Metallica SYSTEM DIAGRAM

AMD Smarter Choice

01

PCB STACK UP

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

DDRIII-SODIMM1 PAGE 6 — DDRIII 1066 MHz
DDRIII-SODIMM2 PAGE 6 — DDRIII 1066 MHz

AMD Champlain
35mm X 35mm
S1G4 Processor
638P (PGA) 25W
PAGE 3,4,5

CPU THERMAL SENSOR PAGE 31

HT3

PCI-E

NORTH BRIDGE
RS880M
21mm X 21mm, 528pin BGA
PAGE 7,8,9,10

X1 New Card PAGE 29
X1 LAN Realtek PCIE-LAN RTL8151DH (10/100/1000) PAGE 28
X1 Mini PCI-E Card (Wireless LAN) PAGE 33
RJ45 PAGE 28

PCI-Express 16X

Seymour XT-S3
64 Bit,DDR3*4
23mm X 23mm, 631pin BGA
PAGE 16,17,18,19,20,21

Option Resistor PAGE 22,23,24

HDMI PAGE 24
CRT PAGE 23
LVDS PAGE 23

ALINK X4

SBSRC_CLK

SOUTH BRIDGE
SB820M
23mm X 23mm, 605pin BGA
PAGE 11,12,13.14.15

USB2.0
0,3,5 USB2.0 Ports PAGE 29
8,9 Bluetooth PAGE 33
4 Webcam PAGE 23
FS1 Finger Printer PAGE 32
6 Flash Media RTS5159 PAGE 30
1 New Card PAGE 29
2 USB WLAN PAGE 33
8 PCI-E WLAN Card x1 PAGE 33

SATA0 150MB
SATA - HDD PAGE 31

SATA4 150MB
SATA - CD-ROM PAGE 31

Azalia
IDT 92HD87 PAGE 25
MDC CONN PAGE 29
Digital MIC PAGE 23
AUDIO CONN Phone/ MIC PAGE 26

LPC
SPI

Keyboard Touch Pad PAGE 32

SMSC KBC
KBC1126
PAGE 27

FAN PAGE 31
SPI ROM PAGE 27

SYSTEM CHARGER(bq24726) PAGE 36,37
3/5VS5 RT8223M PAGE 38
+1.1V(RT8029)/+1.1VS5/+1.8V PAGE 39
DDR3 (RT8207)/+1.0V_VGA PAGE 40
VGACORE(1.1V~0.9V)RT8028A PAGE 41
CPU_CORE ISL6265 PAGE 42

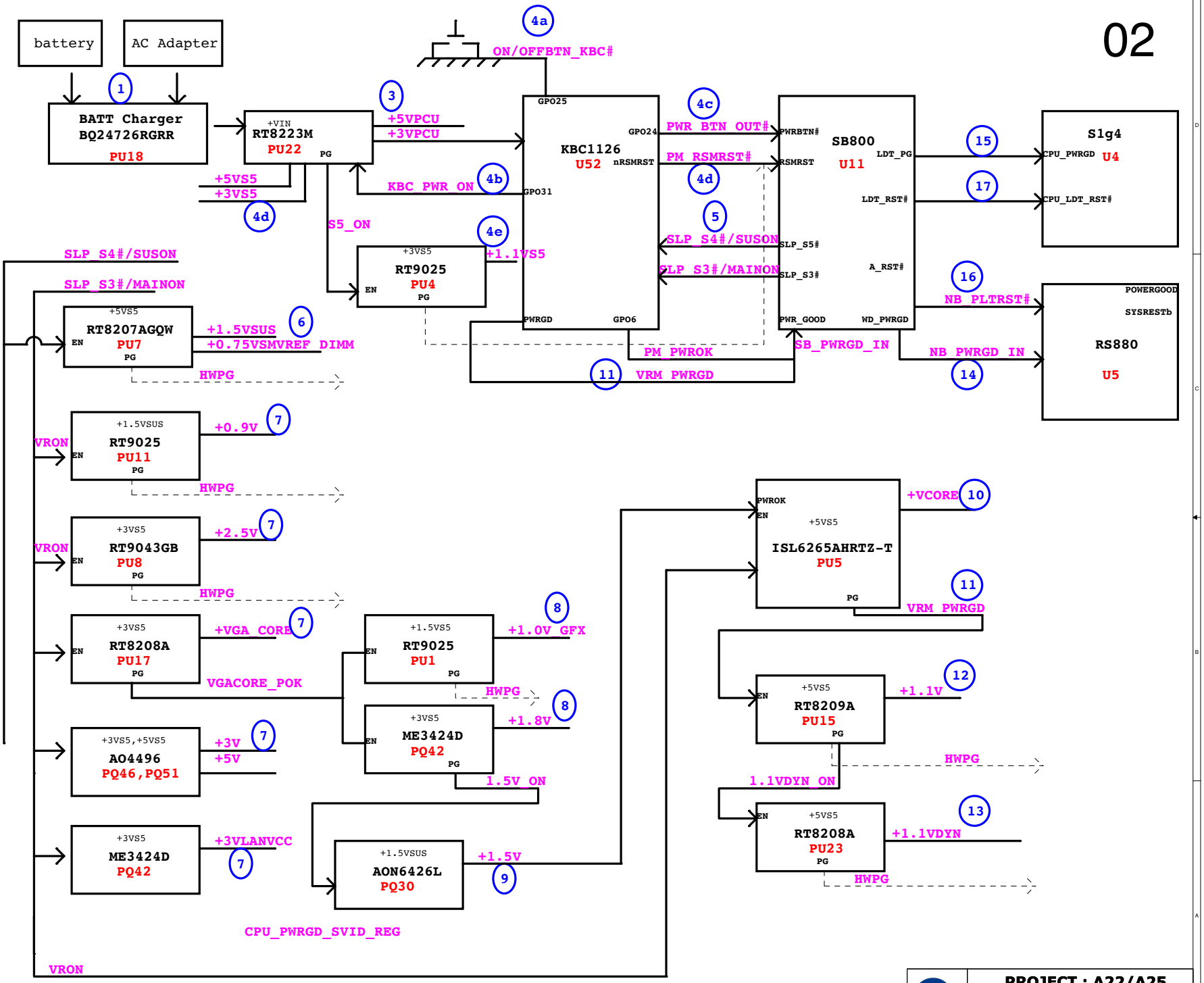
SMBUS TABLE		
SB--SCL0/SD0	Clock gen/ wirless LAN/ New card/ DDR3/ DDR3 thermal/ Accelerometer/system thermal	+3V
EC -- AB1A	Battery charge/discharge	+3VPCU
EC -- AB2A	VGA thermal	+3V

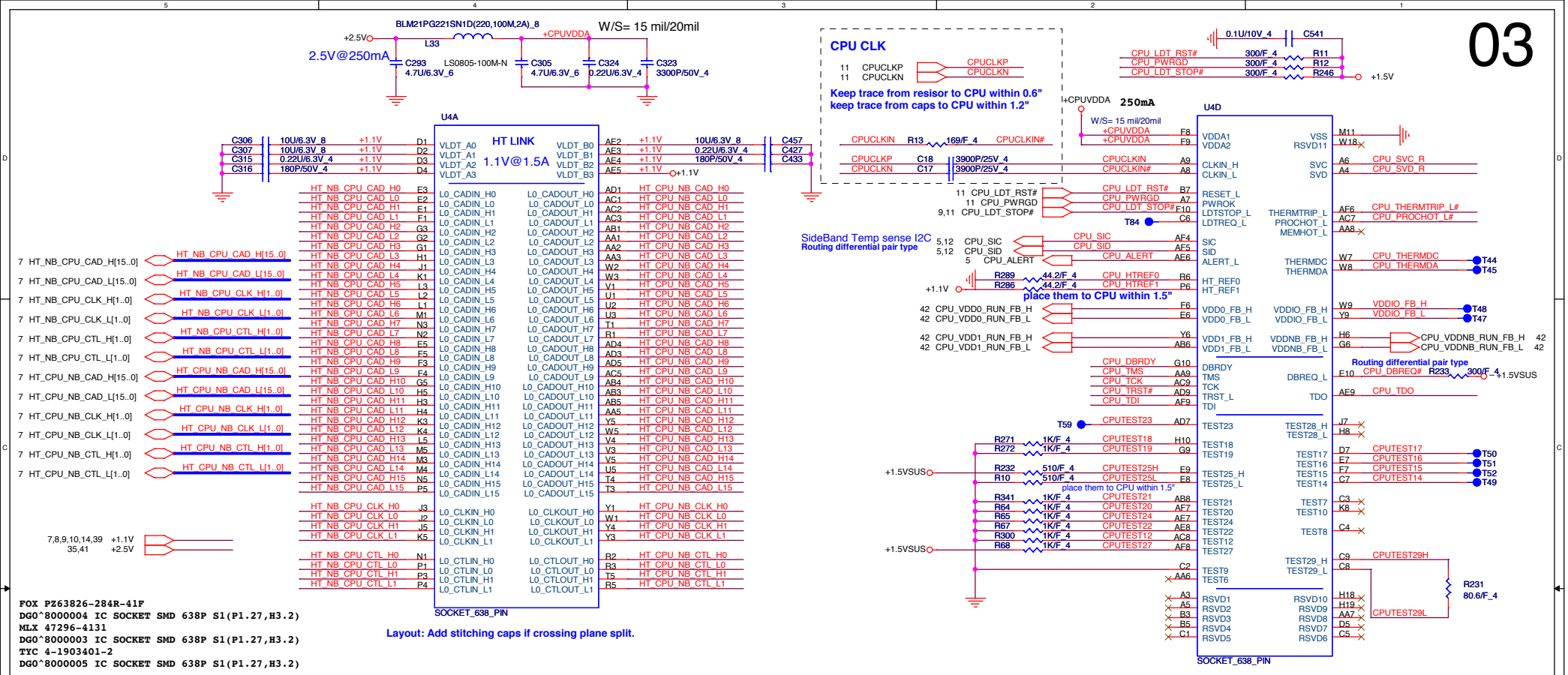
NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

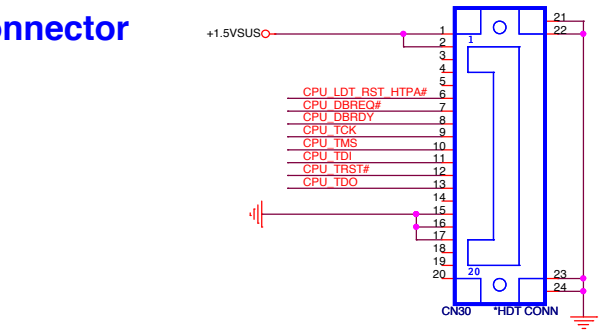
Size	Document Number	Rev
Custom	Block Diagram	1A

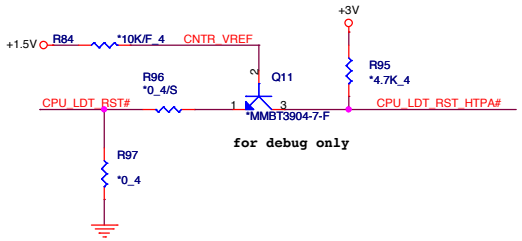
Date: Tuesday, September 21, 2010 | Sheet 1 of 44


02
battery
AC Adapter
1
BATT Charger
BQ24726RGRR
PU18
+VIN
RT8223M
PU22
PG
3
+5VPCU
+3VPCU
+5VS5
+3VS5
4d
4a
ON/OFFBTN_KBC#
GPO25
KBC1126
U52
GPO31
nRSMRST
PWRGD
GPO6
KBC_PWR_ON
4b
S5_ON
4e
+3VS5
RT9025
PU4
EN
PG
+1.1VS5
4c
PWR_BTN_OUT#
PM_RSMRST#
4d
5
SLP_S4#/SUSON
SLP_S3#/MAINON
PWRBTN#
RSMRST
SLP_S5#
SLP_S3#
SB800
U11
LDT_PG
LDT_RST#
A_RST#
PWR_GOOD
WD_PWRGD
15
17
16
S1g4
CPU_PWRGD
U4
CPU_LDT_RST#
NB_PLTRST#
POWERGOOD
SYSRESTb
RS880
U5
PM_PWROK
SB_PWRGD_IN
NB_PWRGD_IN
14
11
VRM_PWRGD
SLP_S4#/SUSON
SLP_S3#/MAINON
+5VS5
RT8207AGQW
PU7
EN
PG
+1.5VSUS
+0.75VSMVREF_DIMM
6
HWPG
+1.5VSUS
RT9025
PU11
+0.9V
7
VRON
HWPG
+3VS5
RT9043GB
PU8
+2.5V
7
VRON
HWPG
+3VS5
RT8208A
PU17
+VGA_CORE
7
VGACORE_POK
+3VS5,+5VS5
AO4496
PQ46,PQ51
+3V
+5V
7
+3VS5
ME3424D
PQ42
+3VLANVCC
7
+1.5VS5
RT9025
PU1
+1.0V_GFX
8
HWPG
+3VS5
ME3424D
PQ42
+1.8V
8
1.5V_ON
+1.5VSUS
AON6426L
PQ30
+1.5V
9
CPU_PWRGD_SVID_REG
VRON
PWROK
EN
+5VS5
ISL6265AHRTZ-T
PU5
PG
+VCORE
10
11
VRM_PWRGD
+5VS5
RT8209A
PU15
PG
+1.1V
12
HWPG
1.1VDYN_ON
+5VS5
RT8208A
PU23
PG
+1.1VDYN
13
HWPG
PROJECT : A22/A25
Quanta Computer Inc.
NB5/RD2
Size
Custom
Document Number
Power sequence
Rev
1A
Date: Monday, September 20, 2010
Sheet 2 of 44

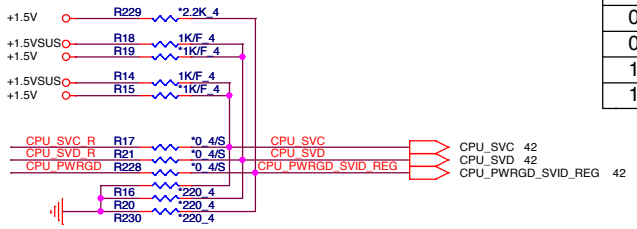


HDT Connector



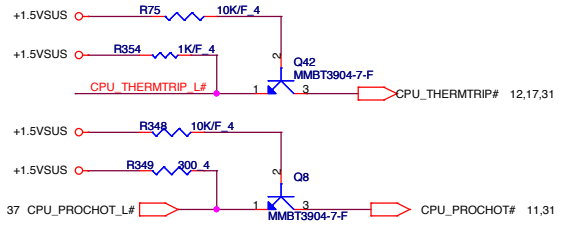


Serial VID



VFIX MODE — VID Override Circuit

SVC	SVD	Voltage Output
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V



NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	S1G4 HT,CTL I/F 1/3	1A

Date: Monday, September 20, 2010 | Sheet 3 of 44

Processor Memory Interface

04

0.9V@1.5A

PLACE THEM CLOSE TO CPU WITHIN 1"

U4B — MEM:CMD/CTRL/CLK — SOCKET_638_PIN

U4C — MEM:DATA — SOCKET_638_PIN

Place close to socket

C520 10U/6.3V_8

R62 39.2/F_4 M_ZP

R61 39.2/F_4 M_ZN

R304 1K/F_4

R297 Reserved *0_4

R298 1K/F_4

C405 0.1U/10V_4

C404 1000P/50V_4

C295 4.7U/6.3V_6 | C479 4.7U/6.3V_6 | C294 4.7U/6.3V_6 | C480 4.7U/6.3V_6 | C474 0.22U/6.3V_4 | C473 0.22U/6.3V_4 | C476 0.22U/6.3V_4 | C475 0.22U/6.3V_4

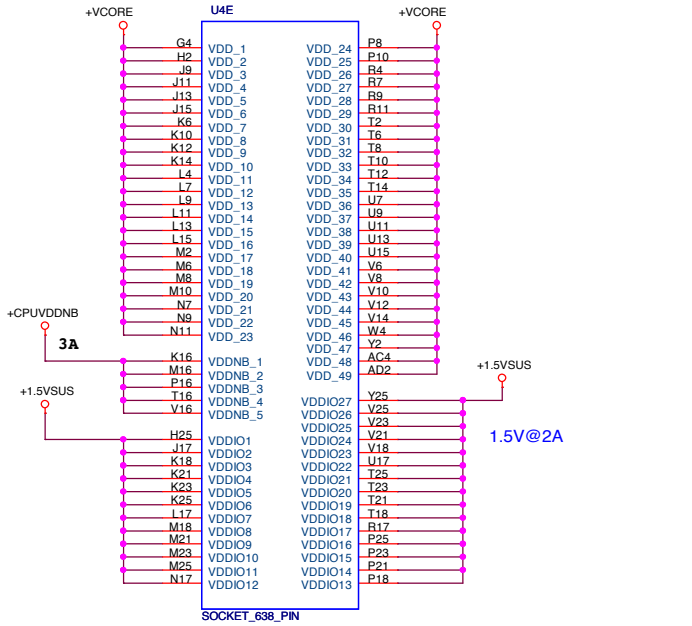
C299 1000P/50V_4 | C300 1000P/50V_4 | C387 1000P/50V_4 | C477 1000P/50V_4 | C302 180P/50V_4 | C297 180P/50V_4 | C298 180P/50V_4 | C303 180P/50V_4

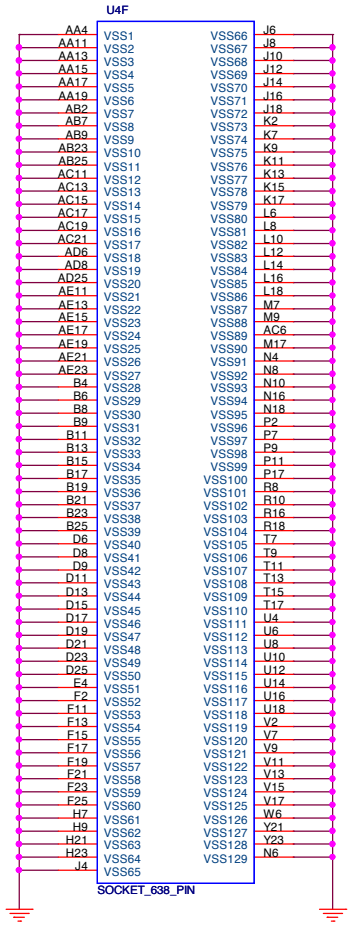
3,5,6,31,40,41,42 +1.5VSUS

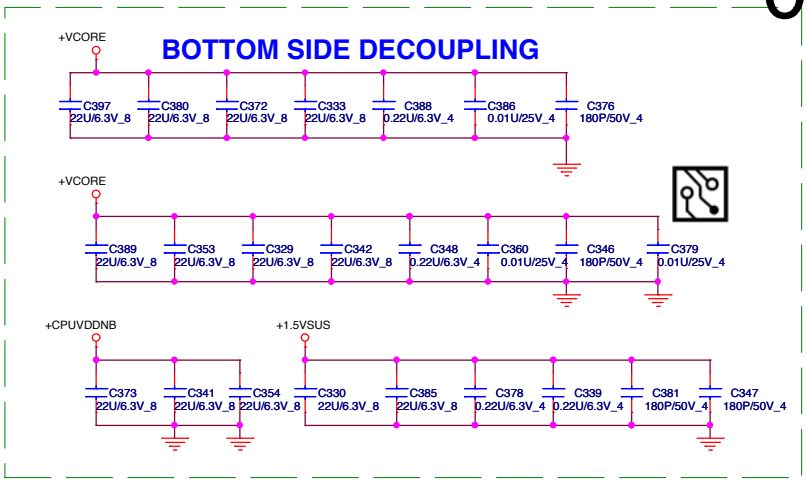
41 +0.9V

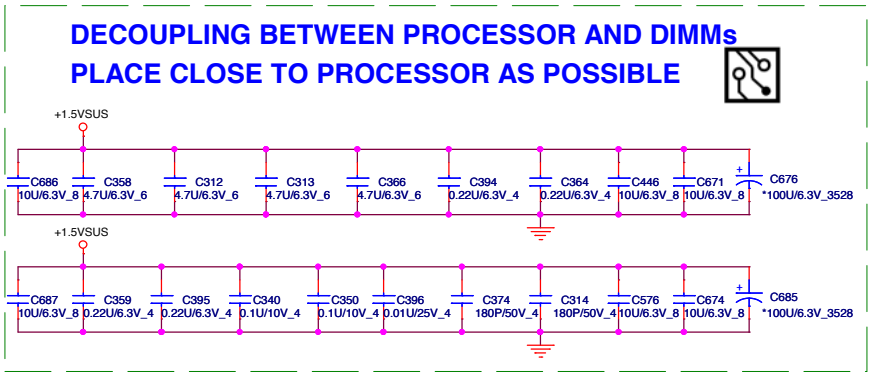
PROJECT :	A22/A25
Quanta Computer Inc.	
Size: Custom	Document Number: S1G4 DDRII MEMORY I/F 2/3
Rev: 1A	
Date: Monday, September 20, 2010	Sheet 4 of 44

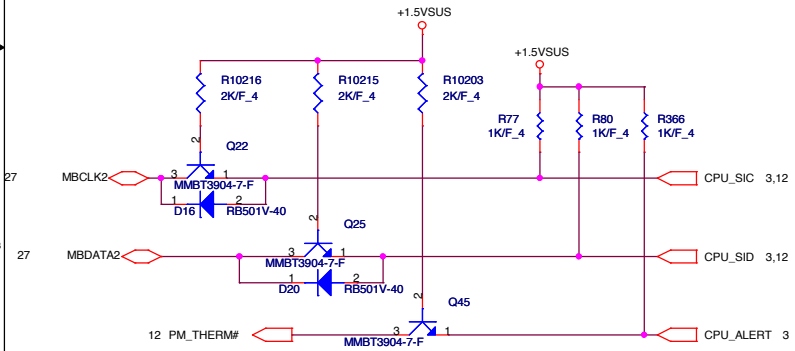
NB5/RD2





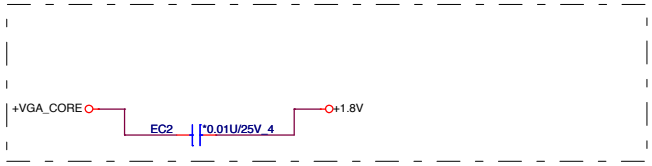


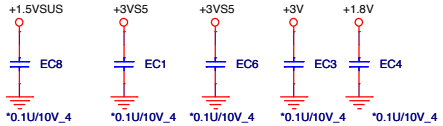




PROCESSOR POWER AND GROUND

For fix HyperTransport nets across plane splits



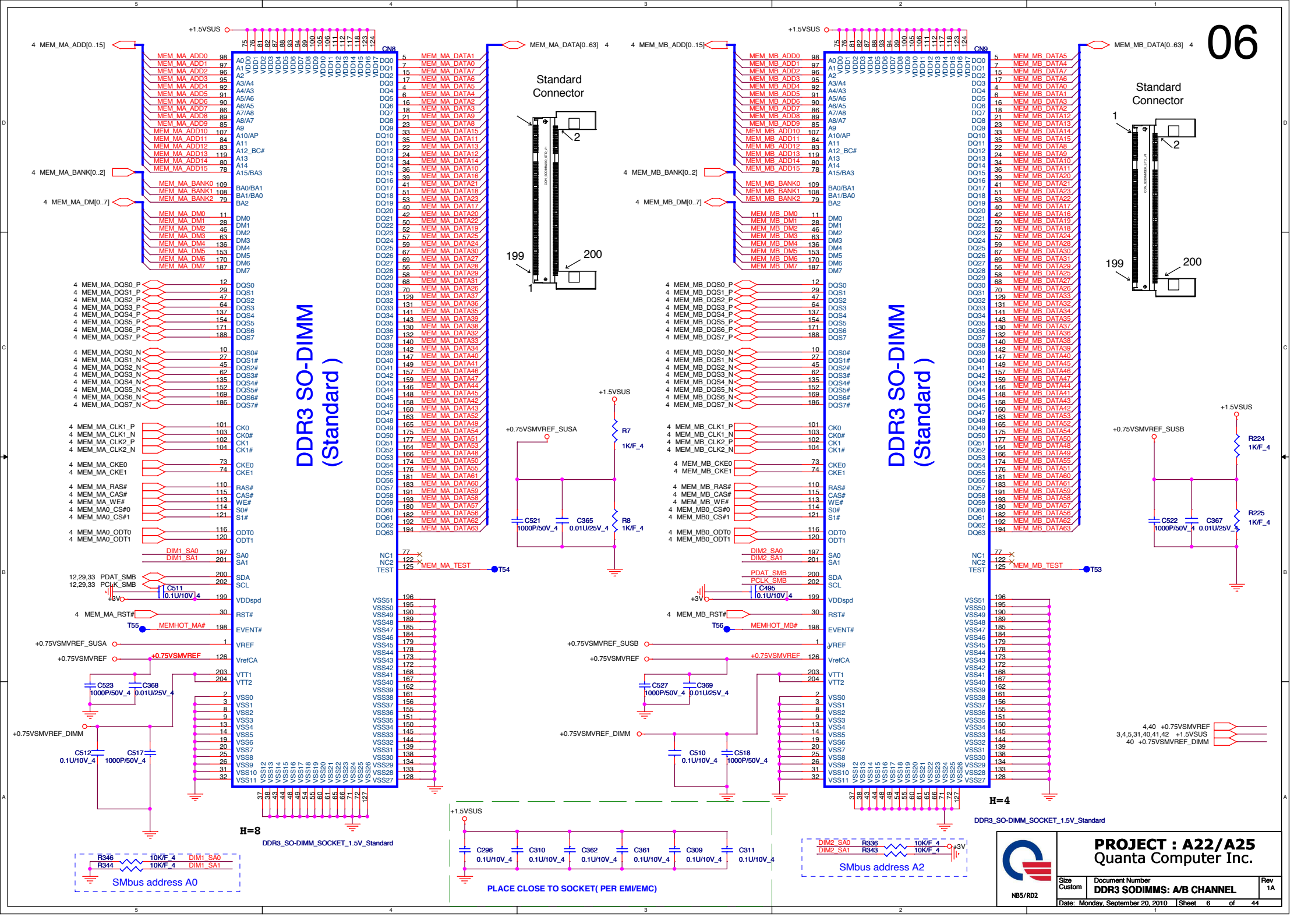


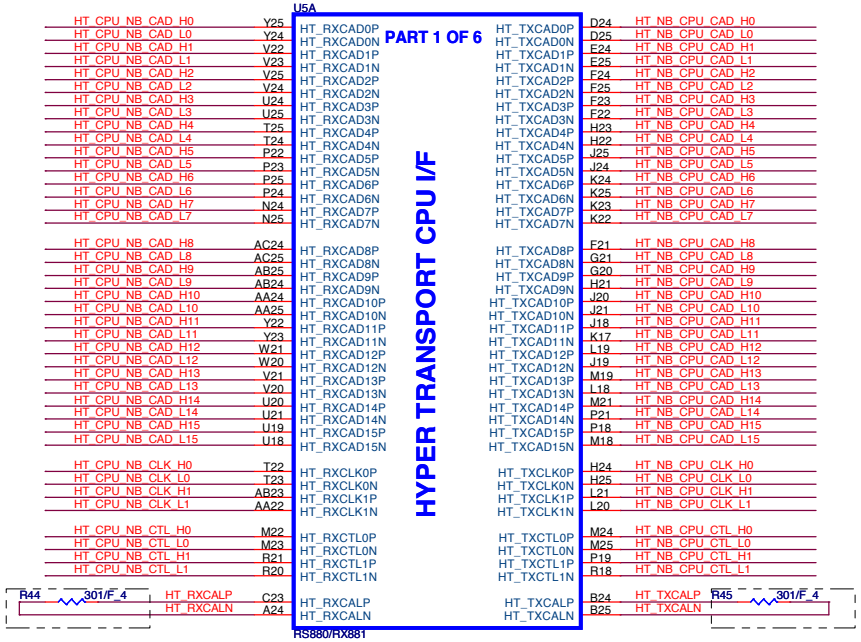
NB5/RD2

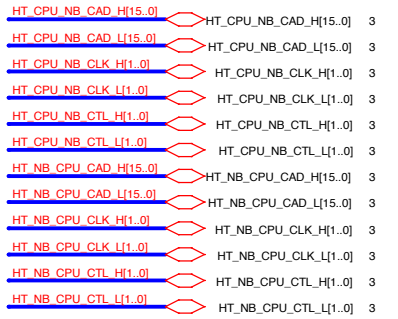
PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	S1G4 PWR & GND 3/3	1A

