS0 BC16 SB_BS_0
 <17> DDR_B_BS1 << DDR B BS1 BB17 SB_BS_1
 <17> DDR_B_BS2 << DDR B BS2 BB33 SB_BS_2

 <17> DDR_B_RAS# << DDR B RAS# AU17 SB_RAS#
 <17> DDR_B_CAS# << DDR B CAS# BG16 SB_CAS#
 <17> DDR_B_WE# << DDR B WE# BF14 SB_WE#

 <17> DDR_B_DM[0..7] << DDR B DM0 AM47 SB_DM_0
 <17> DDR_B_DM1 << DDR B DM1 AY47 SB_DM_1
 <17> DDR_B_DM2 << DDR B DM2 BD40 SB_DM_2
 <17> DDR_B_DM3 << DDR B DM3 BF35 SB_DM_3
 <17> DDR_B_DM4 << DDR B DM4 BG11 SB_DM_4
 <17> DDR_B_DM5 << DDR B DM5 BA3 SB_DM_5
 <17> DDR_B_DM6 << DDR B DM6 AP1 SB_DM_6
 <17> DDR_B_DM7 << DDR B DM7 AK2 SB_DM_7

 <17> DDR_B_DQS[0..7] << DDR B DQS0 AL47 SB_DQS_0
 <17> DDR_B_DQS1 << DDR B DQS1 AV48 SB_DQS_1
 <17> DDR_B_DQS2 << DDR B DQS2 BG41 SB_DQS_2
 <17> DDR_B_DQS3 << DDR B DQS3 BG37 SB_DQS_3
 <17> DDR_B_DQS4 << DDR B DQS4 BF9 SB_DQS_4
 <17> DDR_B_DQS5 << DDR B DQS5 BB2 SB_DQS_5
 <17> DDR_B_DQS6 << DDR B DQS6 AU1 SB_DQS_6
 <17> DDR_B_DQS7 << DDR B DQS7 AN6 SB_DQS_7
 <17> DDR_B_DQS#0 << DDR B DQS#0 AL46 SB_DQS#_0
 <17> DDR_B_DQS#1 << DDR B DQS#1 AV47 SB_DQS#_1
 <17> DDR_B_DQS#2 << DDR B DQS#2 BH41 SB_DQS#_2
 <17> DDR_B_DQS#3 << DDR B DQS#3 BH37 SB_DQS#_3
 <17> DDR_B_DQS#4 << DDR B DQS#4 BG3 SB_DQS#_4
 <17> DDR_B_DQS#5 << DDR B DQS#5 BC2 SB_DQS#_5
 <17> DDR_B_DQS#6 << DDR B DQS#6 AT2 SB_DQS#_6
 <17> DDR_B_DQS#7 << DDR B DQS#7 AN5 SB_DQS#_7

 <17> DDR_B_MA[0..14] << DDR B MA0 AV17 SB_MA_0
 <17> DDR_B_MA1 << DDR B MA1 BA25 SB_MA_1
 <17> DDR_B_MA2 << DDR B MA2 BC25 SB_MA_2
 <17> DDR_B_MA3 << DDR B MA3 AU25 SB_MA_3
 <17> DDR_B_MA4 << DDR B MA4 AW25 SB_MA_4
 <17> DDR_B_MA5 << DDR B MA5 BB28 SB_MA_5
 <17> DDR_B_MA6 << DDR B MA6 AU28 SB_MA_6
 <17> DDR_B_MA7 << DDR B MA7 AW28 SB_MA_7
 <17> DDR_B_MA8 << DDR B MA8 AT33 SB_MA_8
 <17> DDR_B_MA9 << DDR B MA9 BD33 SB_MA_9
 <17> DDR_B_MA10 << DDR B MA10 BB16 SB_MA_10
 <17> DDR_B_MA11 << DDR B MA11 AW33 SB_MA_11
 <17> DDR_B_MA12 << DDR B MA12 AY33 SB_MA_12
 <17> DDR_B_MA13 << DDR B MA13 BH15 SB_MA_13
 <17> DDR_B_MA14 << DDR B MA14 AU33 SB_MA_14

DDR SYSTEM MEMORY B

CANTIGA ES_FCBGA1329-D

U2E <<< DDR_B_D[0..63] <17>
 AK47 DDR B D0
 AH46 DDR B D1
 AP47 DDR B D2
 AP46 DDR B D3
 AJ48 DDR B D4
 AJ48 DDR B D5
 AM48 DDR B D6
 AP48 DDR B D7
 AU47 DDR B D8
 AU46 DDR B D9
 BA48 DDR B D10
 AY48 DDR B D11
 AT47 DDR B D12
 AR47 DDR B D13
 BA47 DDR B D14
 BC47 DDR B D15
 BC46 DDR B D16
 BC44 DDR B D17
 BG43 DDR B D18
 BE43 DDR B D19
 BE45 DDR B D20
 BC41 DDR B D21
 BF40 DDR B D22
 BE41 DDR B D23
 BG38 DDR B D24
 BE38 DDR B D25
 BG35 DDR B D26
 BG35 DDR B D27
 BH40 DDR B D28
 BG39 DDR B D29
 BG34 DDR B D30
 BH34 DDR B D31
 BH14 DDR B D32
 BG12 DDR B D33
 BH11 DDR B D34
 BG8 DDR B D35
 BH12 DDR B D36
 BE11 DDR B D37
 BE9 DDR B D38
 RG7 DDR B D39
 BC5 DDR B D40
 BC6 DDR B D41
 AY3 DDR B D42
 AY1 DDR B D43
 BE6 DDR B D44
 BE5 DDR B D45
 BA1 DDR B D46
 BD3 DDR B D47
 AV2 DDR B D48
 AU3 DDR B D49
 AR2 DDR B D50
 AN2 DDR B D51
 AY2 DDR B D52
 AV1 DDR B D53
 AP2 DDR B D54
 AR1 DDR B D55
 AL1 DDR B D56
 AL2 DDR B D57
 AJ1 DDR B D58
 AH1 DDR B D59
 AM2 DDR B D60
 AM3 DDR B D61
 AH3 DDR B D62
 AJ3 DDR B D63

DELL CONFIDENTIAL/PROPRIETARY

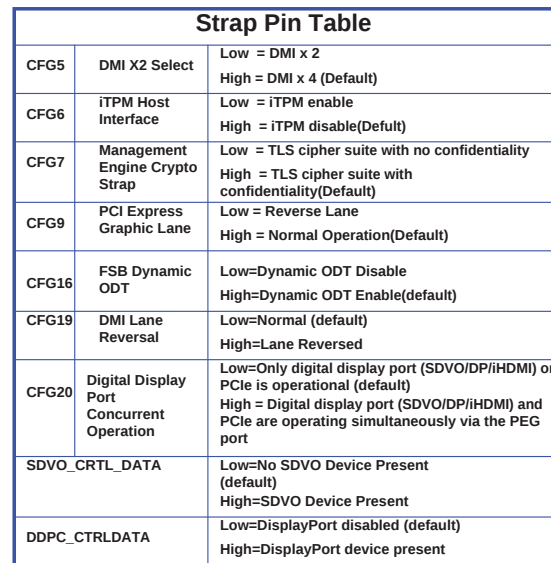
Compal Electronics, Inc.

Cantiga(2 of 6)

File	Document Number	Rev
Size	LA-4051P	1.0
Date: Thursday, June 05, 2008	Sheet 11 of 63	

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.





PEG MTX GRX C P0	C77	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P0
PEG MTX GRX C N0	C78	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N0
PEG MTX GRX C P1	C79	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P1
PEG MTX GRX C N1	C80	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N1
PEG MTX GRX C P2	C81	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P2
PEG MTX GRX C N2	C82	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N2
PEG MTX GRX C P3	C83	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P3
PEG MTX GRX C N3	C84	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N3
PEG MTX GRX C P4	C85	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P4
PEG MTX GRX C N4	C86	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N4
PEG MTX GRX C P5	C87	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P5
PEG MTX GRX C N5	C88	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N5
PEG MTX GRX C P6	C89	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P6
PEG MTX GRX C N6	C90	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N6
PEG MTX GRX C P7	C91	2	1	0.1U 0402	10V7K-D	PEG MTX GRX P7
PEG MTX GRX C N7	C92	2	1	0.1U 0402	10V7K-D	PEG MTX GRX N7
PEG MTX GRX C P8	C93	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P8
PEG MTX GRX C N8	C94	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N8
PEG MTX GRX C P9	C95	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P9
PEG MTX GRX C N9	C96	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N9
PEG MTX GRX C P10	C97	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P10
PEG MTX GRX C N10	C98	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N10
PEG MTX GRX C P11	C99	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P11
PEG MTX GRX C N11	C100	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N11
PEG MTX GRX C P12	C101	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P12
PEG MTX GRX C N12	C102	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N12
PEG MTX GRX C P13	C103	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P13
PEG MTX GRX C N13	C104	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N13
PEG MTX GRX C P14	C105	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P14
PEG MTX GRX C N14	C106	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N14
PEG MTX GRX C P15	C107	1	2	0.1U 0402	10V7K-D	PEG MTX GRX P15
PEG MTX GRX C N15	C108	1	2	0.1U 0402	10V7K-D	PEG MTX GRX N15

CFG[5:16] have internal pullup

CFG[19:20] have internal pulldown



U21

AU48	VSS_1	VSS_100	AM36
AR48	VSS_2	VSS_101	AE36
AL48	VSS_3	VSS_102	P36
BB47	VSS_4	VSS_103	L36
AW47	VSS_5	VSS_104	J36
AN47	VSS_6	VSS_105	F36
AJ47	VSS_7	VSS_106	B36
AF47	VSS_8	VSS_107	AH35
AD47	VSS_9	VSS_108	AA35
AB47	VSS_10	VSS_109	Y35
Y47	VSS_11	VSS_110	U35
T47	VSS_12	VSS_111	T35
N47	VSS_13	VSS_112	BE34
L47	VSS_14	VSS_113	AM34
G47	VSS_15	VSS_114	AJ34
BD46	VSS_16	VSS_115	AE34
BA46	VSS_17	VSS_116	AE34
AY46	VSS_18	VSS_117	W34
AV46	VSS_19	VSS_118	B34
AR46	VSS_20	VSS_119	A34
AM46	VSS_21	VSS_120	RG33
V46	VSS_22	VSS_121	BC33
R46	VSS_23	VSS_122	BA33
P46	VSS_24	VSS_123	AV33
H46	VSS_25	VSS_124	AR33
F46	VSS_26	VSS_125	AL33
BE44	VSS_27	VSS_126	AH33
AH44	VSS_28	VSS_127	AB33
AD44	VSS_29	VSS_128	P33
AA44	VSS_30	VSS_129	L33
Y44	VSS_31	VSS_130	H33
U44	VSS_32	VSS_131	N32
T44	VSS_33	VSS_132	M32
M44	VSS_34	VSS_133	F32
F44	VSS_35	VSS_134	C32
BC43	VSS_36	VSS_135	A31
AV43	VSS_37	VSS_136	AM29
AU43	VSS_38	VSS_137	T29
AM43	VSS_39	VSS_138	N29
J43	VSS_40	VSS_139	K29
C43	VSS_41	VSS_140	N16
BG42	VSS_42	VSS_141	F29
AY42	VSS_43	VSS_142	A29
AT42	VSS_44	VSS_143	BG28
AN42	VSS_45	VSS_144	BD28
AM42	VSS_46	VSS_145	BA28
AE42	VSS_47	VSS_146	AV28
N42	VSS_48	VSS_147	AT28
L42	VSS_49	VSS_148	AR28
BD41	VSS_50	VSS_149	AJ28
AU41	VSS_51	VSS_150	AG28
AM41	VSS_52	VSS_151	AE28
AH41	VSS_53	VSS_152	AB28
AD41	VSS_54	VSS_153	Y28
AA41	VSS_55	VSS_154	P28
Y41	VSS_56	VSS_155	K28
U41	VSS_57	VSS_156	H28
T41	VSS_58	VSS_157	F28
M41	VSS_59	VSS_158	C28
G41	VSS_60	VSS_159	BE26
B41	VSS_61	VSS_160	AH26
BC40	VSS_62	VSS_161	AE26
BB40	VSS_63	VSS_162	AB26
AV40	VSS_64	VSS_163	AA26
AN40	VSS_65	VSS_164	C26
H40	VSS_66	VSS_165	B26
E40	VSS_67	VSS_166	BH25
AT39	VSS_68	VSS_167	BD25
AM39	VSS_69	VSS_168	BB25
AJ39	VSS_70	VSS_169	AV25
AE39	VSS_71	VSS_170	AR25
N39	VSS_72	VSS_171	AJ25
L39	VSS_73	VSS_172	AC25
B39	VSS_74	VSS_173	Y25
BC38	VSS_75	VSS_174	N25
BA38	VSS_76	VSS_175	L25
AU38	VSS_77	VSS_176	J25
AH38	VSS_78	VSS_177	G25
AD38	VSS_79	VSS_178	E25
AA38	VSS_80	VSS_179	BE24
Y38	VSS_81	VSS_180	C11
U38	VSS_82	VSS_181	BG10
T38	VSS_83	VSS_182	AD12
J38	VSS_84	VSS_183	AV10
F38	VSS_85	VSS_184	AT10
C38	VSS_86	VSS_185	AJ10
BE37	VSS_87	VSS_186	AH24
BB37	VSS_88	VSS_187	AE24
AW37	VSS_89	VSS_188	AB24
AT37	VSS_90	VSS_189	R24
AN37	VSS_91	VSS_190	BC9
AJ37	VSS_92	VSS_191	AN9
H37	VSS_93	VSS_192	AM9
C37	VSS_94	VSS_193	AD9
BC36	VSS_95	VSS_194	G9
BD36	VSS_96	VSS_195	B9
AK15	VSS_97	VSS_196	BH8
AU36	VSS_98	VSS_197	BB8
	VSS_99	VSS_198	AV8
		VSS_199	AT8

CANTIGA ES_FCBGA1329-D

U21

BG21	VSS_199	VSS_297	AH8
L12	VSS_200	VSS_298	Y8
AW21	VSS_201	VSS_299	L8
AU21	VSS_202	VSS_300	E8
AP21	VSS_203	VSS_301	B8
AN21	VSS_204	VSS_302	AY7
AH21	VSS_205	VSS_303	AU7
AH21	VSS_206	VSS_304	AJ7
VSS_207	VSS_207	VSS_305	AE7
R21	VSS_208	VSS_306	AA7
M21	VSS_209	VSS_307	N7
T21	VSS_210	VSS_308	I7
G21	VSS_211	VSS_309	BG6
BC20	VSS_212	VSS_310	BD6
BA20	VSS_213	VSS_311	AV6
AM20	VSS_214	VSS_312	AT6
AT20	VSS_215	VSS_313	AM6
AJ20	VSS_216	VSS_314	M6
AG20	VSS_217	VSS_315	C6
Y20	VSS_218	VSS_316	BA5
RG33	VSS_219	VSS_317	AH5
K20	VSS_220	VSS_318	AD5
F20	VSS_221	VSS_319	Y5
C20	VSS_222	VSS_320	L5
AR20	VSS_223	VSS_321	J5
BG19	VSS_224	VSS_322	H5
A18	VSS_225	VSS_323	F5
BG17	VSS_226	VSS_324	BE4
BC17	VSS_227	VSS_325	BC3
AW17	VSS_228	VSS_326	AV3
AT17	VSS_229	VSS_327	AL3
R17	VSS_230	VSS_328	R3
M17	VSS_231	VSS_329	P3
H17	VSS_232	VSS_330	F3
C17	VSS_233	VSS_331	BA2
		VSS_332	AW2
BA16	VSS_235	VSS_333	AU2
		VSS_334	AR2
AU16	VSS_237	VSS_335	AP2
AN16	VSS_238	VSS_336	AJ2
N16	VSS_239	VSS_337	AH2
K16	VSS_240	VSS_338	AE2
G16	VSS_241	VSS_339	AE2
E16	VSS_242	VSS_340	AD2
BG15	VSS_243	VSS_341	AC2
AC15	VSS_244	VSS_342	Y2
W15	VSS_245	VSS_343	M2
A15	VSS_246	VSS_344	K2
BG14	VSS_247	VSS_345	AM1
AA14	VSS_248	VSS_346	AA1
C14	VSS_249	VSS_347	P1
BG13	VSS_250	VSS_348	H1
BC13	VSS_251	VSS_349	
BA13	VSS_252	VSS_350	
		VSS_351	U24
AN13	VSS_255	VSS_352	U28
AJ13	VSS_256	VSS_353	U25
AE13	VSS_257	VSS_354	U29
N13	VSS_258		
L13	VSS_259		
G13	VSS_260		
E13	VSS_261		
BE12	VSS_262		
AV12	VSS_263		
AT12	VSS_264		
AM12	VSS_265		
AA12	VSS_266		
J12	VSS_267		
A12	VSS_268		
BD11	VSS_269		
BB11	VSS_270		
AY11	VSS_271		
AN11	VSS_272		
AH11	VSS_273		
Y11	VSS_275		
N11	VSS_276		
G11	VSS_277		
C11	VSS_278		
BG10	VSS_279		
AV10	VSS_280		
AT10	VSS_281		
AJ10	VSS_282		
AE10	VSS_283		
AA10	VSS_284		
M10	VSS_285		
BE9	VSS_286		
BC9	VSS_287		
AN9	VSS_288		
AM9	VSS_289		
AD9	VSS_290		
G9	VSS_291		
B9	VSS_292		
BH8	VSS_293		
BB8	VSS_294		
AV8	VSS_295		
AT8	VSS_296		

CANTIGA ES_FCBGA1329-D

VSS

VSS NCTF

VSS SCB

NC

VSS_NCTF_1	AE32
VSS_NCTF_2	AB32
VSS_NCTF_3	V32
VSS_NCTF_4	AJ30
VSS_NCTF_5	AM29
VSS_NCTF_6	AF29
VSS_NCTF_7	AB29
VSS_NCTF_8	U26
VSS_NCTF_9	U23
VSS_NCTF_10	AL20
VSS_NCTF_11	V20
VSS_NCTF_12	AC19
VSS_NCTF_13	AL17
VSS_NCTF_14	AL17
VSS_NCTF_15	AA17
VSS_NCTF_16	U17
VSS_SCB_1	BH48
VSS_SCB_2	BH1
VSS_SCB_3	A48
VSS_SCB_4	C1
VSS_SCB_5	A3
NC_26	E1
NC_27	D2
NC_28	C3
NC_29	B4
NC_30	A5
NC_31	A6
NC_32	A44
NC_33	A45
NC_34	A46
NC_35	A47
NC_36	A48
NC_37	A49
NC_38	A50
NC_39	A51
NC_40	A52
NC_41	A53
NC_42	A54

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

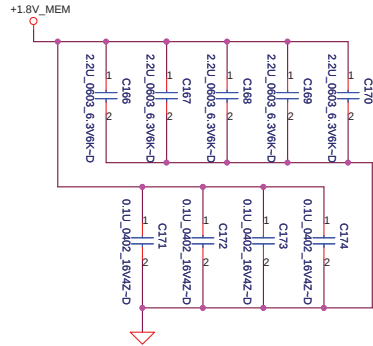
Cantiga(6 of 6)		
File	Document Number	Rev
	LA-4051P	1.0
Date	Thursday, June 05, 2008	Sheet 15 of 63

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.

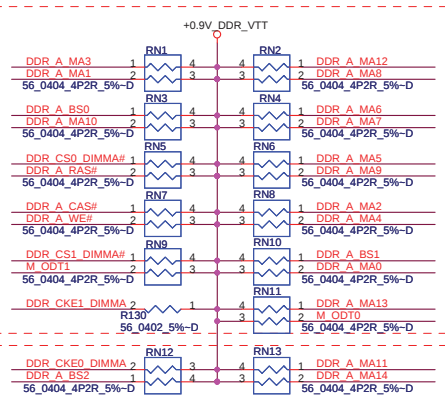
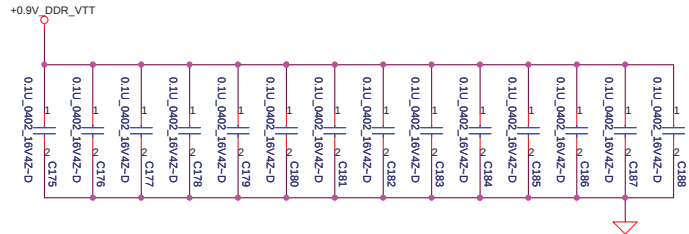


<11> DDR_A_DQS#[0..7] <<>>
 <11> DDR_A_D[0..63] <<>>
 <11> DDR_A_DM[0..7] <<>>
 <11> DDR_A_DQS#[0..7] <<>>
 <11> DDR_A_MA[0..14] <<>>

Layout Note:
Place near JDIMMA

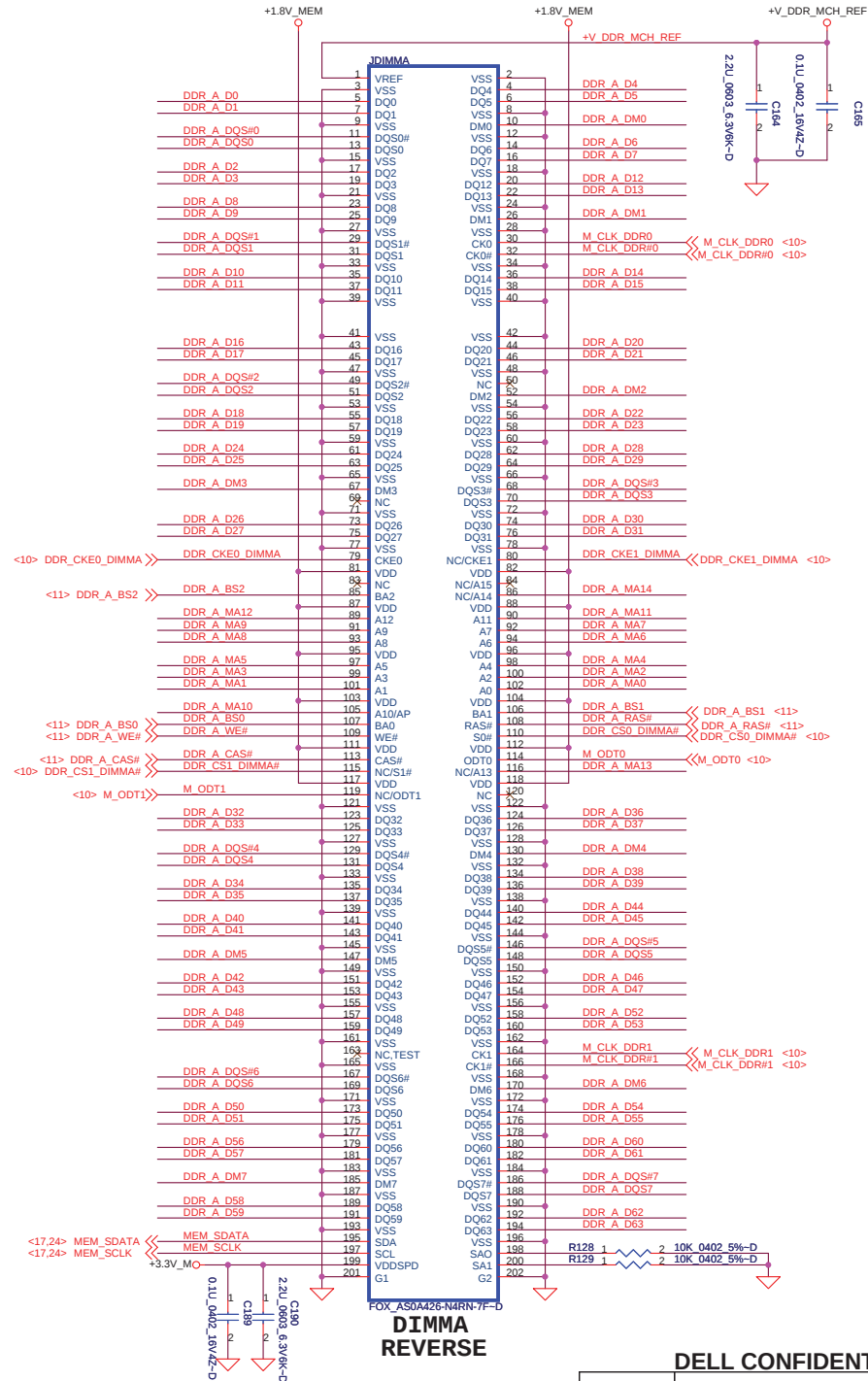


Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9V_DDR_VTT



Layout Note:
Place these resistor
closely JDIMMA, all
trace length<750 mil

Layout Note:
Place these resistor
closely JDIMMA, all
trace length
Max=1.3"



DIMMA
REVERSE

DELL CONFIDENTIAL/PROPRIETARY

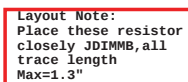
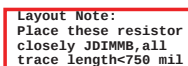
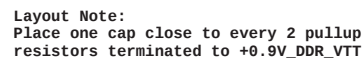
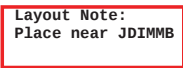
Compal Electronics, Inc.

DDRII-SODIMM SLOT1

LA-4051P

Rev 1.0

Date: Wednesday, June 11, 2008 Sheet 16 of 63



Compal Electronics, Inc.

