

# Compal confidential

ISRAA LA-3441P Schematics Document

Mobile Merom uFCPGA with Intel  
Crestline\_PM+ICH8-M core logic

2006-09-21

REV:0.1

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	Cover Sheet	
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 ISRAA LA-3441P	Rev 0.1
				Date:	Friday, September 22, 2006	Sheet 1 of 48

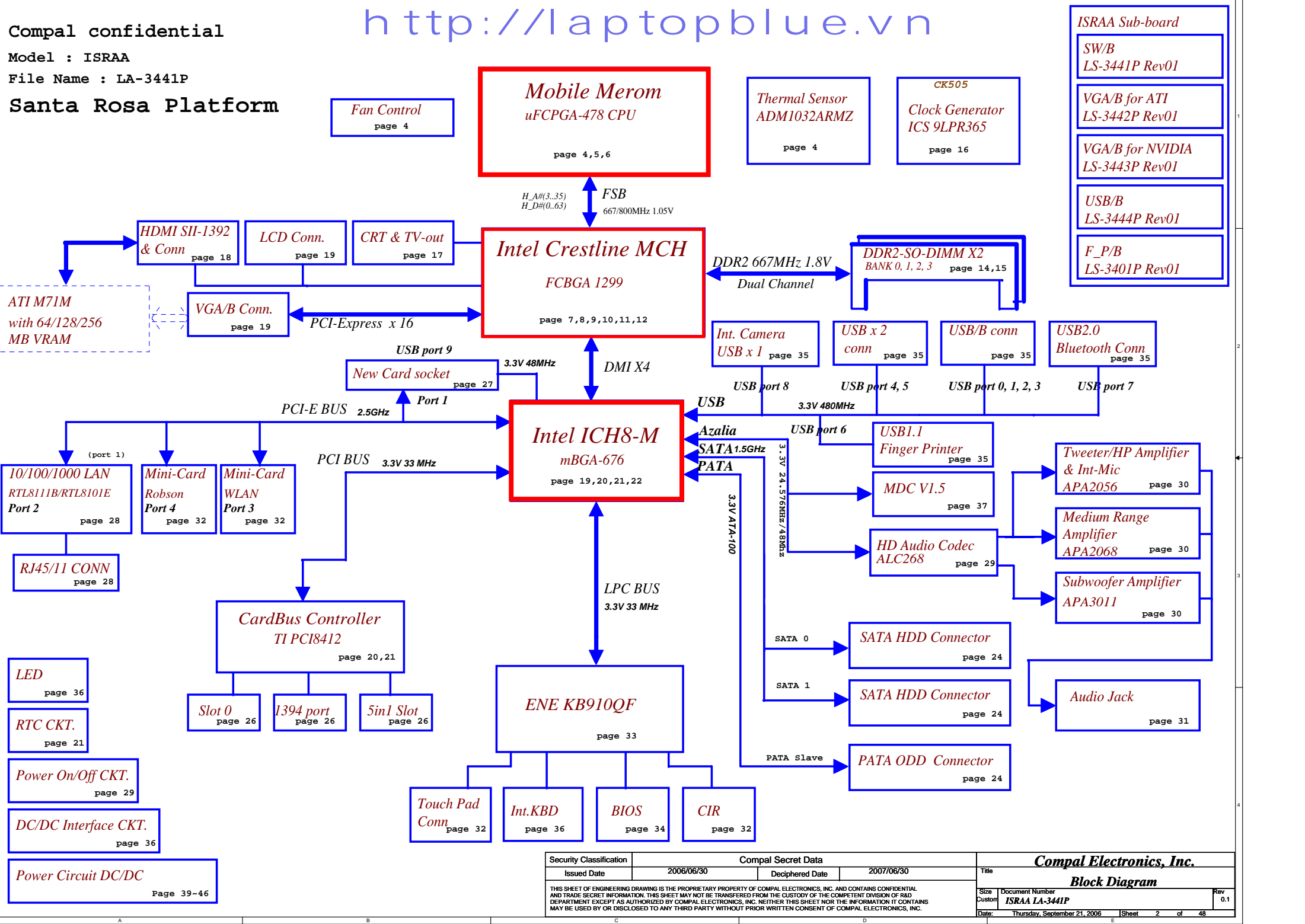
Compal confidential

Model : ISRAA

File Name : LA-3441P

Santa Rosa Platform

http://laptopblue.vn



Security Classification		Compal Secret Data		Title	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	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 Custom	Document Number
				ISRAA LA-3441P	
				Date: Thursday, September 21, 2006	Rev 0.1
				Block Diagram	
				Sheet 2 of 48	

## Voltage Rails

Power Plane	Description	S0-S1	S3	S5
VIN	Adapter power supply (18.5V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+1.05Vs	1.05V power rail for Processor I/O and MCH/ICH core power	ON	OFF	OFF
+0.9VS	0.9V switched power rail for DDRII Vtt	ON	OFF	OFF
+1.5VS	1.5V switched power rail for PCI-E interface	ON	OFF	OFF
+1.8V	1.8V power rail for DDRII	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+2.5VS	2.5V switched power rail for MCH video PLL	ON	OFF	OFF
+1.25Vs	1.25Vs power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+RTC_VCC	RTC power	ON	ON	ON

Note : ON\* means that this power plane is ON only with AC power available, otherwise it is OFF.

## External PCI Devices

DEVICE	PCI Device ID	IDSEL #	REQ/GNT #	PIRQ
1394	D0	AD20	2	A,B,C
CARD BUS	D4	AD20	2	A,B,C
SIN1	D4	AD20	2	A,B,C

## KB910 I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
SM1 24C16	A0H	1010000Xb
SM1 SMART BATTERY	16H	0001011Xb
SM2 ADM0132	98H	1001100Xb
CPU THERMAL MONITOR		

## ICH8-M SM Bus address

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	10100000
DDR SO-DIMM 1	A4	10100100
CLOCK GENERATOR (EXT.)	D2	11010010

## Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 1%			
Board ID	Rb / Rd / Rf	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0.100 V
1	8.2K +/- 1%	0.216 V	0.250 V	0.289 V
2	18K +/- 1%	0.436 V	0.503 V	0.538 V
3	33K +/- 1%	0.712 V	0.819 V	0.875 V
4	56K +/- 1%	1.036 V	1.185 V	1.264 V
5	100K +/- 1%	1.453 V	1.650 V	1.759 V
6	200K +/- 1%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

## BOARD ID Table

Board ID	PCB Revision
0	
1	
2	
3	
4	
5	
6	
7	

## SKU ID Table

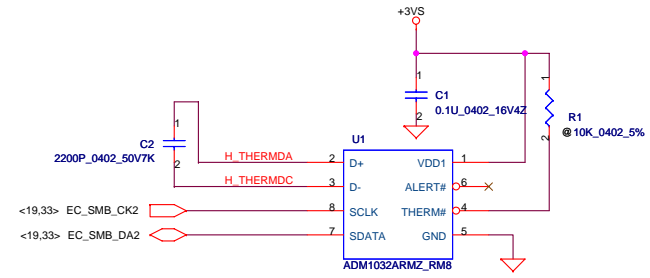
SKU ID	SKU
0	10
1	10G
2	10H
3	
4	
5	
6	
7	

## BTO Option Table

BTO Item	BOM Structure
2ND HDD	2HDD@
LAN	100M@ 1000M@
WLAN	WLAN@
NB	GM@ PM@
BT	BT@
MIC	MIC@
CIR	CIR@
FINGER PRINT	FP@
Express Card	NEWCARD@
PCMCIA Card	PCMCIA@
Camera	Camera@
Robson	Robson@
HDMI	1392@ 1932@ M72M@
SPEAKER	

## USB PORT LIST

PORT	DEVICE
0	RIGHT USB Port (Saml Board)
1	RIGHT USB Port (Saml Board)
2	RIGHT USB Port (Saml Board)
3	RIGHT USB Port (Saml Board)
4	LEFT USB Port
5	LEFT USB Port
6	Fingerprint
7	Blue Tooth
8	Internal Camera
9	Express Card

[illegible][illegible]

H\_PROCHOT#

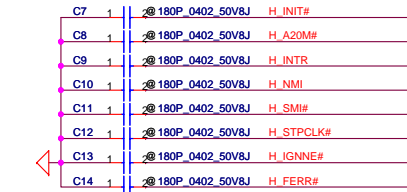
+1.05V

R9 68\_0402\_5%

R10 @56\_0402\_5%

MMBT3904\_SOT23

OCP#



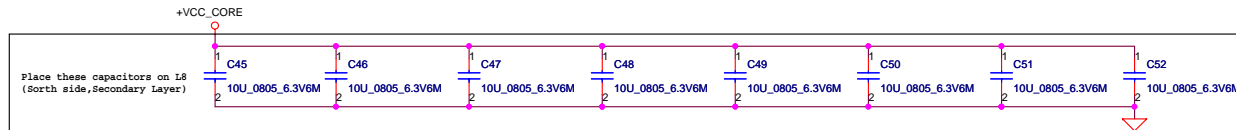
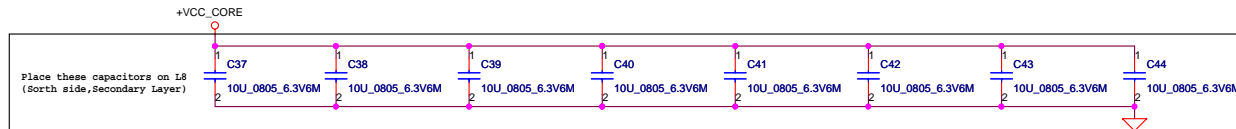
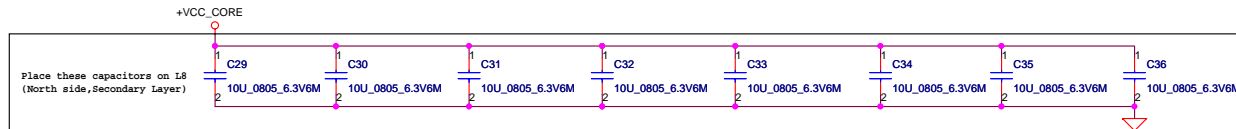
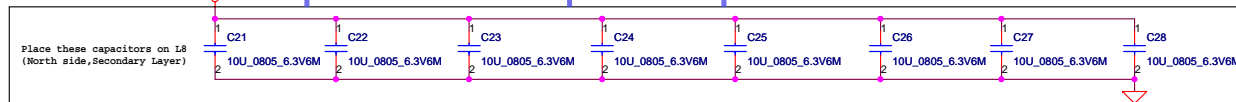
	<b>Compal Electronics, Inc.</b>
--	---------------------------------

**Merom(1/3)-AGTL+**

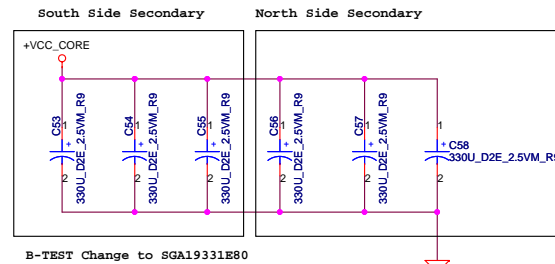
Size	Document Number
Custom	<b>ISRAA LA-3441P</b>

Date: Friday, September 22, 2006 Sheet 4 of 48



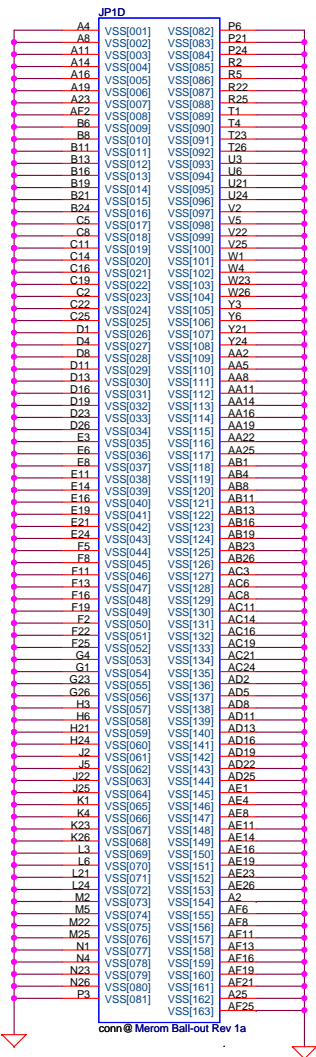
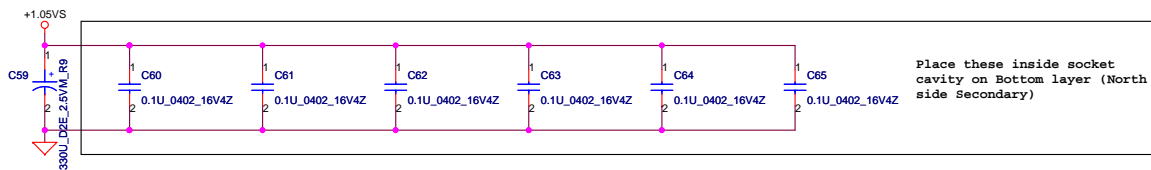


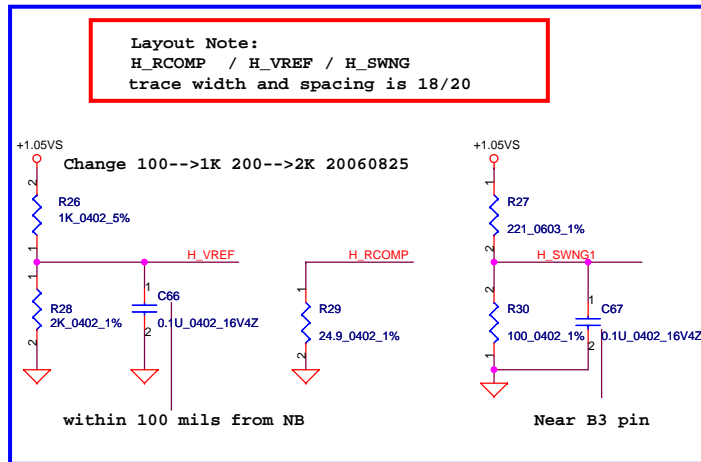
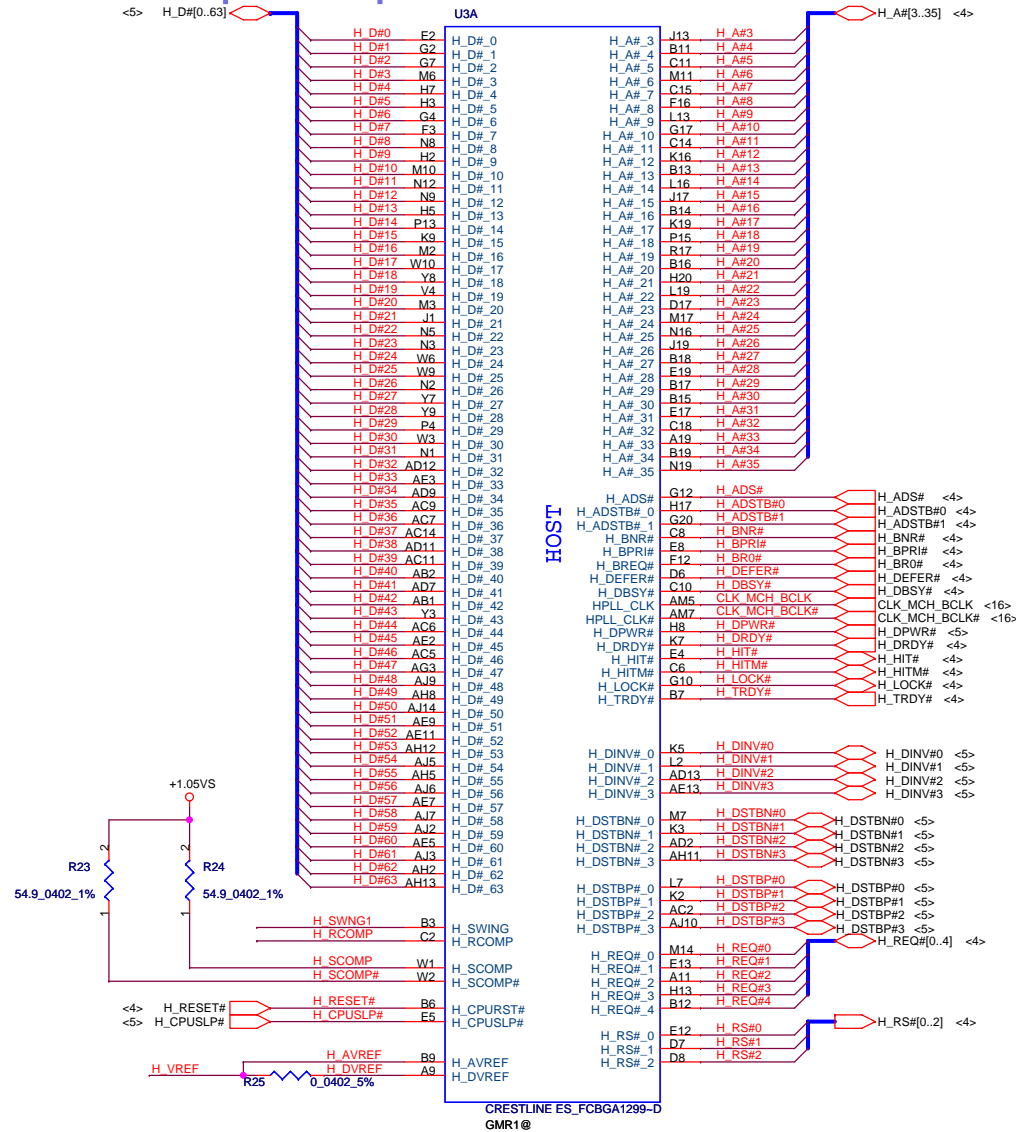
Mid Frequency Decoupling



