Project Name : A14CT0X

Platform : Cadertrail-M/D+TigerPoint (NM10)+ DDR3

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
2011.03.18	Rev.A	71R-C10IE4-T80A		64R-C14IE0-000A	
2011.06.29	Rev.B	71R-C10IE4-T80B			

Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: INDEX	Rev: 2.0
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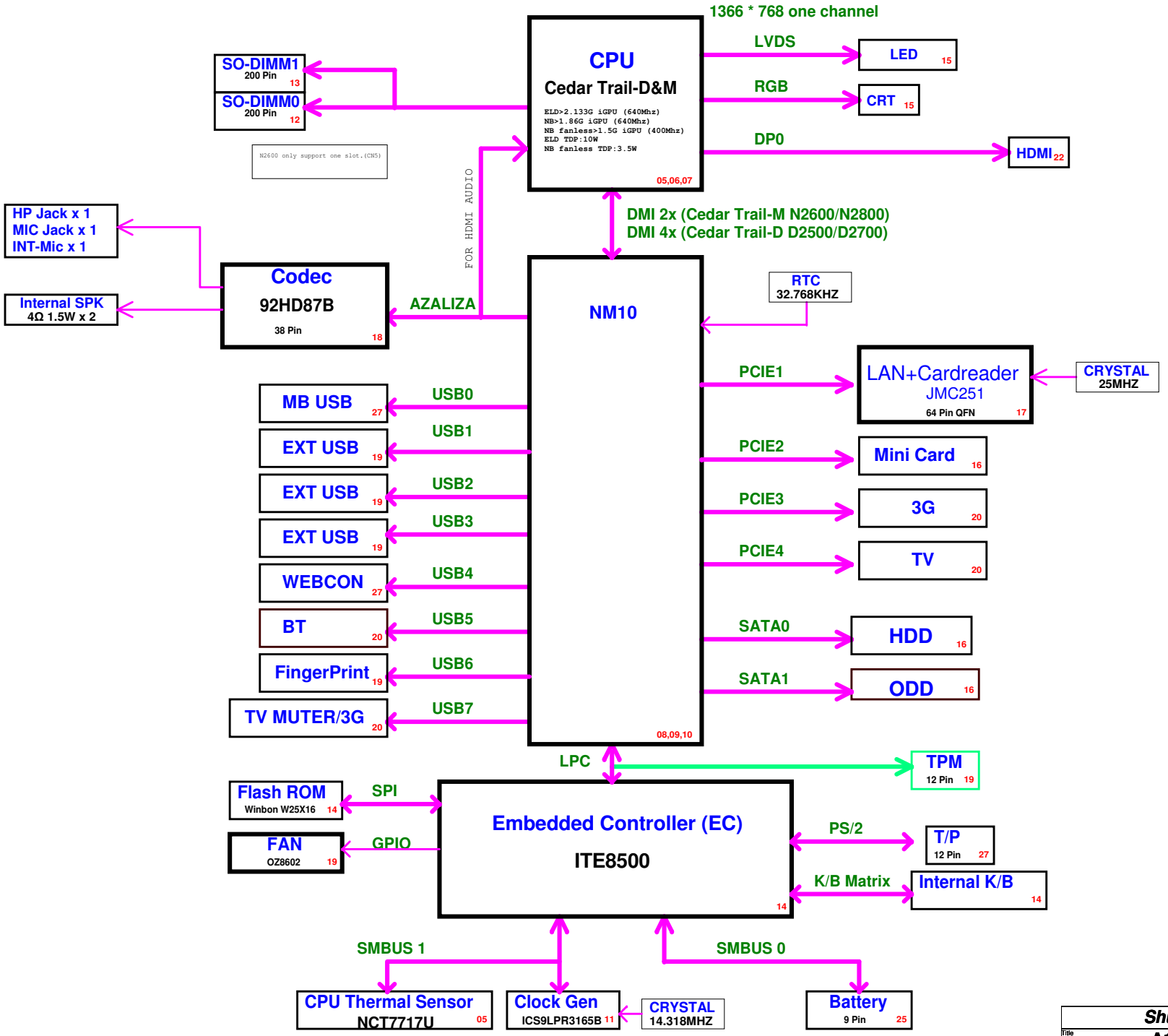
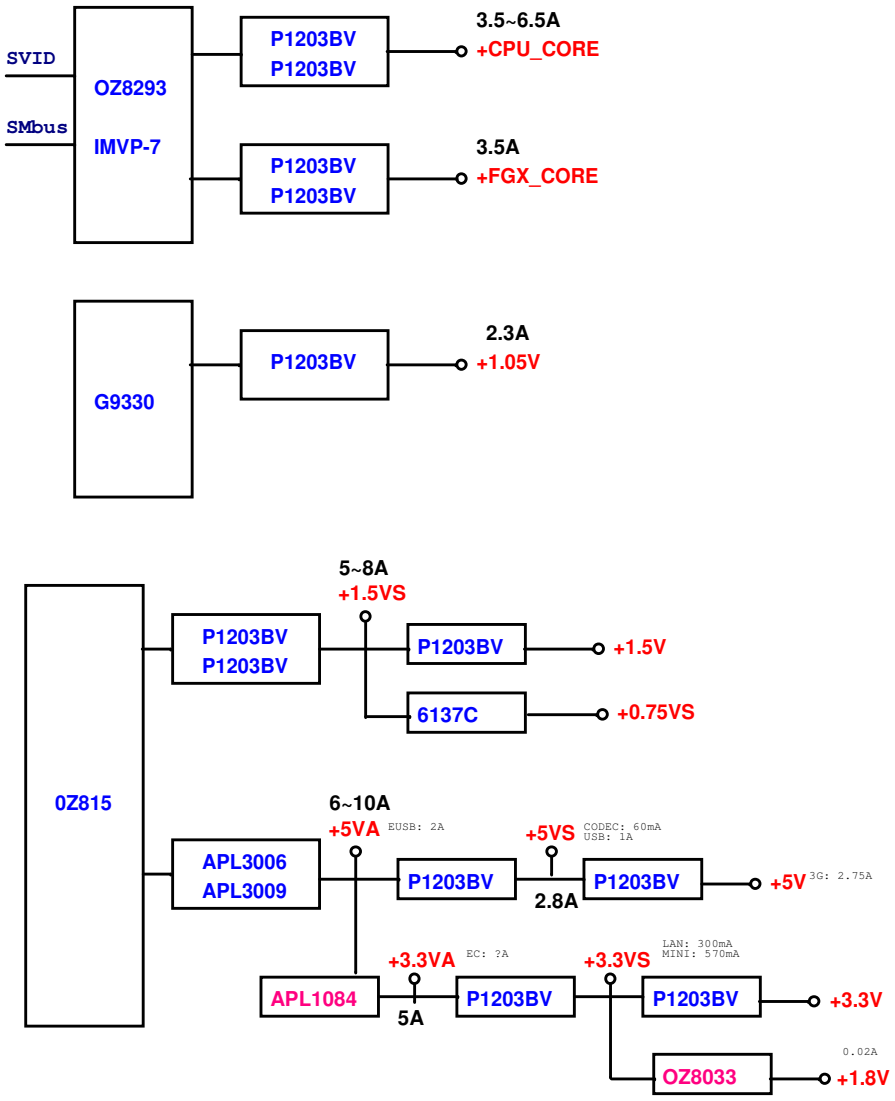
SYSTEM BLOCK DIAGRAM

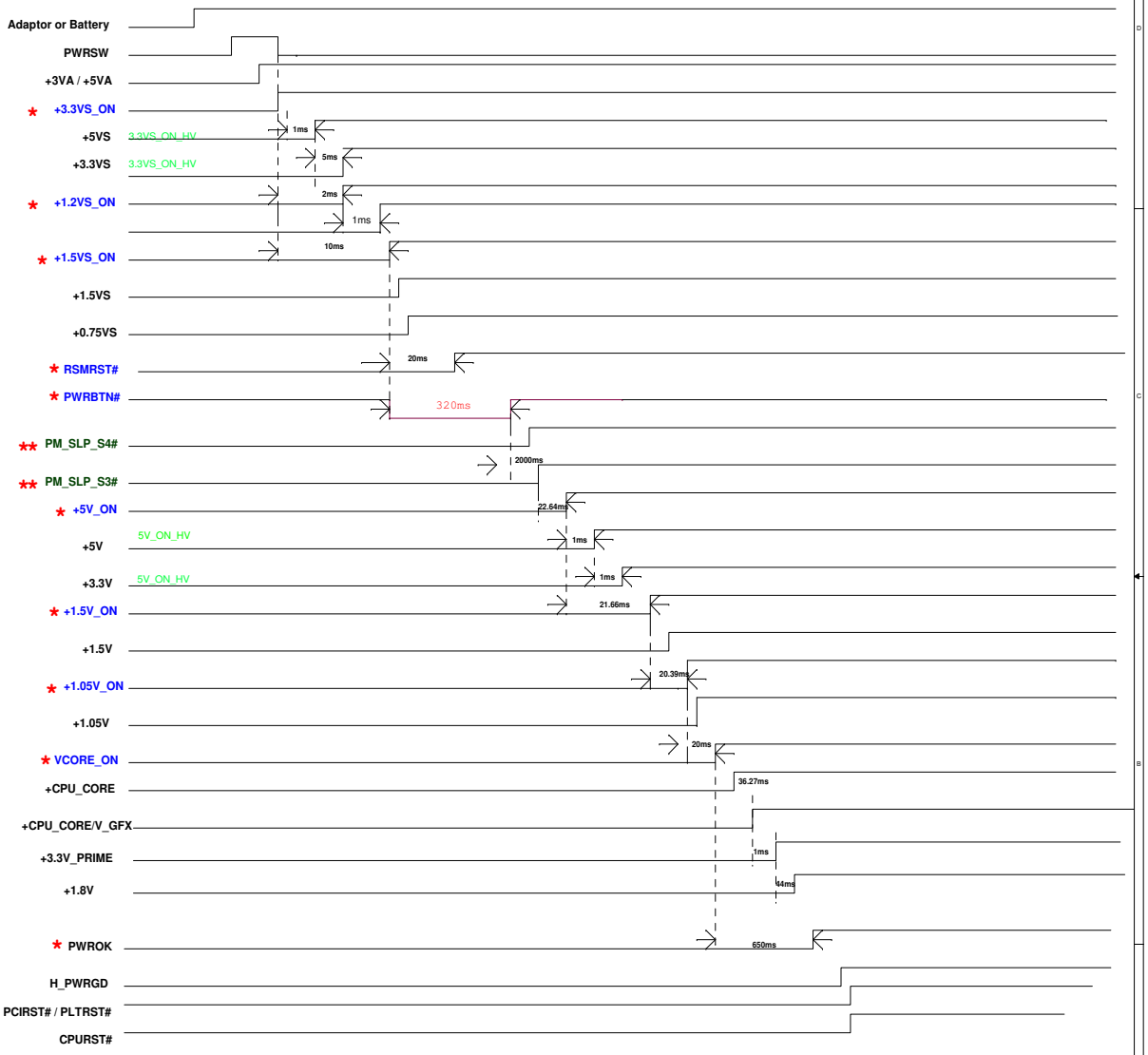


Shuttle Inc.		
Title: A14CT0X		
Size: C	Document Number: SYSTEM BLOCK	Rev: 2.0
Date: Thursday, January 12, 2012	Sheet 2 of 28	

POWER BLOCK DIAGRAM



System Power On Sequence



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

Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: POWER DIAGRAM & SEQUENCE	Rev: 2.0
Date: Thursday, January 12, 2012	Sheet 3 of 28	

NM10 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

ITE8500 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

ITE8500 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-7	1.05	6.5A	10W	

NM10

VCC	ICC(mA)	mW	TEMP(℃)
+5V	4	20	115
+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

IDT92HD87B

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

JMC251

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

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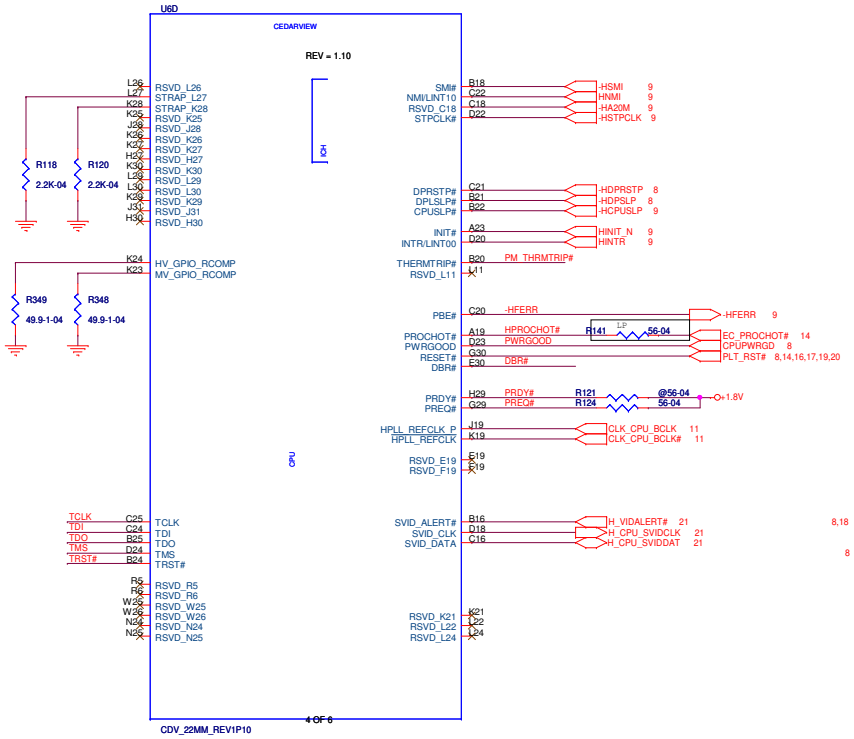
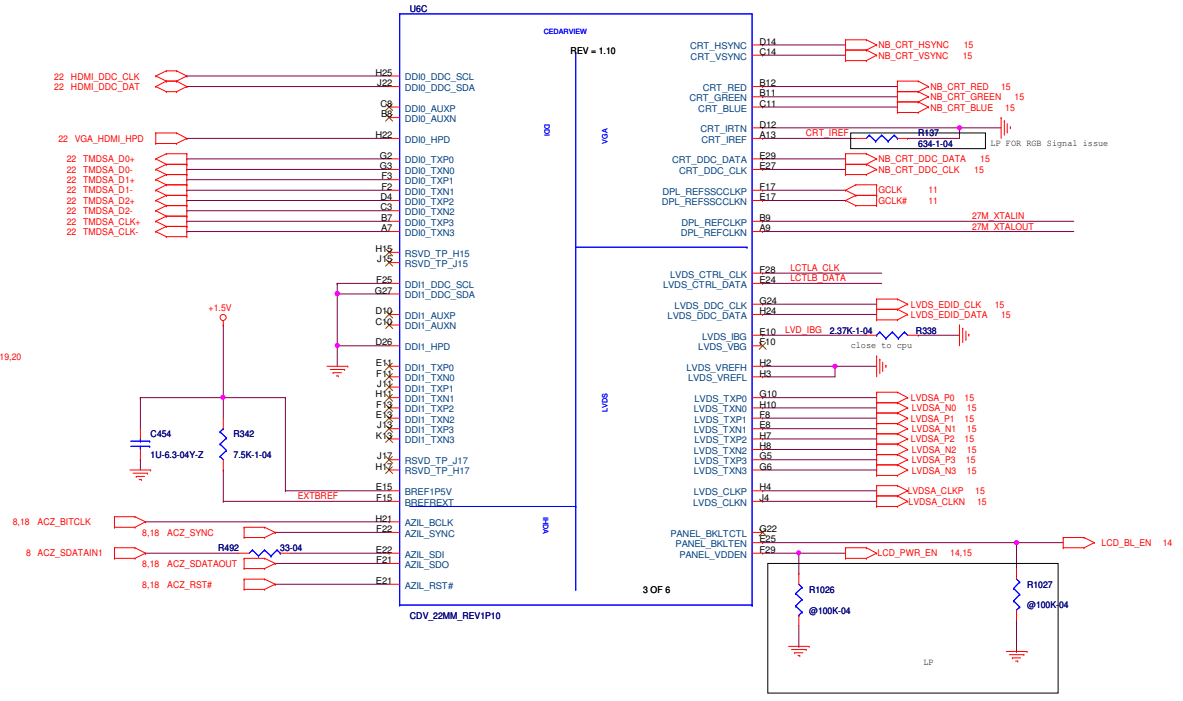
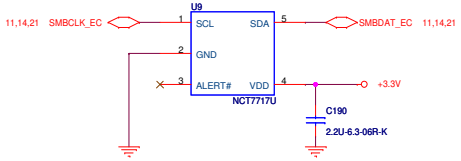
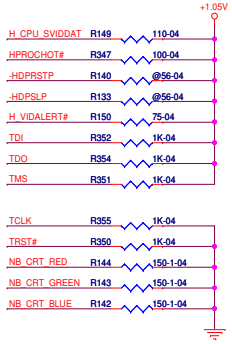
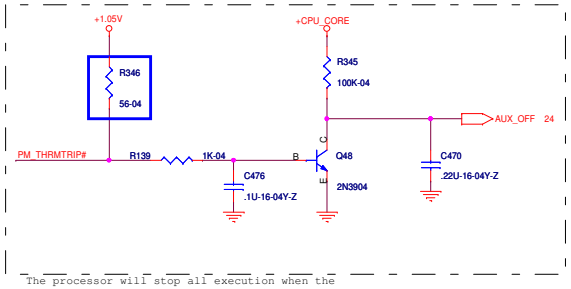


