Project Name : A14HV02

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

PAGE CONTENT

M/B Schematic Version Change List

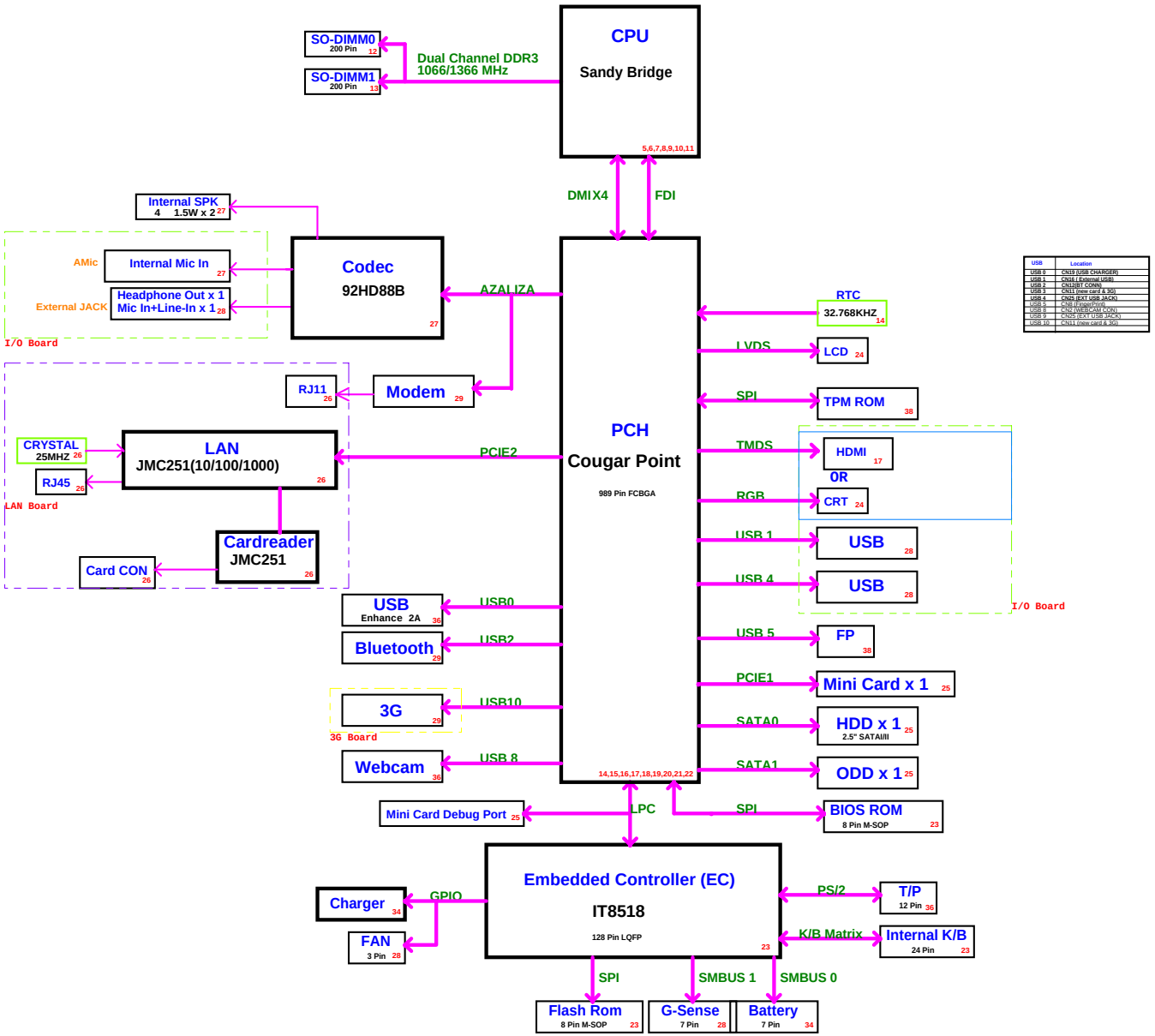
Release Date	Version	PCB P/N	PCB Description	PCBA P/N	Note

Daughter Board Schematic Version Change List

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

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

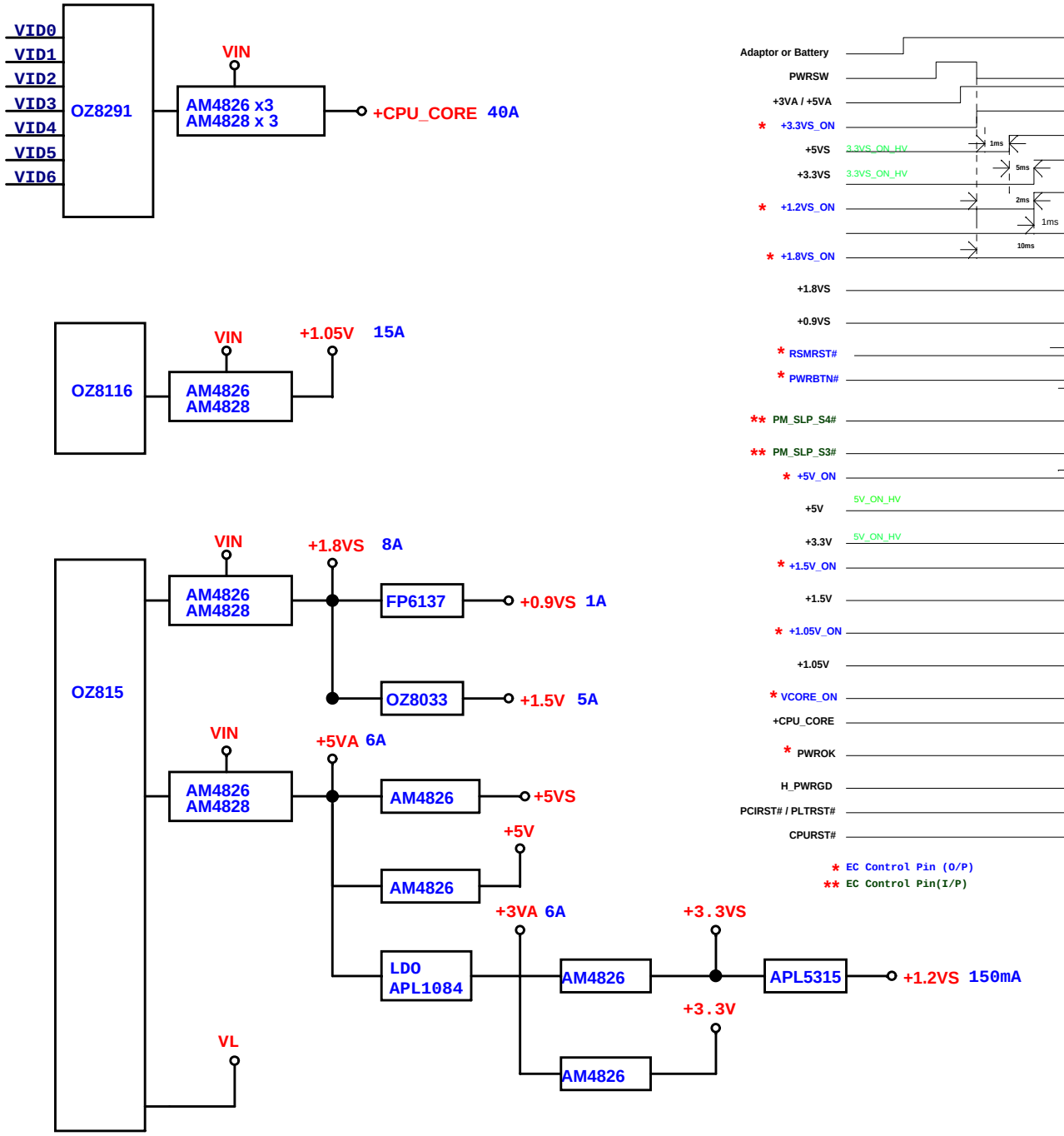
SYSTEM BLOCK DIAGRAM



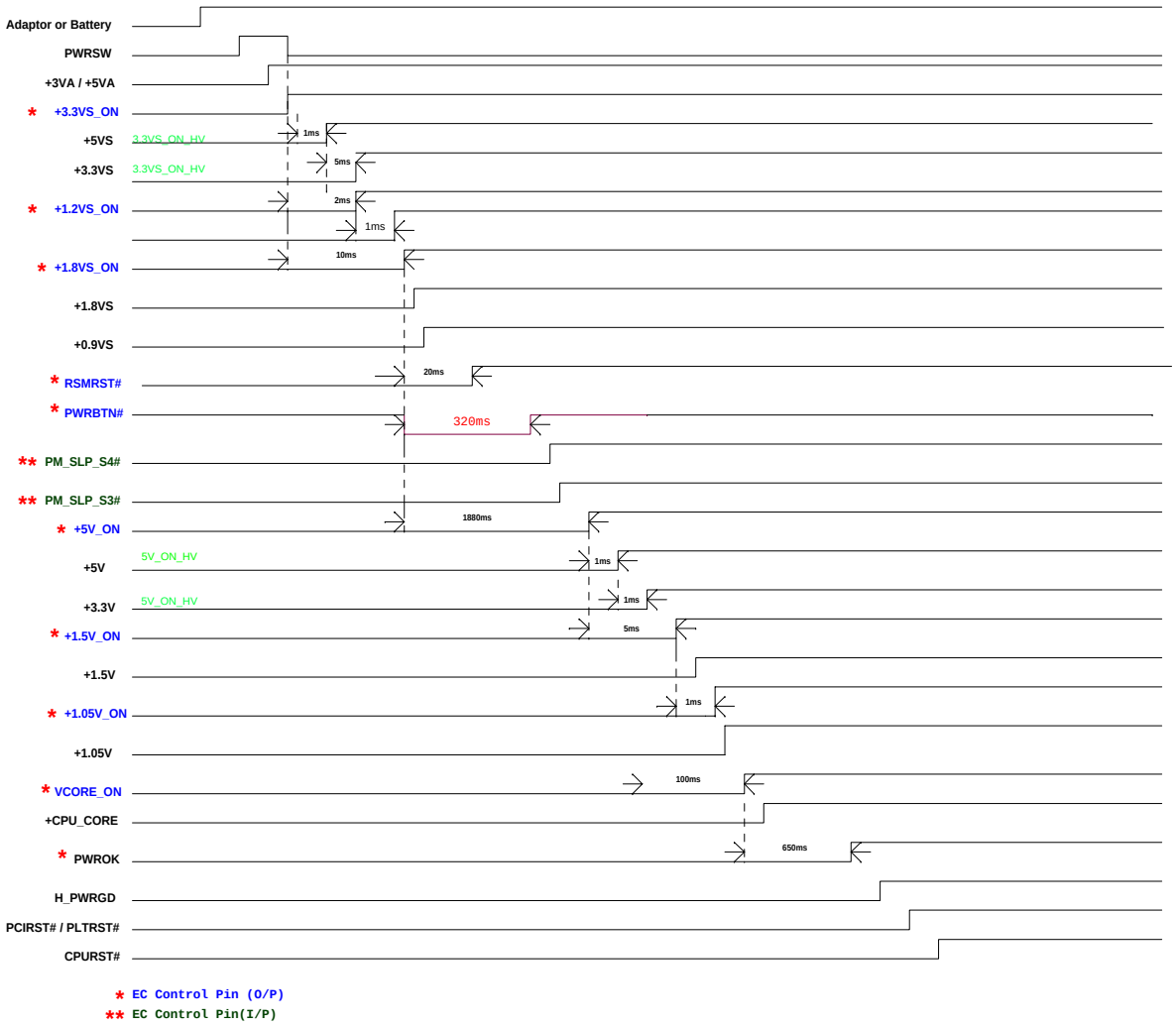
USB	Location
USB 0	CN19 (USB CHARGER)
USB 1	CN16 (External USB)
USB 2	CN12(BT CONN)
USB 3	CN11 (new card & 3G)
USB 4	CN25 (EXT USB JACK)
USB 5	CN8 (Finger Print)
USB 6	CN2 (WEBCAM CON)
USB 9	CN25 (EXT USB JACK)
USB 10	CN11 (new card & 3G)

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
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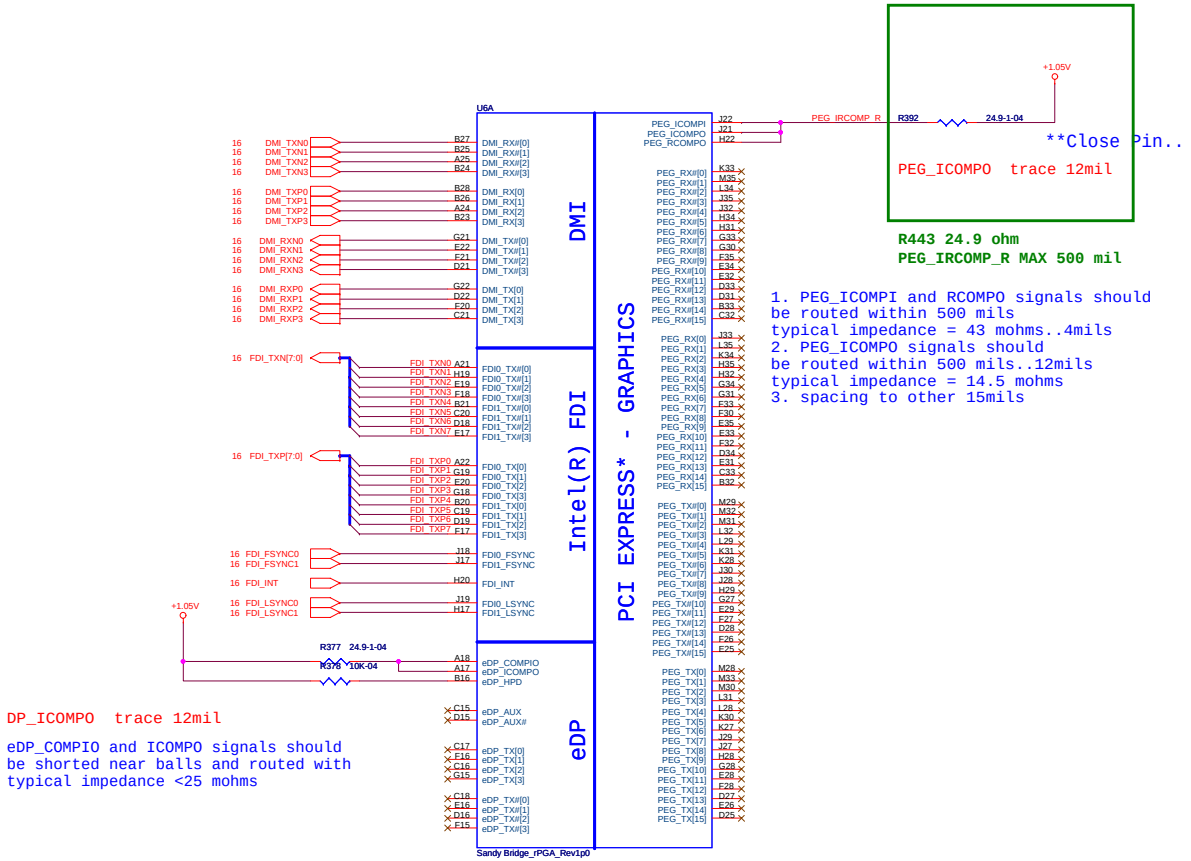
SANDYBRIDGE PROCESSOR(DMI,PEG,FDI)



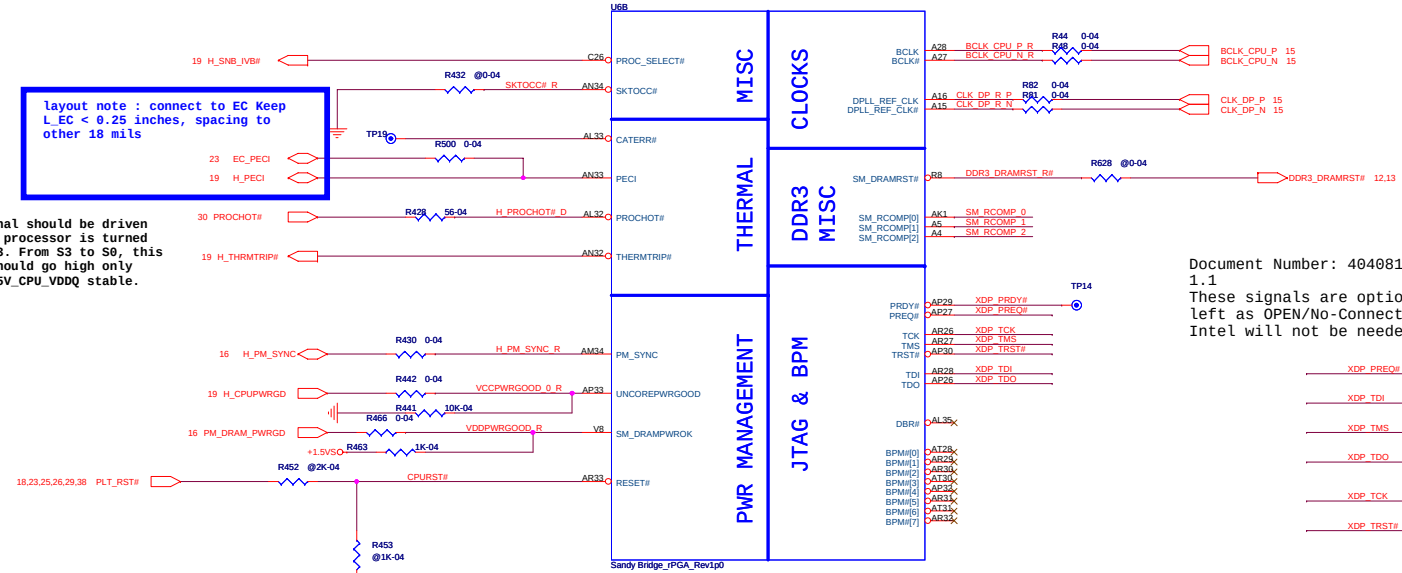
Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: CPU_DMI/PEG/FDI (1 of 7)		Rev: A
Date: Tuesday, September 21, 2010	Sheet 5 of 40		

SANDYBRIDGE PROCESSOR (CLK,MISC,JTAG)

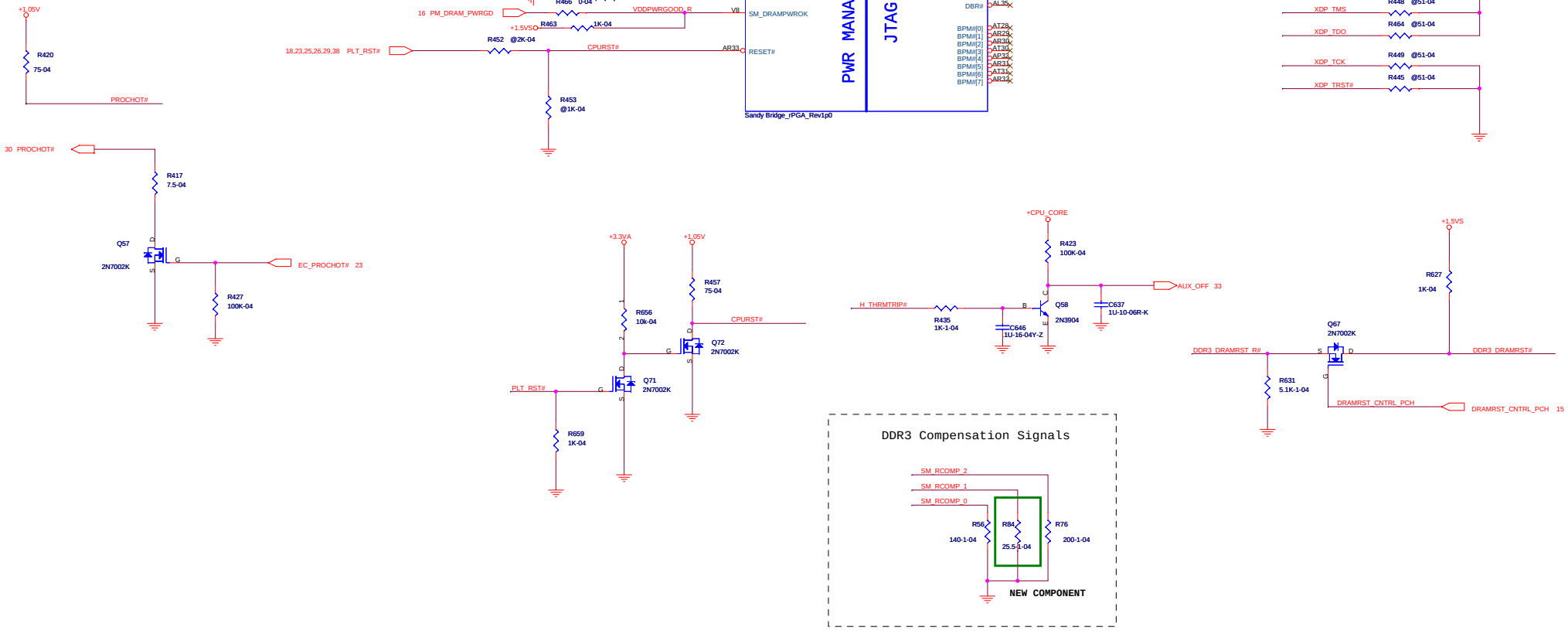
This pin is for compability with future platforms. A pull up resistor to VCPLL is required if connected to the DF_TVS strap on the PCH.

