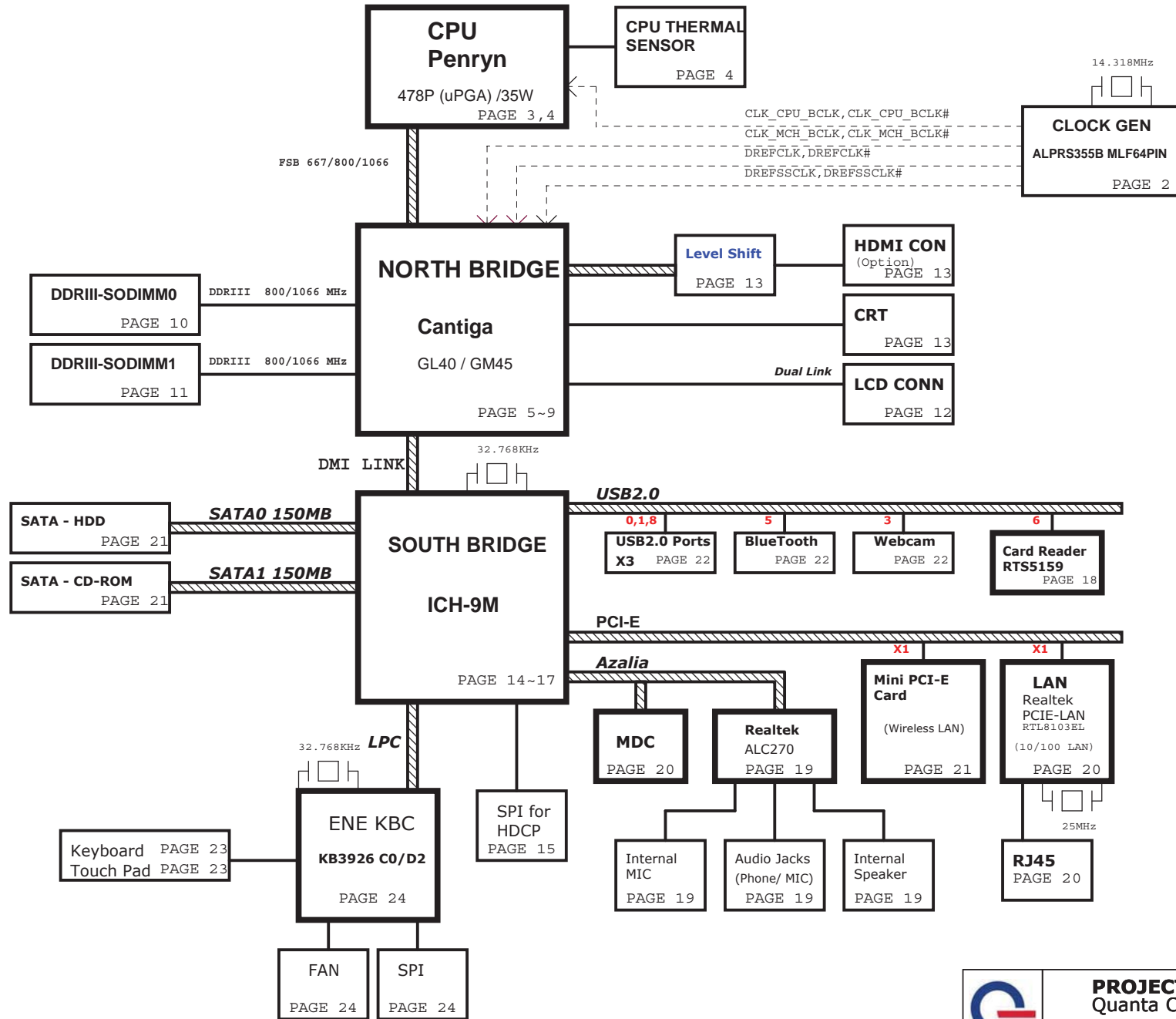


Wimbledon AX3/5 BLOCK DIAGRAM

PCB STACK UP
6L UMA CO-LAY DIS


- LAYER 1 : TOP
- LAYER 2 : SGND
- LAYER 3 : IN1
- LAYER 4 : IN2
- LAYER 5 : VCC
- LAYER 6 : BOT



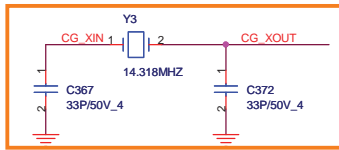
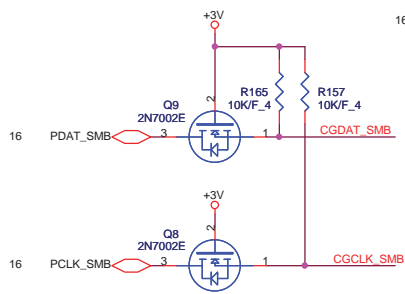
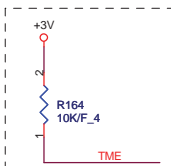
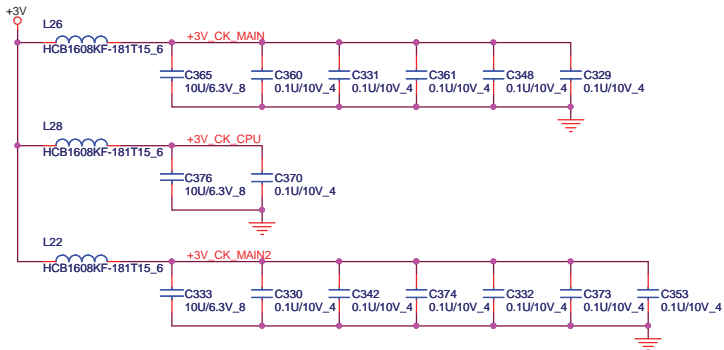
- SYSTEM CHARGER (ISL6251AHAZ-T) PAGE 25
- SYSTEM POWER (RT8206BGQW) PAGE 26
- VCCP +1.05V (RT8209AGQW) & +1.8VSUS (RT9043GB) PAGE 27
- CPU CORE (ISL6262ACRZ-T) PAGE 28
- DDR III SMD DR +1.5VSUS (RT8207AGQW) PAGE 29
- SYSTEM DISCHARGER PAGE 30

- Keyboard PAGE 23
- Touch Pad PAGE 23

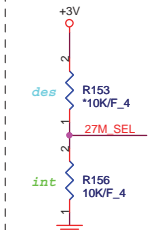
- FAN PAGE 24
- SPI PAGE 24

 NBS	PROJECT :AX3		Date: Wednesday, November 25, 2009 Sheet 1 of 30
	Quanta Computer Inc. Block Diagram		
Size Custom	Document Number		

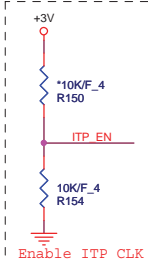
3,4,5,6,8,9,14,17,27,28 +1.05V
4,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,28,30 +3V



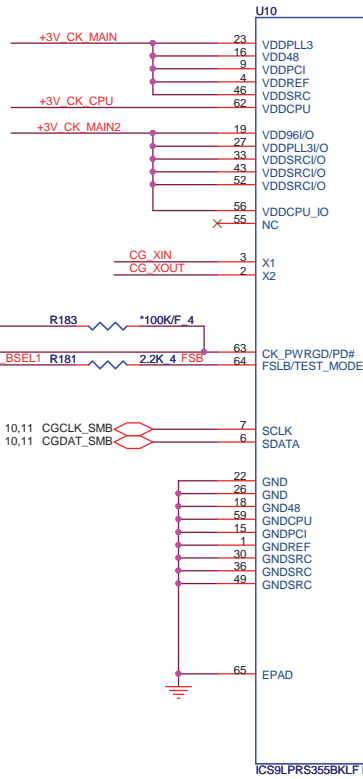
DB:Change from 27P to 33P(TXC suggestion)



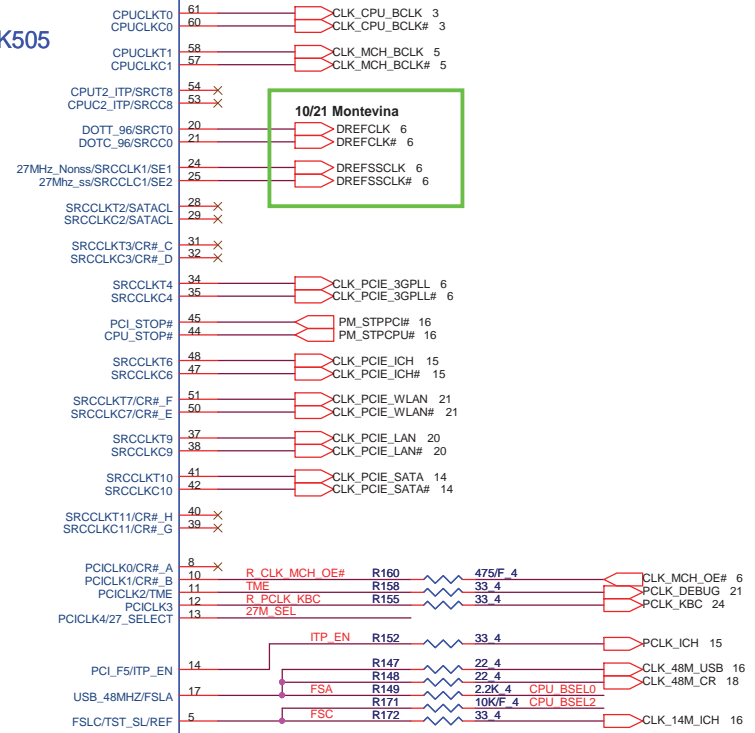
0=UMA
1 = External VGA



Enable ITP CLK



CK505



10/21 Montevina

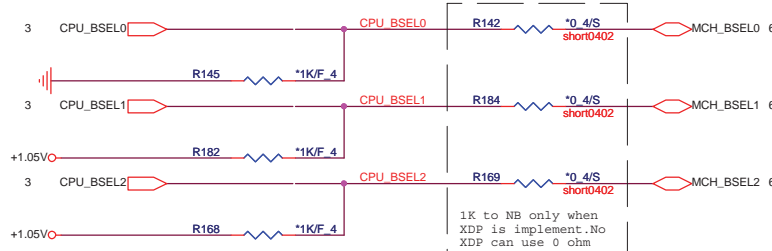
CK505 QFN64

Silego SLG8SP513VTR AL8SP513000
Realtek RTM875N-606-VD-GR AL000875000
ICS ICS9LPRS355BKLF ALPRS355000



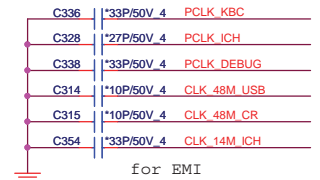
27M_SEL PIN13	PIN20	PIN21	PIN24	PIN25
0=UMA	DOT96T	DOT96C	SRCT1/LCDT_100	SRCT1/LCDT_100
1 = External VGA	SRCT0	SRCC0	27Mout-NSS	27Mout-SS

CPU Clock select



1K to NB only when XDP is implement.No XDP can use 0 ohm

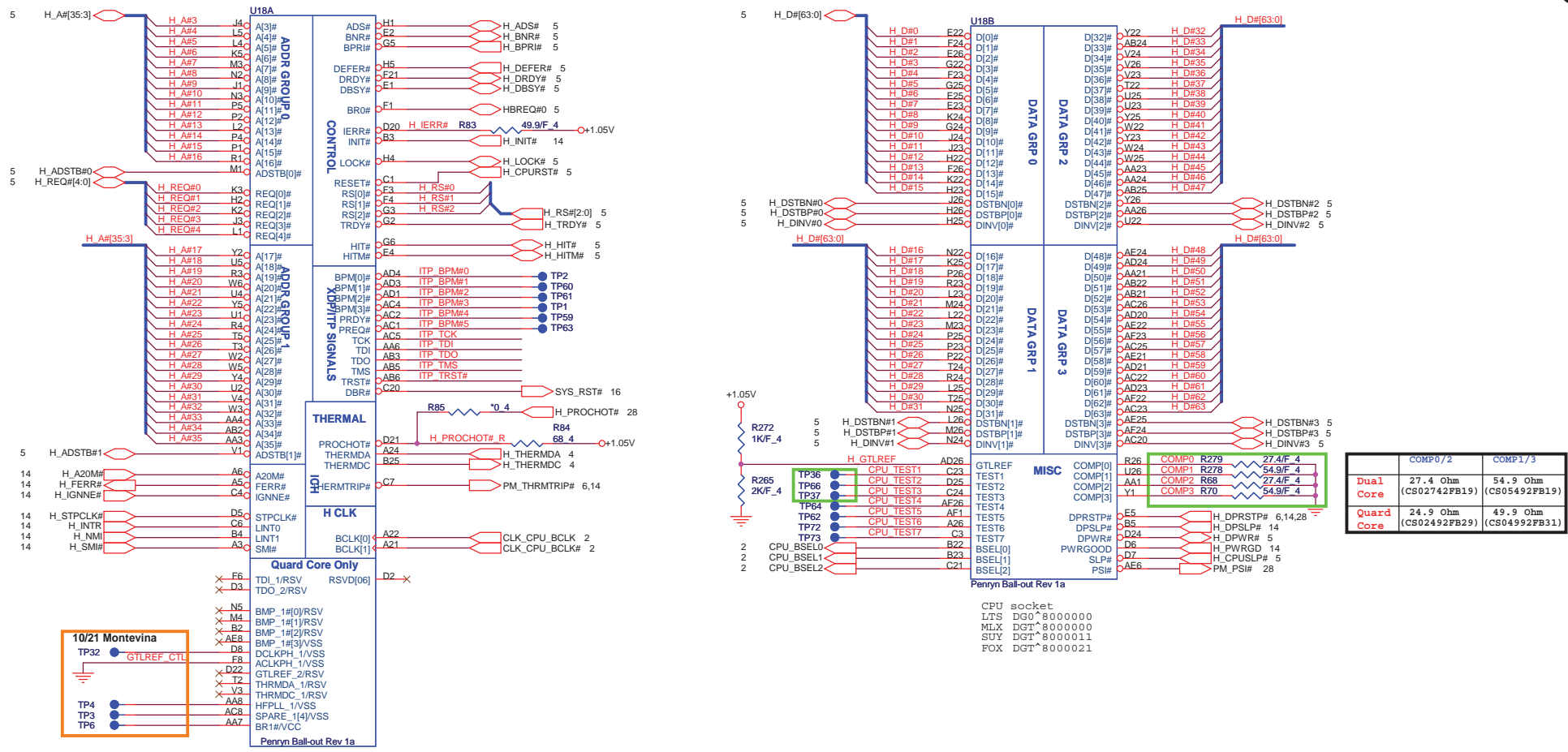
FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33



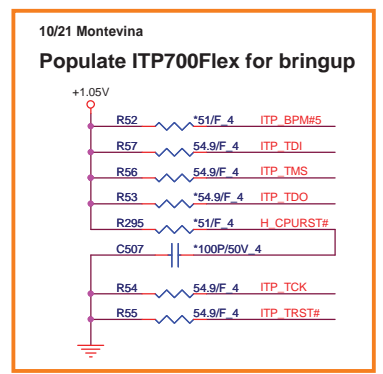
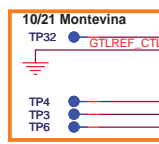
for EMI

PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number **Clock Generator** Rev 1A
Date: Friday, November 27, 2009 Sheet 2 of 30



	COMP0/2	COMP1/3
Dual Core	27.4 Ohm (CS02742FB19)	54.9 Ohm (CS05492FB19)
Quad Core	24.9 Ohm (CS02492FB29)	49.9 Ohm (CS04992FB31)

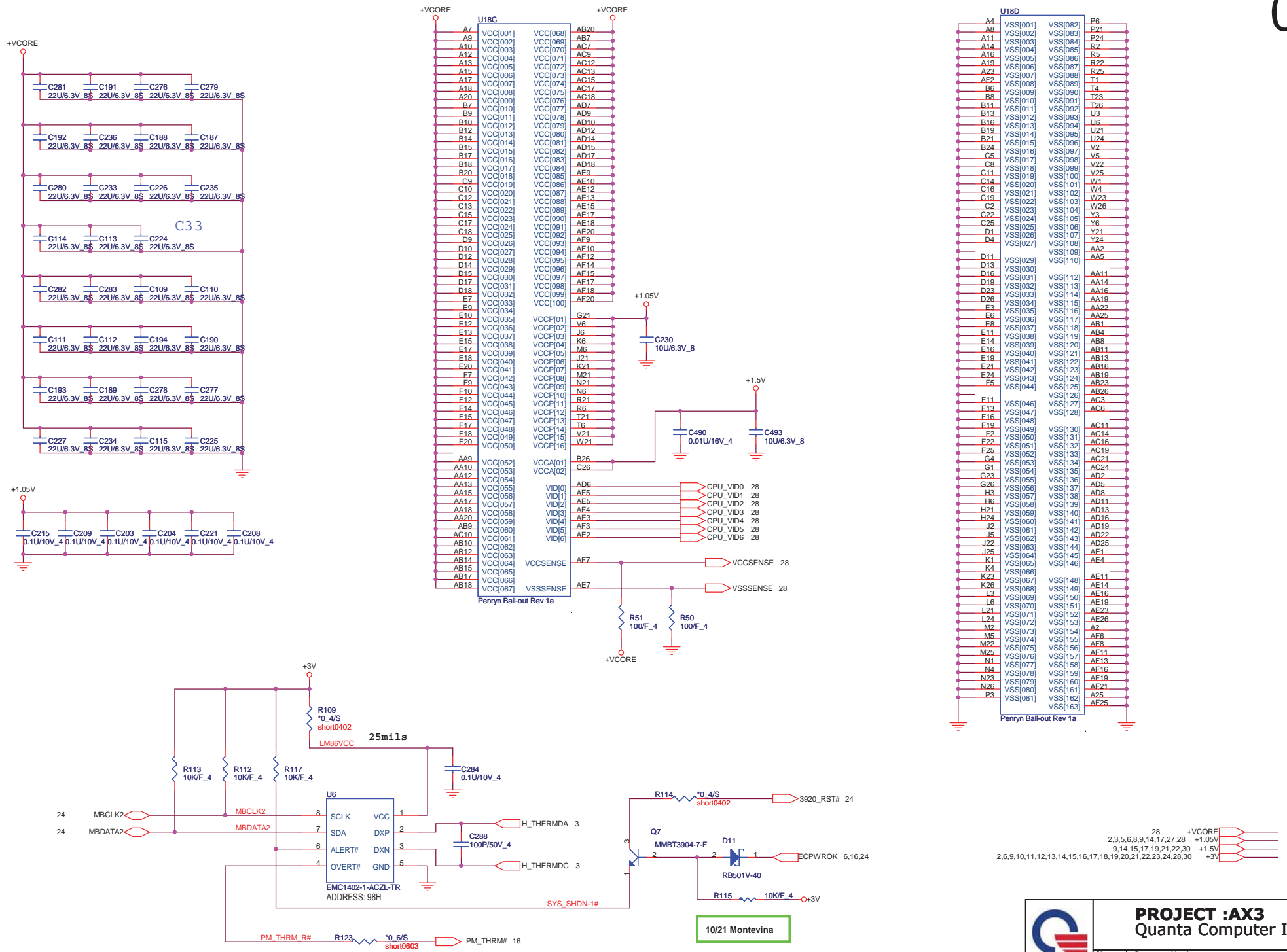


2,4,5,6,8,9,14,17,27,28 +1.05V

PROJECT :AX3
Quanta Computer Inc.