ESR <= 1.5m ohm  
Capacitor > 1980uF

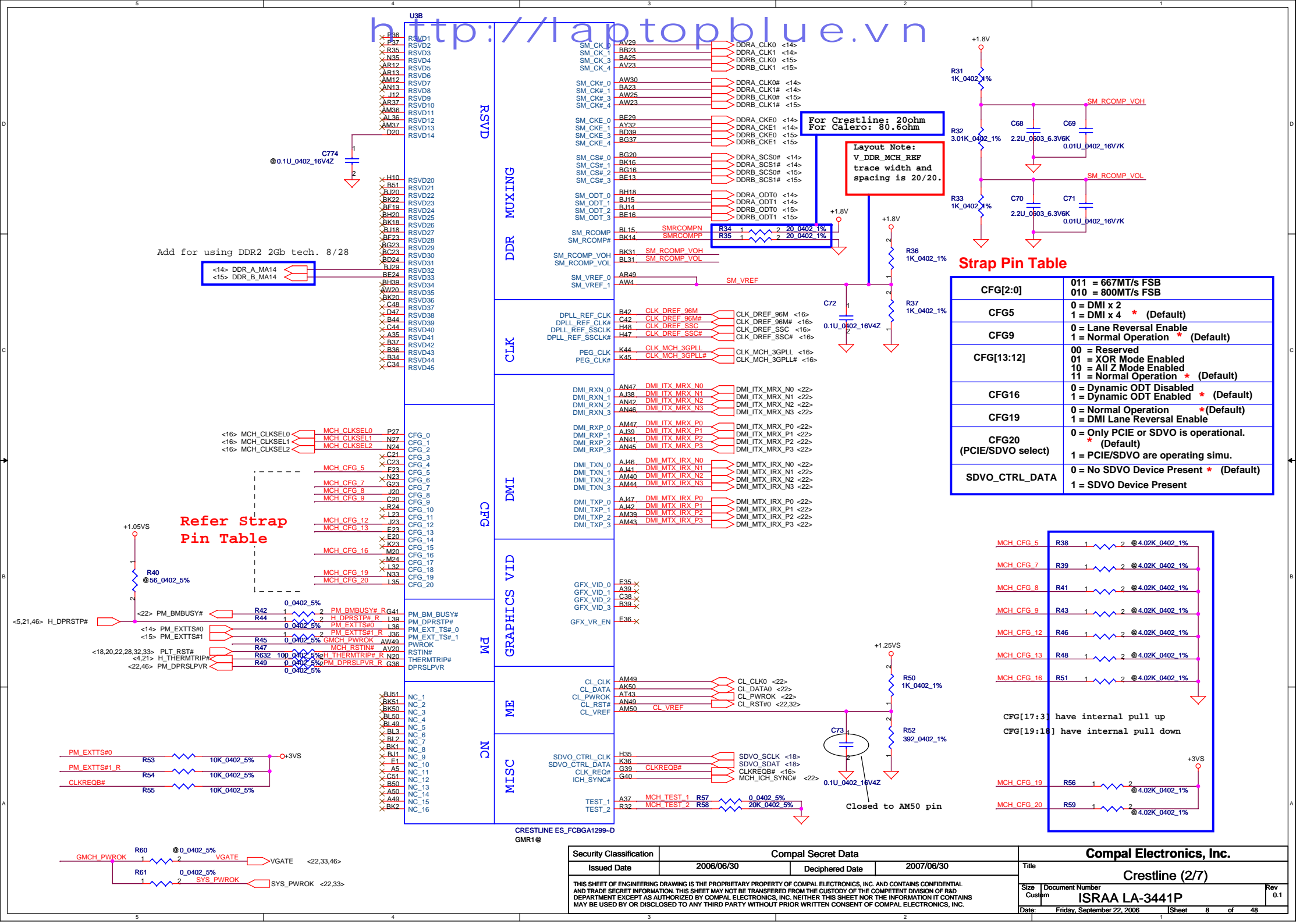
330uF ESR 7m ohm X 6 PCS





Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	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.				Crestline (1/7)	
Size B	Document Number	ISRAA LA-3441P		Rev	0.1
Date:	Friday, September 22, 2006	Sheet	7	of	48

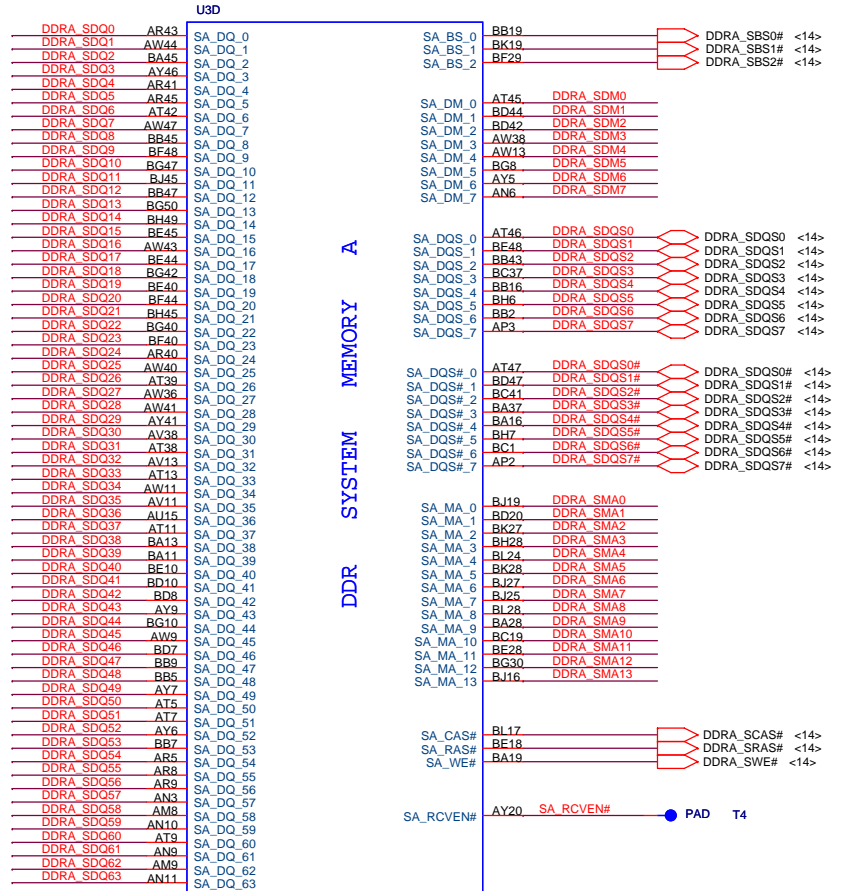




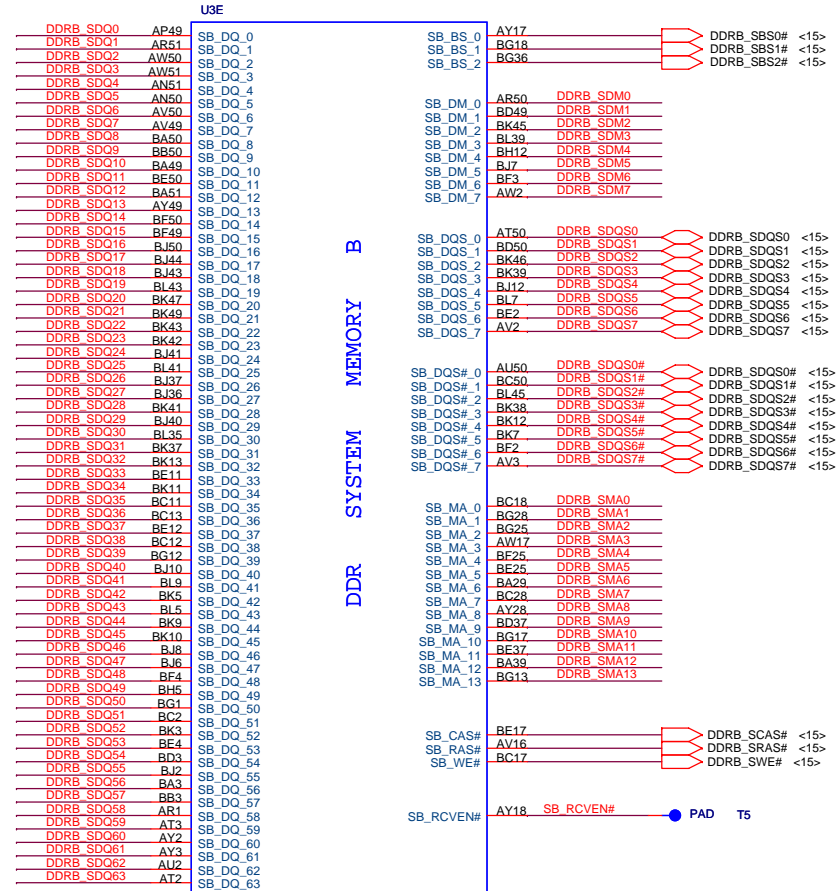


<14> DDRA\_SDQ[0..63] DDRA\_SDQ[0..63]  
 <14> DDRA\_SDM[0..7] DDRA\_SDM[0..7]  
 <14> DDRA\_SMA[0..13] DDRA\_SMA[0..13]

<15> DDRB\_SDQ[0..63] DDRB\_SDQ[0..63]  
 <15> DDRB\_SDM[0..7] DDRB\_SDM[0..7]  
 <15> DDRB\_SMA[0..13] DDRB\_SMA[0..13]

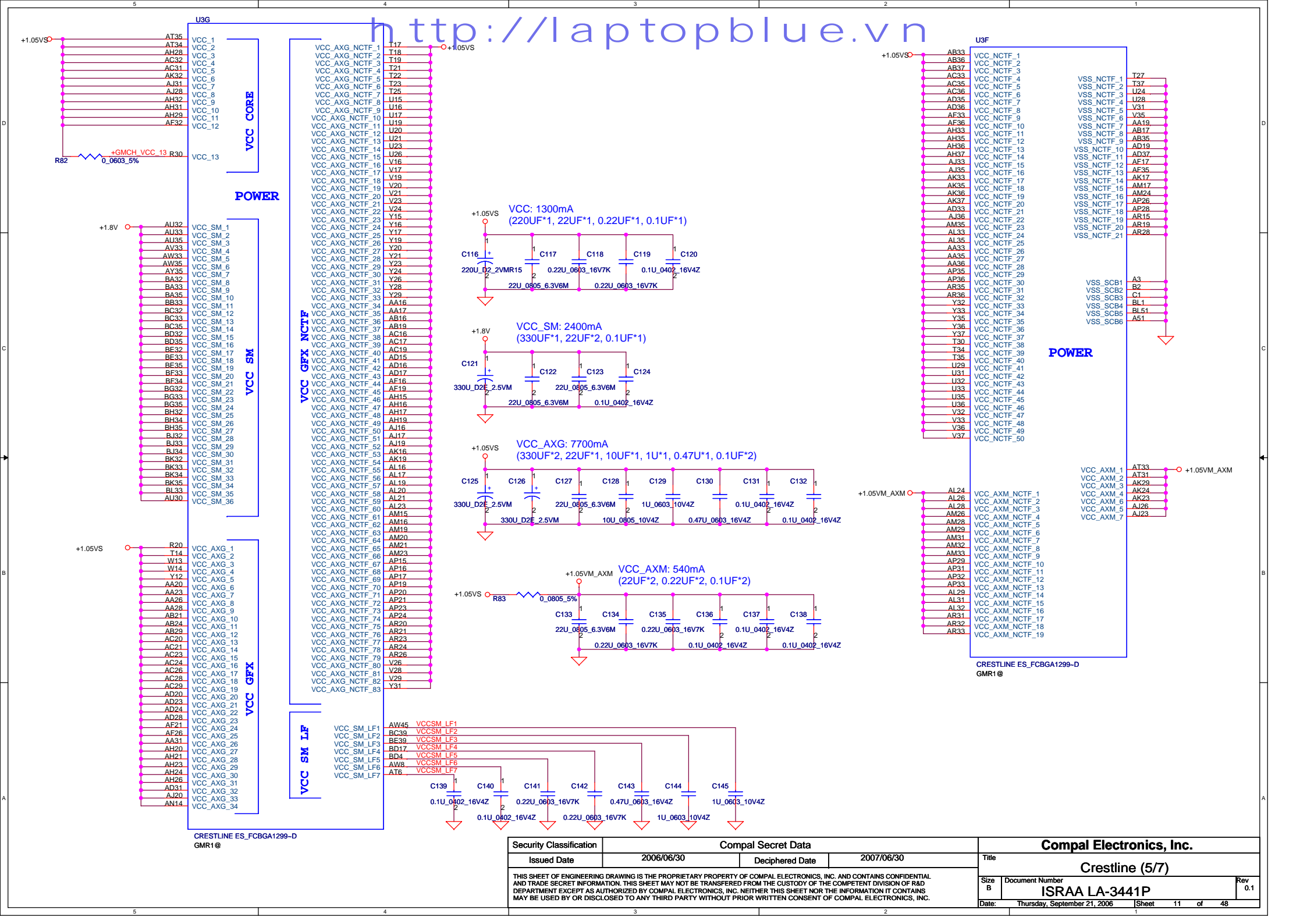


CRESTLINE ES\_FCBGA1299-D  
 GMR1@



CRESTLINE ES\_FCBGA1299-D  
 GMR1@



[illegible]

http://laptopblue.vn

The diagram illustrates the internal connections of the Crestline ES\_FCBGA1299-D GMR1@ microprocessor, showing the power and signal planes and various components.

**Power Planes:**

- VCC CORE:** Includes connections for VCC\_1 through VCC\_12, VCC\_13, and VCC\_14. A +1.05V supply is connected to VCC\_13 through a resistor R82 and a capacitor C82 (0.0603\_5%).
- VCC SM:** Includes connections for VCC\_SM\_1 through VCC\_SM\_36. A +1.8V supply is connected to VCC\_SM\_1 through a capacitor C121 (330U\_D2E\_2.5VM).
- VCC GFX NCTF:** Includes connections for VCC\_AXG\_NCTF\_1 through VCC\_AXG\_NCTF\_83. A +1.05V supply is connected to VCC\_AXG\_NCTF\_1 through a capacitor C116 (220U\_D2\_2VMR15).
- VCC AXG:** Includes connections for VCC\_AXG\_1 through VCC\_AXG\_33. A +1.05V supply is connected to VCC\_AXG\_1 through a resistor R83 and a capacitor C83 (0.0805\_5%).
- VCC SM LF:** Includes connections for VCC\_SM\_LF1 through VCC\_SM\_LF7. A +1.05V supply is connected to VCC\_SM\_LF1 through a resistor R83 and a capacitor C83 (0.0805\_5%).
- VCC AXM:** Includes connections for VCC\_AXM\_1 through VCC\_AXM\_7. A +1.05V supply is connected to VCC\_AXM\_1 through a resistor R83 and a capacitor C83 (0.0805\_5%).

**Signal Planes:**

- VCC NCTF:** Includes connections for VCC\_NCTF\_1 through VCC\_NCTF\_50. A +1.05V supply is connected to VCC\_NCTF\_1 through a resistor R83 and a capacitor C83 (0.0805\_5%).
- VCC SCB:** Includes connections for VCC\_SCB1 through VCC\_SCB6. A +1.05V supply is connected to VCC\_SCB1 through a resistor R83 and a capacitor C83 (0.0805\_5%).

**Components:**

- Capacitors:** C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145.
- Resistors:** R82, R83.

