

Compal confidential

Liverpool/Sunderland 10ATG

NSWAE/NTWAE LA-5331P Schematics Document

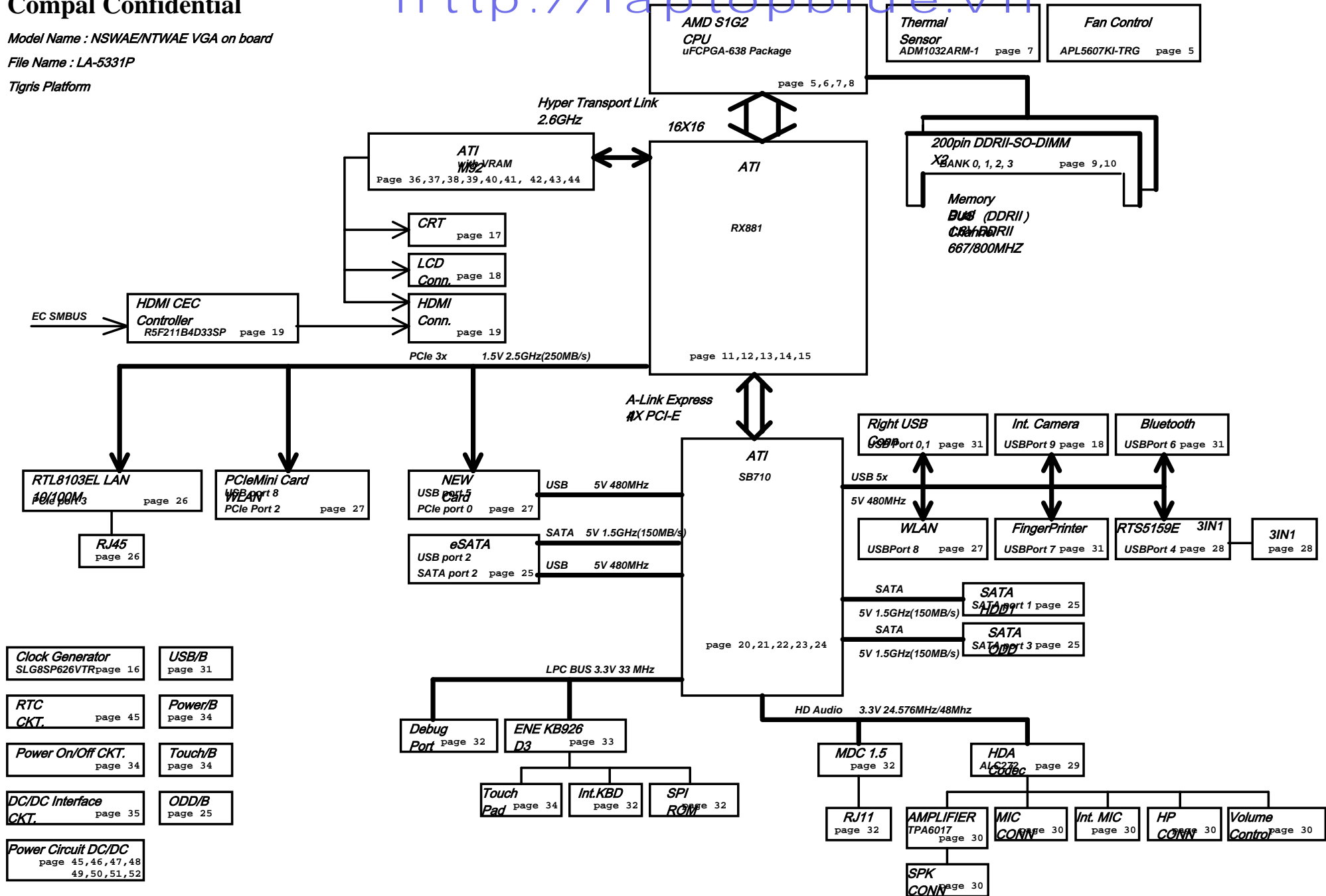
Mobile AMD S1G3/
RX881
SB710

2009-10-02 Rev. 1.0

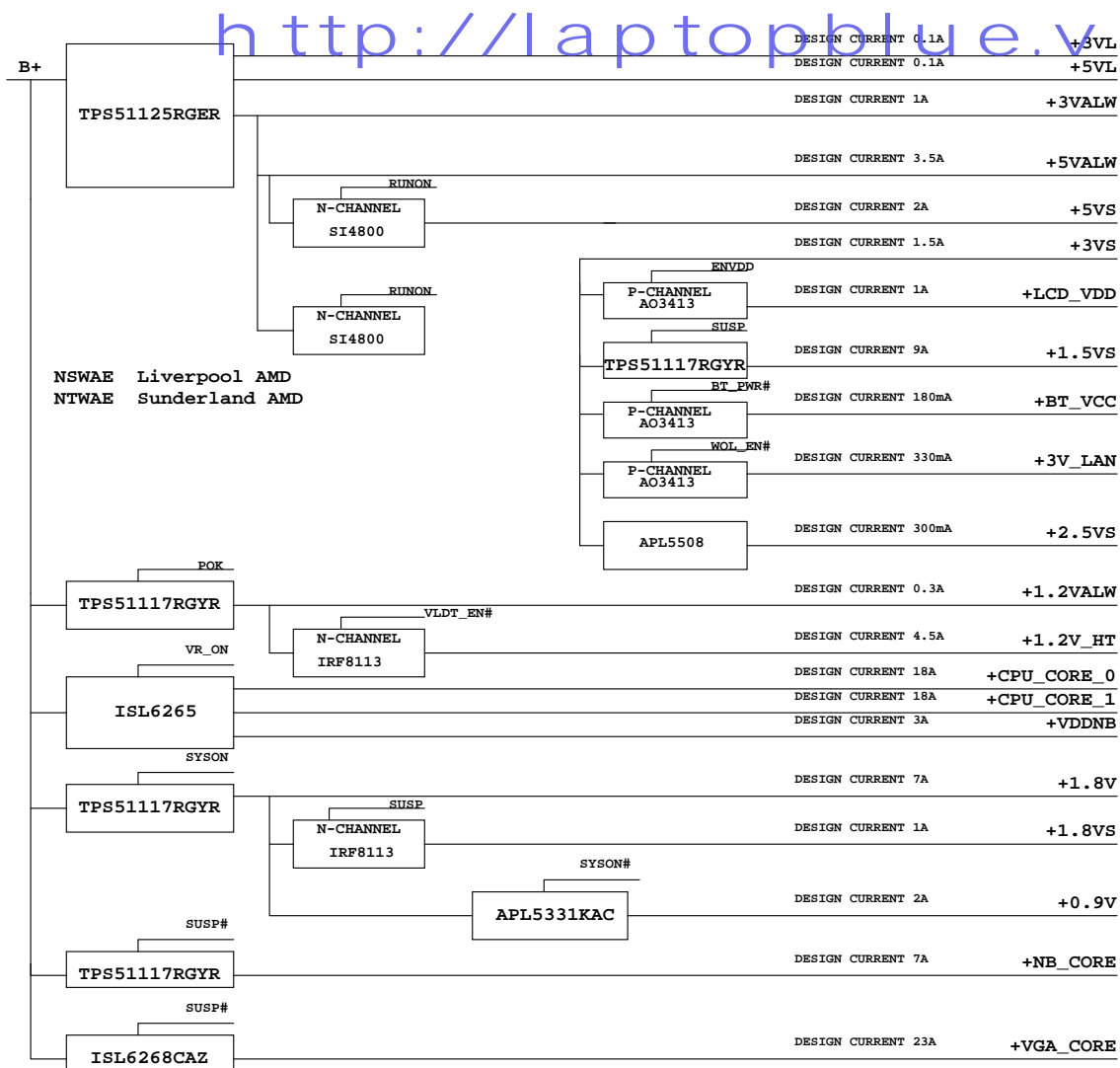
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				Custort	401716
				Date:	Tuesday, February 23, 2010
				Sheet	1 of 54
				Rev	C

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Tigris Platform



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				Date: Tuesday, February 23, 2010		Sheet 2 of 54



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				Custort	401716
				Date:	Rev C
				Tuesday, February 23, 2010	Sheet 3 of 54

Voltage Rails

O : ON
X : OFF

power plane	State	+B +3VL +5VL +RTCVC	+5VALW +3VALW +1.2VALW +3V_LAN	+1.8V +0.9V +0.9V	+5VS +3VS +2.5VS +1.8VS +1.5VS +1.1VS +VGA_CORE +1.2V_HT +CPU_CORE_NB +CPU_CORE_0 +CPU_CORE_1
S0		O	O	O	O
S1		O	O	O	O
S3		O	O	O	X
S5 S4/AC		O	O	X	X
S5 S4/ Battery only		O	X	X	X
S5 S4/AC & Battery don't exist		X	X	X	X

I2C / SMBUS ADDRESSING

DEVICE	HEX	ADDRESS
DDR SO-DIMM 0	A0	1010000X
DDR SO-DIMM 1	A2	1010001X
CLOCK GENERATOR (EXT.)	D2	11010010

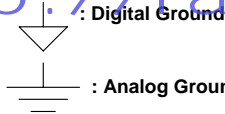
EC SM Bus1 address

Device	HEX	Address
Smart Battery	16H	0001 011X b
HDMI-CEC	34H	0011 010X b
EC KB926D4		

EC SM Bus2 address

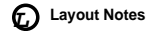
Device	HEX	Address
ADH1032-1 CPU	98H	1001 100X b
ADH1032-2 VGA	9AH	1001 101X b
EC KB926D3		

Symbol Note :



@ : just reserve , no build

DEBUG@ : reserve for debug.



UMA@: means for RS780M.

BTO (Build-To-Order) Option Table

Function	Express card / PCMCIA	BLUE TOOTH	RJ11	SSD	SATA ODD		WiFi		G- sensor		3 in 1 card reader
Description	(E / A)	(B)	(R)	(S)			(H)				
Explain					16"	17"	Half - size		First	Second	RTS5159
BTO	EXPCARD@ / PCMCIA@	BT@	MDC@	SSD@	16inch@	17inch@	WLAN@	WIMAX@	G@ + G_1st@	G@ + G_2nd@	CARD@

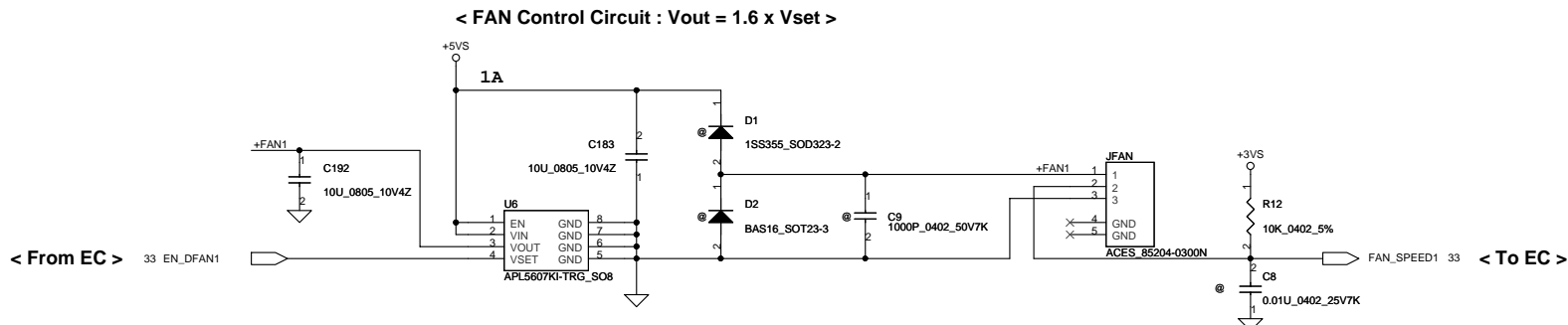
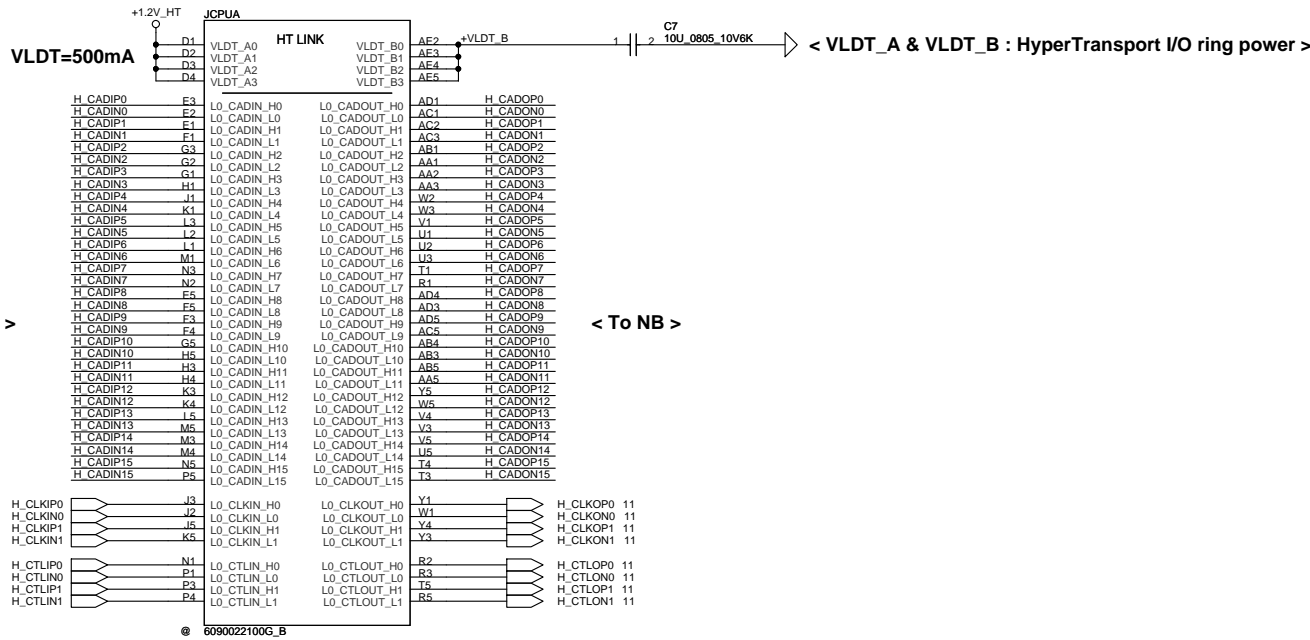
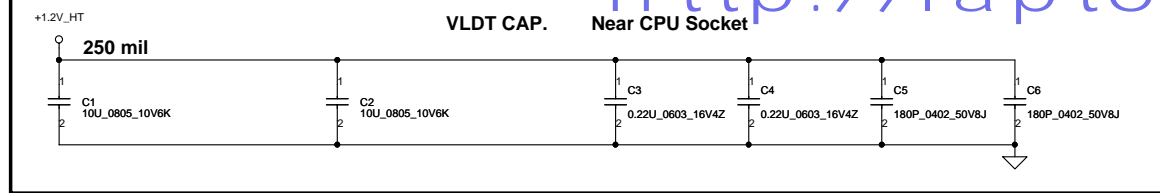
Function	FingerPrinter	CAMERA & MIC	HDMI	LVDS wireset	DC-IN	CHIPSET	
Description	(F)	(X)	(Y)				
Explain		CAMERA MIC	AMD(UMA) ATI VGA/B COMMON	Cost down			
BTO	FP@	CAM@ MIC@	IHDMI@ HDMI@ H@	LVDSSET@	16inch_45@ 17inch_45@	PUMA@ TIGRIS@	

SMBUS Control Table

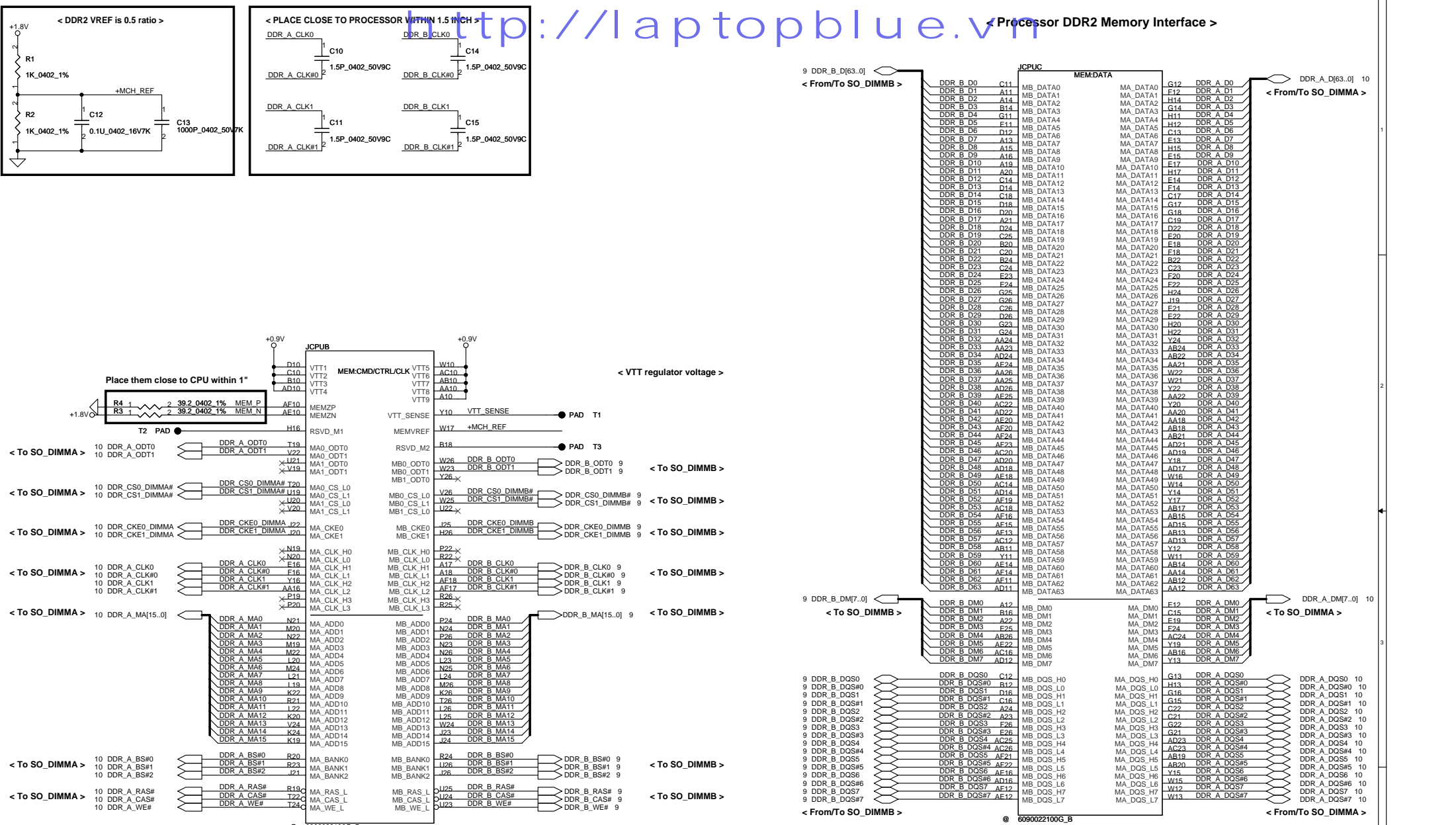
	SOURCE	INVERTER	BATT	HDMI CEC	CPU THERMAL SENSOR	SODIMM I / II	CLK GEN	WLAN	LCD DDC ROM	HDMI DDC ROM	NEW CARD	MXM Thermal Sensor
EC_SMB_CK1 EC_SMB_DA1	KB926		V	V								
EC_SMB_CK2 EC_SMB_DA2	KB926				V							V
I2C_CLK I2C_DATA	RX881								V			
DDC_CLK0 DDC_DATA0	RX881									V		
DDC_CLK1 DDC_DATA1	RX881											
SCL0 SDA0	SB710					V	V				V	
SCL1 SDA1	SB710							V				
SCL2 SDA2	SB710											
SCL3 SDA3	SB710											

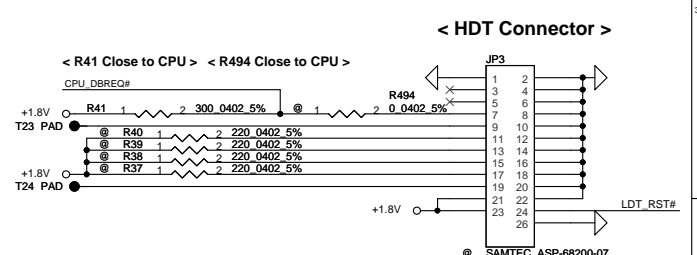
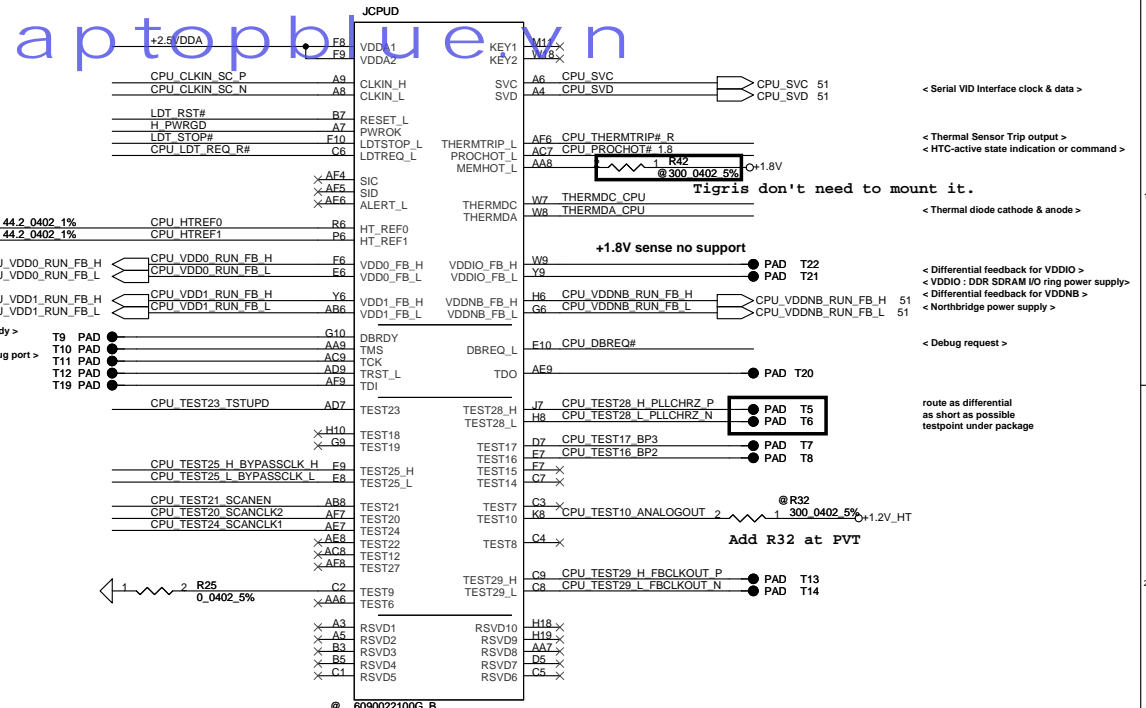
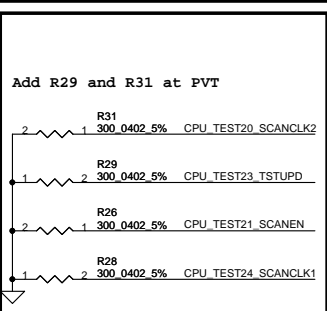
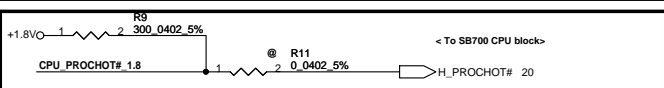
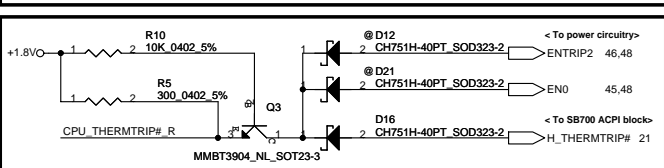
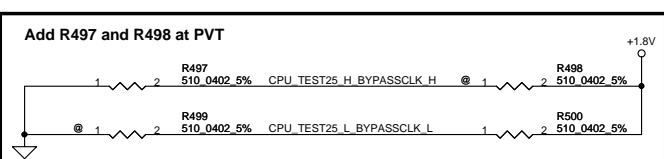
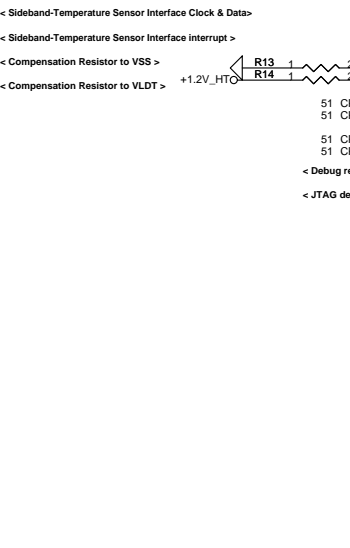
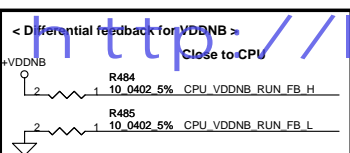
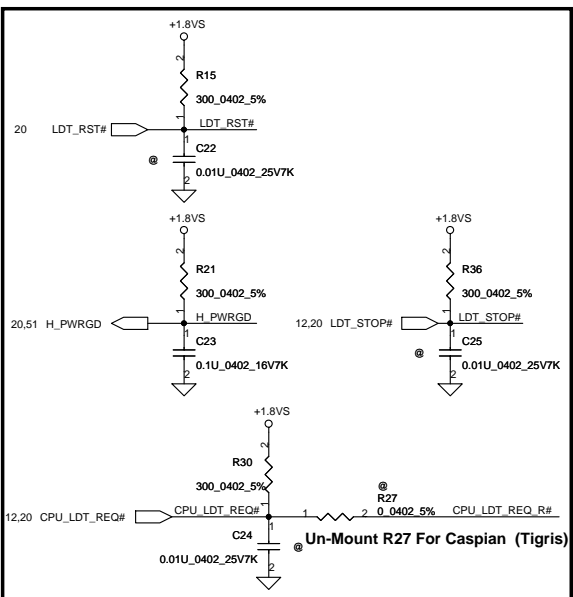
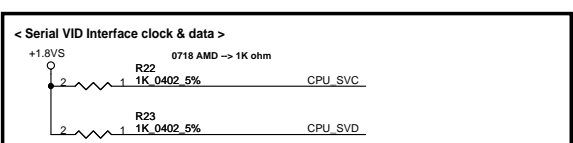
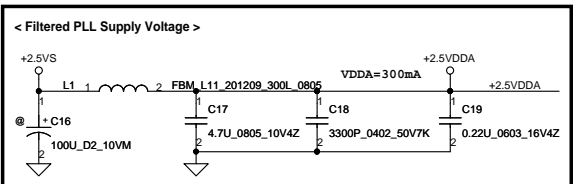
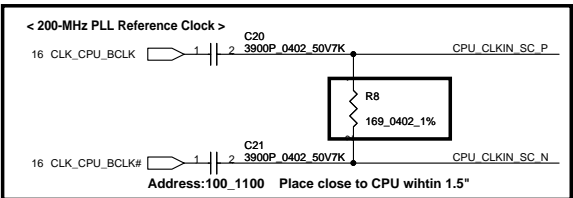
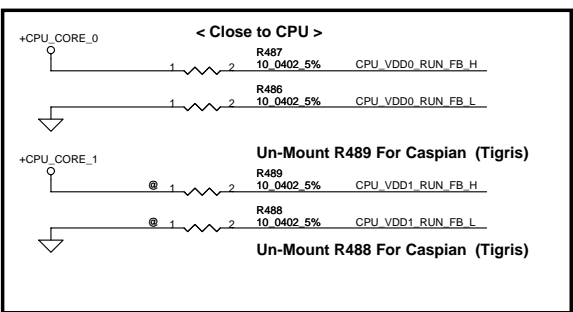
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				Date:	401716
				Tuesday, February 23, 2010	Sheet 4 of 54