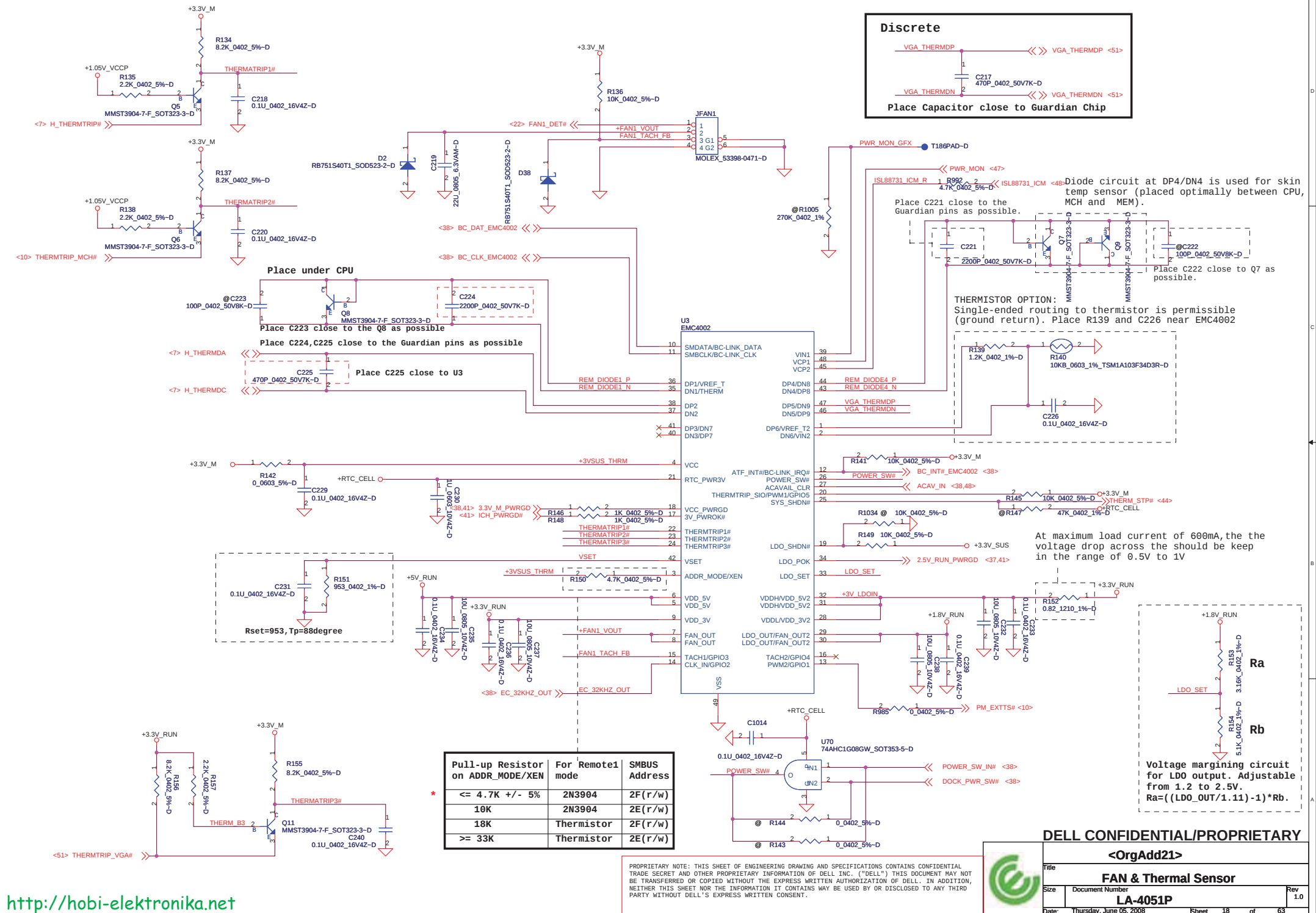
DDRII-SODIMM SLOT2

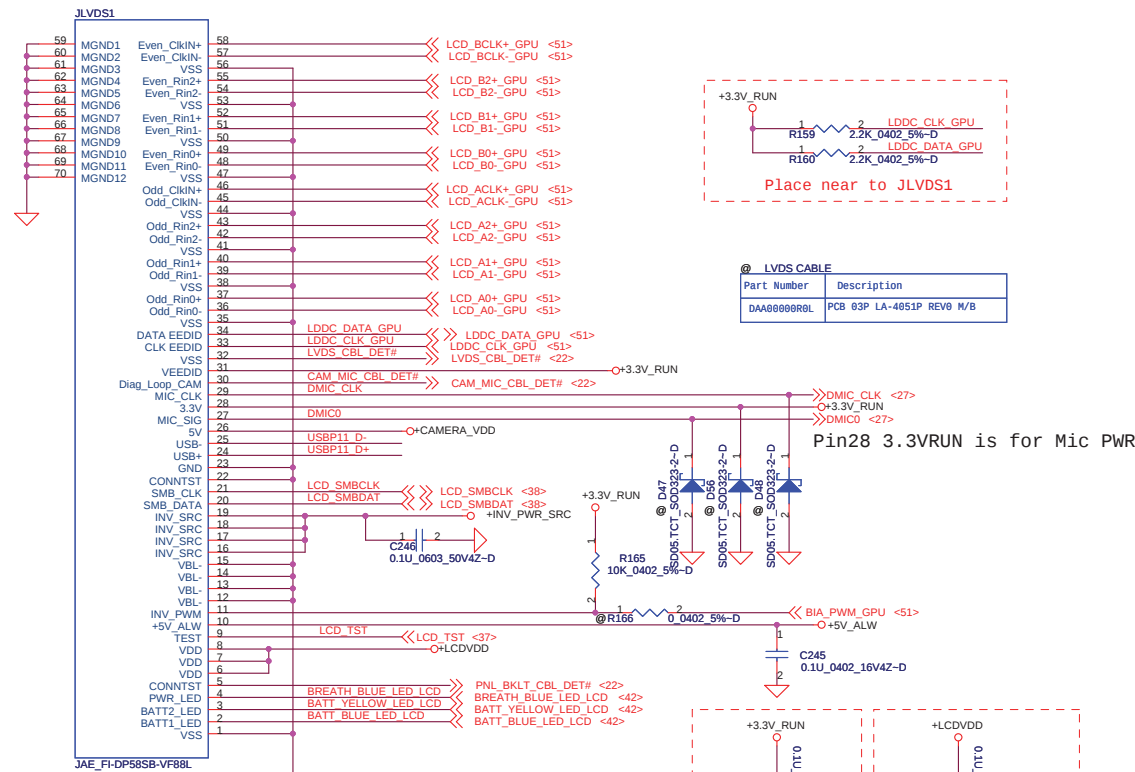
Size	Document Number	Rev
	LA 4054D	1.0

LA-4051P

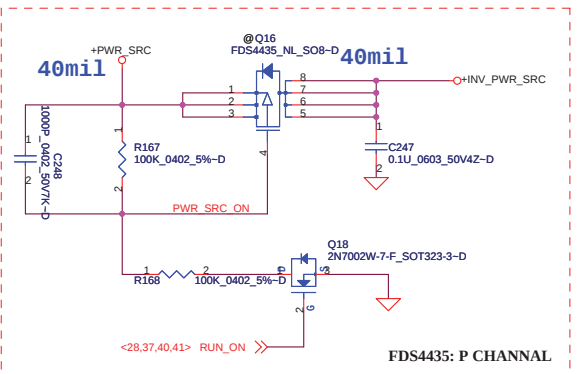
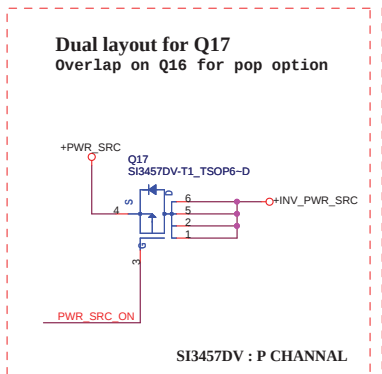
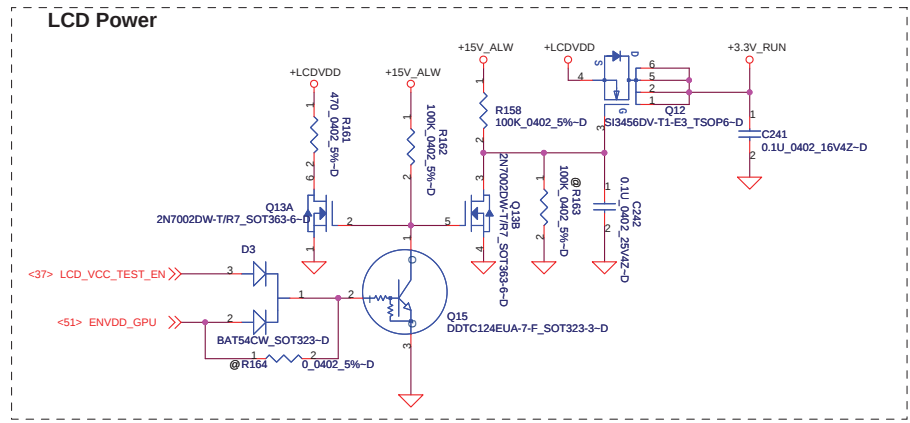
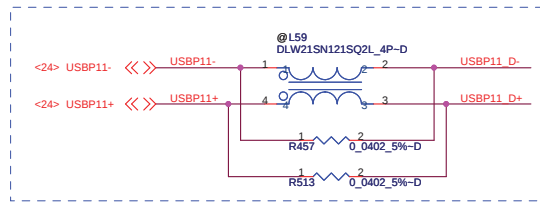
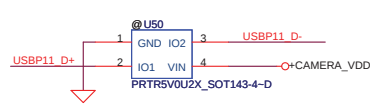
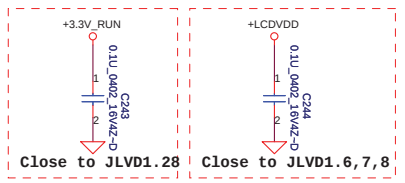
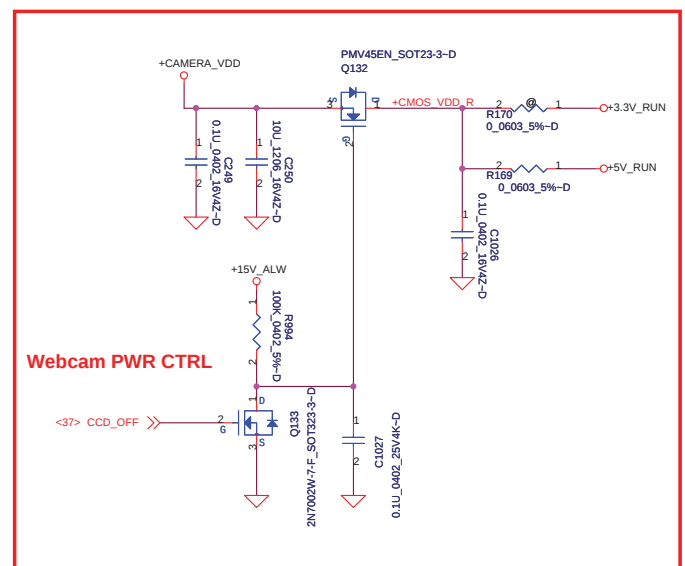
Date: Thursday, June 05, 2008 Sheet 17 of 63

Date:	March 27, 2000	Sheet	1	of	10
-------	----------------	-------	---	----	----

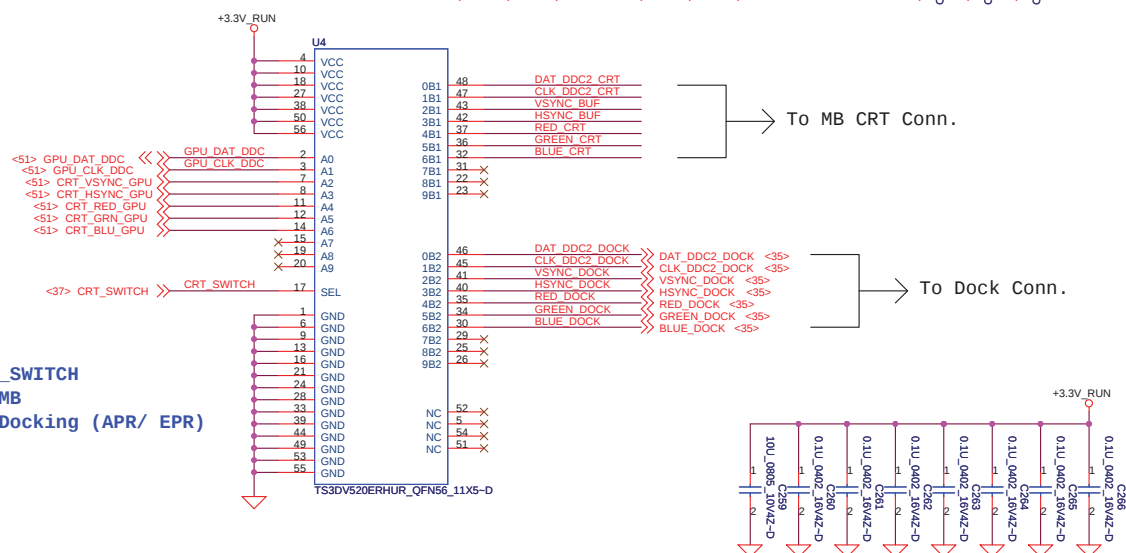




Pin28 3.3VRUN is for Mic PWR



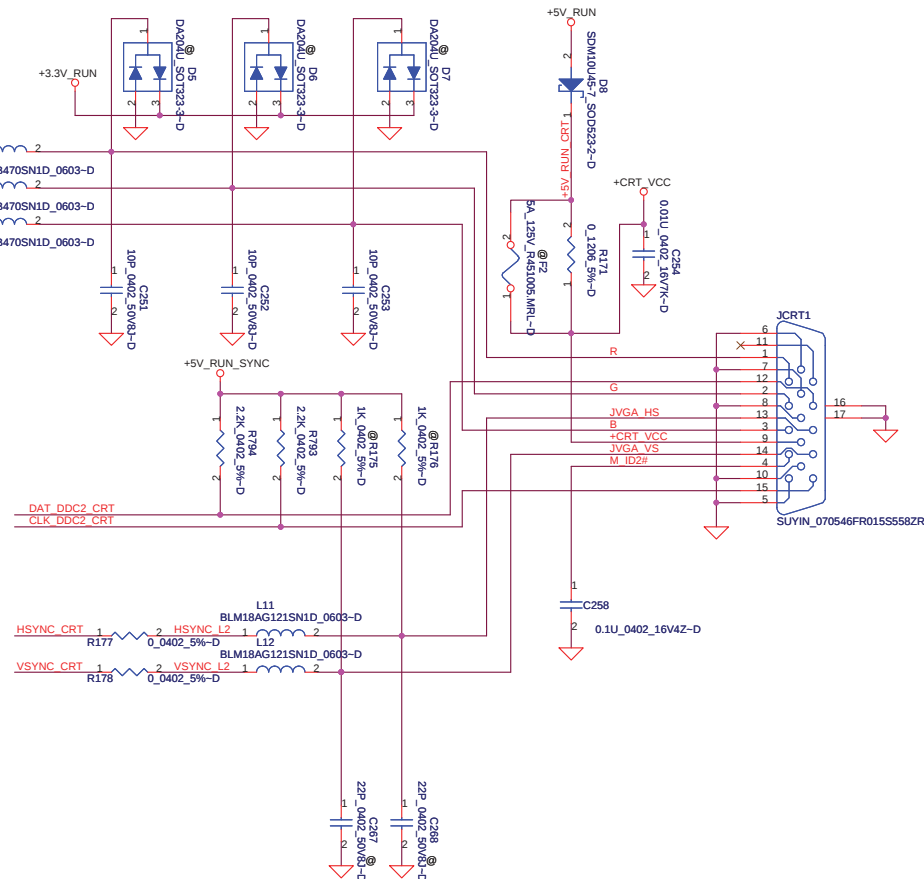
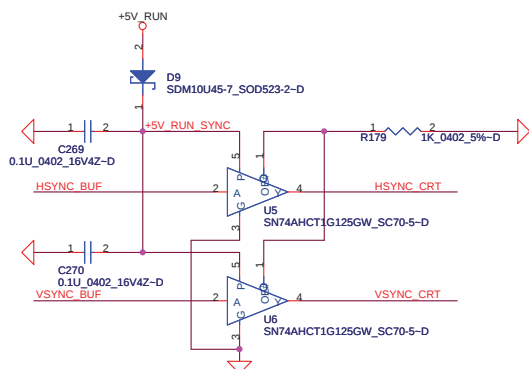
X01 Remove TV Function



CRT_SWITCH

0: MB

1: Docking (APR/ EPR)



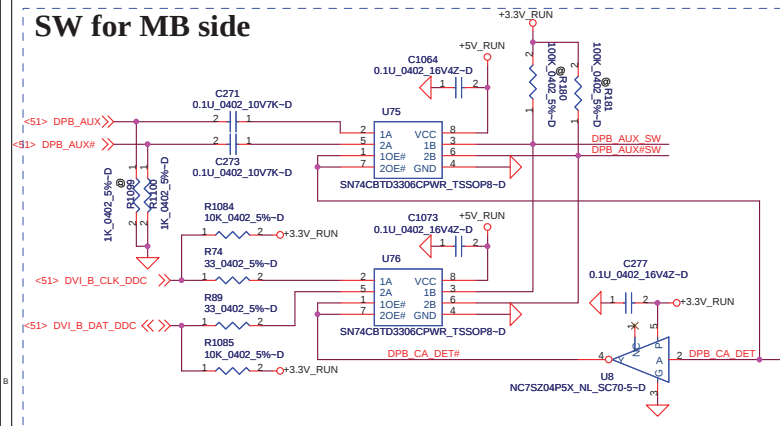
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

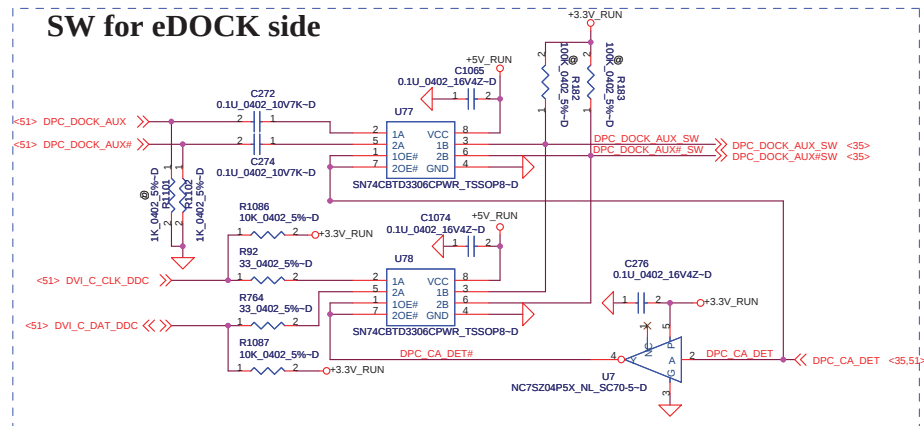
Title			
CRT/Video switch			
Size	Document Number	Rev	
	LA-4051P	1.0	
Date:	Thursday, June 05, 2008	Sheet	20 of 63

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.

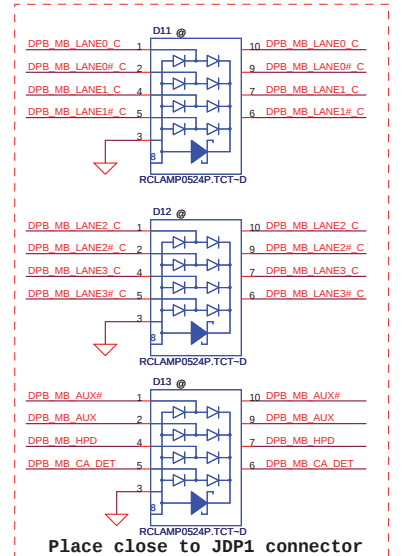
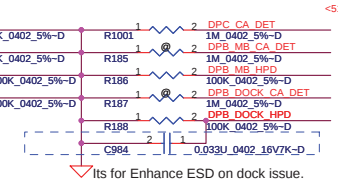
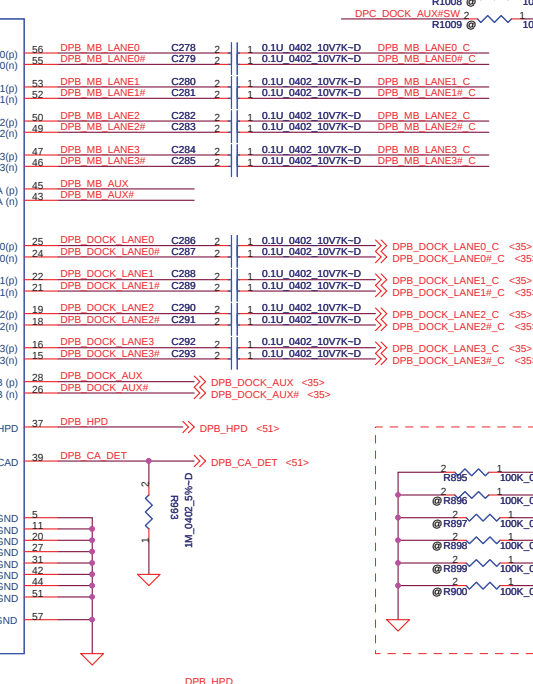
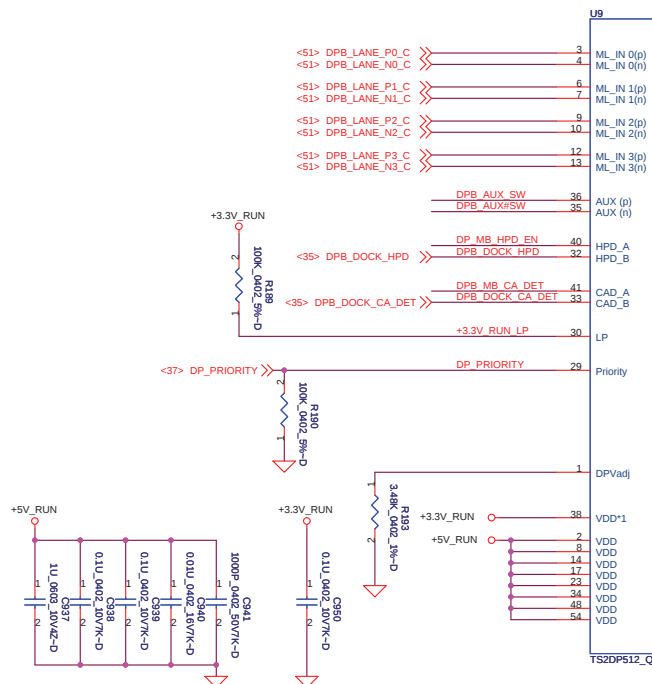
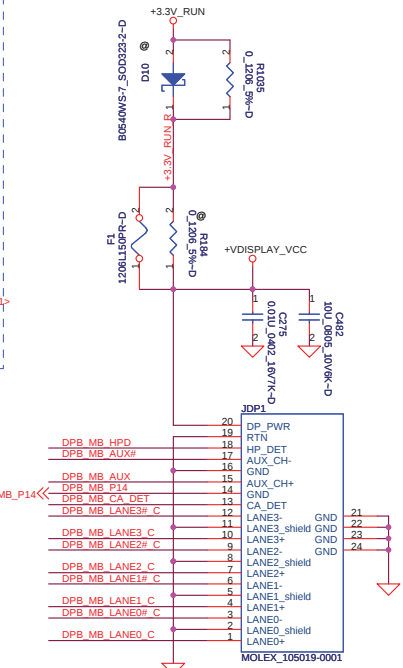
SW for MB side



SW for eDOCK side



Display port Connector



Pin#	Level	State	Description
LP	Hi	Normal Mode	Standard operational mode for device
	Low	Low power Mode	Device is forced into a low power mode causing the output s to go to a high-Z state, all other inputs are ignore

<http://hobi-elektronika.net>

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.

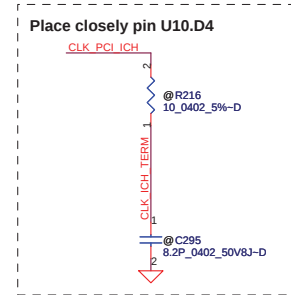
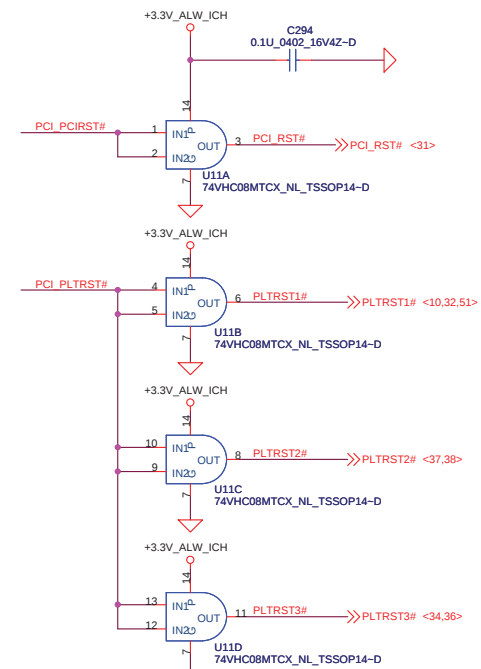
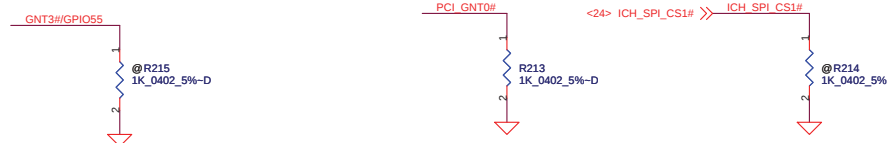
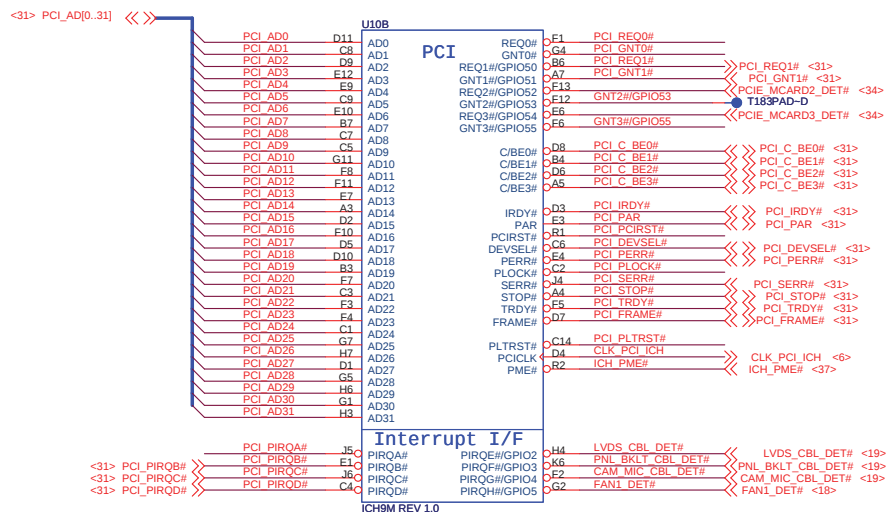
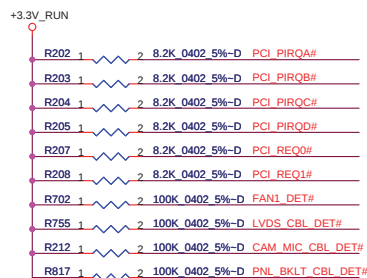
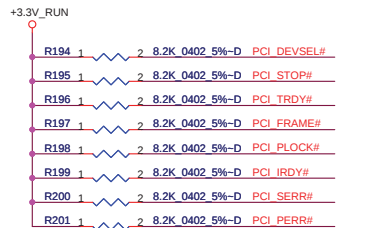
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Display port

LA-4051P

Date: Friday, June 13, 2008 Sheet 21 of 63



A16 away override strap.	
PCI_GNT3#	Low = A16 swap override enabled. High = Default.

