Compal Confidential

PAWGC/D Schematics Document

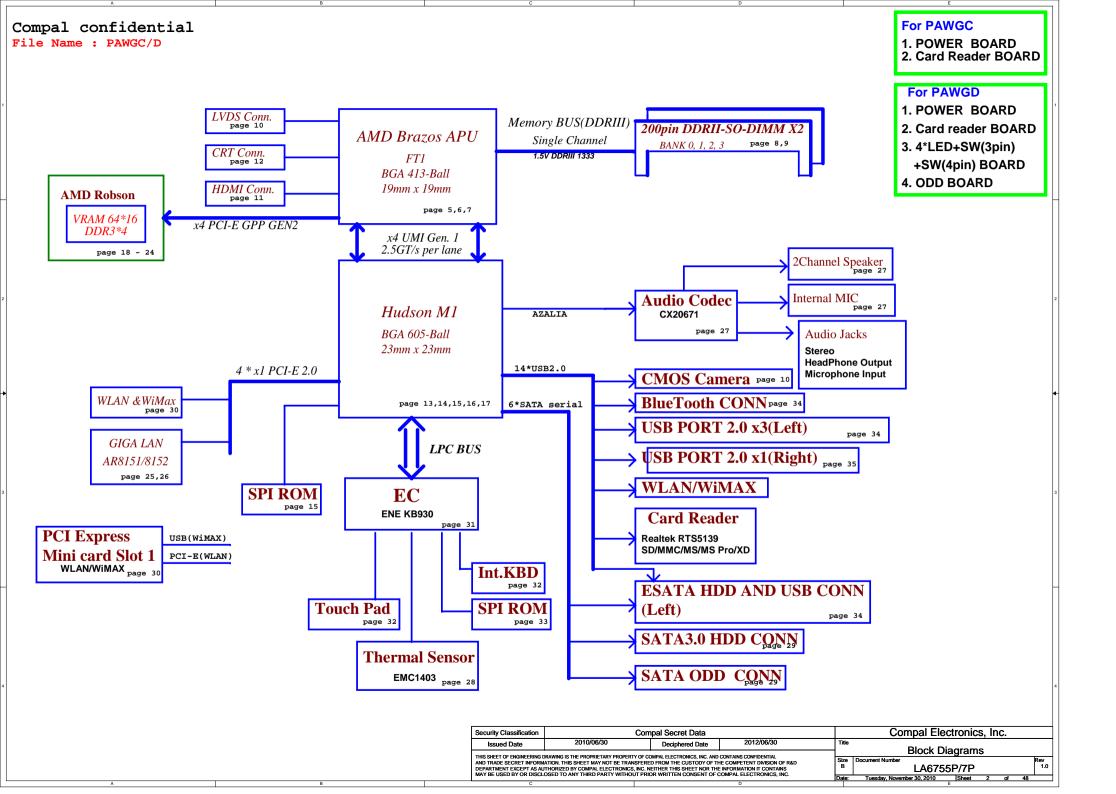
AMD APU Ontario-FT1 + FCH Hudson-M1 + GPU Roberson XT

2010-11-10

REV:1.0

TIT RD Only

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Voltage Rails

		1	
Description	S1	S3	S5
Adapter power supply (19V)	N/A	N/A	N/A
AC or battery power rail for power circuit.	N/A	N/A	N/A
Core voltage for CPU (0.7-1.2V)	ON	OFF	OFF
1.0V switched power rail	ON	OFF	OFF
1.5V power rail for CPU VDDIO and DDRIII	ON	ON	OFF
0.75VS switched power rail for DDR terminator	ON	OFF	OFF
1.0V switched power rail for NB VDDC & VGA	ON	OFF	OFF
1.1VS switched power rail	ON	OFF	OFF
1.8V switched power rail	ON	OFF	OFF
3.3V always on power rail	ON	ON	ON*
3.3V power rail for LAN	ON	ON(WOL)	OFF
3.3V switched power rail	ON	OFF	OFF
5V always on power rail	ON	ON	ON*
5V switched power rail	ON	OFF	OFF
VSB always on power rail	ON	ON	ON*
RTC power	ON	ON	ON
1.1V always on power rail	ON	ON	ON*
	Adapter power supply (19V) AC or battery power rail for power circuit. Core voltage for CPU (0.7-1.2V) 1.0V switched power rail 1.5V power rail for CPU VDDIO and DDRIII 0.75VS switched power rail for DDR terminator 1.0V switched power rail for NB VDDC & VGA 1.1VS switched power rail 1.8V switched power rail 3.3V always on power rail 3.3V power rail for LAN 3.3V switched power rail 5V always on power rail 5V switched power rail 5V switched power rail TVSB always on power rail RTC power	Adapter power supply (19V) AC or battery power rail for power circuit. N/A Core voltage for CPU (0.7-1.2V) 1.0V switched power rail 0N 1.5V power rail for CPU VDDIO and DDRIII 0N 0.75VS switched power rail for DDR terminator 1.0V switched power rail for NB VDDC & VGA 1.1VS switched power rail 0N 1.8V switched power rail 0N 3.3V always on power rail 3.3V power rail for LAN 0N 3.3V switched power rail 0N 5V switched power rail 0N 5V switched power rail 0N 5V switched power rail 0N TVSB always on power rail 0N VSB always on power rail 0N RTC power	Adapter power supply (19V) AC or battery power rail for power circuit. N/A Core voltage for CPU (0.7-1.2V) ON OFF 1.0V switched power rail ON OFF 1.5V power rail for CPU VDDIO and DDRIII ON ON OFF 1.0V switched power rail for DDR terminator ON OFF 1.0V switched power rail for NB VDDC & VGA ON OFF 1.1VS switched power rail ON OFF 3.3V always on power rail ON OFF 3.3V power rail for LAN ON ON ON ON SVSwitched power rail ON ON ON ON OFF SV always on power rail ON OFF SV always on power rail ON OFF SV switched power rail ON OFF ON ON ON ON ON ON ON O

Note: ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

EC SM Bus1 address

EC SM Bus2 address

Device	Address	HEX	Device	Address	HEX
Smart Battery	0001-011xb	15H	EMC1412-2 (dGPU)	1111-100xb	F8H
			EMC1403-2(DDR,WLAN)	1001-101xb	9AH
			SB-TSI	1001-100xb	98H

SM Bus Controller 0 (FCH_SMB1 ~ FCH_SMB4, SMB_ALERT#)

H_THERMTRIP# (FCH_ALERT#)

Device Address

APU SIC/SID (FCH_SMB3)

SM Bus Controller 1

(FCH_SMB0)

Device	Address	HEX
DDR DIMM1 (FCH_SMB0)	1001-000xb	90
DDR DIMM2 (FCH_SMB0)	1001-001xb	92
WLAN (FCH_SMB0)		

	dson-M1
USB PC	ort List
USB1.1	
Port0	NC
Port1	NC
USB2.0	
Port0	Left USB1
Port1	USB Camera
Port2	Left(Combo
Port3	Left USB2
Port4	Right USB
Port5	ВТ
Port6	CardReader
Port7	Mini-PCIE
Port8	NC
Port9	NC
Port10	NC
Port11	NC
Port12	NC
Port13	NC

	Brazo	ວຣ
PCI	E Port	List
	PCIE0	
Ь.	PCIE1	GPU
APU	PCIE2	PCIE x4
	PCIE3	
	PCIE0	LAN
	PCIE1	WLAN
FCH	PCIE2	NC
	PCIE3	NC

FCH Hudson-M1 SATA Port List					
SATA0	HDD				
SATA1	ODD				
SATA2	eSATA				
SATA3	NC				
SATA4	NC				
SATA5	NC				

BOM Structure

UMA@ : UMA only
PX@ : DIS muxluss

- PX3@ : PX3.0 only - BACO@ : Baco only

GIGA@ : AR8151 8152@ : AR8152 CMOS@ : USB camera HDMI@ : HDMI function

nonHDMI@ : w/o HDMI function

ESATA@: eSATA function
BT@ : BT function
ME@ : ME components

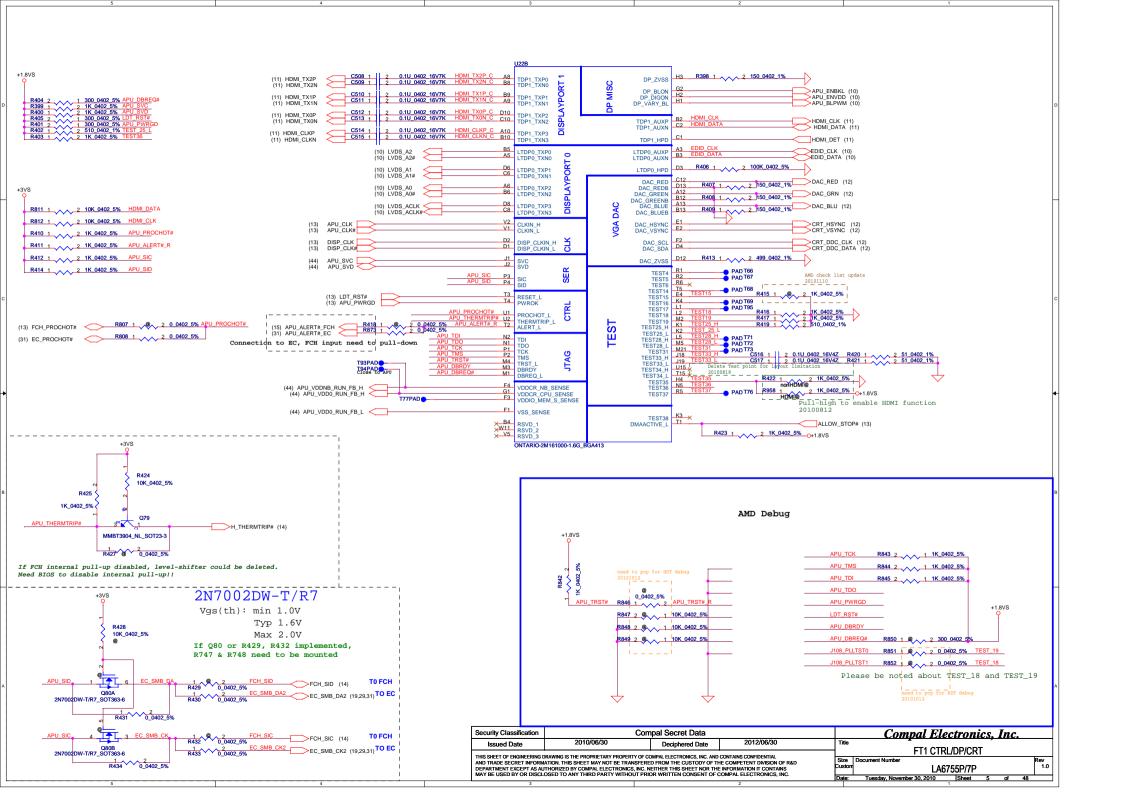
X76@, H1G@, H512@, S1G@, S512@ : VRAM

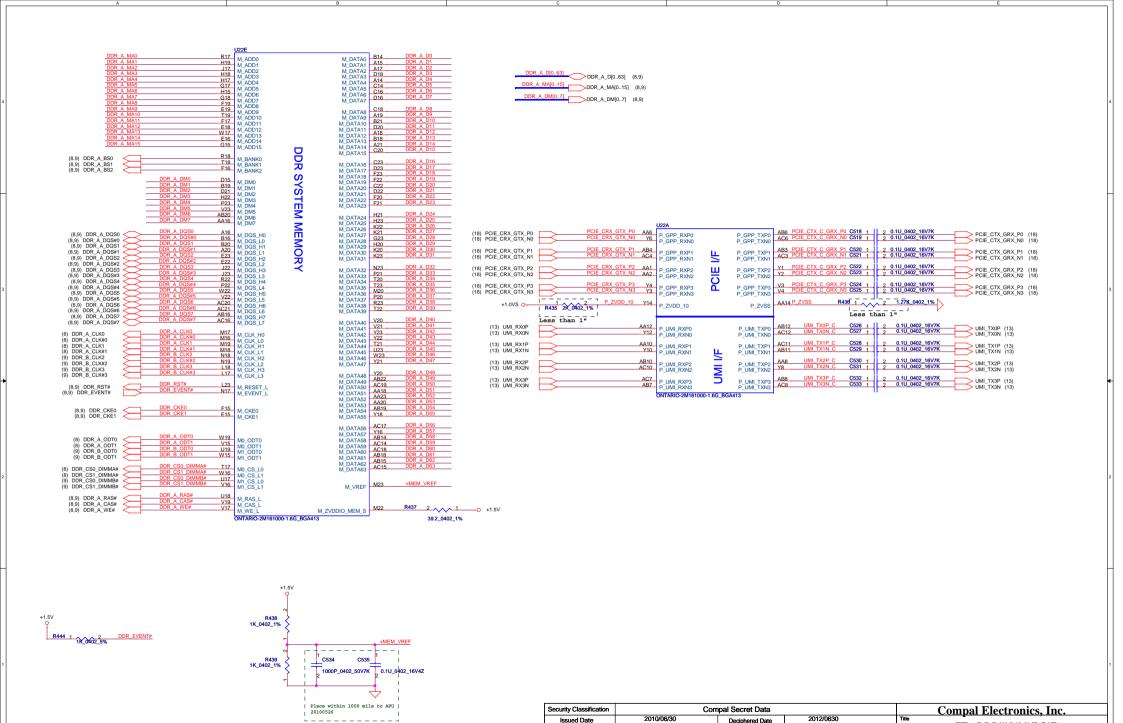
45@ : 45 Level

HWM@ : hardware monitor function
nonHWM@: w/o hardware monitor function

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Without BACO option: Power-Up/Down Sequence PE_GPIO0 : Low -> Reset dGPU ; High -> Normal operation PE_GPIO1 : Low -> dGPU Power OFF : High -> dGPU Power ON 1. All the ASIC supplies must fully reach their respective nominal voltages within 20 ms of the start of the ramp-up sequence, though a shorter ramp-up duration is preferred. **BACO option:** 2. VDDR3 should ramp-up before or simultaneously with VDDC. PE_GPIO0 : High ->Normal operation (dGPU is not reset on BACO mode)
PE_GPIO1 : Low -> dGPU Power OFF ; High -> dGPU Power ON (always High) 3. For LVDS, DPx VDD10 should ramp-up before DPx VDD18 and the PCle Reference clock should begin before DPx VDD18. For power-down, DPx VDD18 should ramp-down before DPx VDD10. dGPU Power Pins Voltage PX 3.0 BACO Mode Max current 4. The external pull-ups on the DDC/AUX signals (if applicable) should ramp-up before or after both VDDC and PCIE PVDD. PCIE VDDR. TSVDD. VDDR4. VDD CT. OFF 1.8V ON 1679mA DPE PVDD, DP[F:E] VDD18, DP[D:A]_PVDD, VDD CT have ramped up. DP[D:A] VDD18, AVDD, VDD1DI, A2VDDQ, VDD2DI, 5.VDDC and VDD_CT should not ramp-up simultaneously. (e.g., VDDC should reach 90% before VDD_CT starts to DPLL PVDD, MPV18, and SPV18 ramp-up (or vice versa).) DP[F:E] VDD10, DP[D:A] VDD10, DPLL VDDC, and 1.0V OFF ON 575mA PCIE VDDC 1.0V OFF ON 2A Note: Do not drive any IOs before VDDR3 is ramped up. VDDR3(3.3VGS) VDDR3, and A2VDD 3.3V OFF ON 190mA BIF VDDC (current consumption = 55mA@1.0V, in ON Same as PCIE_VDDC Same as OFF 70mA PCIE VDDC(1.0V) BACO mode) VDDR1 OFF 1.5V OFF 2.8A **VDDR1(1.5VGS)** VDDC/VDDCI 1.12V OFF OFF 12.9A VDDC/VDDCI(1.12V) **VDD CT(1.8V) BACO Switch iGPU** dGPU **PERSTb** BIF_VDDC PE GPI01 **REFCLK** +3.3VGS **Straps Reset** +1.5VGS **Straps Valid** +1.0V +1.0VGS **Global ASIC Reset** +B +VGA CORE +1.8VGS +1.8V 5 T4+16clock PWRGOOD Compal Secret Data Compal Electronics, Inc. Security Classification 2010/06/30 2012/07/14 Title Issued Date Deciphered Date dGPU Block Diagram THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL Size B AND TRADE SCREET INFORMATION. THIS SHEET MAY NOT BE TRANSFERED FROM THE CUSTODY OF THE COMPETENT DIVISION OF RAD DEPARTMENT EXCEPT AS AUTHORIZED BY COMPACE LECKTRONICS, INC. NETHIER THIS SHEET NOR THE INFORMATION IT CONTINUE MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. 1.0 LA6755P/7P Sheet Tuesday, November 30, 2010





