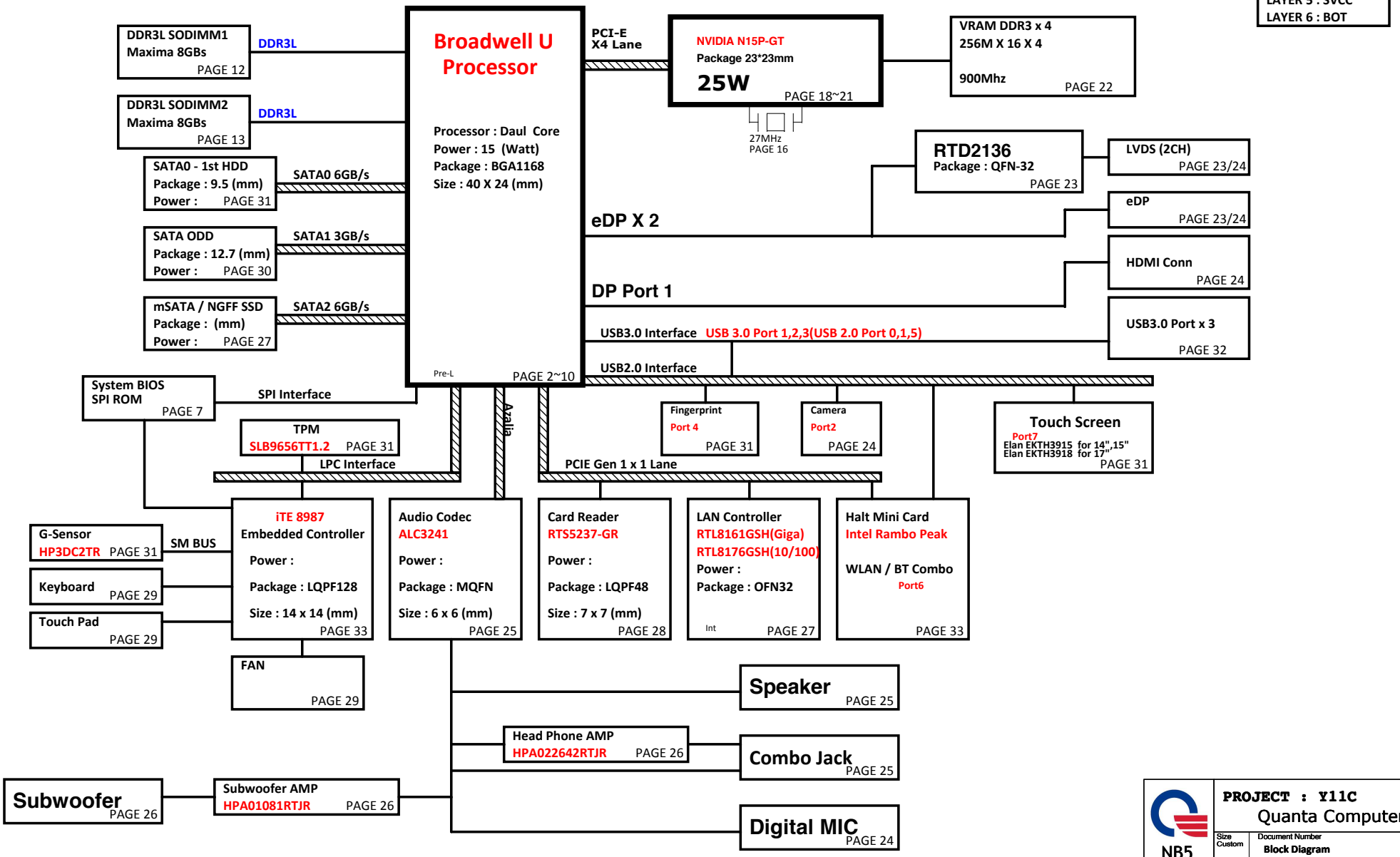
DIS (14" / 15" / 17") S-Vine MT
Intel Cresent Bay ULT Platform Block Diagram

01

PCB 6L STACK UP

LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1(High)
LAYER 4 : IN2(Low)
LAYER 5 : SVCC
LAYER 6 : BOT

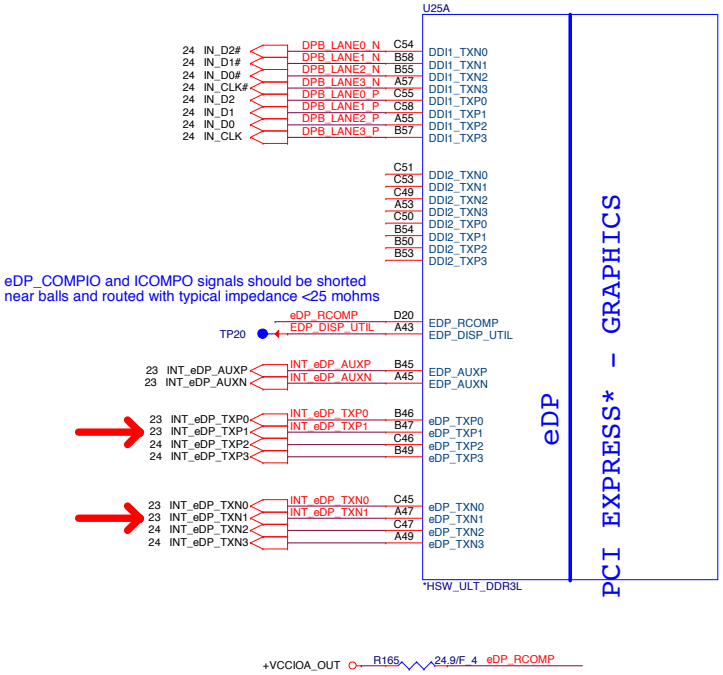


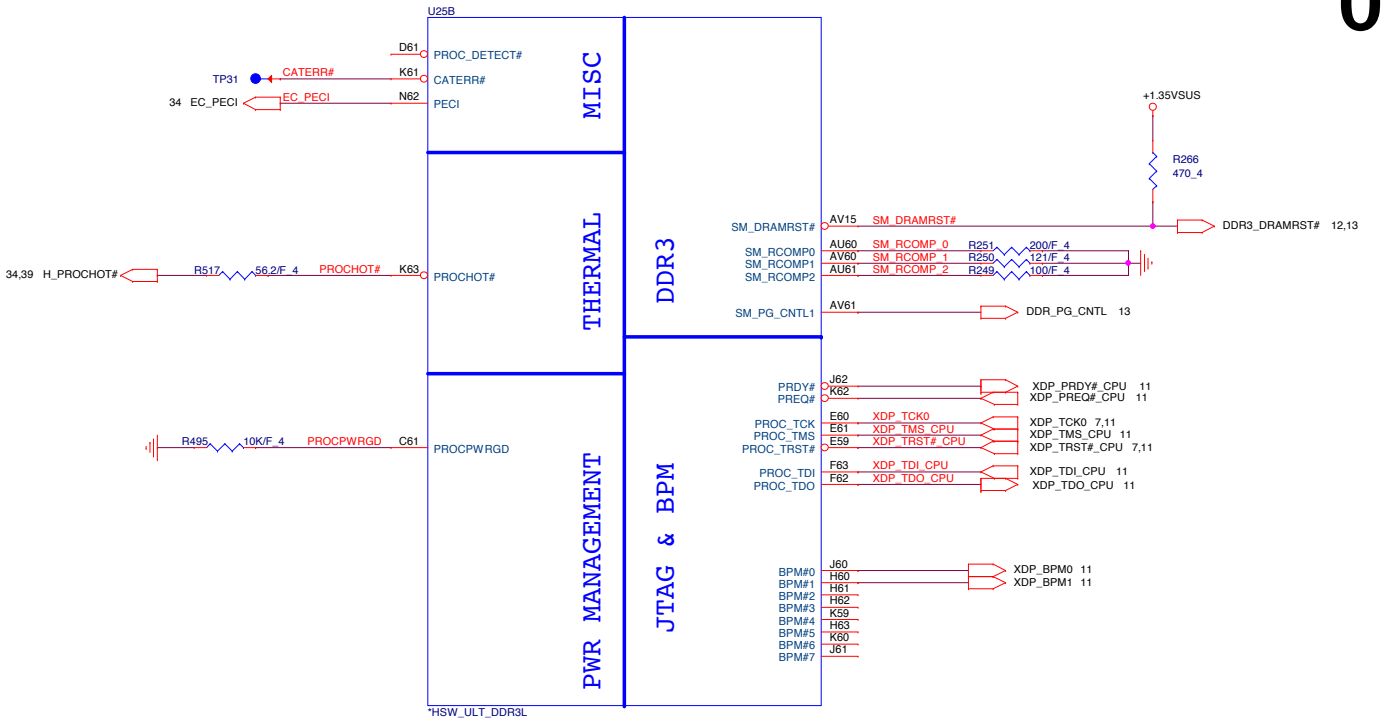
NB5

PROJECT : Y11C
Quanta Computer Inc.

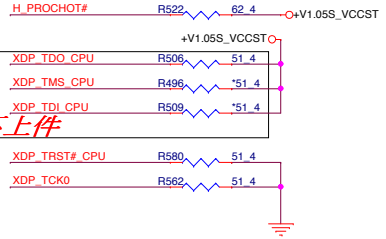
Size	Document Number	Rev
Custom	Block Diagram	1A

Date: Tuesday, April 08, 2014 Sheet 1 of 44





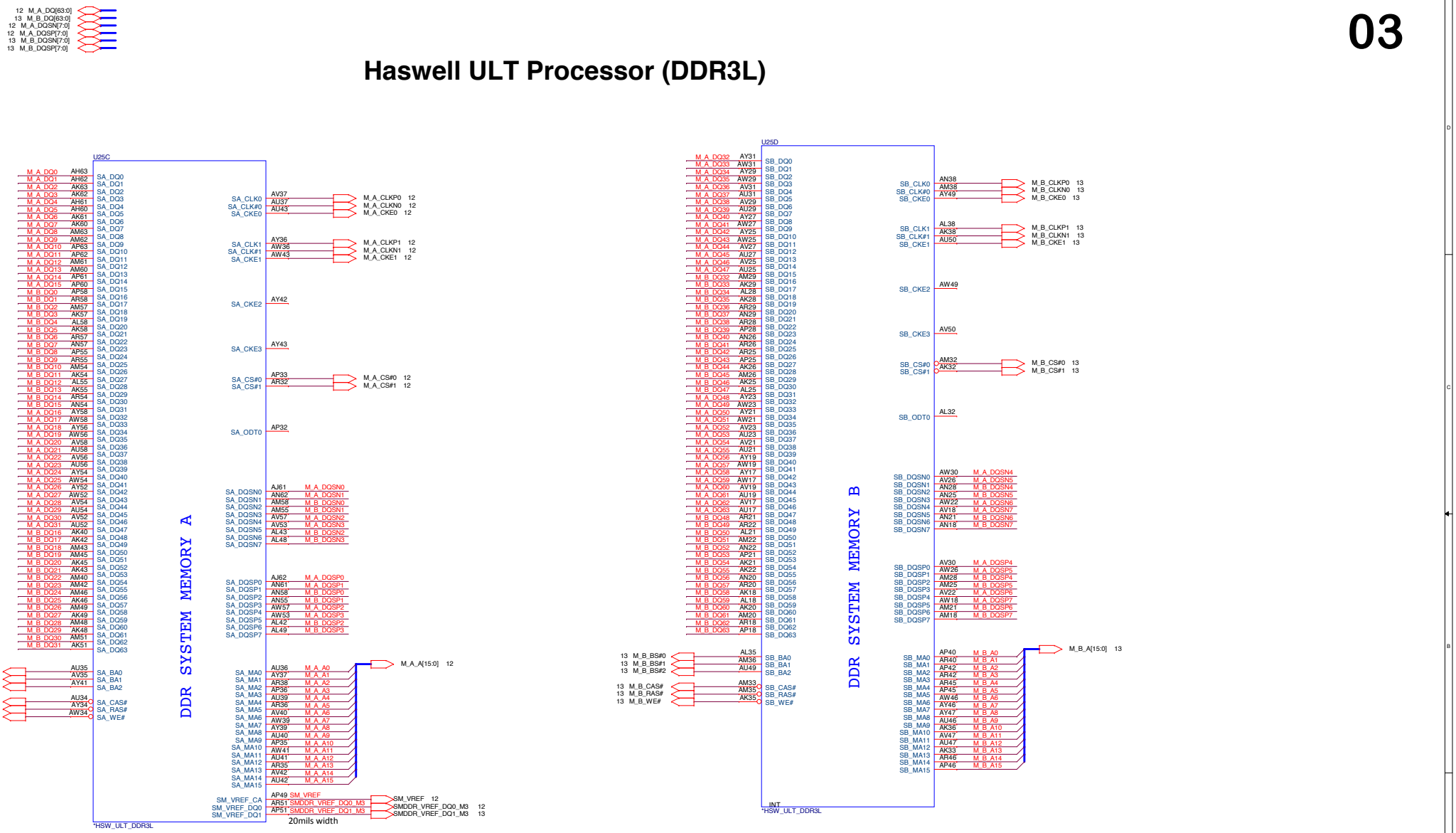
Processor pull-up (CPU)



公板線路有畫但都不上件

NB5	PROJECT : Y11C Quanta Computer Inc.	
Size: Custom	Document Number: ULT 1/9(eDP/DDI)	Rev: 1A
Date: Wednesday, April 02, 2014	Sheet 2 of 44	

Haswell ULT Processor (DDR3L)



POWER

HSW ULT POWER

32A
+VCC_CORE

1.4A
+1.35VSUS

Close to CPU

Direct tie to CPU VCC/VSS-Ball

PV install for RF

CFG0-19 need Reserve TP

RESERVED

Layout note: need routing together and ALERT need between CLK and DATA.

SVID ALERT

SVID CLK

SVID DATA

Place PU resistor close to VR

100- ±1% pull-up to VCC near processor.

IO Thrm Protect

+3VPCU

For 65 degree, 1.8v limit, (SW)

For 75 degree, 1.2v limit, (HW)

THERM_MOINTOR1 34

THER_CPU

R162 100K_4 NTC

Processor Strapping

The CFG signals have a default value of '1' if not terminated on the board.

	1	0	Circuit
CFG3 (Physcial Debug Enable) DFX Privacy	Disable:	Enable: Set DFX Enable in DFX interface MSR	CFG3 R543 *1K_4
CFG4 (DP Presence Strap)	Disable; No physical DP attached to eDP	Enable; An ext DP device is connected to eDP	CFG4 R542 1K_4

+VCCIOA_OUT 2
+VCCIO_OUT 6

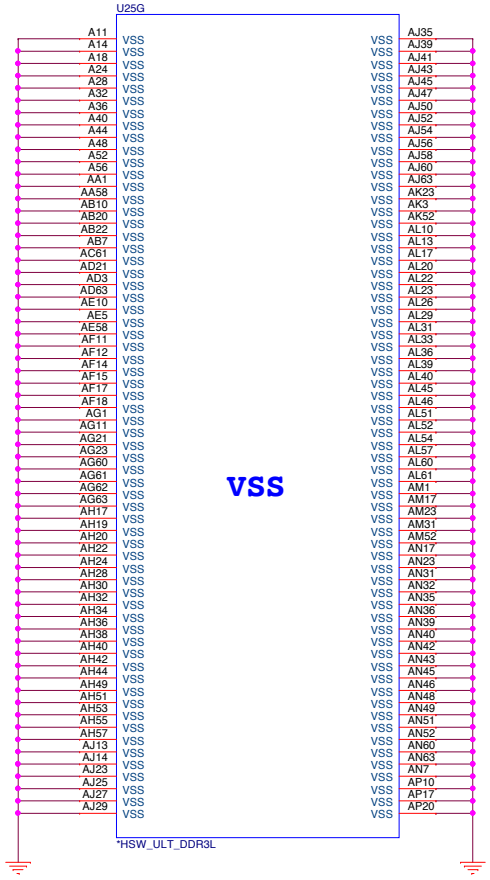
+1.35VSUS 2,12,13,29,37
+1.05V 2,7,9,10,11,31,34,38,39,40,43
+VCC_CORE 39

