

COMPAL CONFIDENTIAL

MODEL NAME : *HAL31(Discrete) & HAL30(UMA)*

PCB NO : *LA-3001P*

COMPAL P/N : *45140031L11 (For Discrete)*
45140031L01 (For UMA)

Bali (DIS&UMA) Schematics Document

uFCPGA Mobile Yonah
Intel Calistoga + ICH7M

2006-04-14

REV : 0.5 (DELL: X03)

@ : Nopop Component

1@ : UMA Used Only

2@ : Bali with discrete Used Only

MB PCB	
Part Number	Description
DA800004W0L	PCB LA-3001P REV0.4 MB

BOM NO: *45140031L11 (For Discrete)*
45140031L01 (For UMA)

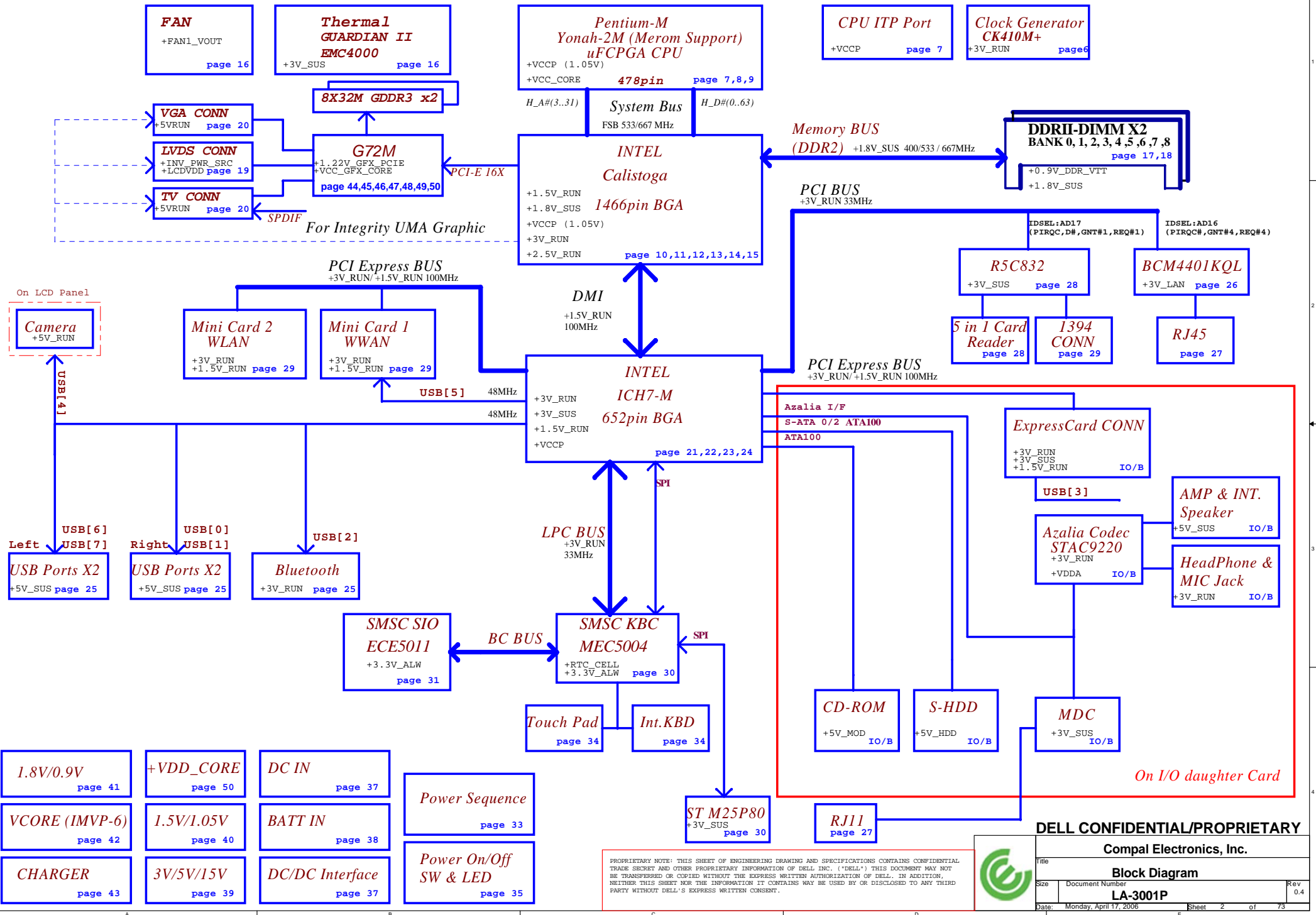
PCB P/N: *DA800004W0L*

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-3001P	0.4
Date: Monday, April 17, 2006	Sheet 1 of 73	



PM TABLE

power plane State	+5V_ALW +3.3V_ALW	+15V_SUS +5V_SUS +3.3V_SRC +3.3V_SUS +1.8V_SUS	+5V_RUN +3.3V_RUN +2.5V_RUN +1.8V_RUN +1.5V_RUN +1.22V_GFX_PCIE +0.9V_DDR_VTT +VCC_GFX_CORE +VCC_CORE +1.05V_VCCP
S0	ON	ON	ON
S1	ON	ON	ON
S3	ON	ON	OFF
S5 S4/AC	ON	OFF	OFF
S5 S4/AC don't exist	OFF	OFF	OFF

PCI TABLE

PCI DEVICE	IDSEL	REQ#/GNT#	PIRQ
LAN	AD16	REQ#3/GNT#3	IRQB
R5C832	AD17	REQ#2/GNT#2	IRQC IRQD

	USB PORT#	DESTINATION
ICH7-M	0	JUSB1 (Ext Back Right Side)
	1	JUSB1 (Ext Back Right Side)
	2	Blue Tooth
	3	EXPRESS CARD
	4	CCD Camera
	5	WWAN
	6	JUSB2 (Ext Back Left Side)
	7	JUSB2 (Ext Back Left Side)
SIO ECE5011	0	None
	1	None
	2	None
	3	None
	4	None

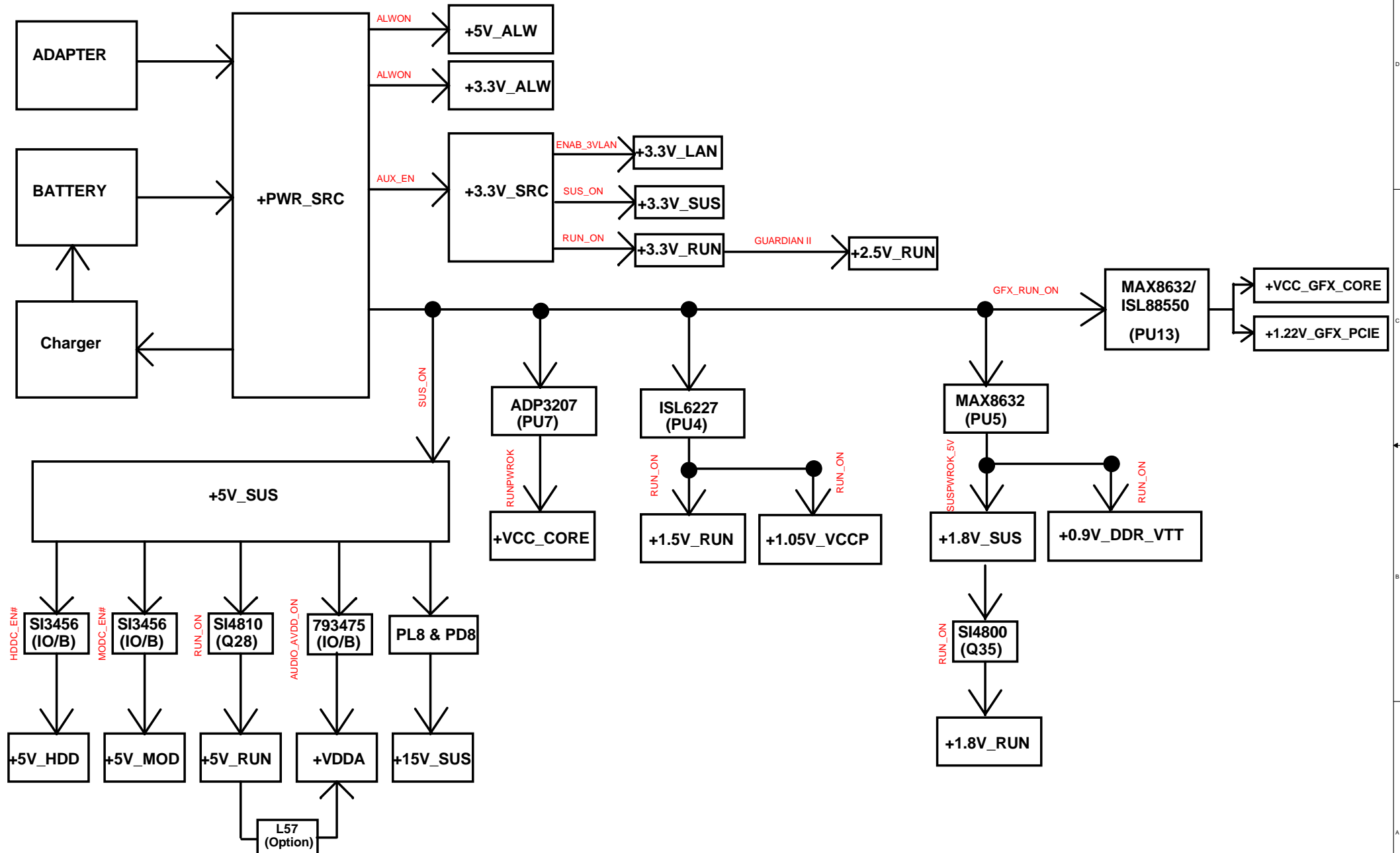
PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	None
Lane 4	EXPRESS CARD

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.

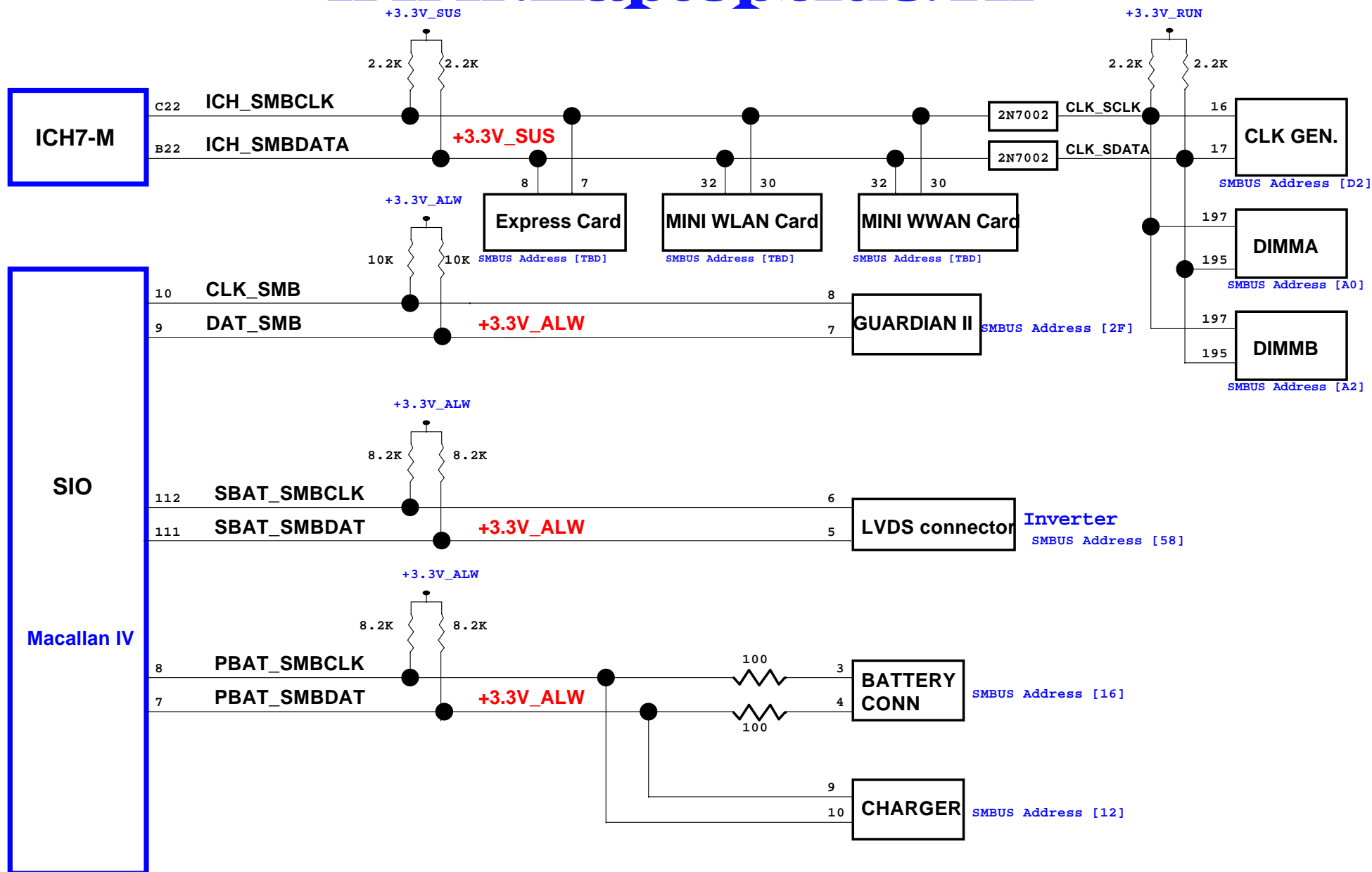
DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.		
Title	Index and Config.	
Size	Document Number	Rev
	LA-3001P	0.4
Date:	Monday, April 17, 2006	Sheet 3 of 73



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.



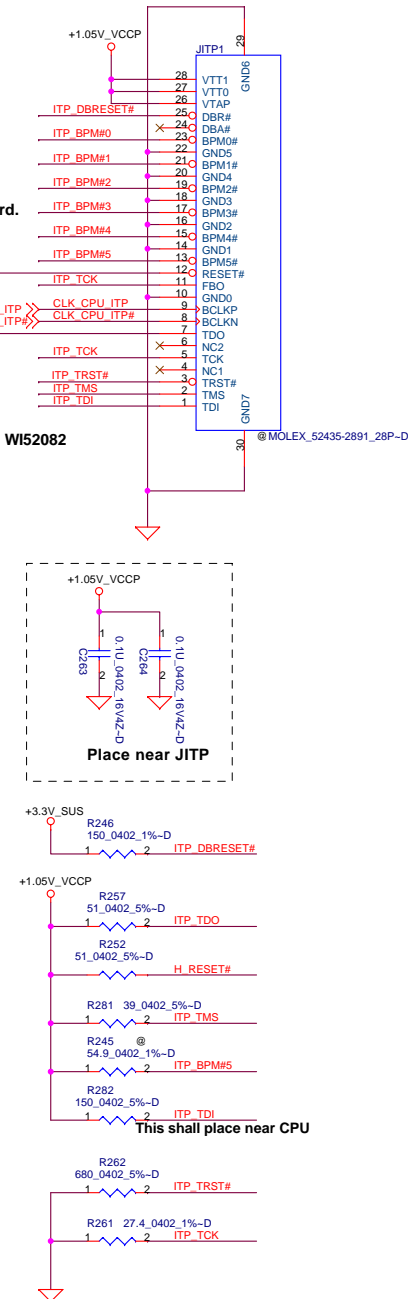
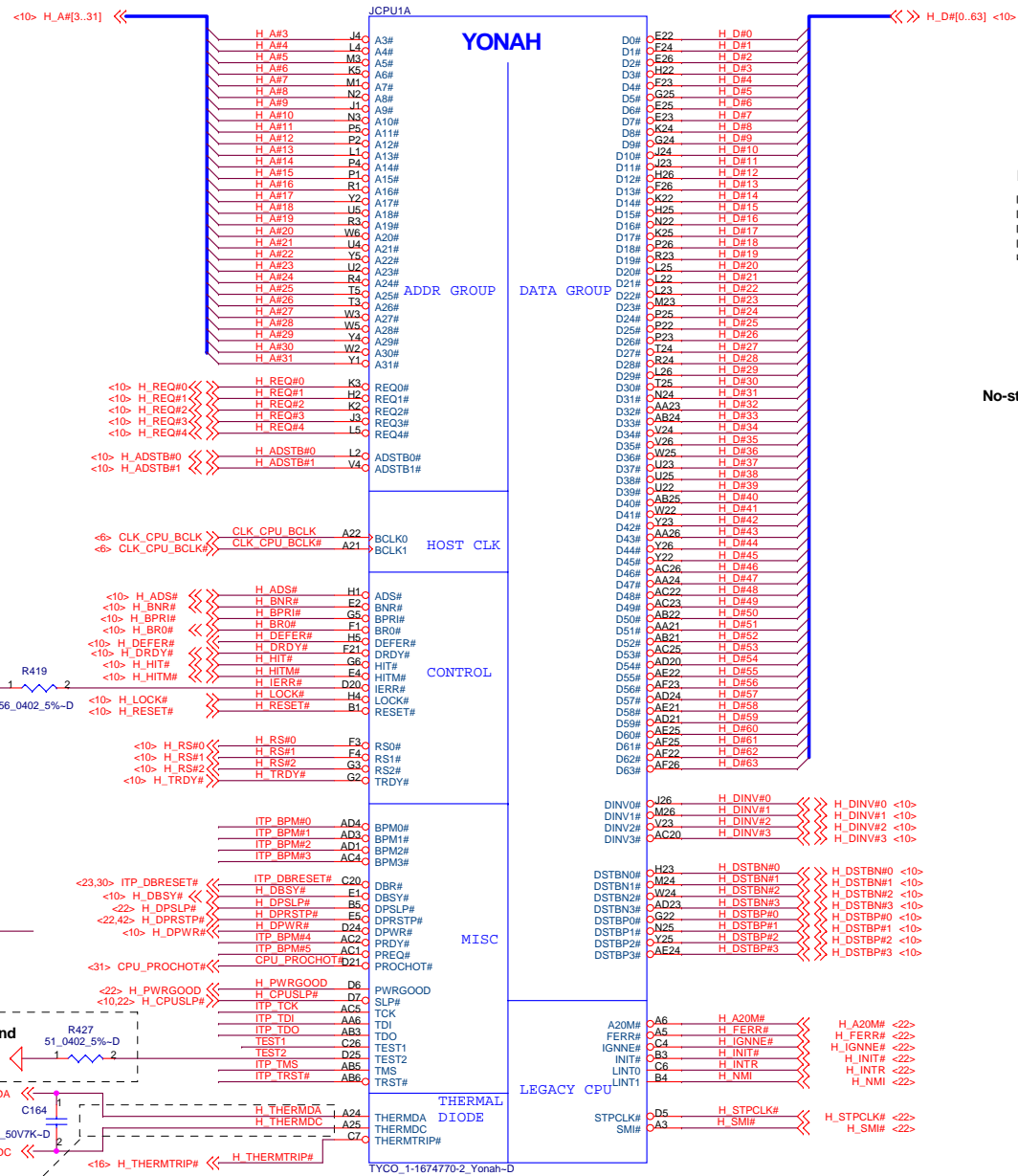
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		SMBUS TOPOLOGY	
Size	Document Number	Rev	
	LA-3001P	0.4	
Date:	Monday, April 17, 2006	Sheet	5 of 73



Sheet 6 of 73



DELL CONFIDENTIAL/PROPRIETARY

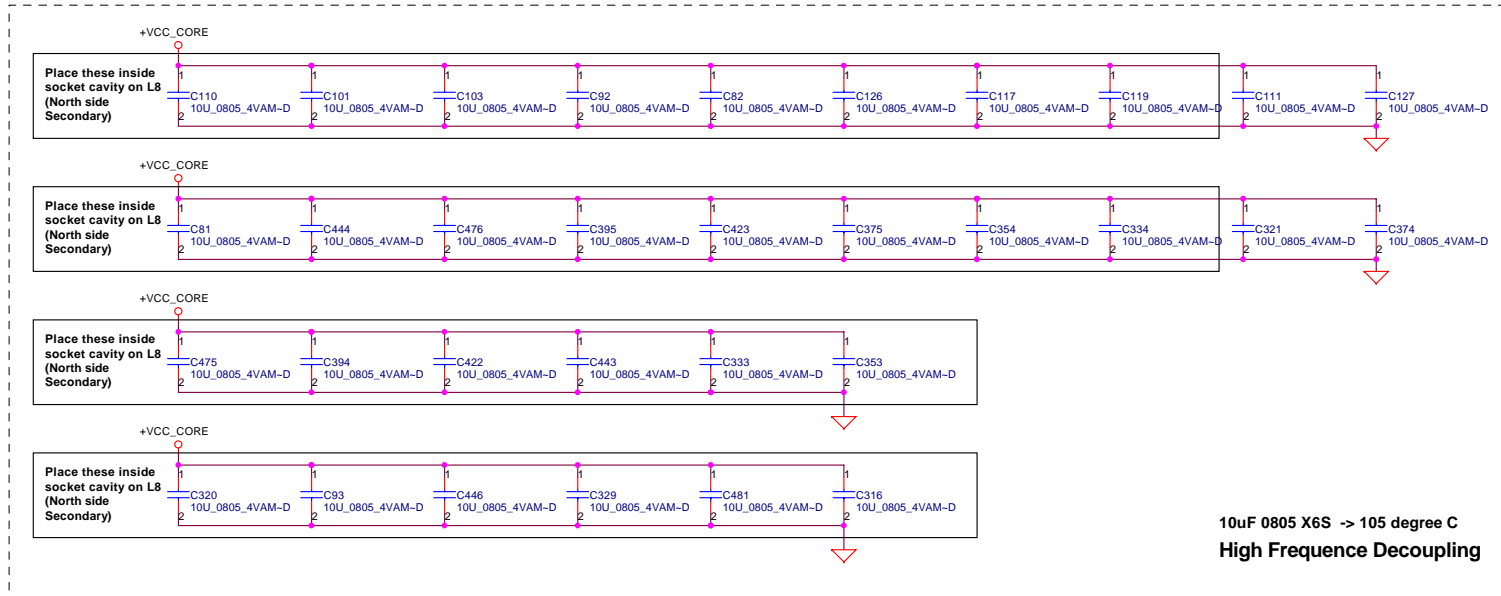
Compal Electronics, Inc.

Yonah Processor(1/2)

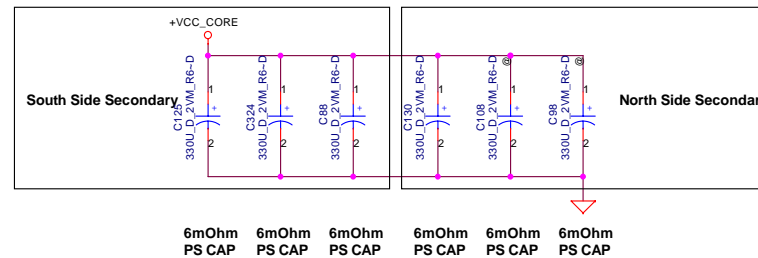
LA-3001P

Date: Monday, April 17, 2006 Sheet 7 of 73

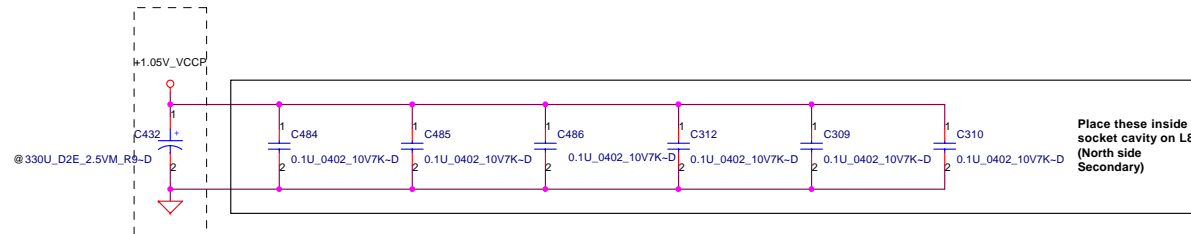
Intel CRB schematic suggest to use X5R or better



Near VCORE regulator



ESR <= 1.5m ohm
Capacitor > 1980uF



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.