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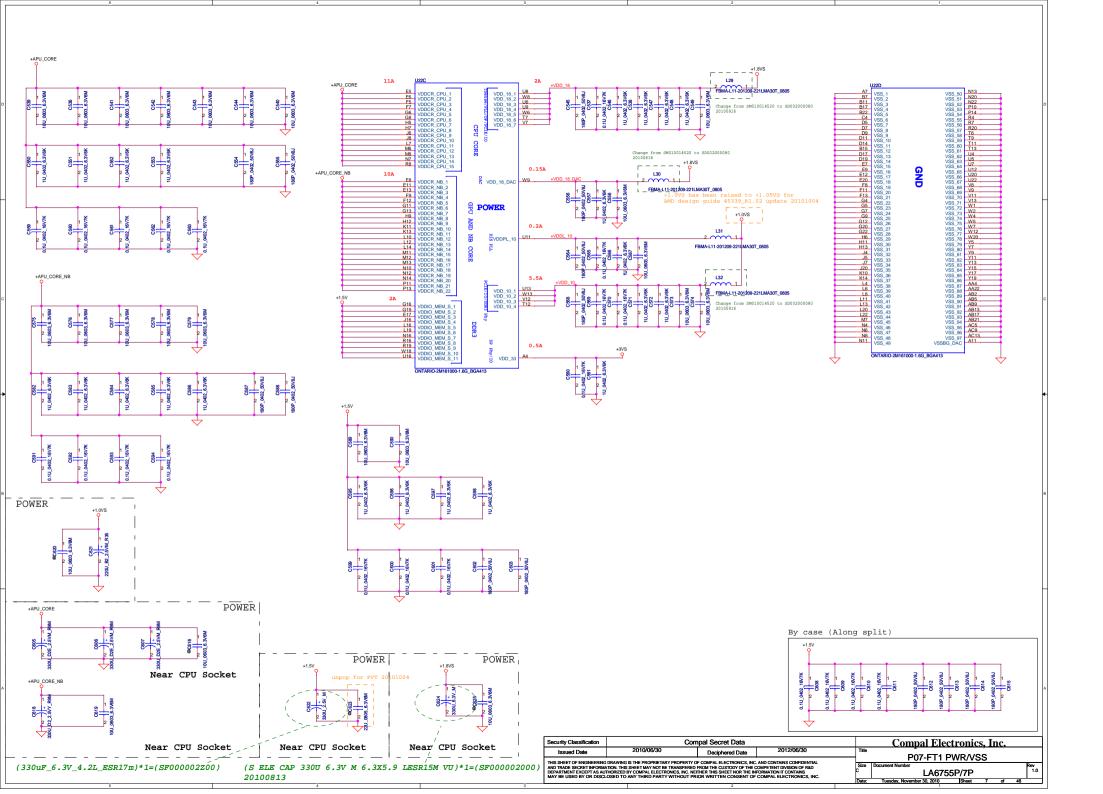
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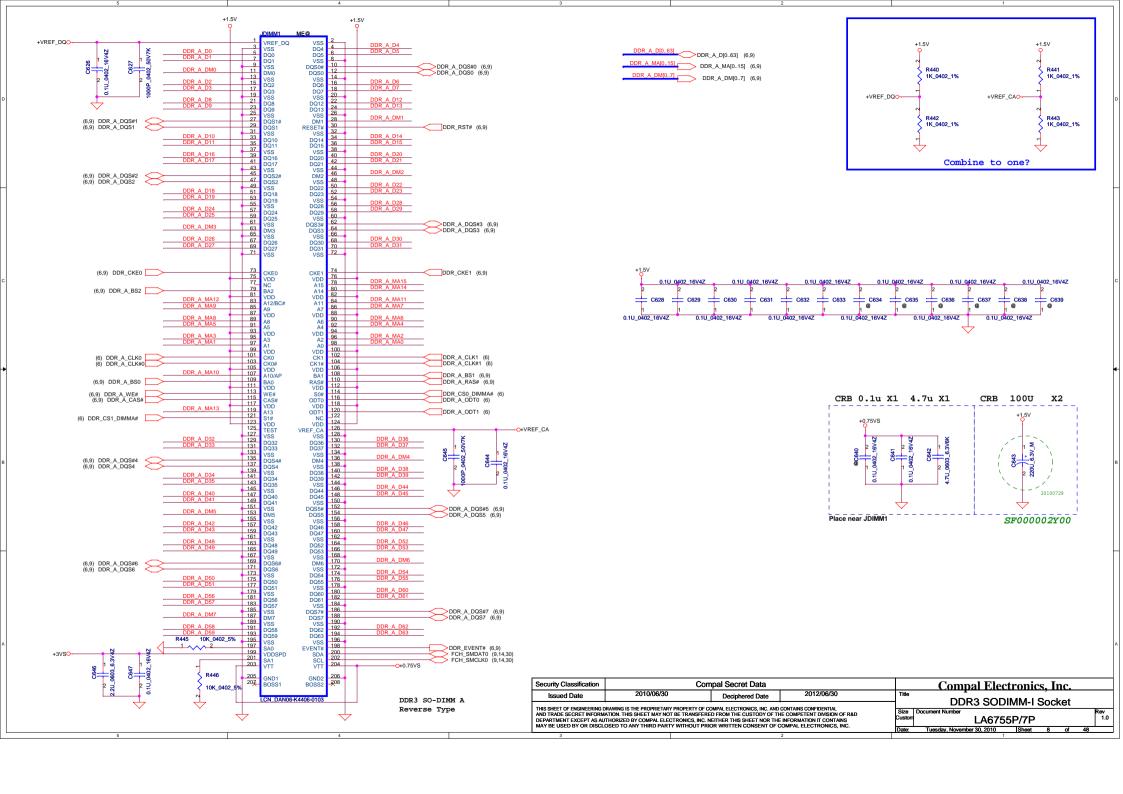
FT1 DDRIII/UMI/PCIE

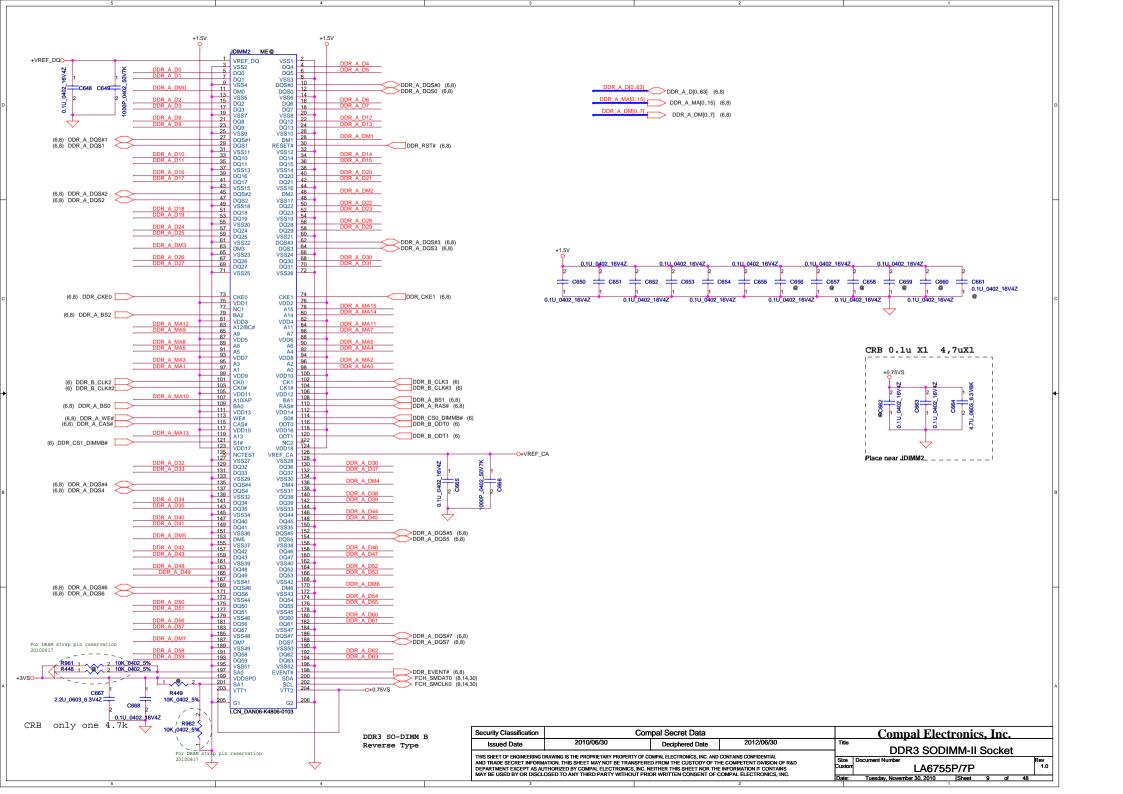
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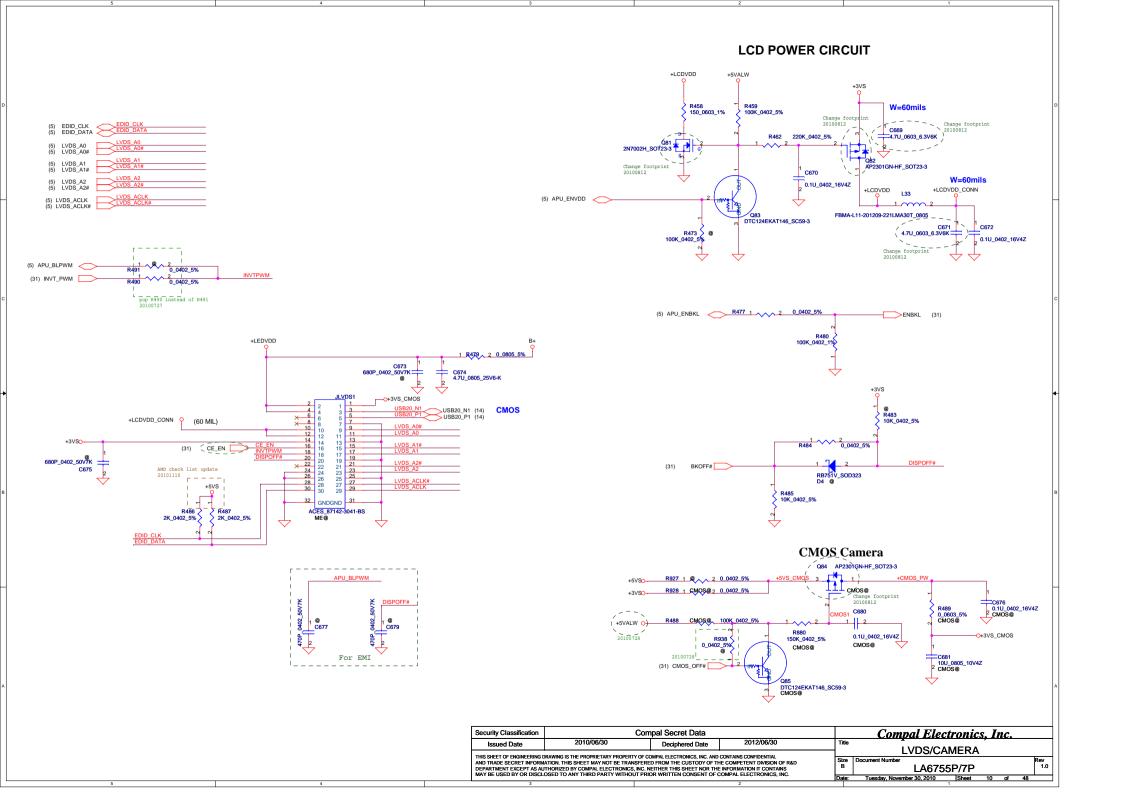
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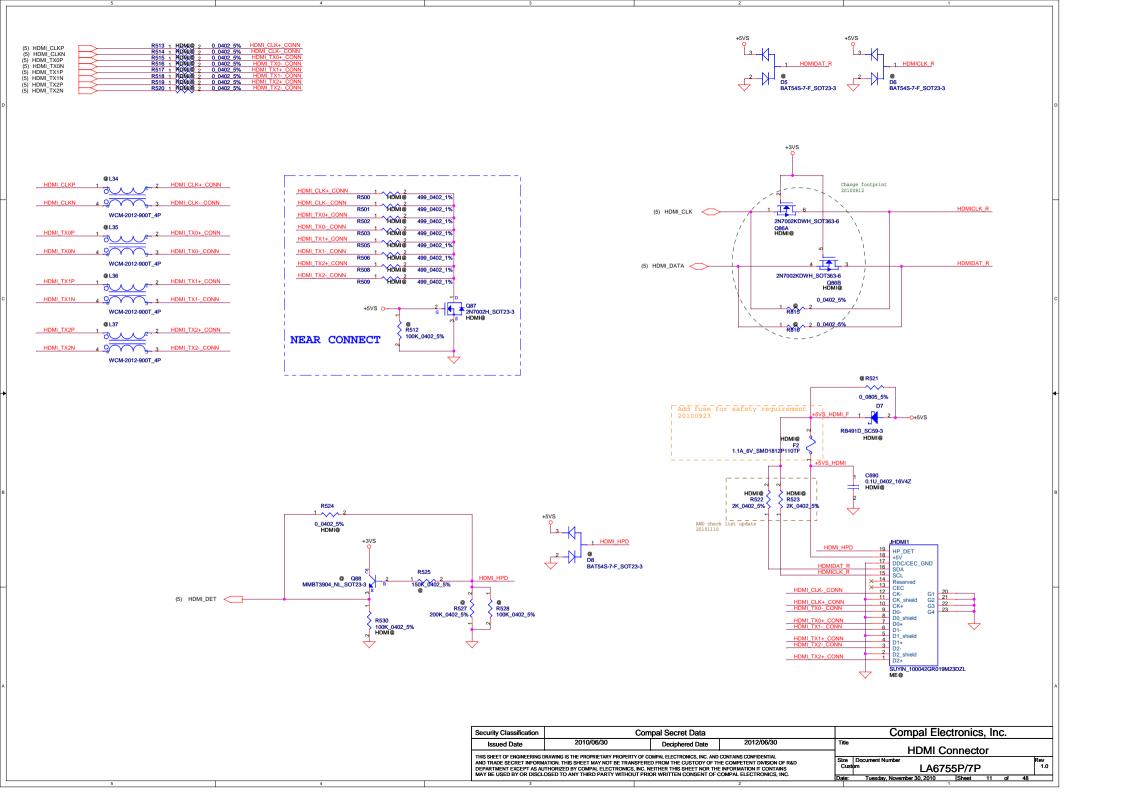
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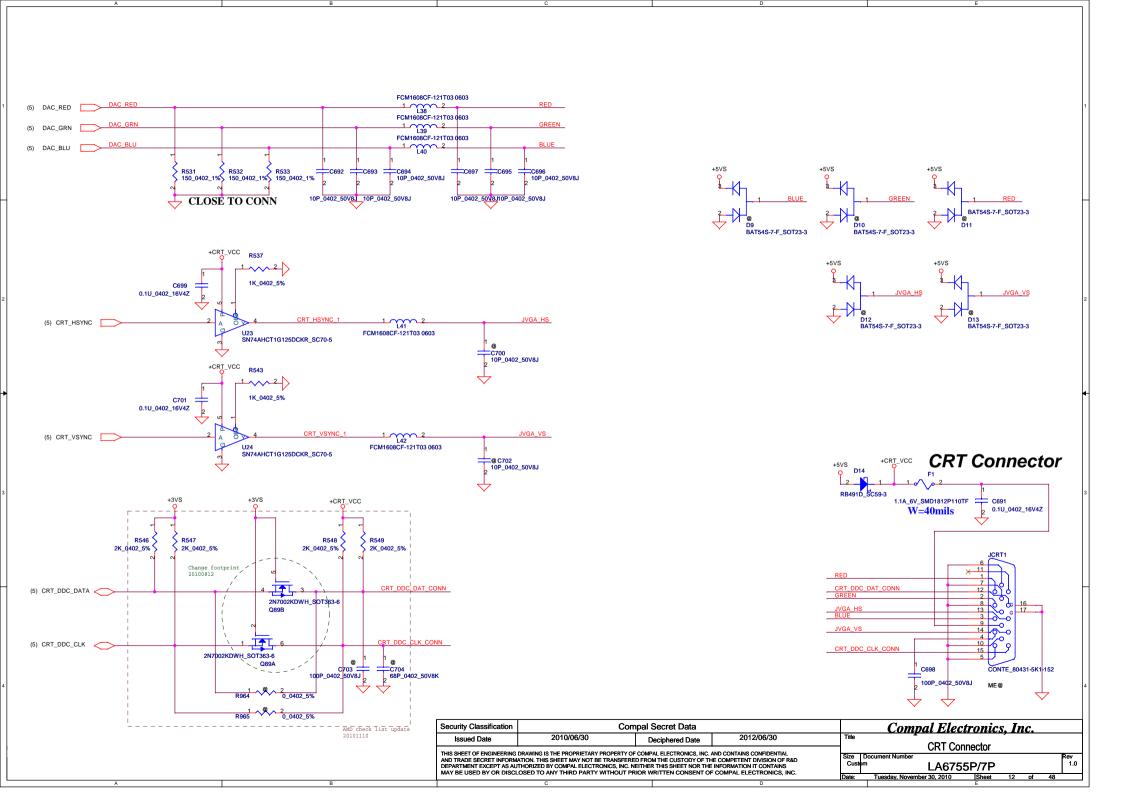