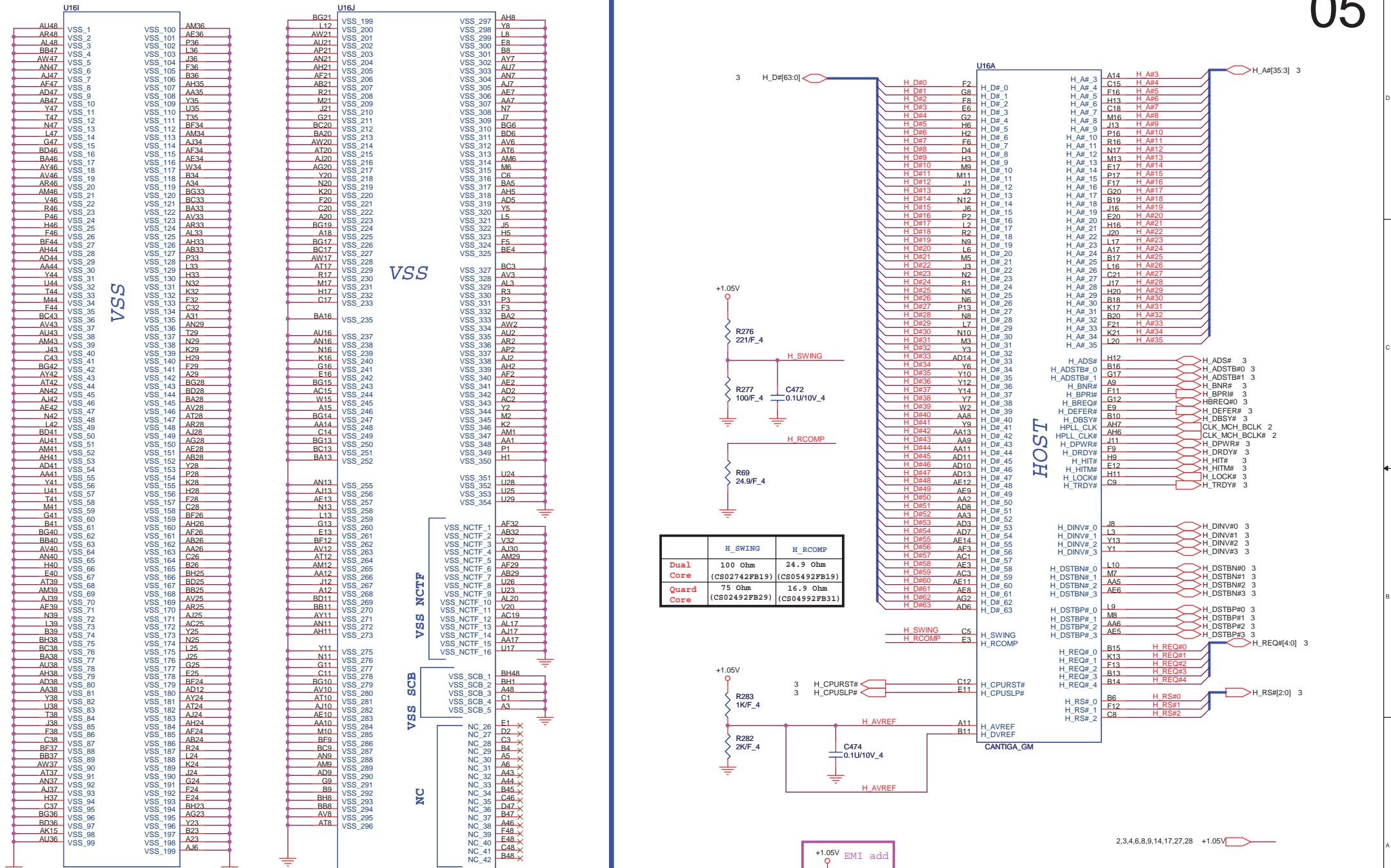
NBS5

Size Custom	Document Number Penryn Host 1/2	Rev 1A
Date: Friday, November 27, 2009	Sheet 3 of 30	



PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number Penryn & TH Monitor 2/2 Rev 1A
 Date: Friday, November 27, 2009 Sheet 4 of 30

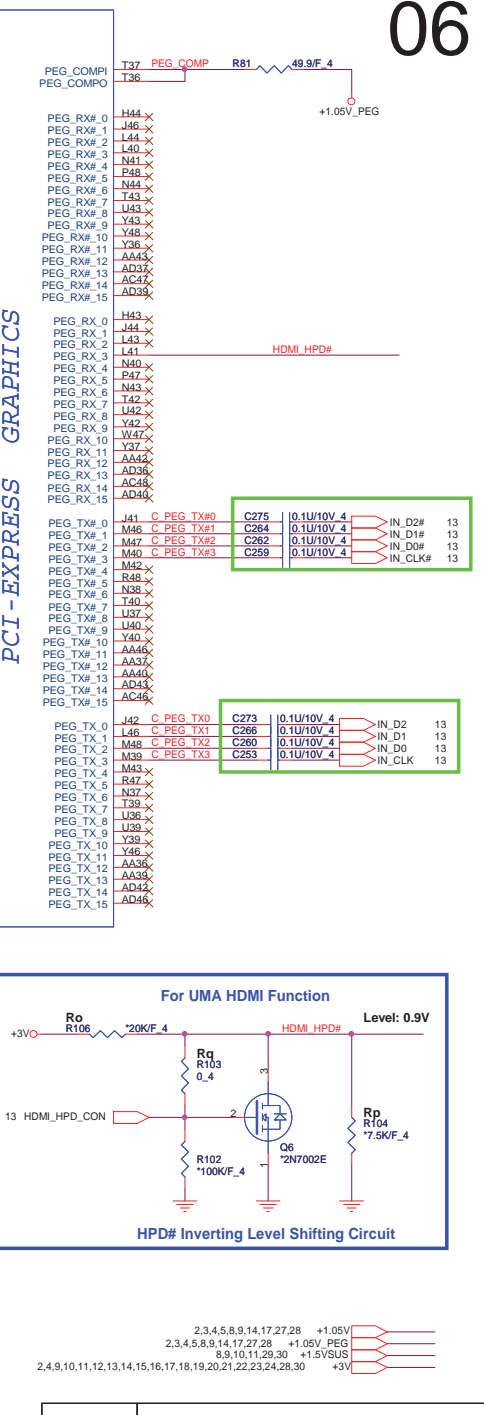
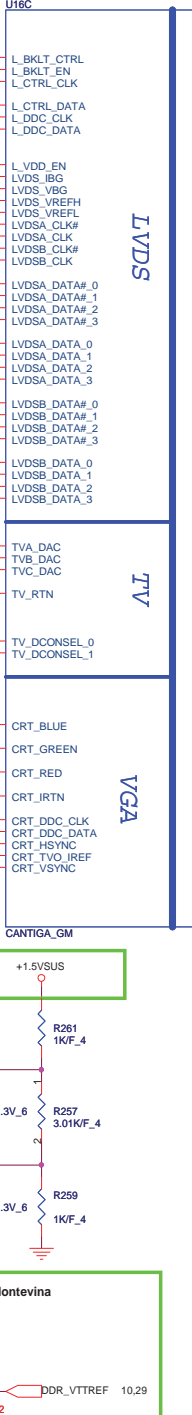
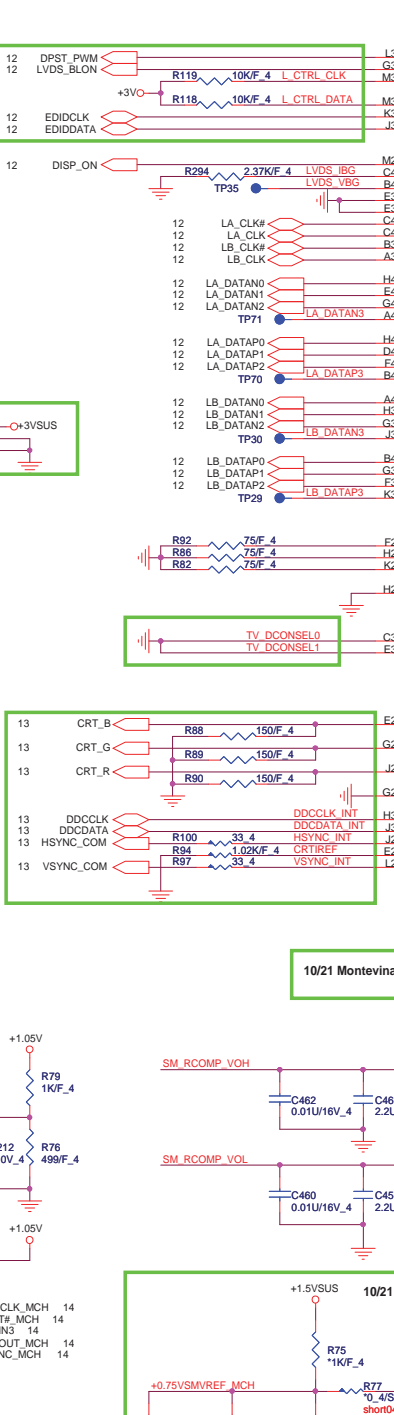
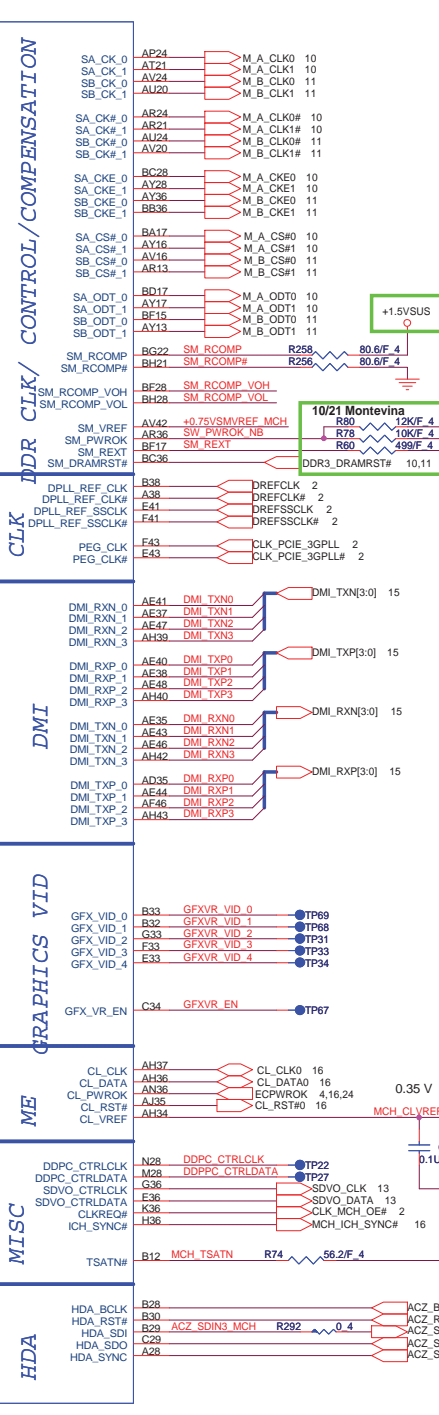
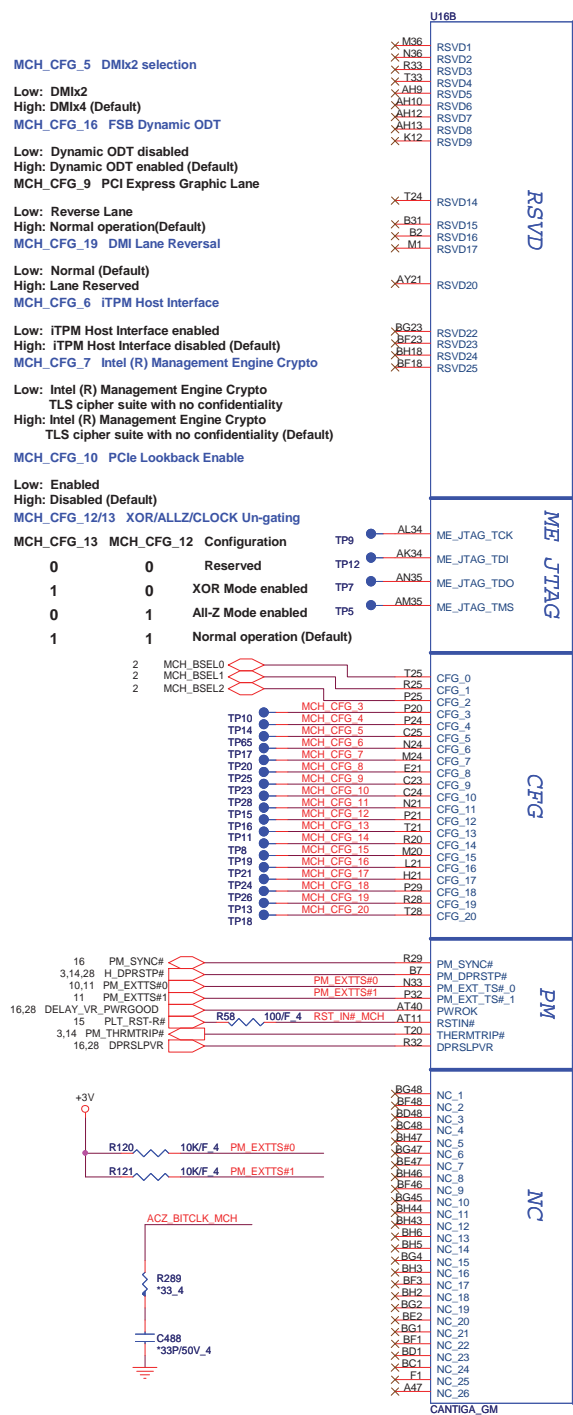


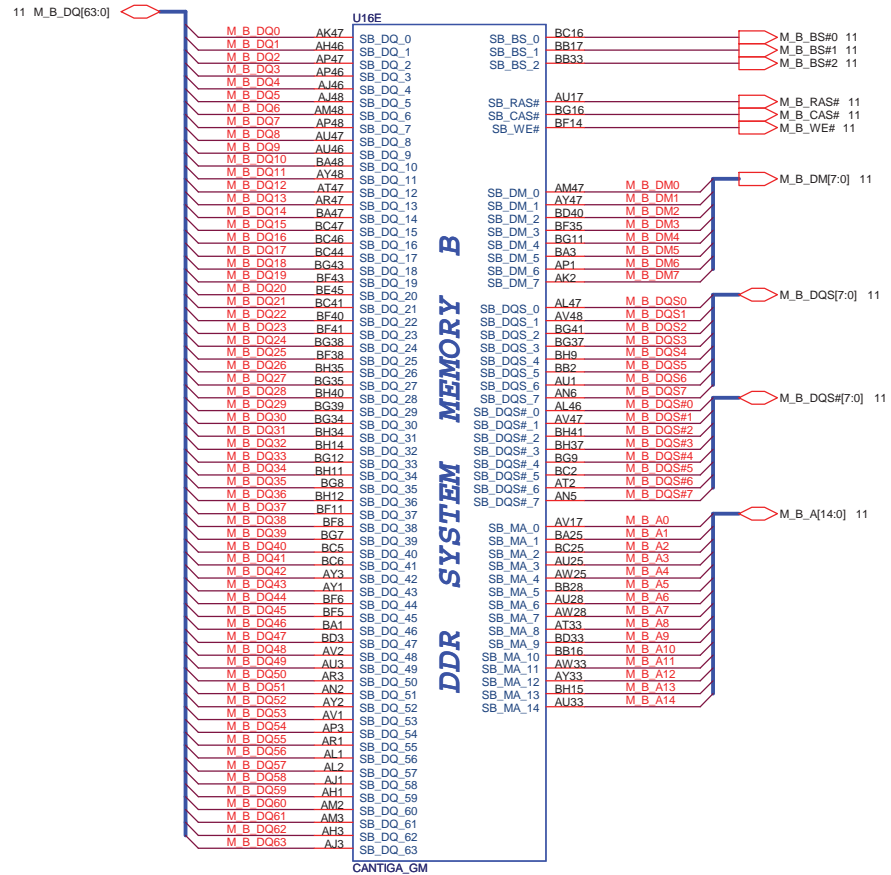
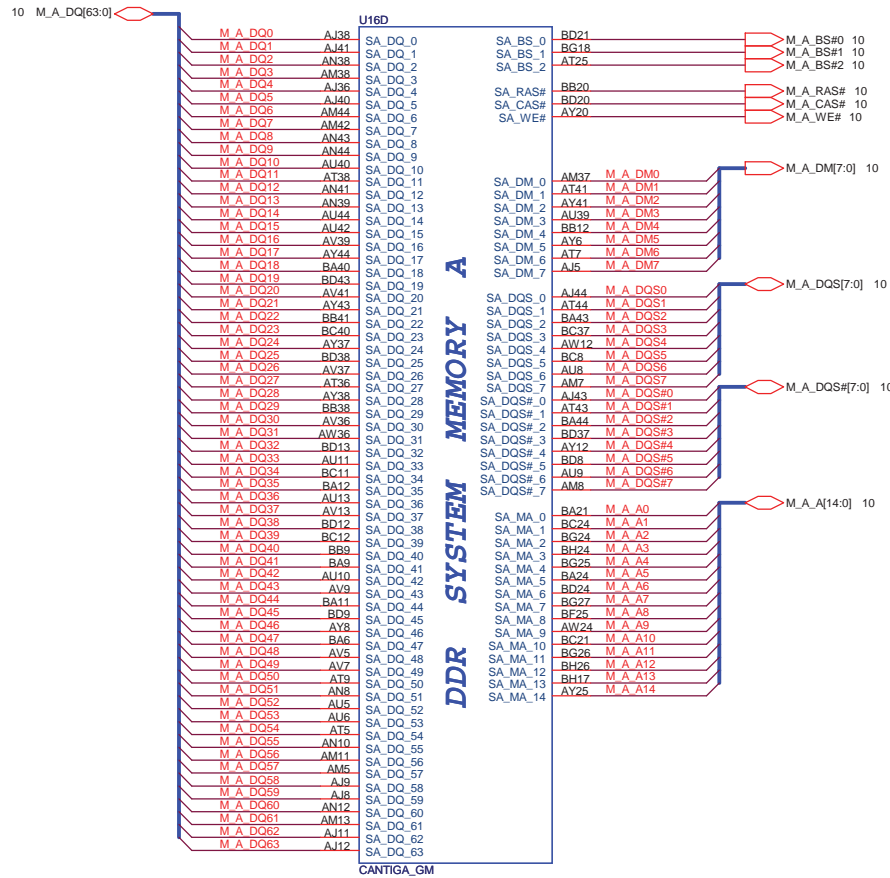
PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number **Canitiga Host & VSS 1/5** Rev 1A

Date: Friday, November 27, 2009 Sheet 5 of 30

NBS5



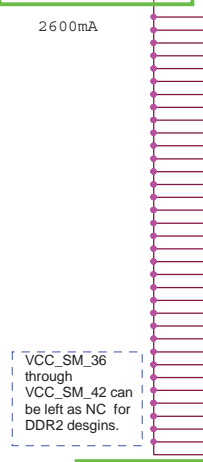


PROJECT :AX3
 Quanta Computer Inc.

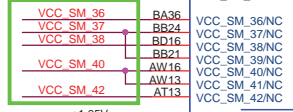
Size Custom Document Number Cantiga DDR3 3/5 Rev 1A
 Date: Friday, November 27, 2009 Sheet 7 of 30

NBS5

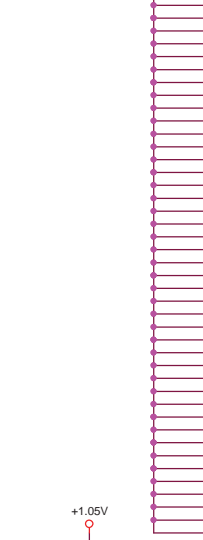
10/21 Montevina +1.5VSUS



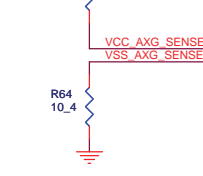
VCC_SM_36 through VCC_SM_42 can be left as NC for DDR2 designs.



