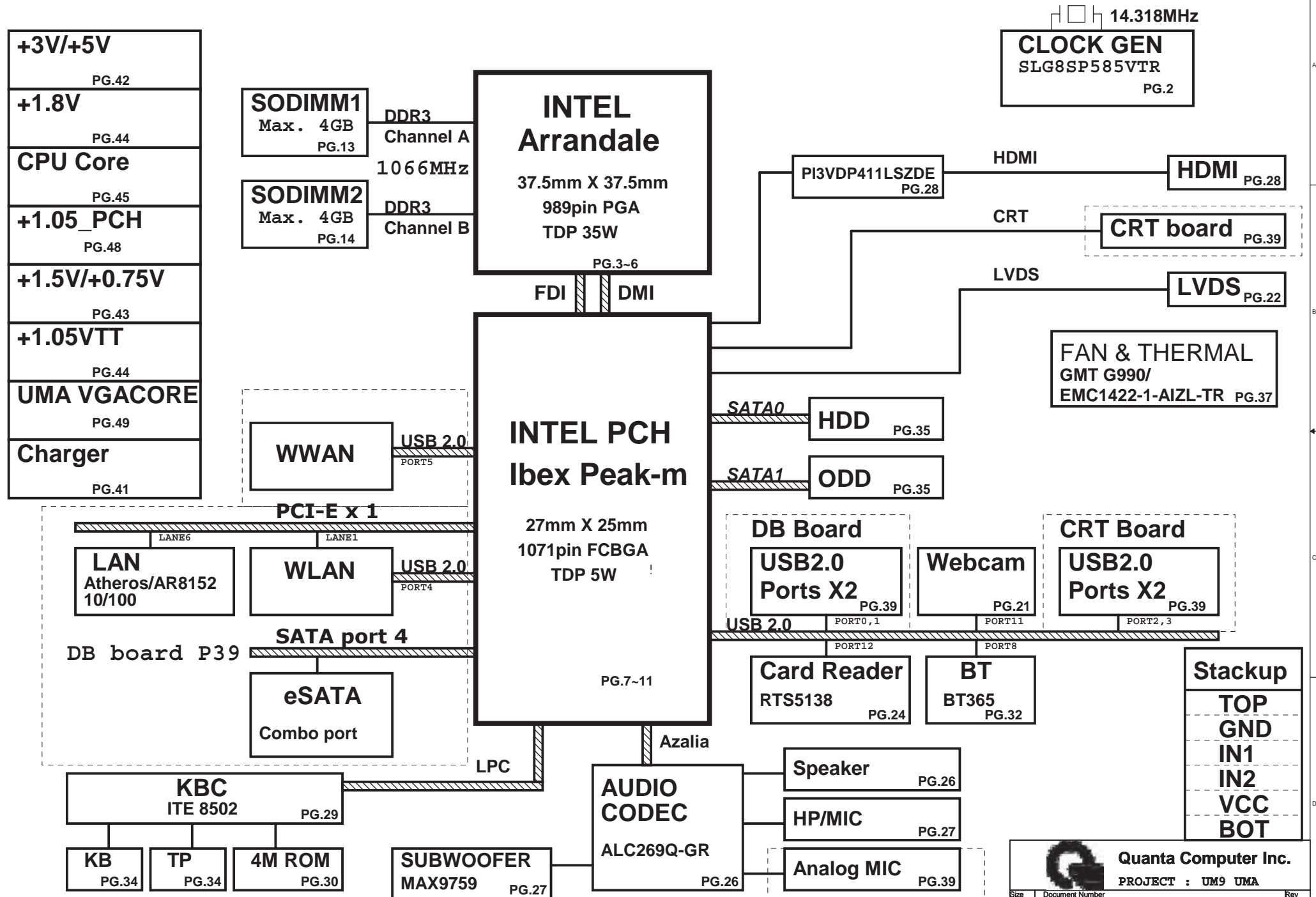
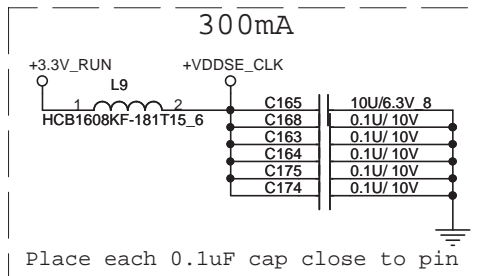
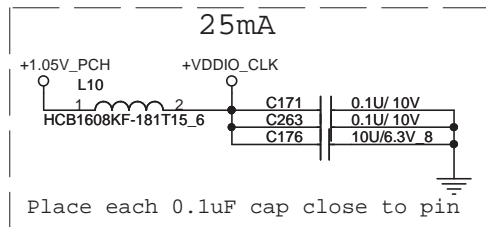
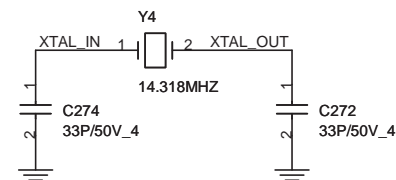
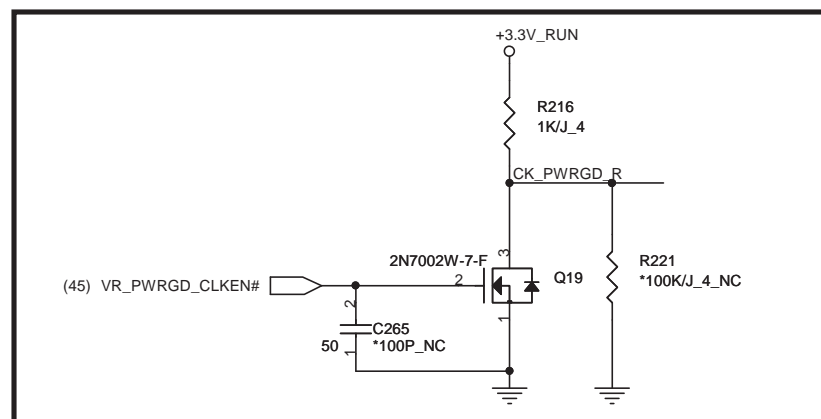
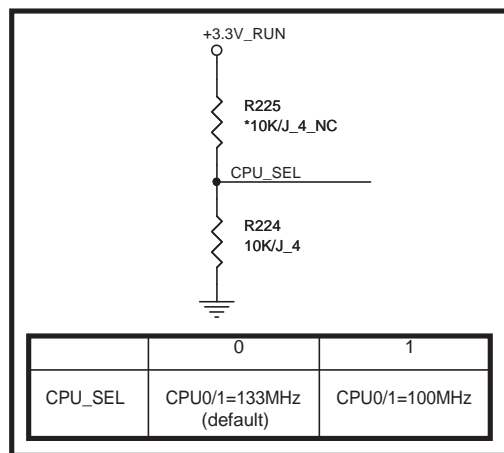
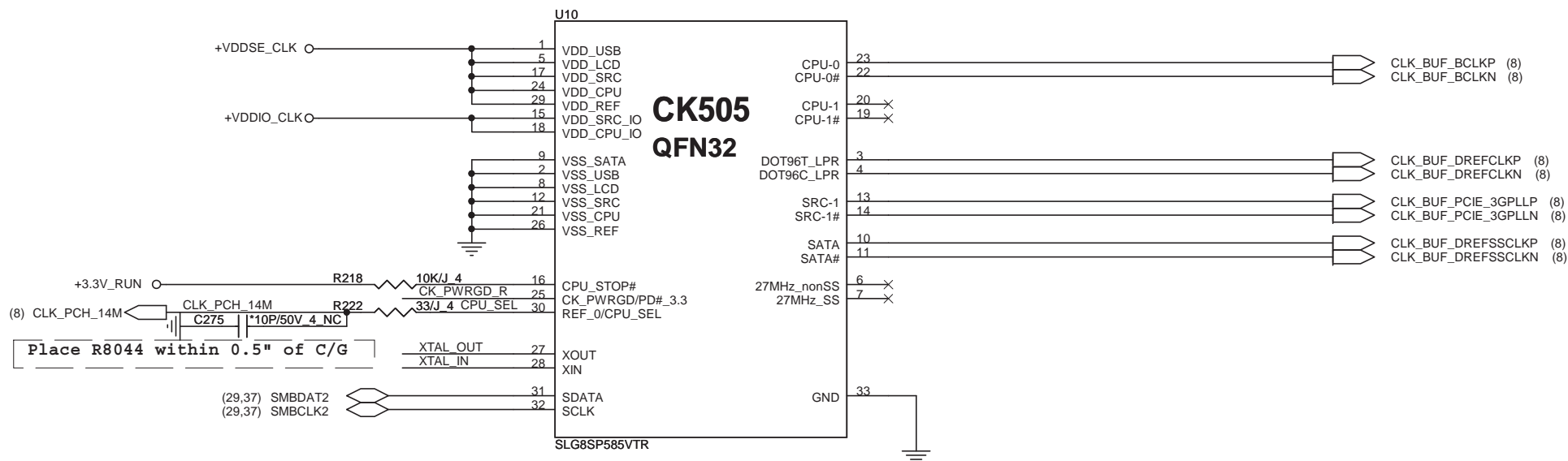


UM9 UMA SYSTEM DIAGRAM





PDC (Power Cap quantities follow UM3)



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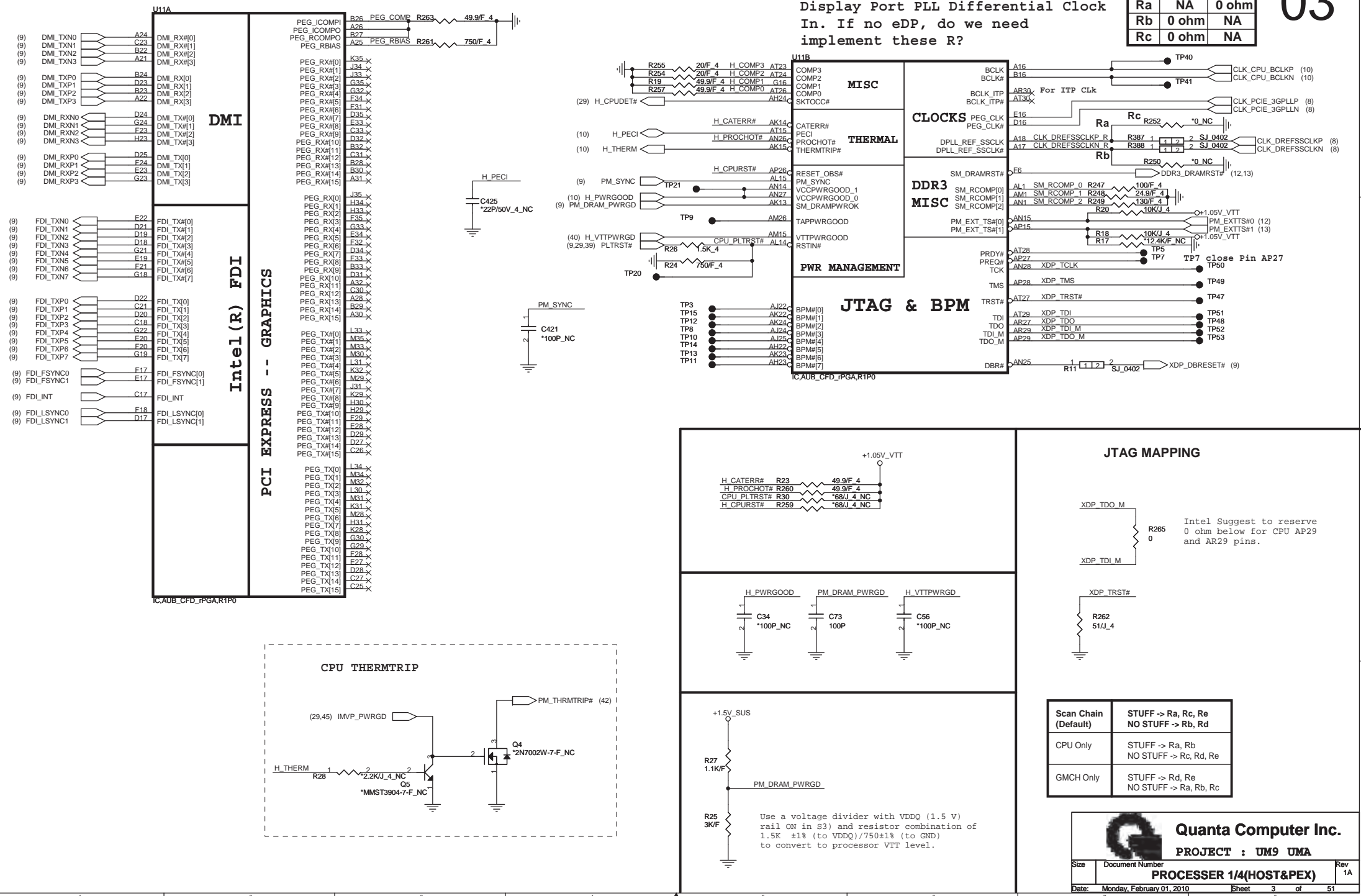
PROJECT : UM9 UMA

Size Document Number
Clock Gen(ICS9LRS3197AKLFT) Rev 1A

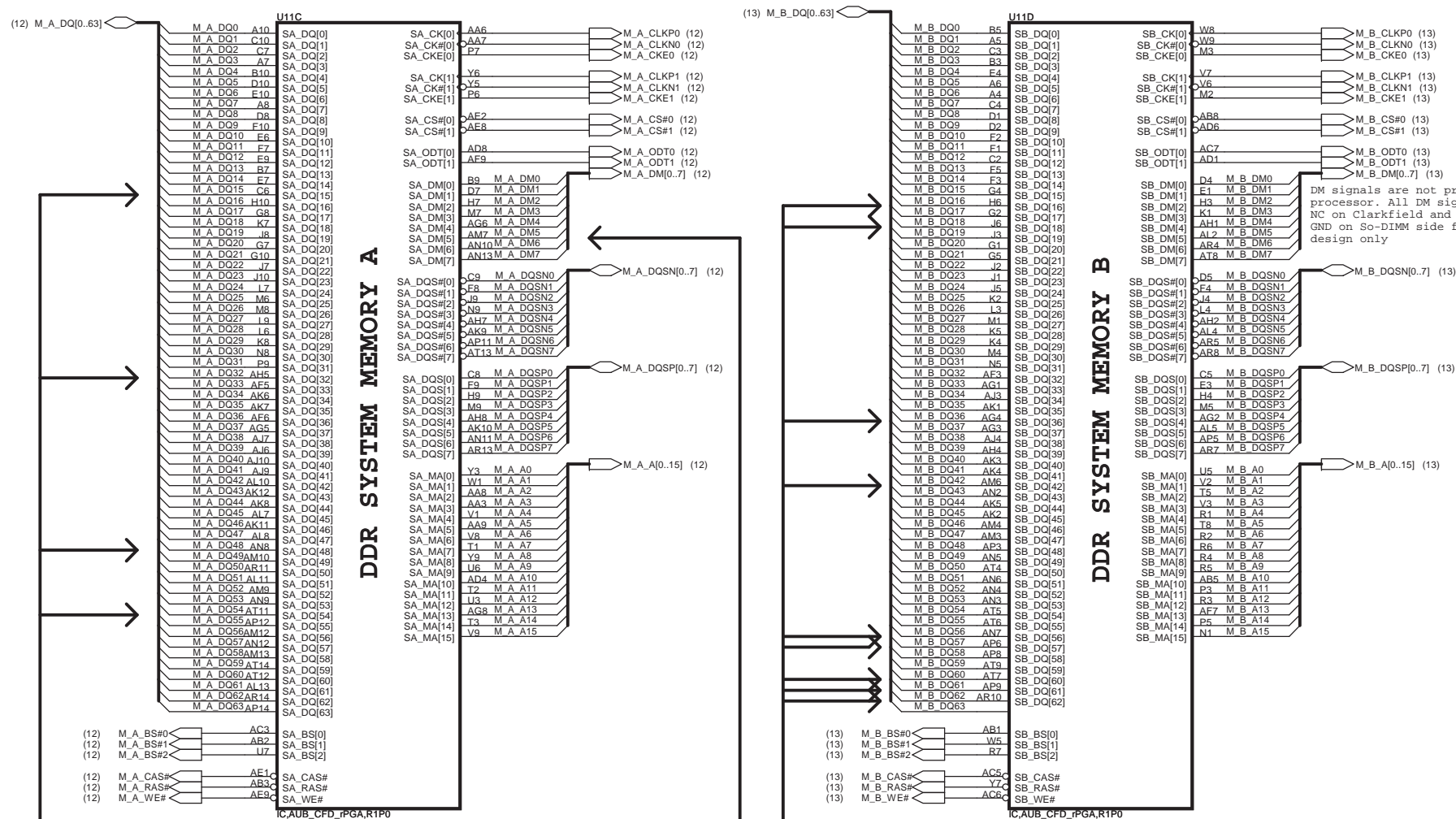
Date: Monday, February 01, 2010 Sheet 2 of 51

DPLL_REF_SSCLK:Embedded
Display Port PLL Differential Clock
In. If no eDP, do we need
implement these R?