Date: Monday, September 20, 2010 | Sheet 5 of 44

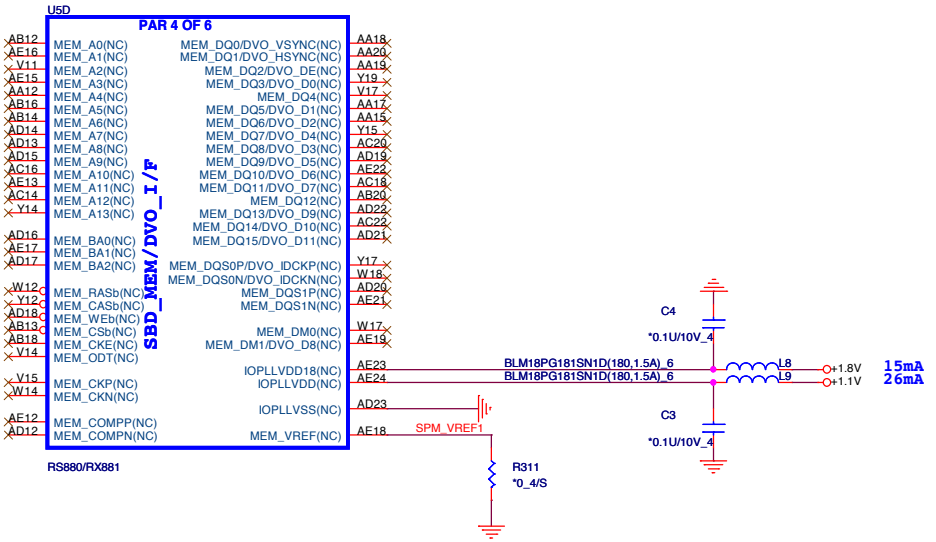

DDR3 SO-DIMM (Standard)
CN8
CN9
Standard Connector
H=8
H=4
DDR3_SO-DIMM_SOCKET_1.5V_Standard
SMbus address A0
SMbus address A2
PLACE CLOSE TO SOCKET(PER EMI/EMC)
PROJECT : A22/A25
Quanta Computer Inc.
DDR3 SODIMMS: A/B CHANNEL
NB5/RD2
Size Custom
Rev 1A
Date: Monday, September 20, 2010
Sheet 6 of 44





signals	RS880M
HT_TXCALP	R430 301 ohm 1%
HT_TXCALN	
HT_RXCALP	R434 301 ohm 1%
HT_RXCALN	

This block is for UMA only , Discrete can remove all component

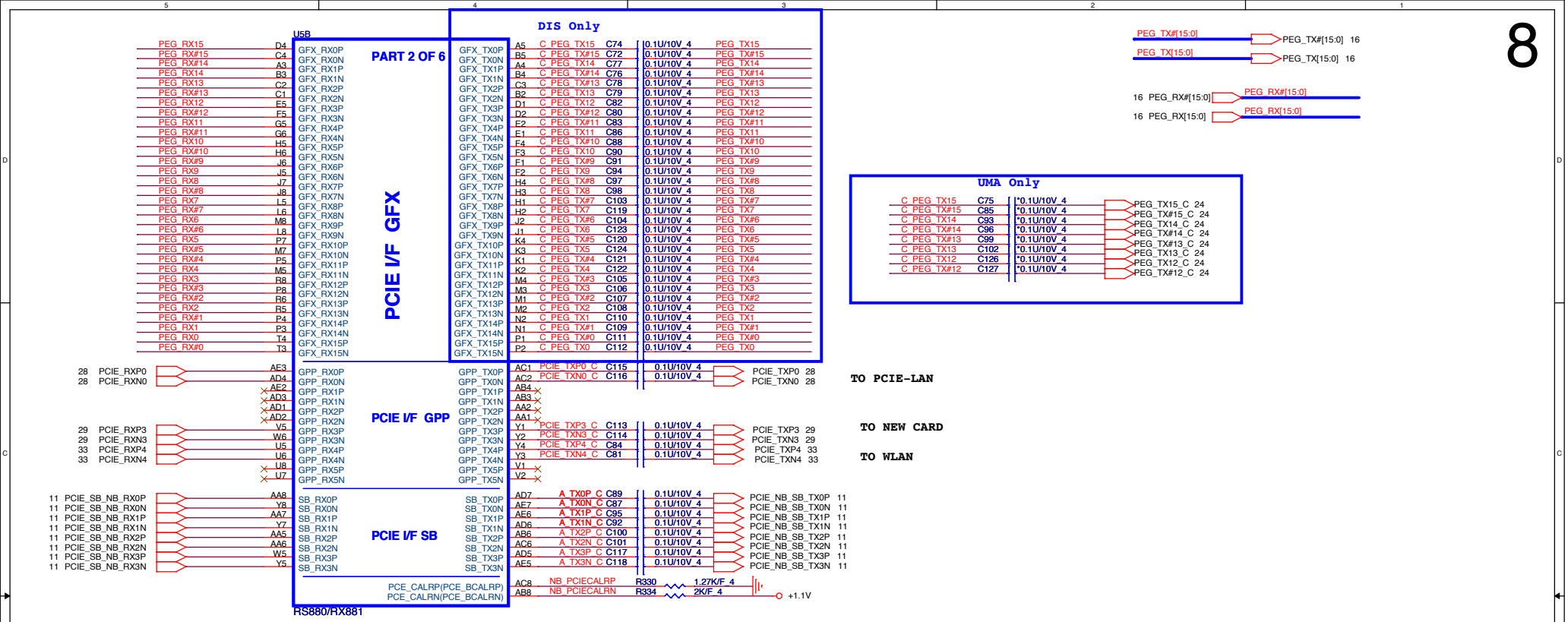


NB5/RD2

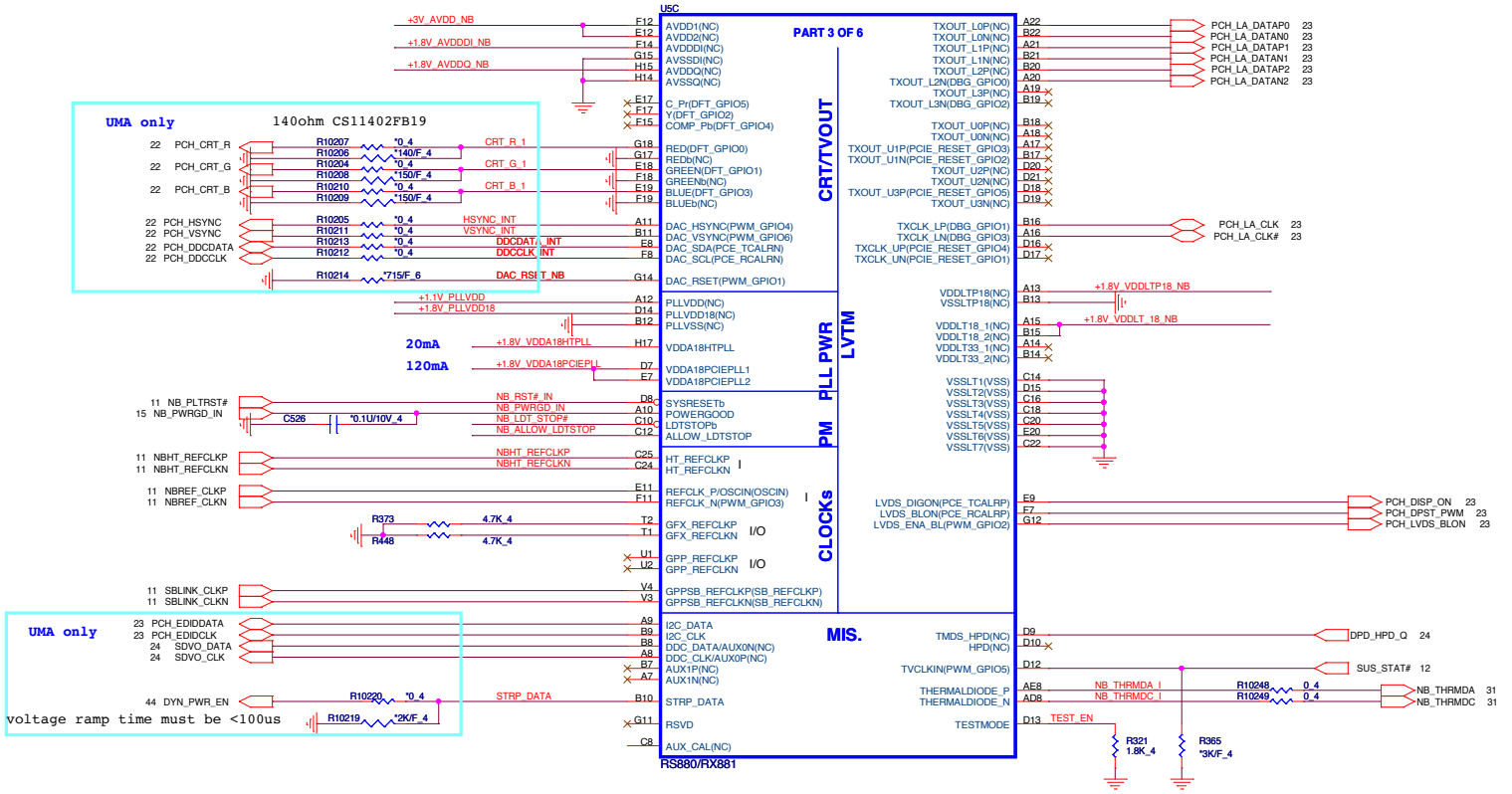
PROJECT : A22/A25
Quanta Computer Inc.

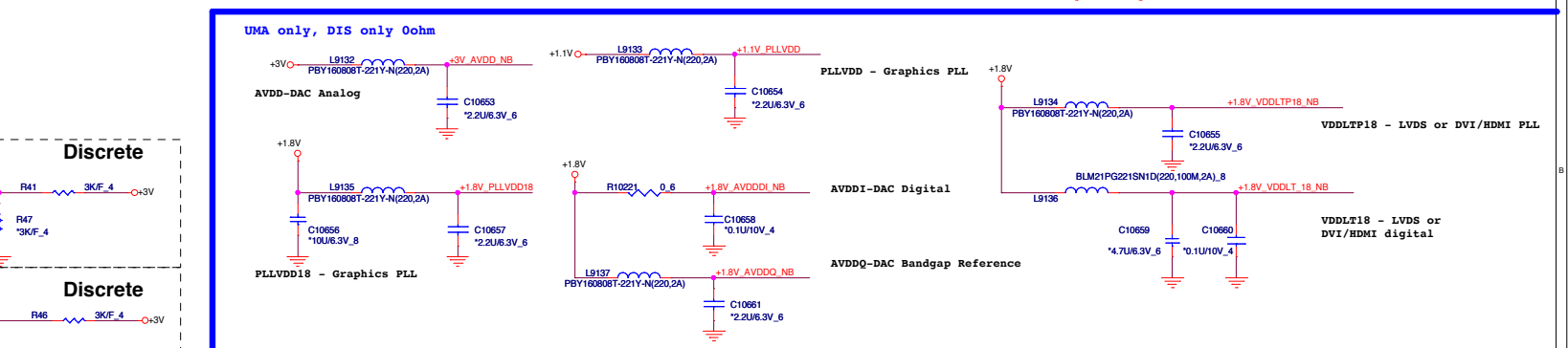
Size	Document Number	Rev
Custom	RS880M-HT LINK I/F 1/5	1A

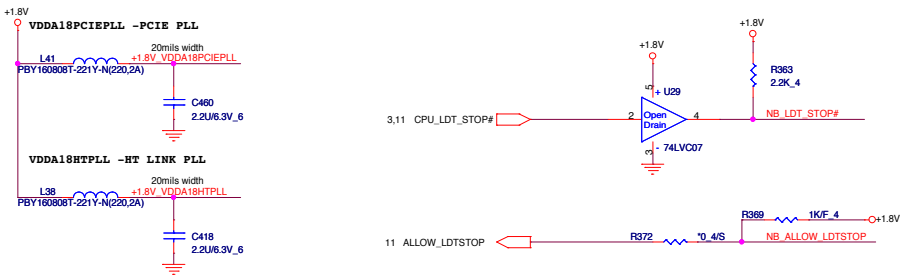
Date: Monday, September 20, 2010 | Sheet 7 of 44



PROJECT : A22/A25 Quanta Computer Inc.			
NB5/RD2	Size: Custom	Document Number: RS880M-PCIE I/F 2/5	Rev: 1A
	Date: Monday, September 20, 2010	Sheet 8 of 44	

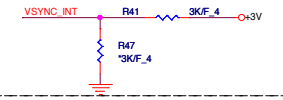






Enables Debug Bus acess
through memory I/O pads and GPIO.
0 : Enable RS880M , Default
1 : Disable RS880M
(RX881 use DAC_VSYNC)

Discrete



Indicates if memory Side port
is available or not
0: Reserved
1: Required setting. Select with a pull-up
resistor on the strap
(RX881 use DAC_HSYNC)

Discrete

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	RS880M-SYSTEM I/F 3/5	1A
Date: Monday, September 20, 2010	Sheet 9 of 44	

N85/RD2

RX881/RS880 POWER DIFFERENCE TABLE

PIN NAME	RX881	RS880	PIN NAME	RX881	RS880
VDDHT	+1.1V	+1.1V	IOPLLVDD	+1.1V	+1.1V
VDDHTRX	+1.1V	+1.1V	AVDD	GND	+3.3V
VDDHTTX	+1.2V	+1.2V	AVDDDI	GND	+1.8V
VDDA18PCIE	+1.8V	+1.8V	AVDDQ	GND	+1.8V
VDDG18	+1.8V	+1.8V	PLLVDD	GND	+1.1V
VDD18_MEM	GND	+1.8V	PLLVDD18	GND	+1.8V
VDDPCIE	+1.1V	+1.1V	VDDA18PCIEPLL	+1.8V	+1.8V
VDDC	+1.1V	+1.1V	VDDA18HTPLL	+1.8V	+1.8V
VDD_MEM	GND	+1.8V/1.5V	VDDLTP18	GND	+1.8V
VDDG33	+3.3V	+3.3V	VDDLT18	GND	+1.8V
IOPLLVDD18	+1.8V	+1.8V	VDDLT33	NC	NC

U5F — PART 6/6 — GROUND

U5E — PART 5/6 — POWER — RS880/RX881

1.1V@0.6A — L40 *0_8/S — +1.1V_VDDHT — C424 4.7U/6.3V_6, C423 0.1U/10V_4, C422 0.1U/10V_4, C419 0.1U/10V_4

1.1V@0.7A — L34 *0_8/S — +1.1V_VDDHTRX — C408 4.7U/6.3V_6, C413 0.1U/10V_4, C399 0.1U/10V_4, C415 0.1U/10V_4

1.1V@0.4A — L35 *0_6/S — +1.1V_VDDHTTX — C409 4.7U/6.3V_6, C417 0.1U/10V_4, C414 0.1U/10V_4, C416 0.1U/10V_4, C412 0.1U/10V_4

1.8V@0.7A — L42 BLM21PG221SN1D(220,100M,2A)_8 — +1.8V_VDDA18PCIE — C455 4.7U/6.3V_6, C458 4.7U/6.3V_6, C481 0.1U/10V_4, C462 0.1U/10V_4, C489 0.1U/10V_4, C453 0.1U/10V_4

25mA — C465 1U/10V_4

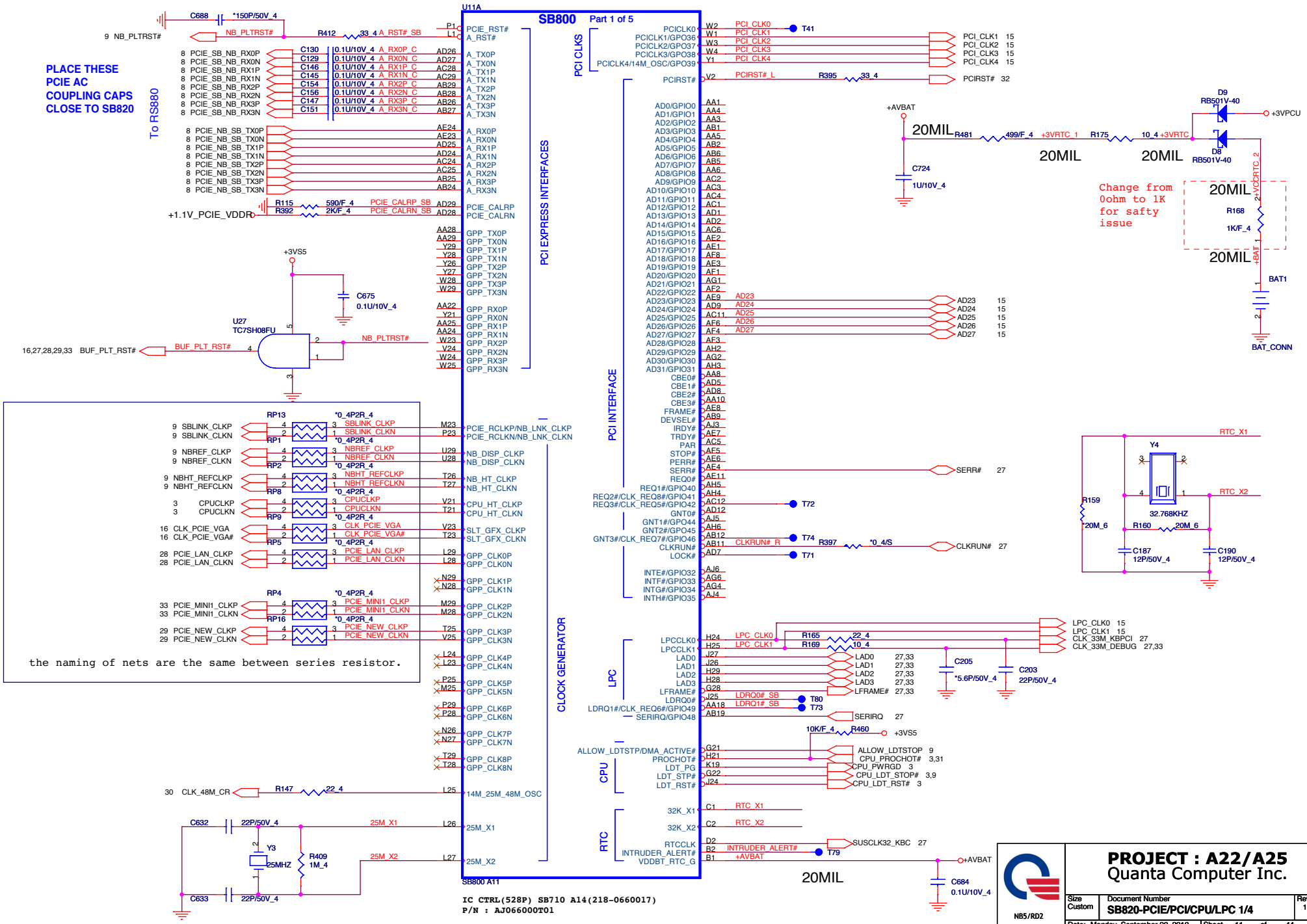
1.1V@2.5A — VDDPCIE - PCIE-E Main power — C542 0.1U/10V_4, C471 0.1U/10V_4, C467 1U/10V_4, C466 1U/10V_4, C482 4.7U/6.3V_6

0.95~1.1V@10A — VDDC - Core Logic power — C430 0.1U/10V_4, C436 0.1U/10V_4, C435 0.1U/10V_4, C445 0.1U/10V_4, C421 10U/6.3V_8; C426 0.1U/10V_4, C444 0.1U/10V_4, C441 0.1U/10V_4, C449 10U/6.3V_8

RS880M without side-port: Connected to GND plane.

+3V_VDDG33 — R371 *0_4/S — 60mA — C461 0.1U/10V_4, C438 0.1U/10V_4

NB5/RD2	PROJECT : A22/A25 Quanta Computer Inc.	
Size: Custom	Document Number: RS880M-POWER5/5	Rev: 1A
Date: Monday, September 20, 2010	Sheet 10 of 44	


PLACE THESE
PCIE AC
COUPLING CAPS
CLOSE TO SB820
To RS880
U11A
SB800
Part 1 of 5
PCI CLKS
PCI EXPRESS INTERFACES
PCI INTERFACE
CLOCK GENERATOR
LPC
CPU
RTC
PCIE_RST#
A_RST#
PCICLK0
PCICLK1/GPO36
PCICLK2/GPO37
PCICLK3/GPO38
PCICLK4/14M_OSC/GPO39
PCIRST#
PCIRST# 32
PCI_CLK1 15
PCI_CLK2 15
PCI_CLK3 15
PCI_CLK4 15
A_TX0P
A_TX0N
A_TX1P
A_TX1N
A_TX2P
A_TX2N
A_TX3P
A_TX3N
A_RX0P
A_RX0N
A_RX1P
A_RX1N
A_RX2P
A_RX2N
A_RX3P
A_RX3N
PCIE_CALRP
PCIE_CALRN
GPP_TX0P
GPP_TX0N
GPP_TX1P
GPP_TX1N
GPP_TX2P
GPP_TX2N
GPP_TX3P
GPP_TX3N
GPP_RX0P
GPP_RX0N
GPP_RX1P
GPP_RX1N
GPP_RX2P
GPP_RX2N
GPP_RX3P
GPP_RX3N
PCIE_RCLKP/NB_LNK_CLKP
PCIE_RCLKN/NB_LNK_CLKN
NB_DISP_CLKP
NB_DISP_CLKN
NB_HT_CLKP
NB_HT_CLKN
CPU_HT_CLKP
CPU_HT_CLKN
SLT_GFX_CLKP
SLT_GFX_CLKN
GPP_CLK0P
GPP_CLK0N
GPP_CLK1P
GPP_CLK1N
GPP_CLK2P
GPP_CLK2N
GPP_CLK3P
GPP_CLK3N
GPP_CLK4P
GPP_CLK4N
GPP_CLK5P
GPP_CLK5N
GPP_CLK6P
GPP_CLK6N
GPP_CLK7P
GPP_CLK7N
GPP_CLK8P
GPP_CLK8N
14M_25M_48M_OSC
25M_X1
25M_X2
AD0/GPIO0
AD1/GPIO1
AD2/GPIO2
AD3/GPIO3
AD4/GPIO4
AD5/GPIO5
AD6/GPIO6
AD7/GPIO7
AD8/GPIO8
AD9/GPIO9
AD10/GPIO10
AD11/GPIO11
AD12/GPIO12
AD13/GPIO13
AD14/GPIO14
AD15/GPIO15
AD16/GPIO16
AD17/GPIO17
AD18/GPIO18
AD19/GPIO19
AD20/GPIO20
AD21/GPIO21
AD22/GPIO22
AD23/GPIO23
AD24/GPIO24
AD25/GPIO25
AD26/GPIO26
AD27/GPIO27
AD28/GPIO28
AD29/GPIO29
AD30/GPIO30
AD31/GPIO31
CBE0#
CBE1#
CBE2#
CBE3#
FRAME#
DEVSEL#
IRDY#
TRDY#
PAR
STOP#
PERR#
SERR#
REQ0#
REQ1#/GPIO40
REQ2#/CLK_REQ8#/GPIO41
REQ3#/CLK_REQ5#/GPIO42
GNT0#
GNT1#/GPO44
GNT2#/GPO45
GNT3#/CLK_REQ7#/GPIO46
CLKRUN#
LOCK#
INTE#/GPIO32
INTF#/GPIO33
INTG#/GPIO34
INTH#/GPIO35
SERR# 27
CLKRUN# 27
LPCCLK0
LPCCLK1
LAD0
LAD1
LAD2
LAD3
LFRAME#
LDRQ0#
LDRQ1#/CLK_REQ6#/GPIO49
SERIRQ/GPIO48
LPC_CLK0 15
LPC_CLK1 15
CLK_33M_KBPCI 27
CLK_33M_DEBUG 27,33
LAD0 27,33
LAD1 27,33
LAD2 27,33
LAD3 27,33
LFRAME# 27,33
SERIRQ 27
ALLOW_LDTSTP/DMA_ACTIVE#
PROCHOT#
LDT_PG
LDT_STP#
LDT_RST#
ALLOW_LDTSTOP 9
CPU_PROCHOT# 3,31
CPU_PWRGD 3
CPU_LDT_STOP# 3,9
CPU_LDT_RST# 3
32K_X1
32K_X2
RTCCLK
INTRUDER_ALERT#
VDDBT_RTC_G
RTC_X1
RTC_X2
SUSCLK32_KBC 27
INTRUDER_ALERT#
+AVBAT
+3VS5
+1.1V_PCIE_VDDR
+3VPCU
+3VRTC_1
+VCCRTC_2
+BAT_1
BAT1
BAT_CONN
BUF_PLT_RST#
NB_PLTRST#
SBLINK_CLKP
SBLINK_CLKN
NBREF_CLKP
NBREF_CLKN
NBHT_REFCLKP
NBHT_REFCLKN
CPUCLKP
CPUCLKN
CLK_PCIE_VGA
CLK_PCIE_VGA#
PCIE_LAN_CLKP
PCIE_LAN_CLKN
PCIE_MINI1_CLKP
PCIE_MINI1_CLKN
PCIE_NEW_CLKP
PCIE_NEW_CLKN
CLK_48M_CR
PCIE_SB_NB_RX0P
PCIE_SB_NB_RX0N
PCIE_SB_NB_RX1P
PCIE_SB_NB_RX1N
PCIE_SB_NB_RX2P
PCIE_SB_NB_RX2N
PCIE_SB_NB_RX3P
PCIE_SB_NB_RX3N
PCIE_NB_SB_TX0P
PCIE_NB_SB_TX0N
PCIE_NB_SB_TX1P
PCIE_NB_SB_TX1N
PCIE_NB_SB_TX2P
PCIE_NB_SB_TX2N
PCIE_NB_SB_TX3P
PCIE_NB_SB_TX3N
C688 *150P/50V_4
R412 33_4 A_RST#_SB
C130 0.1U/10V_4 A_RX0P_C
C129 0.1U/10V_4 A_RX0N_C
C146 0.1U/10V_4 A_RX1P_C
C145 0.1U/10V_4 A_RX1N_C
C154 0.1U/10V_4 A_RX2P_C
C156 0.1U/10V_4 A_RX2N_C
C147 0.1U/10V_4 A_RX3P_C
C151 0.1U/10V_4 A_RX3N_C
R115 590/F_4 PCIE_CALRP_SB
R392 2K/F_4 PCIE_CALRN_SB
C675 0.1U/10V_4
U27 TC7SH08FU
RP13 *0_4P2R_4
RP1 *0_4P2R_4
RP2 *0_4P2R_4
RP8 *0_4P2R_4
RP9 *0_4P2R_4
RP5 *0_4P2R_4
RP4 *0_4P2R_4
RP16 *0_4P2R_4
the naming of nets are the same between series resistor.
R147 22_4
C632 22P/50V_4
C633 22P/50V_4
Y3 25MHZ
R409 1M_4
C724 1U/10V_4
R481 499/F_4
R175 10_4
R168 1K/F_4
D9 RB501V-40
D8 RB501V-40
20MIL
Change from 0ohm to 1K for safty issue
R165 22_4
R169 10_4
C205 *5.6P/50V_4
C203 22P/50V_4
R395 33_4
R397 *0_4/S
R460 10K/F_4
Y4 32.768KHZ
R159 *20M_6
R160 20M_6
C187 12P/50V_4
C190 12P/50V_4
C684 0.1U/10V_4
SB800 A11
IC CTRL(528P) SB710 A14(218-0660017)
P/N : AJ066000T01
NB5/RD2
PROJECT : A22/A25
Quanta Computer Inc.
Size Custom
Document Number SB820-PCIE/PCI/CPU/LPC 1/4
Rev 1A
Date: Monday, September 20, 2010
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SCL0/SDATA0 is 3V tolerance
AMD datasheet define it
Clock gen/CPU thermal /DDR3/DDR3 thermal/Accelerometer
R377 2.2K_4 PCLK_SMB
R376 2.2K_4 PDAT_SMB