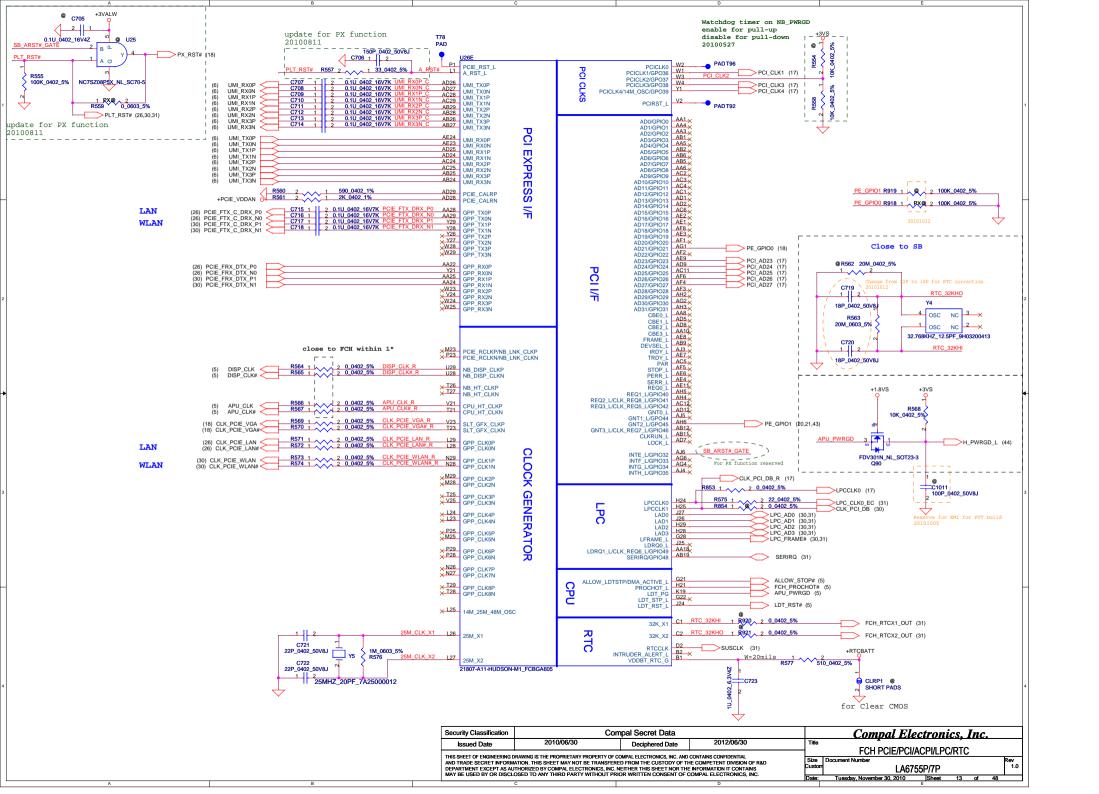


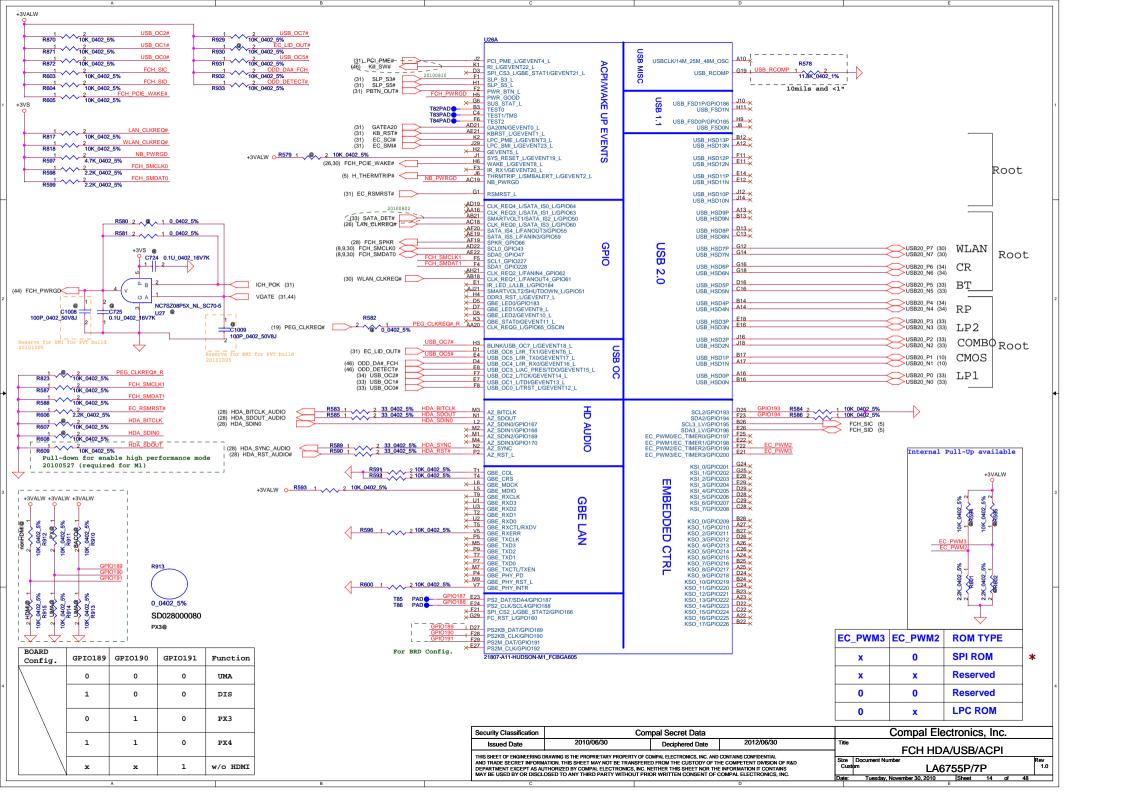


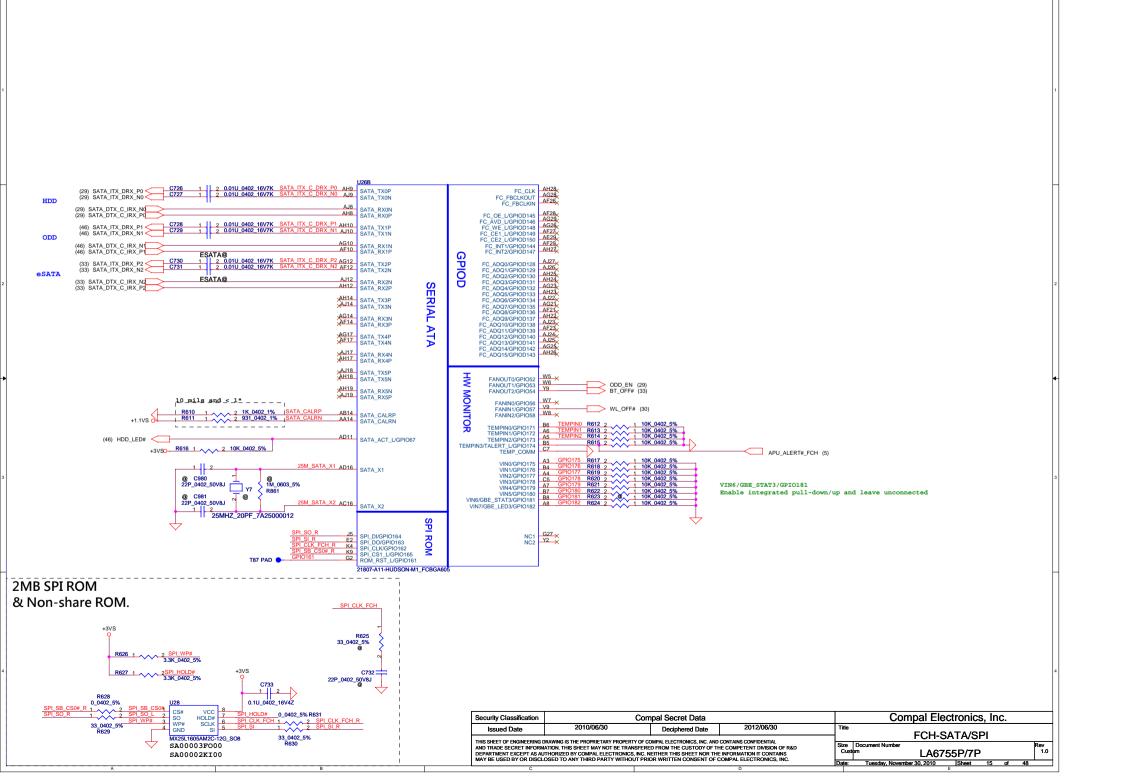


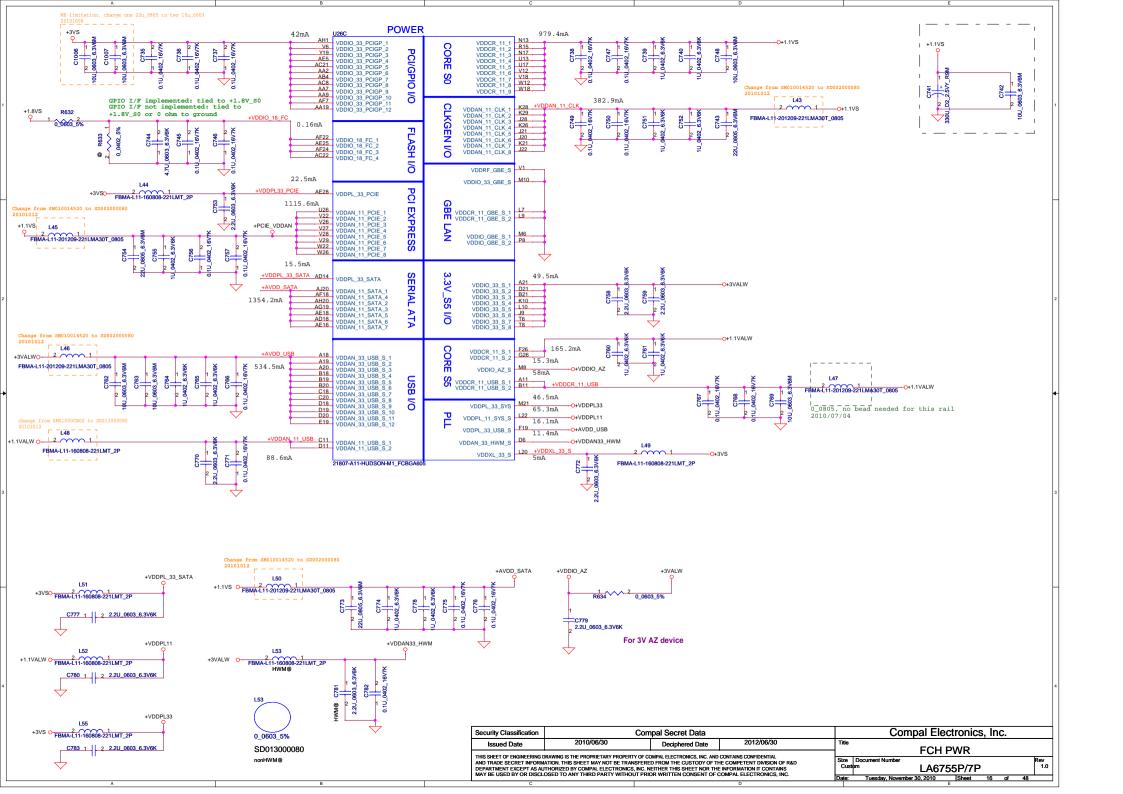










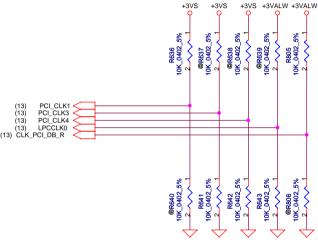


U26D VSSIO_SATA_1 A28 A2 E5 Y16 AB16 VSS_1 VSS_2 VSS_3 VSS_4 VSS_5 VSS_6 VSS_6 VSS_7 VSS_8 VSS_9 R13 VSSIO SATA 2 VSSIO_SATA_3 VSSIO_SATA_4 AC14 AE12 VSSIO_SATA_5 AE14 VSSIO_SATA_6 AF9 AF9 VSSIO_SATA_7 VSSIO_SATA_8 AF13 VSSIO SATA 9 AF16 R13 VSS_10 VSS_11 VSS_12 R13 R17 T10 VSSIO_SATA_10 AG8 VSSIO_SATA_11 VSSIO_SATA_12 AH7 VSS_12 VSS_13 VSS_14 VSS_15 VSS_16 VSS_16 AH11 VSSIO_SATA_13 AH13 VSSIO_SATA_14 AH16 VSSIO_SATA_15 VSSIO_SATA_16 AJ7 VSS_17 V19 ___AJ11 VSSIO SATA 17 VSS_17 VSS_18 VSS_19 VSS_20 VSS_21 VSS_21 VSS_22 VSS_22 AJ13 VSSIO_SATA_18 AJ16 VSSIO SATA 19 GND VSSIO USB 1 B10 VSSIO USB 2 VSS 22 VSS_22 V4 AD6 VSS_24 AD4 VSS_25 AB7 VSS_26 AC9 VSS_27 VSS_28 W8 VSS_29 W10 K11 B9 VSSIO USB 3 VSSIO_USB_4 VSSIO_USB_5 D10 D12 VSSIO_USB_6 VSSIO_USB_7 D17 VSSIO LISB 8 VSSIO_USB_9 VSS_29 VSS_30 VSS_31 VSS_32 B29 F9 VSSIO_USB_10 F12 F14 VSSIO_USB_11 VSS_32 VSS_33 VSSIO_USB_12 VSSIO_USB_13 F16 VSS_34 Y18 C9 VSSIO_USB_14 VSS_34 VSS_35 VSS_36 VSS_37 VSS_37 VSS_38 G11 F18 VSSIO_USB_15 VSSIO_USB_16 D9 VSSIO USB 17 VSSIO USB 18 VSS_38 AA11_ VSS_39 G4 VSS_40 J4 VSS_41 J4 VSS_42 G9 VSS_43 M12 VSS_45 H725 VSS_46 H729 H14 VSSIO USB 19 H16 H16 VSSIO_USB_20 VSSIO_USB_21 J11 VSSIO_USB_22 VSSIO_USB_23 K12 K14 VSSIO_USB_25 VSSIO_USB_24 VSSIO USB 26 VSS_47 AH29 K18 VSSIO_USB_27 H19 VSSIO_USB_28 VSS_47 VSS_48 VSS_48 P6 VSS_49 VSS_50 N4 EFUSE VSS_51 L8 VSS_52 VSSAN HWM M19 VSSPL_SYS M20 VSSXL P21 VSSIO PCIECLK 1 VSSIO_PCIECLK_14 VSSIO_PCIECLK_14 VSSIO_PCIECLK_15 VSSIO_PCIECLK_16 AA21 P20 VSSIO PCIECLK 2 M22 M24 AA21 AA23 VSSIO_PCIECLK_3 VSSIO_PCIECLK_4 VSSIO_PCIECLK_5 VSSIO_PCIECLK_17 VSSIO_PCIECLK_18 M26 AB23 P22 AD23 VSSIO PCIECLK 6 VSSIO PCIECLK 19 P24 AA26 VSSIO_PCIECLK_7 VSSIO_PCIECLK_20 P26 T20 VSSIO_PCIECLK_21 VSSIO_PCIECLK_22 VSSIO_PCIECLK_22 VSSIO_PCIECLK_23 AC26 VSSIO_PCIECLK_8 VSSIO_PCIECLK_9 VSSIO PCIECLK 10 VSSIO_PCIECLK_23 VSSIO_PCIECLK_24 AE26 T24 VSSIO_PCIECLK_11 V20 J23 VSSIO_PCIECLK_12 VSSIO_PCIECLK_13 VSSIO_PCIECLK_25 VSSIO_PCIECLK_26 L21 VSSIO_PCIECLK_27 21807-A11-HUDSON-M1 FCBGA605

REQUIRED STRAPS

Check Internal PU/PD

	PCI_CLK1	PCI_CLK3	PCI_CLK4	LPC_CLK0	CLK_PCI_DB		
PULL HIGH	ALLOW PCIE GEN2 DEFAULT	USE DEBUG STRAP	Reserved	internal EC ENABLE	Internal CLKGEN Mode		
PULL LOW	FORCE PCIE GEN1	IGNORE DEBUG STRAP	CLKGEN Mode Internal	internal EC DISABLE	External CLKGEN Mode		
		DEFAULT	DEFAULT	DEFAULT			



DEBUG STRAPS

FCH M1 HAS 15K INTERNAL PU FOR PCI ADI27:231

	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23 Enable ROM Strap
PULL HIGH	USE internal PLL generated PLL CLK	ILA AUTORUN Disabled	FC PLL	Disable I2C ROM	Required Setting
PULL	BYPASS	DEFAULT	FC PLL	DEFAULT Getting Value	DEFAULT
LOW	PCI PLL	AUTORUN Enabled	bypassed	from I2C EPROM	Reserved

