

MODEL NAME : **RANGER 17**
PCB NO : **LA-9331P**
BOM P/N : **4619KL31L01**

Compal Confidential

RANGER 17

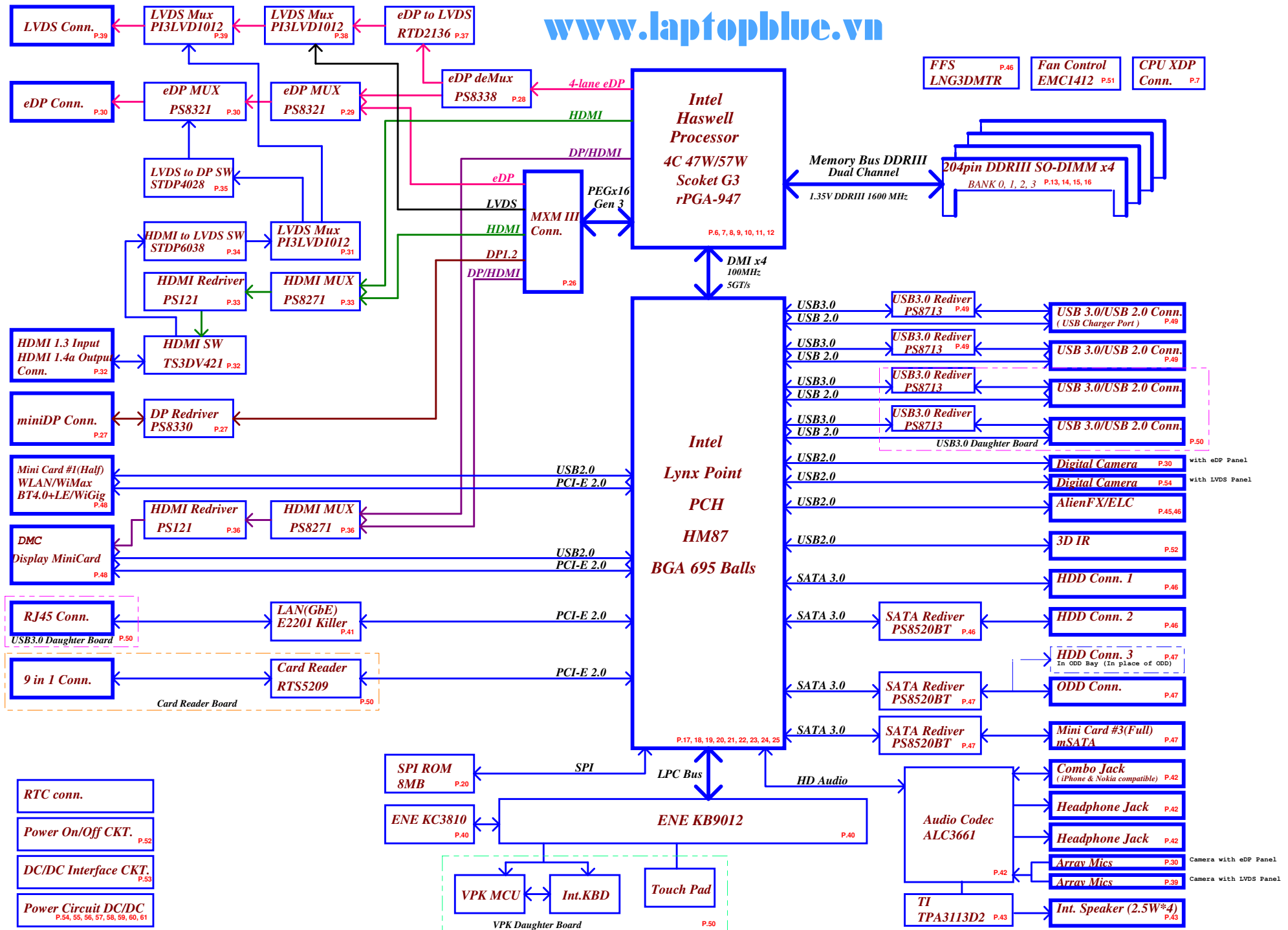
Schematic Document

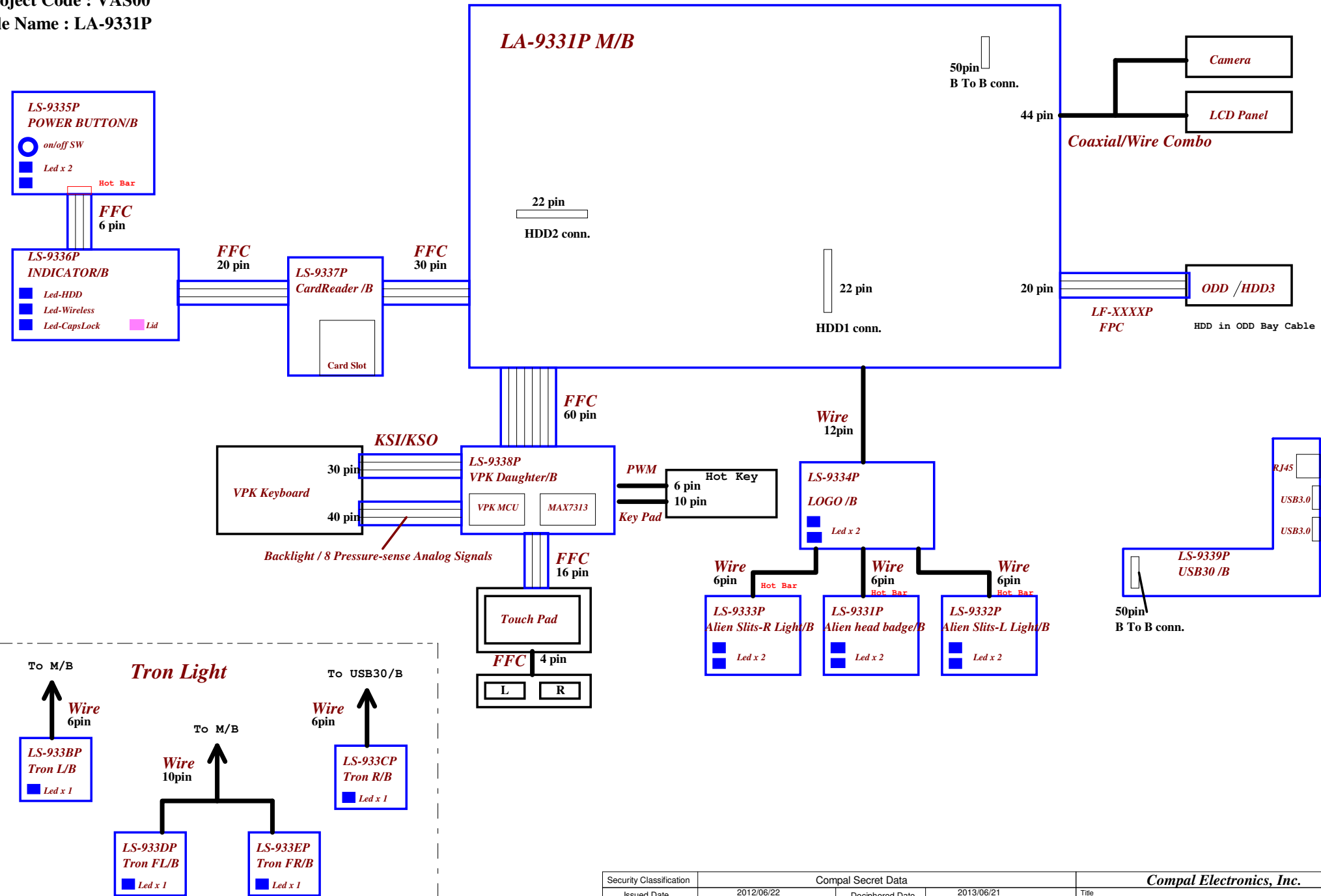
Rev: X00

2012-06-22

@ : Nopop Component

Security Classification	Compal Secret Data			Title	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Cover Sheet	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-9331P	0.1
				Date: Friday, June 22, 2012	Sheet 1 of 61





Board ID Table for AD channel

Vcc	3.3V +/- 5%				
Ra	100K +/- 5%				
Board ID	Rb	VAD_BID min	VAD_BID typ	VAD_BID max	EC AD3
0	0	0 V	0 V	0.155 V	0x00-0x0C
1	8.2K +/- 5%	0.168 V	0.250 V	0.362 V	0x0D-0x1C
2	18K +/- 5%	0.375 V	0.503 V	0.621 V	0x1D-0x30
3	33K +/- 5%	0.634 V	0.819 V	0.945 V	0x31-0x49
4	56K +/- 5%	0.958 V	1.185 V	1.359 V	0x4A-0x69
5	100K +/- 5%	1.372 V	1.650 V	1.838 V	0x6A-0x8E
6	200K +/- 5%	1.851 V	2.200 V	2.420 V	0x8F-0xBB
7	NC	2.433 V	3.300 V	3.300 V	0xBC-0xFF

BOARD ID Table

Board ID	PCB Revision
0	0.1 (SSI)
1	0.2 (PT)
2	0.3 (ST)
3	0.4 (QT)
4	1.0 (MP)
5	
6	
7	

USB 3.0 PORT	Connction
1	JUSB1 (Left side)
2	JUSB2 (Left side)
3	NA
4	NA
5	JUSB3 (Right side)
6	JUSB4 (Right side)

POWER STATES

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

PM TABLE

State	power plane	+5VALW +3VALW +3VLP +3V_PCH	+1.35V +1.05V	+5VS +3VS +1.5VS +1.05VS +0.675VS +3VMXM +5VMXM +VCC_CORE +1.35V_CPU_VDDQ
S0		ON	ON	ON
S3		ON	ON	OFF
S5 S4/AC		ON	OFF	OFF
S5 S4/AC don't exist		OFF	OFF	OFF

Symbol Note :



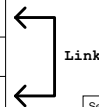
CLK	DIFFERENTIAL	DESTINATION	FLEX CLOCKS	DESTINATION
	CLKOUT_PCIE0	MINI CARD-1 WLAN	CLKOUTFLEX0	None
	CLKOUT_PCIE1	MINI CARD-2 DMC	CLKOUTFLEX1	None
	CLKOUT_PCIE2	10/100/1G LAN	CLKOUTFLEX2	None
	CLKOUT_PCIE3	CARD READER	CLKOUTFLEX3	None
	CLKOUT_PCIE4	None		
	CLKOUT_PCIE5	None		
	CLKOUT_PCIE6	None		
	CLKOUT_PCIE7	None		
	CLKOUT_PEG_A	MXM		

SATAIII	DESTINATION
SATA0	HDD1
SATA1	HDD2
SATA2	ODD
SATA3	mSATA
SATA4/PCIE LANE1	MINI CARD-1 WLAN
SATA5/PCIE LANE2	MINI CARD-2 DMC

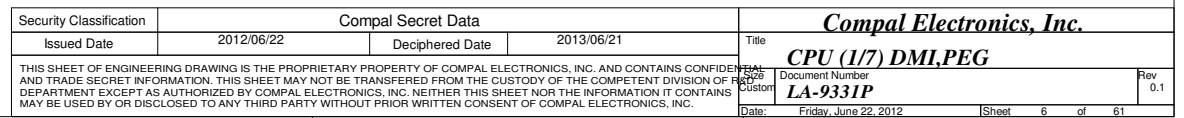
PCI EXPRESS	DESTINATION
Lane 1/USB3.0 Port 3	None
Lane 2/USB3.0 Port 4	None
Lane 3	10/100/1G LAN
Lane 4	CARD READER
Lane 5	None
Lane 6	None
Lane 7	None
Lane 8	None

SMBUS Control Table

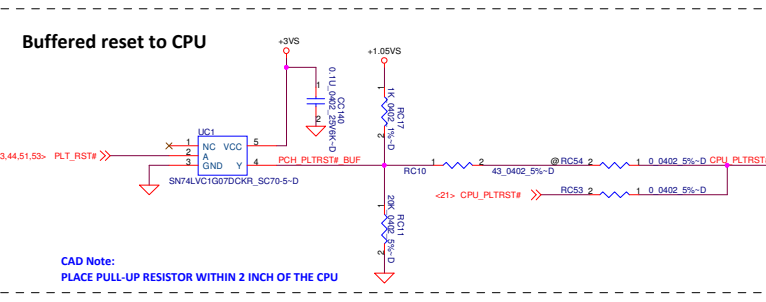
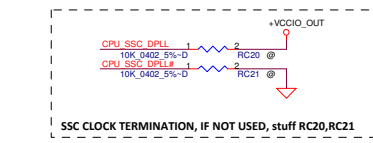
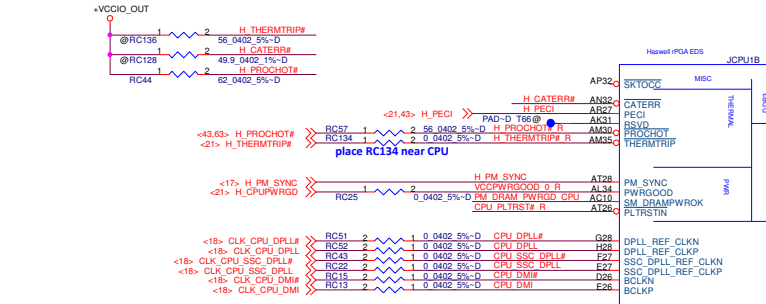
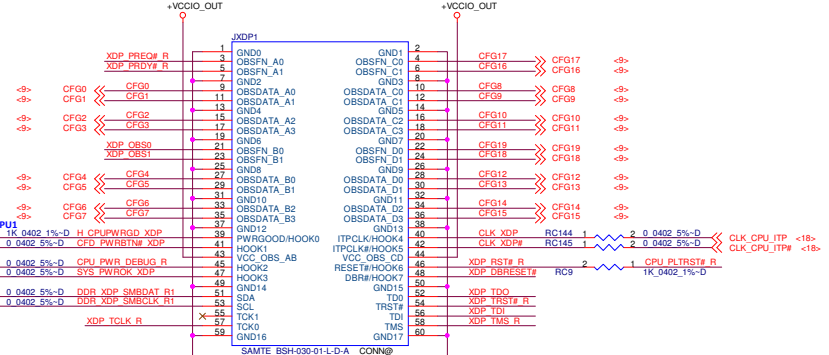
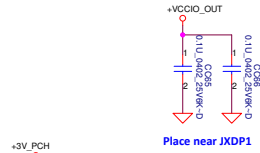
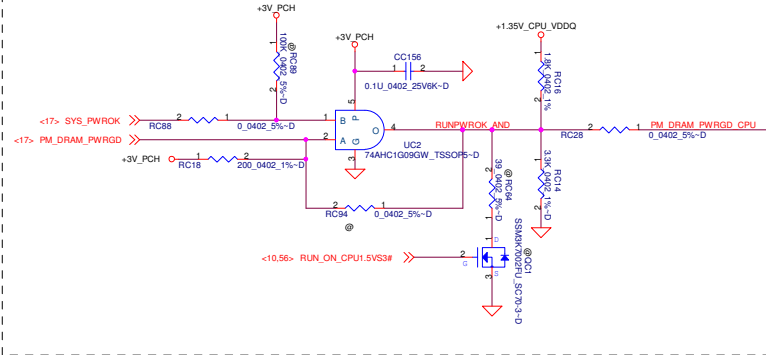
	SOURCE	WLAN	DMC	BATT	DIMM	6038	4028	Thermal Sensor	FFS	2136	VPK MCU	MXM	XDP	Charger	TP	mSATA
EC_SMB_CK1 EC_SMB_DA1	KB9012			V								V		V		
EC_SMB_CK2 EC_SMB_DA2	KB9012					V	V	V		V	V					
PCH_SMLCLK PCH_SML0DATA	PCH															
PCH_SML1CLK PCH_SML1DATA	PCH															
MEM_SMBCLK MEM_SMBDATA	PCH		V		V				V				V		V	V



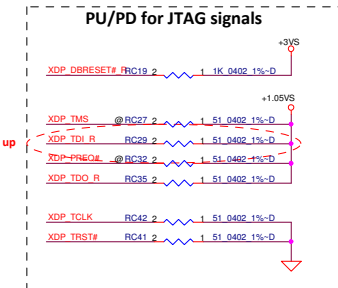
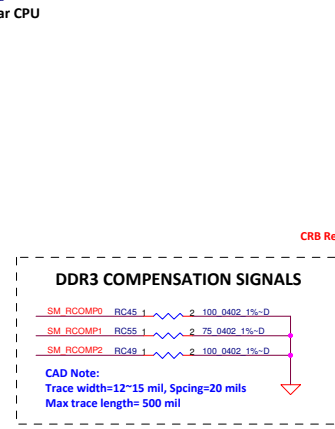
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	Notes List
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	LA-9331P
				Date	Friday, June 22, 2012
				Sheet	4 of 61

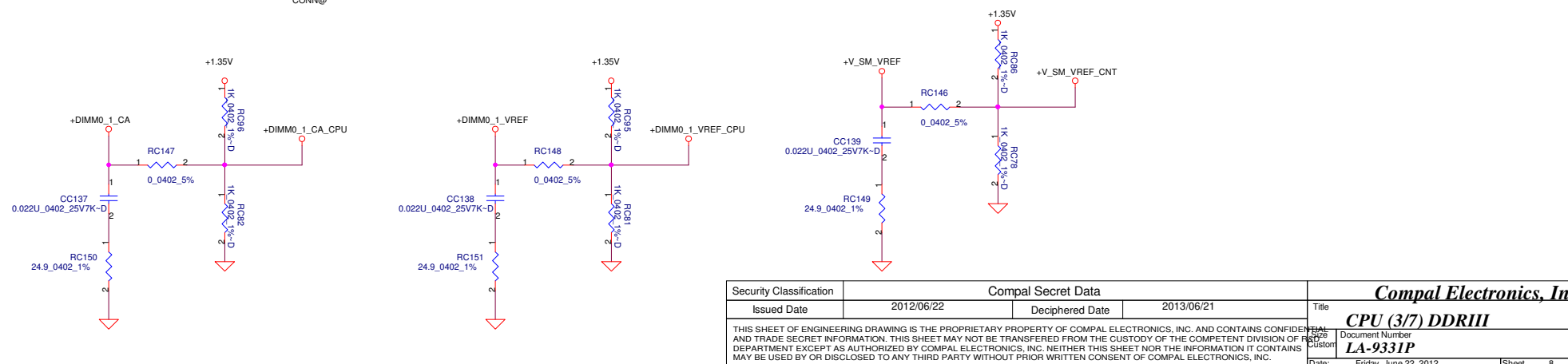
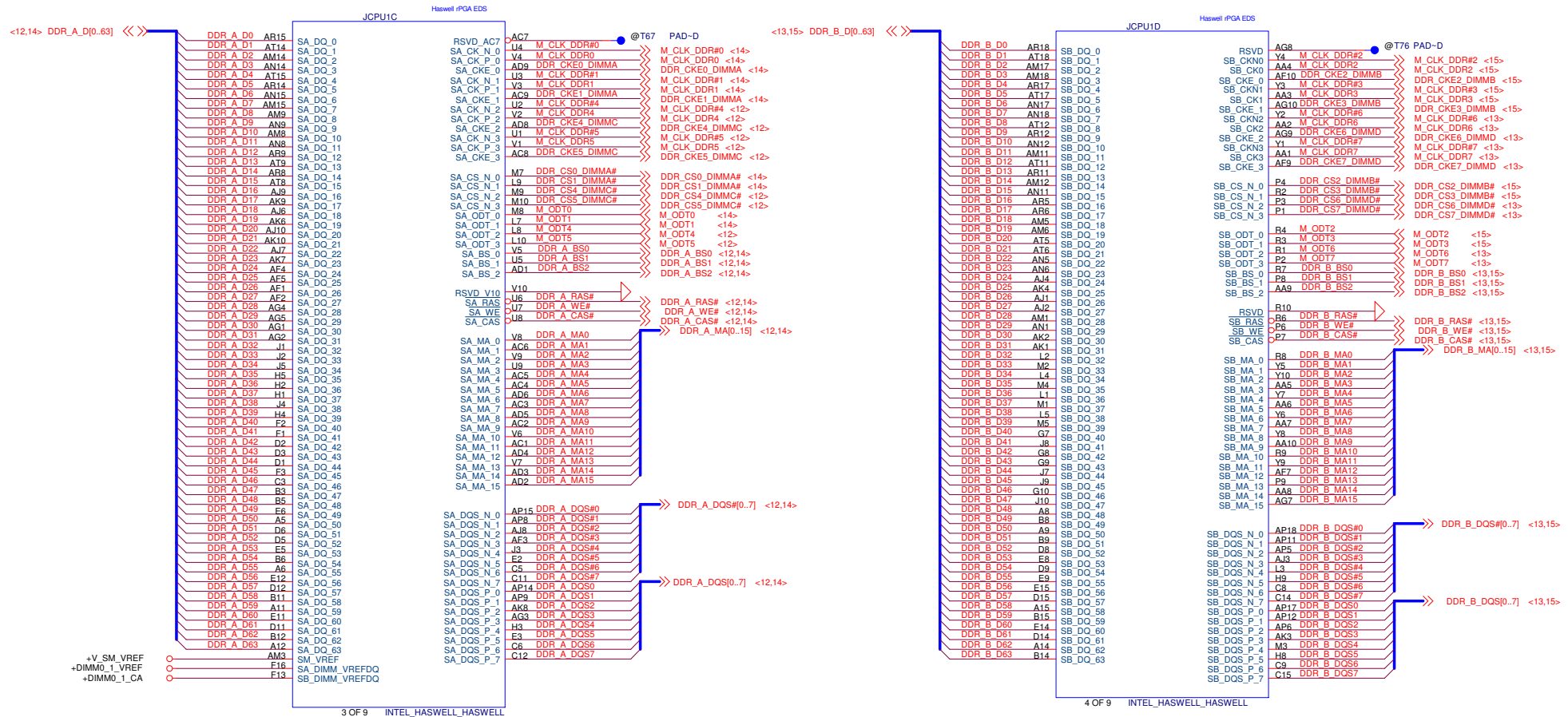