**Security Classification:** Compal Secret Data

**Issued Date:** 2006/06/30

**Deciphered Date:** 2007/06/30

**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.**

**Crestline (5/7)**

**Size B**

**Document Number**

**ISRAA LA-3441P**

**Date:** Thursday, September 21, 2006

**Sheet** 11 **of** 48

**Rev** 0.1

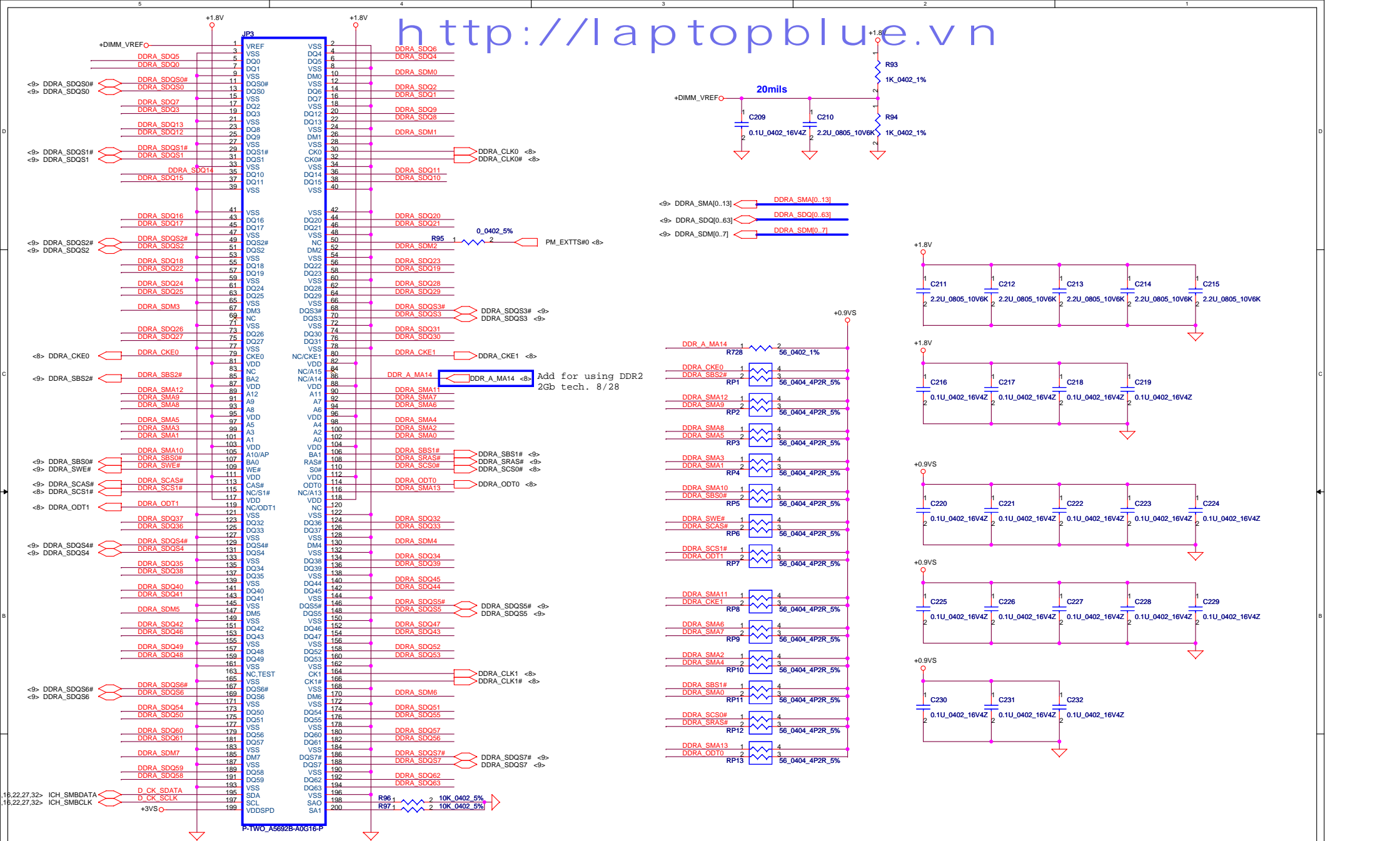
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Crestline (5/7)		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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		
				ISRAA LA-3441P		
				Date: Thursday, September 21, 2006 Sheet 11 of 48		

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	Crestline (6/7)	
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 B	Document Number	
				ISRAA LA-3441P		Rev 0.1
				Date:	Friday, September 22, 2006	Sheet 12 of 48



CRESTLINE ES\_FCBGA1299-D  
GMR1@

CRESTLINE ES\_FCBGA1299-D  
GMR1@



DIMM0 STD H:9.2mm (BOT)

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	DDR II-SODIMMO	
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 B	Document Number
				ISRAA LA-3441P	
				Date:	Friday, September 22, 2006
				Sheet	14 of 48

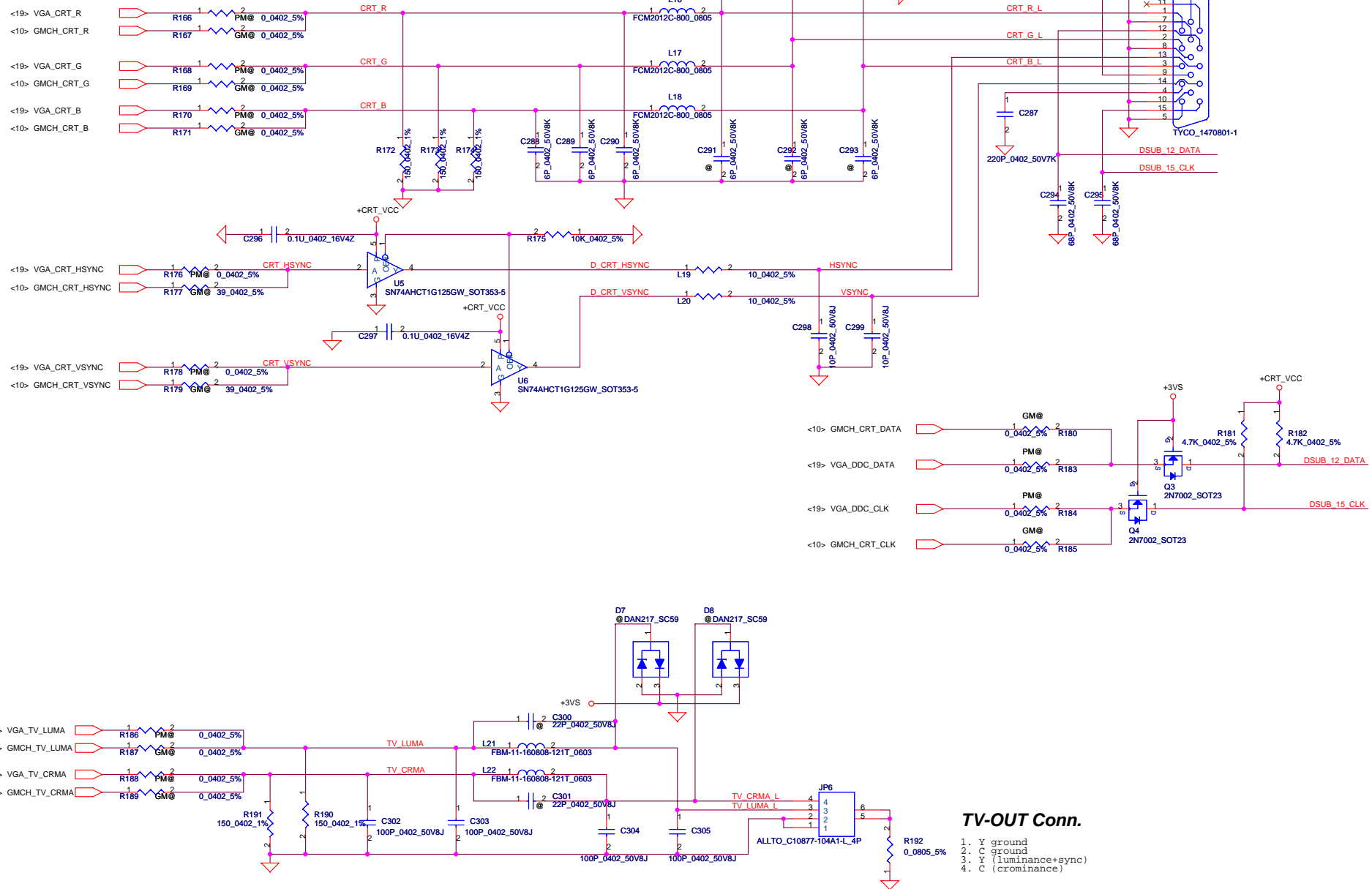




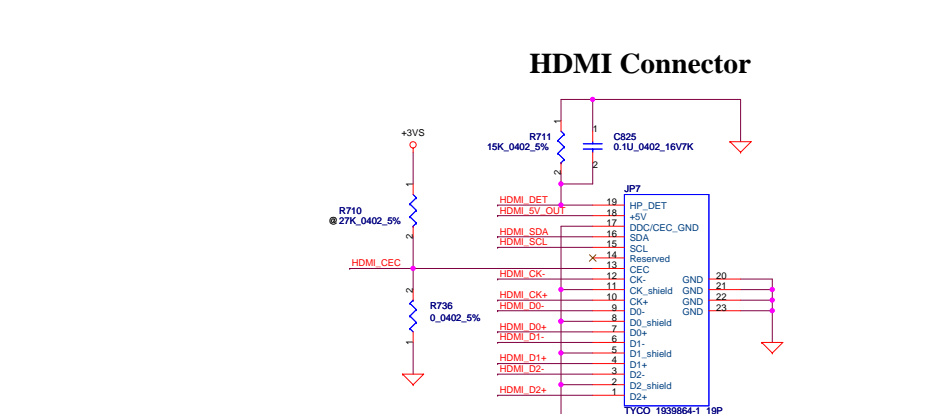
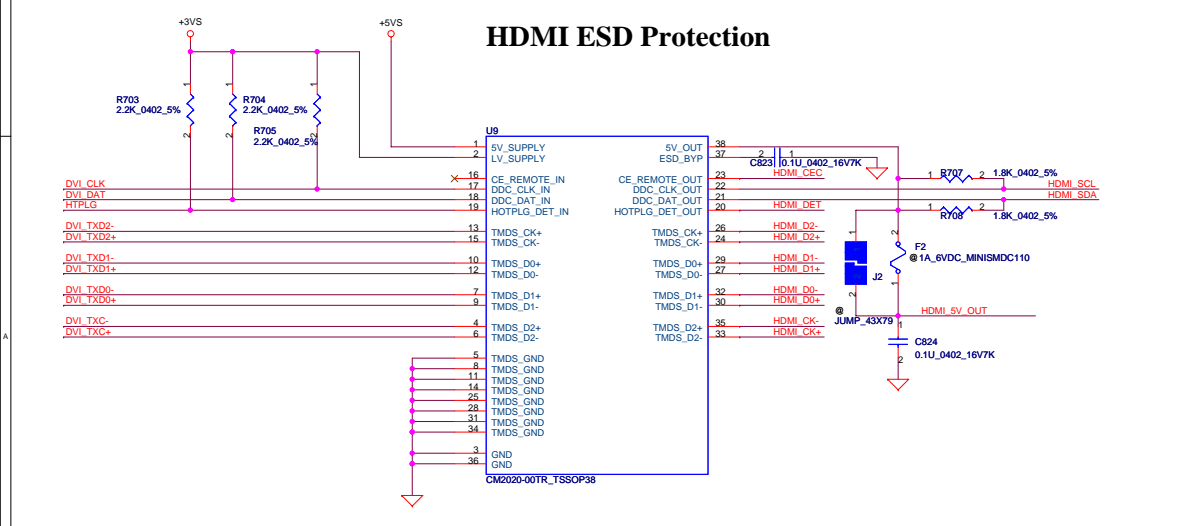


# CRT CONNECTOR

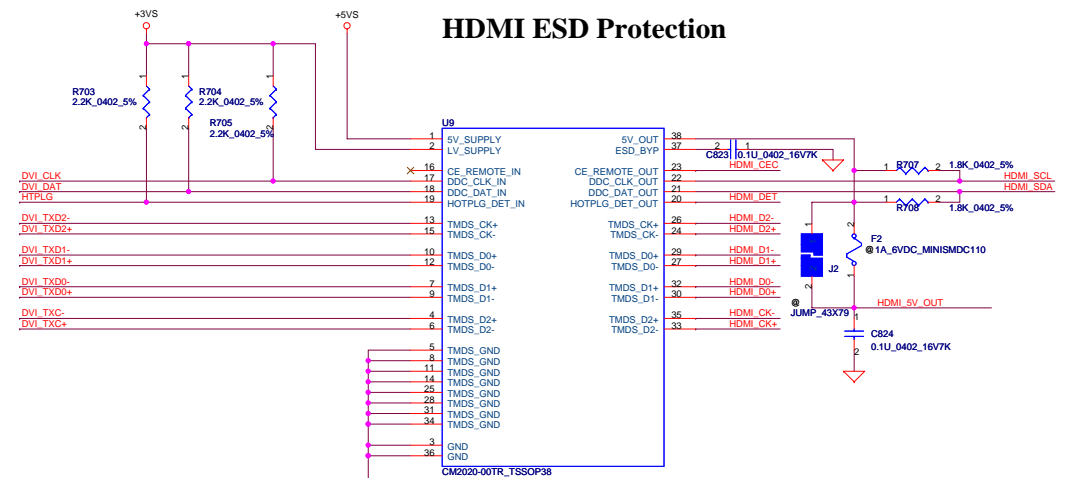
http://laptopblue.vn



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	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.				CRT & TVout Connector	
				Size	Document Number
				ISRAA LA-3441P	
Date: Friday, September 22, 2006				Sheet	17 of 48



## HDMI Connector



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	Sii1392/1932 & HDMI Connector	
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	ISRAA LA-3441P	0.1
Date:				Friday, September 22, 2006	Sheet	18 of 48

# LCD POWER CIRCUIT

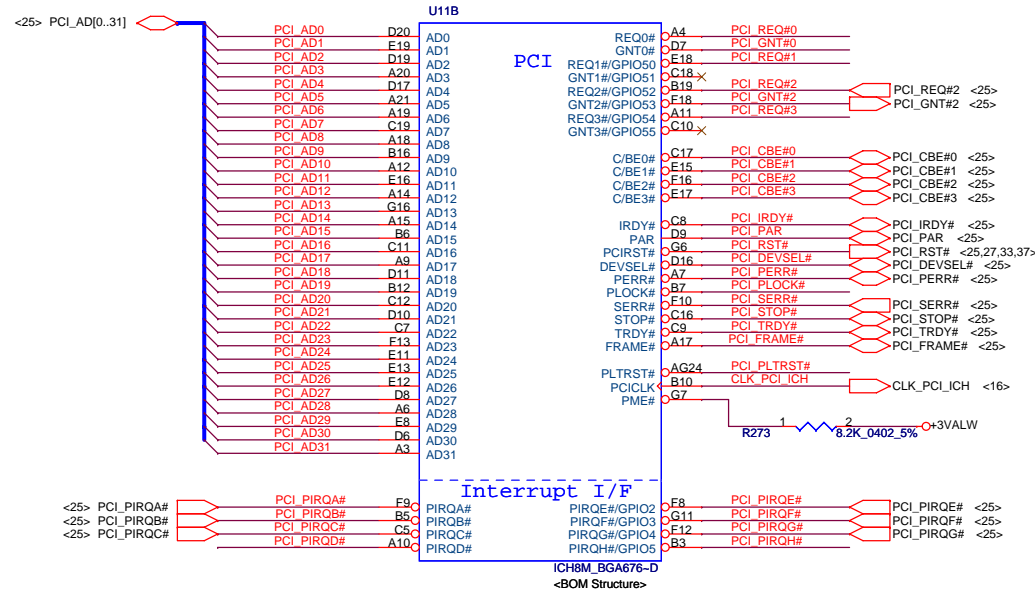
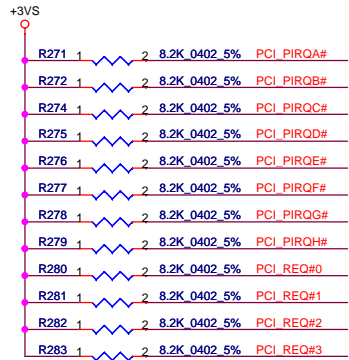
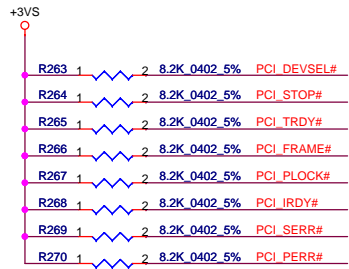
## VGA BOARD Conn.

