

# Compal confidential

## Schematics Document

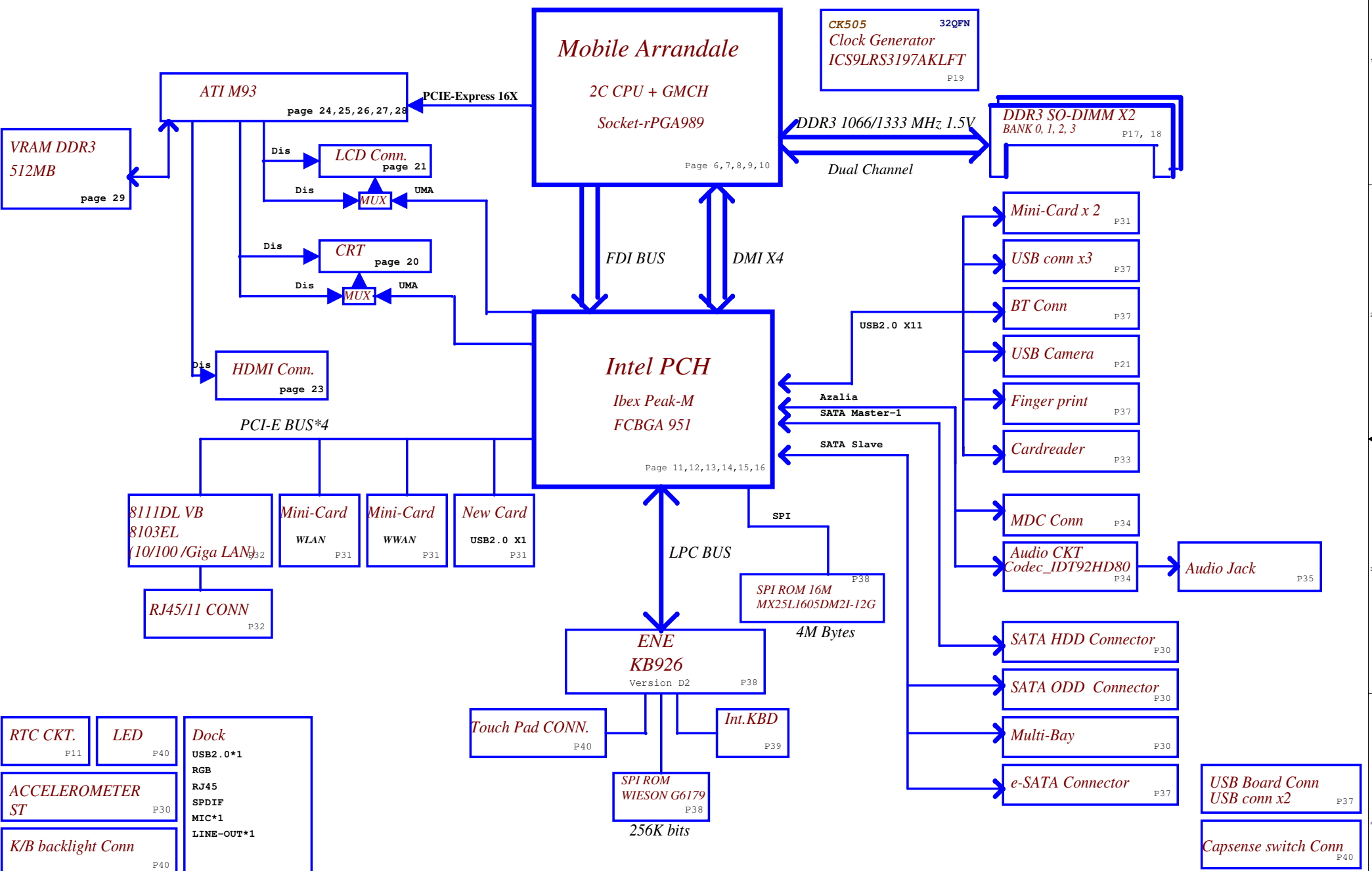
Mobile Arrandale rPGA989 with  
Intel PCH (Ibex Peak-M) core logic

2009-10-23 Rev 1.0

Security Classification	Compal Secret Data			Title <b>Compal Electronics, Inc.</b>		
Issued Date	2007/08/28	Deciphered Date	2006/03/10	Size	Document Number	Rev
<small>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&amp;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.</small>				Customer	<b>Calpella DIS LA-4107P</b>	1.0
				Date	Monday, November 09, 2009	Sheet

[ibexantf@compal.com](mailto:ibexantf@compal.com)

# Calpella Consumer 14" UMA +Switchable



RTC CKT. P11	LED P40	Dock USB2.0*1 RGB RJ45 SPDIF MIC*1 LINE-OUT*1
ACCELEROMETER ST P30		
K/B backlight Conn P40		
DC/DC Interface CKT. P41	P36	

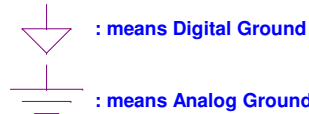
Security Classification	Compal Secret Data		Title	
Issued Date	2006/02/13	Deciphered Date	2006/03/10	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Block Diagram
Size	Document Number	Rev		
Custort	Calpella DIS LA-4107P	1.0		
Date:	Monday, November 09, 2009	Sheet	2	of 55

Voltage Rails

O MEANS ON X MEANS OFF

power plane State	+B	+5VALW +3VALW	+1.5V	+5VS +3VS +1.5VS +0.75VS +VCCP +CPU_CORE +1.05VS +1.8VS
	S0	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

Symbol Note :



@ :	means just reserve , no build
45@ :	means need be mounted when 45 level assy or rework stage.
BATT @ :	means need be mounted when 45 level assy or rework stage.
CONN@ :	means ME part
SG@ :	means stuff when Switchable graphic
PA@ :	Only For PA
OPP@ :	Only For OPP
DIS@ :	means stuff when DIS only
DEBUG@ :	means stuff when need Mini Card LPC debug card
8111DL@ :	means stuff for 8111DL
8103EL@ :	means stuff for 8103EL

USB assignment:

USB-0	Right side
USB-1	Right side
USB-2	Left side(with ESATA)
USB-3	Docking
USB-4	Camera
USB-5	WLAN
USB-6	X
USB-7	X
USB-8	MiniCard(WWANTV)
USB-9	New card
USB-10	Cardreader
USB-11	Finger Printer
USB-12	BT

PCIe assignment:

PCIe-1	WWAN
PCIe-2	WLAN
PCIe-3	LAN
PCIe-4	New card
PCIe-5	X
PCIe-6	X

SATA assignment:

SATA0	HDD
SATA1	ODD
SATA2	X
SATA3	X
SATA4	ESATA
SATA5	Multit-Bay

SMBUS Control Table

	SOURCE	XDP	BATT	Thermal Sensor	SODIMM	CLK CHIP	WLAN WWAN	M93 Thermal Sensor	NB10M-GE	Cap sensor board	NEW CARD	G sensor
SMB_EC_CK1	KB926	X	V	X	X	X	X	X	X	V	X	X
SMB_EC_DA1	KB926	X	X	X	X	X	X	X	X	X	X	X
SMB_EC_CK2	KB926	X	X	X	X	X	X	X	X	X	X	X
SMB_EC_DA2	KB926	X	X	X	X	X	X	X	X	X	X	X
SMBCLK	PCH	V	X	X	V	V	V	X	X	X	V	V
SMBDATA	PCH	X	X	X	X	X	X	X	X	X	X	X
SML0CLK	PCH	X	X	X	X	X	X	X	X	X	X	X
SML0DATA	PCH	X	X	X	X	X	X	X	X	X	X	X
SML1CLK	PCH	X	X	X	X	X	X	X	X	X	X	X
SML1DATA	PCH	X	X	X	X	X	X	X	X	X	X	X

+3VS    +5VL                    +3VS    +3VS    +3VALW                    +5VL    +3VALW    +3VS

M93 SMBUS Control Table

	SOURCE	LVDS	CRT	HDMI
D_EDID_DATA	M93	V	X	X
D_EDID_CLK	M93	X	V	X
D_CRT_DDC_DATA	M93	X	V	X
D_CRT_DDC_DATA	M93	X	X	V
HDMIDAT_VGA	M93	X	X	V
HDMICLK_VGA	M93	X	X	V

Stencil Memo:

**PA:** PJ1, PJP903, PJP301, PJP302, PJP303, PJP304, PJP401, PJP601, PJP602, PJP603, PJP501, PJP901, PJP902

**OPP:** PJ1, PJP301, PJP302, PJP303, PJP304, PJP401, PJP601, PJP602, PJP603, PJP501, PJP901, PJP902, JP303

**Stand-off Location:** H12, H14

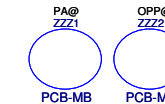
PCH I2C / SMBUS ADDRESSING

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

NAL70 SKUs

PCB part number

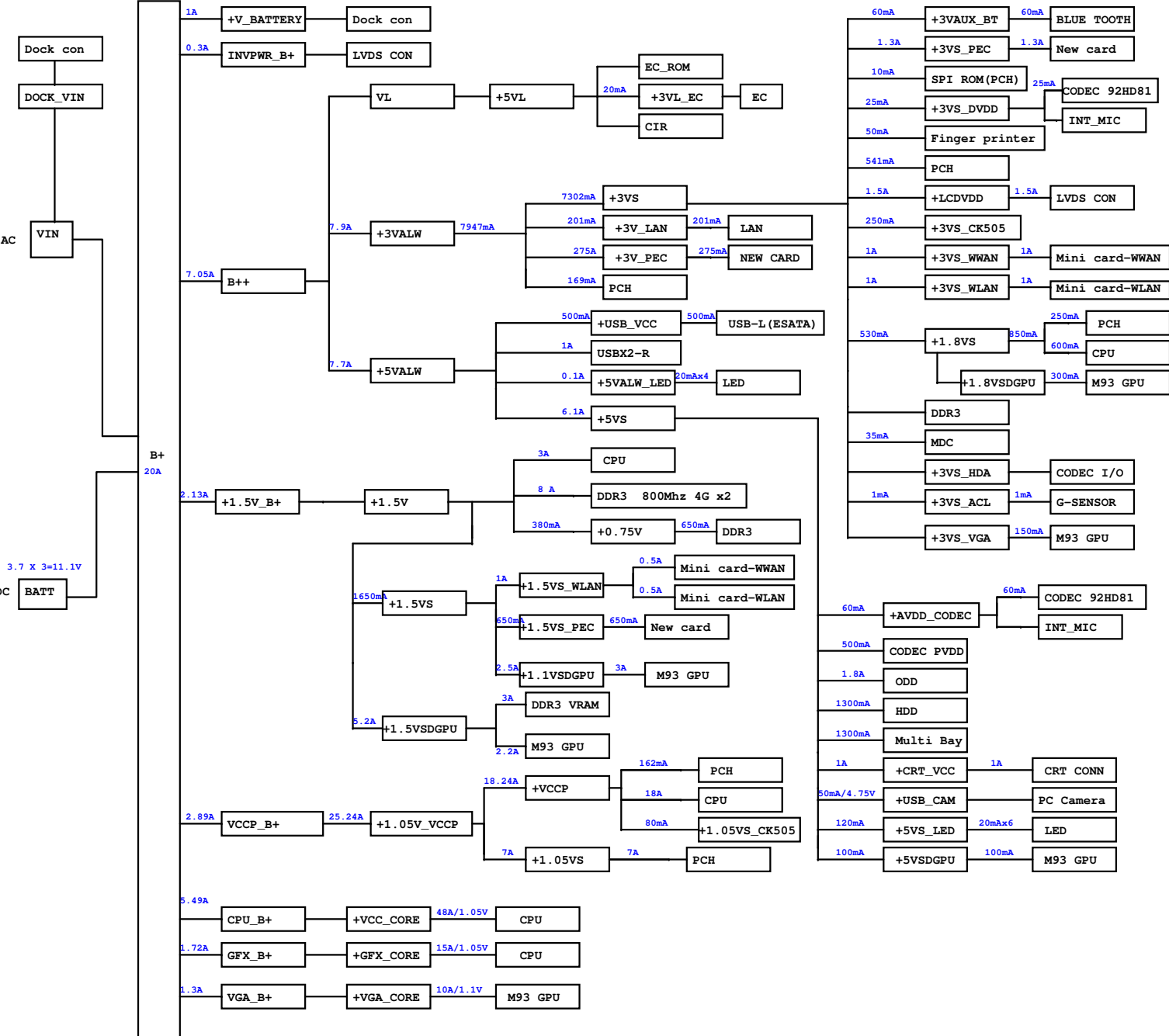
PCB DA80000GL00  
PA DAZ0BI00200  
OPP DAZ0BI00300



PCB version

A1 QV73 SA00002KV10  
B0 QLLT SA00002KV30  
B1 QMGS SA00002KV60  
B3 QMNT SA00003N730

Security Classification	Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/03/10	Compal Electronics Inc.
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.				Notes List
Size	Document Number	Rev	1.0	
Customer	Capella DIS LA-4107P	Date:	Monday, November 09, 2009	Sheet 3 of 55

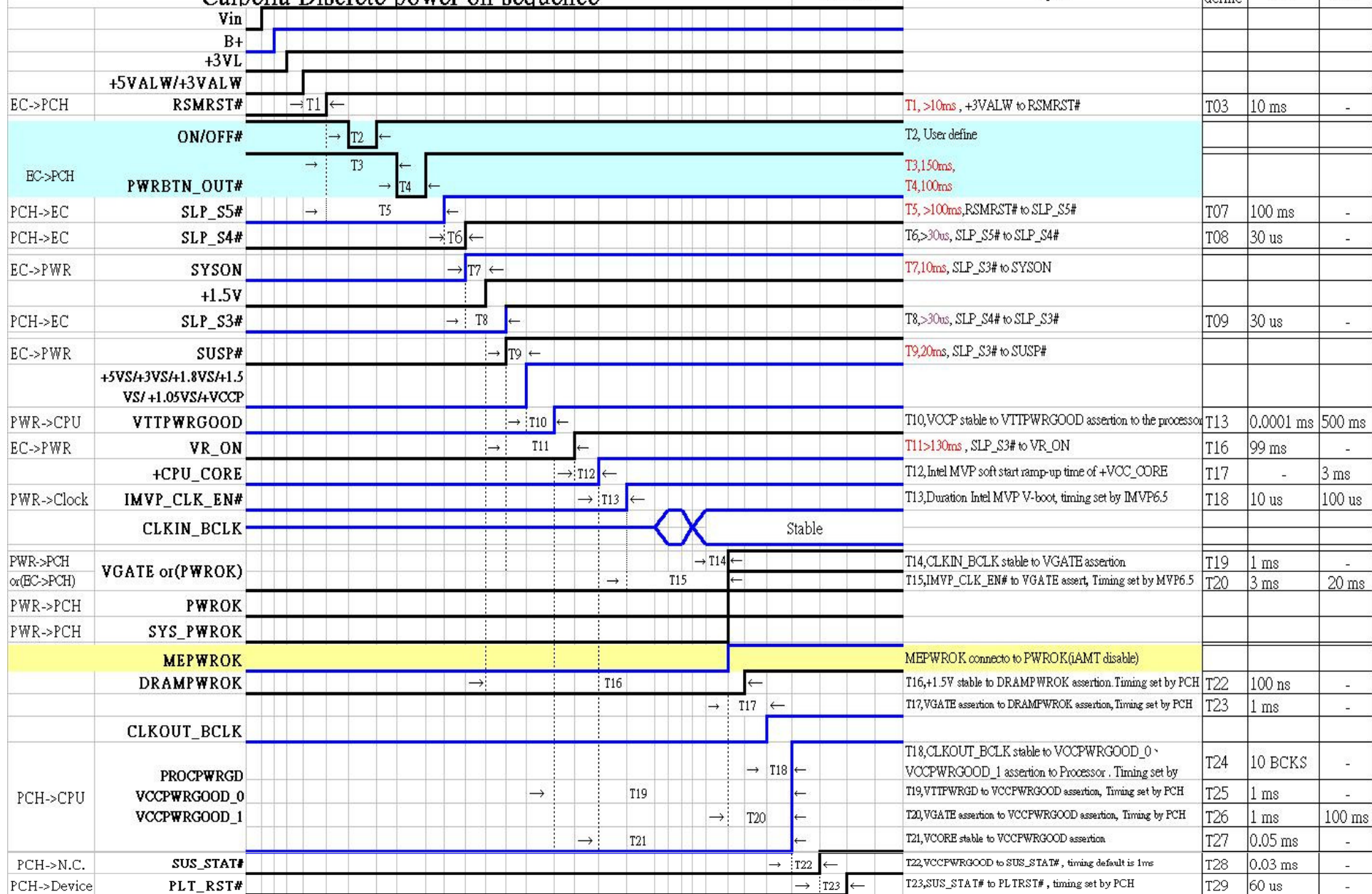


# Calpella Discrete power on sequence

97.09.16.

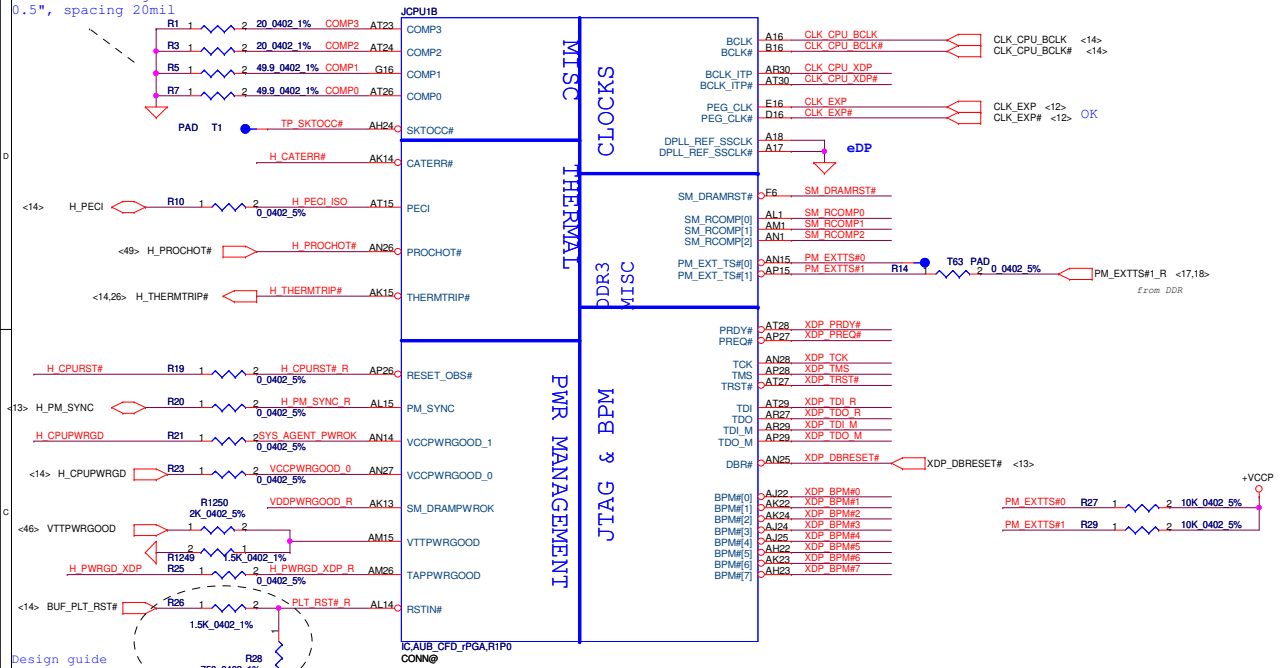
Spec

define min Max

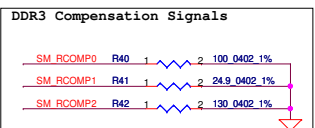
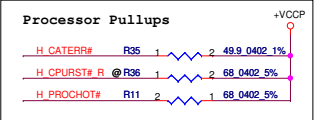


Security Classification	Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/03/10	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF 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.			<b>Compal Electronics Inc.</b> <b>Notes List</b>	
Size	Document Number	Rev		
Custom	Calpella DIS LA-4107P	1.0		
Date:	Monday, November 09, 2009	Sheet	5	of 55

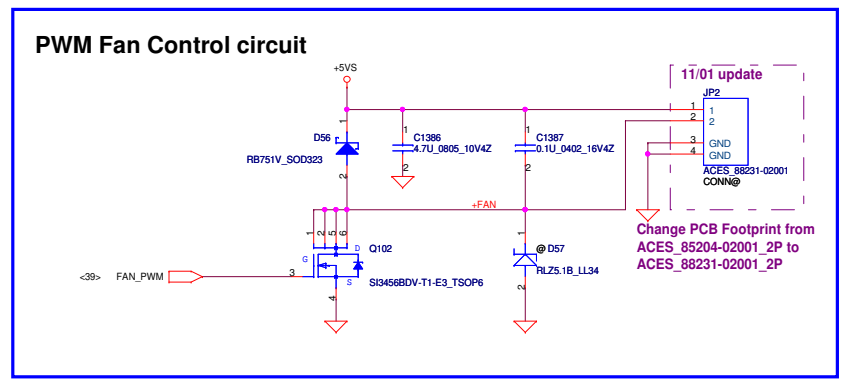
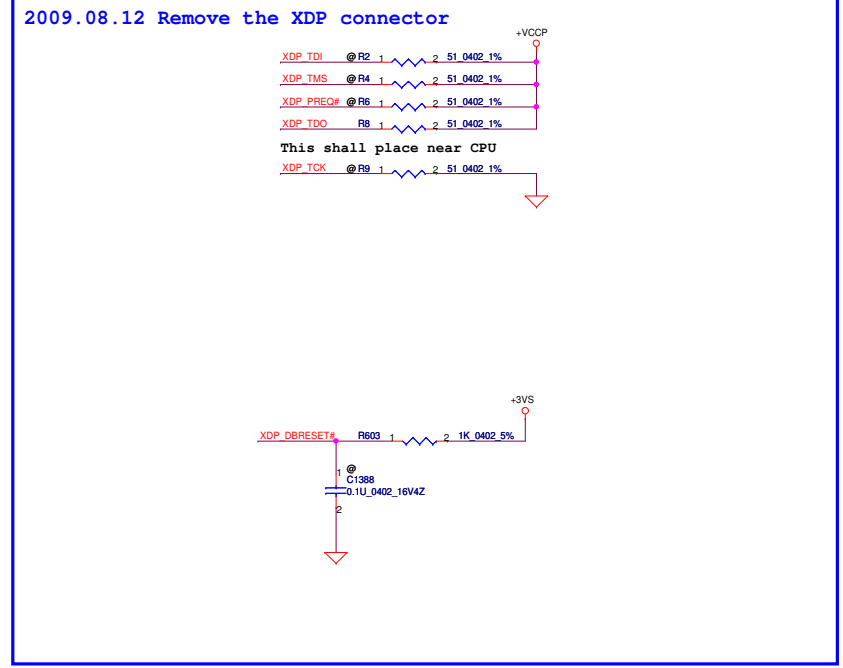
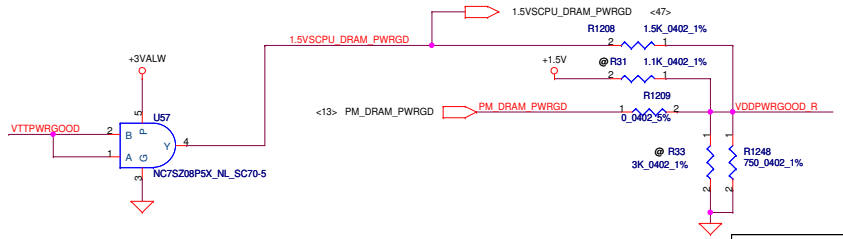
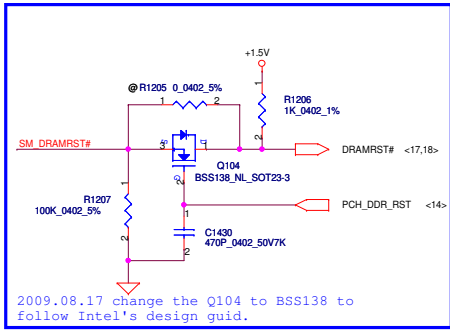
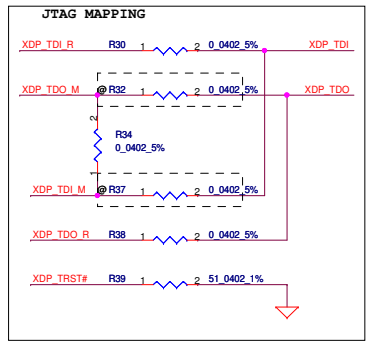
Layout rule 10mil  
width trace length <  
0.5", spacing 20mil



Design guide  
1.1update, PLTRST series  
resistor 1.5K, PL  
resistor 750 ohm

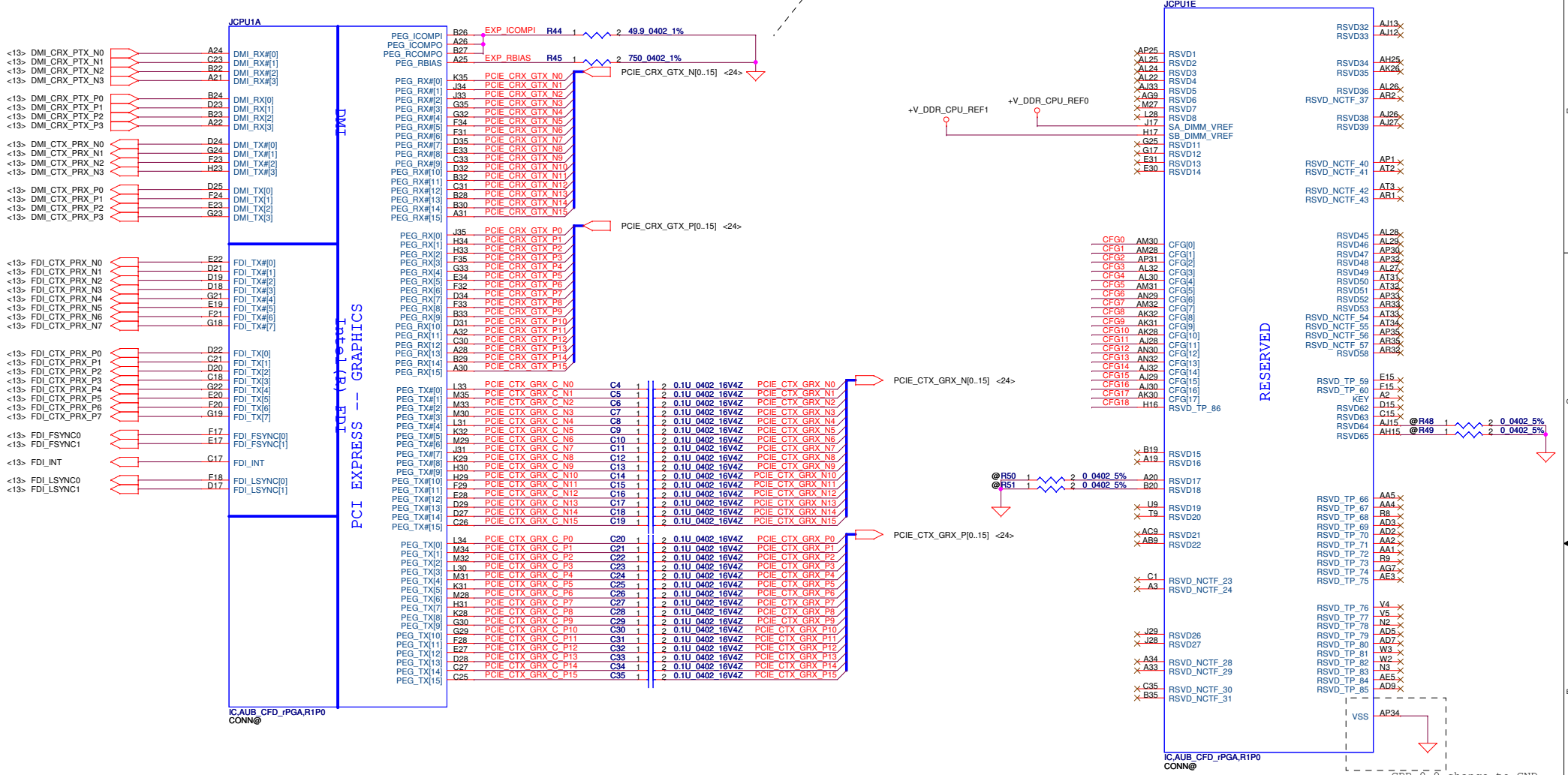


**Layout Note:**Please these resistors near Processor

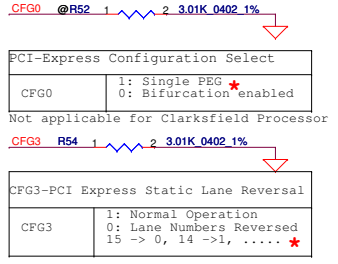


Security Classification	Compal Secret Data		Title <b>Compal Electronics, Inc.</b> <b>Auburndale(1/5)-Thermal/XDP</b>
Issued Date	2008/03/13	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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.			Size Custom
			Document Number <b>Calpella DIS LA-4107P</b>
			Rev 1.0
			Date: Monday, November 09, 2009   Sheet 6 of 55

Layout rule trace length < 0.5"



### CFG Straps for PROCESSOR



PCI-Express Configuration Select	
CFG0	1: Single PEG 0: Bifurcation enabled
Not applicable for Clarksfield Processor	
CFG3-PCI Express Static Lane Reversal	
CFG3	1: Normal Operation 0: Lane Numbers Reversed 15 -> 0, 14 -> 1, .... *

CFG4-Display Port Presence  
 CFG4 1: Disabled; No Physical Display Port  
 0: Enabled; An external Display Port device is connected to the Embedded Display Port

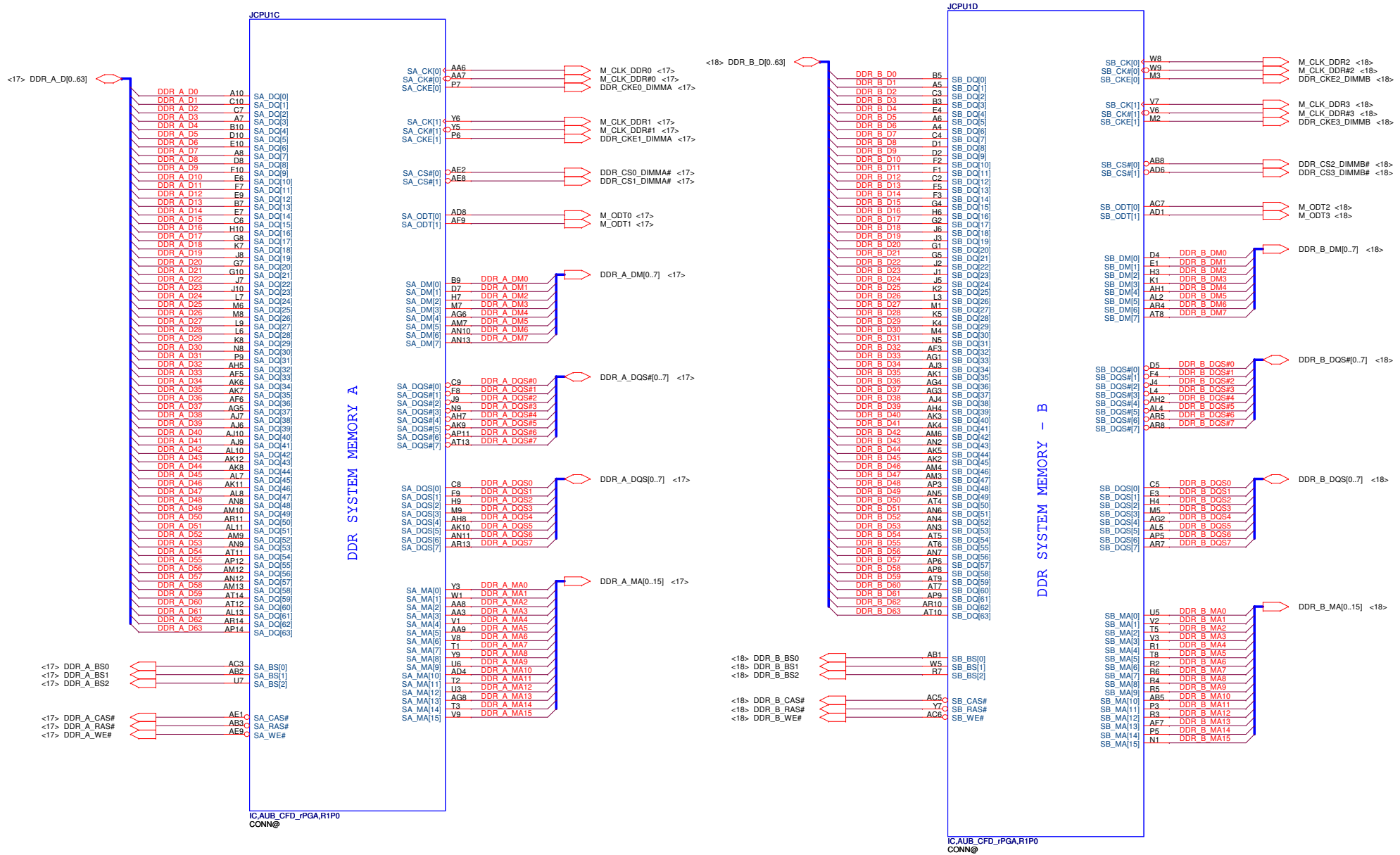
CFG7 @R55 1 2 3.01K 0402 1%  
 Only temporary for early CFD samples (zPGA/BGA)  
 Only for pre ES1 sample

CFG7 MW33 PD 3.01K on CFG7 for PCIe Jitter  
 MW41 don't staff

Security Classification	Compal Secret Data	
Issued Date	2008/03/13	Deciphered Date
		2009/05/11

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.