SCL1/SDATA1 is 3V/S5 tolerance
AMD datasheet define it
R428 2.2K_4 SB_SMBCLK1
R422 2.2K_4 SB_SMBDATA1

SCL2/SDATA2 is 3V/S5 tolerance
AMD datasheet define it
R458 2.2K_4 SB_SCLK2
R459 2.2K_4 SB_SDATA2

modify PV
R418 4.7K_4 SUS_STAT#
modify MV

R514 *10K_4 SYS_RST#
R513 *10K_4 SB_RSMRST# 39
C857 *0.1U/10V_4

Q47 2N7002E
KBRST# 27

To Azalia

ACZ_SDOUT R139 33_4 ACZ_SDOUT_AUDIO 25
C166 *10P/50V_4
ACZ_SYNC R138 33_4 ACZ_SYNC_AUDIO 25
C163 *10P/50V_4
ACZ_BCLK R141 33_4 BIT_CLK_AUDIO 25
C169 22P/50V_4
ACZ_RST# R137 33_4 ACZ_RST#_AUDIO 25
ACZ_SDIN0 ACZ_SDIN0 25

To Modem Board

ACZ_SDOUT R404 33_4 ACZ_SDOUT_MDC 29
C625 *10P/50V_4
ACZ_SYNC R402 33_4 ACZ_SYNC_MDC 29
C620 *10P/50V_4
ACZ_BCLK R142 33_4 BIT_CLK_MDC 29
C172 22P/50V_4
ACZ_RST# R400 33_4 ACZ_RST#_MDC 29
ACZ_SDIN1 ACZ_SDIN1 29

U11D
SB800
Part 4 of 5

T77 LID_SW#_SB
27 SLP_S3# SLP_S3#
27 SLP_S4# SLP_S4#
27,31 PWR_BTN_OUT#
15 SB_PWRGD_IN
9 SUS_STAT#
SB_TEST1
GATEA20_SB
RCIN#_1
27 RUNSCI_EC#
28 DSM#
T43 CRD_REQ#
T42 SYS_RST#
28,29,33 PCIE_WAKE#
SB_THERMTRIP#
15 WD_PWRGD
27 PM_RSMRST# R512 0_4 SB_RSMRST#

PCI_PME#/GEVENT4#
RI#/GEVENT22#
SPI_CS3#/GBE_STAT1/GEVENT21#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
SUS_STAT#
TEST0
TEST1/TMS
TEST2
GA20IN/GEVENT0#
KBRST#/GEVENT1#
LPC_PME#/GEVENT3#
LPC_SMI#/GEVENT23#
GEVENT5#
SYS_RESET#/GEVENT19#
WAKE#/GEVENT8#
IR_RX1/GEVENT20#
THRMTRIP#/SMBALERT#/GEVENT2#
NB_PWRGD
RSMRST#

ACPI / WAKE UP EVENTS
USB 1.1 USB MISC

29 NEW_CLKREQ#
T70
28 LAN_CLKREQ#
34 CAMERA_ON
27,33 MC2_DISABLE
25 SPKR
6,29,33 PCLK_SMB
6,29,33 PDAT_SMB
SB_SMBCLK1
SB_SMBDATA1
33 WLAN_CLKREQ#
T69 CRD_CLKREQ#
28 LP_EN#
R367 0_4
R361 0_4

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#
GBE_LED0/GPIO183
GBE_LED1/GEVENT9#
GBE_LED2/GEVENT10#
GBE_STAT0/GEVENT11#
CLK_REQG#/GPIO65/OSCIN

GPIO
USB 2.0

23,27,31 LID_SW# D18 RB501V-40 LID_SW#_SB
27 A20M GATEA20 D17 RB501V-40 GATEA20_SB
3,17,31 CPU_THERMTRIP# +3V R25 10K/F_4 D22 RB501V-40 SB_THERMTRIP#
29 NEW_CPPE#
5 PM_THERM# R438 150K/F_4
17,27 ADP_PRES_OUT
SB_JTAG_TDO
SB_JTAG_TCK
SB_JTAG_TDI
SB_JTAG_RST#

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#/TRST#/GEVENT12#

USB OC

HD audio interface is +3VS5 voltage

15 ACZ_SDOUT R140 *10K/F_4
ACZ_BCLK
ACZ_SDOUT
ACZ_SDIN0
ACZ_SDIN1
ACZ_SYNC
ACZ_RST#

AZ_BITCLK
AZ_SDOUT
AZ_SDIN0/GPIO167
AZ_SDIN1/GPIO168
AZ_SDIN2/GPIO169
AZ_SDIN3/GPIO170
AZ_SYNC
AZ_RST#

HD AUDIO

GBE_COL
GBE_CRS
GBE_MDCK
GBE_MDIO
GBE_RXCLK
GBE_RXD3
GBE_RXD2
GBE_RXD1
GBE_RXD0
GBE_RXCTL/RXDV
GBE_RXERR
GBE_TXCLK
GBE_TXD3
GBE_TXD2
GBE_TXD1
GBE_TXD0
GBE_TXCTL/TXEN
GBE_PHY_PD
GBE_PHY_RST#
GBE_PHY_INTR

GBE LAN

T81 ADP_PRES0

PS2_DAT/SDA4/GPIO187
PS2_CLK/SCL4/GPIO188
SPI_CS2#/GBE_STAT2/GPIO166
FC_RST#/GPO160
PS2KB_DAT/GPIO189
PS2KB_CLK/GPIO190
PS2M_DAT/GPIO191
PS2M_CLK/GPIO192

EMBEDDED CTRL

CN32 +3VS5 C689 *10P/50V_4
SB_JTAG_TCK
SB_JTAG_TDO
SB_JTAG_TDI
SB_TEST1
SB_JTAG_RST#
SB JTAG
*S/W JTAG DEBUG

SB800 A11

USBCLK/14M_25M_48M_OSC A10
USB_RCOMP G19 USB_RCOMP_SB R433 11.8K/F_6

USB_FSD1P/GPIO186 J10 USBFSDP1+ 32
USB_FSD1N H11 USBFSDP1- 32 Finger Printer
USB_FSD0P/GPIO185 H9 USB_FDS12P T78
USB_FSD0N J8 USB_FSD12N T76

USB_HSD13P B12
USB_HSD13N A12
USB_HSD12P F11
USB_HSD12N E11
USB_HSD11P E14
USB_HSD11N E12
USB_HSD10P J12
USB_HSD10N J14
USB_HSD9P A13 USBP9+ 33
USB_HSD9N B13 USBP9- 33 USB BLUETOOTH
USB_HSD8P D13 USBP8+ 33
USB_HSD8N C13 USBP8- 33 WLAN Min-Card for Bluetooth
USB_HSD7P G12
USB_HSD7N G14
USB_HSD6P G16 USBP6+ 30
USB_HSD6N G18 USBP6- 30 USB card reader
USB_HSD5P D16 USBP5+ 29
USB_HSD5N C16 USBP5- 29 USB Connector
USB_HSD4P B14 USBP4+ 23,34
USB_HSD4N A14 USBP4- 23,34 Carama USB
USB_HSD3P E18 USBP3+ 29
USB_HSD3N E16 USBP3- 29 USB Connector
USB_HSD2P J16 USBP2+ 33
USB_HSD2N J18 USBP2- 33 USB WLAN
USB_HSD1P B17 USBP1+ 29
USB_HSD1N A17 USBP1- 29 New Card
USB_HSD0P A16 USBP0+ 29
USB_HSD0N B16 USBP0- 29 USB Connector

SCL2/GPIO193 D25 SB_SCLK2
SDA2/GPIO194 F23 SB_SDATA2
SCL3_LV/GPIO195 B26 R364 *0_4 CPU_SIC 3,5
SDA3_LV/GPIO196 E26 R362 *0_4 CPU_SID 3,5
EC_PWM0/EC_TIMER0/GPIO197 F25
EC_PWM1/EC_TIMER1/GPIO198 E22
EC_PWM2/EC_TIMER2/GPIO199 F22 GPIO199 GPIO199 15
EC_PWM3/EC_TIMER3/GPIO200 E21 GPIO200 GPIO200 15

KSI_0/GPIO201 G24
KSI_1/GPIO202 G25
KSI_2/GPIO203 E28
KSI_3/GPIO204 F29
KSI_4/GPIO205 D29
KSI_5/GPIO206 D28
KSI_6/GPIO207 C29
KSI_7/GPIO208 C28
KSO_0/GPIO209 B28
KSO_1/GPIO210 A27
KSO_2/GPIO211 B27
KSO_3/GPIO212 D26
KSO_4/GPIO213 A26
KSO_5/GPIO214 C26
KSO_6/GPIO215 A24
KSO_7/GPIO216 B25
KSO_8/GPIO217 A25
KSO_9/GPIO218 D24
KSO_10/GPIO219 B24
KSO_11/GPIO220 C24
KSO_12/GPIO221 B23
KSO_13/GPIO222 A23
KSO_14/GPIO223 D22
KSO_15/GPIO224 C22
KSO_16/GPIO225 A22
KSO_17/GPIO226 B22

EMBEDDED CTRL

U10 TC7SH08FU +3VS5
SLP_S3# MAINON 35,39,40,41,43

U9 TC7SH08FU +3VS5
SLP_S4# SUSON 28,29,40

PROJECT :	A22/A25
Quanta Computer Inc.	
Size: Custom	Document Number: SB820-ACPI/GPIO/USB 2/4
Rev: 1A	
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NB5/RD2

SATA PORT 0,1,2,3
can support AHCI
mode

SATA HDD

SATA ODD

U11B

SB800
Part 2 of 5

SERIAL ATA

FLASH

HW MONITOR

SPI ROM

SB800 A11

PLACE SATA_CAL
RES VERY CLOSE
TO BALL OF SB820

for EXT Gen.

ID3	ID2	ID1	ID0	
0	0	0	0	A22A UMA
0	0	0	1	A22A DIS
0	0	1	0	A25A UMA
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	
0	1	1	1	

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	SB820-ACPI/GPIO/USB 2/4	1A

Date: Monday, September 20, 2010 | Sheet 13 of 44

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

VDDQ--3.3V I/O power

VDD-- S/B CORE power

U11C

SB800

Part 3 of 5

POWER

PCI/GPIO I/O

FLASH I/O

CLKGEN I/O

GBE LAN

PCI EXPRESS

SERIAL ATA

3.3V_S5 I/O

CORE S0

CORE S5

USB I/O

PLL

SB820 without GBE: Connected to GND plane.

SB800 A11

U11E

SB800

GROUND

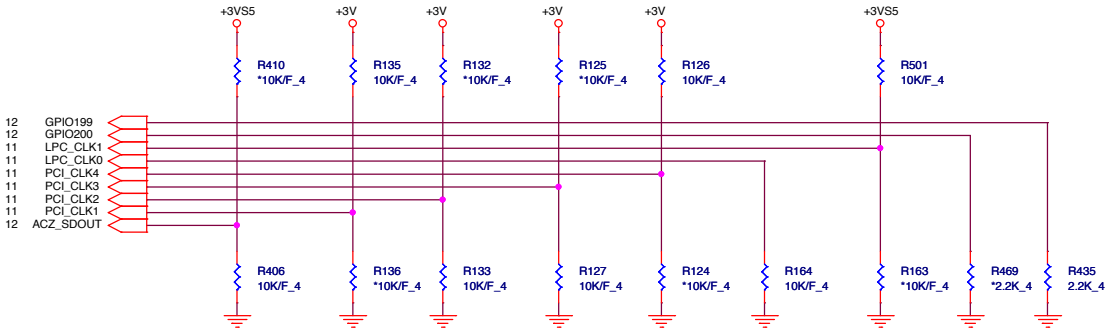
Part 5 of 5

SB800 A11

For support USB wakeup-->3V_S5

REQUIRED STRAPS

OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.

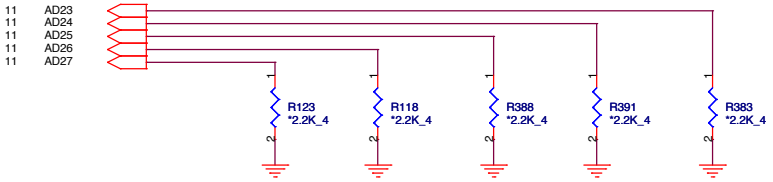


	AZ_SDOUT	PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4	LPC_CLK0	LPC_CLK1	GPIO200 GPIO199
PULL HIGH	LOW POWER MODE	ALLOW PCIE Gen2 DEFAULT	Watchdog Timer Enable	USE DEBUG STRAPS	non_Fusion CLOCK MODE DEFAULT	EC ENABLED	CLKGEN ENABLED DEFAULT	H, H=Reserved H, L=SPI ROM DEFAULT
PULL LOW	PERFORMANCE MODE DEFAULT	FORCE PCIE Gen1	Watchdog Timer Disable DEFAULT	IGNORE DEBUG STRAPS DEFAULT	Fusion CLOCK MODE	EC DISABLED DEFAULT	CLKGEN DISABLED	L, H=LPC ROM L, L=FWH ROM

internal have pull Hi 10K

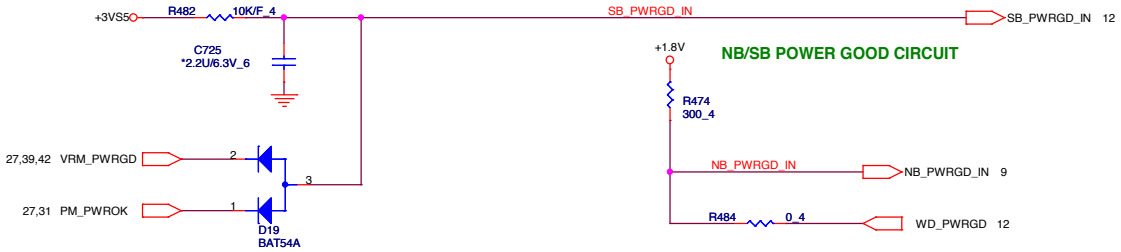
DEBUG STRAPS

SB800 HAS 15K INTERNAL PU 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

NB_PWRGD_IN:
RS880/RX881 = 1.8V;
Do NOT share it with SB_PWRGD when use Internal Clk Gen (Need SB PLL initialize firstly)



NB5/RD2	PROJECT : A22/A25 Quanta Computer Inc.		
Size: Custom	Document Number: SB820-STRAPS	Rev: 1A	
Date: Monday, September 20, 2010	Sheet 15 of 44		

POWER
+PCIE_VDDR=1.2V
+VDD_MEM1.8V=1.8V
+VGA_CORE=0.9~1.2V

U42A

2.5GT/s bit rate

PCI EXPRESS INTERFACE

8	PEG_TX0	PEG_TX0	AF30	PCIE_RX0P	PCIE_TX0P	AH30	C_PEG_RX0	C582	0.1U/10V_4
8	PEG_TX#0	PEG_TX#0	AE31	PCIE_RX0N	PCIE_TX0N	AG31	C_PEG_RX#0	C580	0.1U/10V_4
8	PEG_TX1	PEG_TX1	AE29	PCIE_RX1P	PCIE_TX1P	AG29	C_PEG_RX1	C569	0.1U/10V_4
8	PEG_TX#1	PEG_TX#1	AD28	PCIE_RX1N	PCIE_TX1N	AF28	C_PEG_RX#1	C570	0.1U/10V_4
8	PEG_TX2	PEG_TX2	AD30	PCIE_RX2P	PCIE_TX2P	AF27	C_PEG_RX2	C571	0.1U/10V_4
8	PEG_TX#2	PEG_TX#2	AC31	PCIE_RX2N	PCIE_TX2N	AF26	C_PEG_RX#2	C572	0.1U/10V_4
8	PEG_TX3	PEG_TX3	AC29	PCIE_RX3P	PCIE_TX3P	AD27	C_PEG_RX3	C581	0.1U/10V_4
8	PEG_TX#3	PEG_TX#3	AB28	PCIE_RX3N	PCIE_TX3N	AD26	C_PEG_RX#3	C578	0.1U/10V_4
8	PEG_TX4	PEG_TX4	AB30	PCIE_RX4P	PCIE_TX4P	AC25	C_PEG_RX4	C566	0.1U/10V_4
8	PEG_TX#4	PEG_TX#4	AA31	PCIE_RX4N	PCIE_TX4N	AB25	C_PEG_RX#4	C560	0.1U/10V_4
8	PEG_TX5	PEG_TX5	AA29	PCIE_RX5P	PCIE_TX5P	Y23	C_PEG_RX5	C568	0.1U/10V_4
8	PEG_TX#5	PEG_TX#5	Y28	PCIE_RX5N	PCIE_TX5N	Y24	C_PEG_RX#5	C567	0.1U/10V_4
8	PEG_TX6	PEG_TX6	Y30	PCIE_RX6P	PCIE_TX6P	AB27	C_PEG_RX6	C559	0.1U/10V_4
8	PEG_TX#6	PEG_TX#6	W31	PCIE_RX6N	PCIE_TX6N	AB26	C_PEG_RX#6	C551	0.1U/10V_4
8	PEG_TX7	PEG_TX7	W29	PCIE_RX7P	PCIE_TX7P	Y27	C_PEG_RX7	C548	0.1U/10V_4
8	PEG_TX#7	PEG_TX#7	V28	PCIE_RX7N	PCIE_TX7N	Y26	C_PEG_RX#7	C546	0.1U/10V_4
8	PEG_TX8	PEG_TX8	V30	PCIE_RX8P	PCIE_TX8P	W24	C_PEG_RX8	C543	0.1U/10V_4
8	PEG_TX#8	PEG_TX#8	U31	PCIE_RX8N	PCIE_TX8N	W23	C_PEG_RX#8	C535	0.1U/10V_4
8	PEG_TX9	PEG_TX9	U29	PCIE_RX9P	PCIE_TX9P	V27	C_PEG_RX9	C534	0.1U/10V_4
8	PEG_TX#9	PEG_TX#9	T28	PCIE_RX9N	PCIE_TX9N	U26	C_PEG_RX#9	C525	0.1U/10V_4
8	PEG_TX10	PEG_TX10	T30	PCIE_RX10P	PCIE_TX10P	U24	C_PEG_RX10	C450	0.1U/10V_4
8	PEG_TX#10	PEG_TX#10	R31	PCIE_RX10N	PCIE_TX10N	U23	C_PEG_RX#10	C442	0.1U/10V_4
8	PEG_TX11	PEG_TX11	R29	PCIE_RX11P	PCIE_TX11P	T26	C_PEG_RX11	C501	0.1U/10V_4
8	PEG_TX#11	PEG_TX#11	P28	PCIE_RX11N	PCIE_TX11N	T27	C_PEG_RX#11	C493	0.1U/10V_4
8	PEG_TX12	PEG_TX12	P30	PCIE_RX12P	PCIE_TX12P	T24	C_PEG_RX12	C469	0.1U/10V_4
8	PEG_TX#12	PEG_TX#12	N31	PCIE_RX12N	PCIE_TX12N	T23	C_PEG_RX#12	C456	0.1U/10V_4
8	PEG_TX13	PEG_TX13	N29	PCIE_RX13P	PCIE_TX13P	P27	C_PEG_RX13	C503	0.1U/10V_4
8	PEG_TX#13	PEG_TX#13	M28	PCIE_RX13N	PCIE_TX13N	P26	C_PEG_RX#13	C516	0.1U/10V_4
8	PEG_TX14	PEG_TX14	M30	PCIE_RX14P	PCIE_TX14P	P24	C_PEG_RX14	C519	0.1U/10V_4
8	PEG_TX#14	PEG_TX#14	L31	PCIE_RX14N	PCIE_TX14N	P23	C_PEG_RX#14	C524	0.1U/10V_4
8	PEG_TX15	PEG_TX15	L29	PCIE_RX15P	PCIE_TX15P	M27	C_PEG_RX15	C472	0.1U/10V_4
8	PEG_TX#15	PEG_TX#15	K30	PCIE_RX15N	PCIE_TX15N	N26	C_PEG_RX#15	C488	0.1U/10V_4

PEG_RX0	8							
PEG_RX#0	8							
PEG_RX1	8							
PEG_RX#1	8							
PEG_RX2	8							
PEG_RX#2	8							
PEG_RX3	8							
PEG_RX#3	8							
PEG_RX4	8							
PEG_RX#4	8							
PEG_RX5	8							
PEG_RX#5	8							
PEG_RX6	8							
PEG_RX#6	8							
PEG_RX7	8							
PEG_RX#7	8							
PEG_RX8	8							
PEG_RX#8	8							
PEG_RX9	8							
PEG_RX#9	8							
PEG_RX10	8							
PEG_RX#10	8							
PEG_RX11	8							
PEG_RX#11	8							
PEG_RX12	8							
PEG_RX#12	8							
PEG_RX13	8							
PEG_RX#13	8							
PEG_RX14	8							
PEG_RX#14	8							
PEG_RX15	8							
PEG_RX#15	8							

CLOCK

11	CLK_PCIE_VGA	CLK_PCIE_VGA	AK30	PCIE_REFCLKP
11	CLK_PCIE_VGA#	CLK_PCIE_VGA#	AK32	PCIE_REFCLKN

CALIBRATION

PCIE_CALRP	Y22	PCIE_CALRP	R794	1.27K/F_4		
PCIE_CALRN	AA22	PCIE_CALRN	R796	2K/F_4	+1.1V_PCIE_VDDC	

10K/F_4 1 2 R795 N10 PWRGOOD

11,27,28,29,33 BUF_PLT_RST# AL27 PERSTB

Seymour S3

Semyour S3

100MHz (+/-300ppm) input frequency,
0-0.7V single-ended swing

U42G

DP E/F POWER

+1.8V_DPE_VDD18	1.8V(220mA)	AG15	DPE_VDD18#1
		AG16	DPE_VDD18#2
+1.1V_DPE_VDD10		AG20	DPE_VDD10#1
		AG21	DPE_VDD10#2
		AG14	DPE_VSSR#1
		AH14	DPE_VSSR#2
		AM14	DPE_VSSR#3
		AM16	DPE_VSSR#4
		AM18	DPE_VSSR#5
+1.8V_DPE_VDD18	1.8V220mA)	AF16	DPF_VDD18#1
		AG17	DPF_VDD18#2
+1.1V_DPE_VDD10		AF22	DPF_VDD10#1
		AG22	DPF_VDD10#2
		AF23	DPF_VSSR#1
		AG23	DPF_VSSR#2
		AM20	DPF_VSSR#3
		AM22	DPF_VSSR#4
		AM24	DPF_VSSR#5
R792 150/F_4		AF17	DPEF_CALR
+1.8V_DPE_PVDD	1.8V(20mA)	AG18	DPE_PVDD
		AF19	DPE_PVSS
+1.8V_DPE_PVDD	1.8V(20mA)	AG19	DPF_PVDD
		AF20	DPF_PVSS

DP A/B POWER

	1.8V(130mA)	AE11	DPA_VDD18#1
		AF11	DPA_VDD18#2
+1.1V_DPB_VDD10		AF6	DPA_VDD10#1
		AF7	DPA_VDD10#2
		AE1	DPA_VSSR#1
		AE3	DPA_VSSR#2
		AG1	DPA_VSSR#3
		AG6	DPA_VSSR#4
		AH5	DPA_VSSR#5
	1.8V(130mA)	AE13	DPB_VDD18#1
		AF13	DPB_VDD18#2
+1.1V_DPB_VDD10	BLM18PG181SN1D(180,1.5A)_6	AF8	DPB_VDD10#1
		AF9	DPB_VDD10#2
		AF10	DPB_VSSR#1
		AG9	DPB_VSSR#2
		AH8	DPB_VSSR#3
		AM6	DPB_VSSR#4
		AM8	DPB_VSSR#5
AE10 R793 150/F_4		AF18	DPAB_CALR
	1.8V(20mA)	AG8	DPA_PVDD
		AF7	DPA_PVSS
	1.8V(20mA)	AG10	DPB_PVDD
		AG11	DPB_PVSS