Boot BIOS Strap		
PCI_GNT0#	SPI_CS1#	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC

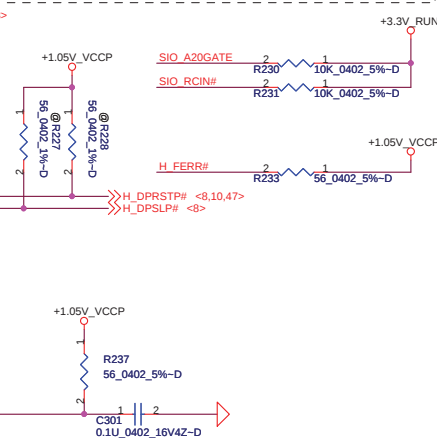
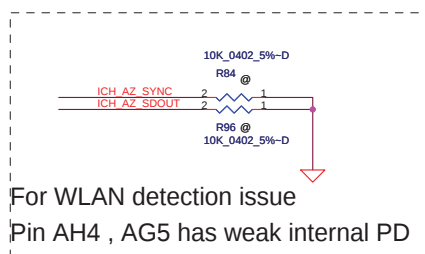
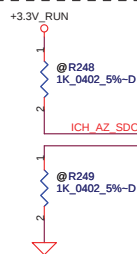
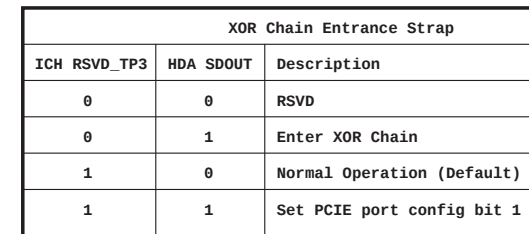
DELL CONFIDENTIAL/PROPRIETARY

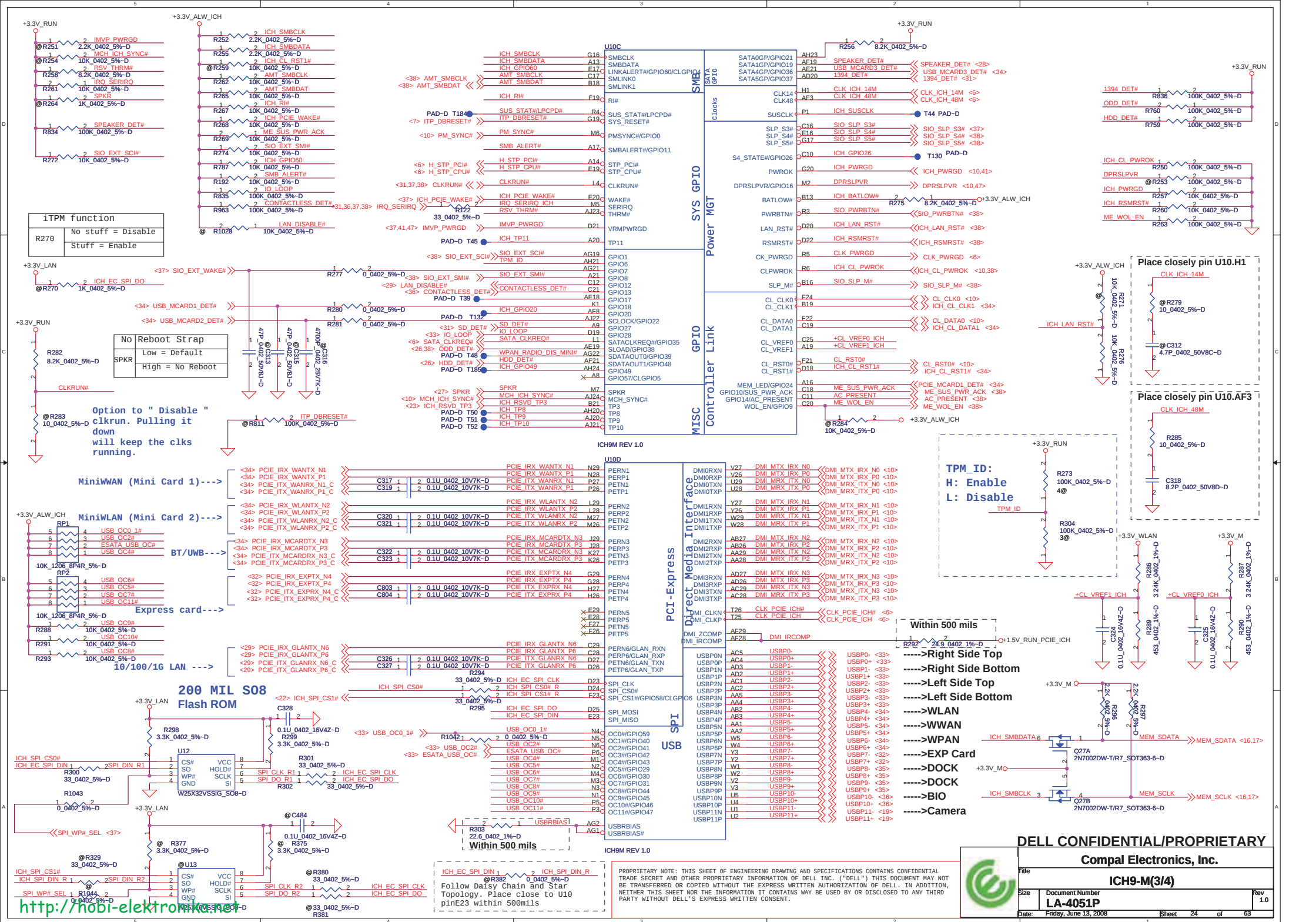
Compal Electronics, Inc.

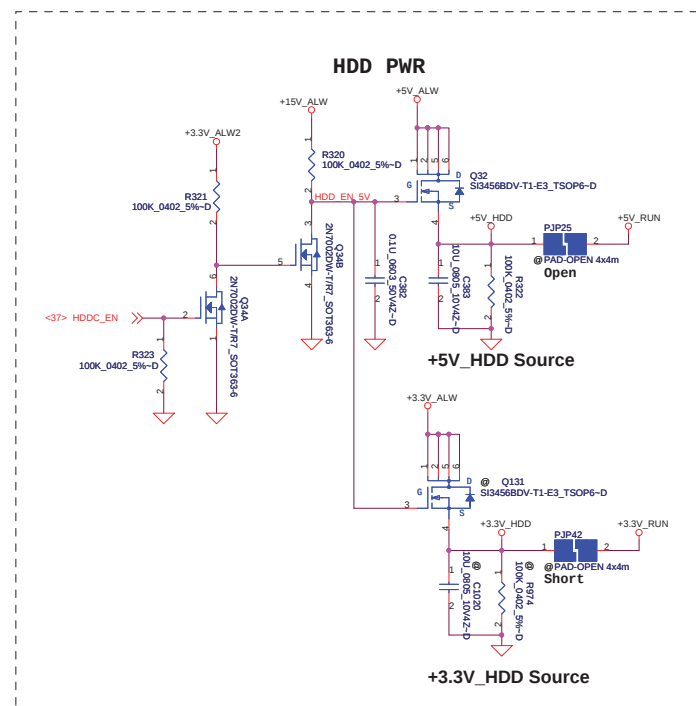
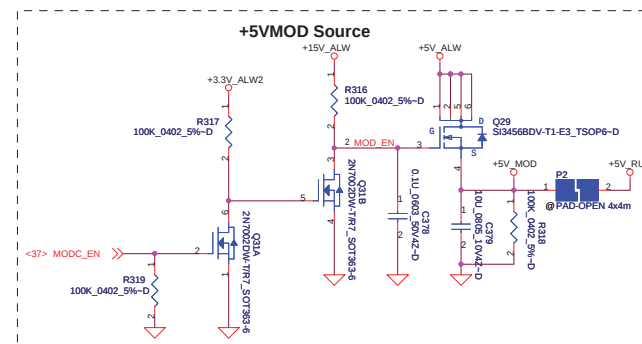
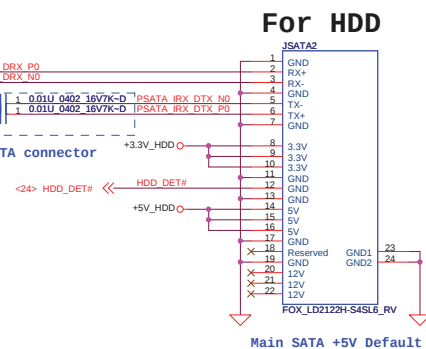
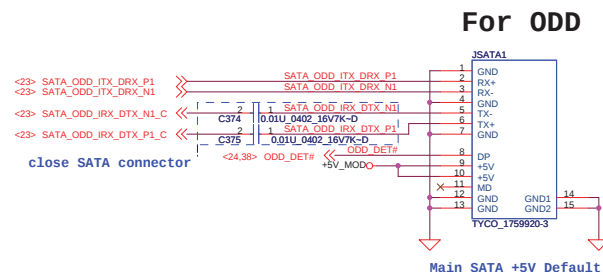


Title			
ICH9-M(1/4)			
Size	Document Number		Rev
	LA-4051P		1.0
Date:	Thursday, June 05, 2008	Sheet 22 of 63	

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.

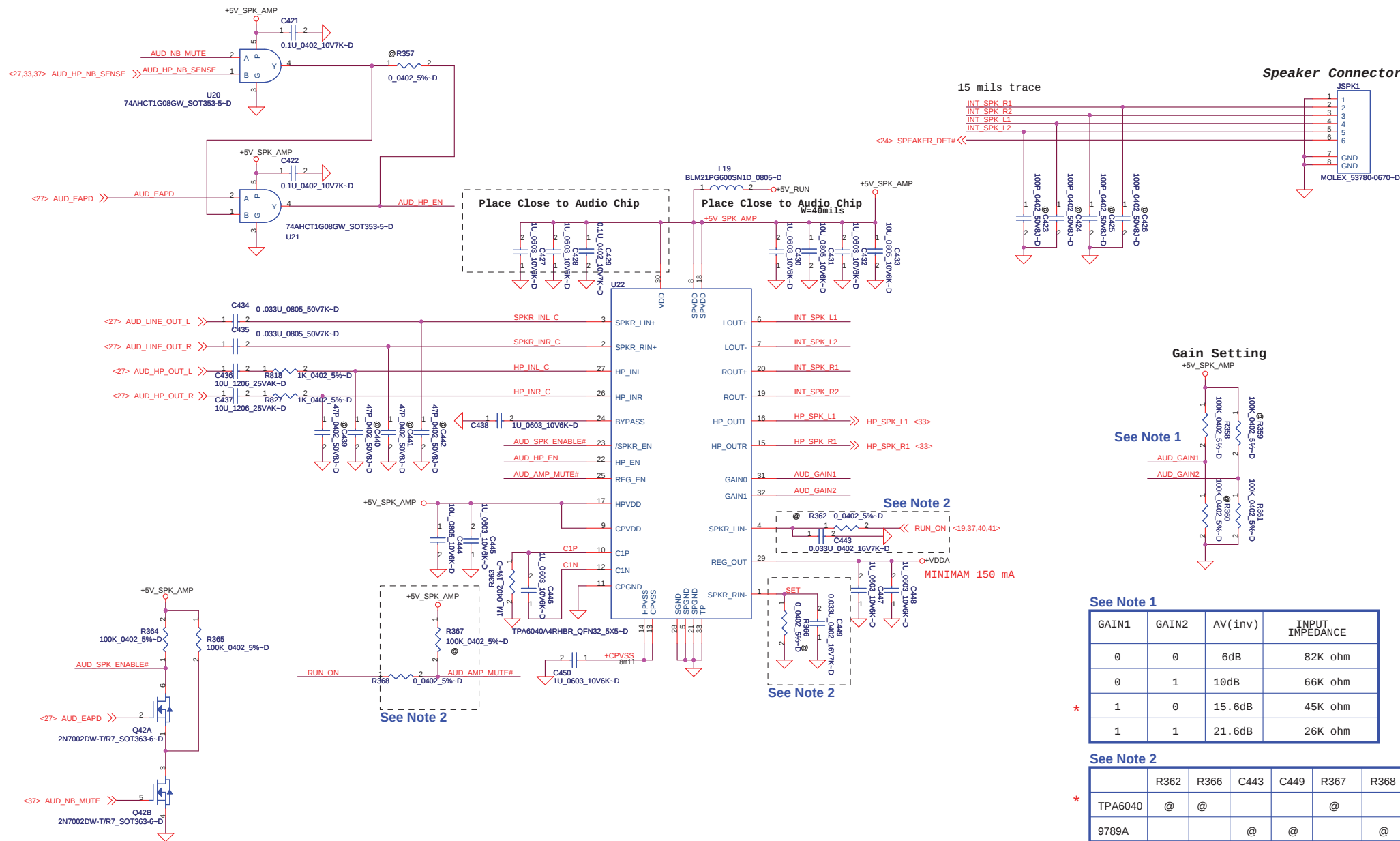






Title			
ODD/HDD CONNECTOR			
Size	Document Number	Rev	
	LA-4051P	1.0	
Date:	Thursday, June 05, 2008	Sheet	26 of 63

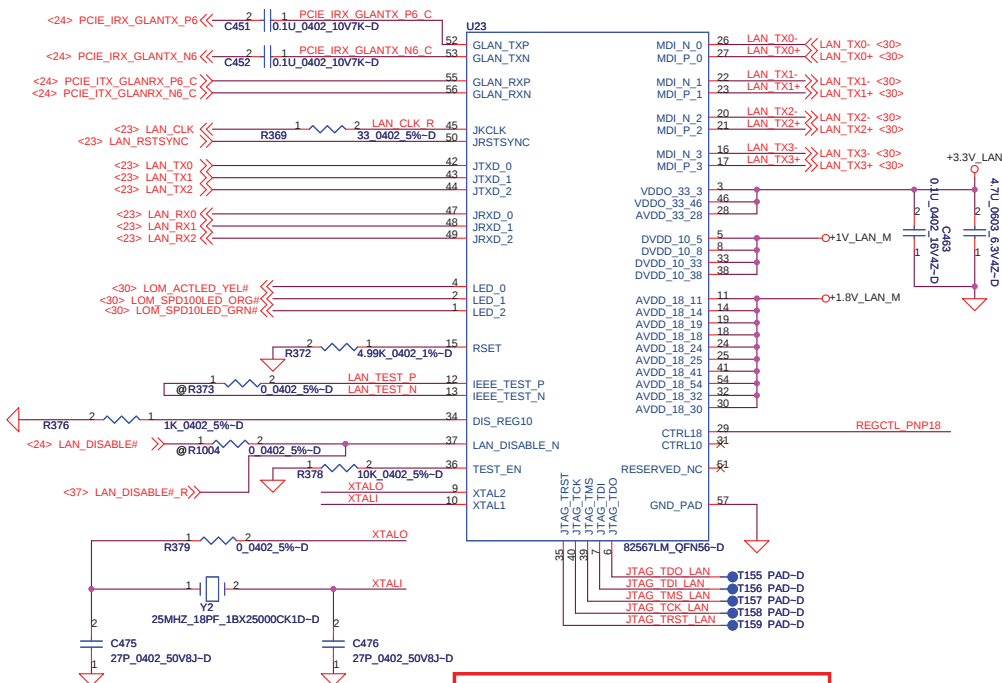
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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



DELL CONFIDENTIAL/PROPRIETARY

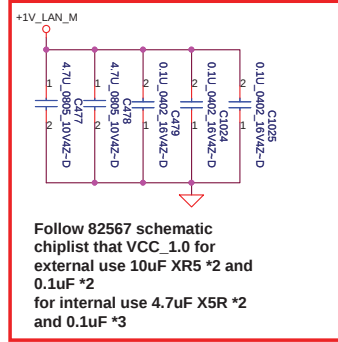
Compal Electronics, Inc.					
AMP and PHONE JACK					
LA-4051P					
Thursday, June 05, 2008	Sheet	28	of	63	Rev 1.0

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.

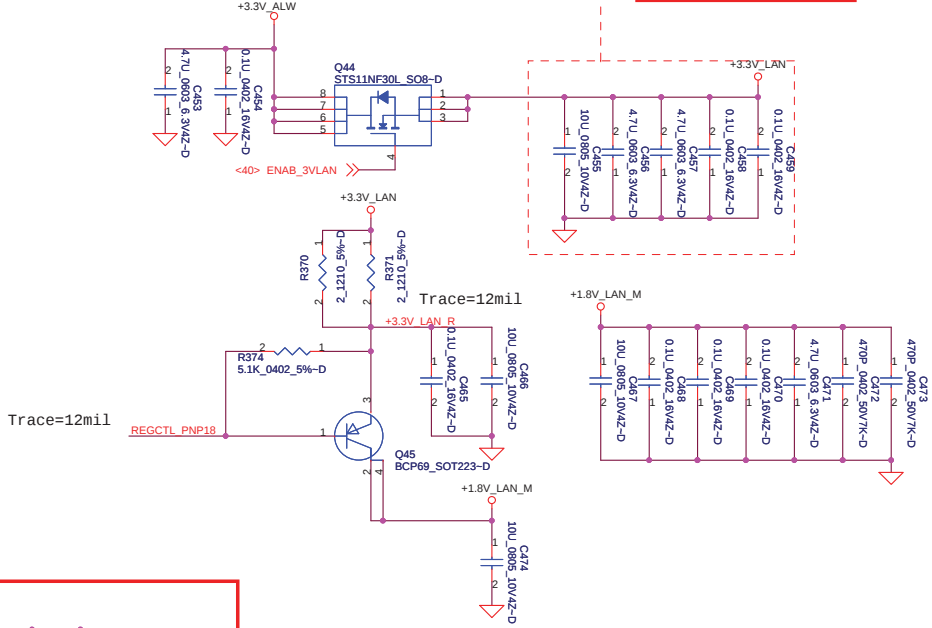


Need to ensure crystal at least 300uW max power drive-level

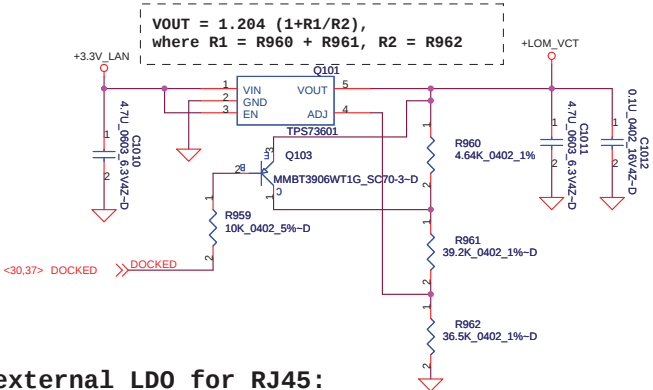
MA use internal 1V, NOT external solutions.
82567LM:
B0 version: 1.05V
A1 version: 1V



Follow 82567 schematic chiplist that VCC_1.0 for external use 10uF XR5 *2 and 0.1uF *2 for internal use 4.7uF X5R *2 and 0.1uF *3



Layout Notice : Place as close chip as possible.



$V_{OUT} = 1.204 (1 + R1/R2)$, where $R1 = R960 + R961$, $R2 = R962$

Intel proposal add external LDO for RJ45:
MB: 2.5V,
Dock: 2.65V

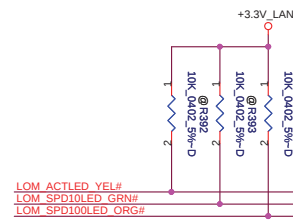
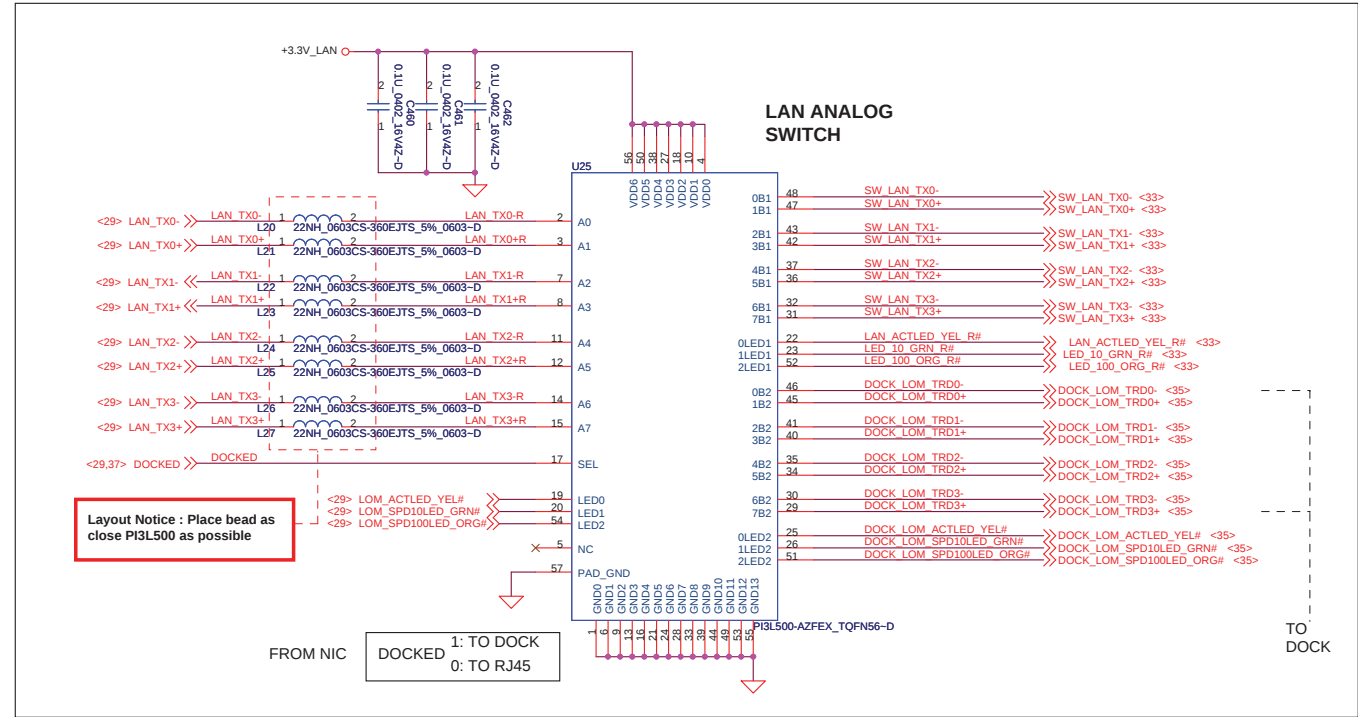
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.



Title			LAN-82567LM
Size	Document Number	Rev	1.0
Date			Friday, June 06, 2008
Sheet			29 of 63

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.



