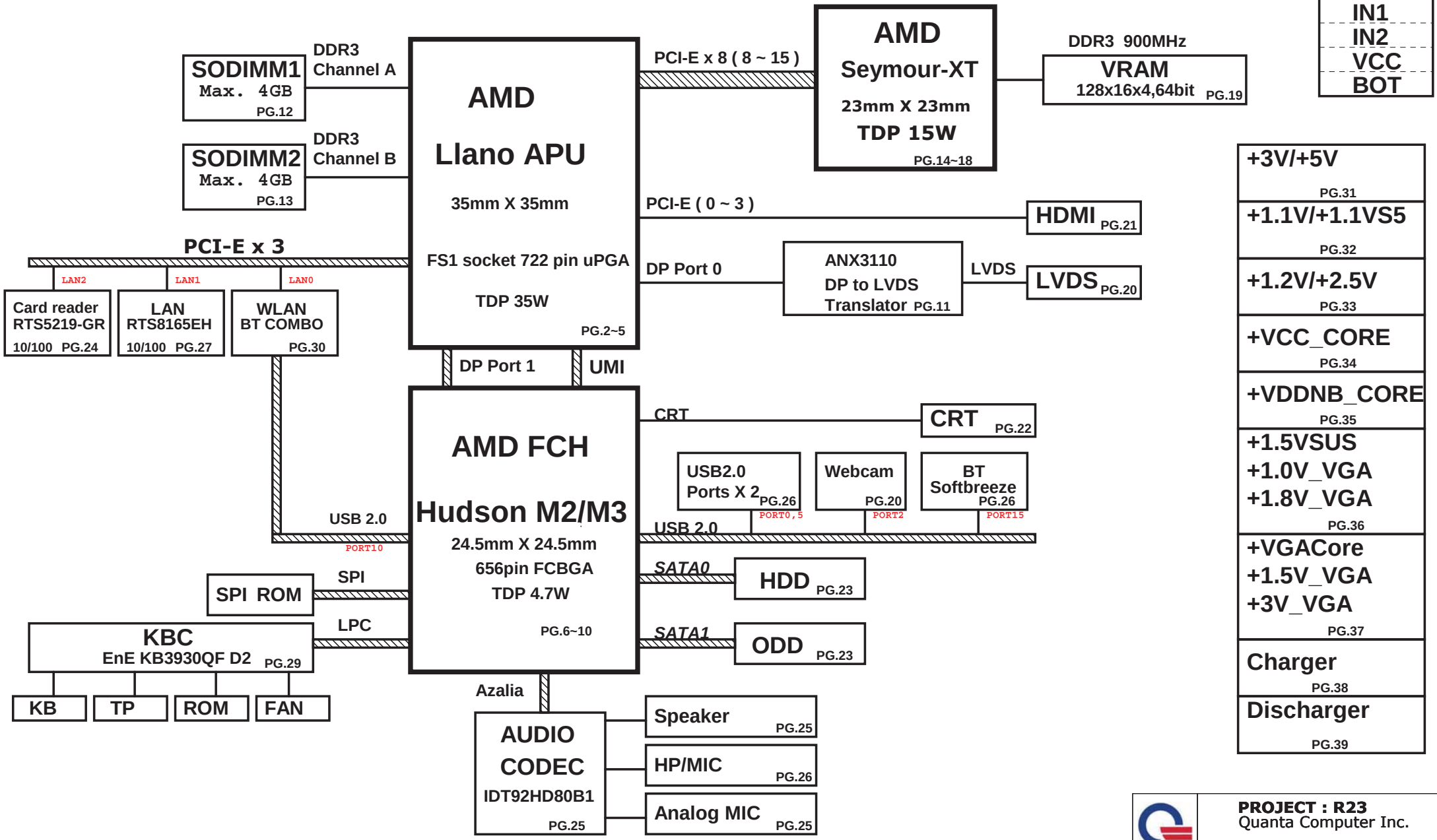
# R23 AMD Sabin UMA/Muxless SYSTEM DIAGRAM





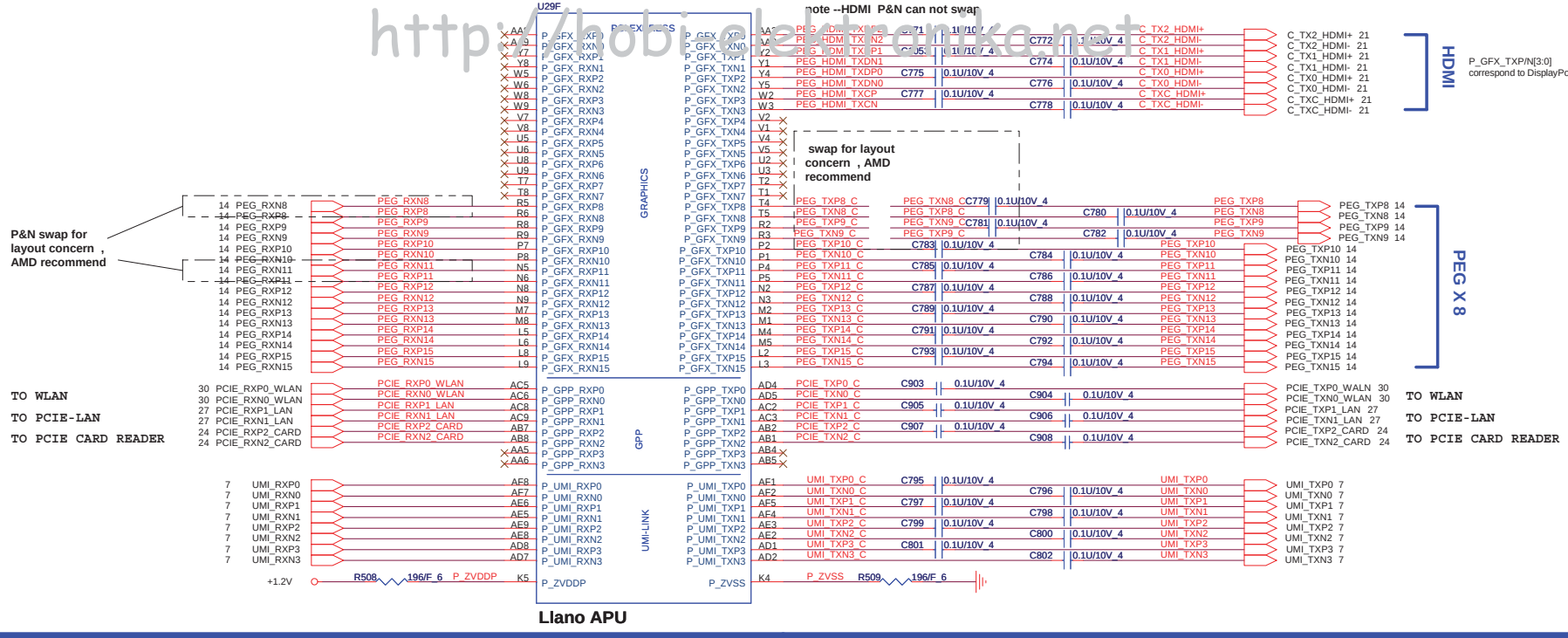

| Stackup |
|---|
| TOP |
| GND |
| IN1 |
| IN2 |
| VCC |
| BOT |

| |
|---|
| +3V/+5V PG.31 |
| +1.1V/+1.1VS5 PG.32 |
| +1.2V/+2.5V PG.33 |
| +VCC_CORE PG.34 |
| +VDDNB_CORE PG.35 |
| +1.5VSUS<br>+1.0V_VGA<br>+1.8V_VGA PG.36 |
| +VGACore<br>+1.5V_VGA<br>+3V_VGA PG.37 |
| Charger PG.38 |
| Discharger PG.39 |

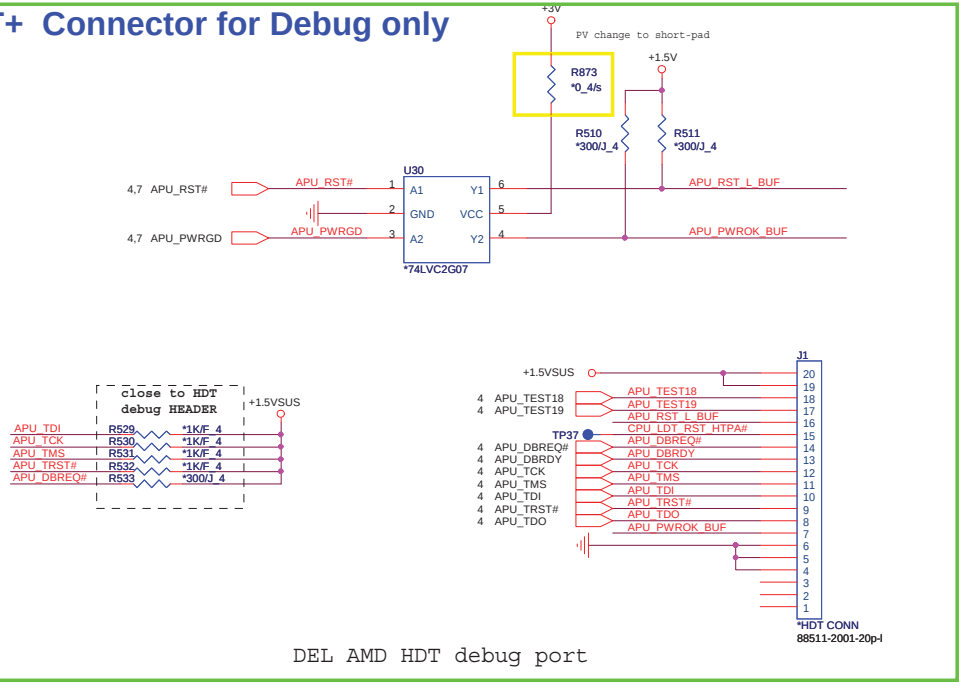
**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | BLOCK DIAGRAM | 1A |

Date: Tuesday, May 03, 2011 Sheet 1 of 40



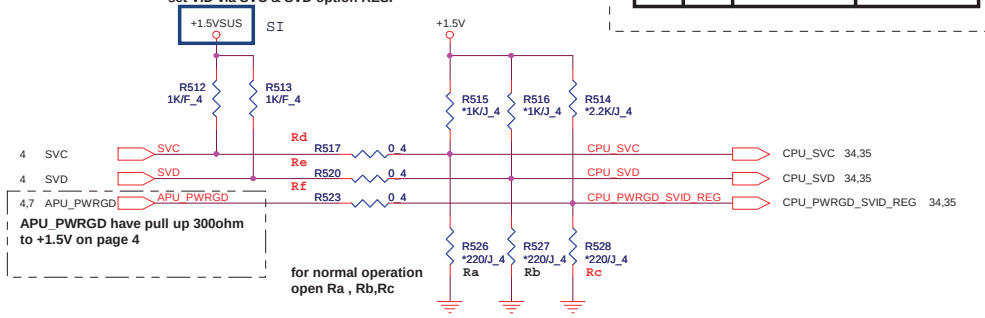

## HDT+ Connector for Debug only




## VID Override Circuit

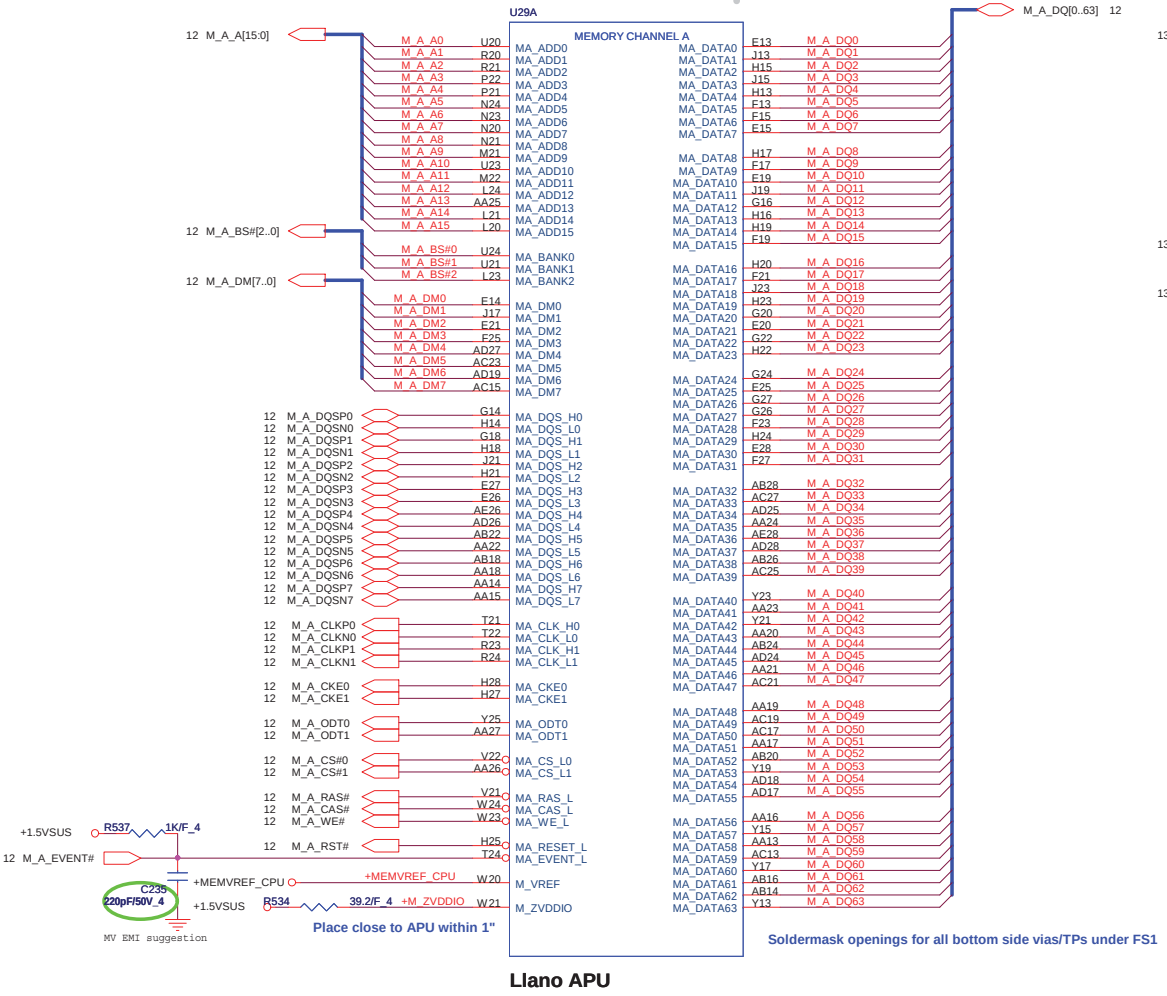
| | BOOT VOLTAGE | |
|---|---|---|
| SVC | SVD | VFIX_+VDD =VCC/GND | VFIX_+VDD =OPEN |
| 0 | 0 | 1.1 | 1.1 |
| 0 | 1 | 1.0 | 1.2 |
| 1 | 0 | 0.9 | 1.0 |
| 1 | 1 | 0.8 | 0.8 |

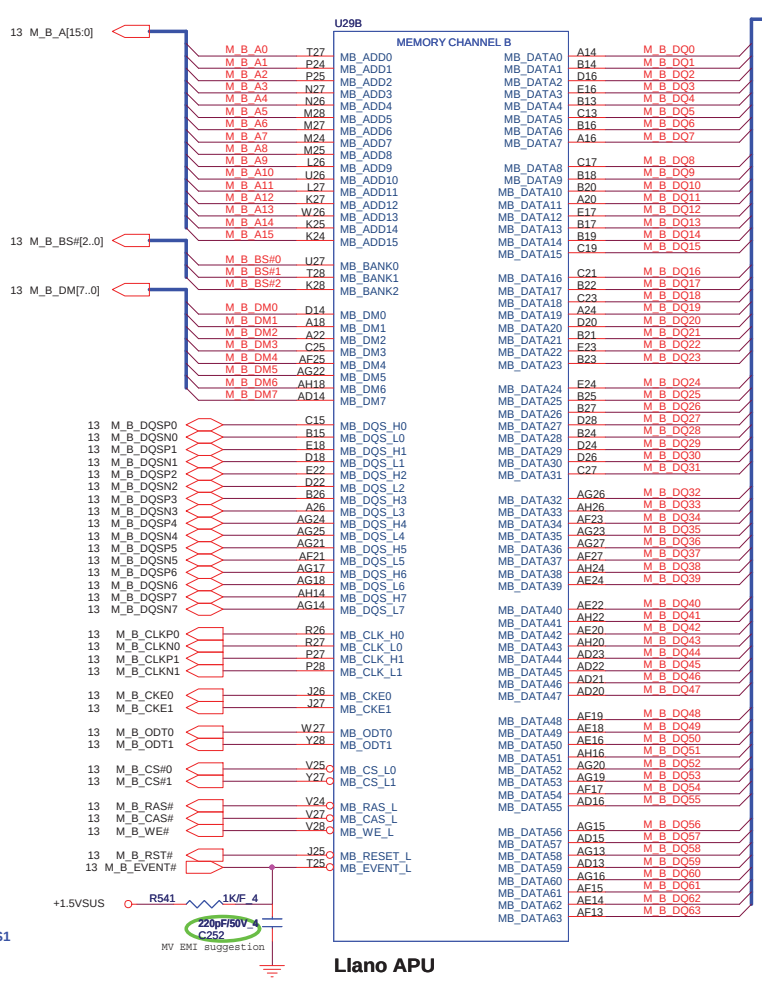
Note:
To override VID,Remove Rd, Re, Rf, install Rc
set VID via SVC & SVD option RES.



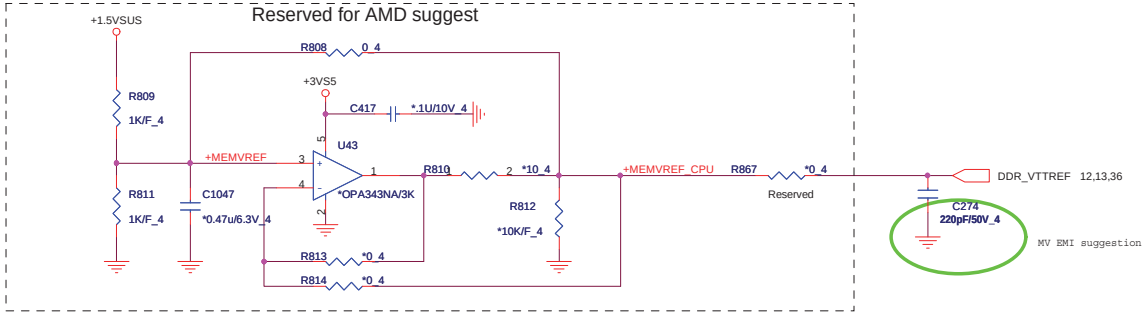

Quanta Computer Inc.
PROJECT : R23

| Size | Document Number | Rev |
|---|---|---|
| | Llano PCIE/UMI/GPP | 1A |
| Date: Wednesday, May 04, 2011 | Sheet 2 of 40 | |




Soldermask openings for all bottom side vias/TPs under FS1

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PROJECT : R23

| Size | Document Number | Rev |
|---|---|---|
| | Llano DDR3 MEM I/F | 1A |

Date: Wednesday, May 04, 2011 Sheet 3 of 40

Place caps with APU < 1 inch
route PCIE as 35ohm +/- 10%

DP0 output to
eDP to LVDS converter

DP1 output to Hudson-M2
for VGA translator interface

Note: CLK_APU_HCLKP/N is 100MHZ SSC

Note: CLK_DP_NSSCP/N is 100MHZ non-SSC

Display port power 1.5V min 1.2v max : 1.65v

Display port power 1.5V min 1.2v max : 1.65v

LVDS

VGA

HDMI

To AMD HDT

DMAACTIVE_L controls
entry and exit from the
sleep and power states

AMD internal test only

TEST35 PU FOR INTERNAL
TEST35 PD FOR CUSTOMER

M_TEST CONNECTION TBD

PV change to short-pad

PV inner document ADD R830 for EC request

to EC reserve only

FS1R1 signals is for detect CPU TYPE and protect it.
FS1R1 CPU this pin is N.C
FS1R2 CPU this pin is LOW
can remove it at MP

APU_PROCHOT# 可以當 input or output
當Low 時CPU 會降 P - STATE

THERMTRIP# shutdown temperature 125度C

ADD VGA TEMP_ FAIL function is active Hi

over 120 degree C= Low

When 100K-NTC 100 C=6.164K
Thermal Trip = 120 C

DEL Thermal IC circuit on MV

## Llano APU

## Thermal

| | |
|---|---|
| Quanta Computer Inc. | PROJECT : R23 |
| Size | Document Number: Llano Display/Misc |
| Rev | 1A |
| Date: Wednesday, May 04, 2011 | Sheet 4 of 40 |

SI EMI

## APU POWER TABLE

| PIN NAME | NET NAME | VOLTAGE |
|---|---|---|
| VDD | +VCC_CORE | +1.1V |
| VDDNB | +VDDNB_CORE | ?? |
| VDDIO | +1.5VSUS | +1.5V |
| VDDP | +1.2V_VDDP | +1.2V |
| VDDR | +1.2V_VDDR | +1.2V |
| VDDA | +2.5V_VDDA | +2.5V |

+VCC_CORE

C388 470P/50V_4 | C383 *470P/50V_4 | C371 *470P/50V_4

PV ADD 470pF on C388 for EMI suggestion

+VDDNB_CORE

C830 22U/6.3VS_8 | C831 22U/6.3VS_8 | C832 22U/6.3VS_8 | C833 22U/6.3VS_8 | C834 0.22U/6.3V_4

C845 0.22U/6.3V_4 | C842 0.22U/6.3V_4 | C843 180P/50V_4 | C844 180P/50V_4

**18A**
**Maximum IDDNBspike 22.5A**

**4A Up to DDR3-1333 @ 1.50V VDDIO**

+1.5VSUS

C851 0.22U/6.3V_4 | C852 0.22U/6.3V_4 | C853 0.22U/6.3V_4 | C854 0.22U/6.3V_4 | C855 180P/50V_4 | C856 180P/50V_4

EMI reserve

U29D

Llano APU

+VCC_CORE

**36A**
**Maximum IDDspike 50A**

C823 22U/6.3VS_8 | C824 22U/6.3VS_8 | C825 22U/6.3VS_8 | C826 22U/6.3VS_8 | C827 22U/6.3VS_8 | C828 22U/6.3VS_8 | C829 22U/6.3VS_8

C835 0.22U/6.3V_4 | C836 0.22U/6.3V_4 | C837 180P/50V_4 | C838 180P/50V_4 | C839 0.01U/25V_4 | C840 0.01U/25V_4 | C841 0.01U/25V_4

**DECOUPLING between PROCESSOR and DIMMs**
**Across VDDIO and VSS split**

+1.5VSUS

C846 0.22U/6.3V_4 | C847 0.22U/6.3V_4 | C848 180P/50V_4 | C849 180P/50V_4

+VDDNB_CORE

+1.5VSUS

C857 22U/6.3VS_8 | C858 22U/6.3VS_8 | C859 4.7U/6.3V_6 | C860 4.7U/6.3V_6 | C861 4.7U/6.3V_6 | C862 4.7U/6.3V_6 | C863 0.22U/6.3V_4

If the VSS plane is cut to create a VDDIO plane, ceramic capacitors are connected across the VDDIO and VSS plane split as follows

**VDDP_A + VDDP_B = 3.5A**

+1.2V — R591 *0_8/S — +1.2V_VDDP_A — **1.75A**

C864 10U/6.3V_8 | C867 0.22U/6.3V_4 | C869 180P/50V_4

+1.2V — R592 *0_8/S — +1.2V_VDDR_A — **1.5A**

C871 1000P/50V_4 | C872 1000P/50V_4 | C875 0.22U/6.3V_4 | C876 0.22U/6.3V_4

C883 4.7U/6.3V_6 | C884 4.7U/6.3V_6 | C887 180P/50V_4 | C888 180P/50V_4

+2.5V — L62 BLM21PG221SN1D(220,100M,2A)_8 — +2.5V_VDDA — **VDDA= 0.75A**

C879 4.7U/6.3V_6 | C880 0.22U/6.3V_4 | C881 3300P/50V_4

**1.75A**

+1.2V_VDDP_B — R824 *0_8/S — +1.2V

C865 10U/6.3V_8 | C866 10U/6.3V_8 | C868 0.22U/6.3V_4 | C870 180P/50V_4

**1.5A**

+1.2V_VDDR_B — R825 *0_8/S — +1.2V

C873 1000P/50V_4 | C874 1000P/50V_4 | C877 0.22U/6.3V_4 | C878 0.22U/6.3V_4

C885 4.7U/6.3V_6 | C886 4.7U/6.3V_6 | C889 180P/50V_4 | C890 180P/50V_4

**VDDR = 3A ( Up to DDR3-1333 @ 1.5V )**

U29E

Llano APU

Quanta Computer Inc.