Compal Electronics, Inc.		
Title: <b>Auburndale(2/5)-DMI/PEG/FDI</b>		
Size	Document Number	Rev
Custom	Calpella DIS LA-4107P	1.0
Date:	Monday, November 09, 2009	Sheet 7 of 55

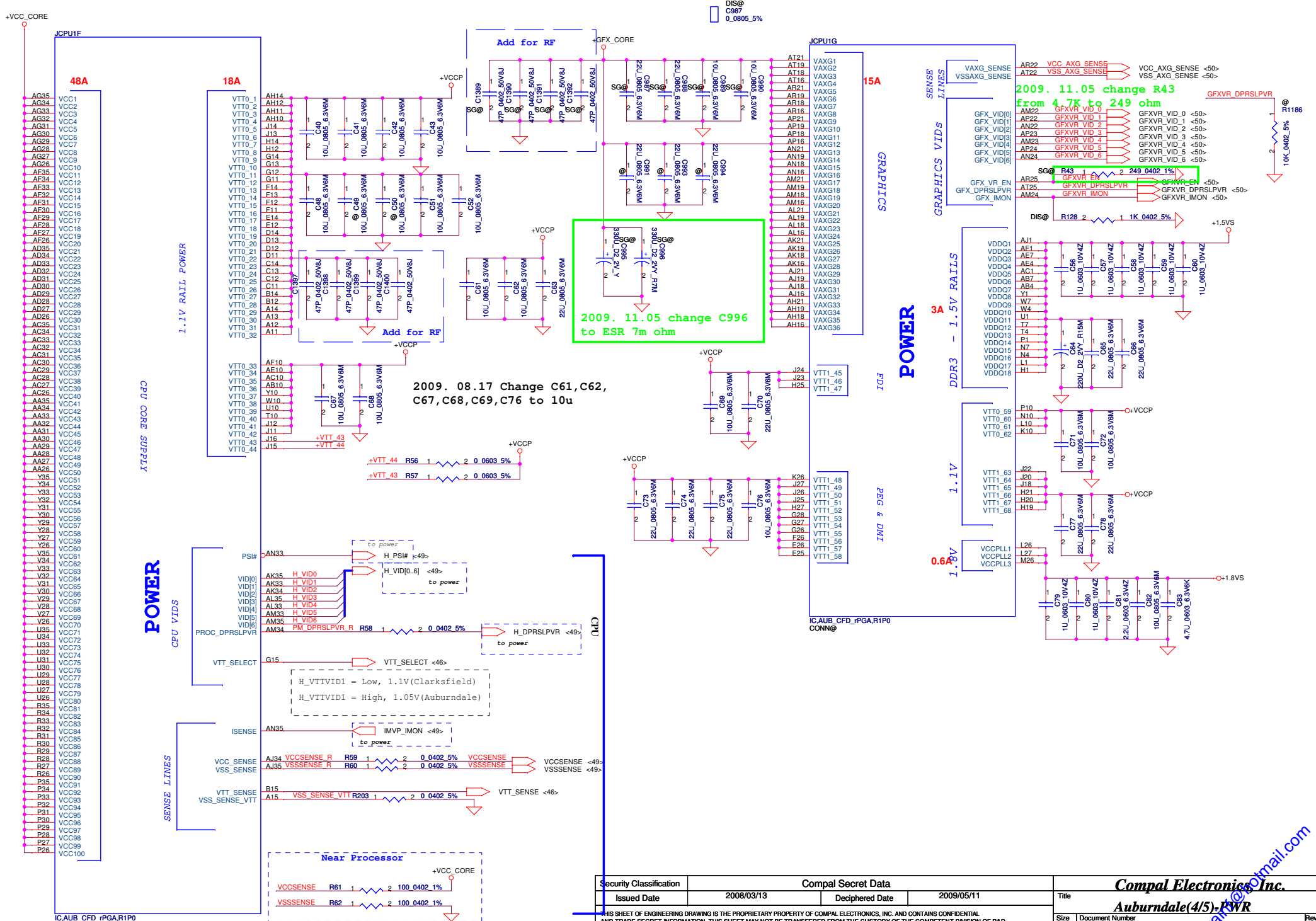


IC,AUB\_CFD\_rPGA,R1P0  
CONN@

IC,AUB\_CFD\_rPGA,R1P0  
CONN@

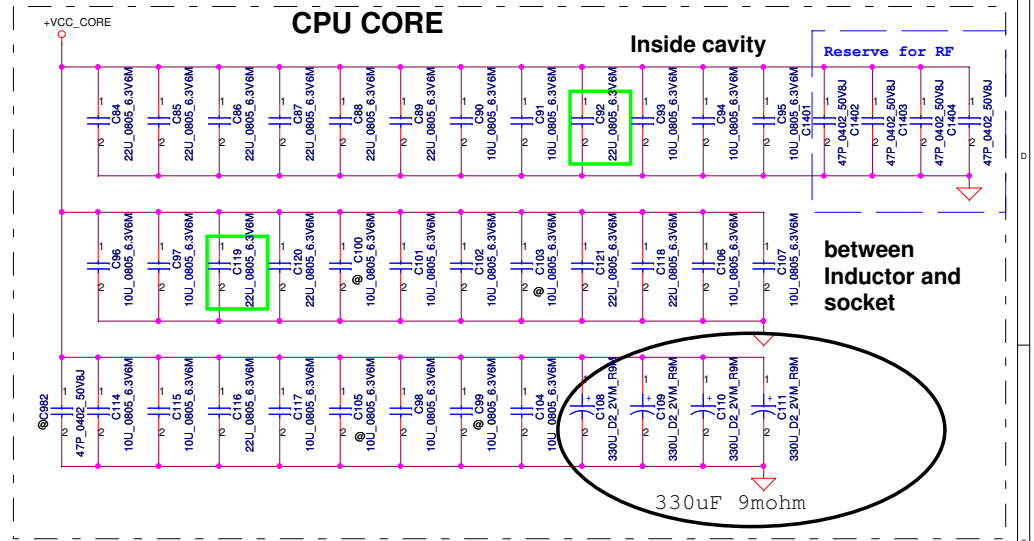
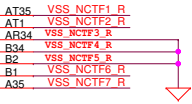
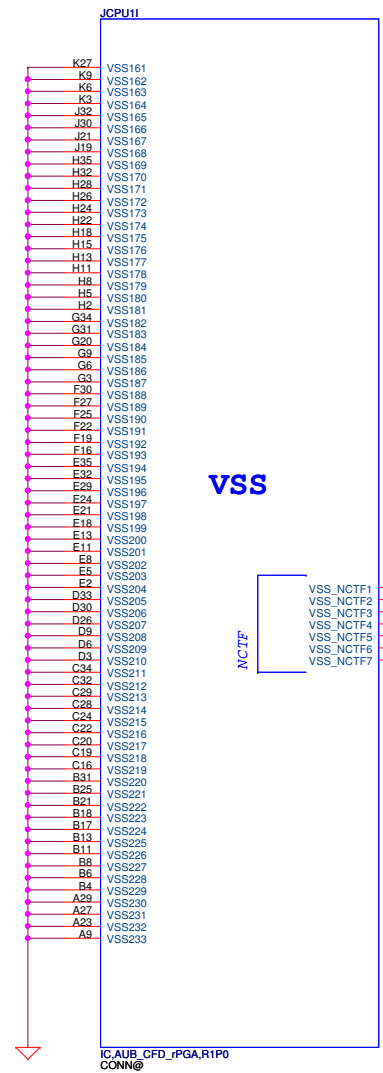
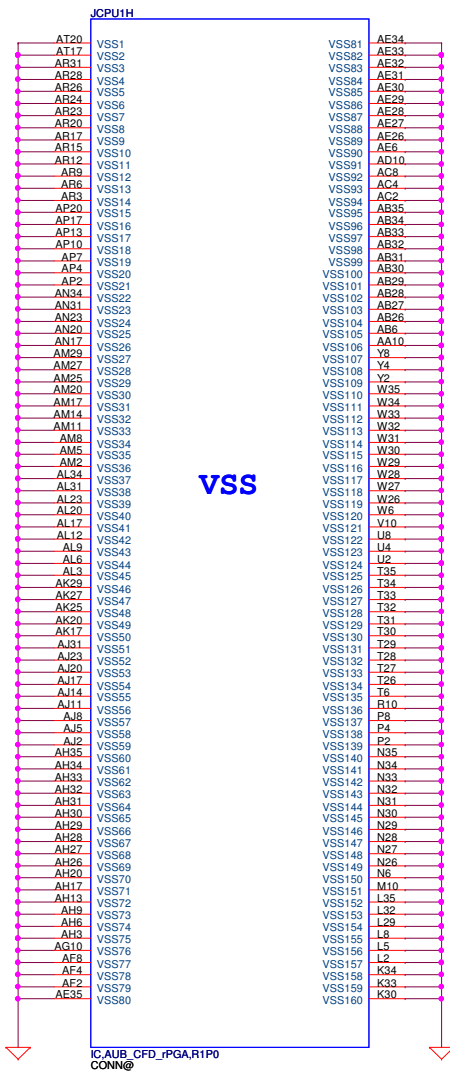
Security Classification		Compal Secret Data		Title	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				<b>Cantiga(2/6)-DDR3 A/B CH</b> Size: Custom   Document Number: Calpella DIS LA-4107P   Rev: 1.0 Date: Monday, November 09, 2009   Sheet: 8 of 55	



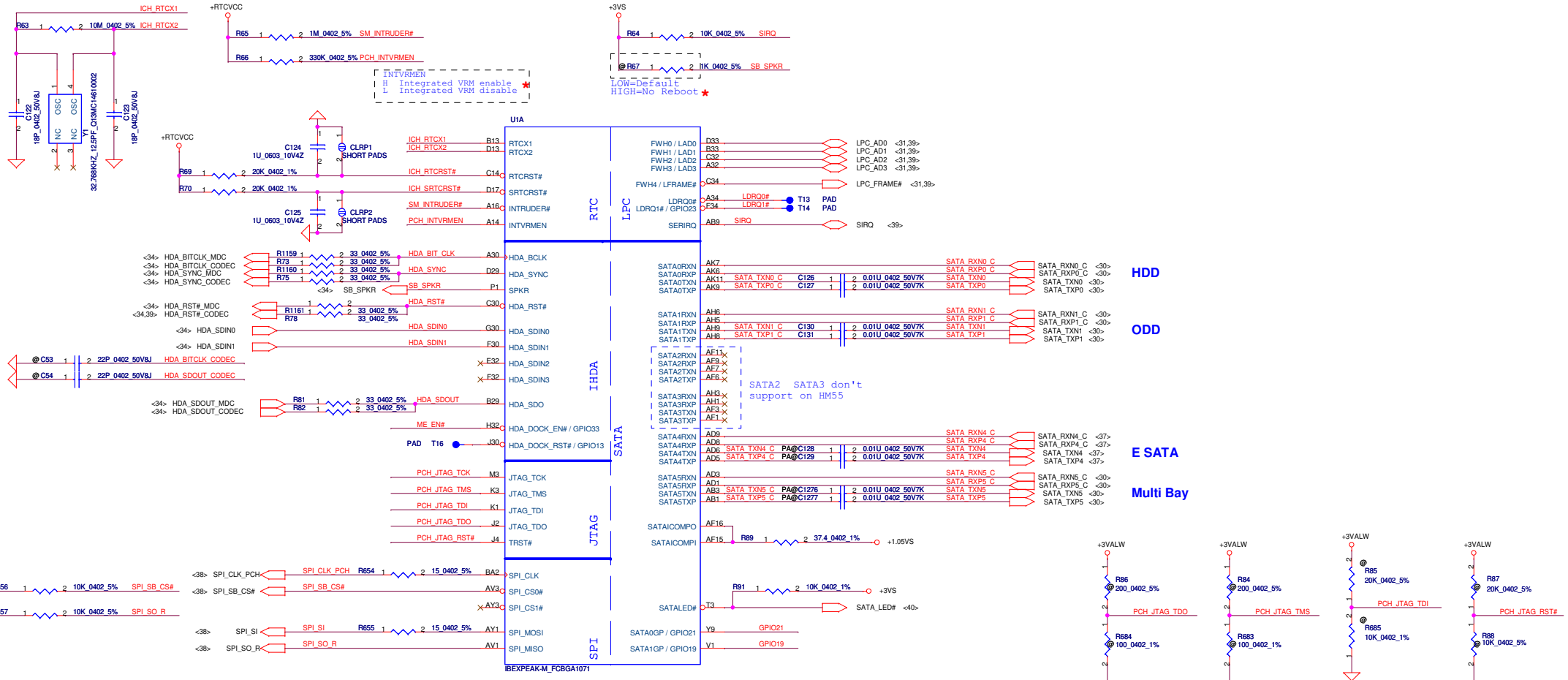


Security Classification	Compal Secret Data		
Issued Date	2008/03/13	Deciphered Date	2009/05/11
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.			

<b>Compal Electronics Inc.</b>			
<b>Auburndale(4/5)-PSWR</b>			
Title	Document Number	Rev	
	Calpella DIS LA-4107P	1.0	
Date:	Monday, November 09, 2009	Sheet	9 of 55



Security Classification		Compal Secret Data		Title	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	Compal Electronics, Inc.	
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.				Auburndale(5/5)-GND/Bypass	
Size	Document Number	Date		Sheet	Rev
Custom	Calpella DIS LA-4107P	Monday, November 09, 2009		10	1.0
				Sheet	10 of 55



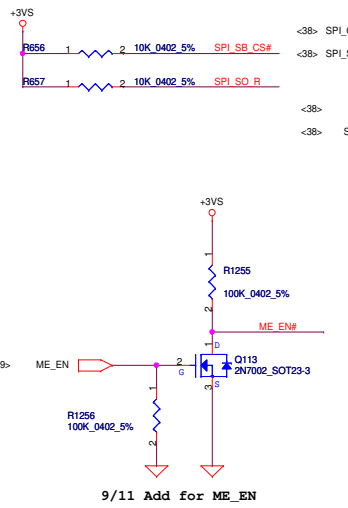
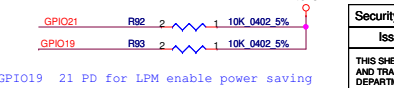
**HDA\_SYNC**  
 This signal has a weak internal pull down.  
 H=>On Die PLL is supplied by 1.5V  
 L=>On Die PLL is supplied by 1.8V

**HDA\_SDO**  
 This signal has a weak internal pull down.  
 This signal can't PU  
 \* Disable iTPM=No Stuff  
 Enable iTPM=Stuff

**HDA\_DOCK\_EN#**  
 ME debug mode, this signal has a weak internal PU  
 \* H=>security measures defined in the Flash Descriptor will be in effect (default)  
 L=>Flash Descriptor Security will be overridden

**SPI\_MOSI**  
 This signal has a weak internal pull down.  
 \* Disable iTPM=No Stuff  
 Enable iTPM=Stuff

**iTPM ENABLE/DISABLE**  
 \* Disable iTPM=No Stuff  
 Enable iTPM=Stuff

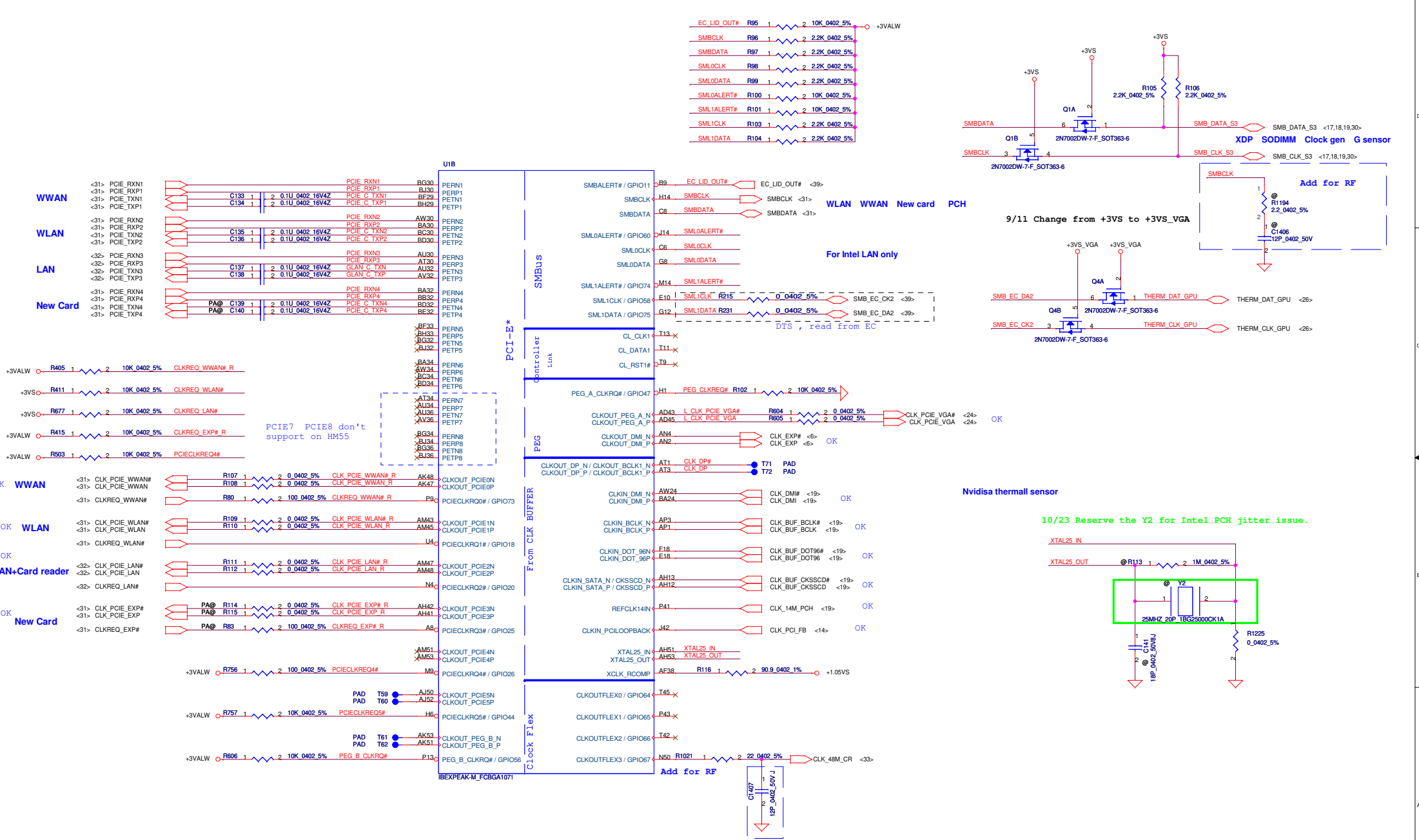


9/11 Add for ME\_EN

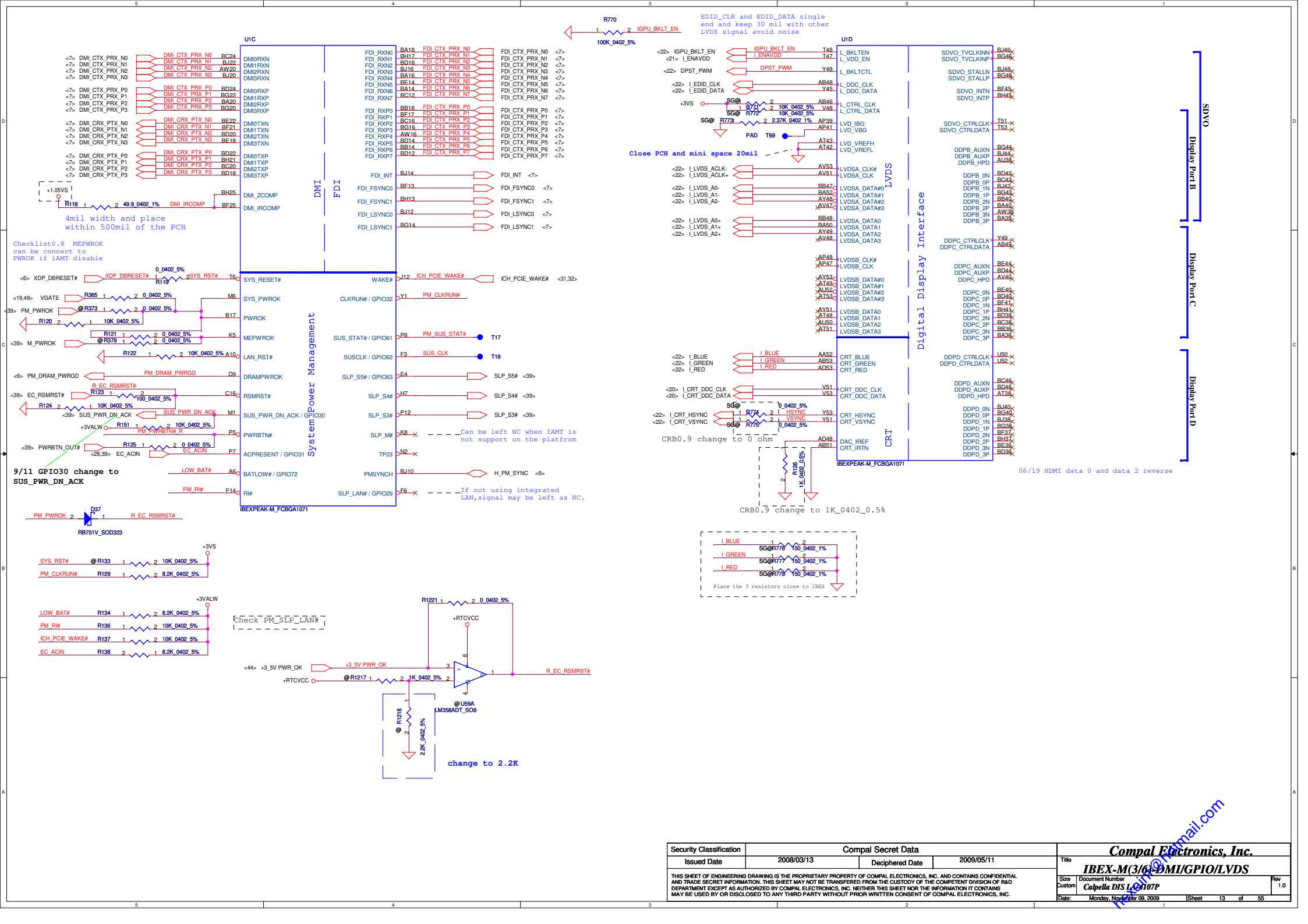
PCH Pin	RefDes	PCH JTAG		PCH JTAG	
		Enable	ES2	Disable	ES2
PCH_JTAG_TDO	R86	No Install	200ohm	No Install	No Install
PCH_JTAG_TMS	R84	No Install	100ohm	No Install	No Install
PCH_JTAG_TDI	R85	200ohm	200ohm	20Kohm	No Install
PCH_JTAG_TCK	R90	100ohm	100ohm	10Kohm	No Install
PCH_JTAG_RST#	R87	51ohm	51ohm	51ohm	51ohm
	R88	20Kohm	20Kohm	No Install	No Install
	R88	10Kohm	10Kohm	No Install	No Install

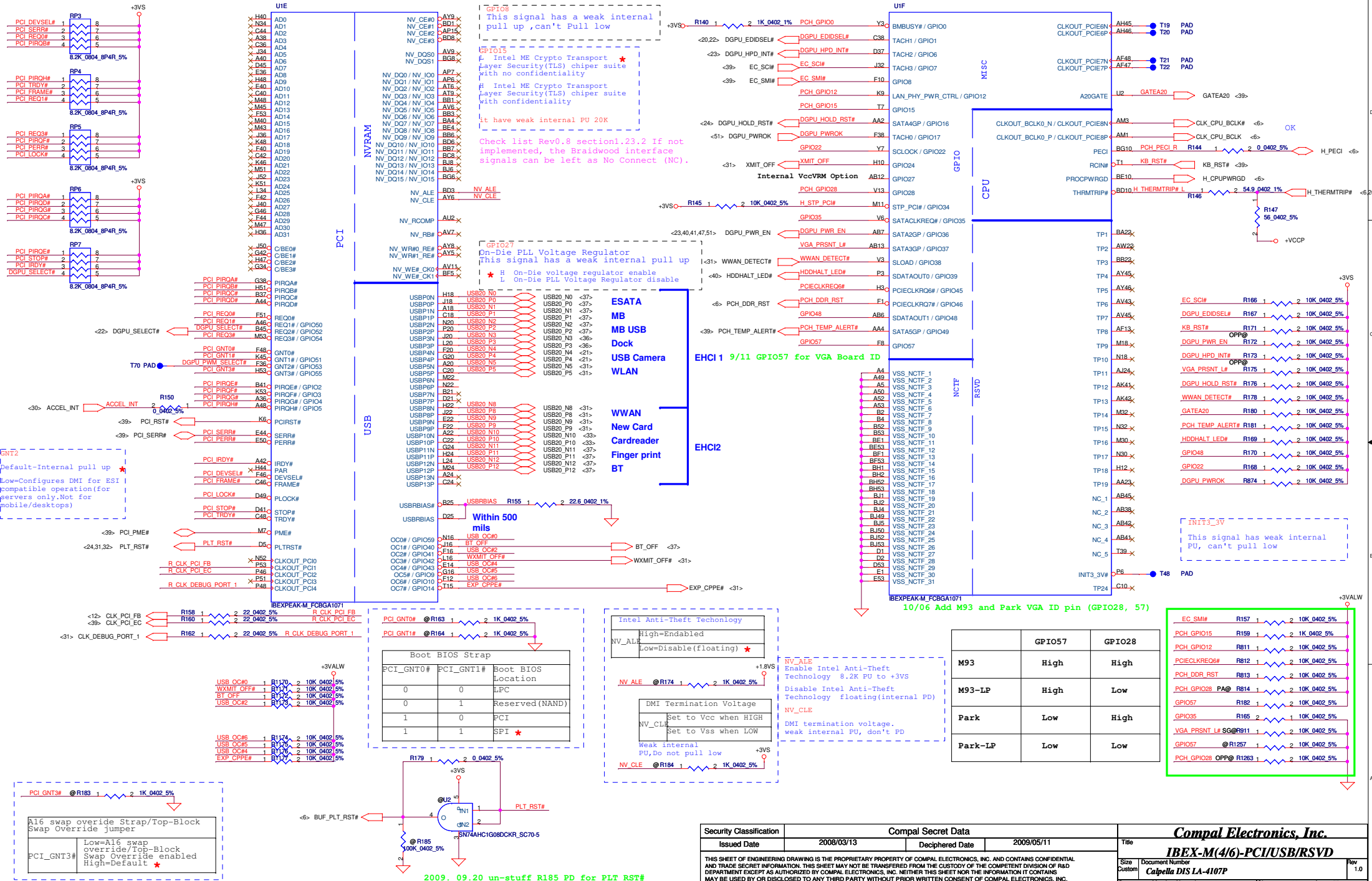
Security Classification	Compal Secret Data		Title	<b>IBEX-M(116)-HDA/JTAG/SATA</b>
Issued Date	2008/03/13	Deciphered Date	2009/05/11	Docu. Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				
Site Custom	Compal	Customer	Calpella DIS LA-4107P	Rev
Date:	Monday, November 09, 2009	Sheet	11	of 55

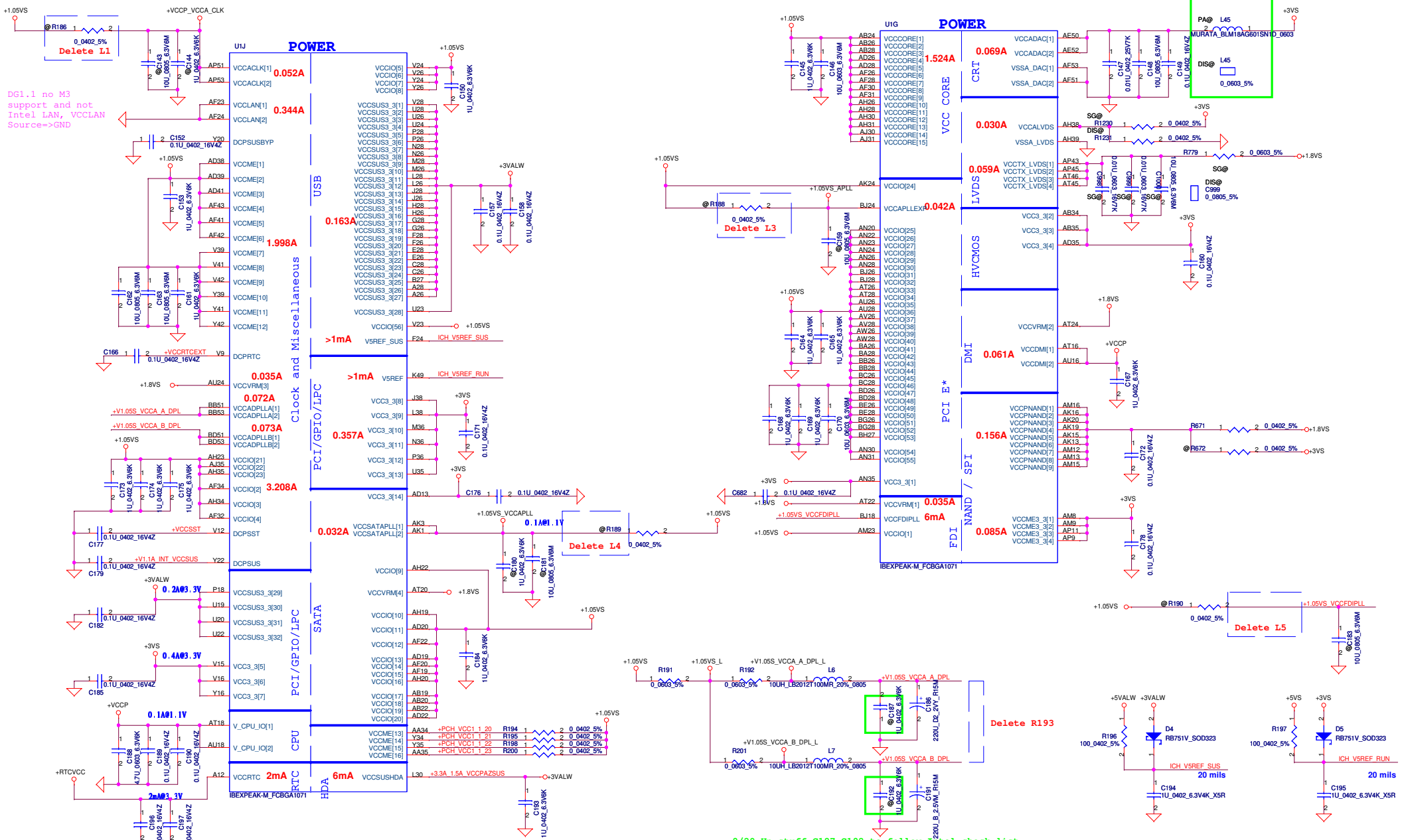
hexainf@hotmail.com



Security Classification		Compal Secret Data		Title	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	IBEX-M(2)6-PCI-E/SMBUS/CLK	
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.				Site Custom	Document Number Calpella DIS LA-4107P
Date:	Monday, November 09, 2009	Sheet	12	of	55