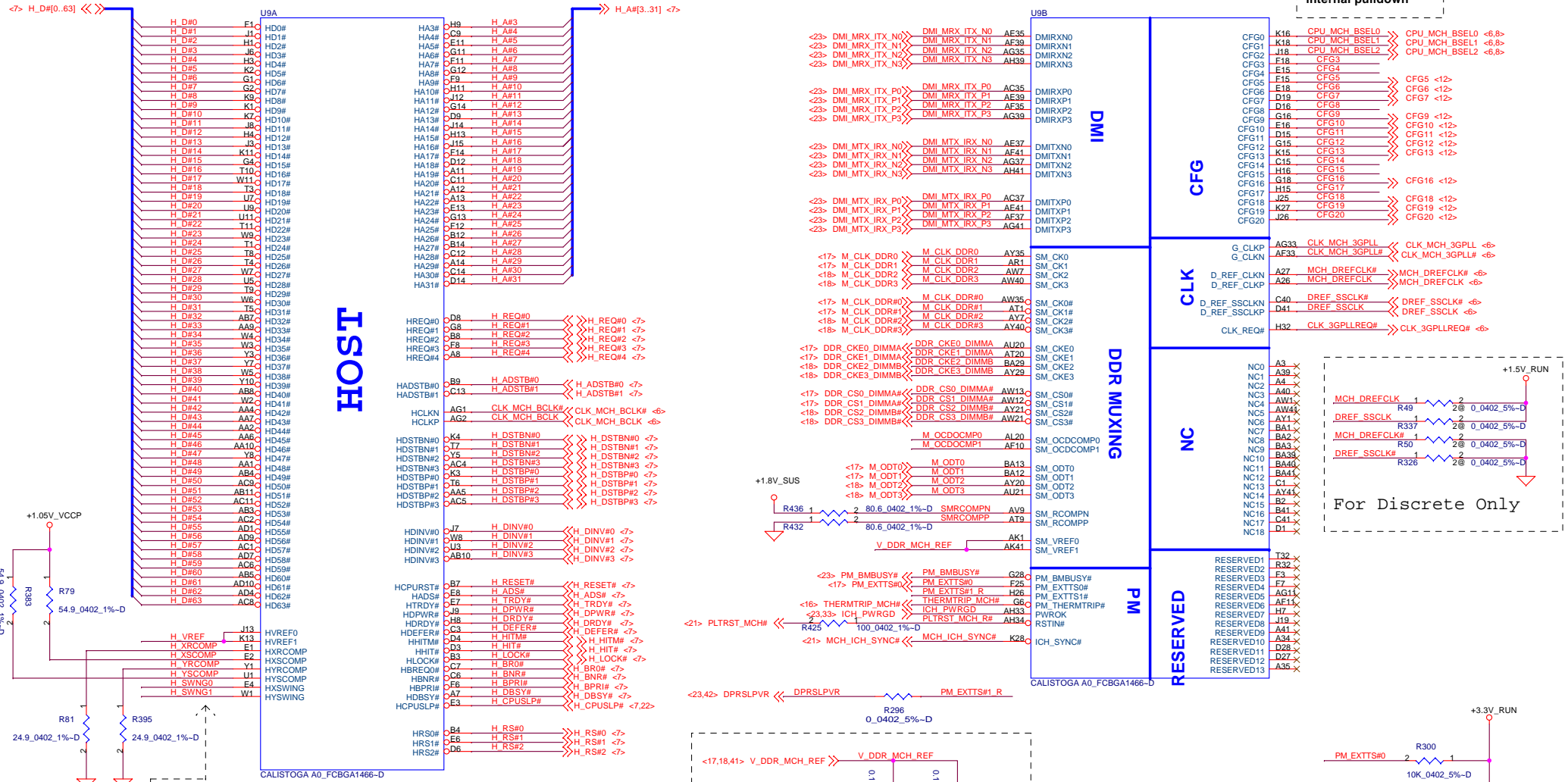
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

CPU Bypass			
Size	Document Number	Rev	
	LA-3001P	0.4	
Date:	Monday, April 17, 2006	Sheet	9 of 73

Description at page12

Note :
CFG3:17 has
internal pullup,
CFG18:19 has
internal pulldown



DELL CONFIDENTIAL/PROPRIETARY

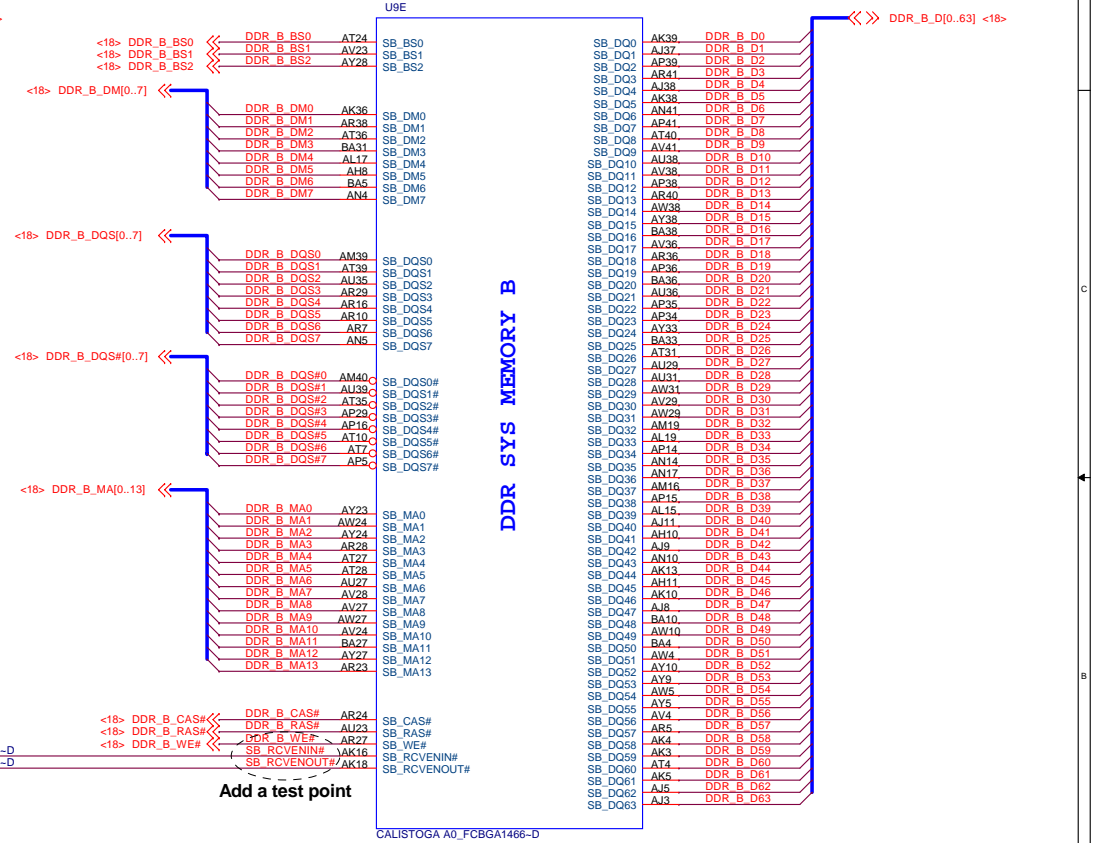
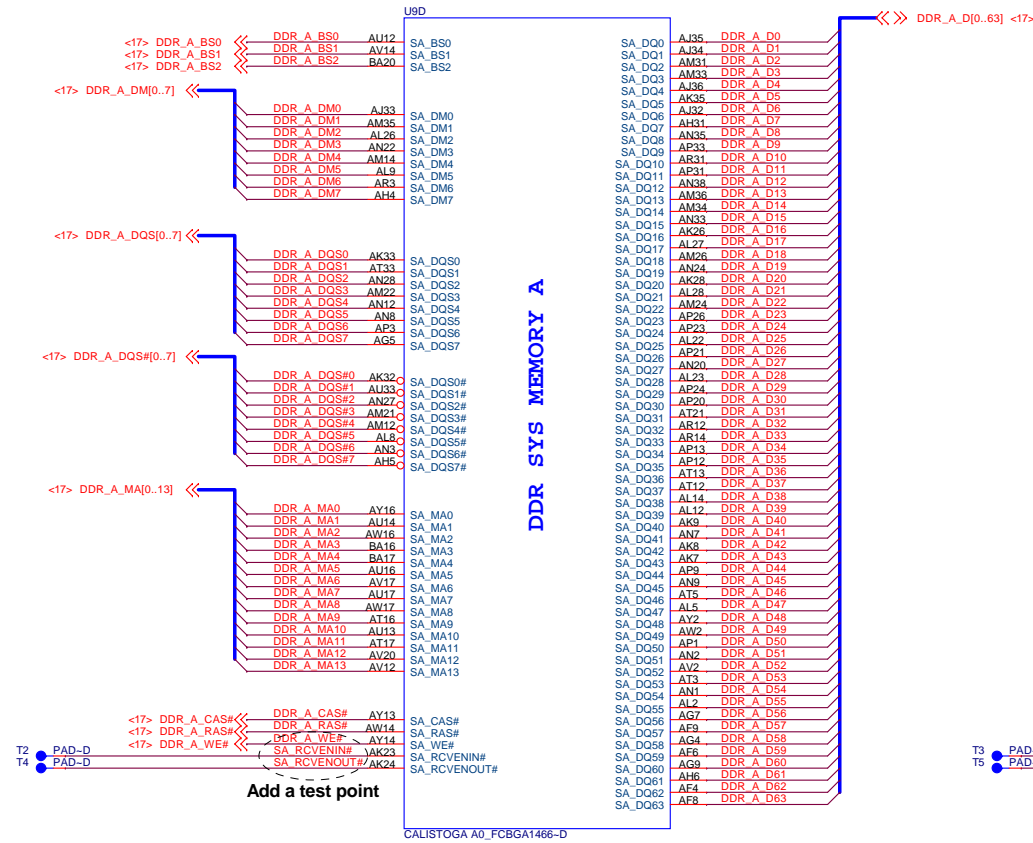
Compal Electronics, Inc.

Calistoga(1 of 6)



File	Document Number	Rev
LA-3001P		0.4
Date: Monday, April 17, 2006	Sheet 10 of 73	

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

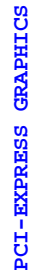
Compal Electronics, Inc.

Calistogo(2 of 6)

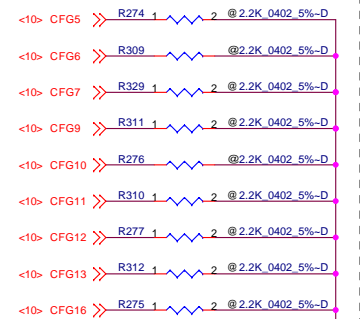


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ('DELL'). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE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

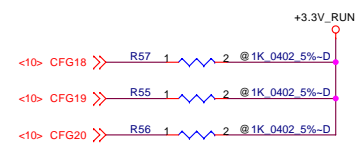
File	Document Number	Rev
LA-3001P		0.4
Date: Monday, April 17, 2006	Sheet 11 of 73	



Stuff AC Caps For Discrete



CFG[3:17] have internal pullup



CFG[18:19] have internal pulldown

1@ 2.2K_0402_5%-D

1@ 2.2K_0402_5%-D

G_CLK_DDC2

CLK_DDC2 <20>

1@ BSS138_SOT23-D

G_DAT_DDC2

DAT_DDC2 <20>

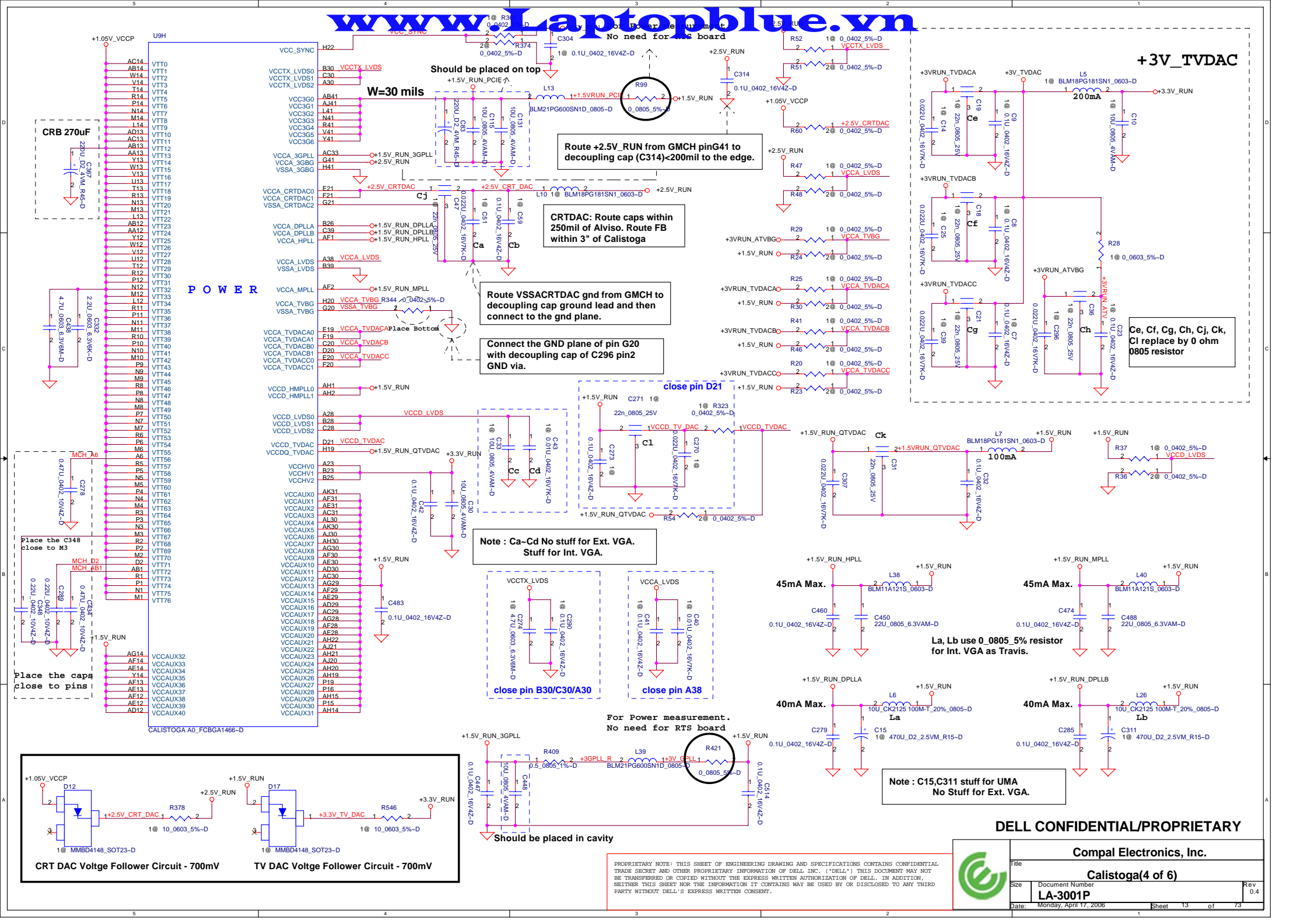
1@ BSS138_SOT23-D

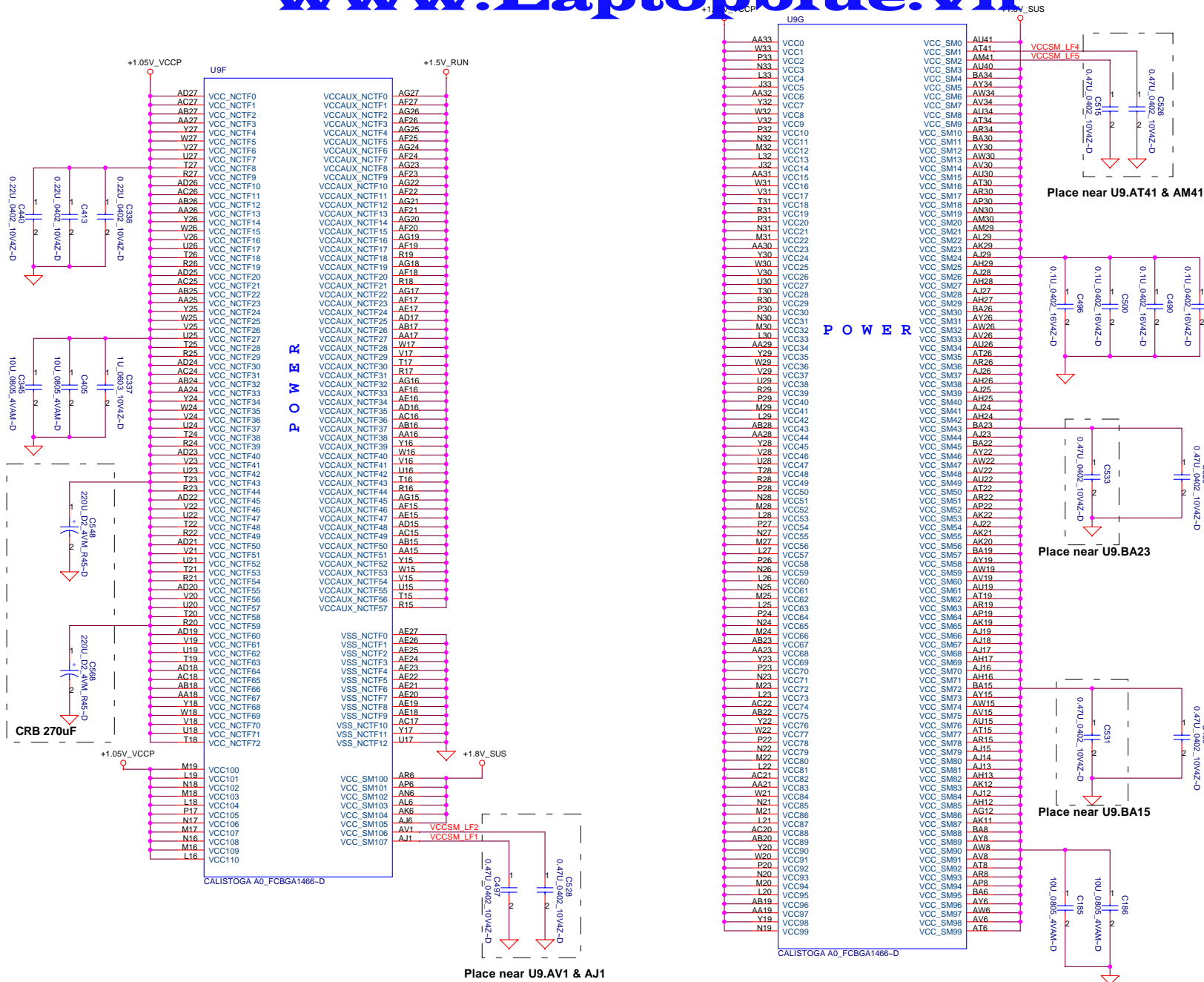
Calistoga(3 of 6)



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.

NOTE:
1@ is for UMA Implemetation.
2@ is for Discrete Implementation.





DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Calistoga(5 of 6)



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.

Size	Document Number	Rev
LA-3001P		0.4

U9I		
AC41	VSS0	VSS100
AA41	VSS1	AC34
W41	VSS2	C34
T41	VSS3	AW33
P41	VSS4	AV33
M41	VSS5	AR33
J41	VSS6	AE33
F41	VSS7	AB33
AV40	VSS8	Y33
AP40	VSS9	V33
AN40	VSS10	T33
AK40	VSS11	R33
A40	VSS12	M33
AH40	VSS13	H33
AG40	VSS14	G33
AF40	VSS15	J21
AE40	VSS16	F33
B40	VSS17	D33
AY39	VSS18	B33
AW39	VSS19	AH32
AV39	VSS20	AR20
AP39	VSS21	AM20
AN39	VSS22	AA20
AJ39	VSS23	K20
AC39	VSS24	B20
AB39	VSS25	A20
AA39	VSS26	AN19
Y39	VSS27	R32
W39	VSS28	AC19
V39	VSS29	AY31
T39	VSS30	AV31
R39	VSS31	AN31
P39	VSS32	AJ31
N39	VSS33	AG31
M39	VSS34	AB31
L39	VSS35	Y31
J39	VSS36	AB30
H39	VSS37	E30
G39	VSS38	AT29
F39	VSS39	AN29
D39	VSS40	AB29
AT38	VSS41	T29
AM38	VSS42	N29
AH38	VSS43	AK17
AG38	VSS44	AV16
AF38	VSS45	AN16
AE38	VSS46	F29
C38	VSS47	C29
AK37	VSS48	A29
AH37	VSS49	F16
AB37	VSS50	C16
AA37	VSS51	AN15
Y37	VSS52	AM15
W37	VSS53	AK15
V37	VSS54	N15
T37	VSS55	AM15
R37	VSS56	L15
P37	VSS57	B15
M37	VSS58	W28
L37	VSS59	J28
J37	VSS60	E28
H37	VSS61	AT14
G37	VSS62	AP27
F37	VSS63	AM27
D37	VSS64	AK27
AY36	VSS65	I27
AW36	VSS66	G27
AN36	VSS67	F27
AH36	VSS68	C27
AG36	VSS69	AV13
AF36	VSS70	AR13
AE36	VSS71	M26
AC36	VSS72	AM13
C36	VSS73	AM13
B36	VSS74	F26
BA35	VSS75	D26
AV35	VSS76	AL13
AR35	VSS77	P13
AH35	VSS78	F13
AB35	VSS79	K25
AA35	VSS80	D13
Y35	VSS81	B13
W35	VSS82	AY12
V35	VSS83	AC12
T35	VSS84	A25
R35	VSS85	K12
P35	VSS86	H12
M35	VSS87	E12
J35	VSS88	AL24
H35	VSS89	AA11
G35	VSS90	AT23
F35	VSS91	AN23
D35	VSS92	AM23
AN34	VSS93	AH23
AK34	VSS94	AC23
AG34	VSS95	W23
AF34	VSS96	K23
	VSS97	J23
	VSS98	F23
	VSS99	C23
		AA22
		K22
		G22
		F22
		E22
		D22
		A22
		BA21
		AV21
		AR21

CALISTOGA A0_FCBGA1466-D

U9J		
AN21	VSS200	VSS280
AL21	VSS201	AG10
AB21	VSS202	AC10
Y21	VSS203	W10
M33	VSS204	VSS283
K21	VSS205	U10
J21	VSS206	BA9
H21	VSS207	AW9
C21	VSS208	AR9
AW20	VSS209	AH9
AR20	VSS210	AB9
AM20	VSS211	Y9
AA20	VSS212	VSS289
K20	VSS213	VSS290
B20	VSS214	R9
A20	VSS215	VSS292
AN19	VSS216	G9
R32	VSS217	E9
AC19	VSS218	A9
AY31	VSS219	VSS293
AV31	VSS220	VSS294
AN31	VSS221	VSS295
AJ31	VSS222	VSS296
AG31	VSS223	VSS297
AB31	VSS224	VSS298
Y31	VSS225	VSS299
AB30	VSS226	VSS300
E30	VSS227	BA7
AT29	VSS228	AV7
AN29	VSS229	AP7
AB29	VSS230	VSS302
T29	VSS231	VSS303
N29	VSS232	AL7
AK17	VSS233	AJ7
AV16	VSS234	AH7
AN16	VSS235	AE7
F29	VSS236	VSS307
C29	VSS237	AC7
A29	VSS238	R7
F16	VSS239	G7
C16	VSS240	VSS309
AN15	VSS241	VSS310
AM15	VSS242	VSS311
AK15	VSS243	AG6
N15	VSS244	D7
AM15	VSS245	VSS312
L15	VSS246	AD6
B15	VSS247	AB6
W28	VSS248	Y6
J28	VSS249	U6
E28	VSS250	N6
AT14	VSS251	K6
AP27	VSS252	H6
AM27	VSS253	B6
AK27	VSS254	VSS317
I27	VSS255	VSS318
G27	VSS256	VSS319
F27	VSS257	VSS320
C27	VSS258	VSS321
AV13	VSS259	VSS322
AR13	VSS260	VSS323
M26	VSS261	VSS324
AM13	VSS262	VSS325
AM13	VSS263	VSS326
F26	VSS264	VSS327
D26	VSS265	VSS328
AL13	VSS266	VSS329
P13	VSS267	VSS330
F13	VSS268	VSS331
K25	VSS269	VSS332
D13	VSS270	VSS333
B13	VSS271	VSS334
AY12	VSS272	VSS335
AC12	VSS273	VSS336
A25	VSS274	VSS337
K12	VSS275	VSS338
H12	VSS276	VSS339
E12	VSS277	VSS340
AL24	VSS278	VSS341
AA11	VSS279	VSS342
AT23		VSS343
AN23		VSS344
AM23		VSS345
AH23		VSS346
AC23		VSS347
W23		VSS348
K23		VSS349
J23		VSS350
F23		VSS351
C23		VSS352
AA22		VSS353
K22		VSS354
G22		VSS355
F22		VSS356
E22		VSS357
D22		VSS358
A22		VSS359
BA21		VSS360
AV21		
AR21		

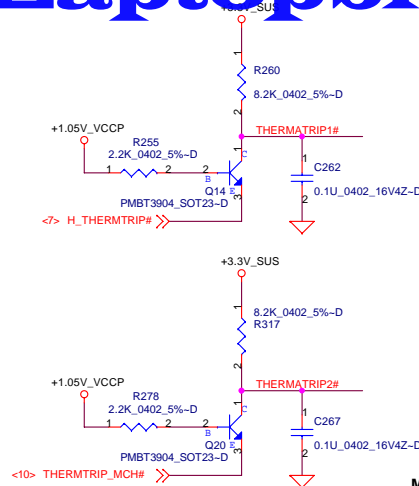
CALISTOGA A0_FCBGA1466-D

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		
Calistoga(6 of 6)		
Size	Document Number	Rev
	LA-3001	0.4
Date:	Monday, April 17, 2006	Sheet 15 of 73

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.