SM_DRAMPWROK with DDR Power Gating Topology

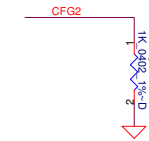


For ESD concern, please put near CPU

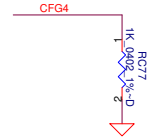




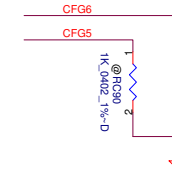
CFG STRAPS for CPU



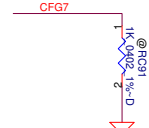
PEG Static Lane Reversal - CFG2 is for the 16x	
CFG2	1:(Default) Normal Operation; Lane # definition matches socket pin map definition 0:Lane Reversed



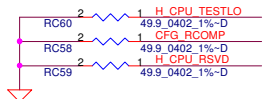
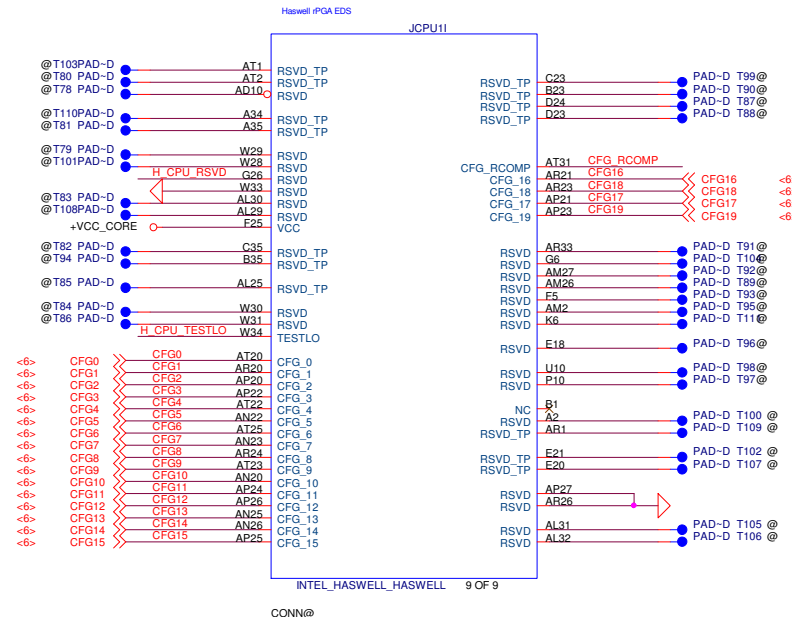
Display Port Presence Strap	
CFG4	1 : Disabled; No Physical Display Port attached to Embedded Display Port 0 : Enabled; An external Display Port device is connected to the Embedded Display Port

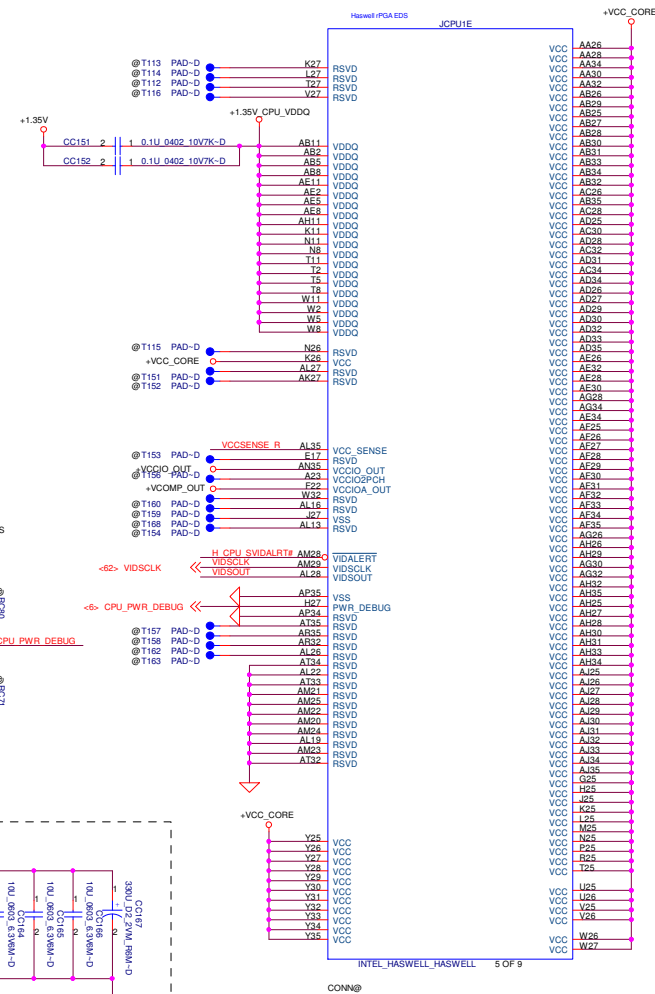
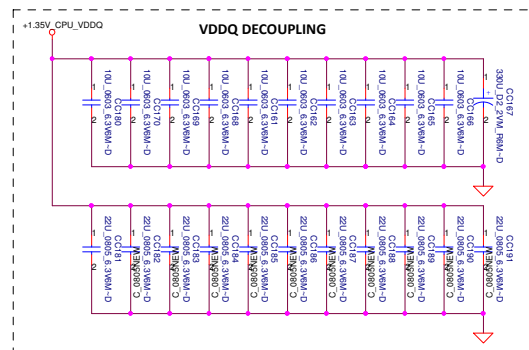
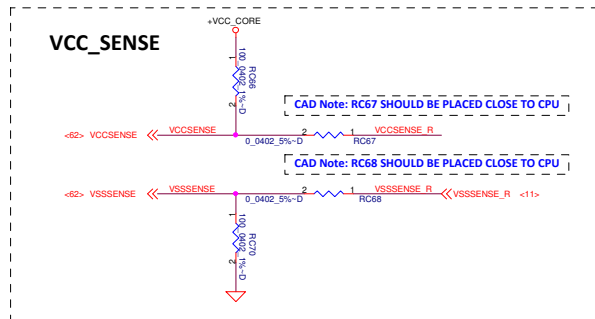


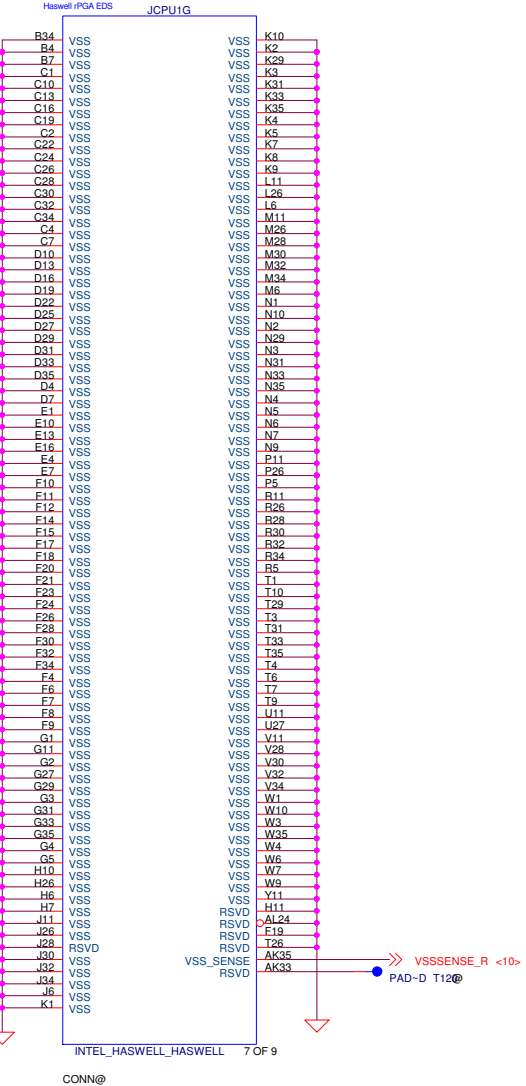
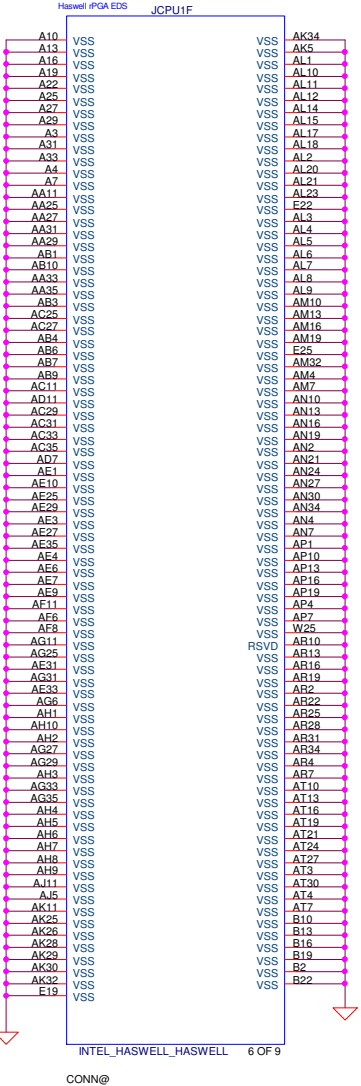
PCIe Port Bifurcation Straps	
CFG[6:5]	11: (Default) x16 - Device 1 functions 1 and 2 disabled 10: x8, x8 - Device 1 function 1 enabled ; function 2 disabled 01: Reserved - (Device 1 function 1 disabled ; function 2 enabled) 00: x8,x4,x4 - Device 1 functions 1 and 2 enabled



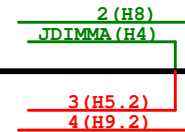
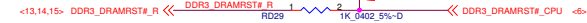
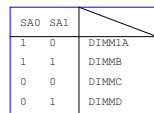
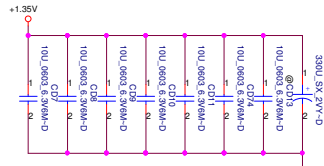
PEG DEFER TRAINING	
CFG7	1: (Default) PEG Train immediately following xxRESETB de assertion 0: PEG Wait for BIOS for training





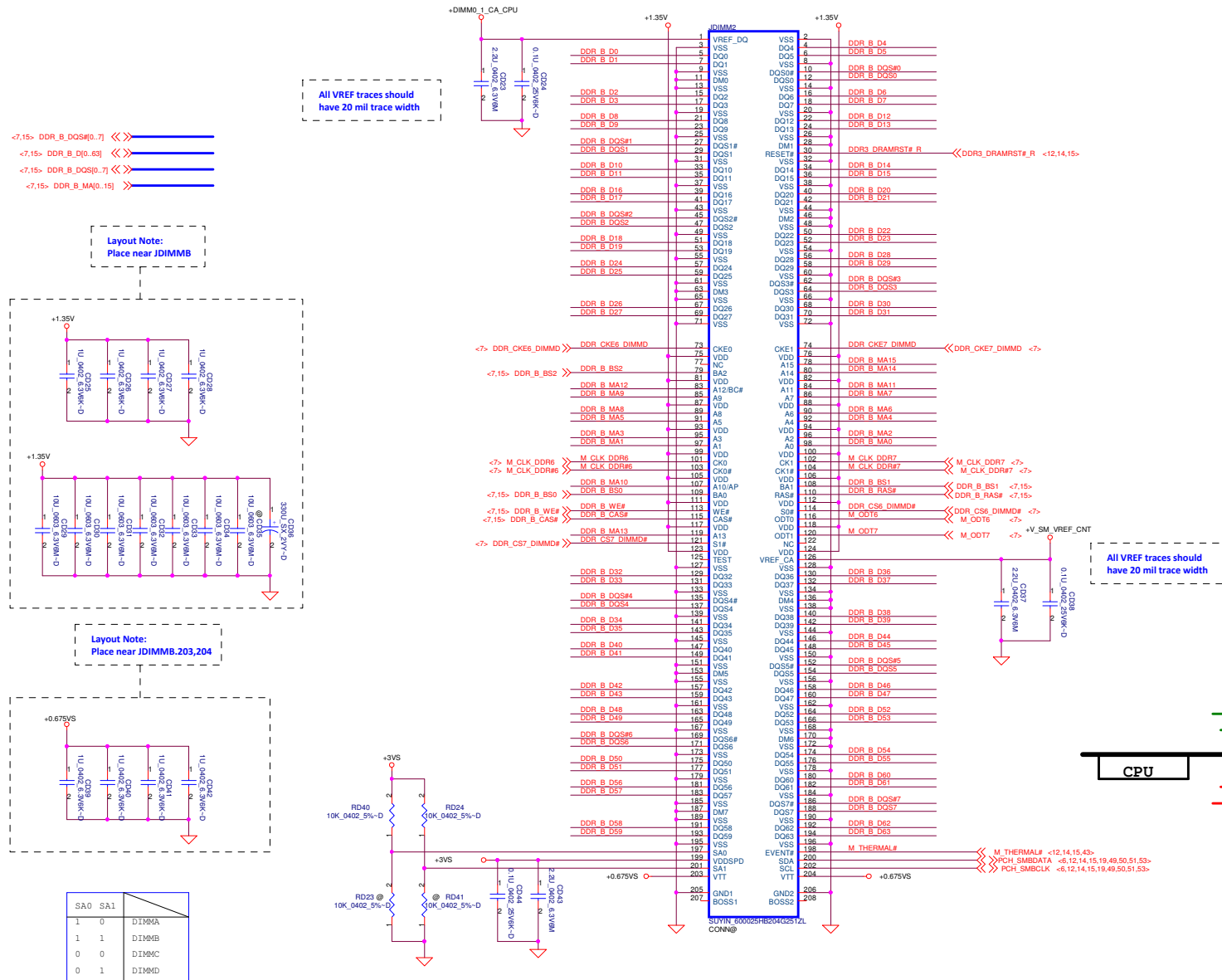


- All VREF traces should have 20 mil trace width

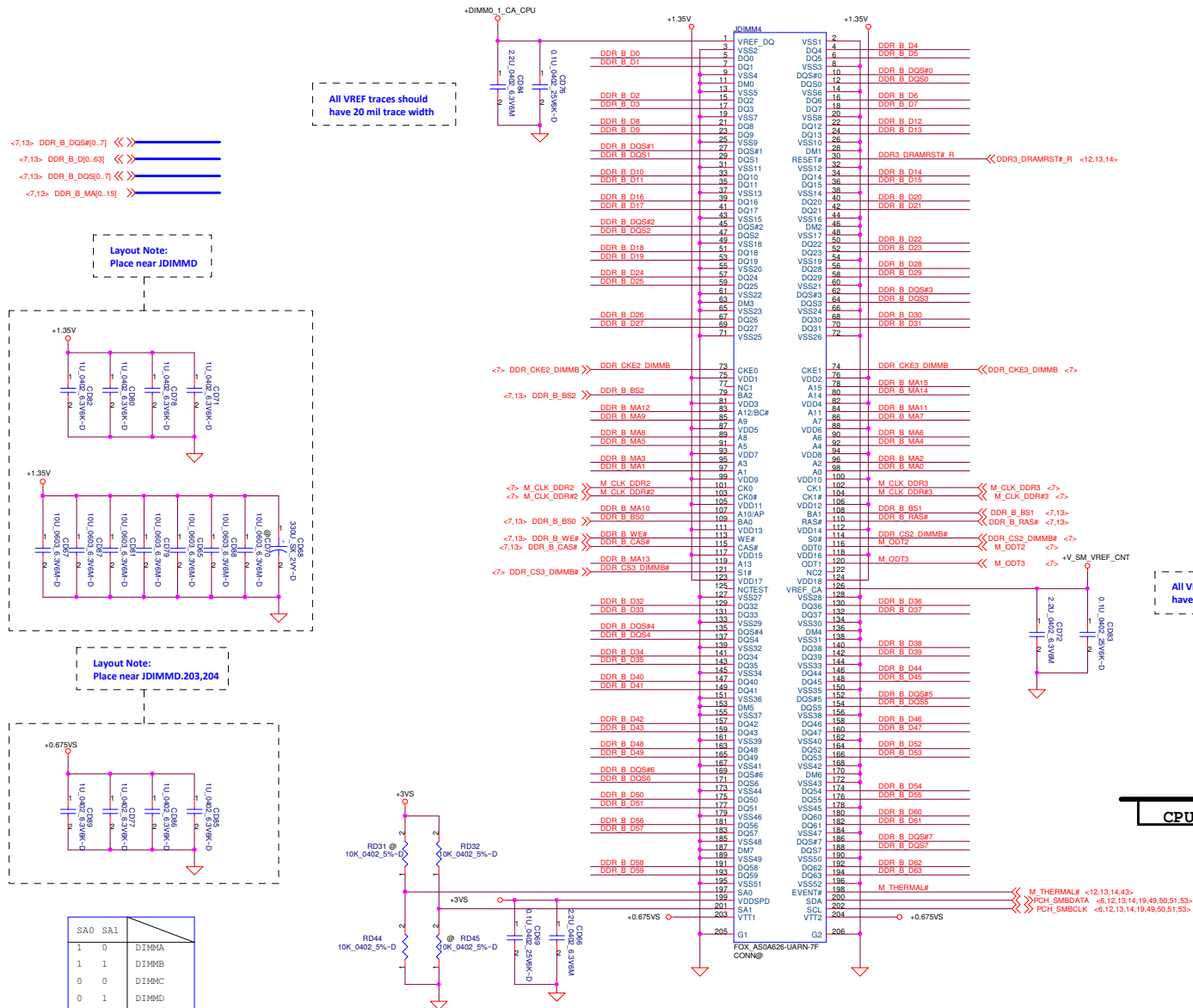


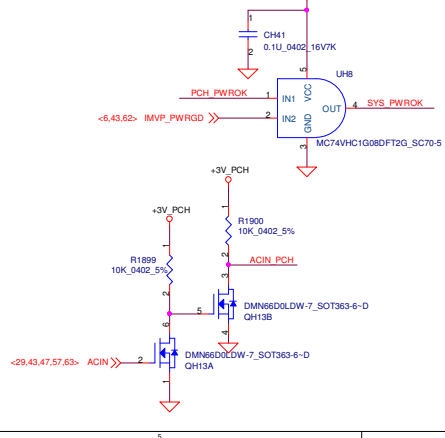
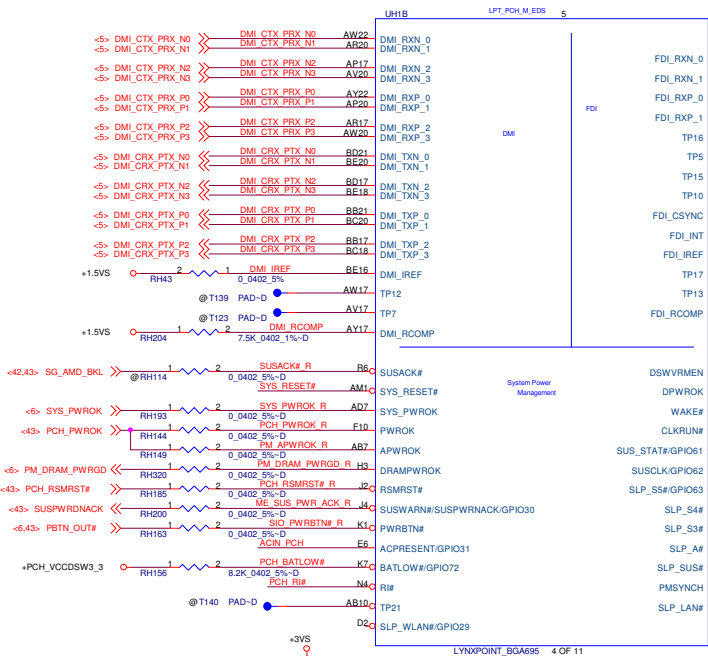
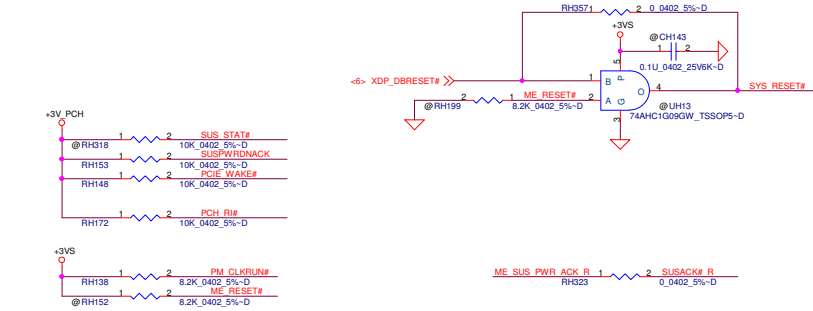
Security Classification	Compal Secret Data			Compal Electronics, Inc. DDRIII DIMMA	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number LA-9331P	Rev 0.1
				Date:	Friday, June 22, 2012 Sheet 13 of 61