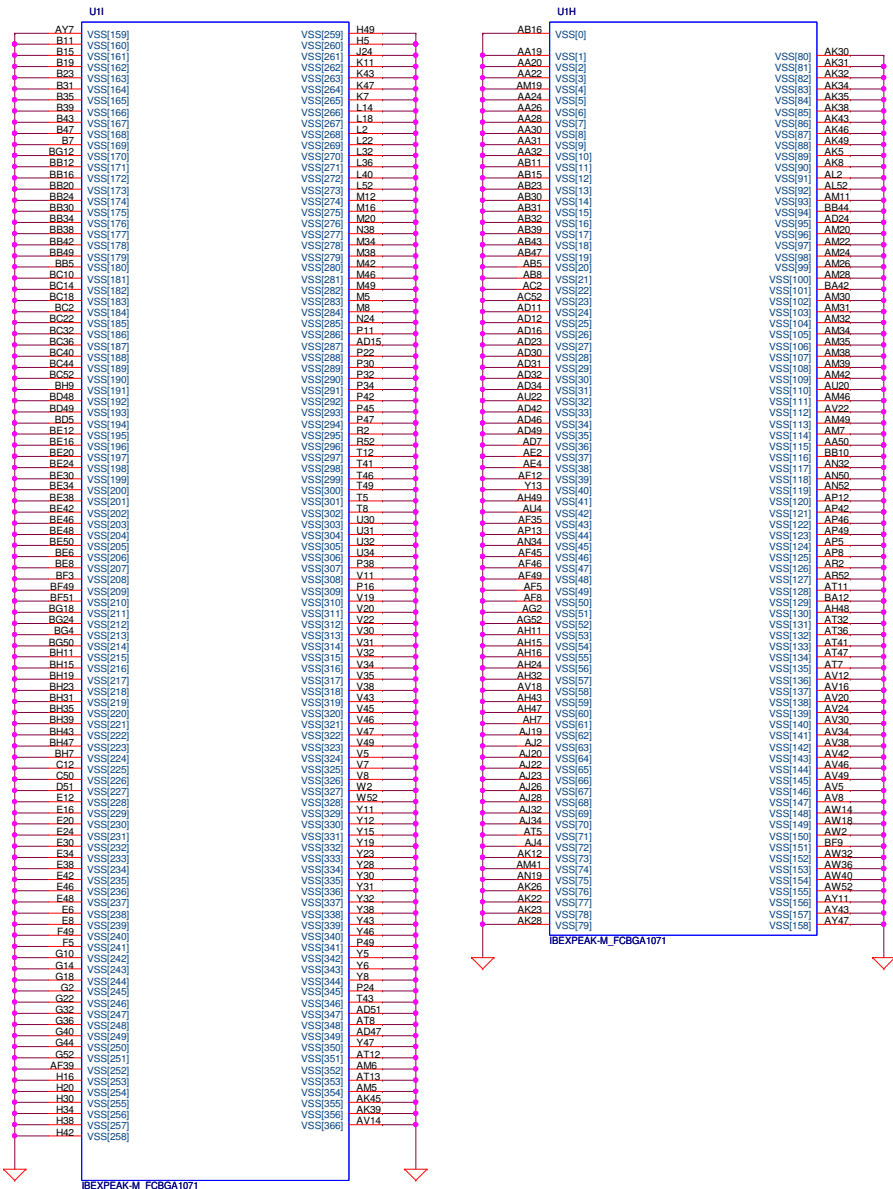






Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	IBEX-M(5/6)-PWR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.			Site Custom	Document Number	Rev
			Monday, November 09, 2009	Calpella DIS LA-4107P	1.0
			Sheet	15	of 55

hexainf@hotmail.com

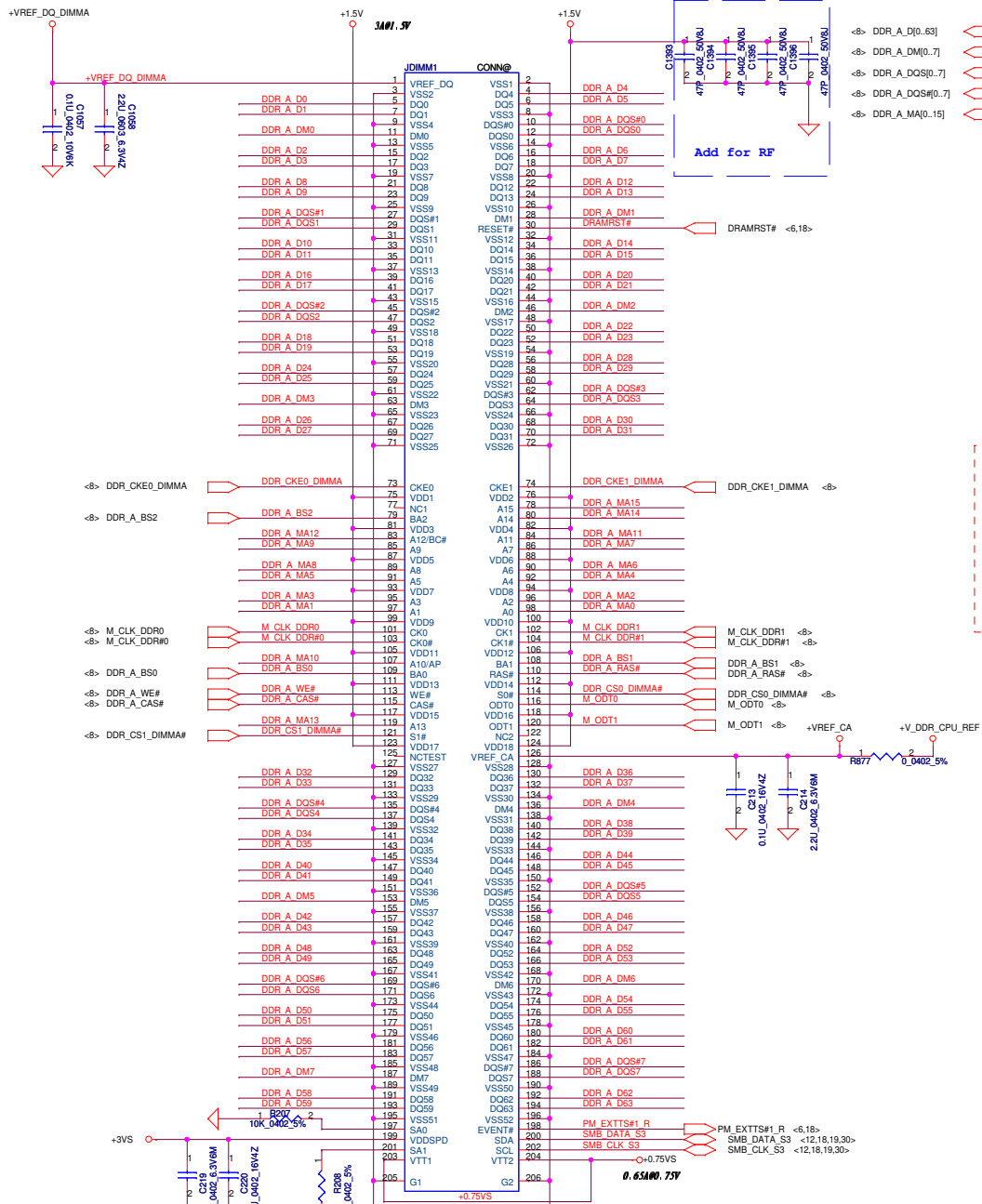


IBEXPEAK-M\_FCBGA1071

IBEXPEAK-M\_FCBGA1071

Security Classification	Compal Secret Data		Title <b>IBEX-M(6/6)-GND</b>
Issued Date	2008/03/13	Deciphered Date 2009/05/11	
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.			Rev 1.0
Date:	Monday, November 09, 2009	Sheet	16 of 55

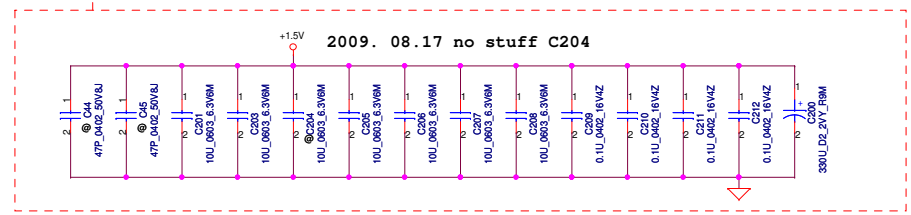




Add for RF

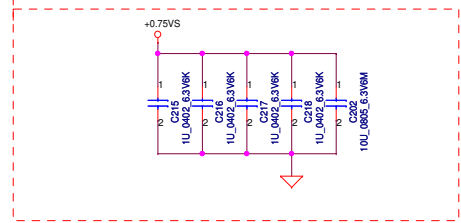
DRAMRST# <-6.18>

Layout Note:  
Place near JDIMM1



Layout Note:  
Place near JDIMM1.203 & JDIMM1.204

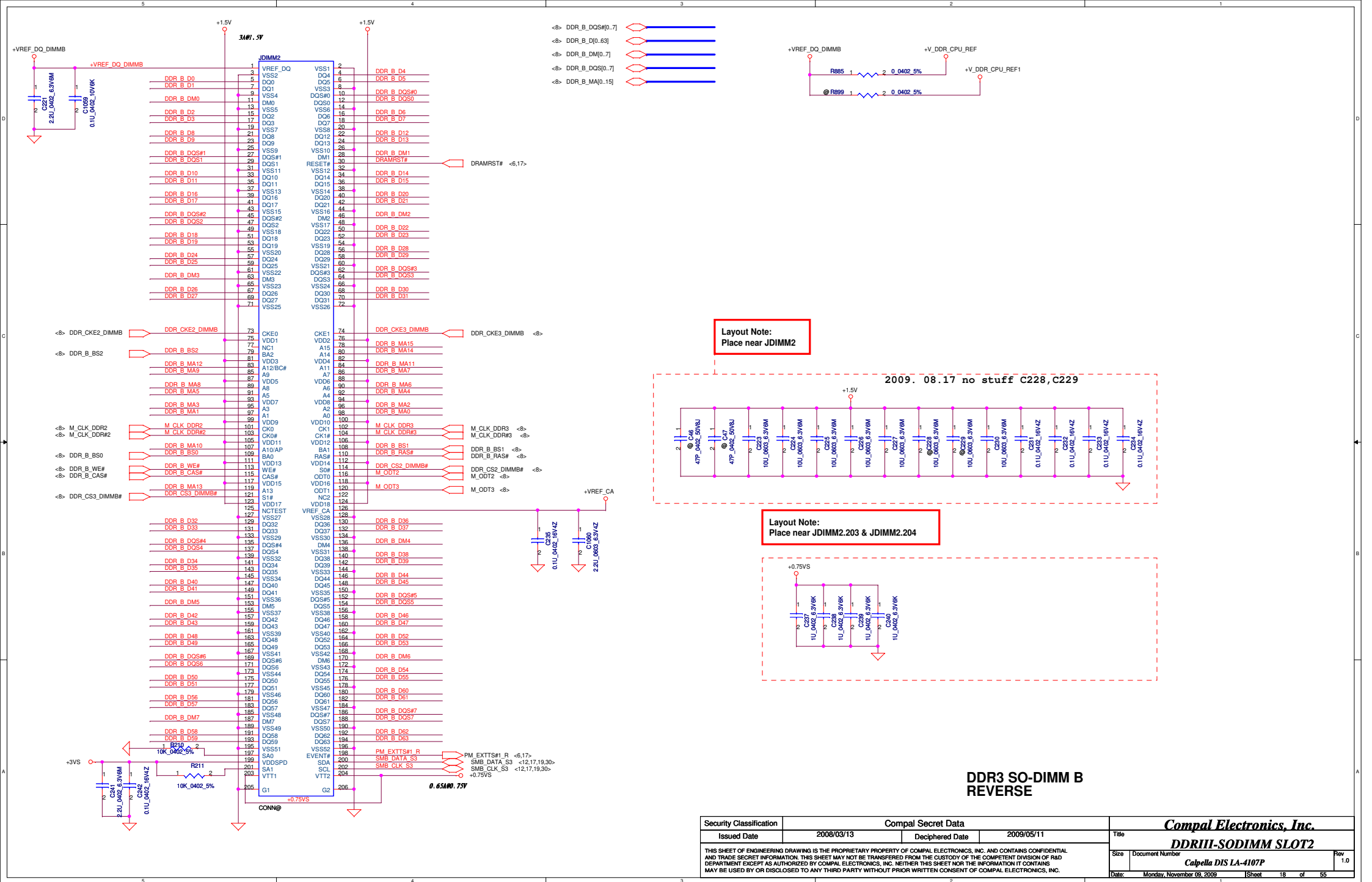
2009.08.17 change the  
C200 to ESR 12m ohm



DDR3 SO-DIMM A  
REVERSE

Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	S00 Document Number Customer <b>Capella DIS LA-4107P</b>	
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.			Date: Monday, November 09, 2009 18:00		

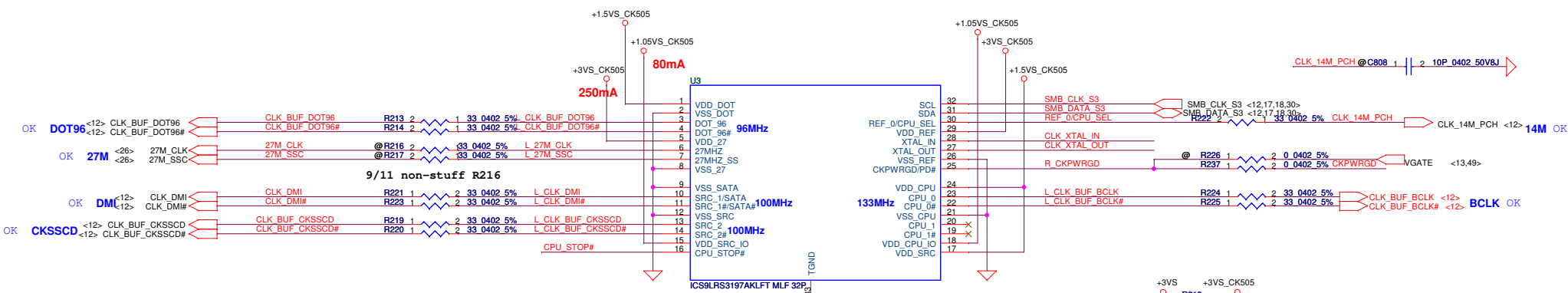
hexainf@hotmail.com



Layout Note:  
Place near JDIMM2

Layout Note:  
Place near JDIMM2.203 & JDIMM2.204

Security Classification		Compal Secret Data		Title	
Issued Date	2008/03/13	Deciphered Date	2009/05/11	Compal Electronics, Inc.	
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.				DDR3-SODIMM SLOT2	
Size	Document Number	Date		Rev	
	Calpella DIS LA-4107P	Monday, November 09, 2009		18 of 55	

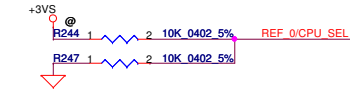


**Number of Clock Outputs**

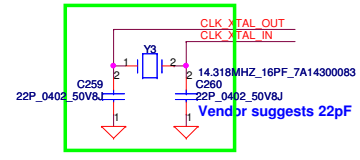
Output	Number
133MHz	2
SRC (100MHz_SS)	1
SRC/SATA (100MHz)	1
REF (14.318MHz)	1
DOT_CLK (96MHz)	1
27MHz	1
27MHz_SS	1

PIN	30	CPU_0	CPU_1
0 (default)		133MHz	133MHz
1		100MHz	100MHz

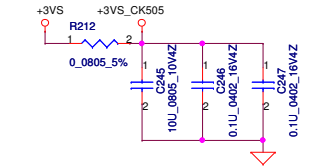
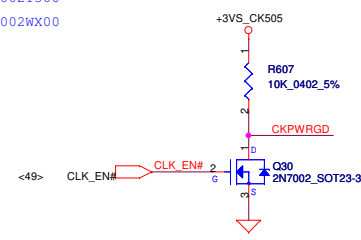
**CPU\_SEL During CK\_PEWGD Latch Pin1**



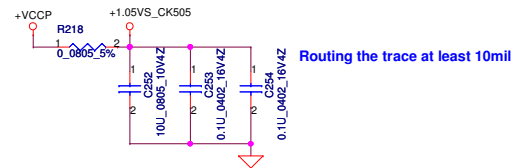
2009.10.21 change the C259, C260 to 22P



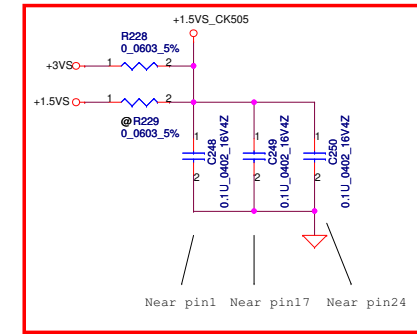
SLG8SP585 pin8 is GND (for DELL HP)  
 SLG8SP587 pin8 is 48MHz (For ABO or 030)  
 Realtek SA00002Y010  
 \* IDT SA00002Y500  
 IDT SA00002WX00



Place close to U3

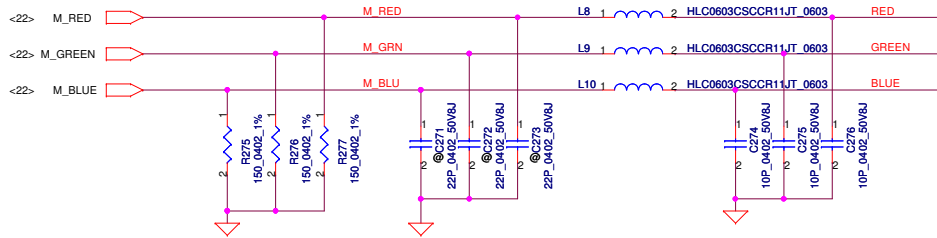
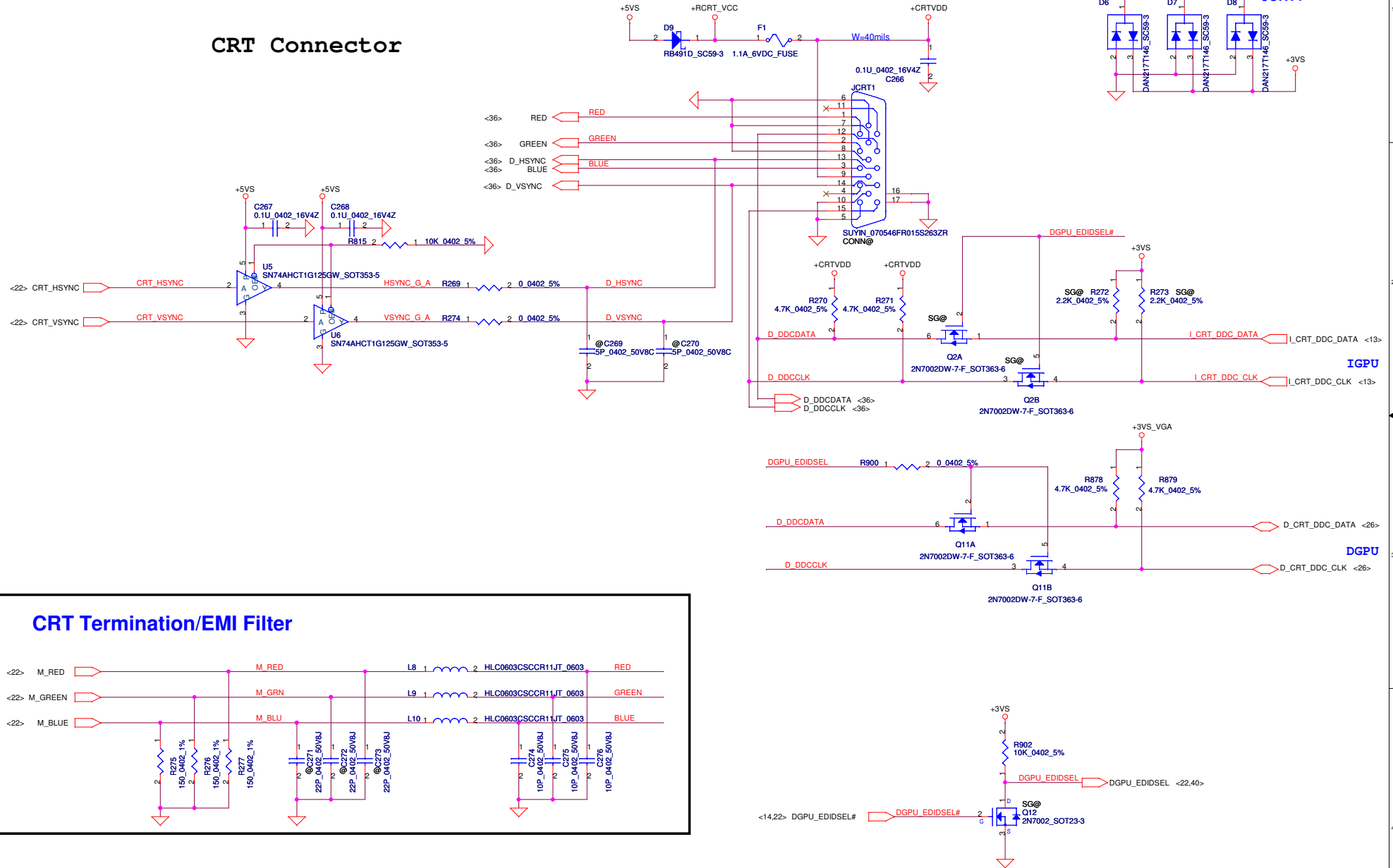


Routing the trace at least 10mil



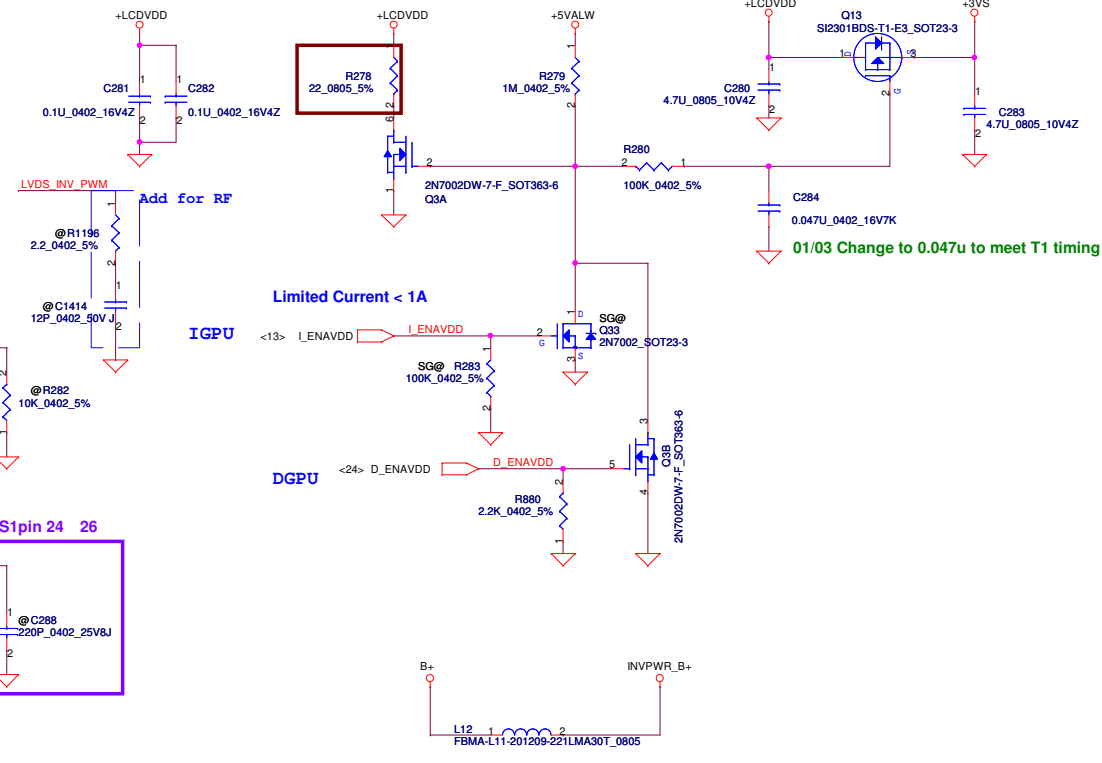
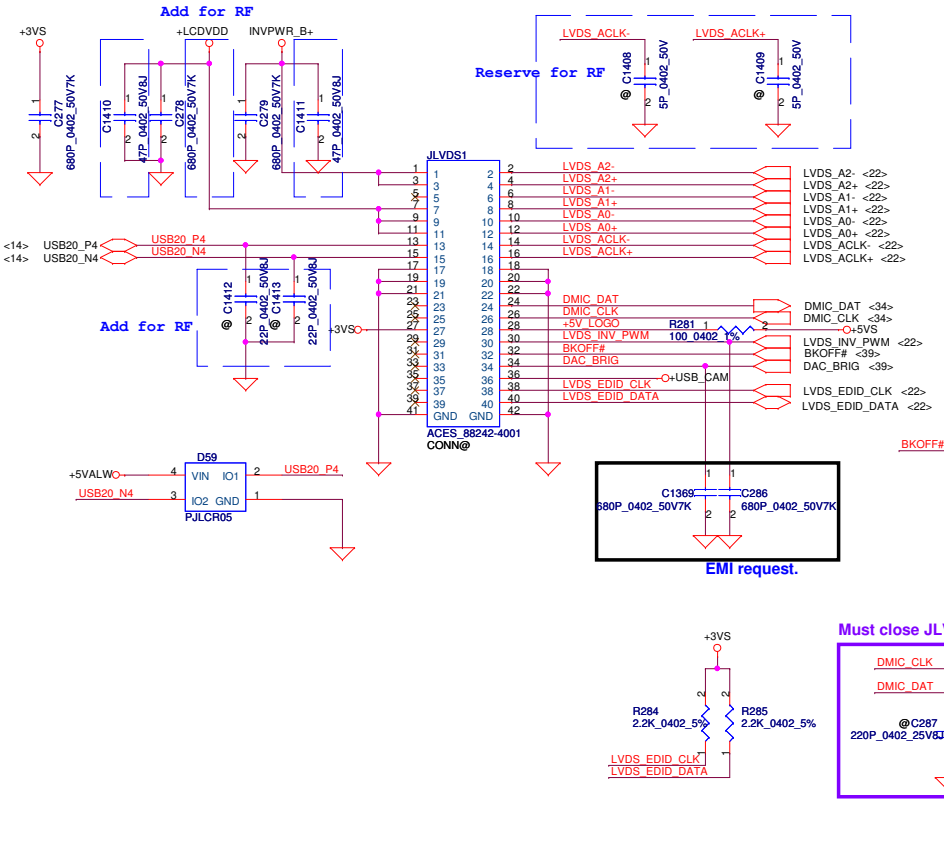
SI Reserve low power clock generator solution

# CRT Connector



Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	Compal Electronics, Inc.	
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.				<b>CRT Connector</b> Size   Document Number   Rev Calpella DIS LA-4107P   1.0	
Date: Monday, November 09, 2009				Sheet 20 of 55	

# LVDS CONN & USB Camera + Dig Mic



01/03 Change to 0.047u to meet T1 timing

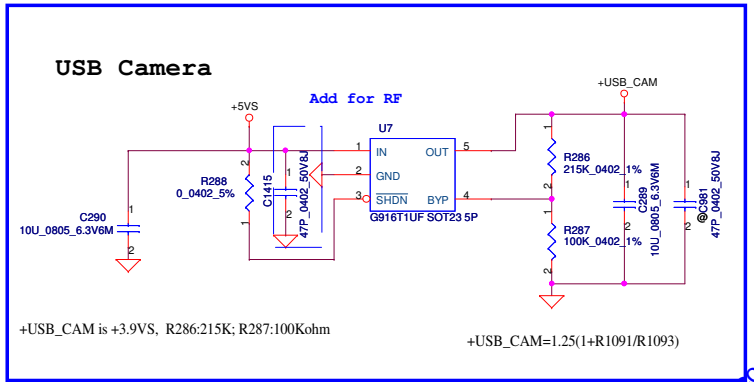
Limited Current < 1A

IGPU

DGPU

Must close JLVS1pin 24 26

EMI request.



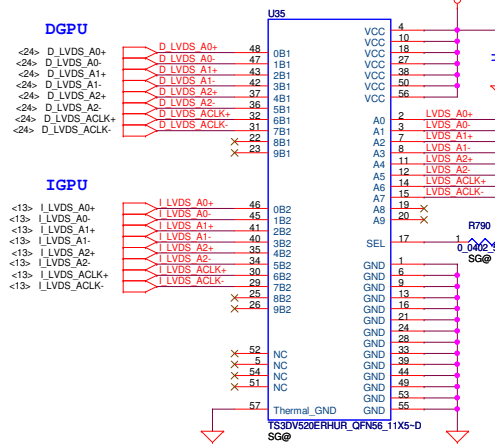
## USB Camera

+USB\_CAM is +3.9VS, R286:215K; R287:100Kohm  
+USB\_CAM=1.25(1+R1091/R1093)

Security Classification	Compal Secret Data		
Issued Date	2007/08/28	Deciphered Date	2006/07/26
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.			