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.



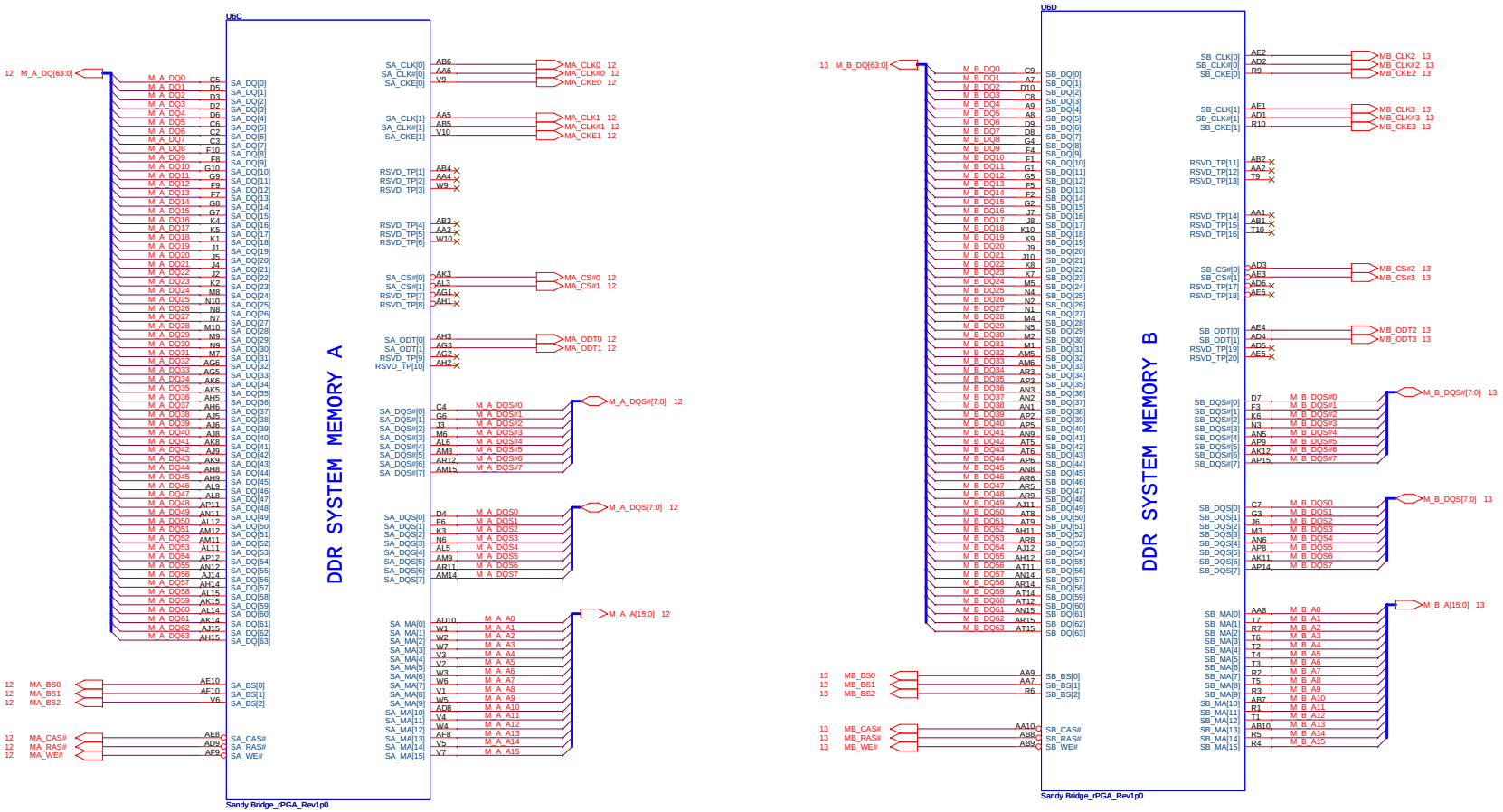
Document Number: 404081, Revision: 1.1
These signals are optional, can be left as OPEN/No-Connect if debug by Intel will not be needed



DDR3 Compensation Signals

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
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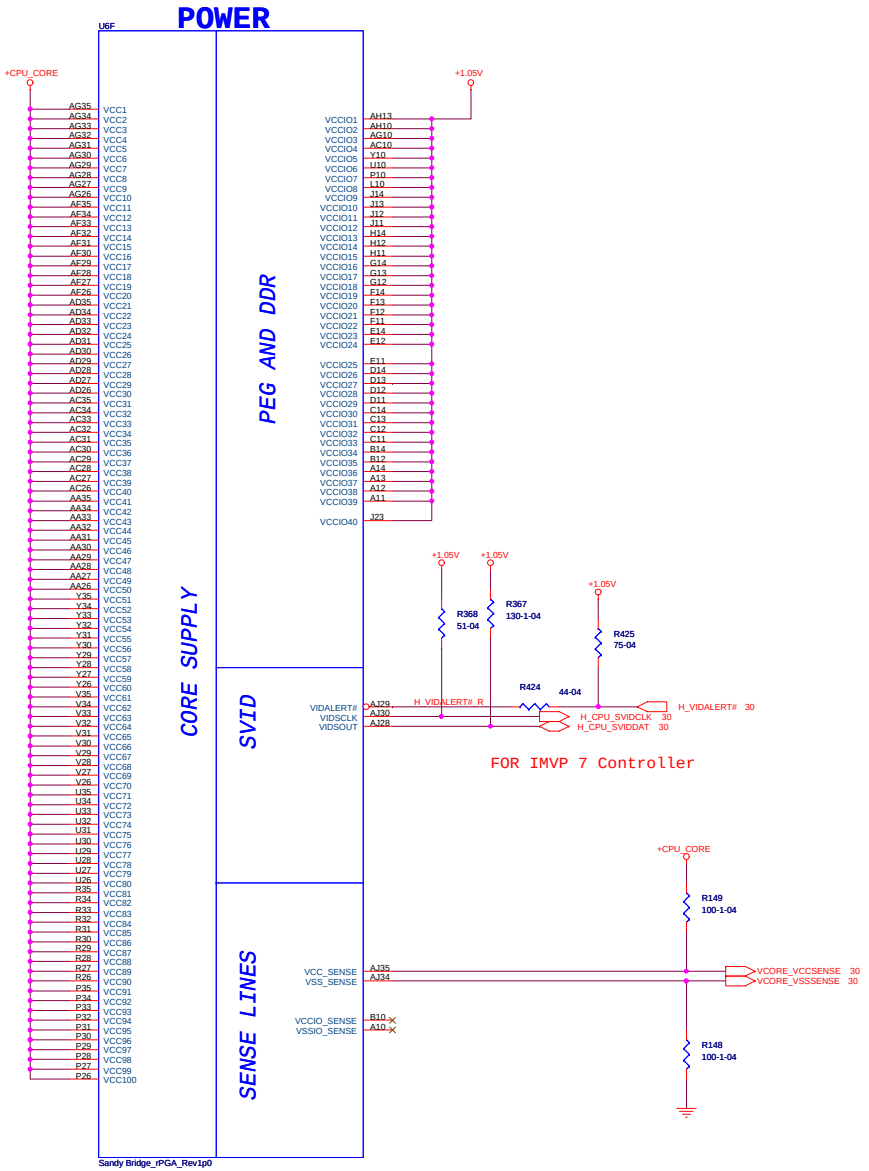
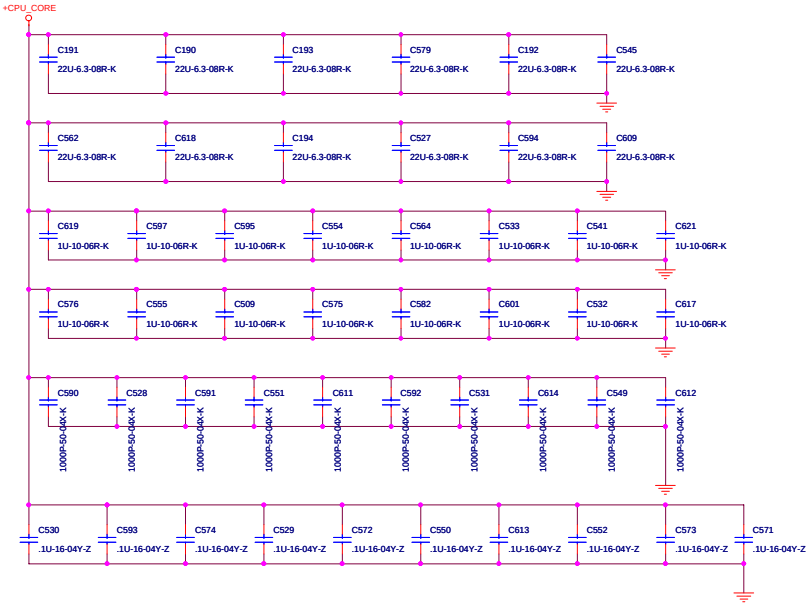
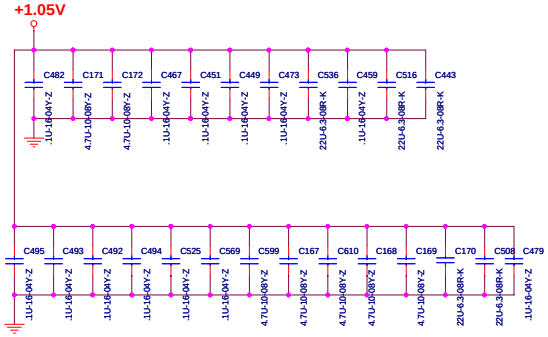
SANDYBRIDGE PROCESSOR (POWER)



+CPU_Core Decoupling





Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_PWR (4 of 7)	Rev: A
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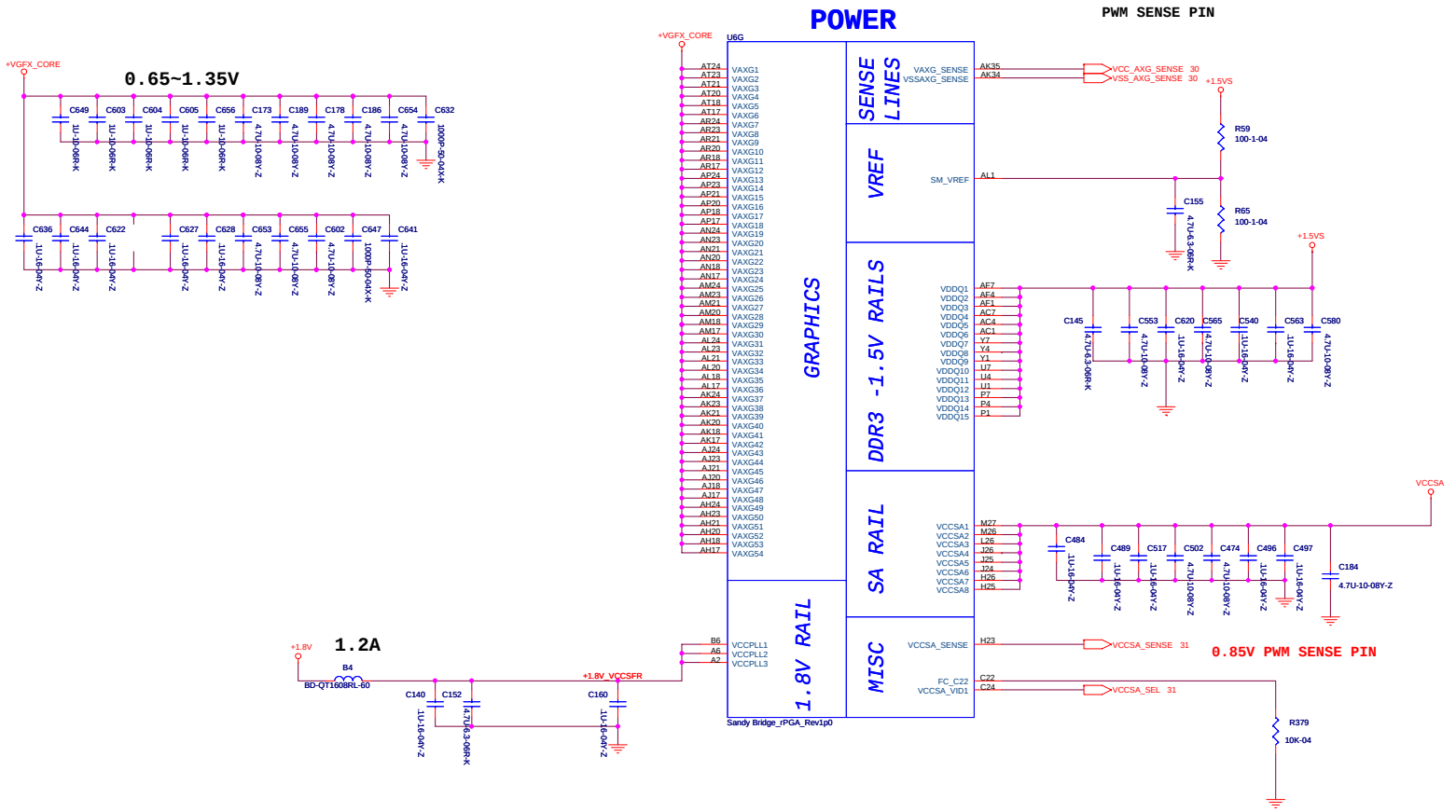
SANDYBRIDGE PROCESSOR (POWER)



Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: CPU_GRAPHICS POWER (5 of 7)		Rev: A
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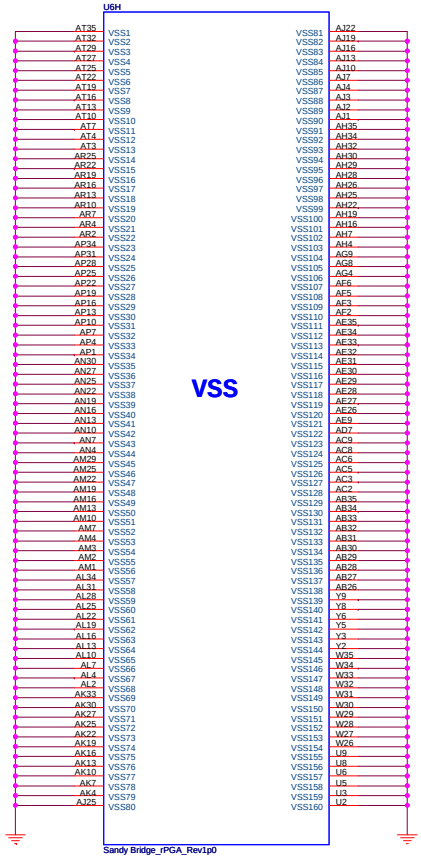
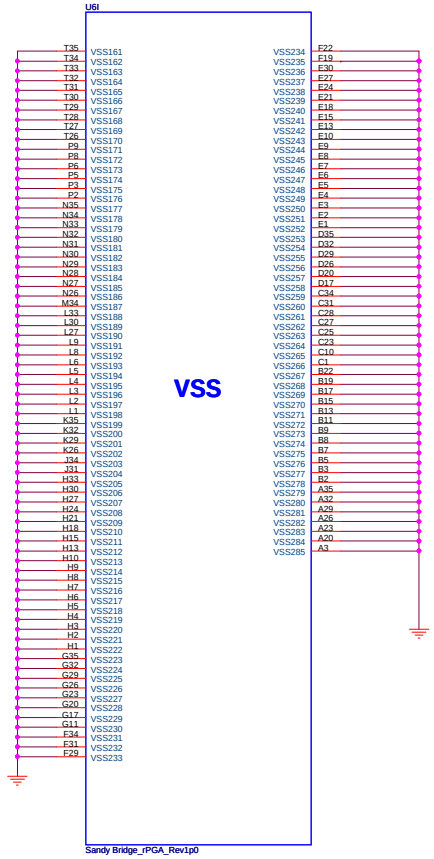
SANDYBRIDGE PROCESSOR (VSS)





Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_GND (6 of 7)	Rev: A
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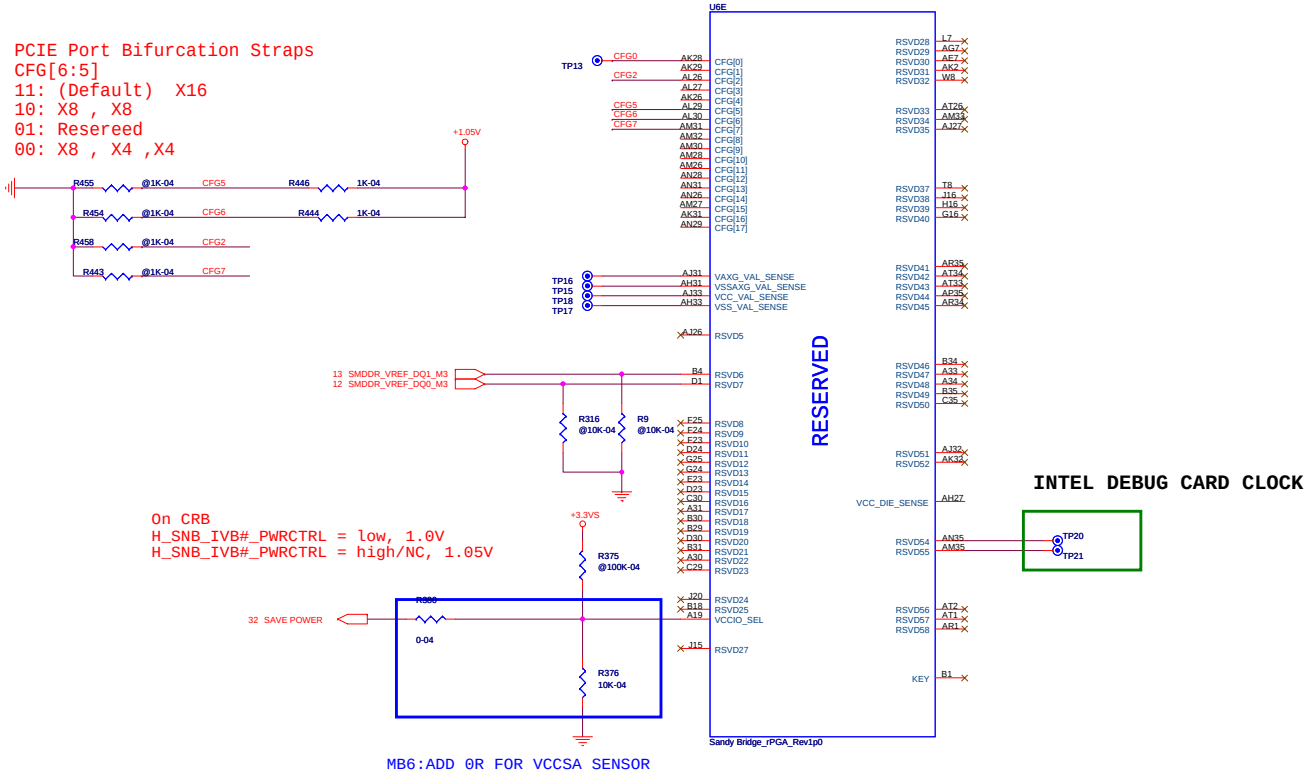
SANDYBRIDGE PROCESSOR (RESERVED)



Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CPU_RESERVED (7 of 7)	Rev: A
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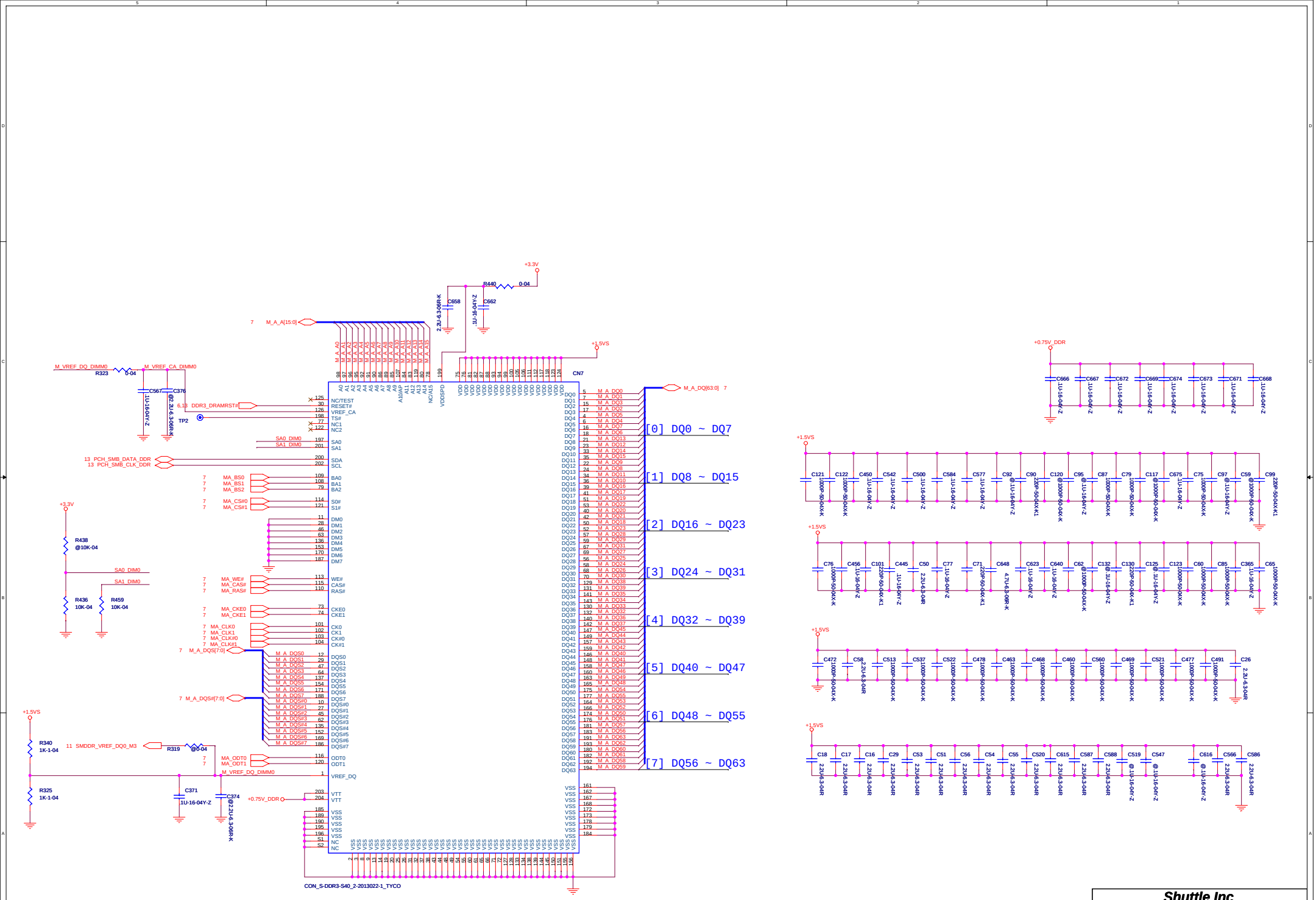

Shuttle Inc	
Title	A14HV
Size: Custom	Document Number: DDR3 SODIMM-A
Rev	A
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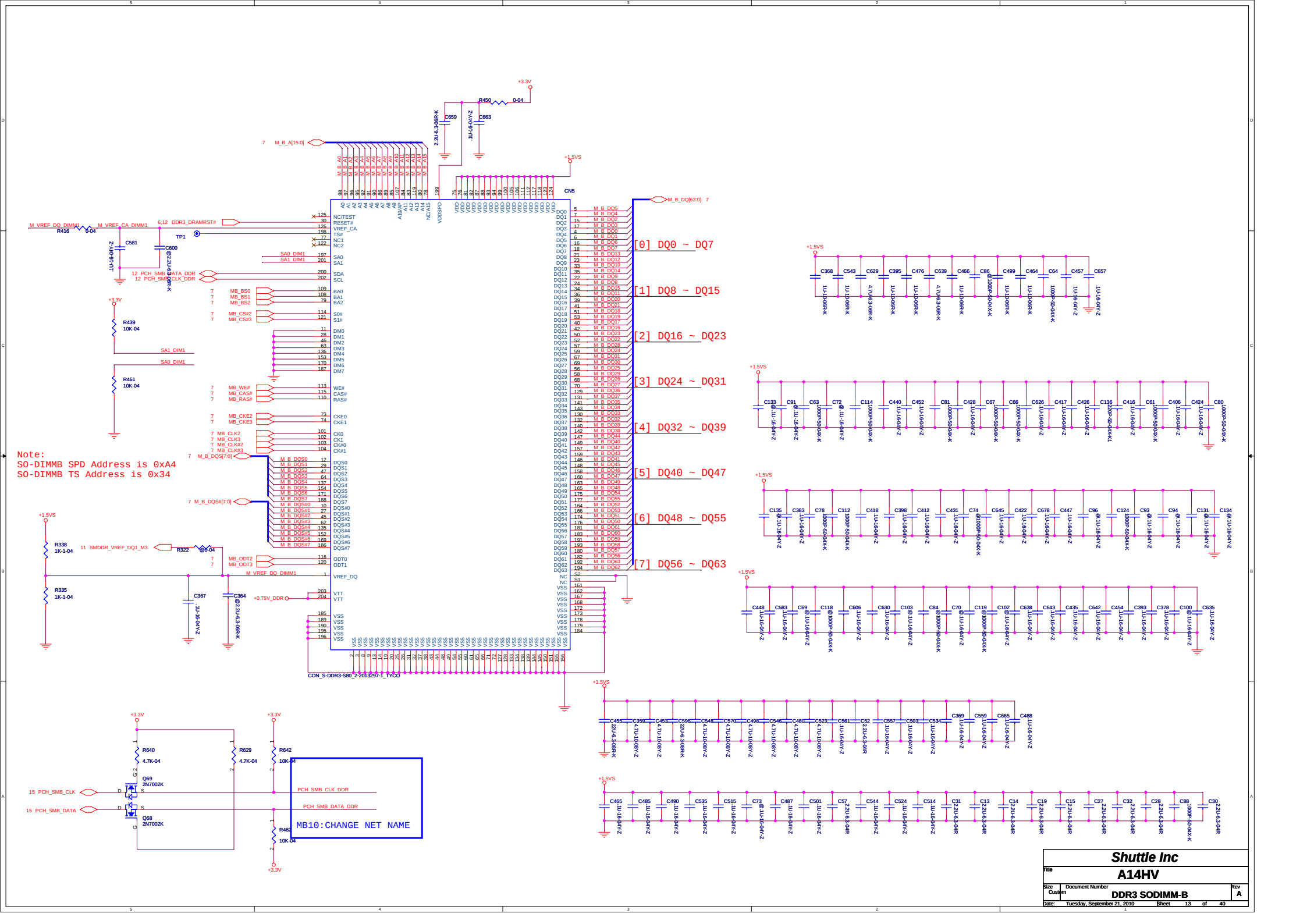
CN5
CON_S-DDR3-S80_2-2013297-1_TYCO
[0] DQ0 ~ DQ7
[1] DQ8 ~ DQ15
[2] DQ16 ~ DQ23
[3] DQ24 ~ DQ31
[4] DQ32 ~ DQ39
[5] DQ40 ~ DQ47
[6] DQ48 ~ DQ55
[7] DQ56 ~ DQ63
Note:
SO-DIMMB SPD Address is 0xA4
SO-DIMMB TS Address is 0x34
MB10:CHANGE NET NAME
Shuttle Inc
A14HV
DDR3 SODIMM-B
Rev A
Tuesday, September 21, 2010
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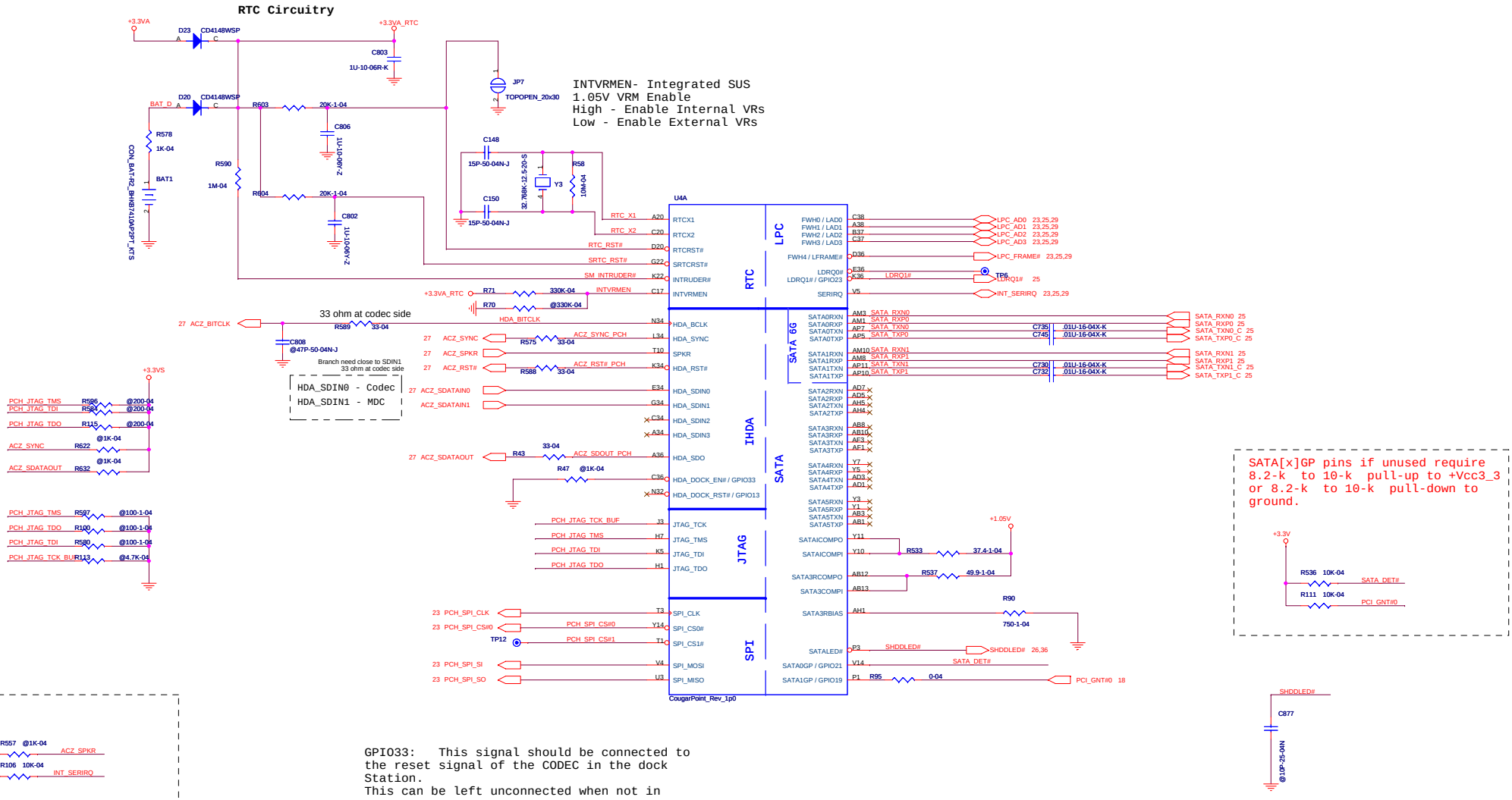
Cougar Point Chipset (RTC,LPC,SATA,HDA,SPI,JTAG)



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.

Shuttle Inc	
Title	A14HV
Size: Custom	Document Number: PCH_HDA/JTAG/SATA (1 of 9)
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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

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

CougarPoint_Rev_1p0

Shuttle Inc	
Title	A14HV
Size: Custom	Document Number: PCH_PCIE/CLK/SMBUS (2 of 9)
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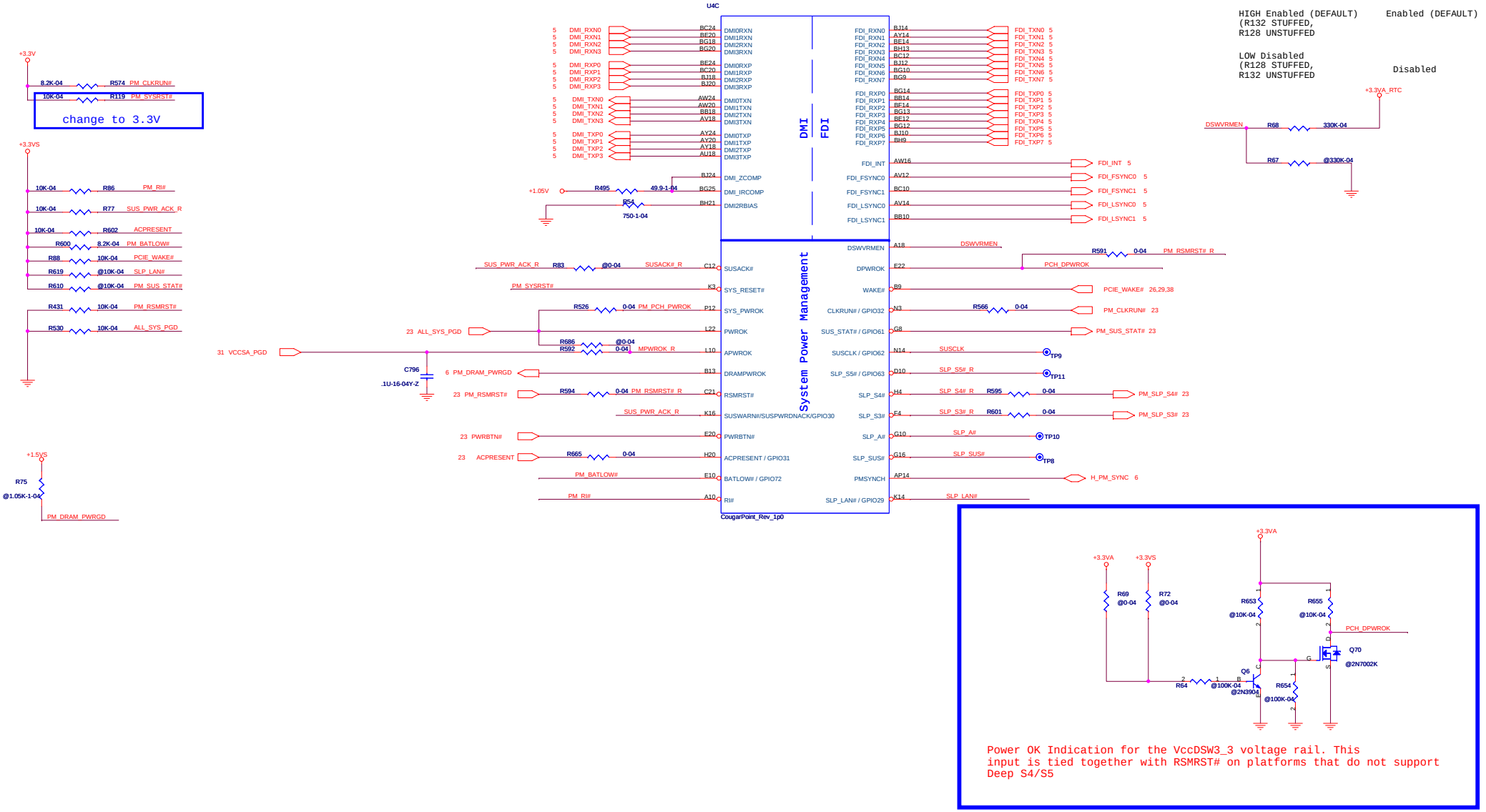
Cougar Point Chipset (DMI,FDI)

DSWODVREN - On Die DSW VR Enable

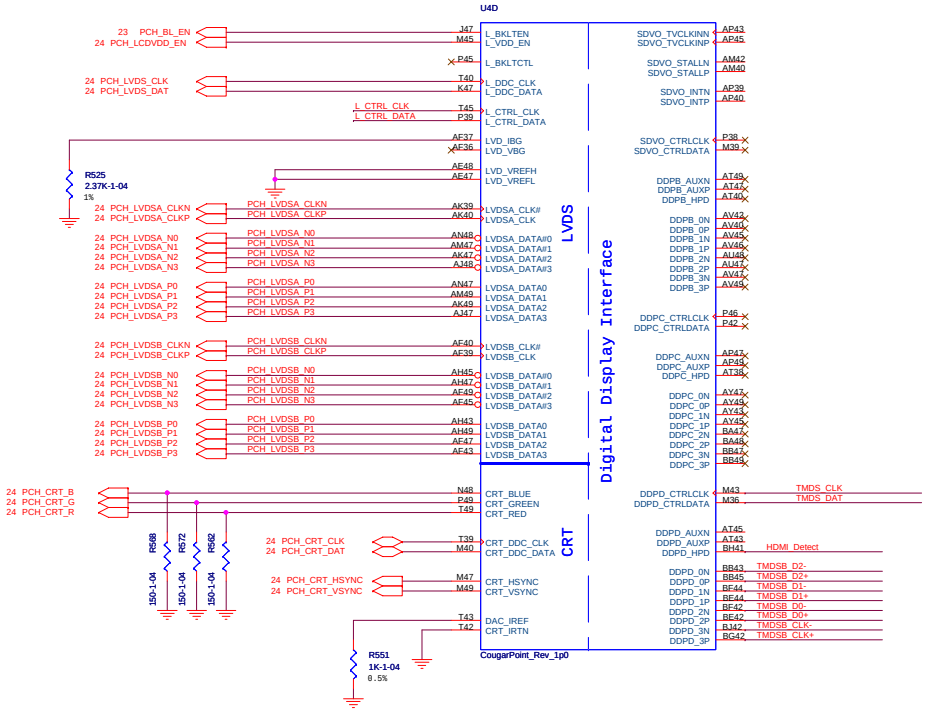
HIGH Enabled (DEFAULT) (R132 STUFFED, R128 UNSTUFFED — Enabled (DEFAULT)