DP PLL POWER

Semyour S3

+1.1V_DPE_VDD10 → L11 BLM18PG181SN1D(180,1.5A)_6 → +1.0V_GFX
C834 0.1U/10V_4, C835 1U/10V_4

+1.8V_DPA_PVDD → L12 BLM18PG181SN1D(180,1.5A)_6 → +1.8V
C831 0.1U/10V_4, C832 1U/10V_4, C833 *10U/6.3V_8

+1.8V_DPE_VDD18 → L14 BLM18PG181SN1D(180,1.5A)_6 → +1.8V
C842 0.1U/10V_4, C843 1U/10V_4

+1.8V_DPE_PVDD → L13 BLM18PG181SN1D(180,1.5A)_6 → +1.8V
C839 0.1U/10V_4, C840 1U/10V_4

3.3V	VDDR3	
VGA Core	BPP	
VGA Core	VDDC	
+1.8V	PCIE_VDDR	
+1.8V	PCIE_PVDD	
+1.8V	VDDR1	

20ms 20ms

+1.8V 5,7,9,10,15,17,19,39,43
+1.0V_GFX 17,19,40

NB5/RD2

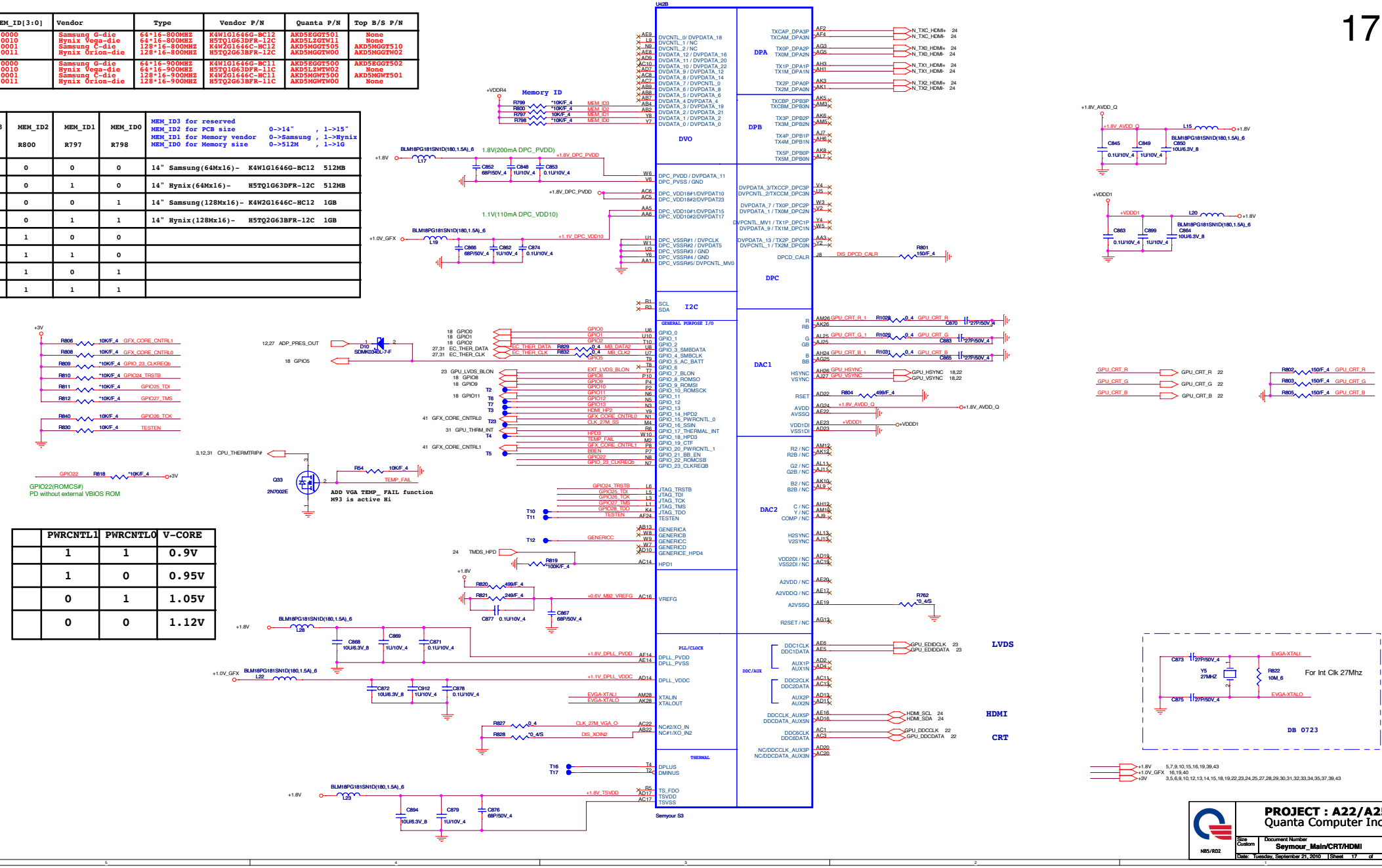
PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Seymour_PCIE_Interface	1A
Date: Monday, September 20, 2010	Sheet 16 of 44	

MEM_ID[3:0]	Vendor	Type	Vendor P/N	Quanta P/N	Top B/S P/N
0000	Samsung G-die	64*16-800MHZ	K4W1G1646G-BC12	AKD5EGGT501	None
0010	Hynix Vega-die	64*16-800MHZ	H5TQ1G63DFR-12C	AKD5LZGTW11	None
0001	Samsung C-die	128*16-800MHZ	K4W2G1646C-HC12	AKD5MGGT505	AKD5MGGT510
0011	Hynix Orion-die	128*16-800MHZ	H5TQ2G63BFR-12C	AKD5MGGTW00	AKD5MGGTW02
0000	Samsung G-die	64*16-900MHZ	K4W1G1646G-BC11	AKD5EGGT500	AKD5EGGT502
0010	Hynix Vega-die	64*16-900MHZ	H5TQ1G63DFR-11C	AKD5LZWTW02	None
0001	Samsung C-die	128*16-900MHZ	K4W2G1646C-HC11	AKD5MGWT500	AKD5MGWT501
0011	Hynix Orion-die	128*16-900MHZ	H5TQ2G63BFR-11C	AKD5MGWTW00	None

MEM_ID3 R799	MEM_ID2 R800	MEM_ID1 R797	MEM_ID0 R798	MEM_ID3 for reserved MEM_ID2 for PCB size 0->14" , 1->15" MEM_ID1 for Memory vendor 0->Samsung , 1->Hynix MEM_ID0 for Memory size 0->512M , 1->1G
0	0	0	0	14" Samsung(64Mx16)- K4W1G1646G-BC12 512MB
0	0	1	0	14" Hynix(64Mx16)- H5TQ1G63DFR-12C 512MB
0	0	0	1	14" Samsung(128Mx16)- K4W2G1646C-HC12 1GB
0	0	1	1	14" Hynix(128Mx16)- H5TQ2G63BFR-12C 1GB
0	1	0	0	
0	1	1	0	
0	1	0	1	
0	1	1	1	

	PWRCNTL1	PWRCNTL0	V-CORE
	1	1	0.9V
	1	0	0.95V
	0	1	1.05V
	0	0	1.12V

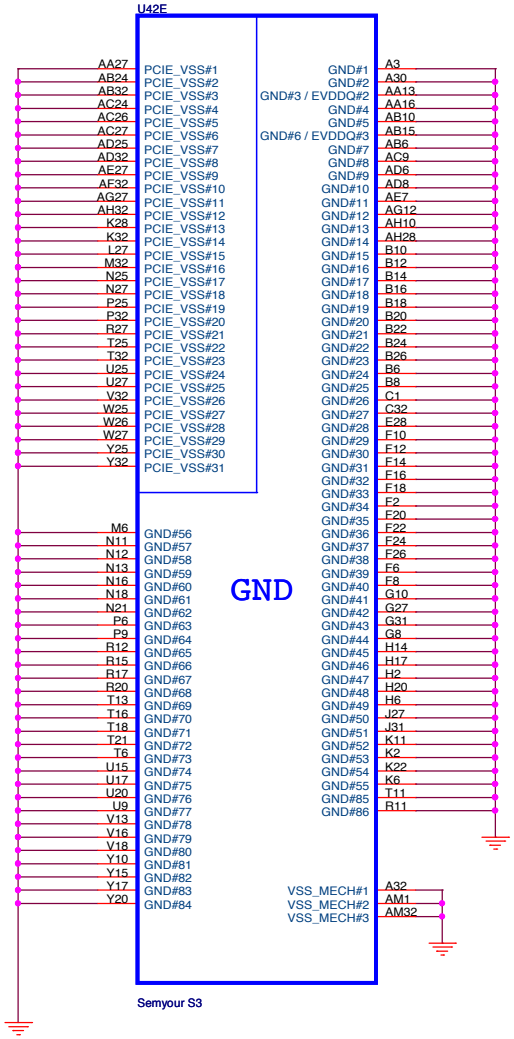


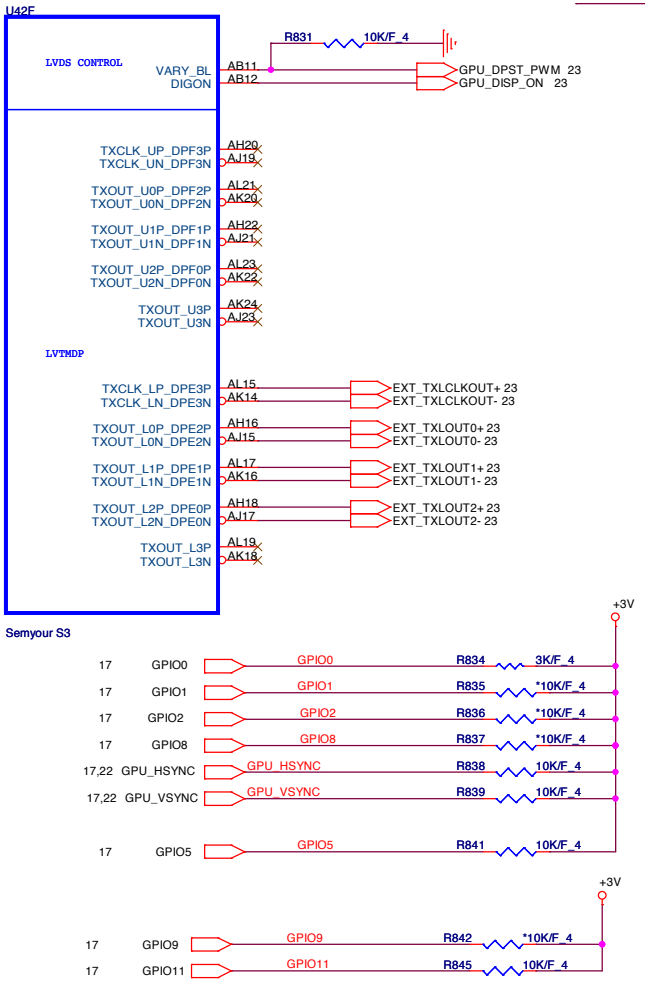
PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Seymour_Main/CRT/HDMI	1A

Date: Tuesday, September 21, 2010 Sheet 17 of 44

NB5/RD2





+3V 3,5,6,9,10,12,13,14,15,17,19,22,23,24,25,27,28,29,30,31,32,33,34,35,37,39,43

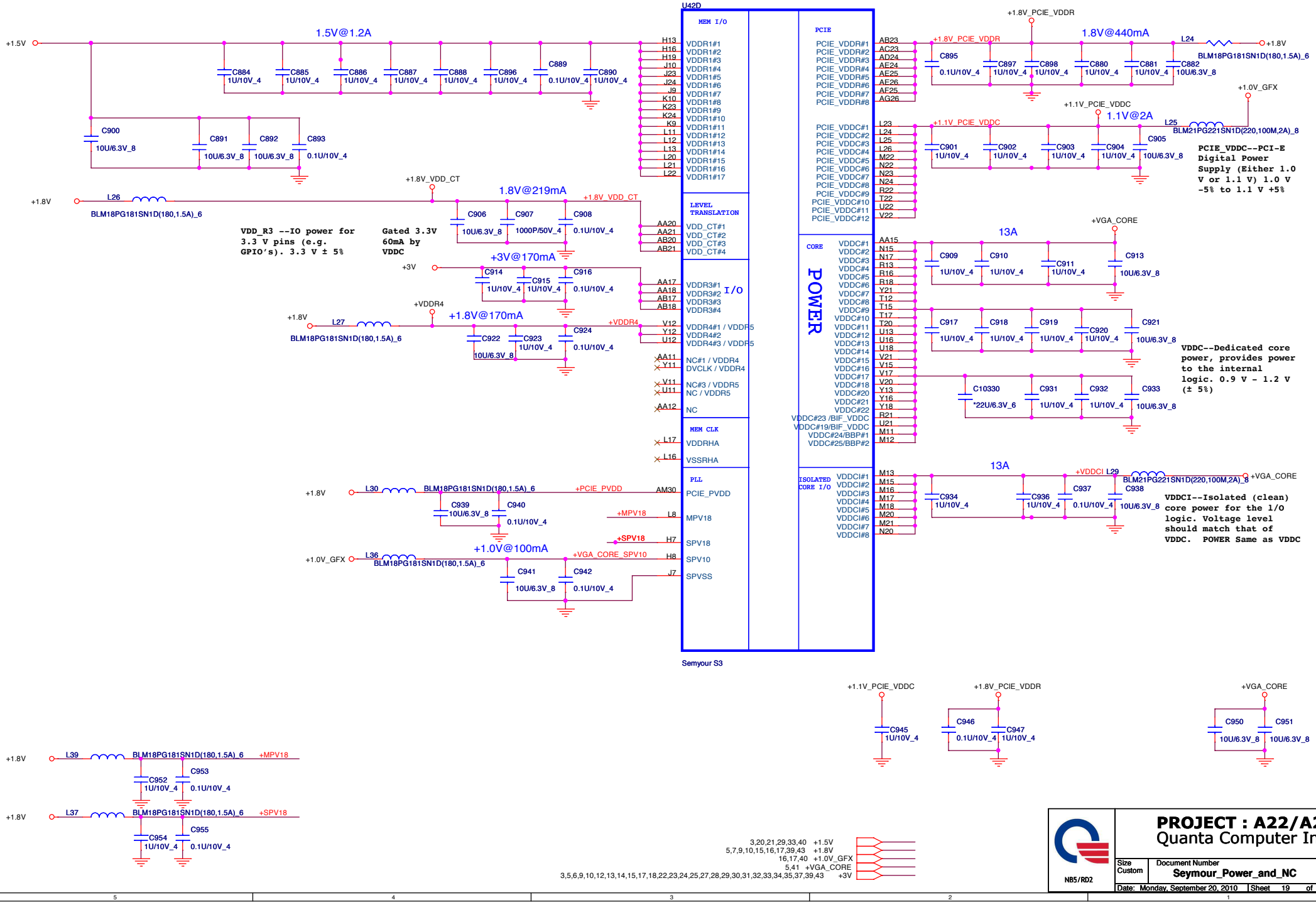
Strap Name		Pin Straps description	Default Value
TX_PWRS_ENB	GPIO0	PCI Express Full TX Output Swing 0: 50% Tx output swing for mobile mode 1: full Tx output swing (Default setting for Desktop)	1
TX_DEEMPH_EN	GPIO1	PCI Express Transmitter De-emphasis Enable 0: Tx de-emphasis disabled for mobile mode 1: Tx de-emphasis enabled (Default setting for Desktop)	0
RESERVED	GPIO2	0 = Advertises the PCI-E device as 2.5 GT/s capable at power-on. 1 = Advertises the PCI-E device as 5.0 GT/s capable at power-on. 5.0 GT/s capability will be controlled by software.	0
RSVD BIF_VGA_DIS RSVD	GPIO8 GPIO9 GPIO21	Enable CLKREQ# Power Management 0 - CLKREQ# power management capability is disabled 1 - CLKREQ# power management capability is enabled	0 0 0
BIOS_ROM_EN	GPIO22	Enable external BIOS ROM device 0 - Disable external BIOS ROM device 1 - Enable external BIOS ROM device	0
AUD[0] AUD(1)	VSYNC HSYNC	AUD[1] AUD[0] 00 No Audio function 01 Audio for DisplayPort and HDMI if dongle is detected 10 Audio for DisplayPort only 11 Audio for both DisplayPort and HDMI	1 1
RSVD	GENERICC		0

Memory Aperture size

GPIO9 BIOSROM		GPIO13 ROMIDCFG2	GPIO12 ROMIDCFG1	GPIO11 ROMIDCFG0
0	128M	0	0	0
0	256M	0	0	1

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

PCIE_VDDR--PCI-E I/O power. 1.8 V ± 5%



21 ODTA0 — ODTA0
21 ODTA1 — ODTA1

21 RASA0# — RASA0#
21 RASA1# — RASA1#

21 CASA0# — CASA0#
21 CASA1# — CASA1#

21 WEA0# — WEA0#
21 WEA1# — WEA1#

21 CSA0#_0 — CSA0#_0

21 CSA1#_0 — CSA1#_0

21 CKEA0 — CKEA0
21 CKEA1 — CKEA1

21 CLKA0 — CLKA0
21 CLKA0# — CLKA0#

21 CLKA1 — CLKA1
21 CLKA1# — CLKA1#

21 QSA#[7..0] — QSA#[7..0]

21 QSA[7..0] — QSA[7..0]

21 DQMA#[7..0] — DQMA#[7..0]

21 MDA[63..0] — MDA[63..0]

21 MAA[13..0] — MAA[13..0]

21 A_BA0 — A_BA0
21 A_BA1 — A_BA1
21 A_BA2 — A_BA2

support 1Gbit VRAM (64M X 16)

U42C

MEMORY INTERFACE

MDA0	K27	DQA_0	MAA_0	K17	MAA0
MDA1	J29	DQA_1	MAA_1	J20	MAA1
MDA2	H30	DQA_2	MAA_2	H23	MAA2
MDA3	H32	DQA_3	MAA_3	G23	MAA3
MDA4	G29	DQA_4	MAA_4	G24	MAA4
MDA5	F28	DQA_5	MAA_5	H24	MAA5
MDA6	F32	DQA_6	MAA_6	J19	MAA6
MDA7	F30	DQA_7	MAA_7	K19	MAA7
MDA8	C30	DQA_8	MAA_8	J14	MAA8
MDA9	F27	DQA_9	MAA_9	K14	MAA9
MDA10	A28	DQA_10	MAA_10	J11	MAA10
MDA11	C28	DQA_11	MAA_11	J13	MAA11
MDA12	E27	DQA_12	MAA_12	H11	MAA12
MDA13	G26	DQA_13	MAA_13/BA2	G11	A_BA2
MDA14	D26	DQA_14	MAA_14/BA0	J16	A_BA0
MDA15	F25	DQA_15	MAA_15/BA1	L15	A_BA1
MDA16	A25	DQA_16			
MDA17	C25	DQA_17	DQMA_0	E32	DQMA#0
MDA18	E25	DQA_18	DQMA_1	E30	DQMA#1
MDA19	D24	DQA_19	DQMA_2	A21	DQMA#2
MDA20	E23	DQA_20	DQMA_3	C21	DQMA#3
MDA21	F23	DQA_21	DQMA_4	E13	DQMA#4
MDA22	D22	DQA_22	DQMA_5	D12	DQMA#5
MDA23	F21	DQA_23	DQMA_6	E3	DQMA#6
MDA24	E21	DQA_24	DQMA_7	F4	DQMA#7
MDA25	D20	DQA_25			
MDA26	F19	DQA_26	RDQSA_0	H28	QSA0
MDA27	A19	DQA_27	RDQSA_1	C27	QSA1
MDA28	D18	DQA_28	RDQSA_2	A23	QSA2
MDA29	F17	DQA_29	RDQSA_3	E19	QSA3
MDA30	A17	DQA_30	RDQSA_4	E15	QSA4
MDA31	C17	DQA_31	RDQSA_5	D10	QSA5
MDA32	E17	DQA_32	RDQSA_6	D6	QSA6
MDA33	D16	DQA_33	RDQSA_7	G5	QSA7
MDA34	F15	DQA_34			
MDA35	A15	DQA_35	WDQSA_0	H27	QSA#0
MDA36	D14	DQA_36	WDQSA_1	A27	QSA#1
MDA37	F13	DQA_37	WDQSA_2	C23	QSA#2
MDA38	A13	DQA_38	WDQSA_3	C19	QSA#3
MDA39	C13	DQA_39	WDQSA_4	C15	QSA#4
MDA40	E11	DQA_40	WDQSA_5	E9	QSA#5
MDA41	A11	DQA_41	WDQSA_6	C5	QSA#6
MDA42	C11	DQA_42	WDQSA_7	H4	QSA#7
MDA43	F11	DQA_43			
MDA44	A9	DQA_44	ODTA0	L18	ODTA0
MDA45	C9	DQA_45	ODTA1	K16	ODTA1
MDA46	F9	DQA_46			
MDA47	D8	DQA_47	CLKA0	H26	CLKA0
MDA48	E7	DQA_48	CLKA0B	H25	CLKA0#
MDA49	A7	DQA_49			
MDA50	C7	DQA_50	CLKA1	G9	CLKA1
MDA51	F7	DQA_51	CLKA1B	H9	CLKA1#
MDA52	A5	DQA_52			
MDA53	E5	DQA_53	RASA0B	G22	RASA0#
MDA54	C3	DQA_54	RASA1B	G17	RASA1#
MDA55	E1	DQA_55			
MDA56	G7	DQA_56	CASA0B	G19	CASA0#
MDA57	G6	DQA_57	CASA1B	G16	CASA1#
MDA58	G1	DQA_58			
MDA59	G3	DQA_59	CSA0B_0	H22	CSA0#_0
MDA60	J6	DQA_60	CSA0B_1	J22	
MDA61	J1	DQA_61			
MDA62	J3	DQA_62	CSA1B_0	G13	CSA1#_0
MDA63	J5	DQA_63	CSA1B_1	K13	
K26		MVREFDA	CKEA0	K20	CKEA0
J26		MVREFSA	CKEA1	J17	CKEA1
J25		MEM_CALRN0	WEA0B	G25	WEA0#
K7		NC/TESTEN#2	WEA1B	H10	WEA1#
K25		MEM_CALRP0	PX_EN	AB16	
L10		DRAM_RST			
K8		CLKTESTA	RSVD#2	G14	
L7		CLKTESTB	RSVD#3	G20	MAA13

Semyour S3

3,19,21,29,33,40 +1.5V

+1.5V
Rd R851 40.2/F_4
MVREFD
Re R853 100/F_4
C956 0.1U/10V_4
+1.5V
Rd R855 40.2/F_4
MVREFS
Re R858 100/F_4
C957 0.1U/10V_4

+1.5V
R852 240/F_4
R854 5.11K
R857 240/F_4
DRAM_RST
CLKTESTA
CLKTESTB

C958 *0.1U/10V_4
C959 *0.1U/10V_4
C960 *51.1/F_4
C961 *51.1/F_4

Place all these components very close to GPU (Within 25mm) and keep all component close to each Other (within 5mm) except Rser2

DRAM_RST — R859 10_4 (R2) — R860 51/F_4 (R3) — MEM_RST 21

R1 R861 5.1K/F_4
C1 C962 120P/50V_4

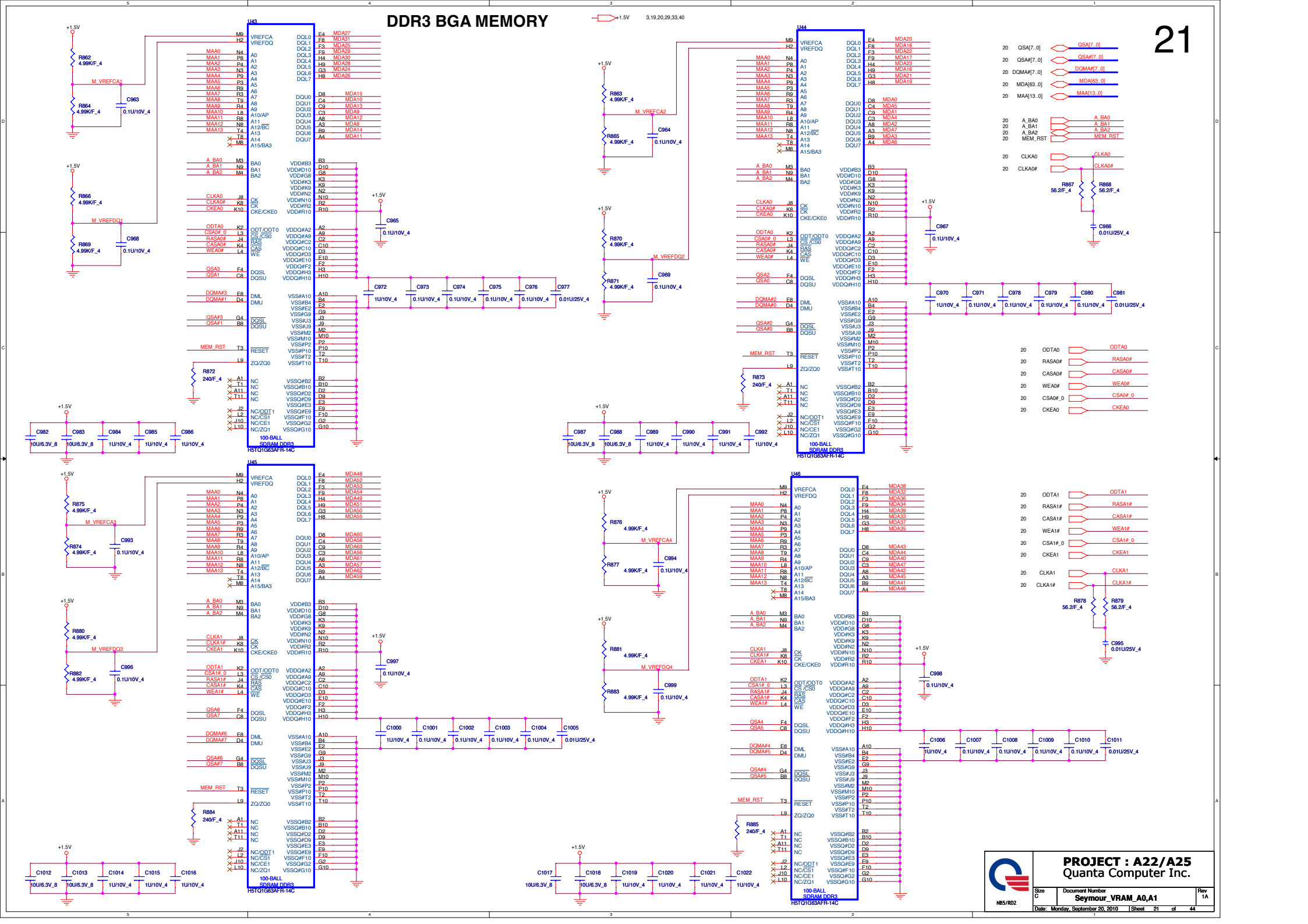
NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Seymour_MEM_Interface	1A

