ELETRÔNICA BR

Project Name : A14HV02- A14HVOX-V 2.1 - 71r-a14hv6

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

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35. +1.05VS/+5VA (OZ815)
36. BATT IN/CHARGER(OZ8602)
37. iGPU Core
38. VCC SW/+3.3VA/HIGH-SPEED CAP

M/B Schematic Version Change List

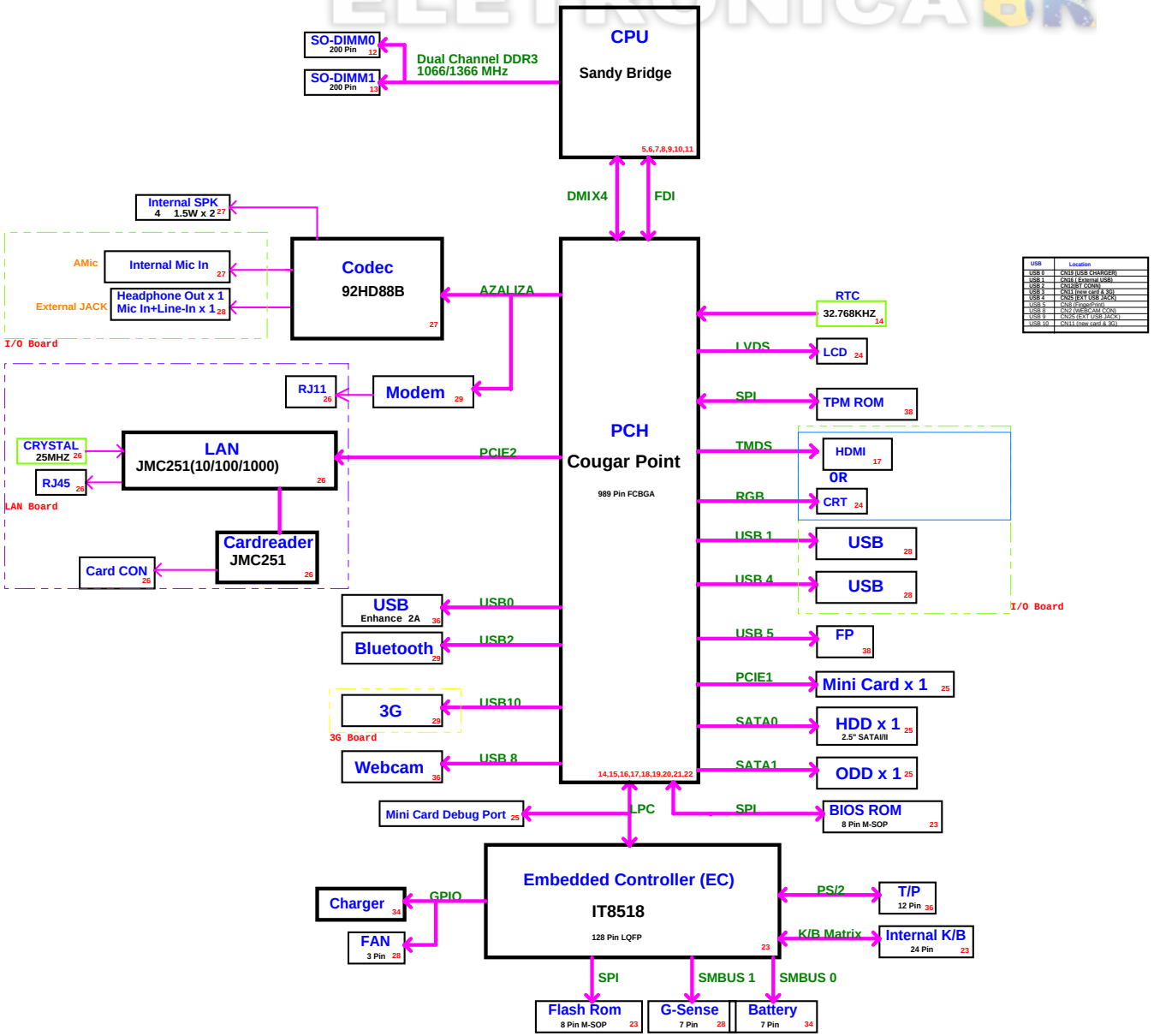
Release Date	Version	PCB P/N	PCB Description	PCBA P/N	Note

Daughter Board Schematic Version Change List

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

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SYSTEM BLOCK DIAGRAM

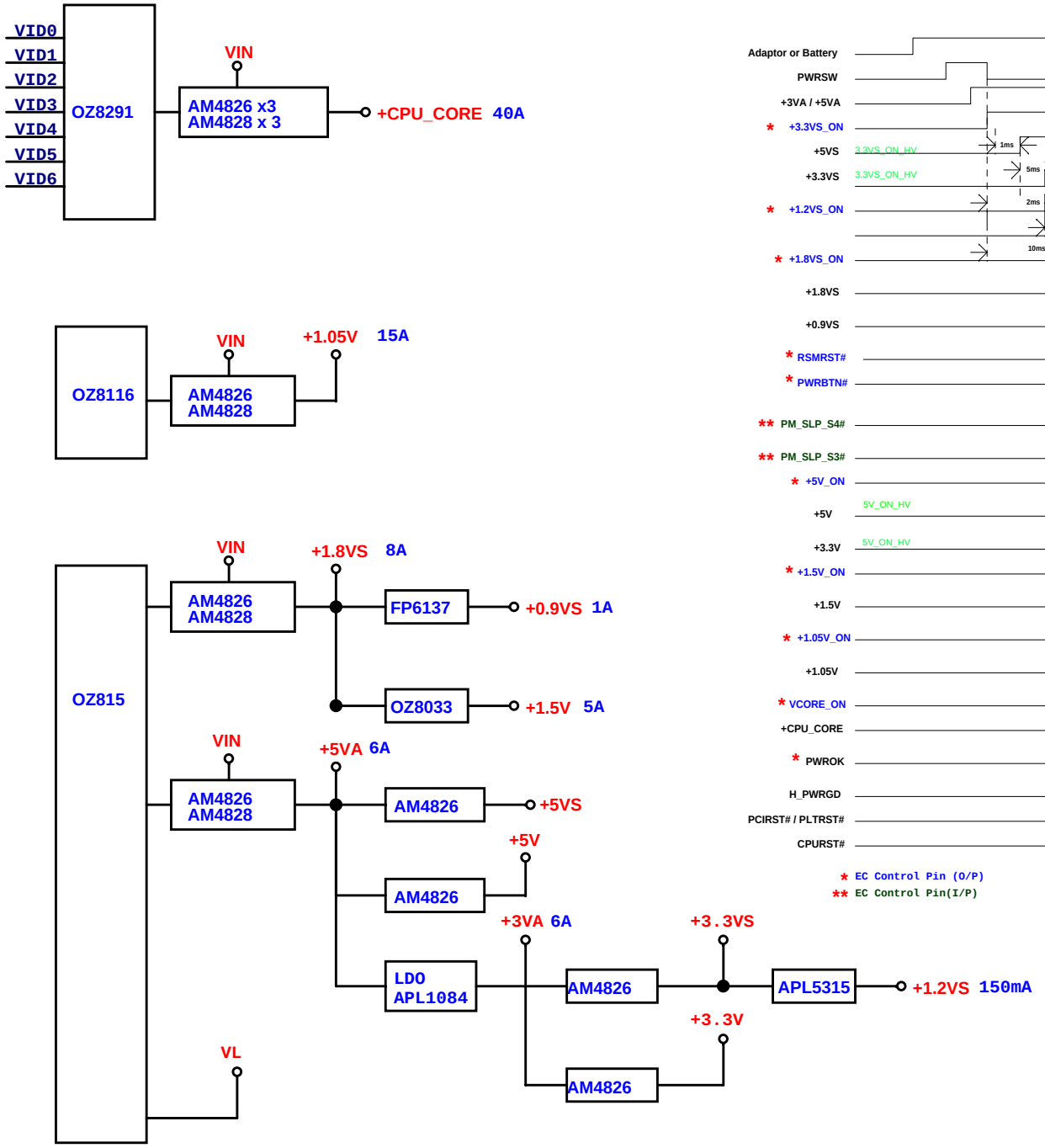


USB	Location
USB 0	CN19 (USB CHARGER)
USB 1	CN16 (External USB)
USB 2	CN12(BT CONN)
USB 3	CN13 (New card & 3G)
USB 4	CN25 (EXT USB JACK)
USB 5	CN8 (Finger Print)
USB 6	CN2 (WEBCAM CON)
USB 9	CN25 (EXT USB JACK)
USB 10	CN11 (new card & 3G)

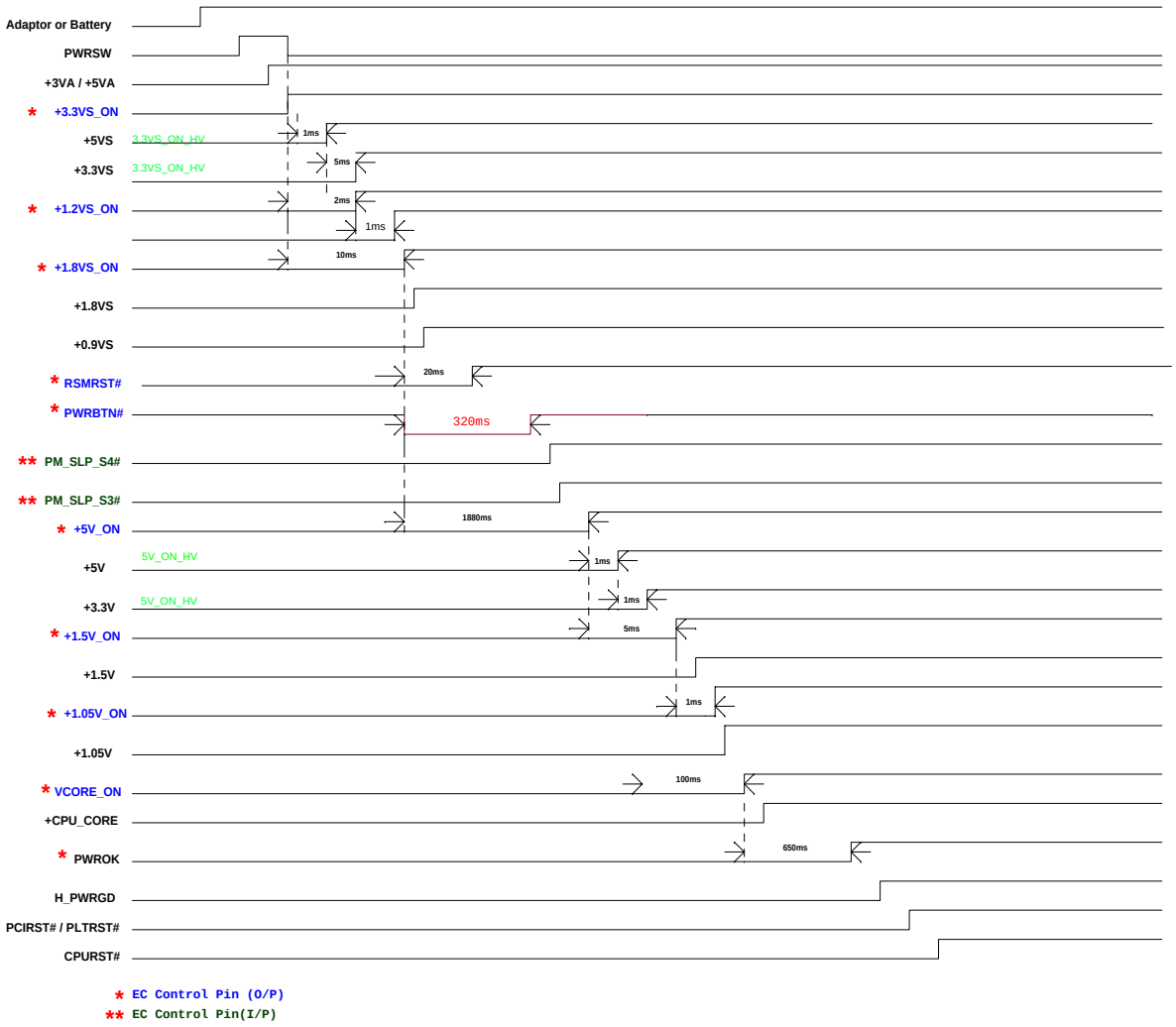
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POWER BLOCK DIAGRAM

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System Poewr On Sequence



* EC Control Pin (O/P)

** EC Control Pin(I/P)

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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	

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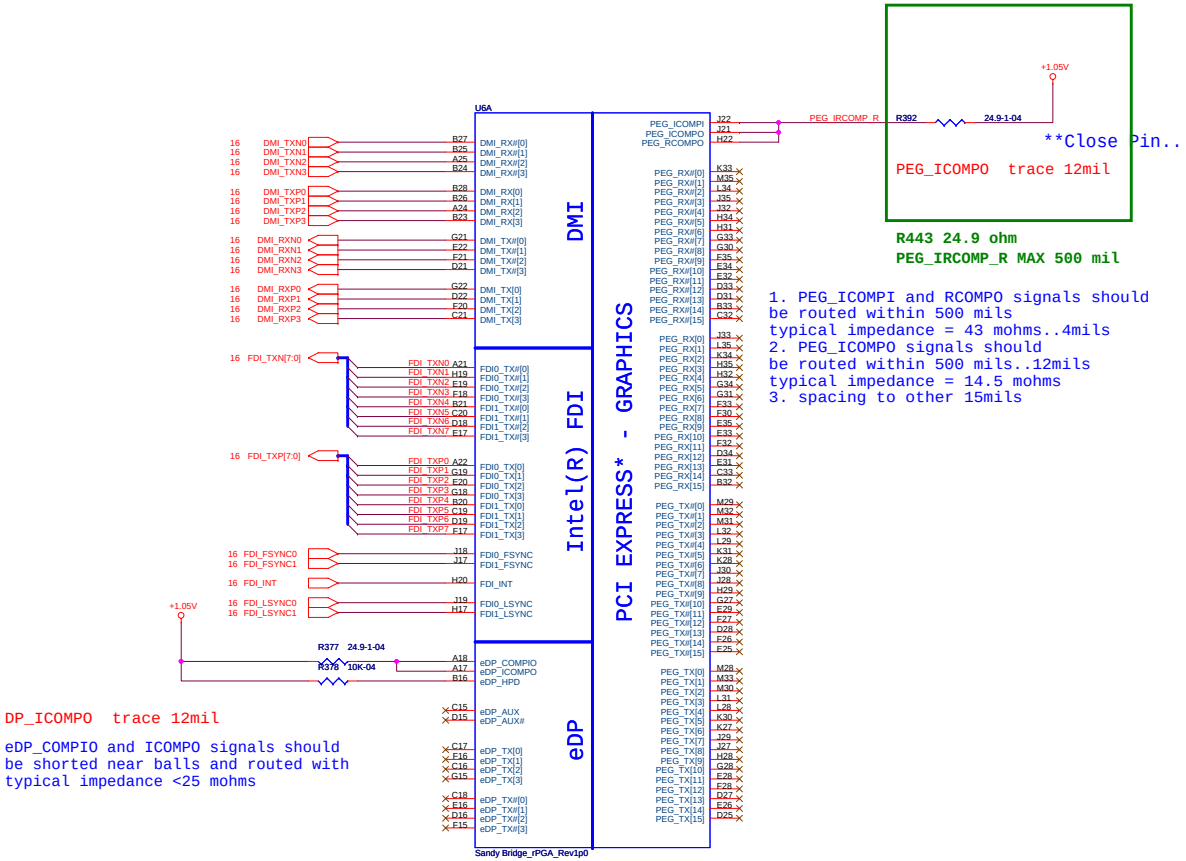
Title: **A14HV**

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

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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

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Title: A14HV		
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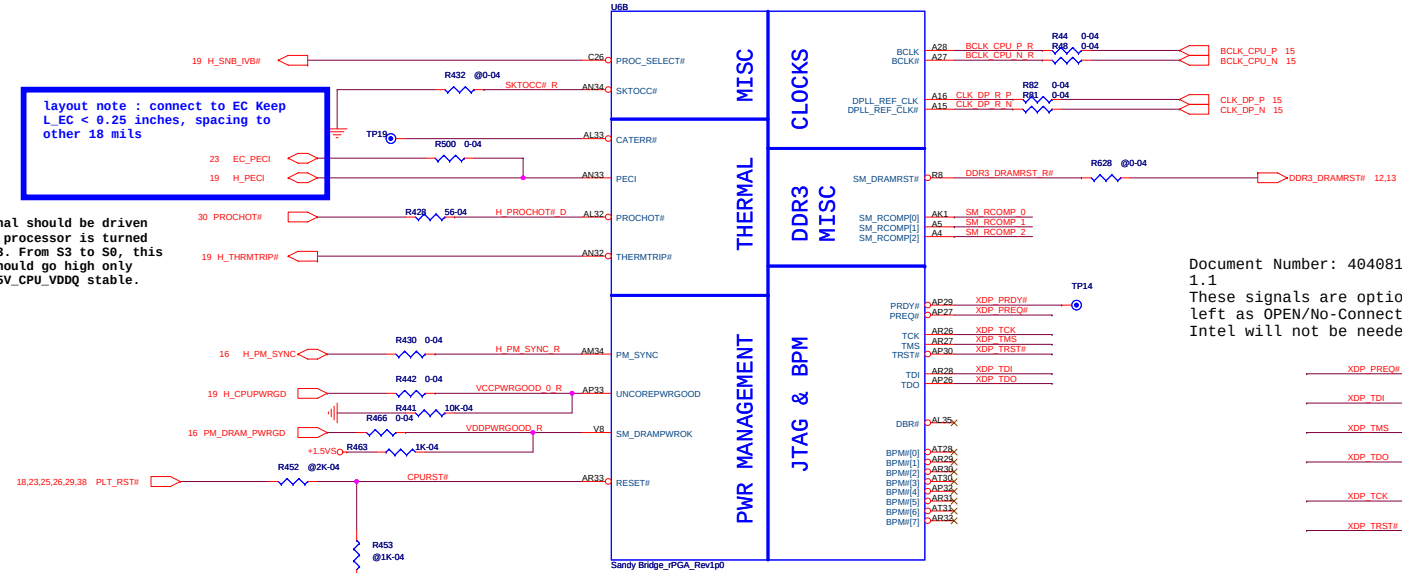
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SANDYBRIDGE PROCESSOR (CLK,MISC,JTAG)

