

Compal Confidential

Schematics Document

NIWE1

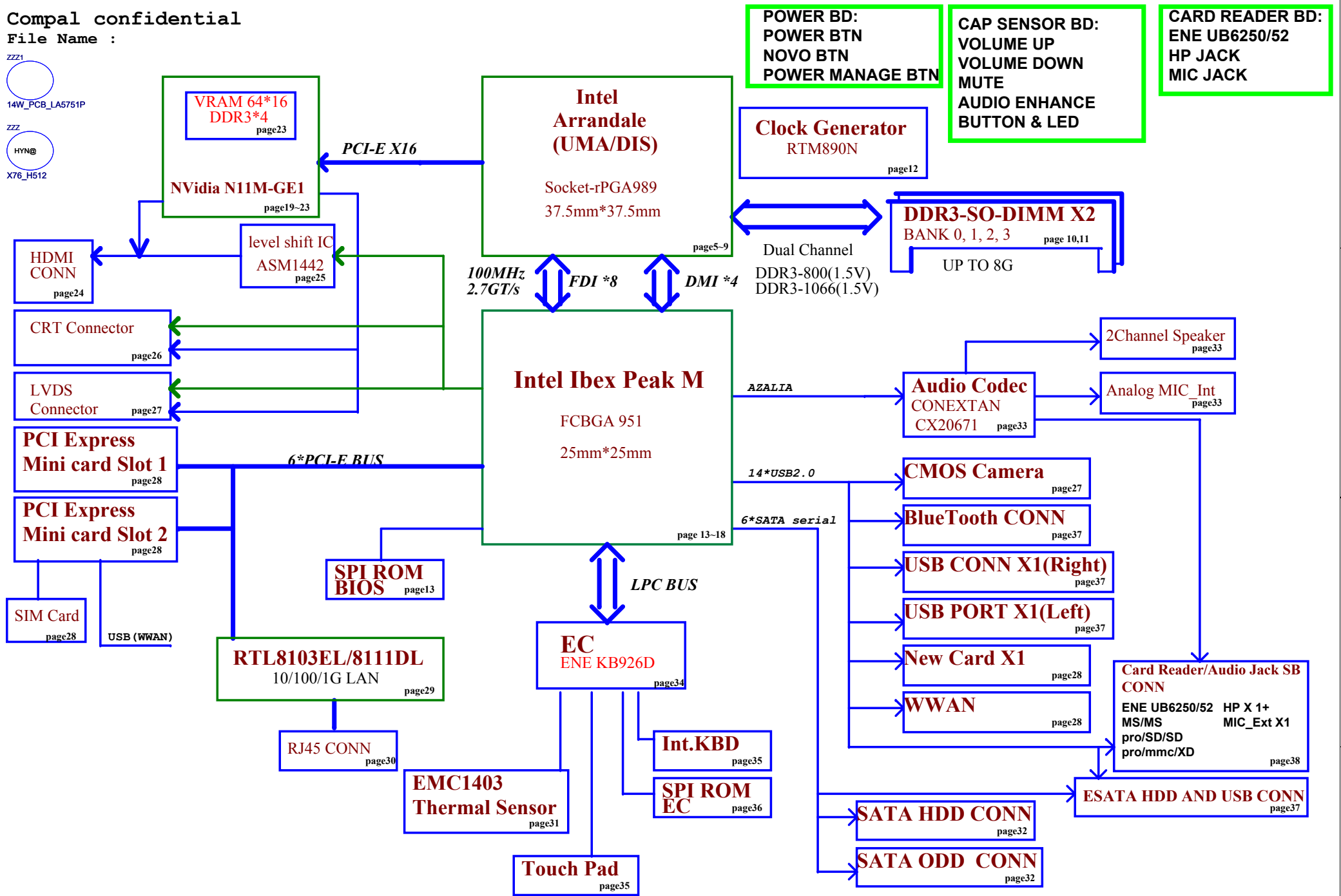
Arrandale

with Intel IBEX PEAK-M core logic

REV: 0.3

Security Classification	Compal Secret Data			<i>Compal Electronics, Ltd.</i>		
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title	Cover Sheet	
<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&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Size	Document Number	Rev
				Custom	LA-5751	0.3
Date: Thursday, October 29, 2009				Sheet	1	of 51

ZZZ1
14W_PCB_LA5751P
ZZZ
HYN@
X76_H512



POWER BD:
POWER BTN
NOVO BTN
POWER MANAGE BTN

CAP SENSOR BD:
VOLUME UP
VOLUME DOWN
MUTE
AUDIO ENHANCE
BUTTON & LED

CARD READER BD:
ENE UB6250/52
HP JACK
MIC JACK

Security Classification	Compal Secret Data			Title		
Issued Date	2008/03/24	Deciphered Date	2008/04/	Compal Electronics, Inc.		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number		Rev
				LA-5751		0.3
				Date:	Thursday, October 23, 2009	Sheet 2 of 51

DDR3 Voltage Rails

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

SMBUS Control Table

	SOURCE	RAM M2	BATT	KE926	SODIMM	CLK CHIP	WLAN WWAN	N10x Thermal Sensor	N10x	Cap sensor board	NEW CARD	PCH
SMB_EC_CK1	KB926	X	V	X	X	X	X	X	X	X	X	X
SMB_EC_DA1	+3VALW		+3VALW									
SMB_EC_CK2	KB926	X	X	X	X	X	X	X	X	X	X	V
SMB_EC_DA2	+3VALW											+3VALW
SMBCLK	PCH	V	X	X	V	V	X	X	X	X	V	X
SMBDATA	+3VALW	+3VALW			+3VS	+3VS					+3VS	
SML0CLK	PCH	X	X	X	X	X	X	X	X	X	X	X
SML0DATA	+3VALW											
SML1CLK	PCH	X	X	V	X	X	X	V	X	V	X	X
SML1DATA	+3VALW			+3VALW				+3VS		+3VS		

I2C / SMBUS ADDRESSING

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

@ FUNCTION

Structure	Description	NON-USE
45@	45 BOM	
BT@	Blue Tooth function	
3G@	3G function (WWAN)	
CAP@	CAP Sensor function	
CMOS@	CMOS CAMERA function	
ESATA@	E-SATA function	
HDMI@	HDMI function (UMA or DIS)	
UMA HDMI@	HDMI function (UMA only)	
X76@	X76 BOM	
100@	10/100 LAN function	
GIGA@	GIGA LAN function	
UMA@	UMA only (Arrandale)	
DIS@	DIS only (Arrandale)	

SKU

Arrandale (dGPU) DIS only	DIS@
Arrandale (iGPU) UMA only	UMA@

PCIE PORT LIST

PORT	DEVICE
1	
2	WLAN
3	LAN
4	3G
5	NEW CARD
6	
7	
8	

USB PORT LIST

PORT	DEVICE
0	RIGHT SIDE
1	LEFT SIDE
2	CMOS
3	LEFT SIDE
4	RIGHT SIDE
5	CARD READER
6	
7	
8	WIRELESS
9	
10	NEW CARD
11	BT
12	
13	3G

Security Classification	Compal Secret Data			Title		
Issued Date	2008/03/24	Deciphered Date	2008/04/	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.				MB Notes List		
				Size	Document Number	Rev
				LA-5751		
				Date: Thursday, October 29, 2009 Sheet 3 of 51		

VGA and DDR3 Voltage Rails (N11x GPIO)

GPIO	I/O	ACTIVE	Function Description
GPIO0	N/A	N/A	
GPIO1	IN	-	Hot plug detect for IFP link C
GPIO2	OUT	H	Panel Back-Light brightness(PWM capable)
GPIO3	OUT	H	Panel Power Enable
GPIO4	OUT	H	Panel Back-Light On/Off (PWM)
GPIO5	OUT	-	GPU VID0
GPIO6	OUT	-	GPU VID1
GPIO7	OUT	N/A	
GPIO8	I/O	N/A	
GPIO9	OUT	N/A	
GPIO10	OUT	N/A	
GPIO11	I/O	-	Reserve 10K pull low.
GPIO12	IN	N/A	
GPIO13	OUT	N/A	
GPIO14	OUT	-	Reserve 10K pull low.
GPIO15	IN	N/A	
GPIO16	OUT	N/A	
GPIO17	IN	-	PAD
GPIO18	IN	N/A	
GPIO19	IN	N/A	

Performance Mode P0 TDP at Tj = 102 C* (DDR3)

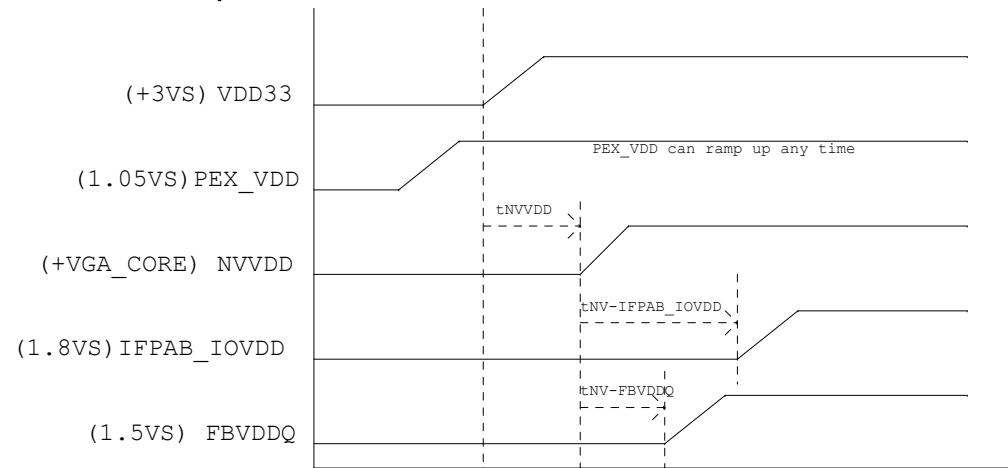
Products	GPU (4)	Mem (1,5)	NVCLK /MCLK	NVVDD		FBVDD (1.5V)		FBVDDQ (GPU+Mem) (1.5V)		PCI Express (1.05V) (6)		I/O and PLLVDD (1.8V)		I/O and PLLVDD (1.05V)		Other (3.3V)		
	(W)	(W)	(MHz)	(V)	(A)	(W)	(A)	(W)	(A)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)	(mA)	(W)
N11M-GE1 64bit 512MB DDR3	14.02	2.16	TBD	TBD	12.9	12.26	0.66	0.99	1.3	1.95	530	0.56	84	0.15	140	0.15	38	0.13

GPIO5 GPIO6

	Device ID	GPU_VID0	GPU_VID1	VGA_CORE	P-State
		0	0	0.8V	Deep P12
N11M-GE1/LP1 (40nm)	0x0A7D	0	1	0.85V	P8
		1	1	1.03V	P0

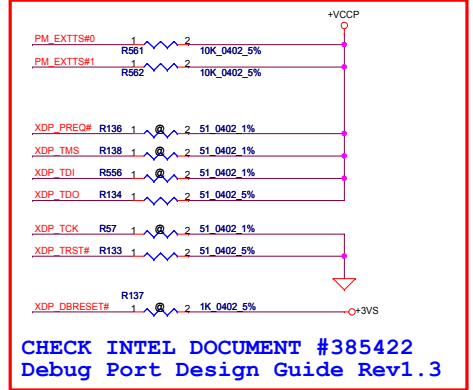
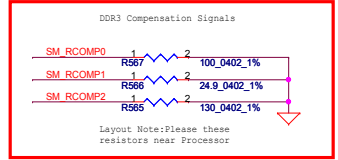
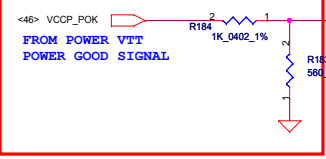
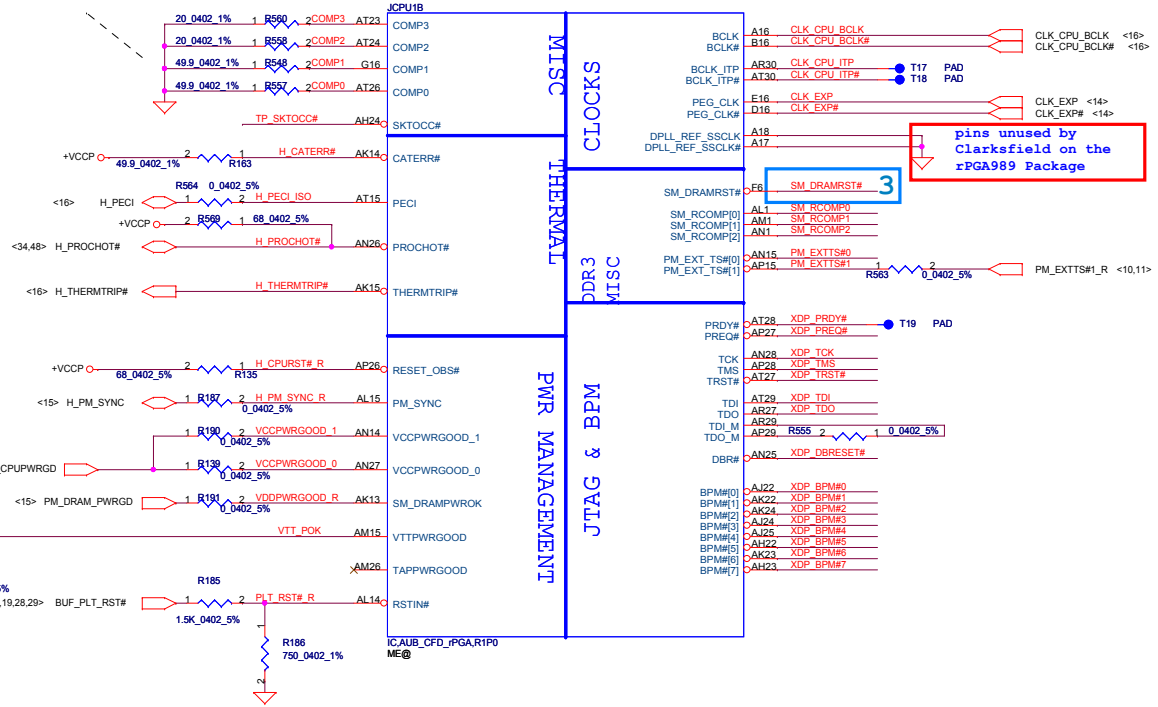
Power Sequence

The ramp time for any rail must be more than 40us

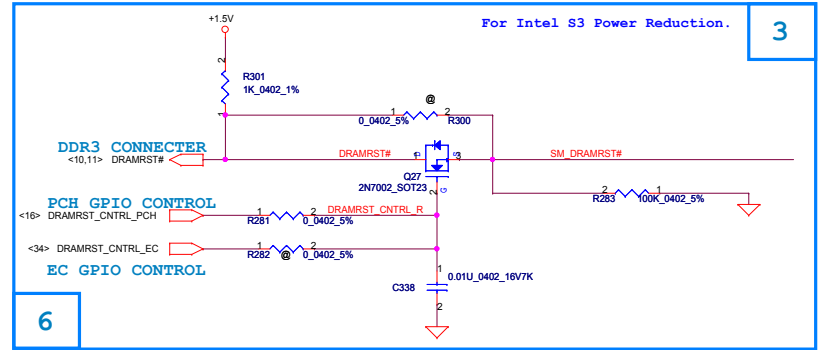
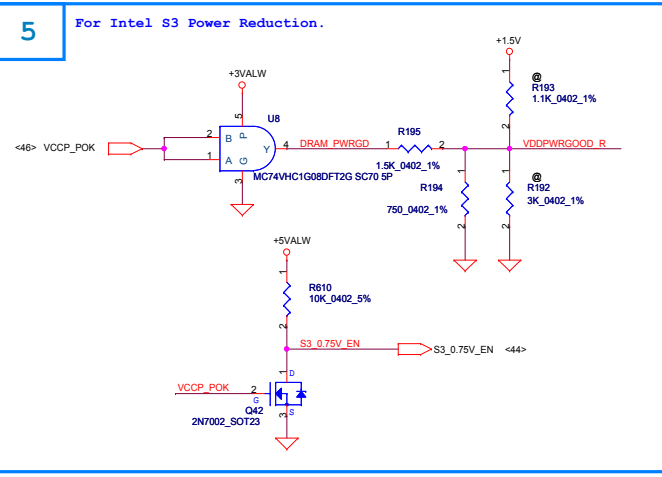


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/03/16	Deciphered Date	2010/03/15	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				VGA Notes List		
				Size	Document Number	Rev
				LA-5751		
				Date: Thursday, October 29, 2009 Sheet 4 of 51		

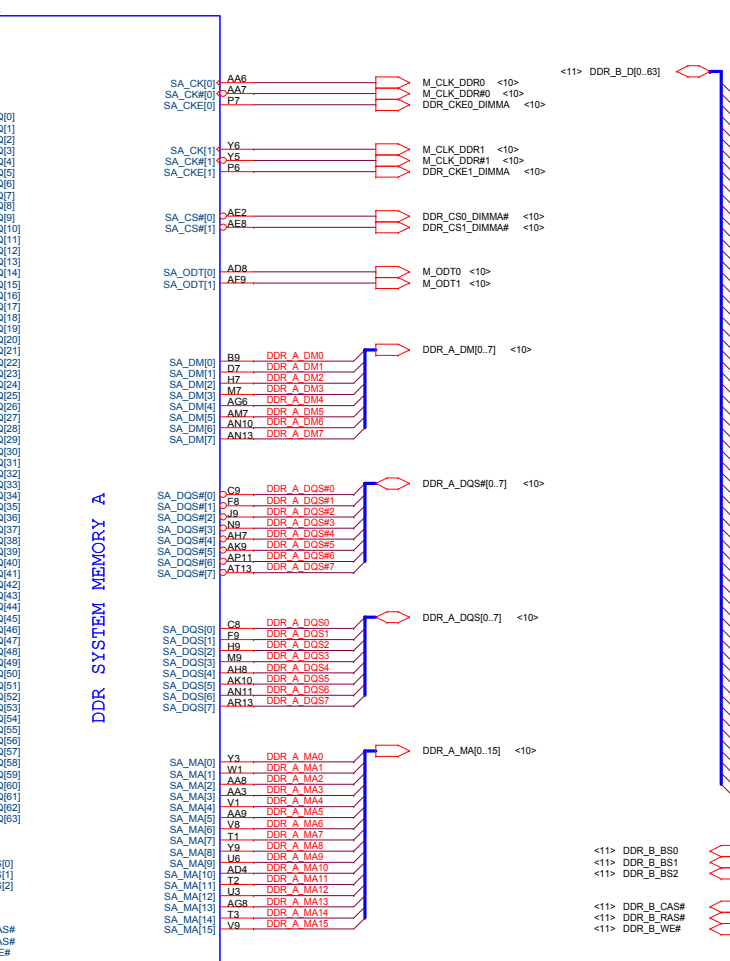
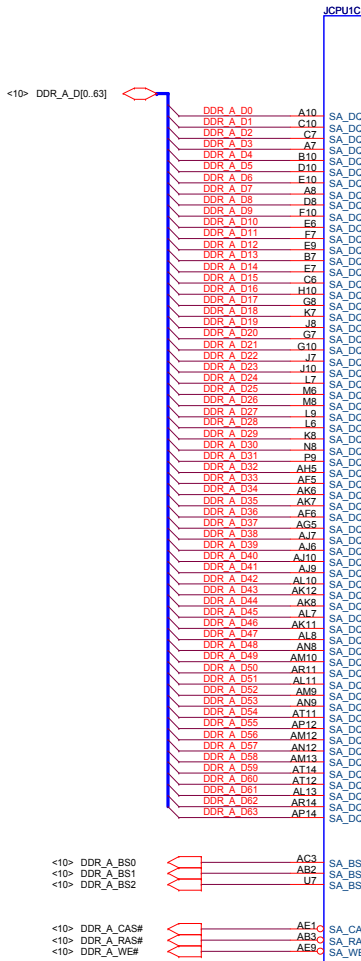
Layout rule: 10mil width trace
length < 0.5", spacing 20mil



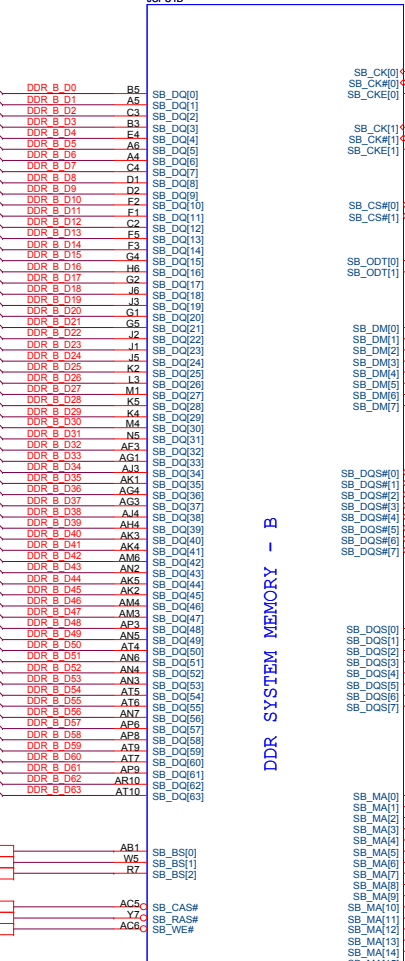
CHECK INTEL DOCUMENT #385422
Debug Port Design Guide Rev1.3