< C1, C2 and C7 must be replaced to 10-uF for Caspian compatibility >

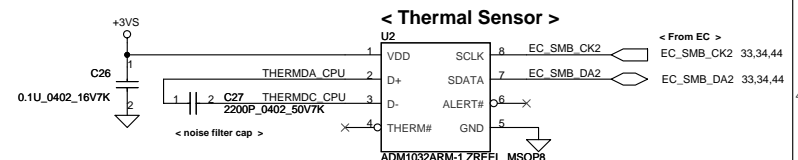


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				401716	Rev C
				Date:	Tuesday, February 23, 2010
				Sheet	5 of 54

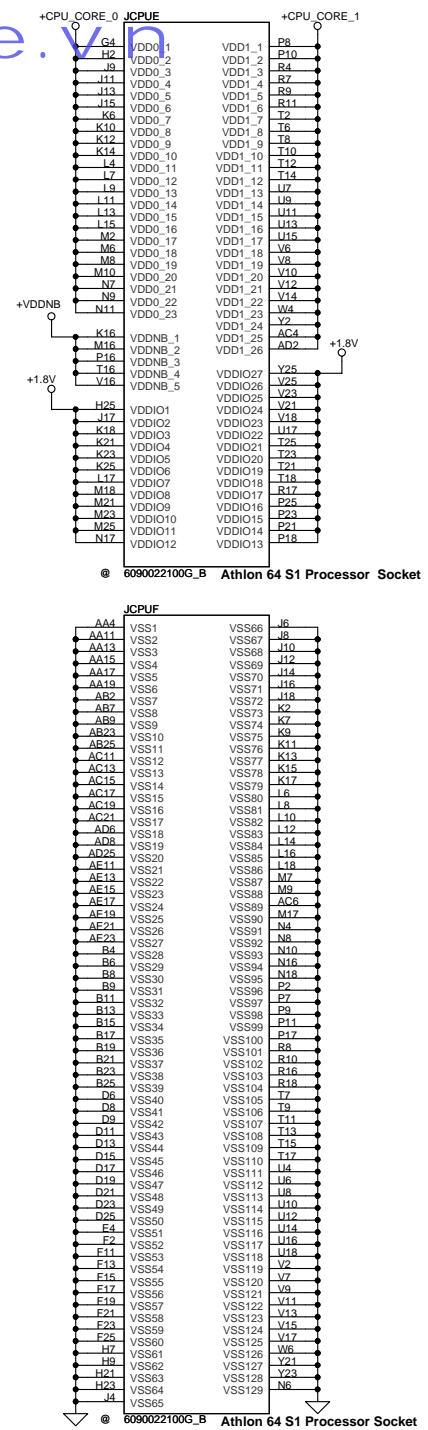
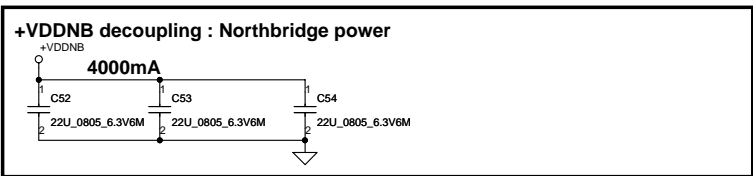
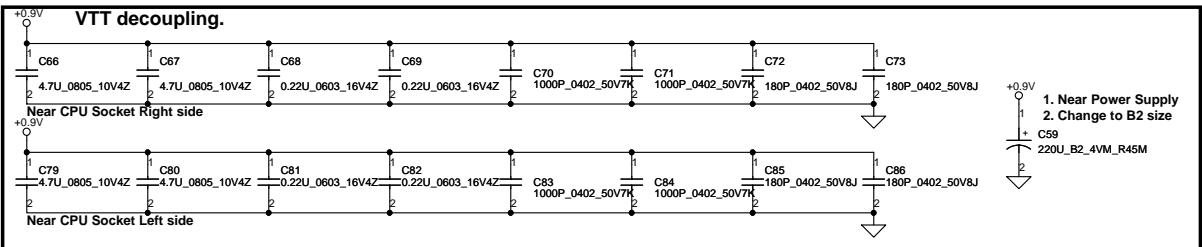
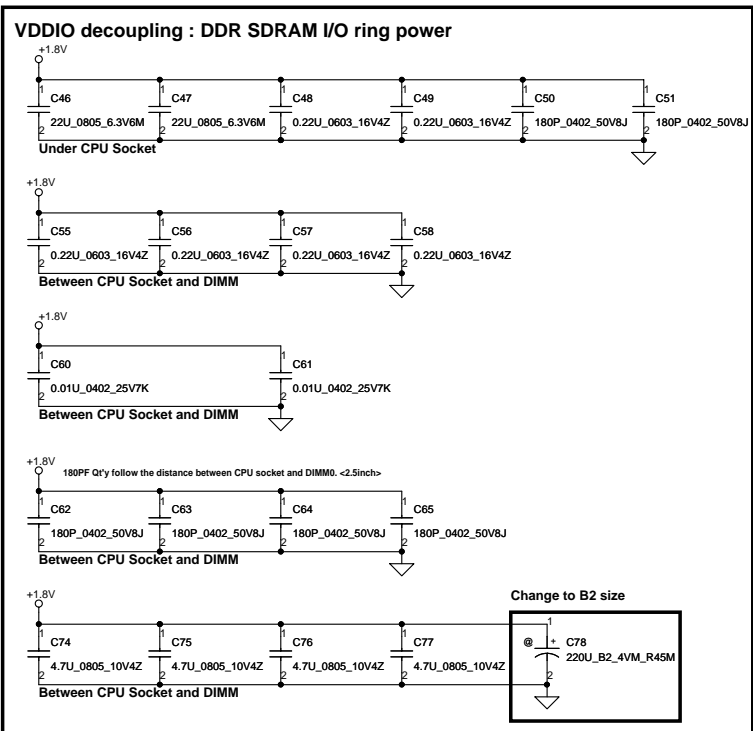
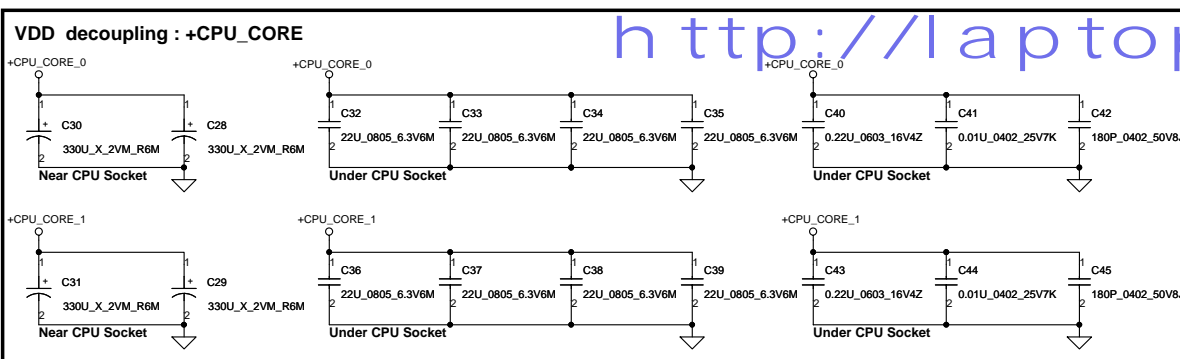




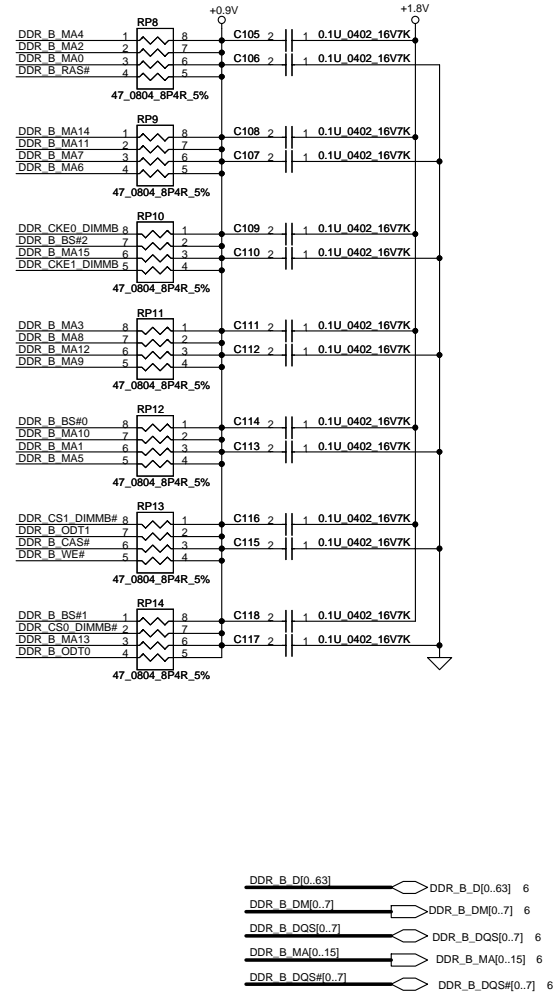
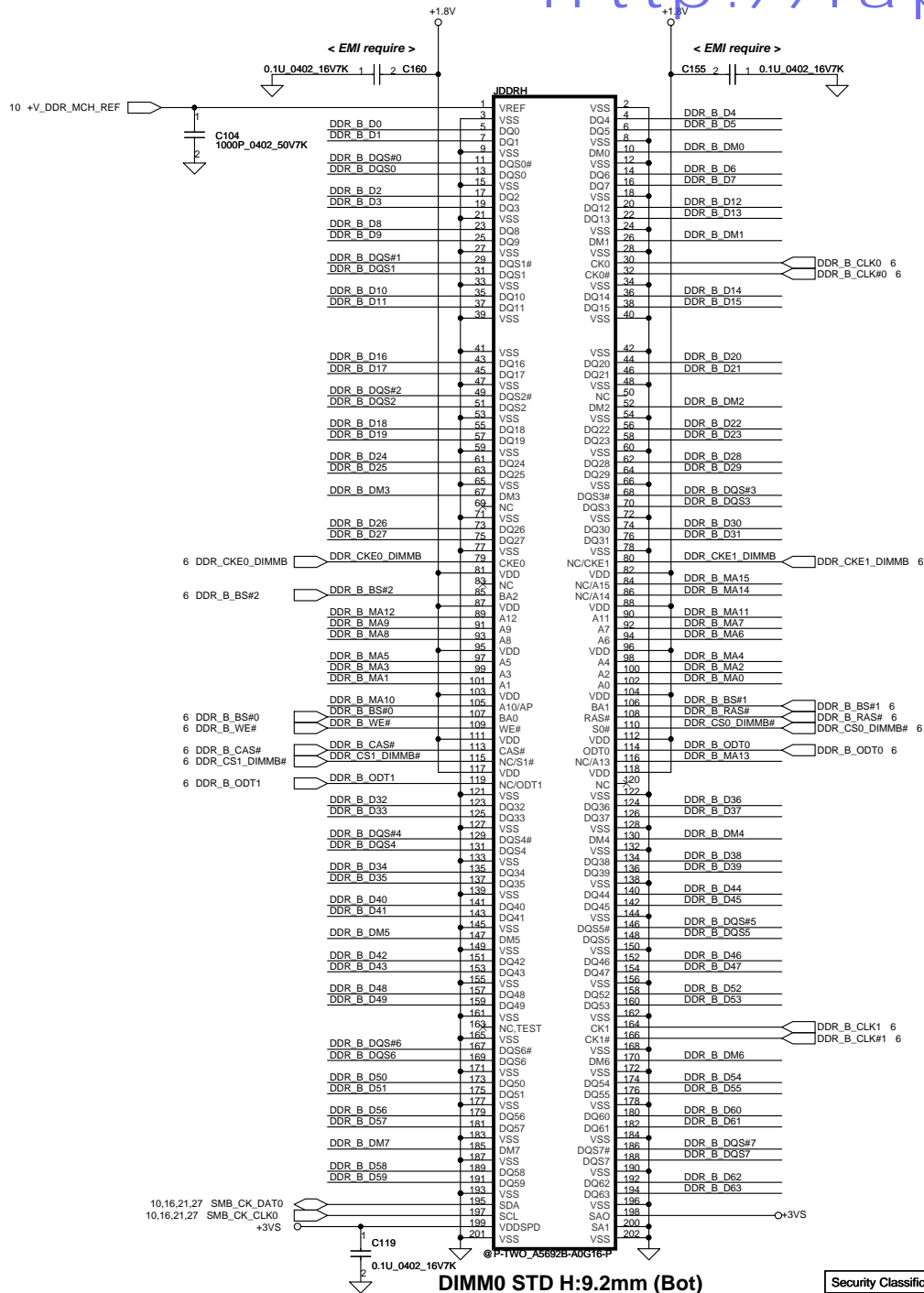
NOTE: HDT TERMINATION IS REQUIRED FOR REV. Ax SILICON ONLY.



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				Date: Tuesday, February 23, 2010	Sheet 7 of 54



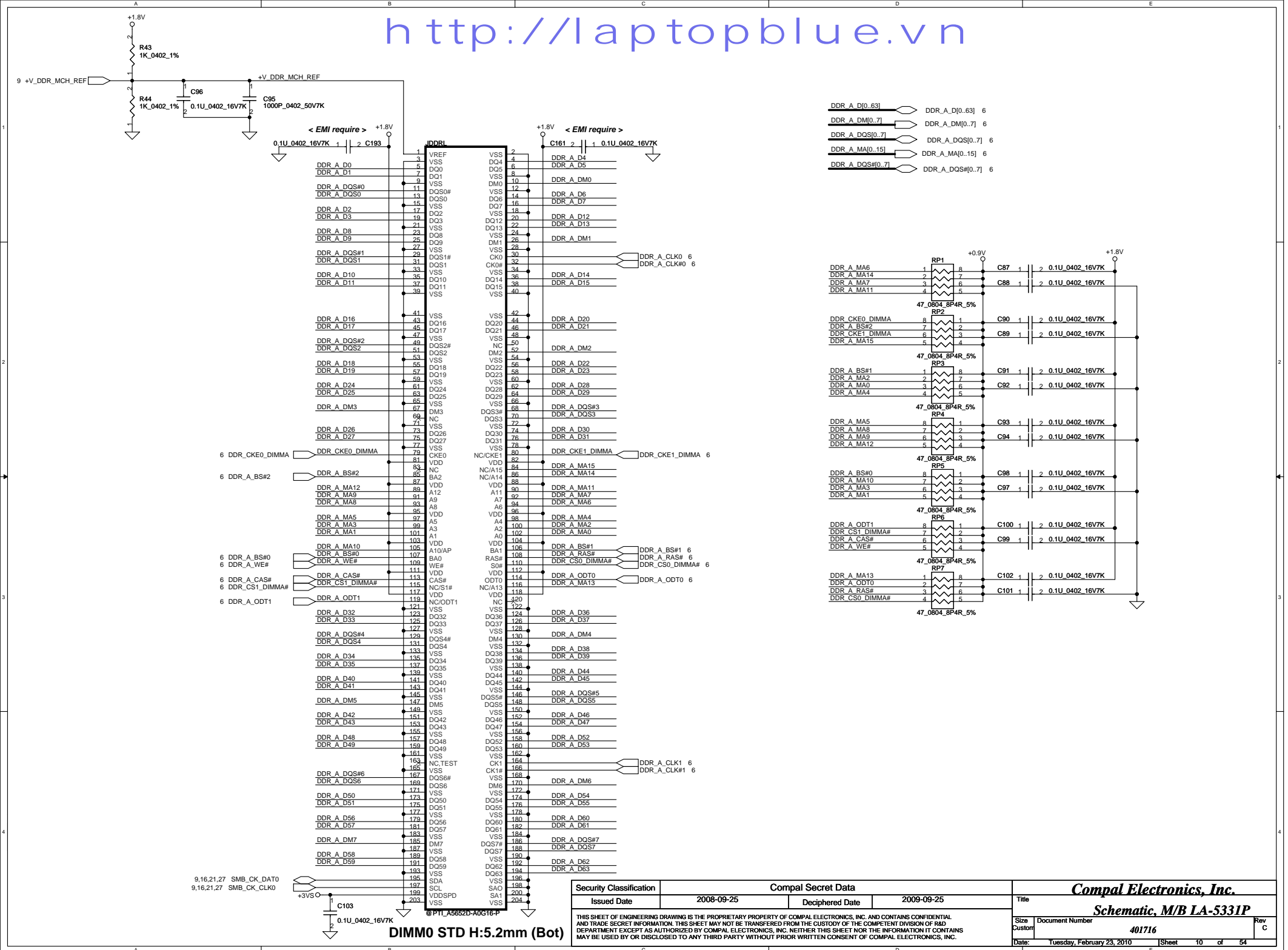
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				Date: Tuesday, February 23, 2010	Rev C
				Sheet 8	of 54

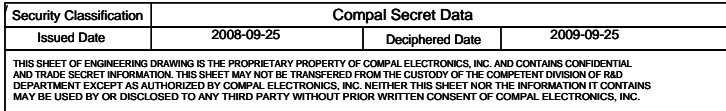


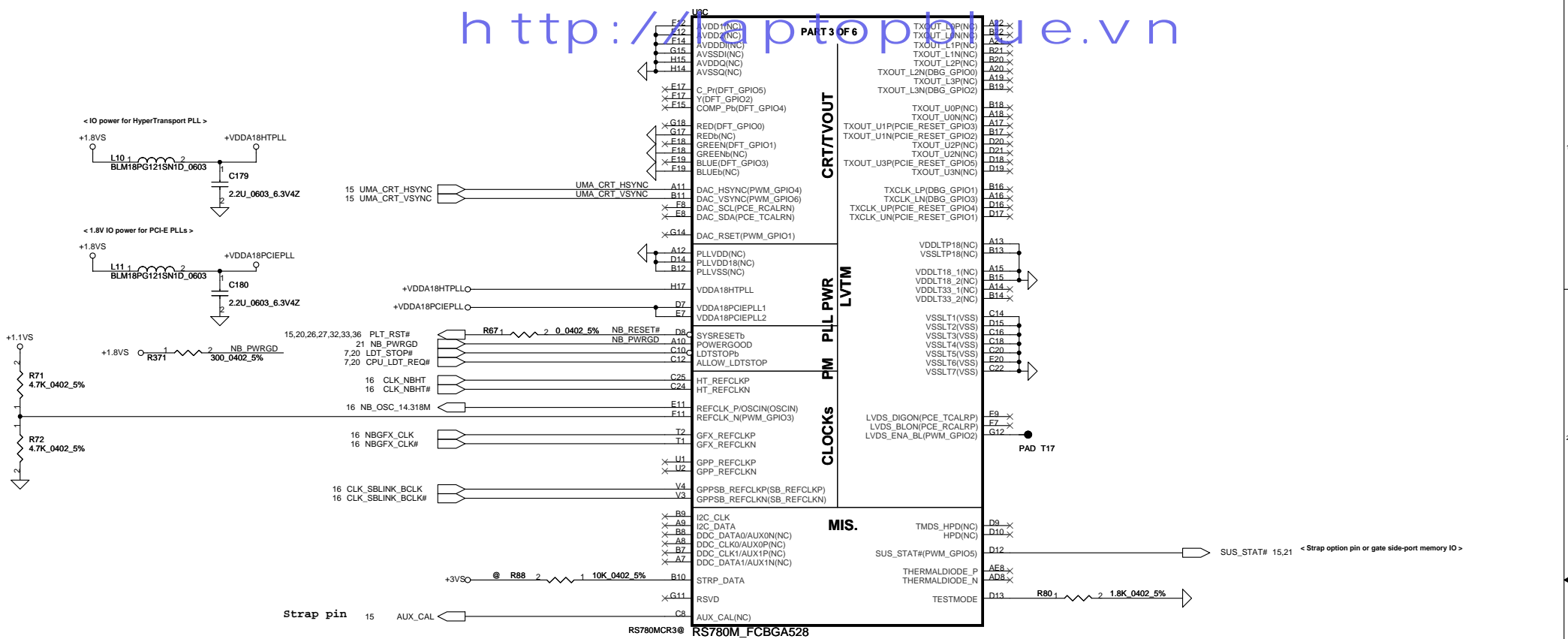
DDR B D[0..63] 6
DDR B DM[0..7] 6
DDR B DQS[0..7] 6
DDR B MA[0..15] 6
DDR B DQS#0..7 6

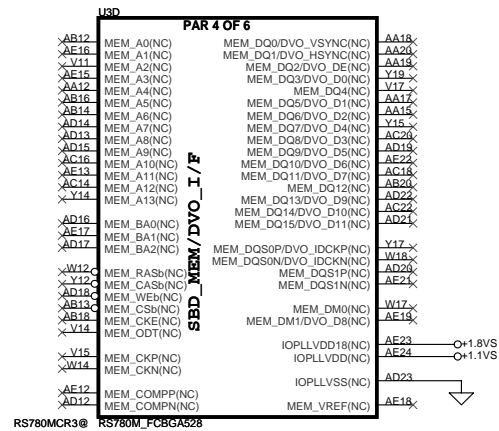
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Size	Document Number	401716		Rev	C
Date:	Tuesday, February 23, 2010	Sheet	9	of	54

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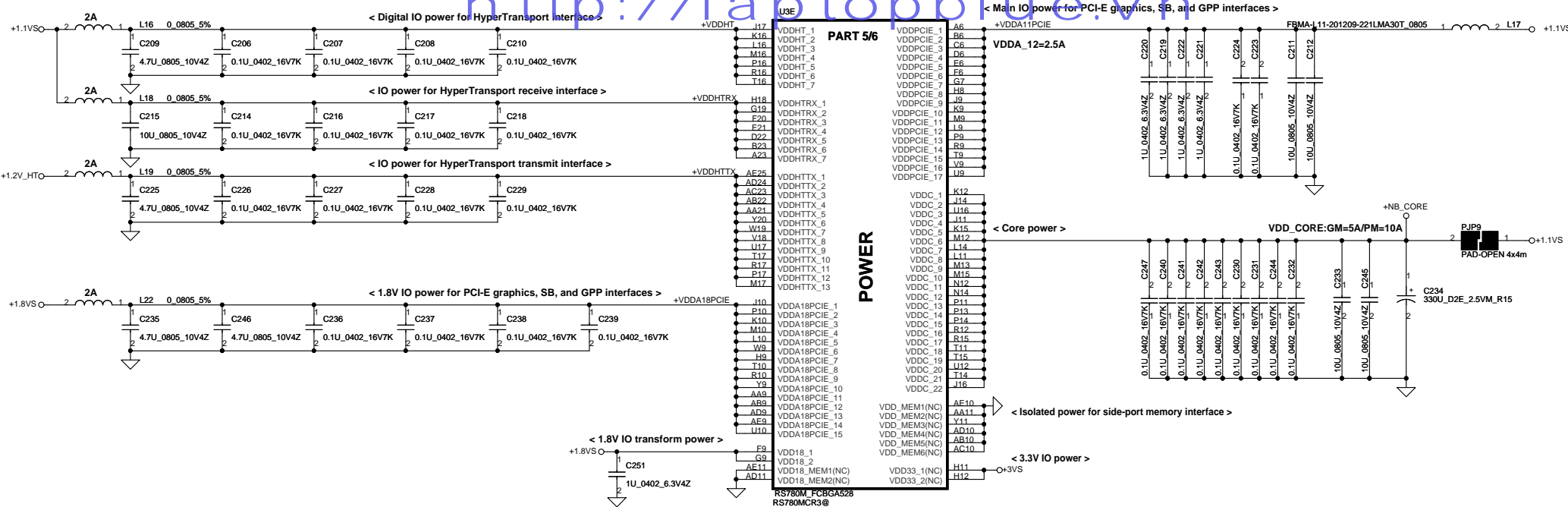




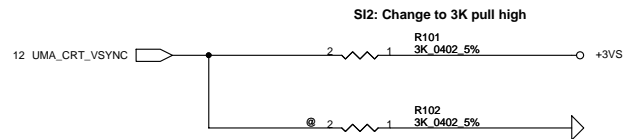




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					Schematic, M/B LA-5331P		
					Size	Document Number	Rev
					Custort	401716	C
Date:					Tuesday, February 23, 2010	Sheet 13 of 54	



< RX881 VSYNC mux at CRT_VSYNC pull High to 3K >



< VSYNC:STRAP_DEBUG_BUS_GPIO_ENABLEb >

Enables the Test Debug Bus using GPIO.

