

AAWZA/AAWZB  
DIS M/B Schematics Document

AMD Carrizo SOC with DDR3L

AMD Exo Pro

2015-04-20

LA-C285P

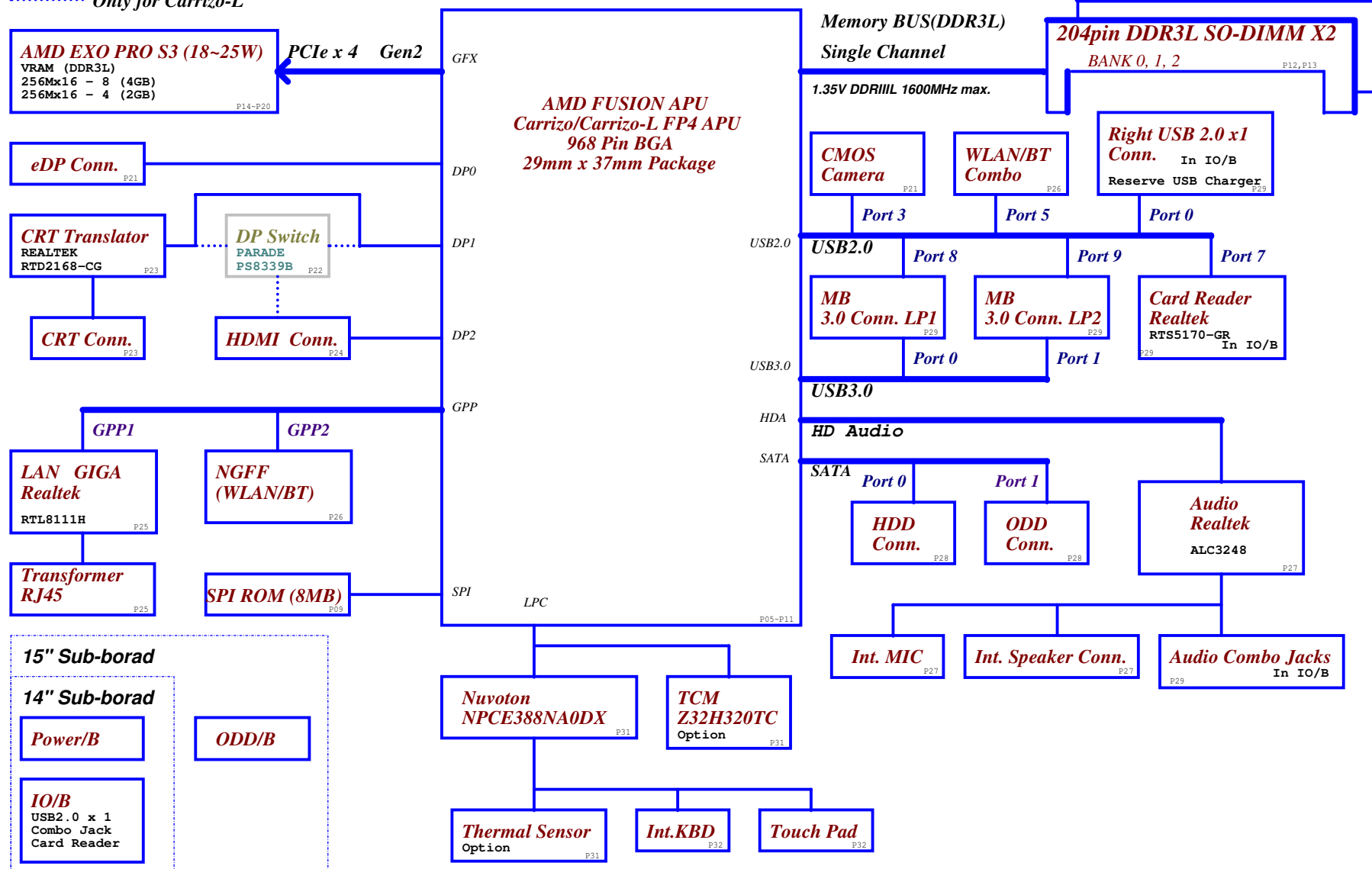
REV : 1.0

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2014/10/02	Deciphered Date	2015/10/02	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.		Cover Page			Rev
		Size	Document Number		1.0
20141107B		C	LA-C285PR10		
		Date:	Thursday, April 23, 2015	Sheet	1 of 46

# AMD Carrizo/Carrizo-L Platform

— Only for Carrizo

..... Only for Carrizo-L



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	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.				Size	Rev
				Custom	1.0
				Block Diagram	
				LA-C285PR10	
				Date:	Thursday, April 23, 2015
				Sheet	2 of 46

Voltage Rails

Power Plane	Description	S0	S3	S5
VIN	Adapter power supply (20V)	ON	ON	ON
B+	AC or battery power rail for power circuit.	ON	ON	ON
+APU_CORE	Core voltage for APU	ON	OFF	OFF
+APU_CORE_NB	Voltage for On-die VGA of APU	ON	OFF	OFF
+VGA_CORE	0.95-1.2V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+1.8VALW	1.8V always on power rail	ON	ON	ON*
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+0.95VALW	0.95V always on power rail	ON	OFF	OFF
+0.95VS	0.95V switched power rail	ON	OFF	OFF
+1.35V	1.35V power rail for APU and DDR	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+3VGS	3.3V switched power rail for VGA	ON	OFF	OFF
+1.8VGS	1.8V switched power rail for VGA	ON	OFF	OFF
+1.35VGS	1.35V switched power rail for VGA	ON	OFF	OFF
+0.95VGS	0.95V switched power rail for VGA	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON
+5VS	5V switched power rail	ON	OFF	OFF
+RTC_APU	RTC power	ON	ON	ON
+0.675VS	0.675V switched power rail for DDR terminator	ON	OFF	OFF

CZ\_APU

- UAPU1  
SA00008T340  
S IC FX-8800P FM880PAAY43KA 2.1G BGA968P  
FX@
- UAPU1  
SA00008T440  
S IC A10-8700P AM870PAAY43KA 1.8G BGA968  
A10@
- UAPU1  
SA00008UN10  
S IC A8-8600P AM860PAAY43KA 1.6G BGA 968P APU C38  
A8@
- UAPU1  
SA00008UC00  
S IC A6-8500P AM850PAAY23KA 1.6G BGA 968P C38  
A6@

STATE \ SIGNAL	SLP_S3#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	ON	ON	ON	ON
S3 (Suspend to RAM)	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	ON	OFF	OFF	OFF

USB OC MAPPING

OC#	USB Port	
0	USB20 port1	
1	USB20 port6,7	USB30 port2,3
2		
3		

BOM Structure Table

BOM Structure	BTO Item
45@	for HDMI Logo
FX@	CZ FX 15W 2.1GHz BGA APU
A10@	CZ A10 15W 1.8GHz BGA APU
A8@	CZ A8 15W 1.6GHz BGA APU
A6@	CZ A6 15W 1.6GHz BGA APU
CZ@	APU Carrizo
CZL@	APU Carrizo-L
Z14@	for 14" componect
Z15@	for 15" componect
UMA@	UMA part
PX@	Common VGA circuit
PX_CZ@	PX for Carrizo
PX_CZL@	PX for Carrizo-L
EXO@	EXO PRO GPU
MESO@	MESO XT GPU
PX4G@	for VRAM 4G
HDMI@	HDMI part
8111H_LDO@	Realtek RTL8111H with LDO mode
LDO@	Realtek LAN with LDO mode
SWR@	Realtek LAN with SWR mode
CMOS@	CMOS Camera part
KBL@	Keyboard backlight
NOKBL@	Non-Keyboard backlight
NOZODD@	Non-Zero Power ODD part
ZODD@	Zero Power ODD part
TPM@	TPM part
NOTPM@	NOTPM part
EMI@	EMI pop component
@EMI@	EMI Un pop component
ESD@	ESD pop component
@ESD@	ESD Un pop component
ME@	ME part
@	Unpop

SMBUS Control Table

	SOURCE	VGA	BATT	EC	SODIMM	WLAN	Thermal Sensor	APU	CRT RTD2168
EC_SMB_CK1 EC_SMB_DA1	388N +3VALW	X	V +3VALW	V +3VALW	X	X	X	X	X
APU_SCLK0 APU_SDATA0	APU +3VS	X	X	X	V +3VS	X	X	X	X
EC_SMB_CK2 EC_SMB_DA2	388N +3VS	V +3VGS	X	V +3VALW	X	X	V +3VS	V +1.8VS (+3VS)	V +3VS

APU PCIE PORT LIST

Port	Device
GPP0	
GPP1	LAN
GPP2	WLAN
GPP3	

USB Port Table

USB 2.0	USB 3.0	Port	3 External USB Port
		0	RIGHT USB
		1	Touch Screen
		2	Card Reader
		3	Camera
		4	
		5	WLAN/BT Combo
	XHCI	2	LEFT USB3.0
		3	LEFT USB3.0

APU SM Bus address

Device	Address	HEX
DDR DIMM1	1010 001Xb	A2H
DDR DIMM2	1010 000Xb	A0H

PCB

- ZZZ15  
DA6001CO110  
PCB 1CO LA-C285P REV1 M/B 3  
Z15@
- ZZZ14  
DA6001CO010,  
PCB 1CE LA-C285P REV1 M/B 2  
Z14@

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	NOTES LIST	
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 RESEARCH AND DEVELOPMENT 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.				Page 8	Document Number	Rev 1.0
				Date: Monday, April 27, 2015	Sheet 3 of 46	

EXO-PRO VRAM STRAP

X76@

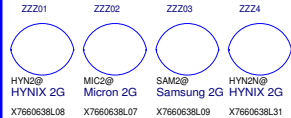
X76@

	Vendor	ID	PS_3[3]	PS_3[2]	PS_3[1]	R_pu RV21	R_pd RV24
ZZZ01 HYN2@	Hynix 2G (256Mx16 --4) SA00006E830 256Mx16 H5TC4G63AFR-11C	0	0	0	0	NC	4.75K
ZZZ02 MIC2@	Micron 2G (256Mx16 -- 4) SA000077K10 256Mx16 MT41J256M16HA-093G:E	1	0	0	1	8.45K	2K
ZZZ03 SAM2@	Samsung 2G (256Mx16 -- 4) SA000076P10 256Mx16 K4W4G1646D-BC1A	2	0	1	0	4.53K	2K
ZZZ04 HYN2N@	Hynix 2G (256Mx16 --4) SA00008DN00 256Mx16 H5TC4G63CFR-N0C	3	0	1	1	6.98K	4.99K
ZZZ05 HYN4@	Hynix 4G (256Mx16 -- 8) SA00006E830 256Mx16 H5TC4G63AFR-11C	4	1	0	0	4.53K	4.99K
ZZZ06 MIC4@	Micron 4G (256Mx16 -- 8) SA000077K10 256Mx16 MT41J256M16HA-093G:E	5	1	0	1	3.24K	5.62K
ZZZ07 SAM4@	Samsung 4G (256Mx16 -- 8) SA000076P10 256Mx16 K4W4G1646D-BC1A	6	1	1	0	3.4K	10K
ZZZ08 HYN4N@	Hynix 4G (256Mx16 --8) SA00008DN00 256Mx16 H5TC4G63CFR-N0C	7	1	1	1	4.75K	NC

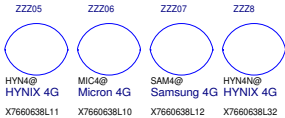
UV3, UV4, UV5, UV6  
2GBytes

UV3, UV4, UV5, UV6,  
UV7, UV8, UV9, UV10  
4GBytes

2GBytes



4GBytes



HYNIX

HY20@ / HY40@

MICROM

M120@ / M140@

SAMSUNG

SA20@ / SA40@

HYNIX

HY20N@ / HY40N@

Power-Up/Down Sequence

"Jet" has the following requirements with regards to power-supply sequencing to avoid damaging the ASIC:

- All the ASIC supplies must reach their respective nominal voltages within 20ms of the start of the ramp-up sequence, though a shorter ramp-up duration is preferred.
- The maximum slew rate on all rails is 50 mV/μs.
- It is recommended that the 3.3-V rail ramp up first.
- It is recommended that the 0.95-V rail reach at least 90% of its nominal value no later than 2ms from the start of VDDC ramping up.
- The power rails that are shared with other components on the system should be gated the dGPU so that when dGPU is powered down (for example AMD PowerXpress™ idle state), all the power rails are removed from the dGPU.
- The gate circuits must meet the slew rate requirement (such as  $\leq 50\text{mV}/\mu\text{s}$ ).
- VDDC and VDD\_CT should not ramp up simultaneously. For example, VDDC should reach 90% before VDD\_CT starts to ramp up (or vice versa).
- For power down, reversing the ramp-up sequence is recommended.

R_pu (Ω)	R_pd (Ω)	Bits [3:1]
NC	4750	000
4530	2000	001
4530	2000	010
4530	1000	011
4530	4000	100
3240	5620	101
3400	10000	110
4750	NC	111
Note: 0402 1% resistors are required.		

VDDR3(+3VGS)

PCIE\_VDDC(+0.95VGS)

VDD\_CT(+1.8VGS)

VDDC/VDDCI(+VGA\_CORE)

VDDR1(+1.35VGS)

PERSTb

REFCLK

Straps Reset

Straps Valid

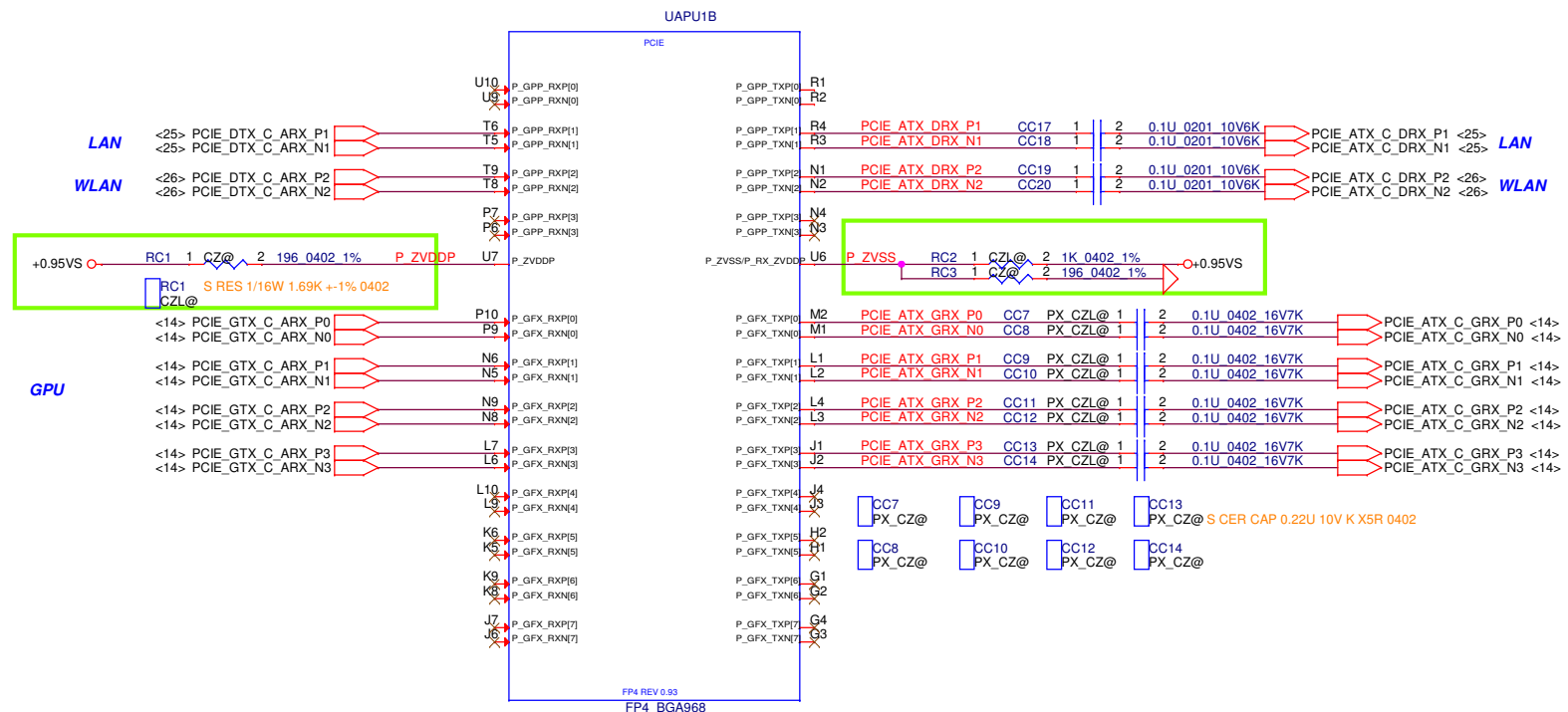
Global ASIC Reset

PS0\_[1] = 1  
PS0\_[2] = 0 For a 256-MB aperture size, PS\_0[3:1] is set to 001  
PS0\_[3] = 0  
PS0\_[4] = 1 Must be 1 at reset.  
PS0\_[5] = 1 Audio-capable display outputs. 111 = No usable endpoints.

PS1\_[1] = 0 PCIeR GEN3 is not supported = 0.  
PS1\_[2] = 0 Must be 0 at reset.  
PS1\_[3] = 0 Must be 0 at reset.  
PS1\_[4] = 1 Full Tx output swing = 1  
PS1\_[5] = 1 Tx deemphasis enabled = 1  
  
PS2\_[1] = 0 Reserved  
PS2\_[2] = 0 Reserved  
PS2\_[3] = 0 Disable the external BIOS ROM device = 0  
PS2\_[4] = 1 VGA controller capacity enabled = 0  
PS2\_[5] = 1 Reserved

PS3\_[1] = 0 Reserved  
PS3\_[2] = 0 Reserved  
PS3\_[3] = 0 Reserved  
PS3\_[4] = 1 Audio-capable display outputs. 111 = No usable endpoints.  
PS3\_[5] = 1 Audio-capable display outputs. 111 = No usable endpoints.