PROJECT : R23

| Size | Document Number | Rev |
|---|---|---|
| | Llano POWER/GND | 1A |

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+3VS5 NC,no install by default
R594 *2.2K/J_4 FCH_TEST0
R596 *2.2K/J_4 FCH_TEST1
R598 *2.2K/J_4 FCH_TEST2

+3V
R602 2.2K_4 CGCLK_SMB
R603 2.2K_4 CGDAT_SMB
to DDR3 SMBUS
R604 *1K/J_4
J2 1 2 SYS_RST#
*SOLDERJUMPER-2
SYS_RST# internal 10K pull up

GEVENT0# internal pull Hi 8.2K to +3V
GEVENT1# internal pull Hi 8.2K to +3V
GEVENT23# internal pull Hi 8.2K to +3V
GEVENT5# internal pull Hi 8.2K to +3VS5
PCIE_WAKE# no need to pull Hi resistor from check list

+3VS5
R856 10K/F_4 SCL3
R857 10K/F_4 SDA3
R611 10K/F_4 SCL2
R613 10K/F_4 SDA2
R614 10K/F_4 SCL1
R616 10K/F_4 SDA1
R618 *4.7K/J_4 FCH_THERMTRIP#
C1073 *0.01U/25V_4
R629 10K/F_4 DNBSWON#

CLK_REQ2# internal pull Hi 8.2K to +3V
CLK_REQ3# internal pull Hi 8.2K to +3V
CLK_REQ4# internal pull Hi 8.2K to +3V
GEVENT16# internal pull Hi 8.2K to +3VS5
GEVENT15# internal pull Hi 8.2K to +3VS5

remove PCIE_RST# from AMD recommend
TP153 TP154 PCIE_RST2# RI#
29 SUSB# SUSB#
29 SUSC# SUSC#
29 DNBSWON# DNBSWON#
10 FCH_PWRGD FCH_PWRGD
FCH_TEST0 FCH_TEST1 FCH_TEST2 EC_A20GATE
29 EC_A20GATE
29 EC_RCIN# EC_RCIN#
TP155 FCH_PME#
29 SIO_EXT_SMI# SIO_EXT_SMI#
29 SIO_EXT_SCI# R829 *0_4/s GEVENT5#
SYS_RST#
27,30 PCIE_WAKE# PCIE_WAKE#
C1075 *100P/50V_4 FCH_THERMTRIP#
4 FCH_THERMTRIP# R607 10K/F_4 WD_PWRGD
+3V
PV change to short-pad
SI
29 RSMRST# RSMRST#
24 PCIE_CARD_CLKREQ# PCIE_CARD_CLKREQ#
27 PCIE_LAN_CLKREQ# PCIE_LAN_CLKREQ#
27,29 LAN_DISABLE# R868 *0/J_4 LAN_DISABLE#_FCH
25 ACZ_SPKR R612 *0_4/s FCH_GPIO66
12,13 CGCLK_SMB CGCLK_SMB
12,13 CGDAT_SMB CGDAT_SMB
SCL1 SDA1
30 PCIE_MINI_CLKREQ# PCIE_MINI_CLKREQ#
CLKREQ1#
LLB# Not Implemented ,left unconnected.
LLB# SMARTVOLT2
This pin is used to power down VGA DAC regulators when CRT no connected
9 VGA_POWER_DOWN R619 0_4 VGA_PD
TP160 TP161 GBE_LED0
24 CARD_EECS R904 0_4
SI
TP163
MV
TP165
23 ODD_PLUGIN# ODD_PLUGIN#
23 ODD_DA#_FCH ODD_DA#_FCH
TP168 FCH_JTAG_TCK
TP169 FCH_JTAG_TDI
TP170 FCH_JTAG_RST#
For Zero ODD

HD audio interface is +3V_S5 voltage
R630 *10K/F_4 ACZ_BCLK_R
R631 *10K/F_4 ACZ_SDOUT_R
R632 *10K/F_4 ACZ_SDIN0
R633 *10K/F_4 ACZ_SDIN1
R634 *10K/F_4 ACZ_SDIN2_R
ACZ_SDIN3_R
ACZ_SYNC_R
ACZ_RST#_R
TP171 TP172

## HUDSON-M3
Part 4 of 5

PCIE_RST2#/GEVENT4#
RI#/GEVENT22#
SPI_CS3#/GBE_STAT1/GEVENT21#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
TEST0
TEST1/TMS
TEST2
GA20IN/GEVENT0#
KBRST#/GEVENT1#
PME#/GEVENT3#
LPC_SMI#/GEVENT23#
LPC_PD#/GEVENT5#
SYS_RESET#/GEVENT19#
WAKE#/GEVENT8#
IR_RX1/GEVENT20#
THRMTRIP#/SMBALERT#/GEVENT2#
WD_PWRGD
RSMRST#
ACPI / WAKE UP EVENTS
CLK_REQ4#/SATA_IS0#/GPIO64
CLK_REQ3#/SATA_IS1#/GPIO63
SMARTVOLT1/SATA_IS2#/GPIO50
CLK_REQ0#/SATA_IS3#/GPIO60
SATA_IS4#/FANOUT3/GPIO55
SATA_IS5#/FANIN3/GPIO59
SPKR/GPIO66
SCL0/GPIO43
SDA0/GPIO47
SCL1/GPIO227
SDA1/GPIO228
CLK_REQ2#/FANIN4/GPIO62
CLK_REQ1#/FANOUT4/GPIO61
IR_LED#/LLB#/GPIO184
SMARTVOLT2/SHUTDOWN#/GPIO51
DDR3_RST#/GEVENT7#/VGA_PD
GBE_LED0/GPIO183
SPI_HOLD#/GBE_LED1/GEVENT9#
GBE_LED2/GEVENT10#
GBE_STAT0/GEVENT11#
CLK_REQG#/GPIO65/OSCIN/IDLEEXIT#
GPIO
BLINK/USB_OC7#/GEVENT18#
USB_OC6#/IR_TX1/GEVENT6#
USB_OC5#/IR_TX0/GEVENT17#
USB_OC4#/IR_RX0/GEVENT16#
USB_OC3#/AC_PRES/TDO/GEVENT15#
USB_OC2#/TCK/GEVENT14#
USB_OC1#/TDI/GEVENT13#
USB_OC0#/SPI_TPM_CS#/TRST#/GEVENT12#
USB OC
AZ_BITCLK
AZ_SDOUT
AZ_SDIN0/GPIO167
AZ_SDIN1/GPIO168
AZ_SDIN2/GPIO169
AZ_SDIN3/GPIO170
AZ_SYNC
AZ_RST#
PS2_DAT/SDA4/GPIO187
PS2_CLK/CEC/SCL4/GPIO188
SPI_CS2#/GBE_STAT2/GPIO166
HD AUDIO
PS2KB_DAT/GPIO189
PS2KB_CLK/GPIO190
PS2M_DAT/GPIO191
PS2M_CLK/GPIO192
KSO_0/GPIO209
KSO_1/GPIO210
KSO_2/GPIO211
KSO_3/GPIO212
KSO_4/GPIO213
KSO_5/GPIO214
KSO_6/GPIO215
KSO_7/GPIO216
KSO_8/GPIO217
KSO_9/GPIO218
KSO_10/GPIO219
KSO_11/GPIO220
KSO_12/GPIO221
KSO_13/GPIO222
KSO_14/XDB0/GPIO223
KSO_15/XDB1/GPIO224
KSO_16/XDB2/GPIO225
KSO_17/XDB3/GPIO226
EMBEDDED CTRL
USBCLK/14M_25M_48M_OSC
USB_RCOMP
USB_FSD1P/GPIO186
USB_FSD1N
USB_FSD0P/GPIO185
USB_FSD0N
USB MISC
USB 1.1
USB_HSD13P
USB_HSD13N
USB_HSD12P
USB_HSD12N
USB_HSD11P
USB_HSD11N
USB_HSD10P
USB_HSD10N
USB_HSD9P
USB_HSD9N
USB_HSD8P
USB_HSD8N
USB_HSD7P
USB_HSD7N
USB_HSD6P
USB_HSD6N
USB_HSD5P
USB_HSD5N
USB_HSD4P
USB_HSD4N
USB_HSD3P
USB_HSD3N
USB_HSD2P
USB_HSD2N
USB_HSD1P
USB_HSD1N
USB_HSD0P
USB_HSD0N
USB 2.0
USBSS_CALRP
USBSS_CALRN
USB_SS_TX3P
USB_SS_TX3N
USB_SS_RX3P
USB_SS_RX3N
USB_SS_TX2P
USB_SS_TX2N
USB_SS_RX2P
USB_SS_RX2N
USB_SS_TX1P
USB_SS_TX1N
USB_SS_RX1P
USB_SS_RX1N
USB_SS_TX0P
USB_SS_TX0N
USB_SS_RX0P
USB_SS_RX0N
USB 3.0
SCL2/GPIO193
SDA2/GPIO194
SCL3_LV/GPIO195
SDA3_LV/GPIO196
EC_PWM0/EC_TIMER0/GPIO197
EC_PWM1/EC_TIMER1/GPIO198
EC_PWM2/EC_TIMER2/WOL_EN/GPIO199
EC_PWM3/EC_TIMER3/GPIO200
KSI_0/GPIO201
KSI_1/GPIO202
KSI_2/GPIO203
KSI_3/GPIO204
KSI_4/GPIO205
KSI_5/GPIO206
KSI_6/GPIO207
KSI_7/GPIO208

USB_RCOMP_SB R597 11.8K/F_6
USBP15+ 26 USBP15- 26 BLUETOOTH
USBP11+ TP156 USBP11- TP157
USBP10+ 30 USBP10- 30 WLAN Min-Card
USBP7+ TP158 USBP7- TP159
USBP6+ 26 USBP6- 26 USB Connector
USBP5+ 26 USBP5- 26 USB Connector
USBP2+ 20 USBP2- 20 Carama USB
USBP1+ TP164 USBP1- TP166
USBP0+ 26 USBP0- 26 USB Connector
USBSS_CALRP TP151 USBSS_CALRN TP152
USB 3.0 Not Implemented: left unconnected.

SCL2 SDA2 SCL3 SDA3
SCL3 of a TSI-capable APU's thermal bus,Pulled up to APU_VDDIO. Resistor value verified in the relevant APU design guide.
EC_PWM2 EC_PWM2 10
No need for GPIO200

Hudson-M2-A13

## To Azalia
ACZ_SDOUT_R R635 33/J_4 ACZ_SDOUT_AUDIO 25
ACZ_SYNC_R R636 33/J_4 ACZ_SYNC_AUDIO 25
ACZ_BCLK_R R637 33/J_4 BIT_CLK_AUDIO 25
ACZ_RST#_R R638 33/J_4 ACZ_RST#_AUDIO 25
ACZ_SDIN0 ACZ_SDIN0 25

Pure UMA can remove
CLK_REQ# already internal pull up 8.2K
37 VGA_REQ D26 RB501V-40 CLKREQ1#

| | | | |
|---|---|---|---|
| Quanta Computer Inc. | | | |
| PROJECT : R23 | | | |
| Size | Document Number: Hudson-M3 GPIO/USB/AZ/RGMII | | Rev 1A |
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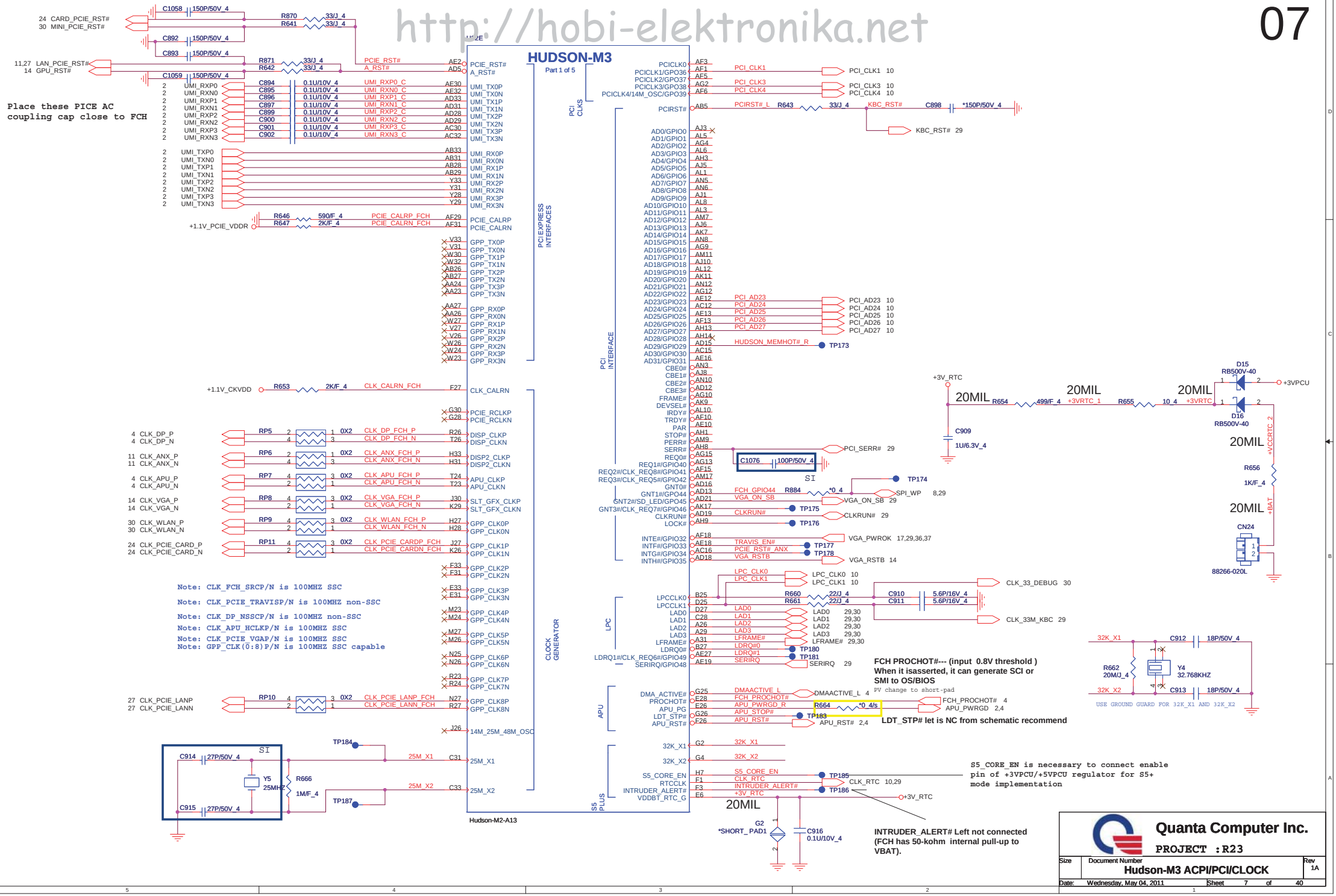


U32D

HUDSON-M3

Part 5 of 5

GROUND

Hudson-M2-A13

U32B

HUDSON-M3

Part 2 of 5

SATA HDD

SATA ODD

PLACE SATA A.C COUPLING CAPS CLOSE TO HUDSON-M2/M3

C921 0.1U/10V_4

U36 TC7SH08FU

SB_SATA_LED#

PLACE SATA_CAL RES VERY CLOSE TO BALL OF HUDSON-M2/M3

Integrated Clock Mode: Leave unconnected.

GPIO52 internal pull Hi 8.2K to +3V
GPIO53 internal pull Hi 8.2K to +3V
GPIO54 internal pull Hi 8.2K to +3V
GPIO56 internal pull Hi 8.2K to +3V
GPIO57 internal pull Hi 8.2K to +3V
GPIO58 internal pull Hi 8.2K to +3V

follow AMD check list to pull UP / LOW

EMI

FCH SPI ROM

*MX25L1605DM2I-12G

R place close to PCH

VGA Hot-plug

| Vender | Size | P/N |
|---|---|---|
| AMIC | 2M | AKE38ZN0801 |
| WINBOND | 2M | AKE38FP0N01 |
| Socket | | DFHS08FS023 |

| ID4 | ID3 | ID2 | ID1 | ID0 | CONFIG | 31- Level BOM | Item |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | UMA | | 1 |
| 0 | 0 | 0 | 1 | 0 | | | 2 |
| 0 | 0 | 1 | 0 | 0 | | | 3 |
| 0 | 0 | 1 | 1 | 0 | | | 4 |
| 0 | 1 | 0 | 1 | 0 | | | 5 |
| 0 | 1 | 1 | 1 | 0 | | | 6 |
| 1 | 0 | 0 | 1 | 0 | | | 7 |
| 1 | 0 | 1 | 1 | 0 | | | 8 |
| 0 | 0 | 0 | 0 | 1 | SG / Muxless | | 9 |
| 0 | 0 | 1 | 0 | 1 | | | 10 |
| 1 | 0 | 0 | 1 | 1 | | | 11 |
| 1 | 0 | 1 | 1 | 1 | | | 12 |

| SIDE_PORT_ID2 | SIDE_PORT_ID1 | SIDE_PORT_ID0 | |
|---|---|---|---|
| 0 | 0 | 0 | Samsung |
| 0 | 0 | 1 | Hynix |
| 0 | 1 | 0 | NC |
| 0 | 1 | 1 | no supprot side port |

TEMP( 0 - 3 )
Temp Monitor Not Implemented
10-KΩ 5% pull-up to +3VS5
or 10-KΩ 5% pull-down

VIN ( 0 - 7 )
Voltage Monitor Not Implemented
10-KΩ 5% pull-up to +3VS5
or 10-KΩ 5% pull-down

PV change to +FCH_VDDAN_33_DAC_R for AMD suggestion

PV DEL R687 for AMD suggestion

Quanta Computer Inc.

PROJECT : R23

| Size | Document Number | Rev |
|---|---|---|
| | Hudson-M3 SATA/HWM/SPI | 1A |
| Date: Wednesday, May 04, 2011 | Sheet 8 of 40 | |

PLACE ALL THE DECOUPLING CAPS ON THIS SHEET CLOSE TO SOC AS POSSIBLE

U32C

HUDSON-M3 Part 3 of 5

Hudson-M2-A13

POWER

NOTE : LDO_CAP
A11 stepping : C will install 1nf cap
A12 stepping : C will let it to NC

M2 chipset need to connect to GND

M2 chipset can let it to GND

VDDQ--3.3V I/O power 102mA

VDDCR-- S/B CORE power 1007mA for M3 902mA for M2

VDDAN_11_CLK-- Internal clock Generator I/O power 340mA

VDDAN_11_PCIE --PCIE/UMI analog power 1088mA

VDDAN_11_SATA--SATA PHY analog/IO power 1337mA

VDDPL_11_SYS_S : System Clock Gen PLLs analog power

VDDPL_33_USB_S : USB PHY PLL analog power

VDDAN_33_USB_S : USB PHY I/O analog power 470mA

VDDAN_11_USB_S : USB PHY PLL analog power 140mA

VDDCR_11_USB_S : USB PHY core power 42mA

VDDAN_11_SSUSB_S : USB3.0 PHY PLL analog power 282mA

VDDCR_11_SSUSB_S : USB3.0 PHY core power 424mA

VDDAN_33_HWM_S -- Hardware monitor interface I/O power

VDDIO_33_S-- 3.3v S5 I/O power 59mA

VDDXL_33_S-- 25MHZ XTAL IO power 5mA

VDDCR_1.1_S-- 1.1V S5 Core power 187mA

VDDPL_11_SYS_S 70mA

VDDAN_33_HWM_S 12mA

VDDIO_AZ_S 26mA

if support USB 3.0 wake up should be change pull hi to S5 power

if support Modem wake up should be change pull hi to S5 power

VDDIO_AZ_S -- HD Audio Interface I/O power

next stage should be change to +1.2VS5 from AMD Errta 1.2

This circuit is for switch DAC and UMI analog power 32 mA Max

VGA will power down when CRT no insert

VGA_PD is generated from FCH

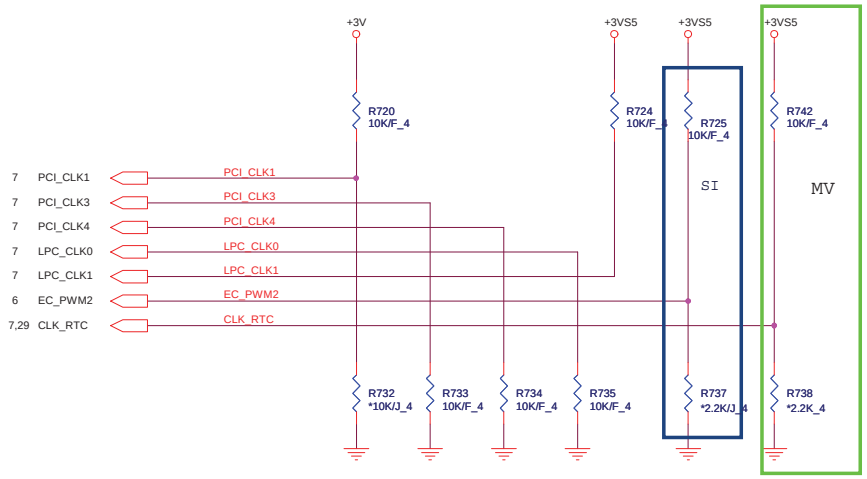
233 mA Max

| | | |
|---|---|---|
| Quanta Computer Inc. | | |
| PROJECT : R23 | | |
| Size | Document Number: Hudson-M3 POWER/GND | Rev: 1A |
| Date: Wednesday, May 04, 2011 | Sheet 9 of 40 | |

# STRAPS PINS

OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.