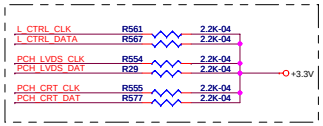
LOW Disabled (R128 STUFFED, R132 UNSTUFFED — Disabled



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	

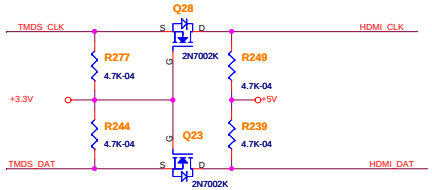
Cougar Point Chipset (LVDS,CRT,Digital Display)



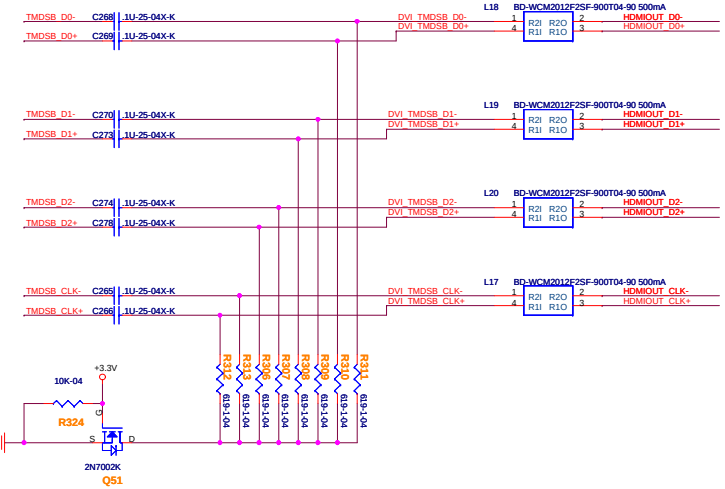


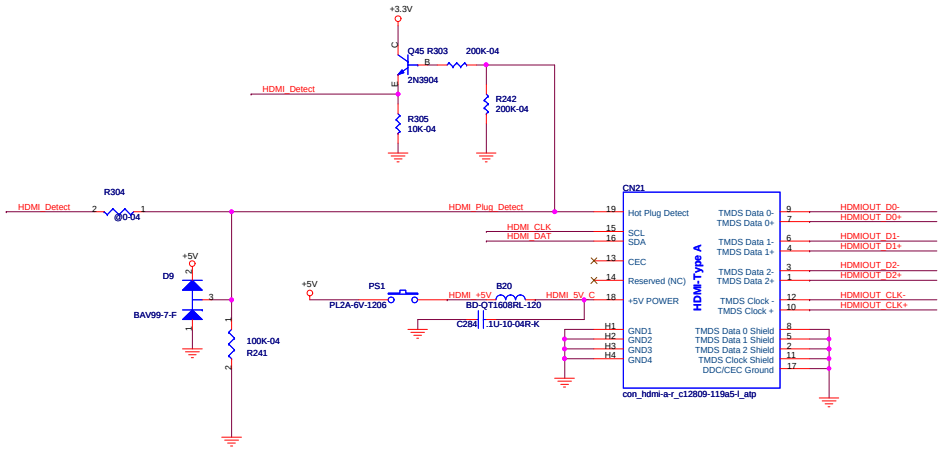
Configuration Wise Pin Mapping for DDI Ports (Sheet 1 of 2)

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
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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-K

6,23,25,26,29,38 PLT_RST# — U5 @74AHC1G08 — PLT_RST#_R

R657 @100K-04

U4E

RSVD

PCI

USB

CougarPoint_Rev_1p0

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)

R46 22.6-1-04

RN1 10K-8P4R-04
- USB_OC#_10_11
- USB_OC#_6_7
- 0C7#/GPIO14

RN5 10K-8P4R-04
- USB_OC#_8_9
- USB_OC#_12_13
- USB_OC#_4_5
- USB_OC#_2_3

R624 @10K-04 — USB_OC#_0_1 — 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 @.1uF-50-04N-J

C110 @.1uF-50-04N-J

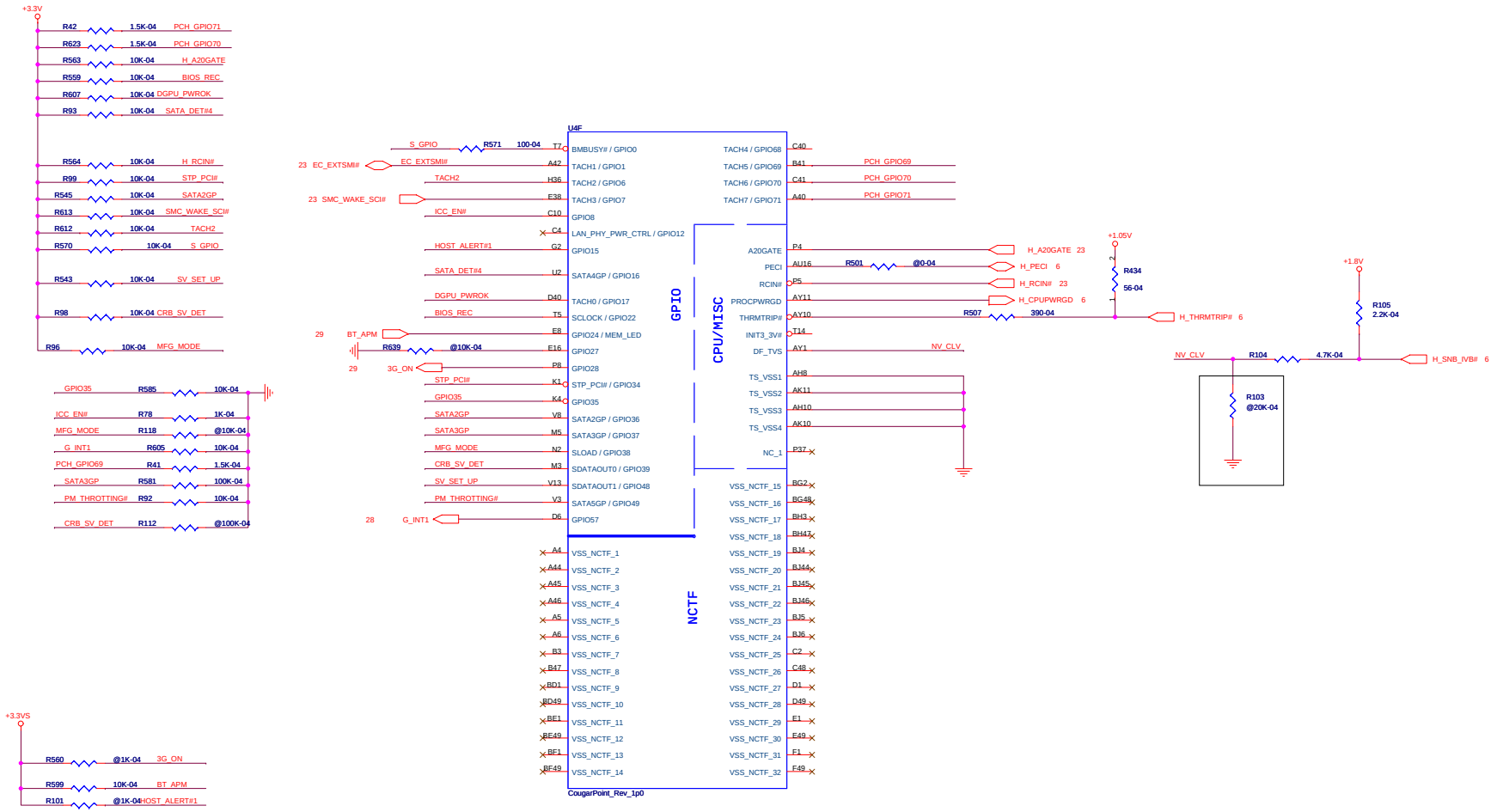
GPIO50,52,54,51,53,55
Desktop: Multiplexed
with REQ2#.
Mobile: Used as GPIO only

Shuttle Inc

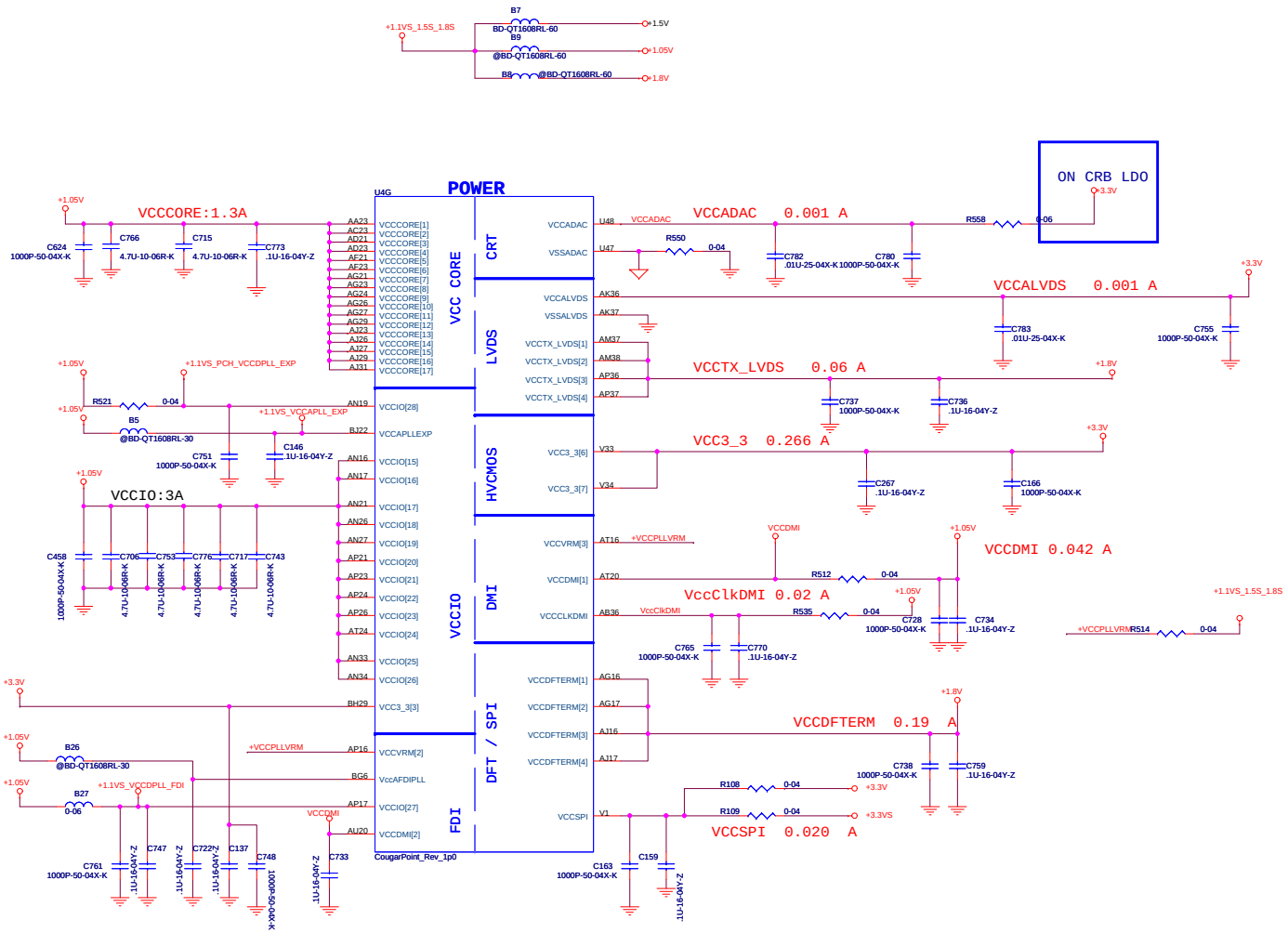
Title: **A14HV**

Size: Custom | Document Number: **PCH_PCI/USB (5 of 9)** | Rev: A

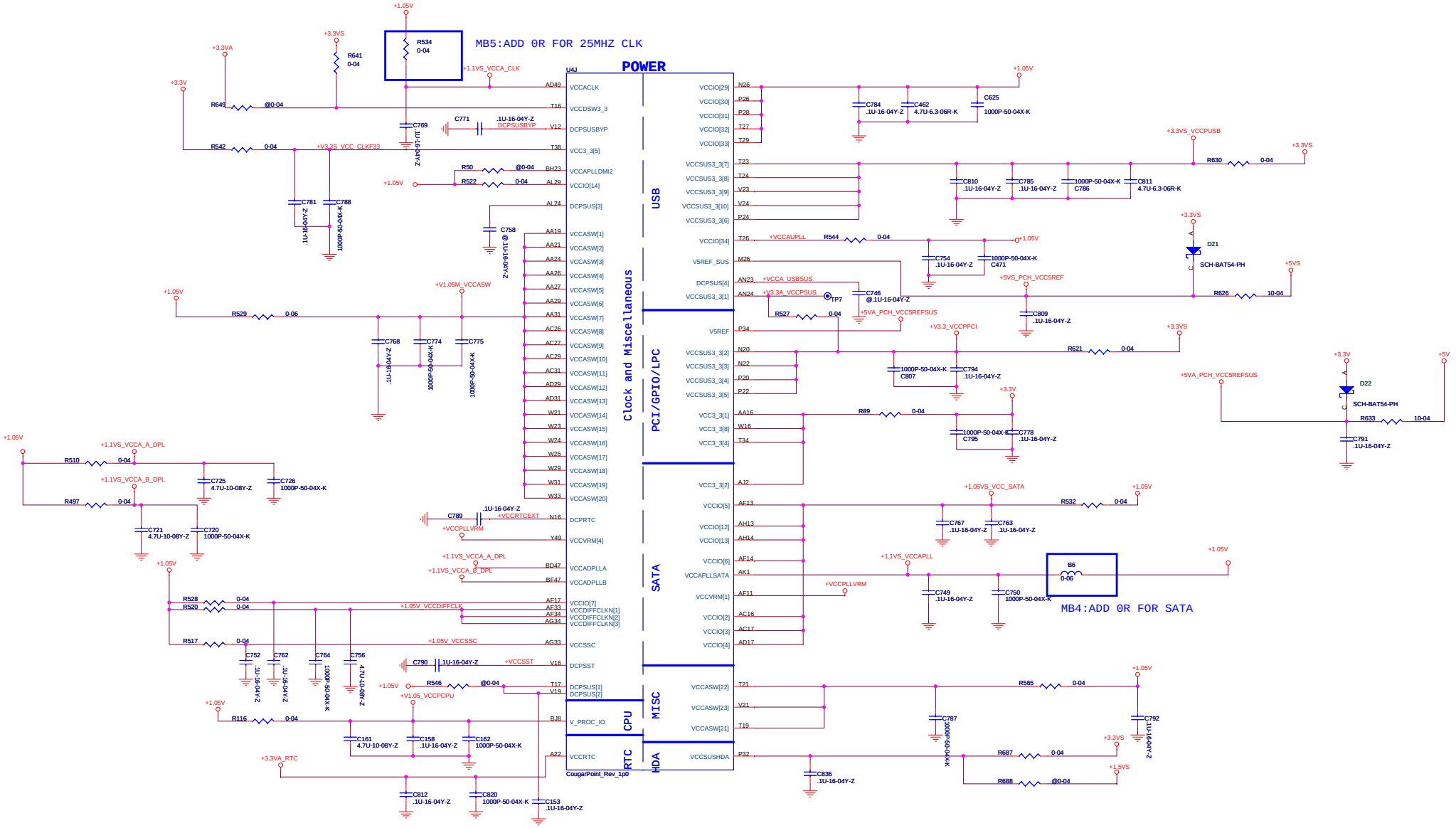
Date: Friday, December 03, 2010 | Sheet 18 of 40



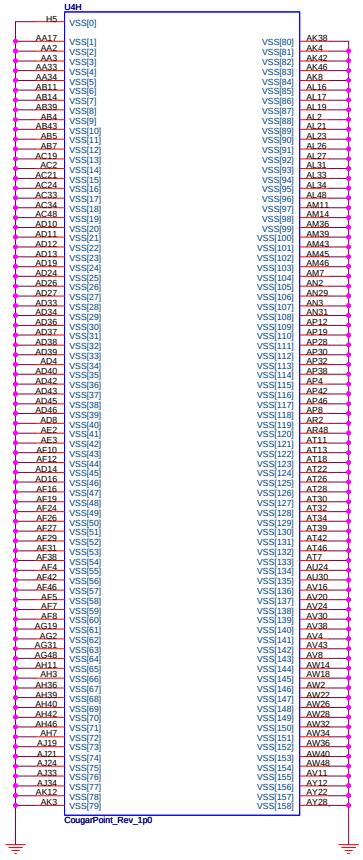
Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: PCH_GPIO/CPU (6 of 9)		Rev: A
Date: Friday, December 03, 2010	Sheet 19 of 40		

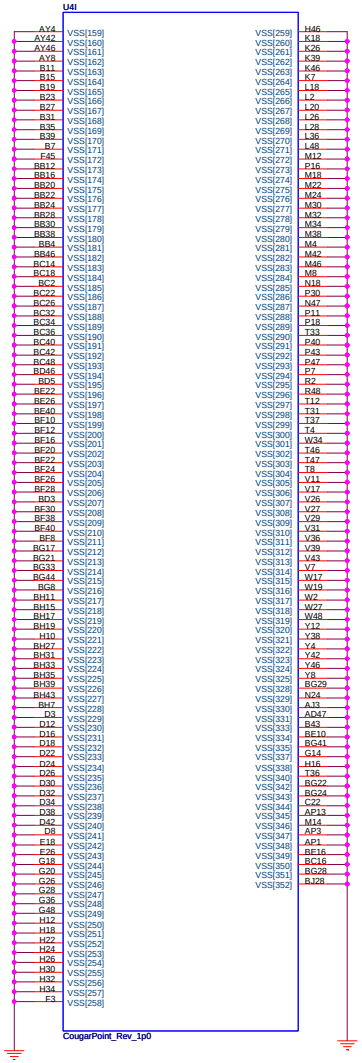


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: PCH POWER-A (7 of 9)		Rev: A
Date: Tuesday, September 21, 2010	Sheet 20 of 40		

