

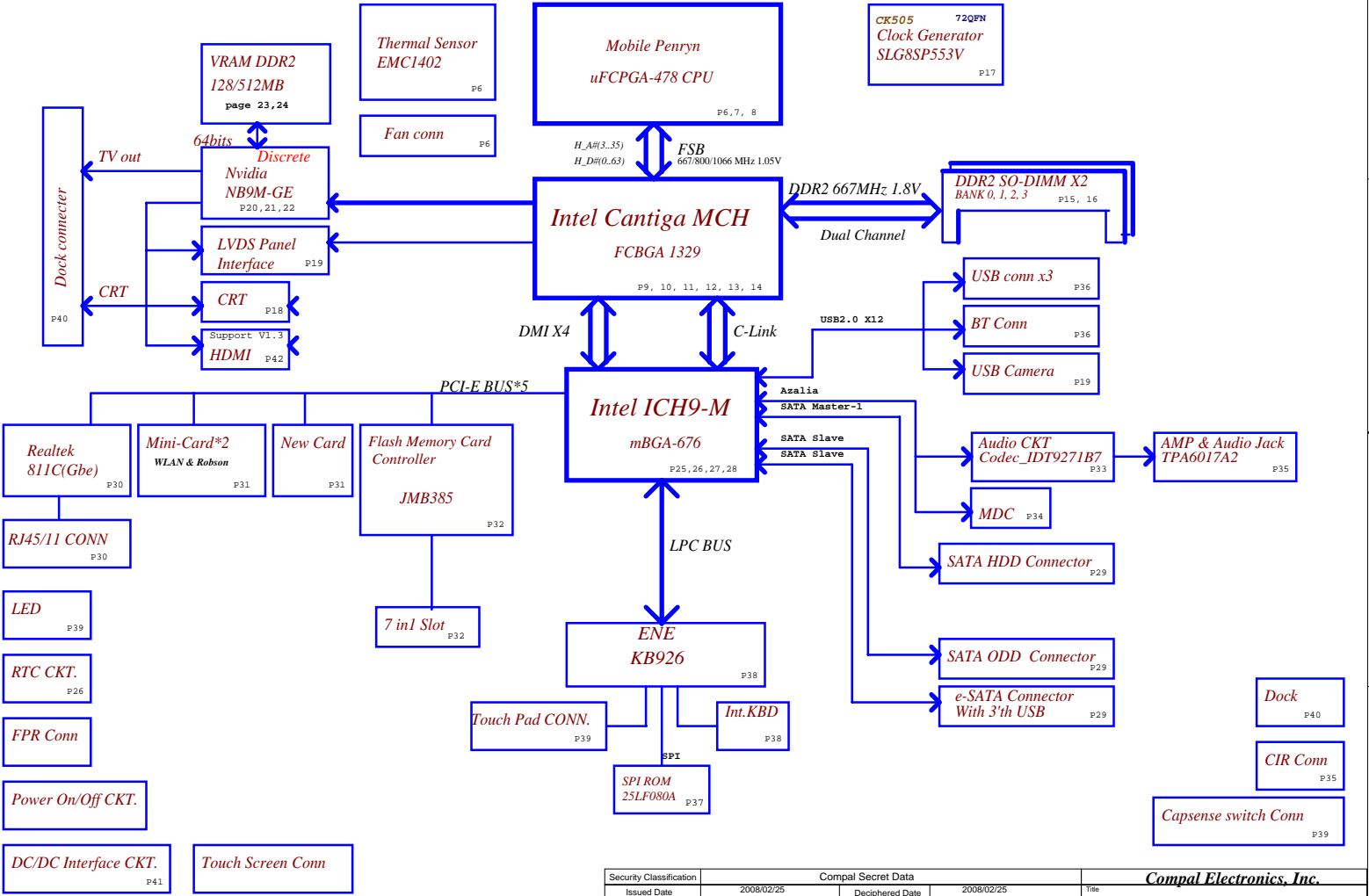
# Compal confidential

## Schematics Document

Mobile Penryn uFCPGA with Intel  
Cantiga\_PM+ICH9-M core logic

2008-02-25

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title
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 LA-4102P Blade discre
				Rev 0.4
				Date Monday, February 25, 2008
				Sheet 1 of 53



Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	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.				Size	Rev
				Custom	0.4
				Date	Monday, February 25, 2008
				Sheet	2 of 53

## Voltage Rails

O MEANS ON

X MEANS OFF

power plane State	+B	+5VALW +3VALW	+1.8V	+5VS +3VS +1.5VS +0.9V +VCCP +CPU_CORE +2.5VS +1.8VS +NVVDD +PCIE
S0	O	O	O	O
S1	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

## Symbol Note :

 : means Digital Ground

 : means Analog Ground

@ : means just reserve , no build  
DEBUG@ : means just reserve for debug.

## USB assignment:

USB-0 Right side  
USB-1 Right side  
USB-2 Left side(with ESATA)  
USB-3 Dock  
USB-4 Camera  
USB-5 WLAN  
USB-6 Bluetooth  
USB-7 Finger Printer  
USB-8 MiniCard(WWAN/TV)  
USB-9 Express card  
USB-10 X  
USB-11 X

## PCle assignment:

PCle-1 TV tuner/WWAN/Robeson  
PCle-2 X  
PCle-3 WLAN  
PCle-4 GLAN (Marvell)  
PCle-5 Card reader  
PCle-6 New Card

## SMBUS Control Table

	SOURCE	INVERTER	BATT	SERIAL EEPROM	Thermal Sensor	SODIMM	CLK CHIF	MINI CARD	Sensor board	NB9M Thermal Sensor	NB9M	G-sensor
SMB_EC_CK1 SMB_EC_DA1	KB926	X	V	V	X	X	X	X	V	X	X	X
SMB_EC_CK2 SMB_EC_DA2	KB926	X	X	X	V	X	X	X	X	V	V	X
ICH_SMBCLK ICH_SMBDATA	ICH9	X	X	X	X	V	V	V	X	X	X	V

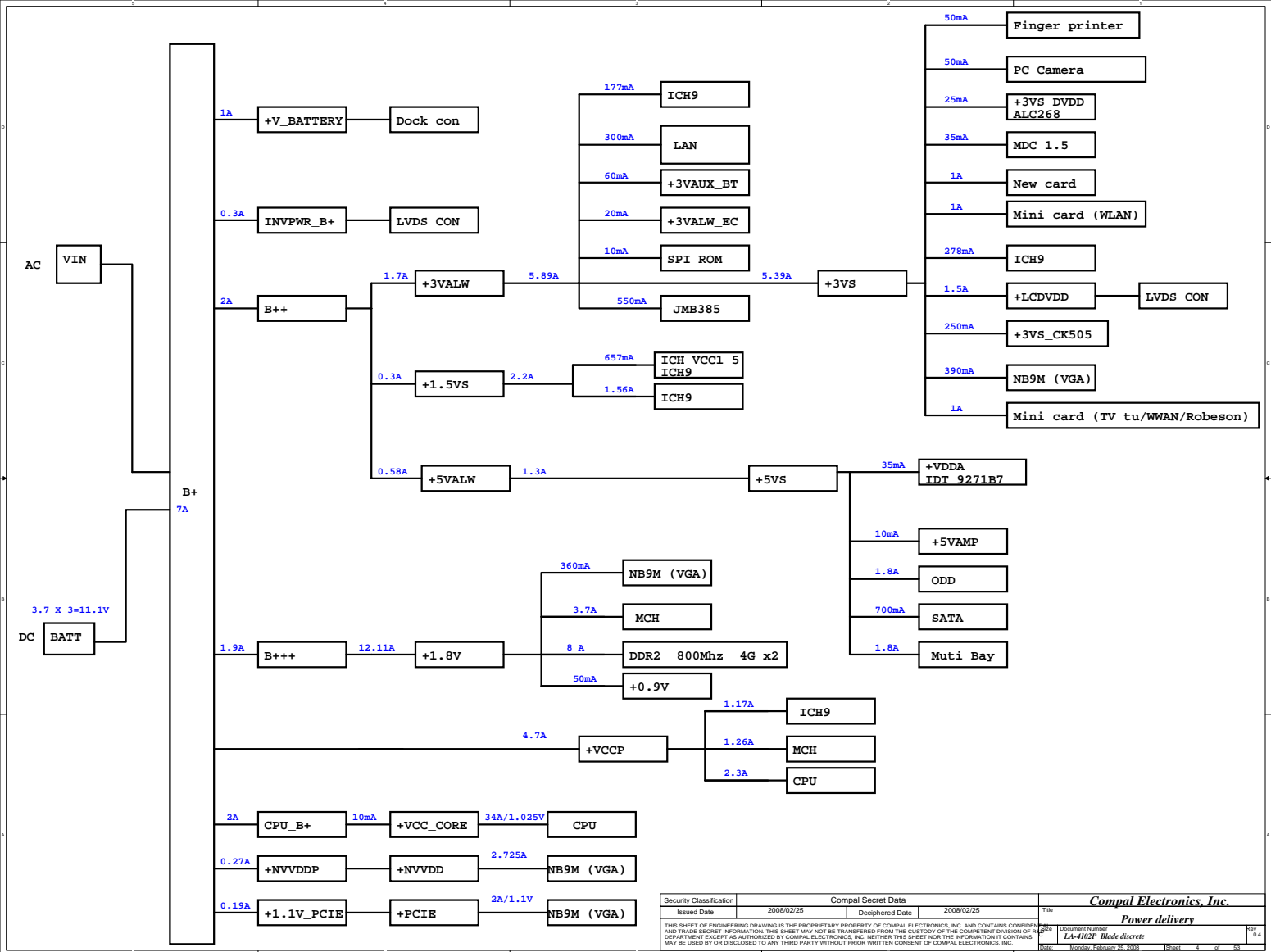
## NB9M SMBUS Control Table

	SOURCE	LVDS	CRT	HDMI
DDC2_DATA DDC2_CLK	NB9M	V	X	X
3VDDCDA 3VDDCCL	NB9M	X	V	X
HDMIDAT_VGA HDMICLK_VGA	NB9M	X	X	V

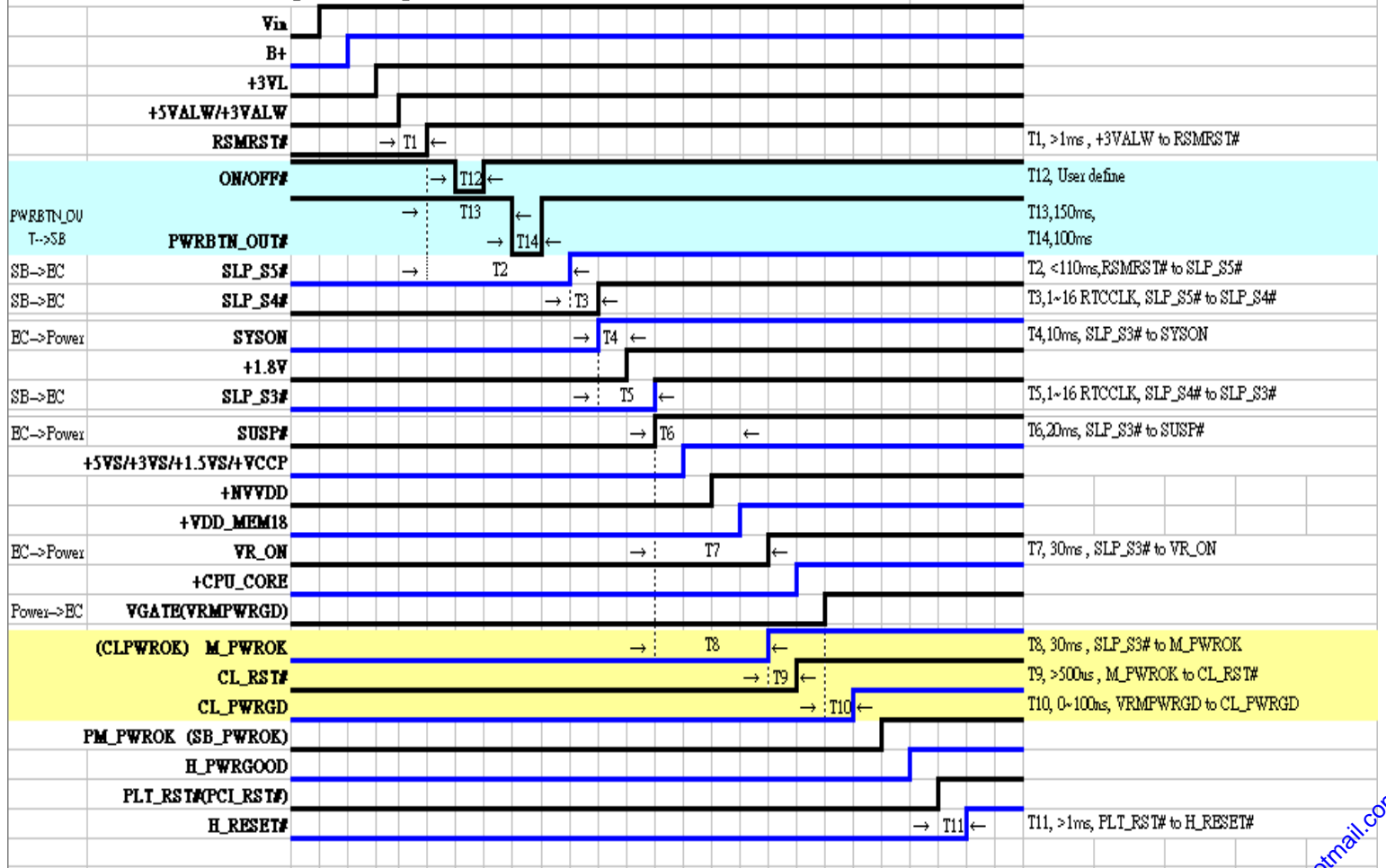
## I2C / SMBUS ADDRESSING

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

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	Notes
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 LA-4102P Blade disc	Rev 0.4
				Date Monday, February 25, 2008	Sheet 3 of 63



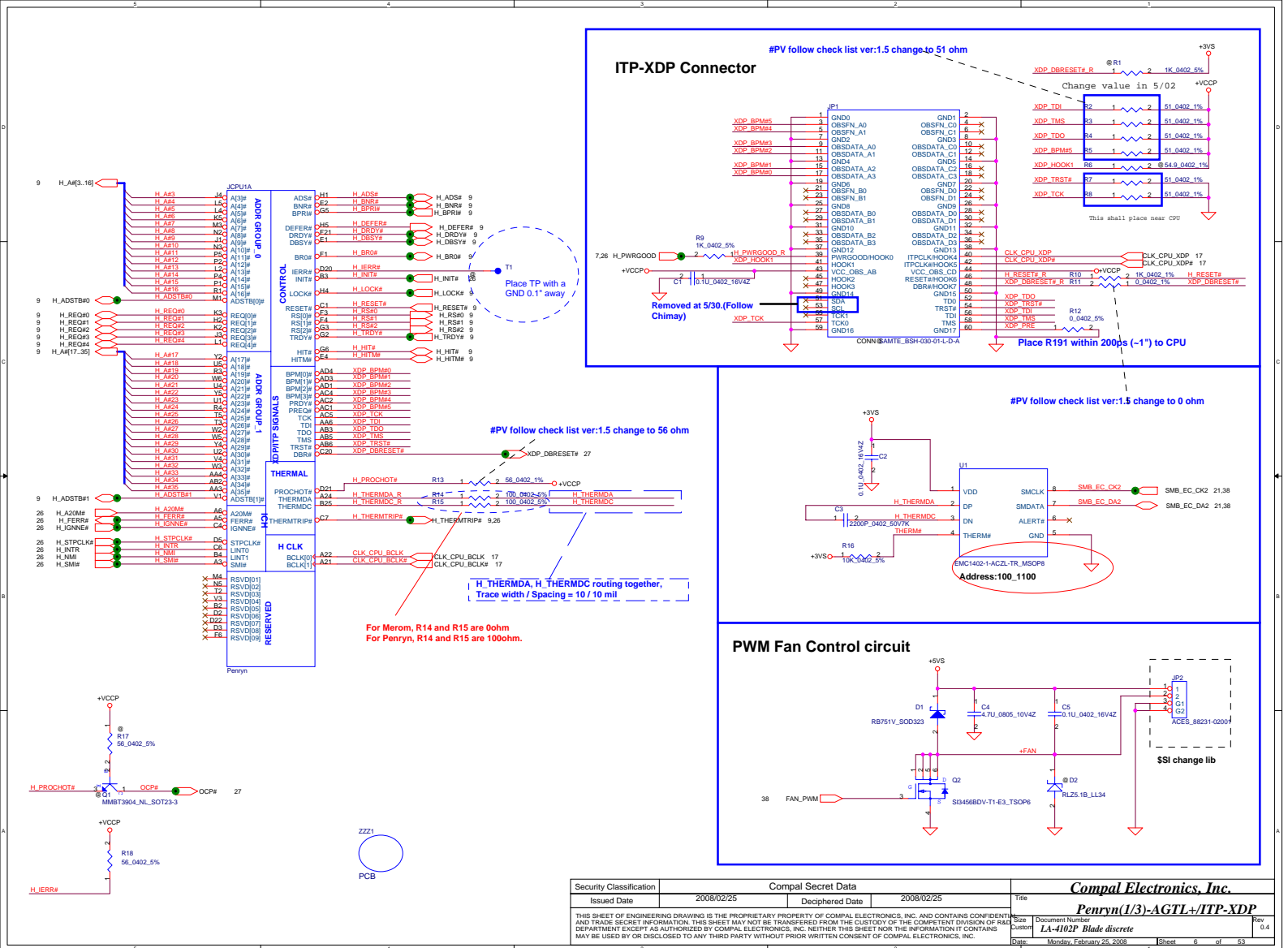
# JAL50 Discrete power sequence AC mode

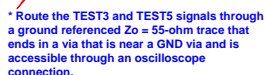


Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Rev	0.4
Date				Monday, February 25, 2008	Sheet 5 of 53

