COMPAL CONFIDENTIAL

MODEL NAME : VAUA0

PCB NO : LA-9591P (DAA00005W10)

BOM P/N : 4319LK31L01

GPIO MAP: 3.0

Goliad 14"

Haswell ULT

2013-05-17

REV : 1.0 (A00)

@ : Nopop Component
1@ : M/B SPI ROM
2@ : TAA/B SPI ROM
EMC@ : EMI, ESD and RF Component
XDP@ : XDP Component
CONN@ : Connector Component
3@ : M/B for non support WWAN
4@ : M/B SPI 4M ROM Component
5@ : TAA/B SPI 4M ROM Component
7@ : M/B for Non-Vpro

	SPI on M/B	TAA
Vpro	1@/3@/4@/EMC@	2@/3@/5@/EMC@
non-Vpro	1@/EMC@	2@/EMC@

MB PCB

Part Number	Description
DAA00005W10	PCB 0VN LA-9591P REV1 M/B

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Title: Cover Sheet

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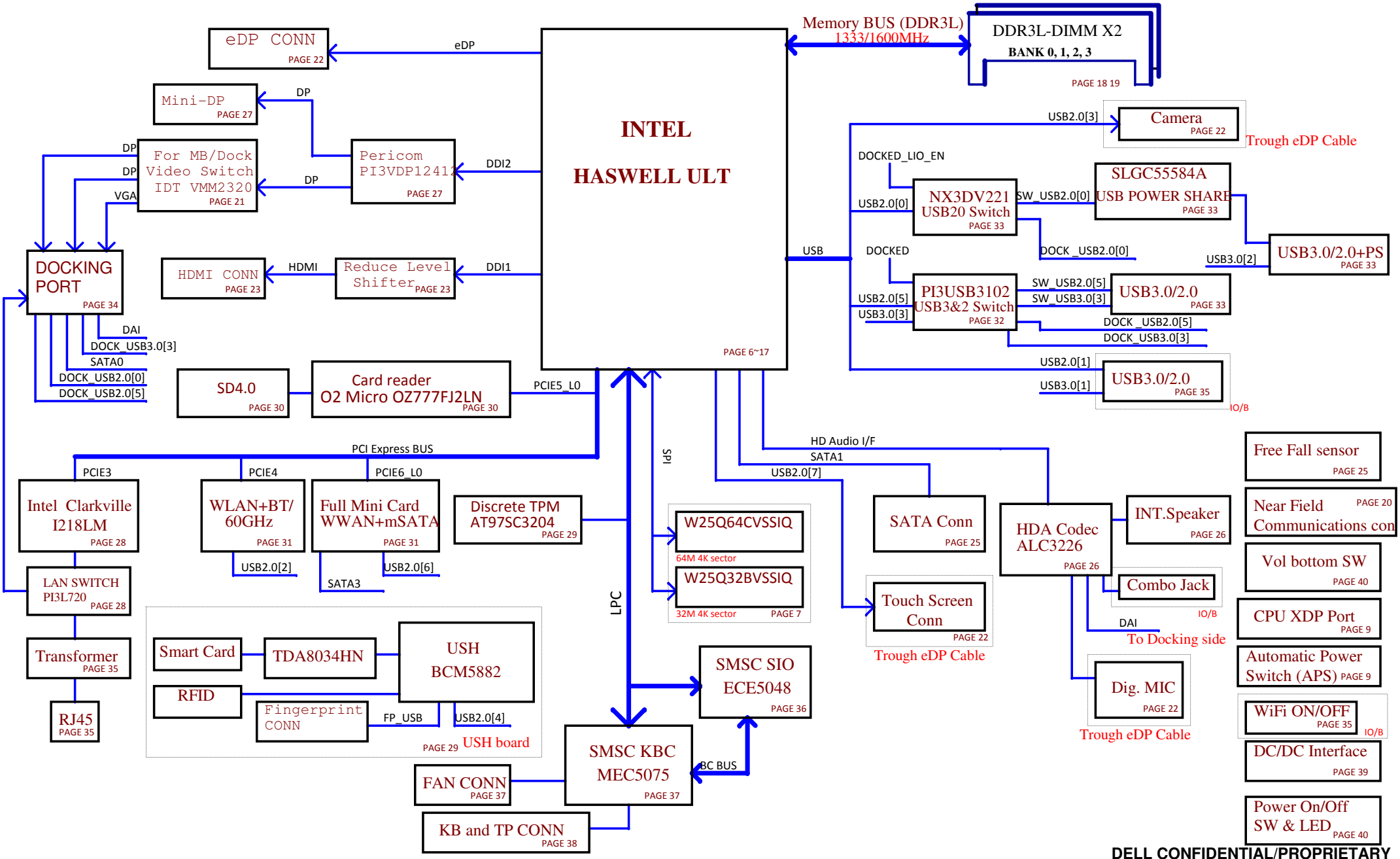
Goliad 14 Block Diagram



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Title	Block diagram
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POWER STATES

Signal / State	SLP S3#	SLP S4#	SLP S5#	SLP A#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M3	LOW	HIGH	HIGH	HIGH	ON	ON	ON	OFF	OFF
S4 (Suspend to DISK) / M3	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF	OFF
S5 (SOFT OFF) / M3	LOW	LOW	LOW	HIGH	ON	ON	OFF	OFF	OFF
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

PM TABLE

power plane / State	+5V_ALW +3.3V_ALW +3.3V_ALW_PCH +3.3V_RTC_LDO	+3.3V_SUS +1.35V_MEM	+5V_RUN +3.3V_RUN +0.675V_DDR_VTT +1.05V_RUN +VCC_CORE	+3.3V_M +1.05V_M	+3.3V_M +1.05V_M (M-OFF)
S0	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	ON	OFF
S5 S4/AC don't exist	OFF	OFF	OFF	OFF	OFF

need to update Power Status and PM Table

PCIE	USB3.0	SATA	DESTINATION
	USB3.0 1		JUSB3-->IO-->Right
	USB3.0 2		JUSB1-->Rear left
PCIE 1	USB3.0 3		JUSB2-->Rear Right//DOCK
PCIE 2			
PCIE 3			LOM
PCIE 4			WLAN (WiGi)
PCIE 5			MMI (CARD READER)
PCIE 6		SATA 3	WWAN(PP/mSATA)
		SATA 2	NA
		SATA 1	HDD
		SATA 0	DOCK

	USB PORT#	DESTINATION
HSW ULT	0	JUSB1 // E-Dock 1
	1	IO/ JUSB3
	2	WLAN + BT
	3	CAMERA
	4	USH->SMART CARD
	5	JUSB2 // E-Dock 2
	6	WWAN
	7	TOUCH

USH	0	BIO
	1	NA

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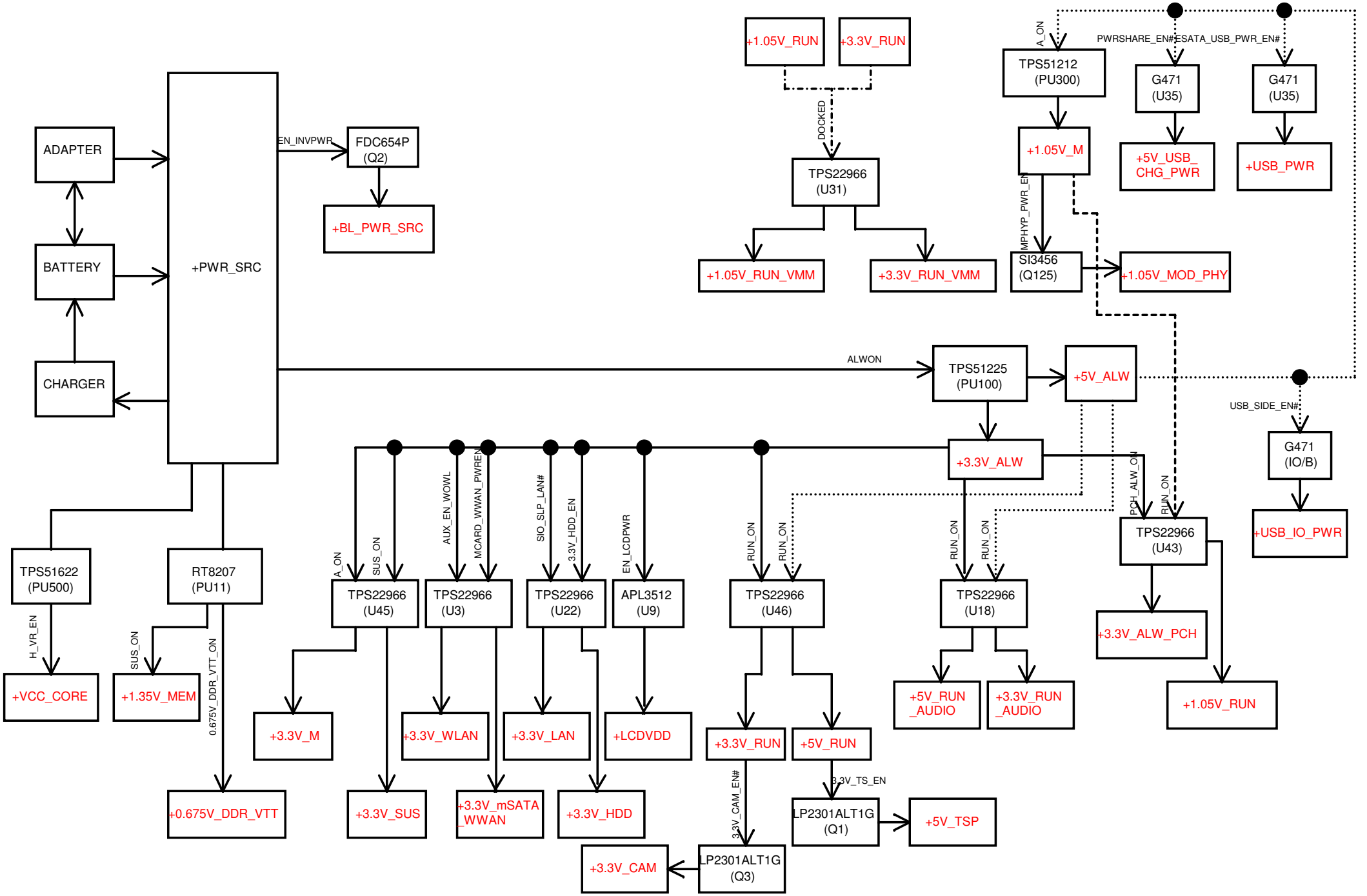

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Title: Power rails

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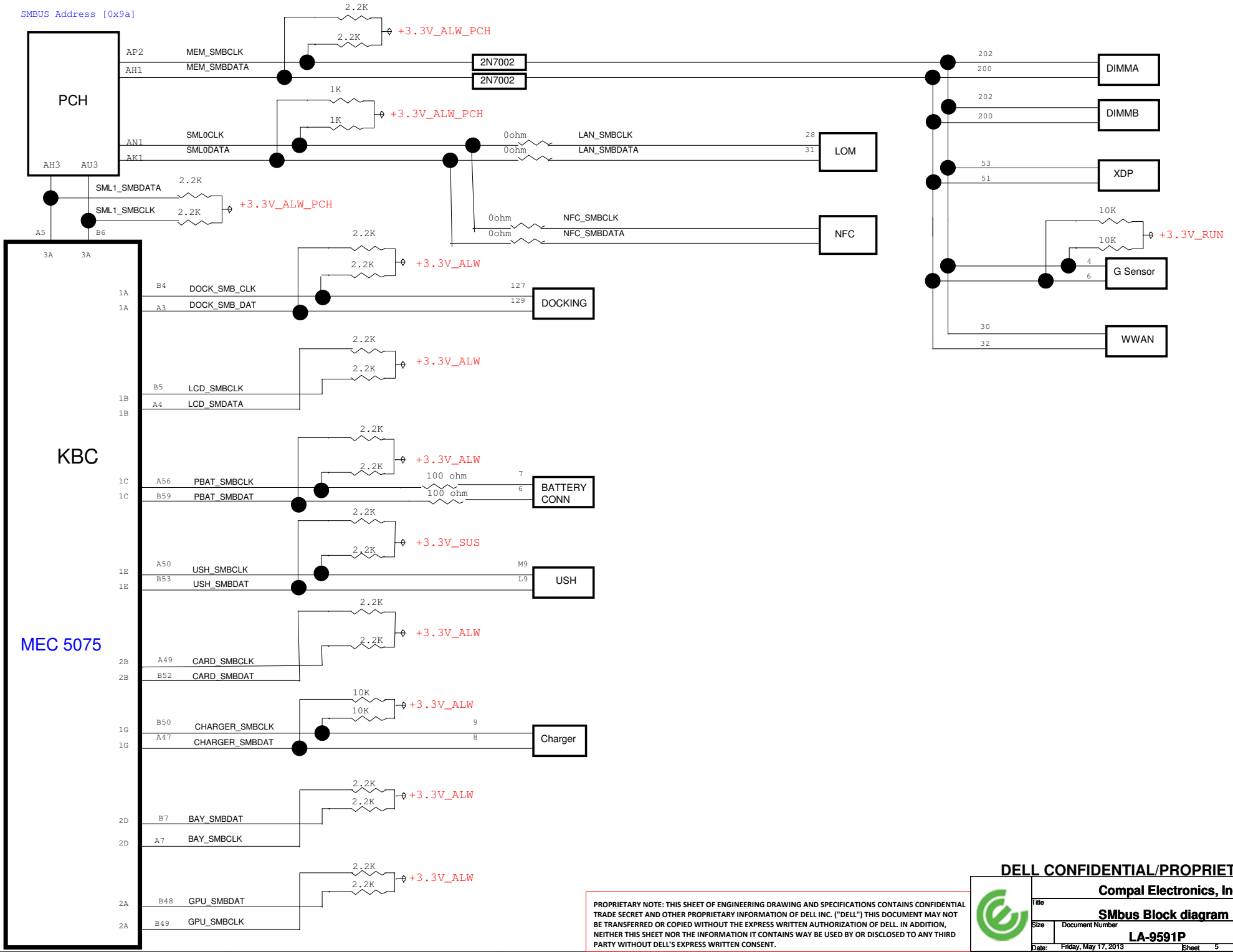

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Title: SMbus Block diagram

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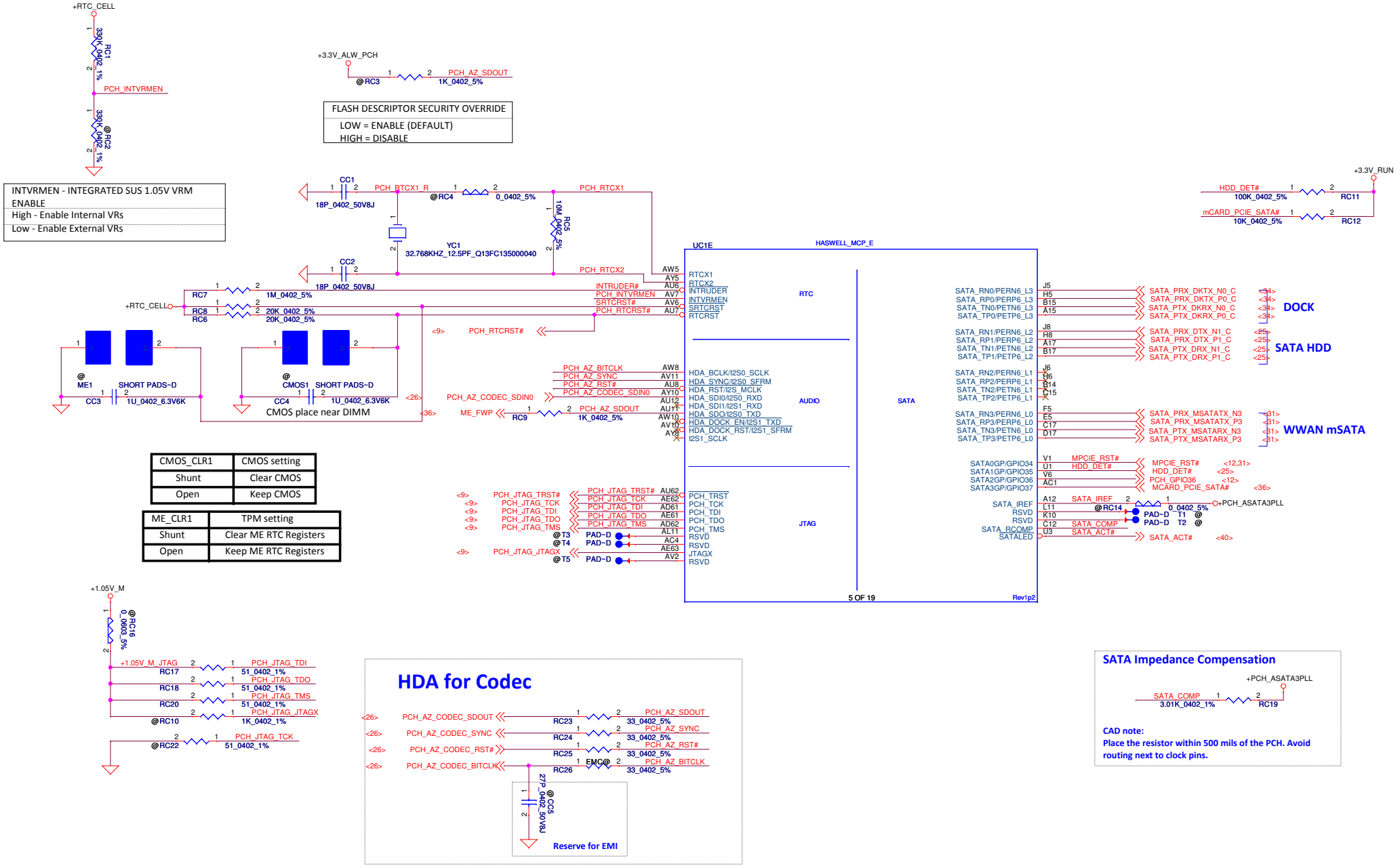

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Compal Electronics, Inc.

Title: CPU (1/12)

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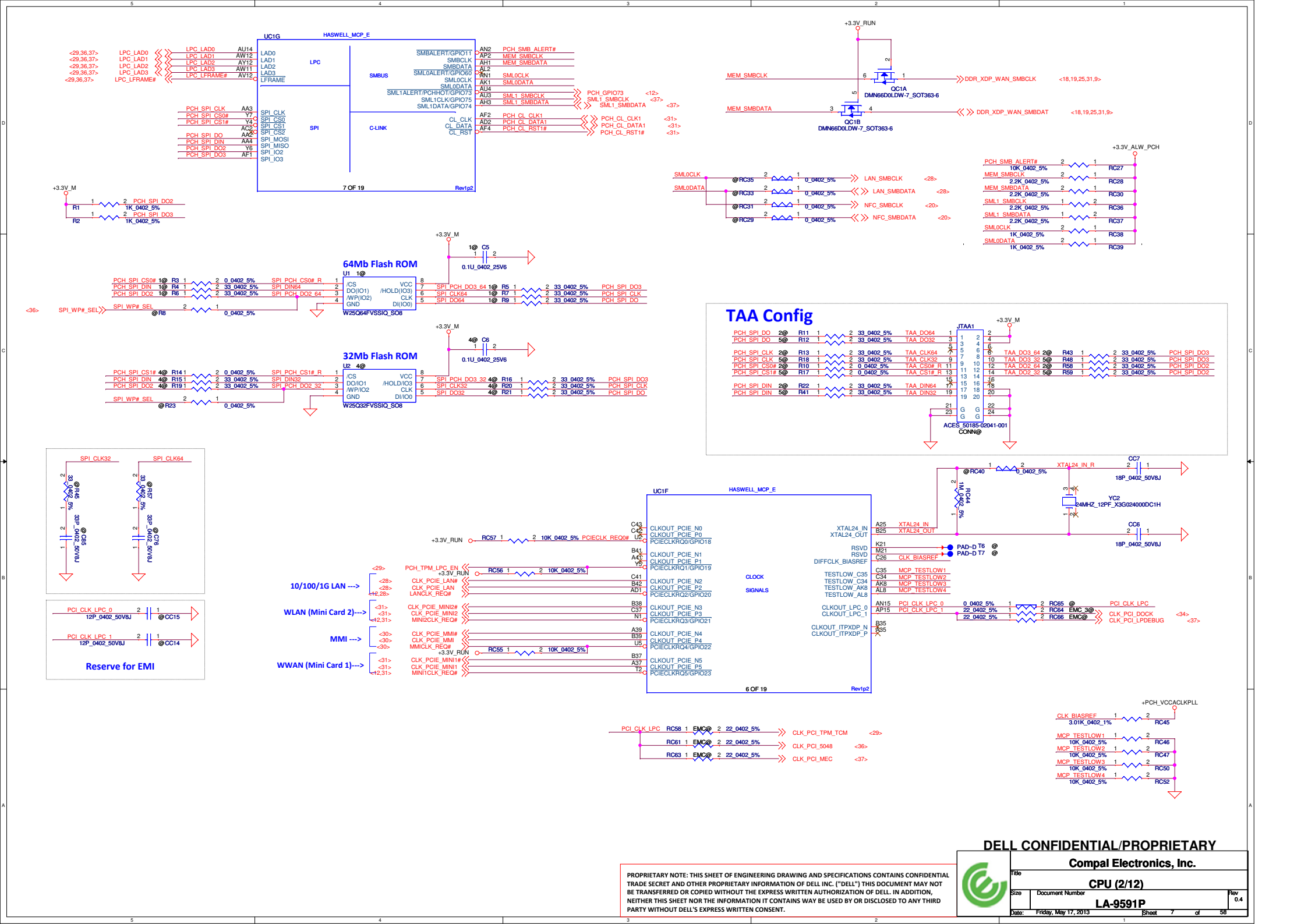
Date: Friday, May 17, 2013 | Sheet 6 of 58



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Title	CPU (2/12)
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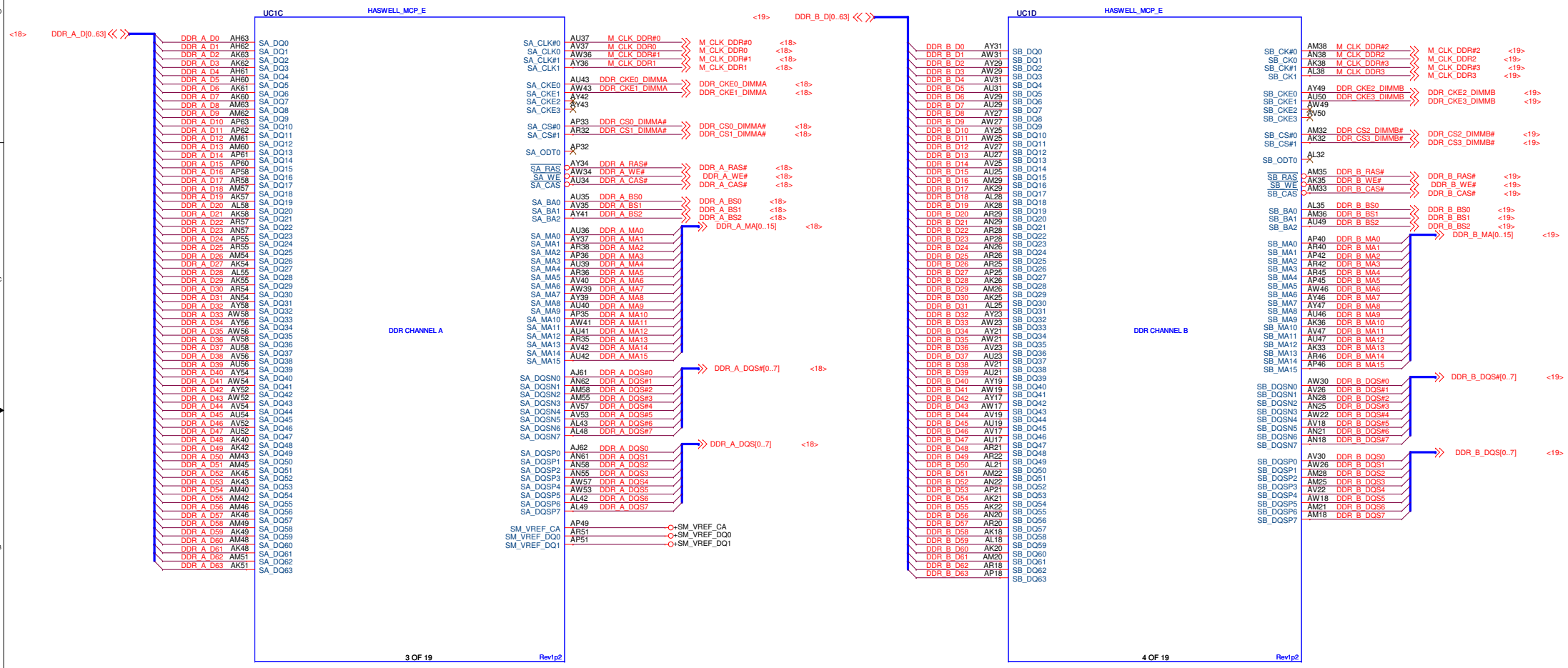

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Title: CPU (3/12)

