Project Name : A14HV02

Platform : Sandy Bridge(PROCESSOR)+Couagr Poinrt(PCH)

PAGE CONTENT

M/B Schematic Version Change List

Release Date	Version	PCB P/N	PCB Description	PCBA P/N	Note

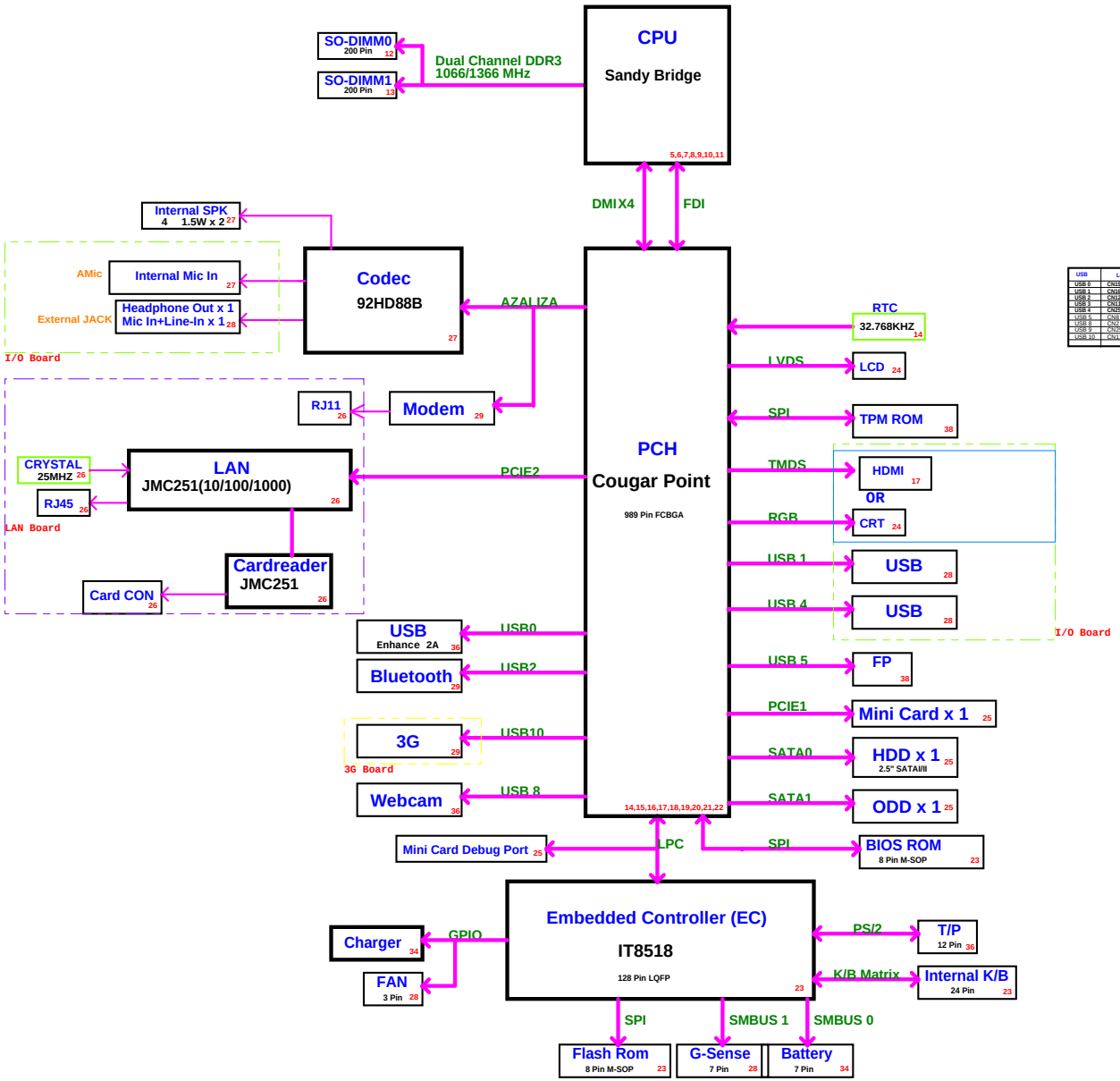
Daughter Board Schematic Version Change List

Release Date	Version	PCB P/N	PCB Description	PCBA P/N	Note

e/cont= dilma.assiscruz@hotmail.com

Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: INDEX		Rev: A
Date: Tuesday, September 21, 2010	Sheet 1 of 40		

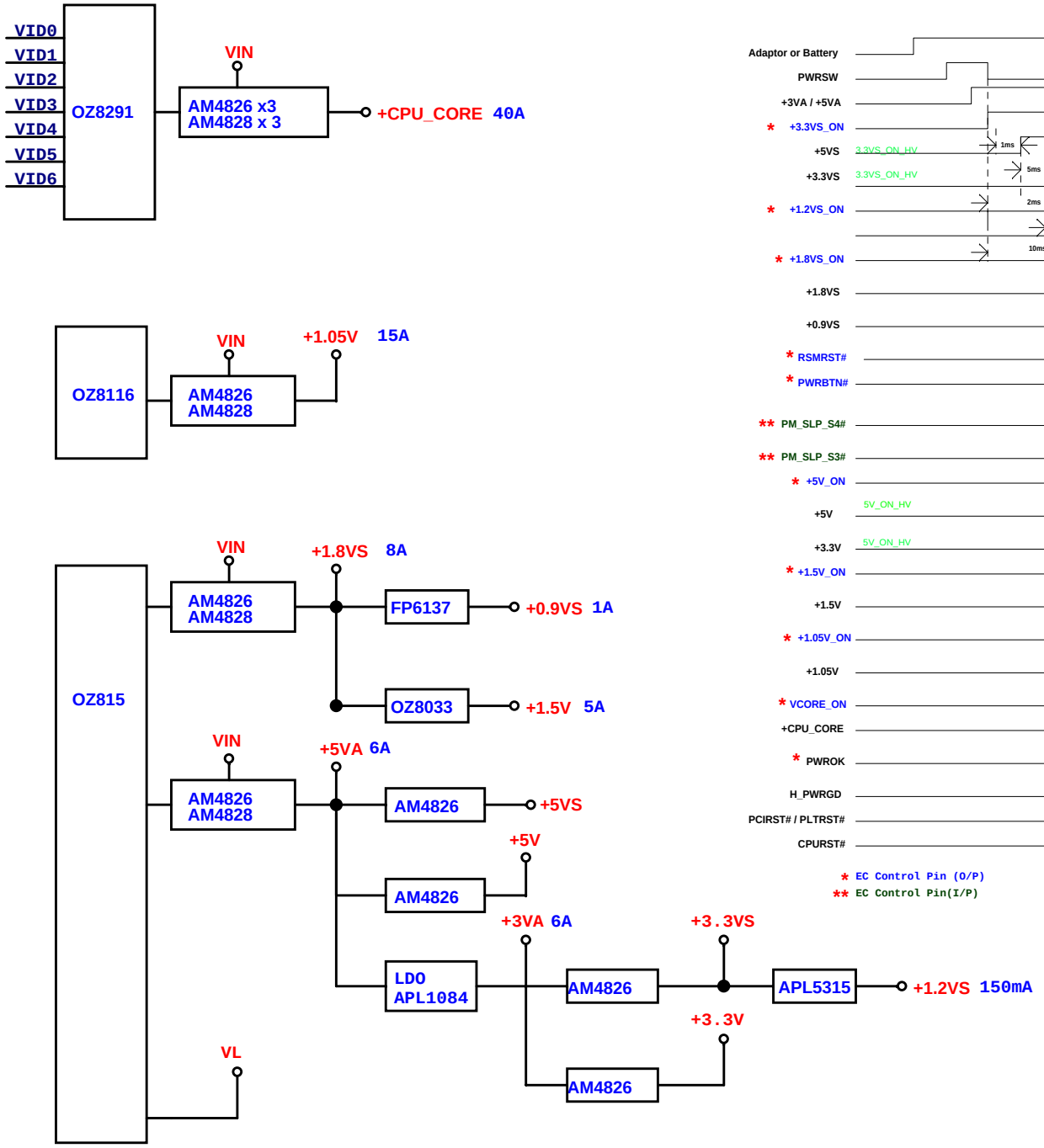
SYSTEM BLOCK DIAGRAM



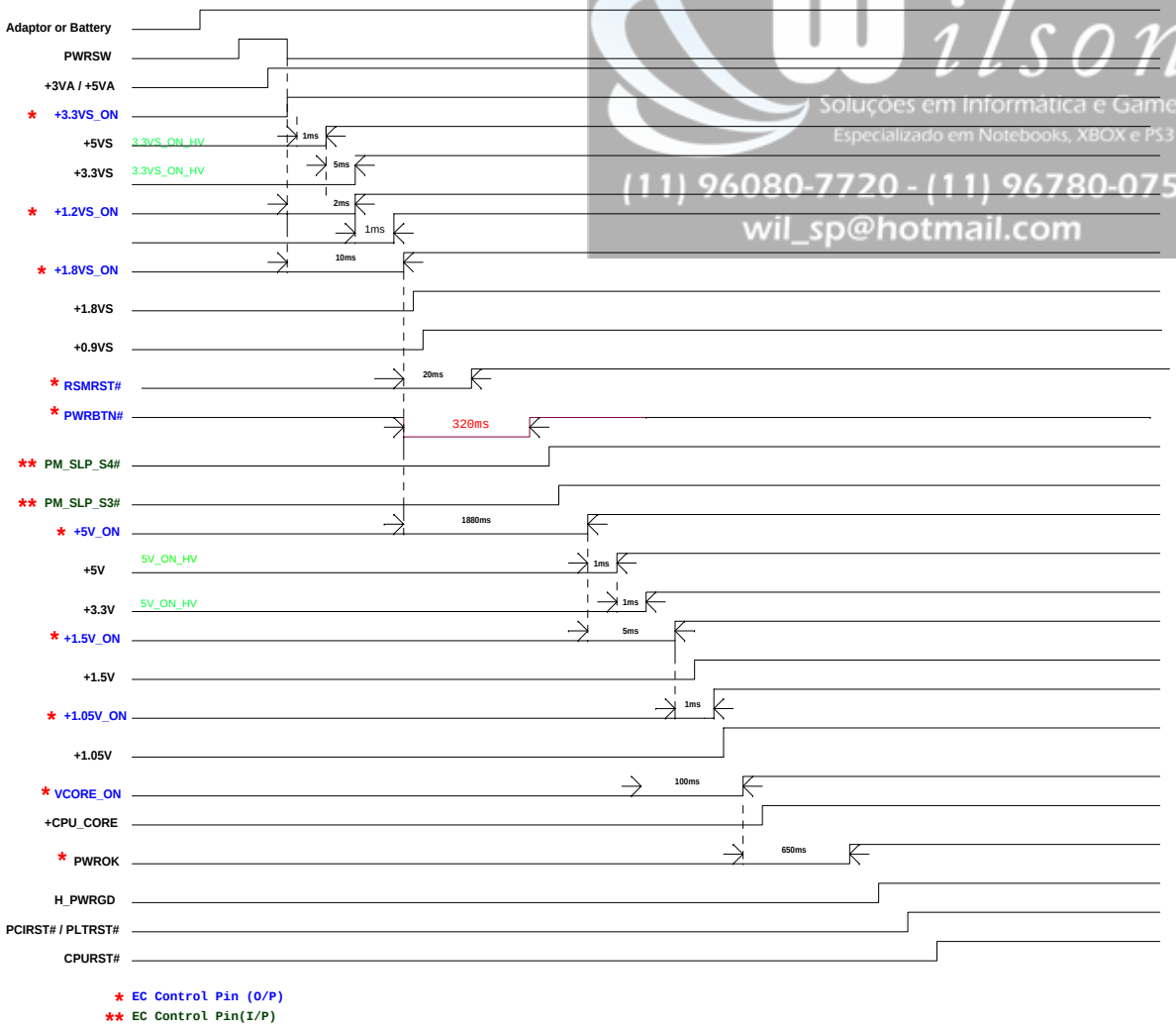
USB	Location
USB 0	CN19 (USB CHARGER)
USB 1	CN16 (External USB)
USB 2	CN1 (BT CONN)
USB 3	CN13 (NEW CARD 1.5V)
USB 4	CN25 (EXT USB JACK)
USB 5	CN3 (Fingerprint)
USB 6	CN2 (WEB CAM CON)
USB 9	CN25 (EXT USB JACK)
USB 10	CN11 (mini card & 3G)

Shuttle Inc.		
Title: A14HV		
Size: Custom	Document Number: SYSTEM BLOCK	Rev: A
Date: Tuesday, September 21, 2010	Sheet 2 of 40	

POWER BLOCK DIAGRAM



System Poewr On Sequence



* EC Control Pin (O/P)
** EC Control Pin(I/P)

Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: POWER DIAGRAM & SEQUENCE	Rev: A
Date: Tuesday, September 21, 2010	Sheet 3 of 40	

ICH9M GPIO	
GPIO0	PM_BM_BUSY#
GPIO1	EC_EXTSMI#
GPIO2	INT_PIRQE#
GPIO3	INT_PIRQF#
GPIO4	INT_PIRQG#
GPIO5	INT_PIRQH#
GPIO6	BIOS_REC
GPIO7	N.C(TACH3)
GPIO8	N.C
GPIO9	N.C(WOL_EN)
GPIO10	N.C(ALERT#)
GPIO11	SMB_ALERT#
GPIO12	LAN_PHYPC
GPIO13	N.C(GLAN_DOCK#)
GPIO14	N.C(NETDETECT)
GPIO15	PM_STPPCI#
GPIO17	N.C(TACH0)
GPIO18	N.C
GPIO19	SATA1GP
GPIO21	SATA0GP
GPIO22	N.C(SCLOCK)
GPIO23	LDRQ1#
GPIO24	CRB_SV_DET
GPIO25	PM_STPCPU#
GPIO26	PM_SLP_S4_STATE#
GPIO27	QRT_STATE0
GPIO28	QRT_STATE1
GPIO29	USB_OC#5
GPIO30	USB_OC#6
GPIO31	USB_OC#7
GPIO32	PM_CLKRUN#
GPIO33	HDA_DOCK_EN
GPIO34	N.C(HDA_DOCK_RST)
GPIO35	CLK_SATA_OE#
GPIO36	SATA2GP
GPIO37	SATA3GP
GPIO38	ODD_DET
GPIO39	ICH_GPIO39
GPIO40	USB_OC#1
GPIO41	USB_OC#2
GPIO42	USB_OC#3
GPIO43	USB_OC#4
GPIO48	MFG_MODE
GPIO49	H_PWRGD
GPIO50	PCI_REQ#1
GPIO51	PCI_GNT#1
GPIO52	PCI_REQ#2
GPIO53	PCI_GNT#2
GPIO54	PCI_REQ#3
GPIO55	PCI_GNT#3

ITE8518 GPIO		Default Pull/Mode
GPA0	PID_3_RF_LED_ON#	UP / GPI
GPA1	BATT_VA_OFF#	UP / GPI
GPA2	BTL_BEEP	UP / GPI
GPA3	WLAN_PWR#	UP / GPI
GPA4	+1.05V_ON	UP / GPI
GPA5	SENBAT_V	UP / GPI
GPA6	PM_RSMRST#	UP / GPI
GPA7	EC_BL_PWM	UP / GPI
GPB0	PM_SLP_S4#	UP / GPI
GPB1	PM_SLP_S3#	UP / GPI
GPB2	3G_PWR#	Dn / GPI
GPB3	SMBCLK	/ GPI
GPB4	SMBDAT	/ GPI
GPB5	H_A20GATE	/ GPO
GPB6	H_RCIN#	UP / Func1
GPB7	SAFTY_PROTECT	Dn / GPI
GPC0	+1.5V_ON	Dn / GPI
GPC1	SMB_CLK_EC	/ GPI
GPC2	SMB_DAT_EC	/ GPI
GPC3	PID_0_CHG_B_LED	Dn / GPI
GPC4	PWRBTN3#	Dn / GPI
GPC5	PANEL_DETECT 2	Dn / GPI
GPC6	VCCSA_ON	Dn / GPI
GPC7	+1.5VS_ON	UP / GPI
GPD0	ADAP_IN	UP / GPI
GPD1	PWRBTN#	UP / GPI
GPD2	PLT_RST#	UP / Func1
GPD3	PM_SUS_STAT#	UP / GPI
GPD4	EC_EXTSMI#	UP / GPI
GPD5	Fastcharge_EN	UP / GPI
GPD6	+5V_ON	Dn / GPI
GPD7	SET_V	Dn / GPI
GPE0	LID#	Dn / GPI
GPE1	PWR_USB_LED	Dn / GPI
GPE2	ALL_SYS_PGD	Dn / GPI
GPE3	Vcore_ON	Dn / GPI
GPE4	PWRSW	UP / GPI
GPE5	LVDS_VIN	Dn / GPI
GPE6	WLAN_ON	Dn / GPI
GPE7	AMP_MUTE#	UP / GPI
GPF0	PCH_BL_EN	UP / GPI
GPF1	+1.8V_ON	UP / GPI
GPF2	BT_ON	UP / GPI
GPF3	N.C	UP / GPI
GPF4	TP_CLK	UP / GPI
GPF5	TP_DATA	UP / GPI
GPF6	EC_PECI	UP / GPI
GPF7	CHG_HI_VOLT#	UP / GPI
GPG0	PWRBTN2#	Dn/GPO/TM
GPG1	+3.3VS_ON	Dn/GPO/ID7
GPG2	EC_PORST	
GPG6	WEBCAN_ON	Dn / GPI
GPH0	PM_CLKRUN#	Dn/GPI/ID0
GPH1	PID_1_CHG_R_LED	Dn/GPI/ID1
GPH2	PID_2_PWR_LED	Dn/GPI/ID2
GPH3	EC_HSCS0#	Dn/GPI/ID3
GPH4	EC_HSCK	Dn/GPI/ID4
GPH5	EC_HMISO	Dn/GPI/ID5
GPH6	EC_HMOSI	Dn/GPI/ID6

ITE8518 GPIO		Default Pull/Mode
GPI0	CRT_DETECT	/GPI/ADC
GPI1	PANEL_DETECT	/GPI/ADC
GPI2	PLATFORM_ID	/GPI/ADC
GPI3	CPPE#	/GPI/ADC
GPI4	BAT_I	/GPI/ADC
GPI5	BATT_TEMP	/GPI/ADC
GPI6	ADAPTOR_1	/GPI/ADC
GPI7	BAT_V	/GPI/ADC
GPJ0	EC_BL_ON	/GPI/DAC
GPJ1	EC_PROCHOT	/GPI/DAC
GPJ2	FAN_CTRL0	/GPI/DAC
GPJ3	CHG_REF	/GPI/DAC
GPJ4	CHG_I	/GPI/DAC
GPJ5	PWR_USB#	/GPI/DAC

Penryn_CPU

	CPU CORE(V)	ICC(A)	W	TEMP( )
IMVP-6+	1.05	44.0	36	

Cantiga

VCC	ICC(mA)	W	TEMP( )
+3.3V	262	0.87	105
+1.8VS	3249	5.73	
+1.5V	86	0.129	
+1.05	14688.52	15.43	

ICH9M

VCC	ICC(mA)	mW	TEMP( )
+5V	4	20	70
+5VS	2	10	
+3.3V	347	1145.1	
+3.3VS	212	699.6	
+1.5V	1988	2982	
+1.05V	1634	1715.7	

ITE8500

VCC	ICC(mA)	mW	TEMP( )
+3.3V	100	330	70

CLOCK_GENERATOR

VCC	ICC(mA)	mW	TEMP( )
+3.3V	1000	3300	70

IDT92HD81

VCC	ICC(mA)	mW	TEMP( )
+3.3V(DVDD)	200	660	70
+5V(AVDD)	1000	5000	

ADM1032

VCC	ICC	mW	TEMP( )
+3.3V	170uA	0.56	150

JMC261

VCC	ICC(mA)	mW	TEMP( )
+3.3VS	300	990	70
+1.2VS	150	180	

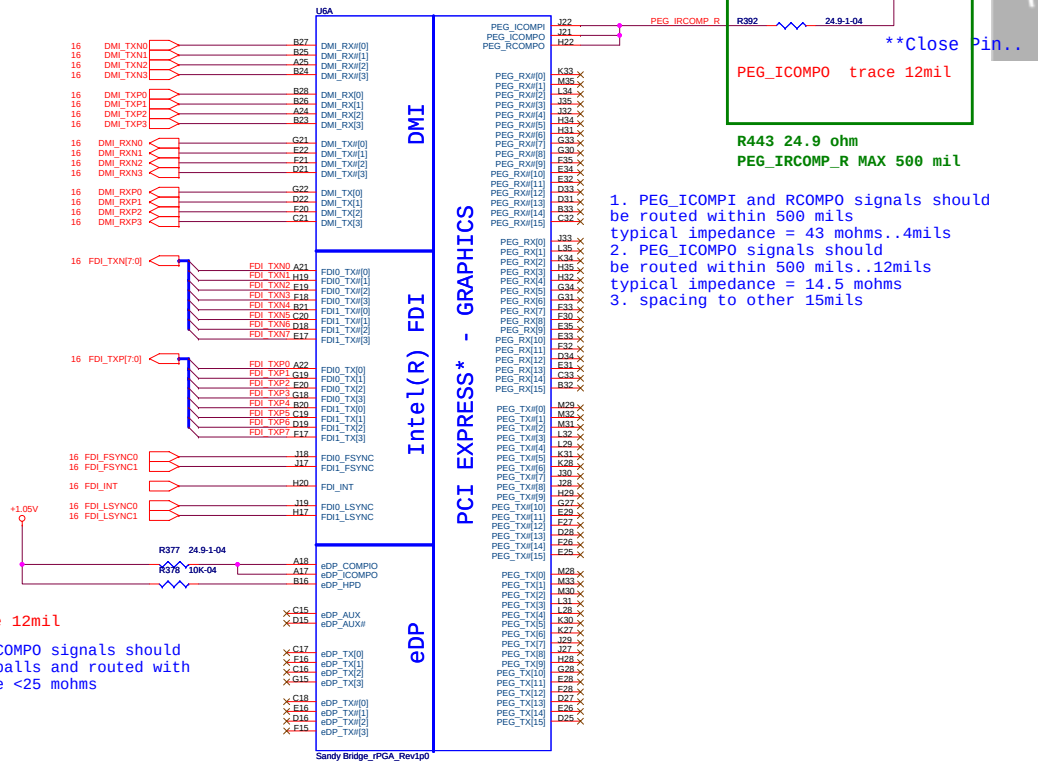
Shuttle Inc

Title: A14HV

Size: Custom | Document Number: GPIO & Power Consumption | Rev: A

Date: Tuesday, September 21, 2010 | Sheet 4 of 40

SANDYBRIDGE PROCESSOR(DMI,PEG,FDI)



