

COMPAL CONFIDENTIAL

MODEL NAME : QXW00
PCB NO : LA-7901P (DA60000PM00)
BOM P/N : 4619F631L01 / L02
GPIO MAP: E4_VC_GPIO_map_rev_1.1

Korbel 14 UMA--Non vPRO

Ivy/Sandy Bridge + Panther POINT(HM77w/DASH)

2012-03-03**REV : 1.0 (A00)**

@ : Nopop Component
CONN@ : Connector Component

MB Type	BOM P/N	
TPM	43*	1@ 3@ 5@
TCM		2@ 4@ 5@
TPM DIS		2@ 3@
HM77 w/o Vpro		
QM77 w/ Vpro		
PCH XDP		PXDP@
HDMI LOGO		46@

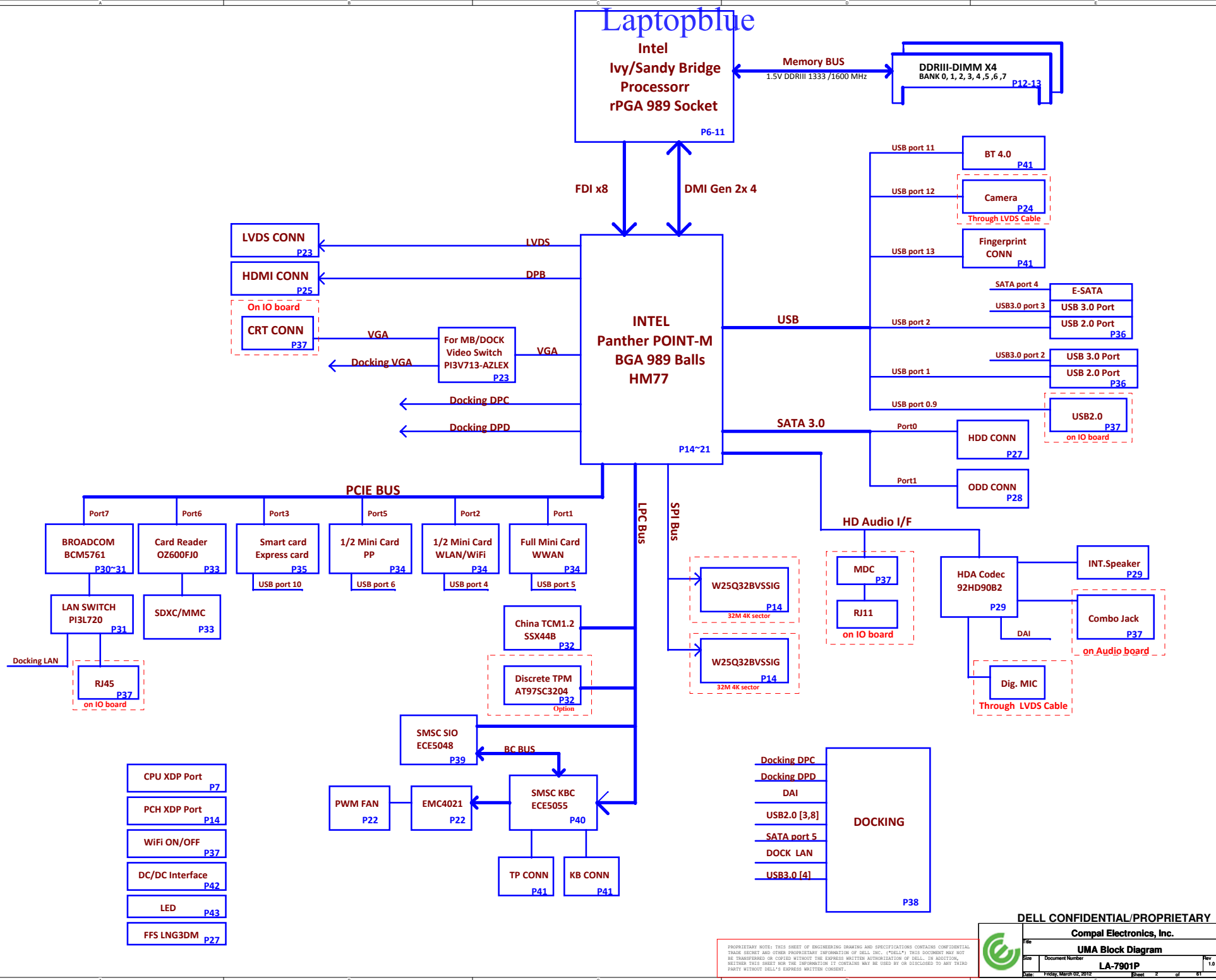
MB PCB	
Part Number	Description
DA60000PM00	PCB OLH LA-7901P REV0 M/S UMA

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UMA 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	+15V_ALW +5V_ALW +3.3V_ALW_PCH +3.3V_RTC_LDO	+3.3V_SUS +1.5V_MEM	+5V_RUN +3.3V_RUN +1.8V_RUN +1.5V_RUN +0.75V_DDR_VTT +VCC_CORE +1.05V_RUN_VTT +1.05V_RUN	+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

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USB 3.0 PORT#	Connetion
1	NA
2	JUSB1 (Left side)
3	JUSB2 (Left side)
4	DOCKING

PCH	USB PORT#	DESTINATION
	0	JUSB (Right side-IO/B)
	1	JUSB (Left side)
	2	JESA1 (Leftt side ESATA)
	3	MLK DOCK
	4	WLAN
	5	WWAN
	*1 6	JMINI3(Flash)-for w/ Vpro
	*1 7	DOCKING
	8	NA
	9	JUSB (Right side-Audio/B)
	10	Express card/Smart Card
	11	Bluetooth
	12	Camera
	13	BIO

*1: HM76 don't support port 6,7

SATA	DESTINATION
SATA 0	HDD
SATA 1	ODD/ E3 Module Bay
SATA 2	NA
SATA 3	NA
SATA 4	ESATA
SATA 5	Dock

UMA DP/HDMI Port	Connetion
Port B	MB HDMI Conn
Port C	Dock DP port 2
Port D	Dock DP port 1

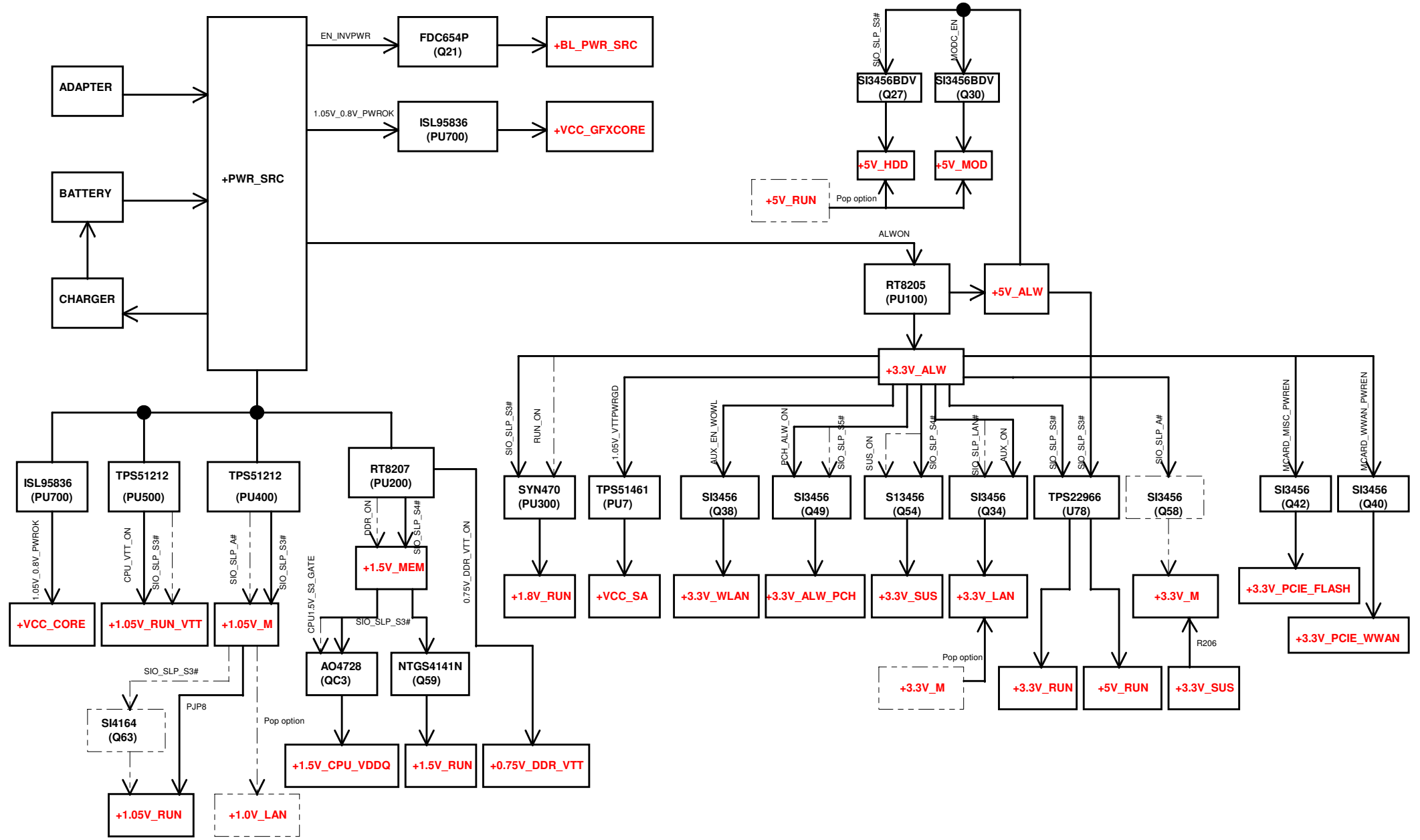
PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	Express card
Lane 4	None
Lane 5	1/2vMINI CARD-3 PCIE
Lane 6	MMI
Lane 7	10/100/1G LOM
Lane 8	None

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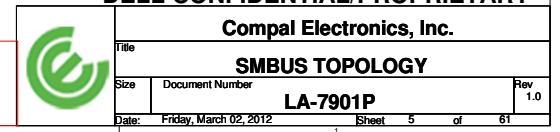
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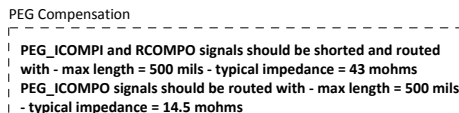
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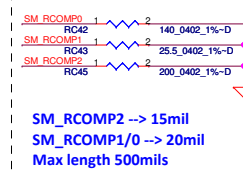
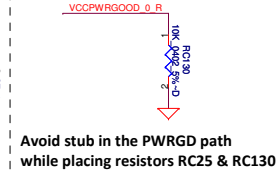
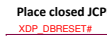
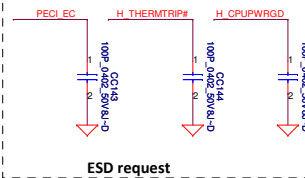
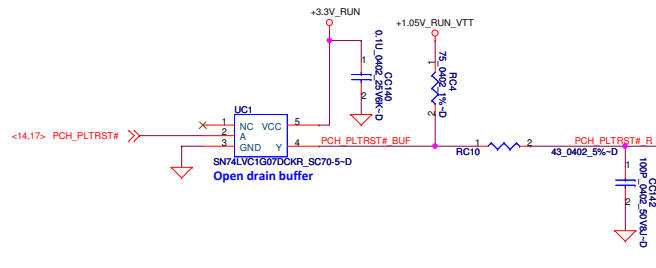
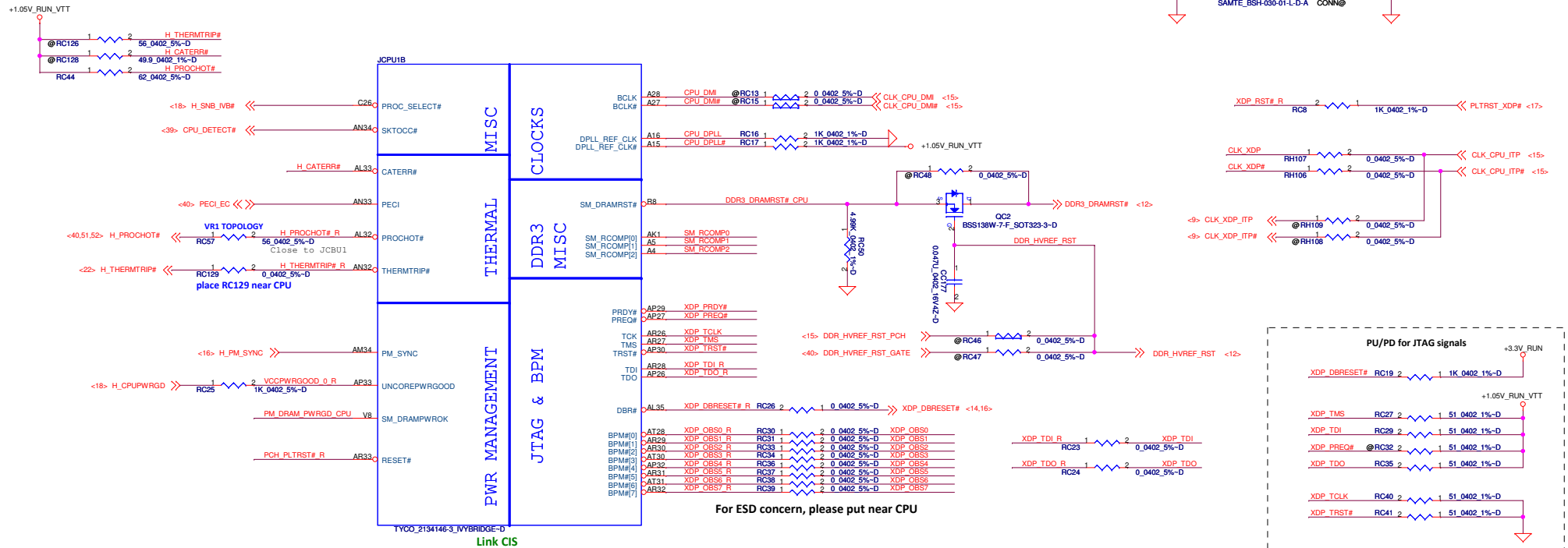
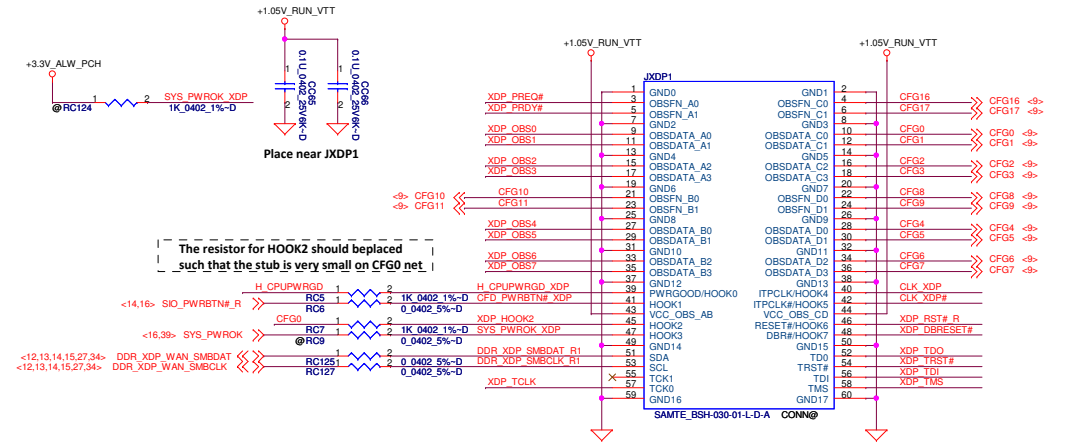
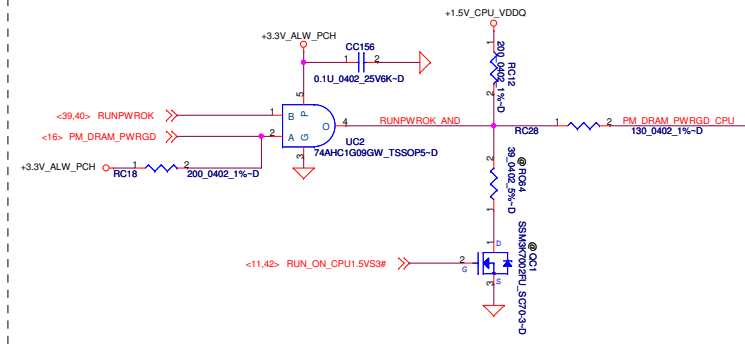
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Follow DG Rev0.71 SM_DRAMPWROK topology



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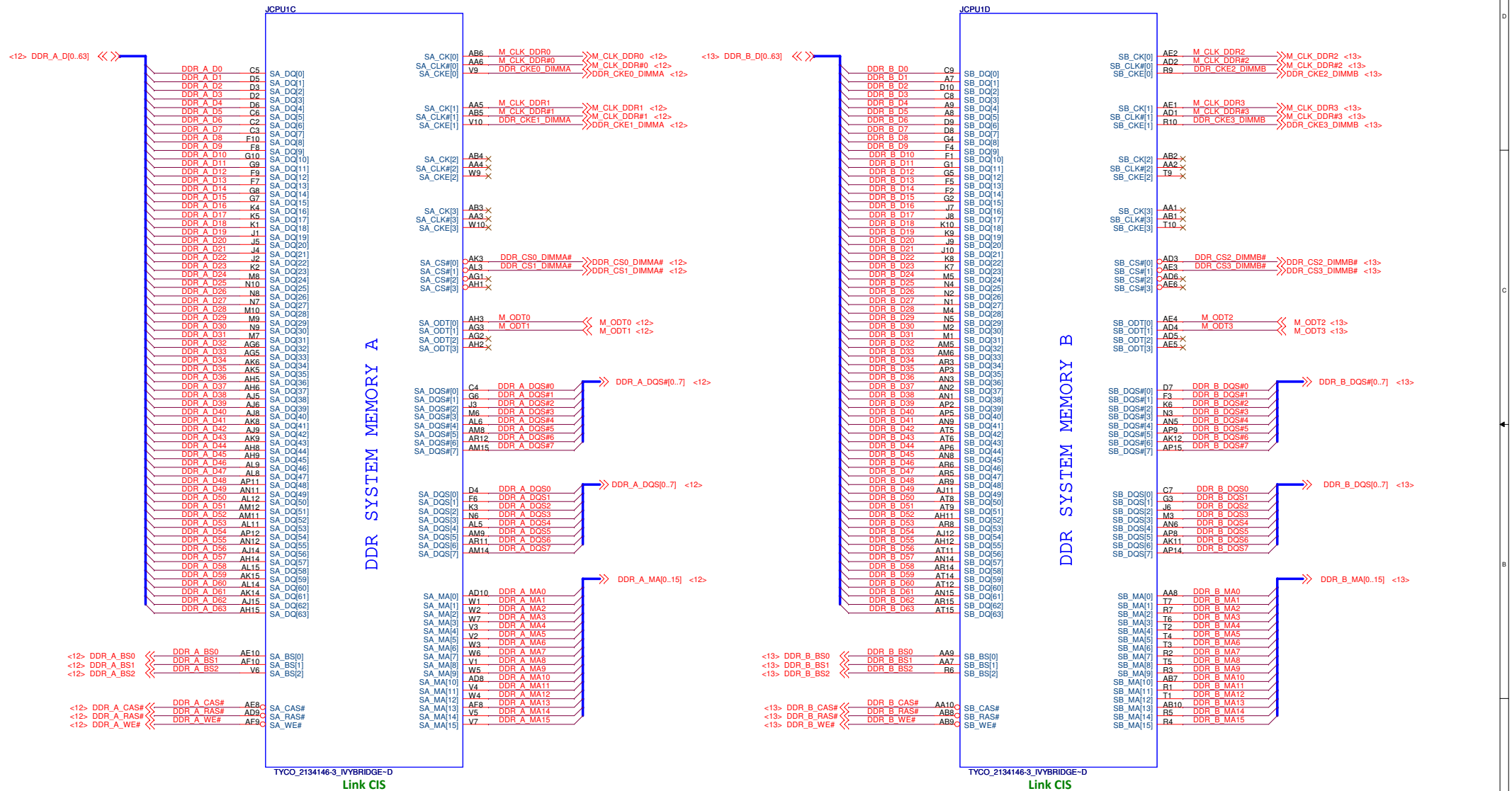
Ivy/Sandy Bridge (2/6)

LA 7001B

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Ivy/Sandy Bridge (3/6)

LA-7901P

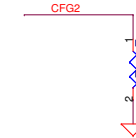
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CFG Straps for Processor



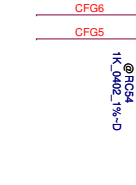
PEG Static Lane Reversal - CFG2 is for the 16x

CFG2	1:(Default) Normal Operation; Lane # definition matches socket pin map definition 0: Lane Reversed
------	---



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
------	--



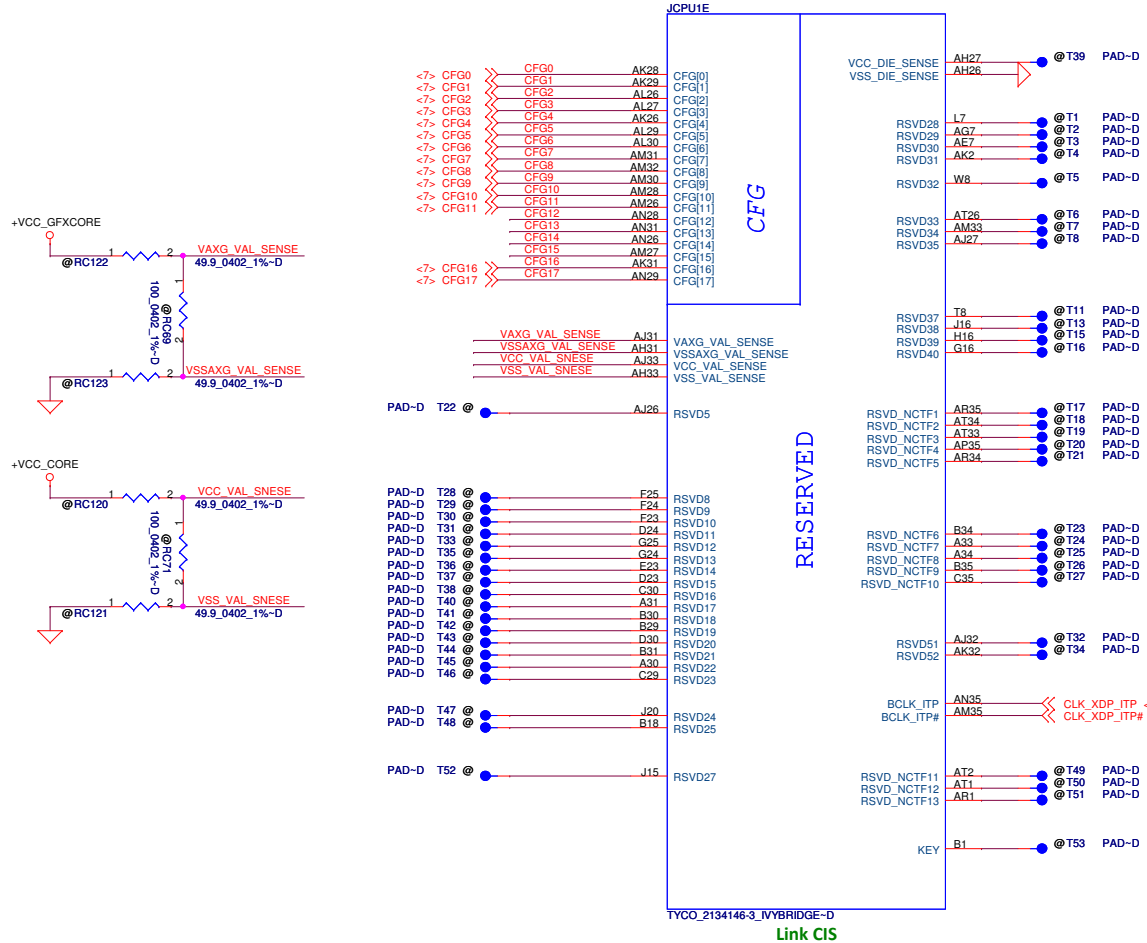
PCIe Port Bifurcation Straps

CFG[6:5]	11: (Default) x16 - Device 1 functions 1 and 2 disabled 10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled 01: Reserved - (Device 1 function 1 disabled ; function 2 enabled) 00: x8,x4,x4 - Device 1 functions 1 and 2 enabled
----------	--



PEG DEFER TRAINING

CFG7	1: (Default) PEG Train immediately following xxRESETB de assertion 0: PEG Wait for BIOS for training
------	---



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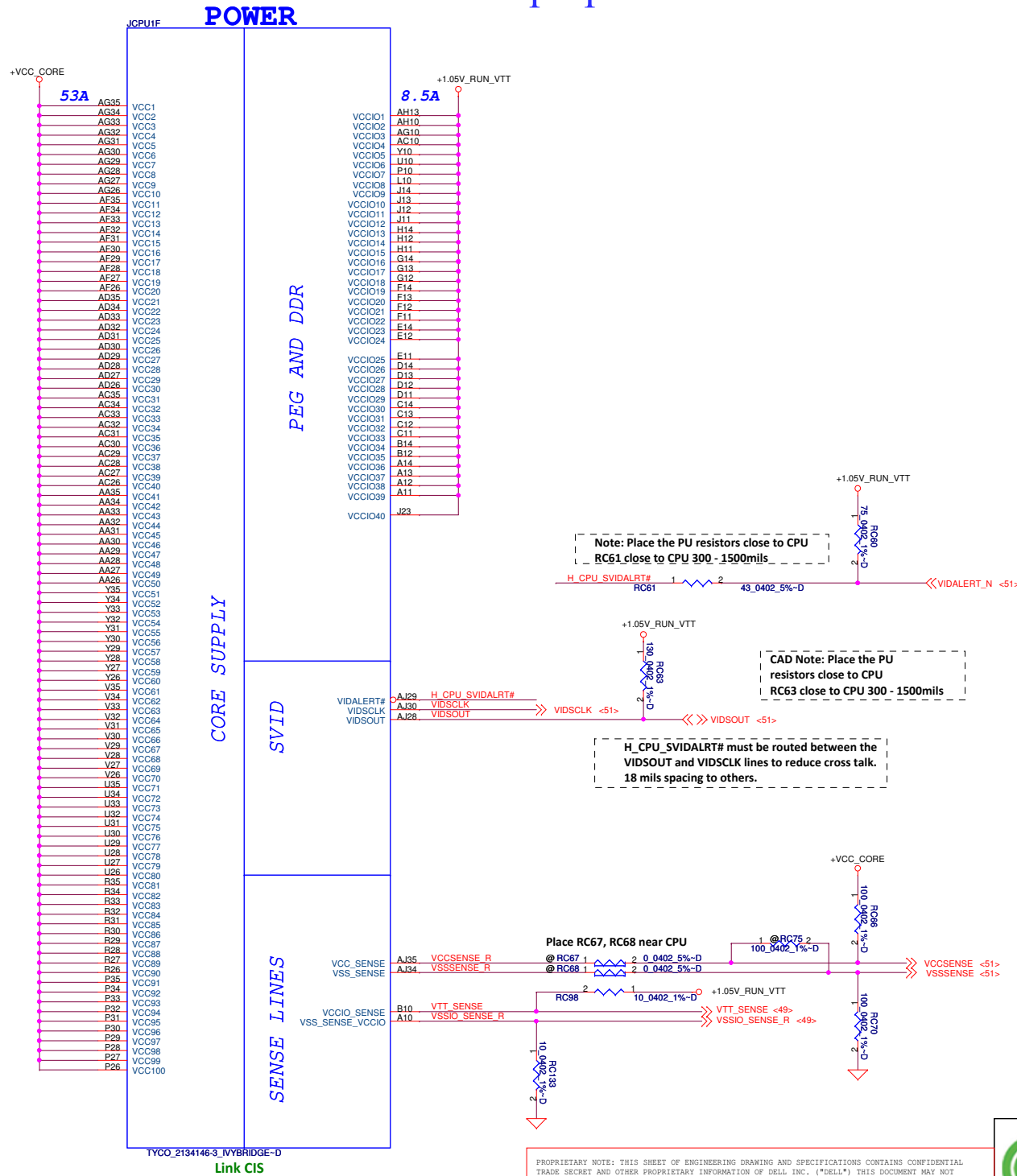
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Ivy/Sandy Bridge (4/6)			
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Iccmax current changed for PDDG Rev0.7