## LCD/PANEL BD. Conn.

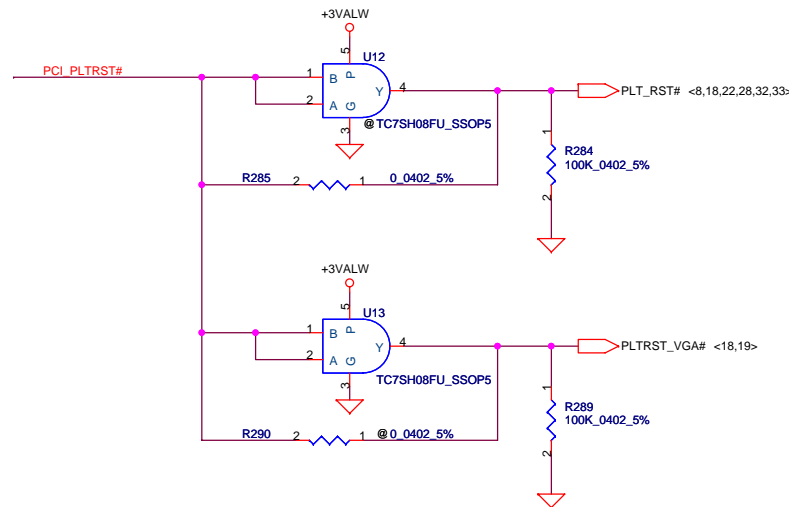
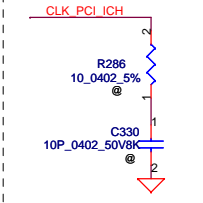
## B+ for NVIDIA VGA BOARD USE

ALL R CLOSE TO LVDS CONNECTOR

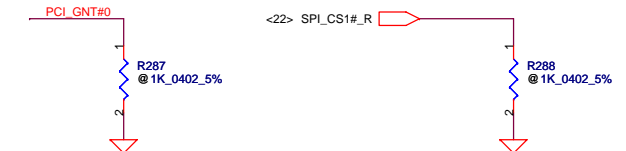
Security Classification		Compal Secret Data		Title	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				VGA CONN	
Size		Document Number		Rev	
		ISRAA LA-3441P		0.1	
Date:		Friday, September 22, 2006		Sheet 19 of 48	

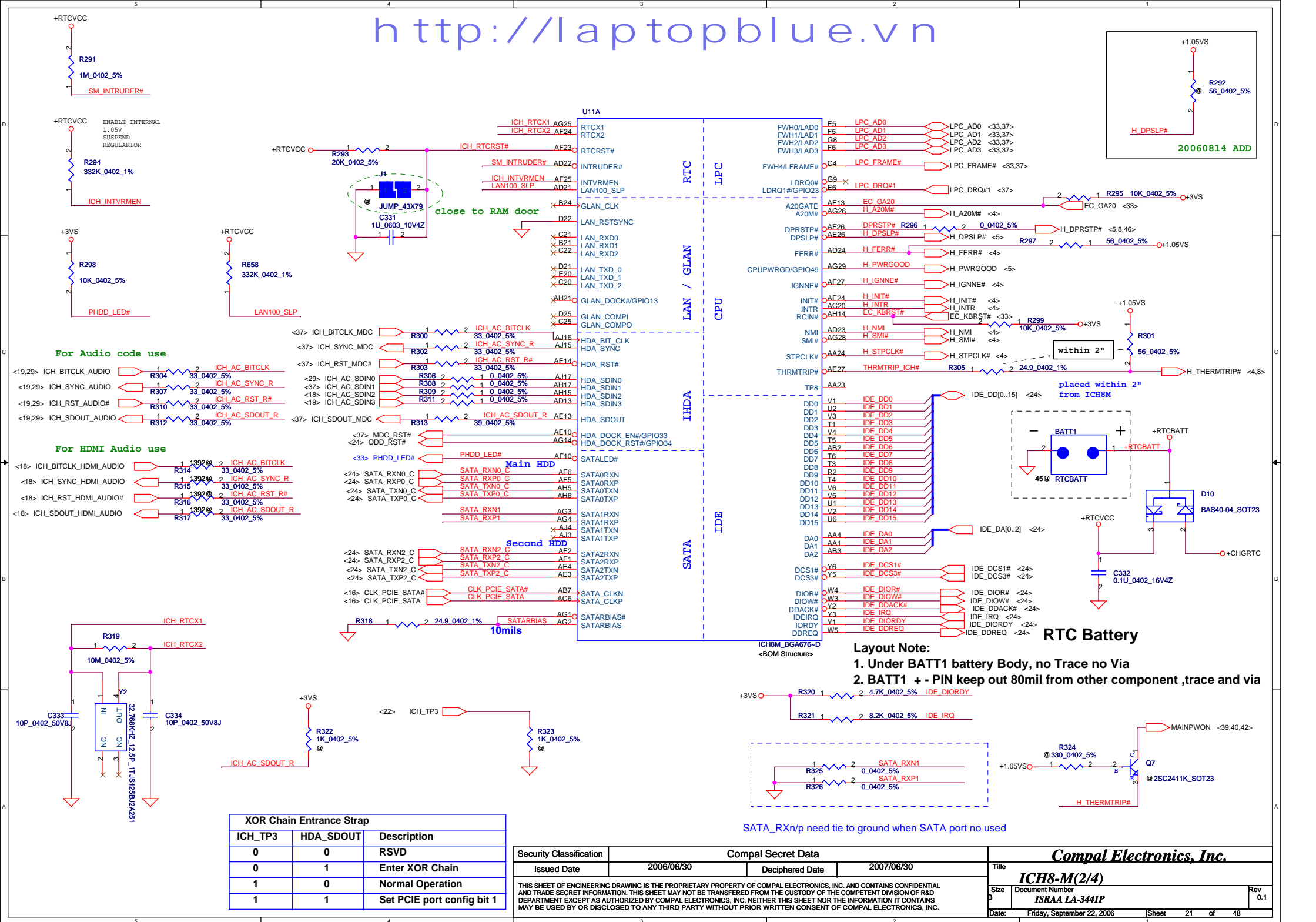


Place closely pin A9

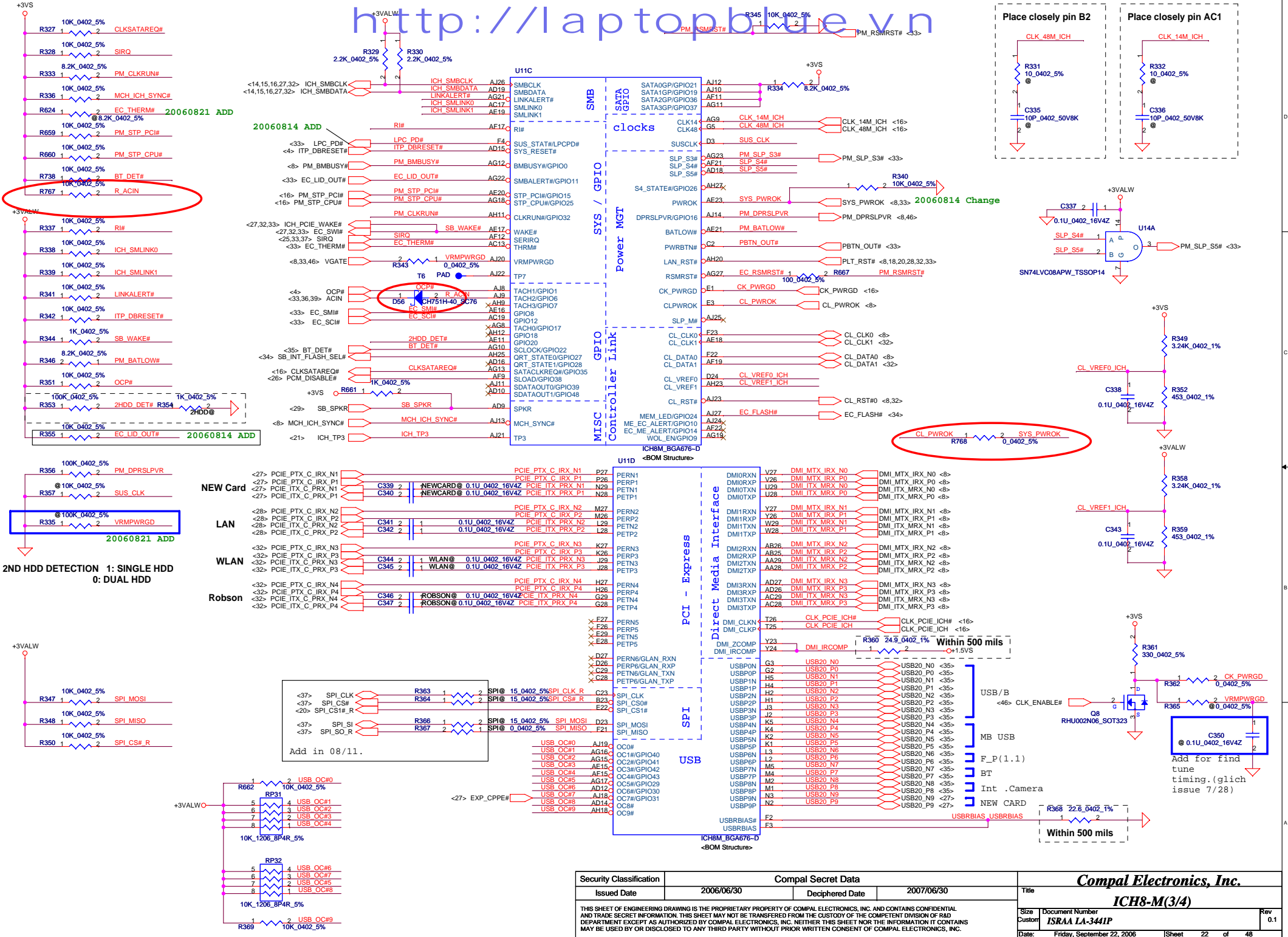


Boot BIOS Strap		
PCI_GNT0#	SPI_CS#0	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *



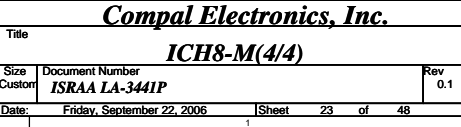


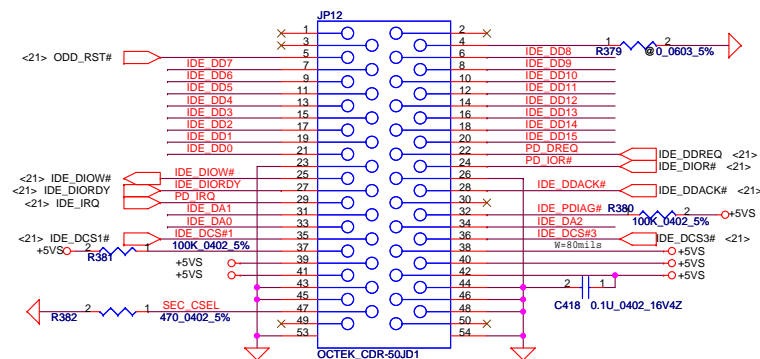




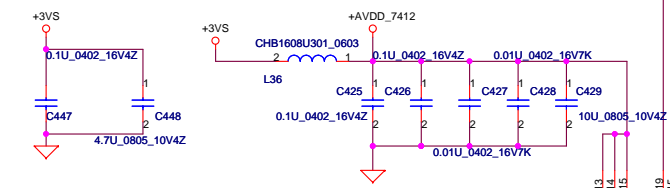
Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b>		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title <b>ICH8-M(3/4)</b>		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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>ISRAA LA-344IP</b>	0.1
				Date:	Friday, September 22, 2006	Sheet 22 of 48



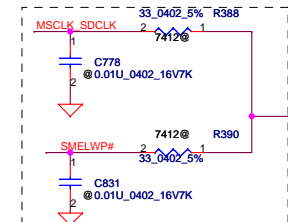




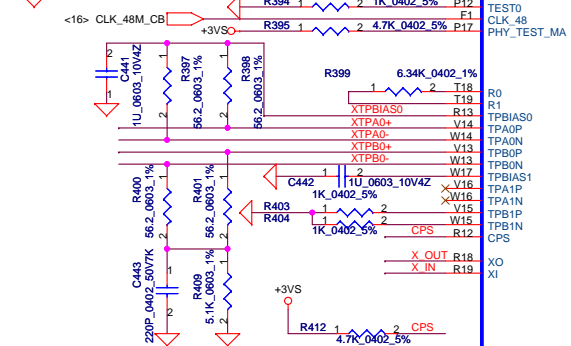
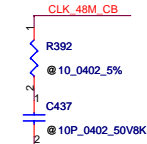
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS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



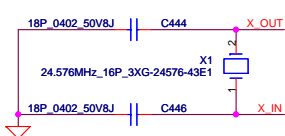
<20> PCI\_AD[0..31] PCI\_AD[0..31]  
<20> PCI\_CBE[0..3] PCI\_CBE[0..3]

