

# Compal Confidential

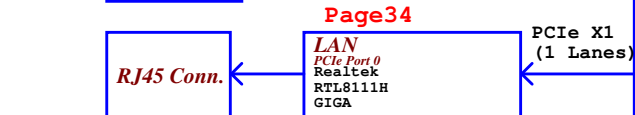
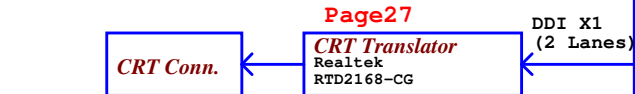
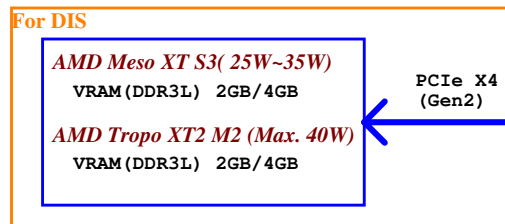
AIWZ0/AIWZ1  
DIS M/B Schematics Document  
Intel Boardwell U Processor with DDR3L  
AMD Meso XT / Tropo XT2

2015-02-02

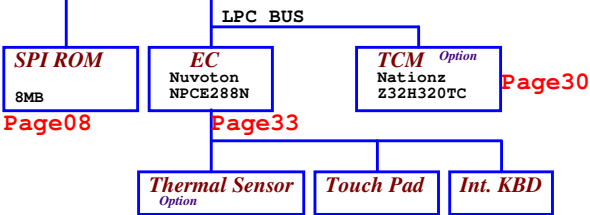
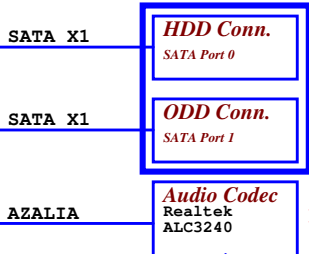
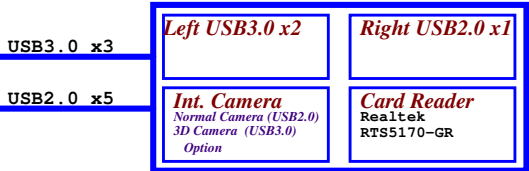
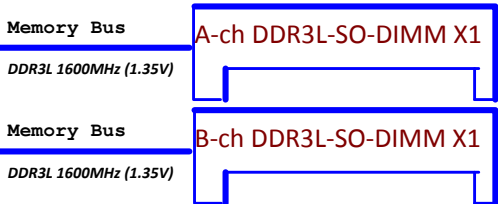
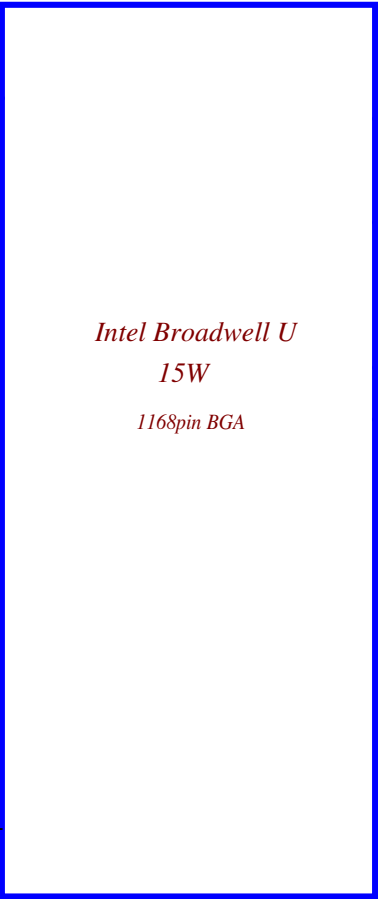
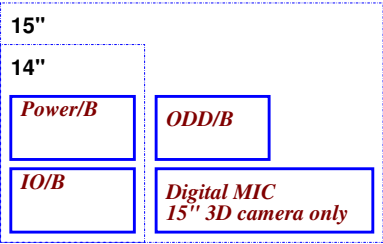
LA-C281P

REV : 1.0

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				C	LA-C281
				Date:	Friday, February 06, 2015
				Sheet	1 of 50
				Rev	1.0



Sub-borad



Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				C	
				Date:	Friday, February 06, 2015
				Sheet	2 of 50
				Rev	1.0

### Voltage Rails

<div>power plane</div> <div>State</div>	B+	+5VALW  +3VALW	+1.35V	+5VS +3VS +1.5VS +1.05VS +VCC_CORE +VGA_CORE +1.8VS +0.675VS +1.05VS
S0	○	○	○	○
S3	○	○	○	✗
S5 S4/AC	○	○	✗	✗
S5 S4/ Battery only	○	✗	✗	✗
S5 S4/AC & Battery don't exist	✗	✗	✗	✗

### EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011x	Thermal Sensor	0100 1100

### PCH SM Bus address

Device	Address	Device	Address
DDR_JDIMM1	1010 000x A0h	Internal thermal sensor	0100 0001 41h
DDR_JDIMM2	1010 010x A4h		

### EC SM Bus2 address

### AMD-GPU SM Bus address

### SMBUS Control Table

<div></div>	SOURCE	CRT	BATT	KB9012	SODIMM	WLAN	Thermal Sensor	PCH
EC_SMB_CK1 EC_SMB_DA1	NPCE288 +3VALW	✗	✓ +3VALW	✗	✗	✗	✗	✗
EC_SMB_CK2 EC_SMB_DA2	NPCE288 +3VS	✓ +3VS	✗	✗	✗	✗	✓ +3VS	✓ +3VALW
PCH_SMBCLK PCH_SMBDATA	PCH +3VALW	✗	✗	✗	✓ +3VS	✗	✗	✗
PCH_SML0CLK PCH_SML0DATA	PCH +3VALW	✗	✗	✗	✗	✗	✗	✗
SML1CLK SML1DATA	PCH +3VALW	✓ +3VS	✗	✓ +3VS	✗	✗	✓ +3VGS	✗

<div>STATE</div> <div>SIGNAL</div>	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1 (Power On Suspend)	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	ON	OFF	OFF	OFF

### USB Port Table

	USB 2.0	Port	3 External USB Port
EHCI1	UHCI0	0	USB Port (Left Side)USB3.0
		1	USB Port (Left Side)USB3.0
		2	Sub Board
	UHCI1	3	CardReader
		4	Touch Screen
		5	Camera
EHCI1	UHCI3	6	Bluetooth (NGFF)
		7	
		8	
	UHCI4	9	
		10	
		11	
EHCI1	UHCI5	12	
		13	

### BDW\_CPU

UC1  
SA000089A60 17-5500U  
S IC FH8065801620004 SR23W F0 2.4G C38!  
17\_5500@

UC1  
SA000089970 15-5200U  
S IC FH8065801620204 SR23Y F0 2.2G C38!  
15\_5200@

UC1  
SA000089880 13-5010U  
S IC FH8065801620406 SR23Z F0 2.1G C38!  
13\_5010@

UC1  
SA000083EH0 13-5005U  
S IC FH8065801884006 SR244 F0 2G C38!  
13\_5005@

### PCB

Z2Z  
DA218K00101  
PCB AIWZ0 LA-C281P LS-C281P/C282P 02  
Z14@  
PCB AIWZ0 LA-C281P LS-C281P/C282P 02

Z2Z  
DA218J00101  
PCB AIWZ1 LA-C281P LS-C281P/C282P/C283P/C285P/C286P 02  
Z15@  
PCB AIWZ1 LA-C281P LS-C281P/C282P/C283P/C285P/C286P 02

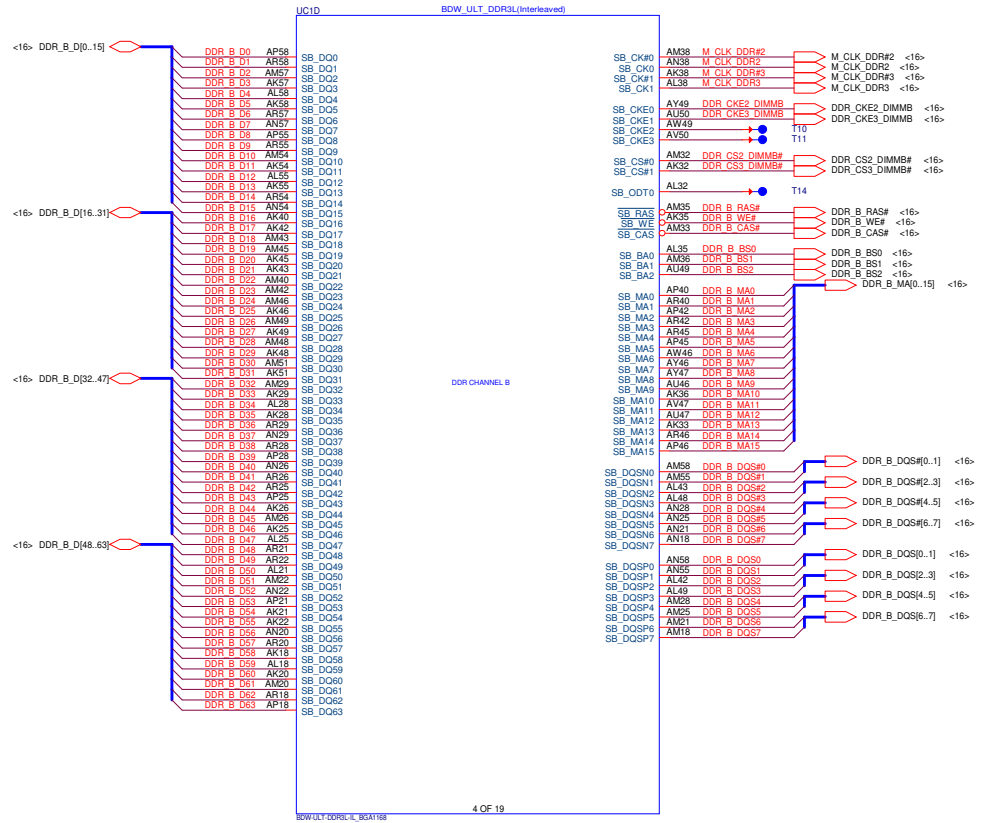
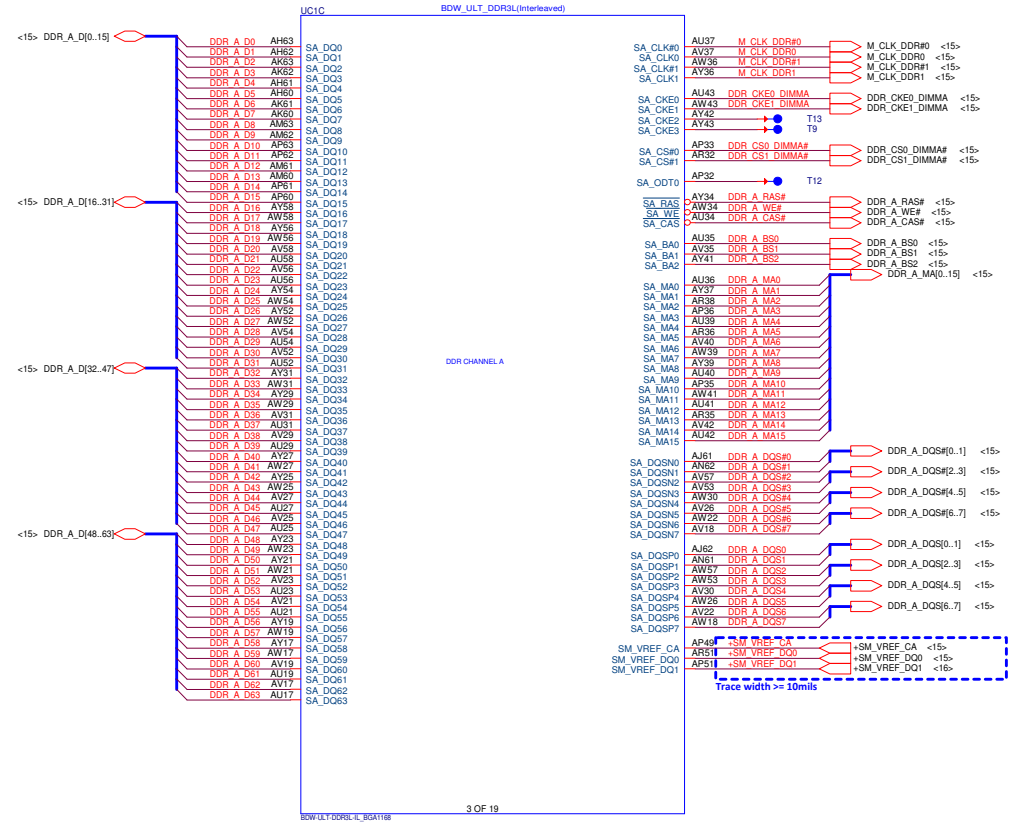
### BOM Structure Table

Item	BOM Structure
AIWZ0 (14")	Z14@
AIWZ1 (15")	Z15@
AIWZ0 (17")	Z17@
LAN Switch mode	SWITCH@
LAN RTL811GS-CG	8111GLDO@
WLAN Support ISCT	ISCT@
WLAN No Support ISCT	NOISCT@
For Green CLK	GCLK@
For No Green CLK	NOGCLK@
Green CLK IC For DIS	GCLKDIS@
Green CLK IC For UMA	GCLKUMA@
For system DIS	PX@
For TROPO DIS pop	DIS@
For TROPO DIS unpop	@DIS@
For UMA	UMA@
3D Camera	3DCMOS@
Camera	CMOS@
HDMI	HDMI@
NO keyboard backlight	NOKBL@
Keyboard backlight	KBL@
HDMI Royalty	45@
Connector	ME@
Un-pop component for EMI	@EMI@
Un-pop component for ESD	@ESD@
pop component for EMI	EMI@
pop component for ESD	ESD@
Un-pop for TPM	TPM@
pop for TPM	NOTPM@
VRAM indentify	X76@
For TROPO function	TROPO@
ADB function	ADB@
NO ADB function	NOADB@
CPU_SA000083E30	QGZ3@
CPU_SA000083C10	QH17@
CPU_SA00007AM00	QFSY@
CPU_SA000083A10	QH15@
CPU_SA000083D30	QH18@
CPU_SA00007UG00	QGHA@
CPU_SA00007UH00	QGH@
CPU_SA00007U900	QGH9@

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	Notes List
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 C	Document Number
				Date: Friday, February 06, 2015	Rev 1.0
				Sheet 3 of 50	LA-C281