The schematic diagram shows a voltage divider circuit. It features two input signals, +5V_SUS and +5V_SUS, which are connected to resistors R19 (2.21K_0603) and R18 (10K_0402_5%-D) respectively. The output of the divider is connected to a buffer circuit consisting of a 2N7002_SOT23-D MOSFET and a 2200P_0402_50V7K-D capacitor. The output signal is labeled VCP1 and 5V_CAL_SIO# <31>. The circuit is powered by a +5V_SUS supply.

Dell COE schematic suggest populate for discrete down design

VGA_THERMDN, VGA_THERMDP, VGA_THERMDP routing

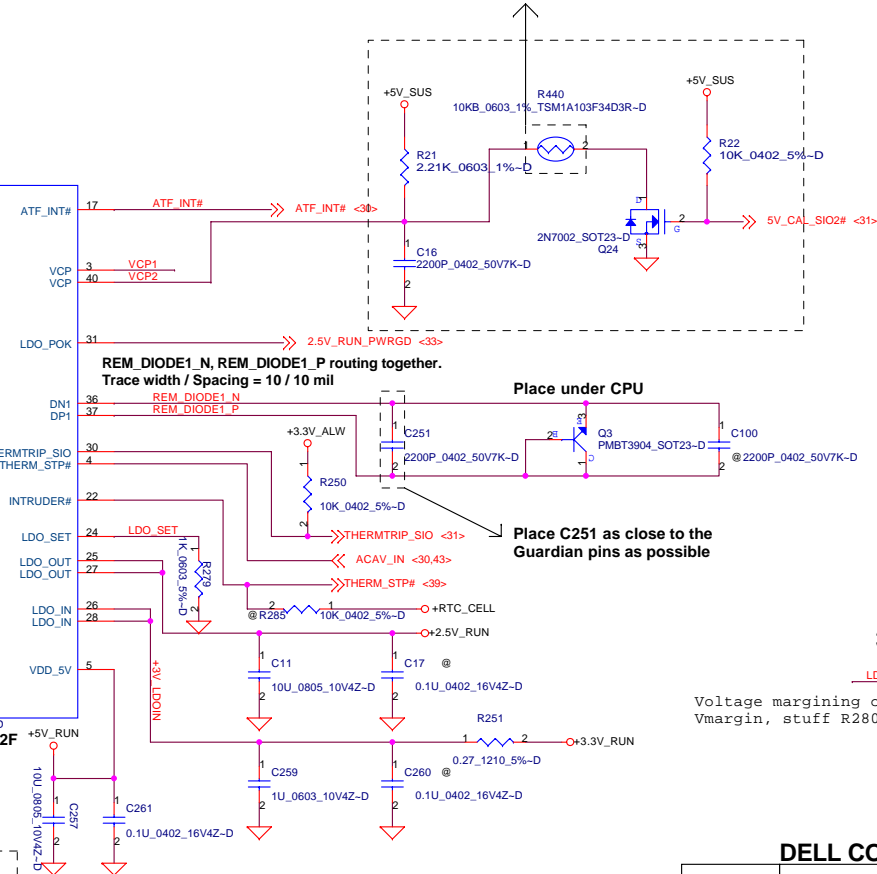
To cut the stub trace for discrete M/B

Place C255 as close to the Guardian pins as possible

Place near the bottom SODIMM for UMA design

Place C255 as close to the Guardian pins as possible

Place near the bottom SODIMM for UMA design



For Discrete: Stuff R259,R249 and no stuff Q13,C253
For UMA: Stuff Q13 and no stuff R259,R249

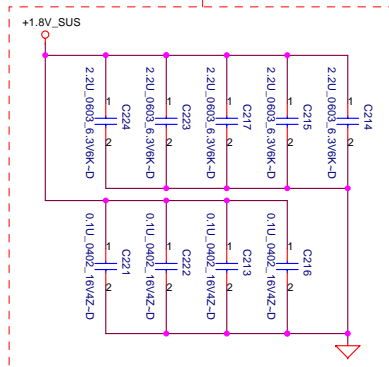


PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ('DELL') THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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

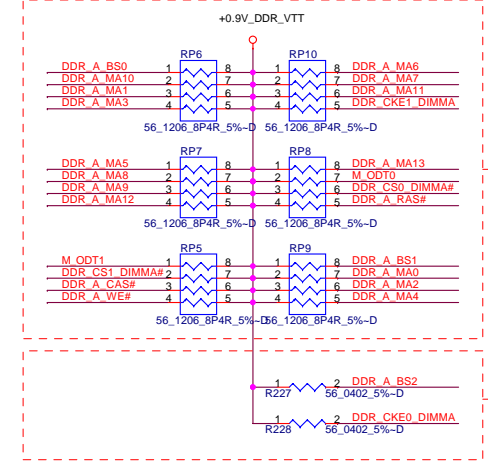
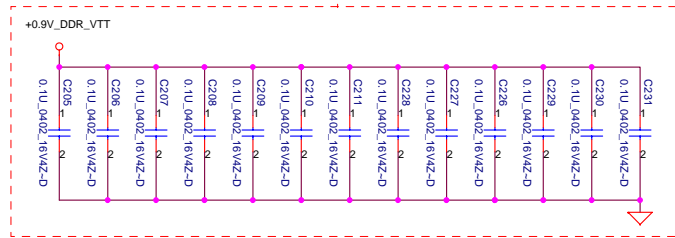
0.3

<1> DDR_A_DQS#[0..7] <<>>
 <1> DDR_A_D[0..63] <<>>
 <1> DDR_A_DM[0..7] <<>>
 <1> DDR_A_DQS#[0..7] <<>>
 <1> DDR_A_MA[0..13] <<>>

Layout Note:
Place near JDIMA1

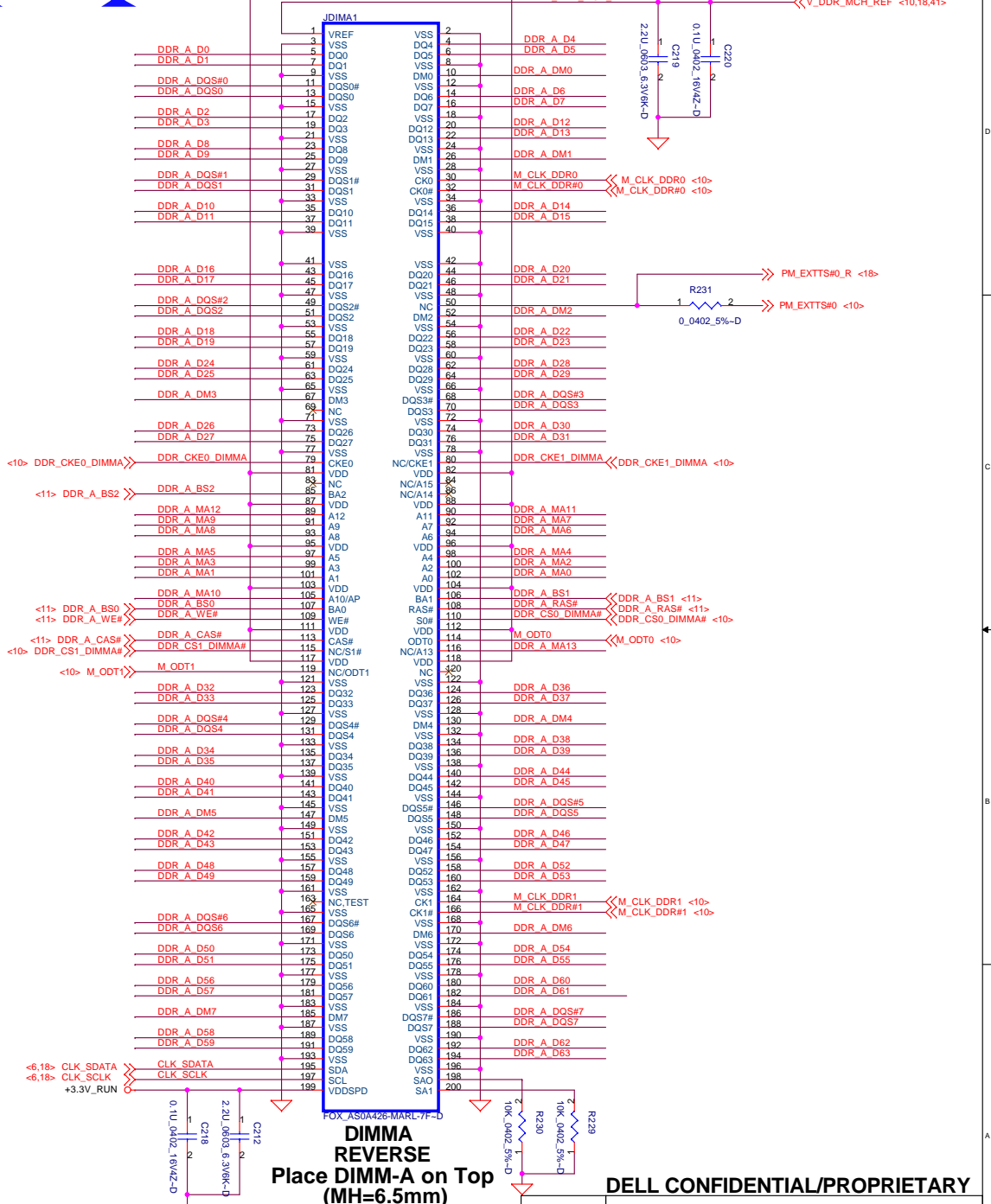


Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9V_DDR_VTT



Layout Note:
Place this resistor closely JDIMA1, all trace length < 750 mil

Layout Note:
Place these resistor closely JDIMA1, all trace length Max=1.3"



DIMMA DIMM-A
Place DIMM-A on Top (MH=6.5mm)

DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.			
DRII-SODIMM SLOT-A			
File	Document Number	Rev	
	LA-3001P	0.4	
Date	Monday, April 17, 2006	Sheet	17 of 73

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.

+0.9V_DDR_VTT

C637 0.1uF 0402 16VWZ-D

C638 0.1uF 0402 16VWZ-D

C639 0.1uF 0402 16VWZ-D

C640 0.1uF 0402 16VWZ-D

C641 0.1uF 0402 16VWZ-D

C642 0.1uF 0402 16VWZ-D

C643 0.1uF 0402 16VWZ-D

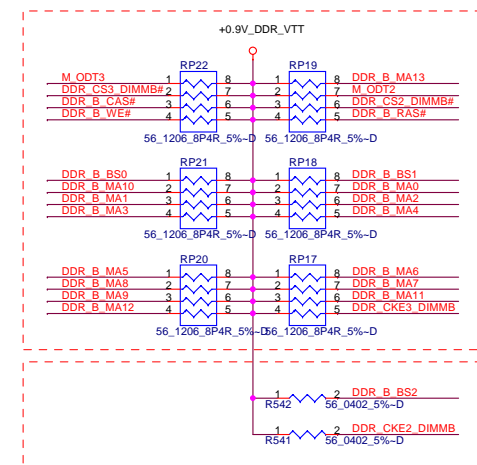
C644 0.1uF 0402 16VWZ-D

C645 0.1uF 0402 16VWZ-D

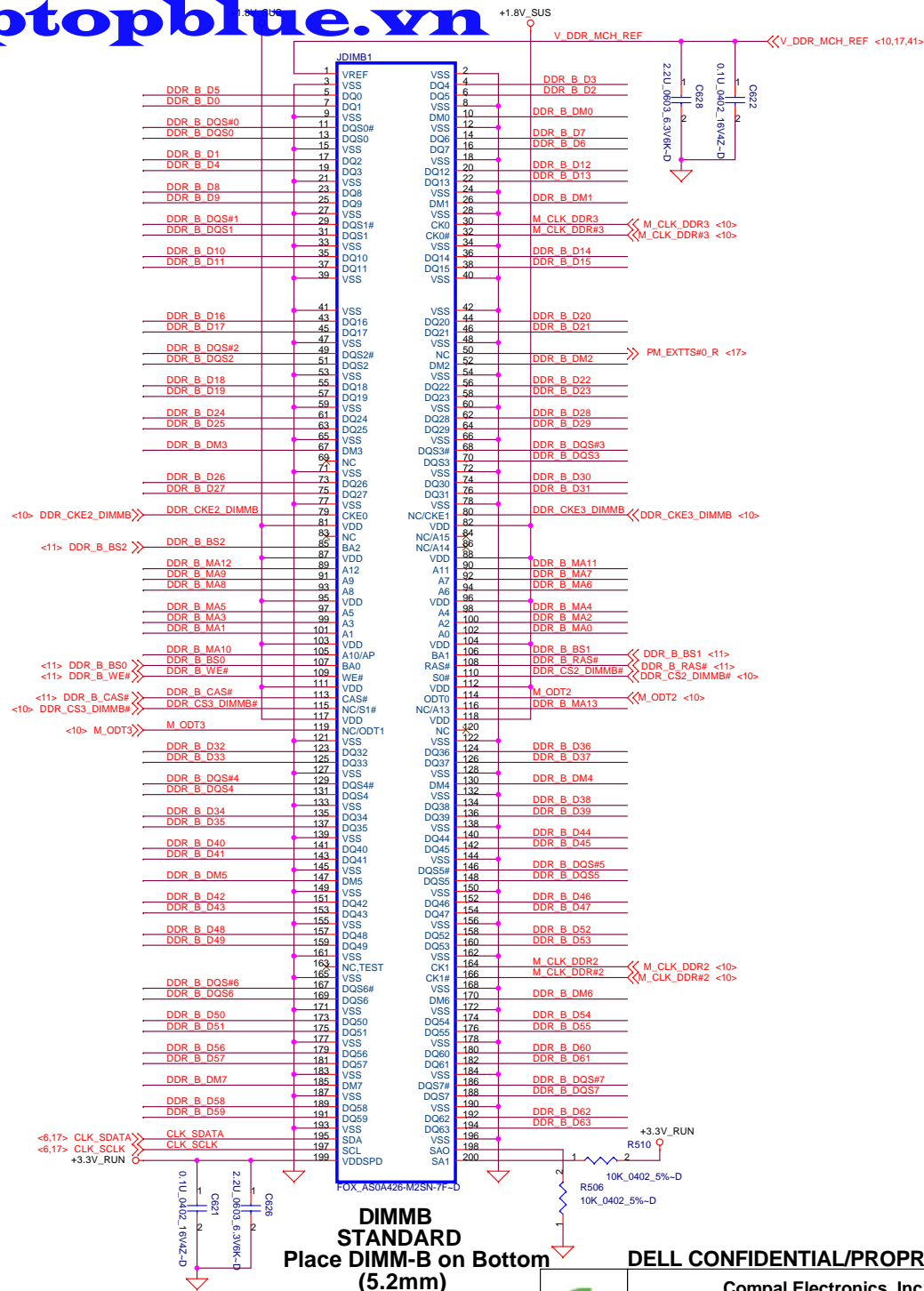
C646 0.1uF 0402 16VWZ-D

C647 0.1uF 0402 16VWZ-D

C648 0.1uF 0402 16VWZ-D



Layout Note:
Place these resistor
closely JDIMB1,all
trace length
Max=1.3"

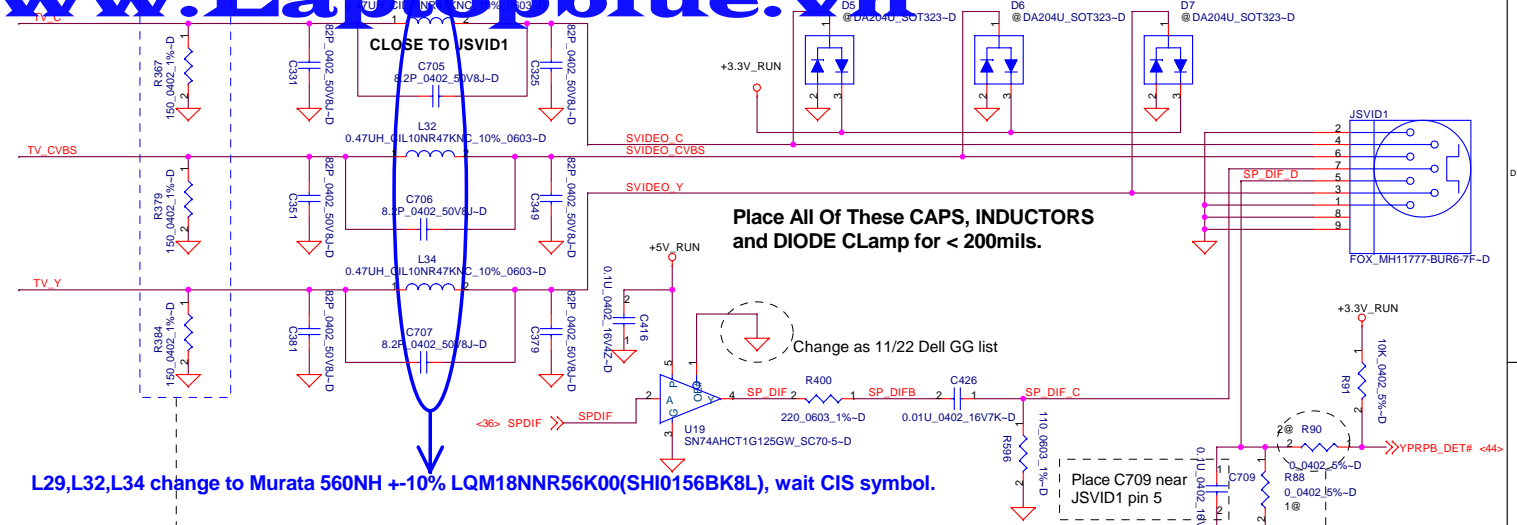


**DIMMB
STANDARD
Place DIMM-B on Bottom
(5.2mm)**

Compal Electronics, Inc.