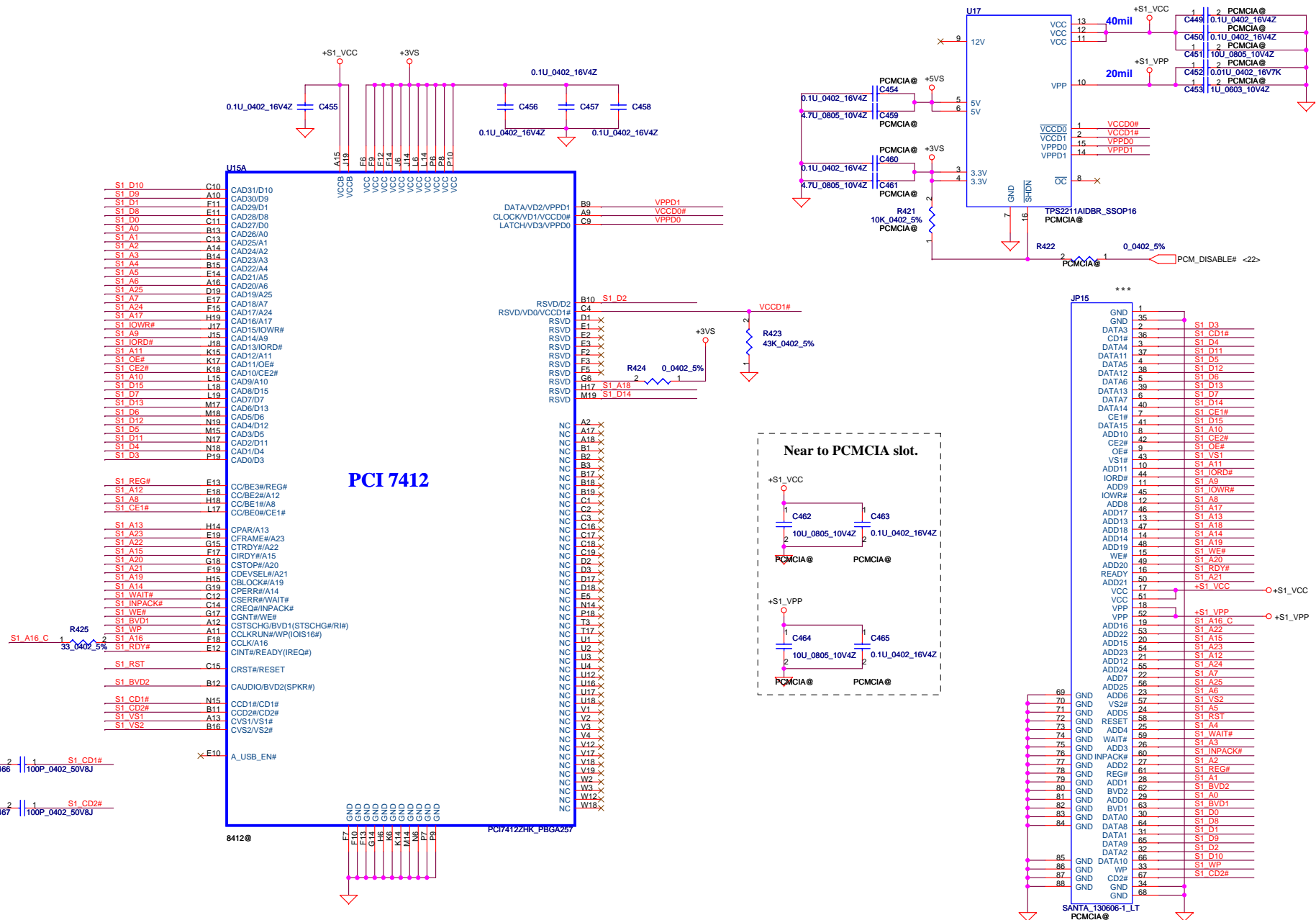


place near Chip 8412

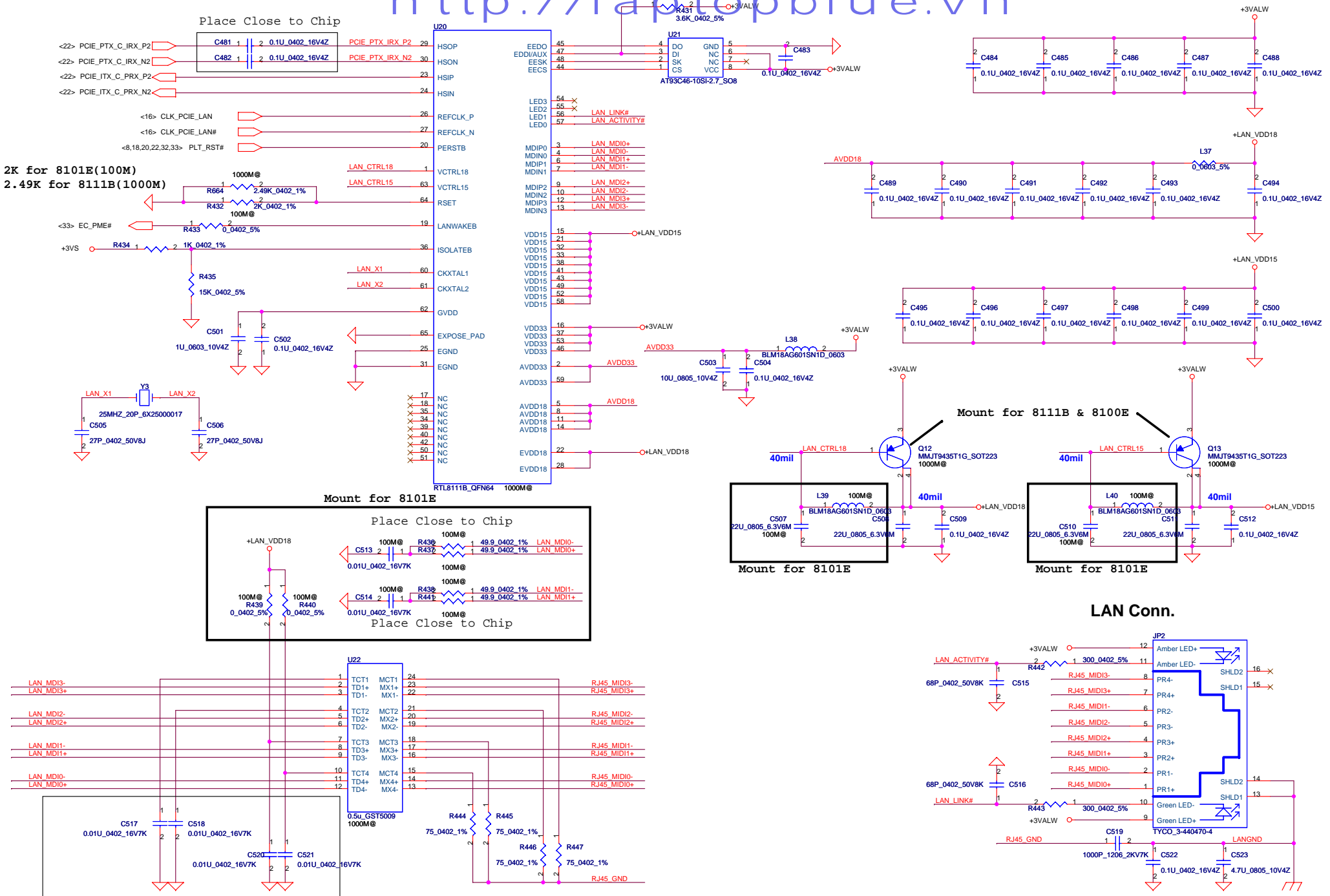


CLOSE TO CHIP







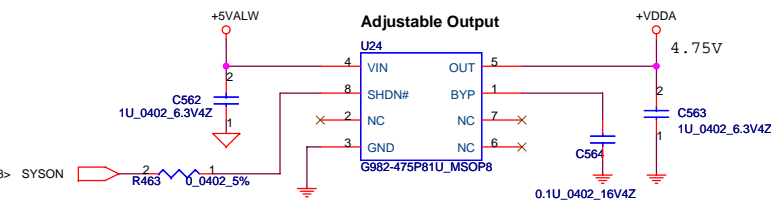
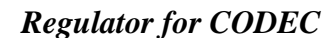


Place these components  
colosed to LAN chip

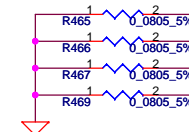
***GST5009 for GIGA LAN***  
***TST1284 for 10/100 LAN***

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>		
Issued Date		2006/06/30	Deciphered Date		2007/06/30	
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		
				RTL8111B/8101E 10/100/1000 LAN		
				Size	Document Number	Rev 0.1
				Custom	ISRAA LA-3441P	
Date:		Friday, September 22, 2006		Sheet	28	of 48





### *Moat Bridge*



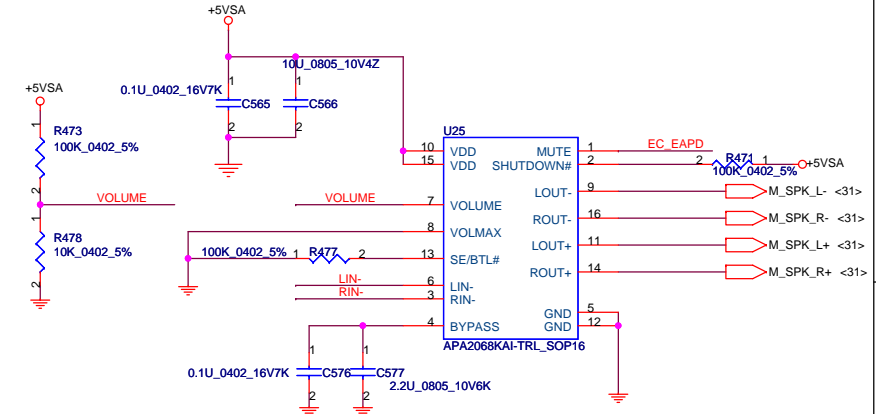
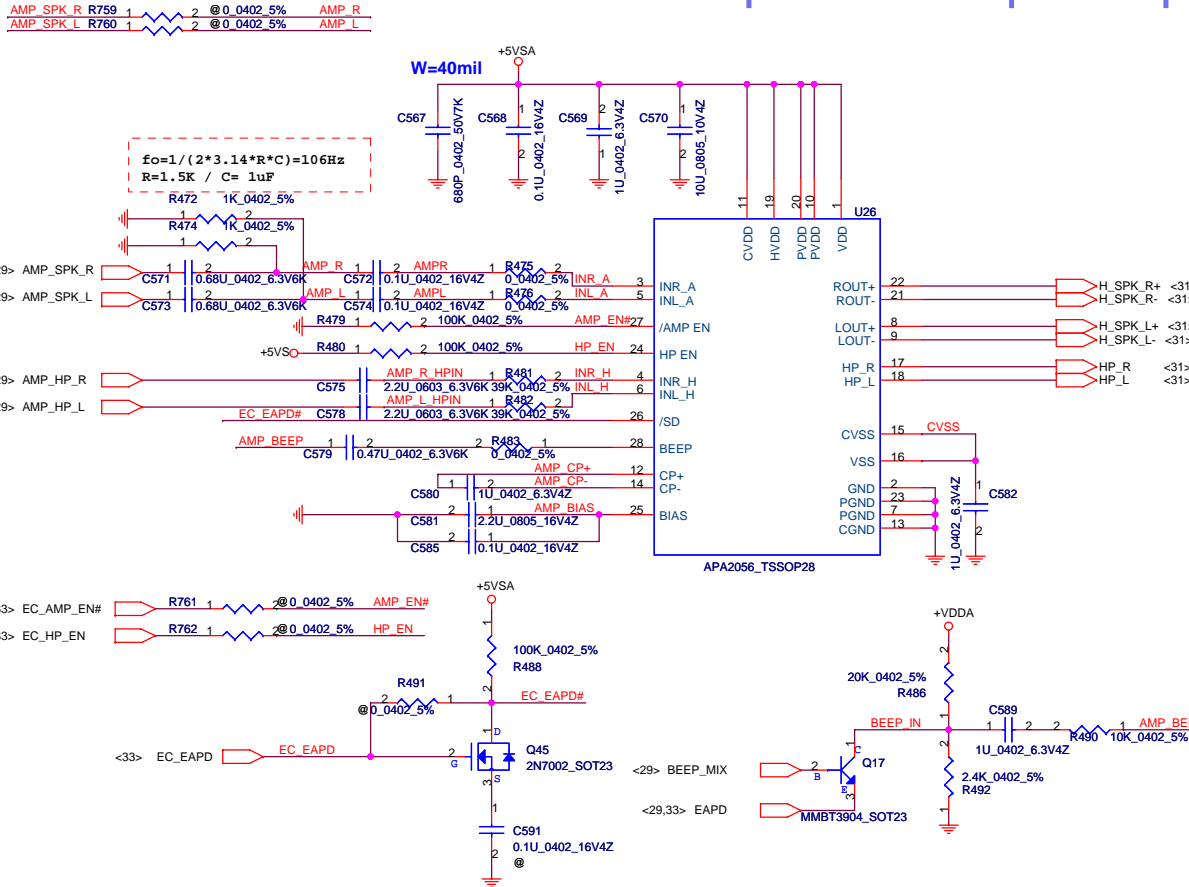
Sense Pin	Impedance	Codec Signals
SENSE A	39.2K	PORT-A (PIN 39, 41)
	20K	PORT-B (PIN 21, 22)
	10K	PORT-C (PIN 23, 24)
	5.1K	PORT-D (PIN 35, 36)
SENSE B	39.2K	PORT-E (PIN 14, 15)
	20K	PORT-F (PIN 16, 17)
	10K	PORT-G (PIN 43, 44)
	5.1K	PORT-H (PIN 45, 46)

Security Classification		Compal Secret Data		<div>Compal Electronics, Inc.</div>		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	<Title> HD Audio Codec ALC861D	
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 0.
					CustmSRAA LA-3441P	
				Date:	Friday, September 22, 2006	Sheet 29 of 48

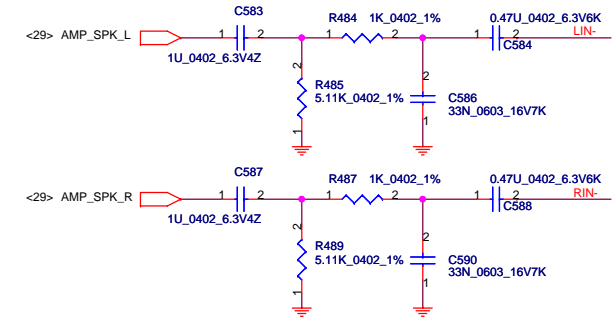


# APA2056 Tweeter HP Amplifier

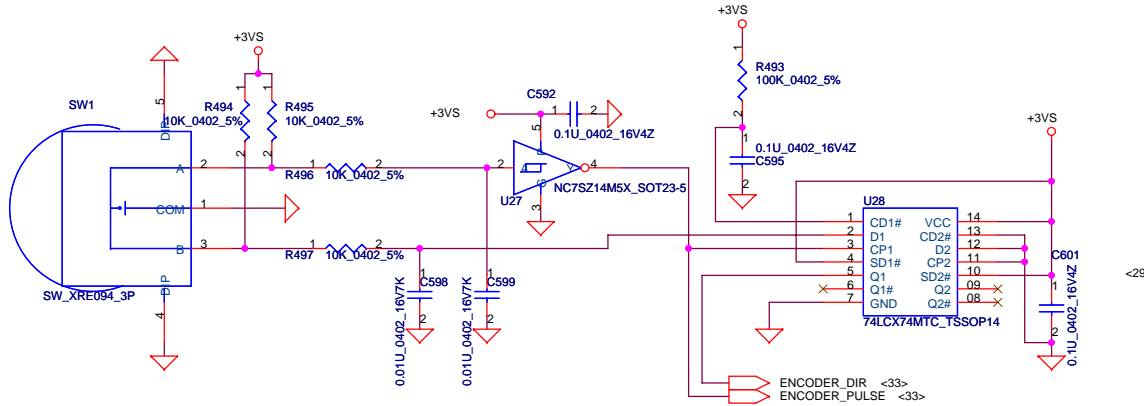
# APA2068 Medium Range Amplifier



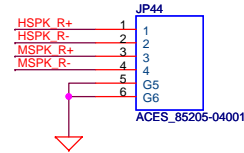
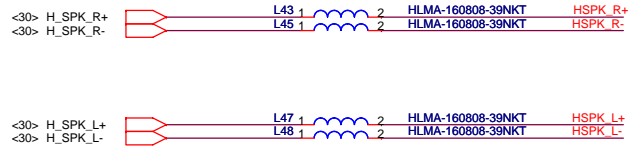
Pin2 /SD should be tied to 5V always and mute pin controlled by EC\_EAPD



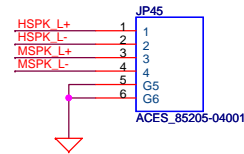
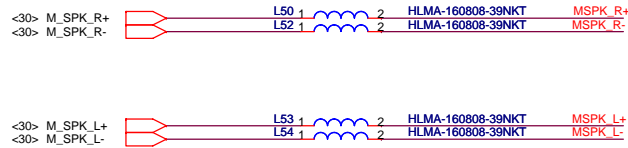
## Volume Control



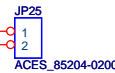
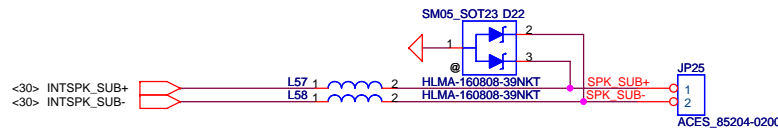
## Tweeter Conn.



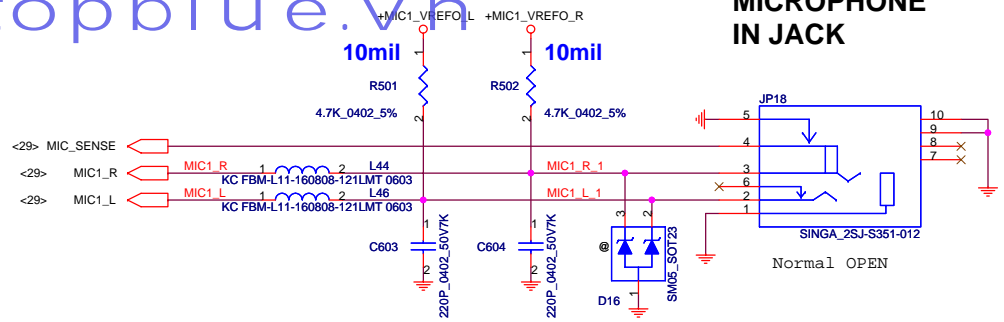
## Medium SPK Conn.



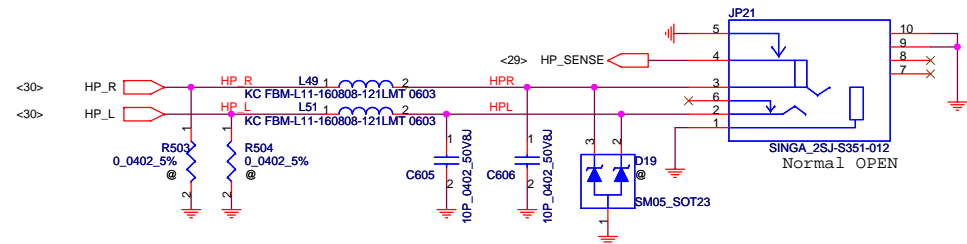
## Sub-woofer Conn.



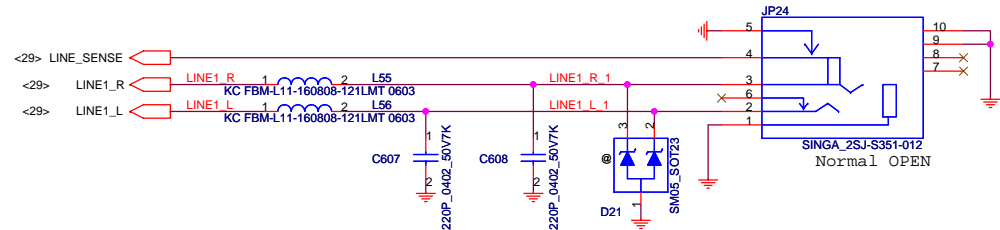
## MICROPHONE IN JACK



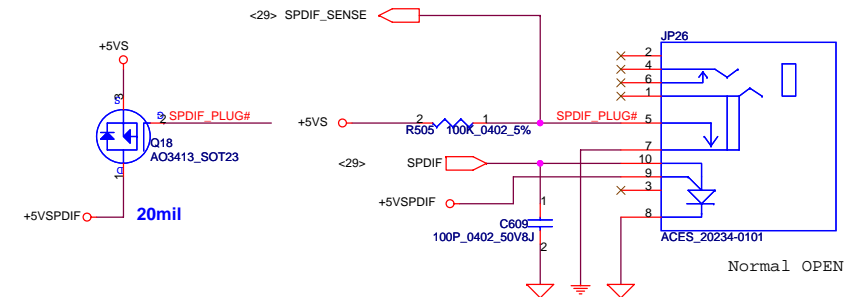
## HEADPHONE OUT JACK



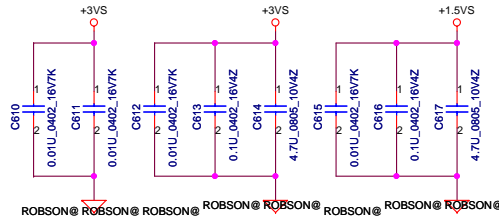
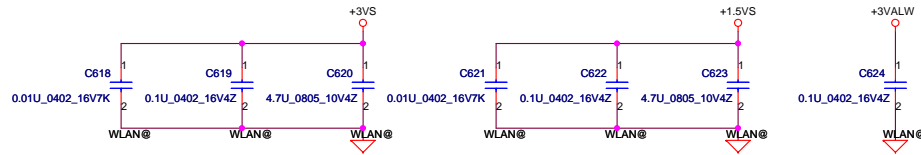
## LINE IN JACK