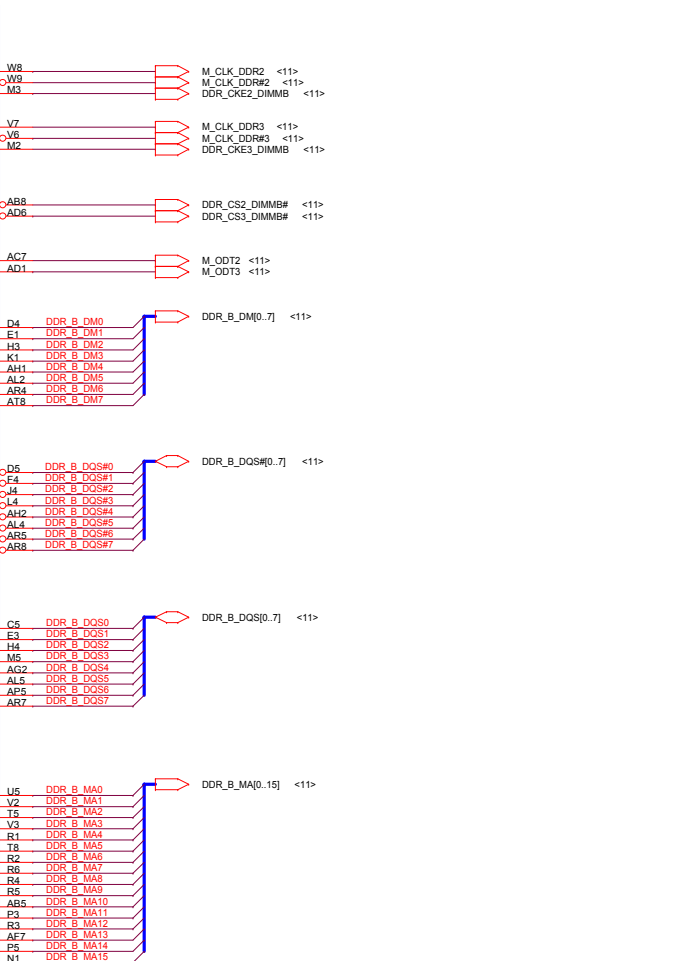
Security Classification	Compal Secret Data		Title Compal Electronics, Inc. Arrandale(1/5)-Thermal/XDP
Issued Date	2008/10/31	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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.			Rev 0.3
Size Custom	Document Number LA-5751		Date: Friday, October 30, 2009 Sheet 5 of 51



DDR SYSTEM MEMORY - A



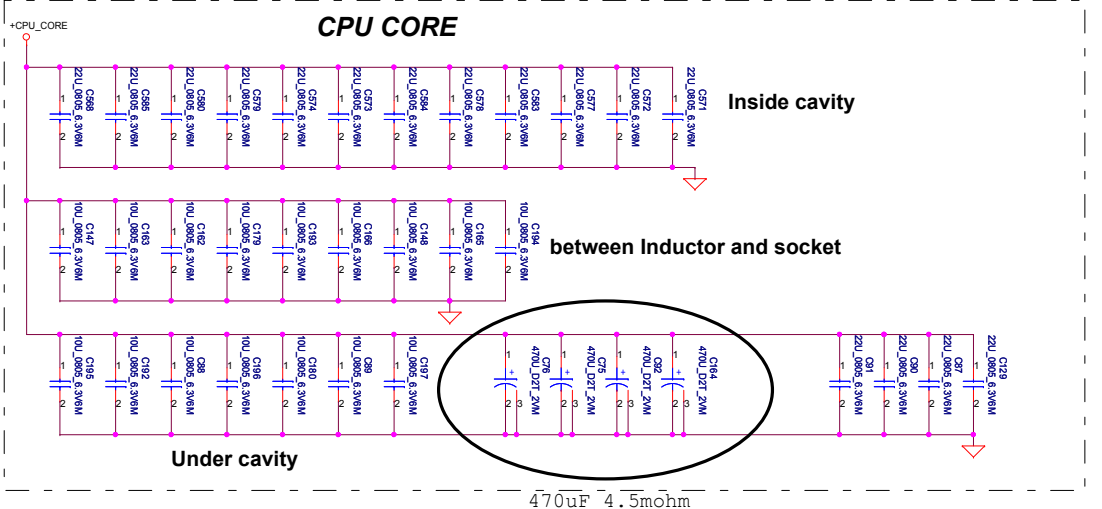
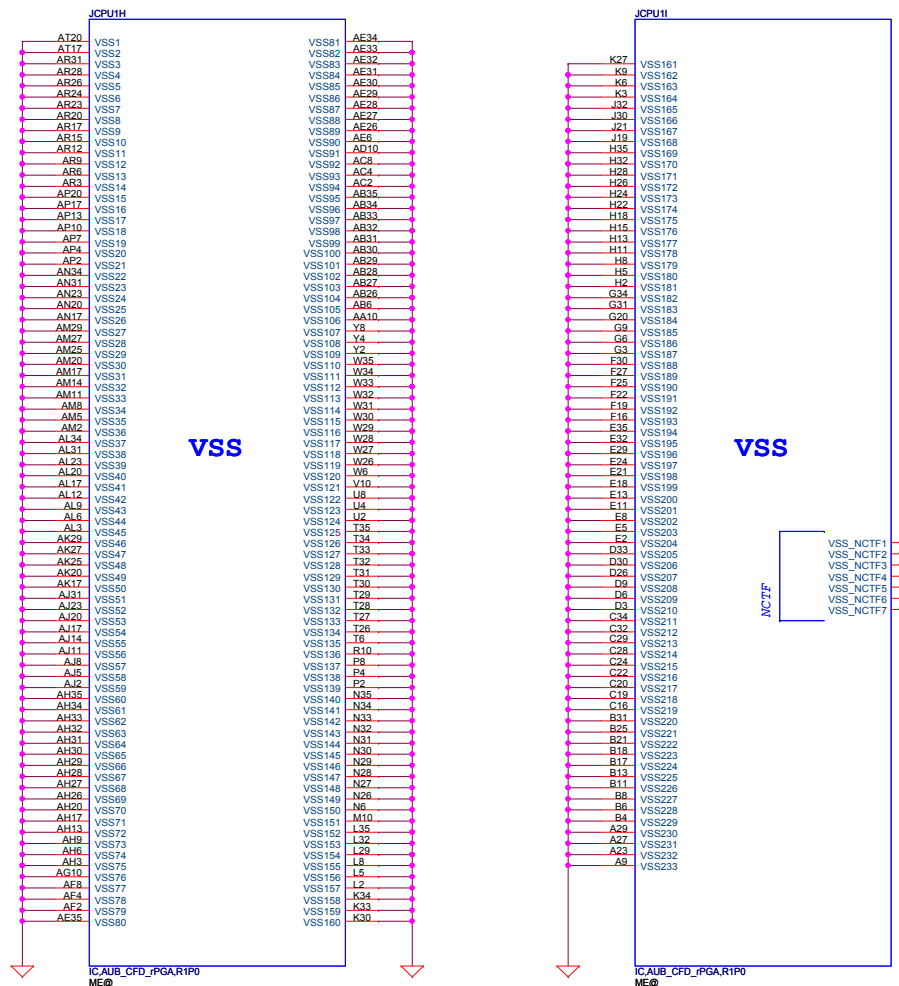
DDR SYSTEM MEMORY - B



IC:AUB_CFD_rPGA.R1P0
ME@

IC:AUB_CFD_rPGA.R1P0
ME@

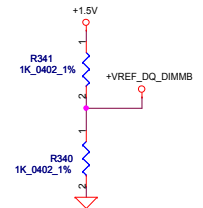
Security Classification	Compal Secret Data		
Issued Date	2008/10/31	Deciphered Date	2009/10/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Title Compal Electronics, Inc. Arrandale(3/5)-DDR III Document Number LA-5751 Date: Friday, October 30, 2008 1 Sheet 7 of 51
Size Custom		Rev	0.3



Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Arrandale(5/5)-GND/Bypass
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 0.3
Size	Custom	Document Number	LA-5751	
Date:	Thursday, October 29, 2009	Sheet	9	of 51

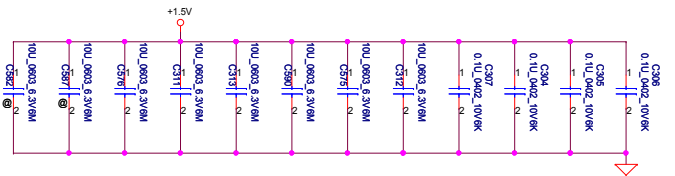


- <?> DDR_B_DQS[0..7]
- <?> DDR_B_D[0..63]
- <?> DDR_B_DM[0..7]
- <?> DDR_B_DQS[0..7]
- <?> DDR_B_MA[0..15]



For Arranale only +VREF_DQ_DIMMB supply from a external 1.5V voltage divide circuit.
07/17/2009

Layout Note:
Place near DIMM



Layout Note:
Place near DIMM



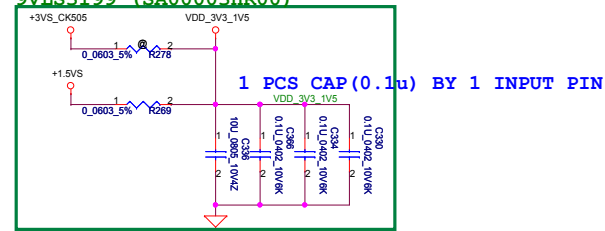
VDDQ (1.5V) =
3*330uf / 12m ohm (TOTAL FOR 2 SO-DIMMS)
6*0603 10uf (PER CONNECTOR)

VTT (0.75V) =
3*0805 10uf 4*0402 1uf

VDDSPD (3.3V) =
1*0402 0.1uf 1*0402 2.2uf

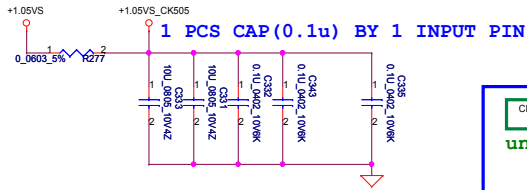
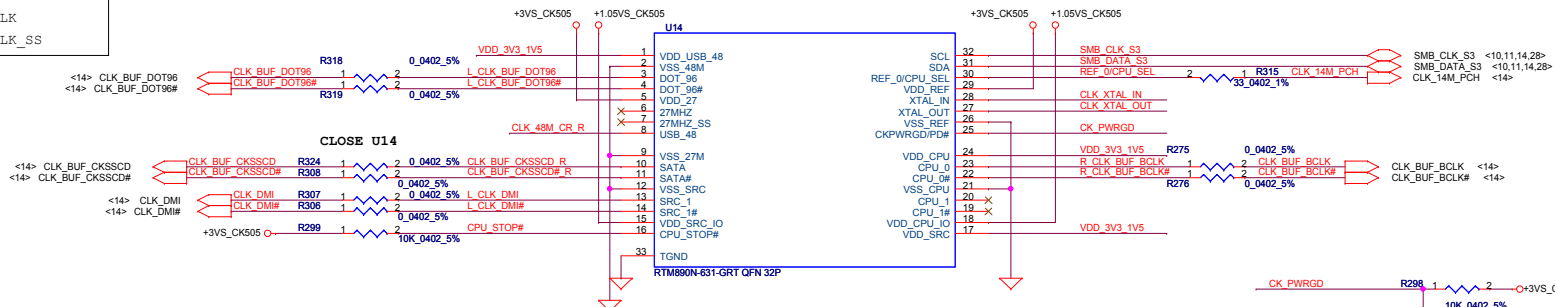
Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	2009/10/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE 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			Rev	
LA-5751			0.3	
Date	Friday, October 30, 2009	Sheet	11	of 51

Reserve for Low Power CLK GEN.
 RTM890N-631 (SA00003HQ00)
 SLG8LV597VTR
 9VLS3199 (SA00003HR00)

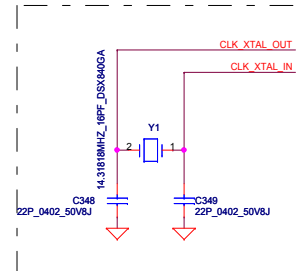
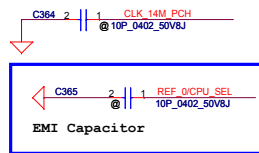
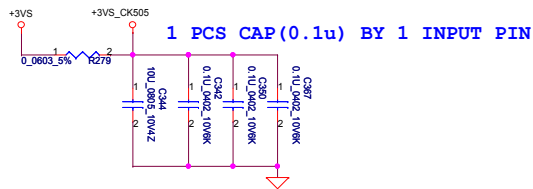
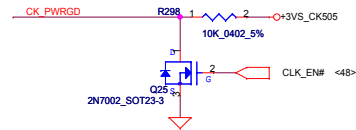
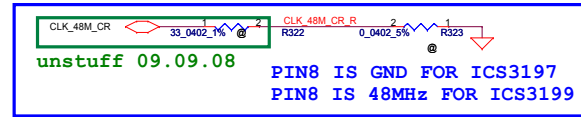


- CLK GEN TO PCH**
1. CLK_DMI
 2. CLK_BUF_BCLK
 3. CLK_BUF_CKSSCD
 4. CLK_BUF_DOT96
 5. CLK_14M_PCH

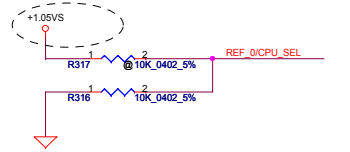
- CLK GEN TO VGA Unused**
1. 27M_CLK
 1. 27M_CLK_SS



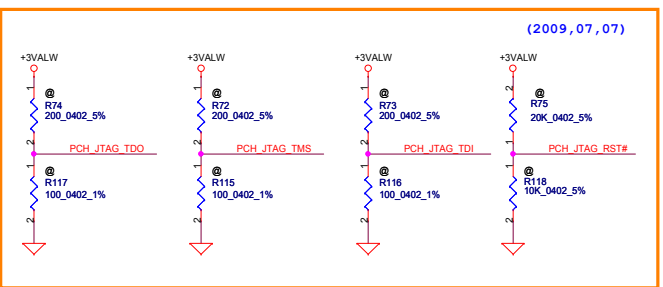
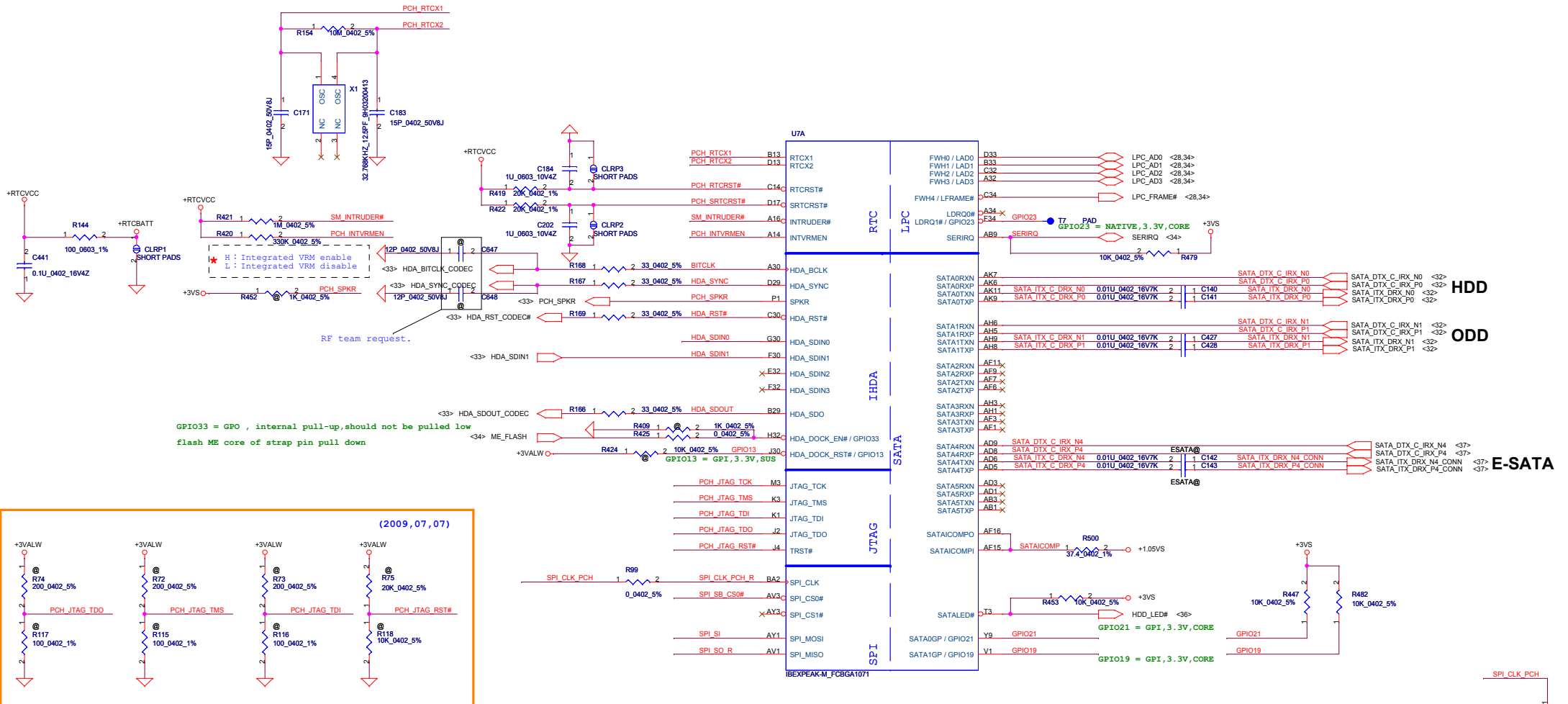
S IC SLG8SP587VTR QFN 32P CLK GEN (SA00002XY00)
 S IC ICS9LRS3199AKLFT MLF 32P CLK GEN (SA000030P00)



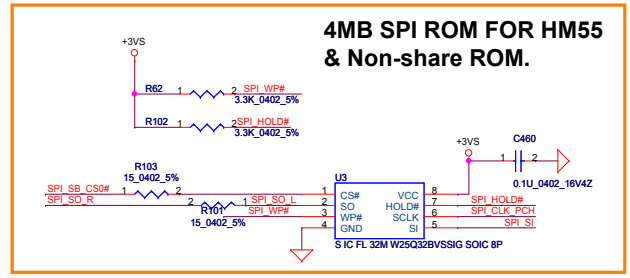
PIN 30	CPU_0	CPU_1
0 (Default)	133MHz	133MHz
1	100MHz	100MHz



Security Classification	Compal Secret Data		Title Compal Electronics, Inc. CLOCK GENERATOR
Issued Date	2008/10/31	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 LA-5751
Date:	Friday, October 30, 2008	Sheet	12 of 51



PCH_JTAG_TCK R114 1 2 51 0402 5% (2009,05,04)
FOR INTEL DPGD REV1.6 (MAY 2009)

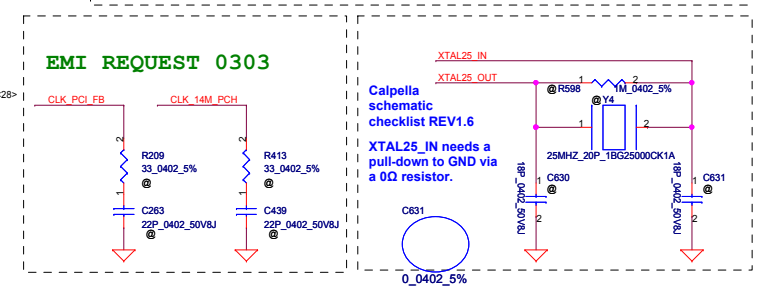
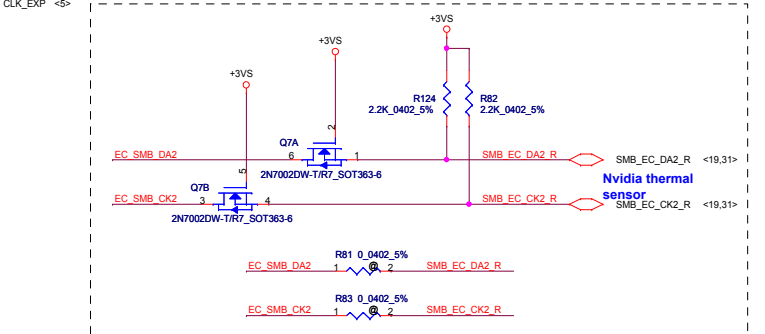
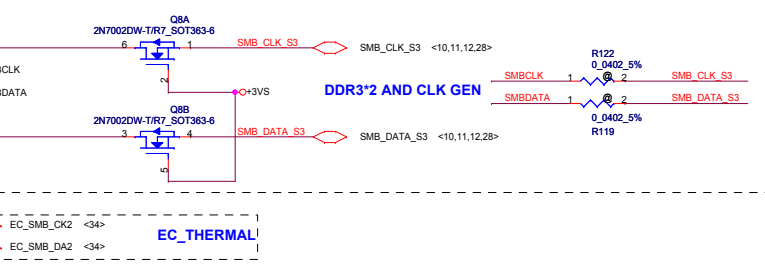
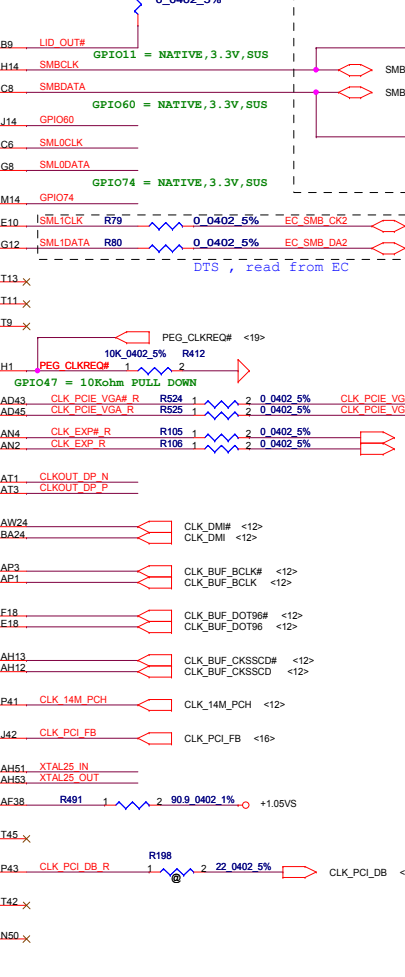
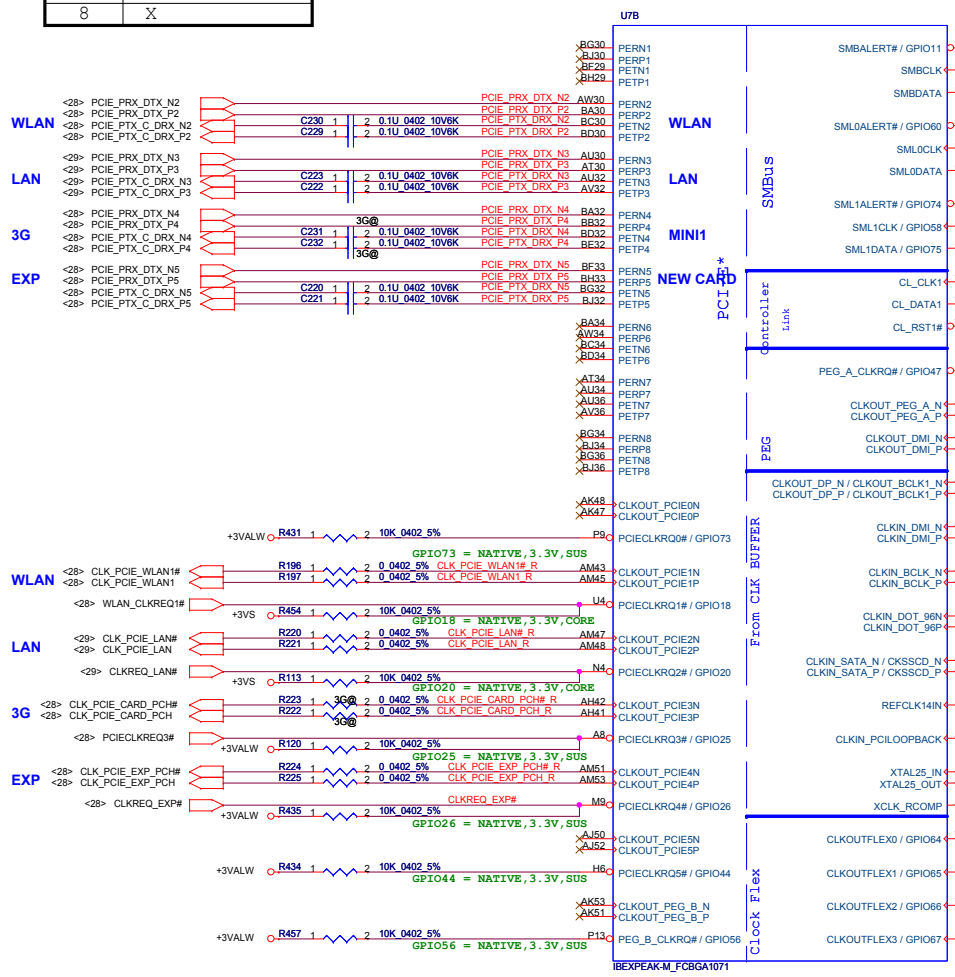