	DIS	SG
Ra	NA	0 ohm
Rb	0 ohm	NA
Rc	0 ohm	NA



AUBURNDALE/CLARKSFIELD PROCESSOR (DDR3)



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PROJECT : UM9 UMA

Size	Document Number	Rev
	PROCESSOR 2/4(DDR)	1A
Date:	Monday, February 01, 2010	Sheet 4 of 51

Name different with power

C324	*22U/6.3V 8 NC	AG35
C334	*22U/6.3V 8 NC	AG34
C330	*22U/6.3V 8 NC	AG32
C329	*22U/6.3V 8 NC	AG31
C41	*22U/6.3V 8 NC	AG30
C40	*22U/6.3V 8 NC	AG29
C325	*22U/6.3V 8 NC	AG27
C316	*22U/6.3V 8 NC	AG26
C333	*22U/6.3V 8 NC	AG25
C54	*22U/6.3V 8 NC	AF35
C42	*22U/6.3V 8 NC	AF34
C336	*22U/6.3V 8 NC	AF32
C328	*10U/6.3V 8 NC	AF31
C32	*10U/6.3V 8 NC	AF30
C31	*10U/6.3V 8 NC	AF29
C323	*10U/6.3V 8 NC	AF28
C53	*10U/6.3V 8 NC	AF27
C39	*10U/6.3V 8 NC	AF26
C49	*10U/6.3V 8 NC	AD35
C30	*10U/6.3V 8 NC	AD34
C28	*10U/6.3V 8 NC	AD33
C339	*10U/6.3V 8 NC	AD32
C317	*10U/6.3V 8 NC	AD31
C331	*10U/6.3V 8 NC	AD30
C322	*10U/6.3V 8 NC	AD29
C55	*10U/6.3V 8 NC	AD28
C335	*10U/6.3V 8 NC	AD27
C33	*10U/6.3V 8 NC	AD26
C29	*470U NC	AD34
C23	*470U NC	AD33

Follow UM3

CPU CORE SUPPLY

POWER

CPU VIDS

SENSE LINES

1.1V RAIL POWER

VTT Rail Values are
Auburndale VTT=1.05V
Clarkfield VTT=1.1V

Please note that +VCC_GFX_CORE
should be 1.05V in Auburndale

18A

U11G

GRAPHICS

POWER

FDI

PEG & DMI

SENSE LINES

GRAPHICS VIDS

DDR3 - 1.5V RAILS

1.1V

1.8V

VAXG_SENSE
VSSAXG_SENSE

GFX_VID[0]
GFX_VID[1]
GFX_VID[2]
GFX_VID[3]
GFX_VID[4]
GFX_VID[5]
GFX_VID[6]
GFX_VR_EN
GFX_DPRSPLVR
GFX_IMON

VDDQ1
VDDQ2
VDDQ3
VDDQ4
VDDQ5
VDDQ6
VDDQ7
VDDQ8
VDDQ9
VDDQ10
VDDQ11
VDDQ12
VDDQ13
VDDQ14
VDDQ15
VDDQ16
VDDQ17
VDDQ18

VTT0_59
VTT0_60
VTT0_61
VTT0_62
VTT0_63
VTT1_64
VTT1_65
VTT1_66
VTT1_67
VTT1_68
VCCPLL1
VCCPLL2
VCCPLL3

VID0
VID1
VID2
VID3
VID4
VID5
VID6
DPRSPLVR
H_PSI#

HFM_VID : Max 1.4V
LFM_VID : Min 0.65V
C397 close to R8361

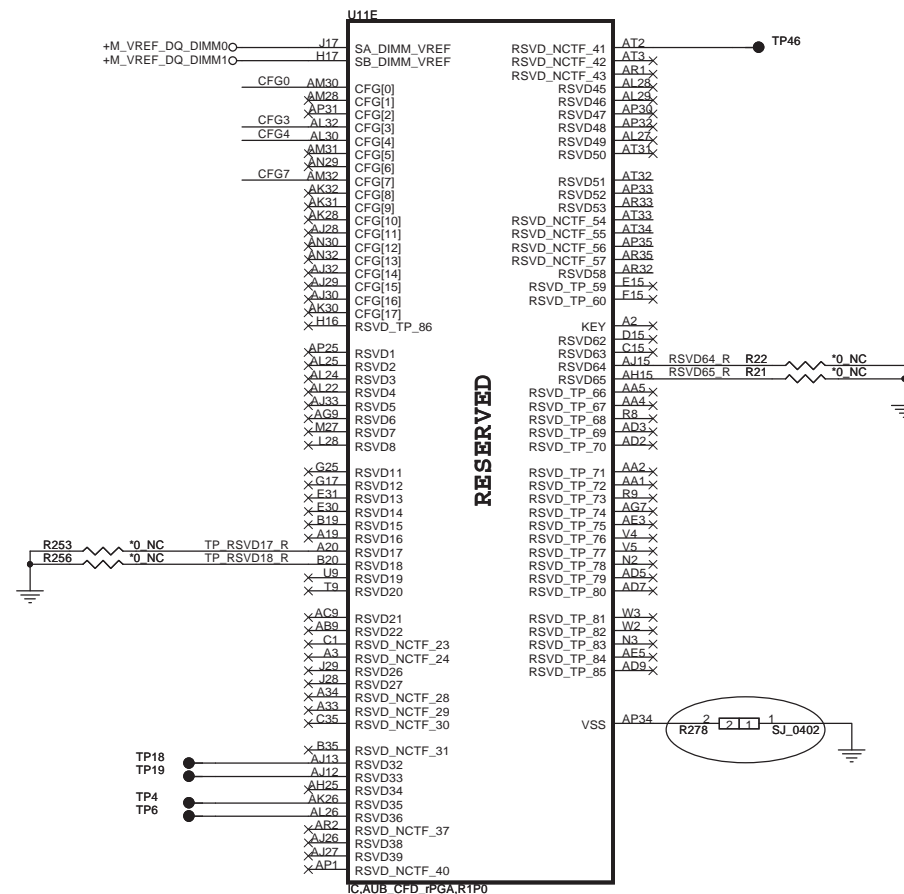
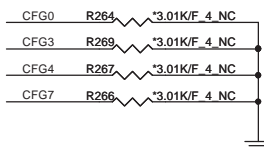
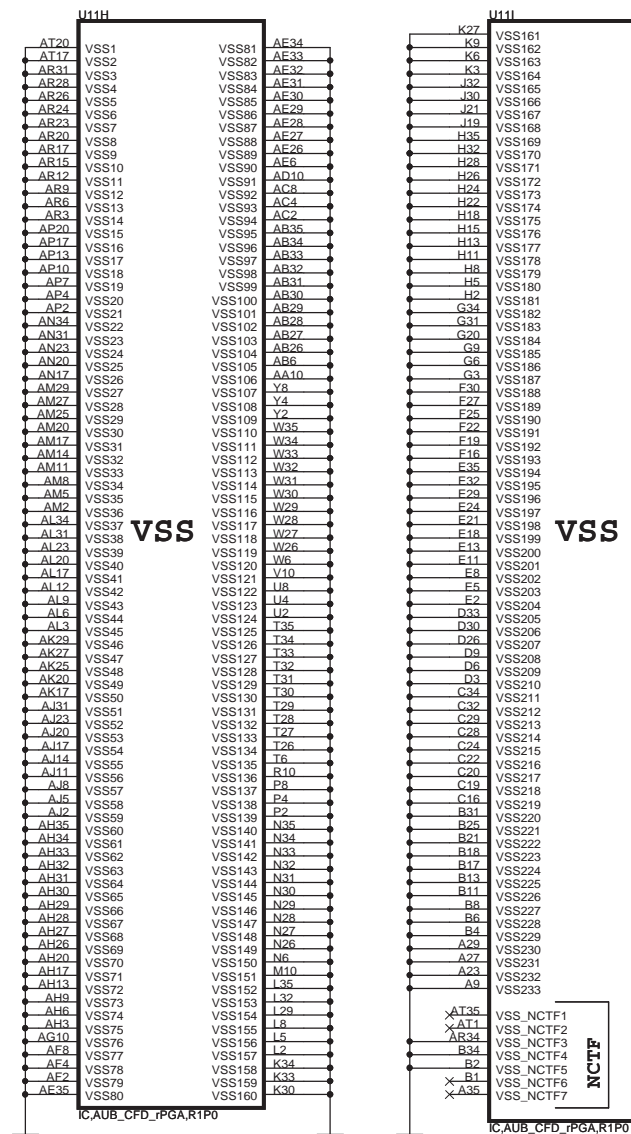


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PROJECT : UM9 UMA

Size Document Number
PROCESSOR 3/4(POWER)
Date: Monday, February 01, 2010 Sheet 5 of 51

AUBURNDALE/CLARKSFIELD PROCESSOR (GND)

AUBURNDALE/CLARKSFIELD PROCESSOR(RESERVED, CFG)



For Discrete only

	1	0
CFG4 (Display Port Presence)	Disabled; No Physical Display Port attached to Embedded Display Port	Enabled; An external Display port device is connected to the Embedded Display port
CFG0 (PCI-Epress Configuration Select)	Single PEG	Bifurcation enabled
CFG3 (PCI-Epress Static Lane Reversal)	Normal Operation	Lane Numbers Reversed 15 -> 0, 14 -> 1

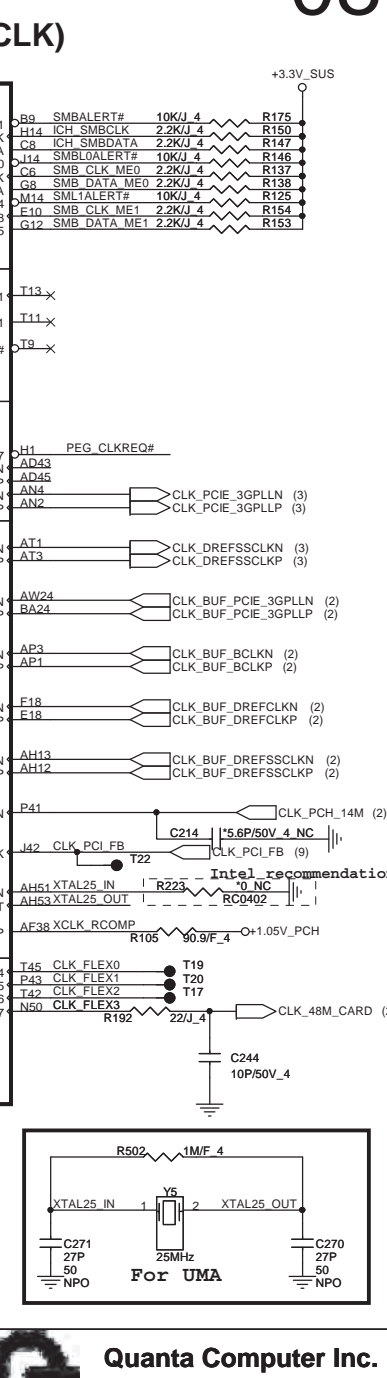
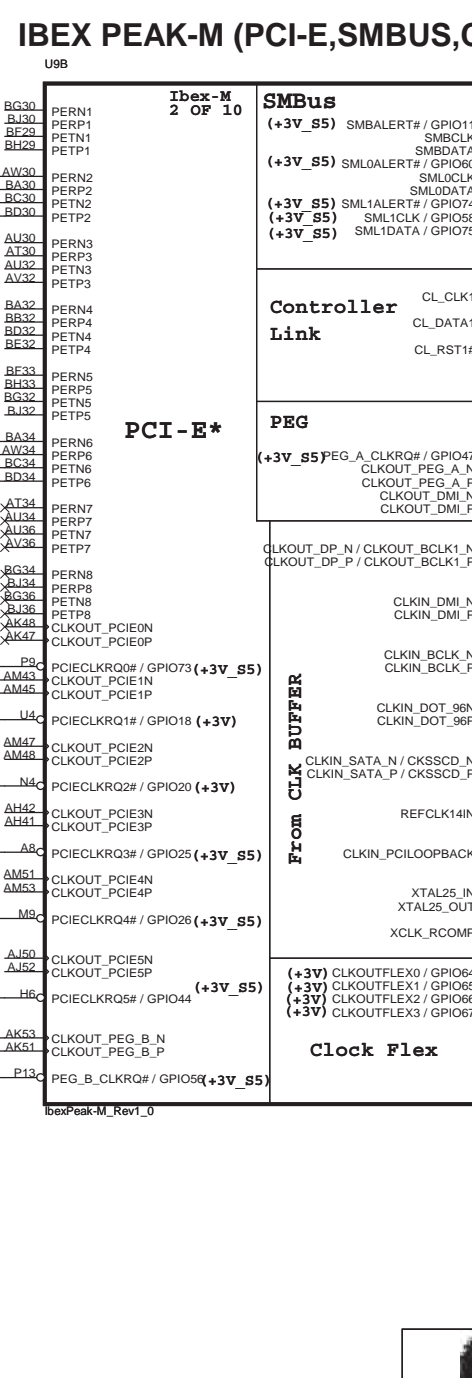
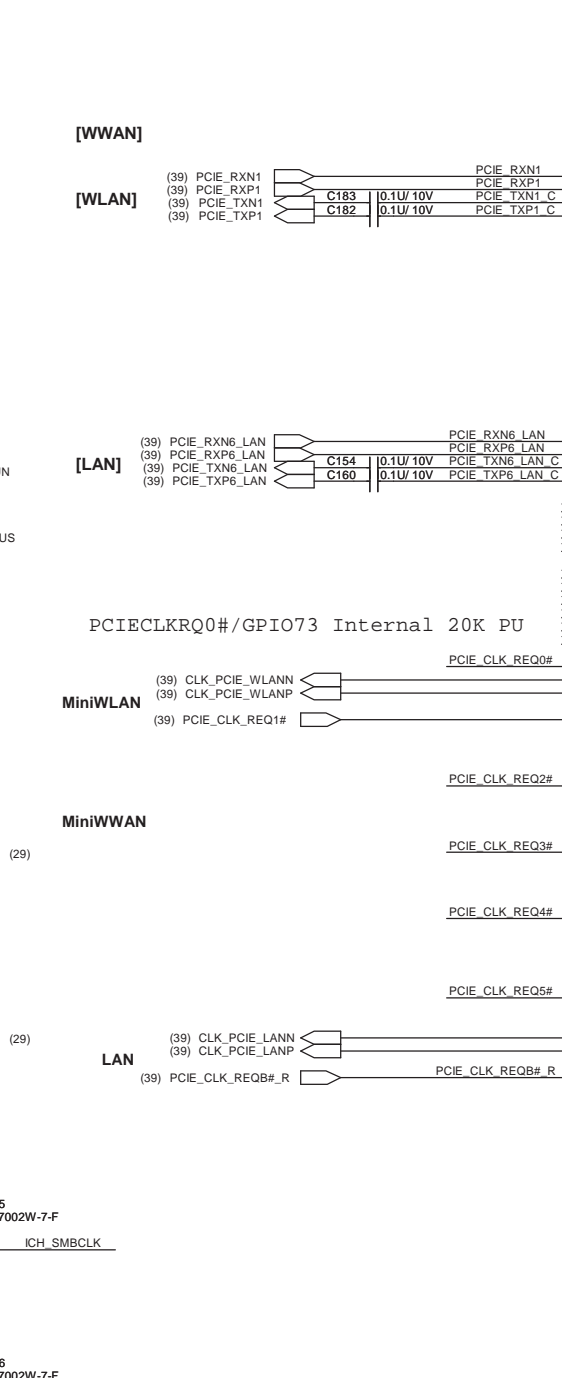
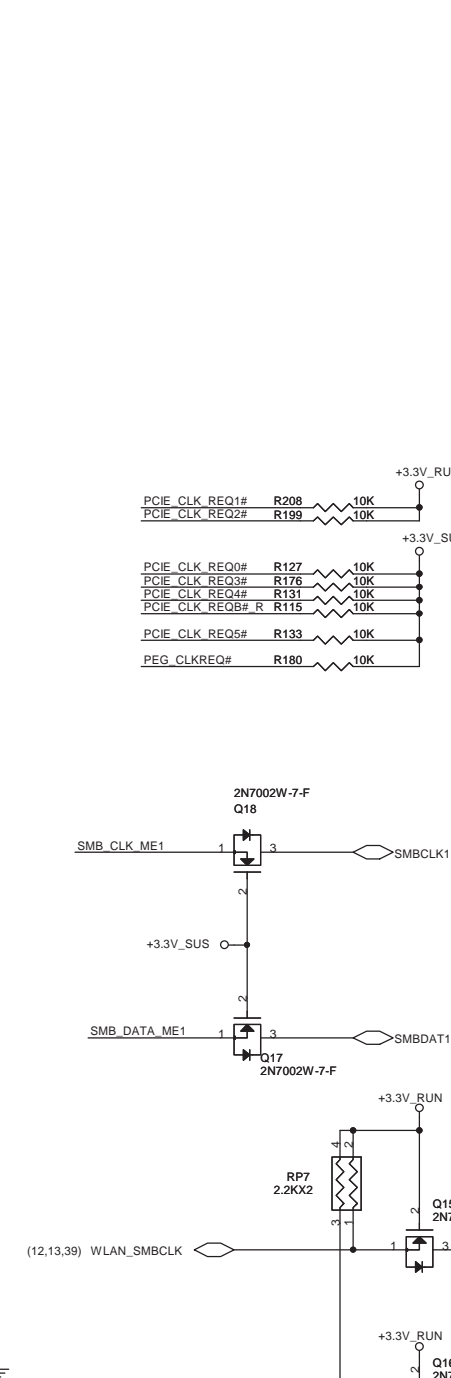
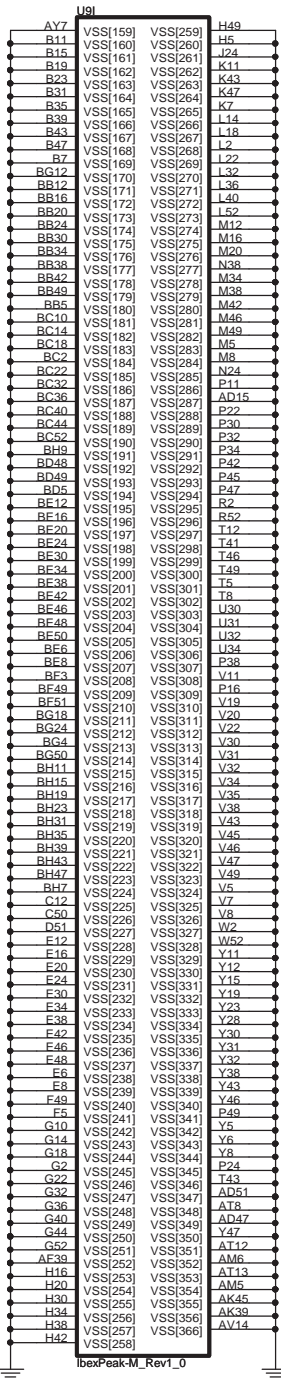
CFG[1:0] - PCI_Epress Configuration Select
 * 11= 1 x 16 PEG
 * 10= 2 x 8 PEG