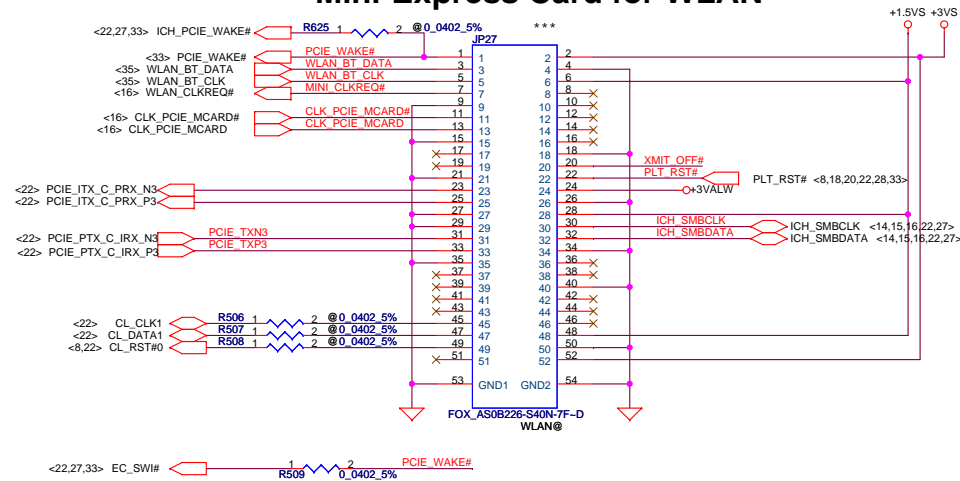
## S/PDIF OUT JACK



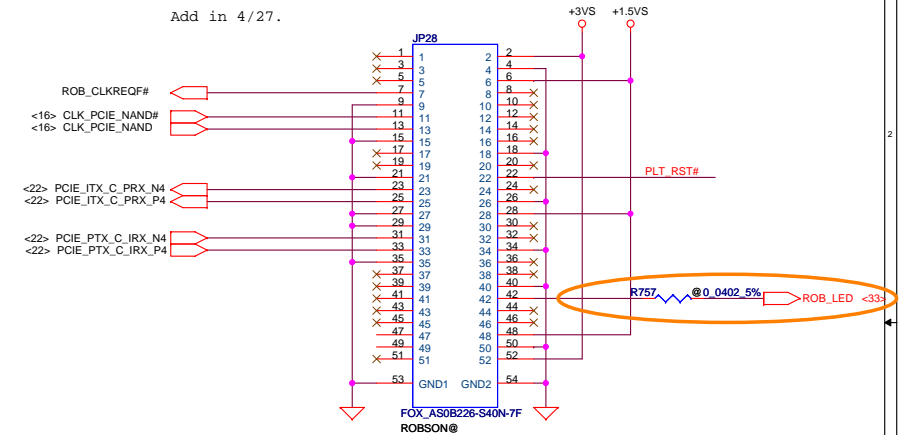
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	<Title> Audio Jack/MIC/SPDIF
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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 CustomISRAA LA-3441P
				Date:	Friday, September 22, 2006
				Sheet	31 of 48
				Rev	0.1



## Mini-Express Card for WLAN



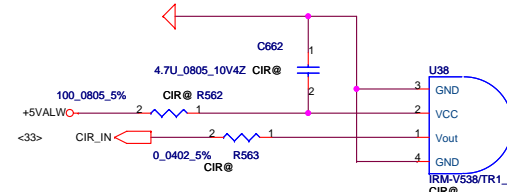
## NAND mini Card(Robson support)



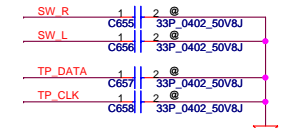
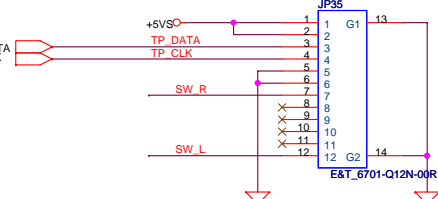
## TP Button



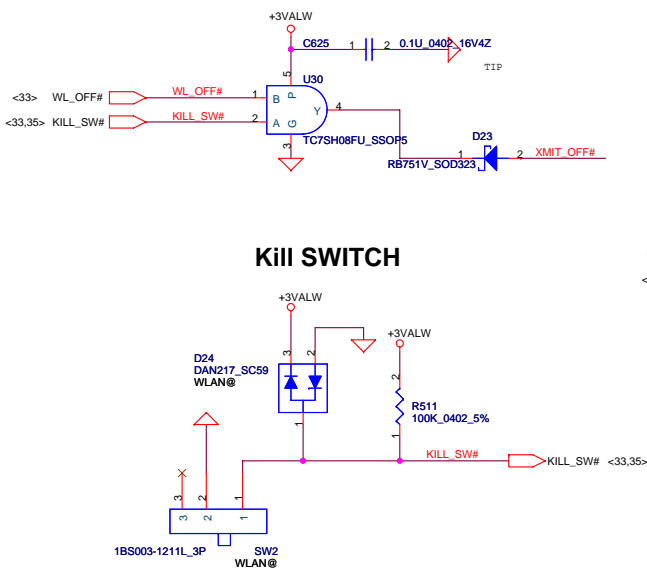
## CIR



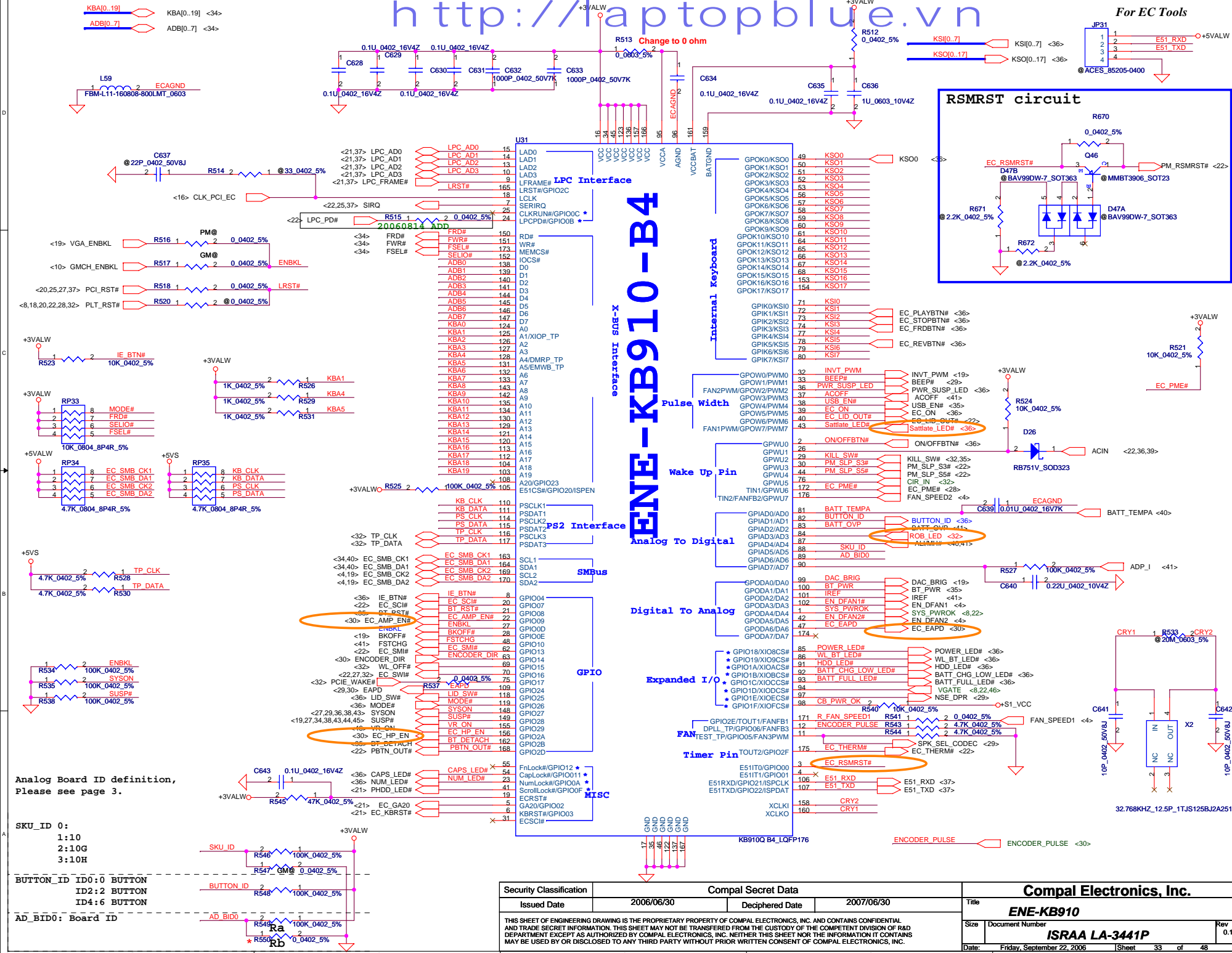
## TP CONN.



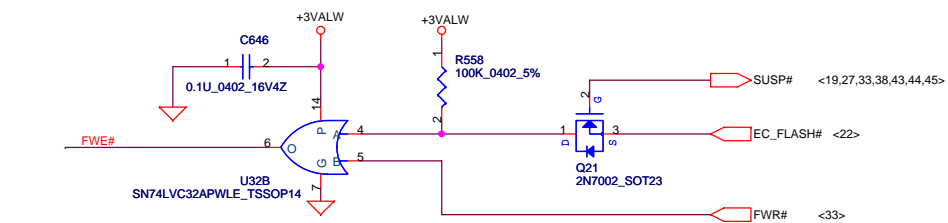
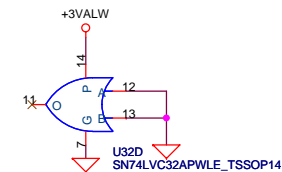
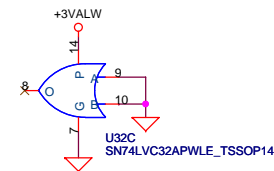
## Kill SWITCH





Security Classification				Compal Secret Data				Title			
Issued Date				2006/06/30				2007/06/30			
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				Document Number				Rev			
ISRAA LA-344IP								0.1			
Date:				Friday, September 22, 2006				(Sheet 32 of 48)			



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	ENE-KB910	
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
					ISRAA LA-3441P	0.1
				Date:	Friday, September 22, 2006	Sheet 33 of 48



<33> KBA[0..19]  KBA[0..19]

<33> ADB[0..7]  ADB[0..7]

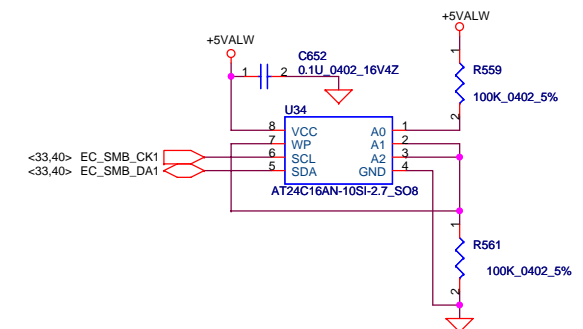
The diagram shows the SST39VF080-70\_TSP40 memory chip connected to a microcontroller. The chip's pins are labeled with their functions and values. The microcontroller pins are labeled with their functions and values. The chip is connected to a 3.3V supply, a 0.1uF capacitor, and a 100k resistor. The chip is also connected to a 3.3V supply, a 0.1uF capacitor, and a 100k resistor. The chip is also connected to a 3.3V supply, a 0.1uF capacitor, and a 100k resistor.

Microcontroller Pin	Function	Value
31	VCC0	3.3V
30	VCC1	3.3V
25	D0	ADB0
26	D1	ADB1
27	D2	ADB2
28	D3	ADB3
32	D4	ADB4
33	D5	ADB5
34	D6	ADB6
35	D7	ADB7
10	RP#	RESET#
11	READY/BUSY#	X
12	NC0	X
29	NC1	X
38	NC1	X
23	GND0	GND
39	GND1	GND

Chip Pinout:

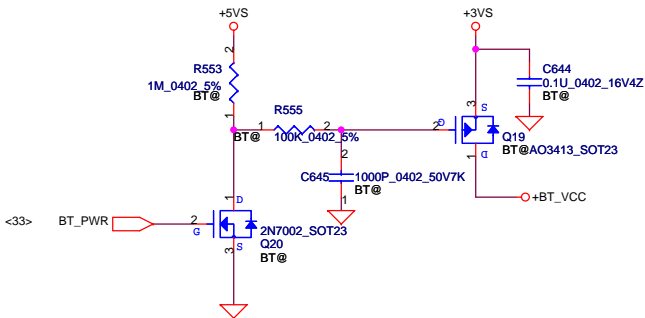
Chip Pin	Function	Value
37	A19	
36	A18	
35	A17	
34	A16	
33	A15	
32	A14	
31	A13	
30	A12	
29	A11	
28	A10	
27	A9	
26	A8	
25	A7	
24	A6	
23	A5	
22	A4	
21	A3	
20	A2	
19	A1	
18	A0	
17	INT_FSEL#	
16	FRD#	
15	FWE#	
14	CE#	
13	OE#	
12	WE#	

Pin 33 connection diagram for the SUYIN 80065AR-040G2T. The diagram shows a central 40-pin connector labeled JP33. Pins 1-16 are on the left, and pins 17-40 are on the right. Left-side connections: KBA16 (pin 1), KBA15 (pin 2), KBA14 (pin 3), KBA13 (pin 4), KBA12 (pin 5), KBA11 (pin 6), KBA9 (pin 7), KBA8 (pin 8), FWE# (pin 9), RESET# (pin 10), INT\_FLASH\_EN# (pin 11), INT\_FLASH\_SEL (pin 12), KBA16 (pin 13), KBA7 (pin 14), KBA6 (pin 15), KBA5 (pin 16), KBA4 (pin 17), KBA3 (pin 18), KBA2 (pin 19), KBA1 (pin 20). Right-side connections: KBA17 (pin 21), KBA19 (pin 22), KBA10 (pin 23), ADB7 (pin 24), ADB6 (pin 25), ADB5 (pin 26), ADB4 (pin 27), ADB3 (pin 28), ADB2 (pin 29), ADB1 (pin 30), ADB0 (pin 31), FRD# (pin 32), FSEL# (pin 33), KBA0 (pin 34). Pins 35-40 are unconnected. A +3V\_WL signal is connected to pin 19. Symbols: a triangle with a cross indicates a connection to a common ground or power plane; a triangle with a dot indicates a connection to a specific signal line.