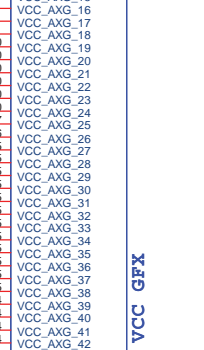
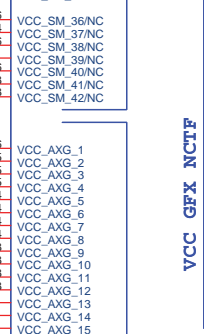
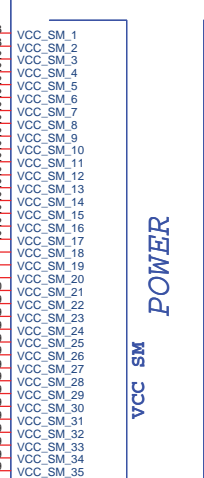
+1.05V



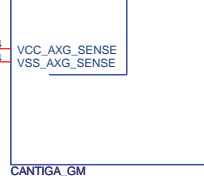
+1.05V



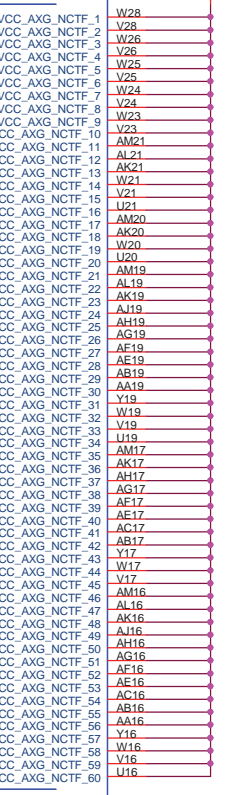
U16G



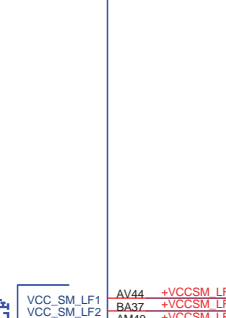
+1.05V



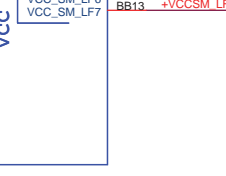
+1.05V



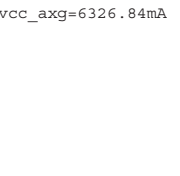
Ivcc_axg=6326.84mA



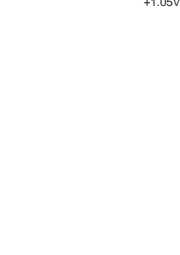
+1.05V



+1.05V



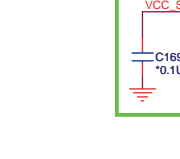
Ivcc=1930.4+508.12=2438.52mA



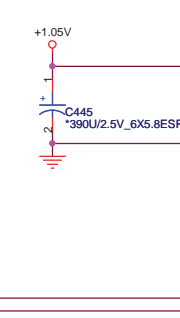
+1.5VSUS



+1.05V

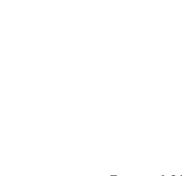


+1.05V

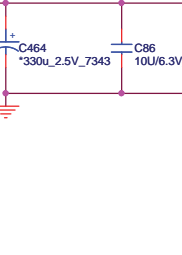


+1.05V

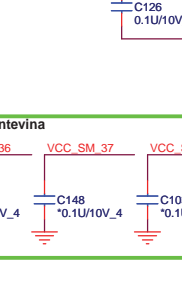
+1.05V



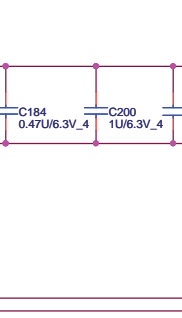
+1.05V



+1.05V

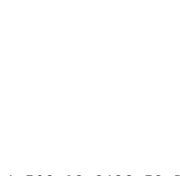


+1.05V

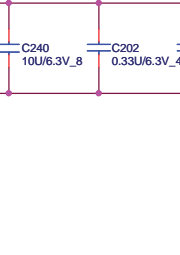


+1.05V

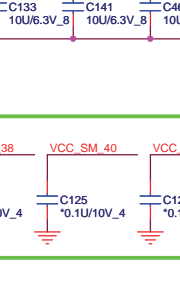
+1.05V



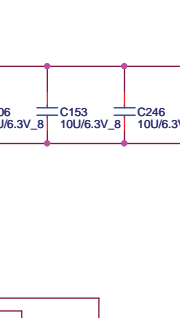
+1.05V



+1.05V



+1.05V

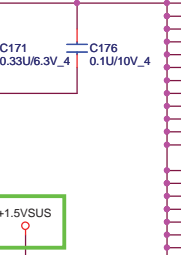


+1.05V

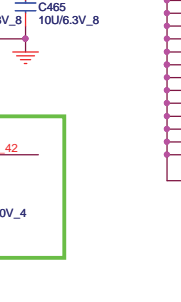
+1.05V



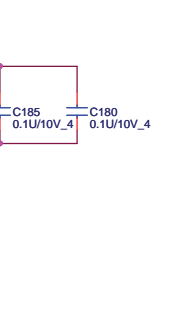
+1.05V



+1.05V

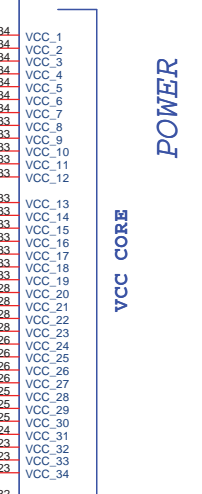


+1.05V



+1.05V

U16F

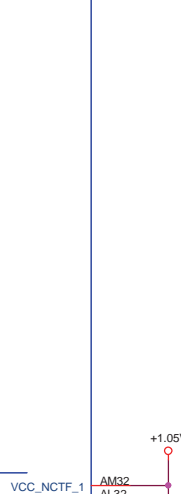


+1.05V

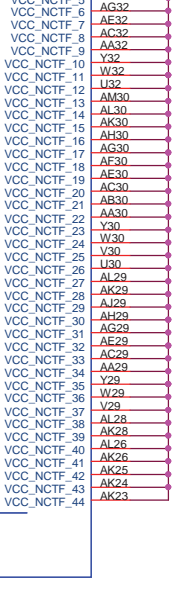


CANTIGA_GM

+1.05V



+1.05V

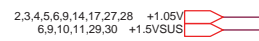


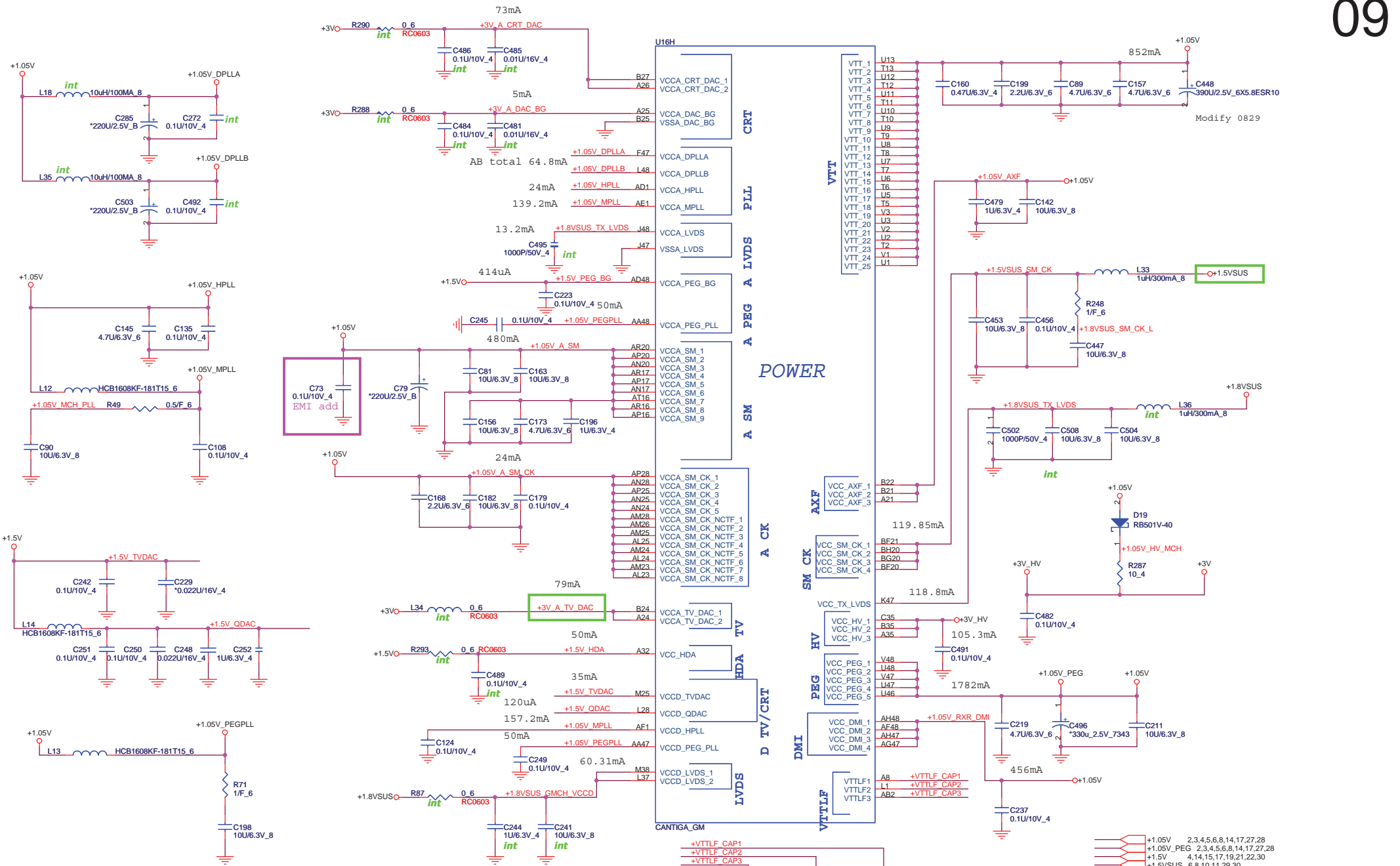
CANTIGA_GM

PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number Cantiga VCC 4/5 Rev 1A

Date: Friday, November 27, 2009 Sheet 8 of 30





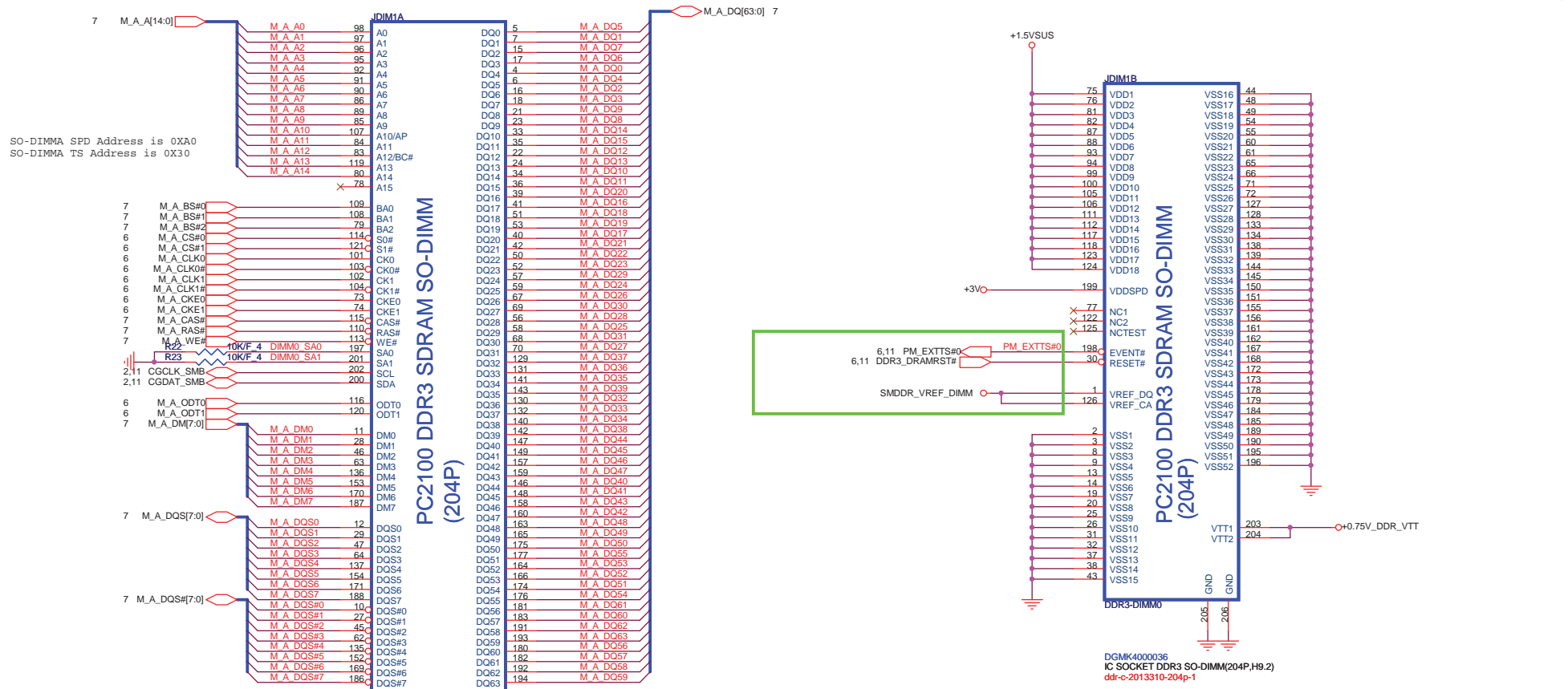
Modify to U40#AF1 power to +1.05V_MPLL as CRB change

+1.05V	2,3,4,5,6,8,14,17,27,28
+1.05V_PEG	2,3,4,5,6,8,14,17,27,28
+1.5V	4,14,15,17,19,21,22,30
+1.5VSUS	6,8,10,11,29,30
+1.8VSUS	27
+3V	2,4,6,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,28,30

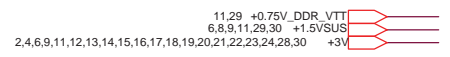
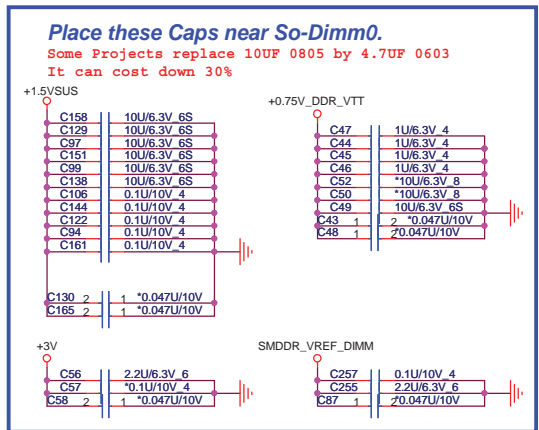
PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number **Cantiga Power 5/5** Rev 1A

Date: Friday, November 27, 2009 Sheet 9 of 30

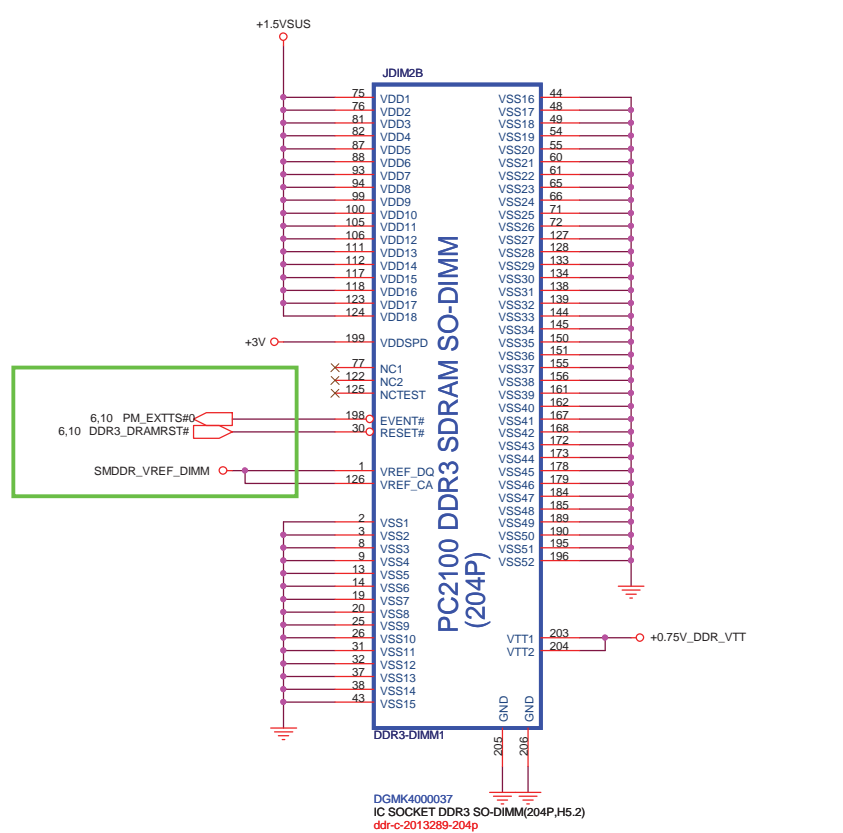
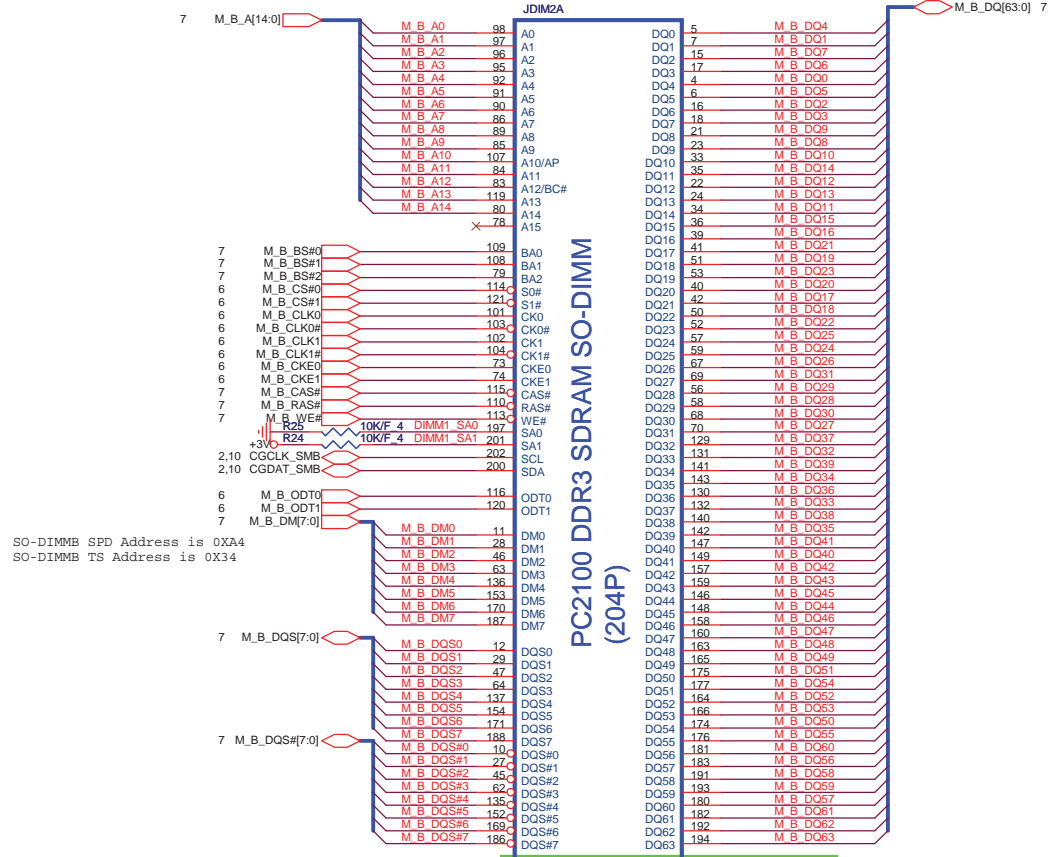


DDR3-DIMM0
 DGMK4000036
 IC SOCKET DDR3 SO-DIMM(204P,H9.2)
 ddr-c-2013310-204p-1
 Reverse type change to Standard type.

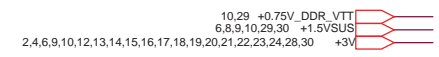
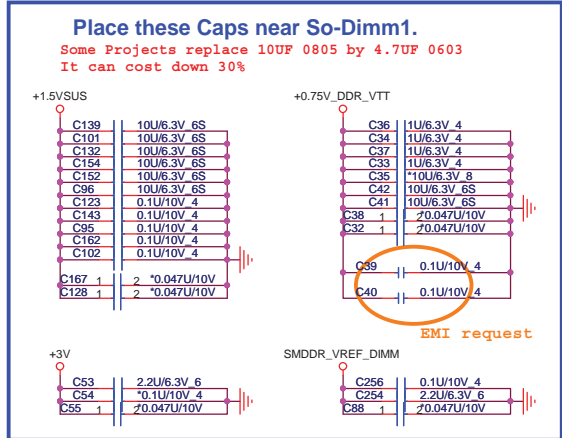
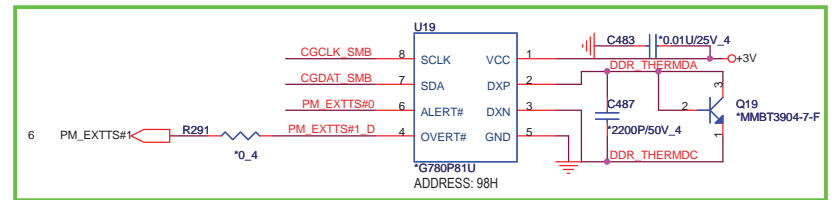


PROJECT :AX3
 Quanta Computer Inc.