CPU Power Rail Table		
Voltage Rail	Voltage	S0 Iccmax Current (A)
VCC	0.65-1.3	53
VCCIO	1.05	8.5
VAXG	0.0-1.1	26
VCCPLL	1.8	3
VDDQ	1.5	5
VCCSA	0.65-0.9	6
+1.5V_MEM	1.5	12-16
5A to Mem controller(+1.5V_CPU_VDDQ) 5-6A to 2 DIMMs/channel 2-5A to +1.5V_RUN & +0.75V_DDR_VTT		

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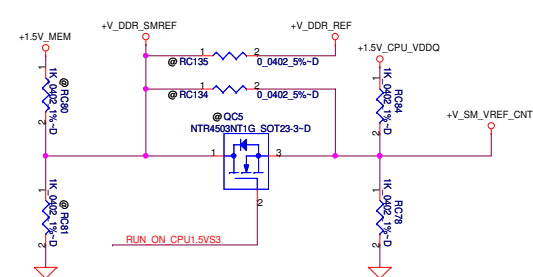


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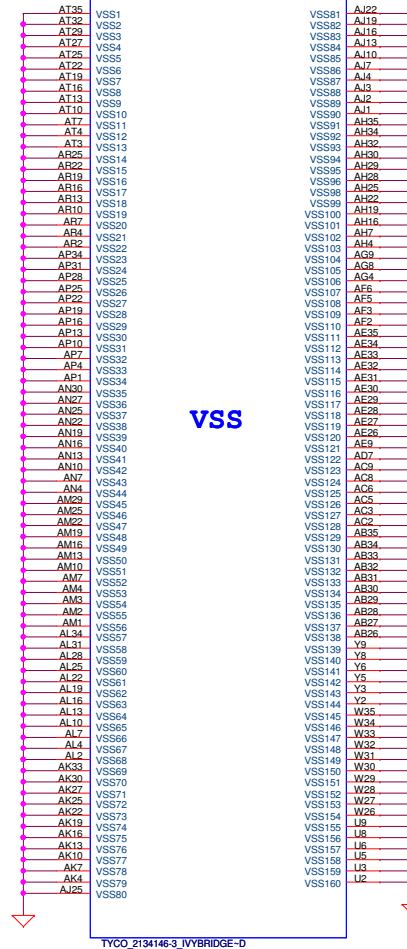
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JCPU1H



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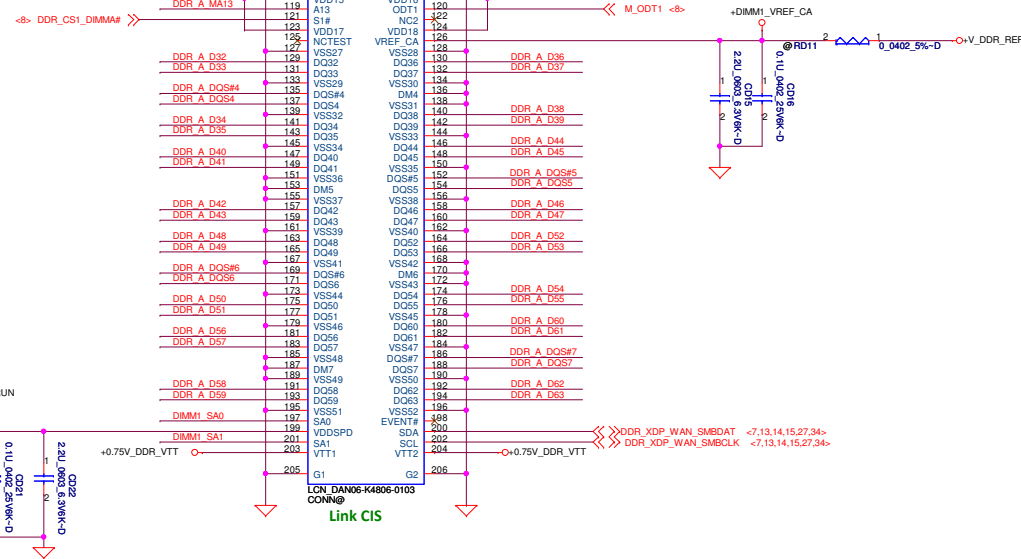
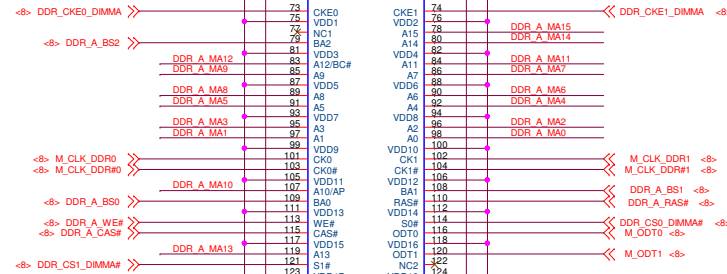
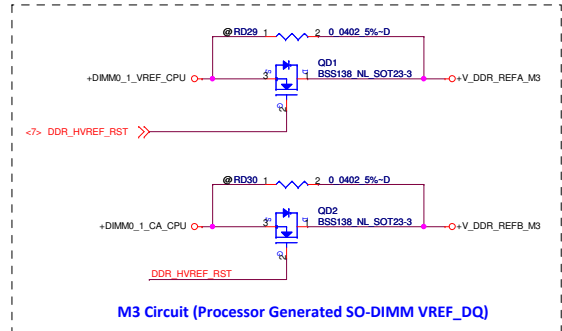
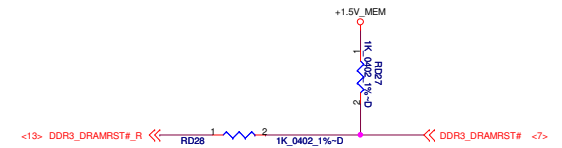
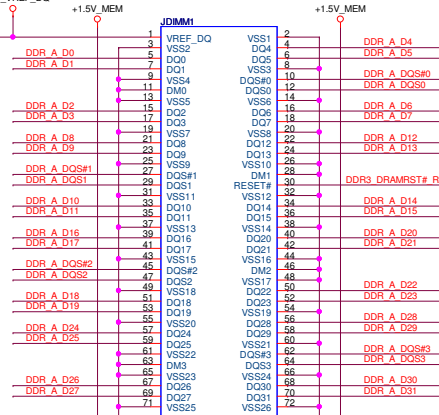
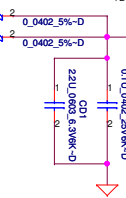
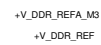


2-3A to 1 DIMMs/channel

```
<8> DDR_A_DQS#[0..7] << >>
<8> DDR_A_D[0..63] << >>
<8> DDR_A_DQS[0..7] << >>
<8> DDR_A_MA[0..15] >>
```

Populate RD1, De-Populate RD7 for Intel DDR3
VREFDQ multiple methods M1
Populate RD7, De-Populate RD1 for Intel DDR3
VREFDQ multiple methods M3

Layout Note:
Place near JDIMM1



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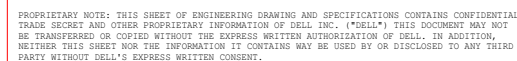
DDRIII-SODIMM SLOT1

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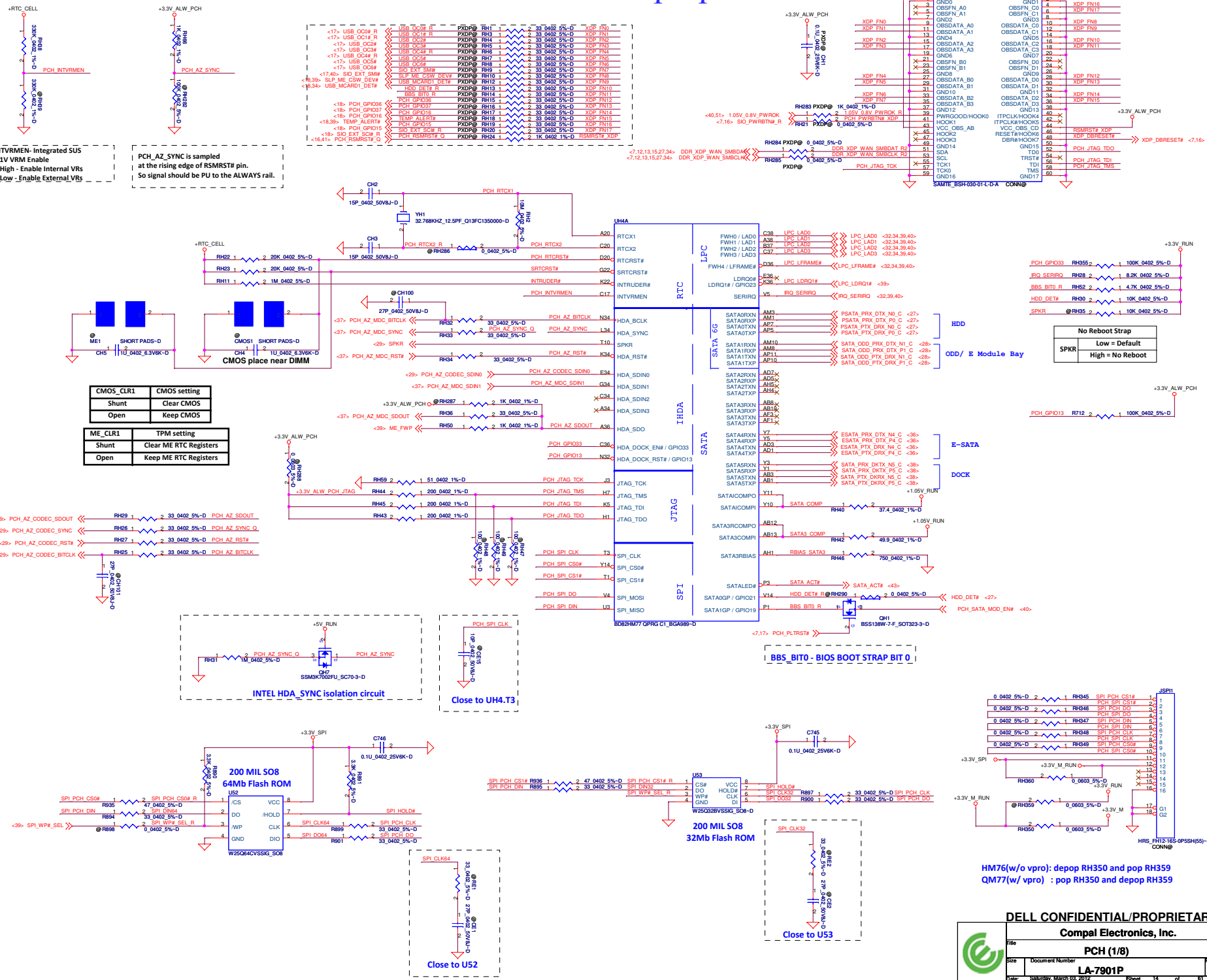
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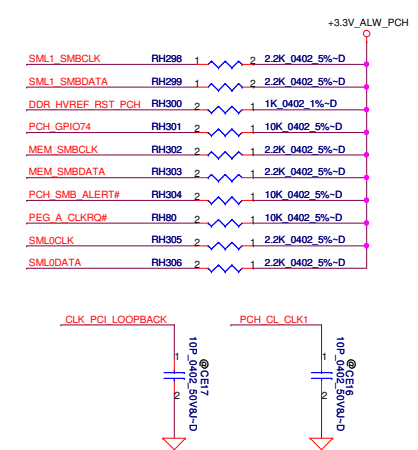
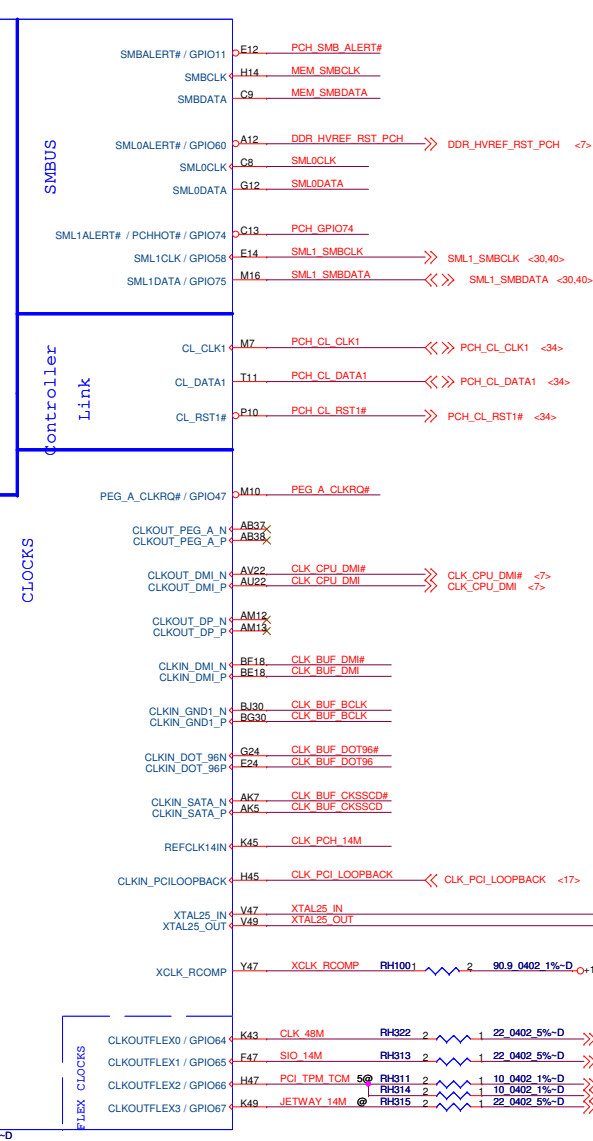
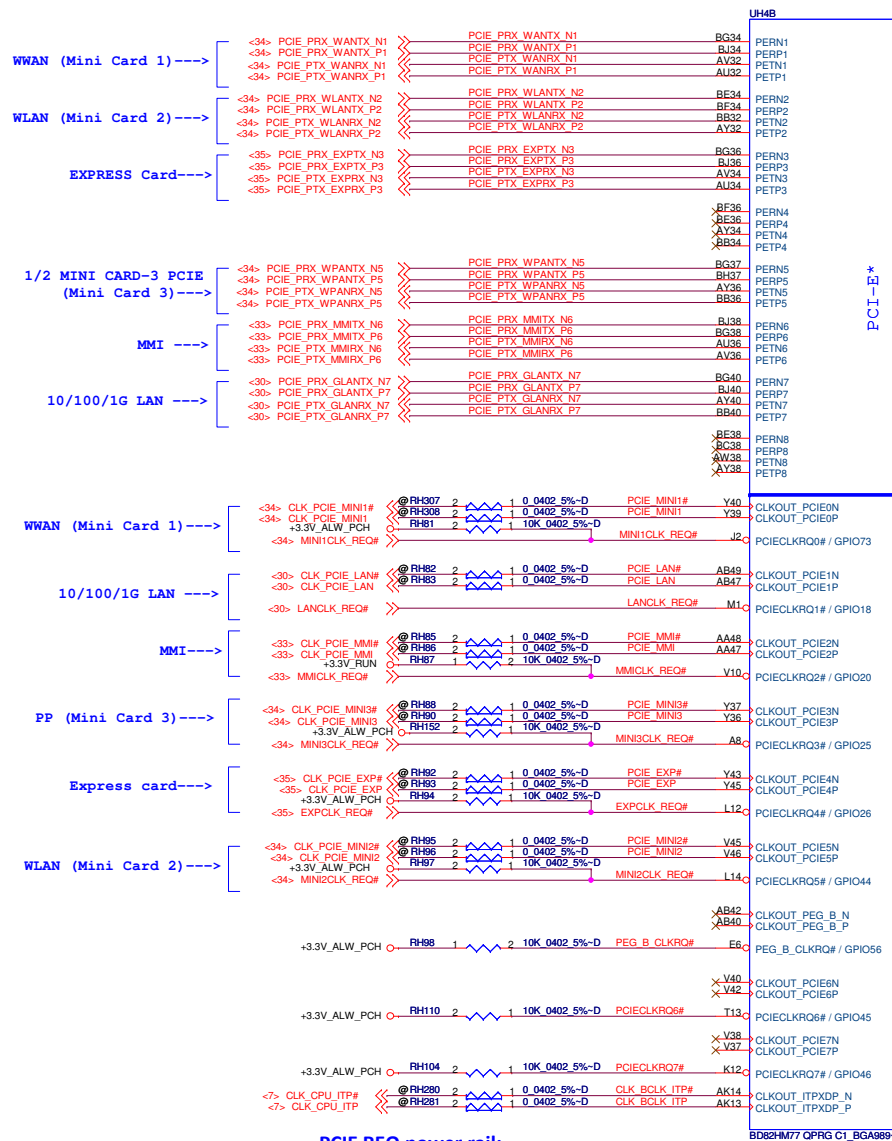
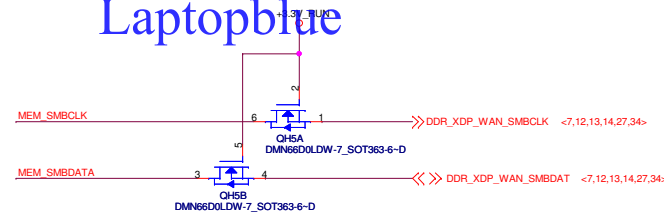
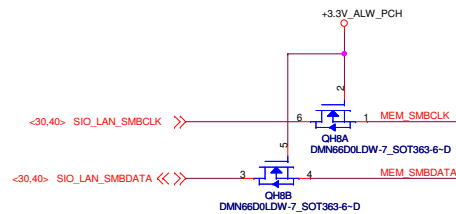
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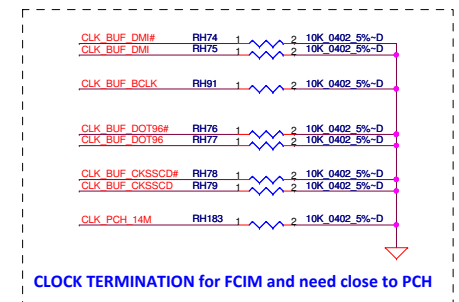
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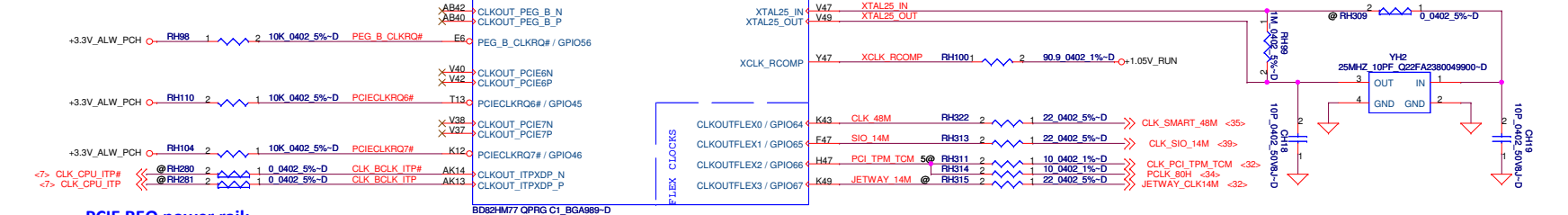
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RF review in 0629



CLOCK TERMINATION for FCIM and need close to PCH



PCIE REQ power rail:
suspend: 0 3 4 5 6 7
core: 1 2

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PCH (2/8)

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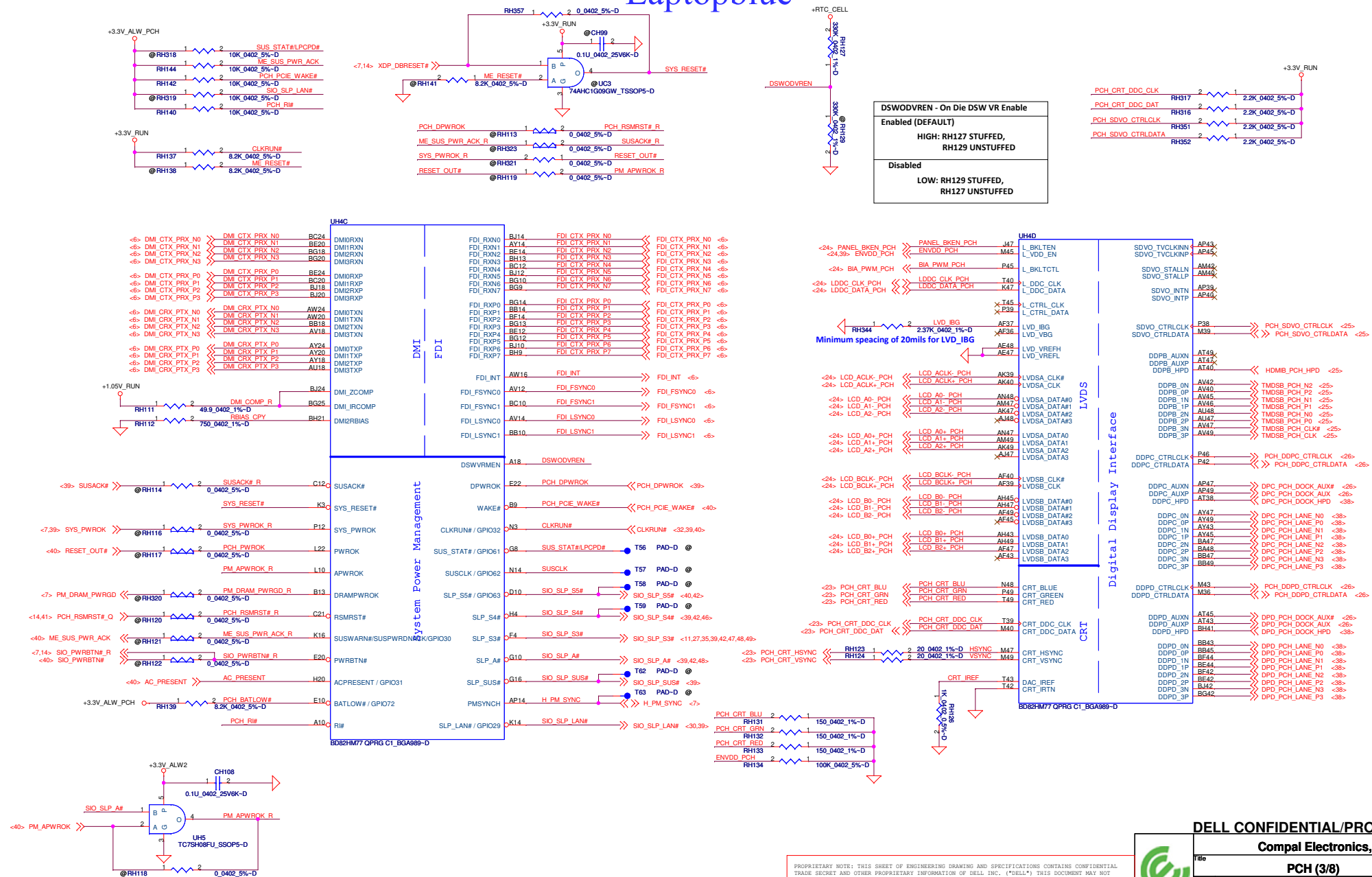
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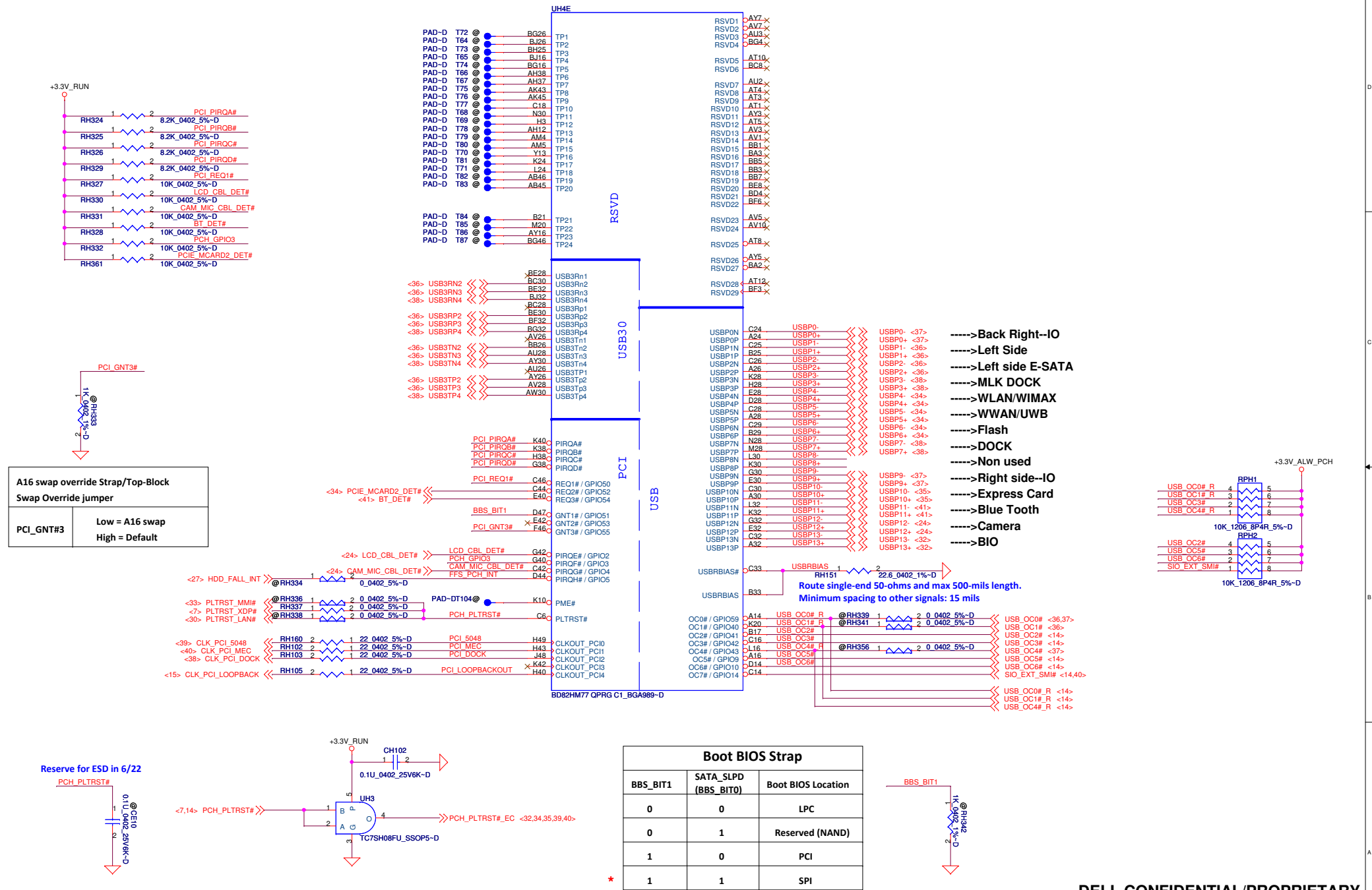
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PCH (3/8)