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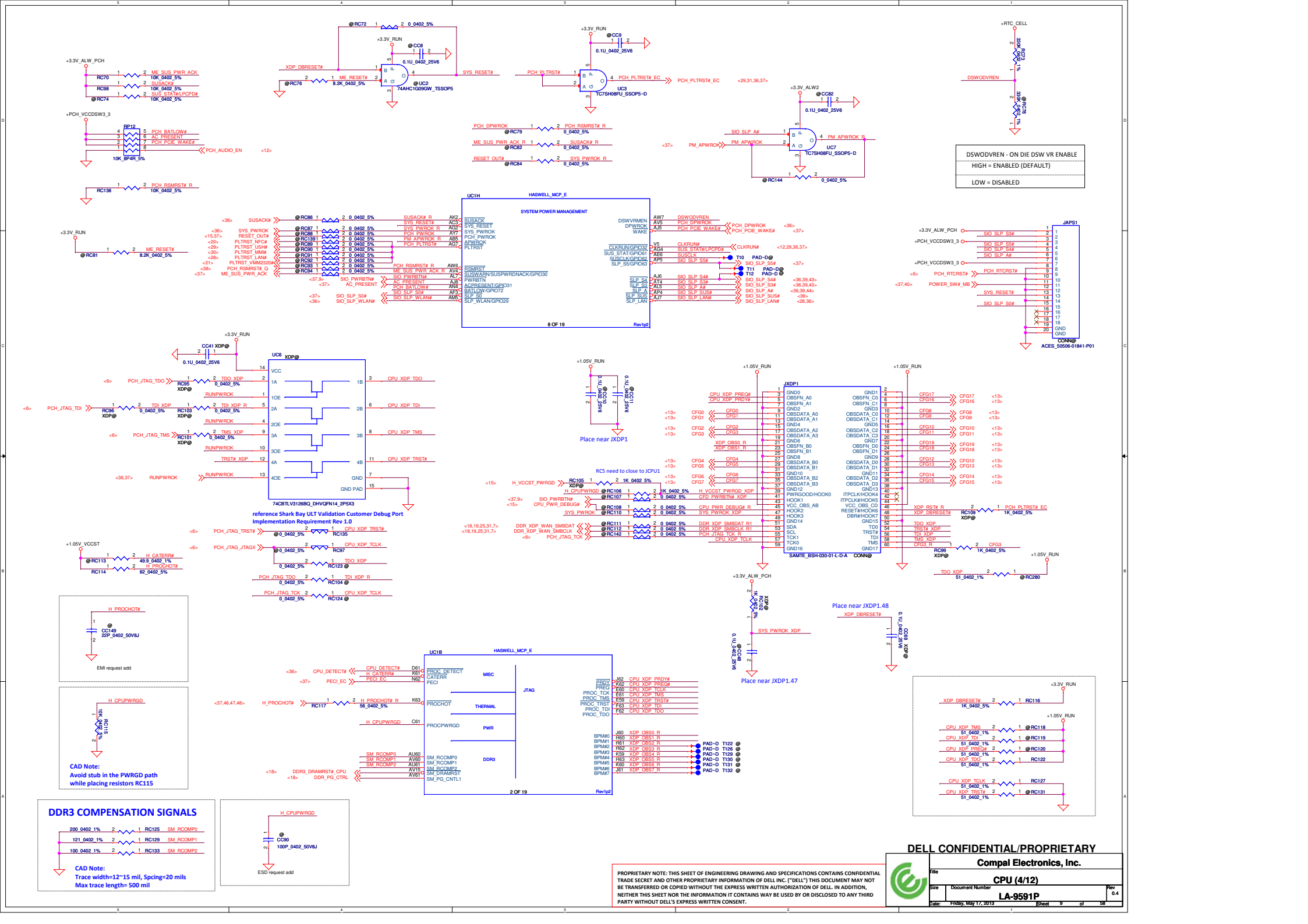
DSWODVREN - ON DIE DSW VR ENABLE
HIGH = ENABLED (DEFAULT)
LOW = DISABLED
DDR3 COMPENSATION SIGNALS
CAD Note:
Trace width=12~15 mil, Spcing=20 mils
Max trace length= 500 mil
CAD Note:
Avoid stub in the PWRGD path
while placing resistors RC115
Place near JXDP1
Place near JXDP1.47
Place near JXDP1.48
RCS need to close to JCPU1
reference Shark Bay ULT Validation Customer Debug Port
Implementation Requirement Rev 1.0
EMI request add
ESD request add
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Compal Electronics, Inc.
CPU (4/12)
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Friday, May 17, 2013
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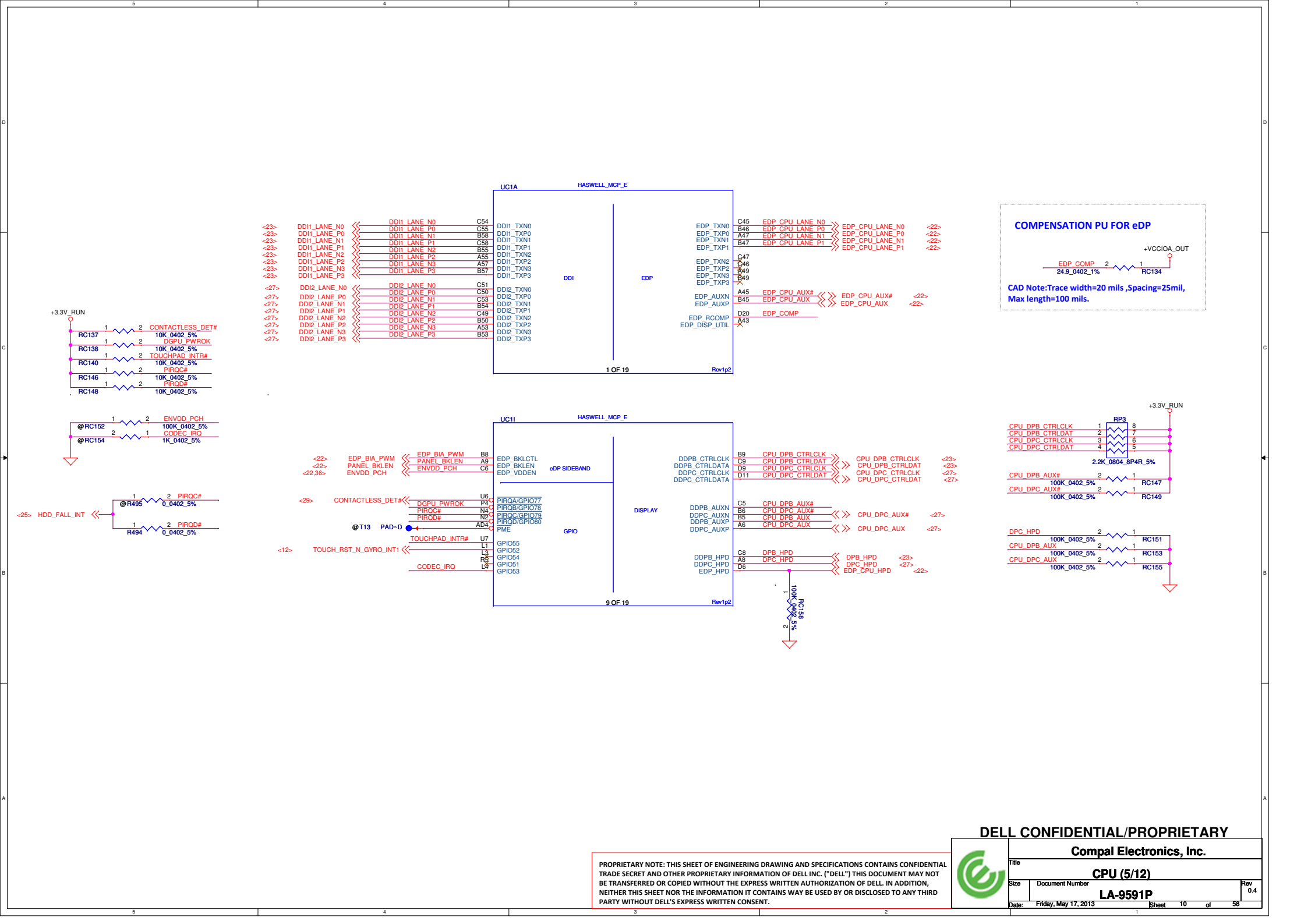

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Title	CPU (5/12)
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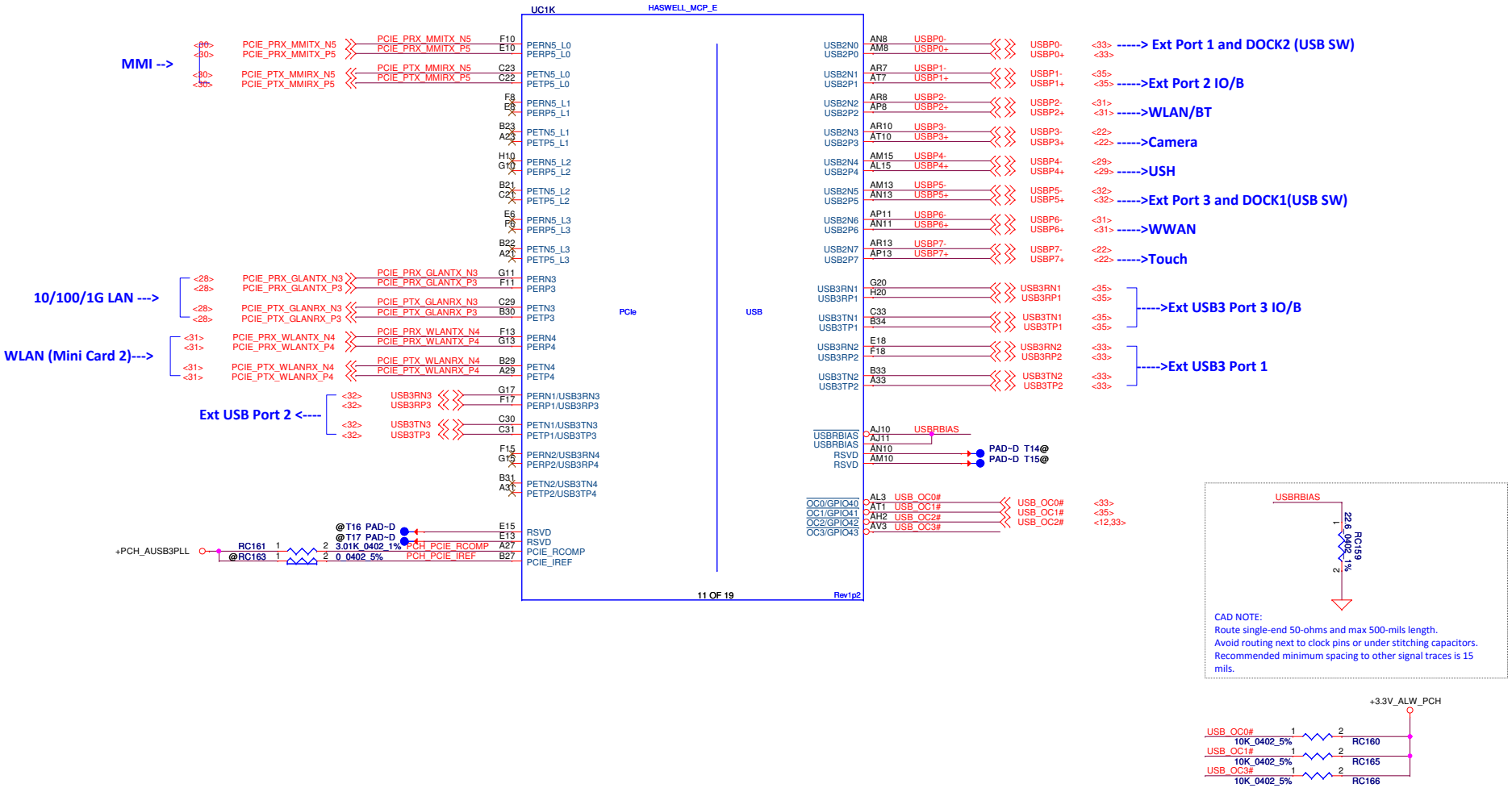

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Title: CPU (6/12)

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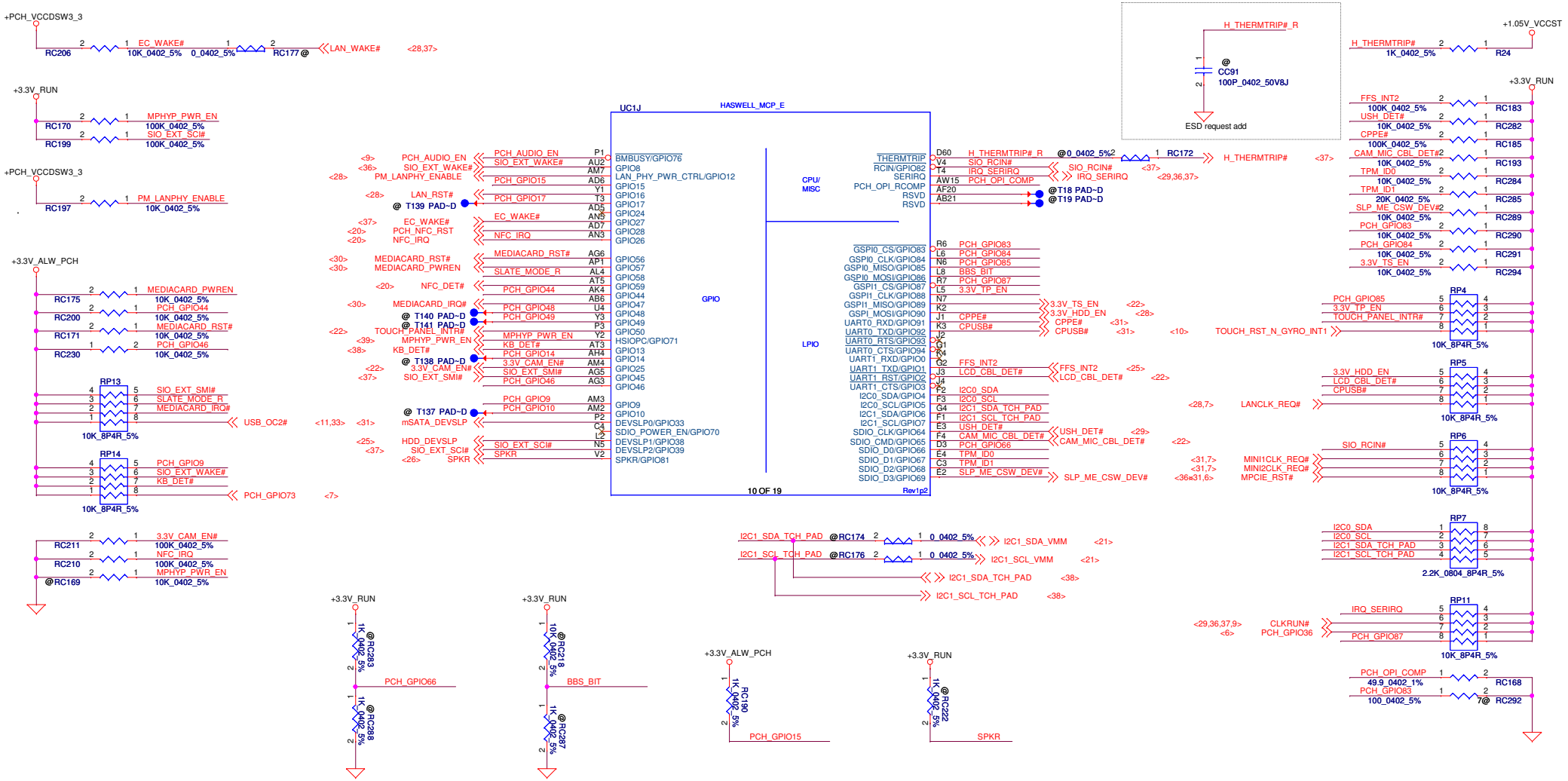

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Title: CPU (7/12)

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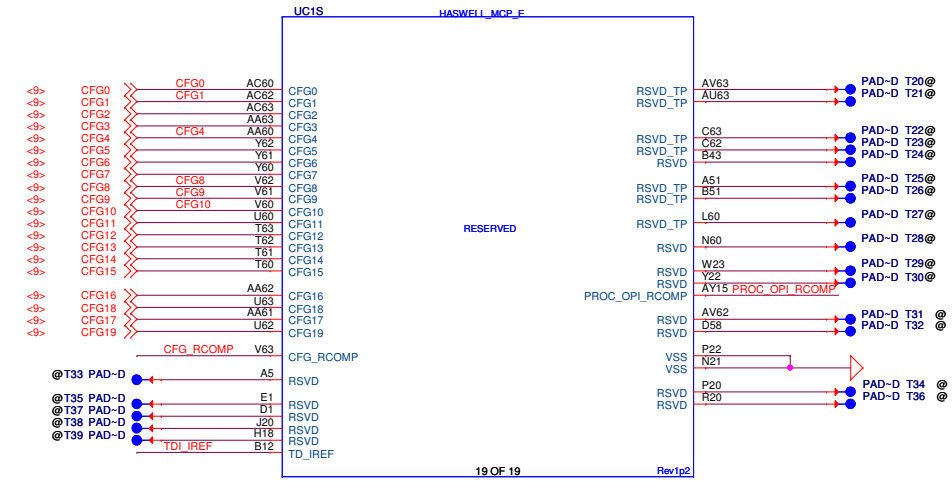
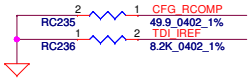
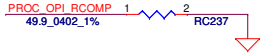
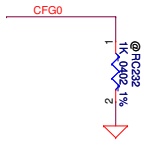
CFG STRAPS for CPU

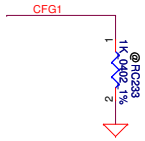




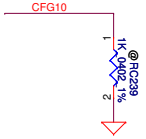




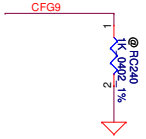
EAR-STALL/NOT STALL RESET SEQUENCE AFTER PCU PLL IS LOCKE	
CFG0	1:(Default) Normal Operation; No stall 0:Lane Reversed



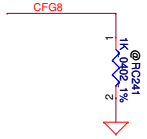
PCH/PCH LESS MODE SELECTION	
CFG1	1:(Default) Normal Operation 0:Lane Reversed



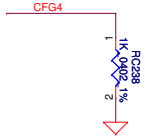
SAFE MODE BOOT	
CFG10	1: POWER FEATURES ACTIVATED DURING RESET 0: POWER FEATURES (ESPECIALLY CLOCK GATINE ARE NOT ACTIVATED



NO SVID PROTOCOL CAPABLE VR CONNECTED	
CFG9	1: VRS support SVID protocol are present 0:No VR support SVID is present The chip will not generate(OR Respond to) SVID activity



ALLOW THE USE OF NOA ON LOCKED UNITS	
CFG8	1: Enable(Default): Noa will be disable in locked units and enable in un-locked units 0: Enable Noa will be available pegardless of the locking of the unit



	Display Port Presence Strap
CFG4	1 : Disabled; No Physical Display Port attached to Embedded Display Port
	0 : Enabled; An external Display Port device is connected to the Embedded Display Port

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Title: CPU (8/12)

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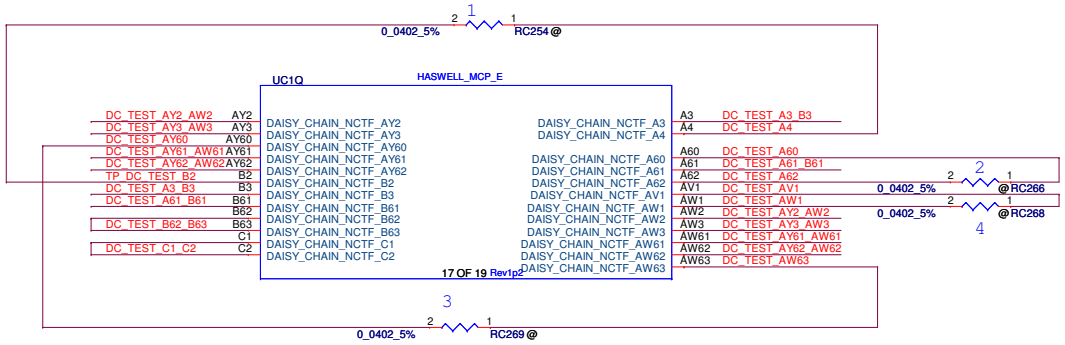


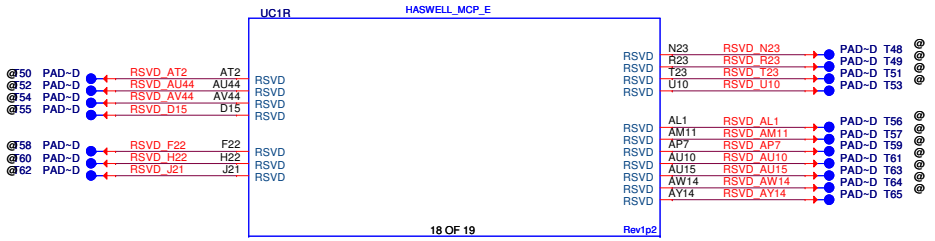
Package Daisy Chain:

1.B2-PKG-C1-PCB-C2-PKG-B3-PCB-A3-PKG-A4

2.A62-PKG-A61-PCB-B61-PKG-B62-PCB-B63-PKG-A60

3.AY60-PKG-AW61-PCB-AY61-PKG-AW62-PCB-AY62-PKG-AW63

4.AW1-PKG-AW3-PCB-AY3-PKG-AW2-PCB-AY2-PKG-AV1



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Title: CPU (9/12)

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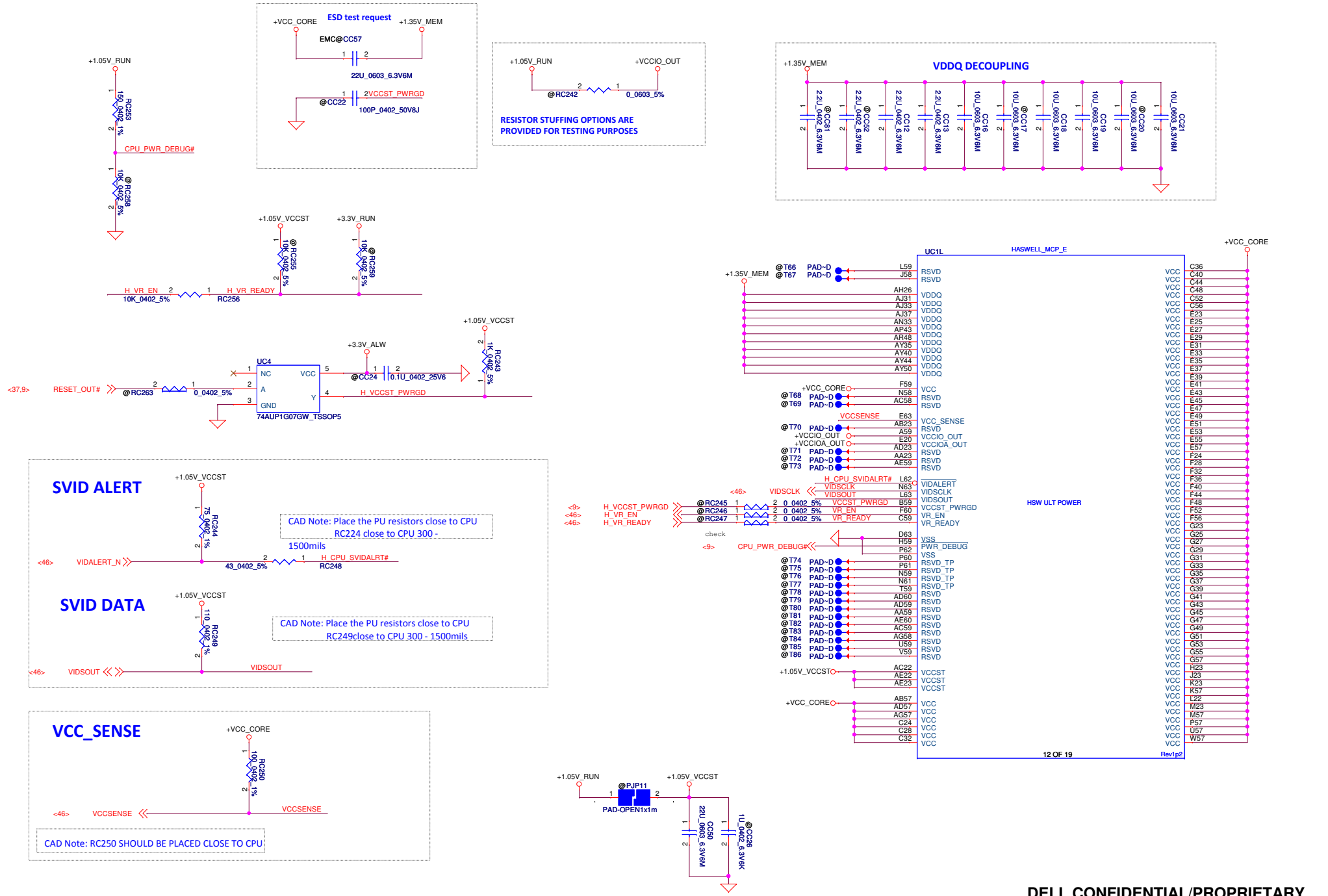

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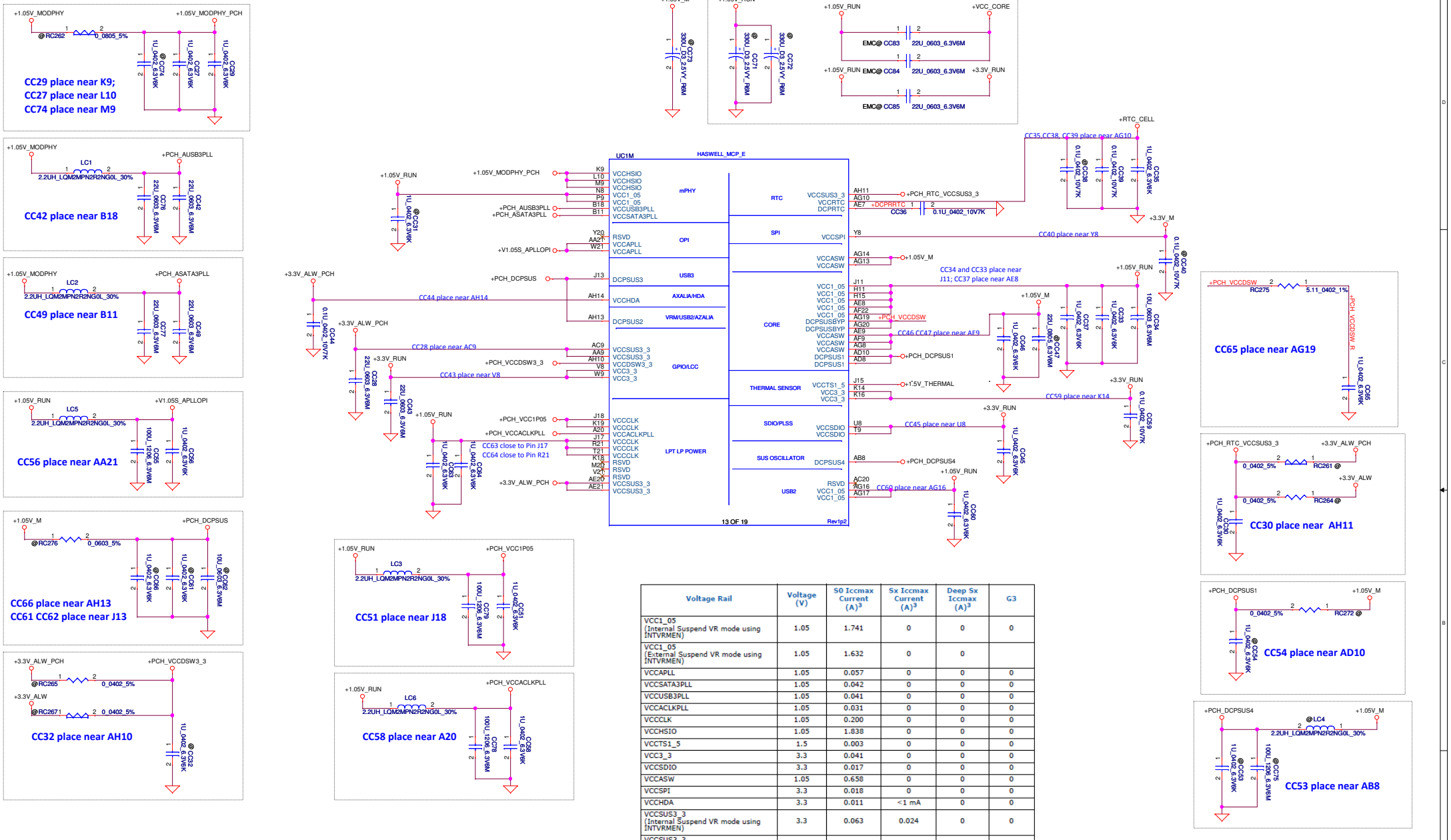
Compal Electronics, Inc.