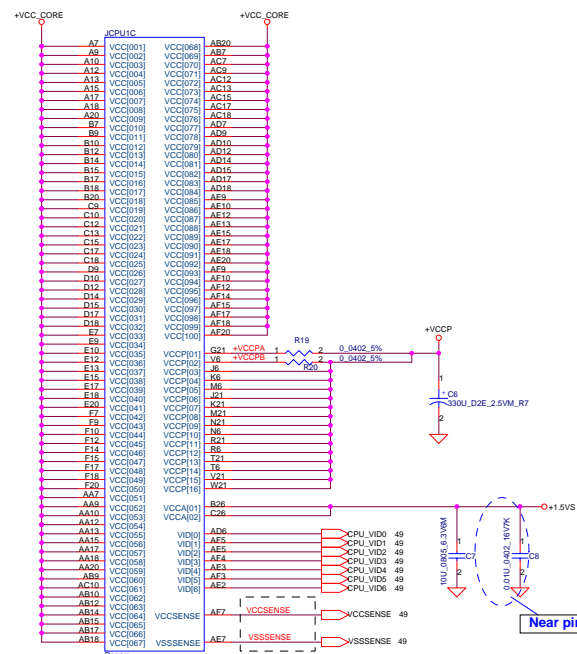
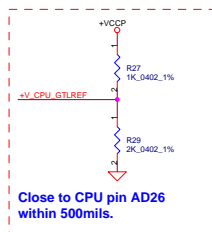
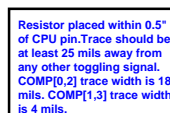
Compal Electronics, Inc.  
Power Sequence

LA-4102P Blade disc...  
Date: Monday, February 25, 2008 Sheet 5 of 53





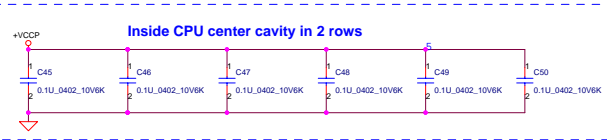
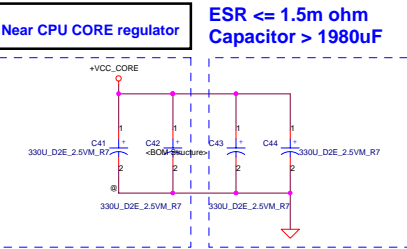
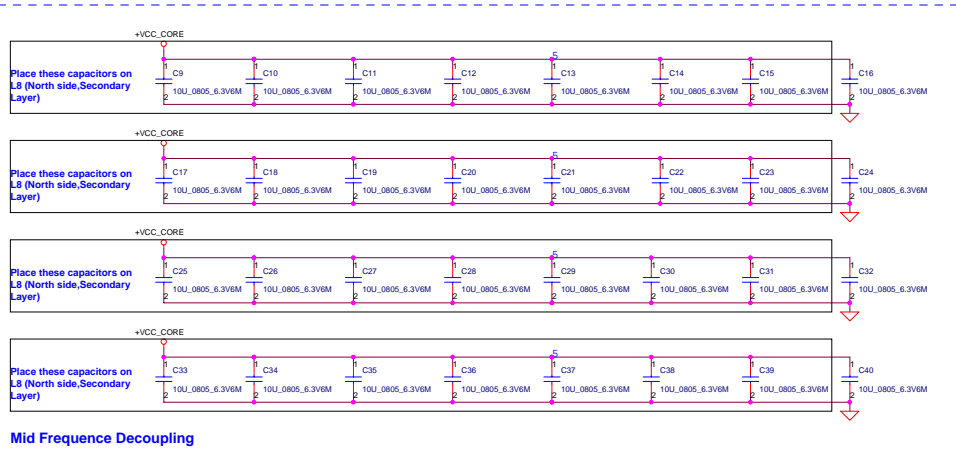
CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0
266	0	0	0



Length match within 25 mils.  
The trace width/space/other is 20/7/25.

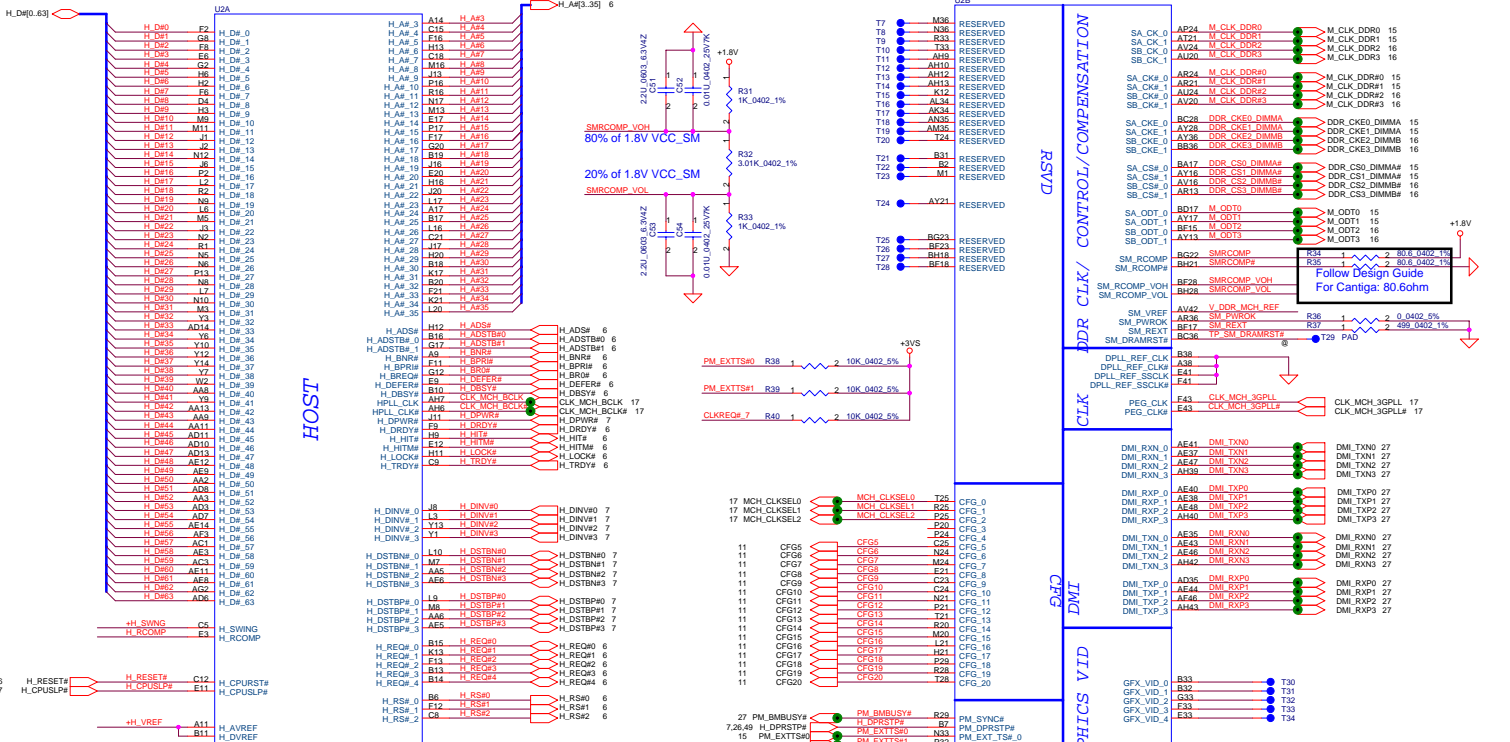
Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	<b>Penryn(2/3)-AGFL+ITP-XDP</b>	
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&amp;D DESIGN OR EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NO INFORMATION FROM THIS SHEET NOR THE INFORMATION CONTAINED THEREIN MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>			Doc Number	LA-402P Blade design	
Date	Monday, February 25, 2008		Issued	7 of 63	

JCPUID		
AA	VSS[001]	P6
AA	VSS[002]	P21
A11	VSS[003]	P24
A14	VSS[004]	R2
A16	VSS[005]	R22
A19	VSS[006]	R22
A23	VSS[007]	T1
AF2	VSS[008]	T26
BA	VSS[009]	T26
BA	VSS[010]	T26
B11	VSS[011]	T26
B13	VSS[012]	T26
B16	VSS[013]	U8
B19	VSS[014]	U21
B21	VSS[015]	U24
B24	VSS[016]	U24
CA	VSS[017]	V5
CA	VSS[018]	V22
C11	VSS[019]	V22
C14	VSS[020]	W1
C16	VSS[021]	W2
C19	VSS[022]	W2
C22	VSS[023]	Y3
CA5	VSS[024]	Y3
D11	VSS[025]	Y2
D11	VSS[026]	Y2
D4	VSS[027]	Y2
D8	VSS[028]	AA2
D13	VSS[029]	AA5
D18	VSS[030]	AA8
D19	VSS[031]	AA11
D23	VSS[032]	AA14
D26	VSS[033]	AA15
EA	VSS[034]	AA15
EA	VSS[035]	AA2
EA	VSS[036]	AA25
E11	VSS[037]	AB1
E14	VSS[038]	AB4
E16	VSS[039]	AB8
E19	VSS[040]	AB11
E21	VSS[041]	AB12
E24	VSS[042]	AB15
F2	VSS[043]	AB15
F8	VSS[044]	AB3
F8	VSS[045]	AB6
F11	VSS[046]	AC3
F13	VSS[047]	AC6
F16	VSS[048]	AC11
F19	VSS[049]	AC14
F22	VSS[050]	AC19
F25	VSS[051]	AC19
G1	VSS[052]	AC24
G1	VSS[053]	AC24
G23	VSS[054]	AD2
G26	VSS[055]	AD6
H3	VSS[056]	AD6
H6	VSS[057]	AD6
H21	VSS[058]	AD11
H24	VSS[059]	AD13
J2	VSS[060]	AD15
J2	VSS[061]	AD19
J2	VSS[062]	AD25
K2	VSS[063]	AE1
K4	VSS[064]	AE1
K4	VSS[065]	AE4
K4	VSS[066]	AE8
K26	VSS[067]	AE11
L3	VSS[068]	AE14
L6	VSS[069]	AE15
L21	VSS[070]	AE19
L24	VSS[071]	AE25
M2	VSS[072]	AF2
M2	VSS[073]	AF8
M2	VSS[074]	AF8
M2	VSS[075]	AF8
M2	VSS[076]	AF13
N1	VSS[077]	AF13
N1	VSS[078]	AF16
N23	VSS[079]	AF19
N26	VSS[080]	AF21
P6	VSS[081]	AF25

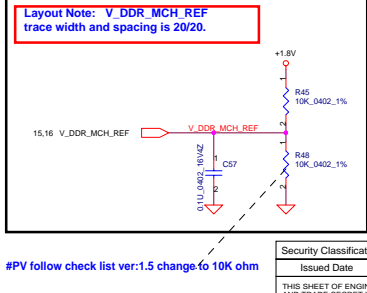
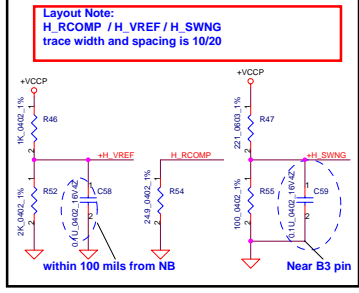


Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	LA-4102P Blade discrete
				Date	Monday, February 25, 2008
				Sheet	8 of 53



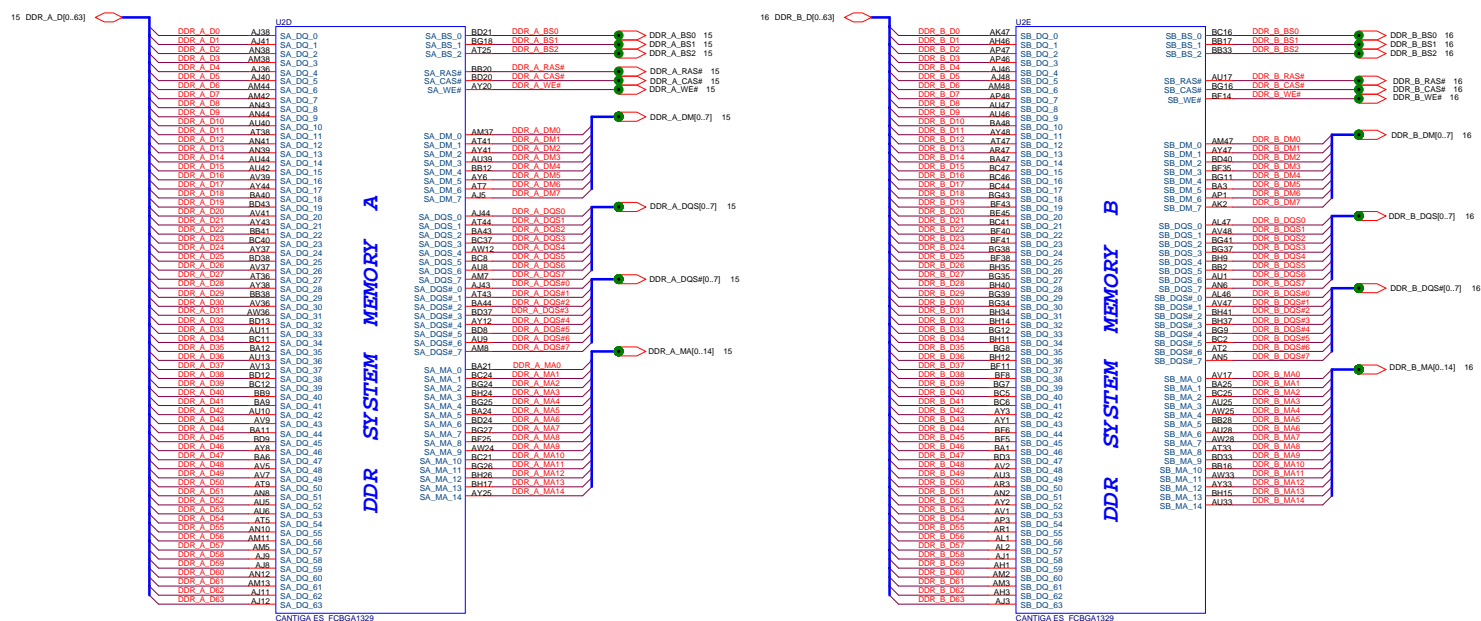



**Layout note:**  
Route H\_SCOMP and H\_SCOMP# with trace width, spacing and impedance (55 ohm) same as FSB data traces



#PV follow check list ver:1.5 change to 10K ohm

Security Classification			
Compal Secret Data			
Issued Date	2008/02/25	Deciphered Date	2008/02/25
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 OR 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.		
Size	Document Number		
Customer	LA-4102P Blade discre		
Date	Monday, February 25, 2008	Sheet	9 of 53

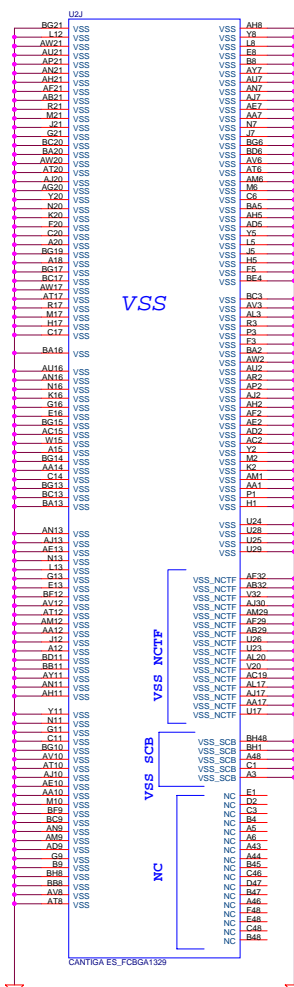
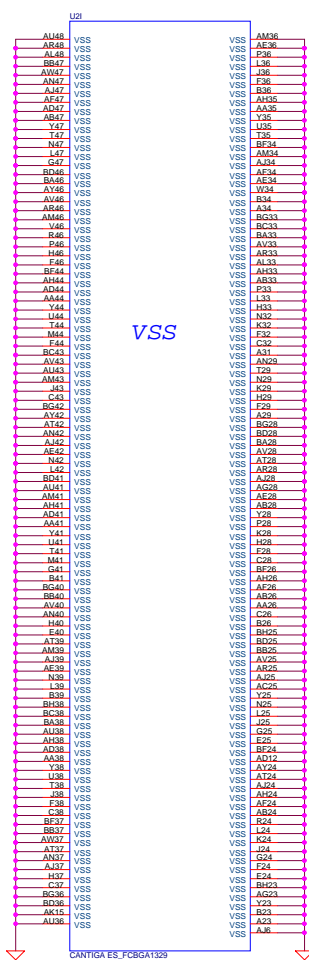