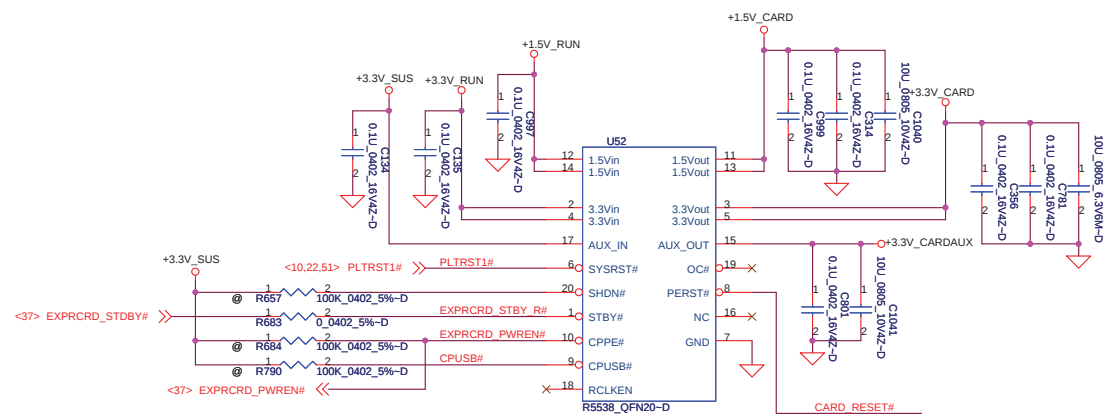
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

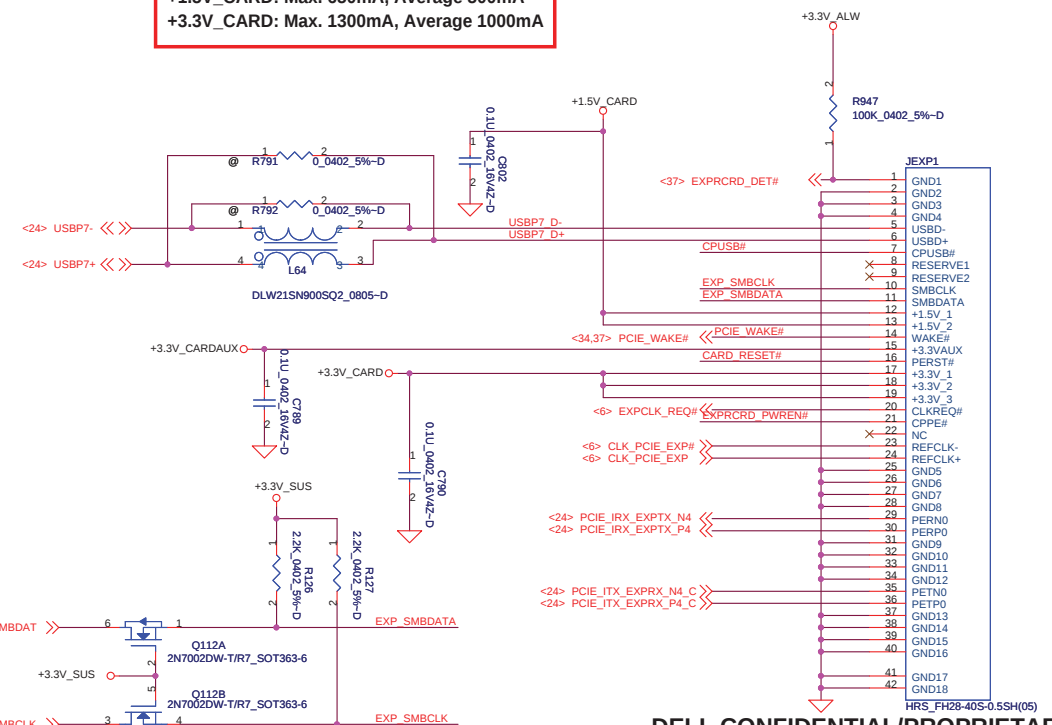
Title		
LAN TRANSFORMER		
Size	Document Number	Rev
	LA-4051P	1.0
Date	Thursday, June 05, 2008	Sheet 30 of 63

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_CARD: Max. 650mA, Average 500mA
+3.3V_CARD: Max. 1300mA, Average 1000mA



Compal Electronics, Inc.

CardBus/SD card Socket

W

Size	Document Number LA-4051P
------	------------------------------------

Rev	
1.0	

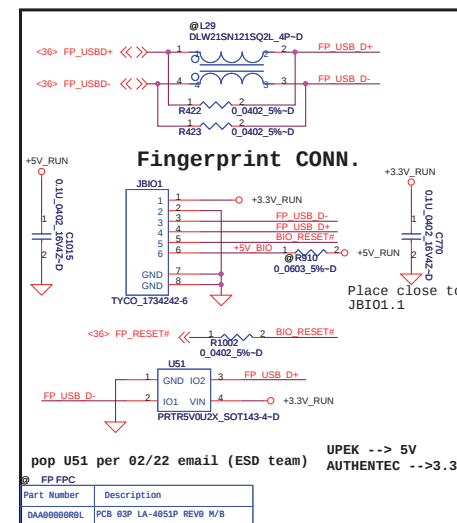
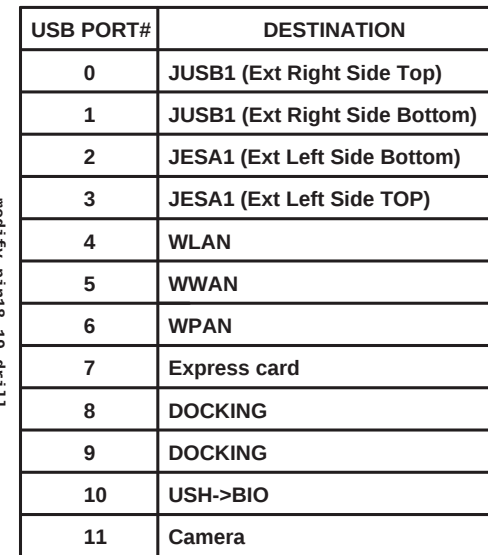
Date: Wednesday, June 11, 2008 Sheet 32 of 63

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.

Part Number	Description
DAA00000R0L	PCB 03P LA-4051P REV0 M/B

Close to JCBUS1 Pin18/52

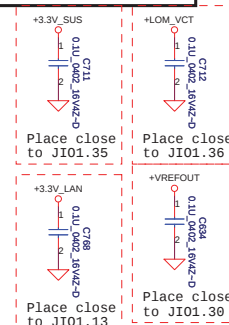
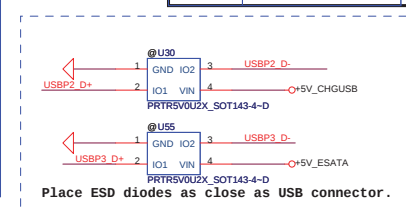
```
se to JCBUS1 pin51,17
```



SEL0_ [A:B]	SEL1_ [A:B]	Compliance Channel
0	0	no equalization
0	1	[0:2.5dB] @ 1.6 GHz
1	0	[2.5:4.5dB] @ 1.6 GHz
1	1	[4.5:6.5dB] @ 1.6 GHz

SEL2_ [A:B]	Swing
0	1x
1	1.2x

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

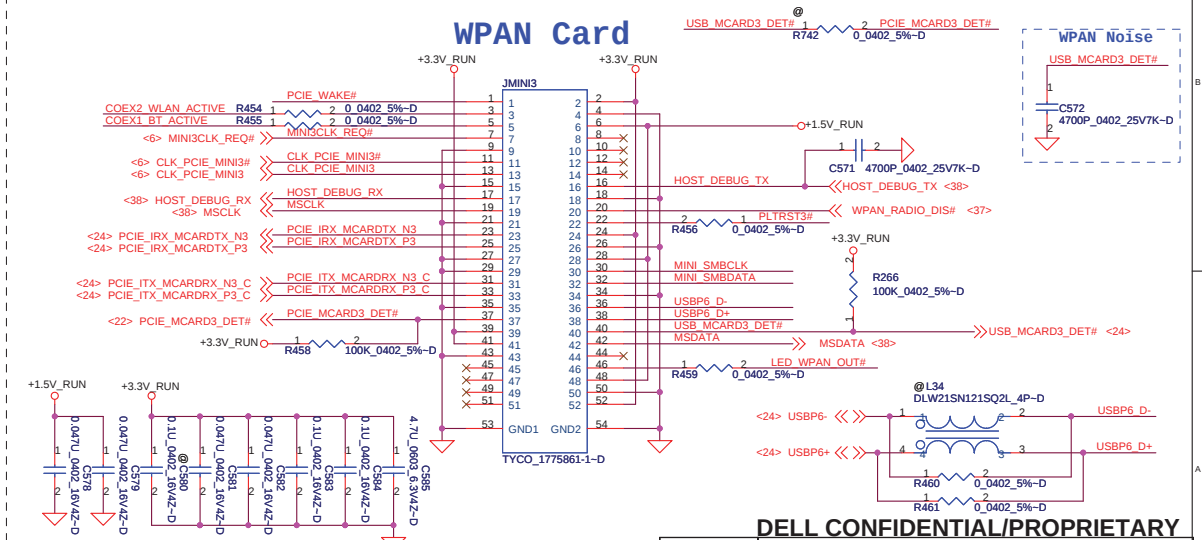
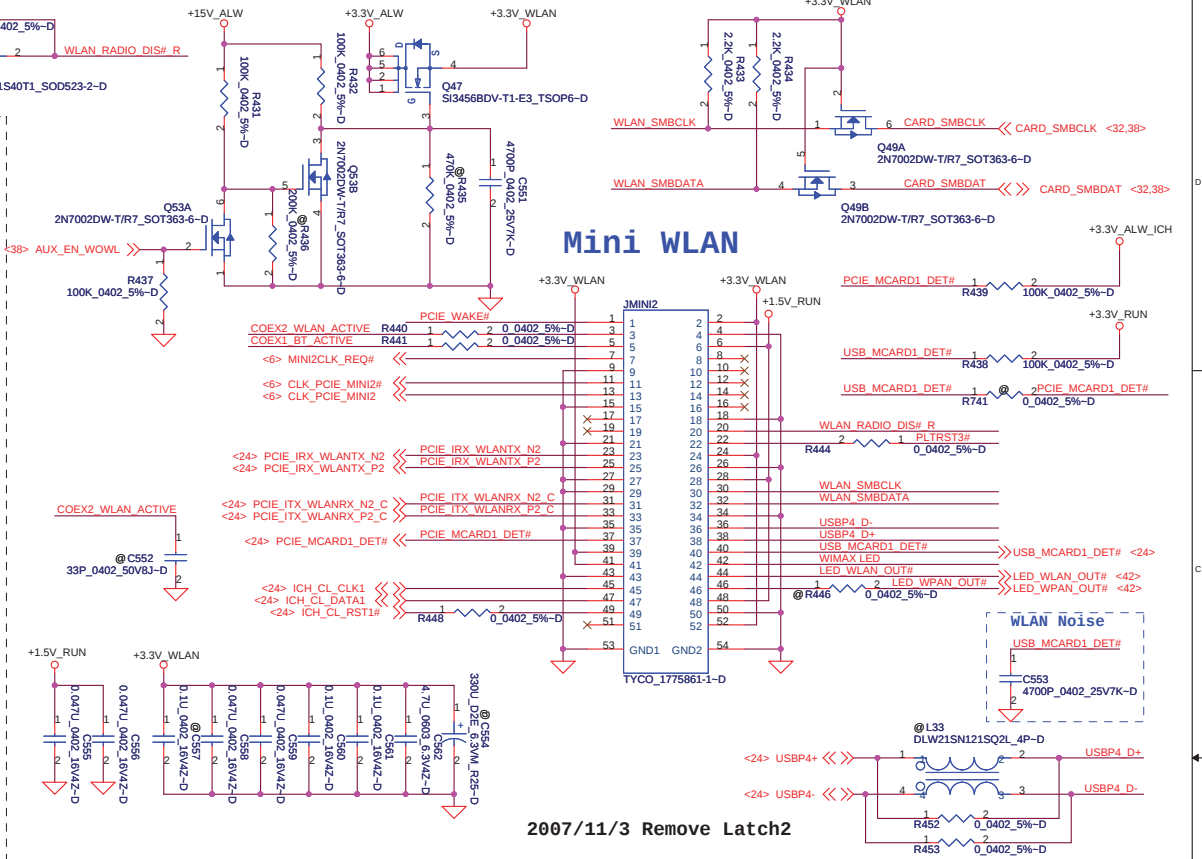
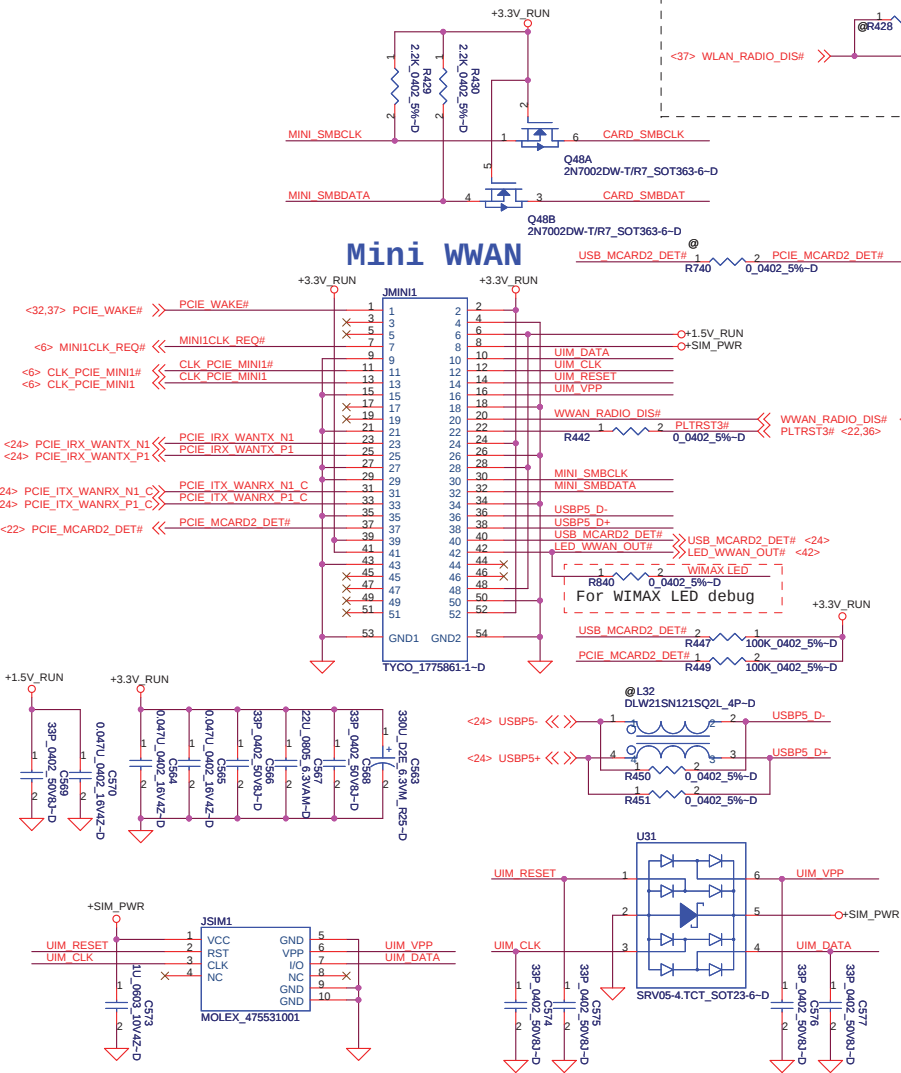


Compal Electronics, Inc.

Title		USB 2.0 PORT		Rev
Size	Document Number	LA-4051P		1.0
Date:	Friday, June 13, 2008	Sheet	33	of 63



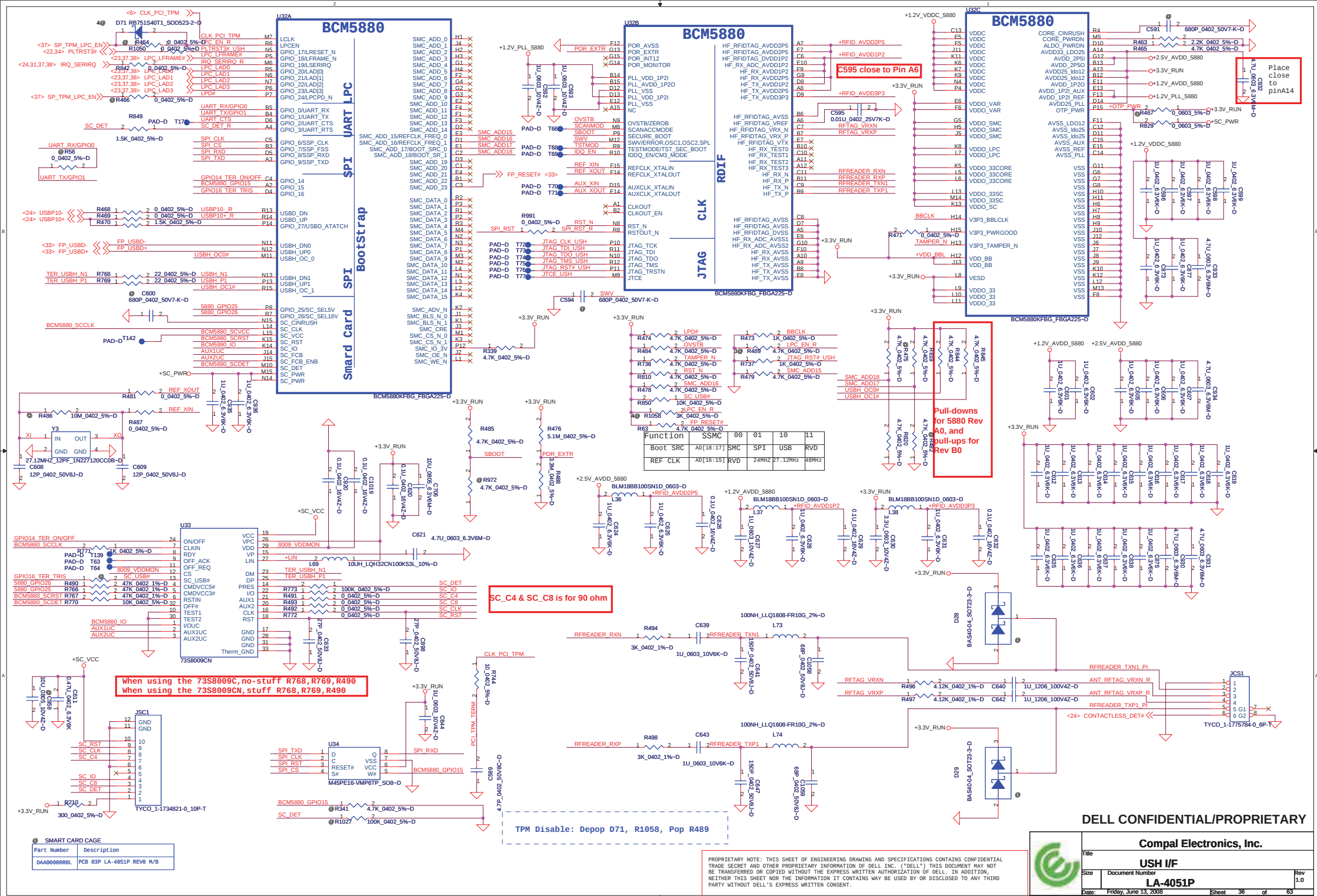
PWR Rail	Voltage Tolerance	Primary Power		Aux Power
		Peak	Normal	Normal
+3.3V	+ -9%	1000	750	
+3.3Vaux	+ -9%	330	250	250 (Wake enable) 5 (Not wake enable)
+1.5V	+ -5%	500	375	NA

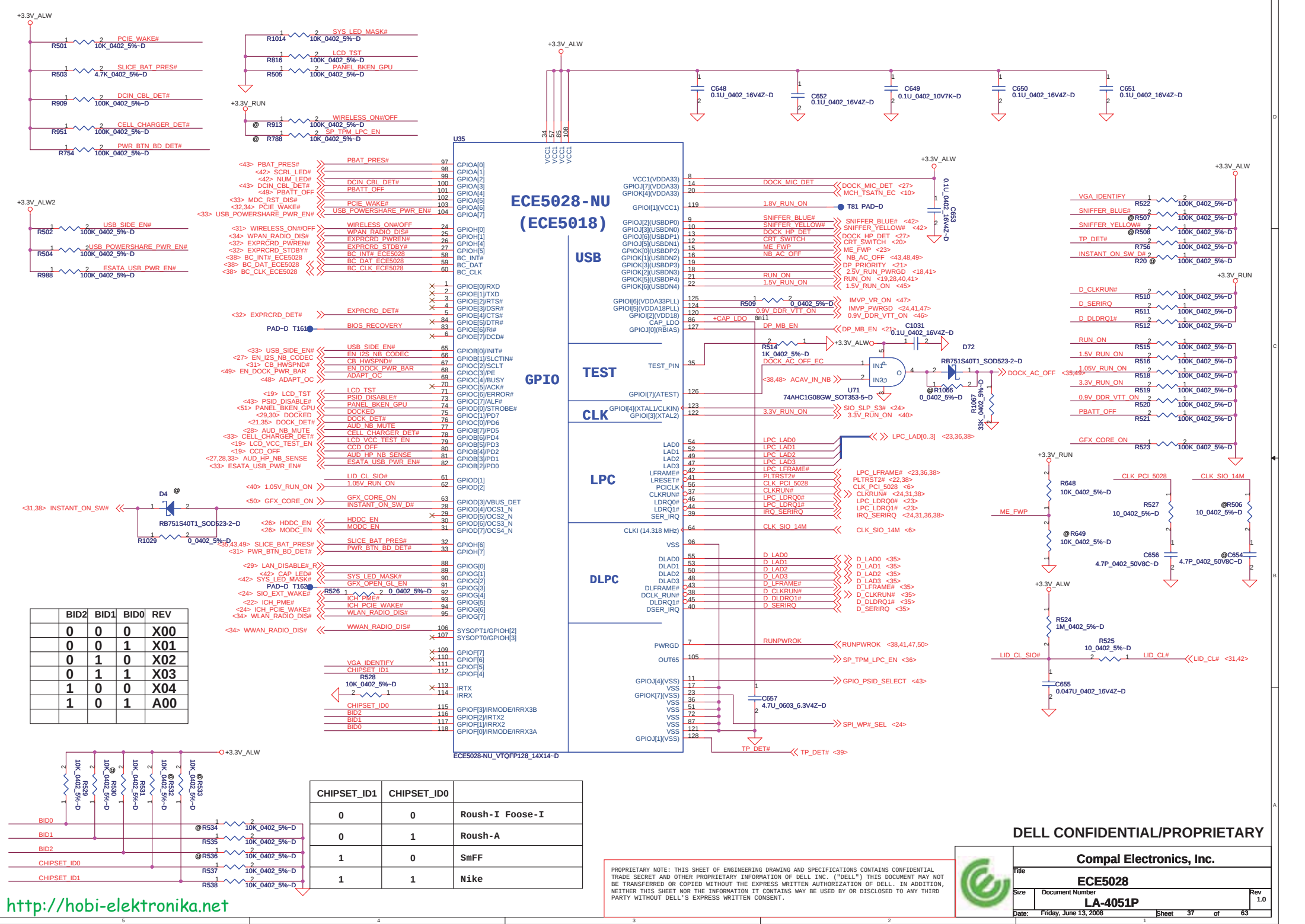


DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.			
Mini Card			
Size	Document Number	Rev	
	LA-4051P	1.0	
Date	Thursday, June 05, 2008	Sheet	34 of 63

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.