Title: CPU (10/12)

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 15 of 58



Voltage Rail	Voltage (V)	S0 Iccmax Current (A)[3]	Sx Iccmax Current (A)[3]	Deep Sx Iccmax (A)[3]	G3
VCC1_05 (Internal Suspend VR mode using INTVRMEN)	1.05	1.741	0	0	0
VCC1_05 (External Suspend VR mode using INTVRMEN)	1.05	1.632	0	0	
VCCAPLL	1.05	0.057	0	0	0
VCCSATA3PLL	1.05	0.042	0	0	0
VCCUSB3PLL	1.05	0.041	0	0	0
VCCACLKPLL	1.05	0.031	0	0	0
VCCCLK	1.05	0.200	0	0	0
VCCHSIO	1.05	1.838	0	0	0
VCCTS1_5	1.5	0.003	0	0	0
VCC3_3	3.3	0.041	0	0	0
VCCSDIO	3.3	0.017	0	0	0
VCCASW	1.05	0.658	0	0	0
VCCSPI	3.3	0.018	0	0	0
VCCHDA	3.3	0.011	<1 mA	0	0
VCCSUS3_3 (Internal Suspend VR mode using INTVRMEN)	3.3	0.063	0.024	0	0
VCCSUS3_3 (External Suspend VR mode using INTVRMEN)	3.3	0.062	0.005	0	0
DcpSus1[4]	1.05	0.109	0.014	0	0
DcpSus2[4]	1.05	0.025	0.001	0	0
DcpSus3[4]	1.05	0.010	0.003	0	0
DcpSus4[4]	1.05	0.001	0.001	0	0
VCCDSW3_3	3.3	0.114	0.004	0.002	0
VCCRTC	3.3	<1 mA	<1 mA	<1 mA	6 µA See notes 1, 2

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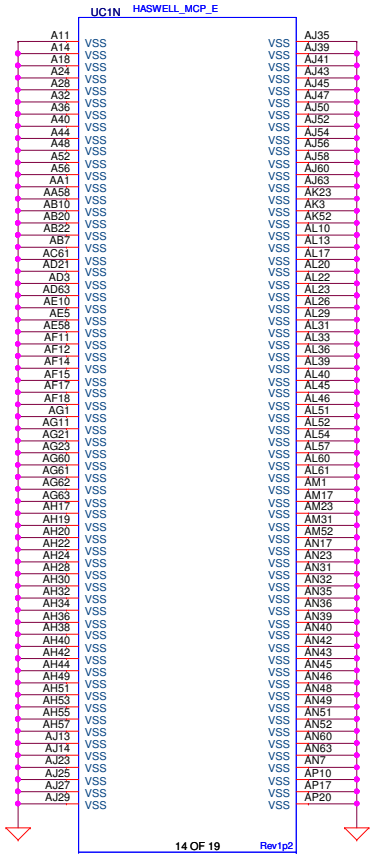
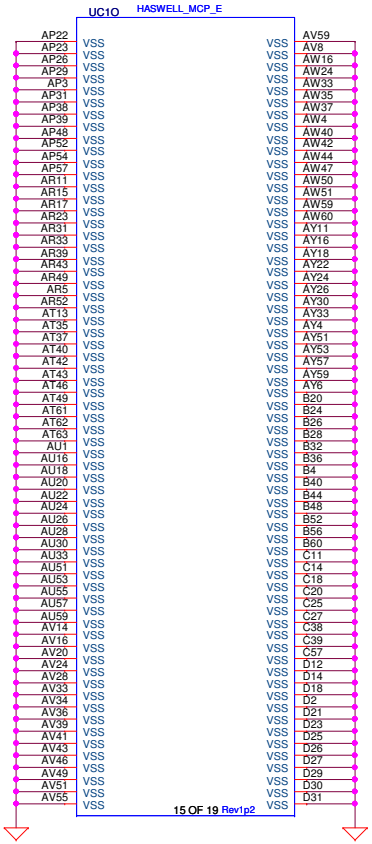
Compal Electronics, Inc.

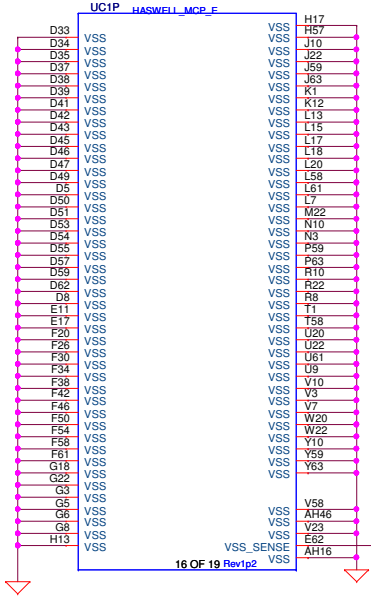
Title: CPU (11/12)

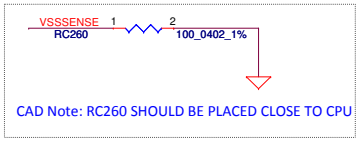
Size: | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 16 of 58









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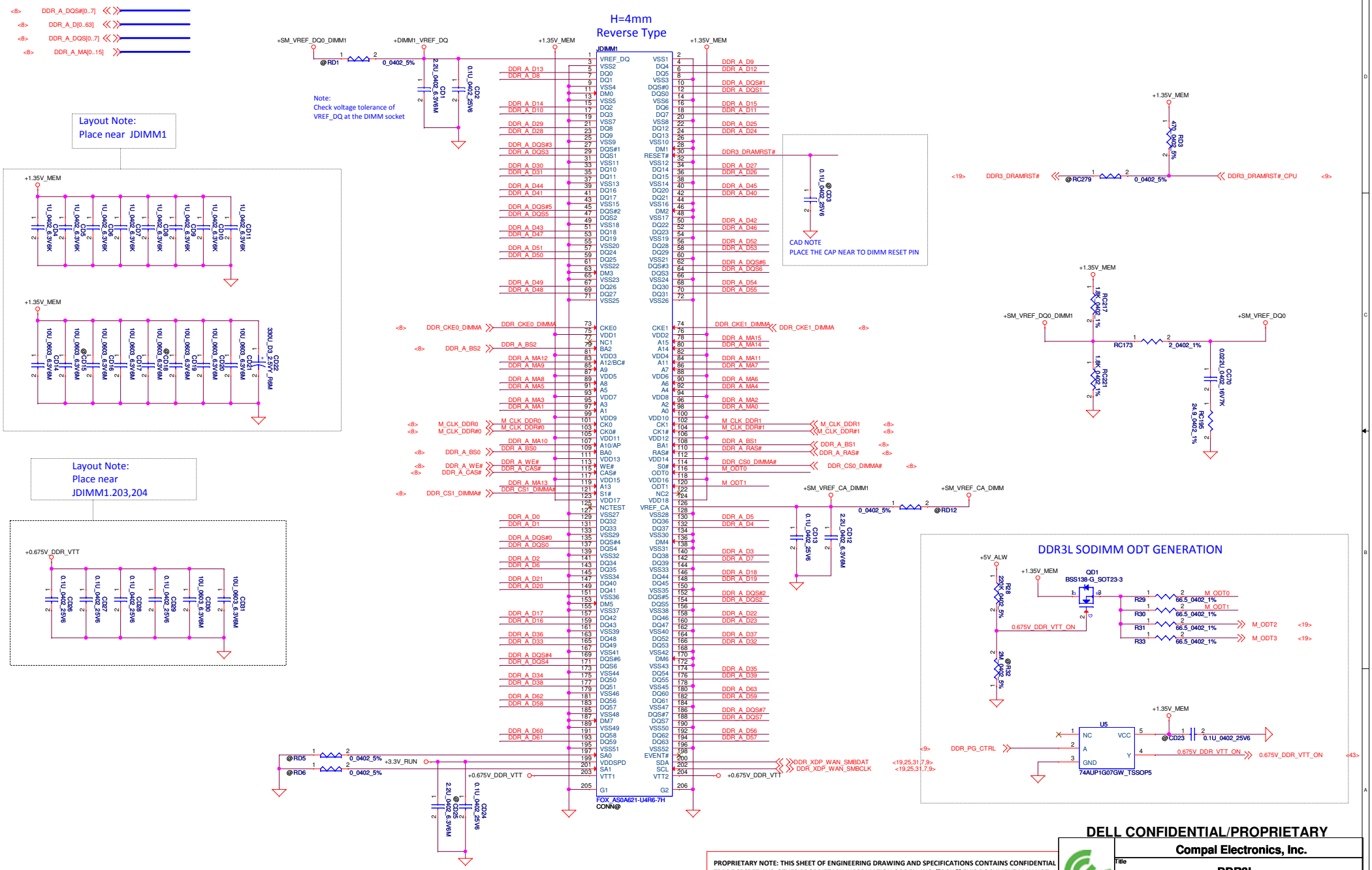
Compal Electronics, Inc.

Title: CPU (12/12)

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 17 of 58



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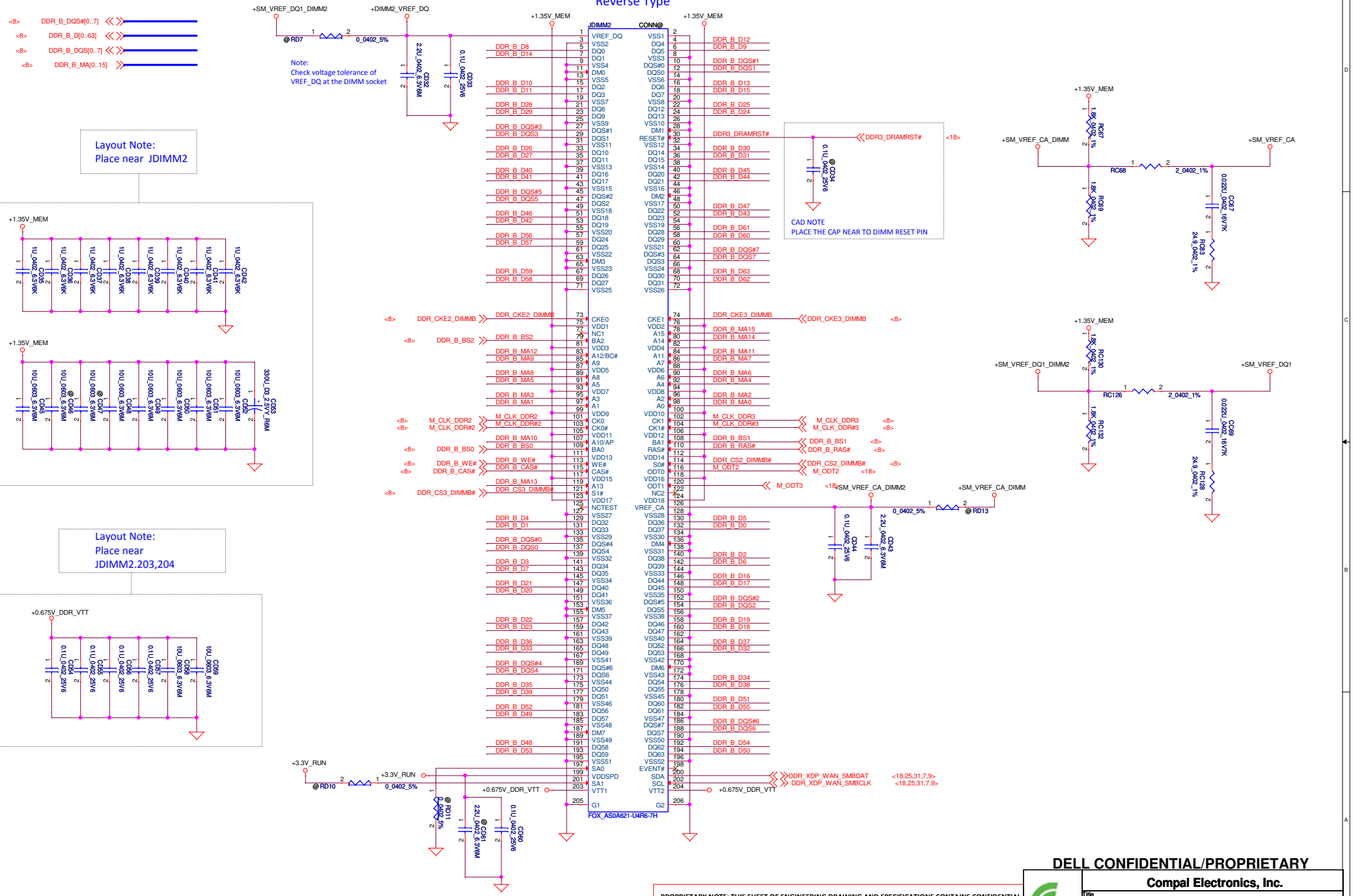
Compal Electronics, Inc.

Title: DDR3L

Size: | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 18 of 58

H=4mm
Reverse Type



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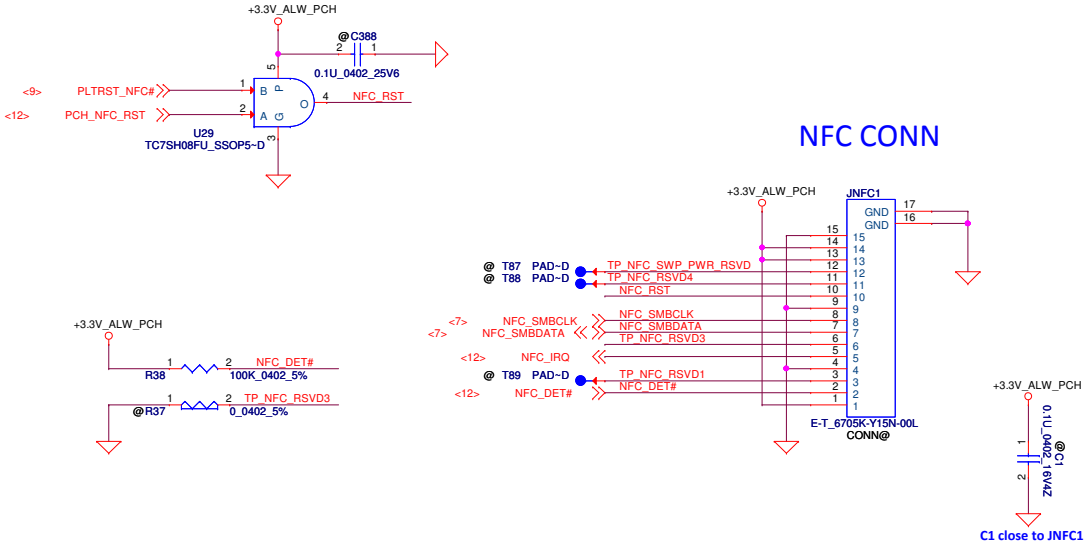
Compal Electronics, Inc.

Title: DDR3L

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 19 of 58



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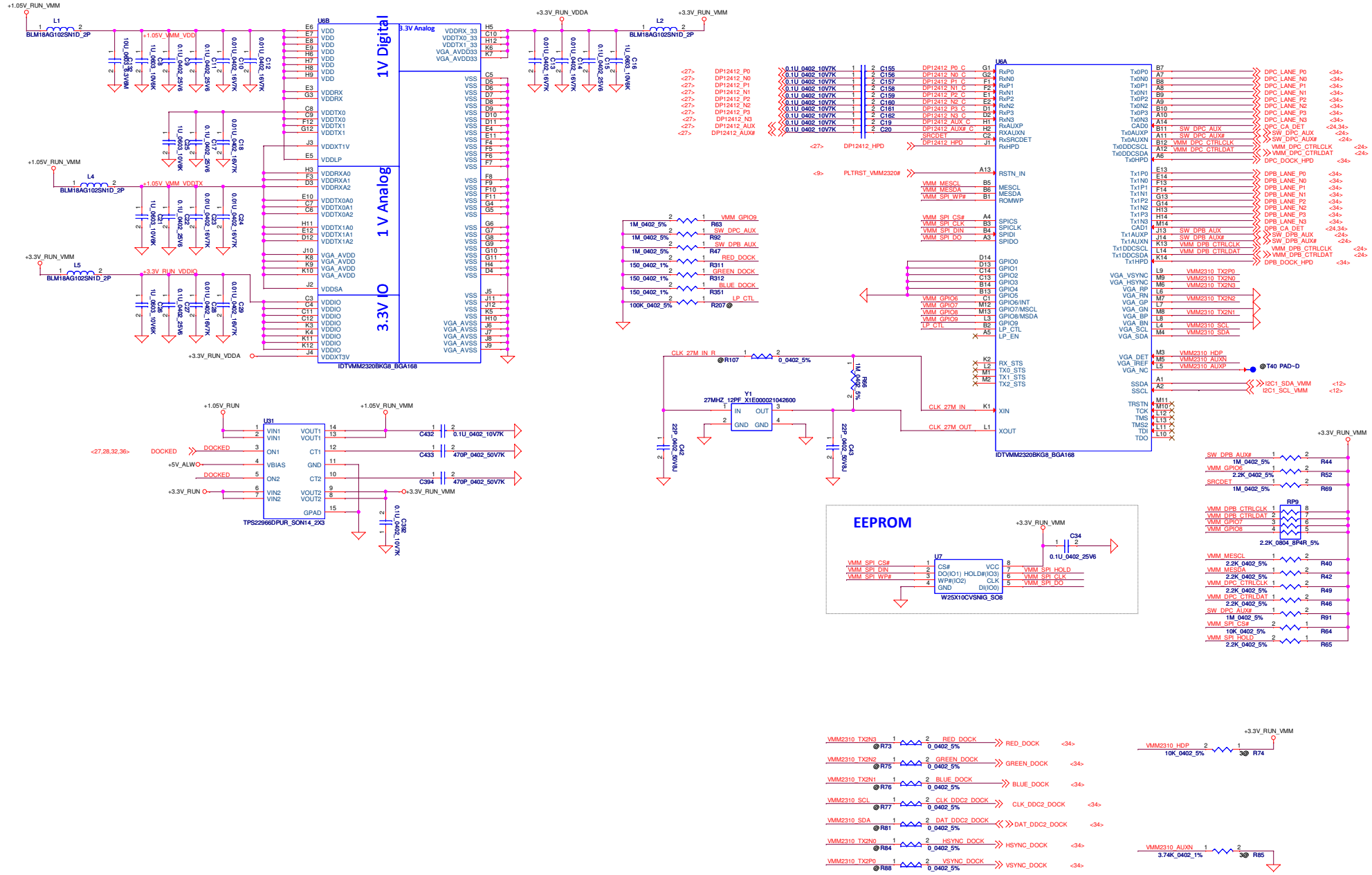
Compal Electronics, Inc.

Title: NFC

Size: | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 20 of 58



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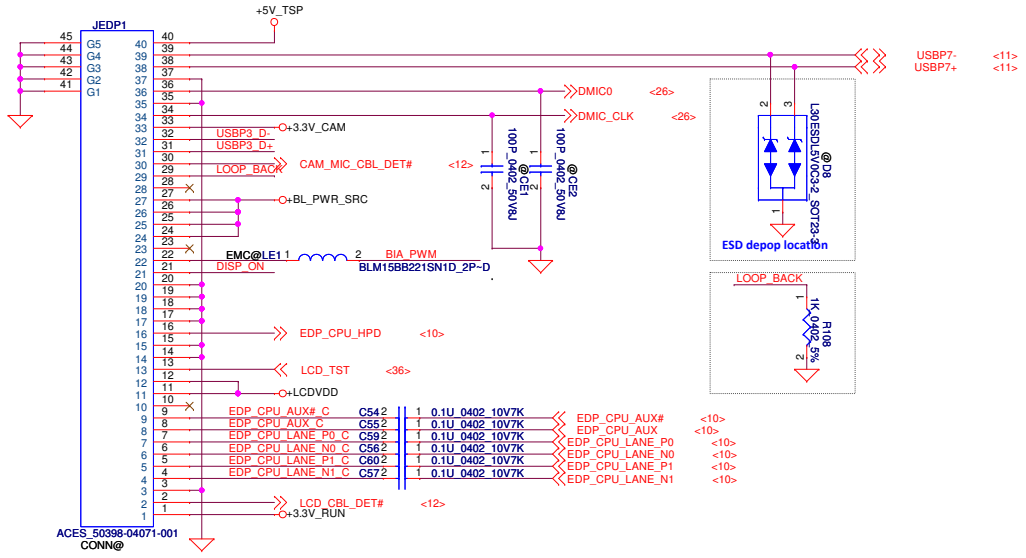
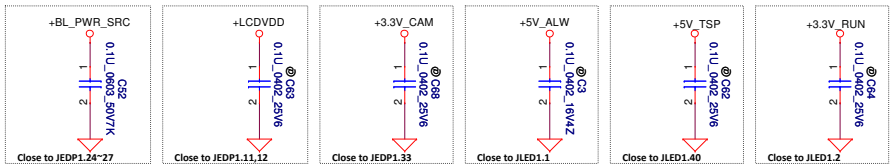
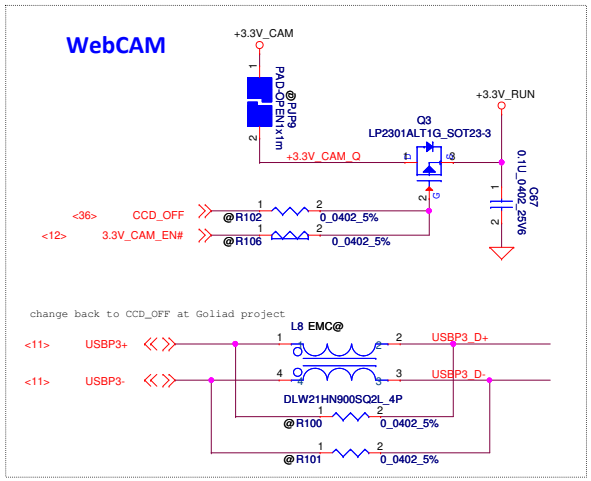
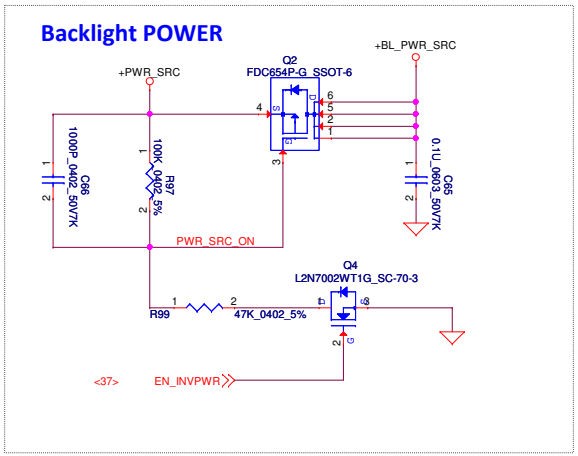
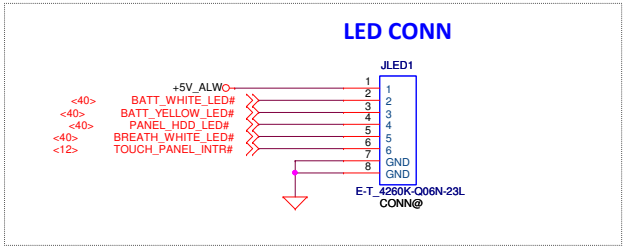
Compal Electronics, Inc.	
Title	DP 1.2 MST HUB
Size	Document Number: LA-9591P
Rev	0.4
Date:	Friday, May 17, 2013
Sheet	21 of 58

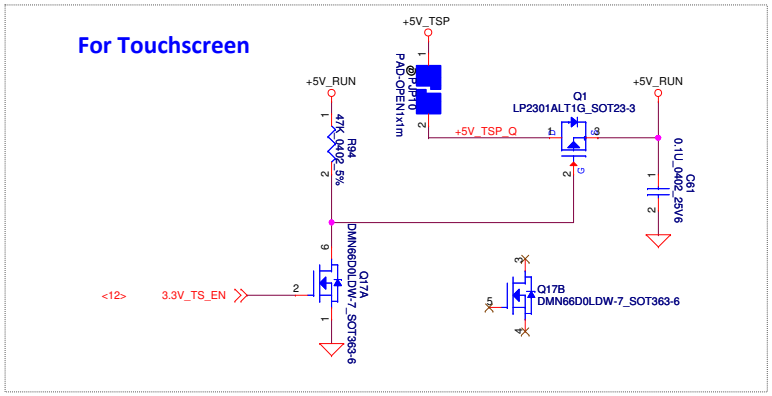


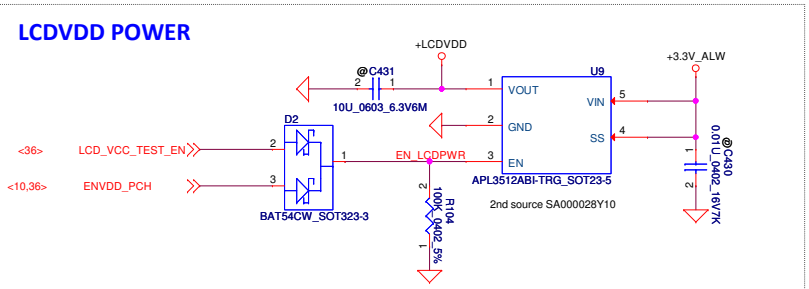












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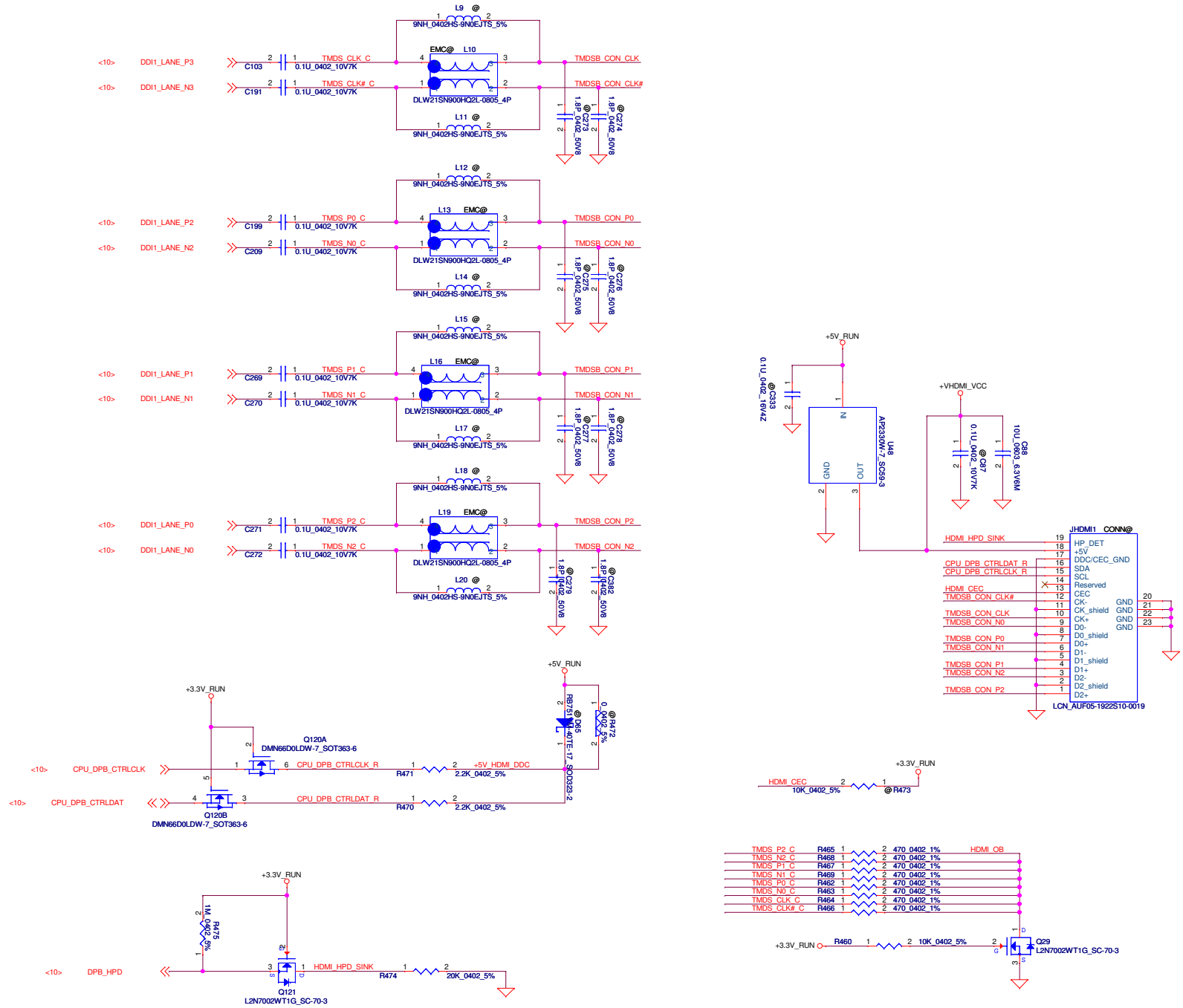
Compal Electronics, Inc.