JDIMMB H=4mm



JDIMMD H=9.2mm





ME_SUS_PWR_ACK_R 1 2 SUSACK# R RH323 0.0402 5%-D

SUSACK# R RH114 0.0402 5%-D

SYS_PWRACK# R RH193 0.0402 5%-D

PCH_PWRACK# R RH144 0.0402 5%-D

PM_DRAM_PWRACK# R RH149 0.0402 5%-D

PCH_RSMRST# R RH320 0.0402 5%-D

ME_SUS_PWR_ACK_R RH185 0.0402 5%-D

SIO_PWRBTN# R RH200 0.0402 5%-D

ACIN_PCH R RH163 0.0402 5%-D

PCH_BATLOW# R RH156 8.2K 0402 5%-D

PCH_RI# R RH140 PAD-D

ACIN_PCH R RH189 10K 0402 5%-D

ACIN R RH138 10K 0402 5%-D

ACIN R RH190 10K 0402 5%-D

ACIN R RH133 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

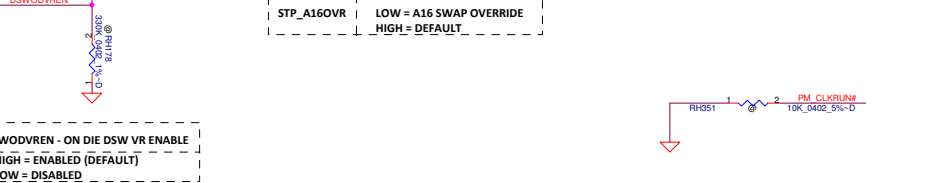
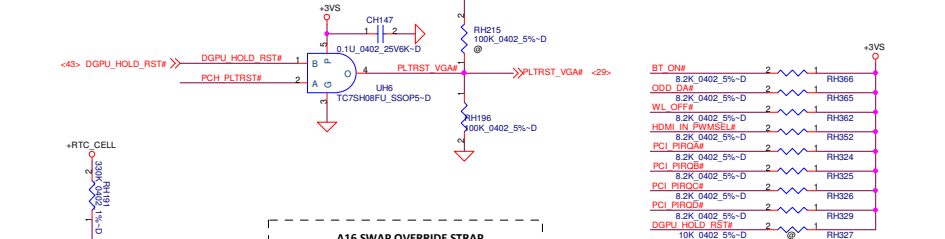
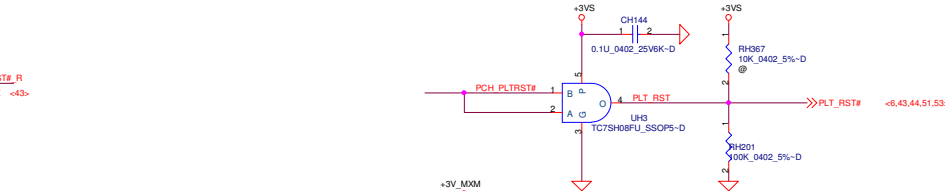
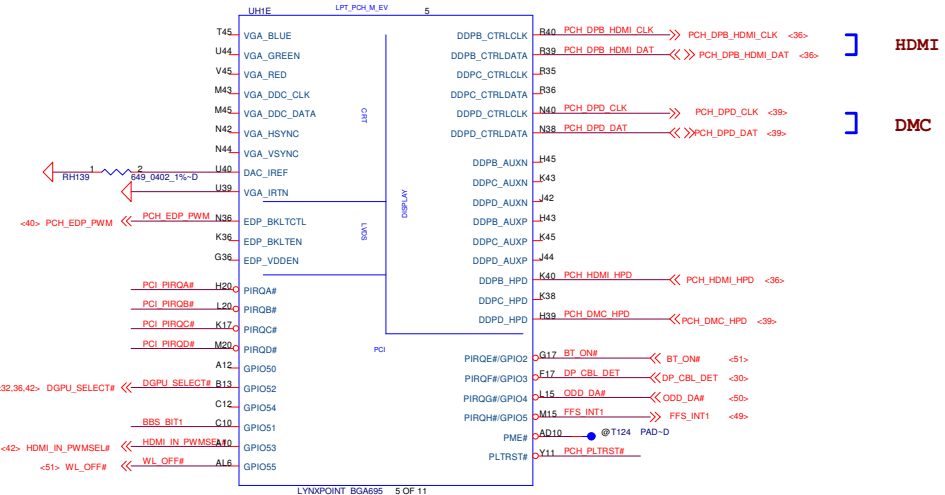
ACIN R RH13A 10K 0402 5%-D

ACIN R RH13A 10K 0402 5%-D

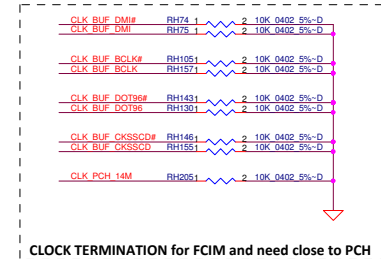
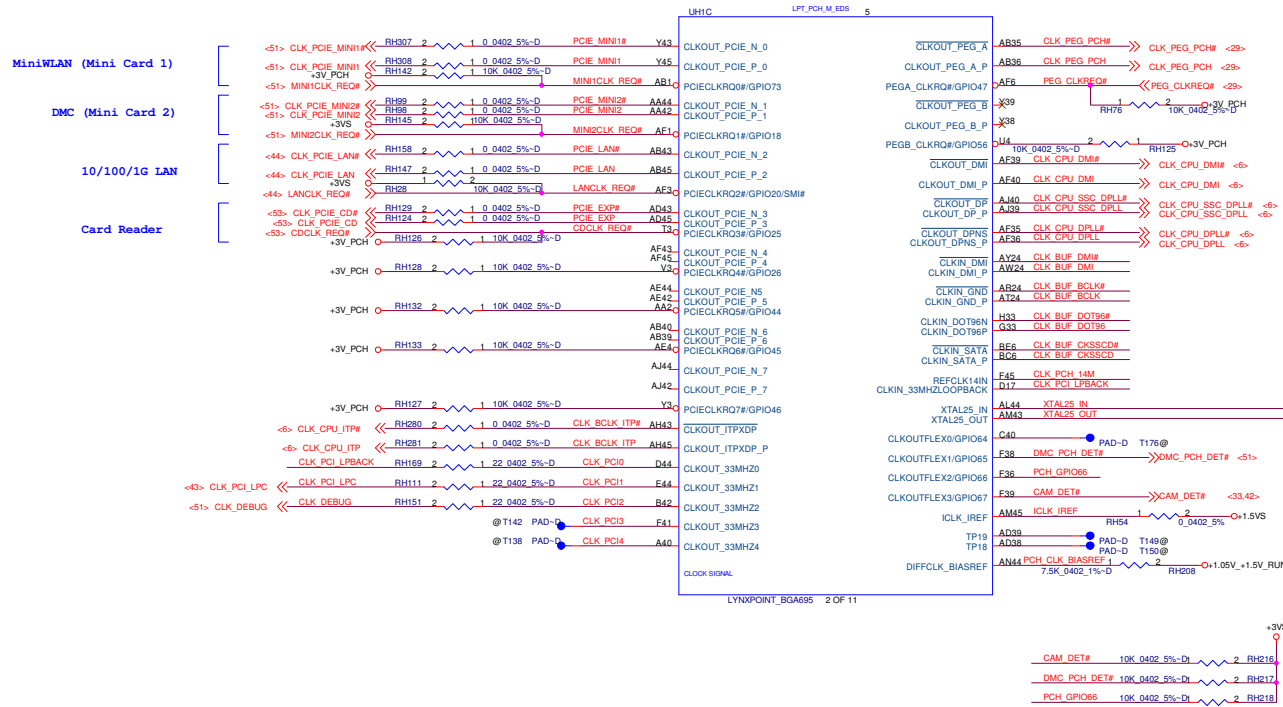
GPIO51 has internal pull up.

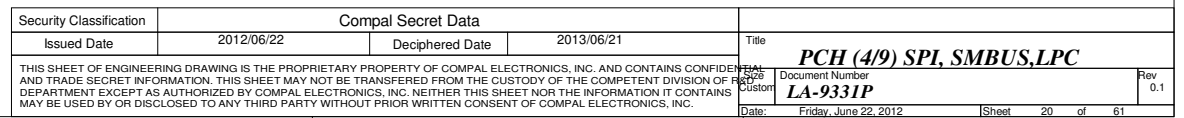
Boot BIOS Strap		
GNT1#/GPIO19 (BBS_BIT1)	SATA1GP/GPIO19 (BBS_BIT0)	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI

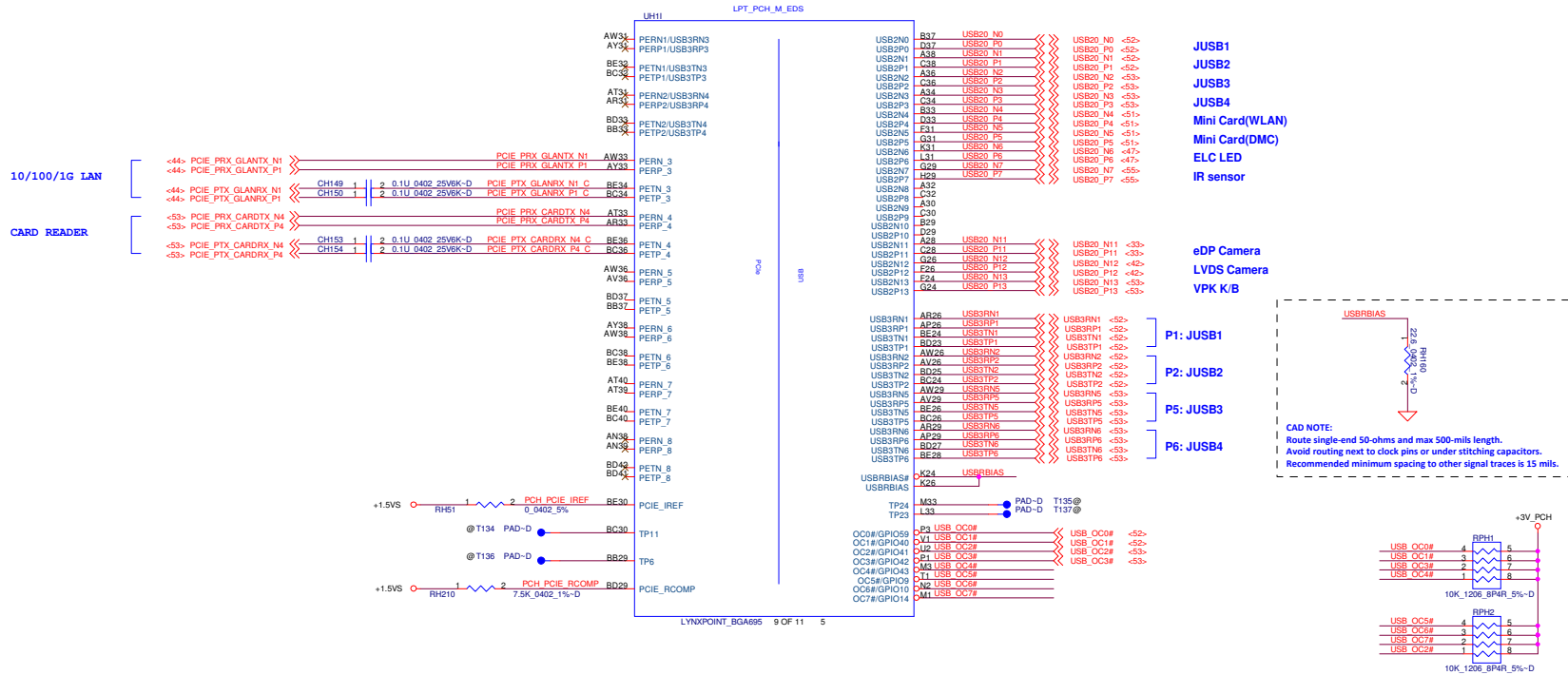
DSWODVREN - ON DIE DSW VR ENABLE
HIGH = ENABLED (DEFAULT)
LOW = DISABLED



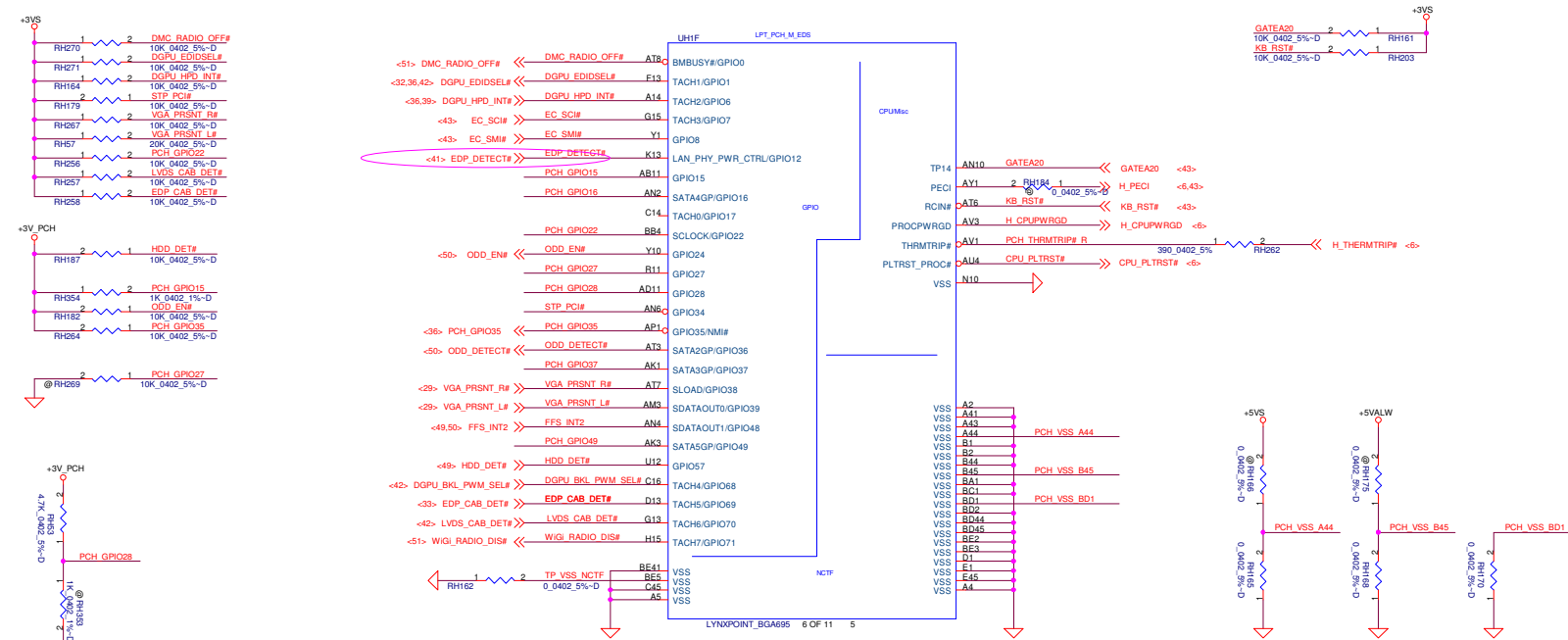
Security Classification		Compal Secret Data		Title	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Document Number	PCH (2/9) DMI,FDI,PM,DP,CRT
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Revision	0.1
Date	Friday, June 22, 2012	Sheet	18	of	61



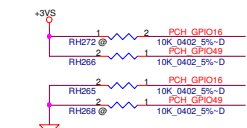




Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i> PCH (S/N) PCIE,USB	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	New
				PCH-9331P Date: Friday, June 22, 2012	0.1
				Sheet	21 of 61

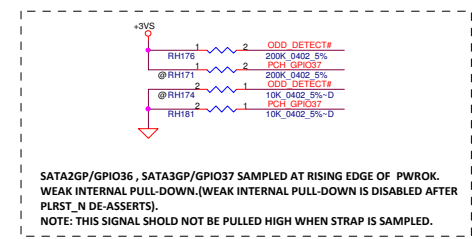


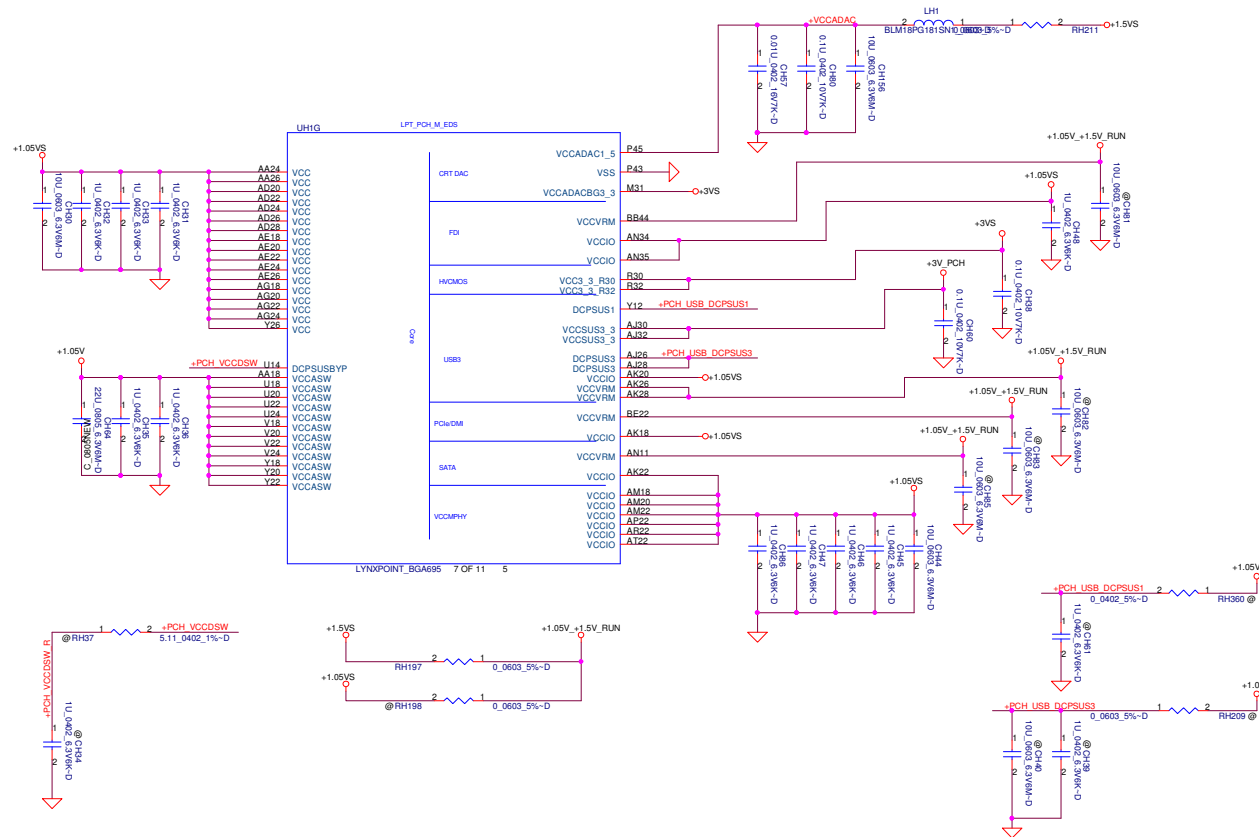
PLL ON DIE VR ENABLE
ENABLED - HIGH(DEFAULT)
DISABLED - LOW



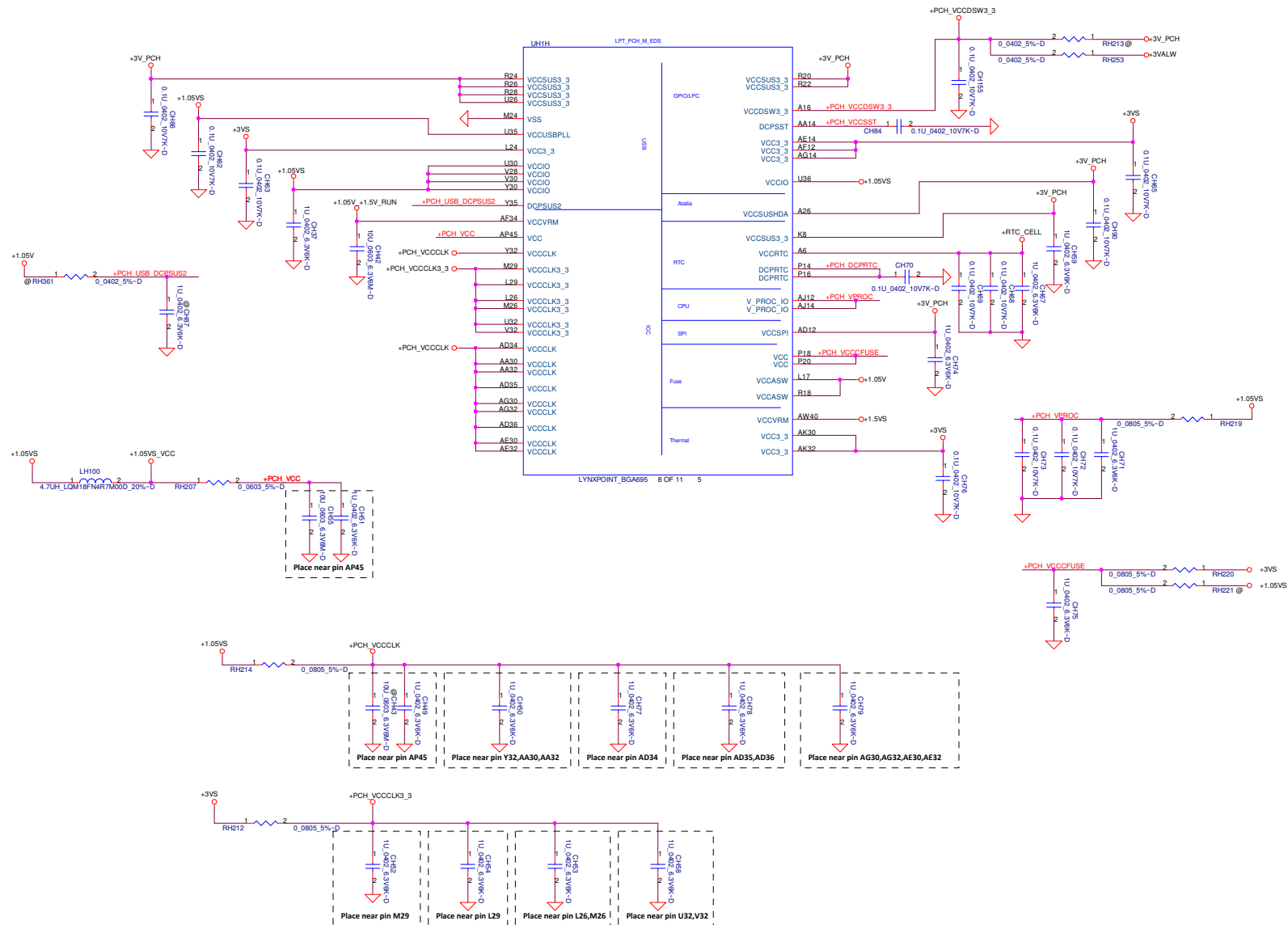
Config	GPIO16,49
USB X4,PCIEX8,SATAx6	11
USB X6,PCIEX8,SATAx4	01

Fixed Signals				Muxed Signals		Fixed Signals								Muxed Signals		Fixed Signals				
USB3_1	USB3_2	USB3_5	USB3_6	PCIE_1	PCIE_2	PCIE_3	PCIE_4	PCIE_5	PCIE_6	PCIE_7	PCIE_8	SATA_4	SATA_5	SATA_6	SATA_7	SATA_8	SATA_9	SATA_10	SATA_11	SATA_12
				(00)	(00)							(00)	(00)							
				USB3_3	USB3_4							PCIE_1	PCIE_2							
				(01)	(01)							(01)	(01)							