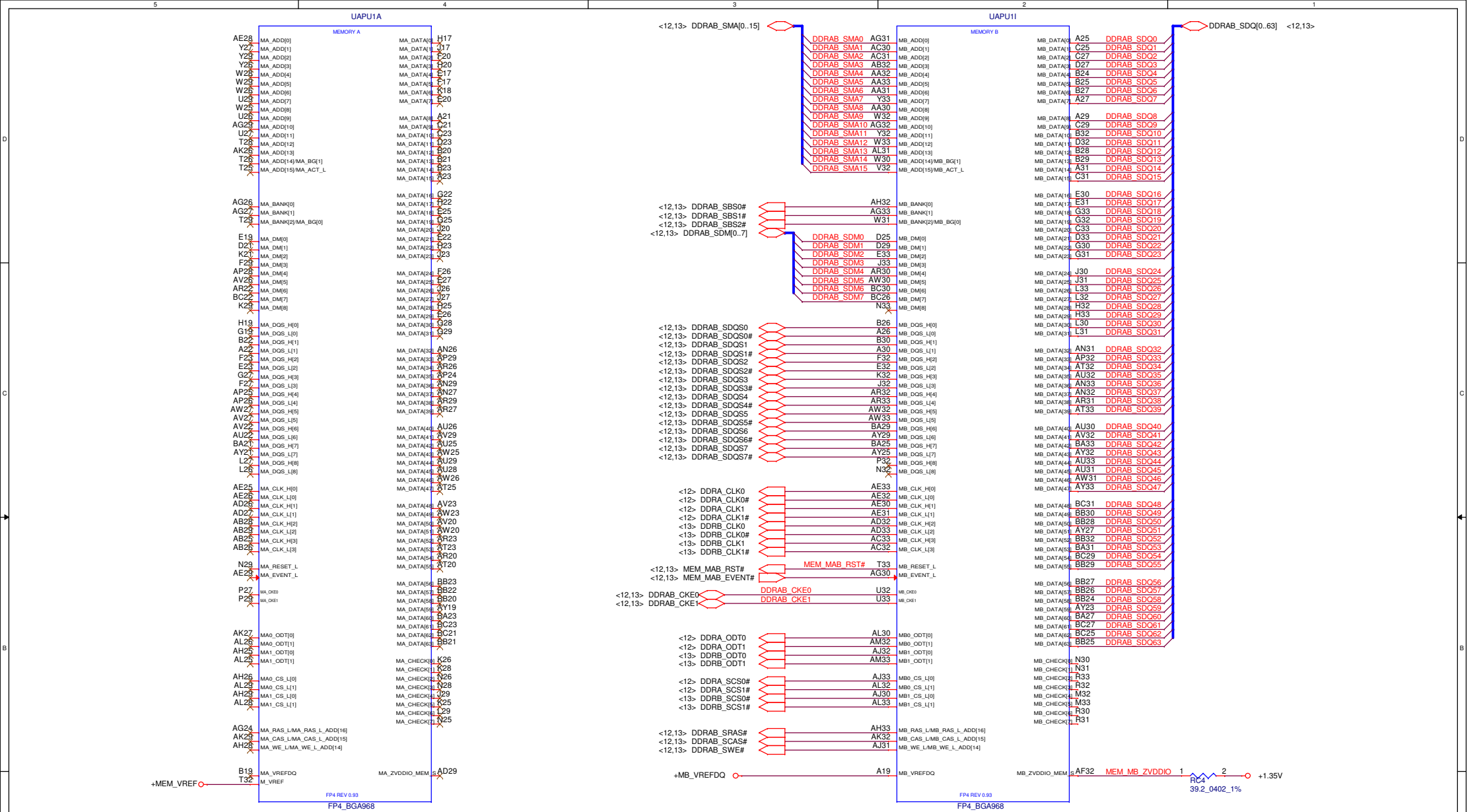
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				VGA Notes List
Size C	Document Number	LA-C285PR10		Rev 1.0
Date: Friday, April 24, 2015		Sheet 4 of 46		



Carrizo:  
PCIe GPP: Four x1 Gen2  
PCIe Discrete Graphics Port: PCI Gen3 x8

Carrizo-L:  
PCIe GPP: Four x1 Gen2  
PCIe Discrete Graphics Port: PCI Gen2 x4

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	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.				Size B	Rev 1.0
				Document Number	LA-C285PR10
				Date: Thursday, April 23, 2015	Sheet 5 of 46



- Carrizo:**  
 DDR3 - Dual Channel

  - Up to 2133
  - Up to 2 DIMMs/Channel
  - uDIMM and SO-DIMM/DRAM down
  - 1.35V and 1.5V

**Carrizo-L (CHANNEL B ONLY):**  
 DDR3 - Single Channel

  - Up to 1866
  - Up to 2 DIMMs/Channel
  - uDIMM and SO-DIMM/DRAM down
  - 1.35V and 1.5V

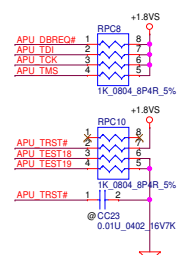
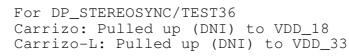
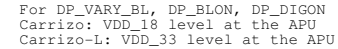
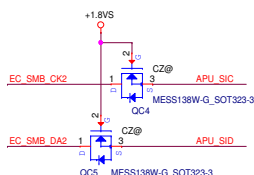
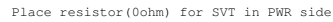
**MEMORY VREF**

**ESD**

<b>Security Classification</b>		<b>Compal Secret Data</b>		<b>Compal Electronics, Inc.</b>	
<b>Issued Date</b>	2014/10/02	<b>Deciphered Date</b>	2015/04/20	<b>Title</b>	
				<b>FP4 MEMORY INTERFACE</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					
Size Custom	Document Number <b>LA-C285PR10</b>			Date Thursday, April 23, 2015	Rev 1.0
				Sheet 6	of 46

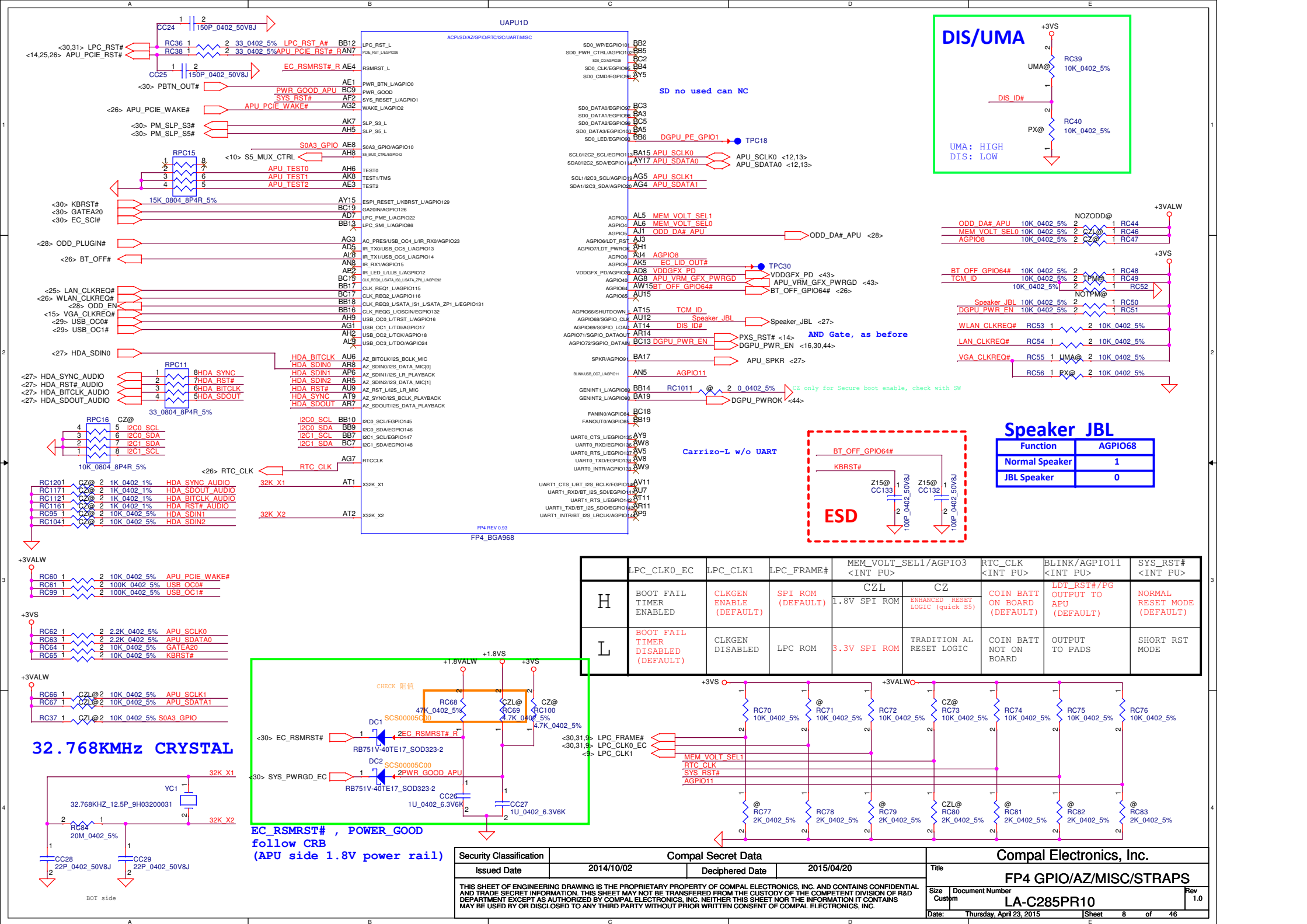
```
For SIC, SID, ALERT_L,  
PROCHOT_L  
Carrizo: Each are pulled  
up to VDD_18  
Carrizo-L: Each are  
pulled up to VDD_33
```

**DP Translator or MUX**

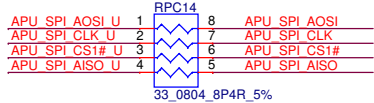
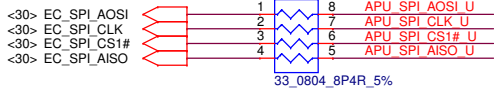
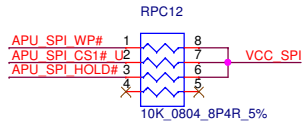
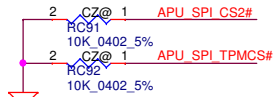


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OR R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEAR THE INFORMATION CONTAINED HEREIN. INFORMATION CONTAINED HEREIN MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Size C	Document Number
			FP4 DISP/MISC/HDT	
			LA-C285P100	
			Date:	Thursday, April 29, 2016
			Printed:	7 of 42

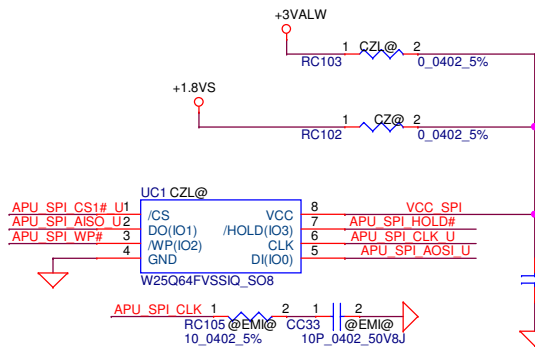




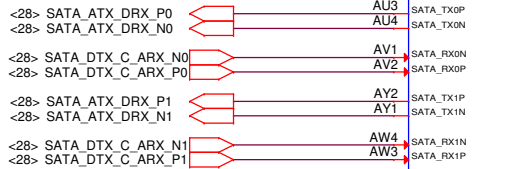




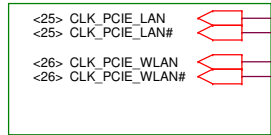
## 8MB SPI ROM



HDD  
ODD



<14> CLK\_PCIE\_GPU  
<14> CLK\_PCIE\_GPU#



<30,31,8> LPC\_CLK0\_EC  
<8> LPC\_CLK1



<30,31> SERIRQ  
LPC\_PD#



SPI ROM  
Part Number = SA00007JS00  
GD25L064CSIGR\_S08

UAPU1E

CLK/SATA/USB/SPI/LPC

USBCCLK/25M\_48M\_CLK

AP8

USB\_ZVSS

USB\_HSD0P

USB\_HSD1P

USB\_HSD2P

USB\_HSD3P

USB\_HSD4P

USB\_HSD5P

USB\_HSD6P

USB\_HSD7P

USB\_HSD8P

USB\_HSD9P

USB\_HSD10P

USB\_HSD11P

USB\_HSD12P

USB\_HSD13P

USB\_HSD14P

USB\_HSD15P

USB\_HSD16P

USB\_HSD17P

USB\_HSD18P

USB\_HSD19P

USB\_HSD20P

USB\_HSD21P

USB\_HSD22P

USB\_HSD23P

USB\_HSD24P

USB\_HSD25P

USB\_HSD26P

USB\_HSD27P

USB\_HSD28P

USB\_HSD29P

USB\_HSD30P

USB\_HSD31P

USB\_HSD32P

USB\_HSD33P

USB\_HSD34P

USB\_HSD35P

USB\_HSD36P

USB\_HSD37P

USB\_HSD38P

USB\_HSD39P

USB\_HSD40P

USB\_HSD41P

USB\_HSD42P

USB\_HSD43P

USB\_HSD44P

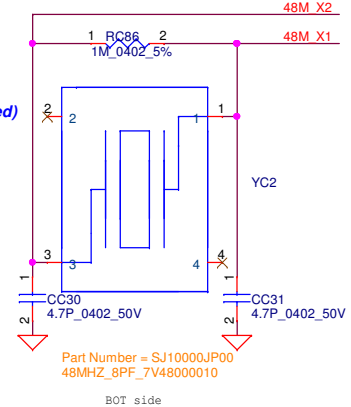
USB\_HSD45P

USB\_HSD46P

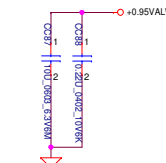
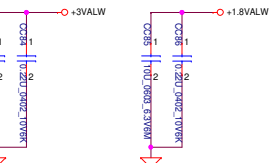
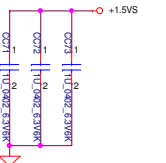
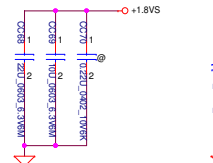
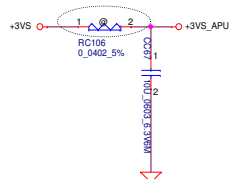
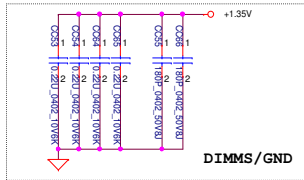
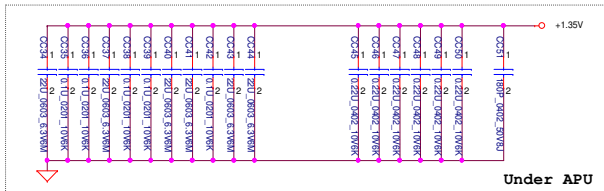
USB\_HSD47P

USB\_HSD48P

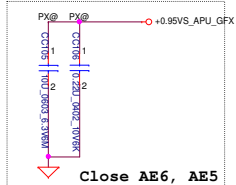
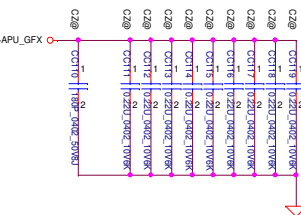
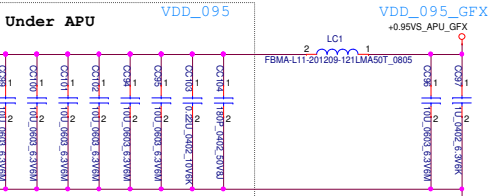
## 48MHz CRYSTAL