Title: eDP CONN & Touch screen

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 22 of 58



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Compal Electronics, Inc.	
Title	HDMI CONN
Size	Document Number: LA-9591P
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Date:	Friday, May 17, 2013
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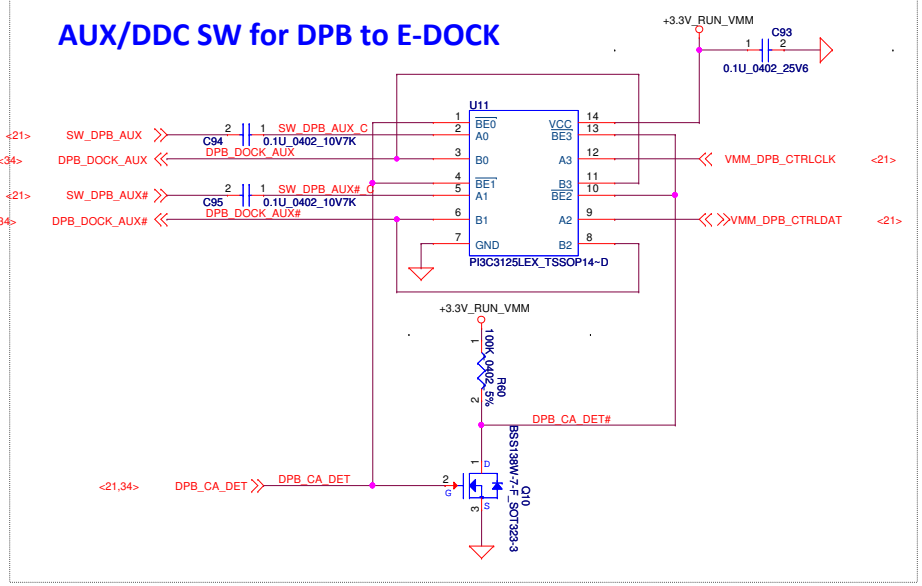
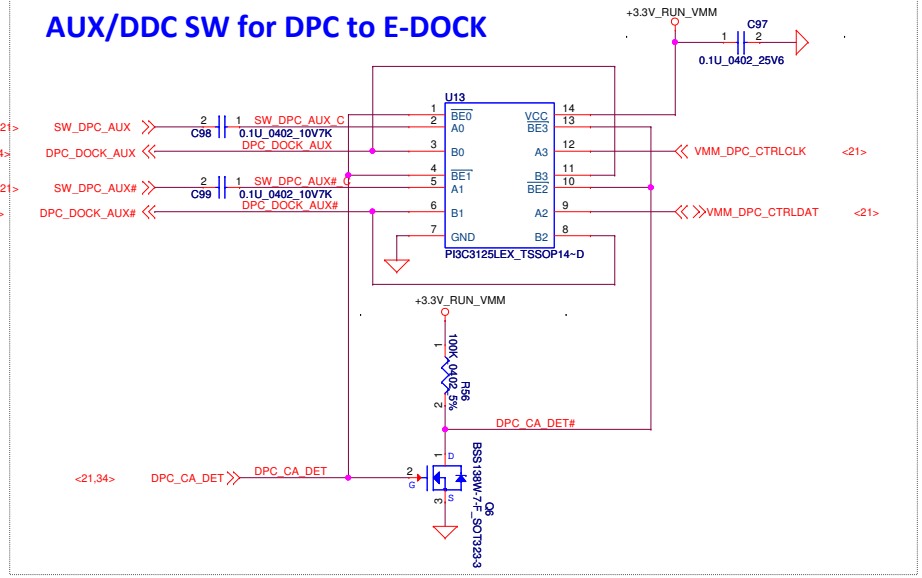
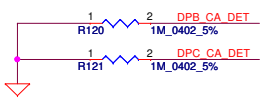
AUX/DDC SW for DPB to E-DOCK



AUX/DDC SW for DPC to E-DOCK





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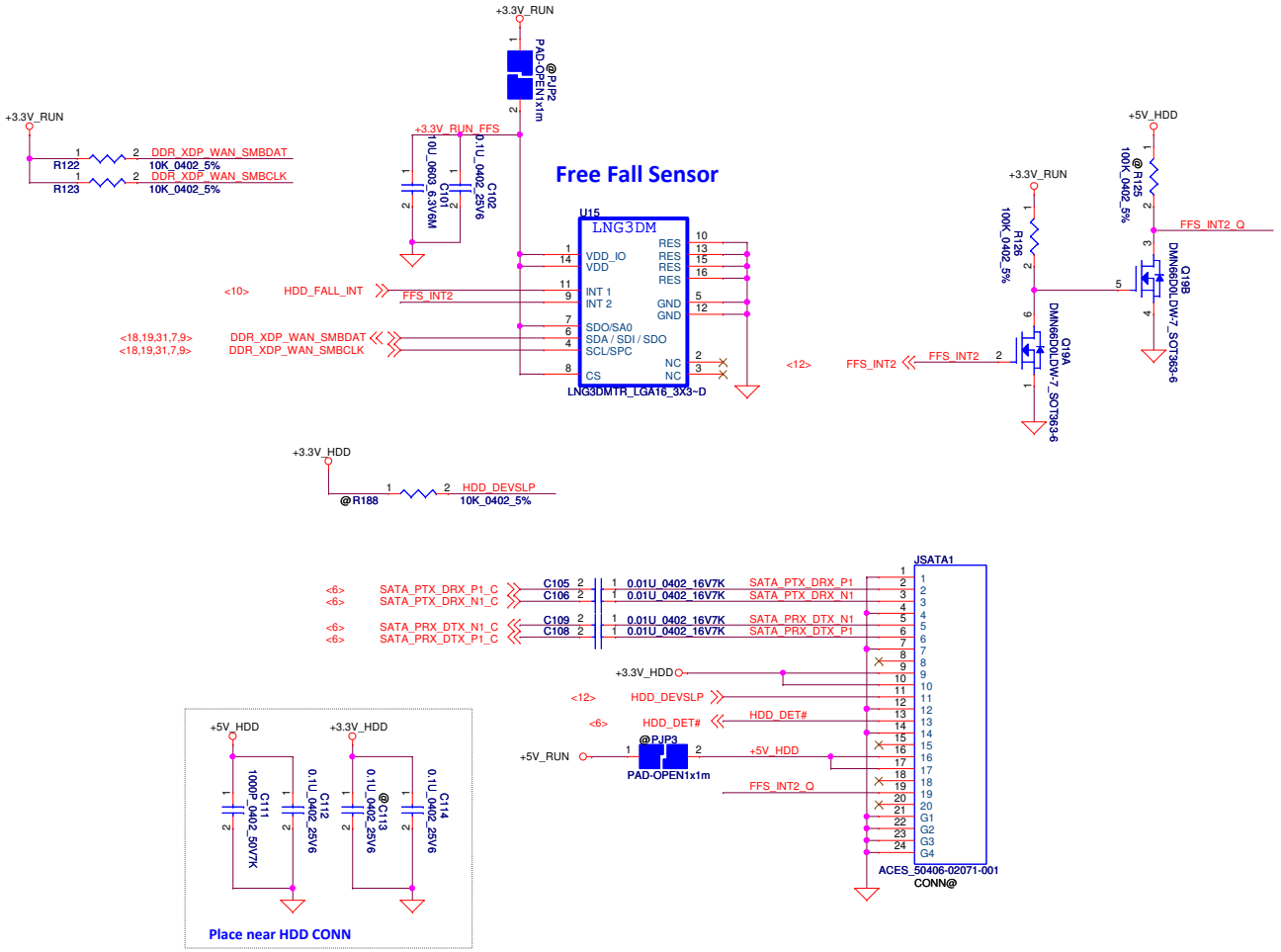
Compal Electronics, Inc.

Title: DP SW

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 24 of 58



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Compal Electronics, Inc.

Title: HDD CONN

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 25 of 58

Internal Speakers Header

40 mils trace keep 10 mil spacing

Close to U17

Close to U17 pin5

Close to U17 pin6

Place R136 close to codec

Place R142 close to codec

Place C134 close to Codec

Place close to Codec

Notes:
Keep PVDD supply and speaker traces routed on the DGND plane.
Keep away from AGND and other analog signals

Place closely to Pin 13.

Add for solve pop noise and detect issue

Place closely to Pin 14

place at AGND and DGND plane

Realtek feedback
Prevent the Noise from Combo Jack
while system entry into S3 / S4 /S5

SLEEVE/RING2 please keep 40 mils trace width

AUD_HP_OUT_L/ AUD_HP_OUT_Rplease keep 15 mils trace width

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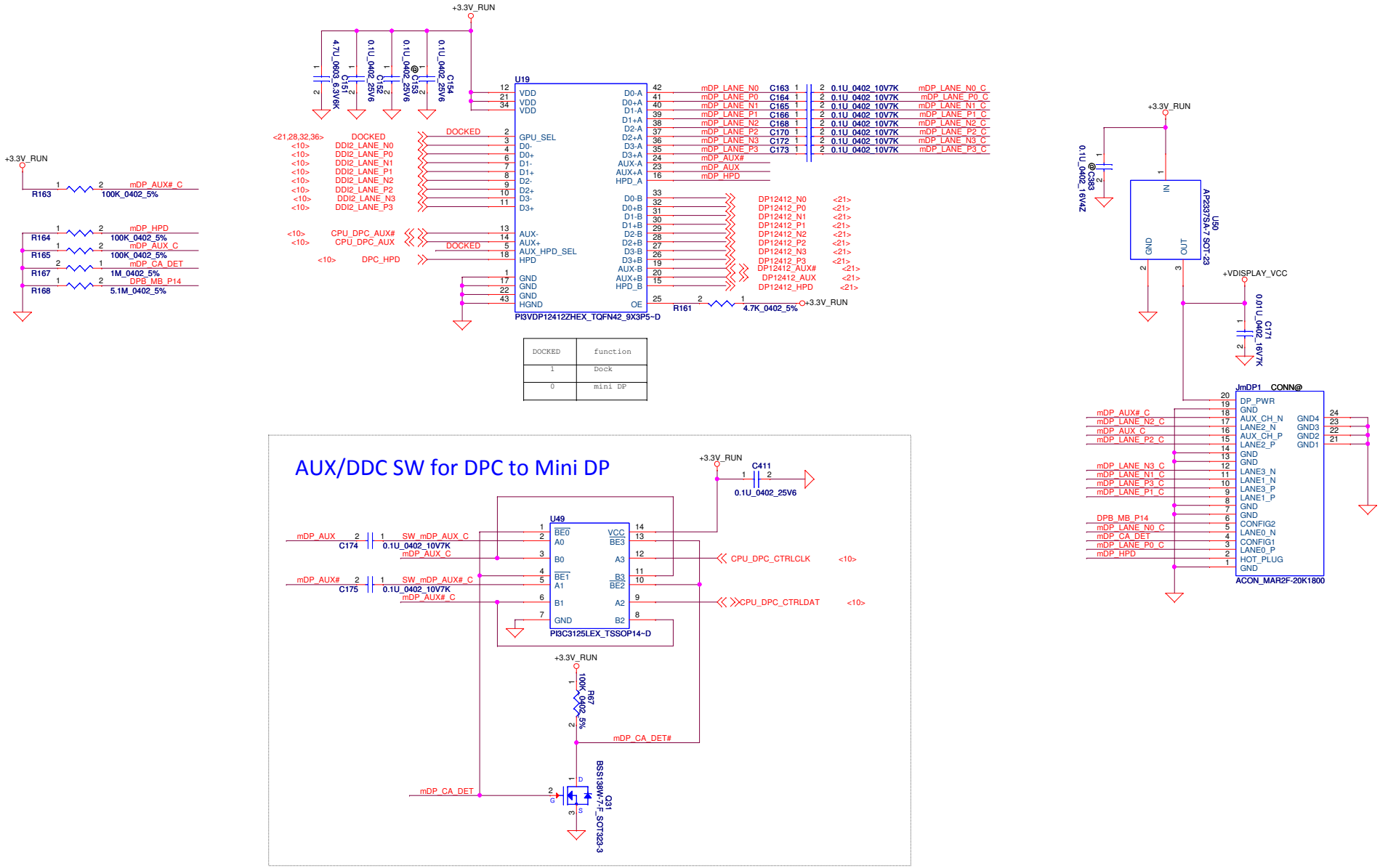
Compal Electronics, Inc.
Title: Codec ALC3226
Size: Document Number: LA-9591P
Rev: 0.4
Date: Friday, May 17, 2013
Sheet 26 of 58



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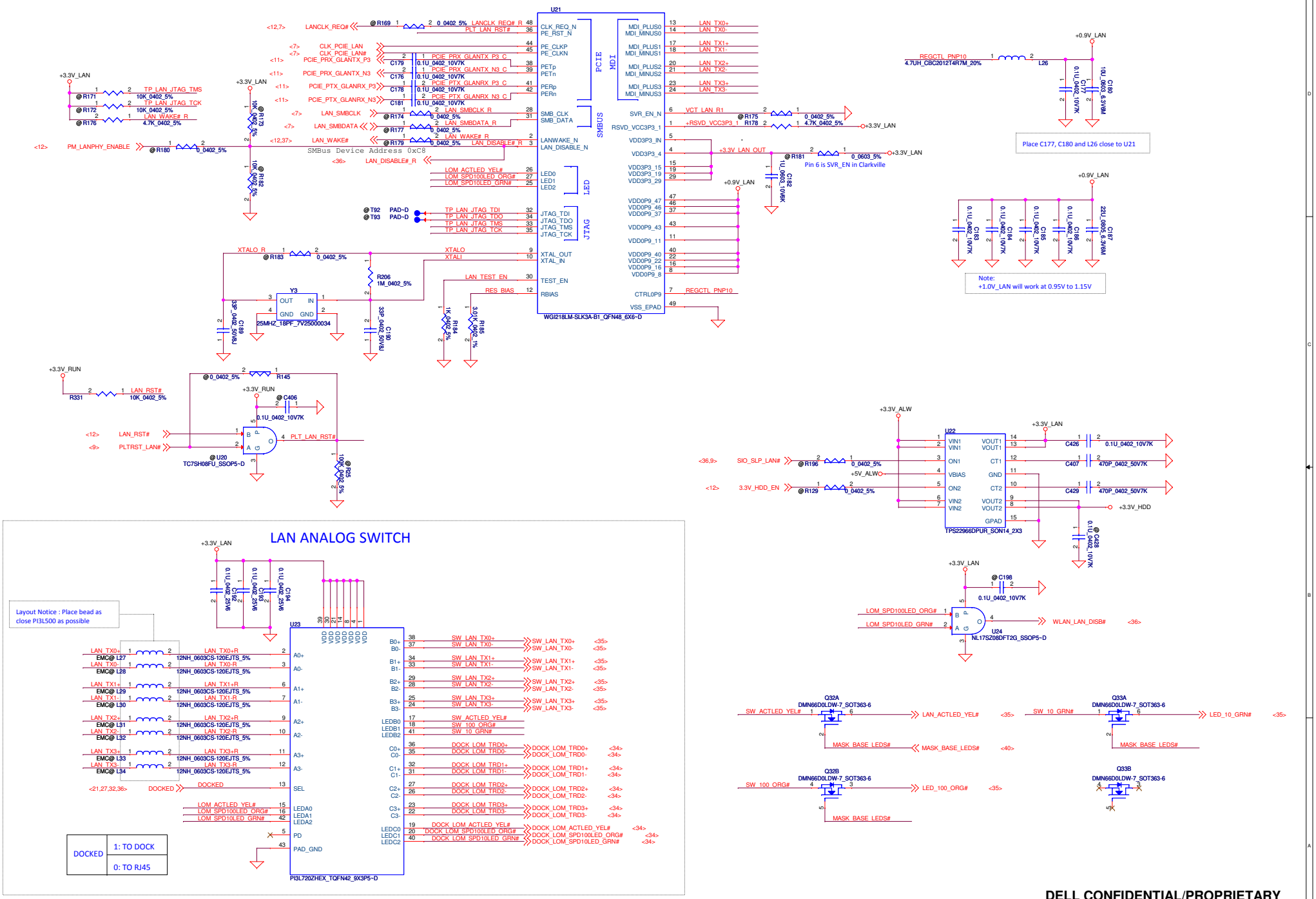
Compal Electronics, Inc.

Title: Mini DP

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 27 of 58



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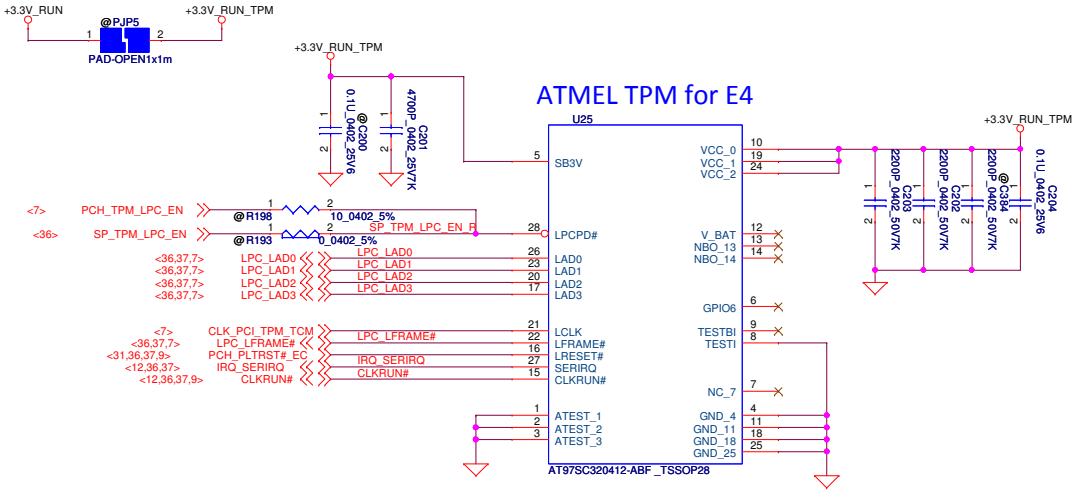
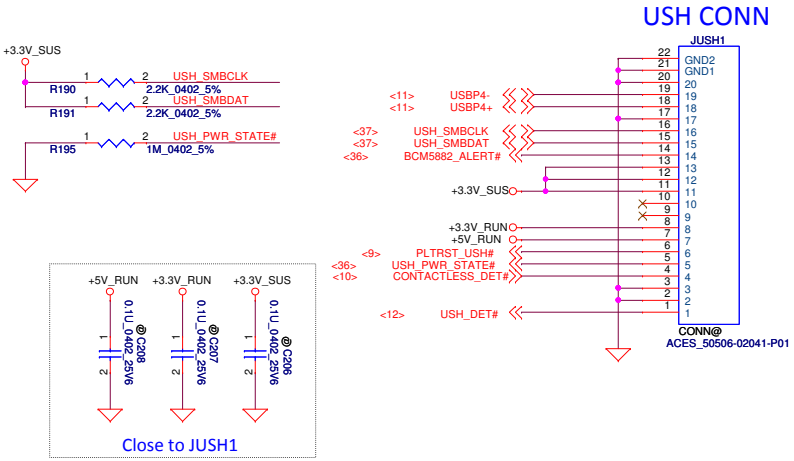
Compal Electronics, Inc.

Title: LAN

Size: | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 28 of 58





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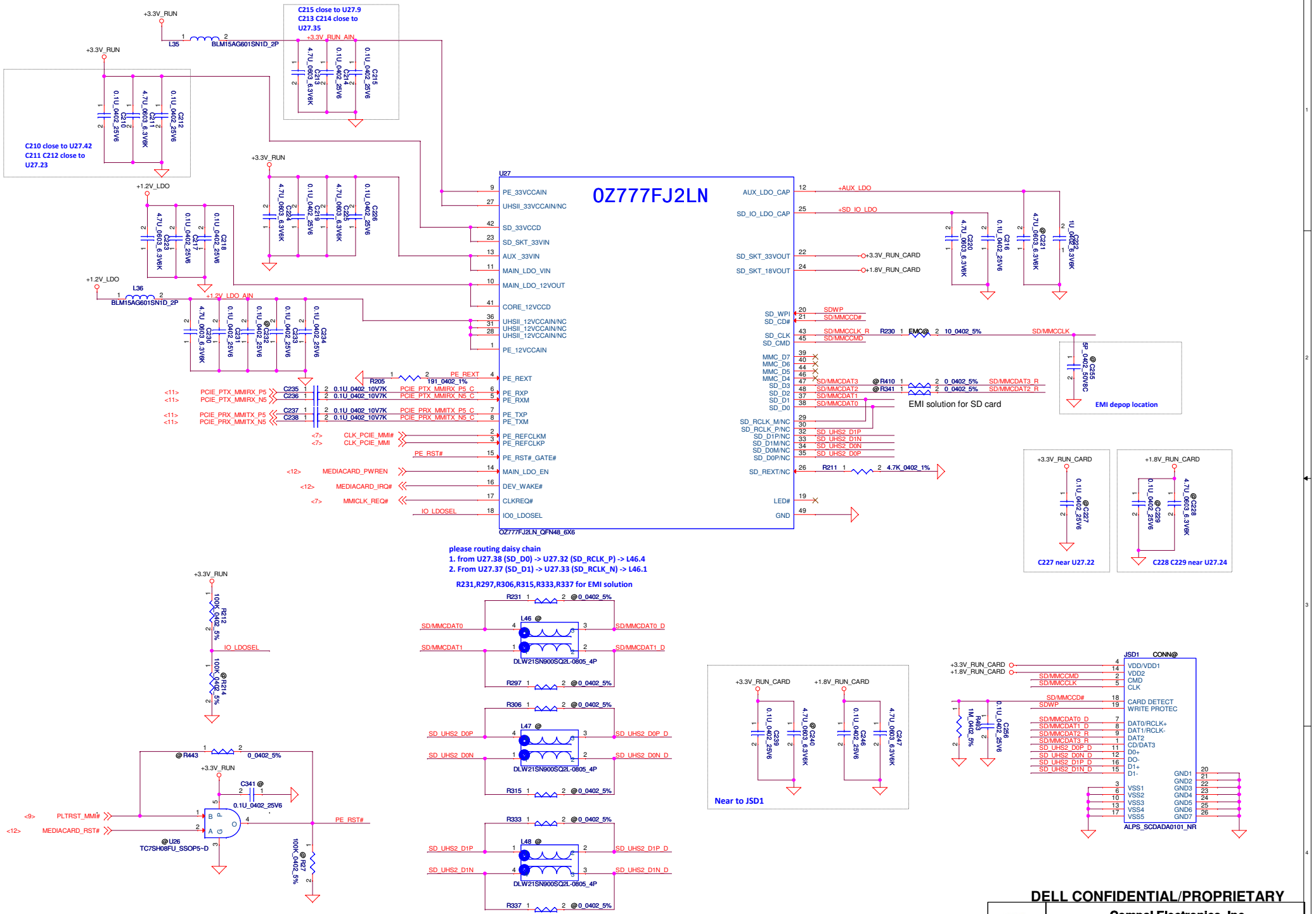
Compal Electronics, Inc.

Title: USH & TPM

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 29 of 58



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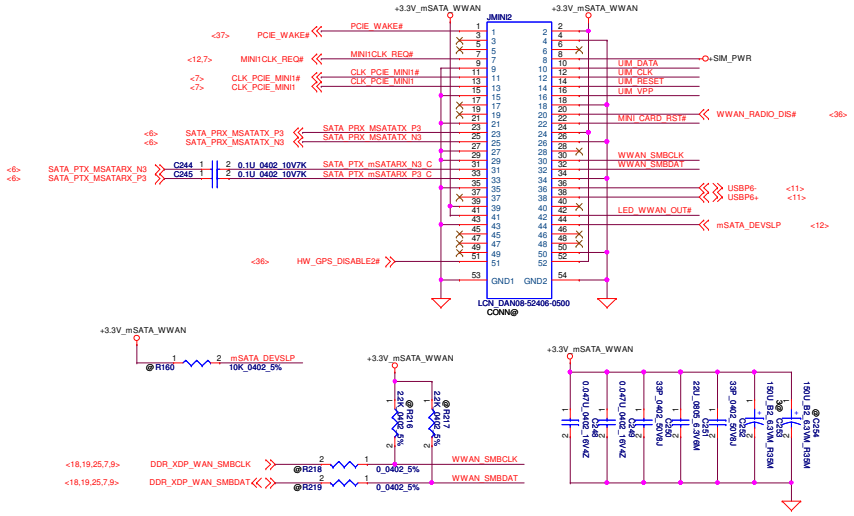
Compal Electronics, Inc.