## REQUIRED STRAPS

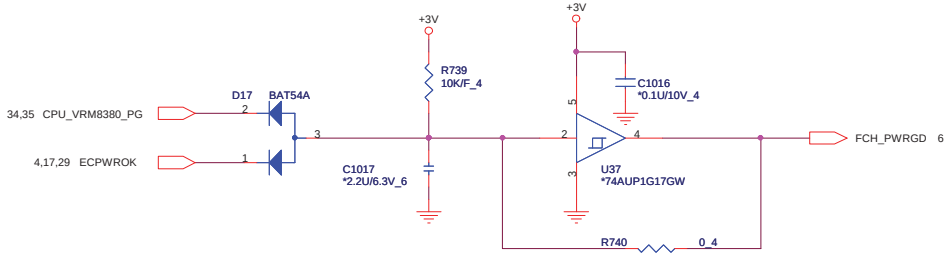
| | -------- | PCI_CLK1 | -------- | PCI_CLK3 | PCI_CLK4 | LPC_CLK0 | LPC_CLK1 | EC_PWM2 | CLK_RTC |
|---|---|---|---|---|---|---|---|---|---|
| PULL HIGH | -------- | ALLOW PCIE Gen2 DEFAULT | -------- | USE DEBUG STRAP | non_Fusion CLOCK MODE | AMD internal EC ENABLED | CLKGEN ENABLED DEFAULT | LPC ROM DEFAULT | S5 PLUS MODE DISABLED DEFAULT |
| PULL LOW | -------- | FORCE PCIE Gen1 | -------- | IGNORE DEBUG STRAP DEFAULT | FUSION CLOCK MODE DEFAULT | EC DISABLED DEFAULT | CLKGEN DISABLED | SPI ROM | S5 PLUS MODE ENABLED |

# DEBUG STRAPS

FCH has 15K Internal Pull Up for PCI_AD[27:23]


| | PCI_AD27 | PCI_AD26 | PCI_AD25 | PCI_AD24 | PCI_AD23 |
|---|---|---|---|---|---|
| PULL HIGH | USE PCI PLL DEFAULT | DISABLE ILA AUTORUN DEFAULT | USE FC PLL DEFAULT | USE DEFAULT PCIE STRAPS DEFAULT | DISABLE PCI MEM BOOT DEFAULT |
| PULL LOW | BYPASS PCI PLL | ENABLE ILA AUTORUN | BYPASS FC PLL | USE EEPROM PCIE STRAPS | ENABLE PCI MEM BOOT |

# FCH PWRGD



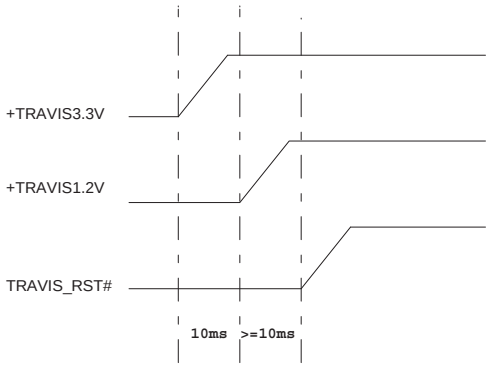

Quanta Computer Inc.

PROJECT : R23

| Size | Document Number | Rev |
|---|---|---|
| | Hudson-M3 STRAP/PWRGD | 1A |

Date: Wednesday, May 04, 2011 Sheet 10 of 40

## ANX3110 Power Up Sequence




# ANALOGIX ANX3110

U38 — ANX3110

GPIO_0 : Define VAR_BL & BL_EN & DIGON H/W or S/W control power up timming
Pull Hi for H/W mode
---chip have defined power up timing
Pull Low for S/W mode -- APU through DPRX port to program it

CLK_SEL:
Pull Hi for 100MHZ clk source input
Pull Low for 27MHZ crystal input

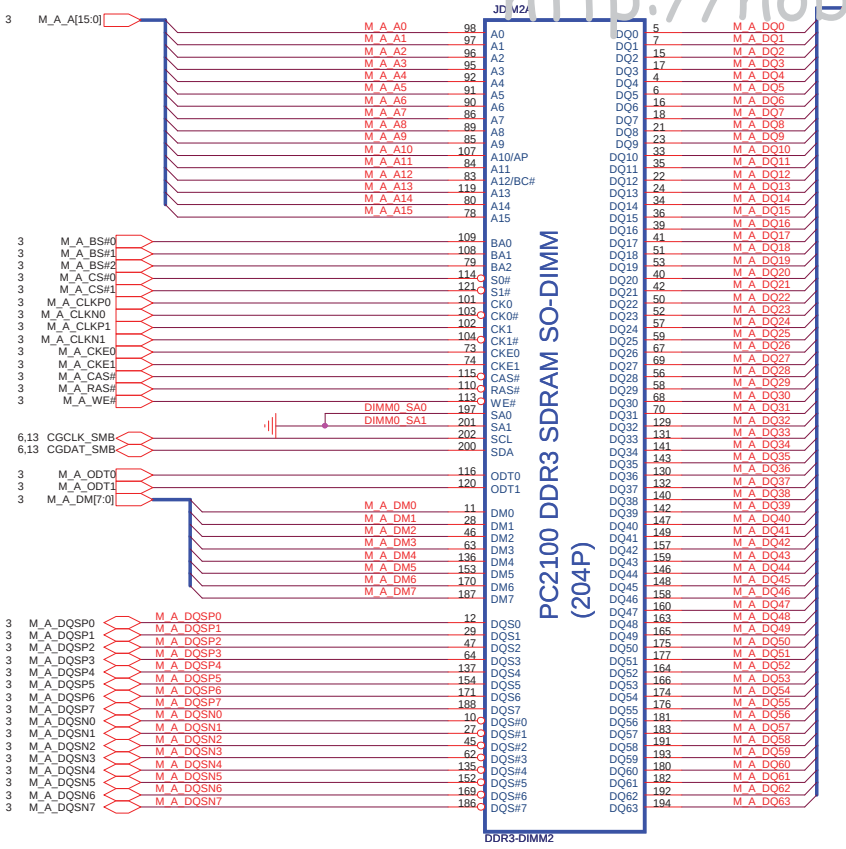
DPRX_HPD :
It will transfer to Hi when power enable

TEST_EN : internal pull low
1:scan test mode
0:normal mode

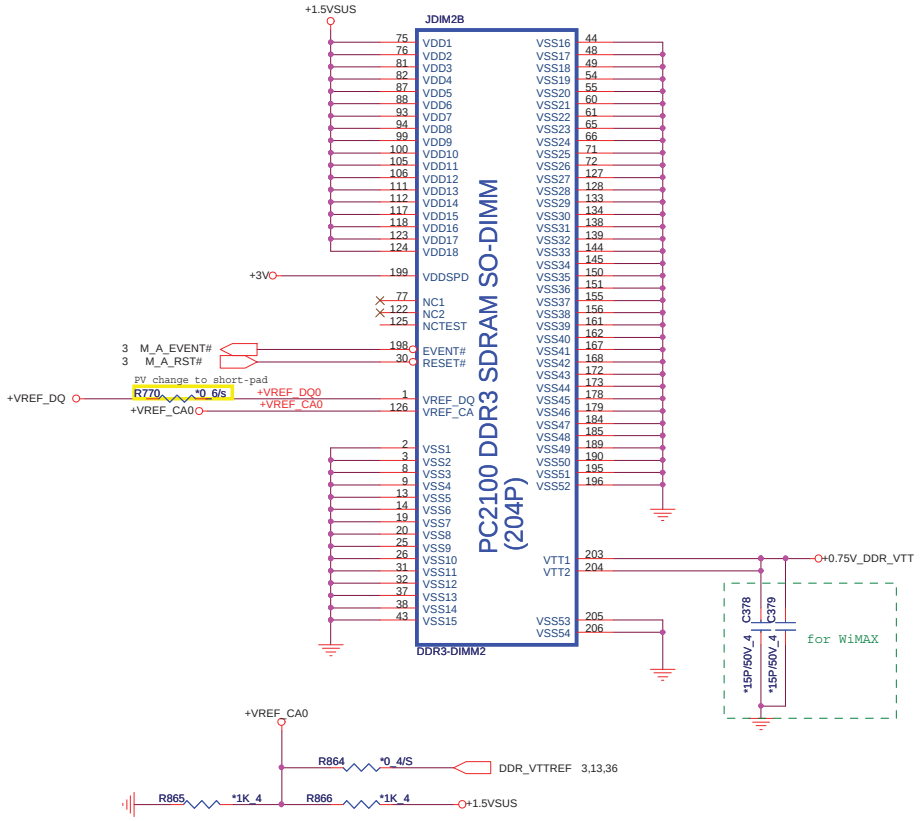
PV change to short-pad

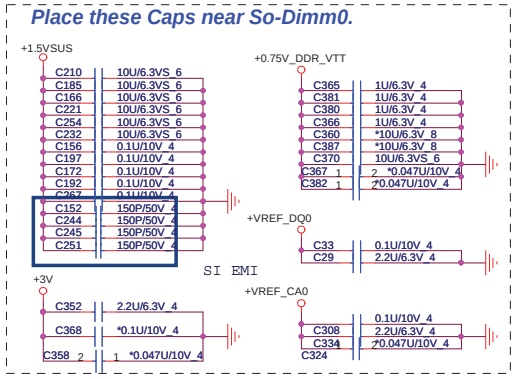
remove level shift

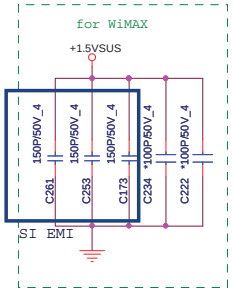
| | |
|---|---|
| PROJECT : R23 | Quanta Computer Inc. |
| Size: Custom | Document Number: ANX3110 |
| Rev: 1A | |
| Date: Tuesday, May 03, 2011 | Sheet 11 of 40 |

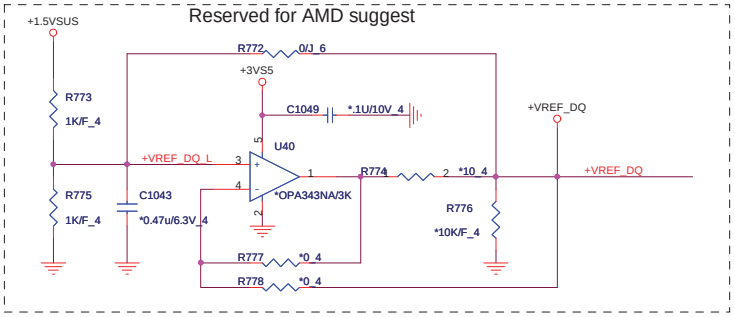



H9.2mm



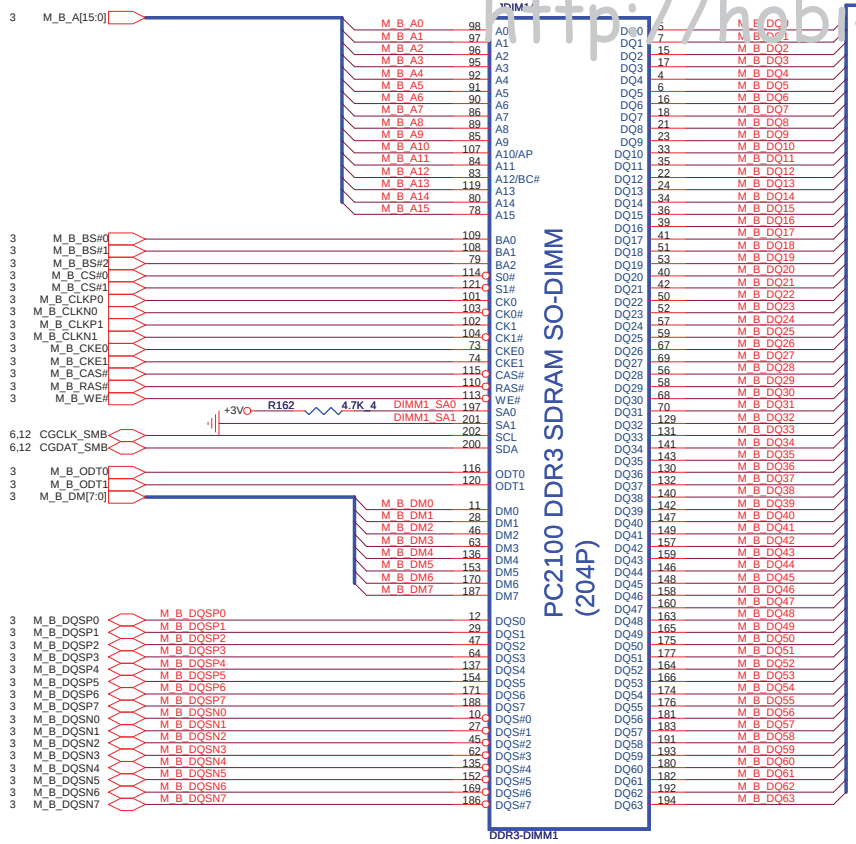



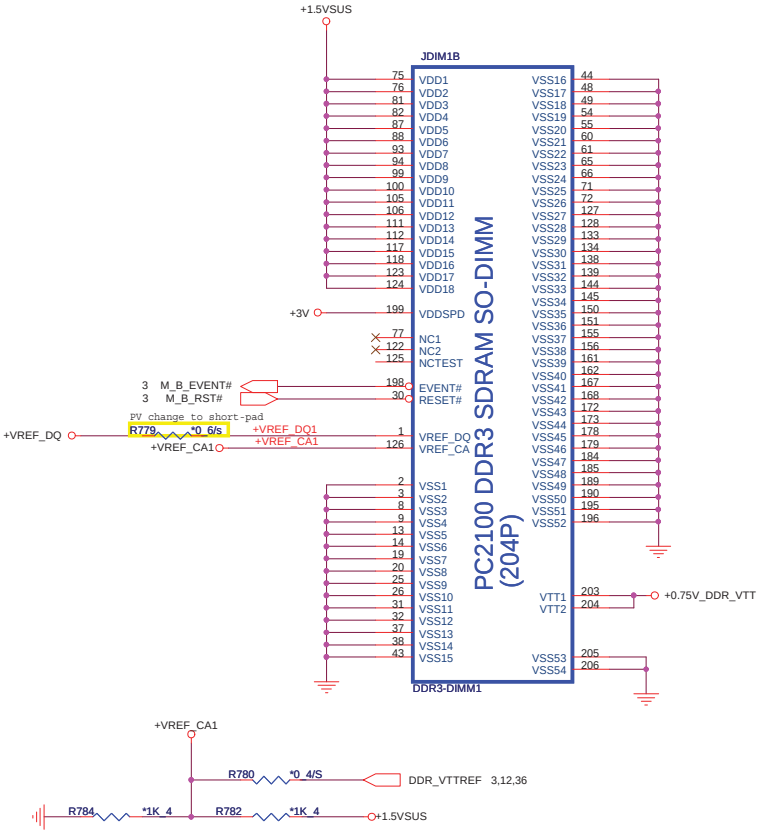

13,36 +0.75V_DDR_VTT
2,3,4,5,13,36,37,39 +1.5VSUS
2,4,6,8,9,10,11,13,14,17,20,22,23,24,25,27,28,29,30,34,37,39 +3V

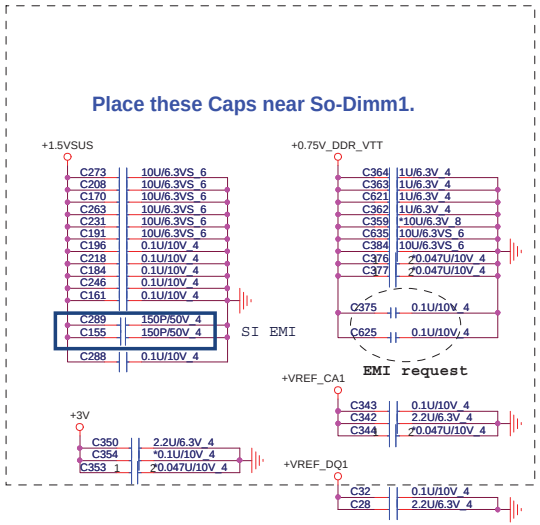
**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | DDR3 DIMM-0 | 1A |
| Date: Tuesday, May 03, 2011 | Sheet 12 of 40 | |




H5.2mm



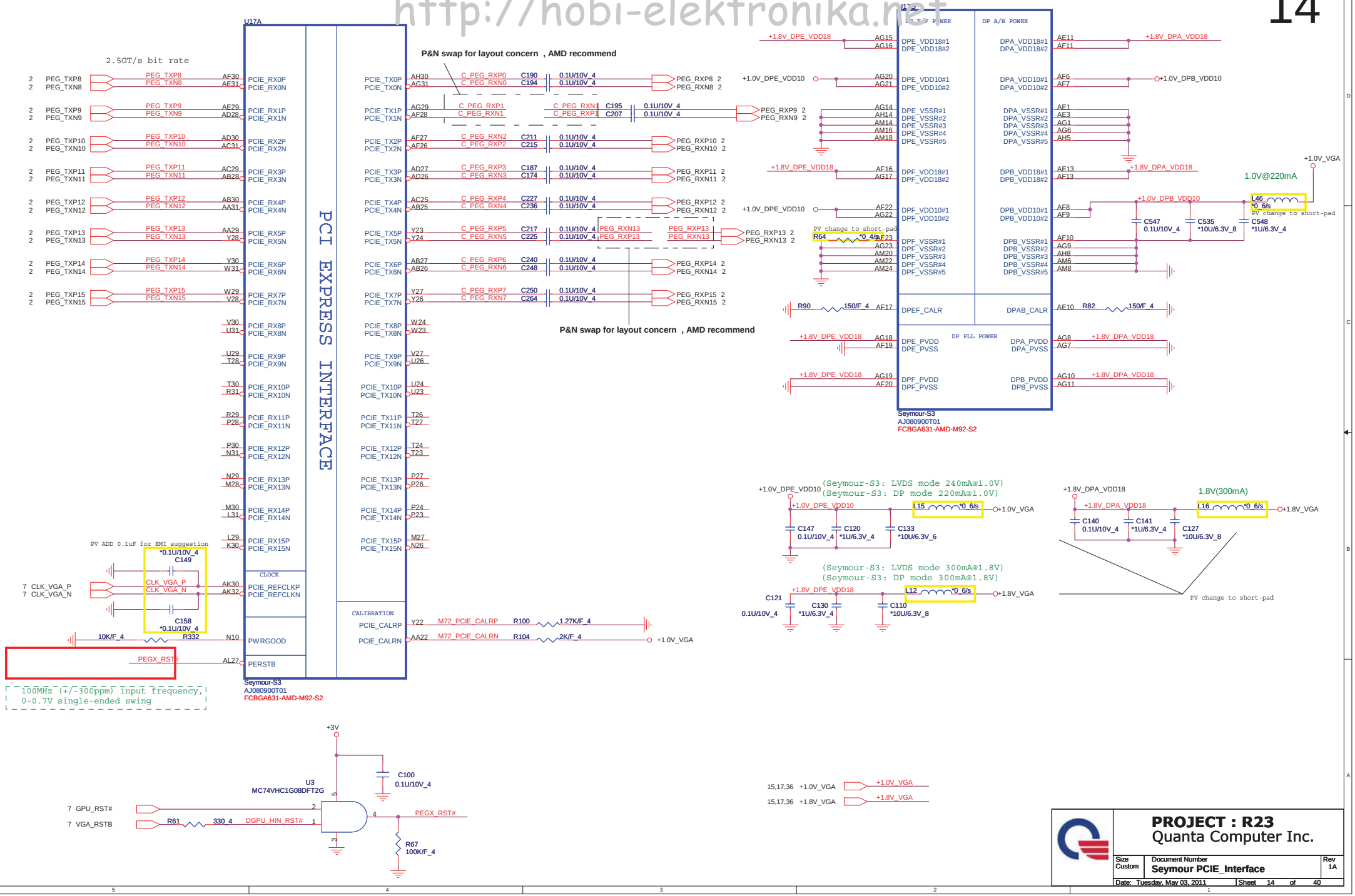




12,36 +0.75V_DDR_VTT
2,3,4,5,12,36,37,39 +1.5VSUS
2,4,6,8,9,10,11,12,14,17,20,22,23,24,25,27,28,29,30,34,37,39 +3V

**PROJECT : R23**
Quanta Computer Inc.

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

Date: Tuesday, May 03, 2011 Sheet 13 of 40



| MEM_ID[3:0] | Vendor | Type | Vendor P/N | QUANTA P/N |
|---|---|---|---|---|
| 0000 | Samsung- E die | 64*16-800MHZ | K4W1G1646E-HC12 | Reserved |
| 0001 | Hynix- Vega die | 64*16-800MHZ | H5TQ1G63DFR-12C | Reserved |
| 0010 | Hynix- Vega die | 128*16-800MHZ | H5TQ2G63BFR-12C | Reserved |
| 0011 | Samsung- C die | 128*16-800MHZ | K4W2G1646C-HC12 | Reserved |
| 0100 | Micron | 128*16-800MHZ | MT41J128M16HA-125:D | Reserved |
| 0101 | Reserved | Reserved | Reserved | Reserved |
| 0110 | Hynix- Vega die | 64*16-900MHZ | H5TQ1G63DFR-11C | AKD5LZWTW02 |
| 0111 | Samsung- E die | 64*16-900MHZ | K4W1G1646E-HC11 | Reserved |
| 1000 | Samsung- G die | 64*16-900MHZ | K4W1G1646G-BC11 | AKD5BGGT500 |
| 1001 | Reserved | Reserved | Reserved | Reserved |
| 1010 | Hynix- Vega die | 128*16-900MHZ | H5TQ2G63BFR-11C | AKD5MGWTW00 |
| 1011 | Samsung- C die | 128*16-900MHZ | K4W2G1646C-HC11 | AKD5MGWT500 |
| 1100 | | | Reserved | Reserved |
| 1101 | | | Reserved | Reserved |
| 1110 | | | Reserved | Reserved |
| 1111 | | | Reserved | Reserved |