Security Classification	Compal Secret Data		 <b>Compal Electronics, Inc.</b>
Issued Date	2008/02/25	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D TO ANY OTHER DIVISION WITHOUT THE WRITTEN CONSENT OF THE COMPETENT DIVISION. THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Title <b>Canitga(2/6)-DDR2 A/B CH</b>
			Drawing <b>A-410P Blade discolor</b>
Date	2008/02/25	Issue	01 of 03



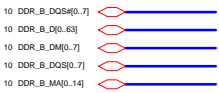




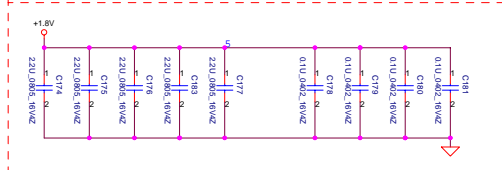


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>Caniga(6/6)-PWR/GND</b>	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT BE AUTHORIZED BY COMPAL ELECTRONICS, INC. THE INFORMATION ON THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Doc. No. <b>LA-4102P Blade disc</b>	Rev 0.4
Date <b>LA-4102P Blade disc</b>				Issue	1 of 63

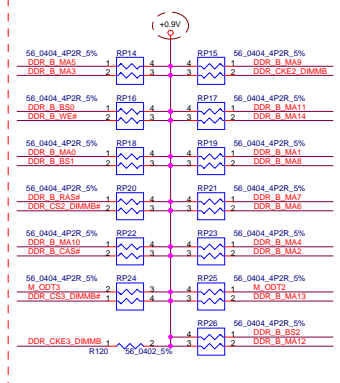
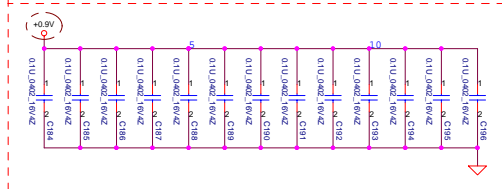




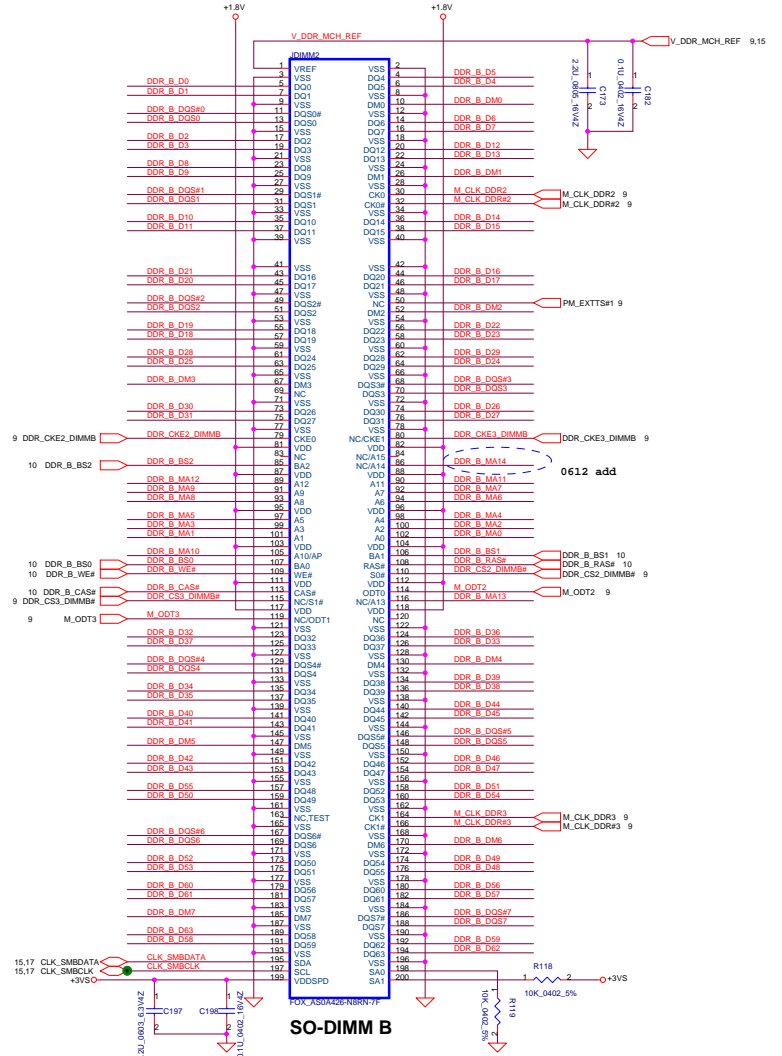
Layout Note:  
Place near JP40



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



Layout Note:  
Place these resistor  
closely JP3, all  
trace length Max=1.5"



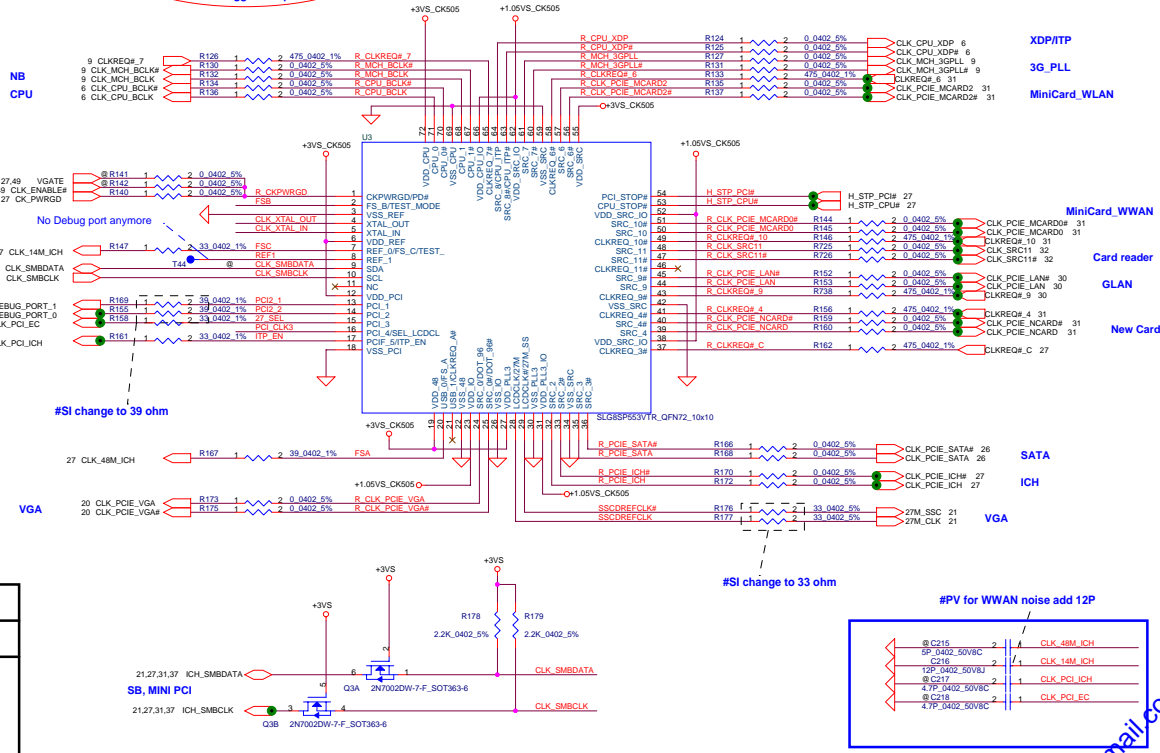
Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	DDRII-SODIMM SLOT2	
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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>				Size	Document Number
				LA-4102P Blade discrete	
				Date	Monday, February 25, 2008
				Sheet	16 of 53

































ITP_EN	0 = SRC0/SRC# 1 = ITP/ITP#	V
PCI_CLK3	0 = Enable DOT96 & SRC1(UMA) 1 = Enable SRC0 & 27MHz(DIS)	V

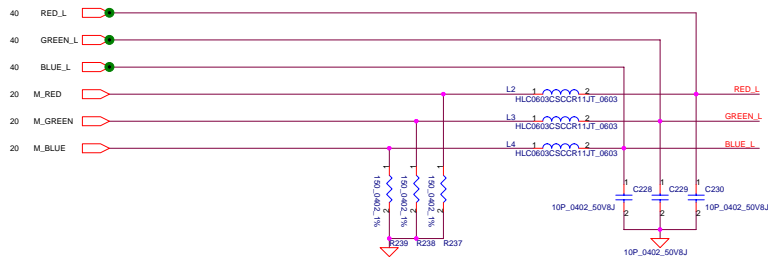
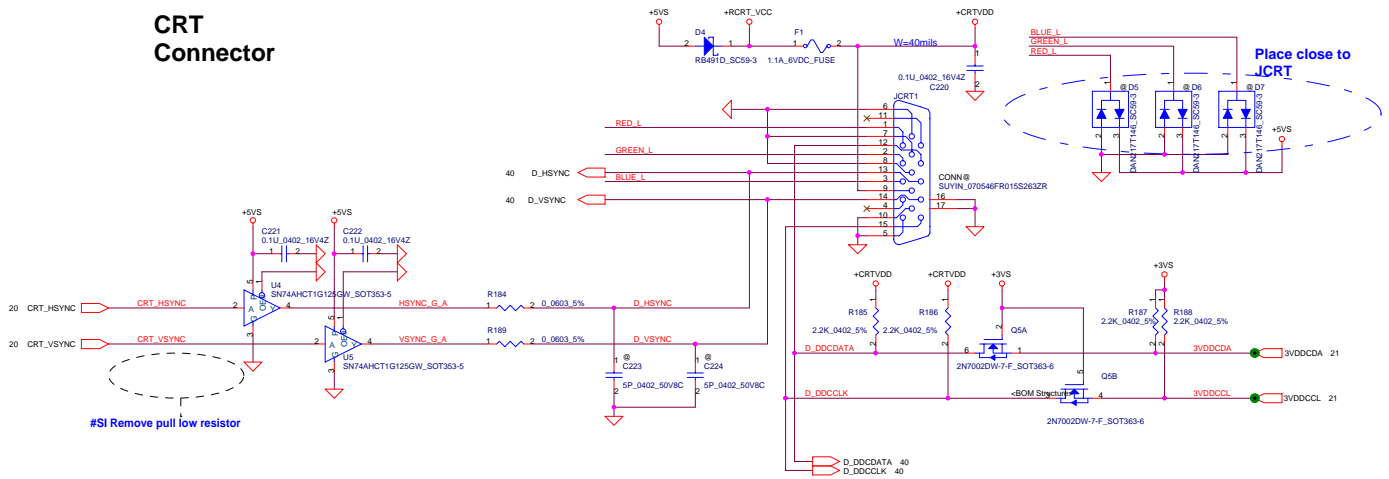
  

The diagram shows two clock drivers. The ITP\_EN driver has a 10K pull-up resistor (R180) to +3V5 and a 10K pull-down resistor (R182) to ground. The PCI\_CLK3 driver has a 10K pull-up resistor (R181) to +3V5 and a 10K pull-down resistor (R183) to ground. Both drivers are shown with their respective signal lines and ground symbols.



Security Classification	Compal Secret Data				
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Time	
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 TREATED AS THE PROPERTY OF THE EMPLOYER DIVISION OF FAIR 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. 0.4
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					

# CRT Connector

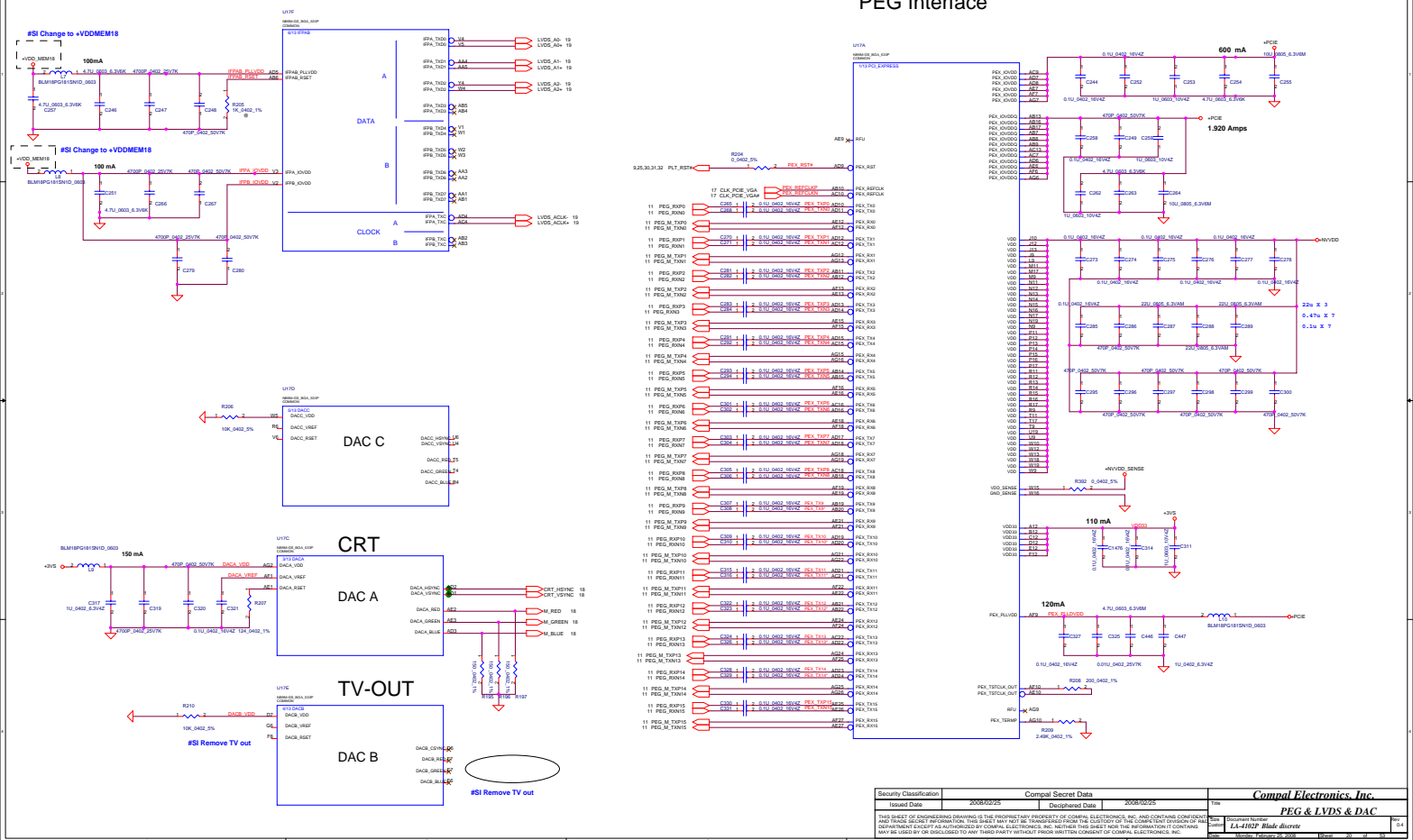


Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Size	Document Number
					LA-4102P Blade discrete
				Date	Monday, February 25, 2008
				Sheet	18 of 53