PCH Pin	RefDes	PCH JTAG Pre-Production		PCH JTAG Production
		ES1	ES2	MP
PCH_JTAG_TDO	R591	No Install	200ohm	No Install
	R590	No Install	100ohm	No Install
PCH_JTAG_TMS	R584	200ohm	200ohm	No Install
	R583	100ohm	100ohm	No Install
PCH_JTAG_TDI	R587	200ohm	200ohm	No Install
	R586	100ohm	100ohm	No Install
PCH_JTAG_TCK	R580	51ohm	51ohm	51ohm
	R595	20Kohm	20Kohm	No Install
PCH_JTAG_RST#	R594	10Kohm	10Kohm	No Install

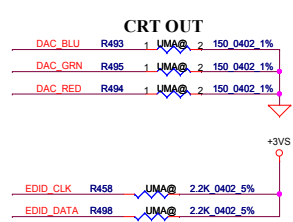
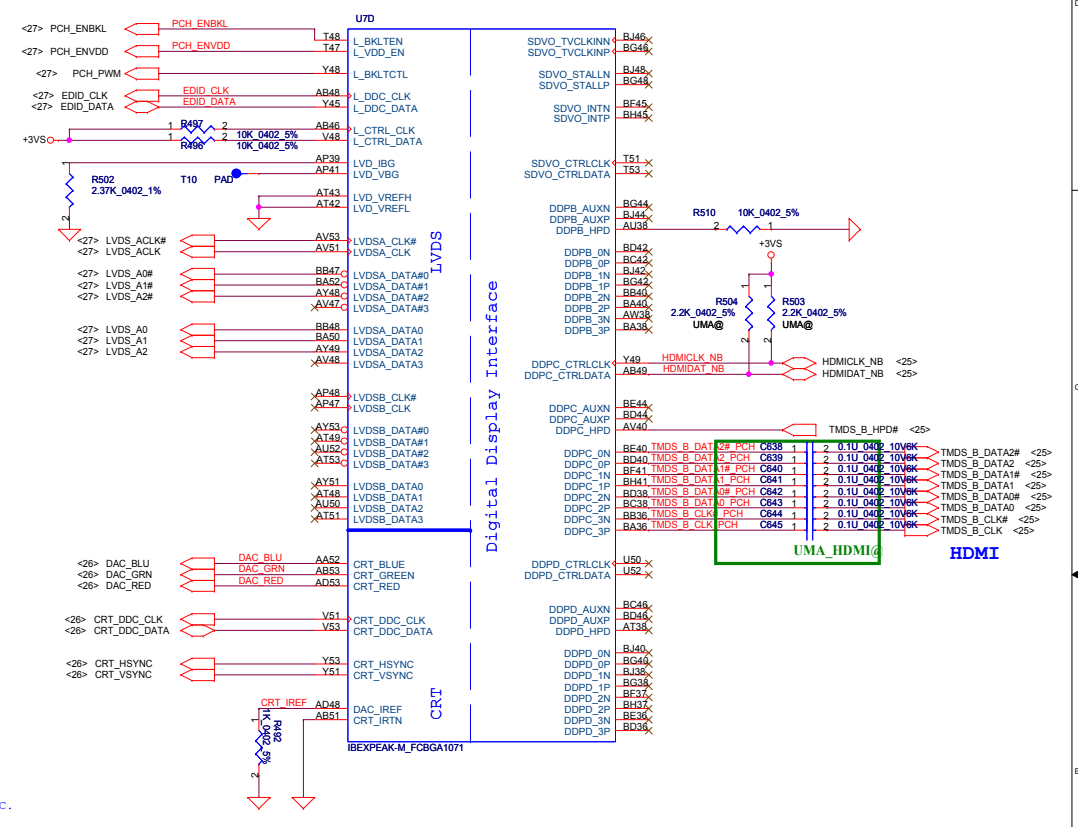
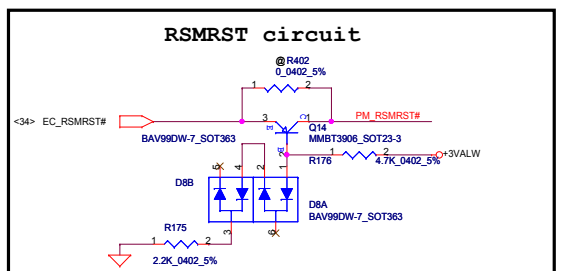
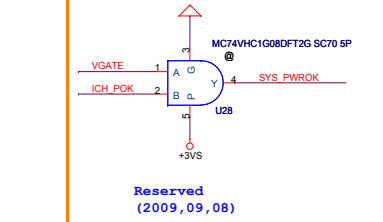
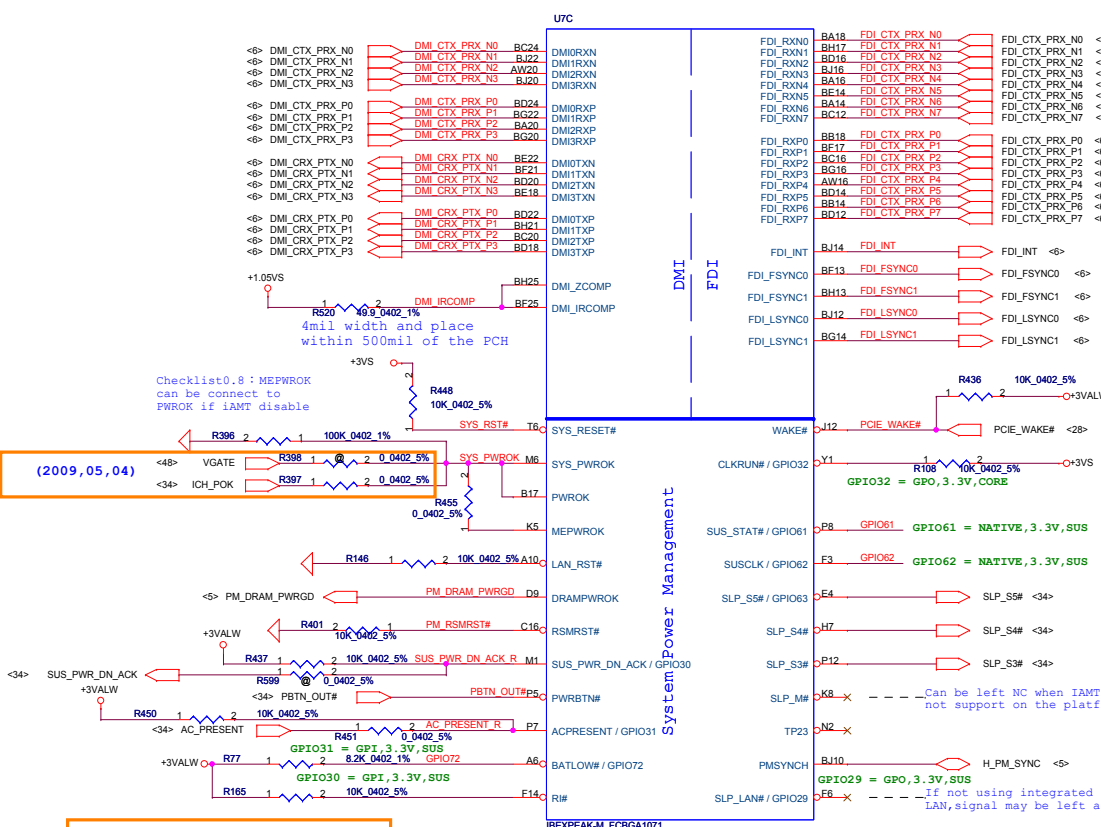
Security Classification	Compal Secret Data		Title IBEX-M(1/6)-HDA/JTAG/SATA
Issued Date	2008/10/31	Deciphered Date	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM 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.			
Site Custom	Document Number	Rev	
	LA-5751	0.3	
Date:	Friday, October 30, 2009	Sheet	13 of 51

PCI-E PORT LIST

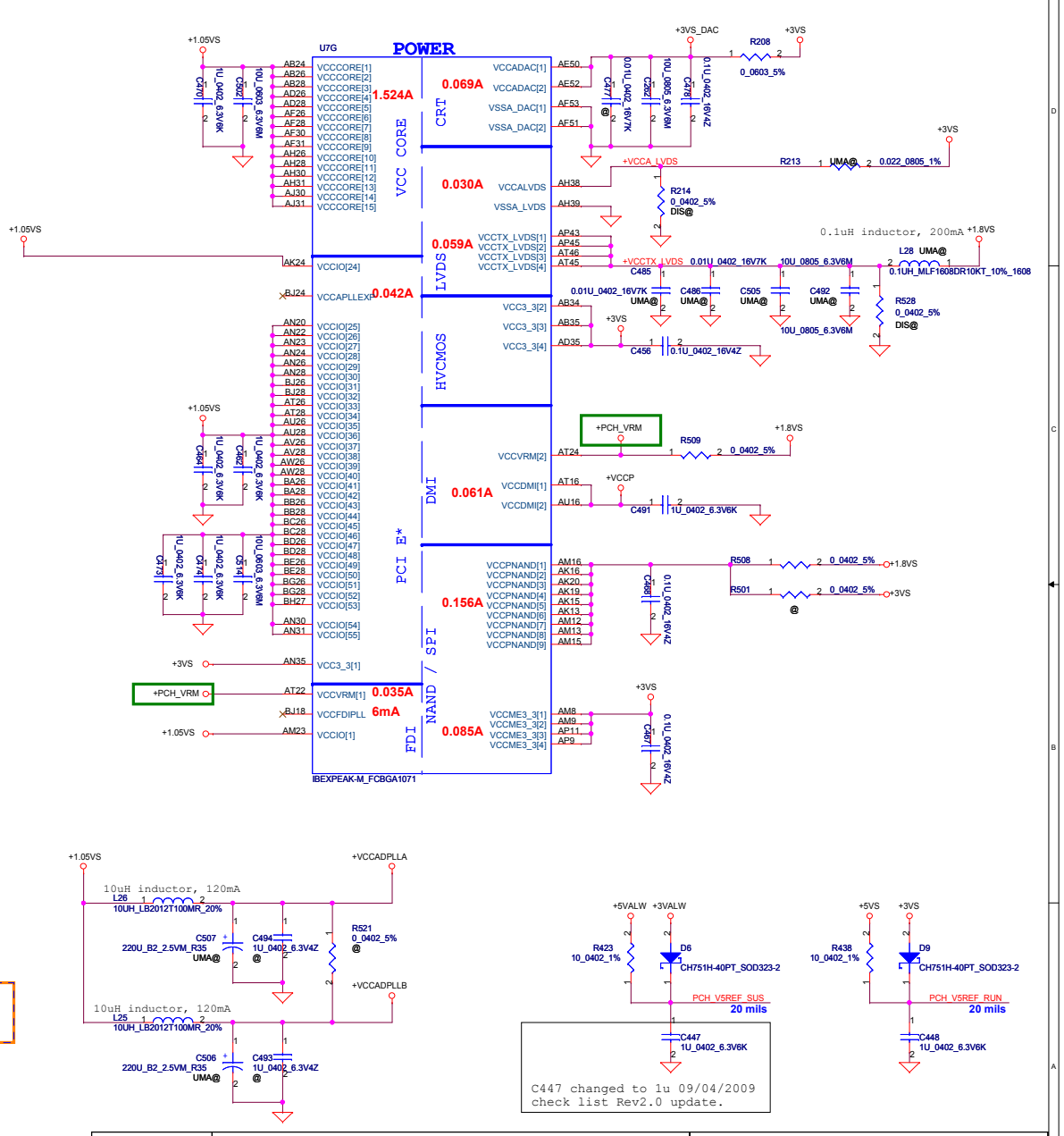
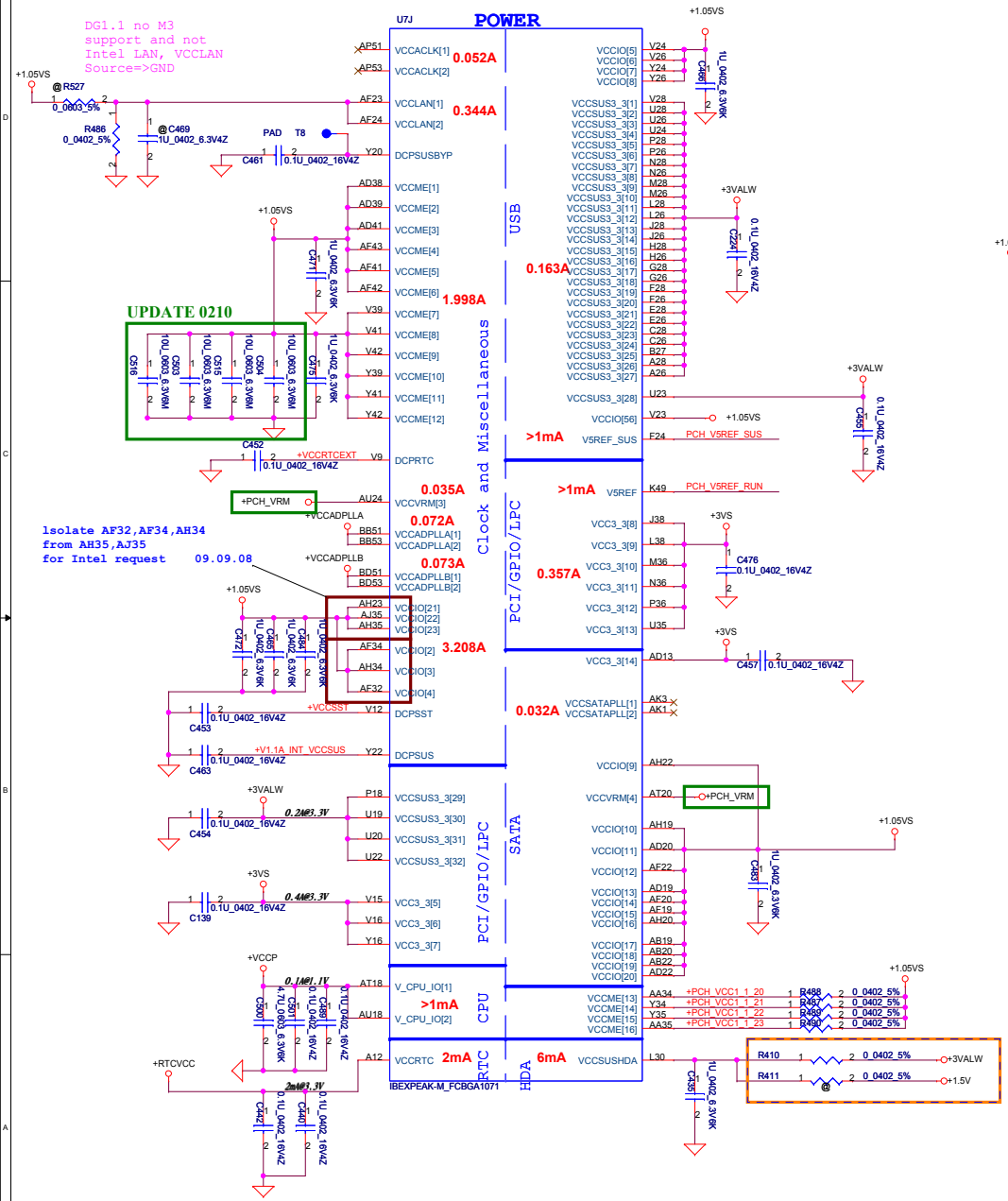
PORT	DEVICE
1	X
2	WLAN
3	LAN
4	3G
5	NEW CARD
6	X
7	X
8	X



Security Classification	Compal Secret Data		Title	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	IBEX-M(2/6)-PCI-E/SMBUS/CLK
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Site Custom	Document Number	Rev	Date	
	LA-5751	0.3	Friday, October 30, 2008	
			Sheet	14 of 51



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2008/10/31	Deciphered Date	2009/10/31	Title	
				IBEX-M(3/6)-DMI/GPIO/LVDS	
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	LA-5751		Rev	0.3	
Date	Friday, October 30, 2008	Sheet	15	of 51	



Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2008/08/12	Deciphered Date	2009/08/12	IBEX-M(S/6)-PWR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUST					

- <6> PCIE_CTX_GRX_N0..15] PCIE_CTX_GRX_N0..15]
- <6> PCIE_CTX_GRX_P0..15] PCIE_CTX_GRX_P0..15]
- <6> PCIE_CRX_GTX_N0..15] PCIE_CRX_GTX_N0..15]
- <6> PCIE_CRX_GTX_P0..15] PCIE_CRX_GTX_P0..15]

- PCIE_CRX_GTX_P0 C120 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N0 C119 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P1 C118 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N1 C117 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P2 C80 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N2 C79 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P3 C78 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N3 C77 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P4 C116 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N4 C115 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P5 C114 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N5 C113 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P6 C112 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N6 C111 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P7 C109 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N7 C108 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P8 C108 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N8 C107 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P9 C105 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N9 C106 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P10 C104 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N10 C103 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P11 C102 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N11 C101 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P12 C100 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N12 C99 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P13 C98 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N13 C97 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P14 C96 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N14 C95 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_P15 C94 DIS@ 1 2 0.1U_0402_10V6K
- PCIE_CRX_GTX_N15 C93 DIS@ 1 2 0.1U_0402_10V6K

- <14> CLK_PCIE_VGA# CLK_PCIE_VGA#
- <14> CLK_PCIE_VGA# CLK_PCIE_VGA#
- PEX_TSTCLK_OUT PEX_TSTCLK_OUT_N
- PEX_TERM PEX_TERM
- PEX_RST_N PEX_RST_N
- PEX_CLKREQ_N PEX_CLKREQ_N
- PEX_CLKREQ# PEG_CLKREQ#

- PCIE_CTX_GRX_P0 AE12
- PCIE_CTX_GRX_N0 AE12
- PCIE_CTX_GRX_P1 AG12
- PCIE_CTX_GRX_N1 AG12
- PCIE_CTX_GRX_P2 AF13
- PCIE_CTX_GRX_N2 AF13
- PCIE_CTX_GRX_P3 AE13
- PCIE_CTX_GRX_N3 AE13
- PCIE_CTX_GRX_P4 AE15
- PCIE_CTX_GRX_N4 AE15
- PCIE_CTX_GRX_P5 AG15
- PCIE_CTX_GRX_N5 AG15
- PCIE_CTX_GRX_P6 AE18
- PCIE_CTX_GRX_N6 AE18
- PCIE_CTX_GRX_P7 AF18
- PCIE_CTX_GRX_N7 AF18
- PCIE_CTX_GRX_P8 AE19
- PCIE_CTX_GRX_N8 AE19
- PCIE_CTX_GRX_P9 AE21
- PCIE_CTX_GRX_N9 AE21
- PCIE_CTX_GRX_P10 AG21
- PCIE_CTX_GRX_N10 AG21
- PCIE_CTX_GRX_P11 AF22
- PCIE_CTX_GRX_N11 AF22
- PCIE_CTX_GRX_P12 AE22
- PCIE_CTX_GRX_N12 AE22
- PCIE_CTX_GRX_P13 AG24
- PCIE_CTX_GRX_N13 AG24
- PCIE_CTX_GRX_P14 AF25
- PCIE_CTX_GRX_N14 AF25
- PCIE_CTX_GRX_P15 AG28
- PCIE_CTX_GRX_N15 AG28
- PCIE_CTX_GRX_P15 AF27
- PCIE_CTX_GRX_N15 AE27

- PCIE_CRX_C_GTX_P0 AD10
- PCIE_CRX_C_GTX_N0 AD11
- PCIE_CRX_C_GTX_P1 AC12
- PCIE_CRX_C_GTX_N1 AC12
- PCIE_CRX_C_GTX_P2 AB11
- PCIE_CRX_C_GTX_N2 AB12
- PCIE_CRX_C_GTX_P3 AD13
- PCIE_CRX_C_GTX_N3 AD14
- PCIE_CRX_C_GTX_P4 AD15
- PCIE_CRX_C_GTX_N4 AC15
- PCIE_CRX_C_GTX_P5 AB14
- PCIE_CRX_C_GTX_N5 AB15
- PCIE_CRX_C_GTX_P6 AC16
- PCIE_CRX_C_GTX_N6 AD16
- PCIE_CRX_C_GTX_P7 AD17
- PCIE_CRX_C_GTX_N7 AD18
- PCIE_CRX_C_GTX_P8 AC18
- PCIE_CRX_C_GTX_N8 AB18
- PCIE_CRX_C_GTX_P9 AB19
- PCIE_CRX_C_GTX_N9 AB20
- PCIE_CRX_C_GTX_P10 AD19
- PCIE_CRX_C_GTX_N10 AD20
- PCIE_CRX_C_GTX_P11 AD21
- PCIE_CRX_C_GTX_N11 AC21
- PCIE_CRX_C_GTX_P12 AB21
- PCIE_CRX_C_GTX_N12 AB22
- PCIE_CRX_C_GTX_P13 AC22
- PCIE_CRX_C_GTX_N13 AD22
- PCIE_CRX_C_GTX_P14 AC23
- PCIE_CRX_C_GTX_N14 AD24
- PCIE_CRX_C_GTX_P15 AE25
- PCIE_CRX_C_GTX_N15 AE26