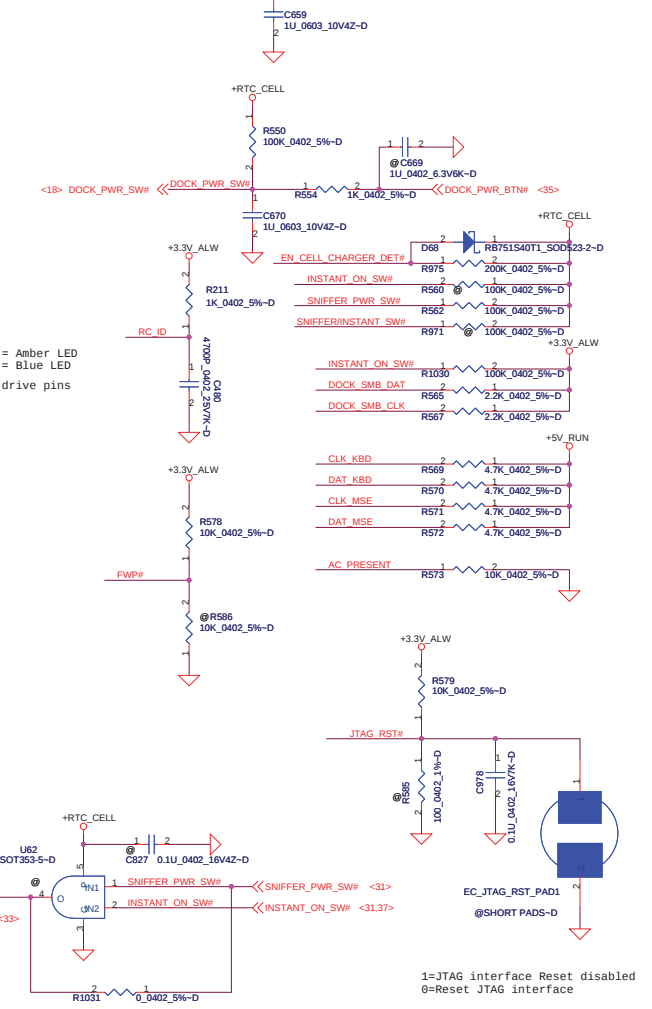
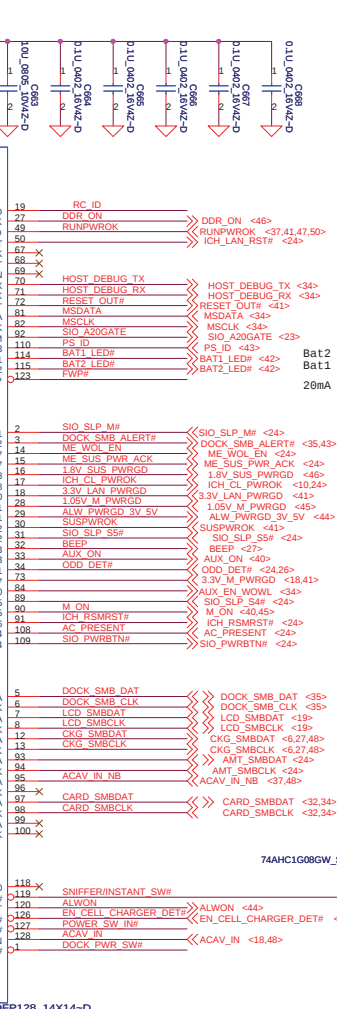
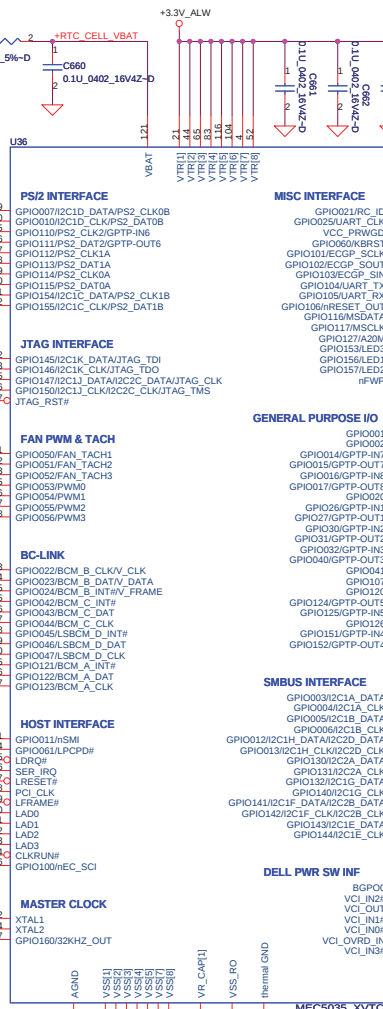
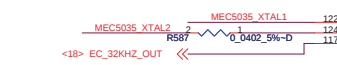
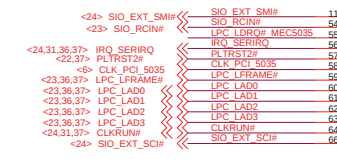
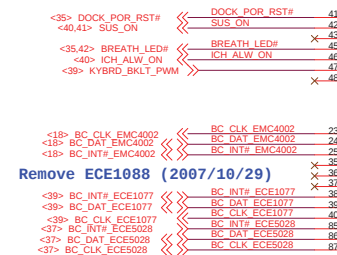
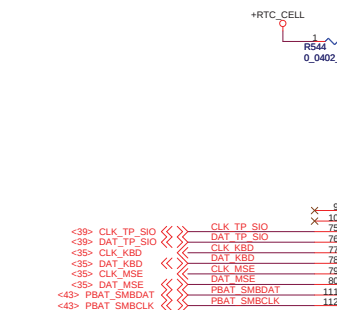
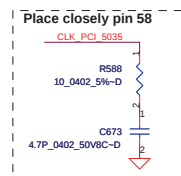
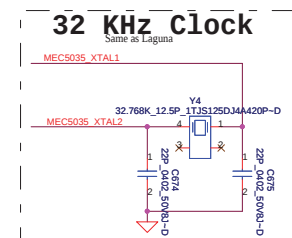


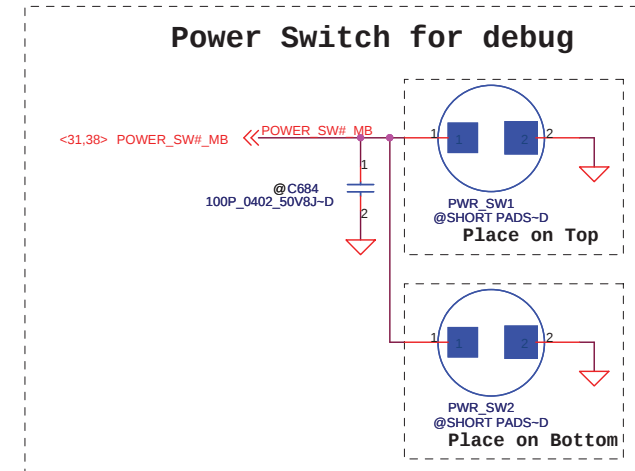
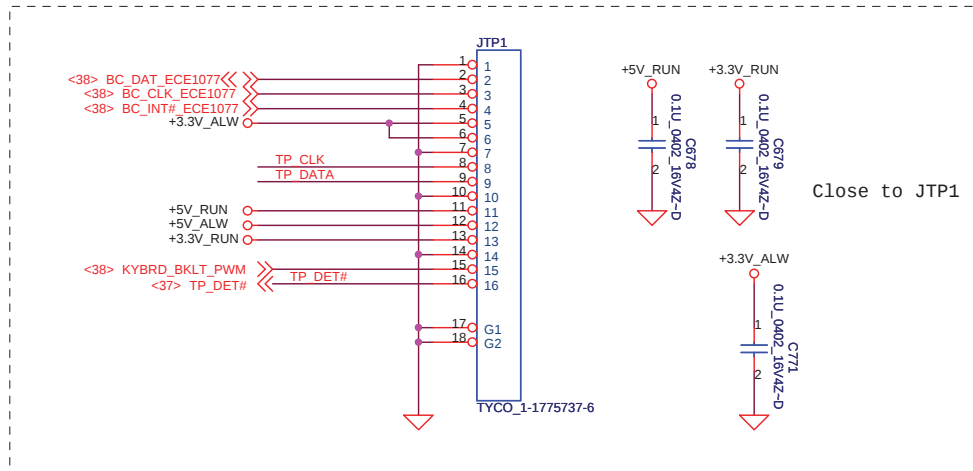
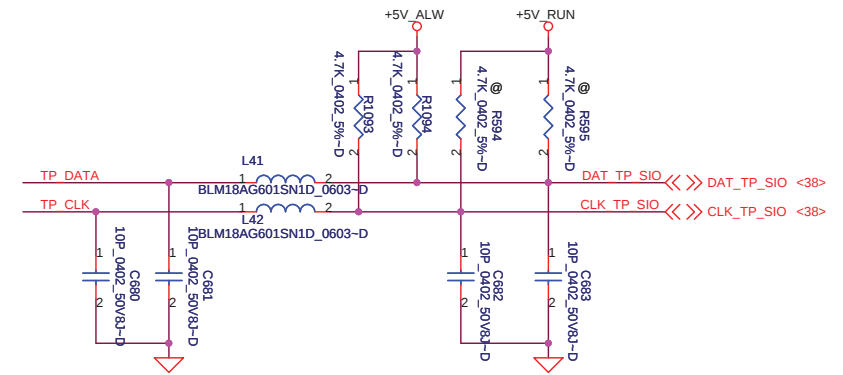
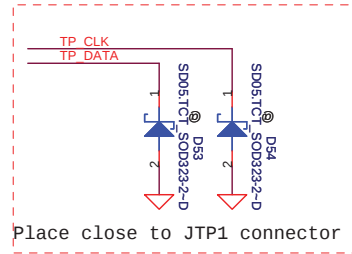
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL"). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE 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.			
E5028			
Size	Document Number	Rev	
	LA-4051P	1.0	
Date:	Friday, June 13, 2008	Sheet	37 of 63





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.

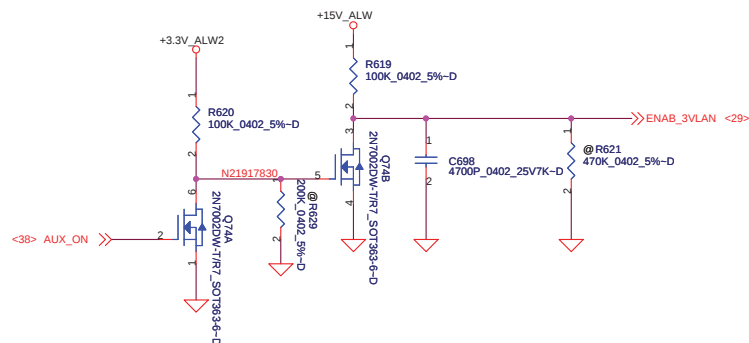
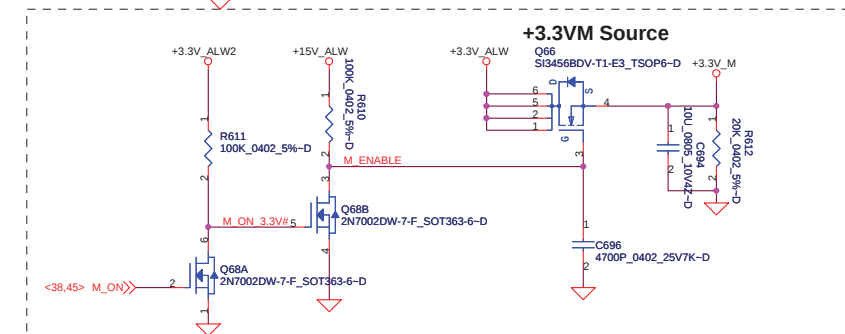
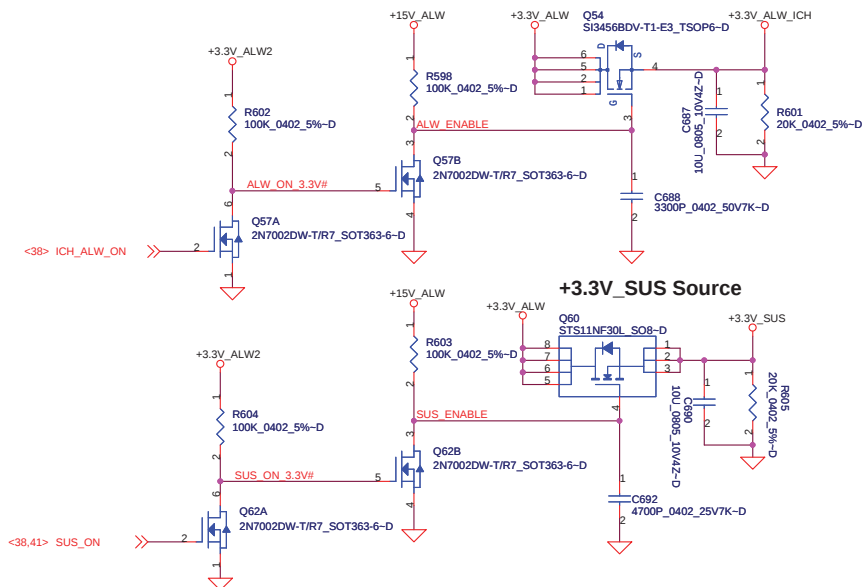


DELL CONFIDENTIAL/PROPRIETARY

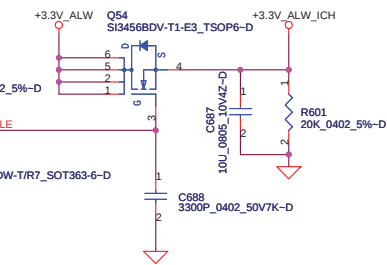
Compal Electronics, Inc.

Title		Rev
Touch PAD/Int KB/LID		1.0
Size	Document Number	
	LA-4051P	
Date:	Thursday, June 05, 2008	Sheet 39 of 63

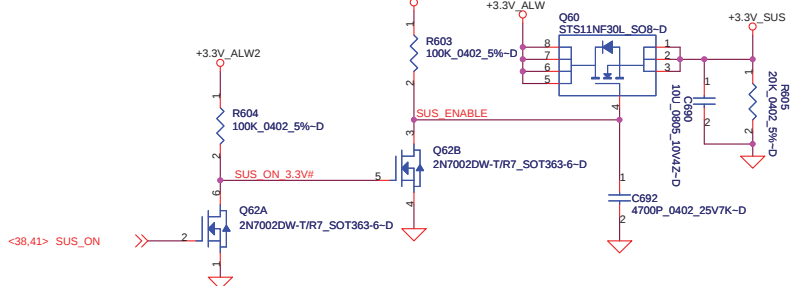
DC/DC Interface



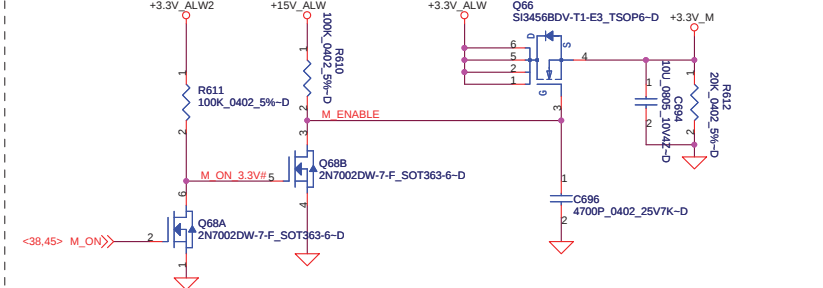
+3.3V_ALW_ICH Source



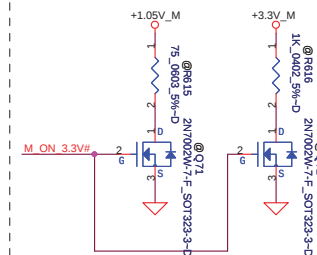
+3.3V_SUS Source



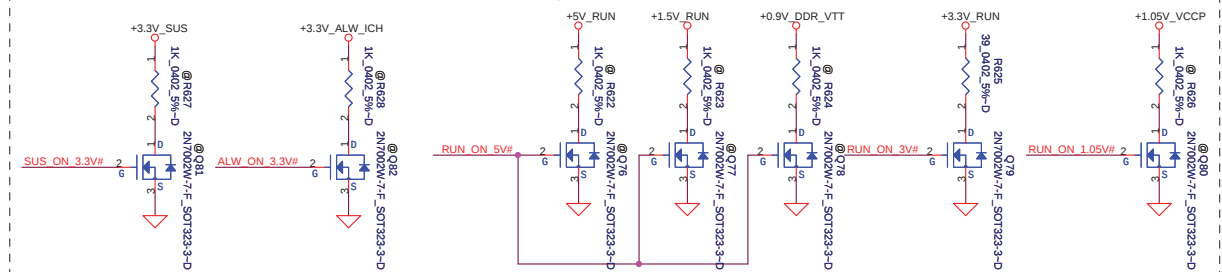
+3.3VM Source



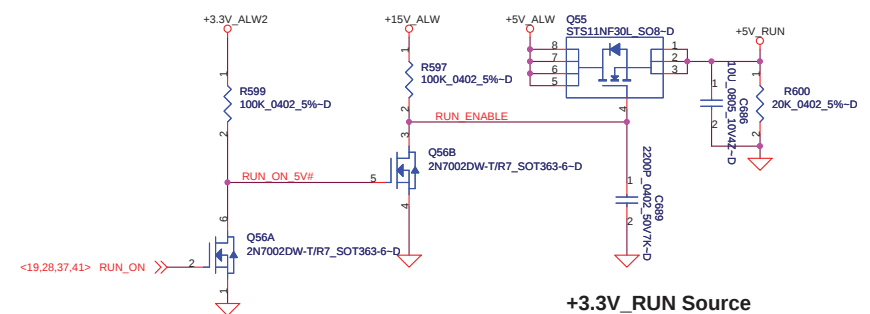
Discharge Circuit



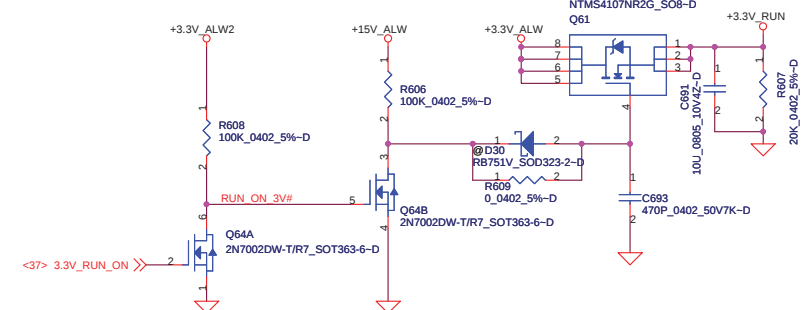
Discharge Circuit



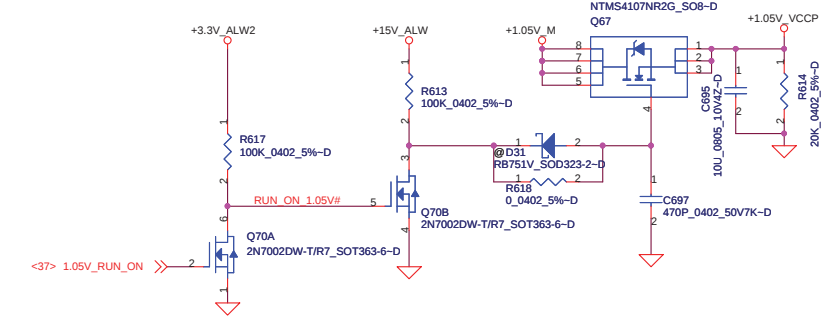
+5V_{RUN} Source



+3.3V_RUN Source



+1.05V_VCCP Source



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

POWER CONTROL

LA-4051P

Rev	
1.0	

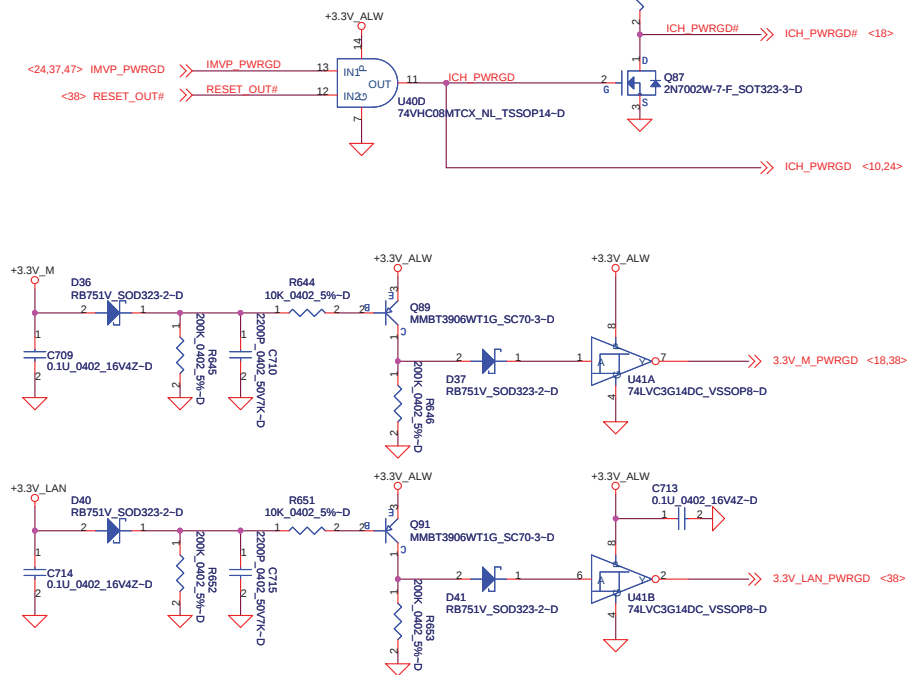
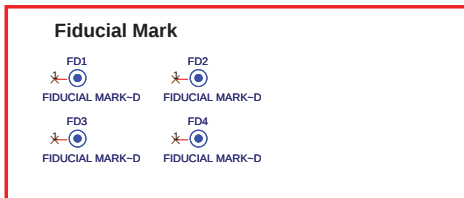
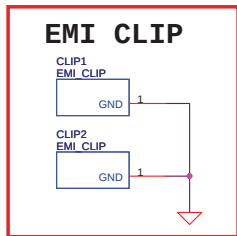
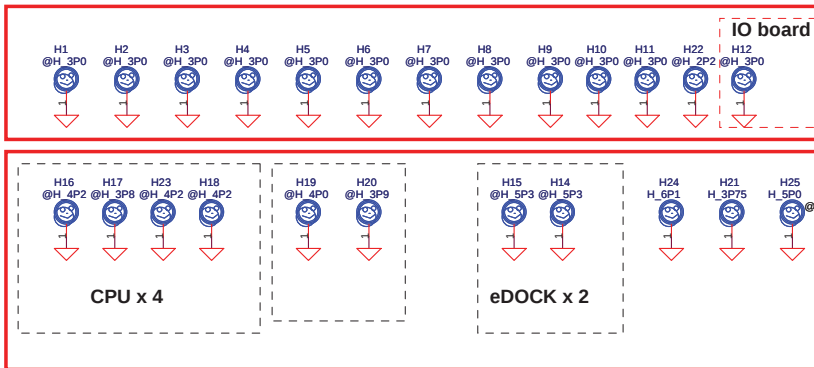
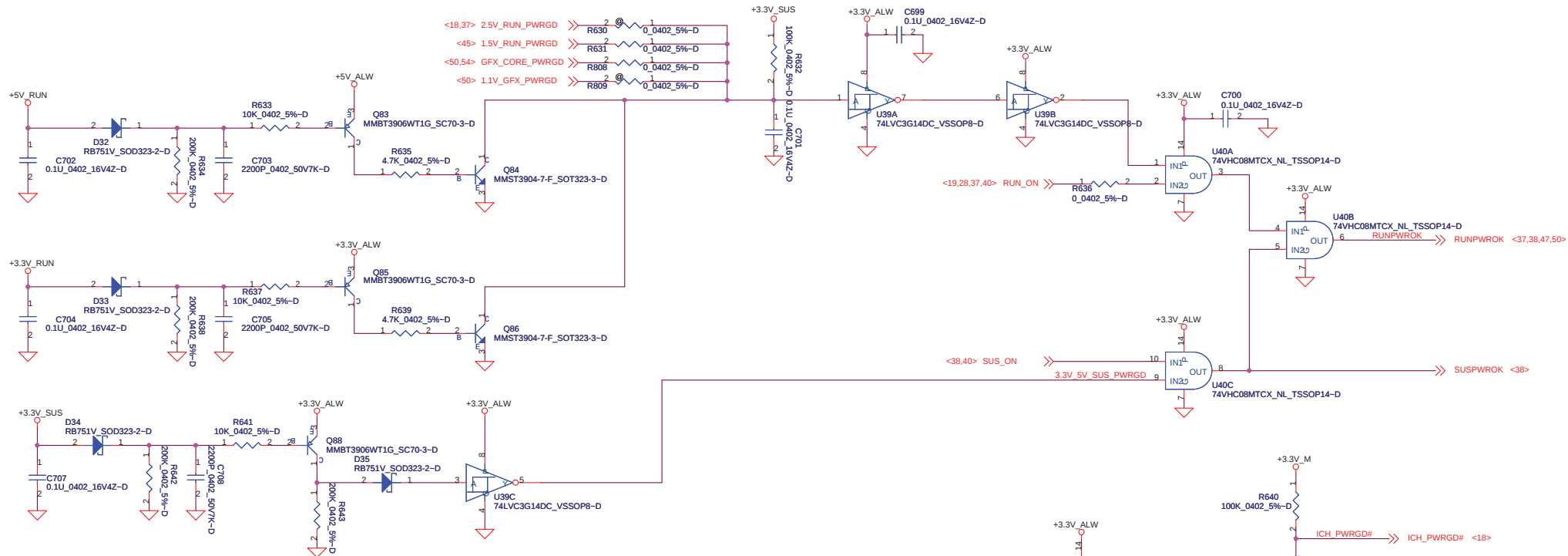
Date: Tuesday, June 10, 2008

Sheet 40 of 63

<http://hobi-elektronika.net>

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

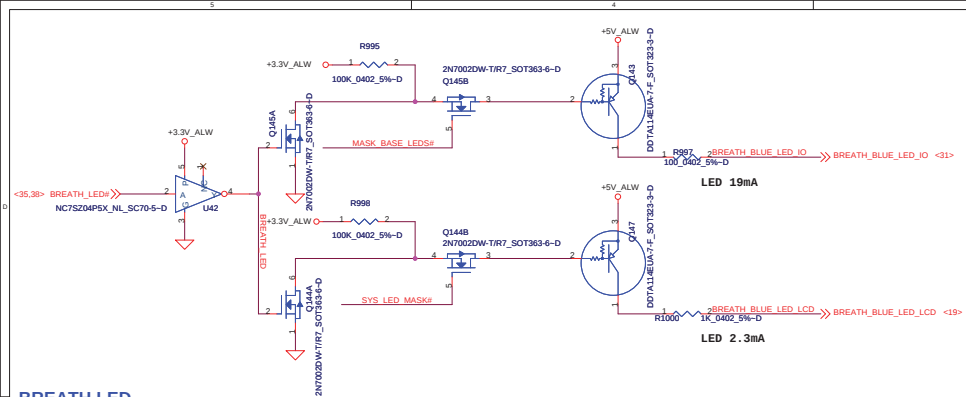
Compal Electronics, Inc.