DDRII-SODIMM SLOT-B

Title			
DDRII-SODIMM SLOT-B			
Size	Document Number	Rev	
	LA-3001P	0.4	
Date:	Monday, April 17, 2006	Sheet	18 of 73

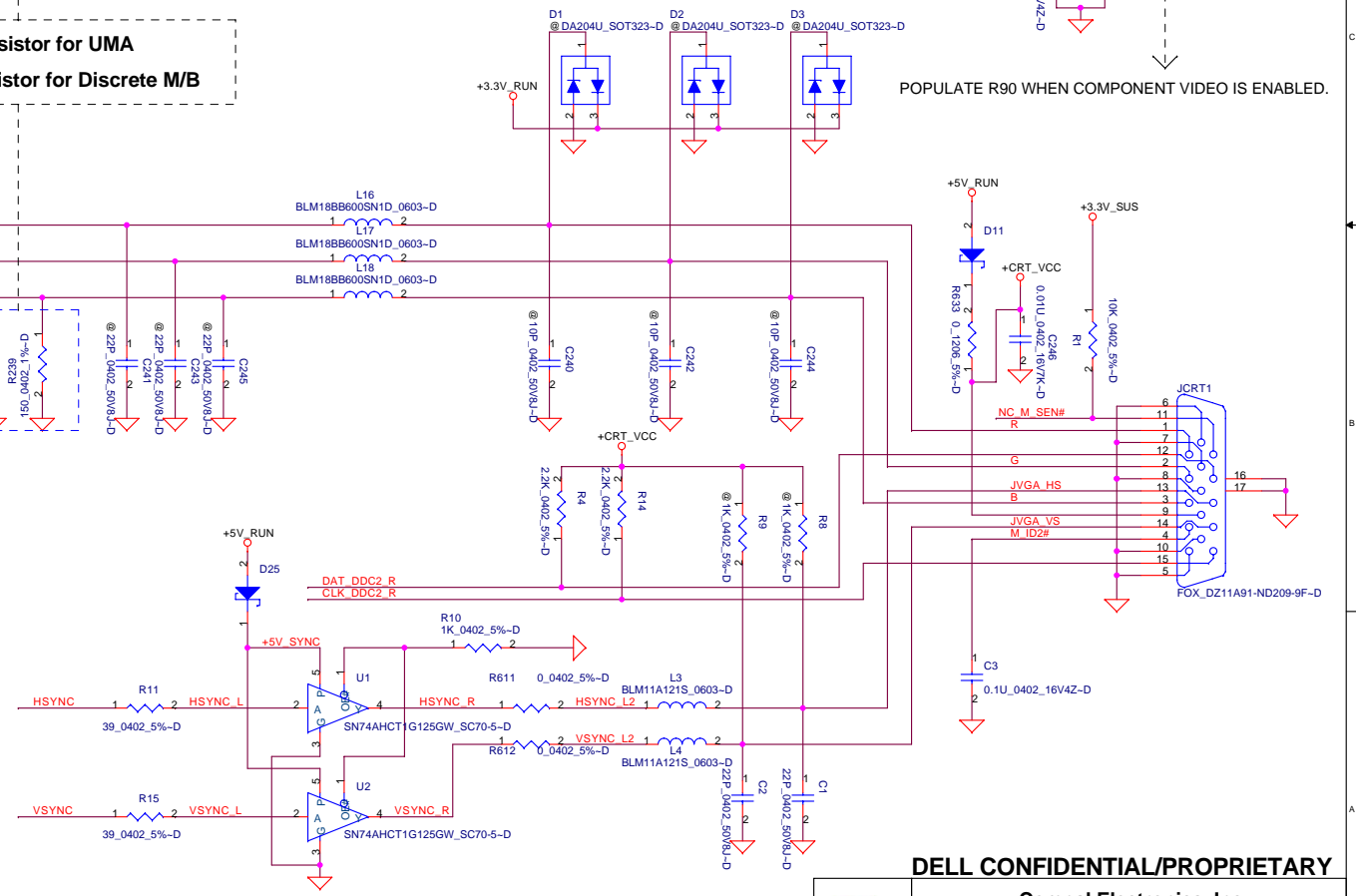
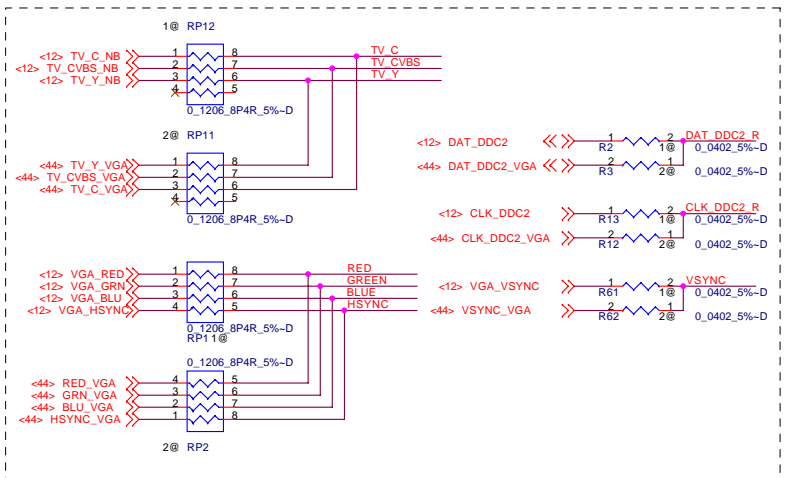


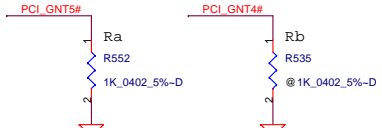
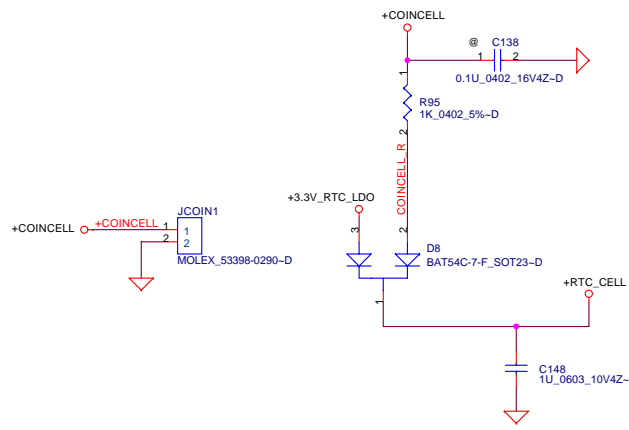
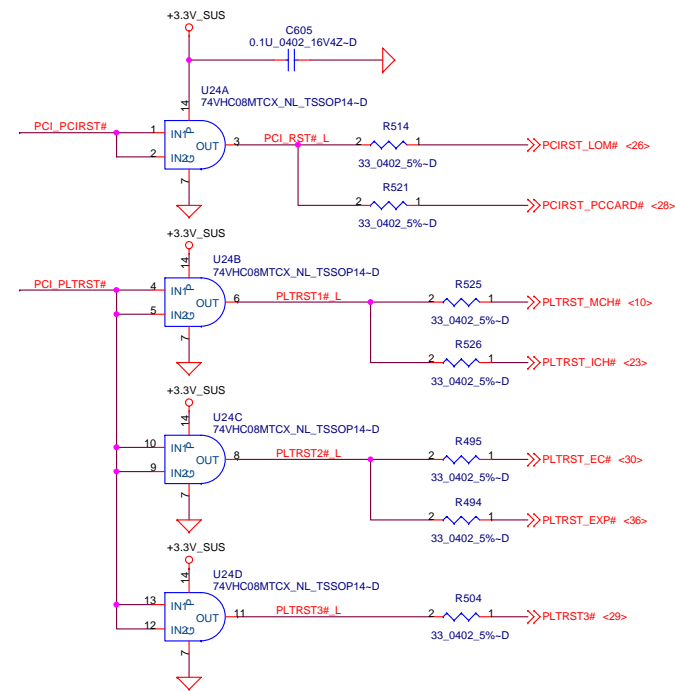
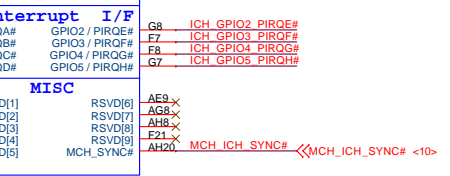
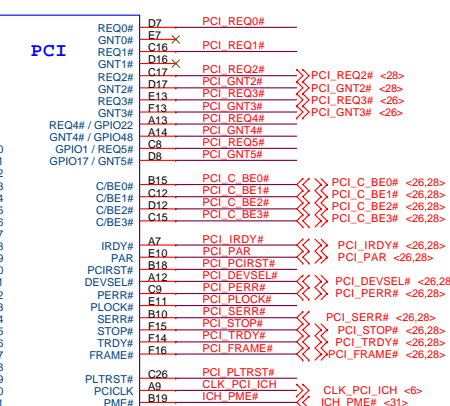
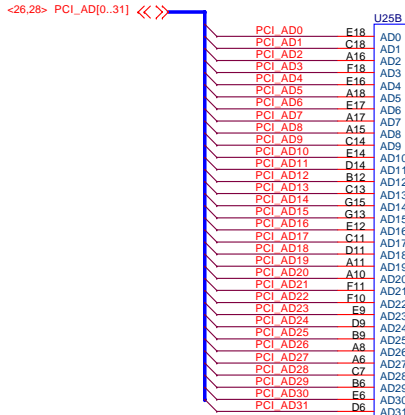
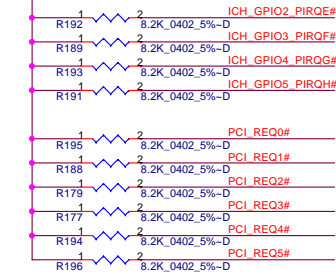
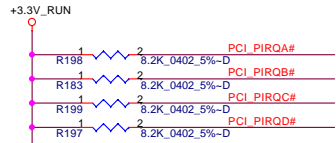
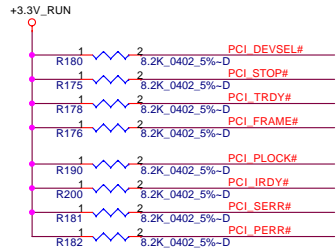
R367, R379, R384,
R234, R236, R239

Pop 150 ohm resistor for UMA
Pop 75 ohm resistor for Discrete M/B

NOTE:
1@ is for UMA Implementation.
2@ is for Discrete Implementation.

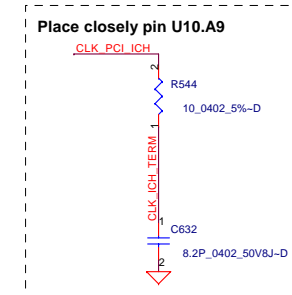
Please put the resistor close to connector side





ICH Boot BIOS select

		GNT5# Ra	GNT4# Rb
LPC	11	unstuff	unstuff
PCI	10	unstuff	stuff
SPI	01	stuff	unstuff



DELL CONFIDENTIAL/PROPRIETARY

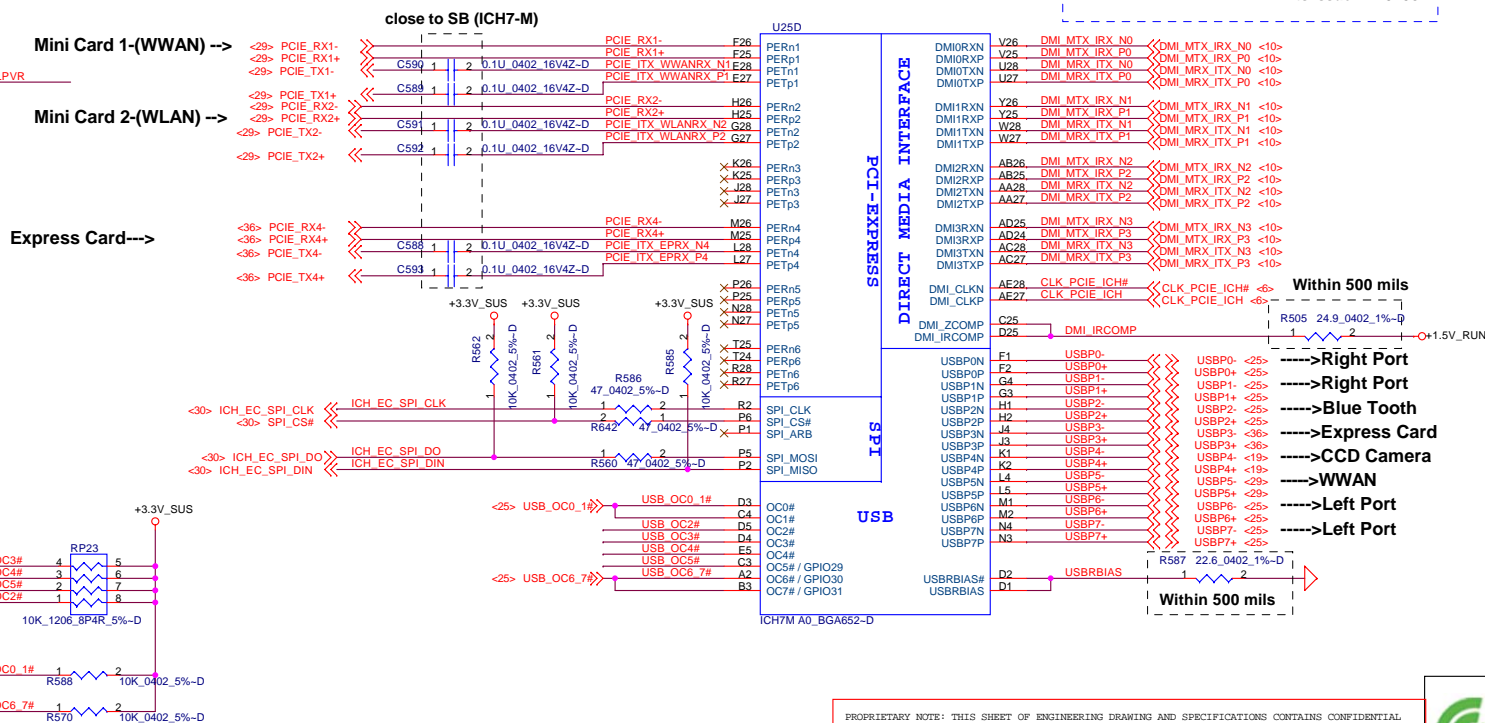
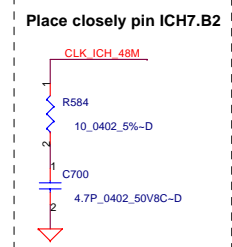
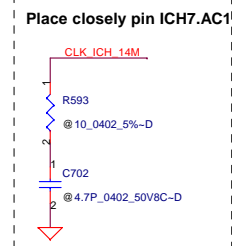
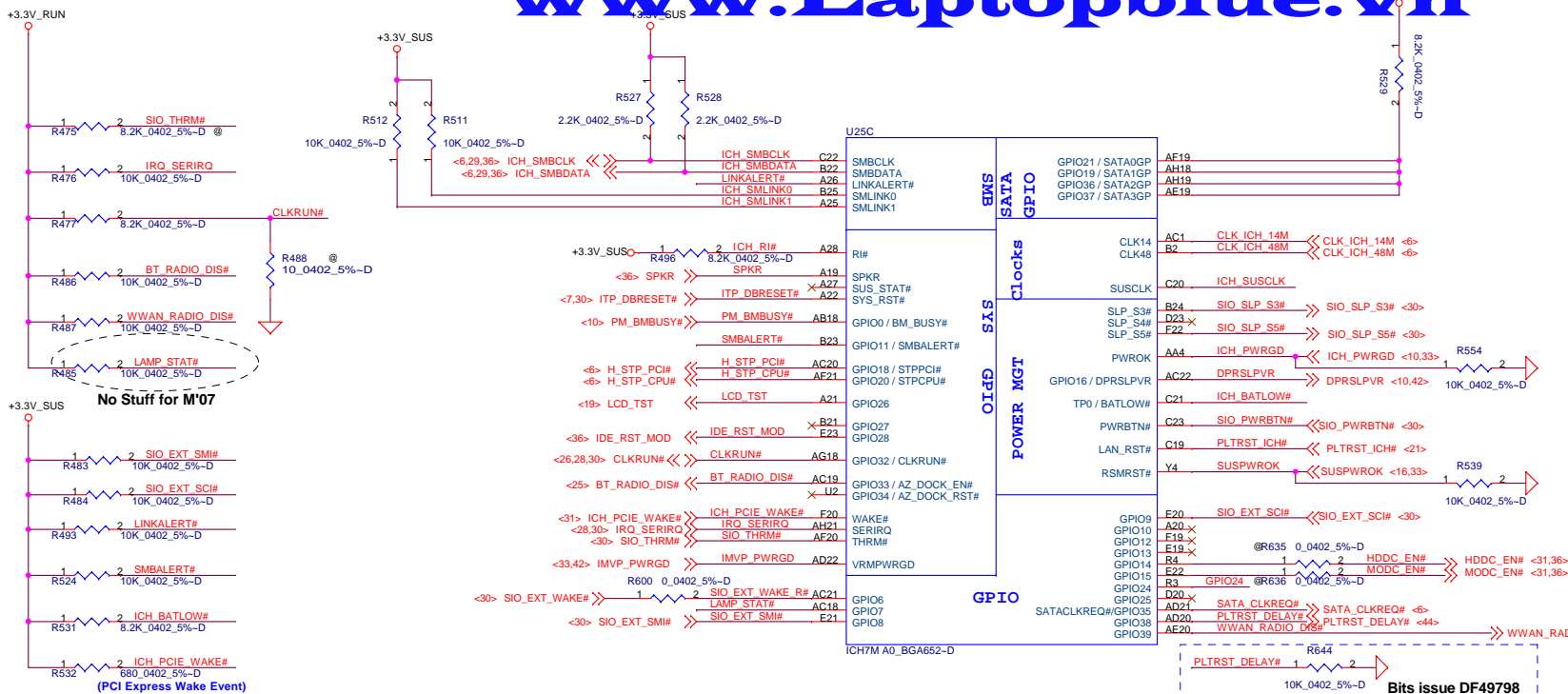
Compal Electronics, Inc.

ICH7(1/4)



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.

File	ICH7(1/4)		
Size	Document Number	Rev	0.4
	LA-3001P		
Date	Monday, April 17, 2006	Sheet	21 of 73



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.



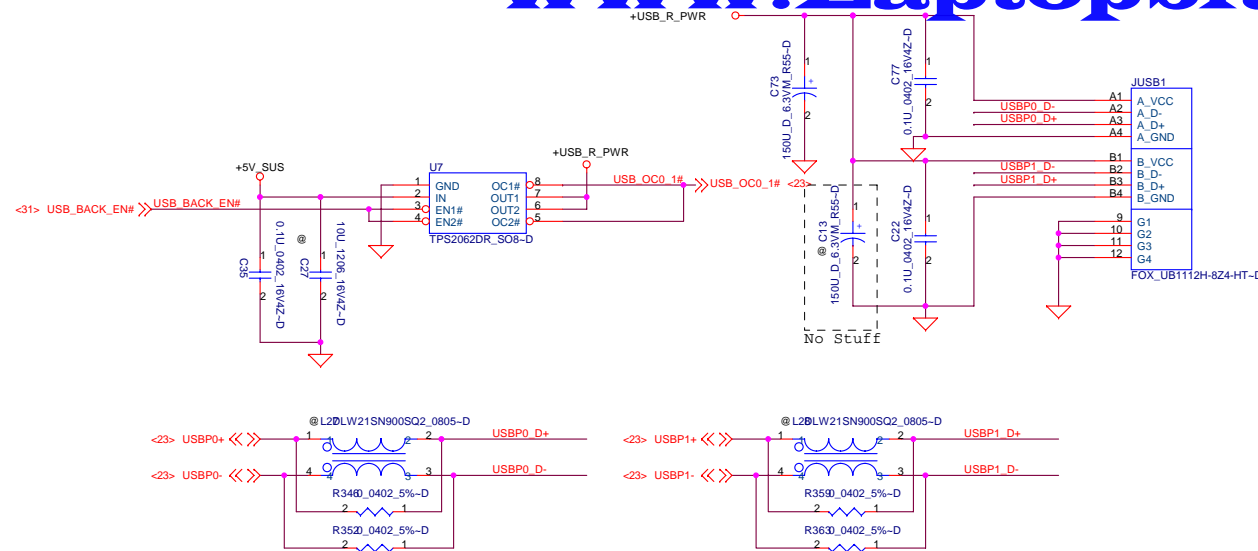
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title			
ICH7(3/4)			
Size	Document Number		Rev
	LA-3001P		0.4
Date:	Monday, April 17, 2006	Sheet 23 of 73	

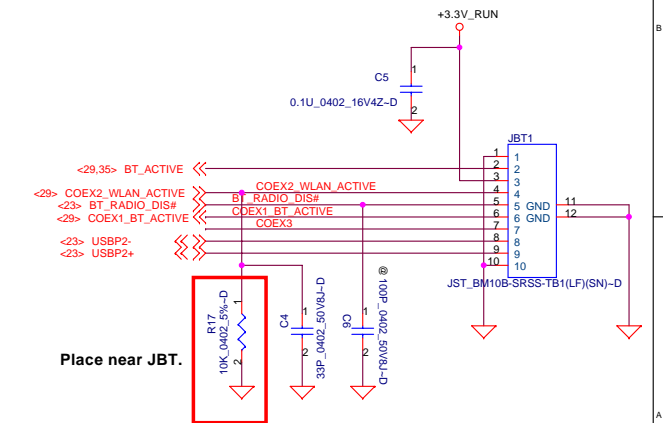
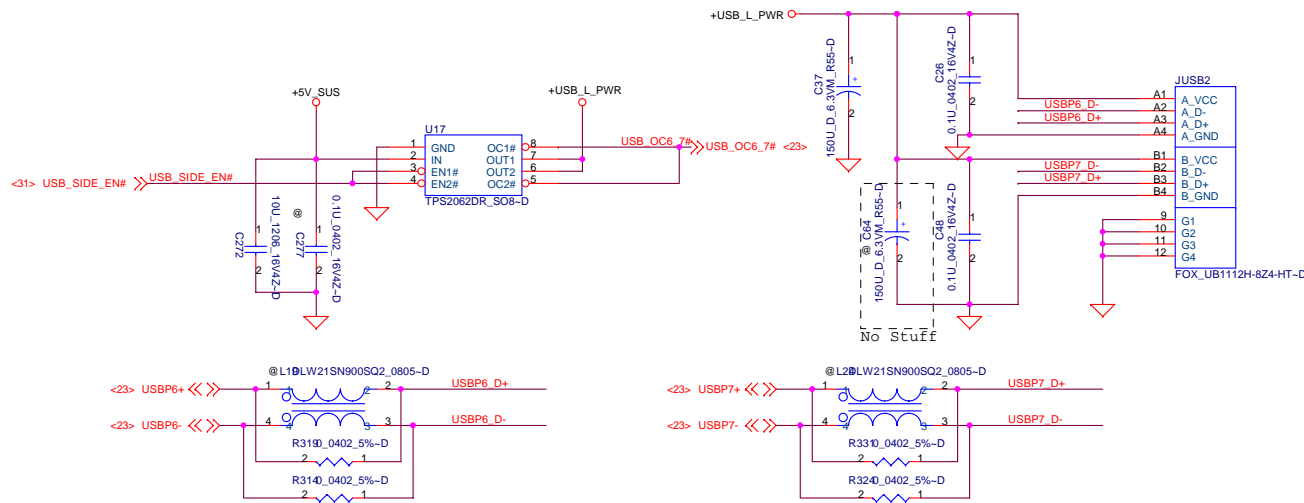
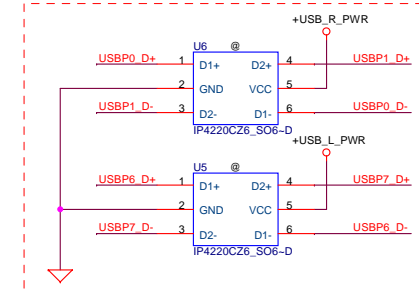


Title			
ICH7(4/4)			
Size	Document Number	Rev	
	LA-3001P	0.4	
Date:	Monday, April 17, 2006	Sheet	24 of 73



USB PORT#	DESTINATION
0	JUSB1 (Ext Back Right Side)
1	JUSB1 (Ext Back Right Side)
2	Blue Tooth
3	EXPRESS CARD
4	CCD Camera
5	ECE5011 HUB
6	JUSB2 (Ext Back Left Side)
7	JUSB2 (Ext Back Left Side)

Place U5, U6 as close as USB connector.



Place near JBT.