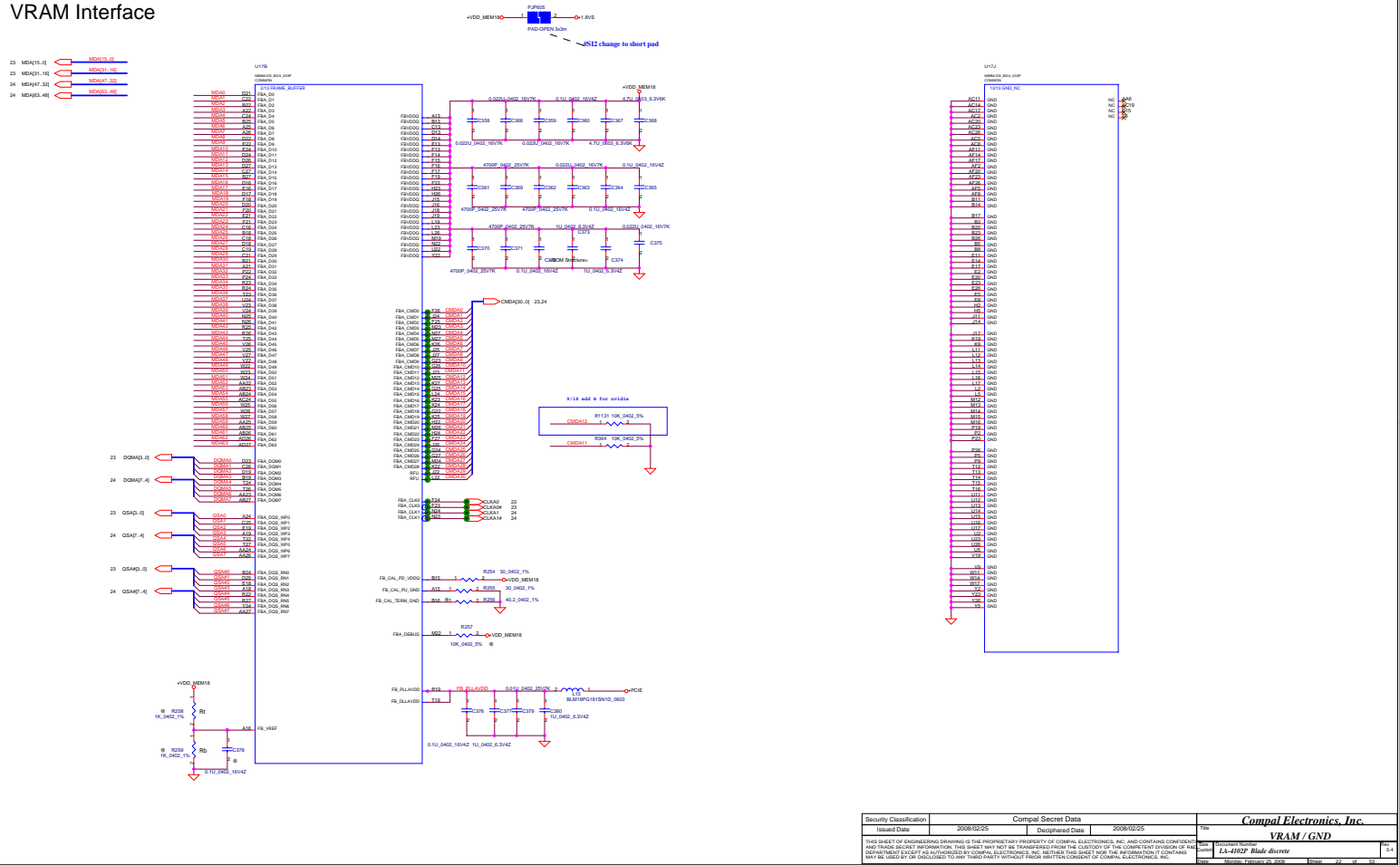
# LVDS & DAC Interface

# PEG Interface

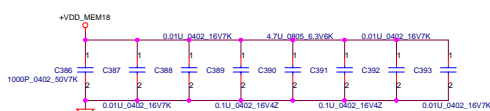
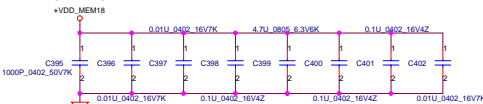
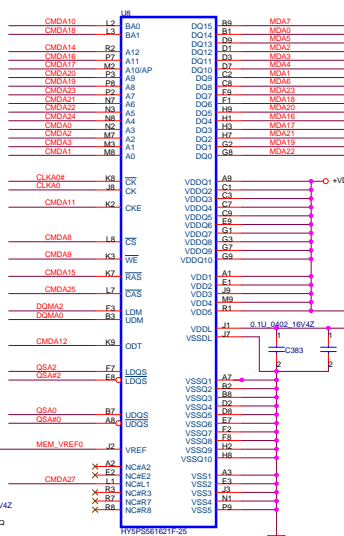
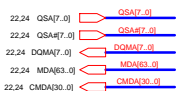


February 26, 2008

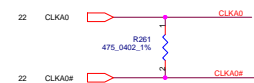
## VRAM Interface



**64Mx16 DDR2 400MHz\*4==>512MB**



Address	DATA Bus		
	0..31	32..63	
CMD0	A3		
CMD1	A0	A0	
CMD2	A2		
CMD3	A1	A1	
CMD4	A3	A3	
CMD5	A4		
CMD6	A5		
CMD7			
CMD8	CS#	CS#	
CMD9	WE#	WE#	
CMD10	BA0	BA0	
CMD11	CKE	CKE	
CMD12	ODT	ODT	
CMD13			
CMD14	A12	A12	
CMD15	RAS#	RAS#	
CMD16	A11	A11	
CMD17	A10	A10	
CMD18	BA1	BA1	
CMD19	A8	A8	
CMD20	A9	A9	
CMD21	A6	A6	
CMD22	A5		
CMD23	A7	A7	
CMD24	A4		
CMD25	CAS#	CAS#	
CMD26	A13	A13	
CMD27	BA2	BA2	
CMD28			
CMD29			
CMD30			



Security Classification	Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Doc Number
<p>THIS SHEET OF ENGINEERING DRAWINGS 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 WITHOUT WRITTEN AUTHORIZATION BY COMPAL ELECTRONICS, INC. WITHOUT SUCH WRITTEN AUTHORIZATION THE INFORMATION CONTAINED HEREIN MAY BE USED OR DISCLOSED TO A THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>			<p><b>LS-2821 ATI M56-P VGA Board</b></p> <p><b>CHANEL A EXT. 256M</b></p>	
<p>Date: Monday, February 25, 2008</p>			Sheet	1 of 16

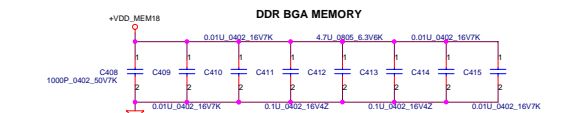
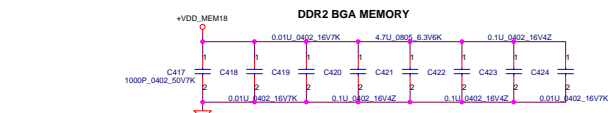
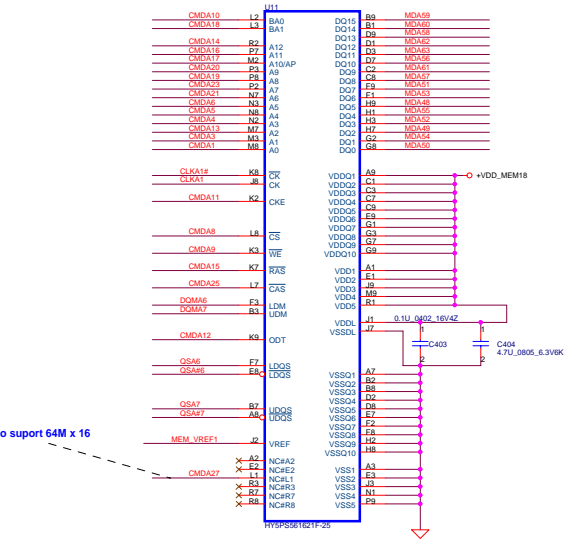
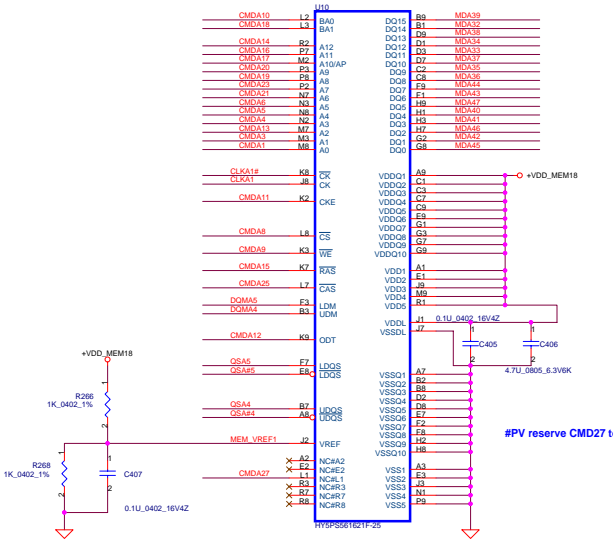
VRAM DDR2 chips (256MB & 512MB)

32Mx16 DDR2 400MHz \*4==>256MB

64Mx16 DDR2 400MHz\*4==>512MB

- 22.23 DQMA[7..0] <==> DQMA[7..0]
- 22.23 CMDA[30..0] <==> CMDA[30..0]
- 22.23 QSA[7..0] <==> QSA[7..0]
- 22.23 QSA[7..0] <==> QSA[7..0]
- 22.23 MDV[63..0] <==> MDV[63..0]

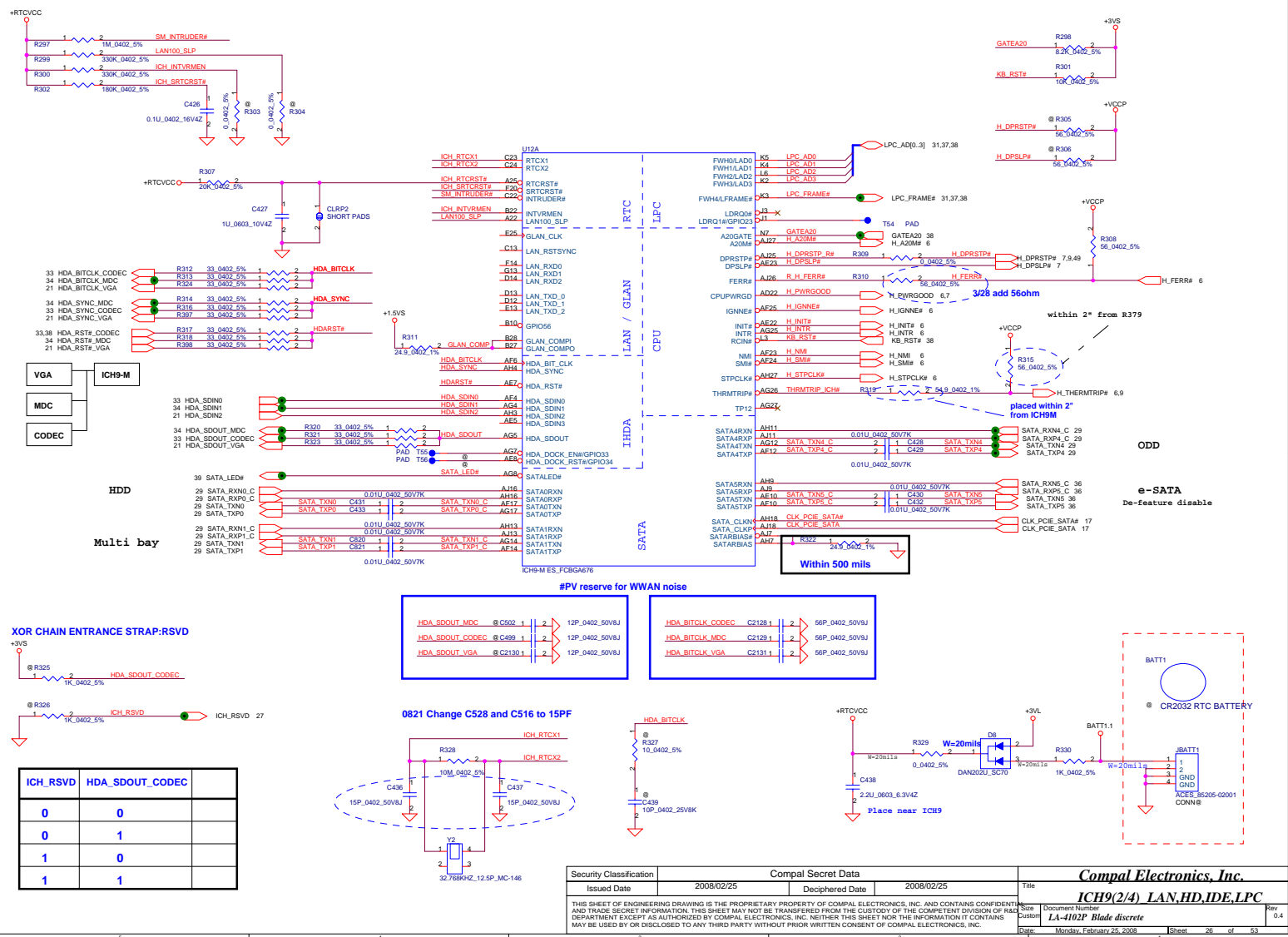
Address	DATA	Bus
CMD0	A3	
CMD1	A0	A0
CMD2	A2	
CMD3	A1	A1
CMD4		A3
CMD5		A4
CMD6		A5
CMD7		
CMD8	CS#	CS#
CMD9	WE#	WE#
CMD10	BA0	BA0
CMD11	CKE	CKE
CMD12	ODT	ODT
CMD13		
CMD14	A12	A12
CMD15	RAS#	RAS#
CMD16	A11	A11
CMD17	A10	A10
CMD18	BA1	BA1
CMD19	A8	A8
CMD20	A9	A9
CMD21	A6	A6
CMD22	A5	
CMD23	A7	A7
CMD24	A4	
CMD25	CAS#	CAS#
CMD26	A13	A13
CMD27	BA2	BA2
CMD28		
CMD29		
CMD30		



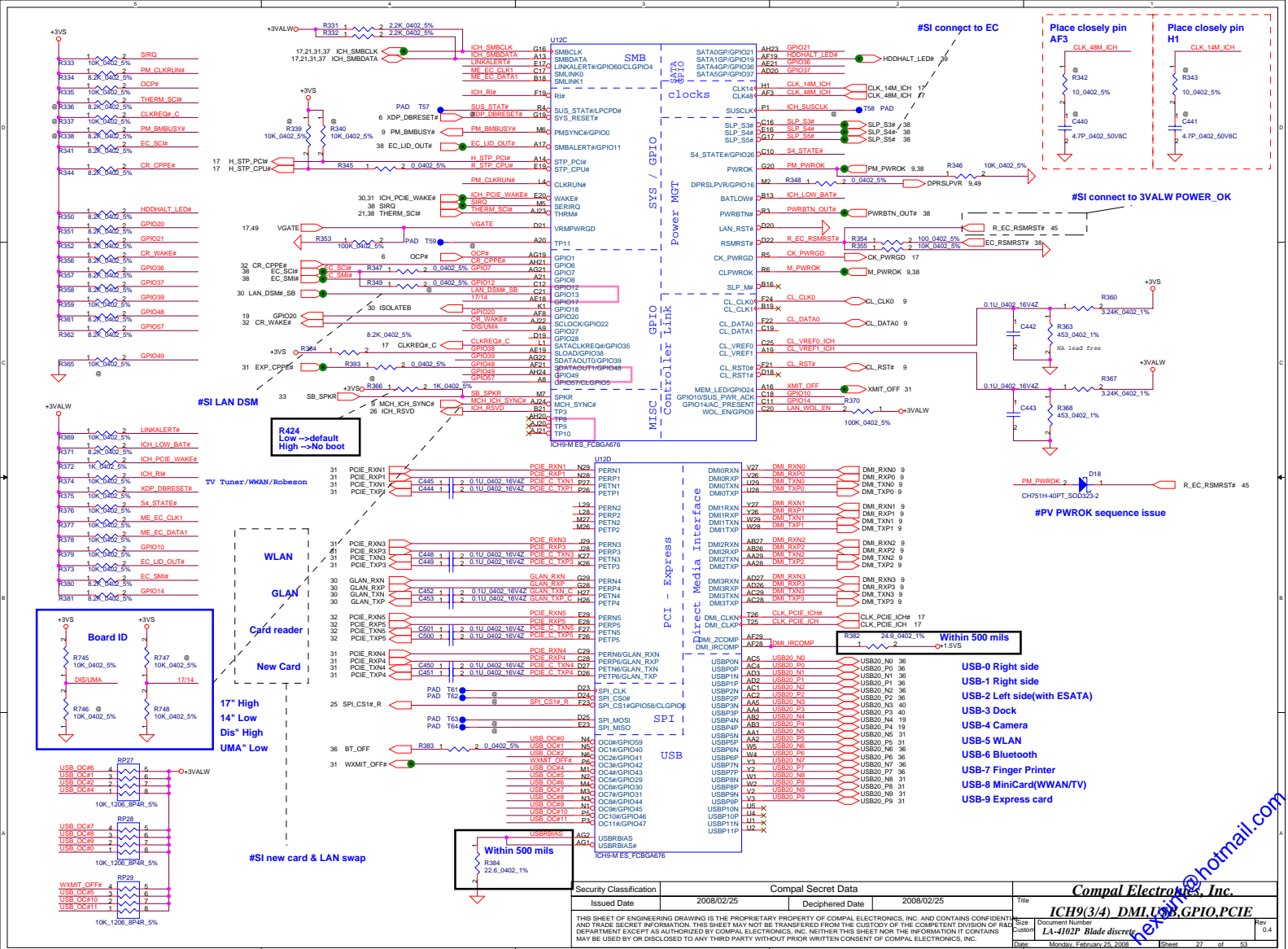
Security Classification	Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	LS-2821 ATI M56-P VGA Board
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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, February 25, 2008	Sheet 8 of 16