- AB10 PEX_REFCLK
- AC10 PEX_REFCLK_N
- AE10 PEX_TSTCLK_OUT
- AG10 PEX_TERM
- AD9 PEX_RST_N
- AE9 PEX_CLKREQ_N
- AE9 PEG_CLKREQ#

- AG10 PEX_TERM
- AD9 PEX_RST_N
- AE9 PEX_CLKREQ_N
- AE9 PEG_CLKREQ#

Part 1 of 5

GPIO

DACA

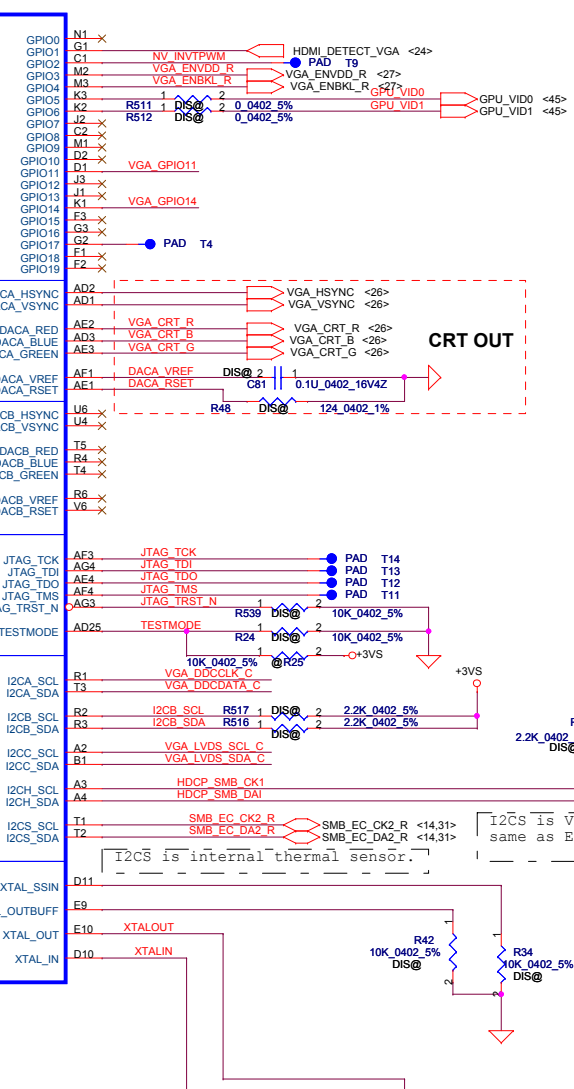
DACB

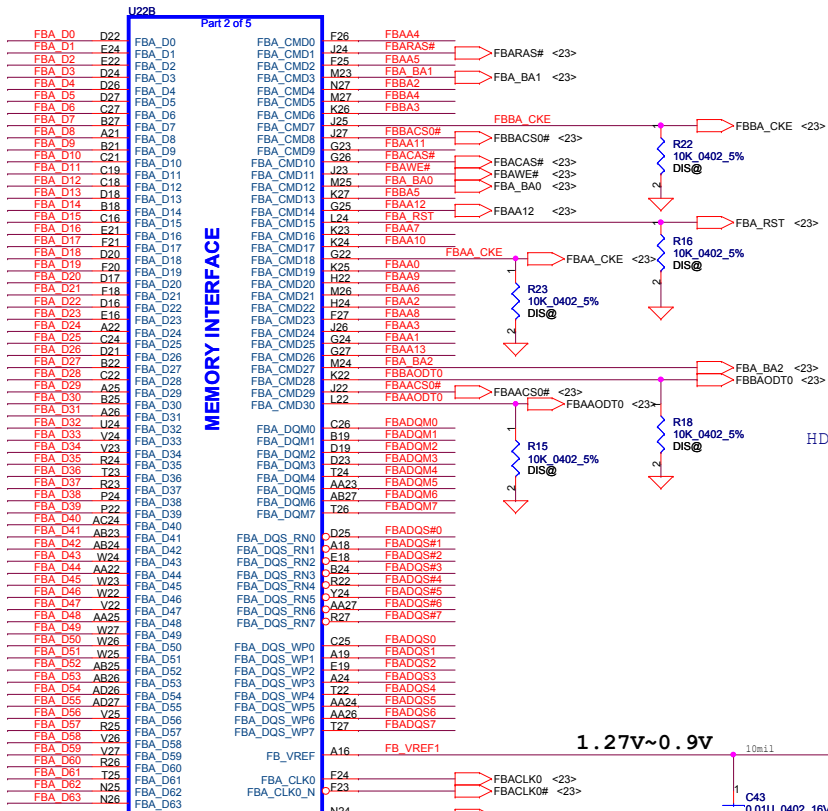
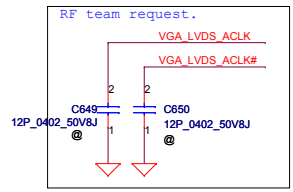
TEST

I2C

CLK

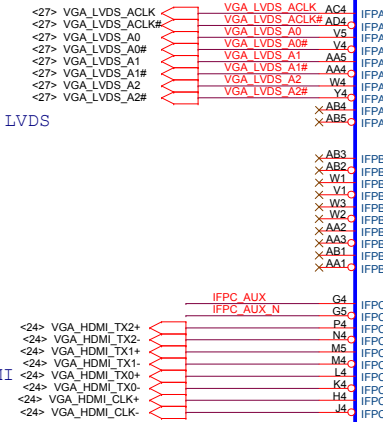
PCIEXPRESS



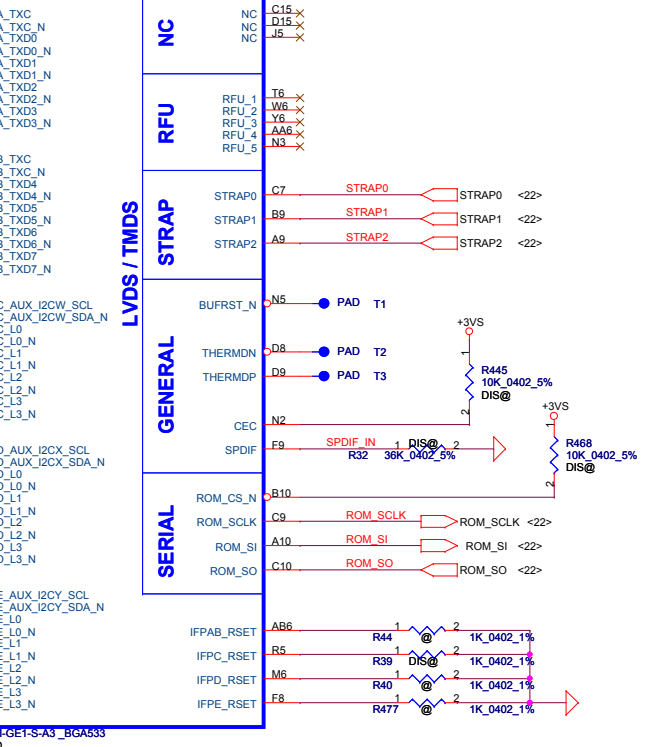


LVDS

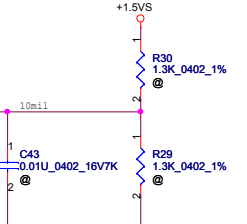
HDMI



LVDS / TMD5



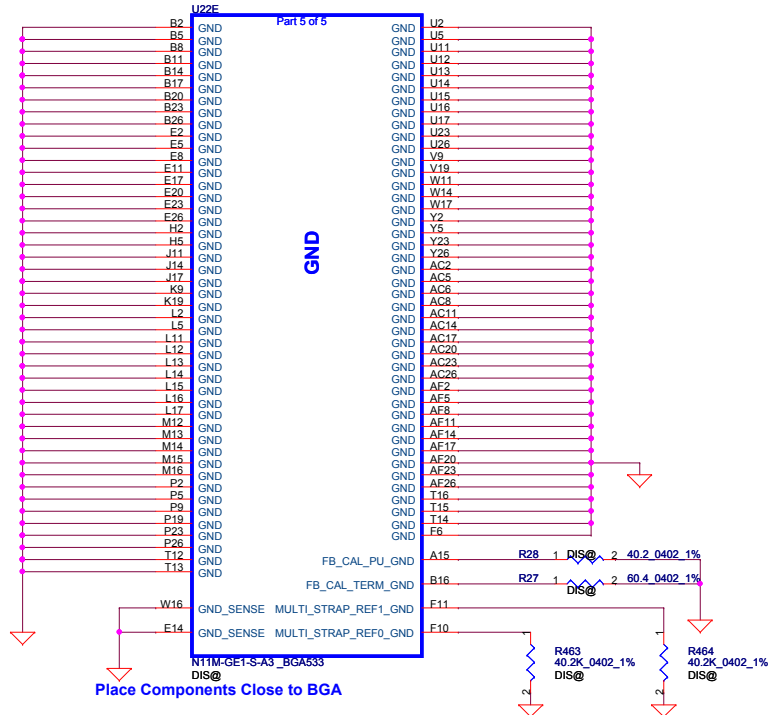
1.27V~0.9V



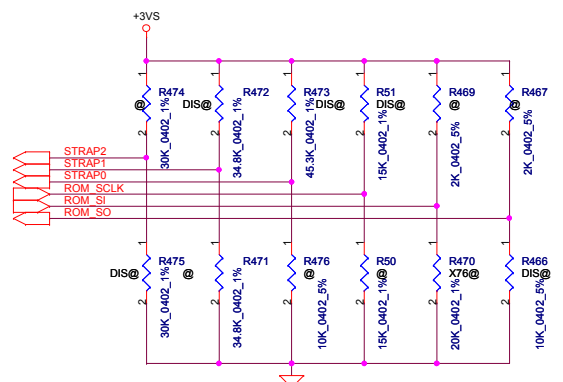
5V PULL UP IN CONNECTER SIDE

Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	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.				N11M-GE1 LVDS,Memory Bus
Size	Document Number	Rev	Date	
B	LA-5751	0.3	Friday, October 30, 2009	
		Sheet	20	of 51

A total of 8 signals are required for GB1 strapping this includes
 2 reference signals
 6 physical strapping pins
 4 logical strapping bits
 A total of 24 logical strapping bits are available



<20> STRAP2
 <20> STRAP1
 <20> STRAP0
 <20> ROM_SCLK
 <20> ROM_SI
 <20> ROM_SO



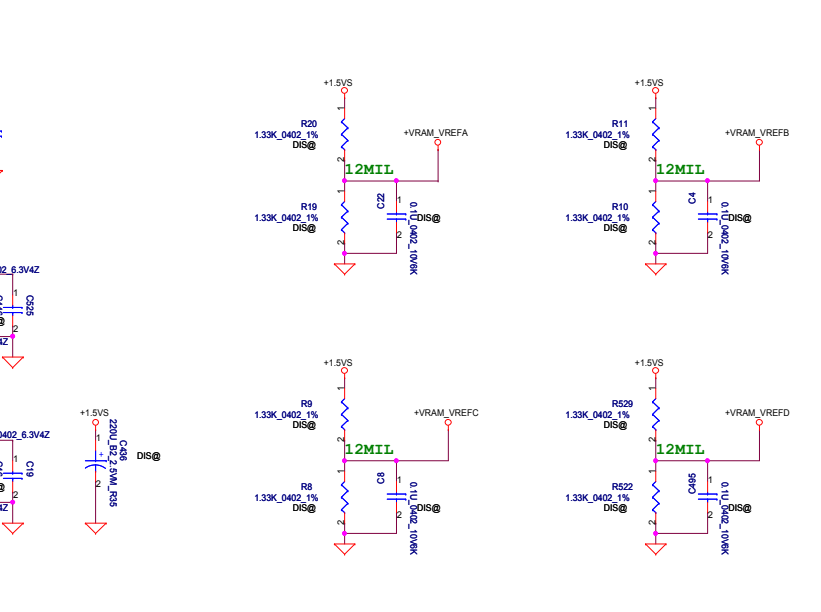
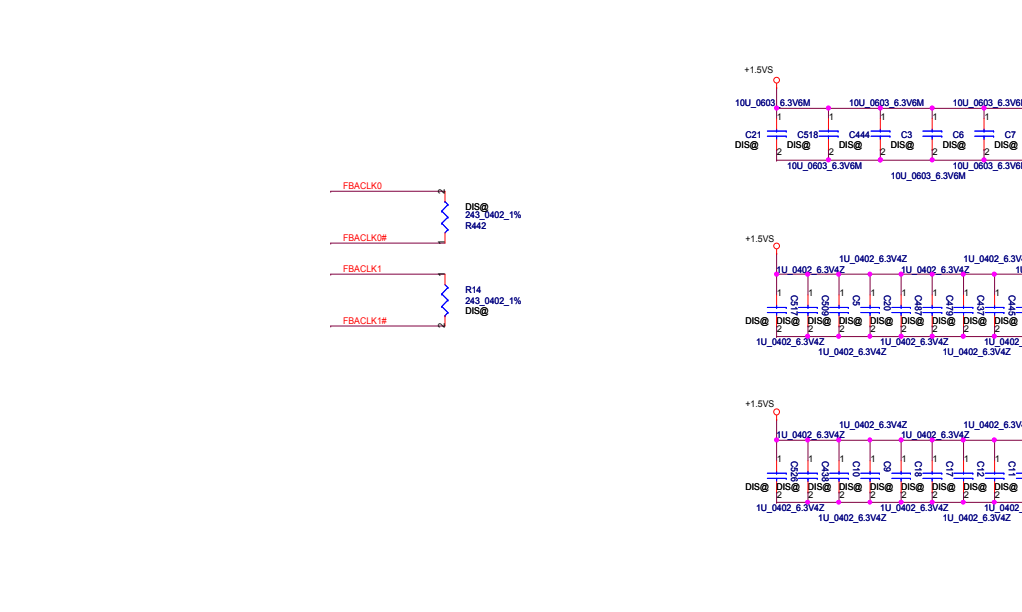
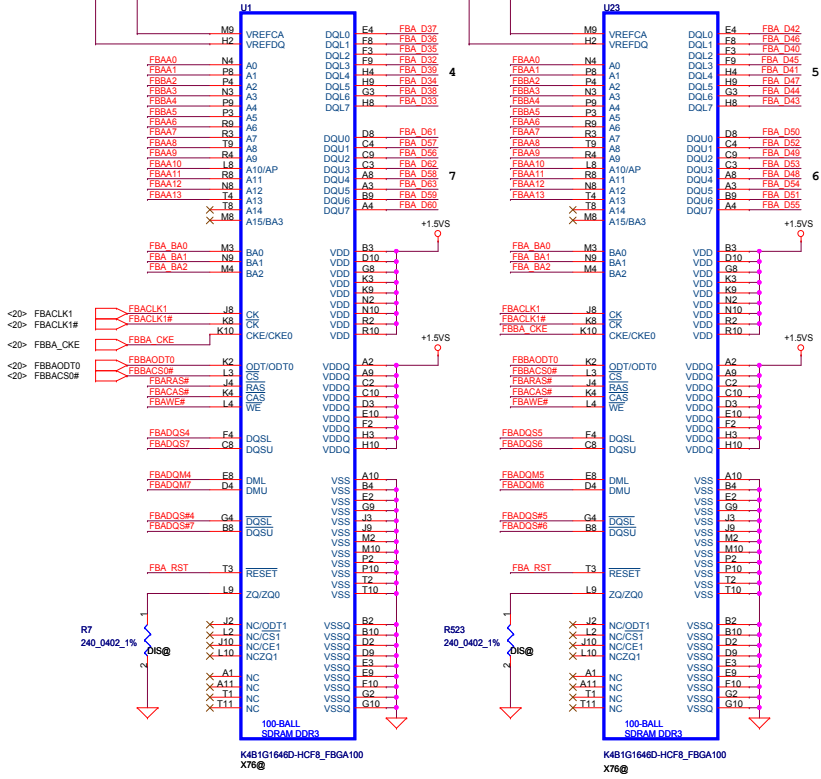
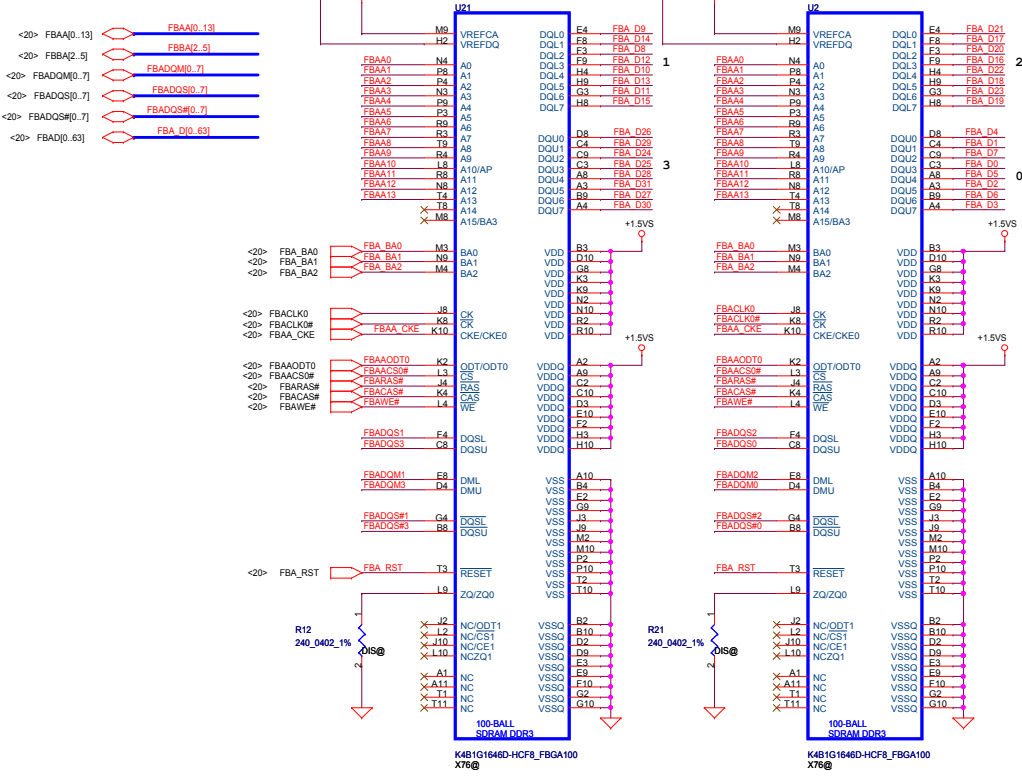
STRAP1 use for 3GIO_PADCFG to set 35K pull up.
 (PUN-04335-001_V10 HW9 update)

N11M-GE1 LP1	Memory/PKG	FBVDDQ	FB_CAL_PU_GND	FBCAL_PD_VDDQ	FBCAL_TERM_GND
	DDR3	+1.5VS	40.2 ohm	40.2 ohm	40.2/60.4 ohm

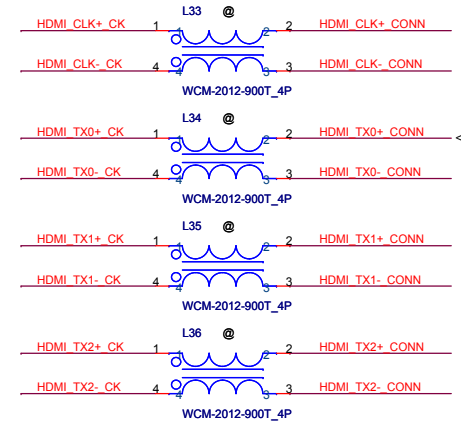
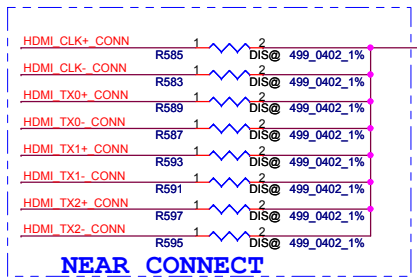
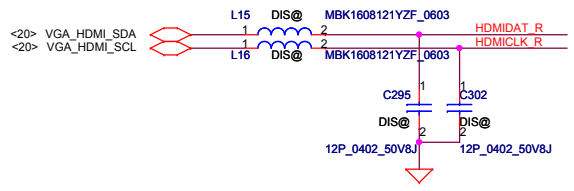
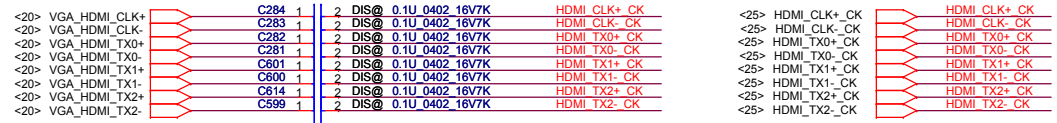
Must be used 1% resistor for driver calibration DG-04642-001-V01(May 22, 2009)

GPU	FB Memory (DDR3)	ROM_SO	ROM_SCLK	ROM_SI	STRAP2	STRAP1	STRAP0
N11M-GE1 LP1 (0x0A7D) 40nm	Samsung 800MHz	K4W1G1646E-HC12					
	(default)	64Mx16	PD 10K	PU 15K	PD 20K	PD 30K	PU 35K PU 45K
Hynix 800MHz	H5TQ1G63BFR-12C						
	64Mx16	PD 10K	PU 15K	PD 15K	PD 30K	PU 35K	PU 45K
				X76			