Power Good

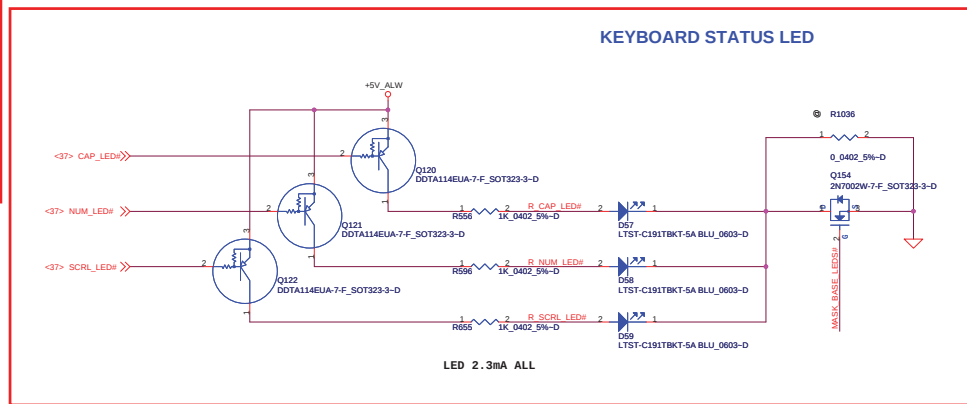
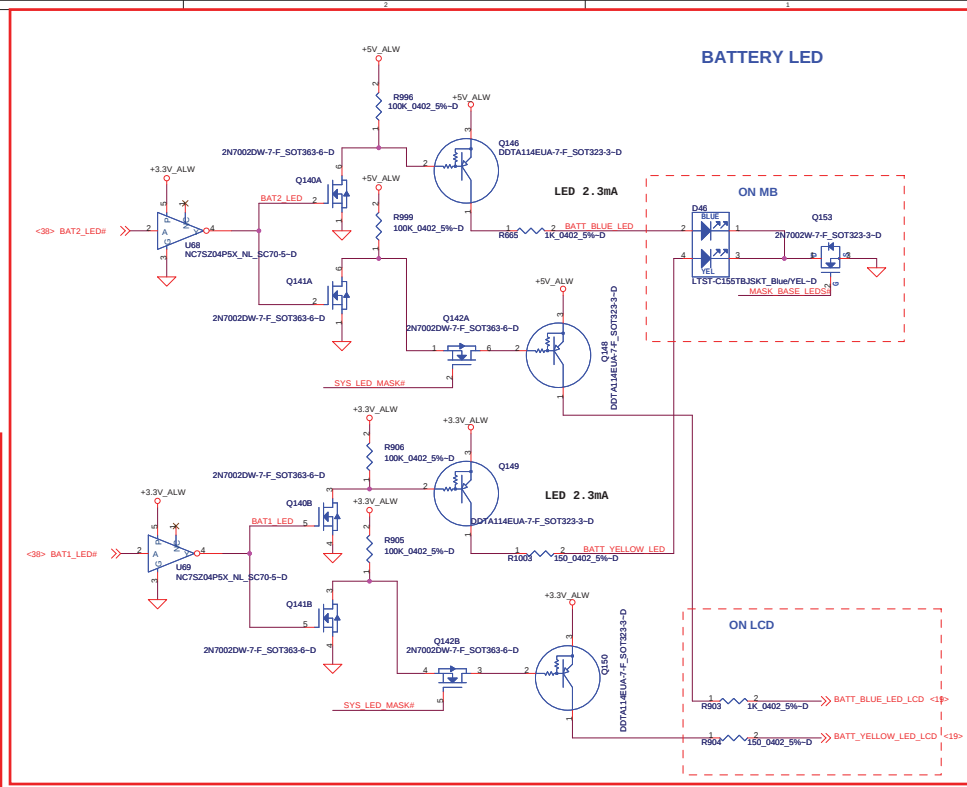
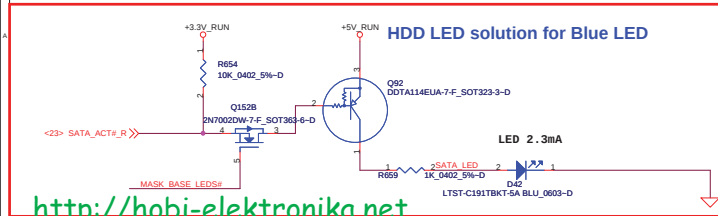
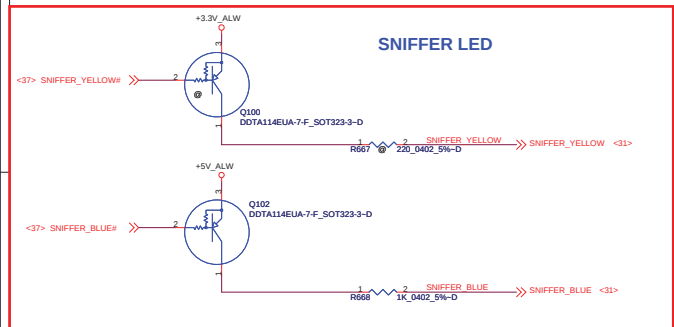
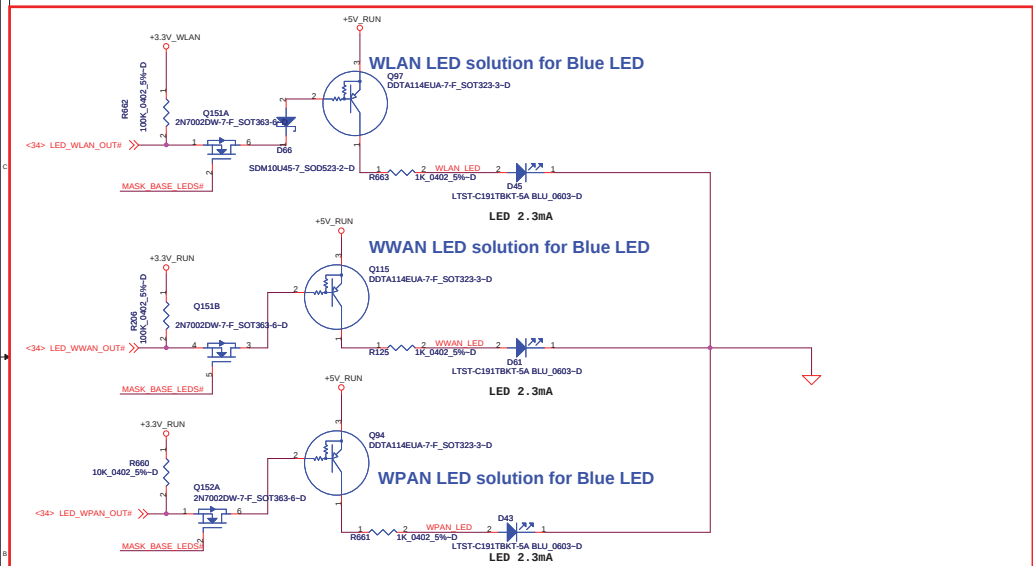
LA-4051P

Thursday, June 05, 2008 Sheet 41 of 63

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.



BREATH LED



BIOS GPIO Table for LED Control

	SYS_LED_MASK#	LID_CL#
MASK ALL LED (SNIFFER FUNCTION)	Low	X
MASK BASE MB LEDs (Lid Closed)	High	Low
Do Not Mask LEDs (Lid Opened)	High	High

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.

LED

LA-4051P

Rev 1.0

Date: Tuesday, June 10, 2008 Sheet 42 of 83

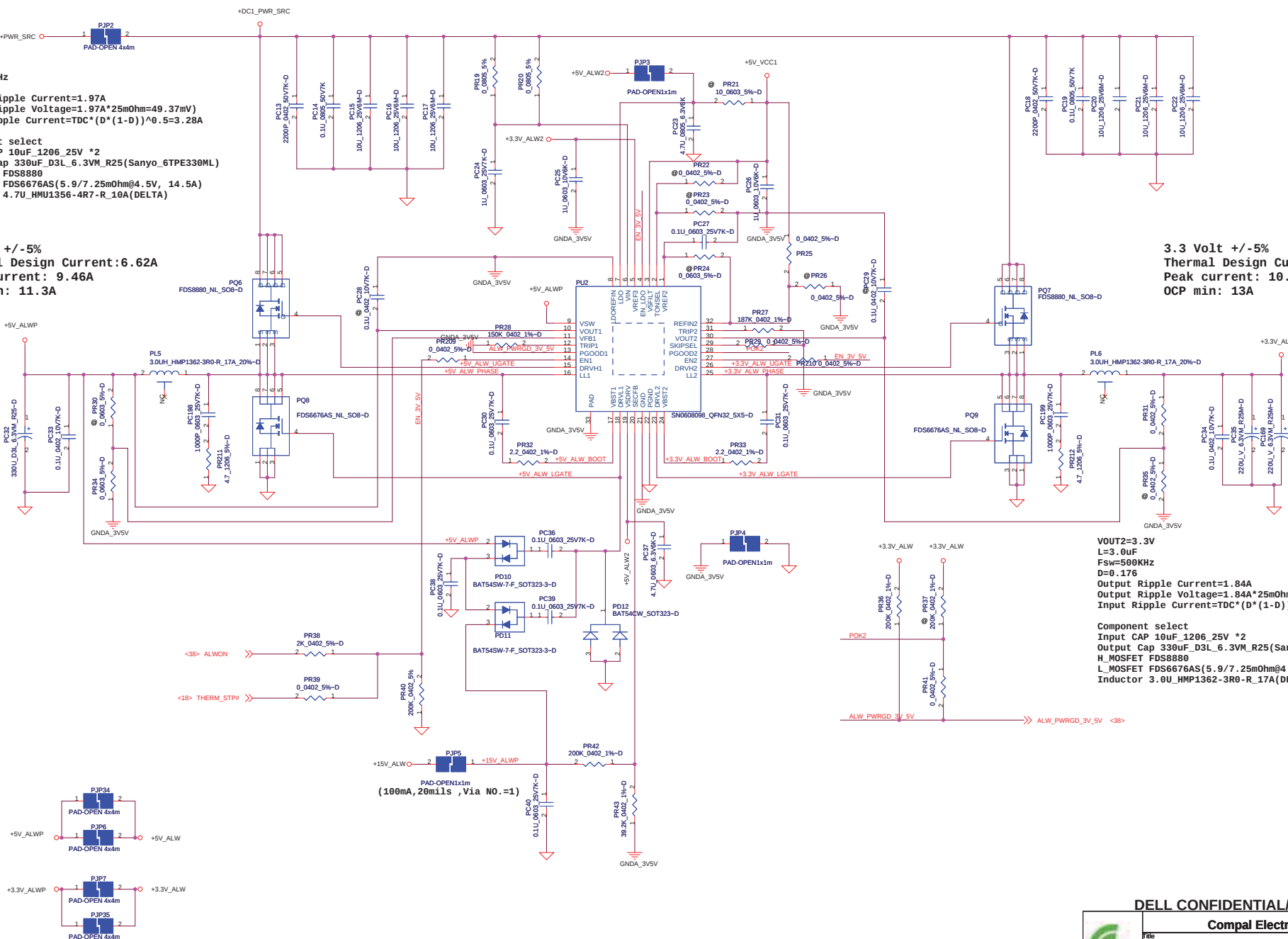
+3.3V_ALWP/ +5V_ALWP/ +5V_ALW2 / +15V_ALWP

VOUT1=5V
L=4.7uF
Fsw=400KHz
D=0.265
Output Ripple Current=1.97A
Output Ripple Voltage=1.97A*25mOhm=49.37mV
Input Ripple Current=TDC*(D*(1-D))^0.5=3.28A

Component select
Input CAP 10uF 1206 25V *2
Output Cap 330uF_D3L 6.3VM_R25(Sanyo_6TPE330ML)
H_MOSFET FDS8880
L_MOSFET FDS6676AS(5.9/7.25mOhm@4.5V, 14.5A)
Inductor 4.7U_HMU1356-4R7-R_10A(DELTA)

5 Volt +/-5%
Thermal Design Current:6.62A
Peck current: 9.46A
OCP min: 11.3A

3.3 Volt +/-5%
Thermal Design Current: 7.39A
Peak current: 10.56A
OCP min: 13A



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

DC/DC +3V/ +5V

LA-4041P

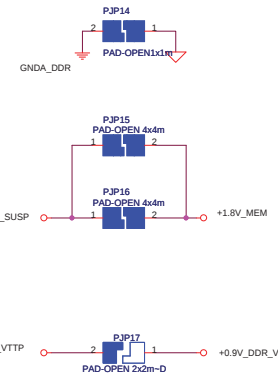
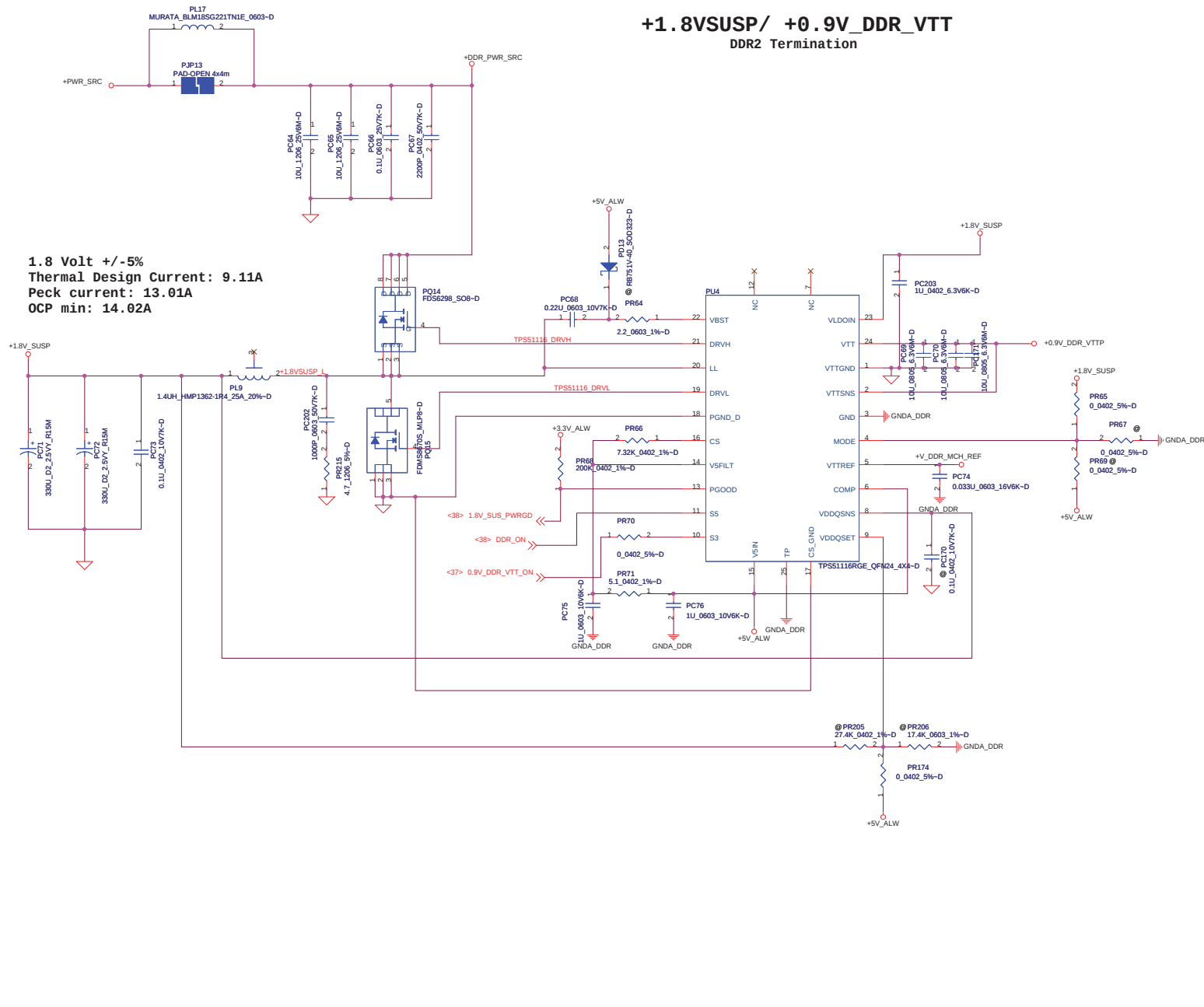
Thursday, June 05, 2008

Date: Thursday, June 05, 2008 Sheet 45 of 63

+1.8VSUSP/ +0.9V_DDR_VTT DDR2 Termination

1.8 Volt +/-5%
Thermal Design Current: 9.11A
Peck current: 13.01A
OCP min: 14.02A

Design current 0.7A for +0.9V_DDR_VTTP
Peak current 1A for +0.9V_DDR_VTTP



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

1.8VSUSP/0.9VDDR

Size	Document Number	Rev
	LA-4041P	1.0
Date	Thursday, June 05, 2008	Sheet 46 of 63

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.

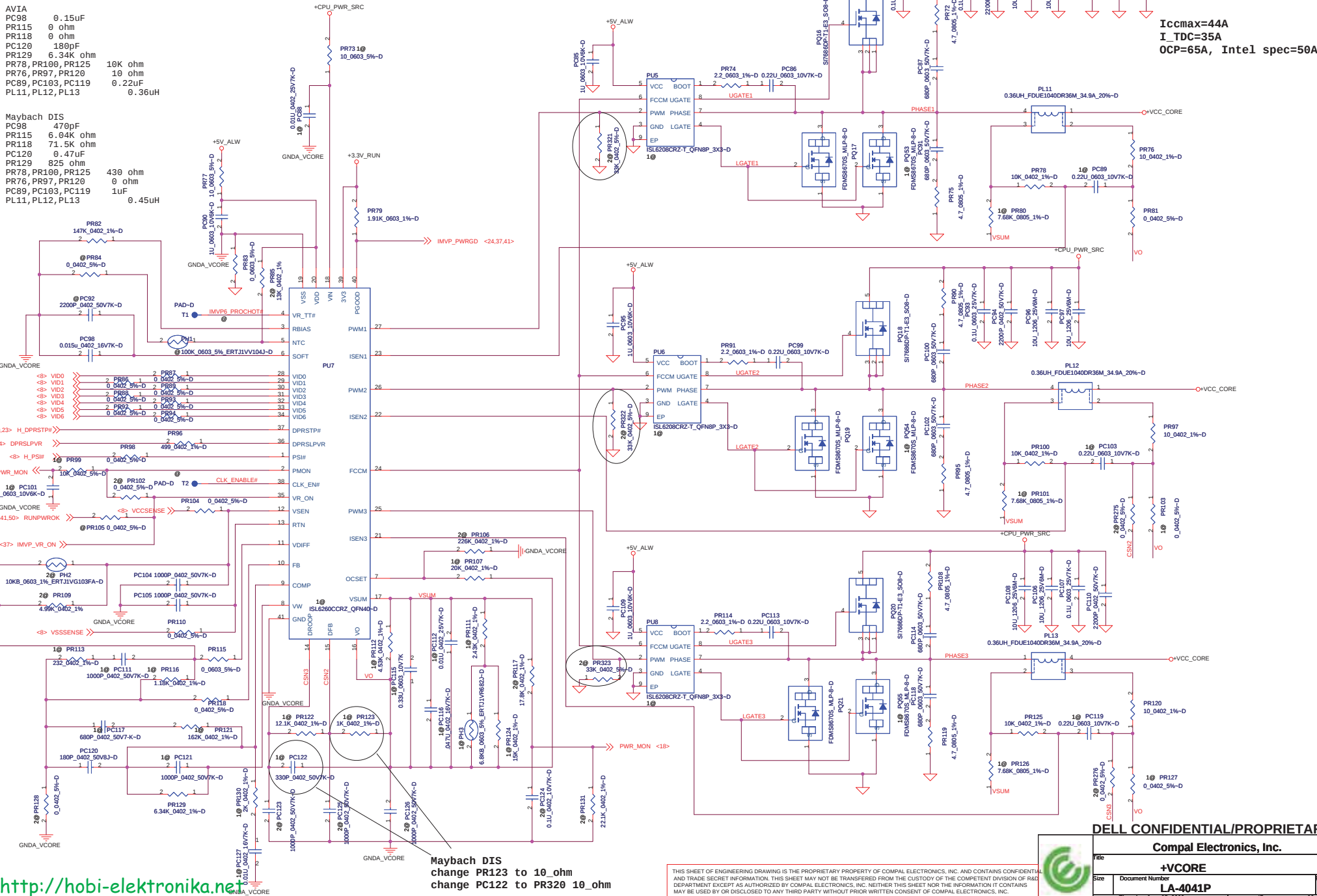


PU5 PU6 PU8
AVIA ISL6208
Maybach DIS MAX8791

PU7
AVIA ISL6260C
Maybach DIS MAX8786

AVIA
PC98 0.15uF
PR115 0 ohm
PR118 0 ohm
PC120 180pF
PR129 6.34K ohm
PR78, PR100, PR125 10K ohm
PR76, PR97, PR120 10 ohm
PC89, PC103, PC119 0.22uF
PL11, PL12, PL13 0.36uH

Maybach DIS
PC98 470pF
PR115 6.04K ohm
PR118 71.5K ohm
PC120 0.47uF
PR129 825 ohm
PR78, PR100, PR125 430 ohm
PR76, PR97, PR120 0 ohm
PC89, PC103, PC119 1uF
PL11, PL12, PL13 0.45uH



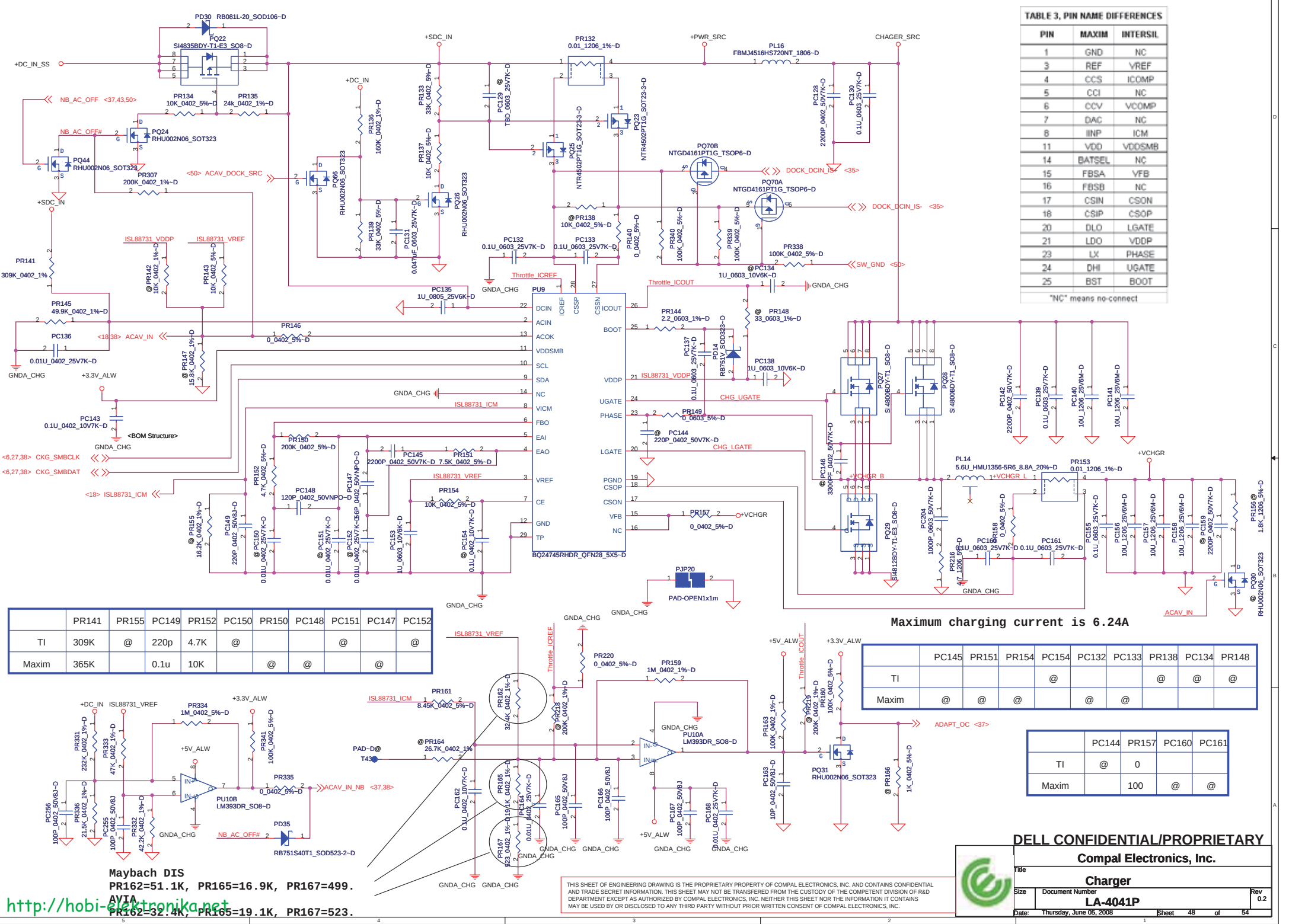


TABLE 3, PIN NAME DIFFERENCES		
PIN	MAXIM	INTERSIL
1	GND	NC
3	REF	VREF
4	CCS	ICOMP
5	CCI	NC
6	CCV	VCOMP
7	DAC	NC
8	IINP	ICM
11	VDD	VDDSMB
14	BATSEL	NC
15	FBSA	VFB
16	FBSB	NC
17	CSIN	CSON
18	CSIP	CSOP
20	DLO	LGATE
21	LDO	VDDP
23	LX	PHASE
24	DHI	UGATE
25	BST	BOOT
"NC" means no-connect		

	PR141	PR155	PC149	PR152	PC150	PR150	PC148	PC151	PC147	PC152
TI	309K	@	220p	4.7K	@		@		@	
Maxim	365K		0.1u	10K		@	@		@	

Maximum charging current is 6.24A									
	PC145	PR151	PR154	PC154	PC132	PC133	PR138	PC134	PR148
TI				@		@	@	@	@
Maxim	@	@	@		@	@			

	PC144	PR157	PC160	PC161
TI	@	0		
Maxim		100	@	@

Maybach DIS
PR162=51.1K, PR165=16.9K, PR167=499.
PR162=32.1K, PR165=19.1K, PR167=523.