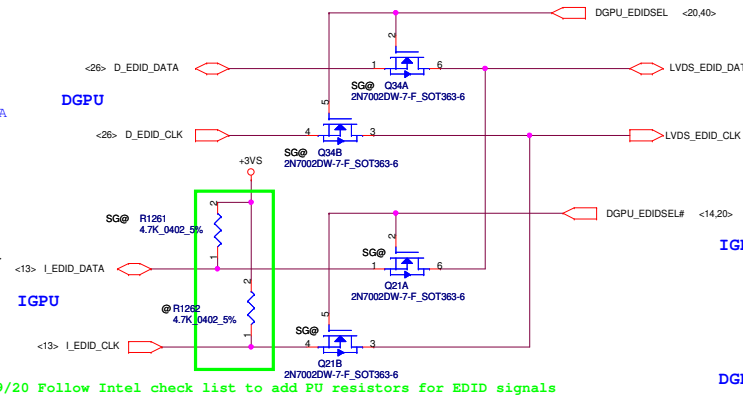
Title			Compal Electronics, Inc.	
LCD CONN			Rev 1.0	
Size	Document Number	Date		Sheet
	Calpella DIS LA-4107P	Monday, November 09, 2009		21 of 55

### LVDS Switch



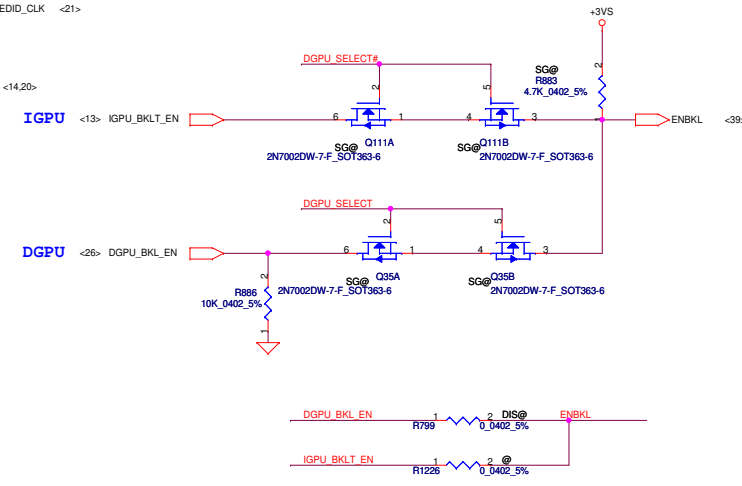
LOW: B1 to A  
High: B2 to A

### LVDS I2C switch

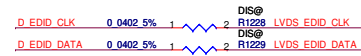
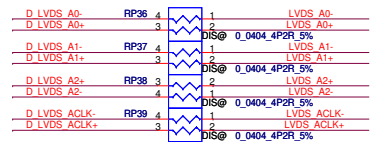


9/20 Follow Intel check list to add PU resistors for EDID signals

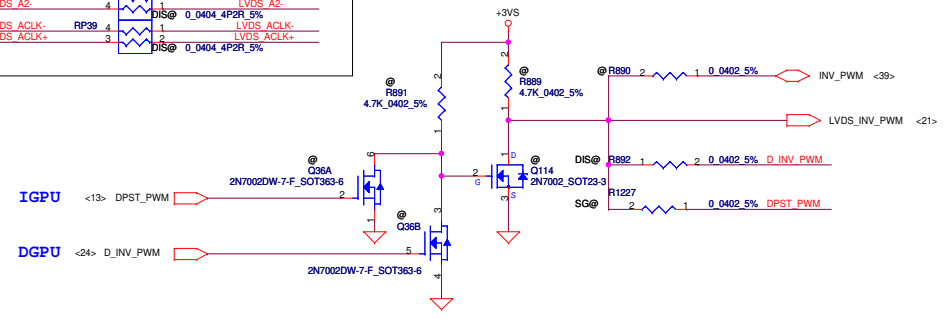
### Backlight Enable



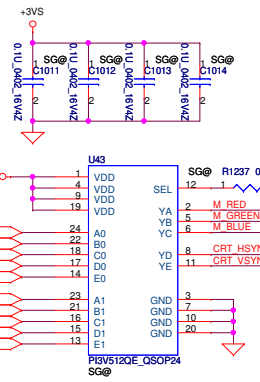
### DIS ONLY (LVDS)



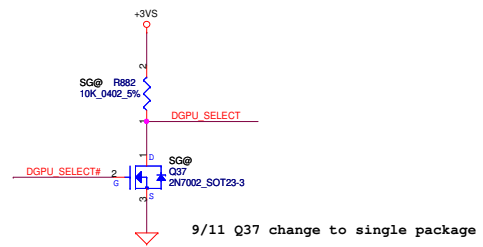
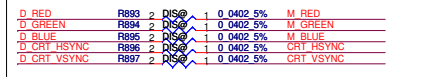
### LVDS PWM switch



### CRT Switch

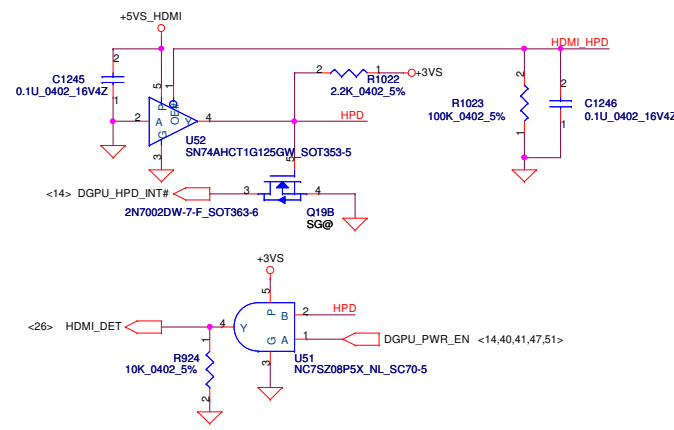
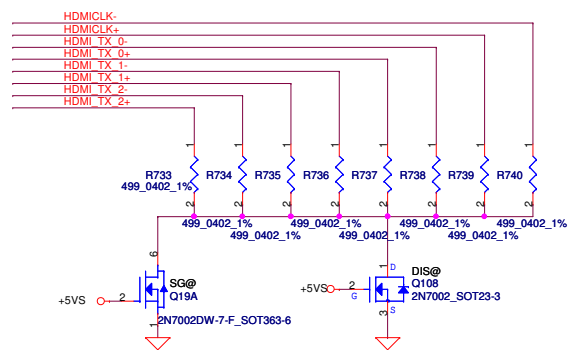
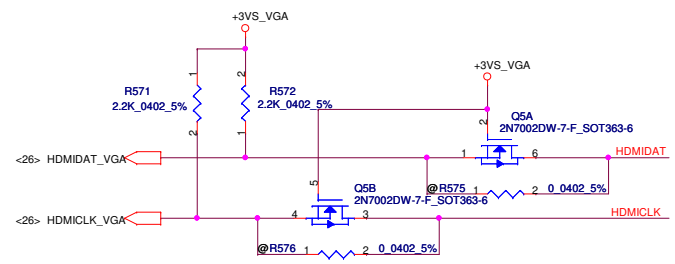
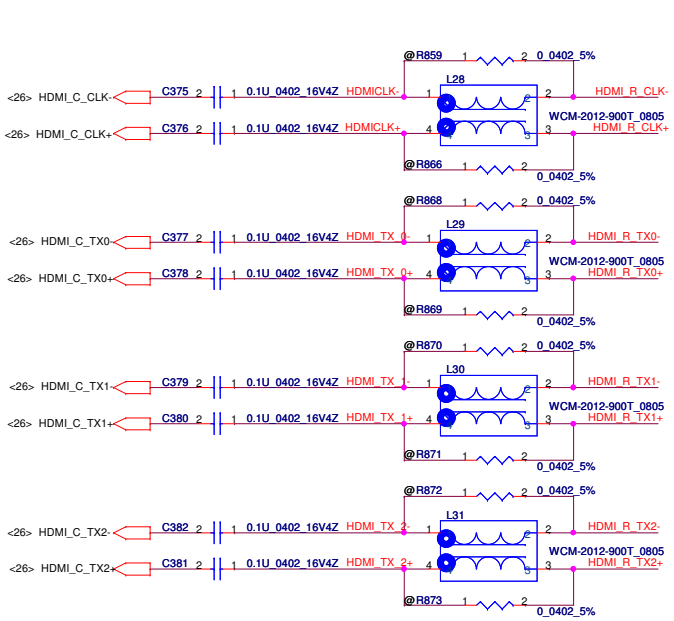


### DIS ONLY (CRT)

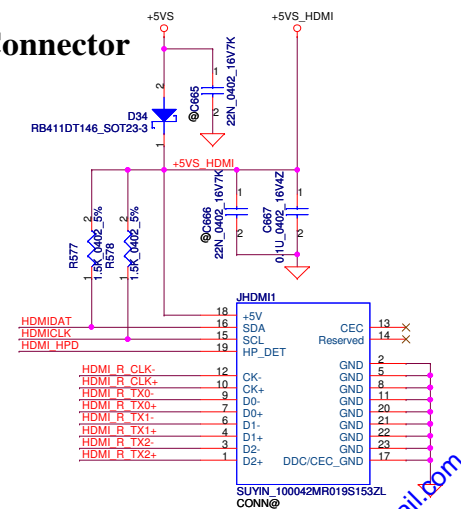


9/11 Q37 change to single package

Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2007/09/29	Deciphered Date	2007/09/29	LVDS Switch	
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.					
Size	Document Number	Date		Sheet	Rev
Custom	Calpella DIS LA-4107P	Monday, November 09, 2009		22 of 55	1.0

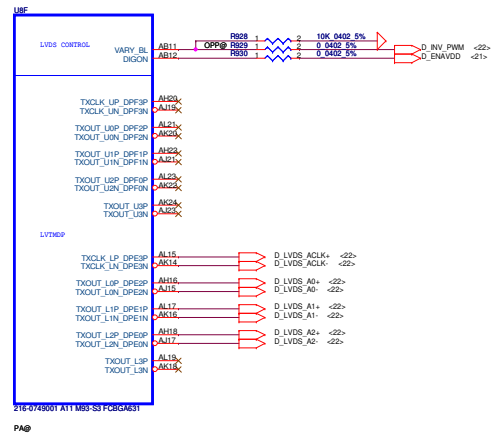


### HDMI Connector



Security Classification	Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/03/10	HDMI LS & Conn.
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.				Size   Document Number Custor   Calpella DIS LA-4107P Date:   Monday, November 09, 2009   Sheet 23 of 55

### LVDS Interface

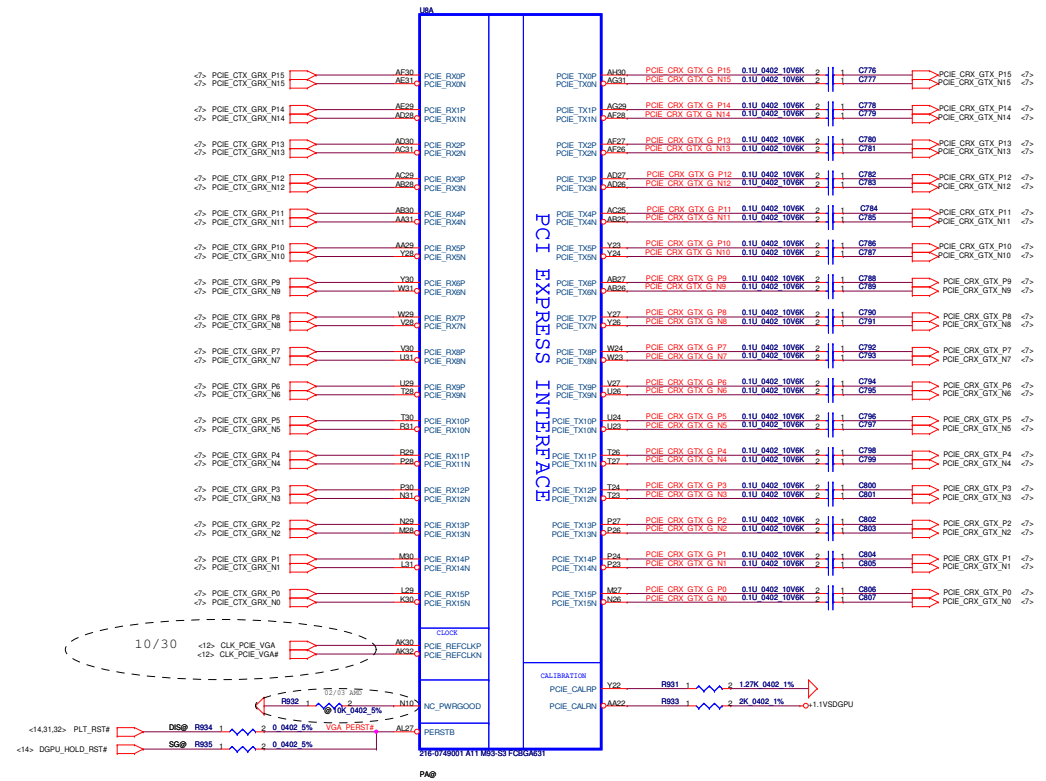


216-0748001 A11 M83-S3 PCB04631

PAB

OPP@  
UB  
M83-S3-UP

### PEG Interface

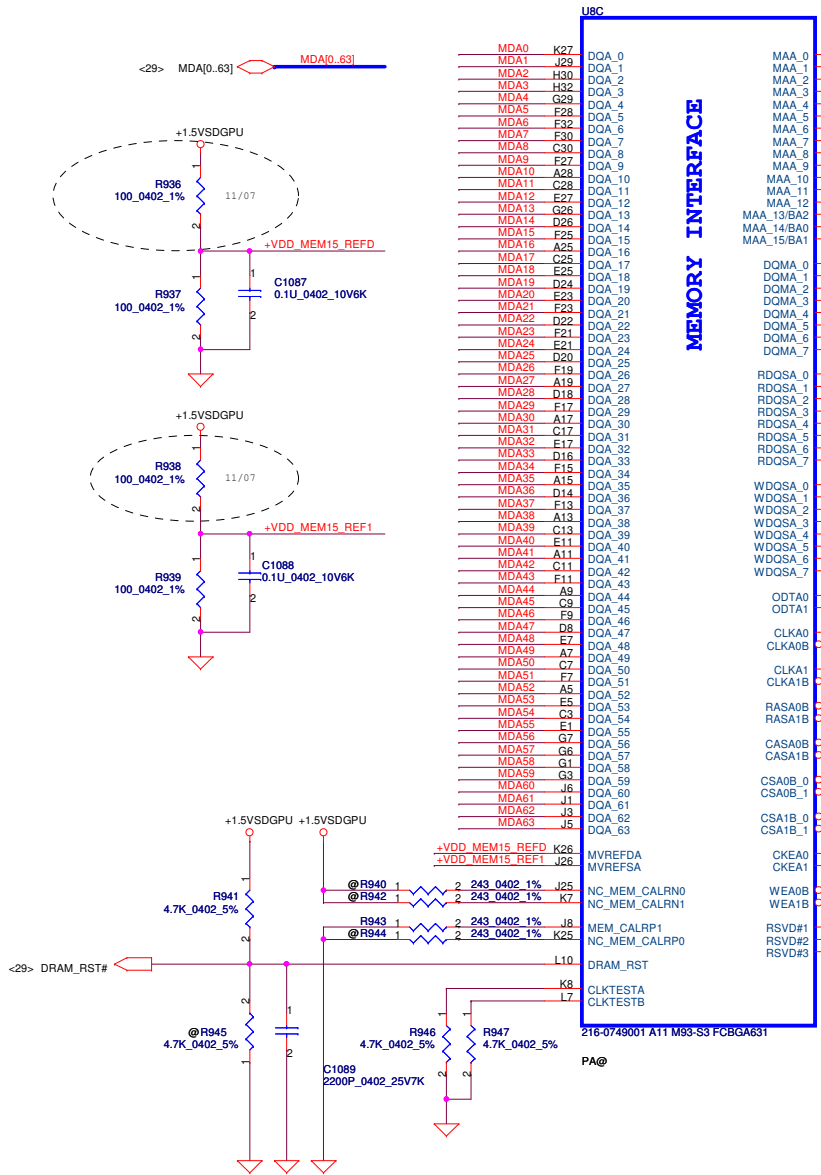


216-0748001 A11 M83-S3 PCB04631

PAB

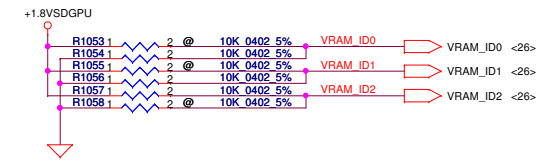
Security Classification	Compal Secret Data		
Issued Date	2009/03/31	Deciphered Date	2010/03/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MUST NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.			Title <b>PEG &amp; LVDS</b> Capella DIS LA-4107P Date: Monday, November 09, 2009 Sheet 24 of 85





- MEMORY INTERFACE**
- MDA0 K27 DQA.0
  - MDA1 J29 DQA.1
  - MDA2 H30 DQA.2
  - MDA3 H32 DQA.3
  - MDA4 G28 DQA.4
  - MDA5 F28 DQA.5
  - MDA6 F32 DQA.6
  - MDA7 F30 DQA.7
  - MDA8 C30 DQA.8
  - MDA9 F27 DQA.9
  - MDA10 A28 DQA.10
  - MDA11 C28 DQA.11
  - MDA12 E27 DQA.12
  - MDA13 G26 DQA.13
  - MDA14 D26 DQA.14
  - MDA15 F25 DQA.15
  - MDA16 A25 DQA.16
  - MDA17 C25 DQA.17
  - MDA18 E25 DQA.18
  - MDA19 D24 DQA.19
  - MDA20 E23 DQA.20
  - MDA21 F23 DQA.21
  - MDA22 D22 DQA.22
  - MDA23 F21 DQA.23
  - MDA24 E21 DQA.24
  - MDA25 D20 DQA.25
  - MDA26 F19 DQA.26
  - MDA27 A19 DQA.27
  - MDA28 D18 DQA.28
  - MDA29 F17 DQA.29
  - MDA30 A17 DQA.30
  - MDA31 C17 DQA.31
  - MDA32 E17 DQA.32
  - MDA33 D16 DQA.33
  - MDA34 F15 DQA.34
  - MDA35 A15 DQA.35
  - MDA36 D14 DQA.36
  - MDA37 F13 DQA.37
  - MDA38 A13 DQA.38
  - MDA39 C13 DQA.39
  - MDA40 E11 DQA.40
  - MDA41 A11 DQA.41
  - MDA42 C11 DQA.42
  - MDA43 F11 DQA.43
  - MDA44 A9 DQA.44
  - MDA45 C9 DQA.45
  - MDA46 F9 DQA.46
  - MDA47 D8 DQA.47
  - MDA48 E7 DQA.48
  - MDA49 A7 DQA.49
  - MDA50 C7 DQA.50
  - MDA51 F7 DQA.51
  - MDA52 A5 DQA.52
  - MDA53 C3 DQA.53
  - MDA54 G3 DQA.54
  - MDA55 E1 DQA.55
  - MDA56 G7 DQA.56
  - MDA57 G6 DQA.57
  - MDA58 G1 DQA.58
  - MDA59 G3 DQA.59
  - MDA60 J6 DQA.60
  - MDA61 J1 DQA.61
  - MDA62 J3 DQA.62
  - MDA63 J5 DQA.63

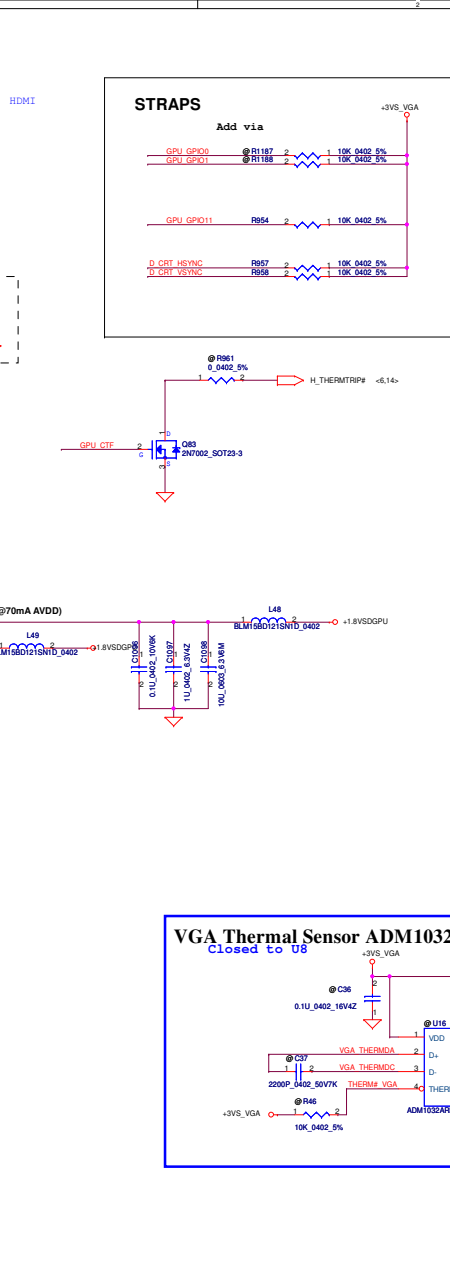
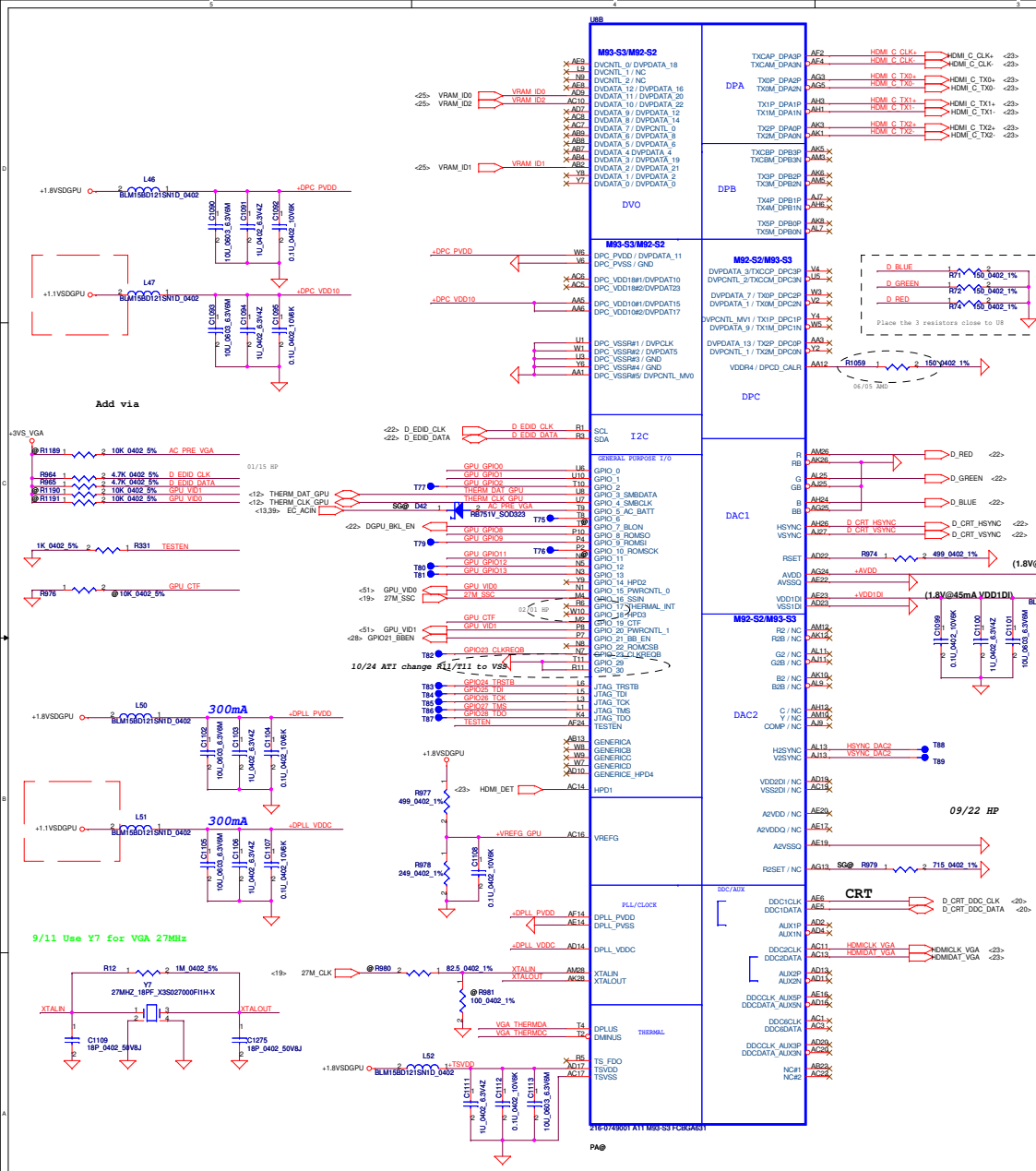
- MAA\_0 K17 MAA0
  - MAA\_1 J20 MAA1
  - MAA\_2 H23 MAA2
  - MAA\_3 G23 MAA3
  - MAA\_4 G24 MAA4
  - MAA\_5 H24 MAA5
  - MAA\_6 J19 MAA6
  - MAA\_7 K19 MAA7
  - MAA\_8 J14 MAA8
  - MAA\_9 K14 MAA9
  - MAA\_10 J11 MAA10
  - MAA\_11 J13 MAA11
  - MAA\_12 H11 MAA12
  - MAA\_13 G11 A BA2
  - MAA\_14 BAO A BA0
  - MAA\_15 BAI L15 A BA1
- DQMA\_0 E32 DQMA#0
  - DQMA\_1 E30 DQMA#1
  - DQMA\_2 A21 DQMA#2
  - DQMA\_3 C21 DQMA#3
  - DQMA\_4 E13 DQMA#4
  - DQMA\_5 D12 DQMA#5
  - DQMA\_6 E3 DQMA#6
  - DQMA\_7 F4 DQMA#7
- RDQSA\_0 H28 QSA0
  - RDQSA\_1 C27 QSA1
  - RDQSA\_2 A23 QSA2
  - RDQSA\_3 E19 QSA3
  - RDQSA\_4 E15 QSA4
  - RDQSA\_5 D10 QSA5
  - RDQSA\_6 D6 QSA6
  - RDQSA\_7 G5 QSA7
- WDQSA\_0 H27 QSA#0
  - WDQSA\_1 A27 QSA#1
  - WDQSA\_2 C23 QSA#2
  - WDQSA\_3 C19 QSA#3
  - WDQSA\_4 C15 QSA#4
  - WDQSA\_5 E9 QSA#5
  - WDQSA\_6 C5 QSA#6
  - WDQSA\_7 H4 QSA#7
- ODTA0 L18 ODTA0 <29>
  - ODTA1 K16 ODTA1 <29>
  - CLKA0 H26 CLKA0 <29>
  - CLKA0B H25 CLKA0# <29>
  - CLKA1 G9 CLKA1 <29>
  - CLKA1B H9 CLKA1# <29>
  - RASA0B G22 RASA0# <29>
  - RASA1B G17 RASA1# <29>
  - CASA0B G19 CASA0# <29>
  - CASA1B G16 CASA1# <29>
  - CSA0B\_0 H22 CSA0#\_0 <29>
  - CSA0B\_1 J22 CSA0#\_1 <29>
  - CSA1B\_0 G13 CSA1#\_0 <29>
  - CSA1B\_1 K13 CSA1#\_1 <29>
  - CKEA0 K20 CKEA0 <29>
  - CKEA1 J17 CKEA1 <29>
  - WEA0B G25 WEA0# <29>
  - WEA1B H10 WEA1# <29>
  - RSVD#1 AB16 <29>
  - RSVD#2 G18 <29>
  - RSVD#3 G20 <29>



	VRAM_ID0	VRAM_ID1	VRAM_ID2	
Hynix Orion die H5TQ1G63BFR-12C SA000032400	800MHz	0	0	0
Samsung E die K4W1G1646E-HC12 SA000035700	800MHz	0	0	1
Qimonda IDGH1G-04A1F1C-16X SA000030800		0	1	0
TBD		0	1	1
TBD		1	0	0
TBD		1	0	1
TBD		1	1	0
TBD		1	1	1

Security Classification	Compal Secret Data		Title	
Issued Date	2009/03/31	Deciphered Date	2010/03/31	<b>Memory Interface</b>
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.				Compal Electronics, Inc. Document Number <b>Calpella DIS LA-4107P</b> Date: Monday, November 09, 2009 Sheet 25 of 55

hexainf@hotmail.com



### CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET

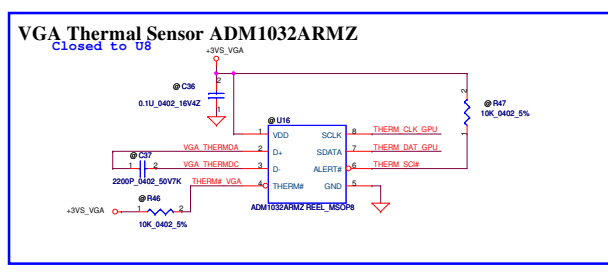
STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS
TX_PWRs_ENB	GPIO0	POE FULL TX OUTPUT SWING	0
TX_DEEMPH_EN	GPIO1	POE TRANSMITTER DE-EMPHASIS ENABLED	0
BIF_GEN2_EN_A	GPIO2	POE GEN2 ENABLED	0
	GPIO8		0
BIF_VGA_DIS	GPIO9	VGA ENABLED	0
	GPIO21		0
BIOS_ROM_EN	GPIO_22_ROMCSB	ENABLE EXTERNAL BIOS ROM	0
ROMIDCFG(2)	GPIO(3:1)	SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT	001
VIP_DEVICE_STRAP_ENA	VSYNCS	IGNORE VIP DEVICE STRAPS	0
	HSYNCS		0
	GENERICC		0
AUD(1)	HSYNCS	AUD(1)/AUD(0) 0 0 No audio function 0 1 Audio for DisplayPort and HDMI if dongle is detected 1 0 Audio for DisplayPort only 1 1 Audio for both DisplayPort and HDMI	11
AUD(0)	VSYNCS		0

### AMD RESERVED CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET

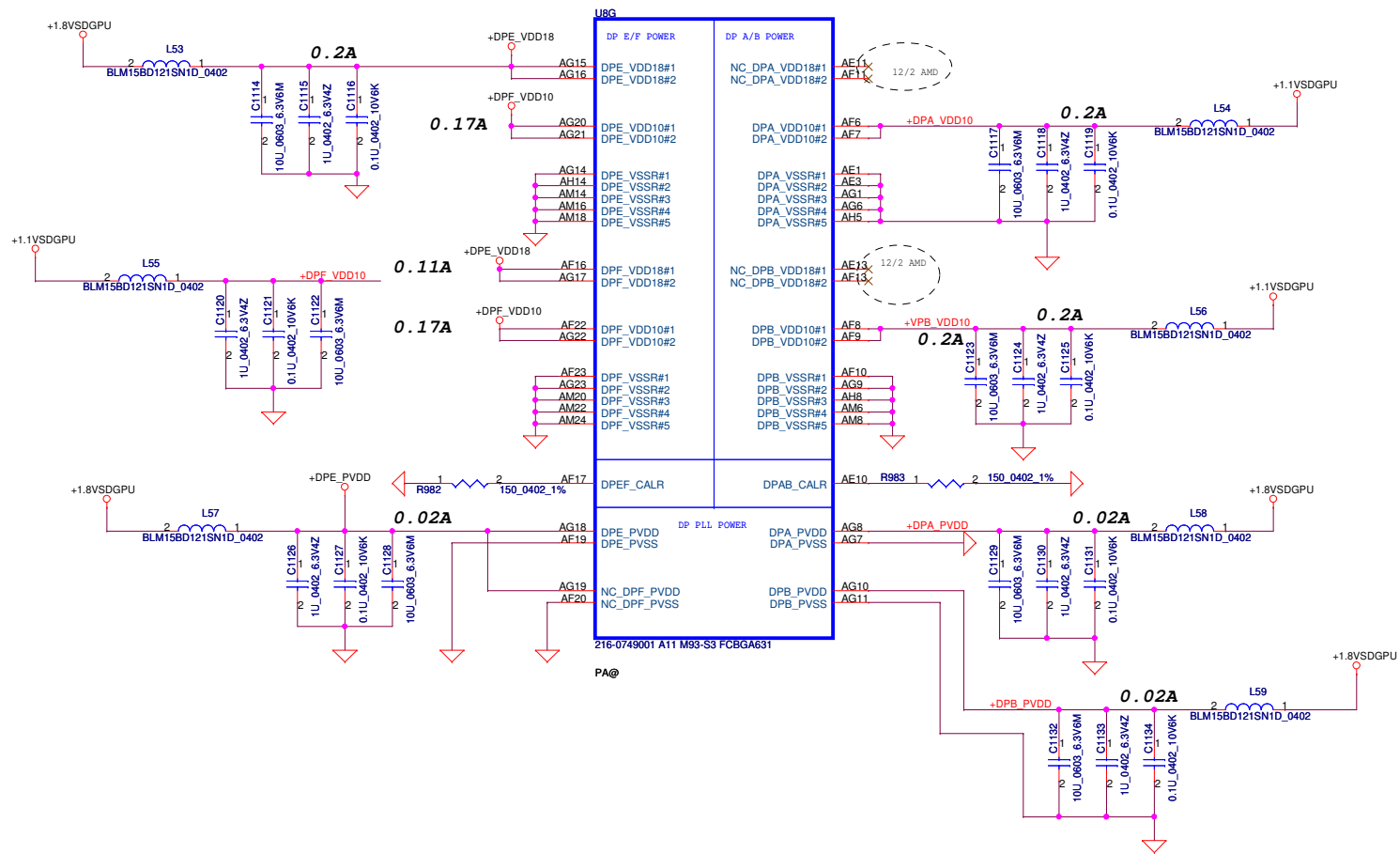
STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS
	HSYNCS		GENERICC
	GPIO21_BB_EN		

PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET



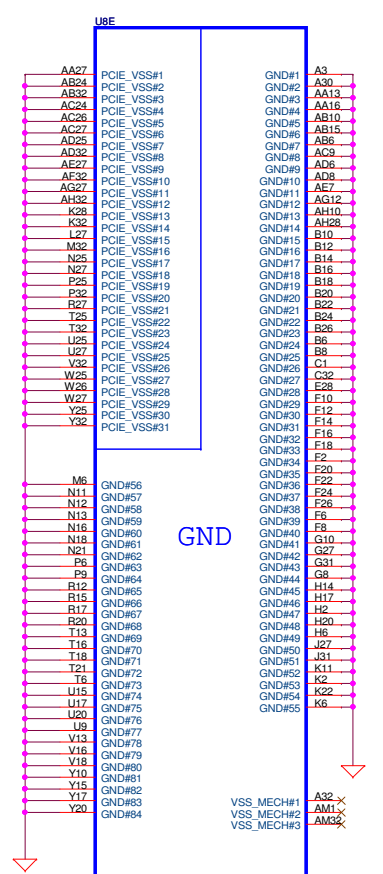
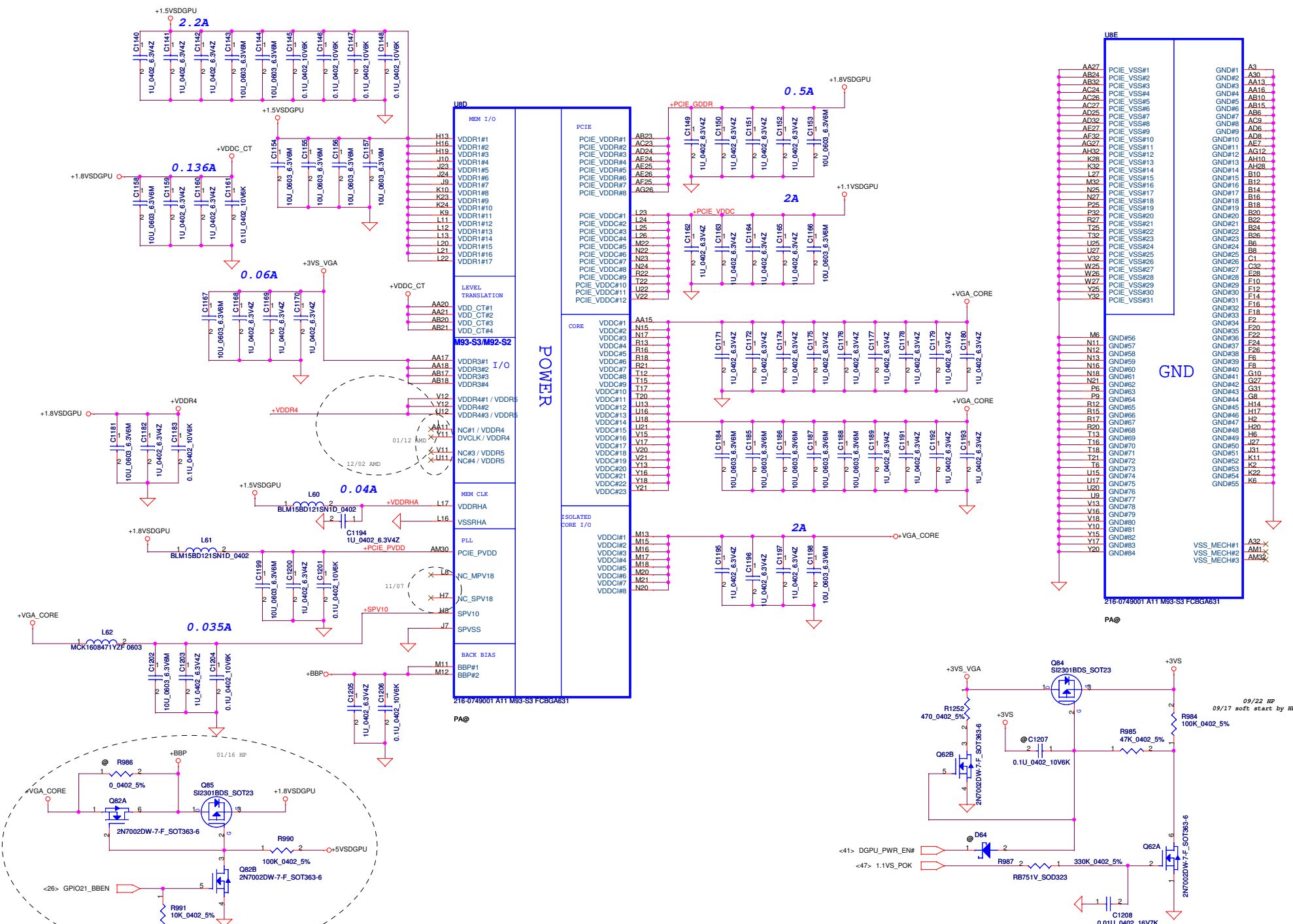
Security Classification	Compal Secret Data		
Issued Date	2009/03/31	Deciphered Date	2010/03/31
Title			Compal Electronics, Inc.
Custom			HDMI_MSIC & Thermal
Size			1.0
Date			Monday, November 05, 2009 18:28 of 55

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 TRANSMITTED FROM THE CUSTODY OF THE COMPANY OR 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.