Check AD29, AD28 strap function check default

	R644 82.2K_0402_5% R646 82.2K_0402_5% R646 82.2K_0402_5% R647 R67 R67 R647 R67 R646 82.2K_0402_5% 2 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	А
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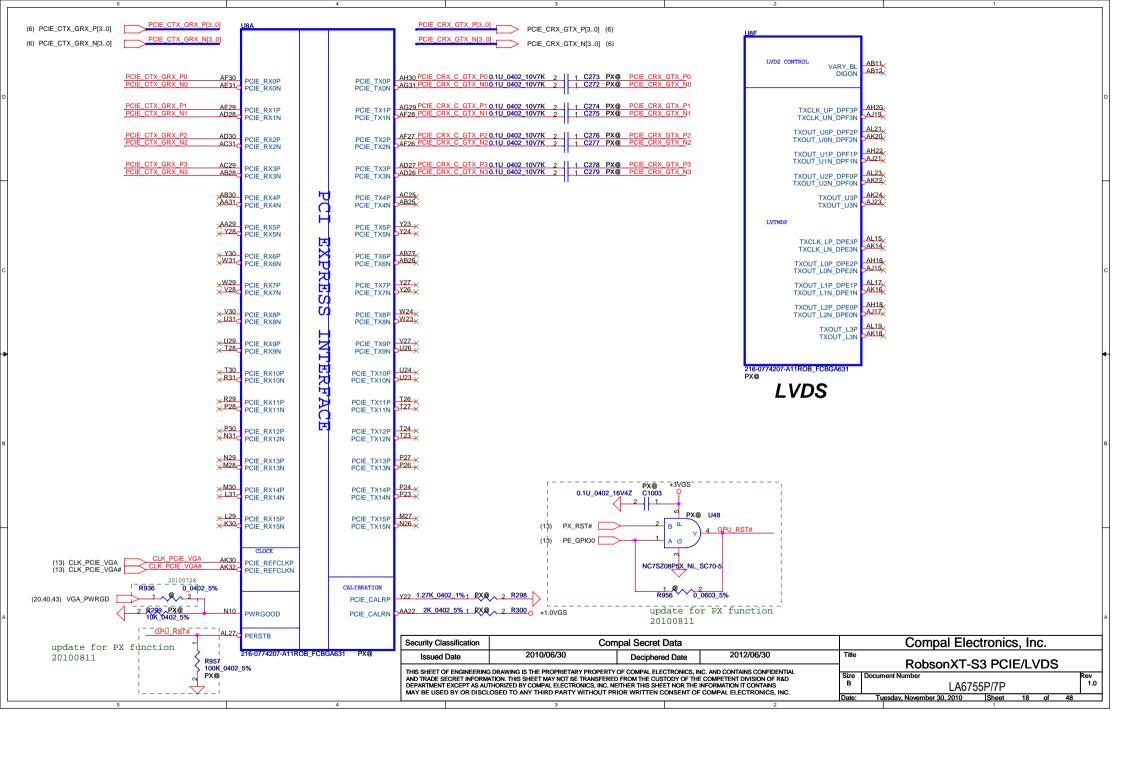
PCI_AD27 PCI_AD26

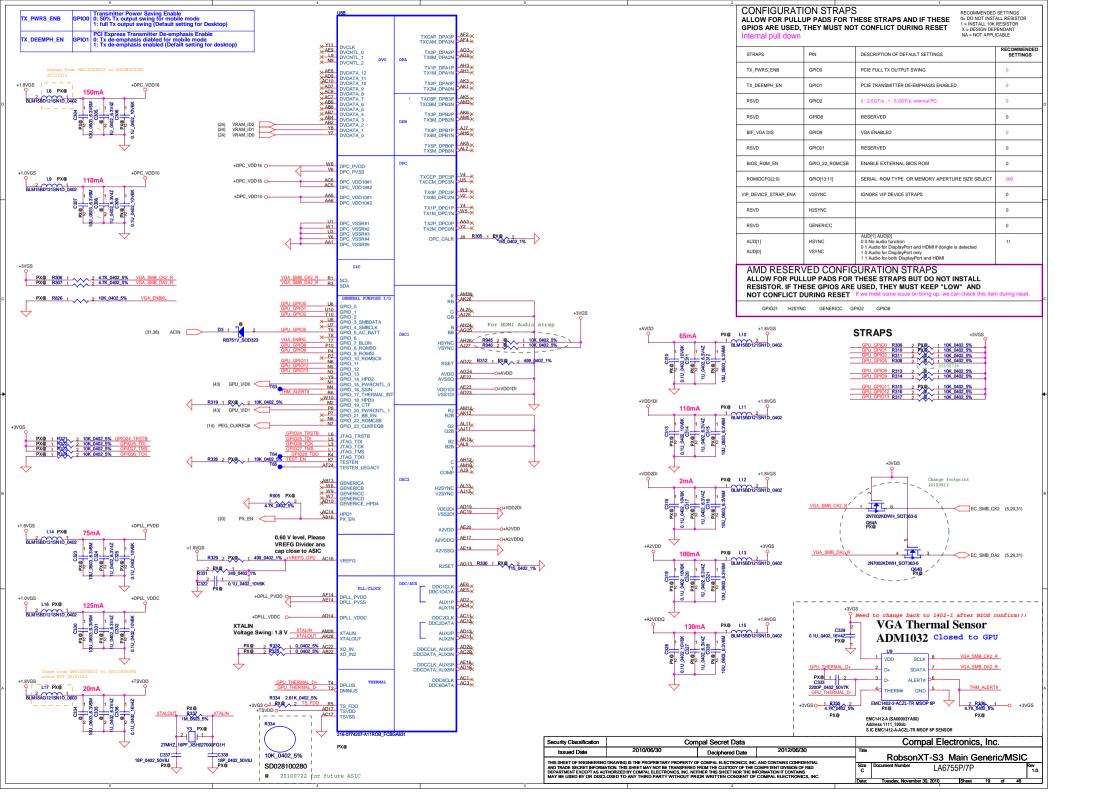
PCI_AD25 PCI_AD24

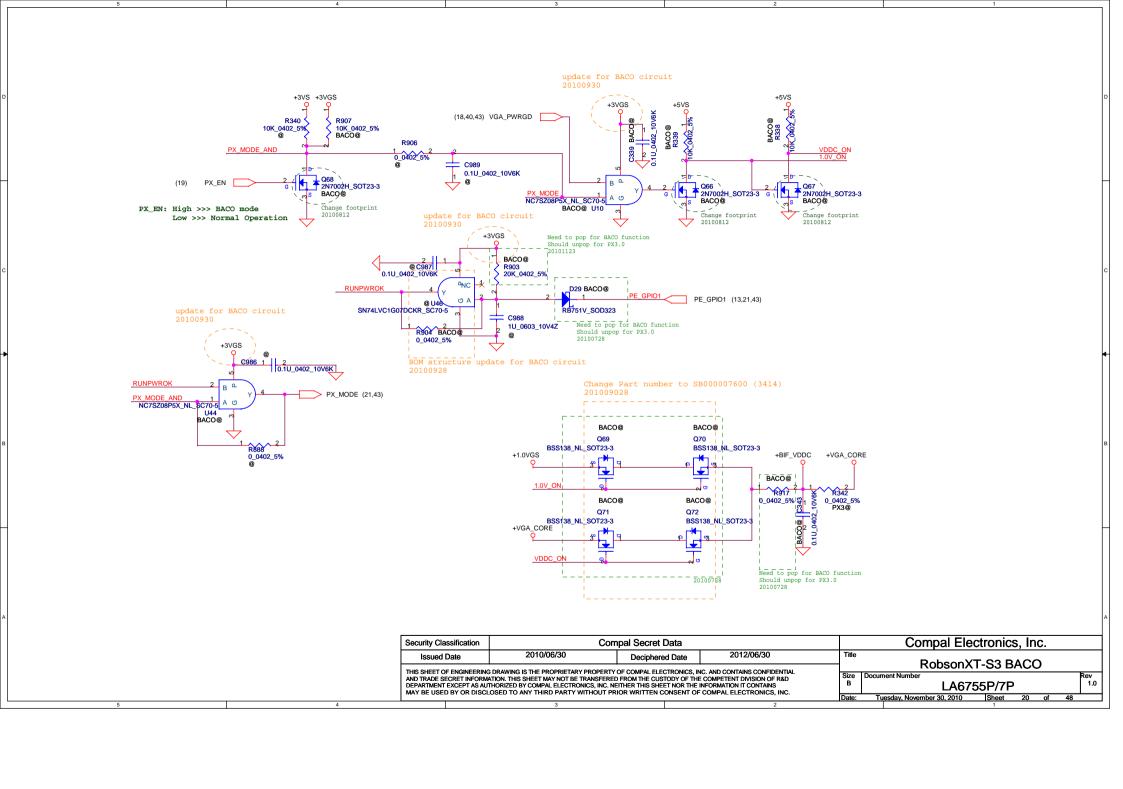
PCI_AD23

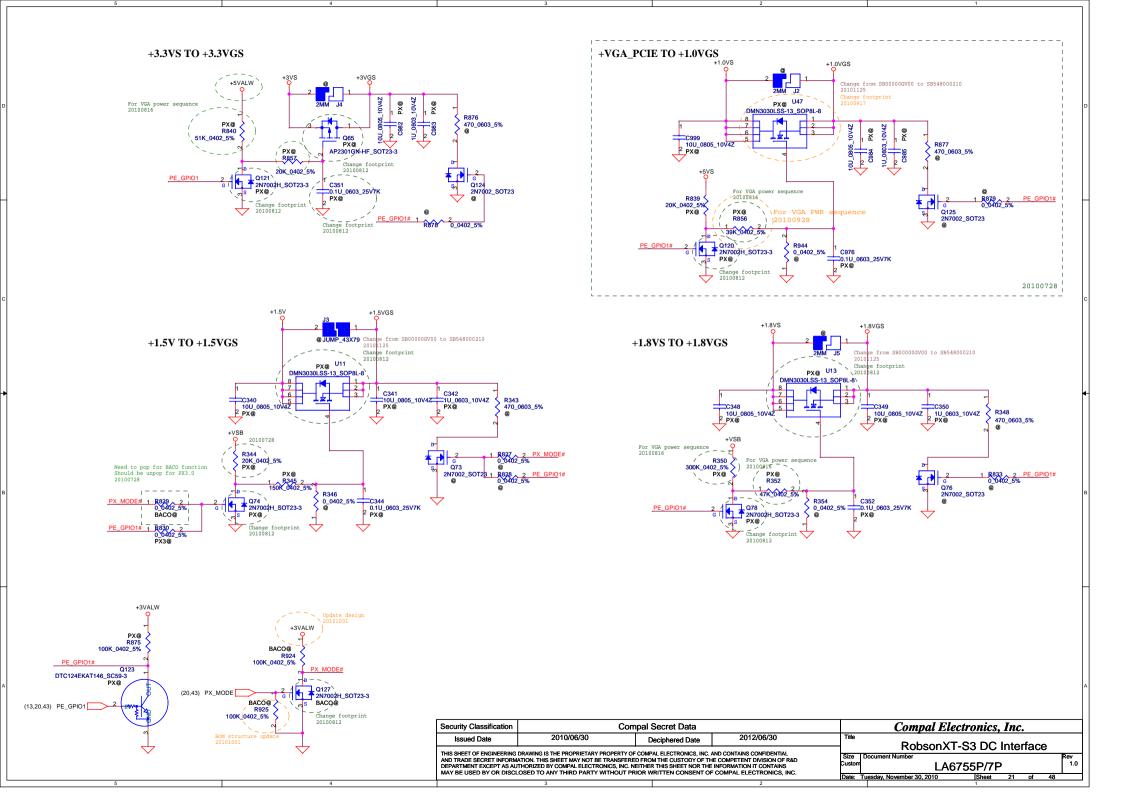
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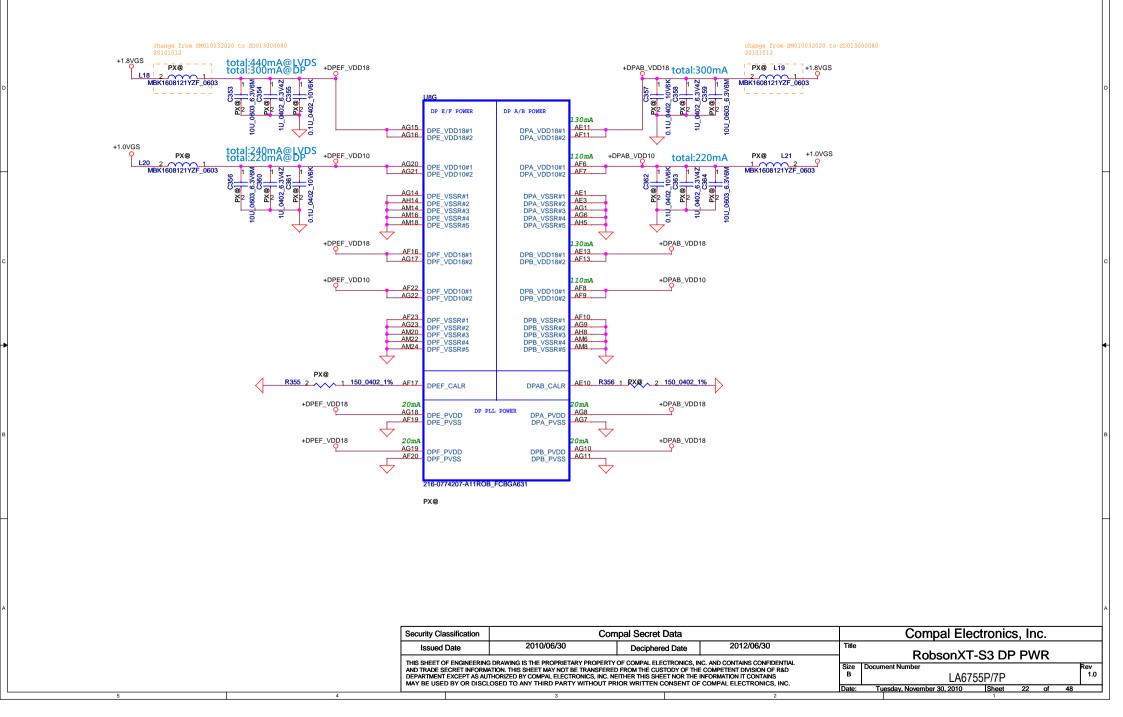
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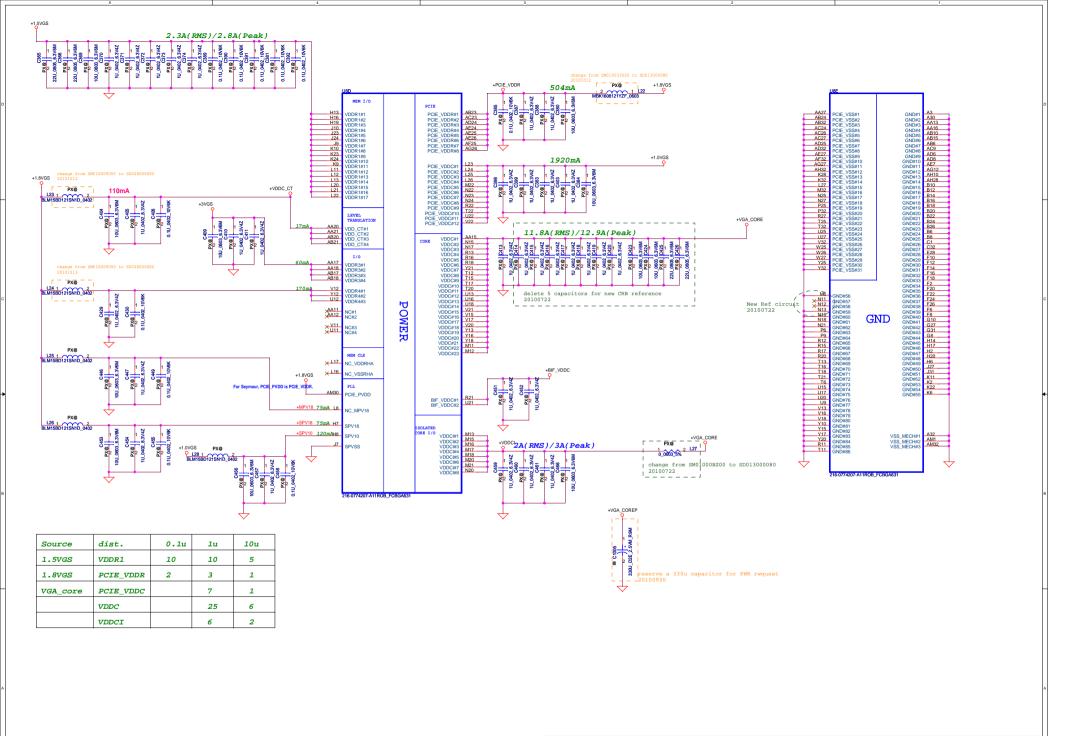