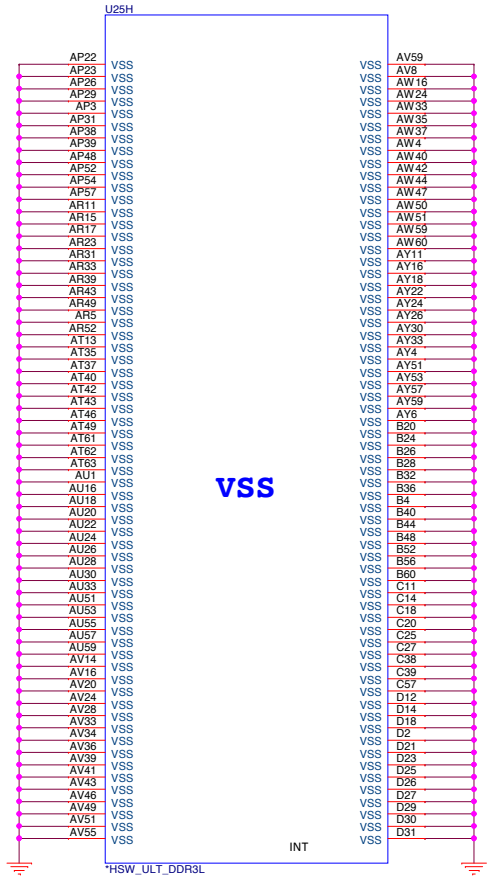
NB5

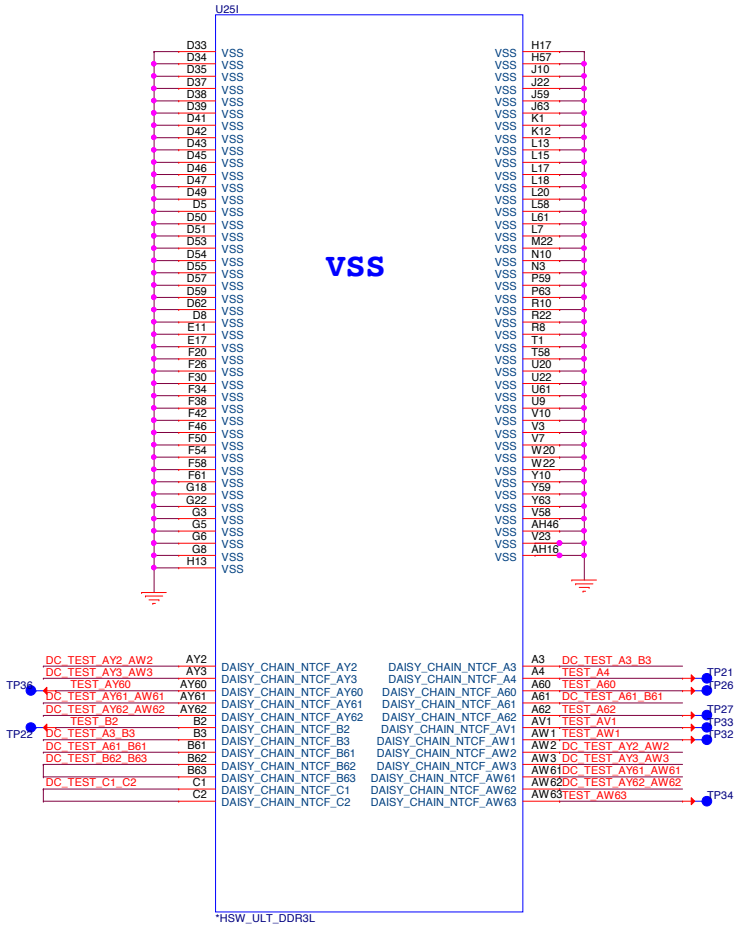
PROJECT : Y11C
Quanta Computer Inc.

Size: Custom | Document Number: 04 – ULT 3/9 (POWER-1) | Rev: 1A

Date: Wednesday, April 02, 2014 | Sheet 4 of 44



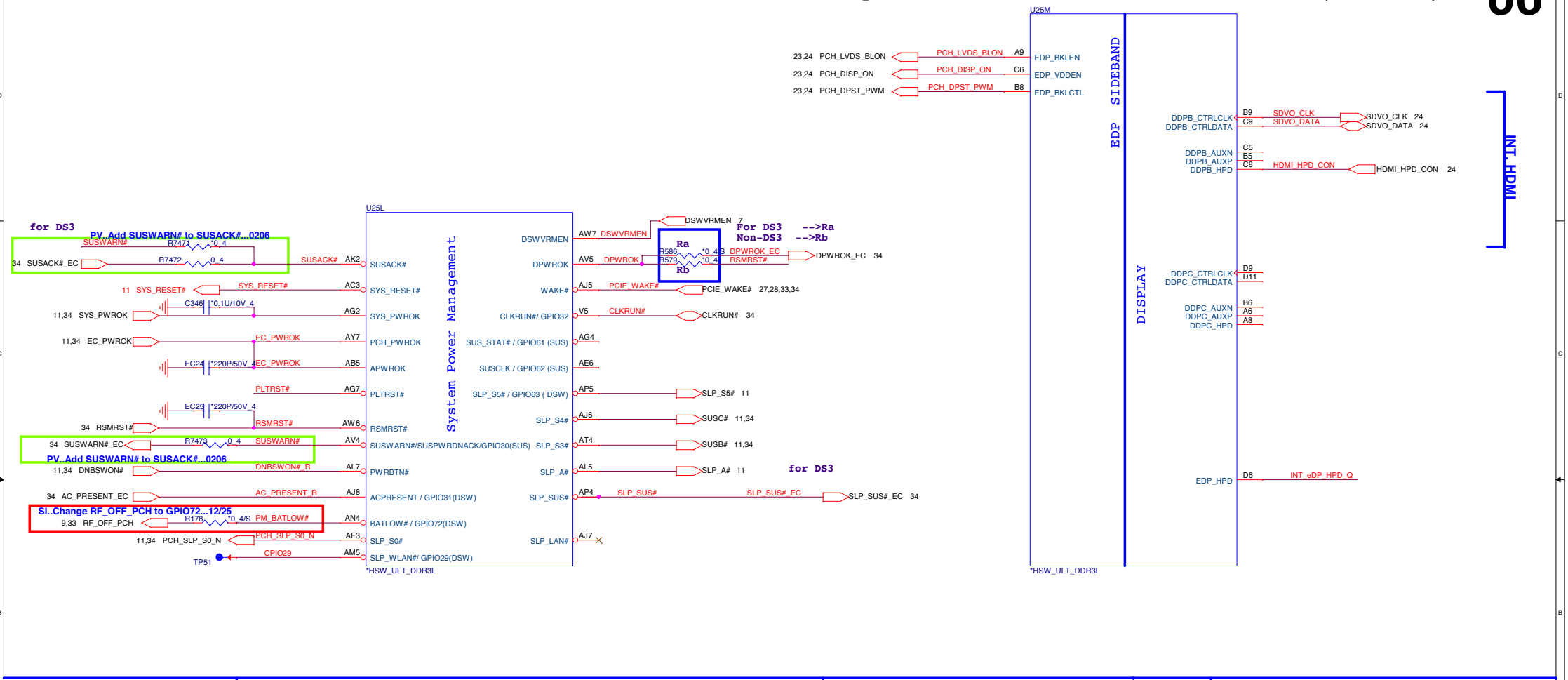




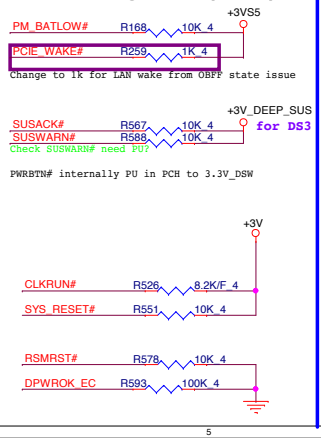
NB5	PROJECT : Y11C Quanta Computer Inc.	
Size: Custom	Document Number: ULT 4/9 (RSV,GND)	Rev: 1A
Date: Wednesday, April 02, 2014	Sheet 5 of 44	

Lynx Point-LP Platform Controller Hub (LVDS,DDI)

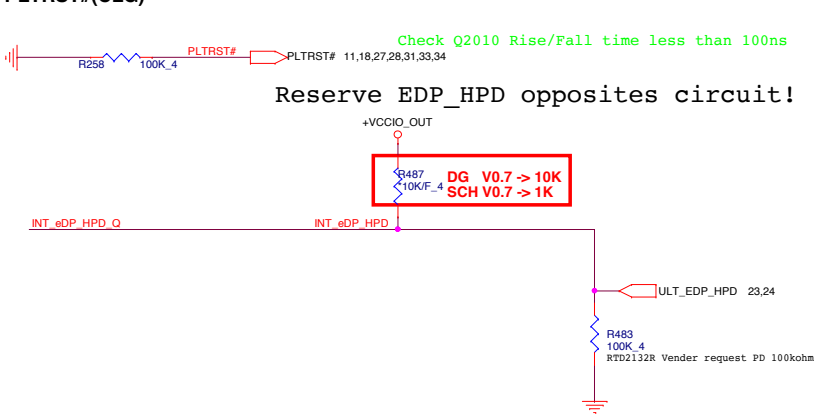
06



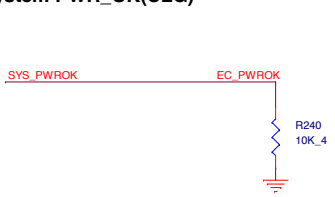
PCH Pull-high/low(CLG)

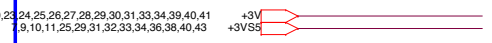


PLTRST#(CLG)



System PWR_OK(CLG)





NB5

PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	ULT 5/9(Power Manger)	1A

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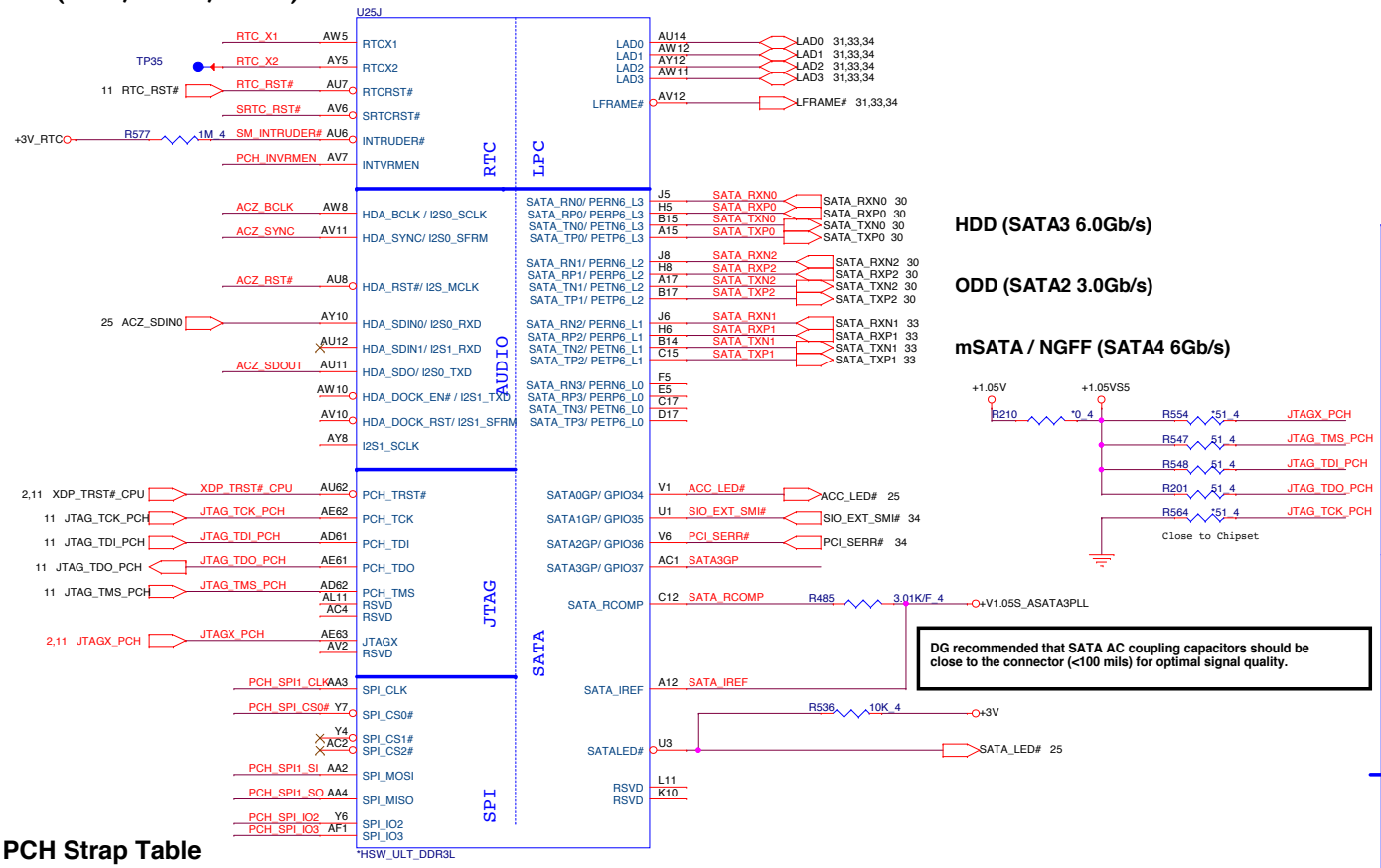
Lynx Point-LP Platform Controller Hub (HDA,JTAG,SATA)



HDD (SATA3 6.0Gb/s)

ODD (SATA2 3.0Gb/s)

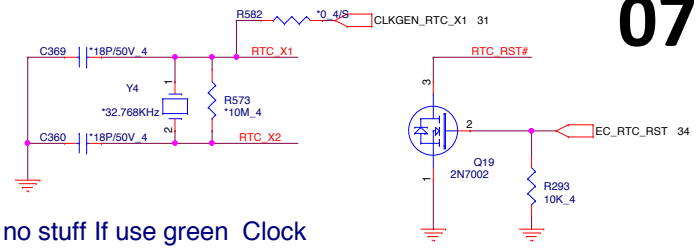
mSATA / NGFF (SATA4 6Gb/s)

DG recommended that SATA AC coupling capacitors should be close to the connector (<100 mils) for optimal signal quality.

PCH Strap Table

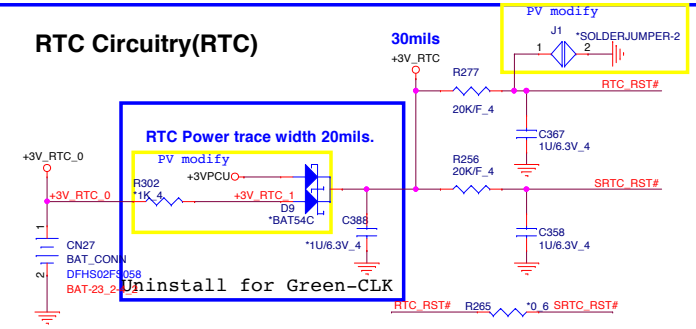
Pin Name	Strap description	Sampled	Configuration	Circuit
SPKR	No reboot mode setting	PWROK	0 = Default (weak pull-down 20K) 1 = Setting to No-Reboot mode	
SDIO_D0 /GPIO66	Top-Block Swap	PWROK	0 = "top-block swap" mode 1 = Default (weak pull-up 20K)	
INTVRMEN	Integrated 1.05V VRM enable	ALWAYS	Should be always pull-up	+3V_RTC R575 330K_4 PCH_INVRMEN
HDA_SDO /I2S0_TXD	Flash Descriptor Security Only for Interposer	PWROK	0 = Default (weak pull-down 20K) 1 = Can be Overridden	34 GPIO33_EC R581 1K_4 ACZ_SDOUT
GSPI0_MOSI /GPIO86	Boot BIOS Selection	PWROK	GNT0# 1 = LPC; 0 = SPI(Default)	
GPIO15	TLS Confidentiality	PWROK	0 = ME Crypto Transport Layer Security cipher suite with no confidentiality(Default) 1 = Intel ME Crypto TLS cipher suite with confidentiality	
DSWVRMEN	Deep Sx Well On-Die Voltage Regulator Enable	ALWAYS	Should be always pull-up	+3V_RTC R576 330K_4 DSWVRMEN 6
				34 PCH_SPI_CS0#_R 34 PCH_SPI1_CLK_R 34 PCH_SPI1_SI_R 34 PCH_SPI1_SO_R

RTC Clock 32.768KHz

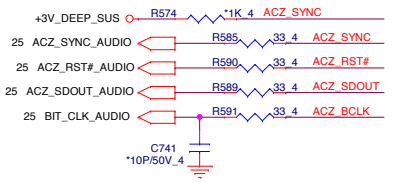


no stuff If use green Clock

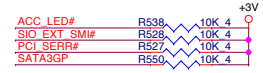
RTC Circuitry(RTC)



HDA Bus(CLG)