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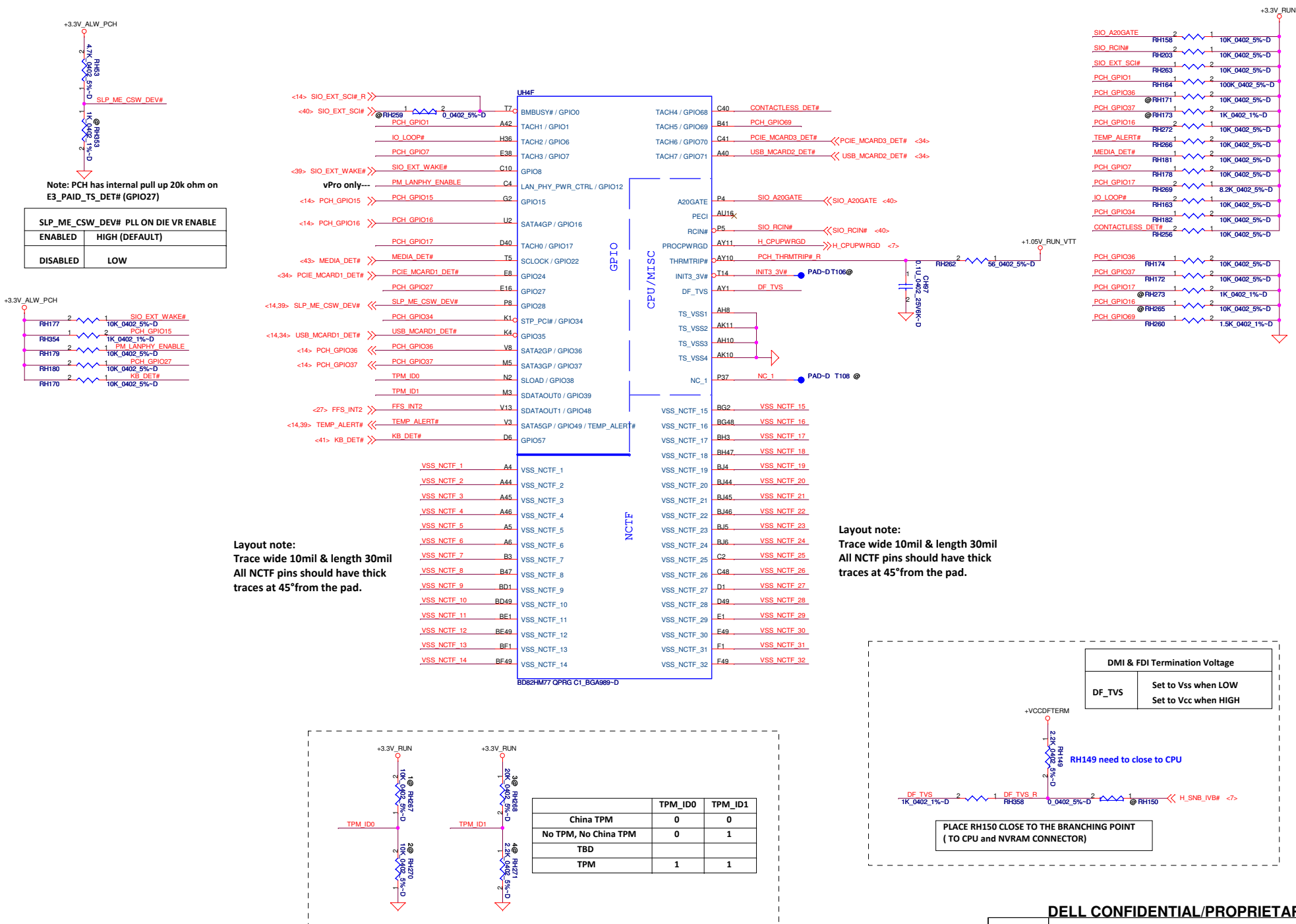
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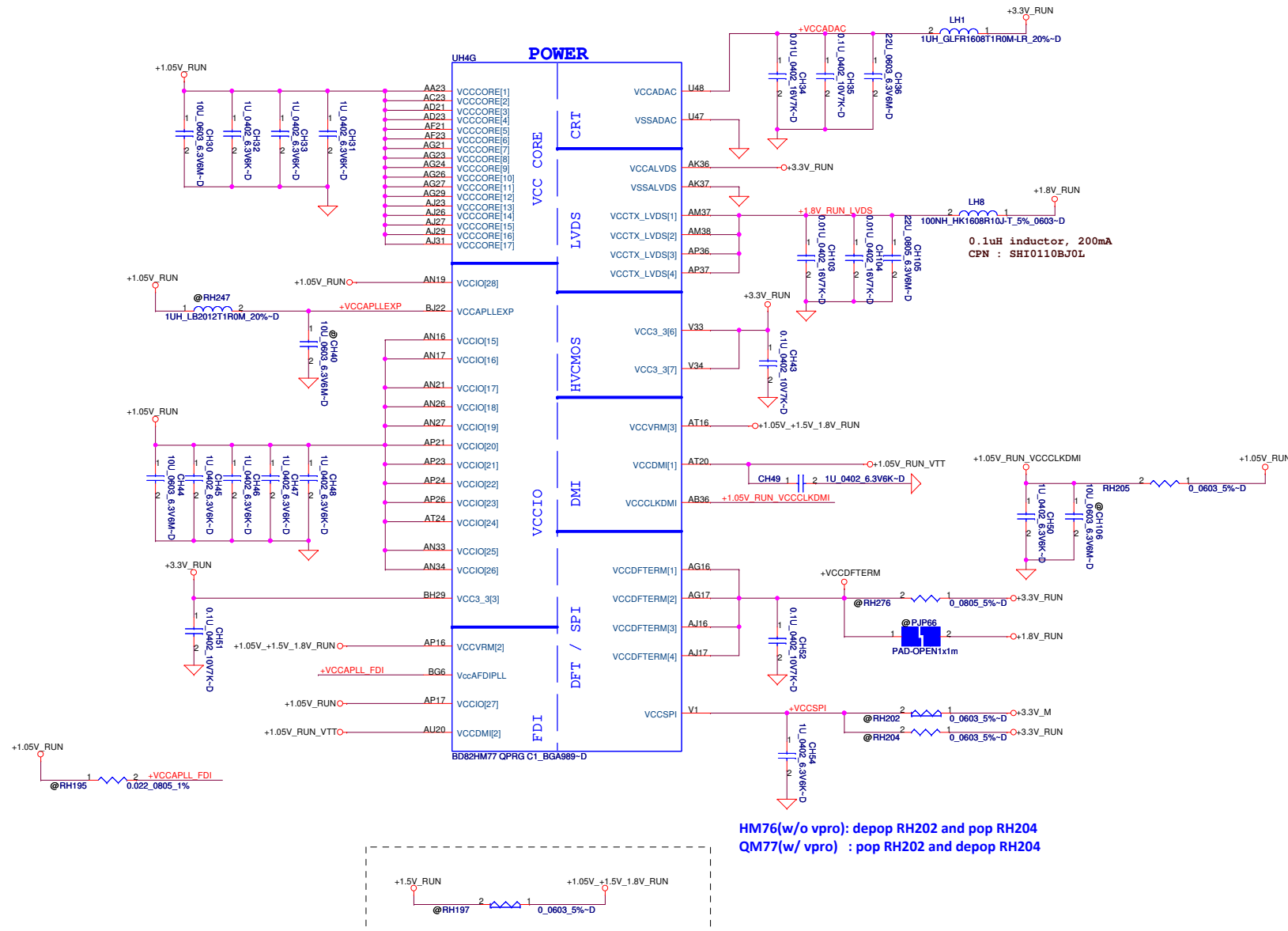
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PCH Power Rail Table

Voltage Rail	Voltage	S0 Iccmax Current (A)
V_PROC_IO	1.05	0.001
V5REF	5	0.001
V5REF_Sus	5	0.001
Vcc3_3	3.3	0.288
VccADAC3	3.3	0.063
VccADPLLA	1.05	0.08
VccADPLLB	1.05	0.08
VccCore	1.05	1.7
VccDMI	1.05	0.047
VccIO	1.05	3.711
VccASW	1.05	0.903
VccSPI	3.3	0.01
VccDSW3_3	3.3	0.001
VCCDFTerm	1.8	0.002
VccRTC	3.3	6uA
VccSus3_3	3.3	0.126
VccSusHDA	3.3	0.01
VccVRM	1.8 / 1.5	0.167
VccClkDMI	1.05	0.07
VccSSC	1.05	0.095
VccDIFFCLKN	1.05	0.055
VccALVDS	3.3	0.001
VccTX_LVDS	1.8	0.04

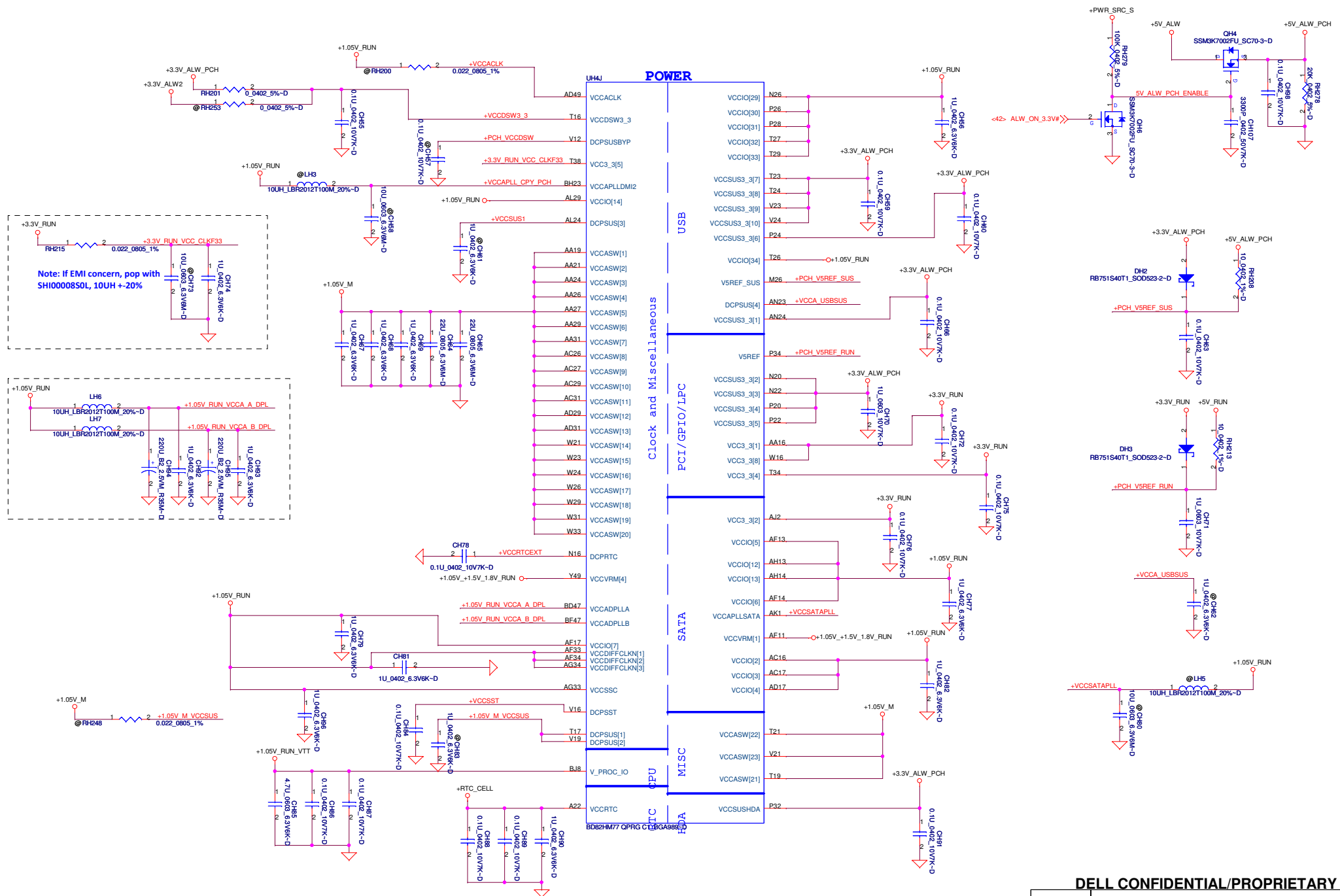
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PCH (6/8)			
Size	Document Number		Rev
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3
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PCH (7/8)

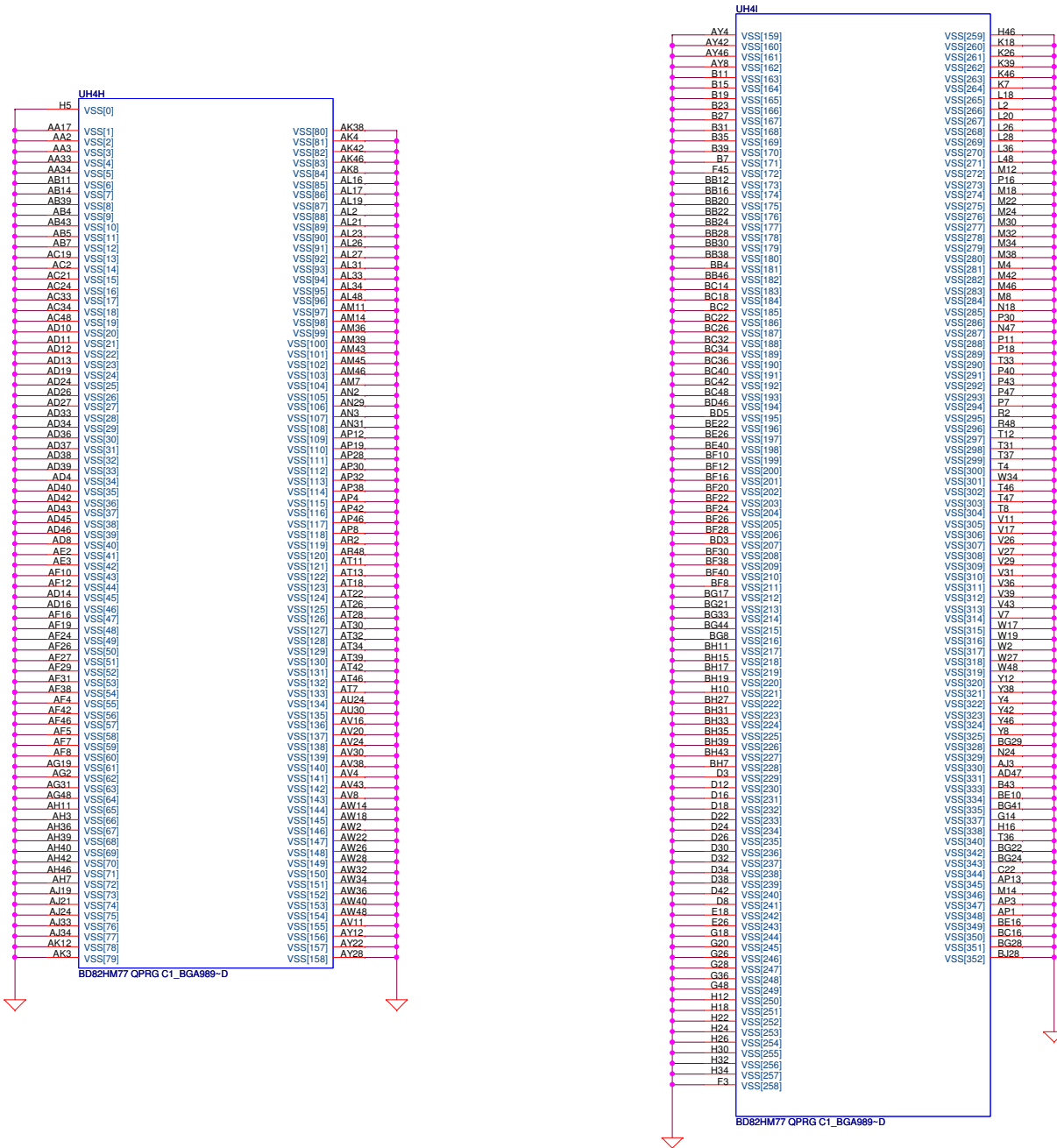
LA-7901P

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LA-7901P

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Laptopblue



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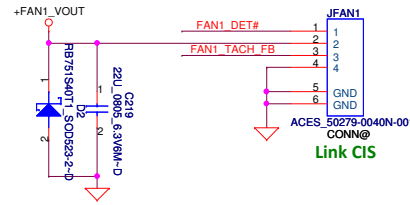
Compal Electronics, Inc.



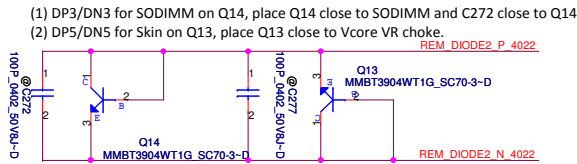
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PCH (8/8)			
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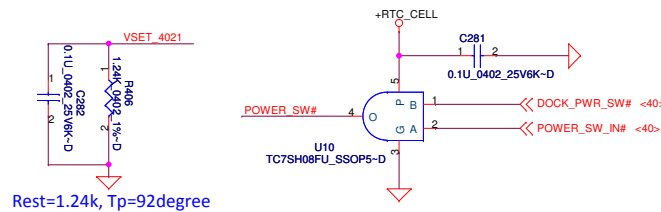
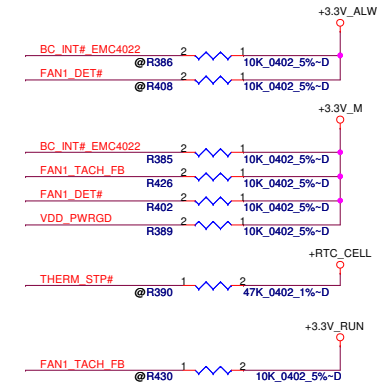
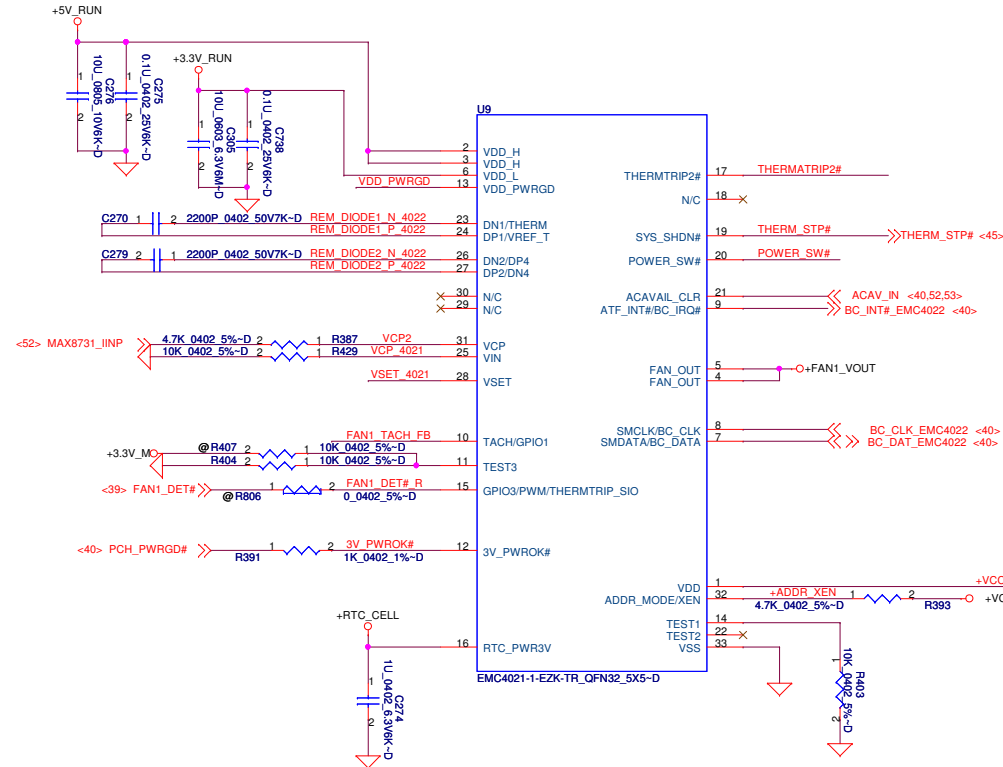
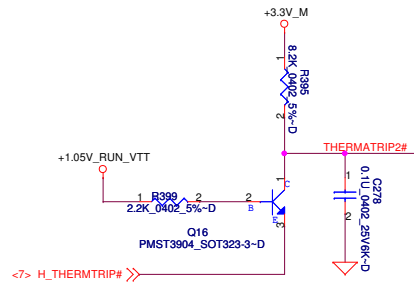
3
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HM76(w/o vpro): depop R385 and pop R386
QM77(w/ vpro) : pop R385 and depop R386



Place under CPU
Place C266 close to the Q12 as possible



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FAN & Thermal Sensor

LA-7901P

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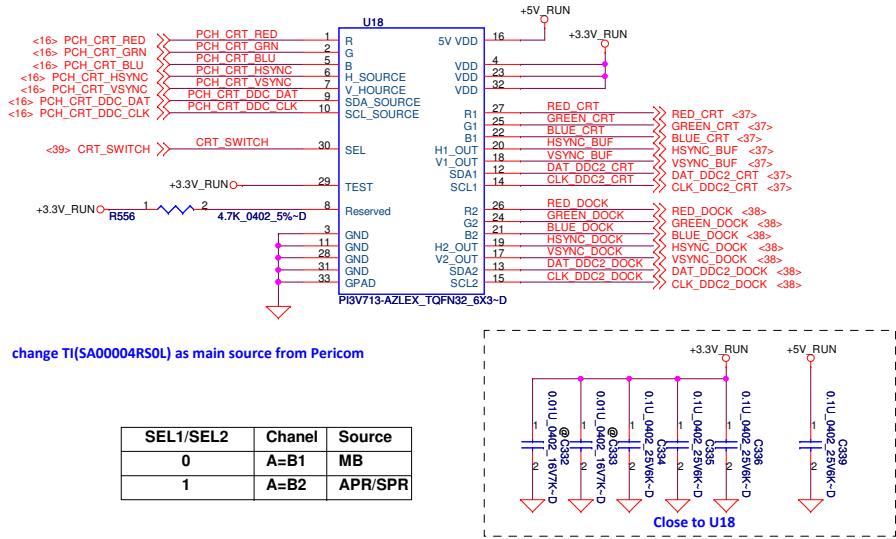
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SW for MB/DOCK