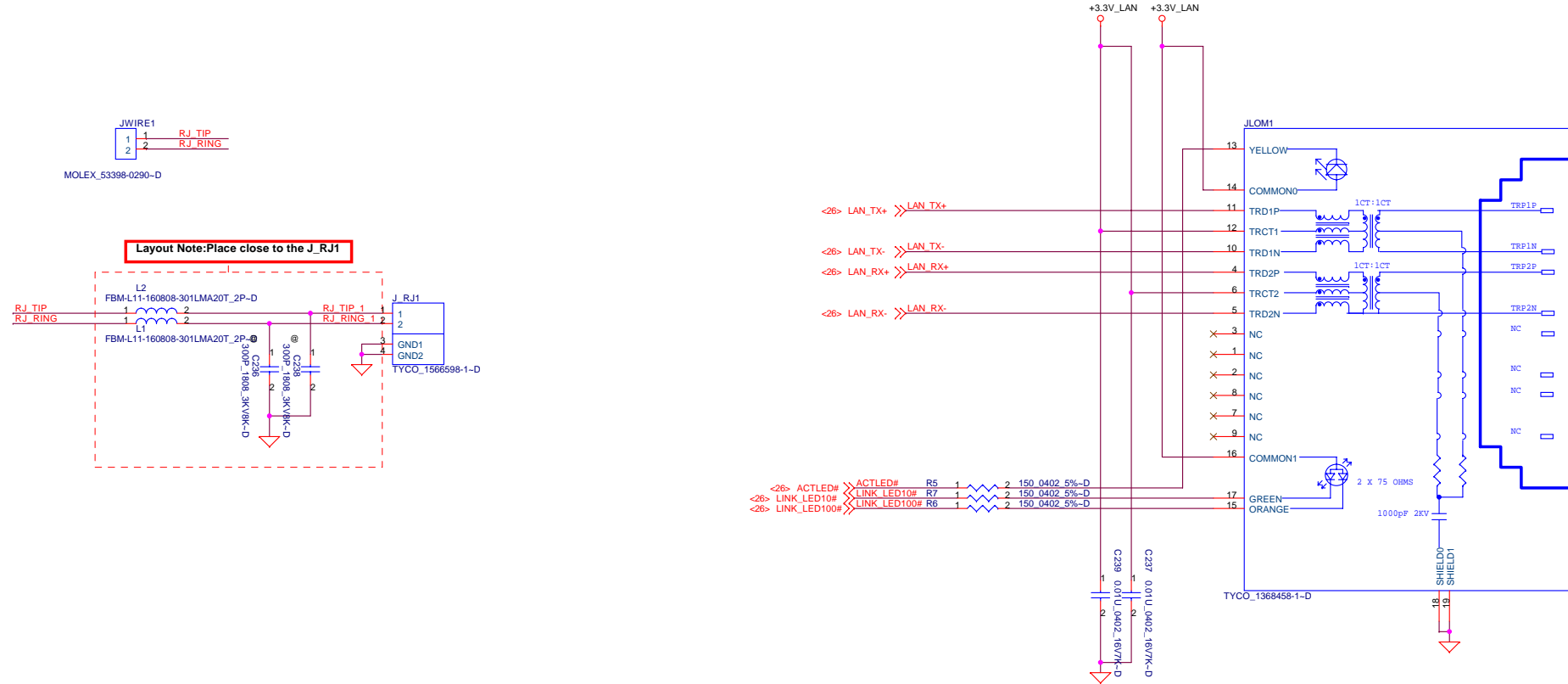
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

USB 2.0 PORT

File	Document Number	Rev
LA-3001P		0.4
Date: Monday, April 17, 2006	Sheet 25 of 73	

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.

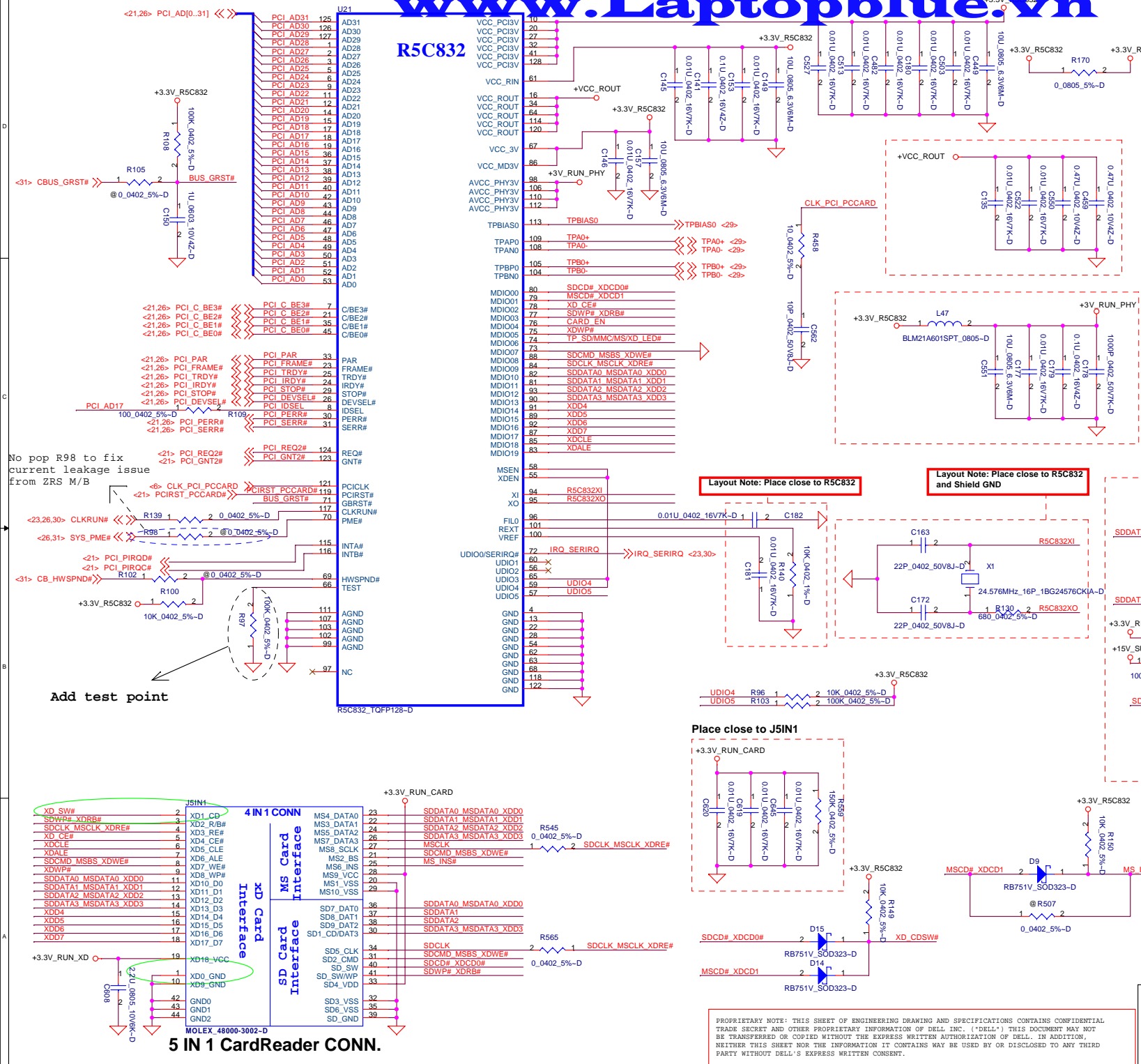


DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Magnetic & RJ45

Title			
Magnetic & RJ45			
Size	Document Number		Rev
	LA-3001		0.4
Date:	Monday, April 17, 2006	Sheet 27 of 73	

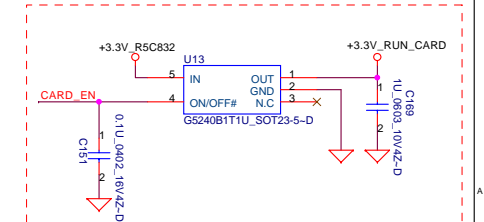
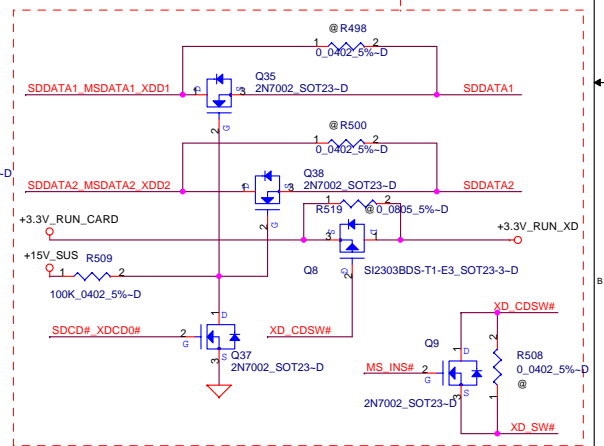


Media I/F	SD Card	MMC Card	MS Card MS Pro Card	XD Card
MDIO00	SDCD#	MMCCD#		XDCD0#
MDIO01			MSCD#	XDCD1#
MDIO02				XDCE#
MDIO03	SDWP#			XDR/B#
MDIO04	SDPWR0	MMCPWR	MSWR	XD PWR
MDIO05	SDPWR1			XDWP#
MDIO06	SDLED#	MMCLED#	MSLED#	XDLED#
MDIO07	SDEXTCK		MSEXTCCK	
MDIO08	SDCCMD	MMCCMD	MSBS	XDWE#
MDIO09	SDCCLK	MMCCLK	MSCCLK	XDRE#
MDIO10	SDCDAT0	MMCDAT	MSCDAT0	XDCDAT0
MDIO11	SDCDAT1		MSCDAT1	XDCDAT1
MDIO12	SDCDAT2		MSCDAT2	XDCDAT2
MDIO13	SDCDAT3		MSCDAT3	XDCDAT3
MDIO14				XDCDAT4
MDIO15				XDCDAT5
MDIO16				XDCDAT6
MDIO17				XDCDAT7
MDIO18				XDCL
MDIO19				XDALE

Function set pin define

UDIO3	UDIO4	MSEN	XDEN	Function
Pull-up	Pull-up	Pull-up	Pull-up	Enable SD, XD, MS, MMC Card

Solve MS Duo Adaptor short problem



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

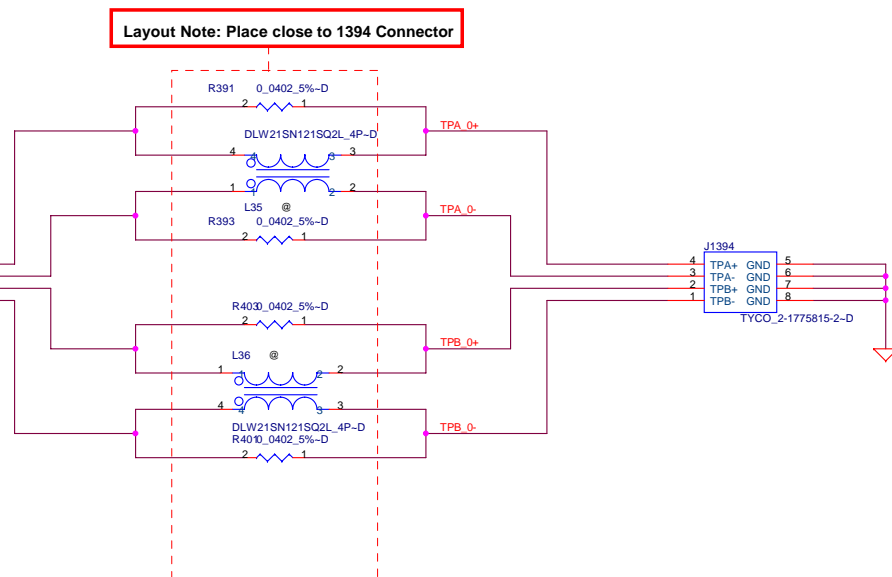
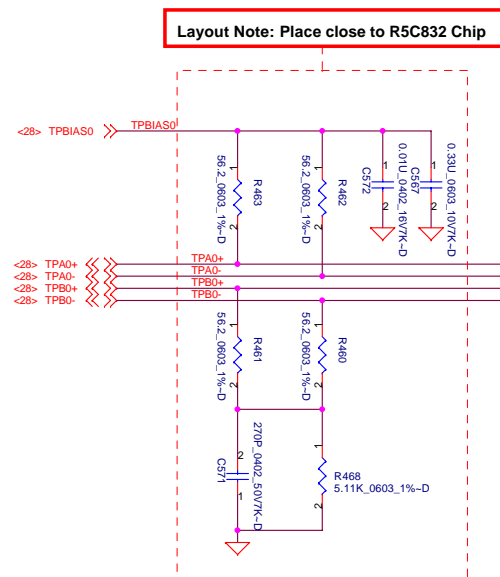
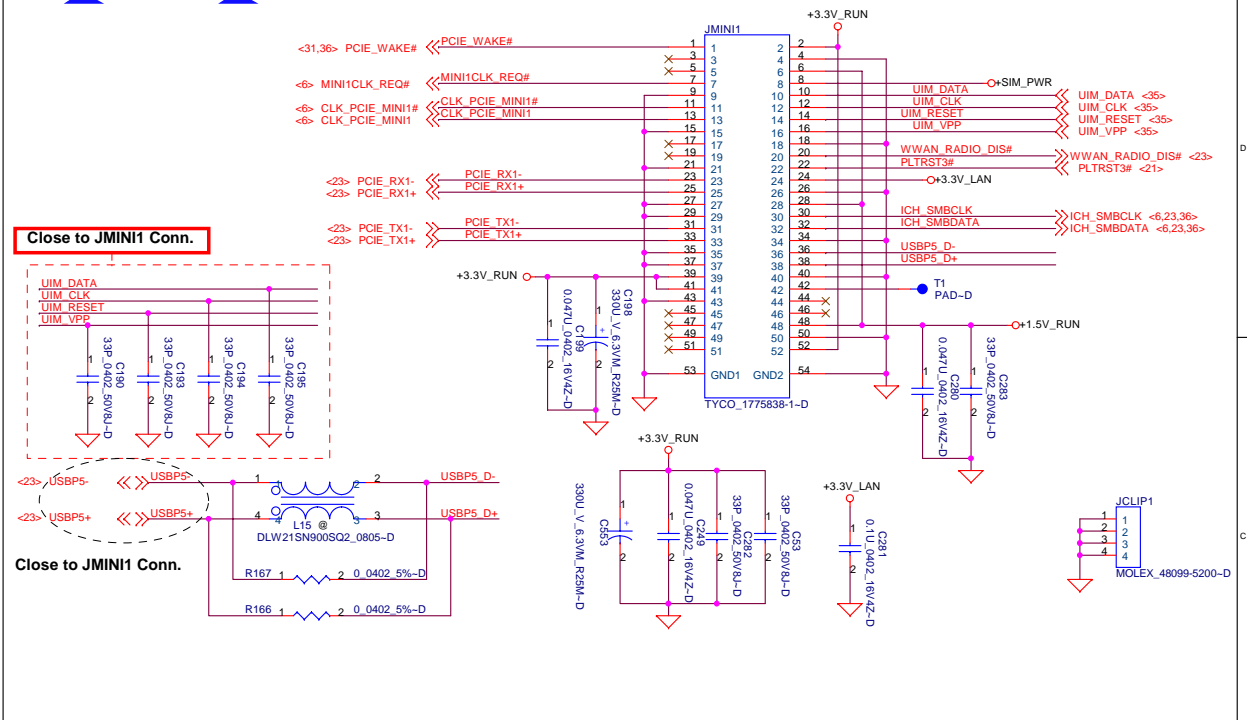
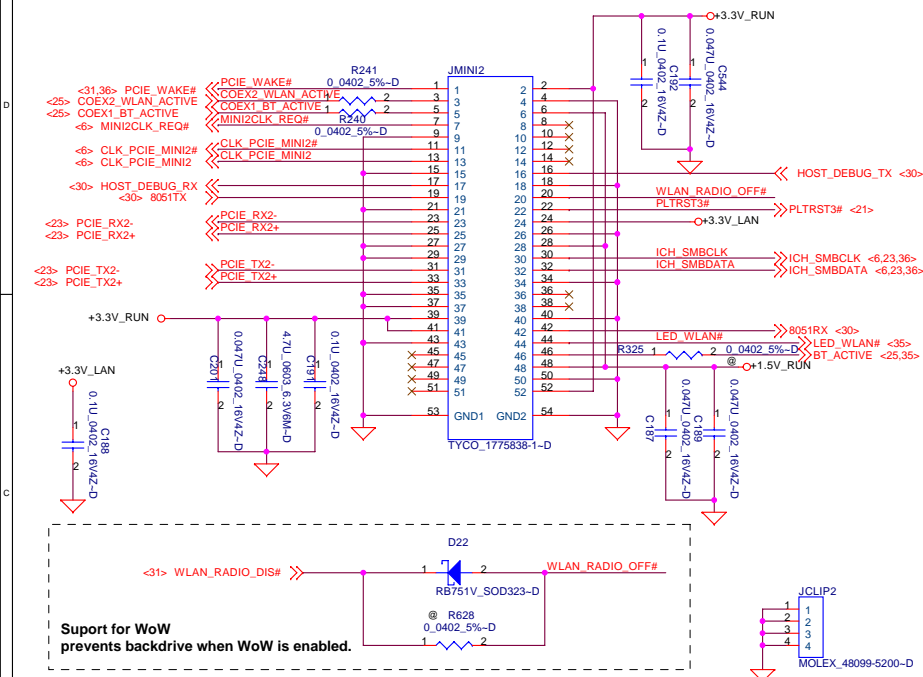
R5C832 and 5 IN 1

Title			
R5C832 and 5 IN 1			
Size	Document Number		Rev
	LA-3001P		0.4
Date:	Monday, April 17, 2006	Sheet 28 of 73	



Mini Wireless LAN Card

www.Laptopblue.vn



DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

Title **MINI CARD & 1394 Connector**

Size	Document Number	Rev
	LA-3001P	0.4
Date:	Monday, April 17, 2006	Sheet 29 of 73

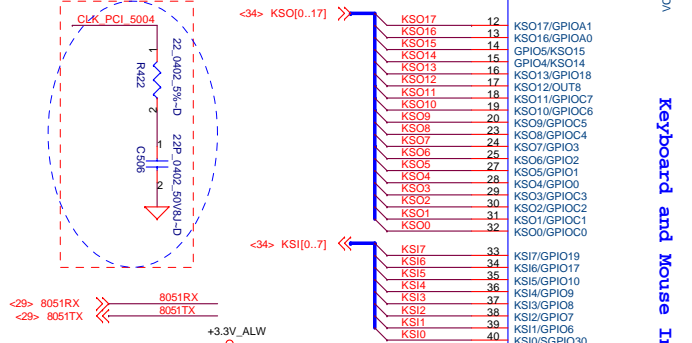
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ('DELL') THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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

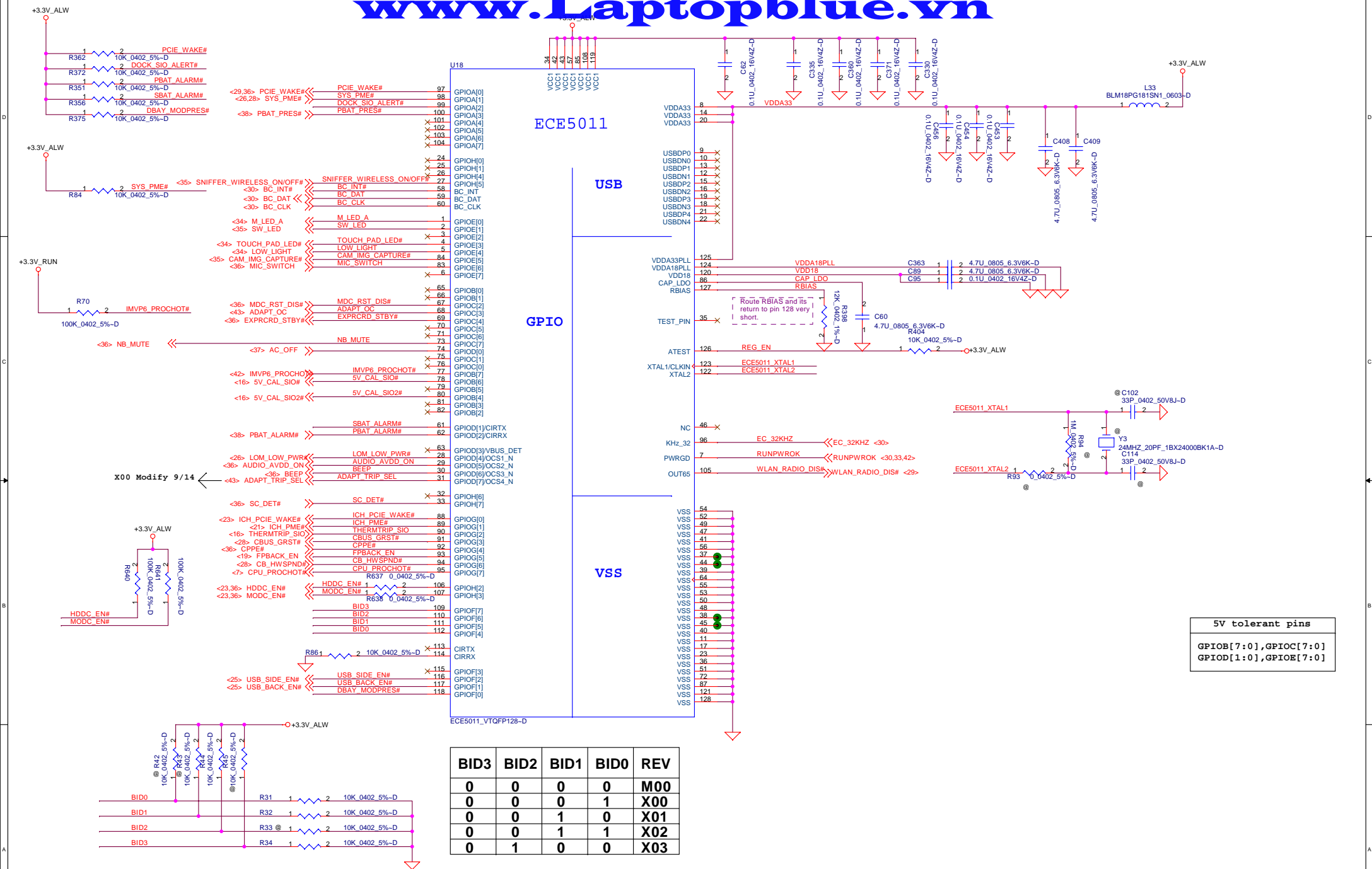
5V tolerant pins

IMCLK, IMDAT, EMCLK, EMDAT,
KCLK, KDAT, 8051RX, 8051TX
GPIO43, GPIO35-37

www.Laptopblue.vn

Place closely pin 58





DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title			HUB/ECE5011	
Size	Document Number	Rev		0.4
LA-3001P				
Date:	Monday, April 17, 2006	Sheet	31	of 73

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.