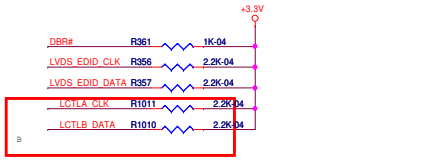


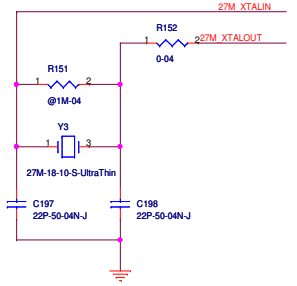
CPU Thermal Sensor











Shuttle Inc			
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CPU	C147/C148/ C155/C158	C159/C162 C156/C157
N2600/N2800	NC	MOUNT
D2500/D2700	MOUNT	MOUNT

AC Couple
Close to TPT

U6A

CEDARVIEW

REV = 1.10

9	DMI_RXP0	C159	.1U-10-04R-K	CPU_DMI_RXP0	L3	DMI_RXP0	DMI_TXP0 K6
9	DMI_RXN0	C162	.1U-10-04R-K	CPU_DMI_RXN0	L2	DMI_RXN0	DMI_TXN0 K5
9	DMI_RXP1	C157	.1U-10-04R-K	CPU_DMI_RXP1	M3	DMI_RXP1	DMI_TXP1 L6
9	DMI_RXN1	C156	.1U-10-04R-K	CPU_DMI_RXN1	M2	DMI_RXN1	DMI_TXN1 L9
9	DMI_RXP2	C158	.1U-10-04R-K	CPU_DMI_RXP2	N2	DMI_RXP2	DMI_TXP2 L8
9	DMI_RXN2	C155	.1U-10-04R-K	CPU_DMI_RXN2	N1	DMI_RXN2	DMI_TXN2 N5
9	DMI_RXP3	C148	.1U-10-04R-K	CPU_DMI_RXP3	P2	DMI_RXP3	DMI_TXP3 N6
9	DMI_RXN3	C147	.1U-10-04R-K	CPU_DMI_RXN3	P3	DMI_RXN3	DMI_TXN3

DMI

DMI_TXP0 9
DMI_TXN0 9
DMI_TXP1 9
DMI_TXN1 9
DMI_TXP2 9
DMI_TXN2 9
DMI_TXP3 9
DMI_TXN3 9

11 CLK_EXP100M
11 CLK_EXP100M#

DMI_REFCLKP N9
DMI_REFCLKN N8
DMI_REF1P5 T2

RSVD_TP_R8 G8
RSVD_TP_R7 G7
DMI_RCOMP T1

+1.5VO

C406 @.1U-16-04Y-Z

R114 7.5K-1-04

+1.5V

1 OF 6

CDV_22MM_REV1P10

+1.5VS

R98 1K-1-04

MREF

R97 1K-1-04

C133 .1U-16-04Y-Z

C134 1000P-50-04X-K

8,14 PM_SLP_S4#

R384 1.21K-1-04

DRAM_PWROK

R332 1K-04

LP

R358 100K-04 DDR3_RST#

R94 22.6-1-04 DDR_CMDPU

R96 280-1-04 DDR_ODTPU

14 DELAY_VR_PWRGD

R367 100-1-04

DELAY_VR_PWRGD_R

R334 100-1-04

LP

U6B

CEDARVIEW

REV = 1.10

12,13 M_A_A[15:0]

M_A_A0	AK14	DDR3_MA0	DDR3_DQ0 Y30 M_A_DQ0
M_A_A1	AK16	DDR3_MA1	DDR3_DQ1 Y29 M_A_DQ1
M_A_A2	AJ14	DDR3_MA2	DDR3_DQ2 AC30 M_A_DQ2
M_A_A3	AJ16	DDR3_MA3	DDR3_DQ3 AC31 M_A_DQ3
M_A_A4	AK18	DDR3_MA4	DDR3_DQ4 W31 M_A_DQ4
M_A_A5	AH18	DDR3_MA5	DDR3_DQ5 W28 M_A_DQ5
M_A_A6	AJ18	DDR3_MA6	DDR3_DQ6 AB28 M_A_DQ6
M_A_A7	AK20	DDR3_MA7	DDR3_DQ7 AB30 M_A_DQ7
M_A_A8	AJ20	DDR3_MA8	DDR3_DQ8 AA28 M_A_DQ8
M_A_A9	AH20	DDR3_MA9	DDR3_DQ9 AA27 M_A_DQ9
M_A_A10	AJ12	DDR3_MA10	DDR3_DQ10 AE27 M_A_DQ10
M_A_A11	AK21	DDR3_MA11	DDR3_DQ11 AE26 M_A_DQ11
M_A_A12	AJ21	DDR3_MA12	DDR3_DQ12 AB27 M_A_DQ12
M_A_A13	AJ8	DDR3_MA13	DDR3_DQ13 AA26 M_A_DQ13
M_A_A14	AH22	DDR3_MA14	DDR3_DQ14 AD25 M_A_DQ14
M_A_A15	AJ22	DDR3_MA15	DDR3_DQ15 AD27 M_A_DQ15
			DDR3_DQ16 AD26 M_A_DQ16
			DDR3_DQ17 AE25 M_A_DQ17
			DDR3_DQ18 AJ30 M_A_DQ18
			DDR3_DQ19 AK29 M_A_DQ19
			DDR3_DQ20 AD28 M_A_DQ20
			DDR3_DQ21 AD29 M_A_DQ21
			DDR3_DQ22 AG30 M_A_DQ22
			DDR3_DQ23 AJ29 M_A_DQ23
			DDR3_DQ24 AE24 M_A_DQ24
			DDR3_DQ25 AG24 M_A_DQ25
			DDR3_DQ26 AD22 M_A_DQ26
			DDR3_DQ27 AC24 M_A_DQ27
			DDR3_DQ28 AG27 M_A_DQ28
			DDR3_DQ29 AG25 M_A_DQ29
			DDR3_DQ30 AG31 M_A_DQ30
			DDR3_DQ31 AE31 M_A_DQ31
			DDR3_DQ32 AD16 M_A_DQ32
			DDR3_DQ33 AD14 M_A_DQ33
			DDR3_DQ34 AG9 M_A_DQ34
			DDR3_DQ35 AG7 M_A_DQ35
			DDR3_DQ36 AG13 M_A_DQ36
			DDR3_DQ37 AE13 M_A_DQ37
			DDR3_DQ38 AD10 M_A_DQ38
			DDR3_DQ39 AF8 M_A_DQ39
			DDR3_DQ40 AH9 M_A_DQ40
			DDR3_DQ41 AG5 M_A_DQ41
			DDR3_DQ42 AD2 M_A_DQ42
			DDR3_DQ43 AD3 M_A_DQ43
			DDR3_DQ44 AH4 M_A_DQ44
			DDR3_DQ45 AK3 M_A_DQ45
			DDR3_DQ46 AE3 M_A_DQ46
			DDR3_DQ47 AD4 M_A_DQ47
			DDR3_DQ48 AD7 M_A_DQ48
			DDR3_DQ49 AD8 M_A_DQ49
			DDR3_DQ50 AA4 M_A_DQ50
			DDR3_DQ51 AB5 M_A_DQ51
			DDR3_DQ52 AE5 M_A_DQ52
			DDR3_DQ53 AB9 M_A_DQ53
			DDR3_DQ54 AA9 M_A_DQ54
			DDR3_DQ55 AB2 M_A_DQ55
			DDR3_DQ56 AB4 M_A_DQ56
			DDR3_DQ57 W4 M_A_DQ57
			DDR3_DQ58 V3 M_A_DQ58
			DDR3_DQ59 AC2 M_A_DQ59
			DDR3_DQ60 AB3 M_A_DQ60
			DDR3_DQ61 Y2 M_A_DQ61
			DDR3_DQ62 W1 M_A_DQ62
			DDR3_DQ63 M_A_DQ63

M_A_DQ[63:0] 12,13

M_A_DQS[7:0] 12,13

M_A_DQS#[7:0] 12,13

			DDR3_DQS0 AA30 M_A_DQS0
			DDR3_DQS1 AB24 M_A_DQS1
			DDR3_DQS2 AF30 M_A_DQS2
			DDR3_DQS3 AE22 M_A_DQS3
			DDR3_DQS4 AG10 M_A_DQS4
			DDR3_DQS5 AF4 M_A_DQS5
			DDR3_DQS6 AB6 M_A_DQS6
			DDR3_DQS7 Y3 M_A_DQS7
			DDR3_DQS#0 AA31 M_A_DQS#0
			DDR3_DQS#1 AB25 M_A_DQS#1
			DDR3_DQS#2 AF29 M_A_DQS#2
			DDR3_DQS#3 AF22 M_A_DQS#3
			DDR3_DQS#4 AF10 M_A_DQS#4
			DDR3_DQS#5 AF3 M_A_DQS#5
			DDR3_DQS#6 AB7 M_A_DQS#6
			DDR3_DQS#7 AA2 M_A_DQS#7

12,13 MA_WE#
12,13 MA_CAS#
12,13 MA_RAS#
12,13 MA_BA[2:0]

MA_WE#	AH10	DDR3_WE#
MA_CAS#	AJ10	DDR3_CAS#
MA_RAS#	AJ11	DDR3_RAS#
MA_BA0	AK12	DDR3_BS0
MA_BA1	AH13	DDR3_BS1
MA_BA2	AK22	DDR3_BS2

12	MA_CS#0	AH12	DDR3_CS#0
12	MA_CS#1	AH8	DDR3_CS#1
13	MA_CS#2	AK11	DDR3_CS#2
13	MA_CS#3	AK8	DDR3_CS#3
12	MA_CKE0	AH23	DDR3_CKE0
12	MA_CKE1	AJ24	DDR3_CKE1
13	MA_CKE2	AK24	DDR3_CKE2
13	MA_CKE3	AH24	DDR3_CKE3
12	MA_ODT0	AK10	DDR3_ODT0
12	MA_ODT1	AK7	DDR3_ODT1
13	MA_ODT2	AL9	DDR3_ODT2
13	MA_ODT3	AJ7	DDR3_ODT3
12	MA_CK0	AG15	DDR3_CK0
12	MA_CK#0	AF15	DDR3_CK#0
12	MA_CK1	AF17	DDR3_CK1
12	MA_CK#1	AG17	DDR3_CK#1
13	MA_CK2	AD17	DDR3_CK2
13	MA_CK#2	AC17	DDR3_CK#2
13	MA_CK3	AC15	DDR3_CK3
13	MA_CK#3	AD15	DDR3_CK#3

LP 12,13 DDR3_RST# AK25 DDR3_DRAMRST#

MREF AJ27 DDR3_VREF
AL28 DDR3_VREF_NCTF

11 CLK_MCH_BCLK AC19 DDR3_REFP
11 CLK_MCH_BCLK# AB19 DDR3_REFN

DRAM_PWROK AA5 DDR3_DRAM_PWROK
DELAY_VR_PWRGD_R W7 DDR3_VCCA_PWROK

DDR_ODTPU AJ26 DDR3_ODTPU
DDR_CMDPU AJ25 DDR3_CMDPU
AK27 DDR3_DQPU

R95 33-1-04 C128 .1U-16-04R-K

	AB13	RSVD_TP_AB11
	AB15	RSVD_TP_AB13
	AF19	RSVD_TP_AF19
	AG19	RSVD_TP_AG19

DDR3

12,13 MA_DM[7:0]

MA_DM0	Y28	DDR3_DM0
MA_DM1	AB26	DDR3_DM1
MA_DM2	AE30	DDR3_DM2
MA_DM3	AB21	DDR3_DM3
MA_DM4	AG11	DDR3_DM4
MA_DM5	AG2	DDR3_DM5
MA_DM6	AB8	DDR3_DM6
MA_DM7	AA3	DDR3_DM7

CDV_22MM_REV1P10

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Shuttle Inc			
Title: A14CT0X			
Size: C	Document Number: CPU_CLK/MISC/JTAG (2 of 7)		Rev: 2.0
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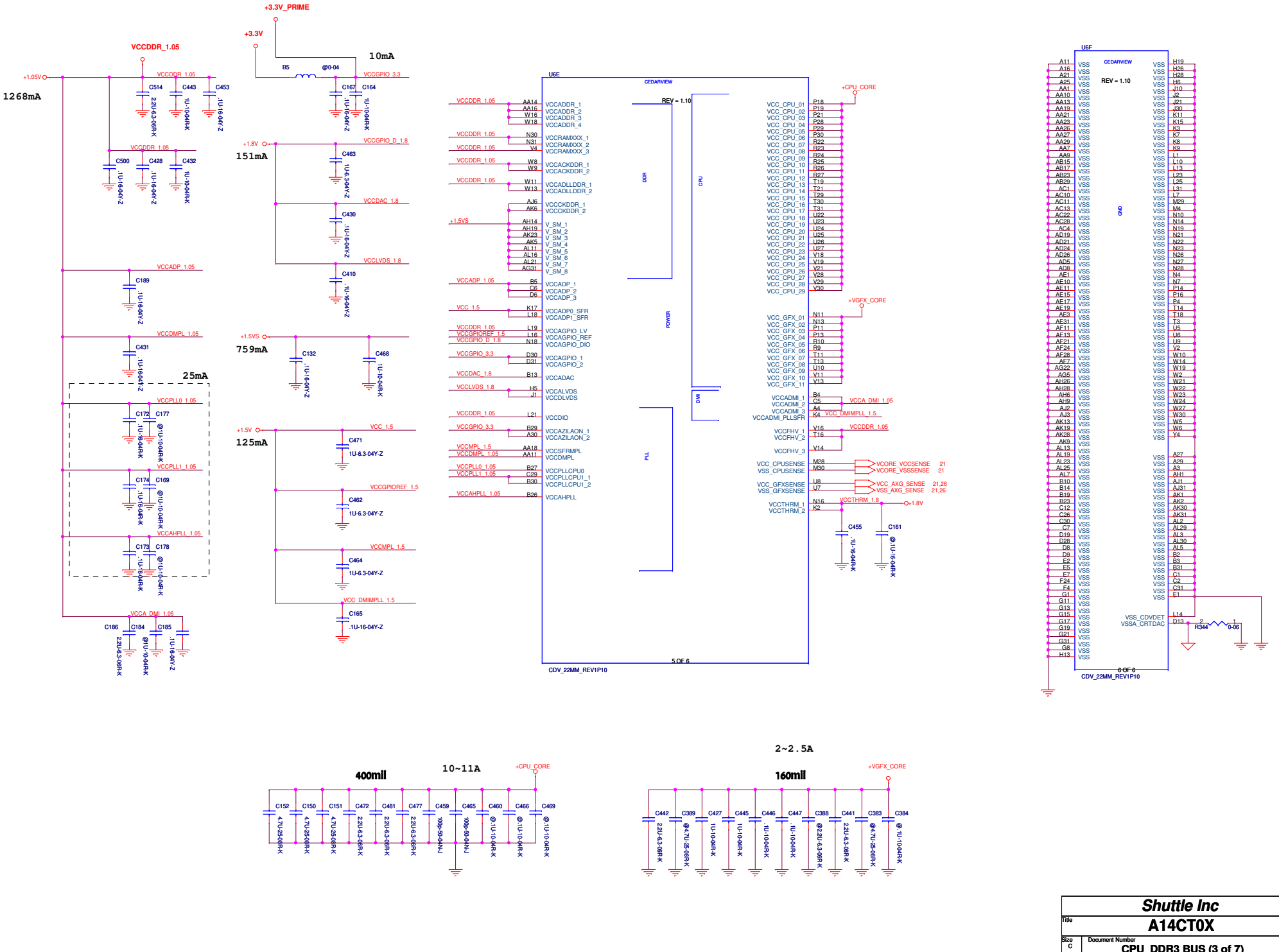


Shuttle Inc			
Title	**A14CT0X**		
Size C	Document Number **CPU_DDR3 BUS (3 of 7)**		Rev 2.0
Date: Thursday, January 12, 2012	Sheet 7 of 28		