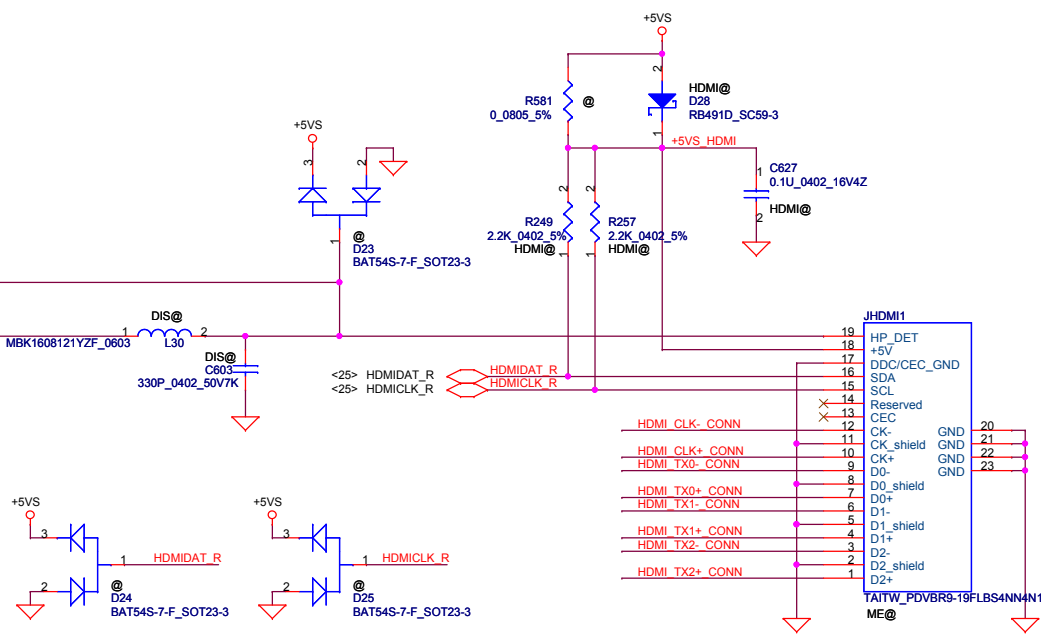
N11x 40nm DDR3 MAPPING
NVIDIA DOCUMENT FOR GA-3978-001



Security Classification	Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	VRAM DDR3
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&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	Date: Thursday, October 26, 2006 Sheet 23 of 51	
C	LA-5751	0.3		



HDMI_CLK+ CK	R584	1	HDMI@	2	0.0402	5%	HDMI_CLK+ CONN
HDMI_CLK- CK	R582	1	HDMI@	2	0.0402	5%	HDMI_CLK- CONN
HDMI_TX0+ CK	R586	1	HDMI@	2	0.0402	5%	HDMI_TX0+ CONN
HDMI_TX0- CK	R586	1	HDMI@	2	0.0402	5%	HDMI_TX0- CONN
HDMI_TX1+ CK	R592	1	HDMI@	2	0.0402	5%	HDMI_TX1+ CONN
HDMI_TX1- CK	R590	1	HDMI@	2	0.0402	5%	HDMI_TX1- CONN
HDMI_TX2+ CK	R596	1	HDMI@	2	0.0402	5%	HDMI_TX2+ CONN
HDMI_TX2- CK	R594	1	HDMI@	2	0.0402	5%	HDMI_TX2- CONN



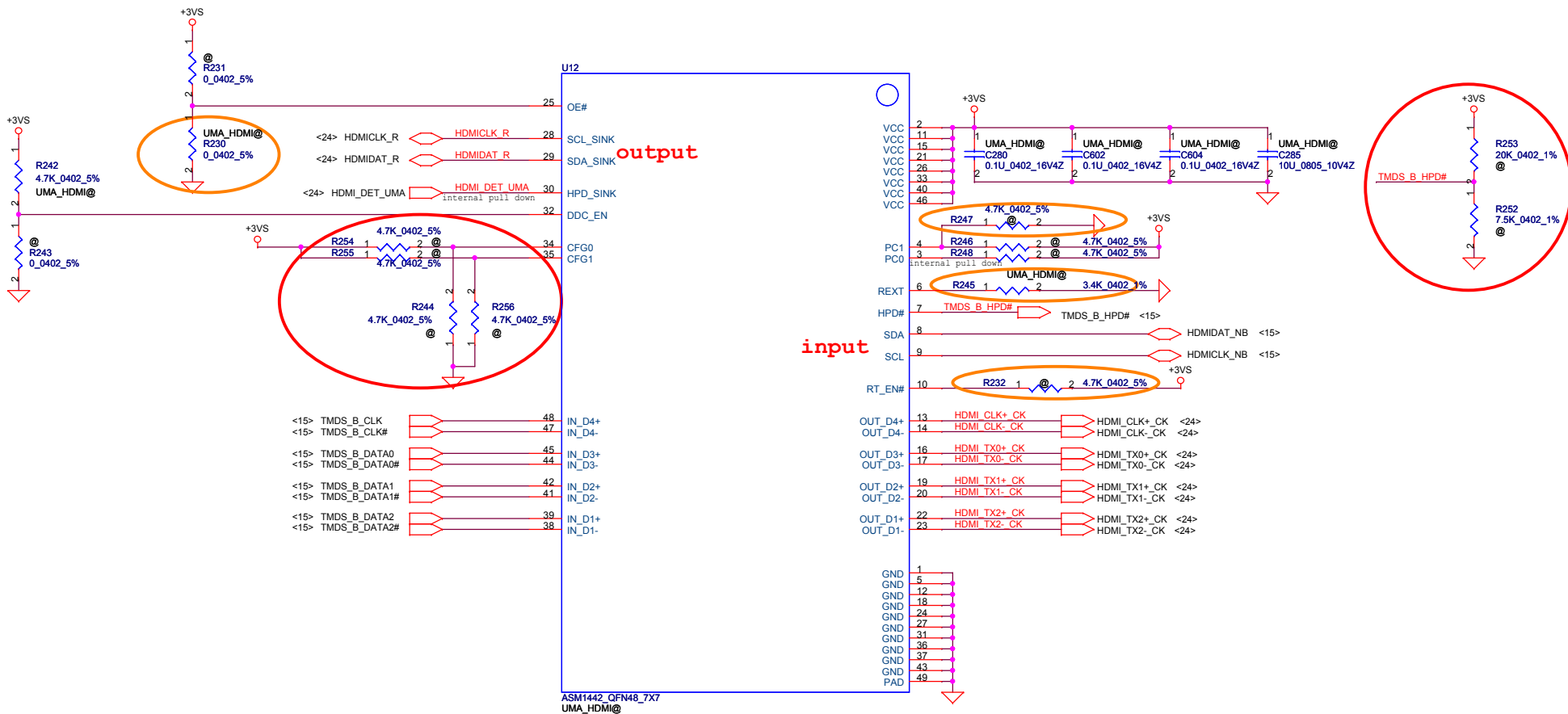
Security Classification		Compal Secret Data		Title	
Issued Date	2008/03/25	Deciphered Date	2008/04/	HDMI CONN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY 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		Sheet	Rev
Custom	LA-5751	Friday, October 30, 2009		24 of 51	0.3

P/N:SA00003GT00 (ASM1442)

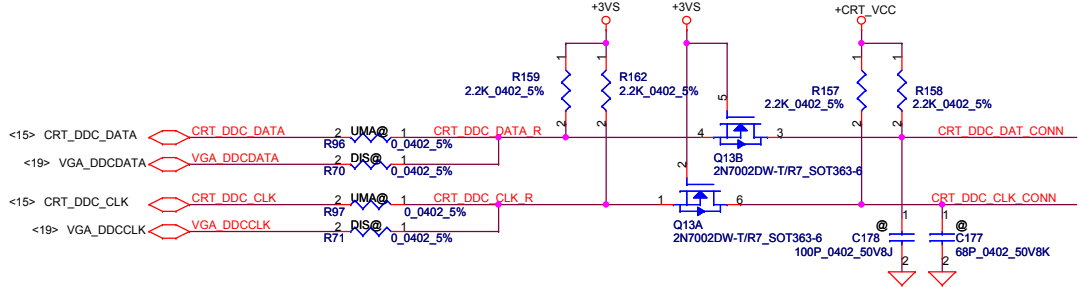
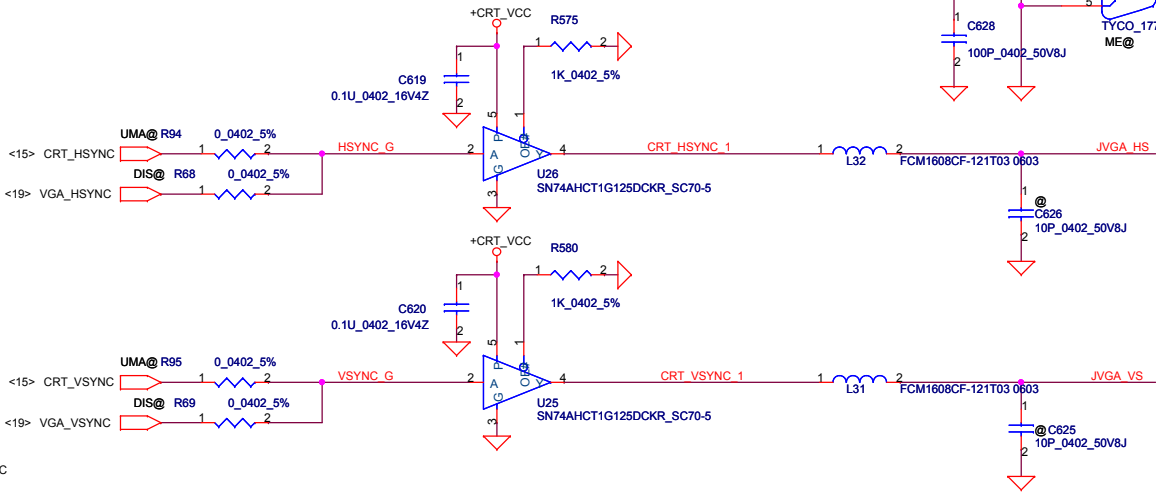
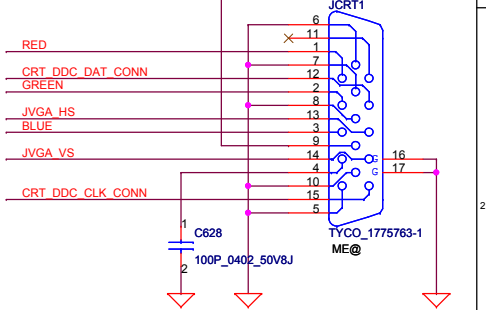
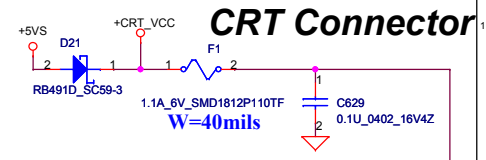
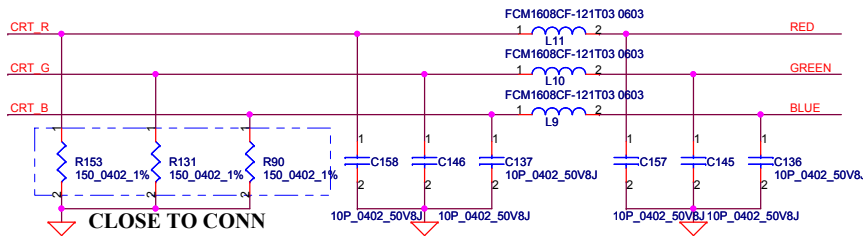
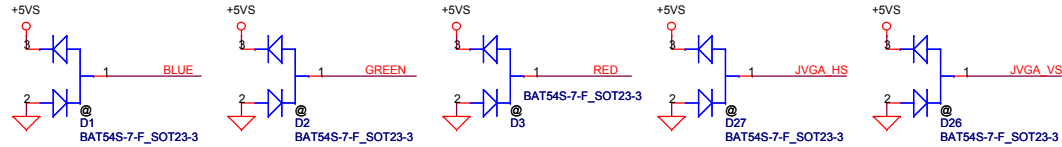
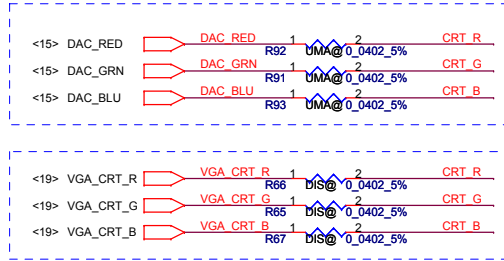
P/N:SA00002D700 (8101T)
P/N:SA00001U900 (CH7318A)

FOR asmedia R230 STUFF
RESERVE THE R232 PULL UP TO 3VS
RESERVE THE R247 PULL DOWN TO GND
CHANGE R245 FROM 499 TO 3.4K OHM

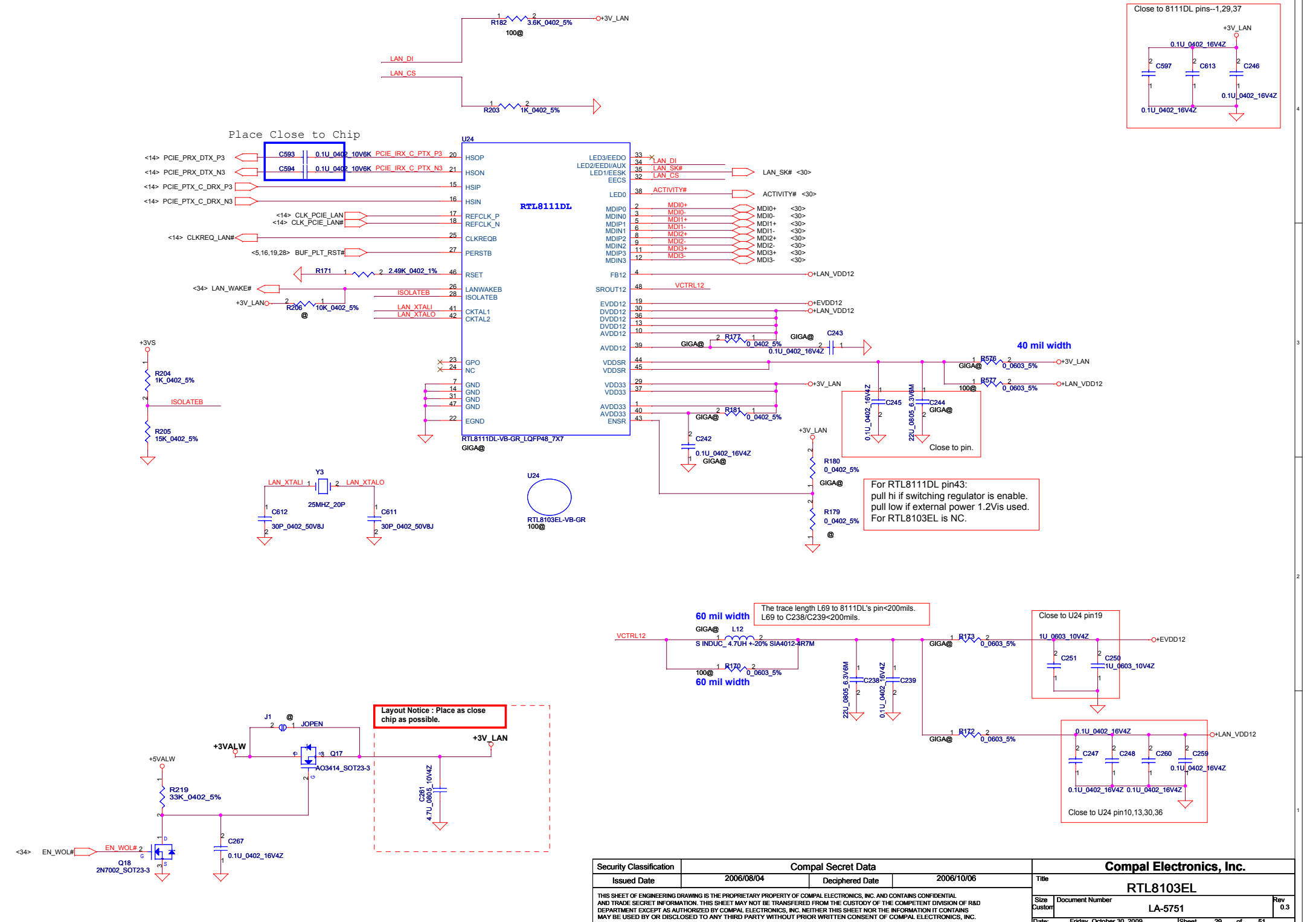
FOR 7318C PIN6 PULL DOWN 1.2Kohm
PIN7 PULL DOWN 7.5Kohm
PIN7 PULL UP 20Kohm



Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title	Level Shifter ASM1442
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Custom	LA-5751
				Date	Thursday, October 29, 2009
				Sheet	25 of 51
				Rev	0.3

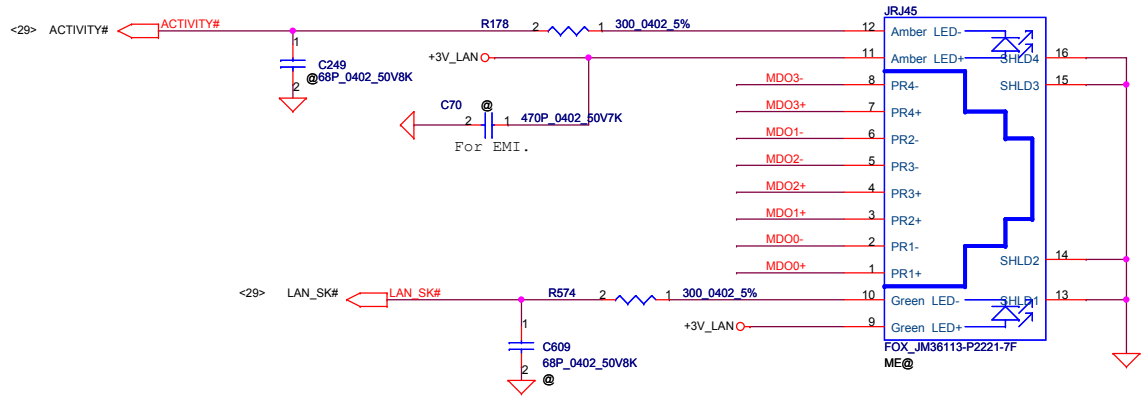
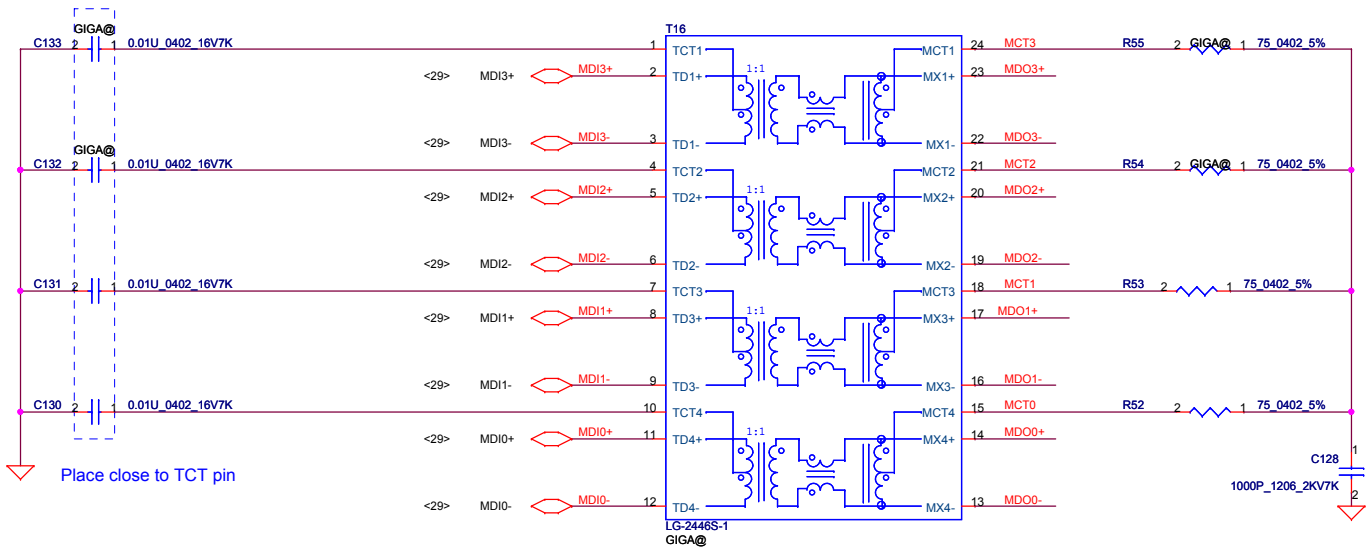


Security Classification		Compal Secret Data		Title	
Issued Date	2007/10/15	Deciphered Date	2008/10/15	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				CRT Connector	
Size	Document Number	Rev		0.3	
Custom	LA-5751				
Date:	Thursday, October 29, 2009	Sheet	26	of	51



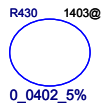
Security Classification		Compal Secret Data		Title	
Issued Date	2006/08/04	Deciphered Date	2006/10/06	RTL8103EL	
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Size	Rev
Customer	Document Number	LA-5751		0.3	
Date:	Friday, October 30, 2009	Sheet	29	of 51	

Close to T14

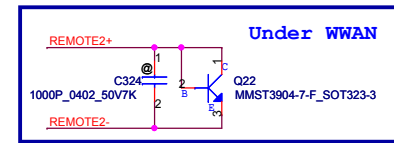
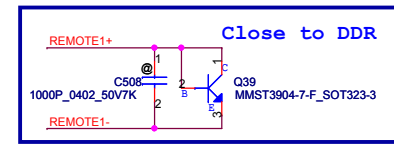
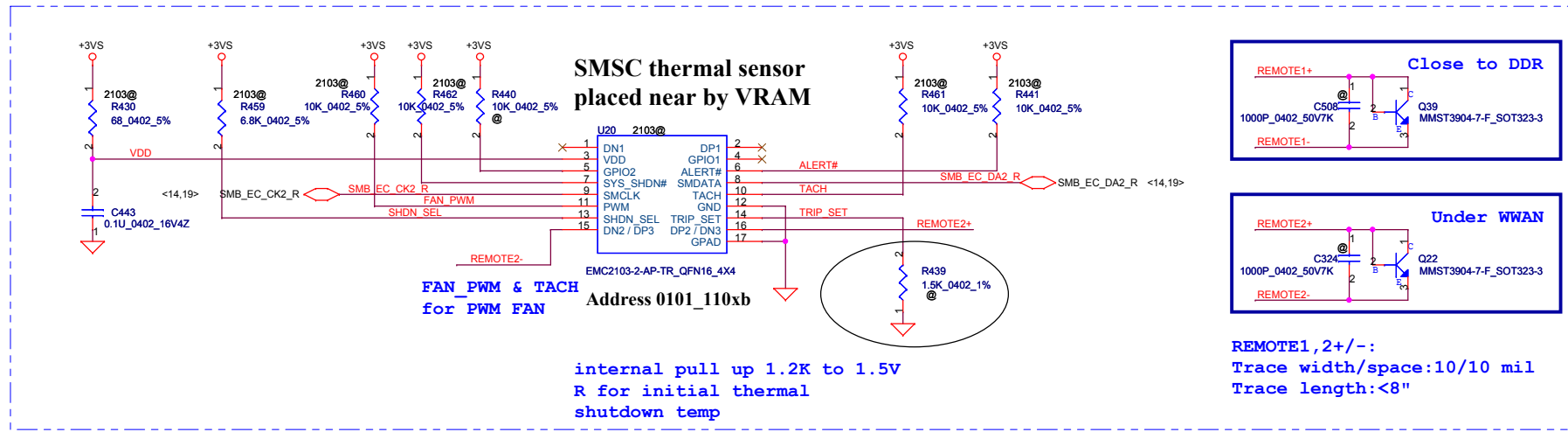


RJ45 Conn.