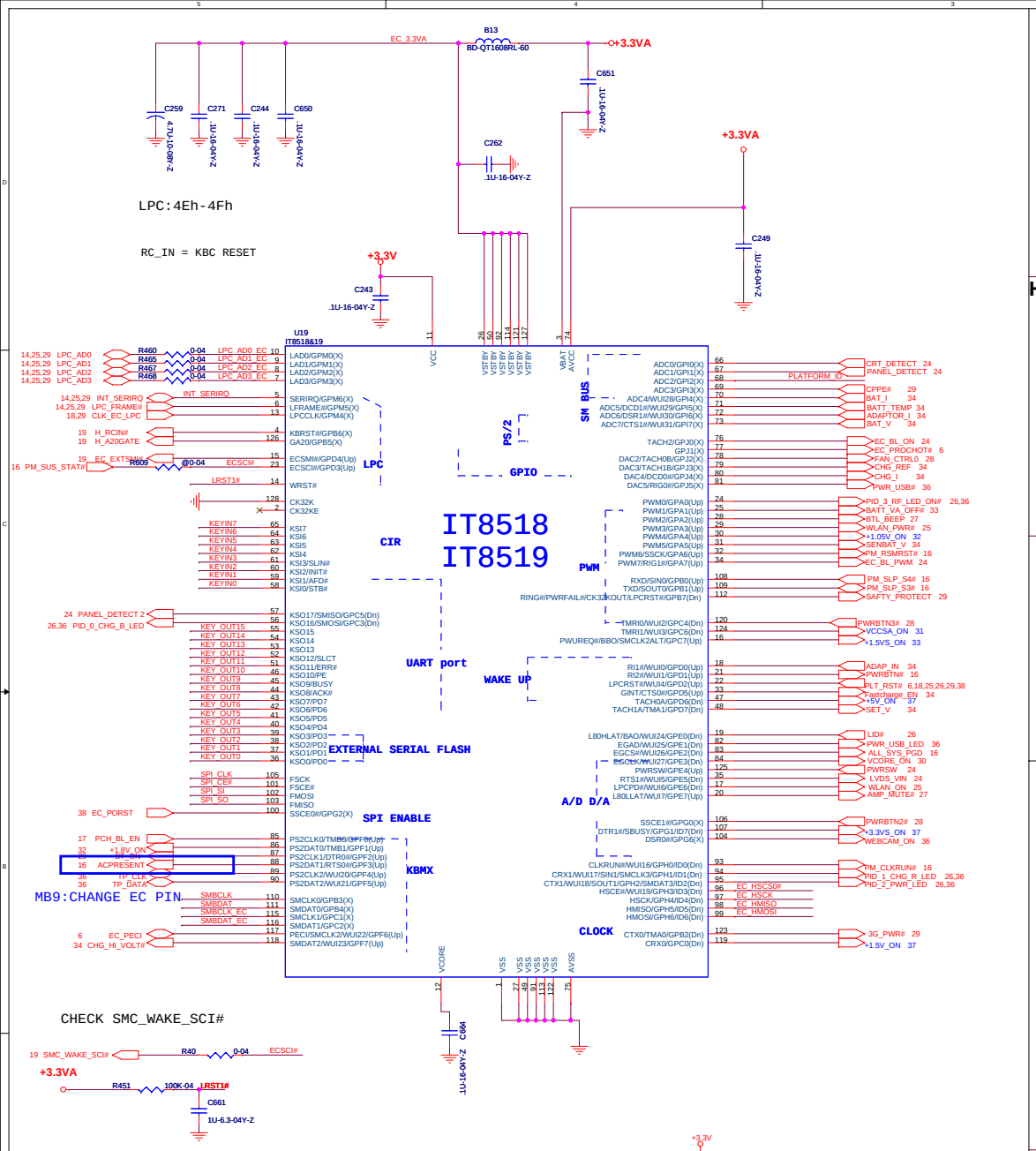


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: PCH POWER-B (8 of 9)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 21 of 40	



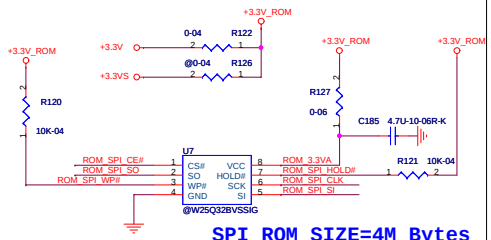


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: PCH GND (9 of 9)	Rev: A
Date: Tuesday, September 21, 2010	Sheet 22 of 40	

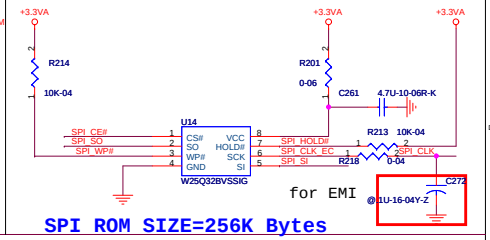


SMB0	only for Batt.
SMB1	PCH,G-sensor

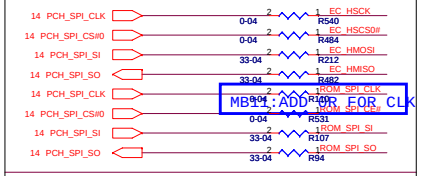
BIOS/ME FLASH ROM(SPI)



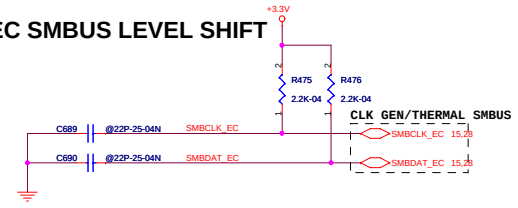
EC FLASH ROM(SPI)



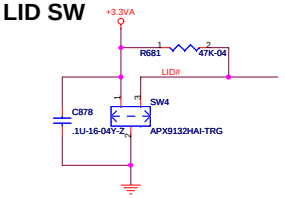
HSPI Select



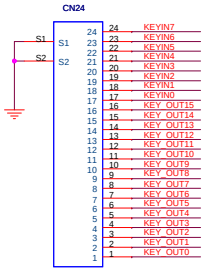
EC SMBUS LEVEL SHIFT



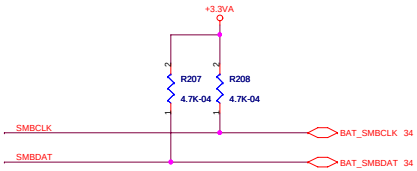
LID SW

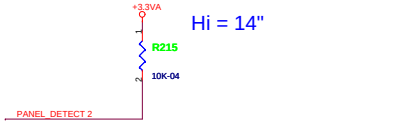


KEYBOARD Conn

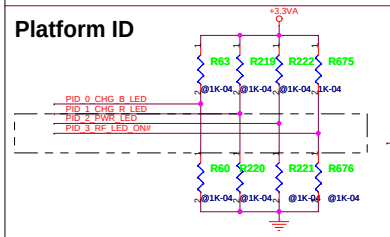


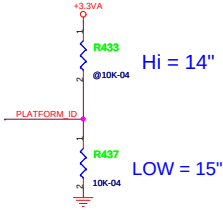
Keyboard conn swap pin ok





Platform ID





ID / MODEL	(ID0)	(ID1)

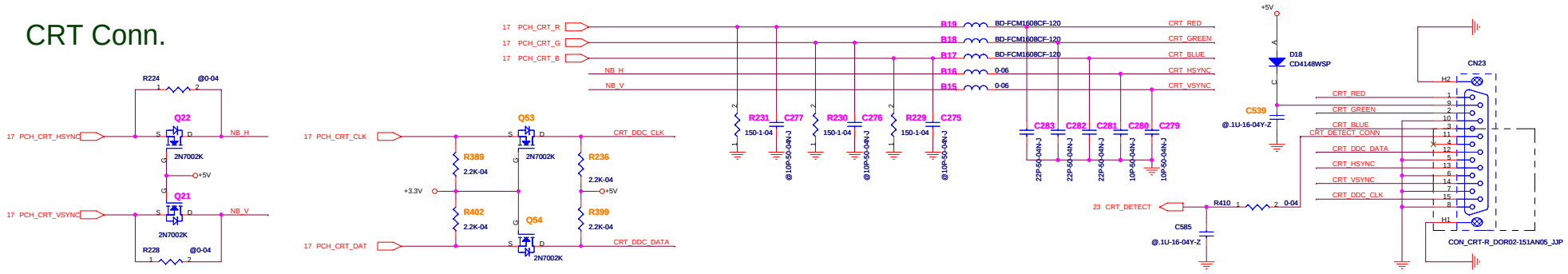
Shuttle Inc

Title: **A14HV**

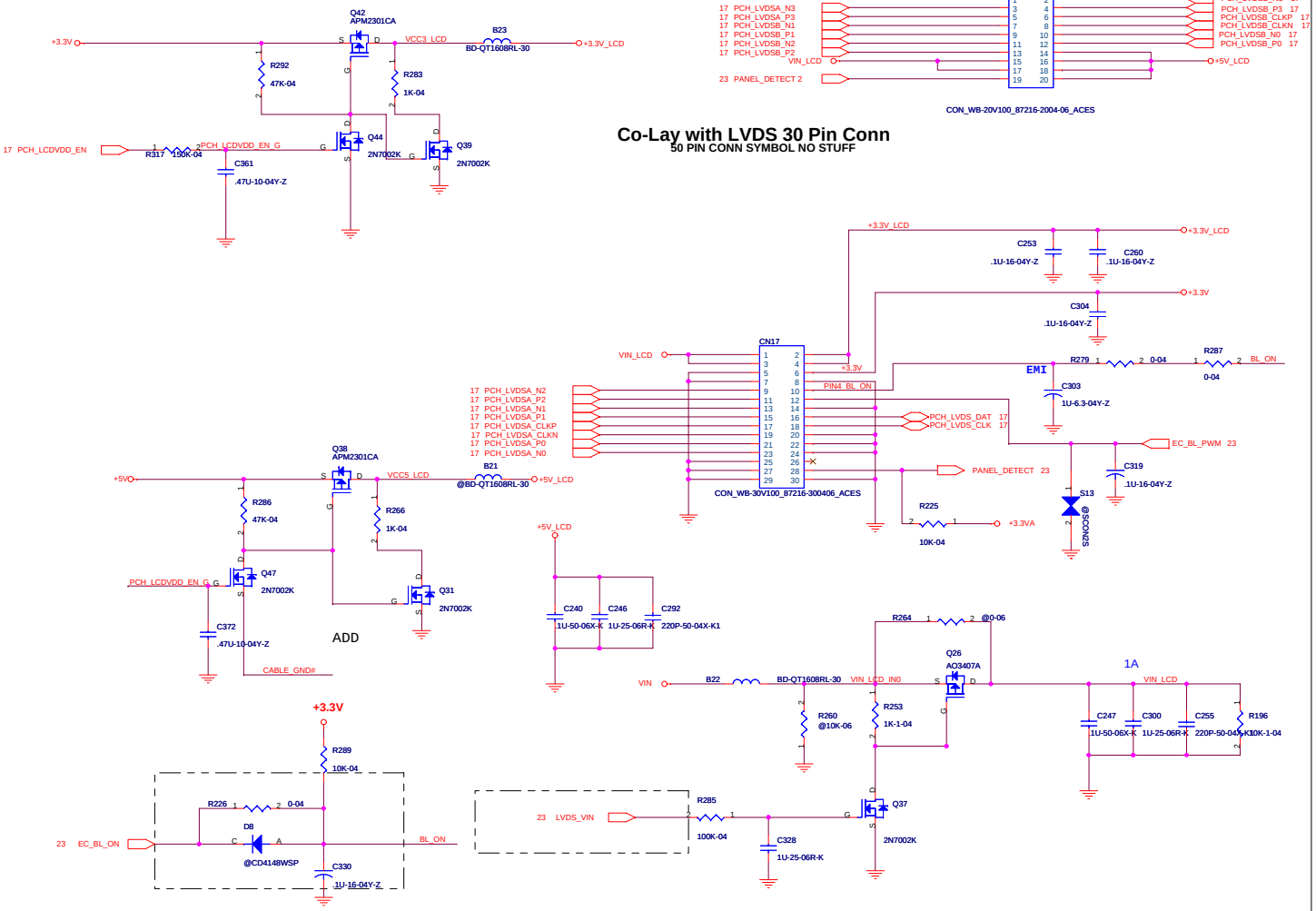
Size: Custom | Document Number: EC IT8500BX/BIOS/KB CONN | Rev: A

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

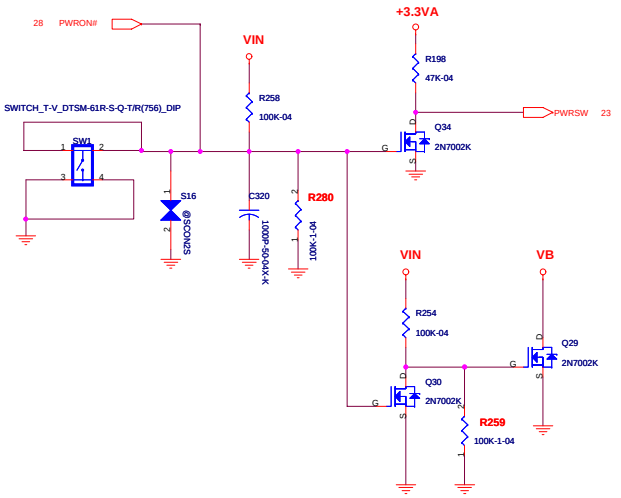
CRT Conn.

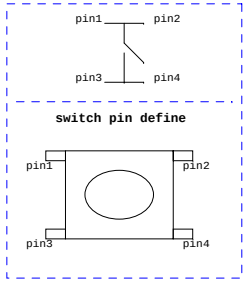


LVDS Conn.



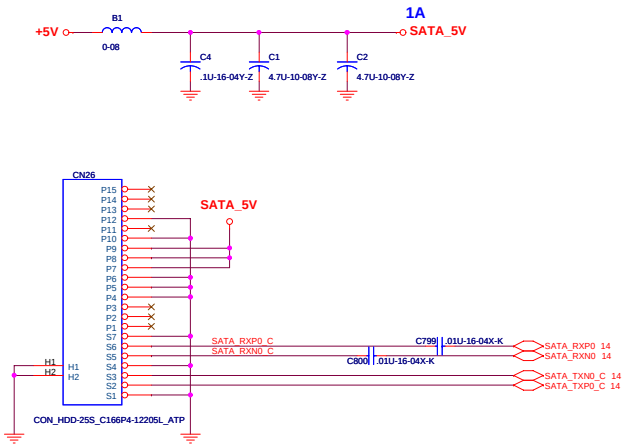
PWR SW



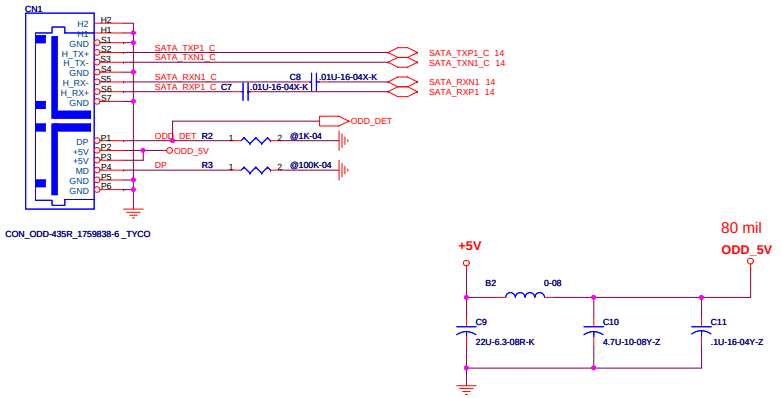


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CRT/LVDS/PWR SW	Rev: A
Date: Tuesday, December 07, 2010	Sheet 24 of 40	