1 : Enable (RX881, RS880)
0 : Disable (RX881, RS880)

PIN: RS880--> VSYNC#

< RX881 use register to control PCI-E configure >

< DFT_GPIO[4:2] : STRAP_PCIE_GPP_CFG[2:0] >

These pin straps are used to configure PCI-E GPP mode.

000 : 00001
001 : 00010
010 : 01011
011 : 00100
100 : 01010
101 : 01100
111 : 01011

< RX881 SUS_STAT# >



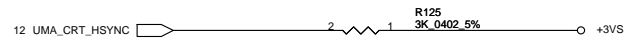
< SUS_STAT# : LOAD_EEPROM_STRAPS >

Selects Loading of STRAPS from EPROM

1 : Bypass the loading of EEPROM straps and use Hardware Default Values
0 : I2C Master can load strap values from EEPROM if connected, or use default values if not connected

RX881:SUS_STAT#

< RX881 use HSYNC to enable SIDE PORT (internal pull high) >



< HSYNC: STRAP_DEBUG_BUS_PCIE_ENABLEb >

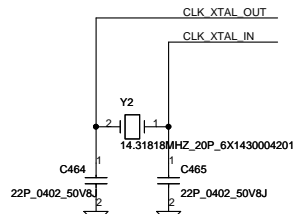
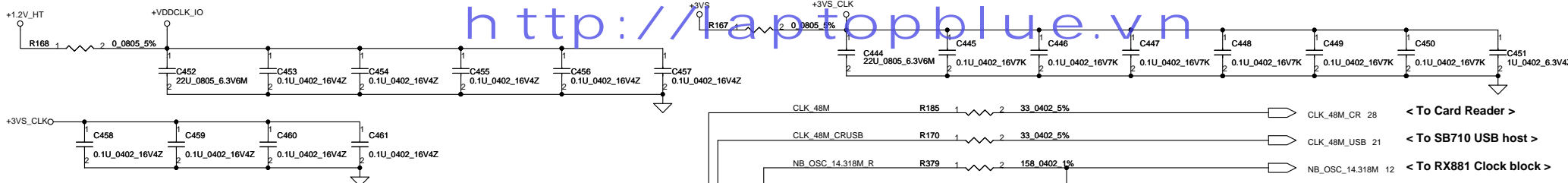
RX881: Enables the Test Debug Bus using PCIE bus

1 : Disable (Can still be enabled using nbcfg register access)
0 : Enable

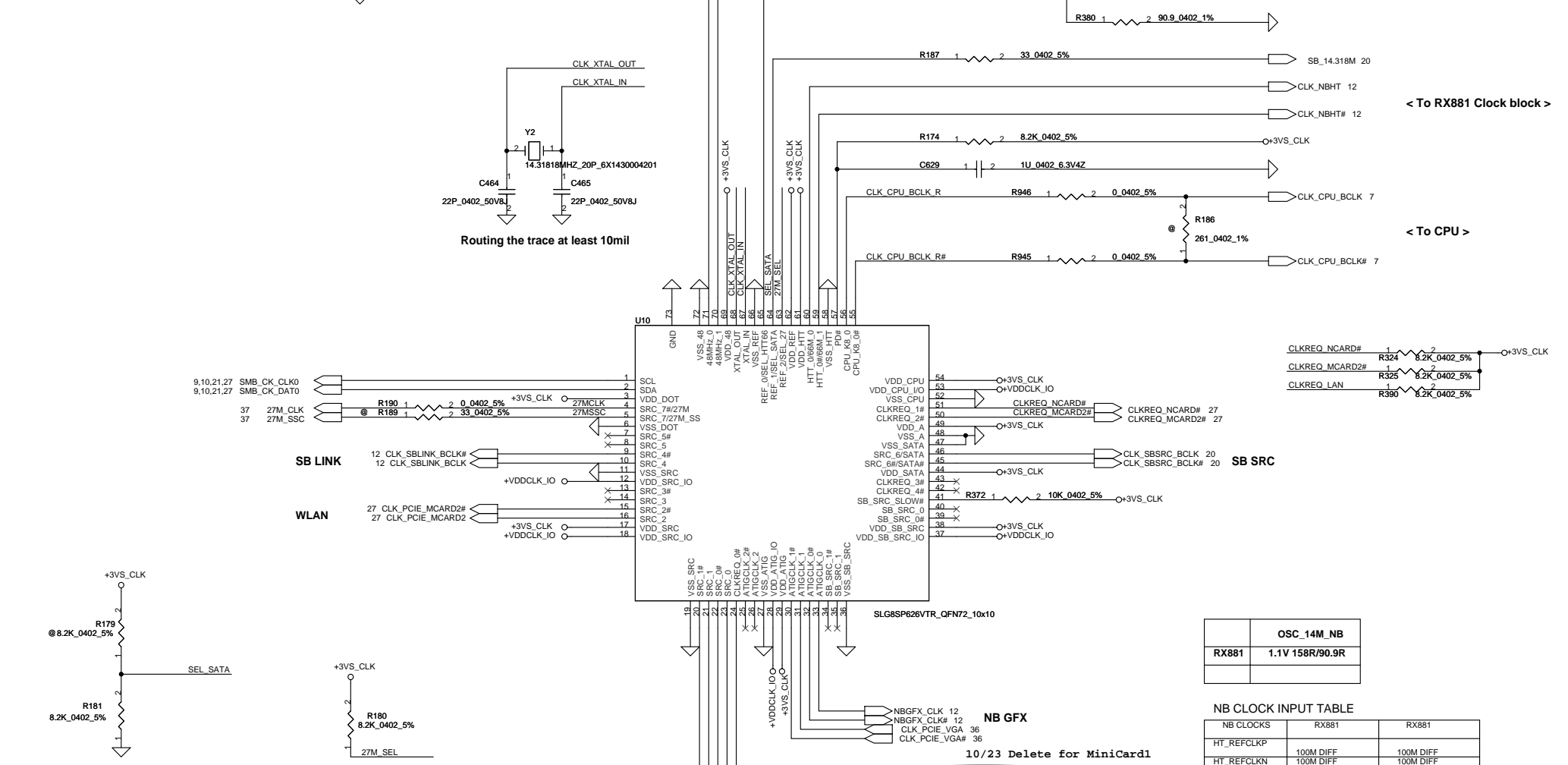
RS880: Enables Side port memory (RS780 use HSYNC#)

1. Disable (RS780)
0 : Enable (RS780)

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				Custort	401716	C
				Date:	Tuesday, February 23, 2010	Sheet 15 of 54



Routing the trace at least 10mil



SEL_SATA	1	configure as SATA output
	0 *	configure as normal SRC(SRC.6) output * default

27M_SEL	1 *	configure as 27M and 27M_SS output
	0	configure as SRC.7 output * default

	OSC_14M_NB
RX881	1.1V 158R/90.9R

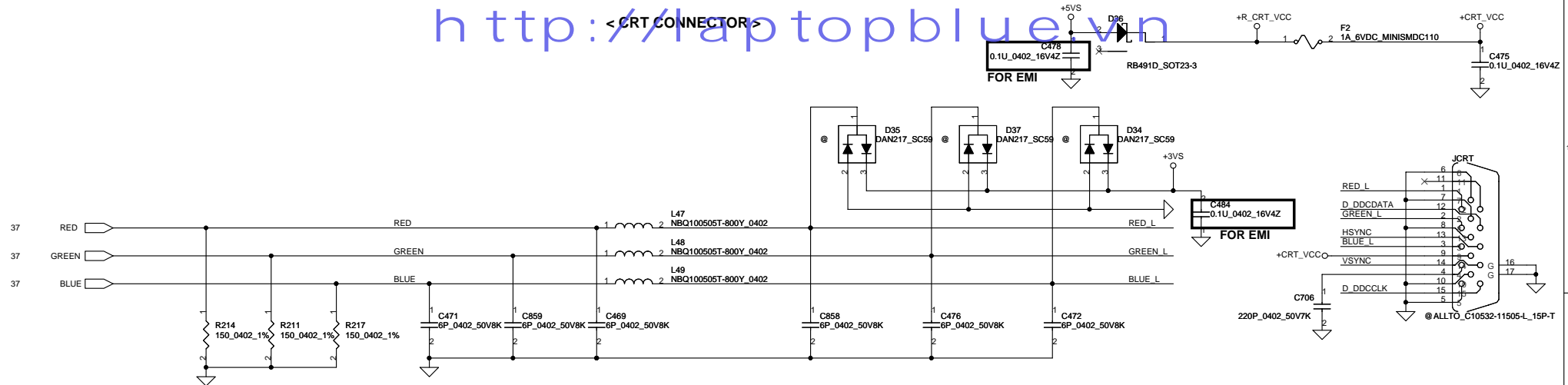
NB CLOCK INPUT TABLE

NB CLOCKS	RX881	RX881
HT_REFCLKP	100M DIFF	100M DIFF
HT_REFCLKN	100M DIFF	100M DIFF
REFCLK_P	14M SE (1.8V)	14M SE (1.1V)
REFCLK_N	NC	vref
GFX_REFCLK	100M DIFF	100M DIFF(IN/OUT)*
GPP_REFCLK	100M DIFF	NC or 100M DIFF OUTPUT
GPPSB_REFCLK	100M DIFF	100M DIFF

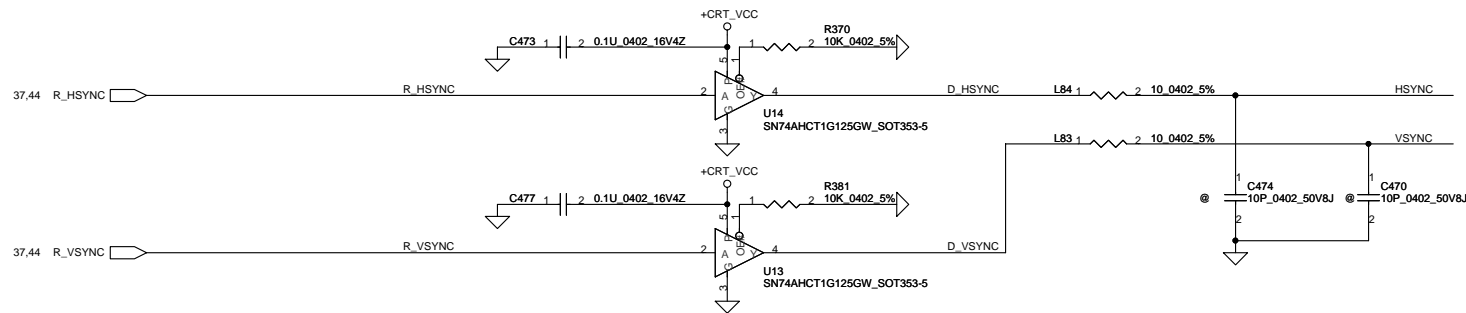
Use voltage divider resistor R379 & R380 to pull low

NB_OSC_14.318M	1	configure as single-ended 66MHz output
	0 *	configure as differential 100MHz output * default

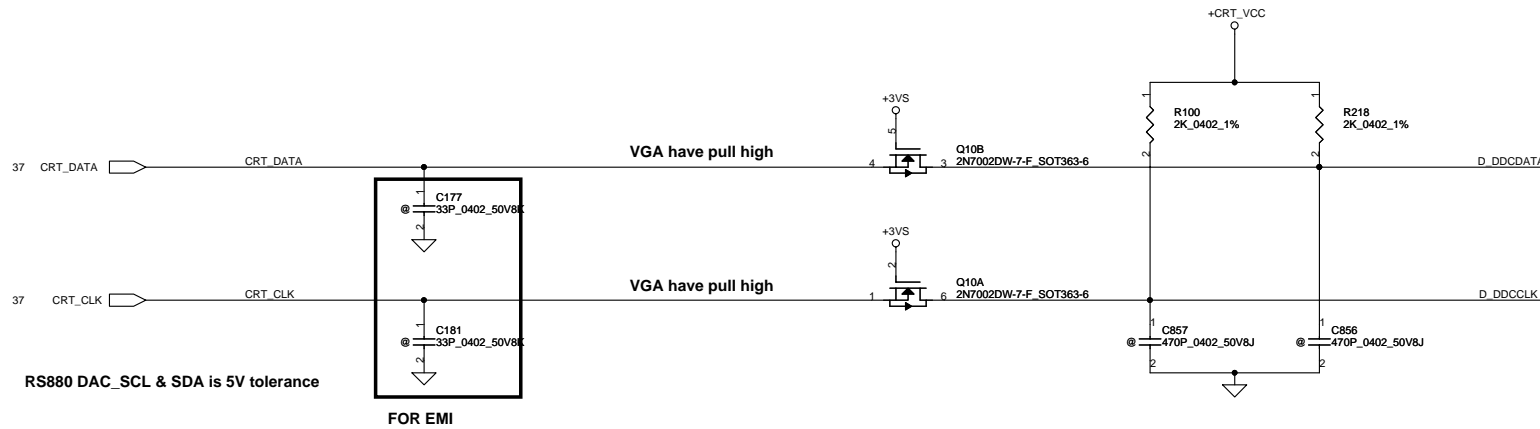
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				Custorm	401716
Date: Tuesday, February 23, 2010				Sheet	16 of 54



RS780 use 140 ohm, check RS880 use what value



< SYNC SIGNAL >



< Display Data Channel >

RS880 DAC_SCL & SDA is 5V tolerance

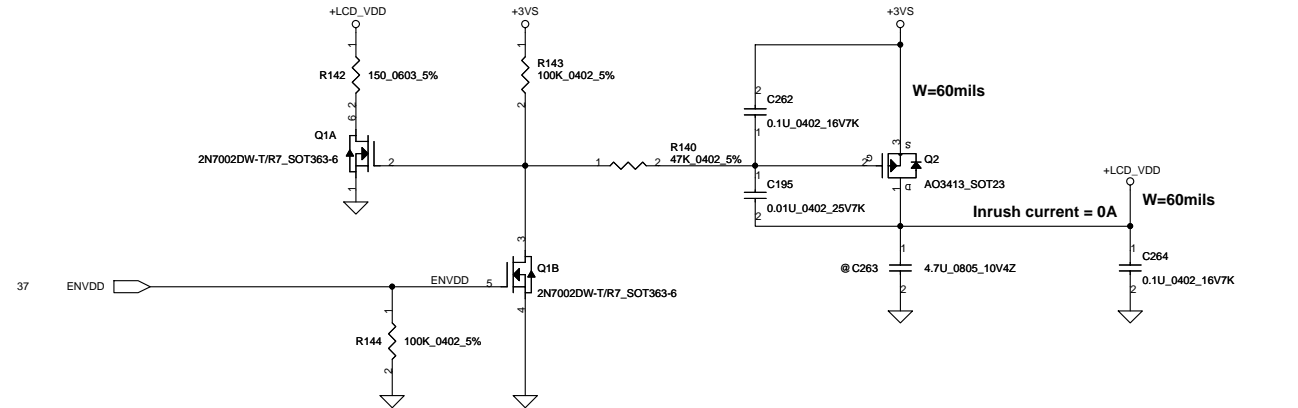
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				Rev
				C
				Date:
				Tuesday, February 23, 2010
				Sheet
				17 of 54

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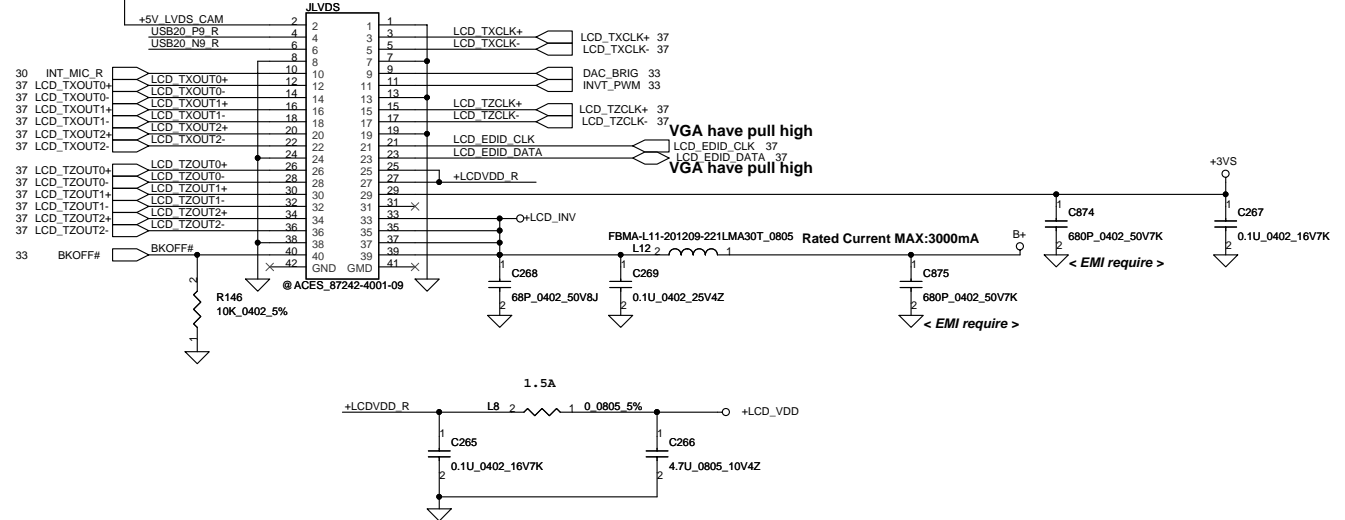
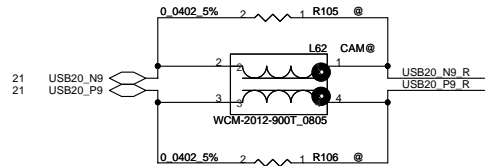
Schematic, M/B LA-5331P

LCD/PANEL BD. Conn.



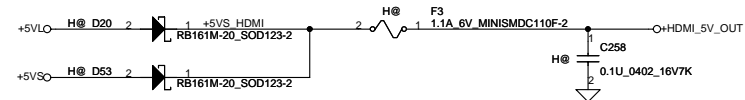
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< EMI require >

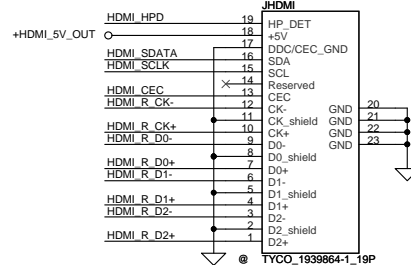


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						Size		Document Number		Rev	
						Custom		401716		C	
						Date:		Tuesday, February 23, 2010		Sheet 18 of 54	

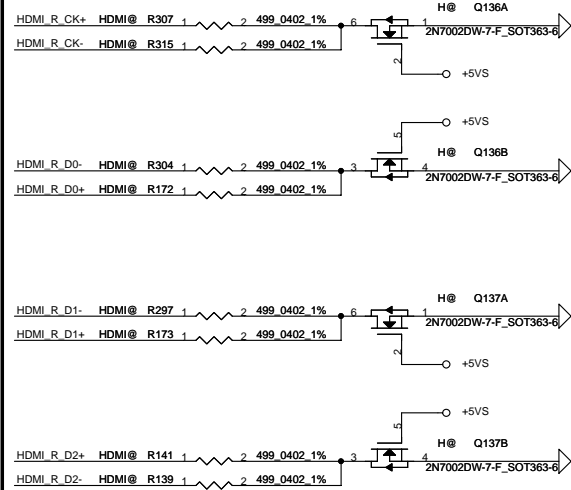
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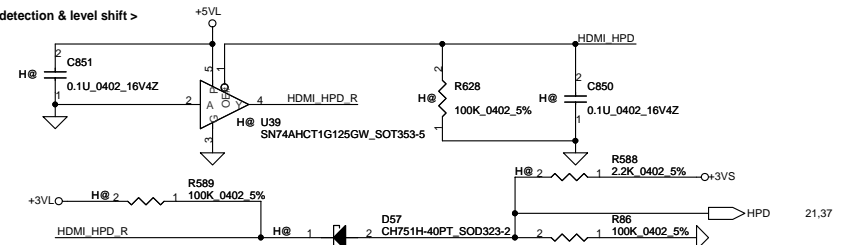
< HDMI Connector >



< Termination resistor >



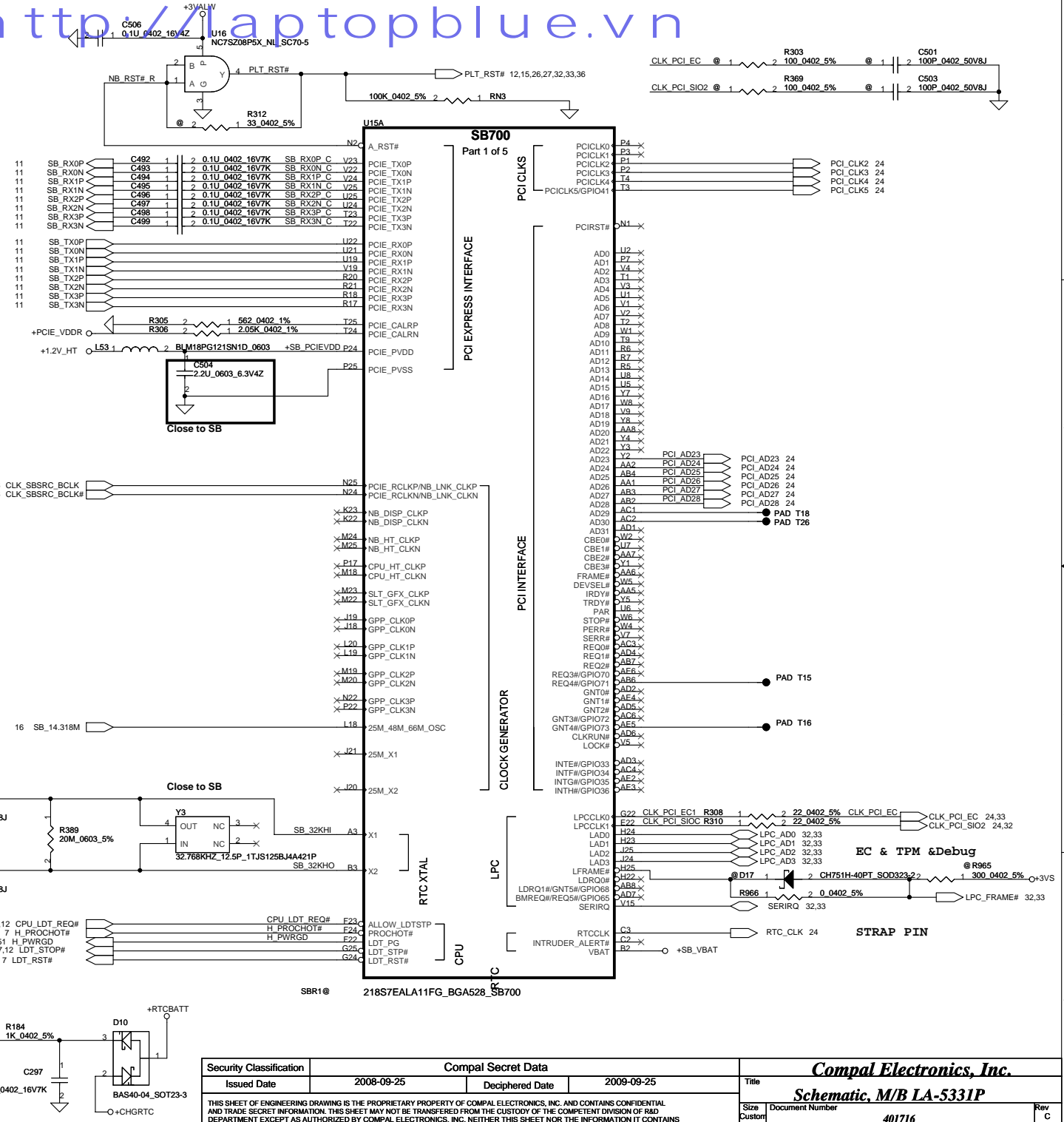
< Hot-plug detection & level shift >



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				Custmr	401716
					Rev C
				Date:	Tuesday, February 23, 2010
				Sheet	19 of 54