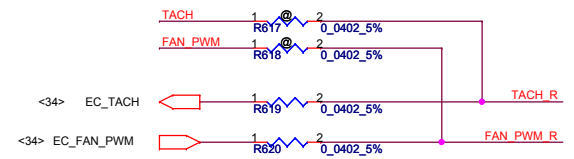
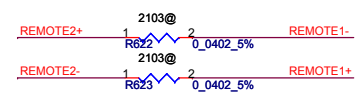
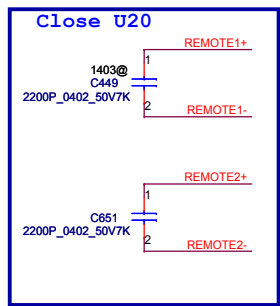
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/03/20	Deciphered Date	2010/03/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				LAN_Transformer	
Size Custom	Document Number	LA-5751		Rev	0.3
Date:	Friday, October 30, 2009	Sheet	30	of	51



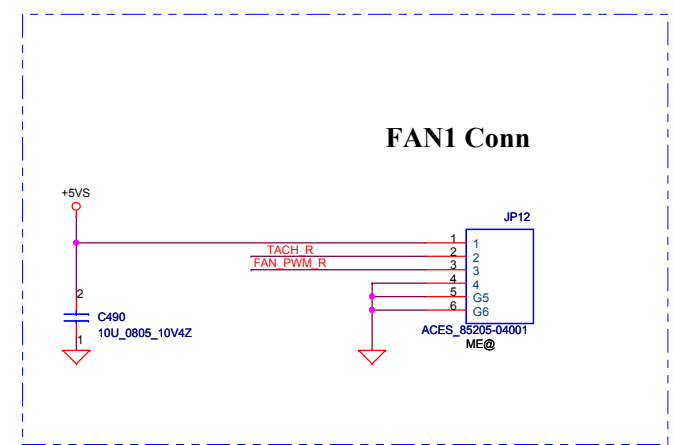
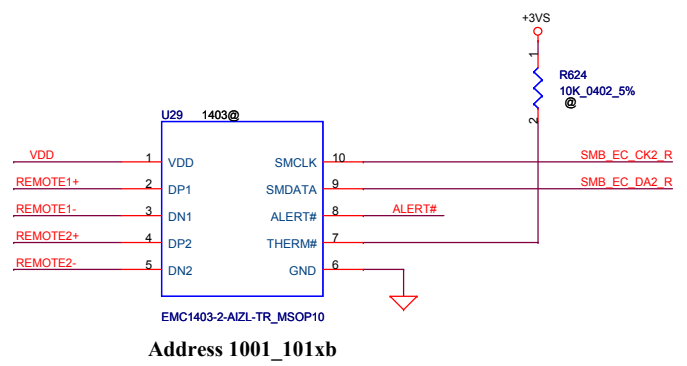
1403:
@C508/@C324=100p



REMOTE1,2+/-:
Trace width/space:10/10 mil
Trace length:<8"

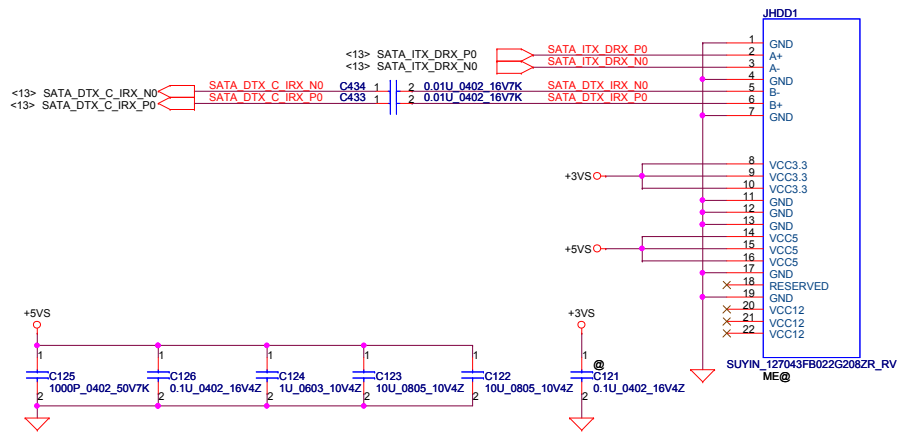


Shutdown Temp	TRIP_SET R439 (1%)
93	953ohm
94	1020ohm
95	1100ohm
96	1150ohm
97	1240ohm
98	1330ohm
99	1400ohm
100	1500ohm
101	1580ohm
102	1690ohm
103	1820ohm
104	1960ohm
105	2050ohm

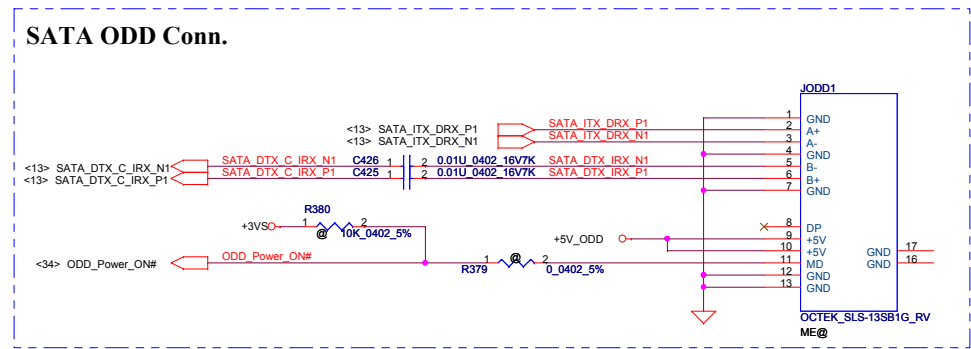


Security Classification		Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title	EMC2103/1403_Thermal sensor/FAN
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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 LA-5751
Date	Friday, October 30, 2009	Sheet	31 of 51	Rev	0.3

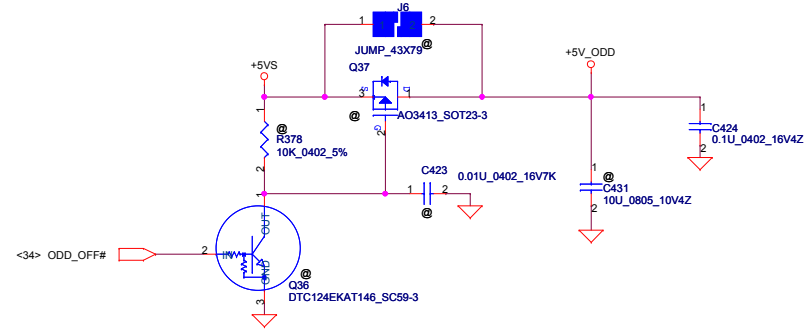
SATA HDD Conn.



SATA ODD Conn.

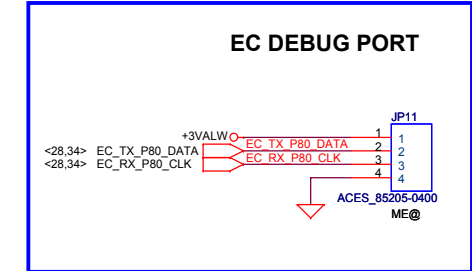
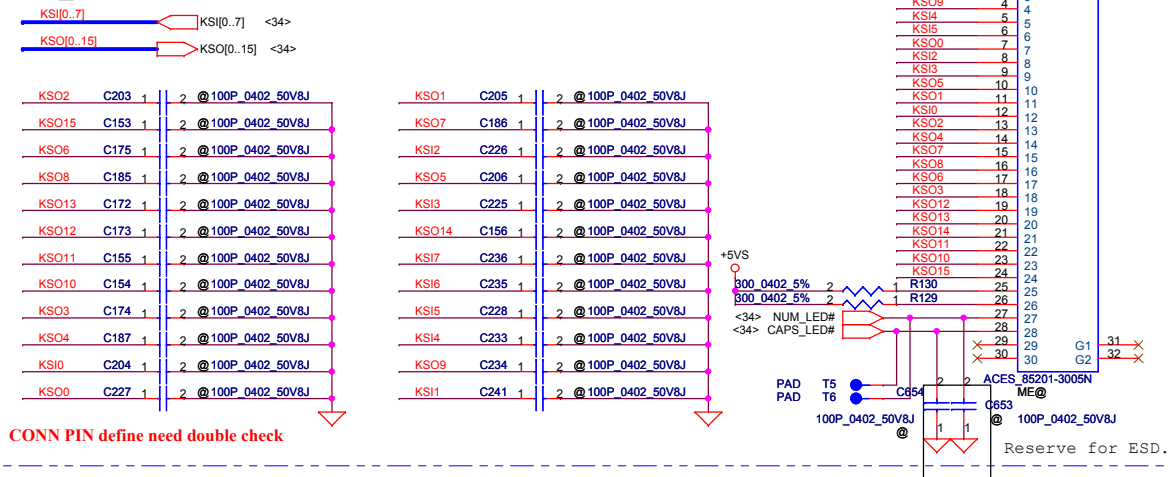


ODD Power Control

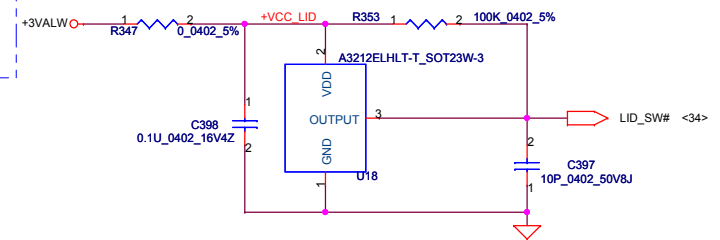


Security Classification		Compal Secret Data		Title		
Issued Date	2007/10/15	Deciphered Date	2008/10/15	Compal Electronics, Inc. HDD/ODD Connector		
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Size B	Document Number	Rev 0.3
				Date:	Friday, October 30, 2009	Sheet 32 of 51

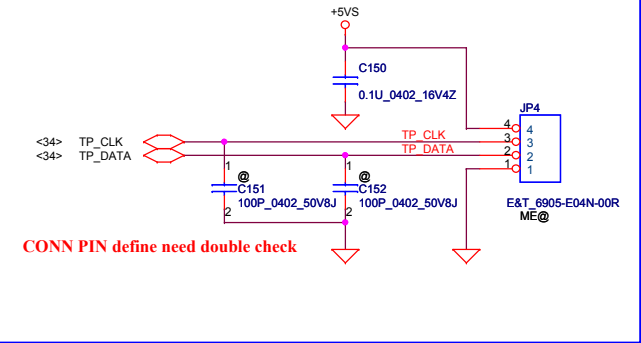
INT_KBD Conn.



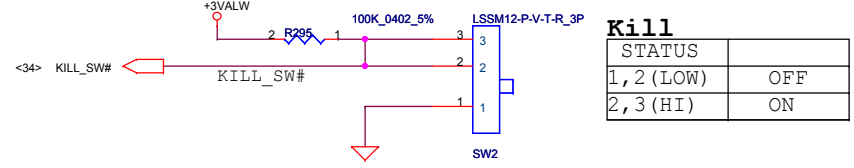
Lid Switch



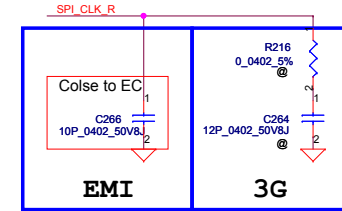
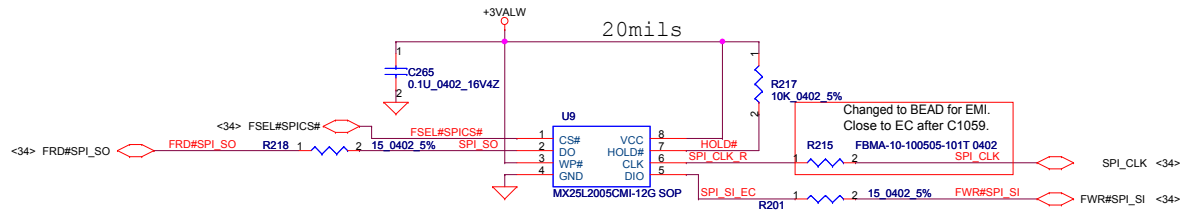
To TP/B Conn.



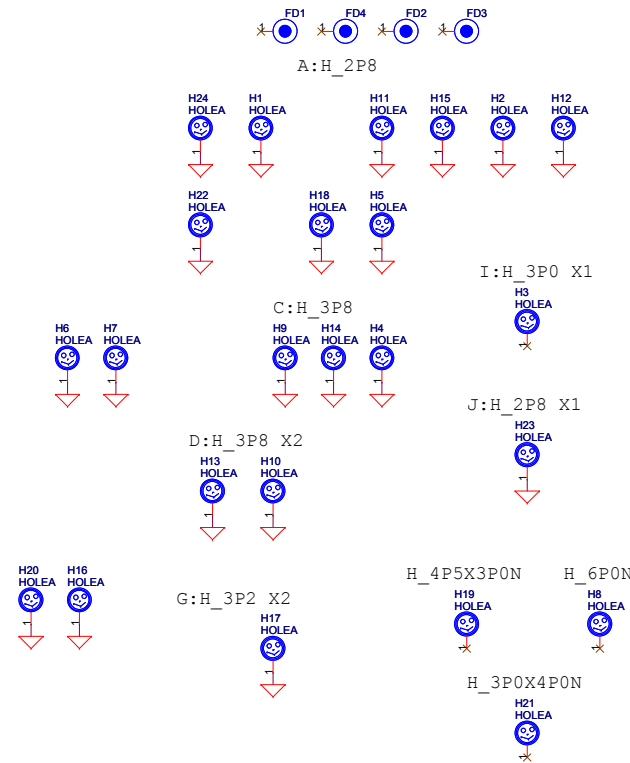
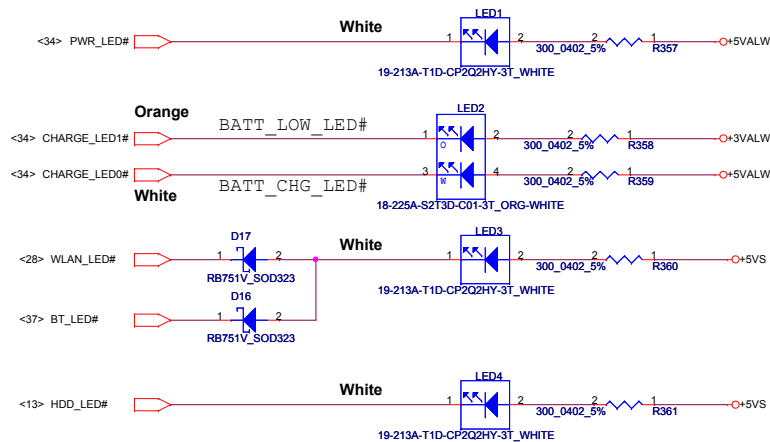
Kill Switch



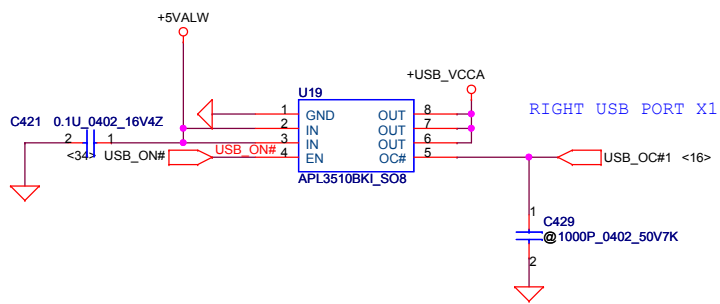
**FOR EC 256KB SPI ROM
(150mil PACKAGE)**



LED

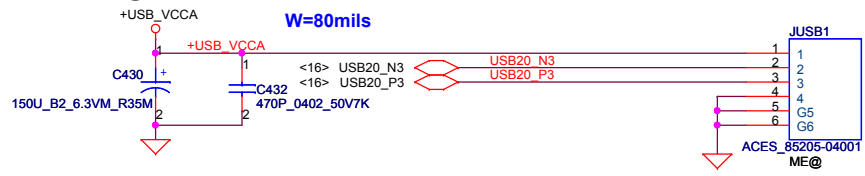


Security Classification	Compal Secret Data		<p align="right">Compal Electronics, Inc.</p> <p align="center">LED/EC SPI ROM</p>	
Issued Date	2007/10/15	Deciphered Date		
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&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 B	Document Number	LA-5751	Rev	0.3
Date:	Friday, October 30, 2009	Sheet	36	of 51

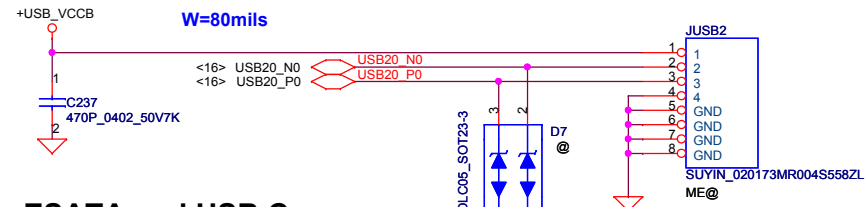


U19/U27 USB power switch need update symbol to SA000039E00 (Low enable)

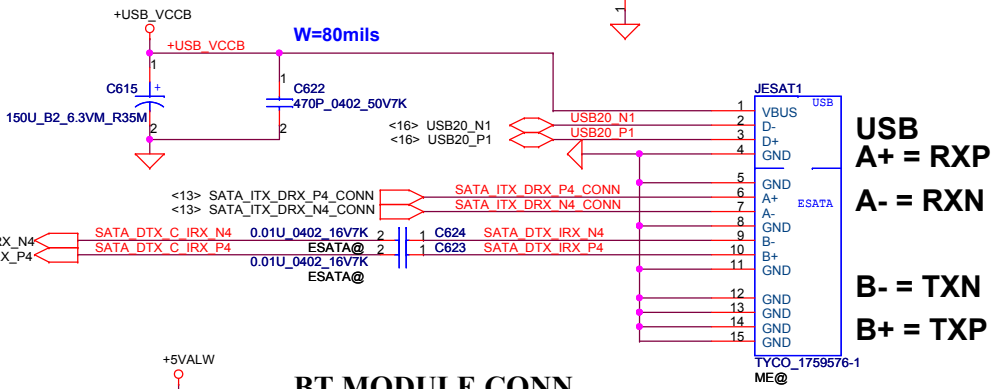
Right USB Conn.



Left USB Conn.



ESATA and USB Conn.