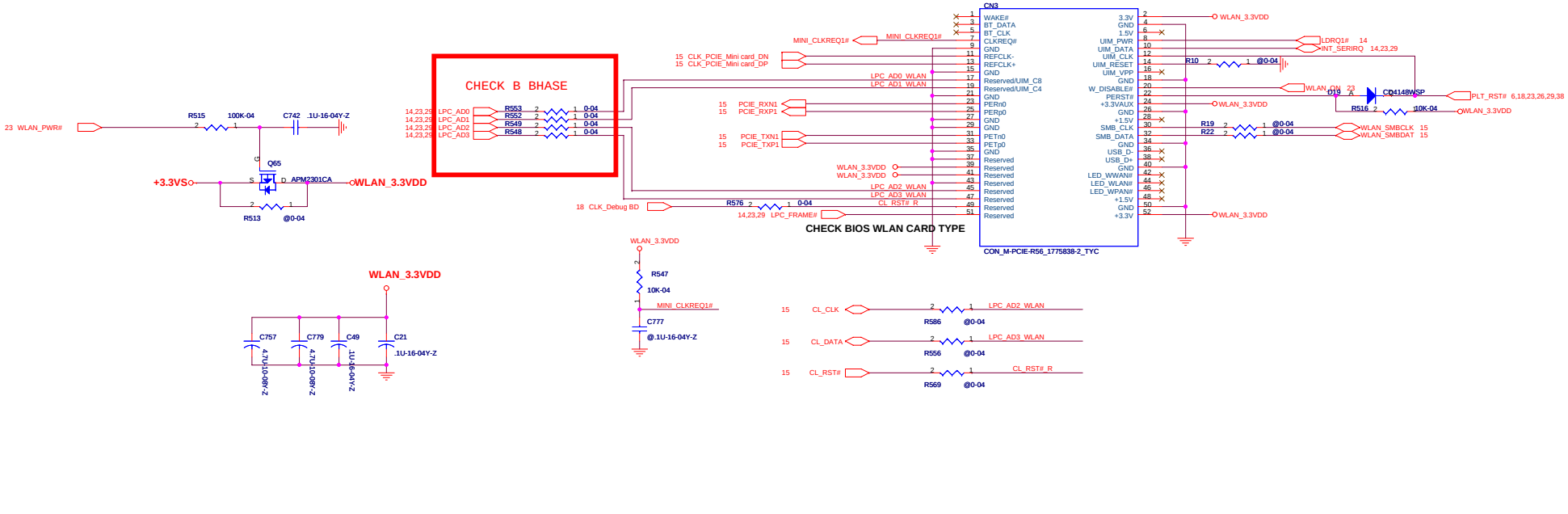
SATA-HDD



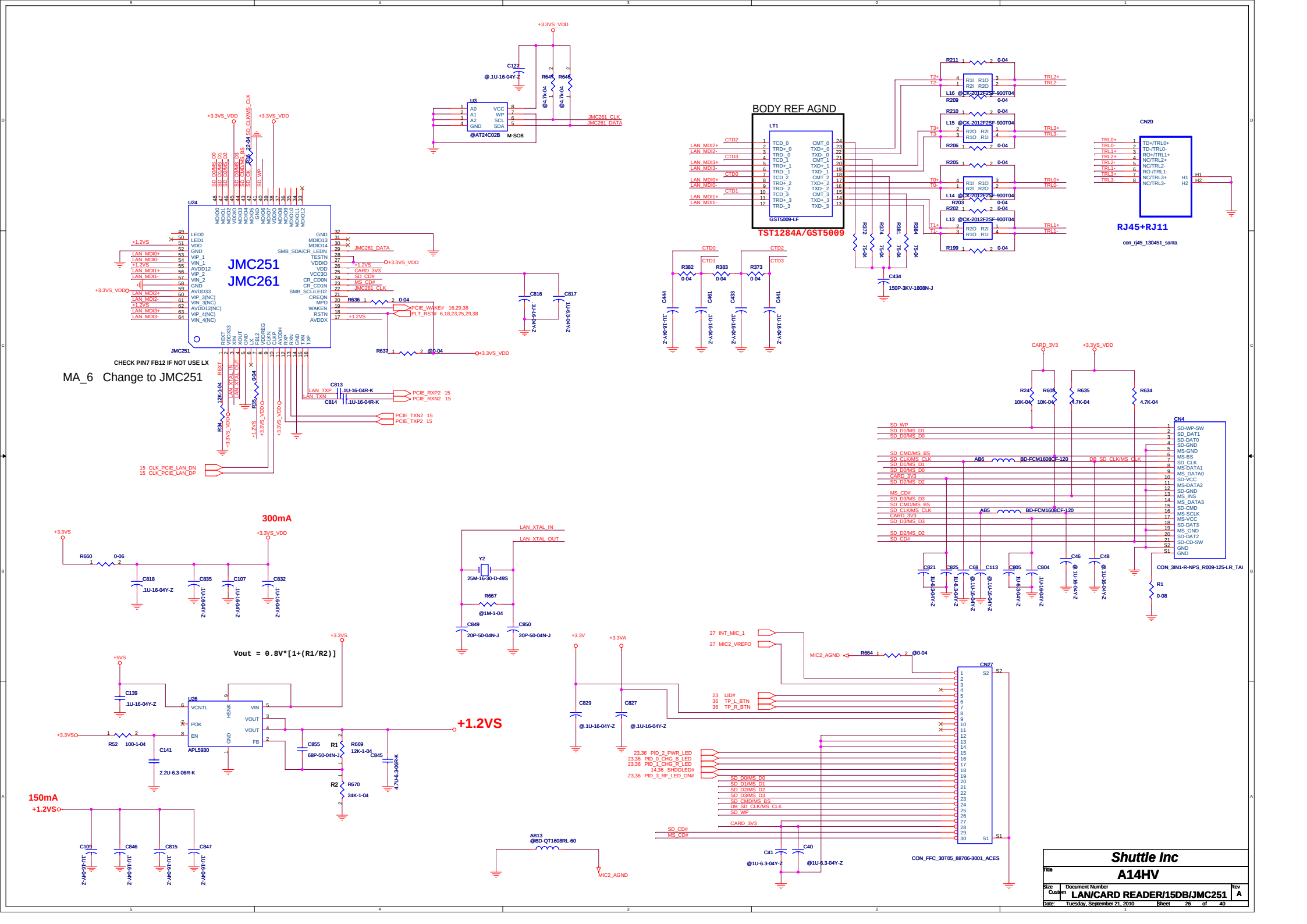
CD-ROM



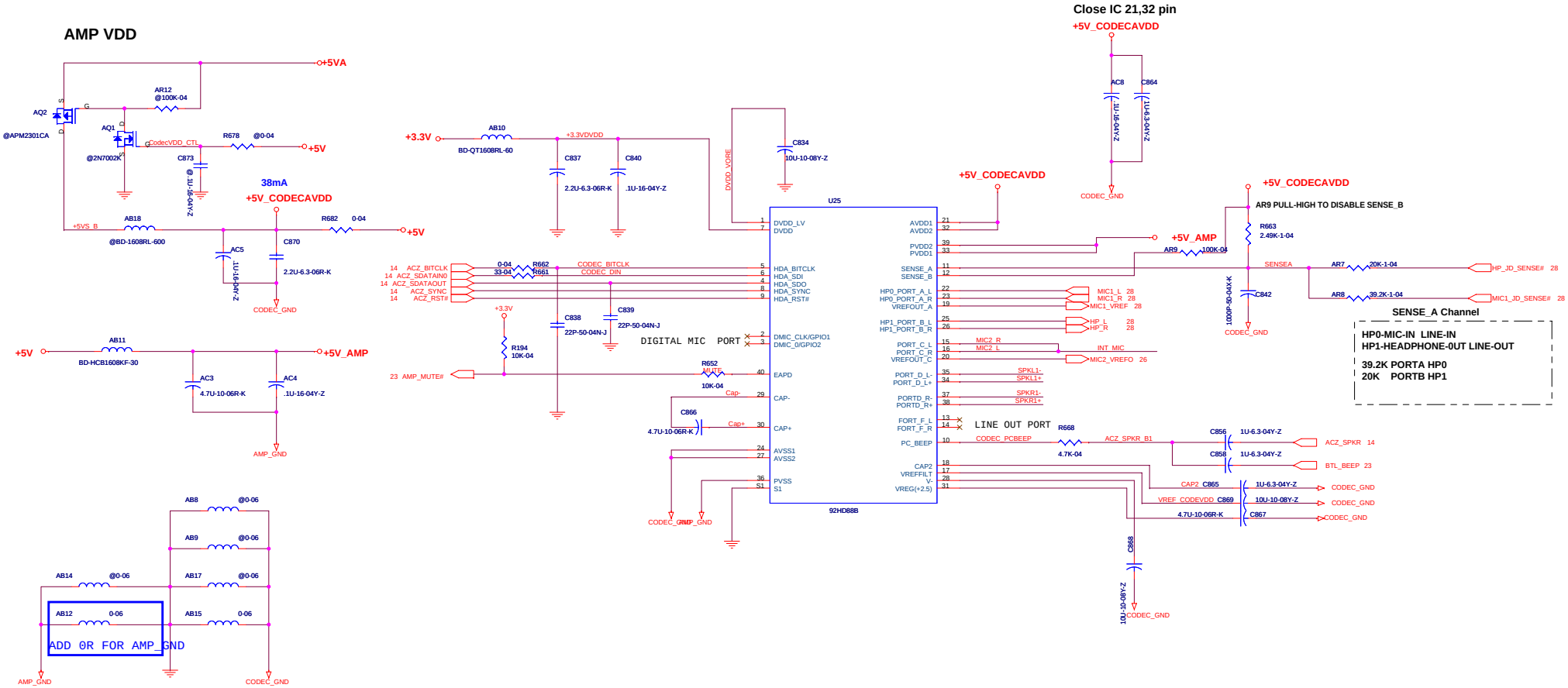
MINI CARD CONN



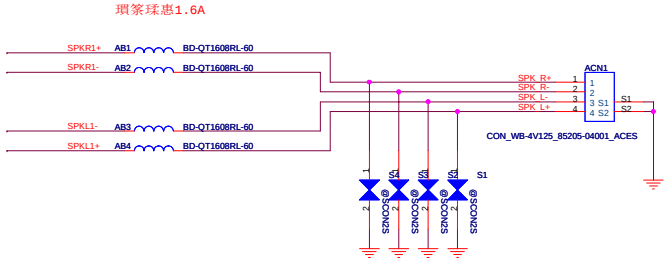
Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: HDD/ODD /MINI CARD		Rev: A
Date: Tuesday, September 21, 2010		Sheet 25 of 40	


JMC251
JMC261
CHECK PIN7 FB12 IF NOT USE LX
MA_6 Change to JMC251
BODY REF AGND
TST1284A/GST5009
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

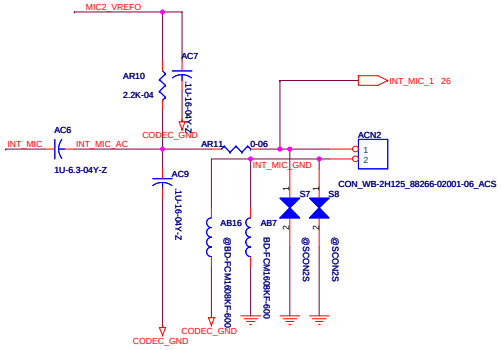
CODEC 92HD81



INT_SPEAKER

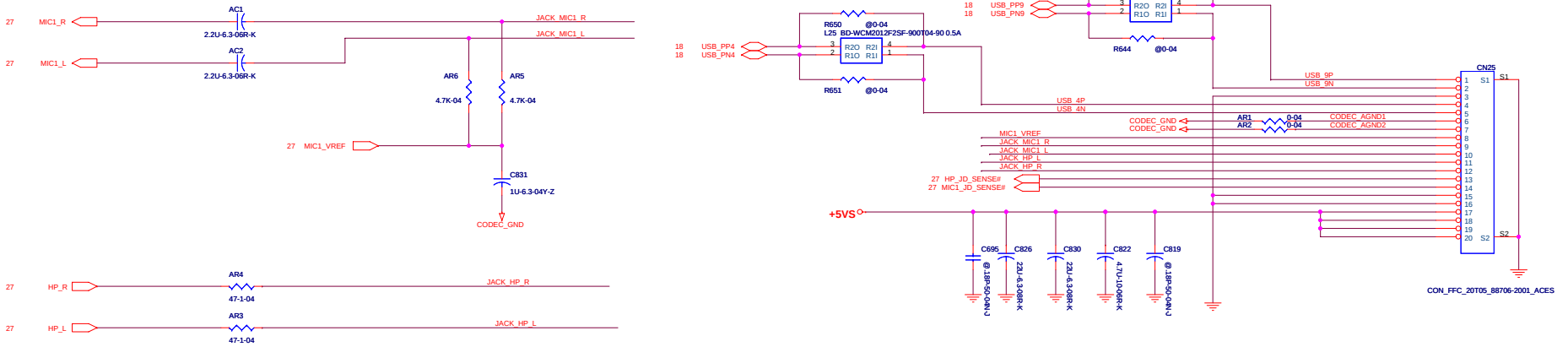


INT_MIC

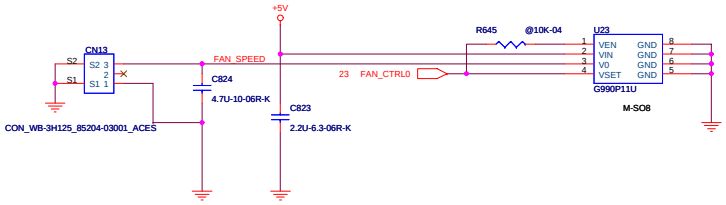


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: CODEC(ALC269)/INT MIC/SPKR	Rev: A
Date: Tuesday, September 21, 2010	Sheet 27 of 40	

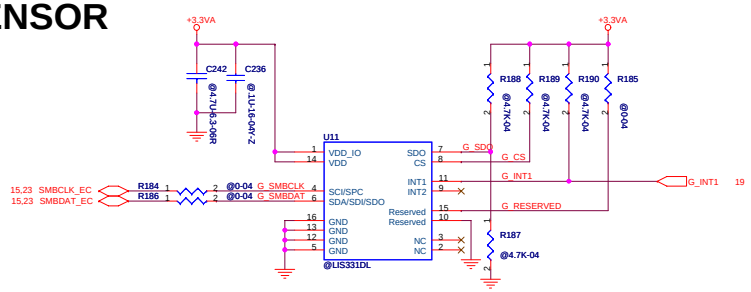
EXT MIC/EXT Line In/ EXT USB JACK



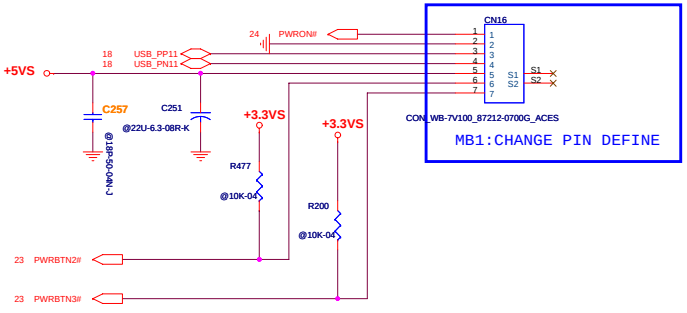
FAN CONTROLLER



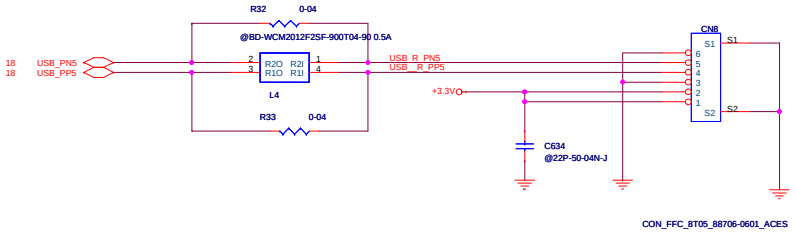
G-SENSOR



EXT USB PORT 4



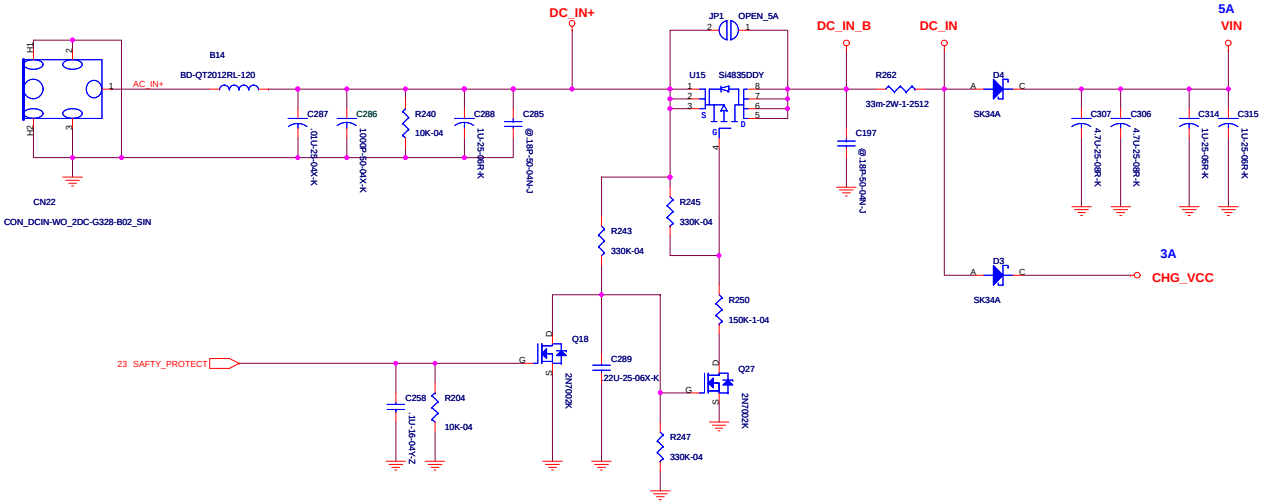
FingerPrint



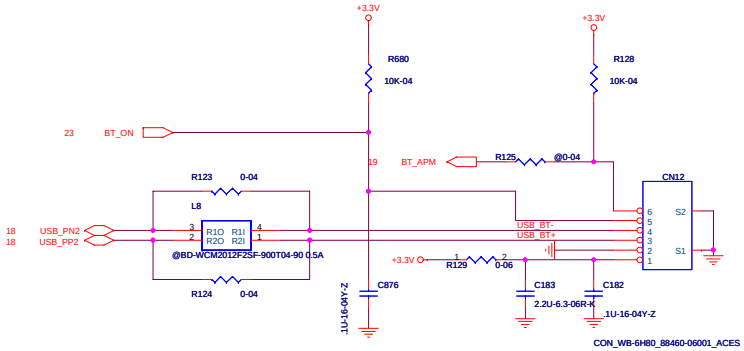
Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: EXT_MIC/H_P/USB/FAN/G-SENSOR/3G		Rev: A
Date: Tuesday, September 21, 2010	Sheet 28 of 40		

DC IN

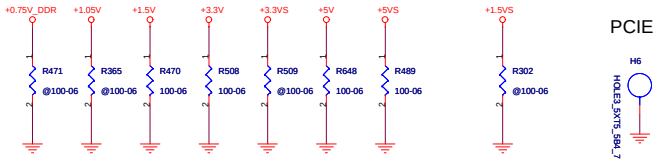
PROJECT	A14HM02		
Adaptor	65W	90W	120W
Rsense	33m Ohm	25m Ohm	18m Ohm
Stop Charger	60W	80W	110W