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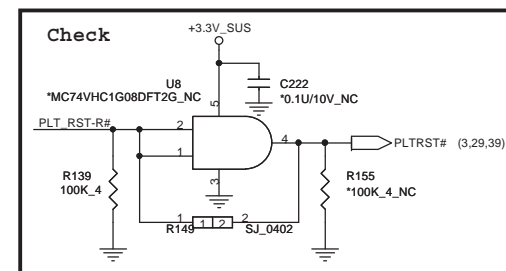
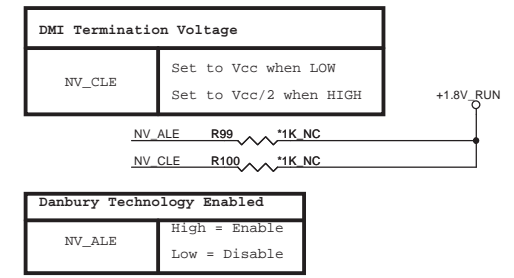
PROJECT : UM9 UMA

Size	Document Number	Rev
	PROCESSOR 4/4 (GND)	1A
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IBEX PEAK-M (DMI,FDI,GPIO)

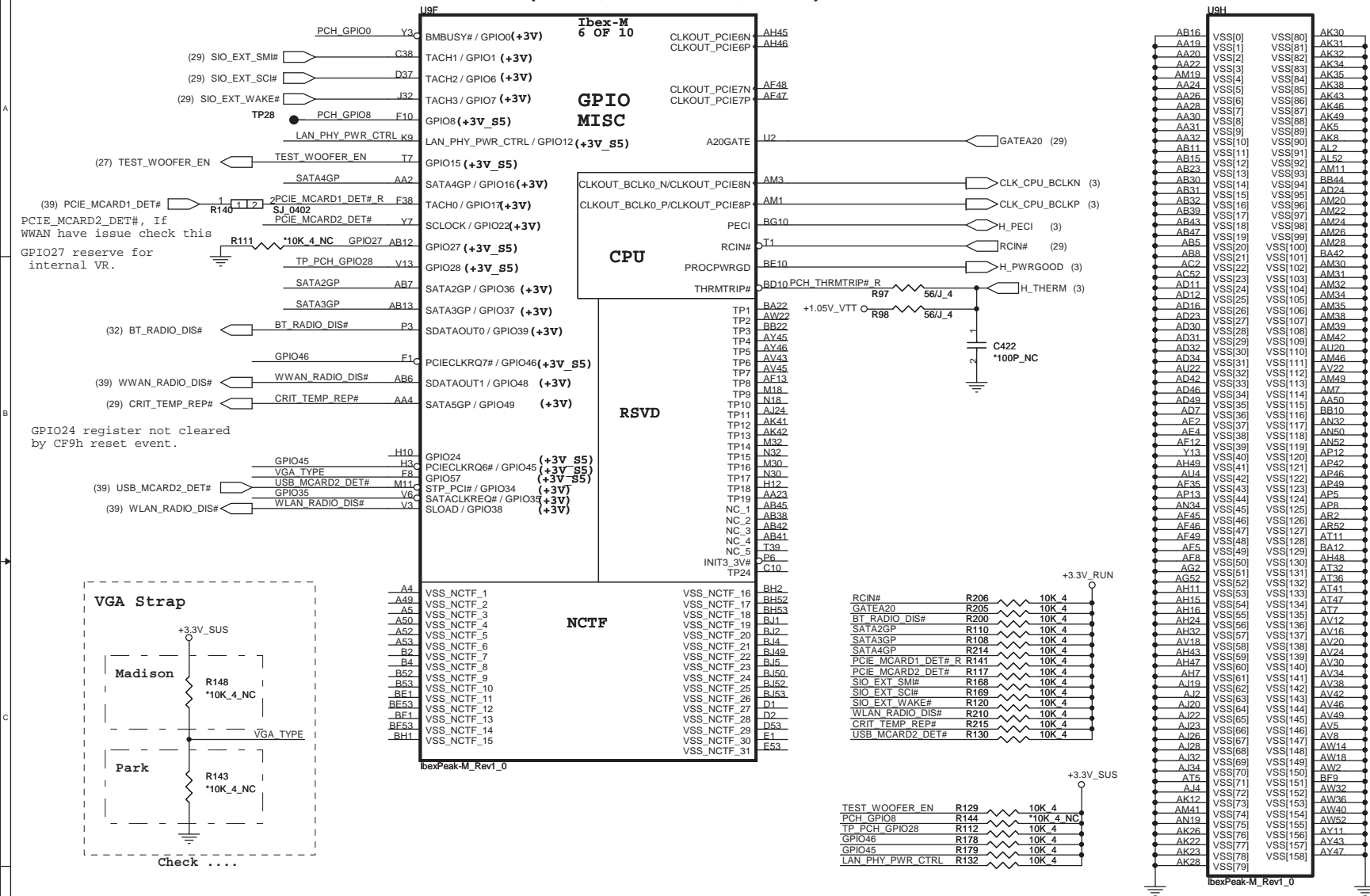
BATLOW#/GPIO72 Internal 20K PU



Boot BIOS Strap		
PCI_GNT0#	GNT#1	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI

A16 swap override Strap/Top-Block Swap Override jumper	
GNT3#	Low = A16 swap override/Top-Block Swap Override enabled High = Default

		Quanta Computer Inc. PROJECT : UM9 UMA	
Size	Document Number	Rev 1A	
PCH 3/5 (PCI,ONFI,USB,DMI)			
Date:	Monday, February 01, 2010	Sheet	9 of 51



GPIO[7,6,1,17], PCIECLKRQ6#/GPIO45,
GPIO28 Internal 20K PU

BMBUSY# (Intel feedback)
Follow CRB checklist, 1K is for intel BIOS validation purpose.

BMBUSY#:
If not used, require a weak pull-up (8.2- KΩ to 10 KΩ) to Vcc3_3.
CRB(V1.0)P28: it has 1K PU and 100 ohm on this net for validation purpose.

WWAN_RADIO_DIS# 1-X High = Strong (Default)

Flash Descriptor Security Override

GPIO33 Low = Enabled
High = Disabled

(7,29) PCH_MELOCK R121 *1KJ_4_NC
(Internal 20K/F pull high to +3.3V_RUN)

Note : GPIO33 is a signal used for Flash Descriptor Security Override/ME Debug Mode. This signal should be only asserted low through an external pull-down in manufacturing or debug environments ONLY.



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PROJECT : UM9 UMA

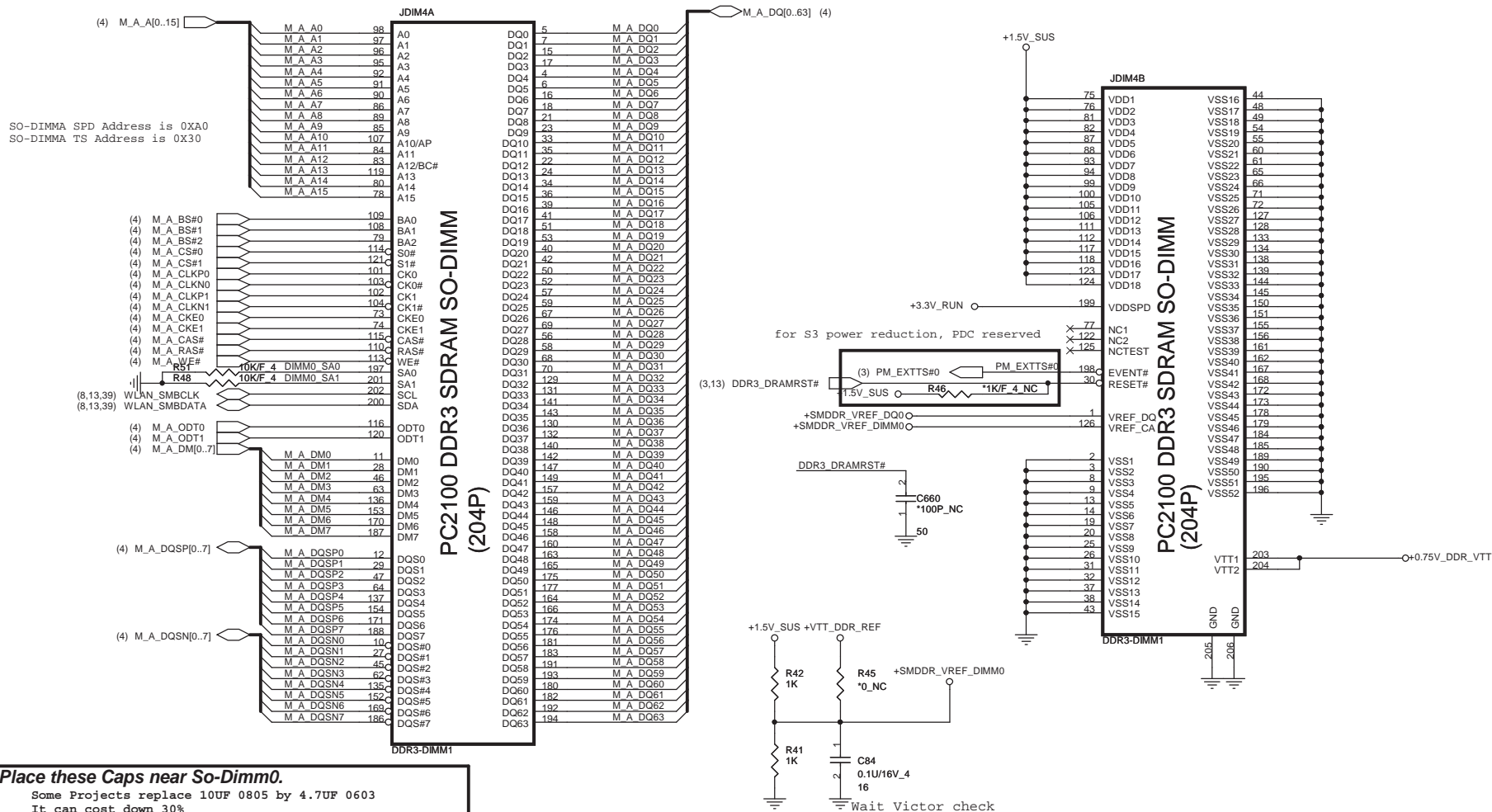
Size Document Number PCH 4/5 (GPIO & Strap) Rev 1A
Date: Monday, February 01, 2010 Sheet 10 of 51

C8335 UMA:22u, DIS:10u, solve UMA CRT display ripple issue.



PROJECT : UM9 UMA

WWW.AliSaler.Com

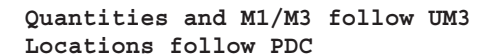


Quantities and M1/M3 follow UM3
Locations follow PDC

Quanta Computer Inc.
PROJECT : UM9 UMA

Size Document Number
DDR3 DIMM-0

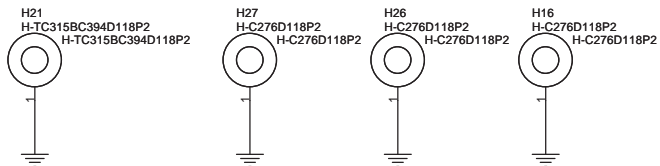
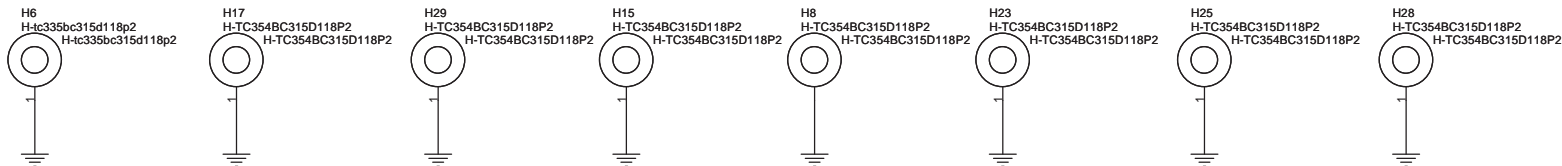
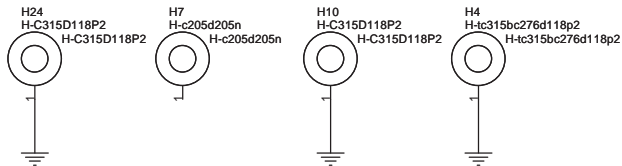
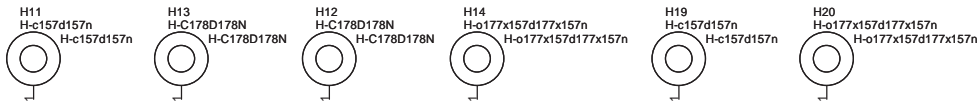
Date: Monday, February 01, 2010 Sheet 12 of 51



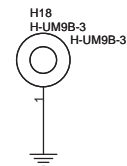
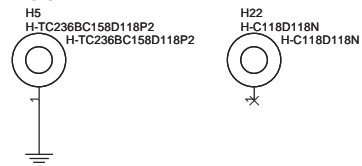
Quanta Computer Inc.
PROJECT : UM9 UMA