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Title

CRT/Video switch

Size Document Number

LA-7901P

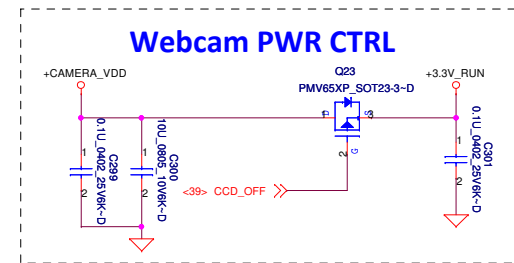
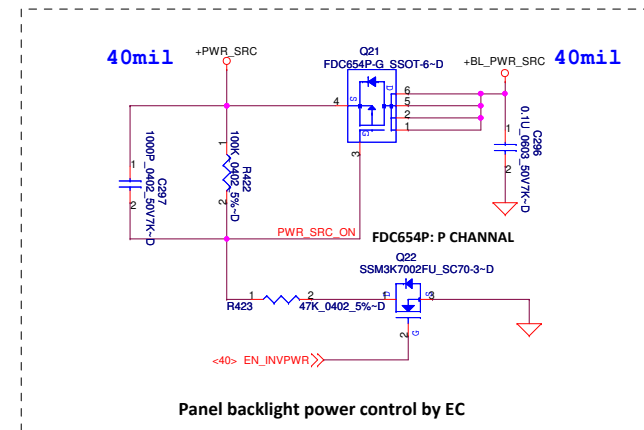
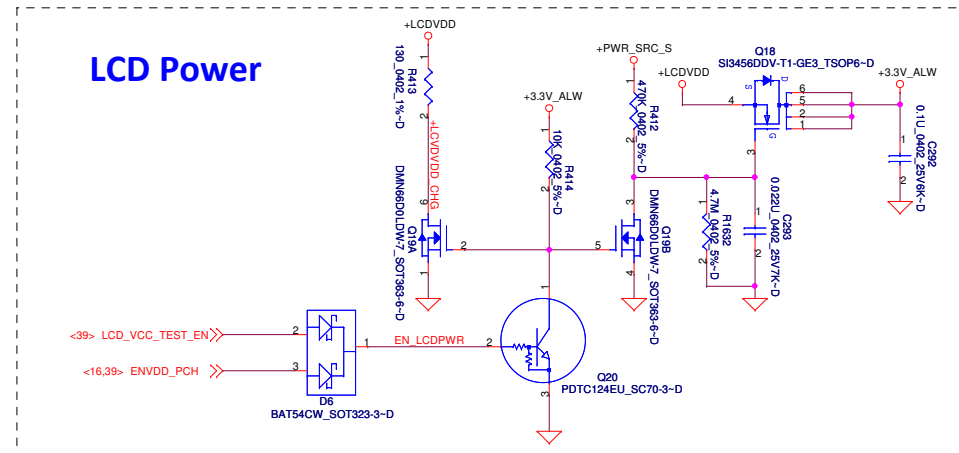
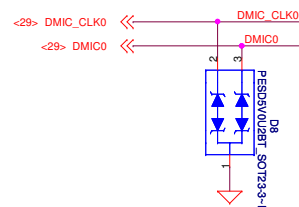
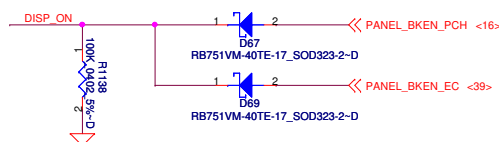
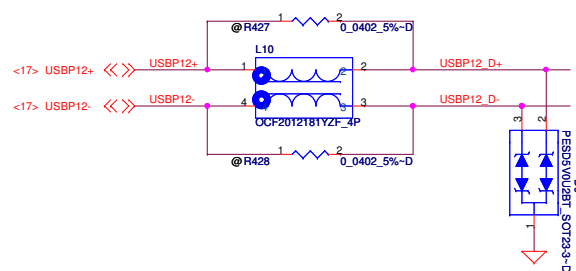
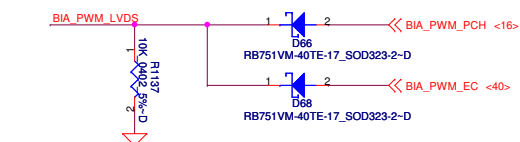
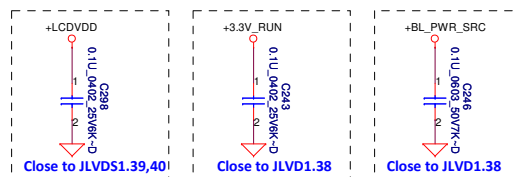
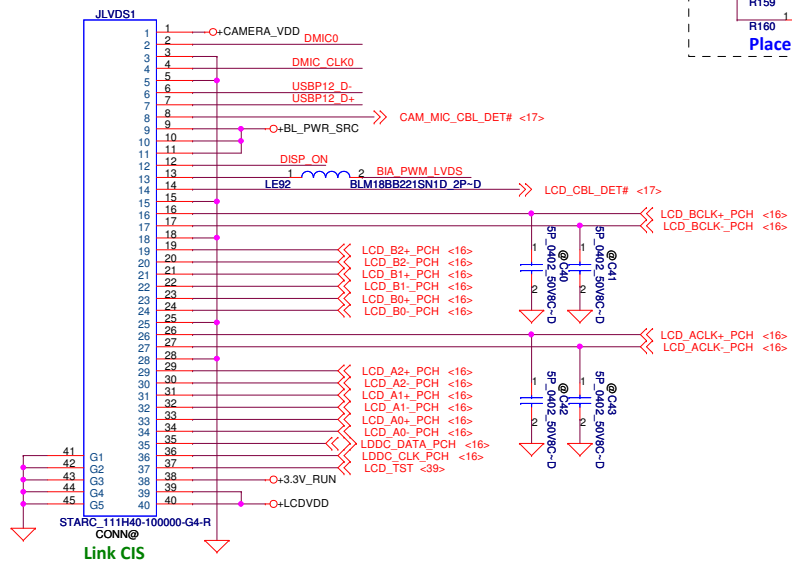
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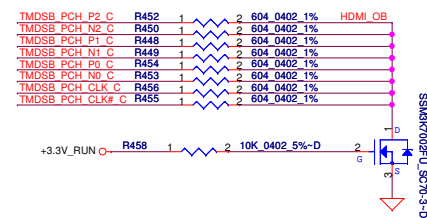
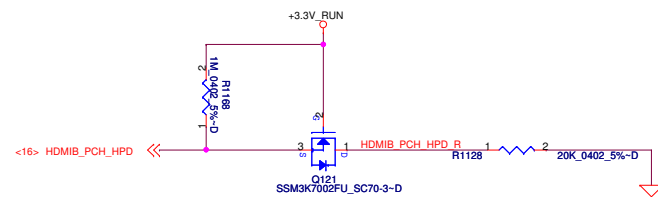
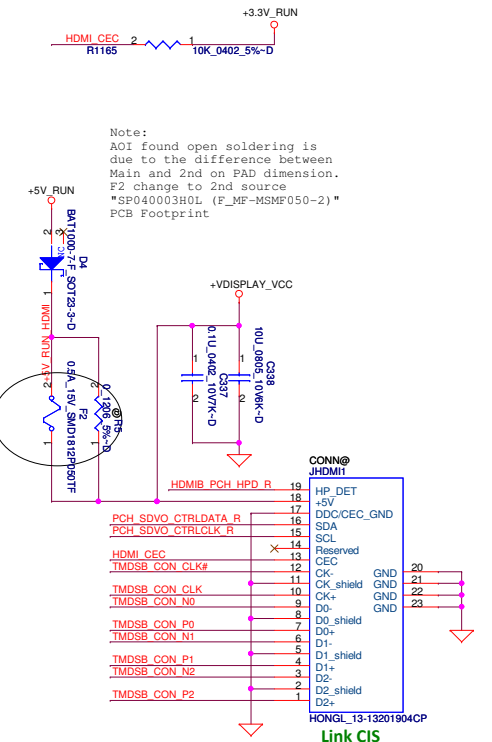
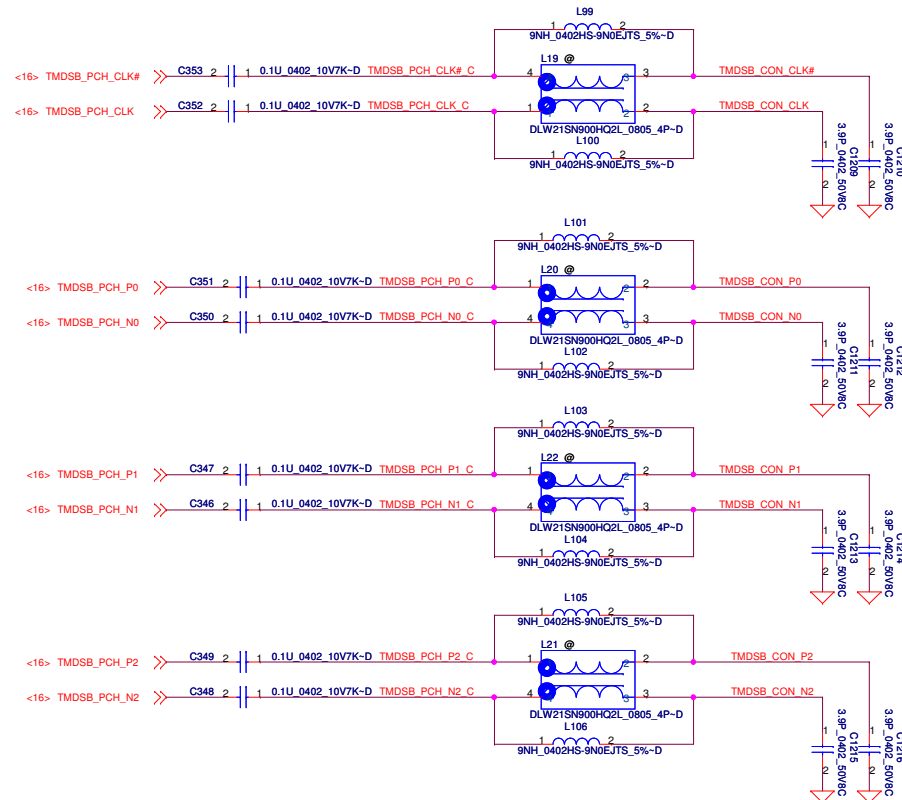
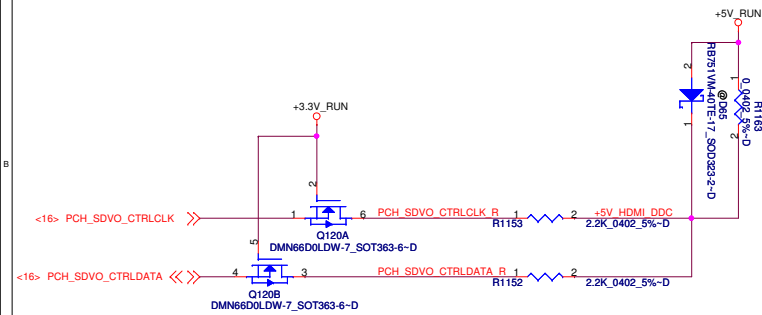
LVDS & CAM Conn

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Part Number	Description
RO0000002HM	HDMI W/Logo:RO0000002HM

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HDMI port

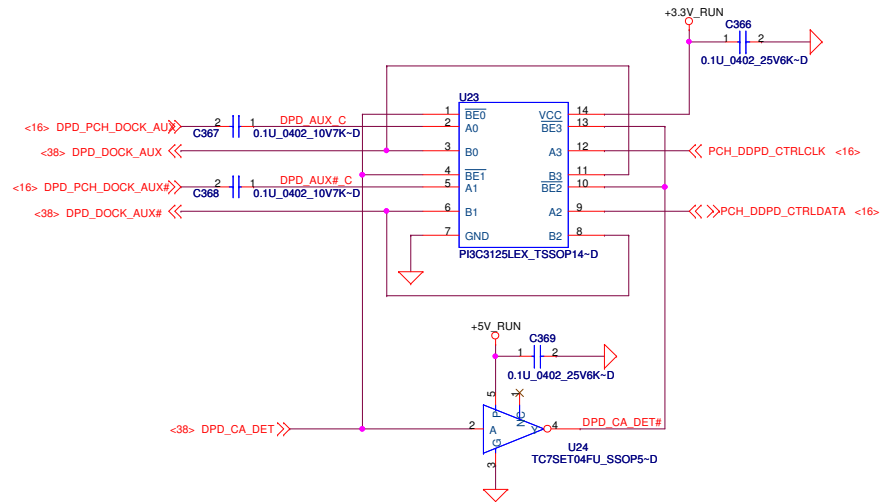
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LA-7901P

Rev 1.0

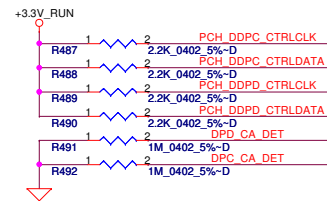
Date: Saturday, March 03, 2012

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AUX/DDC SW for DPD to E-DOCK



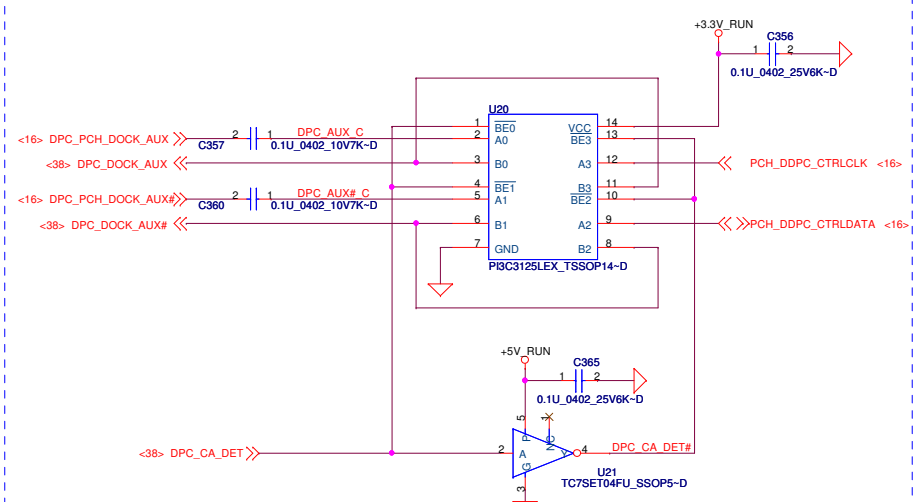
Note:When implement 2nd source, please check Vil and Vih spec is meet main source spec



Intel WW18 Strapping option

Intel WW18 Strapping option

AUX/DDC SW for DPC to E-DOCK



Note:When implement 2nd source, please check Vil and Vih spec is meet main source spec

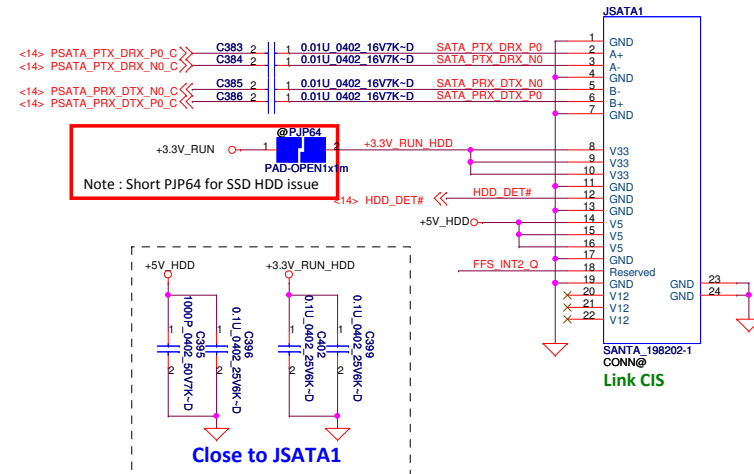
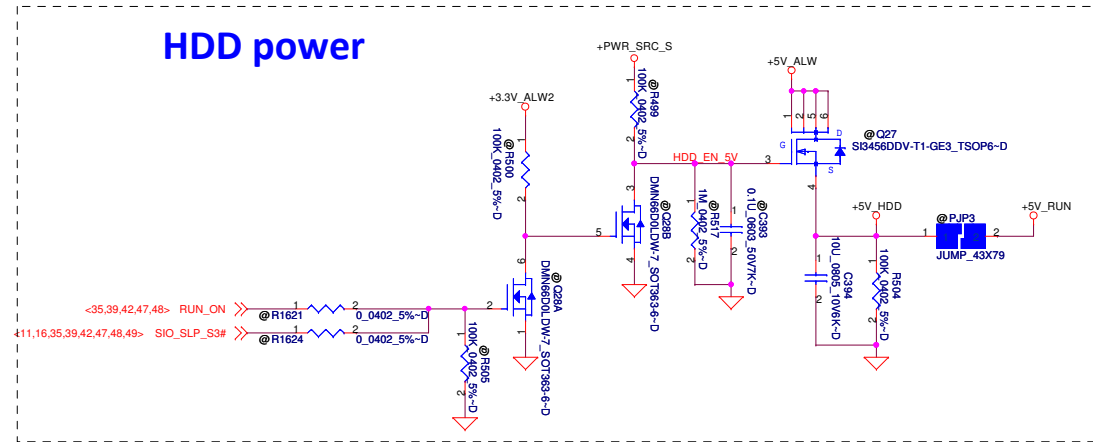
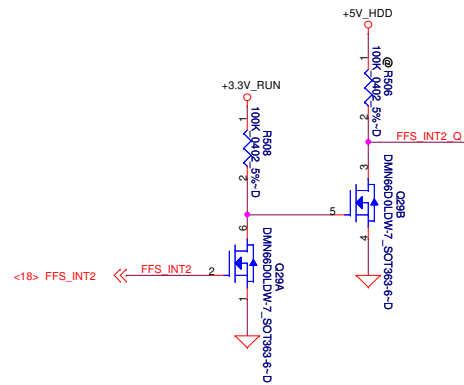
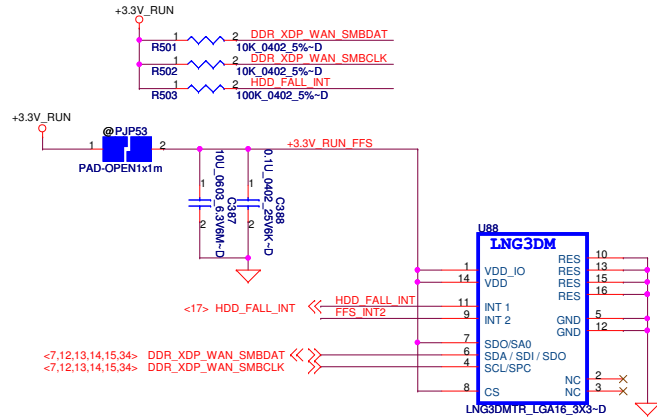
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DP SW		
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HDD CONNECTOR

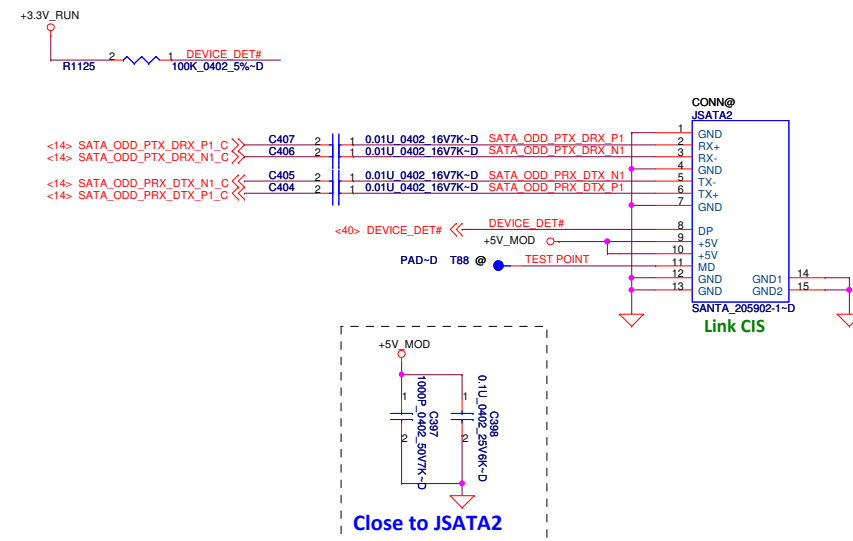
LA-7901P

Rev 1.0

Date: Friday, March 02, 2012

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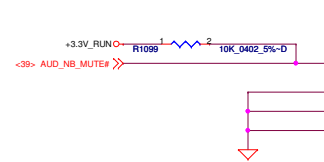
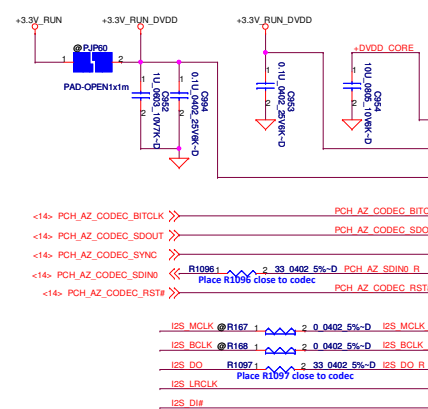
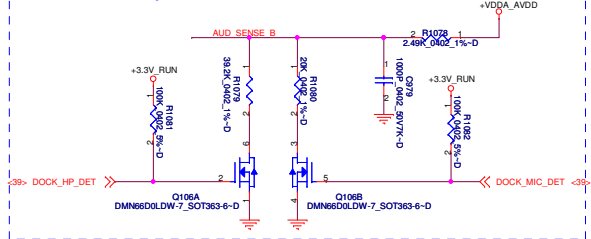
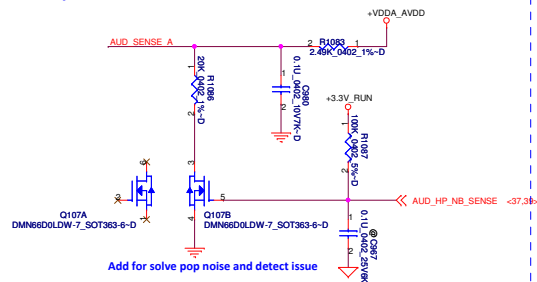
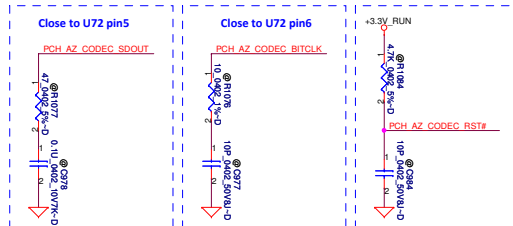
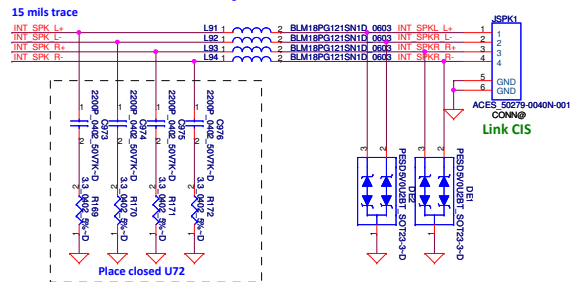
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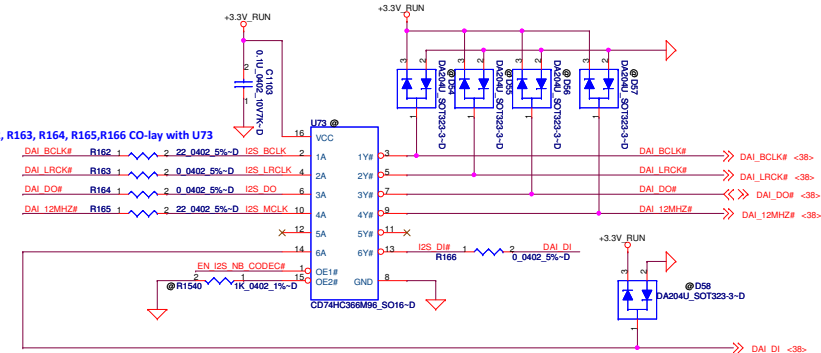
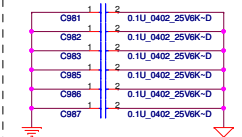
Internal Speakers Header



Notes:
Keep PVDD supply and speaker traces routed on the DGND plane
Keep away from AGND and other analog signals
place at Codec bottom side



place at AGND and DGND plane



DMIC0	Camera/B
DMIC1	Power/B

Resistor	SENSE_A	SENSE_B
39.2K	PORT A	PORT E
20K	PORT B	PORT F
10K	NA	DMICD
5.11K	SPDIFOUT0	SPDIFOUT1 (DMIC1)
2.49K	Pull-up to AVDD	

PORT A	External MIC
PORT B	HeadPhone Out
PORT C	Dock Audio
PORT D	Internal SPK

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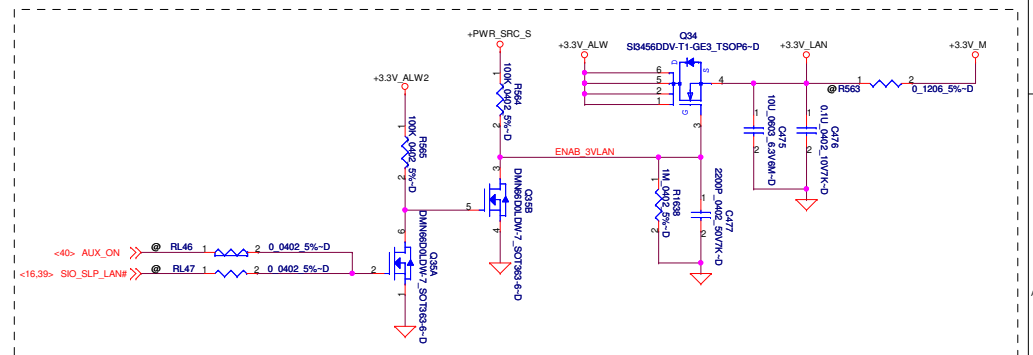
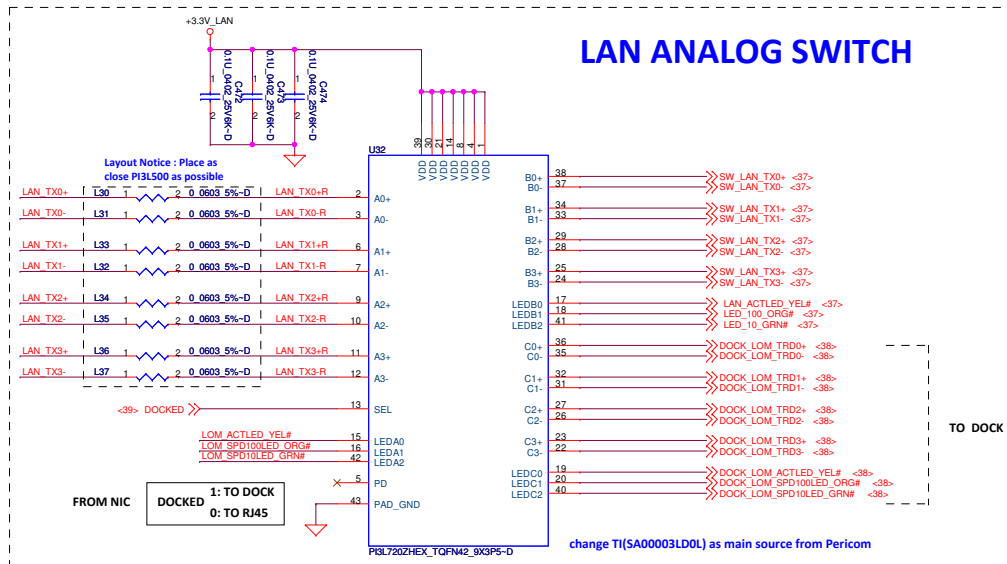
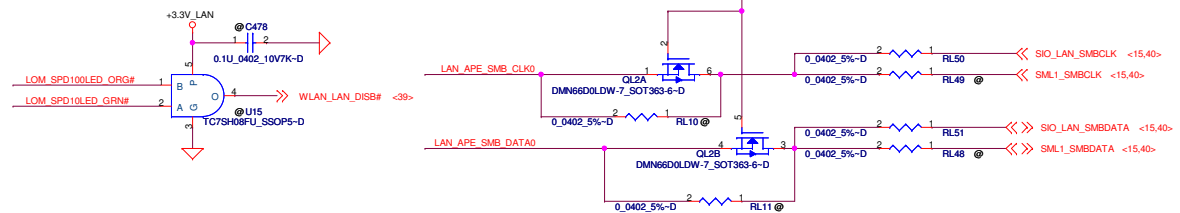
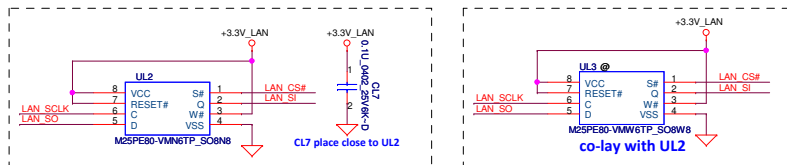
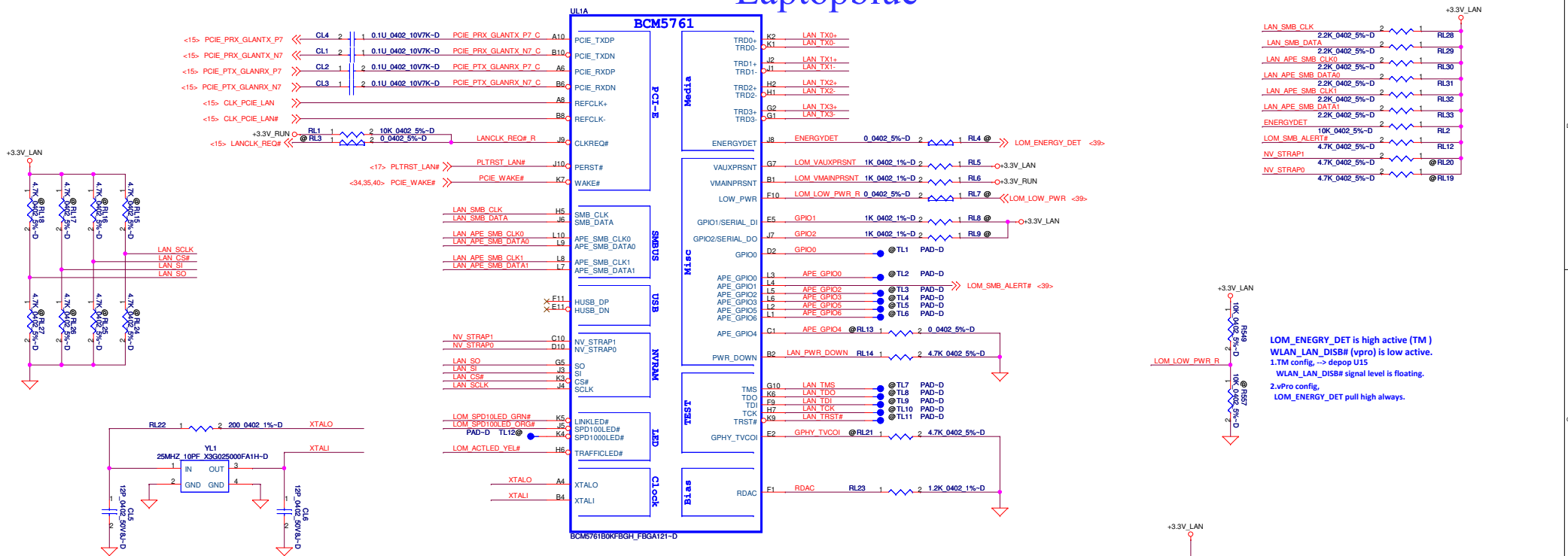
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Azalia (HD) Codec