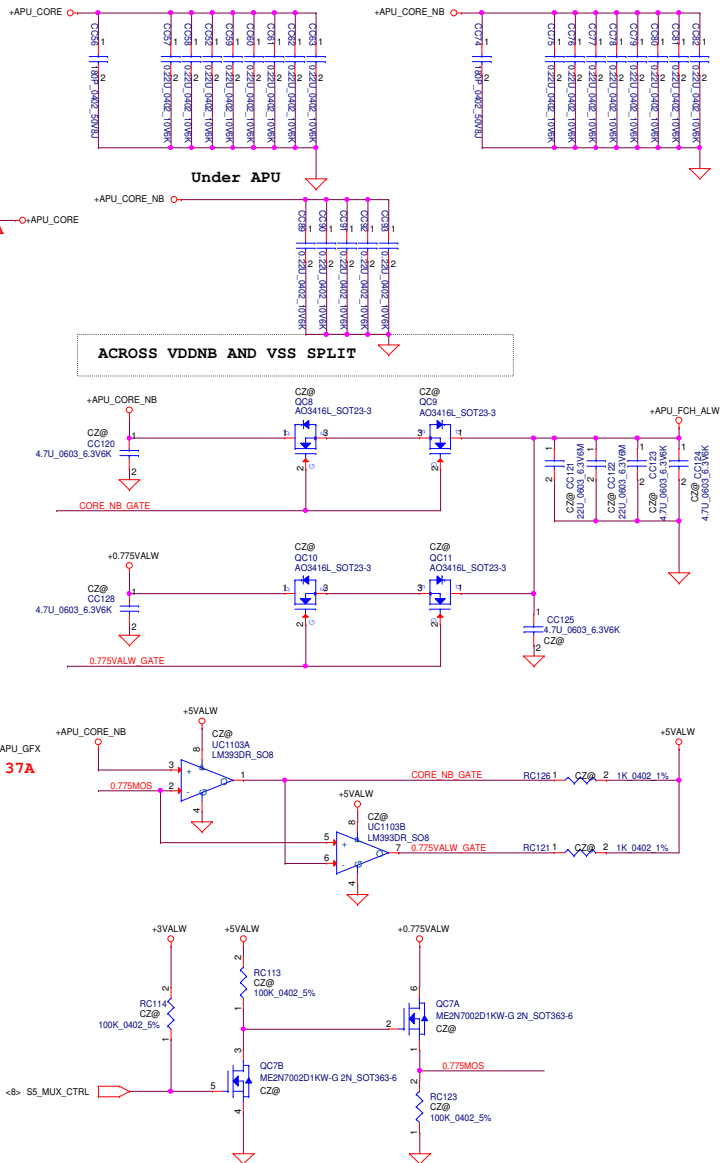
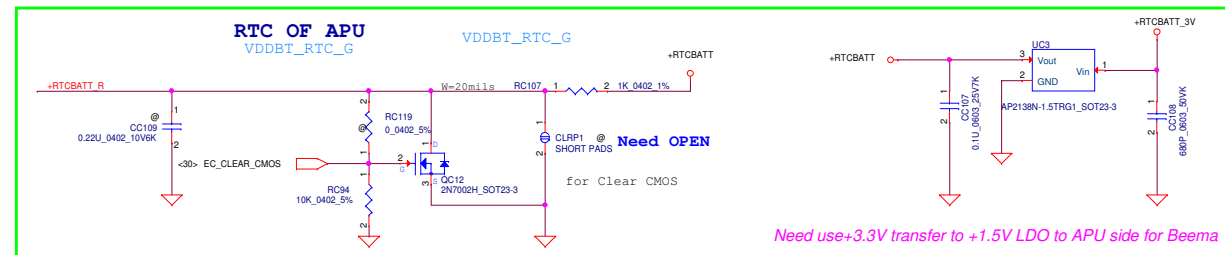
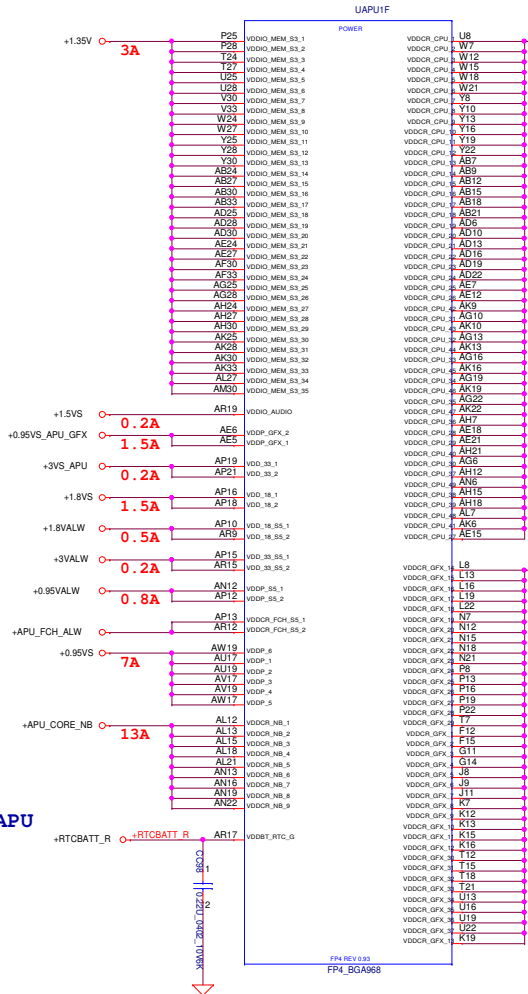
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	FP4 SATA/CLK/USB/SPI
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET 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
				B	1.0
				Document Number	LA-C285PR10
				Date:	Friday, April 24, 2015
				Sheet	9 of 46



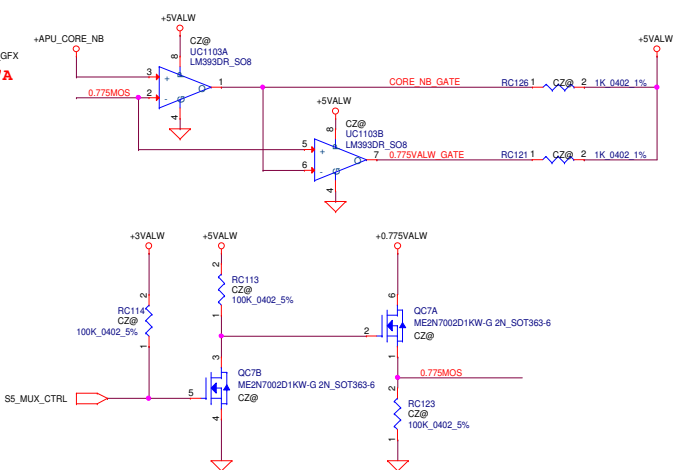
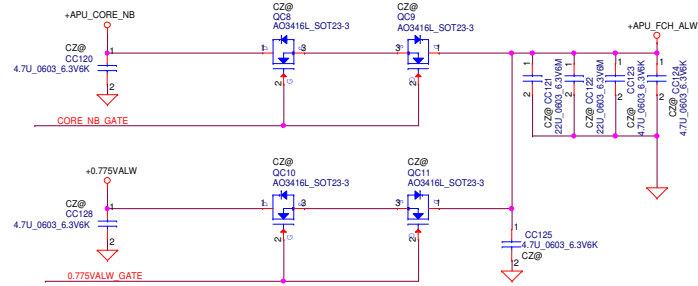
**+0.95VALW/+0.95VS OF APU**



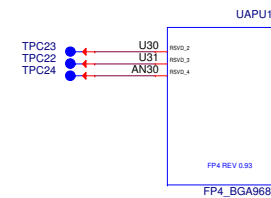
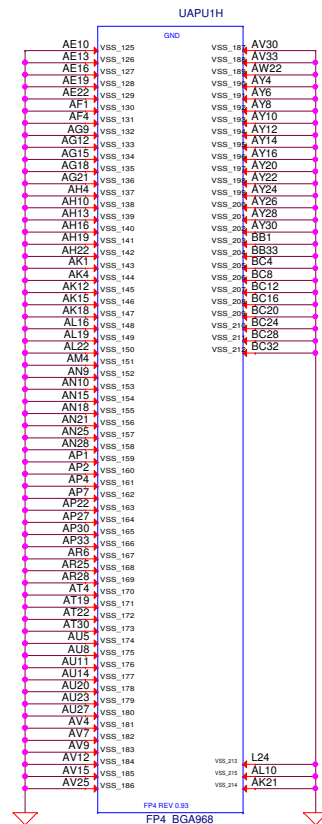
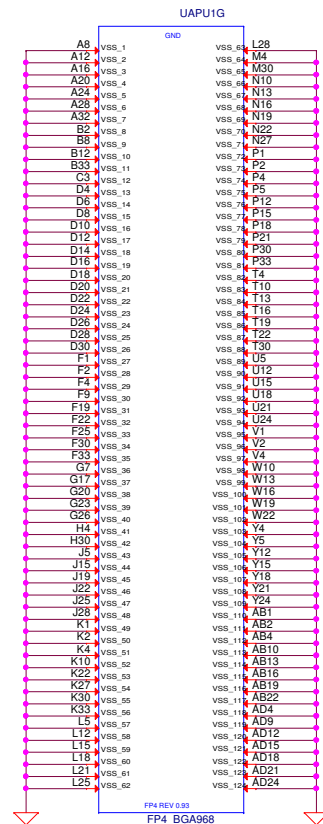
**Close AE6, AE5**



**ACROSS VDDNB AND VSS SPLIT**



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	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.				FP4 PWR	
Size C	Document Number	LA-C285PR10		Rev	1.0
Date:	Thursday, April 23, 2015	Sheet	10 of 46		



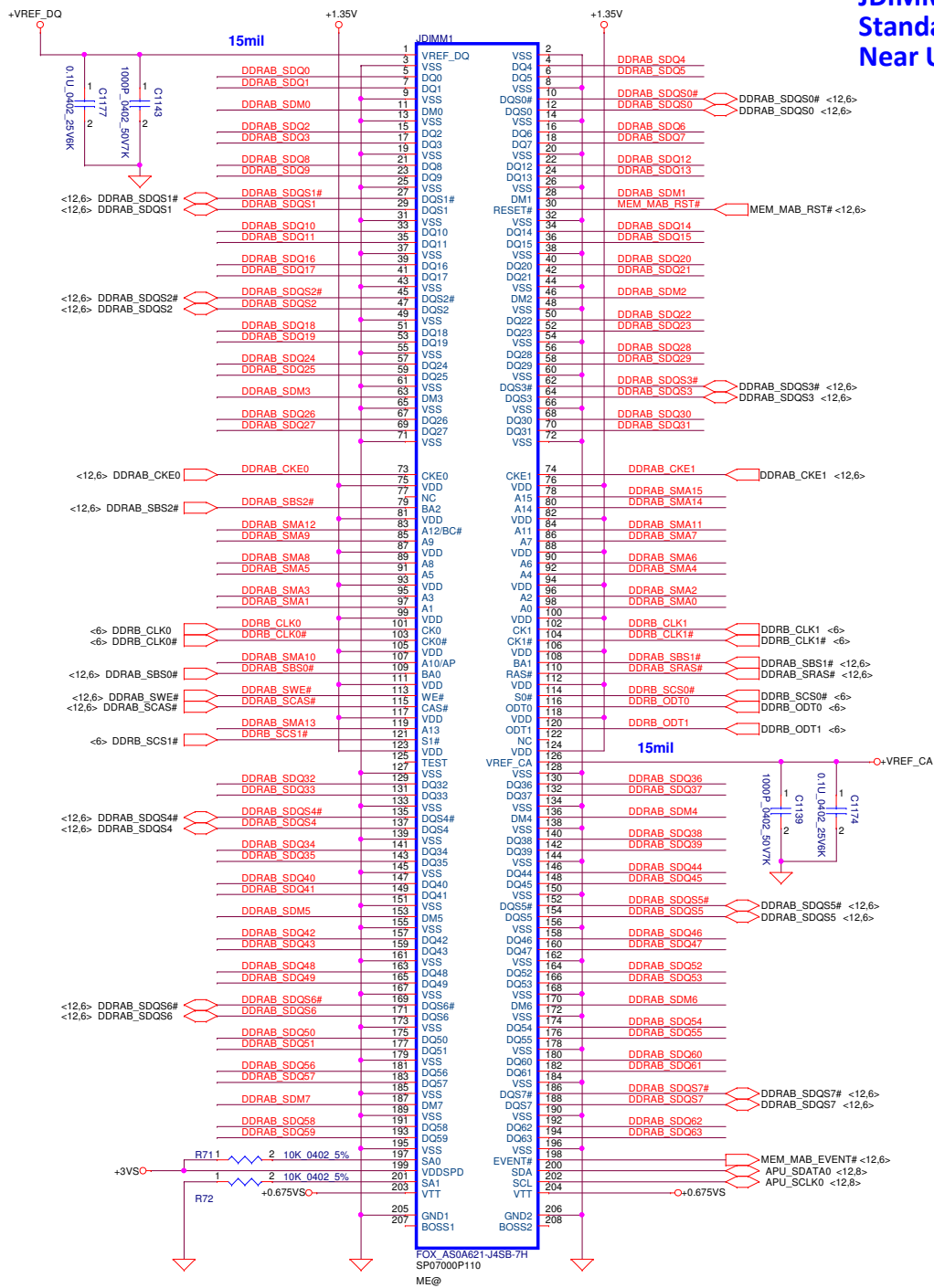
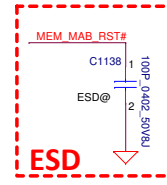
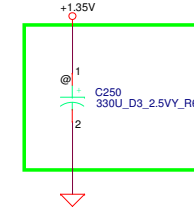
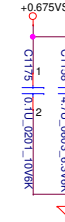
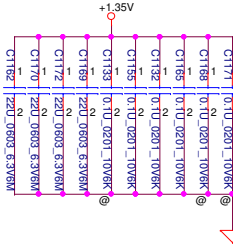
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	FP3 GND
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF DEPARTMENT EXERCISE 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 1.0
				LA-C285PR10	
Date: Thursday, April 23, 2015				Sheet	11 of 46



# JDIMM1 Standard Type Near User

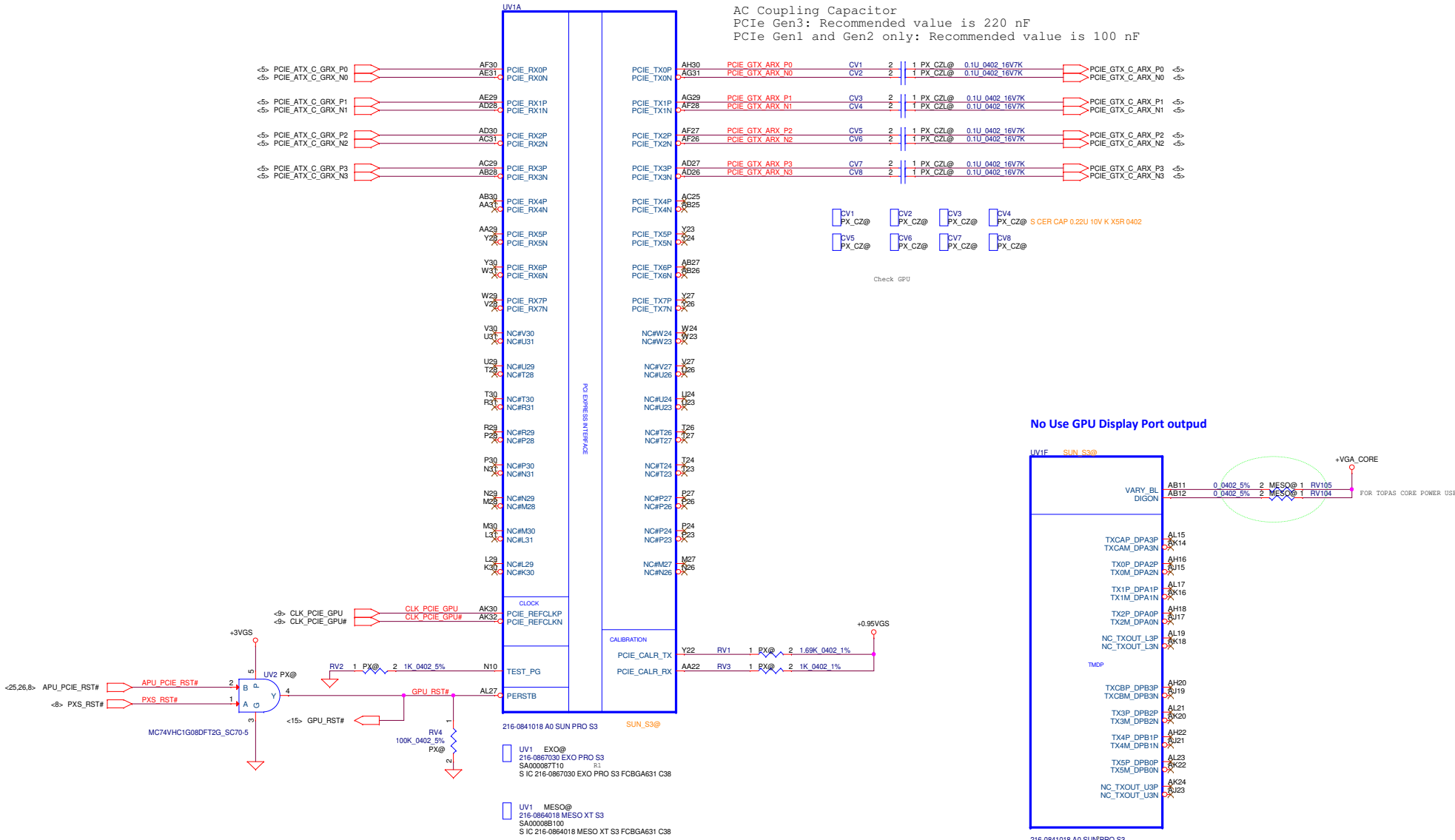
DDRAB\_SDQ[0..63] <12,6>  
DDRAB\_SDM[0..7] <12,6>  
DDRAB\_SMA[0..15] <12,6>

+1.35V/+0.675VS OF DIMM1



DIMM\_1 H:4mm  
<Address: 01>

Security Classification				Compal Secret Data				Compal Electronics, Inc.			
Issued Date				2014/10/02				Title			
				Deciphered Date				DDR3 SODIMM-II Socket			
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 CONSENT 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.				Date				Thursday, April 23, 2015			
				Document Number				LA-C285PR10			
				Rev				1.0			
				Sheet				13 of 46			