GPIO Pull UP

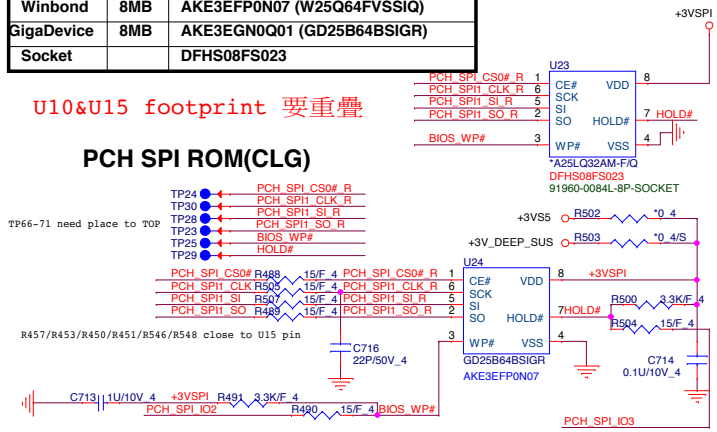


Vender	Size	P/N
MXIC	8MB	AKE3EZN0Z00 (MX25L6473EM2I-10G)
Winbond	8MB	AKE3EFP0N07 (W25Q64FVSSIQ)
GigaDevice	8MB	AKE3EGN0Q01 (GD25B64BSIGR)
Socket		DFHS08FS023

4M SPI ROM Socket

U10&U15 footprint 要重疊

PCH SPI ROM(CLG)



NB5

PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	ULT 6/9(SATA/HDA)	1A

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07

Lynx Point-LP Platform Controller Hub (HDA,JTAG,SATA)

08

PCI/USBOC# Pull-up(CLG)

SI modify

DGPU_PWR_EN	R520	10K_4	+3V
TS_INTB#	R523	10K_4	
PIRQC#	R516	10K_4	
PIRQD#	R518	10K_4	
GPIO77_ULT	R514	10K_4	
GPIO52_ULT	R511	10K_4	
GPU_EVENT#	R510	10K_4	
GC6_FB_EN	R139	10K_4	
DGPU_HOLD_RST#	R493	10K_4	
DGPU_HOLD_RST#	R492	100K_4	

SI modify

+3V_DEEP_SUS for DS3

SMBALERT#	R186	10K_4	
USB_OC1#	R195	10K_4	
USB_OC2#	R211	10K_4	
USB_OC3#	R561	10K_4	
USB_OC4#	R571	10K_4	

USB3.0

32 USB30_RX1-	G20	USB3RN1
32 USB30_RX1+	H20	USB3RP1
32 USB30_TX1-	C33	USB3TN1
32 USB30_TX1+	B34	USB3TP1
32 USB30_RX2-	E18	USB3RN2
32 USB30_RX2+	F18	USB3RP2
32 USB30_TX2-	B33	USB3TN2
32 USB30_TX2+	A33	USB3TP2

20111130 Modify USB3.0 for HM70

U25N

C- Link

CL_CLK	AF2	
CL_DATA	AD2	
CL_RST#	AF4	

USB2.0(M/B-1) (USBP0)
USB2.0(M/B-2) (USBP5)
USB2.0 Small board (USBP1)
FP Small board (USBP4)
Camera (USBP2)
WLAN (USBP6)
TS (USBP7)

USB2N0	AN8	USBP0-	32
USB2P0	AM8	USBP0+	32
USB2N1	AR7	USBP1-	25
USB2P1	AT7	USBP1+	25
USB2N2	AR8	USBP2-	24
USB2P2	AP8	USBP2+	24
USB2N3	AR10	USBP3-	32
USB2P3	AT10	USBP3+	32
USB2N4	AM15	USBP4-	31
USB2P4	AL15	USBP4+	31
USB2N5	AM13	USBP5-	32
USB2P5	AN13	USBP5+	32
USB2N6	AP11	USBP6-	33
USB2P6	AN11	USBP6+	33
USB2N7	AR13	USBP7-	31
USB2P7	AP13	USBP7+	31

PCI

GPIO77_ULT	U6	PIRQA# / GPIO77
TS_INTB#	P4	PIRQB# / GPIO78
PIRQC#	N4	PIRQC# / GPIO79
PIRQD#	N2	PIRQD# / GPIO80
GPIO52_ULT	L1	GPIO52
DGPU_PWR_EN_R	L3	GPIO54
DGPU_HOLD_RST#	R5	GPIO51
GPU_EVENT#	L4	GPIO53
GC6_FB_EN	U7	GPIO55
	AD4	PME#

19,43 DGPU_PWR_EN
18 DGPU_HOLD_RST#
21 GPU_EVENT#
19,21 GC6_FB_EN

USB

TIE TRACES TOGETHER CLOSE TO PINS WITH LENGTH TO RESISTOR

USB_BIAS R193 22.6/F_4

USBRBIAS#	AJ10	
USBRBIAS	AJ11	
RSVD	AN10	
RSVD	AM10	
OC0# / GPIO40(SUS)	AL3	USB_OC1#
OC1# / GPIO41(SUS)	AT1	USB_OC2#
OC2# / GPIO42(SUS)	AH2	USB_OC3#
OC3# / GPIO43(SUS)	AV3	USB_OC4#

*HSW_ULT_DDR3L

Cardreader

32 USB30_RX3-	G17	PERN1 / USB3RN3		
32 USB30_RX3+	F17	PERP1 / USB3RP3		
32 USB30_TX3-	C30	PETN1 / USB3TN3		
32 USB30_TX3+	C31	PETP1 / USB3TP3		
28 PCIE_RXN2_CARD	F15	PERN2/ USB3RN4		
28 PCIE_RXP2_CARD	G15	PERP2/ USB3RP4		
28 PCIE_TXN2_CARD	C705	0.1U/10V_4	PCIE_TXN2_CARD_C	B31
28 PCIE_TXP2_CARD	C711	0.1U/10V_4	PCIE_TXP2_CARD_C	A31
		PETN2/ USB3TN4		
		PETP2/ USB3TP4		

WLAN

33 PCIE_RXN3_WLAN	G11	PERN3		
33 PCIE_RXP3_WLAN	F11	PERP3		
33 PCIE_TXN3_WLAN	C256	0.1U/10V_4	PCIE_TXN3_WLAN_C	C29
33 PCIE_TXP3_WLAN	C244	0.1U/10V_4	PCIE_TXP3_WLAN_C	B30
		PETN3		
		PETP3		

LAN

27 PCIE_RXN4_LAN	PCIE_RXN4_LAN	F13		
27 PCIE_RXP4_LAN	PCIE_RXP4_LAN	G13		
27 PCIE_TXN4_LAN	C698	0.1U/10V_4	PCIE_TXN4_LAN_C	B29
27 PCIE_TXP4_LAN	C701	0.1U/10V_4	PCIE_TXP4_LAN_C	A29
		PERN4		
		PERP4		
		PETN4		
		PETP4		

18 PEG_RXN0	F10	PERN5_L0		
18 PEG_RXP0	E10	PERP5_L0		
18 PEG_TXN0	C691	0.22U/10V_4	PEG_TXN0_C	C23
18 PEG_TXP0	C692	0.22U/10V_4	PEG_TXP0_C	C22
		PETN5_L0		
		PETP5_L0		
18 PEG_RXN1	F8	PERN5_L1		
18 PEG_RXP1	E8	PERP5_L1		
18 PEG_TXN1	C686	0.22U/10V_4	PEG_TXN1_C	B23
18 PEG_TXP1	C687	0.22U/10V_4	PEG_TXP1_C	A23
		PETN5_L1		
		PETP5_L1		
18 PEG_RXN2	H10	PERN5_L2		
18 PEG_RXP2	G10	PERP5_L2		
18 PEG_TXN2	C690	0.22U/10V_4	PEG_TXN2_C	B21
18 PEG_TXP2	C688	0.22U/10V_4	PEG_TXP2_C	C21
		PETN5_L2		
		PETP5_L2		
18 PEG_RXN3	E6	PERN5_L3		
18 PEG_RXP3	F6	PERP5_L3		
18 PEG_TXN3	C693	0.22U/10V_4	PEG_TXN3_C	B22
18 PEG_TXP3	C689	0.22U/10V_4	PEG_TXP3_C	A21
		PETN5_L3		
		PETP5_L3		
	PCIE_IREF	B27		
10 +V1.05S_AUSB3PLL	R150	3.01K/F_4	PCIE_RCOMP	A27
		PCIE_IREF		
		PCIE_RCOMP		
		RSVD		E15
		RSVD		E13

PCI-E*

Cardreader

	C43	CLKOUT_PCIE0N	
	C42	CLKOUT_PCIE0P	
PCIE_CLKREQ0#	U2	PCIECLKRQ0# / GPIO18	
28 CLK_PCIE_CRN	CLK_PCIE_CRN	B41	CLKOUT_PCIE_N1
28 CLK_PCIE_CRP	CLK_PCIE_CRP	A41	CLKOUT_PCIE_P1
28 PCIE_CLKREQ_CR#	PCIE_CLKREQ_CR#	Y5	PCIECLKRQ1# / GPIO19

WLAN

33 CLK_PCIE_WLANN	CLK_PCIE_WLANN	C41	CLKOUT_PCIE_N2
33 CLK_PCIE_WLANP	CLK_PCIE_WLANP	B42	CLKOUT_PCIE_P2
33 PCIE_CLKREQ_WLAN#	PCIE_CLKREQ_WLAN#	AD1	PCIECLKRQ2# / GPIO20

LAN

27 CLK_PCIE_LANN	CLK_PCIE_LANN	B38	CLKOUT_PCIE_N3
27 CLK_PCIE_LANP	CLK_PCIE_LANP	C37	CLKOUT_PCI_P3
27 PCIE_CLKREQ_LAN#	PCIE_CLKREQ_LAN#	N1	PCIECLKRQ3# / GPIO21

VGA

18 CLK_VGA_N	CLK_VGA_N	A39	CLKOUT_PCIE_N4
18 CLK_VGA_P	CLK_VGA_P	B39	CLKOUT_PCIE_P4
18 PCIE_CLKREQ_VGA#	PCIE_CLKREQ_VGA#	U5	PCIECLKRQ4# / GPIO22
		B37	CLKOUT_PCIE_N5
		A37	CLKOUT_PCIE_P5
PCIE_CLKREQ5#	T2		PCIECLKRQ5# / GPIO23

CLOCK SIGNALS

*HSW_ULT_DDR3L

SMBUS

SMBALERT# / GPIO11(SUS)	AN2	SMBALERT#	
SMBCLK	AP2	SMB_PCH_CLK	
SMBDATA	AH1	SMB_PCH_DAT	
SML0ALERT# / GPIO60(SUS)	AL2	SML0ALERT#	
SML0CLK	AN1	SMB_ME0_CLK	
SML0DATA	AK1	SMB_ME0_DAT	
SML1ALERT# / PCHHOT# / GPIO73(SUS)	AU4	SML1ALERT#	TP10
SML1CLK / GPIO75(SUS)	AU3	SMB_ME1_CLK	
SML1DATA / GPIO74(SUS)	AH3	SMB_ME1_DAT	

XTAL24_IN	A25	XTAL24_IN	
XTAL24_OUT	B25	XTAL24_OUT	
CLKOUT_ITPXDP#	B35	CK_XDP_N_R	CK_XDP_N 11
CLKOUT_ITPXDP_P	A35	CK_XDP_P_R	CK_XDP_P 11

*0_4P2R_4 RP1

RP1 install for XDP

EC26 18P/50V_4

CLKOUT_LPC_0	AN15	CLK_PCI_EC_R	R242 22_4
CLKOUT_LPC_1	AP15	CLK_PCI_LPC_R	R234 22_4

CLK_24M_KBC 34
CLK_24M_DEBUG 33

EMI(near PCH)
EC29 18P/50V_4
R243 22_4
CLK_PCI_TPM 31
EMI(near PCH)
EC27 *18P/50V_4

R149 3.01K/F_4

DIFFCLK_BIASREF	C26	XCLK_BIASREF	+V1.05S_AXCK_LCPLL 10

RSVD	K21		
RSVD	M21		
TESTLOW_C35	C35	R148	10K/F_4
TESTLOW_C34	C34	R152	10K/F_4
TESTLOW_AK8	AK8	R239	10K/F_4
TESTLOW_AL8	AL8	R245	10K/F_4

SMBus/Pull-up(CLG)

Q38

13,23,34 MBCLK2 → 4 → 3 → SMB_ME1_CLK
13,23,34 MBDATA2 → 1 → 6 → SMB_ME1_DAT

*2N7002DW

Q12

+3V R185 4.7K_4 → 11,12,13,23,29 SMB_RUN_DAT → 4 → 3 → SMB_PCH_DAT
+3V R194 4.7K_4 → 11,12,13,23,29 SMB_RUN_CLK → 1 → 6 → SMB_PCH_CLK

2N7002DW

CLK_REQ/Strap Pin(CLG)

+3V

PCIE_CLKREQ0#	R534	10K_4
PCIE_CLKREQ5#	R535	10K_4
PCIE_CLKREQ_WLAN#	R530	10K_4
PCIE_CLKREQ_LAN#	R519	10K_4
PCIE_CLKREQ_CR#	R268	10K_4
PCIE_CLKREQ_VGA#	R158	10K_4

R147 0_4/S
PCH_XTAL24_IN 31
TP4
C246 *12P/50V_4
XTAL24_IN
XTAL24_OUT
R153 *1M_4
*24MHZ +-30PPM
Y1
C245 *12P/50V_4
TP5

6,7,9,10,11,12,13,18,19,20,23,24,25,26,27,28,29,30,31,33,34,39,40,41 +3V
6,7,9,10,11 +3V_DEEP_SUS

SMBus/Pull-up(CLG)

for DS3
+3V_DEEP_SUS

R570	2.2K_4	SMB_PCH_CLK	
R566	2.2K_4	SMB_PCH_DAT	
R569	2.2K_4	SMB_ME0_CLK	
R568	2.2K_4	SMB_ME0_DAT	
R572	2.2K_4	SMB_ME1_CLK	
R560	2.2K_4	SMB_ME1_DAT	
R238	10K_4	SML1ALERT#	
R192	1K_4	SML0ALERT#	

NB5

PROJECT : Y11C
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ULT 7/9 (PCIE/USB/CLK)	1A
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Lynx Point-LP Platform Controller Hub (HDA,JTAG,SATA) Haswell (GPIO)

09

U25O

GPIO8(SUS)
GPIO9(SUS)
GPIO10(SUS)
LAN_PHY_PWR_CTRL / GPIO12(DSUS)
GPIO13(SUS)
GPIO14(SUS)
GPIO15(SUS)
GPIO16
GPIO17
GPIO24 (SUS)
GPIO25(DSW)
GPIO26(SUS)
GPIO27(DSW)
GPIO28(SUS)
DEVSLP0/ GPIO33
DEVSLP1/ GPIO38
DEVSLP2/ GPIO39
GPIO44(SUS)
GPIO45(SUS)
GPIO46(SUS)
GPIO47(SUS)
GPIO48
GPIO49
GPIO50
GPIO56(SUS)
GPIO57(SUS)
GPIO58(SUS)
GPIO59(SUS)
SDIO_POWER_EN/ GPIO70
HSIOPC/ GPIO71
BMBUSY# / GPIO76
SPKR/ GPIO81

GPIO

THRMTRIP#
RCIN#/ GPIO82
SERIRQ
PCH_OPI_RCOMP
RSVD
RSVD

CPU/MISC

GSPI0_CS/ GPIO83
GSPI0_CLK/ GPIO84
GSPI0_MISO/ GPIO85
GSPI0_MOSI/ GPIO86
GSPI1_CS/ GPIO87
GSPI1_CLK/ GPIO88
GSPI1_MISO/ GPIO89
GSPI1_MOSI/ GPIO90
UART0_RXD/ GPIO91
UART0_TXD/ GPIO92
UART0_RTS/ GPIO93
UART0_CTS/ GPIO94
UART1_RXD/ GPIO0
UART1_TXD/ GPIO1
UART1_RST/ GPIO2
UART1_CTS/ GPIO3
I2C0_SDA/ GPIO4
I2C0_SCL/ GPIO5
I2C1_SDA/ GPIO6
I2C1_SCL/ GPIO7
SDIO_CLK/ GPIO64
SDIO_CMD/ GPIO65
SDIO_D0/ GPIO66
SDIO_D1/ GPIO67
SDIO_D2/ GPIO68
SDIO_D3/ GPIO69

SERIAL IO

*HSW_ULT_DDR3L

34 SIO_EXT_SCI# — SIO_EXT_SCI# AU2
33 BT_OFF — BT_OFF AM3
6,33 RF_OFF_PCH — R177 *0_4 — RF_OFF_PCH_R AM2
LAN_DISABLE# AM7
GPIO13_ULT AT3
GPIO14_ULT AH4
AD6
30 ZERO_ODD_DP# — R553 *0_4 — ODD_PRSNT#_R Y1
20,34,42 DGPU_PWROK — T3
BOARD_ID6 AD5
GPIO25_ULT AM4
BOARD_ID7 AN3
GPIO27 AN5
BOARD_ID8 AD7
DEVSLP0 P2
33 DEVSLP1 — DEVSLP1 L2
DEVSLP2 N5
GPIO44_ULT AK4
TP for DG
BOARD_ID4 AG5
GPIO46_ULT AG3
BOARD_ID5 AB6
33 BT_COMBO_EN# — BT_COMBO_EN# U4
31 ACCEL_INTA# — GPIO49_ULT Y3
SI..Change ACCEL_INTA# to GPIO49...12/25
GPIO50_ULT P3
BOARD_ID0 AG6
BOARD_ID1 AP1
BOARD_ID2 AL4
BOARD_ID3 AT5
GPIO70_ULT C4
40 MPHY_PWREN — MPHY_PWREN Y2
GPIO76_ULT P1
25 ACZ_SPKR — SPKR V2
25 SPKR