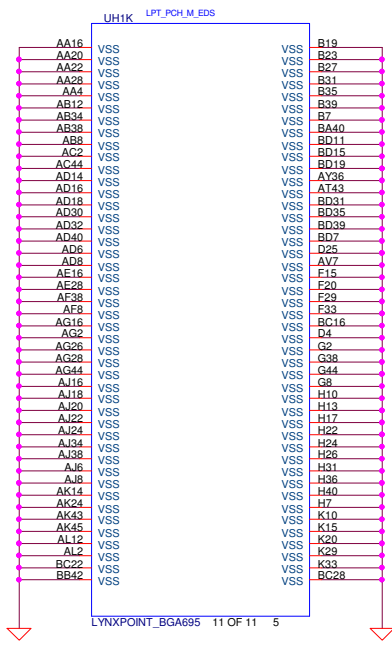
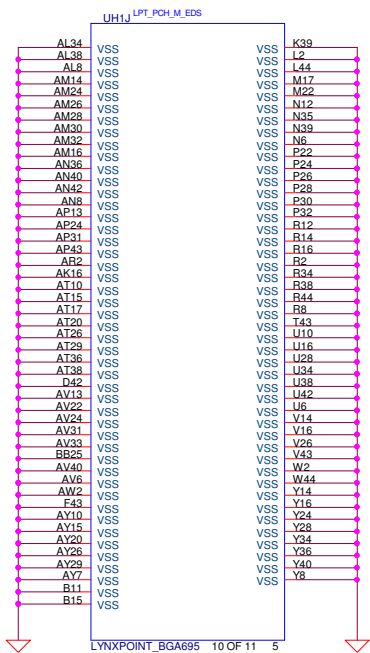


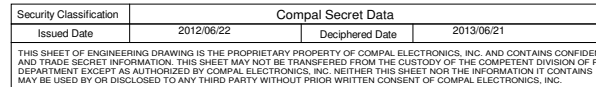


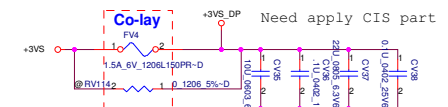
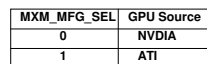
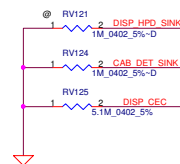
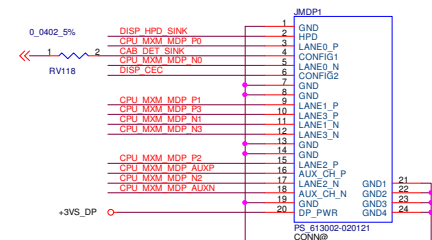
PCH Power Rail Table		
Voltage Rail	Voltage	50 Iccmax Current (A)
VCC	1.05V	1.29 A
VCCIO	1.05V	3.629 A
VCCDAC1_5	1.5V	0.070 A
VCCDAC3_3	3.3V	0.0133 A
VCCCLK	1.05V	0.306 A
VCCCLK3_3	3.3V	0.055 A
VCCVRM	1.5V	0.179 A
VCC3_3	3.3V	0.133 A
VCCASW	1.05V	0.67 A
VCCSUSHDA	3.3V	0.01 A
VCCSPI	3.3V	0.022 A
VCCSUS3_3	3.3V	0.261 A
VCCDSW3_3	3.3V	0.015 A
V_PROD_IO	1.05V	0.004 A



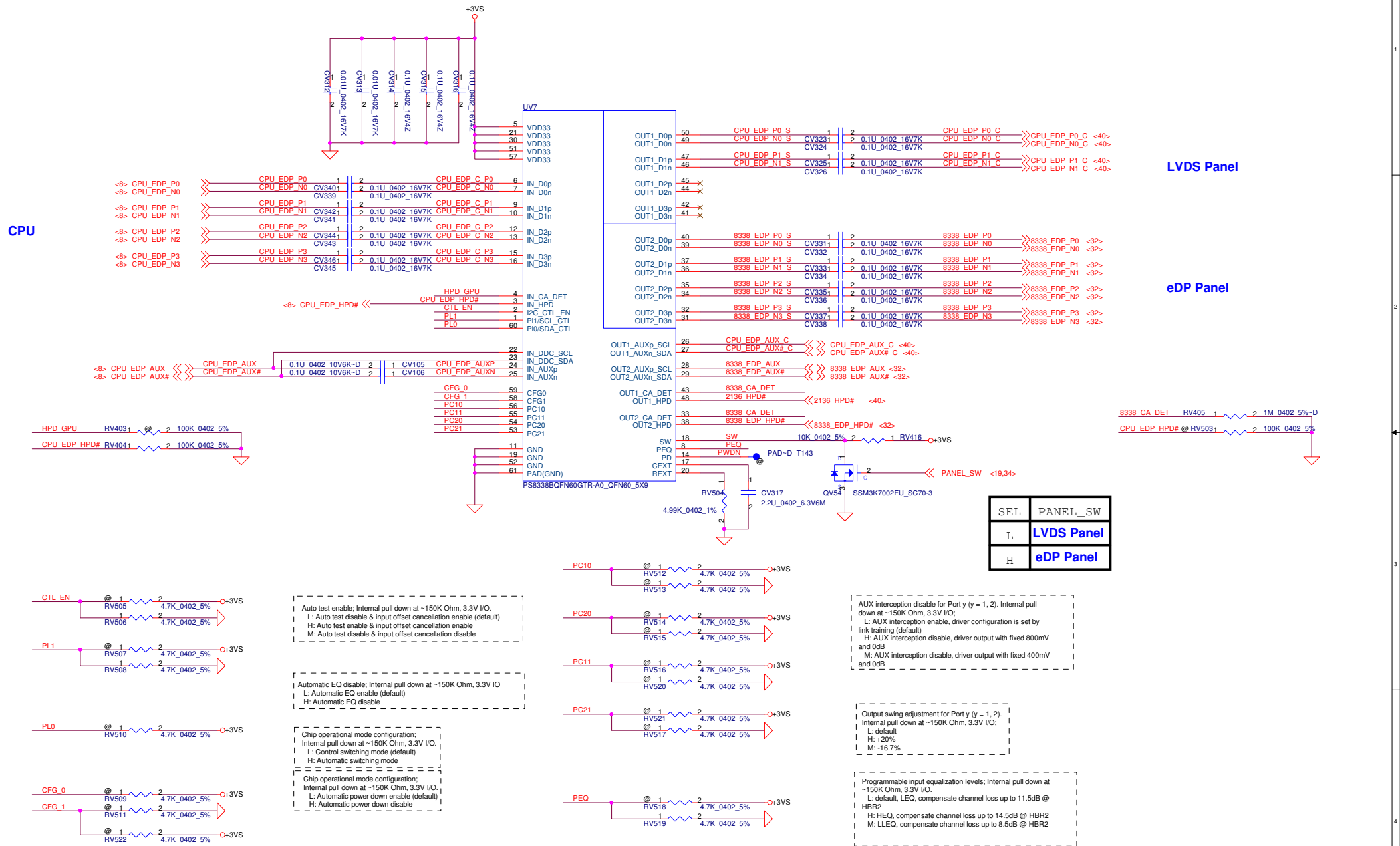
Security Classification	Compal Secret Data		Title	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Compal Electronics, Inc. PCH (S/P) Power Document Number LA-9331P
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. IT MAY NOT BE TRANSFERRED OUTSIDE OF THE COMPETENT DIVISION OF THIS DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Date: Friday, June 22, 2012 Sheet 24 of 61	Rev 0.1



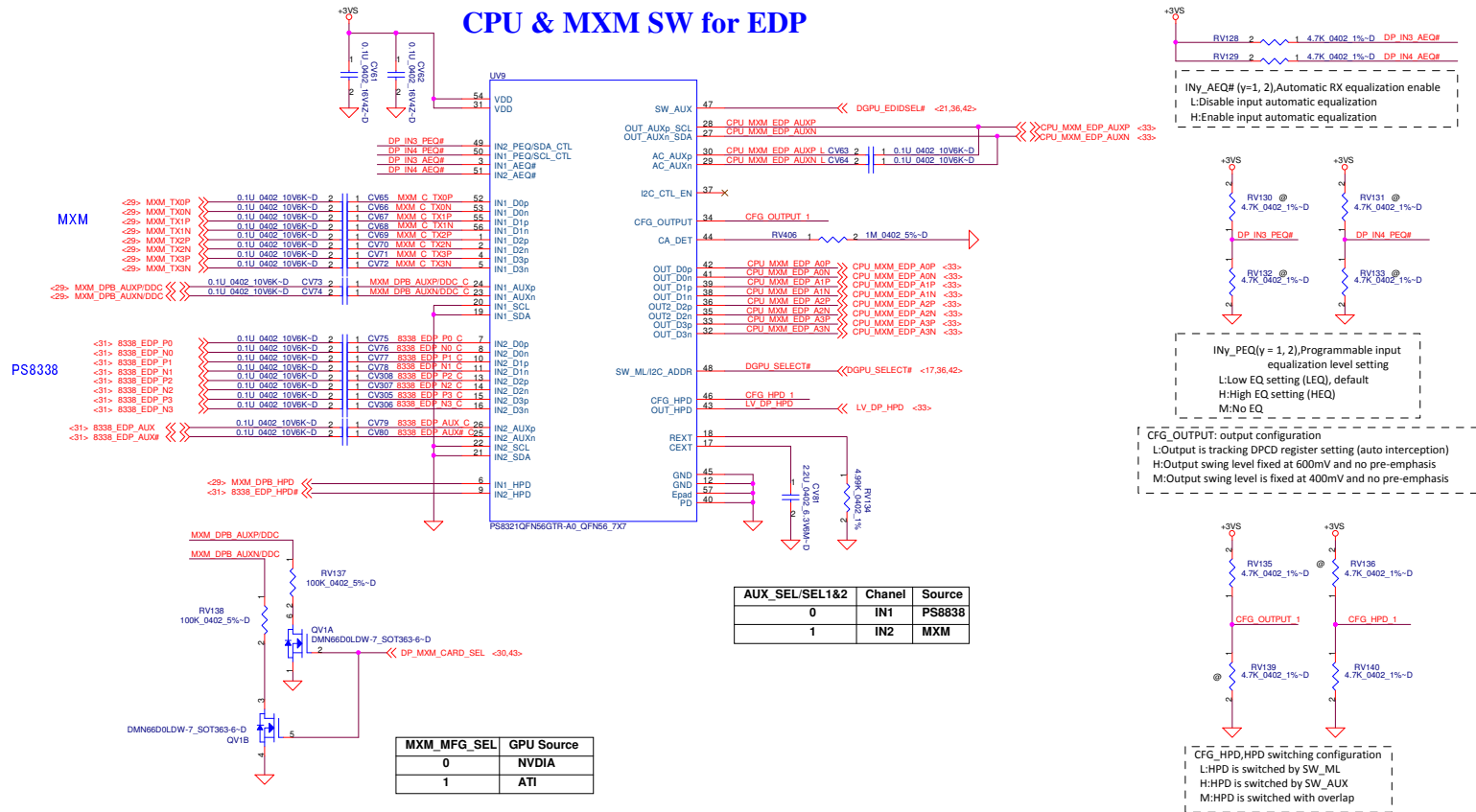


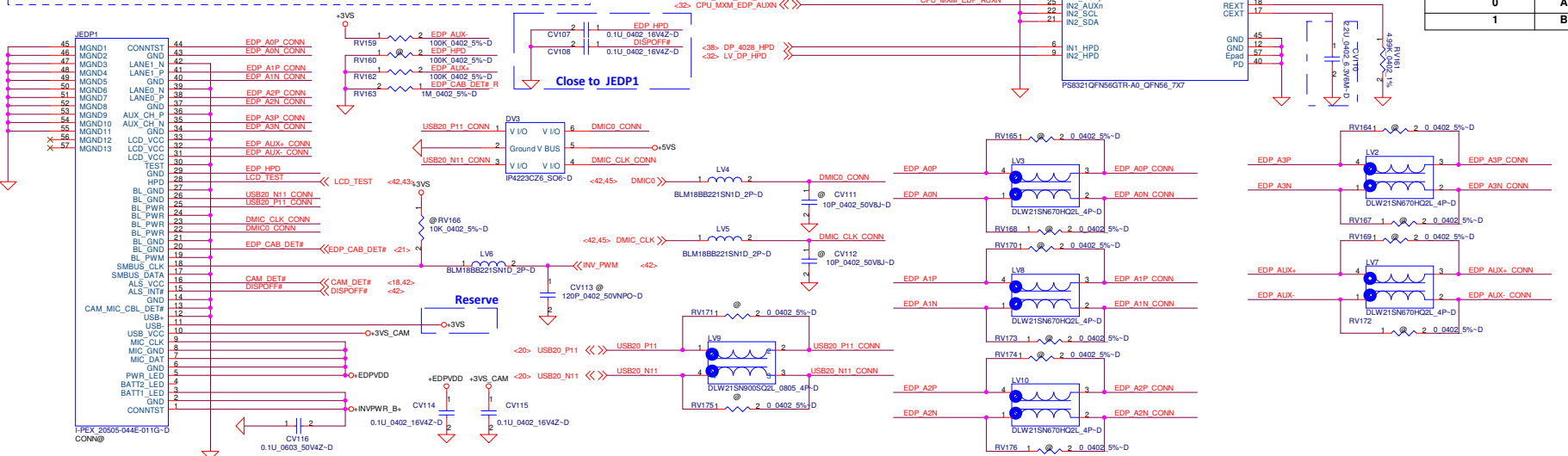
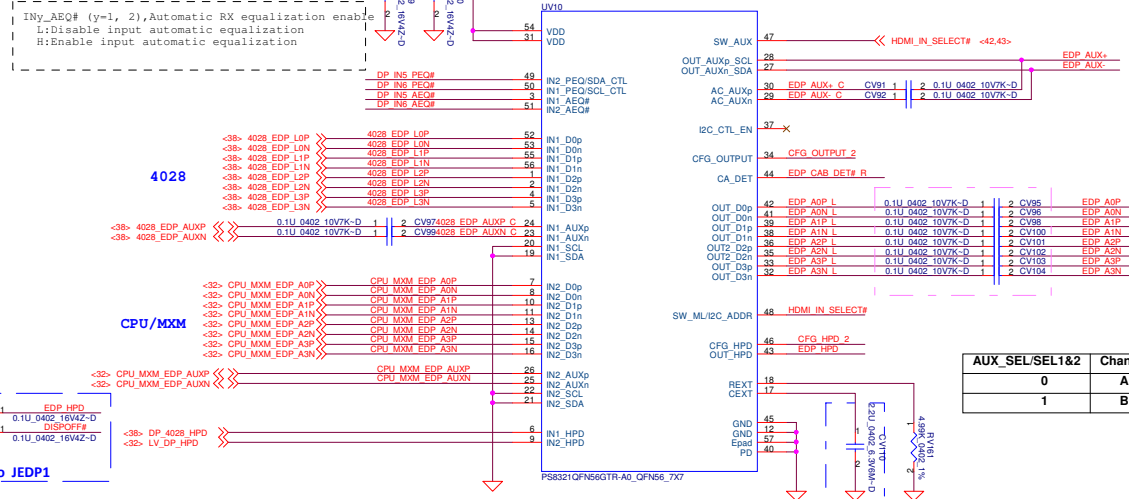
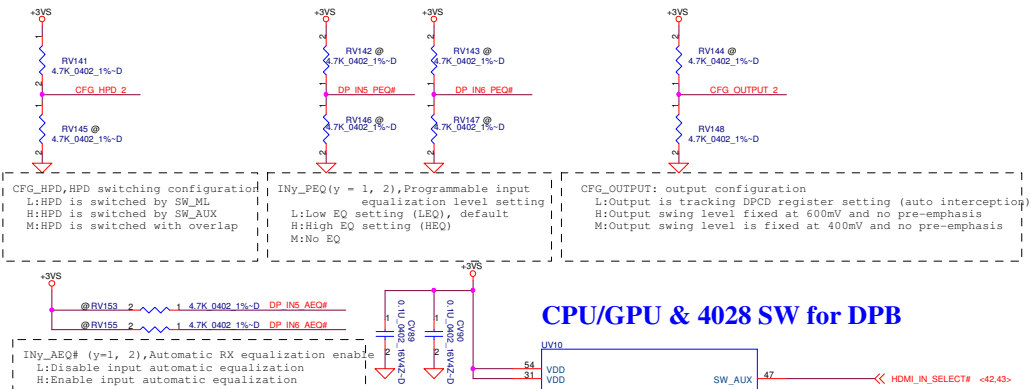
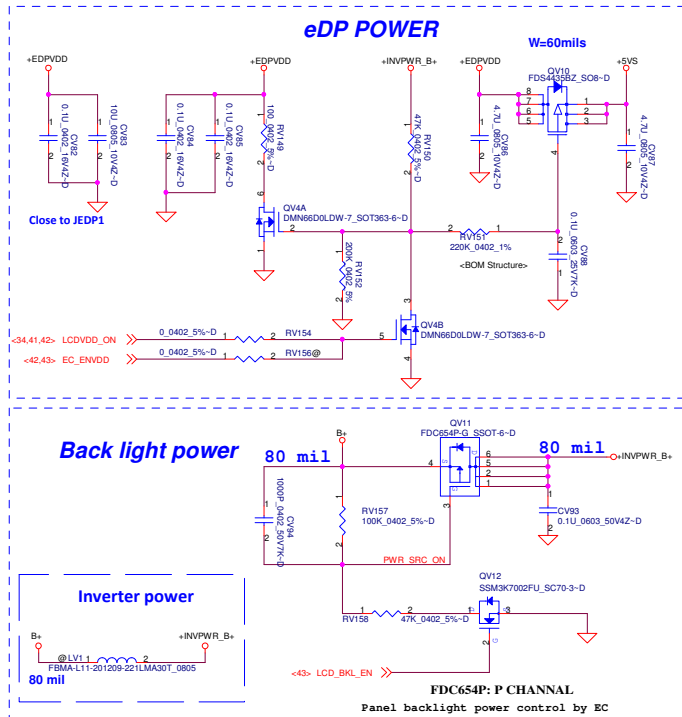
[illegible]

		Compal Electronics, Inc.	
Title		Mini DP/Thunder Bolt power	
Customer	Document Number	Rev	
	LA-9331P	0.1	
Date:	Friday, June 22, 2012	Sheet	27 of 61



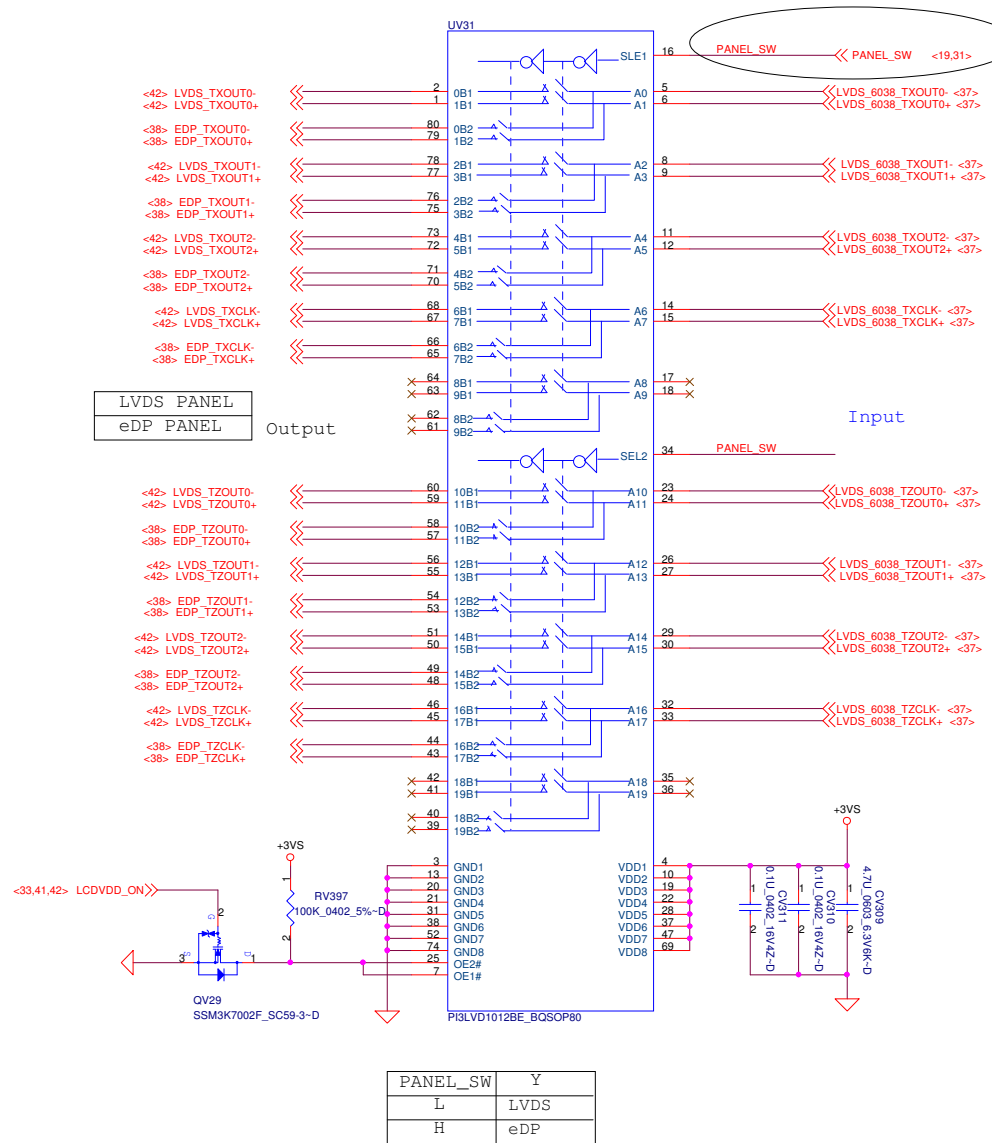
Security Classification		Compal Secret Data			
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	<i>CPU to EDP & LVDS MUX</i>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Docu- ment Number	Rev
				LA-9331P	0.1
				Date: Friday, June 22, 2012	Sheet 28 of 61