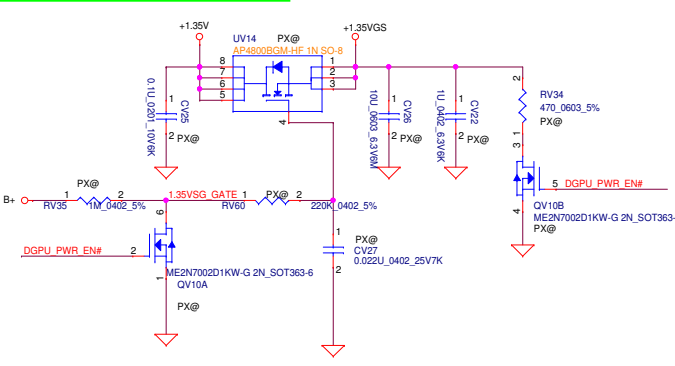








**+1.35VS to +1.35VGS**



**+1.8VALW TO +1.8VGS**  
**+0.95VALW TO +0.95VGS**  
**Load switch**

added on 9

VIN 1.8V and 0.95V (VBIAS=5V), IMAX(per channel)=6A, Rds=18mohm

UV15

VIN1 VIN1

VOUT1 VOUT1

CT1 2200P\_0402\_50V7K

GND

CT2 2200P\_0402\_50V7K

VIN2 VIN2

VOUT2 VOUT2

GPAD

EM5209VF DFN 14P

PX@

+0.95VGS LS RV5 1 2 0.0805 5%

+0.95VGS

PX@ CV99 0.1U\_0201\_10V6K

+1.8VGS

PX@ CV100 0.1U\_0201\_10V6K

DGPU\_PWR\_EN RV36 2 PX@ 1 150K 0402 5%

+1.8VALW

+0.95VALW

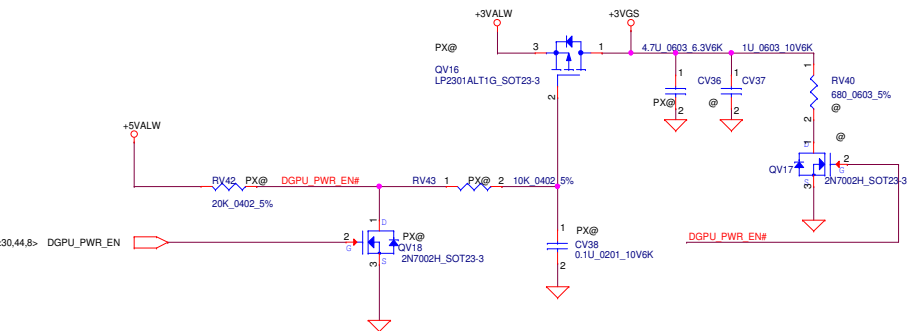
CV96 1U\_0402\_33V6K

CV97 0.1U\_0402\_16V7K

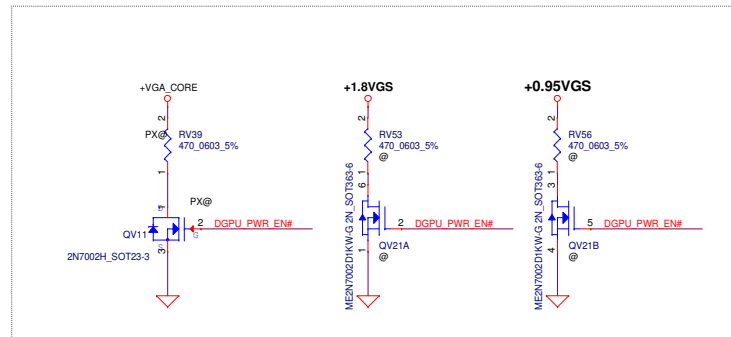
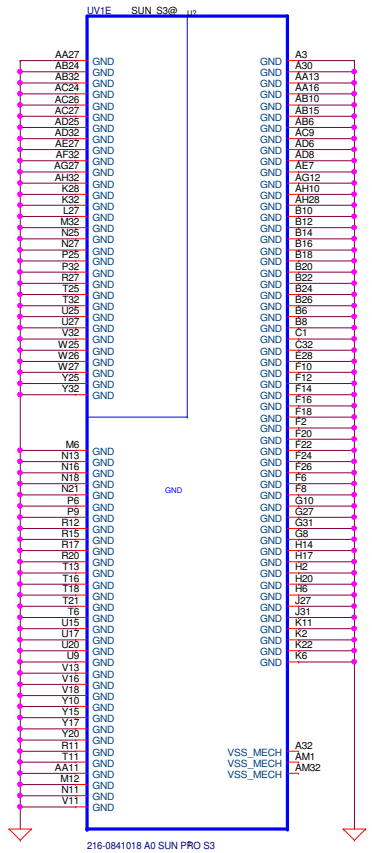
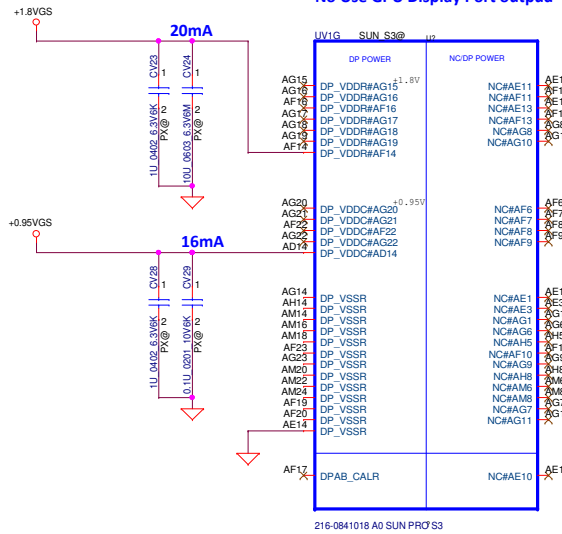
CV98 1U\_0402\_33V6K

added on 9/28

**+3VS to +3VS\_VGA**

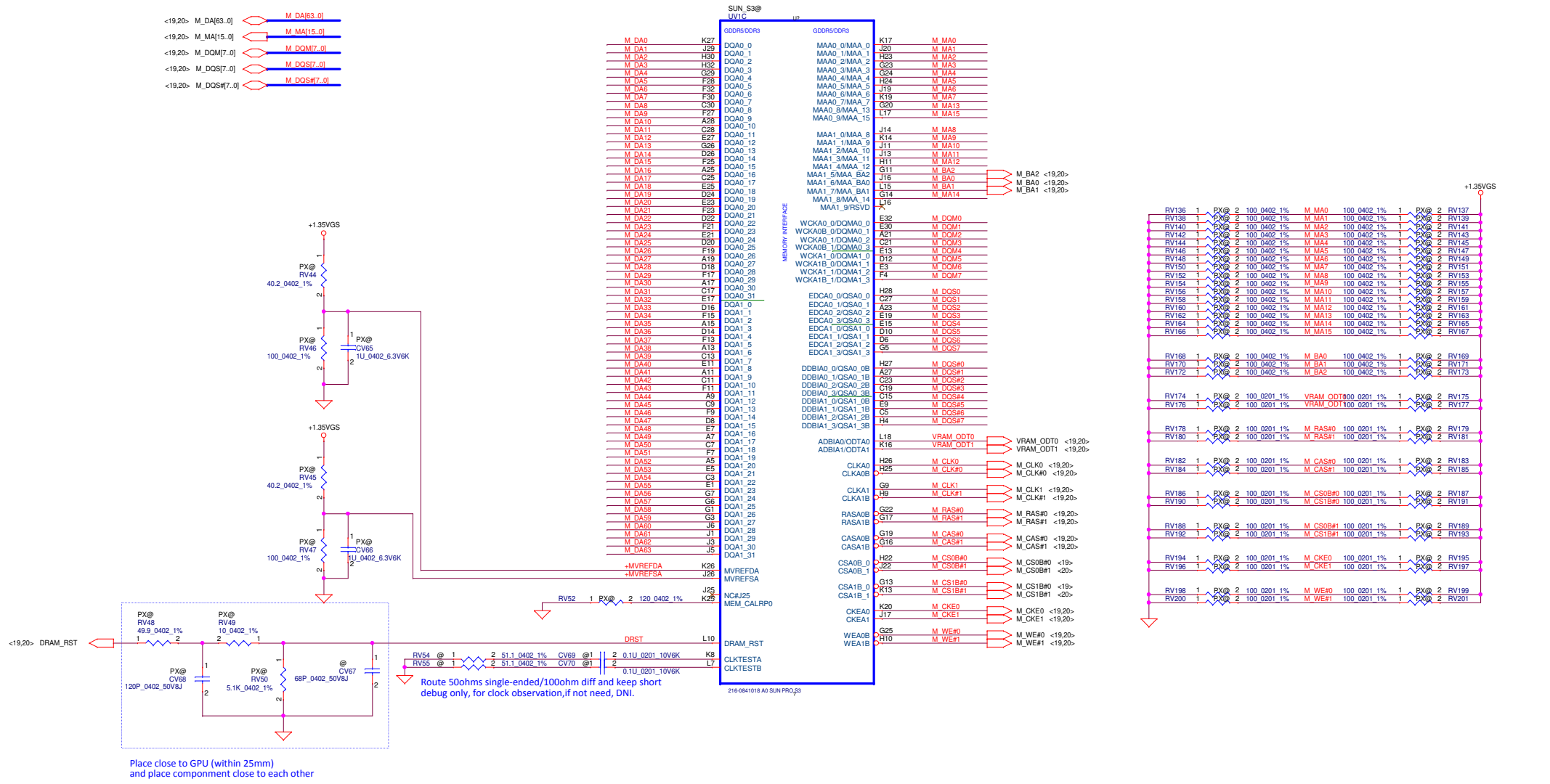


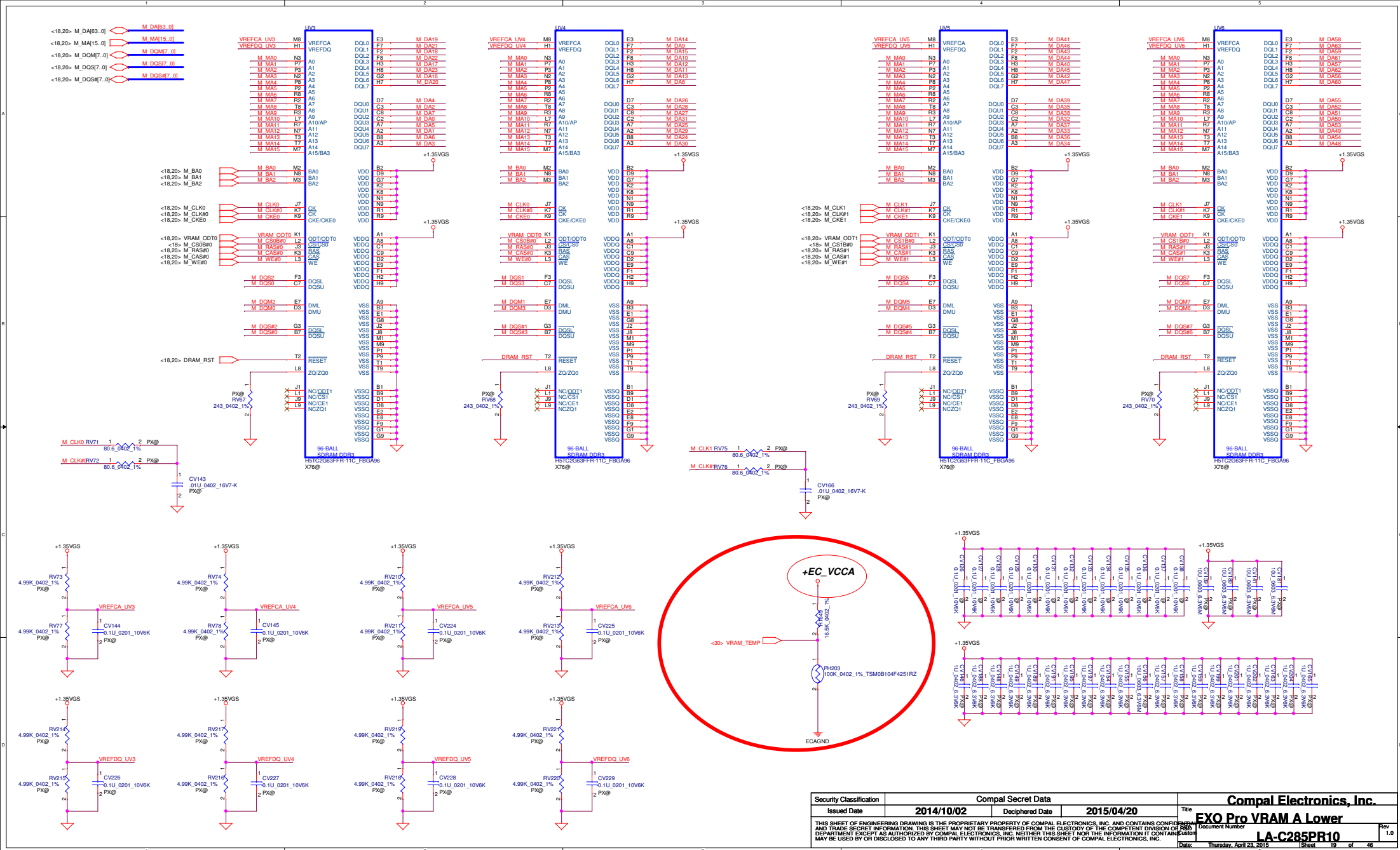
**No Use GPU Display Port output**



Security Classification		Compal Secret Data		Compal Electronics, Inc.				
Issued Date		2014/10/02	Deciphered Date		2015/04/20	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.						EXO/MESO(3/5) PWR/GND		
						Size	Document Number	Rev
						Custom	LA-C285PR10	1.0
Date:		Thursday, April 23, 2015		Sheet	16	of 46		

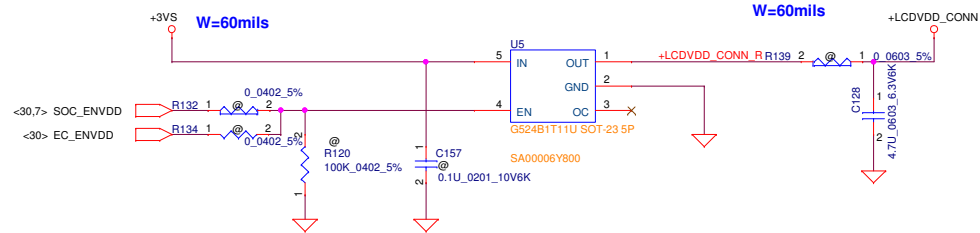




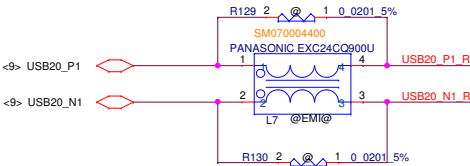
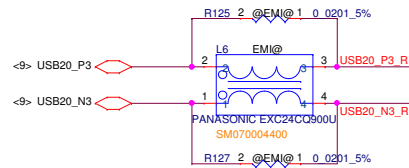
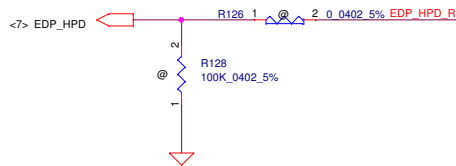
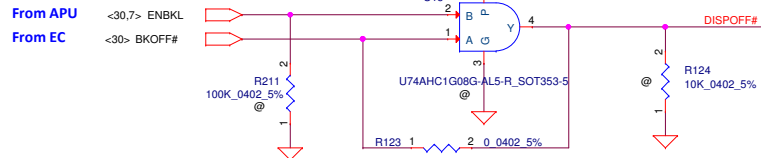
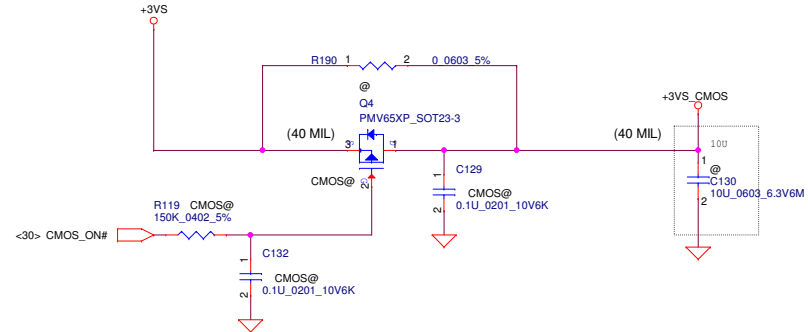




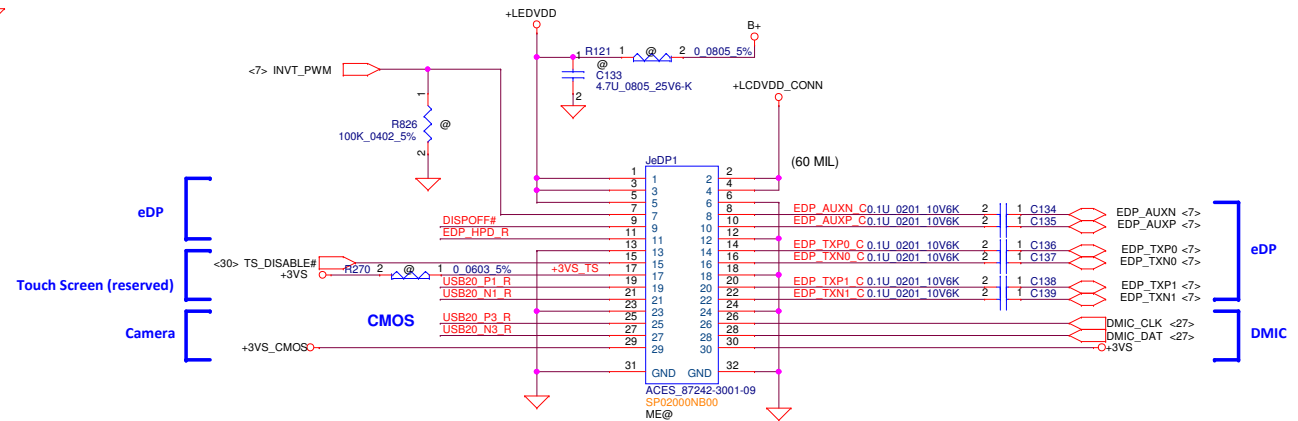
## LCD POWER CIRCUIT



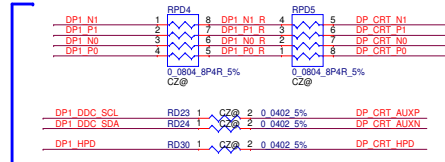
## CMOS Camera











## VGA LCD/PANEL BD. Conn.



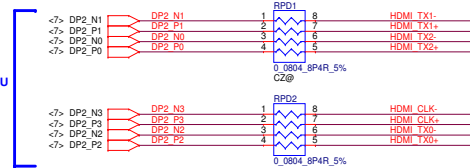
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF 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
				LA-C285PR10
				Rev 1.0
				Date: Thursday, April 23, 2015
				Sheet 21 of 46