R443 24.9 ohm
PEG_IRCOMP_R MAX 500 mil

1. PEG_ICOMPI and RCOMPO signals should be routed within 500 mils typical impedance = 43 mohms..4mils
2. PEG_ICOMPO signals should be routed within 500 mils..12mils typical impedance = 14.5 mohms
3. spacing to other 15mils

DP_ICOMPO trace 12mil

eDP_COMPIO and ICOMPO signals should be shorted near balls and routed with typical impedance <25 mohms

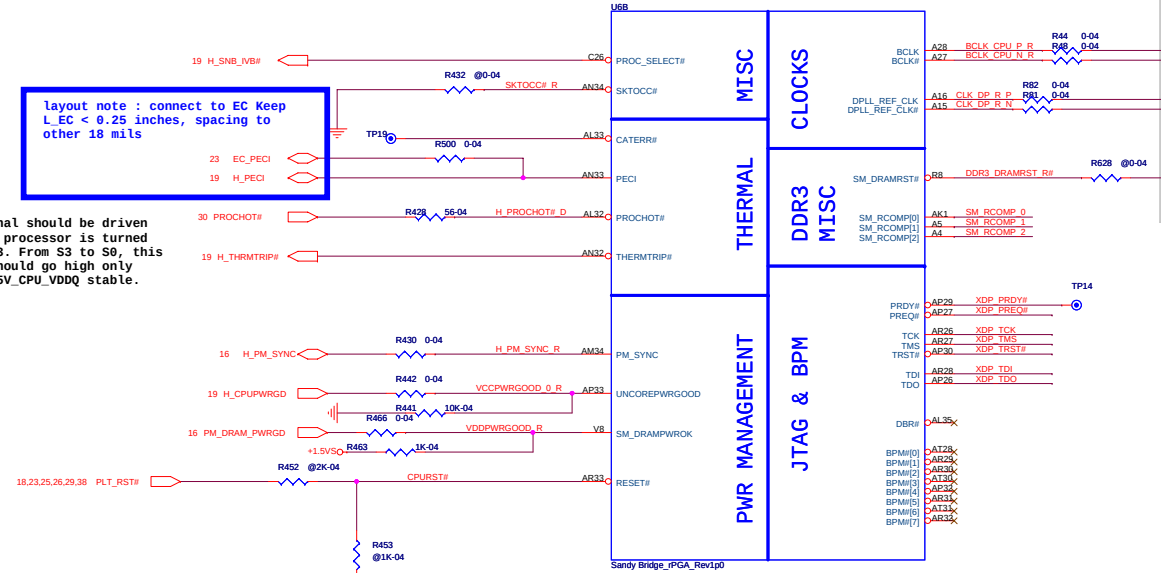
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_DMI/PEG/FDI (1 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 5 of 40	

SANDYBRIDGE PROCESSOR (CLK,MISC,JTAG)

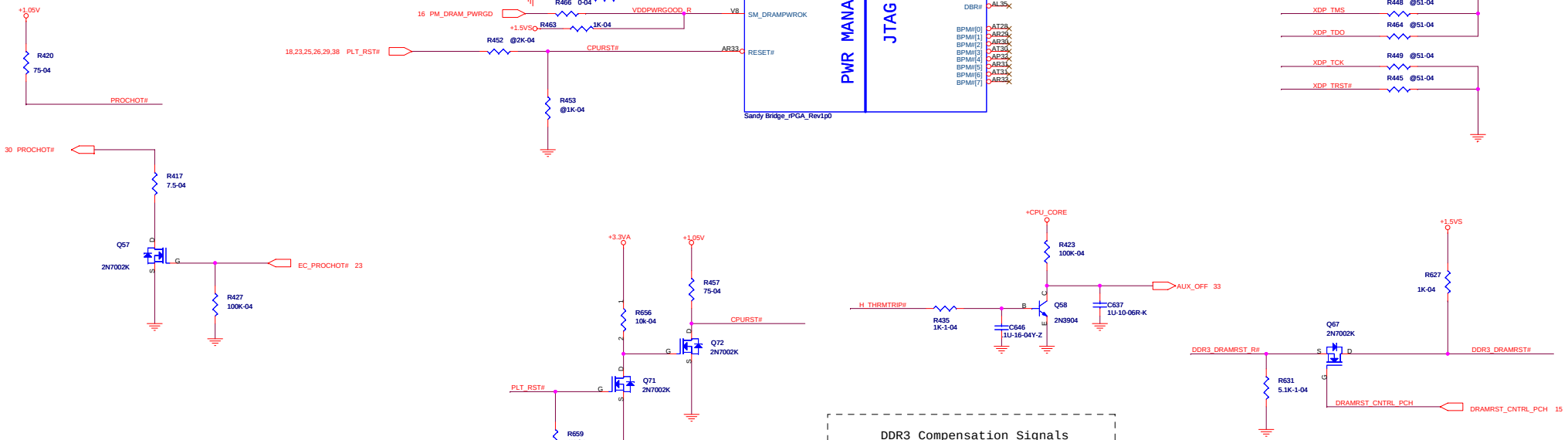
This pin is for compability with future platforms. A pull up resistor to VCPLL is required if connected to the DF_TVS strap on the PCH.

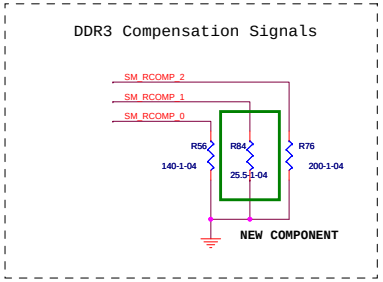
layout note : connect to EC Keep L_EC < 0.25 inches, spacing to other 18 mils

This signal should be driven low when processor is turned off in S3. From S3 to S0, this signal should go high only after 1.5V_CPU_VDDQ stable.



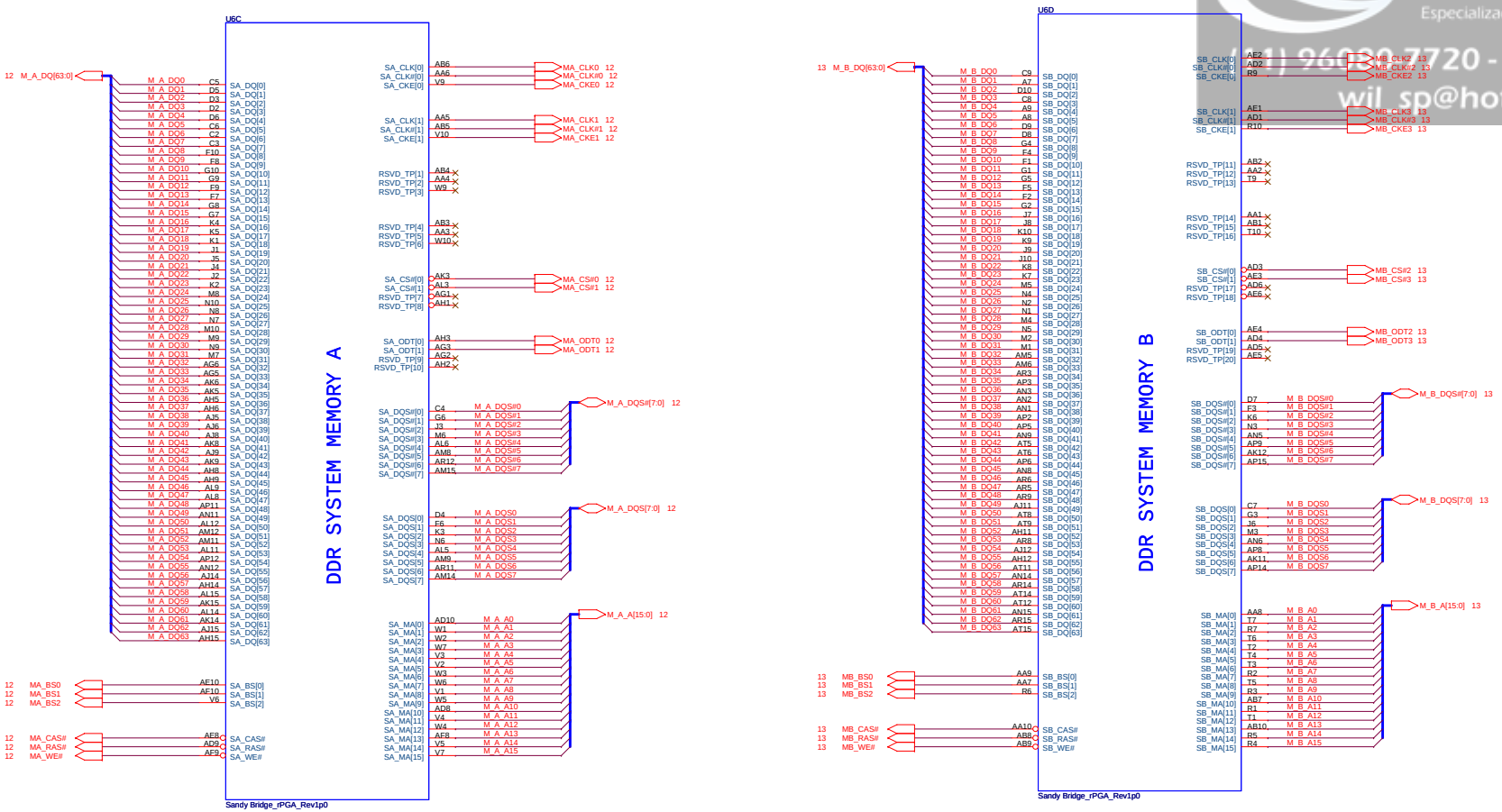
Document Number: 404081, Revision: 1.1
These signals are optional, can be left as OPEN/No-Connect if debug by Intel will not be needed





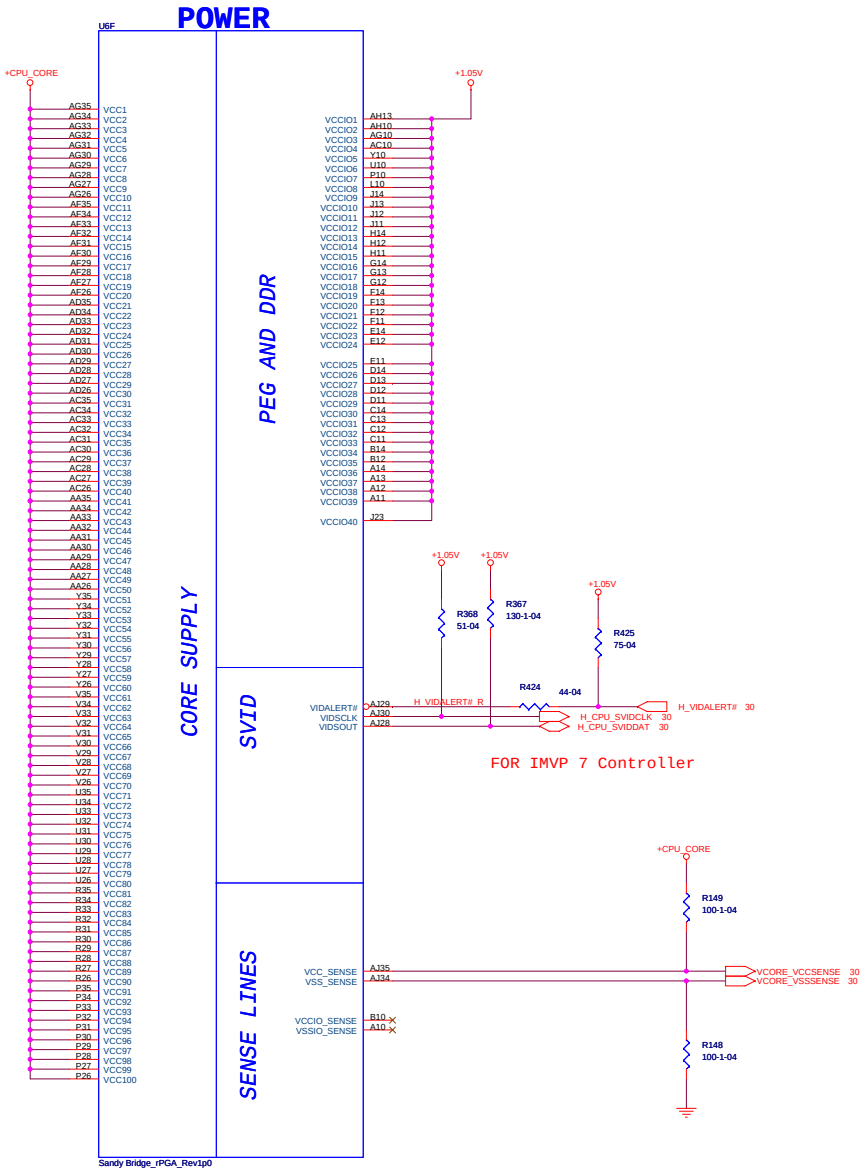
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_CLK/MISC/JTAG (2 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 6 of 40	

SANDYBRIDGE PROCESSOR (DDR3)

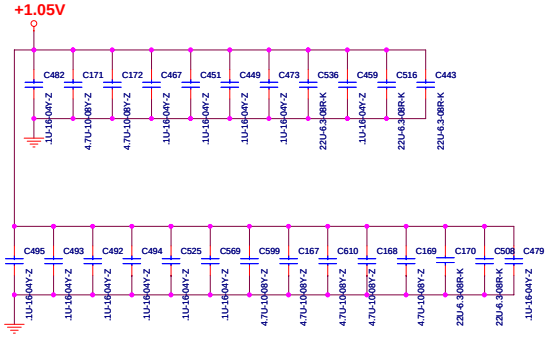


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: CPU_DDR3 BUS (3 of 7)		Rev: A
Date: Tuesday, September 21, 2010	Sheet 7 of 40		

SANDYBRIDGE PROCESSOR (POWER)



+CPU_Core Decoupling



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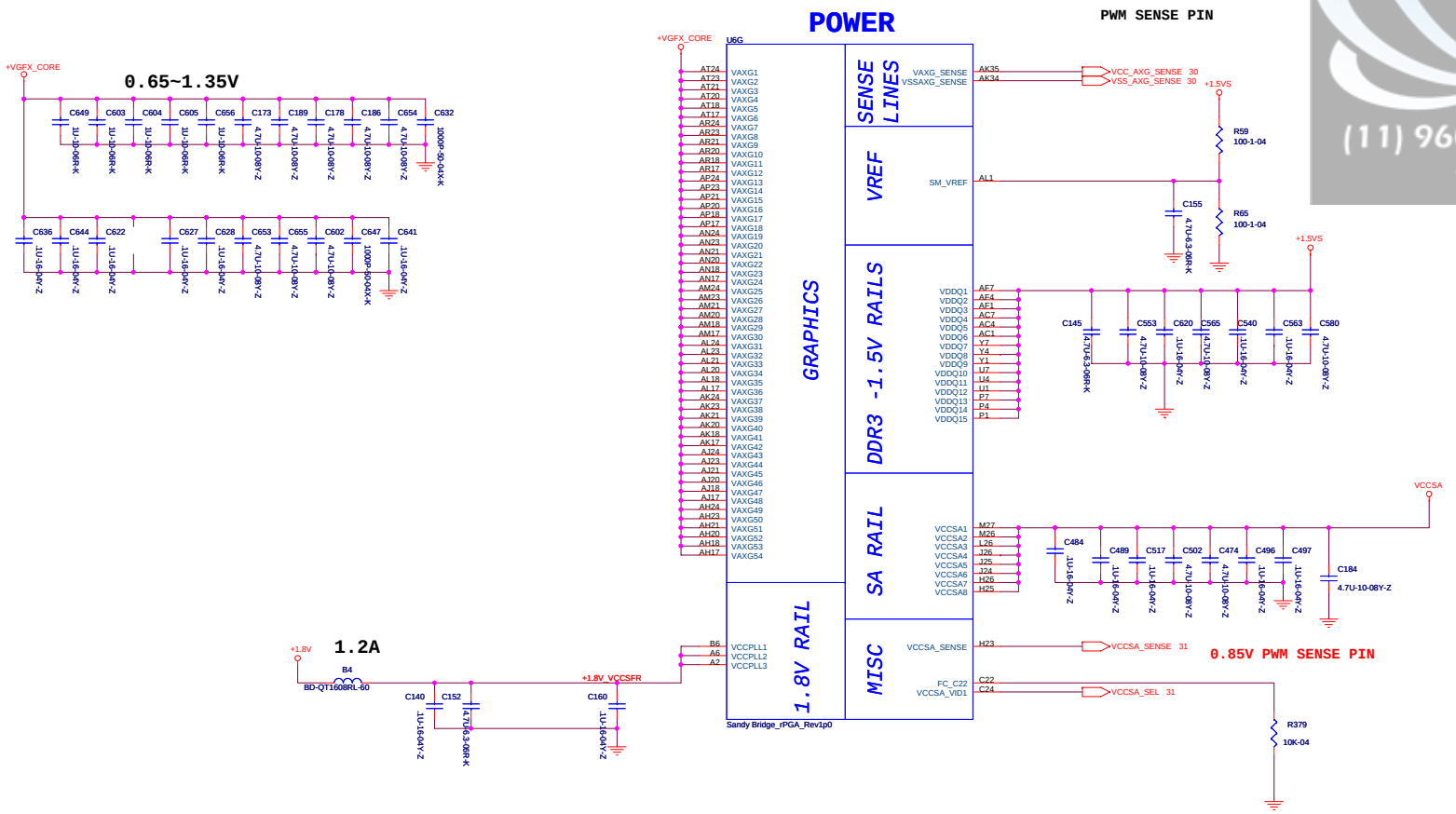
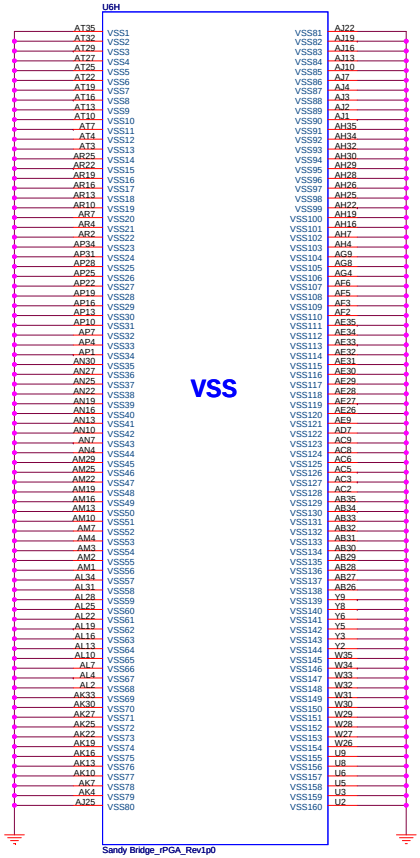
Title: A14HV		
Size: Custom	Document Number: CPU_PWR (4 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 8 of 40	

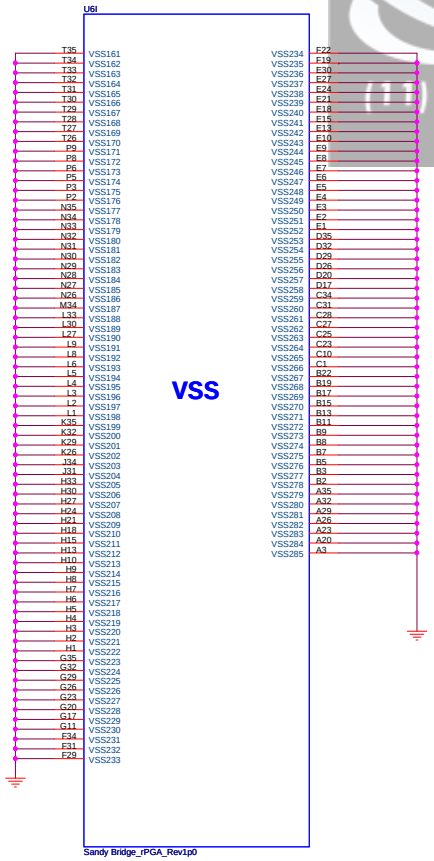
SANDYBRIDGE PROCESSOR (POWER)



Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_GRAPHICS POWER (5 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 9 of 40	