Signal Name	Power Plane	During PLTRST#[6] / RSMRST#[7]	Immediately after PLTRST#[6] / RSMRST#[7]	C3/C4	S1	$S3_{COLD}$[13]	S4/ S5
GPIO[7:6]	Core	Input	Input	Driven	Driven	Off	Off
GPIO[15:12,10:8]	Suspend	Input	Input	Driven	Driven	Driven	Driven
GPIO24	Suspend	No Change	No Change	Defined	Defined	Defined	Defined
GPIO25	Suspend	High	High[13]	Defined	Defined	Defined	Defined
GPIO[28:26]	Suspend	Low	Low	Defined	Defined	Defined	Defined
GPIO33	Core	High	High	Defined	Defined	Off	Off
GPIO34	Core	Low	Low[11]	Defined	Defined	Off	Off
GPIO[39:38]	Core	Input	Input	Driven	Driven	Off	Off

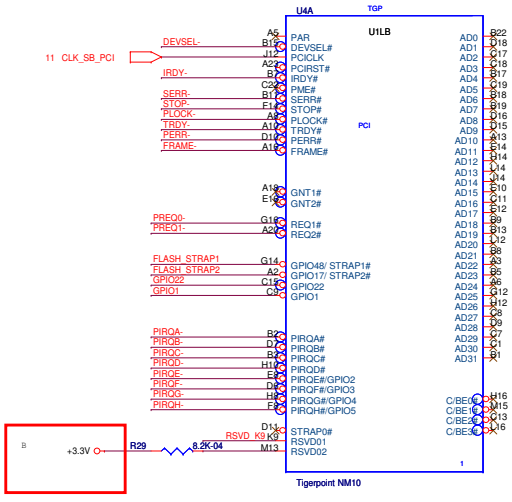
halts processor's instruction stream
STPCLK:C2
CLKRUN# :C2
STP_PCI# :C2
halt processor clock
DPSLP# : C3
STP_CPU#:C3
BM_BUSY#:C3
lower processor voltage
DPRSTP# :C4
STP_CPU# :C4
DPRSLPVR :C4
BATLOW# : Battery Low

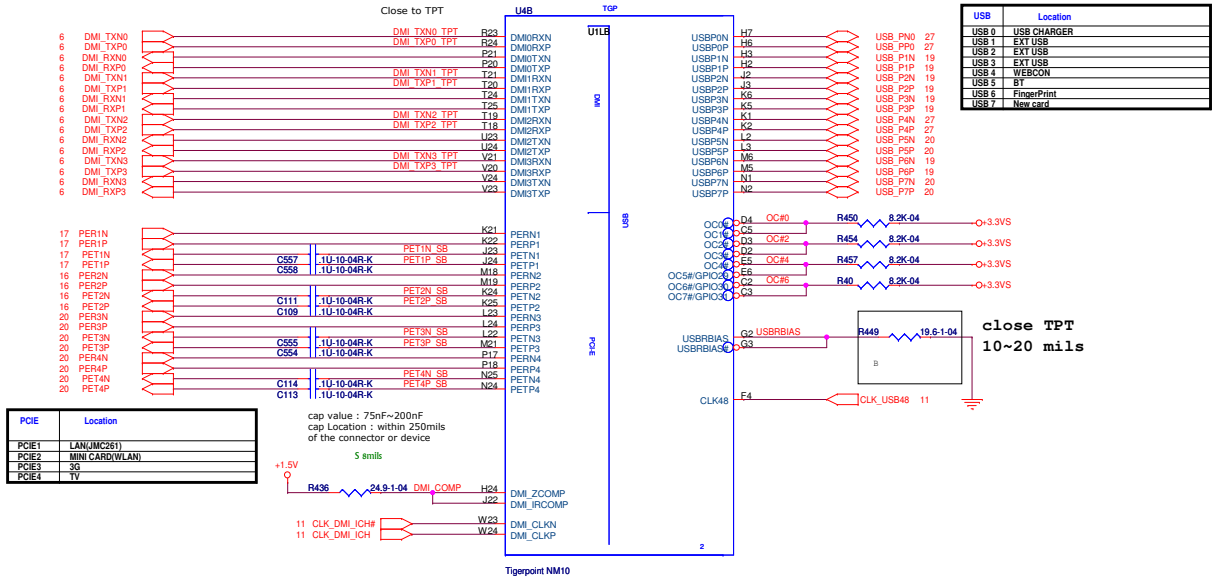
GPI PULL-UP

DMI AC/DC Coupling Selection (GPIO25)

RTC Circuitry

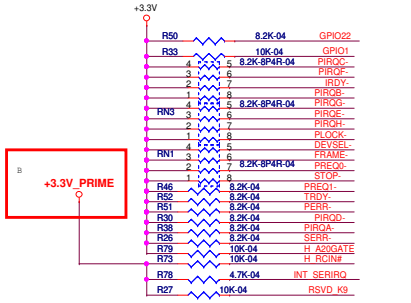
Shuttle Inc	
Title	A14CT0X
Size C	Document Number CPU_PWR (4 of 7) Rev 2.0
Date: Thursday, January 12, 2012	Sheet 8 of 28



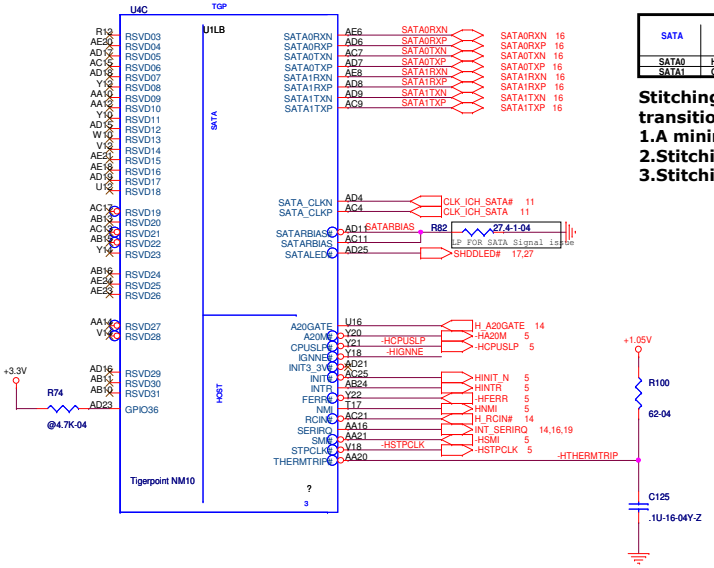


USB	Location
USB 0	USB CHARGER
USB 1	EXT USB
USB 2	EXT USB
USB 3	EXT USB
USB 4	WEBCON
USB 5	BT
USB 6	FingerPrint
USB 7	New card

PCIE	Location
PCIE1	LAN(JMC261)
PCIE2	MINI CARD(WLAN)
PCIE3	3G
PCIE4	TV



STRAP2	STRAP1	Routing
0	1	SPI
1	0	PCI
1	1	LPC *



SATA	Location
SATA0	HDD
SATA1	ODD

Stitching caps used for differential pair reference plane transitions , reduce the loop inductance on the currents return path
1.A minimum of one (1) stitching cap can be shared by up to four different pairs .
2.Stitching cap values of 0.1 µF are sufficient.
3.Stitching caps should be placed within 100 mils

Shuttle Inc		
Title: A14CT0X		
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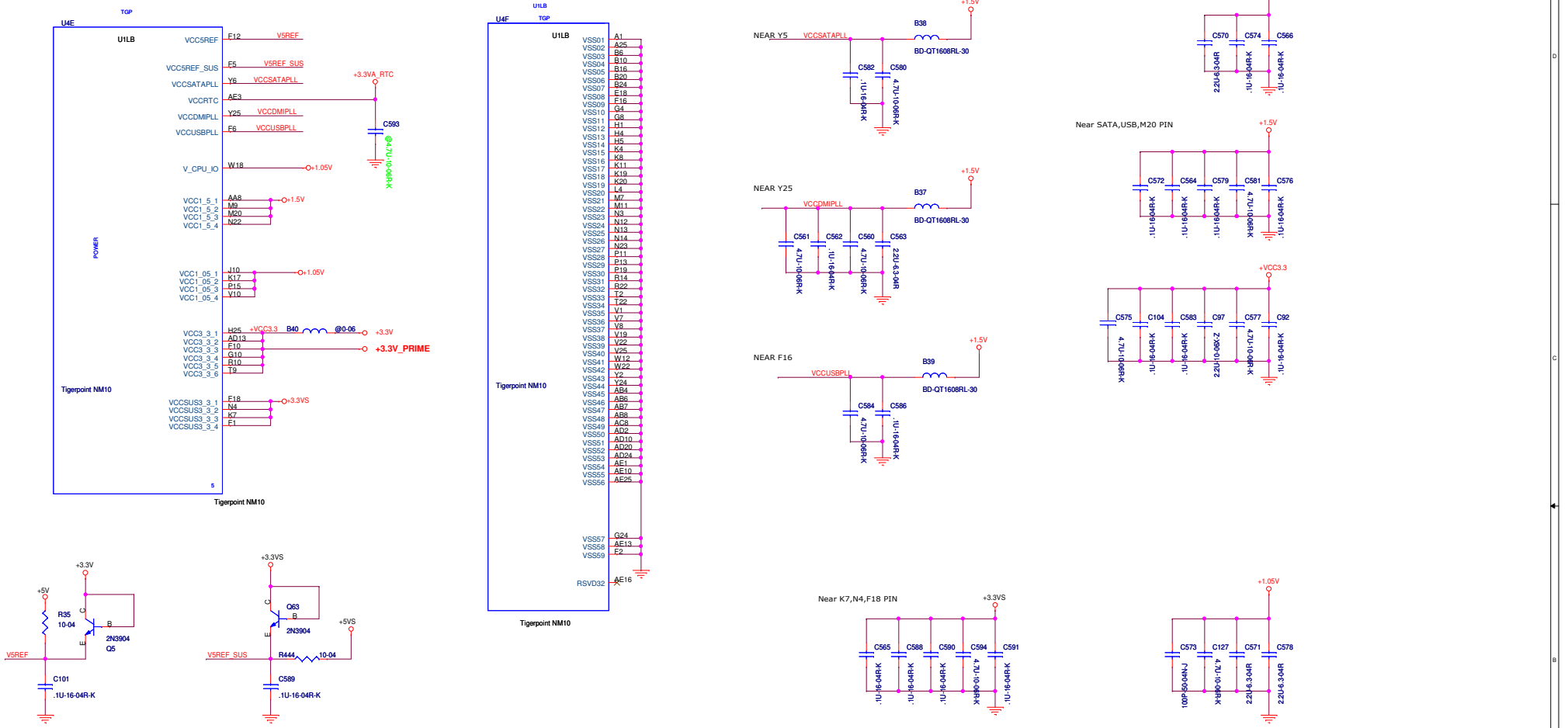

Shuttle Inc		
Title: A14CT0X		
Size: C	Document Number: CPU_GND (6 of 7)	Rev: 2.0
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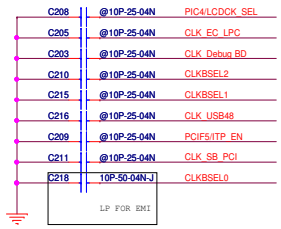
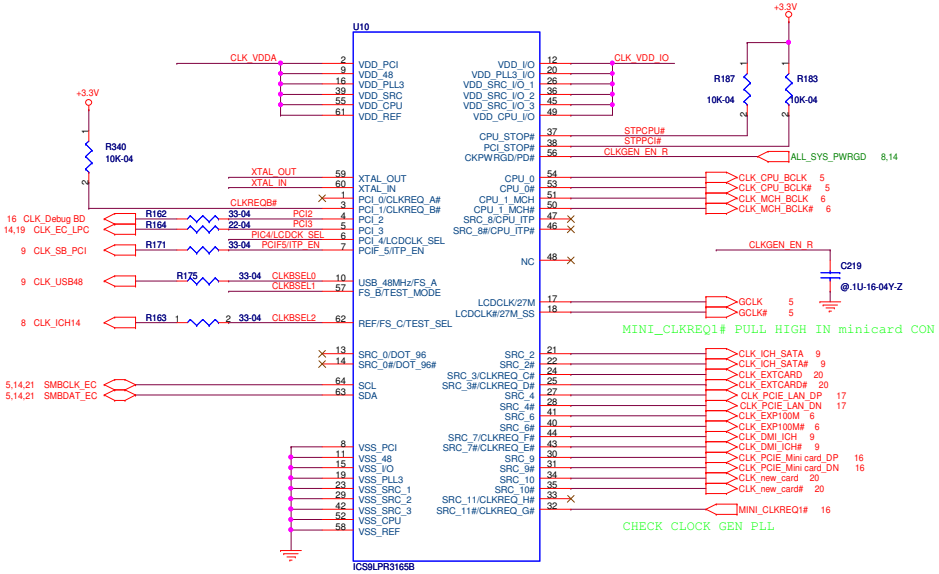
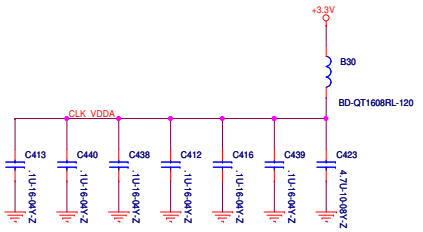
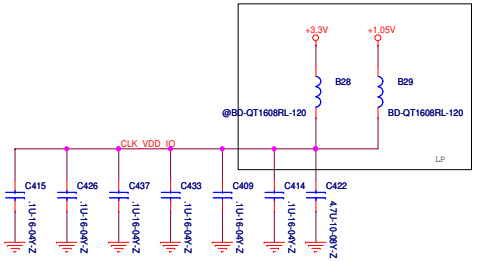
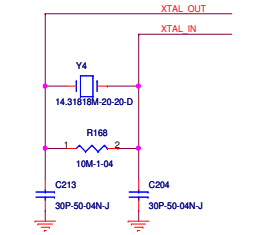
Reserved FOR EMI





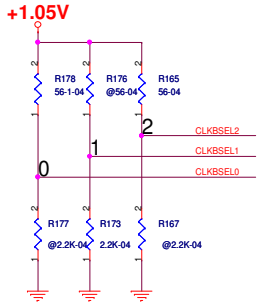


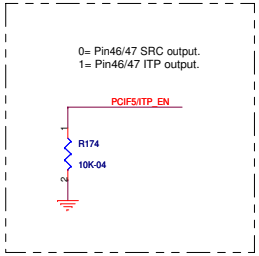


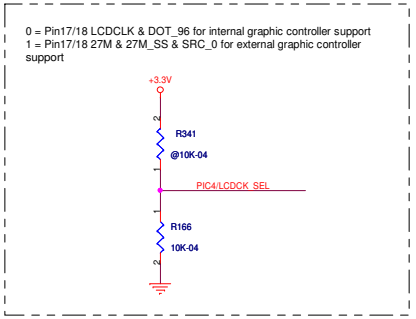


Ce = 2*CL - (Cs + Ci)
CL = Crystal Load Cap = 20P
Ci = IC internal Cap = 5P
Cs = 2P
Ce = Crystal external Cap = 33P

BSEL







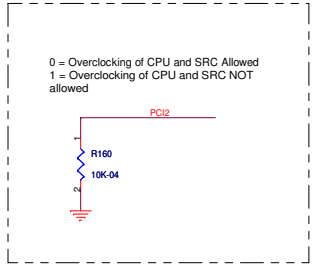


Table 1: CPU Frequency Select Table

FS_LC^2 B0b7	FS_LB^1 B0b6	FS_LA^1 B0b5	CPU MHz	SRC MHz	PCI MHz	REF MHz	USB MHz	DOT MHz
0	0	0	266.66	100.00	33.33	14.318	48.00	96.00
0	0	1	133.33					
0	1	0	200.00					
0	1	1	166.66					
1	0	0	333.33					
1	0	1	100.00					
1	1	0	400.00					
1	1	1	Reserved					