WWW.AliSaler.Com

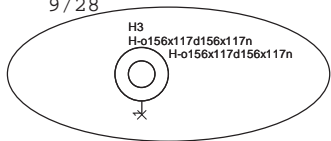
9/28
Del H1&H2



Nut



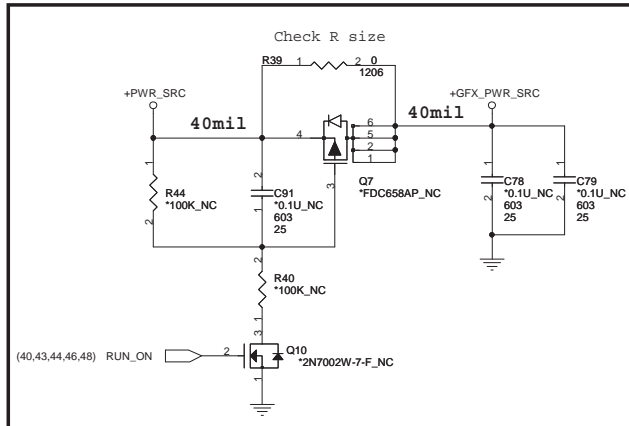
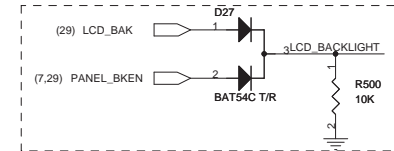
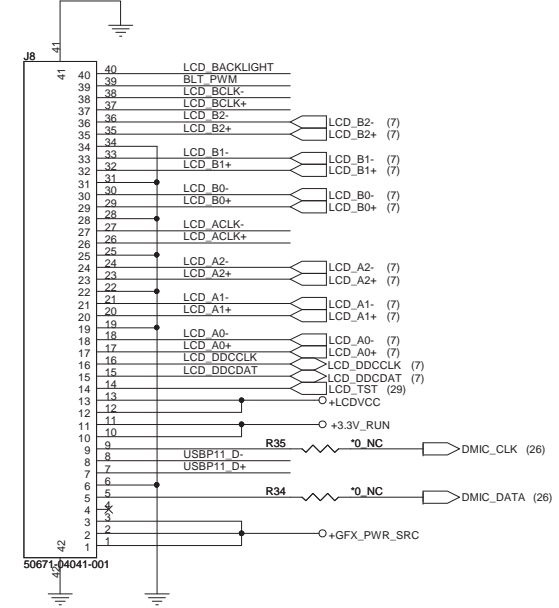
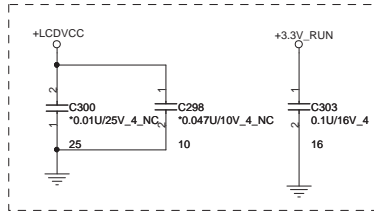
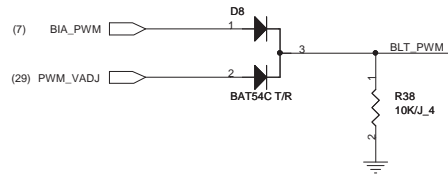
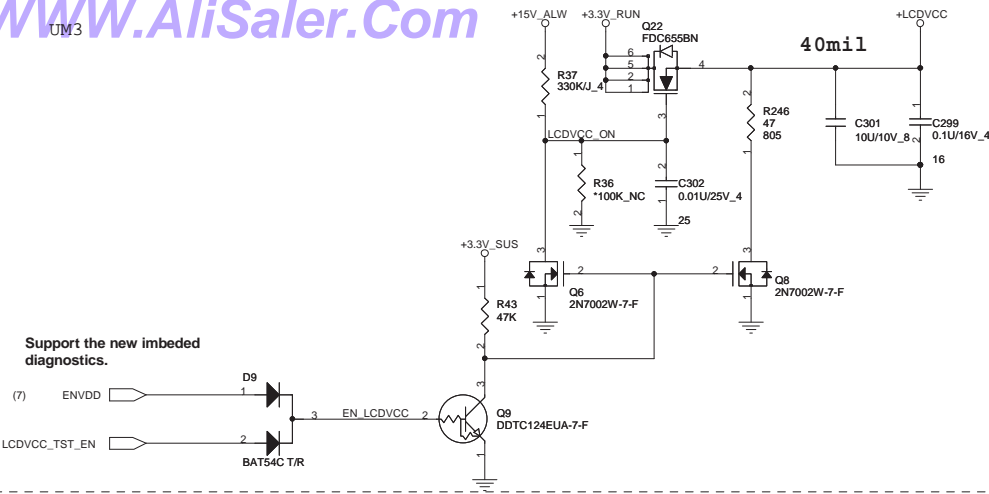
9/28



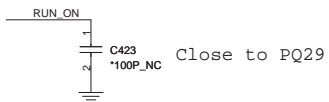
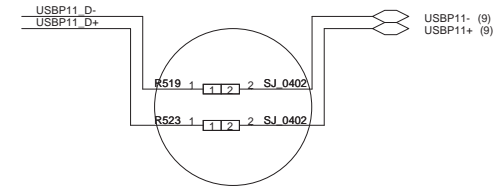
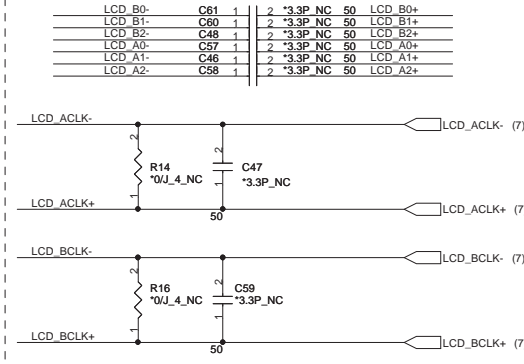
Quanta Computer Inc.
PROJECT : UM9 UMA


Size	Document Number	Rev
	SCREW PAD	1A
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Support the new imbedded diagnostics.



Shunt capacitors on LVDS for improving WWAN.



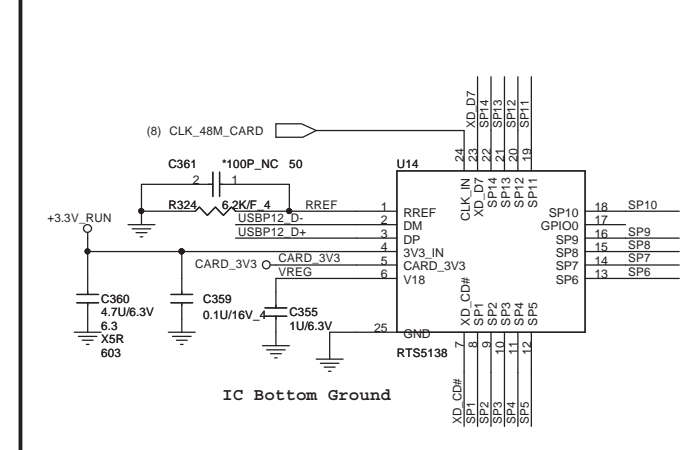
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		PROJECT : UM9 UMA	
Size	Document Number		Rev
	CRT CONN		1A
Date:	Wednesday, January 27, 2010		Sheet 23 of 51



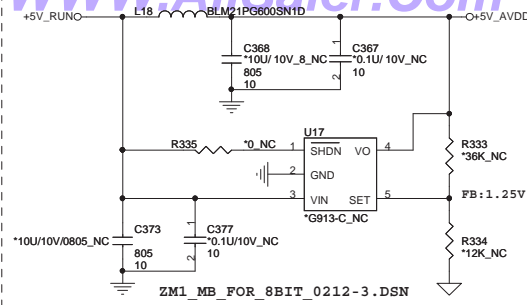
Quanta Computer Inc.

PROJECT : UM9 UMA

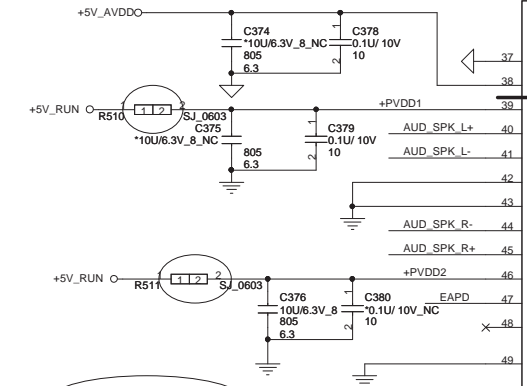
Size	Document Number	Rev
	DB CONN/Left USB	1A
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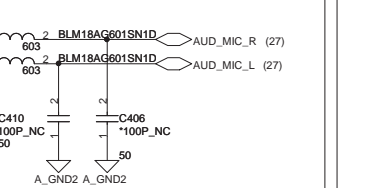
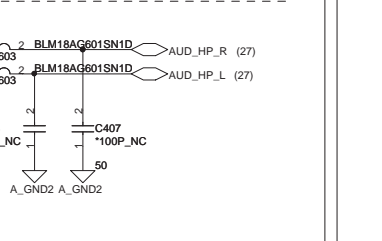
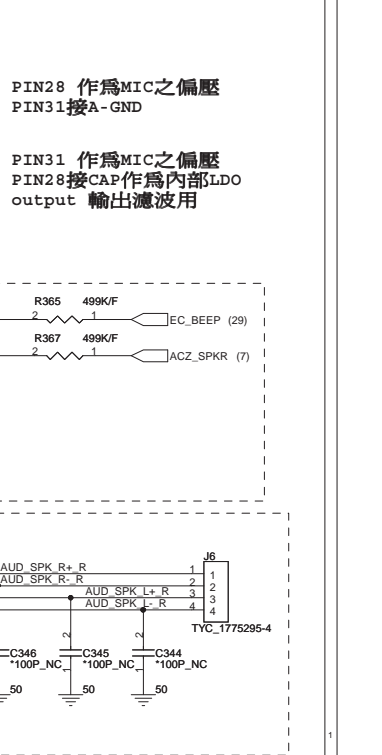
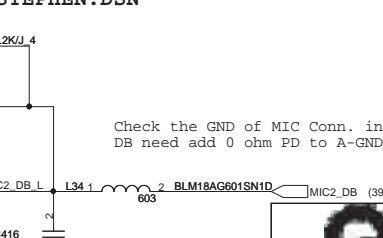
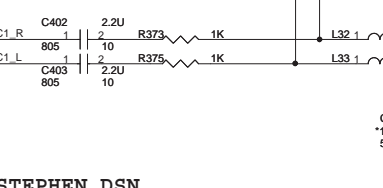
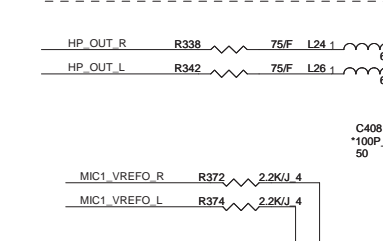
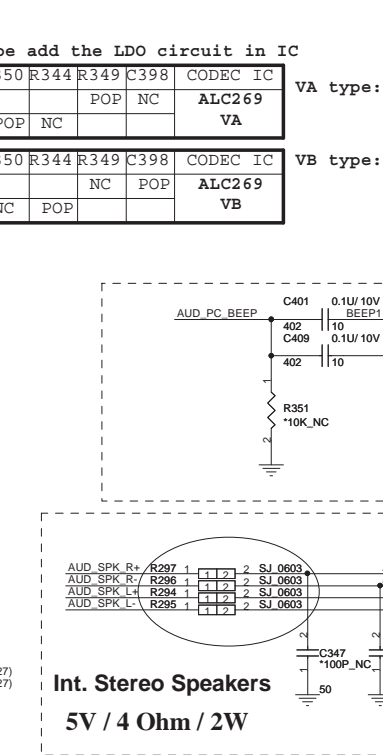
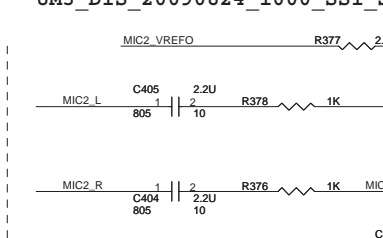
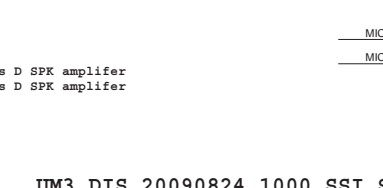
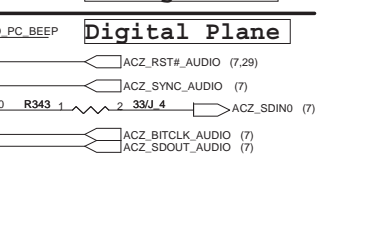
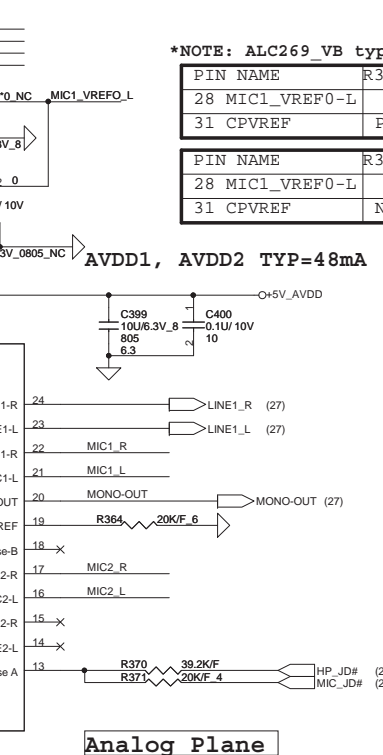
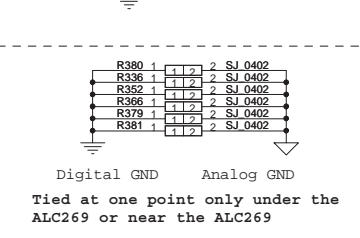
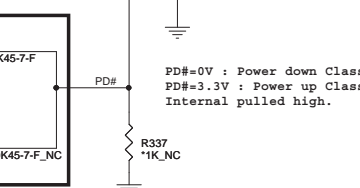
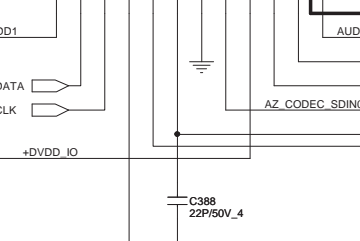
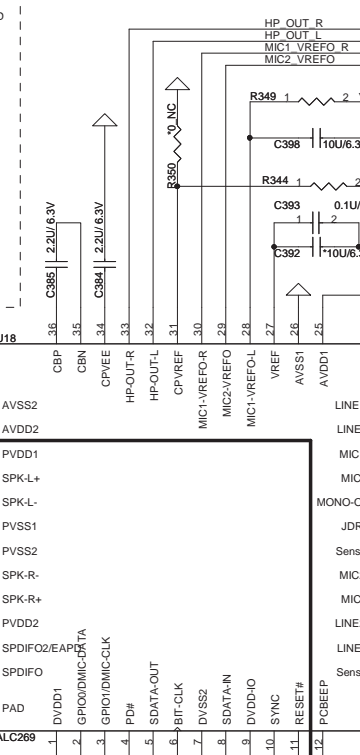
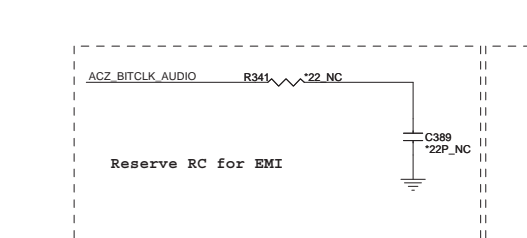
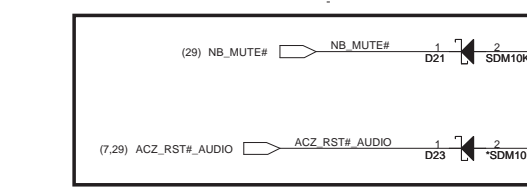
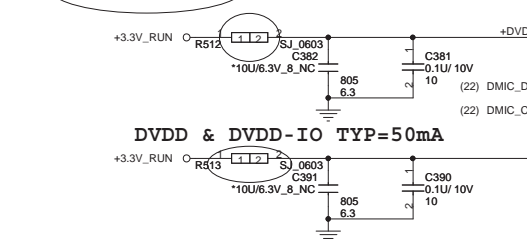
Share Pin