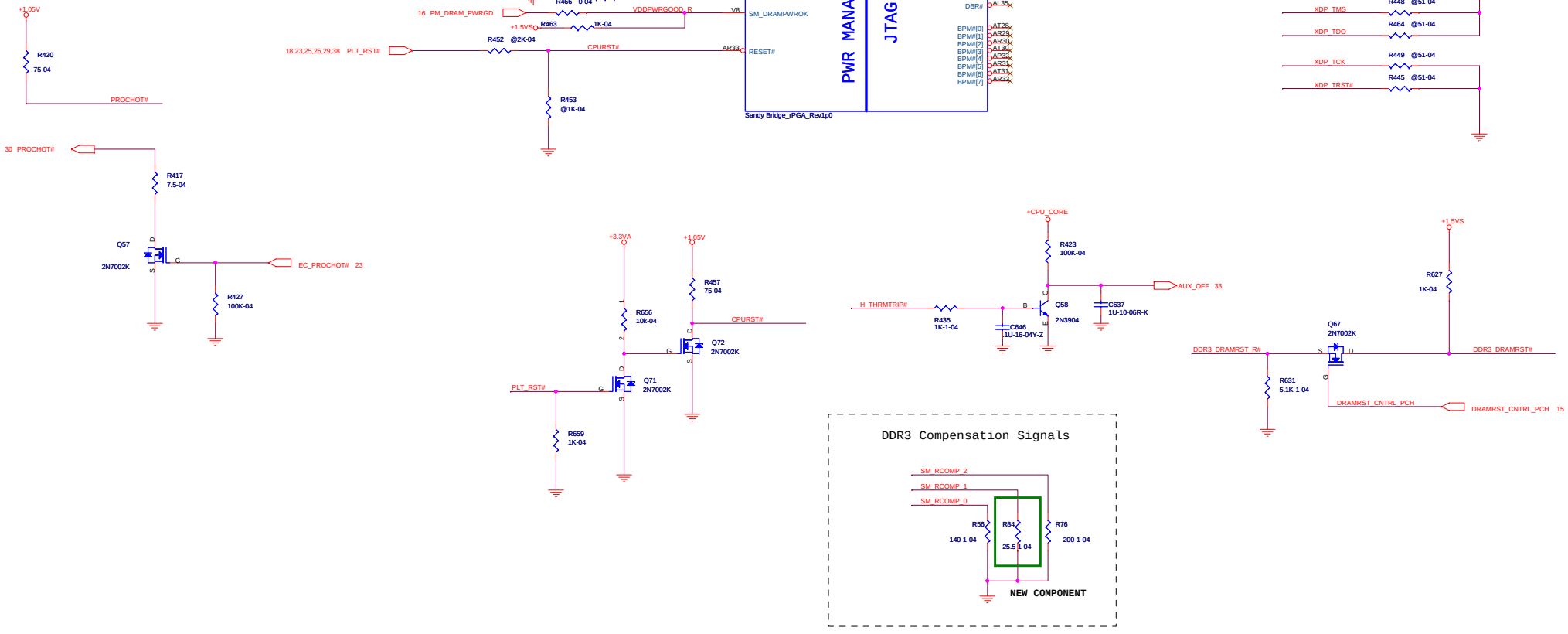
This pin is for compability with future platforms. A pull up resistor to VCPLL is required if connected to the DF_TVS strap on the PCH.

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.



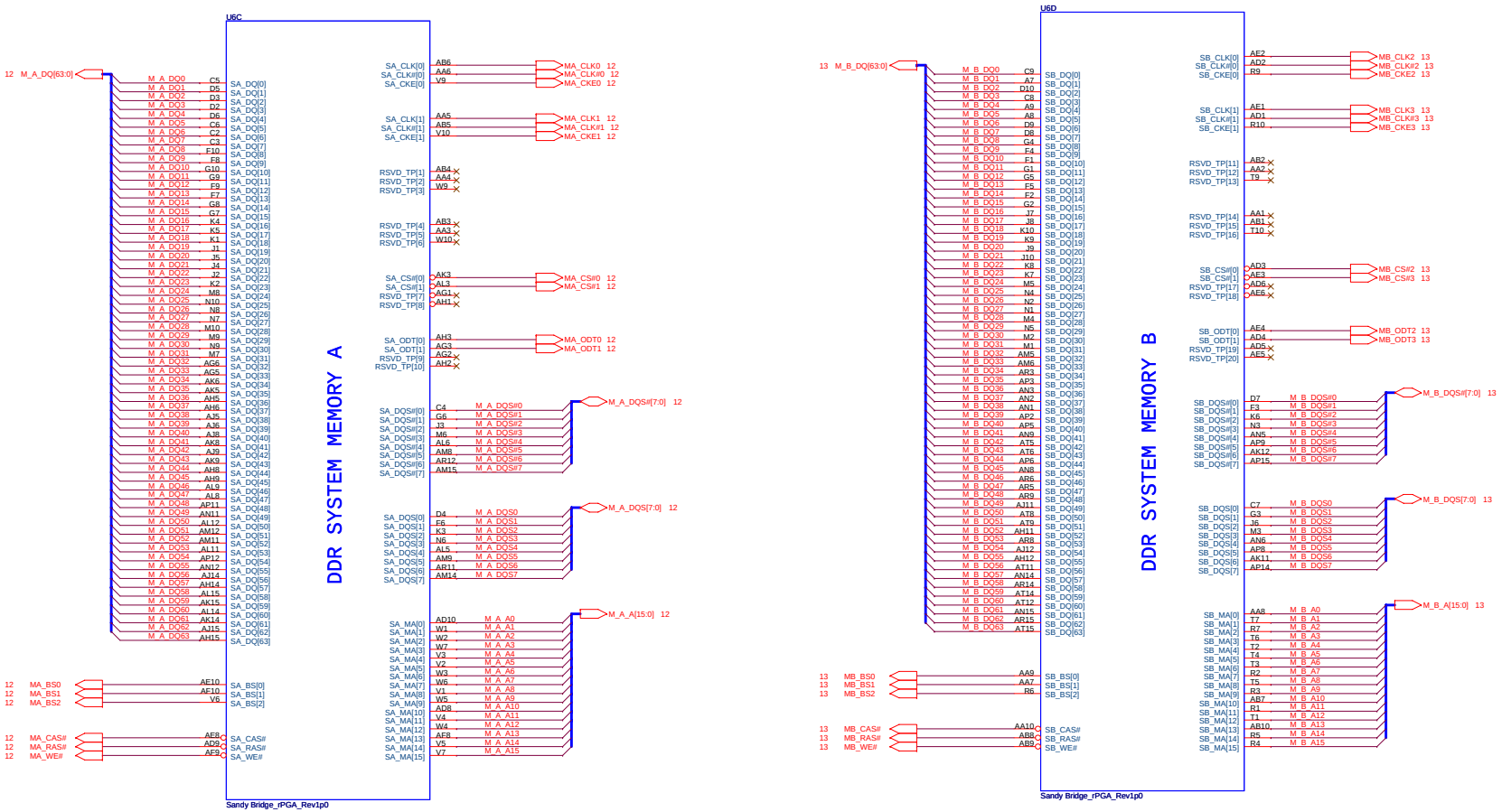
Document Number: 404081, Revision: 1.1
These signals are optional, can be left as OPEN/No-Connect if debug by Intel will not be needed



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SANDYBRIDGE PROCESSOR (DDR3)



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SANDYBRIDGE PROCESSOR (POWER)

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POWER

U6F

+CPU_CORE

PEG AND DDR

CORE SUPPLY

SVID

SENSE LINES

+1.05V

VCCIO1 AH13
VCCIO2 AH10
VCCIO3 AG10
VCCIO4 AC10
VCCIO5 Y10
VCCIO6 U10
VCCIO7 P10
VCCIO8 L10
VCCIO9 J14
VCCIO10 J13
VCCIO11 J12
VCCIO12 J11
VCCIO13 H14
VCCIO14 H12
VCCIO15 H11
VCCIO16 G14
VCCIO17 G13
VCCIO18 G12
VCCIO19 F14
VCCIO20 F13
VCCIO21 F12
VCCIO22 F11
VCCIO23 E14
VCCIO24 E12
VCCIO25 E11
VCCIO26 D14
VCCIO27 D13
VCCIO28 D12
VCCIO29 D11
VCCIO30 C14
VCCIO31 C13
VCCIO32 C12
VCCIO33 C11
VCCIO34 B14
VCCIO35 B12
VCCIO36 A14
VCCIO37 A13
VCCIO38 A12
VCCIO39 A11
VCCIO40 J23

+1.05V +1.05V +1.05V

R368 51-04
R367 130-1-04
R425 75-04
R424 44-04

VIDALERT# A129
VIDSCLK AJ30
VIDSOUT A128

H_VIDALERT# R
H_VIDALERT# 30
H_CPU_SVIDCLK 30
H_CPU_SVIDDAT 30

FOR IMVP 7 Controller

+CPU_CORE

R149 100-1-04
R148 100-1-04

VCC_SENSE AJ35
VSS_SENSE AJ34
VCORE_VCCSENSE 30
VCORE_VSSSENSE 30

VCCIO_SENSE B10
VSSIO_SENSE A10

Sandy Bridge_rPGA_Rev1p0

VCC1 AG35
VCC2 AG34
VCC3 AG33
VCC4 AG32
VCC5 AG31
VCC6 AG30
VCC7 AG29
VCC8 AG28
VCC9 AG27
VCC10 AG26
VCC11 AF35
VCC12 AF34
VCC13 AF33
VCC14 AF32
VCC15 AF31
VCC16 AF30
VCC17 AF29
VCC18 AF28
VCC19 AF27
VCC20 AF26
VCC21 AD35
VCC22 AD34
VCC23 AD33
VCC24 AD32
VCC25 AD31
VCC26 AD30
VCC27 AD29
VCC28 AD28
VCC29 AD27
VCC30 AD26
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VCC67 V29
VCC68 V28
VCC69 V27
VCC70 V26
VCC71 U35
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VCC74 U32
VCC75 U31
VCC76 U30
VCC77 U29
VCC78 U28
VCC79 U27
VCC80 U26
VCC81 R35
VCC82 R34
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VCC84 R32
VCC85 R31
VCC86 R30
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VCC89 R27
VCC90 R26
VCC91 P35
VCC92 P34
VCC93 P33
VCC94 P32
VCC95 P31
VCC96 P30
VCC97 P29
VCC98 P28
VCC99 P27
VCC100 P26

+CPU_Core Decoupling

+CPU_CORE

C191 C190 C193 C579 C192 C545 — 22U-6.3-08R-K

C562 C618 C194 C527 C594 C609 — 22U-6.3-08R-K

C619 C597 C595 C554 C564 C533 C541 C621 — 1U-10-06R-K

C576 C555 C509 C575 C582 C601 C532 C617 — 1U-10-06R-K

C590 C528 C591 C551 C611 C592 C531 C614 C549 C612 — 1000P-50-04X-K

C530 C593 C574 C529 C572 C550 C613 C552 C573 C571 — .1U-16-04Y-Z

+1.05V

C482 C171 C172 C467 C451 C449 C473 C536 C459 C516 C443

.1U-16-04Y-Z 4.7U-10-08Y-Z 4.7U-10-08Y-Z .1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z 22U-6.3-08R-K .1U-16-04Y-Z 22U-6.3-08R-K 22U-6.3-08R-K

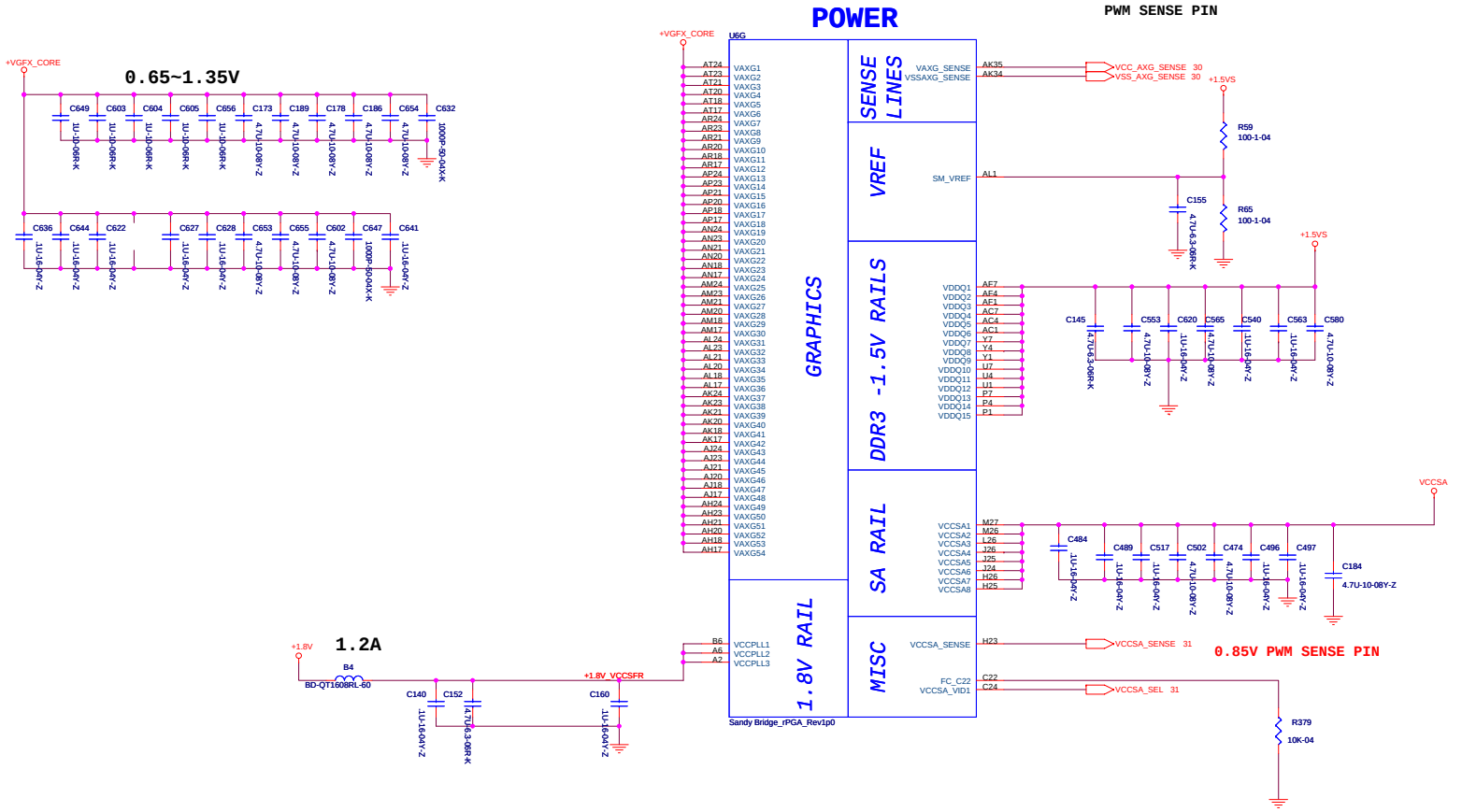
C495 C493 C492 C494 C525 C569 C599 C167 C610 C168 C169 C170 C508 C479

.1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z .1U-16-04Y-Z 4.7U-10-08Y-Z 4.7U-10-08Y-Z 4.7U-10-08Y-Z 4.7U-10-08Y-Z 4.7U-10-08Y-Z 22U-6.3-08R-K 22U-6.3-08R-K .1U-16-04Y-Z

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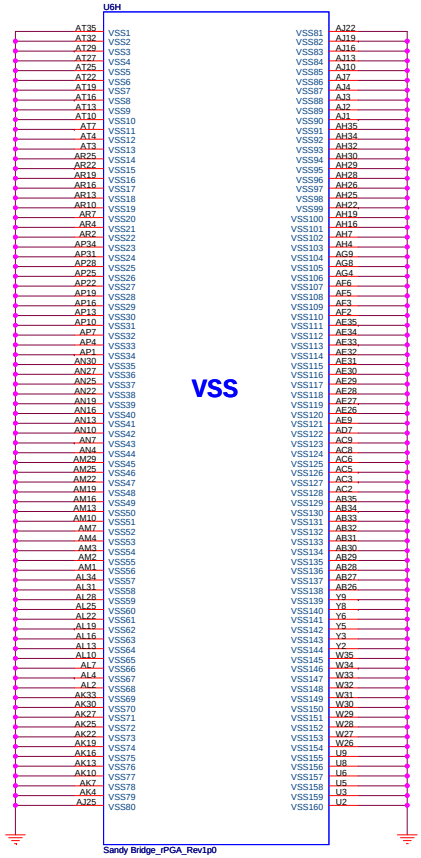
SANDYBRIDGE PROCESSOR (POWER)

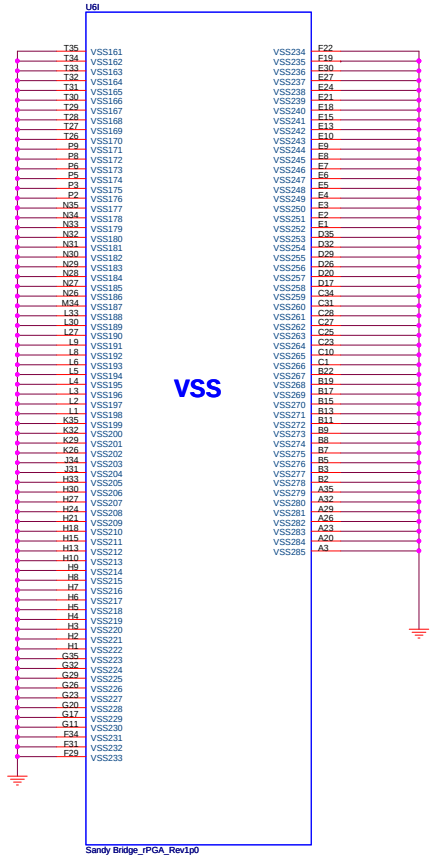


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SANDYBRIDGE PROCESSOR (VSS)