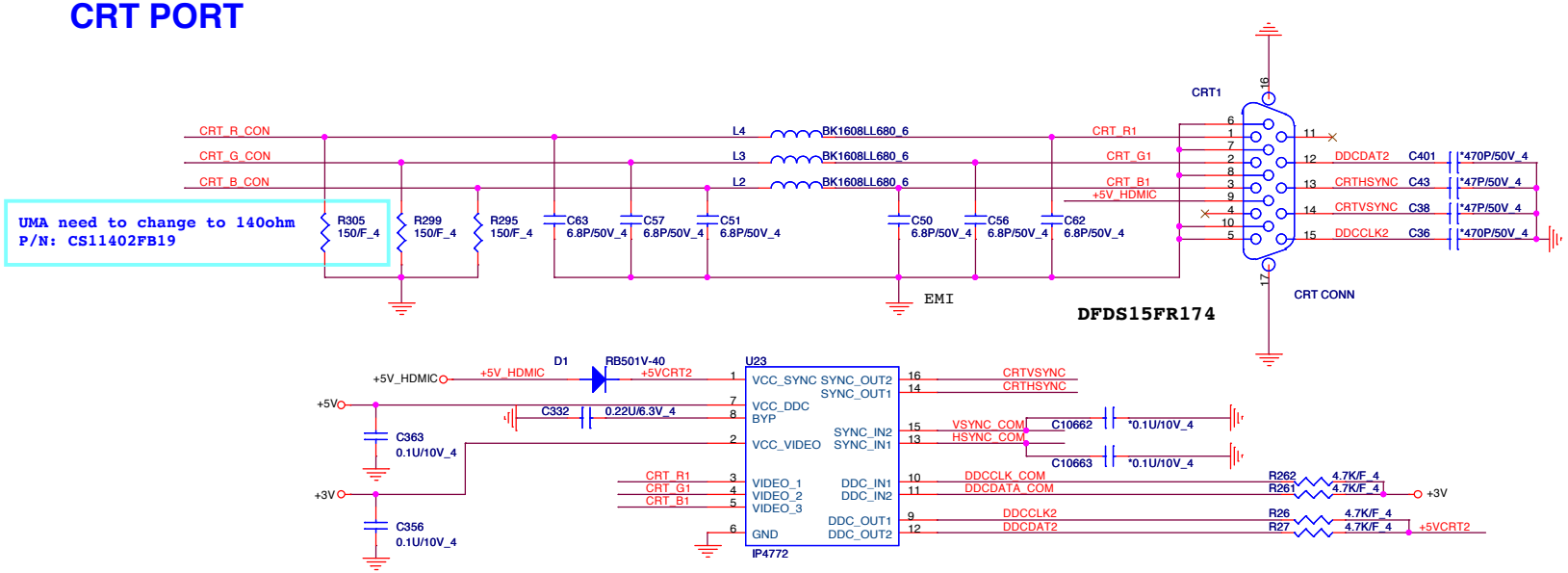
Date: Monday, September 20, 2010 | Sheet 20 of 44

DDR3 BGA MEMORY

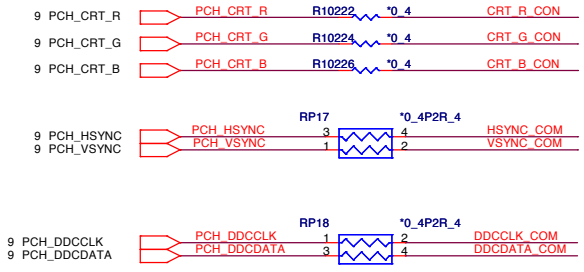


PROJECT : A22/A25
Quanta Computer Inc.
NB5/RD2
Size C
Document Number Seymour_VRAM_A0,A1
Rev 1A
Date: Monday, September 20, 2010
Sheet 21 of 44

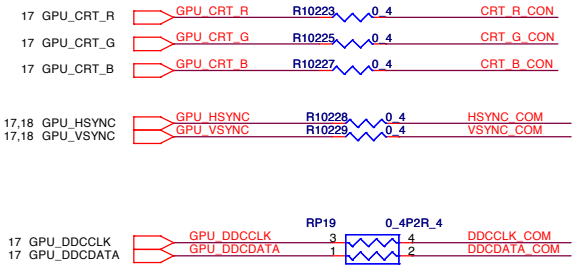
CRT PORT



Stuff for UMA only



Stuff for DIS ONLY

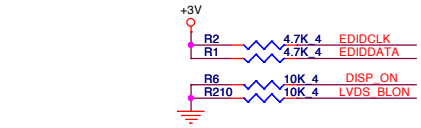


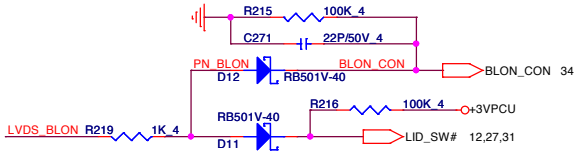
PROJECT : A22/A25
Quanta Computer Inc.

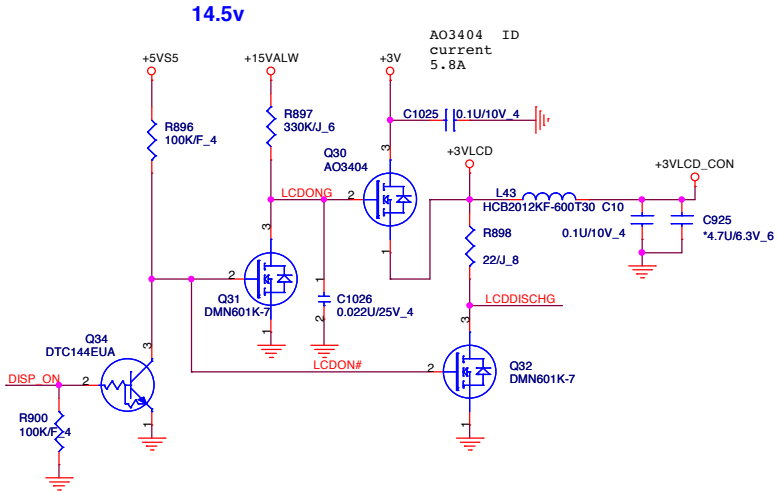
Size	Document Number	Rev
Custom	CRT	1A

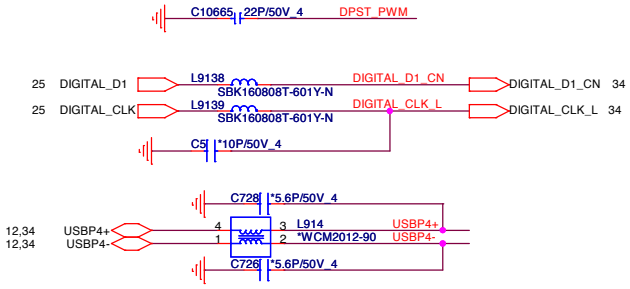
Date: Monday, September 20, 2010 Sheet 22 of 44

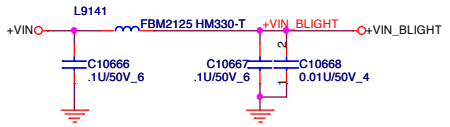
NB5/RD2

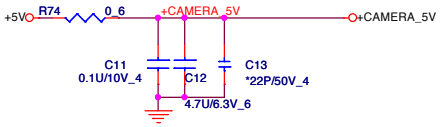


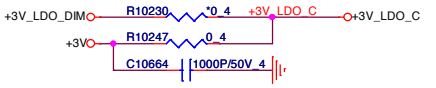








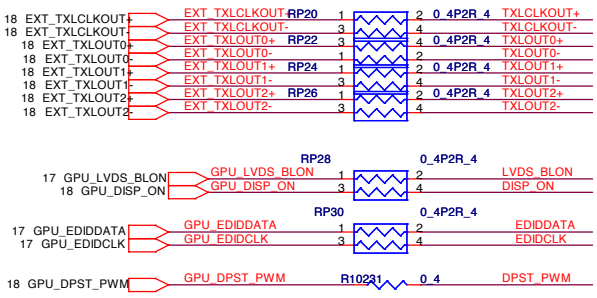




LVDS option

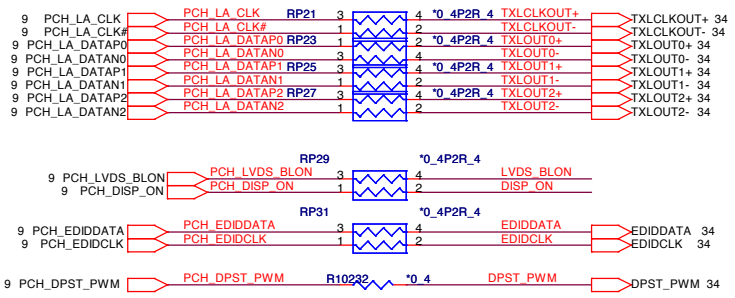
FOR DIS ONLY

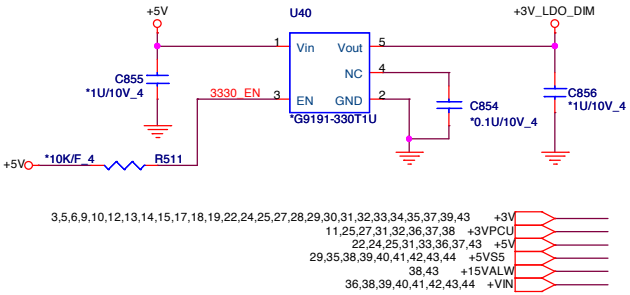
OPTION SIGNAL FROM NB to LVDS for UMA



FOR UMA ONLY

OPTION SIGNAL FROM NB to LVDS for UMA





NB5/RD2

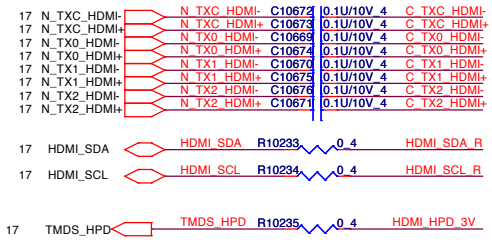
PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LVDS/LID/DMIC	1A

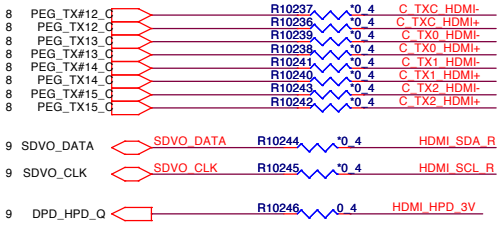
Date: Monday, September 20, 2010 | Sheet 23 of 44

HDMI PORT

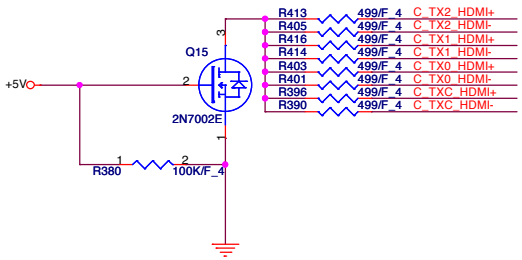
DIS HDMI

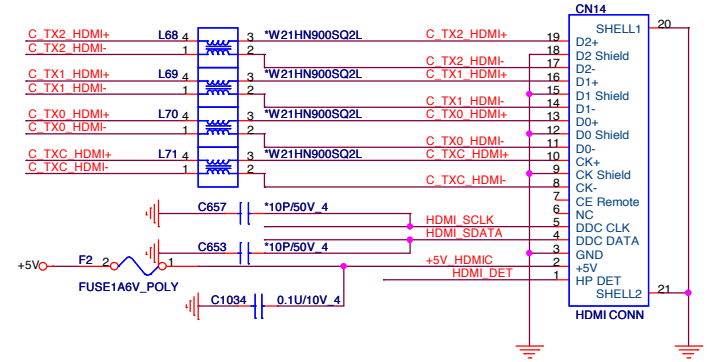


UMA ONLY HDMI

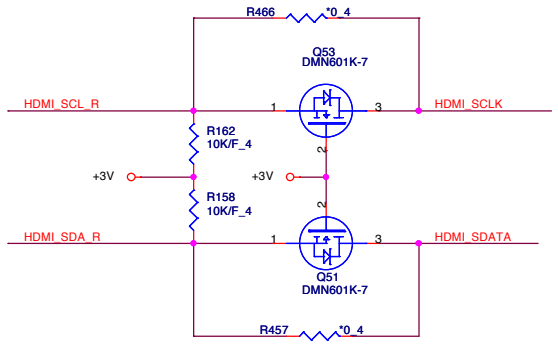


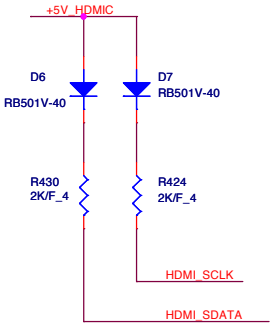
UMA	715R:CS17152FB17
DIS	499R:CS14992FB24

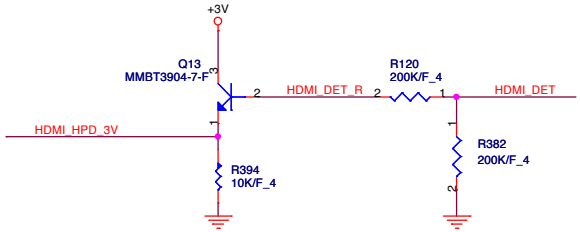


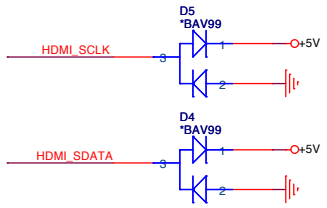


DFHS19FR043









22,23,25,31,33,36,37,43 +5V

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	HDMI Conn	1A

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PORT	PLACE TO
MONO_OUT	X
PORT A	X
PORT B	HP OUT
PORT C	External MIC
PORT D	Internal Speckers

Close to CODEC

Close to CODEC

ALL CAPS CONNECTED TO THE 92HD88
SHOULD BE X7R OR X5R--NO Y5V

>40mils trace

HDA Bus

TO Digital MIC

IDT recommand

IDT 92HD88 EAPD LOW--mute
HI--enable AMP

SENSE_A -->EXT MIC/Headphone out

TO Headphone Jack

TO External MIC Jack

TO External Speaker

	Sense A	SenseB
39.2K	PortA	NA
20K	PortB	PortF
10K	PortC	

+3VPCU	11,23,27,31,32,36,37,38
+5V	22,23,24,31,33,36,37,43
+3V	3,5,6,9,10,12,13,14,15,17,18,19,22,23,24,27,28,29,30,31,32,33,34,35,37,39,43

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	IDT92HD87	1A

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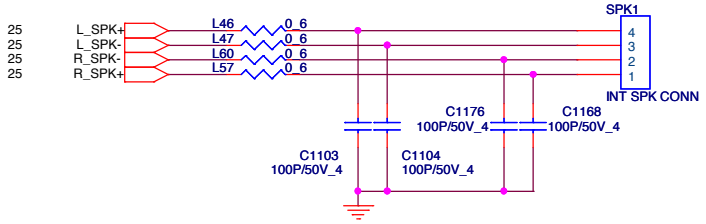
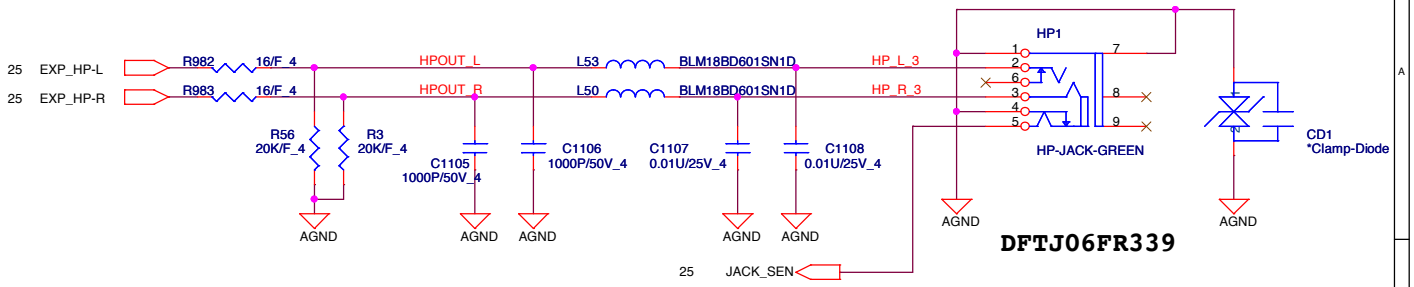
NB5/RD2

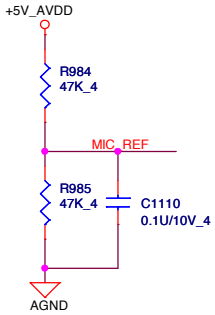
INT. SPEAKER



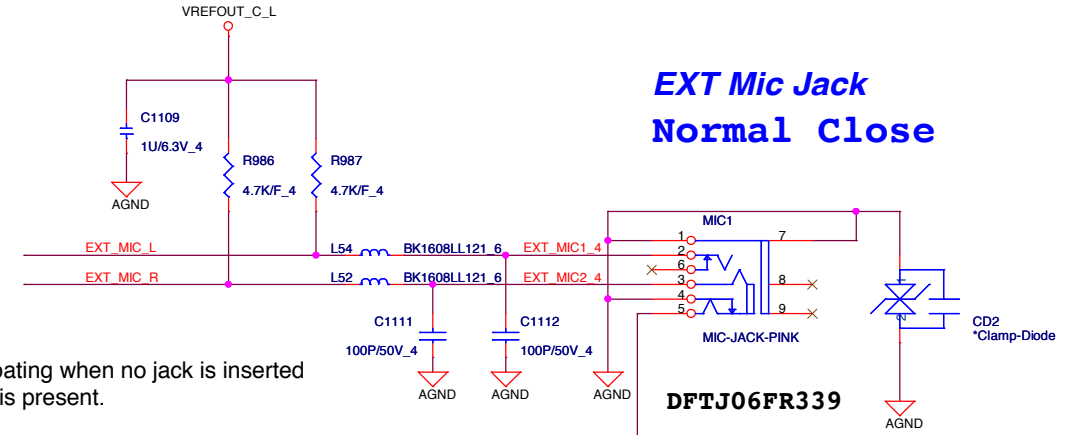
Headphone Jack Normal Close



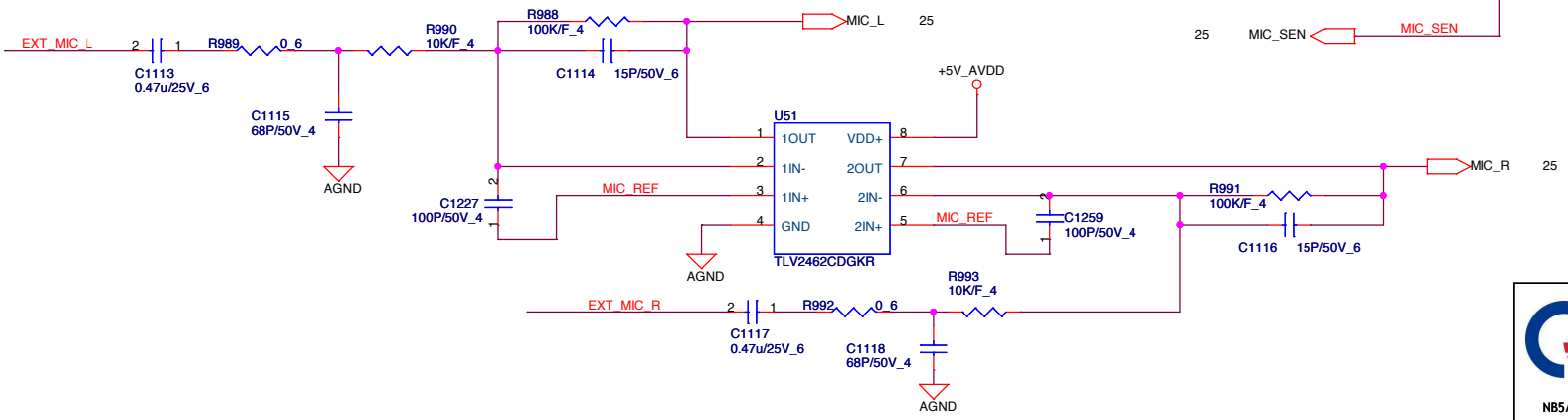
Note: JACK_SEN# is electrically floating when no jack is inserted and shorted to ground when jack is present.



EXT Mic Jack Normal Close



Note: MIC_SEN# is electrically floating when no jack is inserted and shorted to ground when jack is present.

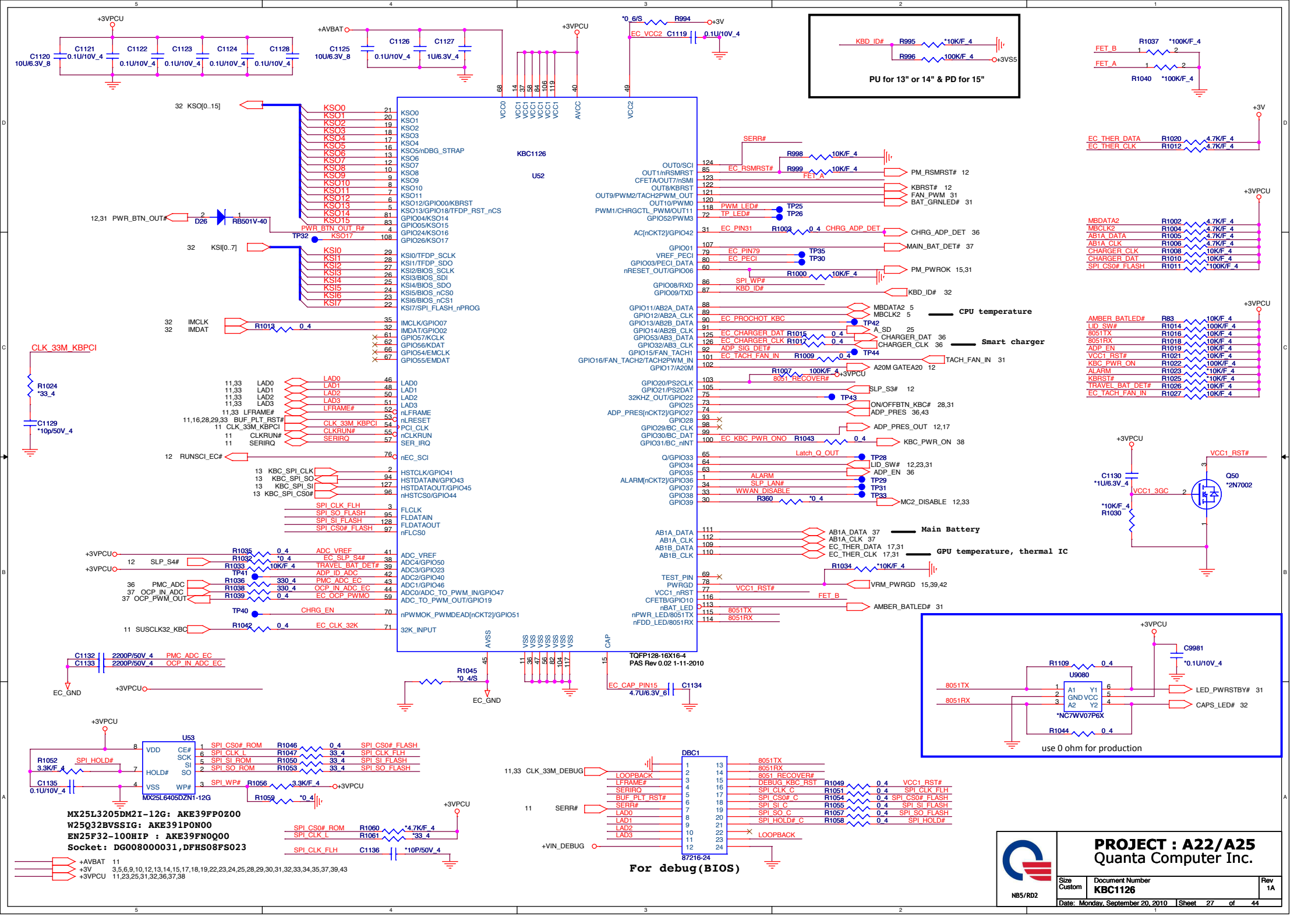


NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
B	HP/MIC/SPK	1A

Date: Monday, September 20, 2010 Sheet 26 of 44


KBC1126
U52
TQFP128-16X16-4
PAS Rev 0.02 1-11-2010
PU for 13" or 14" & PD for 15"
CPU temperature
Smart charger
Main Battery
GPU temperature, thermal IC
use 0 ohm for production
MX25L3205DM2I-12G: AKE39FP0Z00
W25Q32BVSSIG: AKE391P0N00
EN25F32-100HIP : AKE39FN0Q00
Socket: DG008000031,DFHS08FS023
For debug(BIOS)
PROJECT : A22/A25
Quanta Computer Inc.
NB5/RD2
Size Custom
Document Number KBC1126
Rev 1A
Date: Monday, September 20, 2010
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+3VLANVCC trace 60mils

+3VLANVCC

C1137 0.1U/10V_4 C1138 0.1U/10V_4 C1139 0.1U/10V_4 C1140 0.1U/10V_4

For EMI 0 ~ 22 ohm

LAN_25MHZO R1063 10_4 LAN_XTAL1

Y6 25MHZ

LAN_XTAL2

C1141 27P/50V_4 C1142 27P/50V_4

L52 , C1145 , C1150 , C1146 close to U54 pin36

+1.05V_LAN_O

4.7UH ,20%,0.75A,NR3010T4R7M
CV-4708MN02

L56 NR3010T4R7M

+1.05V trace 60mils

+1.05V_LAN

C1150 22U/6.3V_8

C1145 4.7U/6.3V_6

C1146 0.1U/10V_4 C1147 0.1U/10V_4 C1148 0.1U/10V_4 C1149 0.1U/10V_4 C1174 0.1U/10V_4

Trace<30 mil
Width > 60 mil

+1.05V_LAN

+1.05V trace 60mils

C1153 0.1U/10V_4 C1154 0.1U/10V_4 C1155 1U/10V_4 C1156 0.1U/10V_4

C1155 and C1156 Close to Pin 21

+1.05V_LAN +3VLANVCC +1.05V_LAN

R1062 2.49K/F_4 LANRSET

+3VLANVCC

GND VIA x 9 Pcs

LAN_XTAL2 LAN_XTAL1

LAN_TX#

LAN_GPIOS R1064 *1K/F_4 +3VLANVCC DSM# 12

LAN_GLINK100#

U54

+1.05V_LAN_O +3VLANVCC

+1.05V_LAN

MDI0+ MDI0- MDI1+ MDI1- MDI2+ MDI2- MDI3+ MDI3-

+3VLANVCC

RTL8111E-VB-GR

SROUT1 VDDSR VDDSR ENSR EEDI/SDA LED3/EDO EECS/SCL DVDD1 LANWAKEB VDD3 ISOLATEB PERSTP

LAN_EDI_SDA R1065 10K/F_4 +3VLANVCC
LAN_GLINK1000# LAN_ECS_SCL R1066 10K/F_4
PCIE_WAKE# +1.05V_LAN
+3VLANVCC
ISOLATEB
BUF_PLT_RST# 11,16,27,29,33