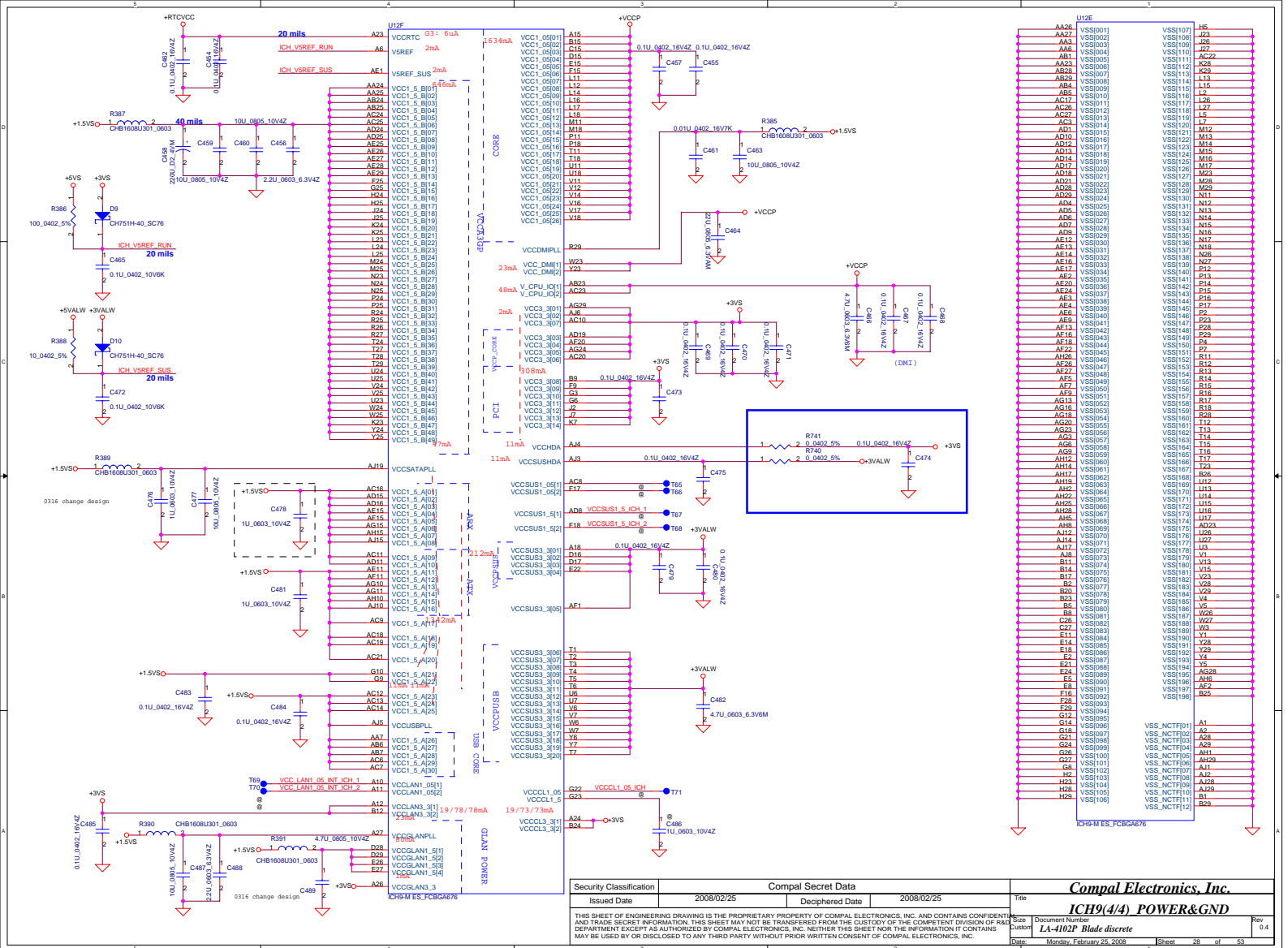




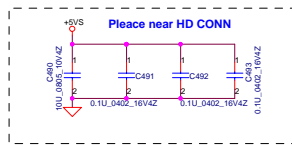


ICH_RSVD	HDA_SDOUT_CODEC	
0	0	
0	1	
1	0	
1	1	

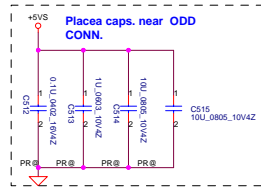
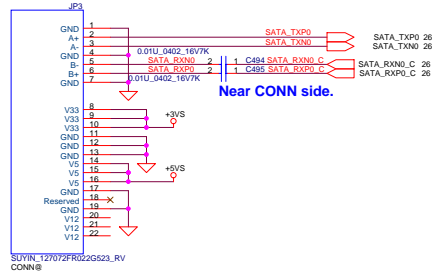




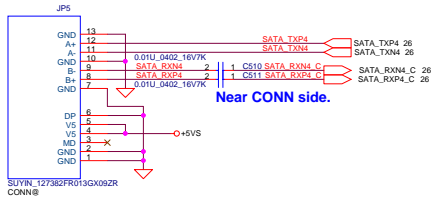
Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	<b>ICH9(4/4) POWER&amp;GND</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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		LA-4102P Blade discrete		Date	Monday, February 25, 2008
Sheet		28		of 53	



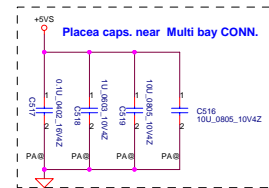
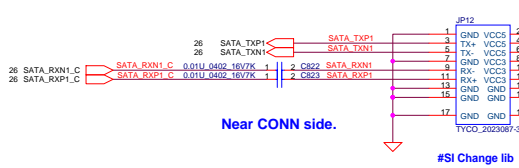
## HDD Connector



## CD-ROM Connector

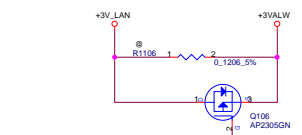


## Multi Bay Connector

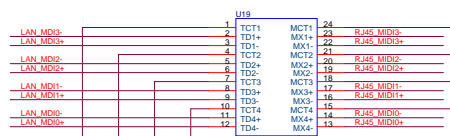
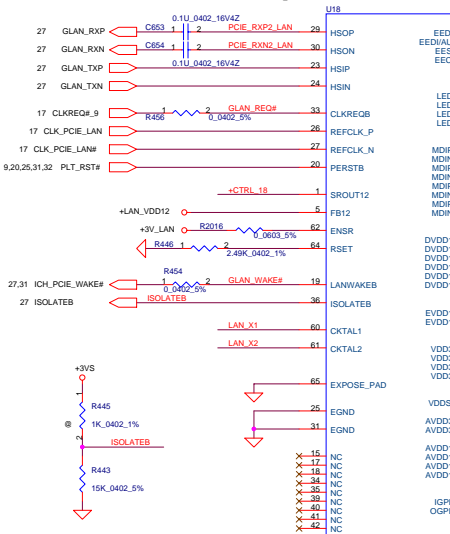


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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
				Customer
				Rev
				0.4
				Date
				Monday, February 25, 2008
				Sheet
				28 of 53

# 1025 add to meet HP request

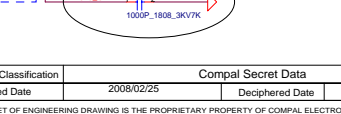
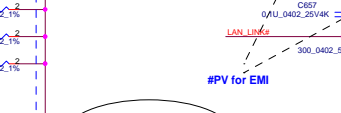
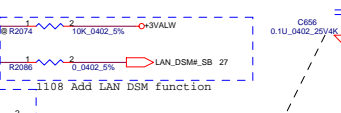
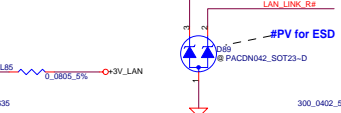
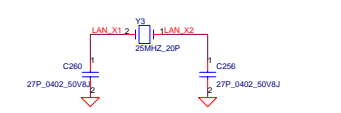
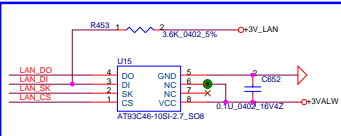
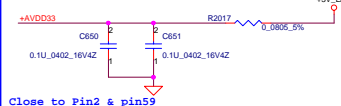


## Place Close to Chip

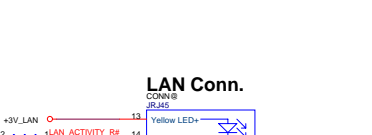
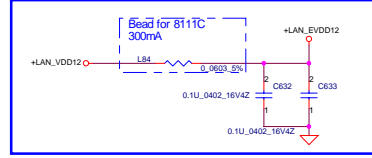
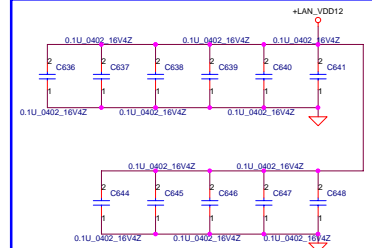
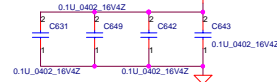


Place these components  
closer to LAN chip

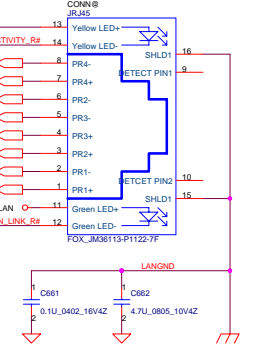
#SI2 change vendor



# Close to Pin16,37,46,53



## LAN Conn.



Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	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.				Rev	0.4
				Date	Monday, February 25, 2008
				Sheet	30 of 53

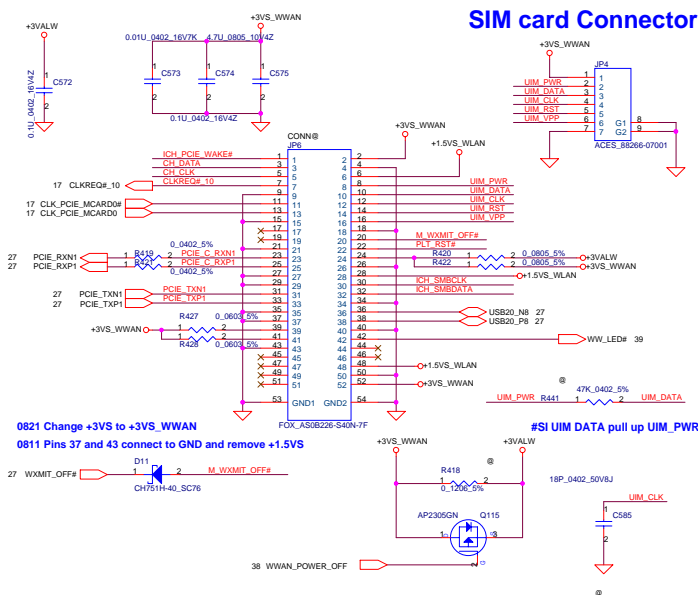
Compal Electronics, Inc.

LAN-8111C

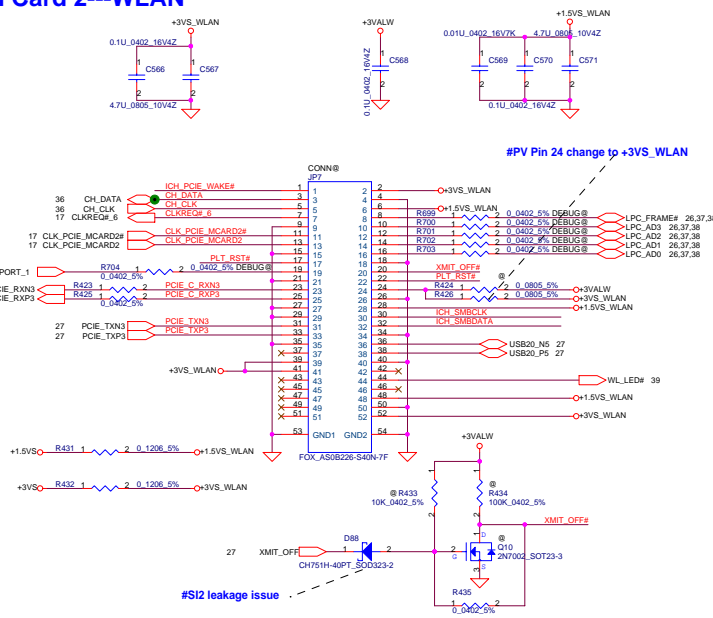
LA-4102P Blade discrete

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

## SIM card Connector

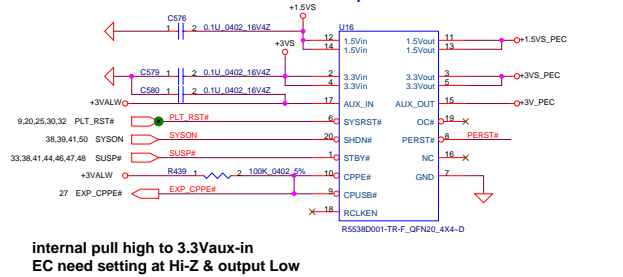


## Mini Card 2---WLAN



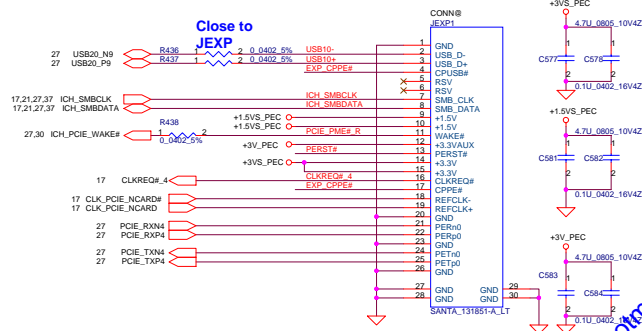
## New Card

### Express Card Power Switch

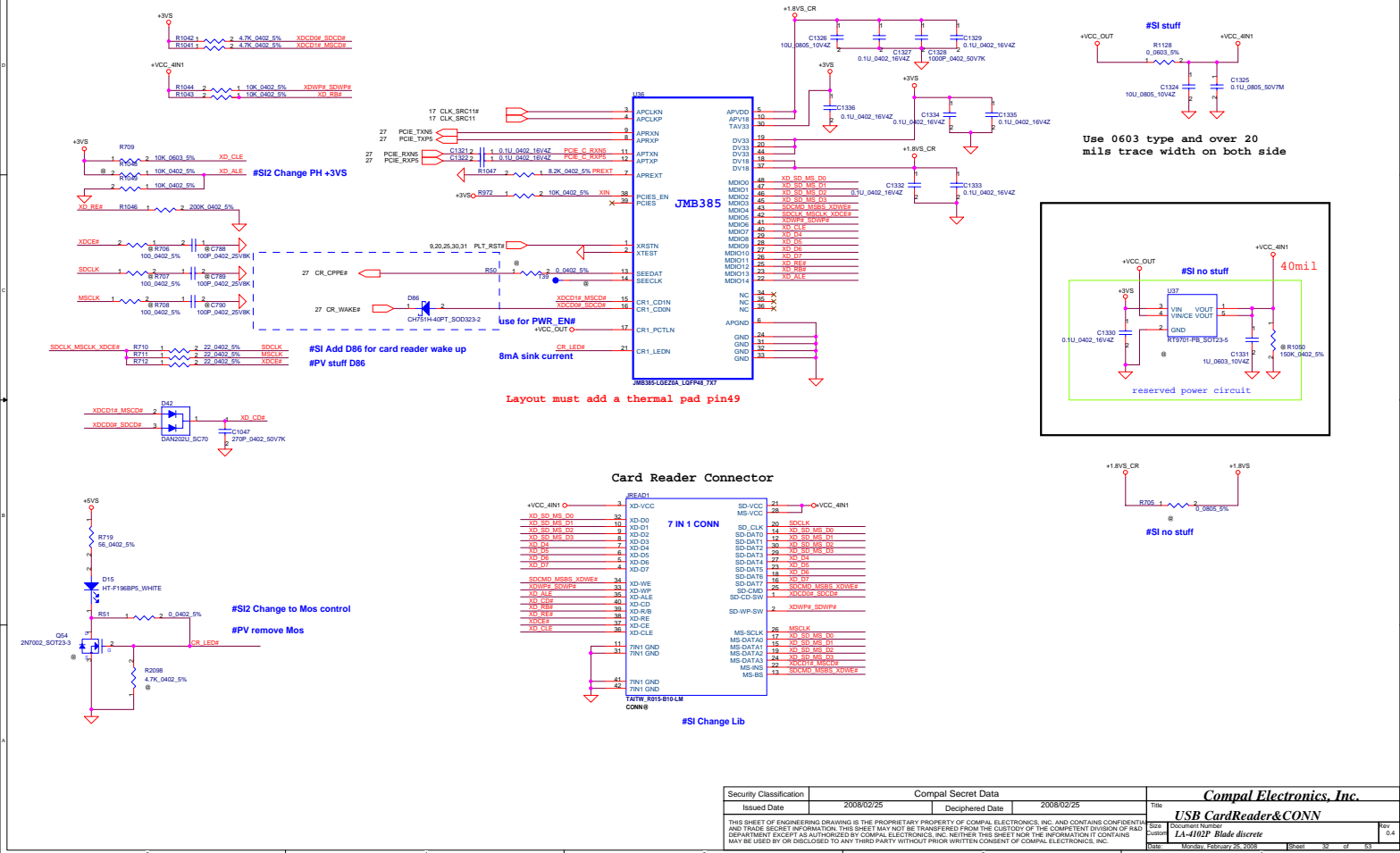


internal pull high to 3.3Vaux-in  
EC need setting at Hi-Z & output Low

**Near to Express Card slot.**



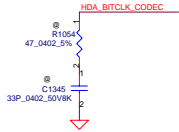
Security Classification	Compal Secret Data		<i>Compal Electronics, Inc.</i>	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF THE COMPETENT DIVISION OF R&D DEPARTMENT. IT MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			WLAN, WWAN, <i>New Card</i>	
			Document Number LA-4102P <i>Read Sheet</i>	
			Date: Monday, February 25, 2008    Discrte    31 of 53	