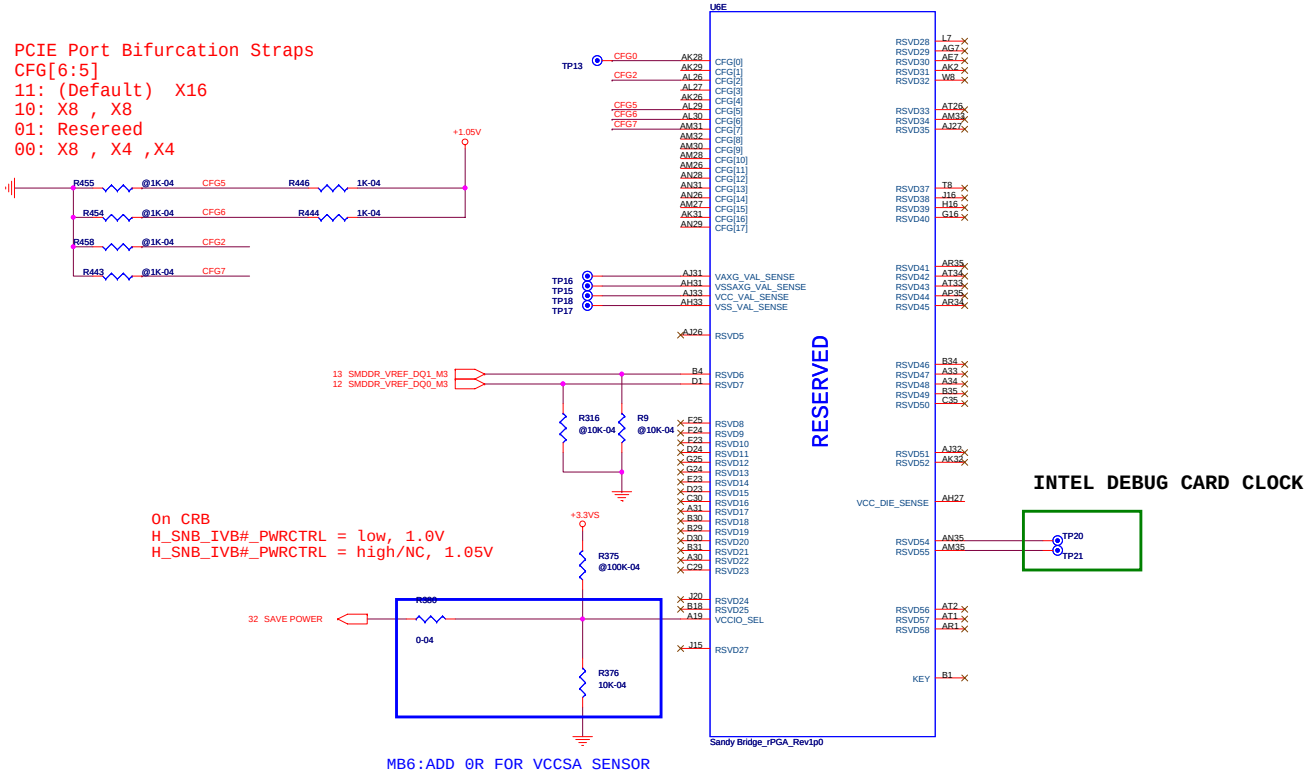




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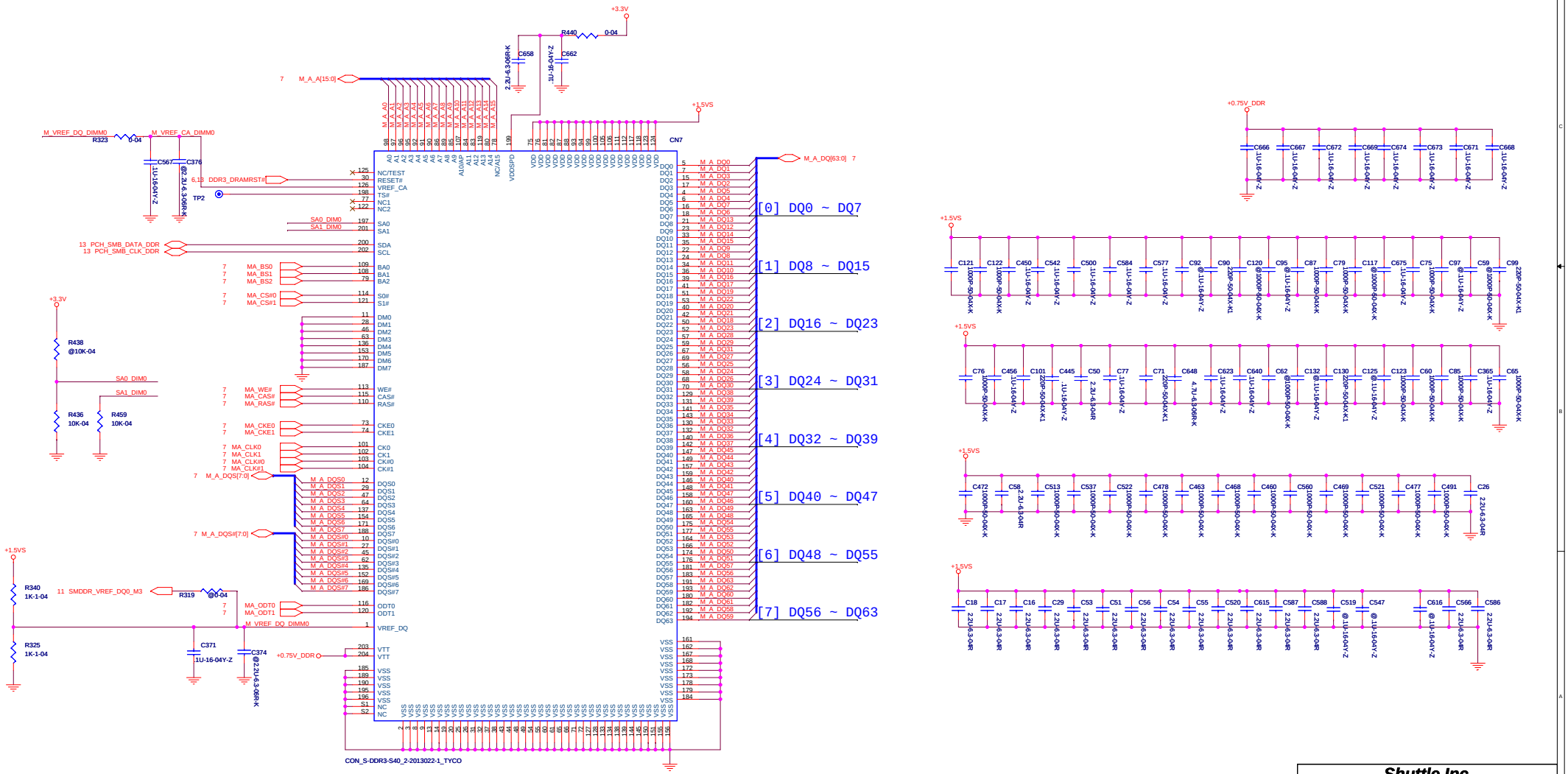
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SANDYBRIDGE PROCESSOR (RESERVED)



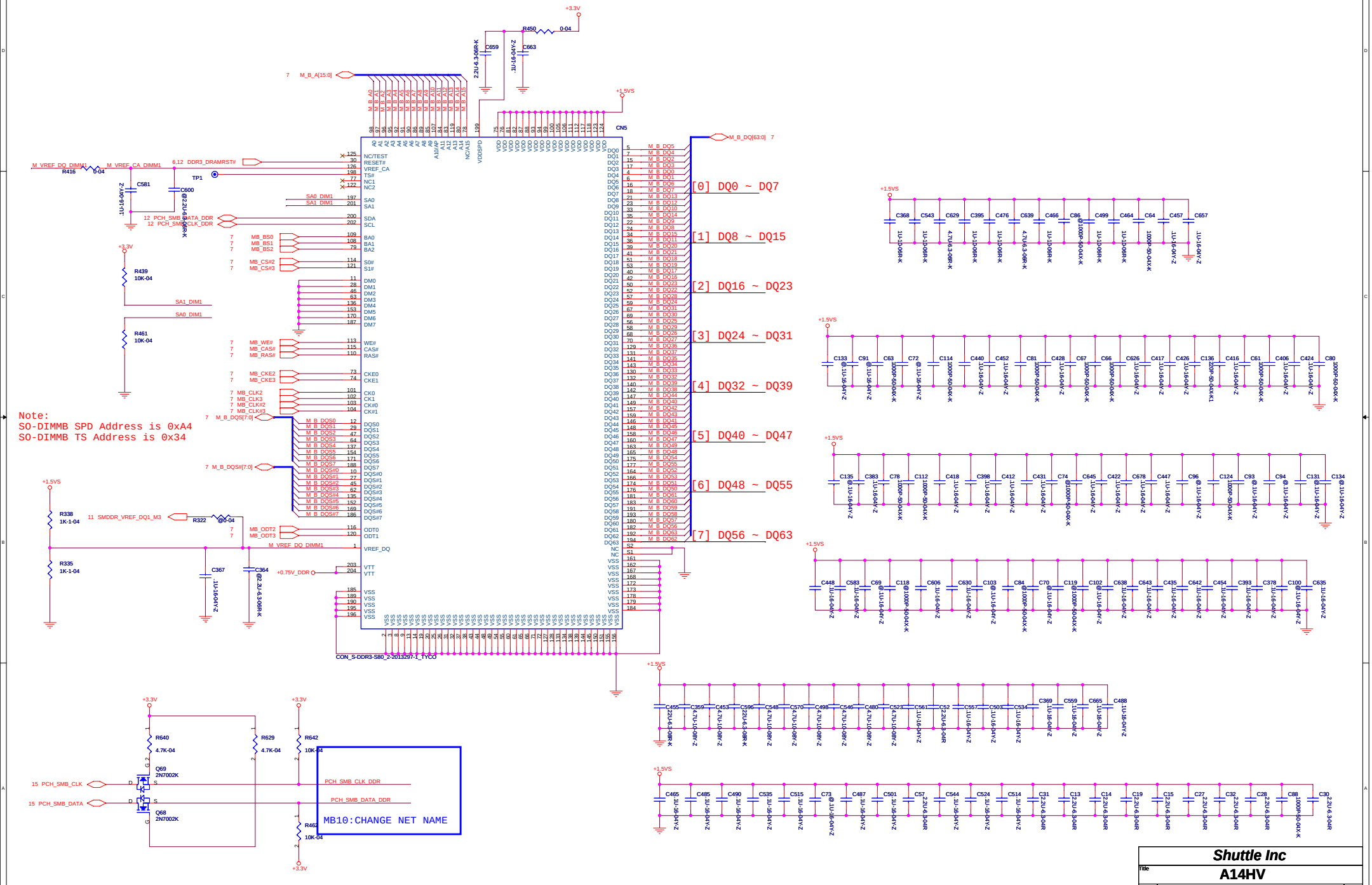
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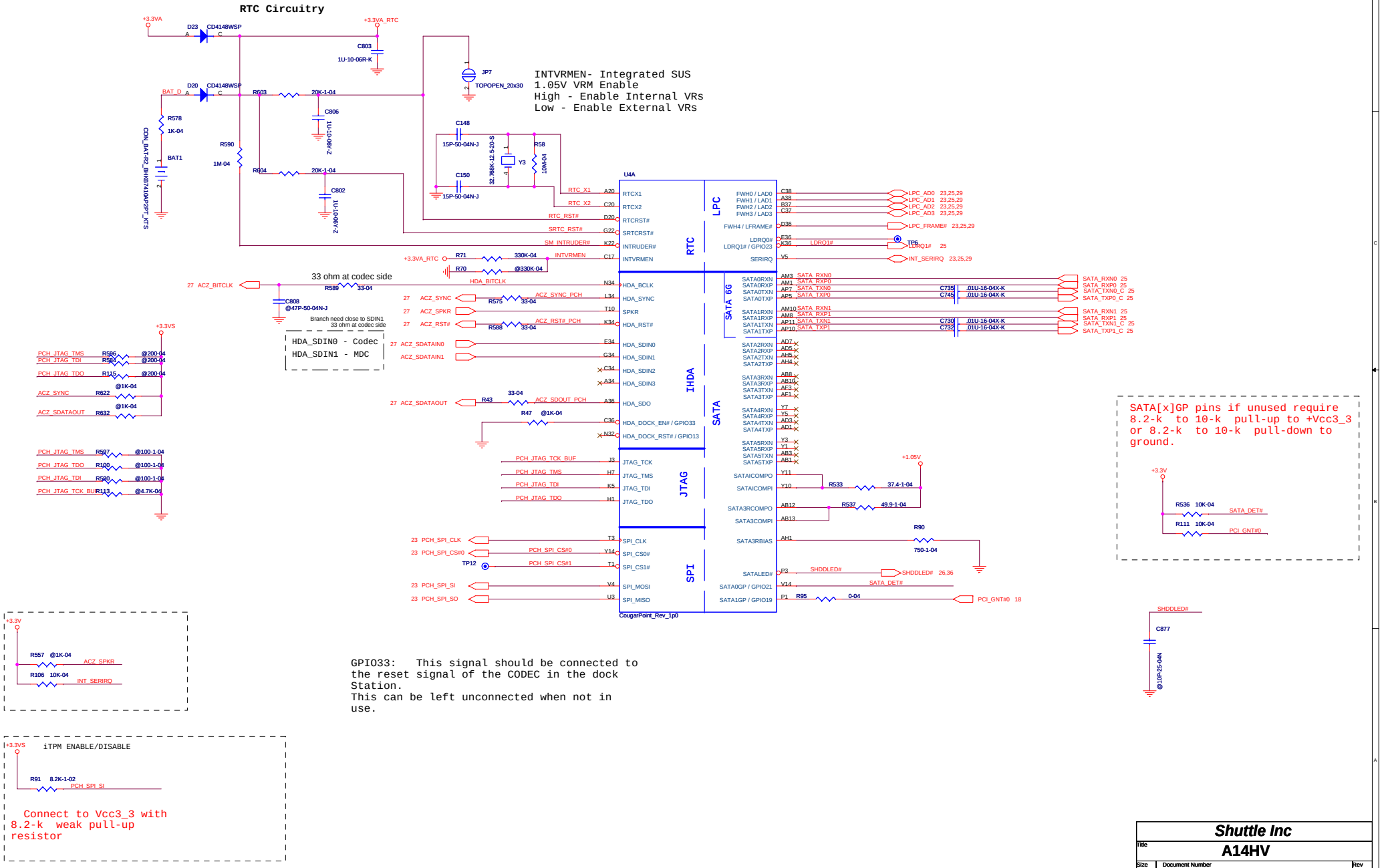
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Cougar Point Chipset (RTC,LPC,SATA,HDA,SPI,JTAG)



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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

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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

+3.3V — 8.2K-04 R574 PM_CLKRUN# — 10K-04 R119 PM_SYSRST#

change to 3.3V

+3.3VS — 10K-04 R86 PM_RI# — 10K-04 R77 SUS_PWR_ACK_R — 10K-04 R602 ACPRESENT — R600 8.2K-04 PM_BATLOW# — R88 10K-04 PCIE_WAKE# — R619 @10K-04 SLP_LAN# — R610 @10K-04 PM_SUS_STAT# — R431 10K-04 PM_RSMRST# — R530 10K-04 ALL_SYS_PGD

+1.5VS — R75 @1.05K-1-04 — PM_DRAM_PWRGD

+3.3VA_RTC — DSWVRMEN — R68 330K-04 — R67 @330K-04

U4C

DMI: DMI0RXN C24, DMI1RXN BE20, DMI2RXN BG18, DMI3RXN BG20; DMI0RXP BE24, DMI1RXP BC20, DMI2RXP BJ18, DMI3RXP BJ20; DMI0TXN AW24, DMI1TXN AW20, DMI2TXN BB18, DMI3TXN AV18; DMI0TXP AY24, DMI1TXP AY20, DMI2TXP AY18, DMI3TXP AU18; DMI_ZCOMP BJ24, DMI_IRCOMP BG25, DMI2RBIAS BH21 (+1.05V — R495 49.9-1-04 — R54 750-1-04)

FDI: FDI_RXN0 BJ14, FDI_RXN1 AY14, FDI_RXN2 BE14, FDI_RXN3 BH13, FDI_RXN4 BC12, FDI_RXN5 BJ12, FDI_RXN6 BC10, FDI_RXN7 BG9; FDI_RXP0 BG14, FDI_RXP1 BB14, FDI_RXP2 BE14, FDI_RXP3 BG13, FDI_RXP4 BE12, FDI_RXP5 BG12, FDI_RXP6 BJ10, FDI_RXP7 BH9; FDI_INT AW16, FDI_FSYNC0 AV12, FDI_FSYNC1 BC10, FDI_LSYNC0 AV14, FDI_LSYNC1 BB10

System Power Management

SUS_PWR_ACK_R — R83 @0-04 — SUSACK# C12; PM_SYSRST# — SYS_RESET# K3; SYS_PWROK P12 (R526 0-04 PM_PCH_PWROK); PWROK L22 (23 ALL_SYS_PGD); APWROK L10 (31 VCCSA_PGD; R686 @0-04, R592 0-04 MPWROK_R); DRAMPWROK B13 (6 PM_DRAM_PWRGD; C796 .1U-16-04Y-Z); RSMRST# C21 (23 PM_RSMRST#; R594 0-04 PM_RSMRST#_R); SUSWARN#/SUSPWRDNACK/GPIO30 K16 (SUS_PWR_ACK_R); PWRBTN# E20 (23 PWRBTN#); ACPRESENT / GPIO31 H20 (23 ACPRESENT; R665 0-04); BATLOW# / GPIO72 E10 (PM_BATLOW#); RI# A10 (PM_RI#)

DSWVRMEN A18 — R591 0-04 PM_RSMRST#_R; DPWROK E22 (PCH_DPWROK); WAKE# B9 (PCIE_WAKE# 26,29,38); CLKRUN# / GPIO32 N3 (R566 0-04 PM_CLKRUN# 23); SUS_STAT# / GPIO61 G8 (PM_SUS_STAT# 23); SUSCLK / GPIO62 N14 (SUSCLK — TP9); SLP_S5# / GPIO63 D10 (SLP_S5#_R — TP11); SLP_S4# H4 (SLP_S4#_R — R595 0-04 PM_SLP_S4# 23); SLP_S3# F4 (SLP_S3#_R — R601 0-04 PM_SLP_S3# 23); SLP_A# G10 (SLP_A# — TP10); SLP_SUS# G16 (SLP_SUS# — TP8); PMSYNCH AP14 (H_PM_SYNC 6); SLP_LAN# / GPIO29 K14 (SLP_LAN#)