AVDD1, AVDD2 TYP=48mA



(27) EAPD



*NOTE: ALC269_VB type add the LDO circuit in IC

PIN NAME	R350	R344	R349	C398	CODEC IC
28 MIC1_VREF0-L			POP	NC	ALC269
31 CPVREF	POP	NC			VA

PIN NAME	R350	R344	R349	C398	CODEC IC
28 MIC1_VREF0-L			NC	POP	ALC269
31 CPVREF	NC	POP			VB

VA type: PIN28 作為MIC之偏壓
PIN31接A-GND

VB type: PIN31 作為MIC之偏壓
PIN28接CAP作為內部LDO
output 輸出濾波用

AVDD1, AVDD2 TYP=48mA

Analog Plane

Digital Plane

Int. Stereo Speakers
5V / 4 Ohm / 2W

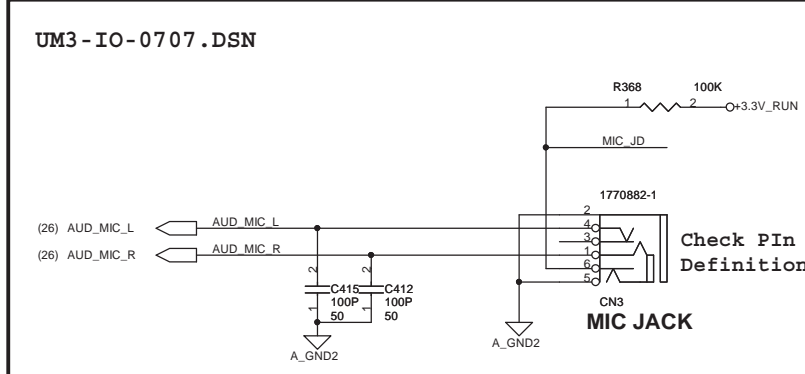
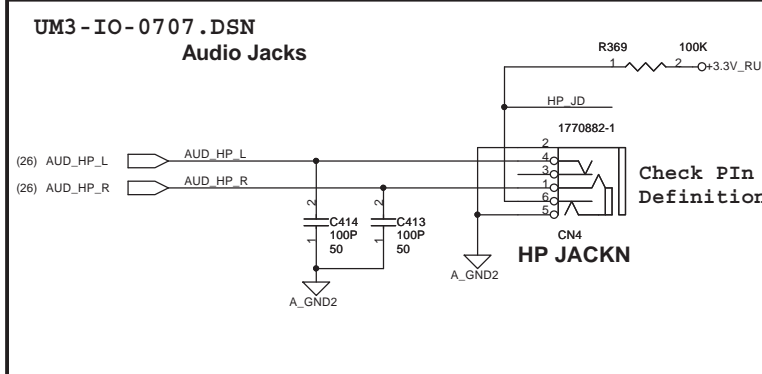
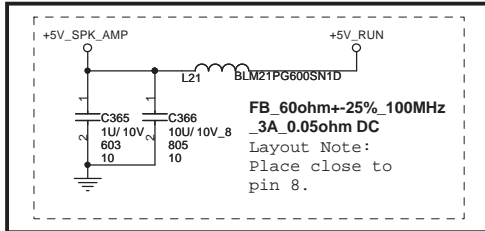
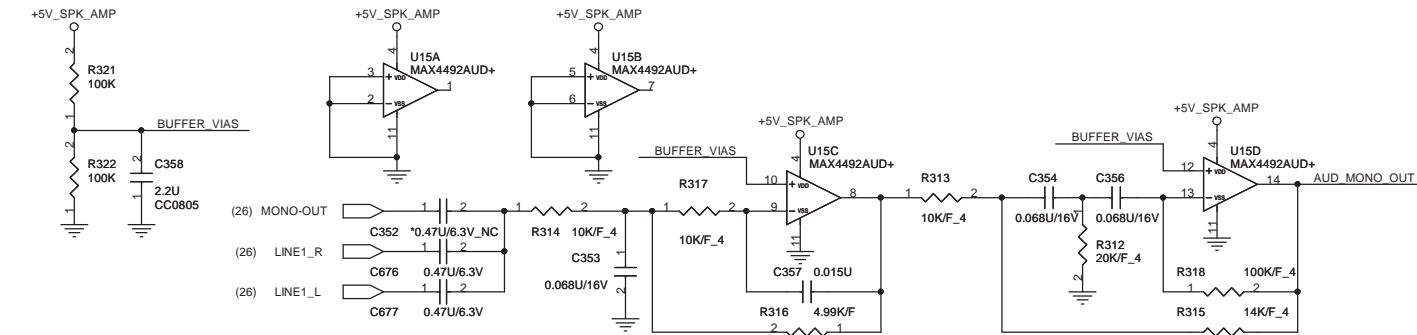
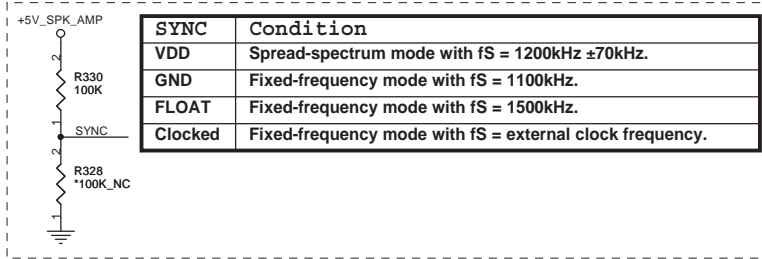
UM3_DIS_20090824_1000_SSI_STEPHEN.DSN

Check the GND of MIC Conn. in the
DB need add 0 ohm PD to A-GND

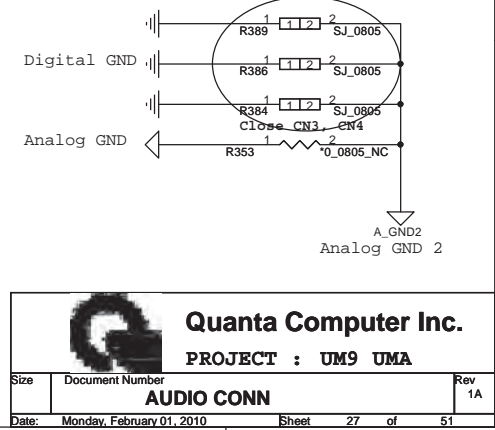
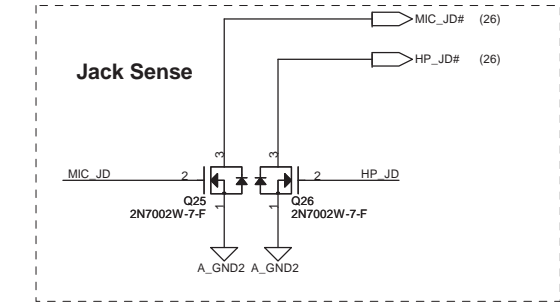
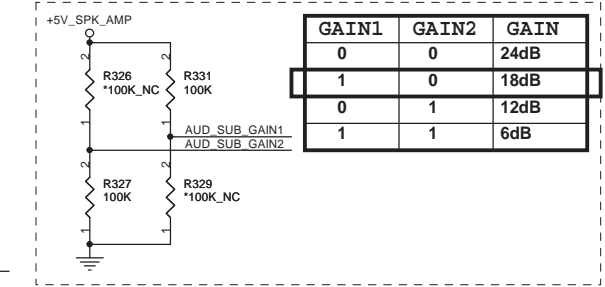
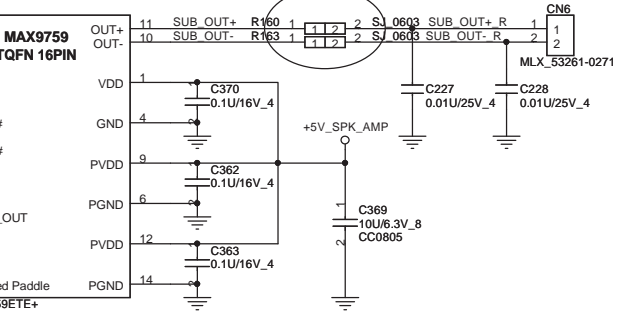
Quanta Computer Inc.
PROJECT : UM9 UMA

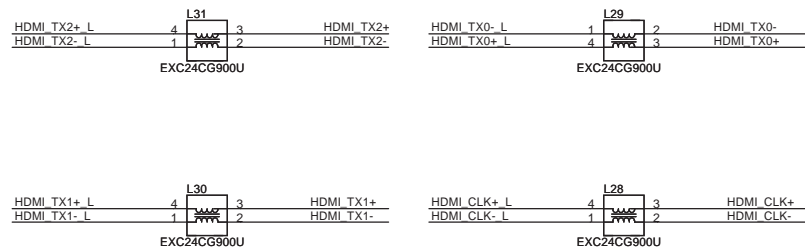
Size	Document Number	Rev
	Azelia CODEC(ALC269)	1A
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INTERNAL SUBWOOFER AMP Only for 17''

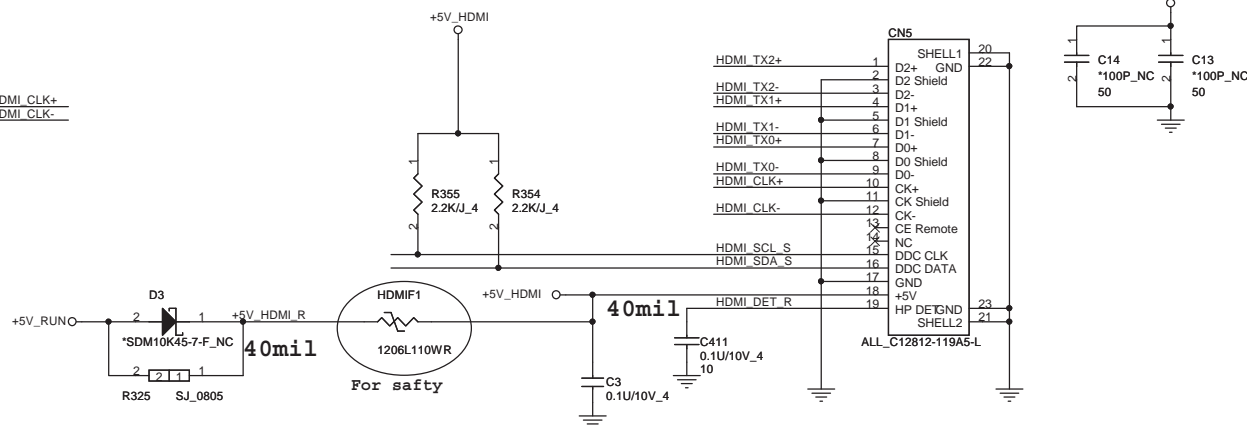


3W

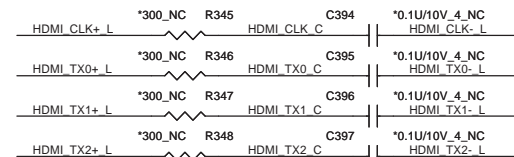




HDMI



For EMI



EQUALIZATION SETTING

PC1:PC0=0:0 8dB
PC1:PC0=0:1 4dB Recommended
PC1:PC0=1:0 12dB
PC1:PC0=1:1 0dB

SCL/SDA Low-level input/output Voltage

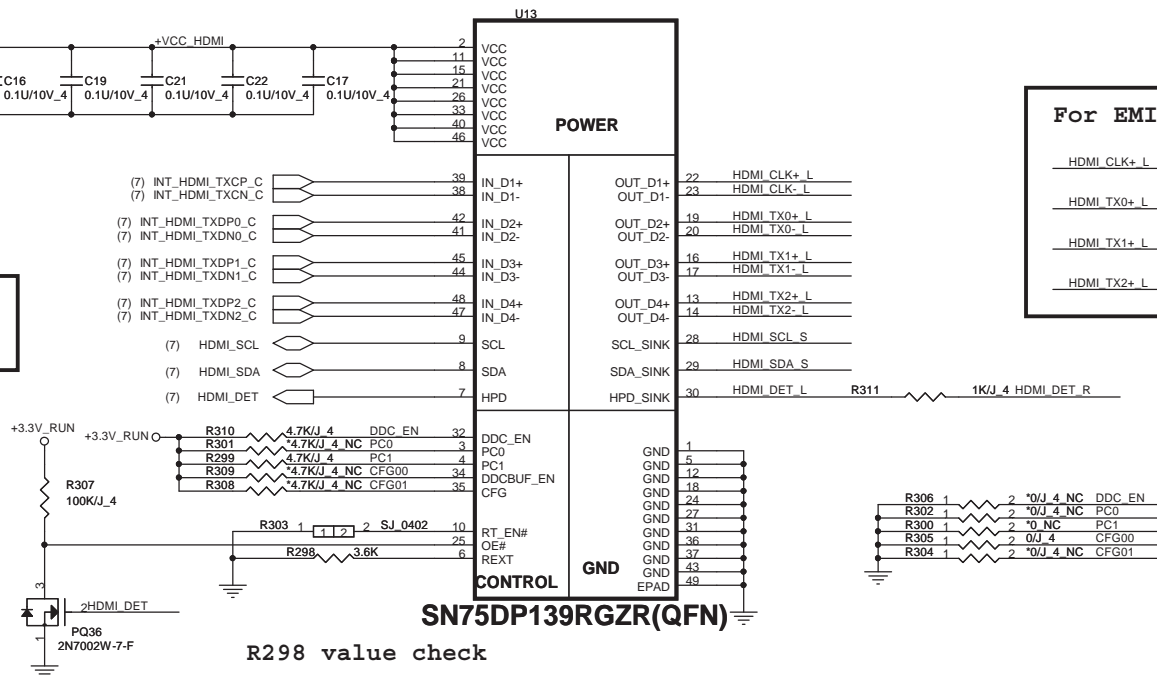
CFG01:CFG00=0:0 VIL:<0.4V VOL:0.6V (Default)
CFG01:CFG00=0:1 VIL:<0.36V VOL:0.55V
CFG01:CFG00=1:0 VIL:<0.44V VOL:0.65V
CFG01:CFG00=1:1 VIL:<0.36V VOL:0.6V

HDMI_PWR_CTRL

0 is Enable
1 is Disable

TI SN75DP139

PIN 4	H	HDMI
I2C_EN	L	DVI
PIN 34	H	HPD Inversion VOH =0.9V
HPDINV	L	HPD non-inversion VOH =3.2V



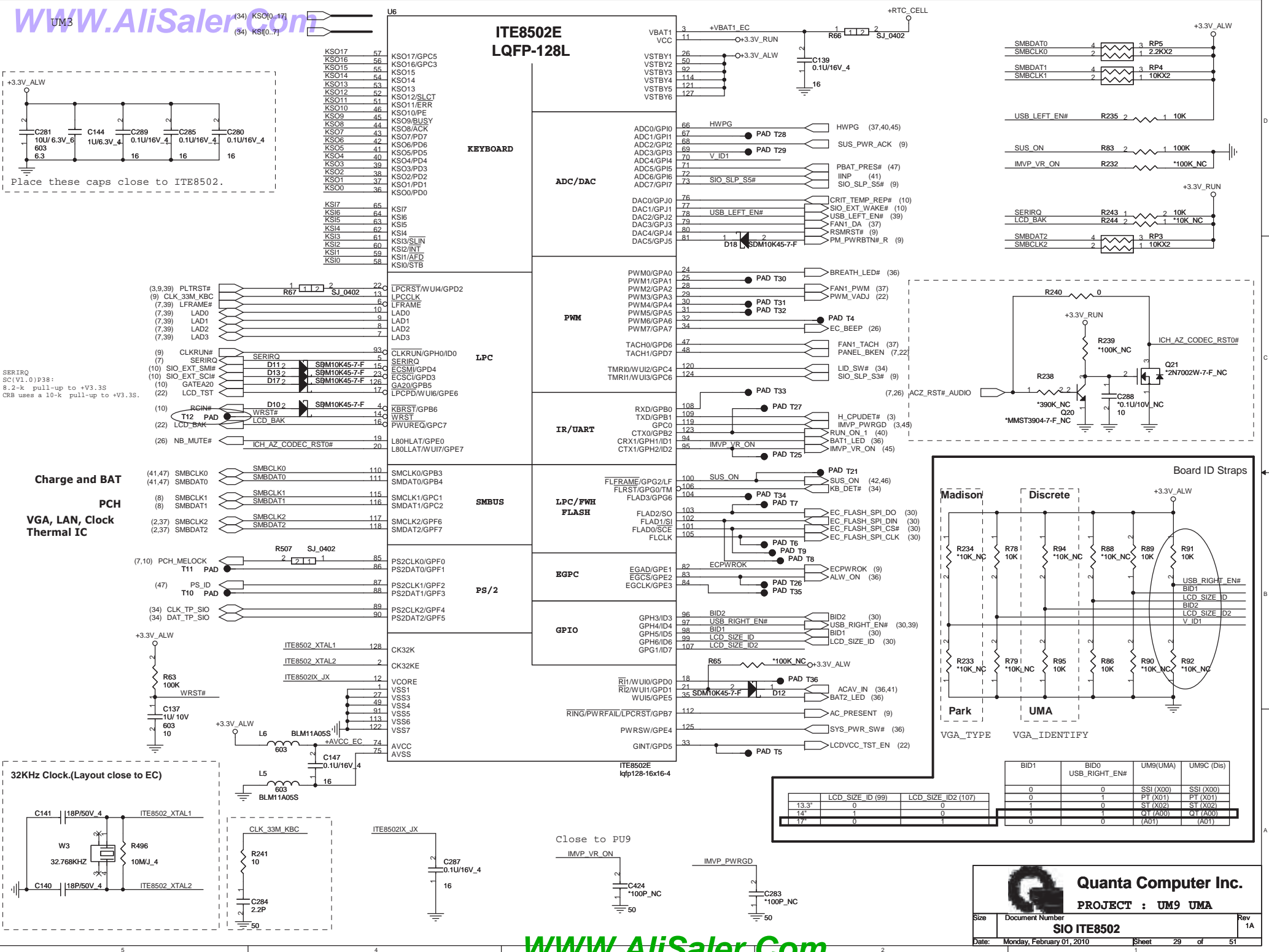
SN75DP139RGZR(QFN)