Security Classification	Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	2008/02/25
THIS SET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. THIS INFORMATION SHALL NOT BE TRANSMITTED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Title <b>USB CardReader+CONN</b>	
THIS SET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. THIS INFORMATION SHALL NOT BE TRANSMITTED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Doc Number <b>LA-112P</b>	Rev <b>0.4</b>
THIS SET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. THIS INFORMATION SHALL NOT BE TRANSMITTED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Date <b>Monday, February 25, 2008</b>	Sheet <b>1 of 51</b>



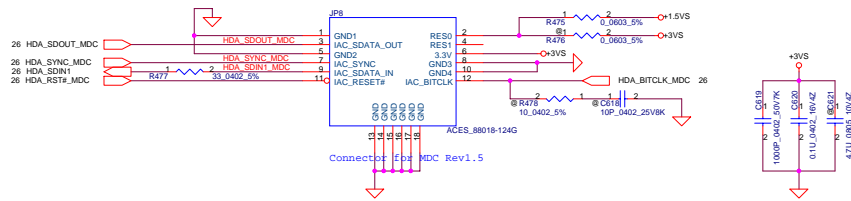
4.75V)  
500mA



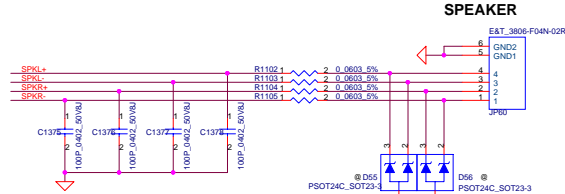
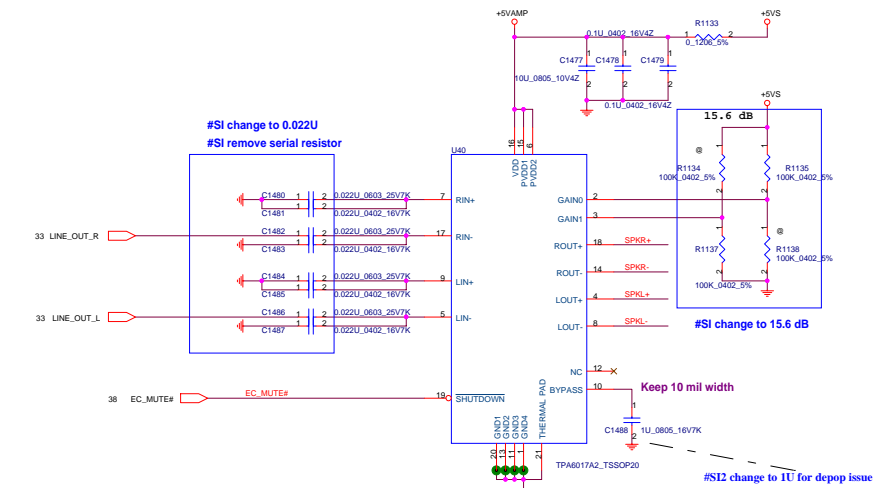
SENSE A		SENSE B	
Port	Resistor	Port	Resistor
A	39.2K	E	39.2K
B	20K	F	20K
C	10K	G	10K
D	5.11K	H	5.11K

Security Classification	Compal Secret Data			Title
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Codec_IDT9271B
<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 OR BE REPRODUCED OR AUTHORIZED BY COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. THIS SHEET NOW THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>				<p>Doc Number</p> <p>LA-4102 Blade disc</p>
Date	Monday, February 25, 2008			<p>Sheet</p> <p>33 of 53</p>

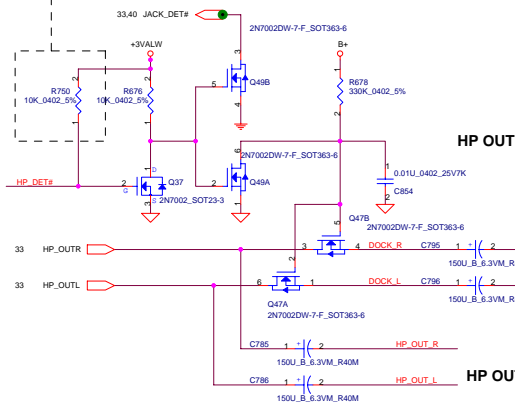
## MDC 1.5 Conn.



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	MDC 1.5 & Robson
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
					LA-4102P Blade discrete
				Rev	0.4
				Date	Monday, February 25, 2008
				Sheet	34 of 53



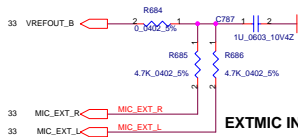
#SI pull high +3VALW



HP OUT

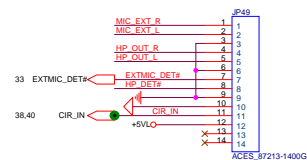
#SI change to 40.2 ohm

HP OUT For M/B

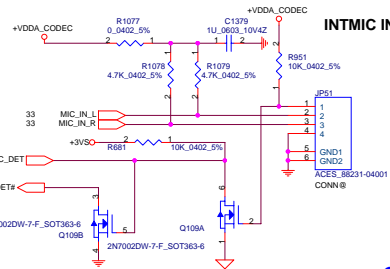


EXTMIC IN

HP OUT For Docking



Audio/B & CIR

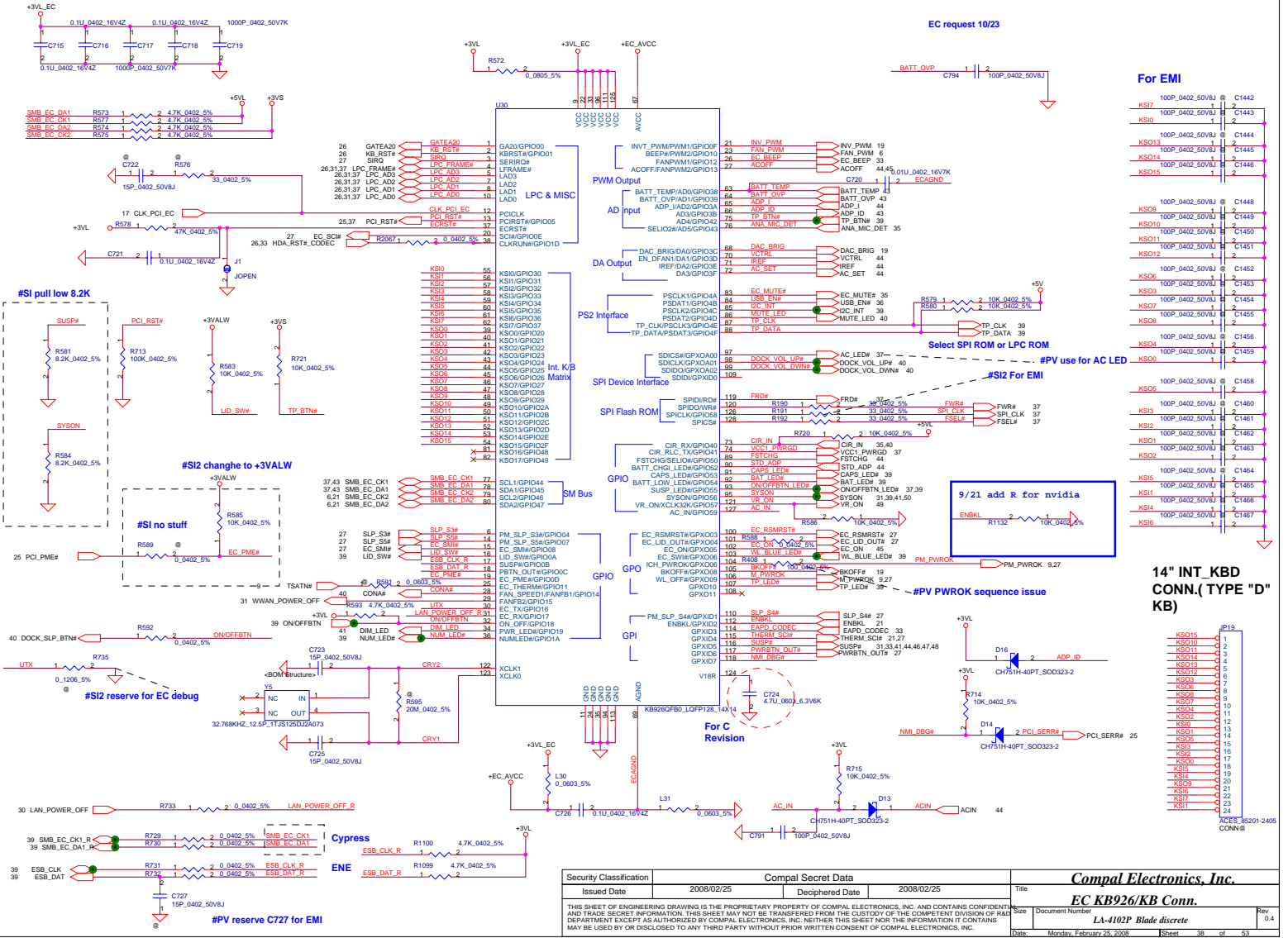


INTMIC IN

Security Classification		Compal Secret Data			
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	
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.				AMP & Audio Jap	
Size	Document Number			Rev	
Date	LA-41002			Blade discrete	
Date		Monday, February 25, 2008		Sheet 35 of 53	







## System LED

**Cap lock**

**Battery Charge LED**

**HDD LED**

**System Power LED**

### Keyboard backlight Conn

[illegible]

# Capacitor Sensor Conn

**#SI2 for EMI**

ESB\_CLK @ R2116 2 1 C2123 2 1  
33\_0402\_5% 15P\_0402\_50VB/J

ESB\_DAT @ R2117 2 1 C2124 2 1  
33\_0402\_5% 15P\_0402\_50VB/J

**#SI2 add by pass cap**

38 SMB\_EC\_CK1\_R  
38 ESB\_CLK  
38 ESB\_DAT  
38 I2C\_INT  
38 NUM\_LED#  
38 SMB\_EC\_DAT1\_R

1 2 C2134 1 2  
15P\_0402\_50VB/J

3V3L\_CAP  
4.7U\_0603\_6.3VB/K  
C261

1 2 3 4 5 6 7 8 9 10 11 12  
GND GND GND GND

ACES: S5201-1005N  
CONN B

3V3L  
C60  
22U\_A\_4VM

# ON/OFF Button Connector

Diagram illustrating the wiring for the ON/OFF Button Connector (J10) to the ACES\_8001-04051 CONN8 connector.

Connections:

- Pin 1 (ON/OFFBTN) connects to +5V\_ALW\_LED.
- Pin 2 (ON/OFFBTN\_LED) connects to ON/OFFBTN.
- Pin 3 (ON/OFFBTN\_LED) connects to ON/OFFBTN\_LED.

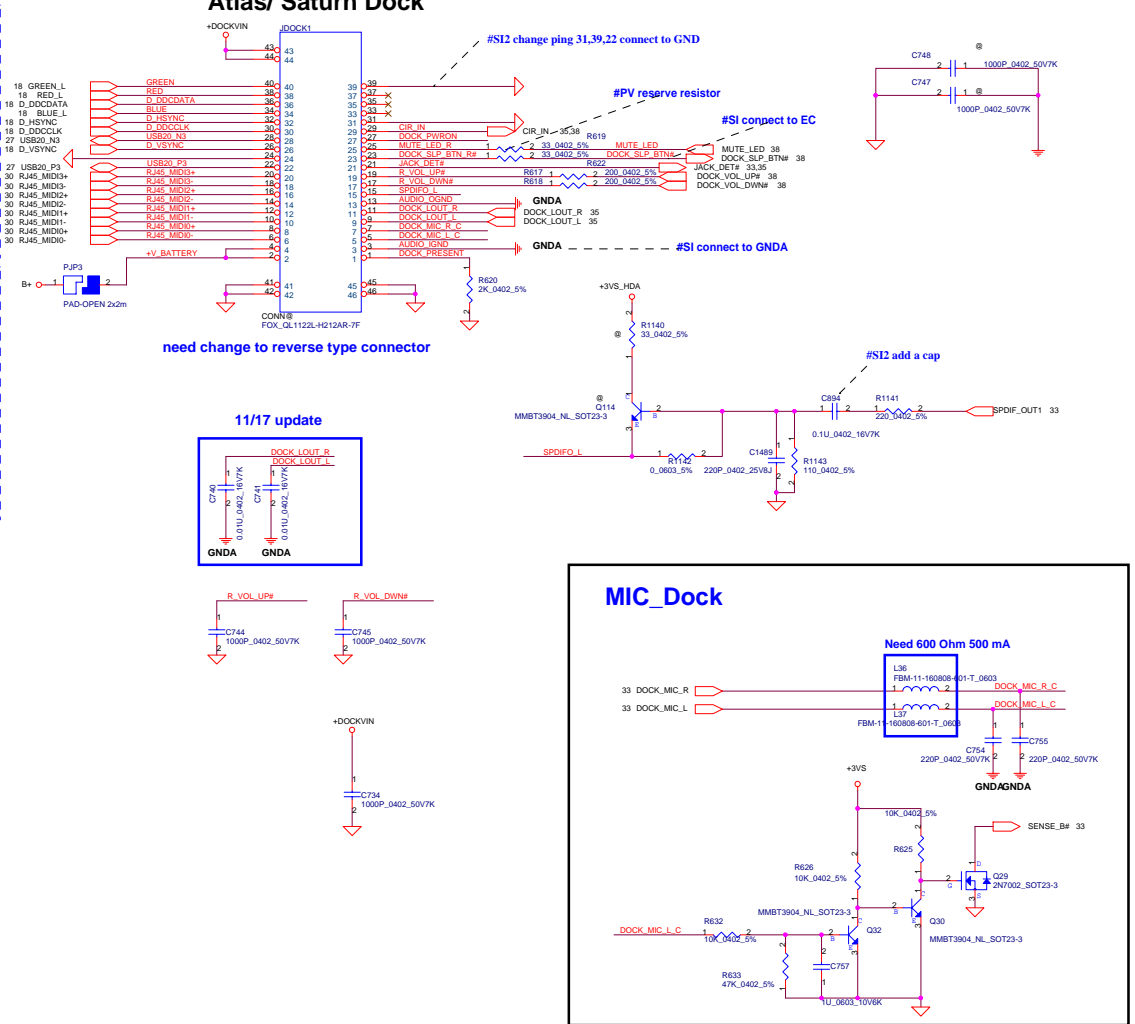
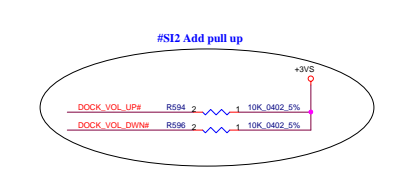
The connector is labeled J10. The PCB is labeled ACES\_8001-04051 CONN8.