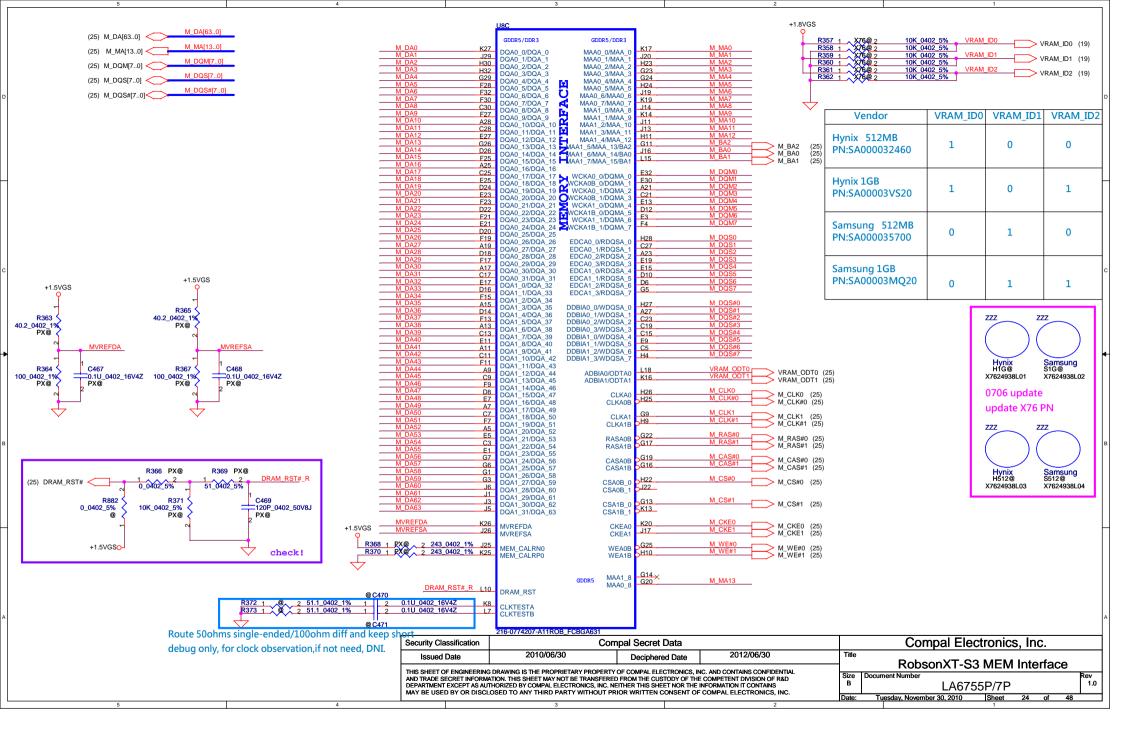


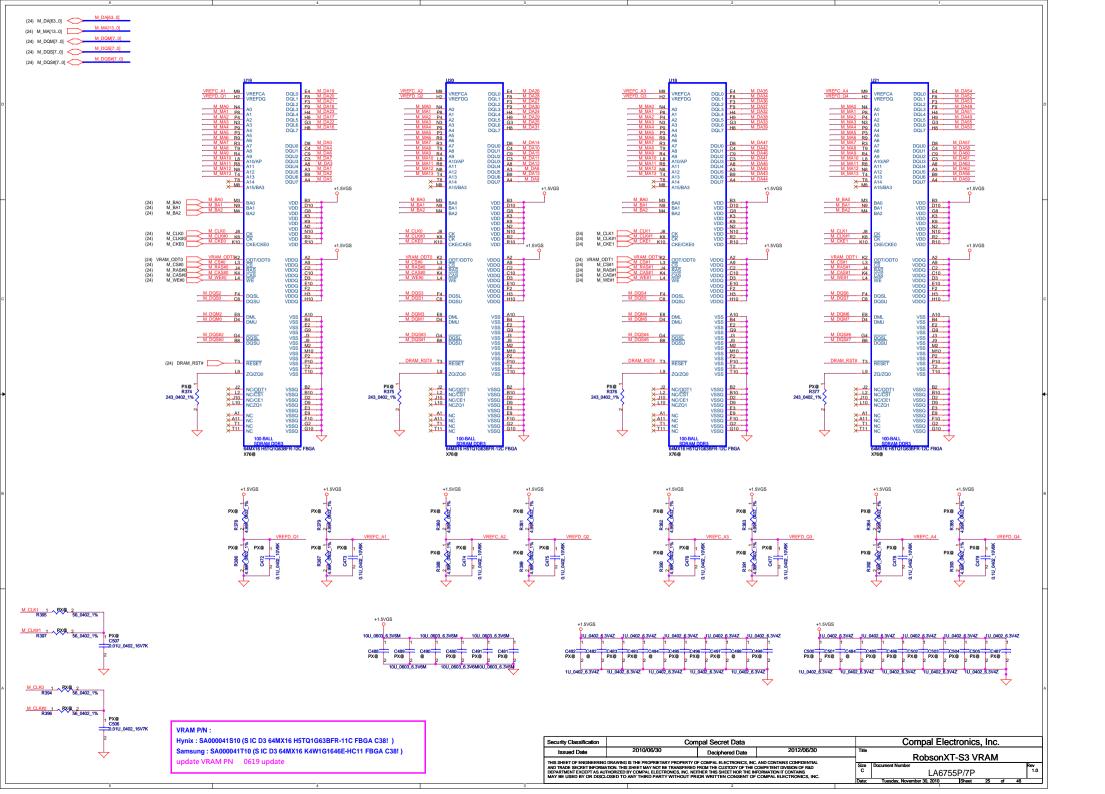


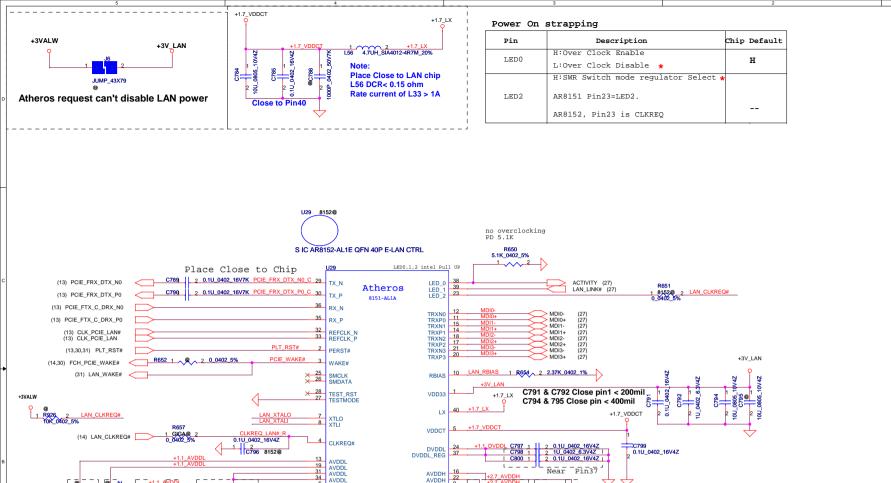




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AVDDH_REG

LAN_XTALI

LAN_XTALO

Near

Pin9

Near

Near

Pin22 Pin16

AVDDI

Near

Pin4

AR8151

VDDCT_REG

CLKREQn

Near

Pin13 Pin19 Pin31 Pin34

Near

Configure

C796

R657

Near

Pin6 🕂

Pin23

CLKREQn

LED[2]

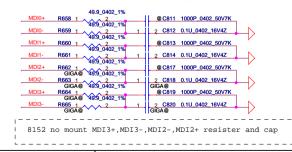
Configure

R651

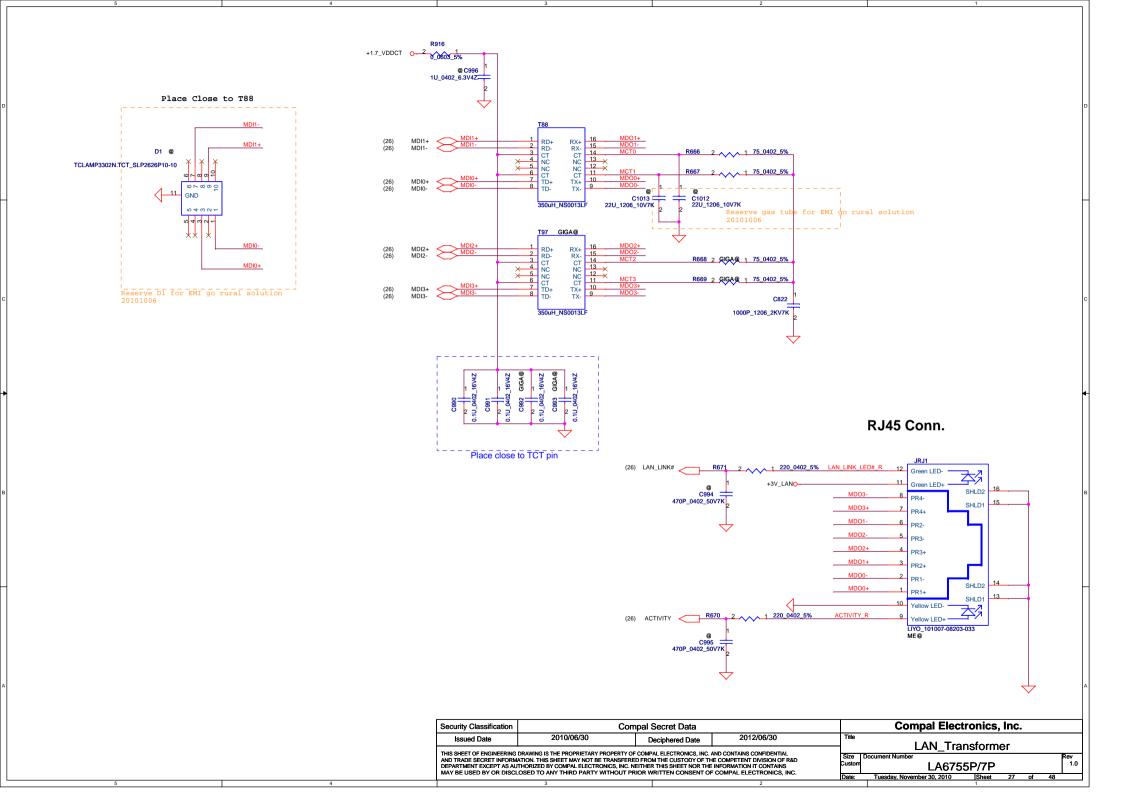
AVDDL_REG GND

AR8151-AL1A_QFN40_5X5 GIGA@



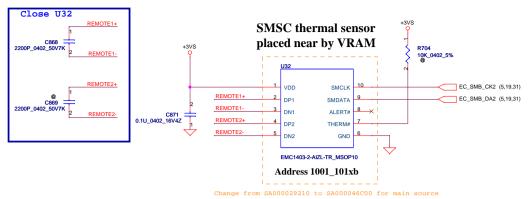


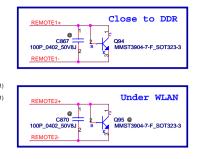
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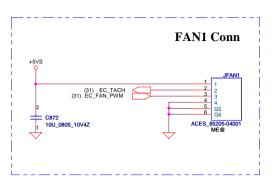
CX20671 High Definition Audio Codec SoC HDA_RST_AUDIO# With Integrated Class-D Stereo EMI Amplifier. An integrated 5 V to 3.3 V Low-dropout 1 R672 2 HDA_BITCLK_AUDIO 0_0402_5% voltage regulator (LDO). An integrated 3.3 V to 1.8V Low-dropout voltage regulator (LDO). +3VSO-+I DO OUT 3 3V 0_0402_5% 2 1 R673 +3VALW 0 0 0402_5% R674

To support Wake-on-Jack or Wake-on-Ring, the CODEC AVDD_3.3 pinis output of internal LDO. NOT connect to support Wake-on-Jack or Wake-on-Ring, the CODEC VAUX_3.3 & VDD_IO pins must be powerd by a rail that is not removed unless AC power is removed. *DSH page42 has more detail. Layout Note:Path from +5VS to LPWR 5.0 Reserve for ESD RPWR_5.0 must be very low resistance (<0.01 ohms) For 20671-21Z update 0_0402_5% 2 1 R676 1 R963 2 0 0805 5% 10K only needed if supply to VAUX_3.3 is removed during system re-start. 0_0402_5% 2 PR677 @ R855 4.7K_0402_5% R678 2 @ 0.1_1206_1% 10 mils @ C977 100P_0402_50V8J Please bypass caps very close to device. (14) HDA RST AUDIO# RESET# R680 1 2 5.11K_0402_1% Sense resistors must be 5 BIT_CLK SYNC 6 SDATA_IN 5 DATA_OUT (14) HDA_BITCLK_AUDIO (14) HDA_SYNC_AUDIO SENSE connected same power R682 1 2 33_0402_5% (14) HDA_SDINO (14) HDA_SDOUT_AUDIO that is used for VAUX 3.3 PC_BEEP EAPD active low R684 2.2K 0402 5% +MICBIASC R685 2.2K 0402 5% 0=power down ex AMP R686 _______100_0402_1% 1=power up ex AMP EXT_MIC_R (34) EXT_MIC_L (34) External MIC 100 0402 1% 0_0402_5% 1 2 R688 0_0402_5% 2 R689 38 GPIO0/EAPD# GPIO1/SPK_MUTE# Changed from 5.1ohm to 15ohm for "zi zi"noise. Internal SPEAKER 1 2 C852 1U_0603_10V4Z Change Part number to SA00003K410 (20671-21Z) 4.7K_0402_5% 1 2 0.1U_0402_16V4Z C856 1 2 2.2U_0603_6.3V4Z Delete redundant part base on vender's suggestion 20100810 1 2 0.1U_0402_16V4Z 1 0_0402_5% 1 0_0402_5% Short GND and GNDA base wide 30MIL vender's suggestion 20100810 close to Codec GND GNDA R953 @ 0_0402_5% PC Beep ACES 882 EC Beep (31) 2 ____1 D30 RB751V_SOD323 L57 ~ L60 change to Oohms base on vender's suggestion 20100810 BEEP# | L57 ~ L60 Change from SD013000080 to SM01000BZ00 | pop C863, C864, C865, C861 | EMI solution 20100824 D31 RB751V_SOD323 ICH Beep (14) FCH_SPKR 1 2 PC_BEEP 33_0402_5% C997 0.1U_0402_16V4Z Security Classification Compal Secret Data Compal Electronics, Inc. R935 10K_0402_5% Issued Date Deciphered Date CX20671 Codec Follow vender recommanded circuit THIS DEET OF ENGREENING COMMING, IS THE PROPRETING PROGRETY OF COMPAL EXCENDENCE, MC. AND CONTRINS CONTRIBUTED AND TRADE SCHOOL THE CONTRIBUTED AND TRADE SCHOOL TRADE SCHO 20100722 LA6755P/7P

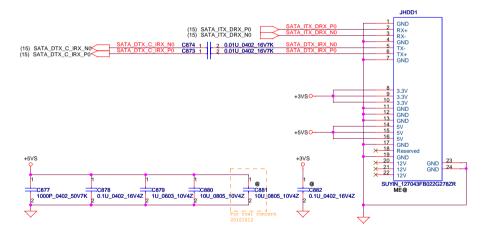


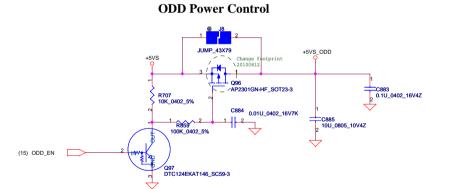






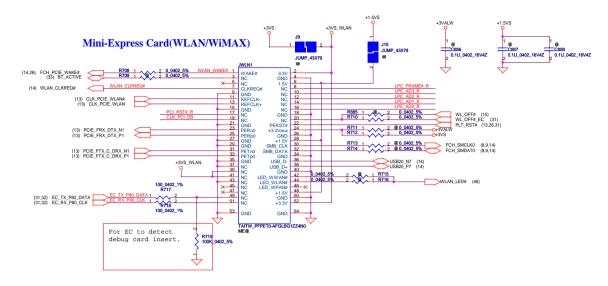
SATA HDD Conn.





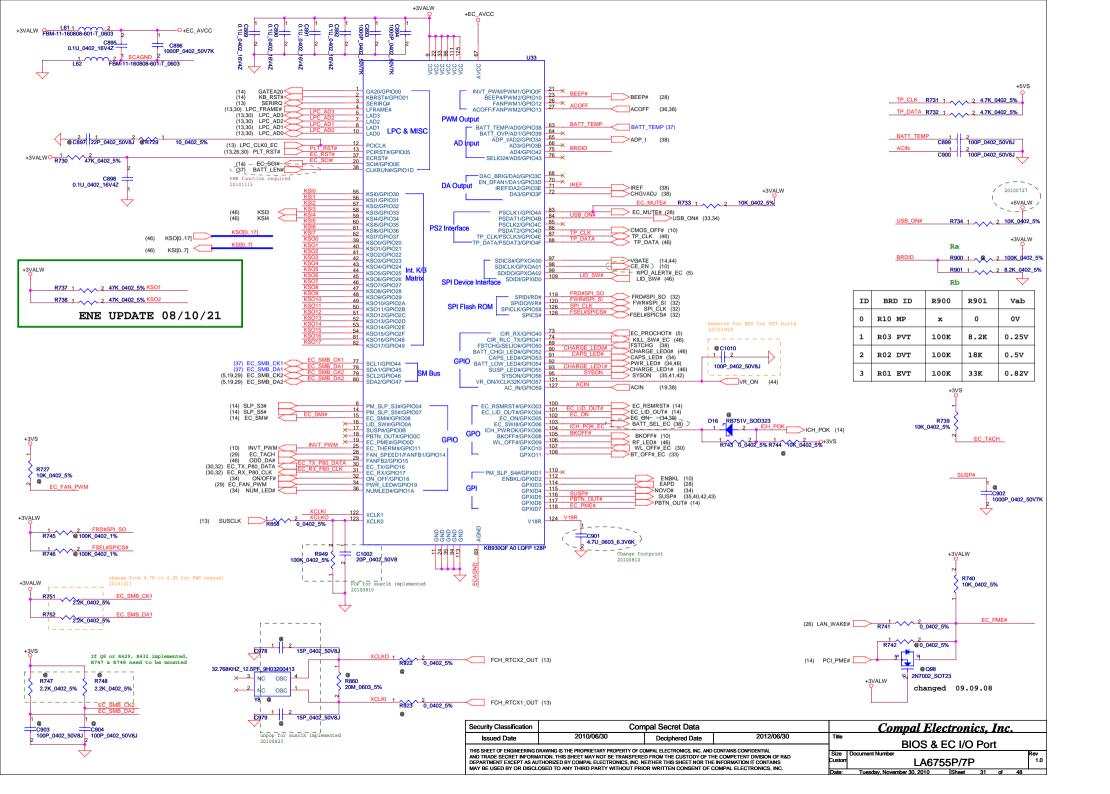
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Mini-Express Card for WLAN/WiMAX(Half)