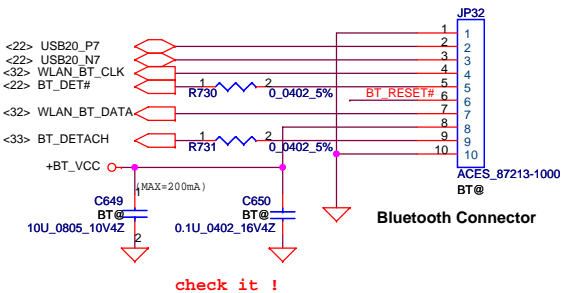
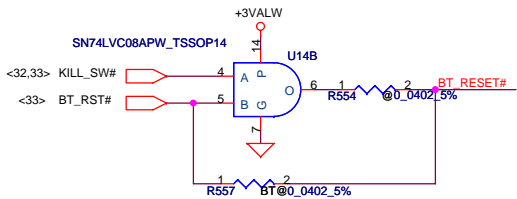


Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title <b>BIOS I/F</b>		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
					<b>ISRAA LA-3441P</b>	0.1
Date:				Friday, September 22, 2006	Sheet	34 of 48

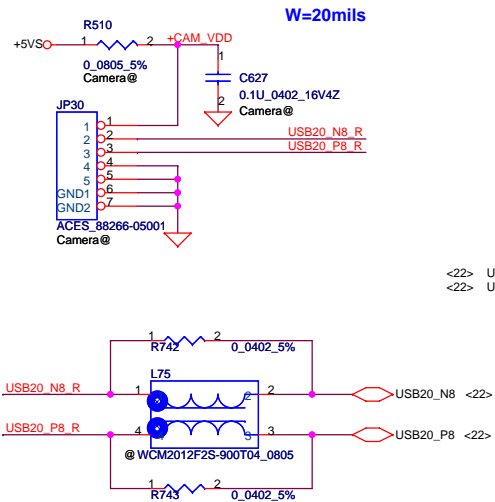
BlueTooth Interface



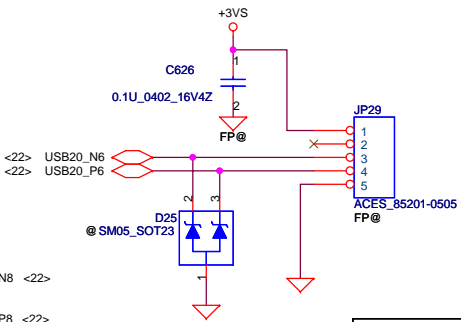
Change at 8/30



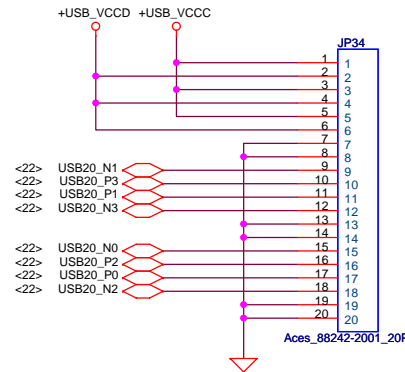
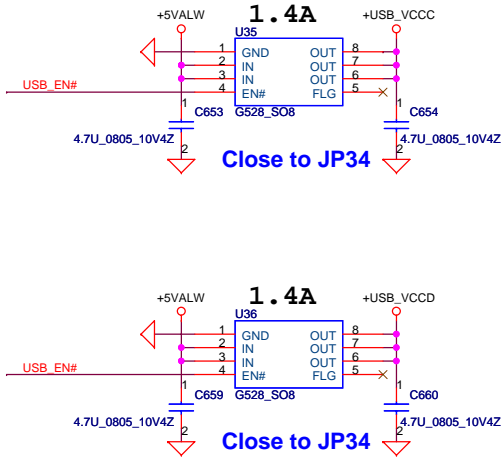
Int. Camera Conn



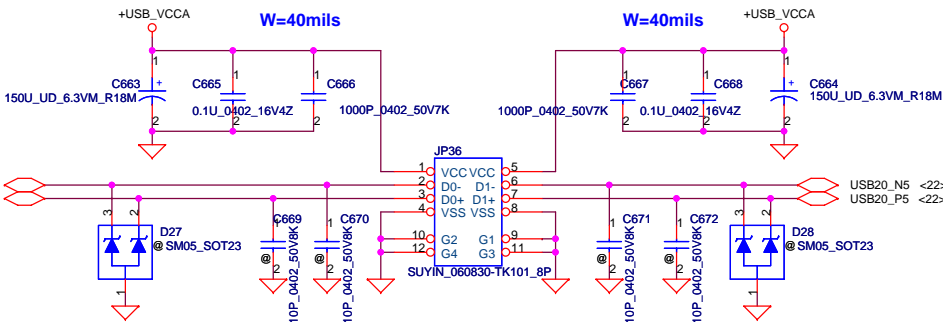
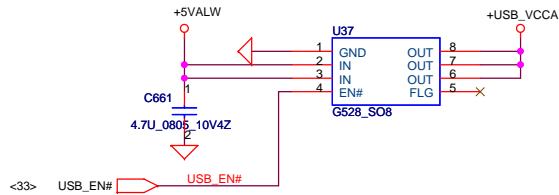
Finger printer Conn



USB Board Right side 2x2 Port

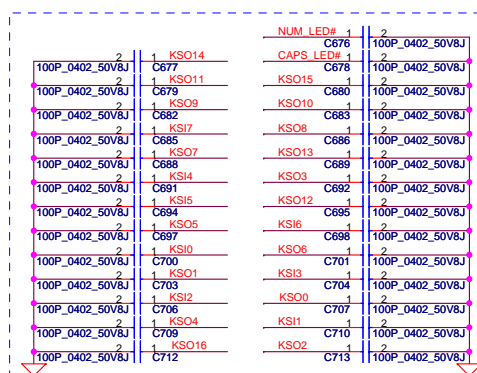
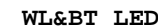


USB Conn Left side 1x2 Port

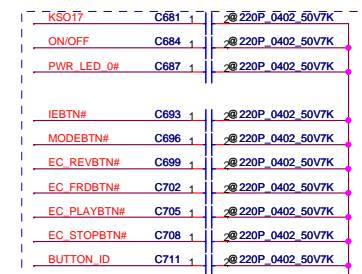
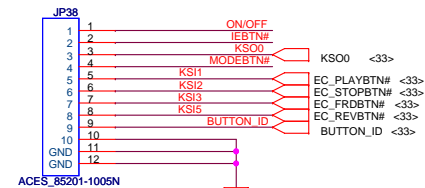


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		Title	
2006/06/30		2007/06/30		USB/BT/F_P/Int. Ca Conn	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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		Rev	
		Document Number		0.1	
		Date		Friday, September 22, 2006	
		Sheet		35 of 48	

http://laptopblue.vpn **ON/OFF BUTTON**  
+5VALW for debug only



SW/LED Connector

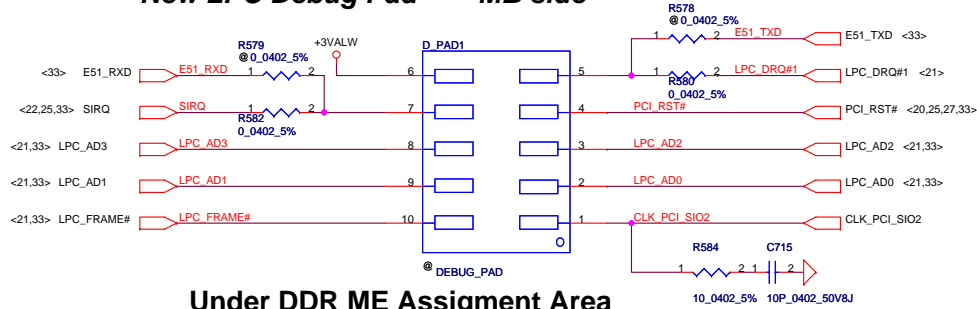


**For EMI Request**

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	LID/KB/LED/SW-B 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 0.1
				ISRAA LA-3441P		
				Date:	Friday, September 22, 2006	Sheet 36 of 48



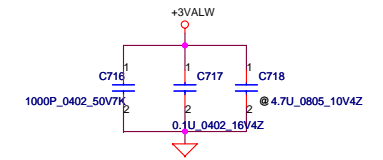
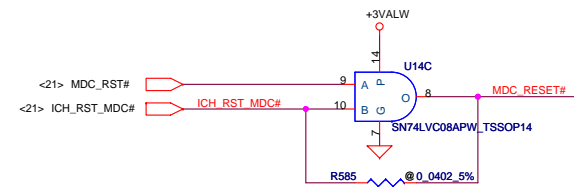
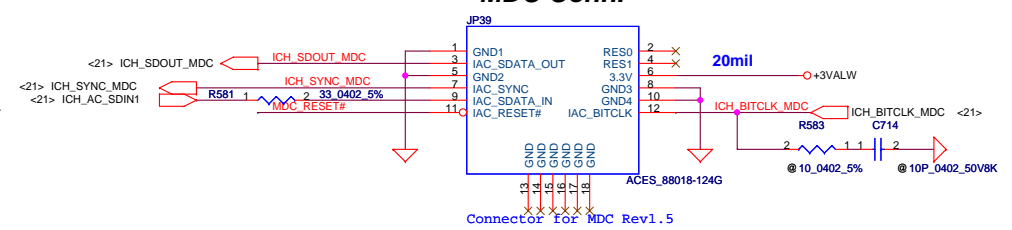
## New LPC Debug Pad ---- MB side



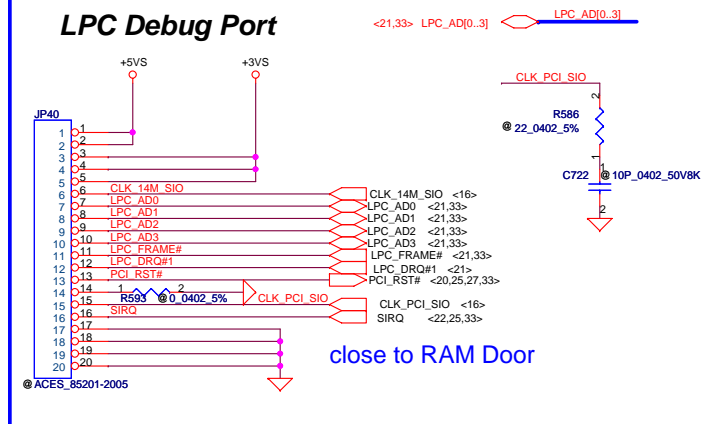
Under DDR ME Assignment Area

Keep Resistor near Debug Pad and in the same side  
Reverse side DIMM ---- Pin 1 keep away DIMM

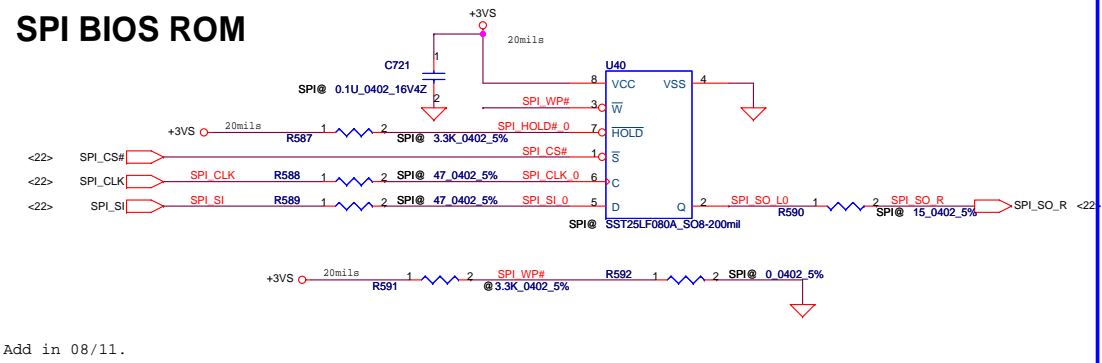
## MDC Conn.



## LPC Debug Port



## SPI BIOS ROM

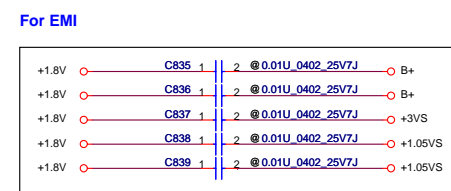
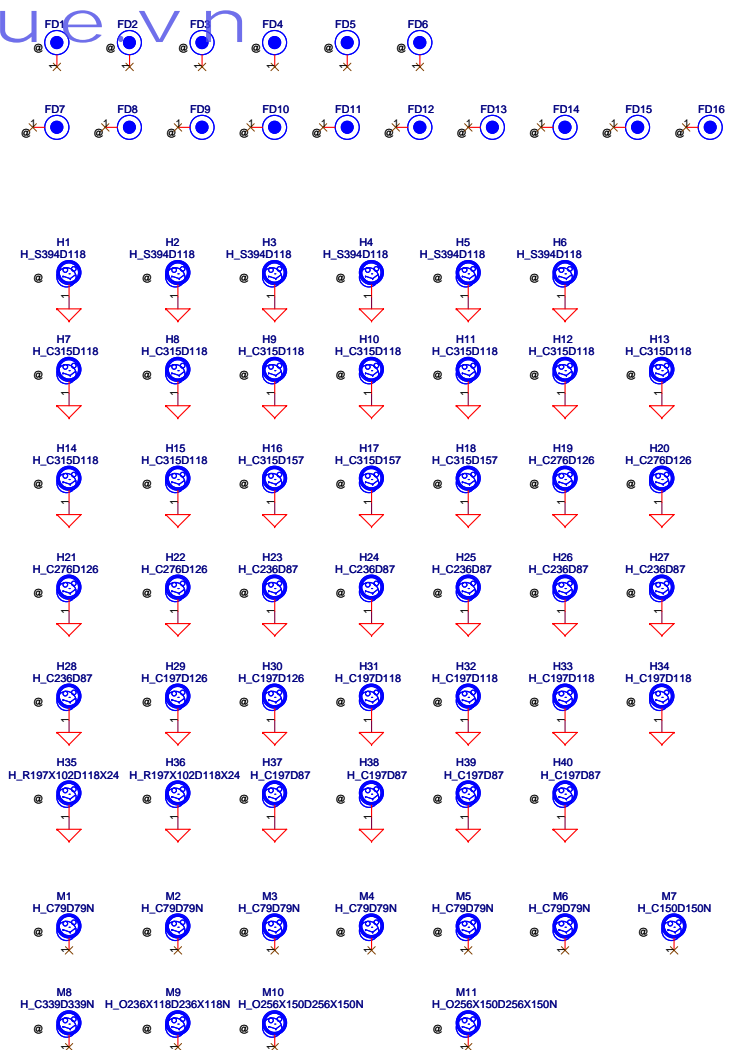
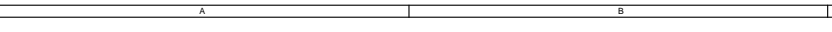
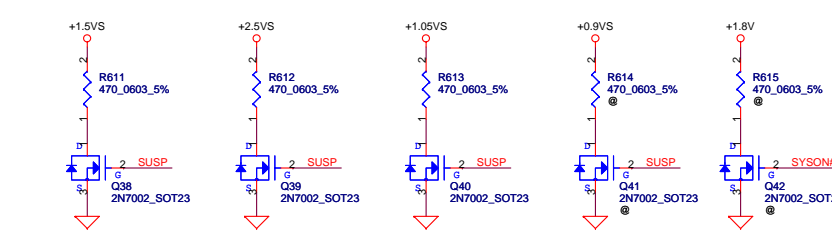
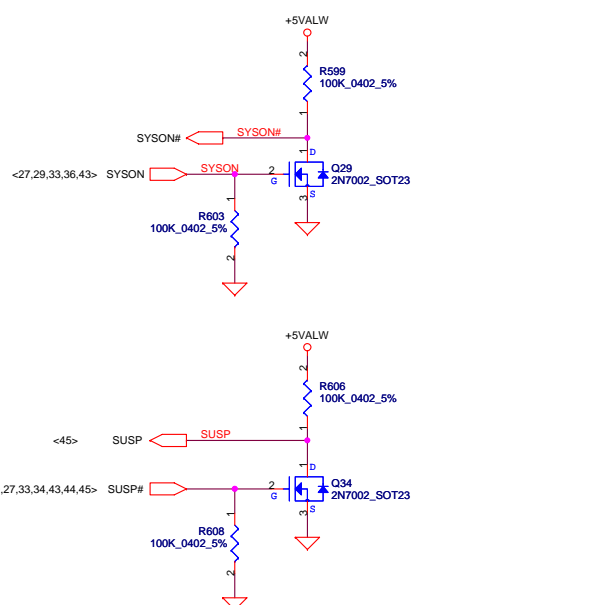
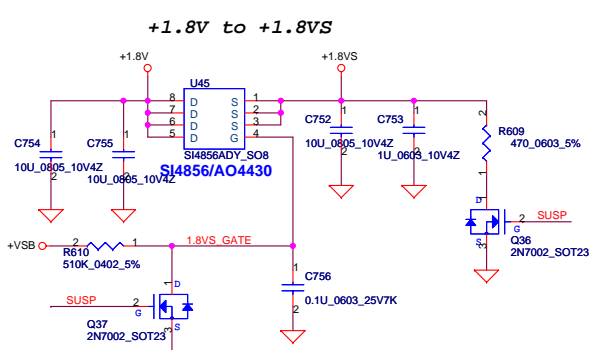
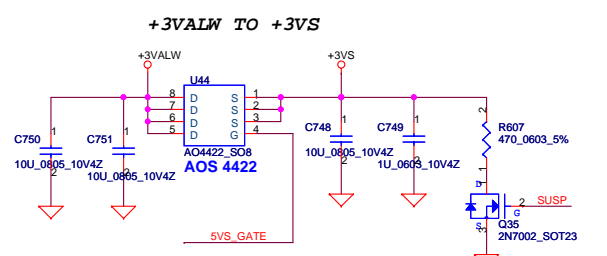
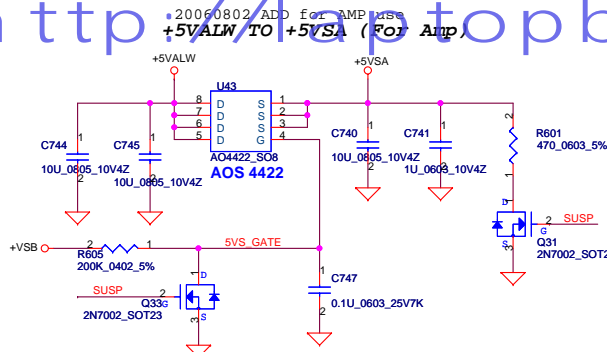
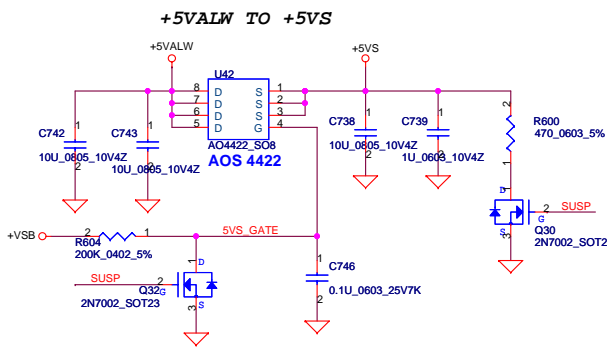


Add in 08/11.