CougarPoint_Rev_1p0

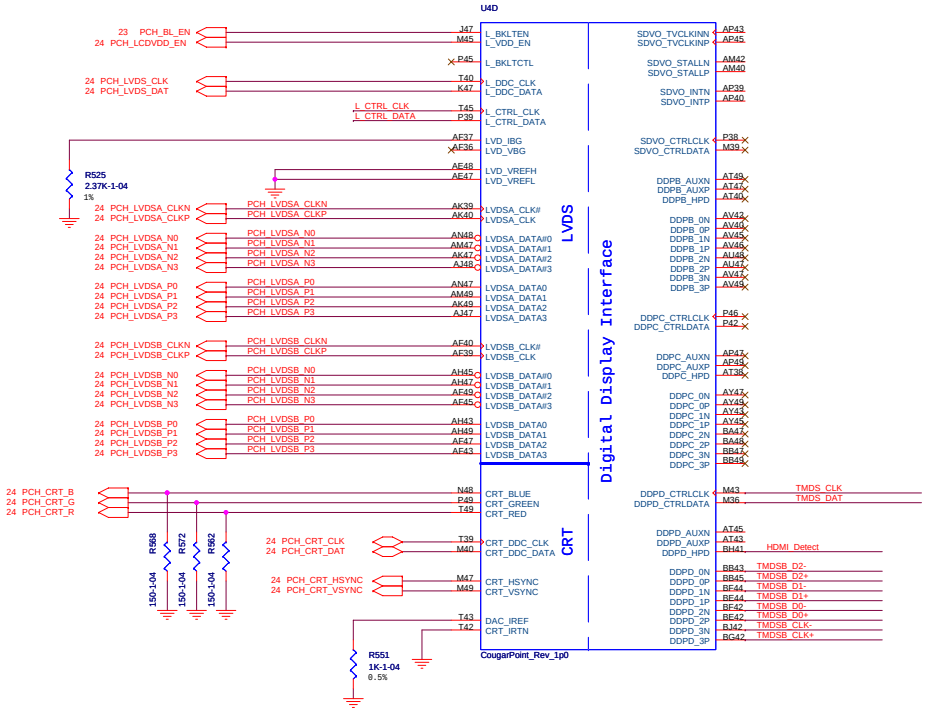
+3.3VA — R69 @0-04; +3.3VS — R72 @0-04; R653 @10K-04, R655 @10K-04 — PCH_DPWROK; Q70 @2N7002K; Q6 @2N3904; R64 @100K-04; R654 @100K-04

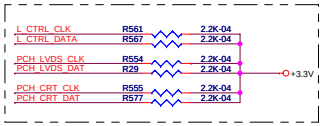
Power OK Indication for the VccDSW3_3 voltage rail. This input is tied together with RSMRST# on platforms that do not support Deep S4/S5

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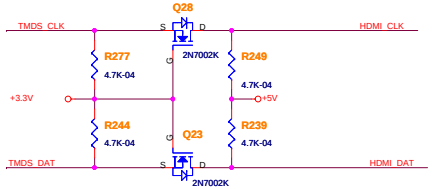
Cougar Point Chipset (LVDS,CRT,Digital Display)



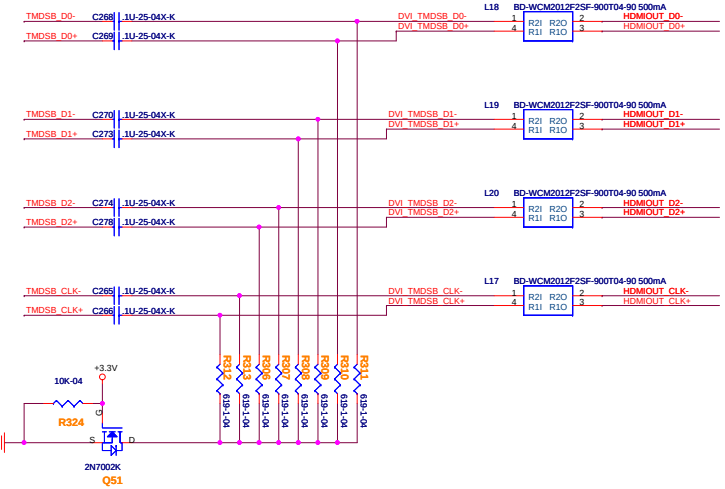


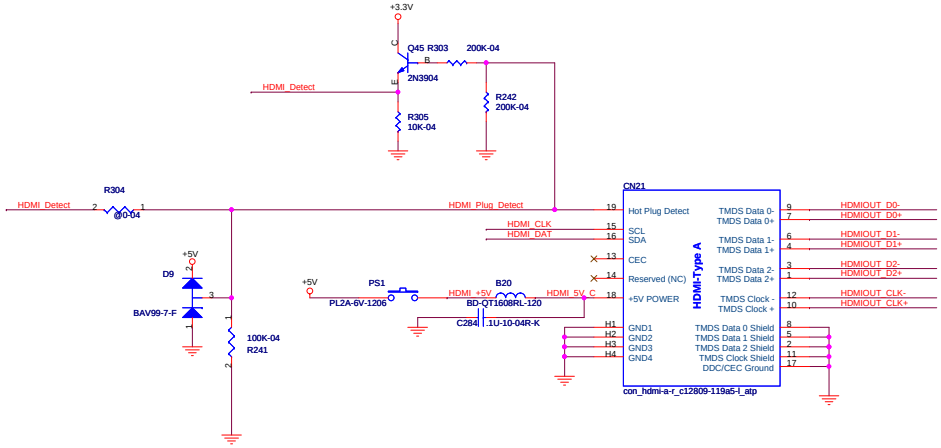
Configuration Wise Pin Mapping for DDI Ports (Sheet 1 of 2)

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





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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# — PLT_RST#_R

R657 @100K-04

U5 @74AHC1G08

U4E

RSVD

PCI

USB

CougarPoint_Rev_1p0

INT_PIRQA# INT_PIRQB# INT_PIRQC# INT_PIRQD#

REQ1# REQ2# REQ3#

PCI_GNT#1

INT_PIRQE# INT_PIRQF# INT_PIRQG# INT_PIRQH#

PCI_PME#

PLT_RST# R

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

USB_PN0_R R166 0-04 — USB_PN0 36,38
USB_PP0_R R167 0-04 — 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

R46 22.6-1-04

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

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)

+3.3VS

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

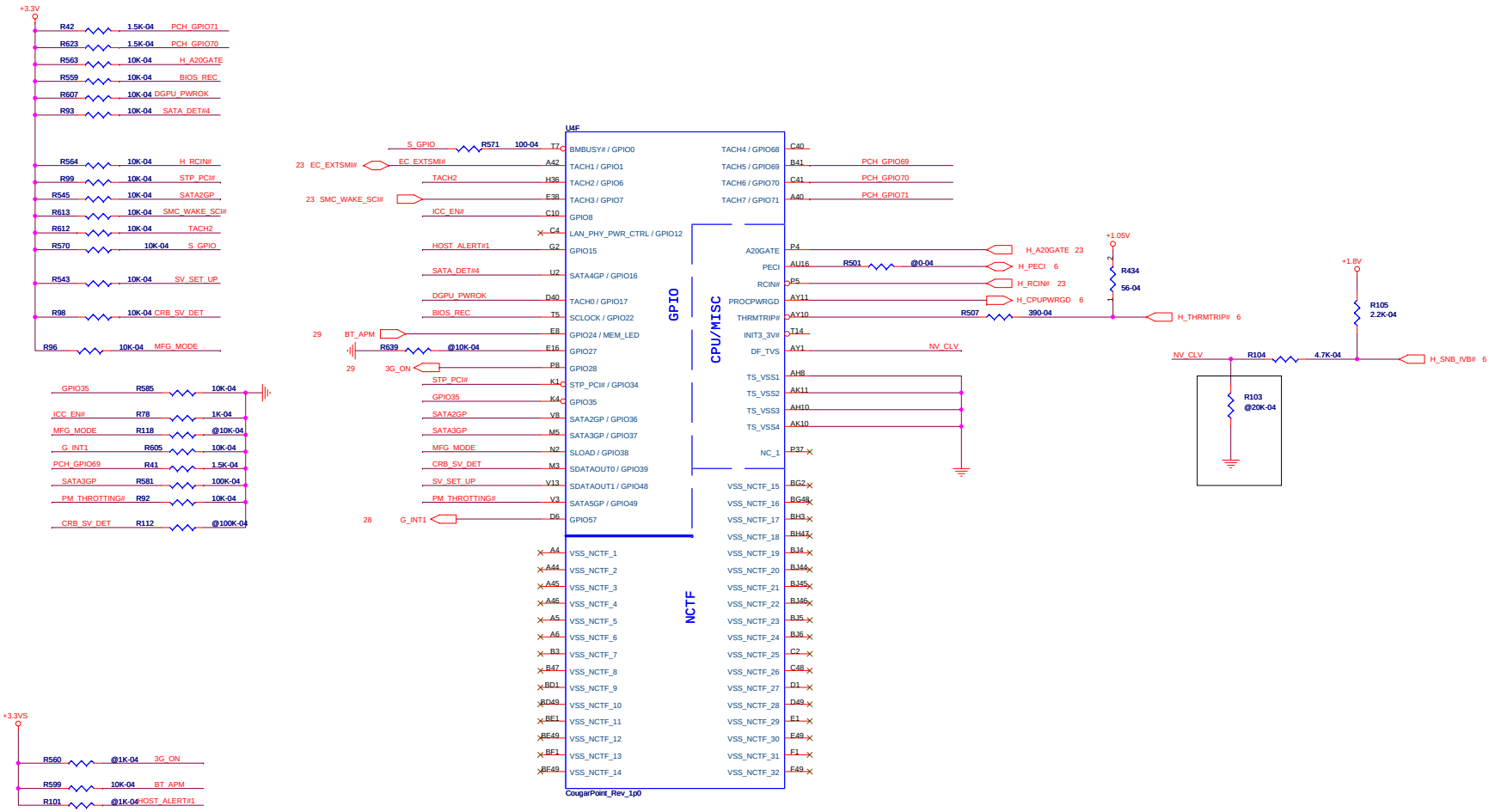
R624 @10K-04

USB_OC#_0_1 — R685 10K-04

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

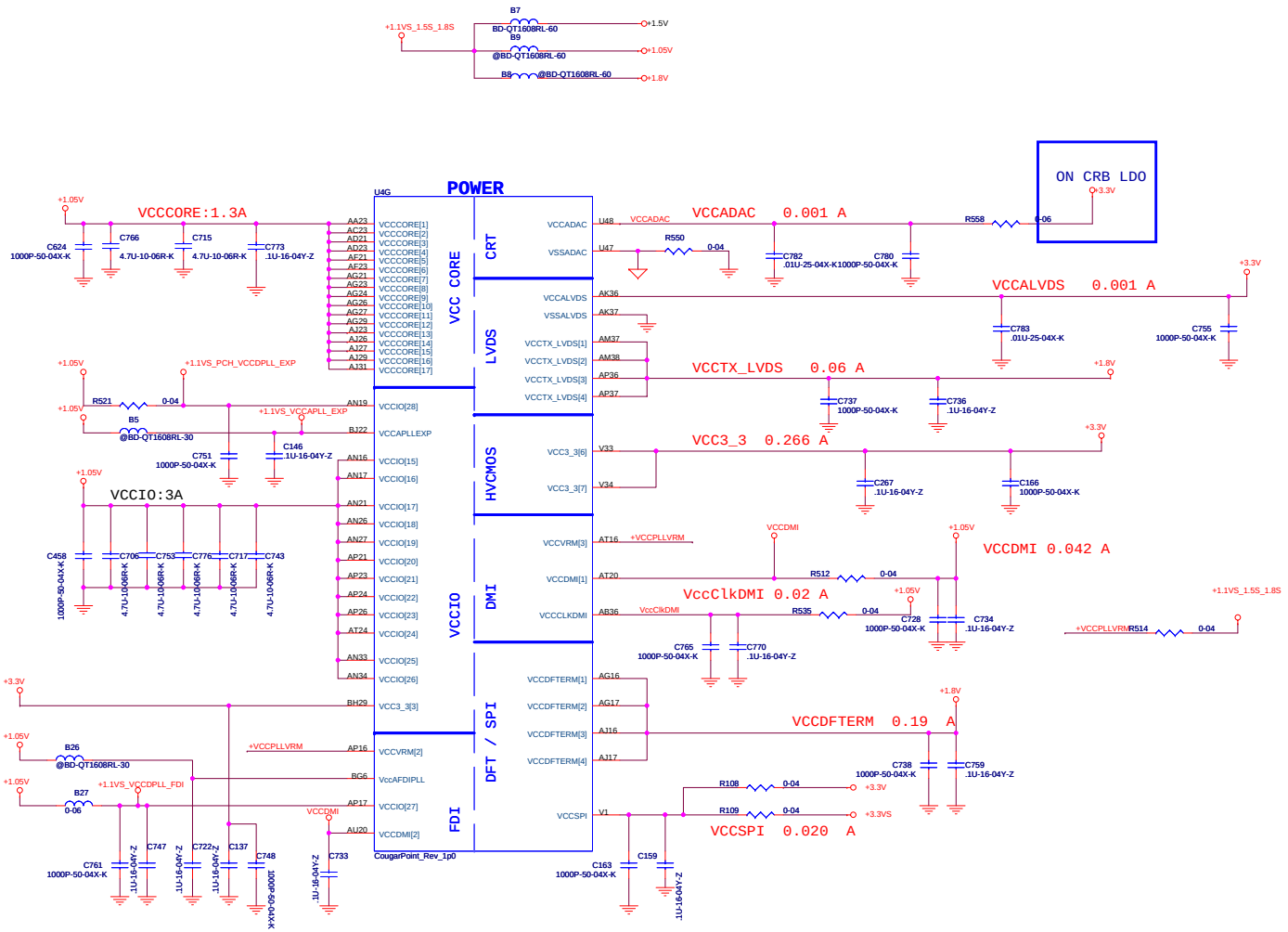
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Title: A14HV		
Size: Custom	Document Number: PCH_PCI/USB (5 of 9)	Rev: A
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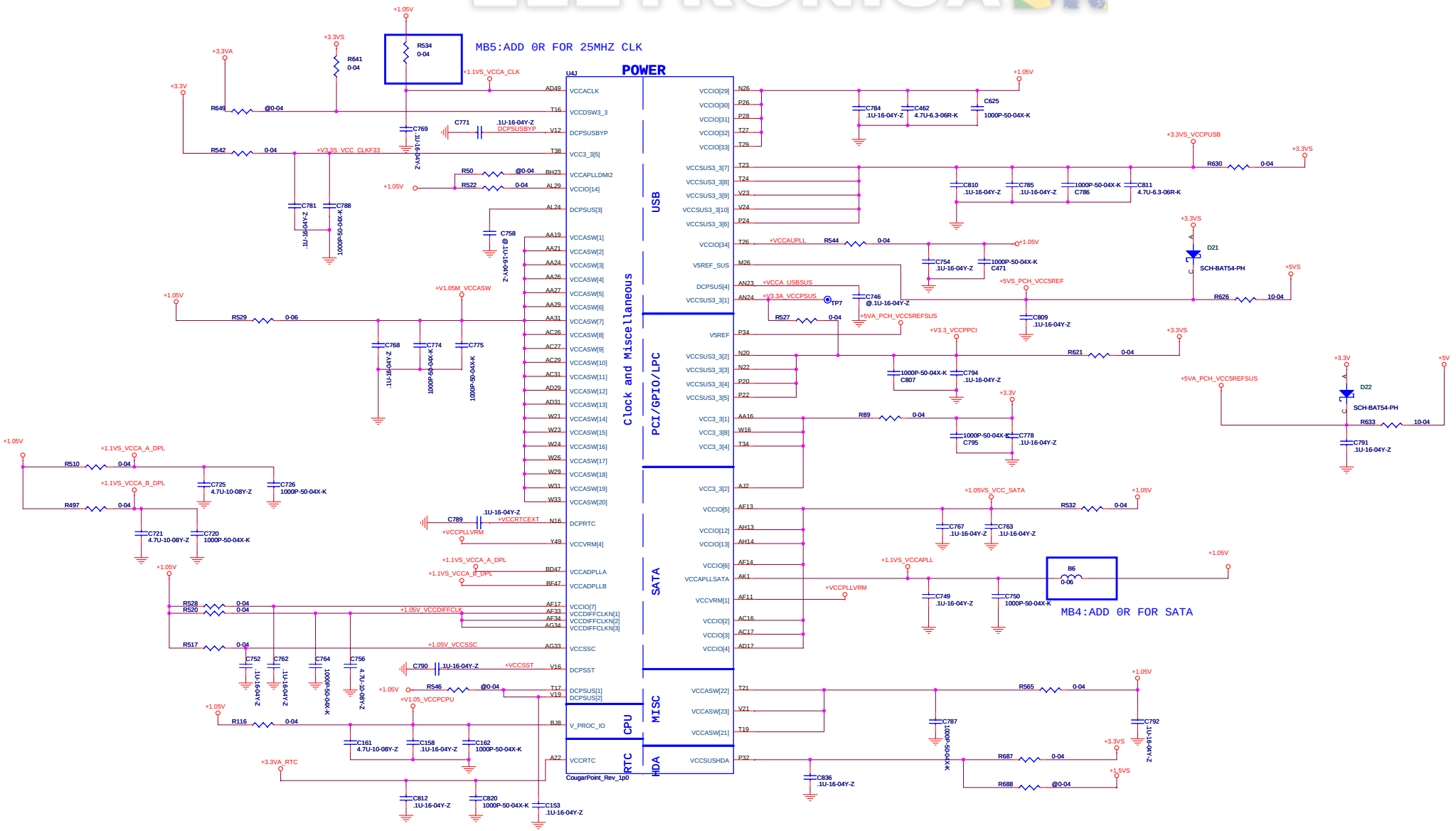
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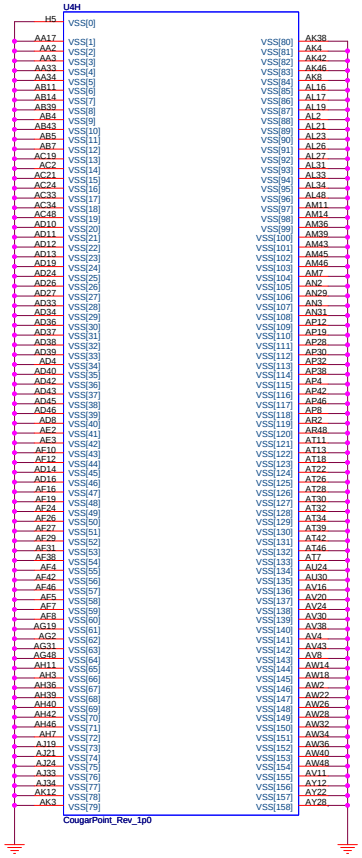
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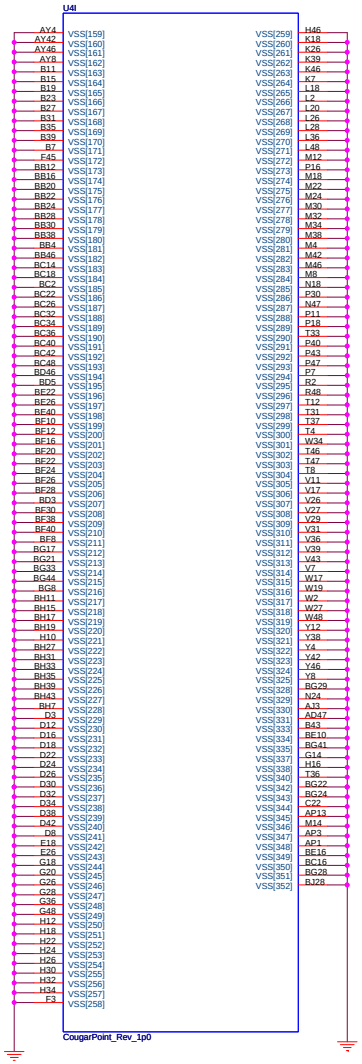
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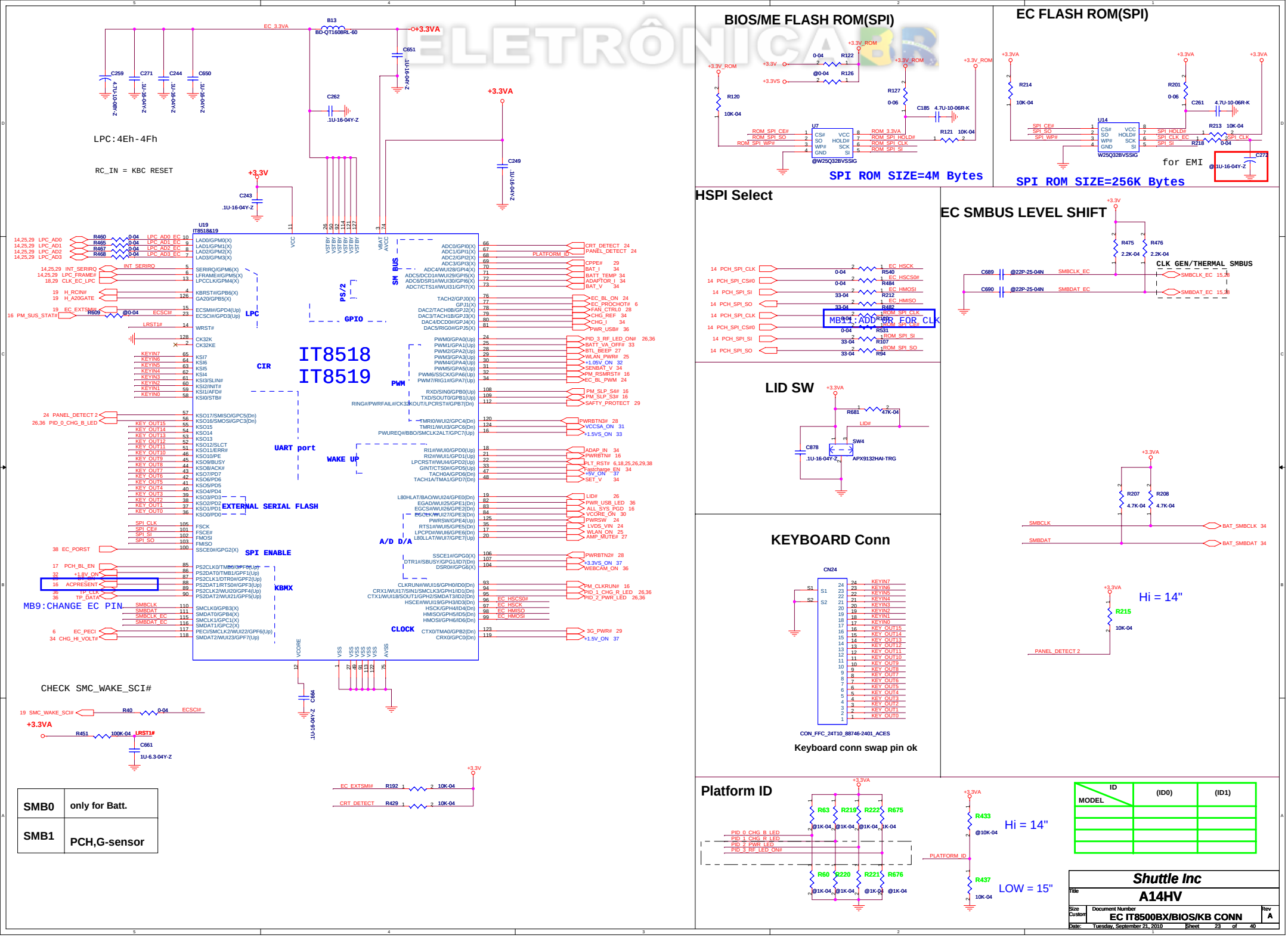
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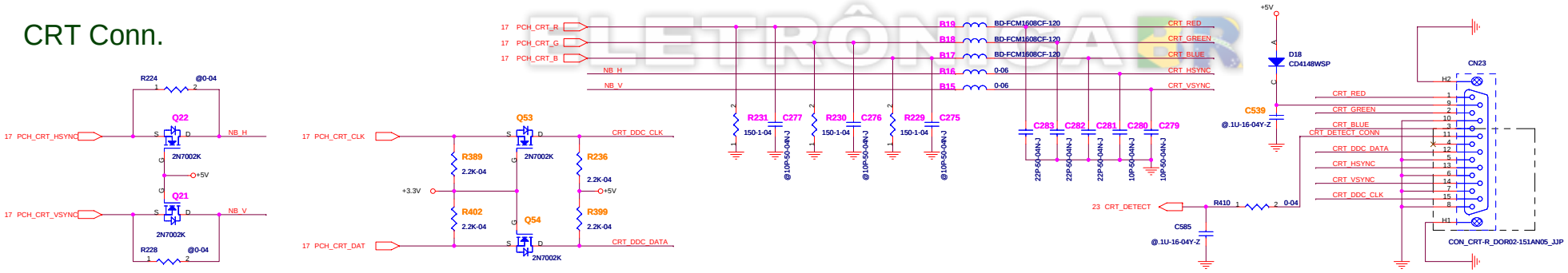