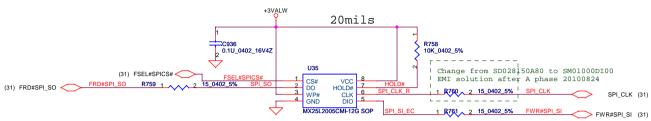


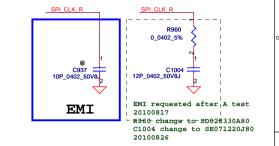
Reserve for SW mini-pcie debug card. Series resistors closed to KBC side.									
LPC_FRAME#_R LPC_AD3_R LPC_AD2_R LPC_AD1_R LPC_AD1_R LPC_AD0_R PCI_RST#_R CLK_PCI_DB	R720 1 8 2 0.0402 5% IPC FRAMEF (13.31) R721 1 2 0.0402 5% IPC A02 R722 1 2 0.0402 5% IPC A02 R722 1 2 0.0402 5% IPC A02 R723 1 2 0.0402 5% IPC A02 R724 1 2 0.0402 5% IPC A02 R725 1 2 0.0402 5% IPC R519 R725 1 2 0.0402 5% IPC R519 R726 1 2 0.0402 5% IPC R519 R727 1 2 0.0402 5% IPC R519 R728 1 2 0.0402 5% IPC								

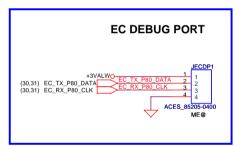
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	Issued Date	2010/06/30	Deciphered Date	2012/06/30	Title	Mini PCIE			
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					Date:	Tuesday, November 30, 2010 Sheet 30 of 48			

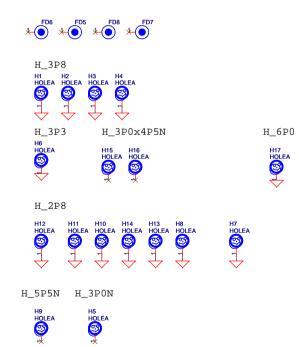


FOR EC 128KB SPI ROM (150mil PACKAGE) SA00003FL10 SA00003JD00

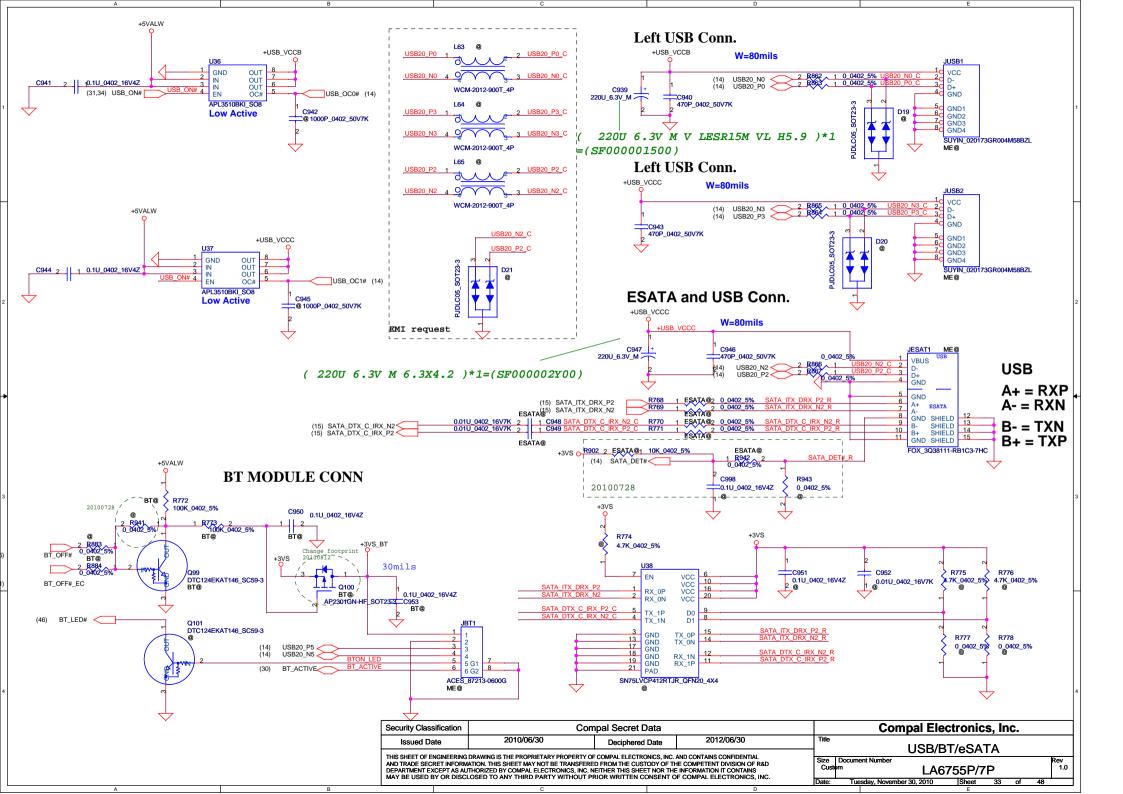


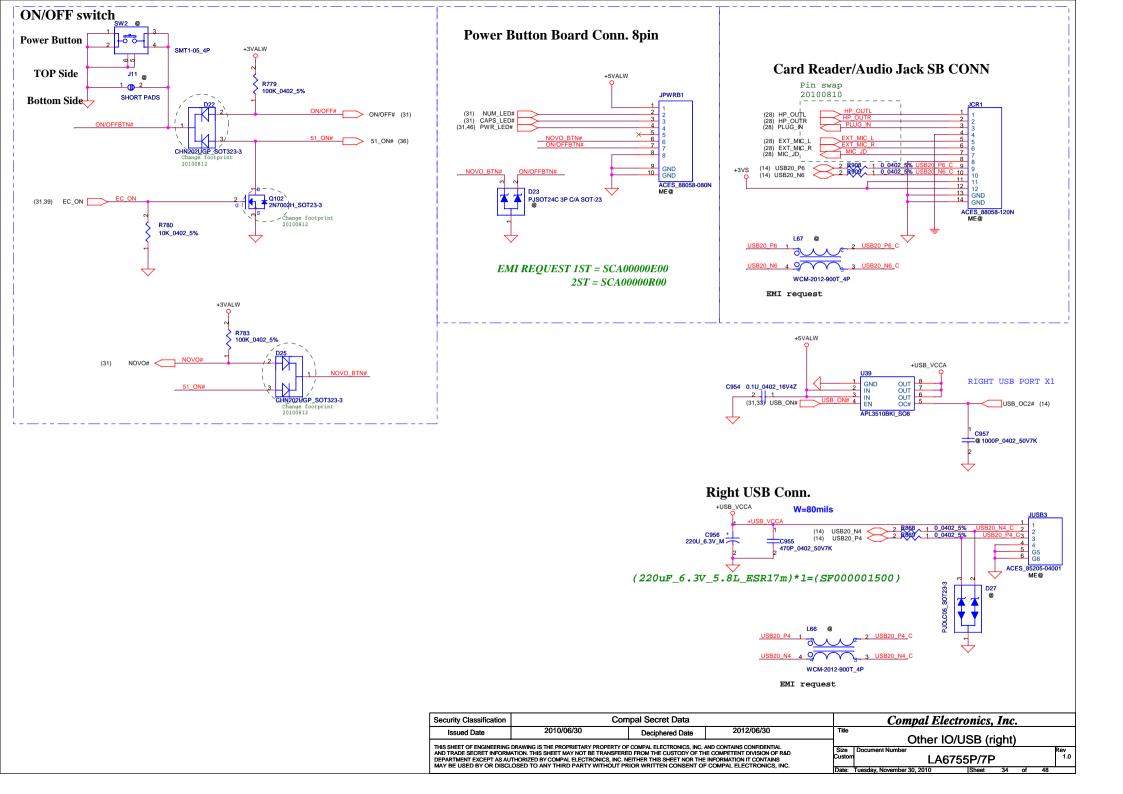


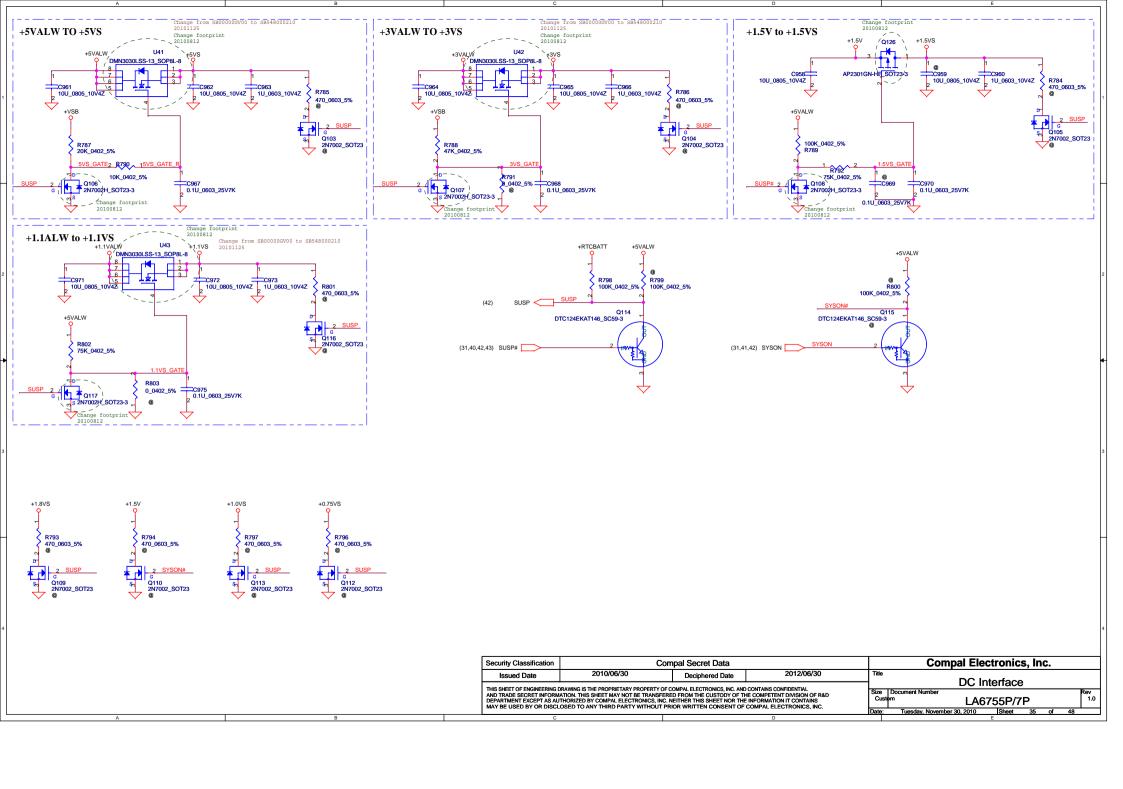


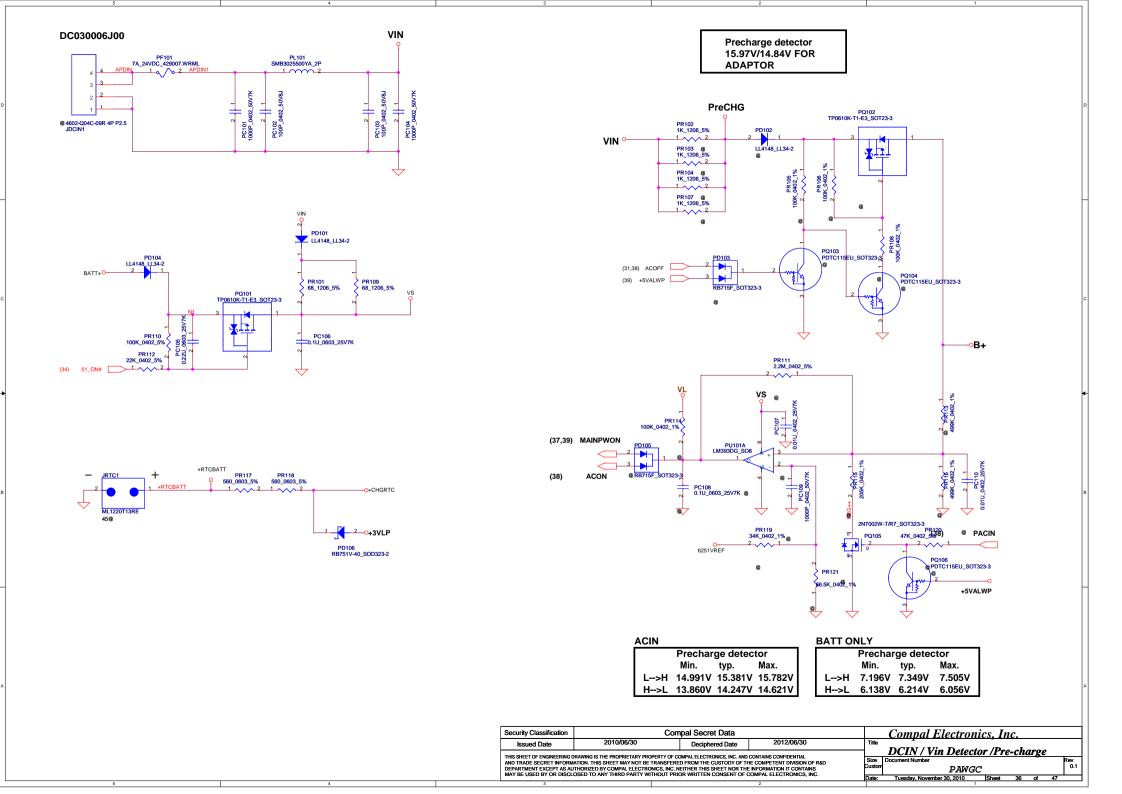


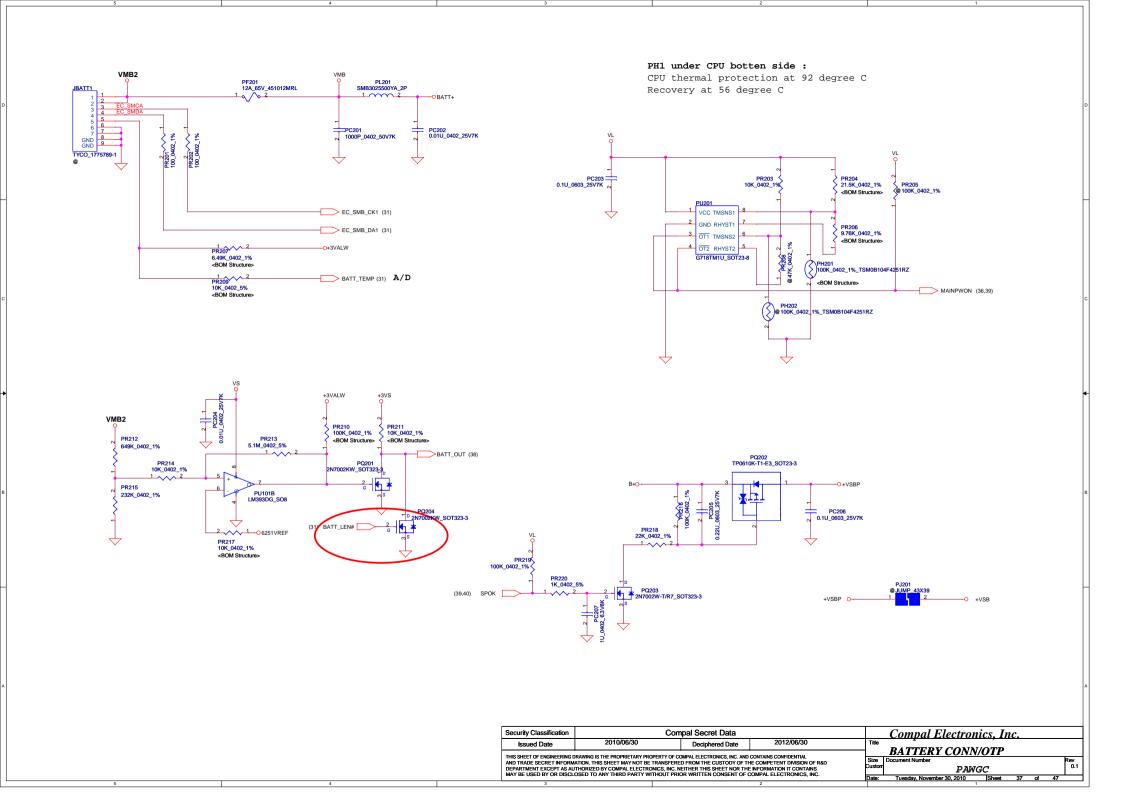
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Issued Date	Issued Date 2010/06/30 Deciphered Date 2012/06/30 Ti				EC SPI ROM/LPC Debug Cor	20
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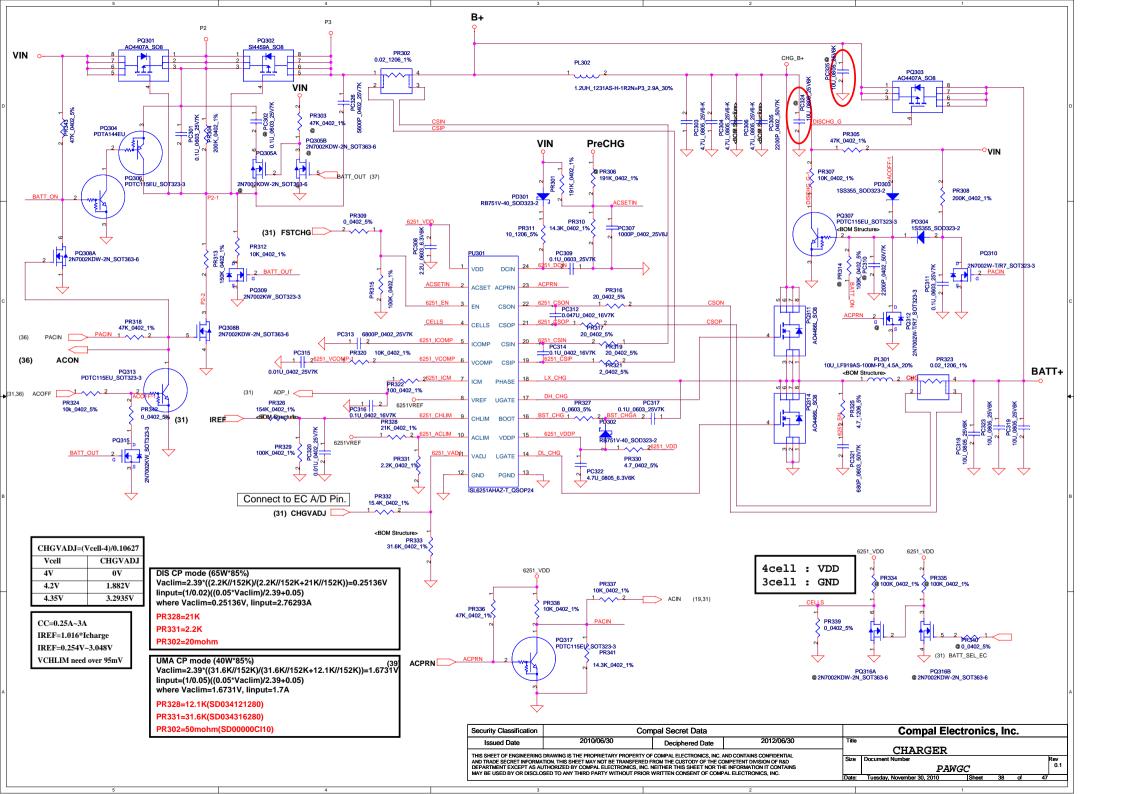