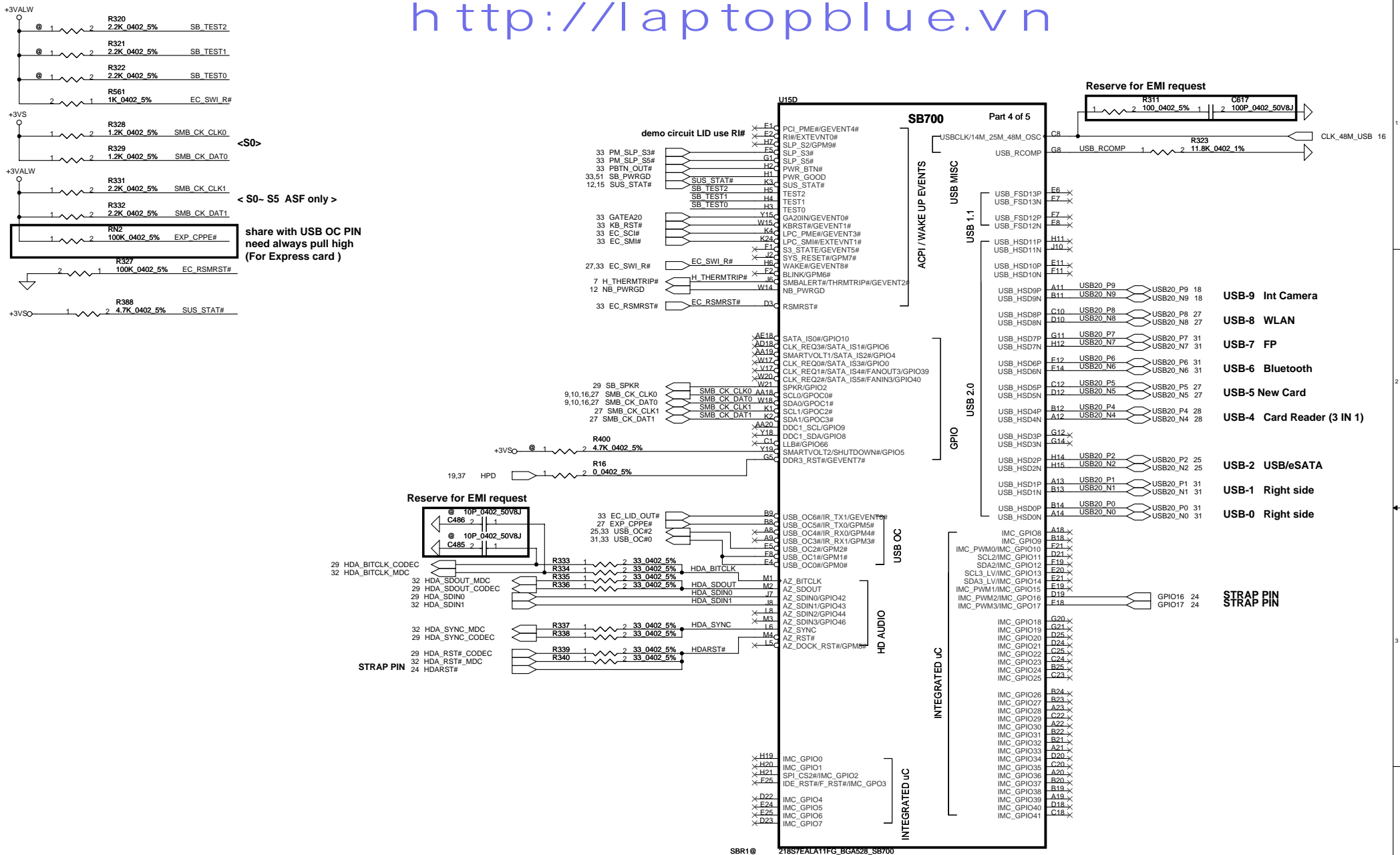
< x4 PCIE A-link To NB >

< x4 PCIE A-link from NB >



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Size		Document Number		401716	
Date		Tuesday, February 23, 2010		Sheet 20 of 54	

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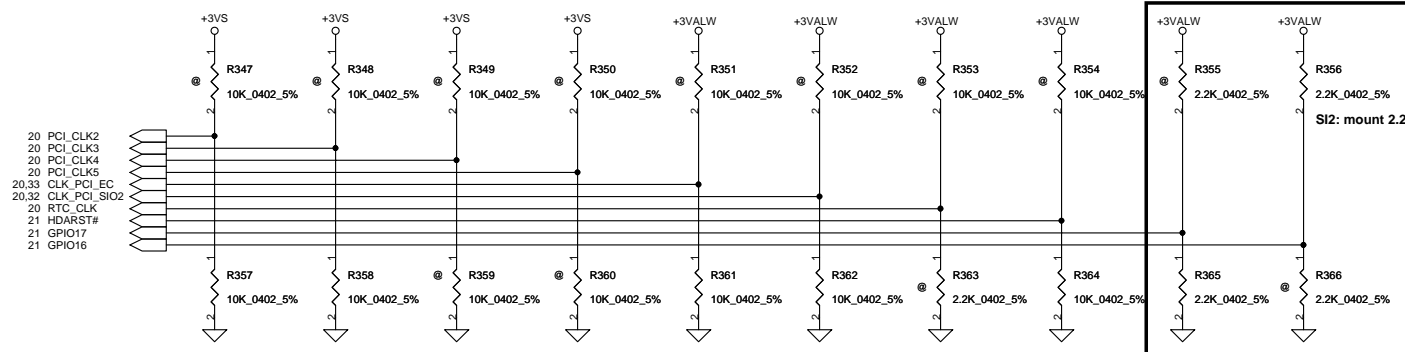


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				Custom	401716
				Date:	Tuesday, February 23, 2010
				Sheet	21 of 54
				Rev	C

REQUIRED STRAPS

NOTE: SB700 HAS INTERNAL 15K PULL UP RESISTOR FOR RTC_CLK

	PCI_CLK2	PCI_CLK3	PCI_CLK4	PCI_CLK5	LPC_CLK0	LPC_CLK1	RTC_CLK	AZ_RST_CD#	GP17	GP16
PULL HIGH	BOOTFAIL TIMER ENABLED	USE DEBUG STRAPS	RESERVED	RESERVED	ENABLE PCI MEM BOOT	CLKGEN ENABLED	INTERNAL RTC DEFAULT	EC ENABLED	Internal pull up H,H = Reserved H,L = SPI ROM	
PULL LOW	BOOTFAIL TIMER DISABLED DEFAULT	IGNORE DEBUG STRAPS DEFAULT			DISABLE PCI MEM BOOT DEFAULT	CLKGEN DISABLED DEFAULT	EXT. RTC (PD on X1, apply 32KHz to RTC_CLK)	EC DISABLED DEFAULT		L,H = LPC ROM (Default) L,L = FWH ROM

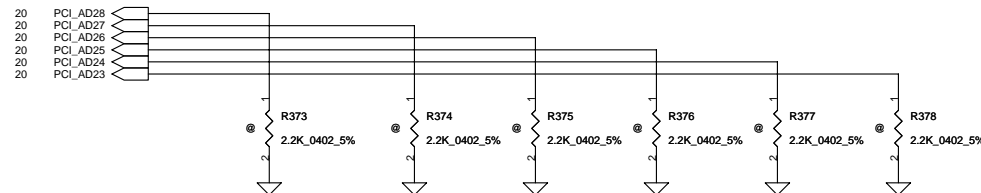


Need to confirm if SB SPI ROM will mount

DEBUG STRAPS

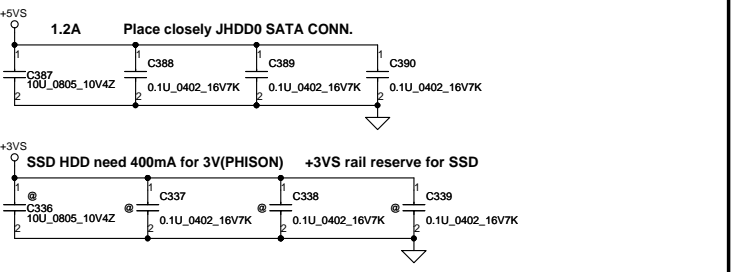
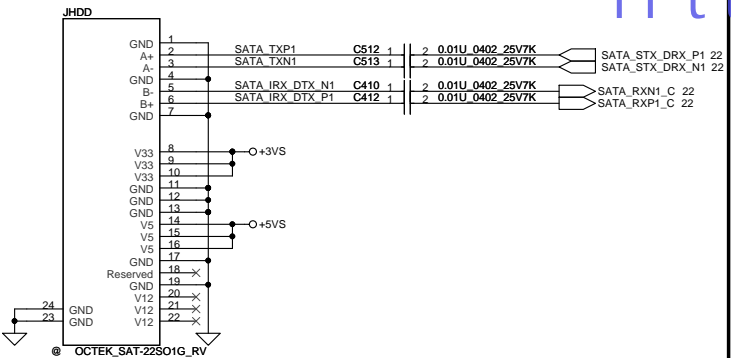
SB700 HAS 15K INTERNAL PU FOR PCI_AD[28:23]

	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	RESERVED
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	

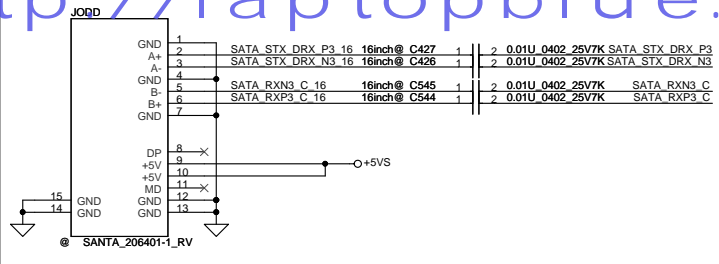


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				Size Custom	Document Number 401716
Date: Tuesday, February 23, 2010				Rev C	
Sheet 24 of 54					

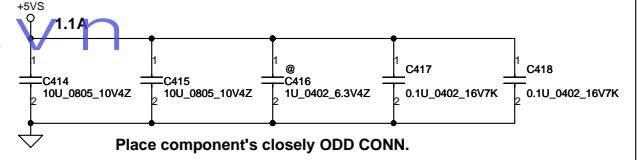
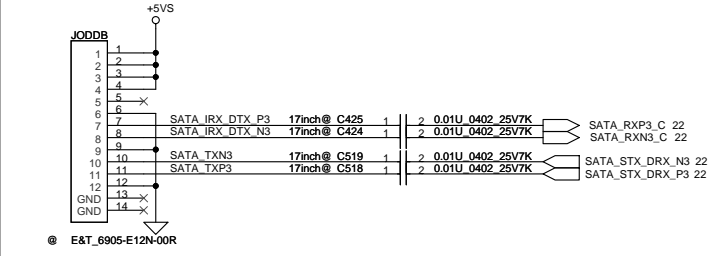
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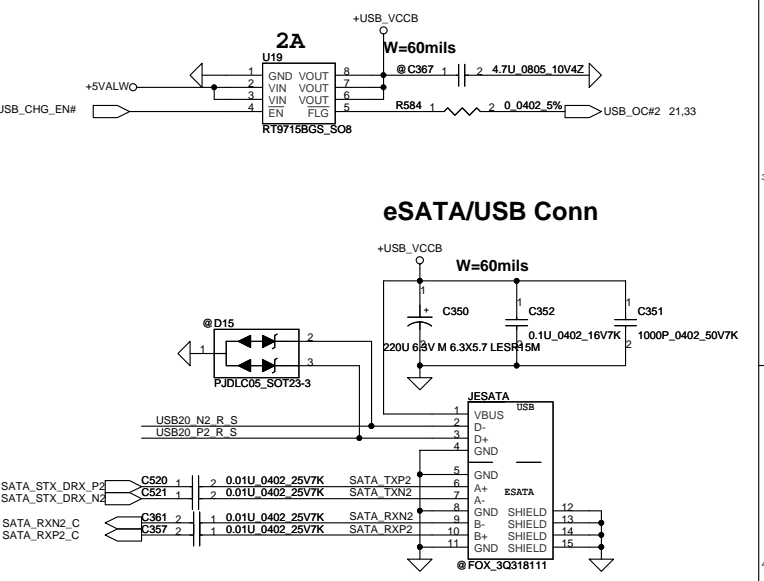
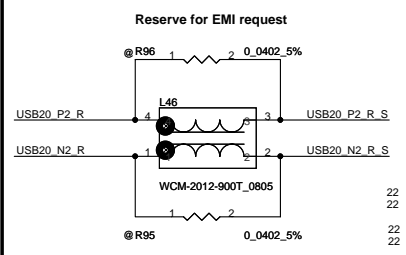
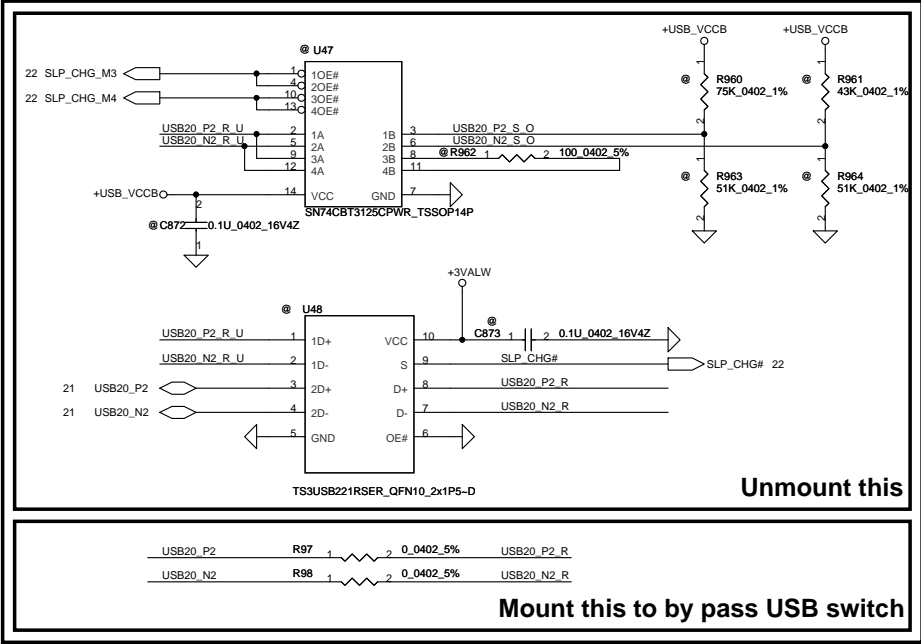
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< 17" SATA ODD Conn >



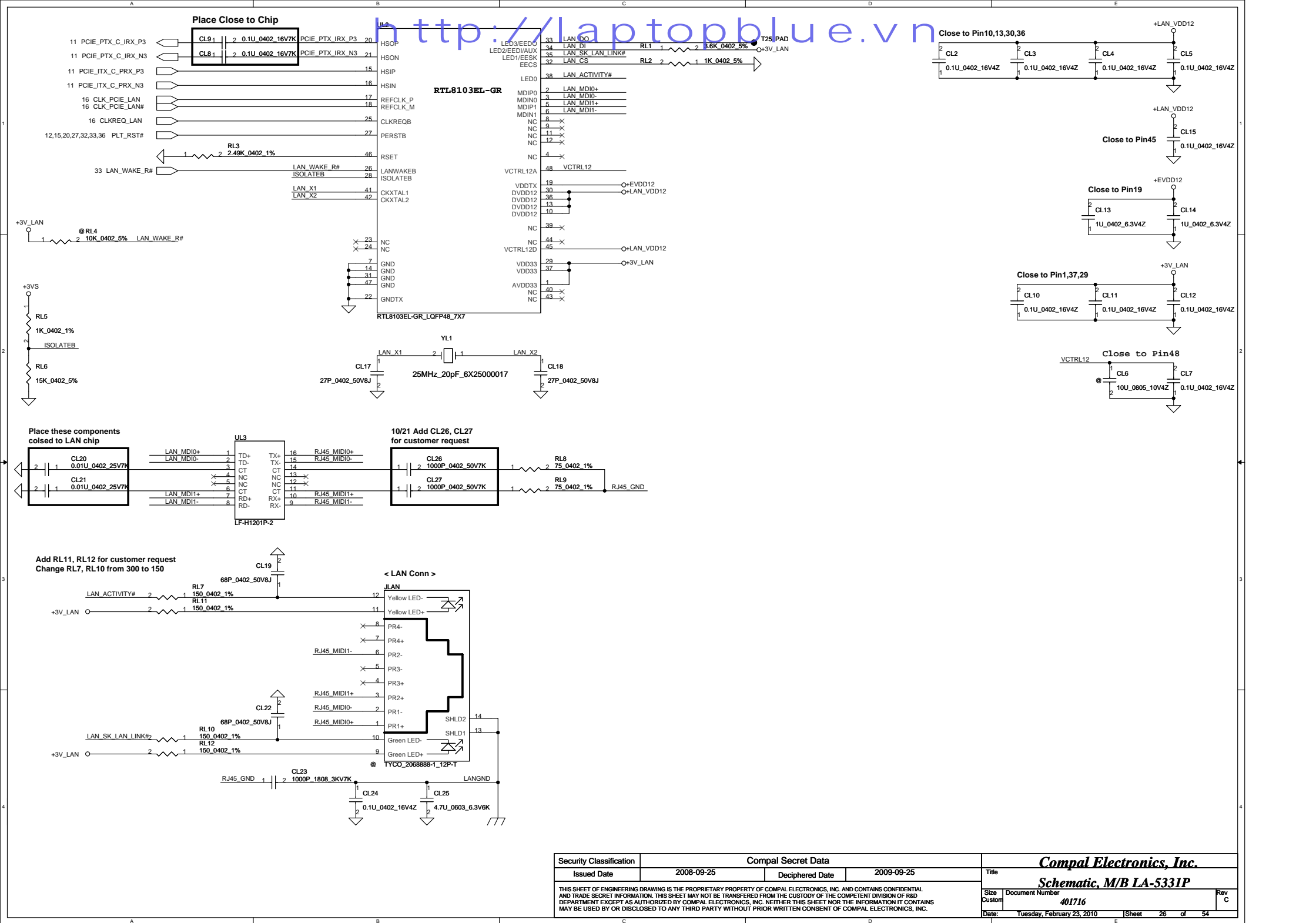
< eSATA/USB > 10/22 Add for USB Sleep & Charge M3/M4



	SLP_CHG_M3	SLP_CHG_M4
Mode 3	HIGH	LOW
Mode 4	LOW	HIGH

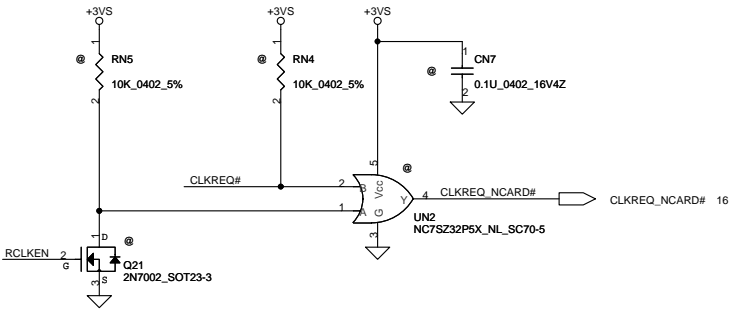
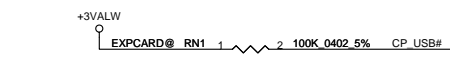
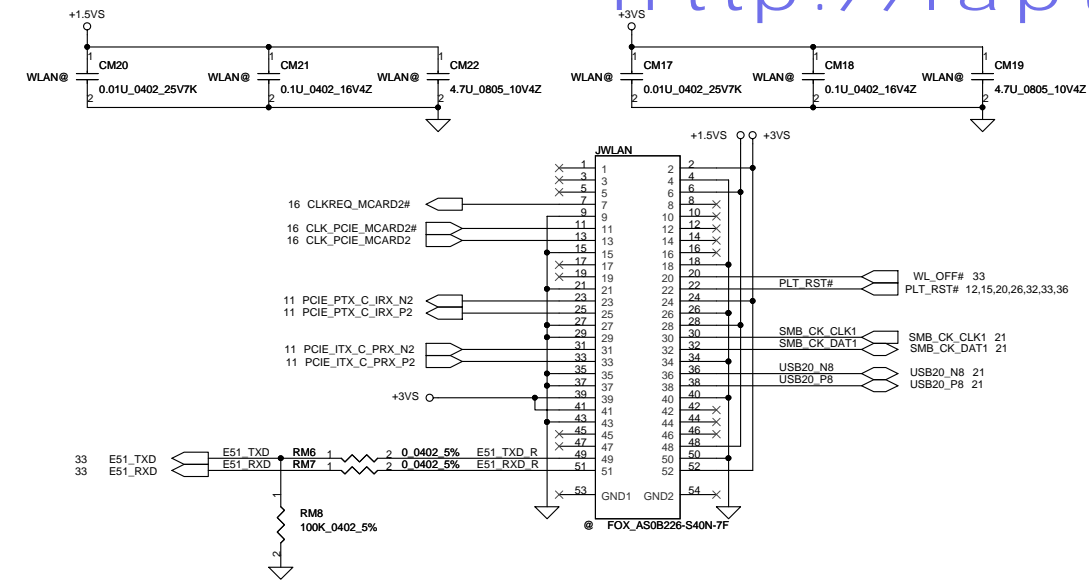
SLP_CHG#	FUNCTION
LOW	D=1D
HIGH	D=2D

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Size	Document Number	401716	Rev	C
Date:	Tuesday, February 23, 2010	Sheet	25	of 54

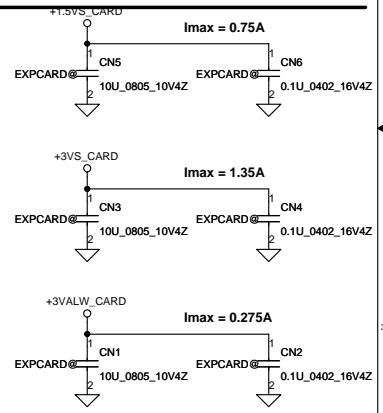
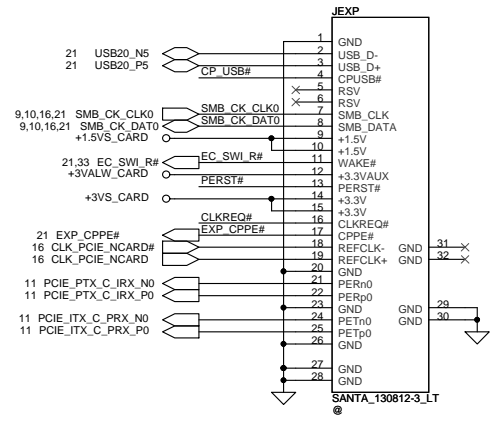
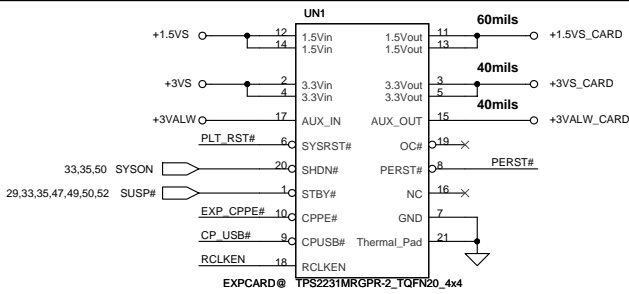
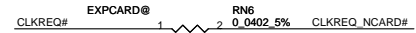