R298 value check



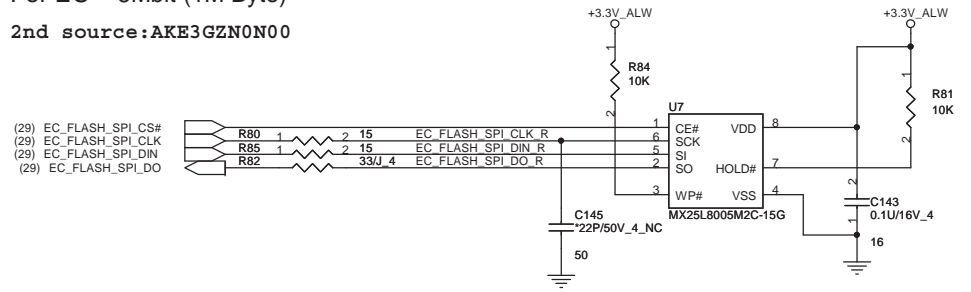
Quanta Computer Inc.
PROJECT : UM9 UMA

Size	Document Number	Rev
	Blank	1A
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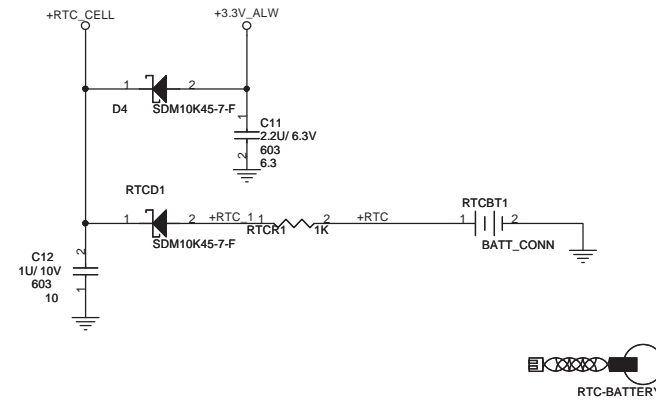


For EC 8Mbit (1M Byte)

2nd source:AKE3GZN0N00



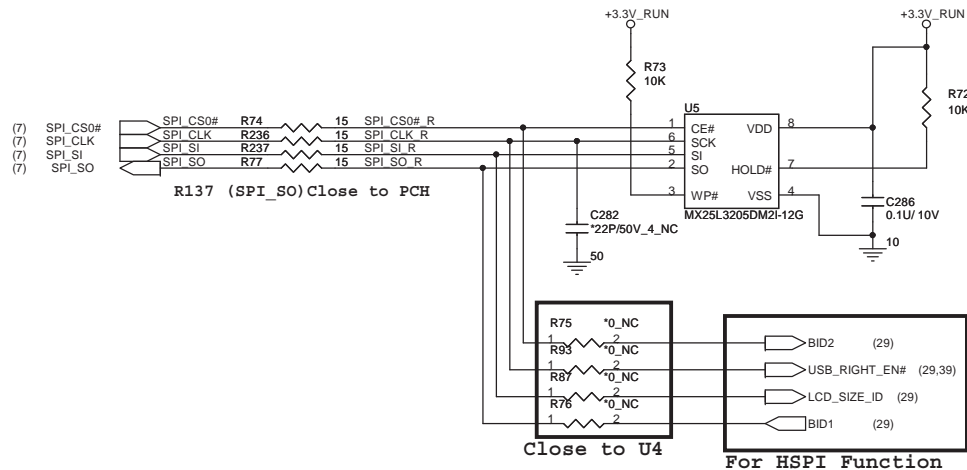
RTC BATTERY



For PCH

32Mbit (4M Byte)


2nd source:AKE39ZP0N00



Quanta Computer Inc.

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Size	Document Number	Rev
	FLASH/RTC	1A
Date:	Monday, February 01, 2010	Sheet 30 of 51

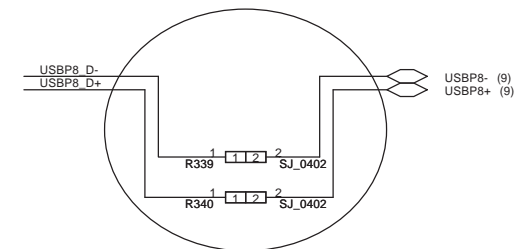
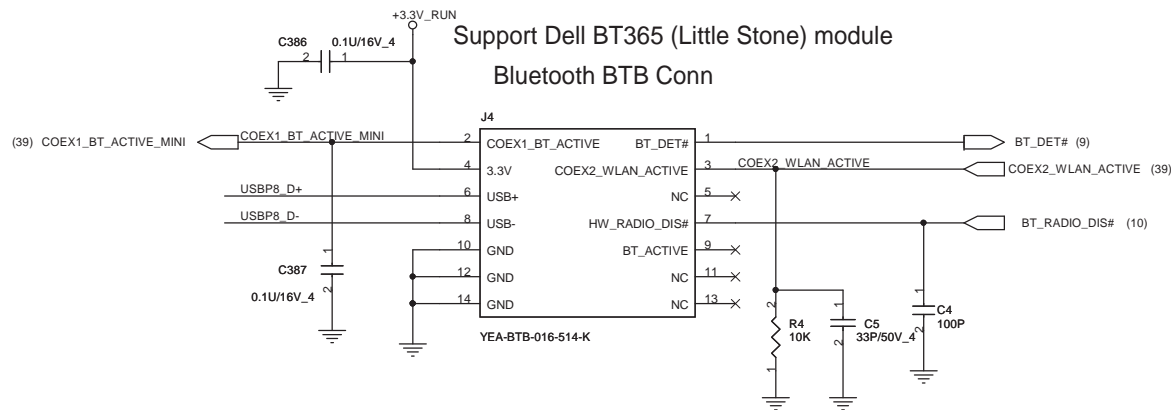


Quanta Computer Inc.

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	MINI-Card WWAN	1A
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WLAN To DB



Quanta Computer Inc.

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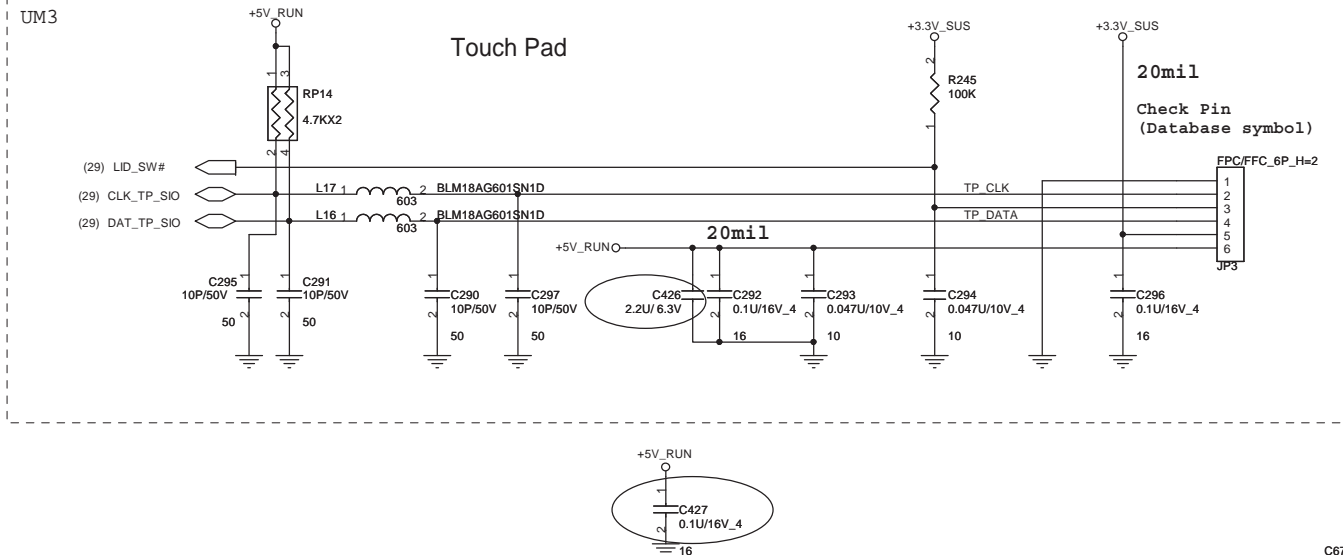
Size	Document Number	Rev
	MINI-Card WLAN / BT	1A
Date:	Monday, February 01, 2010	Sheet 32 of 51



Quanta Computer Inc.

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Size	Document Number	Rev
	eSATA & Right USB	1A
Date:	Wednesday, January 27, 2010	Sheet 33 of 51



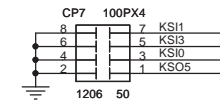
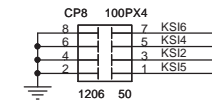
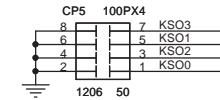
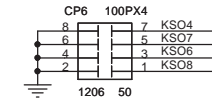
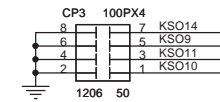
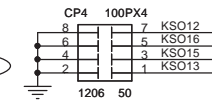
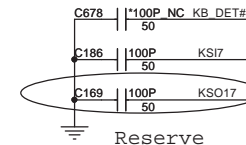
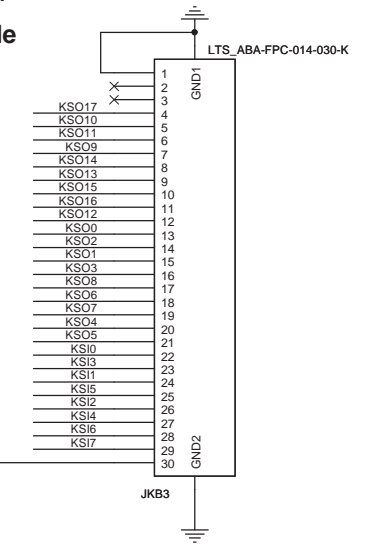
KEYBOARD CONNECTOR

Top side

(29) KSO[0..17]

(29) KSI[0..7]

(29) KB_DET#



100P CAPS CLOSE TO JKB3

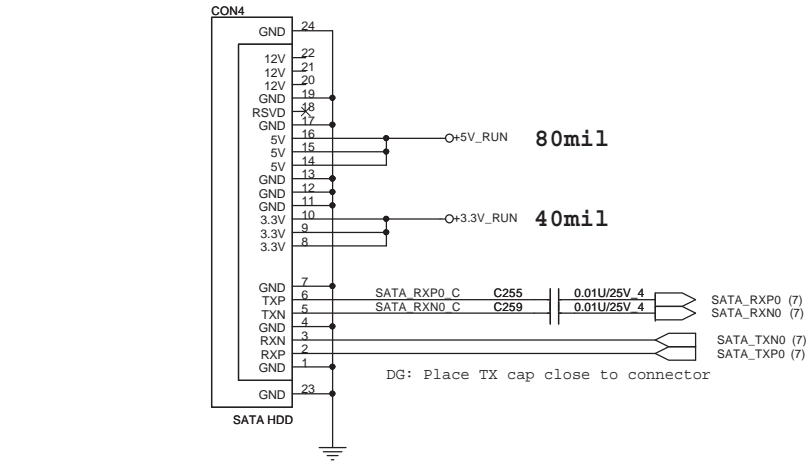


Quanta Computer Inc.

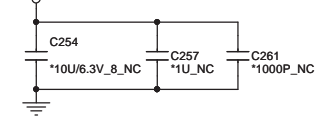
PROJECT : UM9 UMA

Size	Document Number	Rev
	TOUCH PAD, KB	1A
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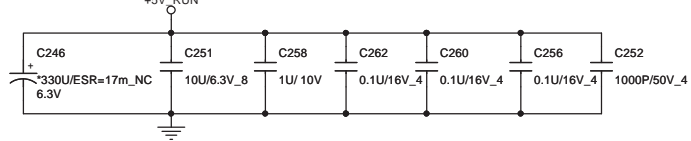
SATA Connector.



+3.3V_RUN Place caps close to connector.

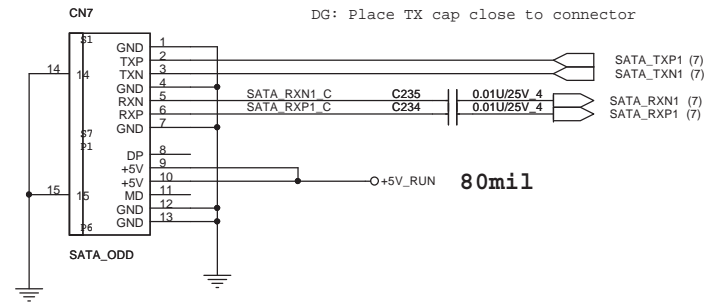


+5V_RUN Place caps close to connector.

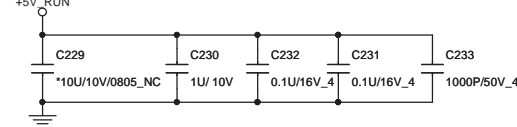


UM3

ODD Connector



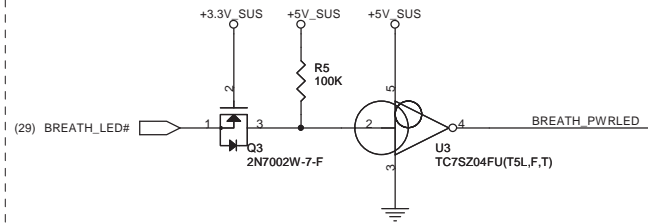
+5V_RUN Place caps close to connector.



Quanta Computer Inc.
PROJECT : UM9 UMA

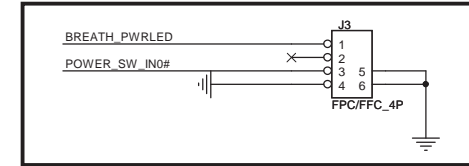
Size	Document Number	Rev
	SATA (HDD&CD_ROM)	1A
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Power



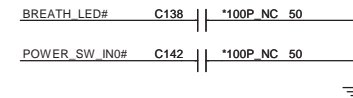
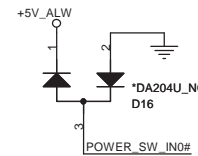
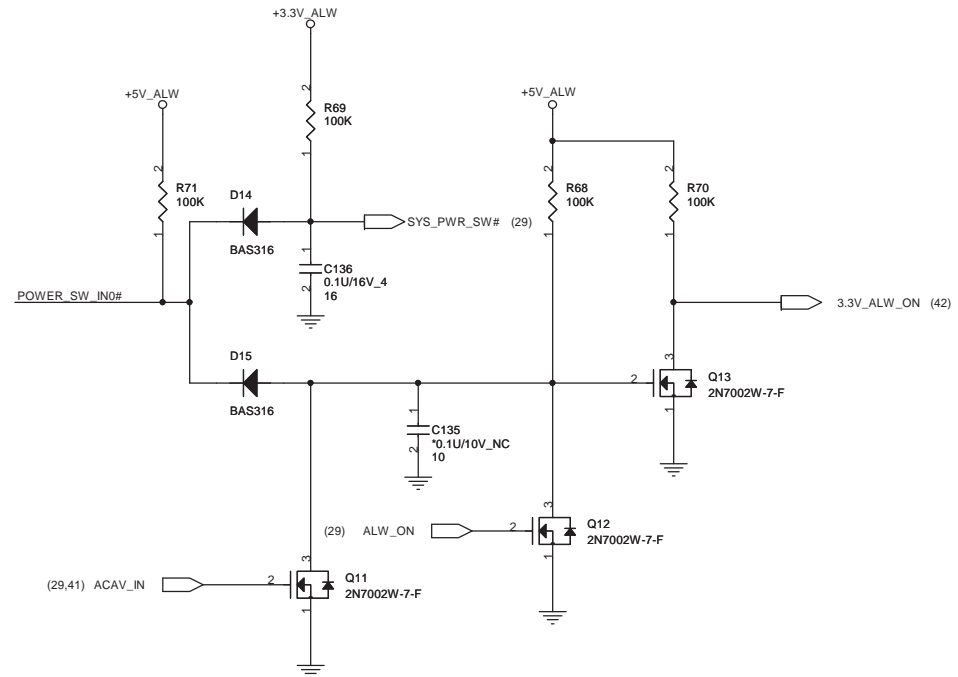
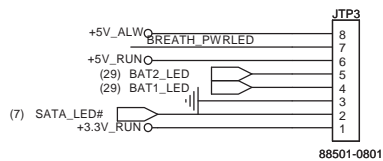
UM3