[illegible]

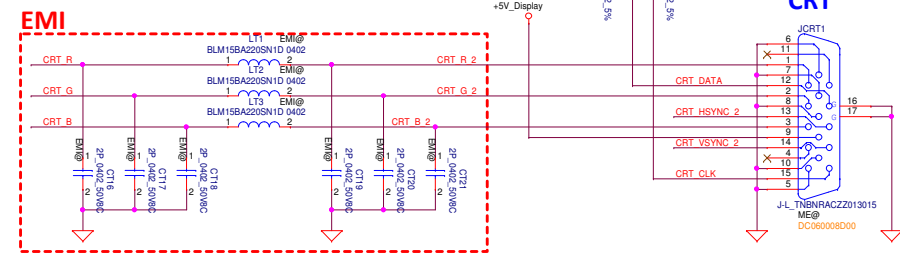
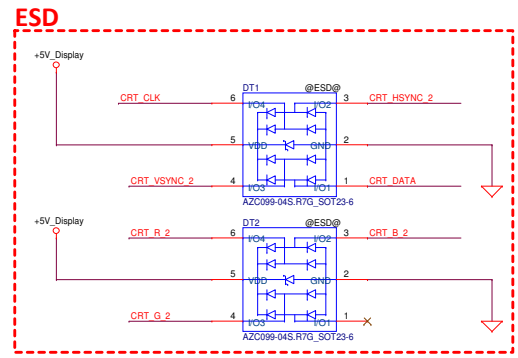
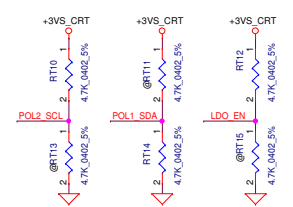
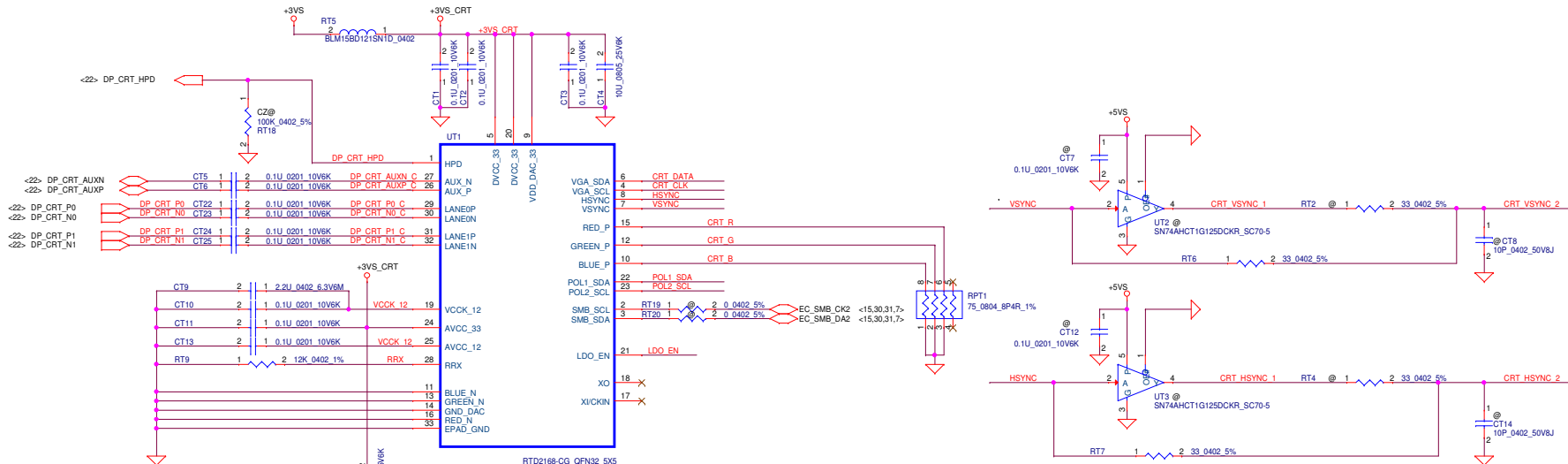
DP_CFG1	Function
H	auto test enable & input offset cancellation enable
M	auto test disable & input offset cancellation disable
* L	default, auto test disable & input offset cancellation enable

<7> DP1_P0		CZL@ C06	1	2	0.1U
<7> DP1_N0		CZL@ C07	1	2	0.1U
<7> DP1_P1		CZL@ C05	1	2	0.1U
<7> DP1_N1		CZL@ C08	1	2	0.1U
<7> DP1_P2		CZL@ C09	1	2	0.1U
<7> DP1_N2		CZL@ C10	1	2	0.1U
<7> DP1_P3		CZL@ C11	1	2	0.1U
<7> DP1_N3		CZL@ C12	1	2	0.1U

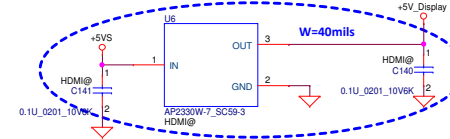
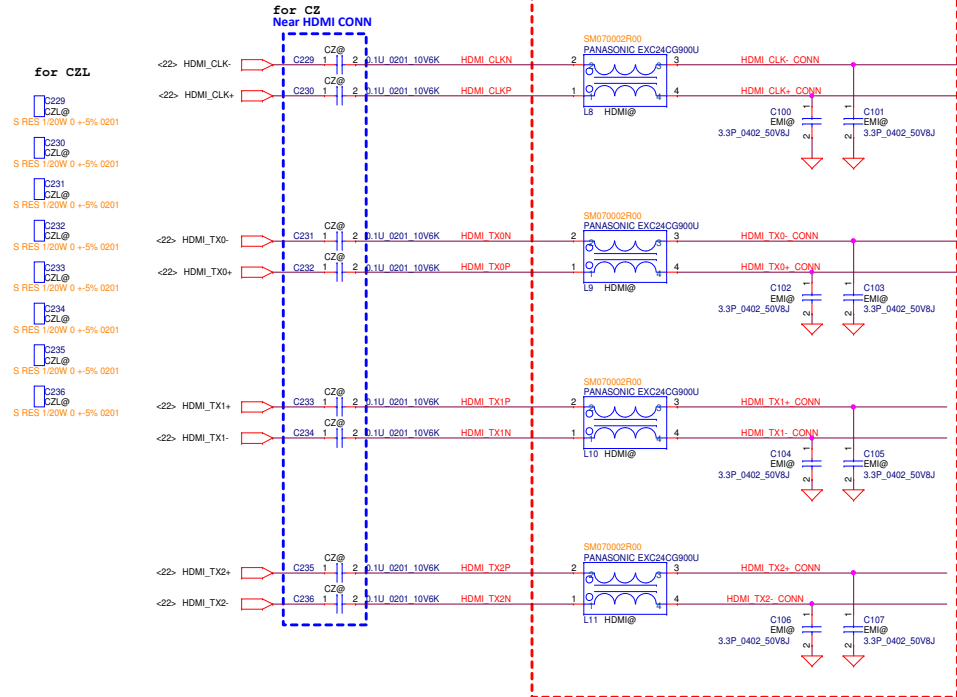
DP_MODE	Function
H	Automatic Switching Mode, HDMI ID disable
*M (VDD33/2	Automatic Switching Mode, HDMI ID enable
L	Control Switching Mode, HDMI ID disable



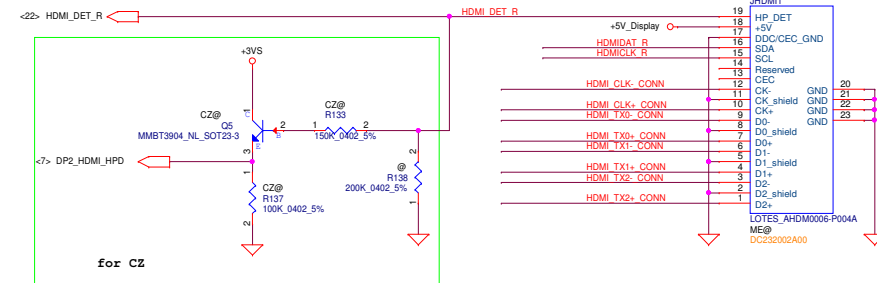
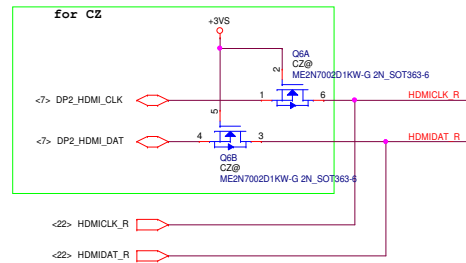
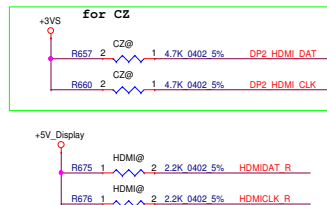
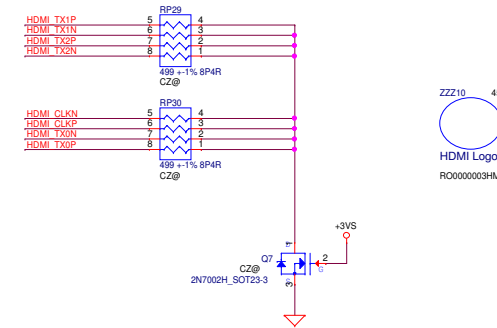




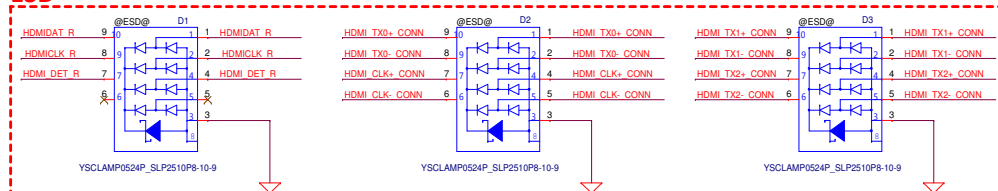
## EMI



For CRT and HDMI

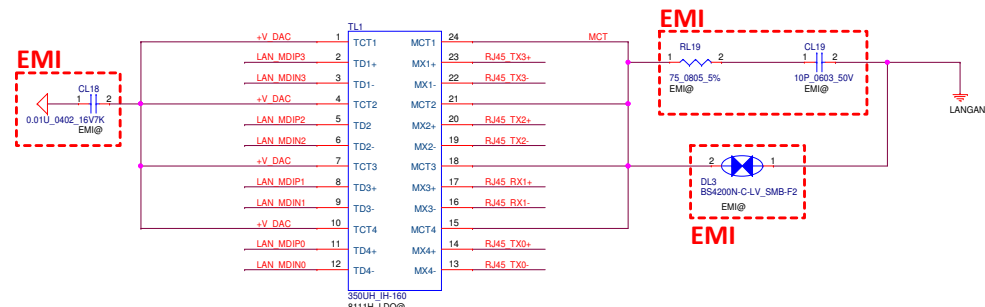
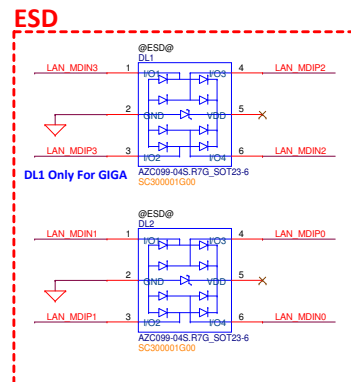
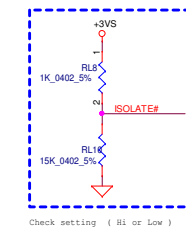
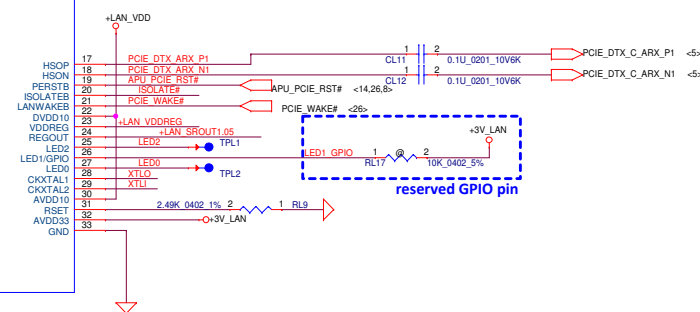
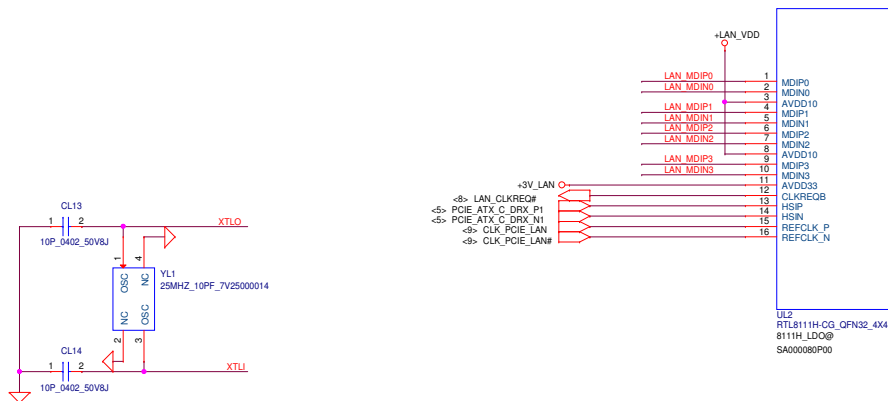
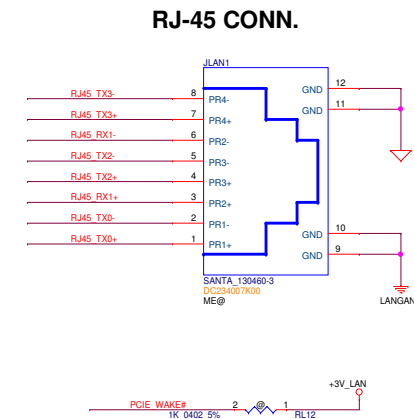
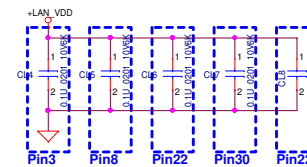
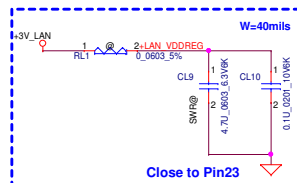
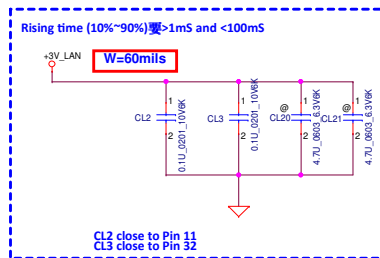
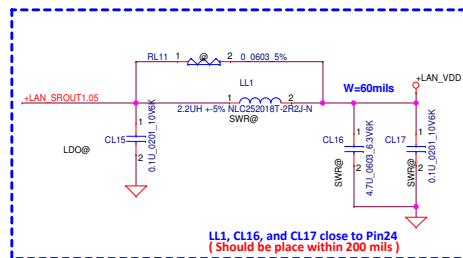


## ESD



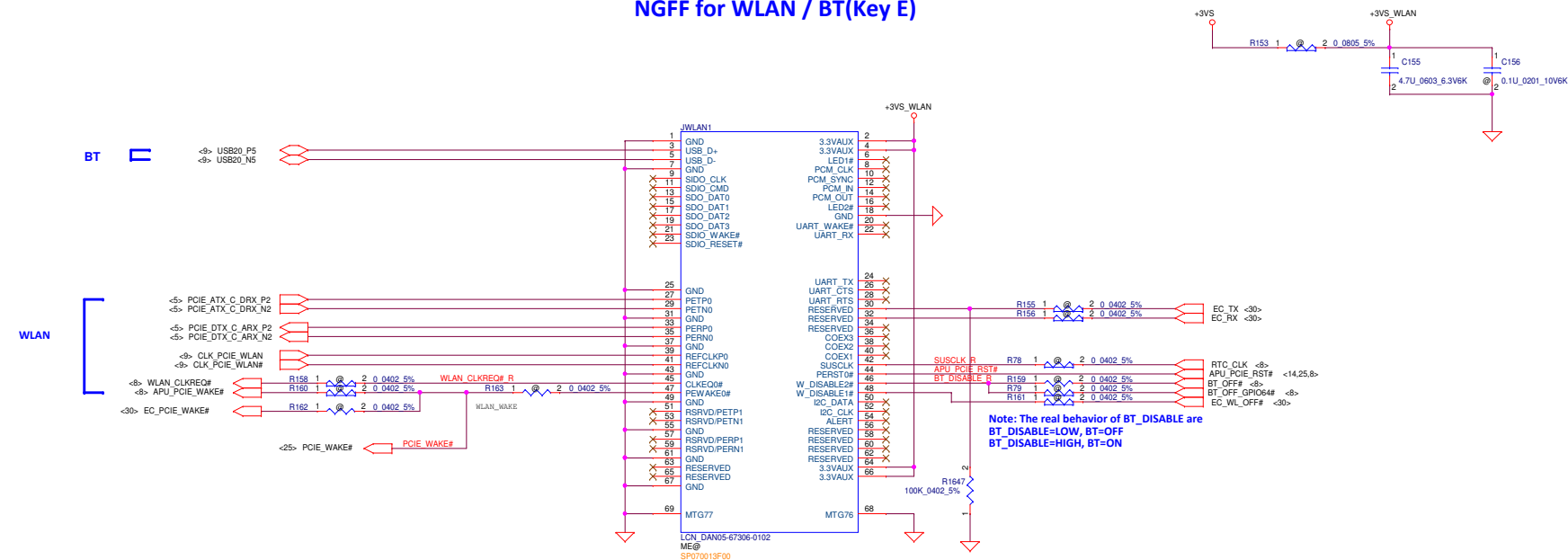
ESD protection needs to be placed near connector side