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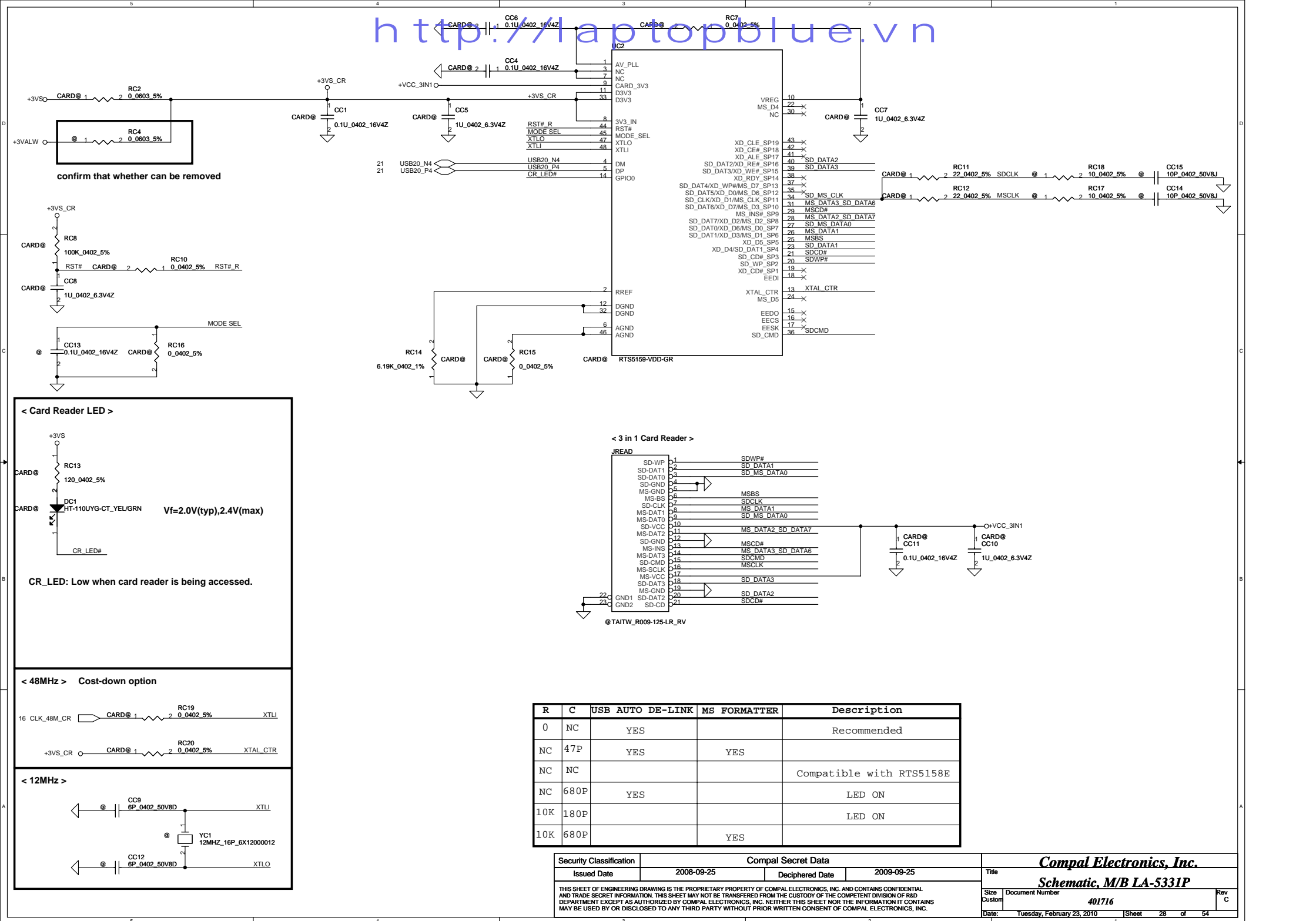
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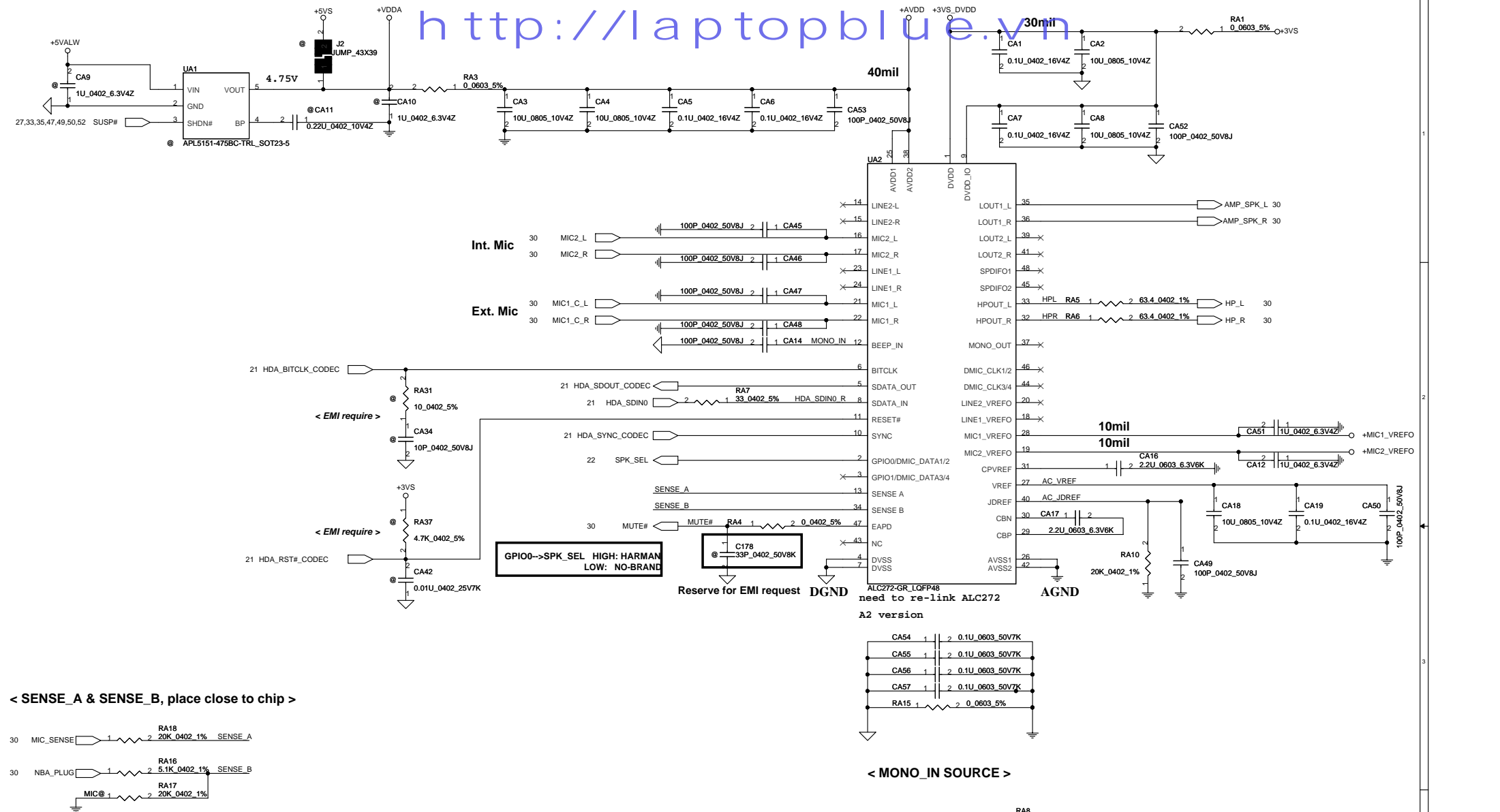


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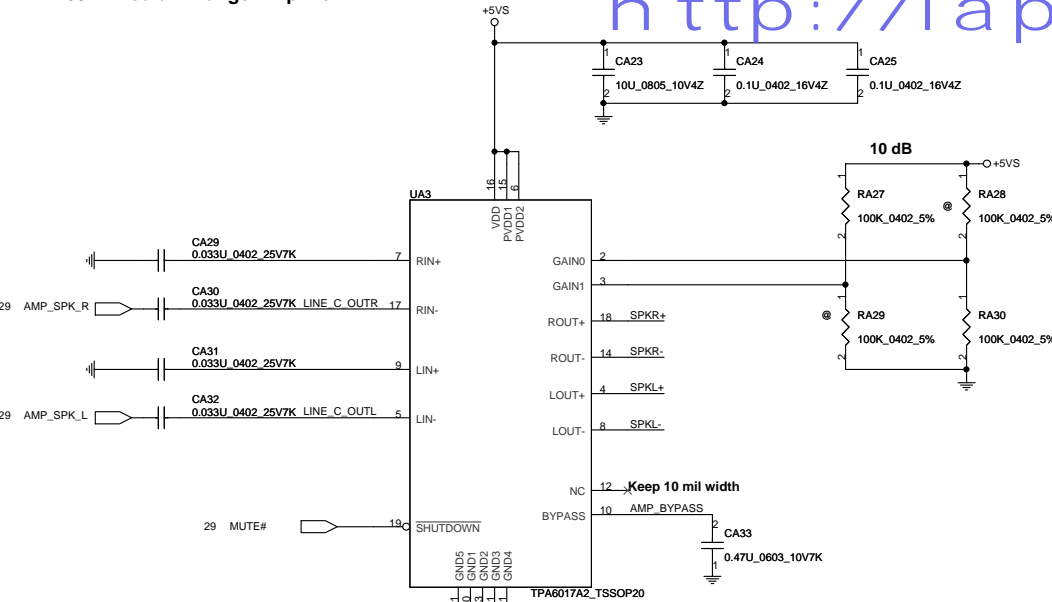
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				401716				Rev			
				C				Date: Tuesday, February 23, 2010			
				Sheet				27 of 54			



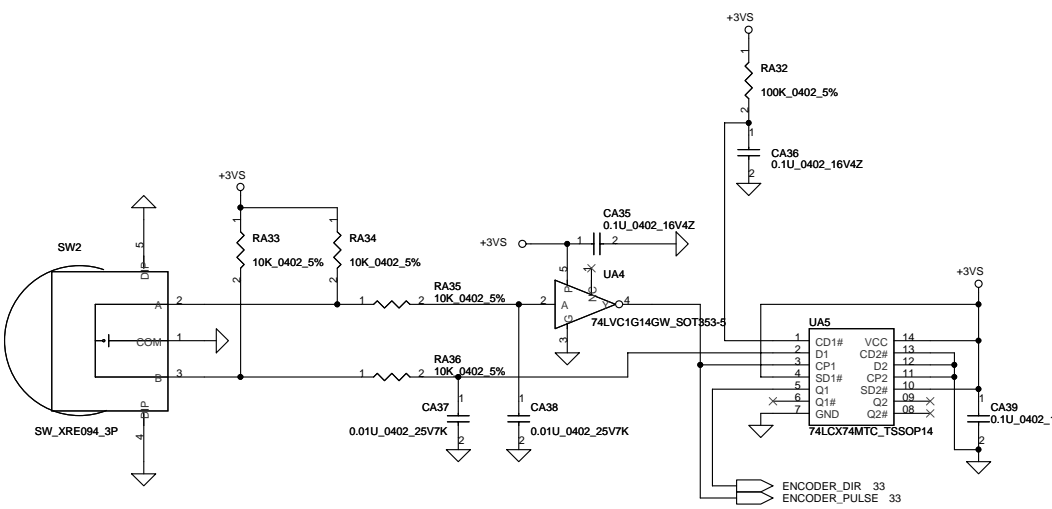


Sense Pin	Impedance	Codec Signals	Function
SENSE A	39.2K	PORT-A (PIN 39, 41)	Ext. MIC
	20K	PORT-B (PIN 21, 22)	
	10K	PORT-C (PIN 23, 24)	
	5.1K	PORT-D (PIN 35, 36)	
SENSE B	39.2K	PORT-E (PIN 14, 15)	Int. MIC
	20K	PORT-F (PIN 16, 17)	
	10K	PORT-H (PIN 37)	
	5.1K	PORT-I (PIN 32, 33)	Headphone out

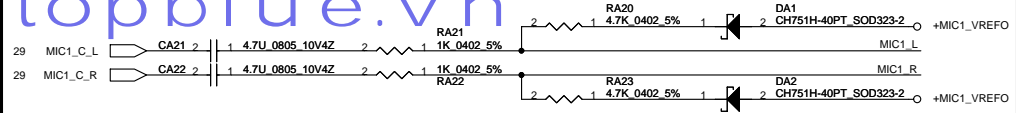
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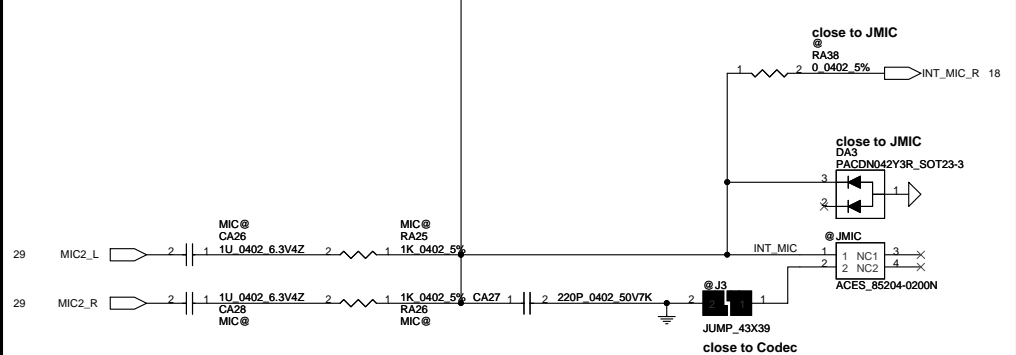
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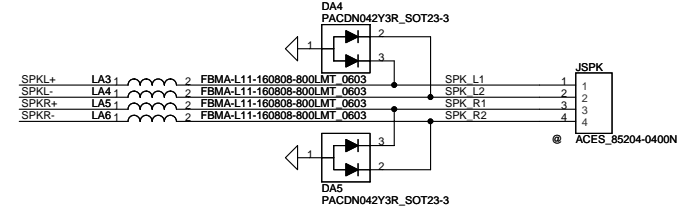
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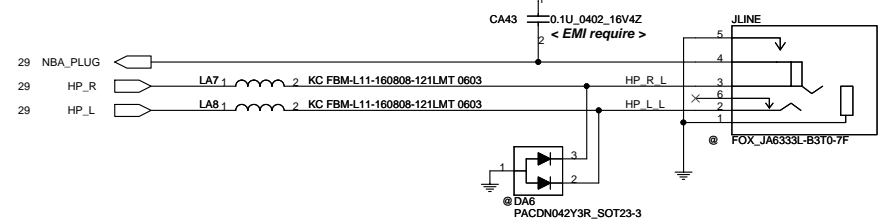
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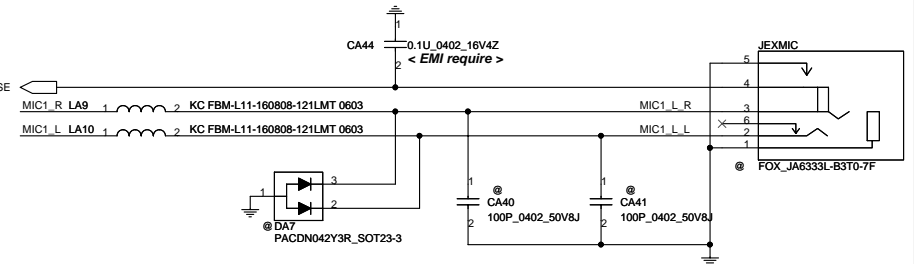
< Speaker Connector >



< HeadPhone JACK >

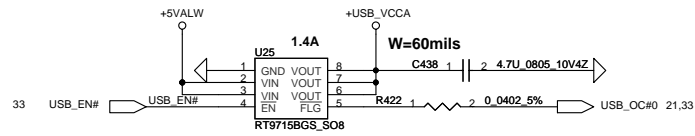


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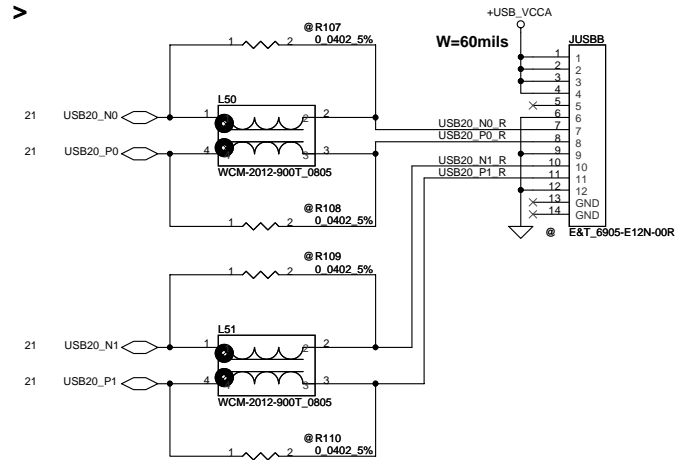


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Size	Custom	Document Number	401716	Rev	C
Date:	Tuesday, February 23, 2010	Sheet	30	of	54

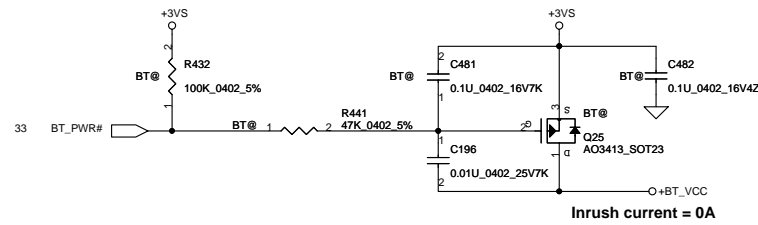
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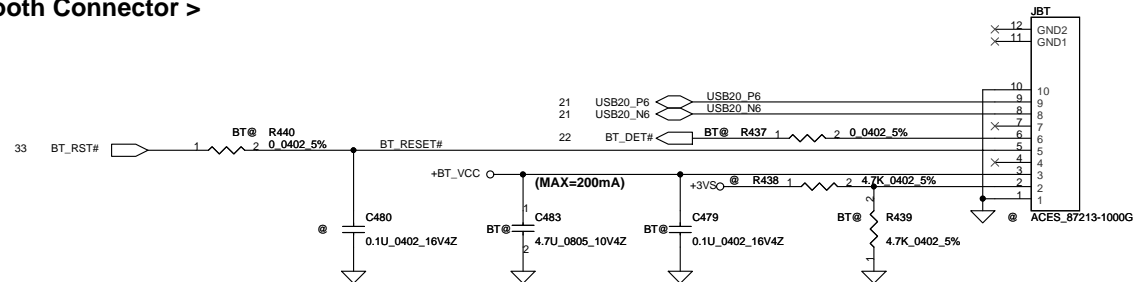
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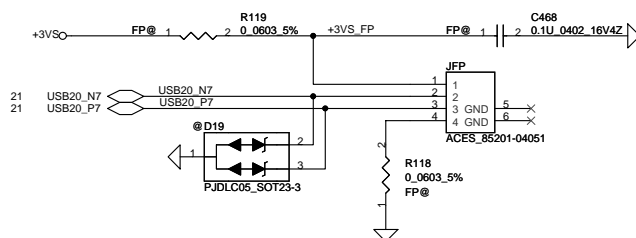
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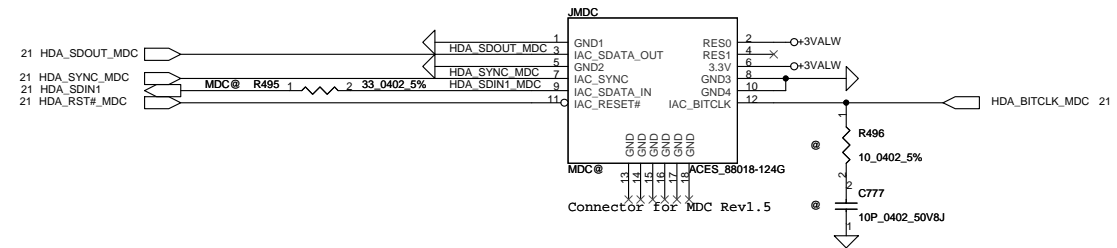


< Finger Printer, USB port 7 >



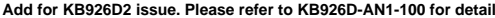
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				401716				Document Number			
				Tuesday, February 23, 2010				Date			
				Sheet 31 of 54				Rev C			

< MDC 1.5 Conn >



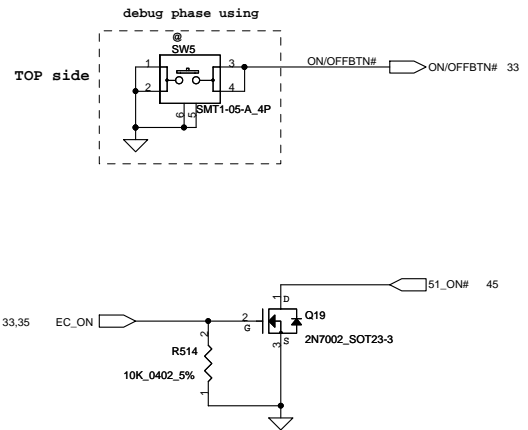
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KS01	C717	1	2	100P	0402	50V8/J
KS00	C721	1	2	100P	0402	50V8/J
KS01	C609	1	2	100P	0402	50V8/J
KS03	C794	1	2	100P	0402	50V8/J
KS05	C728	1	2	100P	0402	50V8/J
KS014	C730	1	2	100P	0402	50V8/J
KS08	C715	1	2	100P	0402	50V8/J
KS07	C732	1	2	100P	0402	50V8/J
KS013	C733	1	2	100P	0402	50V8/J
KS08	C740	1	2	100P	0402	50V8/J
KS07	C737	1	2	100P	0402	50V8/J
KS010	C729	1	2	100P	0402	50V8/J
KS011	C736	1	2	100P	0402	50V8/J
KS012	C738	1	2	100P	0402	50V8/J
KS015	C735	1	2	100P	0402	50V8/J
KS17	C716	1	2	100P	0402	50V8/J
KS12	C741	1	2	100P	0402	50V8/J
KS13	C726	1	2	100P	0402	50V8/J
KS14	C723	1	2	100P	0402	50V8/J
KS10	C731	1	2	100P	0402	50V8/J
KS15	C739	1	2	100P	0402	50V8/J
KS16	C734	1	2	100P	0402	50V8/J
KS1	C733	1	2	100P	0402	50V8/J
CAPS LED#	C722	1	2	100P	0402	50V8/J
NUM LED#	C714	1	2	100P	0402	50V8/J
KS016	C870	1	2	100P	0402	50V8/J
KS017	C871	1	2	100P	0402	50V8/J

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				401716	
Date:				Tuesday, February 23, 2010	Sheet 32 of 54

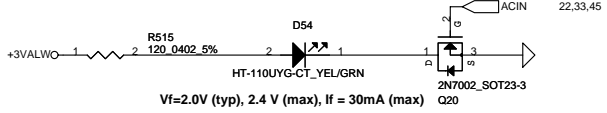


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				Custom	401716
				Date:	Tuesday, February 23, 2010
				Sheet	33 of 54
				Rev	C

< Power Button for Debug >



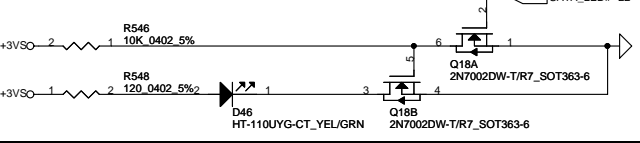
< DC-IN LED >



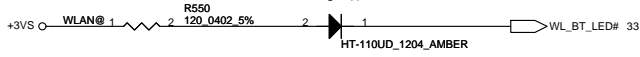
< WiMAX LED >

Remove WiMAX LED control circuit

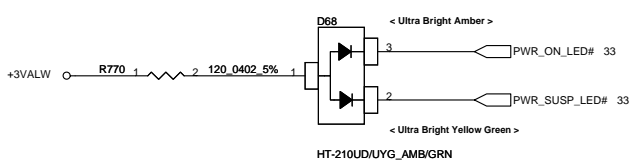
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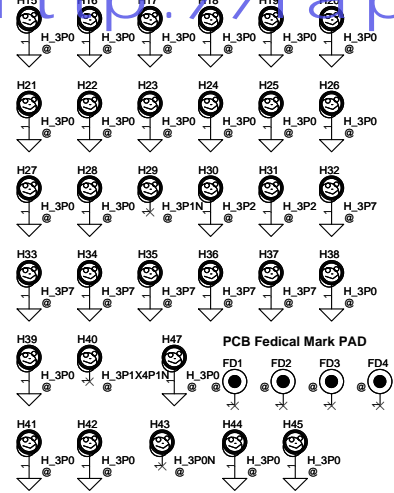
< WL&BT LED >



< POWER-ON & SUSPEND LED >



< Screw Hole >



MDC: H30, H31

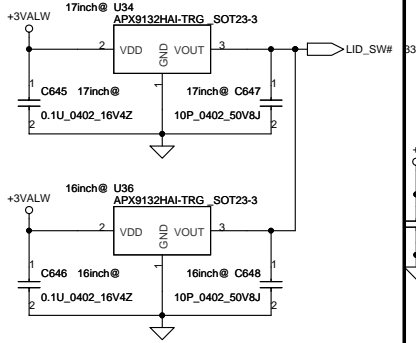
VGA: H38, H39, H41

CPU: H32, H33, H34, H35

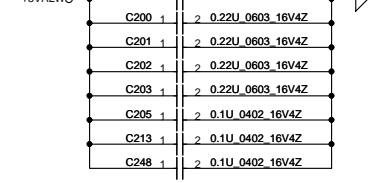
Mini Card: H36, H37

Others: H15, H16, H17, H18, H19, H20, H21, H22, H23, H24, H25, H26, H27, H28, H29, H40, H42, H43, H44, H45

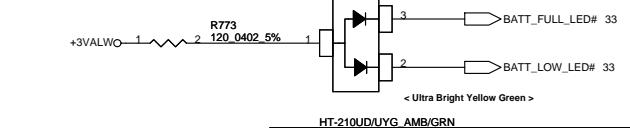
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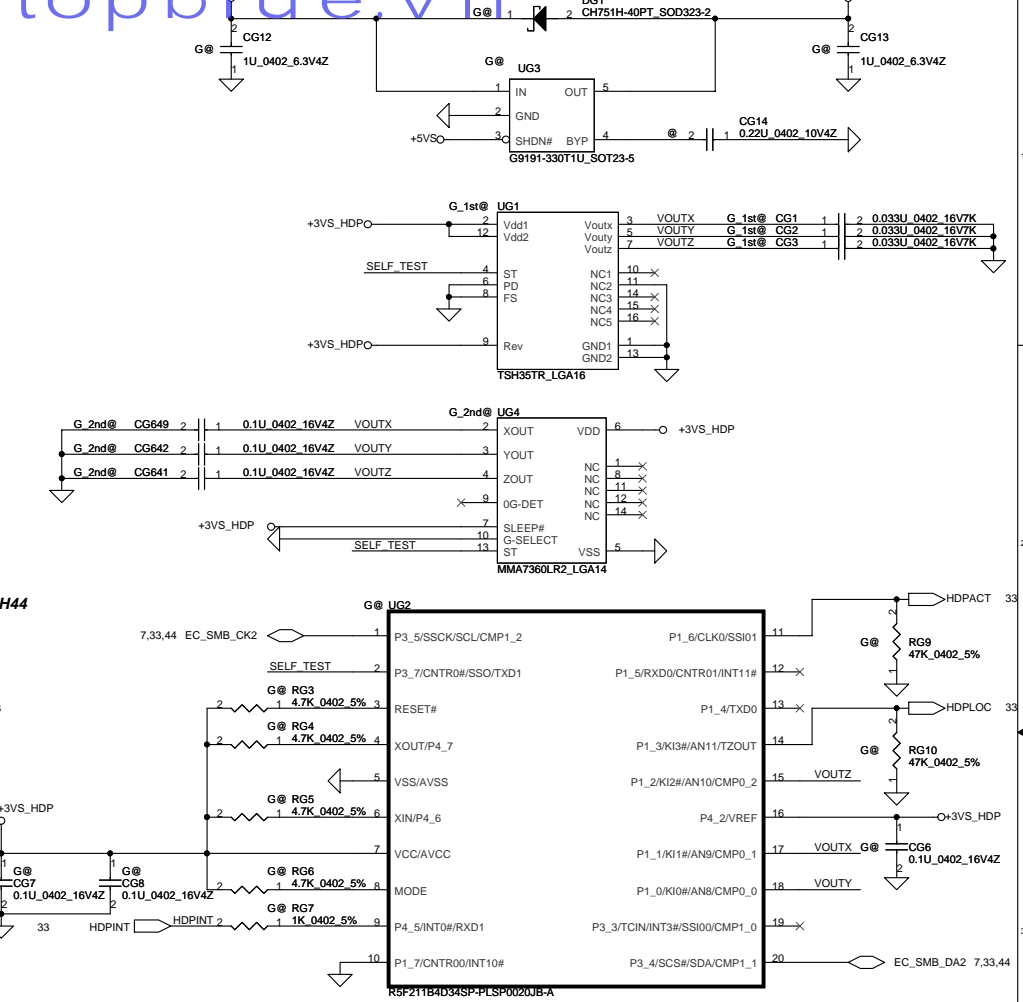
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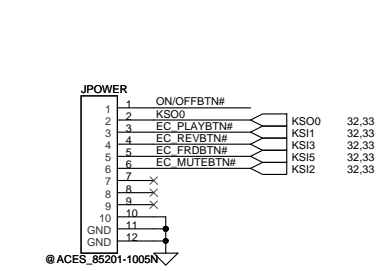
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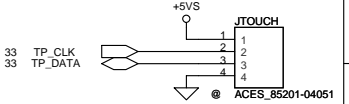
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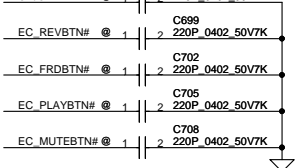
< SW/B Connector >