Power button Cable

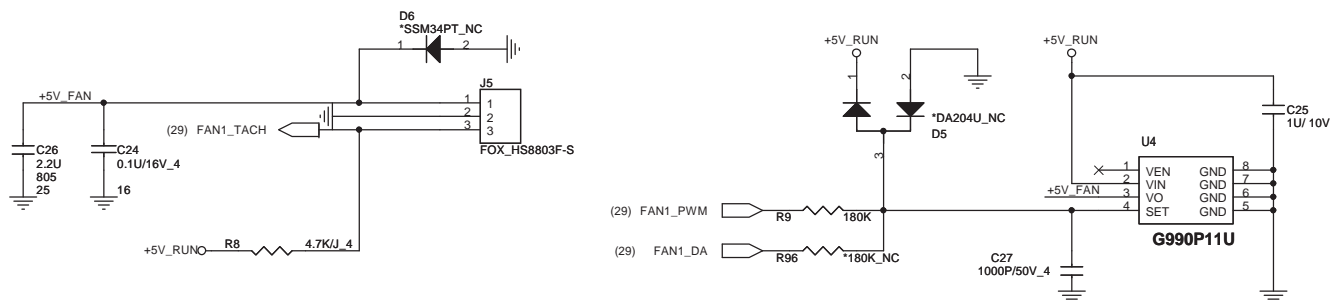


3VALW ON POWER LOGIC

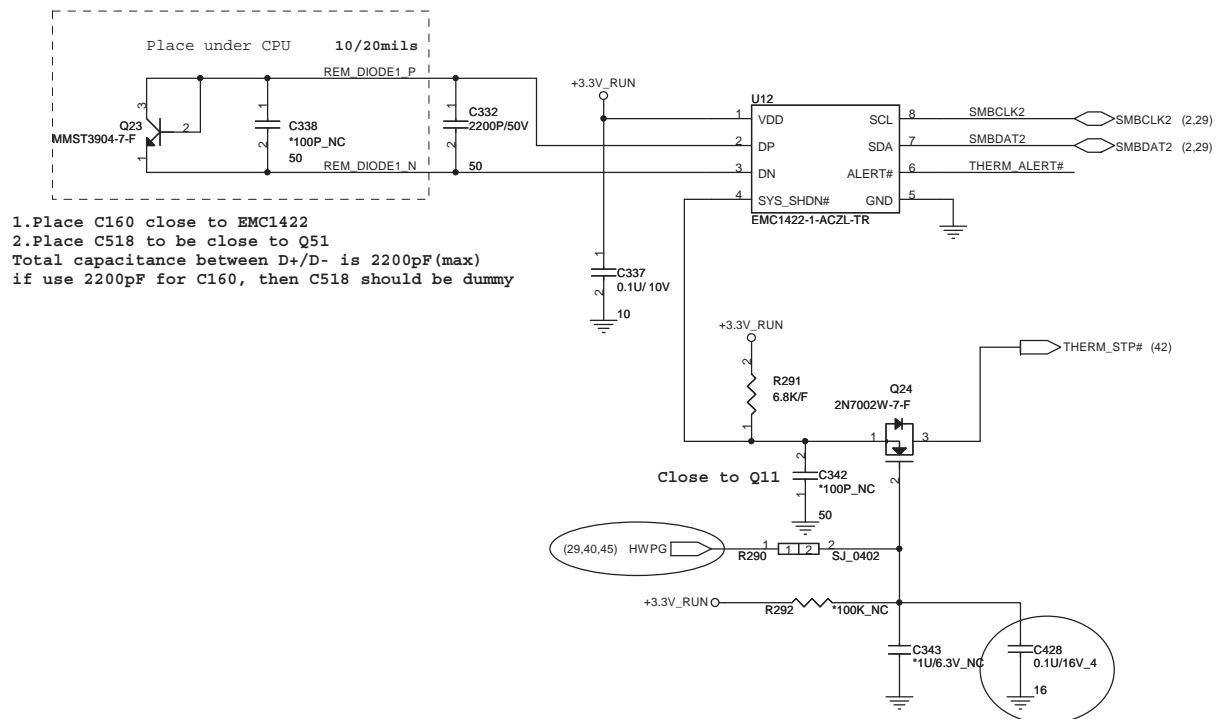
Check Connector P/N and footprint



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PROJECT : UM9 UMA



UM3

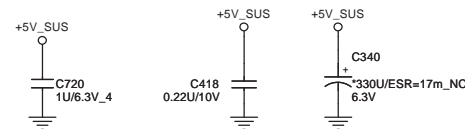
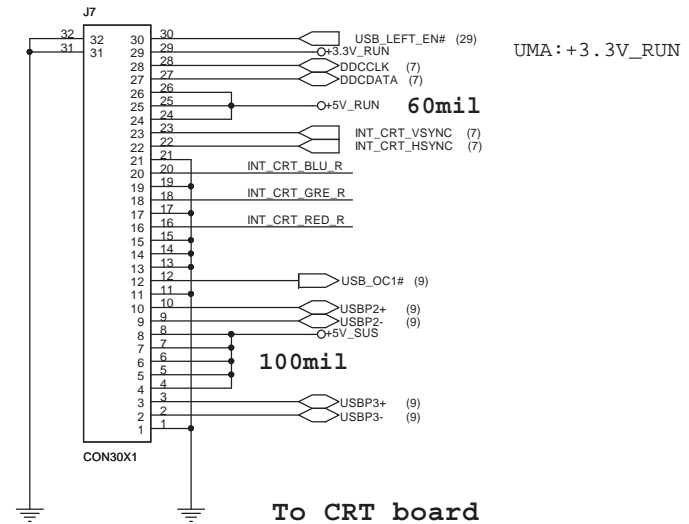
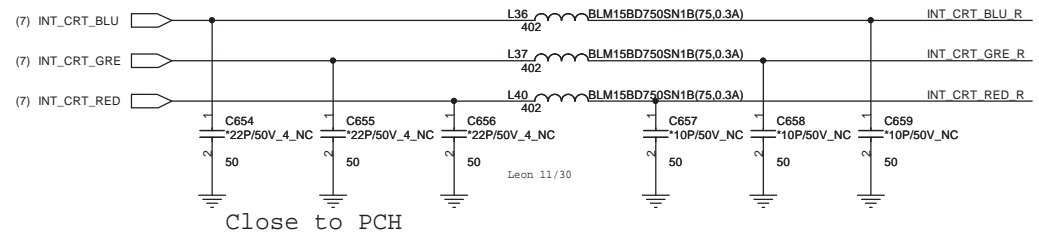
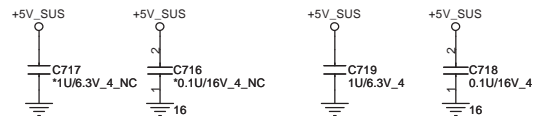
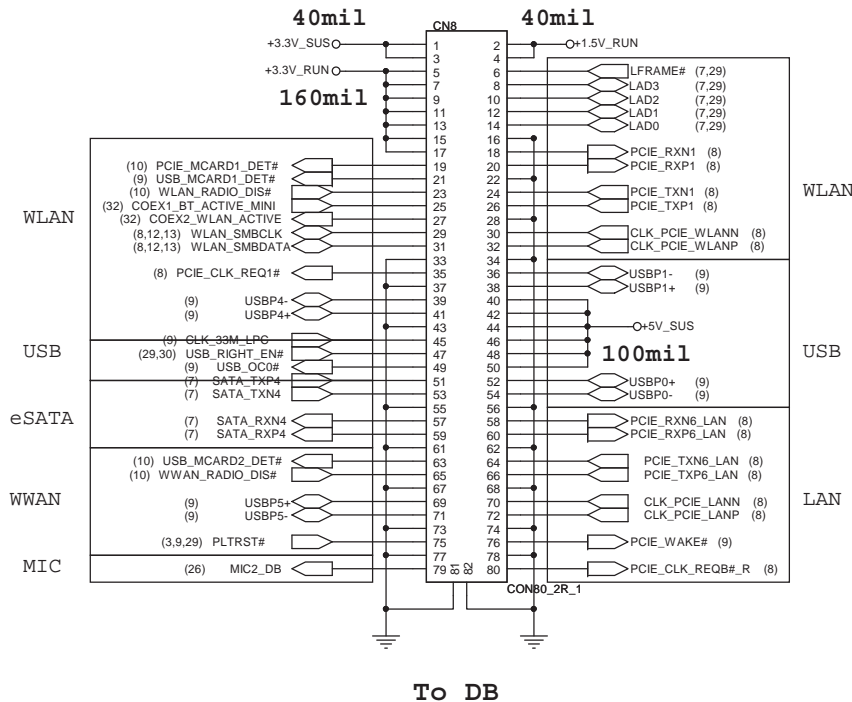


OTP 85 degree C



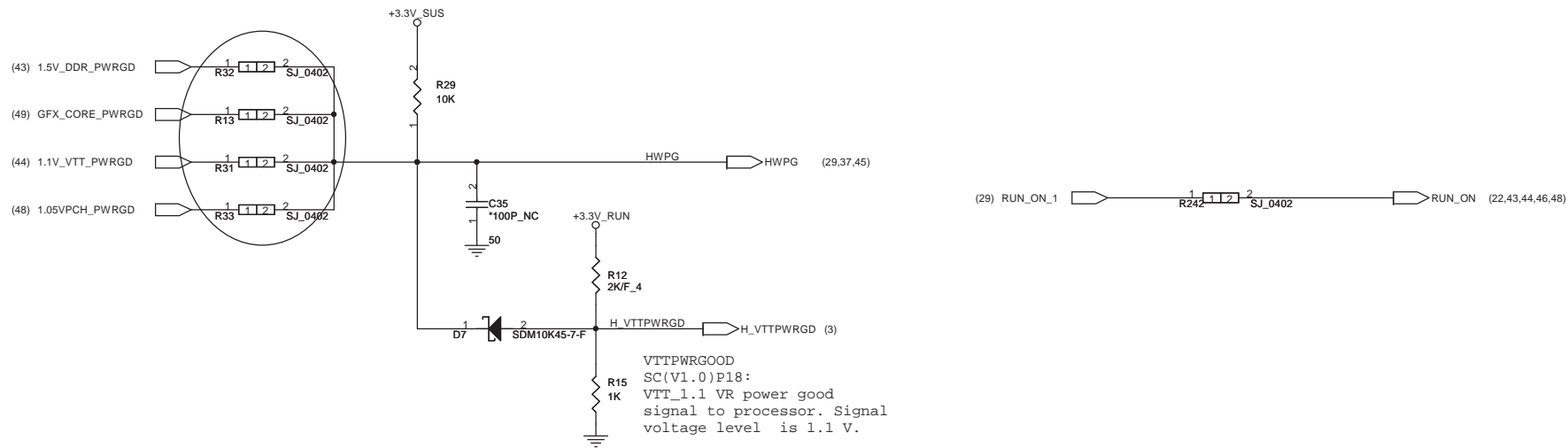
PROJECT : UM9 UMA

WWW.AliSaler.Com

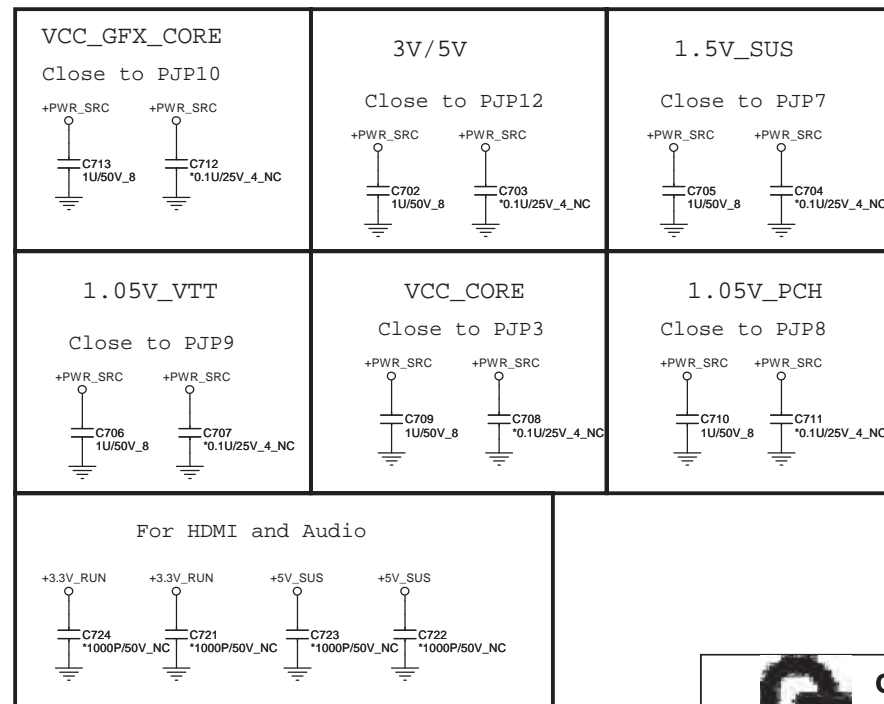
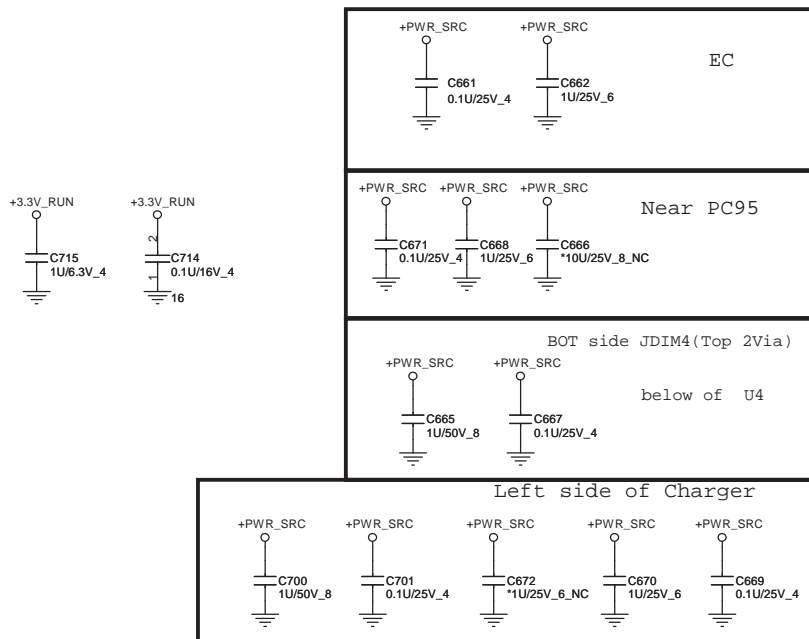


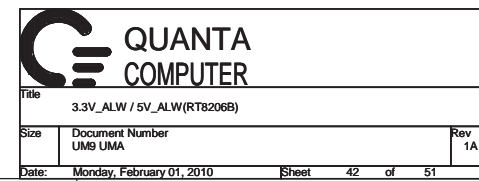
Quanta Computer Inc.
PROJECT : UM9 UMA

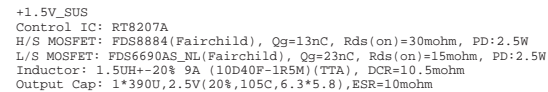
Size	Document Number	Rev
	BTB CONN	1A
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For FDI bus noise