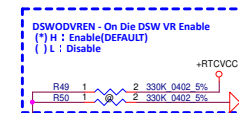


Interleaved Memory

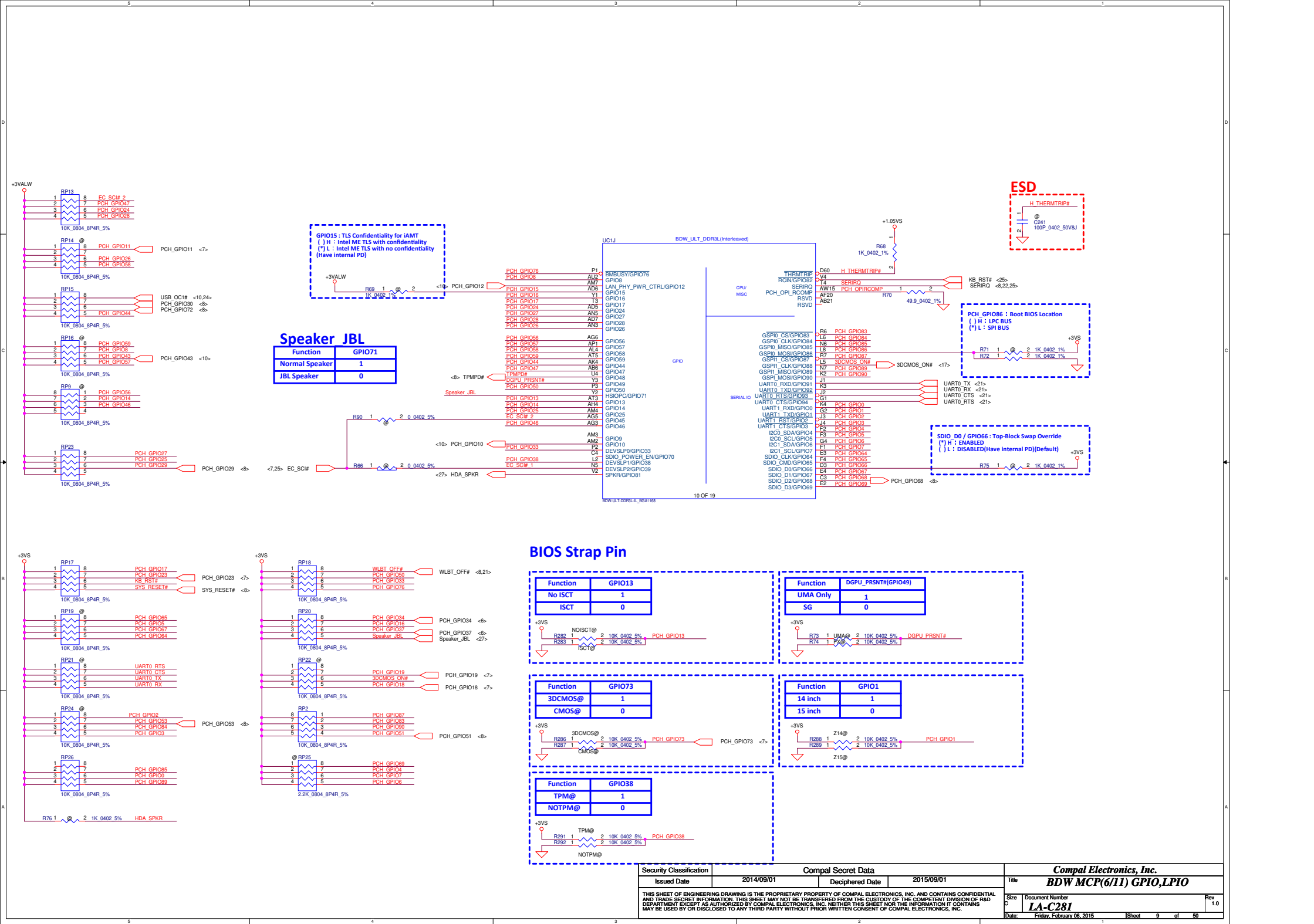








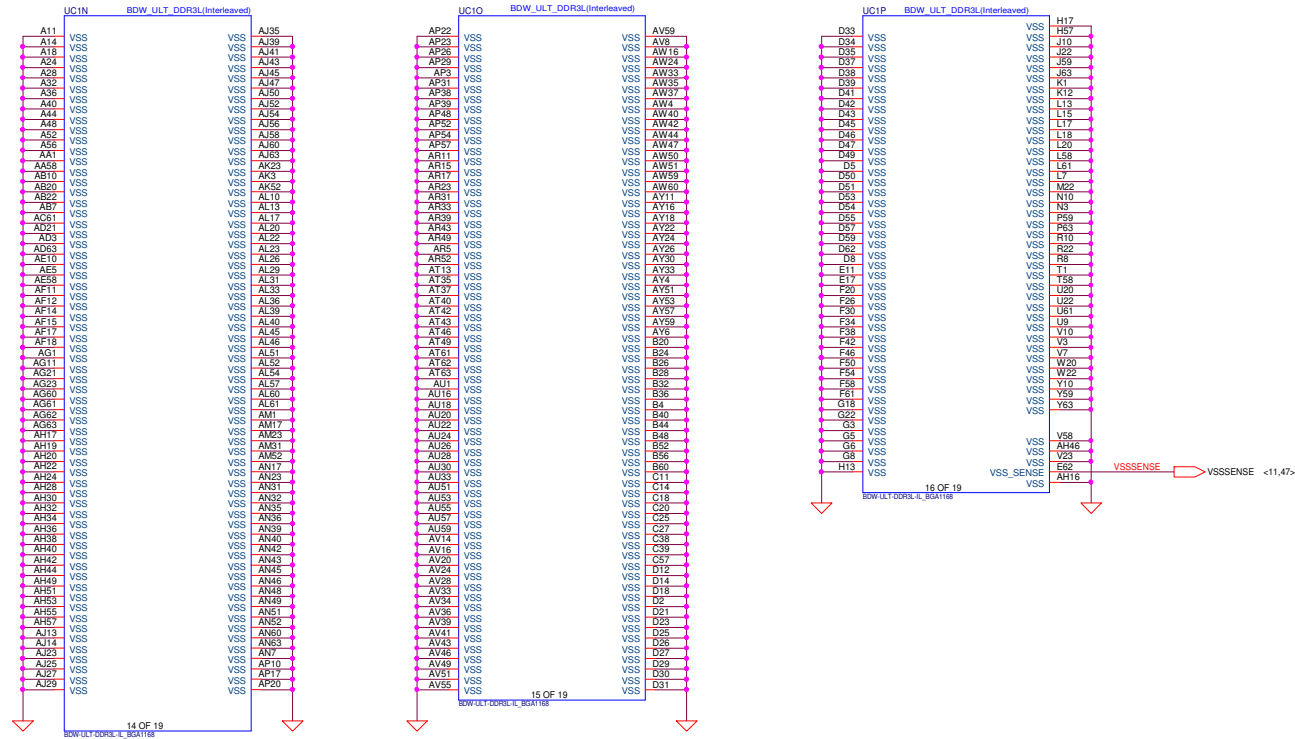










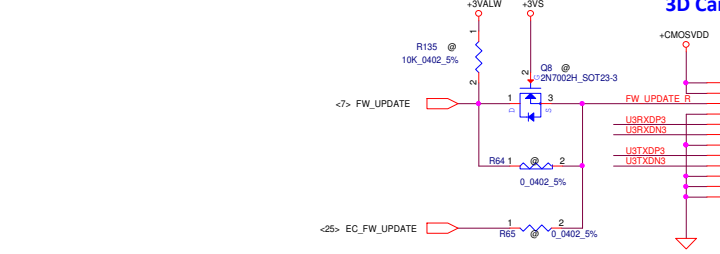
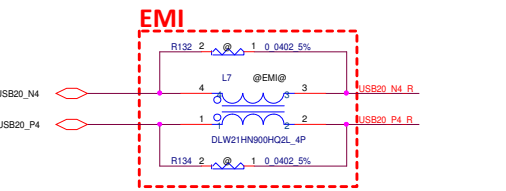
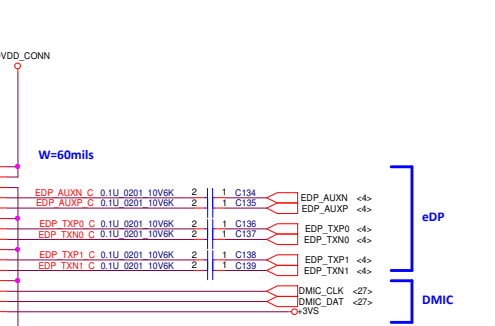
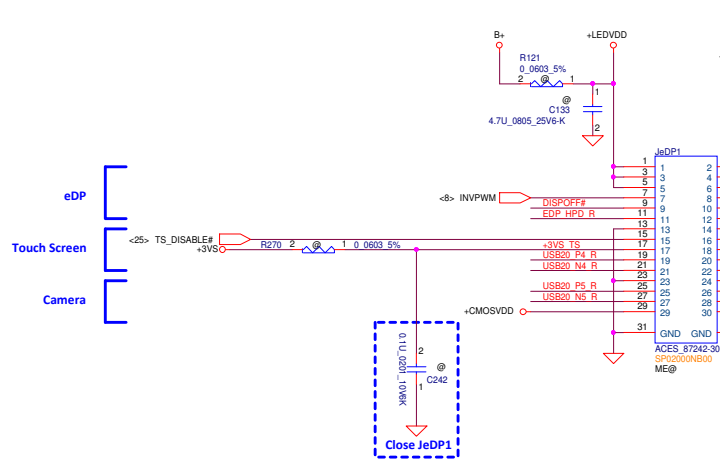
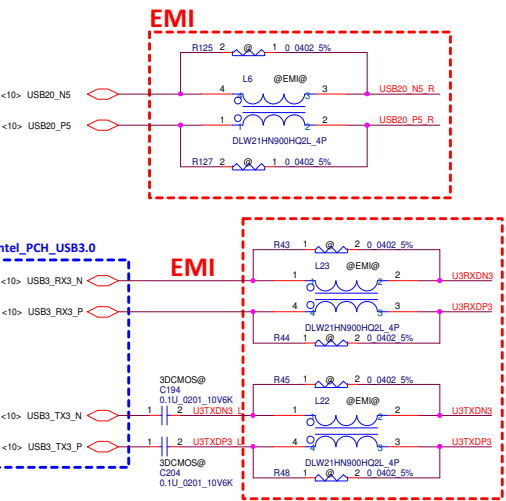
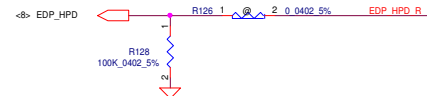
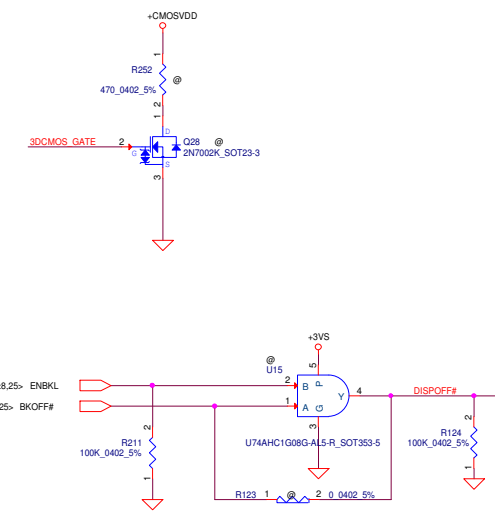
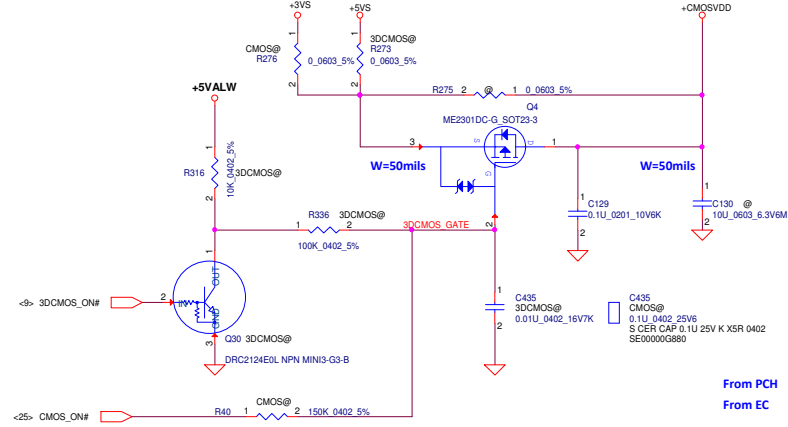
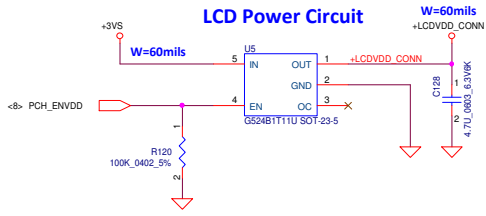




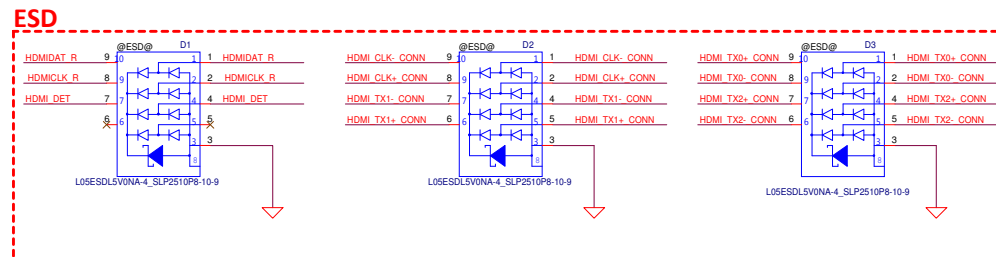
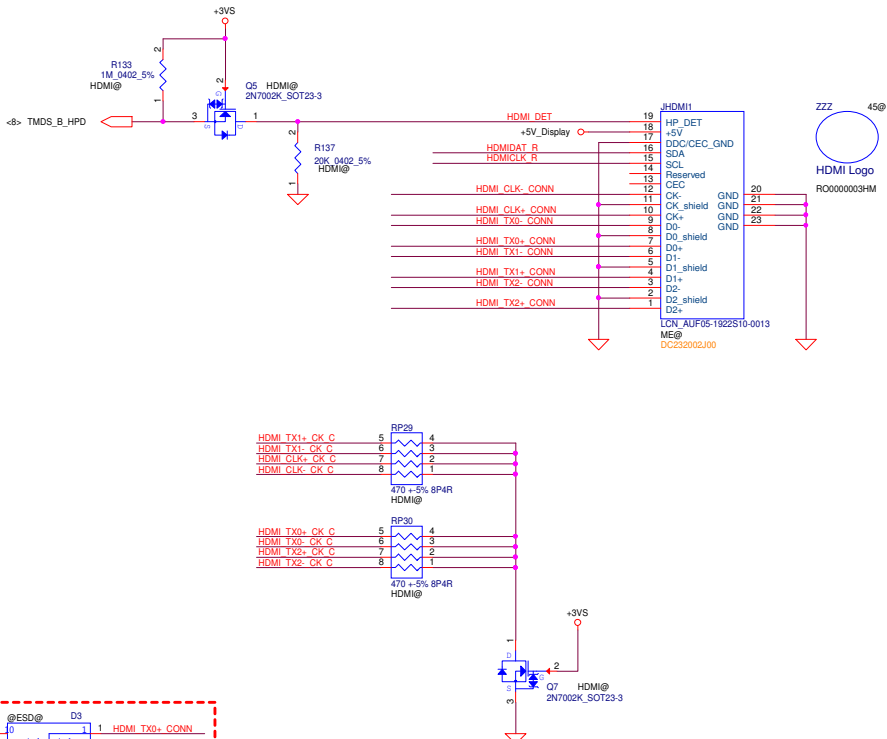
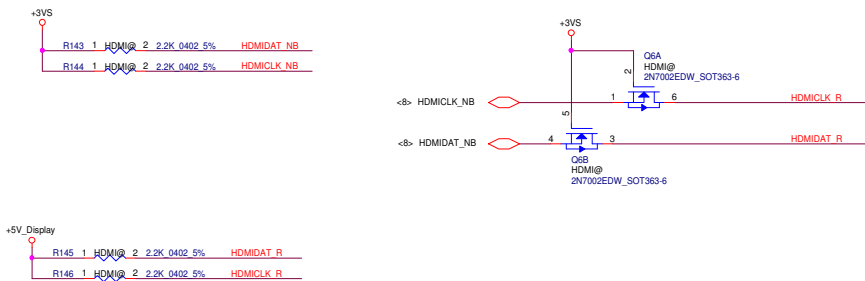
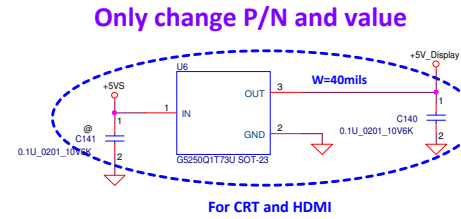
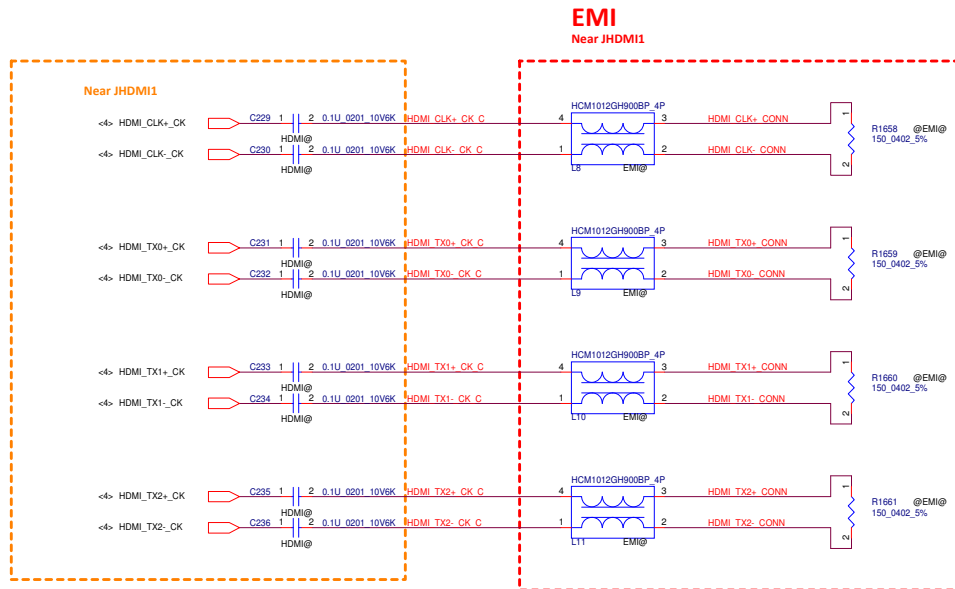


Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>DDR3L DIMMB</b>		
Issued Date	2014/09/01	Deciphered Date	2015/09/01			Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size C	Document Number	
				<b>LA-C281</b>		Rev 1.
				Date:	Friday, February 06, 2015	Sheet 16 of 50

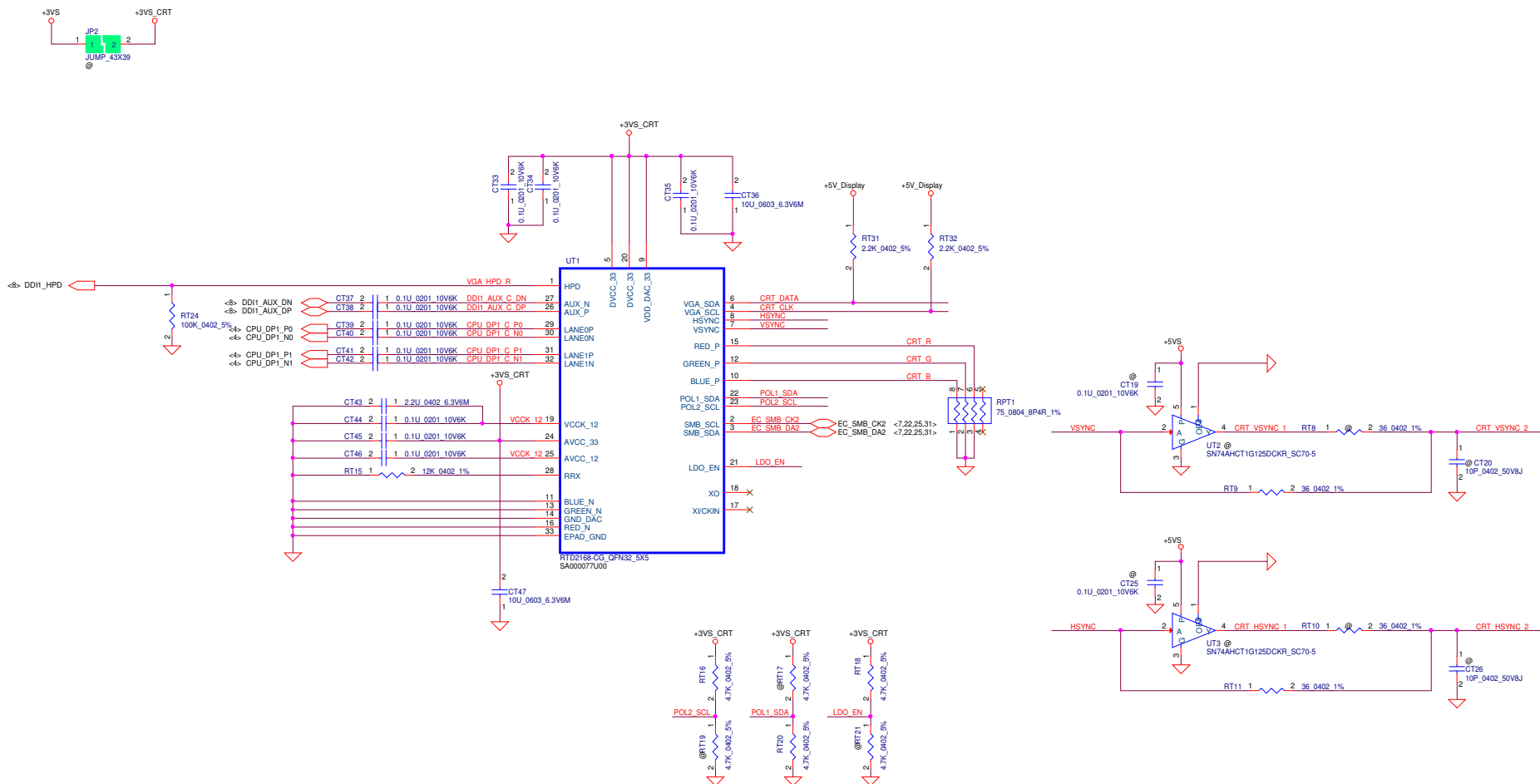




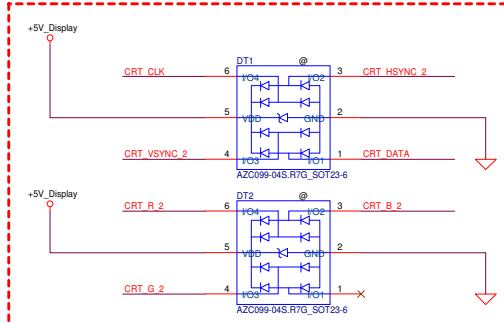
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size
				Document Number
				LA-C281
				Rev
				1.0
				Date
				Friday, February 06, 2015
				Sheet
				17 of 50



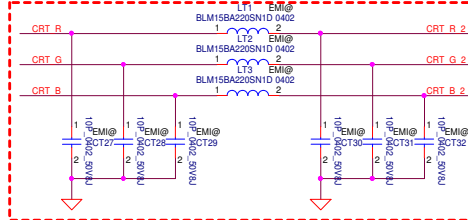
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		Deciphered Date		Title	
2014/09/01		2015/09/01		HDMI CONN	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY 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	Rev
		C		LA-C281	1.0
Date: Friday, February 06, 2015		Sheet		18	of 50



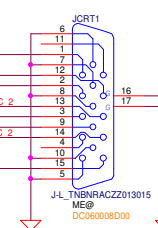
## ESD



## EMI

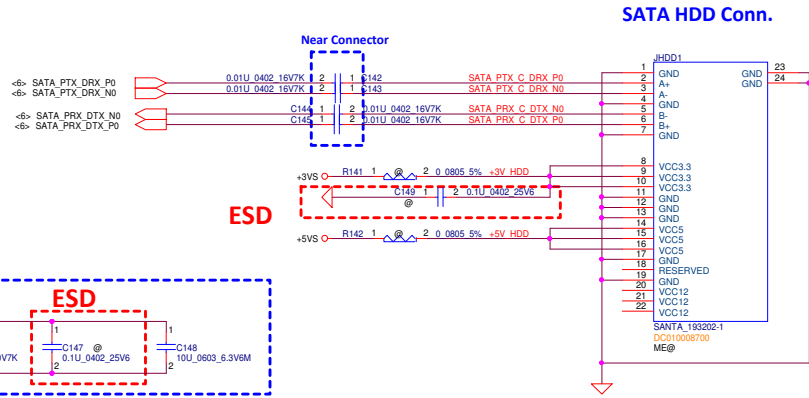


## CRT

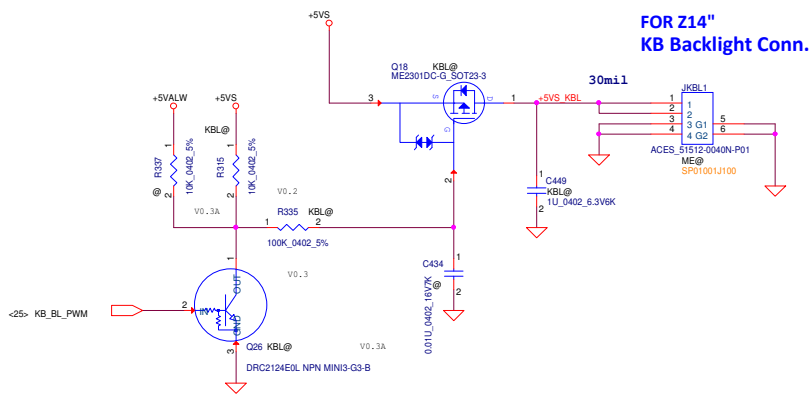


Security Classification	Compal Secret Data		Title	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Size
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE AUTHORIZATION BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number
				LA-C281
				Rev
				1.0
				Date: Friday, February 06, 2015
				Sheet 19 of 50

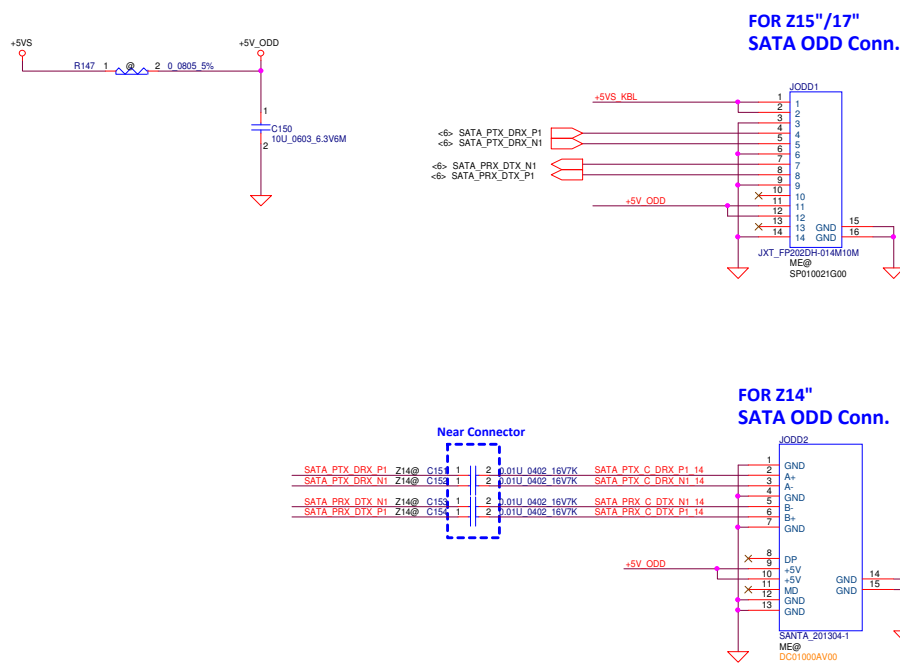
HDD



KB Backlight



ODD



**NGFF for WLAN / BT(Key E)**  
Support ISCT(Intel Smart Connect Technology)

**BT**

**WLAN**

**Pin List:**

- <10> USB20\_P6
- <10> USB20\_N6
- <10> PCIE\_PTX\_C\_DRX\_P4
- <10> PCIE\_PTX\_C\_DRX\_N4
- <10> PCIE\_PRX\_DTX\_P4
- <10> PCIE\_PRX\_DTX\_N4
- <7> CLK\_PCIE\_WLAN
- <7> CLK\_PCIE\_WLAN#
- <8,25,26> PCIE\_WAKE#

**Pin-to-Pin Connections:**

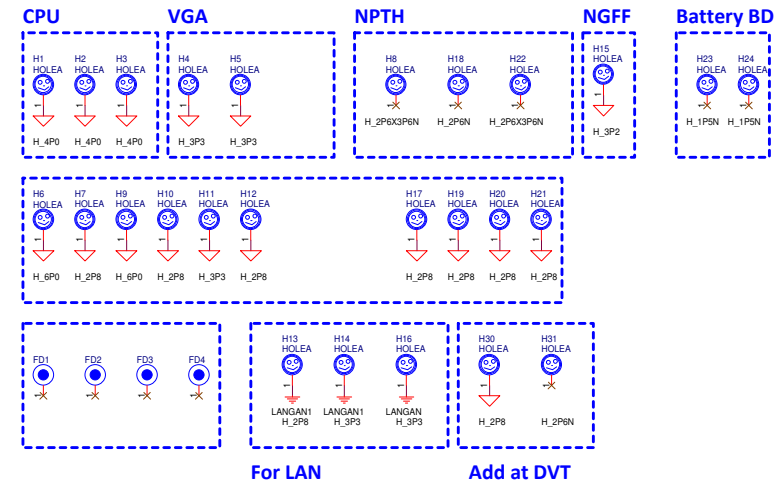
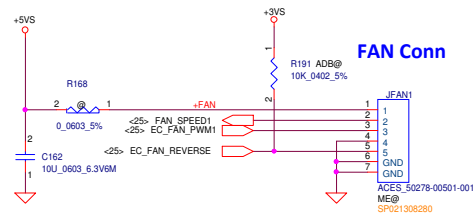
Pin	Signal	Pin	Signal
1	JWLAN1	2	3.3VALUX
3	GND	4	3.3VALUX
5	USB_D+	6	USB_D-
7	GND	8	LED#
9	SDIO_CLK	10	PCM_CLK
11	SDIO_CMD	12	PCM_SYNC
13	SDIO_DAT0	14	PCM_IN
15	SDIO_DAT1	16	PCM_OUT
17	SDIO_DAT2	18	LED#
19	SDIO_DAT3	20	GND
21	SDIO_WAKE#	22	UART_RX
23	SDIO_RESET#	24	UART_TX
25	GND	26	UART_CTS
27	PETP0	28	UART_RTS
29	RESERVED	30	RESERVED
31	RESERVED	32	RESERVED
33	PERP0	34	RESERVED
35	PERP0	36	COEX3
37	PERP0	38	COEX2
39	GND	40	COEX1
41	REFCLKP0	42	SUSCLK
43	REFCLKN0	44	PERST0#
45	GND	46	W_DISABLE#
47	CLKOE0#	48	W_DISABLE#
49	PEWAKE0#	50	IC_DATA
51	GND	52	I2C_CLK
53	RSRVD/PETP1	54	ALERT
55	RSRVD/PETN1	56	RESERVED
57	GND	58	RESERVED
59	RSRVD/PERP1	60	RESERVED
61	RSRVD/PERN1	62	RESERVED
63	GND	64	RESERVED
65	RESERVED	66	3.3VALUX
67	GND	68	3.3VALUX
69	MTG77	70	MTG76