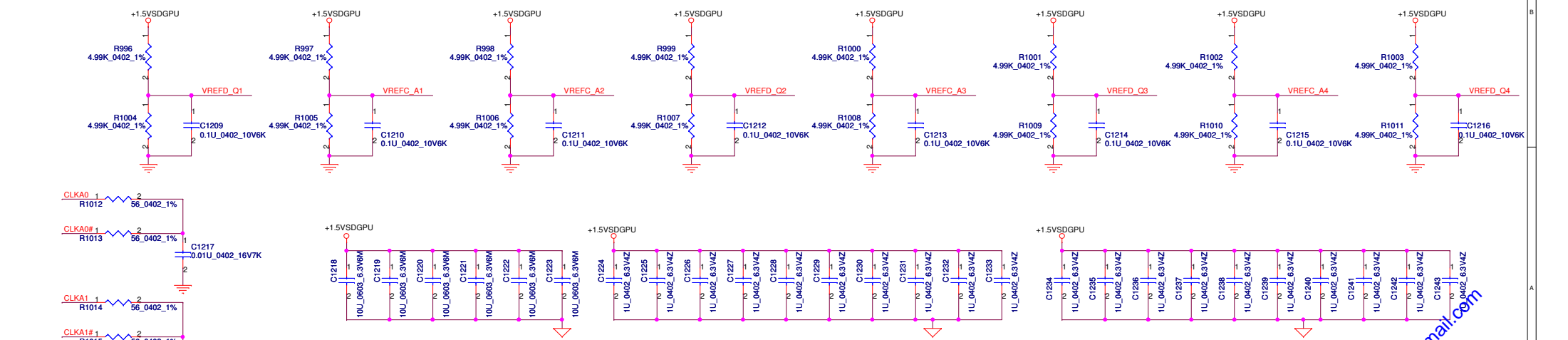
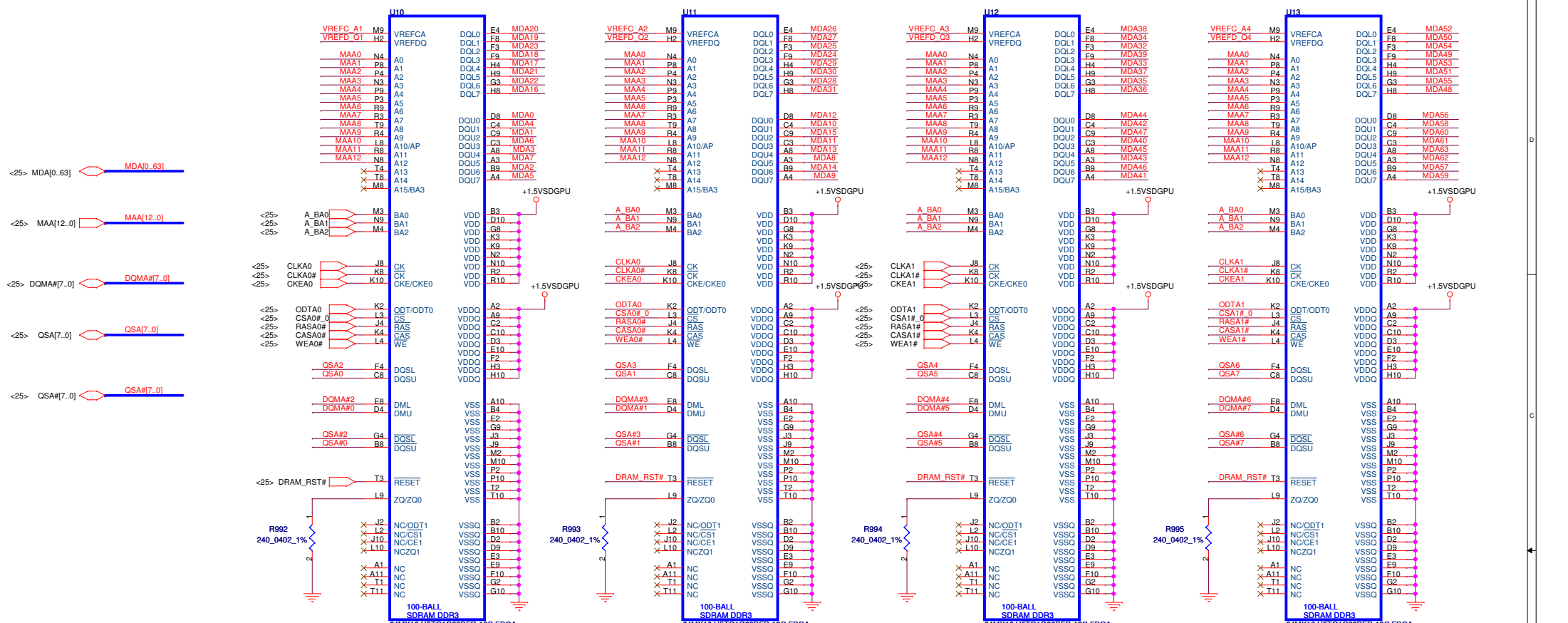


Security Classification	Compal Secret Data		Title	
Issued Date	2009/03/31	Deciphered Date	2010/03/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Document Number
				DPX POWER
				Size
				Custom
				Calpella DIS LA-4107P
				Rev
				1.0
				Date
				Monday, November 09, 2009
				Sheet
				27
				of
				55

hexain@hotmail.com

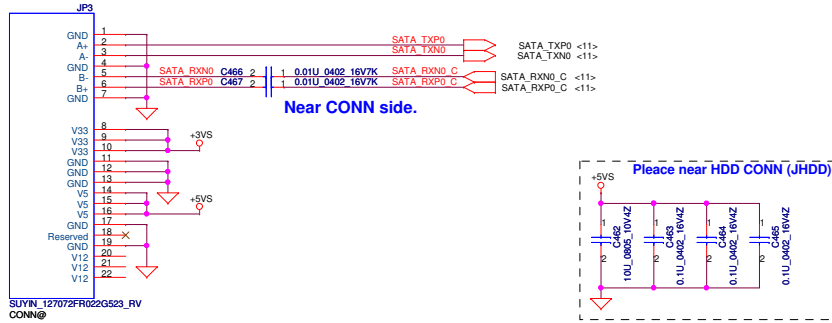


Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2009/03/31	Deciphered Date	2010/03/31	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.			Customer	Calpella DIS LA-4107P	
Date:	Monday, November 09, 2009	Sheet	28	of	55

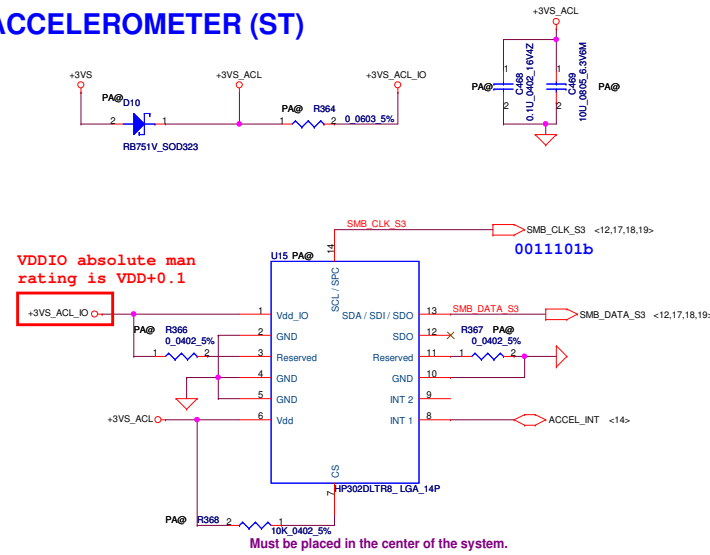


Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2009/03/31	Deciphered Date	2010/03/31	M92-SYRAM	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Size	Document Number
				Calpella DIS 1-107P	
				Date:	Monday, November 09, 2009
				Sheet	29 of 55

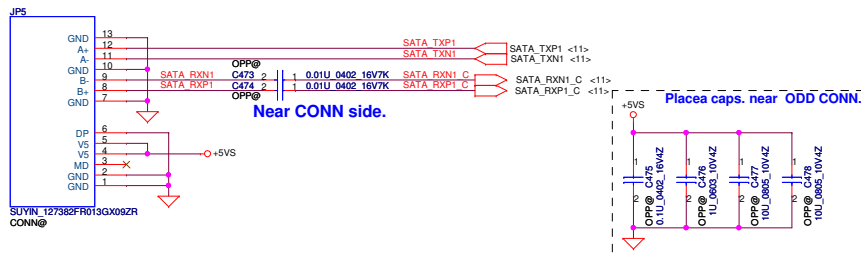
## HDD Connector



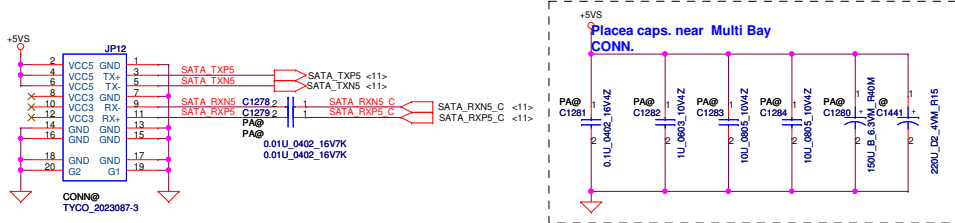
## ACCELEROMETER (ST)



## CD-ROM Connector



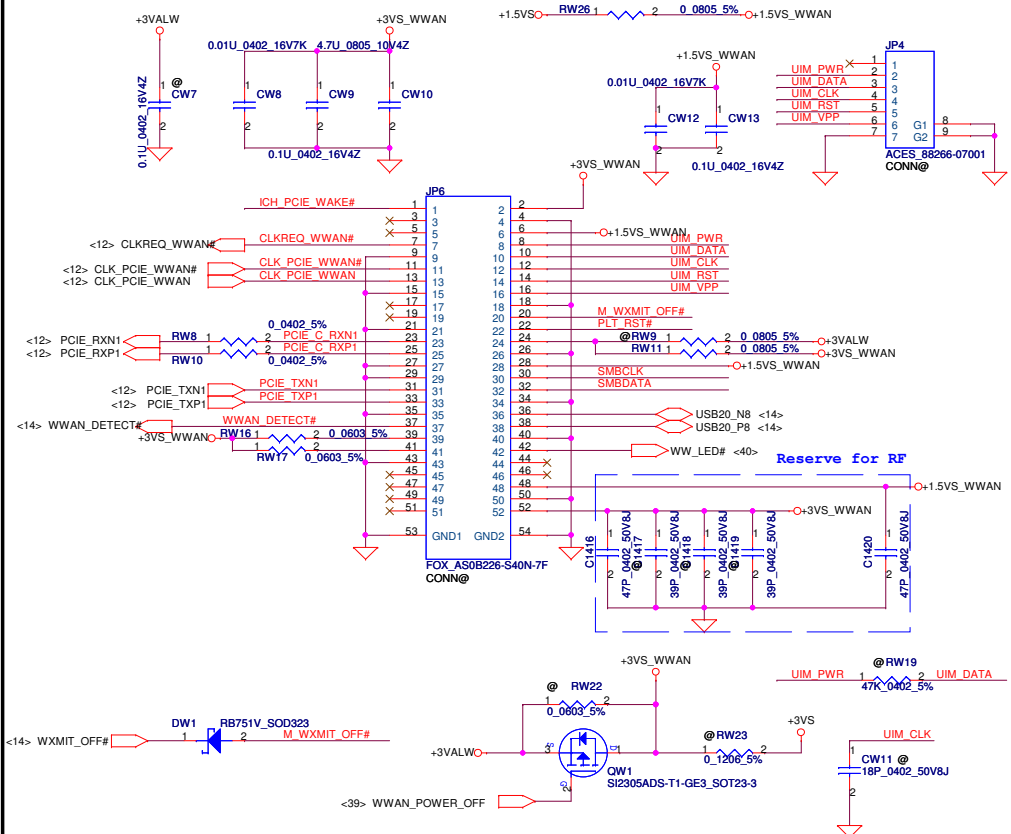
## Multi Bay



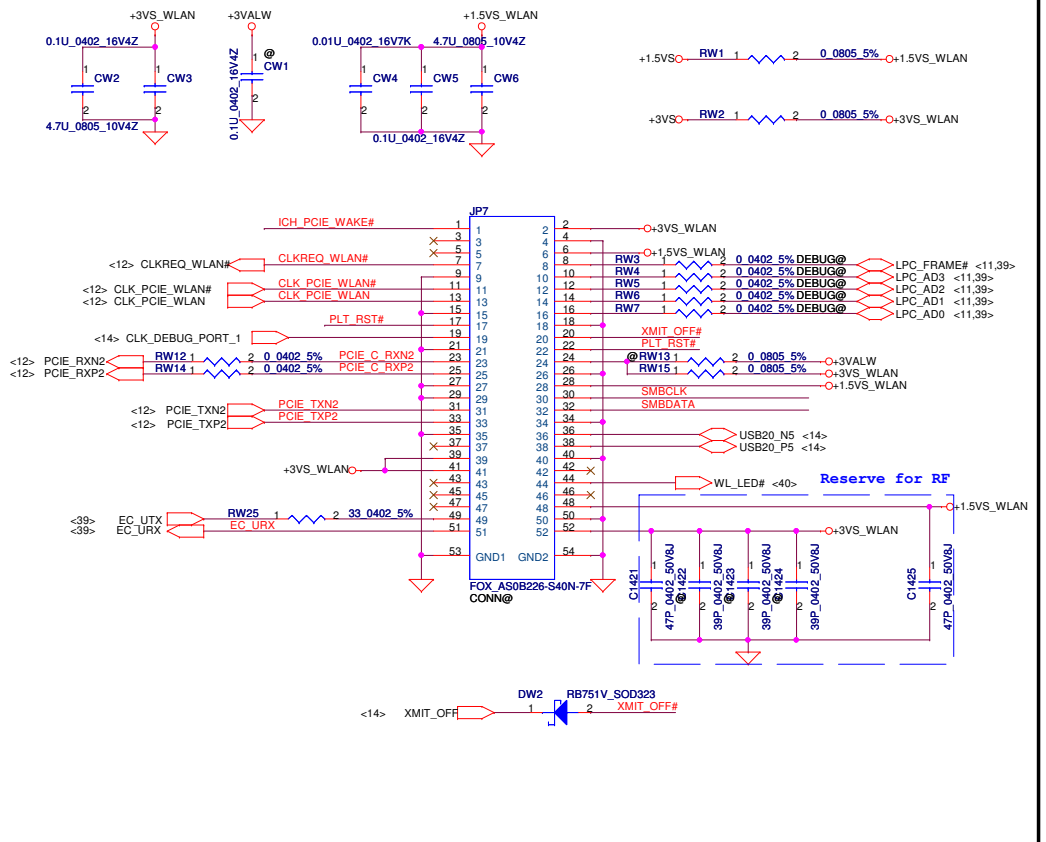
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2007/08/28	Deciphered Date	2006/03/10	Title	HDD & CDROM
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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.				Size	Document Number Custom Calpella DIS LA-4107P
Date:	Monday, November 09, 2009	Sheet	30	Rev	1.0
			of		55

# Mini Card 0--TV tuner/WWAN/Robson

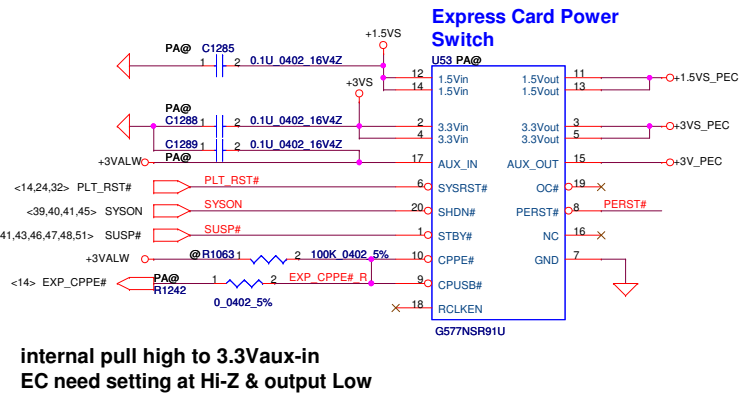
## SIM card Connector



# Mini Card 2---WLAN

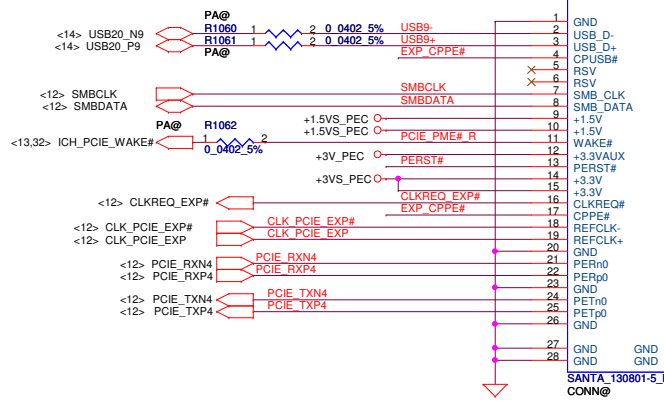


## New Card

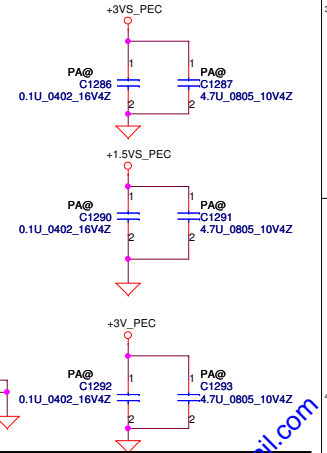


internal pull high to 3.3Vaux-in  
EC need setting at Hi-Z & output Low

## Close to JEXP



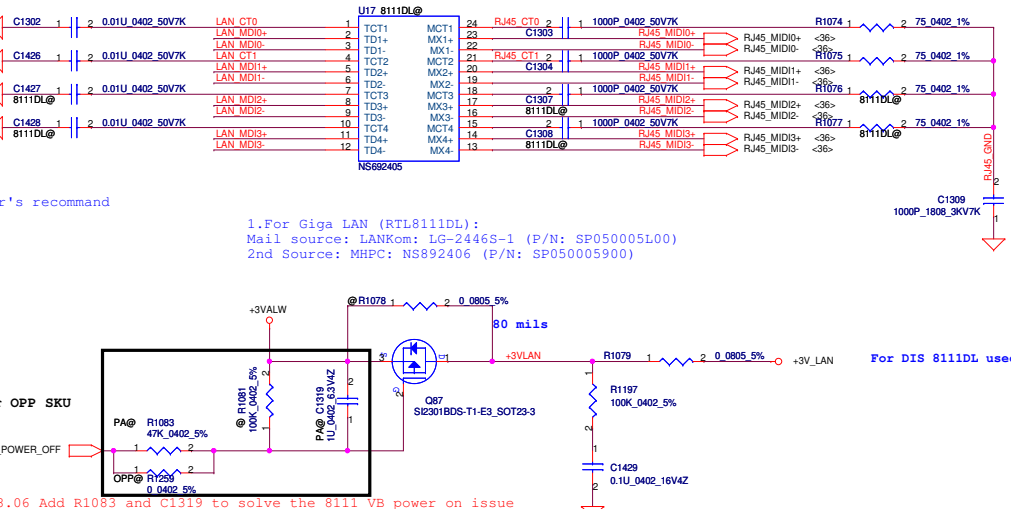
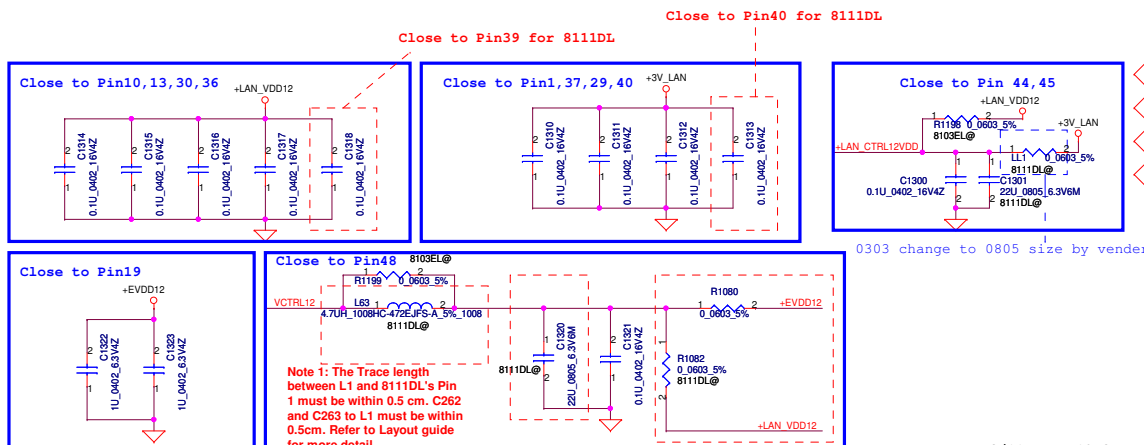
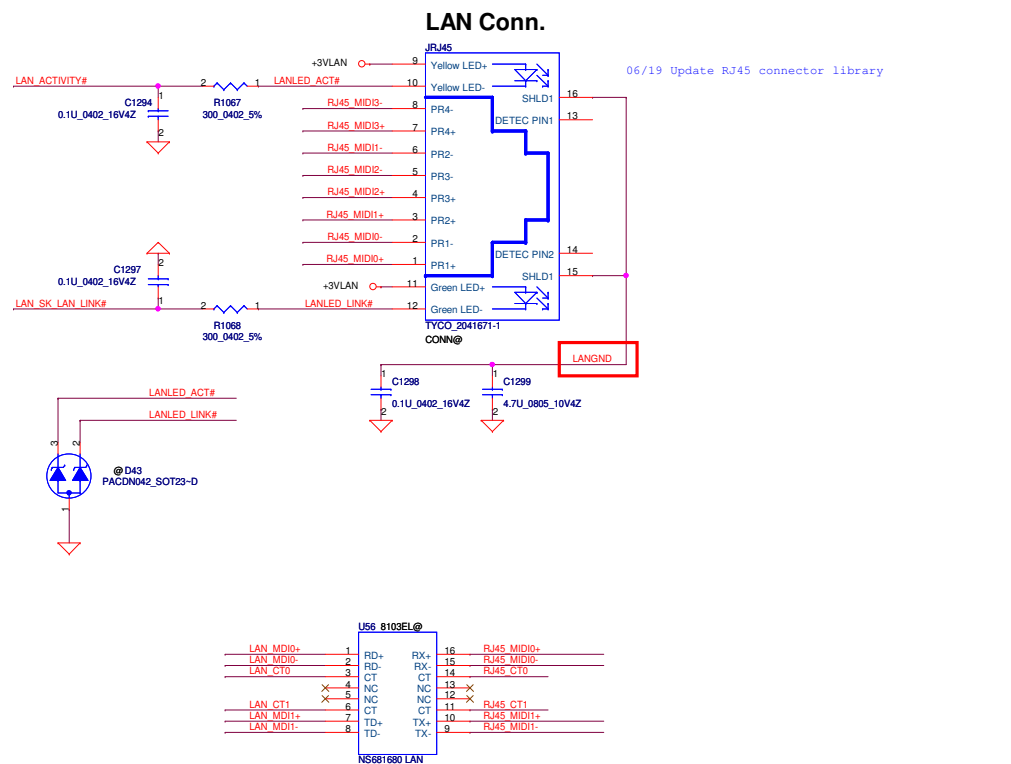
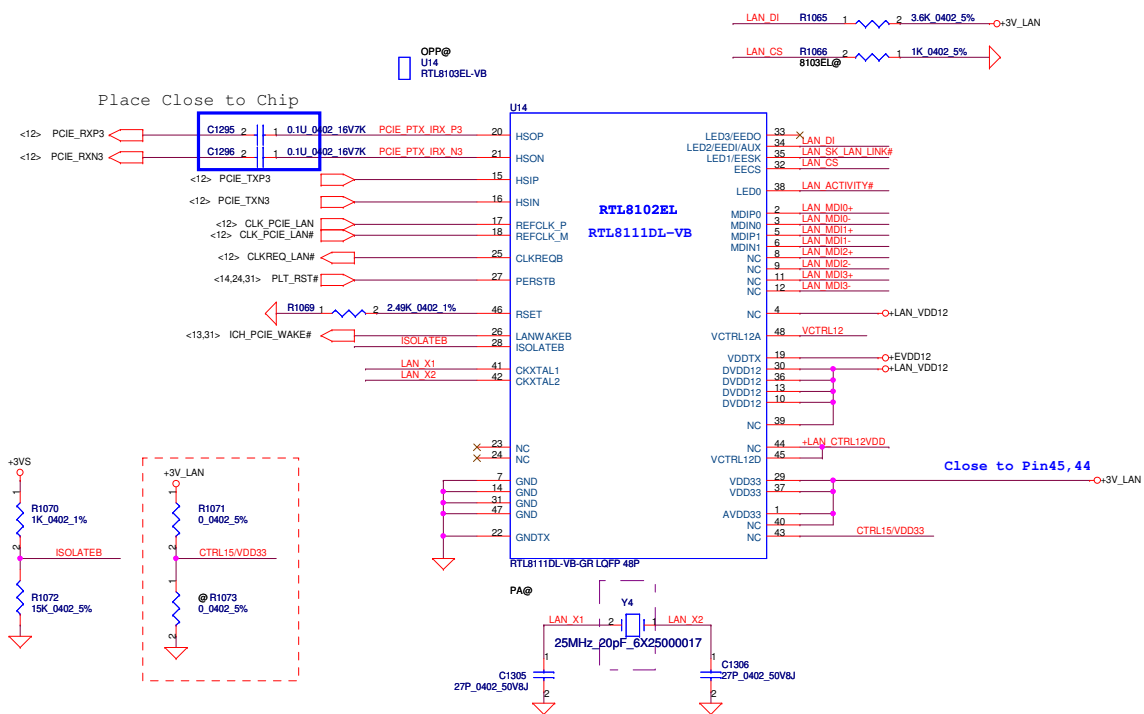
## Near to Express Card slot.



Security Classification	Compal Secret Data	
Issued Date	2007/08/28	Deciphered Date
		2006/07/26

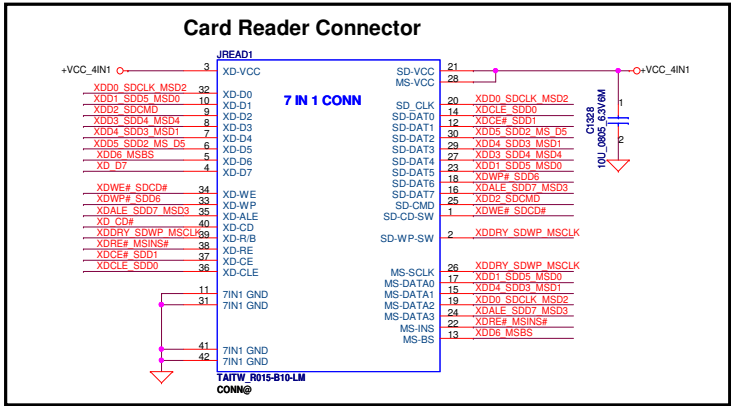
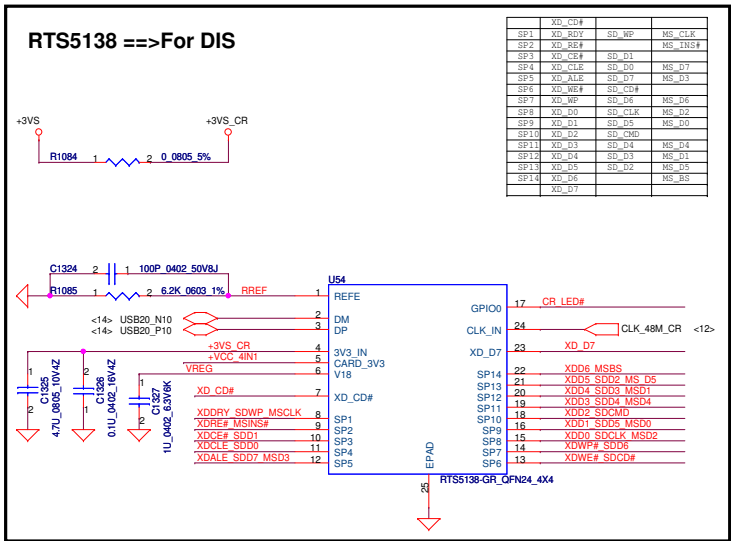
Title		
<b>Compal Electronics, Inc.</b>		
<b>WLAN, WWAN, New Card</b>		
Size	Document Number	Rev
	<b>Capella DIS LA-4107</b>	1.0
Date:	Monday, November 09, 2009	Sheet 31 of 55

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.