Shuttle Inc			
Title: A14CT0X			
Size: C	Document Number: CPU_RESERVED (7 of 7)		Rev: 2.0
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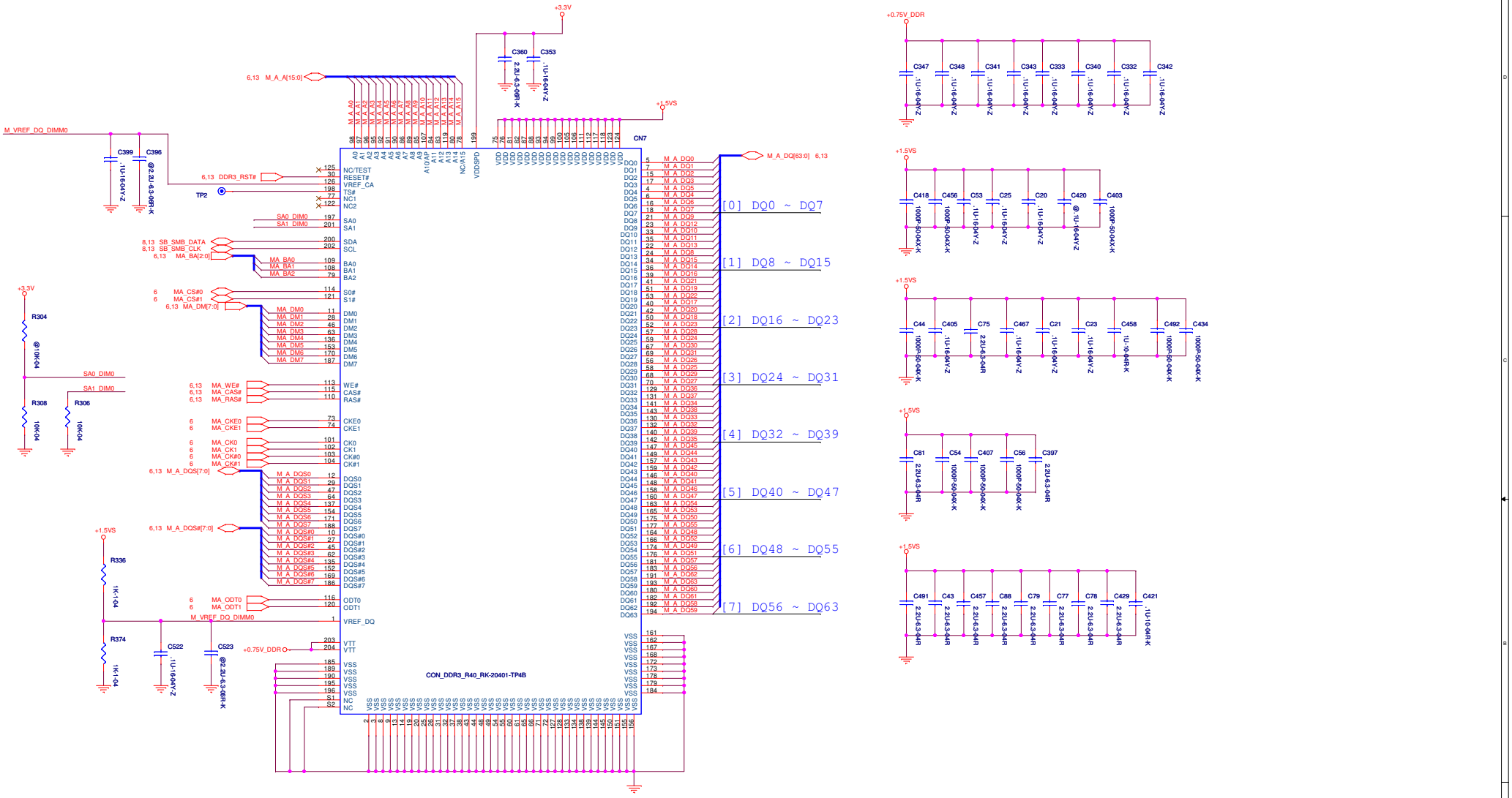

Shuttle Inc		
Title: **A14CT0X**		
Size: Custom	Document Number: **DDR3 SODIMM-A**	Rev: 2.0
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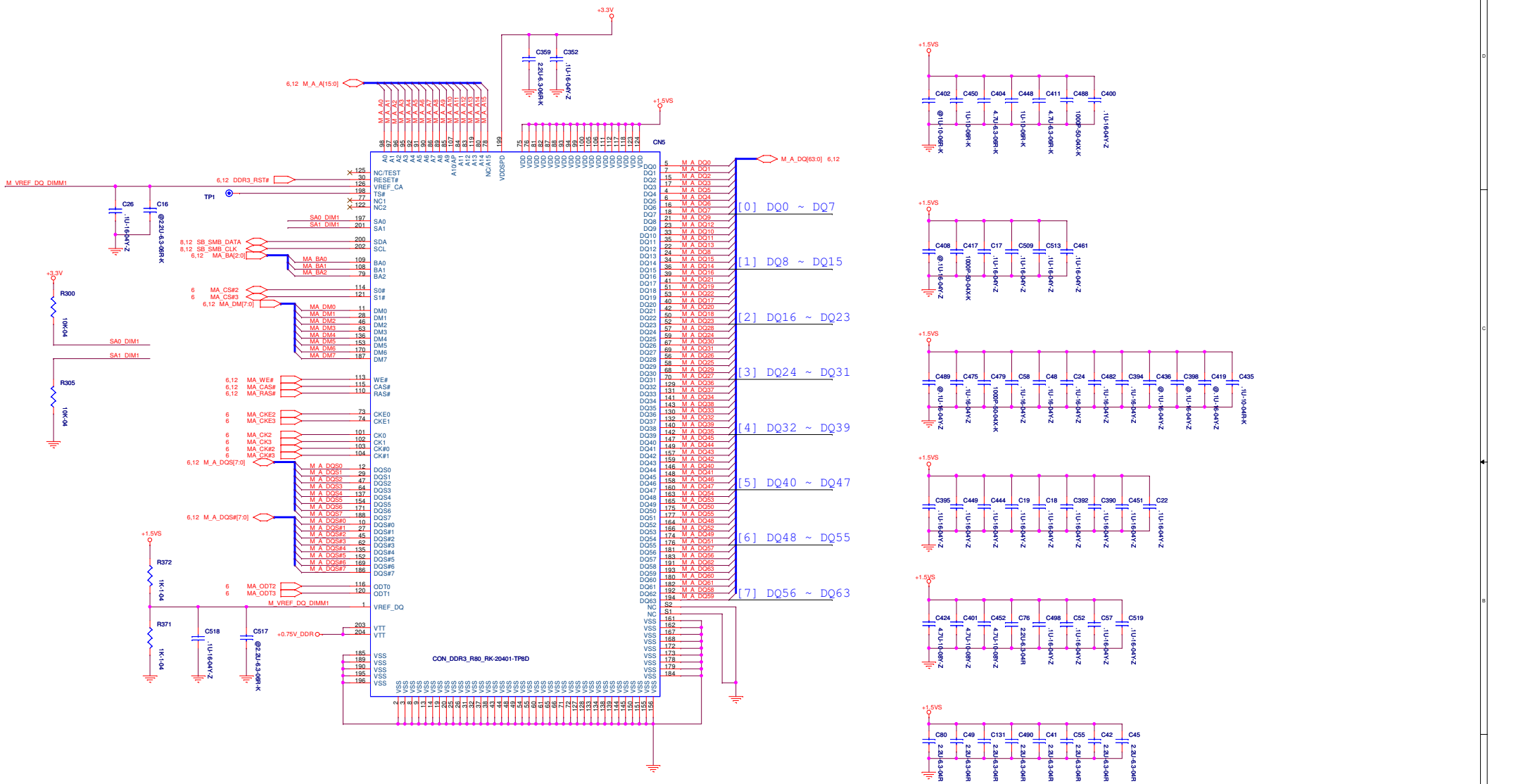
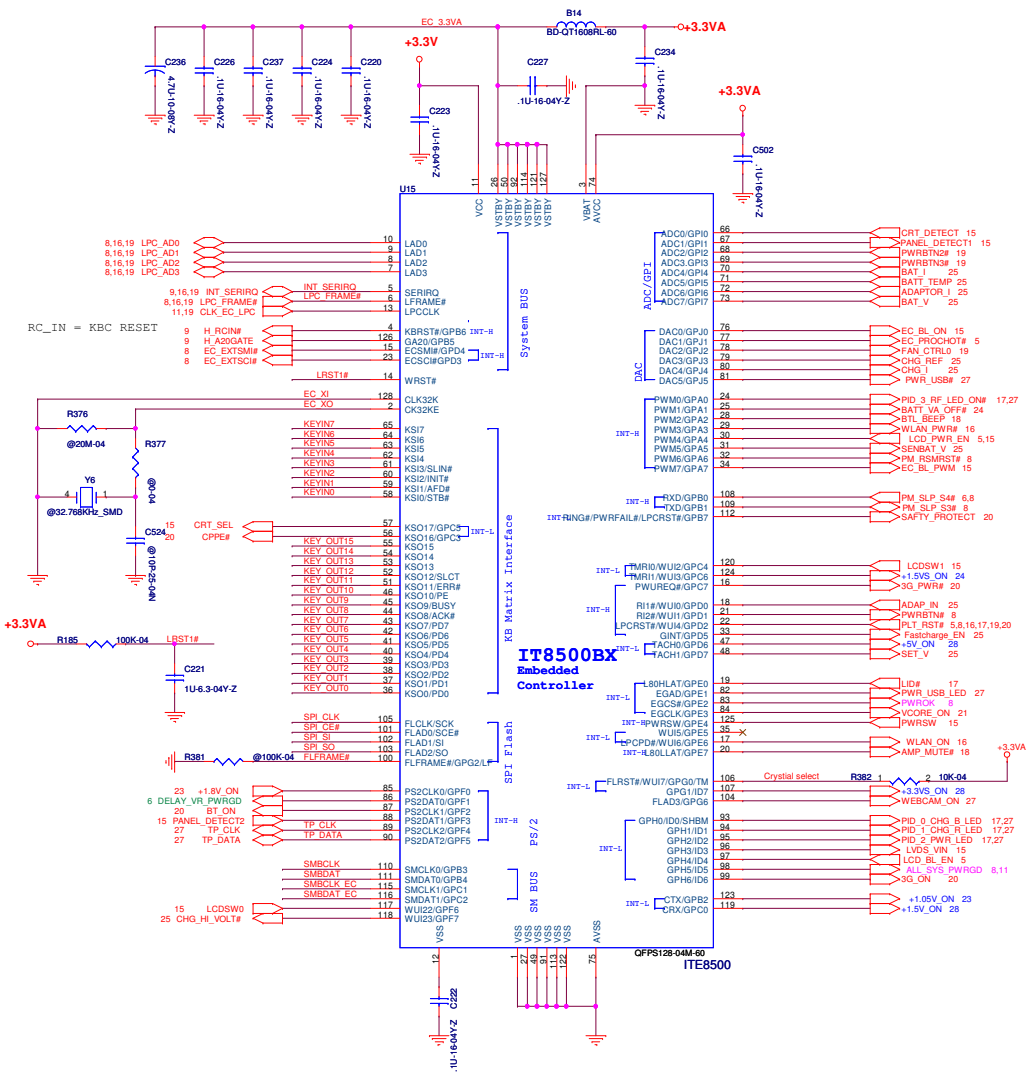
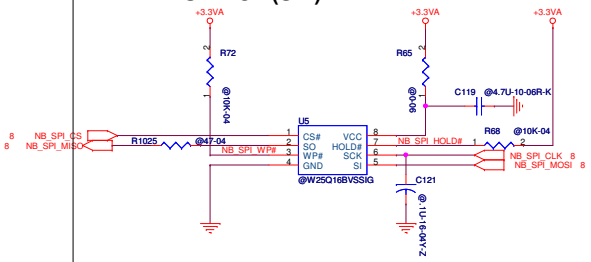


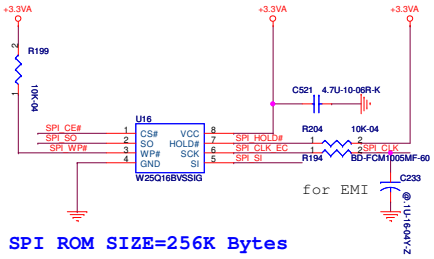
Shuttle Inc			
Title: A14CT0X			
Size: Custom	Document Number: DDR3 SODIMM-B		Rev: 2.0
Date: Thursday, January 12, 2012	Sheet 13 of 28		



TPT FLASH ROM(SPI)

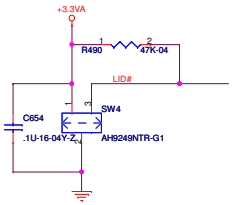


EC FLASH ROM(SPI)

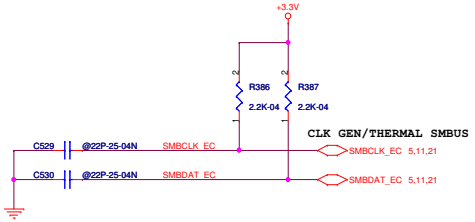


SPI ROM SIZE=256K Bytes

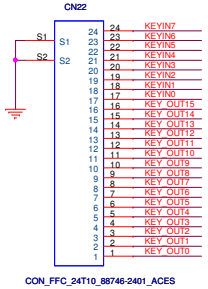
LID SW

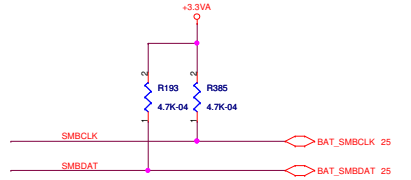


EC SMBUS LEVEL SHIFT



KEYBOARD Conn





SMB0	only for Batt.
SMB1	CLK GEN CPUore,G-sensor

ITE8500 only have 2-pairs SMBUS

ID / MODEL	(ID0)	(ID1)

Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: EC IT8500BX/BIOS/KB CONN	Rev: 2.0
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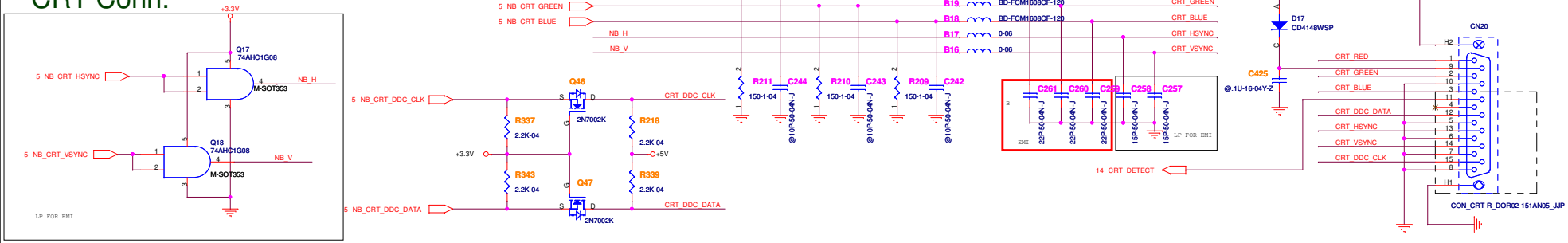
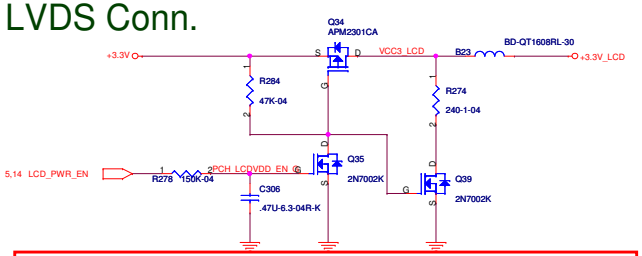
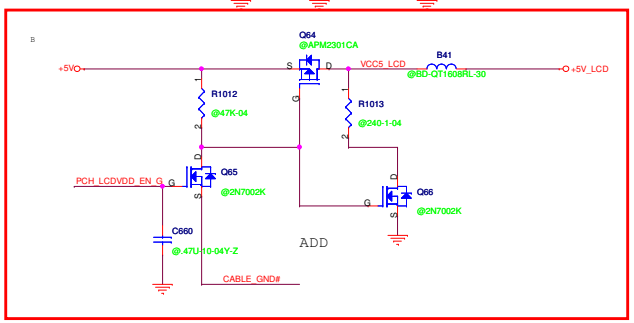
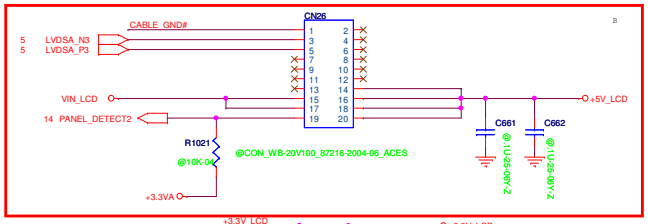
CRT Conn.

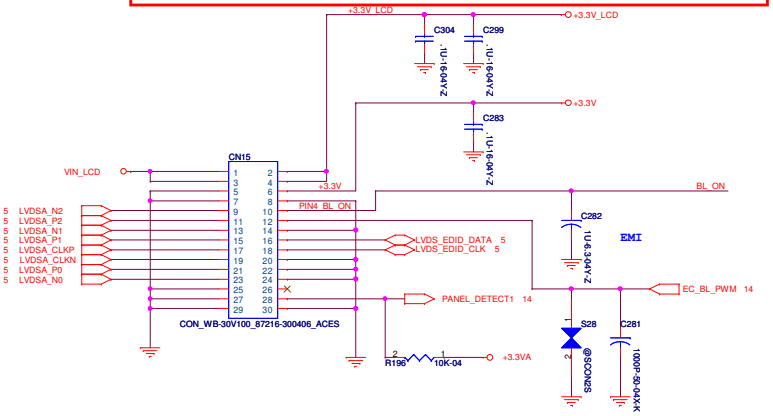


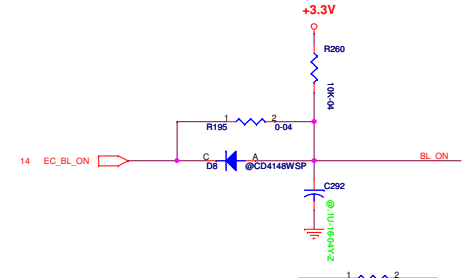
LVDS Conn.