AMD request to use Hi voltage enter O.S

GPIO15 GPIO20

| Seymour-XT | PWRCNTL0 | PWRCNTL1 | V-CORE |
|---|---|---|---|
| L | 0 | 0 | 0.9V |
| M | 0 | 1 | 1V |
| H | 1 | 0 | 1.1V (Default) |
| TBD | 1 | 1 | NA |

Access to SCL and SDA is mandatory on BACO designs for debug purposes

GPIO22(ROMCS#) PD without external VBIOS ROM

If no contact this pin to LVDS need pull low

Seymour uninstall Ra to meet AF24 N/C

Reserve for AMD debug only

Reserve for DB debug only

DAC2 is NC on Seymour

Seymour-S3--NC ROBSON--install

Robson-- Install Seymour- NC BACO mode -- install

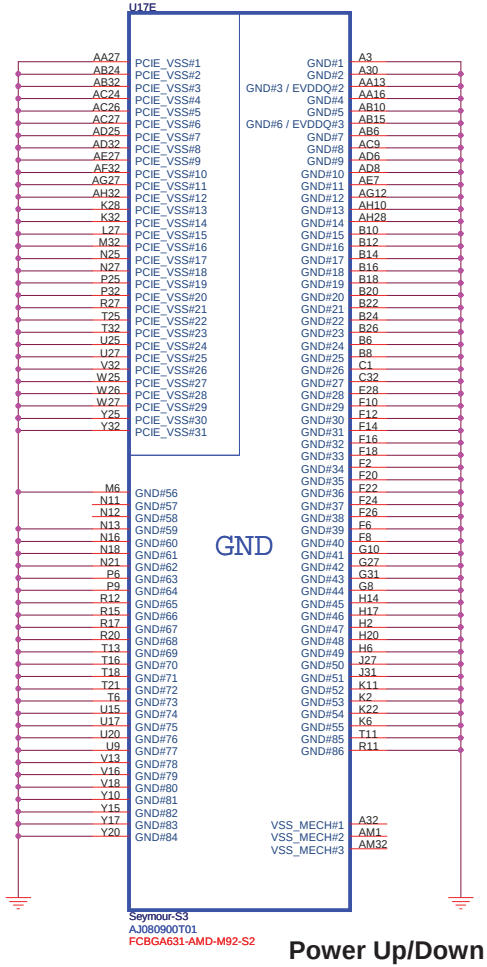
follow AMD checklist change from 10M to 1Mohm

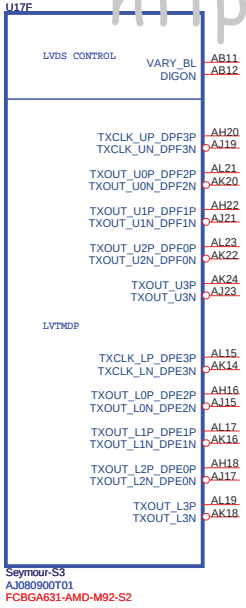
For Int Clk 27Mhz

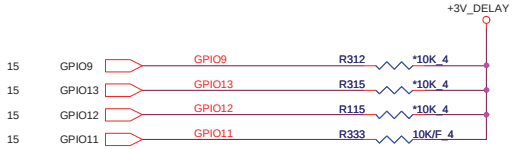
PROJECT : R23
Quanta Computer Inc.

Size: Custom | Document Number: Seymour Main | Rev: 1A

Date: Tuesday, May 03, 2011 | Sheet 15 of 40




## CONFIGURATION STRAPS

**ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET**

RECOMMENDED SETTINGS
0= DO NOT INSTALL RESISTOR
1 = INSTALL 10K RESISTOR
X = DESIGN DEPENDANT
NA = NOT APPLICABLE

| STRAPS | PIN | DESCRIPTION OF DEFAULT SETTINGS | |
|---|---|---|---|
| TX_PWRS_ENB | GPIO0 | **Transmitter Power Savings Enable**<br>0: 50% Tx output swing for mobile mode<br>1: full Tx output swing (Default setting for Desktop) | 1 |
| TX_DEEMPH_EN | GPIO1 | **PCI Express Transmitter De-emphasis Enable**<br>0: Tx de-emphasis disabled for mobile mode<br>1: Tx de-emphasis enabled (Default setting for Desktop) | 1 |
| BIF_GEN2_EN_A | GPIO2 | Enable CLKREQ# Power Management<br>0 - CLKREQ# power management capability is disabled<br>1 - CLKREQ# power management capability is enabled | 0 |
| RSVD<br>BIF_VGA_DIS<br>RSVD | GPIO8<br>GPIO9<br>GPIO21 | VGA ENABLED | 0<br>0<br>0 |
| BIOS_ROM_EN | GPIO_22_ROMCSB | ENABLE EXTERNAL BIOS ROM | 0 |
| ROMIDCFG(2:0) | GPIO[13:11] | SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT | 0 0 1 |
| VIP_DEVICE_STRAP_ENA | V2SYNC | IGNORE VIP DEVICE STRAPS | 0 |
| RSVD<br>AUD[1]<br>AUD[0] | GENERICC<br>HSYNC<br>VSYNC | AUD[1] AUD[0]<br>0 0 No audio function<br>0 1 Audio for DisplayPort and HDMI if dongle is detected<br>1 0 Audio for DisplayPort only<br>1 1 Audio for both DisplayPort and HDMI | 0<br>0<br>11 |

## AMD RESERVED CONFIGURATION STRAPS

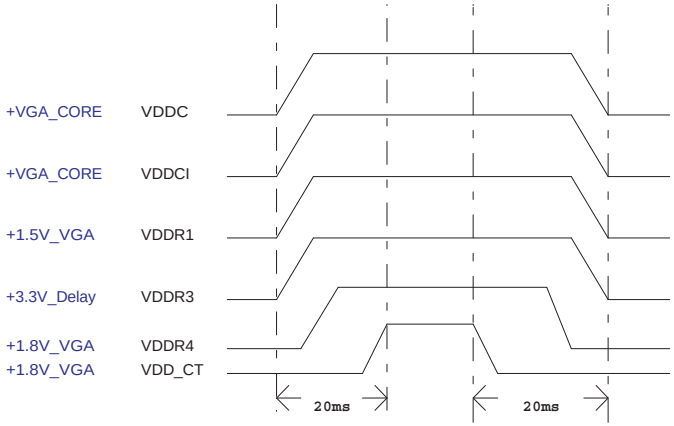
**ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET**

H2SYNC GENERICC

**PULLUP PADS ARE NOT REQUIRED FOR THESE STRAPS BUT IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET**

GPIO21_BB_EN

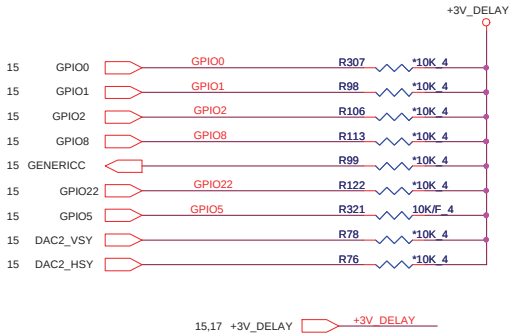
## Power Up/Down Sequence




## Memory Aperture size

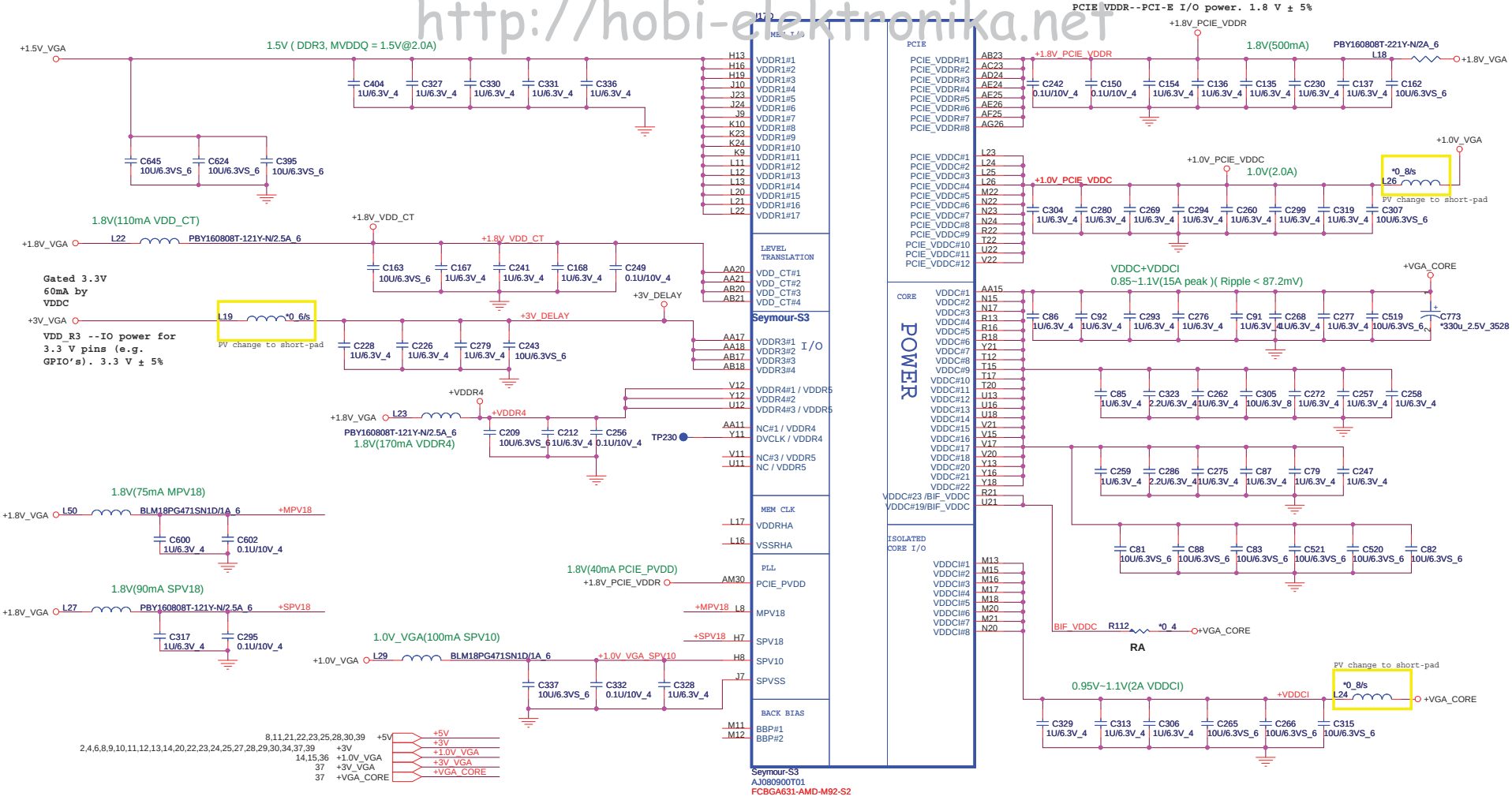
| GPIO9 BIOSROM | | GPIO13 ROMIDCFG2 | GPIO12 ROMIDCFG1 | GPIO11 ROMIDCFG0 |
|---|---|---|---|---|
| 0 | 128M | 0 | 0 | 0 |
| 0 | 256M | 0 | 0 | 1 |
| 0 | 64M | 0 | 1 | 0 |
| 0 | 32M | 0 | 1 | 1 |
| 0 | 512M | 1 | 0 | 0 |
| 0 | 1G | 1 | 0 | 1 |
| 0 | 2G | 1 | 1 | 0 |
| 0 | 4G | 1 | 1 | 1 |

It is a shared pin strap with CONFIG[2:0] if BIOS_ROM_EN is set to 0.

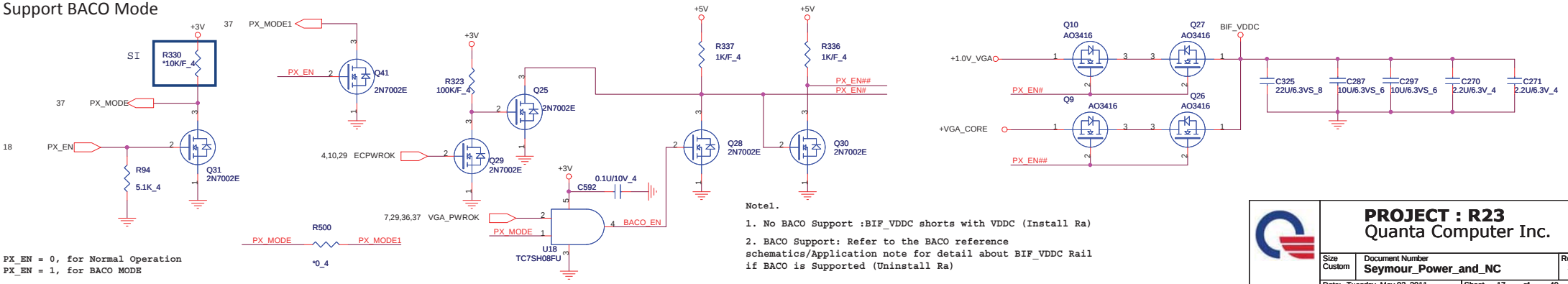



**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | Seymour GND / LVDS/ Straps | 1A |
| Date: Tuesday, May 03, 2011 | Sheet 16 of 40 | |




## Support BACO Mode



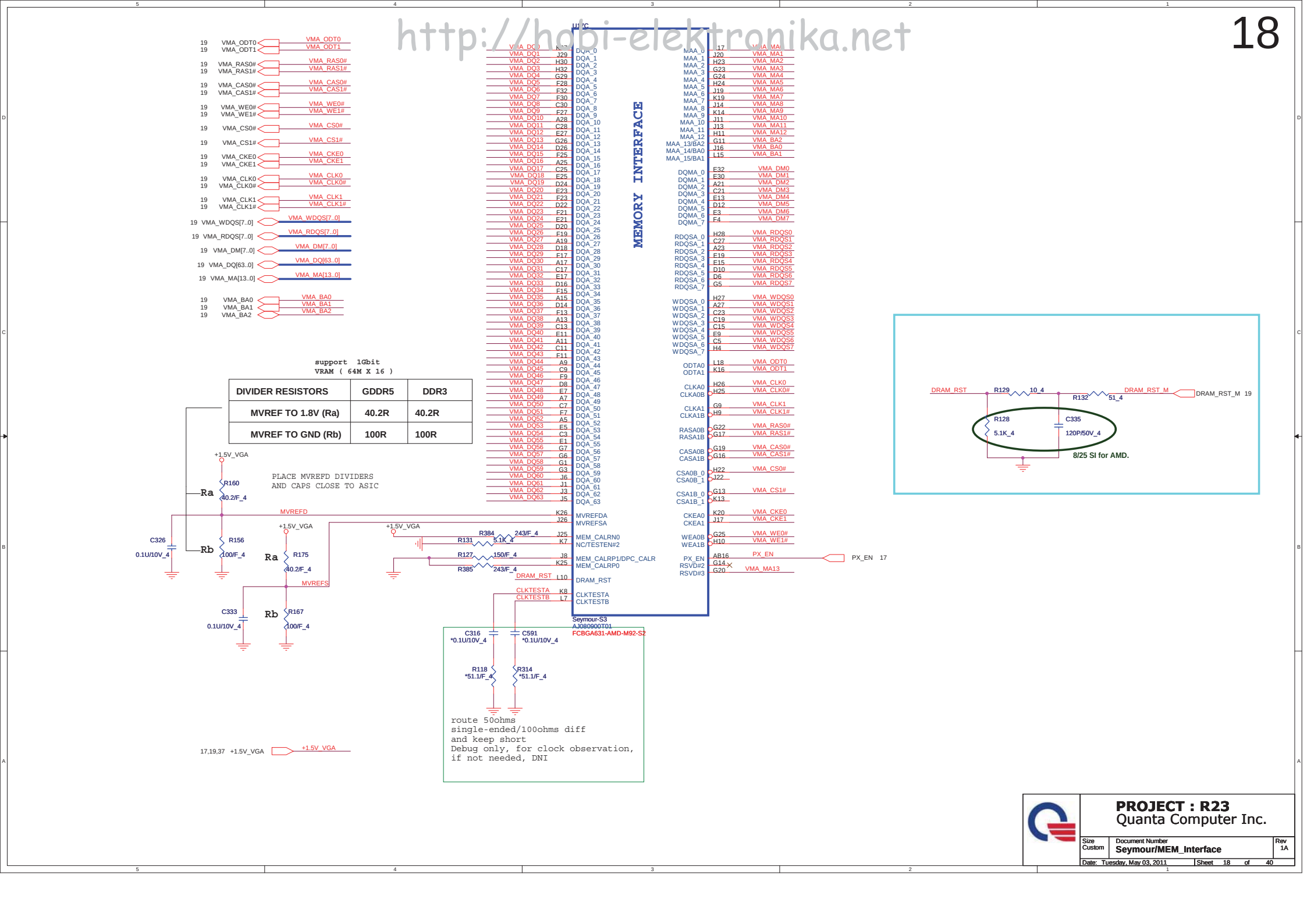

Note1.

1. No BACO Support :BIF_VDDC shorts with VDDC (Install Ra)
2. BACO Support: Refer to the BACO reference schematics/Application note for detail about BIF_VDDC Rail if BACO is Supported (Uninstall Ra)

**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | Seymour_Power_and_NC | 1A |

Date: Tuesday, May 03, 2011 Sheet 17 of 40



# 1GB DDR3

18 VMA_MA[13..0] / 18 VMA_DM[7..0] — VMA_MA[13..0]
18 VMA_DQ[63..0] / 18 VMA_WDQS[7..0] / 18 VMA_RDQS[7..0]

U7 / U1 / U6 / U20 — 100-BALL SDRAM DDR3 — K4W2G1646C-HC11

Should be 243 Ohms +-1%: R174 243/F_4 (U7), R389 243/F_4 (U1), R159 243/F_4 (U6), R379 243/F_4 (U20)

+1.5V_VGA

R401 4.99K/F_4 / R400 4.99K/F_4 / C644 0.1U/10V_4 — VREFC_VMA1
R148 4.99K/F_4 / R151 4.99K/F_4 / C372 0.1U/10V_4 — VREFD_VMA1
R392 4.99K/F_4 / R405 4.99K/F_4 / C650 0.1U/10V_4 — VREFC_VMA2
R146 4.99K/F_4 / R153 4.99K/F_4 / C369 0.1U/10V_4 — VREFD_VMA2
R185 4.99K/F_4 / R183 4.99K/F_4 / C402 0.1U/10V_4 — VREFC_VMA3
R165 4.99K/F_4 / R181 4.99K/F_4 / C396 0.1U/10V_4 — VREFD_VMA3
R383 4.99K/F_4 / R388 4.99K/F_4 / C626 0.1U/10V_4 — VREFC_VMA4
R378 4.99K/F_4 / R386 4.99K/F_4 / C623 0.1U/10V_4 — VREFD_VMA4

VMA_CLK0 — R161 56.2/F_4 — VMA_CLK0_COMM — C374 0.01U/25V_4 — R169 56.2/F_4 — VMA_CLK0#
VMA_CLK1 — R154 56.2/F_4 — VMA_CLK1_COMM — C385 0.01U/25V_4 — R158 56.2/F_4 — VMA_CLK1#
17,18,37 +1.5V_VGA — +1.5V_VGA

+1.5V_VGA: C355 1U/6.3V_4, C357 1U/6.3V_4, C406 1U/6.3V_4, C397 1U/6.3V_4, C393 1U/6.3V_4, C349 1U/6.3V_4, C347 1U/6.3V_4, C655 1U/6.3V_4
+1.5V_VGA: C653 1U/6.3V_4, C648 1U/6.3V_4, C637 1U/6.3V_4, C403 1U/6.3V_4, C408 1U/6.3V_4, C345 1U/6.3V_4, C641 1U/6.3V_4, C643 1U/6.3V_4
+1.5V_VGA: C656 10U/6.3VS_6, C633 10U/6.3VS_6, C410 10U/6.3VS_6, C409 10U/6.3VS_6
+1.5V_VGA: C620 0.1U/10V_4, C618 0.1U/10V_4, C651 0.1U/10V_4, C346 0.1U/10V_4, C654 0.1U/10V_4, C636 0.1U/10V_4, C614 0.1U/10V_4, C611 0.1U/10V_4
+1.5V_VGA: C627 0.1U/10V_4, C622 0.1U/10V_4, C628 0.1U/10V_4, C632 0.1U/10V_4, C639 0.1U/10V_4, C642 0.1U/10V_4, C400 0.1U/10V_4, C405 0.1U/10V_4

| | QCI PN |
|---|---|
| SAM 1G | AKD5MGWT500 |
| HYU 1G | AKD5MGWTW00 |
| SAMSUNG | AKD5EGGT500 |
| HYNIX | AKD5LZWTW02 |