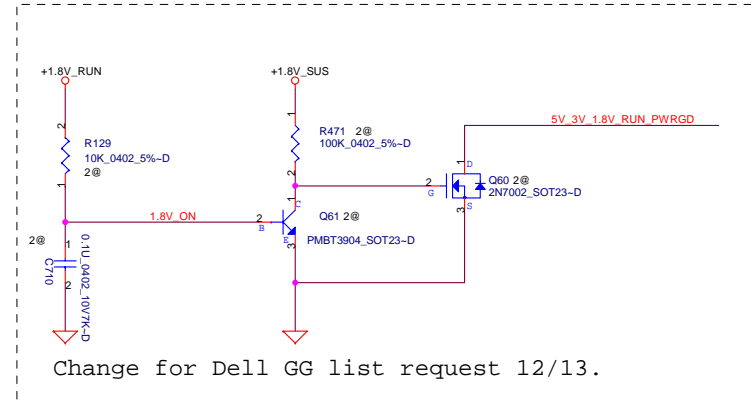
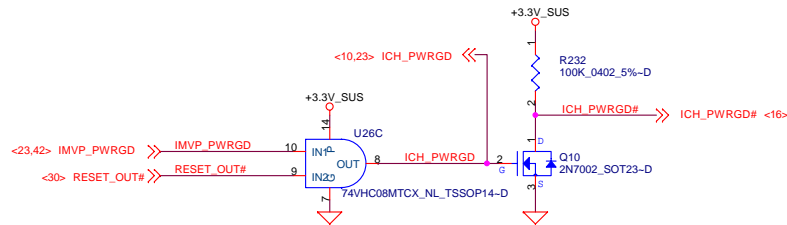
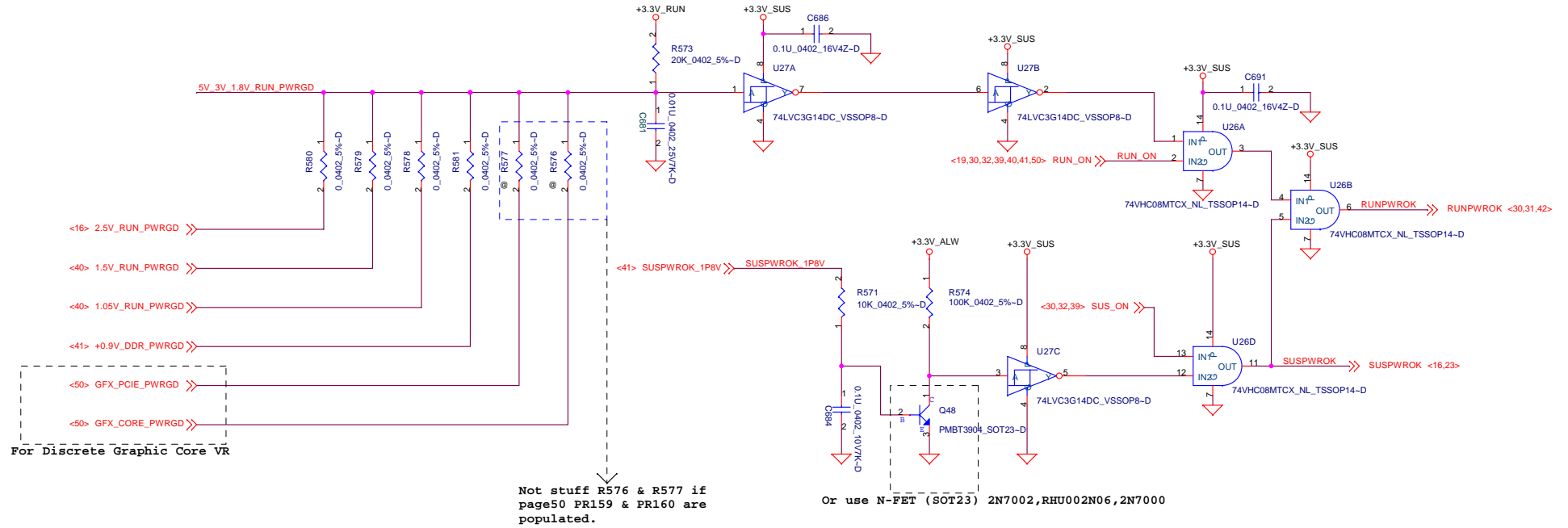
www.Laptopblue.vn



The schematic diagram illustrates the ENAB_3VLAN signal circuit. It features a power supply PWR_SRC connected to a network of resistors and MOSFETs. Resistor R497 (100K_0402_5%-D) is connected between PWR_SRC and the gate of MOSFET Q34 (2N7002_SOT23-D). MOSFET Q34's source is grounded, and its drain is connected to the gate of MOSFET Q36 (2N7002_SOT23-D). Resistor R501 (200K_0402_5%-D) is connected between the gate of Q36 and ground. The drain of Q36 is connected to the ENAB_3VLAN signal line, which is also connected to resistor R513 (100K_0402_5%-D) leading to PWR_SRC and resistor R520 (470K_0402_5%-D) leading to ground. The ENAB_3VLAN signal is shown as a red trace with a bus symbol indicating it is connected to a 26-pin connector.



Sheet 32 of 73



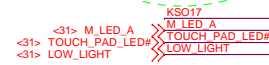
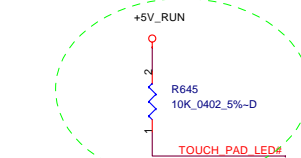
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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



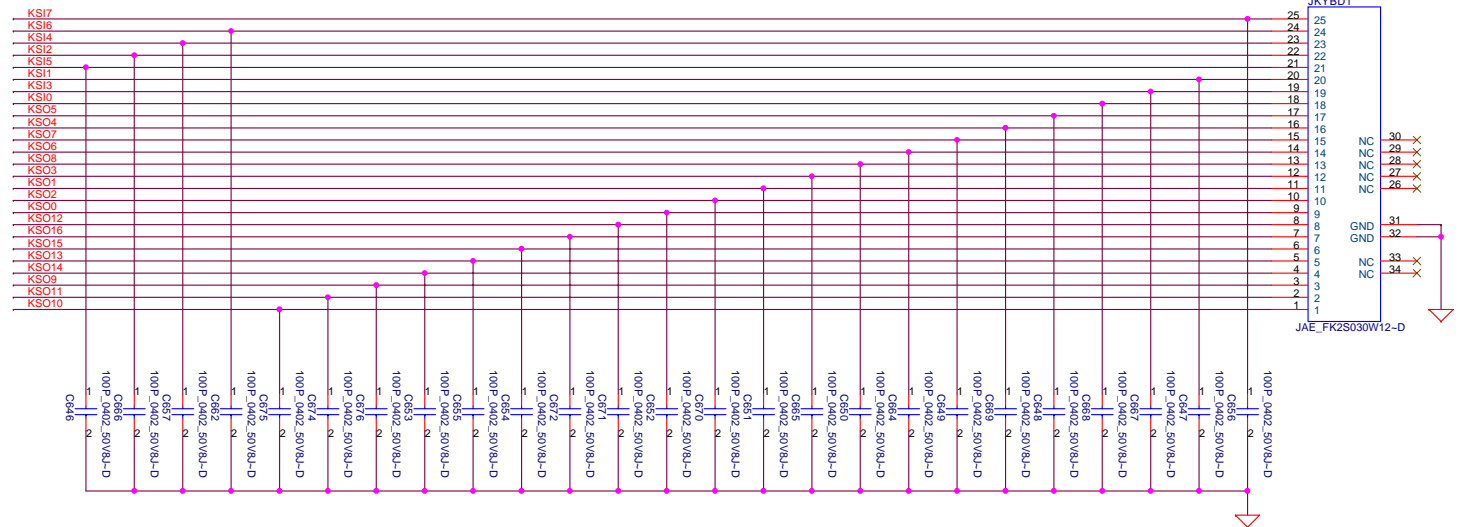
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

Title		POWER SEQUENCE
Size	Document Number	Rev
LA-3001P		0.4
Date:	Monday, April 17, 2006	Sheet 33 of 73

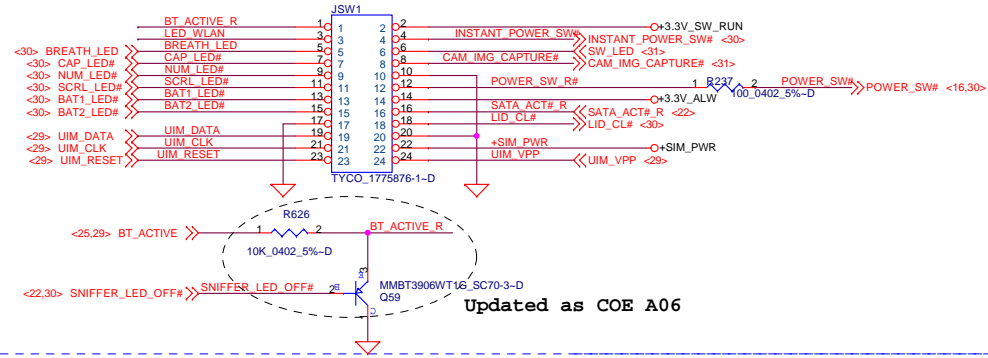


Signals	Description
M_LED_A	High bright for Media LED
	High bright for Touch PAD LED
	Low bright for Media LED/Touch PAD LED

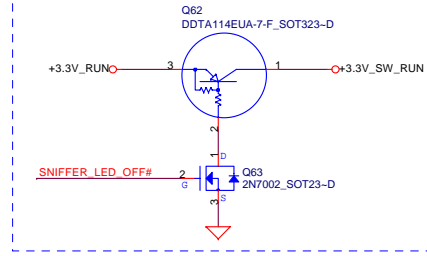
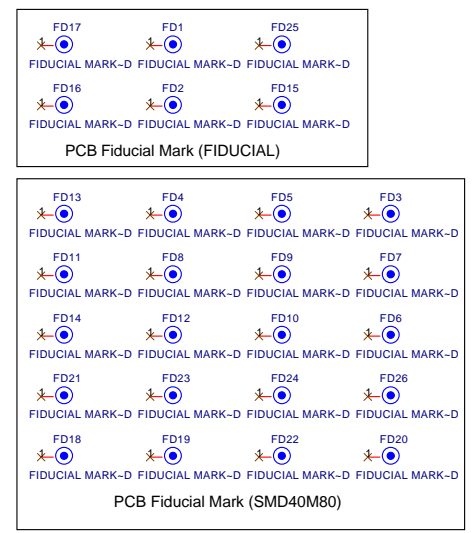


Date: Monday, April 17, 2006		Sheet 34 of 73	
------------------------------	--	----------------	--

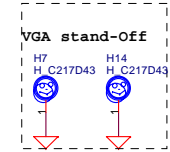
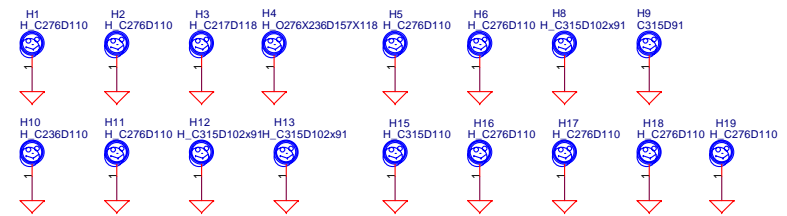
POWER Button CONN.



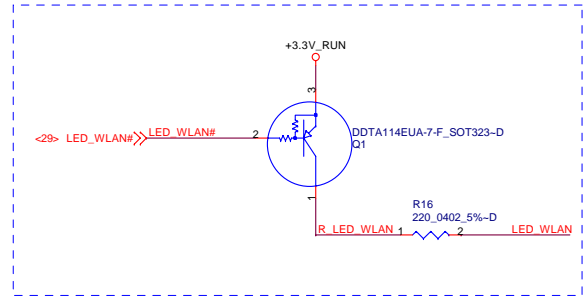
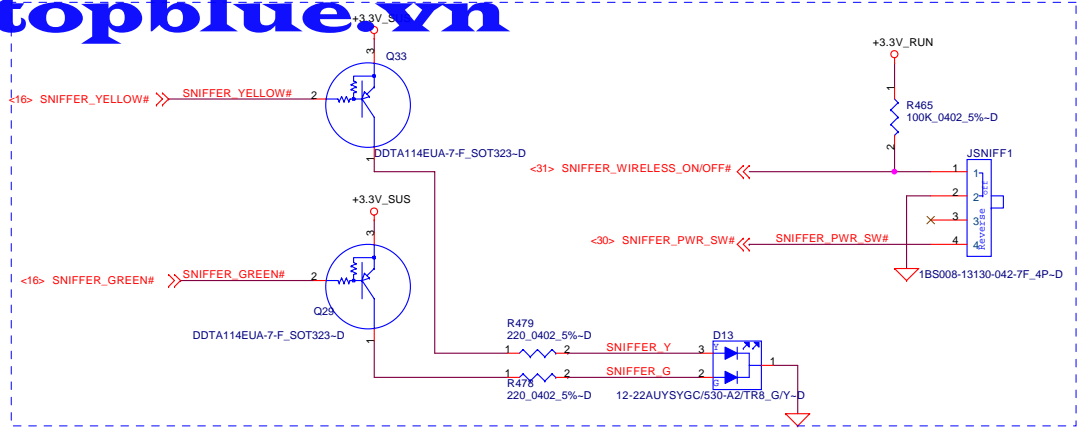
Fiducial Mark



Screw



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.



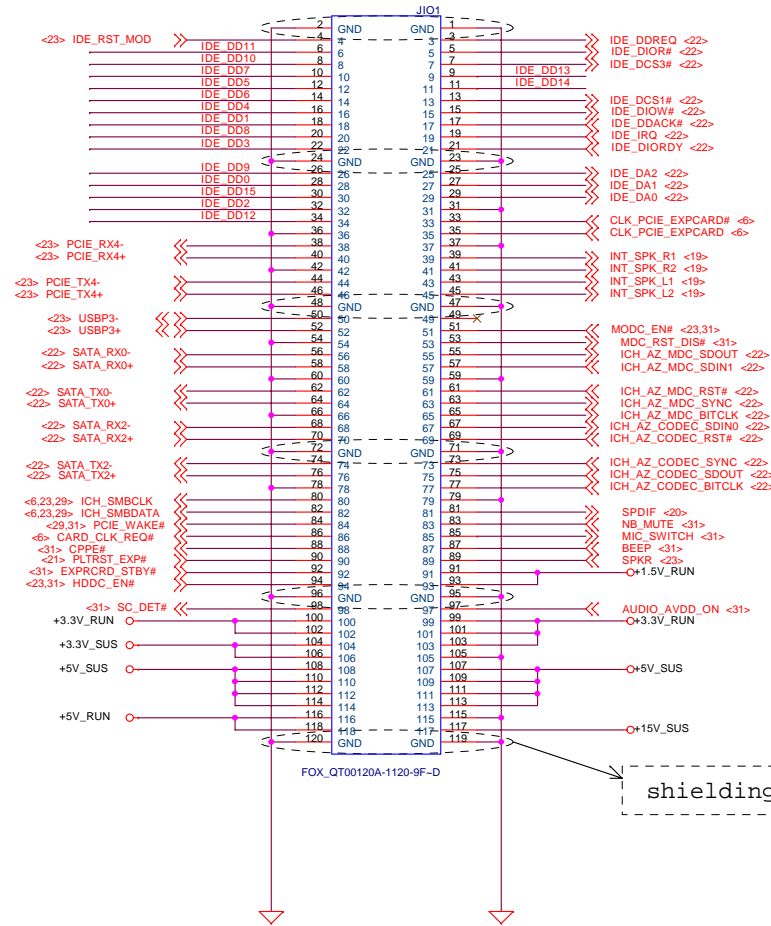
DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.		
Title SW LED/B & ME & spare parts		
Size	Document Number LA-3001P	Rev 0.4
Date: Monday, April 17, 2006	Sheet 35 of 73	

CD-ROM IDE BUS

EXPRESS CARD

SATA HDD



SPEAKER

MDC

AC 97

shielding

IDE_DD[0..15] <22>

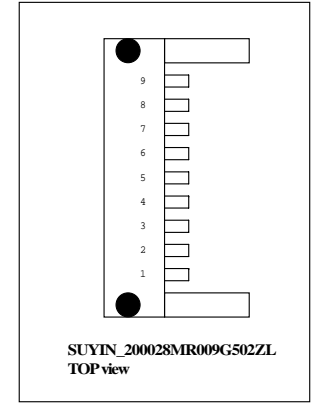
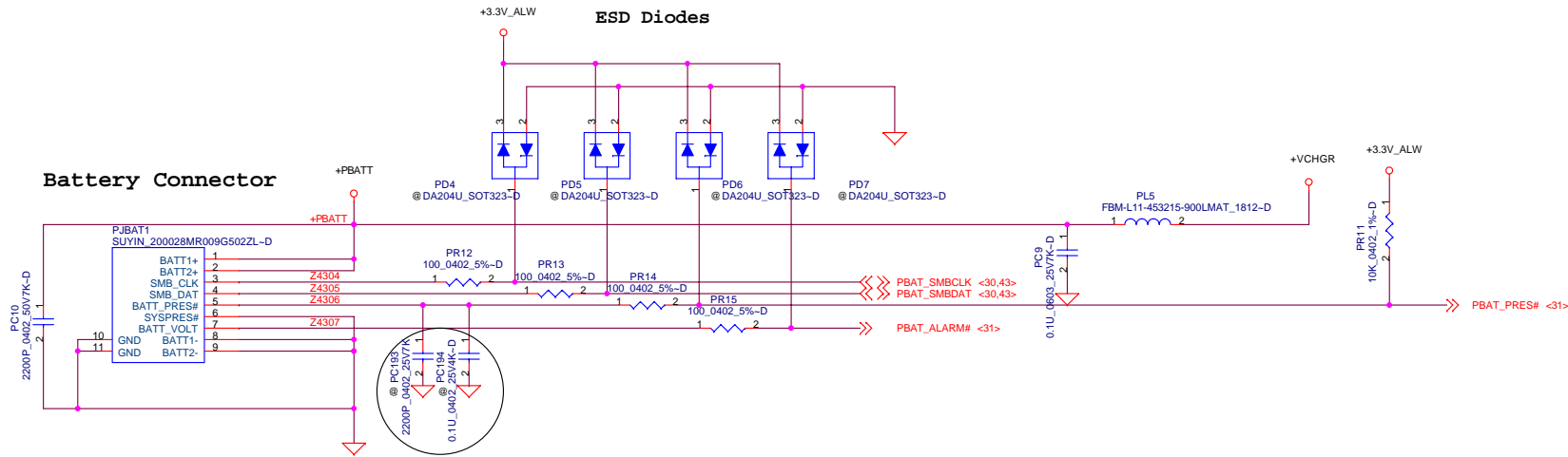
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION 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		
I/O BOARD DOCKING		
Size	Document Number	Rev
	LA-3001P	0.4
Date:	Monday, April 17, 2006	Sheet 36 of 73



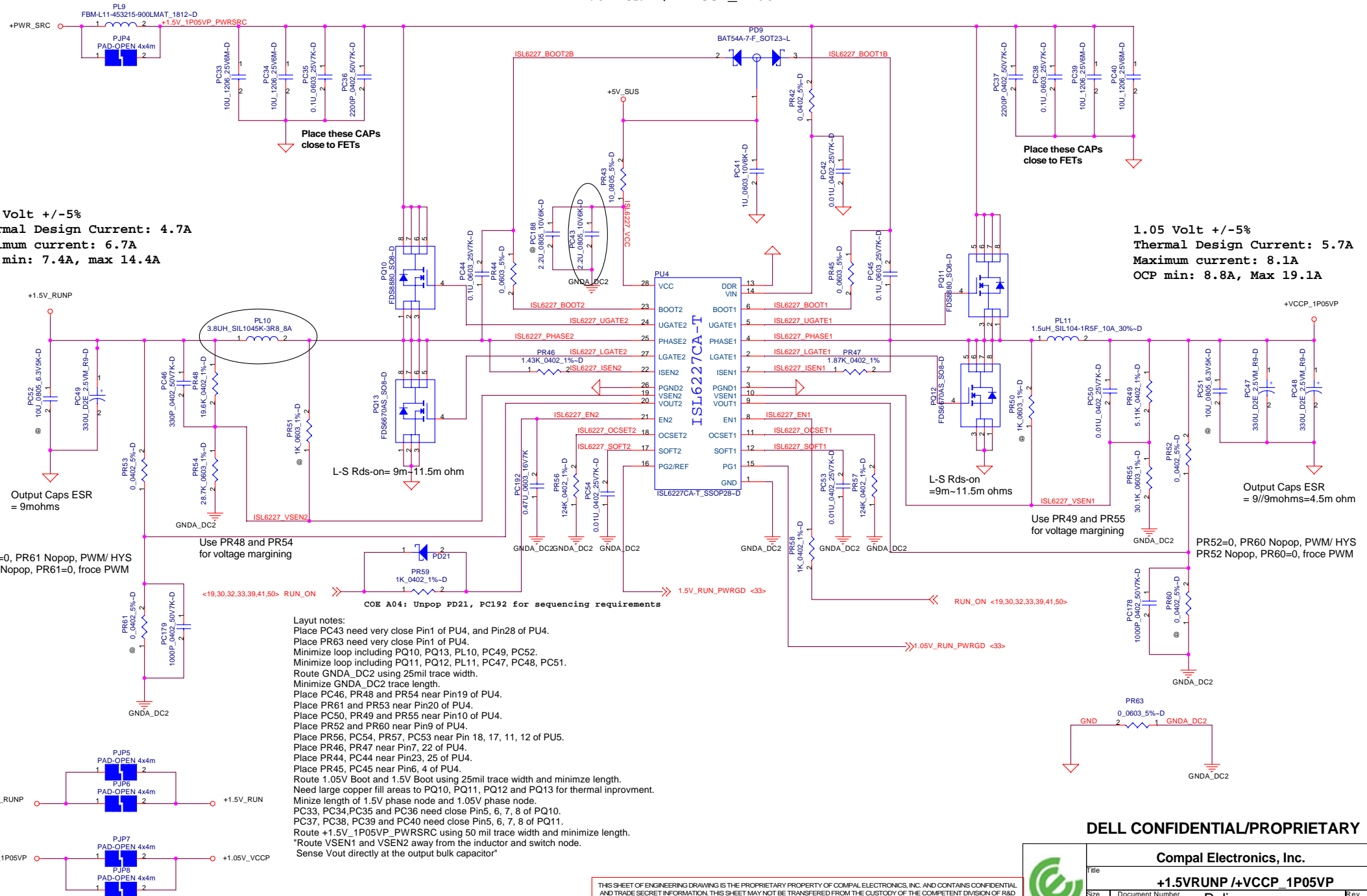
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS 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.			
Title	Battery Conn		
Size	Document Number	Bali	Rev X02
Date:	Monday, April 17, 2006	Sheet 38	of 73

+1.5VRUNP / +VCCP_1P05VP



DELL CONFIDENTIAL/PROPRIETARY

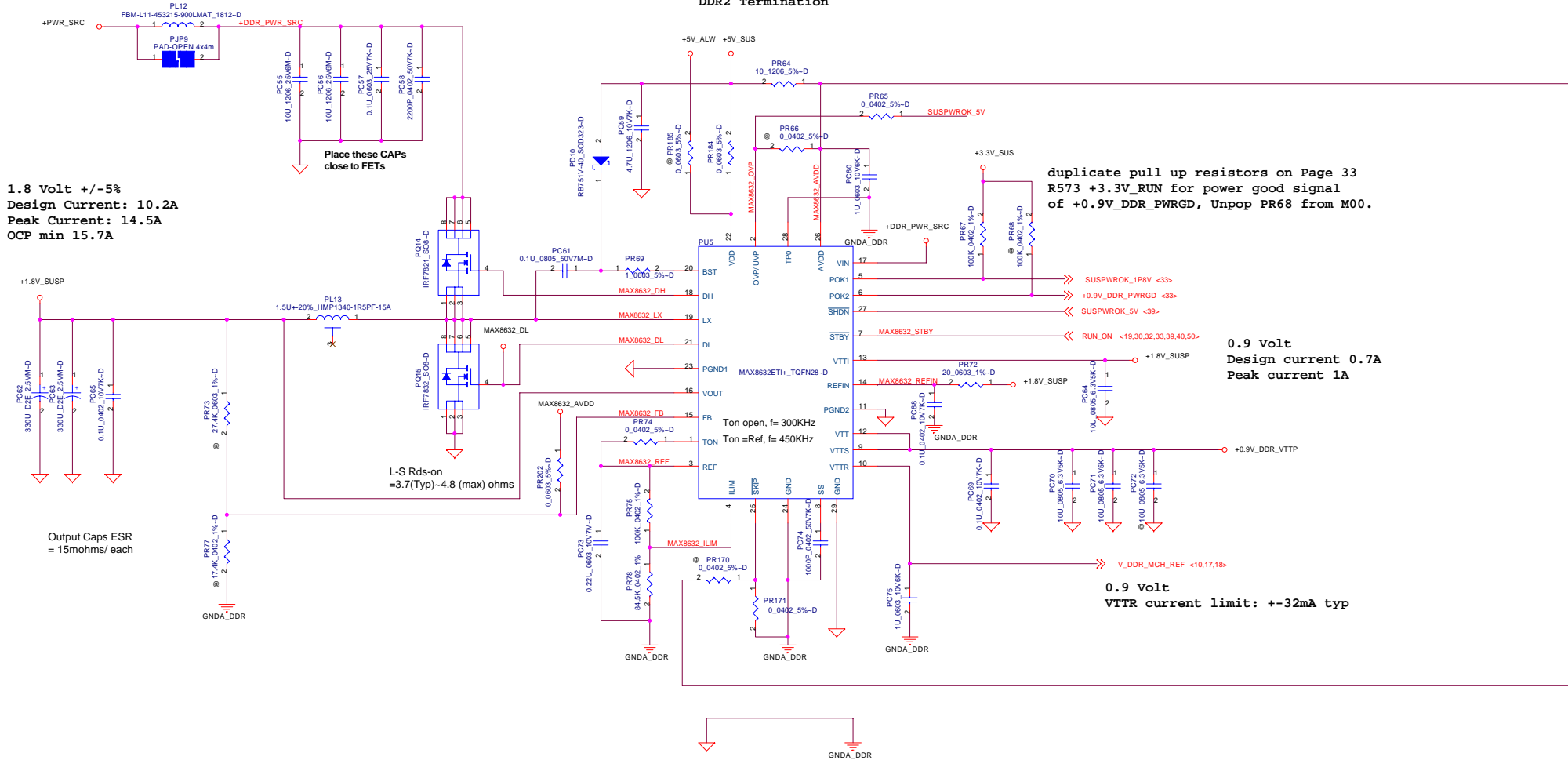
Compal Electronics, Inc.