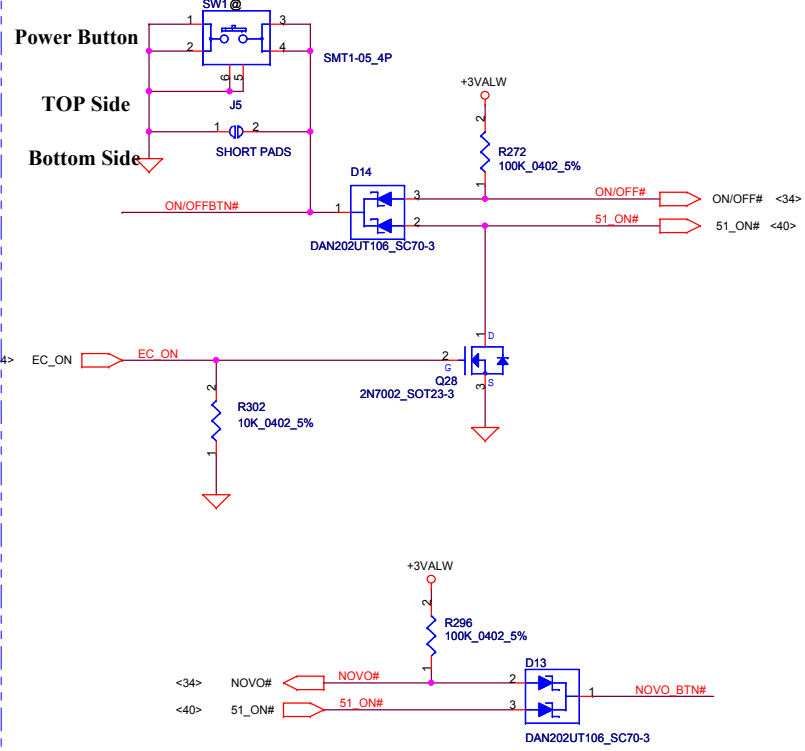


BT MODULE CONN

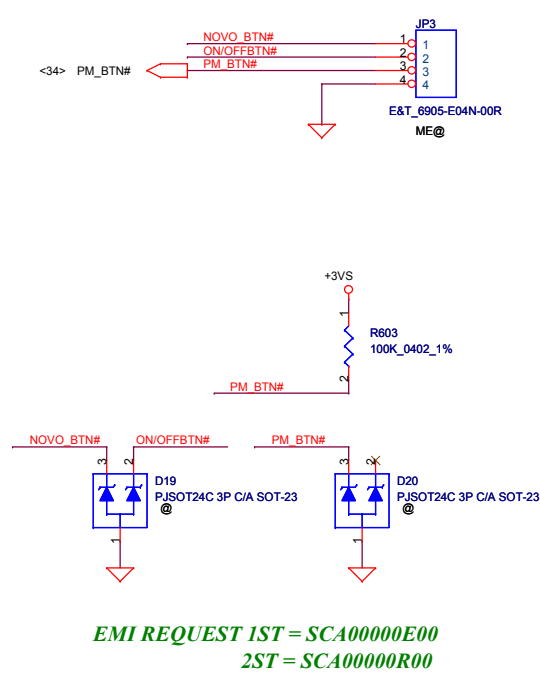
USB
A+ = RXP
A- = RXN
B- = TXN
B+ = TXP

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2006/08/18	Deciphered Date	2007/8/18	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.				USB ports/BT/E-SATA	
Size	Document Number	Rev		Date	
Custom	LA-5751	0.3		Thursday, October 29, 2009	
				Sheet 37 of 51	

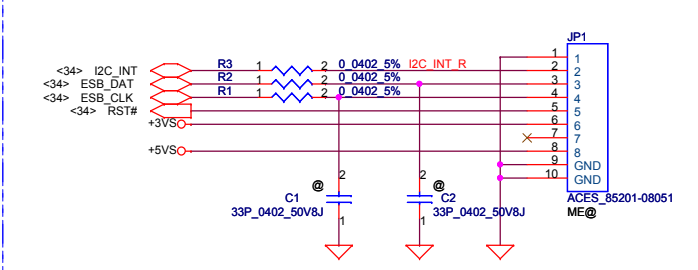
ON/OFF switch



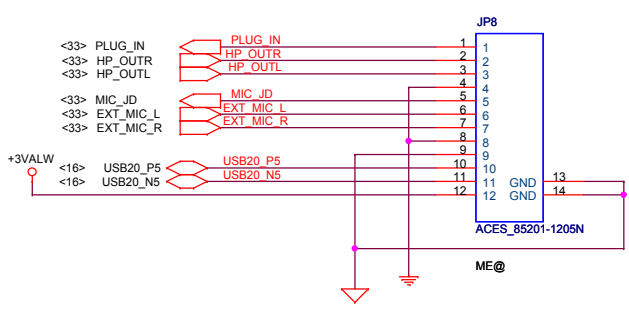
Power Bottom Board Conn. 4pin



Cap Sensor Board Conn. 6pin ENE SB3534

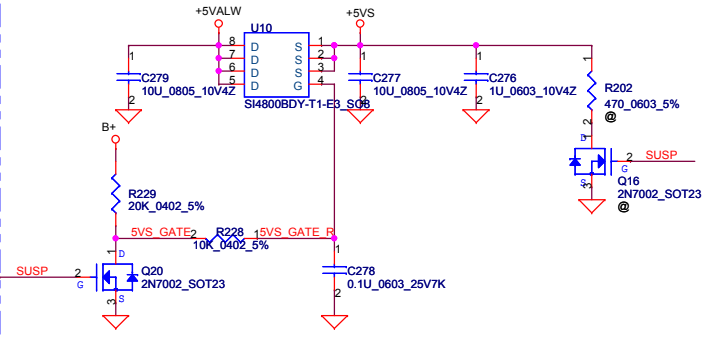


Card Reader/Audio Jack SB CONN

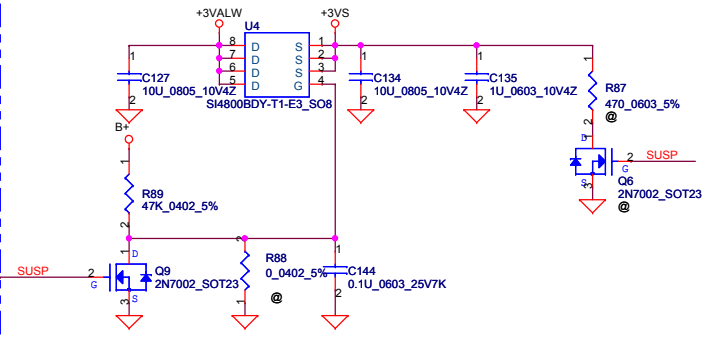


Security Classification	Compal Secret Data		Compal Electronics, Ltd.	
Issued Date	2008/03/25	Deciphered Date	2008/04/	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Audio Jack & SW connector
				Size Custom
		LA-5751		0.3
Date:	Friday, October 30, 2009	Sheet	38 of 51	

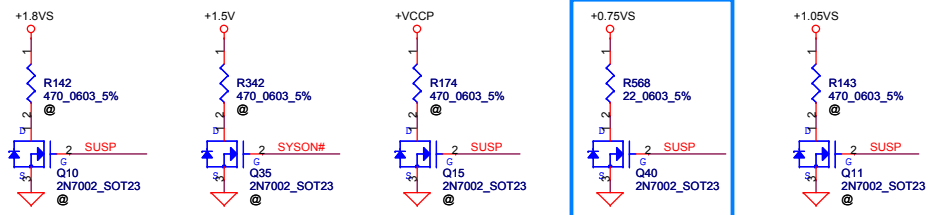
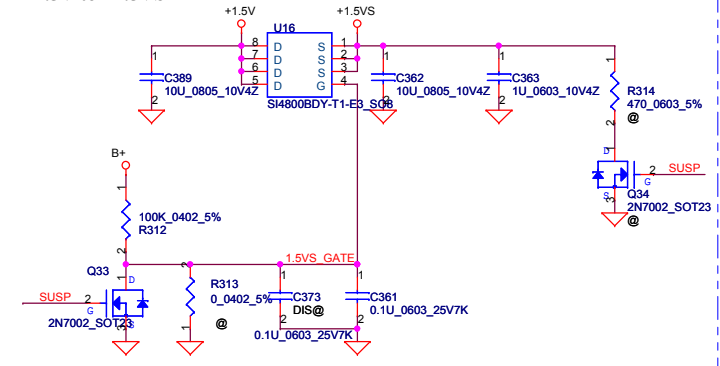
+5VALW TO +5VS



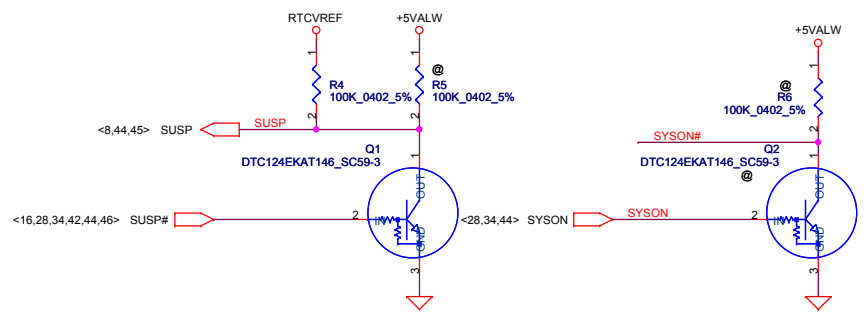
+3VALW TO +3VS



+1.5V to +1.5VS

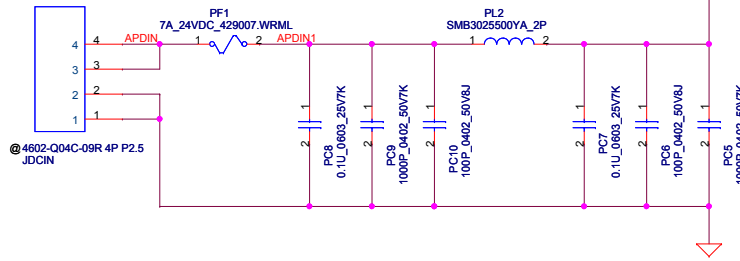


For Intel S3 Power Reduction.



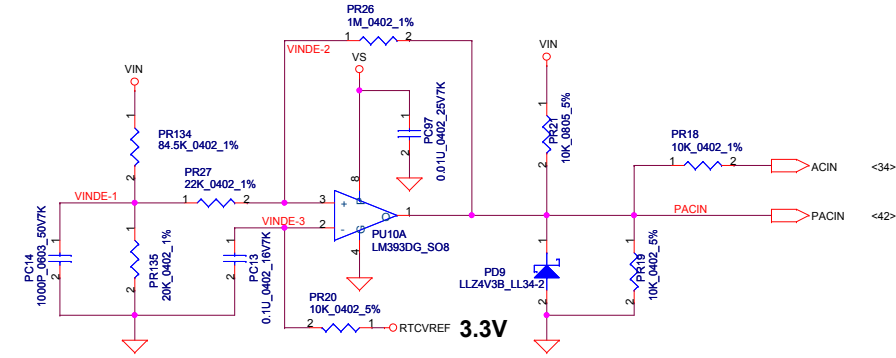
Security Classification		Compal Secret Data		Title	
Issued Date		Deciphered Date		DC Interface	
2006/08/18		2007/8/18		LA-5751	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	0.3
				Date	Sheet
				Thursday, October 29, 2009	39 of 51

DC030006J00



Vin Detector

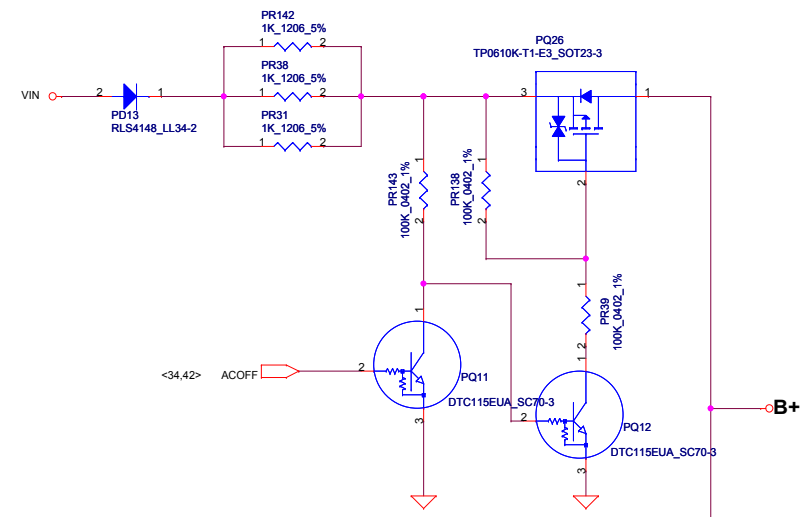
	Min.	typ.	Max.
L-->H	17.430V	17.901V	18.384V
H-->L	16.976V	17.262V	17.728V



ACIN

Precharge detector

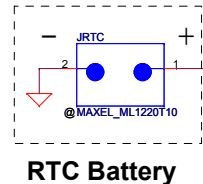
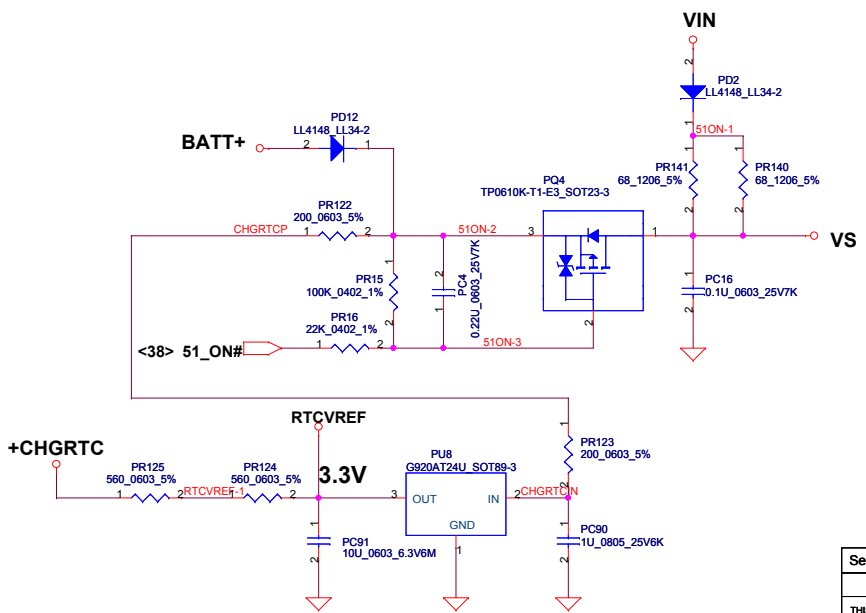
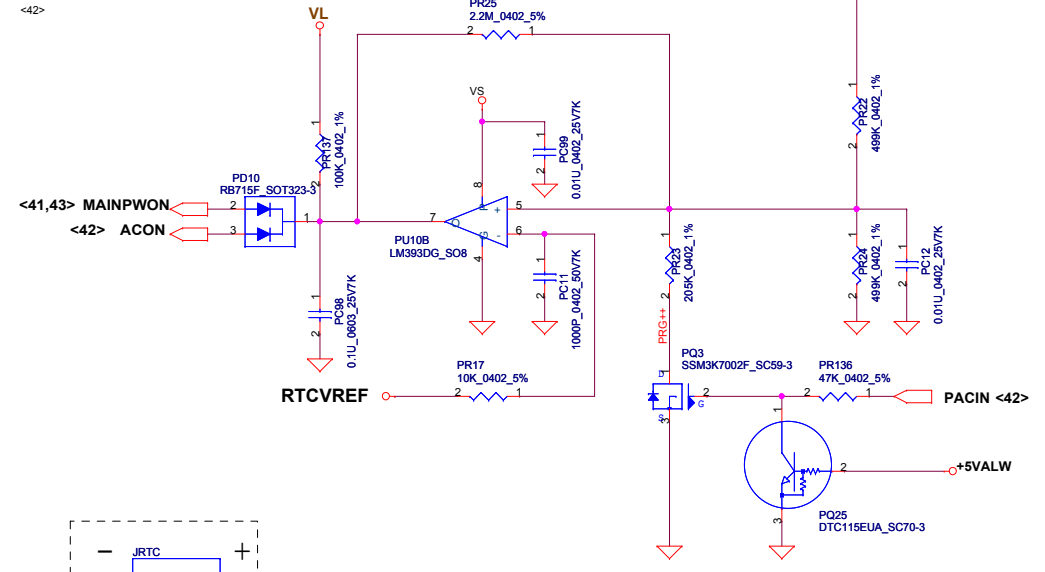
	Min.	typ.	Max.
L-->H	14.991V	15.381V	15.782V
H-->L	13.860V	14.247V	14.621V



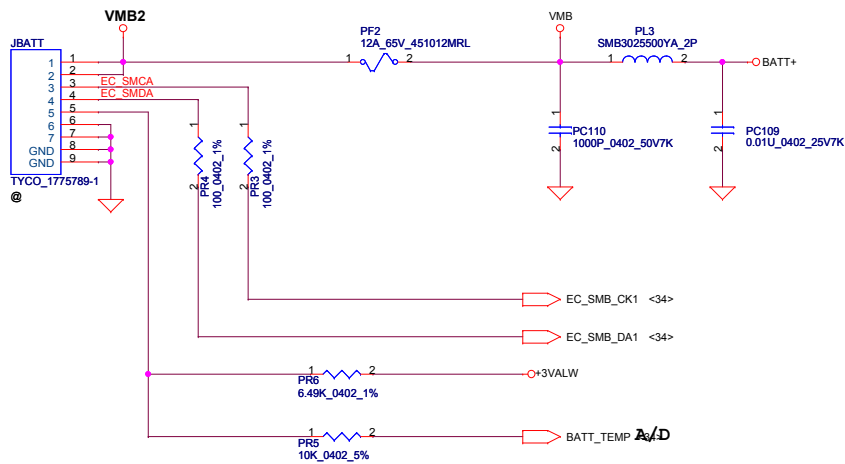
BATT ONLY

Precharge detector

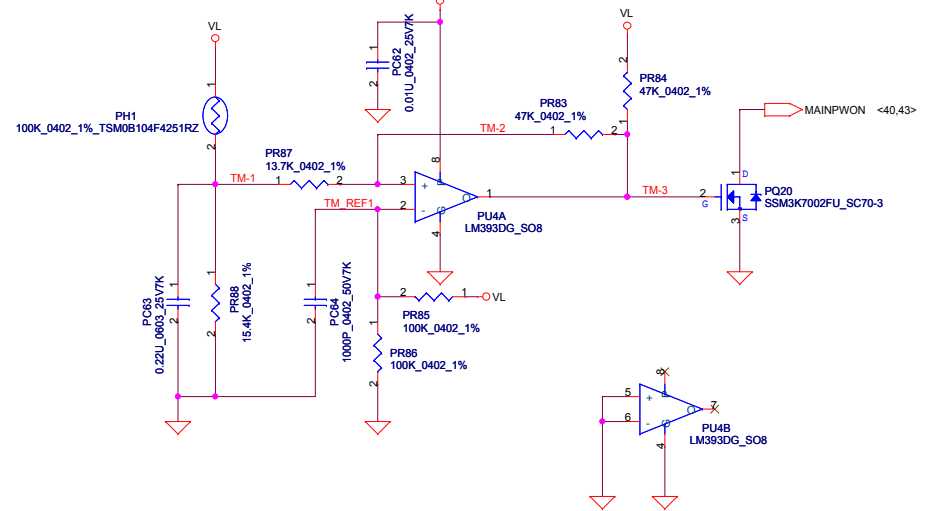
	Min.	typ.	Max.
L-->H	7.196V	7.349V	7.505V
H-->L	6.138V	6.214V	6.056V



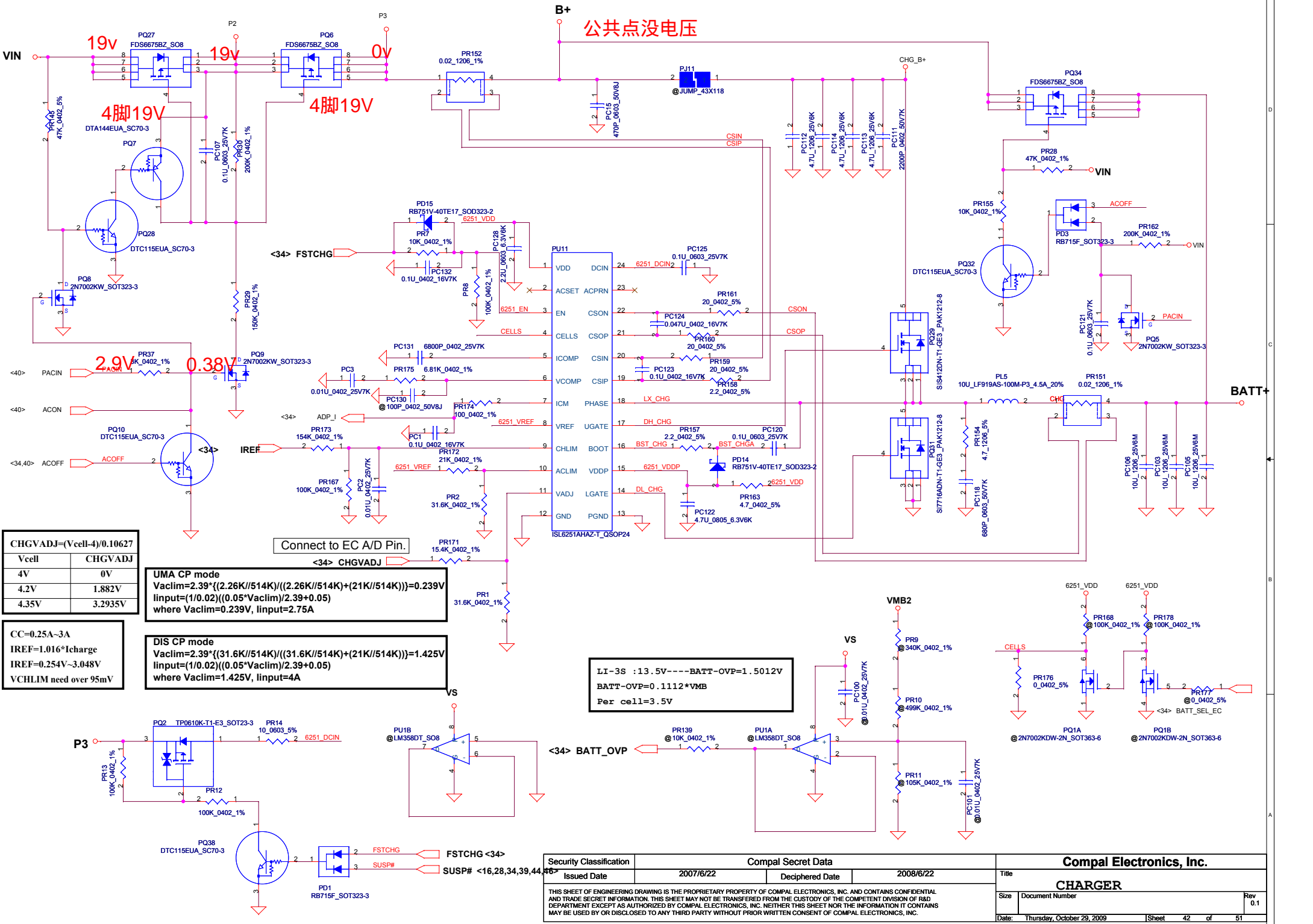
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				DCIN & DETECTOR		
Size	Document Number			Rev		
Custom				0.1		
Date:	Friday, October 30, 2009	Sheet	40	of 51		



PH1 under CPU botten side :
 CPU thermal protection at 92 degree C
 Recovery at 56 degree C



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	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:	Thursday, October 29, 2009	Sheet	41	of	51
					0.1



公共点没电压

19v

19v

4脚19V

4脚19V

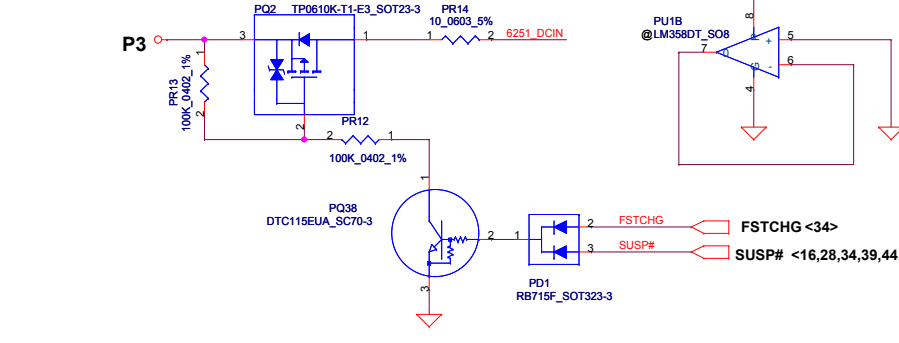
CHGVADJ=(Vcell-4)/0.10627	
Vcell	CHGVADJ
4V	0V
4.2V	1.882V
4.35V	3.2935V