THRMTRIP# D60 — PCH_THRMTRIP# — PM_THRMTRIP# 34
RCIN#/ GPIO82 V4 — EC_RCIN# — EC_RCIN# 34
SERIRQ T4 — SERIRQ — R529 10K_4 — +3V — SERIRQ 31,34
PCH_OPI_RCOMP AW15 — PCH_OPI_RCOMP — R583 49.9/F_4
RSVD AF20
RSVD AB21

GSPI0_CS/ GPIO83 R6 — GSPI0_CS
GSPI0_CLK/ GPIO84 L6 — GSPI0_CLK
GSPI0_MISO/ GPIO85 N6 — GSPI0_MISO
GSPI0_MOSI/ GPIO86 L8
GSPI1_CS/ GPIO87 R7 — GSPI1_CS
GSPI1_CLK/ GPIO88 L5 — GSPI1_CLK
GSPI1_MISO/ GPIO89 N7 — GSPI1_MISO
GSPI1_MOSI/ GPIO90 K2 — GSPI1_MOSI
UART0_RXD/ GPIO91 J1 — UART0_RXD
UART0_TXD/ GPIO92 K3 — UART0_TXD
UART0_RTS/ GPIO93 J2 — UART0_RTS
UART0_CTS/ GPIO94 G1 — UART0_CTS
UART1_RXD/ GPIO0 K4 — UART1_RXD
UART1_TXD/ GPIO1 G2 — UART1_TXD
UART1_RST/ GPIO2 J3 — UART1_RST
UART1_CTS/ GPIO3 J4 — UART1_CTS
I2C0_SDA/ GPIO4 F2 — I2C0_SDA
I2C0_SCL/ GPIO5 F3 — I2C0_SCL
I2C1_SDA/ GPIO6 G4 — I2C1_SDA
I2C1_SCL/ GPIO7 F1 — I2C1_SCL
SDIO_CLK/ GPIO64 E3 — SDIO_CLK
SDIO_CMD/ GPIO65 F4 — SDIO_CMD
SDIO_D0/ GPIO66 D3
SDIO_D1/ GPIO67 E4 — SDIO_D1
SDIO_D2/ GPIO68 C3 — SDIO_D2
SDIO_D3/ GPIO69 E2 — SDIO_D3

RP2
10 UART1_RXD — SDIO_D2 1
9 I2C1_SDA — SDIO_D1 2
8 GSPI0_CLK — SDIO_CMD 3
7 GSPI1_CLK — SDIO_CLK 4
6 5
10K_10P8R_6
+3V

RP6
10 GSPI1_MOSI — I2C0_SCL 1
9 GSPI0_MISO — I2C1_SCL 2
8 GSPI1_MISO — I2C0_SDA 3
7 UART0_TXD — SDIO_D3 4
6 5
10K_10P8R_6
+3V

RP5
10 UART0_RXD — UART1_RST 1
9 UART1_CTS — UART0_RTS 2
8 GSPI0_CS — UART0_CTS 3
7 GSPI1_CS — UART1_TXD 4
6 5
10K_10P8R_6
+3V

GPIO Pull-up/Pull-down(CLG)

+3V_DEEP_SUS

Change R172 Netname

SIO_EXT_SCI# R282 10K_4
BT_OFF R180 10K_4
RF_OFF_PCH_R R172 10K_4
GPIO13_ULT R218 10K_4
GPIO14_ULT R183 10K_4

GPIO44_ULT R565 10K_4
GPIO46_ULT R541 10K_4

+3V

GPIO49_ULT R552 10K_4
GPIO50_ULT R524 10K_4
ODD_PRSNT#_R R546 10K_4
DGPU_PWROK R513 10K_4
DEVSLP0 R515 10K_4

DEVSLP2 R499 10K_4
BT_COMBO_EN# R512 *10K_4
GPIO70_ULT R486 10K_4
EC_RCIN# R269 10K_4

GPIO12 LAN_DISABLE# SUS -->Check list +3V -->Datasheet

GPIO76_ULT R525 10K_4
MPHY_PWREN R544 100K_4
MPHY_PWREN R545 *10K_4

+3VS5

GPIO25_ULT R173 10K_4
LAN_DISABLE# R169 10K_4
GPIO27 R626 10K_4

Close to EC

+V1.05S_VCCST
PM_THRMTRIP# R184 1K_4

Model	BOARD_ID[6:5]	BOARD_ID4	BOARD_ID3	BOARD_ID[2:1]	BOARD_ID0
	Reserve	Reserve	0 Pavillian 1 Envy	00 14" 01 15" 10 17"	0 : UMA 1 : DIS

R174 *10K_4 BOARD_ID0 R539 10K_4 +3V_DEEP_SUS
R205 *10K_4 BOARD_ID1 R199 10K_4
R558 10K_4 BOARD_ID2 R559 *10K_4
R248 *10K_4 BOARD_ID3 R255 10K_4
R175 10K_4 BOARD_ID4 R540 *10K_4
R167 10K_4 BOARD_ID5 R549 *10K_4
R161 10K_4 BOARD_ID6 R164 *10K_4
R204 10K_4 BOARD_ID7 R198 *10K_4
R160 10K_4 BOARD_ID8 R163 *10K_4

	DIS	UMA
Stuff	Ra	Rb
NC	Rb	Ra

6,7,8,10,11,12,13,18,19,20,23,24,25,26,27,28,29,30,31,33,34,39,40,41 +3V
6,7,10,11,25,29,31,32,33,34,36,38,40,43 +3VS5

NB5

PROJECT : Y11C
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ULT 8/9 (GPIO/MISC)	1A

Date: Wednesday, April 02, 2014 Sheet 9 of 44

Lynx Point-LP Platform Controller Hub (HDA,JTAG,SATA)(POWER)

POWER

U25P

CORE
RTC
SPI
ICC
VCCMPHY
USB3
HDA
VRM
GPIO/ LCC
INT
*HSW_ULT_DDR3L
THERMAL SENSOR
OPI
SERIAL IO
SUS OSCILLATOR
USB2

VCC1_05=1.741A +V1.05S_CORE_PCH
1U/6.3V_4 C306
1U/6.3V_4 C294
10U/6.3VS_6 C274
J11 H11 H15 AE8 AF22 VCC1_05
C307 0.47U/6.3V_4
+3VS5
Place close to Pin AG19 and AG20 SI modify
C309 1U/6.3V_4
+PCH_VCCDSW
AG19 DCPSUSBYP
AG20 DCPSUSBYP
+1.05V
+V1.05M_ASW
AE9 AF9 AG8 VCCASW
C288 1U/6.3V_4
C735 22U/6.3V_6
+1.05V
VCCASW=658mA PV install for RF
+V1.05M_FHV0 AG14 VCCASW
+V1.05M_FHV1 AG13 VCCASW
TP8
DcpSus1=109mA
+V1.05A_SUS_PCH
AD10 DCPSUS1
AD8 DCPSUS1
C243 1U/6.3V_4
C235 1U/6.3V_4
+V1.05DX_MODPHY_PCH
K9 VCCHSIO
L10 VCCHSIO
M9 VCCHSIO
VCCHSIO=1.838A
C257 *1U/6.3V_4
+1.05V
+V1.05S_AIDLE
N8 VCC1_05
P9 VCC1_05
C281 *1U/6.3V_4
C708 1U/6.3V_4
+V1.05S_AUSB3PLL
B18 VCCUSB3PLL
C694 22U/6.3VS_6
C695 22U/6.3VS_6
VCCSATA3PLL=42mA
C710 1U/6.3V_4
+V1.05S_ASATA3PLL
B11 VCCSATA3PLL
C700 22U/6.3VS_6
C699 22U/6.3VS_6
SI Change to 22uF for Intel recommend
TP7
DcpSus3=10mA
+V1.05A_VCCUSB3SUS
J13 DCPSUS3
VCCHDA=11mA
+V3.3DX_1.5DX_ADO
+V3.3DX_1.5DX_PAZSUS_PCH
AH14 VCCHDA
C308 1U/6.3V_4
TP9
DcpSus2=25mA
+V1.05A_USB2SUS
AH13 DCPSUS2
VCCSUS3_3=63mA
+V3.3A_PSUS
AC9 AA9 VCCSUS3_3
+3V_DEEP_SUS
C301 22U/6.3VS_6
VCCDSW3_3=114mA
+3.3V_A_DSW_P
AH10 VCCDSW3_3
+3VS5
C316 *1U/6.3V_4
C317 0.47U/6.3V_4
+3V
+V3.3S_PCORE
V8 W9 VCC3_3
C125 22U/6.3VS_6

AH11 +V3.3A_DSW_PRTCSUS VCCSUS3_3 → +3V_DEEP_SUS
C374 1U/6.3V_4
AG10 VCCRTC < 1mA VCCRTC → +3V_RTC
C364 1U/6.3V_4
C368 0.1U/10V_4
C371 0.1U/10V_4
AE7 +VCCRTCEXT C311 0.1U/10V_4 DCPRTC
Y8 VCCSPI=18mA C373 *0.1U/10V_4 VCCSPI
+V3.3M_PSPI → +3V_DEEP_SUS
R278 *0_4 → +3V
2.2uH/500mA_6
+V1.05S_AXCK_DCB L16 → +1.05V
J18 K19 VCCCLK
C289 1U/6.3V_4
C300 47U/6.3VS_6
C299 47U/6.3VS_6
VCCACLKPLL A20
+V1.05S_AXCK_LCPLL L46 2.2uH/500mA_6 → +1.05V VCCACLKPLL=31mA
C707 1U/6.3V_4
C697 47U/6.3VS_6
C696 47U/6.3VS_6
VCCCLK J17
+V1.05S_SSCF100 → +1.05V VCCCLK=200mA
C273 1U/6.3V_4
R21 T21 VCCCLK
+V1.05S_SSCFF → +1.05V
C293 1U/6.3V_4
RSVD K18
RSVD M20
RSVD V21
AE20 AE21 +V3.3A_PSUS VCCSUS3_3 → +V3.3A_PSUS
VCCTS1_5=3mA
J15 VCCTS1_5 +V1.5S_ATS → +1.5V
+V3.3S_PTS → +3V
K14 K16 VCC3_3 VCC3_3=41mA
C175 0.1U/10V_4
2.2uH PN CV-2205JZ00
Y20 AA21 W21 VCCAPLL VCCAPLL=57mA → +1.05V
C305 1U/6.3V_4
+V1.05S_APLLOPI
C303 *47U/6.3VS_6
C304 *47U/6.3VS_6
U8 T9 VCCSDIO=17mA
+V3.3S_1.8S_SDIO_PCH → +3V
C282 1U/6.3V_4
DcpSus4=1mA
AB8 +V1.05A_AOSCSUS DCPSUS4
C291 1U/6.3V_4
AC20 RSVD
AG16 AG17 VCC1_05 +V1.05S_DUSB → +1.05V
C310 1U/6.3V_4

+V3.3DX_1.5DX_ADO
R171 *0_4 → +1.5V
R179 *0_4/S → +3V

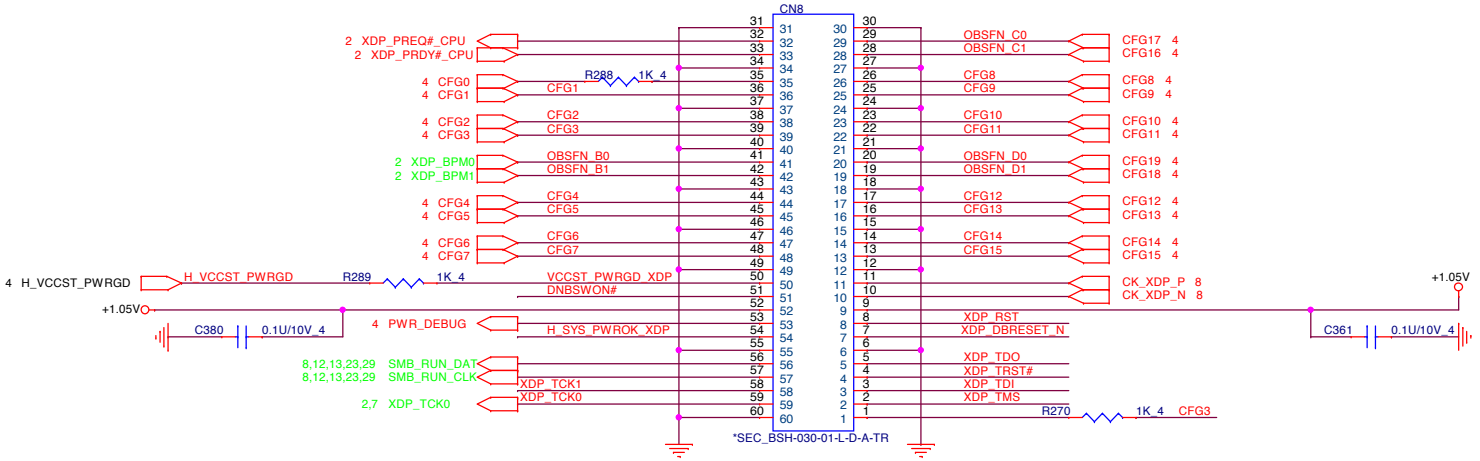
6,7,8,9,11,12,13,18,19,20,23,24,25,26,27,28,29,30,31,33,34,39,40,41 +3V
24,25,26,29,30,31,32,33,40 +5V
2,4,7,9,11,31,34,38,39,40,43 +1.05V
6,7,9,11,25,29,31,32,33,34,36,38,40,43 +3VS5
13,25,29,32,36,37,38,39,40,41,42,43 +5VS5
8 +V1.05S_AUSB3PLL
7 +V1.05S_ASATA3PLL
8 +V1.05S_AXCK_LCPLL
7,31 +3V_RTC
2,4,12,13,29,37 +1.35VSUS

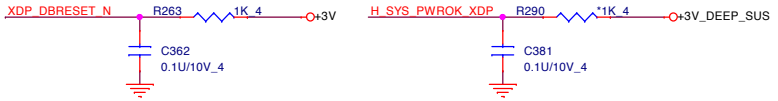
+1.05V_MODPHY
L45 2.2uH/500mA_6 20mil +V1.05S_ASATA3PLL
L44 2.2uH/500mA_6 20mil +V1.05S_AUSB3PLL
+V1.05DX_MODPHY_PCH

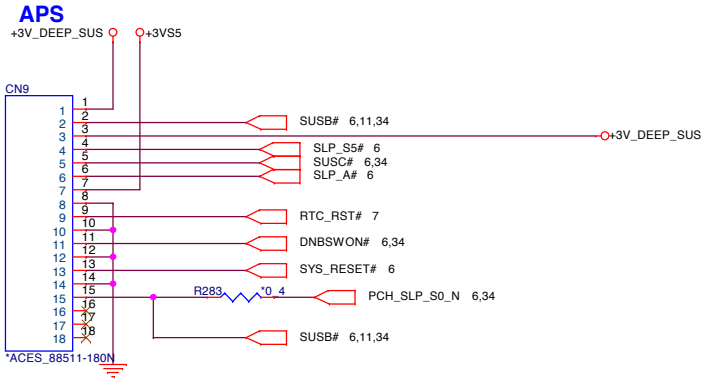
for DS3

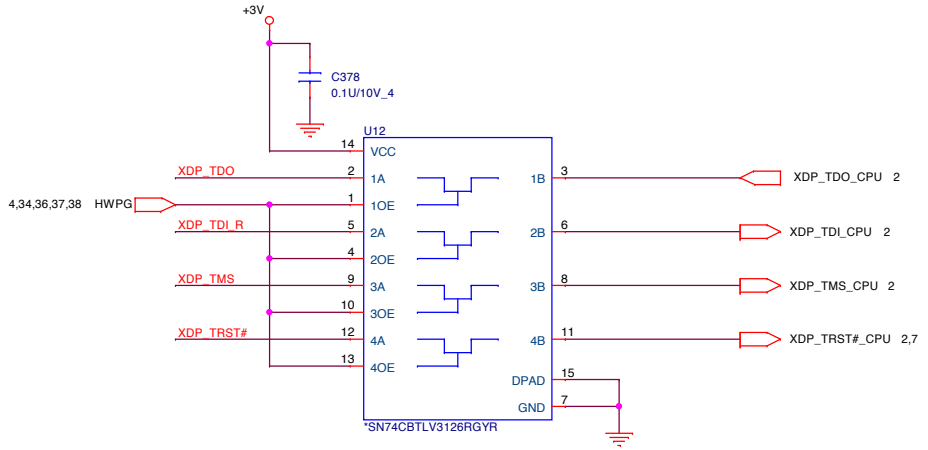
+3VS5
+3V_DEEP_SUS
R563 100K_4
C720 1U/6.3V_4
U26
5 IN
4 IN
3 ON/OFF
OUT 1
GND 2
IC(5P) G5243AT11U-S-M
C726 0.1U/10V_4
C724 *10P/50V_4
34 SLP_SUS_ON