Title: Card Reader

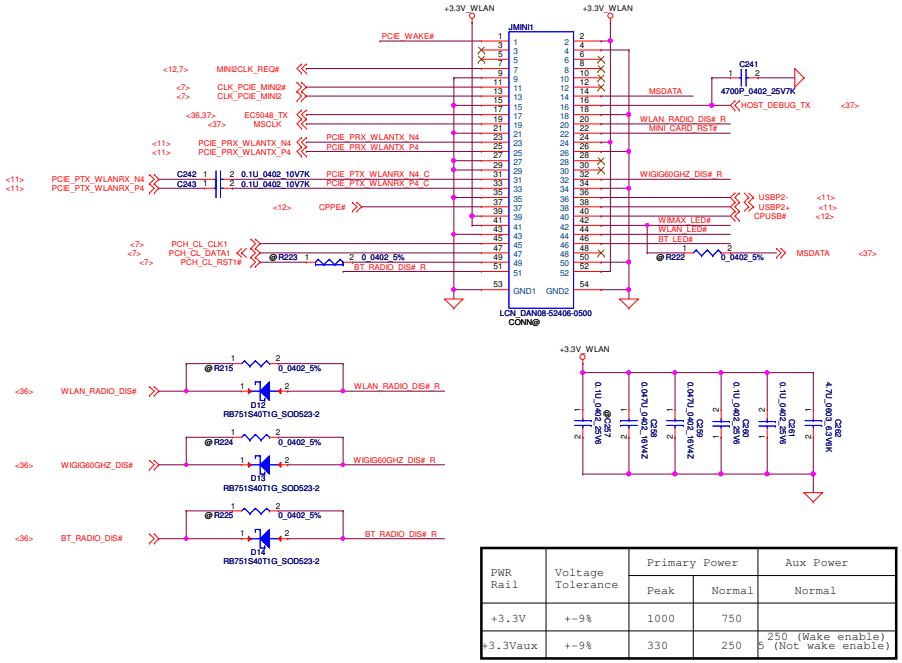
Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 30 of 58

Mini WWAN/GPS/LTE/mSATA/PP H=4

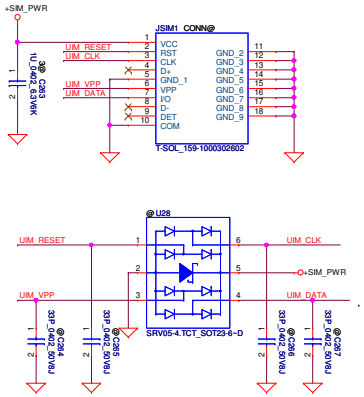


Mini WLAN/WIiGi/BT H=4

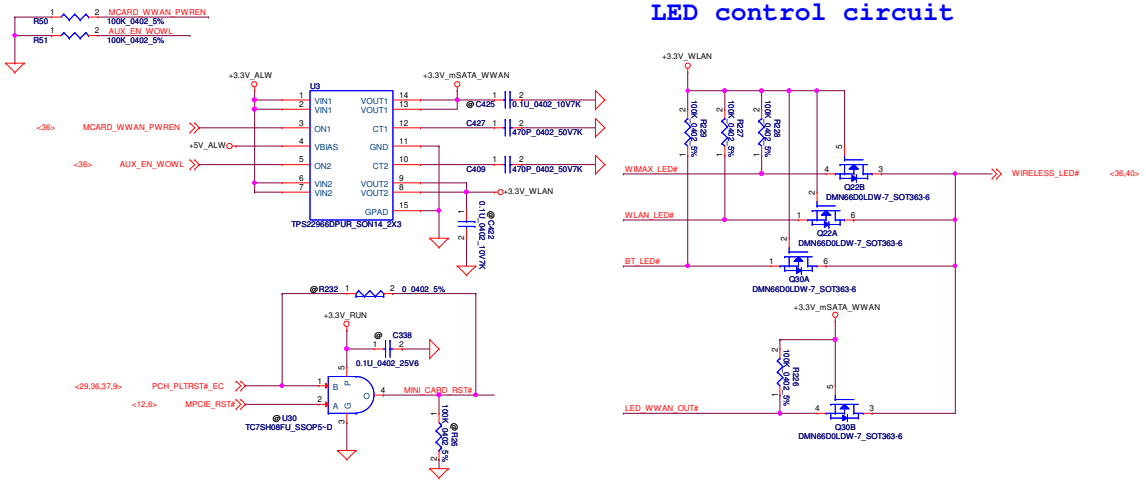


PWR Rail	Voltage Tolerance	Primary Power		Aux Power
		Peak	Normal	Normal
+3.3V	+-9%	1000	750	
+3.3Vaux	+-9%	330	250	250 (Wake enable) 5 (Not wake enable)

SIM Card Push-Push



LED control circuit



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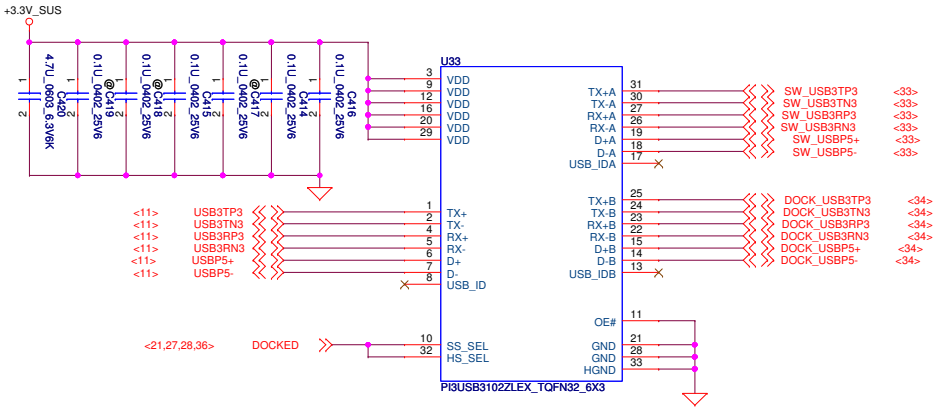
Compal Electronics, Inc.

Title	Mini Card	
Size	Document Number	Rev
	LA-9591P	0.4
Date: Friday, May 17, 2013	Sheet 31 of 58	



check port mapping

DOCKED	function
1	Dock
0	M/B

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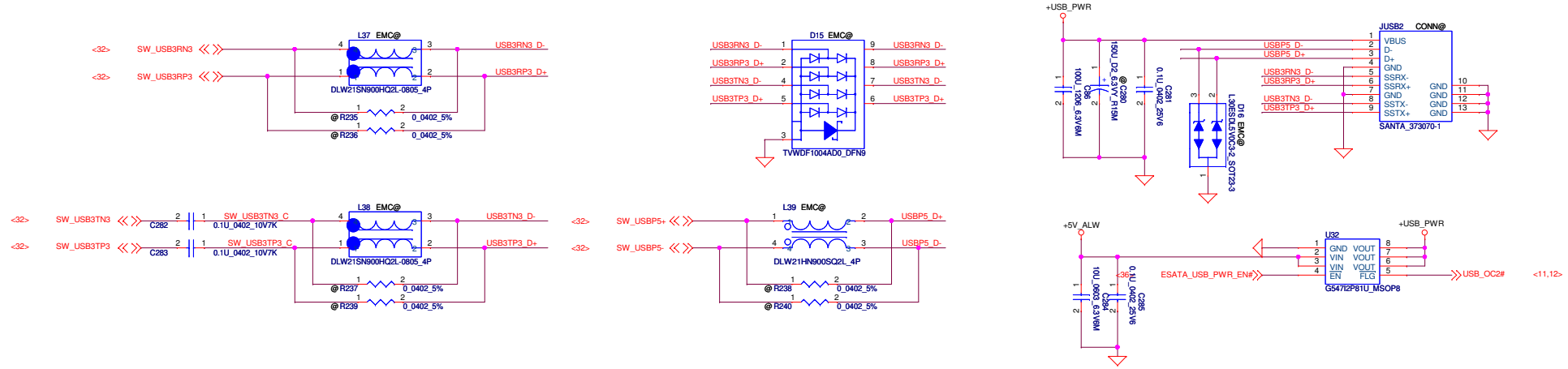
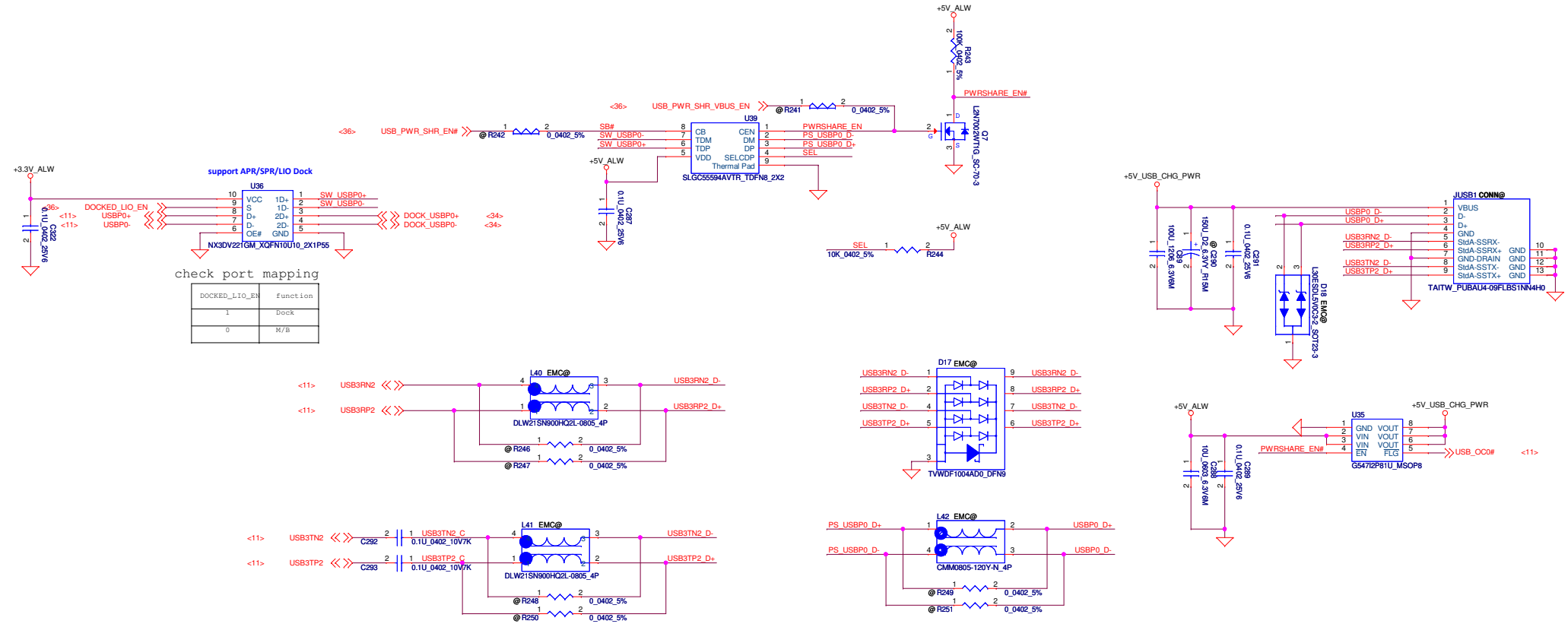
Compal Electronics, Inc.

Title: USB SW

Size | Document Number: LA-9591P | Rev: 0.4

Date: Friday, May 17, 2013 | Sheet 32 of 58





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Compal Electronics, Inc.

Title: USB3.0

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Compal Electronics, Inc.	
Title	E-Dock
Size	Document Number: LA-9591P
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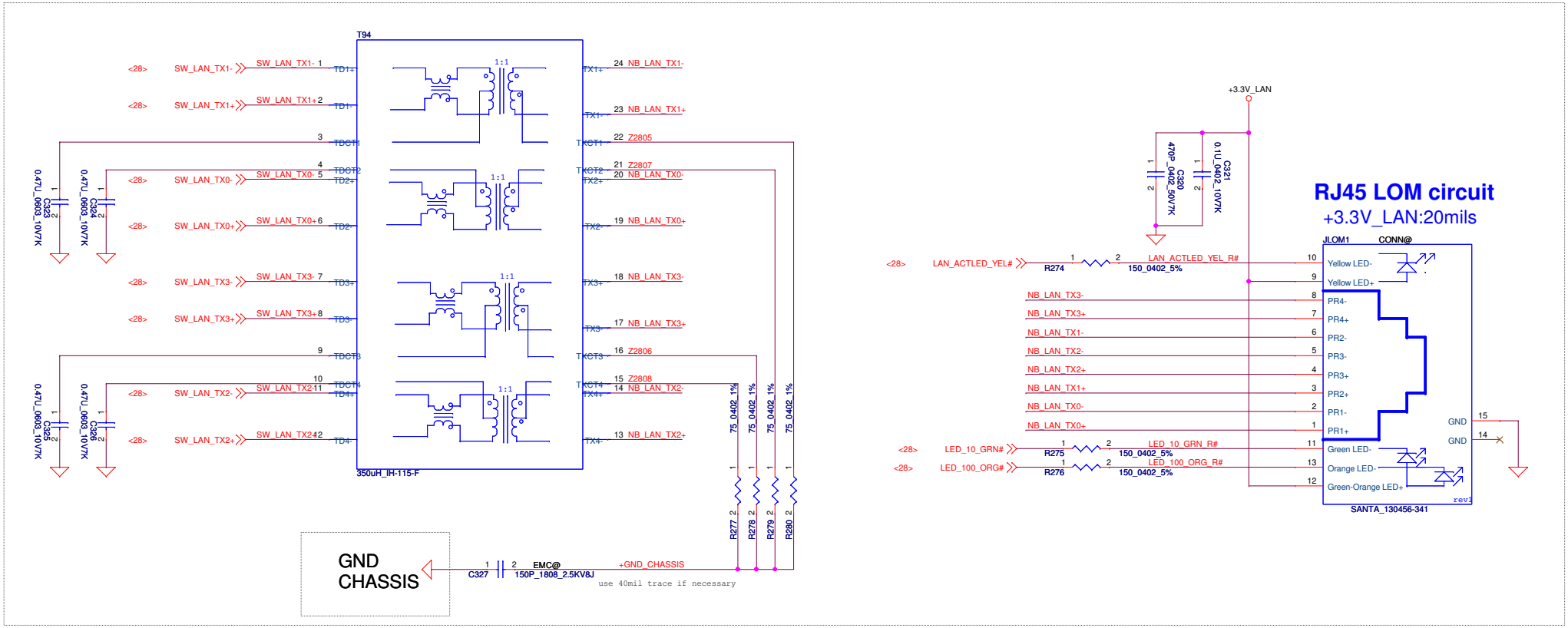

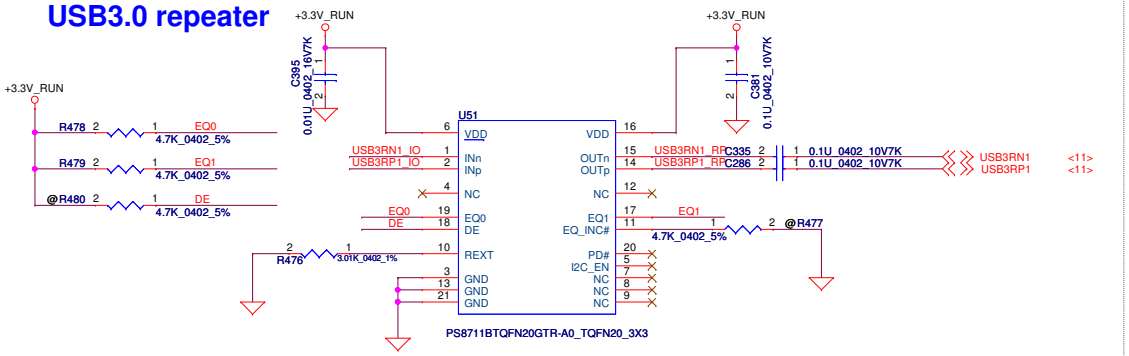

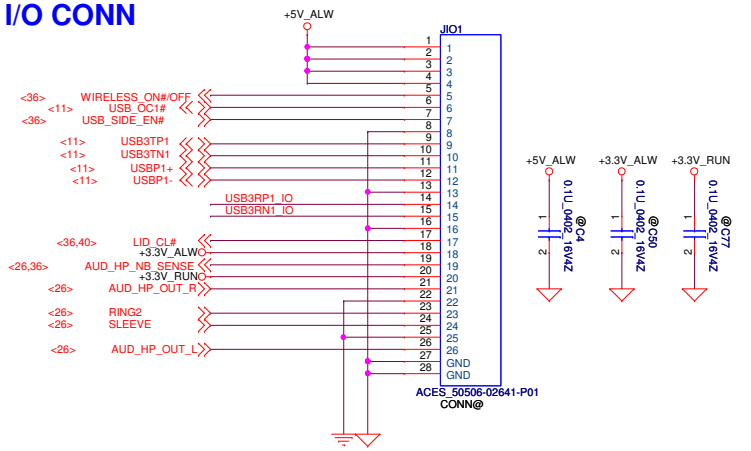

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Compal Electronics, Inc.

Title: RJ45 & I/O

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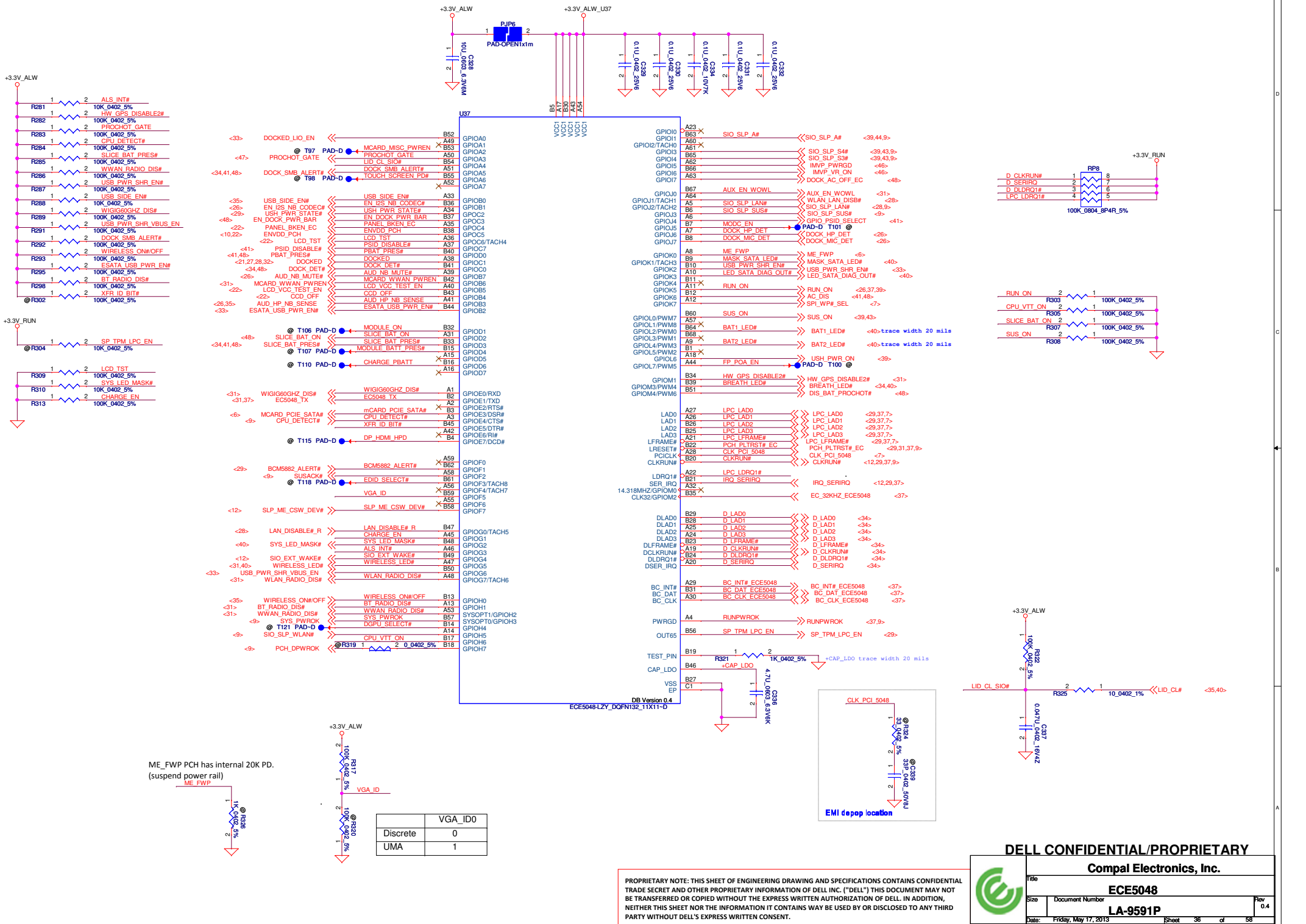
+3.3V_ALW
+3.3V_ALW_U37
PJP6
PAD-OPEN1x1m
C328 10U_0603_6.3V6M
C329 0.1U_0402_25V6
C330 0.1U_0402_25V6
C334 0.1U_0402_10V7K
C331 0.1U_0402_25V6
C332 0.1U_0402_25V6
U37
ALS_INT# R281 10K_0402_5%
HW_GPS_DISABLE2# R282 100K_0402_5%
PROCHOT_GATE R283 100K_0402_5%
CPU_DETECT# R284 100K_0402_5%
SLICE_BAT_PRES# R285 100K_0402_5%
WWAN_RADIO_DIS# R286 100K_0402_5%
USB_PWR_SHR_EN# R287 100K_0402_5%
USB_SIDE_EN# R288 10K_0402_5%
WIGIG60GHZ_DIS# R289 100K_0402_5%
USB_PWR_SHR_VBUS_EN R291 100K_0402_5%
DOCK_SMB_ALERT# R292 100K_0402_5%
WIRELESS_ON#/OFF R293 100K_0402_5%
ESATA_USB_PWR_EN# R295 100K_0402_5%
BT_RADIO_DIS# R298 100K_0402_5%
XFR_ID_BIT# @R302 100K_0402_5%
SP_TPM_LPC_EN @R304 10K_0402_5%
LCD_TST R309 100K_0402_5%
SYS_LED_MASK# R310 100K_0402_5%
CHARGE_EN R313 100K_0402_5%
DB Version 0.4
ECE5048-LZY_DQFN132_11X11-D
ME_FWP PCH has internal 20K PD.
(suspend power rail)
ME_FWP
R326 1K_0402_5%
R317 100K_0402_5%
VGA_ID
R320 100K_0402_5%
VGA_ID0
Discrete 0
UMA 1
R321 1K_0402_5%
+CAP_LDO trace width 20 mils
C336 4.7U_0603_6.3V6K
CLK_PCI_5048
@R324 33_0402_5%
@C339 33P_0402_50V8J
EMI depop location
RP8
D_CLKRUN#
D_SERIRQ
D_DLDRQ1#
LPC_LDRQ1#
100K_0804_8P4R_5%
RUN_ON R303 100K_0402_5%
CPU_VTT_ON R305 100K_0402_5%
SLICE_BAT_ON R307 100K_0402_5%
SUS_ON R308 100K_0402_5%
R322 100K_0402_5%
LID_CL_SIO#
R325 10_0402_1%
LID_CL#
C387 0.047U_0402_16V4Z
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Compal Electronics, Inc.
Title: ECE5048
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Rev: 0.4
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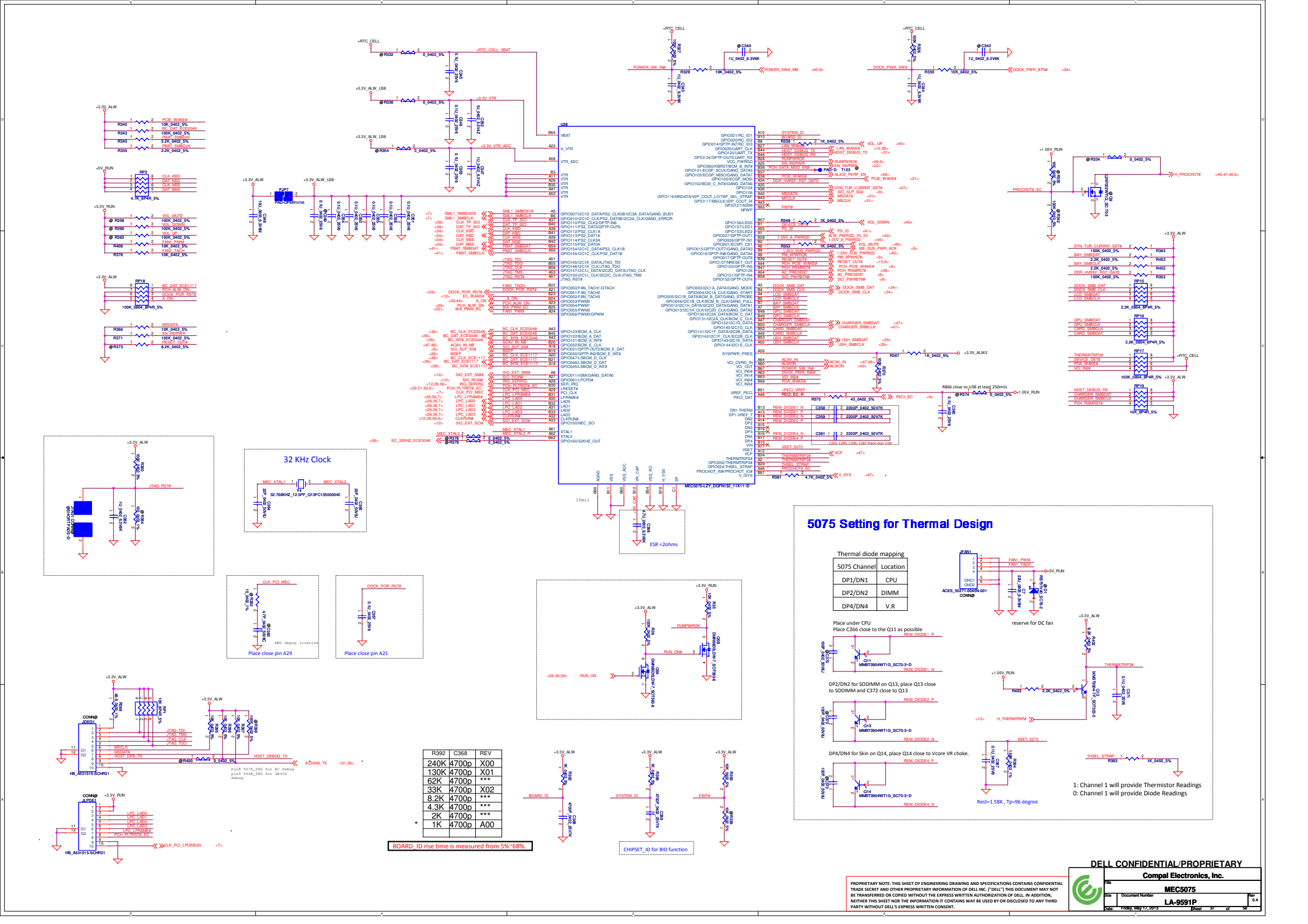
5075 Setting for Thermal Design
Thermal diode mapping
5075 Channel | Location
DP1/DN1 | CPU
DP2/DN2 | DIMM
DP4/DN4 | V.R
Place under CPU
Place C266 close to the Q11 as possible
DP2/DN2 for SODIMM on Q13, place Q13 close to SODIMM and C372 close to Q13
DP4/DN4 for Skin on Q14, place Q14 close to Vcore VR choke.
reserve for DC fan
Rest=1.58K , Tp=96 degree
1: Channel 1 will provide Thermistor Readings
0: Channel 1 will provide Diode Readings
32 KHz Clock
32.768KHZ_12.5PF_Q13FC135000040
ESR <2ohms
Place close pin A29
Place close pin A21
BOARD_ID rise time is measured from 5%~68%.
CHIPSET_ID for BID function
R392 | C368 | REV
240K | 4700p | X00
130K | 4700p | X01
62K | 4700p | X02
33K | 4700p | ***
8.2K | 4700p | ***
4.3K | 4700p | ***
2K | 4700p | ***
1K | 4700p | A00
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Compal Electronics, Inc.
MEC5075
LA-9591P
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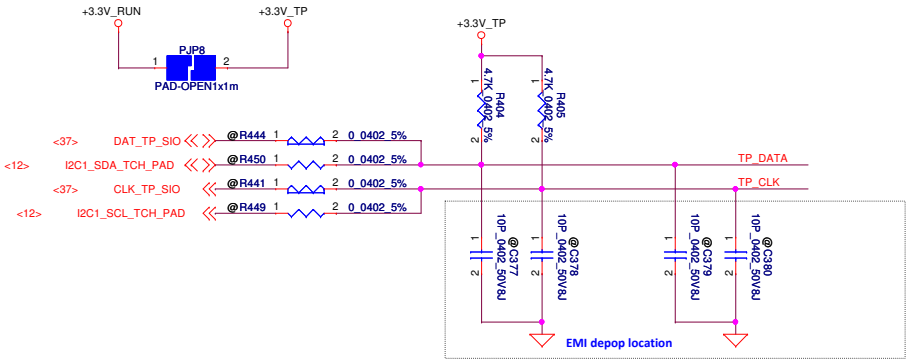
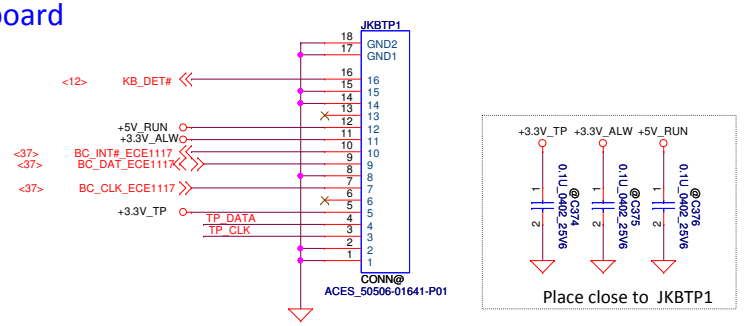
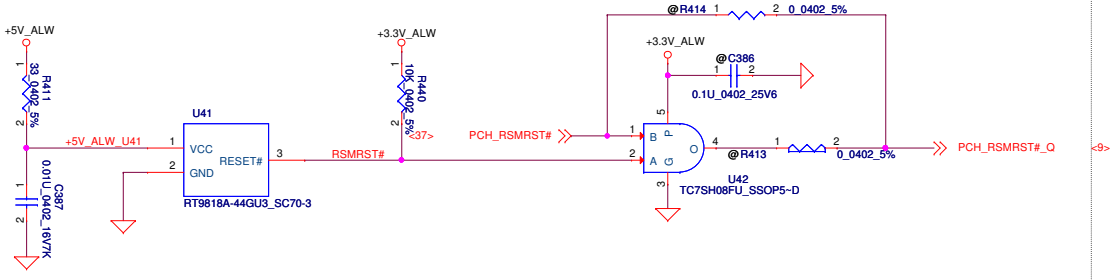
Touch Pad