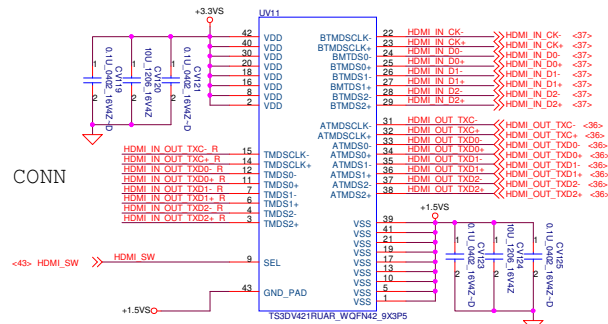


AUX_SEL/SEL1&2	Chanel	Source
0	A	4028
1	B	CPU/MXM

www.laptopblue.vn
STDP6038 to EDP & LVDS MUX



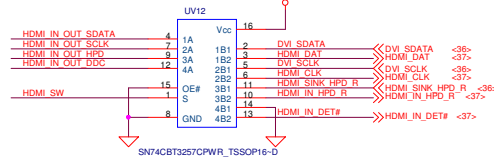
HDMI CONN



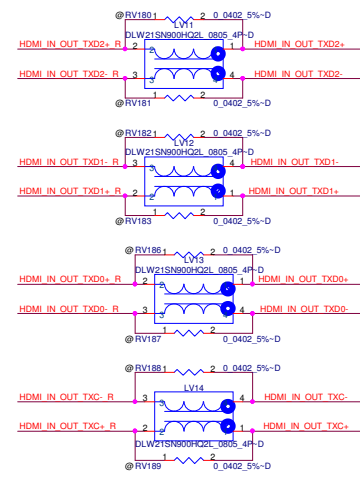
STPD6038

CPU/MXM

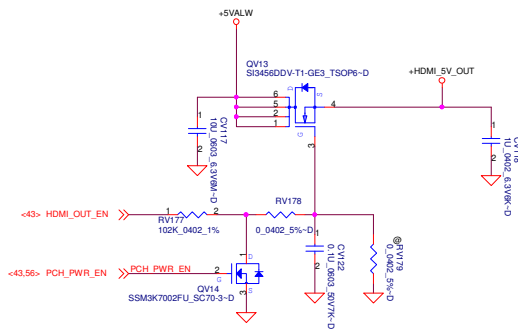
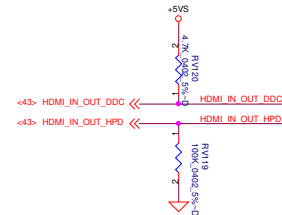
SEL	OUTPUT
L	A
H	B



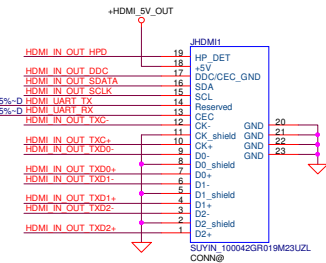
SEL	OUTPUT
L	B1
H	B2



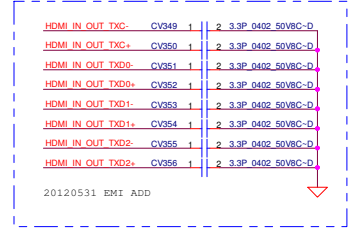
Reserve for EMI please close to JHDM12

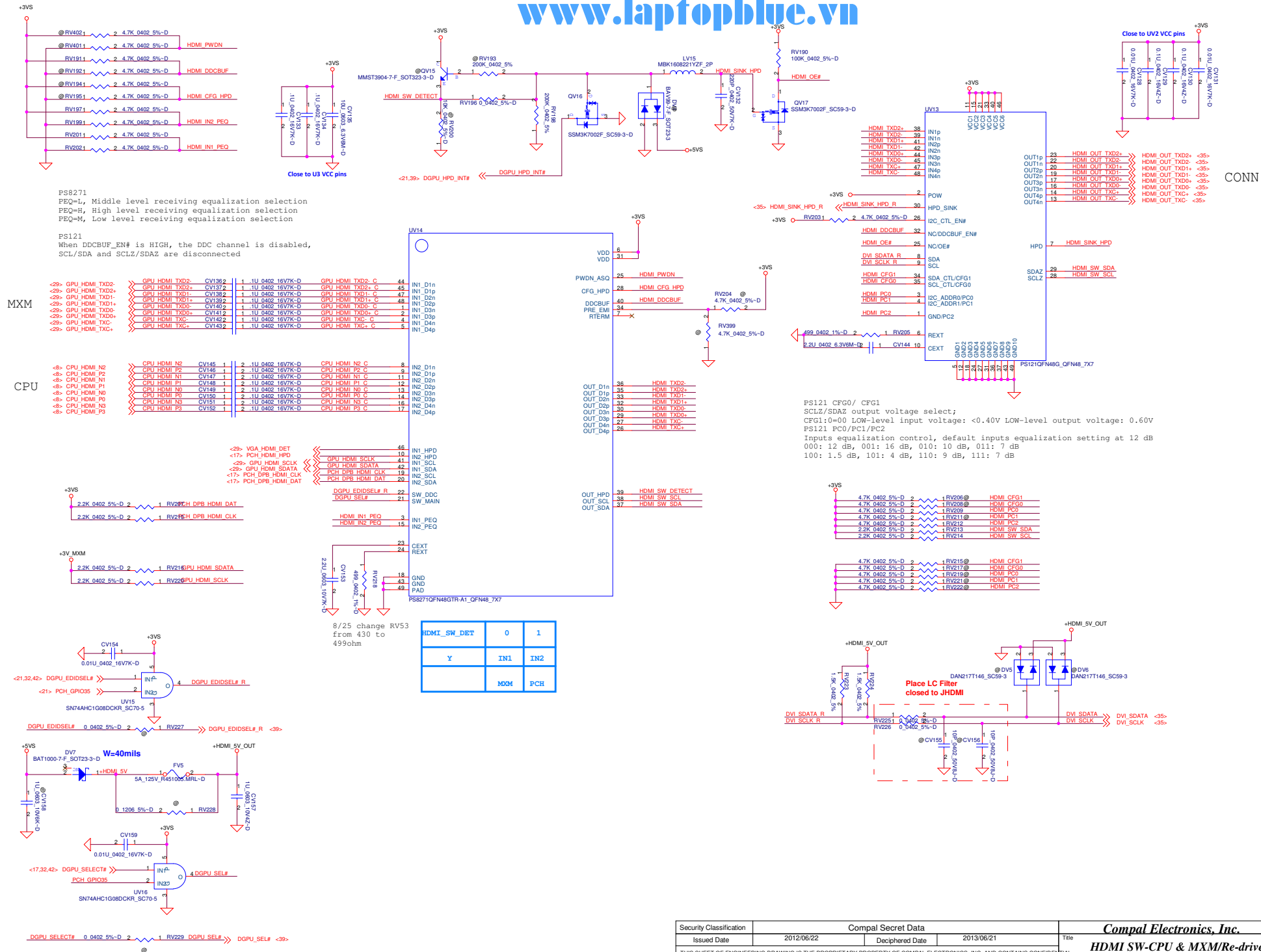


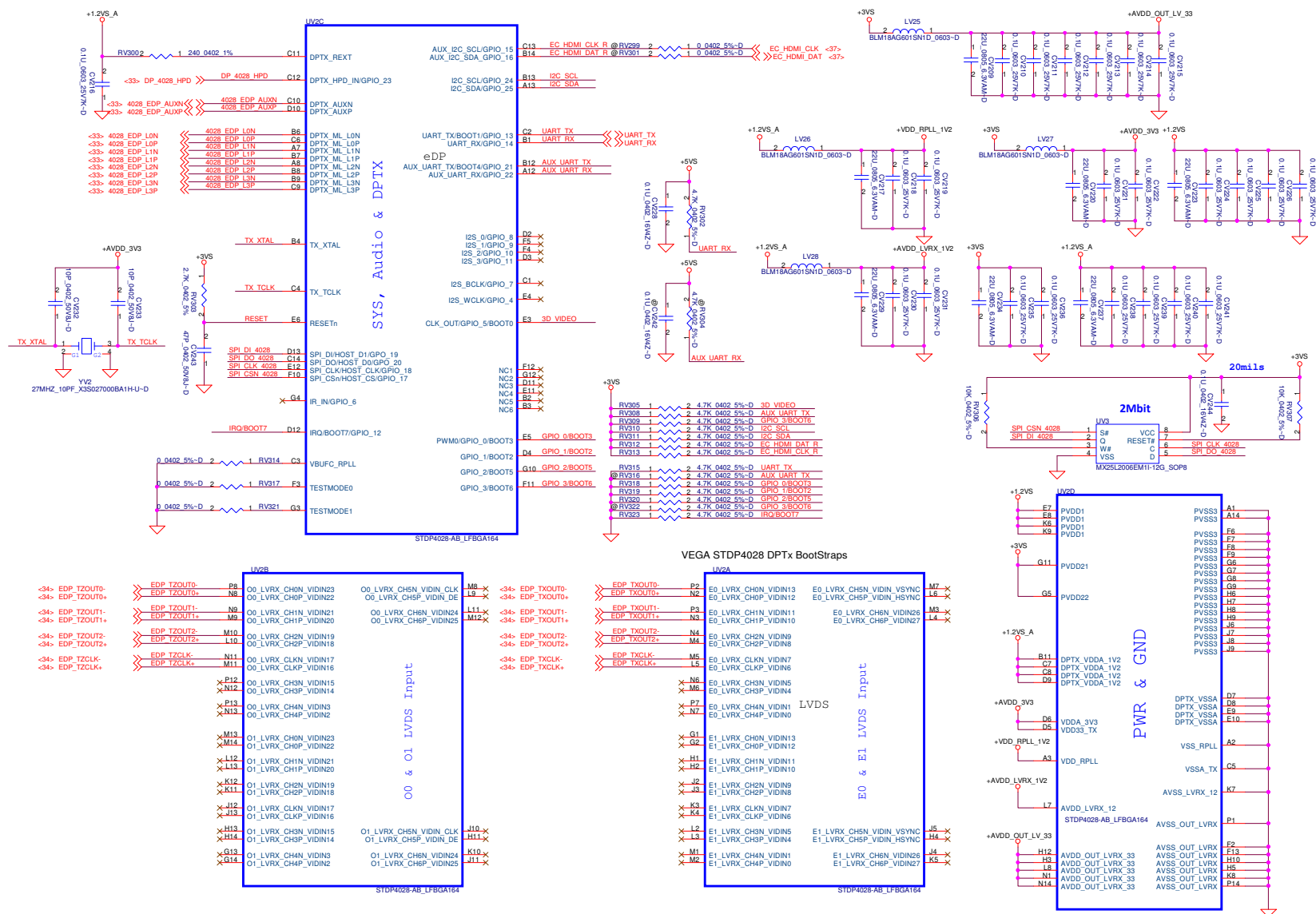
HDMI Input/Output Connector

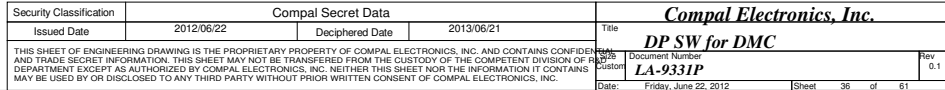


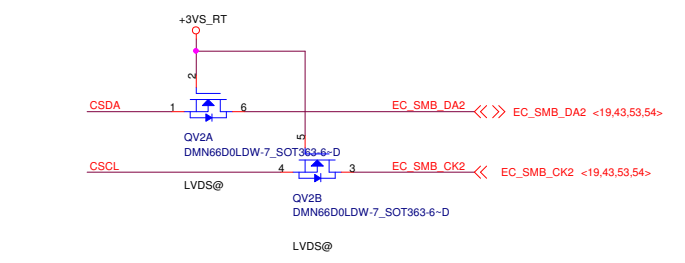
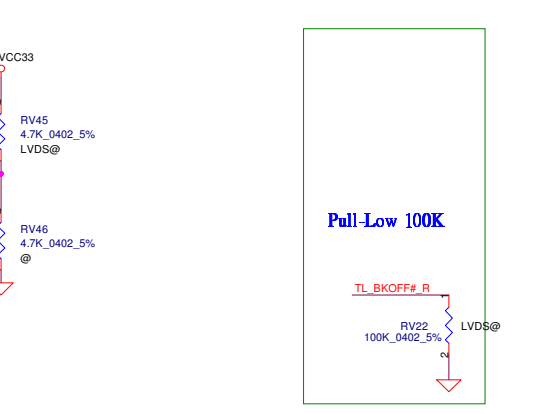
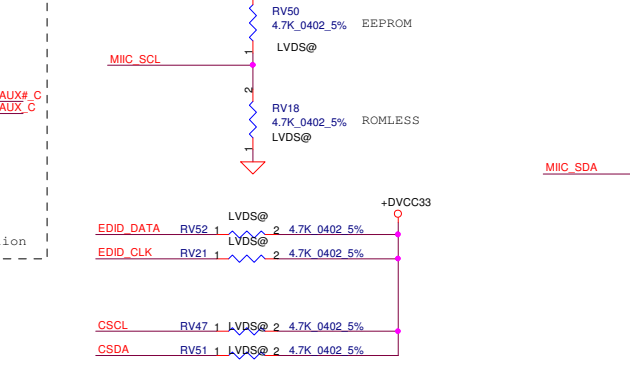
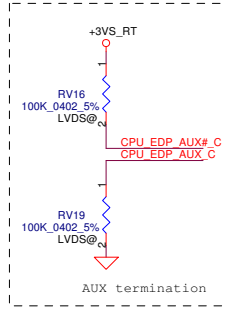
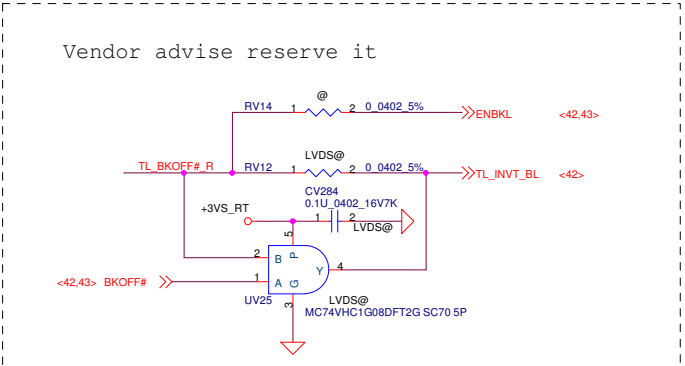
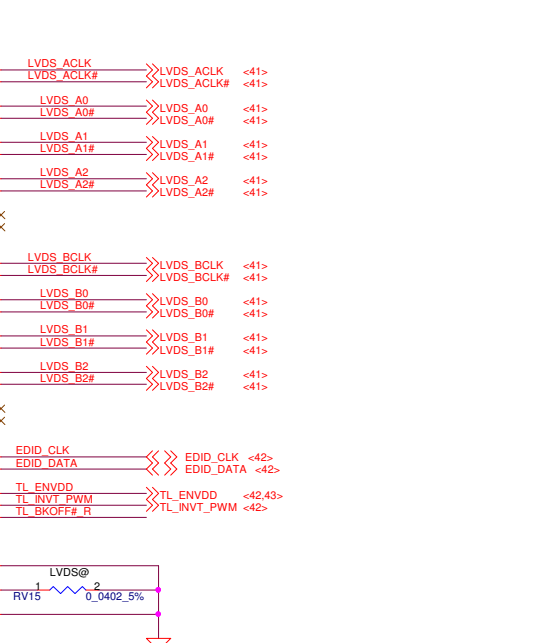
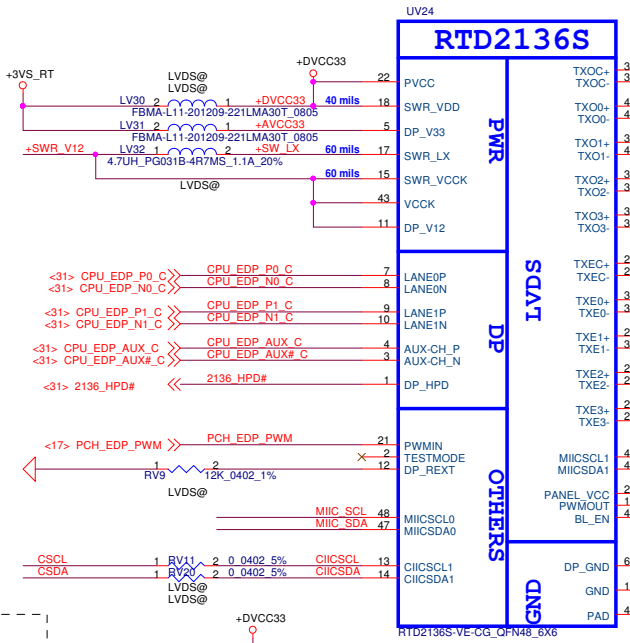
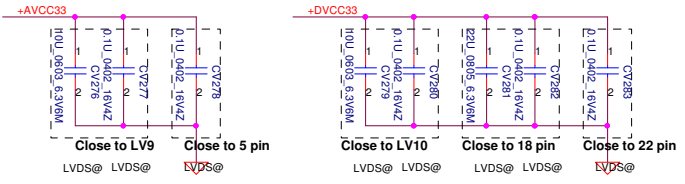
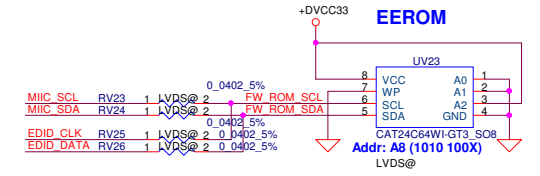
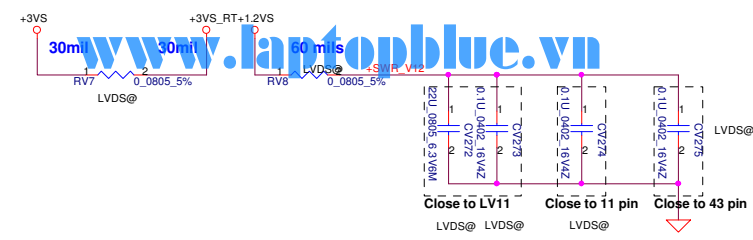
Part Number	Description
8000000028H	HDMI W/Logo:8000000028H