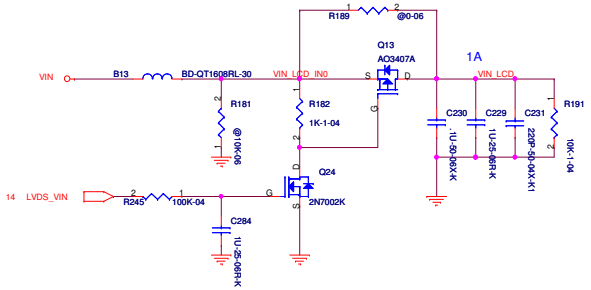


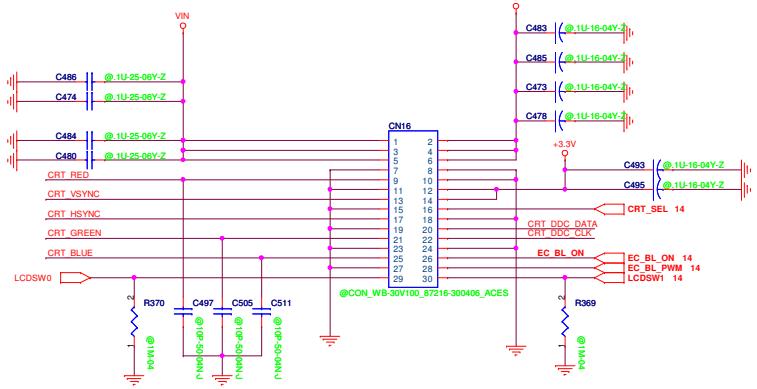






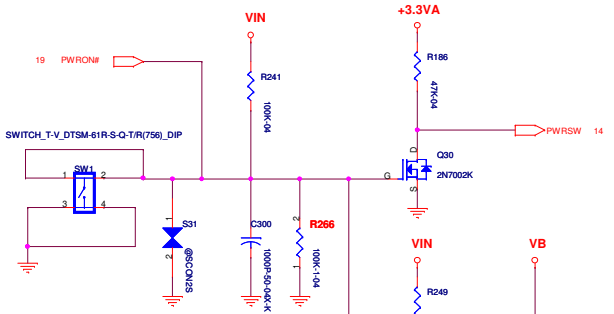


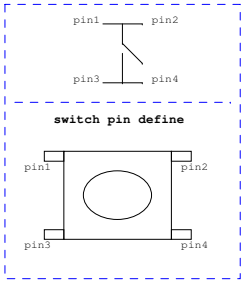




LCDSW1 for FW flash used
LCDSW0 for Quicky KEY used

PWR SW





Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: CRT/LVDS/PWR SW	Rev: 2.0
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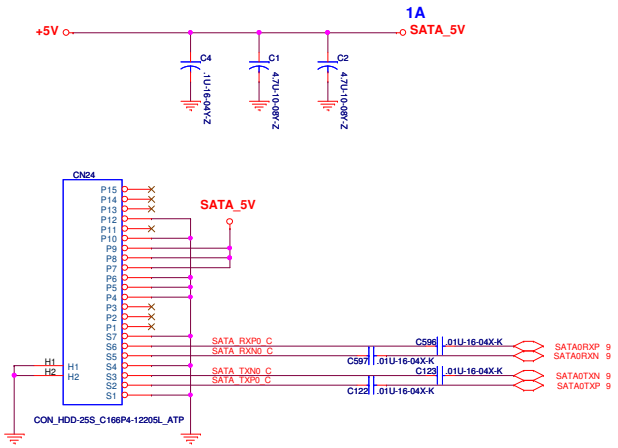
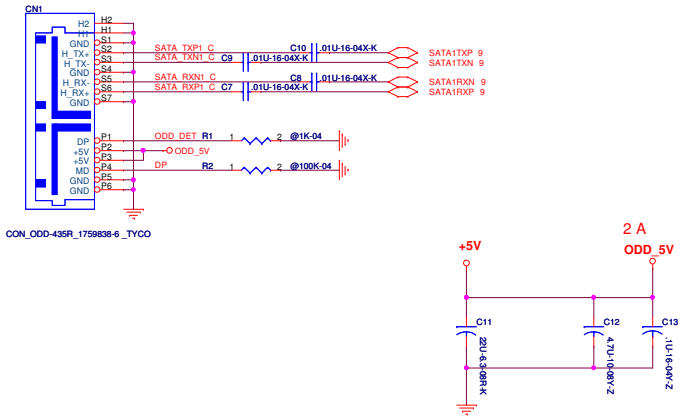
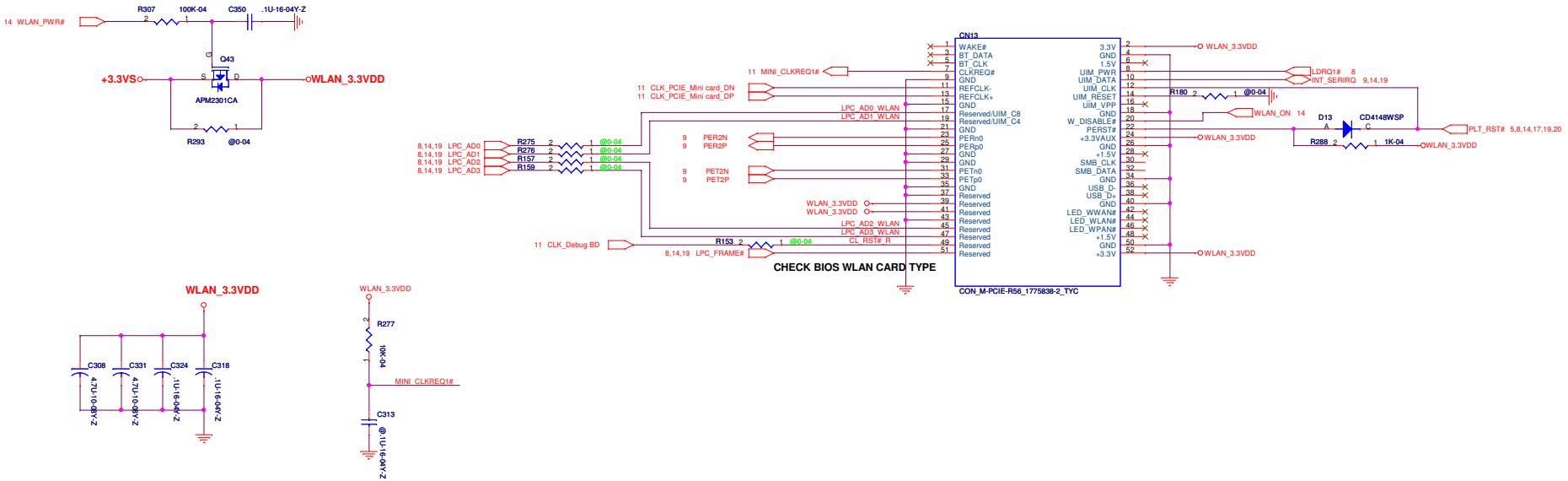
SATA-HDD



CD-ROM



MINI CARD CONN



Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: HDD/ODD /MINI CARD	Rev: 2.0
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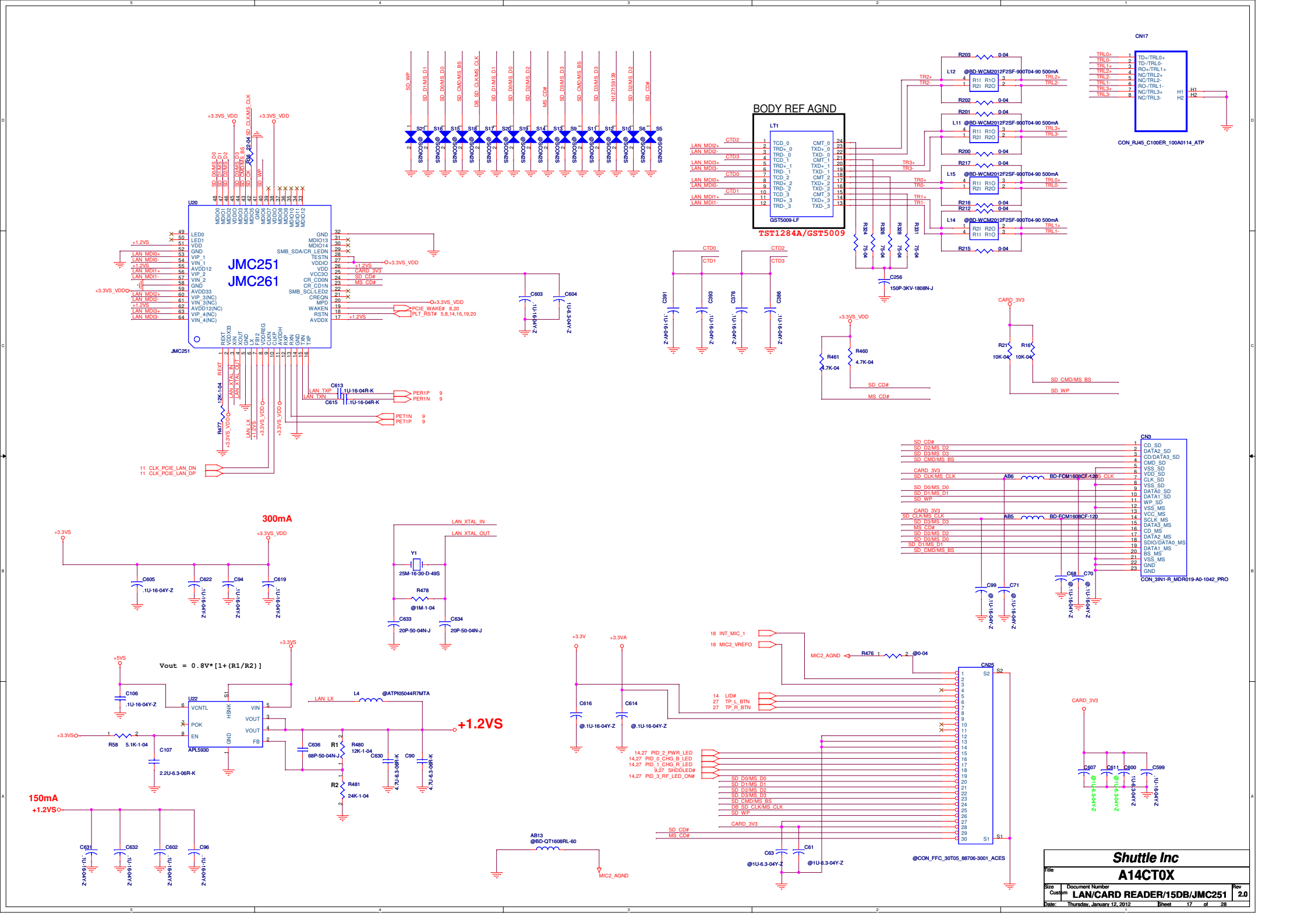
JMC251
JMC261
U20
JMC251
BODY REF AGND
LT1
GST5009-LF
TST1284A/GST5009
CN17
CON_RJ45_C100ER_100A0114_ATP
CN3
CON_3IN1-R_MDR019-A0-1042_PRO
CN25
@CON_FFC_30T05_88706-3001_ACES
U22
APL5930
Vout = 0.8V*[1+(R1/R2)]
300mA
+1.2VS
150mA
+1.2VS
Shuttle Inc
A14CT0X
LAN/CARD READER/15DB/JMC251
2.0
Thursday, January 12, 2012
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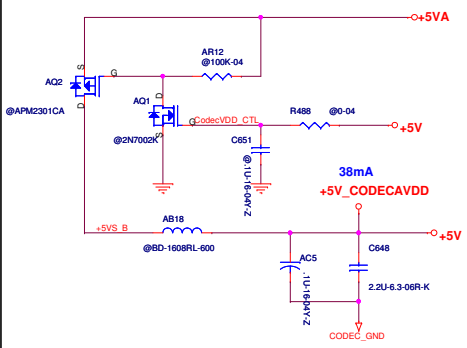
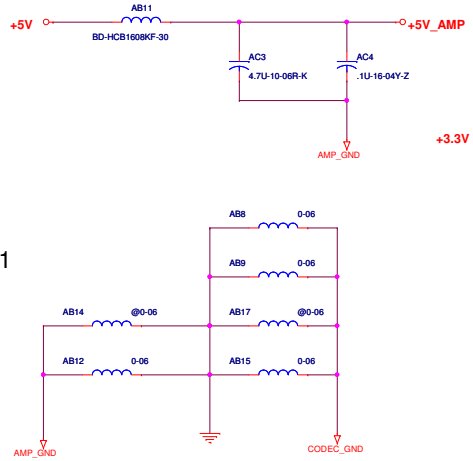
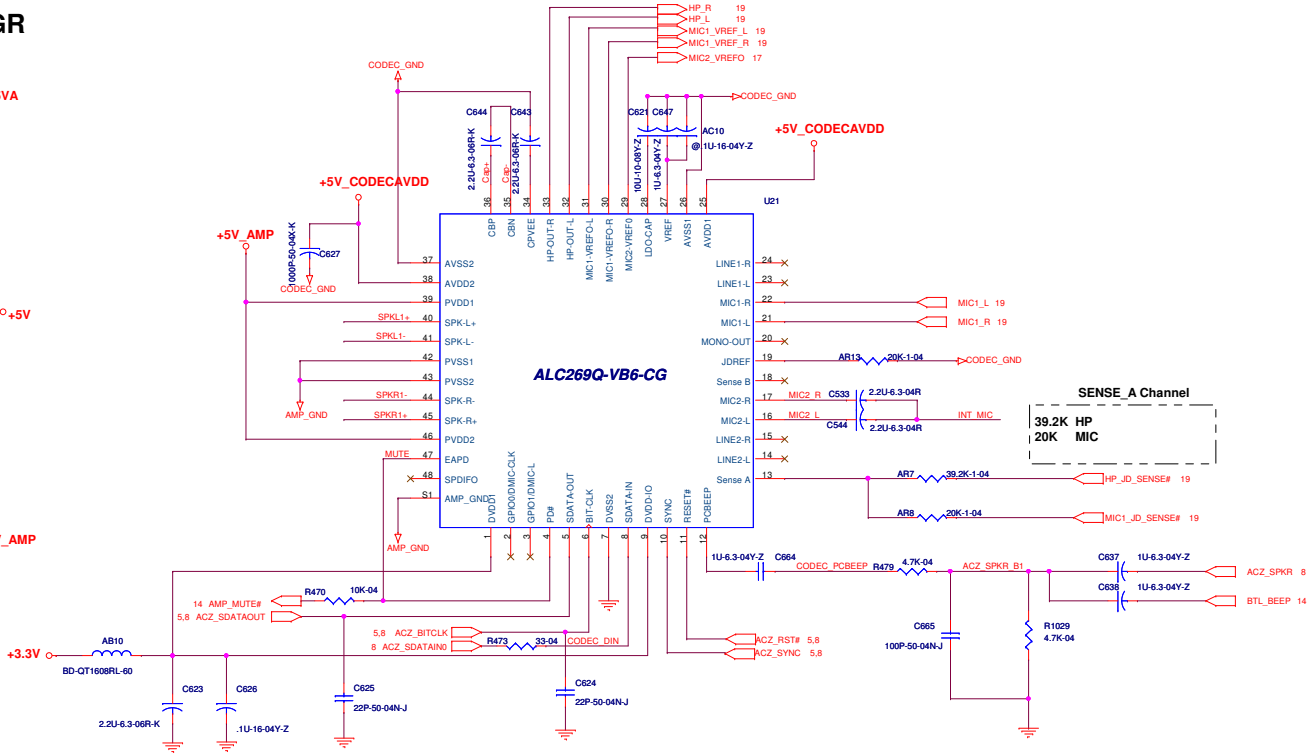
28