< Touch/B Connector >

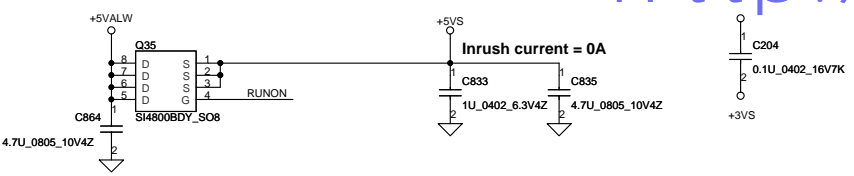


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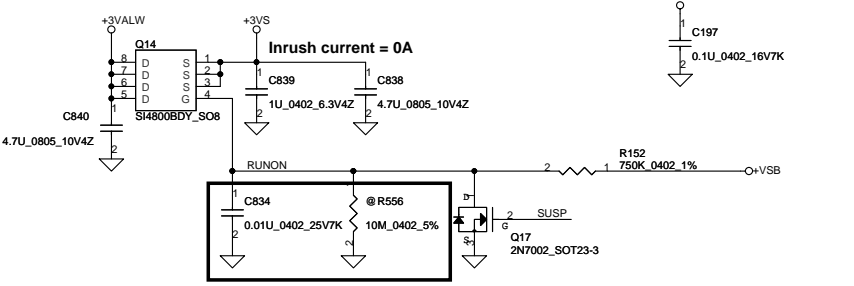
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				Custom	401716
				Date:	Tuesday, February 23, 2010
				Sheet	34 of 54

< +5VALW TO +5VS >



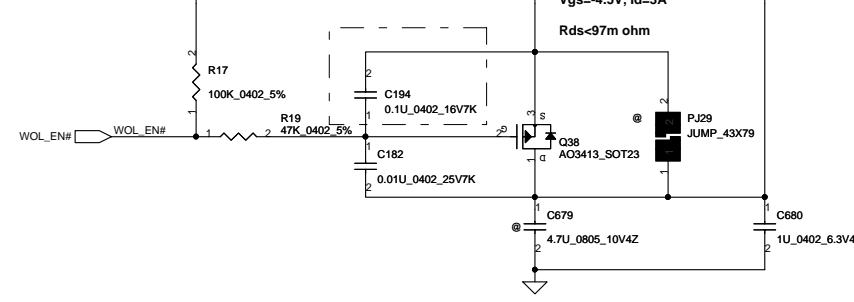
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< +3VALW TO +3VS >

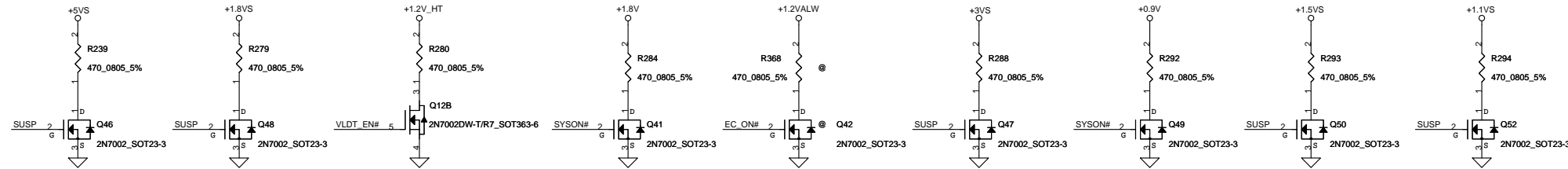


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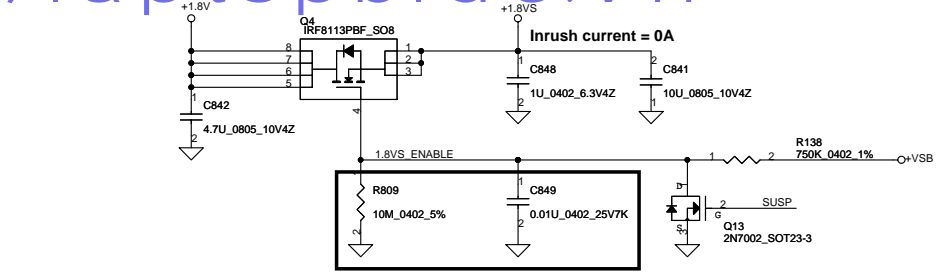
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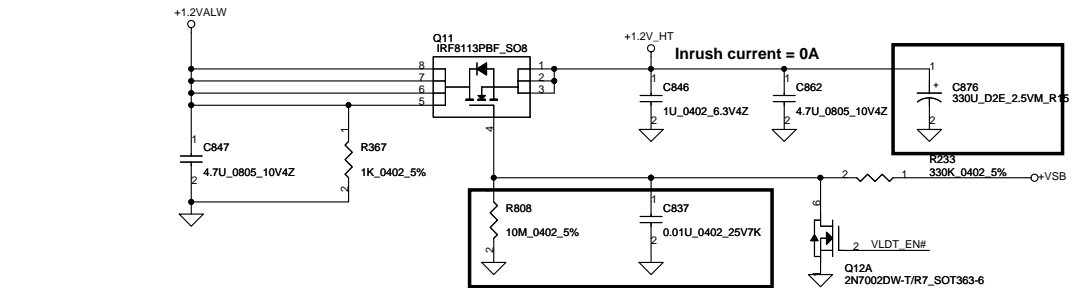
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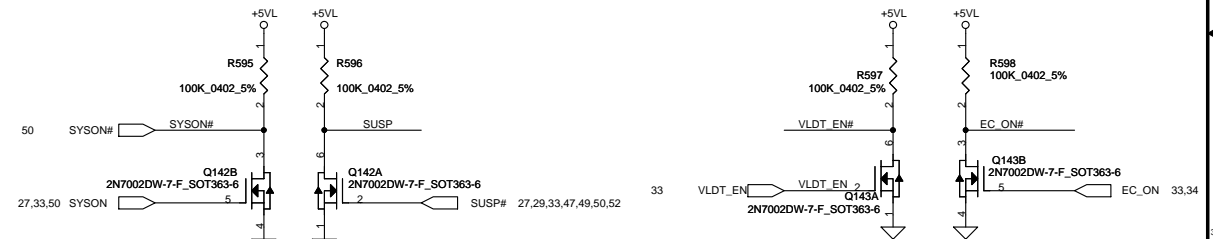
< +1.8V TO +1.8VS >

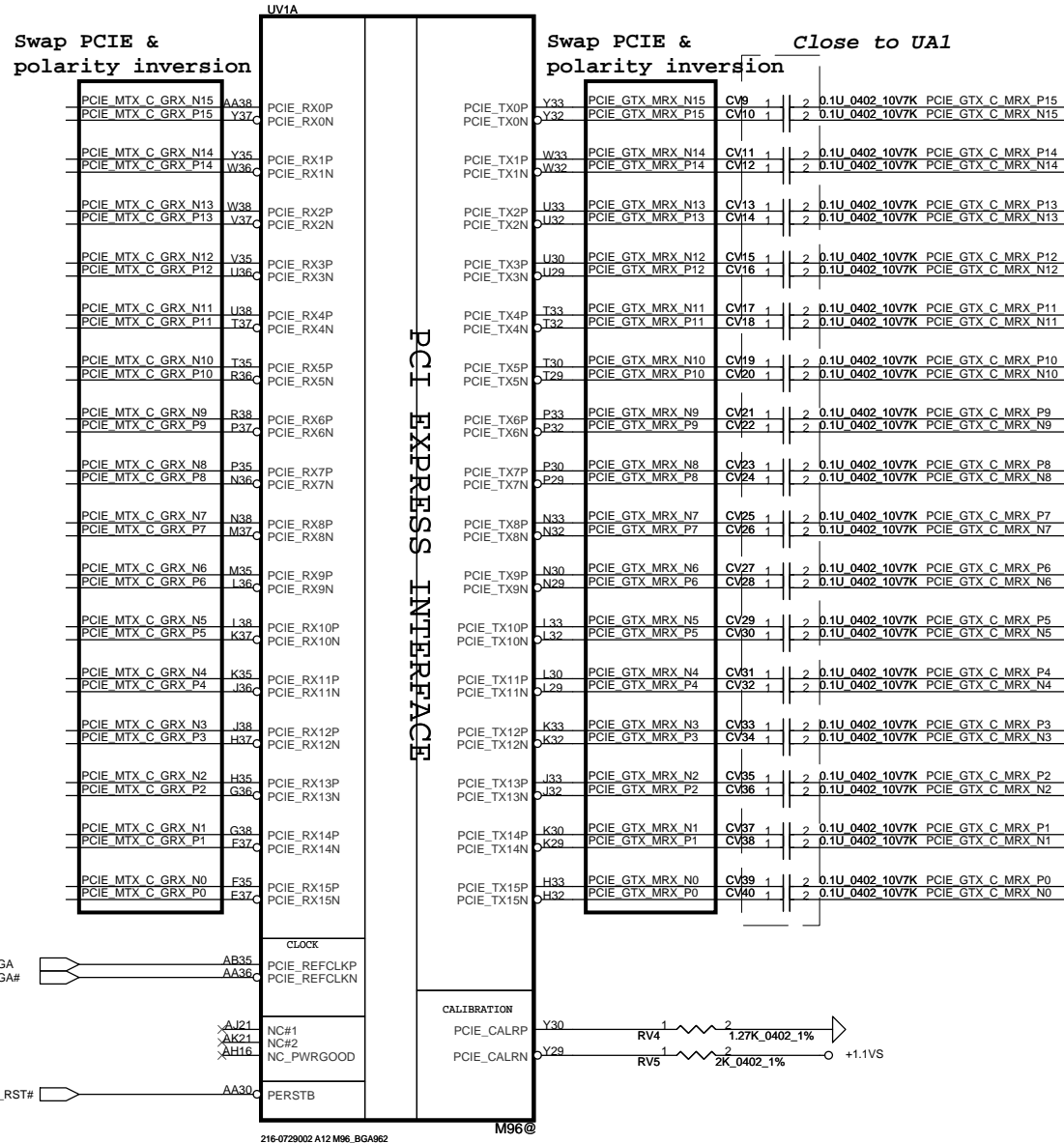
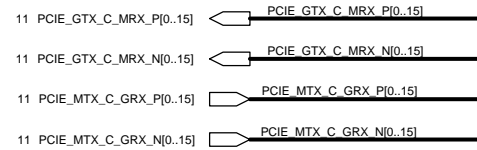


< +1.2VALW TO +1.2V_HT >

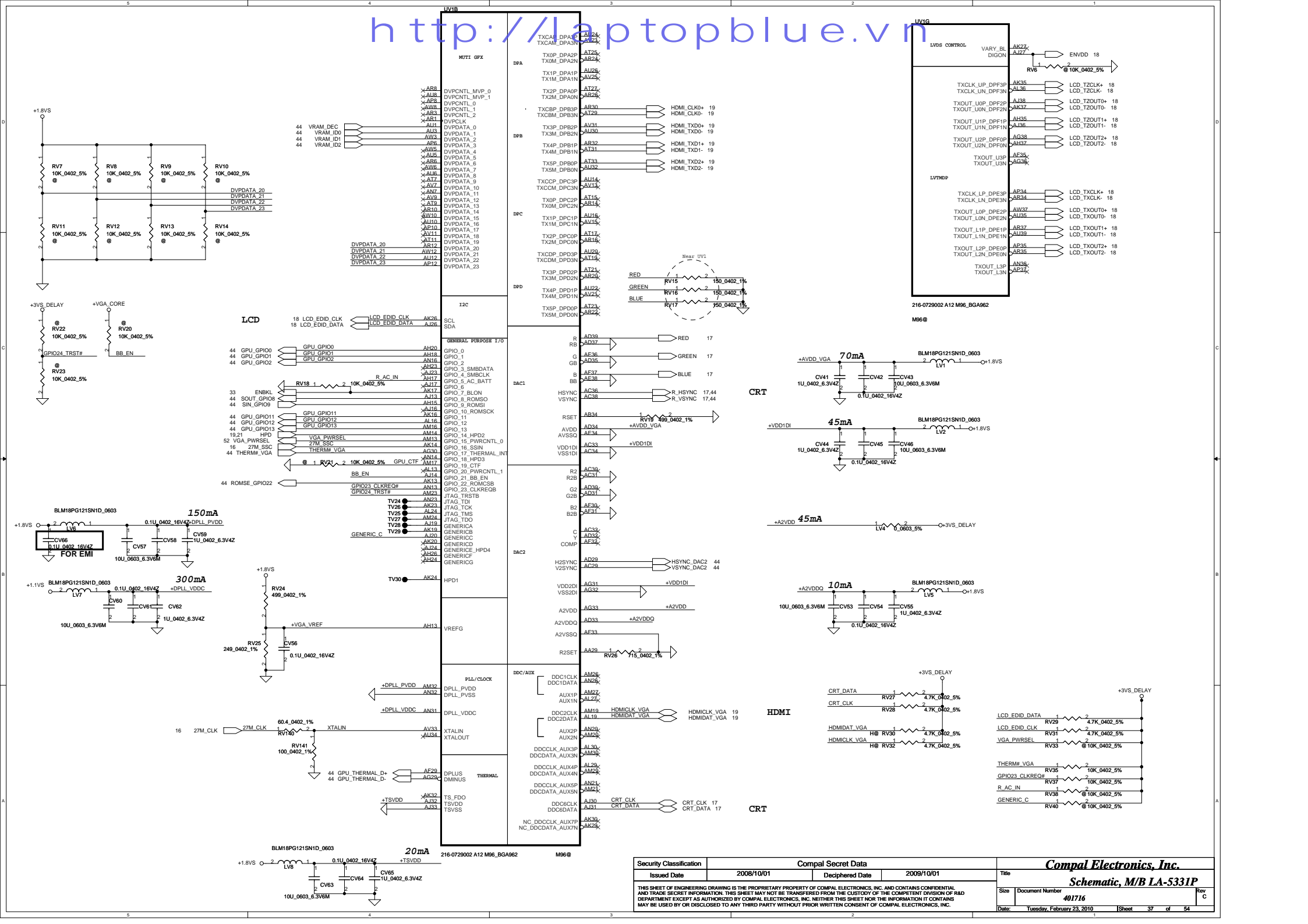


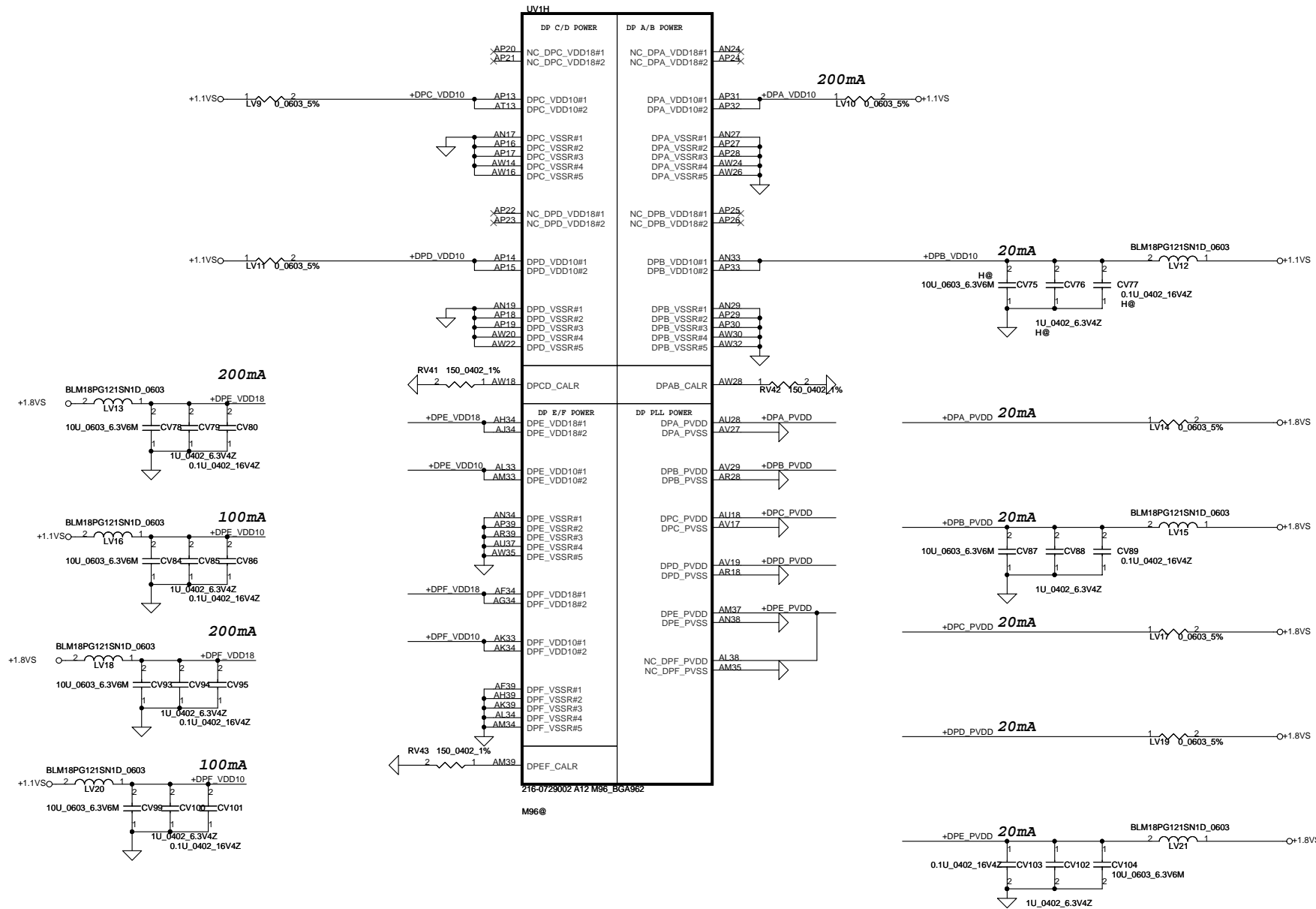
< Inversion of SYSON, SUSP#, VLDT_EN, EC_ON >



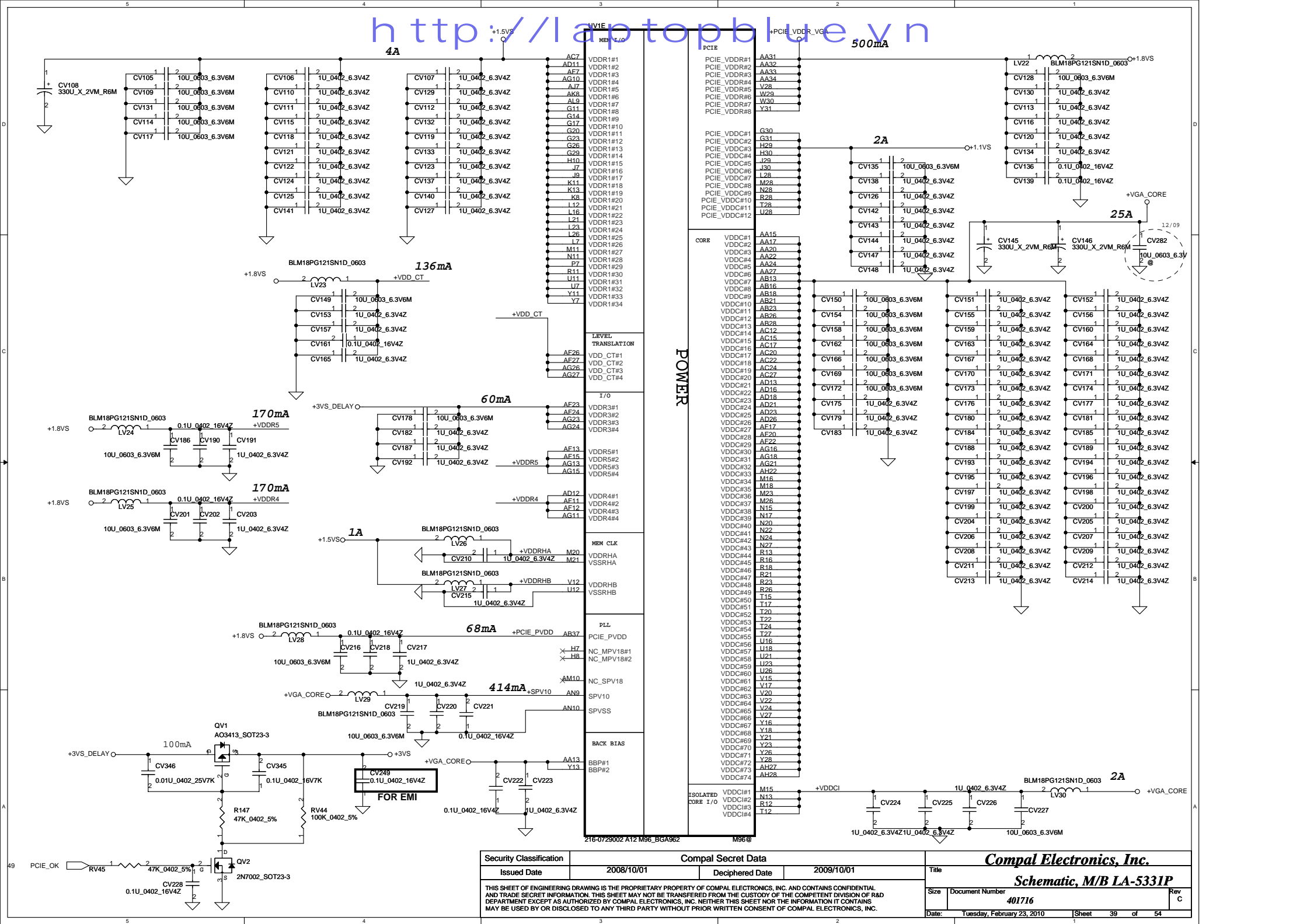


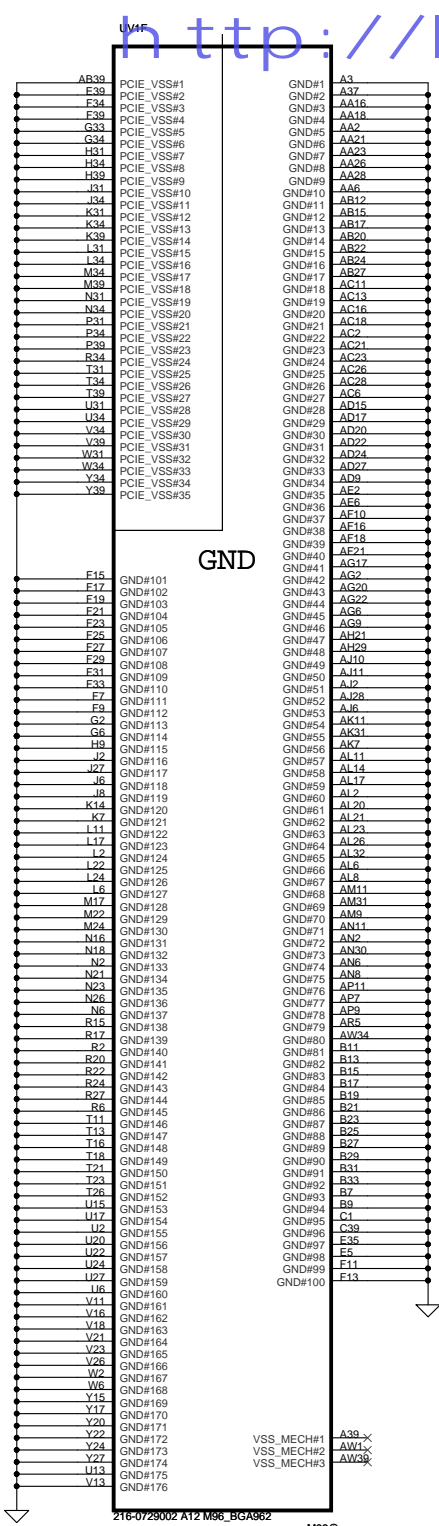
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		401716		C	
Date		Tuesday, February 23, 2010		Sheet 36 of 54	