Size Custom	Document Number DDR3 DIMM-0	Rev 1A
Date: Friday, November 27, 2009		Sheet 10 of 30



DDR3-DIMM1
DGMMK4000037
IC SOCKET DDR3 SO-DIMM(204P,H5.2)
ddr-c-2013289-204p
Reverse type change to Standard type.



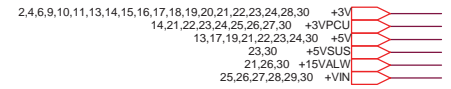
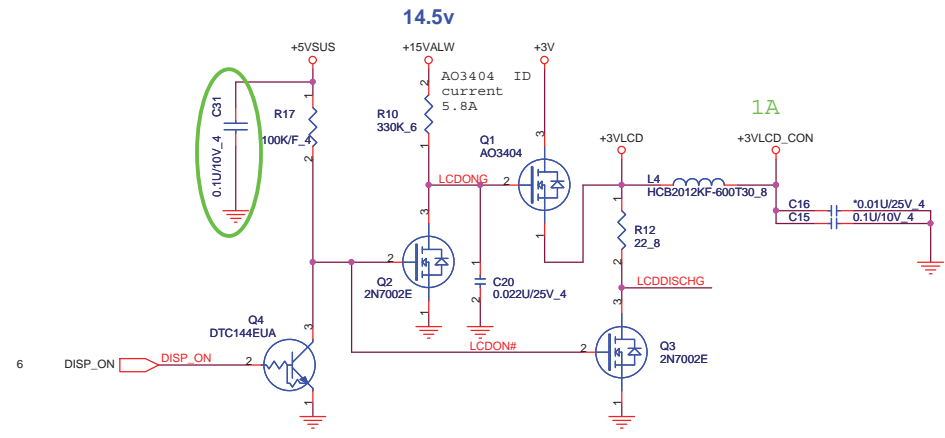
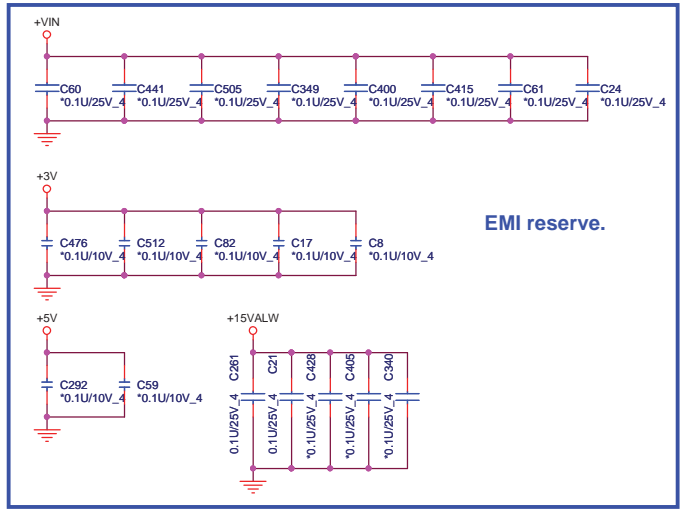
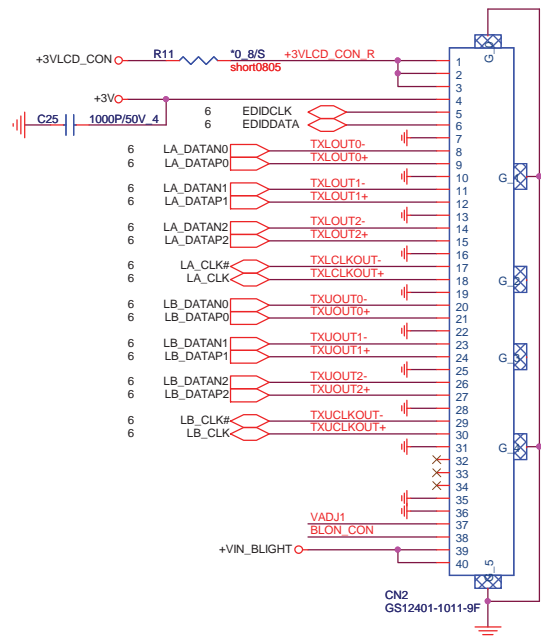
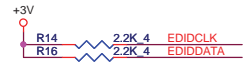
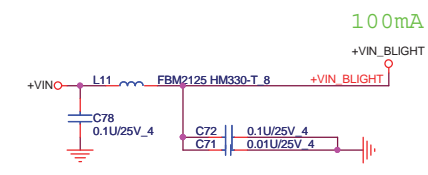
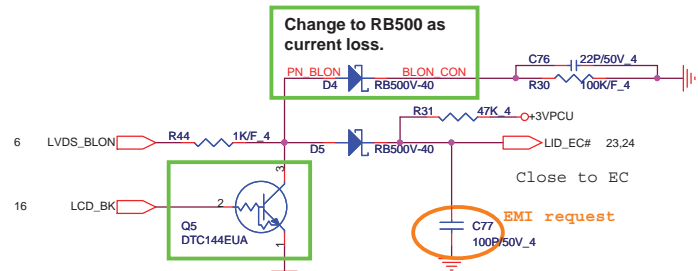
PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number **DDR3 DIMM-1** Rev 1A

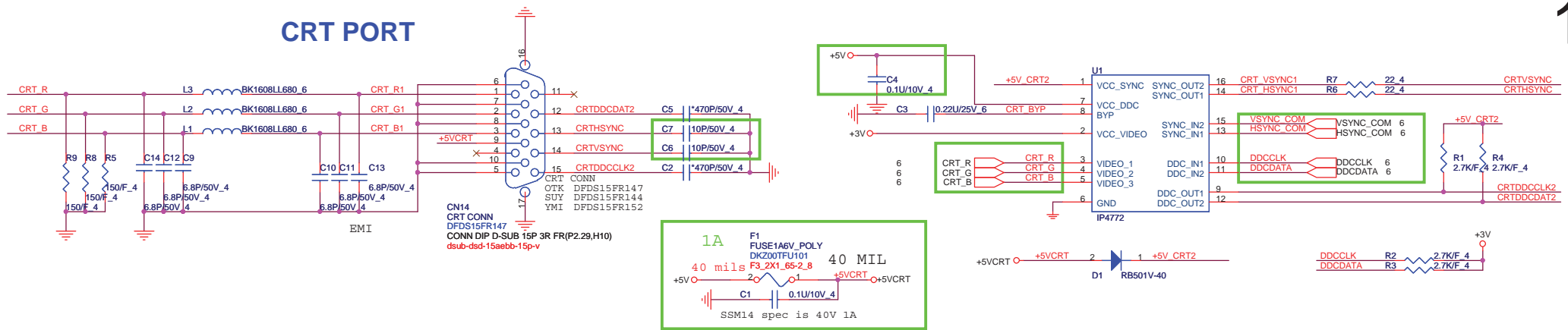
Date: Friday, November 27, 2009 Sheet 11 of 30

NBS5

LID Switch



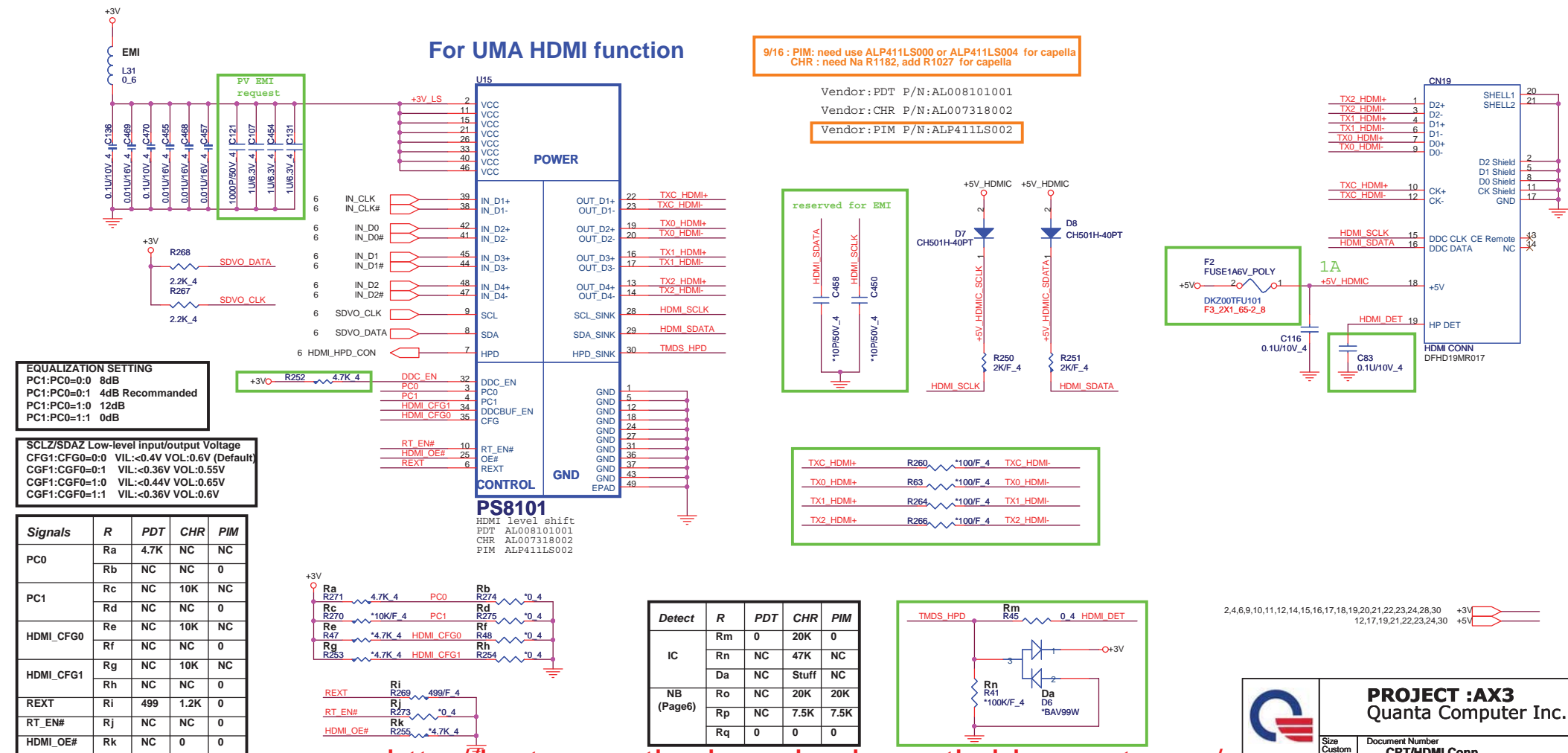
CRT PORT



For UMA HDMI function

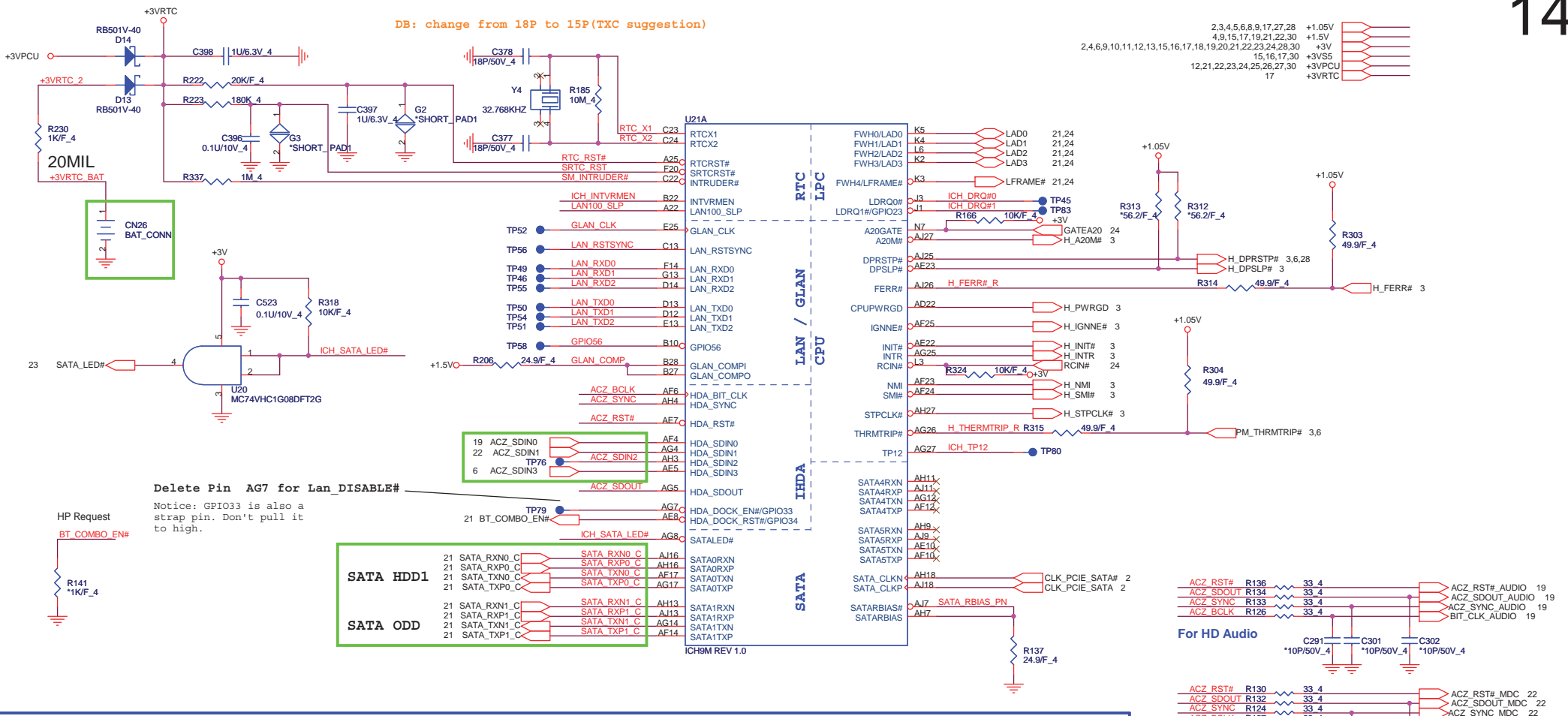
9/16 : PIM: need use ALP411LS000 or ALP411LS004 for capella
 CHR : need Na R182, add R1027 for capella

Vendor: PDT P/N:AL008101001
 Vendor: CHR P/N:AL007318002
 Vendor: PIM P/N:ALP411LS002



PROJECT :AX3
 Quanta Computer Inc.

Size Custom Document Number CRT/HDMI Conn Rev 1A
 Date: Friday, November 27, 2009 Sheet 13 of 30



SB Strap

ICH9-M Internal VR Enable strap (Internal VR for VccSus1_05, VccSus1_5 and VccCL1_5)

ICH9-M LAN100_SLP Strap (Internal VR for VccLAN1_05 and VccCL1_05)

INTVRMEN
 Low = Internal VR disable
 High = Internal VR enable(Default)

LAN100_SLP
 Low = Internal VR disable
 High = Internal VR enable(Default)

XOR Chain Entrance Strap

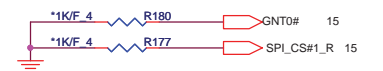
ICH_TP3	HDA_SDOOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal opration(Default)
1	1	Set PCIe port config bit 1

ICH9 Boot BIOS select

STRAP	PCI_GNT0#	SPI_CS#1	(default)
SPI	0	1	
PCI	1	0	
LPC	1	1	

No Reboot Strap

ACZ_SPKR Low: Default
 Hi: No reboot

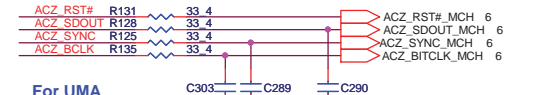
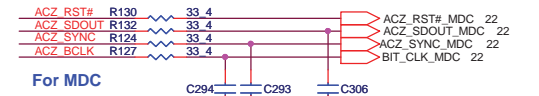
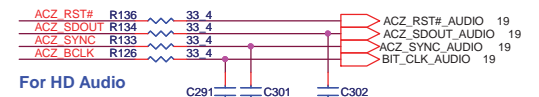
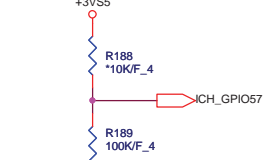
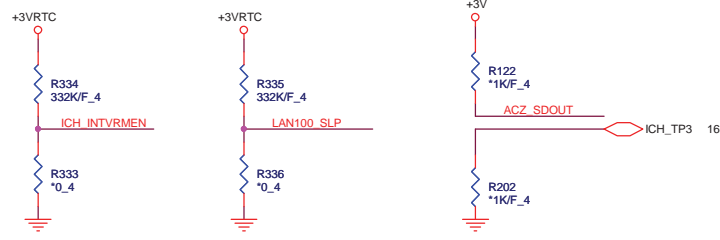


A16 swap override strap

PCI_GNT#3 Low = A16 swap override enabled
 Hi = Default

TPM physical presence

ICH_GPIO57 Low: Default



PROJECT :AX3
 Quanta Computer Inc.

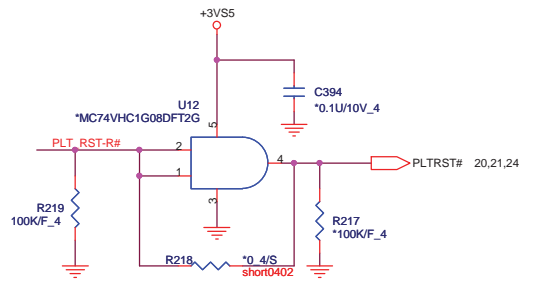
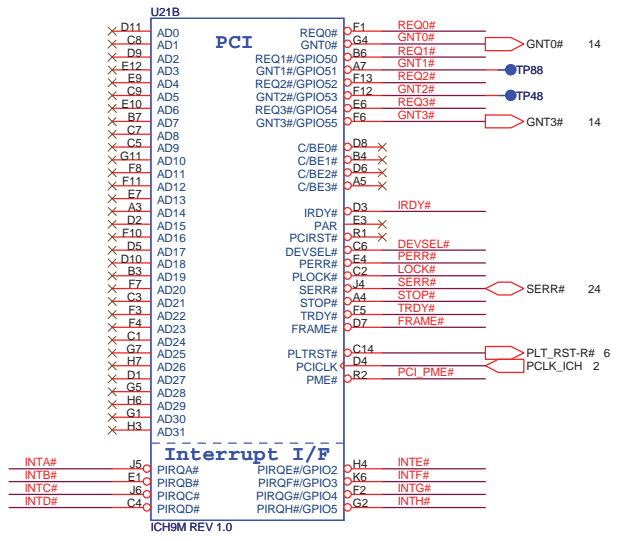
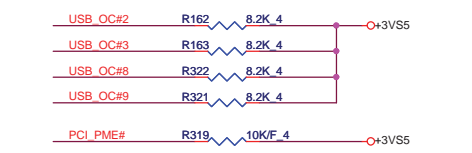
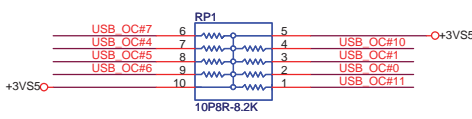
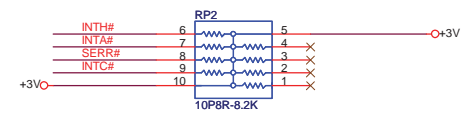
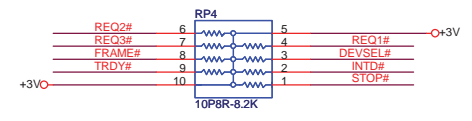
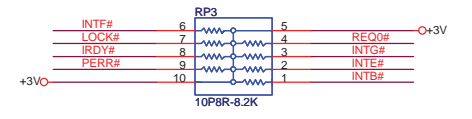
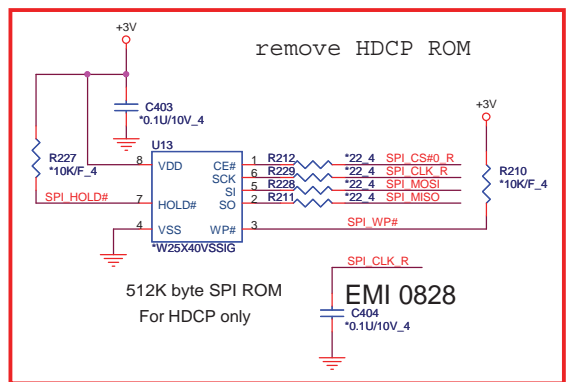
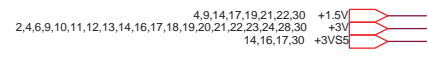
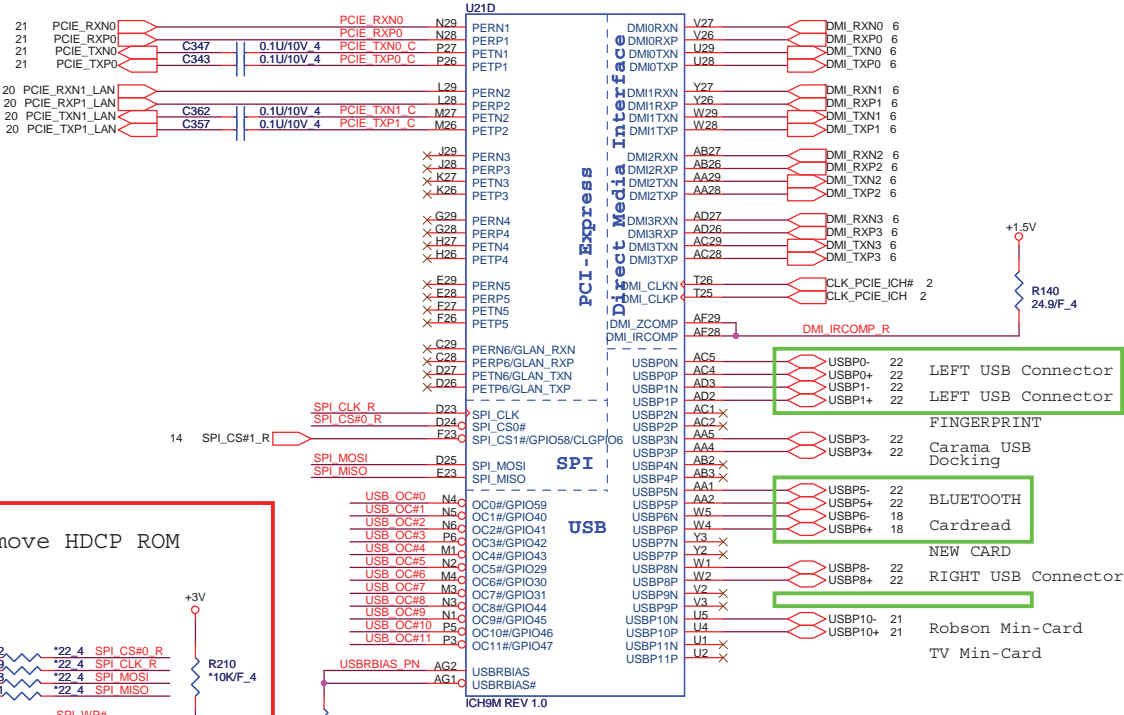
Size Custom Document Number ICH9-M SATA/HDA/RTC 1/4 Rev 1A