SMB0	only for Batt.
SMB1	PCH,G-sensor

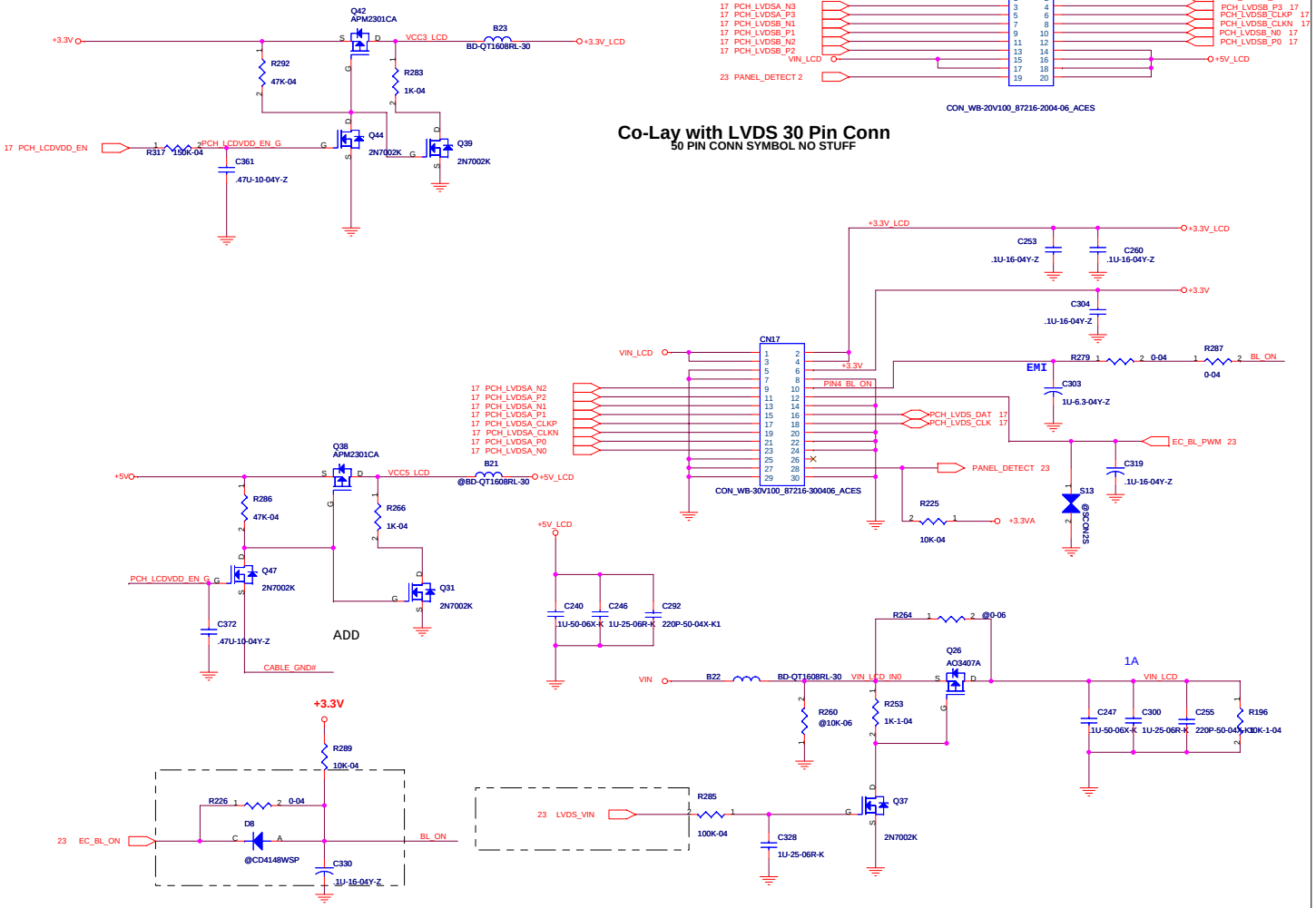
ID / MODEL	(ID0)	(ID1)

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Size: Custom	Document Number: EC IT8500BX/BIOS/KB CONN
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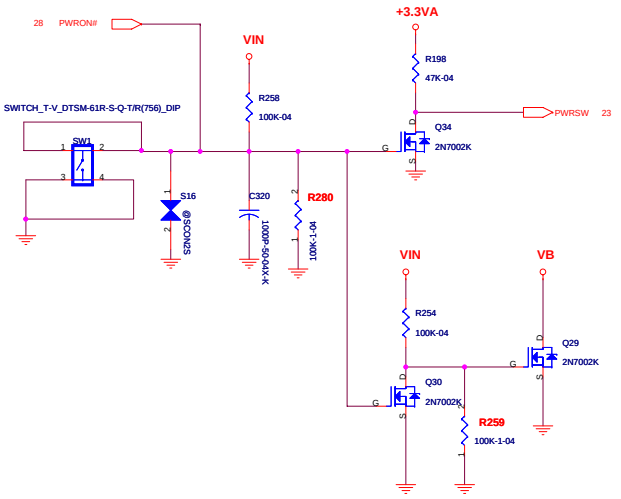
CRT Conn.

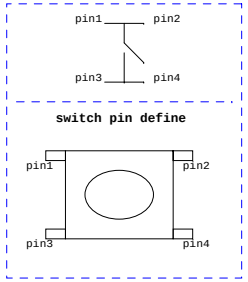


LVDS Conn.



PWR SW

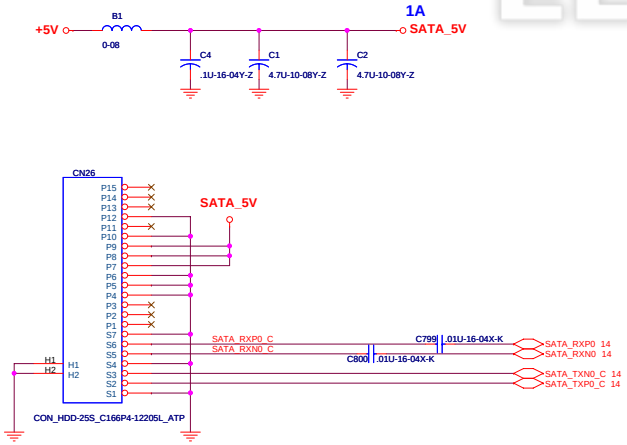




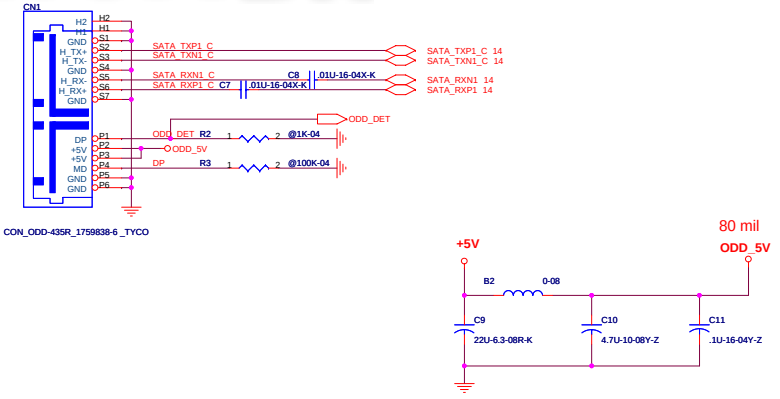
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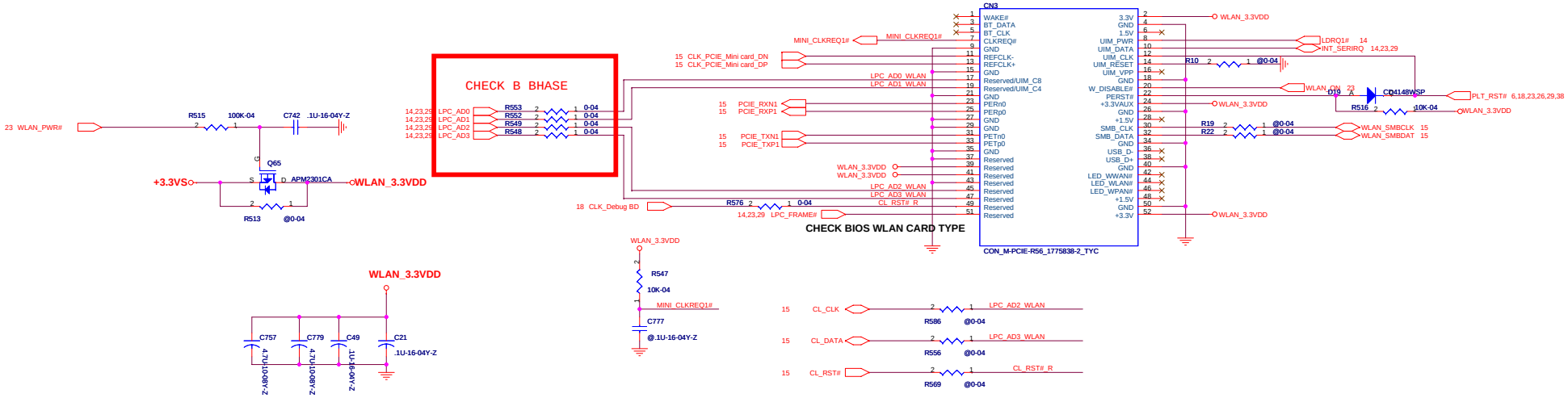
SATA-HDD