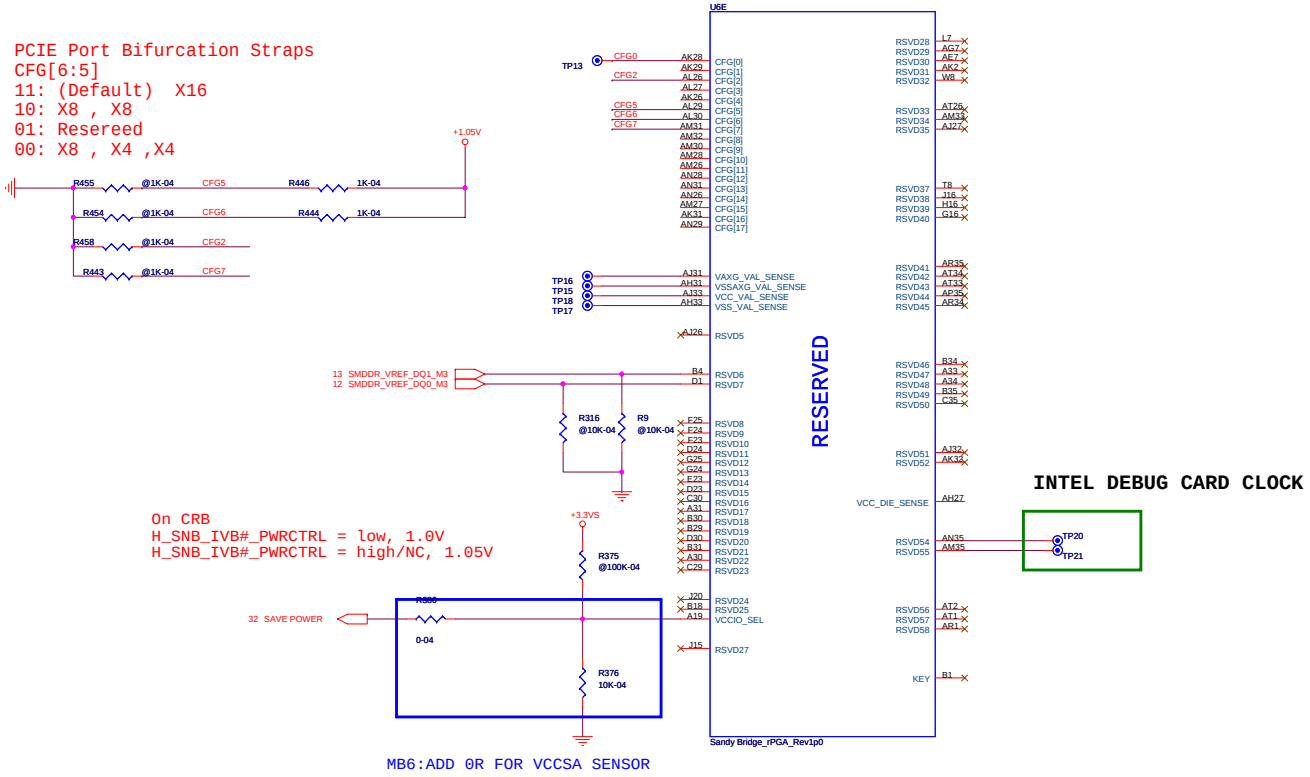
SANDYBRIDGE PROCESSOR (VSS)



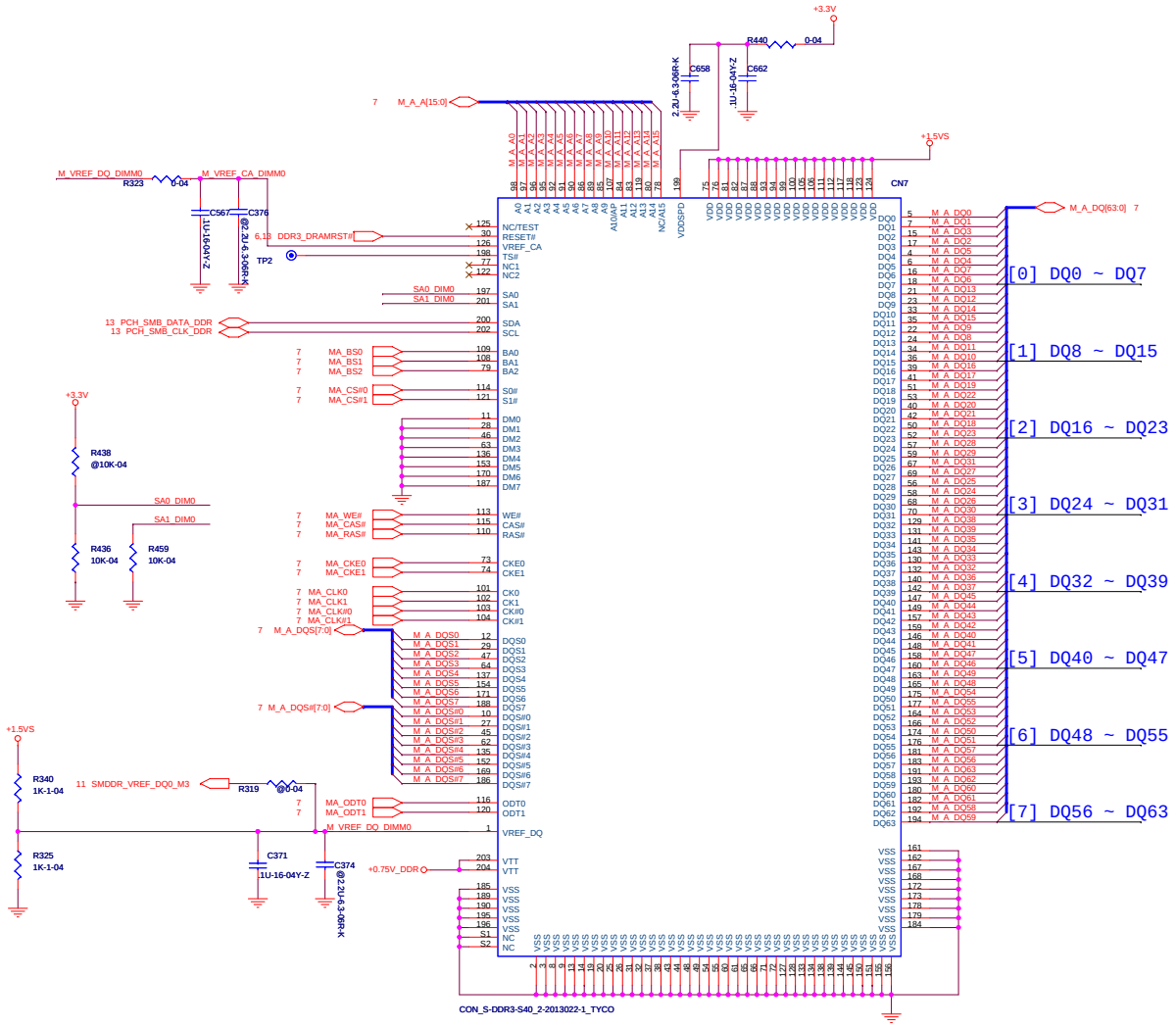


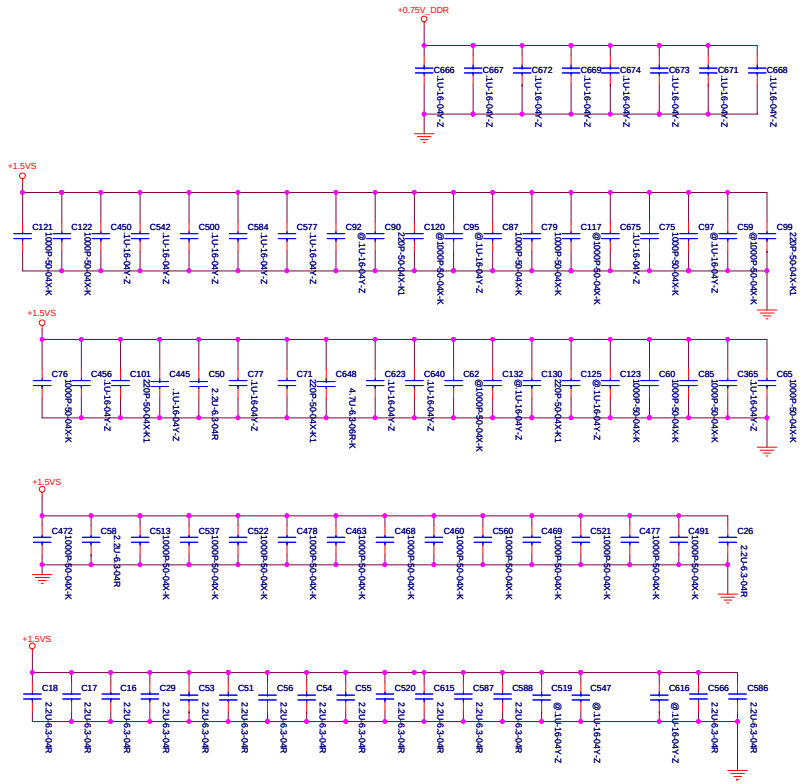
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_GND (6 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 10 of 40	

SANDYBRIDGE PROCESSOR (RESERVED)

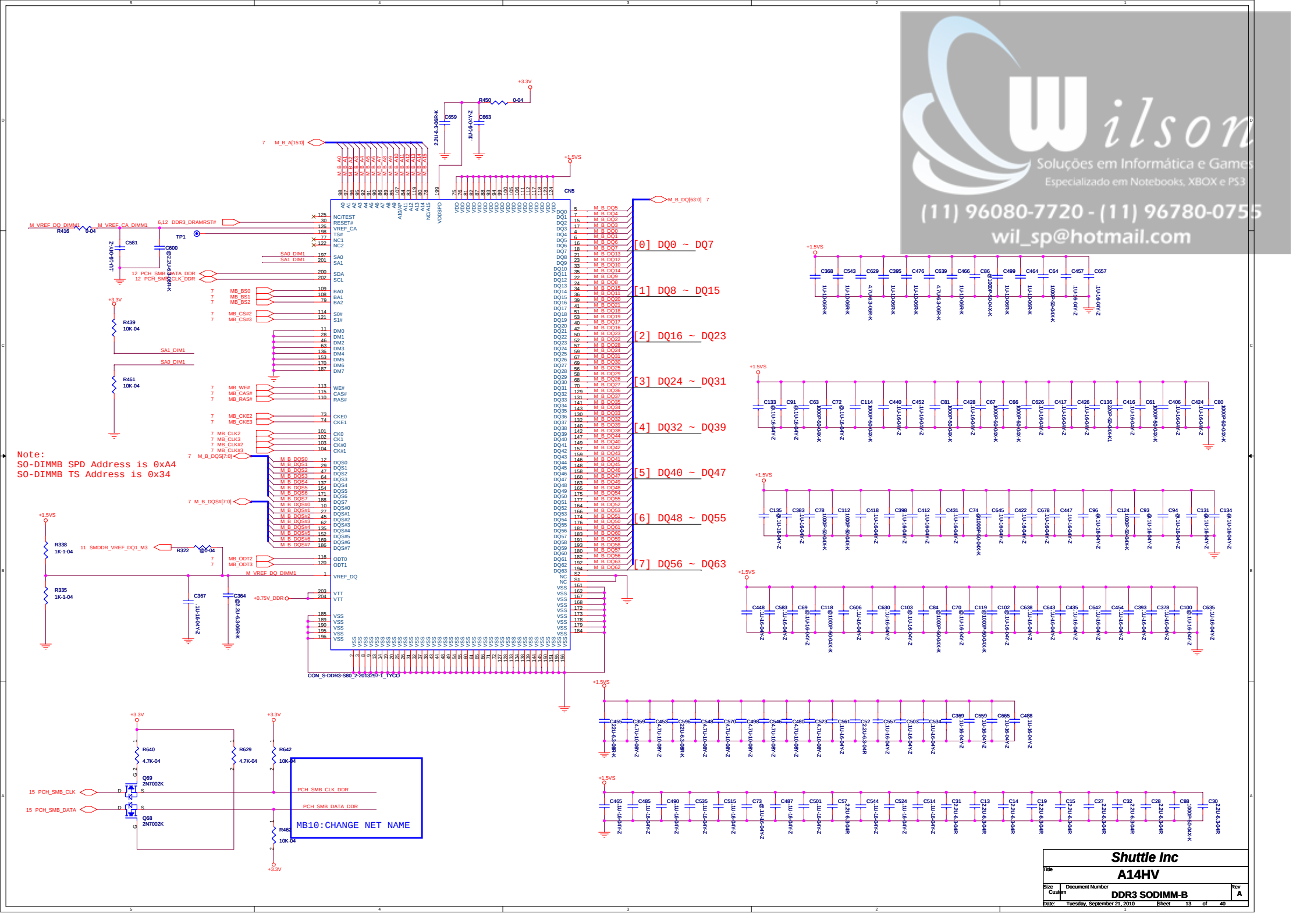


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_RESERVED (7 of 7)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 11 of 40	



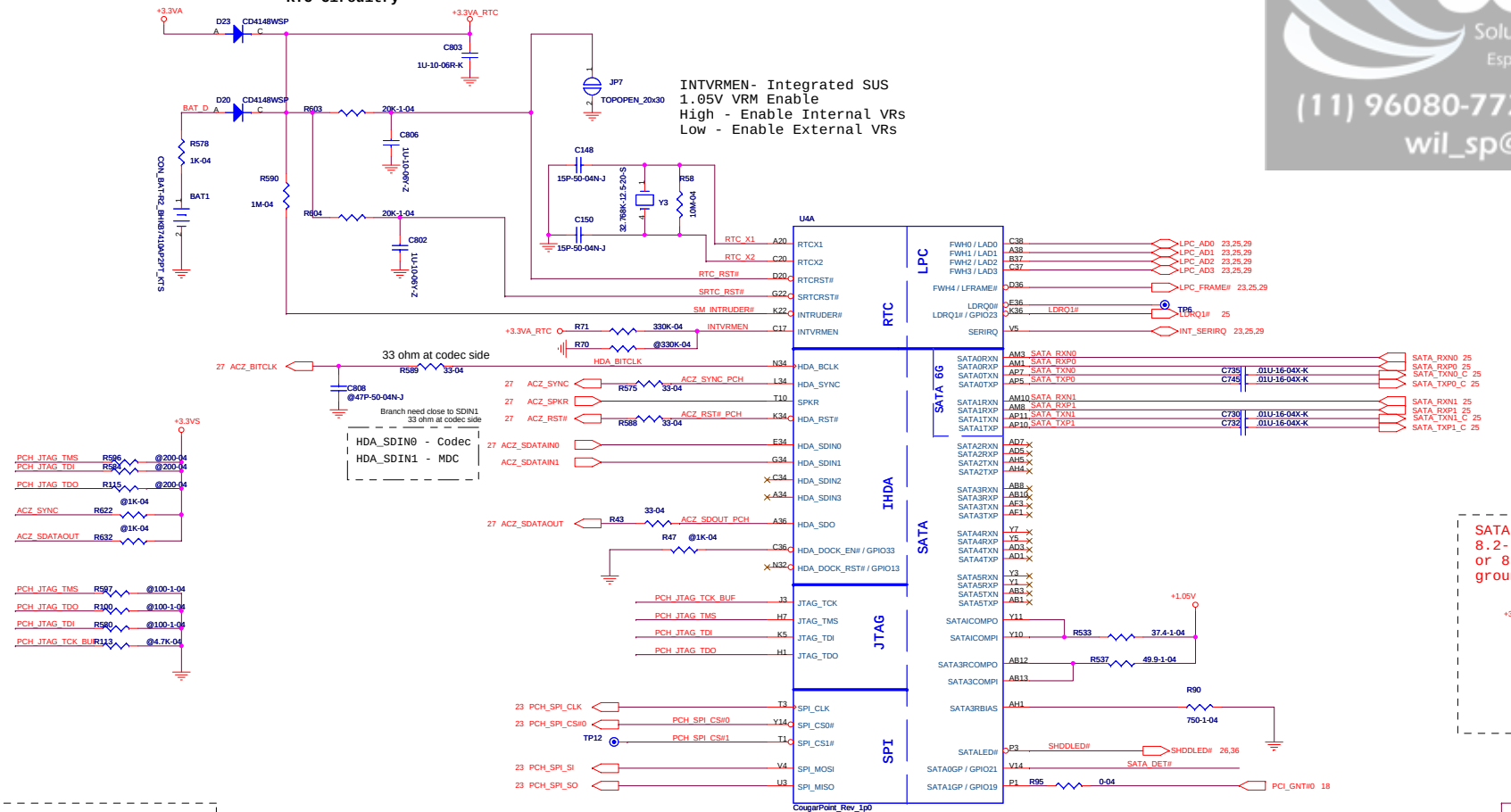


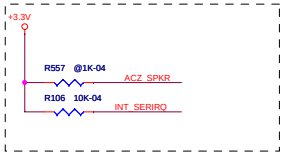
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: DDR3 SODIMM-A	Rev: A
Date: Tuesday, September 21, 2010	Sheet 12 of 40	

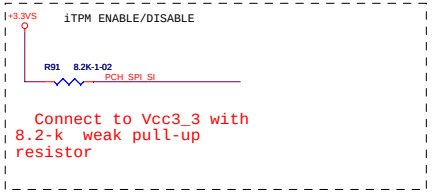


Cougar Point Chipset (RTC,LPC,SATA,HDA,SPI,JTAG)

RTC Circuitry

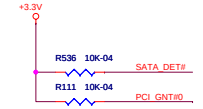


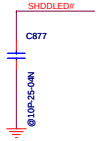




GPIO33: This signal should be connected to the reset signal of the CODEC in the dock Station.
This can be left unconnected when not in use.

SATA[x]GP pins if unused require 8.2-k to 10-k pull-up to +Vcc3_3 or 8.2-k to 10-k pull-down to ground.





Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: PCH_HDA/JTAG/SATA (1 of 9)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 14 of 40	

Cougar Point Chipset (PCIE,SMBUS,CLOCK)

PCIE	Location
PCIE 1	CN3 (MINI CARD CONN)
PCIE 2	U24 (LAN)
PCIE 3	CN11(NEW COAD & TV CARD)
PCIE 4	CN11(NEW COAD & TV CARD)
PCIE 5	U13 (USB3.0 ASM1042)

CLK	Location
CLK 0	CN3 (MINI CARD CONN)
CLK 1	CN11(NEW COAD & TV CARD)
CLK 3	U13 (USB3.0 ASM1042)
CLK 4	U24 (LAN)
CLK 5	CN11(NEW COAD & TV CARD)

SMB_	DDRA,DDRB
SML0_	TO EC
SML1_	TO WLAN

U4B

PCI-E*

SMBUS

Controller Link

CLOCKS

FLEX CLOCKS

CougarPoint_Rev_1p0

To DRAM

To EC

CHECK GPIO74

If not used, 8.2-k to 10-k pull-up to Vcc_3_3 (+V3.3S)

for PCIe Graphics SLOTS

This input has to be terminated with a 10-kOhms pull-down termination resistor in Integrated Clock generation mode.

MB2:DEL R FOR BOM

Title	A14HV
Size	Custom
Document Number	PCH_PCIE/CLK/SMBUS (2 of 9)
Rev	A
Date:	Friday, December 03, 2010
Sheet	15 of 40

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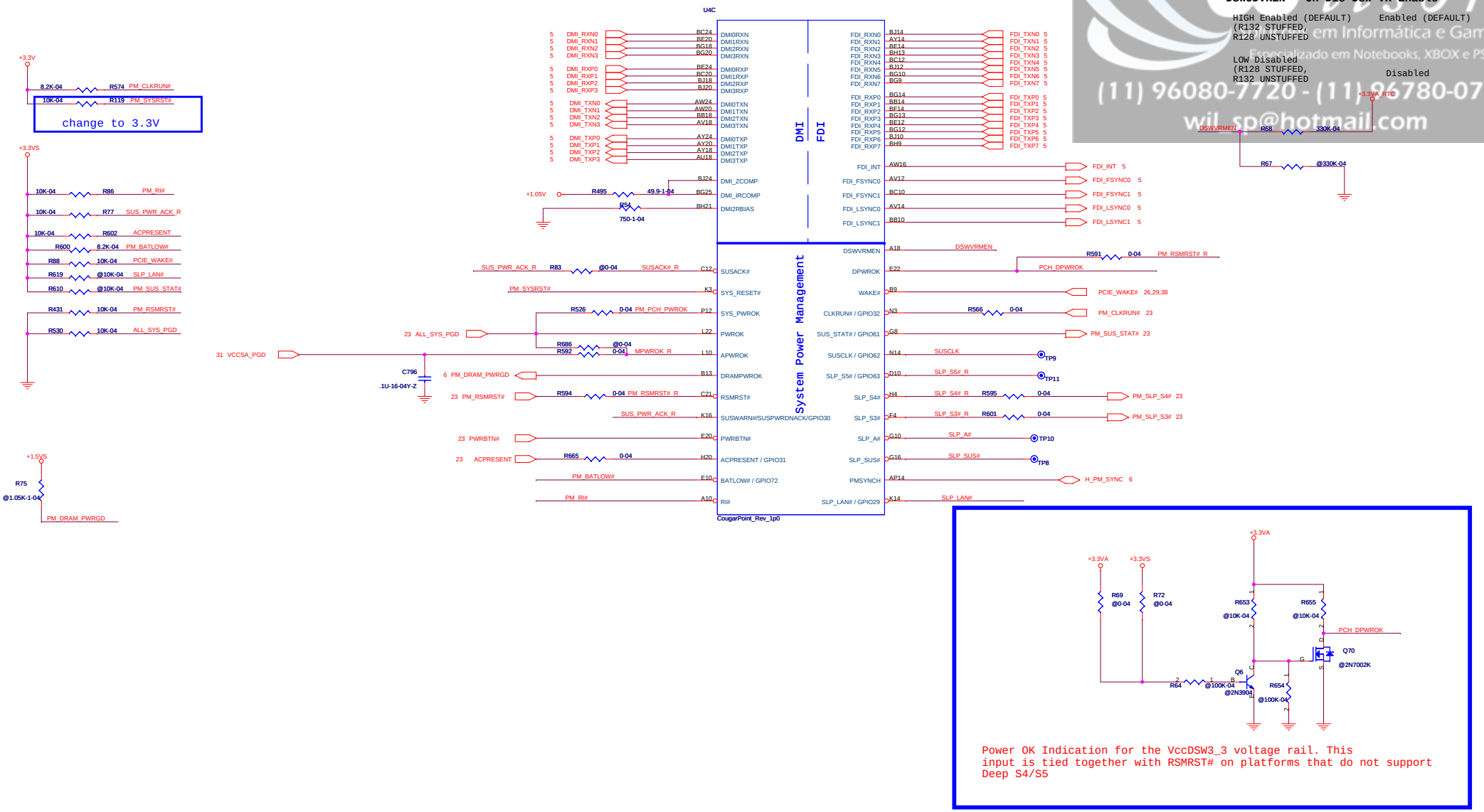
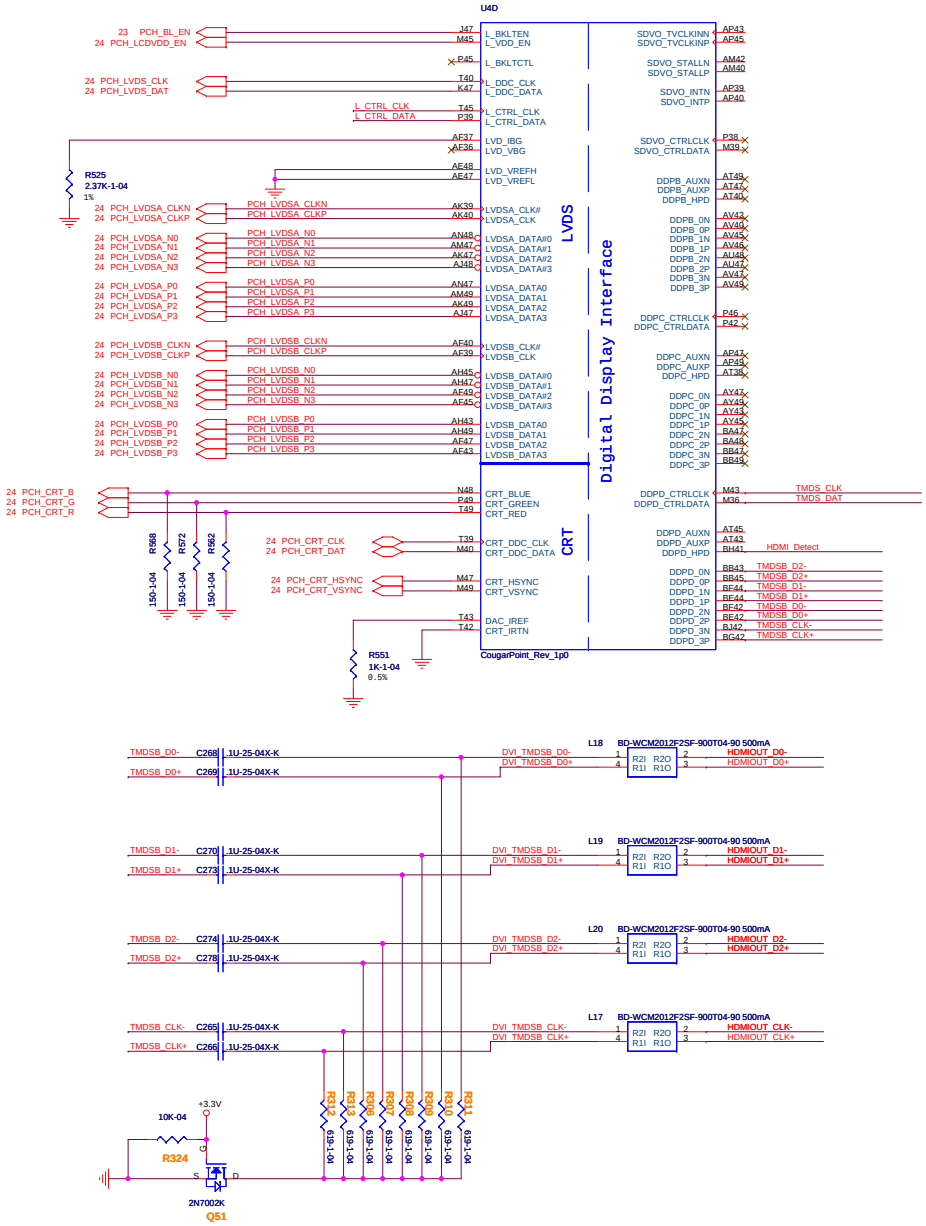
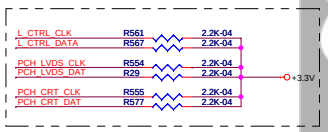
Cougar Point Chipset (DMI,FDI)



Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: PCH_DMI/FDI/PM (3 of 9)	Rev: A
Date: Friday, December 03, 2010	Sheet 16 of 40	

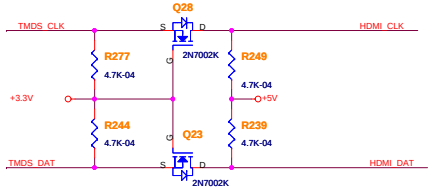
Cougar Point Chipset (LVDS,CRT,Digital Display)



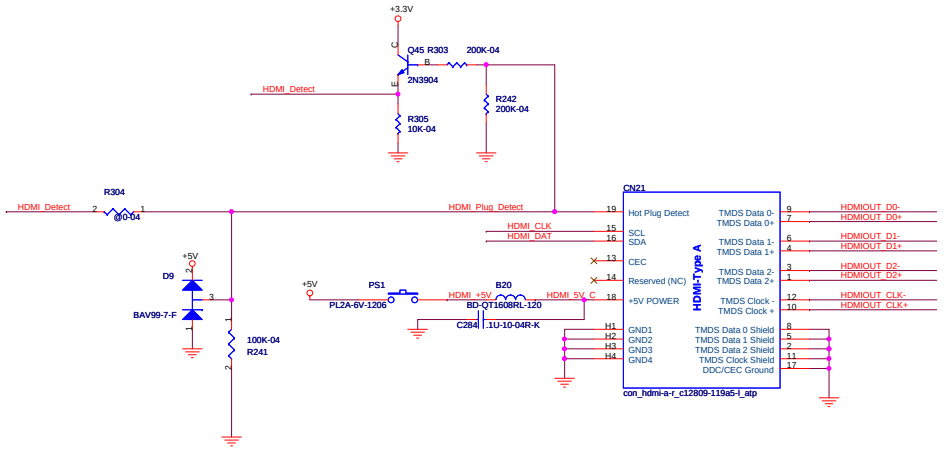


Configuration Wise Pin Mapping for DDI Ports (Sheet 1 of 2)

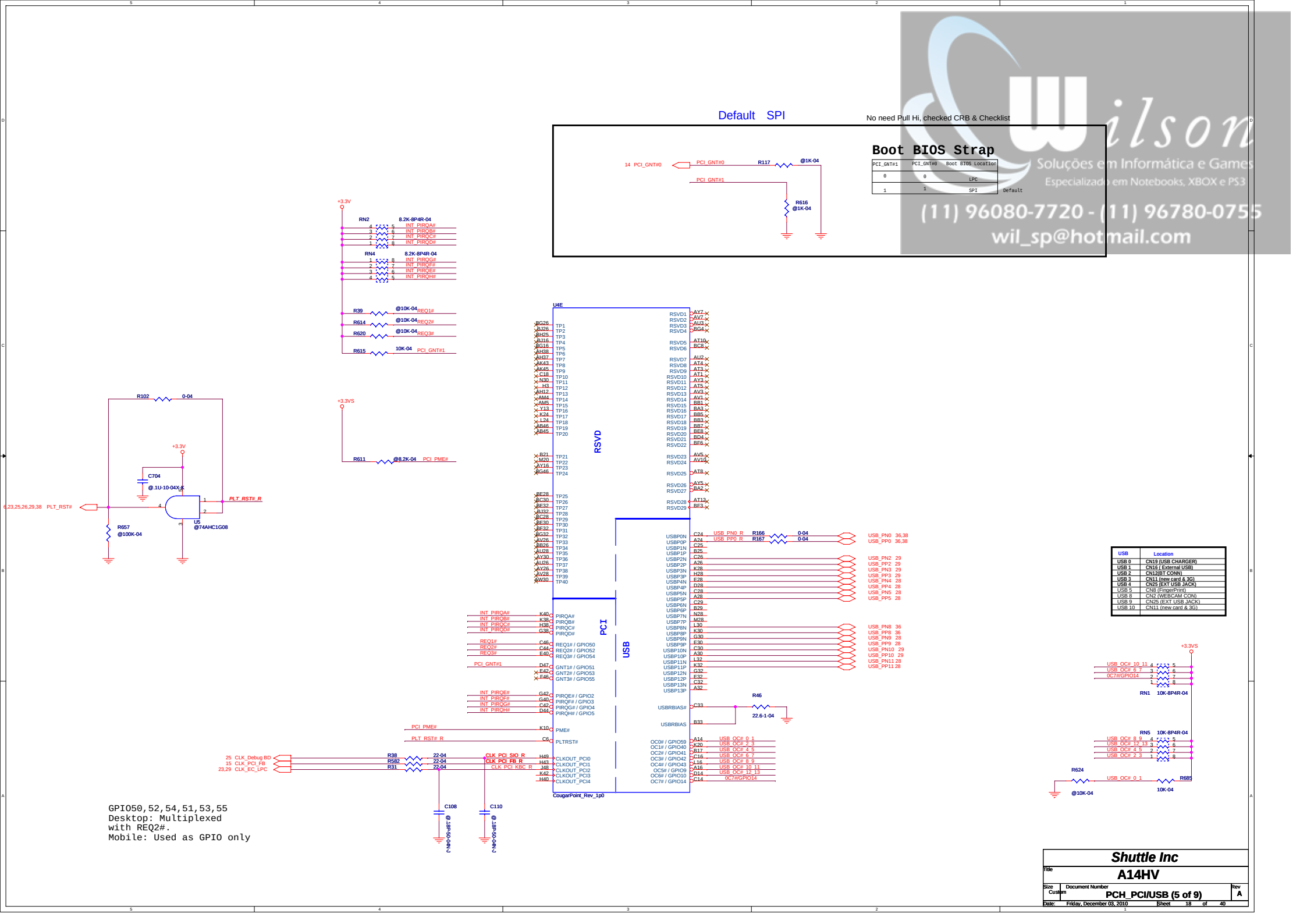
PORT	DDI PCH Pin Names	SDVO Mapping	DisplayPort† Mapping	HDMI/DVI Mapping
PORT-B	DDPB_[0]P	SDVO_RED	DDPB_[0]P	TMDSB_DATA2
	DDPB_[0]N	SDVO_RED#	DDPB_[0]N	TMDSB_DATA2#
	DDPB_[1]P	SDVO_GREEN	DDPB_[1]P	TMDSB_DATA1
	DDPB_[1]N	SDVO_GREEN#	DDPB_[1]N	TMDSB_DATA1#
	DDPB_[2]P	SDVO_BLUE	DDPB_[2]P	TMDSB_DATA0
	DDPB_[2]N	SDVO_BLUE#	DDPB_[2]N	TMDSB_DATA0#
	DDPB_[3]P	SDVO_CLK	DDPB_[3]P	TMDSB_CLK
	DDPB_[3]N	SDVO_CLK#	DDPB_[3]N	TMDSB_CLK#
	DDPB_AUXP	NA	DDPB_AUXP	NA
	DDPB_AUXN	NA	DDPB_AUXN	NA
	DDPB_HPD	NA	DDPB_HPD	HDMIB_HPD
	SDVO_CTRLCLK	SDVO_CTRLCLK	NA	HDMIB_CTRLCLK
	SDVO_CTRLDATA	SDVO_CTRLDATA	NA	HDMIB_CTRLDATA

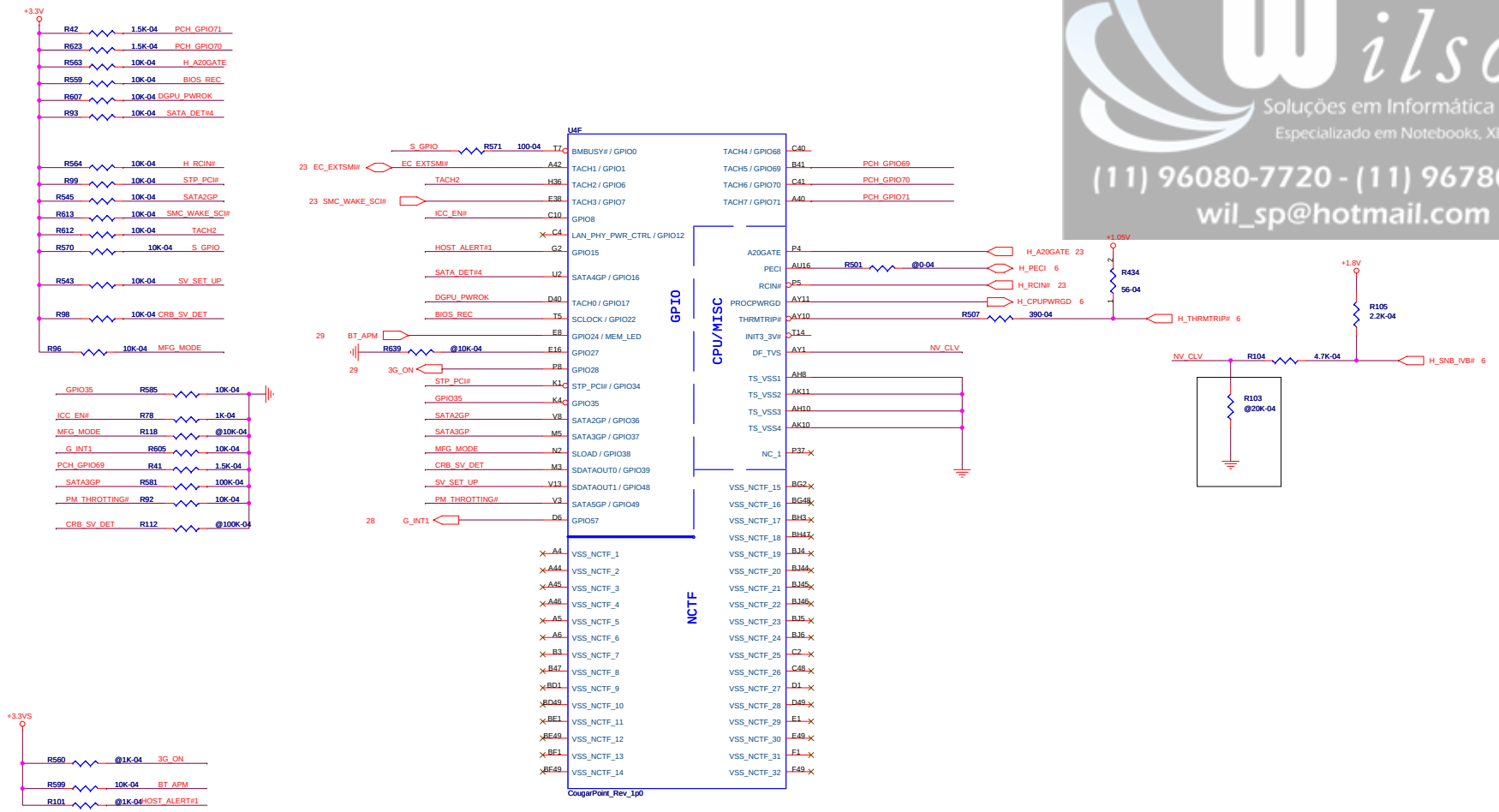


CHECK HDMI SPEC AND CRB

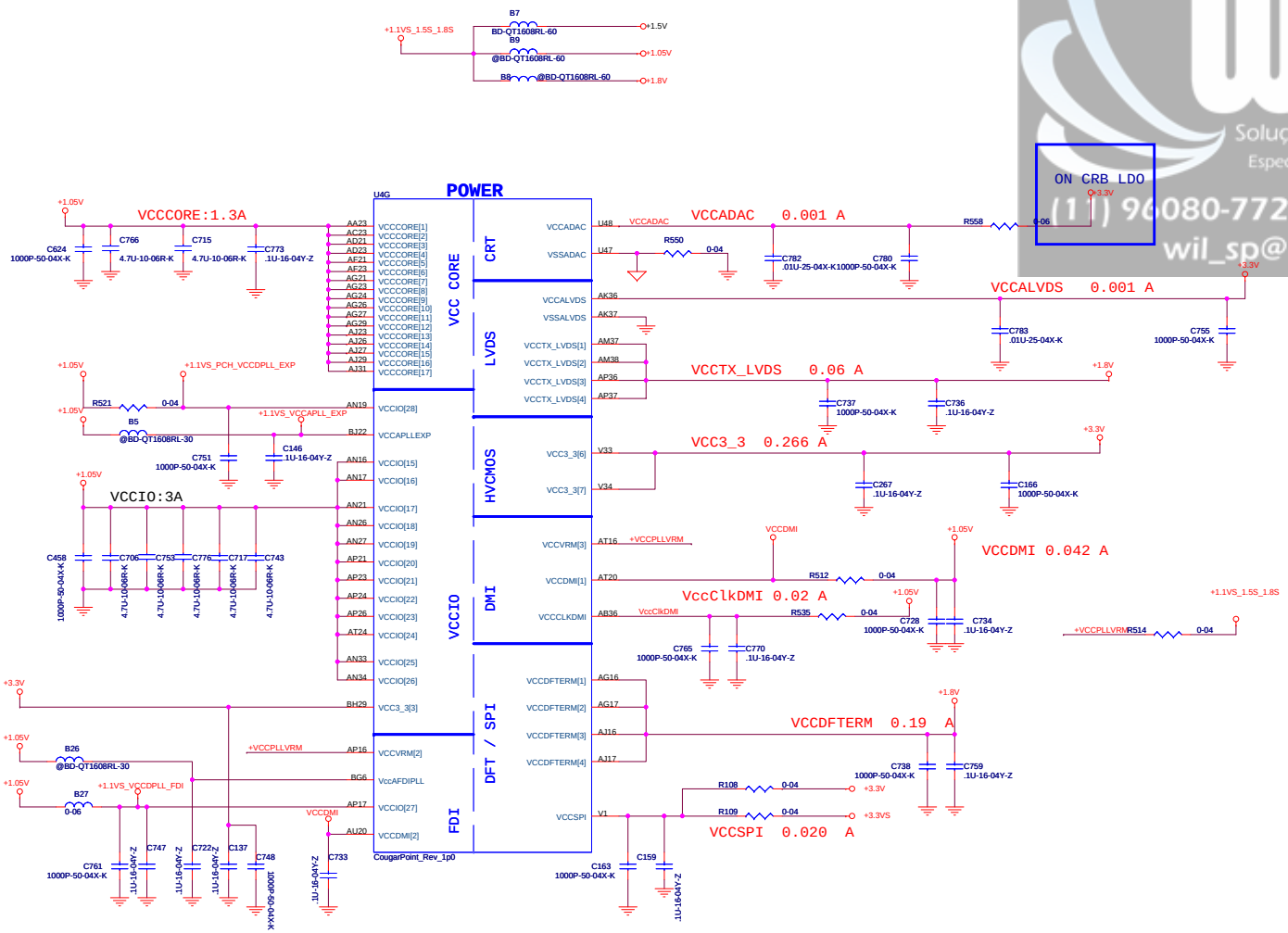


Shuttle Inc	
Title	A14HV
Size: Custom	Document Number: PCH_LVDS/CRT/DDI (4 of 9)
Rev	A
Date: Tuesday, September 21, 2010	Sheet 17 of 40