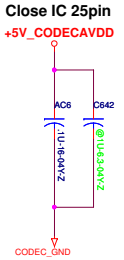
CODEC ALC269Q-VC2-GR

AMP VDD

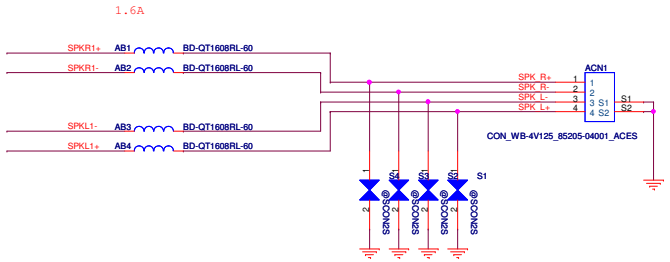




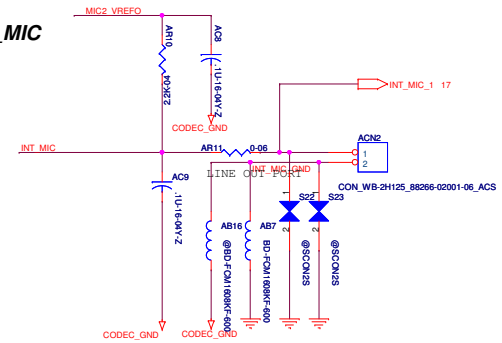




INT_SPEAKER



INT_MIC



Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: CODEC(ALC269)/INT MIC/SPKR	Rev: 2.0
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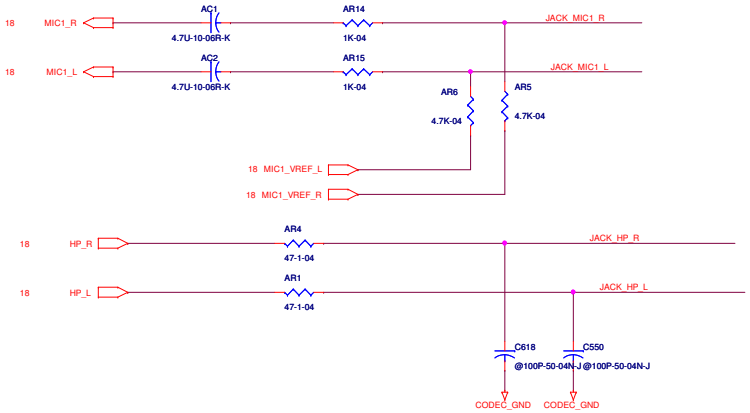
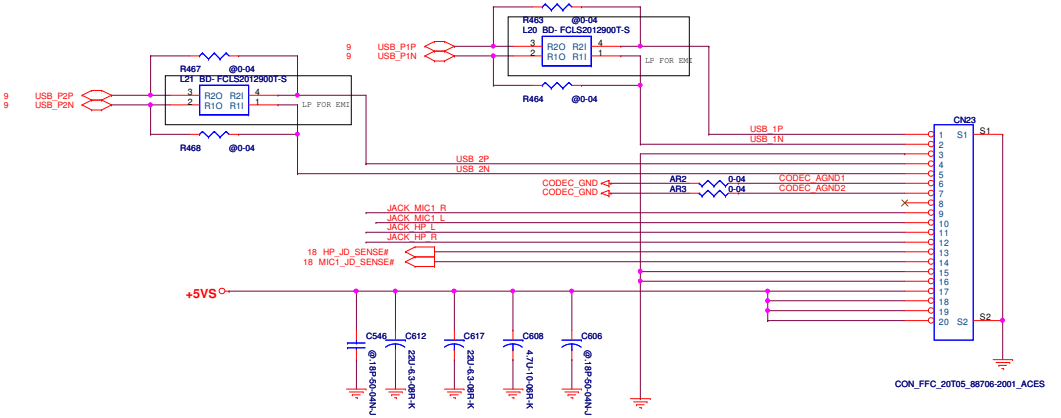
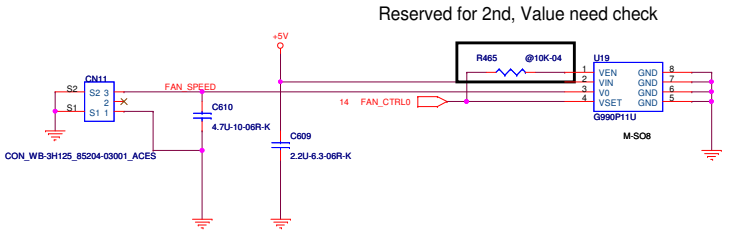
EXT MIC/EXT Line In/ EXT USB JACK

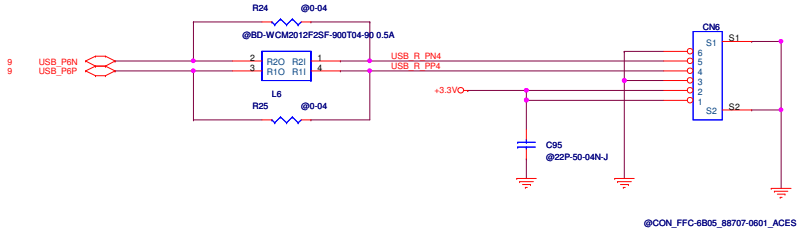




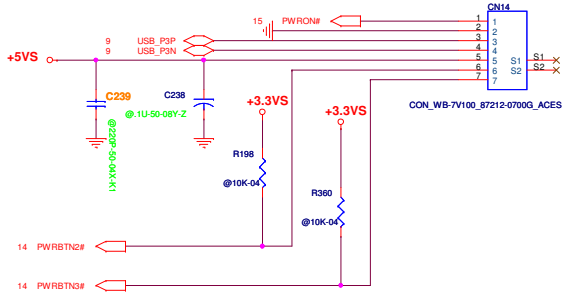
FAN CONTROLLER



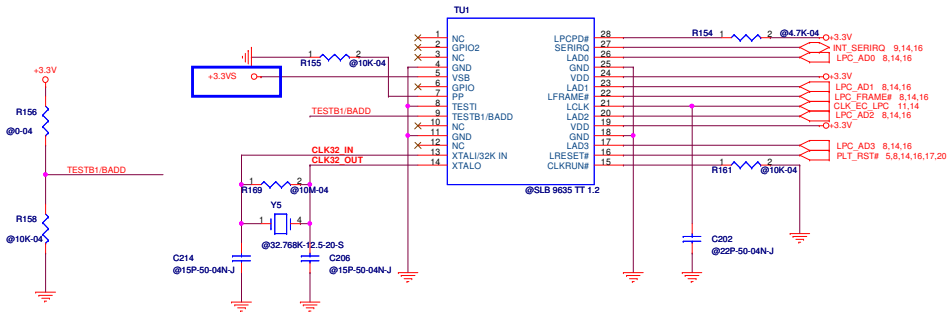
FingerPrint



EXT USB PORT 4



TPM



Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: EXT_MIC/H_P/USB/FAN/G-SENSOR/3G	Rev: 2.0
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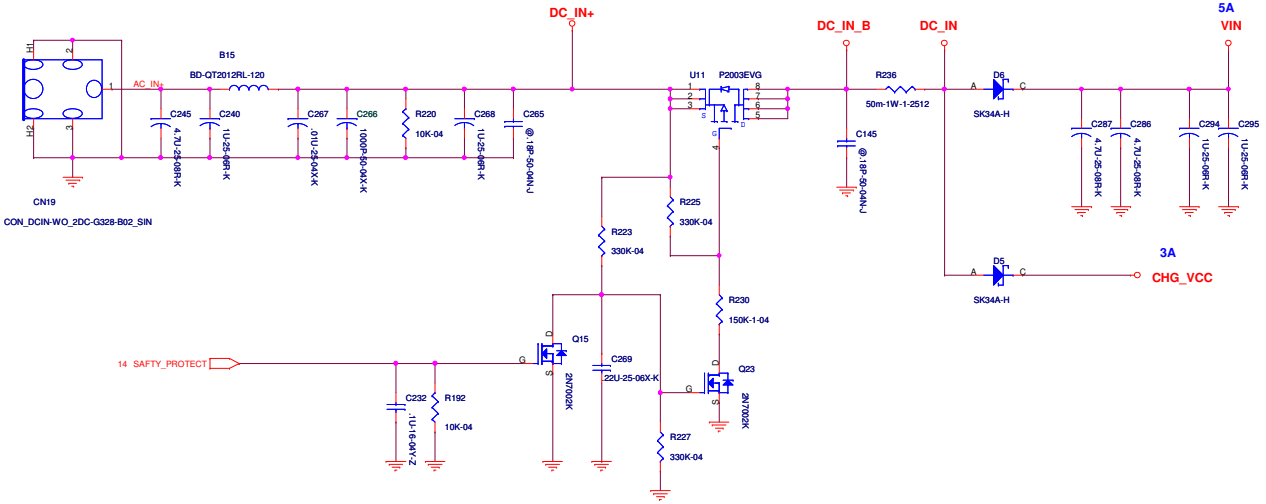
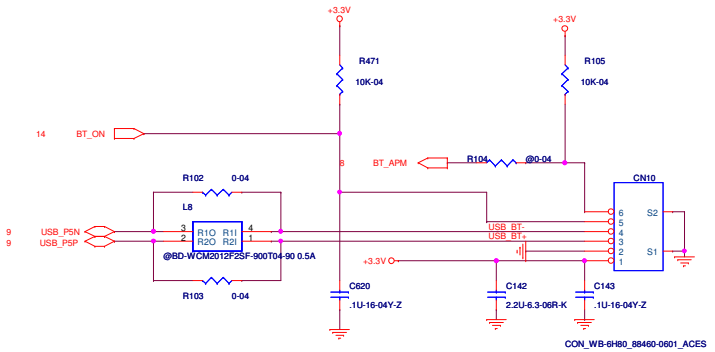
DC IN

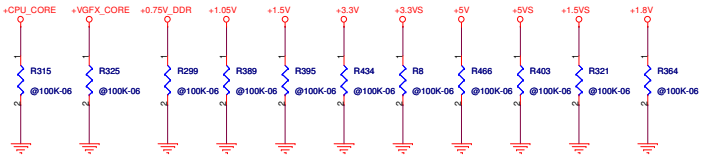
PROJECT	A14HM02			A14CT
Adaptor	65W	90W	120W	40W
Rsense	33m Ohm	25m Ohm	18m Ohm	50m Ohm
Stop Charger	60W	80W	110W	38W

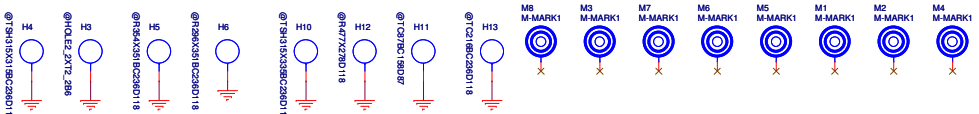


BT CONN



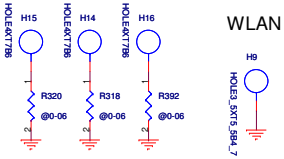
Discharge Resistor





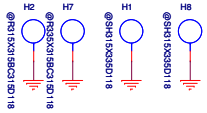
Thermal Module

Main x 3

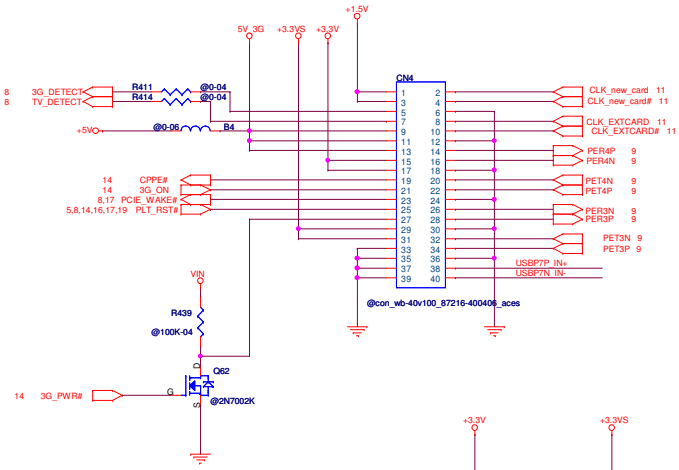


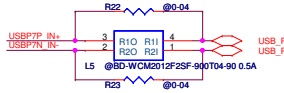
WLAN

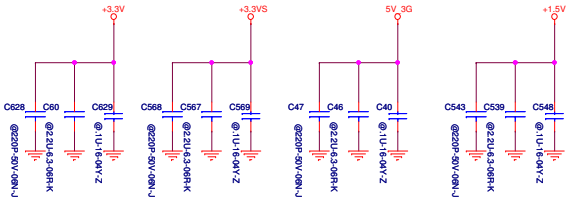
不開太陽花



Express Card







	Shuttle Inc		
Title	A14CT0X		
Size: Custom	Document Number: DC IN/MDC/BT/D-Resistor		Rev: 2.0
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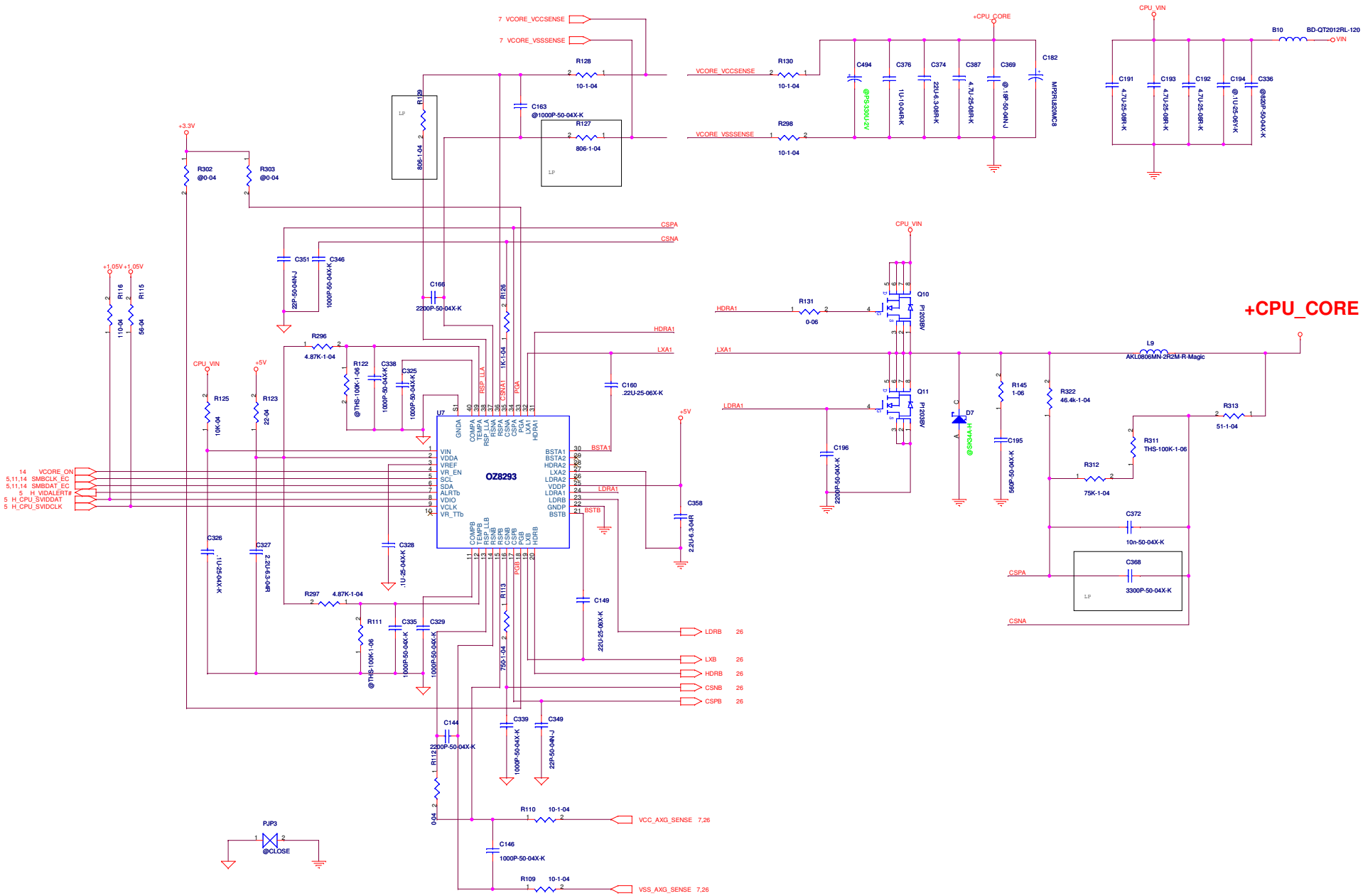
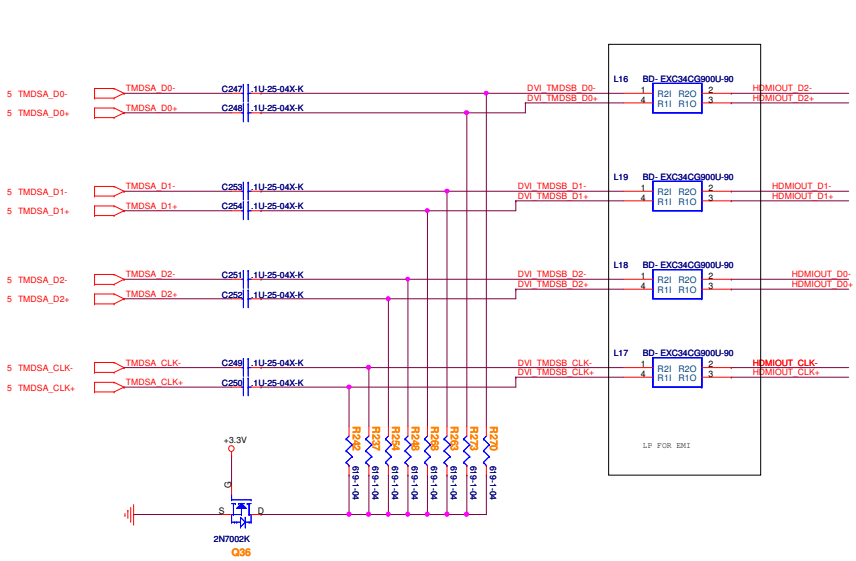
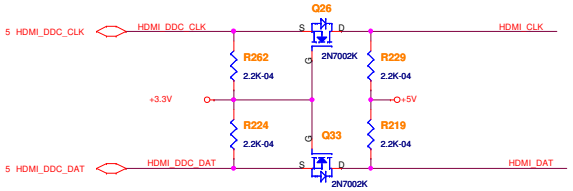
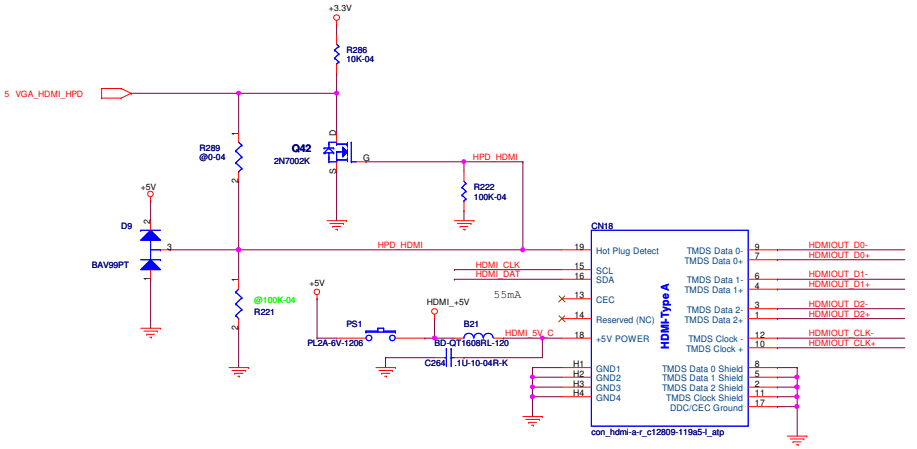