Date: Friday, November 27, 2009 Sheet 14 of 30

NBS

MINI CARD PCI-E (WLAN)

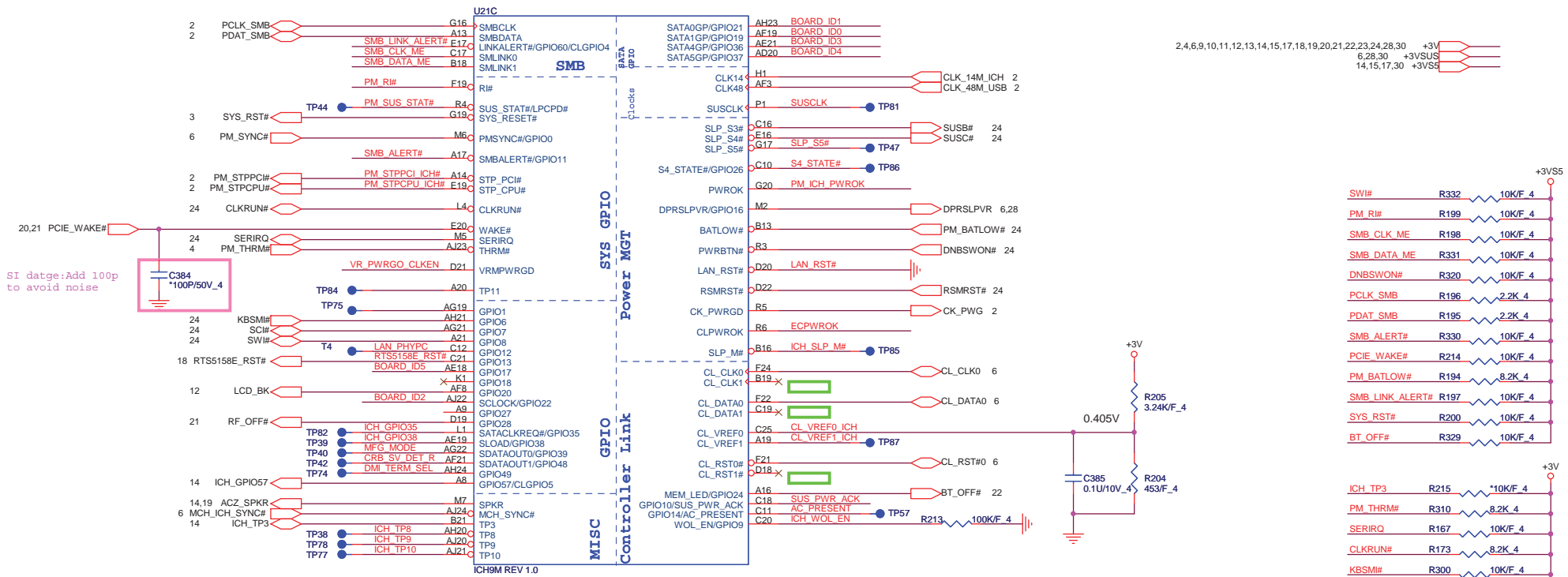
PCI-E-LAN



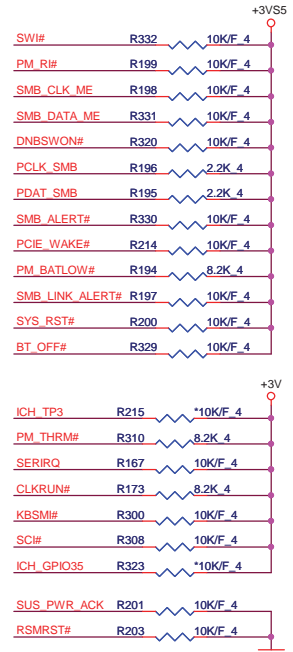
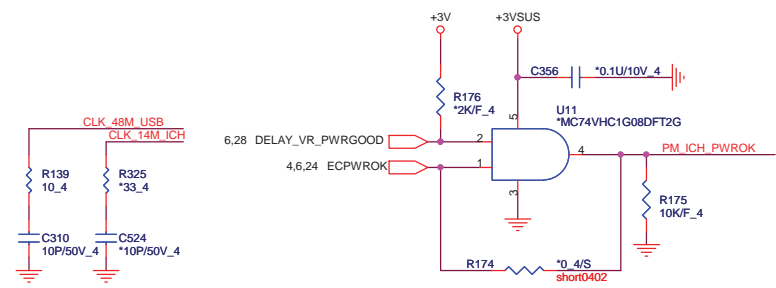
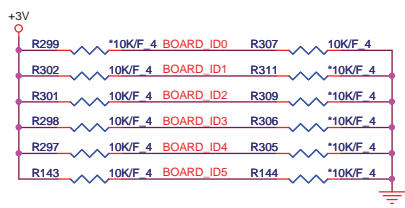
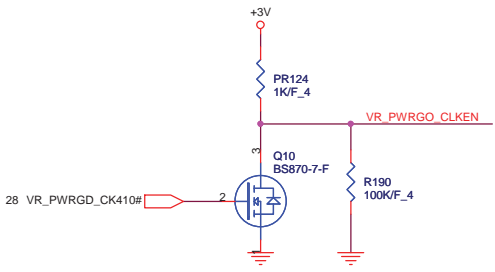
PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number ICH9-M DMI/PCIe/USB 2/4 Rev 1A

Date: Friday, November 27, 2009 Sheet 15 of 30



SI datge:Add 100p to avoid noise



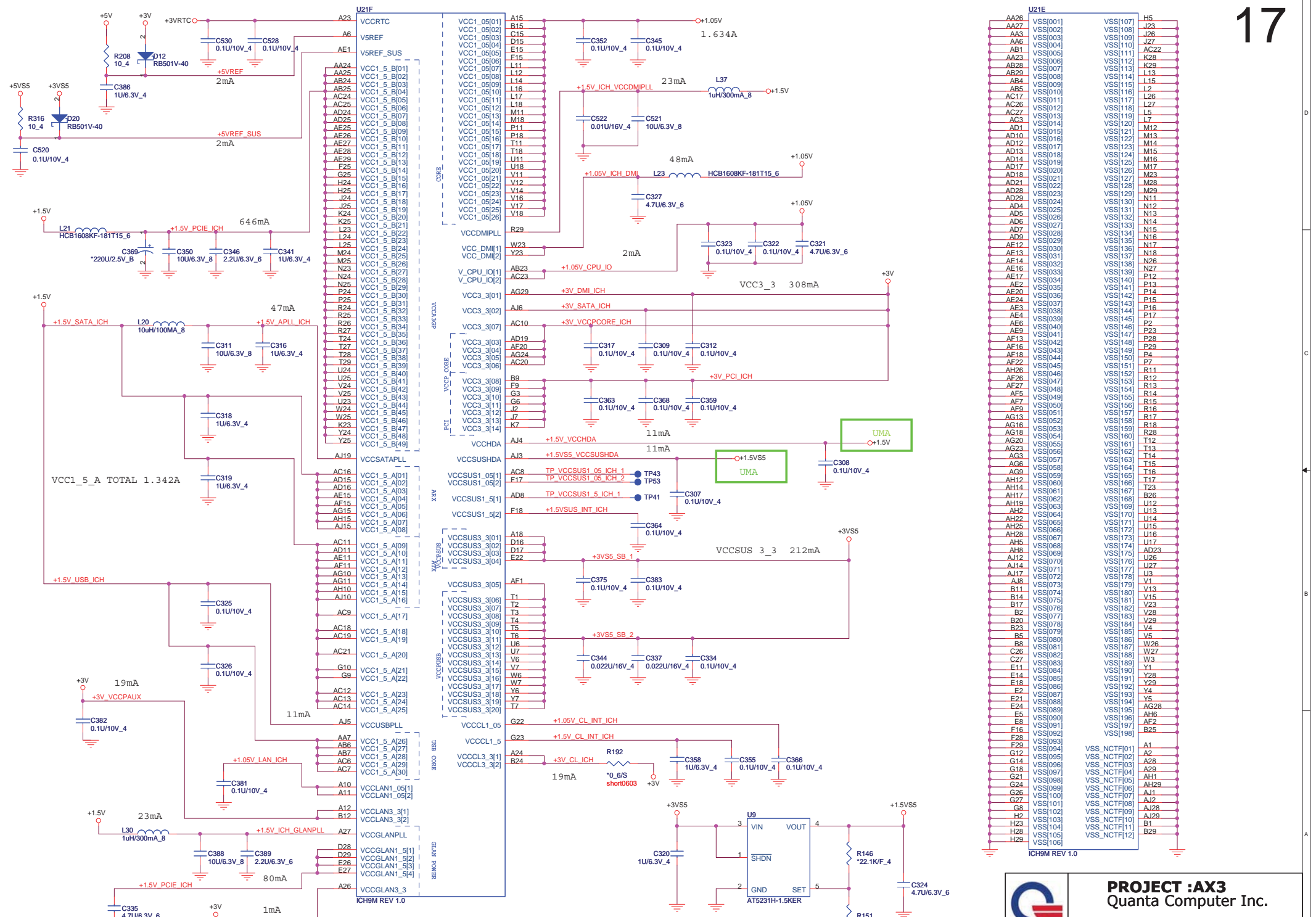
Board ID	ID0	ID1	ID2	ID3	ID4	ID5
	GPIO19	GPIO21	GPIO22	GPIO36	GPIO37	GPIO17
UMA/DIS	0=UMA 1=Dis.					
CardReader		0=No 1=Yes				
HDMI			0=No 1=Yes			
Bluetooth				0=No 1=Yes		
Camera					0=No 1=Yes	
Modem						0=No 1=Yes

AX3 MB P/N	ID0	ID1	ID2	ID3	ID4	ID5
31AX6MB0000	0	1	1	1	1	1
31AX6MB0010	0	1	1	1	1	1
31AX6MB0020	0	1	1	1	1	1

PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number ICH9-M GPIO/Board ID 3/4 Rev 1A

Date: Friday, November 27, 2009 Sheet 16 of 30



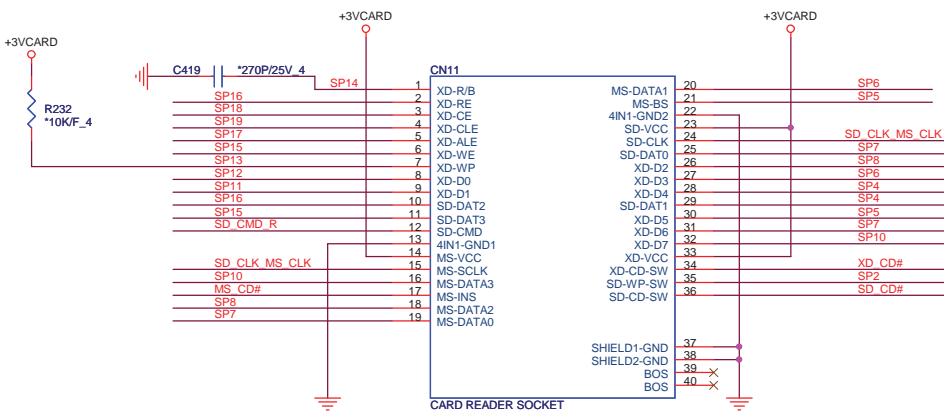
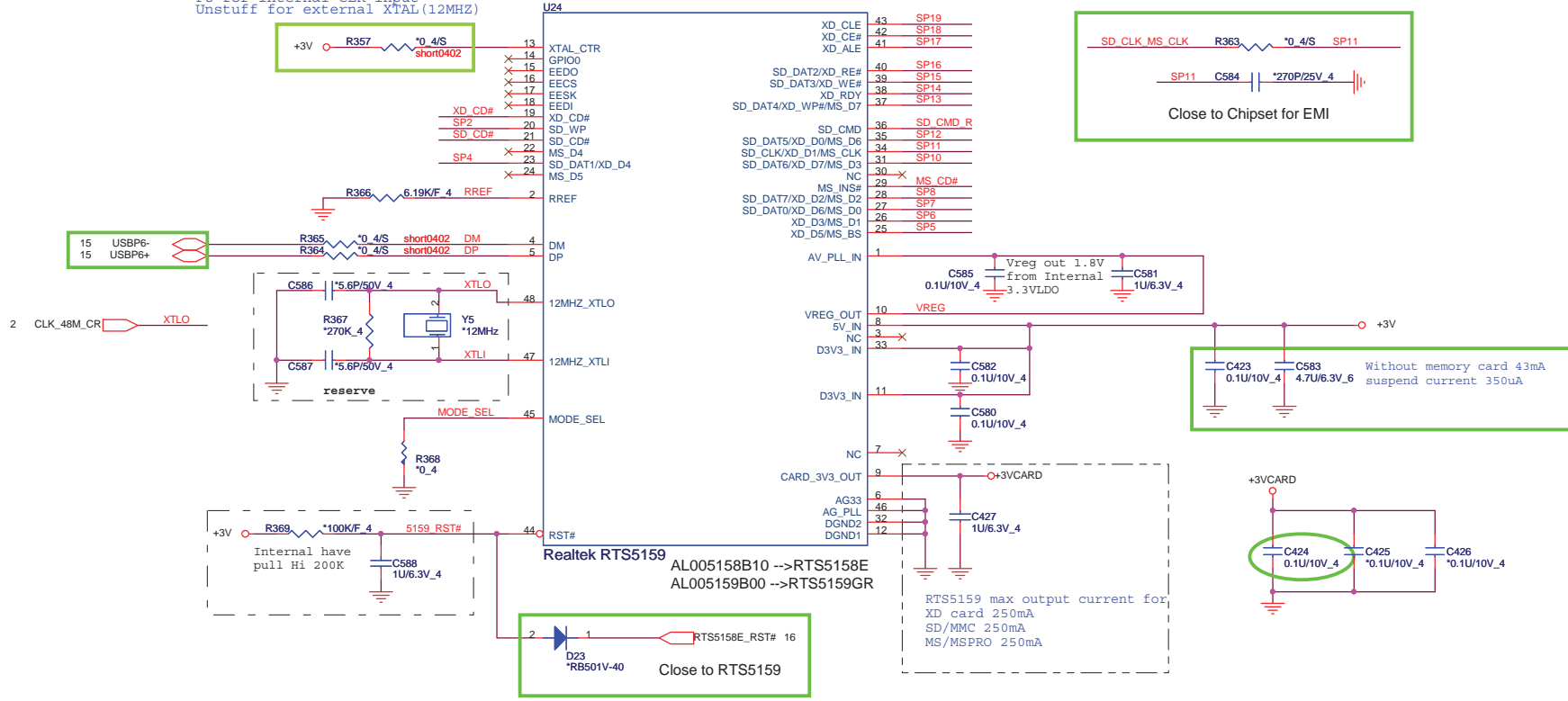
<http://laptop-motherboard-schematic.blogspot.com/>

PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number ICH9-M Power 4/4 Rev 1A

Date: Thursday, November 26, 2009 | Sheet 17 of 30

PU for internal CLK input
Unstuff for external XTAL(12MHZ)