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	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
				LA-C285PR10	
				Date	Thursday, April 23, 2015
				Sheet	24 of 46
				Rev	1.0



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	LAN RTL8111H
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
				LA-C285PR10	
Date: Thursday, April 23, 2015		Sheet 25 of 46			

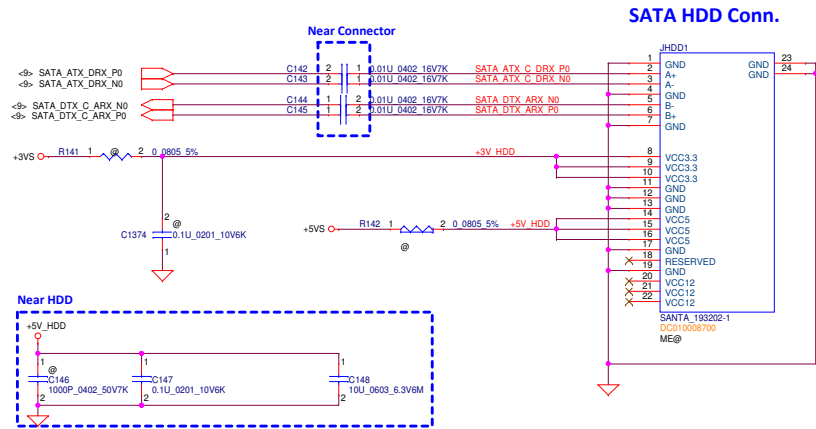
# NGFF for WLAN / BT(Key E)



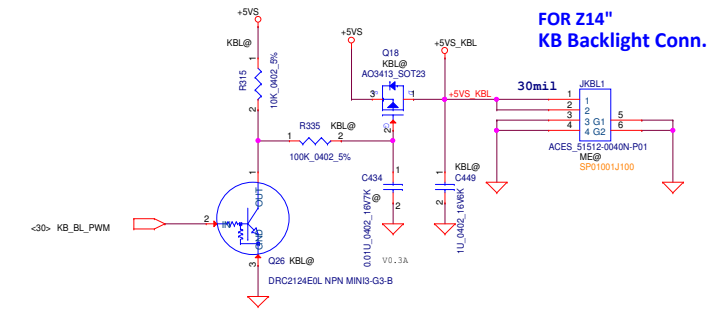
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				NGFF WLAN/BT	
Size	C	Document Number	LA-C285PR10	Rev	1.0
Date: Thursday, April 23, 2015		Sheet		26	of 46



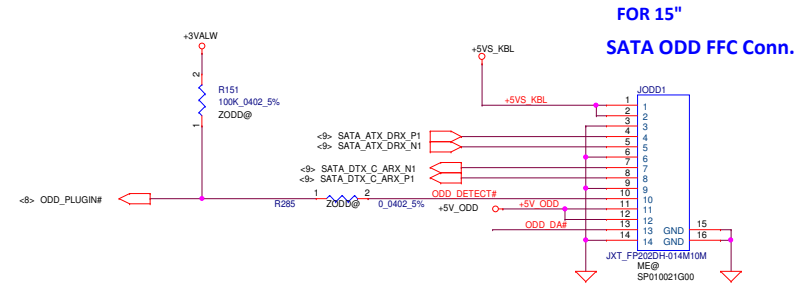
HDD



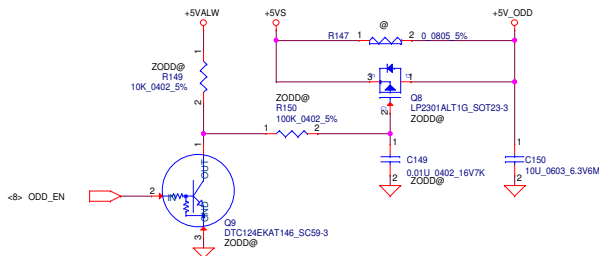
KB Backlight



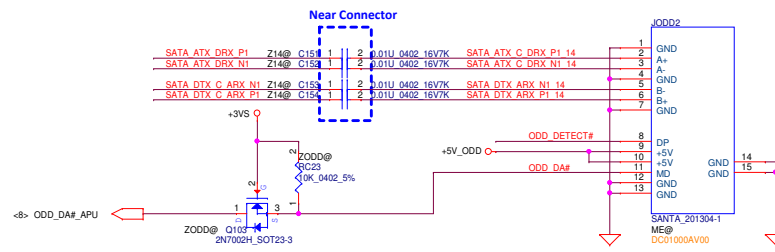
ODD



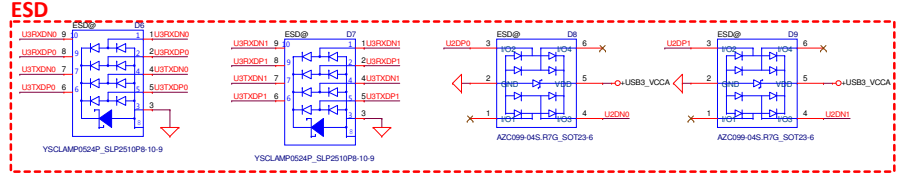
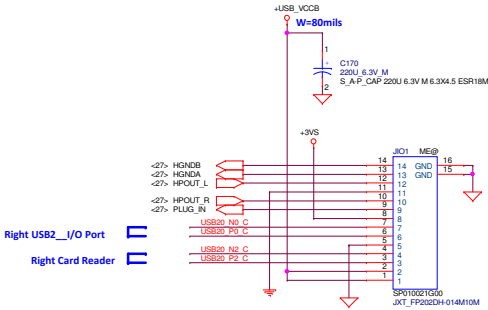
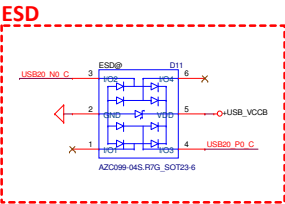
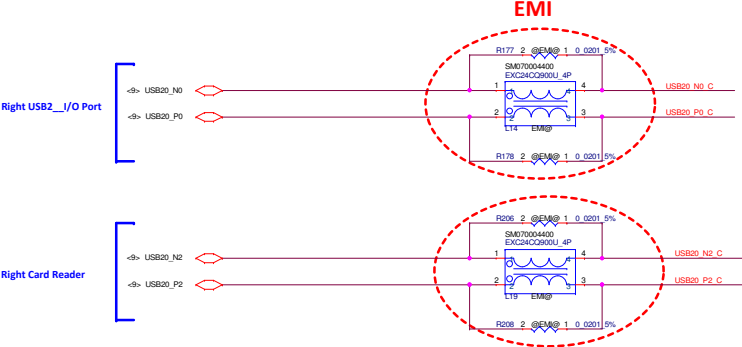
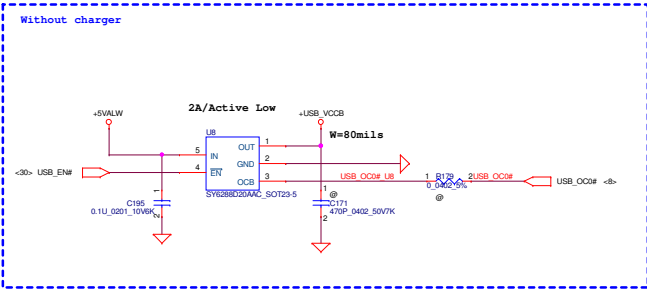
ODD Power Control



FOR 14" SATA ODD Conn.

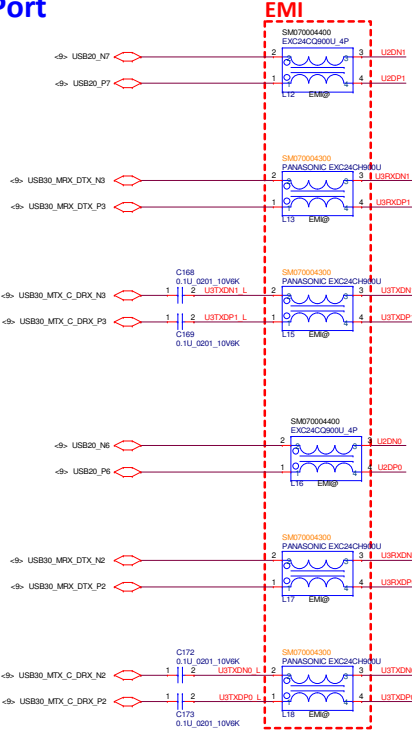


USB2.0\_Port

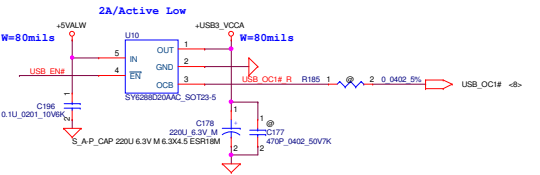


ESD protection needs to be placed near connector side

USB3.0\_Port

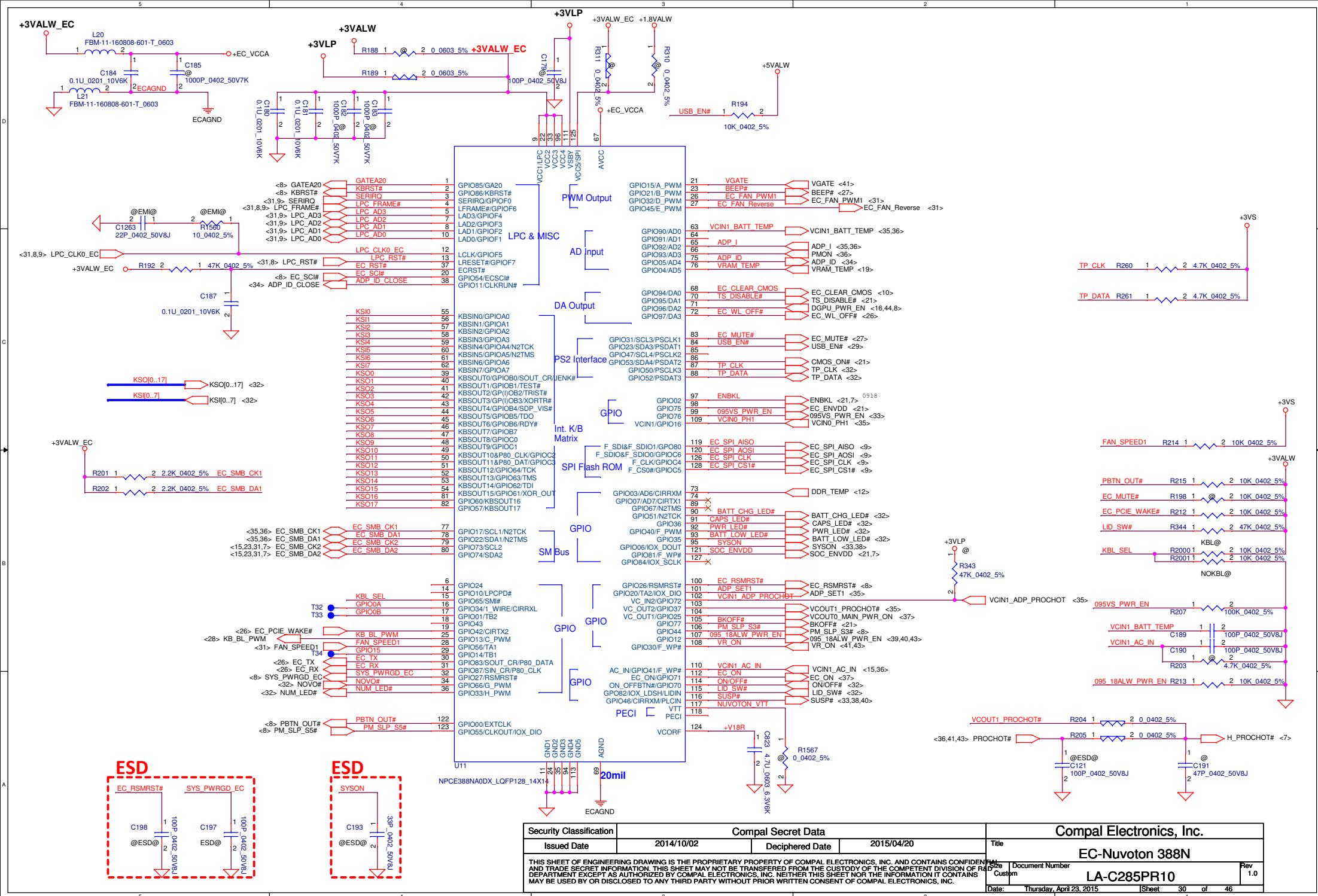


Place TX AC coupling Cap (C843~C850). Close to connector



Security Classification	Compal Secret Data	Compal Electronics, Inc.
Issued Date	2014/10/02	Disciphered Date
2015/04/20		
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		LA-C285PR10
Date		Thursday, April 23, 2015
Sheet		29 of 46





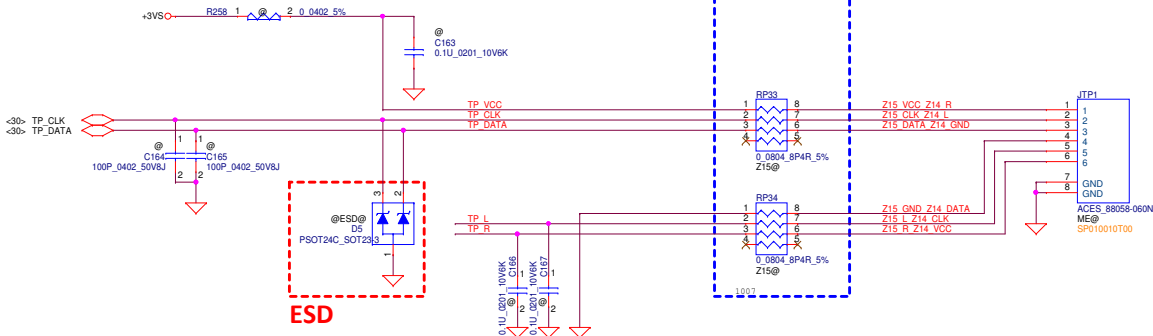
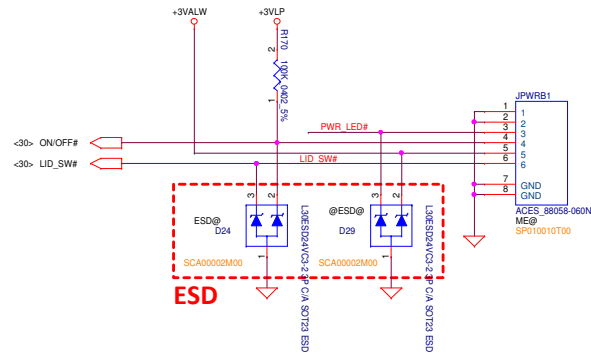


J11: TOP  
J12: BOT

J1  
1 2  
SHORT PADS

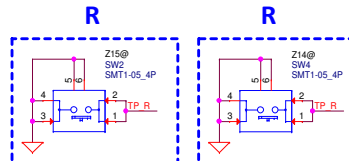
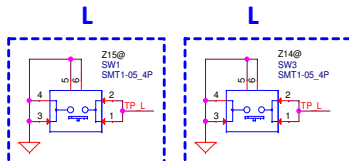
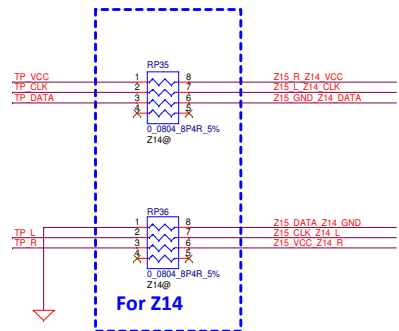
J2  
1 2  
SHORT PADS

ON/OFF#



1	1	VCC
2	2	CLK
3	3	DAT
4	4	GND
5	5	L
6	6	R

6	1	VCC
5	2	CLK
4	3	DAT
3	4	GND
2	5	L
1	6	R

[illegible]

Pinout diagram for the ACES 88514-02601-071 ME@ SPl01R00500. The diagram shows a 28-pin connector with pins numbered 1 to 28. Pins 1 through 26 are labeled with various signals: KS11, KS17, KS36, KS29, KS14, KS15, KS20, KS12, KS13, KS05, KS01, KS10, KS02, KS04, KS01, KS08, KS03, KS08, KS03, KS012, KS013, RS014, RS014, RS012, RS010, RS011, RS012, CAPS, CAPS LED, and CAPS LED. Pins 27 and 28 are labeled GND2 and GND1 respectively. A blue line connects pin 1 to pin 27. A red line connects pin 26 to pin 28. A green line connects pin 28 to the GND symbol. The text "ACES 88514-02601-071 ME@ SPl01R00500" is printed at the bottom.