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Title	MDC	
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	ISRAA LA-3441P	0.1
				Date:	Friday, September 22, 2006	Sheet 37 of 48

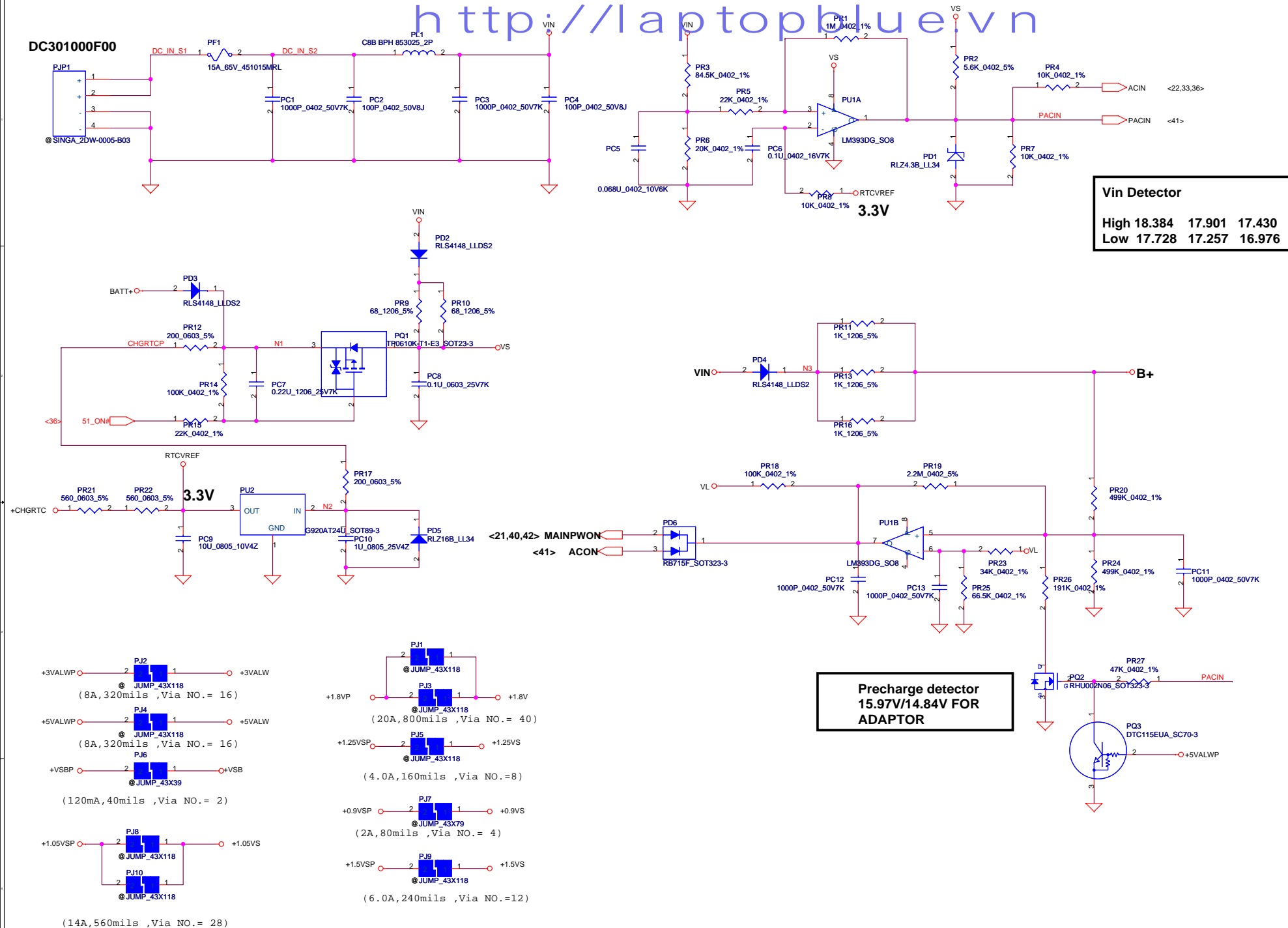
http://topbluev

20060802 ADD for AMP use  
+5VALW TO +5VSA (For Amp)



Security Classification	Compal Secret Data		Title	
Issued Date	2006/06/30	Deciphered Date	2007/06/30	Size
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
				ISRAA LA-344IP
				Rev
				0.1
				Date: Friday, September 22, 2006
				Sheet 38 of 48

# DC301000F00



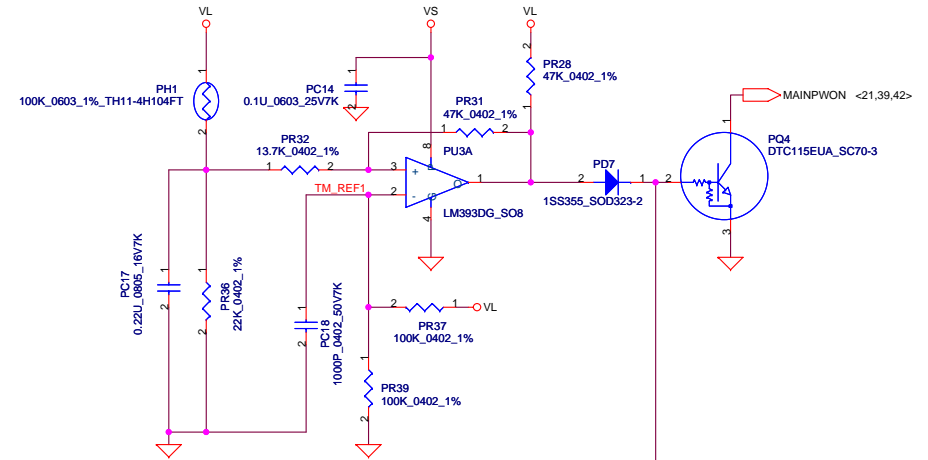
**Vin Detector**  
 High 18.384 17.901 17.430  
 Low 17.728 17.257 16.976

**Precharge detector  
 15.97V/14.84V FOR  
 ADAPTOR**

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2006/05/18	Deciphered Date	2007/05/18	Title	DCIN & DETECTOR
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:	Friday, September 22, 2006
				Sheet	39 of 48
				Rev	0.1

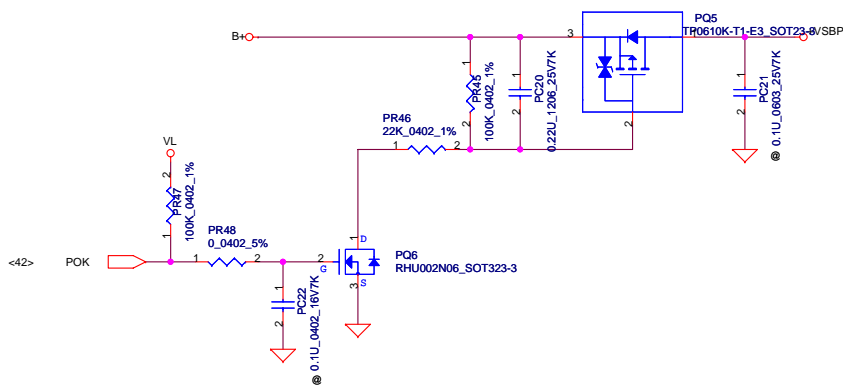
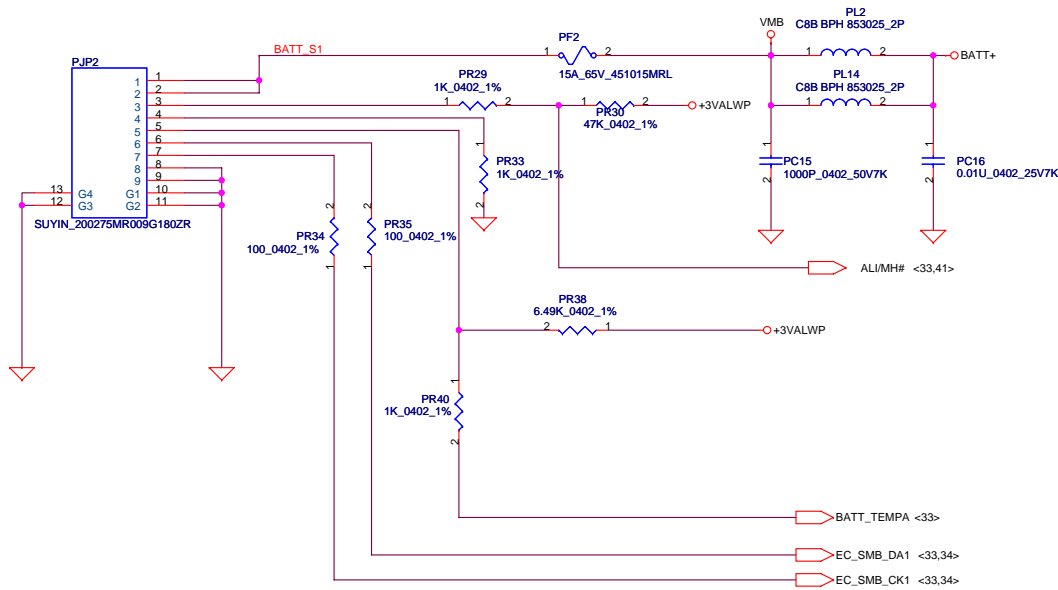
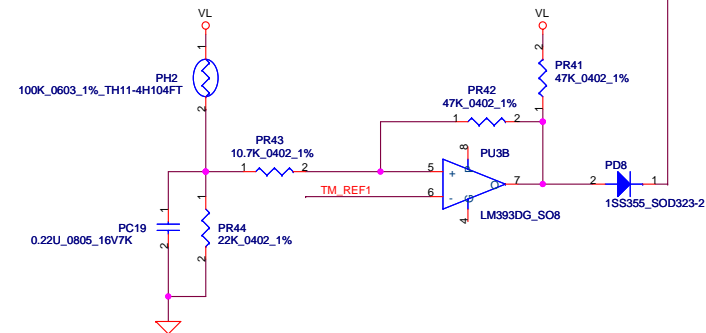
## PH1 under CPU bottom side :

CPU thermal protection at 84 degree C  
Recovery at 45 degree C



## PH2 near main Battery CONN :

BAT. thermal protection at 79 degree C  
Recovery at 45 degree C

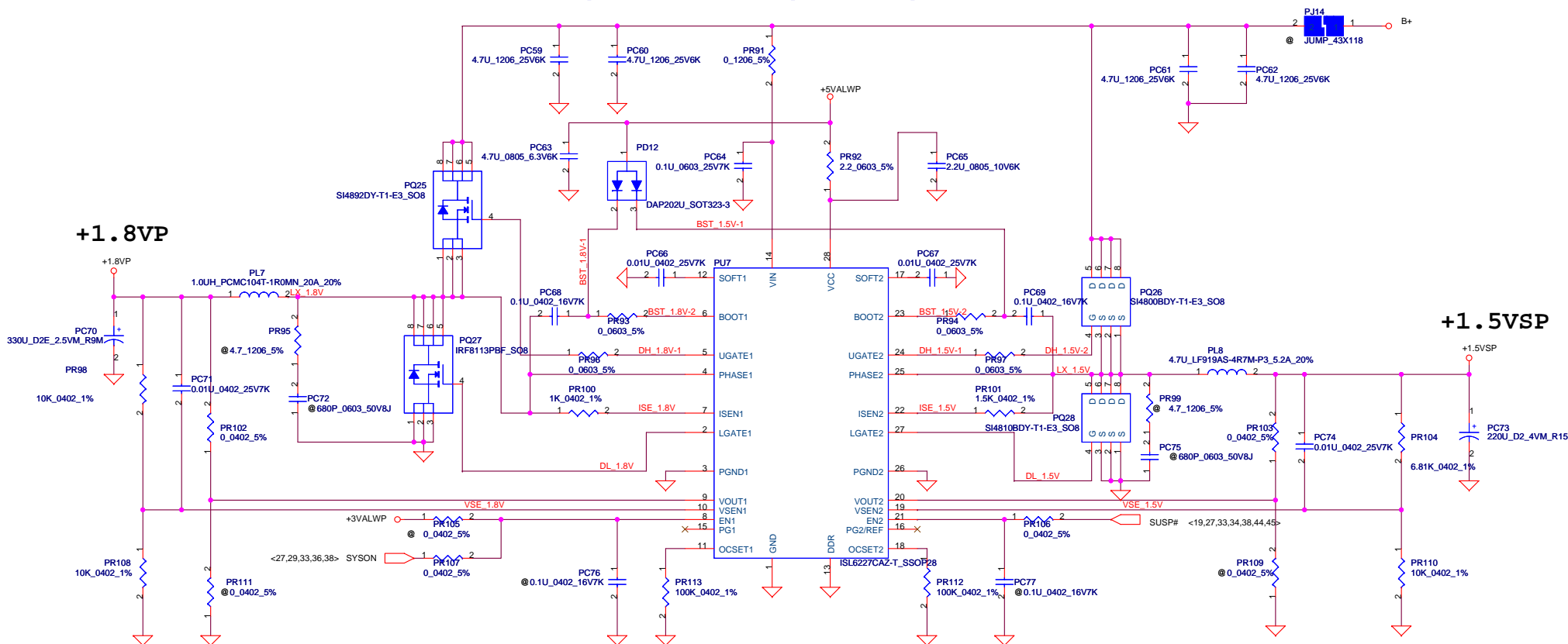


Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date		2006/05/18	Deciphered Date	2007/05/18	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.					BATTERY CONN / OTP		
					Size	Document Number	Rev
					Date:	Friday, September 22, 2006	Sheet

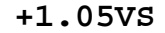


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2006/05/18	Deciphered Date	2007/05/18	Title	+5V/+3V
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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
				Custum	1A YAA (LA-3391P)
					0.1
				Date:	Friday, September 22, 2006
				Sheet	42 of 48





**+1.25VS**

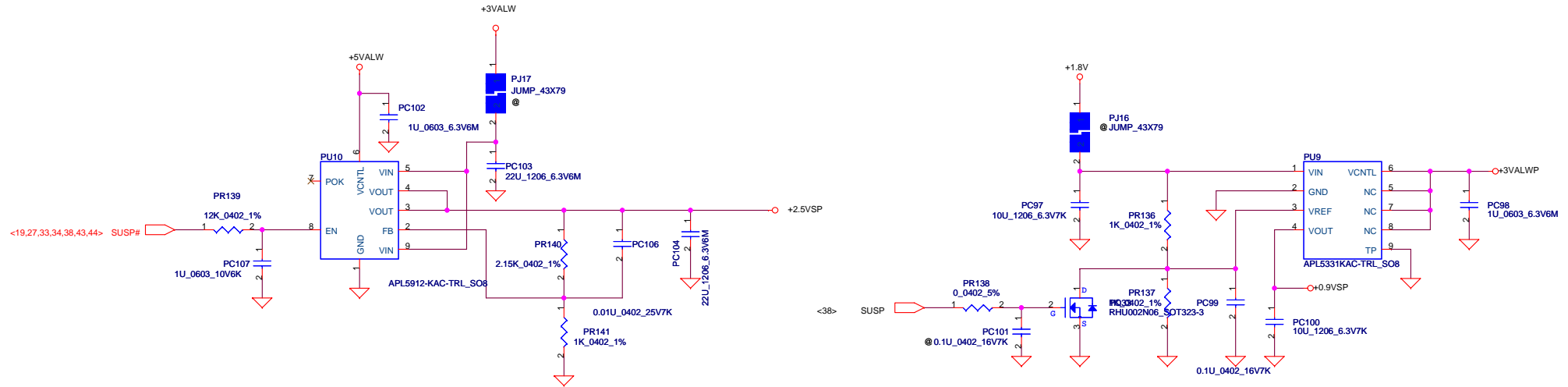


**Compal Electronics, Inc.**

**1.05V / 1.25V**

Size	Document Number	Rev
		01

Date:	Friday, September 22, 2006	Sheet	44	of	48
-------	----------------------------	-------	----	----	----



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/05/18	Deciphered Date	2007/05/18	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.				1.05V / 0.9V / 1.5V	
Size	Document Number			Rev	
				0.1	
Date: Friday, September 22, 2006		Sheet 45 of 48			

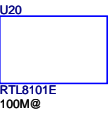


# HW4 Product Improvement Record (P.I.R.)

Phase: A to B		Date: 2006/01/04		Writer: Timo Teng			
Page #	Action Plan (add; del; change)	Location or Net_List	Before value (Attached file)	After value (Attached file)	Detail Discretion and Root Cause	Rev.	DL/DM Check

http://laptopblue.vn

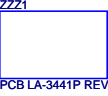
LAN



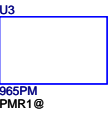
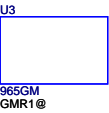
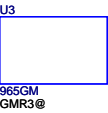
TRANSFORMER



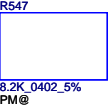
PCB



NB



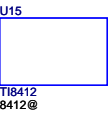
SKU ID



DC-JACK



8412



8402



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2006/05/18	Deciphered Date	2007/06/30	Title ISPD		
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 0.1
				Date	Thursday, September 21, 2006	Sheet 48 of 48