PCIE_WAKE# 12,29,33

1000 : AL008111002
10/100 : AL008105002

+1.05V_LAN

Only RTL8111E stuff

R1067 10K/F_4 LAN_SMBDAT

LAN_REQ#

PCIE_RXN1_LAN_L C1151 0.1U/10V_4 PCIE_RXN0 8
PCIE_RXP1_LAN_L C1152 0.1U/10V_4 PCIE_RXP0 8

+1.05V_LAN

8 PCIE_TXP0
8 PCIE_TXN0
11 PCIE_LAN_CLKP
11 PCIE_LAN_CLKN

+3VLANVCC

R172 10K/F_4

Q18 DMN601K-7

12 LAN_CLKREQ# LAN_REQ#

*0_4

+3VLANVCC

C1143 4.7U/6.3V_6 C1144 0.1U/10V_4

Close to Pin 35/34

C6 1U/10V_4 C8 0.1U/10V_4 LAN_AGND

C7 1U/10V_4 C9 0.1U/10V_4 LAN_AGND

+3V

R1069 1K/F_4

ISOLATEB R1070 *100/F_4 LP_EN# 12

D31 *RB501V-40

R1071 15K/F_4

+3VLANVCC

R505 10K/F_4 SUSON 12,29,40

C14 0.1U/10V_4 R171

Q63 2N7002E

PCIE_WAKE# D33 RB501V-40 ON/OFFBTN_KBC# 27,31

Q64 2N7002E

Transformer for 10/100/1000

1000 : NS892402 DB0AT9LAN05
10/100 : NS892404 DBED2LLAN05

U55

TRA_V_DAC

TCT1 TD1+ TD1- TCT2 TD2+ TD2- TCT3 TD3+ TD3- TCT4 TD4+ TD4-
MCT1 MX1+ MX1- MCT2 MX2+ MX2- MCT3 MX3+ MX3- MCT4 MX4+ MX4-

MDI3- MDI3+ MDI2- MDI2+ MDI1- MDI1+ MDI0- MDI0+

LAN_MCTG0 R1073 75/F_4
LAN_MX3- LAN_MX3+
LAN_MCTG1 R1074 75/F_4
LAN_MX2- LAN_MX2+
LAN_MCTG2 R1076 75/F_4
LAN_MX1- LAN_MX1+
LAN_MCTG3 R1077 75/F_4
LAN_MX0- LAN_MX0+

LAN_MCTG

C1159 1000P/3KV_1808

C1160 0.01U/25V_4

NS892402

LAN_AGND

Lan Connector

RJ1

+3VLANVCC R1075 330_4 C1158 *0.1U/10V_4

LAN_GLED# LAN_GLED

LED_GRE_P LED_GRE_N

LAN_MX3- LAN_MX3+ LAN_MX1- LAN_MX2- LAN_MX2+ LAN_MX1+ LAN_MX0- LAN_MX0+

RX1- RX1+ RX0- TX1- TX1+ RX0+ TX0- TX0+

FOR EMI

GND1 GND

+3VLANVCC R1078 330_4

LAN_TX# LAN_YLED

LED_AMR_P LED_AMR_N

C1161 *0.1U/10V_4

RJ45_CONN

DFTJ12FR181

LAN_AGND

LAN_GLINK1000# D32 *RB501V-40

LAN_GLINK100# D25 RB501V-40 LAN_GLED#

C1157 *0.01U/25V_4

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LAN RTL8111/RJ45	1A

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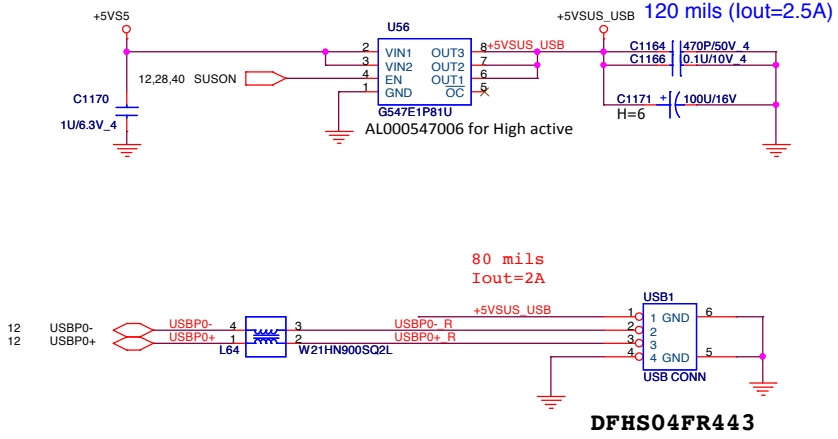
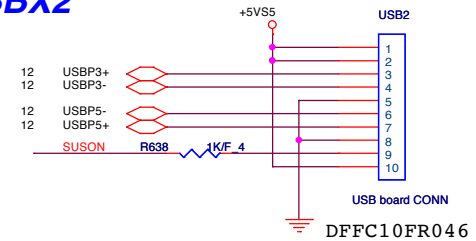
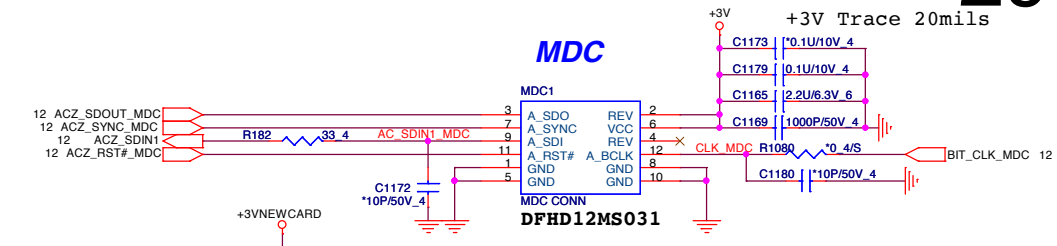
LEFT SIDE USBX1

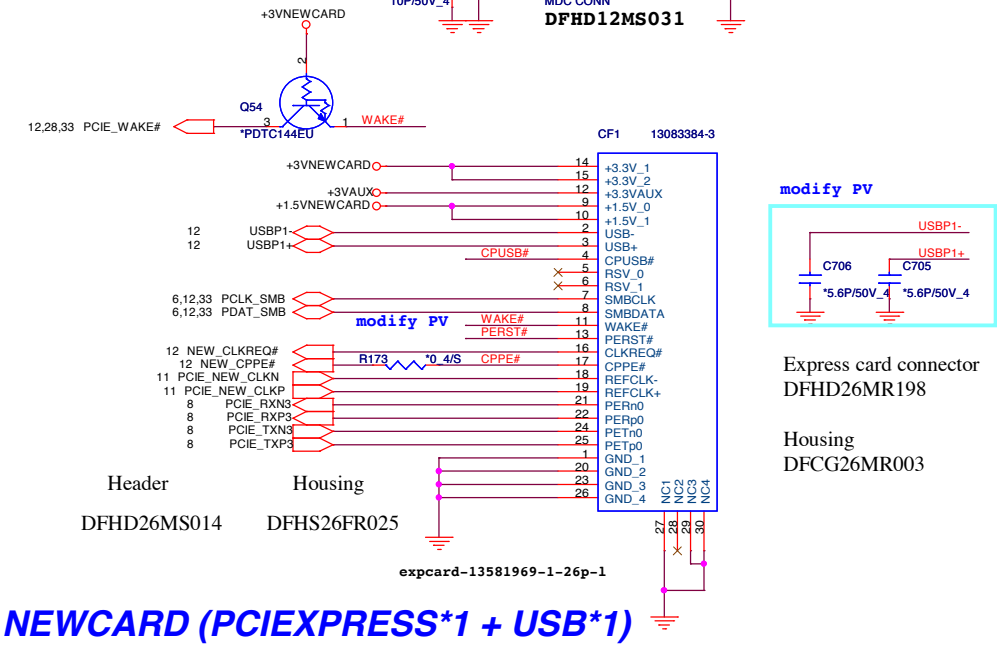


RIGHT SIDE USBX2



Modem CONN

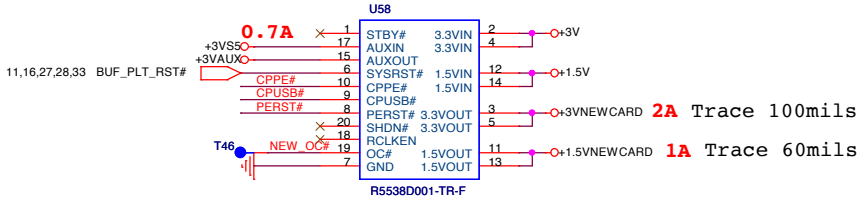


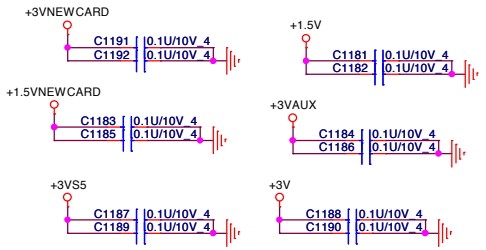


Express card connector
DFHD26MR198

Housing
DFCG26MR003

NEWCARD (PCIEXPRESS*1 + USB*1)





22,23,24,25,31,33,36,37,43 +5V
23,35,38,39,40,41,42,43,44 +5VS5
3,5,6,9,10,12,13,14,15,17,18,19,22,23,24,25,27,28,30,31,32,33,34,35,37,39,43 +3V

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	USB/ESATA/MDC/NEW CARD	1A

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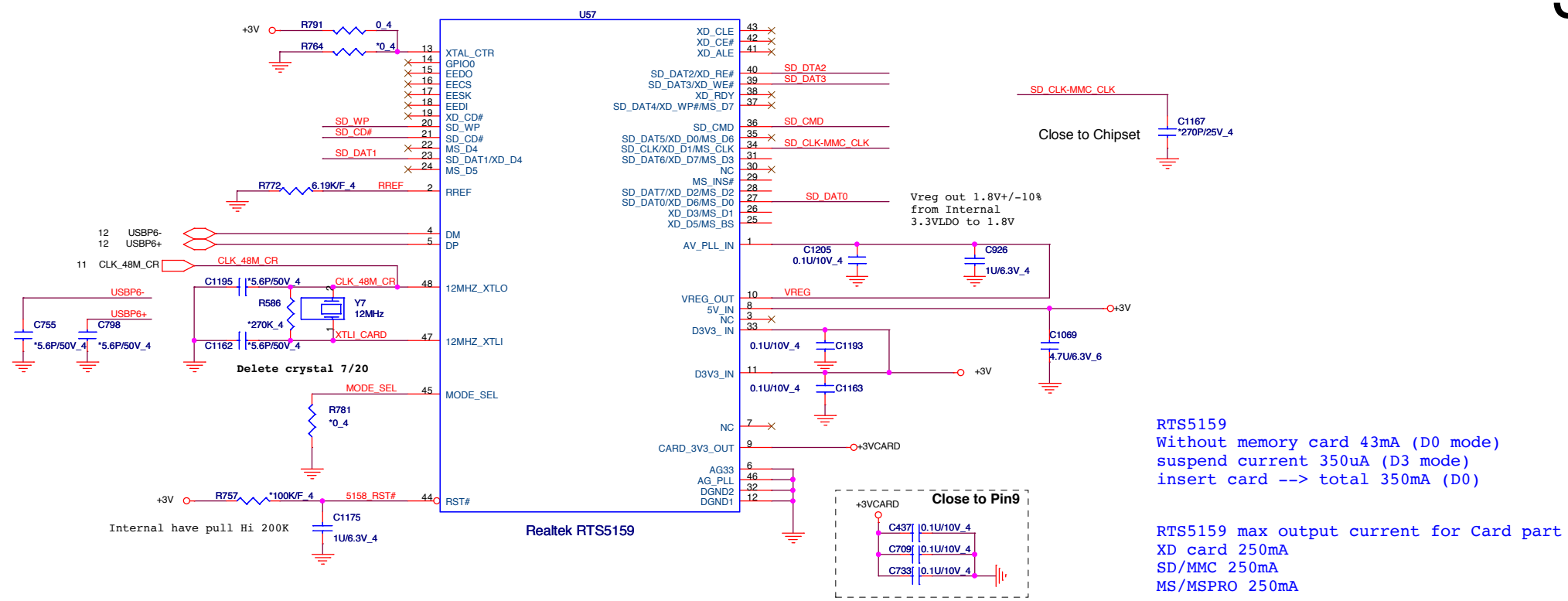
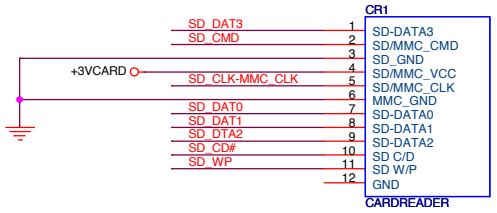


SD / MMC
CARD READER



DFHD11MR005

+3V 3,5,6,9,10,12,13,14,15,17,18,19,22,23,24,25,27,28,29,31,32,33,34,35,37,39,43

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	RTS5159 &CR SOCKET	1A

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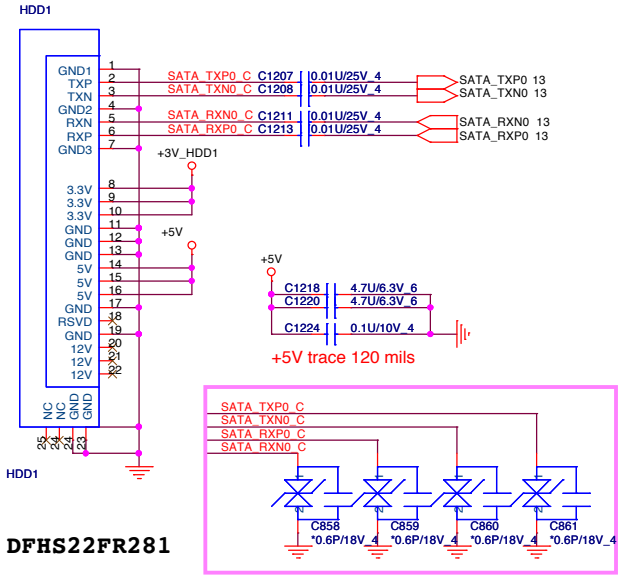
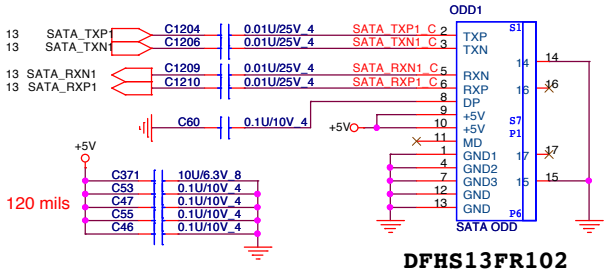
SATA HDD CONNECTOR



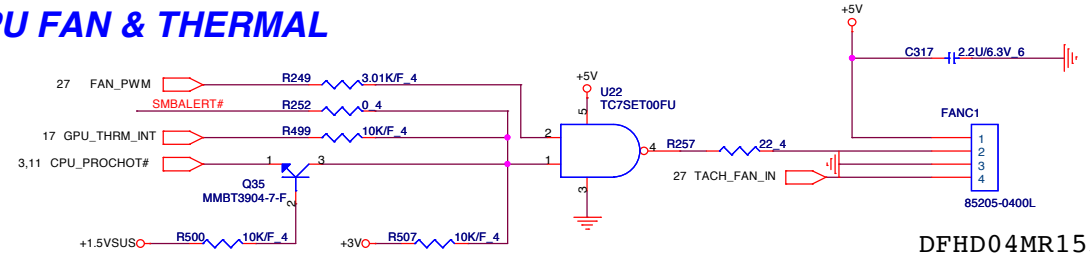
DFHS22FR281

SATA CD-ROM

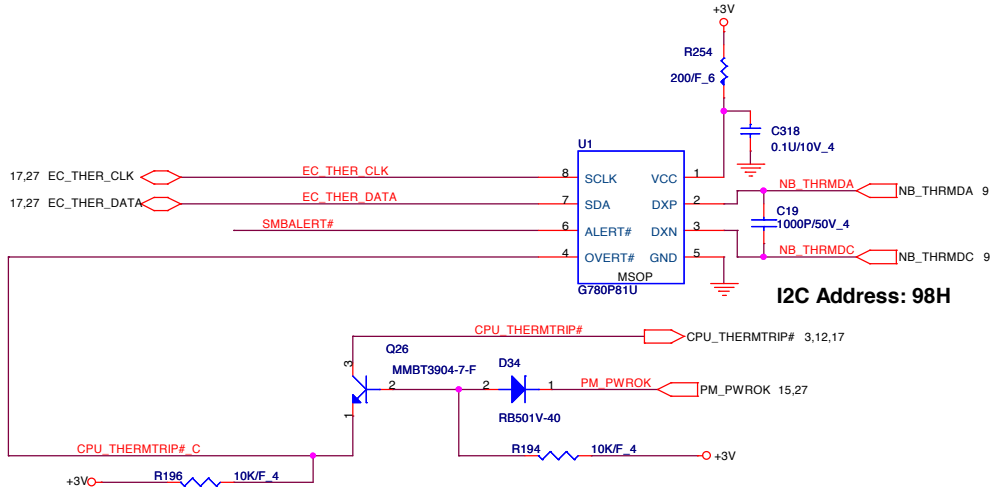


DFHS13FR102

CPU FAN & THERMAL

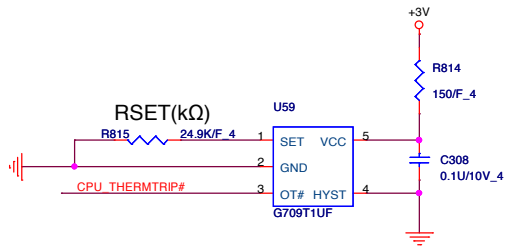


DFHD04MR155

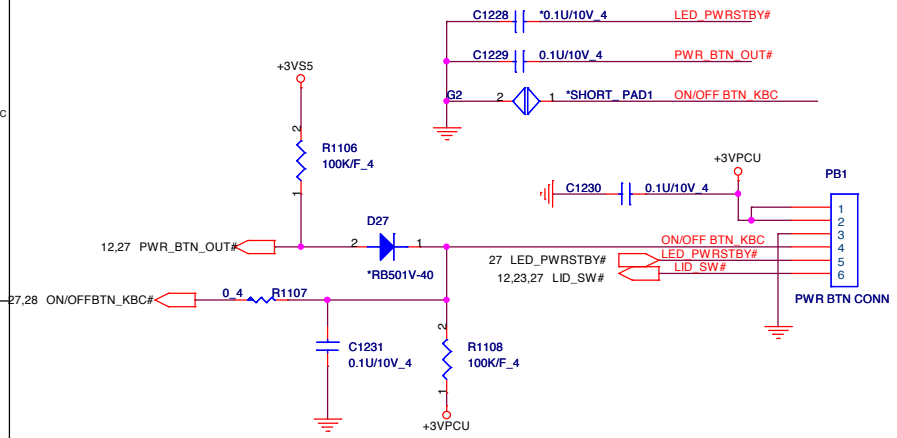


THERM SHUTDOWN AT 85°

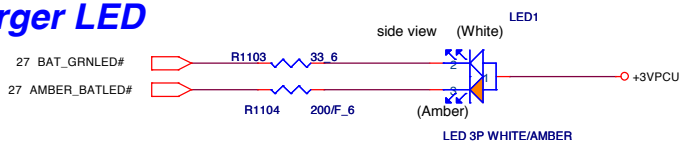
Rset (K ohm) = $0.0012T^2 - 0.9308T + 96.147$



POWER BOTTON CONNECT



Charger LED



3,5,6,9,10,12,13,14,15,17,18,19,22,23,24,25,27,28,29,30,32,33,34,35,37,39,43 +3V
11,23,25,27,32,36,37,38 +3VPCU
5,11,12,13,14,15,27,29,35,38,39,41,42,43,44 +3VS5
22,23,24,25,33,36,37,43 +5V
23,38,43 +15VALW

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	HDD/ODD/GSENSOR/FAN	1A

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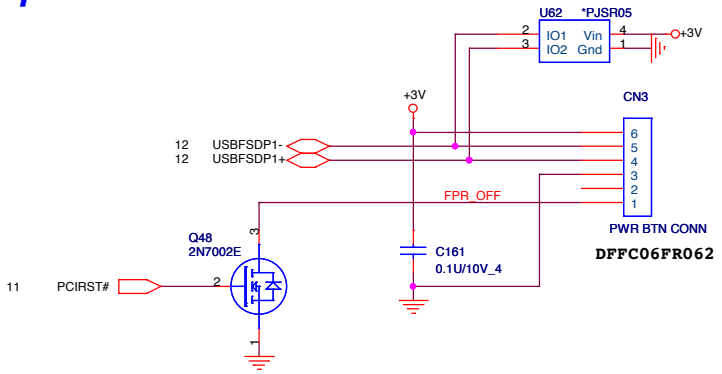
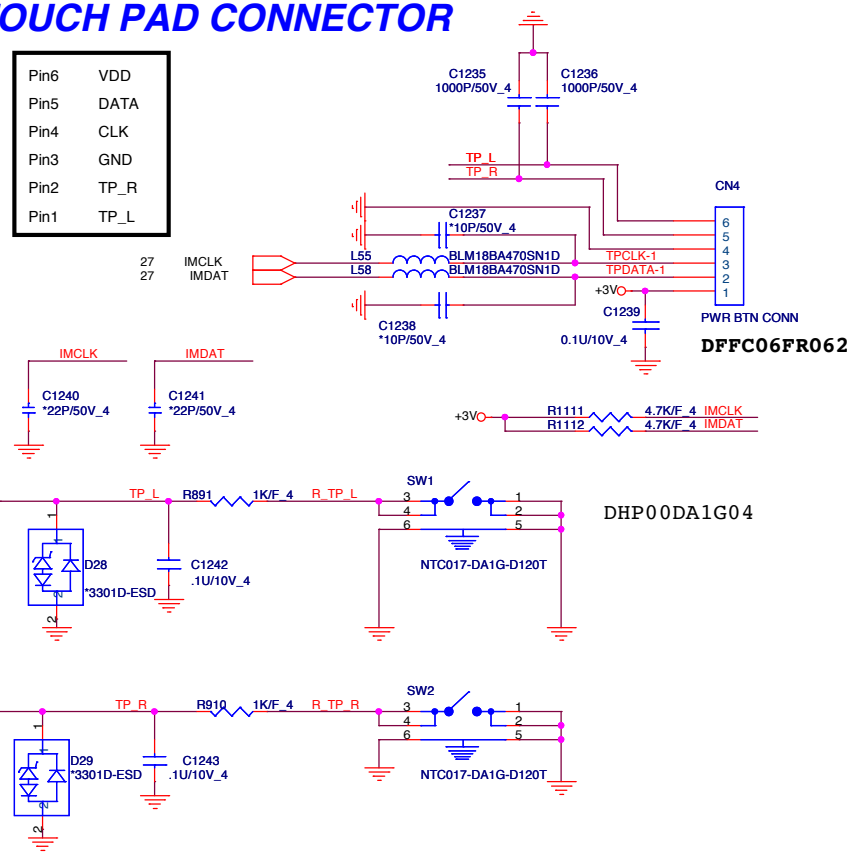
USB fingerprint CON



TOUCH PAD CONNECTOR

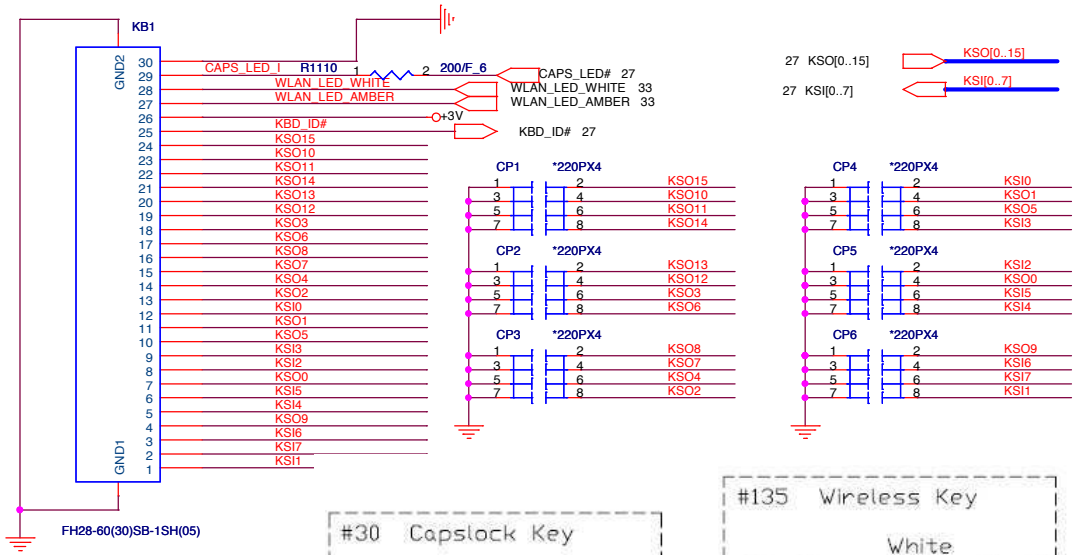
Pin6	VDD
Pin5	DATA
Pin4	CLK
Pin3	GND
Pin2	TP_R
Pin1	TP_L

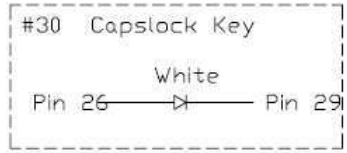


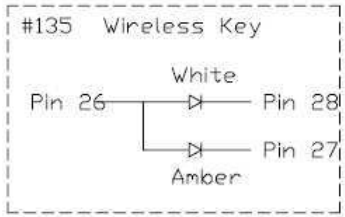
DHP00DA1G04

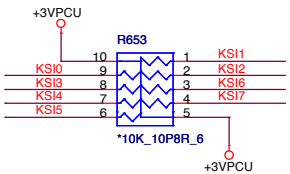
KEYBOARD CONNECTOR.