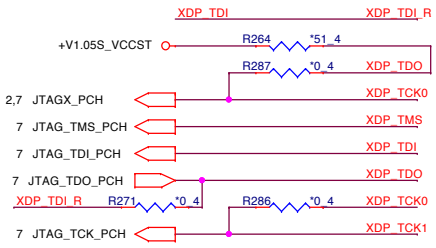
PROJECT :	Y11C
Quanta Computer Inc.	
NB5	
Size: Custom	Document Number: ULT 9/9(POWER-2)
Rev: 1A	
Date: Tuesday, April 08, 2014	Sheet 10 of 44

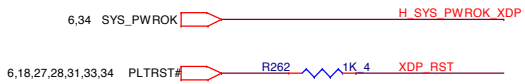












NB5

PROJECT : Y11C

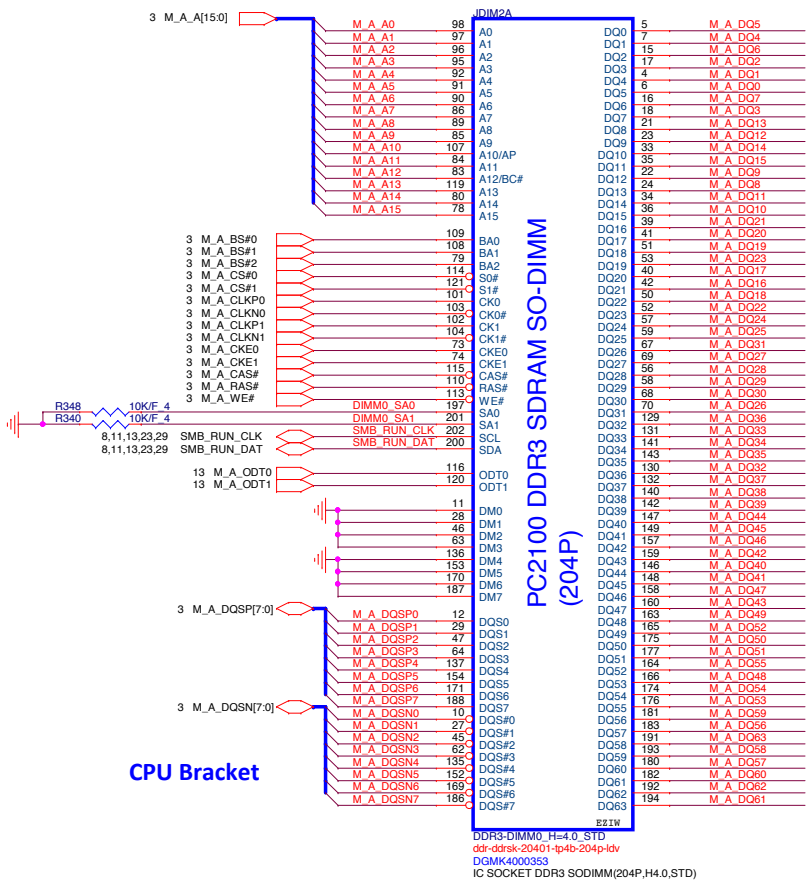
Quanta Computer Inc.

OLT

Size	Document Number	Rev
	HSW XDP & APS	1A

Date: Wednesday, April 02, 2014 | Sheet 11 of 44

DIMM & Footprint 同Joshua提供



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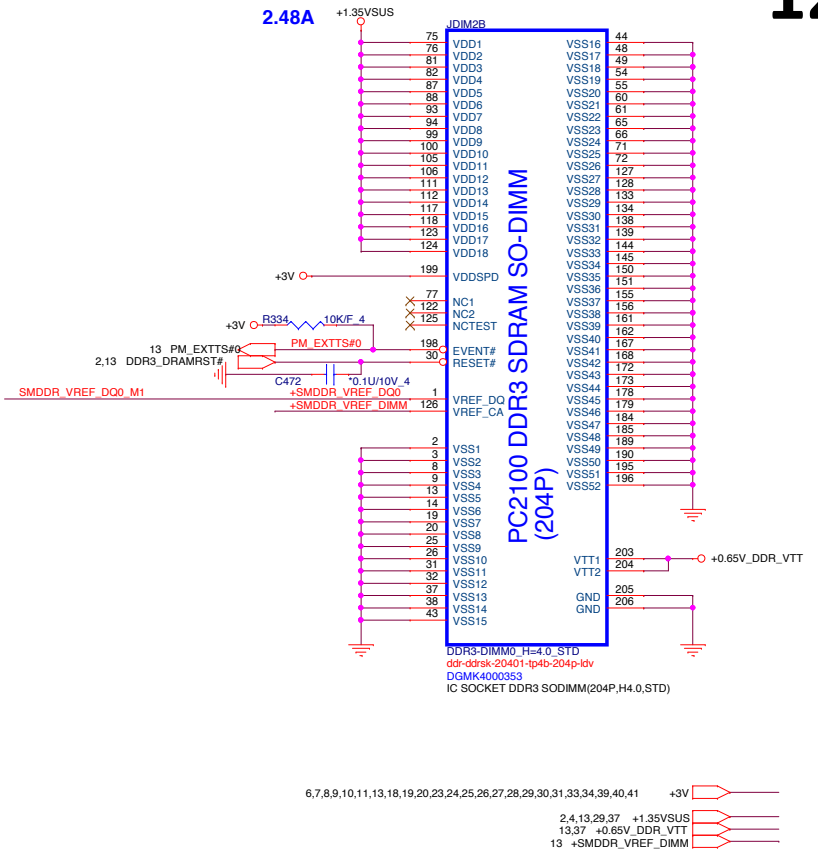
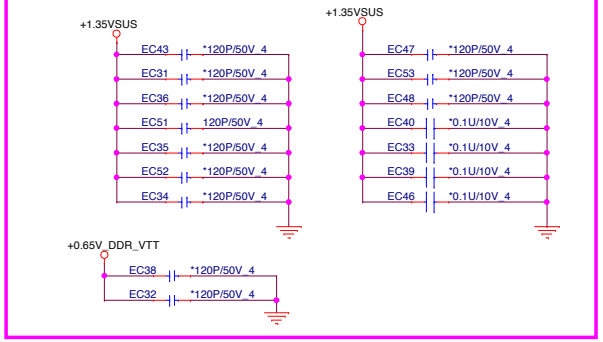
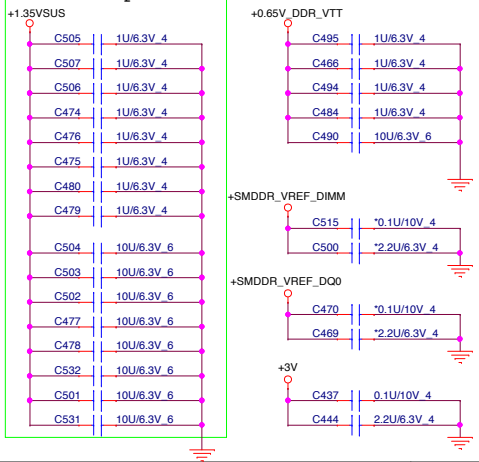


For EMI RESERVE

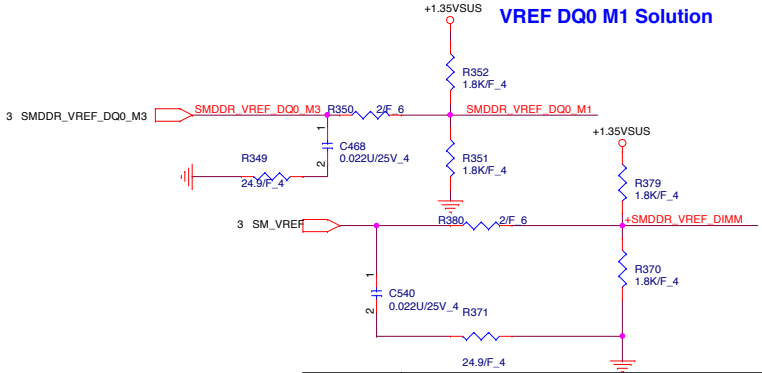


Place these Caps near So-Dimm0.

1uF/10uF 4pcs on each side of connector



VREF DQ0 M1 Solution

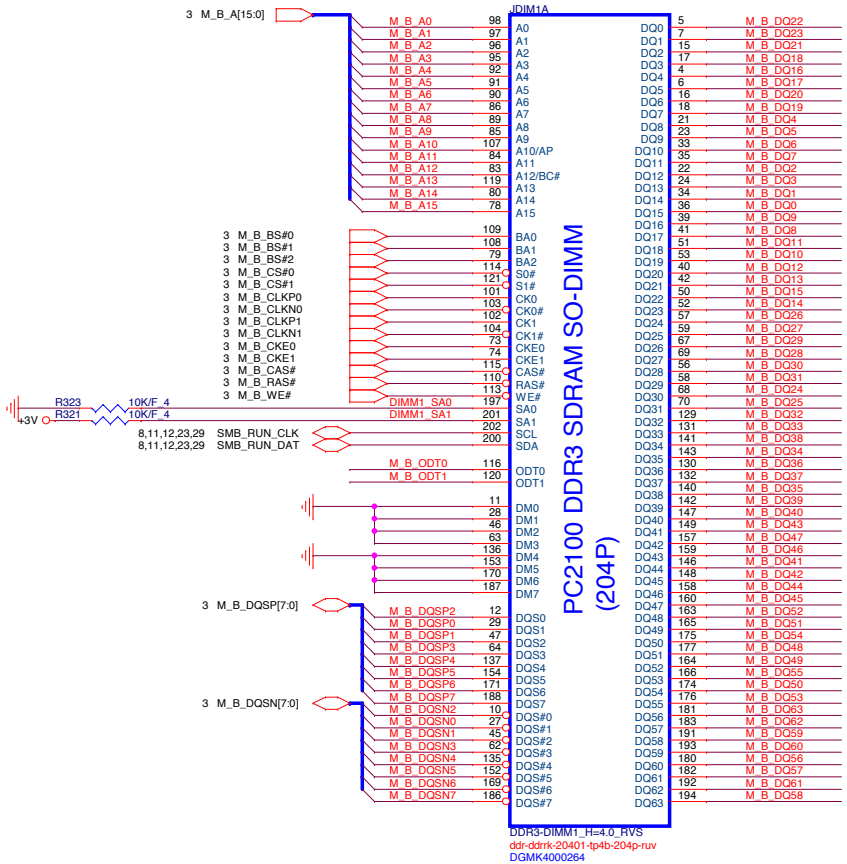


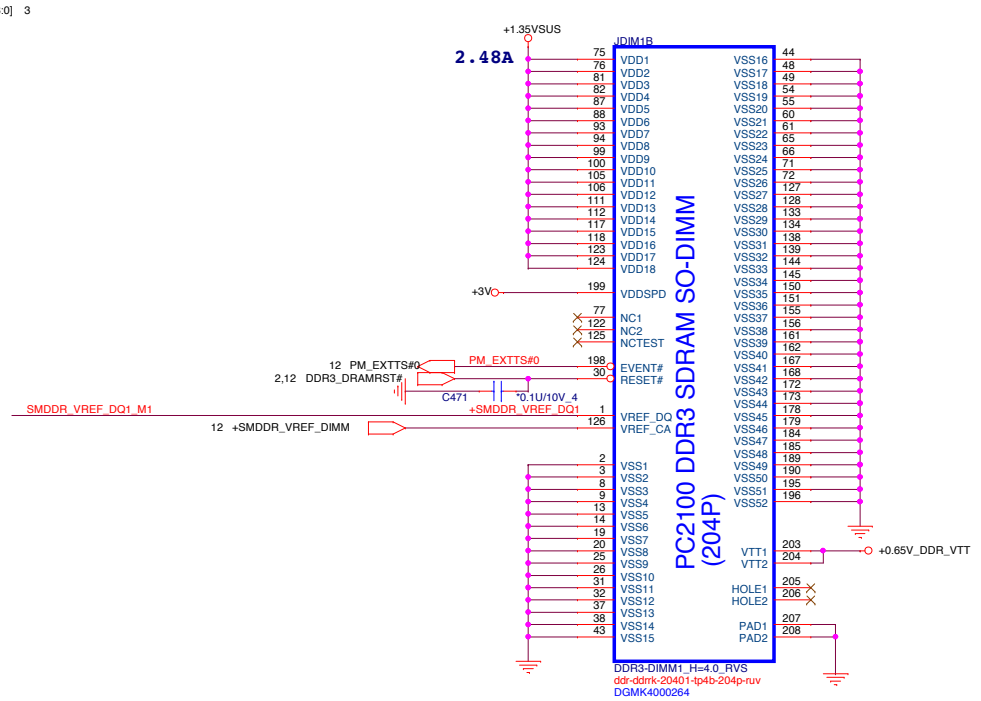
PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	DDR3 DIMM0-STD(4.0H)	1A
Date: Wednesday, April 02, 2014	Sheet 12of 44	

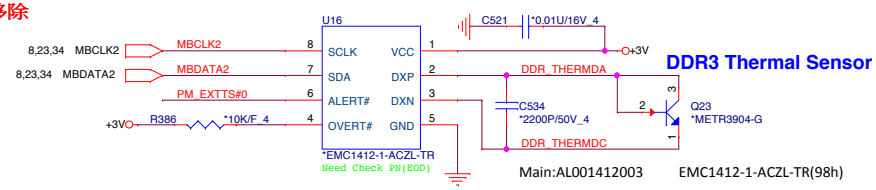
DIMM & Footprint 同Joshua提供





Local Thermal Sensor

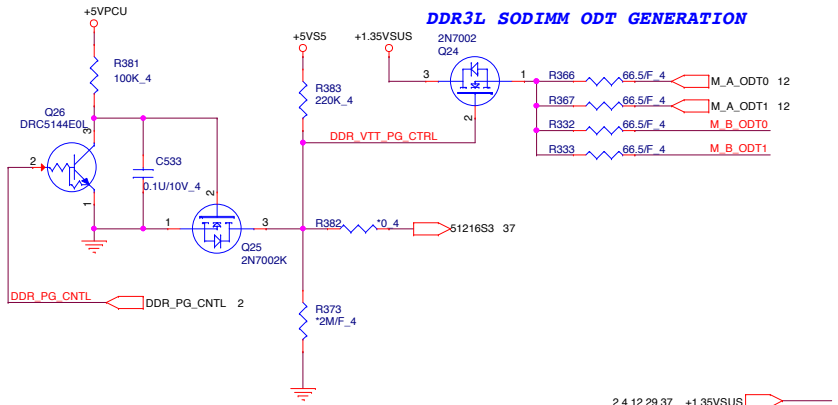
MV可移除



Main:AL001412003 EMC1412-1-ACZL-TR(98h)

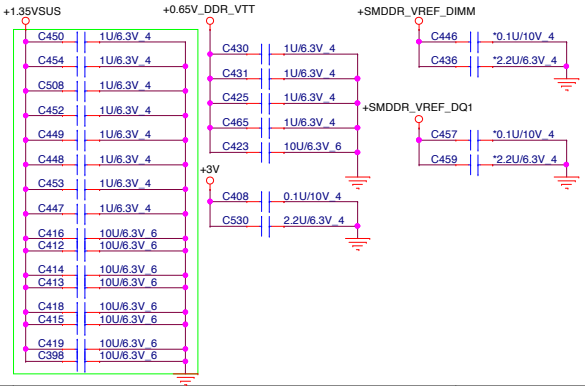
2nd:AL000431014 TMP431ADGKR(98h)

DDR3L SODIMM ODT GENERATION

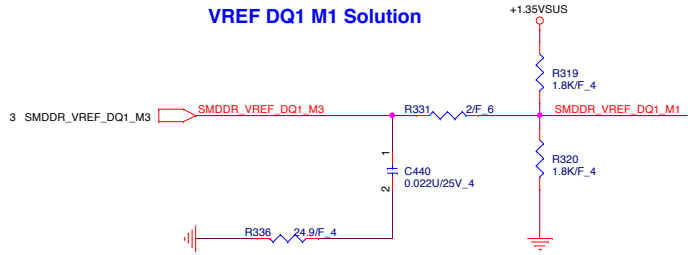


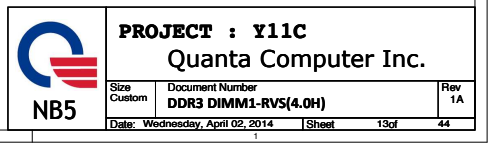
Place these Caps near So-Dimm1.