5 IN1 CARD-READER (PUSH-PUSH)

Support SD/SD PRO/MMC/MS/MS PRO/xD Cards

2,4,6,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,28,30

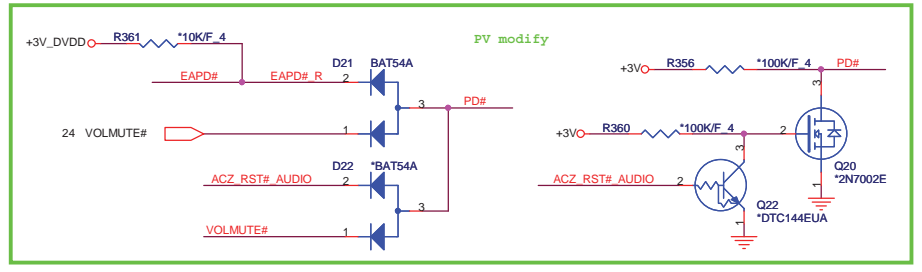
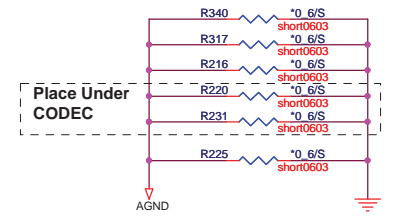
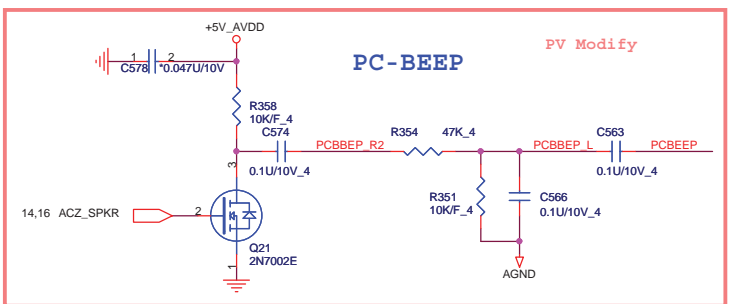
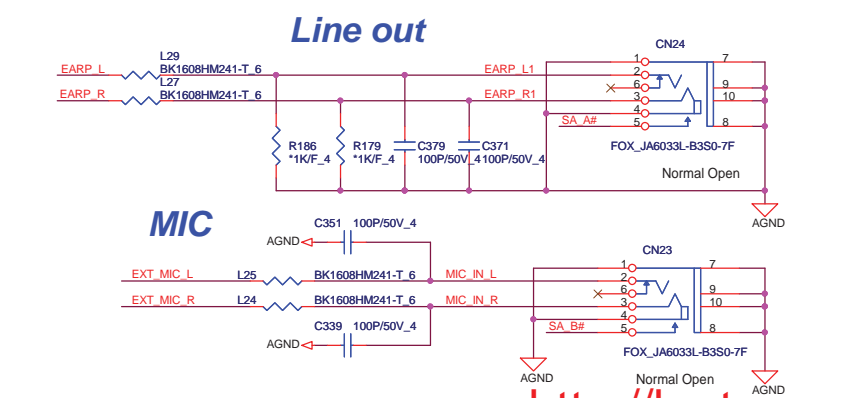
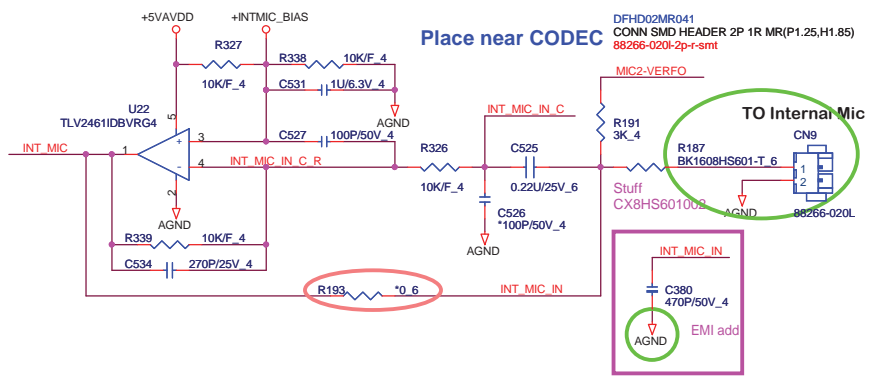
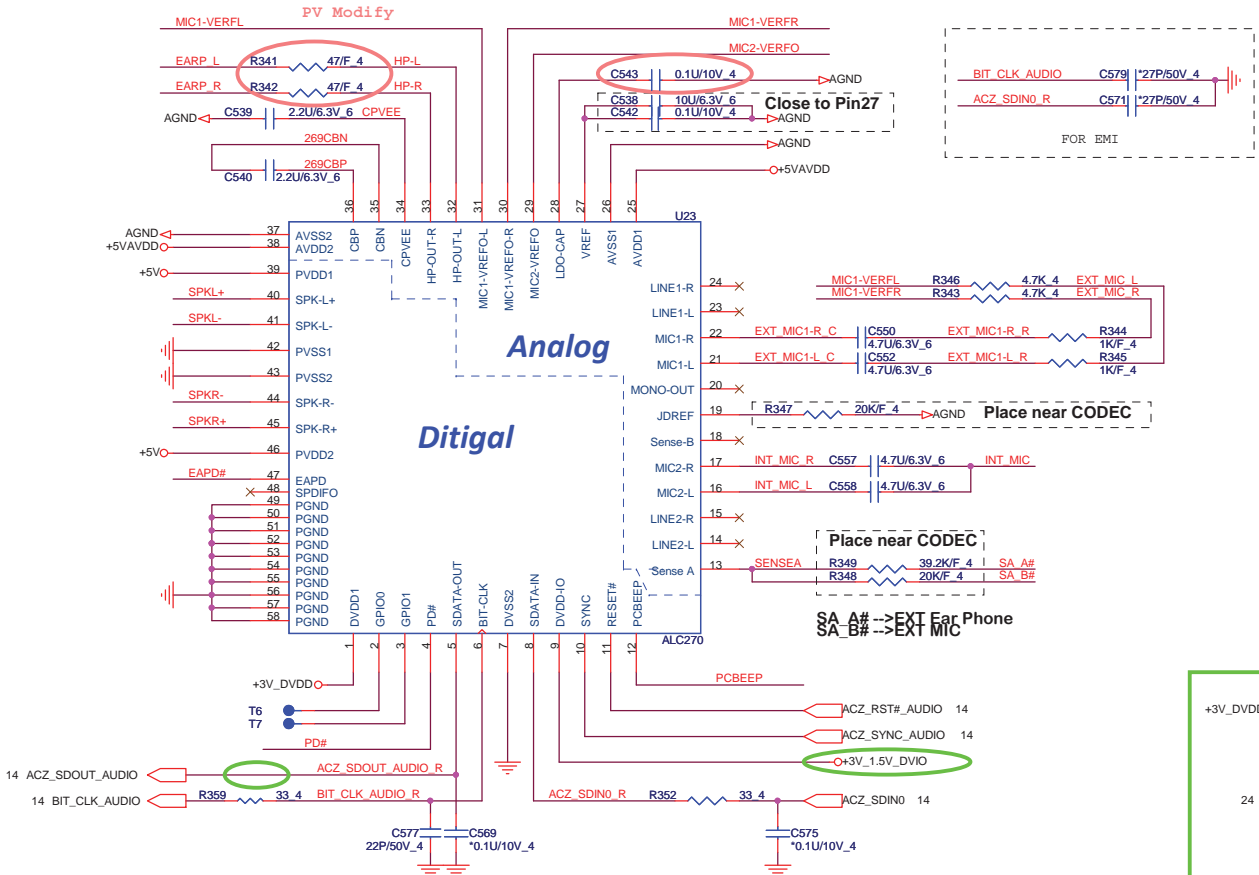
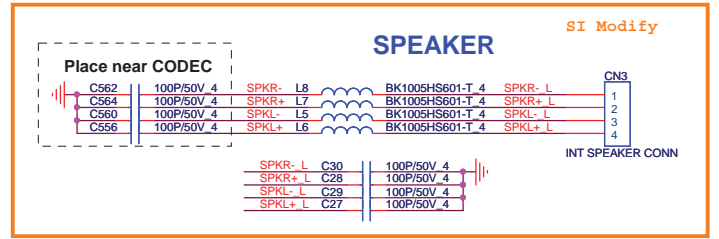
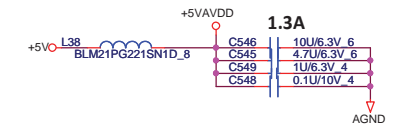
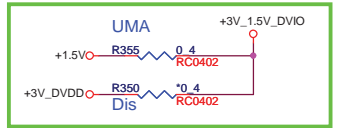
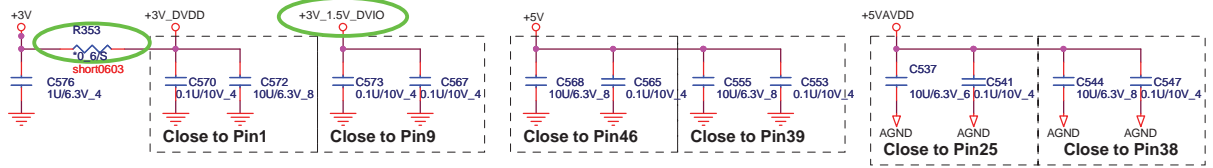
+3V

Note:

SP0	SD/MMC	MS	XD
SP1	SD_WP		XD_CD#
SP2	SD_WP		
SP3	SD_CD#		
SP4	SD_DAT1		XD_D4
SP5		MS_BS	XD_D5
SP6		MS_D1	XD_D3
SP7	SD_DAT0	MS_D0	XD_D6
SP8	SD_DAT7	MS_D2	XD_D2
SP9		MS_INS#	
SP10	SD_DAT6	MS_D3	XD_D7
SP11	SD_CLK	MS_SCLK	XD_D1
SP12	SD_DAT5		XD_D0
SP13	SD_DAT4		XD_D4
SP14			XD_R/#
SP15	SD_DAT3		XD_WE#
SP16	SD_DAT2		XD_RE#
SP17			XD_ALE
SP18			XD_CE#
SP19			XD_CLE

PROJECT :AX3
Quanta Computer Inc.

Size Custom	Document Number RTS5159/CR Socket	Rev 1A
Date: Friday, November 27, 2009 Sheet 18 of 30		

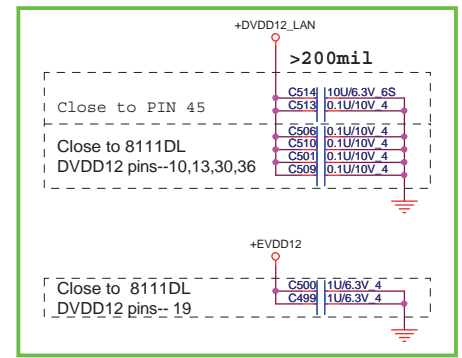
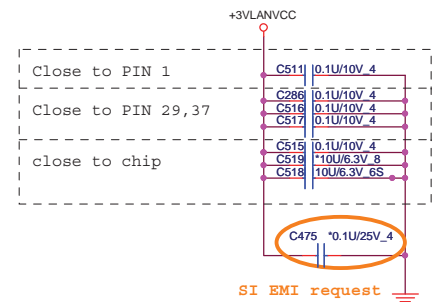
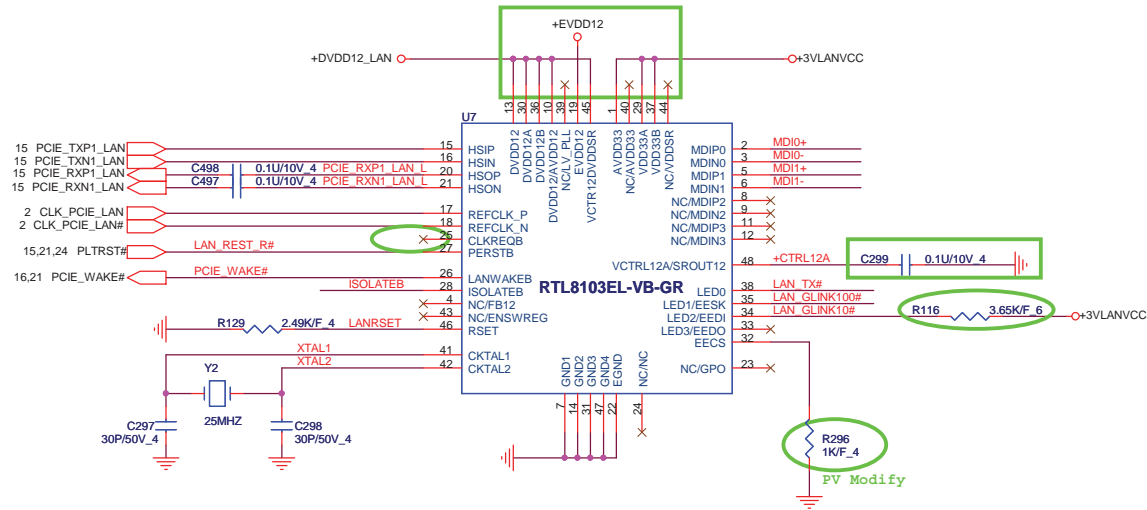


PROJECT :AX3
Quanta Computer Inc.

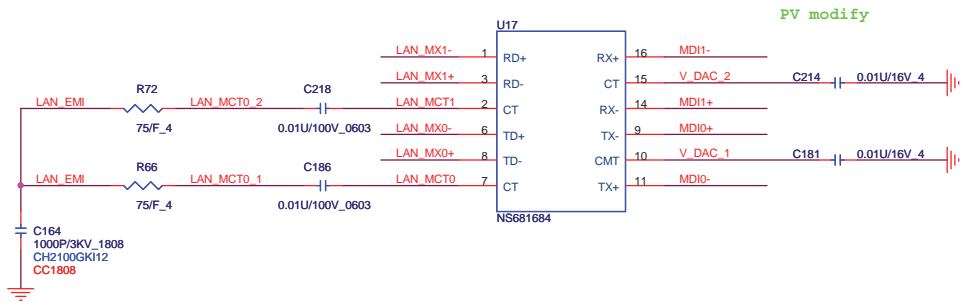
NBS5

Size Custom Document Number Azzalia ALC270/Audio Jack Rev 1A

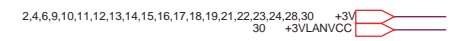
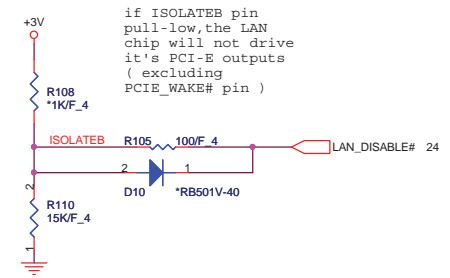
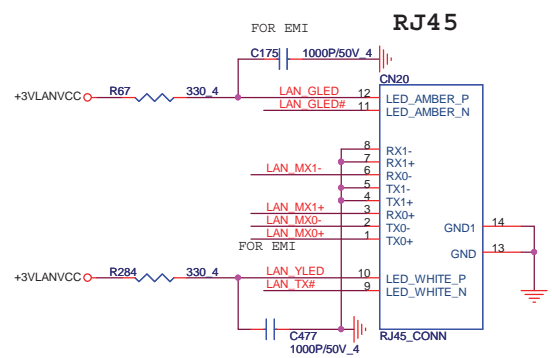
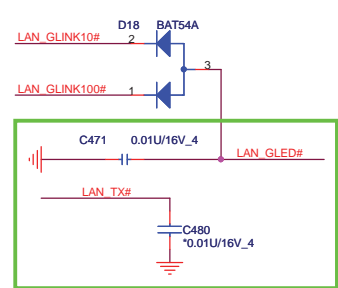
Date: Friday, November 27, 2009 Sheet 19 of 30



Transformer for 10/100



Lan Con.

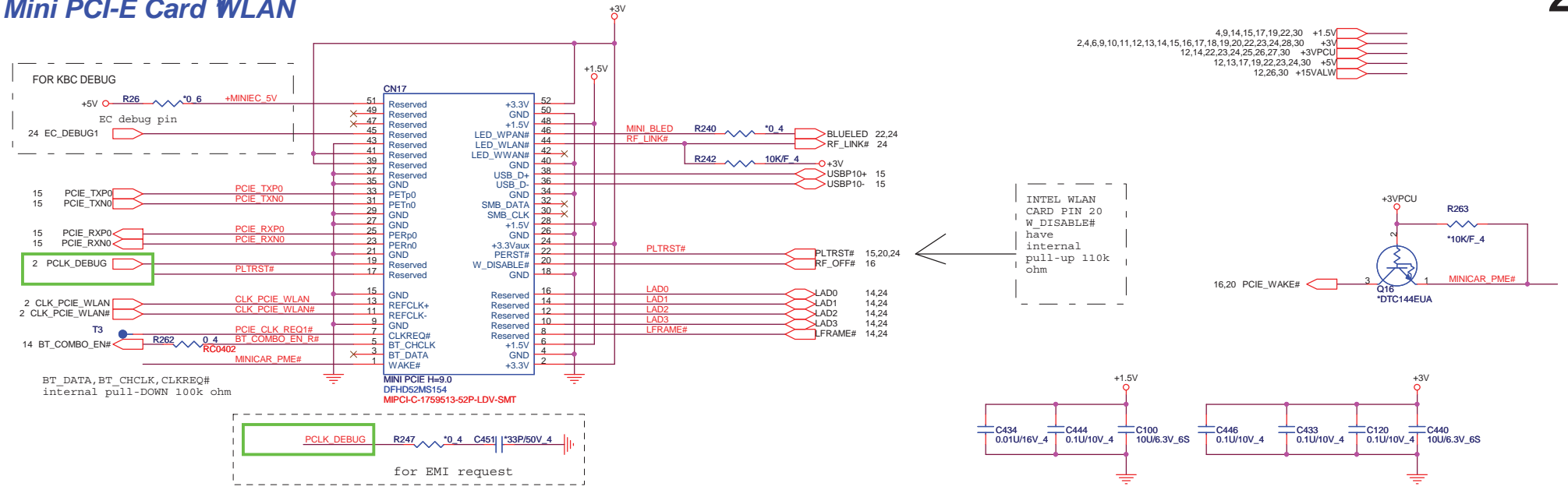


PROJECT :AX3
Quanta Computer Inc.

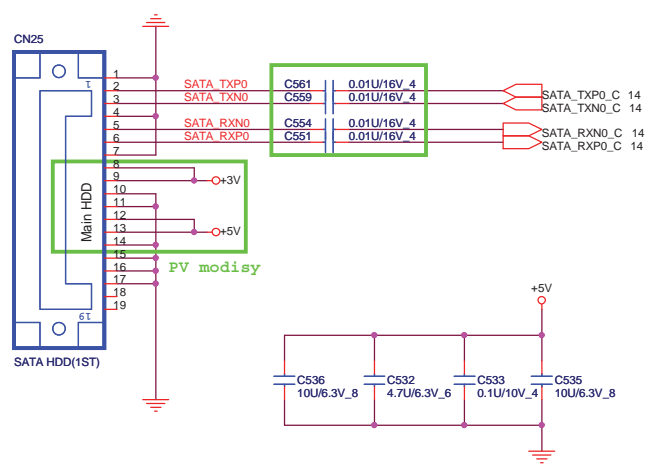
Size Custom Document Number **RTL8103EL/RJ45** Rev 1A

NBS5 Date: Friday, November 27, 2009 Sheet 20 of 30

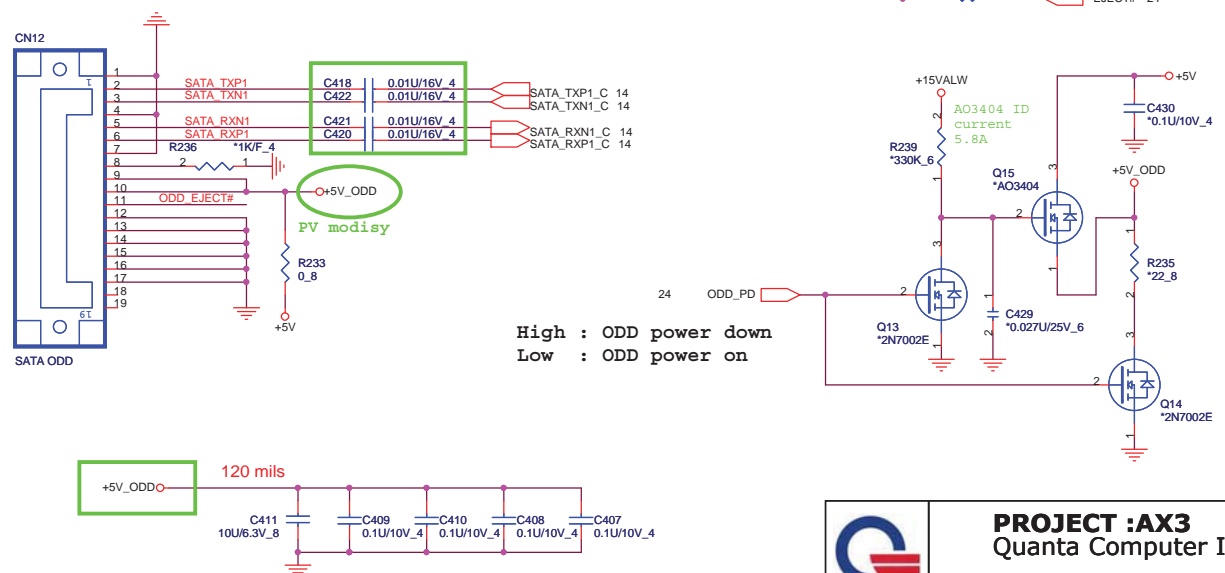
Mini PCI-E Card WLAN



SATA HDD CONNECTOR



SATA ODD CONNECTOR

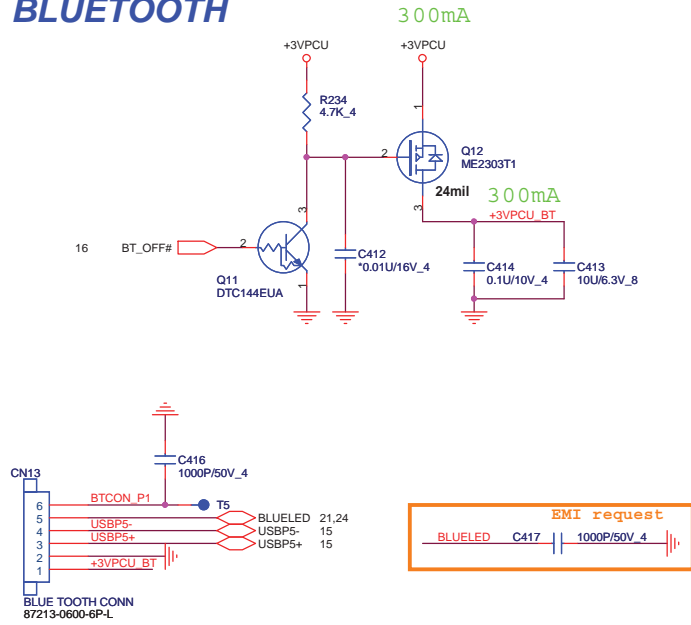


PROJECT :AX3
 Quanta Computer Inc.