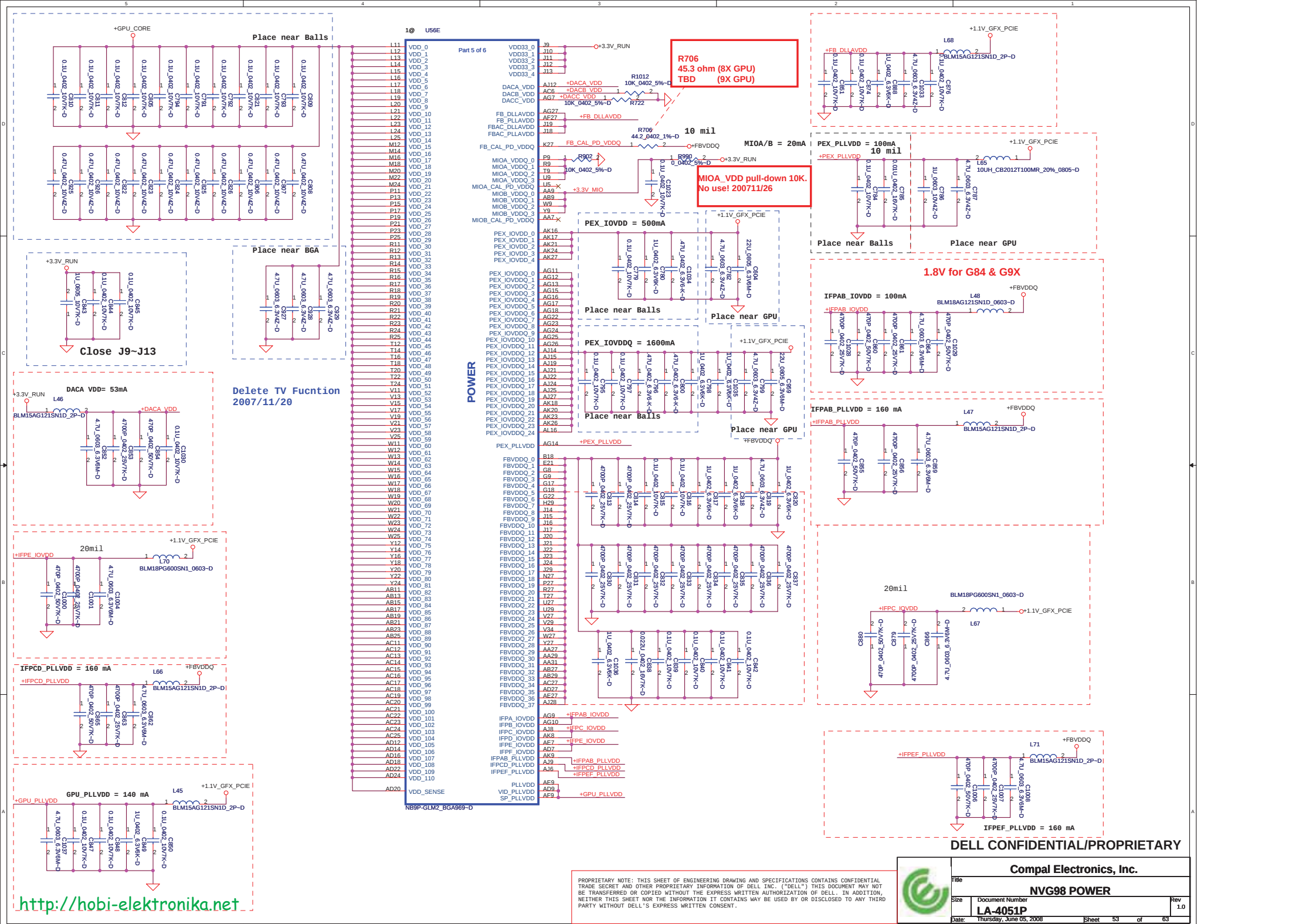
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

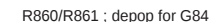


DELL CONFIDENTIAL/PROPRIETARY
Compal Electronics, Inc.
Charger
LA-4041P
Date: Thursday, June 05, 2008 Sheet 48 of 54

File	Document Number	Rev
	LA-4041P	0.2

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.

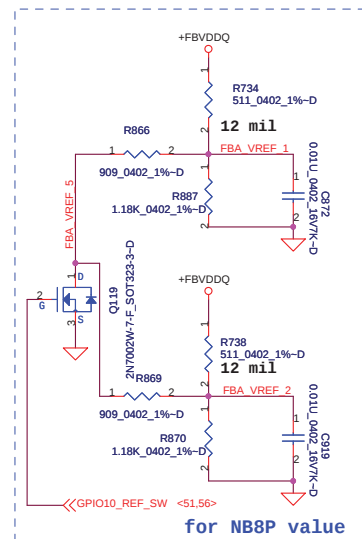
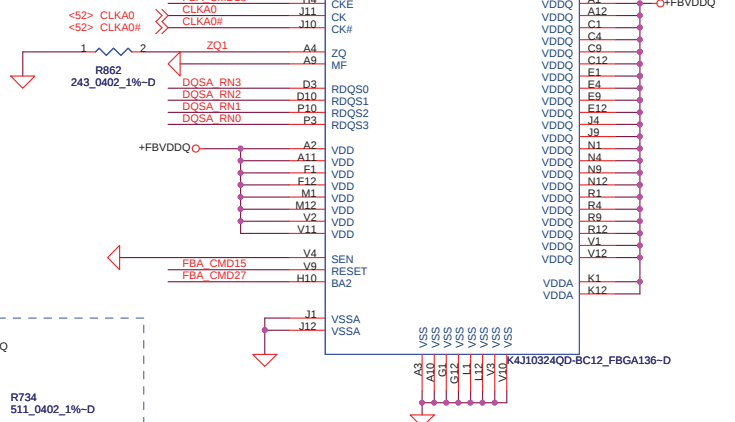
Size	Document Number
------	-----------------

LA-4051F
Date: Thursday, June 05, 2008

Sheet 54 of 63

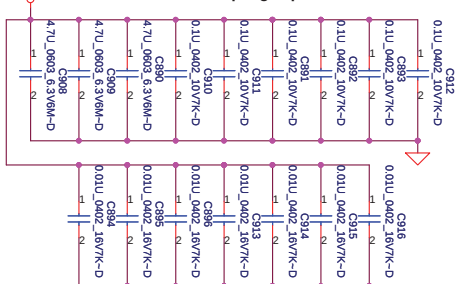
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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

↑ GETPAGE - CDDRO

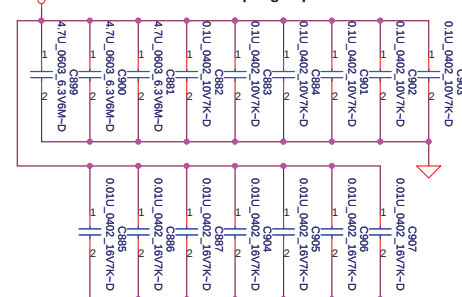


for NB8P value

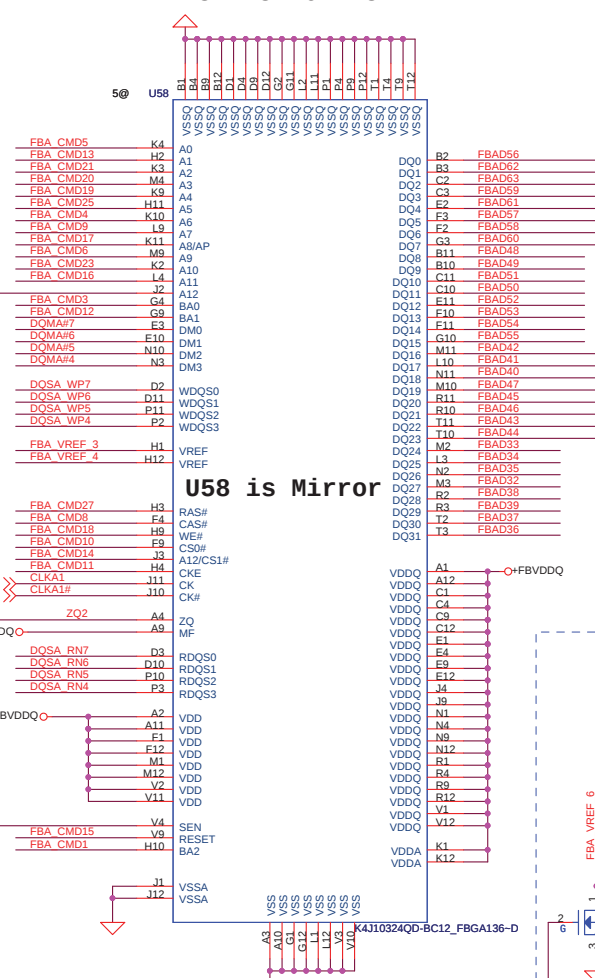
Place below decoupling caps close U57



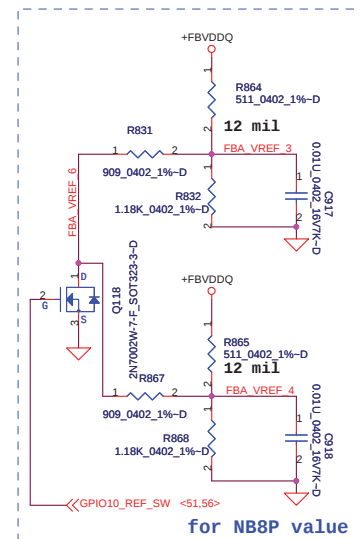
Place below decoupling caps close U58



32Mx32 GDDR3



U58 is Mirror



for NB8P value

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

NVG94 External GDDR3-A

Size	Document Number	Rev
		1.0

LA-4051P	1.0
----------	-----

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)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	37	ECE5028	2007/10/09	Compal	change BID pop option to X01: SCH165393	R534 (depop) ; R529 (pop)	X01
2	33	USB2.0	2007/10/25	Compal	Charger USB Fail: SCH165395	Need to swap the connection for USB_CHARGER_PWR_EN# & ESATA_USB_PWR_EN#	X01
3	13	Cantiga	2007/10/25	Compal	modify JUMPER ref. name	Modify ref name from P1 to PJP22	X01
4	51	NV98	2007/10/25	Compal	VRAM strap pin pop option	depop R922, R923, R933, R934 and pop R920, R921, R935, R936 to match 16Mx32 (Samsung)	X01
5	51	NV98	2007/10/25	Compal	No more TV out function supported on Edock-LIO: SCH165398	Delete TV signals & Circuit, and remove R669, R762, R763	X01
6	20	CRT SW	2007/11/1	Compal	cLock 27M R37 Resistor Error: SCH165399	R37 change value to 33ohm	X01
7	6	cLock	2007/11/5	Compal	Support Quad Core CPU	(1) Quad Core Support, stuff R941, R984, R945, R946, R943, R942, R944, Q14, Q129 (2) Quad Core ITP Support, stuff R976, R977, R978, R979, R980, R981, R982, R983	X01
8	7	Quad Core	2007/11/5	Compal	Support DP compoments	(1) Support DP, all components stuff	X01
9	21	DP	2007/11/5	Compal	DPB_HPD# Voltage Level	Remove R1006 pull down 7.5K (UMA need the resistor), becasue Descrite level is 3.3V	X01
10	21	DP	2007/11/5	Compal	DOCK_DET# Double Pull Up	Remove R799 for Double Pull Up	X01
11	21	DP	2007/11/5	Compal	DP Spec for AUX/# need pull down 100k	add DPB_MB_AUX/# --> R895/R896 add DPB_DOCK_AUX/# --> R897/R898 add DPC_DOCK_AUX/# --> R899/R900 (no-stuff)	X01
12	22	SB	2007/11/5	Compal	MDC Reset Change Control By ECE5028 to 5V Level: SCH165401	SB U10 PinF6 change Name to GNT3#/GPIO55 only	X01
13	23	SB	2007/11/5	Compal	SB Remove RTC Detect Function	Remove R375, R961, R960, Q130 and Add T46 on U10 pinAE8	X01
14	23	SB	2007/11/5	Compal	Support HDCP Audio: SCH165403	SB Stuff 3rd HD Audio to GPU R243, R244, R245, R246 GPU Stuff R673, R674, R676, R678 0ohm, R675 33ohm	X01
15	51	GPU	2007/11/5	Compal	SB GPIO Change: SCH165431	(1) Sniffer detect Remove From SB to ECE5028 GPIOH7, U10 pinAE8 add T39, pull up resistor R754 change to page37 (2) R266 USB_MCARD3_DET# move to page34 (3) SB U10 pinC12 net named to "LAN_PHY_PWR_CNTRL"	X01
16	24	SB	2007/11/5	Compal	Audio Test Result: SCH165433	C437/C436 change from 1uF_1206 to 2.2uF_1206	X01
17	28	Audio	2007/11/5	Compal	Power Board Detect pin name Changed: SCH165431	JS1394 pin9 change name to "PWR_BTN_BD_DET#", and connect to page 37 ECE5028 pin33 GPIOH7	X01
18	31	PWR Board	2007/11/5	Compal	LOM Disable pin name changed: SCH165431	LOM Disable pin name changed to "LAN_PHY_PWR_CNTRL" and connect to page 37 ECE5028 pin88 GPIOG0	X01
19	29	LOM	2007/11/5	Compal	ESATA Enable pin name Change: SCH165431	ESATA Enable pin name U29 Changed to "ESATA_USB_PWR_EN#" and connector to ECE5028 pin82 GPIOB2	X01
20	33	ESATA	2007/11/5	Compal	Charger USB Port pin name Change: SCH165431	Charger USB U53 Enable pin name changed to "USB_POWERSHARE_PWR_EN#" and connector to ECE5028 pin104 GPIOA7	X01
21	33	USB	2007/11/5	Compal	Charger USB Port Switch Eye Diagram Fail: SCH165434	U54 Change to TI Part TS3USB1RSER	X01
22	33	MDC	2007/12/5	Compal	MDC DIS pin Voltage to +3.3V too Low: SCH165431	R326 pull up to +5V_ALW and connrection changed from SB to ECE5028 pin102 GPIOA5 (2007/12/5 update to pull up +5V_ALW) Remove JLAT2	X01
23	34	WLAN	2007/11/5	Compal	New ME Drawing Remove Latch 2	stuff R438, R458, R449	X01
24	34	Nimi-card	2007/11/5	Compal	Correct Nimi-Card Detect	ESD Part D65, D66 stuff	X01
25	35	Dock-ESD	2007/11/5	Compal	Support Dock ESD	Smartcard SC_DET pin remove module port to EC	X01
26	36	USH	2007/11/5	Compal	Smartcard Detect Cancel: SCH165435	L69 change part >400mA of Murata LQH32CN100K53L	X01
27	36	USH	2007/11/5	Compal	Correct Smartcard Buffer 73S8009CN Power Bead Current Value: SCH165435	JCS1 change connector to TYCO I-1775784-0 6P-T. But still wait contactless spec to update	X01
28	36	USH	2007/11/5	Compal	Contactless Connector Changed: SCH165435	(1) pin102 no need of PNL_LED_MASK#, change to MDC_RST_DIS#	X01
29	37	ECE5028	2007/11/5	Compal	ECE5028 change GPIO Define: SCH165431	(3) pin70 GPIOC5 no need of ADAPT_TRIP_SET_NC (4) updt CHIP_ID message, current set to {0,0}	X01

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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
30	38	MEC5035	2007/11/05	Compal	MEC5035 pin19 add RC_ID: SCH165437	add R211/C480	X01
31	38	MEC5035	2007/11/05	Compal	MEC5035 SUSPWROK change Define: SCH165437	SUSPWROK change from pin19 to pin30	X01
32	38	MEC5035	2007/11/05	Compal	MEC5035 no need DEBUG_ENABLE#, support from KOST_DEBUG_RX: SCH165437	(1)JDE61 pin 2 change to HOST_DEBUG_RX, Double pull up --> remove R553. (2)DEBUG_ENABLE# no need, remove R959	X01
33	38	MEC5035	2007/11/05	Compal	No Need EC SPI Rom Function: SCH165439	(1)Remove R591, R589, R590, R592, R593, C672, U37 (2)MEC5035 pin 67, 68, 69 : NC	X01
34	38 39	MEC5035	2007/11/05	Compal	No Need ECE1088: SCH165440	(1)MEC5035 pin35, 37 : NC (2)remove ECE1088: U38, C676, C677, R747, R650, R826	X01
35	39 38	ECE1088	2007/11/05	Compal	TouchPad Change Define: SCH165443	(1)TouchPad Connector Change pin define for pin 14/15/16 to GND/KYBD_BLJT_PWR/TP_DET# (2)KYBD_BLJT_PWR connect to MEC5035 pin47	X01
36	41	Screw	2007/11/05	Compal	ME Changed Screw Size	(1)Dock: H14/H15 --> H 5P3 (2)GPU : H19 --> 4P0, H20 --> 3P9, H21 --> 3P3 (3)H23 --> 4P0 (4)H22 --> 2P2	X01
37	42	LED	2007/11/05	Compal	LED Circuit Changed: SCH165444	(1)Add U14 AND Gate for Base LED Mark with L1D_CL# (2) Refer Page 42 for LED circuit changed	X01
38	37	MEC5028	2007/11/19	Compal	ALWON oscillation on Battery only with RTC battery: SCH165445	Cause the ECE5028 no power, add D4/R20 to separate	X01
39	24, 33, 36	USH/BIO	2007/11/19	Compal	USH add Reset# to BIO Module: SCH165061	BIO_DET# Function Delete, add R63 pull-up for FP_RESET#. And link to USH pin C3. And add R1002 for UPEK module	X01
40	29	LOM	2007/11/19	Compal	Intel LOM PHY 82576LM change to B0 version: SCH165446	Intel LOM PHY 82576LM change to B0 version	X01
41	10~15	NB	2007/11/19	Compal	Intel NB Cantiga change to B0: SCH165447	Intel NB Cantiga change to B0	X01
42	21, 35, 51	DP	2007/11/19	Compal	DP Port Cable Detect change to "H" Detect: SCH165448	Delete R783/Q10, and net name change to DPB_HPD Delete R795/Q114, and net name change to DPC_DOCK_HPD	X01
43	21	DP	2007/11/19	Compal	DP Port delete no use parts	Delete R895-R900, R209, R278, R336, R337, R419, R647 --> Dell want keep those parts	X01
44	21	DP	2007/11/19	Compal	DP Port delete function: SCH165448	DP Port delete function work, DPC_DOCK_AUX_SW/DPC_DOCK_AUX#SW add R1008/R1009 100k to GND DP Port delete function work, DPB_AUX_SW/DPB_AUX#SW add R1006/R1007 100k to GND, but depop U9 pin 1 R193 change to 3.48K 1%, and depop R180/R181/R896. pop R276/R336/R337	X01
45	35	DOCK	2007/11/19	Compal	Dock connect rename: SCH165449	Dock connect rename to JD0CK1	X01
46	35	DOCK	2007/11/20	Compal	Dock connect ESD Diode: SCH165449	add D65 SM24C.TCT_S0D23 ESD Diode on +DOCK_PWR_BAR	X01
47	18	Thermal	2007/11/20	Compal	No need for PWR_MON_GFX for DSC platform: SCH165450	un-stuff R1005	X01
48	20	CRT/ESD	2007/11/20	Compal	No stuff CRT ESD Diode D5, D6, D7: SCH165453	No stuff CRT ESD Diode D5, D6, D7	X01
49	55, 56	GDDR	2007/11/20	Compal	Chnage to NB9P, CLK Shunt Resistors Change Value: SCH165454	R750, R824, R871, R872 change to 475ohm 1%	X01
50	51	GPU	2007/11/20	Compal	need to add two series resistors for CA_DET: SCH165454	add R1010, R1011 0hm, un-stuff	X01
51	12, 13, 20 51, 53	NB/GPU	2007/11/20	Compal	TV Function Remove from M09 Platform: SCH165454	NB: page12 U2 pinC31/E32 --> NC NB: page13 U2 pinM25 to GND, pinL28 to +1.5V RUN after a Bead (L49) SW: page20 U4 7B1/8B1/9B1, 7B2/8B2/9B2 --> NC and remove R669/R762/R763 GPU: page51, delete R679, C737. U56 pinAA4/Y4/AB4/AB6/AC5 NC GPU: page53, delete DACB: C867, C868, C869, C1031, L49, and add R1012 10K pull down DACB at pinAC6 U56 GPU pinD5/E5 I2CE_SCL/SDA add R709/R1013 10K pull up, but depop	X01
52	51	GPU	2007/11/20	Compal	Nvidia FAE suggest for I2C E channel pull up: SCH165454	U56 GPIO5 --> GPU_VID_0 GPIO6 --> GPU_VID_1	X01
53	51	GPU	2007/11/20	Compal	Nvidia GPU set threes different power level: 1.17V, 1.09V, 0.9V: SCH165454	JD0CK1 pin41 add net : +NBDOCK_DC_IN_SS	X01
54	35	DOCK	2007/11/20	Compal	DOCK pin out to support Battery Slice: SCH165449	Remove MDI termination R384-R391, C488-C491, R395, R396, R397 move to IO Board	X01
55	30	LOM	2007/11/20	Compal	Remove termination resistors capacitors and LED serial resistors: SCH165456	Add AND Gate: U70 and C1014, R143/R144 depop	X01
56	18	EMC4002	2007/11/21	Compal	EMC4002, Power SW pin separate : SCH165450	page29: Add L00 Q101/Q103, R959-R962, C1010-C1012 page33: IO connector pin36 change to +LOM_VCT page35: Dock pin116/118 change to +LOM_VCT	X01
57	29, 33, 35	LOM	2007/11/21	Compal	Intel LOM LDO for +2.65V/+2.5V: SCH165456	Change MDI bus Bead Value at L20 ~ L27 from 36nH to 22nH: SCH165456	X01
58	30	LOM SW	2007/11/21	Compal	Change MDI bus Bead Value at L20 ~ L27 from 36nH to 22nH: SCH165456	USB Port Two Connection Changed for Port2: SB --> Switch--> Choke --> Connector, and Switch Chip close to SB	X01
59	33	USB Port 2	2007/11/21	Compal	USB SW Vendor Suggest Change Design: SCH165434	D10 change change to B0540WS-7 SOD323-2	X01
60	21	DP	2007/11/21	Compal	Proper Compoments Derating	For +IFPC IOVDD remove Q127, R940, Q128, PJP43	X01
61	53	GPU Power	2007/11/21	Compal	Change from Nvidia NB8P to NB9P, remove some parts: SCH165457	+IFPE IOVDD: L70, C1000, C1001, C1004 +IFPEF_PLLVDD: L71, C1006, C1007, C1008	X01
62	53	GPU Power	2007/11/21	Compal	pop for NB9P on +IFPE IOVDD/ +IFPEF_PLLVDD: SCH165457		X01