[illegible]

The schematic diagram illustrates the TP ON/OFF LED and T/P Board circuitry, divided into three main sections:

- TP ON/OFF LED:** This section shows the control logic for the TP LEDs. It includes a +5V supply, a 200kΩ resistor (R609), and a 200kΩ 5% resistor (R610). The circuit uses two 2N7002 MOSFETs (Q153 and Q154) to drive the TP LEDs. The LEDs are labeled "AMBER" and "White". The circuit is controlled by a +5V supply and a 10kΩ 5% resistor (R613). The TP LEDs are connected to the TP\_LEDs pin 38.
- T/P Board:** This section shows the control logic for the T/P Board. It includes a +5V supply, a 10kΩ 5% resistor (R611), and a 100kΩ 5% resistor (R612). The circuit uses a 2N7002 MOSFET (Q24) to drive the T/P Board. The T/P Board is controlled by a +5V supply and a 10kΩ 5% resistor (R613). The T/P Board is connected to the TP\_BTN# pin 38.
- T/P Power:** This section shows the power supply for the T/P Board. It includes a +5V supply, a 10kΩ 5% resistor (R612), and a 100kΩ 5% resistor (R613). The circuit uses a 2N7002 MOSFET (Q24) to drive the T/P Board. The T/P Board is controlled by a +5V supply and a 10kΩ 5% resistor (R613). The T/P Board is connected to the TP\_BTN# pin 38.

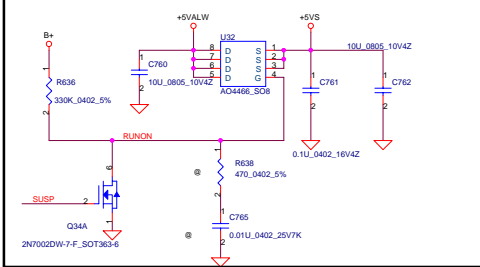
Security Classification	Compal Secret Data		Title	<b>Compal Electronics, Inc.</b>	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	<b>LED, TP.KBL, sub sensor board</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. THIS DOCUMENT IS NOT TO BE TRADED, COPIED, REPRODUCED, OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Size	Document Number	Rev
DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION CONTAINED HEREIN MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<b>LA-1102D, R&amp;D discrete</b>	0.4
Date:	Monday, February 25, 2008		Sheet	39	of 53

[illegible]

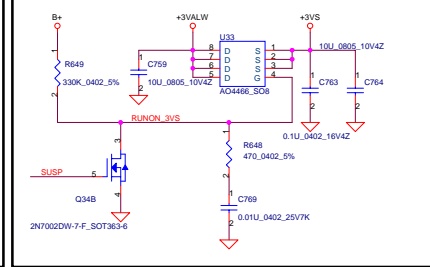
Security Classification	Compal Secret Data			Title		
Issued Date	2008/02/25	Deciphered Date	2008/02/25	DOCK CONN.		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT OR BE 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 Name	Rev
				Date	LA-4102P Blade disclose	0.4
				Sheet	40 of 53	



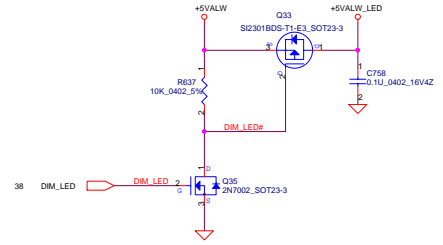
### +5VALW to +5VS Transfer



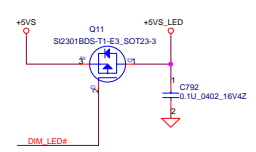
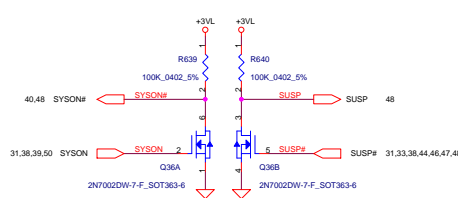
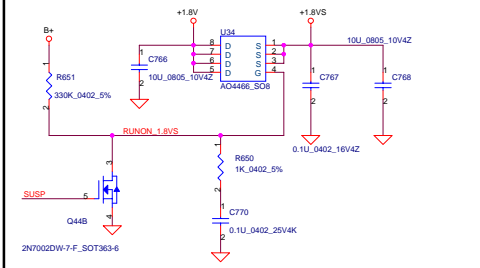
### +3VALW to +3VS Transfer



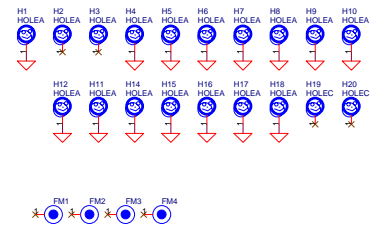
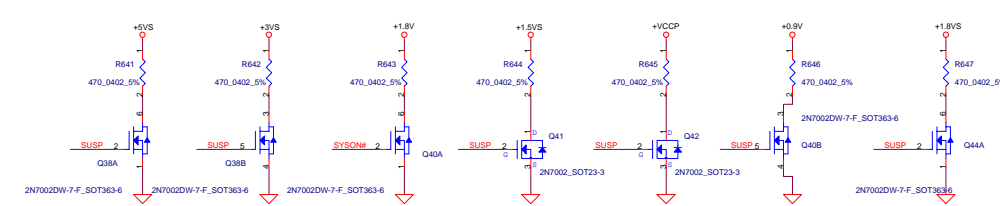
### DIM LED



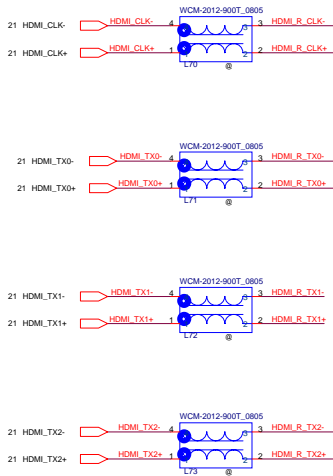
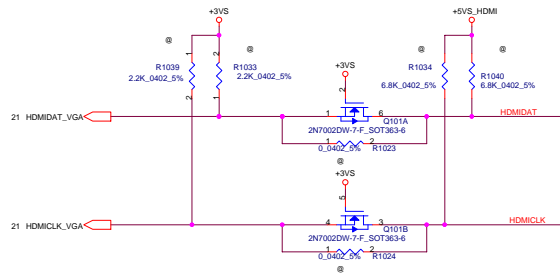
### +1.8V to +1.8VS Transfer



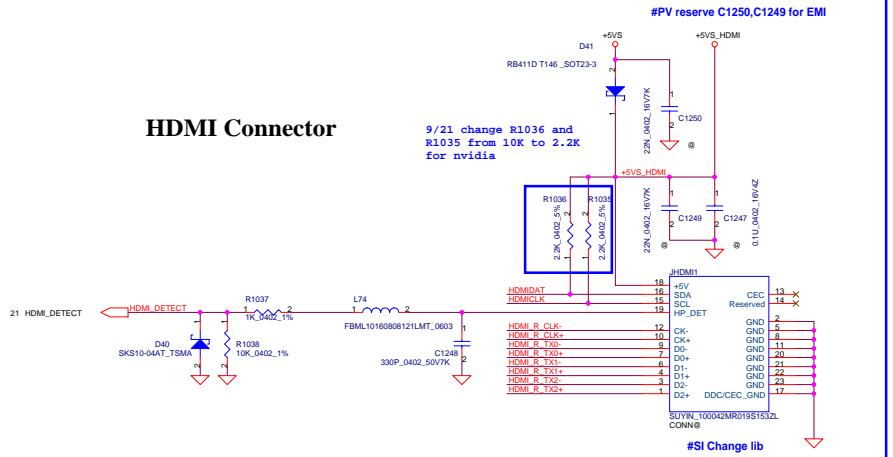
### Discharge circuit



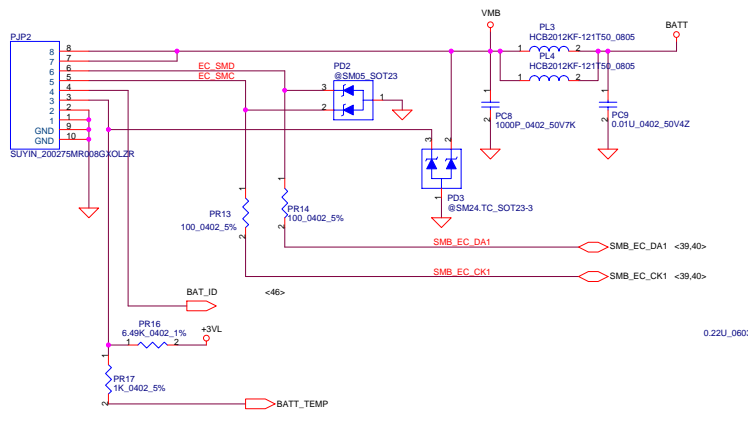
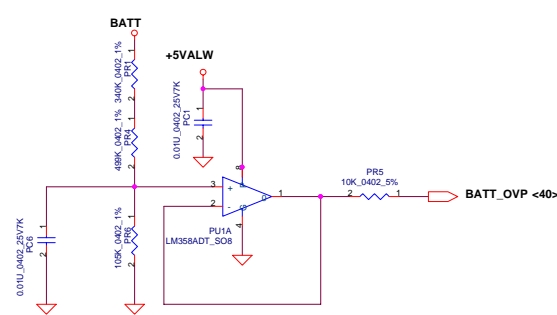
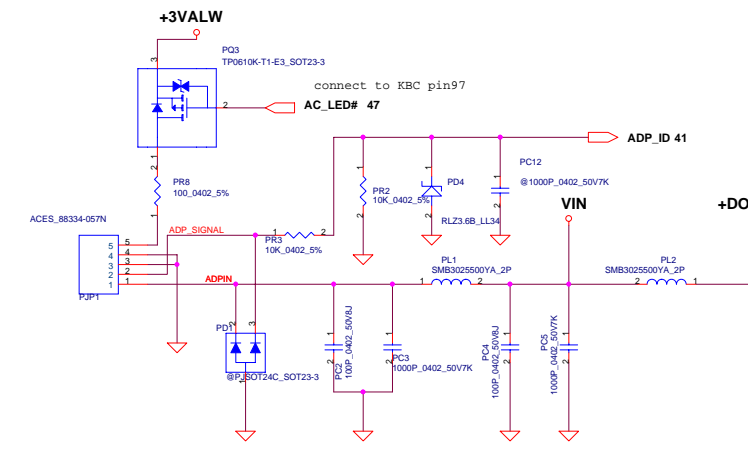
Security Classification	Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	DC/DC Interface
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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 0.4
Date: Monday, February 25, 2008				Sheet 41 of 53



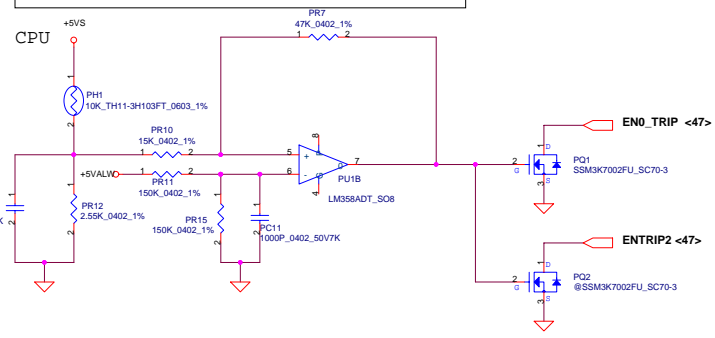
## HDMI Connector



Security Classification	Compal Secret Data			Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	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
				Date	Rev
				Monday, February 25, 2008	0.4
				Sheet	42 of 53

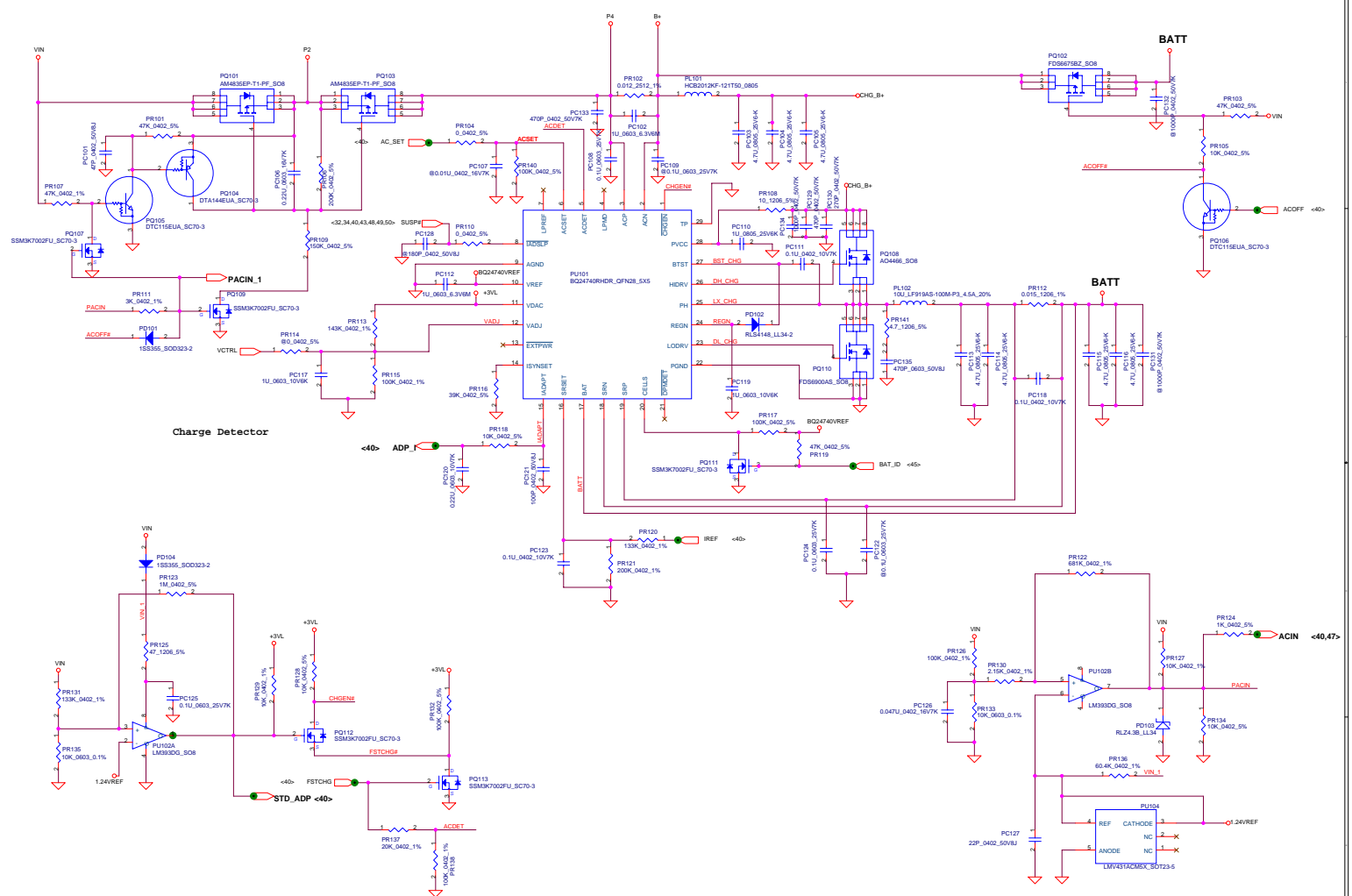


PH1 under CPU bottom side :  
CPU thermal protection at 90  $\pm$  3 degree C  
Recovery at 47  $\pm$  3 degree C