+1.5VRUNP /+VCCP_1P05VP

Size	Document Number	Bali	Rev	X02
Date:	Monday, April 17, 2006	Sheet	40	of 73

+1.8VSUSP/ +0.9V_DDR_VTT
DDR2 Termination

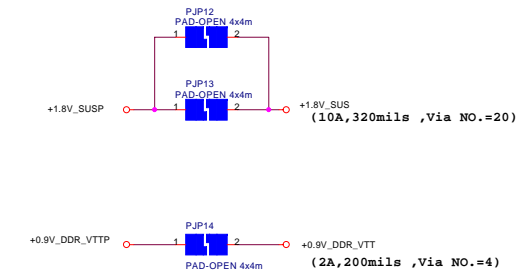
1.8 Volt +/-5%
Design Current: 10.2A
Peak Current: 14.5A
OCP min 15.7A



duplicate pull up resistors on Page 33
R573 +3.3V_RUN for power good signal
of +0.9V_DDR_PWRGD, Unpop PR68 from M00.

0.9 Volt
Design current 0.7A
Peak current 1A

0.9 Volt
VTT current limit: +-32mA typ

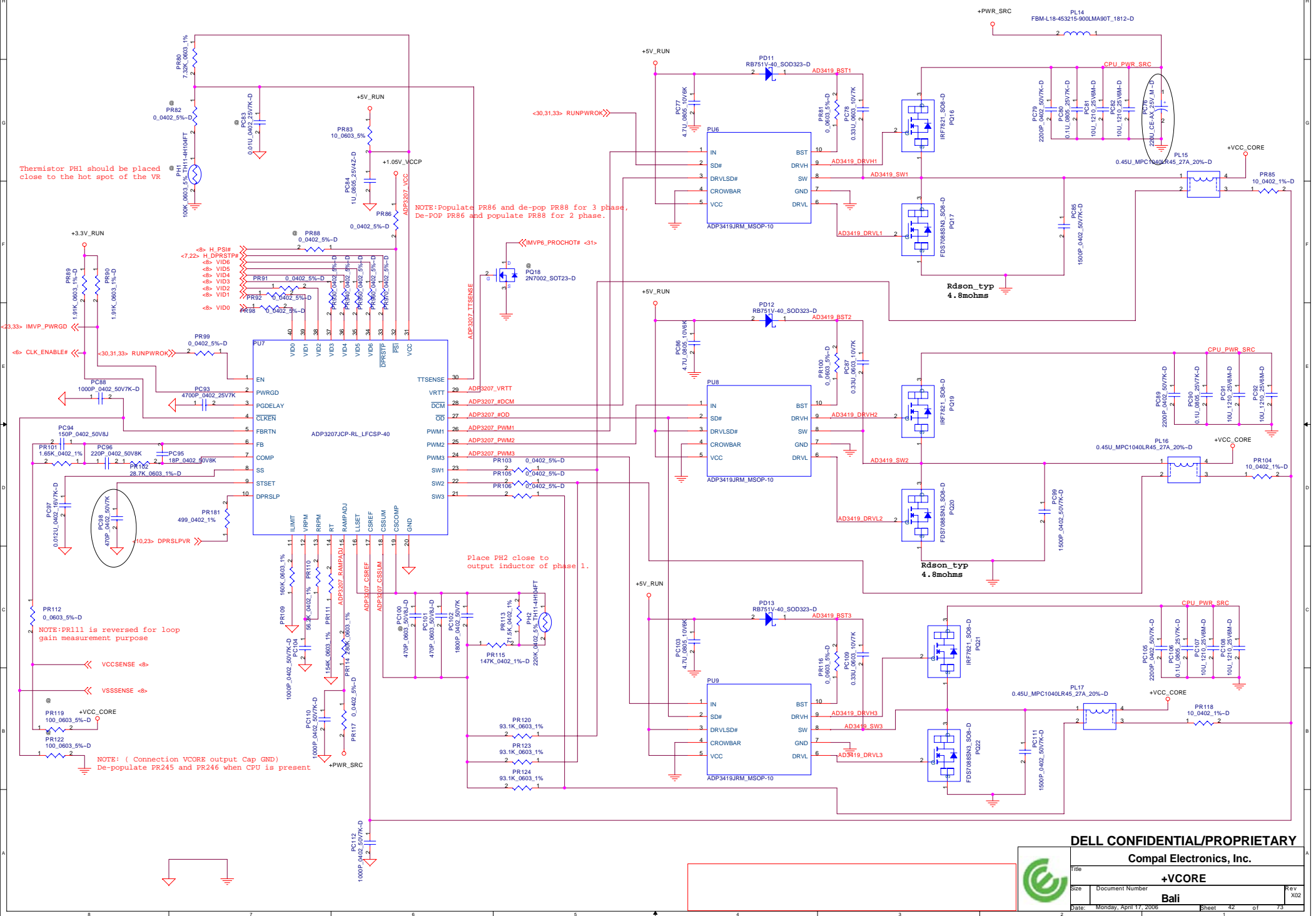


+1.8VSUS OCP

$T_{off} = 1/450k (1-1.8/19) = 2.22\mu s$
 $\Delta I = 1.8V/1.5\mu H * 2.22\mu s = 2.66A$
 $I_{limit} = (V_{ILM} * 0.1) / R_{ds(on)} + 1/2 \Delta I$
 $V_{ILM} = 2 * 100 / (100 + 84.5) = 1.08V * 0.1 = 108mV$
 $I_{C 10\% tolerance} (min 97.2mV) (Typ 108mV) (max 118.8mV)$
 $I_{limit} = (V_{ILM}) / R_{ds(on)} + 1/2 \Delta I$
 $I_{limit Min} = 97.2mV / (4.8m\Omega * 1.4) + 1/2 \Delta I = 15.7A$

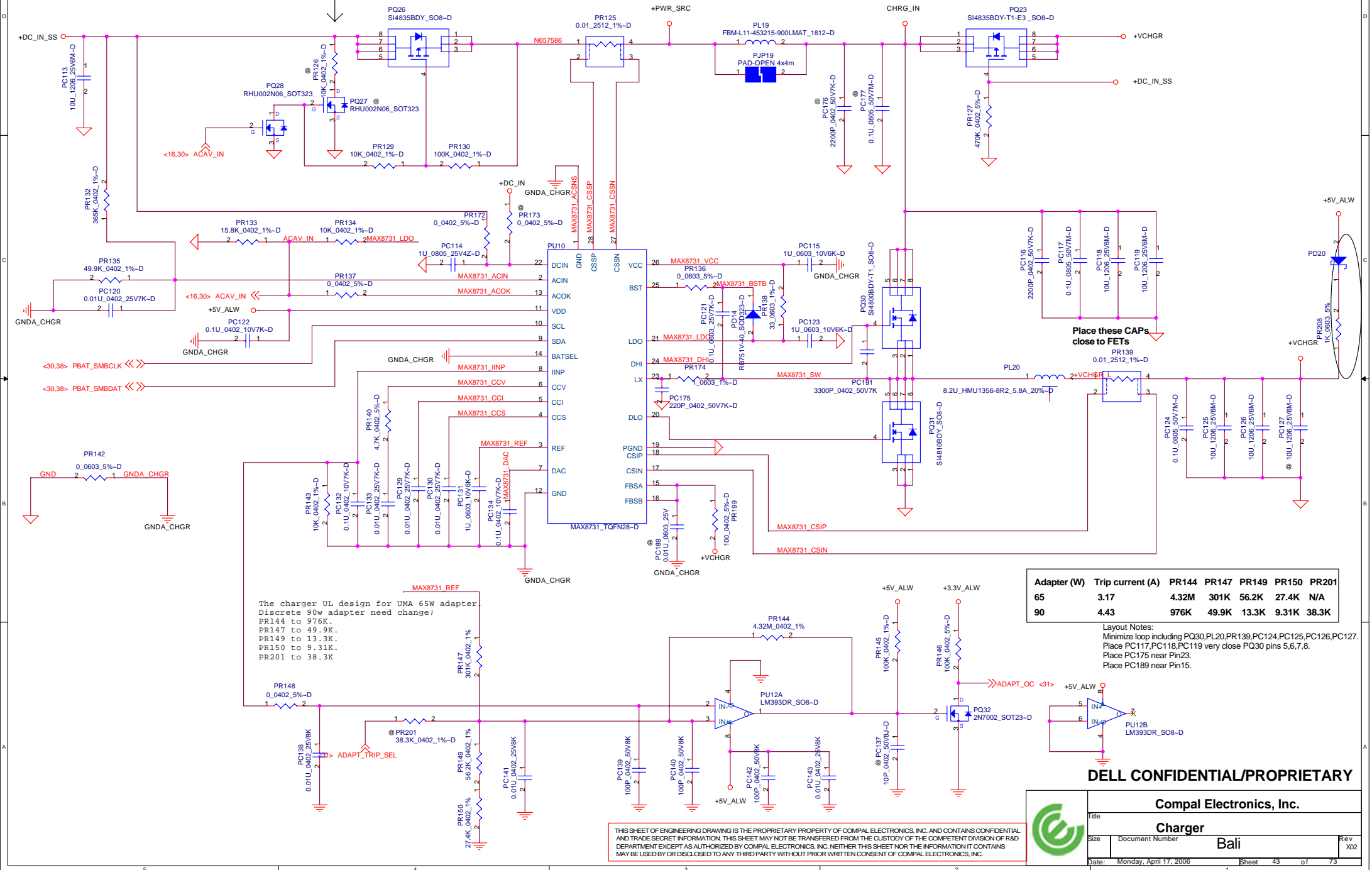
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ("DELL") THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE INFORMATION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

```
-For Merom: 3-phase: Thermal Design Current 35A / Iccmax 44A
-For Yonah: 3-phase: Thermal Design Current 28.8A / Iccmax 36A
```



+DC_IN discharge path

Smart Charger



Adapter (W)	Trip current (A)	PR144	PR147	PR149	PR150	PR201
65	3.17	4.32M	301K	56.2K	27.4K	N/A
90	4.43	976K	49.9K	13.3K	9.31K	38.3K

Layout Notes:
Minimize loop including PQ30, PL20, PR139, PC124, PC125, PC126, PC127.
Place PC117, PC118, PC119 very close PQ30 pins 5, 6, 7, 8.
Place PC175 near Pin23.
Place PC189 near Pin15.

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

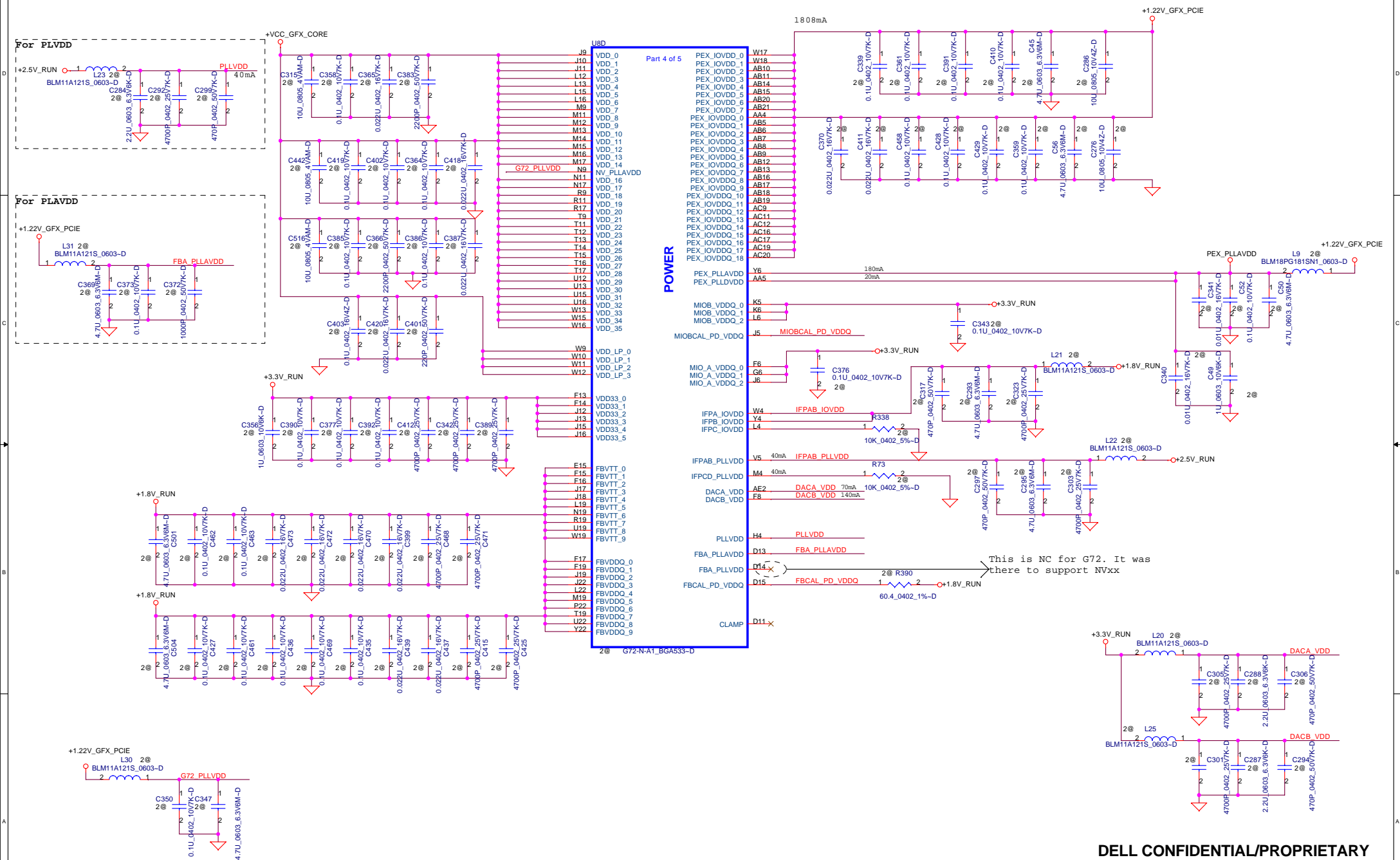
Charger

Bali

Rev	
X02	

Date:	Monday, April 17, 2006	Sheet	43	of	73
-------	------------------------	-------	----	----	----





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.

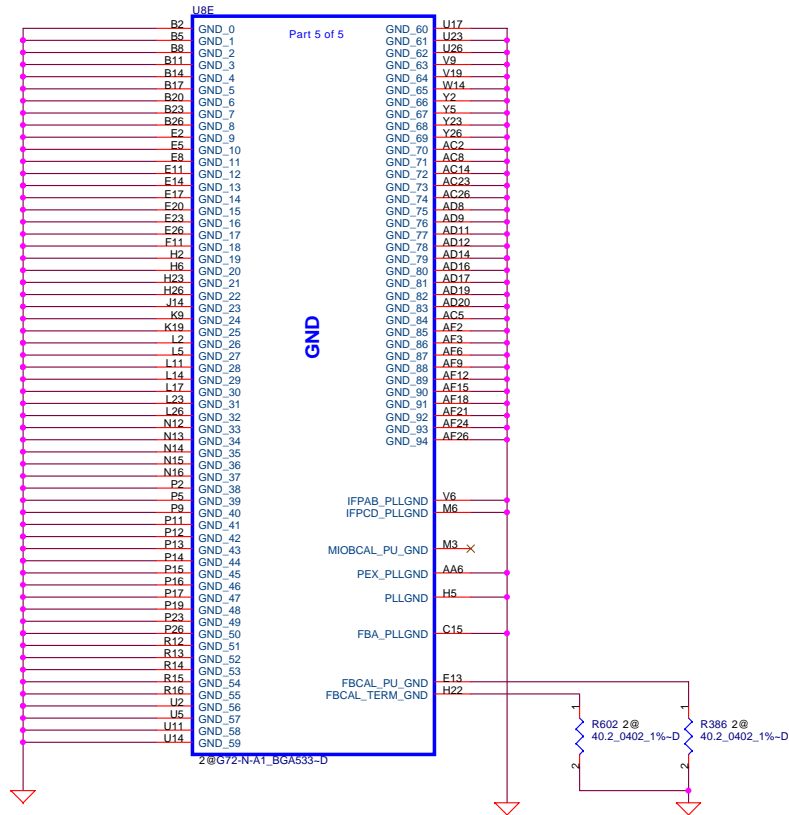


Compal Electronics, Inc.

NVG72 PWR

LA-3001P

Date: Monday, April 17, 2006 Sheet 46 of 73



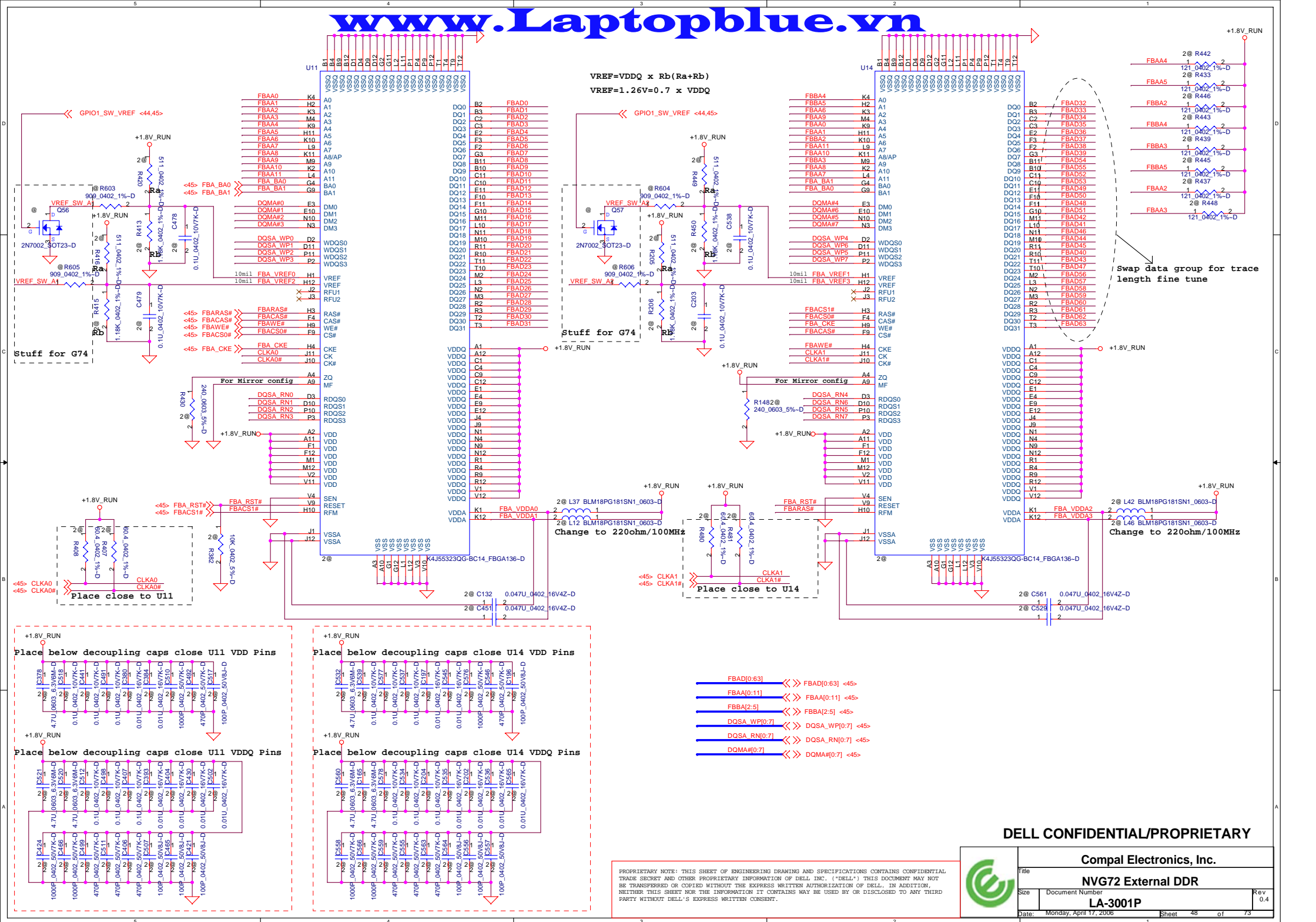
DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.