**WLAN Module Connections:**

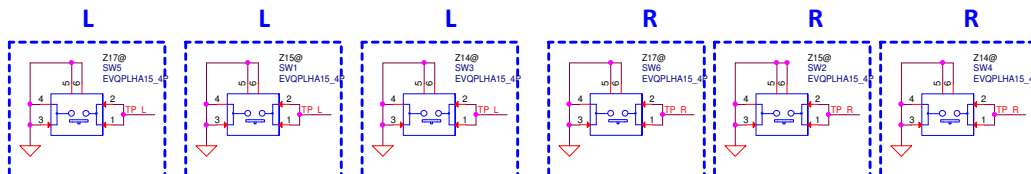
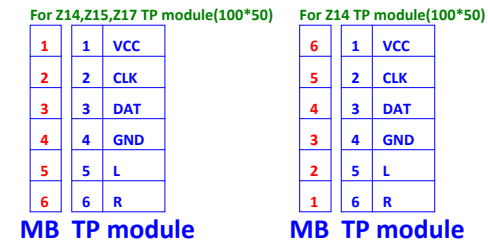
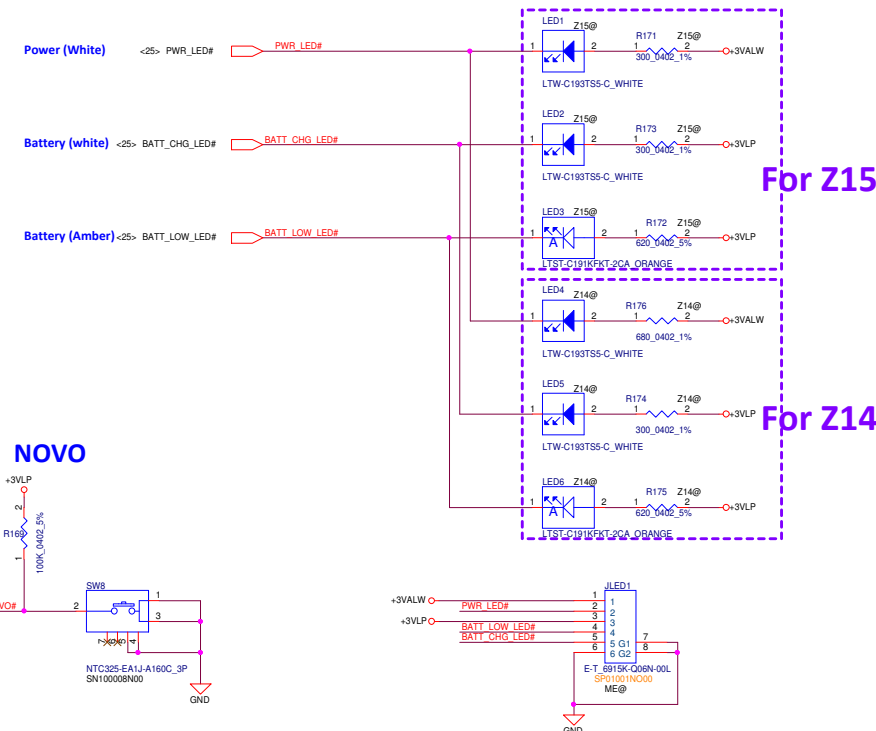
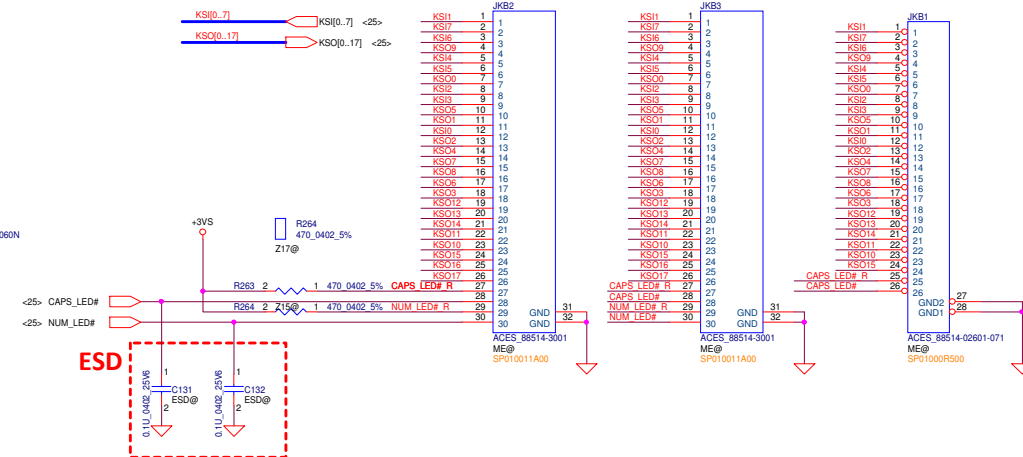
- WLAN\_PWR\_ON#
- ISCT@ ME2301DC-0\_SOT23-3
- ISCT@ R154 150K\_0402\_5%
- ISCT@ R157 100K\_0402\_5%
- ISCT@ R163 100K\_0402\_5%
- ISCT@ Q11 2N7002K\_SOT23-3
- ISCT@ R164 100K\_0402\_5%
- ISCT@ R161 100K\_0402\_5%
- ISCT@ R156 100K\_0402\_5%
- ISCT@ R155 100K\_0402\_5%
- ISCT@ R158 100K\_0402\_5%
- ISCT@ R159 100K\_0402\_5%
- ISCT@ R160 100K\_0402\_5%
- ISCT@ R162 100K\_0402\_5%
- ISCT@ R164 100K\_0402\_5%
- ISCT@ R165 100K\_0402\_5%
- ISCT@ R166 100K\_0402\_5%
- ISCT@ R167 100K\_0402\_5%
- ISCT@ R168 100K\_0402\_5%
- ISCT@ R169 100K\_0402\_5%
- ISCT@ R170 100K\_0402\_5%
- ISCT@ R171 100K\_0402\_5%
- ISCT@ R172 100K\_0402\_5%
- ISCT@ R173 100K\_0402\_5%
- ISCT@ R174 100K\_0402\_5%
- ISCT@ R175 100K\_0402\_5%
- ISCT@ R176 100K\_0402\_5%
- ISCT@ R177 100K\_0402\_5%
- ISCT@ R178 100K\_0402\_5%
- ISCT@ R179 100K\_0402\_5%
- ISCT@ R180 100K\_0402\_5%
- ISCT@ R181 100K\_0402\_5%
- ISCT@ R182 100K\_0402\_5%
- ISCT@ R183 100K\_0402\_5%
- ISCT@ R184 100K\_0402\_5%
- ISCT@ R185 100K\_0402\_5%
- ISCT@ R186 100K\_0402\_5%
- ISCT@ R187 100K\_0402\_5%
- ISCT@ R188 100K\_0402\_5%
- ISCT@ R189 100K\_0402\_5%
- ISCT@ R190 100K\_0402\_5%
- ISCT@ R191 100K\_0402\_5%
- ISCT@ R192 100K\_0402\_5%
- ISCT@ R193 100K\_0402\_5%
- ISCT@ R194 100K\_0402\_5%
- ISCT@ R195 100K\_0402\_5%
- ISCT@ R196 100K\_0402\_5%
- ISCT@ R197 100K\_0402\_5%
- ISCT@ R198 100K\_0402\_5%
- ISCT@ R199 100K\_0402\_5%
- ISCT@ R200 100K\_0402\_5%
- ISCT@ R201 100K\_0402\_5%
- ISCT@ R202 100K\_0402\_5%
- ISCT@ R203 100K\_0402\_5%
- ISCT@ R204 100K\_0402\_5%
- ISCT@ R205 100K\_0402\_5%
- ISCT@ R206 100K\_0402\_5%
- ISCT@ R207 100K\_0402\_5%
- ISCT@ R208 100K\_0402\_5%
- ISCT@ R209 100K\_0402\_5%
- ISCT@ R210 100K\_0402\_5%
- ISCT@ R211 100K\_0402\_5%
- ISCT@ R212 100K\_0402\_5%
- ISCT@ R213 100K\_0402\_5%
- ISCT@ R214 100K\_0402\_5%
- ISCT@ R215 100K\_0402\_5%
- ISCT@ R216 100K\_0402\_5%
- ISCT@ R217 100K\_0402\_5%
- ISCT@ R218 100K\_0402\_5%
- ISCT@ R219 100K\_0402\_5%
- ISCT@ R220 100K\_0402\_5%
- ISCT@ R221 100K\_0402\_5%
- ISCT@ R222 100K\_0402\_5%
- ISCT@ R223 100K\_0402\_5%
- ISCT@ R224 100K\_0402\_5%
- ISCT@ R225 100K\_0402\_5%
- ISCT@ R226 100K\_0402\_5%
- ISCT@ R227 100K\_0402\_5%
- ISCT@ R228 100K\_0402\_5%
- ISCT@ R229 100K\_0402\_5%
- ISCT@ R230 100K\_0402\_5%
- ISCT@ R231 100K\_0402\_5%
- ISCT@ R232 100K\_0402\_5%
- ISCT@ R233 100K\_0402\_5%
- ISCT@ R234 100K\_0402\_5%
- ISCT@ R235 100K\_0402\_5%
- ISCT@ R236 100K\_0402\_5%
- ISCT@ R237 100K\_0402\_5%
- ISCT@ R238 100K\_0402\_5%
- ISCT@ R239 100K\_0402\_5%
- ISCT@ R240 100K\_0402\_5%
- ISCT@ R241 100K\_0402\_5%
- ISCT@ R242 100K\_0402\_5%
- ISCT@ R243 100K\_0402\_5%
- ISCT@ R244 100K\_0402\_5%
- ISCT@ R245 100K\_0402\_5%
- ISCT@ R246 100K\_0402\_5%
- ISCT@ R247 100K\_0402\_5%
- ISCT@ R248 100K\_0402\_5%
- ISCT@ R249 100K\_0402\_5%

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	<b>Mini-Card/NEW Card/SIM</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
					<b>LA-C281</b>
Date:				Friday, February 06, 2015	Sheet 21 of 50

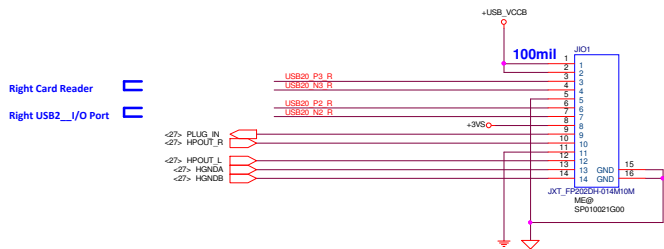
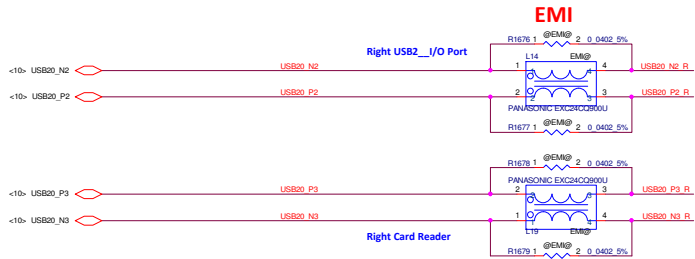
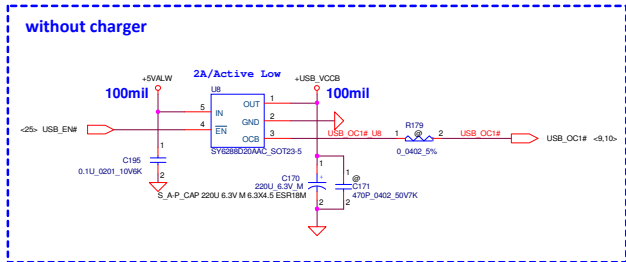
**WWW.AliSaler.Com**



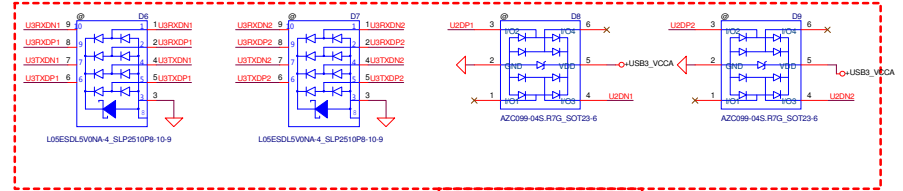
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	Fintek-Thermal IC/FAN/screw	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENTS 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 1.0
				LA-C281		
				Date:	Friday, February 06, 2015	

**KB For 714**

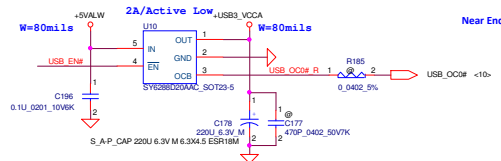
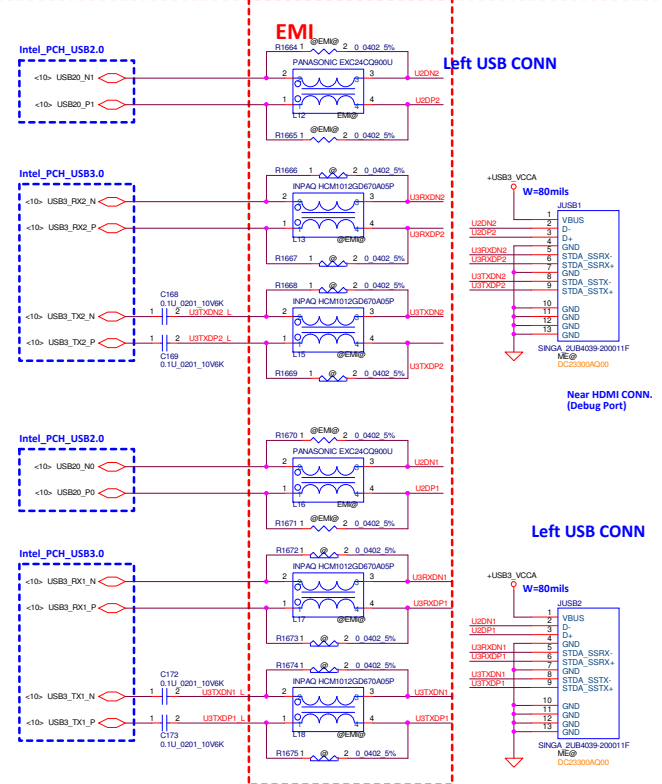
Security Classification	Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title <b>ROM/KBD/PWR/C/R/LD/PT Conn.</b>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DESIGN OR 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 C	Document Number <b>LA-C281</b>
			Date	Edits: Edwinn, DE 2015 99 of 50



## ESD

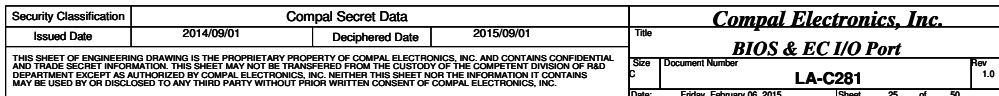


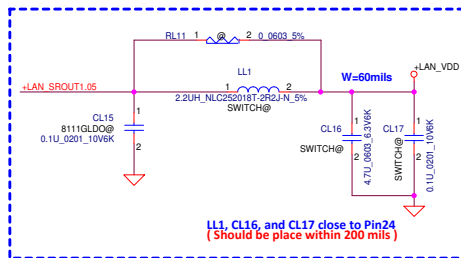
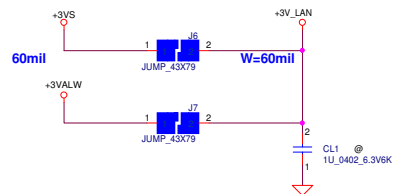
## USB3.0\_Port



Security Classification			Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01		Title	USB3.0/Left USB Ports
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 COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF 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
						Revision
						Date: Friday, February 06, 2015
						Sheet 24 of 50