CD-ROM

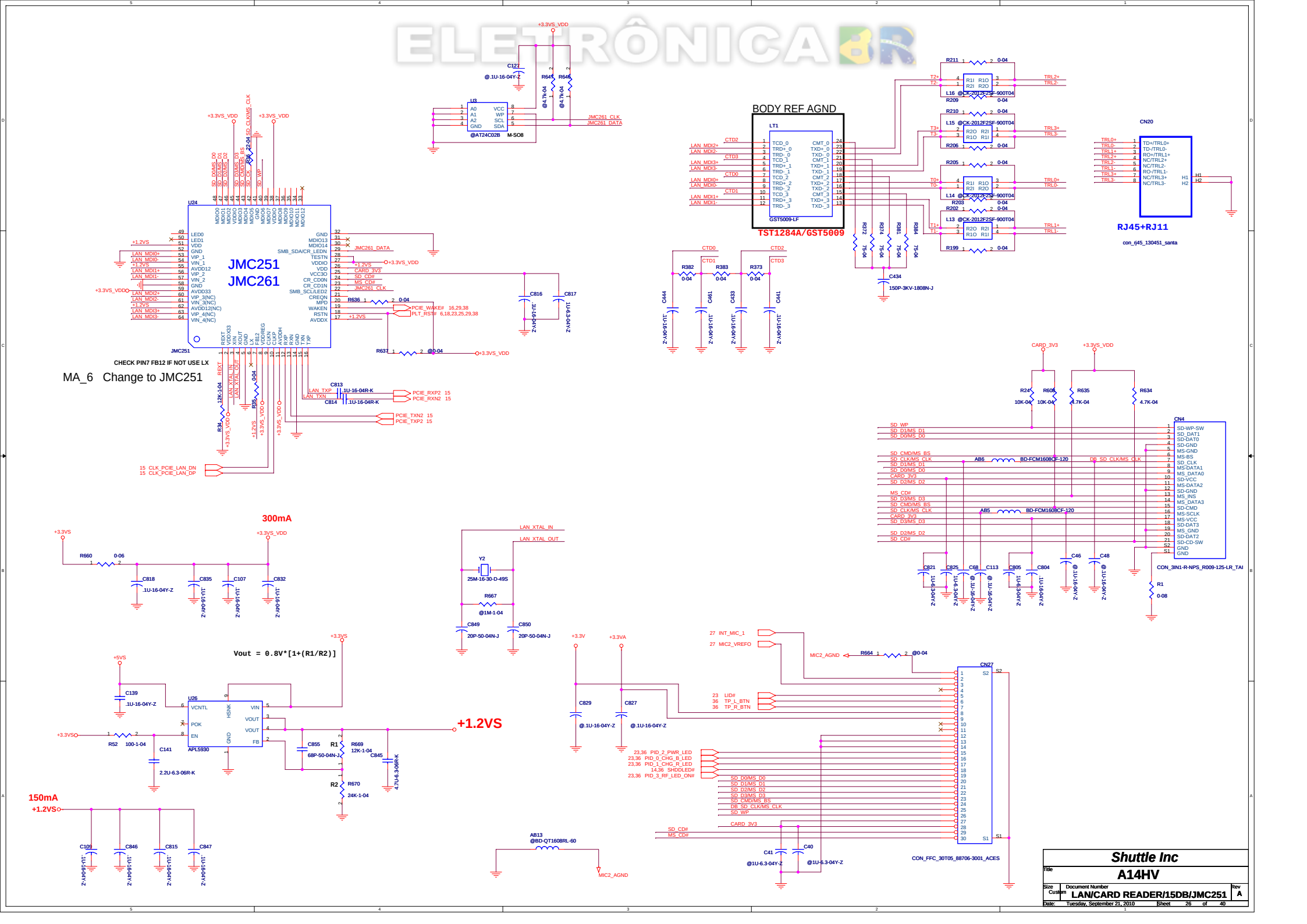


MINI CARD CONN



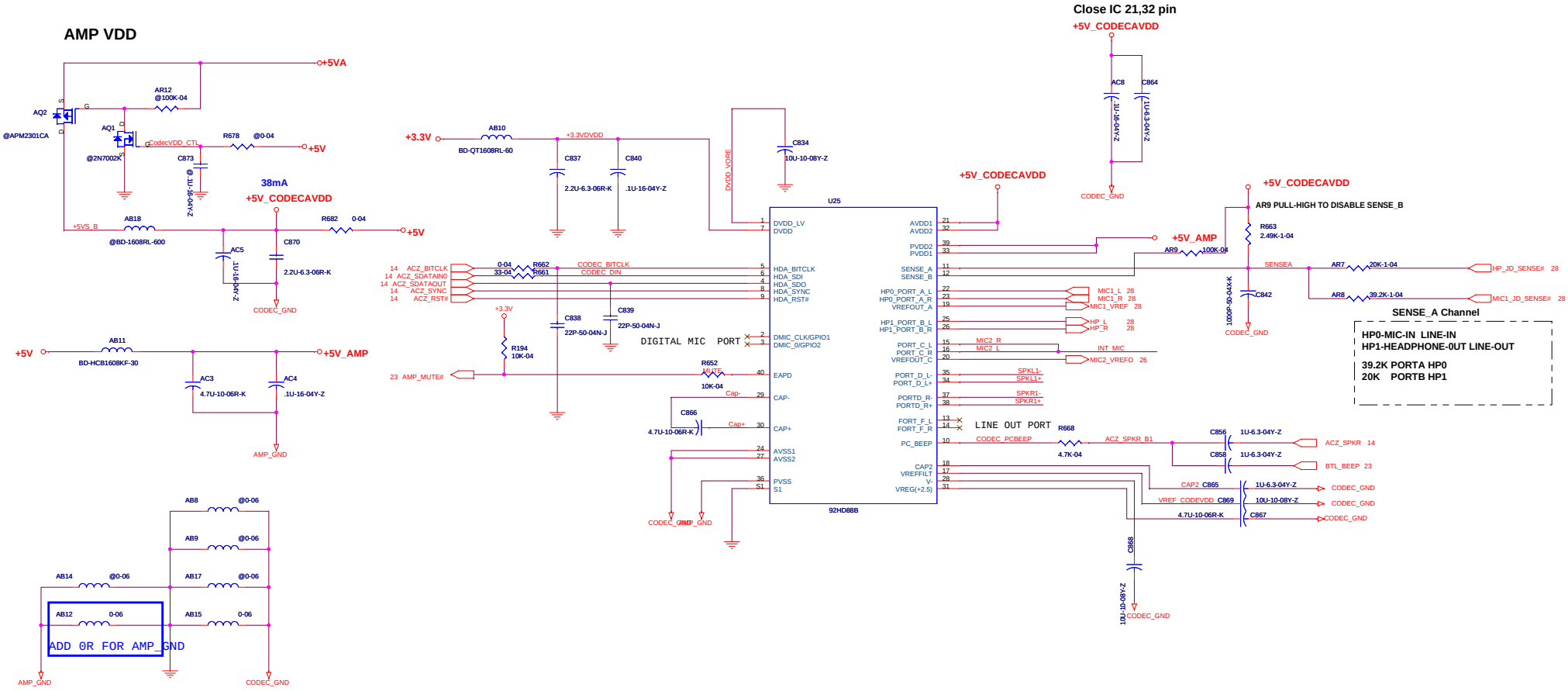
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Size: Custom	Document Number: HDD/ODD /MINI CARD — Rev: A
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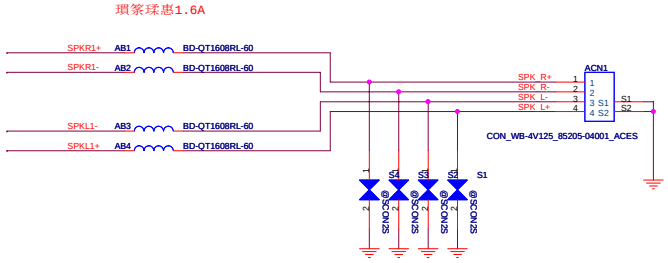


CODEC 92HD81

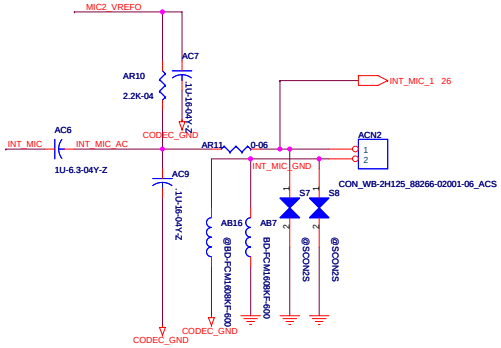
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INT_SPEAKER

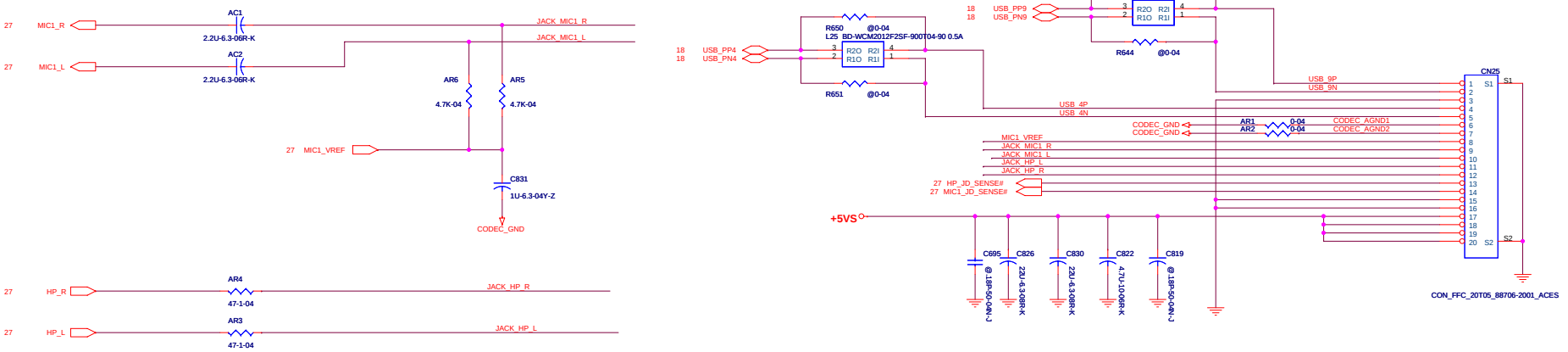


INT_MIC

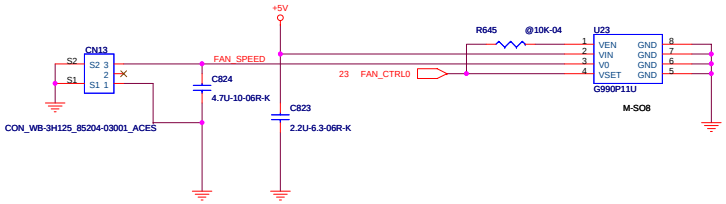


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Size: Custom	Document Number: **CODEC(ALC269)/INT MIC/SPKR**	Rev: A
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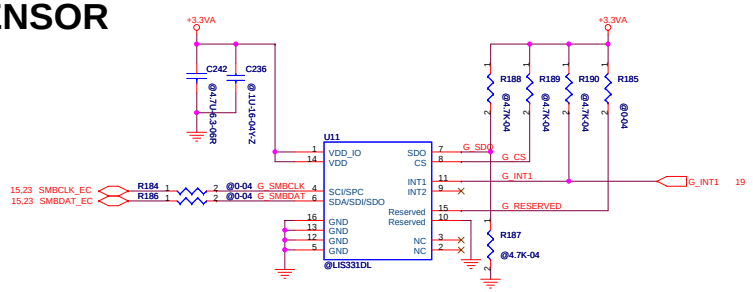
EXT MIC/EXT Line In/ EXT USB JACK



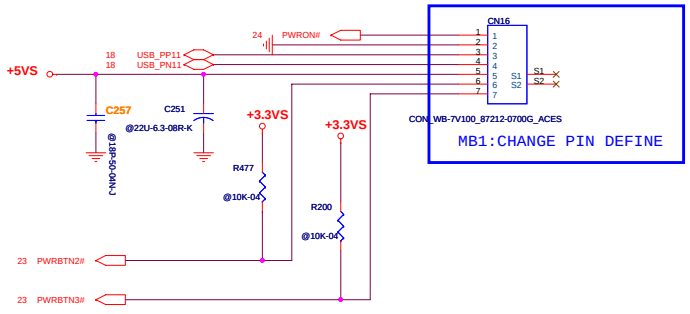
FAN CONTROLLER



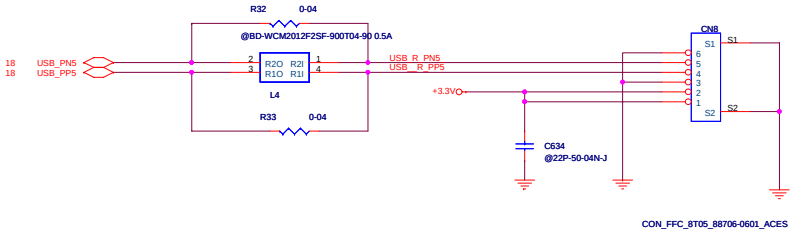
G-SENSOR



EXT USB PORT 4



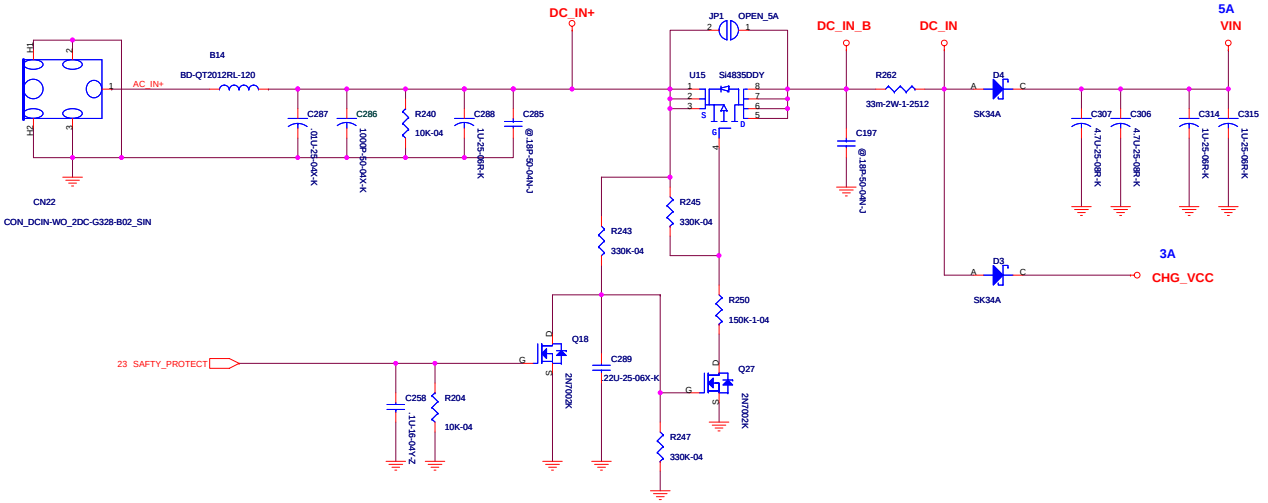
FingerPrint



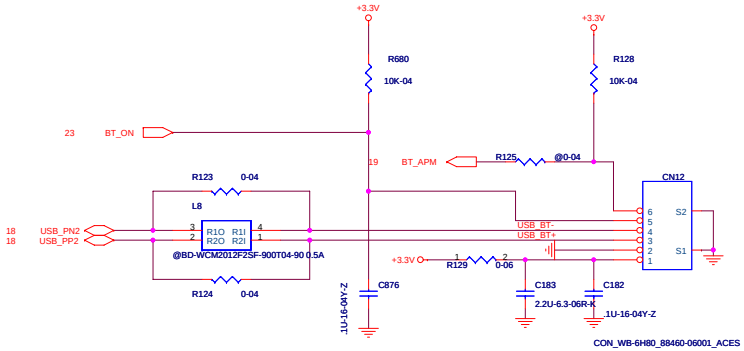
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DC IN

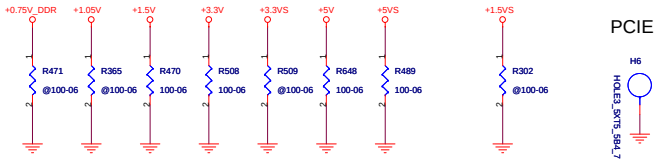
PROJECT	A14HM02		
Adaptor	65W	90W	120W
Rsense	33m Ohm	25m Ohm	18m Ohm
Stop Charger	60W	80W	110W