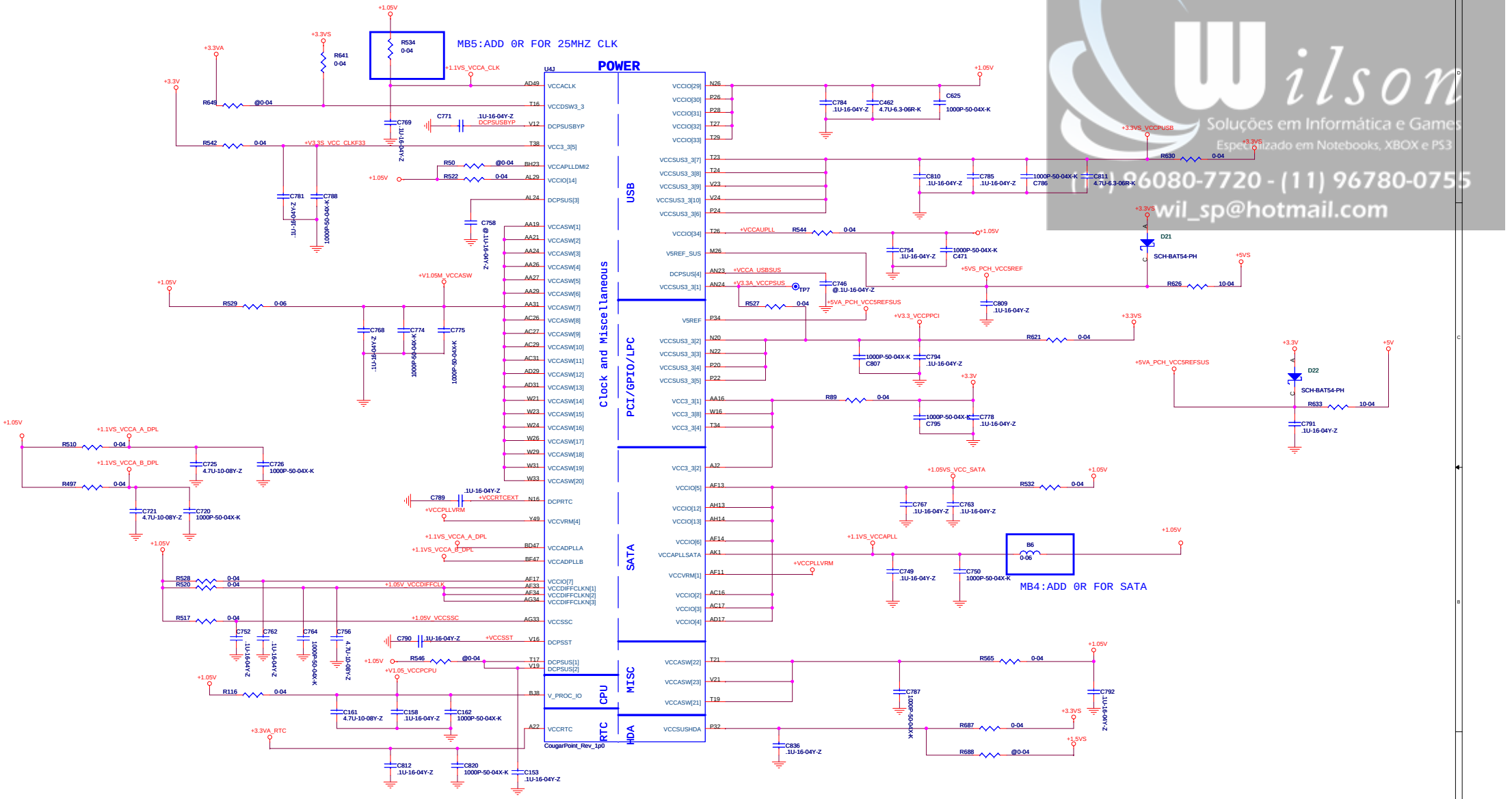

Default SPI
No need Pull Hi, checked CRB & Checklist
Boot BIOS Strap
PCI_GNT#1 PCI_GNT#0 Boot BIOS Location
0 0 LPC
1 1 SPI Default
14 PCI_GNT#0
PCI_GNT#0
R117 @1K-04
PCI_GNT#1
R616 @1K-04
+3.3V
RN2 8.2K-8P4R-04
INT_PIRQA#
INT_PIRQB#
INT_PIRQC#
INT_PIRQD#
RN4 8.2K-8P4R-04
INT_PIRQG#
INT_PIRQF#
INT_PIRQE#
INT_PIRQH#
R39 @10K-04 REQ1#
R614 @10K-04 REQ2#
R620 @10K-04 REQ3#
R615 10K-04 PCI_GNT#1
+3.3VS
R611 @8.2K-04 PCI_PME#
R102 0-04
+3.3V
C704
@.1U-10-04X
6,23,25,26,29,38 PLT_RST#
PLT_RST#_R
R657 @100K-04
U5 @74AHC1G08
U4E
RSVD
PCI
USB
PIRQA#
PIRQB#
PIRQC#
PIRQD#
REQ1# / GPIO50
REQ2# / GPIO52
REQ3# / GPIO54
GNT1# / GPIO51
GNT2# / GPIO53
GNT3# / GPIO55
PIRQE# / GPIO2
PIRQF# / GPIO3
PIRQG# / GPIO4
PIRQH# / GPIO5
PME#
PLTRST#
CLKOUT_PCI0
CLKOUT_PCI1
CLKOUT_PCI2
CLKOUT_PCI3
CLKOUT_PCI4
USBRBIAS#
USBRBIAS
R46 22.6-1-04
OC0# / GPIO59
OC1# / GPIO40
OC2# / GPIO41
OC3# / GPIO42
OC4# / GPIO43
OC5# / GPIO9
OC6# / GPIO10
OC7# / GPIO14
USB_OC# 0_1
USB_OC# 2_3
USB_OC# 4_5
USB_OC# 6_7
USB_OC# 8_9
USB_OC# 10_11
USB_OC# 12_13
0C7#/GPIO14
R166 0-04
R167 0-04
USB_PN0_R
USB_PP0_R
USB_PN0 36,38
USB_PP0 36,38
USB_PN2 29
USB_PP2 29
USB_PN3 29
USB_PP3 29
USB_PN4 28
USB_PP4 28
USB_PN5 28
USB_PP5 28
USB_PN8 36
USB_PP8 36
USB_PN9 28
USB_PP9 28
USB_PN10 29
USB_PP10 29
USB_PN11 28
USB_PP11 28
USB Location
USB 0 CN19 (USB CHARGER)
USB 1 CN16 (External USB)
USB 2 CN12(BT CONN)
USB 3 CN11 (new card & 3G)
USB 4 CN25 (EXT USB JACK)
USB 5 CN8 (FingerPrint)
USB 8 CN2 (WEBCAM CON)
USB 9 CN25 (EXT USB JACK)
USB 10 CN11 (new card & 3G)
RN1 10K-8P4R-04
RN5 10K-8P4R-04
R624 @10K-04
R685 10K-04
25 CLK_Debug BD
15 CLK_PCI_FB
23,29 CLK_EC_LPC
R38 22-04
R582 22-04
R31 22-04
CLK_PCI_SIO_R
CLK_PCI_FB_R
CLK_PCI_KBC_R
C108 @18P-50-04N-1
C110 @18P-50-04N-1
CougarPoint_Rev_1p0
GPIO50,52,54,51,53,55
Desktop: Multiplexed
with REQ2#.
Mobile: Used as GPIO only
Shuttle Inc
A14HV
PCH_PCI/USB (5 of 9)
Size Custom
Rev A
Date: Friday, December 03, 2010
Sheet 18 of 40



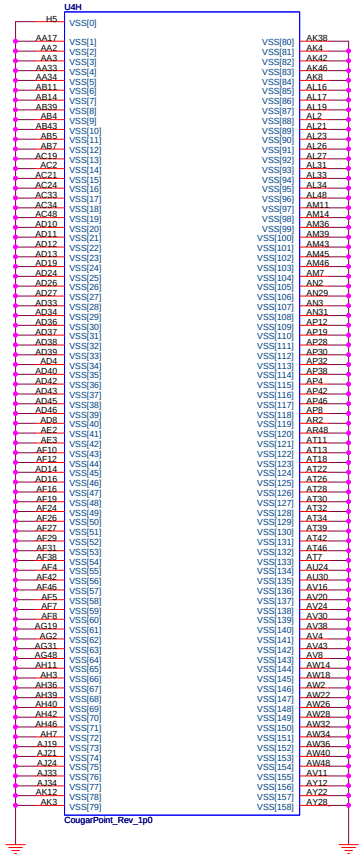
Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: PCH_GPIO/CPU (6 of 9)		Rev: A
Date: Friday, December 03, 2010	Sheet 19 of 40		

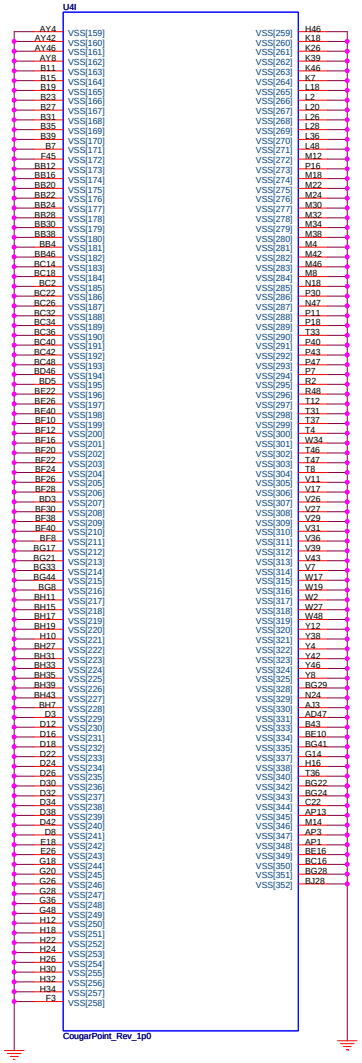


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: PCH POWER-A (7 of 9)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 20 of 40	

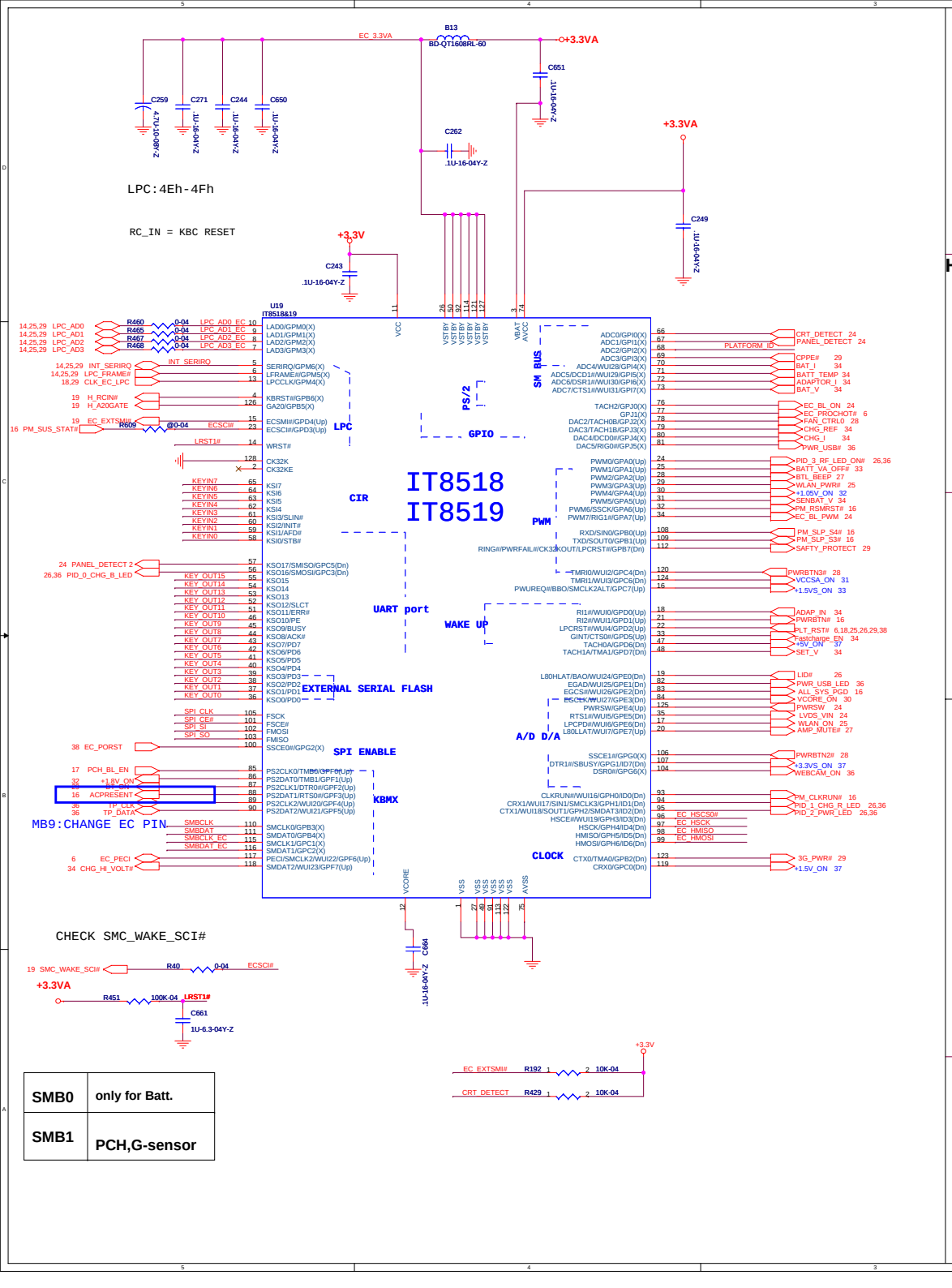


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: PCH POWER-B (8 of 9)		Rev: A
Date: Tuesday, September 21, 2010	Sheet 21 of 40		



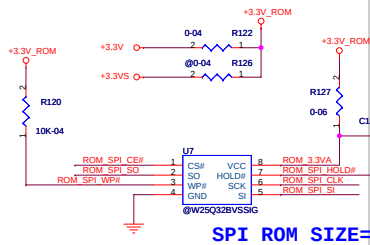


Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: **PCH GND (9 of 9)**	Rev: **A**
Date: Tuesday, September 21, 2010	Sheet 22 of 40	



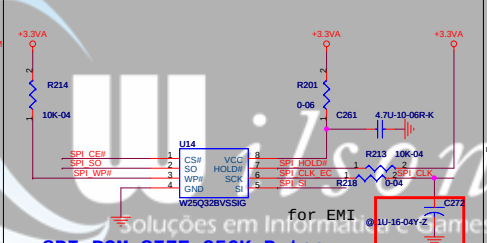
SMB0	only for Batt.
SMB1	PCH,G-sensor

BIOS/ME FLASH ROM(SPI)



SPI ROM SIZE=4M Bytes

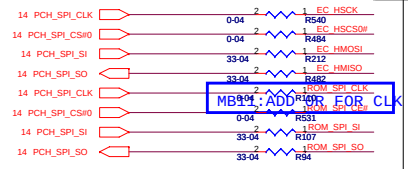
EC FLASH ROM(SPI)



for EMI

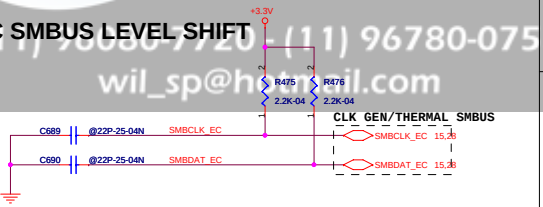
SPI ROM SIZE=256K Bytes

HSPI Select

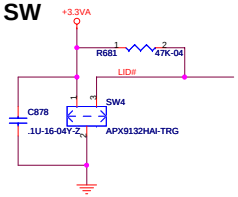


MB11:ADD 33R FOR CLK

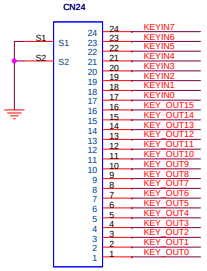
EC SMBUS LEVEL SHIFT



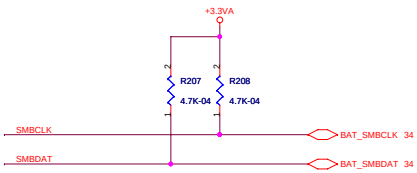
LID SW

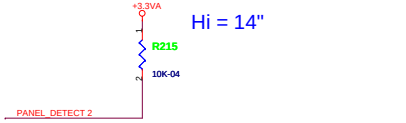


KEYBOARD Conn

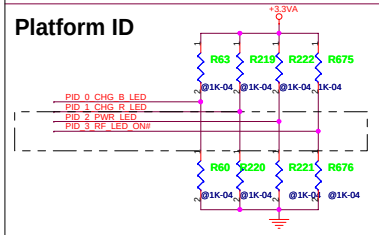


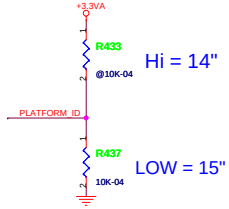
Keyboard conn swap pin ok





Platform ID





ID / MODEL	(ID0)	(ID1)

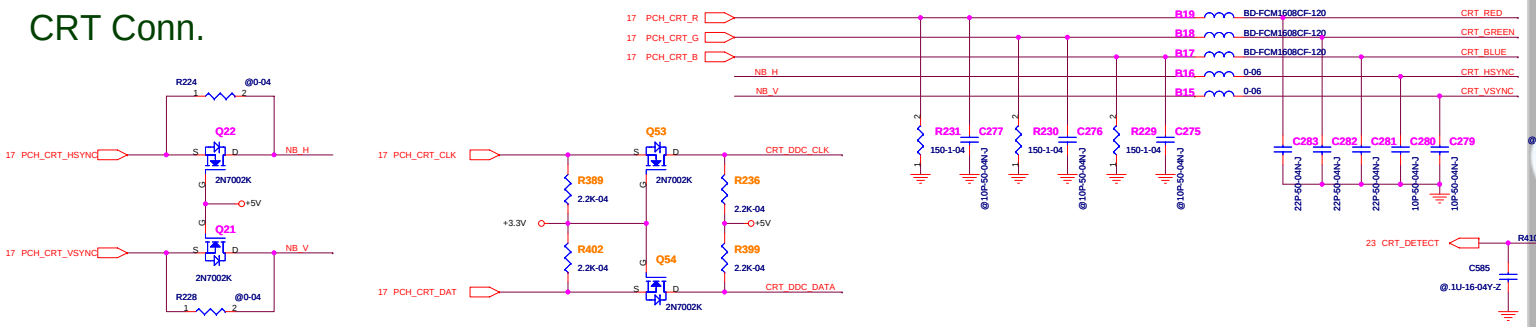
Shuttle Inc

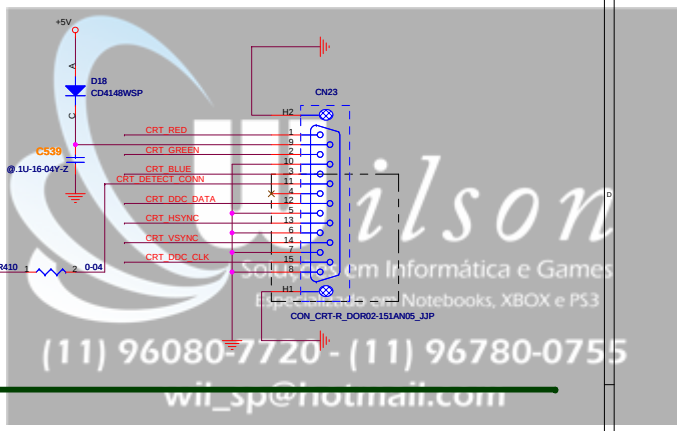
Title: **A14HV**

Size: Custom | Document Number: **EC IT8500BX/BIOS/KB CONN** | Rev: A

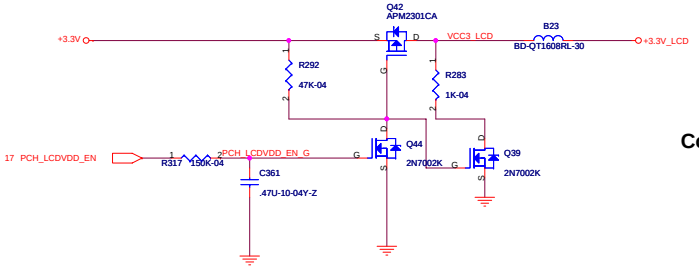
Date: Tuesday, September 21, 2010 | Sheet 23 of 40

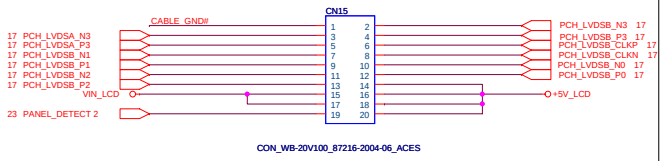
CRT Conn.



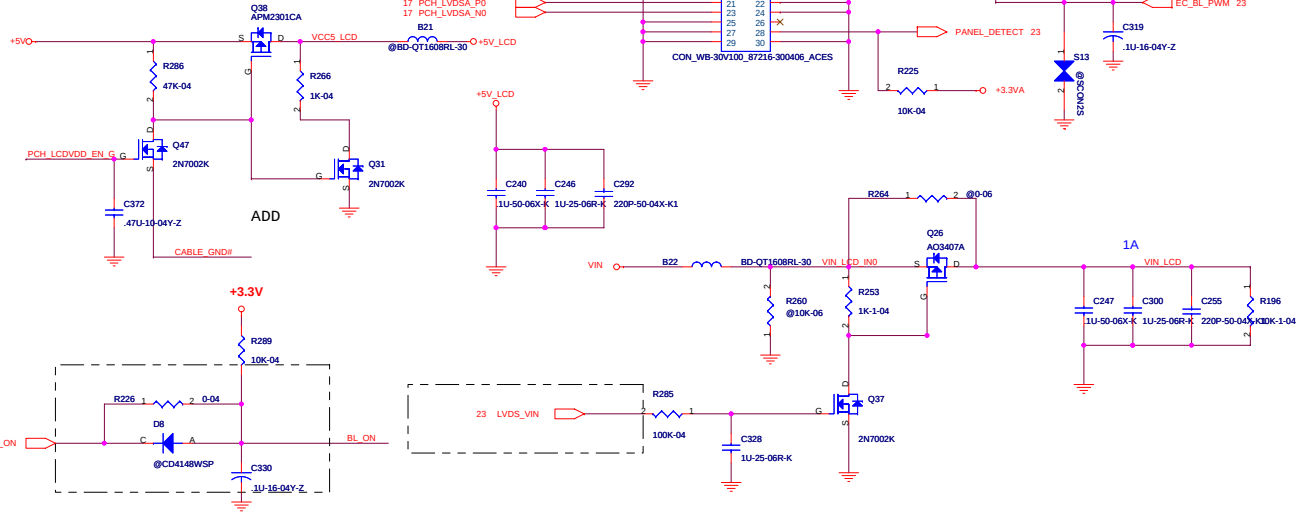


LVDS Conn.