**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | Seymour VRAM(DDR3 BGA96) | 3A |

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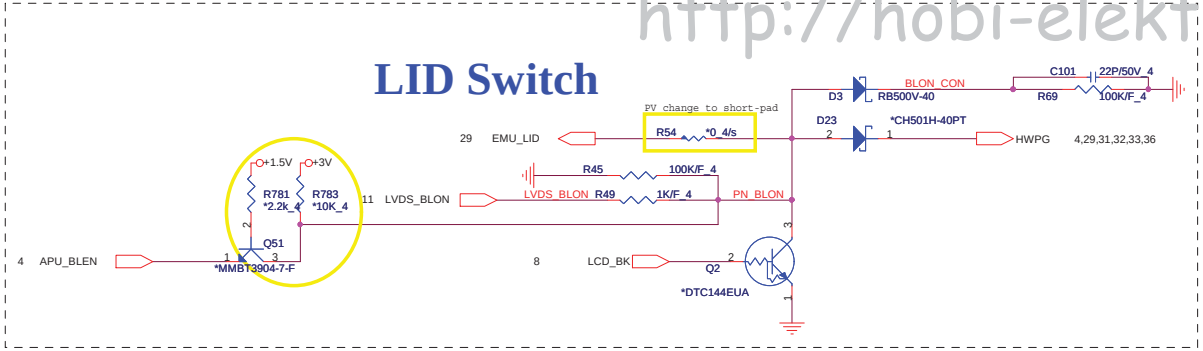
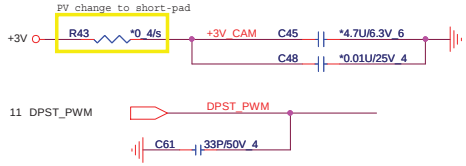
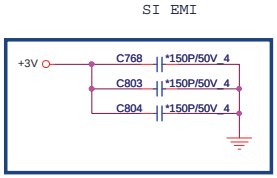
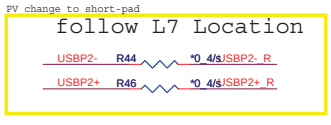
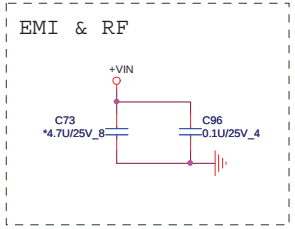
# LID Switch

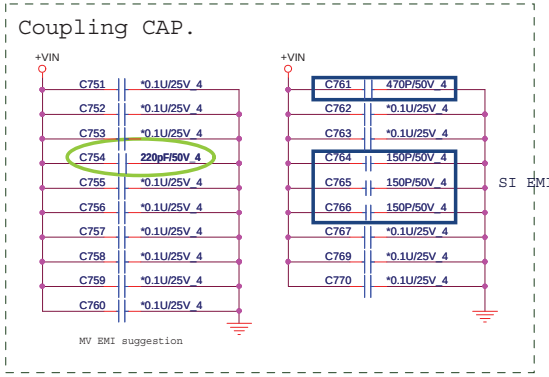


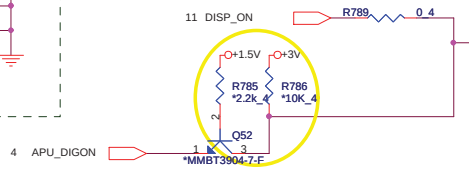



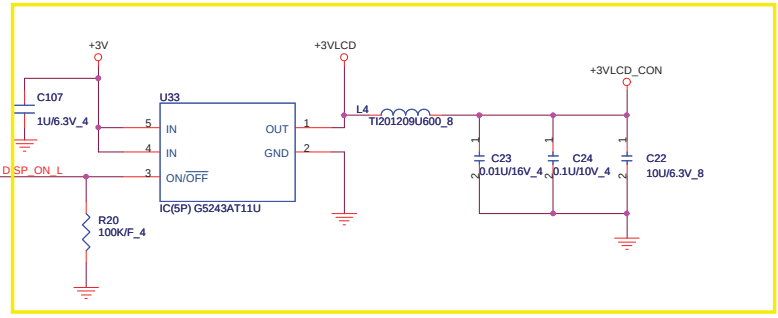



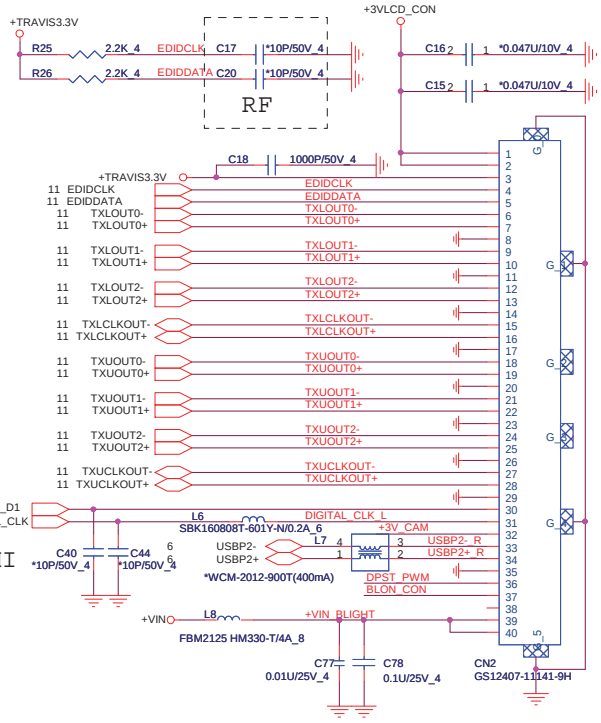



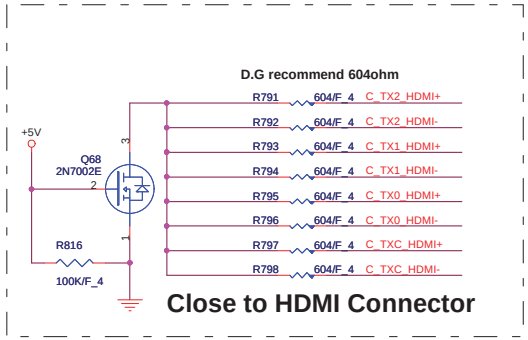



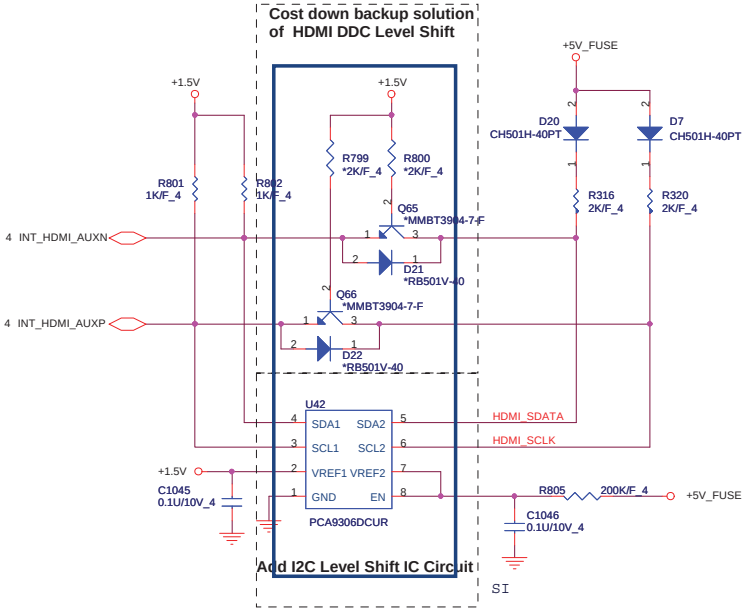



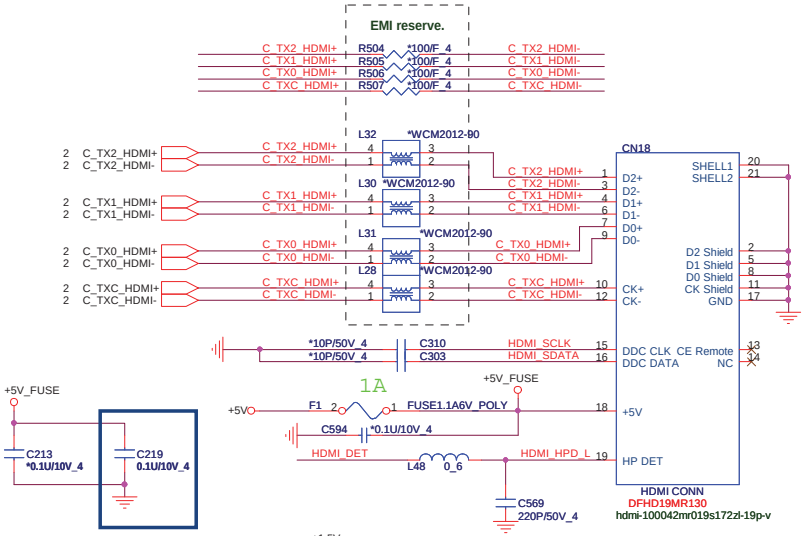

4,7,26,28,29,31,38 +3VPCU
2,4,6,8,9,10,11,12,13,14,17,22,23,24,25,27,28,29,30,34,37,39 +3V
9,37,38,39 +12VALW
31,32,33,34,35,36,37,38,39 +VIN

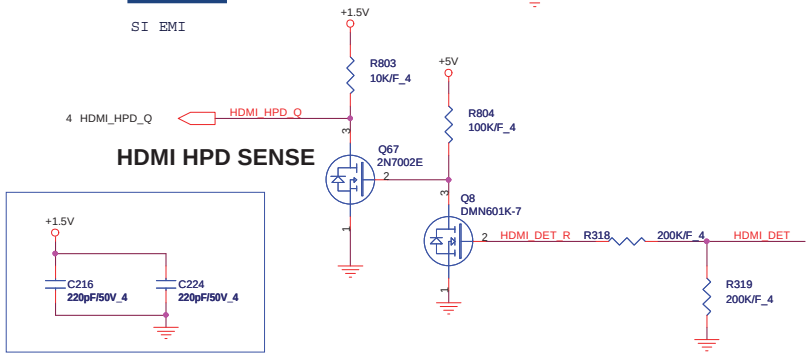
**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | LCD CONN/LID/CAM | 1A |
| Date: Tuesday, May 03, 2011 | Sheet 20 of 40 | |

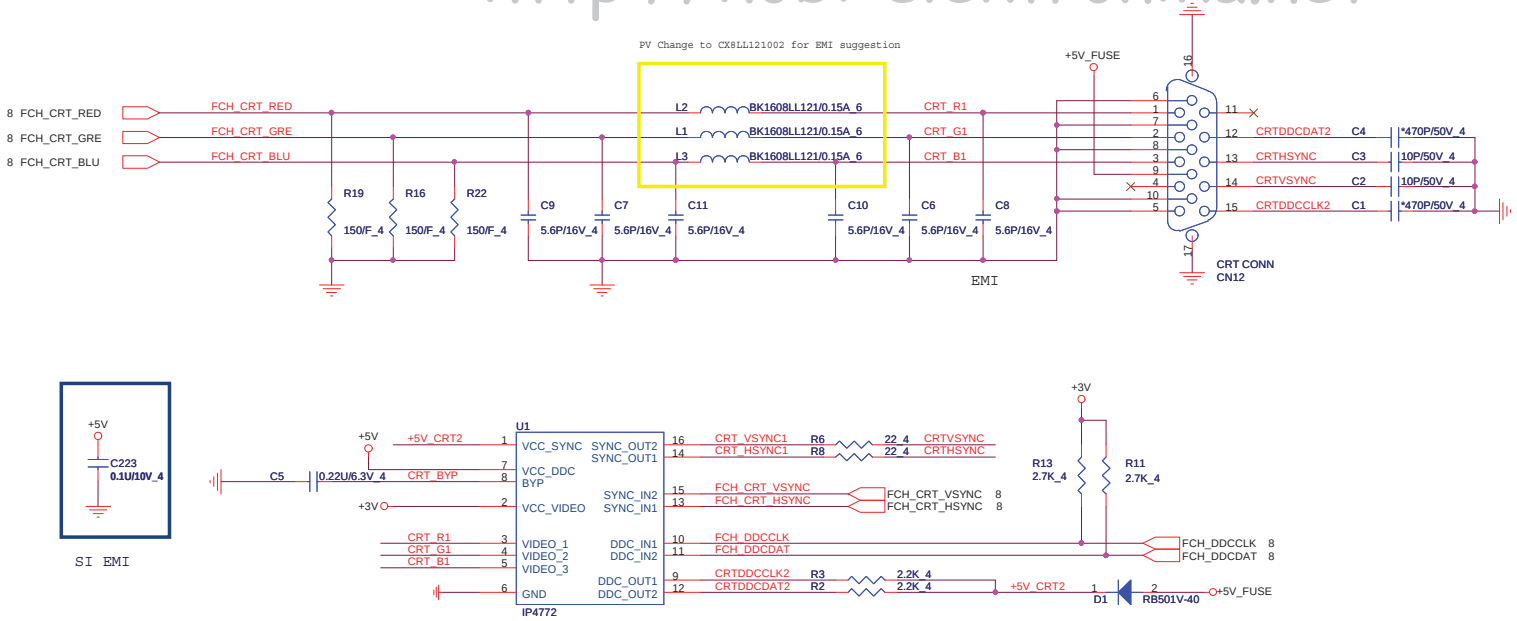



| | | |
|---|---|---|
| | **PROJECT : R23**<br>Quanta Computer Inc. | |
| Size: Custom | Document Number: **HDMI CONN** | Rev: 1A |
| Date: Tuesday, May 03, 2011 | Sheet 21 of 40 | |







## HOLE

H1 *h-c354d118p2 — h-c354d118p2
H6 *h-c354d118p2 — h-c354d118p2
H14 *h-c354d118p2 — h-c354d118p2
H11 *h-c354d118p2 — h-c354d118p2
H12 *H-C354I158D118P2 — H-C354I158D118P2
H3 *h-c354d118p2 — h-c354d118p2
H8 *H-C354I158D118P2 — H-C354I158D118P2
H4 *H-C354I158D118P2 — H-C354I158D118P2
H2 *h-c236d118p2 — h-c236d118p2
H13 *h-c236d118p2 — H-tc354bc236d118p2
H15 *h-c354d118p2 — h-c354d118p2

PAD2 *EMIPAD
For EMI

## CPU

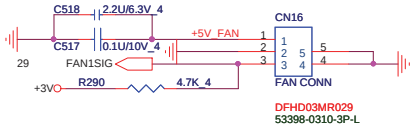
H7 *IINTEL-CPU-BKT2 — INTEL-CPU-BKT2

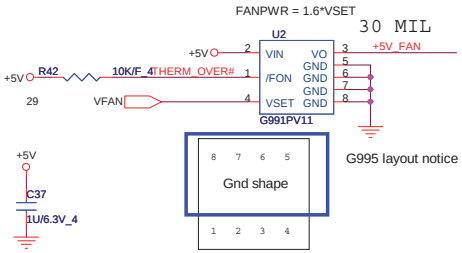
## VGA

H10 *h-tc248bc197d150p2 — h-tc248bc197d150p2
H9 *h-tc248bc197d150p2 — h-tc248bc197d150p2
H5 *h-tc248bc197d150p2 — h-tc248bc197d150p2

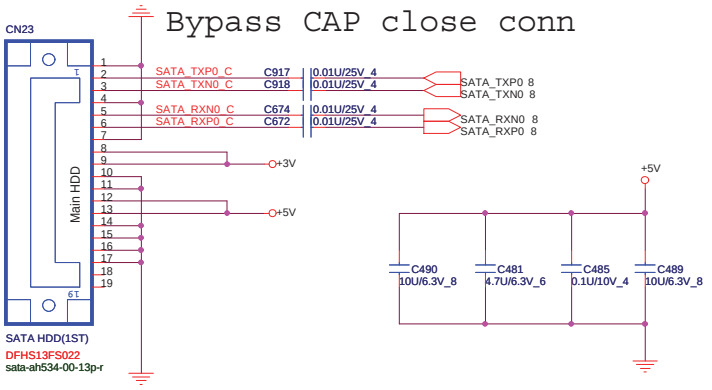
| | | |
|---|---|---|
| **PROJECT : R23** Quanta Computer Inc. | | |
| Size: Custom | Document Number: CRT,Hole | Rev: 1A |
| Date: Tuesday, May 03, 2011 | Sheet 22 of 40 | |