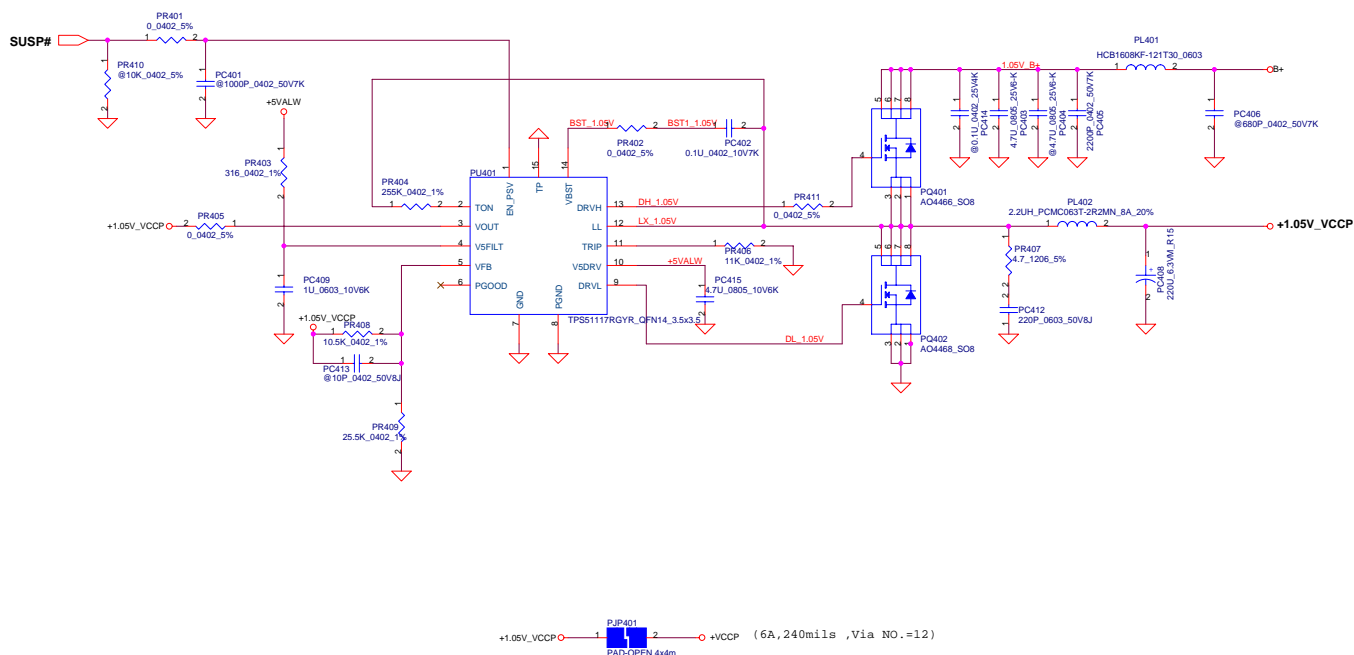
Security Classification	Compal Secret Data			Title	Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Doc Number	LA-4102P Blade disc	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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, February 25, 2008	Rev 0.4

helen@compal.com

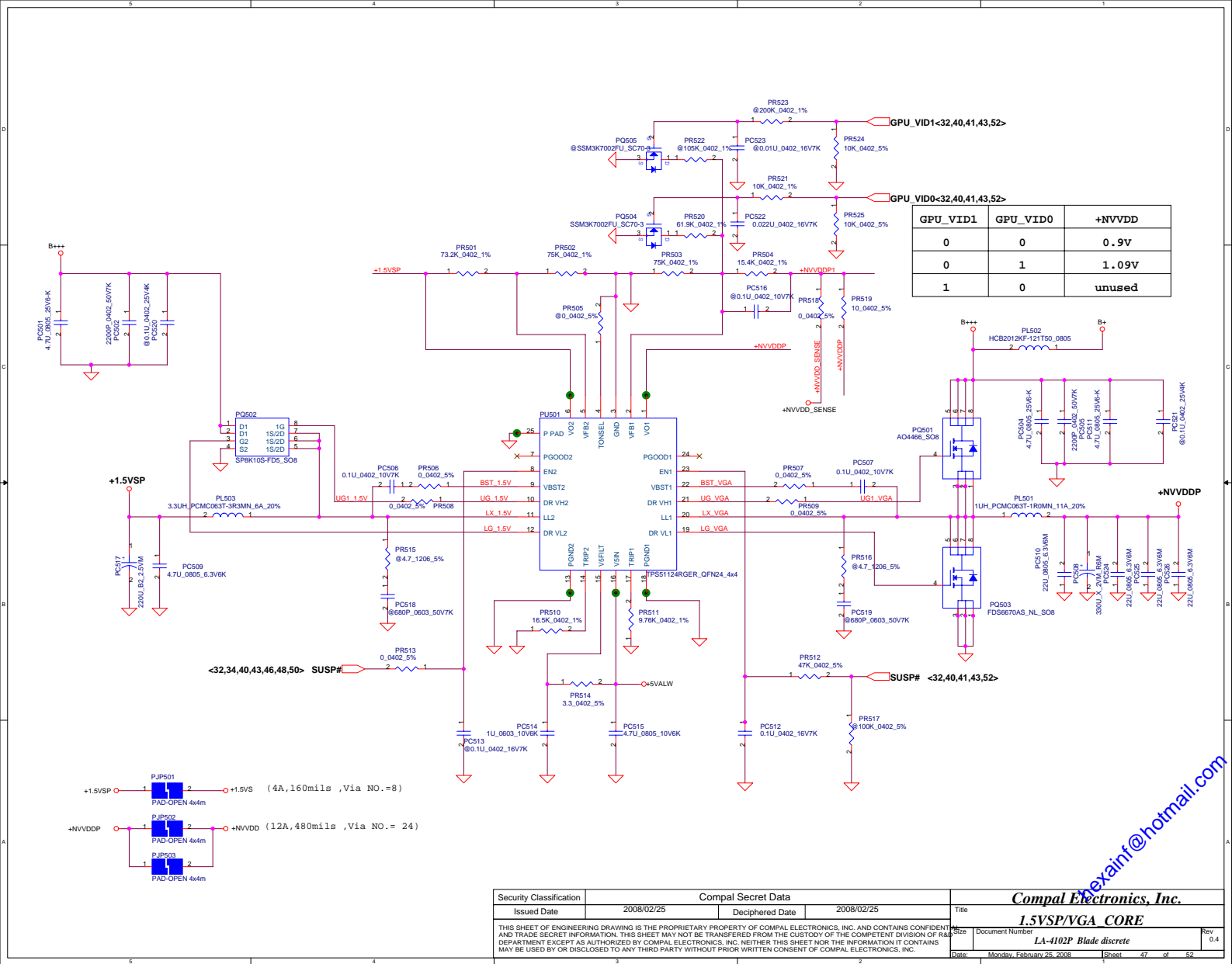


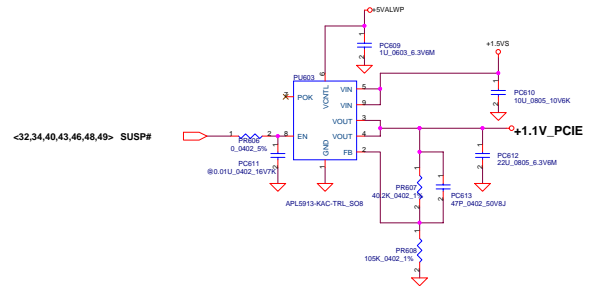
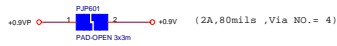
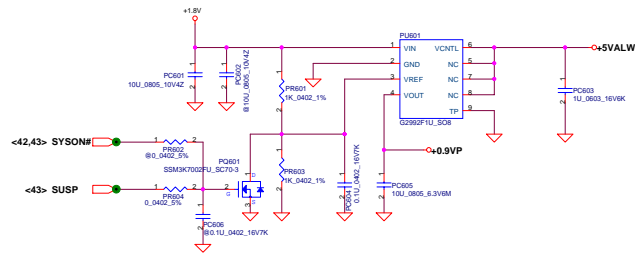
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETITION 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.				Doc No.	LA-4102P Blade discrete
				Rev	0.4
				Issue	Monday, February 25, 2008
				Page	44 of 58





Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title	1.05V VCCP
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
					LA-4102P Blade discrete
				Date	Monday, February 25, 2008
				Sheet	46 of 52
				Rev	0.4





Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Title
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
				04
				Date
				Monday, February 25, 2008
				Sheet
				48
				51
				52







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

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	43	DC Connector /CPU_OTP	11/06	Compal	Add PD4 & PC12	Add PD4 & PC12	
2	45	3.3VALWP/5VALWP	11/06	Compal	for Layout	Change PQ301, cancel PQ303.	
3	44	Charger	11/06	Compal	EMI solution	Add PC128	
4	49	CPU_CORE	11/06	Compal	EMI solution	Add PC240	
5	47	1.5VSP/VGA_CORE	11/06	Compal	for VGA voltage steps	Add PQ505, PR523, PR524, PR525	
6	45	3.3VALWP/5VALWP	12/31	Compal	PWR request	Add PU302, control signal changed to ACOFF	
7	44	Charger	12/31	Compal	EMI solution	Add PC129, PC130, PC131, PC132, PC133	
8	49	+CPU_CORE	12/31	Compal	EMI solution	Add PC242	
9	47	+1.5VSP/VGA COREP	01/02	Compal	HW request	Change PR513 to 0_ohm	
10	44	Charger	01/02	Compal	EMI solution	Add PC135 and PR141	
11	49	+CPU_CORE	02/15	Compal	Change high-side MOS for WWAN	Change PQ201 and PQ204 to powerpak	
12	43	DC Connector /CPU_OTP	02/15	Compal	AC LED change to KBC control	ACLED# connect to EC pin 97	
13	43	DC Connector /CPU_OTP	02/19	Compal	WWAM issue	add PC241 47pF	
14	49	+CPU_CORE	02/19	Compal	WWAM issue	add PC243 PC244 47pF	

Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	Size	Document Number
<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>				Custom	LA-4102P Rev discrete
				Date	Monday, February 25, 2008
				Sheet	51 of 52

**Compal Electronics, Inc.**  
**Power Changed List History-1**  
 Rev 0.4

Item	Fixed Issue (Reason for change)	PAGE	Modify List	Date	Phase
1	Transation Fail	08	C41, C42, C43, C44 Change ESR=7m ohm	11/21	DB
2	Disable TV out function from Docking	20	TV signal unconnected,DACB_VDD pull low 10K (R948).	11/07	DB
3	Update Connetor Library		CRT(JCRT1), HDMI(JHDMI1), ESATA(JP53), Finger print(JJP24), FAN(JP2), Speaker(JP60), Multi bay(JP12), Dual LED(D53, D54	11/17	DB
4	Delete LVDS B channel	19,20	Schematic Delete	11/17	DB
5	USB camera Footprint error	19	Change U42 to G916-390T1UF SOT23, it adjustable mode, R1091=215K , R1093=100K,Add GPIO 20 to turn off power	11/07	DB
6	Reserve Card reader D3E function	27,32	GPIO6= CR_CPPE# , GPIO22=CR_WAKE#	11/17	DB
7	Swap PCIE LAN and New card	27	Swap PCIE4 and PICE6	11/17	DB
8	Change GPU 1.8VS power	20, 21	Change 1.8VS to +VDD_MEM18	11/17	DB
9	Change G sensor control from SB, LED drive by +5VS	27, 39	Change G sensor control from SB	11/17	DB
10	Avoid Battery mode can't boot issue	38, 45	Add +3VALW GD to EC_RSMRST# to fix Battery mode can't boot issue	11/17	DB
11	Add G sensor ST and Bosch	37	Add G sensor ST and Bosch	11/17	DB
12	Change LAN solution (Marvell to Realtek)	30	Change LAN solution (Marvell to Realtek)	11/17	DB
13	LAN transformer interfere	30	U19 Change to correct transformer type	11/17	DB
14	Cardreader schematic review,add D3E function	32	R709-->10K, R1047-->8.2K, R1128-->Stuff, R705-->@, U37-->@, Cardreader LED-->+5VS, add D3E function	11/17	DB
15	Jack can't detect normal	33	R1059 change from 39.2 to 39.2K	11/17	DB
16	Docking can not power on	40	Add power on circuit D57,Q13R751,R752,R753	11/17	DB
17	HP audio team recommend	33, 35	C1480-C1487, C1352, C1354 change to 0.022U, Amp output setup to 15.6 dB, Reserve C747, C748 for GNDA and GND	11/17	DB
18	Audio jack can't detect normal	35	Add Pull up resistor R750 to +3VALW	11/17	DB
19	Docking HP audio test fail	35	Add C795, C796 to avoid DC level, and add R968, R969 to reduce HP out level	11/17	DB
20	Leakage problem	38	Correct direction prectek leakage	11/07	DB
21	EC pin define update	38	Delete EC_PME#, SYSON PU, SUSP# PU, LID_SW# change to +3VALW, Delete CLKRUN#, R582->@ for C0 chip, C1R PU+5VL, add 100P to BATT_OVP(EC recommend)	11/07	DB
22	Can't Hibernation(SLP_S4#)	38	Connect SLP_S4# to SB	11/17	DB
23	EC can't receive docking present	40	CONA# change +3VL	11/12	DB
24	Reserve capacitor on digital MIC for EMI request	19	Add C496,C498	11/07	DB
25	Add 2N7002 to GND on HDMI to avoid leakage.	21	Add Q74	01/04	SI
26	+VDD_MEM18 to +1.8VS, change to jummpers	22	Delete R1124,R1125 add PJP605	01/04	SI
27	HDCP ROM fail. HDCP_SCL need pull high.	22	R224 no stuff. R213 stuff.	01/04	SI
28	Reserve capacitor on digital MIC for SED, WWAN noise	26	Add C499,C502	01/04	SI

Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	HW PIR	
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
					LA-4102P Blade discrete
				Date	Monday, February 25, 2008
				Sheet	52 of 53
				Rev	0.4

Item	Fixed Issue (Reason for change)	PAGE	Modify List	Date	Phase
1	Change transformer vendor	30	change U19 library	01/04	SI
2	XMIT_OFF add a diode to avoid leakage.	31	Add D88	01/04	SI
3	Card reader recommend	32	XD_ALE need pull +3VS not pull low.	01/04	SI
4	change Q54 from transistor to MOS for cardreader LED.	32	Change Q54	01/04	SI
5	speaker pop issue	35	Change C1488 to 1U	01/04	SI
6	Reserve capacitor on SPI_FSEL#,CLK#,FER for EMI request	36	Add C2125,C2126,C2127	01/04	SI
7	Change EC_PME pull high from +3VL to +3VALW	38	R585 stuff	01/04	SI
8	Reserve damping resistor on SPI_CLK for EMI request	38	Add R191	01/04	SI
9	WLAN LED issue,WL_BLUE_LED# pull +3VS	39	Add R716	01/04	SI
10	Add bypass capacitance on sensor bottom	39	Add C261(4.7U)	01/04	SI
11	EC can't detect DOCK_PRESENT.	40	change R754 to 22 Ohm,R623 to 2K	01/04	SI
12	Add DOCK_VOL_UP#,DOCK_VOL_Down# pull +3VS	40	Add R594,R596	01/04	SI
13	SPDIF issue	40	follow Vader	01/04	SI
14	Docking CRT blurred	40	Change ping 31,39,22 connect to GND	01/04	SI
15	Change R650 and C770 to modify the power sequence	41	change R650 to 1K, C770 to 0.1u	01/04	SI
16	Add 12P on CLK_14M_ICh for WWAN noise	17	Add 12P on CLK_14M_ICh	02/15	PV
17	BKOFF# reserve pull low 10K	19	reserve R717	02/15	PV
18	Reserve CMD27 to support 64M X16	7,8	Reserve CMD27 to support 64M X16	02/15	PV
19	Reserve cap on HDA_BITCLK for WWAN noise issue	26	Reserve cap on HDA_BITCLK	02/15	PV
20	Reserve to prevent ESD issue	30	Reserve ESD diode on LAN LED pin	02/15	PV
21	Change WLAN and WWAN 0402 resistor to 0805	31	Change WLAN and WWAN 0402 resistor to 0805, and WLAN change to +3VS power plane	02/15	PV
22	Direct drive LED, and add D3E function diode	32	Direct drive LED and XD_ALE Pull L, and add D86 for D3E function	02/15	PV
23	Change R1092 value on BT power switch Gate	36	Change R1092 to 10K	02/15	PV
24	Correct AC_LED control by EC	38	AC_LED Change controll by EC	02/15	PV
25	Change all LED limit current resistor to 200 ohm	39	Change all LED limit current resistor to 200 ohm and add Touch pad LED for PR	02/15	PV
26	Add 33 ohm for MUTE_LED and DOCK_SLP_BTN#	40	Add 33 ohm for MUTE_LED and DOCK_SLP_BTN#	02/15	PV
27	follow check list ver:1.5	6	change R13 to 56 ohm;change R2~R8 to 51 ohm;change R11 to 0ohm	02/20	PV
28	Reserve Cap for EMI	42	add C1250,C1249	02/20	PV

Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	HW PIR	
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
					LA-4102P
					Rev 0.4
				Date	Monday, February 25, 2008
				Sheet	53 of 53

Item	Fixed Issue (Reason for change)	PAGE	Modify List	Date	Phase
1	follow check list Ver:1.5	17	reserve R148	02/15	PV
2	follow check list Ver:1.5	9	change R45,R48 to 10K	02/15	PV
3	boot code "88" power sequence faill	27	add Diode from PWROK to RSMRST	02/15	PV
4	Change BT,LAN,DOCK,Multibay connect for DFX			02/15	PV
5	Change WWAN and WLAN LED	39		02/15	PV
6	For EMI	37	SPL_CLK add R2118 , R2119 , R2120 => 33ohm add C2125 , C2126 , C2127 => 22pF;R553, 554, 556 =>10ohm	02/15	PV
7	For EMI	30	LAN add C656 and C657 => 0.1uF	02/15	PV
8	For EMI	39	T/P add D28 and C729	02/15	PV
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					

Security Classification		Compal Secret Data		Title	
Issued Date	2008/02/25	Deciphered Date	2008/02/25	HW PIR	
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
					LA-4102P Blade discrete
				Date	Monday, February 25, 2008
				Sheet	54 of 53
				Rev	0.4