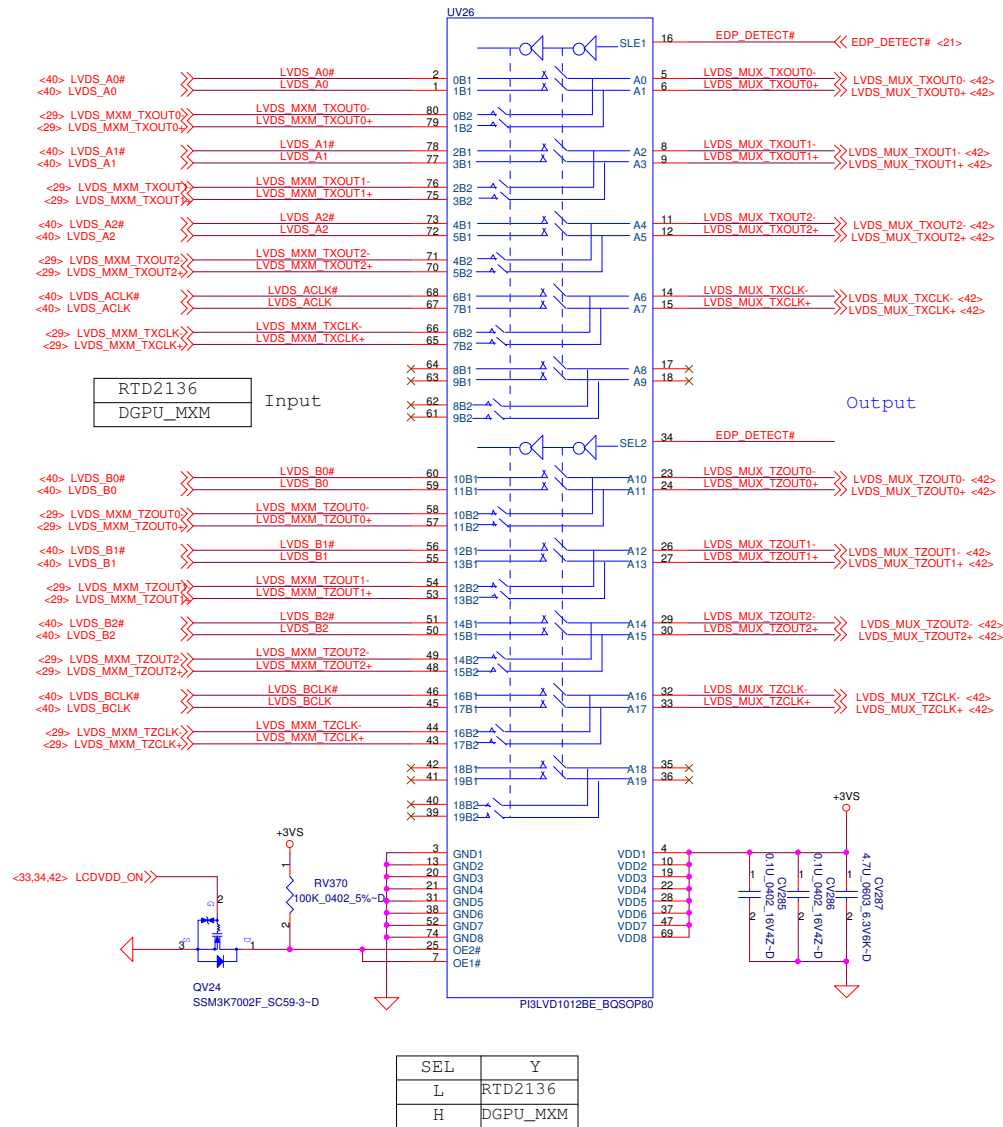


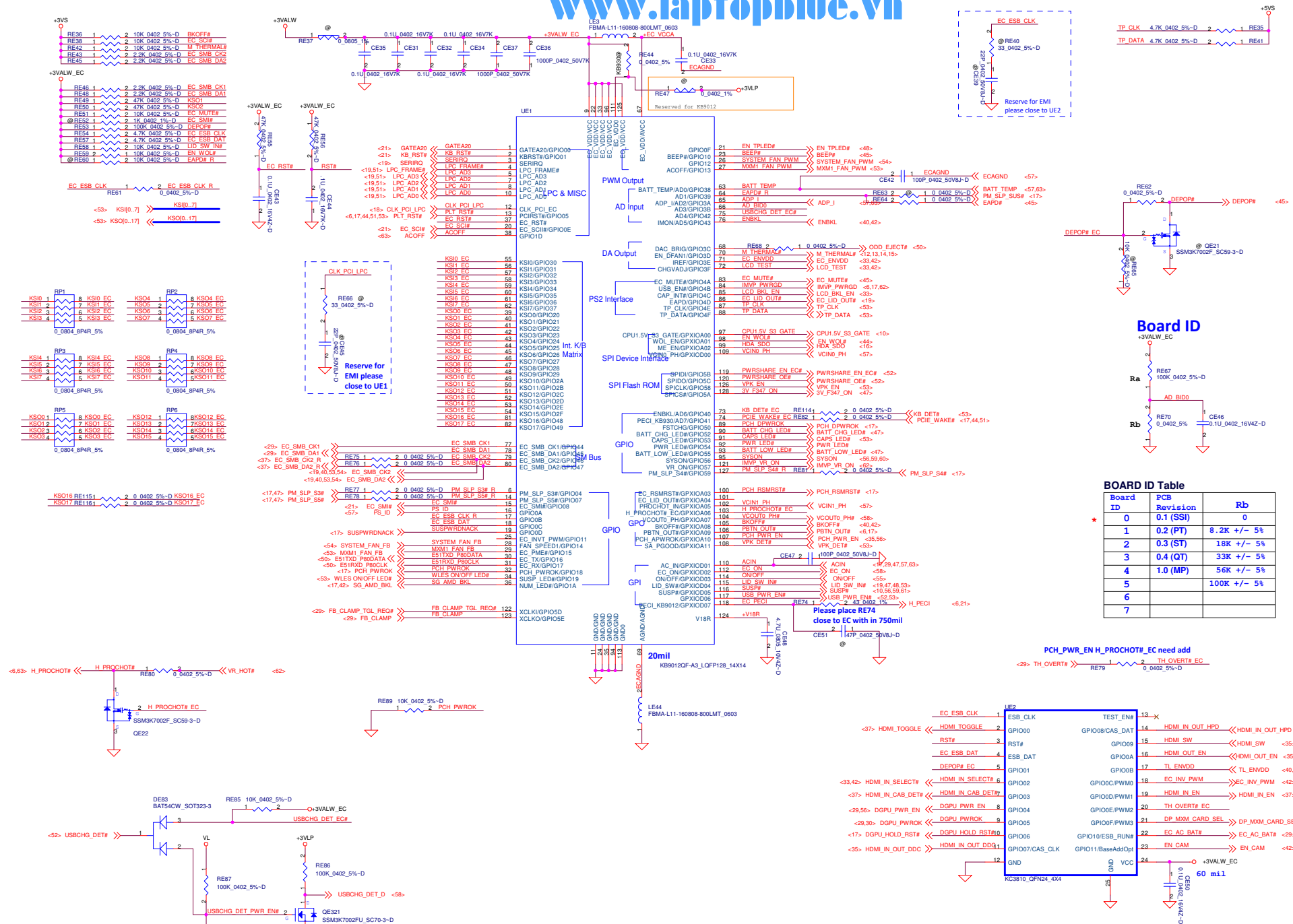




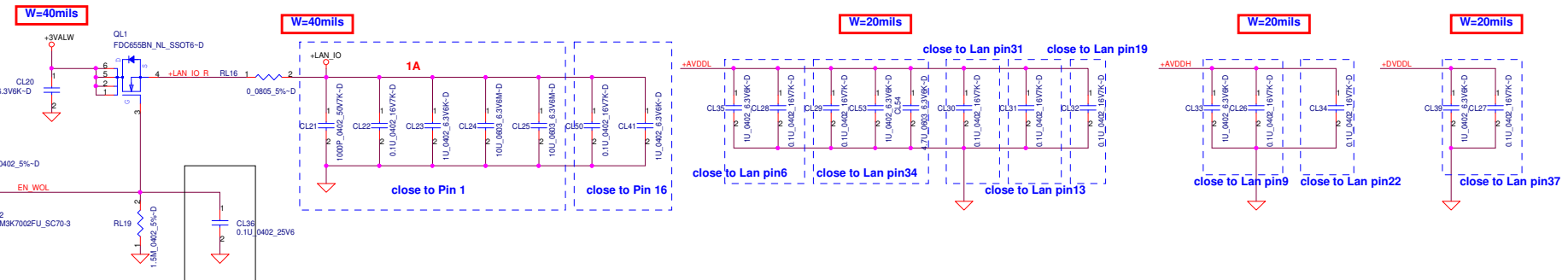
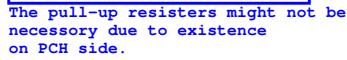
www.laptopblue.vn

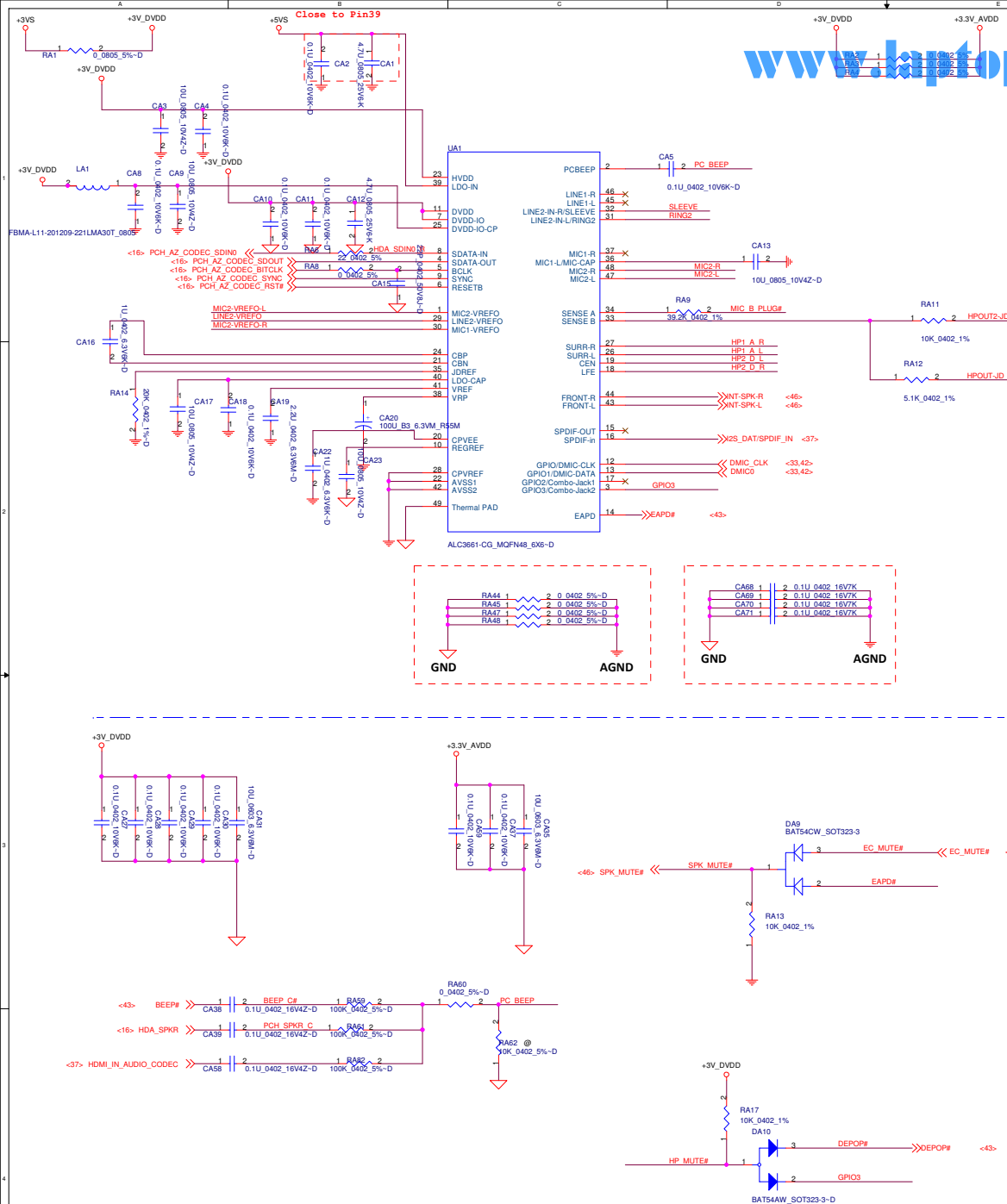
STDP6038 SW STDP4028 PCH/GPU AUX for LVDS



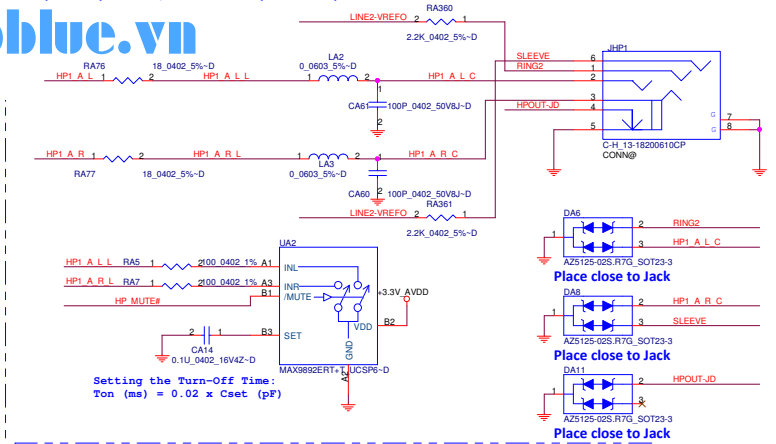


Security Classification	Compal Secret Data		
Issued Date	2012/06/22	Deciphered Date	2013/06/21
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. TO ANY OTHER DEPARTMENT OR DIVISION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			

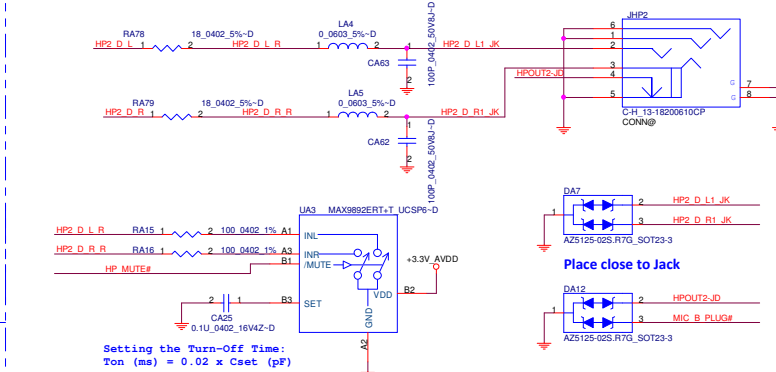




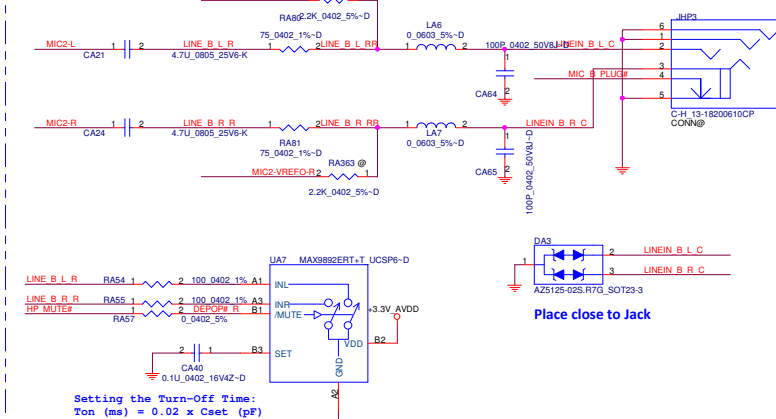
S1 (Out + In) : Front L/R + HP1 + MIC (auto-sense)



S2 (Out) :Center + HP2

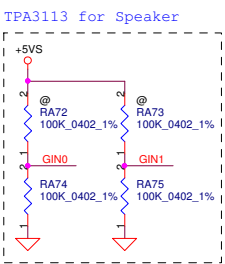
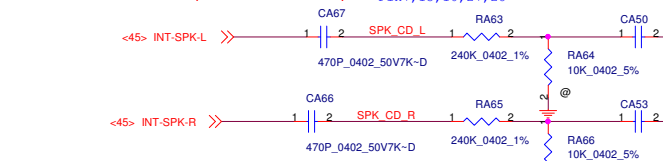
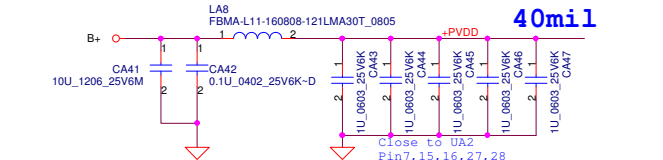


S3 (Out) : Rear L/R

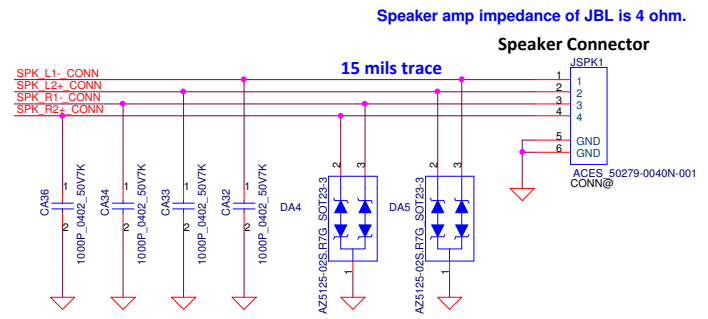
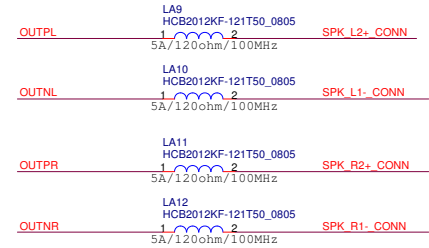
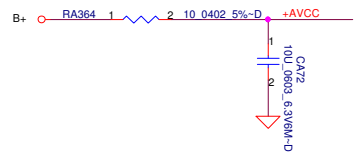
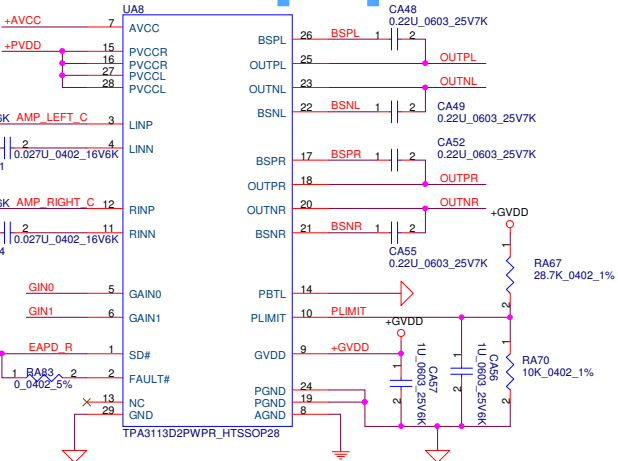


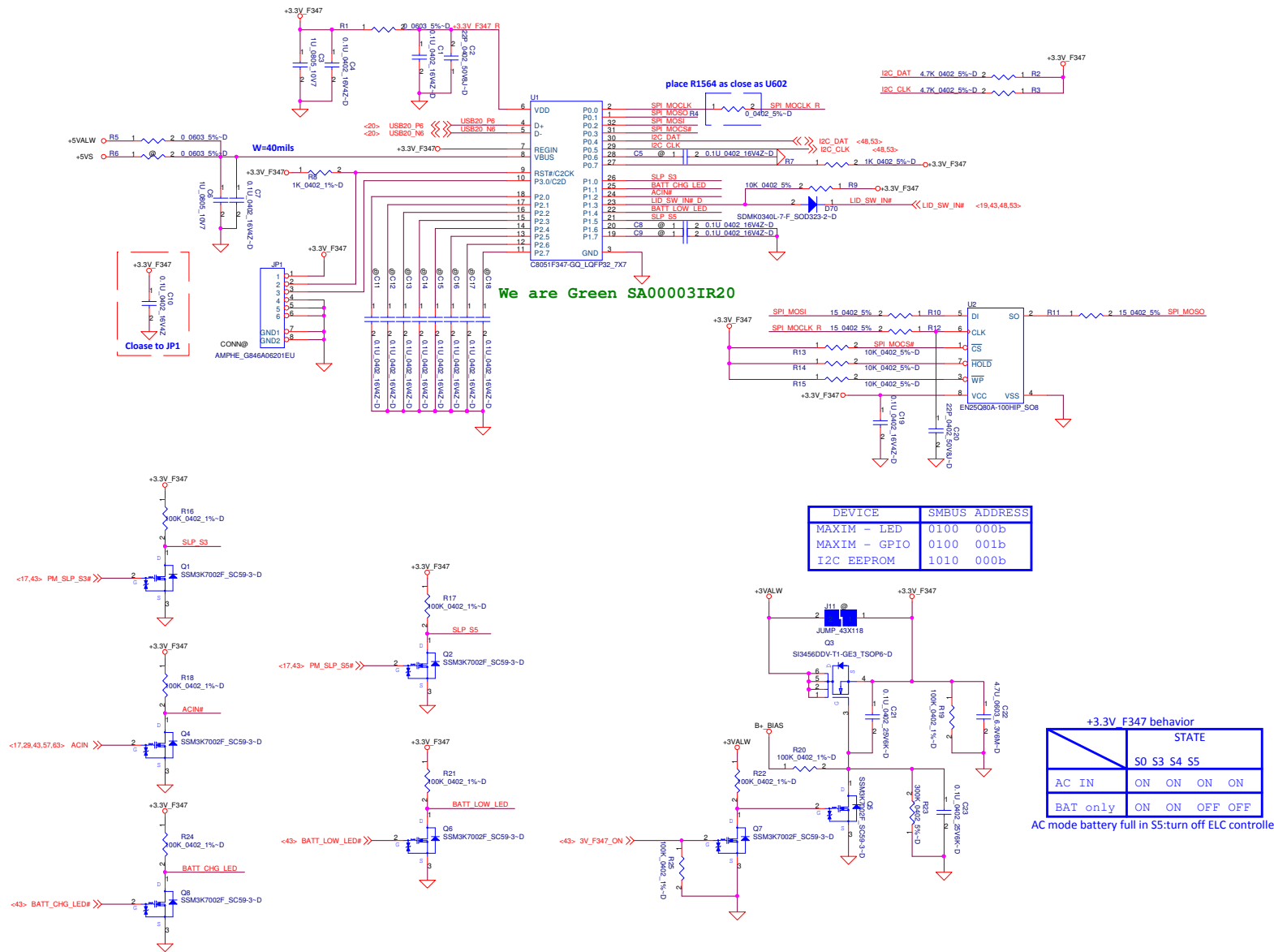
Security Classification		Compal Secret Data		<i>Compal Electronics, Inc.</i>		
Issued Date		Deciphered Date		Title		
2012/06/22		2013/06/21		HD Audio ALC3661		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number		Rev 0.1
				LA-9331P		
Date: Friday, June 22, 2012				Sheet 42 of 61		

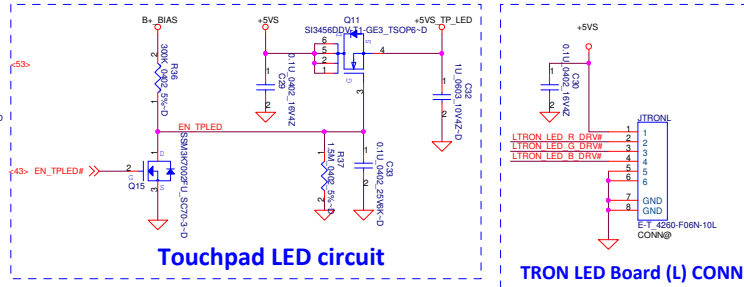
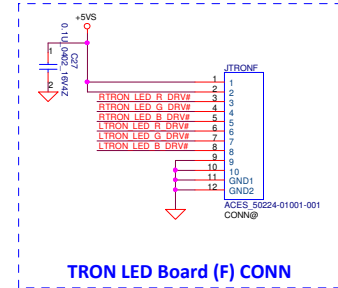
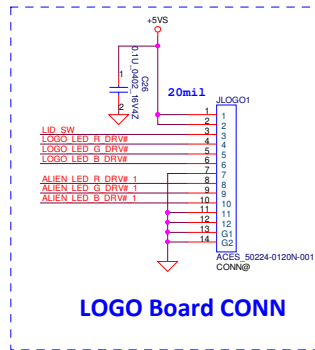
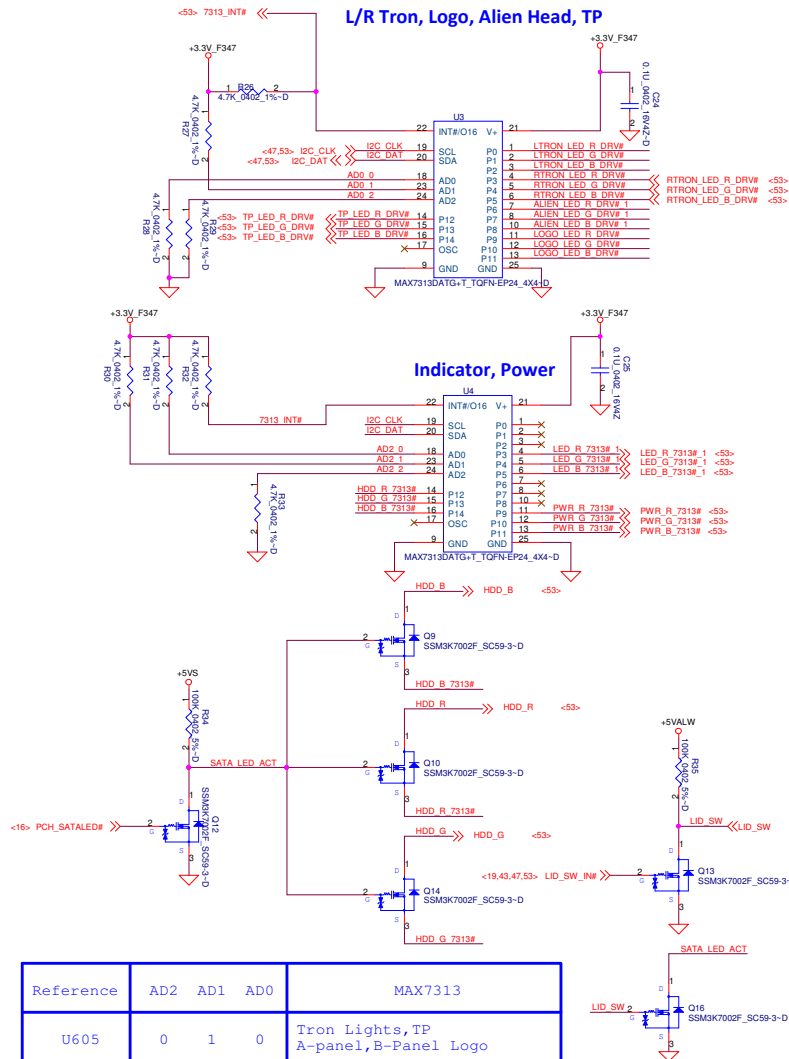
Compal Electronics, Inc.
HD Audio ALC3661