Keyboard



RSMRST circuit



@IO FFC

Part Number	Description
DA30000GZ00	FPC 0VN LF-9591P REV0 M/B-IO/B

@eDP TS Cable

Part Number	Description
DC02C004S00	H-CONN SET 0VN MB-LCD-LED-CAM-TS

@eDP Cable

Part Number	Description
DC02C004T00	H-CONN SET 0VN MB-LCD-LED-CAM

@SATA Cable

Part Number	Description
DC02C004K00	H-CONN SET 0VN MB-HDD

@DC-IN Cable

Part Number	Description
DC30100MF00	CONN SET 0VN DCJACK-MB 2DW1003-038110F

@RTC BATT

Part Number	Description
DC30100MF00	CONN SET 0VN DCJACK-MB 2DW1003-038110F

@FAN

Part Number	Description
DC28A000800	FAN SET DAQ20 DC5V AB7405HB-HB3 ADDA

@MEDIA Board FFC

Part Number	Description
NBX0001CW00	FFC 8P G P0.5 PAD0.3 50MM MB-MEDIA/B 0VN

@KBTP FFC

Part Number	Description
NBX0001CZ00	FFC 15P G P.5 PAD.3 85MM MB-NFC MODU 0VN

@NFC Board FFC

Part Number	Description
NBX0001CZ00	FFC 15P G P.5 PAD.3 85MM MB-NFC MODU 0VN

@USH Board FFC

Part Number	Description
NBX0001CY00	FFC 20P G P0.5 PAD=0.3 75MM MB-USH/B 0VN

@FP FFC

Part Number	Description
NBX0001D100	FFC 6P G P0.5 PAD=0.3 75MM USH/B-FP 0VN

@Speak

Part Number	Description
PK230003Q0L	SPK PACK ZJX 2.0W 4 OHM FG

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Compal Electronics, Inc.

Title: Keyboard

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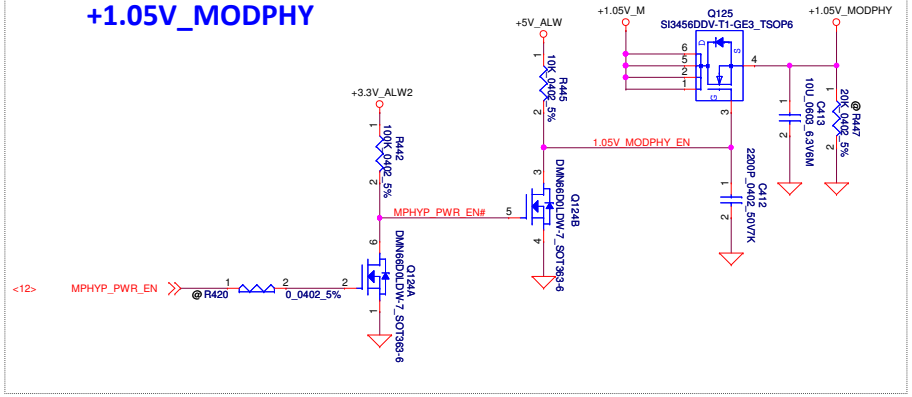
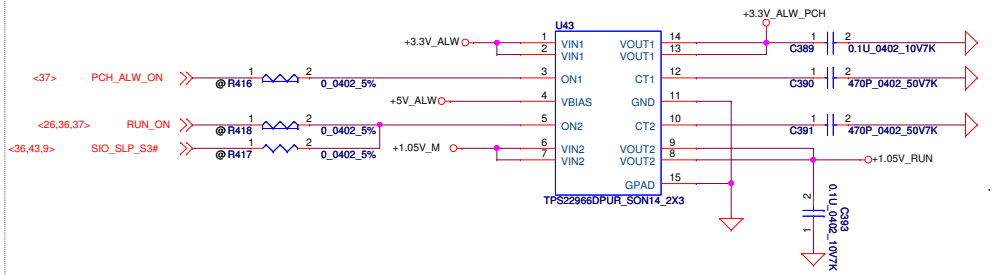
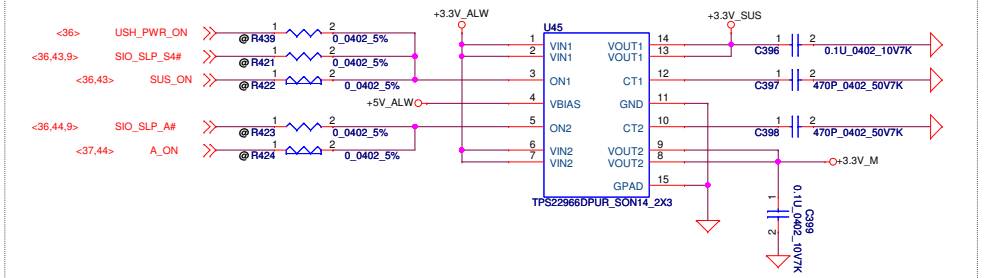
+1.05V_MODPHY



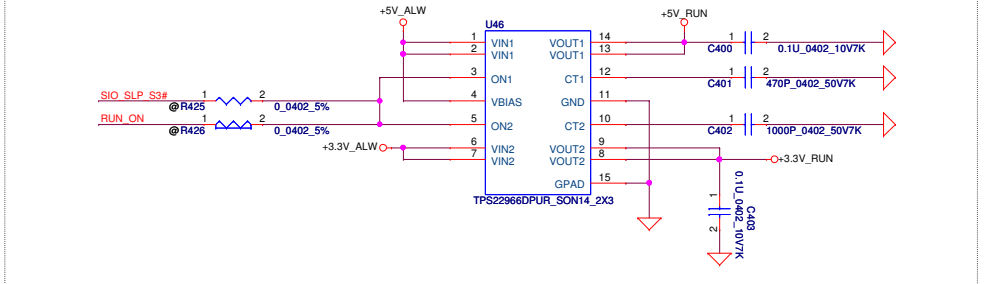
+3.3V_ALW_PCH/+1.05V_RUN source



+3.3V_SUS/+3.3V_M source



+3.3V_RUN/+5V_RUN source



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Compal Electronics, Inc.

Title: Power control

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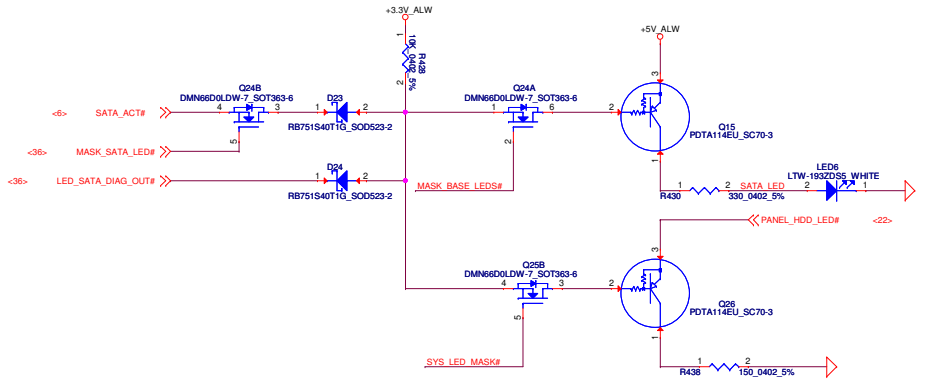
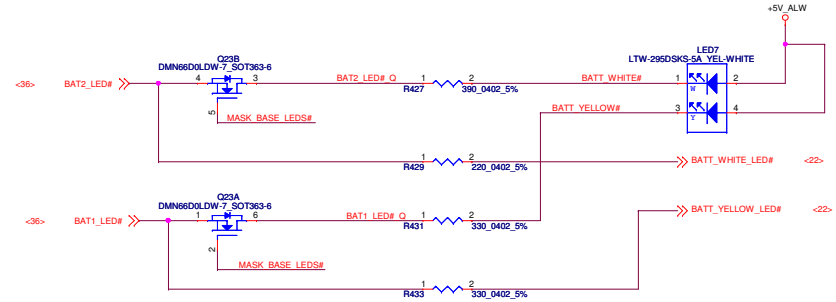
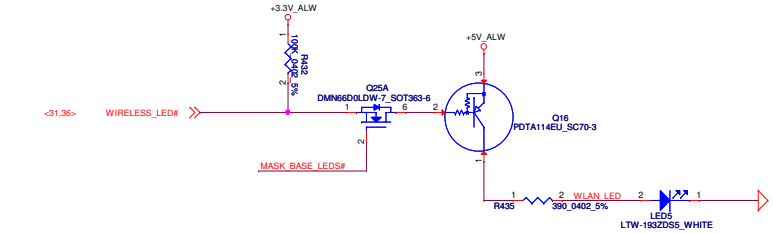
HDD LED solution for White LED



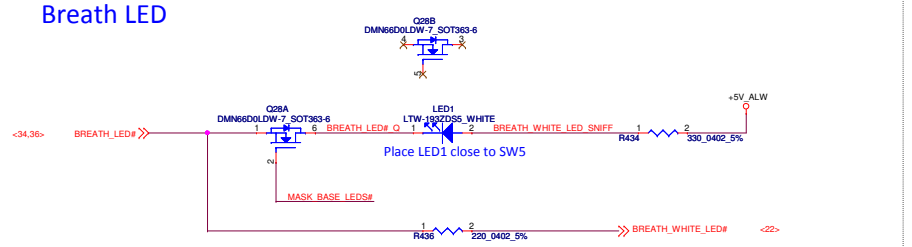
Battery LED

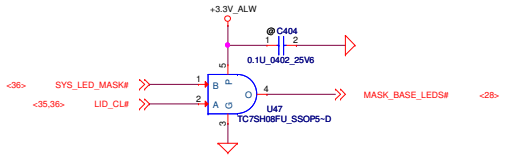


WLAN LED solution for White LED

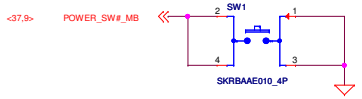


Breath LED



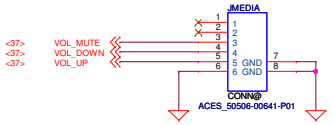


POWER & INSTANT ON SWITCH



EMI CLIP

Media board CONN



Fiducial Mark

@FD1 FIDUCIAL MARK~D
@FD2 FIDUCIAL MARK~D
@FD3 FIDUCIAL MARK~D
@FD4 FIDUCIAL MARK~D

LED Circuit Control Table

	SYS_LED_MASK#	LID_CL#
Mask All LEDs (Sniffer Function)	0	X
Mask Base MB LEDs (Lid Closed)	1	0
Do not Mask LEDs (Lid Opened)	1	1

@H1 H_2P8 @H2 H_2P8 @H3 H_3P1 @H4 H_2P8 @H5 H_2P8 @H6 H_3P1 @H8 H_3P8 @H9 H_3P8 @H10 H_3P8 @H11 H_3P8 @H12 H_5P0 @H13 H_2P8 @H14 H_2P3 @H15 H_2P8 @H16 H_2P8 @H17 H_2P8 @H18 H_2P8 @H19 H_2P8 @H21 H_1P0N @H22 H_1P0N @H23 H_2P1 @H24 H_2P1X2P6 @ST1 CLIP_C5P5 @ST2 CLIP_C5P5

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Compal Electronics, Inc.

Title: PAD, LED

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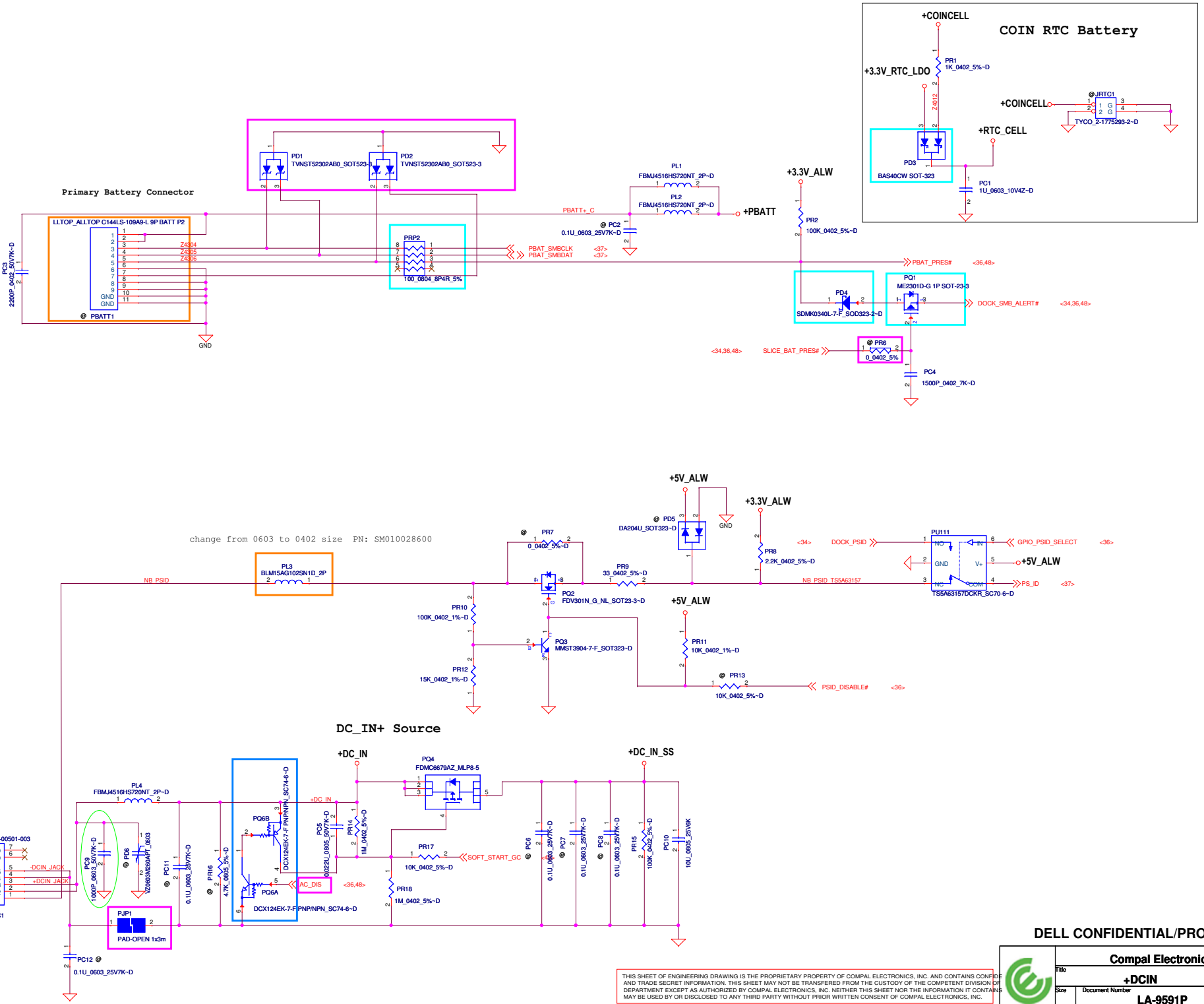

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Compal Electronics, Inc.		
Title: +DCIN		
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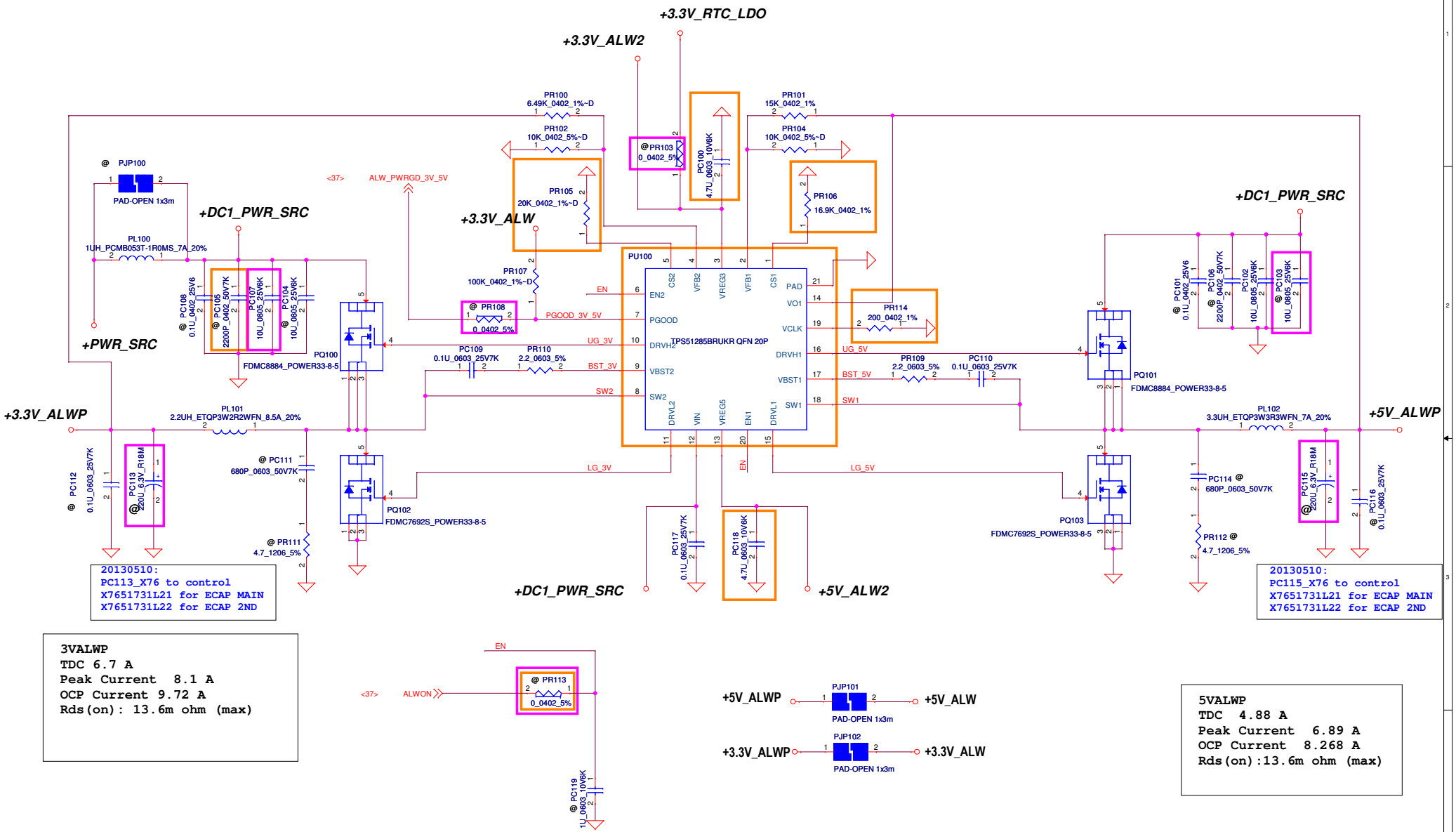

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Compal Electronics, Inc.