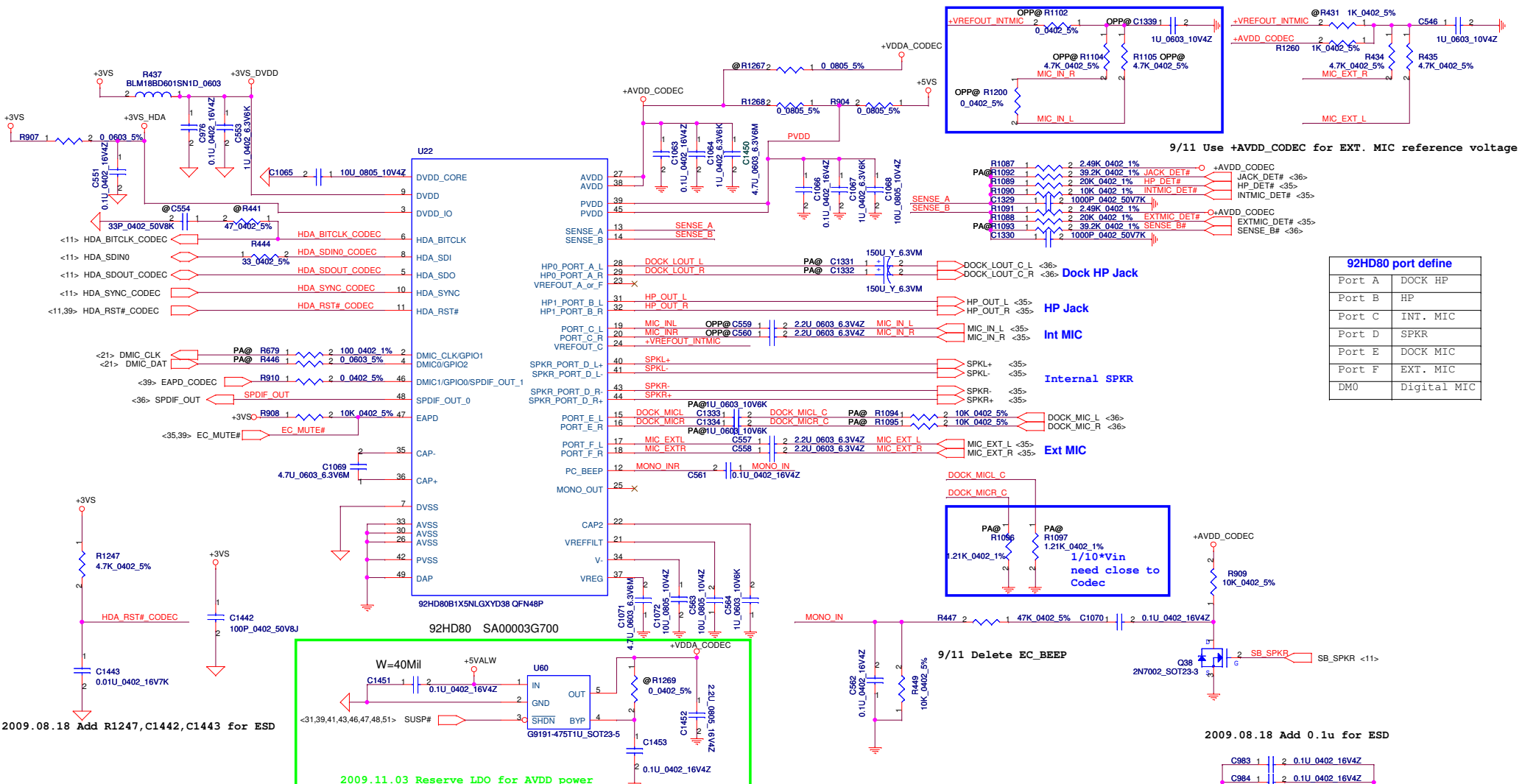
Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2007/08/28	Deciphered Date	2006/10/06	USB CardReader&CONN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.					
Size	Custom	Document Number	Catpella DIS LA-107P		Rev
Date	Monday, November 09, 2009	Sheet	32	of	55





Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b>
Issued Date	2007/08/28	Deciphered Date	2006/10/06	<b>USB CardReader&amp;CONN</b>
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.				Rev 1.0
Size	Custom	Document Number	Calpella DIS LA-4107	
Date:	Monday, November 09, 2009		Sheet	33 of 55

hexainf@hotmail.com

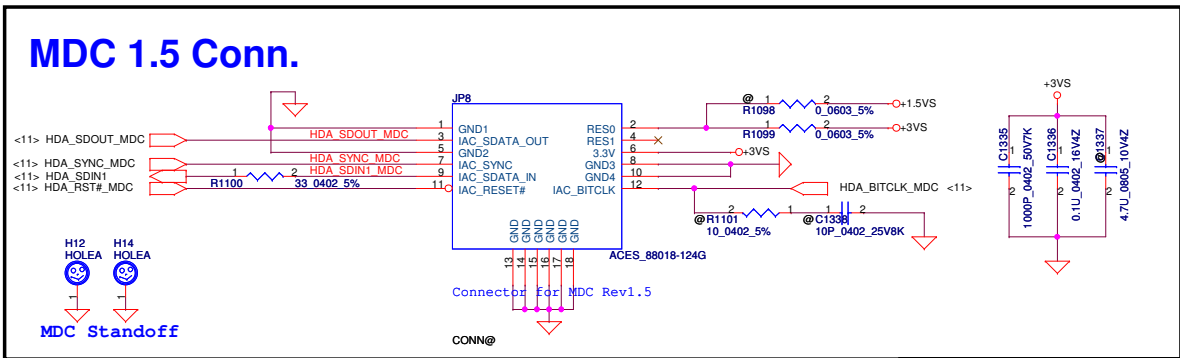


**92HD80 port define**

Port A	DOCK HP
Port B	HP
Port C	INT. MIC
Port D	SPKR
Port E	DOCK MIC
Port F	EXT. MIC
DM0	Digital MIC

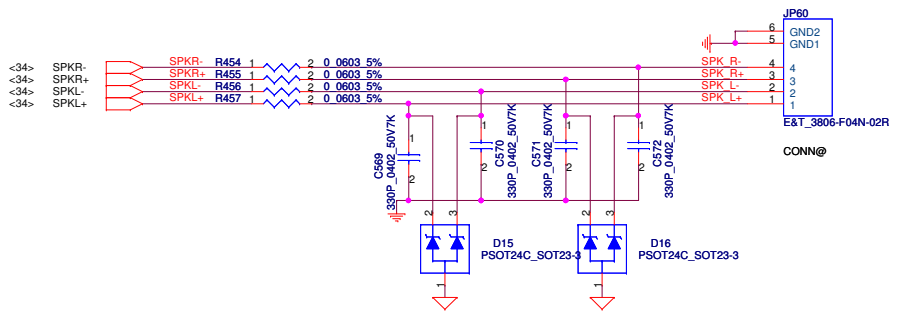
2009.08.18 Add R1247,C1442,C1443 for ESD

2009.08.18 Add 0.1u for ESD

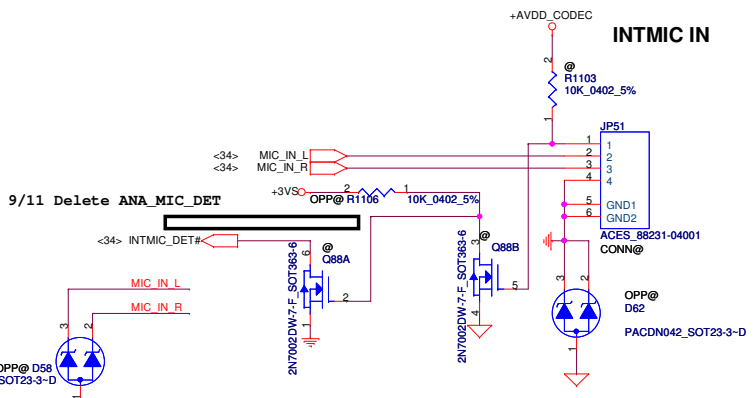


Security Classification	Compal Secret Data	Title	<b>Codec_IDT92HD80</b>	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				
Size	Document Number	Rev		
Custom	<b>Calpella DIS LA-4107P</b>	1.0		
Date:	Monday, November 09, 2009	Sheet	34	of 55

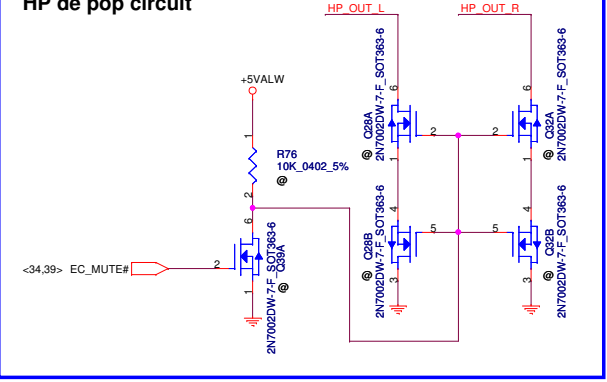
### SPEAKER



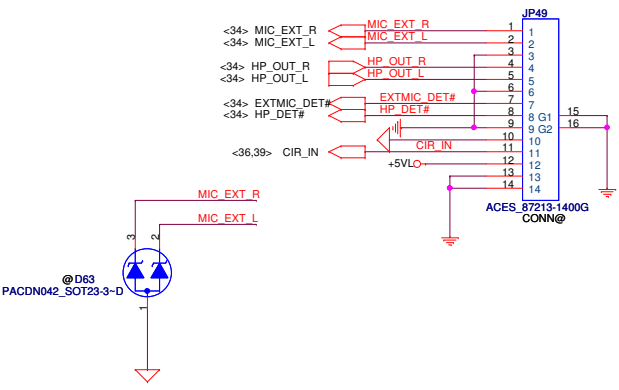
### INTMIC IN



### HP de pop circuit



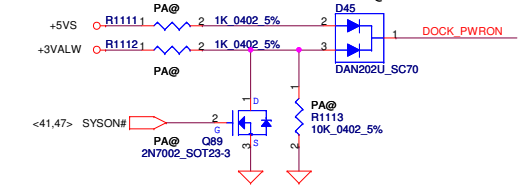
### Audio/B & CIR



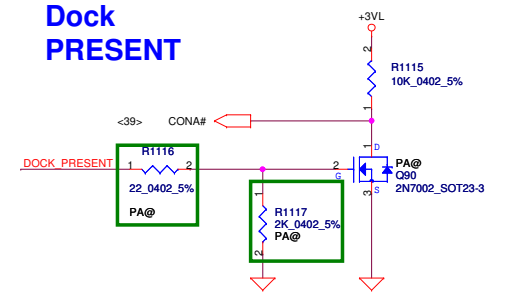
Security Classification	Compal Secret Data			Title	<b>AMP &amp; Audio Jack</b>	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	Size	Document Number	Rev
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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.				Calpella DIS LA-1107P		1.0
				Date:	Monday, November 09, 2009	Sheet 35 of 55

# Atlas/ Saturn Dock

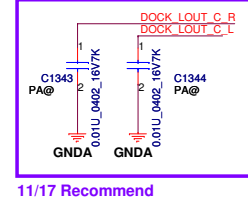
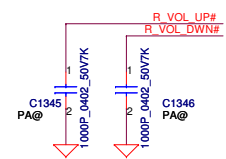
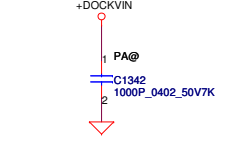
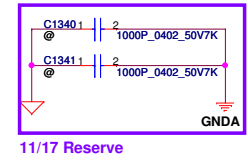
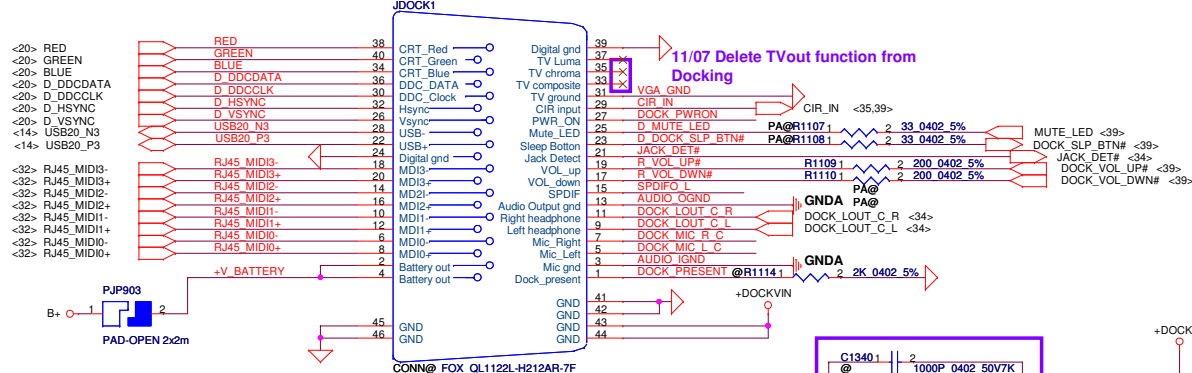
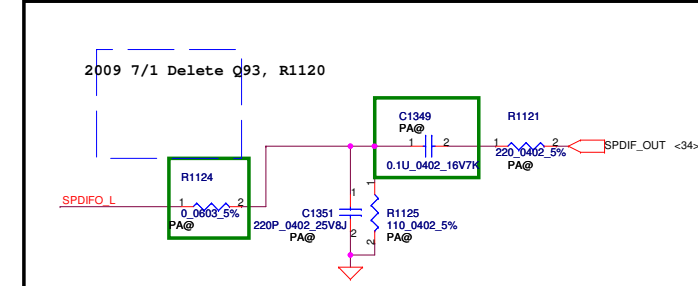
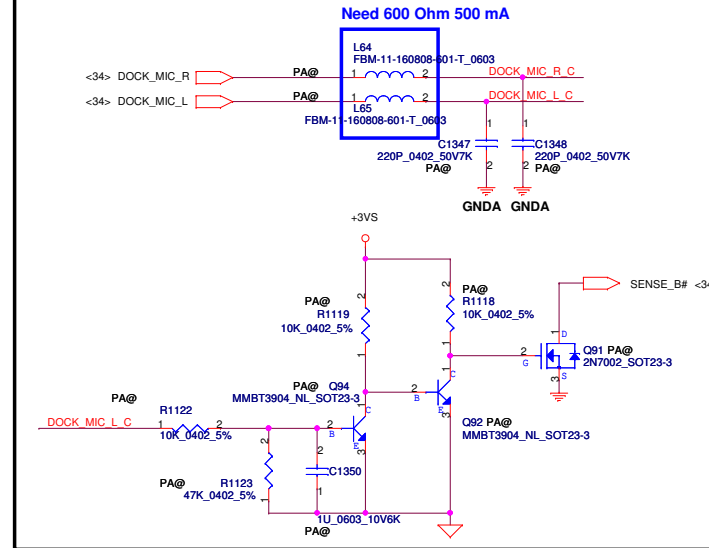
**DOCK\_PWR\_ON Spec**  
 0V = Notebook S4/S5, Dock off  
 2.5V = Notebook S3, Dock on  
 4V = Notebook S0, Dock on



## Dock PRESENT

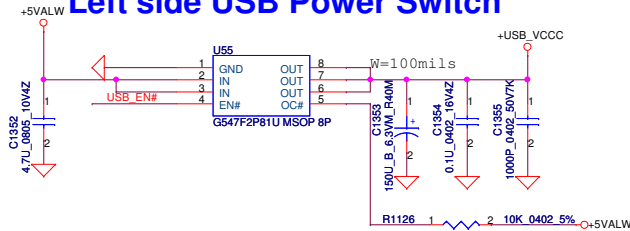


## MIC\_Dock

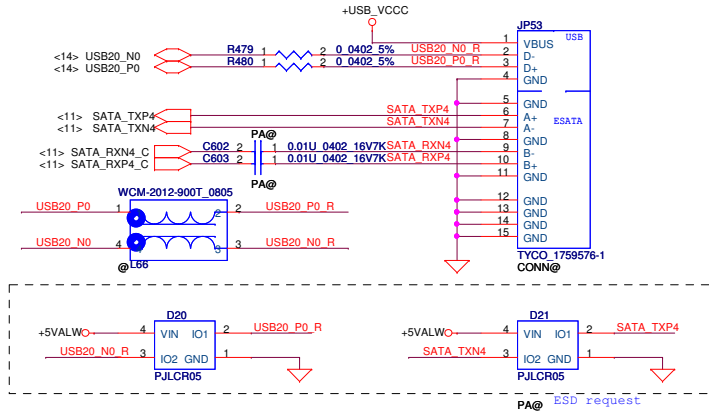


Security Classification	Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/03/10	<b>DOCK CONN.</b>
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;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.</small>				Document Number <b>Calpella DIS LA-4107P</b>
Date:	Monday, November 09, 2009	Sheet	36	of 55

### Left side USB Power Switch

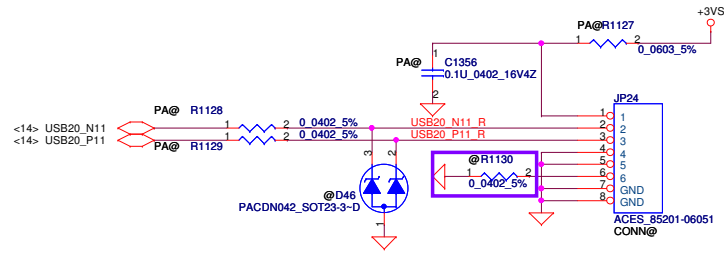


### Left side ESATA/USB combination Connector



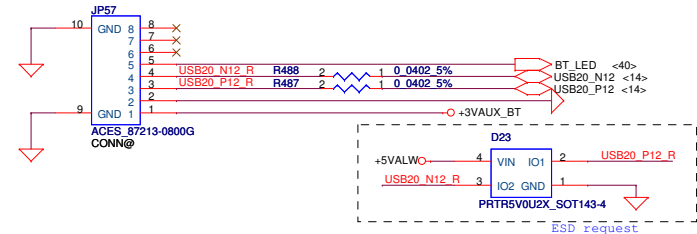
### Finger printer

Change Finger printer from USB port7 to USB port 11

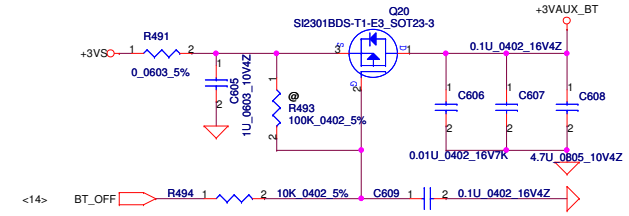
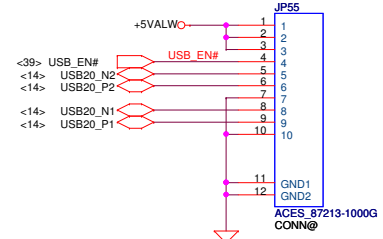


### BT Connector (SoftBreeze) Need change to New version

Change Bluetooth from USB port 6 to USB port 12



### USB cable connector for Right side

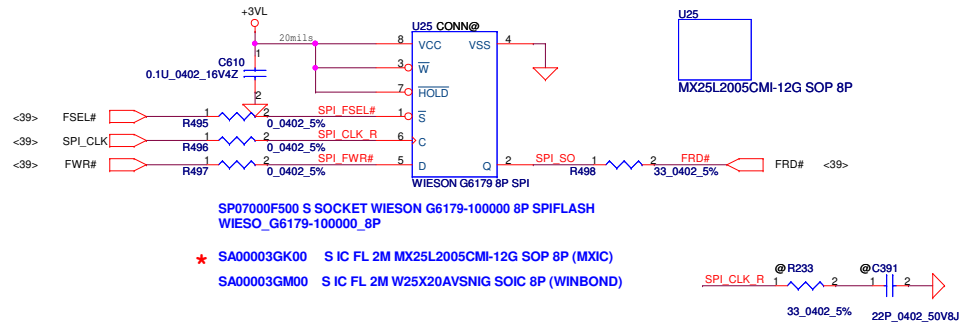


Security Classification	Compal Secret Data		
Issued Date	2007/08/28	Deciphered Date	2006/07/26

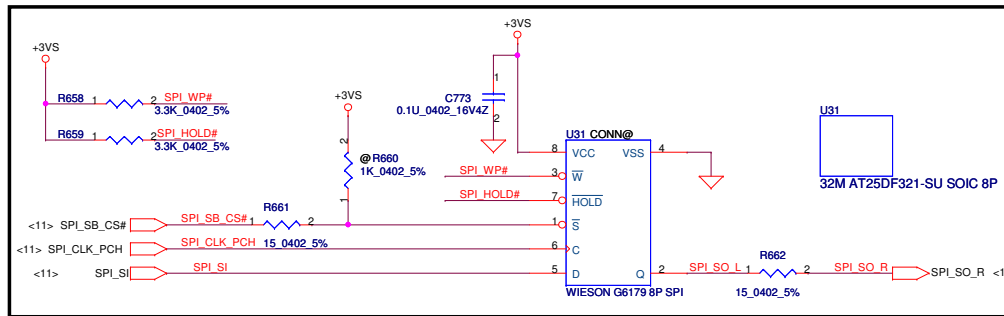
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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

<b>Compal Electronics, Inc.</b>		
<b>USB, BT, eSATA</b>		
Title	Document Number	Rev
	Calpella DIS LA-4107P	1.0
Date:	Monday, November 09, 2009	Sheet 37 of 55

### SPI ROM => 256K (EC code)

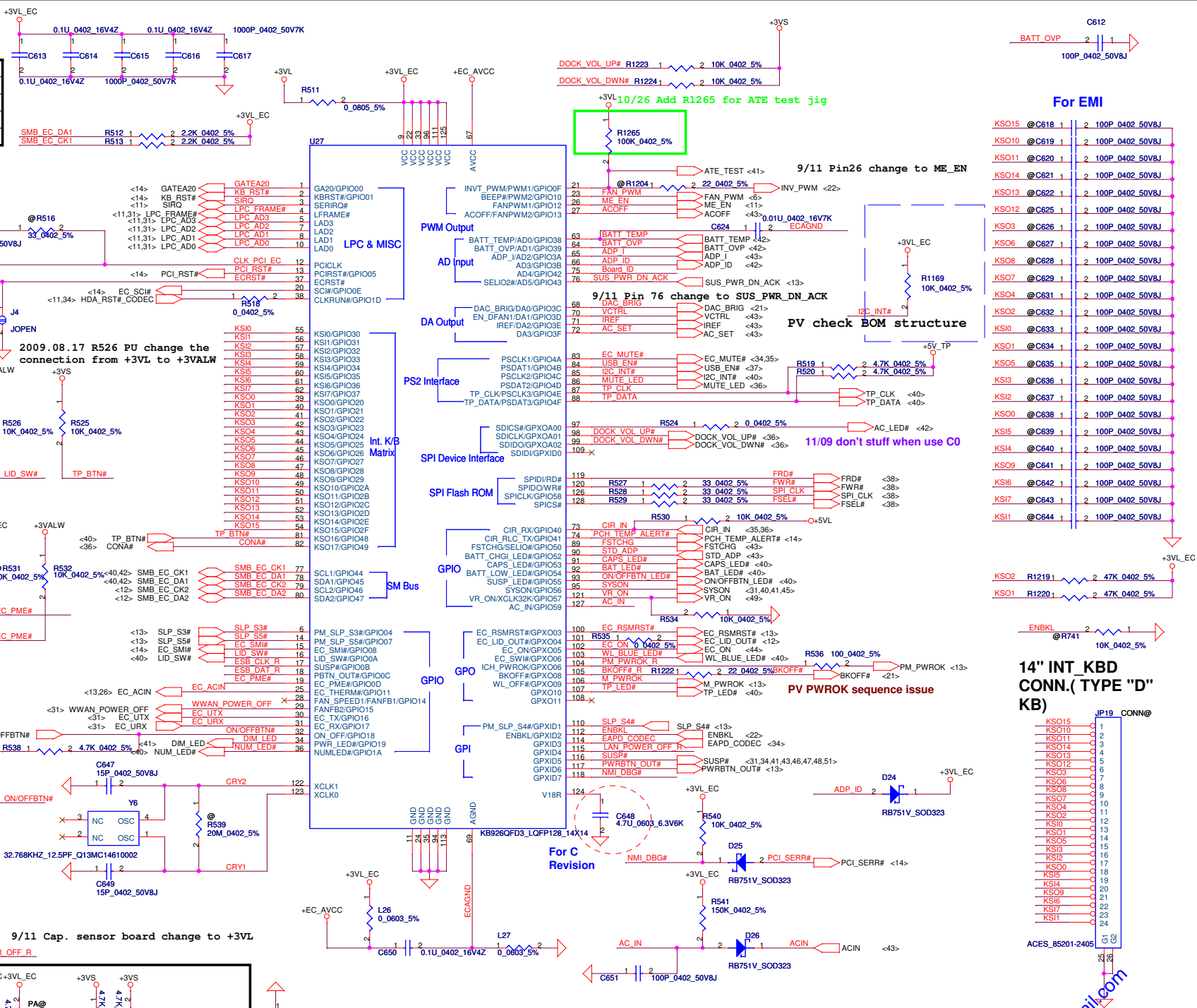


### SPI ROM on PCH => 4M (ME code + System BIOS)



Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	Compal Electronics, Inc.	
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.				BIOS ROM	
Size	Document Number			Rev	
	Calpella DIS LA-4107P			1.0	
Date:	Monday, November 09, 2009	Sheet	38	of	55

VCC	3.3V+/-5%			
Ra	100K+/-5%			
Board ID	Rb	V <sub>AD_BID</sub> min	V <sub>AD_BID</sub> typ	V <sub>AD_BID</sub> max
Blade UMA	0	0V	0V	0V
Blade SG	8.2K+/-5%	0.216V	0.250V	0.289V
Bee UMA	18K+/-5%	0.436V	0.503V	0.538V
Bee DIS	33K+/-5%	0.712V	0.819V	0.875V



**For EMI**

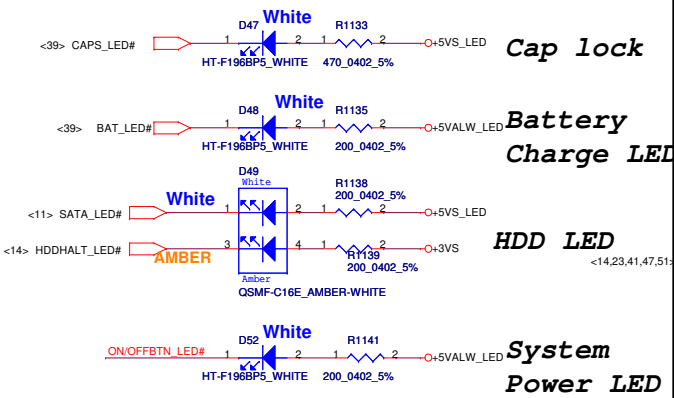
KSO15	@C618	1	2	100P_0402_50VBJ
KSO10	@C619	1	2	100P_0402_50VBJ
KSO11	@C620	1	2	100P_0402_50VBJ
KSO14	@C621	1	2	100P_0402_50VBJ
KSO13	@C622	1	2	100P_0402_50VBJ
KSO12	@C625	1	2	100P_0402_50VBJ
KSO3	@C626	1	2	100P_0402_50VBJ
KSO6	@C627	1	2	100P_0402_50VBJ
KSO8	@C628	1	2	100P_0402_50VBJ
KSO7	@C629	1	2	100P_0402_50VBJ
KSO4	@C631	1	2	100P_0402_50VBJ
KSO2	@C632	1	2	100P_0402_50VBJ
KSO10	@C633	1	2	100P_0402_50VBJ
KSO1	@C634	1	2	100P_0402_50VBJ
KSO5	@C635	1	2	100P_0402_50VBJ
KSI3	@C636	1	2	100P_0402_50VBJ
KSI2	@C637	1	2	100P_0402_50VBJ
KSO0	@C638	1	2	100P_0402_50VBJ
KSI5	@C639	1	2	100P_0402_50VBJ
KSI4	@C640	1	2	100P_0402_50VBJ
KSI9	@C641	1	2	100P_0402_50VBJ
KSI6	@C642	1	2	100P_0402_50VBJ
KSI7	@C643	1	2	100P_0402_50VBJ
KSI1	@C644	1	2	100P_0402_50VBJ
KSO2	R1219	1	2	47K_0402_5%
KSO1	R1220	1	2	47K_0402_5%

**14" INT KBD CONN.(TYPE "D" KB)**

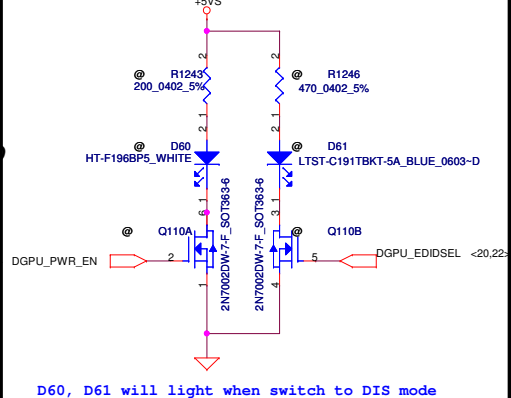
J919	CONN@
KSO15	1
KSO10	2
KSO11	3
KSO14	4
KSO13	5
KSO12	6
KSO3	7
KSO6	8
KSO7	9
KSO4	10
KSO2	11
KSO1	12
KSO5	13
KSI3	14
KSI2	15
KSO0	16
KSI5	17
KSI4	18
KSI9	19
KSI6	20
KSI7	21
KSI1	22
KSI8	23
KSI1	24

Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	EC KB926@KB Conn.	
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.			Size	Document Number	Rev
				Calpedis DIS LA-4107P	1.0
			Date:	Monday, November 09, 2009	Sheet 39 of 55

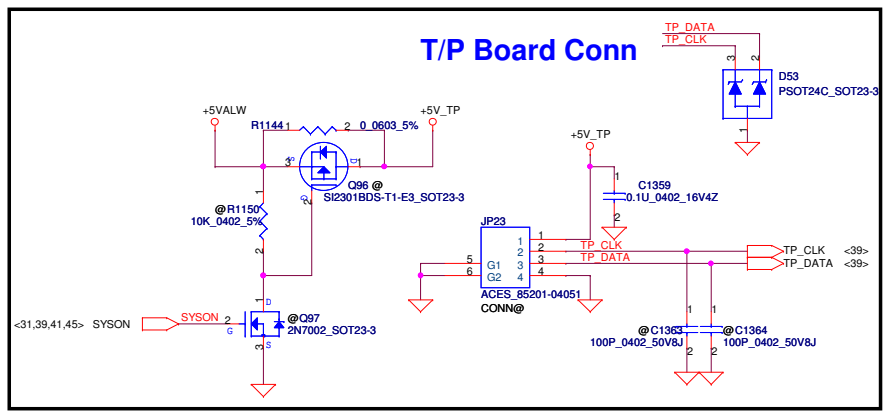
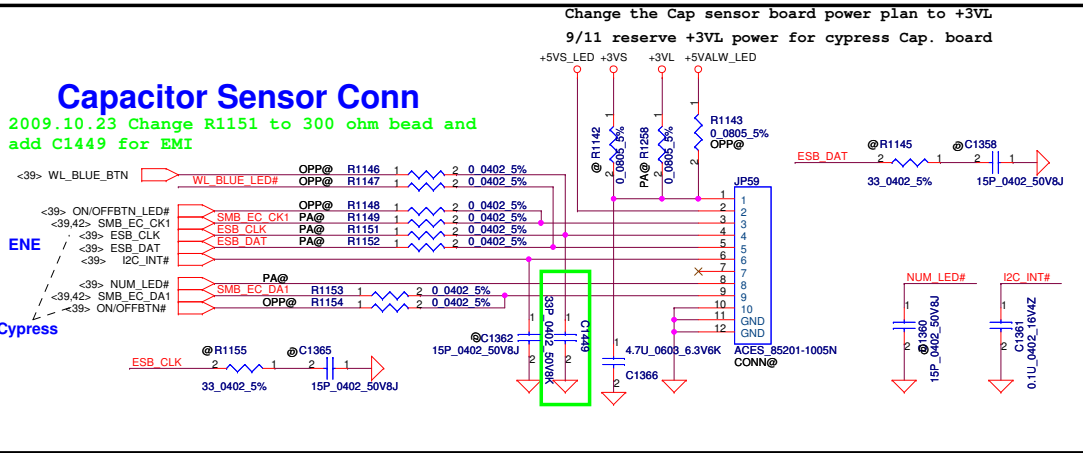
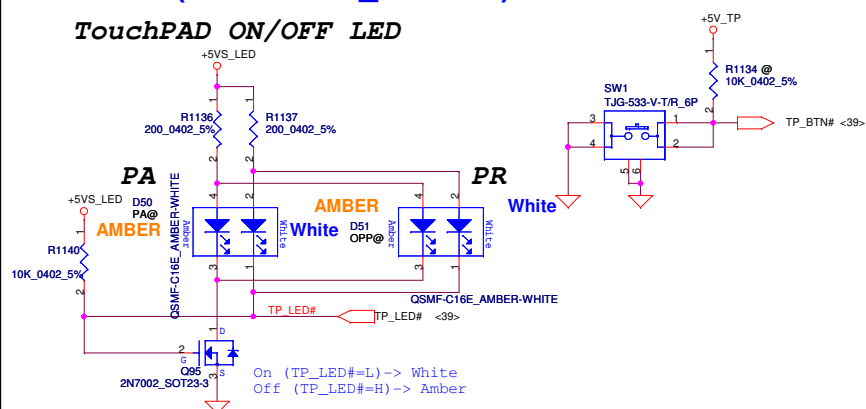
## System & Caps-Lock LED