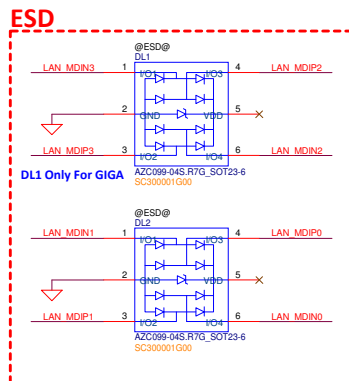
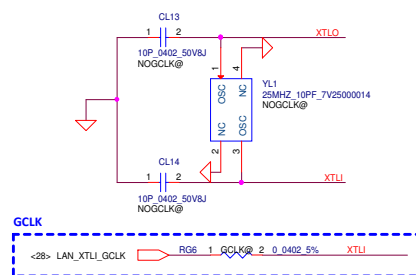
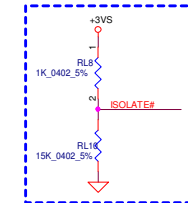
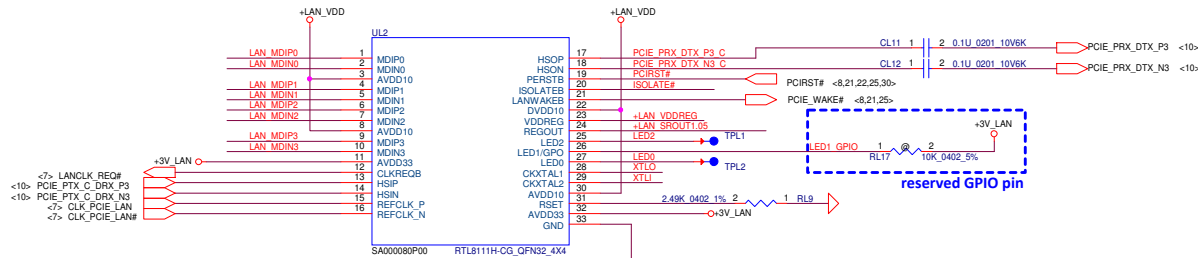
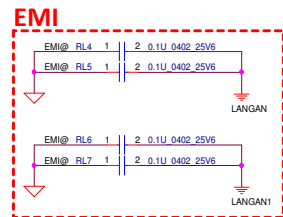
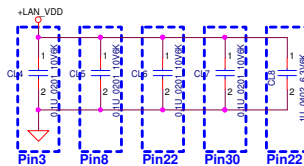
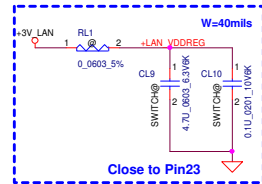
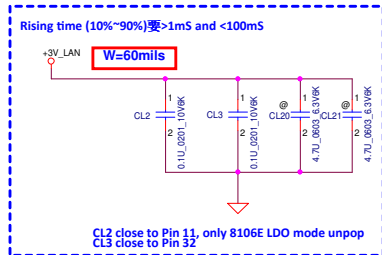
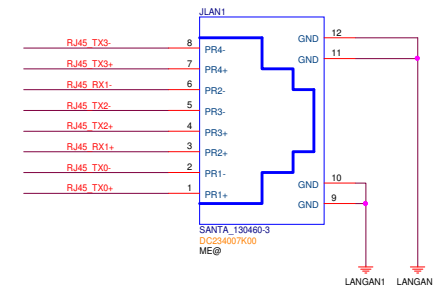
SA00005V700

SA000065V00

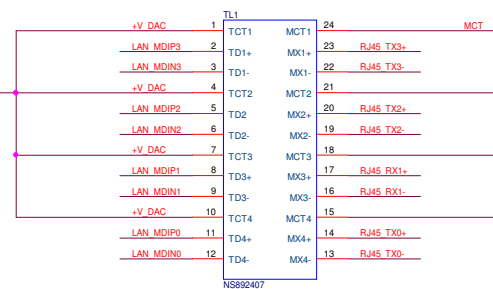
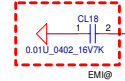
	1.0 V source	LL1	CL16, CL17	CL9, CL10	RL11	CL15
RTL8111G	LDO	X	X	X	O	O
RTL8111G	External	X	X	X	X	O
RTL8111GS/ RTL8111GUS/ RTL8106EUS	SWR	O	O	O	X	X
RTL8106E	LDO	X	X	X	X	X

Please refer to the table above when using different 1.0V supply source.  
For RTL8111GS, RTL8111GUS, RTL8106E and RTL8106EUS, External 1.0V Supply Is Not Permitted.

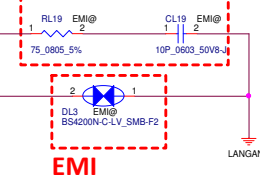
## RJ-45 CONN.



## EMI

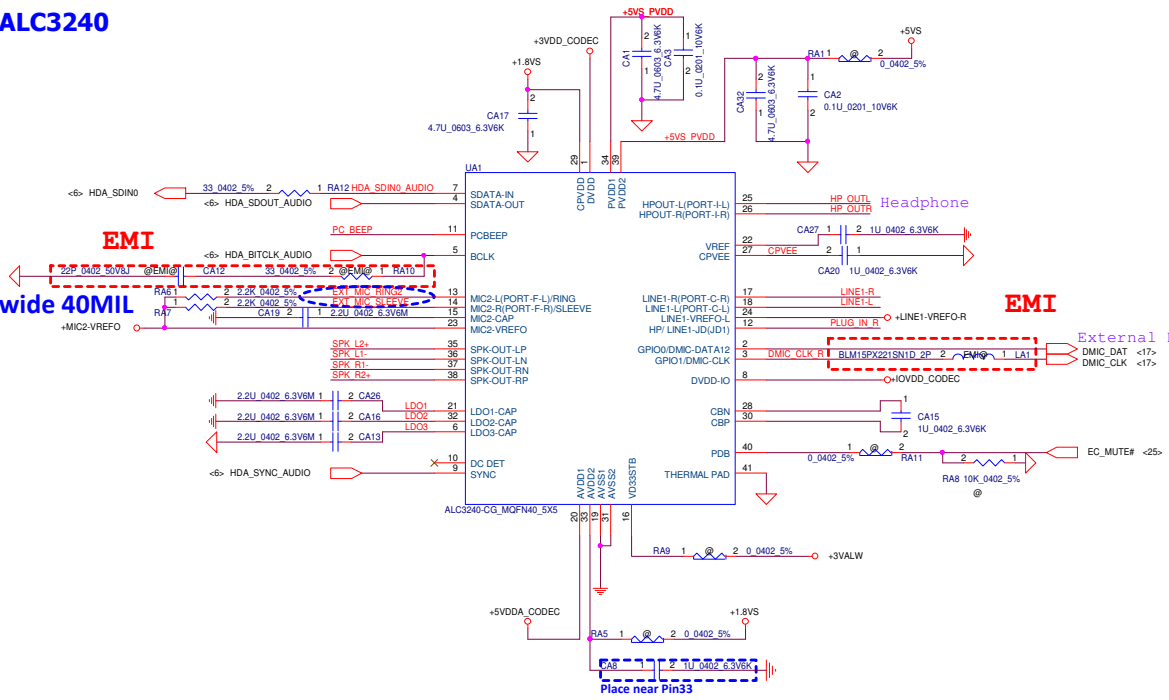


## EMI

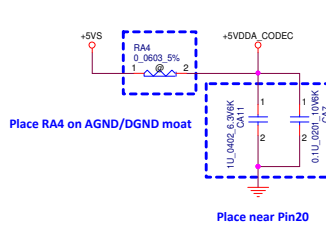


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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 RTL8111/8106
Size	Document Number	LA-C281	Rev	1.0
Date	Friday, February 06, 2015	Sheet	26	of 50

ALC3240



+5VS → +5VDDA\_CODEC



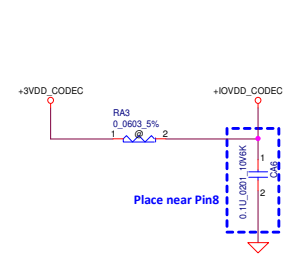
Each Platform Power Net Support List :

	+1.5VS	+1.8VS	+3VS	+5VS	+3VALW
AMD Carrizo	V	V	V	V	V
AMD Carrizo-L	V	V	V	V	V
Intel Broadwell	V	V	V	V	V
Intel Braswell	V	V	V	V	V
Intel Skylake	V	V	V	V	V
Intel Bay trail-M	V	V	V	V	V

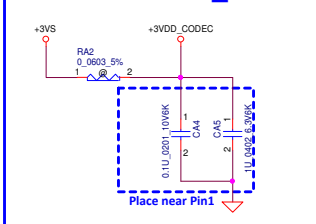
Each Platform HDA Link Voltage Support (Pin 8) :

	3.3V	1.5V
AMD Carrizo		V
AMD Carrizo-L		V
Intel Broadwell	V	V
Intel Braswell	V	V
Intel Skylake	V	V
Intel Bay trail-M		V

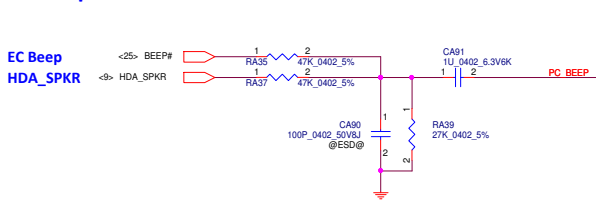
+3VDD\_CODEC → +IOVDD\_CODEC



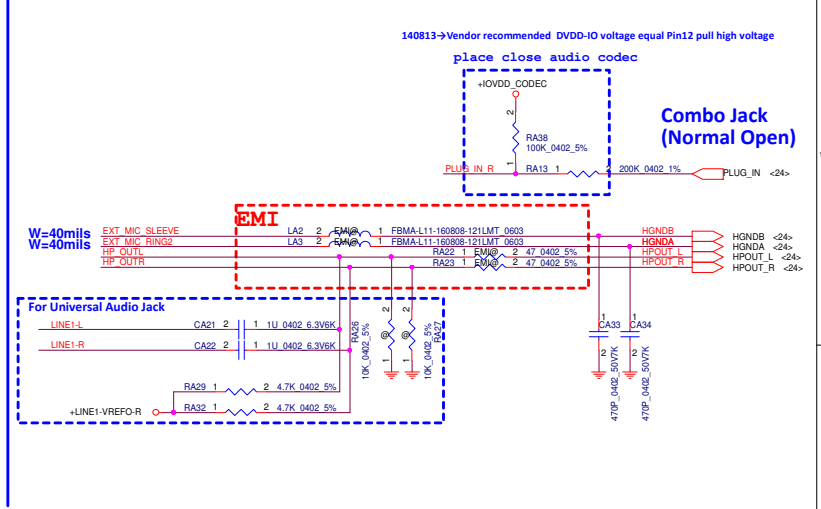
+3VS → +3VDD\_CODEC



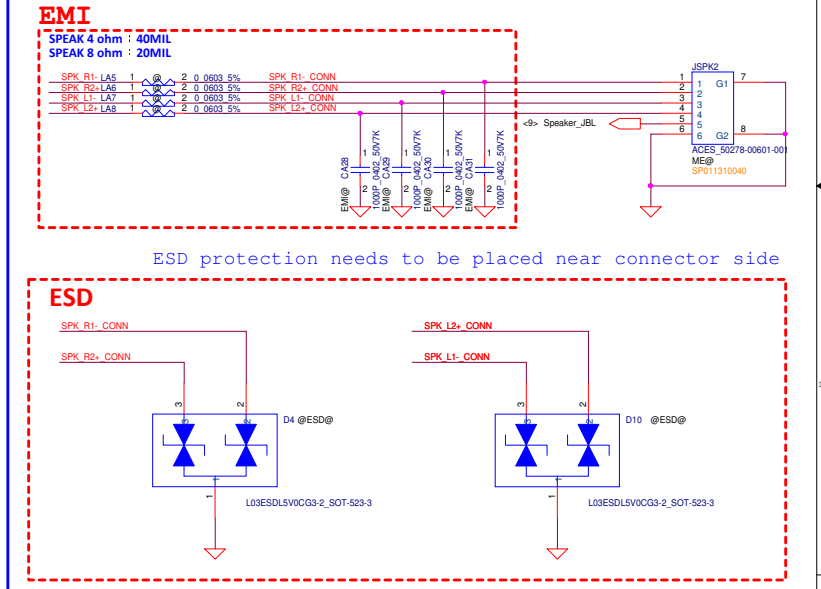
PC Beep



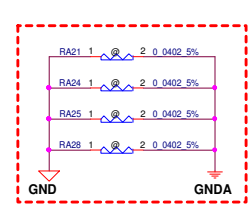
Input

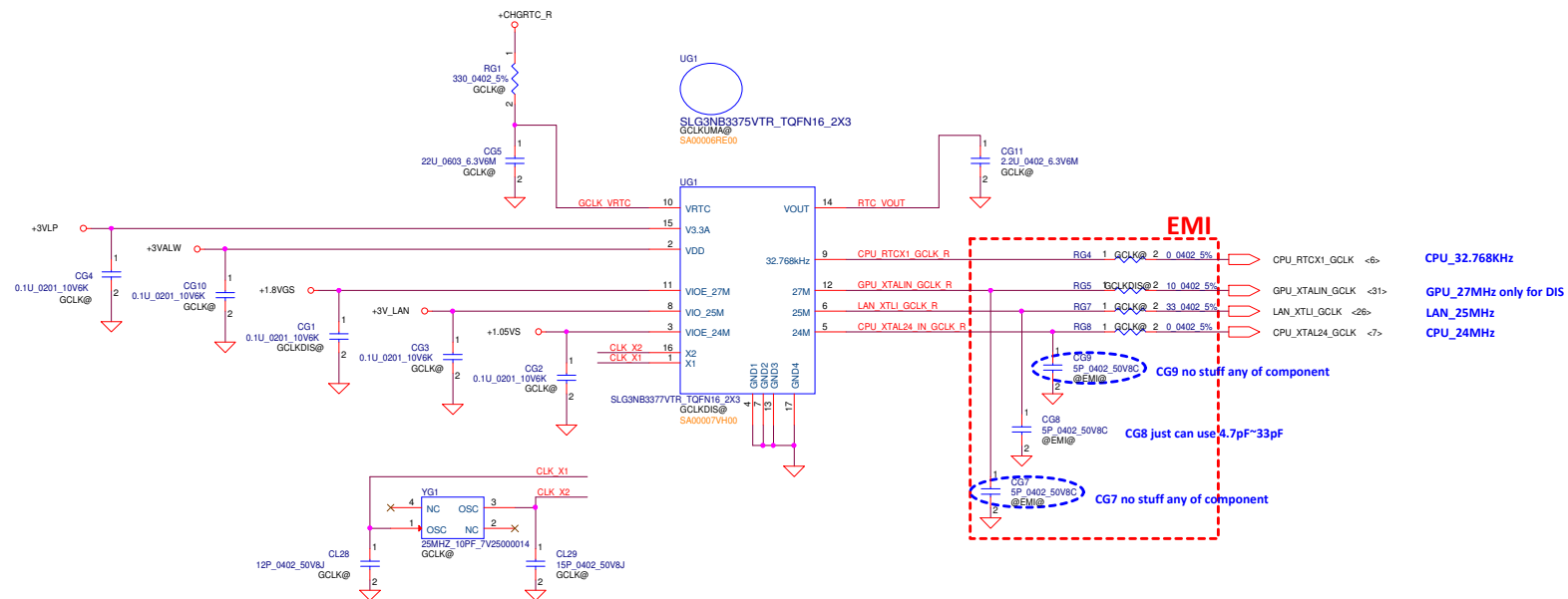


Output



EMI





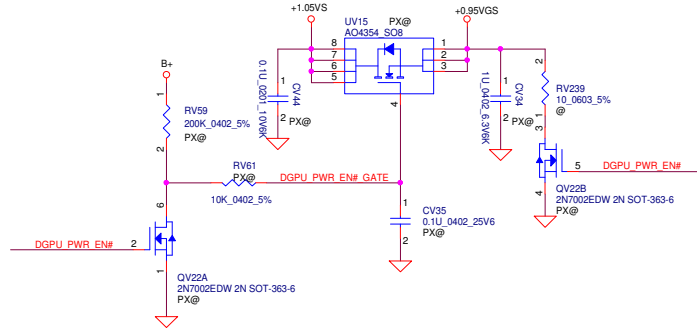
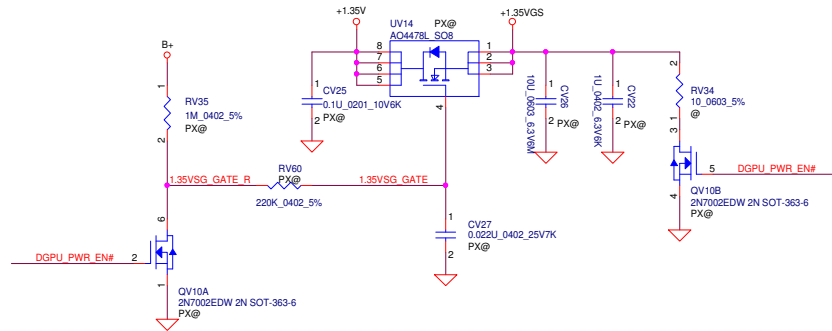
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	GCLK
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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, February 06, 2015
				Sheet	28 of 50
				Rev	1.0