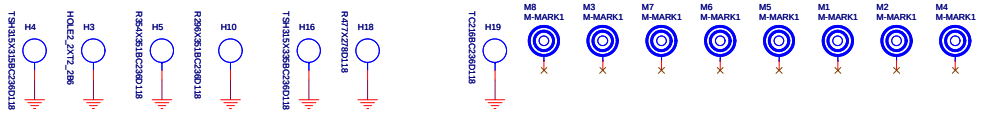
BT CONN



Discharge Resistor

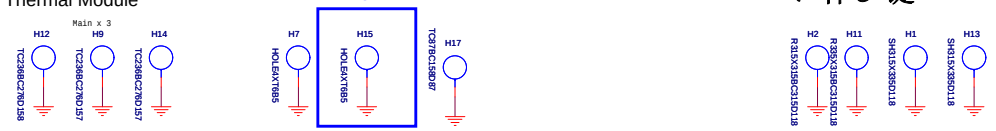


PCIE



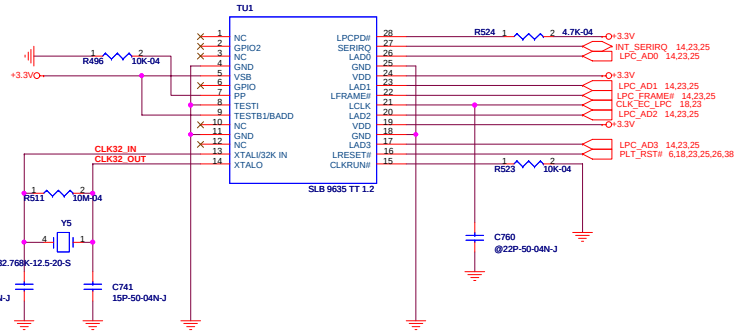
Thermal Module

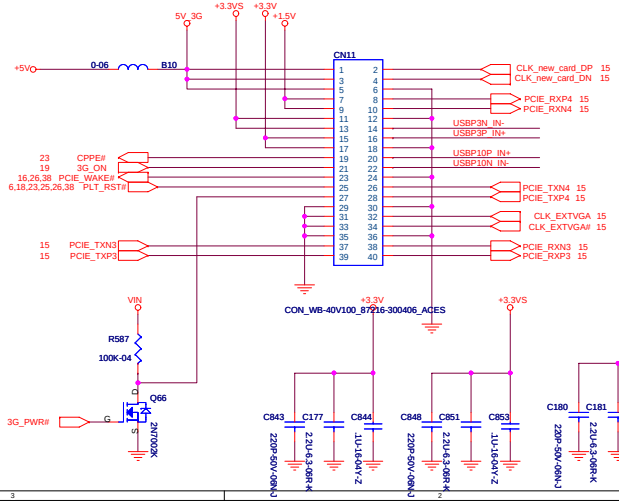
chang H17 for B



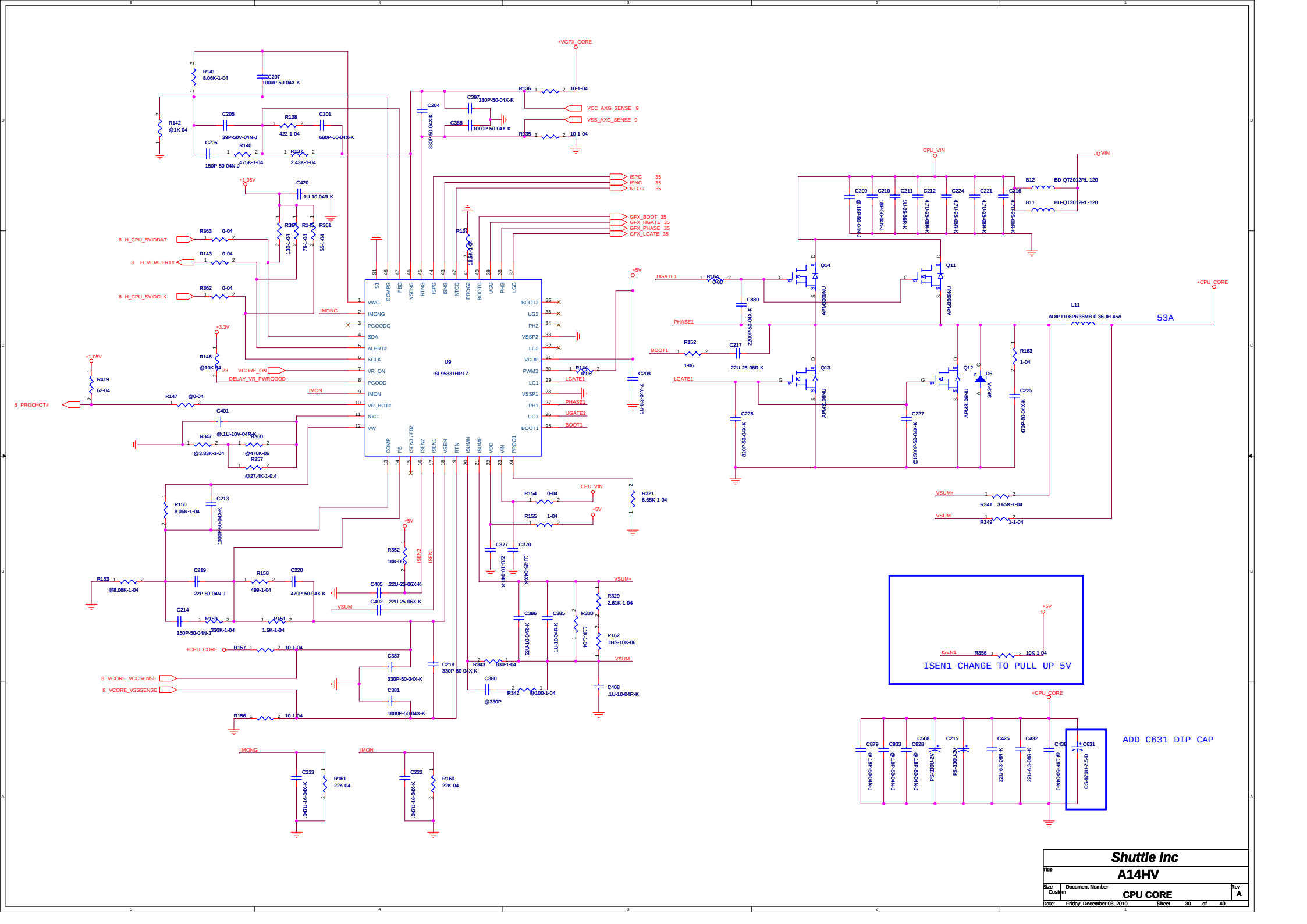
い 祚び錠

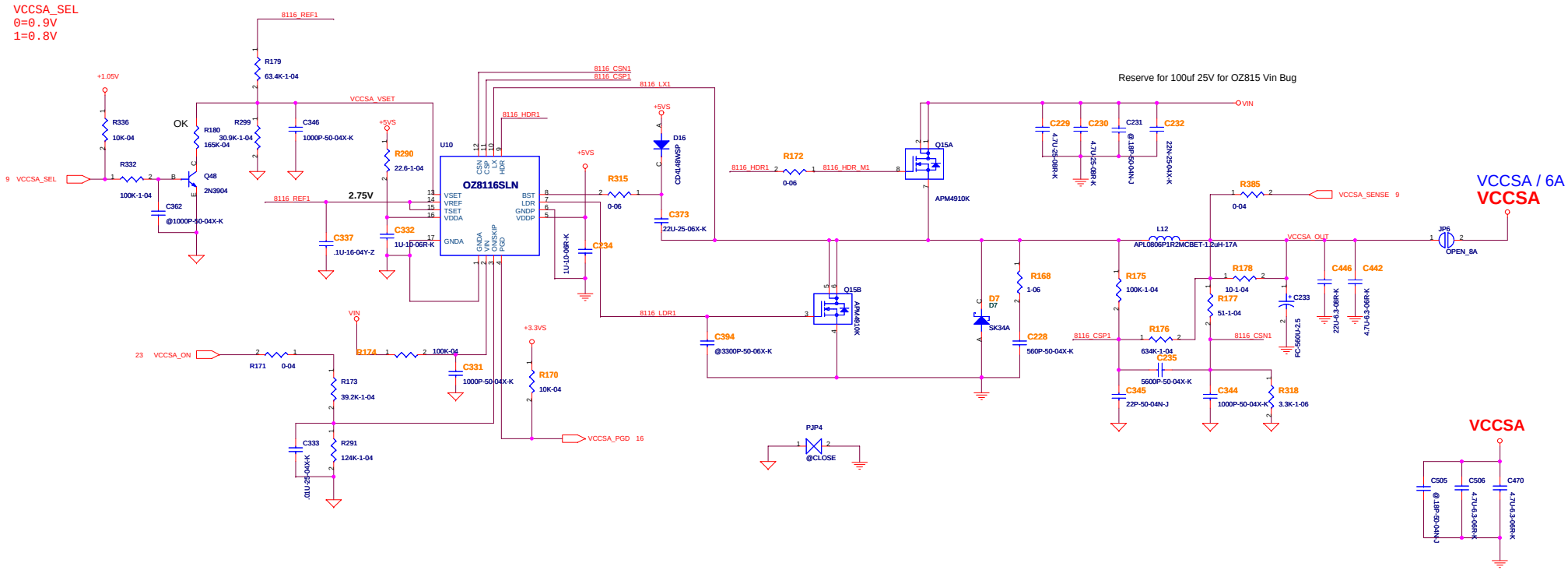
TPM



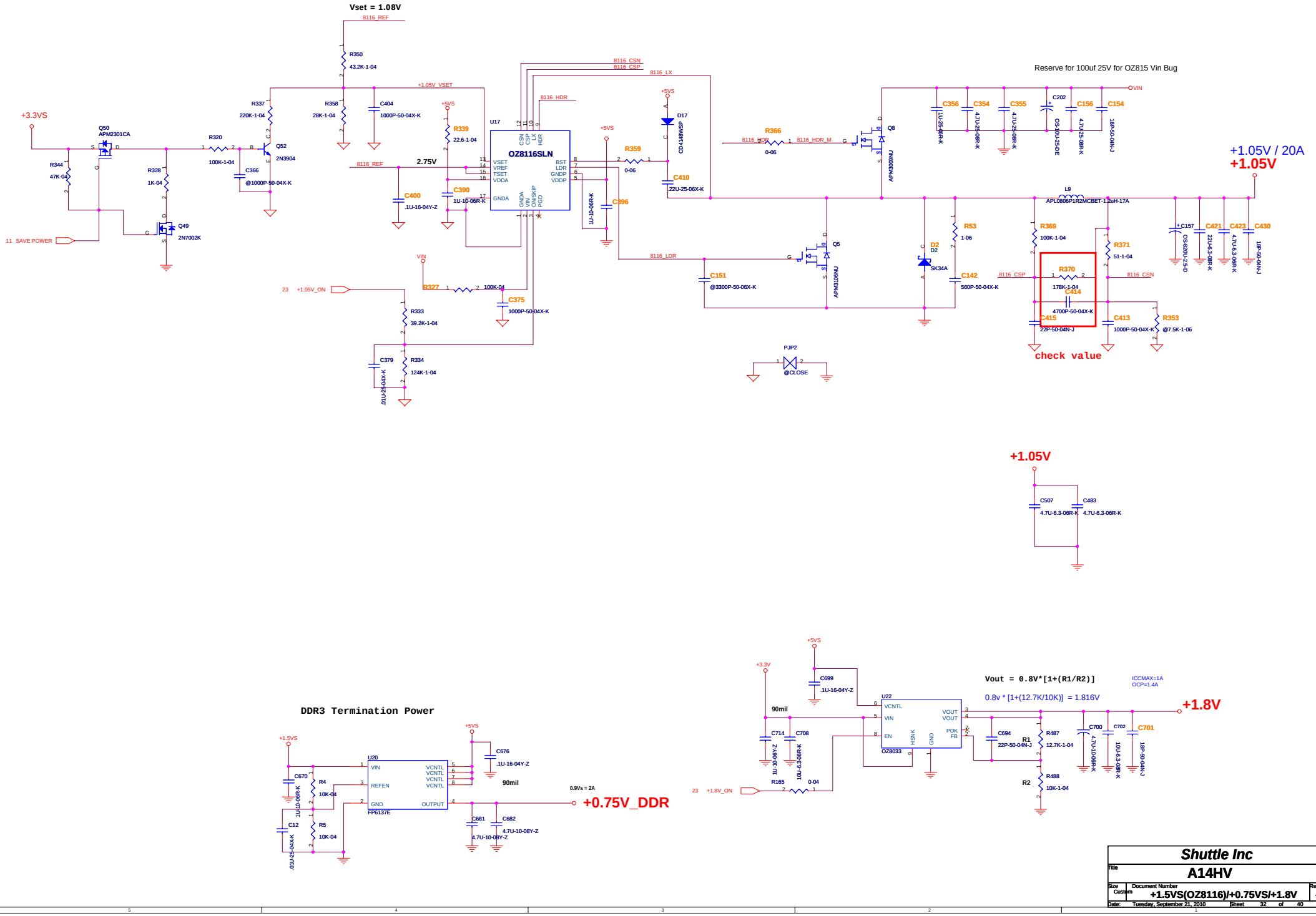


Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: DC IN/MDC/BT/D-Resistor		Rev: A
Date: Monday, December 13, 2010	Sheet 29 of 40		


+VGFX_CORE
U9
ISL95831HRTZ
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
APM3600NU
APM3106NU
SK34A
ADD C631 DIP CAP
ISEN1 CHANGE TO PULL UP 5V
Shuttle Inc
A14HV
CPU CORE
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		


Vset = 1.08V
8116_REF
R350
43.2K-1-04
+1.05V_VSET
R337
220K-1-04
R358
28K-1-04
C404
1000P-50-04X-K
+3.3VS
Q50
APM2301CA
R320
100K-1-04
Q52
2N3904
C366
@1000P-50-04X-K
R344
47K-04
R328
1K-04
Q49
2N7002K
11 SAVE POWER
+5VS
R339
22.6-1-04
U17
OZ8116SLN
CSN
CSP
LX
HDR
VSET
VREF
TSET
VDDA
GNDA
BST
LDR
GNDP
VDDP
ON/SKIP
PGD
8116_REF
2.75V
C400
.1U-16-04Y-Z
C390
1U-10-06R-K
8116_CSN
8116_CSP
8116_LX
8116_HDR
R359
0-06
C396
1U-10-06R-K
D17
CD4148WSP
C410
22U-25-06X-K
8116_LDR
VIN
23 +1.05V_ON
R327
100K-04
C375
1000P-50-04X-K
R333
39.2K-1-04
C379
.01U-25-04X-K
R334
124K-1-04
C151
@3300P-50-06X-K
Q5
APM6106NU
PJP2
@CLOSE
R366
0-06
8116_HDR_M
Q8
AP4N3006MU
Reserve for 100uf 25V for OZ815 Vin Bug
C356
1U-25-06R-K
C354
4.7U-25-06R-K
C355
4.7U-25-06R-K
C202
OS-100U-25-DE
C156
4.7U-25-06R-K
C154
18P-50-04N-J
+1.05V / 20A
+1.05V
L9
APL0806P1R2MCBET-1.2uH-17A
C157
OS-820U-2.5-D
C421
22U-6.3-06R-K
C423
4.7U-6.3-06R-K
C430
18P-50-04N-J
D2
D2
SK34A
C142
560P-50-04X-K
R53
1-06
R369
100K-1-04
R371
51-1-04
8116_CSP
R370
178K-1-04
C414
4700P-50-04X-K
C415
22P-50-04N-J
8116_CSN
C413
1000P-50-04X-K
R353
@7.5K-1-06
check value
+1.05V
C507
4.7U-6.3-06R-K
C483
4.7U-6.3-06R-K
DDR3 Termination Power
+1.5VS
U20
VIN
REFEN
GND
VCNTL
VCNTL
VCNTL
VCNTL
OUTPUT
FP6137E
C670
1U-10-06R-K
R4
10K-04
R5
10K-04
C12
.01U-25-04X-K
+5VS
C676
.1U-16-04Y-Z
90mil
C681
4.7U-10-08Y-Z
C682
4.7U-10-08Y-Z
0.9Vs = 2A
+0.75V_DDR
+3.3V
+5VS
C699
.1U-16-04Y-Z
U22
VCNTL
VIN
EN
OZ8033
VOUT
VOUT
POK
FB
HSNK
GND
90mil
C714
1U-10-06Y-Z
C708
.01U-6.3-06R-K
Vout = 0.8V*[1+(R1/R2)]
ICCMAX=1A
OCP=1.4A
0.8v * [1+(12.7K/10K)] = 1.816V
+1.8V
C694
22P-50-04N-J
R1
R487
12.7K-1-04
R2
R488
10K-1-04
C700
4.7U-10-06R-K
C702
10U-6.3-08R-K
C701
18P-50-04N-J
23 +1.8V_ON
R165
0-04
Shuttle Inc
A14HV
Size
Custom
Document Number
+1.5VS(OZ8116)/+0.75VS/+1.8V
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+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

C39 CHANGE TO DIP CAP

1.5V/15A

+1.5VS

DCR = 4.5 mohm

+5VA/8A

+5VA

C5 CHANGE TO DIP CAP

MB3:CHANGE 24K

OZ815

OZ815LN

Shuttle Inc		
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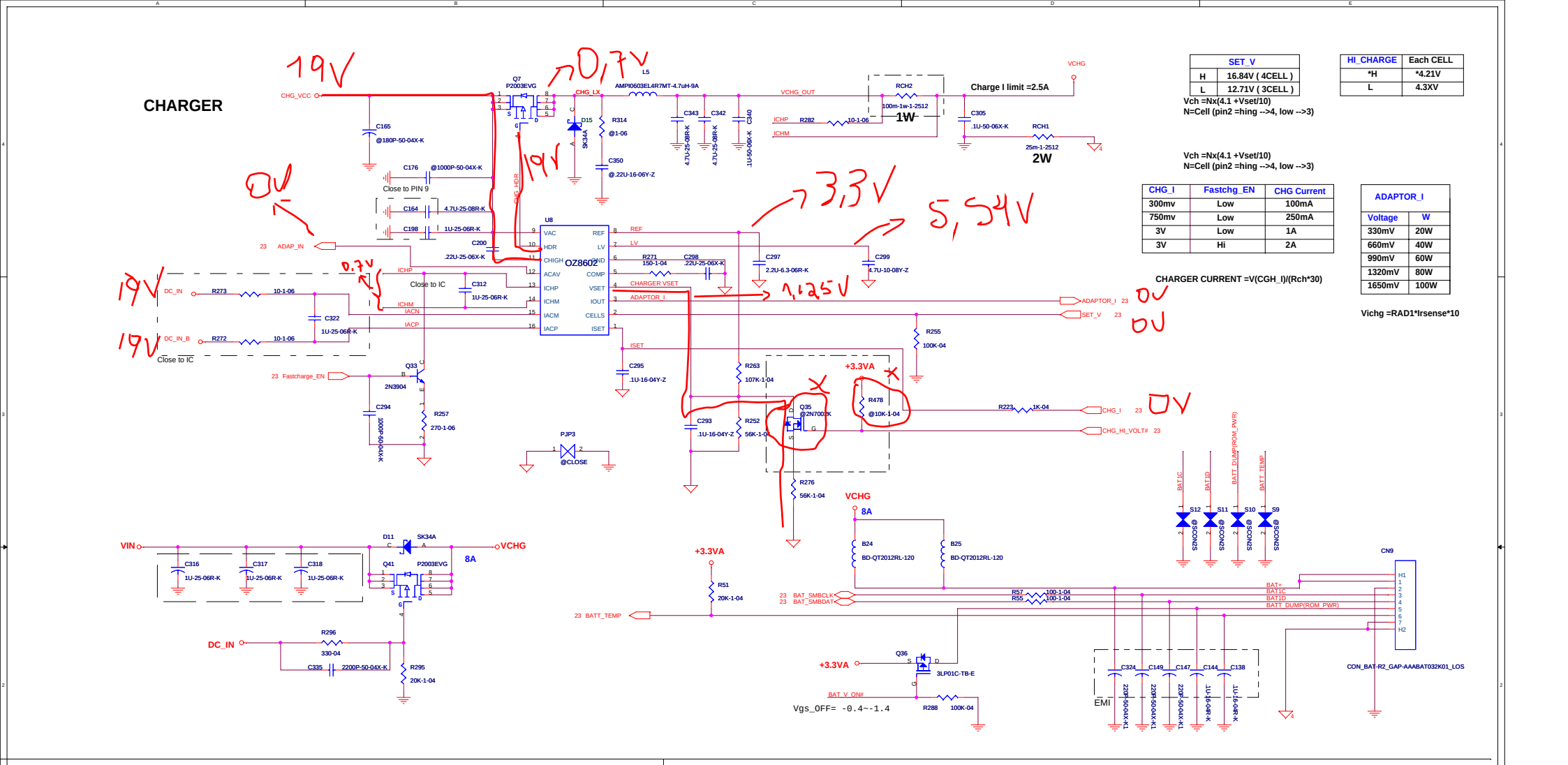


SET_V	
H	16.84V (4CELL)
L	12.71V (3CELL)

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)

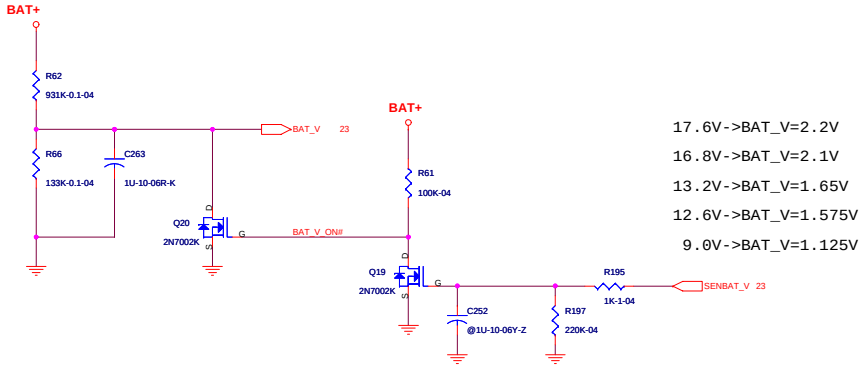
CHG_I	Fastchg_EN	CHG Current
300mv	Low	100mA
750mv	Low	250mA
3V	Low	1A
3V	Hi	2A