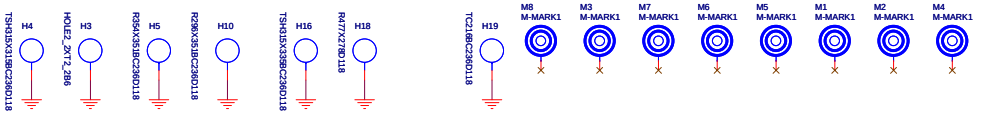
BT CONN



Discharge Resistor

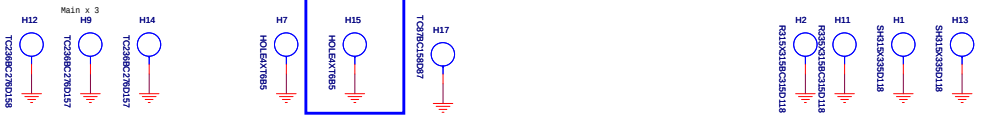


PCIE



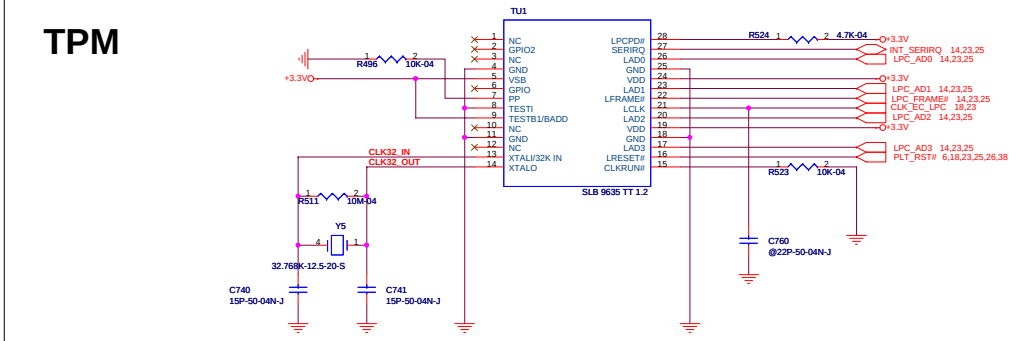
Thermal Module

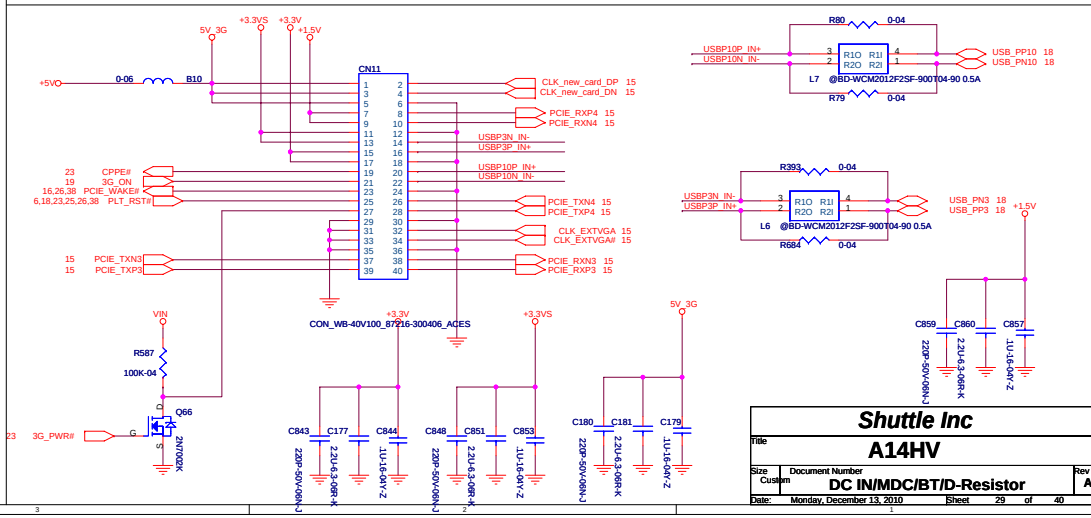
chang H17 for B



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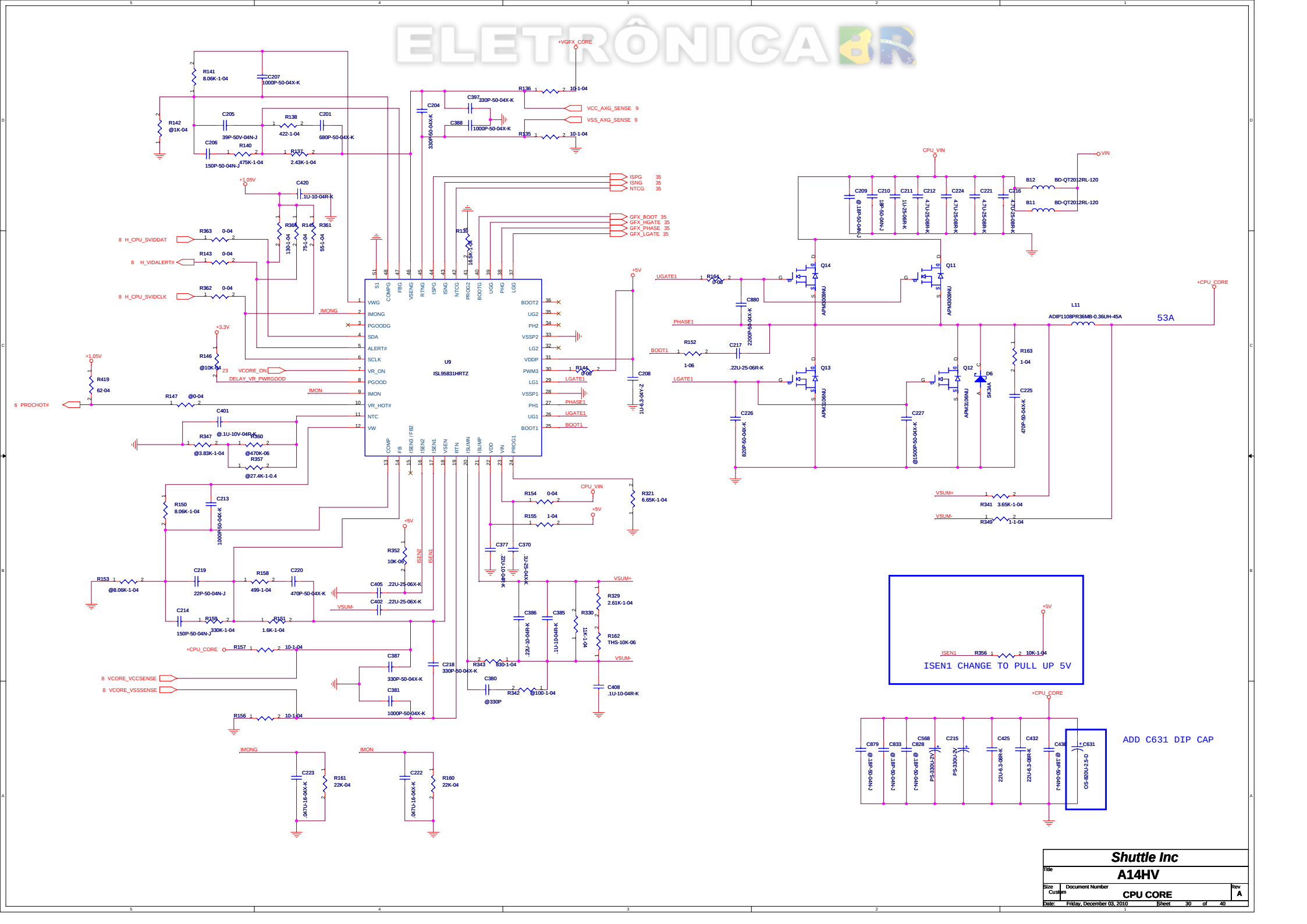
TPM



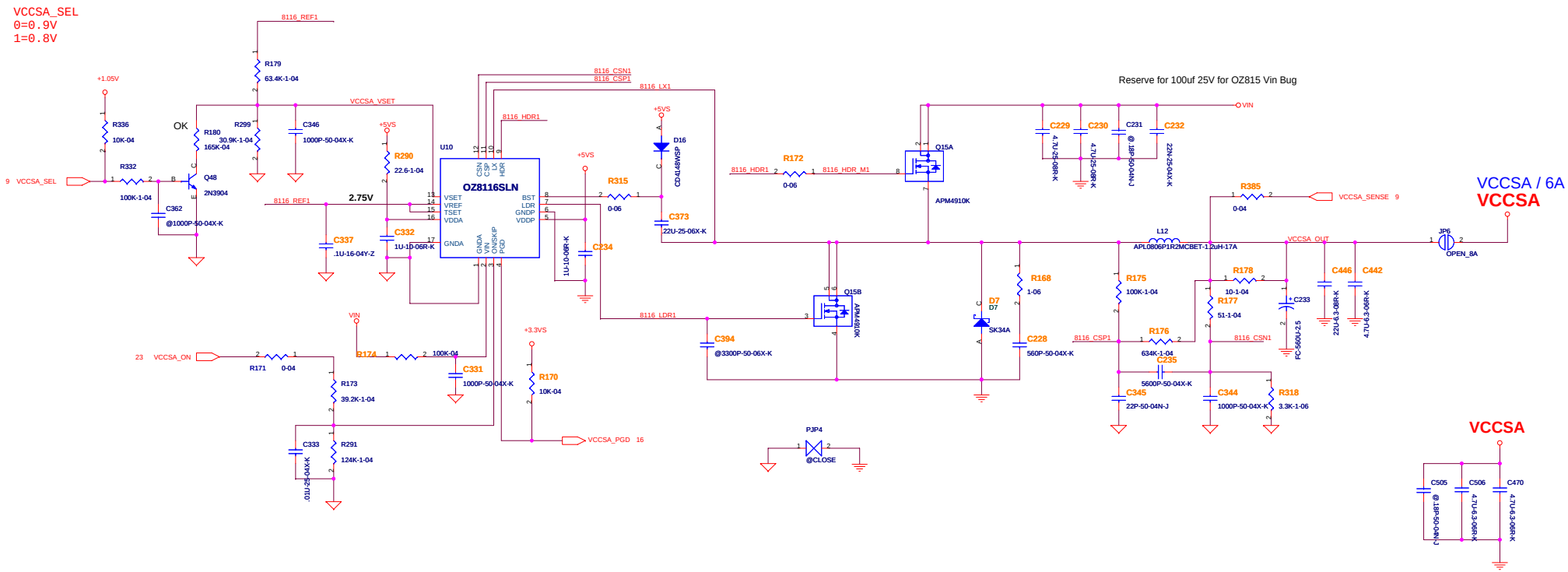


Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: DC IN/MDC/BT/D-Resistor	Rev: A
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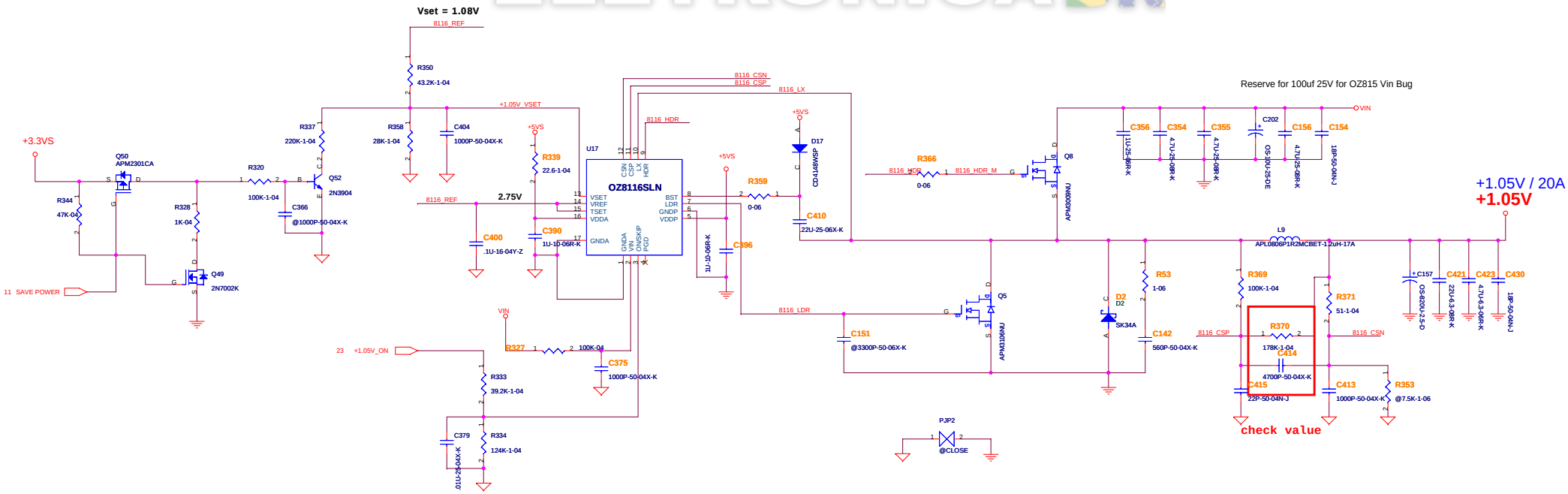


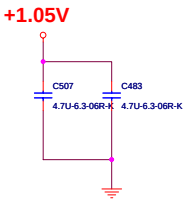
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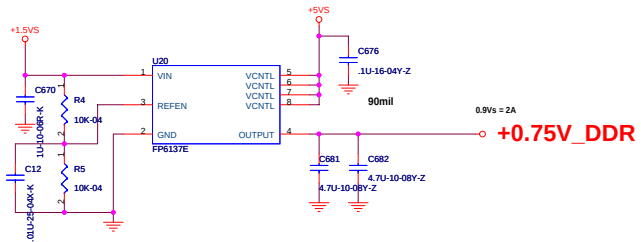


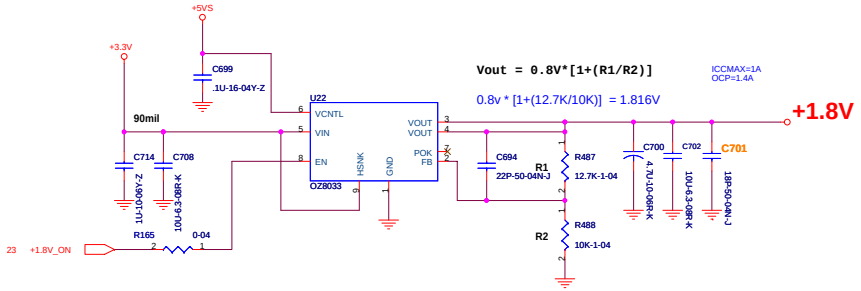
Title	A14HV	
Size: Custom	Document Number: CPU VCCSA	Rev: A
Date: Tuesday, September 21, 2010	Sheet 31 of 40	

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Shuttle Inc		
Title: **A14HV**		
Size: Custom	Document Number: +1.5VS(OZ8116)/+0.75VS/+1.8V	Rev: A
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ELETRÔNICA BR

+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

1.5V/15A

+1.5VS

C39 CHANGE TO DIP CAP

DCR = 4.5 mohm

+5VA/8A

+5VA

C5 CHANGE TO DIP CAP

MB3:CHANGE 24K

Enable Skip mode

DEL R28

Enable Skip mode

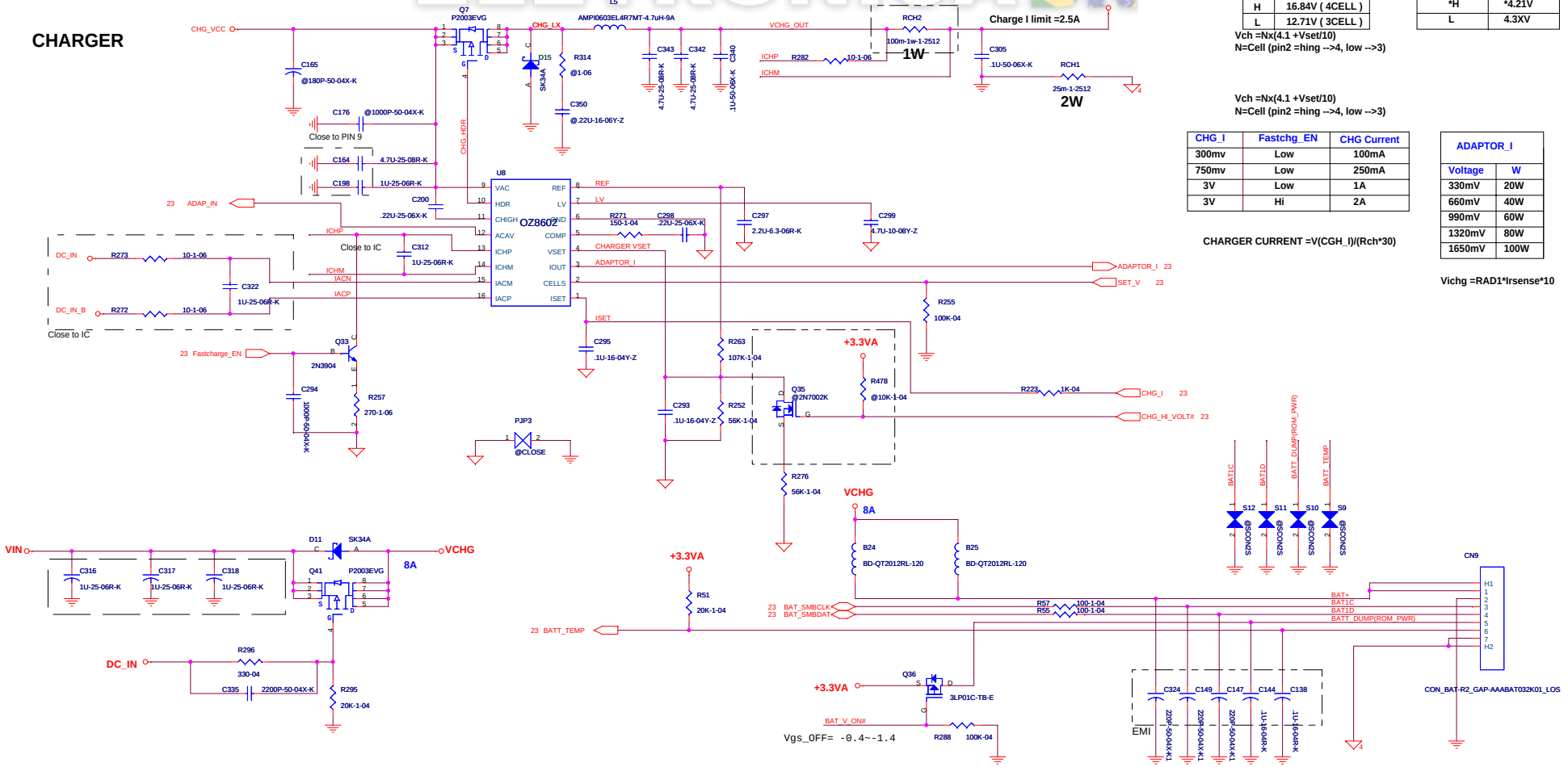
OZ815

OZ815LN

Shuttle Inc			
Title: A14HV			
Size: Custom	Document Number: +1.05VS/+5VA (OZ815)		Rev: A
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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)

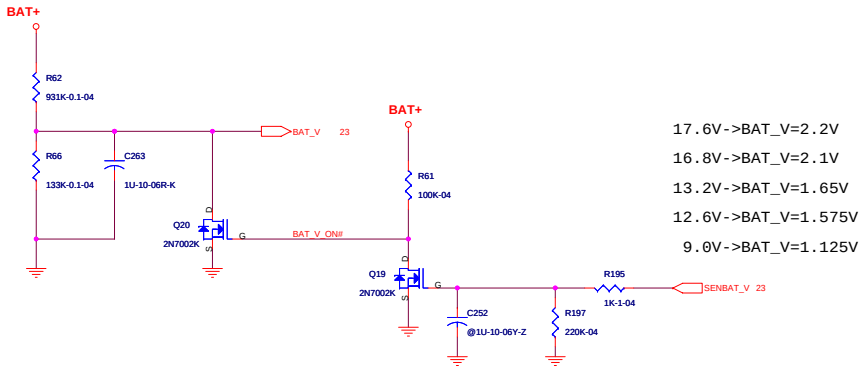
CHG_I	Fastchg_EN	CHG Current
300mv	Low	100mA
750mv	Low	250mA
3V	Low	1A
3V	Hi	2A