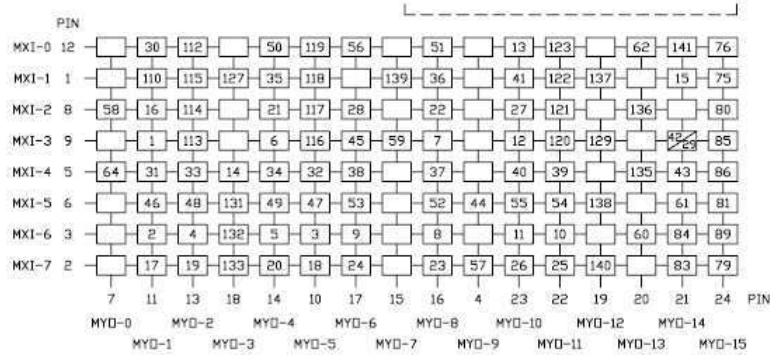
KEYBOARD CONNECTOR.











11,23,25,27,31,36,37,38 +3VPCU
22,23,24,25,31,33,36,37,43 +5V
3,5,6,9,10,12,13,14,15,17,18,19,22,23,24,25,27,28,29,30,31,33,34,35,37,39,43 +3V

NB5/RD2

PROJECT : A22/A25
Quanta Computer Inc.

Size	Document Number	Rev
Custom	BT/FP/TP/KB/LED	1A

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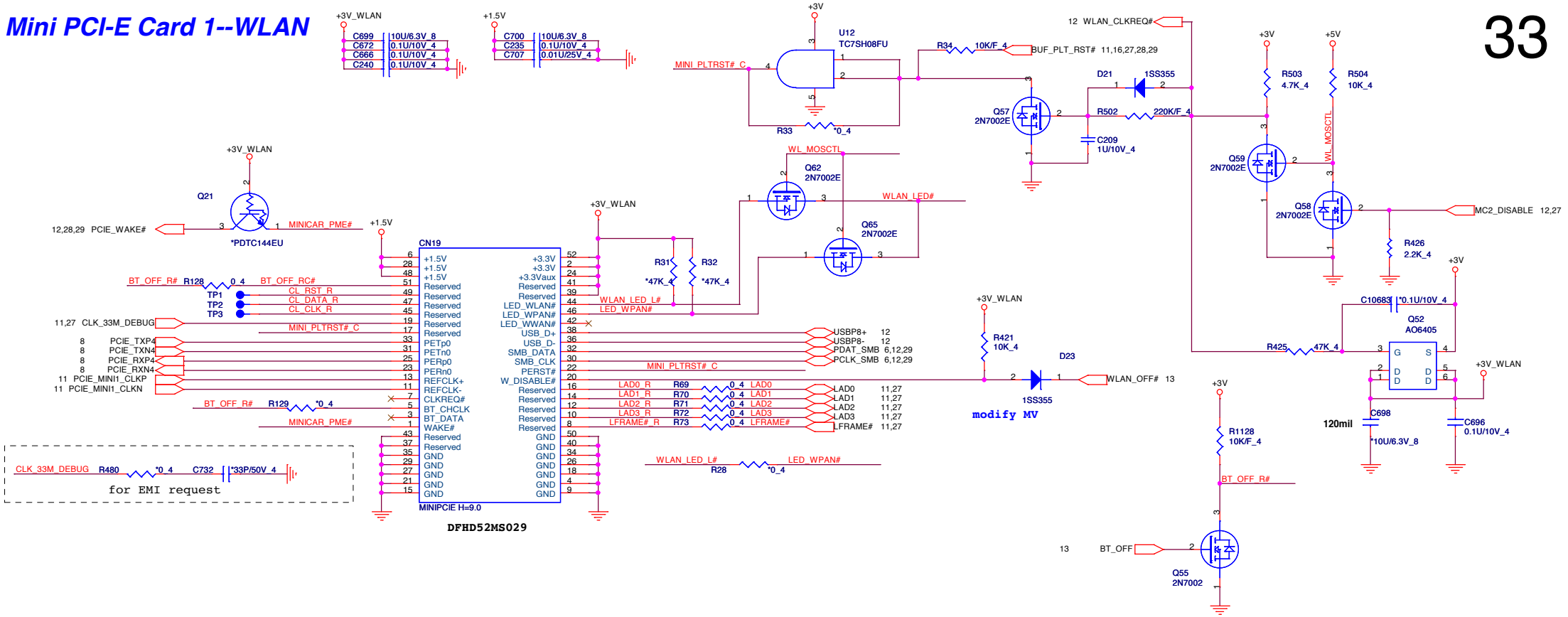
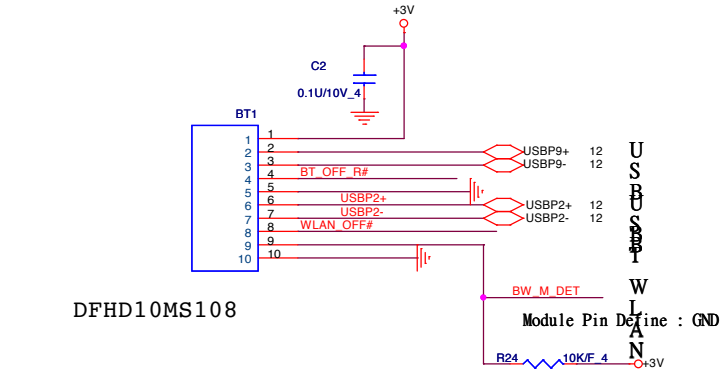
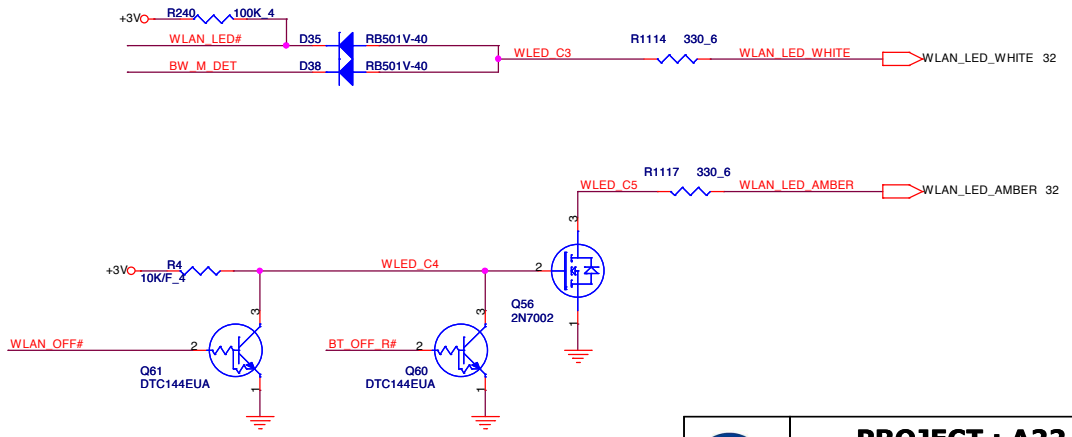
Mini PCI-E Card 1--WLAN



BT+WLAN





NB5/RD2	**PROJECT : A22/A25** Quanta Computer Inc.	
Size: Custom	Document Number: WLAN/ BT+WiFi	Rev: 1A
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For 14"

MDC NB(U5)

H1 h-c217d59pt
H3 h-c217d59pt
H2 h-c217d59pt
H4 h-c217d59pt

CPU

H8 *H-TC197I201BC299D150P2
H14 *h-tc315bsd118p2
H18 *h-c315d118p2
H22 *H-TC315BC275D118P2
H9 *H-TC197I201BC299D150P2
H16 *h-c315d118p2
H19 *h-c354d118p2
H23 *h-tsbsd118p2
H7 *H-C315D118P2
H32 *H-C217D91PT
H17 *H-C197D157PB
H24 *H-C217D91PT
H21 *H-C217D91PT
H31 *H-C217D91PT

VGA

H25 h-c217d59pt
H11 *H-TC197I201BC299D150P2
H10 *H-TC197I201BC299D150P2
H6 *H-C315D118P2
H15 *h-c315d118p2
H20 *h-c315d118p2

LVDS1

+3VLCD_CON		1
+3V		3
+3V_LDO_C		4
23 EDIDCLK	EDIDCLK	5
23 EDIDDATA	EDIDDATA	6
+CAMERA_5V		7
23 DPST_PWM	DPST_PWM	9
23 BLON_CON	BLON_CON	10
+VIN_BLIGHT	+VIN_BLIGHT	11
12 CAMERA_ON	CAMERA_ON	13
23 DIGITAL_D1_CN	DIGITAL_D1_CN	14
23 DIGITAL_CLK_L	DIGITAL_CLK_L	15
23 TXLOUT0-	TXLOUT0-	16
23 TXLOUT0+	TXLOUT0+	17
23 TXLOUT1-	TXLOUT1-	19
23 TXLOUT1+	TXLOUT1+	20
23 TXLOUT2-	TXLOUT2-	22
23 TXLOUT2+	TXLOUT2+	23
23 TXLCLKOUT-	TXLCLKOUT-	25
23 TXLCLKOUT+	TXLCLKOUT+	26
12,23 USBP4-	USBP4-	28
12,23 USBP4+	USBP4+	29

Connector-LVDS CN

DFWF30MR002

For 15"

MDC NB(U5)

H26 h-c217d59p2
H30 h-c217d59pt
H27 h-c217d59p2
H29 h-c217d59pt

CPU

H38 *H-TC197I201BC299D150P2
H39 *H-TC197I201BC299D150P2
H36 *H-TC197I201BC299D150P2
H55 *Spad-s197
H74 *Spad-pad-3np
H34 *h-c276d276n
H42 *h-c315d118p2
H35 *h-c315d118p2
H50 *h-c315i158d118p2
H60 *h-o217x138d138x59p2
H51 *h-e541x315d118p2
H47 *h-tc217bc315d118p2
H53 *h-c157d79p2
H43 *h-c315d118p2
H44 *emipadc217np
H56 *Spad-s197
H49 *h-c315d118p2
H52 *h-a16-1
H46 *h-c315d118p2
H45 *h-tc315bsd118p2
H69 *Spad-s197
H59 *emipad1181x472np
H62 *Spad-s197
H54 *h-c217d91p2
H67 *Spad-s197
H63 *Spad-s197
H65 *Spad-pad-1np
H61 *Spad-s197
H68 *Spad-s197
H37 *H-TC197I201BC299D150P2
H64 *Spad-s197
H72 *Spad-s197
H71 *Spad-pad-2np
H33 *H-C217D91PT
H48 *H-C217D91PT
H66 *H-C217D91PT
H70 *H-C217D91PT
H75 *Emipadr236x118np
H76 *Emipadc177np

WLAN

H41 *emipadc217np
H40 *emipadc217np
H73 *emipadc217np

VGA

H28 h-c217d59pt
H58 *emipad315x197np
H57 *emipad315x197np

LVDS2

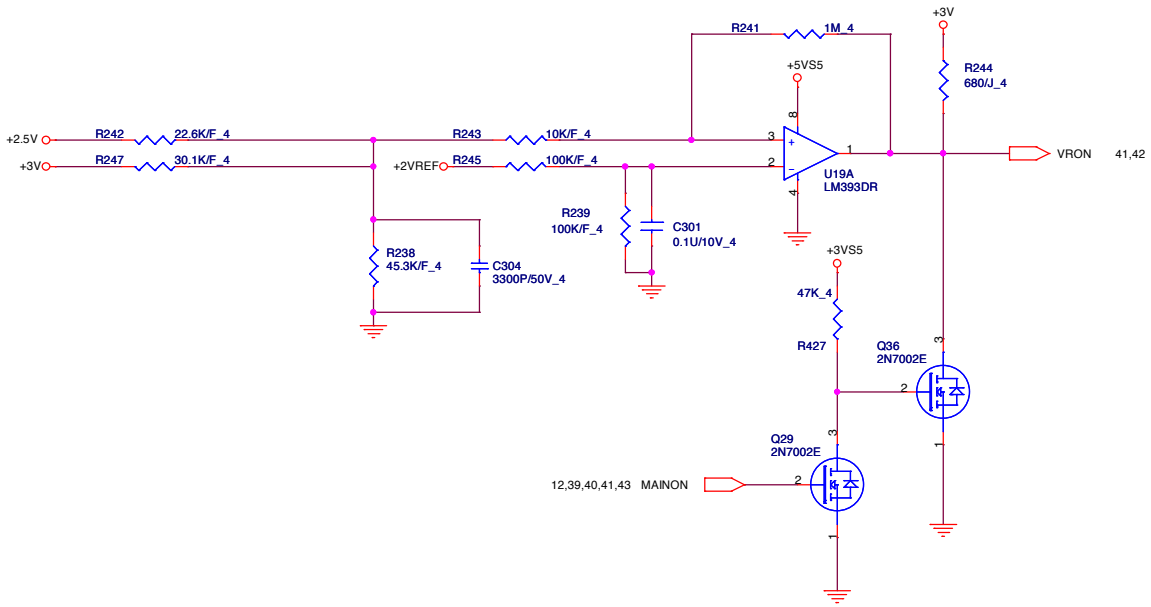
+3VLCD_CON		1
+3V		3
23 EDIDCLK	EDIDCLK	4
23 EDIDDATA	EDIDDATA	5
23 TXLOUT0-	TXLOUT0-	7
23 TXLOUT0+	TXLOUT0+	8
23 TXLOUT1-	TXLOUT1-	10
23 TXLOUT1+	TXLOUT1+	11
23 TXLOUT2-	TXLOUT2-	13
23 TXLOUT2+	TXLOUT2+	14
23 TXLCLKOUT-	TXLCLKOUT-	16
23 TXLCLKOUT+	TXLCLKOUT+	17
+3V_LDO_C	+3V_LDO_C	23
+CAMERA_5V	+CAMERA_5V	24
12 CAMERA_ON	CAMERA_ON	26
23 DIGITAL_D1_CN	DIGITAL_D1_CN	28
23 DIGITAL_CLK_L	DIGITAL_CLK_L	29
12,23 USBP4-	USBP4-	31
12,23 USBP4+	USBP4+	32
23 DPST_PWM	DPST_PWM	34
23 BLON_CON	BLON_CON	35
+VIN_BLIGHT	+VIN_BLIGHT	36

GS12401-1011-9F

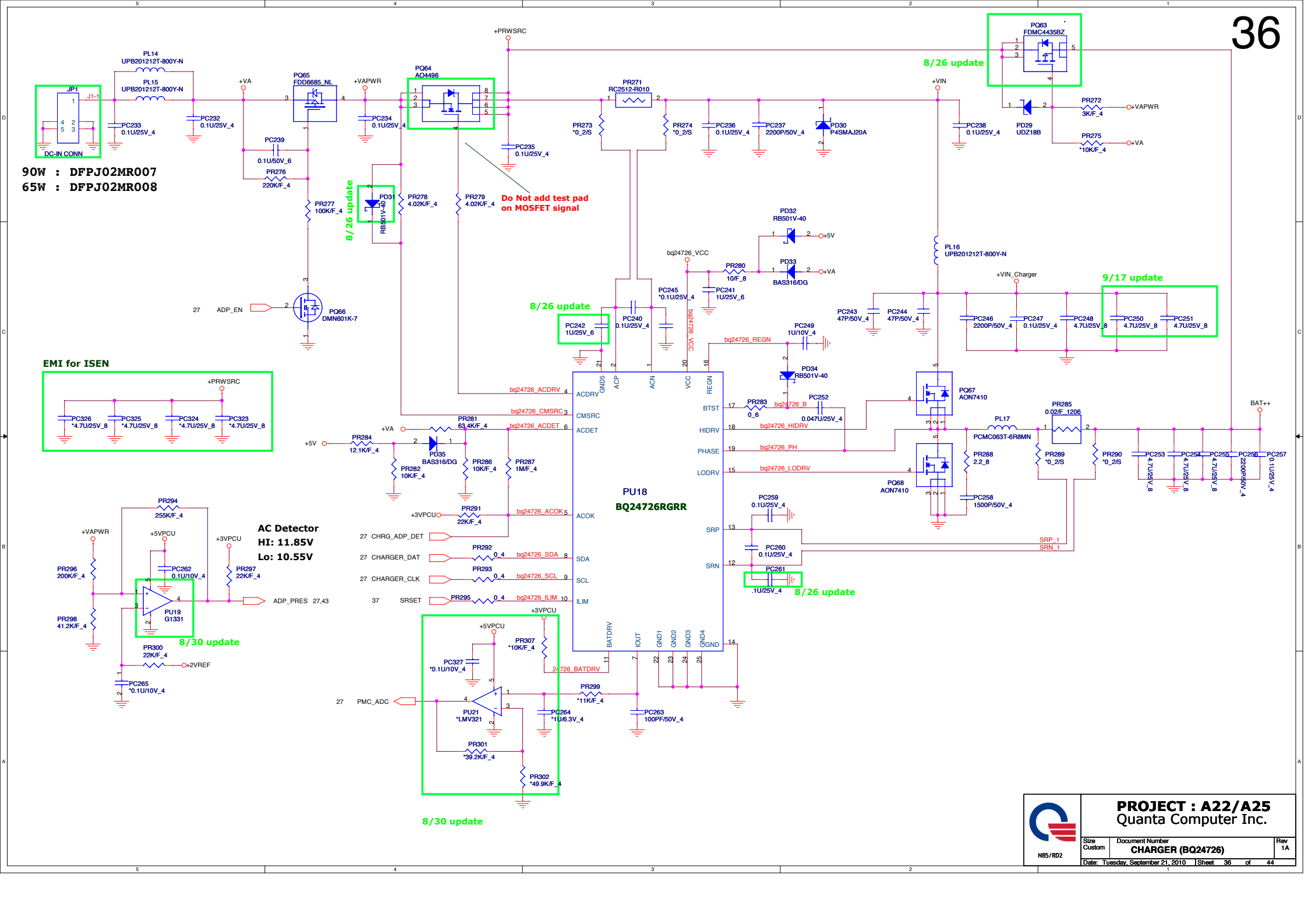
DFHS40FS030

PROJECT : A22/A25	
Quanta Computer Inc.	
Size: Custom	Document Number: Hole, Nuts
Rev: 1A	
Date: Monday, September 20, 2010	Sheet 34 of 44

NB5/RD2



NB5/RD2	**PROJECT : A22/A25** Quanta Computer Inc.	
Size: Custom	Document Number: **POWER Sequance**	Rev: 1A
Date: Monday, September 20, 2010	Sheet 35 of 44	


90W : DFPJ02MR007
65W : DFPJ02MR008
8/26 update
Do Not add test pad on MOSFET signal
9/17 update
EMI for ISEN
AC Detector
HI: 11.85V
Lo: 10.55V
8/30 update
PU18
BQ24726RGRR
PU19 G1331
PU21 *LMV321
DC-IN CONN
+PRWSRC
+VA
+VAPWR
+VIN
+VIN_Charger
+5V
+3VPCU
+5VPCU
+2VREF
bq24726_VCC
bq24726_REGN
ADP_EN
ADP_PRES 27,43
CHRG_ADP_DET
CHARGER_DAT
CHARGER_CLK
SRSET
PMC_ADC
BAT++
SRP_1
SRN_1
PROJECT : A22/A25
Quanta Computer Inc.
CHARGER (BQ24726)
N85/RD2
Size Custom
Rev 1A
Date: Tuesday, September 21, 2010
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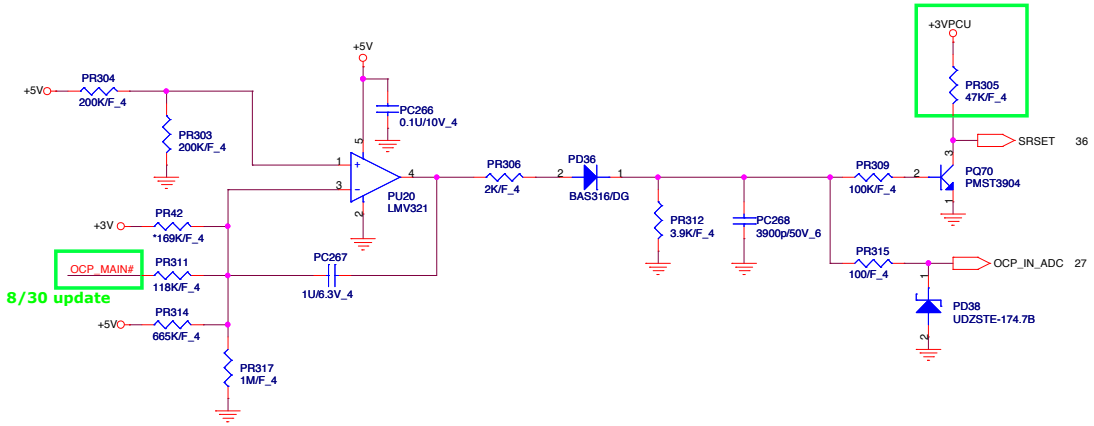
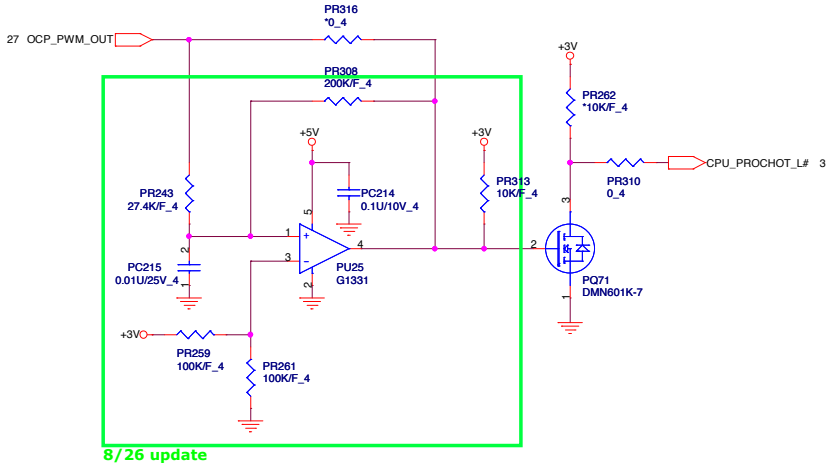
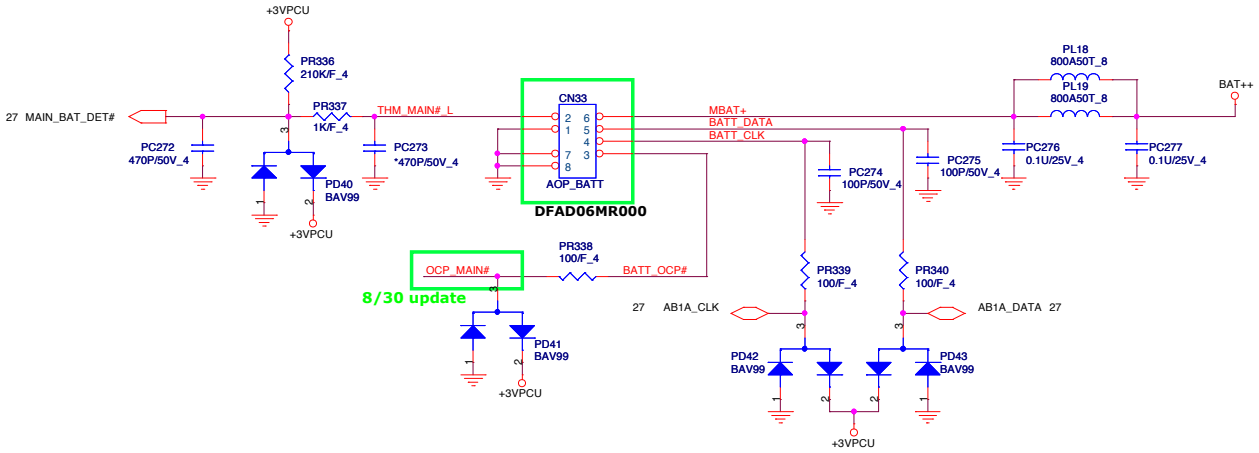
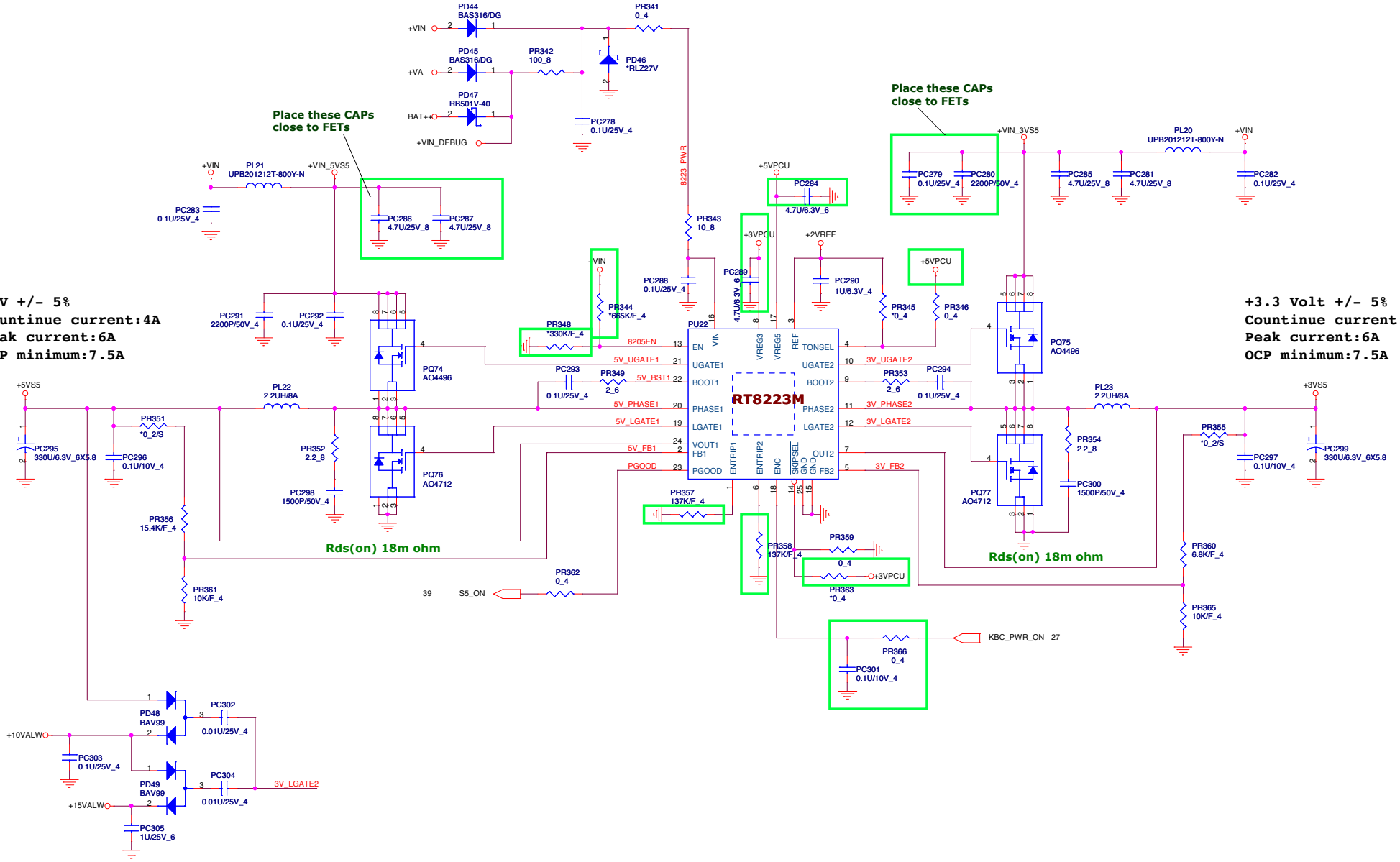






NB5/RD2	**PROJECT : A22/A25** Quanta Computer Inc.	
Size: Custom	Document Number: **CHARGER II**	Rev: 1A
Date: Tuesday, September 21, 2010	Sheet 37 of 44	

DC/DC +3VPCU/+5VPCU/+5VS5 /+3VS5



PROJECT : A22/A25
Quanta Computer Inc.