1uF/10uF 4pcs on each side of connector



VREF DQ1 M1 Solution





PROJECT :Y05
Quanta Computer Inc.

Size	Document Number	Rev
Custom	N15S-GT (PCIE I/F) /NVDD	2A

Date: Wednesday, April 02, 2014 Sheet 14 of 44

PROJECT :Y05
Quanta Computer Inc.

Size	Document Number	Rev
Custom	N15S-GT (MEMORY/GND)	2A

Date: Wednesday, April 02, 2014 Sheet 15 of 44

PROJECT :Y05
Quanta Computer Inc.

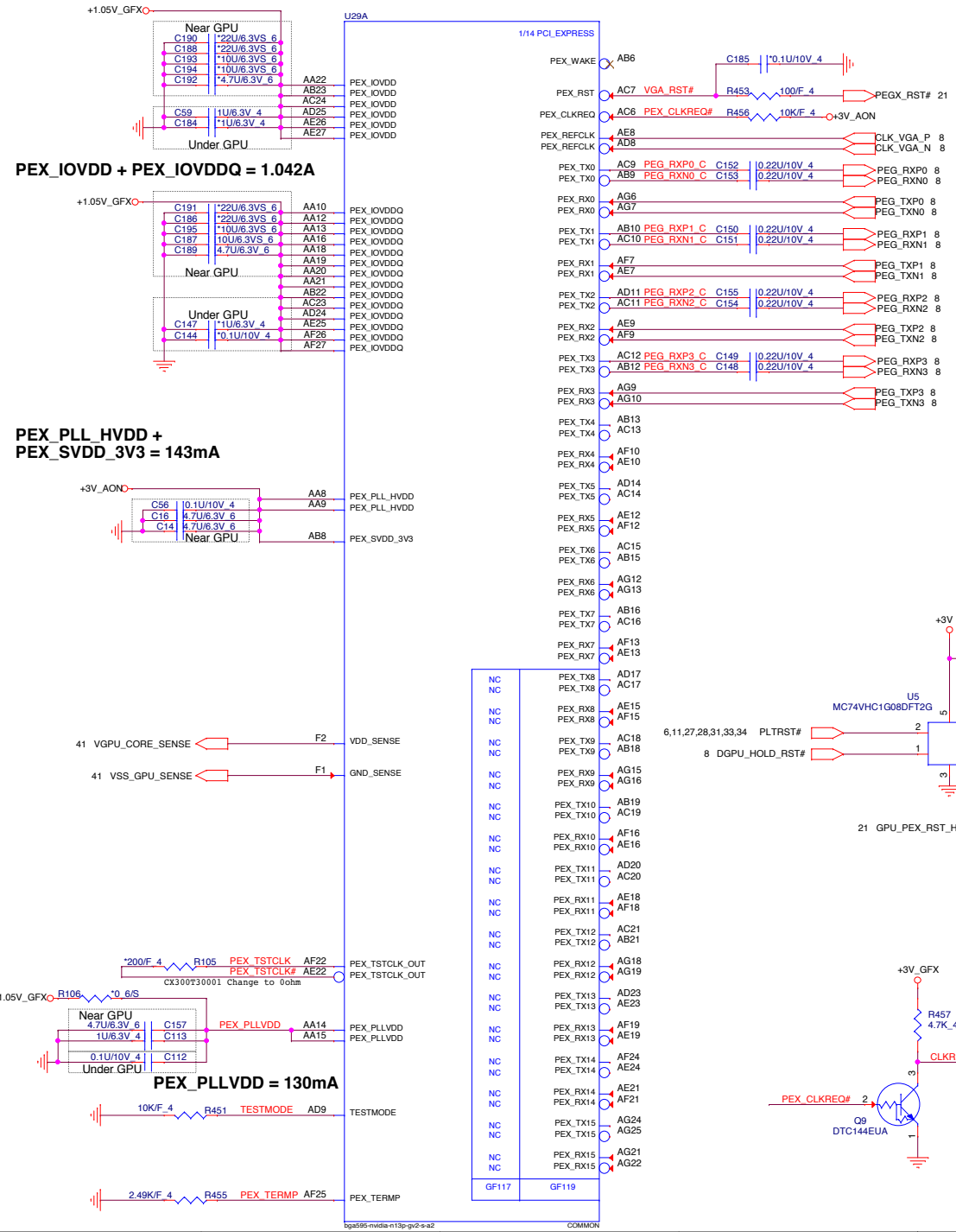
Size	Document Number	Rev
Custom	N15S-GT (DISPLAY)	2A

Date: Wednesday, April 02, 2014 Sheet 16 of 44

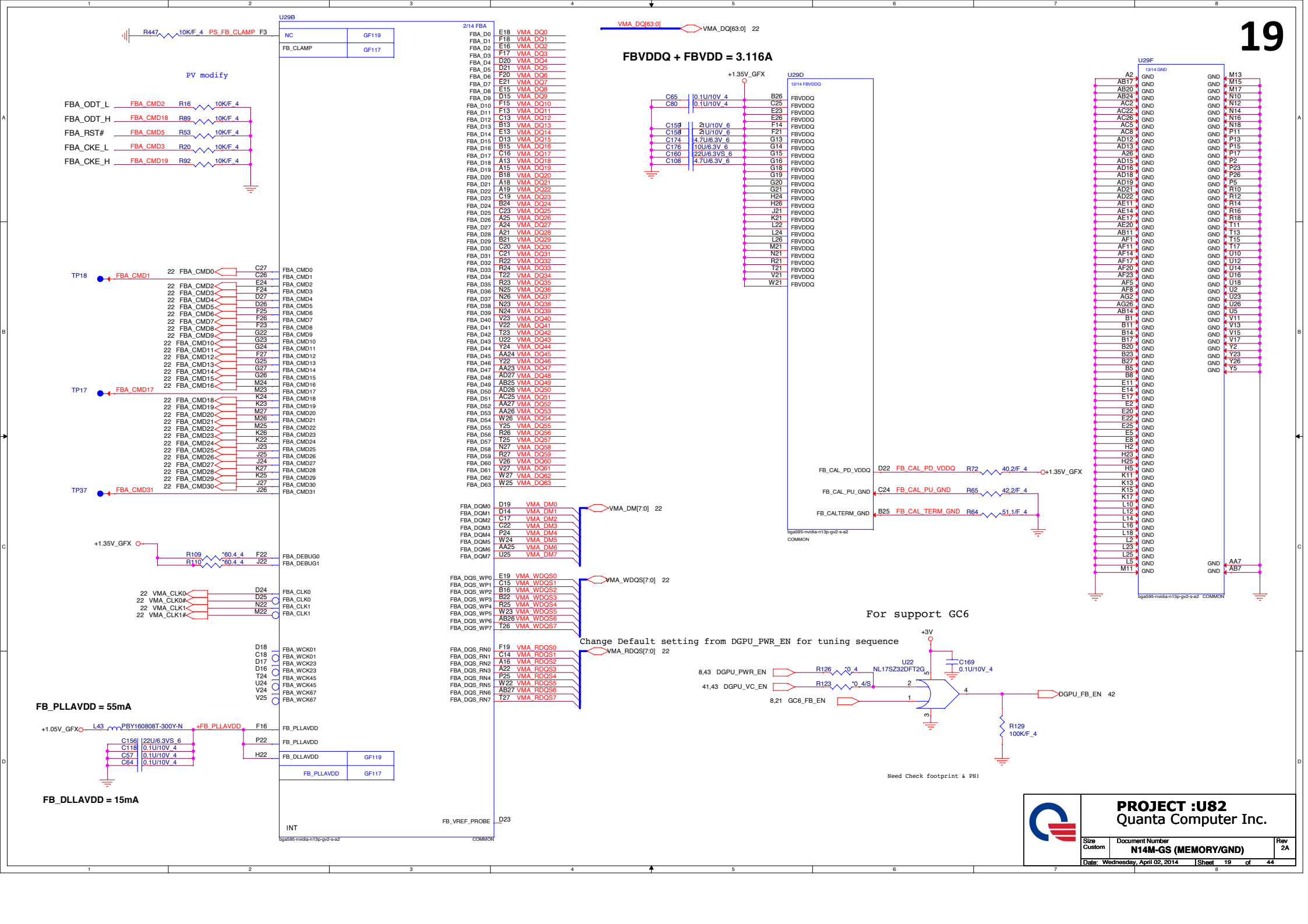
PROJECT :Y05
Quanta Computer Inc.

Size	Document Number	Rev
Custom	N15S-GT (GPIO/STRAPS)	2A

Date: Wednesday, April 02, 2014 Sheet 17 of 44



PROJECT :U82 Quanta Computer Inc.		
Size: Custom	Document Number: N14M-GS (PCIE I/F) /NVDD	Rev: 2A
Date: Wednesday, April 02, 2014	Sheet 18 of 44	



PROJECT :U82 Quanta Computer Inc.		
Size: Custom	Document Number: N14M-GS (MEMORY/GND)	Rev: 2A
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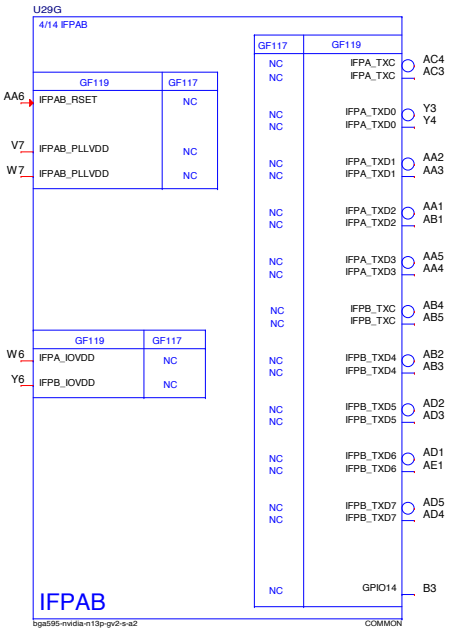

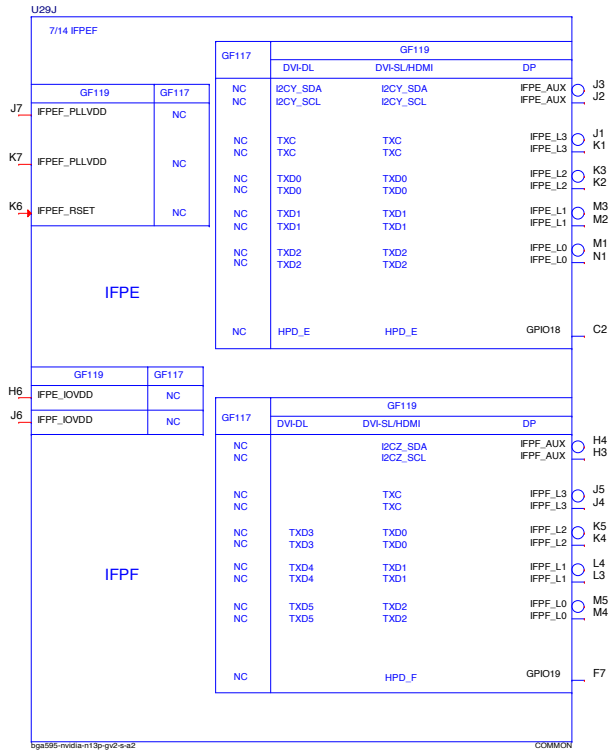

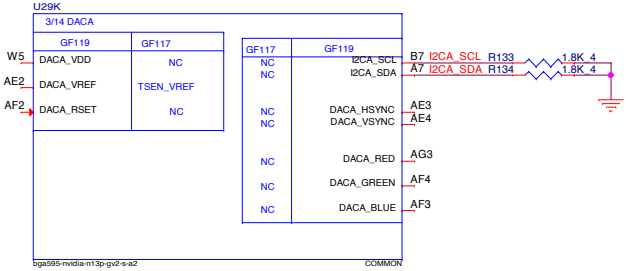

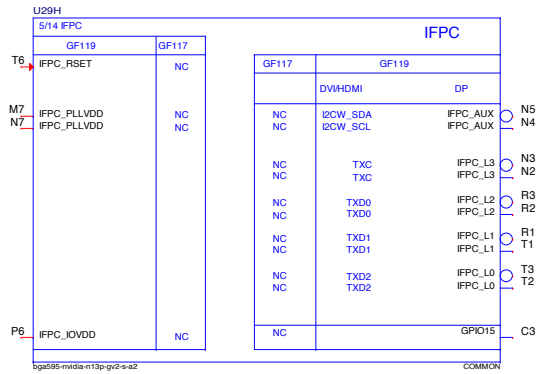

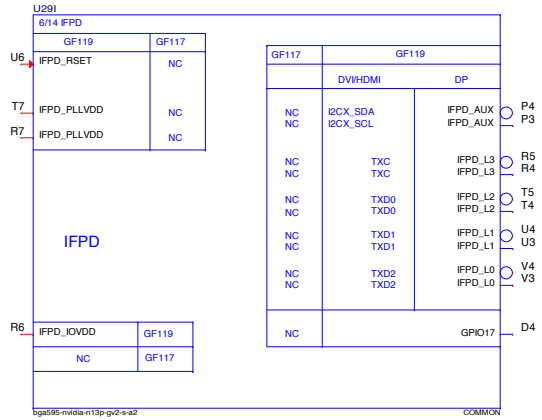

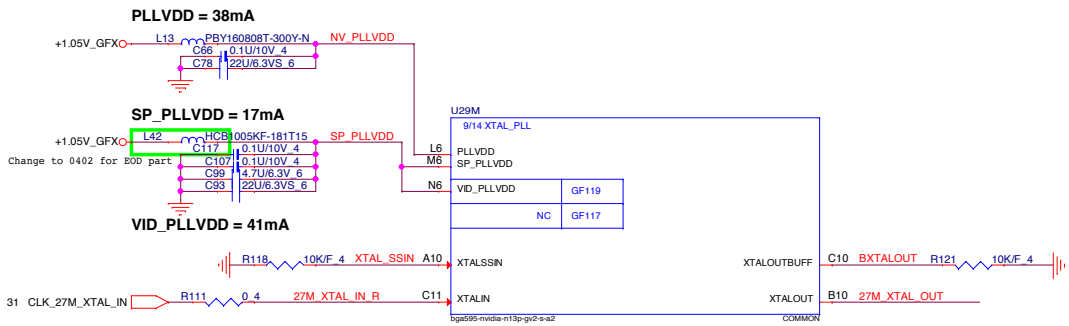

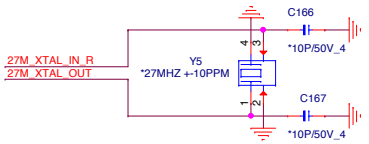

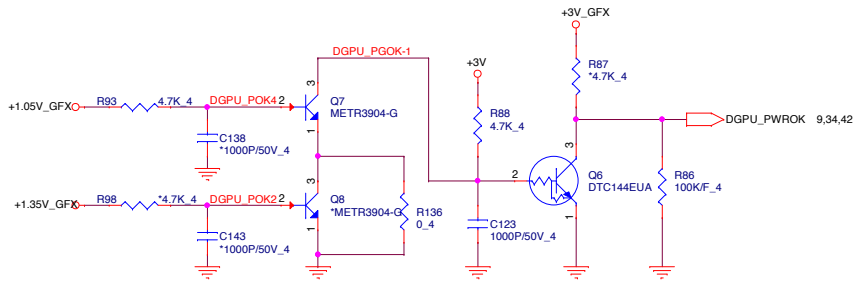

PROJECT :U82
Quanta Computer Inc.