## CPU FAN



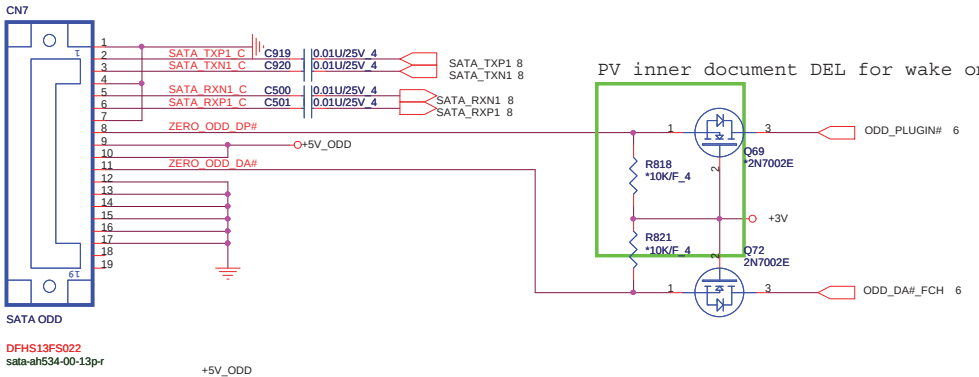




## SATA HDD CONNECTOR



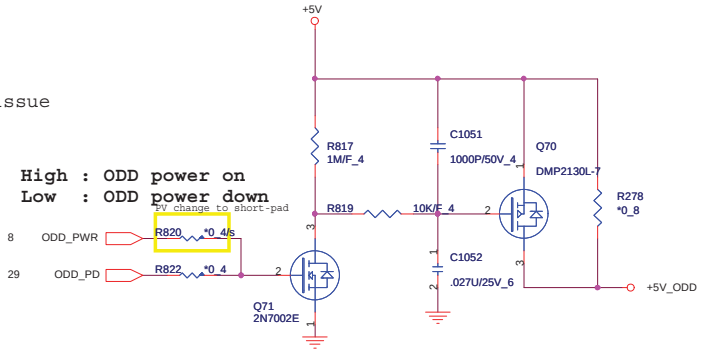

## SATA ODD CONNECTOR

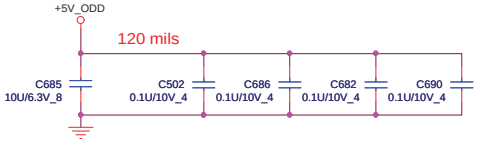
SATA ODD




PV inner document DEL for wake on LAN issue



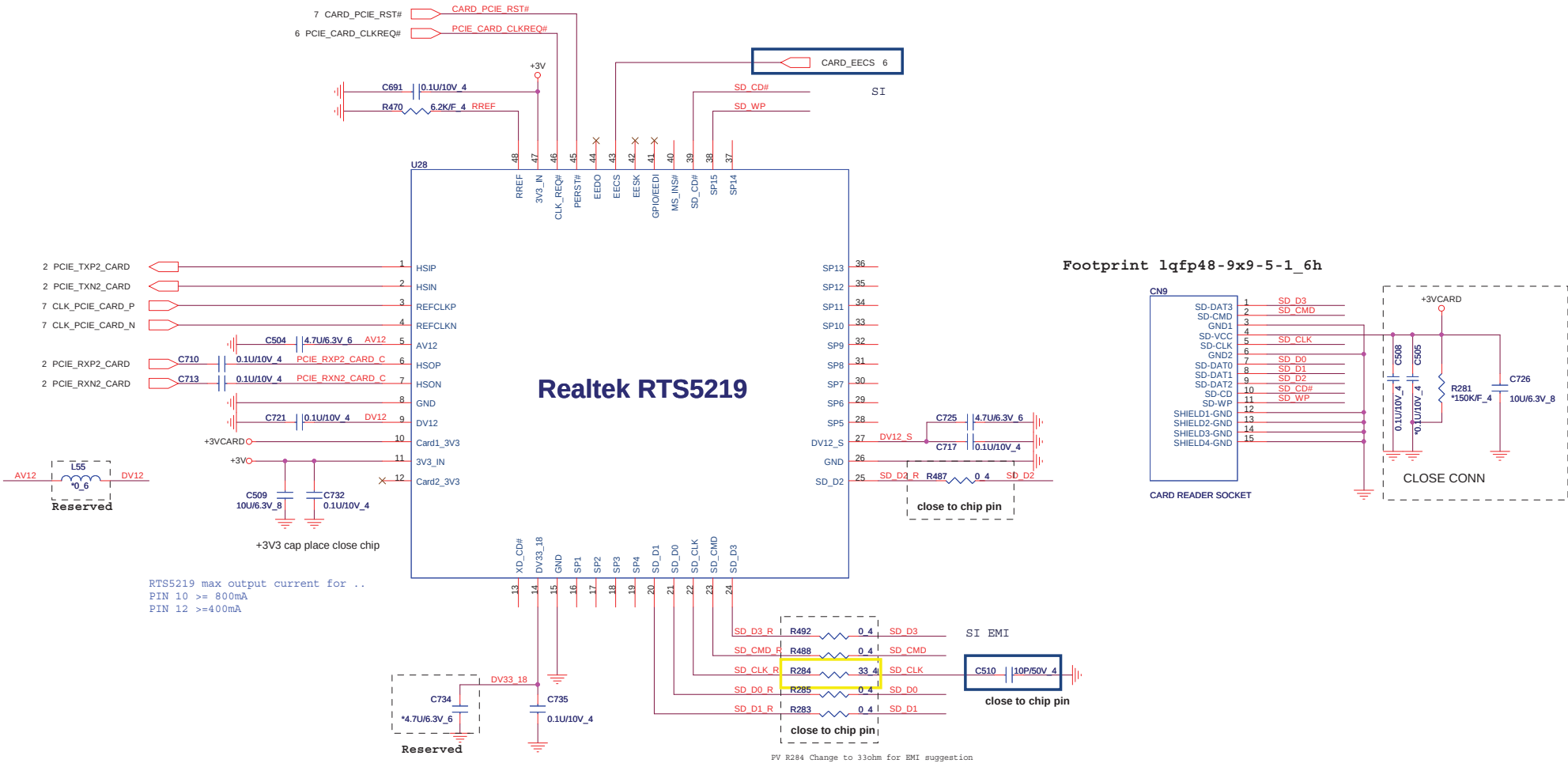




**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | HDD/ODD/FAN | 1A |

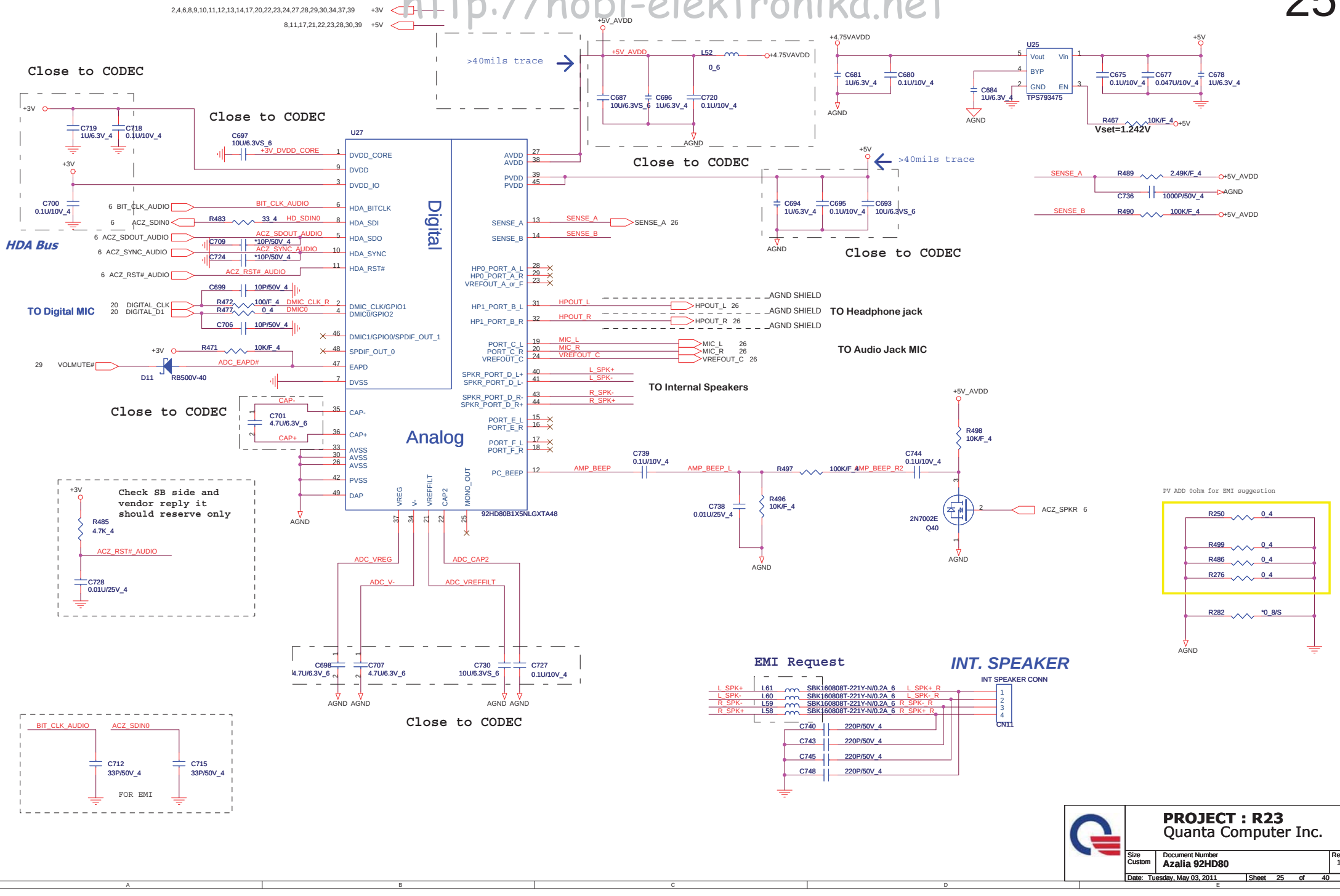
Date: Wednesday, May 04, 2011 Sheet 23 of 40



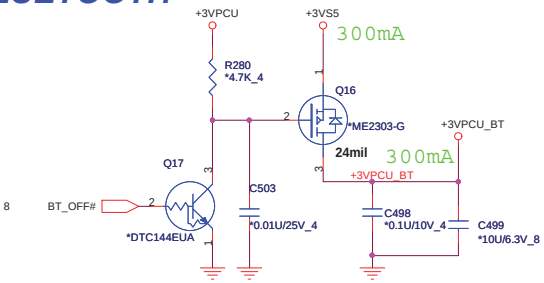

Footprint lqfp48-9x9-5-1_6h

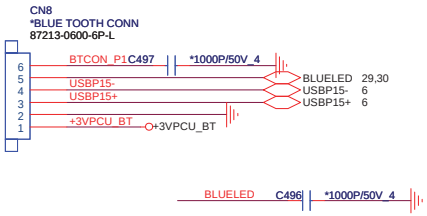


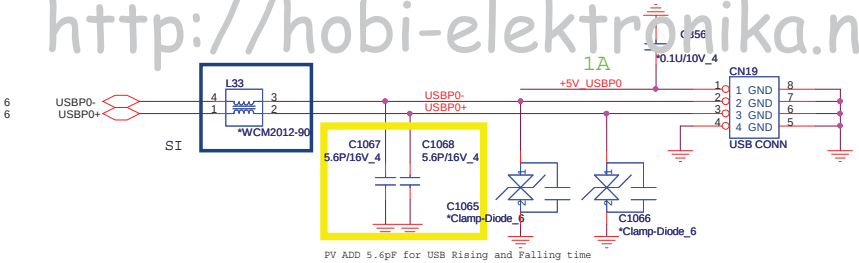

| | | |
|---|---|---|
| **PROJECT : R23** Quanta Computer Inc. | | |
| Size: Custom | Document Number: RTS5219 & CR SOCKET &HOLE | Rev: 1A |
| Date: Tuesday, May 03, 2011 | Sheet 24 of 40 | |

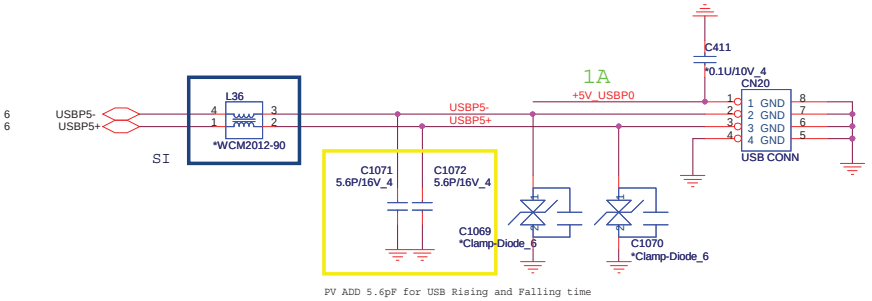


# BLUETOOTH

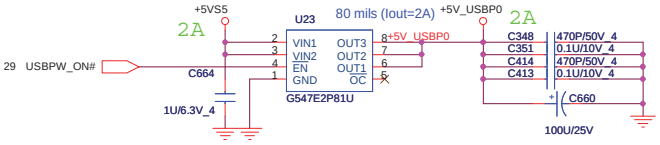


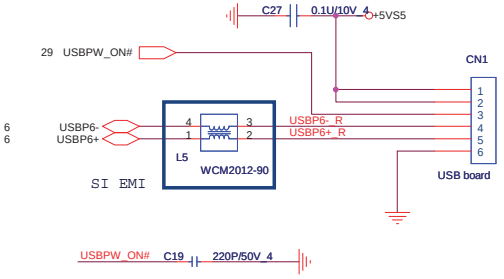



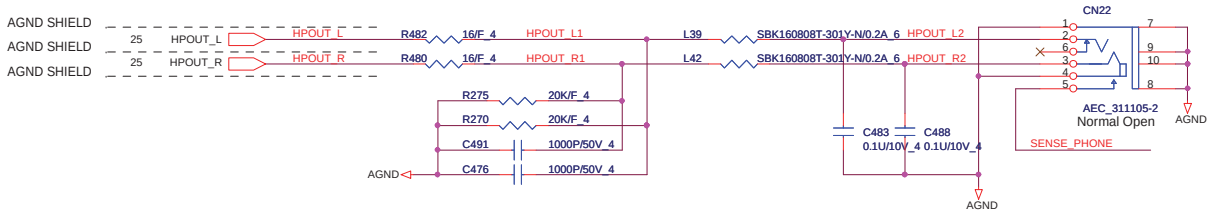

# LEFT SIDE USBX2



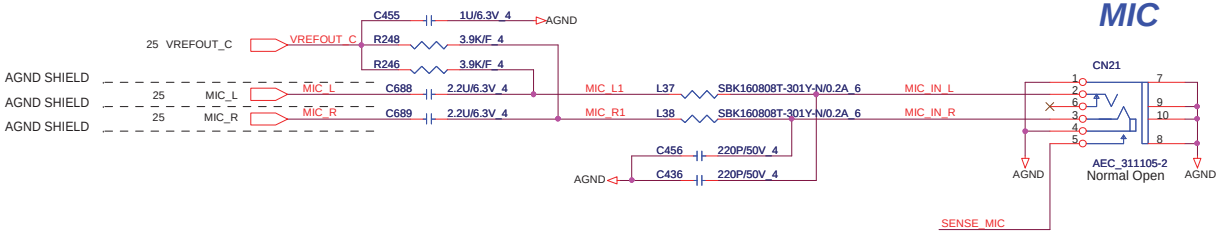

# Right SIDE USBX1



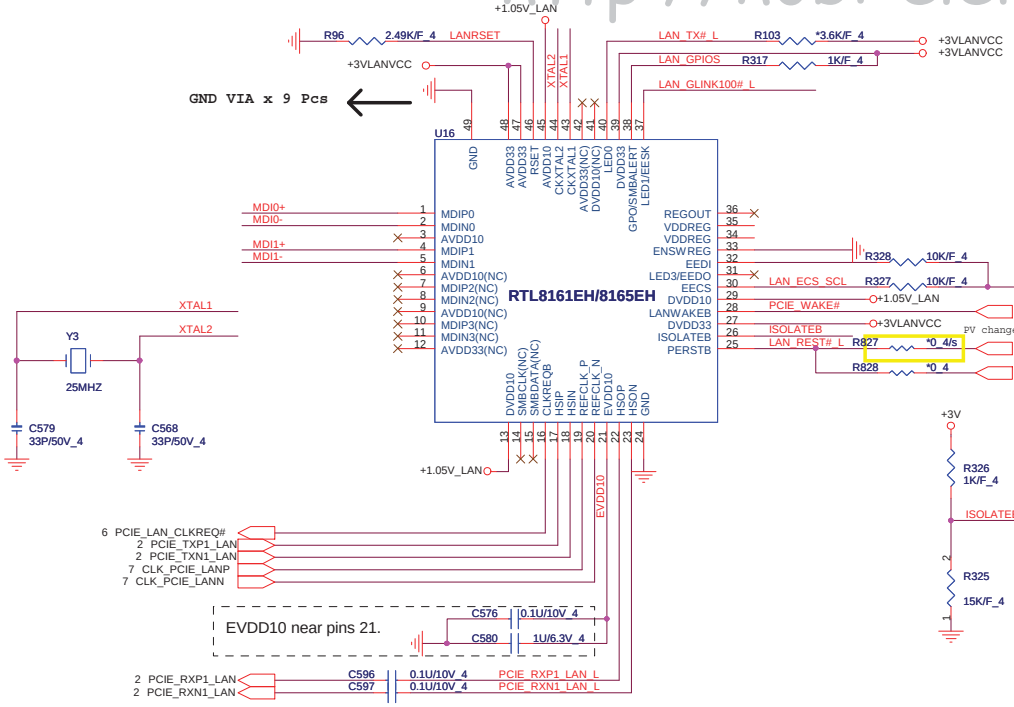

# Line out

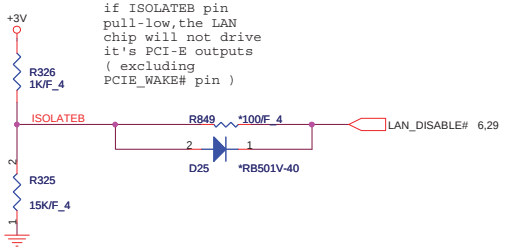



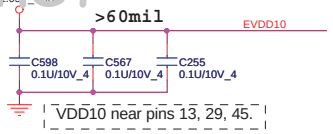

# MIC

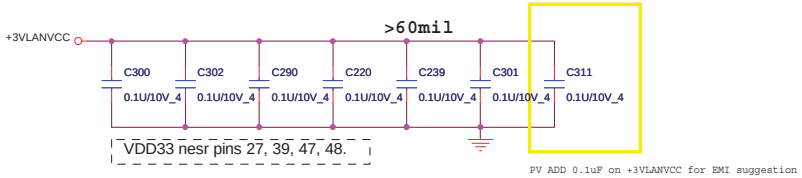



| | | |
|---|---|---|
| | **PROJECT : R23**<br>Quanta Computer Inc. | |
| Size<br>Custom | Document Number<br>**USB/BT/Audio JacK** | Rev<br>1A |
| Date: Tuesday, May 03, 2011 | Sheet 26 of 40 | |

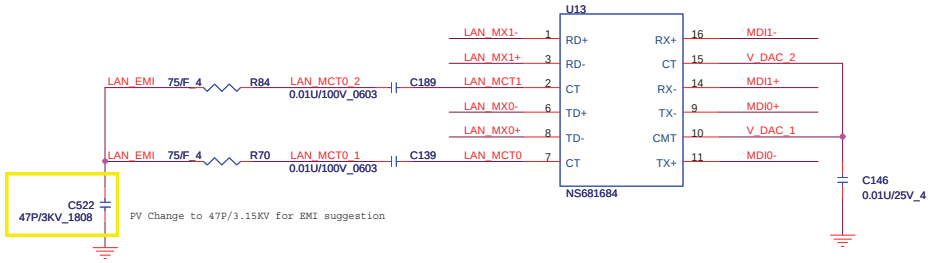


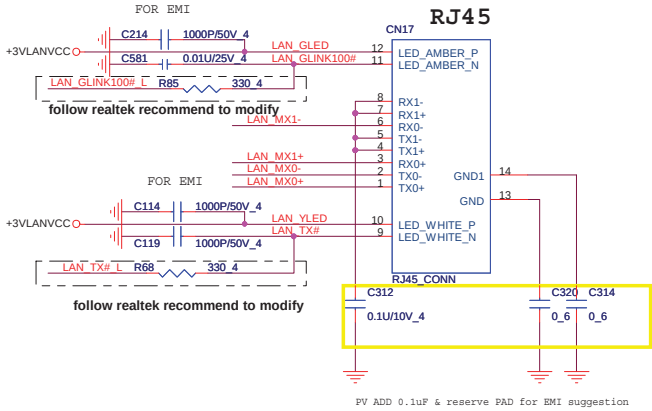




## Transformer for 10/100




## Lan Con.




39 +3VLANVCC
2,4,6,8,9,10,11,12,13,14,17,20,22,23,24,25,28,29,30,34,37,39 +3V

**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | RTL8165EH | 1A |

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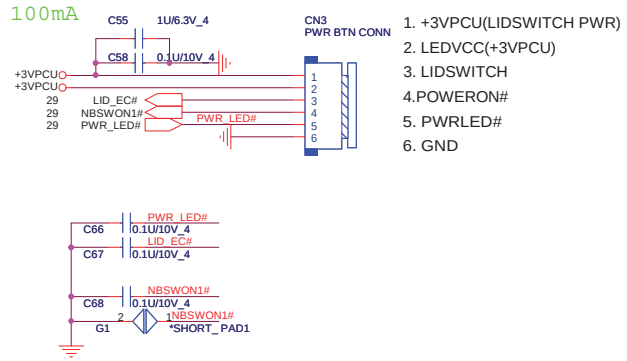
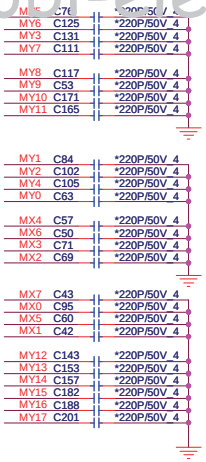
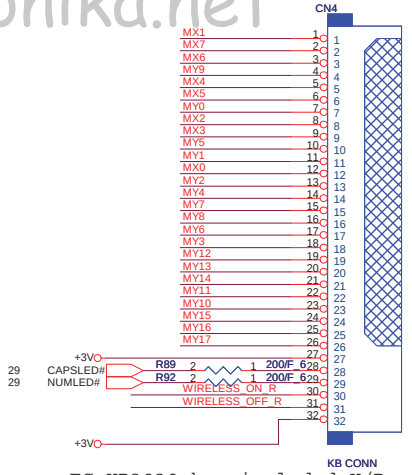
## POWER BOTTON CONNECT

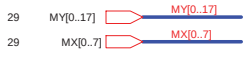



1. +3VPCU(LIDSWITCH PWR)
2. LEDVCC(+3VPCU)
3. LIDSWITCH
4.POWERON#
5. PWRLED#
6. GND

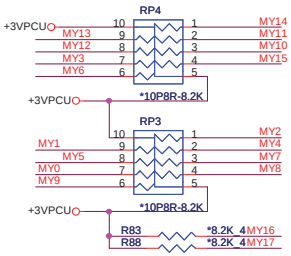
## KEYBOARD Con.



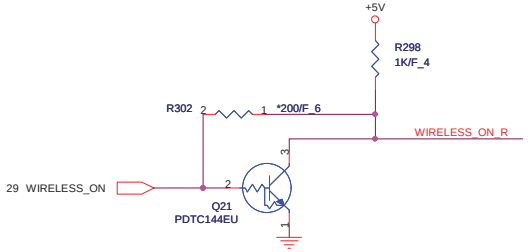



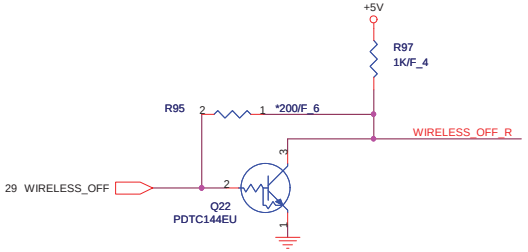




### KEYBOARD PULL-UP

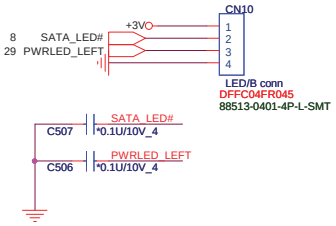



EC KB3930 has included K/B pull-up resistor and function

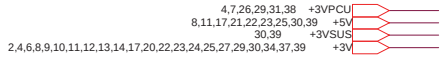



## LED Con.

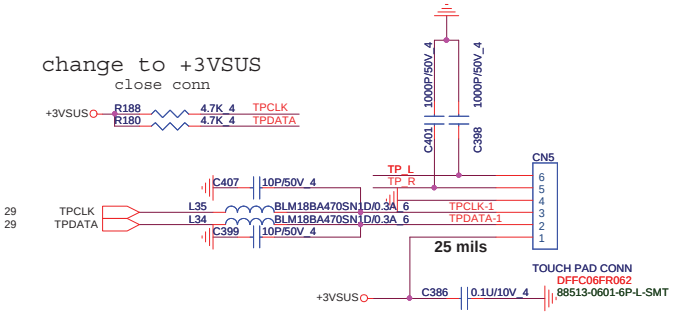



1. +3V
2. SATA_LED#
3. PWR_LED#
4.GND

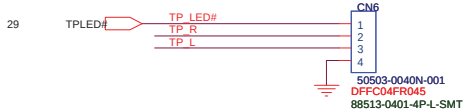



## TOUCH PAD Con.

change to +3VSUS
close conn




## To TOUCH PAD SW board




**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | LED/KB/SW/TP | 1A |

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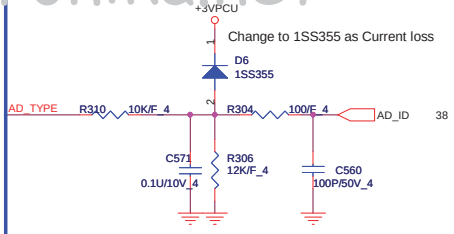
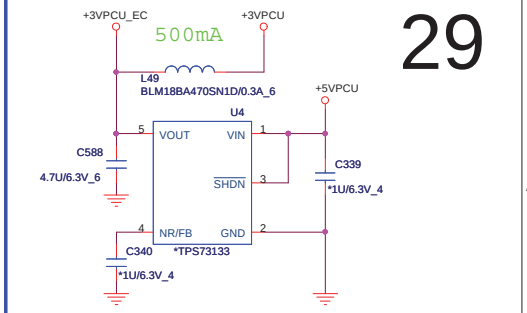
## Smart adapter Type check

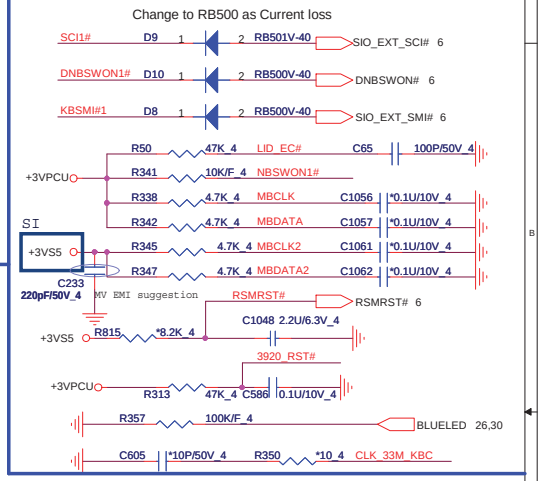



## Adapter select


Hi ==> DIS/SG
Low ==>UMA

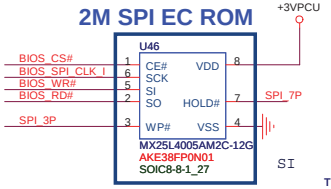
| Platform model | GPIO42 | adapter |
|---|---|---|
| SG/DIS | High | 90W |
| UMA | Low | 65W |