NB5/RD2

Size	Document Number	Rev
Custom	RT8223M	1A

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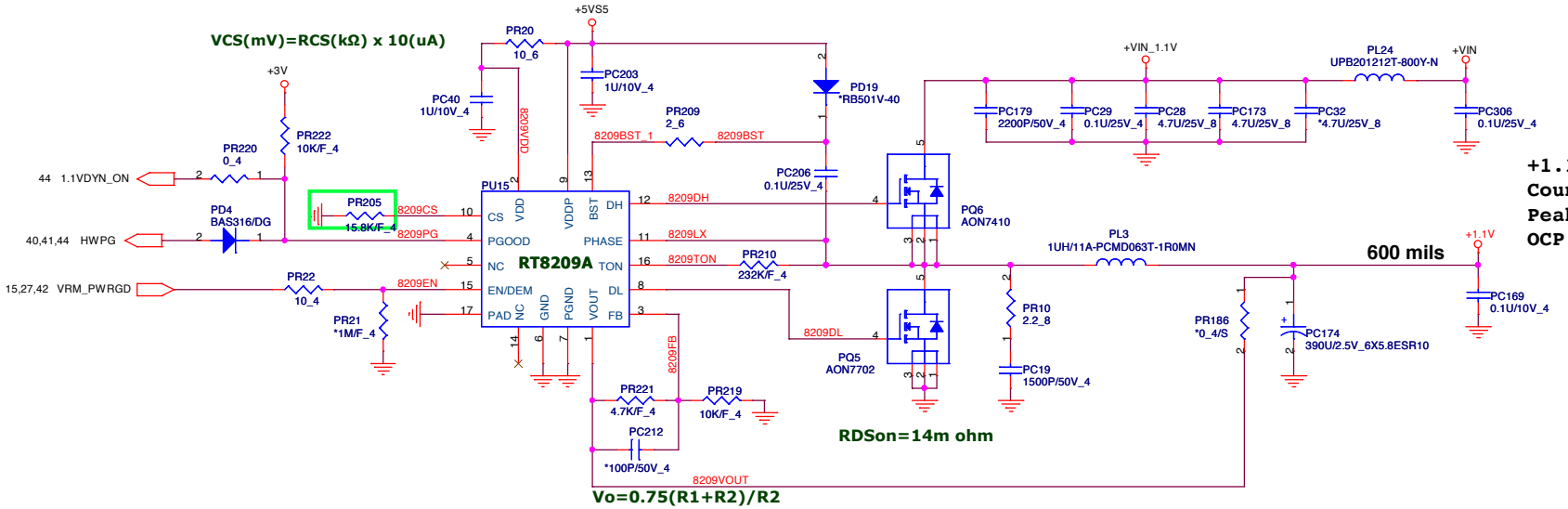
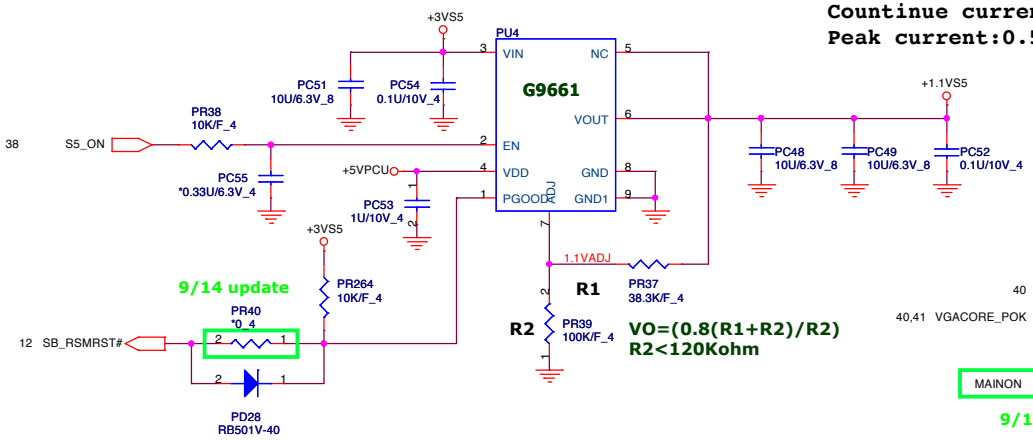
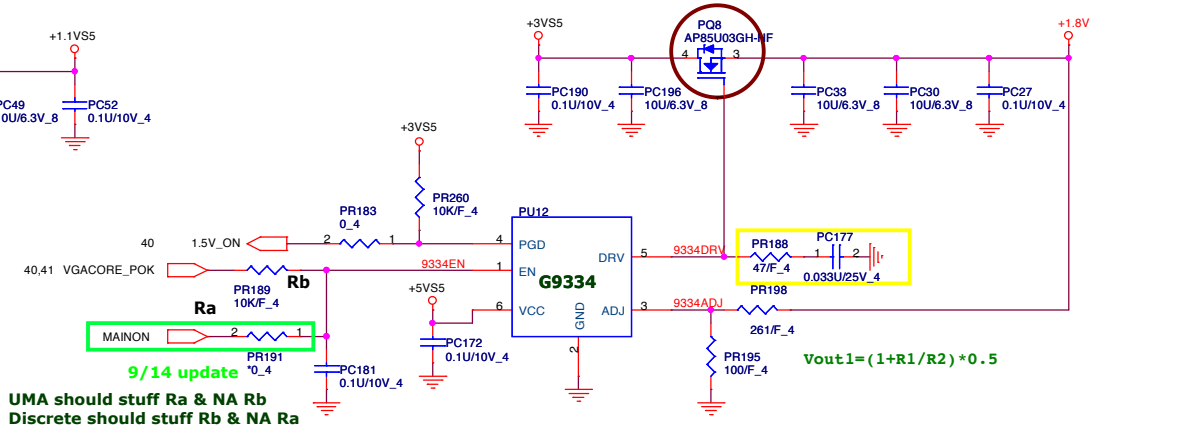
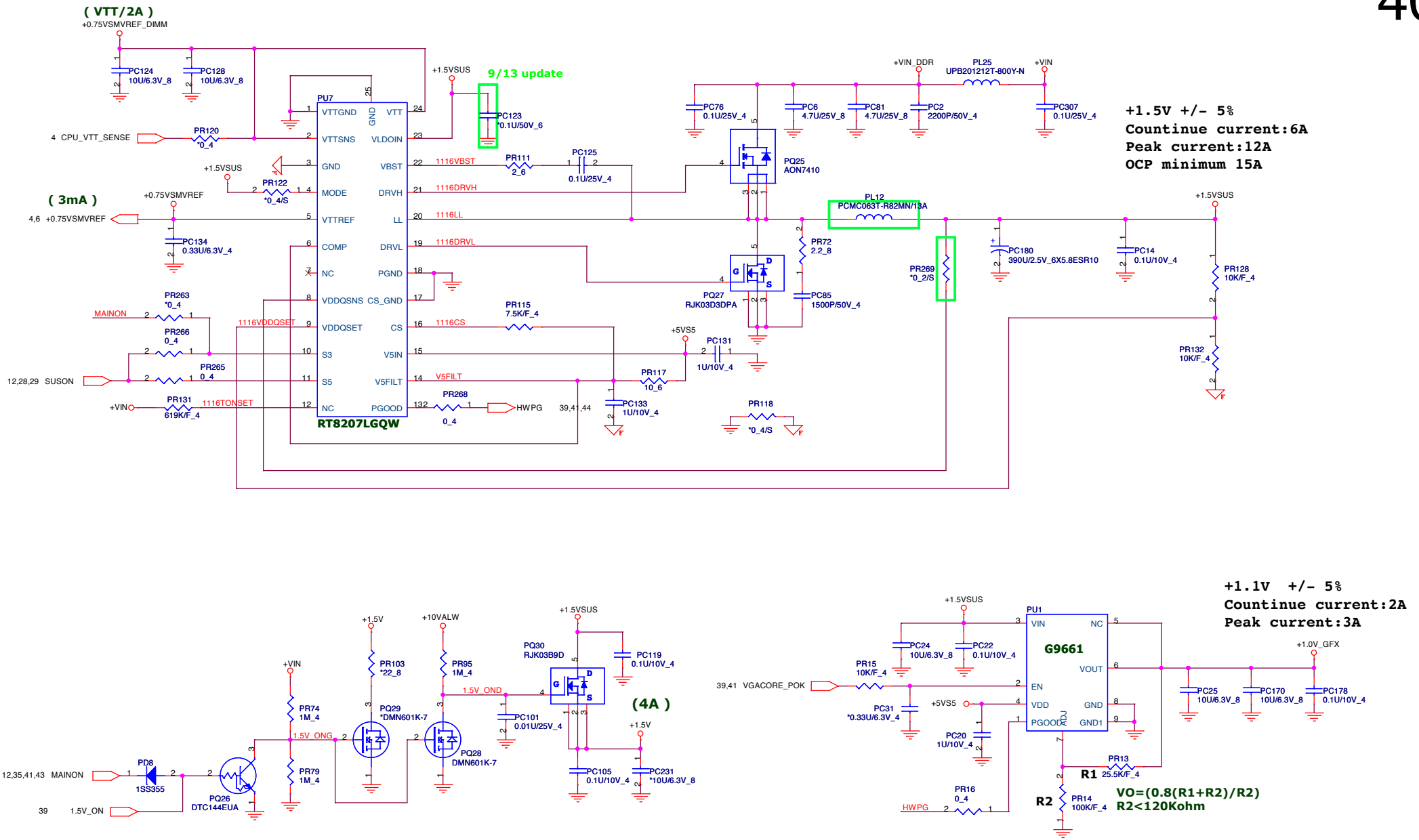






NB5/RD2	PROJECT : A22/A25 Quanta Computer Inc.	
Size: Custom	Document Number: +1.1VTT/+1.1VS5/+1.8V	Rev: 1A
Date: Tuesday, September 21, 2010	Sheet 39 of 44	



NB5/RD2	PROJECT : A22/A25 Quanta Computer Inc.	
Size: Custom	Document Number: DDR3 (RT8207)/+1.0V_GFX	Rev: 1A
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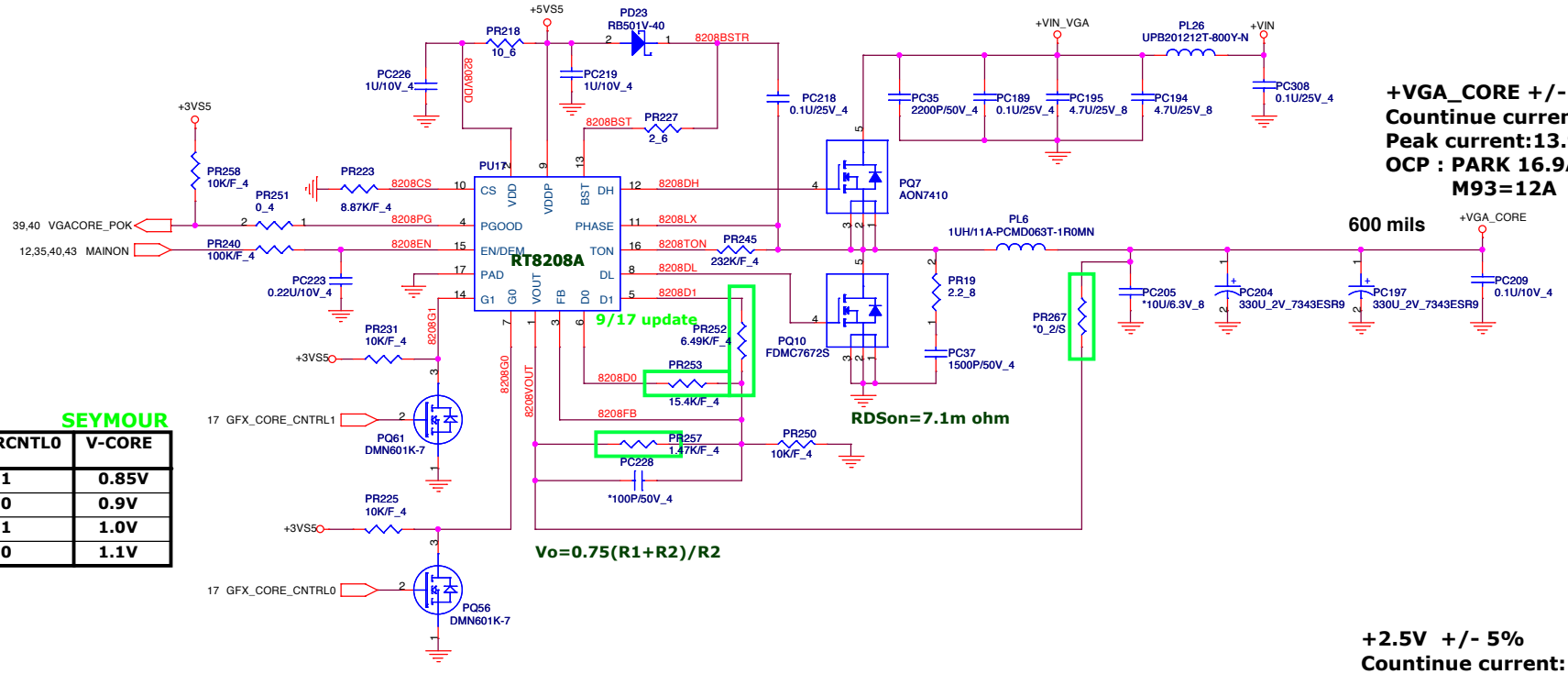
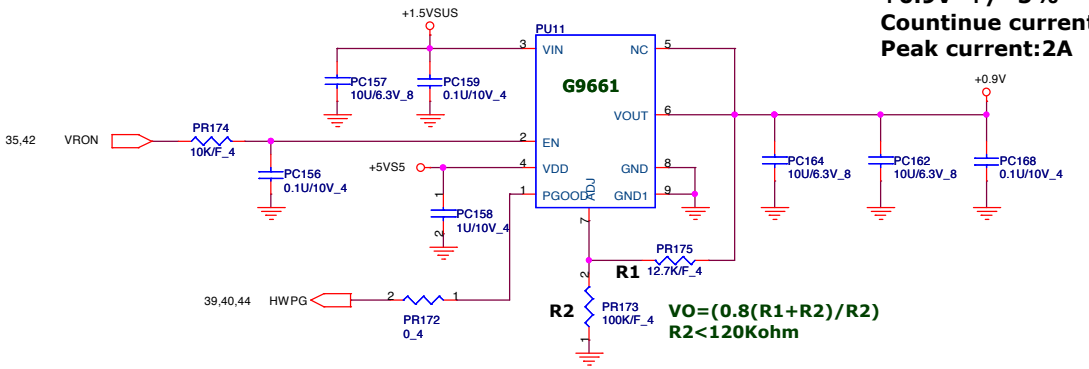
VGA Core & VCC1.1



+VGA_CORE +/- 5%
Countinue current:12A
Peak current:13.9A
OCP : PARK 16.9A
M93=12A

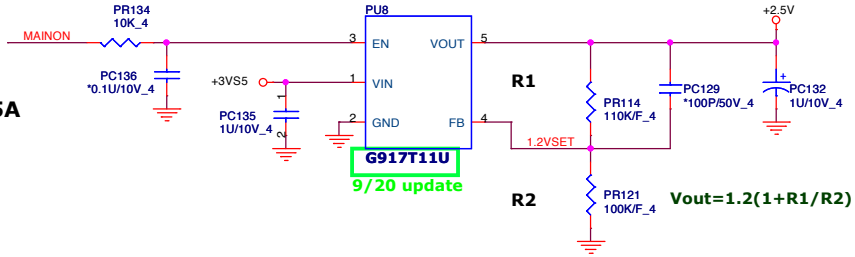
SEYMOUR

PWRCNTL1	PWRCNTL0	V-CORE
1	1	0.85V
1	0	0.9V
0	1	1.0V
0	0	1.1V



+0.9V +/- 5%
Countinue current:1.5A
Peak current:2A

VO=(0.8(R1+R2)/R2)
R2<120Kohm



+2.5V +/- 5%
Countinue current: 250mA
Peak current: 500mA

Vout=1.2(1+R1/R2)

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Quanta Computer Inc.

NB5/RD2

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Custom	VGA/+0.9V/+2.5V	1A

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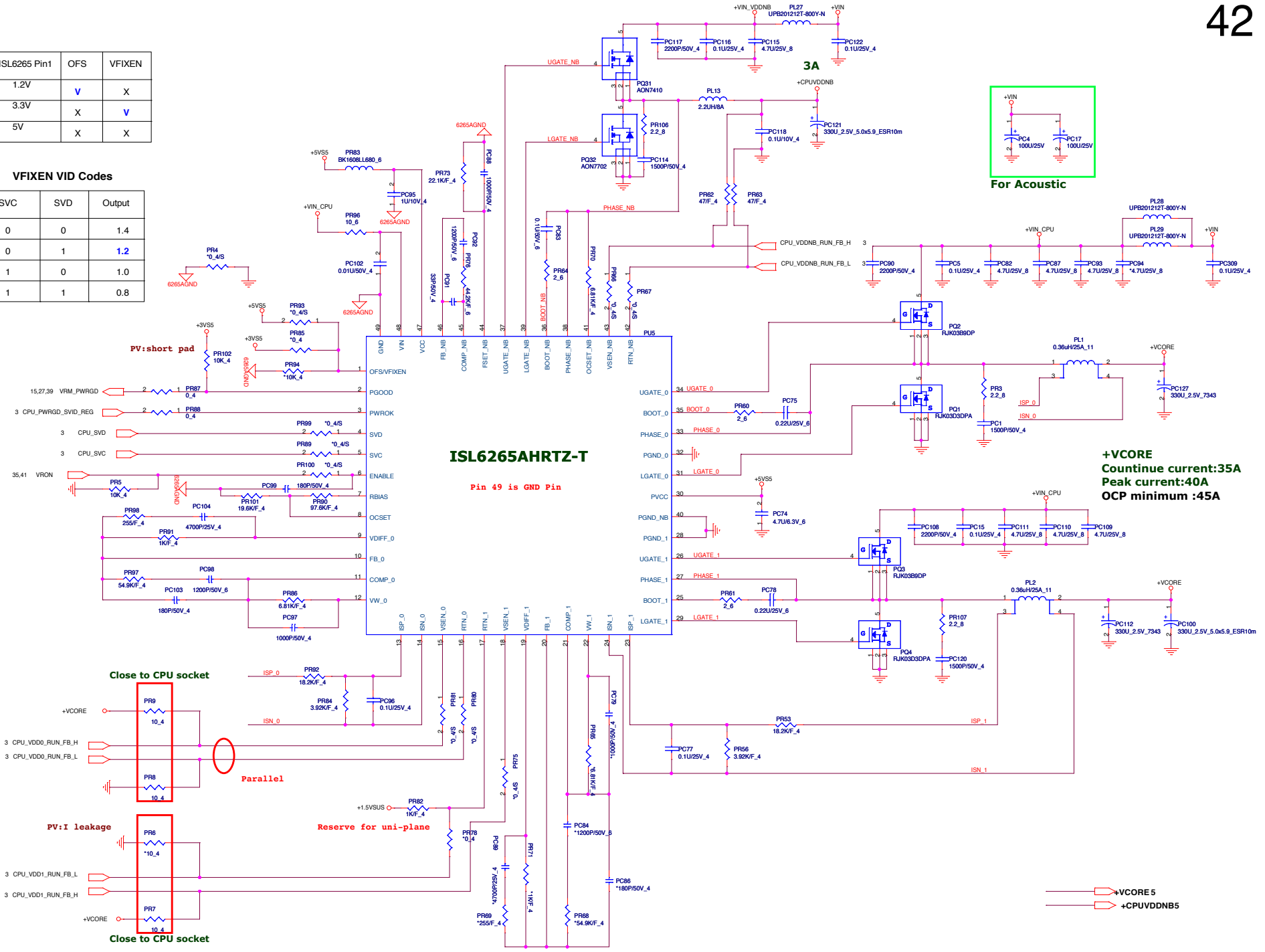
ISL6265 Pin1	OFS	VFIXEN
1.2V	V	X
3.3V	X	V
5V	X	X

VFIXEN VID Codes

SVC	SVD	Output
0	0	1.4
0	1	1.2
1	0	1.0
1	1	0.8



PROJECT : A22/A25 Quanta Computer Inc.			
NB5/RD2	Size C	Document Number CPU_CORE(ISL6265)	Rev 1A
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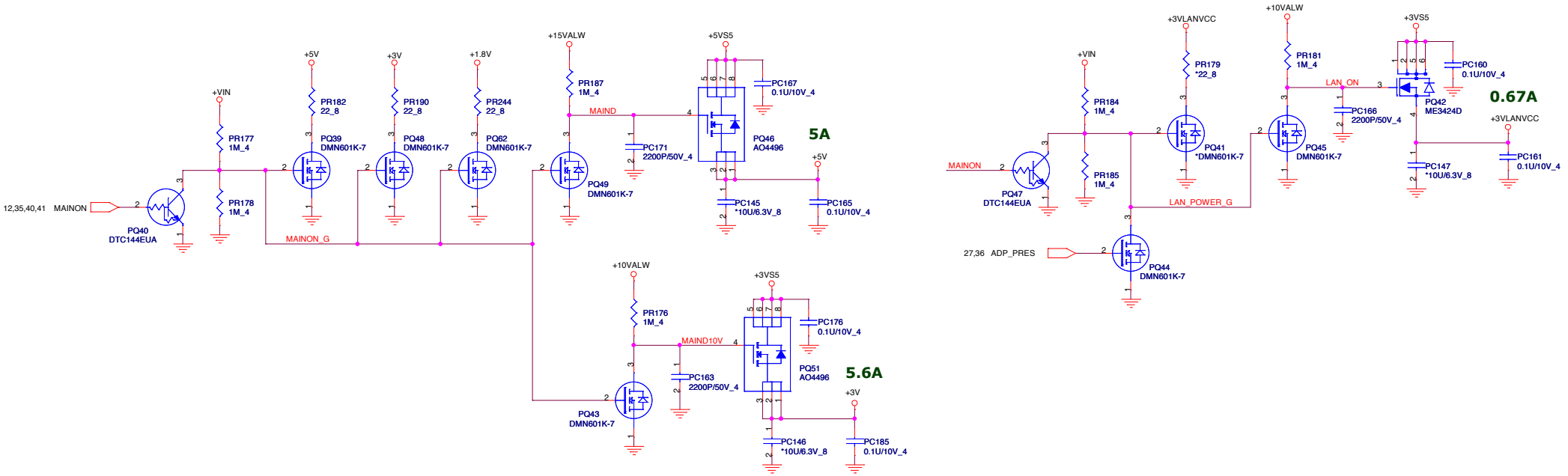
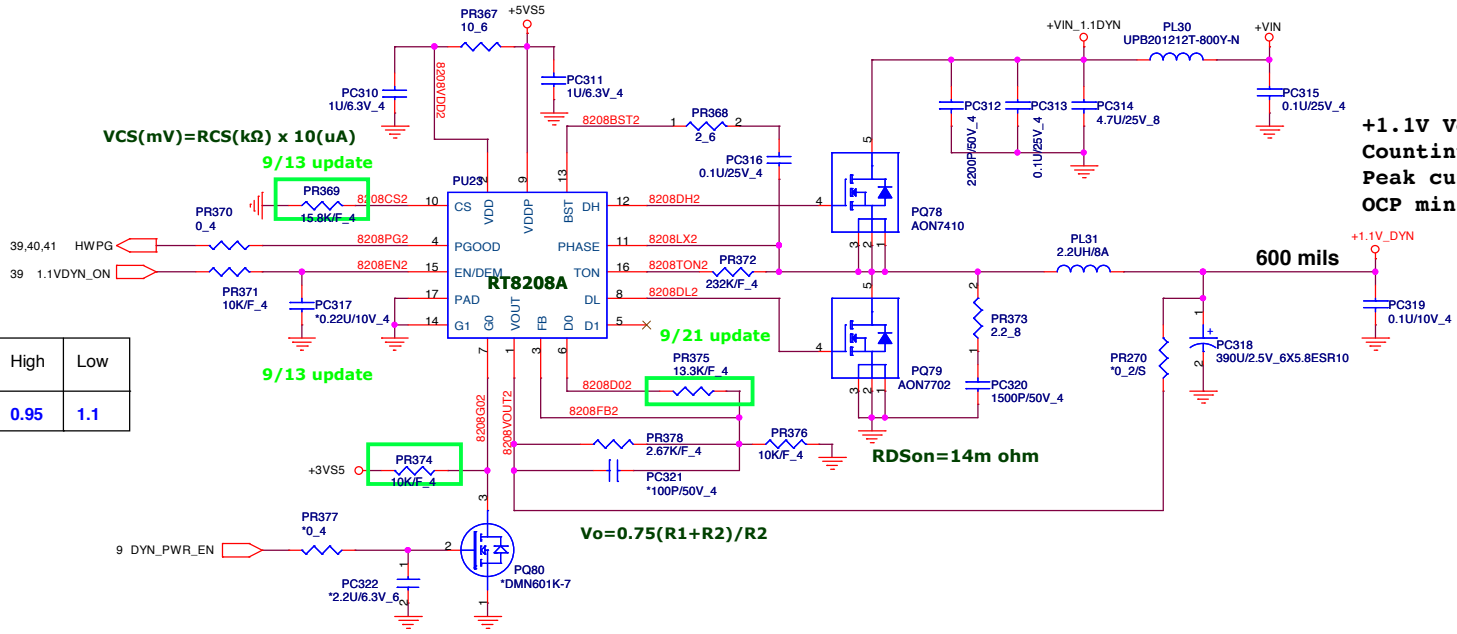


N85/RD2	**PROJECT : A22/A25** Quanta Computer Inc.	
Size: Custom	Document Number: DISCHARGE/3VS5/5VS5/LAN	Rev: 1A
Date: Tuesday, September 21, 2010	Sheet 43 of 44	



DYN_PWR_EN	High	Low
+1.1V_DYN	0.95	1.1

NB5/RD2	PROJECT : A22/A25 Quanta Computer Inc.	
	Size: Custom Document Number: +1.1V_DYN	Rev: 1A
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