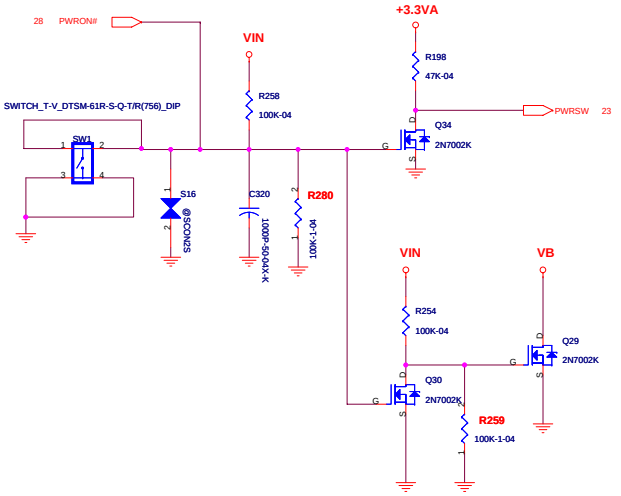


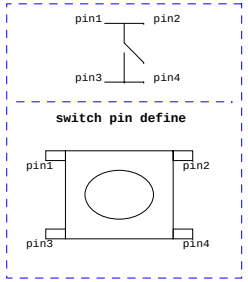


Co-Lay with LVDS 30 Pin Conn
50 PIN CONN SYMBOL NO STUFF



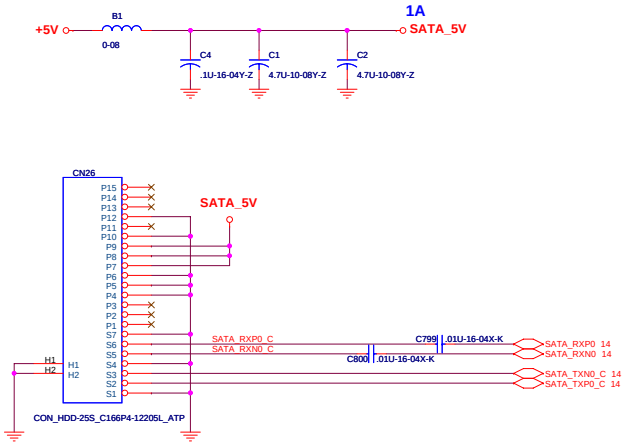
PWR SW



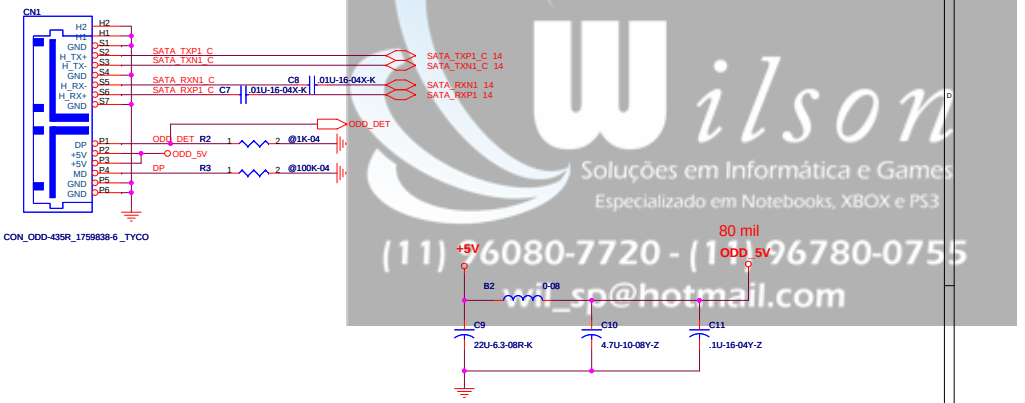


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CRT/LVDS/PWR SW	Rev: A
Date: Tuesday, December 07, 2010	Sheet 24 of 40	

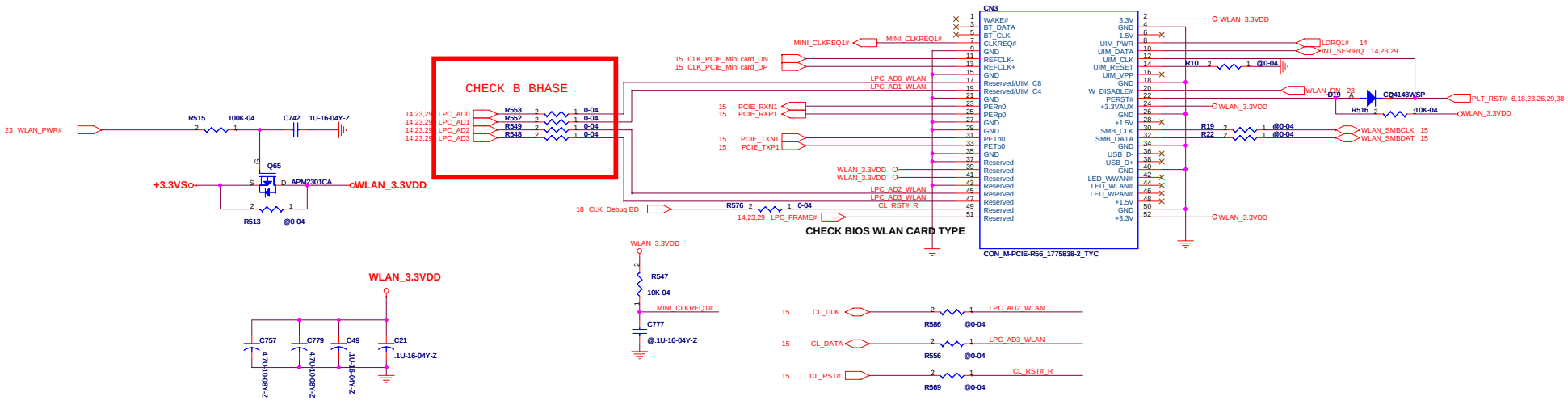
SATA-HDD



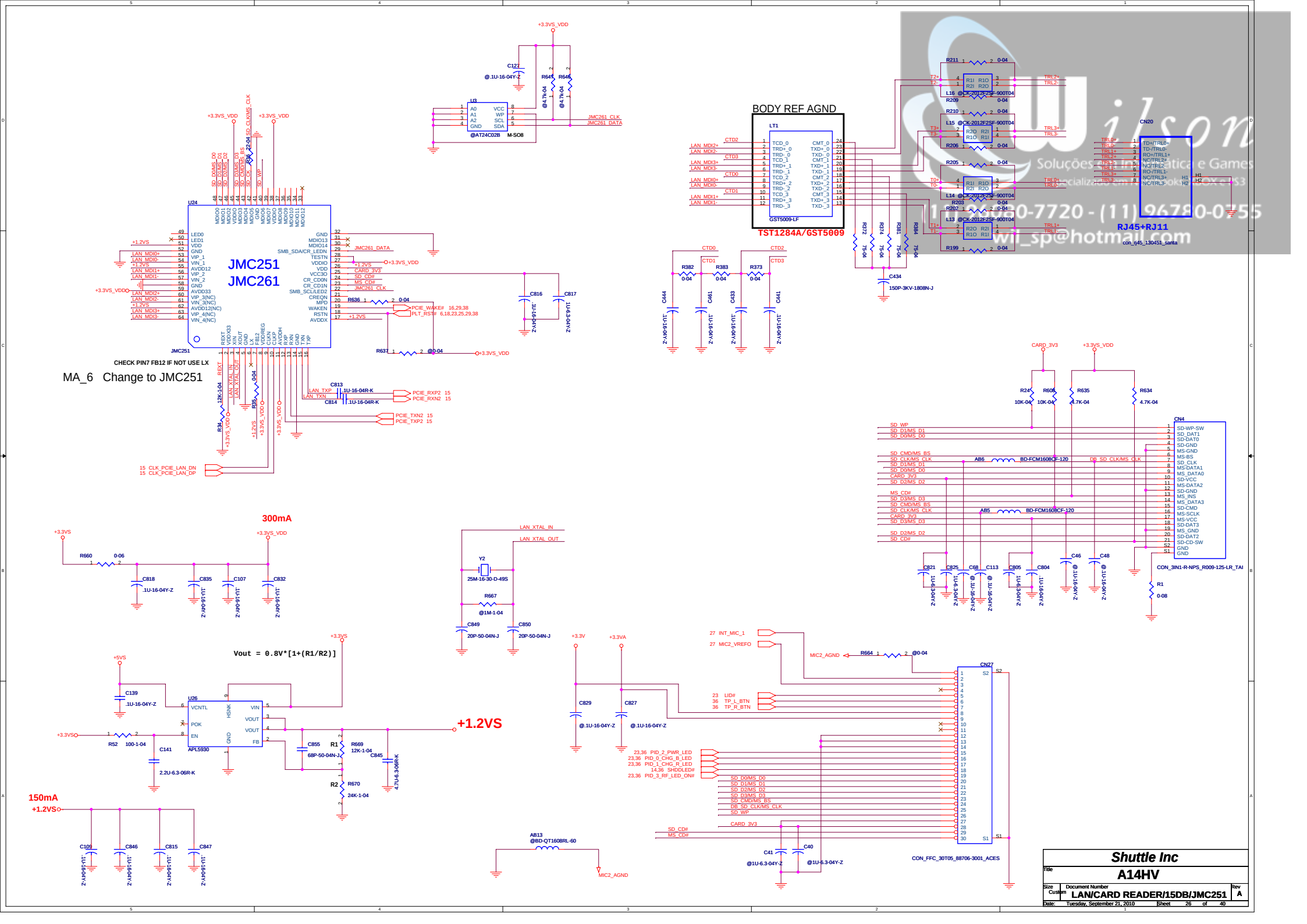
CD-ROM



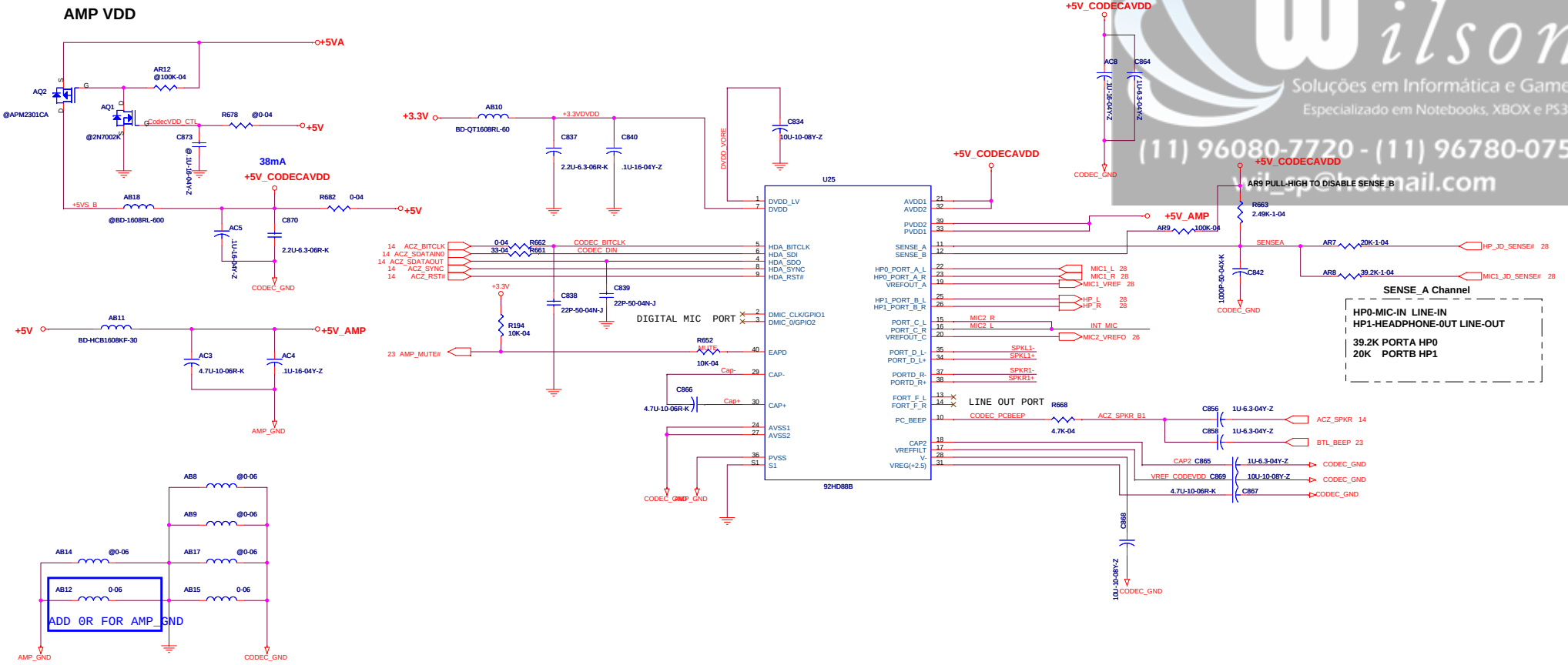
MINI CARD CONN



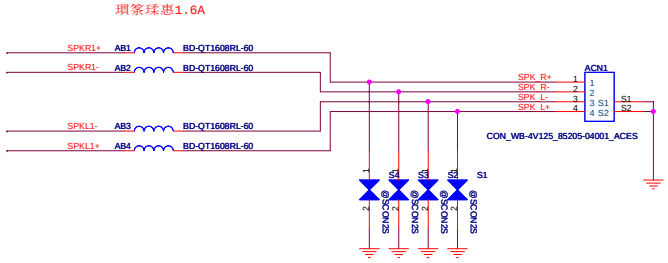
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: HDD/ODD /MINI CARD	Rev: A
Date: Tuesday, September 21, 2010	Sheet 25 of 40	


JMC251
JMC261
CHECK PIN7 FB12 IF NOT USE LX
MA_6 Change to JMC251
TST1284A/GST5009
BODY REF AGND
RJ45+RJ11
300mA
Vout = 0.8V*[1+(R1/R2)]
+1.2VS
150mA
+1.2VS
Shuttle Inc
A14HV
LAN/CARD READER/15DB/JMC251
Rev A
Tuesday, September 21, 2010
Sheet 26 of 40

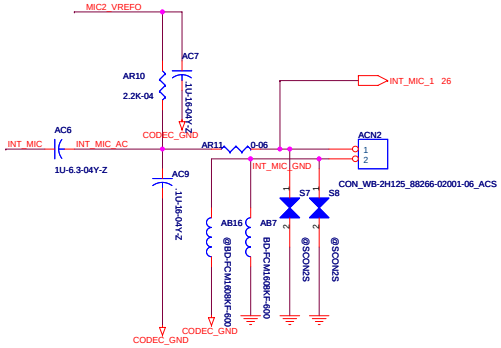
CODEC 92HD81



INT_SPEAKER

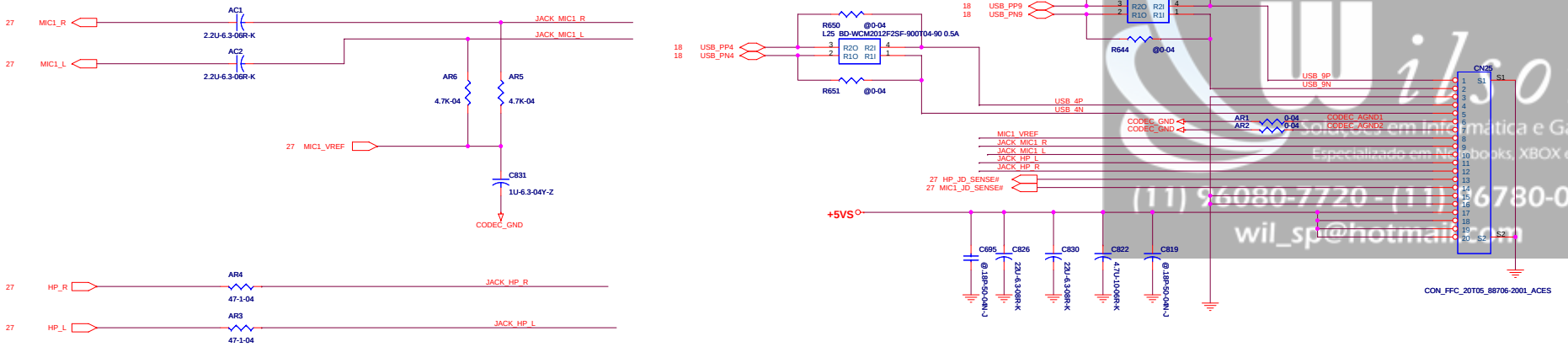


INT_MIC

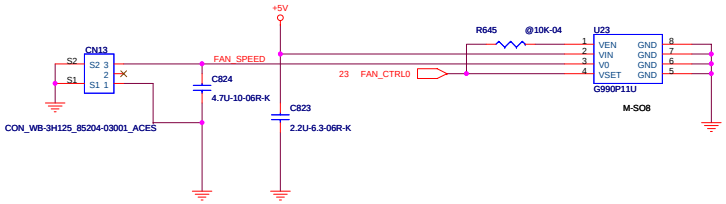


Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: **CODEC(ALC269)/INT MIC/SPKR**	Rev: A
Date: Tuesday, September 21, 2010	Sheet 27 of 40	

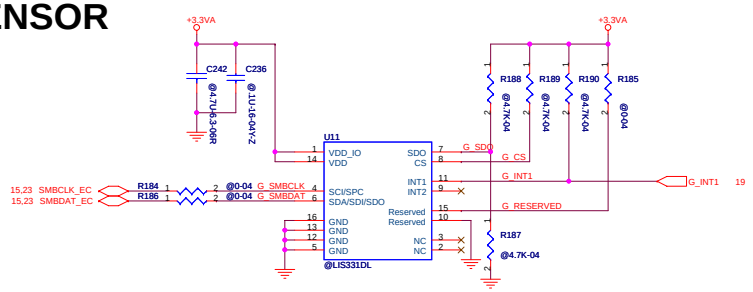
EXT MIC/EXT Line In/ EXT USB JACK



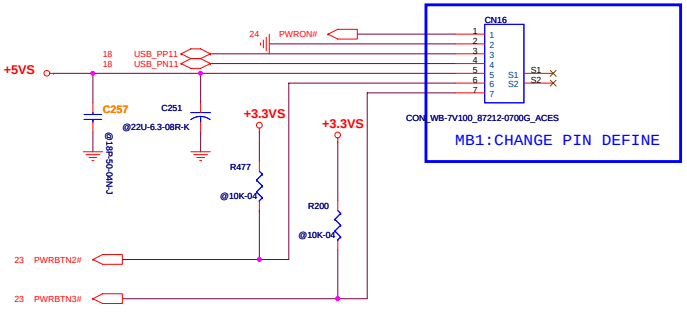
FAN CONTROLLER



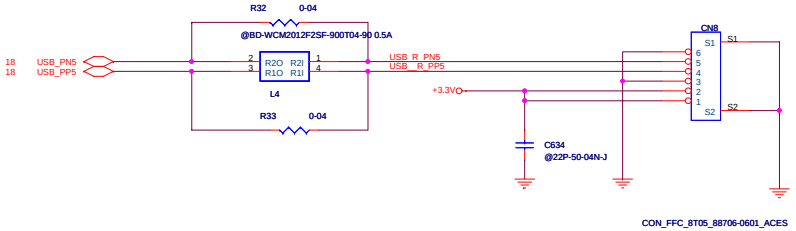
G-SENSOR



EXT USB PORT 4



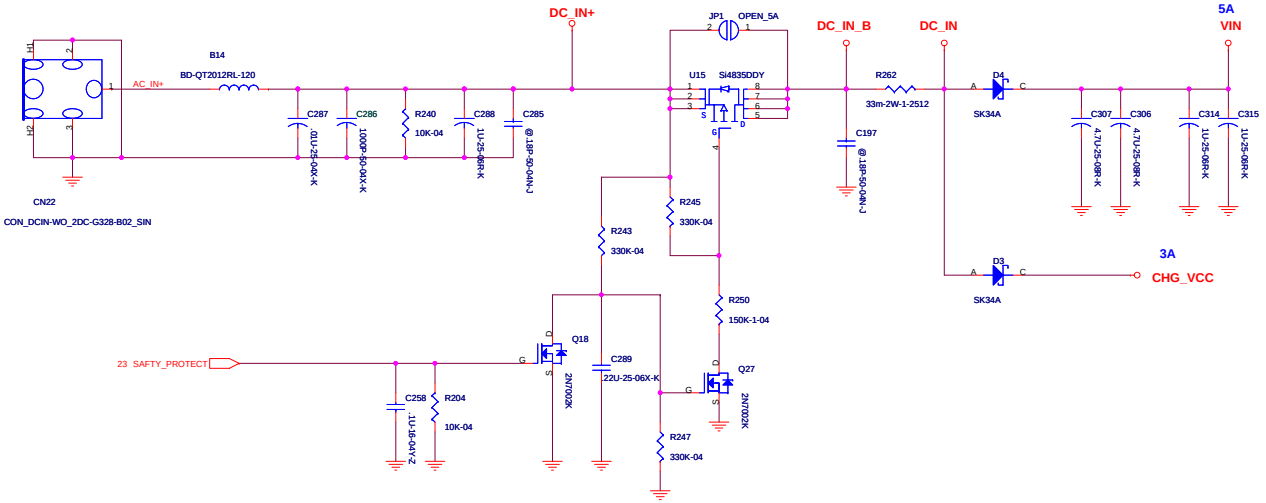
FingerPrint



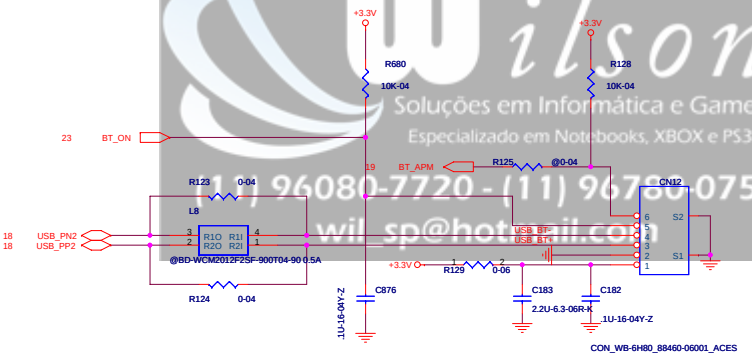
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: EXT_MIC/H_P/USB/FAN/G-SENSOR/3G	Rev: A
Date: Tuesday, September 21, 2010	Sheet 28 of 40	

DC IN

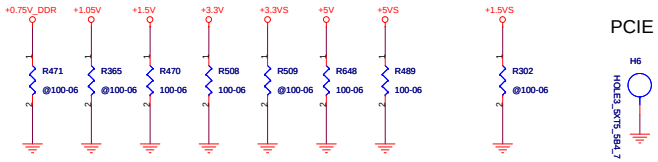
PROJECT	A14HM02		
Adaptor	65W	90W	120W
Rsense	33m Ohm	25m Ohm	18m Ohm
Stop Charger	60W	80W	110W