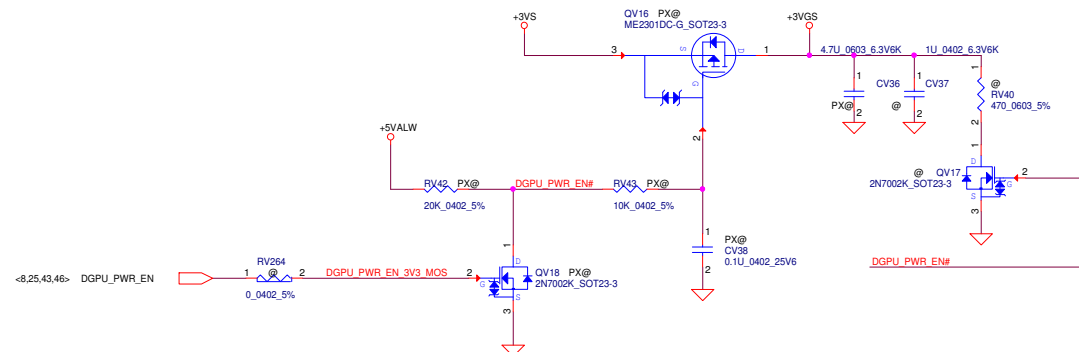
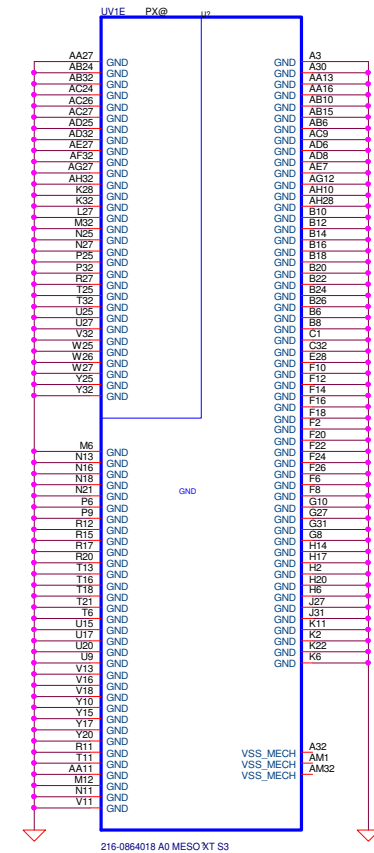
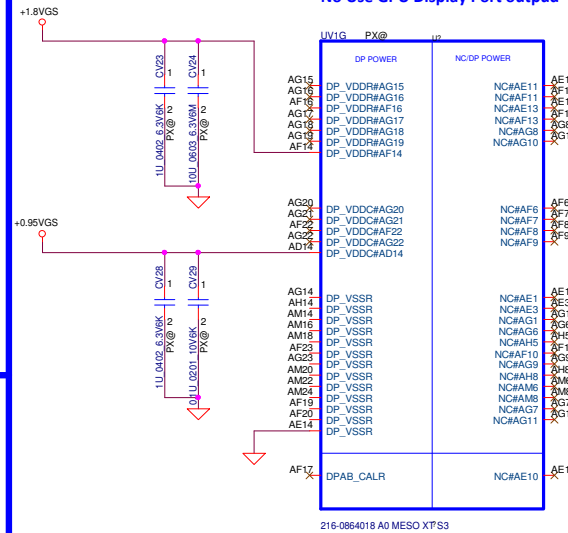




**+1.05VS to +0.95VGS**



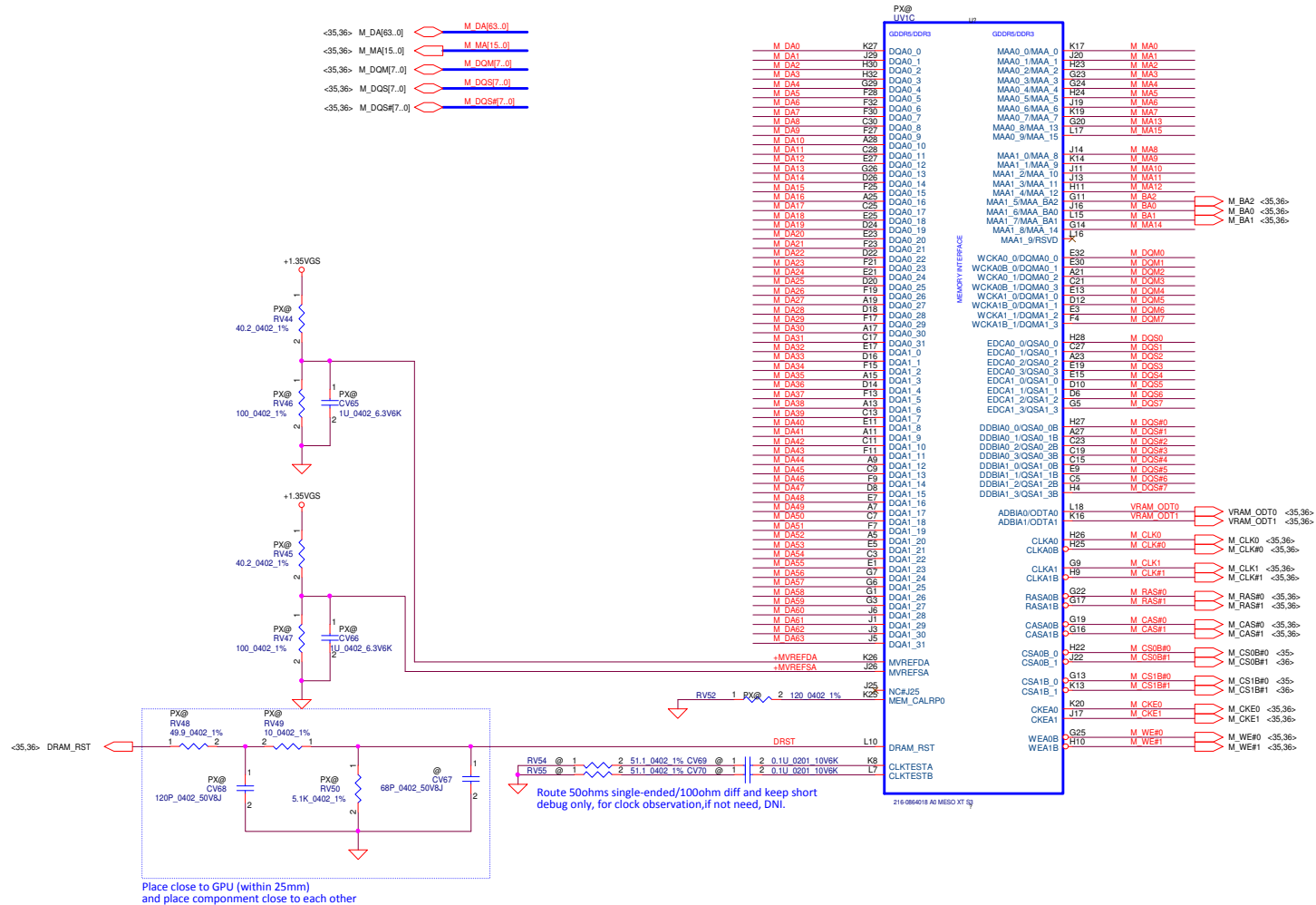
No Use GPU Display Port output



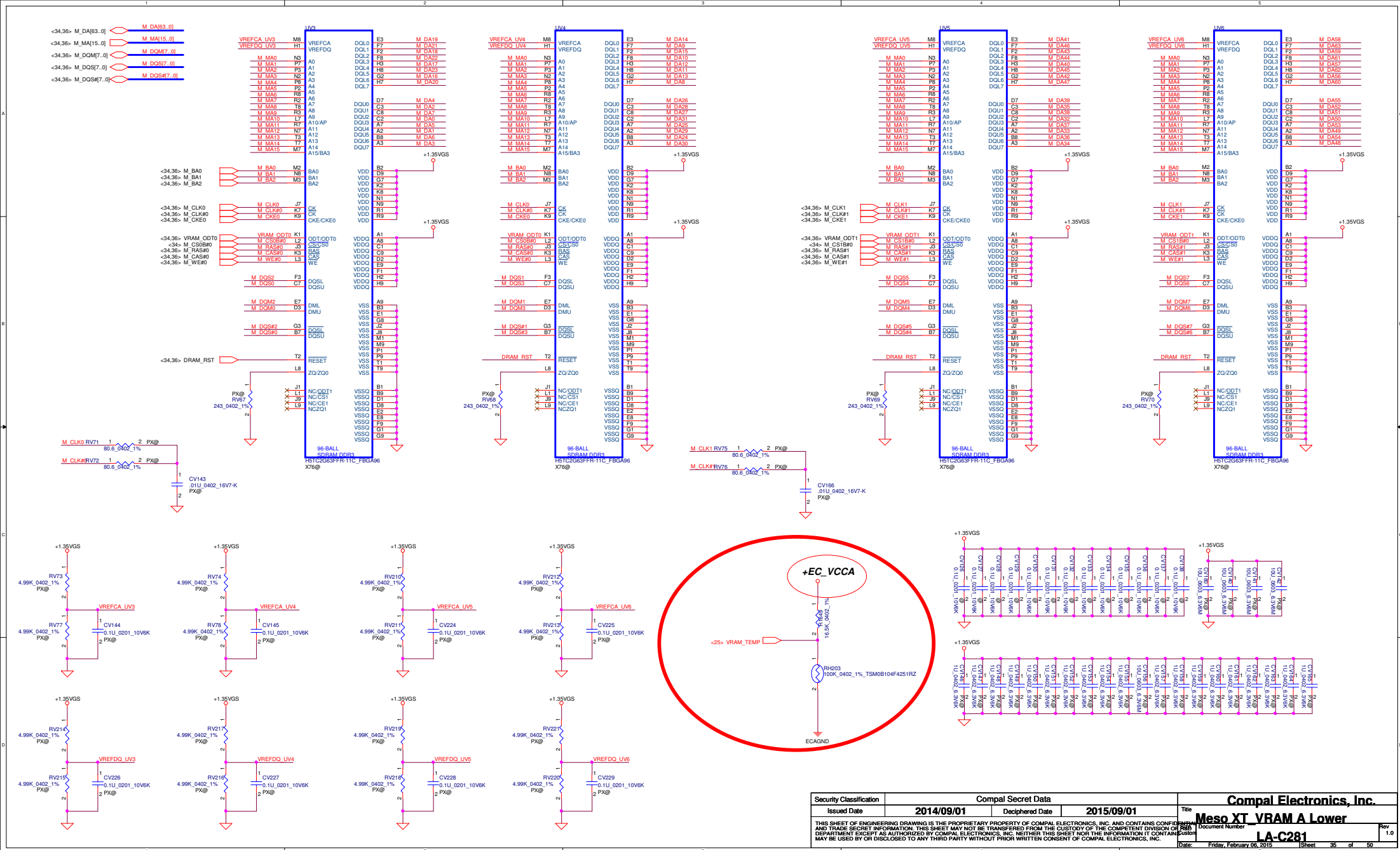
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		2014/09/01	Deciphered Date		2015/09/01	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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		
				Meso XT_Power/GND		
				Size	Document Number	Rev
				Custom	LA-C281	1.0
				Date:	Friday, February 06, 2015	Sheet 32 of 50





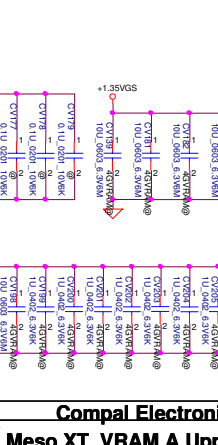
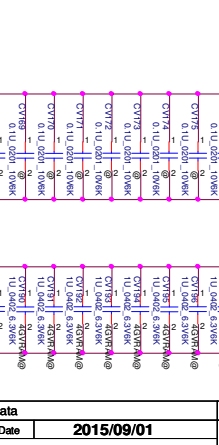
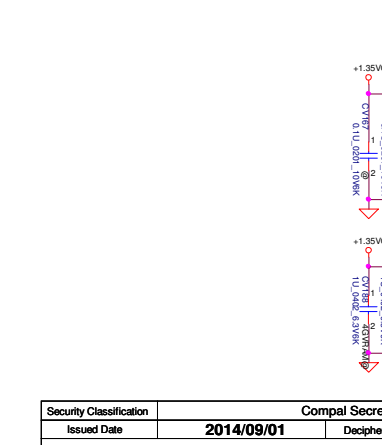
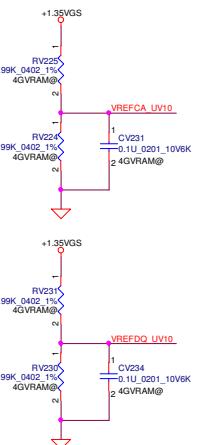
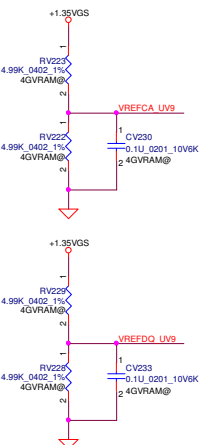
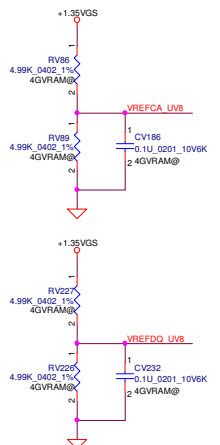
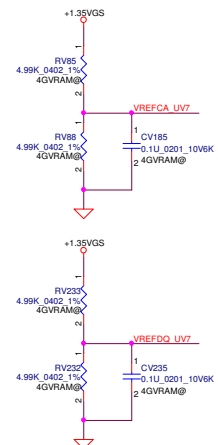
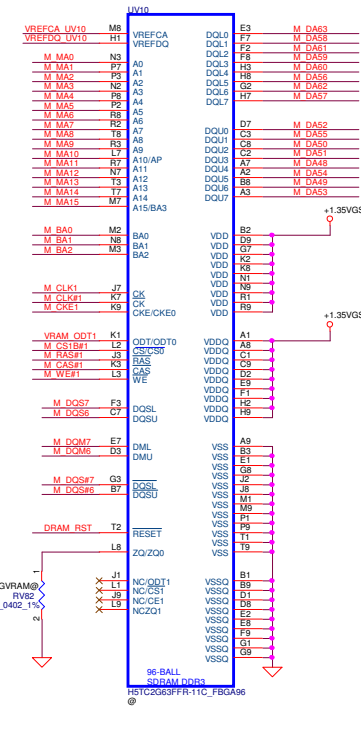
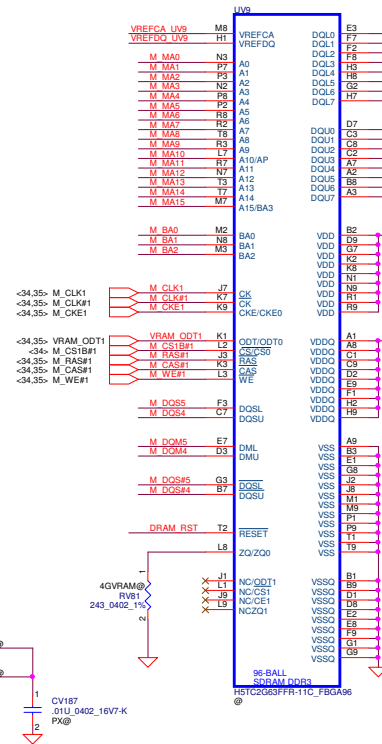
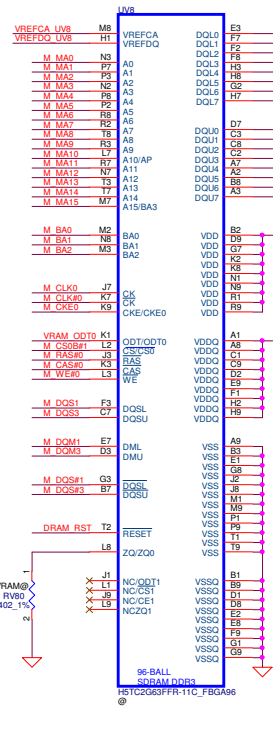
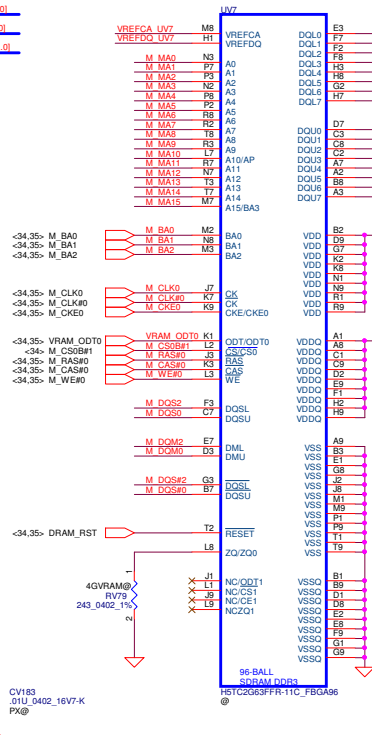