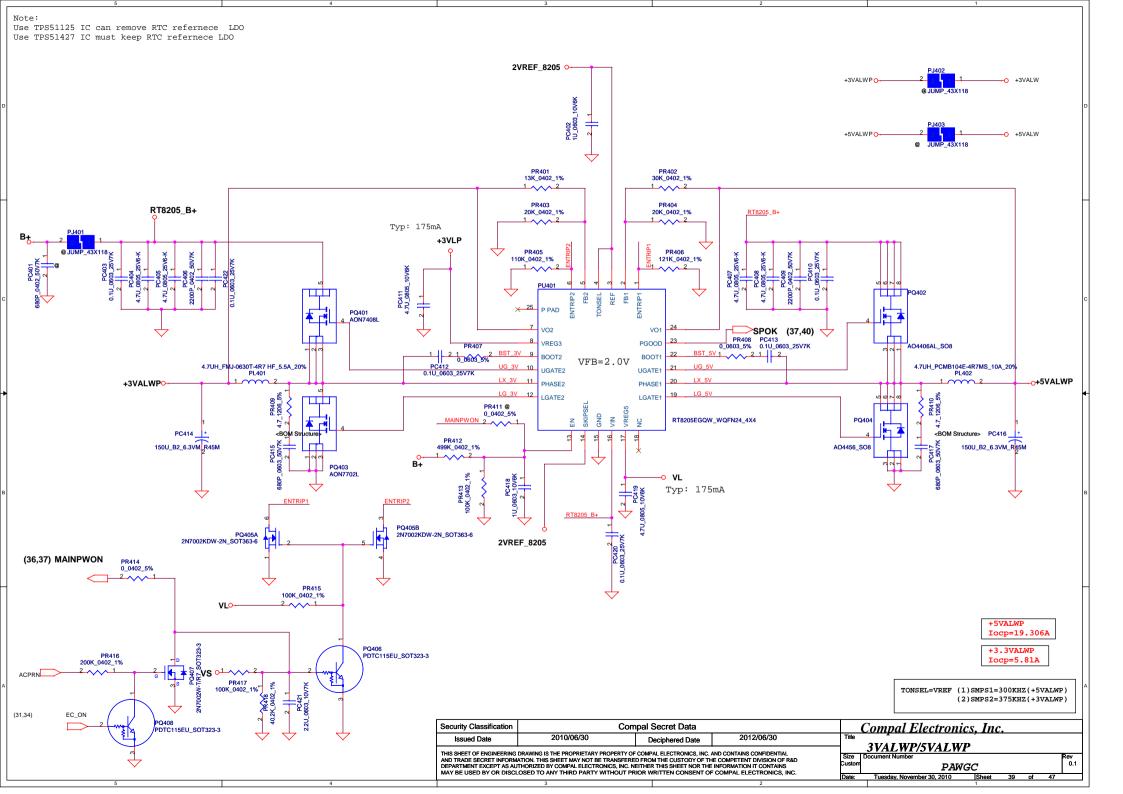


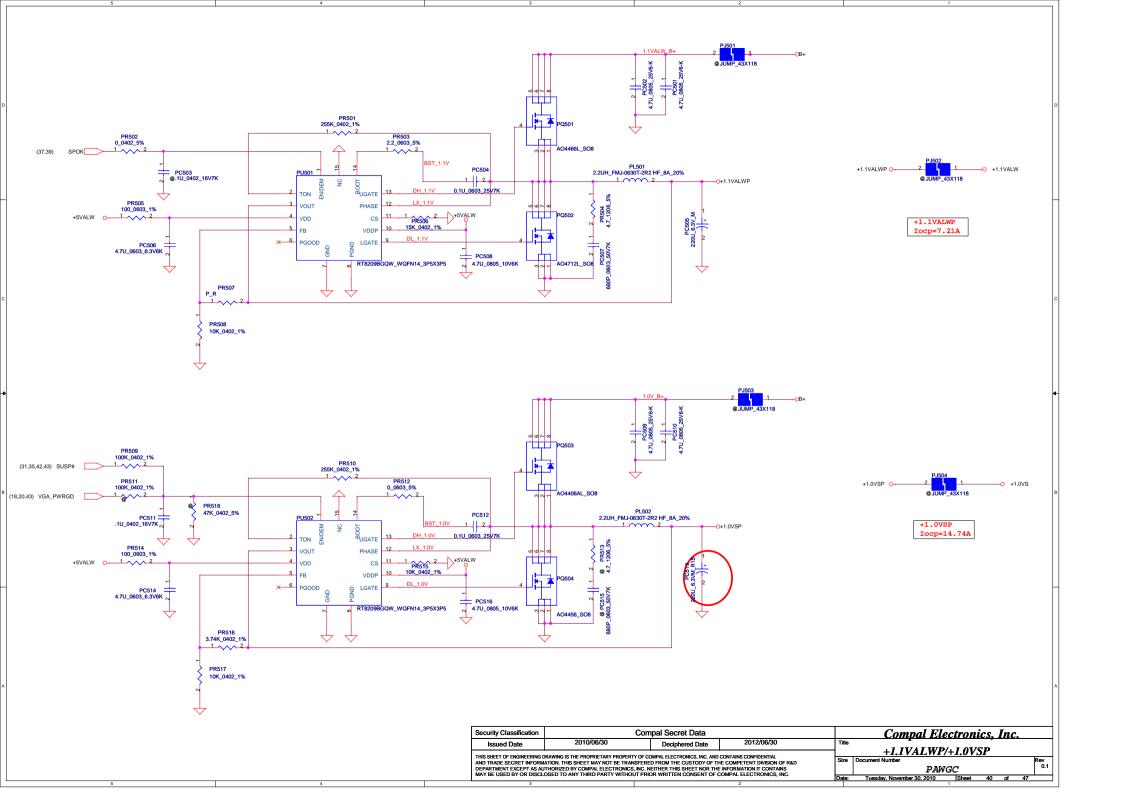


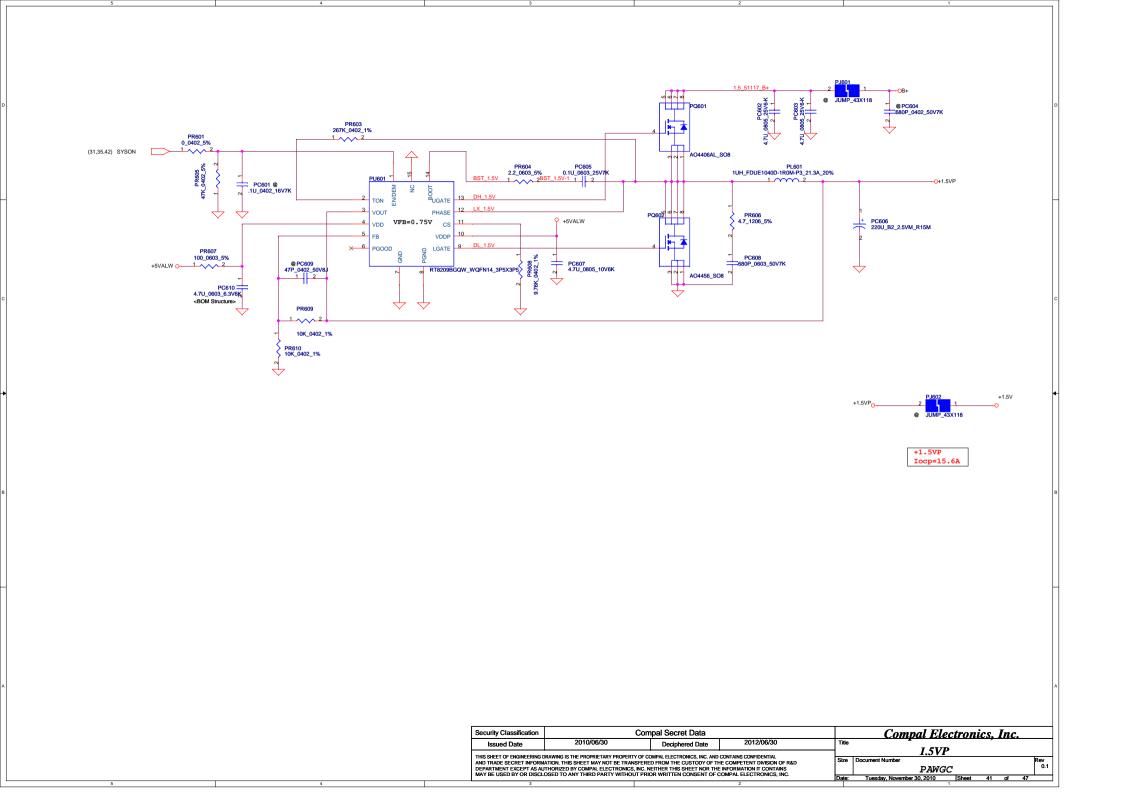


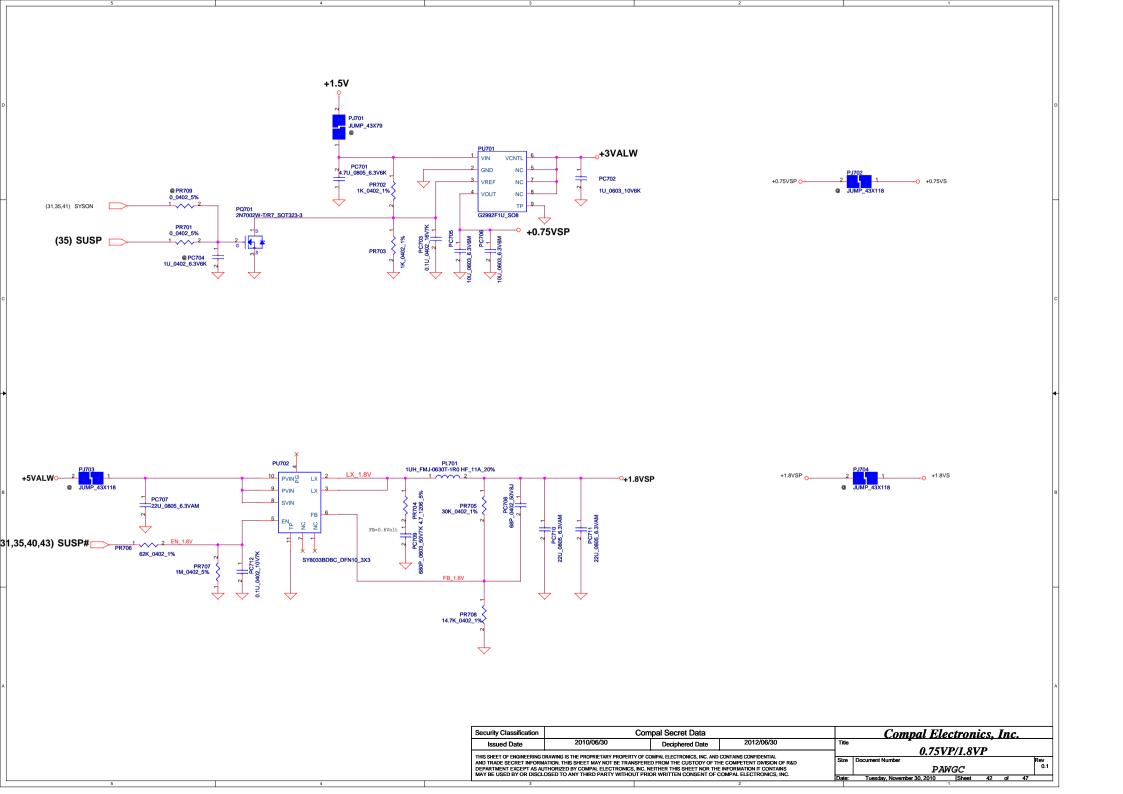


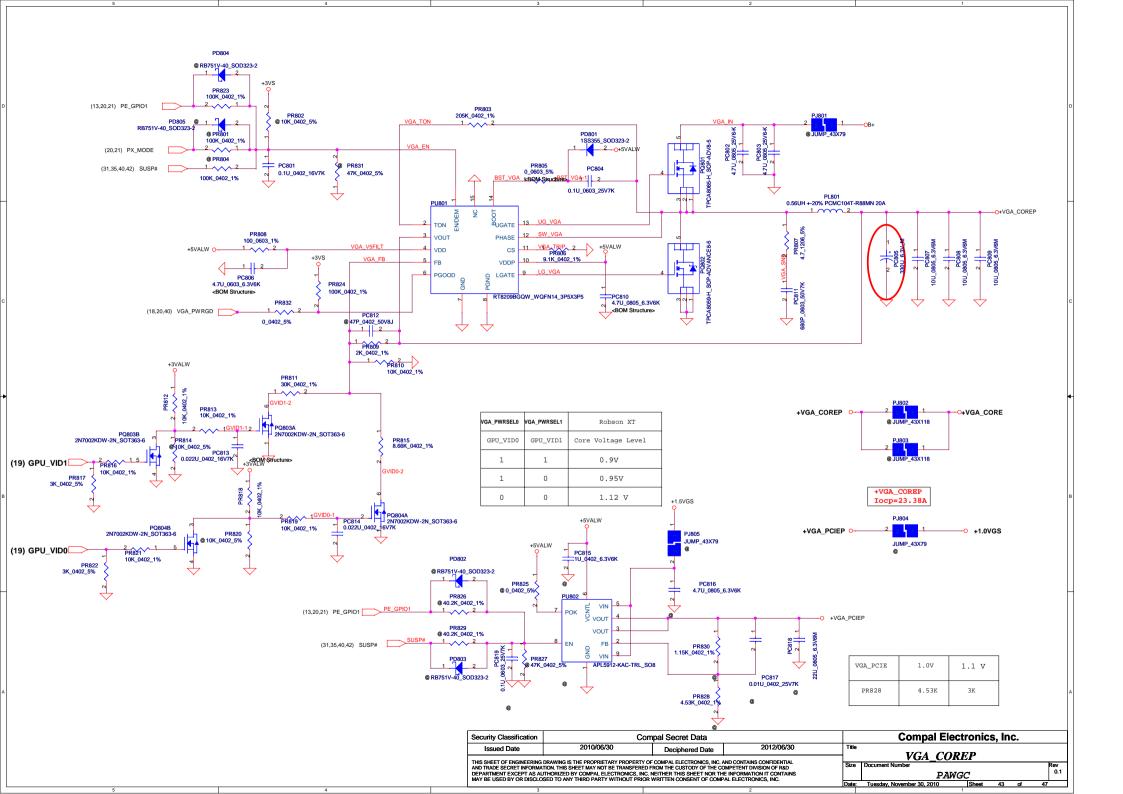


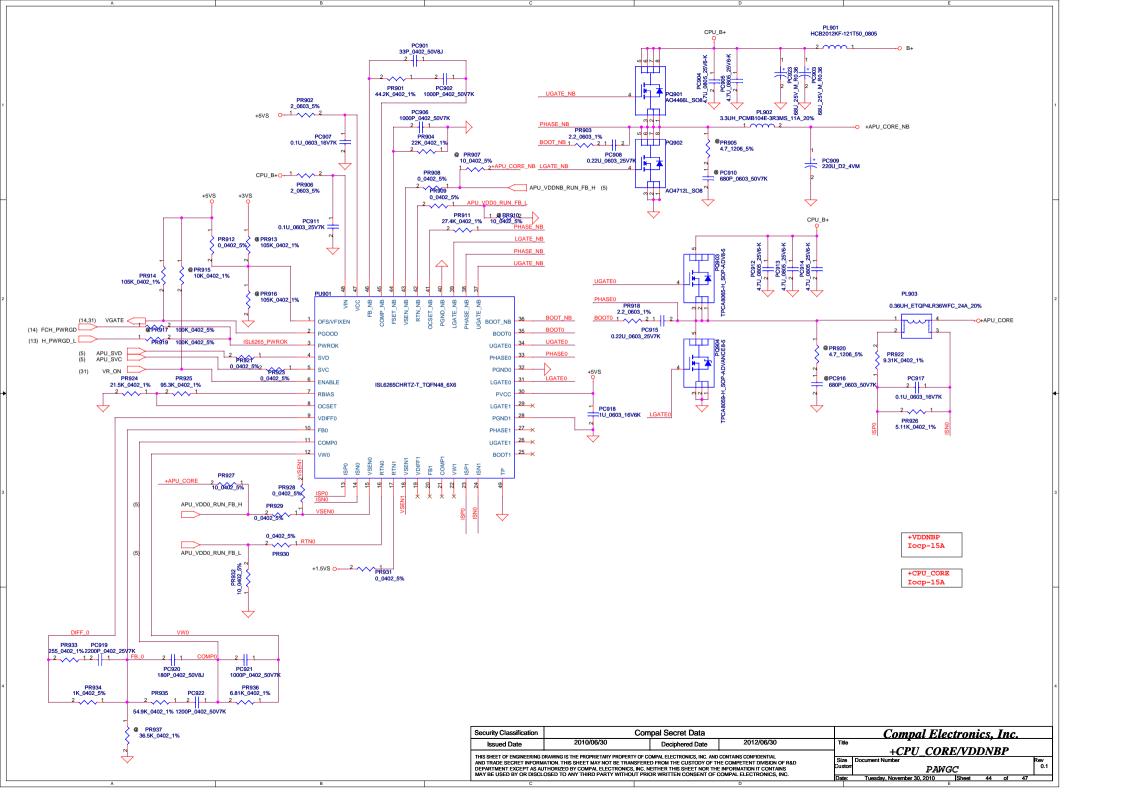








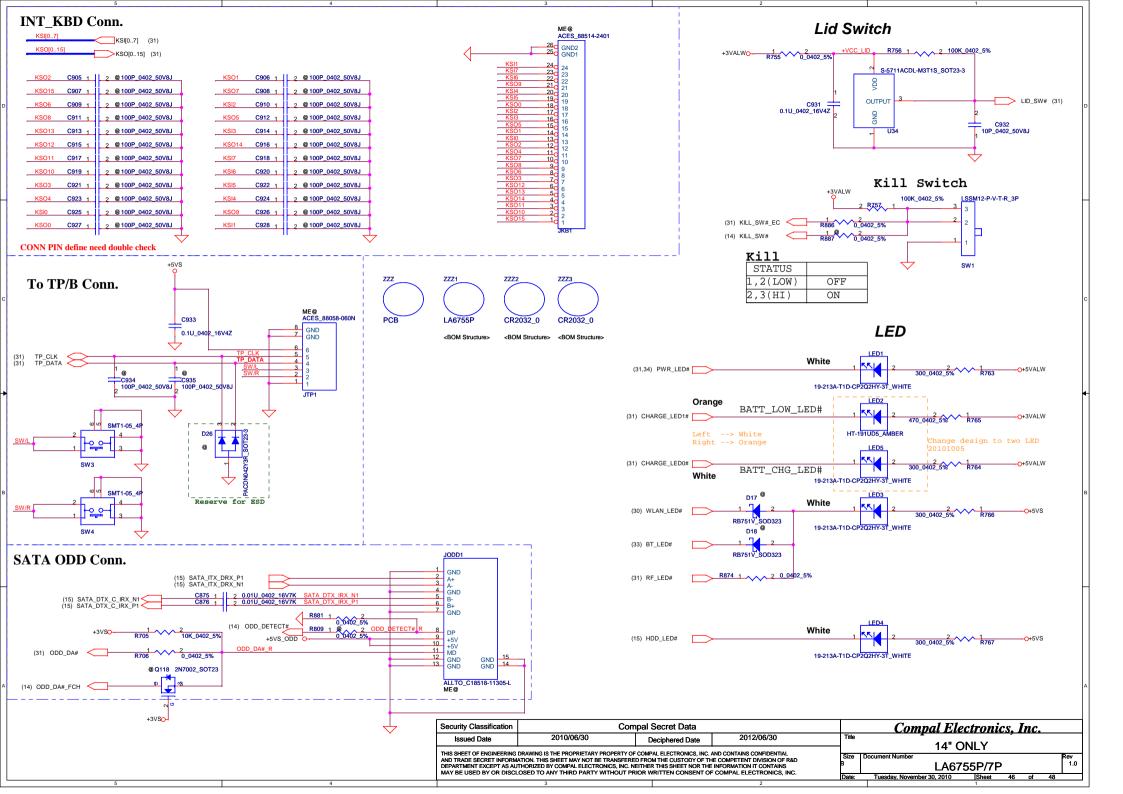


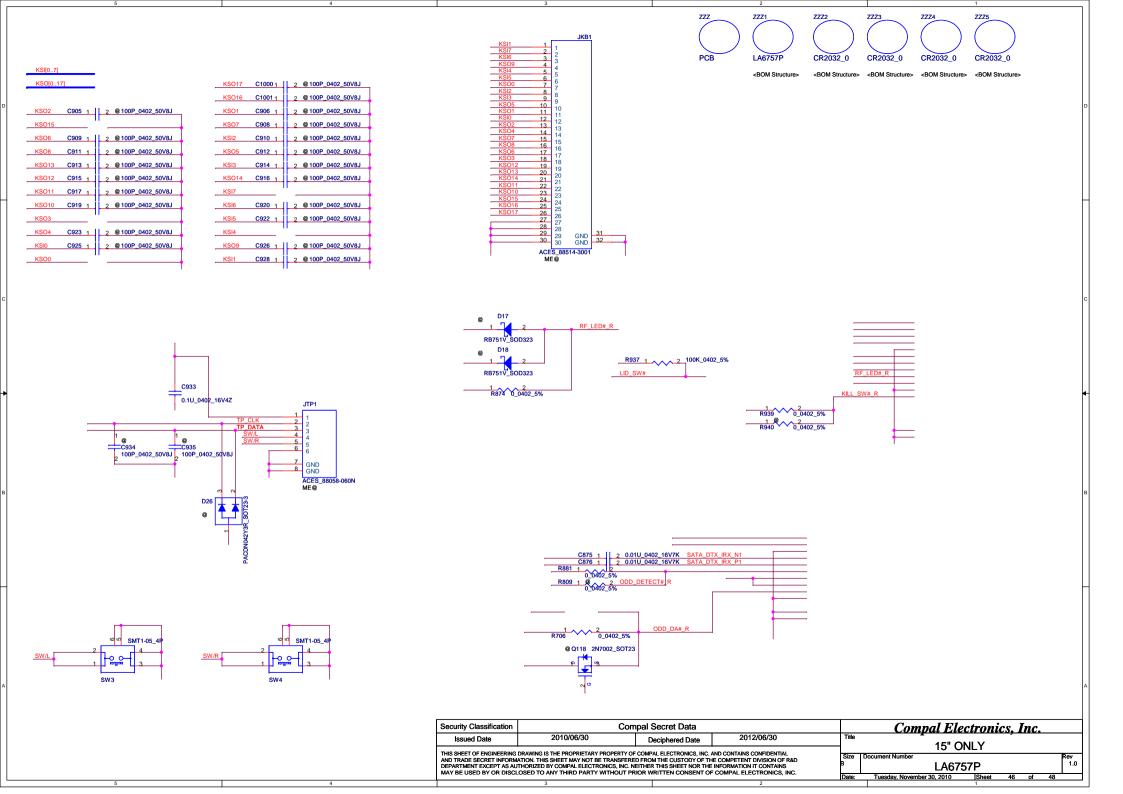


Version Change List (P. I. R. List) for Power Circuit

Page#	Title	Date	Request Owner	Issue Description	Solution Description
	power sequence	2010/07/30	HW		PR701 change to 0 ohm and PC704 non mount.
	Add PU802 for AMD's request	2010/09/21	AMD		
Add PL302,PG	C324 and PC325 for EMC Solution.	2010/10/04	EMC		change PJ301 to PL302.
Add	PC422 for EMC Solution.	2010/10/06	EMC		
Add PQ204	4 for EM6.0 battery learning function.	2010/11/12	PWR		

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Issued Date	2010/06/30	Deciphered Date	2012/06/30	Title	Power PIR			
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IASE	PAGE	Modification list		PURPOSE				
0.2	P08	C643 change to OS-CON type		For cost down	purpose			
5.2	P10	pop R490, unpop R491		LVDS PWM contr				
1.2	P10	Add CE_EN @ JLVDS1.16 and U33.98		For color engi	=			
 2	P10	R488 pull-up to +5VALW		For C38 module				
.2	P10	Add R938		For CMOS cost	-			
.2 .2	P12	JCRT1 change foot-print from DC060003000 to DC060004S00		Foot-print is				
2	F12 P14	SATA DET# change from U26.AE19 to U26.AB21			ing SATA port ass			
.2 .2	P14 P16	Delete R635		Our codec cons				
2		Add R936		For VGA_PWRGD				
	P18							
2	P20	Q69 ~ Q72 change to N-MOS		Follow BACO su				
2	P21	R840 pull-up change to +5VALW and R857 change to 20K ohms		For +3VGS sequ				
2	P21	Delete Q122, Add U47, C999, R944		For +1.0VGS DO	-			
2 1	P23	L27 change to 0 ohms		For new refere				
:	P23	Delete GND connection of U8.N11 and U8.N12		For new refere				
: †	P21	R344 change to 20K ohms		Prevent Q74 da	mage			
†	P28	J7 foot-print update		Base on DFX re	quest			
+	P28	Add net CLK_PCI_DB_R and unpop R854		for EMI concer	n			
+	P28	Modify PC_Beep circuit		Base on vender	suggestion			
:+	P23	Delete C421, C422, C431, C432, C433		For new refere	nce circuit			
†	P31	R734 pull-high change to +5VALW		For USB ports				
+	P31	Add BATT_SEL_EC at U33.103		=	lection reservati	 ion		
		Add R941		_	st down purpose			
2	P33	Add R942, R943, C998			function design			
	P33 P28	Delete C851, C855		For useless AG				
		Change JP7 to JPWRB1 and JP8 to JCR1		For useless Ad				
	P34	Change JP7 to JPWRB1 and JP8 to JCR1 Del U45, R890 ~ R899, J12, CHR ON# (U33.70)			_			
- 1	P34			Deleting USB o				
I	P35	Delete C974			essary part for	+1.1VS 		
1	P19	Add R945, R946		For HDMI Audic	_			
:	P13	Delete T79, T80			ce needed for SAT			
2 - 1	P28	Add R947, R948				ase on vender suggeti	ion	
2	P28	Delete C857, R694				on vender suggestion		
	P28	L57 ~ L60 change to 0_0603_5%		Base on vender				
: †	P28	R672 change to 0ohm and location to be series on HDA_BITCLK_AUDIO		For EMI soluti	on reservation ba	ase on vender suggeti	ion	
†	P14	Kill_SW# change from U26.G24 to U26.K1		Kill_SW# funct	ion needs event p			
+	P31	Add R949, C1002		Requirement of	implementing SUS	SCLK		
2+	P28	Add R950 @ +3VS, R951 @ +LDO_OUT_3.3V, R952 @ +5VS		For customer r	equest (PWR consi	umption)		
2+	P28	Add R953		For PC Beep ci	=			
+	P29	Add R954, R955			equest (PWR consi	umption)		
+	P13	Add C1003, U48, R956, R957		For PX GPU_RST				
·	P13	Delete R556, R841, R889, D28		IOI FA GEO_RSI	, Lunction			
2	P05	 Add R958		For enabling H	DMT function			
		Add R959		For enabling For EMI reserv				
+	P28	l						
2	P32	Add R960 and c1004		For EMI reserv		,		
2	P09	Add R961 and R962			MB strap pin rese	ervation 		
2 1	P05	Delete T74, T75		For layout lim				
3	P29	change +5V_ODD to +5VS_ODD		For better net	name			
	P46							
†	P32	R760 change to 1000hm bead and R761 change back to 150hm resistor		For correct EM	I solution			