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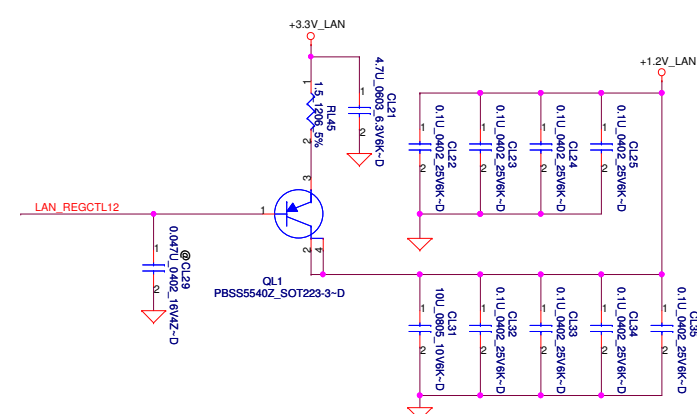
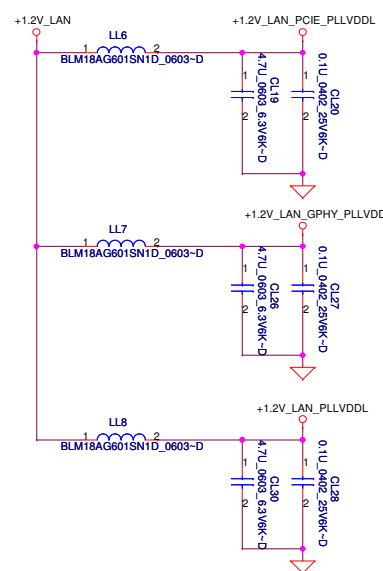
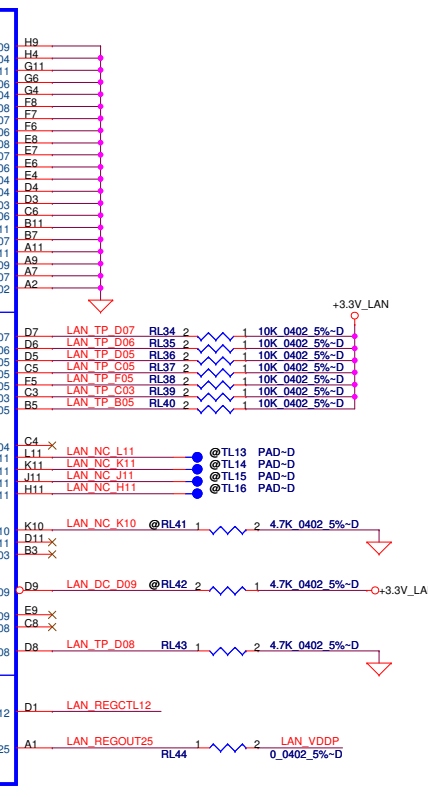
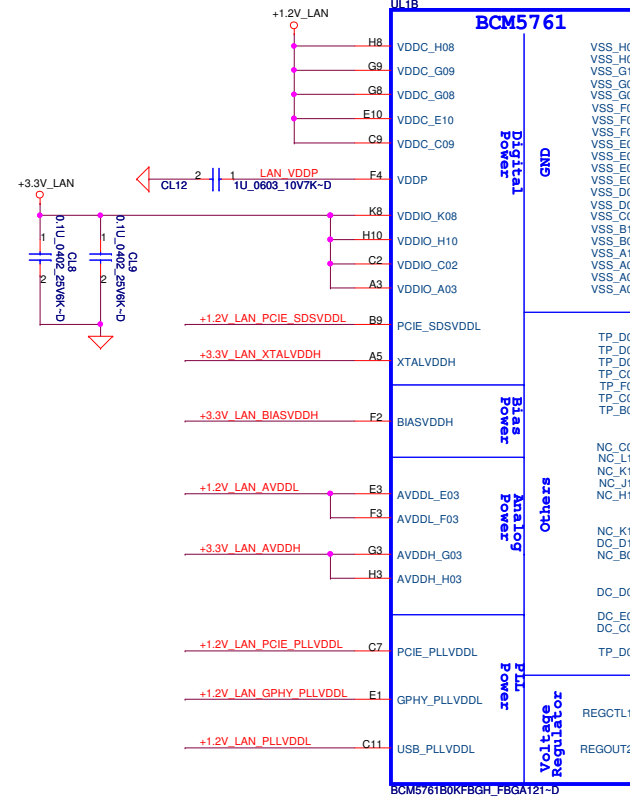
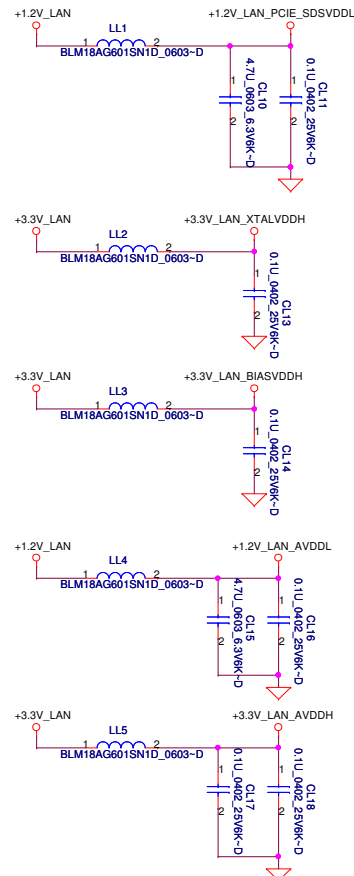
LAN (1/2) BCM5761

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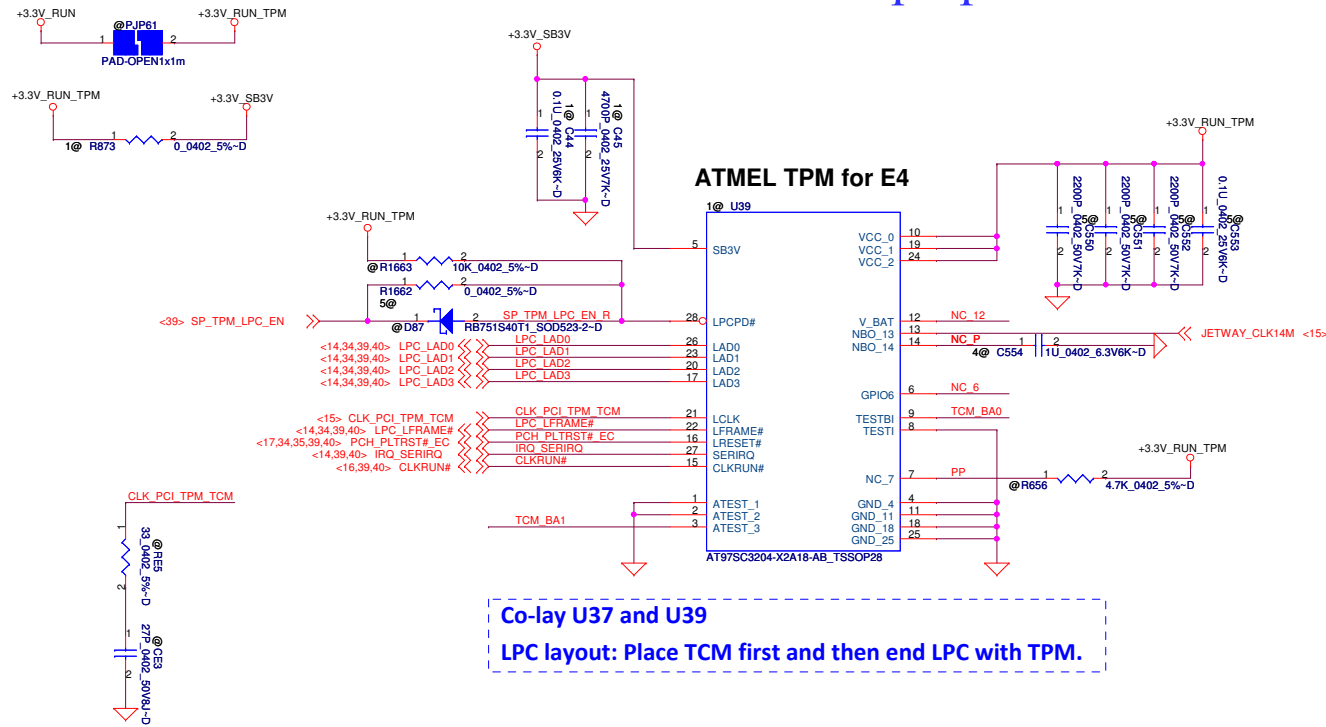
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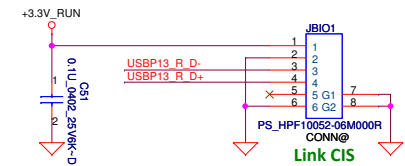
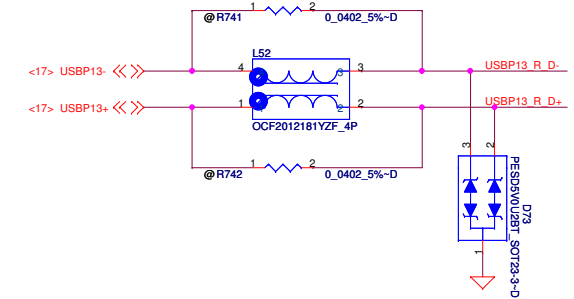
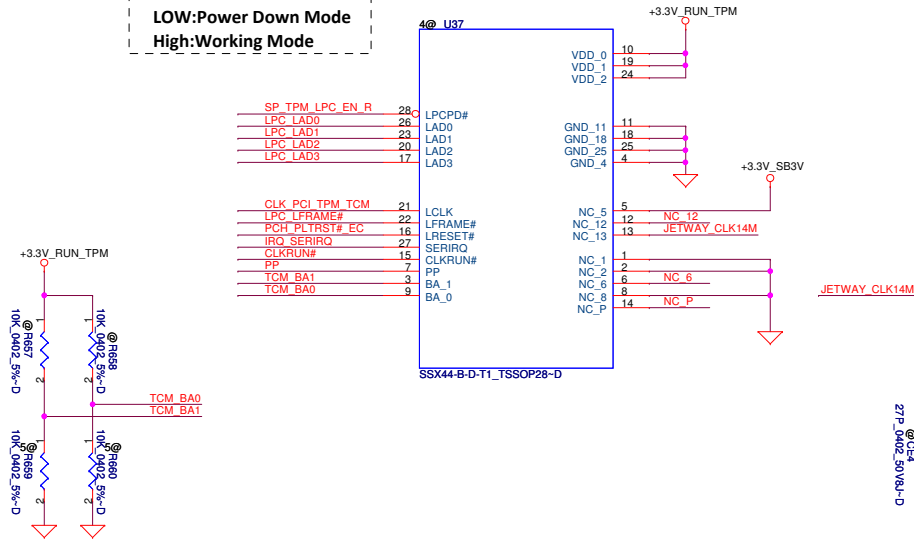
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China TCM: NationZ & Jetway co-lay

LOW:Power Down Mode
High:Working Mode

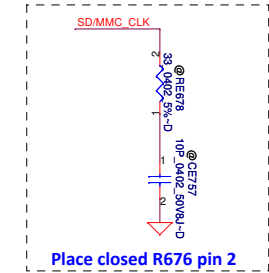
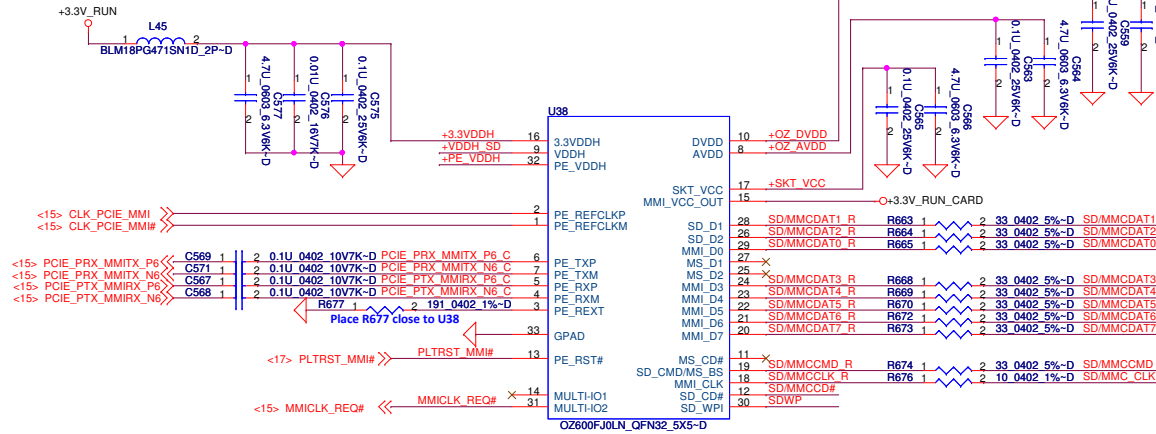
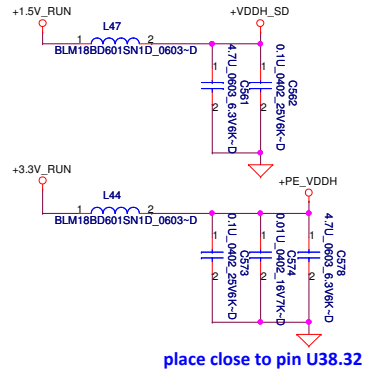


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		Compal Electronics, Inc.	
TPM/TCM/BIO Conn		LA-7901P	
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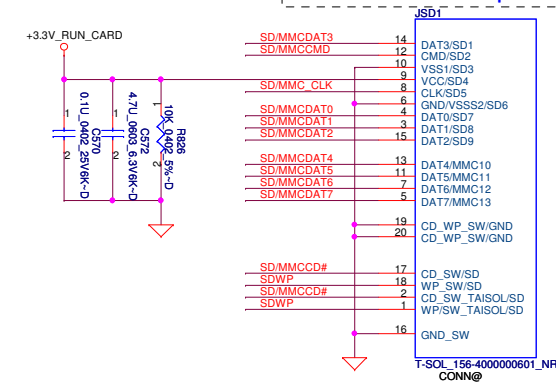
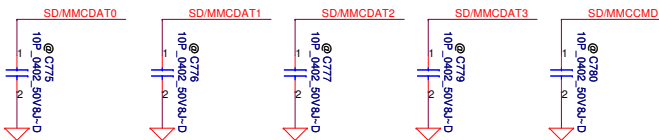
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Note: The trace need to route as daisy-chain and the trace of SD signals need to route as short as possible

Vendor review in 6/22 and reserve for SD3.0 UHS-I 200MHz transfer



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Card Reader OZ600FJ0

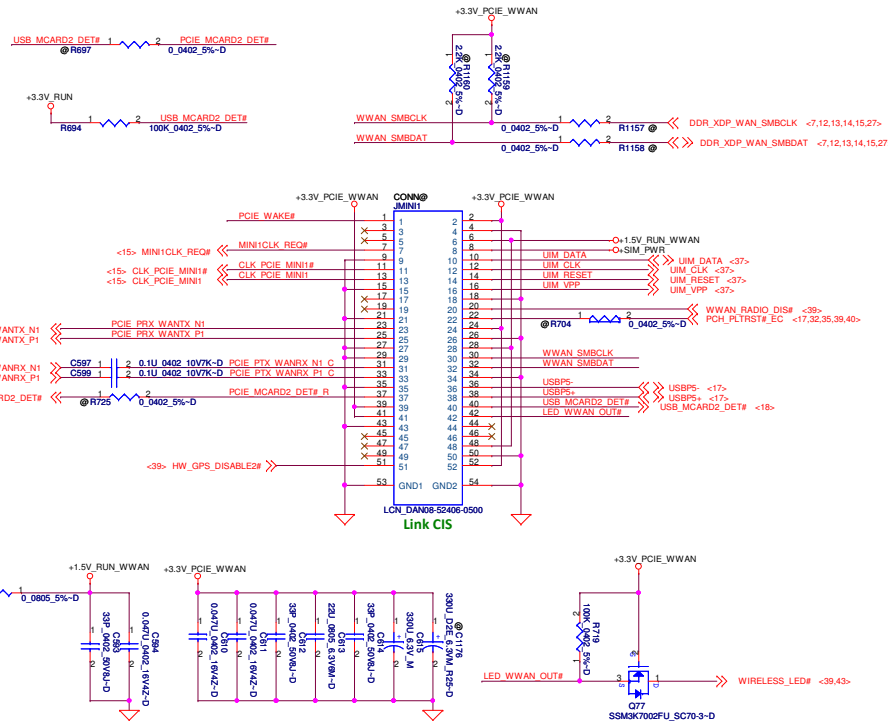
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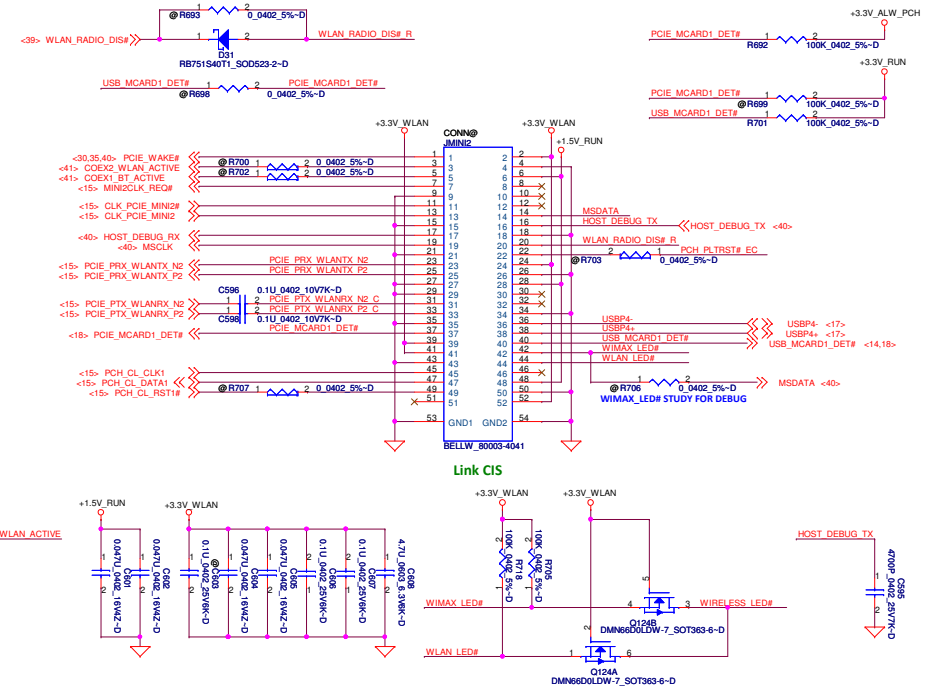
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Mini WWAN/GPS/LTE/UWB H=4

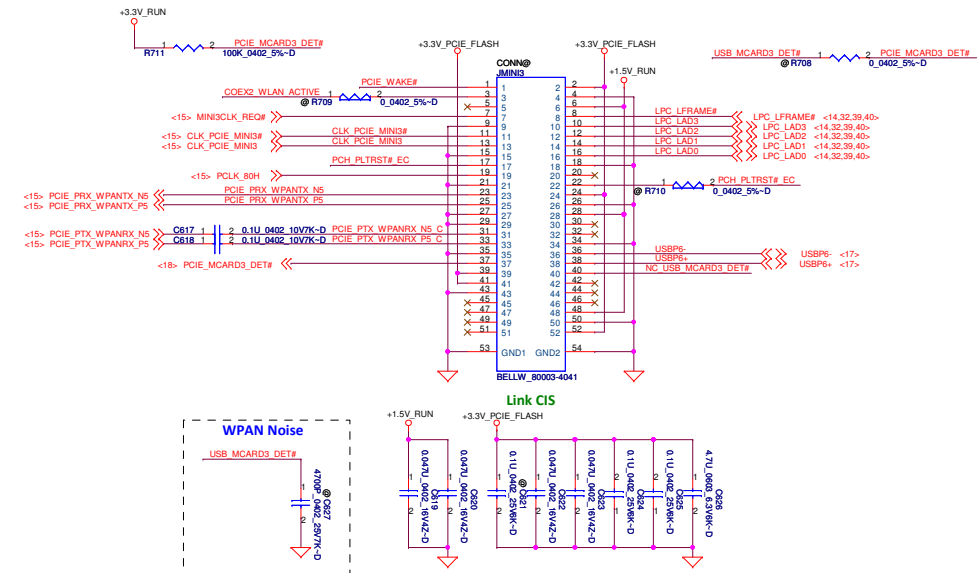


FWR Rail	Voltage Tolerance	Primary Power		Aux Power
		Peak	Normal	Normal
+3.3V	+9%	1000	750	
+3.3Vaux	+9%	330	250	250 (Wake enable) 5 (Not wake enable)
+1.5V	+5%	500	375	NA

Mini WLAN/WIMAX H=6.7



1/2 Minicard Pink Pather/60GHz Card H=6.7



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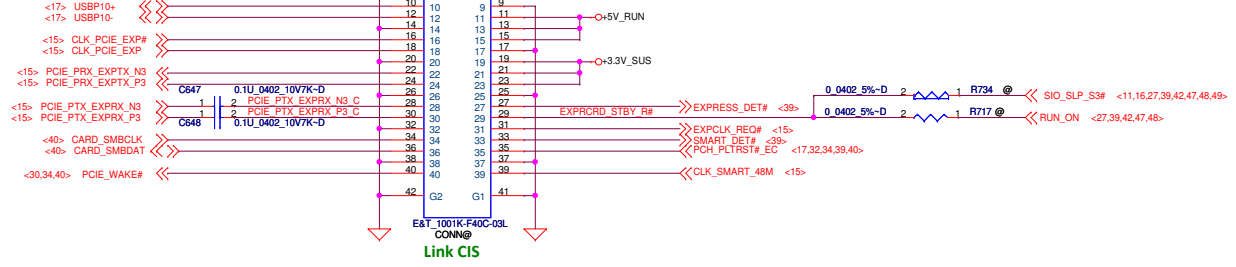
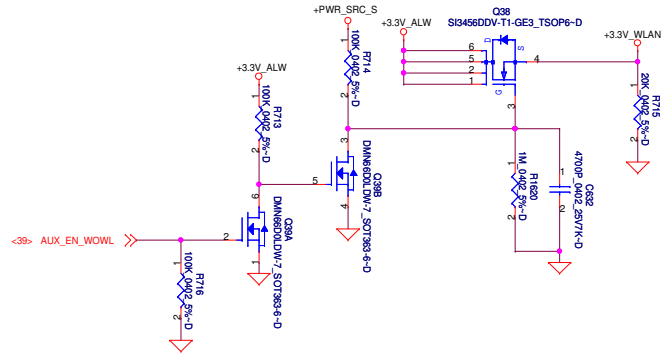
Mini Card

LA-7901P

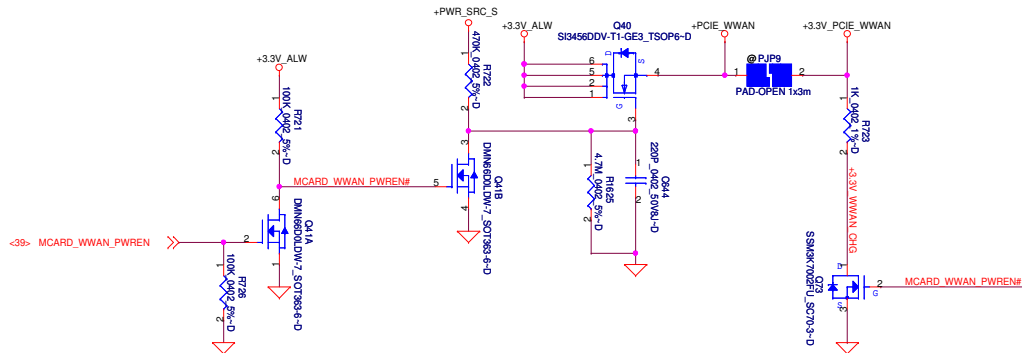
Date: Friday, March 02, 2012 Sheet 34 of 61

Express/Smart Card Conn.