Shuttle Inc	
Title	A14CT0X
Size: Custom	Document Number: CPU CORE
Rev	2.0
Date: Thursday, January 12, 2012	Sheet 21 of 28





CHECK HDMI SPEC AND CRB



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Size: Custom	Document Number: CPU VCCSA		Rev: 2.0
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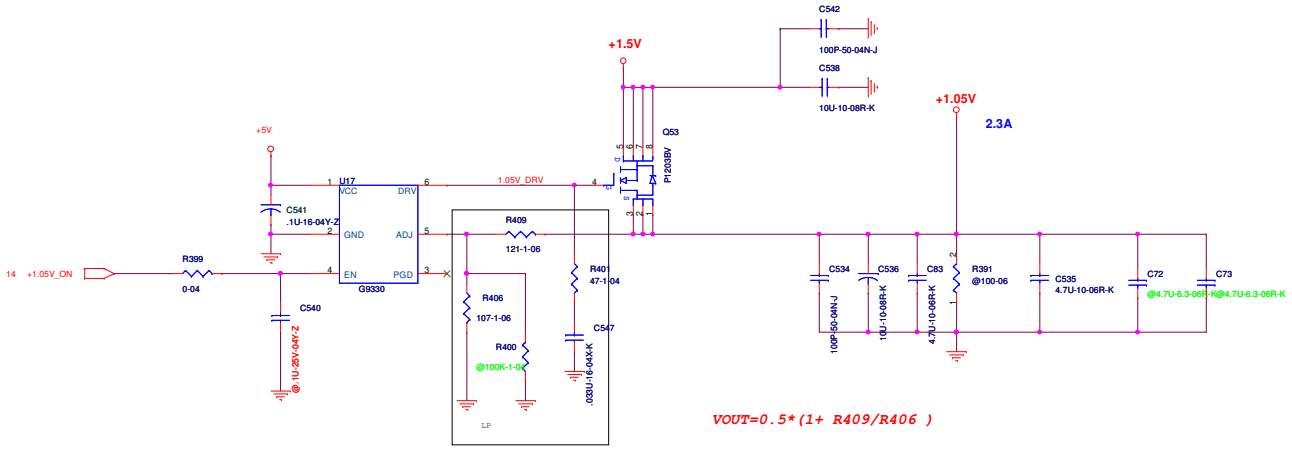
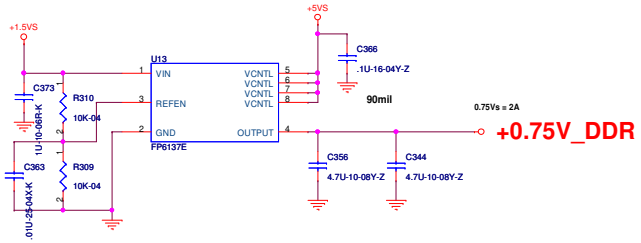
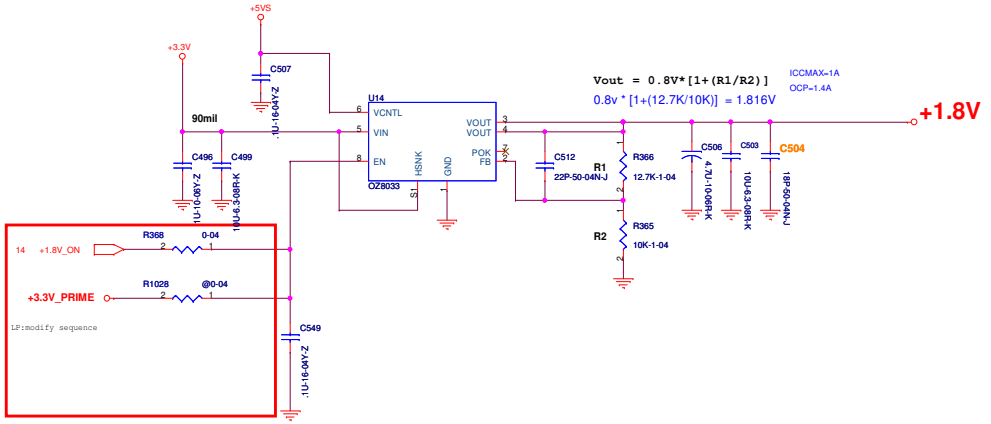


VOUT=0.5*(1+ R409/R406)

D series		N series	
R409	127 OHM	R409	121 OHM
R406	110 OHM	R406	107 OHM

DDR3 Termination Power





Shuttle Inc			
Title: A14CT0X			
Size: Custom	Document Number: +1.5VS(OZ8116)/+0.75VS/+1.8V		Rev: 2.0
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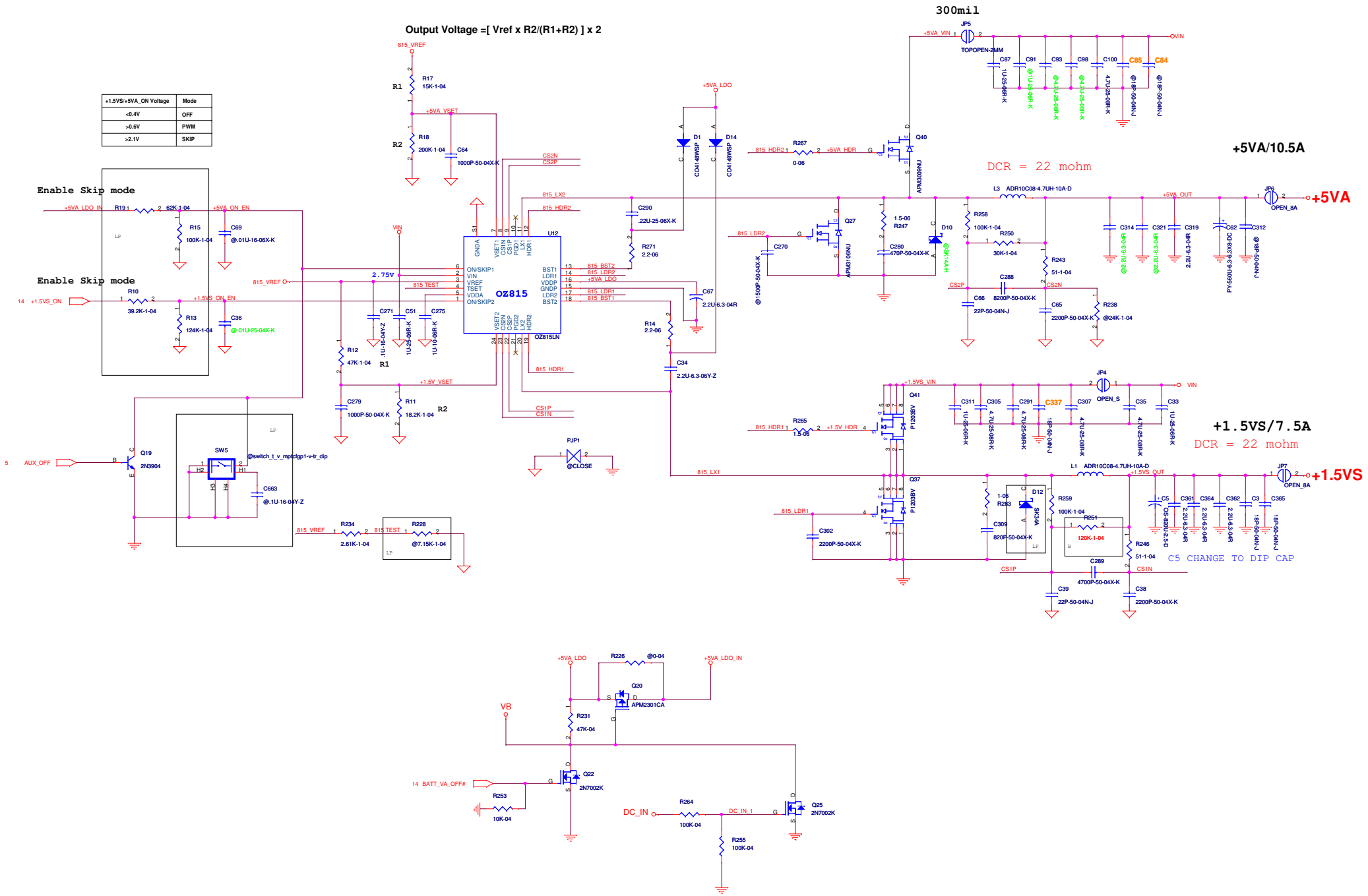

+1.5VS/+5VA_ON Voltage	Mode
<0.4V	OFF
>0.6V	PWM
>2.1V	SKIP

Shuttle Inc	
Title: A14CT0X	
Size: Custom	Document Number: +1.05VS/+5VA (OZ815) Rev: 2.0
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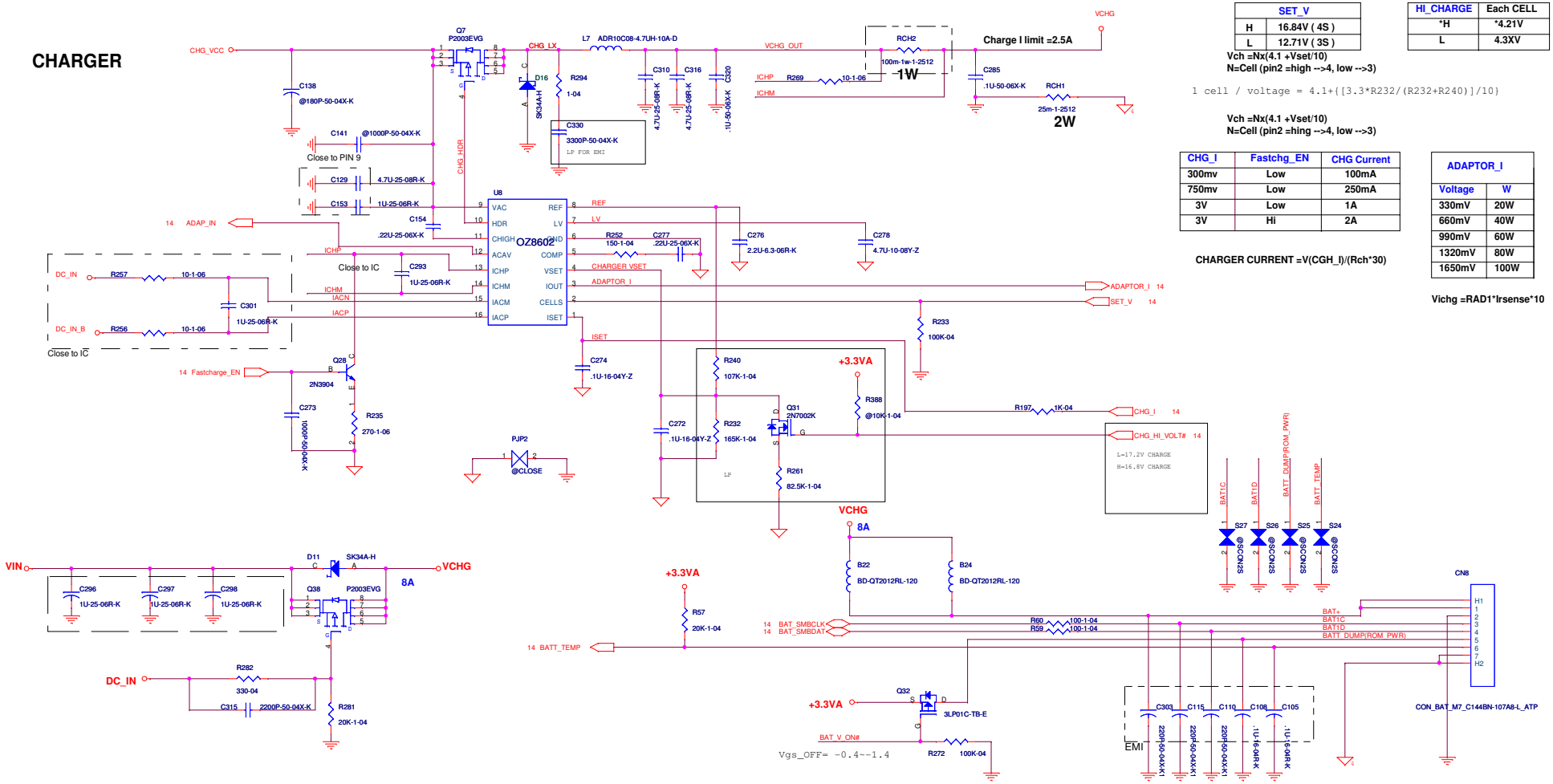
CHARGER



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

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

HI_CHARGE	Each CELL
*H	*4.21V
L	4.3XV

1 cell / voltage = 4.1+{[3.3*R232/(R232+R240)]/10}

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

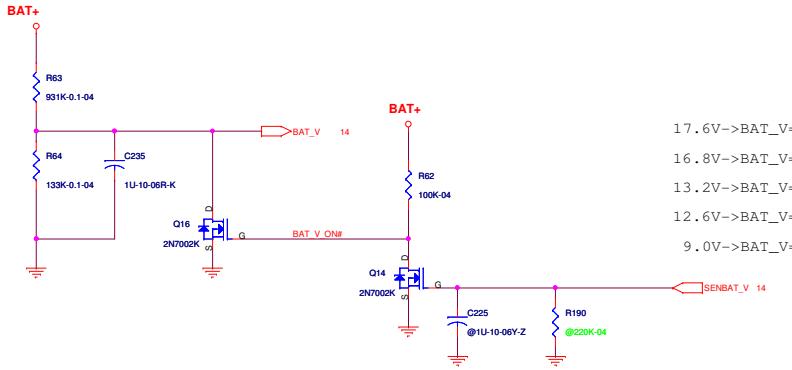
CHG_I	Fastchg_EN	CHG Current
300mv	Low	100mA
750mv	Low	250mA
3V	Low	1A
3V	Hi	2A