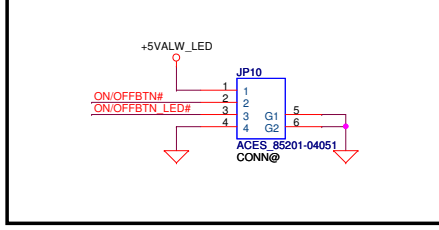
## Switch function LED(test)



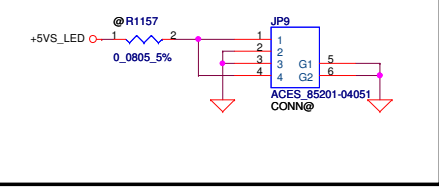
## T/P Board (Inclde T/P\_ON/OFF)



## ON/OFF Button Connector

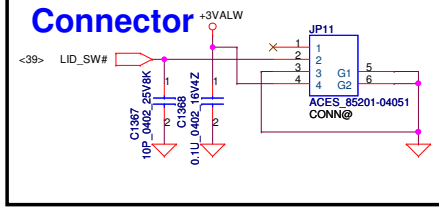


## Keyboard backlight Conn

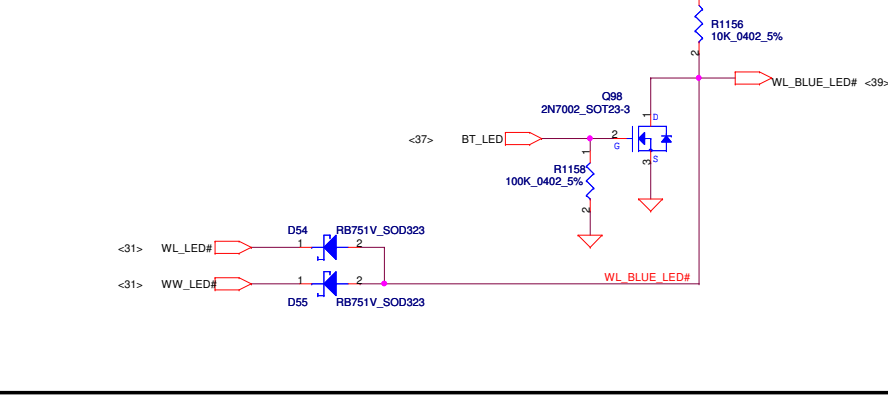


## Lid Switch Connector

Change the Lid switch power plan to +3VALW

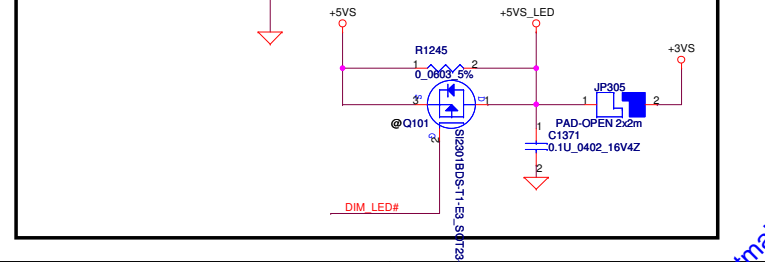
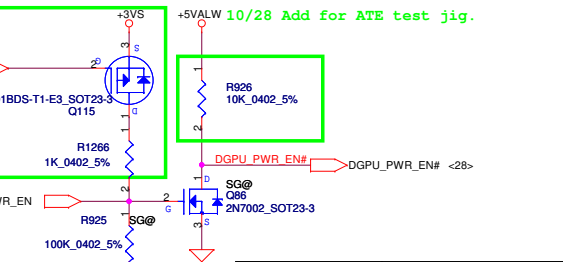
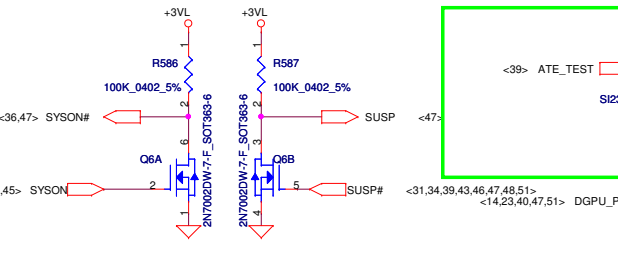
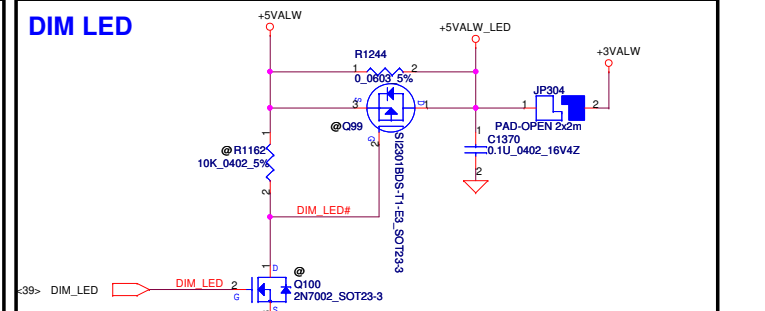
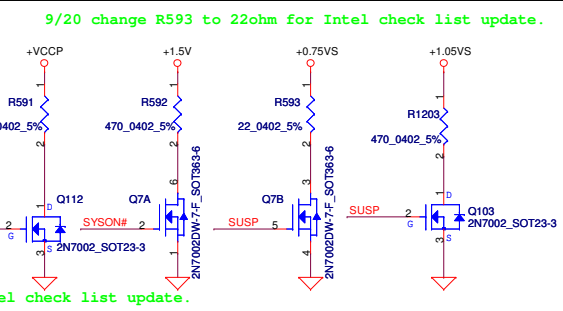
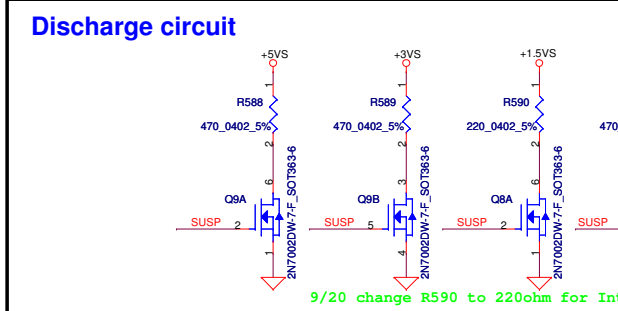
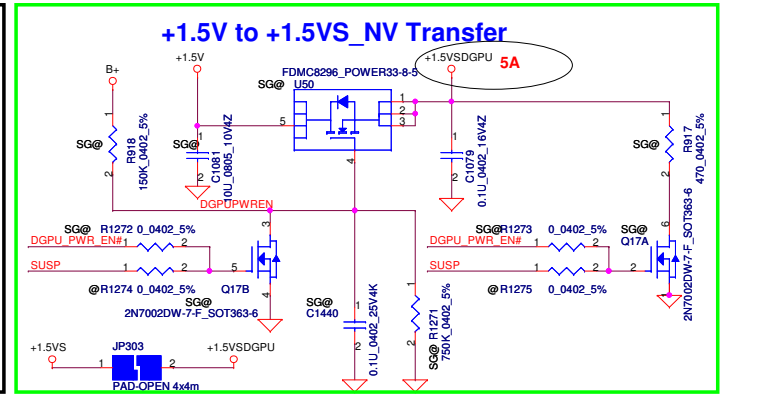
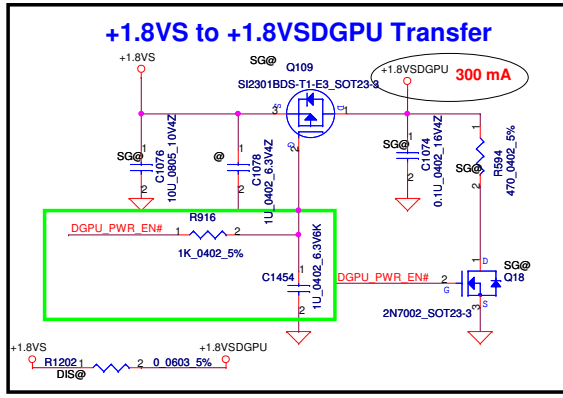
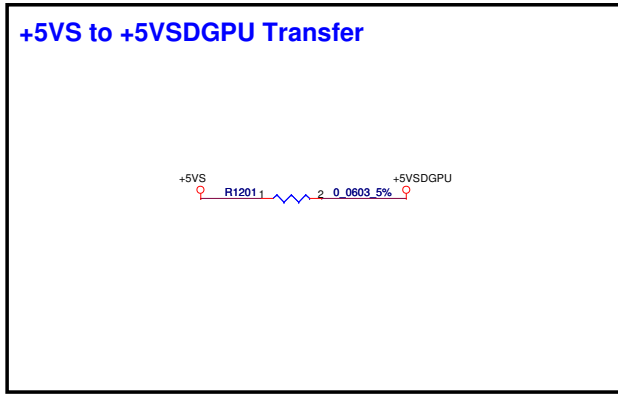
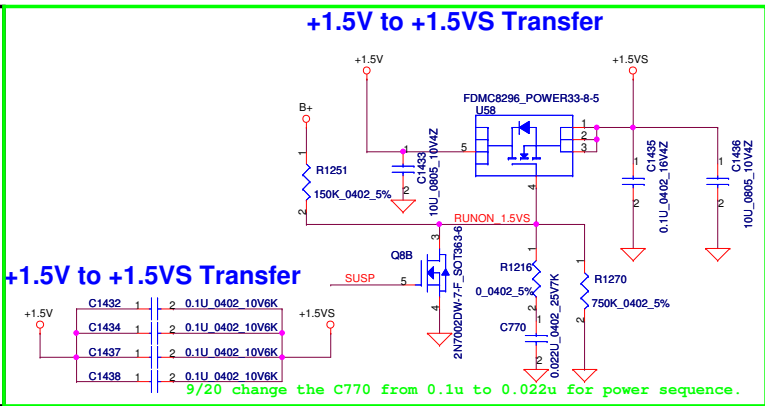
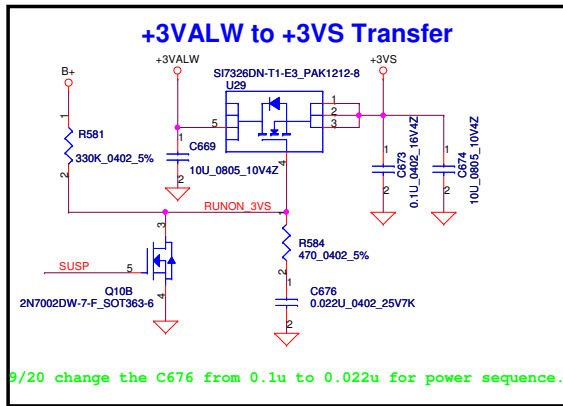
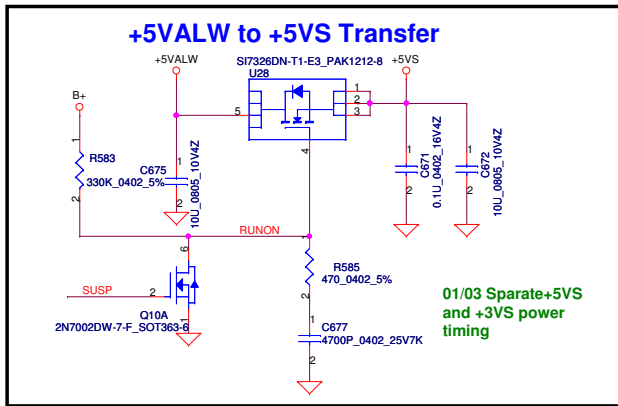


## Mini card LED

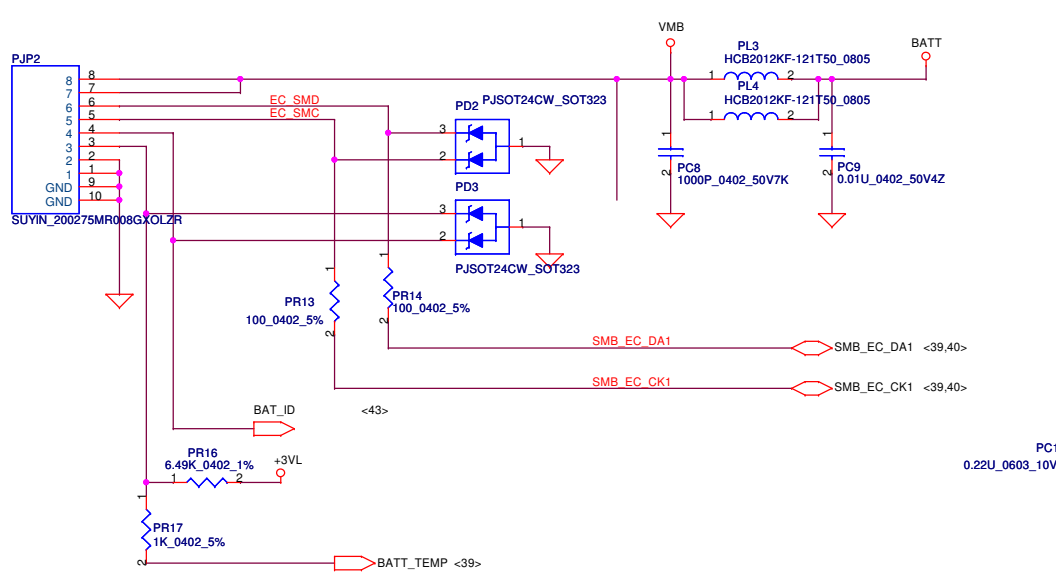
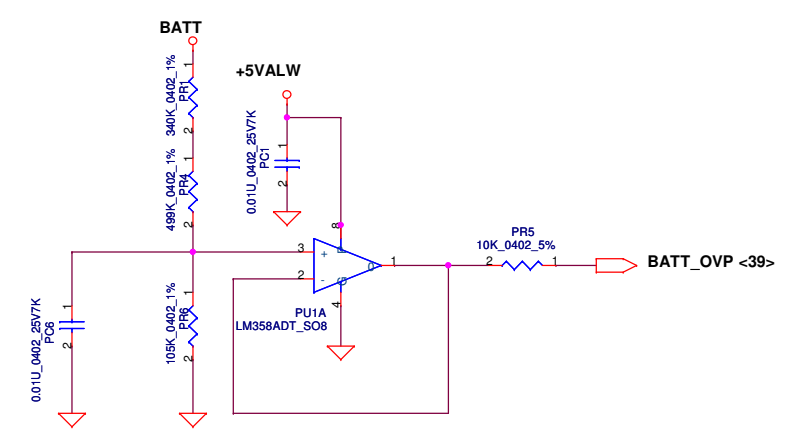
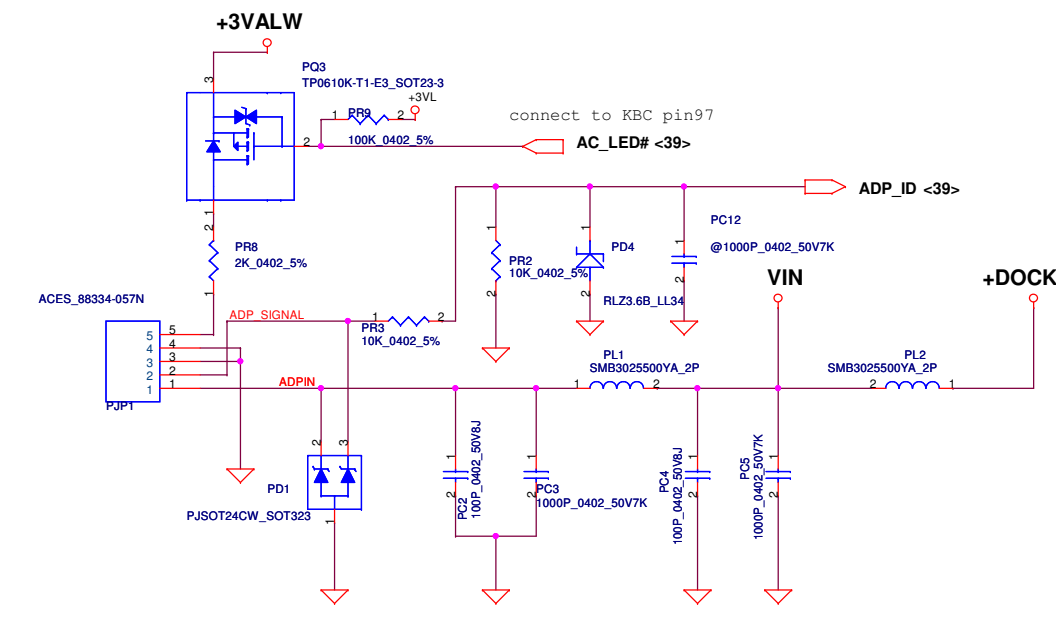


Security Classification	Compal Secret Data			Title	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	KBD, ON/OFF, SW, CIR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.					
Size	Document Number	Date		Monday, November 09, 2009	Rev 1.0
Calpella DIS LA-4107P				Sheet 40	of 55

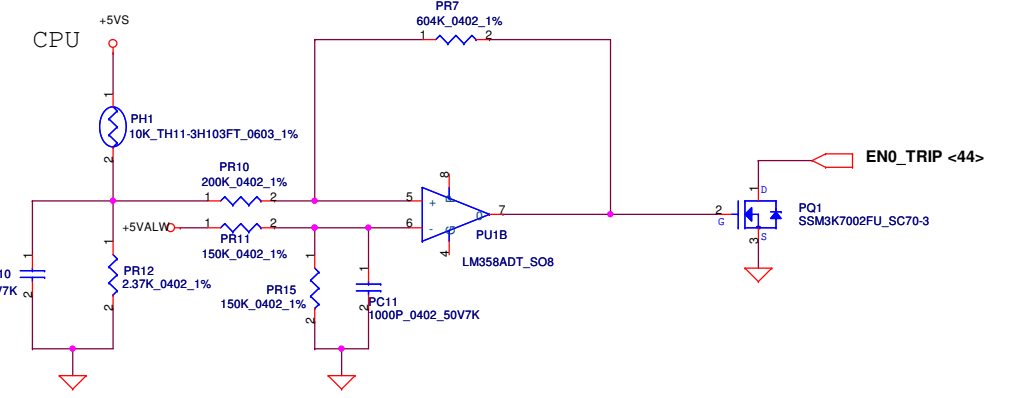




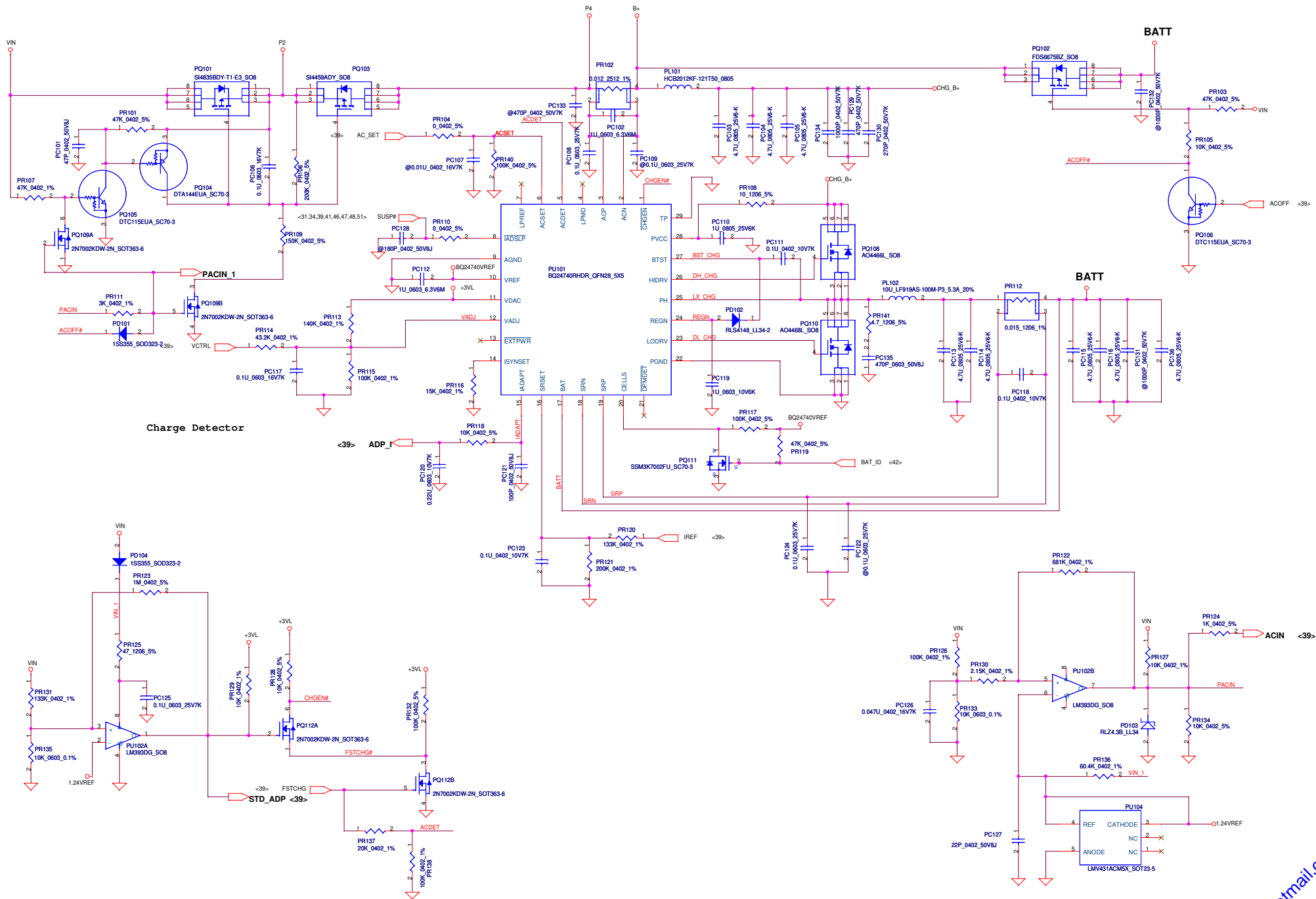
Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	DC/DC Interface	
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;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.</p>				<p>Compal Electronics, Inc.</p> <p>Capella DIS LA-4107</p>	
H1 HOLEA	H3 HOLEA	H13 HOLEC	H4 HOLEA	H5 HOLEA	H6 HOLEA
H7 HOLEA	H8 HOLEA	H9 HOLEA	H10 HOLEA	H15 HOLEA	H16 HOLEA
H17 HOLEA	H18 HOLEA	H19 HOLEC	H20 HOLEC	H1 HOLEA	FM1 FM2
H2 HOLEA	H11 HOLEA	FM3	FM4	Date: Monday, November 09, 2009	
				Page: 41 of 55	



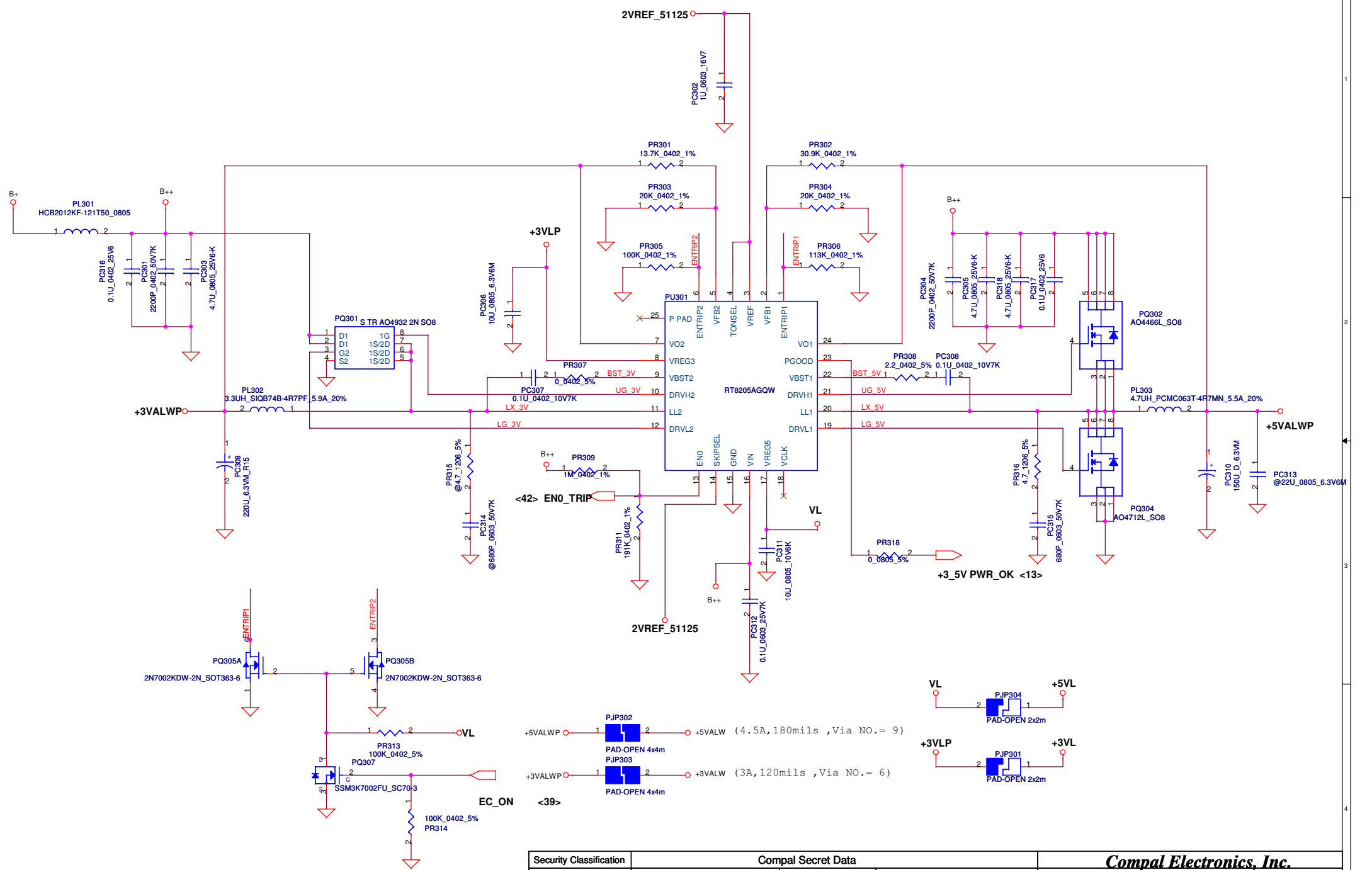
PH1 under CPU bottom side :  
CPU thermal protection at 90 +-3 degree C



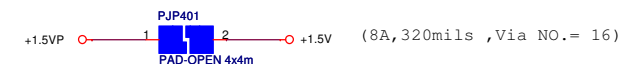
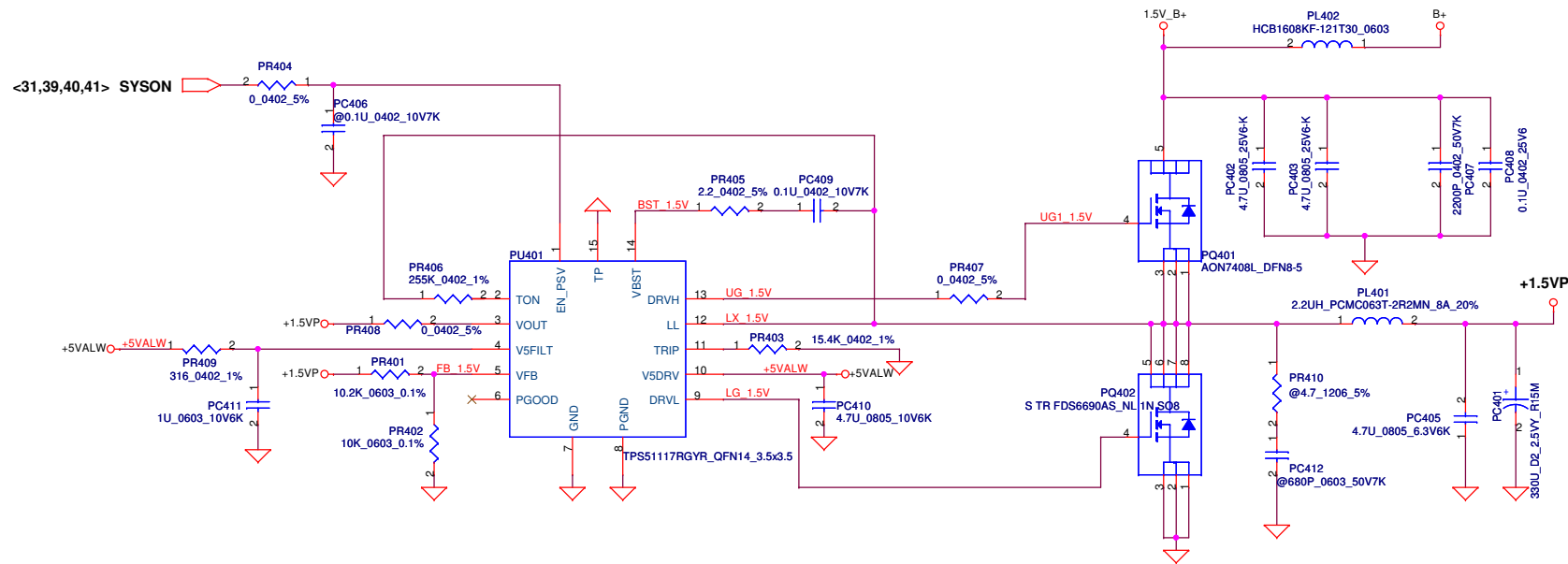
Security Classification		Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DC Connector/CPU_OTP	
Size	Document Number	Date		Rev	1.0
	Capella DIS LA-4107P	Monday, November 09, 2009	Sheet	42	of 55



Security Classification	Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	Charger
<small>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&amp;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.</small>				
Size	Document Number	Rev	Date	
	Capella DIS LA-107P	1.0	Monday, November 08, 2009	
			Sheet	43 of 55

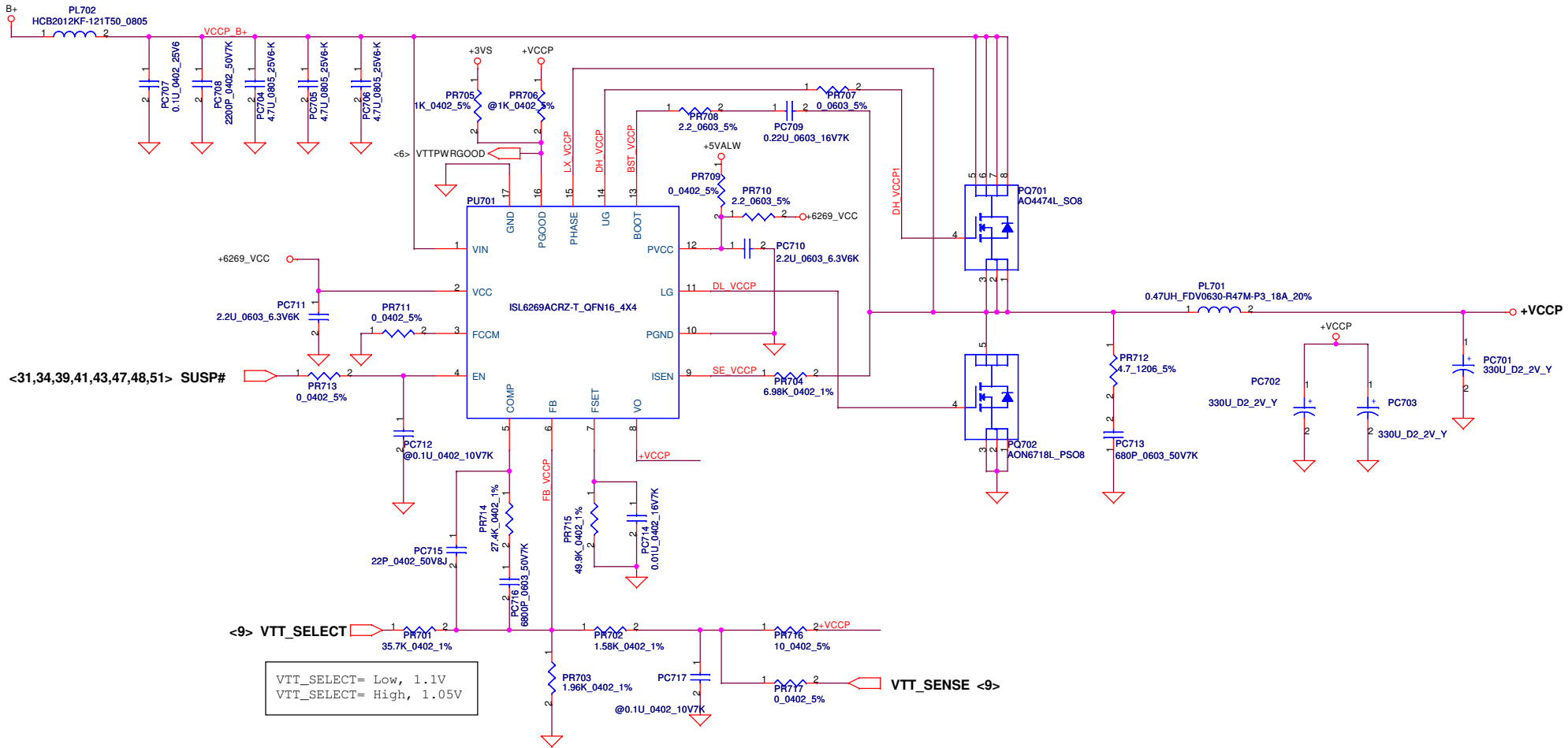


Security Classification		Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	3.3VALWP/5VALWP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.				<b>Compal Electronics, Inc.</b> <b>3.3VALWP/5VALWP</b> Calpella DIS LA-4107P Rev 1.0	
Date:	Monday, November 09, 2009	Sheet	44	of	55