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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
63	38	MEC5035	2007/11/21	Compal	Change Netname following Power Circuit Changed: SCH165437	"ACAV_IN DOCK" to "ACAV DOCK SRC" "ACAV_IN DOCK#" to "ACAV DOCK SRC#" "ACAV_IN MB/DOCK" to "ACAV_IN" Remove U64, C846, add U71, C1031	X01
64	37	MEC5028	2007/11/21	Compal	DF174483: [SSI2]The LCD/LED will keep had power with USB device when unplug AC & Battery.	1) Add 100k no pop pull-ups to +3.3V_ALW2 on: - USB_SIDE_EN# - ESATA_USB_PWR_EN# - USB_POWERSHARE_PWR_EN# 2) No stuff R502, R923, R929.	X01
65	37	MEC5028	2007/11/21	Compal	Change PU/PD on SYS_LED_MASK#: SCH165431	add R1014 100k PD	X01
66	36	USH	2007/11/21	Compal	Remove unnecessary parts on contact less: SCH165435	Remove R495, R499	X01
67	51	GPU	2007/11/21	Compal	Need to depop R855/R892 to pass HDMI spec: SCH165454	depop R855/R892	X01
68	27, 36	Crystal	2007/11/21	Compal	Y3 Y5 is not PSL parts: SCH165458	Update Y3, Y5 to PSL parts	X01
69	24, 29, 37	Crystal	2007/11/22	Compal	LAN_PHY_DISABLE# Change net name same with Roush: SCH165431	Change net name to LAN_DISABLE# for SB GP1012 to PHY, and pass a 00hm resistor for "LAN_DISABLE#_R" to ECE5028 GP1060	X01
70	7	CPU Quad Core	2007/11/22	Compal	Bom Separate for Avia and Maybach DSC for CPU: SCH165460	Change the R976~ R983, R984, R941~R946 Q129, Q14 to 1@, then Avia Bom Stuff. MaybachDSC un-stuff Camera net name update to "+CAMERA_VDD"	X01
71	19	Camera VDD	2007/11/22	Compal	Camera net name update: SCH165461	U28 chnage to TI TPS2051BDBVR_S0T23-5	X01
72	31	PCMCIA	2007/11/22	Compal	Change SD Card Power Switch for PSL: SCH165463	JSD1 change to 16pin cable type connector, same with touchpad connector	X01
73	31	PCMCIA	2007/11/22	Compal	JSD1 connector changed from FPC type to Cable type: SCH165464	JBI01 change to "TYCO_1734242-6_6P-T"	X01
74	33	BIO	2007/11/22	Compal	BIO connector change to another part: SCH165464	JDOCK1 change to JAE_WD2F144WB1	X01
75	35	Docking	2007/11/22	Compal	Docking Connector Change Layout Symbol: SCH165449	JCS1 Contact Less Connector Changed to Tyco_1-1775784-0	X01
76	36	Contact Less	2007/11/22	Compal	Contact Less Connector Changed: SCH165435	We use I2C codec, no more for SPI Audio Codec, R329 can remove	X01
77	27	I2C Codec	2007/11/27	Compal	Reduce one components R329 for I2C Codec fixed: SCH165467	R845/R844 pop, delete R847/R846	X01
78	36	USH	2007/11/27	Compal	use B0 USH BCM5880 Chip, resistors setting changed: SCH165435	delete components: R307/R308/R309/R295/R305/R304/R306/C329/U13	X01
79	24	SPI/ICH0	2007/11/27	Compal	no more for 2nd SPI Rom, save board space: SCH165469	Add R1015~R1020 on ITP BPM#0~BPM#5, and depop first. Then we need hand soldering when we want use ITP	X01
80	7	ITP	2007/11/29	Compal	ESD suggest add 0-ohm resistors on ITP bus: SCH165507	remove D1/R122	X01
81	13	NB	2007/12/03	Intel	SCH165564, Intel provide remove D1/R122	(1) R788 SP TPM LPC EN pull up pop (2) R490 depop (3) C591 depop (4) remove R472 resistor 100hm (5) pop R829, depop R467 for B0 version (6) depop R849, due to Broadcom no need detect SC DET (7) R476 change to 5.1M, R488 change to 3.3M to reduce power consumption (8) depop C594 (9) add R1027 47K pull down	X01
82	37, 36	USH	2007/12/04	Broadcom	Broadcom Review Result	(1) PEX_IOVDDQ add C1035 1uF (2) PEX_IOVDD add C1034 (3) remove C778 (4) R699, R700, C755 no stuff (5) FBVDDQ C820 to 1u and add one C1036 (1u) (6) +FBVDDQ all 0.022u to 4700p, done (7) +FB_DLLAVDD add C1033 4.7u (8) +GPU_PLLVDD C850 change to 0.1u (9) +GPU_PLLVDD add C1037 4.7u (10) strap pin define change, STRAP0: Not stuff R933: Stuff R920 with 45.3K 1%. STRAP1: Not stuff R921: Stuff R934 with 10K 1% STRAP2: NB9M-NS : Not stuff R935, Stuff R922 with 20K 1% STRAP2: NB9P-GLM2 : Not stuff R935, Stuff R922 with 25K 1% ROM_CLK_GPU: NB9M-NS : Not stuff R923, stuff R936 with 15K 1% ROM_CLK_GPU: Qimonda 16Mx32 : Not stuff R931, Stuff R927 with 10K 1%. Hynix 16Mx32 : Not stuff R931, Stuff R927 with 15K 1% Samsung 16Mx32 : Not stuff R931, stuff R927 with 20K 1% Qimonda 32Mx32 : Not stuff R931, Stuff R927 with 30K 1%. Hynix 32Mx32 : Not stuff R931, Stuff R927 with 35K 1% Samsung 32Mx32 : Not stuff R931, stuff R927 with 45.3K 1% ROM_SO_GPU: Not stuff R928, Stuff R930 with 4.99K 1% (11) Add R1022 40.2K 1% on STRAP_REF_MIOB (12) Add R1023 40.2K 1% on STRAP_REF_3V3. (13) C982 Remove (14)Add pull down resiter on MIOA_CAL_PU_GND R1026 and not stuff (15)Add 10K pull down on MIOB_CLKIN R1021 (16) I2CE_SCL/SDA: Change R709 and R1013 to pull up +3.3V_RUN (17) I2CS_SCL/SDA: Add 10K pull up on I2CS_SCL. (18) R696 pop	X01
82	51, 52, 53, 54	Graphic	2007/12/04	Nvidia	Nvidia Review result	(1) PEX_IOVDDQ add C1035 1uF (2) PEX_IOVDD add C1034 (3) remove C778 (4) R699, R700, C755 no stuff (5) FBVDDQ C820 to 1u and add one C1036 (1u) (6) +FBVDDQ all 0.022u to 4700p, done (7) +FB_DLLAVDD add C1033 4.7u (8) +GPU_PLLVDD C850 change to 0.1u (9) +GPU_PLLVDD add C1037 4.7u (10) strap pin define change, STRAP0: Not stuff R933: Stuff R920 with 45.3K 1%. STRAP1: Not stuff R921: Stuff R934 with 10K 1% STRAP2: NB9M-NS : Not stuff R935, Stuff R922 with 20K 1% STRAP2: NB9P-GLM2 : Not stuff R935, Stuff R922 with 25K 1% ROM_CLK_GPU: NB9M-NS : Not stuff R923, stuff R936 with 15K 1% ROM_CLK_GPU: Qimonda 16Mx32 : Not stuff R931, Stuff R927 with 10K 1%. Hynix 16Mx32 : Not stuff R931, Stuff R927 with 15K 1% Samsung 16Mx32 : Not stuff R931, stuff R927 with 20K 1% Qimonda 32Mx32 : Not stuff R931, Stuff R927 with 30K 1%. Hynix 32Mx32 : Not stuff R931, Stuff R927 with 35K 1% Samsung 32Mx32 : Not stuff R931, stuff R927 with 45.3K 1% ROM_SO_GPU: Not stuff R928, Stuff R930 with 4.99K 1% (11) Add R1022 40.2K 1% on STRAP_REF_MIOB (12) Add R1023 40.2K 1% on STRAP_REF_3V3. (13) C982 Remove (14)Add pull down resiter on MIOA_CAL_PU_GND R1026 and not stuff (15)Add 10K pull down on MIOB_CLKIN R1021 (16) I2CE_SCL/SDA: Change R709 and R1013 to pull up +3.3V_RUN (17) I2CS_SCL/SDA: Add 10K pull up on I2CS_SCL. (18) R696 pop	X01
82	28	Audio	2007/12/05	IDT	IDT Audio Reference changed	R818. R827 change to 1K_0402	X01

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Changed-List History-3

LA-4051P

Date: Thursday, June 05, 2008 Sheet 59 of 63

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)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
83	32	CardBus/Express	2007/12/6	Ricoh	Ricoh review result	(1) CBS_CCD1#/CBS_CCD2# add C1038/C1039 270pF pull down (2) U52 +1.5V_CARD add C1041, +3.3V_CARDAUX ADD C1040 10uF_0805 (3) R657, R684, R790 depop, because chip internal have been pull up	X01
84	24	LOM	2007/12/10	Intel	Per Intel message, no use GPIO12 to control LAN_DISABLE#, then reserve to pull up	add R1028 pull up +3.3V_ALW_ICH, depop	X01
85	37, 38	EC	2007/12/10	Dell	INSTANT_ON_SW# design change (WI165505)	INSTANT_ON_SW# change design to add R1029, R1030, R1031, then depop R560, D4, C827, R20	X01
86	23, 51	SB/VGA	2007/12/10	Compal	HDMI Over Audio source changed, because it will impact S3 resume. HDMI source change from SPDIF	Depop R673, R674, R675, R676, R678, R243, R244, R245, R246.	X01
87	27	Codec	2007/12/12	Compal	IDT codec review result to change C408 ~ C411	Value from 1uF to 2.2uF	X01
88	18, 21, 37, 38	EMC4002, DP 5028, 5035, LED	2007/12/13	Compal	The VCC tied to logic gate VCC isn't correct.	Change U70, U66, U71, U62, U14 from 74AHCT to 74AHC part. (VCC pin spec = 3.3V)	X01
89	35	DP	2007/12/17	Dell	SCH166257: DOCK_DET# add pull 100K	add R1033 100K, and depop R124	X02
90	38	DOCK/5035	2007/12/17	Dell	TASK166259: update GPIO Map	signal ACAPV_DOCK_SRC# can be removed from the 5035	X02
91	29	LOM PHY	2007/12/17	Dell	SCH166263: De-pop R1004 for control LAN_PHY enable from BIOS setting	De-pop R1004	X02
92	42	LED	2007/12/17	Compal	SCH165444: add D66 for +5V_RUN back drive issues	add D66 between Q151 and Q97	X02
93	18	+2.5V LDO	2007/12/17	Compal	SCH166267: Disable EMC4002 LDO for +2.5V_RUN	add R1034 10K pull low, and de-pop R149, C238, C239	X02
94	19	DP	2007/12/17	Compal	SCH166272: De-populate D10 with a 0ohm Resistor	D10 footprinter can't stuff for 0805 or 1210, reserve a 1210 resistor footprint first: R1035	X02
95	42	LED	2007/12/17	DELL	SCH166275: Mask signals for NUM/SCRL/CAPS LEDs	Add Q154/R1036 to control NUM/SCRL/CAPS LED on/off, R1036 de-pop	X02
96	33, 38	USB	2007/12/17	DELL	SCH166278: Update cell charger detect circuit	add D67/D68 R1037, del R986, update C1021 to 1uF	X02
97	6, 8, 24	CLOCK, CPU, ICH	2007/12/17	DELL	SCH166282: intel NOA tests points compliance	add R1038-R1042 on PT2	X02
98	33	eSATA	2007/12/17	Compal	SCH166284: eSATA add Repeater Chip	eSATA repeater for ICH to eSATA trace over 5inch issues, add U72, C1042-C1045, R1043-R1048, Q155. U72 change to P12EQX3201BZFE	X02
99	37	5035	2007/12/17	Compal	SCH166316: PT2 change to X02 BID	PT2 change the BID for X02: R530, R534 pop. R535, R529 de-pop	X02
100	35	Dock	2007/12/21	Compal	SCH166435 : Hot Docking then Docking side Apdater Protect	add D70 and R1057 on docking connector, and add C1055, R1059. MEC5035 pin41 change to "DOCK_POR_RST#" to dock pin140	X02
101	9	CPU Bulk Caps	2008/2/4	Power	SCH166160 : CPU Bulk change to 270u 4.5mohm to support QC CPU	C56-C61 change to 270U_D_2VM_R4.5M-D, C58, C61 depop	X03
102	21	DP	2008/2/13	Dell	SCH168227 : DP Circuit Separate to Two Path for DP and DVI	Add C1056, C1057, R1060-R1063, Q155, Q156, U73, U74	X03
103	24, 36	SB (TPM), USH	2008/2/13	Dell	SCH168228 : Disable TPM Strape pin on SB GPIO6	Add R304 (30) pull low when disable TPM Strap, and depop R273. And USH Depop D71, R1058 (40) Pop R489 (30)	X03
104	27	Audio	2008/2/13	IDT	SCH168229 : Reduce distortion, hissing, noise, and "pops" when changing PC BEEP volume	Depop R328, and R327/R828 change to 499K	X03
105	35	Dock	2008/2/13	Power	SCH168230 : Prevent System as Docking Always	Depop R1057	X03
106	13	NB	2008/2/13	Compal	SCH168231 : Debug +3.3V_Run backdrive issues	Reserve R1065 and stuff	X03
107	37	EC E5028	2008/2/13	Power	SCH168232 : Power Battery Slice Issues	Add D72/R1067, and reserve R1066	X03
108	33	eSATA	2008/2/13	Pericom	SCH168233 : Vendor Suggest Reserve Some Resistors on ESATA Repeater Chip	R1068-R1069 pop, and R1070-R1073 depop. And pop R1046 470ohm for SATA Eye	X03
109	36	USH	2008/2/13	Dell	SCH168234 : USH USB Signals Damping Resistor Value	R468/ R469 change to 0ohm	X03
110	33	USB Switch	2008/2/13	Dell	SCH168235 : USB Switch Add Resistor Reserve	Add R1074, R1075, depop	X03
111	42	LED	2008/2/13	Compal	SCH168236 : Follow Roush Test Result for LED Current Spec	Change to 1K: R663, R125, R661, R1000, R668, R659, R556, R596, R655, R903, R665 Change to 82ohm: R997	X03
112	18	EMC4002	2008/2/13	SMSC	SCH168237 : For Proper ESATA Power Consumption on EMC4002 +3.3V LDO	R152 Change to 0.82 1210	X03
113	6	Clock	2008/2/13	Dell	SCH168238 : For Proper Ferrite Bead Power Rating	L1 change to BK2125HS601 500mA	X03
114	36	USH	2008/2/13	Broadcom	SCH168239 : For USH Support Low Power	Pop R849	X03
115	10	NB	2008/2/13	Intel	SCH168045 : Reserve for Intel Debug	add R1088, Depop	X03
116	37	EC E5028	2008/2/13	Compal	SCH168043 : X03 Board ID Updated	Pop R529 and Depop R534	X03
117	27	Audio	2008/2/15	ADI	SCH168240 : ADI Suggest	(1) L18 change to BLM18EG601SN1D for wider high frequency coverage (2) C391, C395, C406 change to 4.7uF 0805 (IDT suggest 10uF 0805 better, but the package is too big) (4) C392 remove	X03
118	27 36	Audio USH	2008/2/15	IDT Broadcom	Chip Version changed	(1) U32 USH change to C0 version (2) U16 IDT Audio change to 92HD71B7A5NLGX3X8_QFN48	
119	24 36	SB USH	2008/2/15	Compal	TPM Disable to Common Resistors Location with UMA, R1064 --> R304, R483 --> R489		



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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
120	7	ITP	2008/2/18	Intel	Change Some ITP Resistors Value	ITP Resistors: R67 --> 27, R64 --> 39 , R66 -> 649, R65 --> 150, R57 --> 124	X03
121	33	eSATA	2008/2/18	Compal	SCH168046: Follow eSATA EA Result, Add the Parallel Resistor	R1046 pop 470ohm	X03
122	27, 28	Audio	2008/2/20	ADI/Dell	SCH168466 : ADI Suggest to Update Separate AGND and Audio Precision Spec Update	(1) ADI SSM2602 add AGND net, include Audio Codec 92HD71 (2) Audio Precision spec for SNR and THD+N update, then C436/C437 change to 10uF	X03
123	21	DP	2008/2/20	Dell	SCH168467 : More DP Components Changed	(1) R1060 / R1061 / R1062 / R1063 change to 10K (2) R897/R336/R898/R337/R1008/R1009 depopulate (3) R193 to 5.11K (4) R1001 change to 1M	X03
124	27	Codec	2008/2/22	ADI/Dell	SCH168468 : update codec circuit for noise problem	(1) C401, change to 0.1uF (2) add C124, C329, R308, R309, C392, C481 (3) delete C397 (4) C408/C409 change to 0.22uF (5) C410/C411 change to 0.068uF (6) R340/R342 change to 100 ohm	X03
125	36	USH5880	2008/2/22	Compal	SCH168469 : add PI circuit for EMI issue	Add L73/L74/C1059/C1058	X03
126	18	EMC4002	2008/2/25	Compal	SCH168531 : chnge R153 value to meet the formula of Ra	R153 change to 3.16K	X03
127	33	USB2.0	2008/2/29	Compal	SCH168774 : To pop U51 per ESD testing result	pop U51	X03
128	23, 29, 36	ICH, USH, LAN	2008/2/29	Compal	SCH168777 : X'tal EA result to change some Caps value	C296/C297 from 15pF to 10pF; C475/C476 from 27pF to 12pF; C609/C608 from 22pF to 12pF	X03
129	8	CPU	2008/3/3	Dell	SCH168828 : QC BU issue	Pin AA7 of the CPU has to be NC and we connect it to +VCC_CORE	X03
130	27	Codec	2008/3/3	Compal/IDT	SCH168836 : Follow Roush to add R1091/R1092 for Audio noise	add R1091/R1092 (100 ohm)	X03
131	39	TP/KB/LID	2008/3/3	Dell	SCH168838 : M09 S3 backdrive issue	Touch pad vendor use 5VALW for SMBUS, to add R1093, Ro1094, and depop R594/R595	X03
132	23	ICH	2008/3/3	Compal	SCH168843 : 24MHz noise issue (EMI feedback)	pop C300, C302, C309	X03
133	7	CPU	2008/4/28	Compal	SCH170946 : change R944 from 2K to 1.74K	R944 from 2K to 1.74K	X04
134	7	CPU	2008/4/28	Compal	POP R785 to support Quad Core circuit	POP R785 (51 ohm)	X04
135	10	MCH	2008/4/28	Compal	SCH170947 : R82 & R95 value for Quad core , Dual Core	R82 for Avia is 16.9 ohm ; R82 for DSC is 24.9 ohm R95 for Avia is 75 ohm ; R95 for DSC is 100 ohm	X04
136	21, 51	GPU, DP	2008/4/28	Compal	SCH170948 : ESD requirement	C984 & C983 from 0.1uF to 0.033uF	X04
137	24	ICH	2008/4/28	Compal	SCH170949 : Depop 2nd SPI ROM	Depop R329, R1044, R377, U13, R375, C484, R380, R381, R382	X04
138	27	Codec	2008/4/28	Compal	SCH170950 : DMIC CLK EMI issue	We pop C485 and change R338 to L75(POP)	X04
139	27	Codec	2008/4/28	Compal	SCH170952 : Bypass double inverter of DAI_DI	follow Roush to bypass U18, U19. so we depop U18, U19, C418, C419, and add R762(0 ohm) to bypass it.	X04
140	35	eDOCK	2008/4/28	Compal	SCH170955 : Follow Roush to add R1095, R1096	add R1095, R1096	X04
141	37	ECE5028	2008/4/28	Compal	SCH170956 : change BID	depop R529, add R534 ; depop R530, add R535 ; add R531, depop R536	X04
142	40	PWR CTRL	2008/4/28	Compal	SCH170957 : add discharge circuit of 3.3VRUN	add R625(39 ohm), Q79	X04
143	18	EMC4002	2008/5/7	Compal	SCH171232 : FAN speed couldnt be detected issue	add D38	X04
144	42	LED	2008/5/7	Compal	SCH171235 : SNIFFER LED only support blue color led	depop Q100, R667	X04
145	23	ICH	2008/5/8	Compal	SCH171330 : WLAN detection issue	Follow Roush to add R84, R96 PD 10K ohm	X04
146	40	PWR CTRL	2008/5/27	Compal	SCH172015 : Follow Roush to change C688 value	From 4700pF to 3300pF	A00
147	37	ECE5028	2008/5/27	Compal	SCH172018 : BID to A00(1.0)	pop R529, depop R534	A00
148	7, 18	CPU, EMC4002	2008/5/29	Intel/DELL	SCH172109 : to disconnect the Quad Core 2nd thermal sensor	delete the traces, H_THERMDA1 / H_THERMDC1, and delete C227, C228	A00
149	7, 37	CPU, ECE5028	2008/5/29	Compal	SCH172115 : to modify the Quad Core detect circuit	(1) disconnect ECE5028 pin3, pin4. make it NC. (2) delete R941, and CPU pin F8 connect to R945 pin2, the net name is QUAD_REF_CTRL (3) R945 change to 10K, and R945 pin 1 change PU to +1.05V_VCCP (4) R943 pin 1 change PU to +3.3V_RUN	A00
150	24, 38	ICH, MEC5035	2008/6/2	DELL	SCH172198 : re-route ODD_DET#	add a connection to MEC5035 pin34 also.	A00
151	29	82567LM	2008/6/6	DELL	SCH172398 : LOM IEEE test result from Intel	C475 & C476 from 12PF to 27PF to pass LOM IEEE test	A00
152	42	LED	2008/6/6	Compal	SCH172400 : Breath LED current issue	R997 from 82 ohm to 100 ohm for current limited	A00
153	24	ICH	2008/6/6	Compal	SCH172402 : SAWT00TH waveform on SERIRQ issue	Add R122(33 ohm)	A00
154	36	USH5880	2008/6/13	BRCM	BRCM feedback for PI circuit	C1058/C1059 from 5% to 1% ; C641/C647 from 5% to 1%	A00



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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	43	+DC_IN	11/24	leverage Roush	Battery slice need detect NB battery is insert or not.	Add PQ69 NTR4502PT1G, and PD32 RB751_S0D323 Connect to DOCK_SMB_ALERT# and SLICE_BAT_PRES#	
2	43	+DC_IN	11/24	leverage Roush	DCIN_CBL_DET# damage ECE5028	Add ESD diode PD17 DA204U_S0T323 at DCIN_CBL_DET# Series PR221 1K_0402_5% between PJPC1, PIN1 and DCIN_CBL_DET# Parallel PC254 0.47uF_0402_6.3V on DCIN_CBL_DET#	
3	43	+DC_IN	11/24	leverage Roush	Roush component and rework changes for Docking test	PC4 change form 0.47uF_0805_25V to 0.1uF_0805_25V PR14 change form 240K_0402_5% to 1M_0402_5% PR17 change form 47K_0402_1% to 220K_0402_5% PR18 change form 47K_0402_1% to 22K_0402_5% PR342 change form 0_0402_1% to 100K_0402_5%	
4	48	Charger	11/24	leverage Roush	NB DC blocking MOSFET won't turn off when Dock AC insert.	Add PQ44 RHU002N06 control NB DC blocking MOSFET. Control signal is NB_AC_OFF Series PR284 200K_0402_1% between PQ44 PIN1 and ACAV_IN Add PD30 B540C parallel PQ34	
5	48	Charger	11/24	leverage Roush	Charger of ISL88731 will turn off When ACIN is no power	Add LM393 to replace ISL88731 ACOK function(PU11B)	
6	48 49	Charger Selector	11/24	leverage Roush	+PWR_SRC exist on Docking connector through the DOCK_DCIN_IS+ and -	Add PQ70 NTGD4161PT1G series DOCK_DCIN_IS+ and - Add PQ71 RHU002N06 to control PQ70 on/off	
7	48 49	Charger Selector	11/24	leverage Roush	A global signal name change for all notebooks	From "ACAV_IN_DOCK" to "ACAV_DOCK_SRC" From "ACAV_IN_DOCK#" to "ACAV_DOCK_SRC#"	
8	48	Charger	11/24	leverage Roush	SCH165050: Validate EMC4002 VIN1/VCP1/VCP2 for UMA & Discrete for PT1 SMT	Depop UL circuit.	
9	49	Selector	11/24	leverage Roush	PBATT DC blocking MOSFET won't turn off when Docking AC insert. It will cause Battery or adapter protect.	Add PD18 RB715F_S0T323, PD20 and PD19 RB751V_S0D323, PR329 100K_0402_5% PR328 and PR327 47K_0402_5%, PR326 and PR325 240K_0402_5% PQ75 2N7002DW-7-F_S0T363-6, PQ72 NTG6161PT1G_TSOP6 Extra net name add +NBD0CK_DC_IN_SS from Docking connector	
10	43	+DCIN	11/24	EE / SCH165224	follow HW change	To delete the RTC detection circuit	
11	52	Graphic	11/24	Compal	support Maybach DIS and AVIA	Add PR308 and PR309 to switch 1 phase or 2 phase.	
12	48 49	Selector charger	11/30	Dell	for slice function implement	change charger output to FB pin15 net name from PBATT+ to +VCHGR Add PQ41 PQ70 PR351 PR352 PR353 between +VCHGR and PBATT+	
13	47	Vcore	12/17	Intersil	transent to meet Intel IMVP6+	change PR116 from 1.69K to 1.18K,PC111 from 680p to 1000pF, PR113 from 332 to 232,PR121 from 82.5K to 162k, PC117 from 1500p to 680pF,PC120 from 220p to 180pF, PR122 from 14.7K to 12.1K,PR107 from 11.5K to 20k, PR130 from 1K to 2k,PC116 from 0.033u to 0.047u, PC112 from 0.033u to 0.01uF	
14	47	Vcore	12/17	Maxim	fix voltage too low when no load	change PR78,PR100,PR120 from 2K to 430 ohm Change PC89,PC103,PC119 from 0.22u to 1uF	

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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
15	43	+DCIN	12/17	Dell	change DCIN connector for ESD issue of "DCIN_CBL_DET#"	from Molex_87437_0663 to MOLEX_87437-0763	
16	49	selector	12/24	Dell	AC adaptor crowbar when docking	Add PR354 330K ohm Add PR355: 0 ohm Add PQ77 RHU002N06	
17	49	Selector	02/19	Merle DELL	Fix BITS CR196131 and CR196130	Add PR363 1K_1206 and PC262 1U_0603_25V from +NBD0CK_DC_IN_SS to ground Add PD35 RB751S40T1_S0D523-2 from NB_AC_OFF# to ACAV_IN_NB	
18	47	+Vcore	02/19	Dell / Maxim	Reduce Ring-backwithin 20mV when change bulk caps from 4*220uF to 3*270uF (Maybach DIS)	PR129 change from 909 ohm to 825 ohm	
19	47	+Vcore	02/19	Maxim	Fix Jitter issue	change PR123 to 10_ohm change PC122 to PR320 10_ohm	
20	50	Graphic	02/19	Maxim	MAX17007 cold boot issue back up circuit if IC versin change can not catch ST schedule	Add PQ73 RHU002N06 Add PR296	
21	48	Charger	03/06	Compal	Delete non-use circuit	delete +DC_IN_SS to PR217 and PR217.	
22	49	Selector	03/06	Compal	For slice battery hot docking issue	Change PQ40 from IMD2AT to 2N7002DW change PR202 from240K_ohm ot 620k_ohm change PR204 from 47K_ohm to 33_ohm add PR222 390K_ohm and PR223 390K_ohm add PD34 RB751S40T1	
23	47	+Vcore	03/11	Maxim	For driver IC power down issue	Add PR321 PR322 PR323 from IC pin 2 to GND	
24	50	Graphic	03/18	Compal	hardware delete NET	delete NET 1.1V_RUN_ON delete PR305	
25	50	Graphic	4/23	Compal	EMI soultion	change PR168 to 2.2ohm	
26	50	Graphic	4/23	Compal	hardware change control mode	un-pop PR310 pop PR312 (un-pop PR311 pop PR313 for JAL21)	
27	50	Graphic	4/23	Maxim	MAX17007 version change	un-pop PQ73 RHU002N06 un-pop PR296	
28	47	Vcore	4/23	Maxim	JAL21 Driver IC power down issue need change resistor value	change PR321 PR322 PR323 to 33K	
29	48	Charger	5/23	Dell	For Dell M09 platform	Change PR135 to 24K PC256 to 100p	
30	50	Graphic PWR	5/23	Nvidia	support GLM3	PR288 change to 7.15K, PR290 change to 10K, PR289 change to 13.7K	
31	43	DC-IN	6/3	Compal	Glitch issue on SLICE_BAT_PRES#	Add PC257:SE074152K8L(S CER CAP 1500P 50V +-10% X7R 0402) between pin2 of PQ69 and GND.	
32	49	Selector	6/4	Compal	Reserve a pull high resistor between +3.3V_ALW2 and SLICE_BAT_PRES#	Add un-pop PR330:SD02847018L(S RES 1/16W 4.7K +-5% 0402) between +3.3V_ALW2 and PQ40B.5.	
33	48	Charger	5/21	Merle DELL	Reduce delay time between NB adapter removal and ACAV_IN_NB de-assert from 1.6mS to~400uS.	change PC256 from .1uF to 100pF. change PR135 from 100K to 24K.	
34	50	Graphic PWR	6/10	Compal	change PL18 to PSL	change PL18 from SM01001821L (Tai tech) to SM01002078L (KC)	