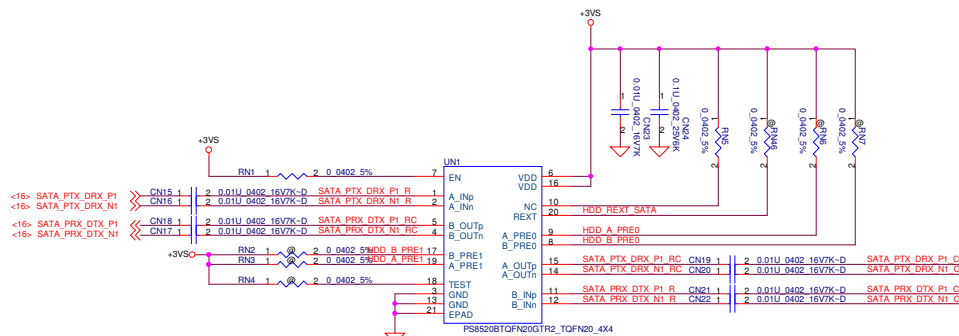
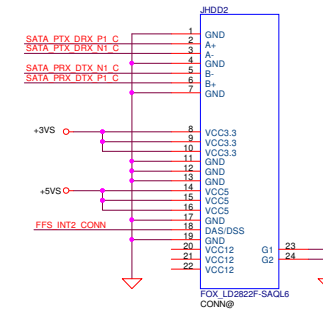
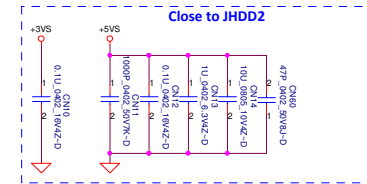
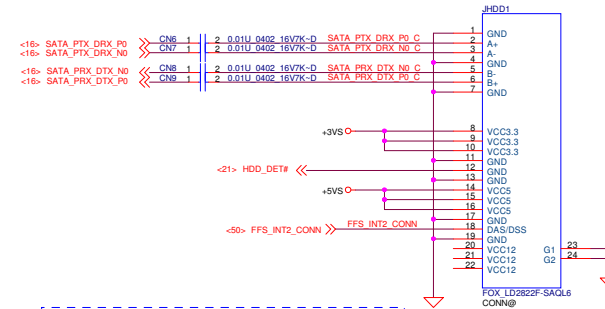
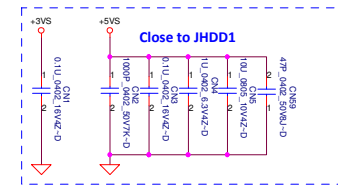
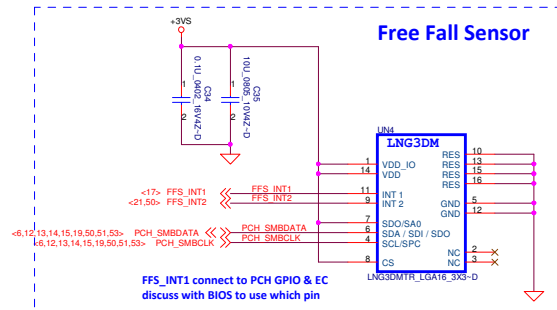


GAIN1	GAIN0	AV (inv)	INPUT IMPEDANCE
0	0	20dB	60Kohm
0	1	26dB	30Kohm
1	0	32dB	15Kohm
1	1	36dB	9Kohm









HDD_B_PREQ0 RN8 1 2 0.0402 5%
HDD_B_PREQ1 RN9 1 2 0.0402 5%
HDD_A_PREQ1 RN10 1 2 0.0402 5%
HDD_A_PREQ0 RN11 1 2 0.0402 5%
HDD_REXT SATA RN12 2 5.1K 0402 5%

Pin 20:
PARADE PS8250B:
Reserve RN46, Mount RN12

PERICOM PI3EQX6741ST:
Mount RN46, Reserve RN12

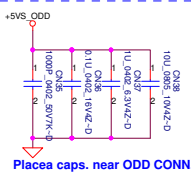
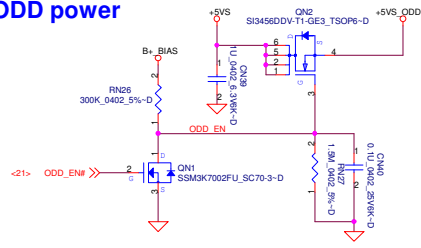
ASMEDIA ASM1466:
Mount RN46, Reserve RN12

Pin 9:
PARADE PS8250B:
Reserve RN11.

PERICOM PI3EQX6741ST:
Reserve RN11

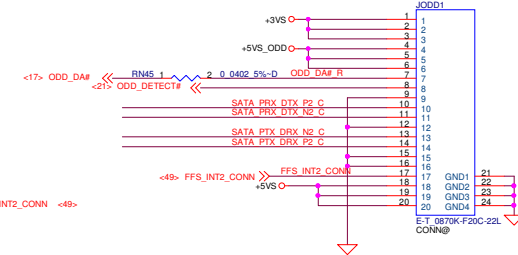
ASMEDIA ASM1466:
Mount RN11 to pull down

ODD power

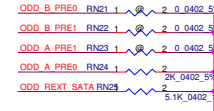
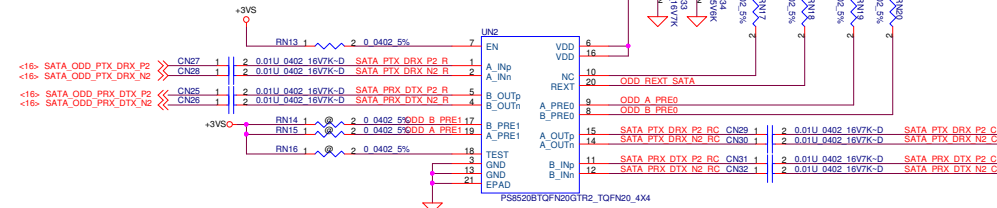


1. Host generate Low pulse 40ms to eject ODD
2. After this pulse, signal remain high and no pulse is allowed within 7s

SATA ODD Conn.



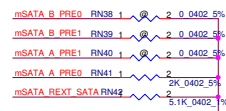
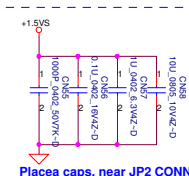
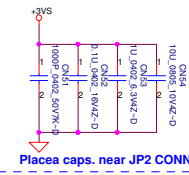
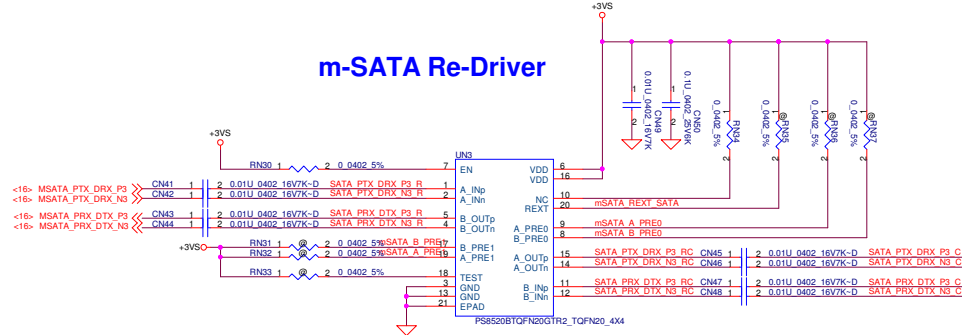
ODD Redriver



Pin 20:
PARADE PS8250B:
Reserve RN18, Mount RN25
PERICOM P13EQX6741ST:
Mount RN18, Reserve RN25
ASMEDIA ASM1466:
Mount RN18, Reserve RN25

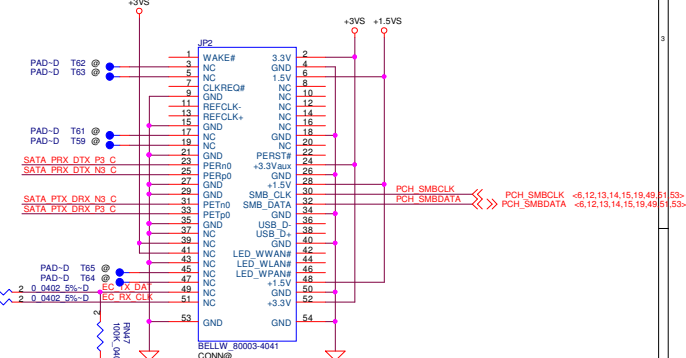
Pin 9:
PARADE PS8250B:
Reserve RN24
PERICOM P13EQX6741ST:
Reserve RN24
ASMEDIA ASM1466:
Mount RN24 to pull down

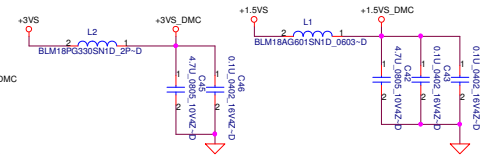
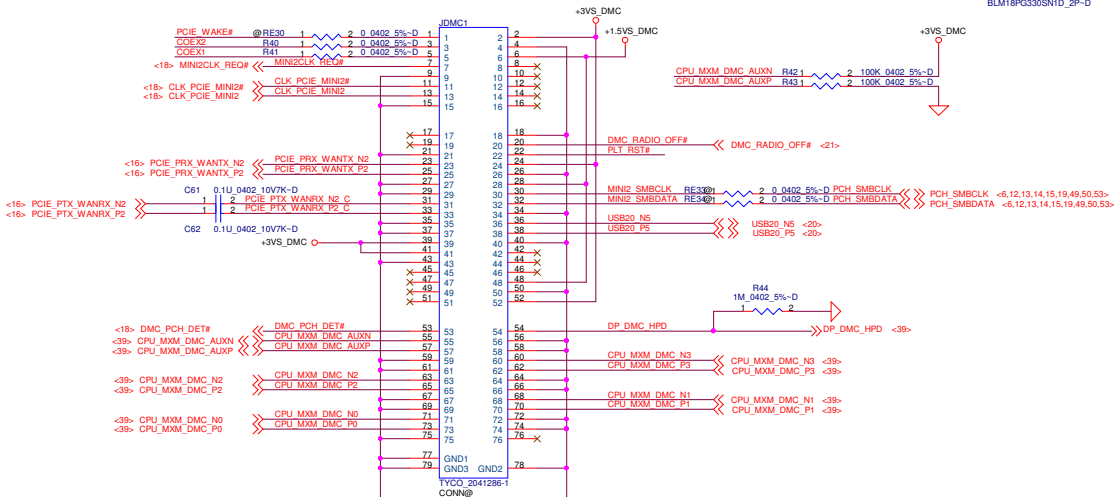
m-SATA Re-Driver





Pin 20:
PARADE PS8250B:
Reserve RN35, Mount RN42
PERICOM P13EQX6741ST:
Mount RN35, Reserve RN42
ASMEDIA ASM1466:
Mount RN35, Reserve RN42

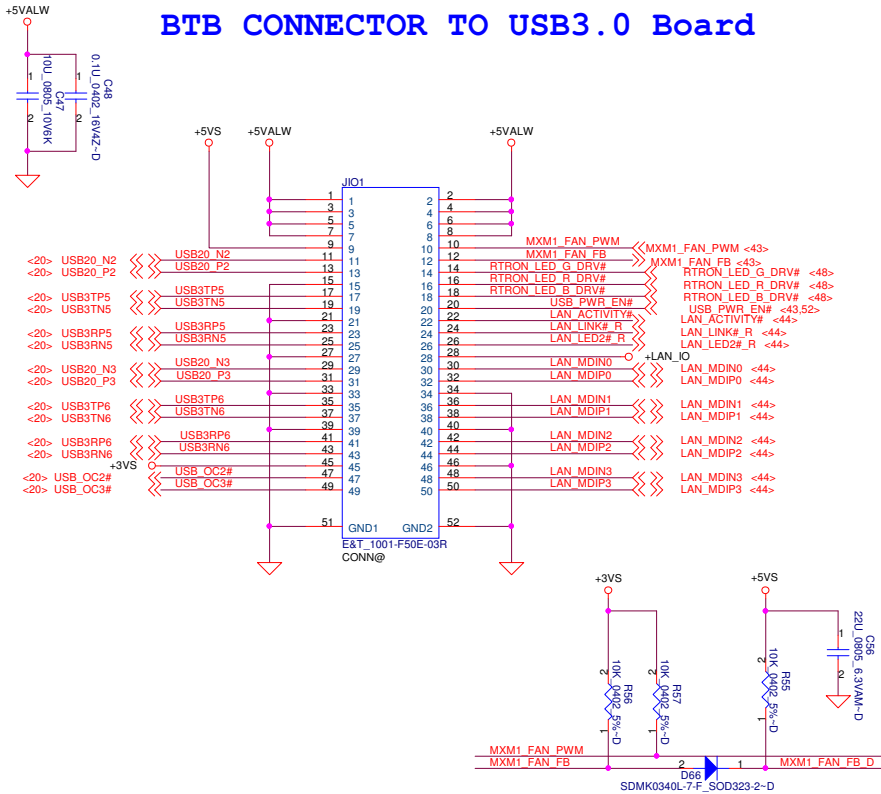
Pin 9:
PARADE PS8250B:
Reserve RN41
PERICOM P13EQX6741ST:
Reserve RN41
ASMEDIA ASM1466:
Mount RN41 to pull down



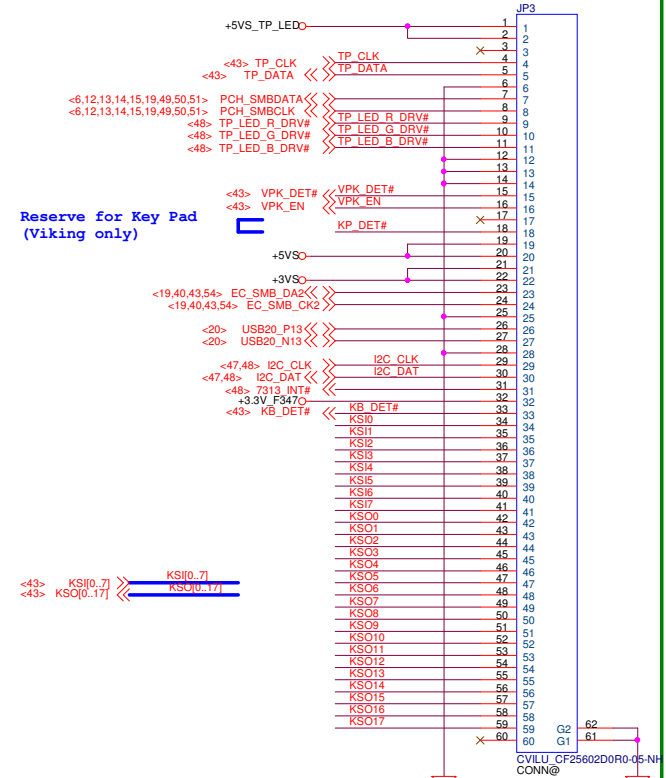


Security Classification	Compal Secret Data			<div> <div>  </div> </div>	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	<div> <div>  </div> </div>
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Date Friday, June 22, 2012	Sheet 48 of 61
				Document Number LA-9331P	Rev 0.1

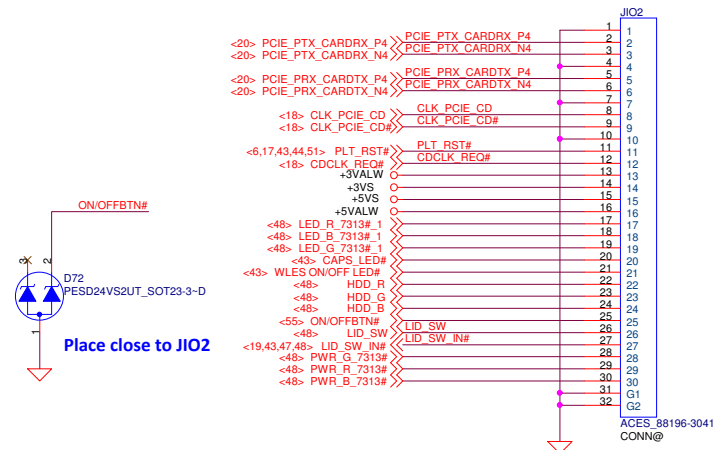
BTB CONNECTOR TO USB3.0 Board



60 pin FFC connector To MB

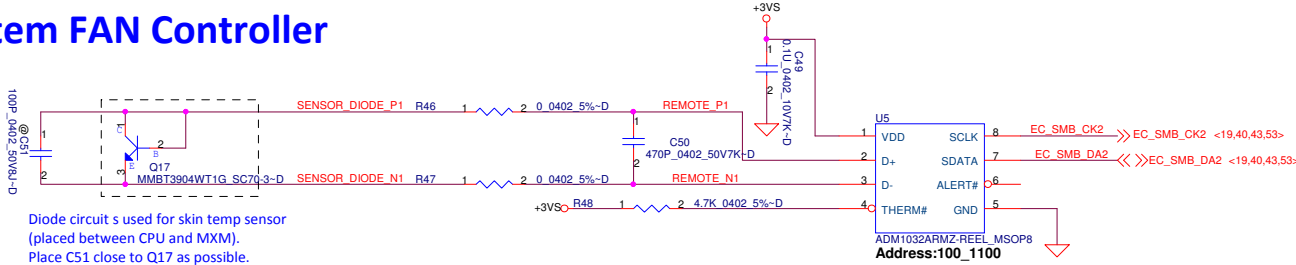


30pin Connector to CardReader

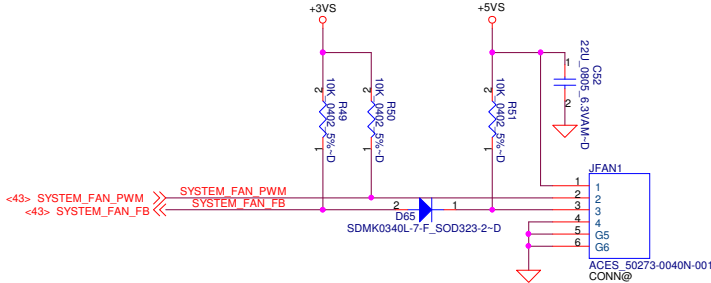


Security Classification		Compal Secret Data		Title <div>IO BTB CONN</div>		
Issued Date	2012/06/22	Deciphered Date	2013/06/21			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RGT DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				REAL Estate	Document Number <div>LA-933IP</div>	Rev 0.1
				Custom		
				Date:		

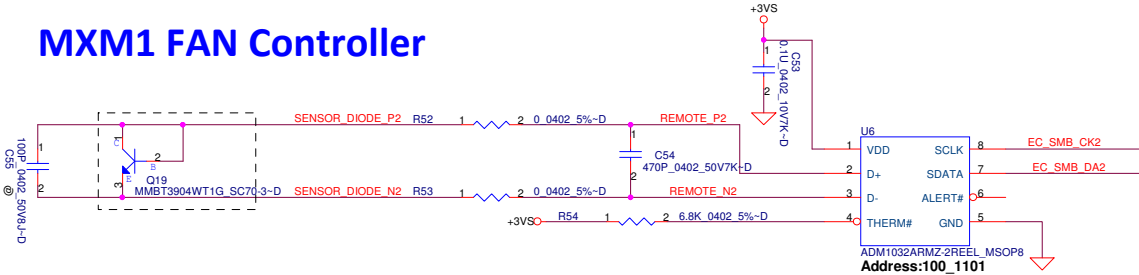
System FAN Controller



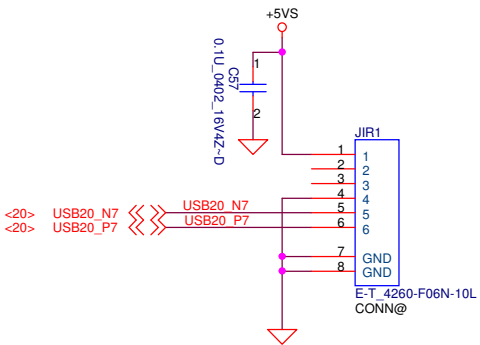
Diode circuit s used for skin temp sensor
(placed between CPU and MXM).
Place C51 close to Q17 as possible.