[illegible]

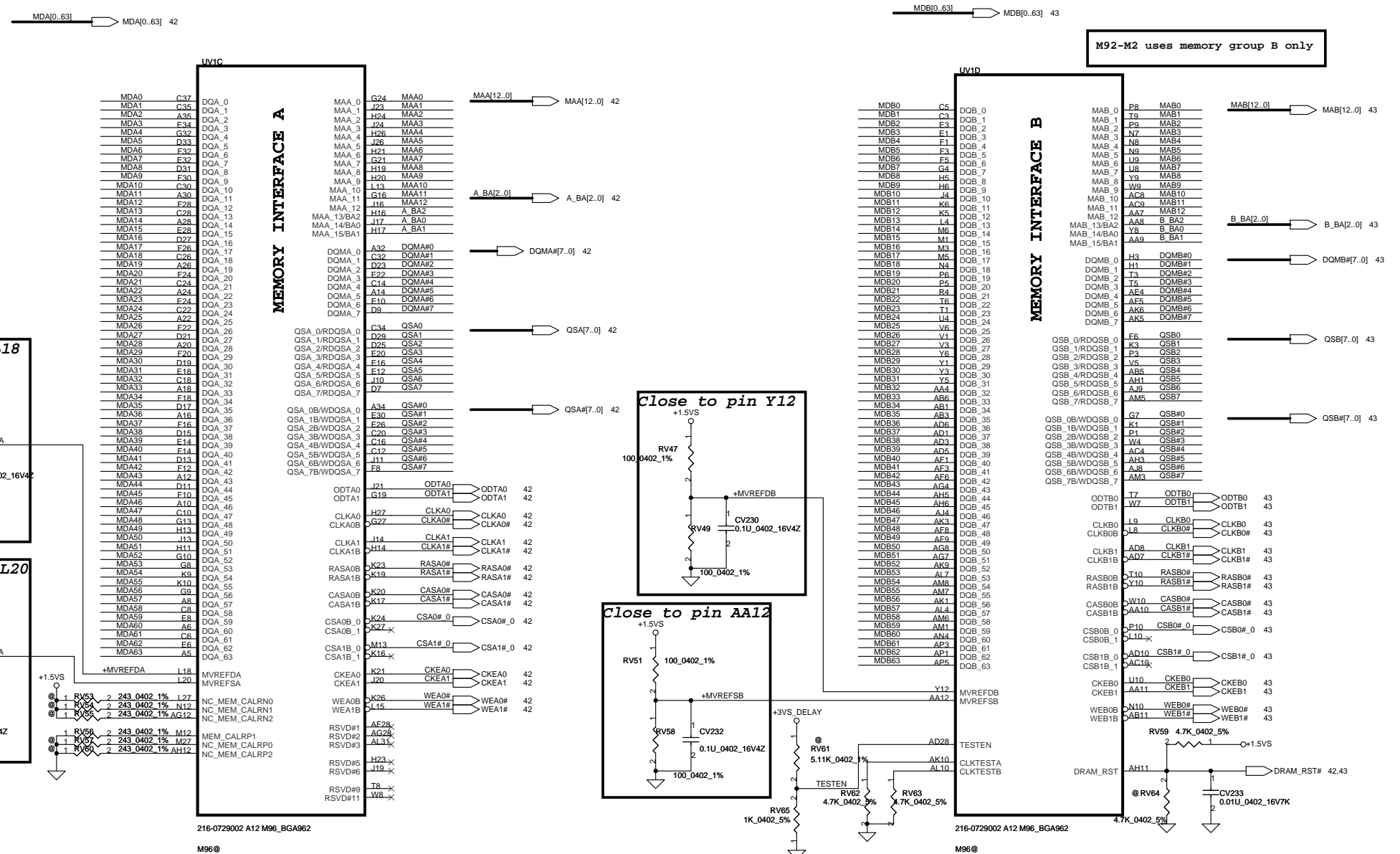


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				Date	Tuesday, February 23, 2010
				Sheet	38 of 54

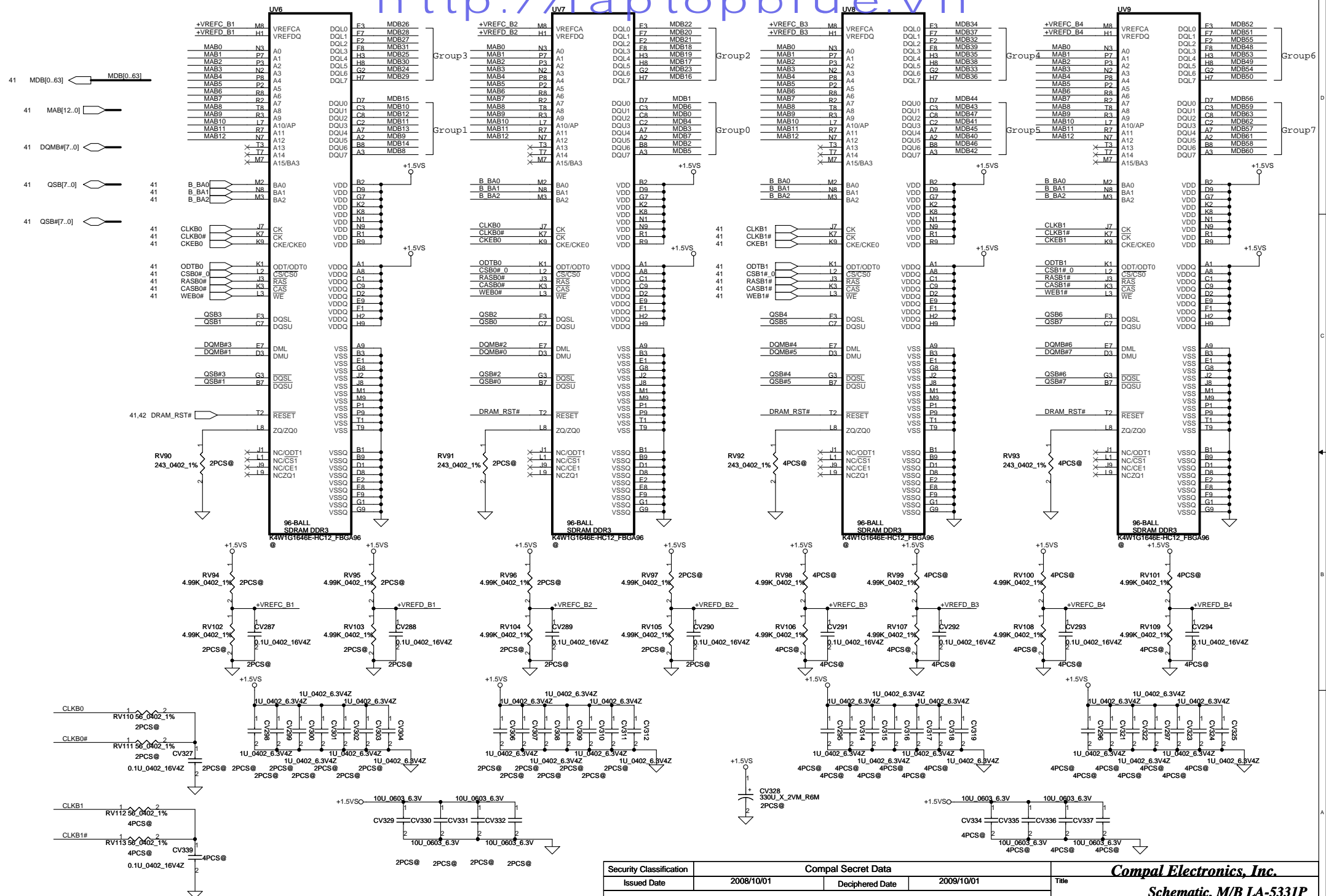




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Size		Document Number	401716	Rev	C
Date:		Tuesday, February 23, 2010	Sheet	40	of 54

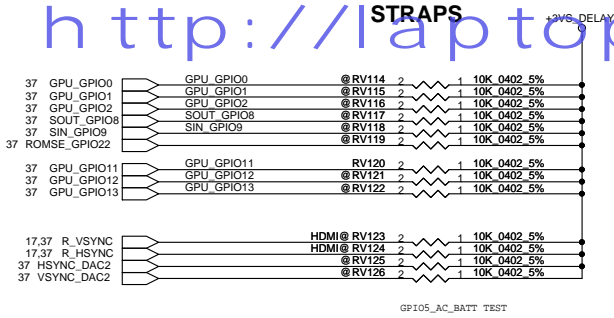


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				Size	Document Number	Rev
				401716		C
Date:				Tuesday, February 23, 2010	Sheet	41 of 54



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Size	Custom	Document Number	401716	Rev C	
Date:	Tuesday, February 23, 2010	Sheet	43	of 54	

GPU by the system BIOS		GPU by VBIOS
GPIO22 = 0 (BIOS_ROM_EN = 0)		GPIO22 = 1 (BIOS_ROM_EN = 1)
GPIO[13:11]	MEMORY SIZE	GPIO[13:11]
0 0 0	128MB	1 0 0 (M25P05A)
0 0 1	256MB	
0 1 0	64MB	



CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET

STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS
TX_PWRS_ENB	GPIO0	PCIE FULL TX OUTPUT SWING	0
TX_DEEMPH_EN	GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED	0
BIF_GEN2_EN_A	GPIO2	PCIE GNE2 ENABLED	0
BIF_CLK_PM_EN	GPIO8	BIF_CLK_PM_EN	0
BIF_VGA_DIS	GPIO9	VGA Controller ENABLED	0 (Enable)
BIOS_ROM_EN	GPIO_22_ROMCSB	Enable External BIOS device	0
ROMIDCFG(2:0)	GPIO[13:11]	ROM Configurations	0 0 1
VIP_DEVICE_STRAP_ENA	VSYNC_DAC2	IGNORE VIP DEVICE STRAPS	0
AUD[1]	HSYNC	AUD[1] AUD[0] 0 0 No audio function	1 1
AUD[0]	VSYNC	0 1 Audio for DisplayPort and HDMI if dongle is detected 1 0 Audio for DisplayPort only 1 1 Audio for both DisplayPort and HDMI	
RSVD	HSYNC_DAC2		0
RSVD	GENERICC		0

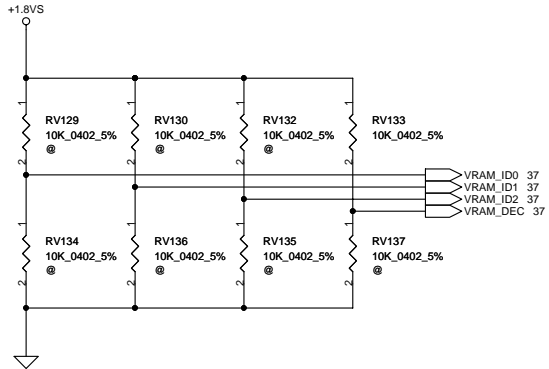
AMD RESERVED CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET

HSYNC_DAC2 GENERICC

PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET

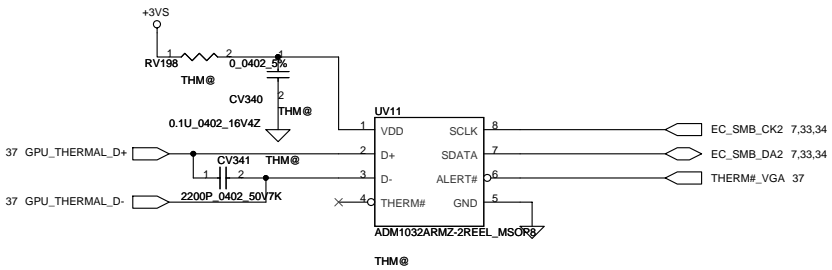
GPIO_28_TDO GPIO21_BB_EN



DDR3	
VRAM_DEC	1

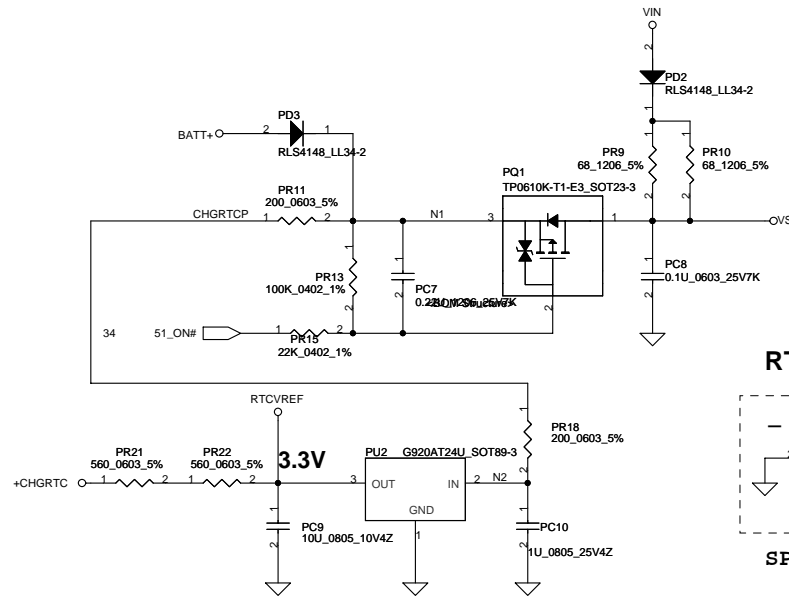
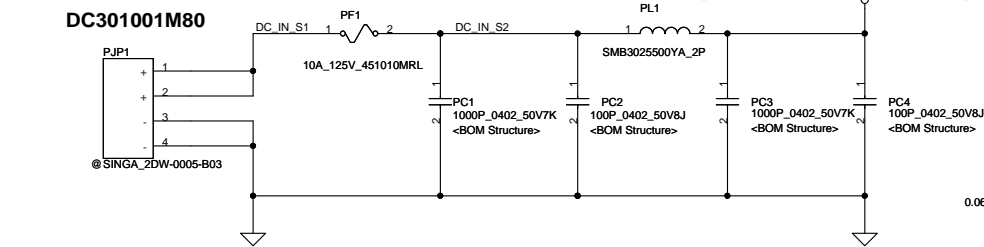
STRAPS	PIN	GPU	VRAM size	Vendor Part Number#	Compal Part Number#	VRAM_ID 2,1,0
VRAM_ID[2:0]	DVPDATA (3,2,1)	M92-M2 XT	512M 64Mx16 (x4)	HYN H5TQ1G63BFR-12C	SA000032400	0 0 0
		M96-M2	1G 64Mx16 (x8)	HYN H5TQ1G63BFR-12C	SA000032400	0 0 1
		M92-M2 XT	256M 64Mx16 (x2)	HYN H5TQ1G63BFR-12C	SA000032400	0 1 0
VRAM_ID[2:0]	DVPDATA (3,2,1)	M92-M2 XT	512M 64Mx16 (x4)	SAM K4W1G1646E-HC12	SA000035700	1 0 0
		M96-M3	1G 64Mx16 (x8)	SAM K4W1G1646E-HC12	SA000035700	0 1 1
		M92-M2 XT	256M 64Mx16 (x2)	SAM K4W1G1646E-HC12	SA000035700	1 0 1

External VGA Thermal Sensor

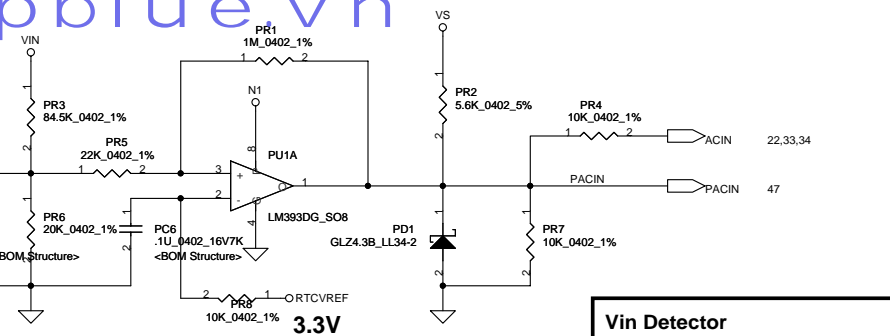
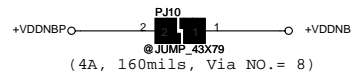
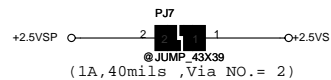
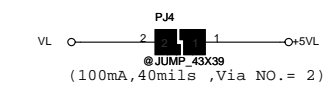
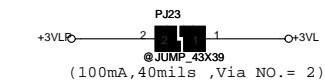
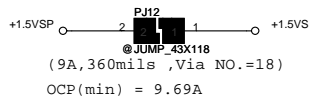
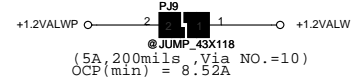
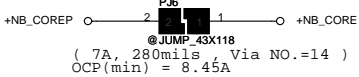
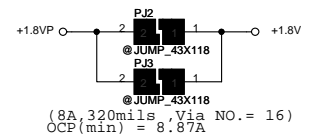
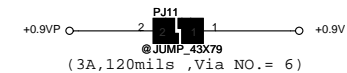
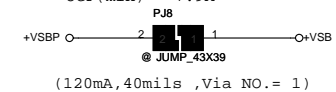
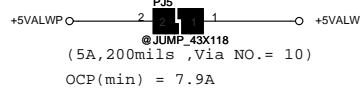
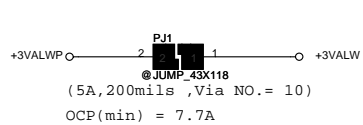
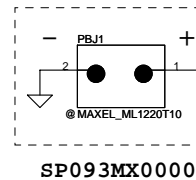


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DC301001M80

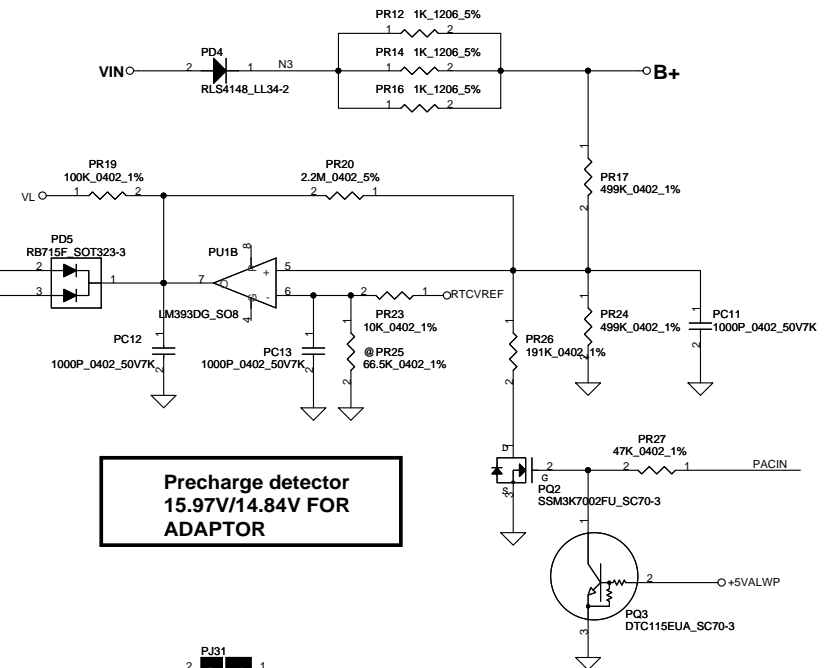


RTC Battery

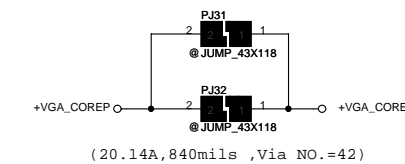


Vin Detector

High 18.384 17.901 17.430
Low 17.728 17.257 16.976



Precharge detector 15.97V/14.84V FOR ADAPTOR

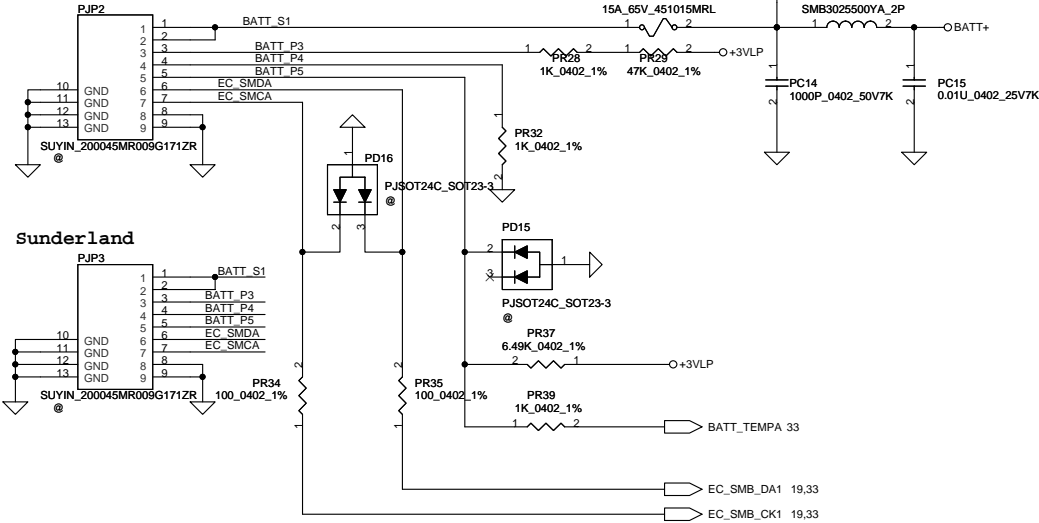


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								Rev C		
								Date: Tuesday, February 23, 2010		
								Sheet 45 of 54		

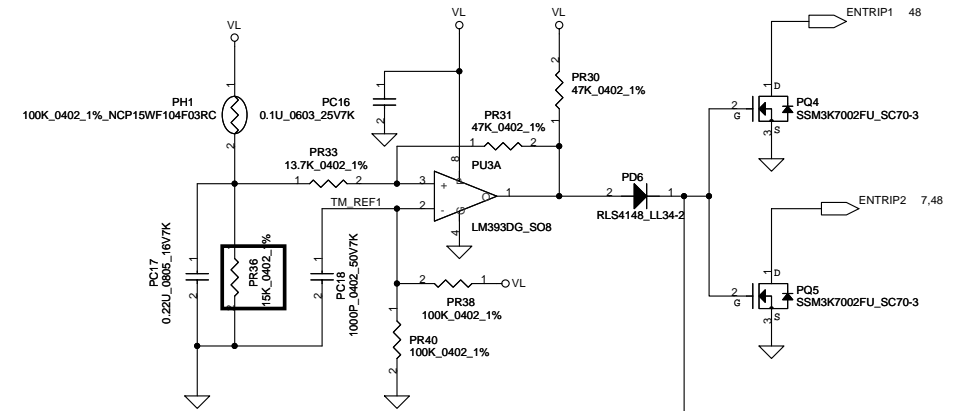
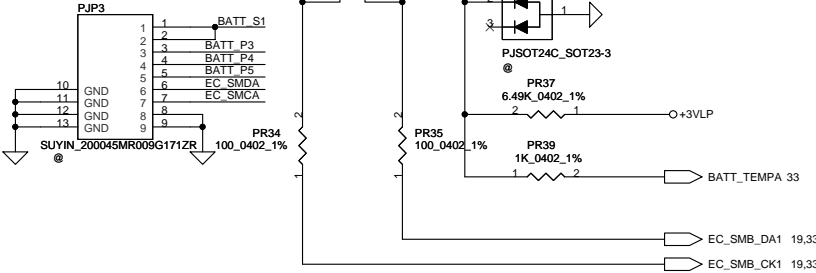
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PH1 under CPU botten side :
CPU thermal protection at 95 degree C
Recovery at 57 degree C

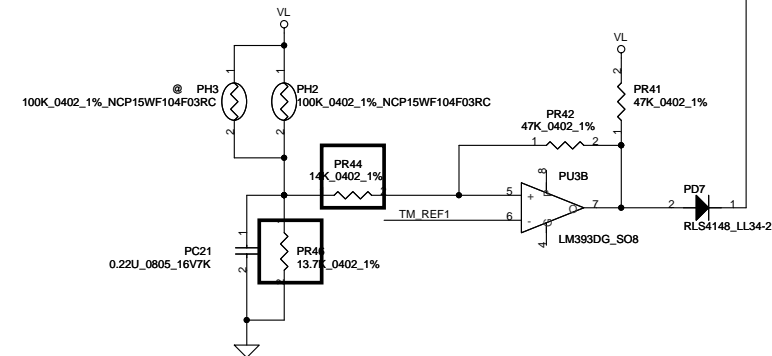
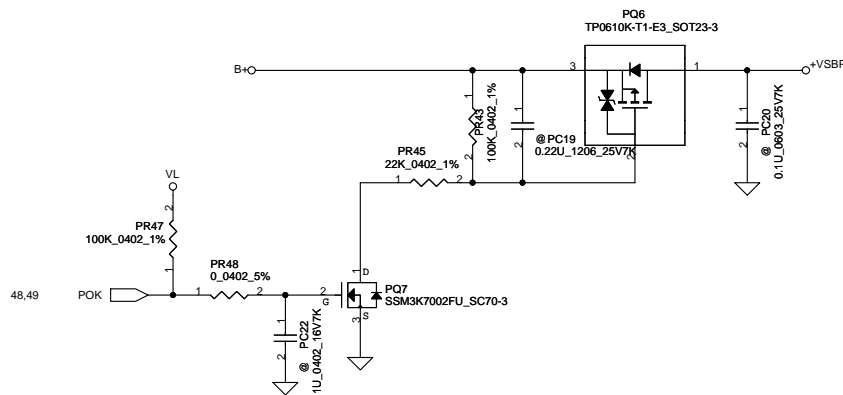
Liverpool