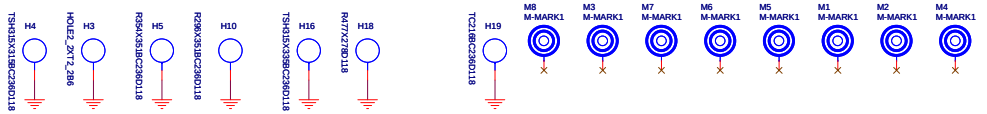
BT CONN



Discharge Resistor

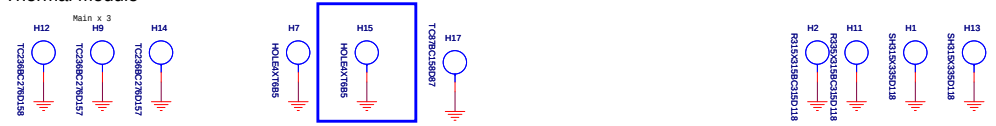


PCIE



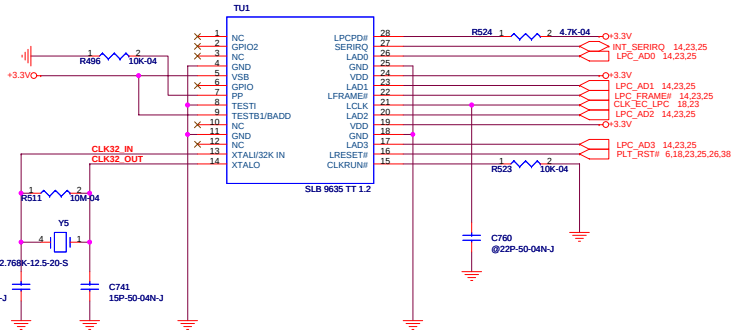
Thermal Module

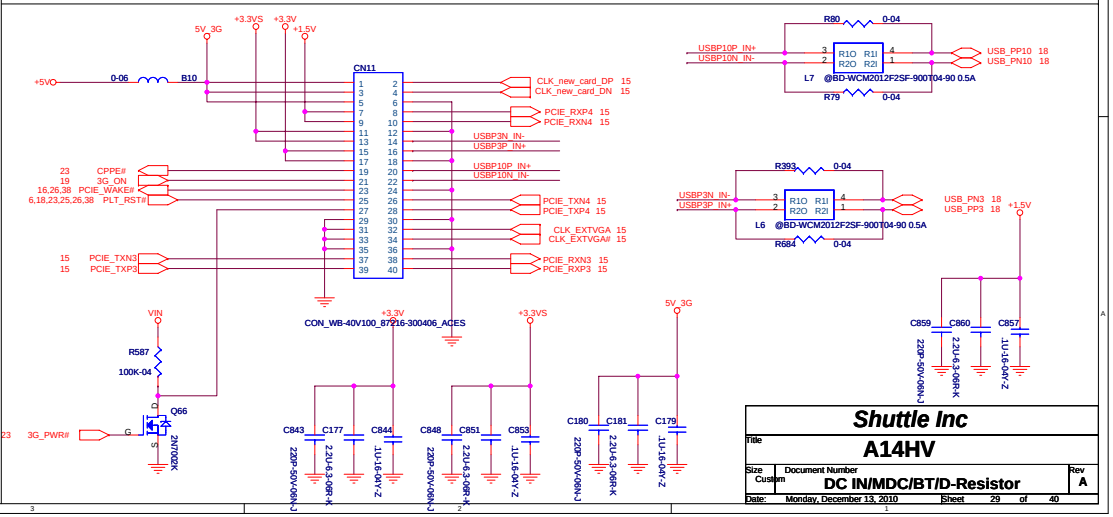
chang H17 for B



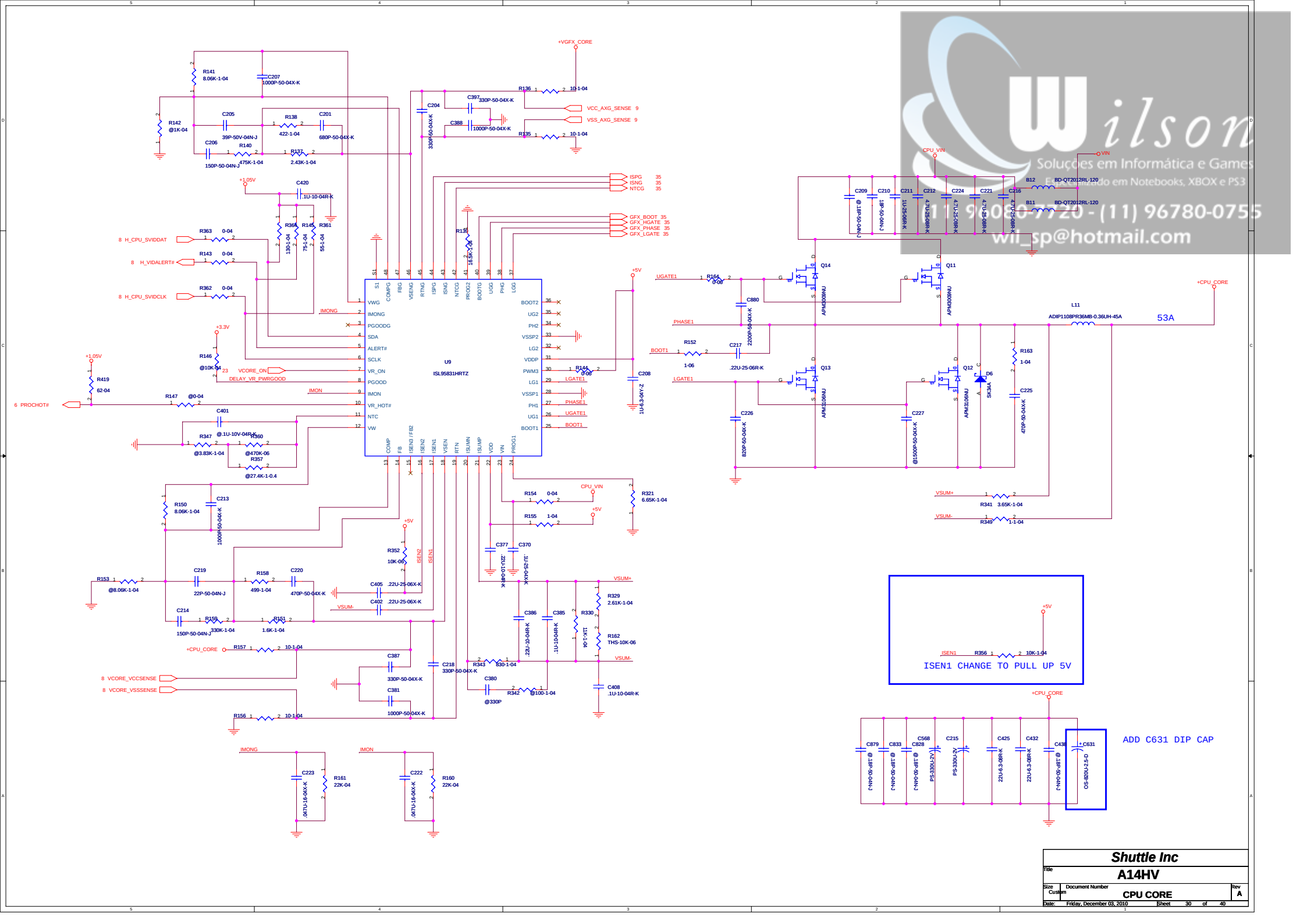
い 祚び 錠

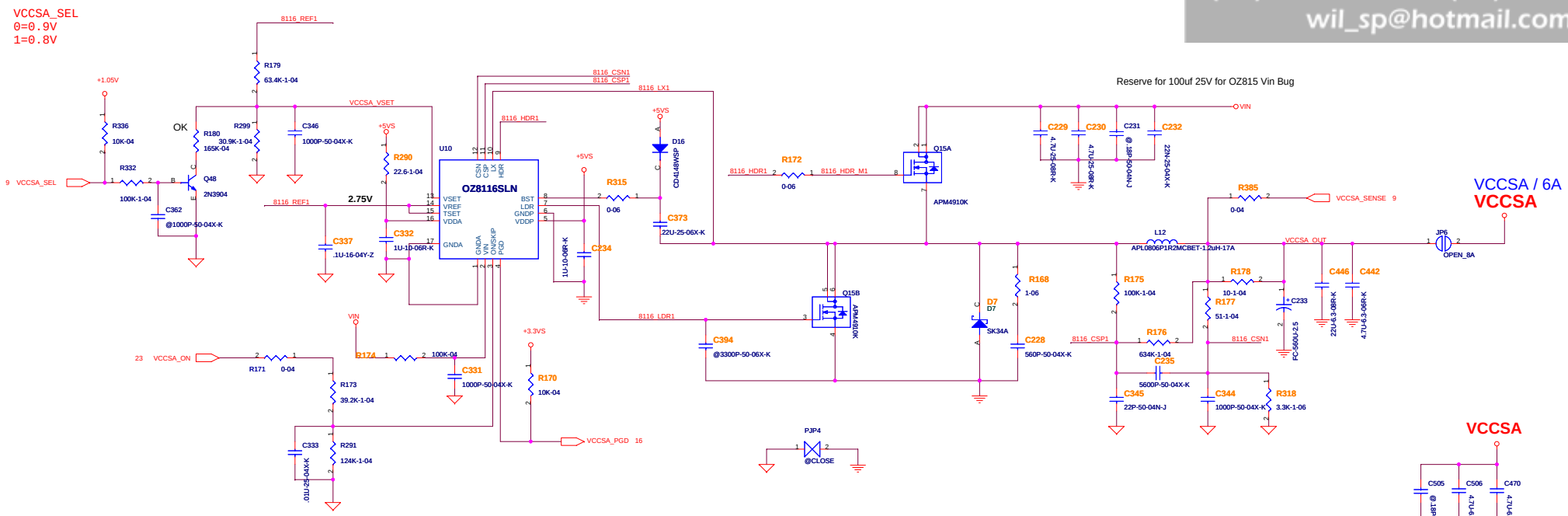
TPM



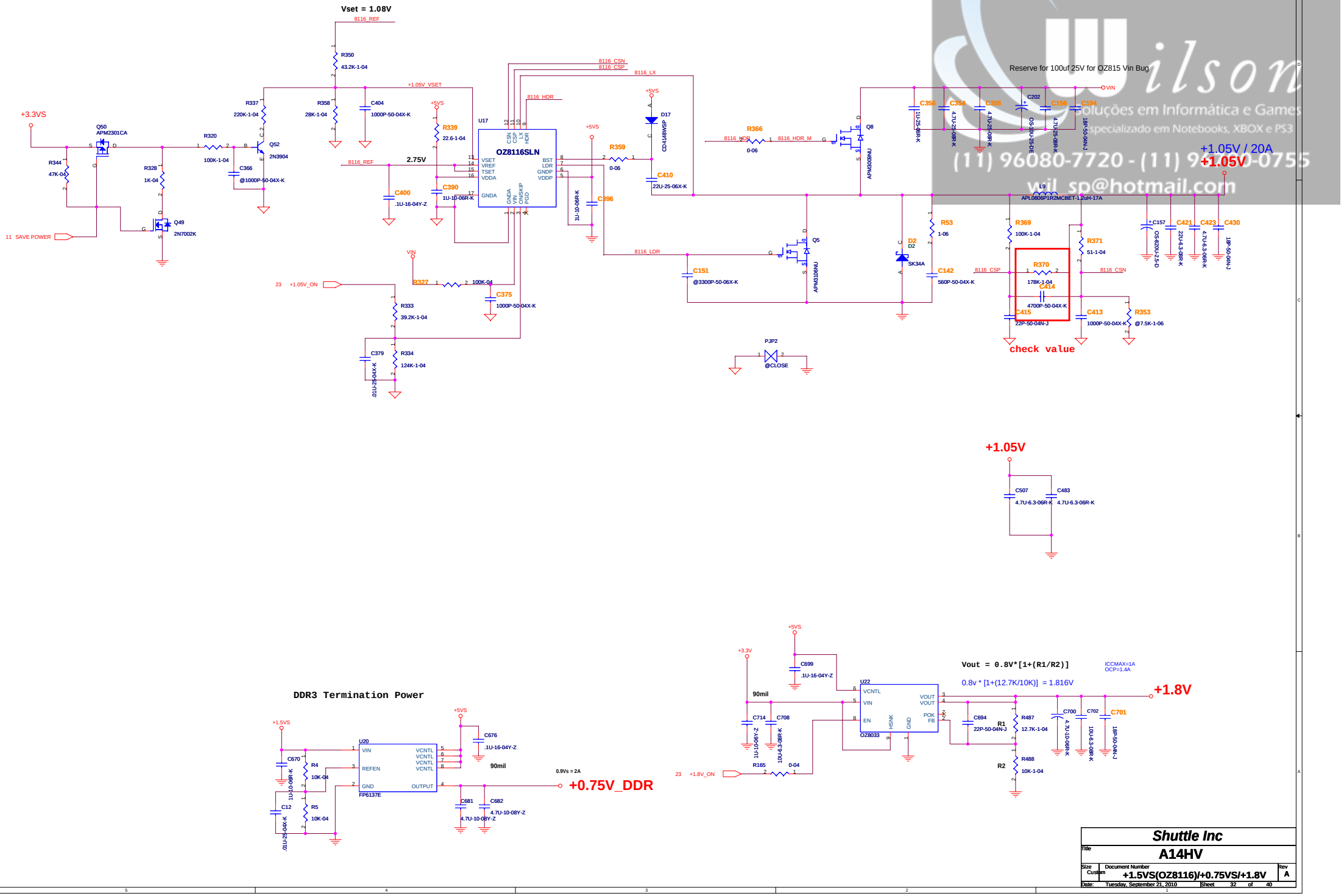


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: DC IN/MDC/BT/D-Resistor		Rev: A
Date: Monday, December 13, 2010	Sheet 29 of 40		

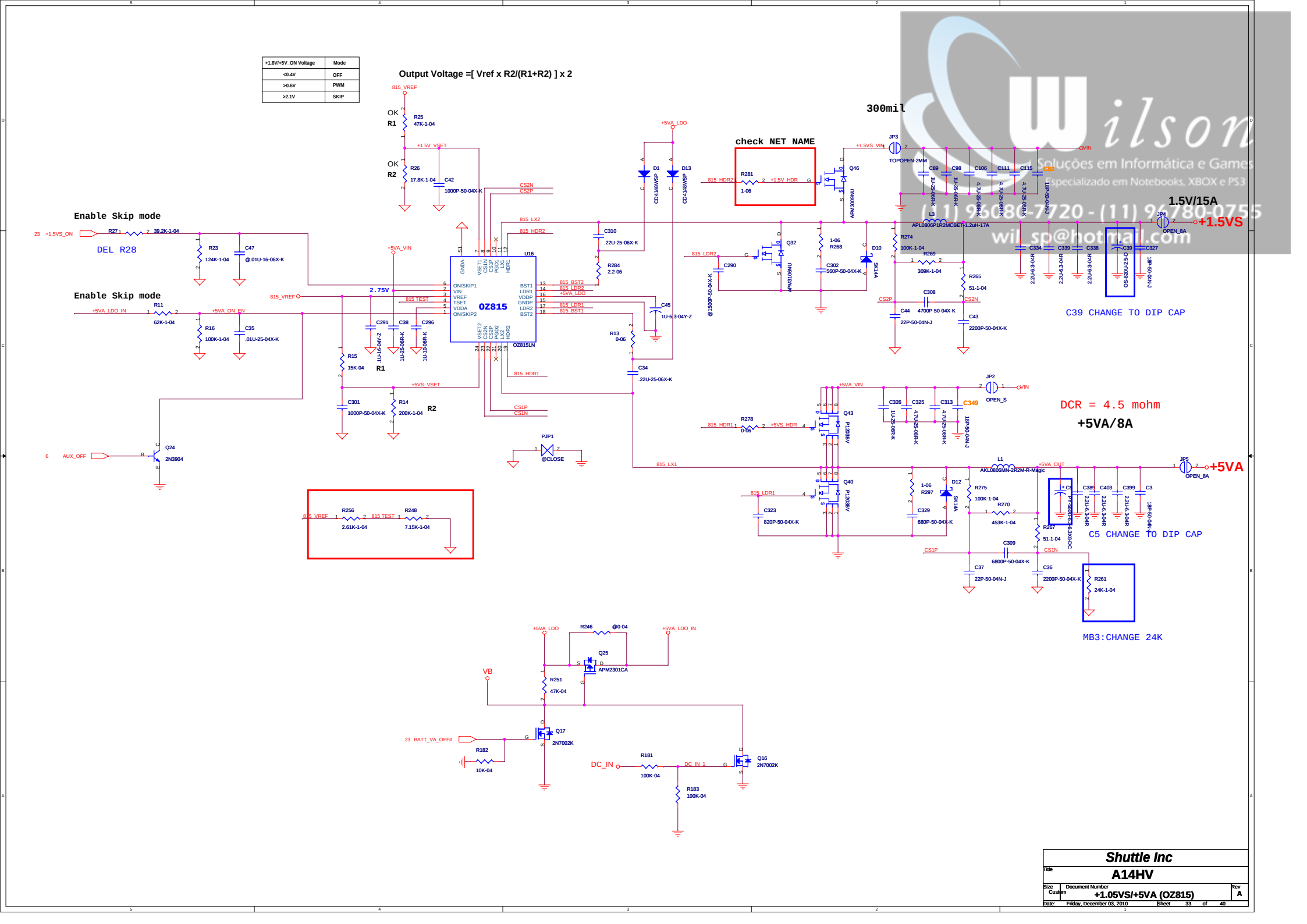

U9
ISL95831HRTZ
+VGFX_CORE
VCC_AXG_SENSE 9
VSS_AXG_SENSE 9
ISPG 35
ISNG 35
NTCG 35
GFX_BOOT 35
GFX_HGATE 35
GFX_PHASE 35
GFX_LGATE 35
CPU_VIN
VIN
+CPU_CORE
53A
L11
ADIP1108PR36MB-0.36UH-45A
APM3009NU
APM3106NU
SK34A
UGATE1
PHASE1
BOOT1
LGATE1
IMONG
VCORE_ON
DELAY_VR_PWRGOOD
PROCHOT#
H_CPU_SVIDDAT
H_VIDALERT#
H_CPU_SVIDCLK
VCORE_VCCSENSE
VCORE_VSSSENSE
VSUM+
VSUM-
ISEN1
ISEN2
ISEN3 / FB2
+1.05V
+3.3V
+5V
ISEN1 CHANGE TO PULL UP 5V
ADD C631 DIP CAP
Shuttle Inc
A14HV
CPU CORE
Size Custom
Document Number
Rev A
Date: Friday, December 03, 2010
Sheet 30 of 40



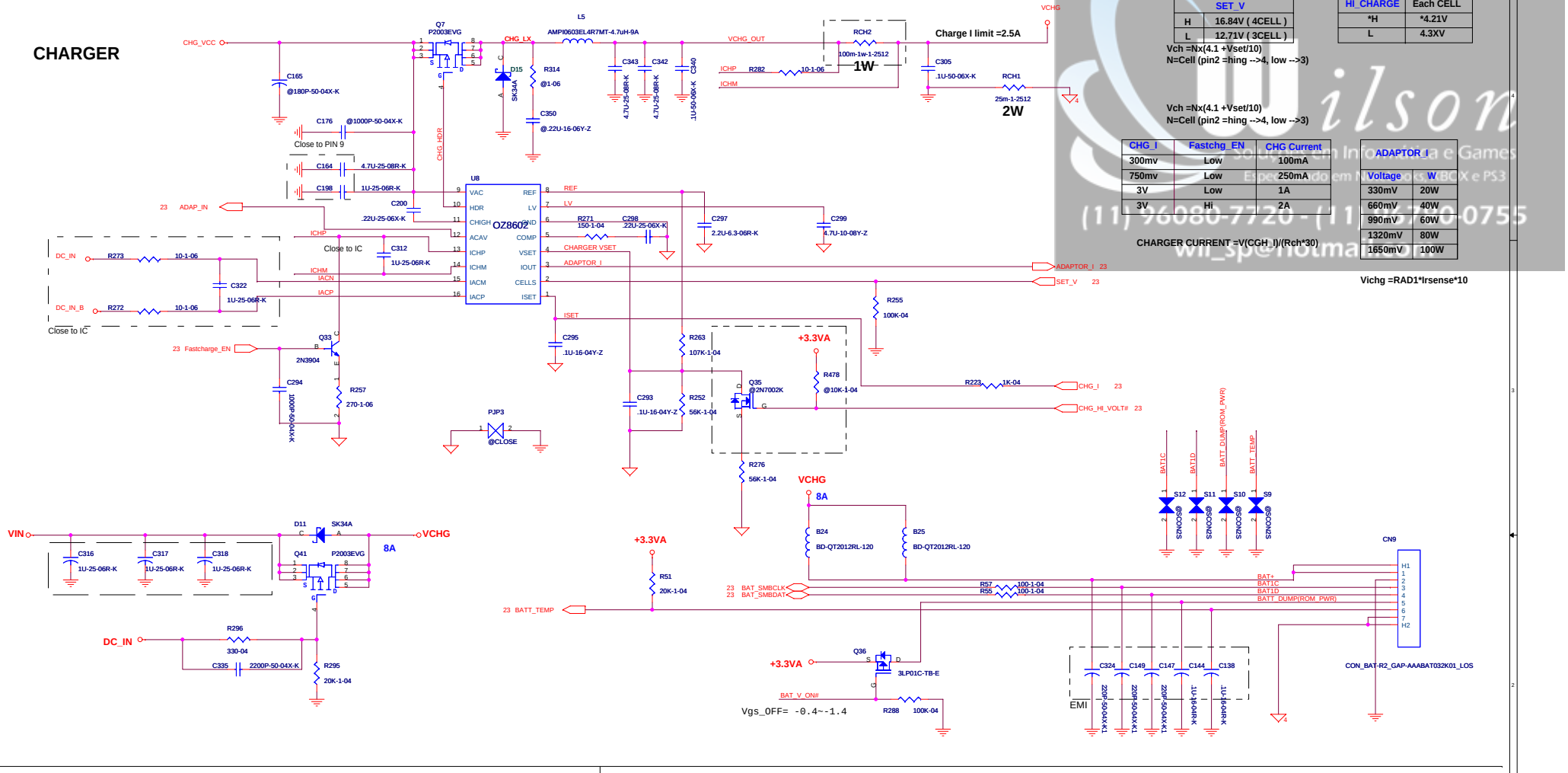
Title	A14HV	
Size: Custom	Document Number: CPU VCCSA	Rev: A
Date: Tuesday, September 21, 2010	Sheet 31 of 40	



Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: +1.5VS(OZ8116)/+0.75VS/+1.8V	Rev: A
Date: Tuesday, September 21, 2010	Sheet 32 of 40	


+1.8V/+5V_ON Voltage
Mode
<0.4V
OFF
>0.6V
PWM
>2.1V
SKIP
Output Voltage =[Vref x R2/(R1+R2)] x 2
300mil
check NET NAME
Enable Skip mode
DEL R28
Enable Skip mode
OZ815
OZ815LN
2.75V
C39 CHANGE TO DIP CAP
1.5V/15A
+1.5VS
DCR = 4.5 mohm
+5VA/8A
C5 CHANGE TO DIP CAP
MB3:CHANGE 24K
Shuttle Inc
A14HV
+1.05VS/+5VA (OZ815)
Rev A
Friday, December 03, 2010
Sheet 33 of 40

CHARGER



SET_V	
H	16.84V (4CELL)
L	12.71V (3CELL)

HI_CHARGE	Each CELL
*H	*4.21V
L	4.3XV

Vch =Nx(4.1 +Vset/10)
N=Cell (pin2 =hing -->4, low -->3)

Vch =Nx(4.1 +Vset/10)
N=Cell (pin2 =hing -->4, low -->3)