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

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

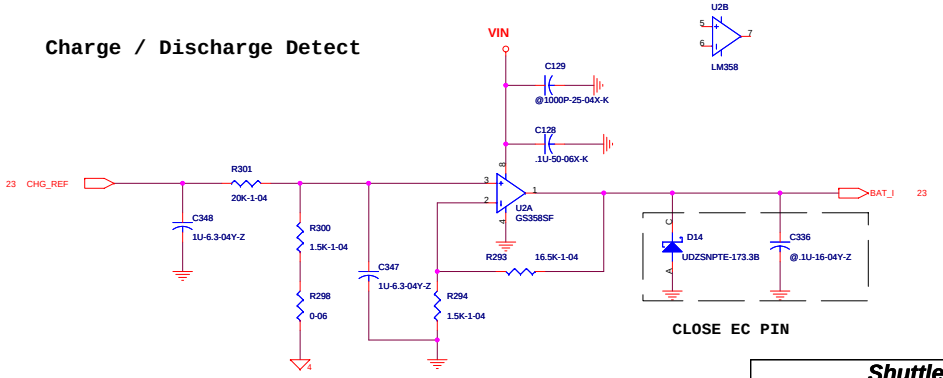
Vichg =RAD1*Irsense*10

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

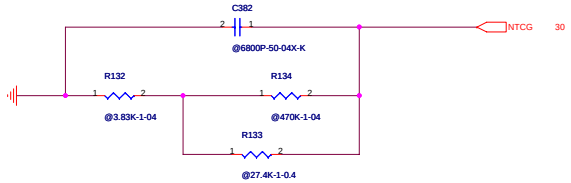
Charge / Discharge Detect

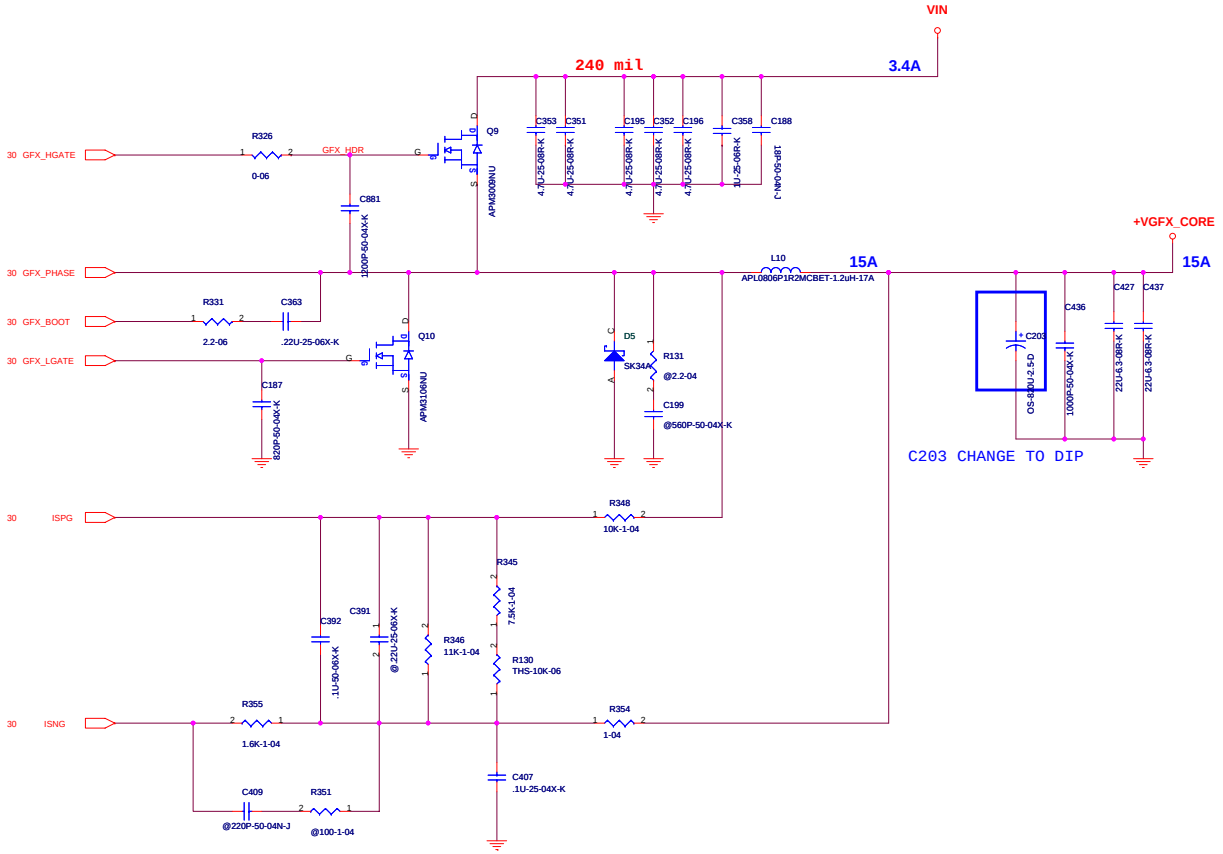


CLOSE EC PIN

Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: BATT IN/CHARGER(OZ8602)	Rev: A
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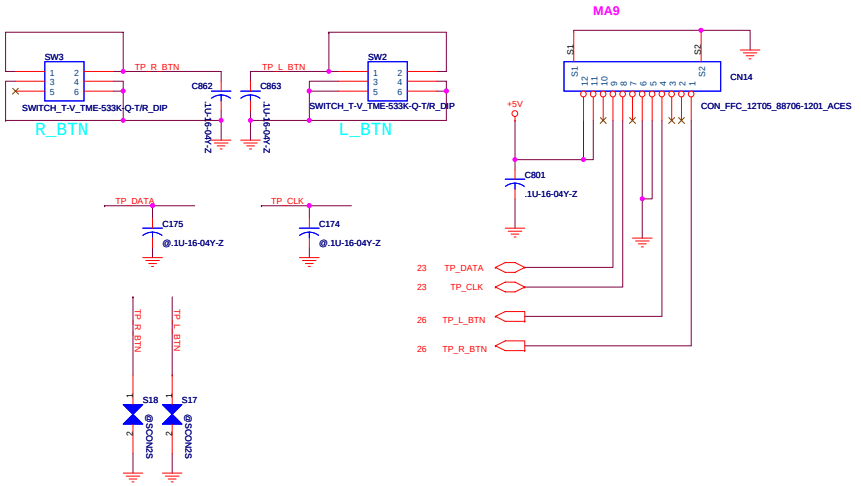




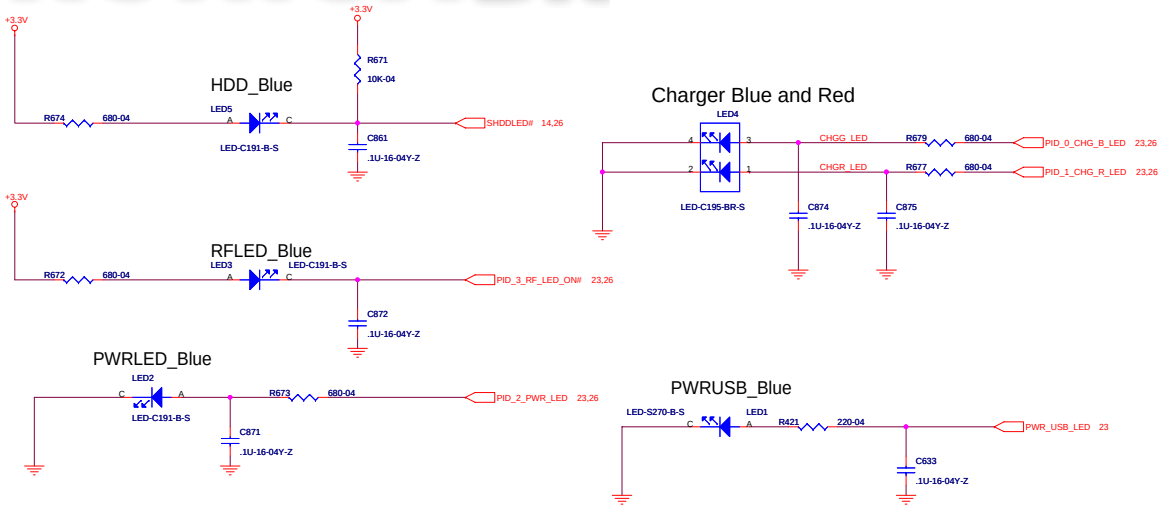
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: iGPU_CORE	Rev: _A
Date: Tuesday, September 21, 2010	Sheet 35 of 40	

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Touch Pad

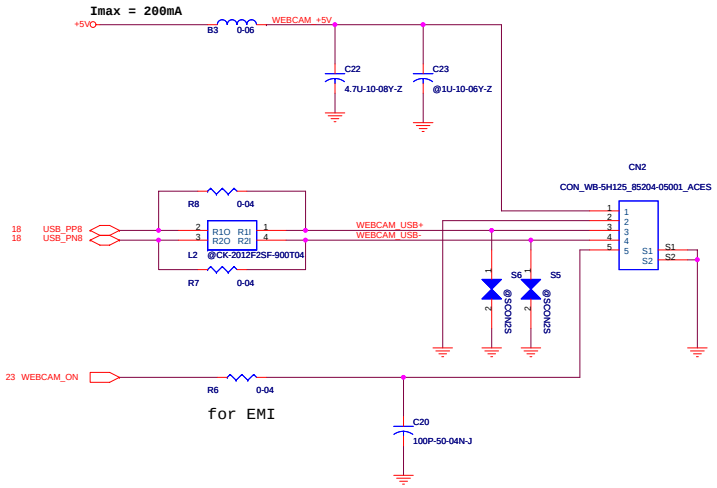


LED

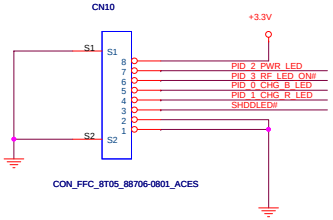


WEBCAM CON

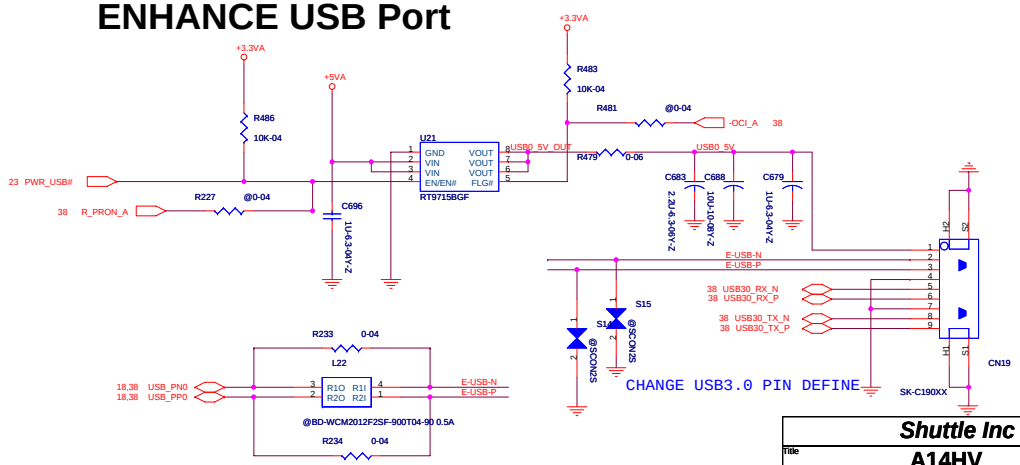
WEBCAM_ON	
1	ON
0	OFF



LED BD



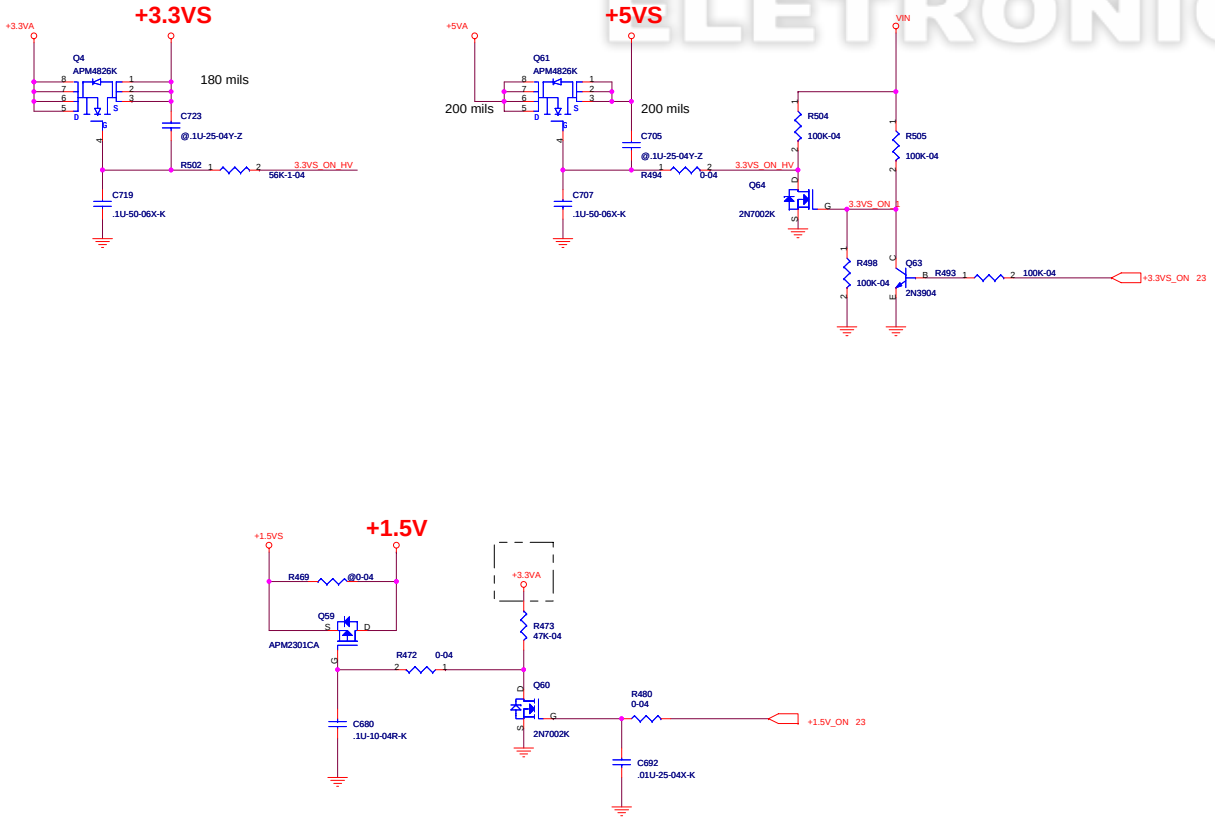
ENHANCE USB Port



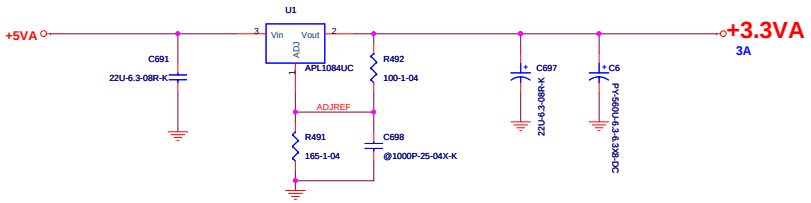
Shuttle Inc		
Title: A14HV		
Size: Custom	Document Number: TP/LED/WEBCAM/USB CHARGER	Rev: A
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ELETRÔNICA BR

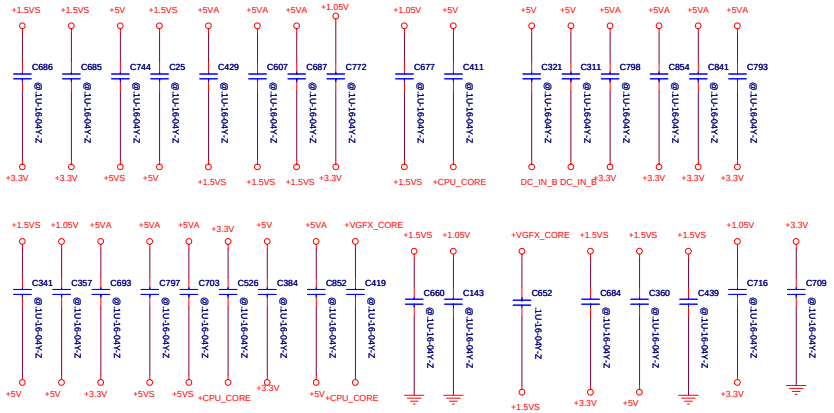
VCCSW



LDO



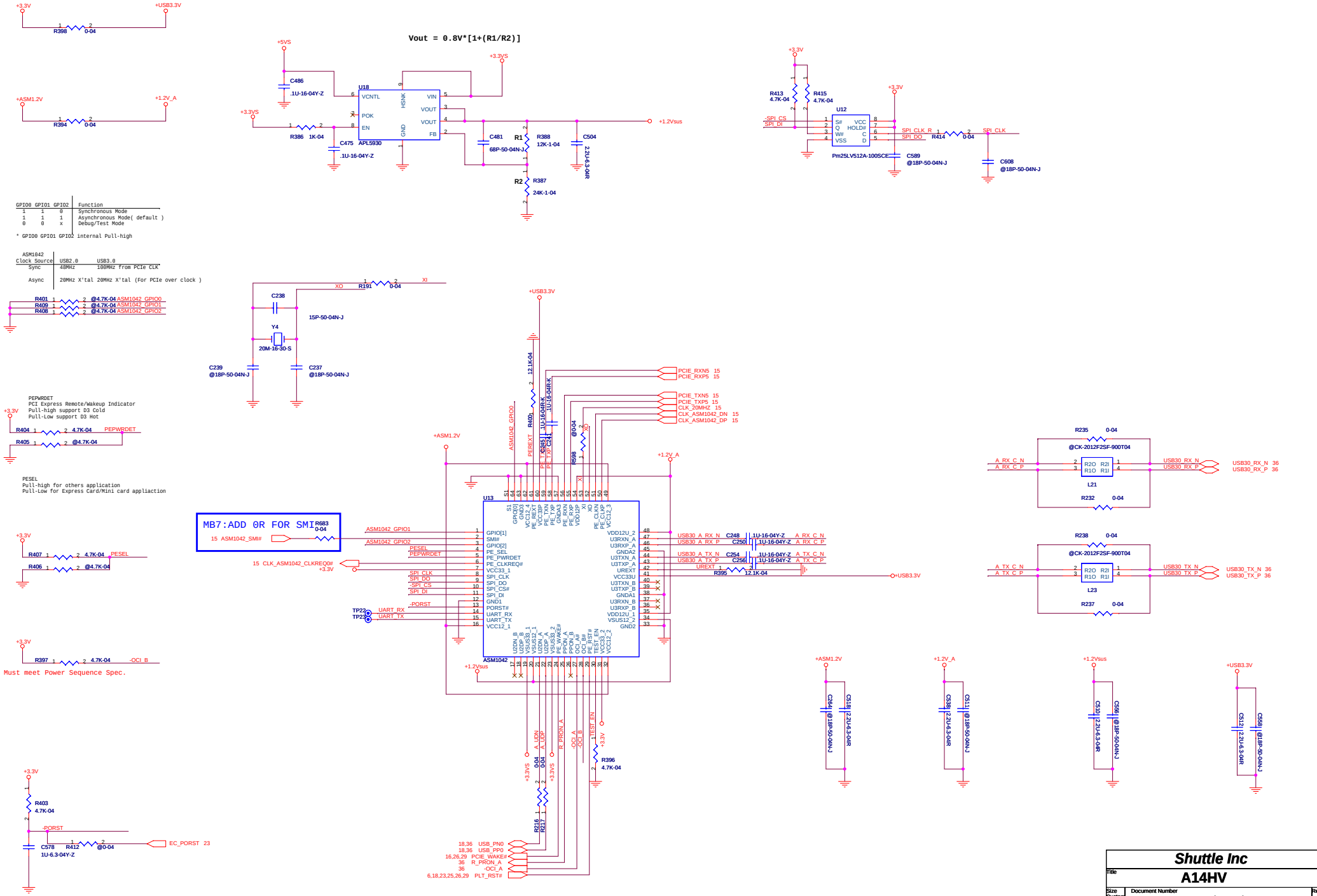
HIGH-SPEED CAP



Shuttle Inc		
Title: **A14HV**		
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USB3.0



Shuttle Inc		
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Title: **A14HV**			
Size: Custom	Document Number: **Reserved**		Rev: **A**
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Shuttle Inc			
Title: **A14HV**			
Size: Custom	Document Number: **History**		Rev: **A**
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