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

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

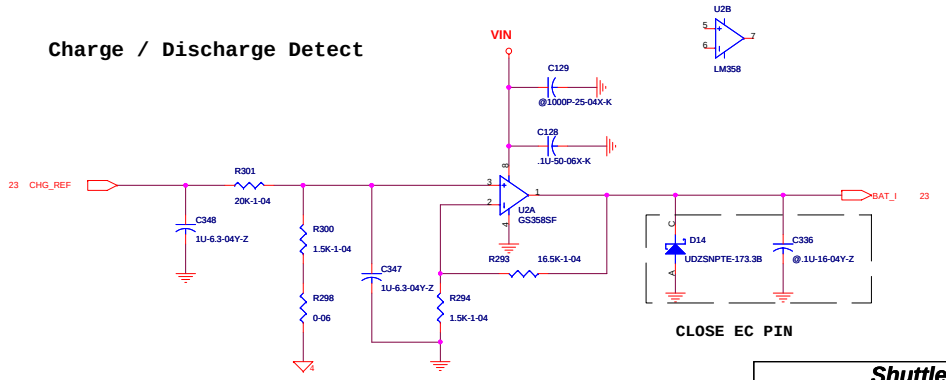
Vichg =RAD1*Irsense*10

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		
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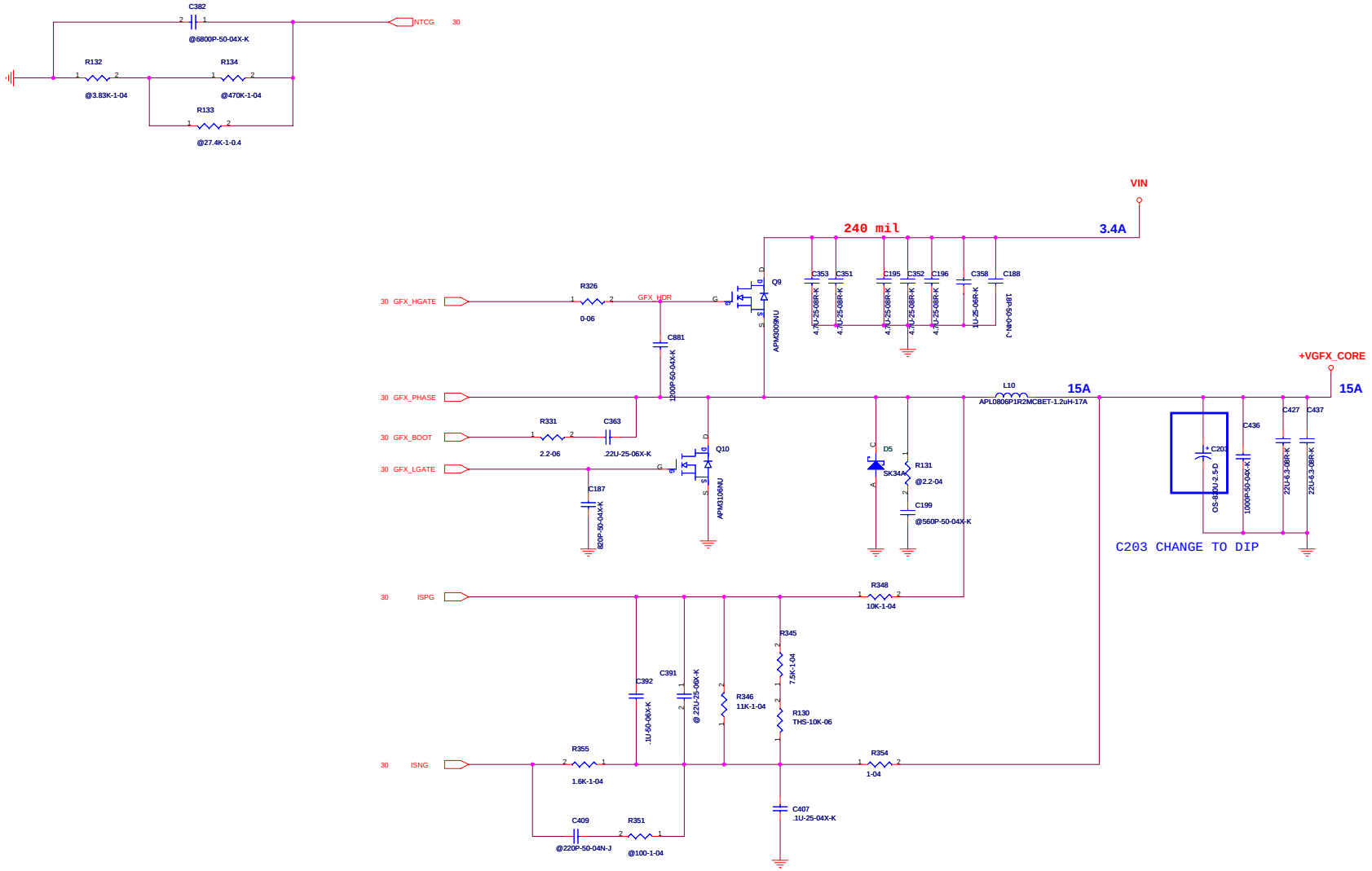

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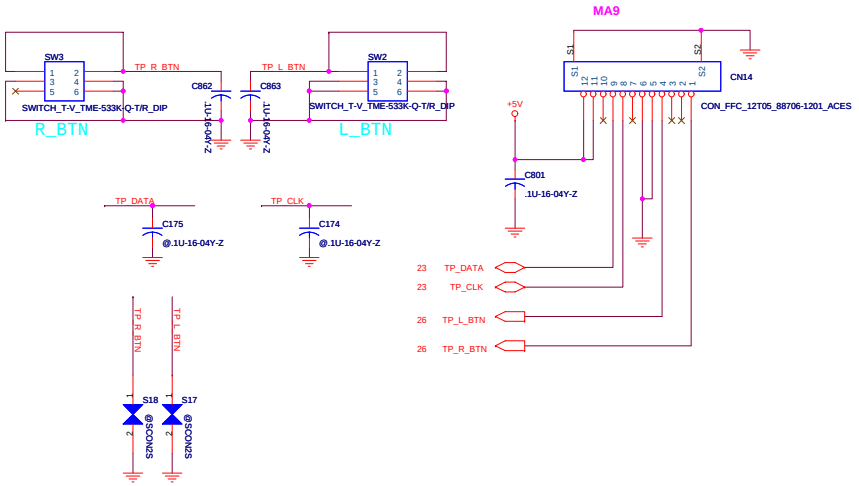
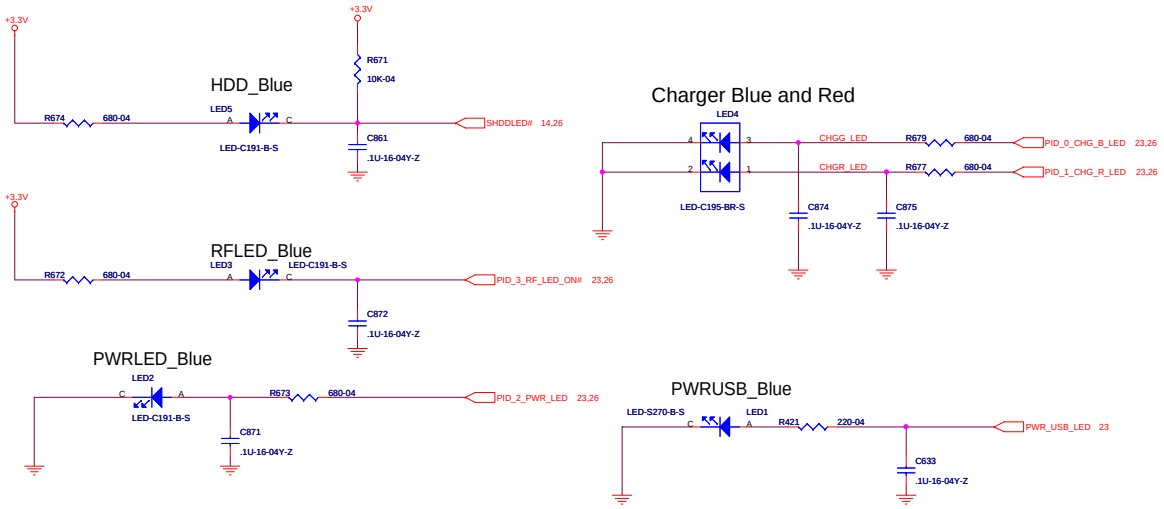
Touch Pad

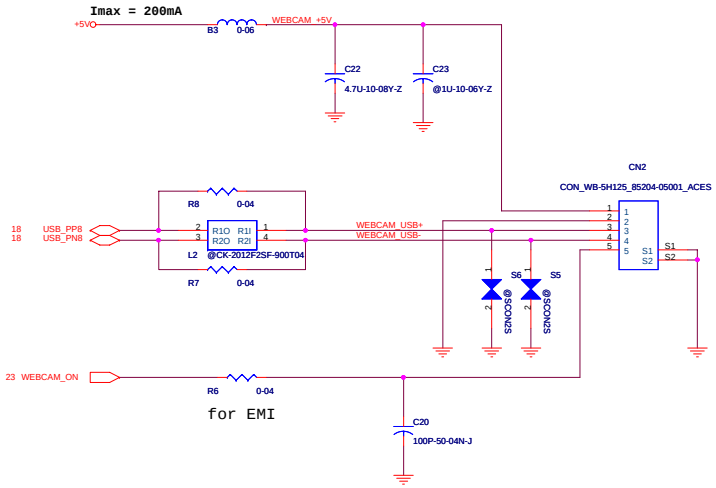


LED

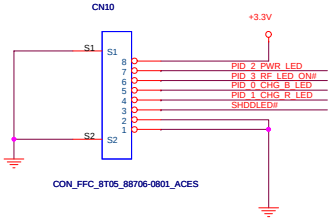


WEBCAM CON

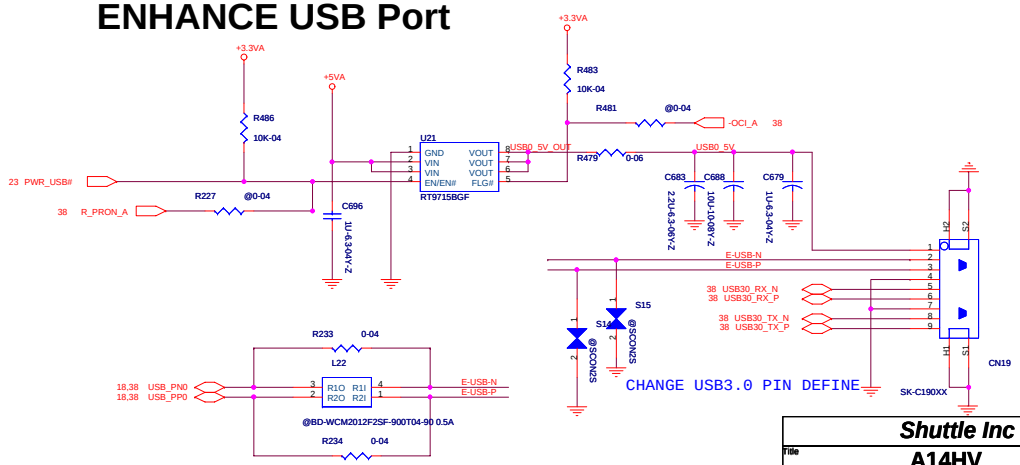
WEBCAM_ON	
1	ON
0	OFF



LED BD



ENHANCE USB Port



Shuttle Inc		
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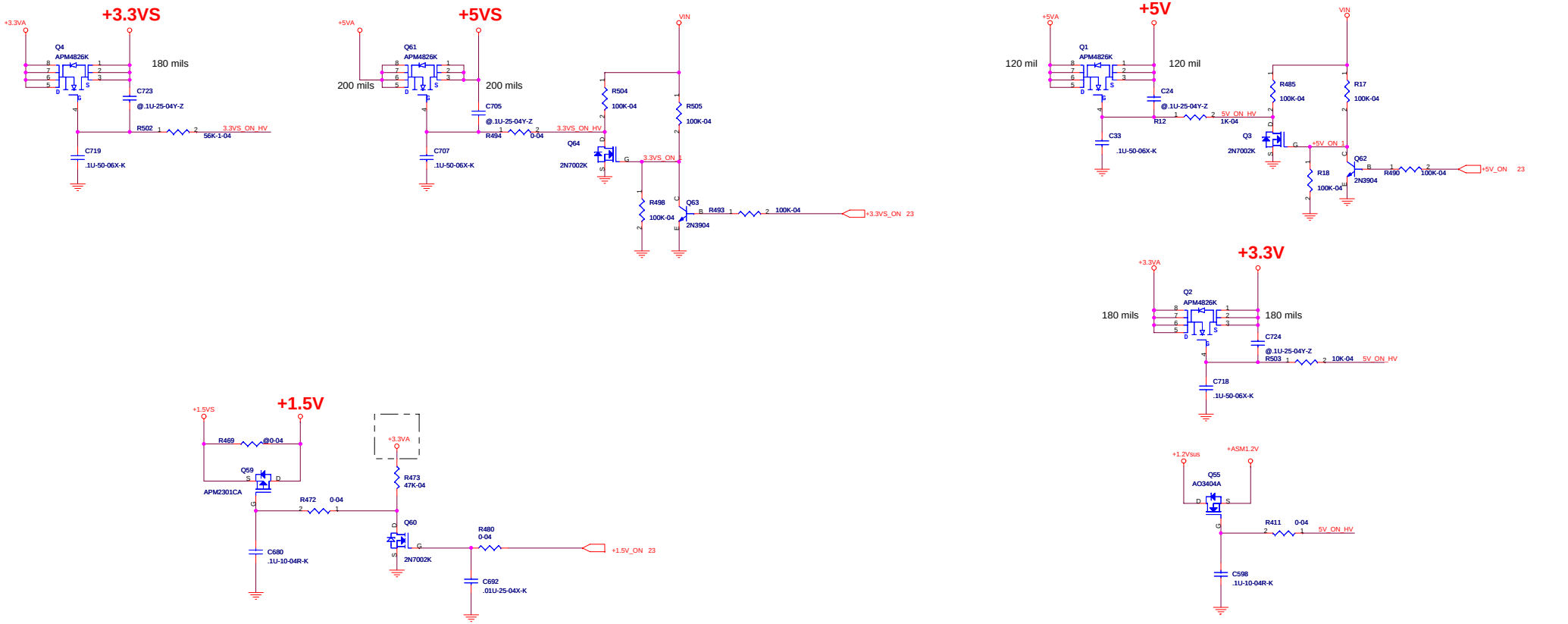
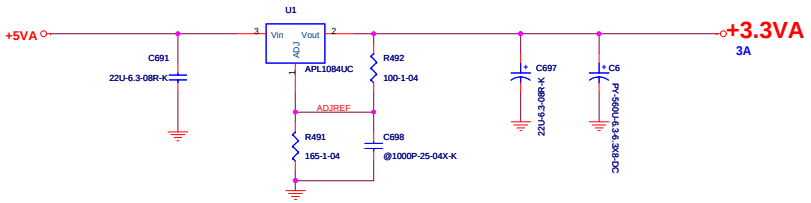
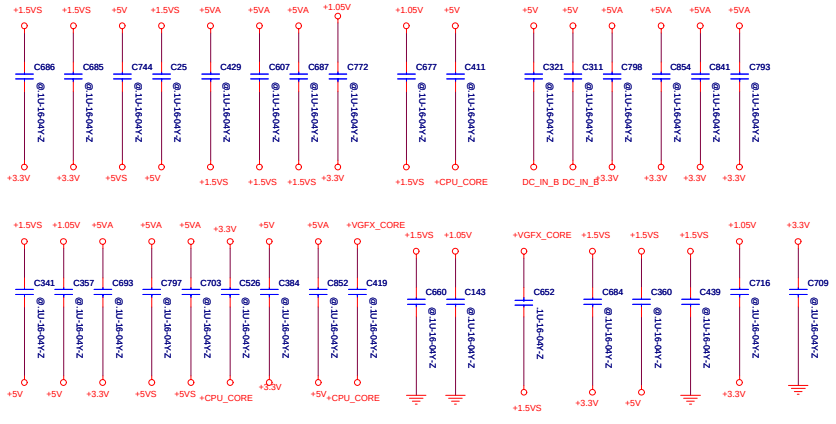
VCCSW



LDO



HIGH-SPEED CAP



	Shuttle Inc	
Title	A14HV	
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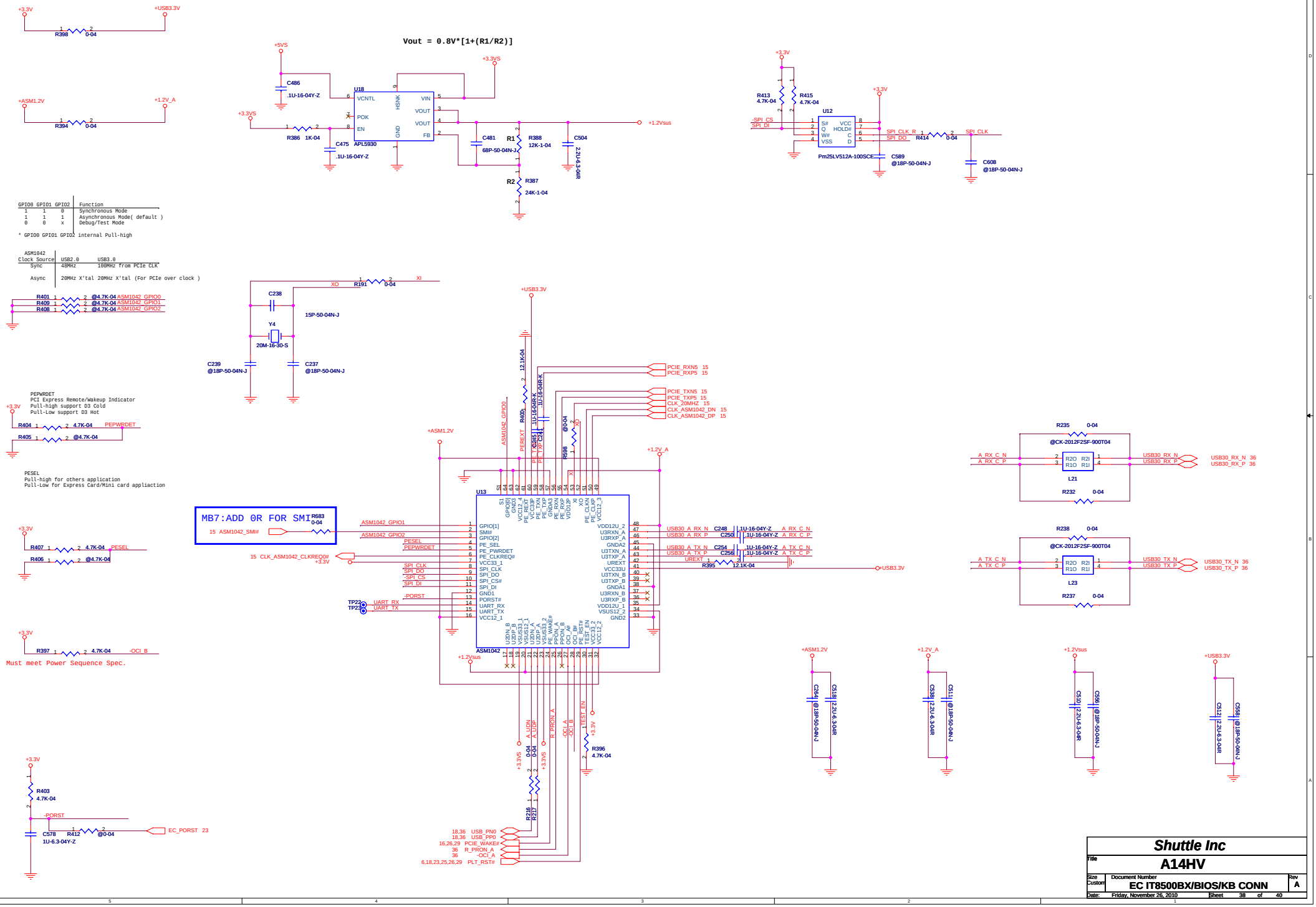
USB3.0



Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: EC IT8500BX/BIOS/KB CONN	Rev: A
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Size: Custom	Document Number: **Reserved** — Rev: **A**
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Shuttle Inc		
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Size: Custom	Document Number: **History**	Rev: **A**
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