Title: +5V_ALW/3.3V_ALW

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1.35Volt +/- 5%
TDC: 7.2 A
Peak Current: 10 A
OCP current: 12 A
Rds(on): 13.6m ohm(max)

0.75Volt +/- 5%
TDC 0.525A
Peak Current 0.75A
OCP Current 0.9A

+PWR_SRC
PJP200
PAD-OPEN 1x2m~D
1.35V_B+
PC200 4.7U_0805_25V6K~D
PC201 4.7U_0805_25V6K~D
@ PC202 0.1U_0402_25V6
@ PC203 2200P_0402_50V7K~D
PR200 2.2_0603_5%~D
BOOT_1.35V
PC204 0.22U_0603_16V7K~D
DH_1.35V
SW_1.35V
DL_1.35V
+VLDOIN_1.35V
PJP201
PAD-OPEN1x1m
+1.35V_MEN_P
+0.675V_P
PC205 22U_0805_6.3V6M
+1.35V_MEN_P
PL200 1UH_PCMB063T-1R0MS_12A_20%
PQ200 FDMC8884_POWER33-8-5
PQ201 FDMC7692S_POWER33-8-5
PU11 RT8207MZQW_WQFN20_3X3
PHASE UGATE BOOT VLDOIN VTT PAD VTTGND VTTSNS GND VTTREF VDDQ LGATE PGND CS VDDP VDD PGOOD TON S5 S3 FB
PR201 23.7K_0402_1%
CS_1.35V
PC209 1U_0603_10V6K~D
PR202 5.1_0603_5%~D
VDD_1.35V
PC211 1U_0603_10V6K~D
+5V_ALW
+V_DDR_REF
+V_DDR_REF
PC212 0.033U_0402_16V7~D
@ PC207 330U_2.5V_ESR16M
@ PC208 680P_0603_50V7K
SNUB_1.35V
@ PR203 4.7_1206_5%
+3.3V_ALW
PR204 100K_0402_1%~D
<37> 1.35V_SUS_PWRGD
1.35V_SUS_PWRGD
FB sense trace
when FB pull down to GND
PR205 8.06K_0402_1%~D
1.35V_FB
PC213 100P_0402_50V8J~D
PR206 1M_0402_1%~D
1.35V_B+
@ PR207 0_0402_5%~D
<36,39,9> SIO_SLP_S4#
S5_1.35V
<36,39> SUS_ON
@ PR208 0_0402_5%
@ PC215 0.1U_0402_16V7K~D
PR209 10K_0402_1%
@ PC214 0.1U_0402_16V7K~D
@ PR210 0_0402_5%
<18> 0.675V_DDR_VTT_ON
@ PR211 0_0402_5%~D
<36,39,9> SIO_SLP_S3#
+1.35V_MEN_P
FB sense trace

20130510:
PC207_X76 to control
X7651731L21 for ECAP MAIN
X7651731L22 for ECAP 2ND

Mode	S3	S5	+1.5V_MEN	+V_DDR_REF	+0.75V_P
S5	L	L	off	off	off
S3	L	H	on	on	off(Hi-Z)
S0	H	H	on	on	on

+1.35V_MEN_P
PJP203
JUMP_1x3m
PJP204
JUMP_1x3m
+1.35V_MEM

+0.675V_P
PJP202
PAD-OPEN1x1m
+0.675V_DDR_VTT

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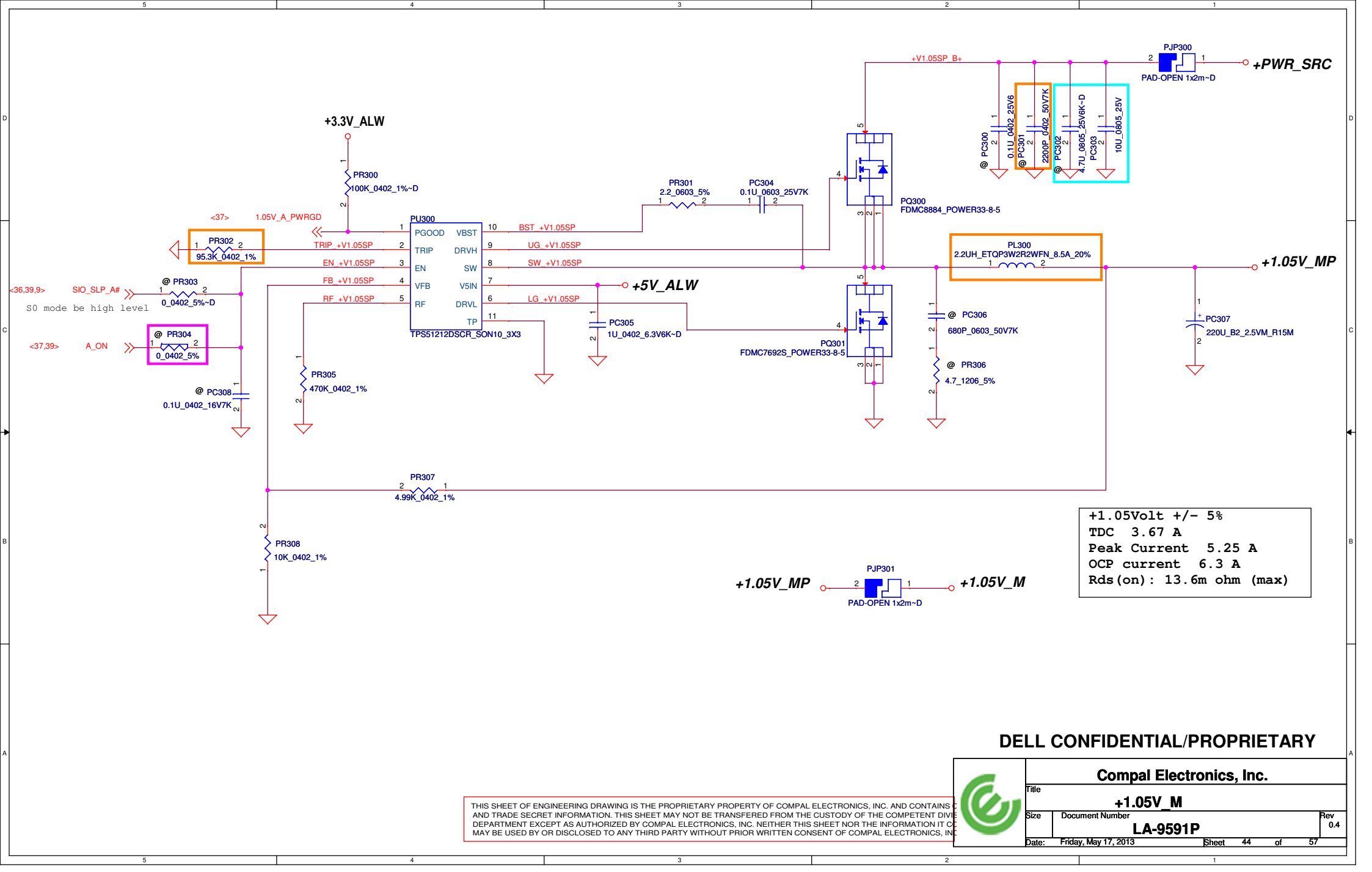
Title: +1.35V_MEN/+0.675V_DDR_VTT
Size: Document Number: LA-9591P
Rev: 0.4
Date: Friday, May 17, 2013 Sheet 43 of 57



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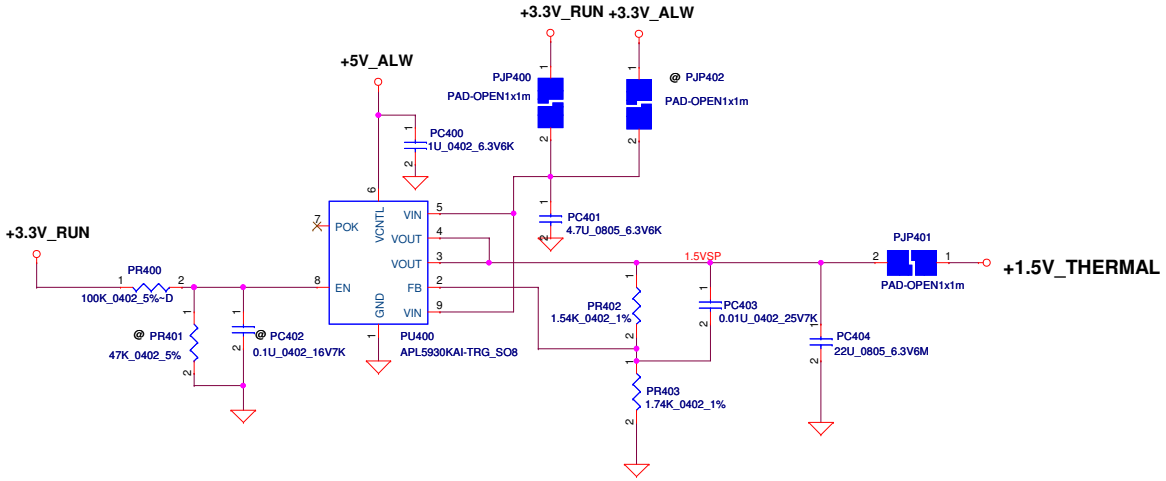
Compal Electronics, Inc.		
Title: +1.05V_M		
Size	Document Number: LA-9591P	Rev: 0.4
Date: Friday, May 17, 2013	Sheet 44 of 57	



Security Classification	Compal Secret Data		
Issued Date	<Issued_Date>	Deciphered Date	<Deciphered_Date>

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Custom	*Chief River VC*	0.4

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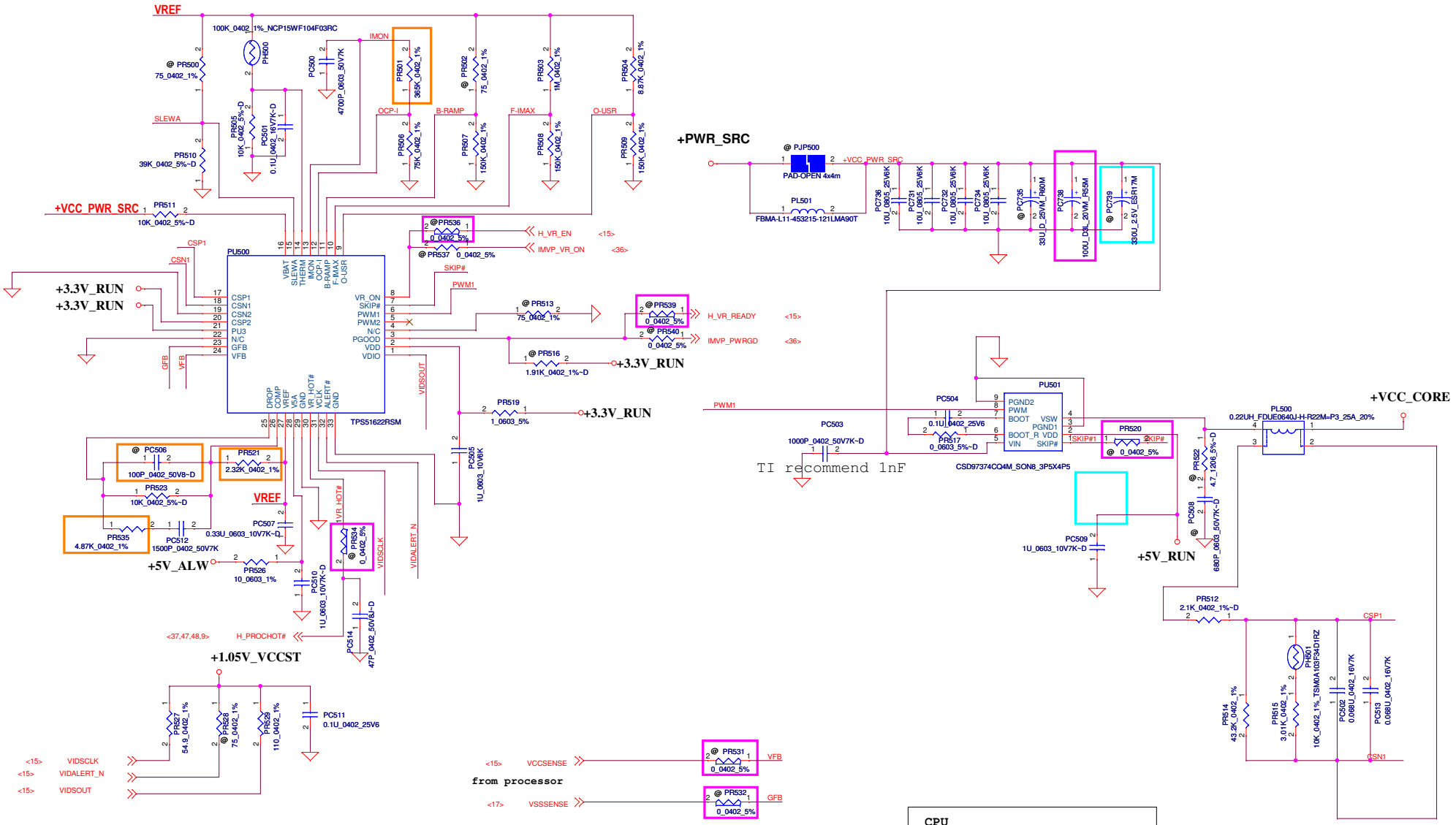
20120911 TI-Alex Note: Although there is no pulse-overlap in 1-phase mode, during USR, the pulse comes in immediately.
So, the problem with PR504 = DNP is that if there is a high ripple, and USR is faultily detected, you will get a double-pulse.
So, we want to make sure USR is not active if it is not necessary. So, I moved it all the way to highest level so PR504 works to 8.87k.



CPU
TDC 10 A
Peak Current 32 A
OCP Current 38.4 A
DCR: 0.82m +-5% ohm
PH500 B value: 4250k 1%
PH501 B value: 3435k 1%

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Size: | Document Number: LA-9591P | Rev: 0.4

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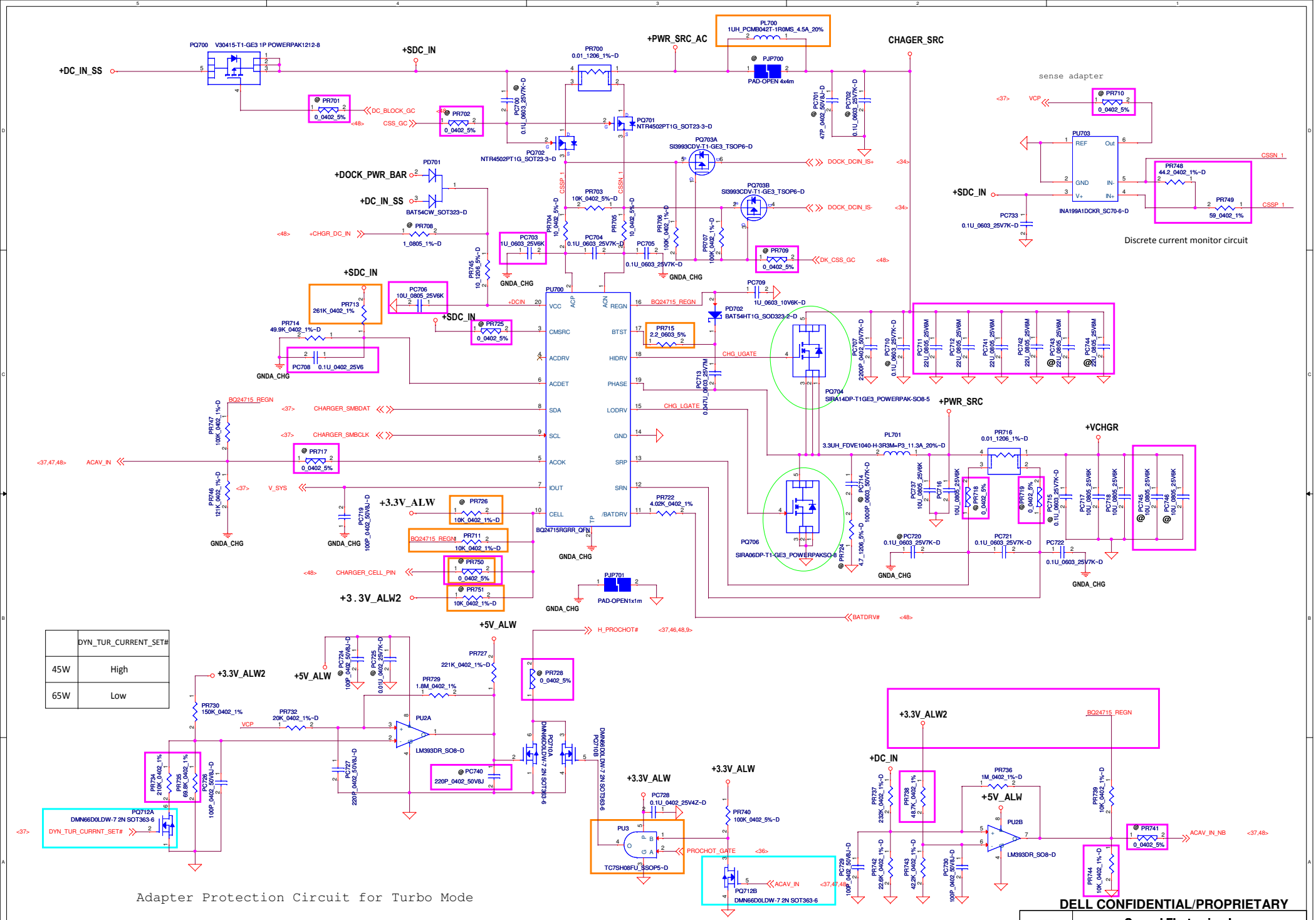

	DYN_TUR_CURRENT_SET#
45W	High
65W	Low

Adapter Protection Circuit for Turbo Mode

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Compal Electronics, Inc.	
Title	+GPU_CORE
Size	Document Number: LA-9591P
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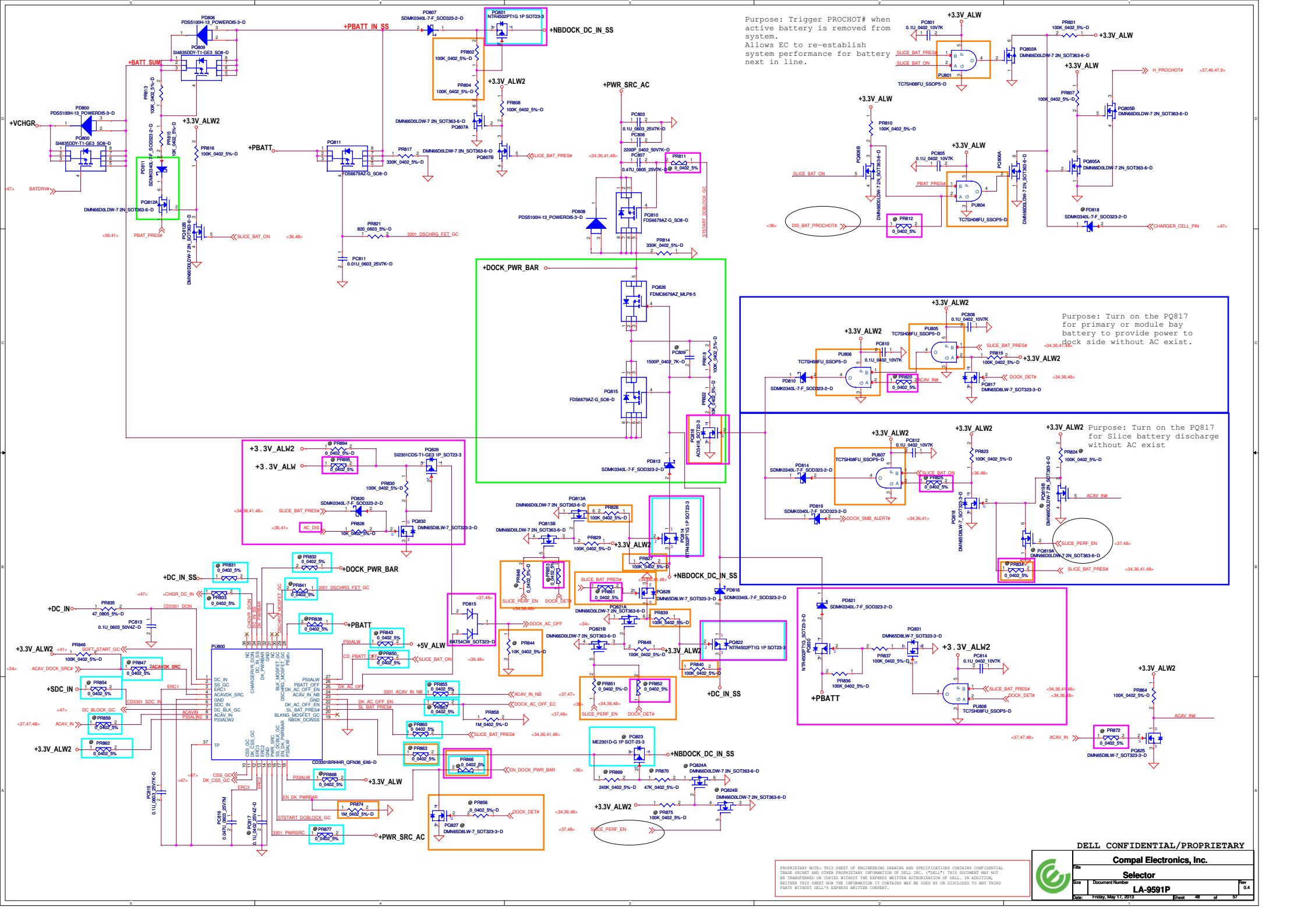
Date: Friday, May 17, 2013	Sheet 47 of 57


Purpose: Trigger PROCHOT# when active battery is removed from system.
Allows EC to re-establish system performance for battery next in line.
Purpose: Turn on the PQ817 for primary or module bay battery to provide power to dock side without AC exist.
Purpose: Turn on the PQ817 for Slice battery discharge without AC exist
+PBATT_IN_SS
+NBDOCK_DC_IN_SS
+PWR_SRC_AC
+VCHGR
+BATT_SUM
+PBATT
+DOCK_PWR_BAR
+DC_IN_SS
+DC_IN
+SDC_IN
+5V_ALW
+3.3V_ALW
+3.3V_ALW2
+3.3V_ALW2
+3.3V_ALW
+PWR_SRC_AC
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Compal Electronics, Inc.
Selector
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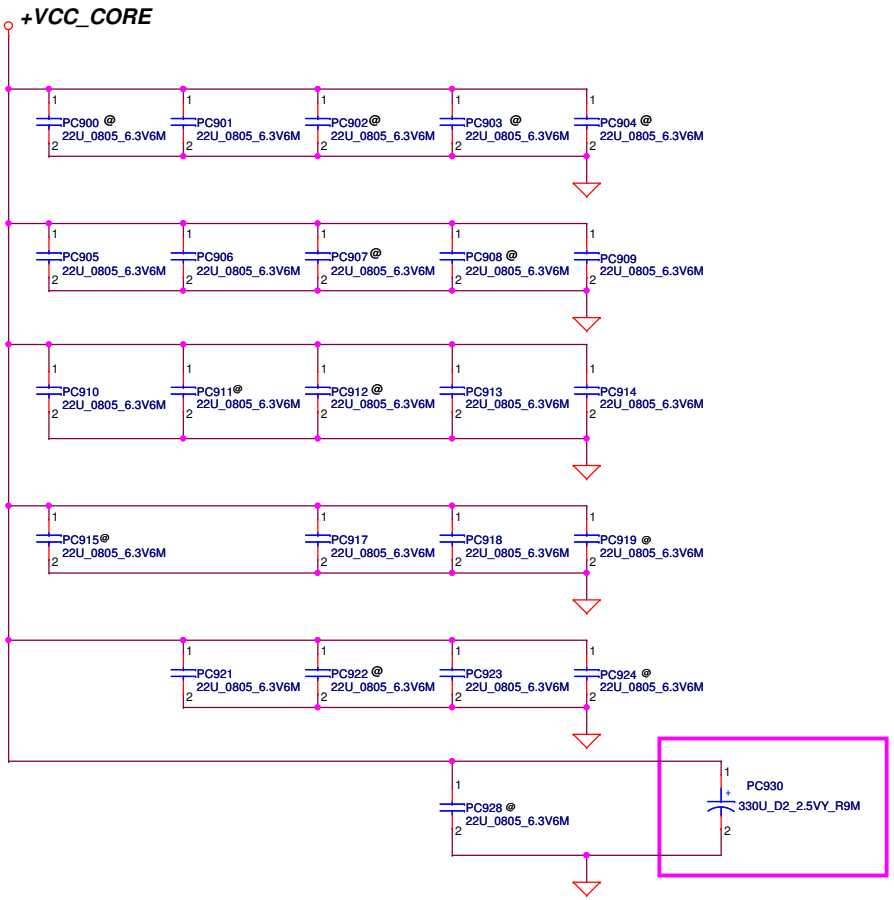
Based on PDDG rev 0.7 Table 5-1.



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Title	PROCESSOR DECOUPLING	
Size	Document Number LA-9591P	Rev 0.4
Date: Friday, May 17, 2013	Sheet 49 of 57	

Version Change List (P. I. R. List) Page 1

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	P45	1.5VSP	8/17	Compal	Base power budget request, add 1.5V powre rail	Add PU400	
2	P42	+5V/+3.3V	8/17	Compal	reserver PR114 for TPS51282 application	ADD @PR114	
3	P47	Charger	8/17	Compal	EC can't detect charger IC cause can't charger	modify SMBus net for correct connect	
4	P46	Vcore	8/17	Compal	schematic control error cause can't set OCP	add Vref net for correct connect	
5	P48	Selector	8/17	Compal	in order to meet latest multi-battery request	change control signal for meet E5 request	
6	P43	1.35V/0.675V	8/17	Compal	chagne OCP setting	change PR201 from 20k to 24.9k.	
7	P42	+5V/+3.3V	10/22	Compal	Reserve 0ohm for 3v5v enable debug	Change PR113 from SD03420018L (S RES 1/16W 2K +-1% 0402) to SD028000080 (S RES 1/16W 0 +-5% 0402)	X01
8	P44	+1.05V_MP	10/22	Compal	+1.05V_MP EA for ripple portion can't meet spec. 31.5mv, after change from 1u to 2.2u test is pass	Change PL300 from SH00000PJ00 (S COIL 1UH +-20% PCMB063T-1R0MS 12A) to SH00000MR00 (S COIL 2.2UH +-20% ETQP3W2R2WFN 8.5A)	X01
9	P42	+5V/+3.3V	10/22	Compal	Original 3v5v IC -TPS51225 can't support 2cell battery follow TI suggestion, When TPS51285A/B is used, please update the below four components. 1)VREG5 cap to 4.7uF 2)VREG3 cap to 4.7uF 3)CS1 resistor to 1/5 of the Tps51275's value 4)CS2 resistor to 1/5 of the Tps51275's value 5)VCLK connection (when not be used): add 200-ohm to GND	Change PU100 from SA00005LS00 (S IC TPS51225CRUKR QFN 20P PWM) to SA000064T00 (S IC TPS51285BRUKR QFN 20P PWM) 1)2)Change PC118(VREG5 Cap) and PC100(VREG3 Cap) from SE080105K80(S CER CAP 1U 10V K X5R 0603) to SE00000MA00(S CER CAP 4.7U 10V K X5R 0603) 3) Change PR106(for CS1) from SD03484528L (S RES 1/16W 84.5K +-1% 0402) to SD034169280 (S RES 1/16W 16.9K +-1% 0402) 4) Change PR105(for CS2) from SD03410038L (S RES 1/16W 100K +-1% 0402) to SD034200280 (S RES 1/16W 20K +-1% 0402) 5) Add PR114 SD034200080(S RES 1/16W 200 +-1% 0402)	X01
10	P47 P48	Charger Selector	10/22	Compal	To avoid HW and Power SMT materials can't entirely replace	Change PU3,PU801,PU804,PU805,PU806,PU807 from SA74108040L(S IC 74AHC1G08GW SOT353 AND) to SA00708012L(S IC TC7SH08FU SSOP 5P AND)	X01
11	P47	Charger	10/22	Compal	follow E5- Salado 14"15" schematic	1) @PQ819, @PQ824 2) EMI request for add PL700 SH00000IW00(S COIL 1UH +-20% PCMB042T-1R0MS 4.5A)	X01
12	P46	Vcore	11/02	Compal	follow TI suggestion modify setting value to meet Intel VR12.6(ULV) validation EA 1) Imon 2) Loadline 3) transient	1) Change PR501 from SD034422380 (S RES 1/16W 422K +-1% 0402) to SD034365380 (S RES 1/16W 365K +-1% 0402) 2) Change PR521 from SD000009M80 (S RES 1/16W 2.61K +-1% 0402) to SD00000WS8L(S RES 1/16W 2.32K +-1% 0402) 3) @PC506 100p_0402 and change PR535 from SD02810028L(S RES 1/16W 10K +-5% 0402) to SD034487100 (S RES 1/16W 4.87K +-1% 0402 (LF))	X01