LED1 Z15@  
1 2  
R174 Z15@  
300 0402 5%  
→3VALW  
LTW-C193TSS-C\_WHITE

LED2 Z15@  
1 2  
R173 Z15@  
300 0402 5%  
→3VLP  
LTW-C193TSS-C\_WHITE

LED3 Z15@  
1 2  
R172 Z15@  
620 0402 5%  
→3VLP  
18-217550-FMP21V1Y3T 0503 ORANGE  
SC-5000521

LED4 Z14@

1 2

R197 Z14@

680 0402 5%

3V LVP

LTW-C193TSS-C\_WHITE

LED5 Z14@

1 2

R175 Z14@

300 0402 5%

3V LVP

LTW-C193TSS-C\_WHITE

LED6 Z14@

1 2

R199 Z14@

620 0402 5%

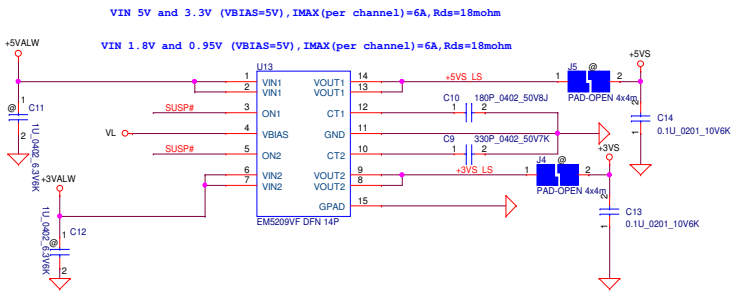
3V LVP

19-21782Z-FM2PIVY3T 0603 ORANGE  
SC500005T00

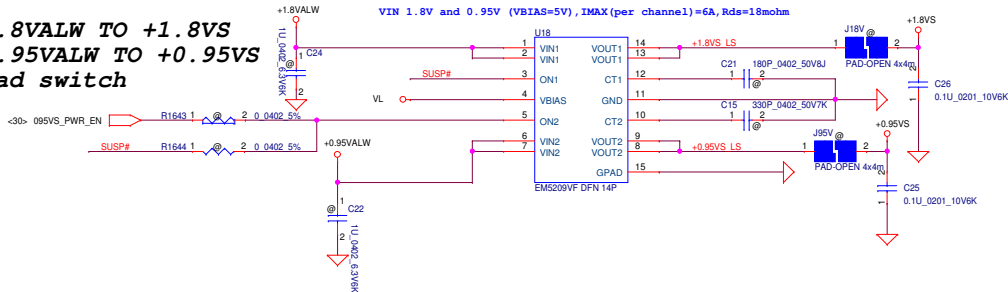
## For Z14

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2014/10/02	Deciphered Date	2015/04/20	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.				KB/PWR BTN/LED/TP	
				Size	Document Number
				LA-C285PR10	
Date		Thursday, April 22, 2015		Sheet	22 of 25

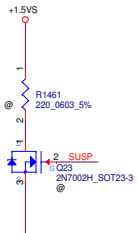
+5VALW TO +5VS  
+3VALW TO +3VS  
Load switch



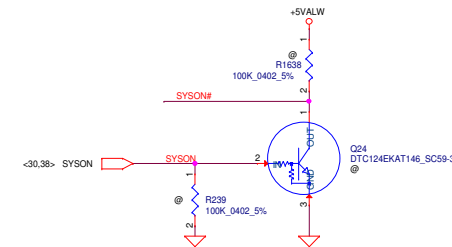
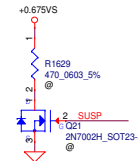
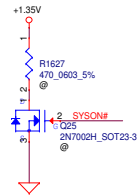
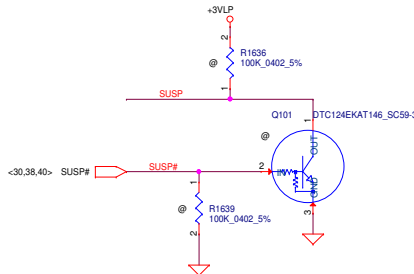
+1.8VALW TO +1.8VS  
+0.95VALW TO +0.95VS  
Load switch



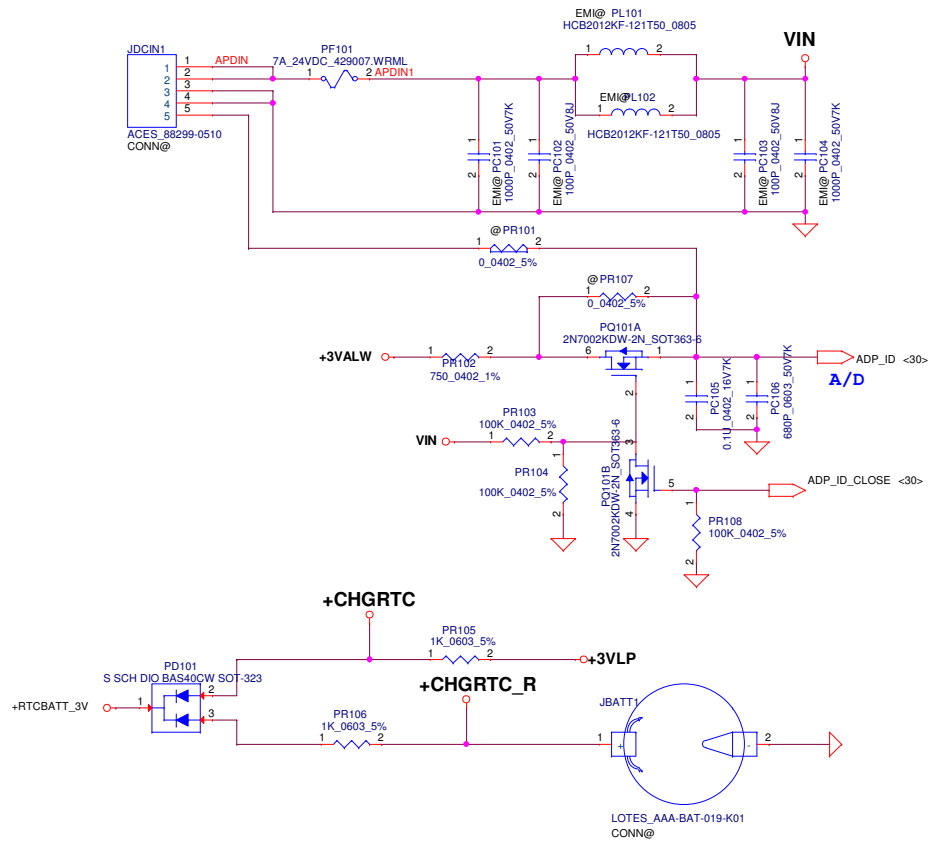
+1.5VS discharge circuit only for Beema  
only 1.5VS from PWR



only for Beema

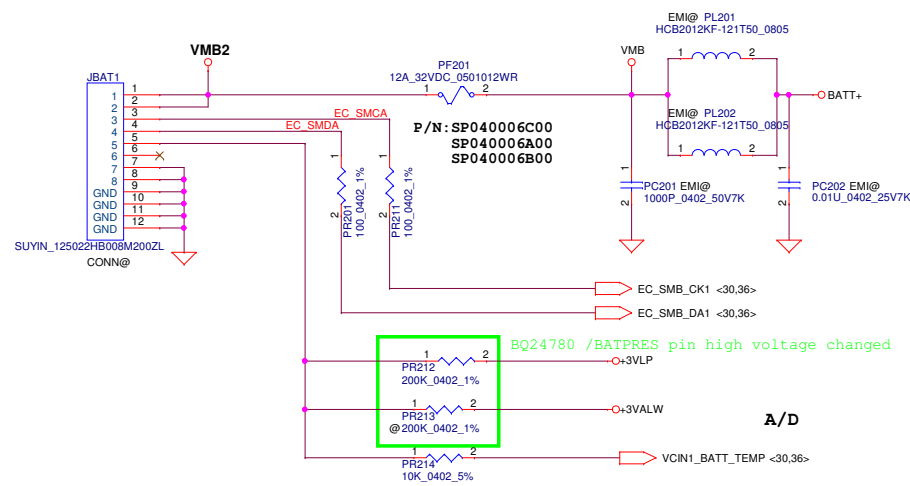


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title		
				DC Interface		
				Size	Document Number	Rev
				C	LA-C285PR10	1.0
				Date:	Thursday, April 23, 2015	Sheet 33 of 46



RTC Battery

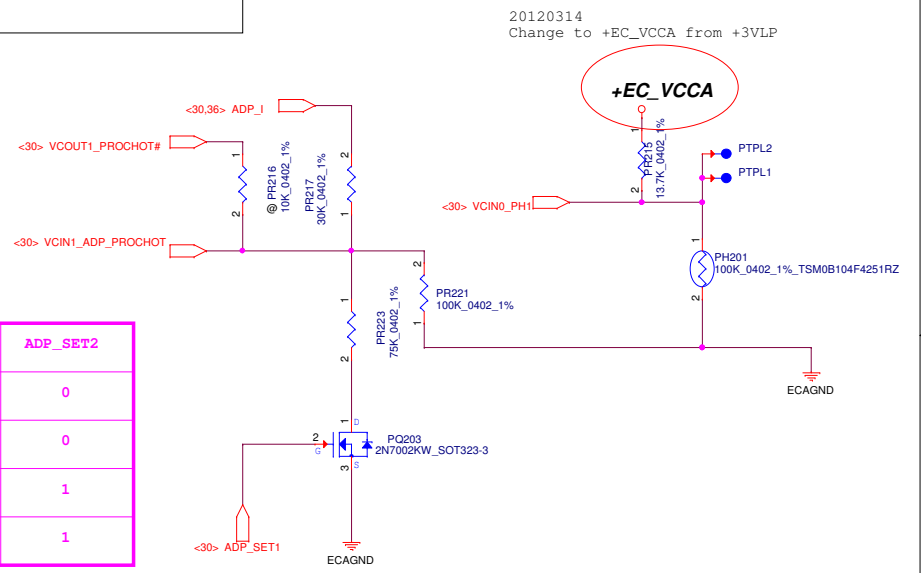
ADP_ID		
AC Adapter	90W	65W
R(K ohm)	open	10
ADP_ID(V)	3.3	1.65
Detection voltage	>2.64	1.32~1.98

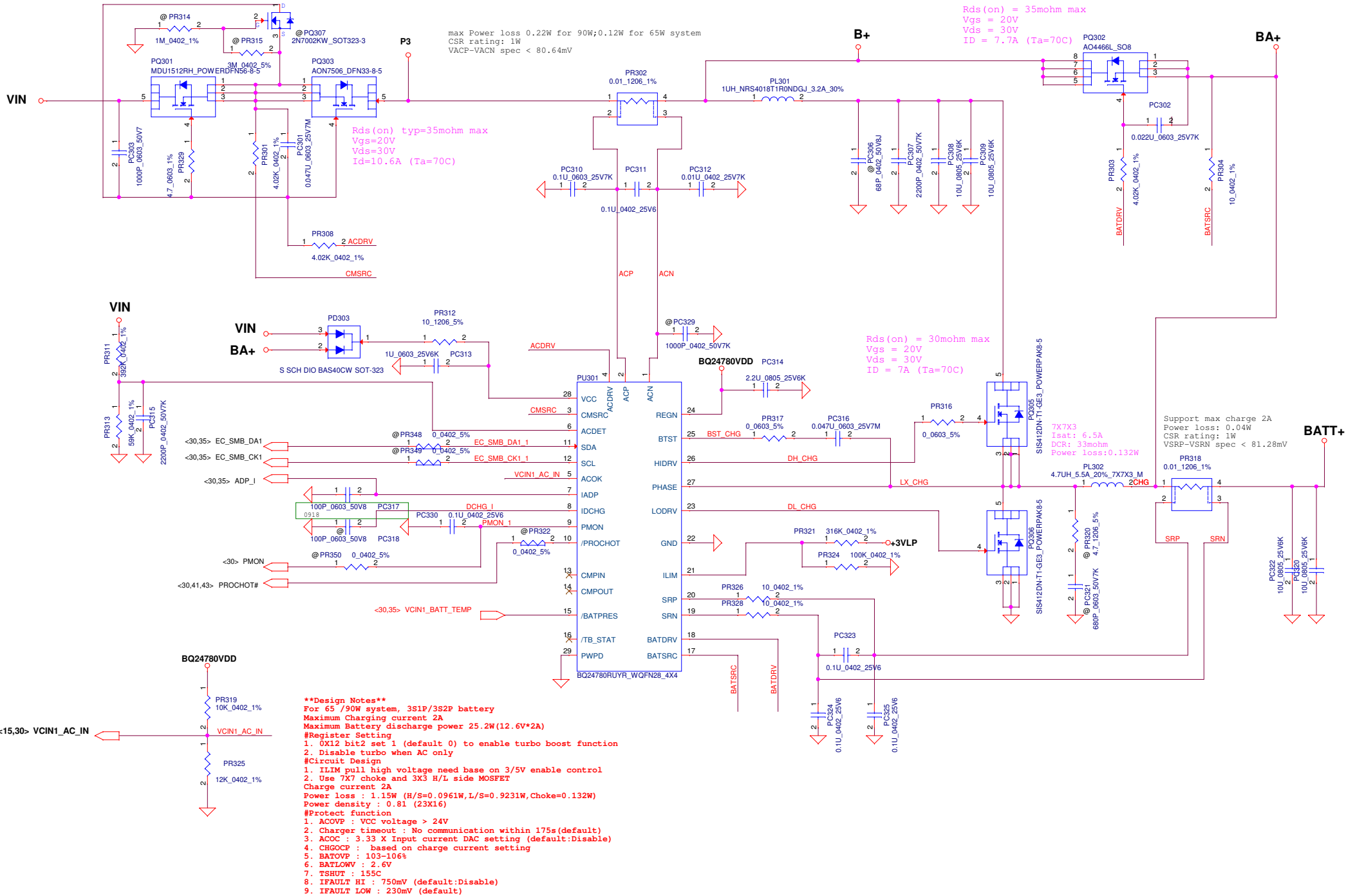


**PH201 under CPU bottom side :**  
**CPU thermal protection at 93 +-3 degree C**  
**Recovery at 56 +-3 degree C**

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

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





Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	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.				PWR-CHARGER BQ24780	
Date		Thursday, April 23, 2015		Sheet	36 of 46