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

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

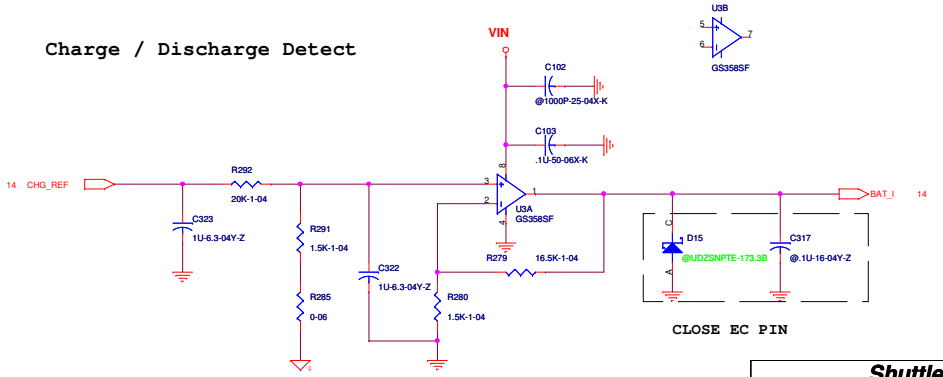
Vichg =RAD1*Irsense*10

Battery Voltage Detect



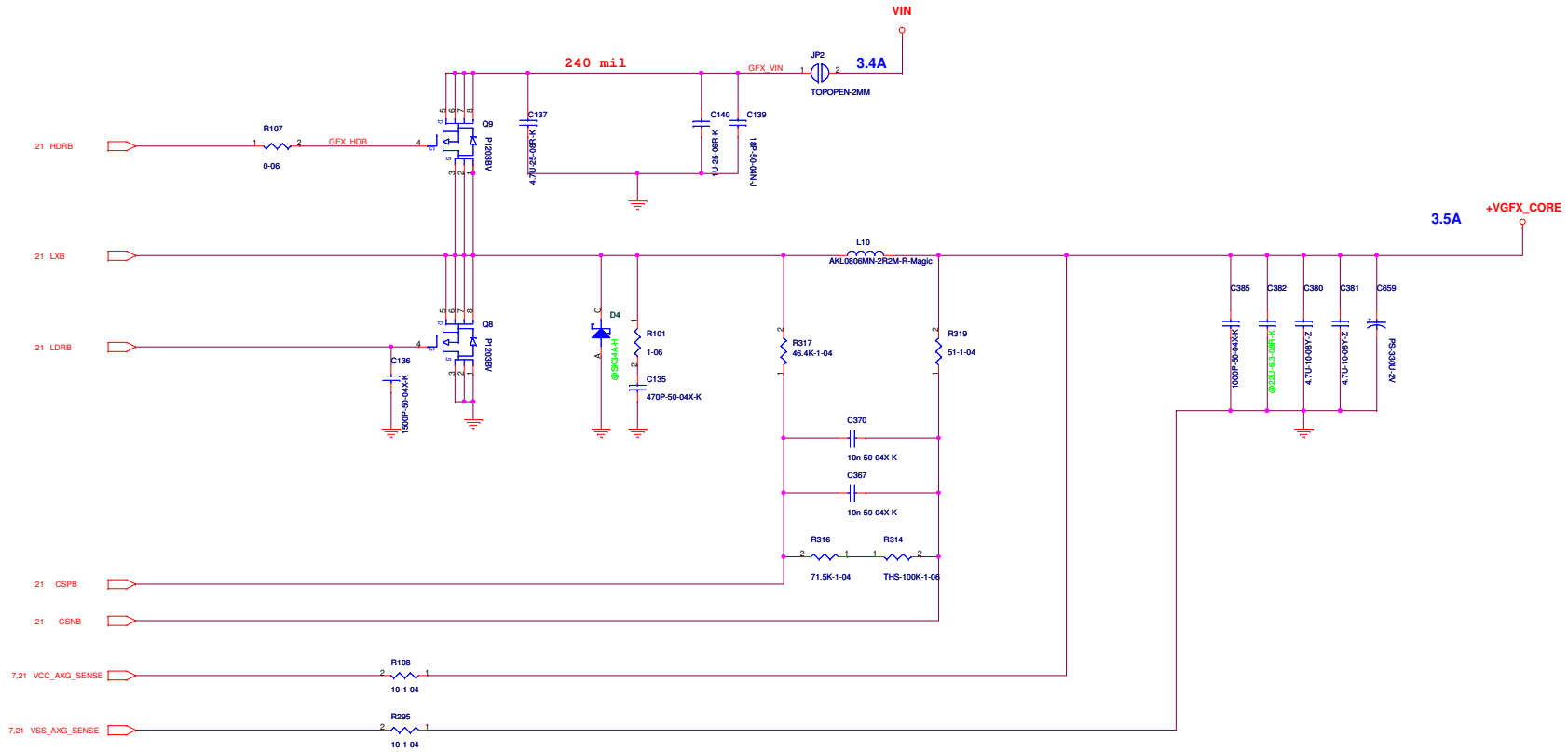
17.6V->BAT_V=2.2V
16.8V->BAT_V=2.1V
13.2V->BAT_V=1.65V
12.6V->BAT_V=1.575V
9.0V->BAT_V=1.125V

Charge / Discharge Detect



CLOSE EC PIN

Shuttle Inc			
Title: A14CT0X			
Size: Custom	Document Number: BATT IN/CHARGER(OZ8602)		Rev: 2.0
Date: Thursday, January 12, 2012		Sheet 25 of 28	



Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: iGPU_CORE	Rev: 2.0
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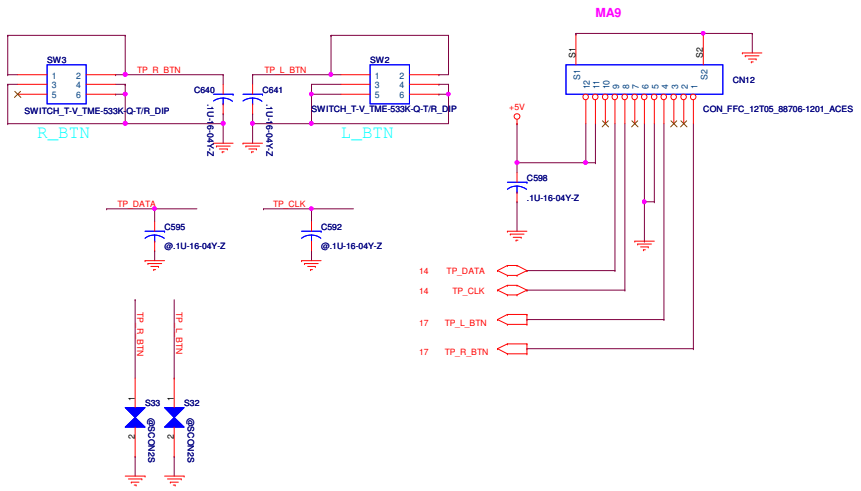
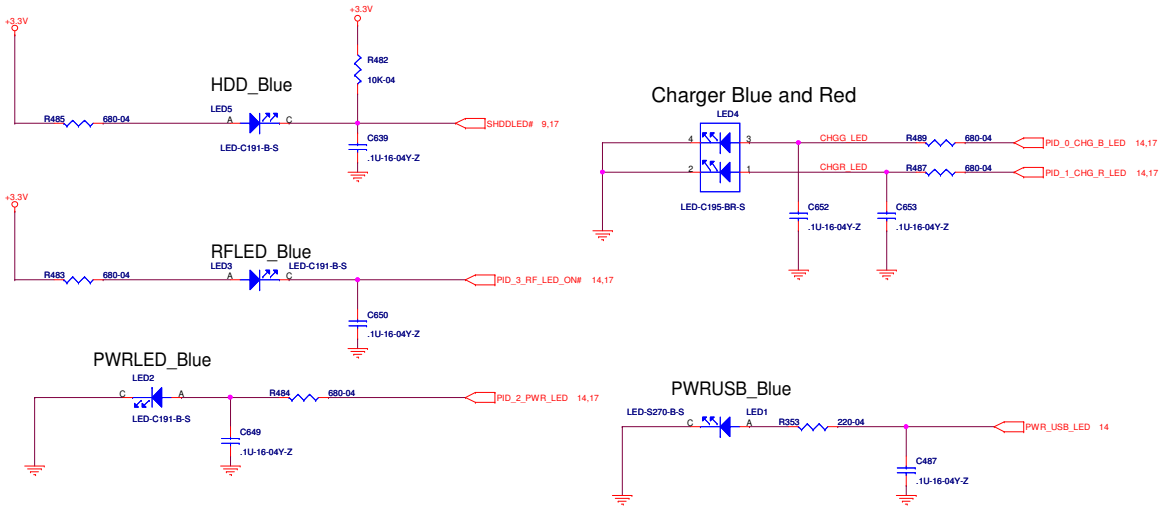
Touch Pad

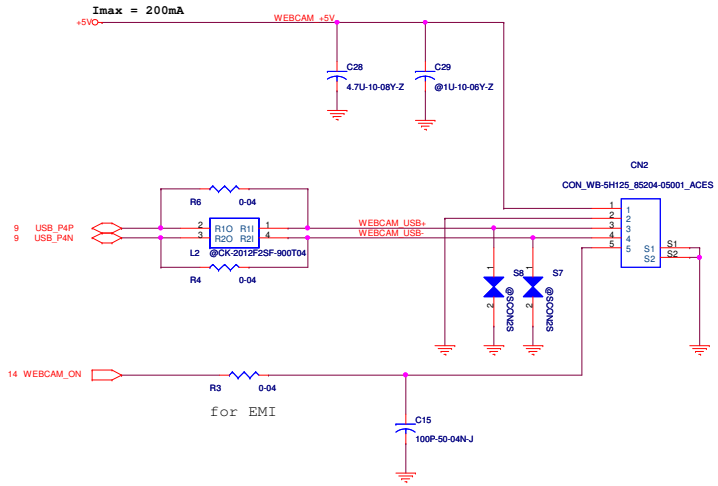


LED

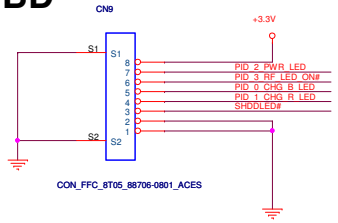


WEBCAM CON

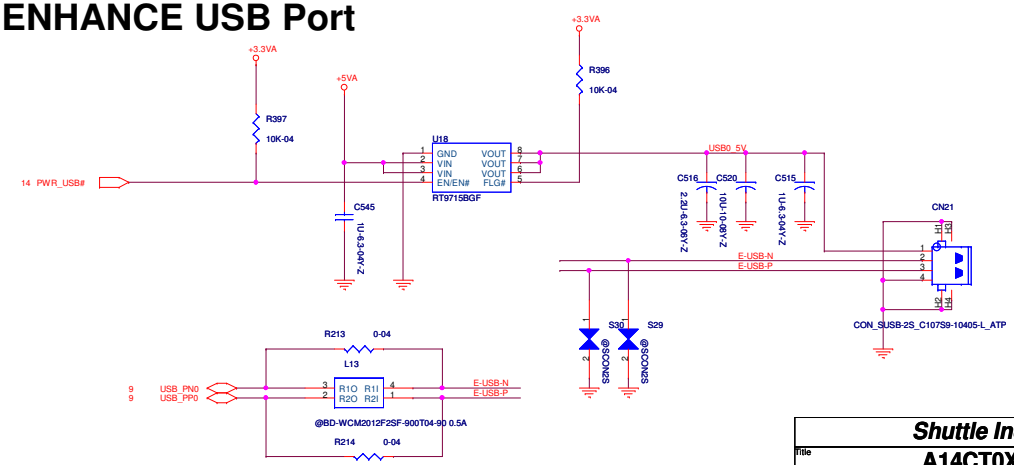
WEBCAM_ON	
1	ON
0	OFF



LED BD



ENHANCE USB Port



Shuttle Inc			
Title: A14CT0X			
Size: Custom	Document Number: TP/LED/WEBCAM/USB CHARGER		Rev: 2.0
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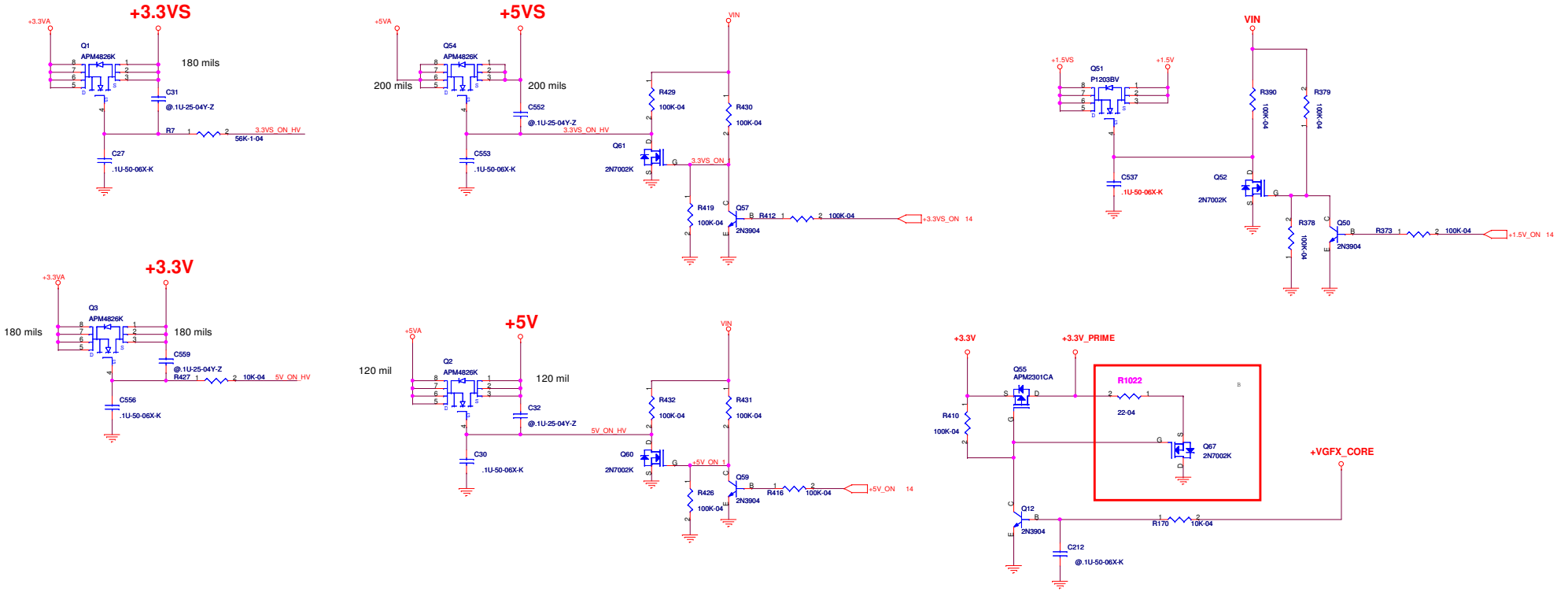
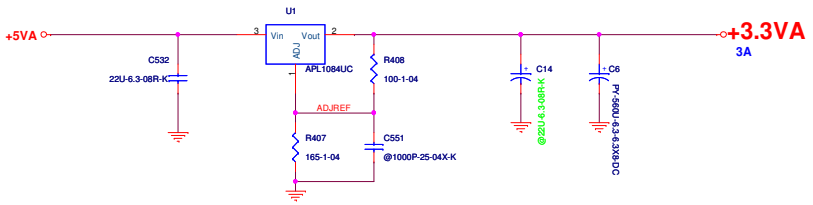
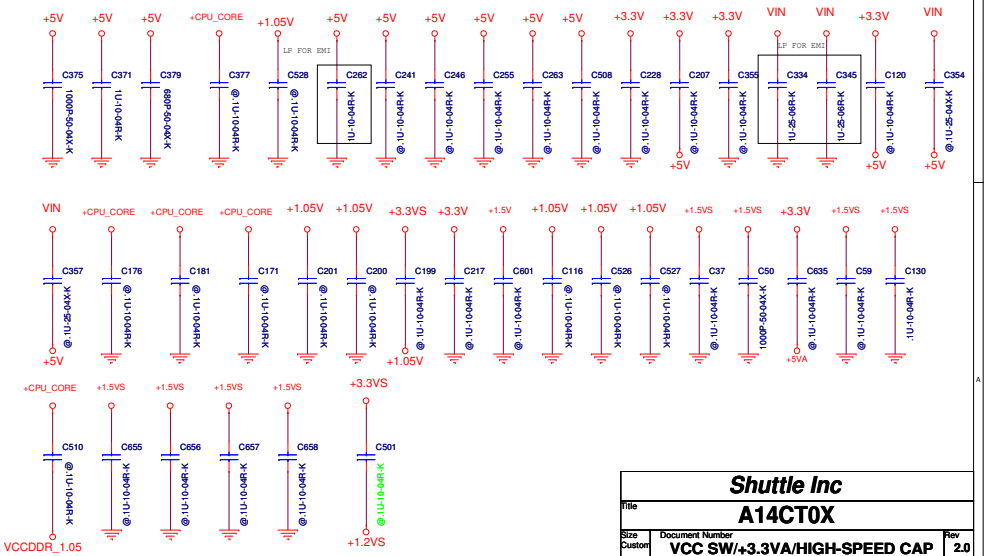
VCCSW



LDO



HIGH-SPEED CAP



Shuttle Inc		
Title: A14CT0X		
Size: Custom	Document Number: VCC SW/+3.3VA/HIGH-SPEED CAP	Rev: 2.0
Date: Thursday, January 12, 2012	Sheet 28 of 28	