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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
13	P47	Charger	11/05	Compal	1) TI suggestion BQ24715 cell pin pull high 3.3V change to V_regn(6v) for sequence issue 2) Reserve 0 ohm for debug	1) Change PR711 from SD02800008L (S RES 1/16W 0 +-5% 0402) to SD034100280 (S RES 1/16W 10K +-1% 0402) ,add PR750 SD028000080(S RES 1/16W 0 +-5% 0402) 2) Add @PR751	X01
14	P42	+5V/+3.3V	11/05	Compal	follow E5- Salado 14"15" schematic	1) @PR863, @PR870, @PR869, @PR824, @PR875, @PQ823 2) Add @PR848, @PR851 and add PR834, PR852, PR853, all is SD028000080(S RES 1/16W 0 +-5% 0402) 3) Add PR874 SD028100480(S RES 1/16W 1M +-5% 0402) 4) Add PD819 SCS0340L01L(S SCH DIO SDMK0340L-7-F SOD-323)	X01
15	P47	Charger	11/05	Compal	Improve charger efficiency	Change PR715 from SD028200A80 (S RES 1/16W 20 +-5% 0402) to SD013220B80 (S RES 1/10W 2.2 +-5% 0603)	X01
16	P47	Charger	11/05	Compal	follow E5- Salado 14"15" schematic	Delete @PR731, @PR733, @PU702	X01
17	P44	+1.05VTTP	11/05	Compal -QAD team -Huang.Hanks (PCP)	Support QAD WCEPTA analysis, to modify 1.05 OCP Rtrip resistance to 95K, Cpk value will pass specification.	Change PR302 from SD00000H880 (S RES 1/16W 54.9K +-1% 0402) to SD034953280 (S RES 1/16W 95.3K +-1% 0402)	X01
18	P48	+5V/+3.3V 1.35V/0.675V +1.05V_MP	11/05	Compal - EMC team Wen. Andy	EMC team suggestion	@PC105, @PC203, @PC301	X01
19	P48	Selector	11/15	Compal	follow E5- Salado 14"15" schematic for undock shutdown issue	Add PQ827 SB00000UO00 (S TR DMN65D8LW-7 1N SOT323-3), @PR856 SD028000080 (S RES 1/16W 0 +-5% 0402), PQ816 SB534020000 (S TR AO3402 1N SOT-23), PQ828 SB00000UO00 (S TR DMN65D8LW-7 1N SOT323-3), PR861 SD028000080 (S RES 1/16W 0 +-5% 0402) PR802, PR827, PR840 change from SD028240380 (S RES 1/16W 240K +-5% 0402) to SD028470280 (S RES 1/16W 47K +-5% 0402), PR804, PR826, PR839 change from SD028470280 (S RES 1/16W 47K +-5% 0402), to SD028240380 (S RES 1/16W 240K +-5% 0402)	X01
20	P47 P48	Charger Selector	12/12	Compal		Change PR713 from SD034294380 (S RES 1/16W 294K +-1% 0402) to SD034261380 (S RES 1/16W 261K +-1% 0402) @PR844	X01
21	P41	+DCIN	2013 /01/11	Compal- ESD team	ESD team's PD1 vendor(NXP) proposal PD1 pin 5 connected to the VCC (5V or 3.3V).	PD1 pin5 connect to +3.3V_ALW	X01_2

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Version Change List (P. I. R. List)

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
22	P48	Selector	2013/01/23	Compal	To avoid +DOCK_PWR_BAR leakage voltage when system only with main battery	1). Add PU808 P/N: SA007080120 (S IC TC7SH08FU SSOP 5P AND) 2). Add PQ830 P/N: SB000007900 (S TR NTR4502PT1G 1P SOT23-3) 3). Add PQ831 P/N: SB00000UO00 (S TR DMN65D8LW-7 1N SOT323-3) 4). Add PD821 P/N: SCS0340L010 (S SCH DIO SDMK0340L-7-F SOD-323) 5). Add PR836, PR837 P/N: SD028100380 (S RES 1/16W 100K +-5% 0402) 6). Add PC814 P/N: SE102104K00 (S CER CAP 0.1U 10V +-10% X7R 0402)	X01_2
23	P41	+DCIN	2013/02/07	Compal	PPM-Jovins_Chang and Sourcer-Willie_Zeng highlight SB000009N8L will shortage after 2013/05	Change PQ6 From : SB000009N8L (S TR IMD2AT-108 PNP/NPN SC74-62) To : SB000009P80 (TR DCX124EK-7-F PNP/NPN SC74R-6)	X02
24	P48	Selector	2013/02/18	Compal	AC_DIS# should be change to AC_DIS because it's high active not low active for our application.	1). Change PQ6A.5 and PR828.1 net name from AC_DIS# to AC_DIS 2). Add PQ829 P/N: SB00000H500 (S TR SI2301CDS-T1-GE3 1P SOT23-3) , PQ832 P/N: SB00000UO00 (S TR DMN65D8LW-7 1N SOT323-3) , PD820 P/N: SCS0340L010 (S SCH DIO SDMK0340L-7-F SOD-323) , @PR894 , PR895 P/N: SD028000080 (S RES 1/16W 0 +-5% 0402) 3). modify PR828,PR830 4). Delete PQ820 5). Delete PL5, add PJP1	X02
25	P41	+DCIN	2013/02/18	Compal-ME	DFX highlight Battery connetor(locattion:PBATT1) hard to insert.	Battery connetor(locattion:PBATT1) footprint follow ME team Iris requesti to change from SUYIN_200277GR009M262ZR_9P-T to ALLTO_C144LS-109A9-L_9P-T	X02
26	P48	Selector	2013/02/18	Compal	layout spec limit	Delete PD817, modify PD815 footprint same as PD701, from SDMK0340L-7-F_SOD323-2 to RB717F_SOT323-3	X02
27	P41	+DCIN	2013/02/21	Compal-ESD team Anderson	follow ESD team request	Goliad 14 need change PD1(6 pin*1) as Goliad 12 (3 pin*2), the main and 2nd source also, these two ESD diode need to close battery connector as possible. Change PD1 and add PD2 From : SC300001100 (S DIO(BR) IP4223CZ6 SO-6 ESD) To : SCA00001W00 (S ZEN ROW TVNST52302AB0 C/C SOT523 ESD after check 1.75X1.7xH=0.9mm <ME H=1.5mm)	X02

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Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
28	P48	Selector	2013/02/21	Compal	follow E5- Salado 14"15" schematic 1) For Input current sense stablilze 2) To provent charger into sleep mode dual AC transient. 3) Fine tune ACOK response time. 4) Adapter protect rating setting 5) Fine tune H_PROCHOT# response time. 6) Improve ACAV_IN_NB ref voltage accuracy. 7) Improve current sense accuracy.	1). Change PC703 from 0.1U to 1U P/N: SE000006900 (S CER CAP 1UF 25V K X5R 0603) 2). Change PC706 from 1U to 10U P/N: SE00000QK00 (S CER CAP 10U 25V K X5R 0805 H1.25) 3). Change PC708 from 0.01U to 0.1U P/N: SE00000G880 (S CER CAP 0.1U 25V K X5R 0402) 4). Change PR734 from 100K ohm to 210K ohm P/N: SD034210380 (S RES 1/16W 210K +-1% 0402) Change PR735 from 46.4K ohm to 69.8K ohm P/N: SD034698280 (S RES 1/16W 69.8K +-1% 0402) 5). Add @PC740 6). Change PR738.pin1 from BQ24715_REGN connect to +3.3V_ALW2. Change PR738 from 118K ohm to 48.7K ohm P/N: SD034487280 (S RES 1/16W 48.7K +1% 0402) Change PR744 from 12K ohm to 10K ohm P/N: SD034100280 (S RES 1/16W 10K +-1% 7). Change PR748 from 6.8 ohm to 210K ohm P/N: SD034442A80 (S RES 1/16W 44.2 +-1% 0402) Change PR749 from 10 ohm to 69.8K ohm P/N: SD00000W200 (S RES 1/16W 59 +-1% 0402)	X02
29	P48	Selector	2013/02/27	Compal	Modify resistor value to meet voltage tolerence	1). Change PR802,PR827,PR840 from 47K ohm to 100K P/N: SD028100380 (S RES 1/16W 100K +-5% 0402) 2). Change PR804,PR826,PR839 from 240K to 100K P/N: SD028100380 (S RES 1/16W 100K +-5% 0402)	X02
30	P47	Charger	2013/03/18	Compal	follow E5- Salado 14"15" schematic to add charger input MLCC to 88u	1). Add PC741, PC742 P/N: SE00000XH80 (S CER CAP 22U 25V M X5R 0805 H1.25)	X02_1
31	P42 P43 P44	+5V/+3.3V 1.35V/0.675V +1.05V_MP	2013/03/20	Compal	support DFX team change choke layout pad to avoid soldering issue	1). Change PL101, PL102, PL200, PL300 PCB FootPrint change from CYNTE_PCMC063T-2R2MN_2P to CYNTE_PCMB064T-3R3MS_2P	X02_1
32	P47 P49 P46	Charger PROCESSOR DECOUPLING Vcore	2013/03/21	Compal	Support acoustic team to reduce noise	1). Add PC930 P/N: SGA00002680 (S POLY C 330U 2.5V Y D2 LESR9M EEFS H1.9) 2). Del PC916, PC920, PC925, PC926, PC927, PC929 P/N: SE000001120 (S CER CAP 22U 6.3V M X5R 0805 H0.85) 3). Change PC738 from 33U(SGA00005M00) to 100U P/N: SGA00008R00 (S POLY C 100U 20V M D ESR55M (D3L_H=2.8mm) 4). Depop PC928, PC924, PC919, PC915, PC911 and Add PC901 P/N: SE000001120 (S CER CAP 22U 6.3V M X5R 0805 H0.85)	X02_1

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Version Change List (P. I. R. List)

Item	Page #	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	40 36	HW	10/23/2012	DELL	DELL drop Media LED function	Remove backlight LED function and change connector to 6pin	X01
2	10	HW	10/23/2012	COMPAL	Remove EMI solution at Speaker side	Remove R132, R133, R134 and R135	X01
3	22	HW	10/23/2012	DELL	DELL drop ALS function	Remove ALS interface from EC and CPU side than move touch screen signal to eDP side	X01
4	22	HW	10/23/2012	COMPAL	change LCDVDD power control circuit	change U9 from TPS22966 to APL3512 solution	X01
5	22	HW	10/23/2012	COMPAL	change Webcam power enable from PCH	pop R106 and de-pop R102	X01
6	10	HW	10/23/2012	COMPAL	remove eDP backlight control pull up resistor	Remove RC150	X01
7	21	HW	10/23/2012	COMPAL	Vendor update schematic for power saving	change +1.05V_RUN_VMM power enable signal from LP_EN to DOCKED and add +3.3V_RUN_VMM for DP2320 series 3.3V power rail remove L3 and move U6.E5 to +1.05V_VMM_VDD power rail change U6.J4 to +3.3V_RUN_VDDA R85 change to 3.74K_1% remove LP_EN, R232 and U6A.A5 to NC remove R55 and pop-option R207 when use VMM2310	X01
8	21	HW	10/23/2012	COMPAL	change VMM2320 config	remove DP to VGA PTN3392 circuit and add 0ohm pop option for 2320 config	X01
9	18 19	HW	10/23/2012	COMPAL	Remove DIMM VERF power rail from power side	Remove RD2, RD4, RD8 and RD9	X01
10	26	HW	10/23/2012	COMPAL	change miniDP OCP solution	remove D10 R160 F2 and add U50 de-pop C383	X01
11	26	HW	10/23/2012	COMPAL	refer salado 14" to change PCBEEP circuit	remove C132,C146,R146,R138,C133 and C143 than add C145,C146,R147,R151 and de-pop R194 R153	X01
12	26	HW	10/23/2012	COMPAL	If doesn't has external power, Sleeve will be floating mode and no reference GND.	Add AUD_NB_MUTE# to control Sleeve pin.	X01
13	37,36,12 20	HW	10/23/2012	COMPAL	GPIO map update to 2.7 version	Move EC_WAKE# from ECE5048[L]5 to MEC5075 GPIO52. Change name: 1.5V_SUS_PWRGD to 1.35V_SUS_PWRGD for DDR3L. Add NFC_DET# ECE5048 GPIOL[5] to NFC moudle and add pull up 10K resistor	X01
14	37	HW	11/8/2012	COMPAL	Change board ID to X01	change R392 form 240K to 130Kohm	X01
15	10 12 21 36 37	HW	11/8/2012	COMPAL	change to network resistor	remove RC167,RC202,RC293 and RC290 then add RP4 remove RC295,RC189,RC191 and RC51 then add RP5 remove RC177,RC15,RC62 and RC43 then add RP6 remove RC201,RC203,RC204 and RC208 then add RP7 remove R299,RC300,R301 and R296 then add RP8 remove R53,R54,R70 and R72 then add RP9 remove RC216,RC178,RC80 and RC21 then add RP11 remove RC77,RC85,RC71 and RC215 then add RP12 remove RC207,RC214,RC205 and RC164 then add RP13 remove RC229,RC188,RC34 and RC196 then add RP14 remove R359,R361,R451 and R387 then add RP15 remove R445,R456,R457 and R454 then add RP16 remove R346,R347,R364 and R365 then add RP17 remove R344,R368,R369 and R372 then add RP18 remove R401,R348,R350 and R377 then add RP19	X01

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16	22	HW	11/8/2012	COMPAL	Add Mic power and remove DBC function	Add 3.3V_RUN for Mic power and remove DBC function at JeDP.2	X01
17	39	HW	11/8/2012	COMPAL	+1.05V_MODPHY can't meet INTEL timing spec	change +1.05V_MODPHY to MOS solution	X01
18	19	HW	11/8/2012	COMPAL	refer PDG1.0 to change SODIMM control circuit resistor	change RC68, RC126 and RC173 from 2.2 to 2ohm 1% change RC67,RC69,RC130,RC132,RC217 and RC221 from 1.82K to 1.8Kohm 1%	X01
19	27,32,26,20,40	ME	11/8/2012	COMPAL	ME change connector	change JmDP1,JSIM1,JSPK1,JNFC1,JMEDIA,SW1,JSD1	X01
20	2, 3, 6, 34	HW	11/13/2012	COMPAL	update SATA topology fro Mainstream CPU	exchange SATA1&SATA2 topology	X01
21	12	HW	11/13/2012	COMPAL	refer Goliad 12" add LAN_WAKE# T-topology	add RC177 to link LAN_WAKE# and EC_WAKE#	X01
22	15	HW	11/13/2012	COMPAL	remove RC252 for cost saving	change RC252 to PJP11(1mm jumper-short)	X01
23	34	ME	11/14/2012	COMPAL	ME change Docking connector	change JDOCK1	X01
24	16	HW	11/14/2012	INTEL	MOW_WW46 request change for VCCUSB3PLL and VCCSATA3PLL	change CC42 and CC49 from 1u_0402 to 22u_0603 change CC76 and CC77 from 100u_1206 to 22u_0603	X01
25	20,28,30,31	HW	11/14/2012	COMPAL	change AND gate to same source	Change U20, U26, U29 and U30 from SA74108040L to SA00708012L	X01
26	33	HW	11/14/2012	COMPAL	add USB power cap 150u co-layout with 100u	add C86,C89(1206) co-layout with C280,C290(B2)	X01
27	24	HW	11/14/2012	COMPAL	change AUX/DDC power rail same as VMM2320	Change U11,U13 power rail from +3.3V_RUN to +3.3V_RUN_VMM	X01
28	38,12	HW	11/14/2012	COMPAL	remove +3.3V_TP power load switch solution	remove U40, R458,C424 and C423	X01
29	31	HW	11/14/2012	COMPAL	remove TPS22965 solution	remove U51(TPS22965) and U34(TPS22965) than add U3(TPS22966)	X01
30	22	HW	11/15/2012	COMPAL	change diode to daul-diode fro cost saving	remove D4,D5,D6,D7 and add D10,D21	X01
31	9	HW	11/16/2012	COMPAL	change APS pin 11 net_name for DELL APS debug	Change JAPS1.11 net name from SIO_PWRBTN# to POWER_SW#_MB	X01
32	31,12	HW	11/16/2012	COMPAL	add mSATA_DSLP for mSATA HDD	add mSATA_DEVSLP from UC1.P2(DEVSLP1/GPIO38) to mSATA_HDD(JMINI2.44) and pull up 10K(R160 depop) to +3.3V_mSATA_WWAN. de pop HDD_DEVSLP pull up resistor R155	X01
33	37	HW	11/16/2012	COMPAL	change thermal diode for cost saving	change D11,D13 and D14 form SB000008P0L to SB33904510L	X01
34	12,28	HW	11/16/2012	COMPAL	support TLS confidentility	change net name from HOST_ALERT1_R_N to PCH_GPIO15, and pop RC190 remove R188	X01
35	38,26,30,22	HW	11/16/2012	COMPAL	change Bead for cost reduce	change L44 and L45 from SM01000558L to SM01000C500 change L35 and L36 from SM01000AM0L to SM01000C500 change LE1 from SM01000DH0L to SM01000BV00 change L21 from SM01001788L to SM010005N00	X01

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36	29	HW	11/19/2012	COMPAL	exchange JUSH1,JMEDIA pin define for ME update	exchange JUSH1 and JMEDIA pin define	X01
37	25	HW	11/19/2012	COMPAL	remove HDD_DEVSLP resisrtor	remove R189	X01
38	37	HW	11/19/2012	COMPAL	change thermal OTP to 98 degree	change R394 from 1.24K to 1.82K_1%	X01
39	28	HW	11/20/2012	COMPAL	LOM LED issue	reverse Q32,Q33 of C & D gate	X01
40	22 40 38 26	HW	11/22/2012	COMPAL	Remove ESD reserve location	Per ESD experiment, D3,D27,D22,DE1,DE2 can be remove	X01
41	15	HW	11/23/2012	COMPAL	Per Intel CRB updated	Change VCCST_PWRGD pull high value from 10K ohm to 1K ohm.	X01
42	26	HW	11/23/2012	COMPAL	Universal Jack no longer supported on X5	Remove D9,D11,R209,R210,C195,C196,R198,R199	X01
43	12	HW	11/27/2012	COMPAL	Change GPIO connection	change NFC_DET# connection from EC GPIOL[5]/PWM2 to LPT_LP GPIO59	X01
44	6	HW	11/28/2012	COMPAL	To support mainstream and Premium CPU, change to SATA port assignment.	Change docking SATA port form SATA port 1 to SATA port 0 and spindle HDD from port 0 to port 1	X01
45	12	HW	11/28/2012	COMPAL	To support the SATA DevSLP function for new SATA port assignment.	Change DEVSLP0/GPIO33 to mSATA_DEVSLP and DEVSLP1 to HDD_DEVSLP	X01
46	12	HW	11/28/2012	COMPAL	USB port 0 EA result	Change L42 from DLW21SN900SQ2L to OCE2012120YZF	X01
47	31	HW	11/28/2012	COMPAL	Change WWAN power control.	Change power control signal from 3.3V_WWAN_EN & 3.3V_mSATA_EN to MCARD_WWAN_PWREN	X01
48	31	HW	11/28/2012	COMPAL	Change WLAN power control.	Change power control signal from 3.3_1.5V_WLAN_EN to AUX_EN_WOWL	X01
49	38	HW	11/28/2012	COMPAL	Per EMI test result	Remove L44,L45	X01
50	34	HW	11/28/2012	COMPAL	Per EMI test result	Change R259,R252,R253,R255,R257,R263,R265,R266 R260,R261,R254,R256,R262,R264,R258,R267 from 0 ohm to 33 ohm.	X01
51	9	HW	1/9/2013	COMPAL	add RSMRST pull down resistor	add RC136	X01
52	38	HW	1/9/2013	COMPAL	add repeater at USB3 RX IO connector side	add U51 circuit	X01
53	22	HW	1/9/2013	COMPAL	change LCDVDD power chip soft start cap	change C430 from 0.1u to 0.01u	X01
54	36	HW	1/9/2013	COMPAL	change dock SMbus alert pull up resistor	change R292 from 10K to 100Kohm	X01
55	40	HW	1/17/2013	COMPAL	change LED series resistor form LED measure	change R435 from 1.8K to 390ohm, change R430 from 2.2K to 220ohm, change R434 from 220 to 150ohm, change R427 from 1K to 390ohm.	X01

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56	1 9	HW	1/23/2013	COMPAL	add XDP@ for XDP component	change XDP circuit to XDP@	X02
57	37	HW	1/23/2013	COMPAL	change board ID to ST config	change R392 from 130K to 33Kohm	X02
58	37	HW	1/30/2013	COMPAL	change HW thermal shortdwon temperature	change R394 from 1.82K to 1.58Kohm	X02
59	22	HW	2/1/2013	COMPAL	change eDP connector pin define for factory burn out issue	1.add pull down 1Kohm at JEDP1.29 2.Swap JEDP1.1 and JEDP1.2	X02
60	26	HW	2/1/2013	COMPAL	update speaker EMI bead for audio precsison fail issue	change L22~L25 from SM01000L300 to SM010019400	X02
61	26	HW	2/1/2013	COMPAL	update XDP circuit for INTEL ITE can't boot	remove RC121 and pop RC102	X02
62	36	HW	2/18/2013	COMPAL	power update AC_DIS# circuit to high active	change AC_DIS# net name to AC_DIS	X02
63	11 35	HW	2/21/2013	COMPAL	Fixed 2 USB IO Port use the same OC# signal issue	1.change IO/B USB OC# from USB_OC0# to USB_OC1# 2.change USB_OC1#/3# to USB_OC1#, USB_OC3# and add RC166 for OC3# pull up resistor	X02
~~64~~	~~7~~	~~HW~~	~~2/21/2013~~	~~COMPAL~~	~~add jumper for clock buffer co-layout~~	~~add PJP12, PJP13 and PJP14 beween UC5~~	~~X02~~
~~65~~	~~7~~	~~HW~~	~~2/21/2013~~	~~COMPAL~~	~~change TAA connector from ME request~~	~~change JTAA1 from ACES_50185-02041-001 to PANAS_AXK820145WG~~	~~X02~~
66	16	HW	2/22/2013	COMPAL	add ESD solution	1.Pop CC71 and CC72 2.Add two 22u 0603 between +VCC_CORE and +1.05V_RUN power plan 3.Add 22u 0603 between +1.05V_RUN and +3.3V_RUN power plan	X02
67	33	HW	2/22/2013	COMPAL	change USB charge solution for SAMSUNG phone	change U39 from SA00004VH00 to SA00006L600	X02
68	7	HW	2/25/2013	COMPAL	add RF noise solution at clock buffer	1. add CC86~CC89 between clock signal 2. add RC62 for UC5 power rail 3. change RC100 from 0ohm short to 10ohm 4. change UC5 from IDT_5V60034DCG8 to CYPRESS_CY2304SXI-1T	X02
69	23	HW	2/25/2013	COMPAL	refer INTEL MOW to update HDMI cost reduce level shifter main link	cahnge R462~R469 resistor from 680(SD034680080) to 470ohm(SD034470080)	X02
~~70~~	~~11 12~~	~~HW~~	~~2/25/2013~~	~~COMPAL~~	~~For AOAC function, can't wake up from S3 through SIO_EXT_SMI#~~	~~change net name from USB_OC3# to SIO_EXT_SMI#, and change SIO_EXT_SMI# to PCH_GPIO45~~	~~X02~~
71	9	HW	2/26/2013	COMPAL	add EMI solution at H_PROCHOT#	add CC149_22P_0402(SE071220J80) depop for EMI request	X02
72	26	HW	2/26/2013	COMPAL	for Fixed BIOS flash HOTSOS issue	change R154 from PCH_AUDIO_EN to RUN_ON	X02
73	7	HW	2/28/2013	COMPAL	remove clock Buffer solution	1.remove item 68 location and CC25 CC57 CC80 CC22 UC5 RC100 and CC23 2.change RC65 to 0ohm_short	X02
74	7 29	HW	2/28/2013	COMPAL	refer GPIO3.0 to add PCH_TPM_LPC_EN	add RC56 for pull up enable signal and add R198 for pop option	X02
75	30	HW	3/12/2013	COMPAL	For O2 enters into test mode unexpectedly with SD card inserted incompletely issue.	1. SD/MMCCD# add C256(0.1uF) & R493(1M) pull-down to GND 2. C222 change to 1uF(SE000000K80) from 0.1u(SE00000G880)	X02

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76	7	HW	3/13/2013	COMPAL	Base on INTEL EDS SPEC Update Rev 1.5.1	1. LANCLK_REQ# change to UC1.AD1 from UC1.Y5 2. MINI1CLK_REQ# change to UC1.T2 from UC1.U2 3. MINI2CLK_REQ# change to UC1.N1 from UC1.T2 4. MMICLK_REQ# change to UC1.U5 from UC1.AD1 5. PCH_TPM_LPC_EN change to UC1.Y5 from UC1.U5	X02
77	7	HW	3/14/2013	COMPAL	For PCIE CLK & PCIE CLK REQ signal mapping	1. CLK_PCIE_LAN change CLKOUT_PCIE port2 2. CLK_PCIE_MINI2 change CLKOUT_PCIE port3 3. CLK_PCIE_MMI change CLKOUT_PCIE port4 4. CLK_PCIE_MINI1 change CLKOUT_PCIE port5	X02
78	21	HW	3/15/2013	COMPAL	remove VMM2310 co-layout schematic	remove U8, R93, R98, R105 circuit	X02
79	15	HW	3/15/2013	COMPAL	add ESD solution	add CC22 and CC57	X02
80	7	HW	3/18/2013	COMPAL	For INTEL request	PCIECLK_REQ0# add RC57(10k) pull-high to+3.3V_RUN	X02
81	21	HW	3/20/2013	COMPAL	For Synaptics vender request	1. Delete R78/R80/R82 2. add C132	X02
82	9 12	HW	3/21/2013	COMPAL	add ESD solution	add CC90 and CC91	X02
83	35	HW	4/02/2013	COMPAL	For USB3.0 1M cable	Pop R478, R479 and change R476 to 3.01K ohm	X02
84	37	HW	4/25/2013	COMPAL	change board ID to A00 version	change R392 from 33K to 1K ohm	A00
85	33	HW	4/25/2013	COMPAL	for JUSB2 can't wake from S3 issue	change U33 power rail from +3.3V_RUN to +3.3V_SUS	A00
86	9	HW	4/25/2013	COMPAL	for XDP signal should be contact to PCH	change RC97 and RC135 to 0ohm short	A00
87	28	HW	4/25/2013	COMPAL	for support Vpro reset pin	depop U20 and add R145	A00
88	12	HW	4/25/2013	COMPAL	reserve for support non vpro pop option pin	reserve RC292 pull down	A00
89	40	HW	4/25/2013	COMPAL	current LED resistor for LED EA measure	R434 change from 150 to 330ohm, R430 change from 220 to 330ohm, R438 change to 2.2K to 150ohm, R436 change from 2.2K to 220ohm and R429 change from 620 to 220ohm	A00
90	10	HW	5/14/2013	COMPAL	HDD Free Fall Sensor	add R494 & R495	A00
91	15 16	HW	5/16/2013	COMPAL	add ESD solution	Pop CC57, depop CC71 , CC72	A00
91	12	HW	5/16/2013	COMPAL	reserve for support non vpro pop option pin	Follow Goliad12, Pop RC290 & change RC292 from 10K to 100ohm.	A00
							X02

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