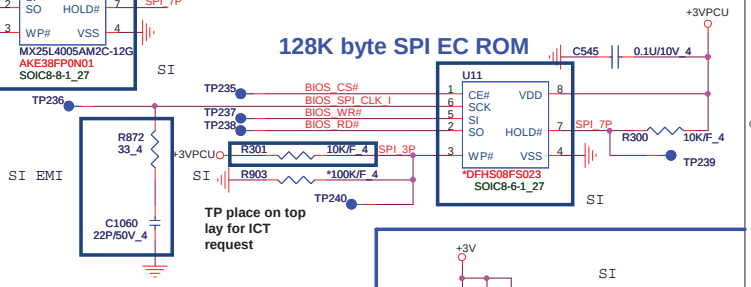



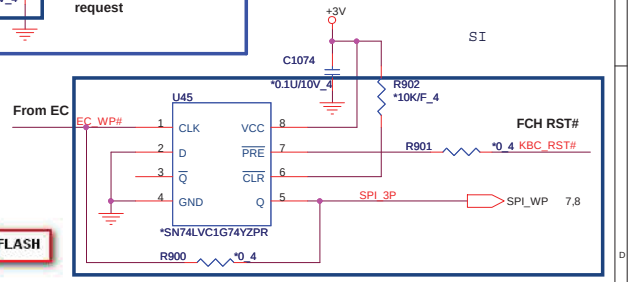

| Vender | Size | P/N |
|---|---|---|
| AMIC | 128K | AKE35ZN0801 |
| EON | 128K | AKE35FN0Q00 |
| Socket | | DFHS08FS023 |

## 2M SPI EC ROM

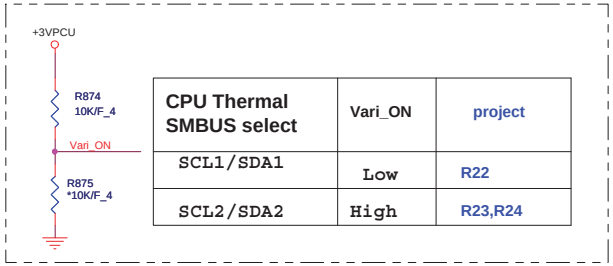



## 128K byte SPI EC ROM

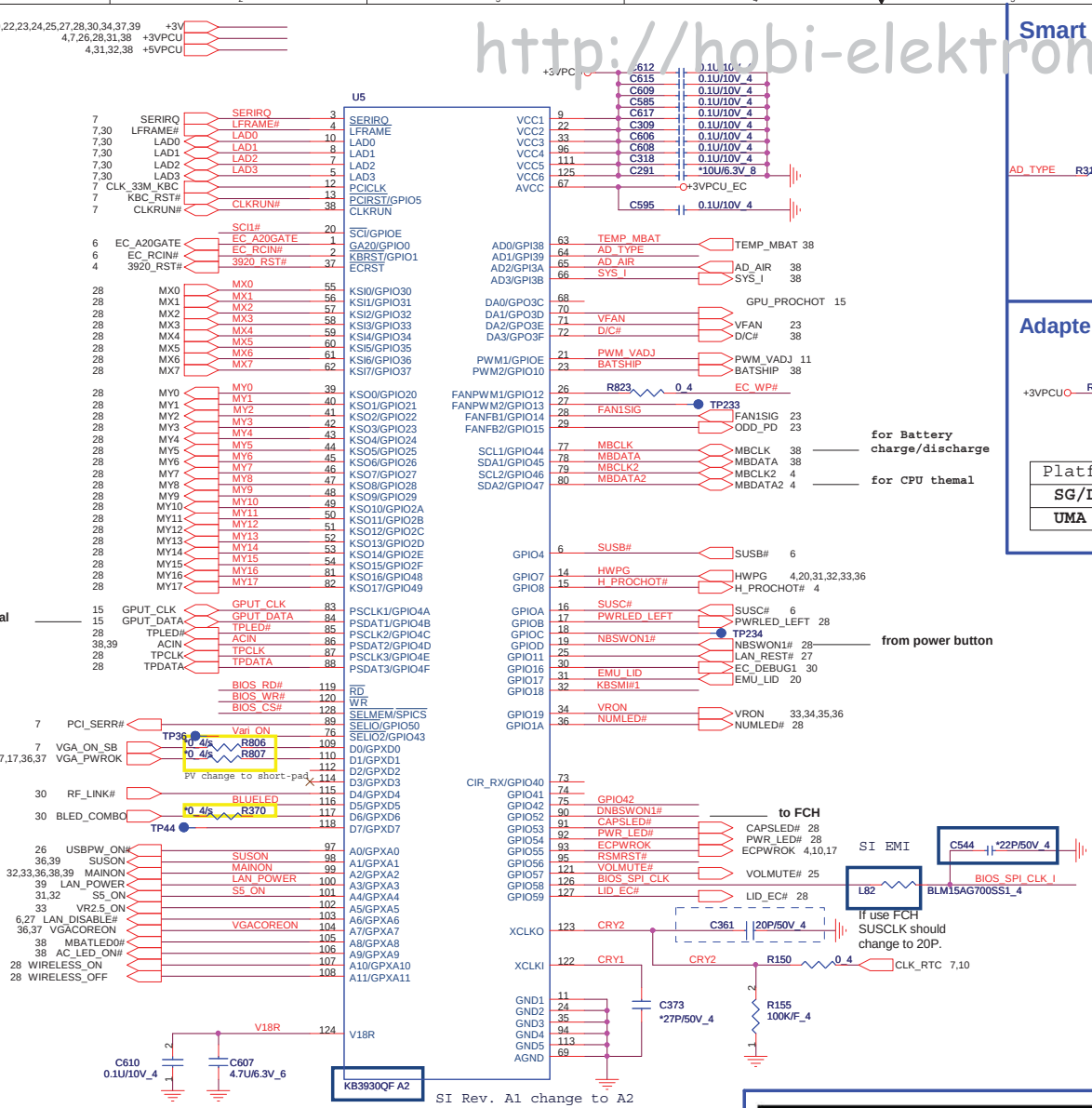



| INPUTS | | | | OUTPUTS | | |
|---|---|---|---|---|---|---|
| PRE | CLR | CLK | D | Q | Q | |
| L | H | X | X | H | L | FLASH |
| H | L | X | X | L | H | |
| L | L | X | X | H (1) | H (1) | |
| H | H | ↑ | H | H | L | |
| H | H | ↑ | L | L | H | LOCK |
| H | H | L | X | $Q_0$ | $\overline{Q_0}$ | |




| CPU Thermal SMBUS select | Vari_ON | project |
|---|---|---|
| SCL1/SDA1 | Low | R22 |
| SCL2/SDA2 | High | R23,R24 |

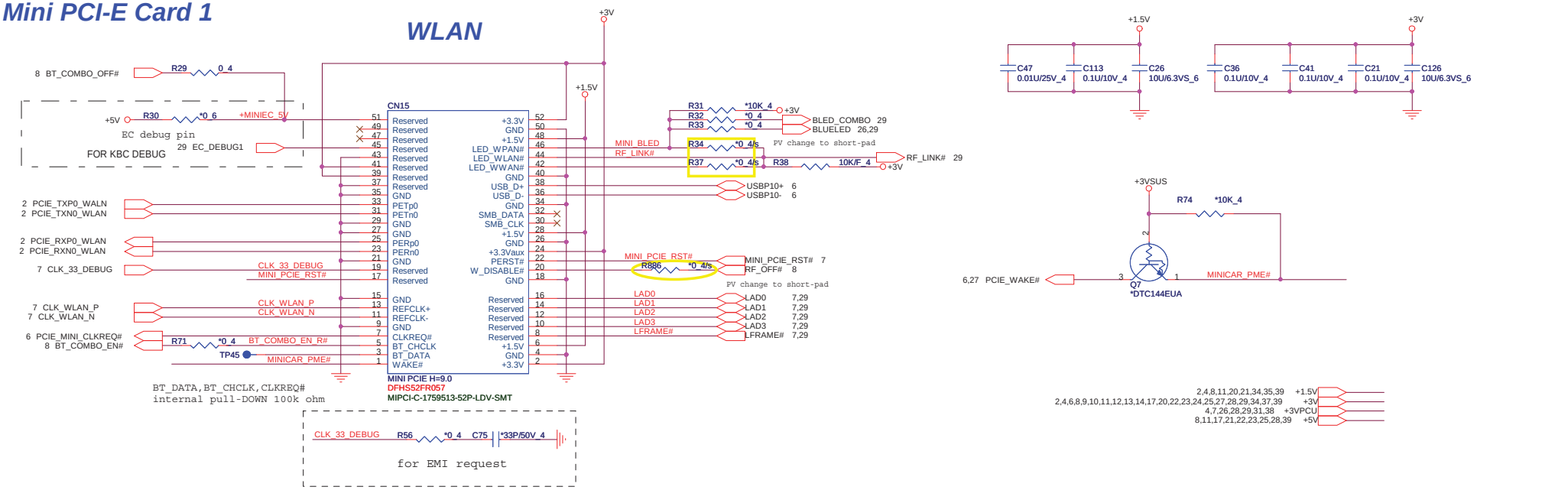



| | | | |
|---|---|---|---|
| C612 | 0.1U/10V_4 | | |
| C615 | 0.1U/10V_4 | | |
| C609 | 0.1U/10V_4 | | |
| C585 | 0.1U/10V_4 | | |
| C617 | 0.1U/10V_4 | | |
| C309 | 0.1U/10V_4 | | |
| C606 | 0.1U/10V_4 | | |
| C608 | 0.1U/10V_4 | | |
| C318 | 0.1U/10V_4 | | |
| C291 | *10U/6.3V_8 | | |
| C595 | 0.1U/10V_4 | | |


PROJECT : R23
Quanta Computer Inc.
Size: Custom
Document Number: EC (KB3926)/ROM
Rev: 1A
Date: Tuesday, May 03, 2011
Sheet 29 of 40

# Mini PCI-E Card 1

## WLAN







**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | MINI PCIE CONN X1 | 1A |

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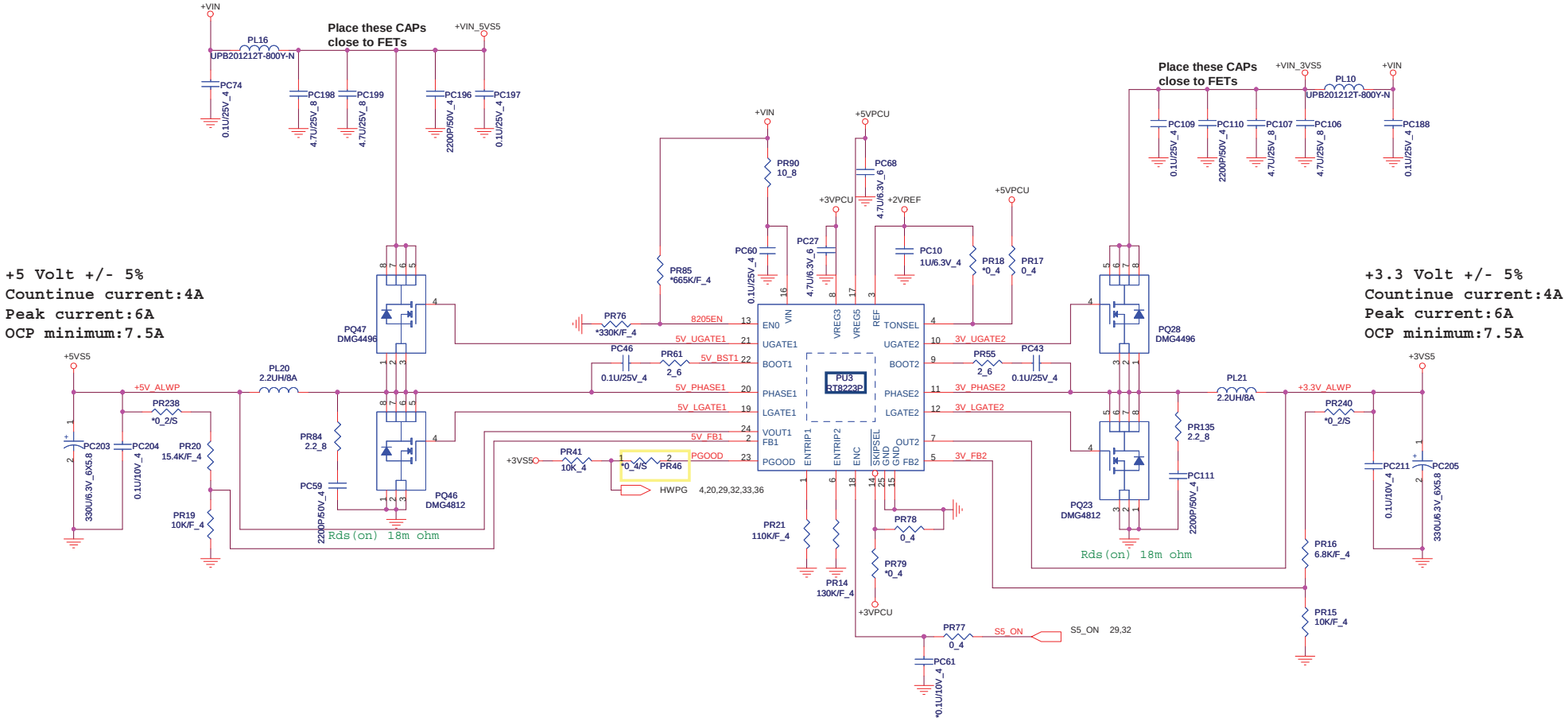


**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | +5V/+3V (RT8206B) | 1A |

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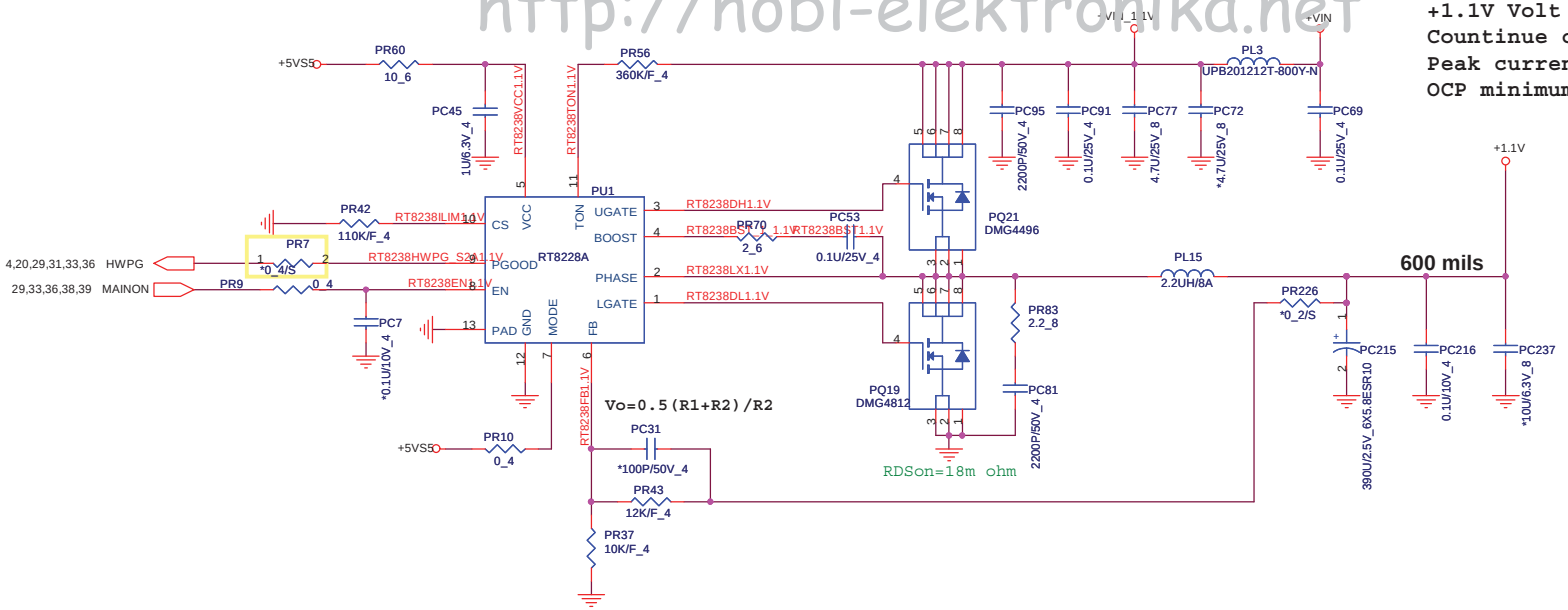
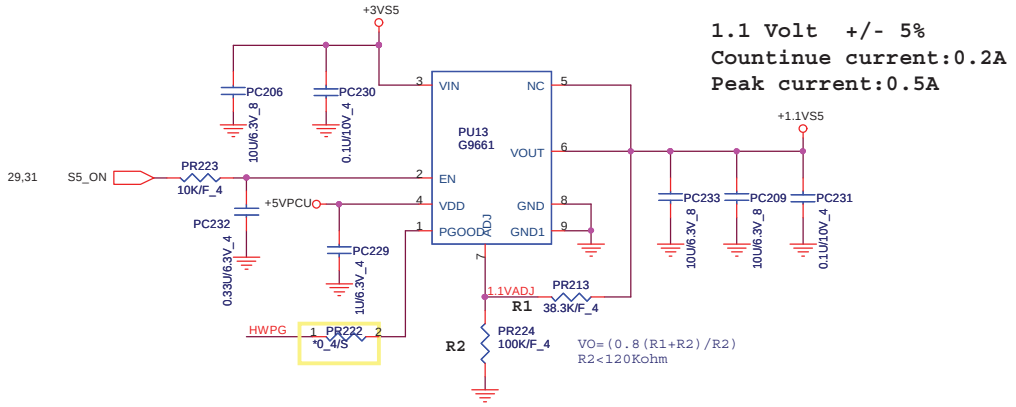
+1.1V Volt +/- 5%
Countinue current:3A
Peak current: 4A
OCP minimum:6A

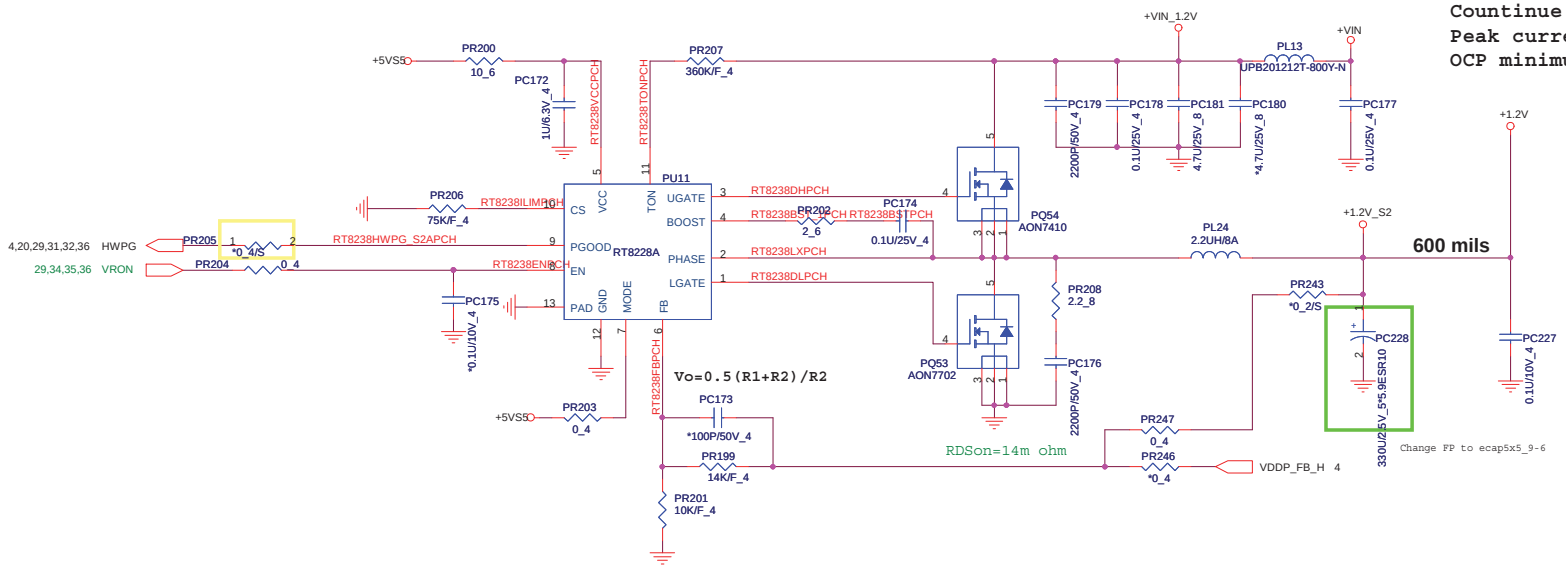



1.1 Volt +/- 5%
Countinue current:0.2A
Peak current:0.5A

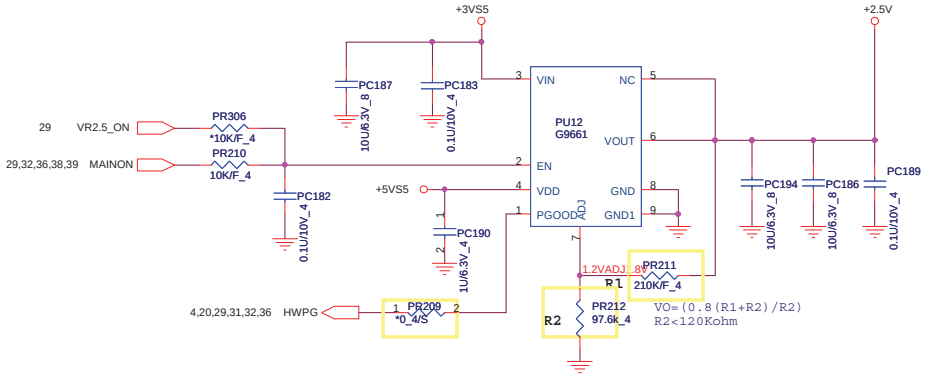



| | | |
|---|---|---|
| NB5/RD2 | **PROJECT : R23**<br>Quanta Computer Inc. | |
| Size: Custom | Document Number: VGA Core/+1.8VGFX/1.0VGFX | Rev: 1A |
| Date: Tuesday, May 03, 2011 | Sheet 32 of 40 | |