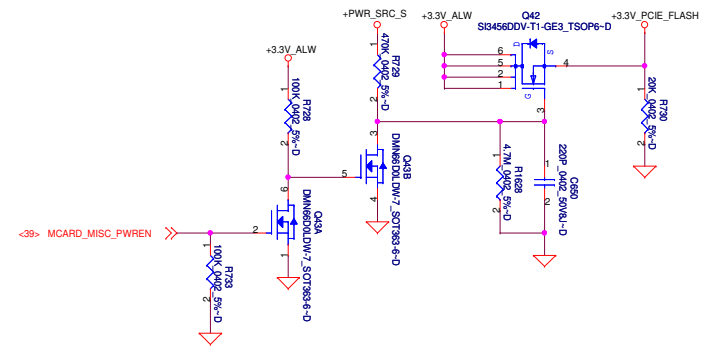
Power Control for Mini card2



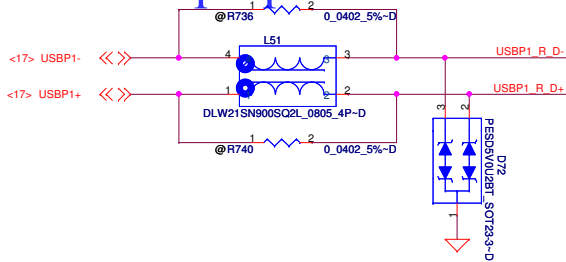
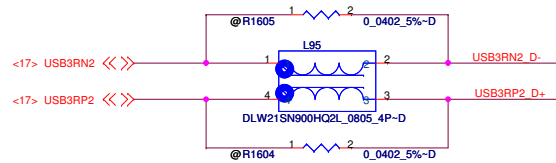
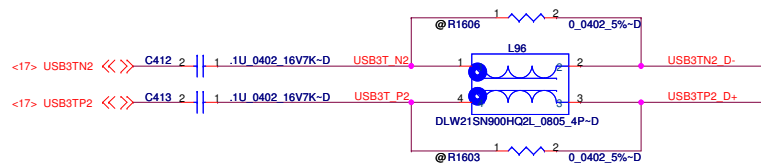
Power Control for Mini card1



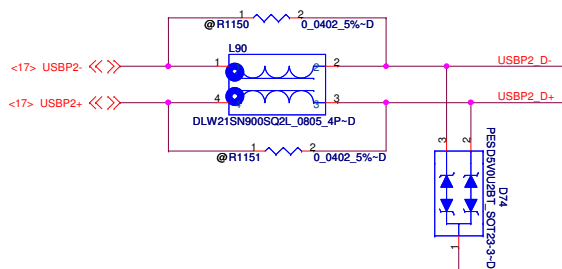
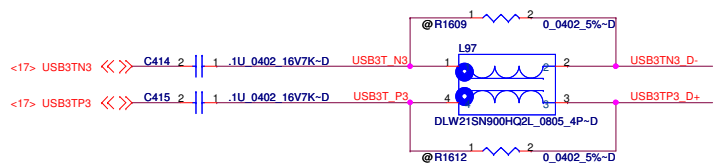
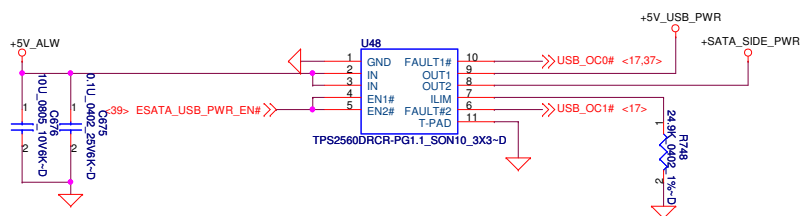
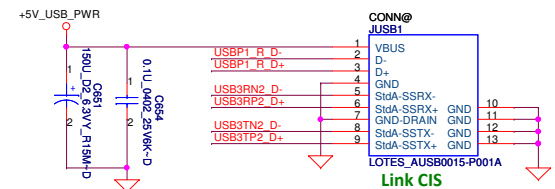
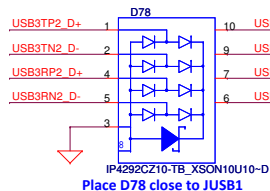
Power Control for Mini card3



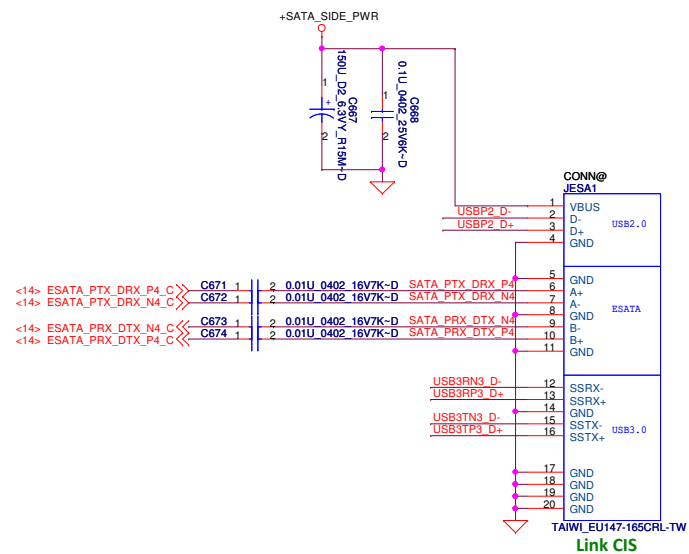
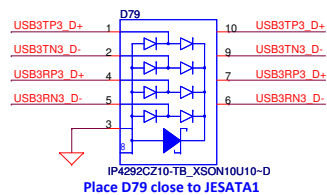
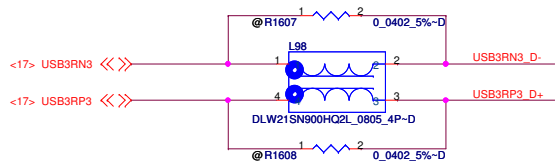
Laptopblue



Place D72 close to JUSB1



Place D74 close to JESATA1



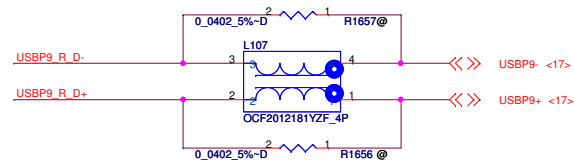
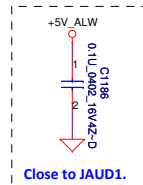
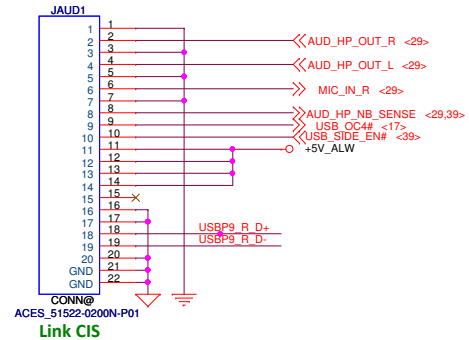
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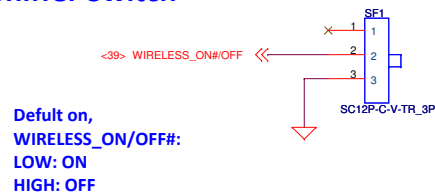
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Size		USB2.0/3.0 ESATA	
Document Number		LA-7901P	
Date		Friday, March 02, 2012	
Sheet		36 of 61	

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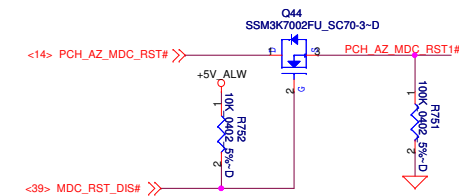
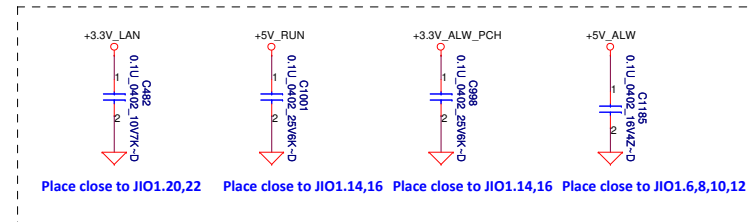
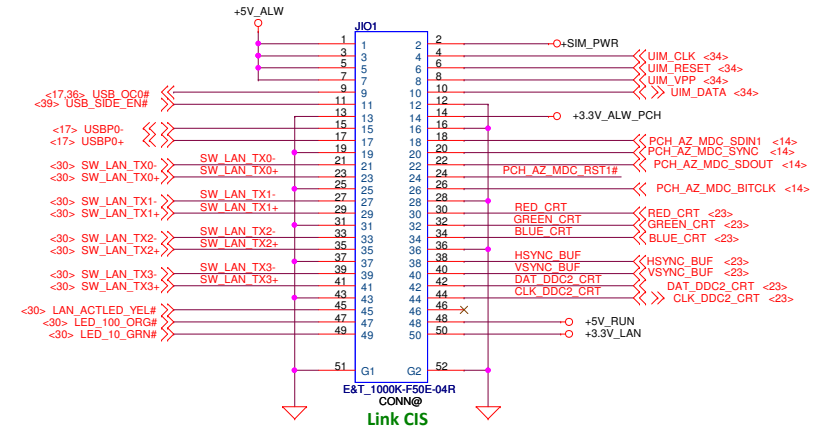
AUDIO BOARD



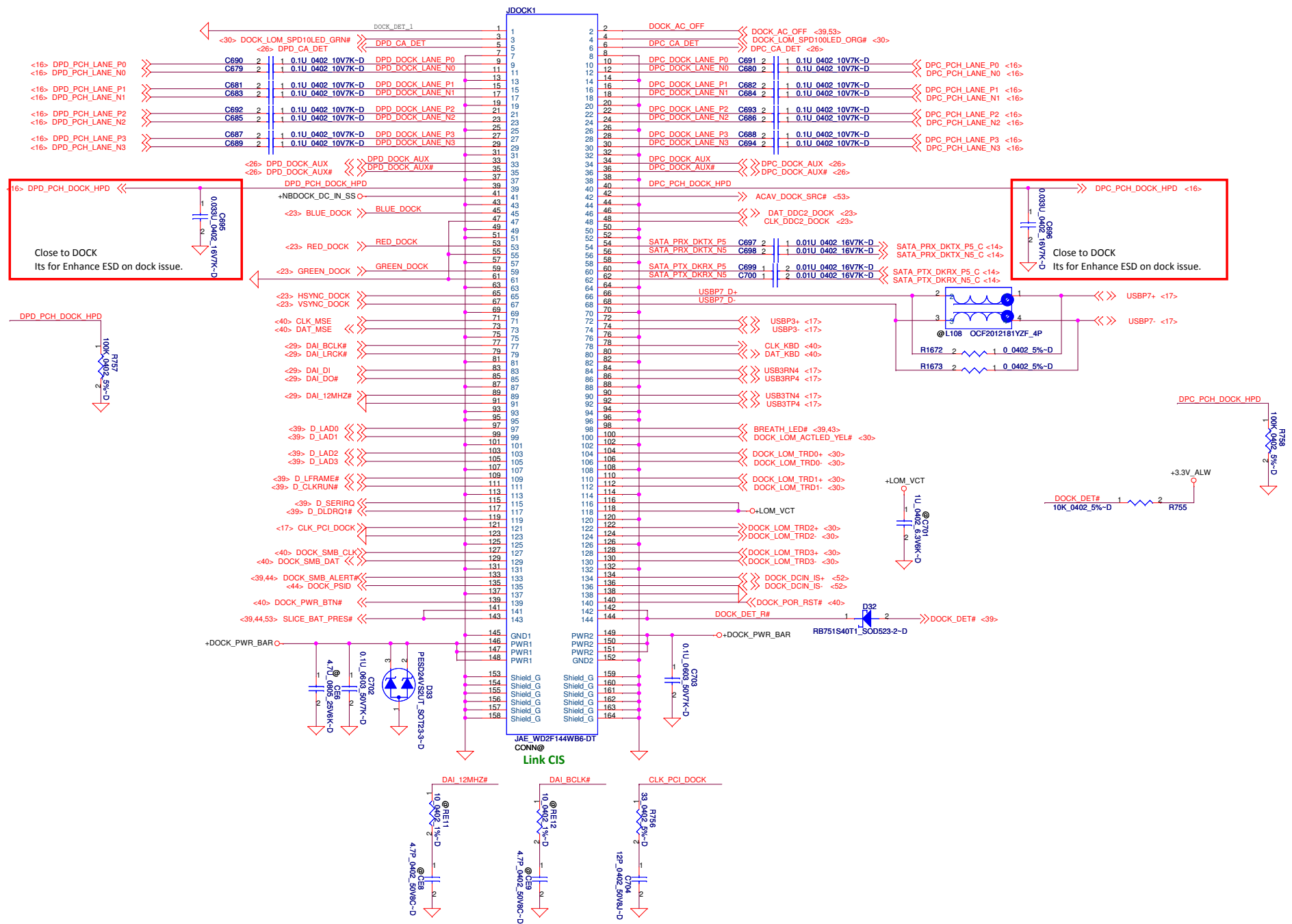
Sniffer Switch



IO BOARD



Laptopblue



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Compal Electronics, Inc.

DOCKING CONN

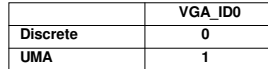
LA-7901P

Rev
1.0

Date: Friday, March 02, 2012

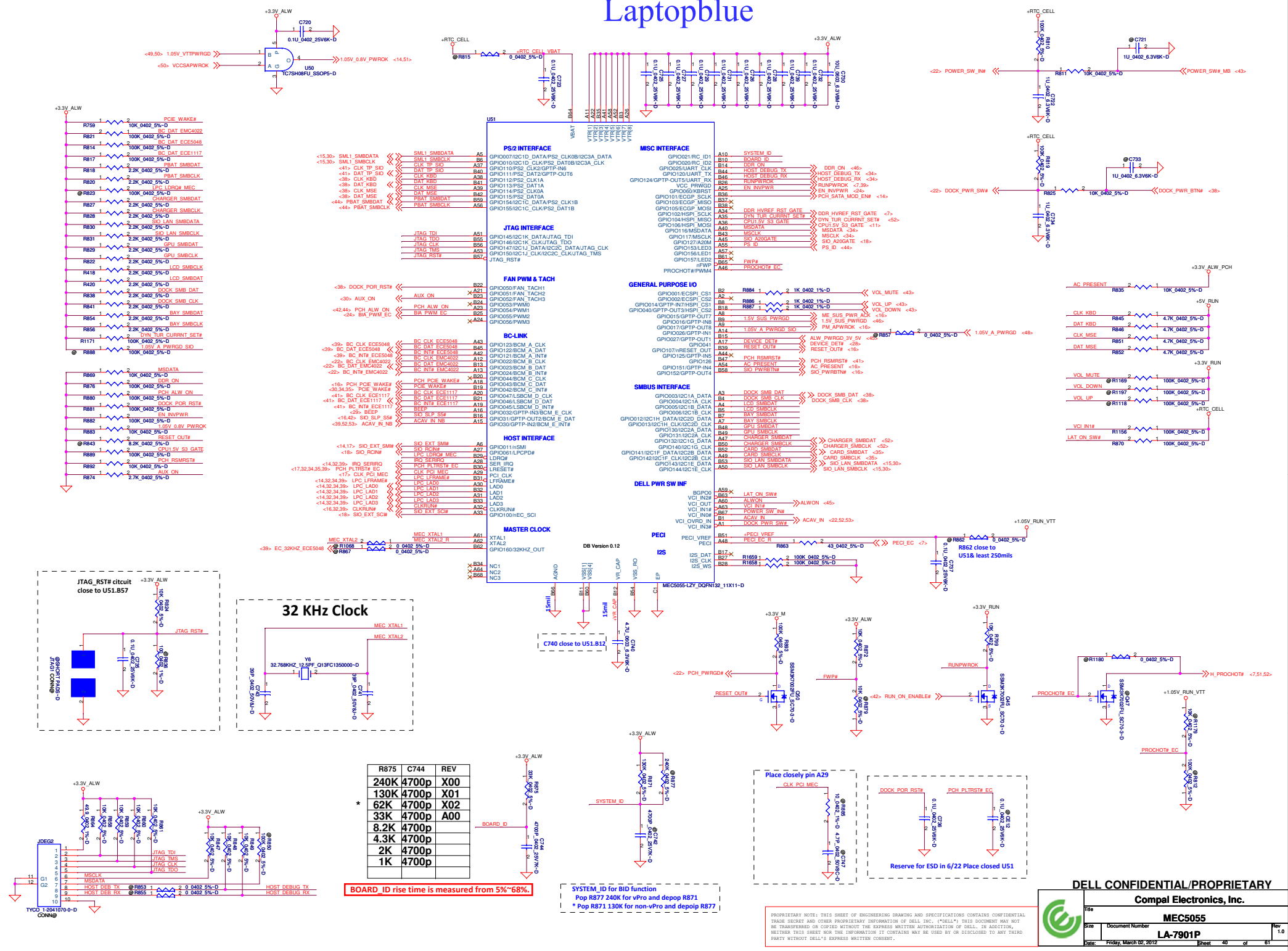
Sheet 38 of 61

+3.3%



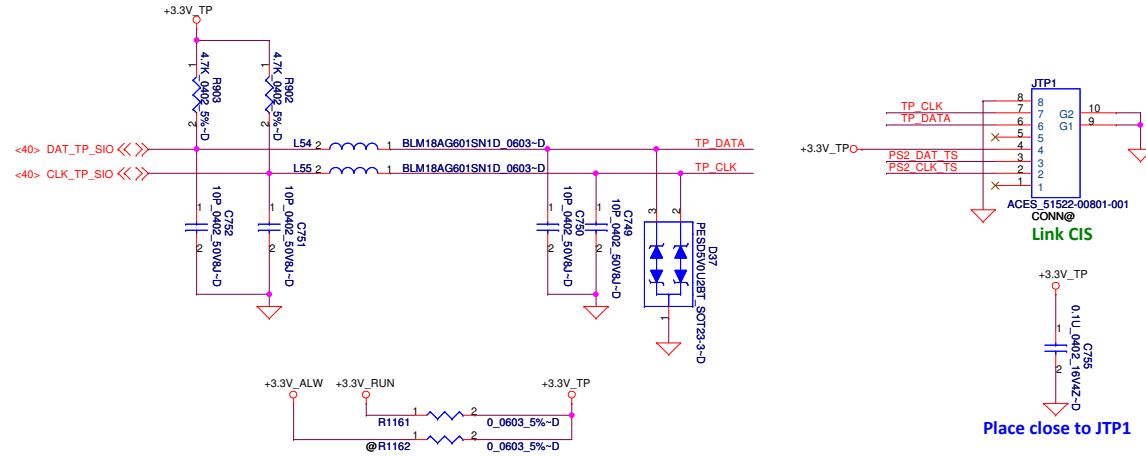
Date: Friday, March 02, 2012 Sheet 39 of 61

Laptopblue

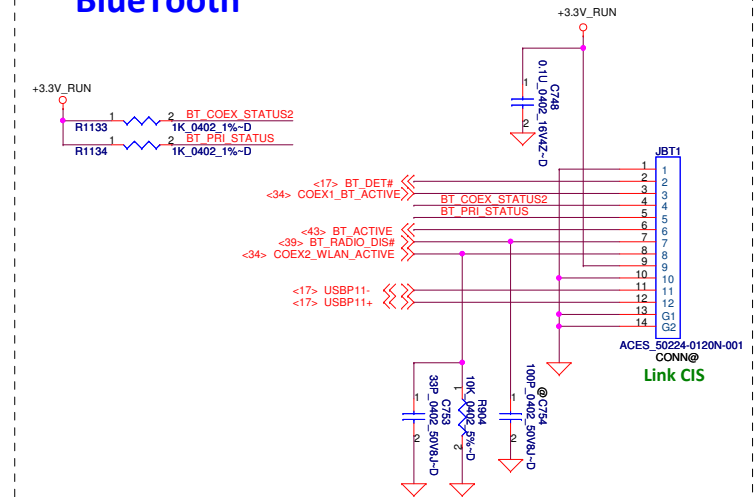


Laptopblue

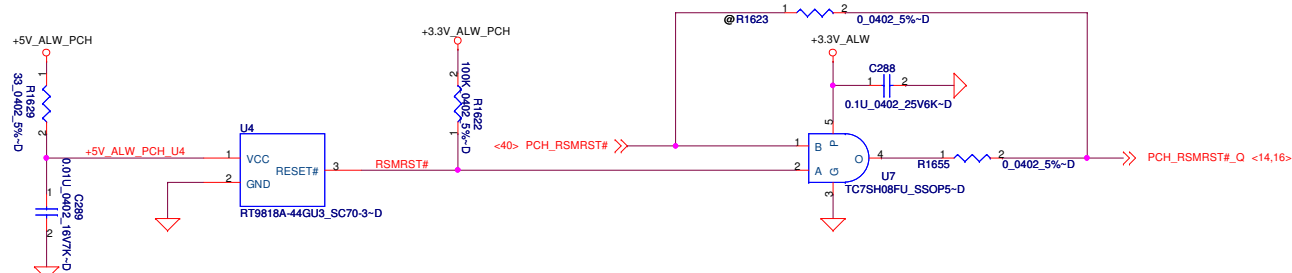
Touch Pad



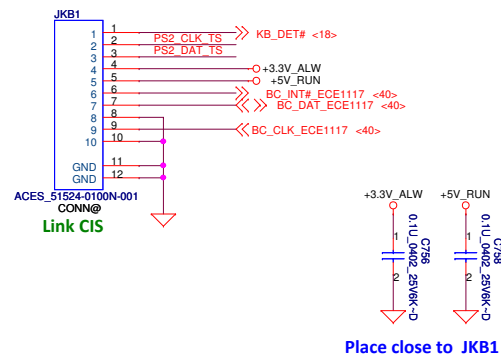
BlueTooth



RSMRST circuit



Keyboard

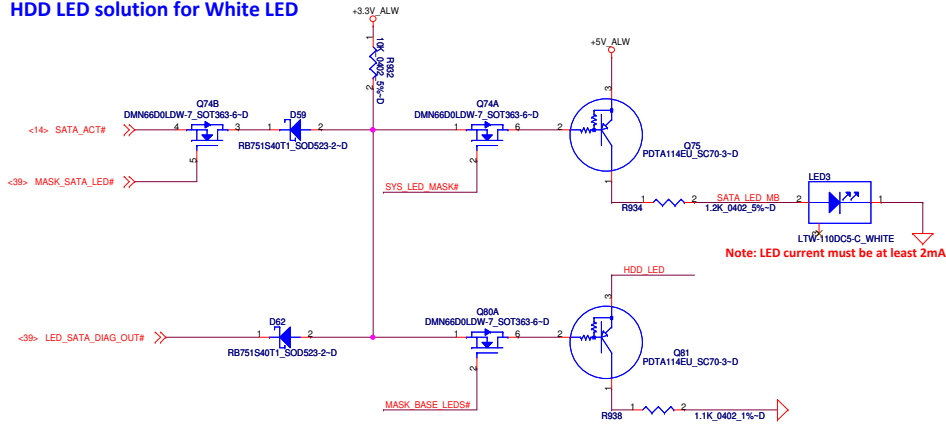


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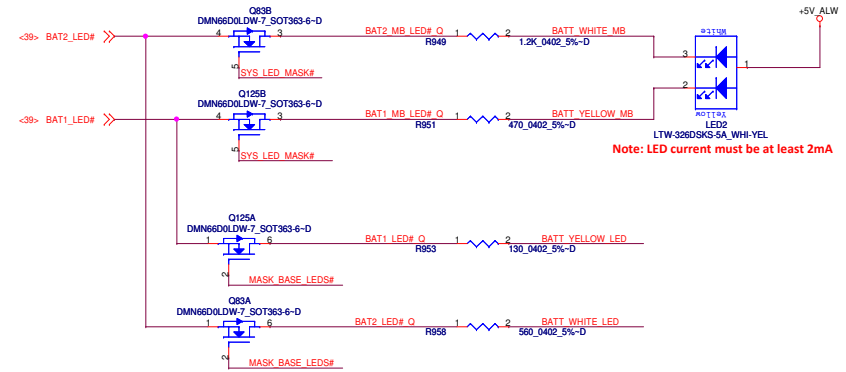


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Title			
Size	Document Number		Rev 1.0
Date:	Friday, March 02, 2012	Sheet 41 of 61	

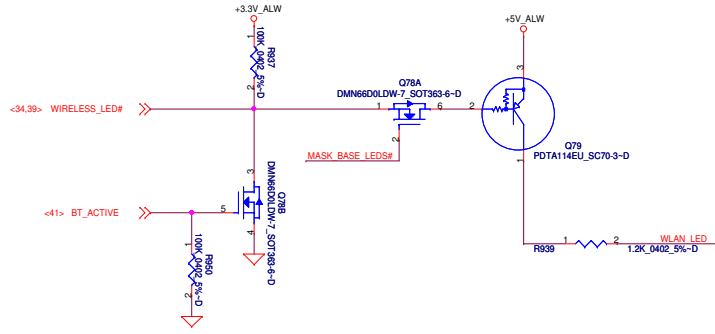
HDD LED solution for White LED



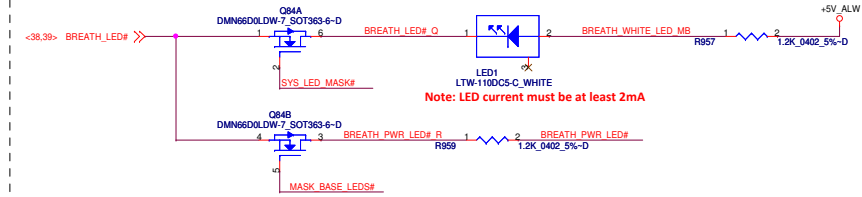
Battery LED



WLAN LED solution for White LED



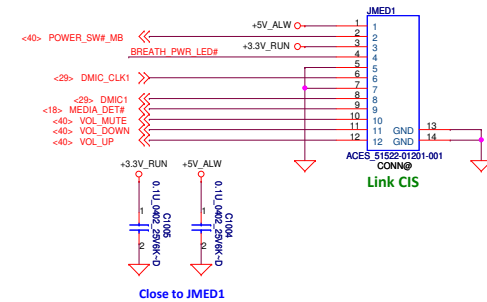
Breath LED



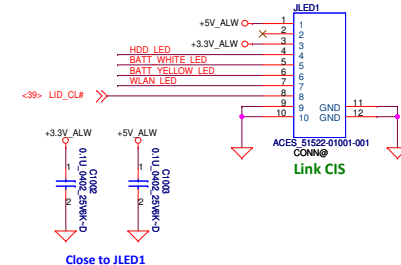
LED Circuit Control Table

	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

MEDIA BOARD

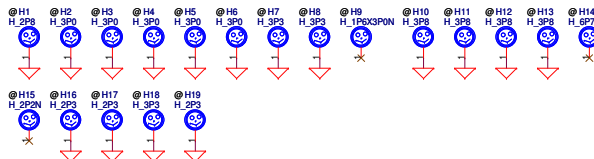


LED BOARD



Fiducial Mark

- FD1
- FIDUCIAL MARK-D
- FD2
- FIDUCIAL MARK-D
- FD3
- FIDUCIAL MARK-D
- FD4
- FIDUCIAL MARK-D



EMI CLIP



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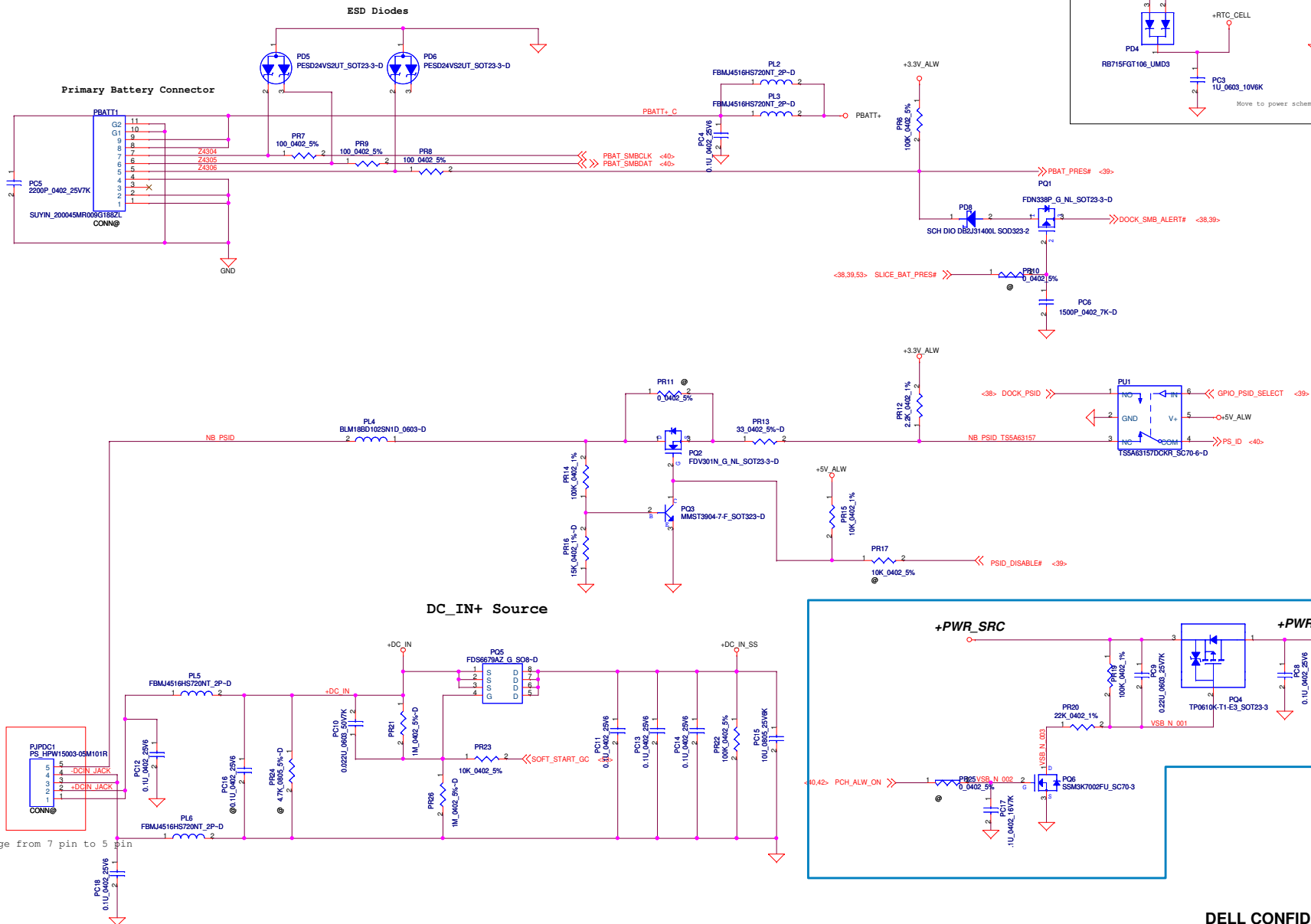
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Compal Electronics, Inc.