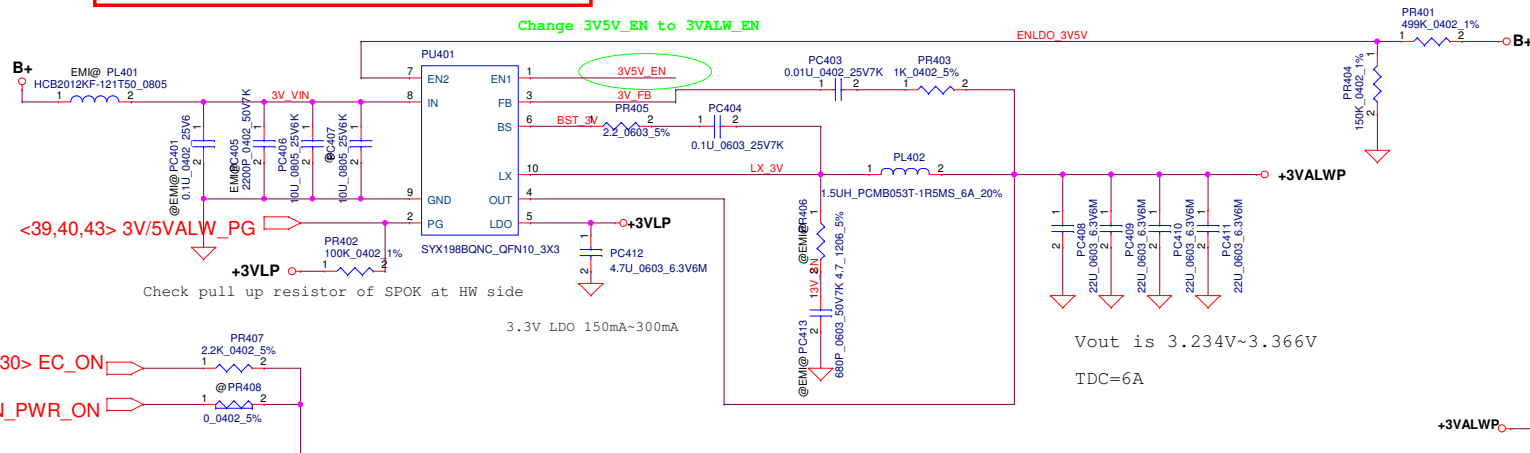
# Module model information

SY8208B\_V2.mdd

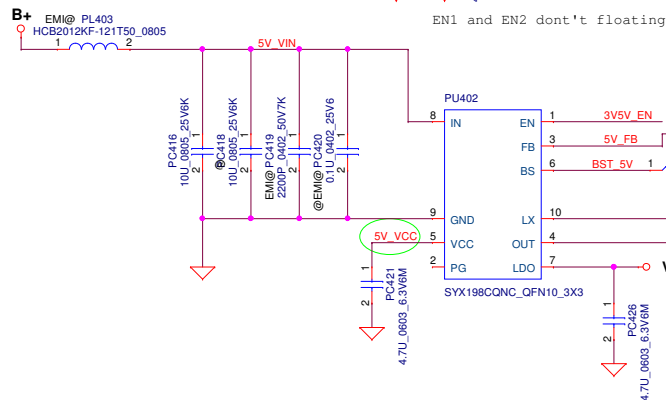
EN1 and EN2 don't floating

Change 3V5V\_EN to 3VALW\_EN

ENLDO\_3V5V



+3VALWP @PJ401 JUMP\_43X118 +3VALW



Vout is 4.998V~5.202V

TDC=6A

+5VALWP @PJ402 JUMP\_43X118 +5VALW

# Module model information

SY8208C\_V2.mdd

5V LDO 150mA~300mA

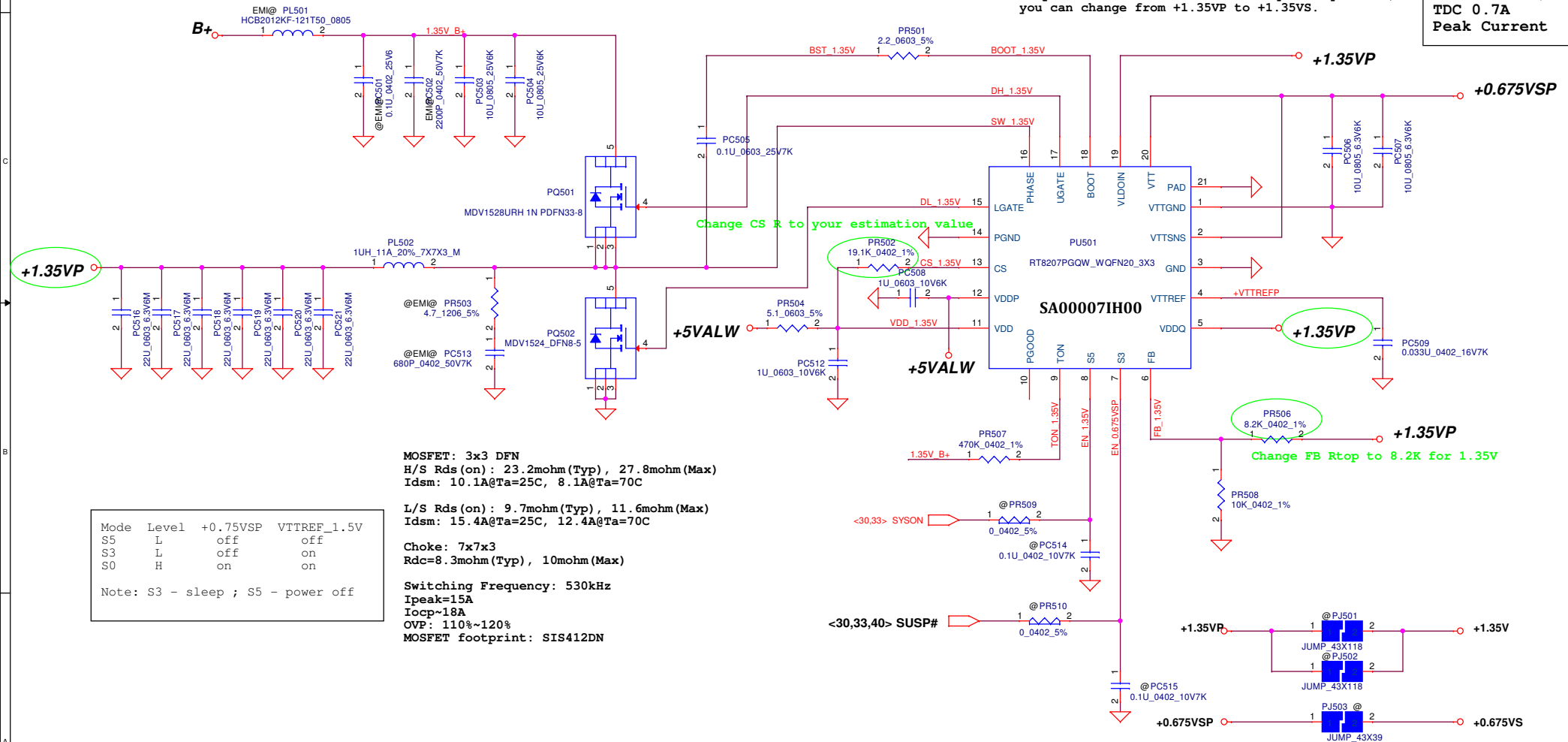
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	PWR- 3VALW/5VALW-SY8208B/C
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	LA-C285PR10
				Date	Thursday, April 23, 2015
				Sheet	37 of 46

# Module model information

RT8207M\_V1.mdd For Single layer  
RT8207M\_V2.mdd For Dual layer

Pin19 need pull separate from +1.35VP.  
If you have +1.35V and +0.675V sequence question,  
you can change from +1.35VP to +1.35VS.

0.675Volt +/- 5%  
TDC 0.7A  
Peak Current 1A



Security Classification		Compal Secret Data		<b>Compal Electronics, Inc.</b>	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	PWR+1.35VP/ +0.675VS
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-C285PR10			Rev 1.0
Date:	Thursday, April 23, 2015			Sheet 38 of 46	

## SY8208D\_V2.mdd

10V

1M\_0402\_1%  
PR602

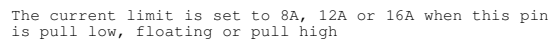
@ PC601  
0.22U\_0402\_10V6K

@ PR610  
0.0402\_5%

@ PR601  
0.0402\_5%

095\_1BALW\_PWR\_EN <30,40,43>

3V/5VALW\_PG <37,40,43>



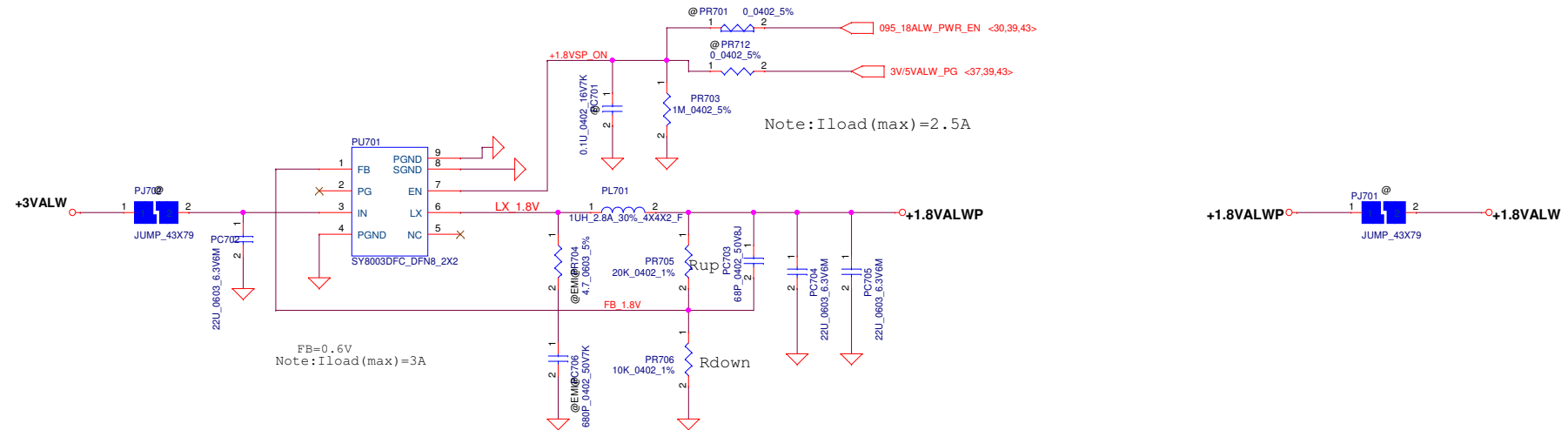
Pin 7 BYP is for CS.  
Common NB can delete +3VALW and PC15

$$V_{FB} = 0.6V$$
$$V_{out} = 0.6V * (1 + R_{up}/R_{down})$$
$$V_{out} = 0.95V$$

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	PWR- +0.95VALW
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	1.0
Date:		Thursday, April 23, 2015		Sheet	39 of 46

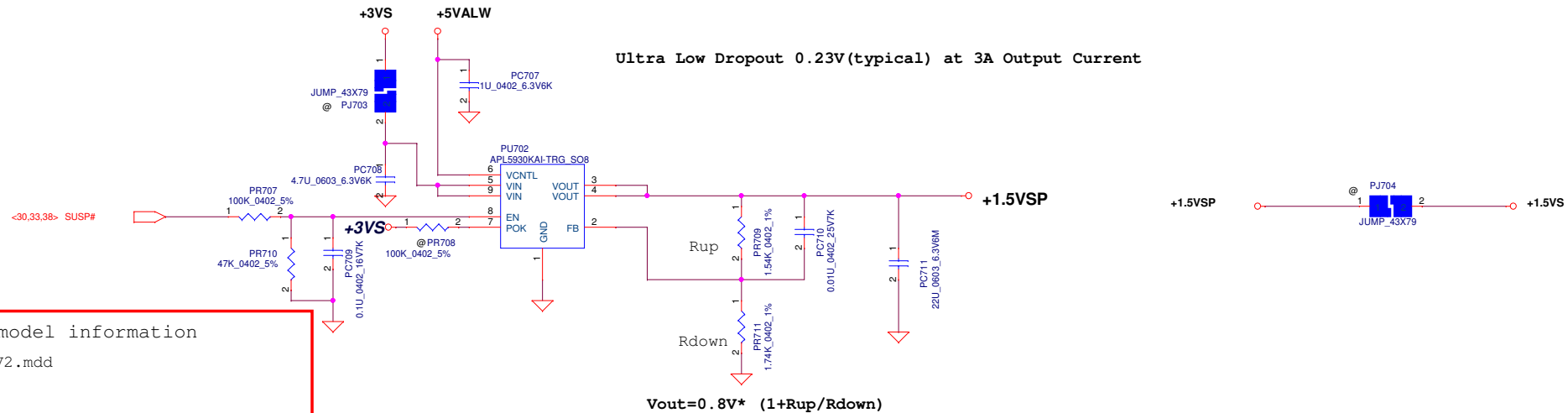
# Module model information

SY8003\_V2.mdd



Note:  
When design Vin=5V, please stuff snubber  
to prevent Vin damage

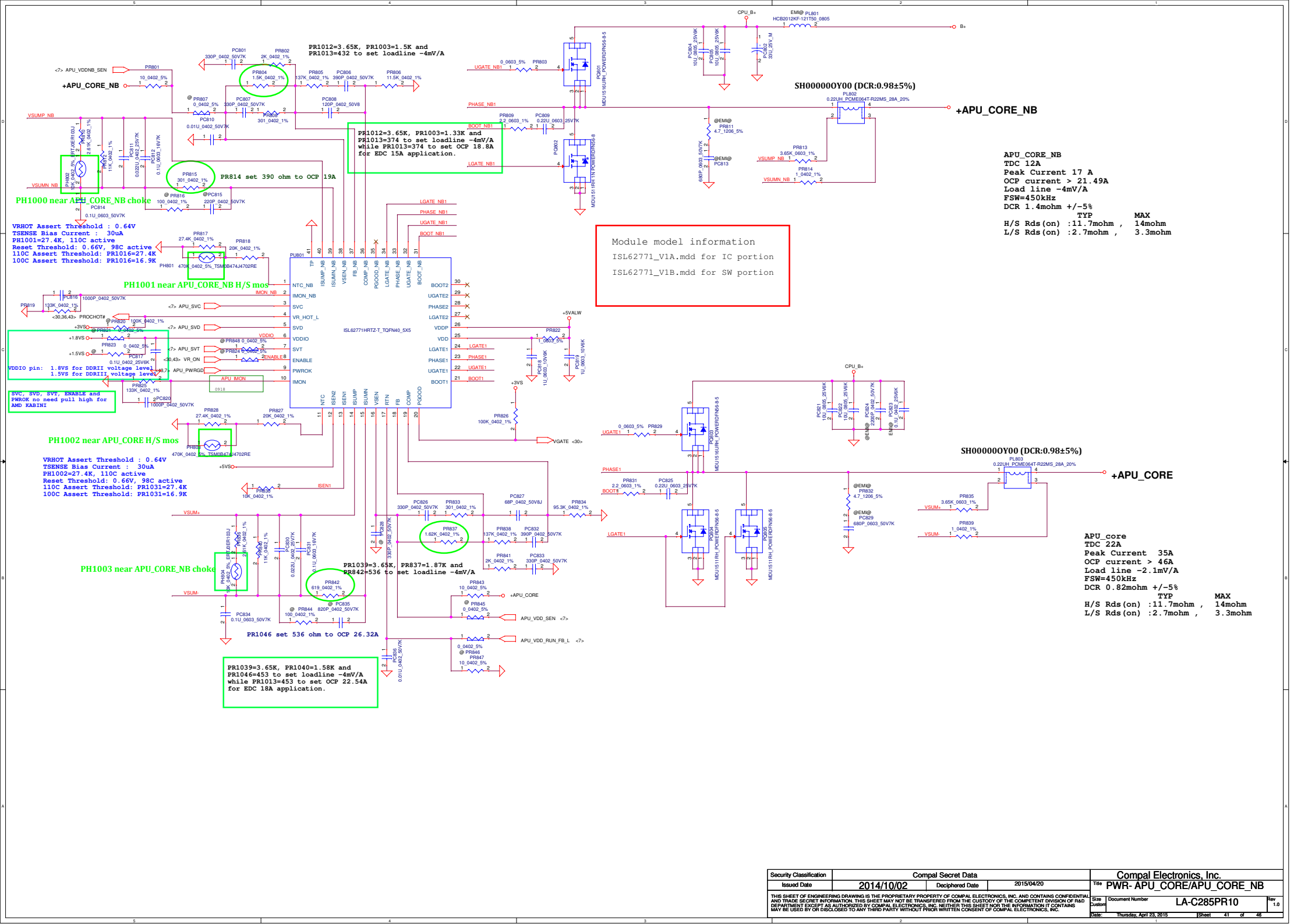
$$V_{out} = 0.6V * (1 + R_{up}/R_{down})$$



# Module model information

APL5930\_V2.mdd

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	PWR- +1.8VALW/ +1.5VS	
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-C285PR10
				Date	Thursday, April 23, 2015
				Sheet	40 of 46
				Rev	1.0



## +APU\_CORE

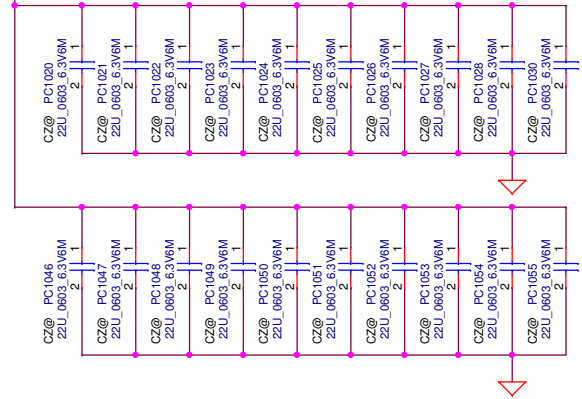
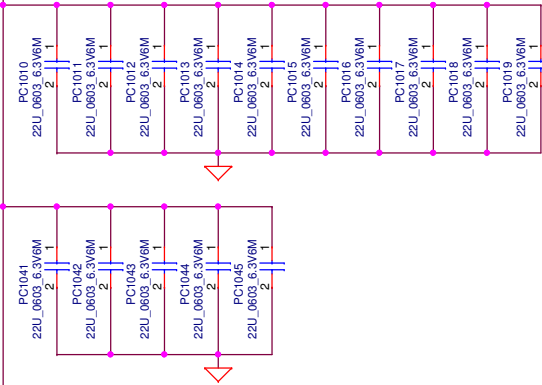
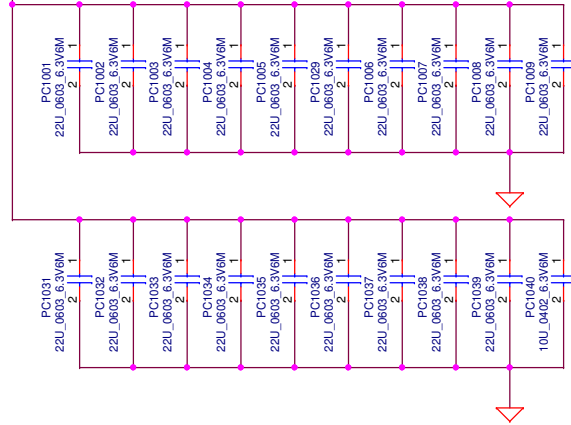
## +APU\_CORE\_NB

## +APU\_GFX

### +APU\_CORE

### +APU\_CORE\_NB

### +APU\_GFX



APU CORE  
470uF\*3  
22uF\*20

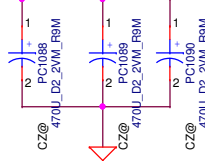
APU\_CORENB  
470uF\*1  
22uF\*15

APU CORE  
470uF\*3  
22uF\*20

### +APU\_CORE



### +APU\_GFX

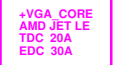
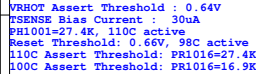


Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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.				Size	Rev
				Custom	1.0
				Date:	Thursday, April 23, 2015
				Sheet	42 of 46





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



**Power Dissipation:** H/S 0.720W  
L/S 0.876W

Security Classification	Compal Secret Data		Title	Compal Electronics, Inc. PWR-+VGA_CORE	
Issued Date	2014/10/02	Deciphered Date	2015/04/20	Size	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND SECRET INFORMATION. THIS INFORMATION MAY NOT BE TRANSMITTED OUTSIDE OF THE COMPANY OR TO ANY OTHER PERSON OR DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			LA-C285PR10	Rev	
Date	Thursday, April 23, 2015		Sheet	44 of 48	

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

Page 1 of 1  
for PWR

Item	Reason for change	PG#	Modify List	Date	Phase
1	Added PR932 ,PR936	P44	Added local sense resistance in power side.	2014/12/28	A
2	Reserve PR1149	P45	Reserve pull down resistance in power IC side	2014/12/28	A
3	PR322,PR348,PR349,PR510,PR601,PR701,PR821,PR914,PR1103,PR1113	A11	0 ohm change to R-short	2014/12/28	A
4	PR606 change to 12.4K	P39	Change the +0.95VALWP voltage to 0.97V	2014/12/28	A
5	PR920 change to 220P	P44	ISL62771 2phase setting, change to 220P	2014/12/28	A
6	PR914 change to 0 ohm footprint	P44	Reserve AMD MESO pull high voltage	2014/02/10	B
7	PR1117,PR1145,PR1124,PR848 change to R-short footprint	P41 P43	0 ohm change to R-short	2014/02/10	B
8	PR606 change to 15K	P39	Change the +0.95VALWP voltage to 1.05V	2014/03/03	C
9	PC1084,PC1085,PC1086,PC1087,PC1088,PC1089,PC1090	P42	330uF change to 470uF	2014/04/17	PreMP
10					
11					
12					
13					
14					
15					
16					
17					

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2009/01/06	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.				PIR (PWR)	
				C38-G series Chief River Schematic <sup>1.0</sup>	
Date: Thursday, April 23, 2015				Sheet	45 of 46

Page 1 of 1  
for HW |

Security Classification	Compal Secret Data			<b>Compal Electronics, Inc.</b> <b>HW-PIR1</b>	
Issued Date	2011/06/15	Deciphered Date	2015/04/20	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.				Size	Document Number <b>LA-C285PR10</b>
				Date:	Thursday, April 23, 2015 Sheet 46 of 46