+1.05V PCH Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A




+2.5V +/- 5%
Countinue current:0.3A
Peak current:0.75A




**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | +1.05V (RT8238A) | 1A |

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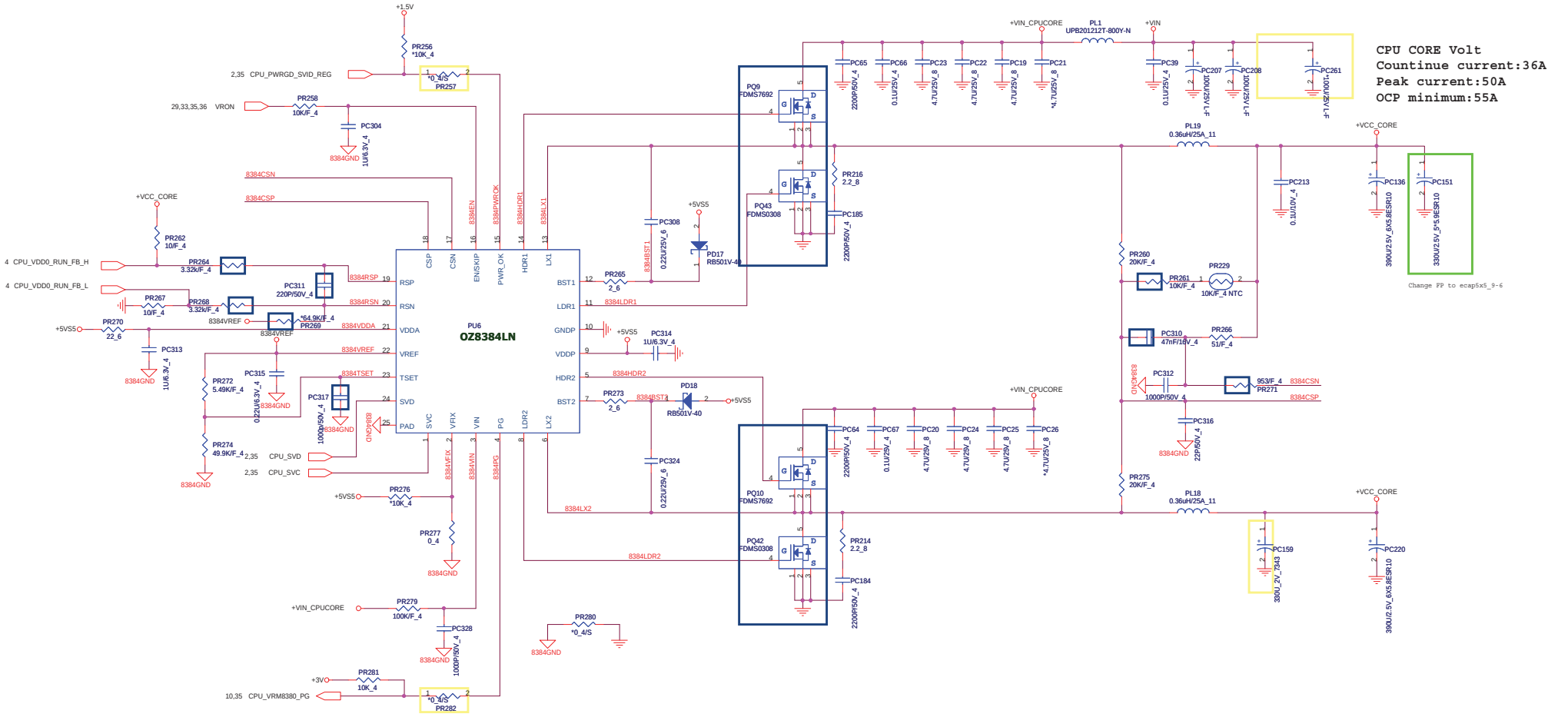
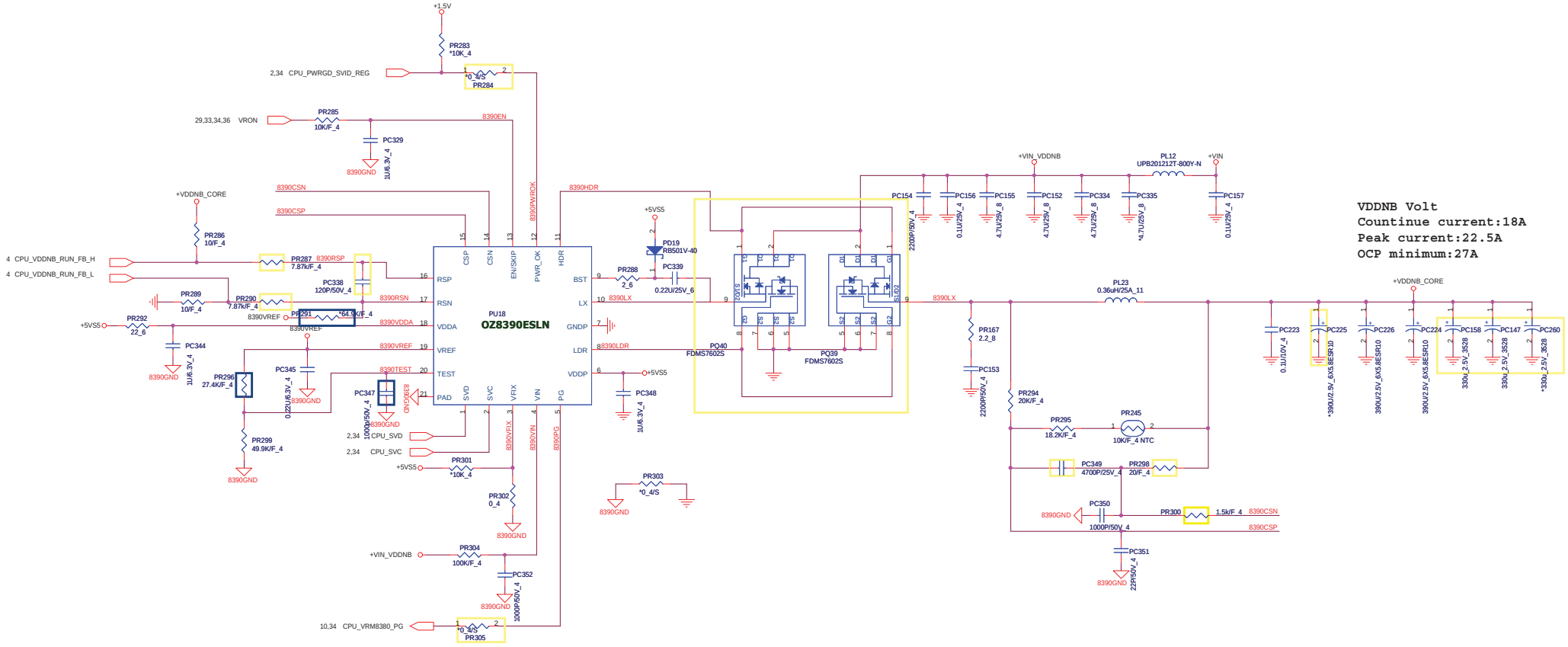
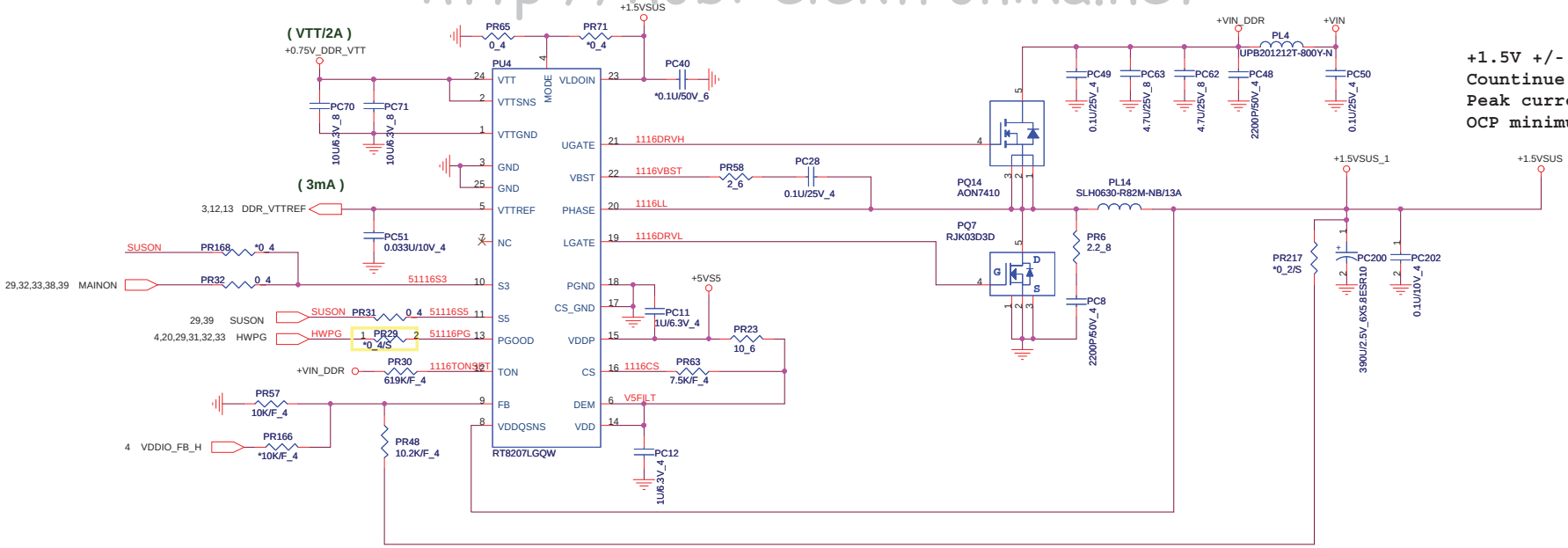


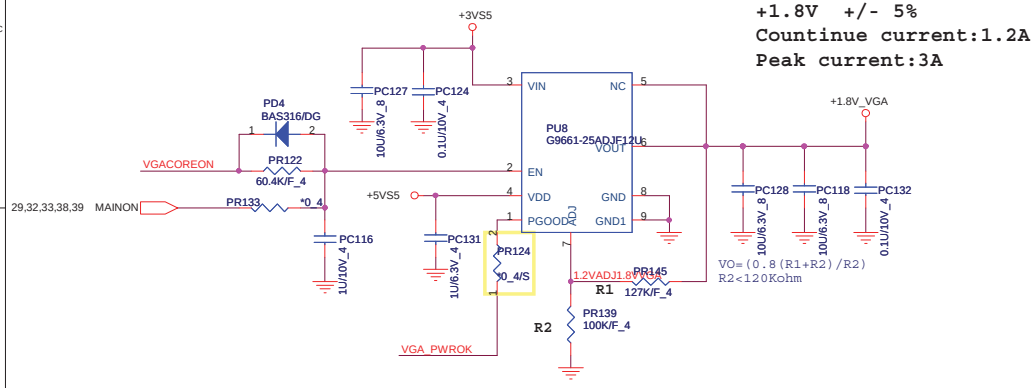

| | | | |
|---|---|---|---|
| PROJECT : R23 Quanta Computer Inc. | | | |
| NB5/RD2 | Size C | Document Number +1.1V VTT / PCH | Rev 1A |
| | Date: Tuesday, May 03, 2011 | Sheet 34 of 40 | |

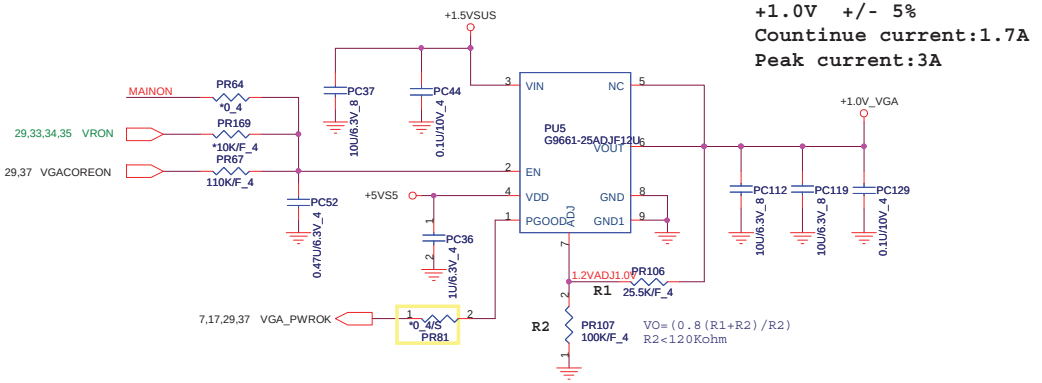



| | | |
|---|---|---|
| | **PROJECT : R23** Quanta Computer Inc. | |
| NB5/RD2 | Size C — Document Number +1.1V VTT / PCH | Rev 1A |
| | Date: Tuesday, May 03, 2011 — Sheet 35 of 40 | |




SG & Discrete Only




**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | DDR3 (RT8207) | 1A |
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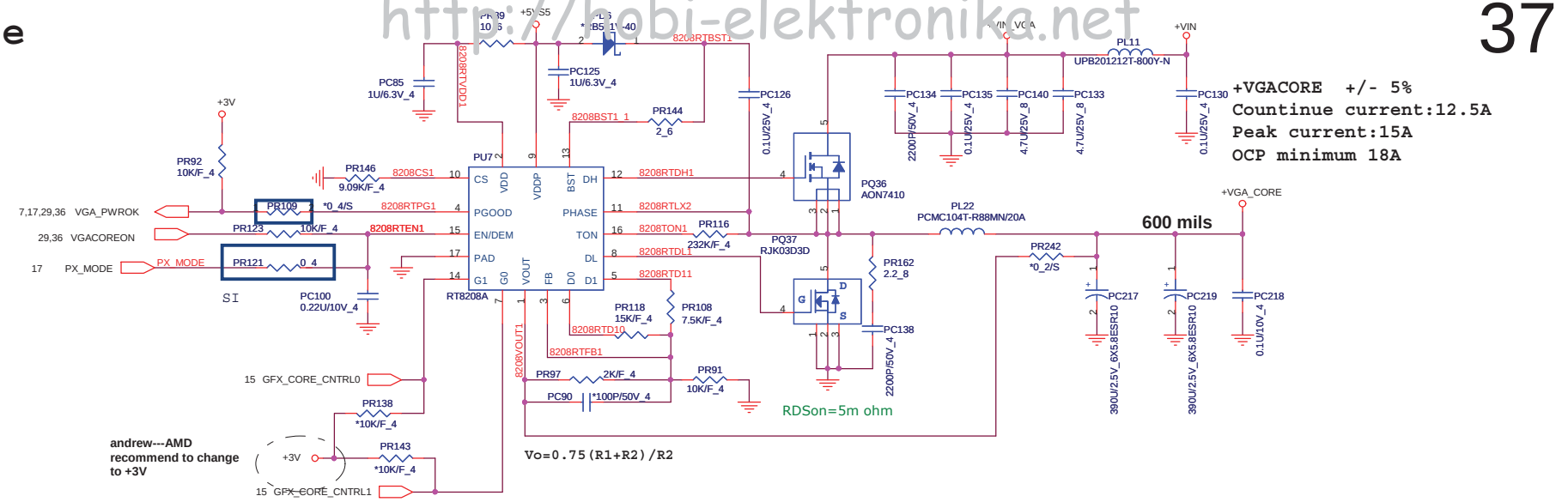
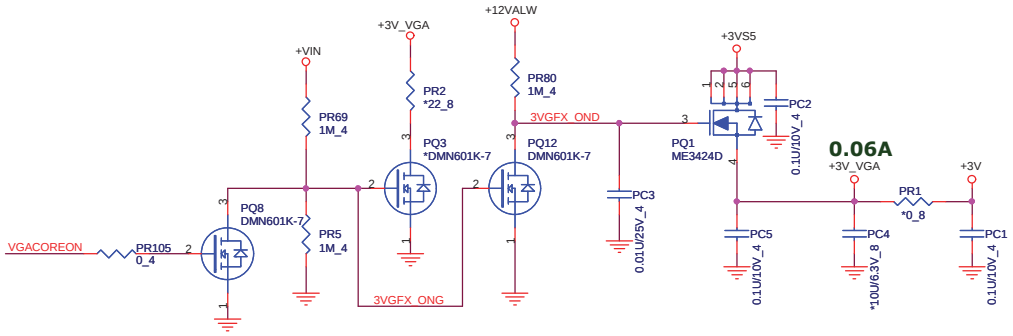
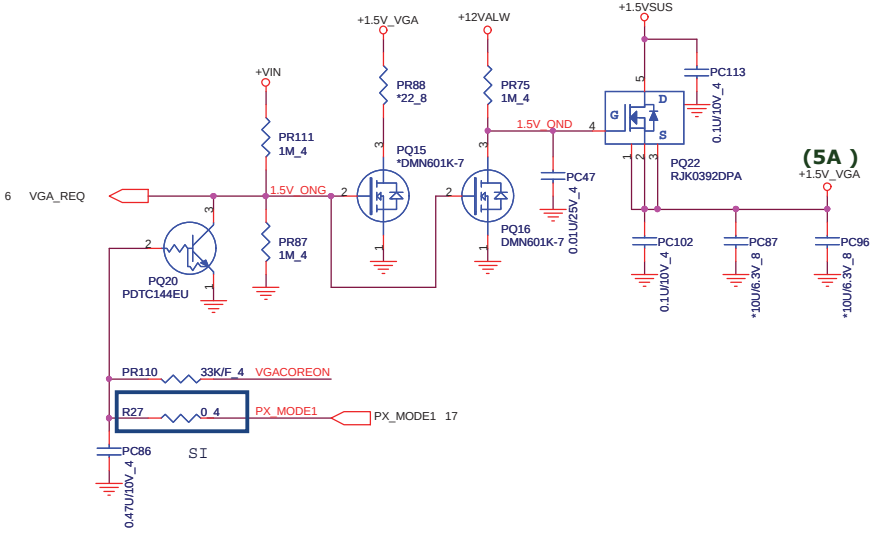
# VGA Core






| Seymour-XT | PWRCNTL0 | PWRCNTL1 | V-CORE |
|---|---|---|---|
| L | 0 | 0 | 0.9V |
| M | 0 | 1 | 1V |
| H | 1 | 0 | 1.1V (Default) |
| TBD | 1 | 1 | NA |




| | | |
|---|---|---|
| PROJECT : R23 Quanta Computer Inc. | | |
| Size: Custom | Document Number: +VGACORE (RT8208/1.8V) | Rev: 1A |
| Date: Tuesday, May 03, 2011 | Sheet 37 of 40 | |

DC_JACK
90W

Do Not add test pad on BATDIS_G signal

To PWR LED

Place this ZVS close to Diode away +VIN

Place this ZVS close to Far-Far away +VIN

Place this cap close to EC

Place this cap close to EC

Place this cap close to EC

Place this cap close to EC

PU9
OZ8681

+VA
+VH28 39
+VAD_1 39
+3VPCU 4,7,26,28,29,31
+5VPCU 4,29,31,32
+BATCHG

PROJECT : R23
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | Charger (OZ8681) | 1A |

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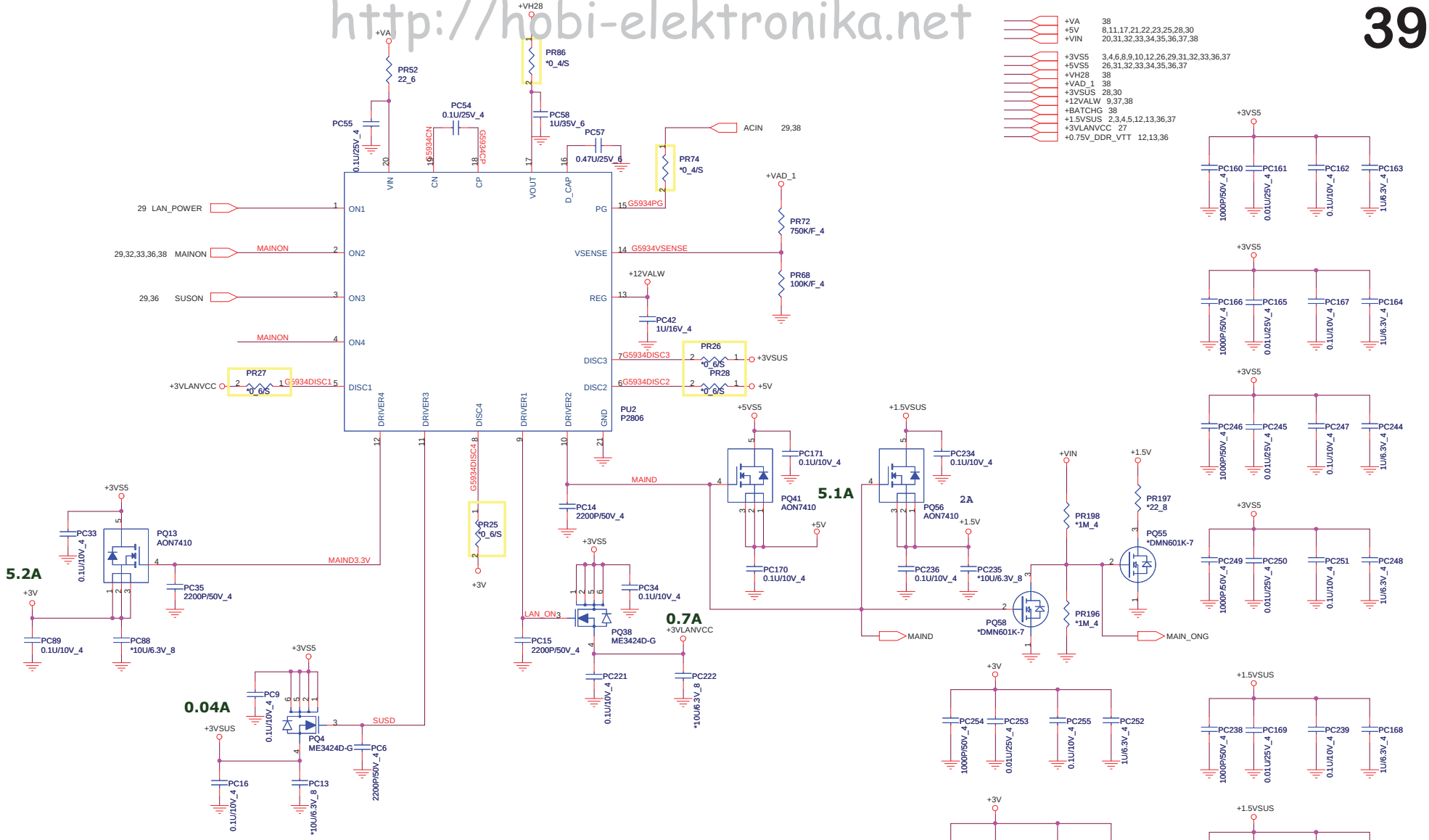


**PROJECT : R23**
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | Dis-charge IC (G5934) | 1A |

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