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	Title	Meso XT MEM
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT 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-C281	Rev 1.0
				Date:	Friday, February 06, 2015
				Sheet	34 of 50



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	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 COMPAL ELECTRONICS, INC. AUTHORIZED BY COMPAL ELECTRONICS, INC. THIS SHEET IS NOT FOR THE INFORMATION IT MAY CONTAIN. IT MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Meso XT_VRAM A Lower Document Number: LA-C281	
Date	Friday, February 06, 2015	Sheet	35	of 50

<34.35> M\_DA[63:0] M\_DA[63:0]  
 <34.35> M\_MA[15:0] M\_MA[15:0]  
 <34.35> M\_DM[7:0] M\_DM[7:0]  
 <34.35> M\_DS[7:0] M\_DS[7:0]  
 <34.35> M\_DS[7:0] M\_DS[7:0]



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/09/01	Deciphered Date	2015/09/01	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 COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 1.0
Meso XT VRAM A Upper				LA-C281
Date: Friday, February 06, 2015				Sheet 36 of 50

Meso XT\_VRAM\_TRAP

X76@

X76@

2GBytes

2GBytes

2GBytes

4GBytes

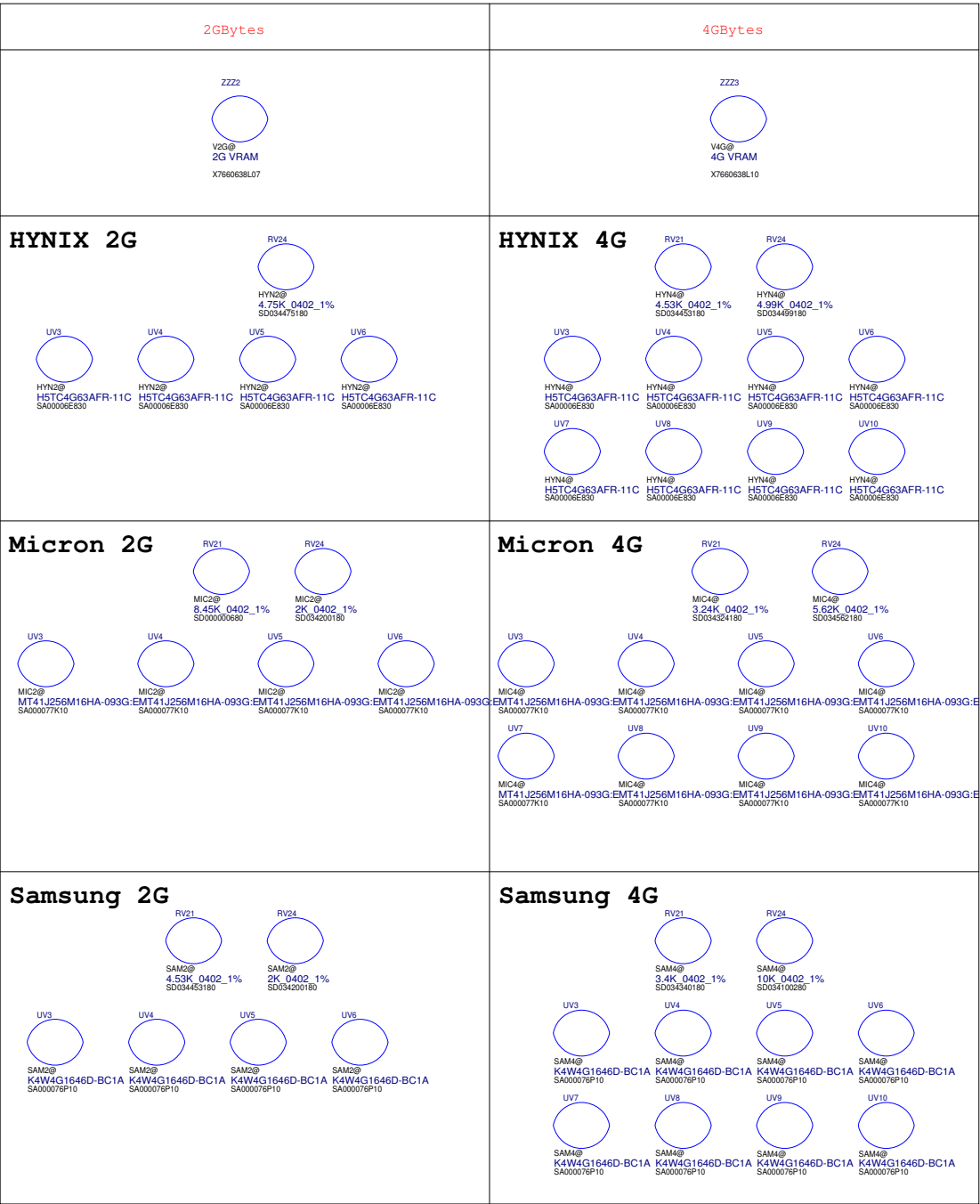
4GBytes

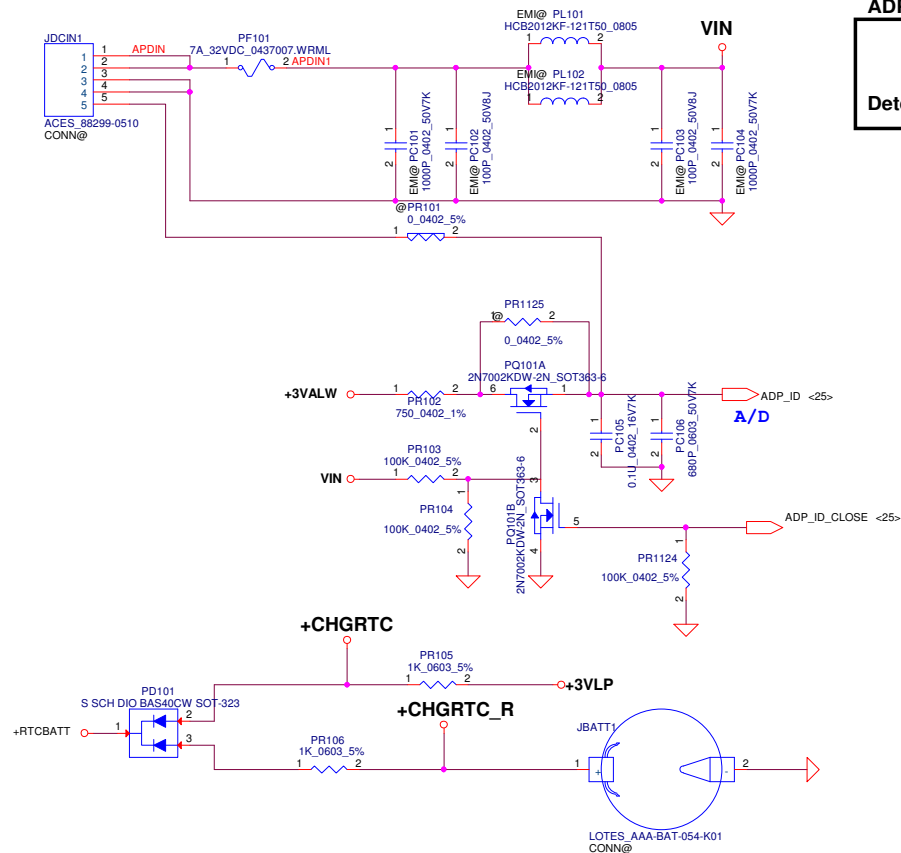
4GBytes

R_pu (Ω)	R_pd (Ω)	Bits [3:1]
NC	4750	000
8450	2000	001
4530	2000	010
6980	4990	011
4530	4990	100
3240	5620	101
3400	10000	110
4750	NC	111

Note: 0402 1% resistors are required.

Vendor		X76@					
UV3, UV4, UV5, UV6, UV7, UV8, UV9, UV10		ID	PS_3[3]	PS_3[2]	PS_3[1]	R_pu RV21	R_pd RV24
HYN2@	Hynix 2G SA00006E830 256Mx16 H5TC4G63AFR-11C	0	0	0	0	NC	4.75K
MIC2@	Micron 2G SA000077K10 256Mx16 MT41J256M16HA-093G:E	1	0	0	1	8.45K	2K
SAM2@	Samsung 2G SA000076P10 256Mx16 K4W4G1646D-BC1A	2	0	1	0	4.53K	2K
		3	0	1	1	6.98K	4.99K
HYN4@	Hynix 4G SA00006E830 256Mx16 H5TC4G63AFR-11C	4	1	0	0	4.53K	4.99K
MIC4@	Micron 4G SA000077K10 256Mx16 MT41J256M16HA-093G:E	5	1	0	1	3.24K	5.62K
SAM4@	Samsung 4G SA000076P10 256Mx16 K4W4G1646D-BC1A	6	1	1	0	3.4K	10K
		7	1	1	1	4.75K	NC



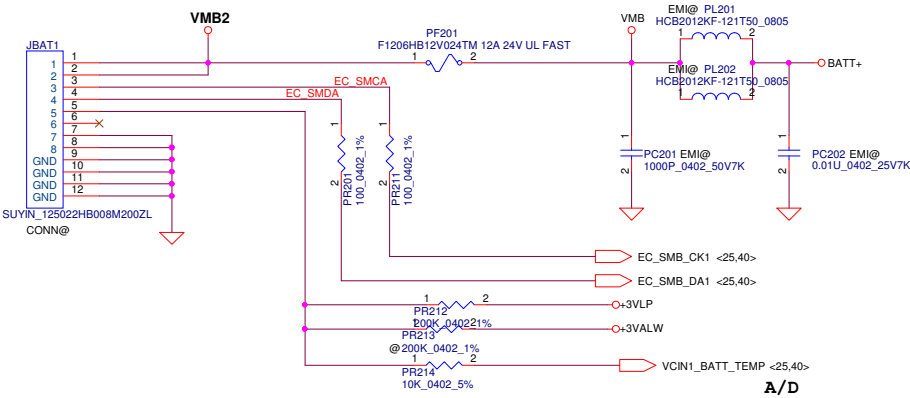


# ADP\_ID

AC Adapter	90W	65W
R(K ohm)	open	10
ADP_ID(V)	3.3	1.65
Detection voltage	>2.64	1.32~1.98

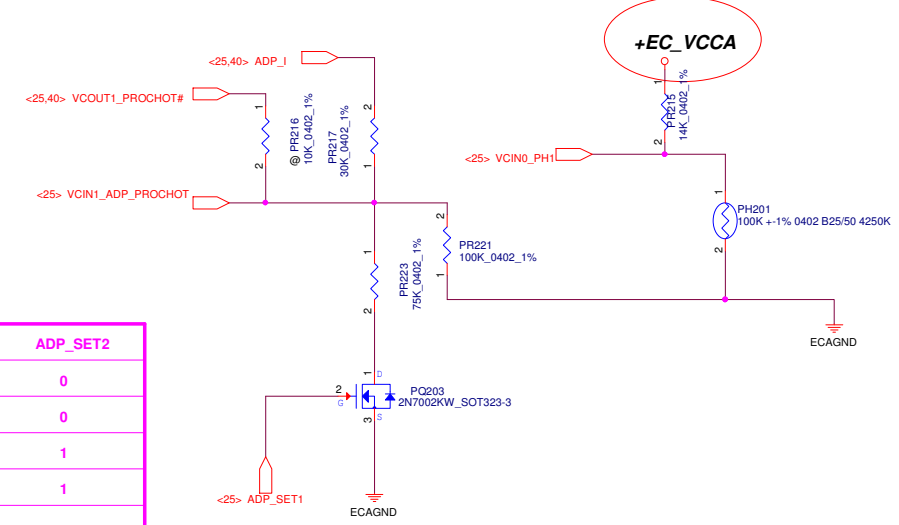
## RTC Battery

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	Title	PWR DCIN / RTC Battery
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 FACTORY AND TRADE SECRET INFORMATION. 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	Z_BDW
				Date	Friday, February 06, 2015
				Sheet	38 of 50
				Rev	1.0



**PH201 under CPU bottom side :**  
**CPU thermal protection at 93 +-3 degree C**  
**Recovery at 56 +-3 degree C**

20120314  
 Change to +EC\_VCCA from +3VLP



	ADP_SET1	ADP_SET2
45W adapter	0	0
65W adapter	1	0
90W adapter	0	1
135W adapter	1	1

**135W: 150W active, 135W recovery**  
**90W : 120W active, 90W recovery**  
**65W : 85W active, 65W recovery**  
**45W : 65W active, 45W recovery**





# Module model information

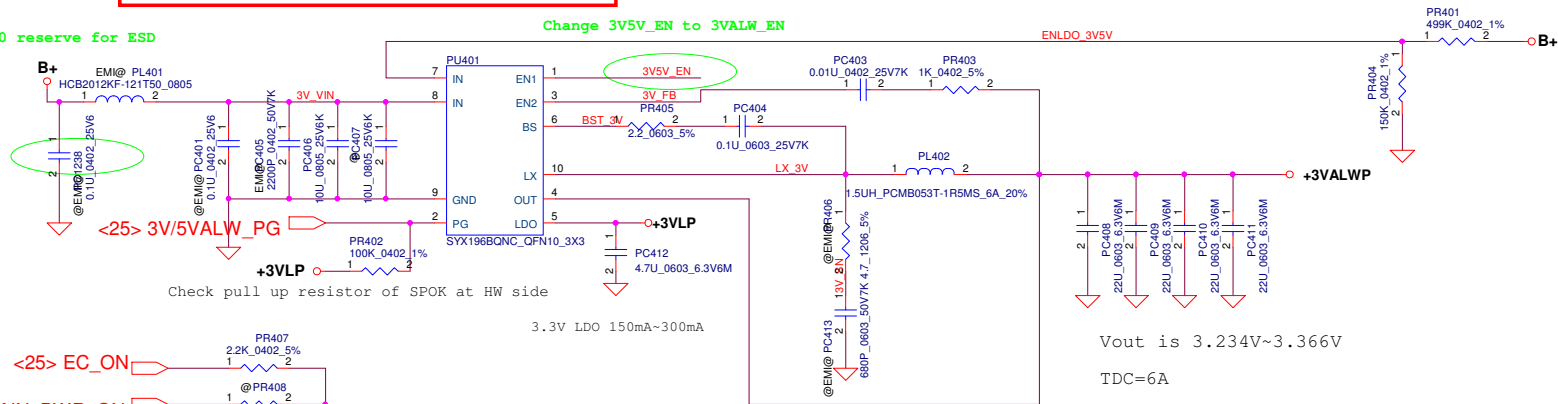
SY8208B\_V2.mdd

EN1 and EN2 don't floating

2014.10.30 reserve for ESD

Change 3V5V\_EN to 3VALW\_EN

ENLDO\_3V5V



<25> EC\_ON

<25> VCOUT0\_MAIN\_PWR\_ON

EC VDD0 is +3VL, PC13 UNPOP  
EC VDD0 is +3VALW, PC13 POP

3.3V LDO 150mA~300mA

EN1 and EN2 don't floating

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

3V5V\_EN

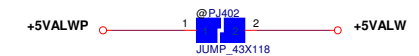
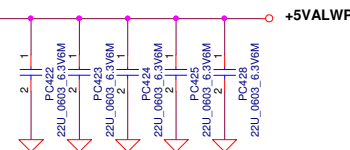
# Module model information