PWR/LED Conn/PAD/ME

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LA-7901P		1.0
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Laptopblue



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+DCIN

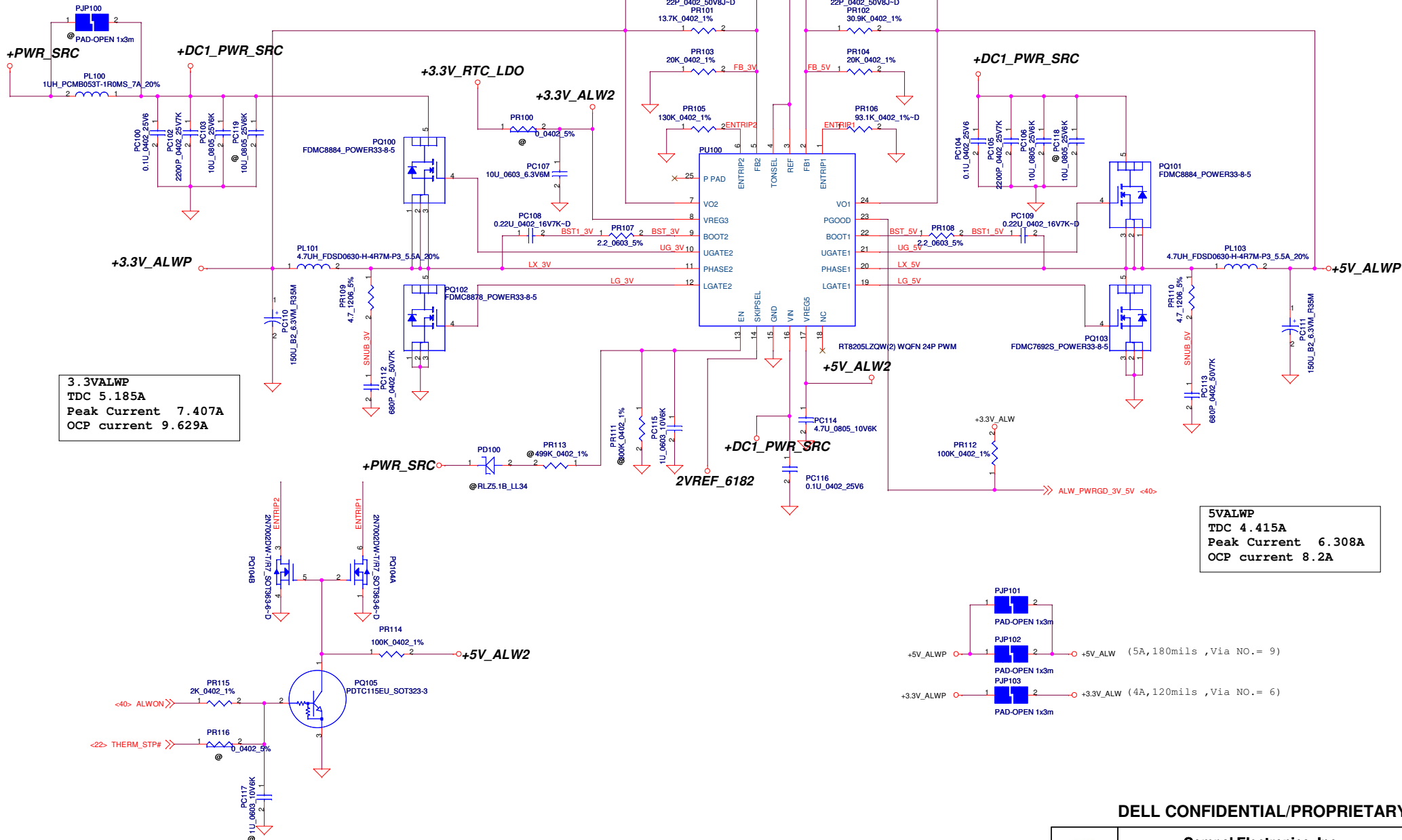
Size	Document Number	Rev
LA-7902P	1.0	

Date: Friday, March 02, 2012 Sheet 44 of 61

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2VREF_6182



3.3VALWP
TDC 5.185A
Peak Current 7.407A
OCP current 9.629A

5VALWP
TDC 4.415A
Peak Current 6.308A
OCP current 8.2A

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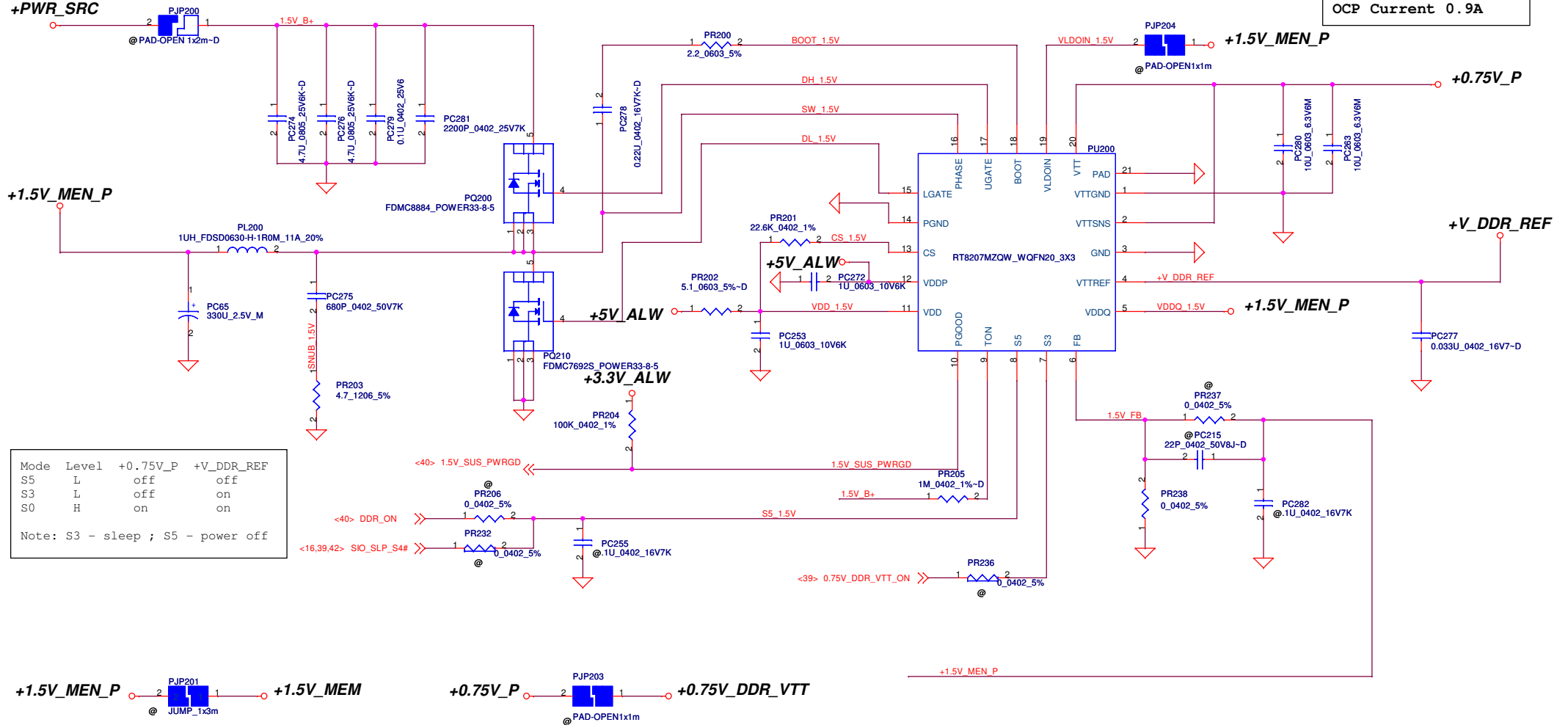
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Compal Electronics, Inc.			
Title			
+5V_ALW/3.3V_ALW			
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Laptopblue

1.5Volt +/- 5%
TDC 9.74A
Peak Current 13.915A
OCP current 16.698A

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



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+1.5V_MEN/+0.75V_DDR_VTT

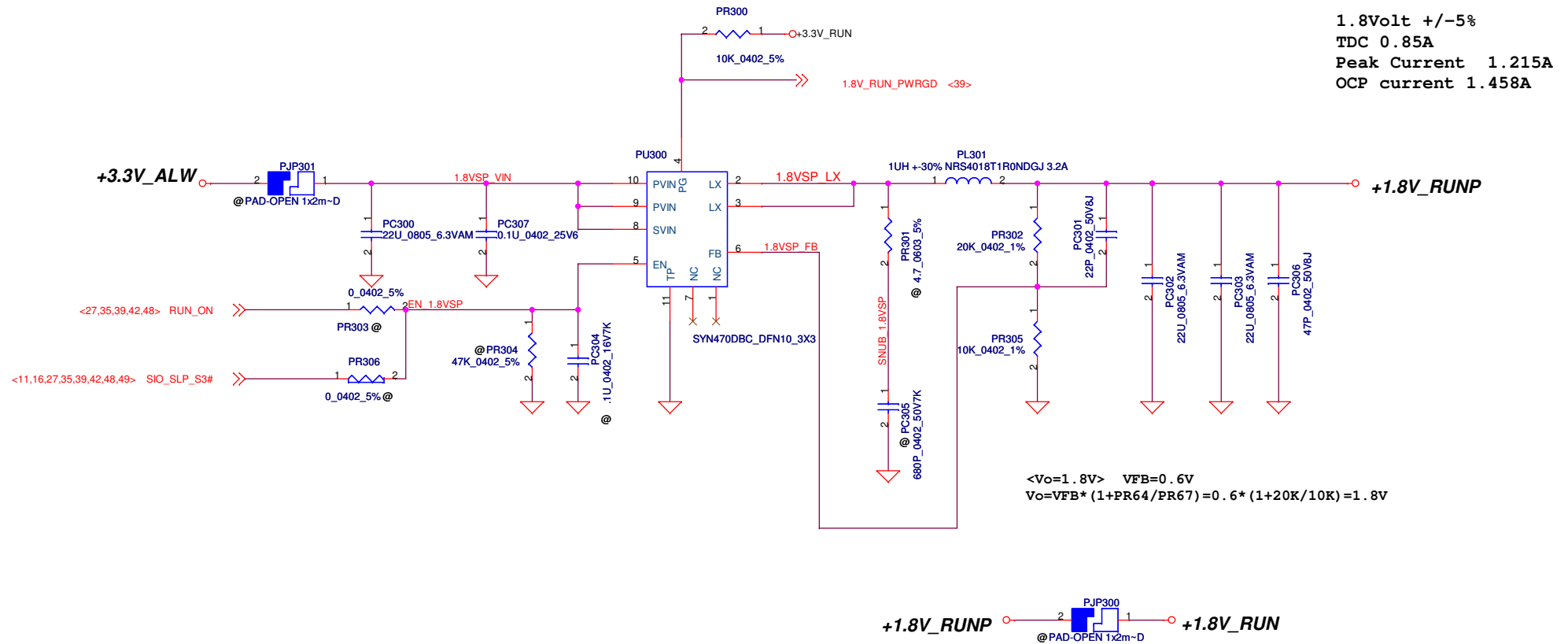
LA-7902P

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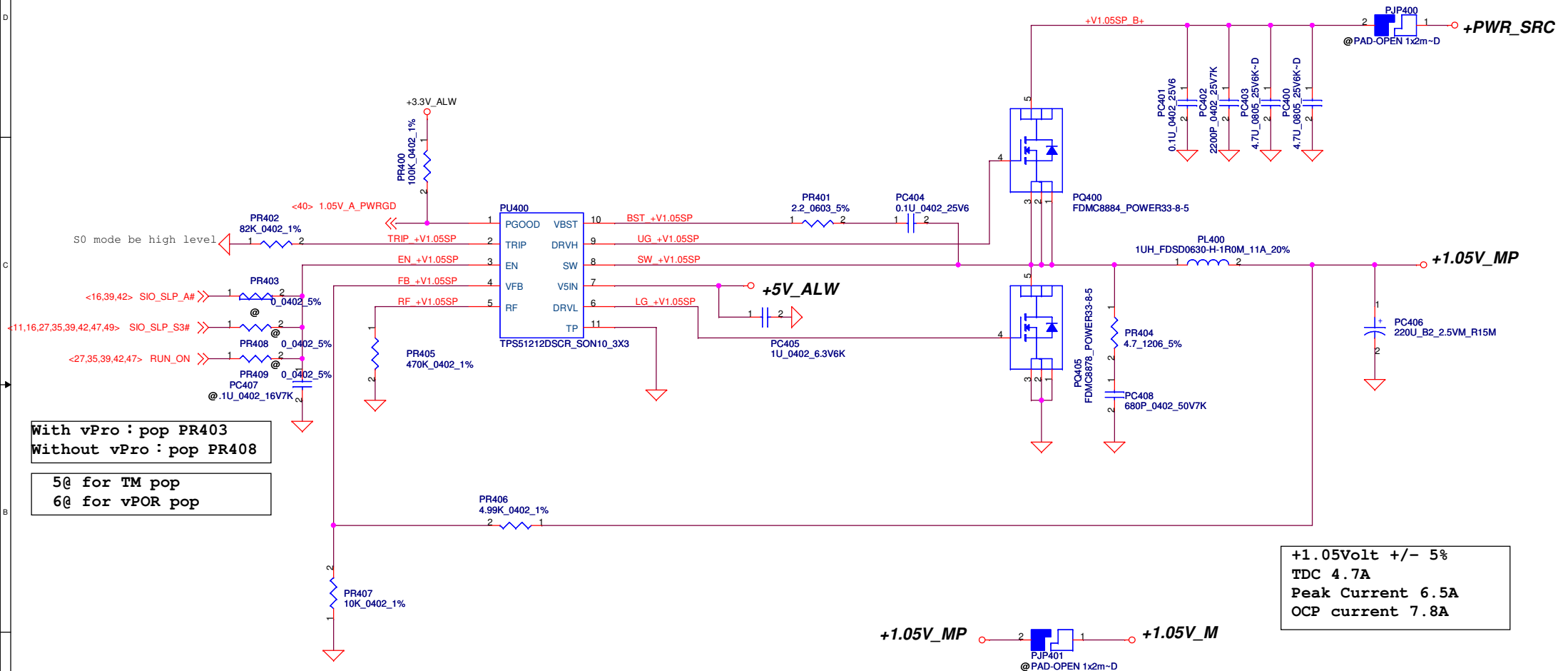


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Compal Electronics, Inc.			
Title			
+1.8V_RUN			
Size	Document Number		Rev
	LA-7902P		1.0
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3
Laptopblue



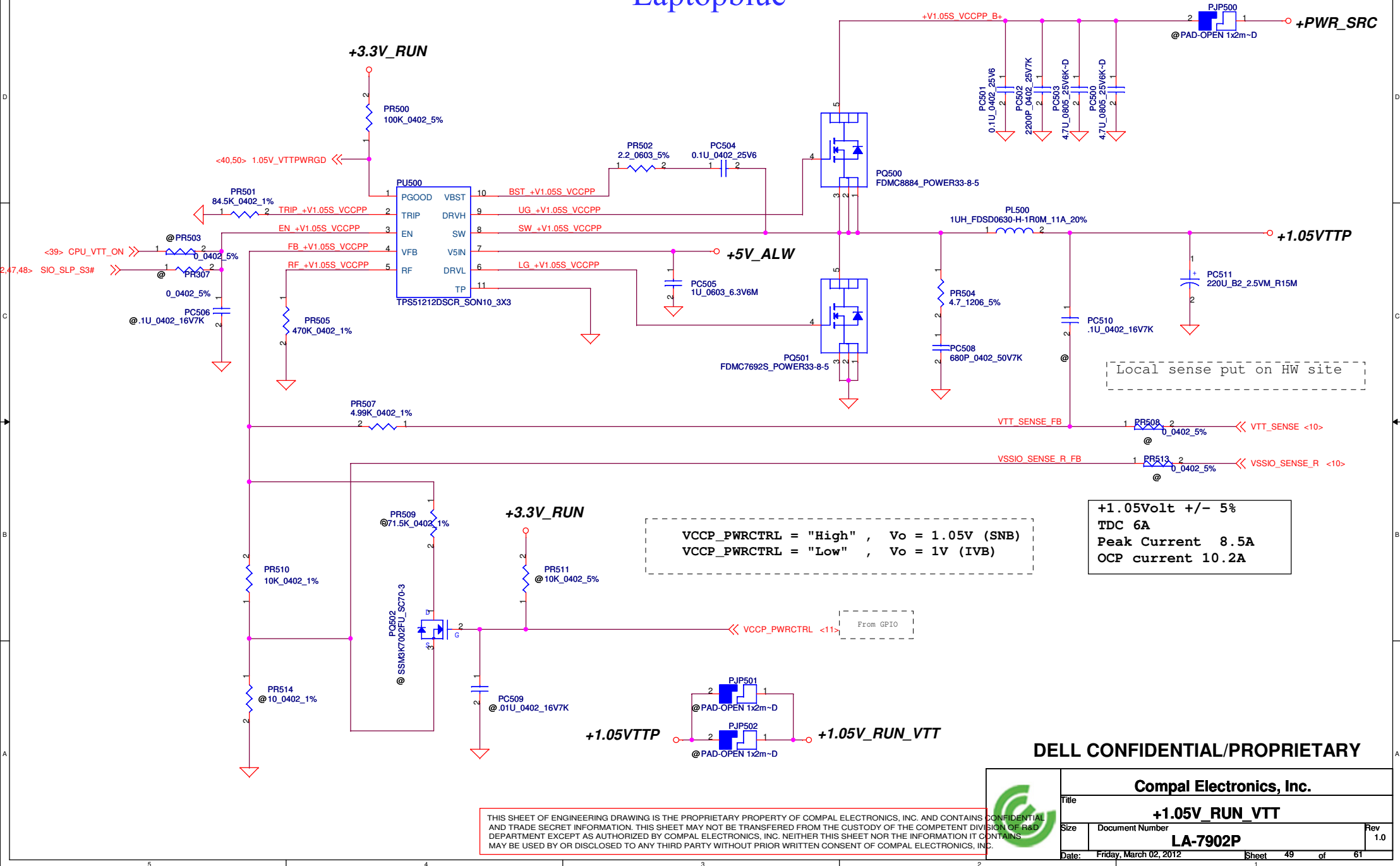
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Compal Electronics, Inc.			
Title			
+1.05V_M			
Size	Document Number		Rev
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3
Laptopblue



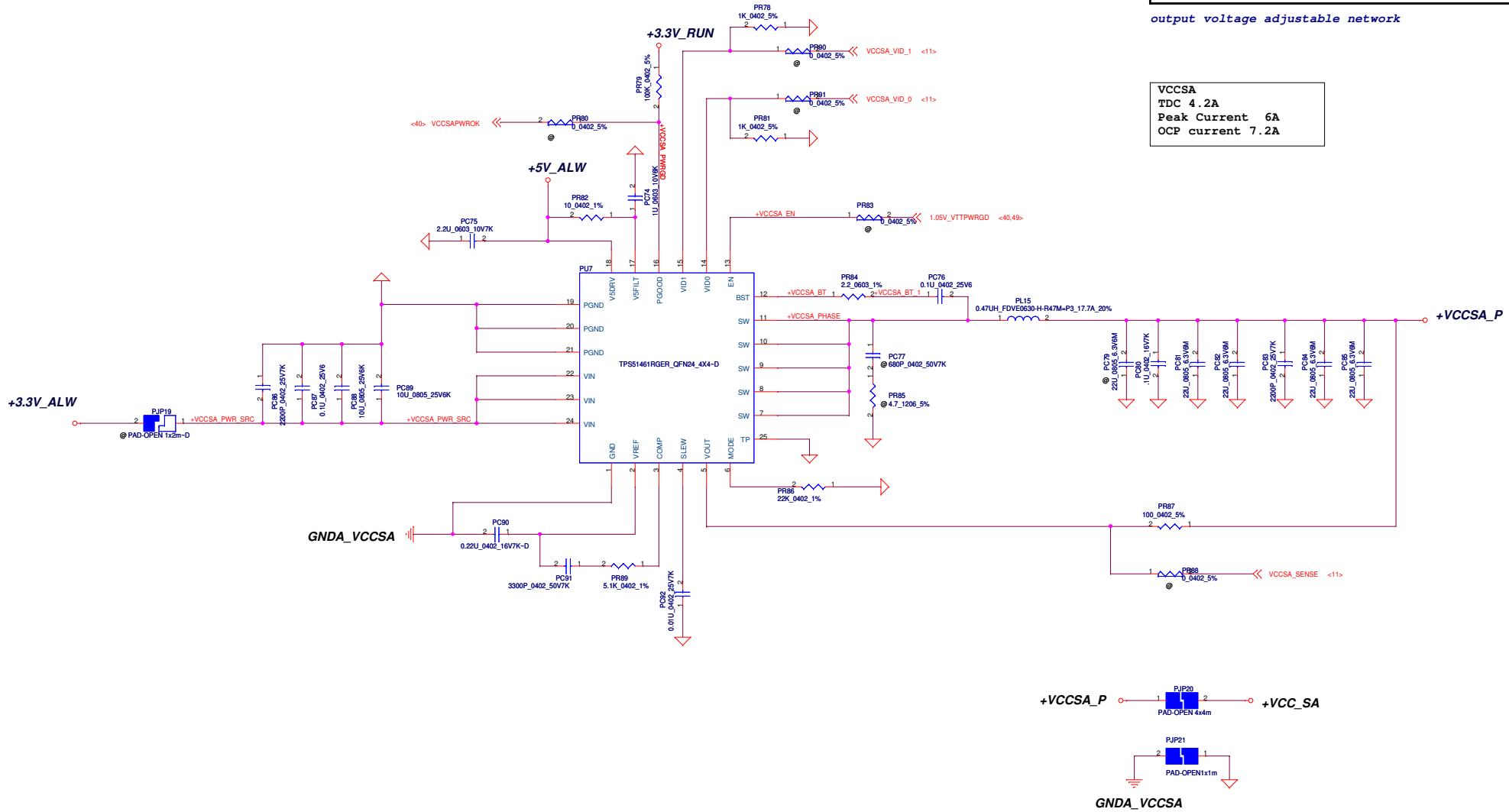
Laptopblue

The 1k PD on the VCCSA VIDs are empty.
These should be stuffed to ensure that
VCCSA VID is 00 prior to VCCIO stability.

VID [0]	VID[1]	VCCSA Vout
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V

output voltage adjustable network

VCCSA
TDC 4.2A
Peak Current 6A
OCP current 7.2A



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Compal Electronics, Inc.		Title	
+VCC SA		Size	
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```
VCC_GFXCORE
TDC 21.5A
Peak Current 33A
OCP current 57.18A
Load line -3.9mV/A
```

+VCC_PWR_SRC