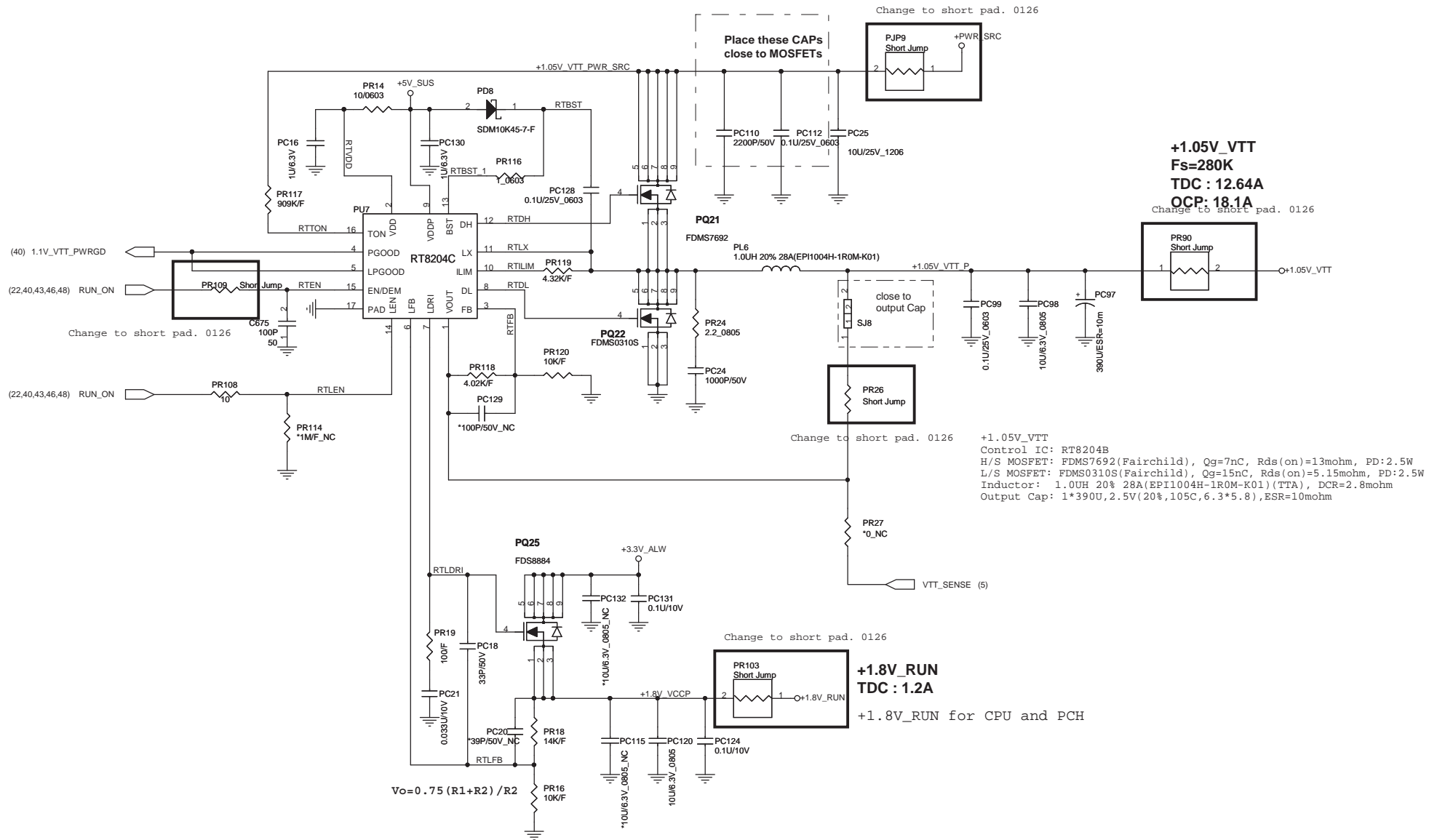




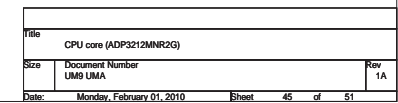


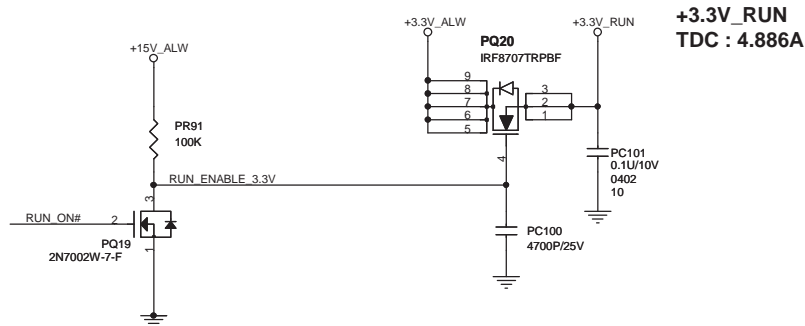
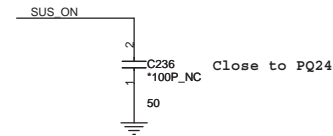
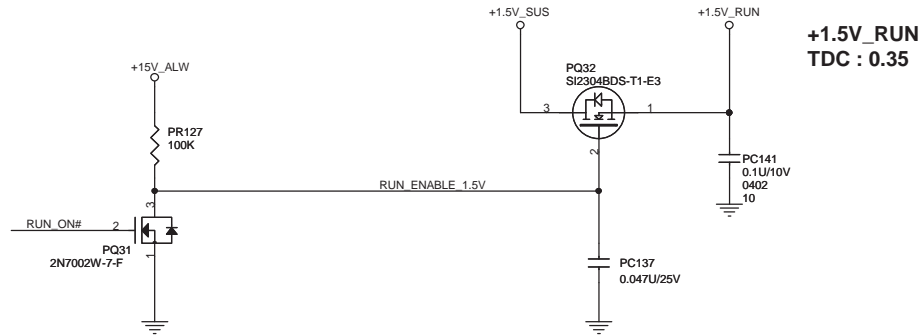
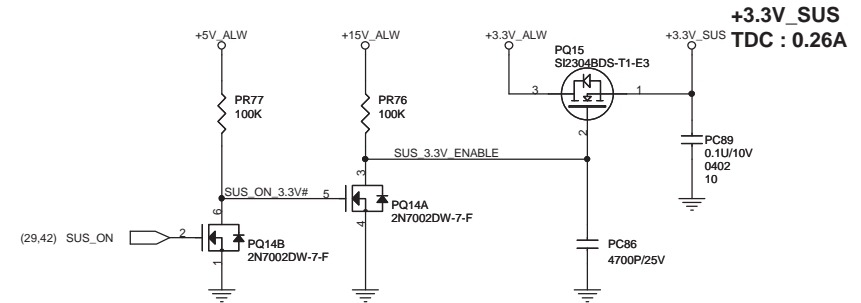
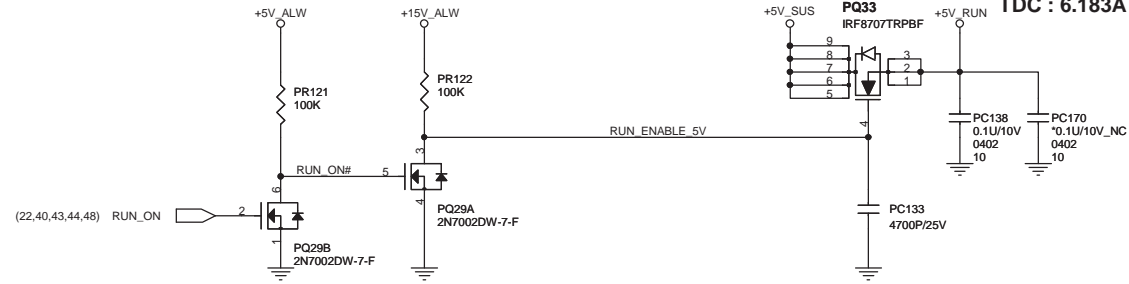
Outputs Management by S3, S5 control

State	S3	S5	VDDQ	VTTREF	VTT
S0	HI	HI	On	On	On
S3	LO	HI	On	On	Off (Hi-Z)
S4/S5	LO	LO	On (discharge)	Off (discharge)	Off (discharge)

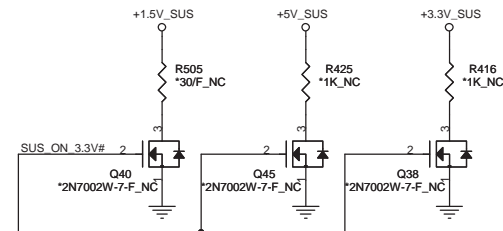
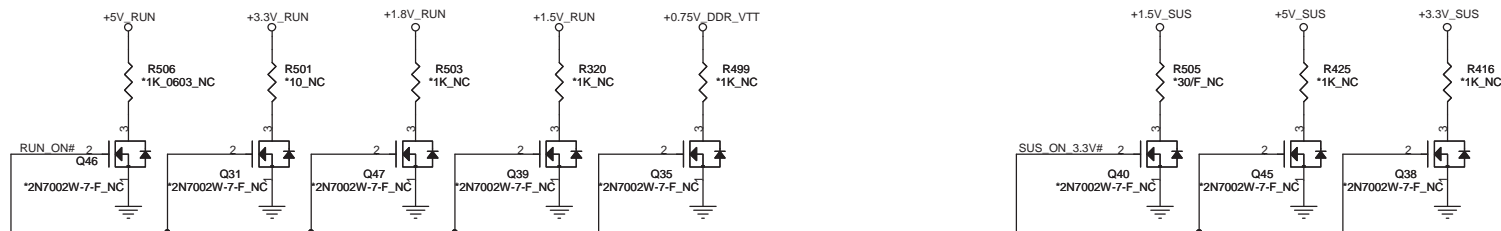


Title		
+1.05V_VTT(RT8204C)		
Size	Document Number	Rev
	UM9 UMA	2A
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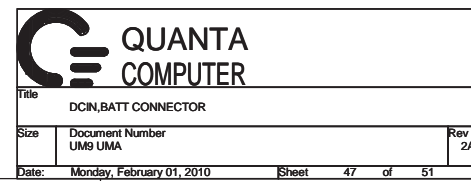


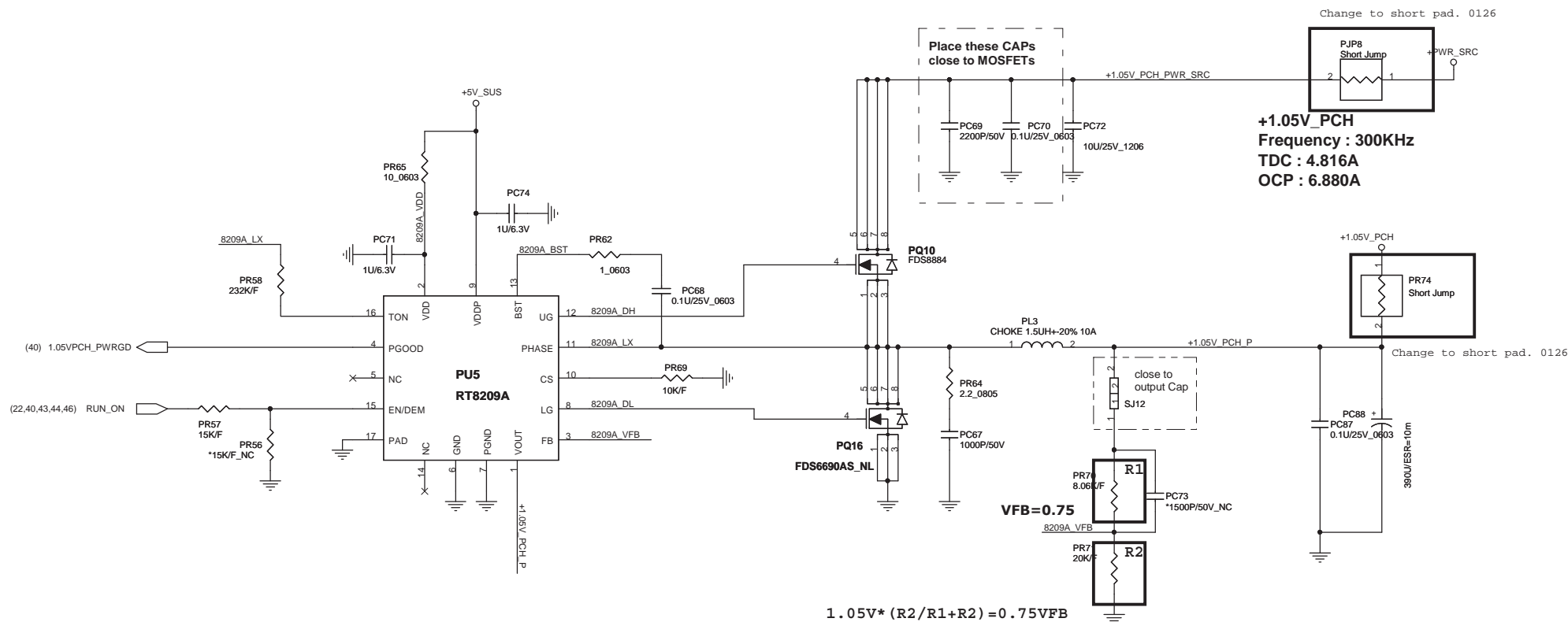


Reserve discharge path



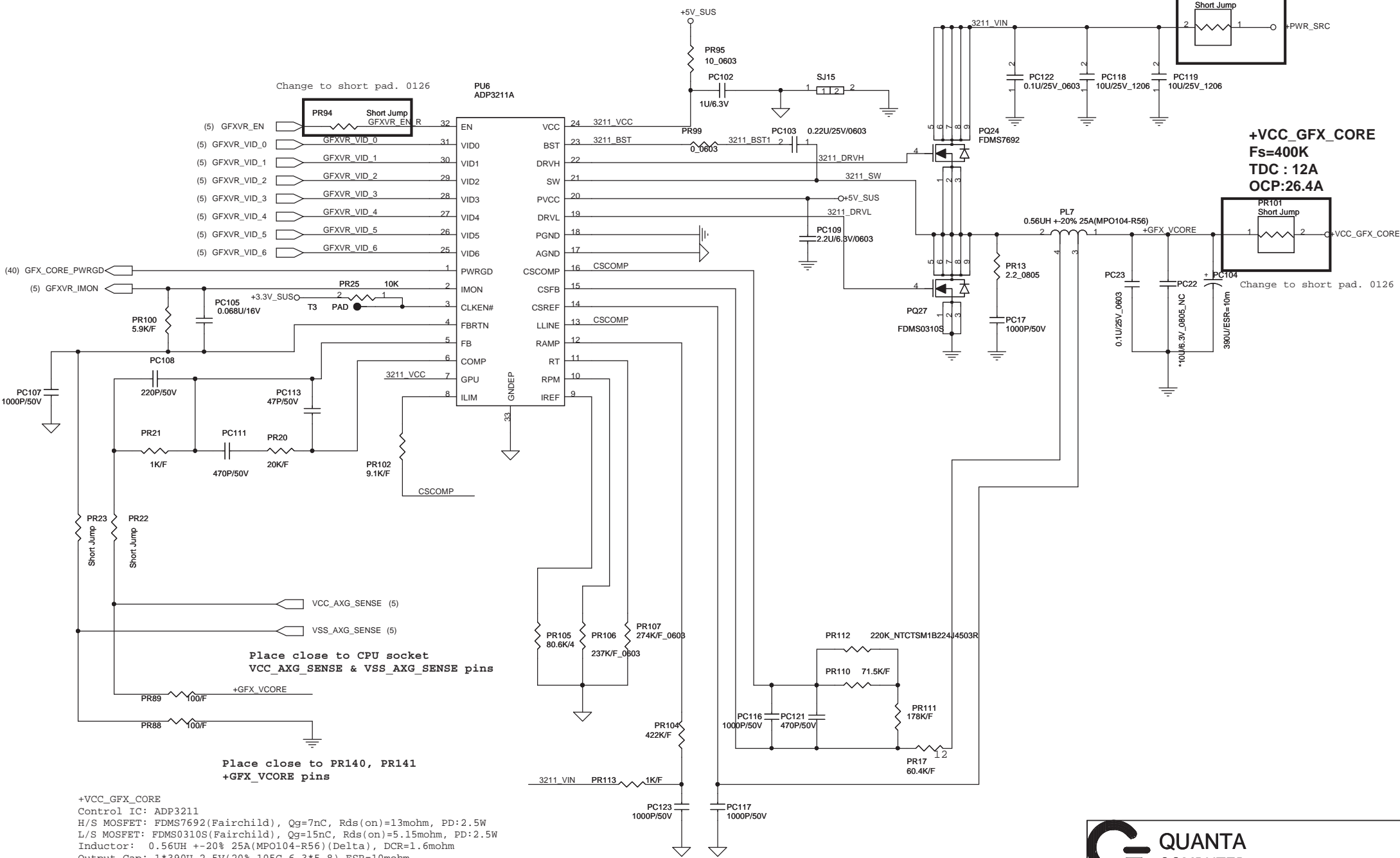
Title		
RUN / SUS POWER SW		
Size	Document Number	Rev
	UM9 UMA	2A
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+1.05V_PCH
Control IC: RT8209A
H/S MOSFET: FDS8884(Fairchild), Qg=13nC, Rds(on)=30mohm, PD:2.5W
L/S MOSFET: FDS6690AS_NL(Fairchild), Qg=23nC, Rds(on)=15mohm, PD:2.5W
Inductor: 1.5uH+-20% 9A (10D40F-1R5M)(TTA), DCR=10.5mohm
Output Cap: 1*390U,2.5V(20%,105C,6.3*5.8),ESR=10mohm

Title		
+1.05V_PCH(RT8209A)		
Size	Document Number	Rev
	UM9 UMA	2B
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+VCC_GFX_CORE
Control IC: ADP3211
H/S MOSFET: FDMS7692(Fairchild), Qg=7nC, Rds(on)=13mohm, PD:2.5W
L/S MOSFET: FDMS0310S(Fairchild), Qg=15nC, Rds(on)=5.15mohm, PD:2.5W
Inductor: 0.56UH +-20% 25A(MPO104-R56)(Delta), DCR=1.6mohm
Output Cap: 1*390U, 2.5V(20%, 105C, 6.3*5.8), ESR=10mohm

**QUANTA
COMPUTER**

Title VGA (ADP3211)		
Size UM9 UMA	Document Number	Rev 2A
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