†	P21	U47 change to SB00000GV00 footprint		For correct sy	mbol			
+	P05	R958 change to HDMI@ and R422 change to nonHDMI@		For SKU withou	t HDMI function			
†	P21	Add PX_MODE off page		For design cor	rection			
+								
			Security Classification		mpal Secret Data		Co	mpal Electronics, Inc.
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PHASE	PAGE	Modification list		PURPOSE				
0.2	P08	C643 change to OS-CON type		For cost down purpose				
-0.2	P10	pop R490, unpop R491		LVDS PWM controls by EC				
0.2	P10	Add CE_EN @ JLVDS1.16 and U33.98		For color engine function				
0.2	P10	R488 pull-up to +5VALW		For C38 module design				
0.2	P10	Add R938		For CMOS cost down purpose				
-0.2	P12	JCRT1 change foot-print from DC060003000 to DC060004S00		Foot-print is wrong				
0.2	P14	SATA_DET# change from U26.AE19 to U26.AB21		For corresponding SATA port assigned		D		
-0.2	P16	Delete R635		Our codec consumes +3V				
-0.2	P18	Add R936		For VGA_PWRGD reservation				
- 0.2	P20	Q69 ~ Q72 change to N-MOS		Follow BACO suggestion SCH				
- 0.2	P21	R840 pull-up change to +5VALW and R857 change to 20K ohms		For +3VGS sequence design				
- 0.2	P21	Delete Q122, Add U47, C999, R944		For +1.0VGS DC power design				
- 0.2	P23	L27 change to 0 ohms		For new reference circuit				
- 0.2	P23	Delete GND connection of U8.N11 and U8.N12		For new reference circuit				
- 0.2	- <u></u>	R344 change to 20K ohms		Prevent Q74 damage				
- 0.2	- <u></u>	J7 foot-print update		Base on DFX request				
- 0.2	- <u></u>	Add net CLK_PCI_DB_R and unpop R854		for EMI concern				
- 0.2	P28	Modify PC_Beep circuit		Base on vender suggestion				
-0.2	P23	Delete C421, C422, C431, C432, C433		For new reference circuit				
0.2	P31	R734 pull-high change to +5VALW		For USB ports ACIN leakage				
c - 0.2	P31	Add BATT_SEL_EC at U33.103		For Battery selection reservation		С		
- 0.2	- 	Add R941		For further cost down purpose				
- 0.2	- 	Add R942, R943, C998		For SATA DET# function design				
- 0.2	- -	Delete C851, C855		For useless AGND bridge				
- 0.2	- 	Change JP7 to JPWRB1 and JP8 to JCR1		For standard naming				
- 0.2	- F34 - P34	Del U45, R890 ~ R899, J12, CHR_ON# (U33.70)		Deleting USB charge function				
- 0.2	P35	Delete C974		Deleting unnecessary part for +1.1VS				
- 0.2	P19	Add R945, R946		For HDMI Audio strap				
$-\frac{0.2}{0.2}$	P13	Delete T79, T80		For layout space needed for SATA calibration		ľ		
-0.2	P28	Add R947, R948		For EMI solution reservation base on vender suggetion				
- 0.2	P28	Delete C857, R694		To delete redundant part base on vender suggestion				
-0.2	P28	L57 ~ L60 change to 0_0603_5%		Base on vender suggestion				
-0.2	P28	R672 change to 0ohm and location to be series on HDA_BITCLK_AUD		For EMI solution reservation base on vender suggetion				
-0.2	P26 P14	Kill_SW# change from U26.G24 to U26.K1		Kill_SW# function needs event pin				
-0.2	P14 P31	Add R949, C1002		Requirement of implementing SUSCLK				
B - 0.2	P31 P28	Add R949, C1002 Add R950 @ +3VS, R951 @ +LDO_OUT_3.3V, R952 @ +5VS				В		
-0.2	P28 P28	Add R950 @ +3VS, R951 @ +LDO_OUT_3.3V, R952 @ +5VS Add R953		For customer request (PWR consumption) For PC Beep circuit				
	1	Add R953 Add R954, R955		For PC Beep circuit For customer request (PWR consumption)				
0.2	P29							
0.2	P13 P18	Add C1003, U48, R956, R957 Delete R556, R841, R889, D28		For PX GPU_RST# function				
	l			The state of the street of the				
0.2	P05	Add R958		For enabling HDMI function				
0.2	P28			For EMI reservation		-		
0.2	L	Add R960 and c1004		For EMI reservation				
0.2	P09	Add R961 and R962		For DDR SO-DIMMB strap pin reservation				
0.2	P05	Delete T74, T75		For layout limitation				
A 15 only		Add C1000, C1001		For 15" 30pin KB connector		F		
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			Issued Date	·	Compal Electronics, Inc.			
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