UMA CP mode
 $V_{aclip} = 2.39 * ((2.26K // 514K) / ((2.26K // 514K) + (21K // 514K))) = 0.239V$
 $input = (1/0.02) * (0.05 * V_{aclip}) / 2.39 + 0.05$
 where $V_{aclip} = 0.239V$, $input = 2.75A$

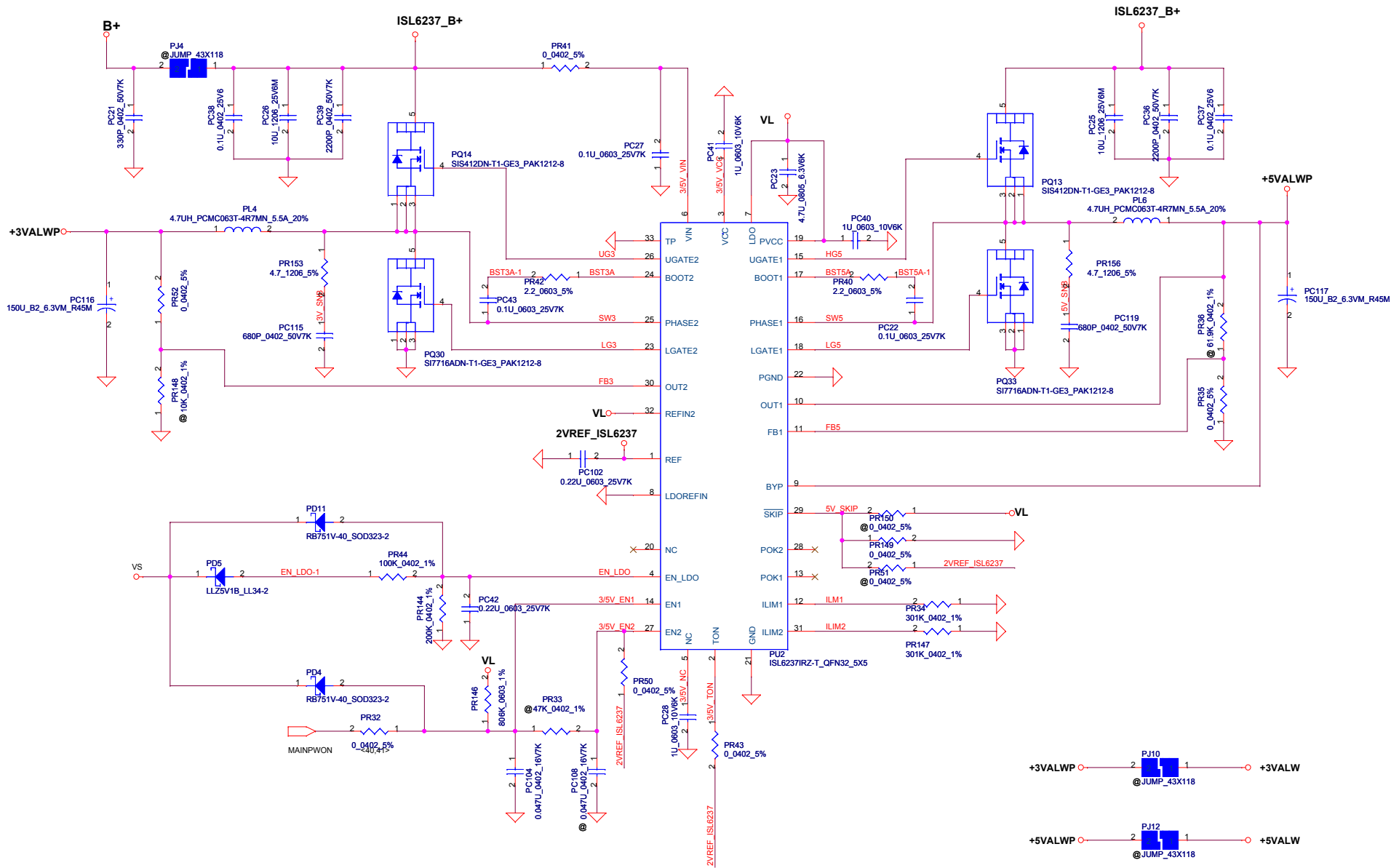
DIS CP mode
 $V_{aclip} = 2.39 * ((31.6K // 514K) / ((31.6K // 514K) + (21K // 514K))) = 1.425V$
 $input = (1/0.02) * (0.05 * V_{aclip}) / 2.39 + 0.05$
 where $V_{aclip} = 1.425V$, $input = 4A$

CC=0.25A-3A
 IREF=1.016*Icharge
 IREF=0.254V-3.048V
 VCHLIM need over 95mV

LI-3S : 13.5V --- BATT-OVP=1.5012V
 BATT-OVP=0.1112*VMB
 Per cell=3.5V

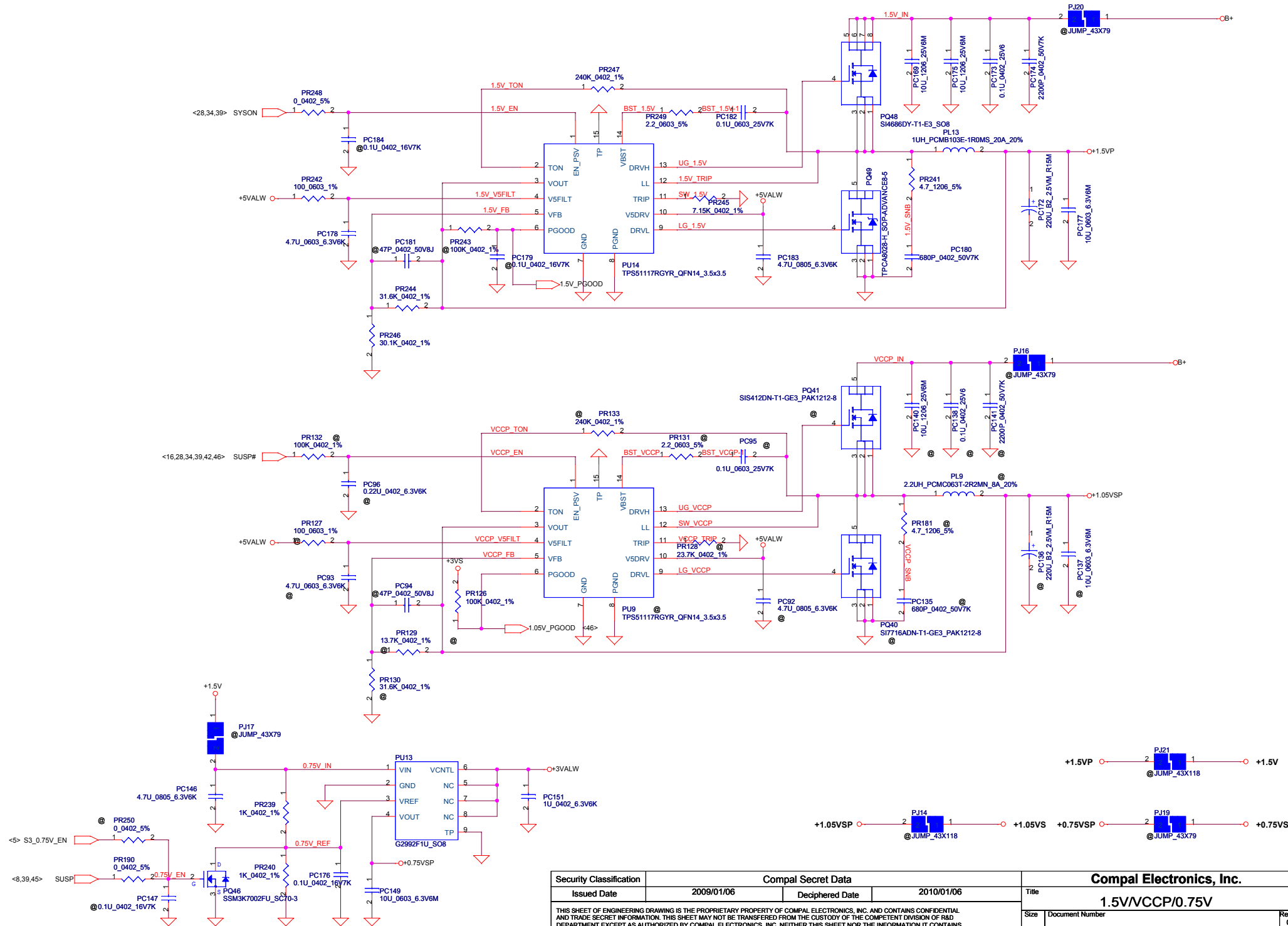


Security Classification	Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2007/6/22	Deciphered Date	2008/6/22	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Sheet	42 of 51
Date: Thursday, October 29, 2009				Rev	0.1

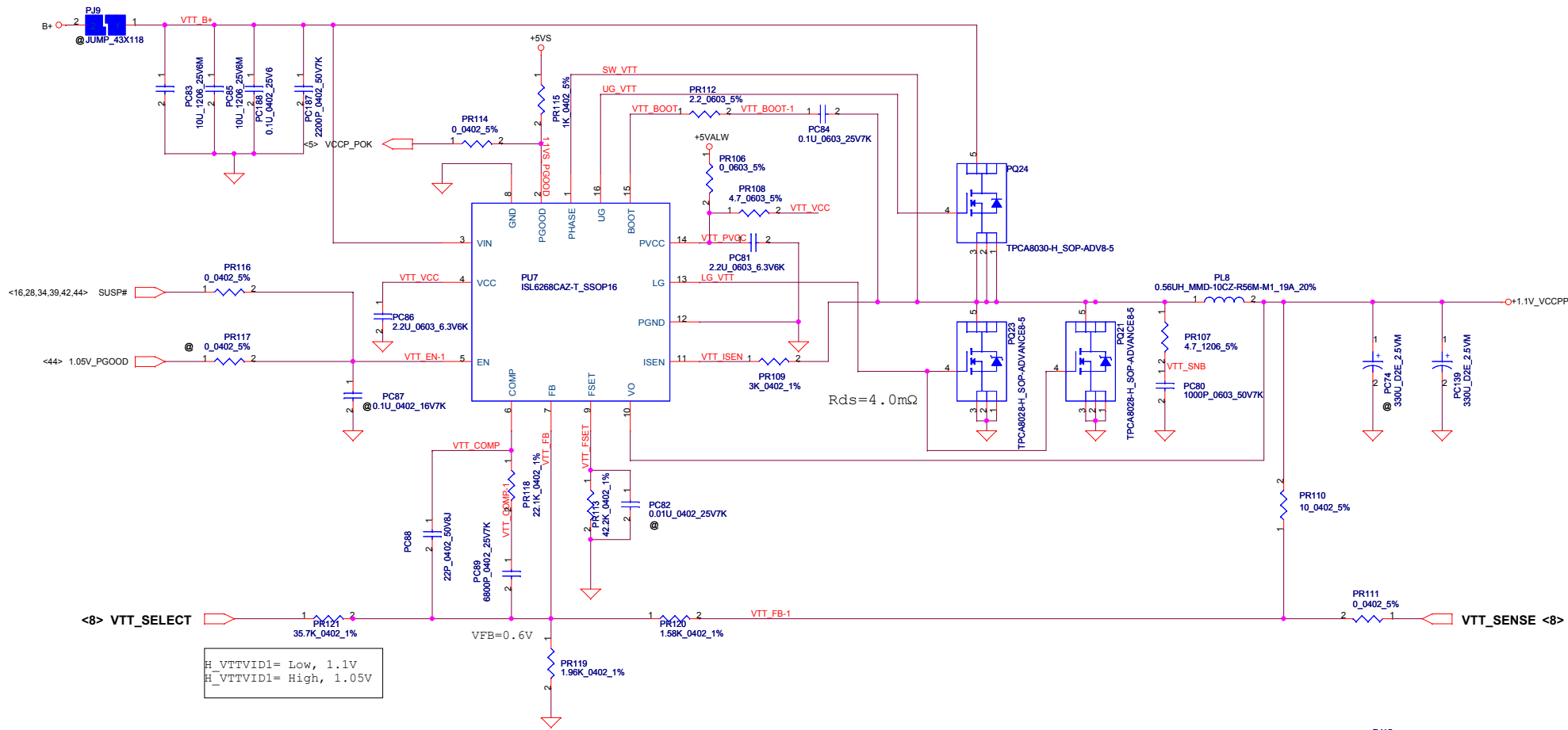


Security Classification	Compal Secret Data	
Issued Date	2009/01/06	Deciphered Date
		2010/01/06
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		

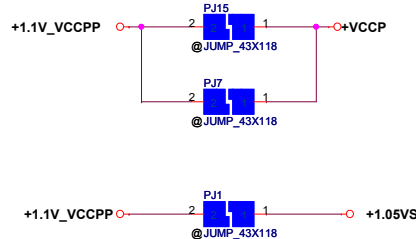
Compal Electronics, Inc. Title 3VALW/5VALW	
Size	Rev
Custom	0.1
Date:	Thursday, October 29, 2009
Sheet	43 of 51



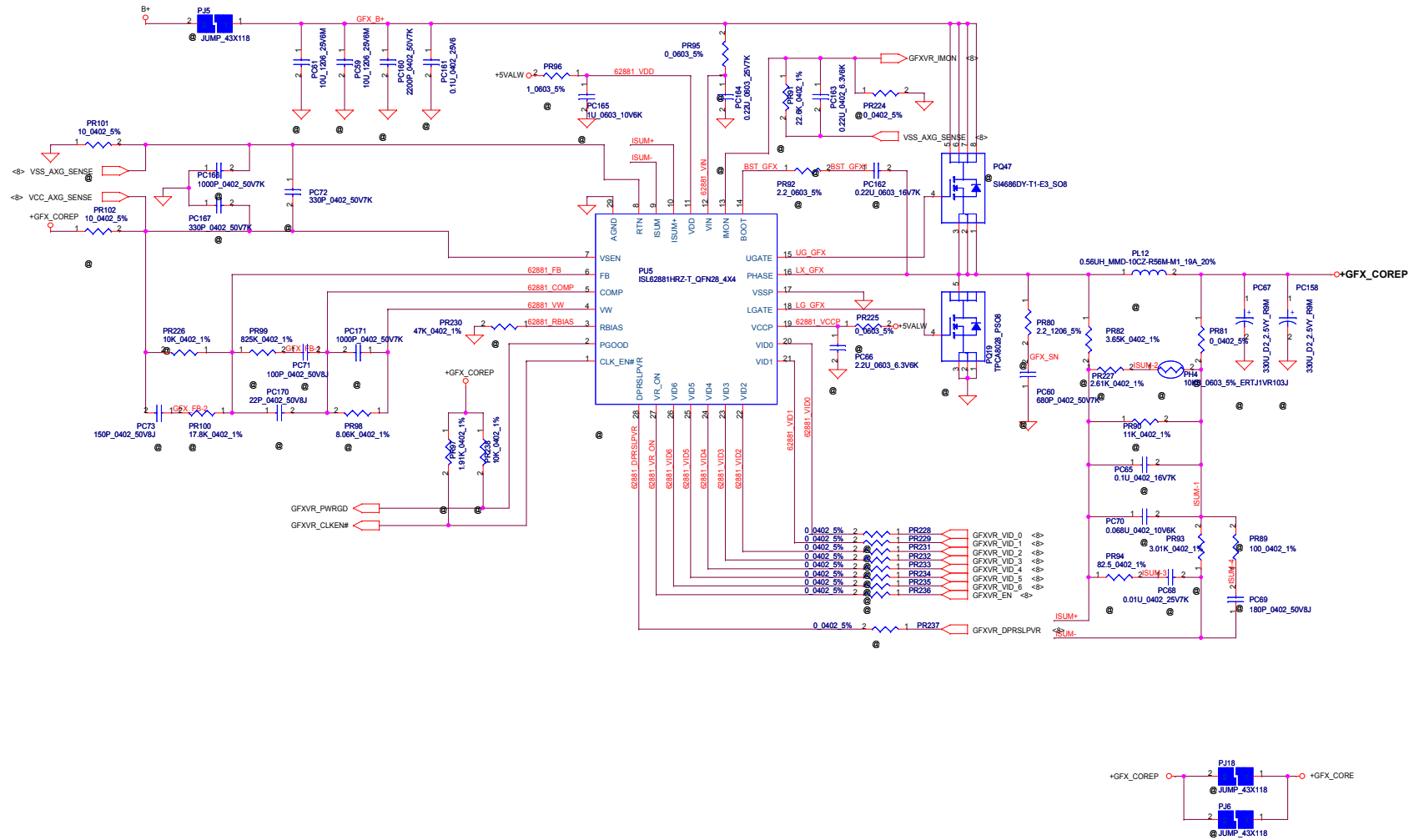
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				1.5V/VCCP/0.75V	
Size	Document Number			Rev	
Date:	Friday, October 30, 2009	Sheet	44	of	51



H_VTVID1= Low, 1.1V
 H_VTVID1= High, 1.05V



Security Classification	Compal Secret Data		Title	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	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
				Rev 0.1
Date: Thursday, October 29, 2009				Sheet 46 of 51



(15A,600mils ,Via NO. = 30)

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2010/01/06	Title
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&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.				GFX CORE
Size	Document Number	Rev	0.1	
Date:	Friday, October 30, 2009	Sheet	47	of 51

Version change list (P.I.R. List)

Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17				20081022	

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	Deciphered Date	2009/01/06	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.				PIR (PWR)	
Size	Document Number	Rev		0.1	
Custom	<Doc>	Date:		Thursday, October 29, 2009	
		Sheet		49 of 51	

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE	EVT TO DVT
1		P15	Add C638-C645	For UMA HDMI	
2		P05	Add test point for BCLK_ITP, BCLK_ITP#, PRDY#	For XDP connector	
3		P32, P28	Change J6 size & unstuff ODD power control components Change J4 size	Disable ODD power control circuit	
4		P17	Stuff C262	For UMA CRT	
5		P34	Change R291, R294 from +3VALW to +3VS		
6		P38	Add R603 pull high to +3VS	For PM_BTN#	
7		P38	Change JP1 from 6 pin to 8 pin , Change JP8 from 14 pin to 12 pin , unstuff R322	For LED color changed Remove CLK_48M_CR	
8		P29, P34	Change EN_WOL to EN_WOL#	For identify clearly	
9		P34	EC pin26-> EC_FAN_PWM , pin75->PCH_TEMP_ALERT , pin34->PROCHOT# , pin66->NOVO#	EC GPIO arrangement	
10		P31	Change JP12 pin define	For EC FAN control	
11		P16	Change U5 pin3, pin5	POWER , GND reversed	
12		P15	Add U28 for ICH_POK & VGATE	Reserved	
13		P12	Unstuff R278, stuff R269 and change U14 to SA00003HQ00	For low power CLK GEN	
14		P13	Change U3 from 2MBytes to 4MBytes	For 4MBytes SPI ROM for PCH	
15		P29	Correct Q17 to P/N:SB000007600	For +3V_LAN power	
16		P16	Add C646 for BUF_PLT_RST#	Reserved for BUF_PLT_RST# overshoot problem	
17		P36	Change U9 from 2MBytes to 256KBytes	For 256KBytes SPI ROM for EC	
18		P03	UMA_HDMI@ , HDMI@ , BT@ , 3G@ , ESATA@ , CMOS@	New BOM structure	
19		P08	Add R608	For PSI# pull down	
20		P37	Delete D18		
21		P16	Unstuff R210, R212	Set Boot BIOS Strap to SPI	
22		P22	Change & stuff R475 to 30K, R51 to 15K Unstuff R474, R50	For N11M-GE1 QS sample	
23		P25	Unstuff R246	Level shift default setting	
24		P39	Change C373 to DIS@	for DIS power sequence	
25		P15, P16, P17	Change R436 from 1K to 10K Change C447 from 0.1u to 1u Delete R514 Unstuff C493, C494 Reserve R609	Check list Rev2.0 update	
27		P34	Add R607	Reserved for KB926 SPI STRAP PIN	
28		P36	Change LED1, LED3, LED4 to white color LED2 to orang\white color and orange connect to +3VALW		
29		P14	Change exp-card from PCIE port 1 to port 5	SW BIOS request	
30		P38	Unstuff SW1		
31		P13, P34	Change X1, X2 footprint		
32		P12	Change C348 to 22p, C349 to 22p	For Crystal matching	
33		P13, P20	Add C647-C650 12p, stuff C370->22p, R331->33	Reserved for RF team	
34		P36	Delete JP6	SPI ROM socket	
35		P37	Change C430, C615 footprint to B2 type		
36		P27, P32, P37	Change Q4, Q24, Q32, Q37 footprint to A03413		

Compal Electronics, Inc.		
HW PIR		
Size B	Document Number LA-5751	Rev 0.3
Date:	Thursday, October 29, 2009	Sheet 50 of 51

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
37		P34	Change C320 to 0805 type	EVT TO DVT
38		P08	Unstuff C268 Change C252, C258 from 10u to 22u	For CPU VDDQ (DDR3 1.5V rails)
39		P34	Change ODD_power_on# from U13 pin28 to pin 76 Add EC_TACH on U13 pin28 to JP12	EC GPIO arrangement
40		P31	Change U20 to EMC1403, add C651	Change thermal sensor solution to EMC1403
41		P05	Add Q42, R610	Reserve for +0.75V enable option
42		P34, P35	Add C652, C653, C654	Reserve for NUM_LED#, CAPS_LED# ESD request
43		P34	Add R611, R612, R613	For EC_FAN_PWM, EC_TACH

NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
				DVT TO PVT
1		P34	Reserve R614, R615.	EC_ID to identify KB926 D or E
2		P34	Stuff R607	KB926 SPI STRAP PIN
3		P33	Stuff C632-C635	EMI request
4		P16	Stuff C646	For PLT_RST# signal quality
5		P37	Add R616 100K, change R304 to 100K, C353 to 0.1u	For +3VS_BT power on rising time
6		P37	Changed R304 pin1 from +5VS to +5VALW	For +3VS_BT power on leakage
7		P5	Stuff R283, C338 0.01u	For S3 power reduction
8		P31	Add U29	Colay EMC2103/EMC1403 thermal sensor

Compal Electronics, Inc.		
Title		
HW PIR		
Size B	Document Number LA-5751	Rev 0.3
Date:	Thursday, October 29, 2009	Sheet 51 of 51