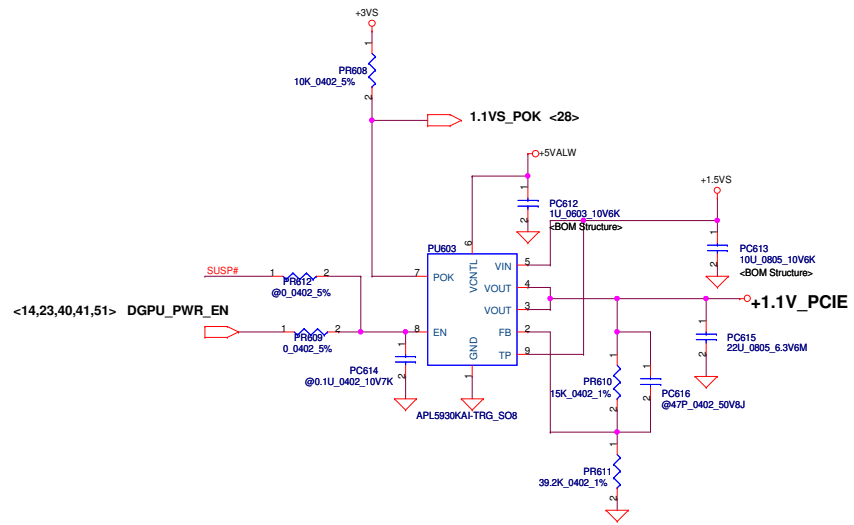
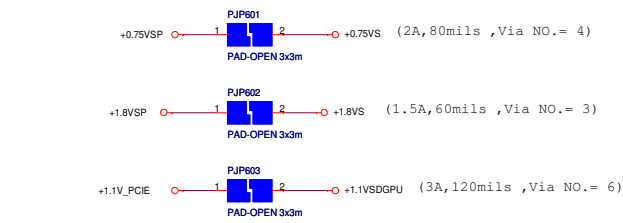
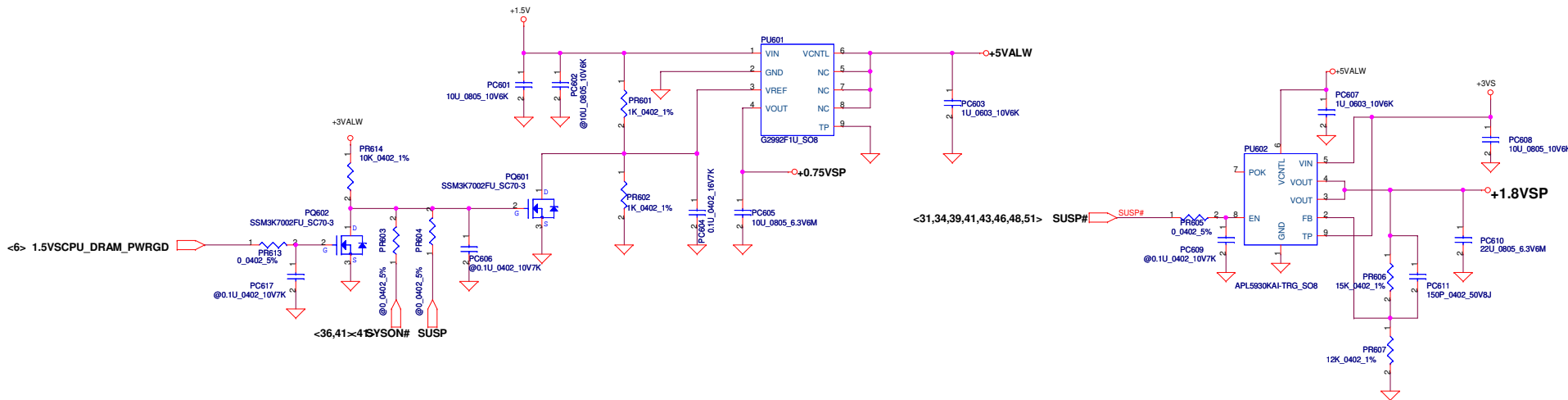


Security Classification		Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	+1.5VP	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY 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.				Size	Document Number
				Compella DIS LA-407P	
Date:	Monday, November 09, 2009	Sheet	45	of	55

Email: [reprint@compal.com](mailto:reprint@compal.com)

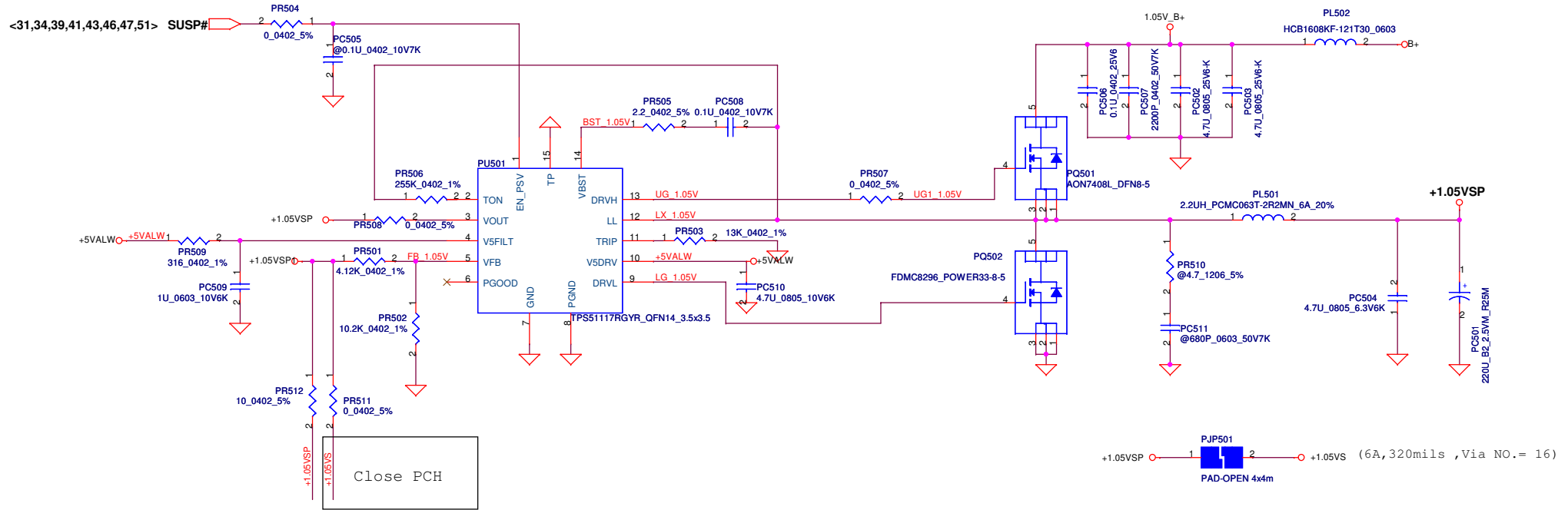


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>1.05V_VCCP</b>	
Issued Date	2008/09/15	Deciphered Date	2009/09/15		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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.				Title <b>1.05V_VCCP</b>	Size Document Number <b>Calpella DIS LA-4107P</b>
				Date: Monday, November 09, 2009	Rev 1.0
				Sheet 46 of 55	



Security Classification	Compal Secret Data		Title	
Issued Date	2006/11/23	Deciphered Date	2007/11/23	0.75VP/1.8VSP/1.1V_PCIE
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.				
Size	Document Number	Date	Sheet	Rev
	Calpella DIS LA-4107P	Monday, November 09, 2009	47	1.0

hexainf@hotmail.com

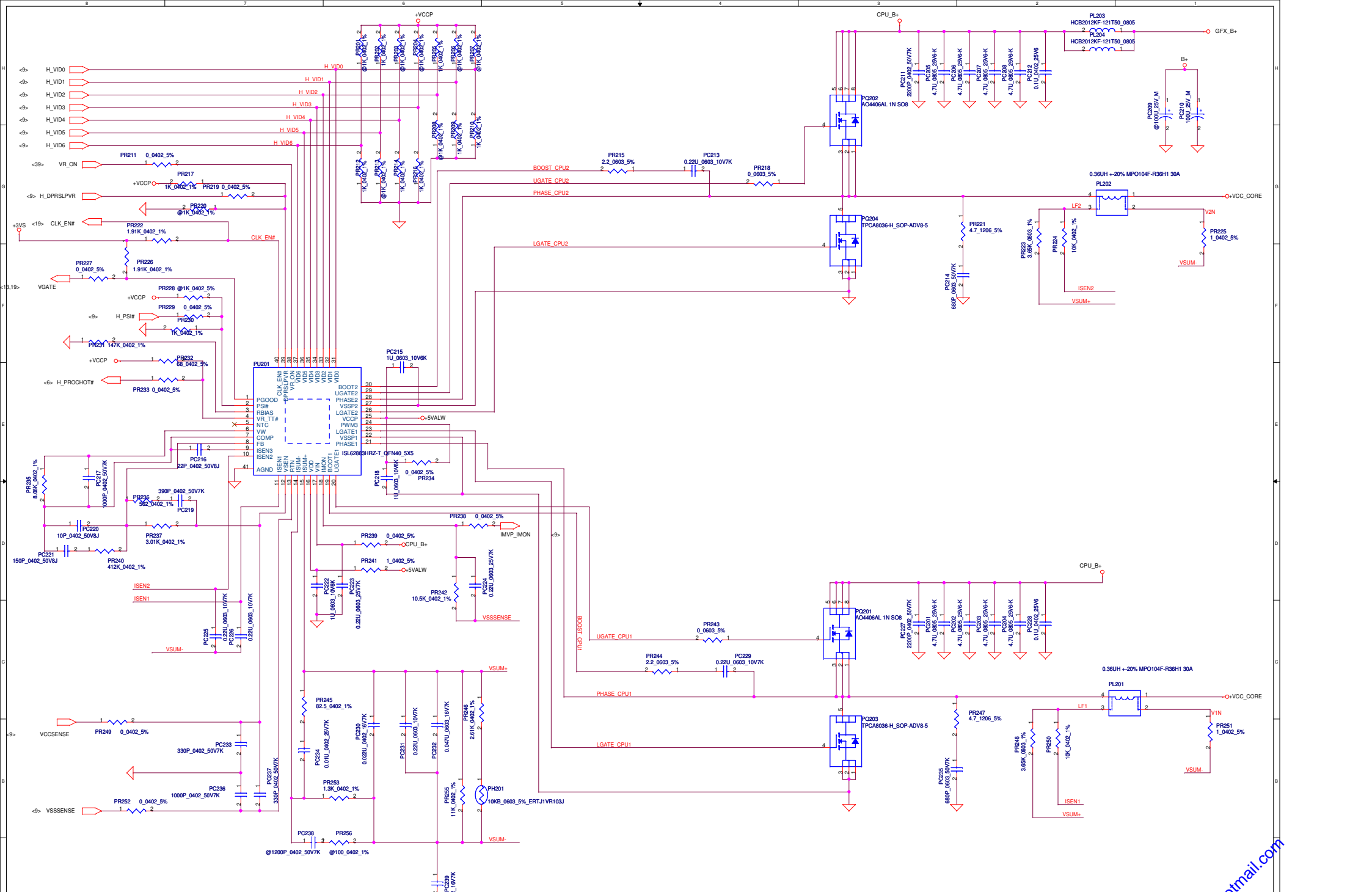


Close PCH

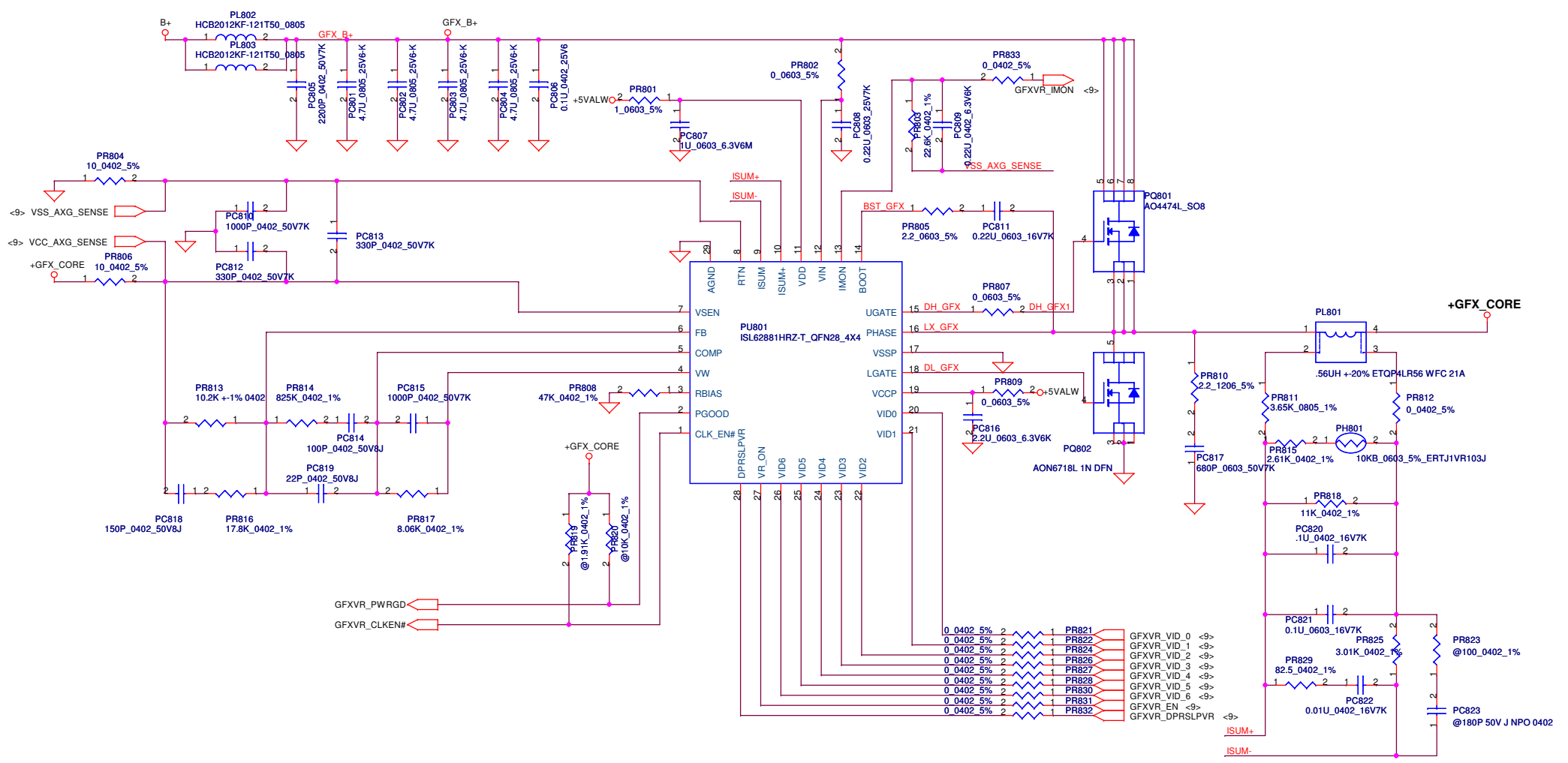
PJP501  
PAD-OPEN 4x4m  
+1.05VSP (1) +1.05VS (6A, 320mils, Via NO.= 16)

Security Classification		Compal Secret Data		Title	
Issued Date	2008/09/15	Deciphered Date	2009/09/15	1.05VSP	
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.				Size	Document Number
				Calpella DIS LA-4107P	
				Date:	Monday, November 09, 2009
				Sheet	48 of 55
				Rev	1.0

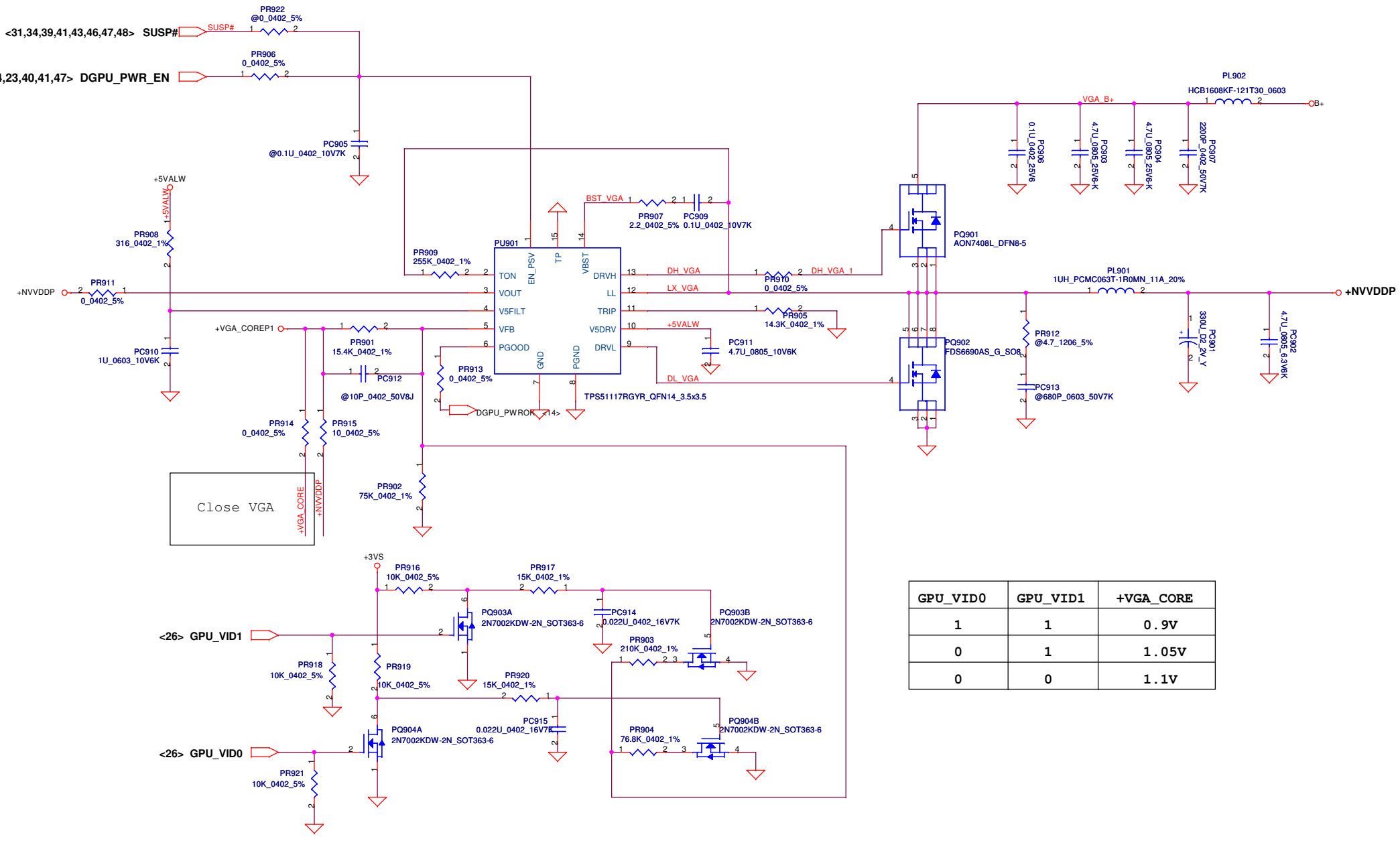




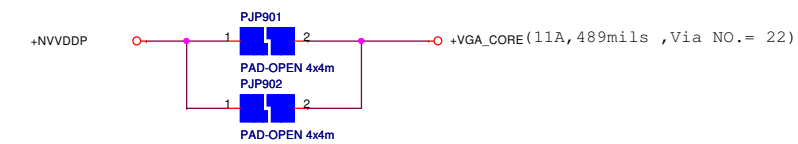
Security Classification	Compal Secret Data		Title	
Issued Date	2007/05/29	Deciphered Date	2008/05/29	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF 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.			Size	Document Number
			<b>Compal Electronics Inc.</b> <b>+CPU CORE</b> <b>Capella DIS LA-100P</b>	
			Rev	1.0
			Date	Monday, November 09, 2009
			Sheet	49 of 55



Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title	
				<b>VCCGFX</b>	
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.					
Size	Document Number			Rev	
Custom	<b>Calpella DIS LA-4107P</b>				
Date:	Monday, November 09, 2009	Sheet	50	of	55



GPU_VID0	GPU_VID1	+VGA_CORE
1	1	0.9V
0	1	1.05V
0	0	1.1V



**Security Classification** Compal Secret Data

**Issued Date** 2007/05/29 **Deciphered Date** 200810/11

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.

**Compal Electronics, Inc.**

**VGA CORE**

**Compal DIS LA-1107P**

Date: Monday, November 09, 2009 Sheet 51 of 55

mailto:compal@compal.com

Item	Fixed Issue (Reason for change)	PAGE	Modify List	Date	Phase
1	PLT_RST# need a PD resistor	14	Add R185 PD for PLT_RST#	08/6	PV
2	Remove MUX in CRT DDC circuit of SG design	20	Change to MOS design	08/6	PV
3	Remove MUX in LVDS ENAVDD circuit of SG design	21	Change to MOS design	08/6	PV
4	LCD panel will fail in OPP SKU	21	Add one 0 ohm resistor (R1238) for OPP SKU	08/6	PV
5	Remove MUX in LVDS I2C circuit of SG design	22	Change to MOS design	08/6	PV
6	OPP SKU: M93 and VRAM may have leakage in S3 mode	41	Change the power plan to +1.5VS of JP303	08/6	PV
7	8111VB power on timing issue	32	Add R1083 and C1319 to fine tune the power on timing	08/10	PV
8	Blade 2.0 need Board ID	39	Use EC GPIO48 for ID pin(Add R1239, R1240)	08/12	PV
9	EC GPIO17 will be used for debug card	39	LAN_POWER_OFF signal change to EC GPXID4(Pin 115)	08/12	PV
10	Cap. sensor board need to change the power source.	40	Change the power source of Cap. sensor board to +3VS	08/13	PV
11	Lid switch need to change the power source.	40	Change the power source of Lid switch to +3VALW and R526 PU to +3VALW.	08/13	PV
12	Change +1.8VS to +1.8VSDGPU Transfer design for cost down	41	Change the power MOS(U49) to 2301 PMOS(Q109).	08/13	PV
13	BIOS team doesn't need XDP connector	6	Remove the XDP connector	08/13	PV
14	Change +5VS to +5VSDGPU Transfer design for cost down	41	Use 0 ohm to contact +5VS and +5VSDGPU	08/13	PV
15	PCH_DDR_RST need use PCH GPIO46 to control	6	PCH_DDR_RST MOS gate control signal change from EC to PCH GPIO46	08/13	PV
16	Remove the 27MHz crystal of VGA	26	Use clock gen 27MHz source and stuff R216	08/14	PV
17	Q104 need change to low Vgs type	6	Change the Q104 to BSS138 P/N:SB501380020	08/18	PV
18	Cost down plan	9	Change the C995,C996 330u to ESR=9m ohm	08/14	PV
19	Cost down plan	9	Change the C64 from 330u to 220u	08/14	PV
20	Cost down plan	9	Change the C61,C62,C67,C68,C69,C76,C82 from 22u to 10u	08/14	PV
21	Cost down plan	9	Change the C200 330u to ESR=9m ohm	08/14	PV
22	Cost down plan	9	Un-stuff C204,C228 and C229	08/14	PV
23	Docking no sound when play music	34	Need to stuff R910	08/14	PV
24	Audio new Mapping	34	Exchange the port A and port F	08/14	PV
25	We won't have DIM_LED function	41	Un-stuff Q99,Q101 and add two 0 ohm(R1244,R1245) resistors for LED power source.	08/14	PV
26	ESD issue	34	Add R1247,C1442,C1443 and change the C983~C986, C1444~C1446 to 0.1u	08/18	PV
27	Black light issue(will see the garbage when boot)	22	Change the black light enable schematic design.	08/18	PV
28	CPU leakage issue	6	Change the design for Intel's power leakage issue when go into S3 mode	08/19	PV

Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/28	Deciphered Date	2006/07/26	Compal Electronics, Inc.	
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.				PIR-HW	
				Size	Document Number
				Calpella DIS LA-4107P	
				Date:	Monday, November 09, 2009
				Sheet	52 of 55

Item	Fixed Issue (Reason for change)	PAGE	Modify List	Date	Phase
29	INT.MIC ESD issue	35	Add D58 and D62 for ESD issue	08/18	PV
30	EXT.MIC ESD issue	35	Reserve D63 for Ext. MIC	08/18	PV
31	Reserve PU resistors to +3VL for ESB BUS	39	Reserve R1253,R1254 for ESB bus	08/21	PV
32	Make sure power sequence is correct	6,47	Use 1.5VSCPU_DRAM_PWRGD to enable 0.75VS power	09/11	PV2
33	Add ME_EN# for PCH GPIO33	11	Add inverter circuit for ME_EN signal	09/11	PV2
34	+3VS_VGA will have leakage when switch to IGPU mode	12	Change Q4 pin2 and pin5 to +3VS_VGA	09/11	PV2
35	Need contact SUS_PWR_DN_ACK between EC and PCH	13	Use PCH GPIO30 and EC pin76 for SUS_PWR_DN_ACK	09/11	PV2
36	Need add VGA ID pin for M93 and M93 LP	14	Use PCH GPIO57 for VGA ID pin	09/11	PV2
37	Change 27MHz clock source of VGA to Y7	19,26	non-stuff R216	09/11	PV2
38	Q37 dual package will have floating isse	22	Change Q37 to single package	09/11	PV2
39	Fix 8103 BOM isse	32	Add R1259 for 8103EL LAN chip	09/11	PV2
40	Fix EXT. MIC reference voltage issue	34	Change the reference voltage to +AVDD_CODEC	09/11	PV2
41	Remove EC_BEEP function	34	Delete EC_BEEP function	09/11	PV2
42	Remove Analog MIC detect function	35,39	Delete ANA_MIC_DET signal from EC and codec	09/11	PV2
43	EMI need to add chock for ESATA/USB port	37	Add L66 for ESATA/USB port	09/11	PV2
44	HM55 PCH will disable USB port6 and port7	37	Change Finger printer from USB port7 to USB port 11	09/11	PV2
45	HM55 PCH will disable USB port6 and port7	37	Change Bluetooth from USB port 6 to USB port 12	09/11	PV2
45	Remove EC_BEEP function	39	Change Pin 26 from EC_BEEP to ME_EN	09/11	PV2
46	Fix PV phase Board ID issue	39	Exchange TP_BTN# and Board_ID pin	09/11	PV2
47	Cypress Cap. sensor board need use +3VL power	40	Change Cap. sensor board power to +3VL	09/11	PV2
48	Adjust +3VS / +1.5VS power sequence	41	Change C676,C770 from 0.1u to 0.022u	09/12	PV2
49	PLT_RST# don't need PD resistor	14	Un-stuff R185	09/20	MV
50	Follow Intel to adjust +0.75VS discharge timing	41	Change R593 from 470ohm to 22ohm	09/20	MV
51	Follow Intel to adjust +1.5VS discharge timing	41	Change R590 from 470ohm to 220ohm	09/20	MV
52	Follow Intel Check list 2.0	15	Un-stuff C187 and C192	09/20	MV
53	EDID signal need to add PU resistor	22	Add R1261 for EDID DATA	09/20	MV
54	VCCADAC dosen't need LC filter when DIS only	15	Change L45 to 0 ohm resistor for OPP SKU	10/01	MV
55	GFX core power transient fail	9	Change C996 to 330u 7m ohm	10/21	MV

Security Classification		Compal Secret Data	
Issued Date	2007/08/28	Deciphered Date	2006/07/26
<small>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&amp;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.</small>			

<b>Compal Electronics, Inc.</b>			
<b>PIR-HW</b>			
Title	Document Number		Rev
	<b>Calpella DIS LA-4107</b>		1.0
Date:	Monday, November 09, 2009		Sheet 53 of 55



# Version Change List (P. I. R. List) for Power Circuit

Item	Page #	Title	Date	Request Owner	Issue Description	Solution Description	Note
1	44	PWR-3.3VALWP/5VALWP	8/12	PWR	all cap no more than 0805	Add PC318,PC305 from 1206 to 0805 and parallel with PC318	DB to PV1
2	49	PWR-CPU_CORE	8/13	PWR	OCP & IMON ajustment and Fixed LL to match INTEL Spec	Change PR253 from 1.1K to 1.3K,Change PR242 from 8.25K to 10.5K Change PR237 from 2.43K to 3.01K	DB to PV1
3	49	PWR-CPU_CORE	8/17	PWR	RF Solution	Change PQ201 PQ202 from AO4474L to AO4406AL,PR215 PR244 from 0 to 2.2	DB to PV1
4	47	PWR-0.75VP/1.8VSP	8/20	PWR	Cost Down plan	Change PU602 from APL5915 to APL5930	DB to PV1
5	43	PWR-Charger	8/20	PWR	Smart Charger	Change PR113 from 143K to 140K, Change PC117 from 1u to 0.1u, Add PR114	DB to PV1
6	49	PWR-CPU_CORE	8/20	PWR	Avoide DFX interfere	Delete PC209 and add PC210	DB to PV1
7	46	PWR-1.05V_VCCP	8/24	PWR	Follow HW Suggestion Pull-up resistor connect to 3VS	Add PR705 connect to 3VS, remove PR706	DB to PV1
8	45	PWR-1.5VP	8/24	PWR	PU401 second source solution	PR403 from 13.7K to 15.4K	DB to PV1
9	46	PWR-1.05V_VCCP	8/24	PWR	PU701 second source solution	PR703 from 8.06K to 6.98K	DB to PV1
10	49	PWR-CPU-CORE	8/28	PWR	Improve transient response	Add PC230	DB to PV1
11	46	PWR-1.05V_VCCP	9/2	PWR	Cost down plan	Change PC701 PC702 PC703 from 330u 6m ohm to 330u 9m ohm	DB to PV1
12	46	PWR-1.05V_VCCP	9/3	PWR	Improve VCCP Ripple	Del PC717	DB to PV1
13	50	GFX_CORE	9/11	PWR	Let GFX IMON measure easily	Add PR833 connect to GFRXVR_IMON and PU801 pin 13	PV1 to PV2
14	47	PWR-0.75VP/1.8VSP	9/11	PWR	For HW requirement add 1.5VSCPU_DRAM_PWRGD	Add 1.5VSCPU_DRAM_PWRGD add PR613 connect to PQ601 pin 2 and Delet PR604	PV1 to PV2

Security Classification		Compal Secret Data		Title	
Issued Date	2007/08/02	Deciphered Date	2008/08/02	PIR-PWR	
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.				Size	Rev
				Document Number	1.0
				Date	Monday, November 09, 2009
				Sheet	55 of 55

[calpella@compal.com](mailto:calpella@compal.com)