```
VCC_core
TDC 36A
Peak Current 53A
OCP current 64A
Load line -1.9mV/A
Icc_Dyn_VID1 43A
```

+PWR_SRC

+VCC_CORE

VCC_CORE

Compal Electronics, Inc.

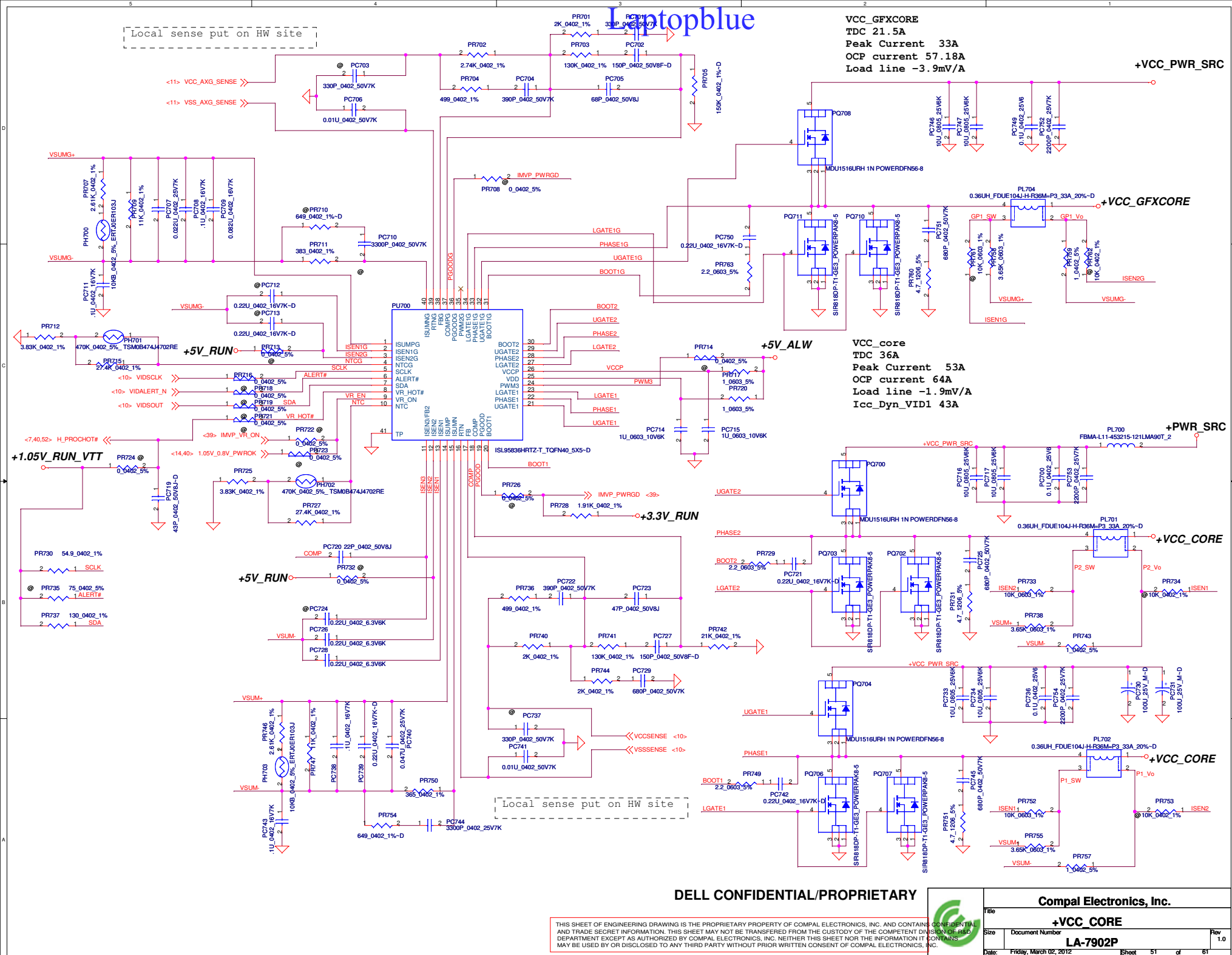
+VCC_CORE

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Rev	1.0
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ISL88731C 11@
BQ24747 22@

Laptopblue

E2 AC_OK=17.7 Volt

PR1313
TI bq24745 = 316K
Intersil ISL88731 = 226K

Vref
TI bq24747 = 3.3V
Intersil ISL88731C = 3.2V
VDDP
TI bq24747 = 6V
Intersil ISL88731C = 5.1V

Maximum charging current is 7.2A

DYN_TUR_CURRENT_SET#	
65W	High
90W	Low

Adapter Protection Circuit for Turbo Mode

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Compal Electronics, Inc.

Charger

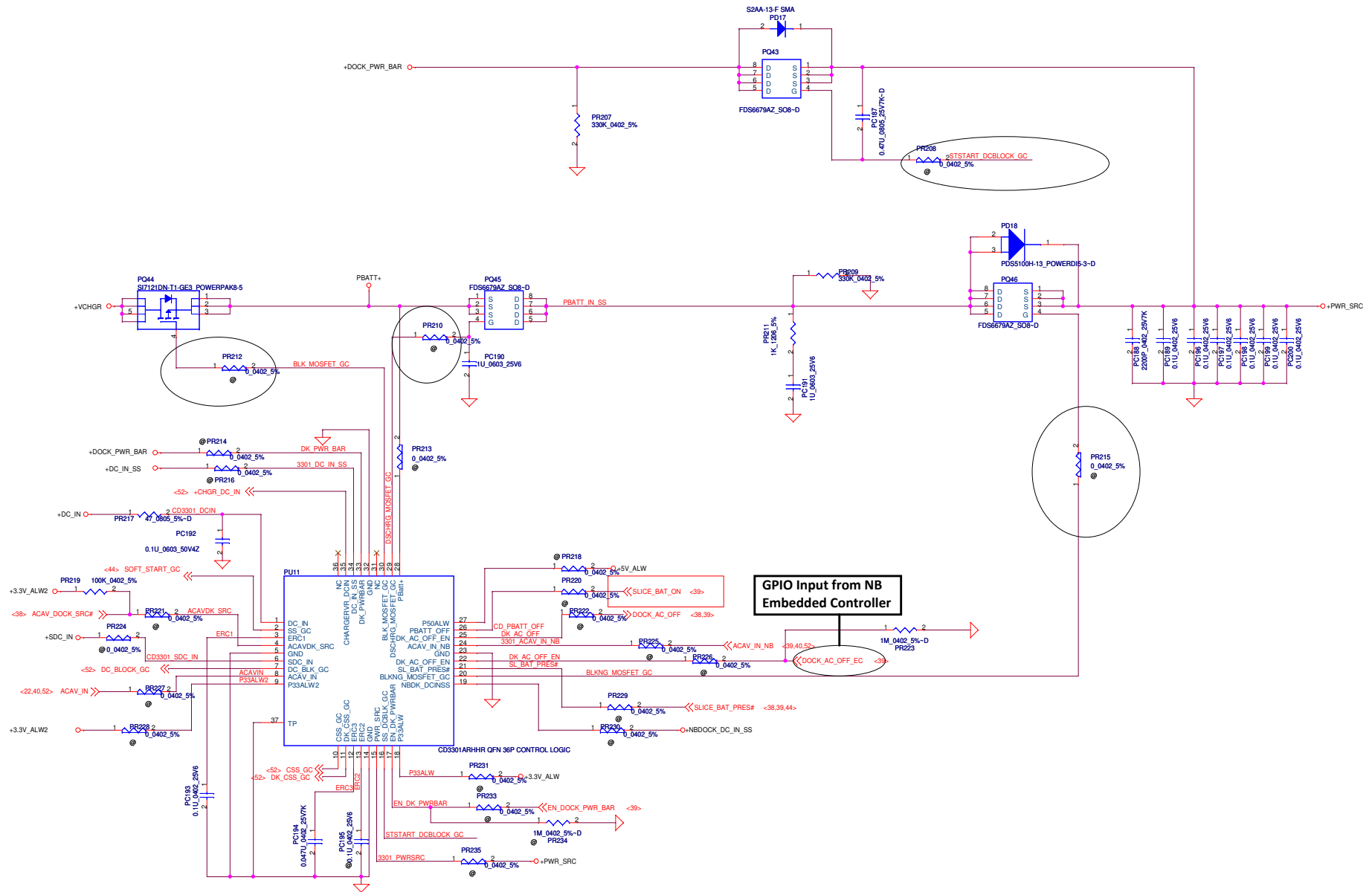
LA-7902P

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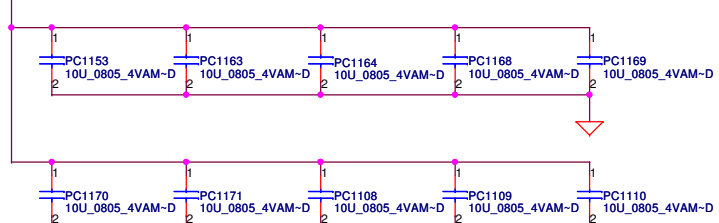
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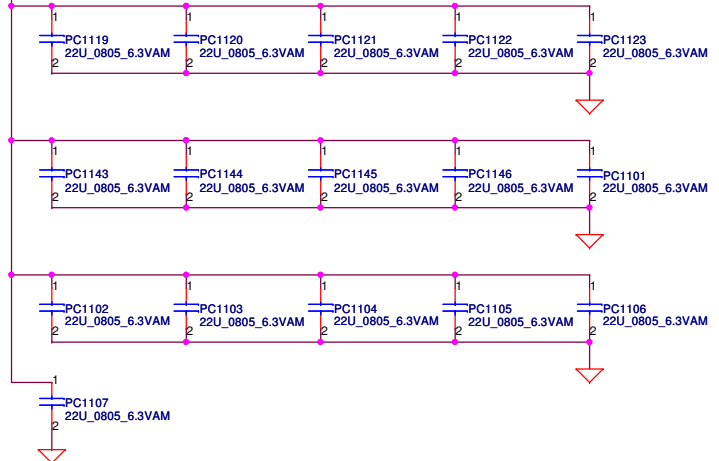
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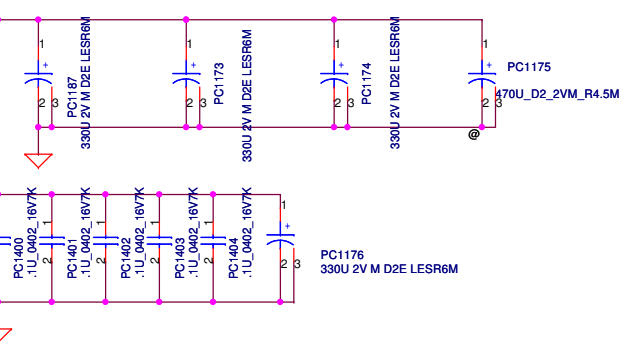
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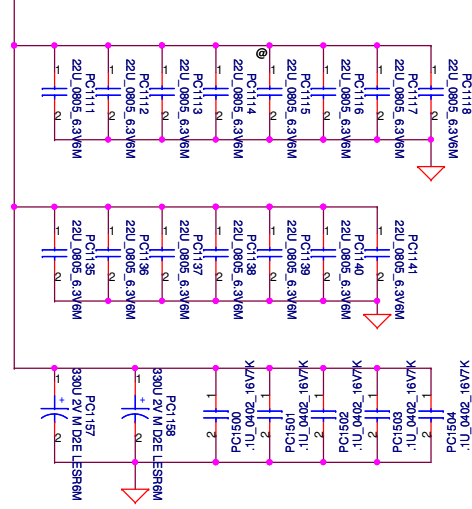
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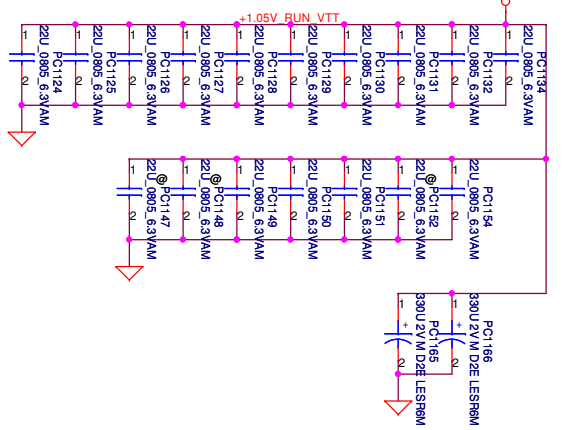
+VCC_CORE



+VCC_GFXCORE



+1.05V_RUN_VTT




Compal Electronics, Inc.			
Title		PROCESSOR DECOUPLING	
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Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
1	44	Power	8/18	Compal	ME design change.	PJPDC1 change from 7pin to 5pin	X01
2	45	Power	8/18	Compal	Main and 2nd IC common setting.	De-pop PD100,PR113,PR111	X01
3	45 46	Power	8/18	Compal	Prevent Jitter issue.	Add PC120,PC121,PC215 parallel with PR101,PR102,PR207	X01
4	51	Power	8/18	Compal	Prevent output voltage glitch when power up.	PU700 VCCP and VDD change form +5V_RUN to +5V_ALW	X01
5	53	Power	8/18	Dell	Change net name PBATT to SLICE_BAT_ON.	Change net name same as E4.	X01
6	50	Power	8/18	Compal	Reserve 0 ohm resistance for test.	Add PR90, PR91	X01
7	45 52	Power	8/30	Compal	For reduce EMI radiation.	Pop PL100, PL1300	X01
8	54	Power	8/30	Compal	Reserve cap for improve transient response.	Reserve PC1176	X01
9	53	Power	8/30	Compal	For reduce EMI radiation.	Add PC196, PC197, PC198, PC199, PC200	X01
10	54	Power	8/31	Compal	Change to green P/N.	Change PQ4, PC1153, PC1163, PC1164, PC1168, PC1169, PC1170, PC1171, PC1108, PC1109, PC1110, PC1187, PC1173, PC1174, PC1175, PC1157, PC1158, PC179, PQ1310, PQ1306 to green P/N	X01
11	48	Power	9/1	Dell	For support TL+TM	Change 6@ to pop for PC400~PC406, PC408, PL400, PQ400, PQ405, PR400~PR407, PU400. 5@ to @ for PR408.	X01
12	49	Power	9/1	Compal	For fix 1.05V_RUN_VTT on 1.05V	Depop PR509, PR511, PQ502. Change PR507 to 4.99k.	X01
13	51	Power	9/5	Compal	Follow EMI requirement.	Change PL700 to SM01000DJ00	X01
14	45 46	Power	9/6	Compal	Change to green P/N.	Change PC107, PC263, PC280, PC405, PC505 to HF P/N.	X01
15	52	Power	9/13	Compal	For reduce EMI radiation.	Pop PC1400~1404, PC1500~PC1504.	X01

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16	51	Power	9/14	Compal	Adjust CPU transient , loadline and OCP	Add PC740 to 0.1uF Change PR750 to 365 ohm Change PR741 to 130K ohm Change PC744 to 3300pF, PR754 to 649ohm.	X01
17	51	Power	9/14	Compal	Adjust AXG transient , loadline and OCP	Change PR703 to 130K ohm Change PC709 to 82nF Change PR702 to 2.74K ohm Change PR711 to 383 ohm	X01
18	52	Power	11/17	Compal	Shortage issue	Change PQ1303 from NTGD416 to AP2623	X02
19	52	Power	11/17	Compal	Need ESD protected	Change PQ1306, PQ1310 from SB57002040L to SB000009Q80	X02
20	53	Power	11/17	Compal	IC version upgrade	Change PU11 from CD3301 to CD3301A	X02
21	45	Power	11/17	Compal	Shortage issue	Change PC110, PC111 from SGA00004E00 to SGA00002N80	X02
22	45	Power	11/17	Compal	EMI request	Pop PC1138, PC1139, PC1149, PC1150	X02
23	44	Power	11/21	Compal	Erp lot6 tier2 Fail issue	PWR_SRC_S control signal change from +3.3V_ALW to PCH_ALW_ON	X02
24	44	Power	12/05	Compal	Prevent COS.	Change PD8 from SCS0340L01L to SCS00005C00 Change PD1301 from SCS00003M0L to SCS0000400L	X02
25	54	Power	12/13	Compal	Prevent COS.	Change PC1176, PC1174, PC1173, PC1187, PC1157, PC1158, PC1165, PC1166 to SGA00002U1L	X02
26	50	Power	12/13	Compal	Improve efficiency	change PR86 to 22K_0402_5%	X02
27	47	Power	12/16	Compal	Prevent COS.	Change PL301 from SH00000MN00 to SH00000MW00	X02

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1	11	HW	08/25/2011	COMPAL	INTEL review feedback	Add CC178,CC179,CC149,CC150	X01
2	14, 39	HW	08/25/2011	COMPAL	SMSC request to delete LPC_LDRQ0#	Leave LDRQ0# no connection on both of 5048 and PCH side Removed R743	X01
3	22	HW	08/25/2011	COMPAL	Removed reserve circuit for EMC4022	Removed R405,C280,R392,R394	X01
4	42	HW	08/25/2011	COMPAL	Load SW sources output rising time mismatch and COS. cost concern	Change back to E3 +3.3V/5V_RUN discrete solution Removed U78 and add Q55,Q61 circuit	X01
5	29	HW	08/25/2011	COMPAL	Codec is change to 92HD93	Pop R162~R166 and de-pop U73,R1540	X01
6	29	HW	08/25/2011	COMPAL	Reserve so lay with ALC290	Pop option for 92HD93/ALC290=>R1646/C1164; R1644/R1643; C965/R1642; Q107/R171 Reserve for ALC290 only: C1204, C1205, R1647, C1165, R1648 Reserve for 92HD93 only: R1645, C963 Add R174 depop and R175 pop	X01
7	20	HW	08/25/2011	COMPAL	Vgs less than cut-in voltage in battery mode	Add control circuit QH6,R279,CH107 for +5V_ALW_PCH	X01
8	27, 28	HW	08/25/2011	COMPAL	Vgs of 5V MOS maybe large than max rating	Add R517, R518	X01
9	11	HW	08/25/2011	COMPAL	Follow INTEL PDDG 0.8	De-pop RC140	X01
10	40	HW	08/25/2011	COMPAL	Change board ID to X01	Change R875 to 130Kohms	X01
11	34	HW	08/25/2011	COMPAL	PCH GPIO52 need 8.2~10K pull up +3.3VS	Change R695 from 100K to 10Kohms	X01
12	23	HW	08/25/2011	COMPAL	CRT SW 2nd source TI, TS3V713 pin29 is VDD	Connect U18 pin29 to +3.3V_RUN	X01
13	16	HW	08/25/2011	COMPAL	+1.05V_M turn off before APWROK de-assert	Add UH5,CH108 6@ circuit reserve for VPRO	X01
14	41	HW	08/25/2011	COMPAL	Reset IC threshold voltage issue	Change U4 to RT9801A (threshold adjustable) Add R1649~R1654;Reserve R1655 and pop R1623	X01
15	26	HW	08/25/2011	COMPAL	DPX_CA_DET voltage too low through dongle	Change U21 and U24 to SA000055G0L	X01
16	17, 18	HW	08/25/2011	COMPAL	Request from INTEL review feedback	Pop RH332 for PCH_GPIO3 and RH180 for GPIO27	X01
17	42	HW	08/25/2011	COMPAL	Material changed	Power team request Q59 change to SB00000L80L	X01
18	43	HW	08/25/2011	COMPAL	White light LED brightness is abnormal	Change R934, R938, R939, R949, R958, R957 and R959 to 1.2 Kohms	X01
19	40	HW	08/25/2011	COMPAL	Reserve C1208 for ESD backup plan	Reserve C1208 for ESD backup plan	X01
20	11	HW	08/25/2011	COMPAL	S3 can't resume issue	Control 1.5V_VDDQ by EC. Pop RC79 and de-pop RC82	X01
21	17	HW	08/25/2011	COMPAL	INTEL review feedback	Change RH331,RH272 to 10K ohm	X01

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22	34	HW	08/25/2011	COMPAL	WWAN card request	JMINI1 pin 1 connect to PCIE_WAKE#	X01
23	14	HW	08/25/2011	COMPAL	ROM size changed	Change U52 to 8M and R936,R895,R897,R900 to 6@	X01
24	11	HW	08/25/2011	COMPAL	Material package changed	Change CC161~CC166 from 0402 to 0603	X01
25	42	HW	08/25/2011	COMPAL	BOM changed	Change Q60 to 6@	X01
26	39	HW	08/25/2011	COMPAL	GPIO signal name changed same as E/P	Change PBATT_OFF to SLICE_BAT_ON	X01
27	34	HW	08/25/2011	COMPAL	Material package changed	Changed C615 to SF000002000	X01
28	30	HW	08/26/2011	COMPAL	LAN EA result	Changed RL23 to 1.2K Ohm.	X01
29	40	HW	08/26/2011	COMPAL	Backdrive issue	Depop R1169,R1197,R118 due to it has internal pull high.	X01
30	37	HW	08/29/2011	COMPAL	To avoid power short to GND	NC Pin 15 for JAUD1	X01
31	37	HW	08/30/2011	COMPAL	Follow connector list	Swap JAUD1 pin.	X01
32	12	HW	08/30/2011	COMPAL	Change part to HF part	Change QD1, QD2 part number to SB501380050 (for HF)	X01
33	15	HW	09/01/2011	COMPAL	For clock EA	Change RH311 and RH314 to 10 ohm	X01
34	43	HW	09/01/2011	COMPAL	ME drawing update	Add H19	X01
35	14, 16 19, 22 30, 40 42	HW	09/01/2011	COMPAL	BOM option change for TL	Change U53,R936,R895,R897,R900,RH350,UH5,CH108,RH116 RH202,R385,R426,R402,Q63,R931,Q58,Q60 R916,RL46,R871 to pop Change RH359,RH321,RH119,RH204,R430,R386,R408 ,R206,RL47,R877,to depop	X01
36	25	HW	09/02/2011	COMPAL	Due to EMI HDMI test Fail, add EMI solution	Change resistor to Inductor Change R451, R459, R462, R466, R468, R469, R470, R471 to 9nH L99, L100, L101, L102, L103, L104, L105, L106. Add C1209, C1210, C1211, C1212, C1213, C1214, C1215 and C1216 between Inductor and HDMI connector	X01
37	37	HW	09/05/2011	COMPAL	ME connector list change	Change JAU1 to 50271-0020N-001	X01
38	37	HW	09/06/2011	COMPAL	EMI issue	Add L107 & R1656,R1657	X01
39	15, 30	HW	09/06/2011	COMPAL	Follow LL to reserve SM bus for BRCM LAN	Add QH8,RL50,RL51	X01
40	36	HW	09/08/2011	COMPAL	Follow Intel design guide	Change C412~C415 to 0.1uF for USB3.0 signal	X01
41	7	HW	09/08/2011	COMPAL	Follow ESD recommand.	Reserve CC1141~CC144 for ESD	X01
42	14, 15, 40	HW	09/08/2011	COMPAL	Crystal EA result	Change CH2,CH3 to 18pF Change C741,C743 to 39pF Change CH18,CH19 to 10pF Change CL5,CL6=33pF,RL22=510 ohm	X01

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43	29	HW	09/13/2011	COMPAL	Follow IDT recomment	Swap R169~R172,C973~C976 connection	X01
44	42	HW	09/13/2011	COMPAL	Change Q55,Q61 part for open soldering issue.	Change Q55,Q61 from DMN3030LSS-13 to AO4478L	X01
45	40	HW	10/13/2011	COMPAL	Change board ID to X02	Change R875 to 62Kohm	X02
46	42	HW	10/13/2011	COMPAL	Rated Vgs of Q61 is 25V	De-pop R1627	X02
47	39	HW	10/13/2011	COMPAL	SMSC change 5048 pin A23 to GPIOI0	Re-link ECE 5048 symbol	X02
48	40	HW	10/13/2011	COMPAL	SMSC review feedback	Reserve R1658 and R1659 100Kohms to GND for I2S disabled	X02
49	41	HW	10/13/2011	COMPAL	Change reset IC to RT9818A-44GU3	Update U4 symbol and add R1629 for backup of inrush prevention. Change RSMRST# pull up with 100Koms. Pop R1655 and de-pop R1623.Delete R1649~R1654	X02
50	39	HW	10/13/2011	COMPAL	When suspend/resume cycles, wireless SW GPIO IRQs keeps giving	Change pull up rail to +3.3V_ALW for WIRELESS_ON#/OFF	X02
51	29	HW	10/13/2011	COMPAL	15" UMA speaker no sound issue	Pop snubber on speaker trace with C: 2200pF and R: 3.3ohms. Change bead rated current from 200mA to 2A.	X02
52	29	HW	10/13/2011	COMPAL	EMI request	Pop C981,C982,C983,C985,C986,C987	X02
53	27	HW	10/13/2011	COMPAL	Depop HDD control power circuit for cost down.	Depop R1624,Q28,R500,R499,R617,C393	X02
54	30	HW	10/18/2011	COMPAL	Crystal EA result	Change YL1 to 3G025000FA1H, CL5,CL6 to 12pF.RL22 to 200 ohm.	X02
55	All	HW	10/18/2011	COMPAL	For cost saving.	Change 0 ohm to R-short.	X02
56	42	HW	10/26/2011	COMPAL	1V leakage on 3.3V_RUN during system boot	Pop Q69 and R929	X02
57	42	HW	10/26/2011	COMPAL	Inrush current with Smart Card detect fail issue	change C763 and C766 to 2200p	X02
58	43	HW	10/27/2011	COMPAL	LED Conn PIN definition change	JLED1 PIN define change	X02
59	37	HW	10/27/2011	COMPAL	Remove 2pin connector for Audio performance	Remove JAG1 2 pin connector.	X02
60	42	HW	11/01/2011	COMPAL	Change MOSFET to wihtout Schottky Diode for +1.5V_RUN leakage issue	change QC3, Q59 as AO4304L from AO4728L	X02
61	14	HW	11/15/2011	COMPAL	RTC issue	change CH2, CH3 to 15pF	X02
62	14	HW	11/15/2011	COMPAL	S5 power consumption over spec.	depop RH288	X02

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63	34	HW	11/29/2011	COMPAL	S3 had leakage in +3/5V_RUN	De-pop R725, remove R695 and add +3.3V_RUN pull high at PCH side(RH361)	X02
64	32	HW	11/29/2011	COMPAL	TPM is changed to AT97SC3204-X2A18-AB	U39(TPM) is changed to SA00004WQ10 (AT97SC3204-X2A18-AB) for WIN8 support	X02
65	32	HW	11/29/2011	COMPAL	+3.3V_RUN Giltch when AC plugin	Add D87, R1662 and R1663 (pull high to +3.3V_RUN_TPM) for HW solution backup	X02
66	14~21	HW	11/29/2011	COMPAL	Change PCH to C1 version	Change UH4 to SA00005AG1L(HM77 for non vpro)	X02
67		HW	11/29/2011	COMPAL	Change RC value at Gate of MOS Load SW to modify power rail soft start timing	RC72 from 100K to 330K; RC143 form 330K to 1M; CC136 form 0.1u to 0.022u R412 from 100K to 470K; R1632 form 1M to 4.7M; C293 form 0.1u to 0.022u R507 from 100K to 470K; R517 form 1M to 4.7M; C400 form 0.1u to 0.022u R722 from 100K to 470K; R1625 form 1M to 4.7M; C644 form 4700p to 220p R729 from 100K to 470K; R1628 form 1M to 4.7M; C650 form 4700p to 220p R917 from 100K to 470K; R1617 form 1M to 4.7M; C770 form 4700p to 220p R920 from 100K to 470K; R1610 form 470K to 2.2M; C771 form 4700p to 470p R930 from 100K to 330K; R1611 form 470K to 1M; C773 form 2200p to 100p R906 from 100K to 470K; C763 form 2200p to 220p R912 from 100K to 470K; C766 form 470p to 220p	X02
68	36	HW	12/01/2011	COMPAL	Change P/N for HF	Change C412~C415 P/N to SE076104K8L	X02
69	35	HW	12/01/2011	COMPAL	Reserve 0.1uF CAP to GND for ESD request	reserve CE14, CE20, CE22, CC151, CC152, CC153 to GND	X02
70	19	HW	12/05/2011	COMPAL	Change LH1 from bead to Inductor for CRT	Change LH1 to 1uH Inductor(SHI00007W0L)	X02
71	17,38	HW	12/07/2011	COMPAL	EMI solution for E-Docking USB port	Swap USB Port7 and Port8 and reserve a choke(L108) at E-Docking side: Port7 from NA to E-docking Port8 from E-Docking to NA	X02
72	24,32,37	HW	12/07/2011	COMPAL	Change USB9,12,13 CMC to 180ohm for EMI request	Change L10,L52,L107 to SM070002X00(OCF2012181YZF)	X02
73	37	HW	12/08/2011	COMPAL	Follow CONN List_1130A Change JAUD1 to ACES_51522-0200N-P01	Change JAUD1 to ACES_51522-0200N-P01	X02
74	22	HW	12/09/2011	COMPAL	Thermal requests to change OTP from 88 to 92	Change R406 from 953ohm to 1.24Kohm	X02
75	41	HW	12/09/2011	COMPAL	To prevent inrush current at reset IC input	Change R1629 from 0ohms to 33ohms resistor	X02
76	19	HW	12/09/2011	COMPAL	For CRT issue	Change CH36 from 10uF to 22uF	X02
77	25	HW	12/13/2011	COMPAL	Change HDMI R,C value for EMI request	Change R448,R449,R450,R452,R453,R454,R455,R456 from 680ohm to 604ohm; C1209~C1216 from 4.7pF to 3.9pF	X02
78	42	HW	12/15/2011	COMPAL	+3.3V_SUS sequence timing	R911 from 100K to 470K; R1618 from 1M to 4.7M; C767 from 4700p to 220p	X02
79	43	HW	12/15/2011	COMPAL	Change current limit resistors of LED	R934 from 1.2K to 820, R957 from 1.2K to 1K, R951 from 330 to 270, R949 from 1.2K to 910,	X02

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80	34	HW	01/04/2012	COMPAL	Change RC25 value for ESD	Change RC25 from 0ohm to 1kohm(ST MEMO)	A00
81	40	HW	01/17/2012	COMPAL	SMSC creates a new catalog part number and IC marking for the MEC5055	Change U51 P/N to SA00003TZ2L	A00
82	43	HW	02/20/2012	COMPAL	Change current limit resistors of LED	Change R938 to 1.1k ohm, R958 to 560 ohm, R953 to 130 ohm, R951 to 470 ohm, change R939, R959, R957, R934, R949 to 1.2k ohm	A00
83	38	HW	02/24/2012	COMPAL	Dalmore14 UMA hang on white screen issue when attached AC+media battery after hot dock.	Change R755 from 100k ohm to 10k ohm	A00
84	40	HW	02/24/2012	COMPAL	Change board ID to A00	Change R875 to 33K ohm	A00
85	33	HW	02/24/2012	COMPAL	Change SD CLK damping resistor for EMI request	Change R676 from 33 ohm to 10 ohm	A00
86	32	HW	02/24/2012	COMPAL	Change BOM option for TPM/TCM funtion	Change C550,C551,C552,C553,R659,R660,R1662,RH311 BOM option to 5@	A00
87	25	HW	03/03/2012	COMPAL	SMT request to change F2 footprint	For DFX concern of F2 2nd source, SP040003H0L, change F2 footprint to F_MF-MSMF050-2	A00
88	14~21, 30	HW	03/03/2012	COMPAL	Change PCH P/N for X-build	UH4 is changed to SA00005AG3L	A00
89	14	HW	03/03/2012	COMPAL	De-pop resistor on PCH JTAG for power saving	De-pop RH288, RH47, RH48 and RH49	A00

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