Size	Document Number	Rev
Custom	N14M-GS (DISPLAY)	2A

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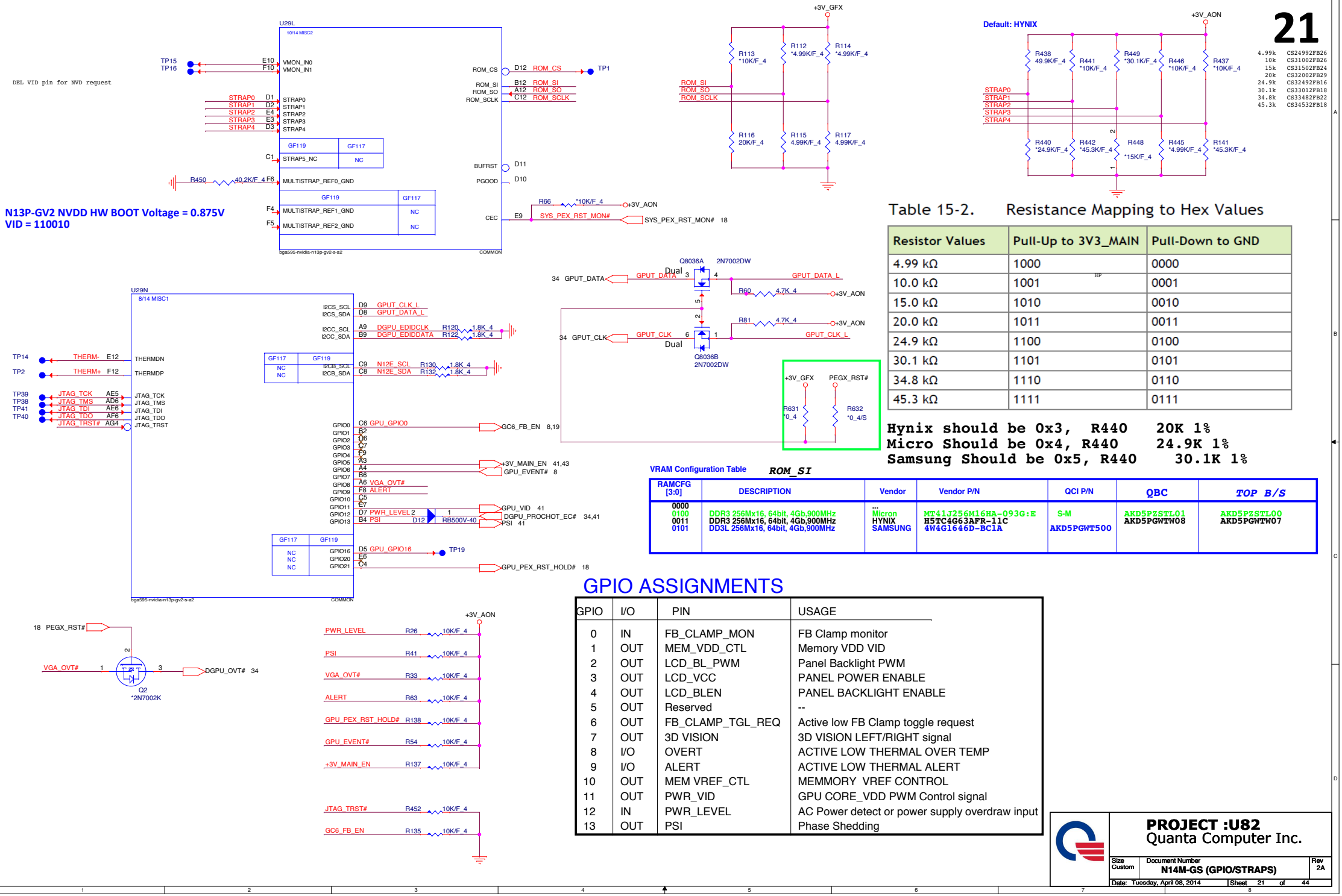

Table 15-2. Resistance Mapping to Hex Values

Resistor Values	Pull-Up to 3V3_MAIN	Pull-Down to GND
4.99 kΩ	1000	0000
10.0 kΩ	1001	0001
15.0 kΩ	1010	0010
20.0 kΩ	1011	0011
24.9 kΩ	1100	0100
30.1 kΩ	1101	0101
34.8 kΩ	1110	0110
45.3 kΩ	1111	0111

Hynix should be 0x3, R440 20K 1%
Micro Should be 0x4, R440 24.9K 1%
Samsung Should be 0x5, R440 30.1K 1%

VRAM Configuration Table *ROM_SI*

RAMCFG [3:0]	DESCRIPTION	Vendor	Vendor P/N	QCI P/N	QBC	TOP B/S
0000	...	...	...	...	...	...
0100	DDR3 256Mx16, 64bit, 4Gb,900MHz	Micron	MT41J256M16HA-093G:E	S-M	AKD5PZSTL01	AKD5PZSTL00
0011	DDR3 256Mx16, 64bit, 4Gb,900MHz	HYNIX	H5TC4G63AFR-11C	AKD5PGWT500	AKD5PGWTW08	AKD5PGWTW07
0101	DD3L 256Mx16, 64bit, 4Gb,900MHz	SAMSUNG	4W4G1646D-BC1A			

GPIO ASSIGNMENTS

GPIO	I/O	PIN	USAGE
0	IN	FB_CLAMP_MON	FB Clamp monitor
1	OUT	MEM_VDD_CTL	Memory VDD VID
2	OUT	LCD_BL_PWM	Panel Backlight PWM
3	OUT	LCD_VCC	PANEL POWER ENABLE
4	OUT	LCD_BLEN	PANEL BACKLIGHT ENABLE
5	OUT	Reserved	--
6	OUT	FB_CLAMP_TGL_REQ	Active low FB Clamp toggle request
7	OUT	3D VISION	3D VISION LEFT/RIGHT signal
8	I/O	OVERT	ACTIVE LOW THERMAL OVER TEMP
9	I/O	ALERT	ACTIVE LOW THERMAL ALERT
10	OUT	MEM VREF_CTL	MEMMORY VREF CONTROL
11	OUT	PWR_VID	GPU CORE_VDD PWM Control signal
12	IN	PWR_LEVEL	AC Power detect or power supply overdraw input
13	OUT	PSI	Phase Shedding

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Quanta Computer Inc.

Size	Document Number	Rev
Custom	N14M-GS (GPIO/STRAPS)	2A

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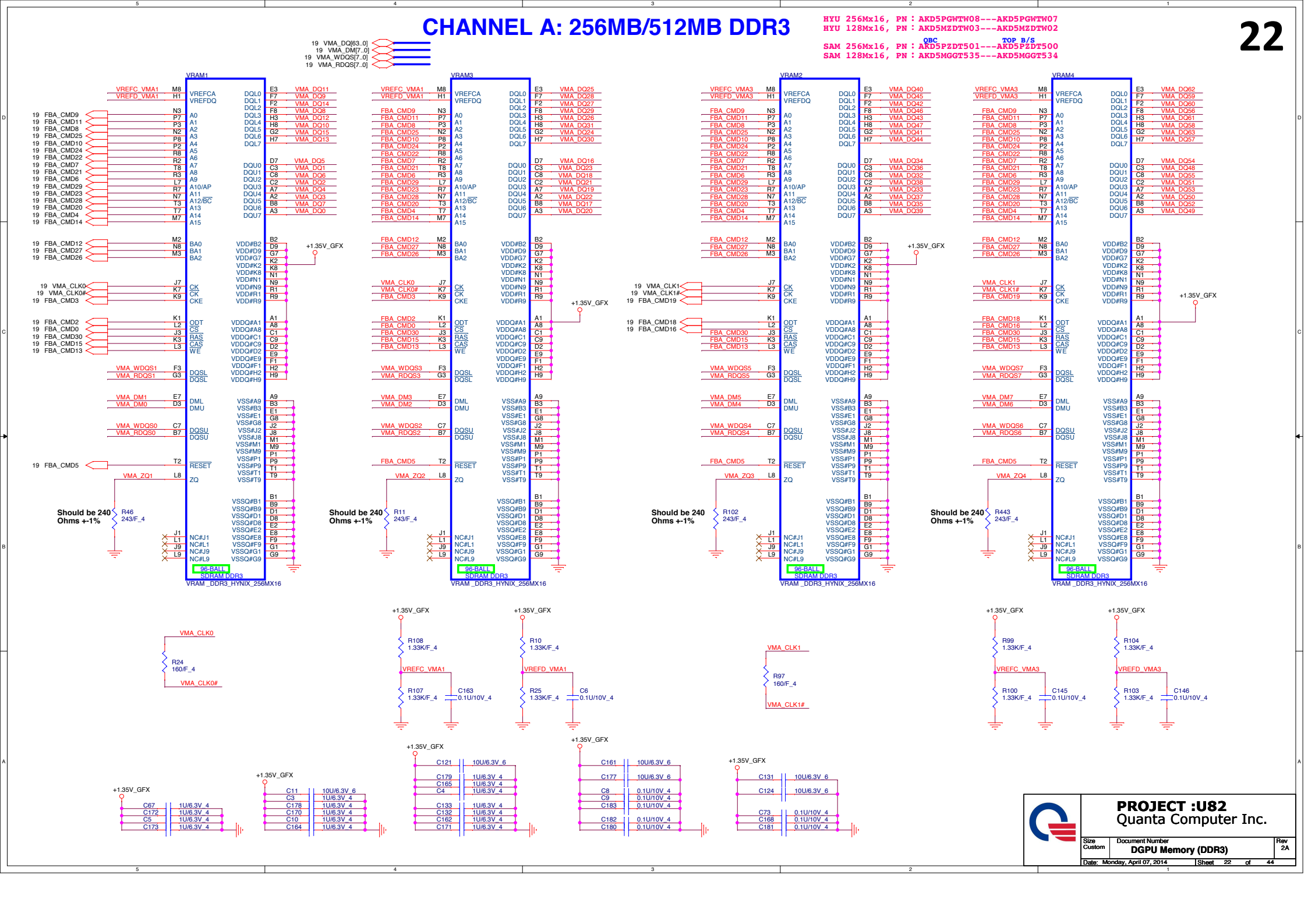
CHANNEL A: 256MB/512MB DDR3

HYU 256Mx16, PN : AKD5PGWTW08---AKD5PGWTW07
HYU 128Mx16, PN : AKD5MZDTW03---AKD5MZDTW02
QBC TOP B/S
SAM 256Mx16, PN : AKD5PZDT501---AKD5PZDT500
SAM 128Mx16, PN : AKD5MGGT535---AKD5MGGT534



PROJECT :U82
Quanta Computer Inc.

Size	Document Number	Rev
Custom	DGPU Memory (DDR3)	2A
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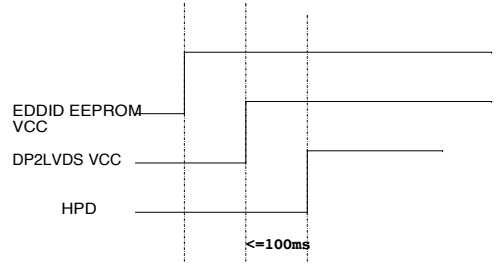
RTD2136 Dual Channel only

RTD2136S Power Up Sequence 23



Reserve for co layout EDP CON, EDP only please stuff

Pine 18: keep 80 Mile Trace

IC底部需接GND

Use 1% Res on R2178

Reserve

Default

For eDP, close to U8016

keep 80 Mile Trace

L8: need use CV-4709MN00 for Vendor suggestion

SWR MODE	LDO MODE
Stuff L8	Stuff R86

PROJECT : Y11C
Quanta Computer Inc.
NB5
Size: Custom | Document Number: RTD2136 | Rev: 1A
Date: Wednesday, April 02, 2014 | Sheet 23 of 44

LID Switch

34 EMU_LID — R7 *0_4/S PN_BLON — D1 MEK500V-40 — BLON_CON — C2 22P/50V_4 — R6 100K/F_4

LVDS_BLON1 — R5 1K/F_4

SI...Change LVDS_BLCON1 to PN_BLON ...12/13

LVDS_BLON1 — R4 100K/F_4

BRIGHT R28 1K/F_4 — VADJ1

C40 33P/50V_4

100mA

+VIN — +VIN_BLIGHT

C71 0.1U/25V_4

C91 0.01U/25V_4

+VIN: C101 *4.7U/25V_8, C98 0.1U/25V_4

+VIN: C102 *4.7U/25V_8, C103 0.1U/25V_4, C97 0.1U/25V_4, C92 0.1U/25V_4, C72 0.1U/25V_4

23 EDIDDATA_2136 — EDIDDATA

23 EDIDCLK_2136 — EDIDCLK

+3V — +3V_CAM

C26 *0.01U/25V_4

C34 *4.7U/6.3V_6

23 TXUCLKOUT- — TXUCLKOUT-

23 TXUCLKOUT+ — TXUCLKOUT+

23 TXUOUT0+ — TXUOUT0+

23 TXUOUT0- — TXUOUT0-

23 TXUOUT1+ — TXUOUT1+

23 TXUOUT1- — TXUOUT1-

23 TXUOUT2+ — TXUOUT2+

23 TXUOUT2- — TXUOUT2-

+3V — R61 4.7K_4 EDIDCLK — R62 4.7K_4 EDIDDATA

For LVDS Only:

RF — C62 *10P/50V_4 — C63 *10P/50V_4

LVDS Conn.

24

GS12401-1011-9H

lvds-50671-04041-001-40p-l

+3VLCD_CON

C19 *0.047U/10V_4 — C18 0.047U/10V_4

+3V — R14 *0_6/S — C17 1000P/50V_4

DFFC40FR065 — CN2

EDIDCLK_R — EDIDDATA_R — TXLOUT0- — TXLOUT0+ — TXLOUT1- — TXLOUT1+ — TXLOUT2- R — TXLOUT2+ R — TXLCLKOUT- R — TXLCLKOUT+ R — TXUOUT0- — TXUOUT0+ — TXUOUT1- — TXUOUT1+ — TXUOUT2- — TXUOUT2+ — TXCLKOUT- — TXCLKOUT+

For LVDS Only: Stuff Rc

For EDP Only: Stuff Rd

6,23 ULT_EDP_HPD — R8 — R9 0_4 — Rc — Rd — 0_4 ULT_EDP_HPD_R

For LVDS

Power Switch Reserve

80 mile trace

23 2136_DISP_ON — R7468 100K/F_4 — C29 4.7U/6.3V_4 — R23 0_8 — +3VLCD_CON

SI..Change R23 Netname to "DISP_ON" ...11/30

SI..ADD R139for LVDS DISO ON ...11/30

For eDP

+3V — C37 *1U/6.3V_4 — U2 AP2821KTR-G1 (IN, IN, ON/OFF, OUT, GND) — L8 *0_6 — +3VLCD_CON

C52 *0.01U/25V_4 — C49 0.1U/10V_4 — C48 *10U/6.3V_6

6,23 PCH_DISP_ON — R31 *100K/F_4

R31 close to U2 for eDP,stuff

for eDP,stuff U2 & L8

for LVDS,stuff C29 & R23

MCM2012B900GBE — +3V_CAM — USBP2- C — USBP2+ C — L2 — DIGITAL_CLK_L — VADJ1 — BLON_CON

Change FOOTPRINT to 0402

25 DIGITAL_CLK — 25 DIGITAL_D1 — L1 SBY100505T-121Y-N(120,300MA) — C13 *10P/50V_4 — C12 *10P/50V_4 — +VIN_BLIGHT

SI...for Swap CN2 to pin6/pin8 ...12/11

Mirror Pin-Define on 10/20

2 INT_eDP_TXP3 — 23 TXLCLKOUT+ — 23 TXLCLKOUT- — 2 INT_eDP_TXN3 — C33 *0.1U/10V_4 — R30 0_4 — R29 0_4 — C32 *0.1U/10V_4 — TXLCLKOUT+_R — TXLCLKOUT-_R

2 INT_eDP_TXP2 — 23 TXLOUT2+ — 23 TXLOUT2- — 2 INT_eDP_TXN2 — C36 *0.1U/10V_4 — R35 0_4 — R34 0_4 — C35 *0.1U/10V_4 — TXLOUT2+_R — TXLOUT2-_R

23 INT_eDP_TXP1_R — 23 TXLOUT0+_2136 — 23 TXLOUT0-_2136 — 23 INT_eDP_TXN1_R — C42 *0.1U/10V_4 — R43 0_4 — R42 0_4 — C41 *0.1U/10V_4 — TXLOUT0+ — TXLOUT0-

23 INT_eDP_TXP0_R — 23 TXLOUT1+_2136 — 23 TXLOUT1-_2136 — 23 INT_eDP_TXN0_R — C44 *0.1U/10V_4 — R45 0_4 — R44 0_4 — C43 *0.1U/10V_4 — TXLOUT1+ — TXLOUT1-

23 INT_eDP_AUXN_R — 23 EDIDDATA — 23 EDIDCLK — 23 INT_eDP_AUXP_R — C39 *0.1U/10V_4 — R49 0_4 — R48 0_4 — C38 *0.1U/10V_4 — EDIDDATA_R — EDIDCLK_R