Title			NVG72 GND	
Size	Document Number		Rev	
	LA-3001P		0.4	
Date:	Monday, April 17, 2006	Sheet	47	of 73

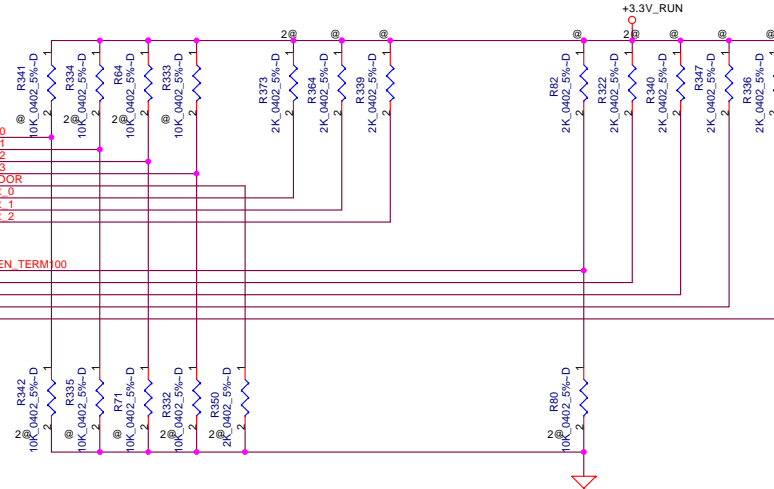
PROPRIETARY NOTE: THIS SHEET OF ENGINEERING DRAWING AND SPECIFICATIONS CONTAINS CONFIDENTIAL TRADE SECRET AND OTHER PROPRIETARY INFORMATION OF DELL INC. ('DELL'). THIS DOCUMENT MAY NOT BE TRANSFERRED OR COPIED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF DELL. IN ADDITION, NEITHER THIS SHEET NOR THE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



<44> RAM_CFG0
<44> RAM_CFG1
<44> RAM_CFG2
<44> RAM_CFG3
<45> SUB_VENDOR
<45> 3GIO_ADR_0
<45> 3GIO_ADR_1
<45> 3GIO_ADR_2

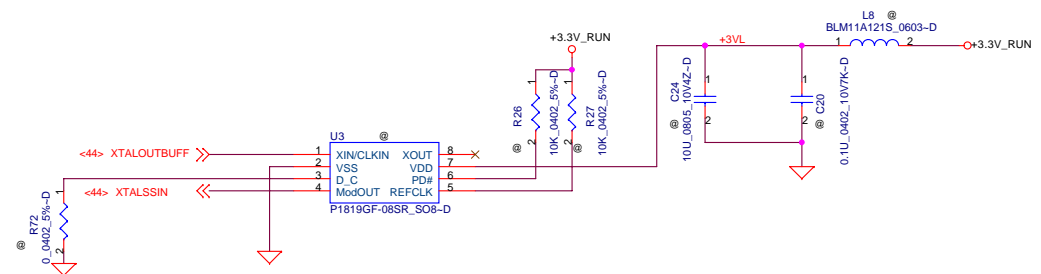
<45> PEX_PLL_EN_TERM100
<44> DEVID3
<44> DEVID2
<44> DEVID1
<44> DEVID0

RAM_CFG0
RAM_CFG1
RAM_CFG2
RAM_CFG3
SUB_VENDOR
3GIO_ADR_0
3GIO_ADR_1
3GIO_ADR_2
PEX_PLL_EN_TERM100
DEVID3
DEVID2
DEVID1
DEVID0



G72xx				
	DEVID3	DEVID2	DEVID1	DEVID0
G72GLM	1	1	0	0
G72M	1	0	0	0
G72MV	0	1	1	1

STRAPS	PIN	DESCRIPTION		Value
ROM_TYPE[1:0]	MIOBD10 MIOB_VSYNC	Parallel=00, SERIAL AT25F=01 DEFAULT, Serial SST45VF=10, LpC=11		01
SUB_VENDOR	MIOAD1	VBIOS on card (pull high) VBIOS with system BIOS (pull down)		0
PEX_PLL_TERM	MIOAD0			0
RAM_CFG[3:0]	MIOBD0 MIOBD1 MIOBD8 MIOBD9	For GDDR1	8Mx32 DDR monolithic (64bit) 300MHz, 1.8V	0001
			8Mx32 DDR monolithic (32bit) 300MHz, 1.8V	1001
			8Mx32 DDR (Samsung K4D55323QF-GC) 300MHz, 1.8V	0010
			4Mx32 DDR generic (64bit) 1.8V I/O	0100
			4Mx32 DDR generic (32bit) 1.8V I/O	1100
	For GDDR3		Infineon 8Mx32 500MHz, 1.8V	0101
			Hynix 8Mx32 500MHz, 1.8V	0111
			Samsung 8Mx32 500MHz, 1.8V	0110



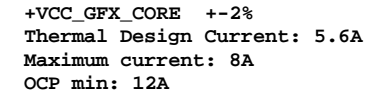
	U3.Pin3	Internal pull up
-1.75% (DOWN)	0	
±0.875% (CENTER)	1	

DELL CONFIDENTIAL/PROPRIETARY



Compal Electronics, Inc.		
Title		
NVG72 Strapping		
Size	Document Number	Rev
	LA-3001P	0.4
Date:	Monday, April 17, 2006	Sheet 49 of 73

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.



output voltage adjustable network


Sheet 50 of 73

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	Solution Description	Rev.
1	ALL	H/W	9/14	Bill	Revision change to X00(0.2)	Modify Done.	0.2
2	31	H/W	9/14	Bill	Update Board ID to 0001 for X00	Stuff R42 and no-stuff R31	0.2
3	31	H/W	9/14	Bill	CoE update. (EC_A05)	Add GPIO USB_CAM_EN# and ADAPT_TRIP_SEL	0.2
4	19	H/W	9/20	Bill	CoE update. (CRT, LVDS, SVIDEO and DVI Interfaces_A06)	Delete U28, R607. Add R610.	0.2
5	20	H/W	9/20	Bill	CoE update. (CRT, LVDS, SVIDEO and DVI Interfaces_A06)	Update Population Note for the RGB and TV out Filter.	0.2
6	32	H/W	9/23	Reden	CoE update. (M07 SYSTEM POWER SEQUENCE_A03)	Change R58,R540,R567,R447,R558,R564,R597 to 30_0805_5%	0.2
7	23	H/W	9/28	Reden	Update the ICH7 USB bus connection	Add connection of USB4+/- for CCD, USB2+/- for Blue tooth	0.2
8	ALL	H/W	9/28	Reden	Change Connector for ME request	Update J1394, JTP1, JBT1, JLVDS1 connector	0.2
9	14	H/W	9/30	Reden	Update the note for MCH power	Remove the placement note for C489,C525 as COE schematic	0.2
10	22	H/W	9/30	Scott	Pull-up on SATA_ACT# (R530) should be populated	Modify OK	0.2
11	22	H/W	9/30	Scott	Capacitor on THRMTRIP_ICH# (C609) can be de-populated	Modify OK	0.2
12	23	H/W	9/30	Scott	Rename net LCM_SMB_CLK to ICH_SMLINK0	Modify OK	0.2
13	23	H/W	9/30	Scott	Rename net LCM_SMB_DAT to ICH_SMLINK1	Modify OK	0.2
14	29	H/W	9/30	B.McFarland	Can remove R489 and R490. Leave pins 3 and 5 as NC on JMINI1. See A06 Ref Schem.	Modify OK	0.2
15	20	H/W	9/30	John Lerma	Please check the latest reference schematics. Delete 75 ohm resistors on RED, GREEN, & BLUE. Add 39 ohms series resistors to ouputs of U1 & U2. Move L3 & L4 before caps C1 & C2.	Delete R233, R235, R238, Add R611, R612 (39 Ohm). And move L3 & L4 before caps C1 & C2.	0.2
16	20	H/W	9/30	John Lerma	Please check the latest reference schematics. Delete 75 ohm resistors on TV_C, TV_CVBS, & TV_Y. Filter circuit values have been changes and a cap in parallel with each inductor has been added.	Remove R368, R380, R385.	0.2
17	33	H/W	9/30	John Lerma	Add diode for power leakage in power sequence circuit	Change R129,R482,R466 to 100K,and change Q6,Q30,Q27 to 2N3906,and change R471,R474,R469 to 4.7K.	0.2
18	23	H/W	9/30	Reden	No stuff R485 (10k pull high) for M'07 inverter	Modify OK	0.2
19	47	H/W	9/30	Reden	Change pull down resistor value to follow COW schematic	Change R602,R386 to 37.4_0402_1%	0.2
20	20	H/W	10/04	Reden	Change S-video filter bead same as COE schematic	Change L29,L32,L34 to 0.47UH_CIL10NR47KNC_10%_0603	0.2

DELL CONFIDENTIAL/PROPRIETARY


	Compal Electronics, Inc.		
	Title Changed-List History 1		
	Size	Document Number	Rev
		LA-3001P	0.3
Date: Monday, April 17, 2006		Sheet 51 of 73	

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	29	H/W	10/05	John	Swap CLKREQ signal between WWAN and WLAN	Modify ok.		0.2
2	27	H/W	10/05	John	Change C236,C238 from 1000p to 300p	Modify ok.		0.2
3	29	H/W	10/05	John	Add debug signals to WLAN connector	Connecting JMINI2 pins 16 - HOST_DEBUG_TX, 17 - HOST_DEBUG_RX, 19 - 8051_TX & 42 - 8051_RX.		0.2
4	32	H/W	10/05	John	Remove C682 and replace C685 with 4700pF as COE schematic	Modify ok.		0.2
5	44	H/W	10/05	John	Add signal THERMTRIP_VGA# to G72 pin B13 from Guardian II	Modify ok.		0.2
6	49	H/W	10/05	John	Change R341, R334, R64, & R333 from 2K to 10K	Modify ok.		0.2
7	20	H/W	10/05	John	Change Caps C331,C325,C351,C349,C381,& C379 from 82pF to 47pF and add C705-C707	Modify ok.		0.2
8	44	H/W	10/05	John	Add 10K pull-down resistor to G72 pins C3, C1, & D7	Modify ok.		0.2
9	31	H/W	10/06	Reden	Add signal U18 pin5 (GPIOE4) connect to TP connector for LED.	Modify ok.		0.2
10	44	H/W	11/02	John	Add 150ohm terminal resistor on GFx side.	Add 150ohm of R619~R624		0.3
11	22	H/W	11/02	Reden	Add SNIFFER LED Disable Circuit as COE schematic	Add Q58,R625		0.3
12	30	H/W	11/02	Reden	Added 0 ohm to EC5004 test pin	Modify ok.		0.3
13	29	H/W	11/02	Reden	Added circuit to support WoW from S3/S4. Blocking diode and bypass resistor as COE	Modify ok.		0.3
14	35	H/W	11/02	Reden	Added a circuit (Transistor and Resistors) to keep BT LED off when the SNIFFER is turned on	Modify ok.		0.3
15	44	H/W	11/02	Reden	Change pull up resistor same as COE graphic schematic.	Change R370,R376 from 4.7K to 470K.		0.3
16	20	H/W	11/17	Reden	Change VCC_CRT Diode D11 to RB500 (rate Io=100mA).	Modify ok.		0.3
17	44	H/W	11/17	Reden	Add series resistor on signal of PLTRST_DELAY#.	Modify ok.		0.3
18	44	H/W	11/17	Reden	Add series resistor on signal of THERMTRIP_VGA#.	Modify ok.		0.3
19	33	H/W	11/18	Reden	Change Q6,Q27,Q30 to MMBT3906, and delete D19~D21(RB751V_SOD323~D) same as COE schematic.	Modify ok.		0.3
20								
21	32	H/W	11/18	Reden	Added 3VRUN Delay RC CKT, to fix IMVP_PWRGD Glitch issue and add 1.8 VRUN Delay RC CKT, to meet GFX Power Sequence Requirement	Modify ok.		0.3
22								
23								
24	32	H/W	11/18	Reden	Added Diode Bleed off for 3VRUN and 1.8VRUN for GFX Power Down Sequence adjustment.	Modify ok.		0.3
25	32	H/W	11/21	Reden	Change the GFX_RUN_ON connection to VR turn on pin as COE A06 version schematic.	Modify ok.		0.3
26	20	H/W	11/23	John	Change U19 connection from EC to GND as GG list request.	Modify ok.		0.3

DELL CONFIDENTIAL/PROPRIETARY


		Compal Electronics, Inc.	
Title		Changed-List History 2	
Size	Document Number		Rev
	LA-3001P		0.3
Date:	Monday, April 17, 2006	Sheet	52 of 73

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	34	H/W	11/23	John	Change JTP1 pin 19 from +5V_ALW to +5V_RUN as Dell GG list	Modify ok.	0.3
2	20	H/W	11/23	John	Place a 0 ohm 1206 place holder between D11 pin 1 and JCRT1 pin 9	Modify ok.	0.3
3	29	H/W	11/23	John	Change WWAN USB source from EC to ICH7M/USB5 and remove WWLAN USB signal from EC.	Modify ok.	0.3
4	44	H/W	11/24	John	Add connection for signal of YPRPB_DET# to G72 pin A15 through a series resistor.	Modify ok.	0.3
5	44	H/W	12/01	John	Change R615 to no-pop	Modify ok.	0.3
6	23/31	H/W	12/02	John	Add connection to EC for signal HDDC_EN# and MODC_EN#	Modify ok.	0.3
7	6	H/W	12/06	Reden	Change R456 to 150, R457 to 91 for internal spectrum clock.	Modify ok.	0.3
8	20	H/W	12/07	John	Add a diode for U1,U2 power pin.	Modify ok.	0.3
9	20	H/W	12/07	John	Add a cap 0.1uf for JSVID1 pin5	Modify ok.	0.3
10	28	H/W	12/07	John	Change u13 to G5240B1T1U	Modify ok.	0.3
11	30	H/W	12/07	John	Add connection for pin73 for LVDS BIA_PWM through resistor	Modify ok.	0.3
12	20	H/W	12/08	John	Remove the C104 form dell COE team request.	Modify ok.	0.3
13	6/44/49	H/W	12/12	Reden	Remove external spectrum and swap populated resistor for internal CLK GEN.	Modify ok.	0.3
14	31	H/W	12/12	John	Add pull up resistors to +3.3V_ALW for signals of HDDC_EN#,MDDC_EN#	Modify ok.	0.3
15	23/30	H/W	12/13	John	Add damping series resistors (47ohm) for signal SPI_CS# on EC and ICH7	Modify ok.	0.3
16	33	H/W	12/13	John	Removed 3V/5V power good sequence circuit and change +1.8V_RUN PWRGD circuit.	Modify ok.	0.3
17	35	H/W	12/14	Reden	Swap the Sniffer LED (D13) pin define, Pin3=>Yellow, Pin2=>Green.	Modify ok.	0.3
18	9	H/W	12/14	Reden	Change CPU VCORE area caps , 22uF->10uF and replace 330uF poly with 6m ohm x 4pcs.	Modify ok.	0.3
19	31	H/W	12/15	Reden	Change pull up resistors of HDDC_EN#,MDDC_EN# from 10k to 100K for leakage issue.	Modify ok.	0.3
20	49	H/W	12/15	Reden	Change Device ID from 0111 to 1000 for G72M	Modify ok.	0.3
21	32	H/W	2006/2/07	Reden	Change C154 from 0.01uf to 0.047uf to match G72 VDD_CORE&1.8V power up sequence	Modify ok.	0.4
23	13	H/W	2006/2/07	Reden	Change L6/L26 TDK to 2nd and use Taiyo for main source	Modify ok.	0.4
24	24	H/W	2006/2/07	Reden	Change L53 TDK to 2nd and use Taiyo for main source	Modify ok.	0.4
25	20	H/W	2006/2/08	Reden	Change TV filter caps valus as dell's suggest 1. Change C331,C351,C381,C325,C349,C378 from 47pf to 82pf 2. Change C705,C706,C707 from 22pf to 8.2pf	Modify ok.	0.4

DELL CONFIDENTIAL/PROPRIETARY


		Compal Electronics, Inc.	
Title		Changed-List History 3	
Size	Document Number	Rev	
	LA-3001P	0.3	
Date	Monday, April 17, 2006	Sheet	53 of 73

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	35	H/W	02/17	Reden	To add logic circuit to control 3.3V_RUN for power switch board.	Modify ok.	0.4
2	35	H/W	02/17	Reden	Add pull down resistor (10K) for signal PLTRST_DELAY# to fix leakage issue	Modify ok.	0.4
3	19	H/W	02/21	Reden	Add SI3457DV P channel mos to dual-stuff for +GFX_PWR_SRC	Modify ok.	0.4
4	31	H/W	02/21	Reden	Change board ID to X02 (0011)	Modify ok.	0.4
5	19	H/W	02/21	Reden	Add voltage drop diode for CMOS power (+5V_RUN), and remove D'05 buffer.	Modify ok.	0.4
6	22, 23, 34	H/W	02/21	Reden	populate the 48MHz/bit_clk/keyboard signal termination for EMI issue	Modify ok.	0.4
7	19	H/W	02/21	Reden	Change population option for BACKLITEON,stuff R610 for DSC and stuff R639 for UMA.	Modify ok.	0.4
8	20	H/W	02/21	Reden	Change R611,R612 resistor to 0 for signal quality.	Modify ok.	0.4
9	23	H/W	02/22	Reden	Stuff R485 for Bits issue WI52653	Modify ok.	0.4
10	16	H/W	02/22	Reden	Change thermal setpoint from 85 degrees to 88 degrees, change R242 from 147K ohm to 322K ohm 1% and R247 from 41.2K ohm to 118K ohm 1%.	Modify ok.	0.4
11							
12	19	H/W	02/28	Reden	Add R652 overlap on D26 for CMOS power pop option	Modify ok.	0.4
13	31	H/W	04/03	Reden	Change board ID to X03 (0100)	Modify ok.	0.5
14	16	H/W	04/11	Reden	Switch Q7,Q24 Pin S,D connection	Modify ok.	0.5
15		H/W				Modify ok.	0.5
16		H/W				Modify ok.	0.5
17		H/W				Modify ok.	0.5
18		H/W				Modify ok.	0.5
19		H/W				Modify ok.	0.5
20		H/W				Modify ok.	0.5
21		H/W				Modify ok.	0.5
23		H/W				Modify ok.	0.5
24		H/W				Modify ok.	0.5
25		H/W				Modify ok.	0.5
26		H/W					

DELL CONFIDENTIAL/PROPRIETARY

		Compal Electronics, Inc.	
Title		Changed-List History 4	
Size	Document Number		Rev
	LA-3001P		0.3
Date	Monday, April 17, 2006		Sheet 54 of 73

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. & List) for Power Circuit

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	P39	+3.3VALW	0926/2005	Dell	Dell request to change PC30 from 4.7U_1206 to 10U_1206	PC30 change to 10U_1206_10V	X00
2	P40	+1.5V / +1.05V OCP	0926/2005	Dell	+1.5V OCP min = 7.4A, +1.05V OCP min = 9.3A	1.) +1.5V OCP: PR56 change to 124K, PR46 change to 1.43K 2.) +1.05V OCP: PR57 change to 124K, PR47 change to 1.87K	X00
3	P41	+1.8V_SUS	0926/2005	Dell	Contact the FB pin of the controller to the AVDD pin via zero ohm resister	Add PR202 0 ohm 0603 between FB pin with AVDD pin of PU5 MAX8632	X00
4	P39	+15V_SUS	0926/2005	Compal	Follows COE +15V reference schematics	Unpop PR179 10K_0805	X00
5	P50	+VCC_GFX	0926/2005	Compal	Improve +1.22V_GFX_PCIEP pin7 STBY# and pin5 POK1 pull high resister of PU13 MAX8632.	Depop PR159, PR160 100K_0402	X00
6	P40	+1.5V / +1.05V	1004/2005	Dell	Improve better phase margin	PC46 change to 330pf/0402/50v	X00
7	P41	+1.8V_SUSP OCP	1004/2005	Dell	Improve 1.8V_SUSP OCP	PR78 change to 84.5K	X00
8	P39	+3.3VALW	1004/2005	Dell	Dell request to populate PC11 at the input to the 3V regulator	Populate PC11 10uf/1206/25V	X00
9	P50	+VCC_GFX	1007/2005	Dell	Dell request to Change PR167 pin 1 contact to +3.3V_RUN	PR167 pin1 contact to +3.3V_RUN	X00
10	P50 P41	+VCC_GFX +1.8V_SUSP	1007/2005	Dell	MAX8632 Just connect pin 24 directly to the exposed pad without using zero ohm resistor .	DEL PR186 and PR79	X00
12	P41	+1.8V_SUSP	1007/2005	Dell	Dell request to populate PR74. (PU5 MAX8632 f from 300K change to 450khz)	Add PR74	X00
13	P43	Charger	1007/2005	Dell	Dell request to change PR174 to 1_0603.	PR174 from 1_0805 change to 1_0603(refer to COE Rev A09)	X00
14							
15	P41	+1.8V_SUSP	1107/2005	Dell	Dell Coe DDR Rev A05 request to del PR70	DEL PR70 Change PR69 from 0 ohm to 1 ohm.	X01
16	P43	Charger	1107/2005	Dell	Dell Coe Cgarger Rev A07 requested	1. Change PR174 from 1_0805 to 1_0603. 2. Add PC175 220P_0402 3. Del PR200, Add PR199 100_0402, PC189 0.01U_0603 PU10 Pin 15 & Pin16 shorted. 4. Add PR144 4.3M 0402. 5. Del PR201. 6. Change PR149 from 59K to 56.2K 0402 7. Change PR150 from 33.2K to 27.4K 0402.	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

Power-Changed-List History

Size

Document Number

Bali

Rev

X01

Date

Monday, April 17, 2006

Sheet

55

of

73

Version Change List (P. I. & List) for

Power Circuit

Item Page# Title Date Request Owner Issue Description Solution Description Rev.

17	P50	+VDD_CORE	1108/2005	Dell	Dell COE Graphics Power reference A07 requested	1. Change PR155 to 1 ohm. 2. Change PR161 from 69.8K to 57.6K. 3. Change PR164 from 118K to 178K. 4. Change PR166 from 301 to 0 ohm. 5. Change PR162 from 1.1K to 1.21K 6. All +5V_RUN change to +5V_SUS. 7. All +3V_RUN change to +3V_SUS.	X01
18	P50	+VDD_CORE	1108/2005	Dell	Follow Coe ref De-pop PR203. Del PR204, H/W has same R632 100k on Page 32 between +3.3V_RUN to PU13 Pin_27.	Del PR203 Del PR204	X01
19	P37	+DC_IN	1202/2005	Dell	Add solder jumper pads in parallel with PL2 & PL3.	Add PJP21, PJP22	X01
20	P43	Charger	1120/2005	Dell	Dell COE Charger reference A09 requested	De pop PC189 Add PC191	X01
21	P42	+VCC_CORE	1120/2005	Compal	Improve VCC-CORE OCP to 55A. (original design X00 PR109 191K OCP point 45A only.)	Change PR109 to 160K	X01
22	P37 P38 P39 P40 P41 P42 P43 P50	EMI Bead	1122/2005	Compal	Change Footprint 'L_1812' to 'L-1812-S' for 2nd source	Change PL2, PL5, PL6, PL9, PL12, PL14, PL19, PL21 footprint to L_1812-S for 2nd source	X01
23	P39	3.3VSRRC	1124/2005	Dell	Nopop PQ39 since this will not be needed once the EC HUB is removed.	Unpop PQ39	X01
24	P42	+VCC_CORE	1130/2005	Compal	Tokin inductor 0.45uH/27A rusted on surface after storage test.	change PL15, PL16, PL17 to Panasonic ETQP4LR45XFC (0.45uH 10% Lead Free)	X01
25	P50	+VDD_CORE	1201/2005	Dell	Improve +3.3V_RUN leakage at S3 mode	1. Change PR167 Pin_1 net name from +3.3V_SUS change to +3.3V_RUN 2. Change PR159, PR160 Pin_1 net name from +3.3V_SUS change to +3.3V_RUN	X01
26	P43	Charger	1201/2005	Dell	CoE Charger Ref A10 request: Deeply discharged battery problem.	Add PR208, PD20	X01
27	P50	+VDD_CORE	1202/2005	Dell	Change PR167 to 4.7K to fix stair step issue seen on signal.	Change PR167 to 4.7K	X01
28	P40	+1.5V_RUN	1202/2005	Dell	Add PC192 0.1uF cap to pin 21 of PU4 for power-up sequencing. Also add PD20 diode in parallel with PR59 for power-down sequencing.	Add PC192, PD21	X01
29	P37	DC_IN	1206/2005	Dell	ChangePR9 from 4.7K to 10K. The exisging 4.7K exceeds power dissipation rating of 0603 size at 20V.	Change PR9 from 4.7K to 10K	X01
30	P43	Charger	1206/2005	Dell	Unpop PQ27, PR126	Unpop PQ27, PR126	X01
31	P44	+15VP	1206/2005	Dell	Add a PR209 150 ohm between PD19 Pin_3 and PD18 Pin_2 to prevent +15V_SUSP short cause PD18 damage.	Add PR209 150 ohm	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.

Power-Changed-List History

Date	Monday, April 17, 2006	Sheet	56	of	73
------	------------------------	-------	----	----	----

Request Owner

Size	Document Number	Rev
	Bali	X01
Date:	Monday, April 17, 2006	Sheet 57 of 73

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.