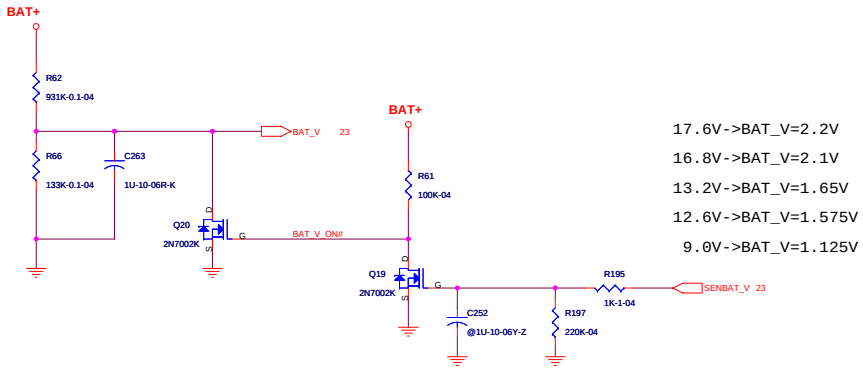
CHG_I	Fastchg_EN	CHG Current
300mv	Low	100mA
750mv	Low	250mA
3V	Low	1A
3V	Hi	2A

ADAPTOR_I	
Voltage	W
330mV	20W
660mV	40W
990mV	60W
1320mV	80W
1650mV	100W

CHARGER CURRENT =V(CGH_I)/(Rch*30)

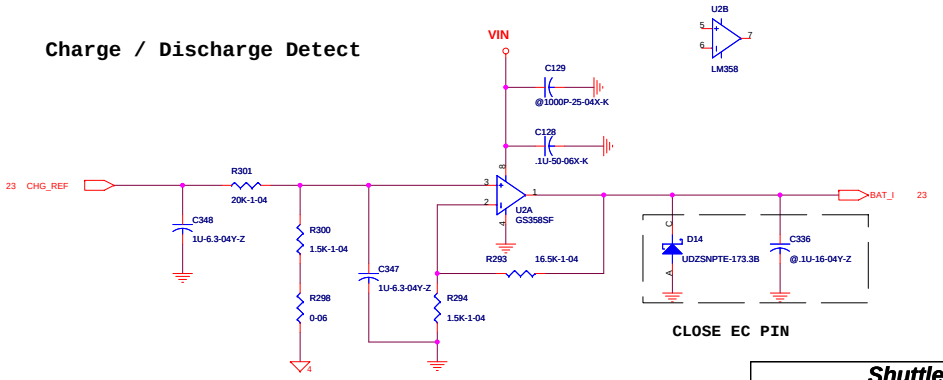
Vichg =RAD1*Irsense*10

Battery Voltage Detect



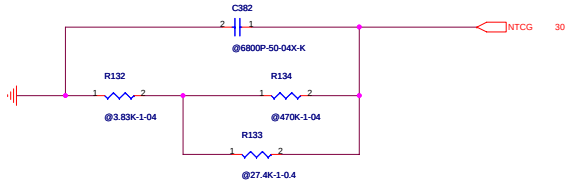
17.6V->BAT_V=2.2V
16.8V->BAT_V=2.1V
13.2V->BAT_V=1.65V
12.6V->BAT_V=1.575V
9.0V->BAT_V=1.125V

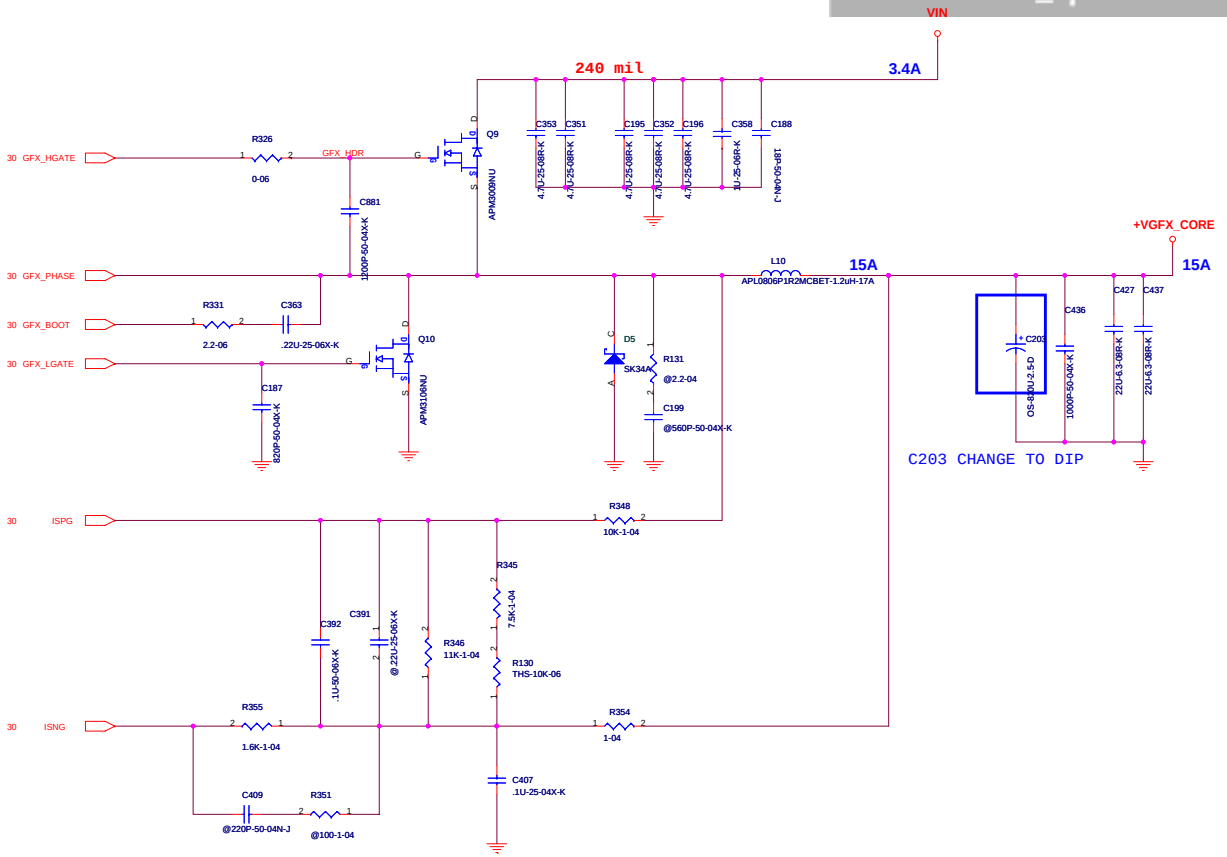
Charge / Discharge Detect



CLOSE EC PIN

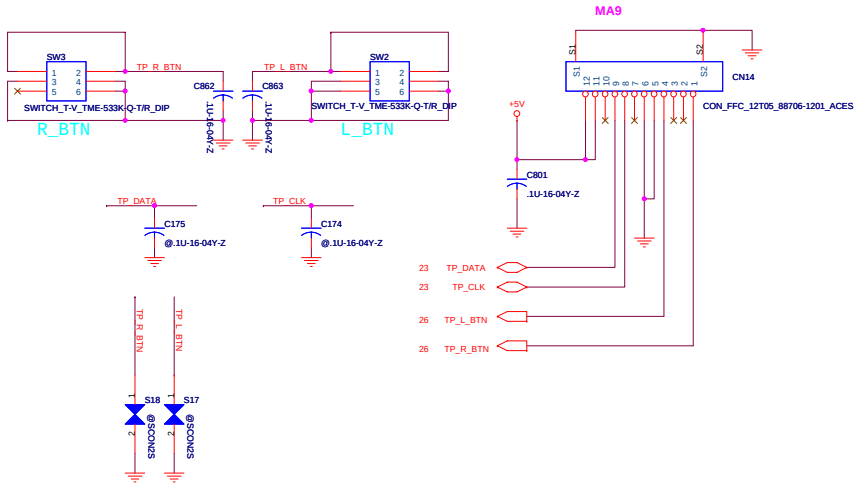
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: BATT IN/CHARGER(OZ8602)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 34 of 40	



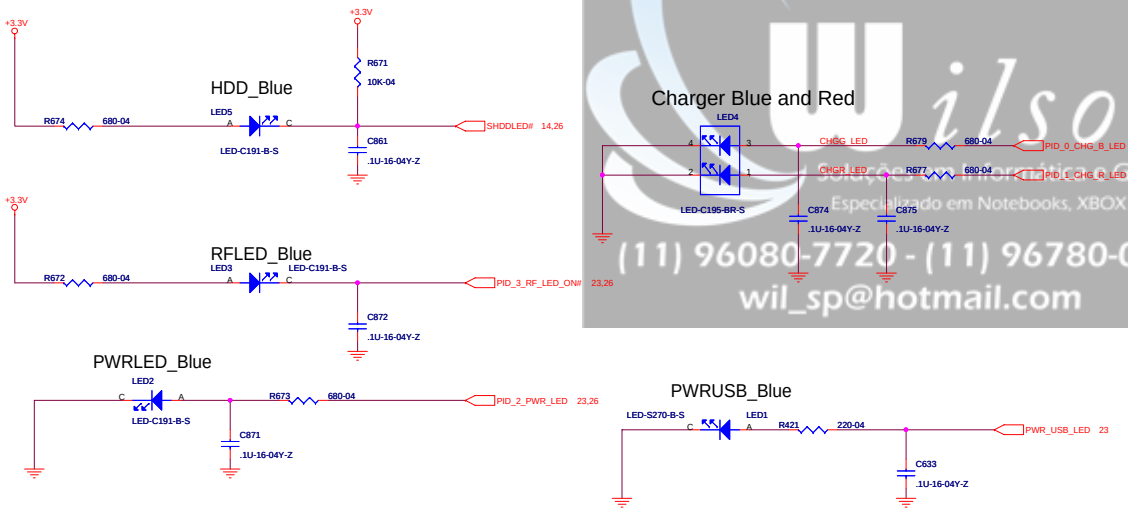


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: iGPU_CORE	Rev: A
Date: Tuesday, September 21, 2010	Sheet 35 of 40	

Touch Pad

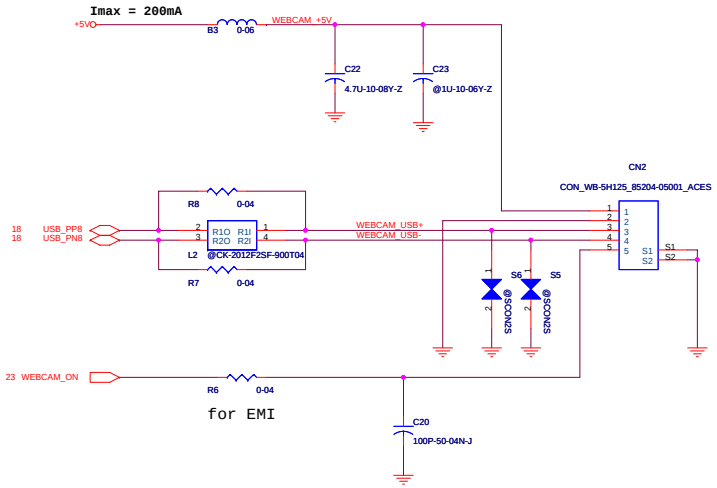


LED

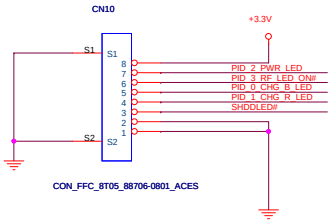


WEBCAM CON

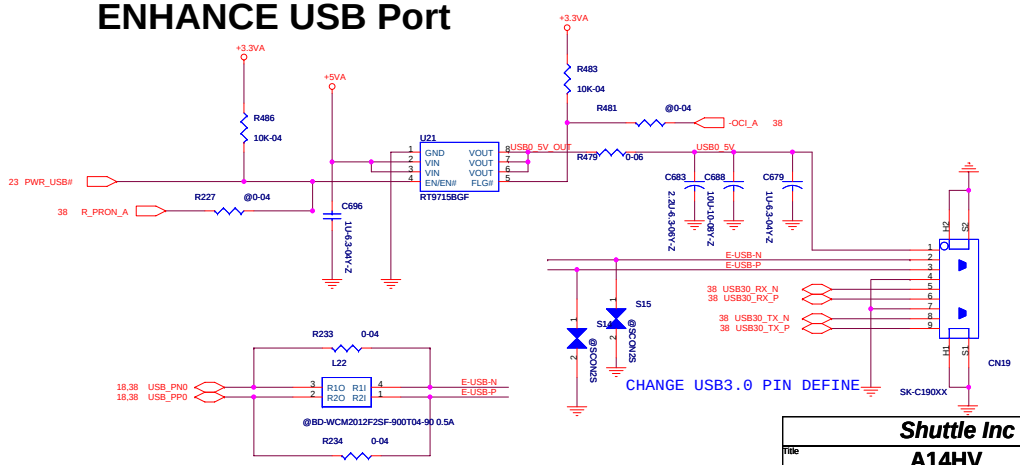
WEBCAM_ON	
1	ON
0	OFF



LED BD

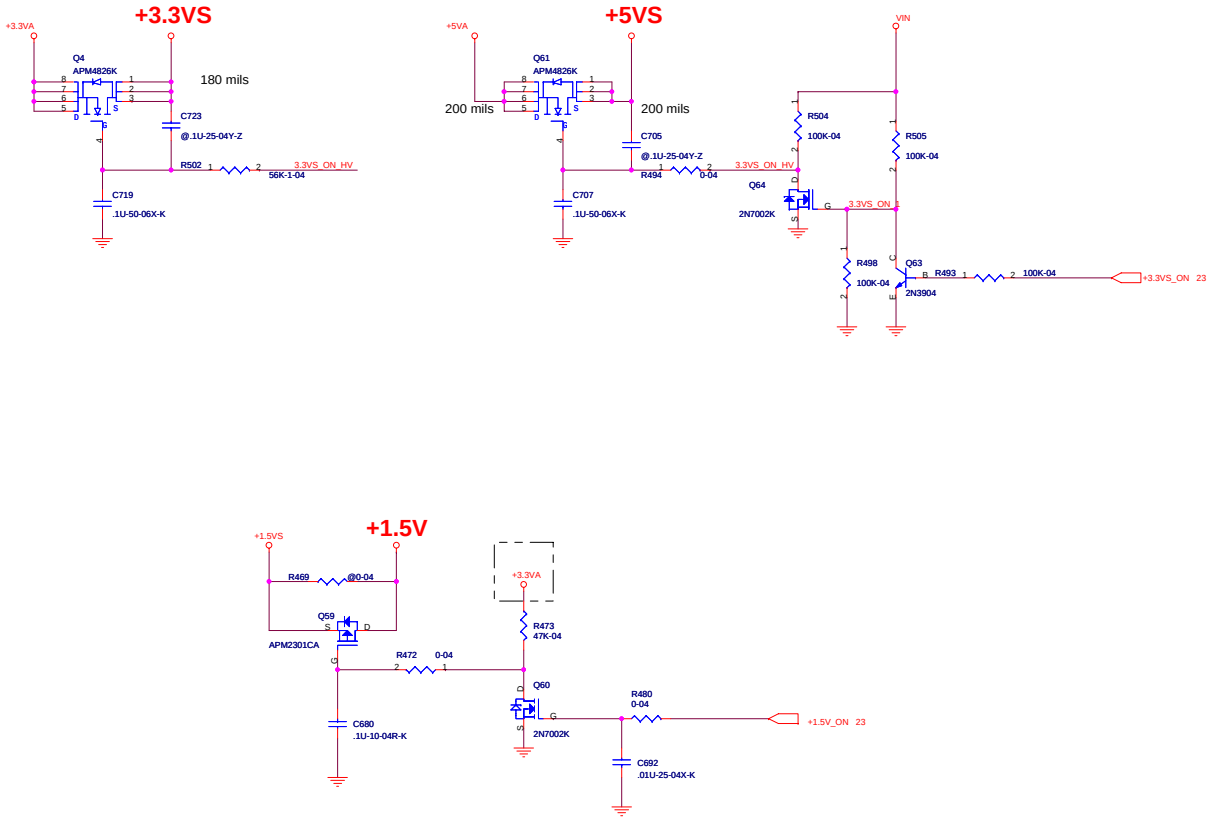


ENHANCE USB Port

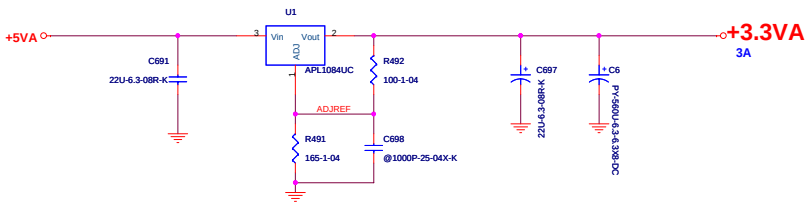


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: TP/LED/WEBCAM/USB CHARGER		Rev: A
Date: Tuesday, September 21, 2010	Sheet 36 of 40		

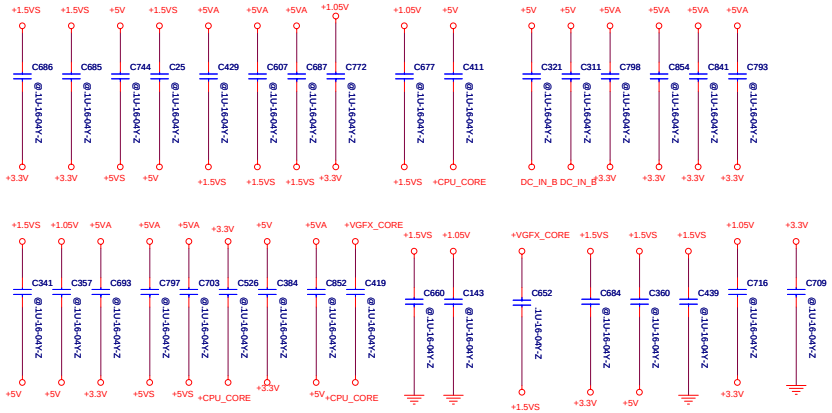
VCCSW



LDO

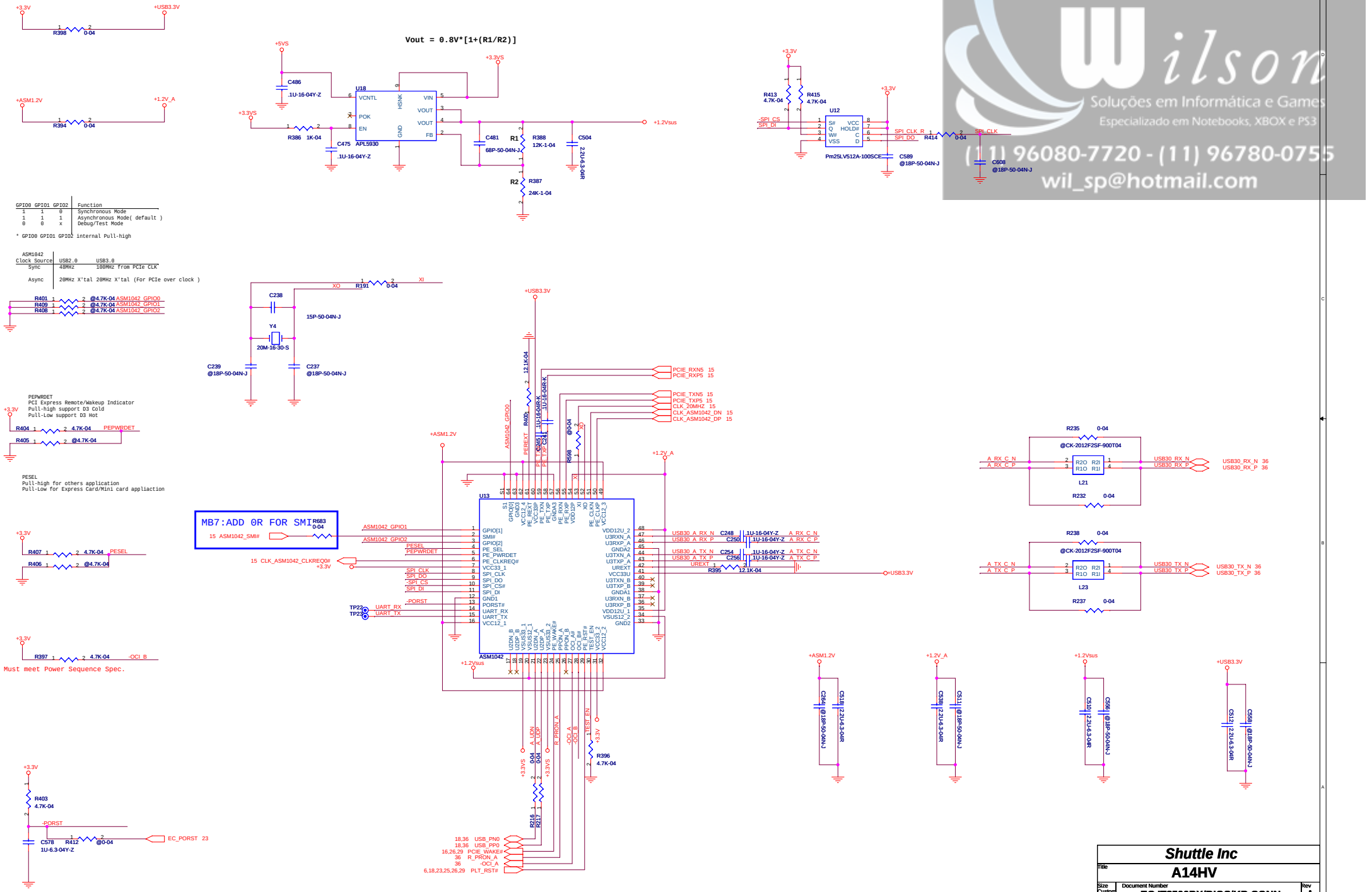


HIGH-SPEED CAP



Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: **VCC SW/+3.3VA/HIGH-SPEED CAP**	Rev: A
Date: Tuesday, December 07, 2010	Sheet 37 of 40	

USB3.0



Shuttle Inc		
Title	A14HV	
Size: Custom	Document Number: EC IT8500BX/BIOS/KB CONN	Rev: A
Date: Friday, November 26, 2010	Sheet 38 of 40	

Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: **Reserved**	Rev: **A**
Date: Tuesday, September 21, 2010	Sheet 39 of 40	

Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: **History**	Rev: **A**
Date: Tuesday, September 21, 2010	Sheet 40 of 40	