SY8208C\_V2.mdd

5V LDO 150mA~300mA

Vout is 4.998V~5.202V

TDC=6A

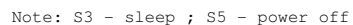


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	Title	+3VALW/+5VALW
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. 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	Z_BDW
				Date	Friday, February 06, 2015
				Sheet	41 of 50
				Rev	1.0

RT8207M_V1.mdd	For Single layer
RT8207M_V2.mdd	For Dual layer

RT8207M_V1.mdd	For Single layer
RT8207M_V2.mdd	For Dual layer

0.75Volt +/- 5%  
TDC 0.7A  
Peak Current 1A



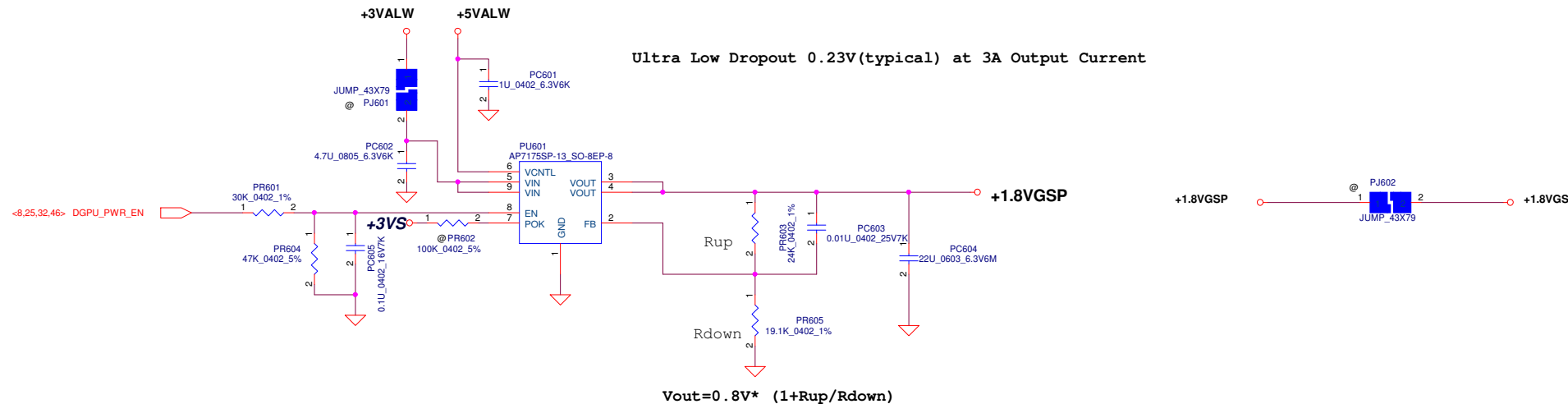
***Compal Electronics, Inc.***

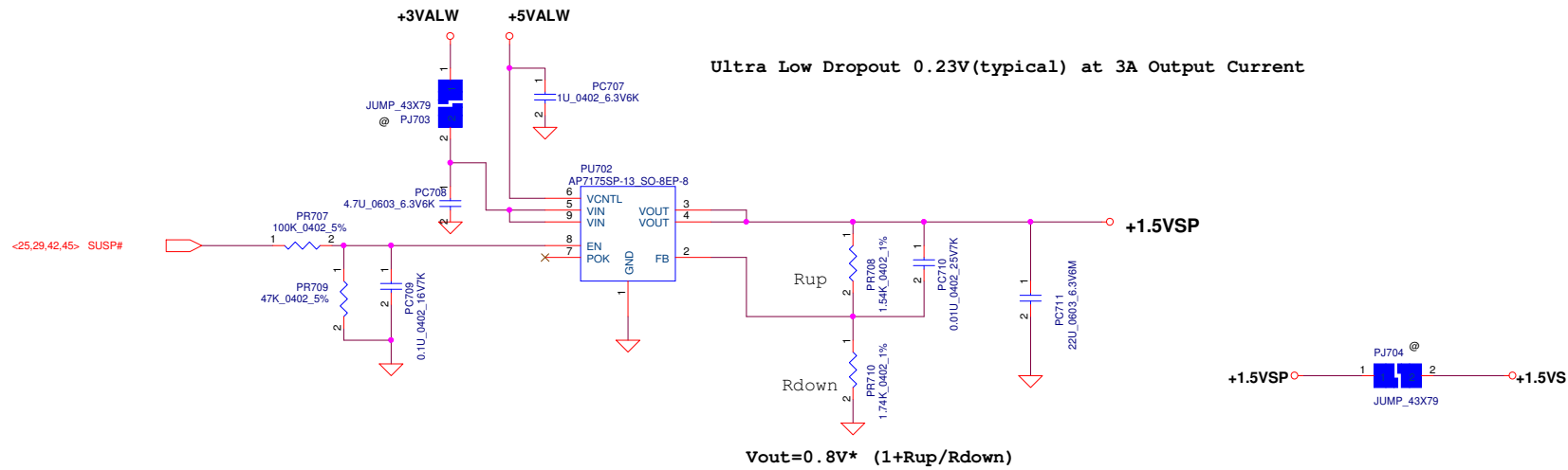
**RT8207M**

Size	Document Number
Custom	Z BDW

Date:	Friday, February 06, 2015	Sheet	42	of	50
-------	---------------------------	-------	----	----	----

Module model information  
APL5930\_V1.mdd



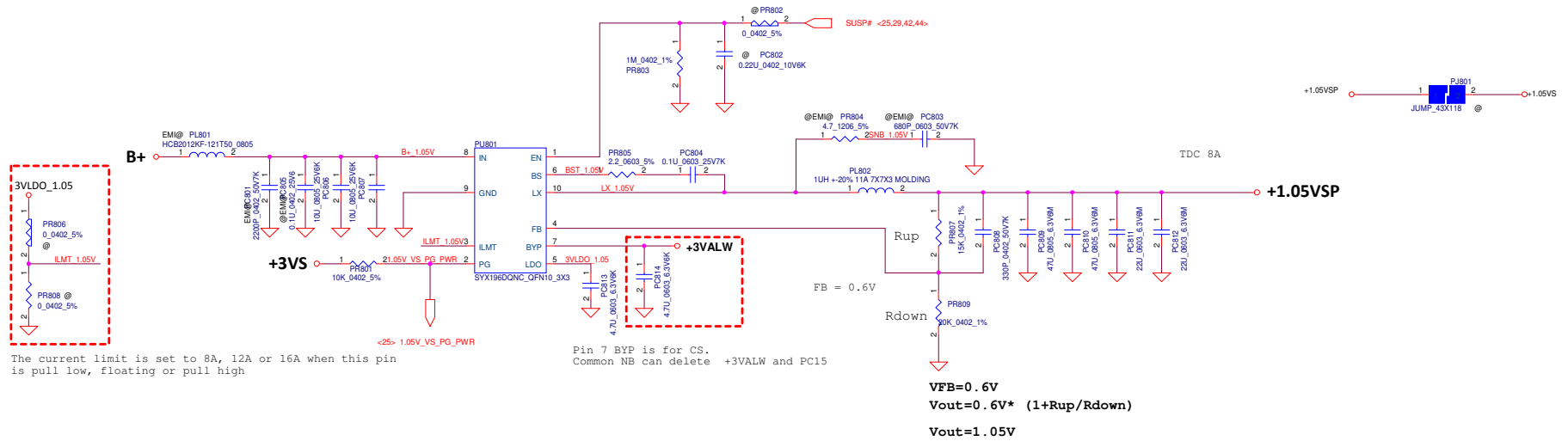


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				+1.5VS	
Size		Document Number		Rev	
Custom		Z_BDW		1.0	
Date:		Friday, February 06, 2015		Sheet 44 of 50	

# Module model information

SY8208D\_V1.mdd

EN pin don't floating  
If have pull down resistor at HW side, pls delete PR2



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	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.				+1.05VS	
Size	Document Number	Z BDW		Rev	
1	1	1		1.0	
Date: Friday, February 06, 2015		Sheet 45 of 50			

```
Module model information
ISL62771_V1A.mdd for IC portion
ISL62771_V1B.mdd for SW portion
```

+VGA\_CORE  
AMD Meso XT  
TDC 36A, EDC 54A  
OCP min 67.8A



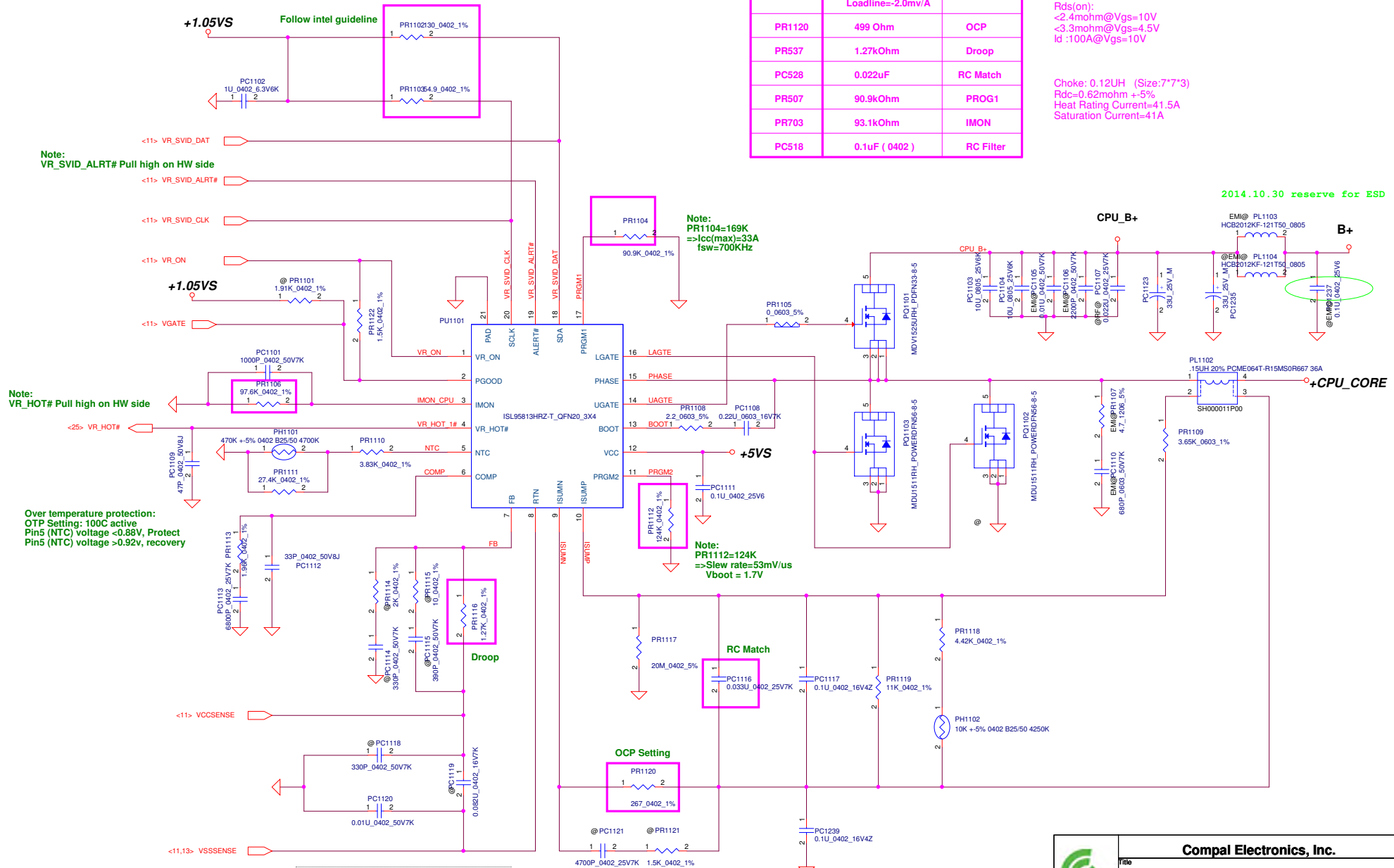
**Module model information:**  
**ISL95813 (for 15W & 28W CPU)**

Base on BDW PDDG Rev_0_73		
Location	15W	Note
	TDC 14A	
	MAX 32A	
	OCp 39A	
	Loadline=-2.0mv/A	
PR1120	499 Ohm	OCp
PR537	1.27kOhm	Droop
PC528	0.022uF	RC Match
PR507	90.9kOhm	PROG1
PR703	93.1kOhm	IMON
PC518	0.1uF ( 0402 )	RC Filter

H-side MOS: MDV1525URH  
Rds(on):  
<10.1mohm@Vgs=10V  
<14.0mohm@Vgs=4.5V  
Id :24A@Vgs=10V

L-side MOS: MDU1511RH  
Rds(on):  
<2.4mohm@Vgs=10V  
<3.3mohm@Vgs=4.5V  
Id :100A@Vgs=10V

Choke: 0.12UH (Size:7\*7\*3)  
Rdc=0.62mohm +5%  
Heat Rating Current=41.5A  
Saturation Current=41A



Local sense put on HW site



**Compal Electronics, Inc.**

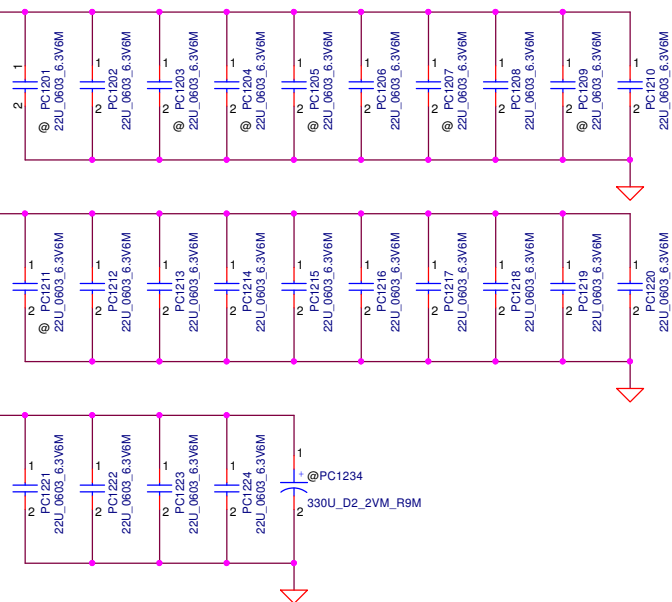
ISL95813 for BDW-Y&amp;U(15W/28W) CPU

Size	Document Number	Rev
	3 PDW	1

Date: Friday, February 06, 2015 Sheet 47 of 50

+CPU\_CORE

24 X 22u/0603



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	Title	PWR-PROCESSOR DECOUPLING
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 Z BDW
				Date: Friday, February 06, 2015	Sheet 48 of 50



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

Page 1 of 1  
for PWR

Item	Reason for change	PG#	Modify List	Date	Phase
1	reserve VGA_CORE RC delay	P46	add PC1236	2014.10.15	SIV
2	reserve 0.1uF for ESD	P41/P47	add PC1237,PC1238	2014.10.30	SIV
3					
4					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/24	Deciphered Date	2012/07/12	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)	
				BE BDW	
				Rev 1.0	
Date: Friday, February 06, 2015				Sheet 49 of 50	

Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b> <b>HW-PIRI</b>	
Issued Date	2011/06/15	Deciphered Date	2012/07/11	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				C	LA-C281P
				Date	Friday, February 06 2015
				Sheet	50 of 50
				Rev	1.0