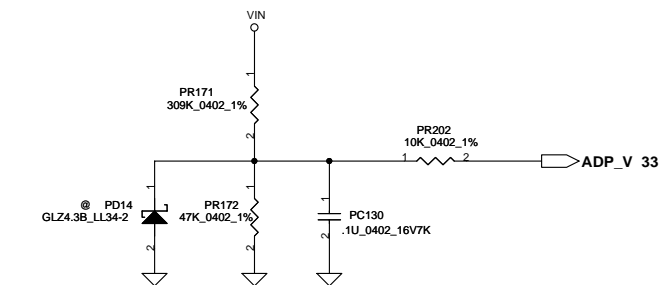
Sunderland



PH2 near main Battery CONN :
BAT. thermal protection at 98 degree C
Recovery at 60 degree C

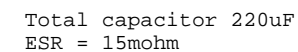


CELLS	VDD	GND	Float
CELL number	4	3	2



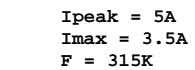
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				Custom	401716		C	
				Date:	Tuesday, February 23, 2010		Sheet	47 of 54

I_{peak} = 5A
I_{max} = 3.5A
F = 245K

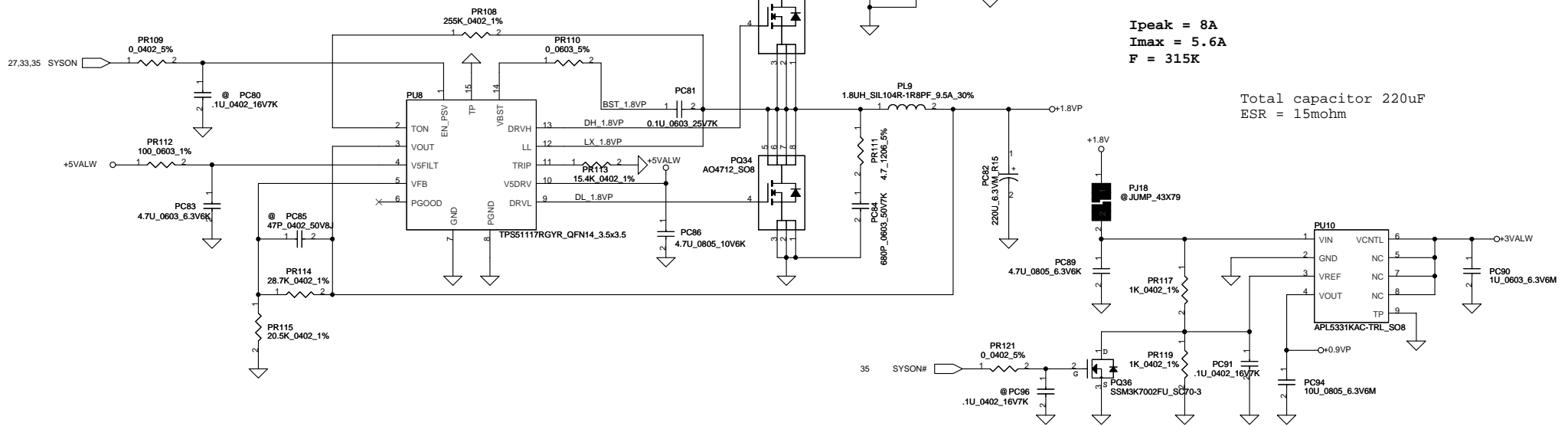


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				Custom	401716		
				Date:	Tuesday, February 23, 2010	Sheet	48

Total capacitor 550uF
ESR = 30mohm

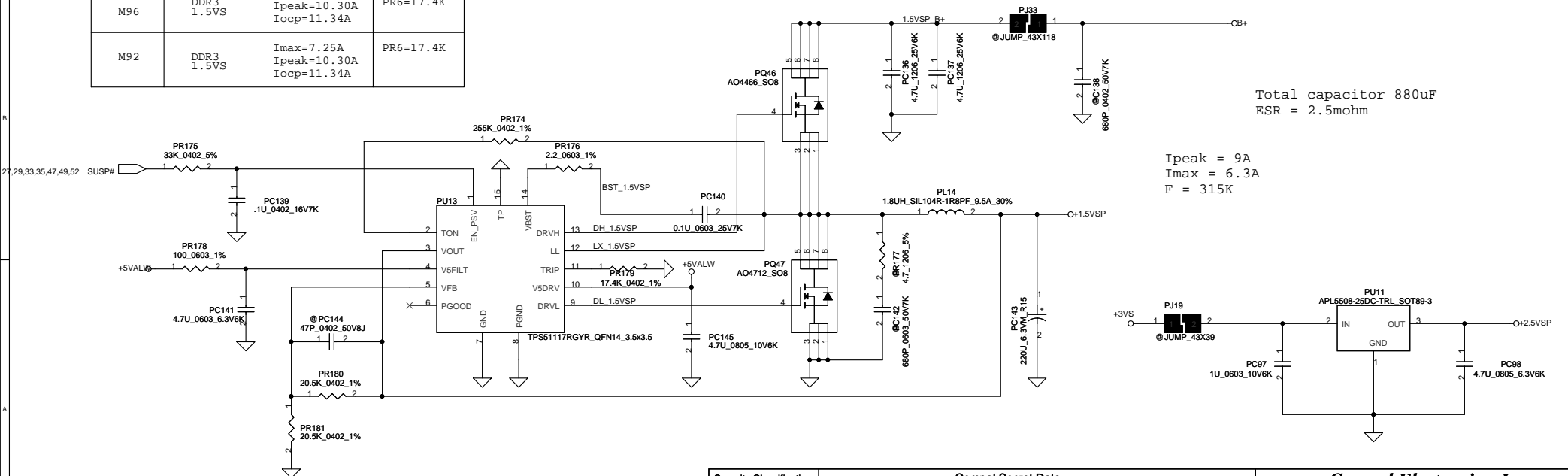


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				Size	Document Number	Rev C
					401716	
				Date:	Tuesday, February 23, 2010	



M96	DDR3 1.5VS	$I_{max}=7.25A$ $I_{peak}=10.30A$ $I_{ocp}=11.34A$	PR6=17.4K
M92	DDR3 1.5VS	$I_{max}=7.25A$ $I_{peak}=10.30A$ $I_{ocp}=11.34A$	PR6=17.4K

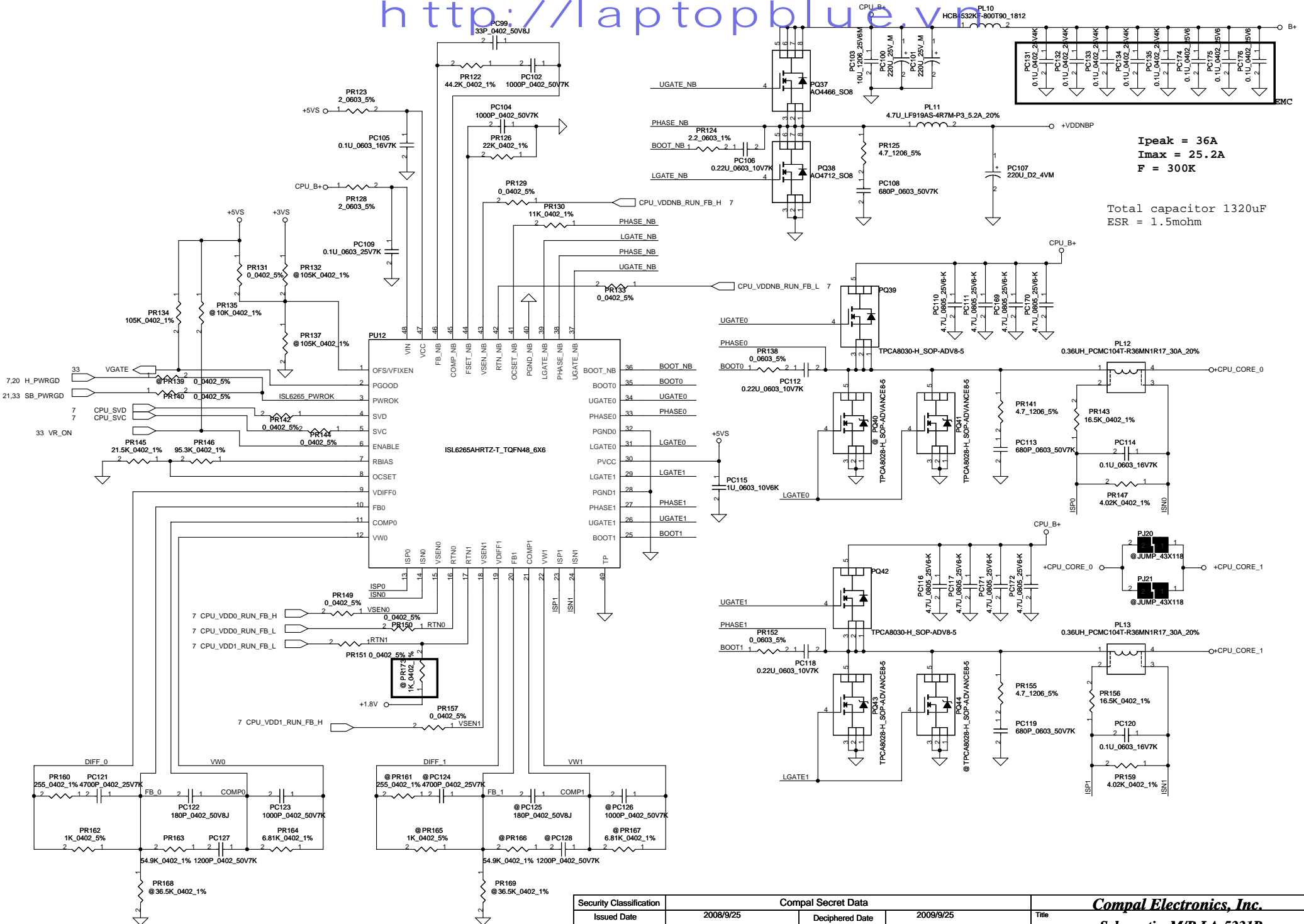
FSW=312KHz



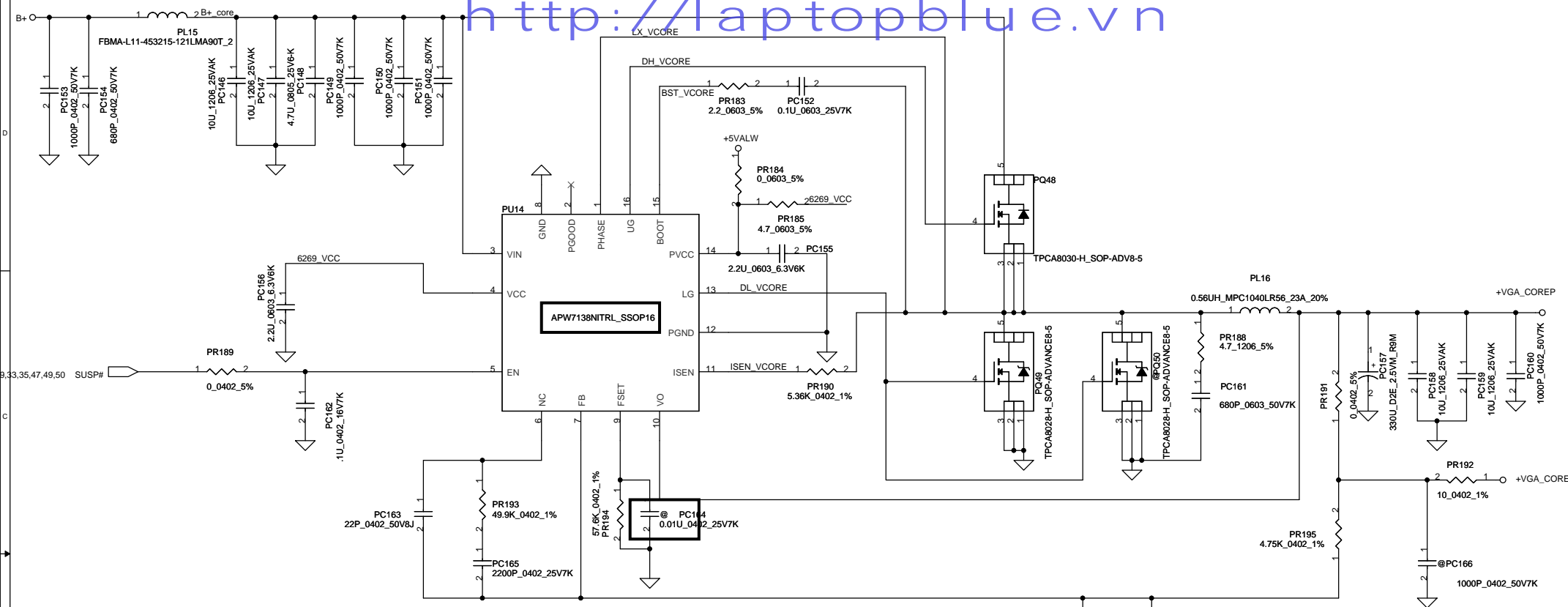
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				Date: Tuesday, February 23, 2010	Sheet 50 of 54

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						Date:		Tuesday, February 23, 2010		Sheet		51 of 54	

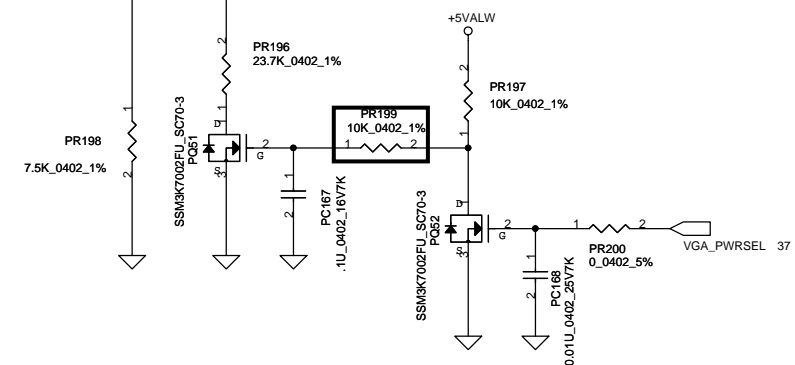


$$VFB(0.6) = V_{out} \cdot R_{bottom} / (R_{top} + R_{bottom})$$

	M96	M92
VGA_PWSELECT	Core Voltage Level	Core Voltage Level
High	0.98 V	0.98 V
Low	1.1 V	1.2 V
resistor setting	PR26 = 4.75K PR30 = 7.5K PR27 = 23.7K	PR26 = 4.75K PR30 = 7.5K PR27 = 13K

$$FSW = 1 / (75E - 12 * 57.6K) = 231.48KHz$$

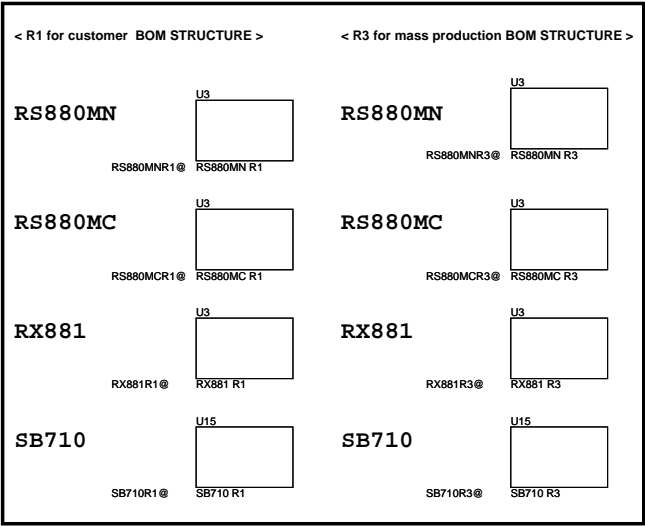
M96	M92
Imax=18.23A Ipeak=26.05A Iocp=28.65A	Imax=12.81A Ipeak=18.30A Iocp=20.14A
PR21=7.15K PQ5=unpop	PR21=5.36K PQ5=unpop



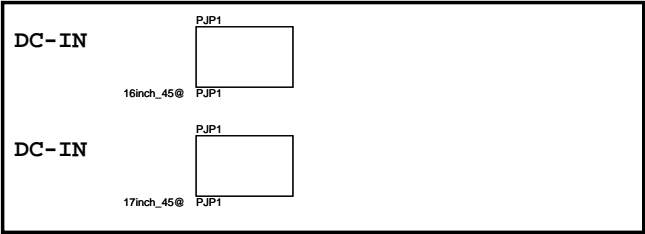
Version Change List (P. I. R. List) for Power Circuit

Item	Page#	Title	Date	Request Owner	Issue Description	Solution Description	Rev.
<hr/>							
Pre EVT modification							
01.	2009/02/09	--> change UG3 to G9191-330T1U, P/N is SA000022100				55. 2009/04/02 --> ADD RM8	
02.	2009/02/10	--> change UL3's P/N to SP050005V00				56. 2009/04/02 --> Change R440 from 100k ohm to 0 ohm and unmount C480	
03.	2009/02/10	--> change R489 & R488 BOM structure				57. 2009/04/02 --> Change +HDMI_5V_OUT circuit, add D20, D53	
04.	2009/02/10	--> change R142 from 300 ohm to 150 ohm				58. 2009/04/14 --> Add C205, C213, C248, C478, C484, CV66, CV249 for EMI request	
05.	2009/02/10	--> change R143 from 1M ohm to 100K ohm				59. 2009/04/14 --> Mount CA54, CA55, CA56, CA57 for EMI request	
06.	2009/02/10	--> change JREAD footprint to TAITW_R009-125-LR_21P_RV-T				60. 2009/04/14 --> Add C876 for Power noise issue	
07.	2009/02/11	--> change +HDMI_5V_OUT circuit, add D18, R160, Q26, R557, C876 and change power				61. 2009/04/14 --> Add D21 for Power issue	
08.	2009/02/11	--> change UG1 P/N and value to SA000039900 and TSH35TR				62. 2009/04/15 --> Del TV2, TV3, TV4, TV5, TV6, TV7, TV8, TV9, TV10, TV11, TV12, TV13, TV14, TV15, TV16, TV17, TV18, TV19, TV20, TV21, TV22, TV23	
09.	2009/02/11	--> change location from CV2 to C706				63. 2009/04/17 --> Un-mount D12	
10.	2009/02/13	--> remove WIMAX LED control circuit					
11.	2009/02/17	--> remove Audio codec digital GND to analog GND net				Pre DVT modification	
12.	2009/02/17	--> Add JFAN1 for M96 FAN				64. 2009/04/27 --> Un-mount DA6, DA7	
13.	2009/02/17	--> change JTOUCH footprint				65. 2009/04/27 --> Change C234, C876 P/N to SGA19331D00	
14.	2009/02/17	--> add NPTH Hole H42, H43				66. 2009/04/27 --> Change RV45 P/N to SD028470280	
15.	2009/02/17	--> add CA12				67. 2009/04/27 --> Change RV140 P/N to SD034604A80	
16.	2009/02/17	--> change Int MIC ground to AGND between CA27 and J3				68. 2009/04/27 --> Un-mount R42	
17.	2009/02/17	--> change UN1 P/N to SA00001SL20				69. 2009/04/27 --> Mount R367	
18.	2009/02/17	--> Add JPWR1 for co-lay with JPOWER				70. 2009/05/07 --> Change U25, U19 from SA005280110 to SA00002XX00	
19.	2009/02/19	--> add CA45, CA46, CA47, CA48, CA49, CA50, CA51, CA52, CA53				71. 2009/05/07 --> Change RA38 from LVDSSET@ to @	
20.	2009/02/19	--> replace RA12, RA13, RA14 with CA54, CA55, CA56 and add CA57				72. 2009/05/07 --> Change U34, U36 from SA00001NT00 to SA00001WP00	
21.	2009/02/19	--> Delete CV81, CV82, CV83, CV90, CV91, CV92, CV96, CV97, CV98				73. 2009/05/07 --> Change QV1 from SB923010020 to SB934130000	
22.	2009/02/19	--> Change LV14, LV17, LV19 to 0 ohm				74. 2009/05/07 --> Change QV2 from SB000009610 to SB770020010	
23.	2009/02/19	--> Swap M9X PCIE net & polarity inversion				Pre PVT modification	
24.	2009/02/19	--> Add CV345, CV346, R147 for soft start				75. 2009/05/24 --> Add H44,H45 H_3P0 for express dummy card	
25.	2009/02/19	--> Delete CV249, CV257, CV265, CV273, CV278, CV285, CV305, CV313, CV320, CV326, CV333, CV338				76. 2009/05/24 --> Change C350 from SF22001M300 to SF22001M200.	
26.	2009/02/20	--> Add R189, R190 & Net : 27MCLK, 27M_CLK, 27MSSC, 27M_SSC				77. 2009/05/24 --> Add C178,C485,C486 for EMI request.	
27.	2009/02/20	--> Delete UV12, RV142, CV343, CV344, CV342, RV138, XV1, RV139				78. 2009/05/24 --> Del JPWR1	
28.	2009/02/24	--> change R70, R77 from 4.7K to 2.2K				79. 2009/05/24 --> Del JPWR1,JCAM,R430,R428,C744,R20,R18	
29.	2009/02/24	--> change R178 from 4.7K to 47K				80. 2009/05/24 --> Change net name from USB20_N9_R_CAM & USB20_P9_R_CAM to USB20_N9_R & USB20_P9_R	
30.	2009/02/26	--> change UG2 P/N to SA00003A600				81. 2009/05/24 --> Change UV2 ~ UV9 P/N & symbol to SA000035700	
31.	2009/02/27	--> change T9, T10, T11,T12, T19, T20 footprint to TPC24				Pre Pre-MP modification	
32.	2009/02/27	--> Delete JFAN1				82. 2009/07/07 --> Change C643 & C652 to SE071120J80 .	
33.	2009/02/28	--> Change D36 from SC1B491D000 to SCS00002000				83. 2009/07/07 --> Change C350 to SF000001H00.	
34.	2009/02/28	--> Change 5V camera power at JLVDS connector and add R968, R967, C274				84. 2009/08/06 --> Change Y7 PN from SJ100003D00 to SJ132P7KW10.	
35.	2009/02/28	--> Change SPI ROM from SST to MXIC				85. 2009/08/27 --> Change RV123 & RV124 BOM structure to HDMI@.	
36.	2009/03/06	--> Change R556 BOM structure to @				86. 2009/09/21 --> Change C9, C13, C70, C71, C83, C84, C95, C104, CL26, CL27 to SE074102K80	
37.	2009/03/06	--> Change D17, R965 BOM structure to @ and mount R966				87. 2009/09/21 --> Change U34, U36 to SA00003GI00	
38.	2009/03/06	--> Change RA16 from 5% to 1%				88. 2009/10/02 --> Del RN2's BOM structure and move to SB side.	
Pre DVT modification							
39.	2009/03/10	--> Add ESD diode D19 for JFP				Pre EVT POWER modification	
40.	2009/03/10	--> Change C686, C699, C702, C705, C708 P/N from SE074221K00 to SE074221K80				01. 2009/03/06 --> Mount PR95, PC66, PR170, PC129	
41.	2009/03/10	--> Change Y2 P/N from SJ114P3M730 to SJ114P3MG00				EVT --> DVT modification	
42.	2009/03/21	--> change R146 from 100k ohm to 10k ohm				P46 add PR203 10Ohm	
43.	2009/03/21	--> change LAN_WAKE# & EC_SWI#				P46 change PR65 to 47K	
44.	2009/03/21	--> unmount USB sleep & charge, add R97 & R98				P47, 48, 49, 50 PR82, 83, 94, 102, 110, 138, 152 change to SD013000080	
45.	2009/03/21	--> connect USB_OC#0 to LAN_WAKE# through 0 ohm (R35)				P45 change PR36 to 13.7K	
46.	2009/03/21	--> unmount HDMI CEC controller and related components.				P50 change PC99 to SE071330J80	
47.	2009/03/21	--> change H42 from NPTH to PTH				P47 change PR79 to 19.1K	
48.	2009/03/21	--> change capacitor of SE068101K80 to SE071101J80				P50 change PR145=21.5K, PR146=95.3K, PR143 and PR156 =16.5K, PR147 and PR159=4.02K	
49.	2009/03/26	--> change F2 footprint to F_MINISMDC110F-2				P49 change PR175 = 33K, PC139 to mount	
50.	2009/03/26	--> Add R370 & R381				P51 change PR199 = 10K	
51.	2009/03/26	--> change R557's BOM structure from H@ to @				P47, 48, 49 add 3PCS Cap.=0.1uF_0402 (PC177, PC178, PC179) on B+	
52.	2009/03/26	--> change R440 from 0 ohm to 100k ohm					
53.	2009/03/26	--> Mount R197 and add R198					
54.	2009/03/26	--> Change RA1 & RA3 P/N to SD013000080					
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				Custom		401716	
				Date:		Tuesday, February 23, 2010	
				Sheet		53 of 54	
				Rev		C	

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< DC Jack >



< PCB >