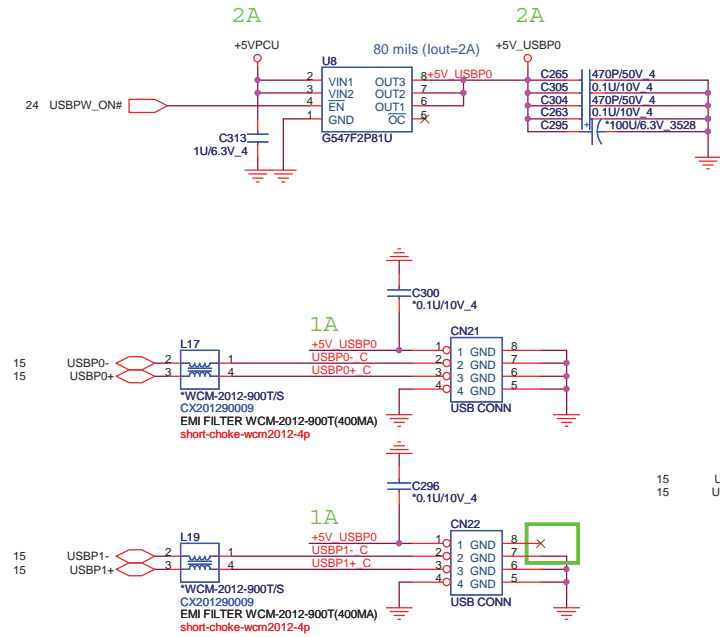
NBS5

Size Custom	Document Number HDD/ODD/FAN	Rev 1A
Date: Friday, November 27, 2009	Sheet 21 of 30	

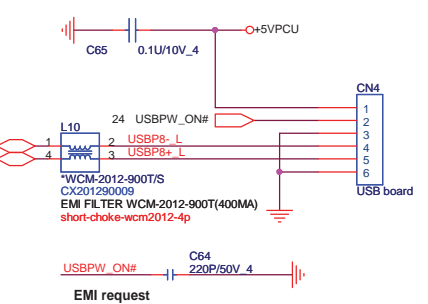
BLUETOOTH



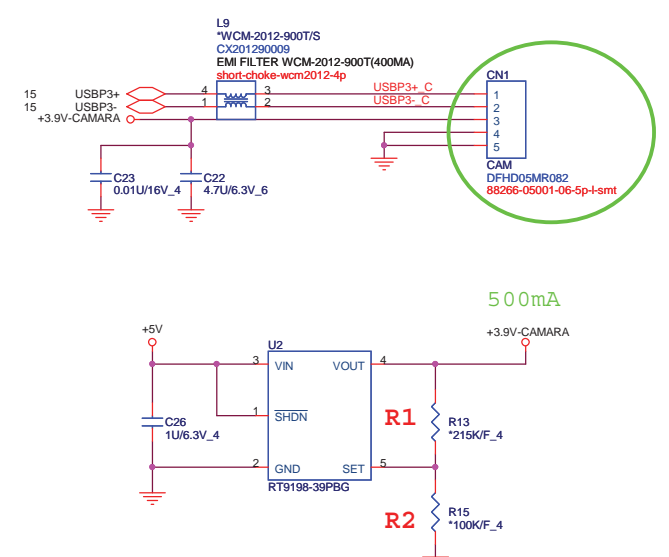
LEFT SIDE USBX1



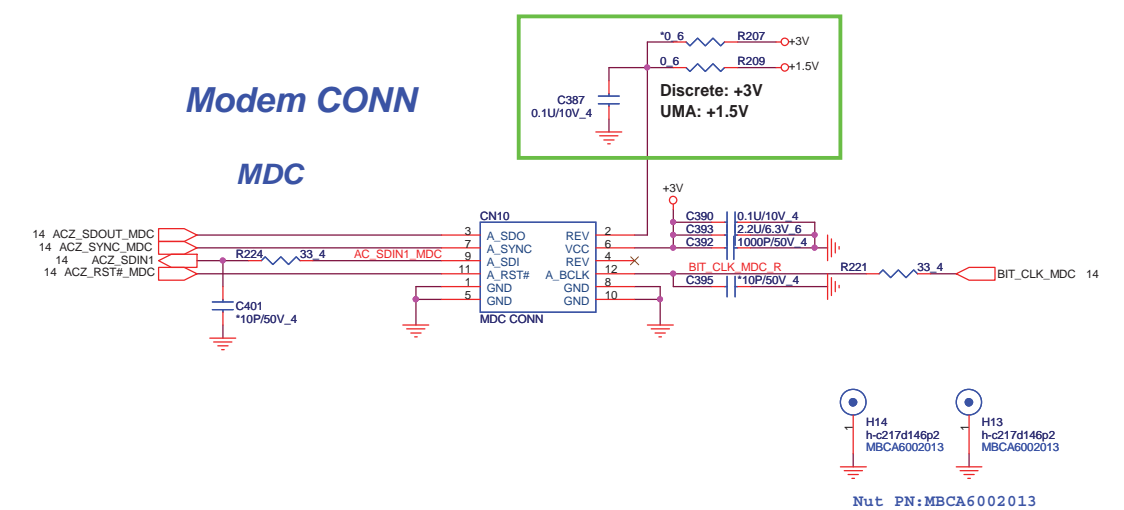
Right SIDE USBX1



CAMERA



Modem CONN

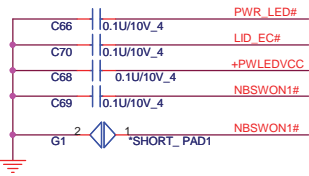
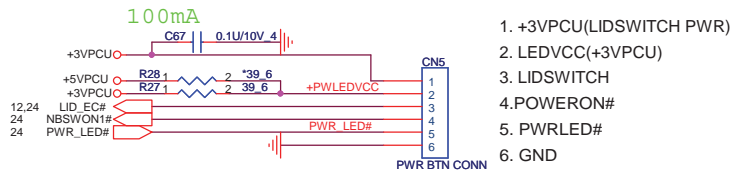


PROJECT :AX3
Quanta Computer Inc.

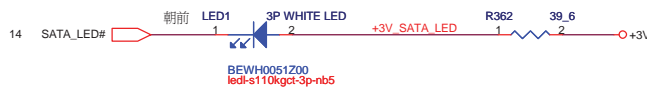
Size Custom Document Number **USB/BT/CAMERA/Modem** Rev 1A

Date: Friday, November 27, 2009 Sheet 22 of 30

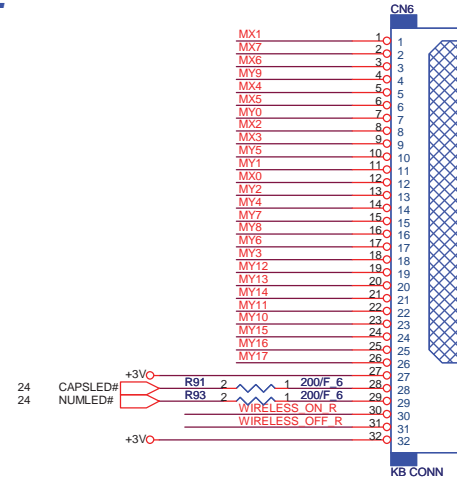
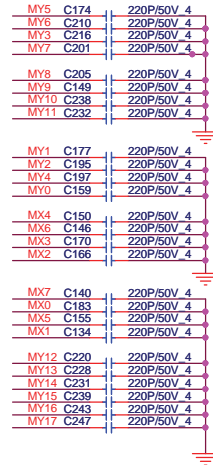
POWER BOTTON CONNECT



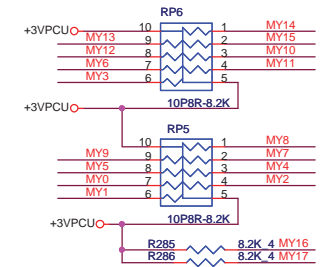
SATA LED



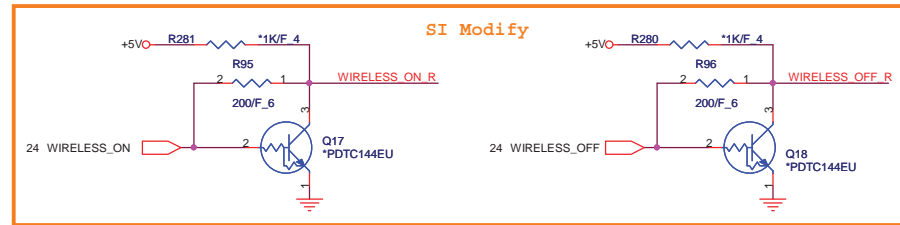
KEYBOARD Con.



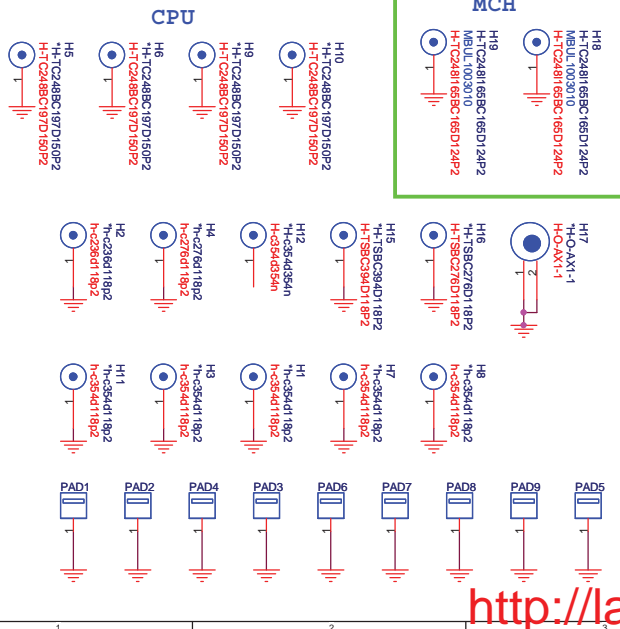
KEYBOARD PULL-UP



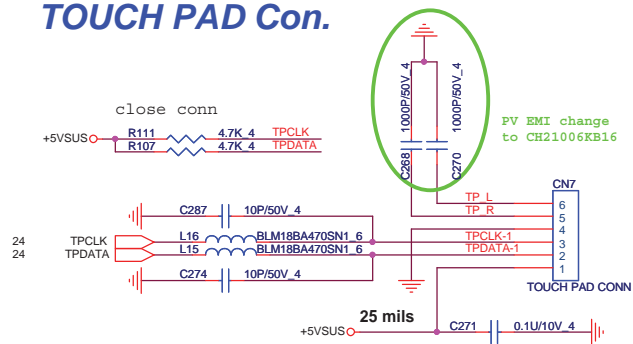
SI Modify



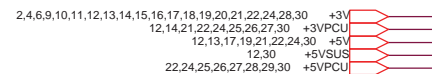
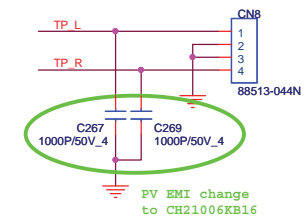
HOLE & PAD

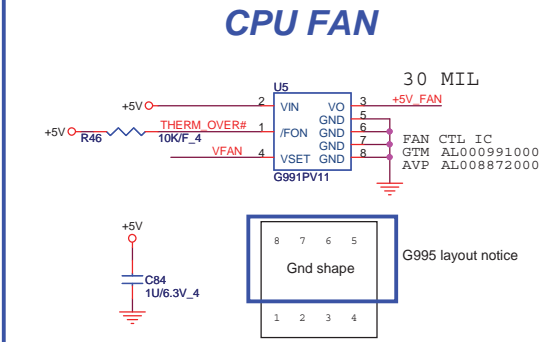
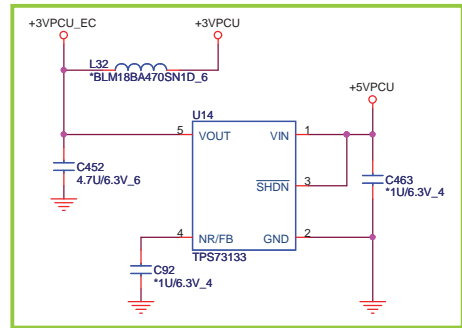
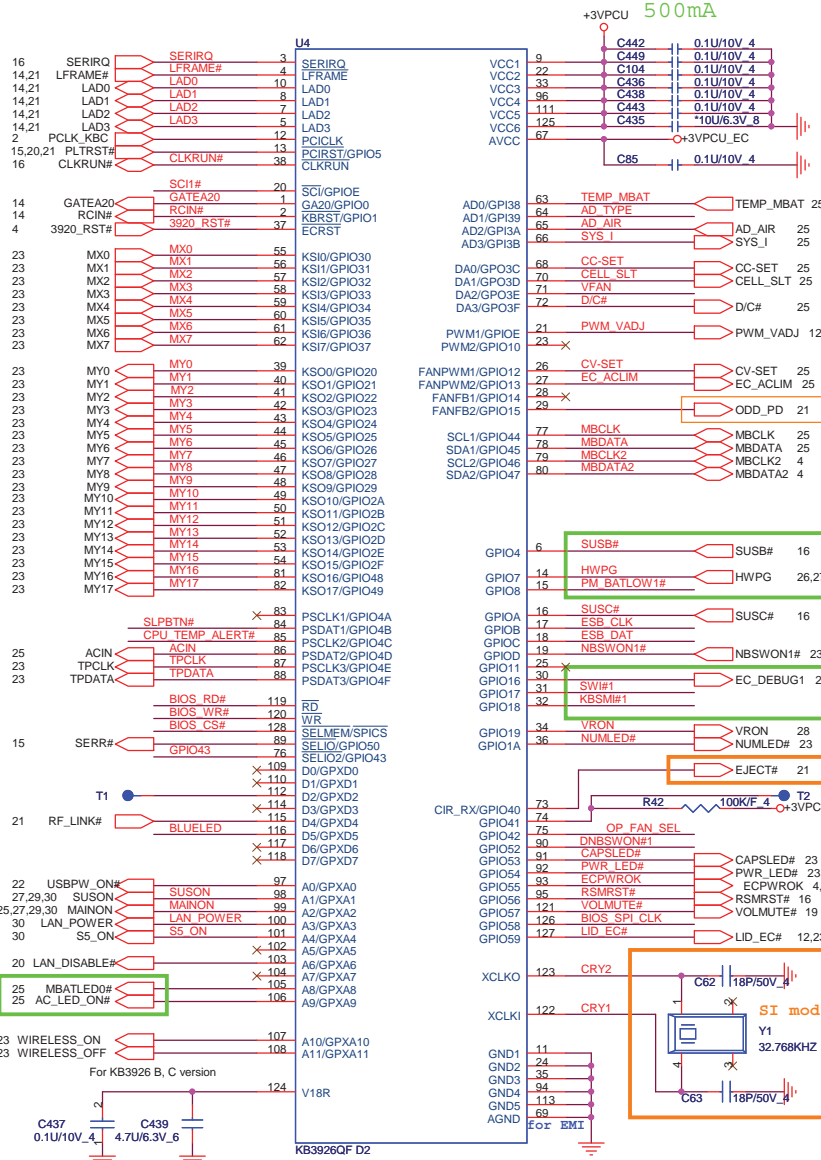


TOUCH PAD Con.

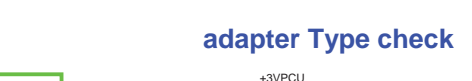
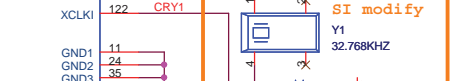
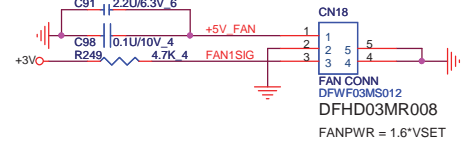
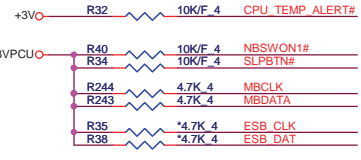


To TOUCH PAD SW board

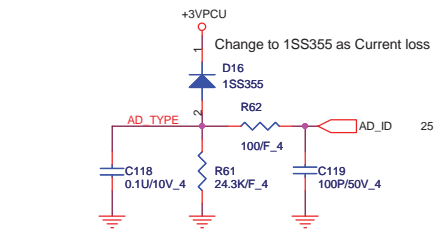
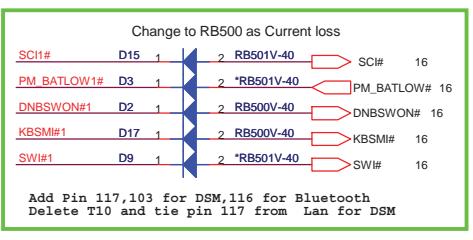




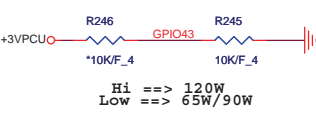
for Battery charge/charge and cap board
for VGA/CPU thermal



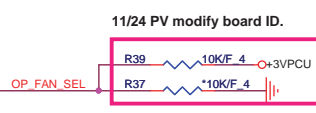
adapter Type check



Adapter select for EC

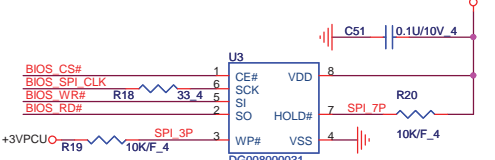


GPIO42 control fan table

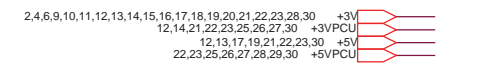


Project Model	GPIO42
AX 14"	High
AX 15.6"	Low
AX 17.3"	Middle (1.5V)

1M byte SPI EC ROM



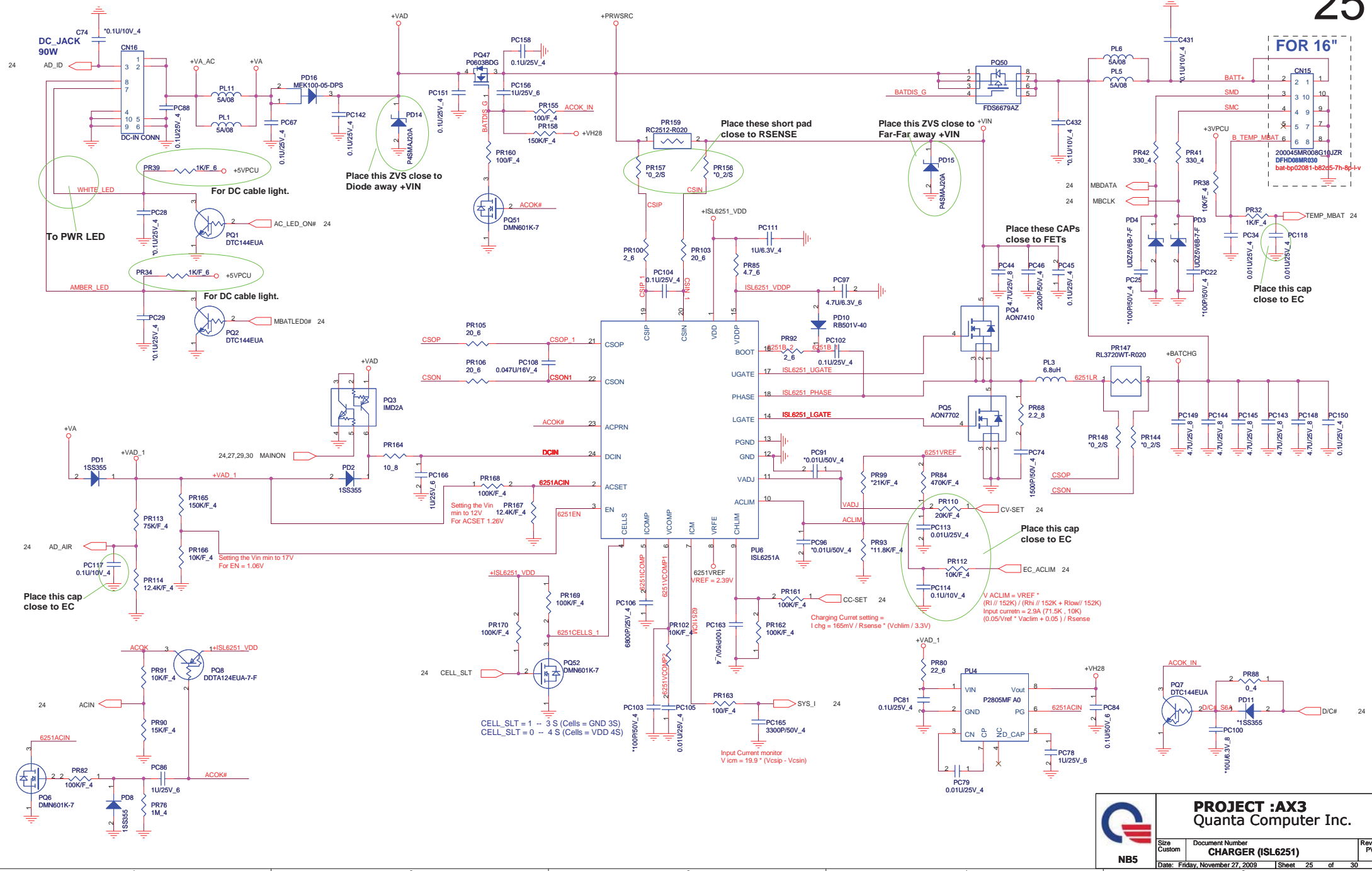
Socket: DG00800031
WINBOND AKE3GZNON00
EON AKE3GZP0Q00
AIT AKE3GZP0801
MAX AKE5GFK0Z09




PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number **EC (KB3926)/ROM** Rev 1A

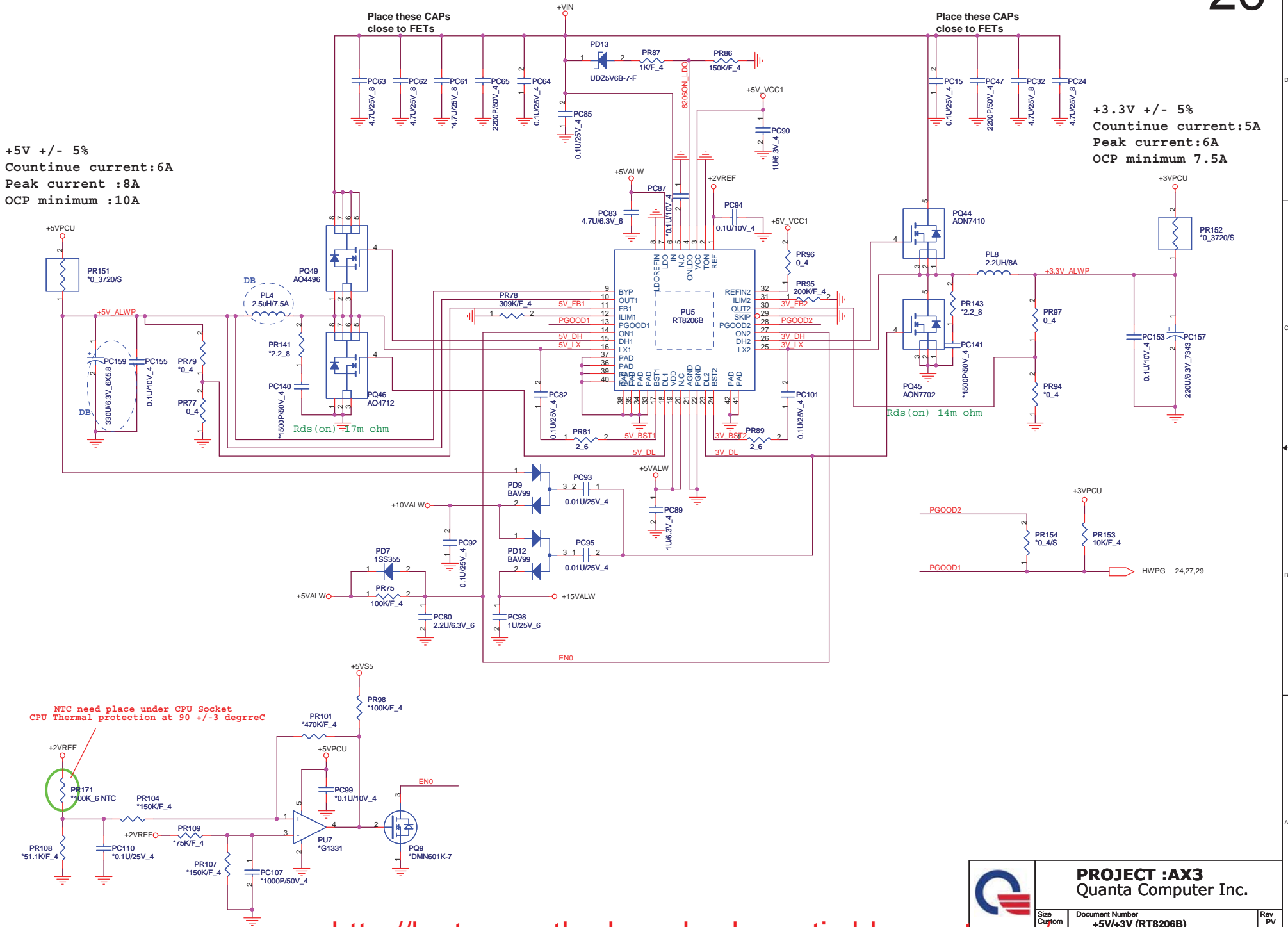
Date: Friday, November 27, 2009 Sheet 24 of 30



	PROJECT :AX3		Rev PV
	Quanta Computer Inc.		
	Size Custom	Document Number CHARGER (ISL6251)	
Date: Friday, November 27, 2009		Sheet 25 of 30	

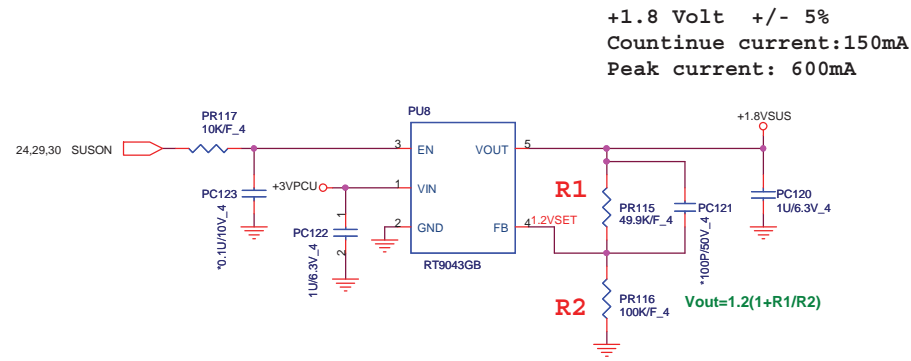
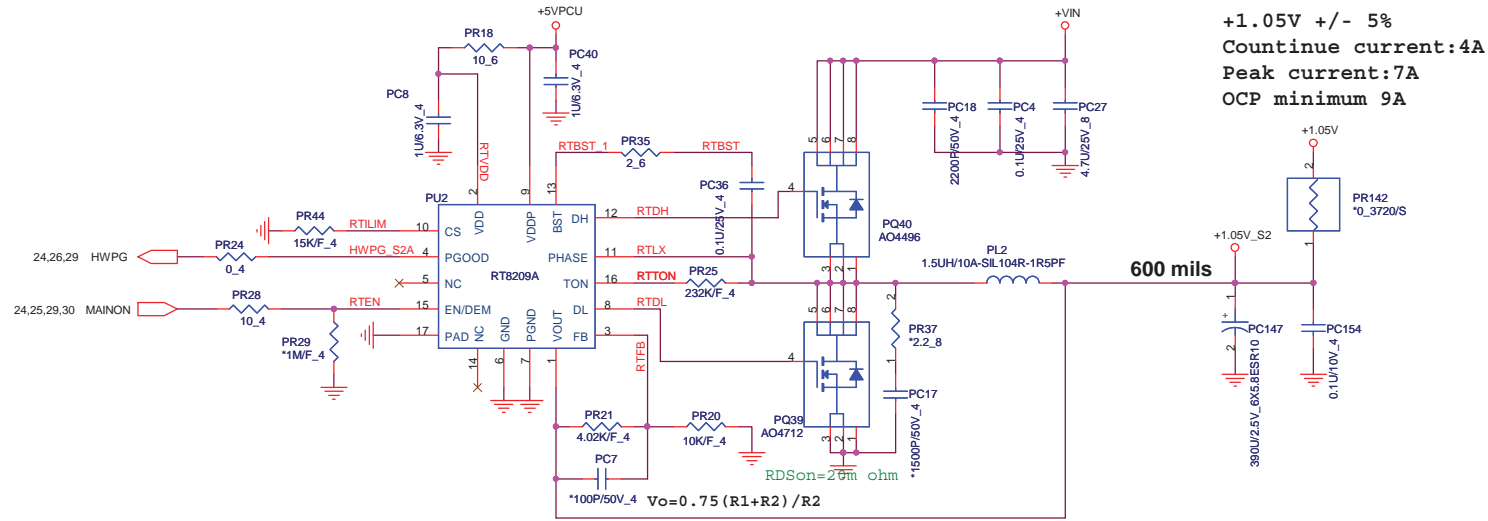
+5V +/- 5%
 Countinue current:6A
 Peak current :8A
 OCP minimum :10A


+3.3V +/- 5%
 Countinue current:5A
 Peak current:6A
 OCP minimum 7.5A



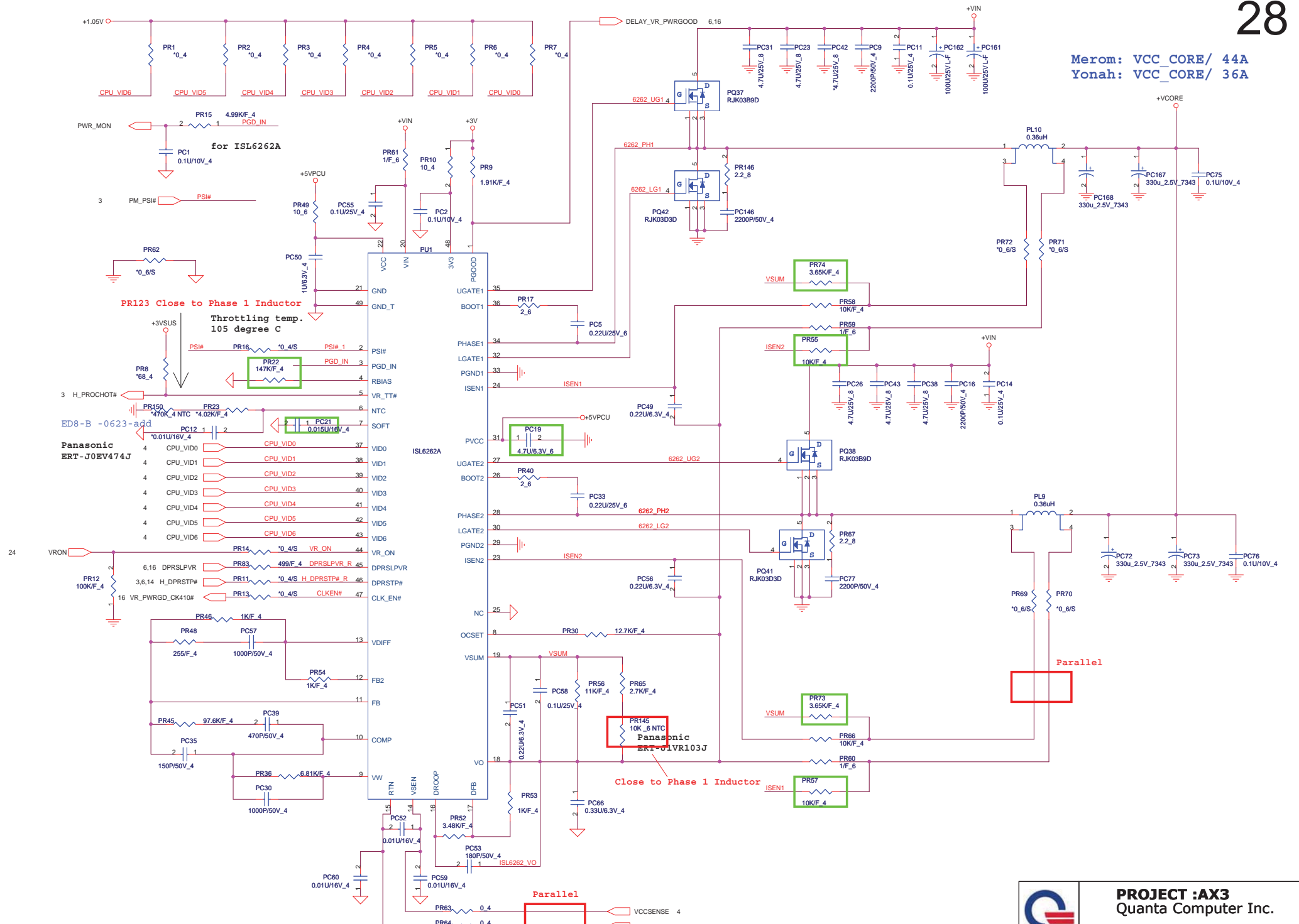
NTC need place under CPU Socket
 CPU Thermal protection at 90 +/-3 deგრec

<p>PROJECT :AX3 Quanta Computer Inc.</p>		
Size Custom	Document Number +5V/+3V (RT8206B)	Rev PV
Date: Friday, November 27, 2009 Sheet 26 of 30		



 PROJECT :AX3 Quanta Computer Inc.		
Size Custom	Document Number +1.05V/+1.8V (RT8204C)	Rev PV
Date: Friday, November 27, 2009		Sheet 27 of 30


Merom: VCC_CORE/ 44A
Yonah: VCC_CORE/ 36A

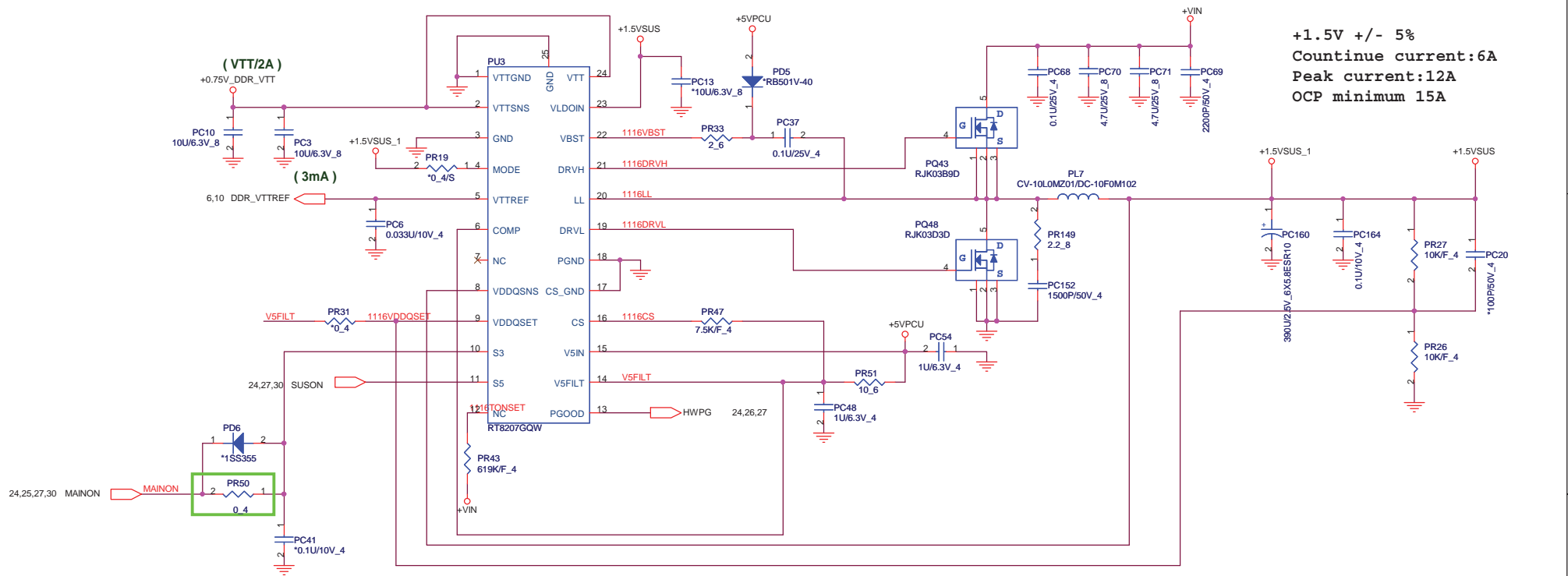


PR123 Close to Phase 1 Inductor
Throttling temp.
105 degree C


Close to Phase 1 Inductor

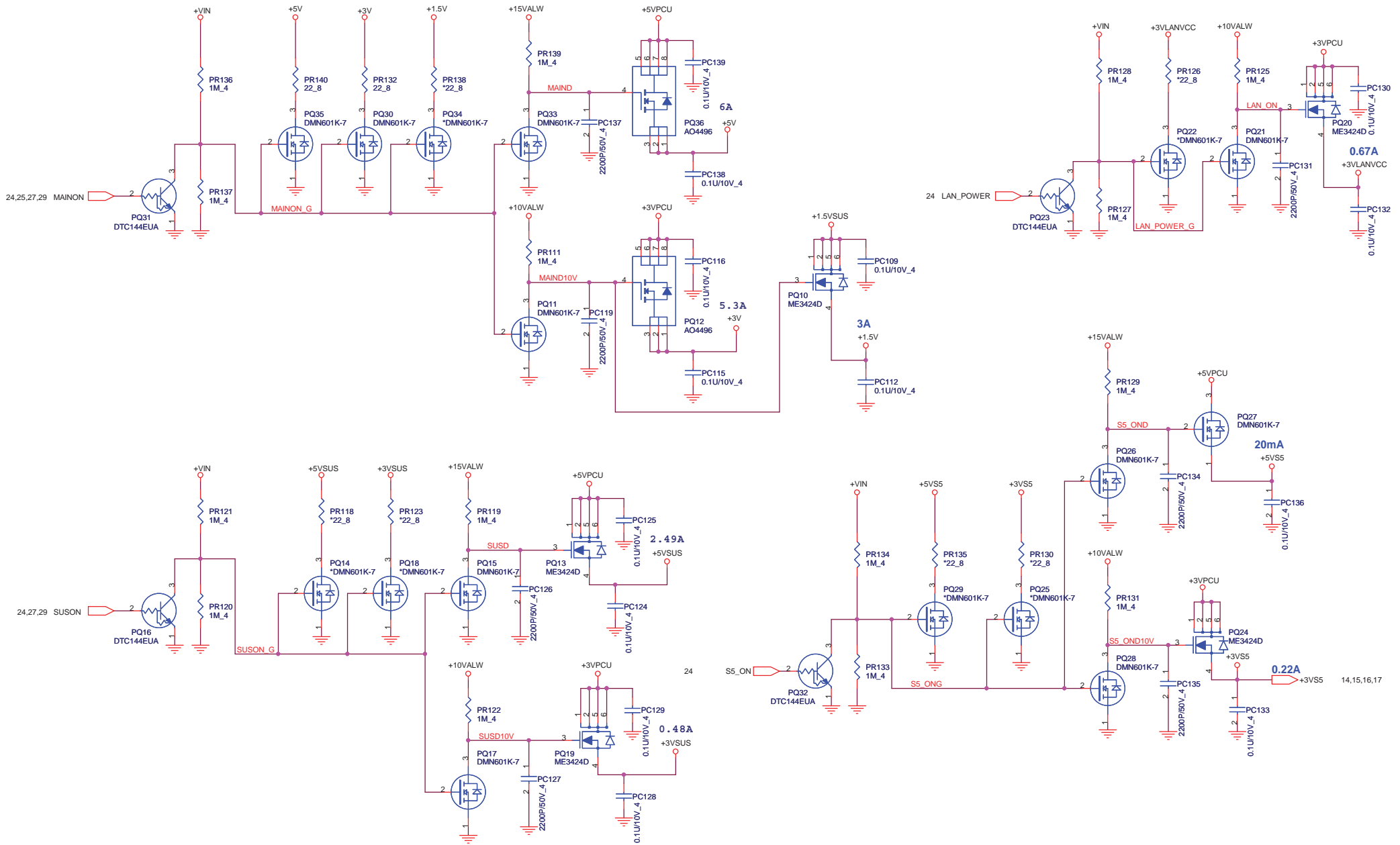
Parallel


		PROJECT :AX3	
		Quanta Core Inc.	
Size Custom	Document Number	CPU Core (ISL6266A)	
Date: Friday, November 27, 2009		Sheet 28	of 30



+1.5V +/- 5%
Countinue current:6A
Peak current:12A
OCP minimum 15A

	PROJECT :AX3 Quanta Computer Inc.	
	Size Custom	Document Number DDR3 (RT8207)
Date: Friday, November 27, 2009		Sheet 29 of 30
		Rev PV



 NBS	PROJECT :AX3		Rev PV
	Quanta Computer Inc.		
Size Custom	Document Number	DISCHARGE/3VS5/5VS5/LAN	
Date: Friday, November 27, 2009	Sheet	30	of 30