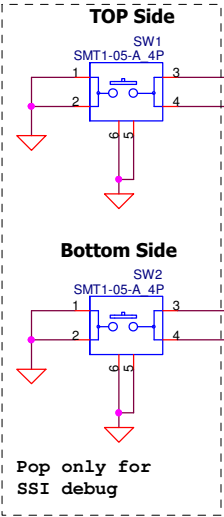
MXM1 FAN Controller



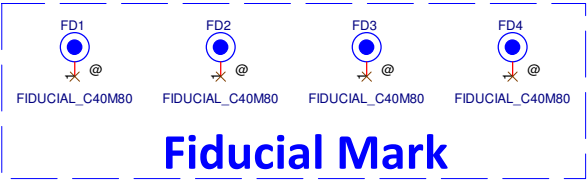
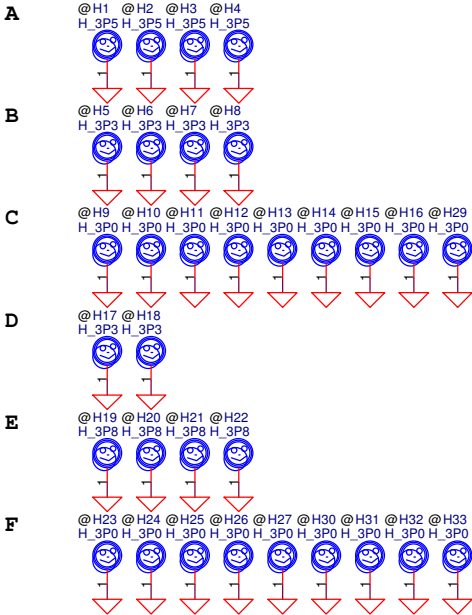
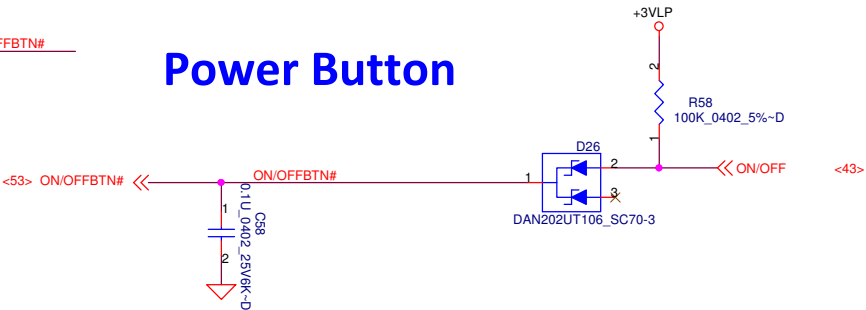
IR SENSOR connector



ON/OFF switch



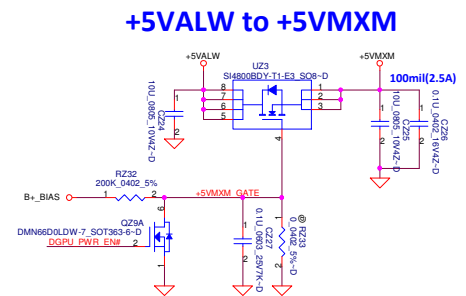
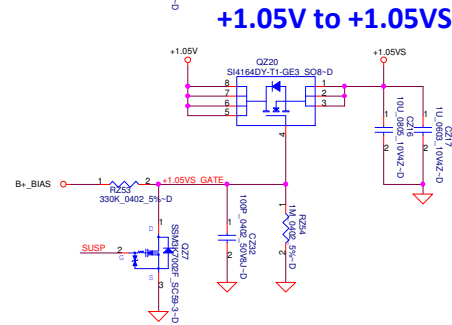
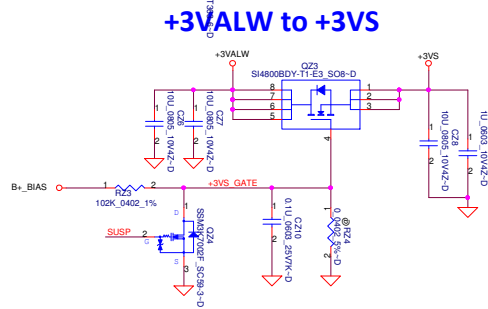
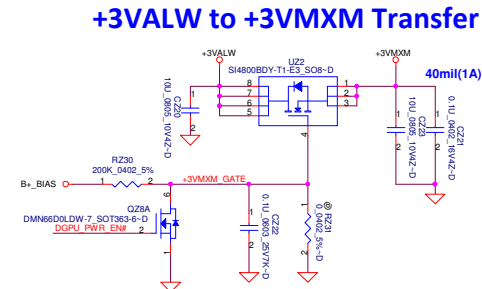
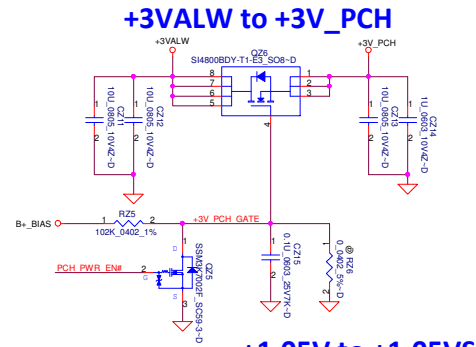
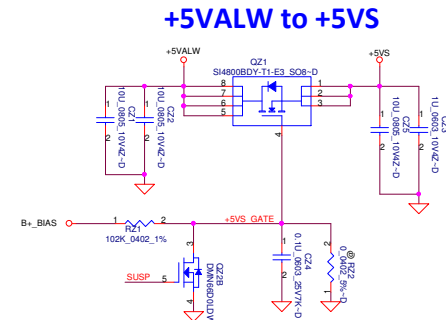
Power Button



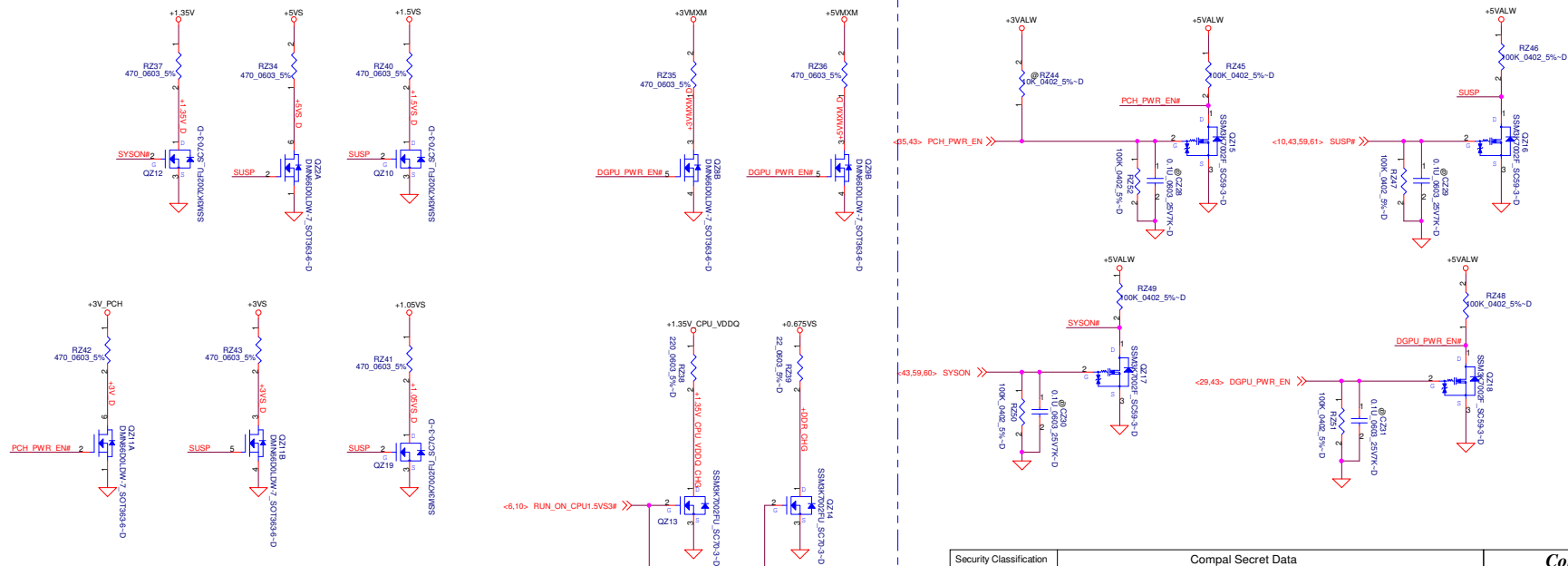
Fiducial Mark

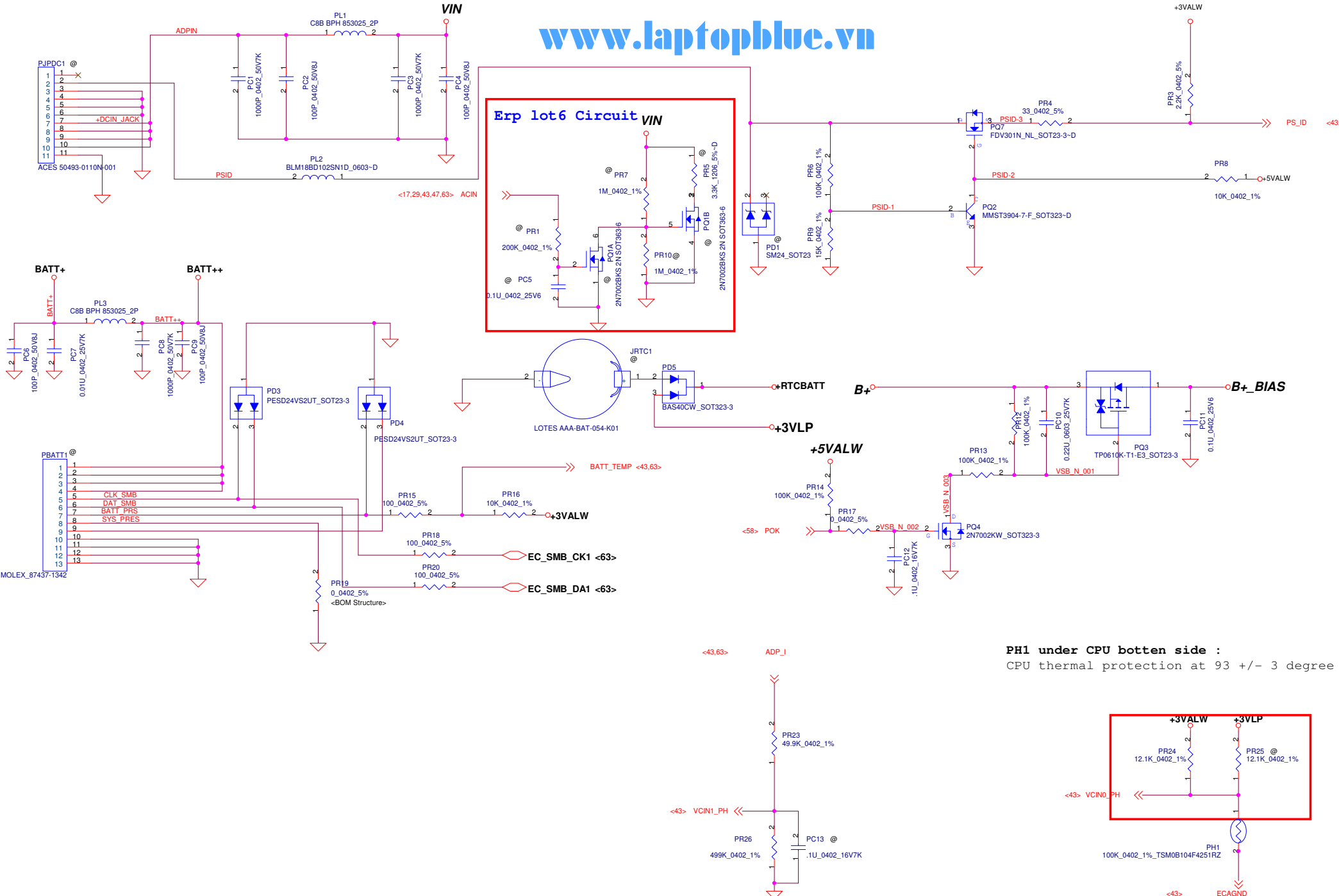
Security Classification		Compal Secret Data		Title	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	KB & Power Button & IR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-9331P	0.1
Date: Friday, June 22, 2012				Sheet	61

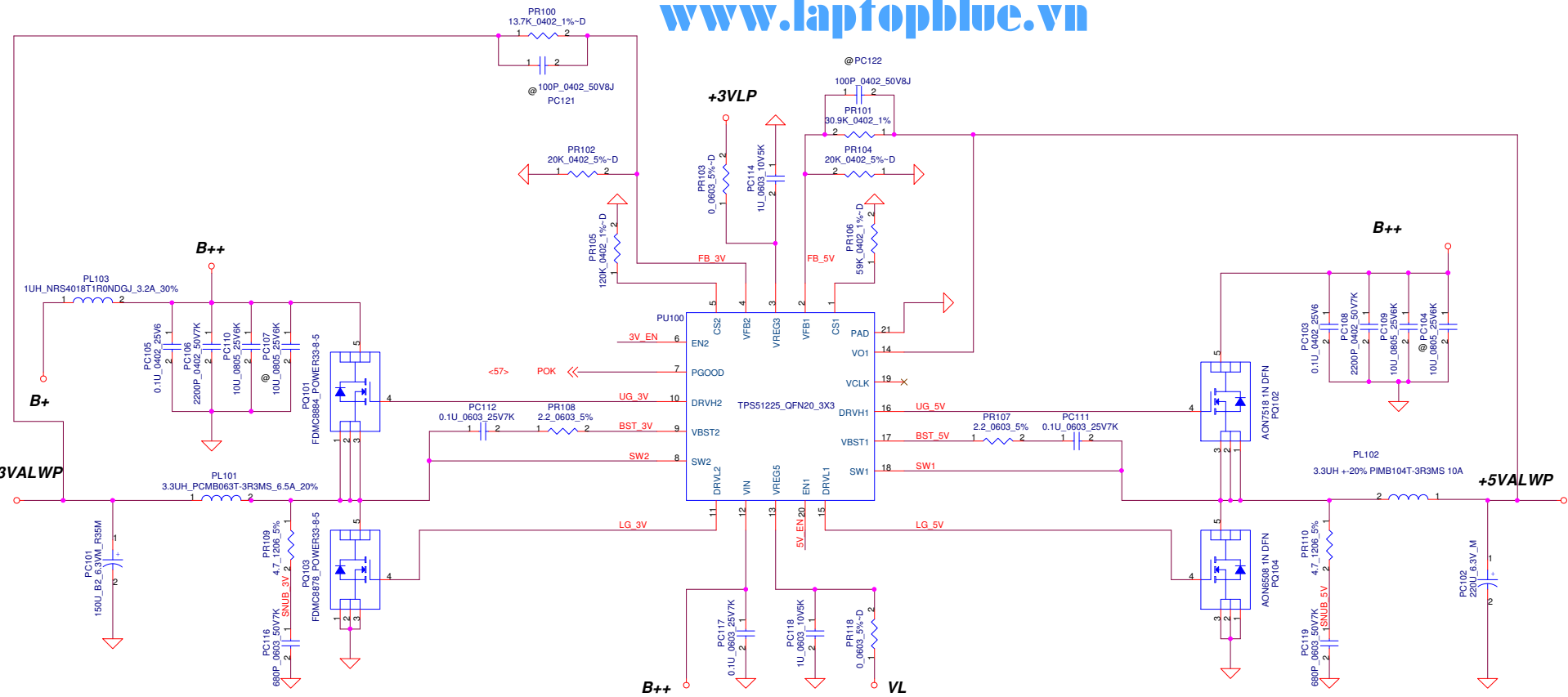
DC to DC



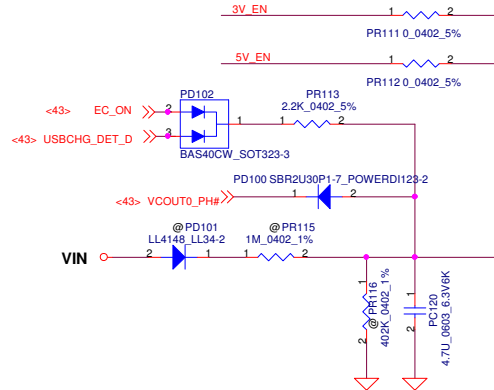
Discharge Circuit





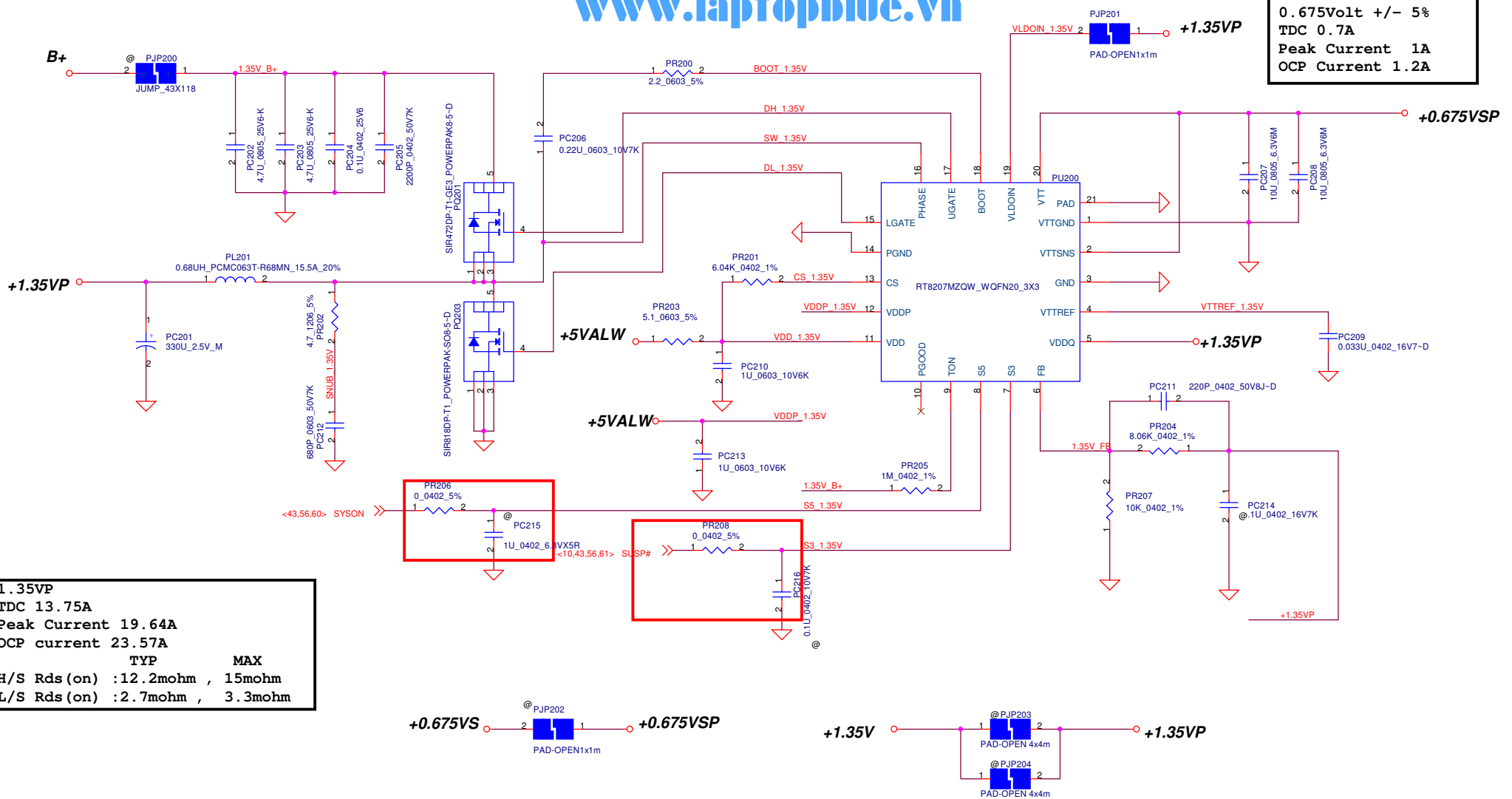


3VALWP
TDC 6.08A
Peak Current 8.11A
OCP current 9.73A
TYP MAX
H/S Rds(on) :22mohm , 30mohm
L/S Rds(on) :12.1mohm ,17mohm



5VALWP
TDC 10.64A
Peak Current 14.19A
OCP current 17.03A
TYP MAX
H/S Rds(on) 11.2mohm , 14mohm
L/S Rds(on) :3.7mohm , 5mohm

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2012/06/22	Deciphered Date	2013/06/21	Title	PWR-3VALWP/SVALWP
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	LA-9331P
				Date	Friday, June 22, 2012
				Sheet	55 of 61



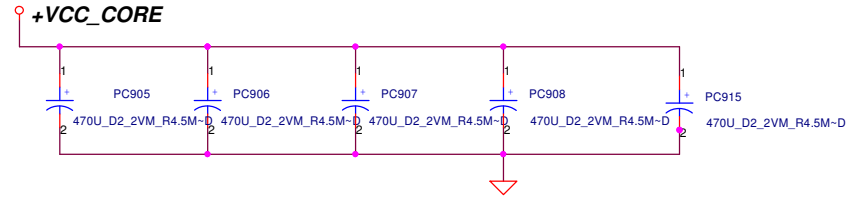
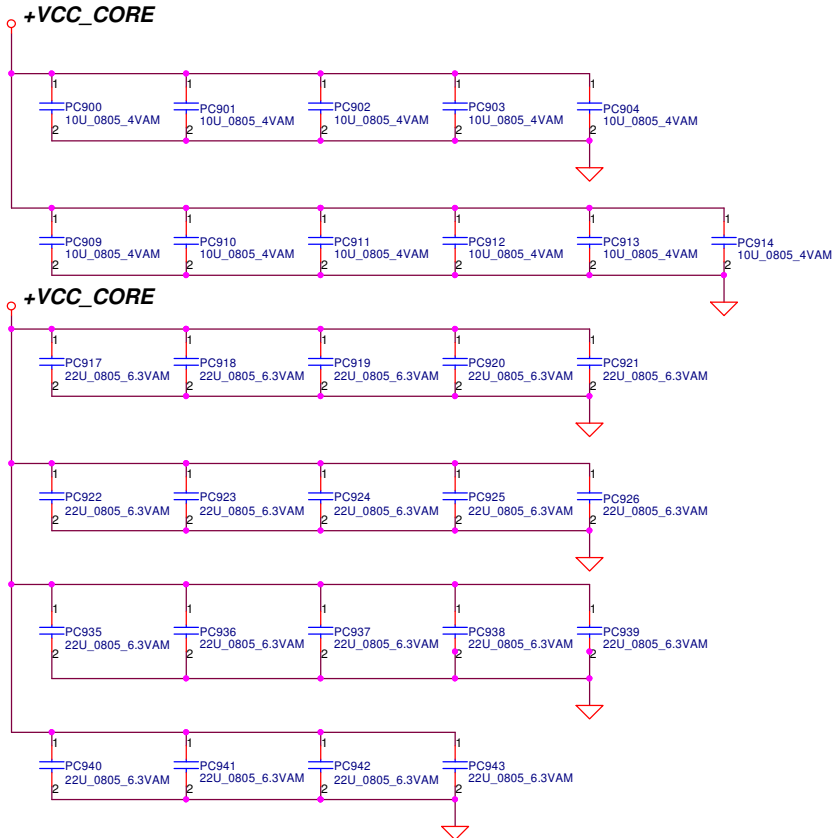
1.35VP
TDC 13.75A
Peak Current 19.64A
OCP current 23.57A

	TYP	MAX
H/S Rds (on)	:12.2mohm	15mohm
L/S Rds (on)	:2.7mohm	3.3mohm

0.675VSP +/- 5%
TDC 0.7A
Peak Current 1A
OCP Current 1.2A



Title			
PWR-1.5VSP			
Size	Document Number	Rev	
	LA-9331P	0.1	
Date:	Friday, June 22, 2012	Sheet	58 of 61



DELL CONFIDENTIAL/PROPRIETARY

Compal Electronics, Inc.

PROCESSOR DECOUPLING

Size	Document Number	Rev
	LA-9331P	0.1
Date:	Friday, June 22, 2012	Sheet 61 of 61

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

www.s-manuals.com