For LVDS Only: stuff Ra,Rb,Rc

R37 100K/F_4 — Ra — R38 0_4 — BRIGHT

23 2136_DPST_PWM — Rb — R3 0_4 — LVDS_BLON1

23 LVDS_BLON_2136

For EDP Only: stuff Rd,Re,Rf

6,23 PCH_DPST_PWM — R27 — Rd — *10_4 — BRIGHT

6,23 PCH_LVDS_BLON — R2 — Re — *0_4 — LVDS_BLON1

For EDP Only: stuff

+3V — R40 *100K_4 — EDIDDATA_R — R39 *100K_4 — EDIDCLK_R

+3V — R58 *1K_4 — BRIGHT — R1 *1K_4 — LVDS_BLON1

13,25,29,32,36,37,38,39,40,41,42,43 — +5VS5

6,7,8,9,10,11,12,13,18,19,20,23,25,26,27,28,29,30,31,33,34,39,40,41 — +3V

4,7,25,29,31,33,34,35,36 — +3VPCU

25,26,29,30,31,32,33,40 — +5V

26,29,30,35,36,37,38,39,40,41,42,43 — +VIN

EMI Solution

C_TX2_HDMI+ — R247 120/F_4 — C_TX2_HDMI-

C_TX1_HDMI+ — R231 120/F_4 — C_TX1_HDMI-

C_TX0_HDMI+ — R234 120/F_4 — C_TX0_HDMI-

C_TXC_HDMI+ — R217 120/F_4 — C_TXC_HDMI-

C_IN_CLK — R219 *0_4/S — C_TXC_HDMI+

C_IN_CLK# — R215 *0_4/S — C_TXC_HDMI-

HDMI SMBus Isolation

+3V — R188 2.2K_4 — Q14 2N7002DW — HDMI_SCL_R — HDMI_SCLK

6 SDVO_CLK

6 SDVO_DATA — HDMI_SDA_R — HDMI_SDATA — +3V — R187 2.2K_4

For EDP Only: stuff Cap

For LVDS only stuff Resistor

Close to HDMI connector

+3V — Q40 2N7002K — DGPU_CL_HDMIP — R273 100K/F_4 — C372 0.1U/10V_4

Close to Q31

R253 470/F_4 C_TX2_HDMI+ — R246 470/F_4 C_TX2_HDMI-

R232 470/F_4 C_TX1_HDMI+ — R230 470/F_4 C_TX1_HDMI-

R241 470/F_4 C_TX0_HDMI+ — R233 470/F_4 C_TX0_HDMI-

R222 470/F_4 C_IN_CLK — R214 470/F_4 C_IN_CLK#

+3V — R170 1M_4 — Q10 2N7002 — 6 HDMI_HPD_CON — 3 HDMI_HPD R176 20K/F_4

2 IN_D2 — IN_D2 — C354 0.1U/10V_4 — C_TX2_HDMI+

2 IN_D2# — IN_D2# — C349 0.1U/10V_4 — C_TX2_HDMI-

2 IN_D1 — IN_D1 — C336 0.1U/10V_4 — C_TX1_HDMI+

2 IN_D1# — IN_D1# — C331 0.1U/10V_4 — C_TX1_HDMI-

2 IN_D0 — IN_D0 — C343 0.1U/10V_4 — C_TX0_HDMI+

2 IN_D0# — IN_D0# — C339 0.1U/10V_4 — C_TX0_HDMI-

2 IN_CLK — IN_CLK — C327 0.1U/10V_4 — C_IN_CLK — C_TXC_HDMI+

2 IN_CLK# — IN_CLK# — C324 0.1U/10V_4 — C_IN_CLK# — C_TXC_HDMI-

+5V_HDMIC — D3 — D5 — RB500V-40 — 5V_HSMBCK R196 2.2K_4 — 5V_HSMBDT R202 2.2K_4 — HDMI_SCLK — HDMI_SDATA

C321 *10P/50V_4 — C318 *10P/50V_4

+5V_HDMIC — C313 *0.01U/16V_4

HDMI_HPD — HDMI_DET_C — VC1 *TVM0G5R5M220R — C298 220P/50V_4

for EMI request

CN24 HDMI CONN — SHELL1 — D2+ — D2 Shield — D2- — D1+ — D1 Shield — D1- — D0+SHELL2 — D0 Shield — D0- — CK+ — CK Shield — CK- SHELL2 — CE Remote — NC — DDC CLK — DDC DATA — GND — +5V — HP DET — SHELL2

+5V — 40 mils — F1 FUSE1A6V_POLY — +5V_HDMIC — C314 0.1U/10V_4 — VC2 *TVM0G5R5M220R — SSM14 spec is 40V 1A

NB5

PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	LCD CONN/LID/CAM/D-MIC	1A

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Audio Codec

Close to PIN9

+3V L37 HCB1005KF-181T15 +3V_DVDD
C576 1U/6.3V_4
C581 10U/6.3VS_6
C578 0.1U/10V_4

+1.5V L32 *HCB1005KF-181T15
+3V L33 HCB1005KF-181T15
+3V_DVDD-IO
C560 10U/6.3VS_6
C564 0.1U/10V_4

>40mils trace

+5V_AVDD
C596 10U/6.3VS_6
L31 HCB1005KF-181T15 +5V
C589 0.1U/10V_4
C517 *AZ2015-01H
Close to PIN27
AGND

+5V_AVDD
C559 0.1U/10V_4
C553 10U/6.3VS_6
AGND AGND
Close to PIN38

U20

TO Digital MIC
24 DIGITAL_D1
24 DIGITAL_CLK
C569 10P/50V_4
R405 600/300mA DMIC0
R395 600/300mA DMIC_CLK_R
C555 10P/50V_4
R411 *0_4/S

7 ACZ_SDOUT_AUDIO
7 BIT_CLK_AUDIO
7 ACZ_SDIN0
R410 33_4 HD_SDIN0
+3V_DVDD-IO
7 ACZ_SYNC_AUDIO
7 ACZ_RST#_AUDIO
C582 *0.1U/10V_4
AMP_BEEP
L_SPK+
L_SPK-
R_SPK-
R_SPK+
COMBO-DET
26 PD#
26 HP_EAPD

Digital

9	DVDD	AVDD1 AVDD2	27 38
4	GPIO1/ DMIC-DATA		
2	GPIO0/ DMIC-CLK	AVSS1 AVSS2	26 33
7	DVSS	LDO-CAP	21
5	SDATA-OUT		
6	BIT-CLK	VREF	25
8	SDATA-IN	HPOUT-L	31
3	DVDD-IO	HPOUT-R	32
10	SYNC		23
11	RESET#	LINE1-VREFO	
12	PCBEEP	LINE1-L	28
40	SPK-L+	LINE1-R	29
41	SPK-L-		20
42	PVSS	MIC1-R	19
43	SPK-R-	MIC1-L	
44	SPK-R+	MIC1-VREFO	30
46	DMIC1/GPIO2	MONO-OUT	37
47	EAPD/PD	CPVEE	34
48	Globe Input Mute	CBN	35
24	I2S_DIN	CBP	36
18	I2S_LRCK		
17	I2S-DOUT		
16	I2S-SCLK		
15	I2S-MCLK		
39	PVDD1		
45	PVDD2		
1	DREG-OUT		
49	GND		
13	SenseA		
14	SenseB		
22	JDREF		

ALC3241 x QFN48

Close to PIN21
C588 10U/6.3VS_6 AGND

Close to PIN25
C586 0.1U/10V_4
C587 2.2U/6.3V_4 AGND

HPOUT_L HPOUT_L 26 AGND SHIELD
HPOUT_R HPOUT_R 26 AGND SHIELD
AGND SHIELD
TO Headphone jack

VREFOUT_C

MIC_L1 C574 4.7U/6.3V_4
MIC_R1 C571 *4.7U/6.3V_4
R436 1K/F_4 EXT_MIC_L
TO Audio Jack MIC

R431 *0_4/S MUTE_LED_CNTL 29

SUB_OUT R609 *0_4 SUB_OUT14 26
R608 0_4 SUB_OUT15 26

C563 2.2U/6.3V_4 AGND

CAP-
CAP+ C562 2.2U/6.3V_4
Close to Pin 35

Close to Pin 22
R429 20K/F_4 AGND
SENSE_A R428 39.2K/F_4 SENSE_A
Close to codec

C544 10U/6.3VS_6

+5V_DVDD
+5V L30 HCB1005KF-181T15 +5V_DVDD
C535 0.1U/10V_4
C543 10U/6.3VS_6
Close to Pin 39
+5V_DVDD
C556 0.1U/10V_4
C550 10U/6.3VS_6
Close to Pin 45

+5V_AVDD
C558 *2.2U/6.3V_4
AGND
U17
Vout Vin
BYP
GND EN
TPS793475DBVR
HPA01091DBVR
C548 *1U/6.3V_4
C512 0.1U/10V_4
C519 0.047U/10V_4
C513 1U/6.3V_4
+5V
R374 10K_4 +5V
Vset=1.242V

Close to Speaker
Speaker 4 ohm: 40mils

L_SPK+ L6 TI160808U600 L_SPK+_R
L_SPK- L5 TI160808U600 L_SPK-_R
R_SPK- L4 TI160808U600 R_SPK-_R
R_SPK+ L3 TI160808U600 R_SPK+_R
CN3
INT SPEAKER CONN
Change FOOTPRINT to 0603
C27 1000P/50V_4
C31 1000P/50V_4
C30 1000P/50V_4
C25 1000P/50V_4

AMP_BEEP C584 0.1U/10V_4 AMP_BEEP_L
R427 100K/F_4 AMP_BEEP_R2
C583 0.1U/10V_4
check value
C594 0.01U/25V_4
R433 10K_4
Check layout
mount location
AGND
+5V_AVDD
R432 10K_4
2N7002 Q31
ACZ_SPKR 9

+1.5V
R408 *2.2K_4
+3V_DVDD
R421 10K_4
R420 *10K_4
Q29 *MMBT3904
ACZ_RST#_AUDIO
PD#
26,34 VOLMUTE#
D11 MEK500V-40

VREFOUT_C
C585 *1U/6.3V_4
AGND
R430 2.2K_4
EXT_MIC_L
R435 2.2K_4
COMBO-DET R610 *0_4/S COMBO-DET_R
R434 10K_4
C595 10U/6.3VS_6
AGND

ACZ_SDIN0 EC60 *33P/50V_4
ACZ_SDOUT_AUDIO EC61 *10P/50V_4
ACZ_SYNC_AUDIO EC65 *10P/50V_4
BIT_CLK_AUDIO EC62 *33P/50V_4

update Pin-define On 10/20
SMD FPC 30P
32 USB30_TX3+_DC
32 USB30_TX3-_DC
32 USB30_RX3+_DC
32 USB30_RX3-_DC
8 USBP1+
8 USBP1-
MCM2012B900GBE
USBP1+_C
USBP1-_C
7 ACC_LED#
7 SATA_LED#
29 DEEP_PWRLED#
+3V
+3VPCU
SI..Add pin15 +5VS5 for USB port
+5VS5
32,34 USBPW_ON#
SENSE_A
EXT_MIC_L
AGND
26 LINEOUT_L_C
26 LINEOUT_R_C
LINEOUT_L_C
LINEOUT_R_C
CN14

+3VS5
C786 0.1U/10V_4
USBPW_ON# EC55 *220P/50V_4
ACC_LED# EC79 *680P/50V_4
SATA_LED# EC78 *680P/50V_4
DEEP_PWRLED# EC4 *680P/50V_4
+3VPCU EC5 0.1U/10V_4
+5VS5 EC30 0.1U/10V_4

EC89 1000P/50V_4
EC82 1000P/50V_4
EC81 1000P/50V_4
EC80 1000P/50V_4
EC54 1000P/50V_4
AGND
Close to CODEC
place to near U24 or under U24
R618 *0_8/S
AGND

10,33,38 +1.5V
+3V
+5V
6,7,8,9,10,11,12,13,18,19,20,23,24,26,27,28,29,30,31,33,34,39,40,41
24,26,29,30,31,32,33,40

NB5

PROJECT : Y11C
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Audio Codec	1A

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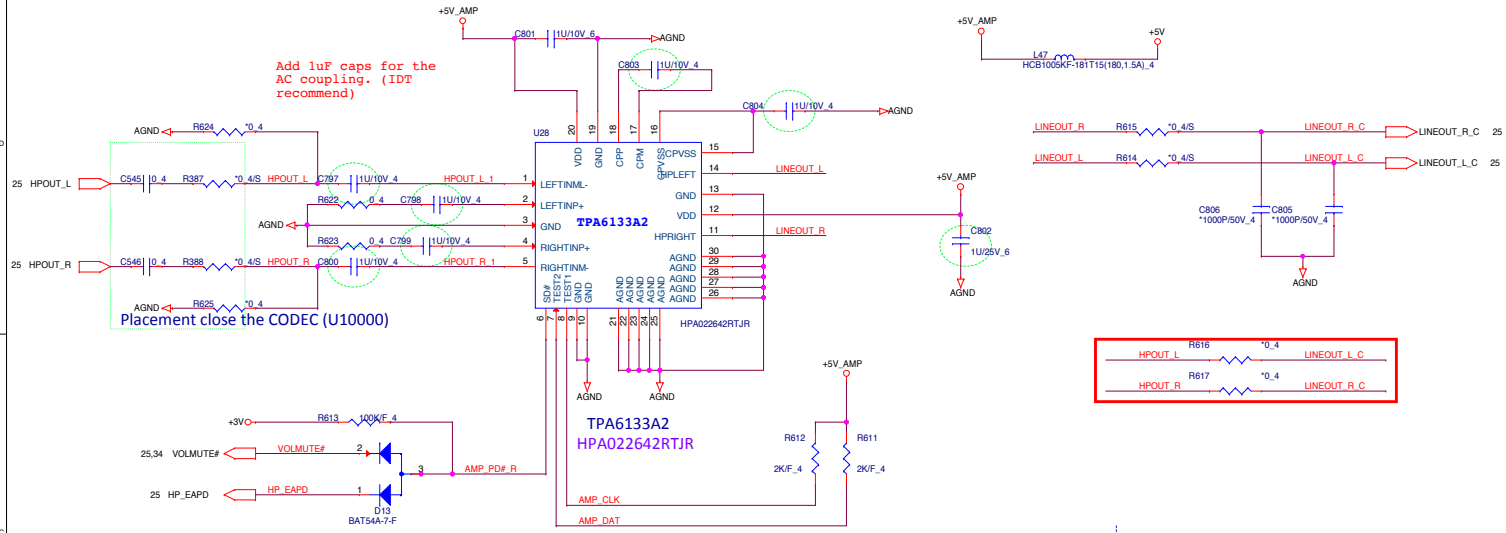
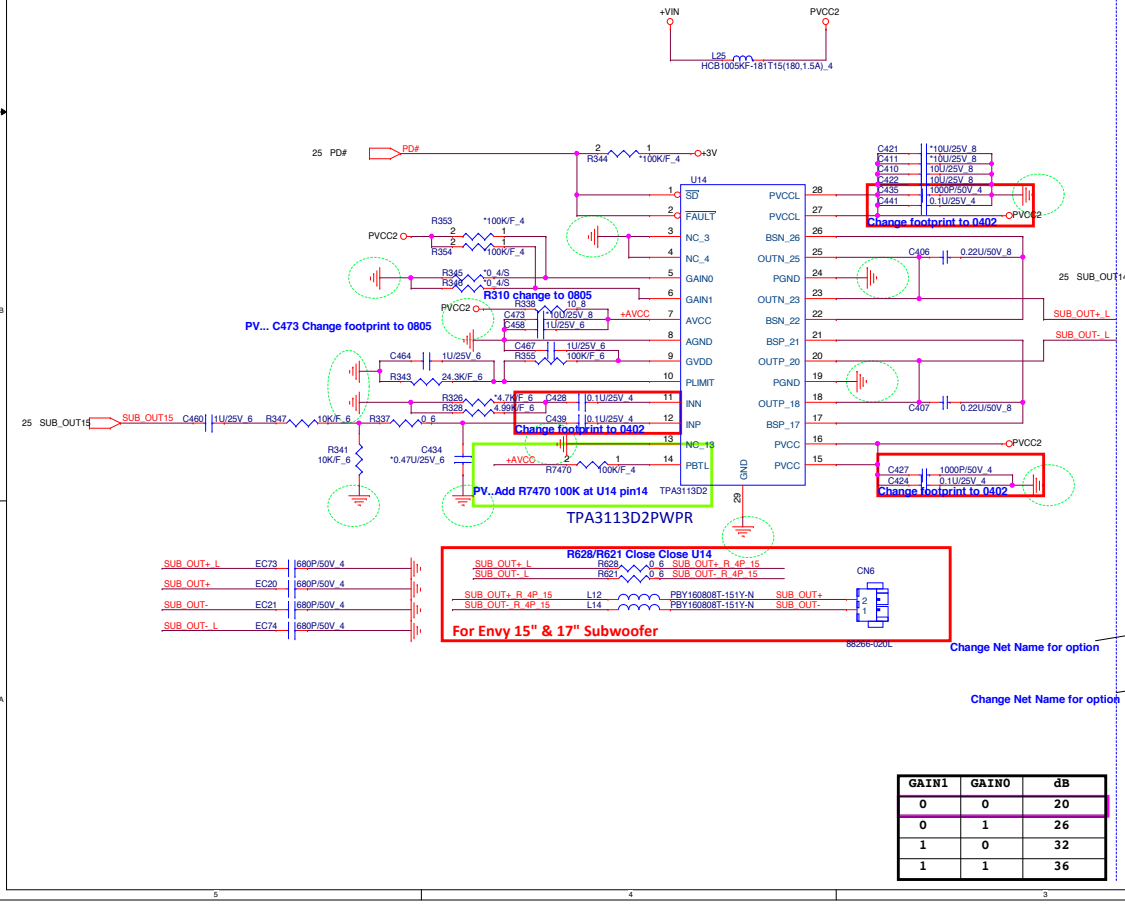
Head Phone out

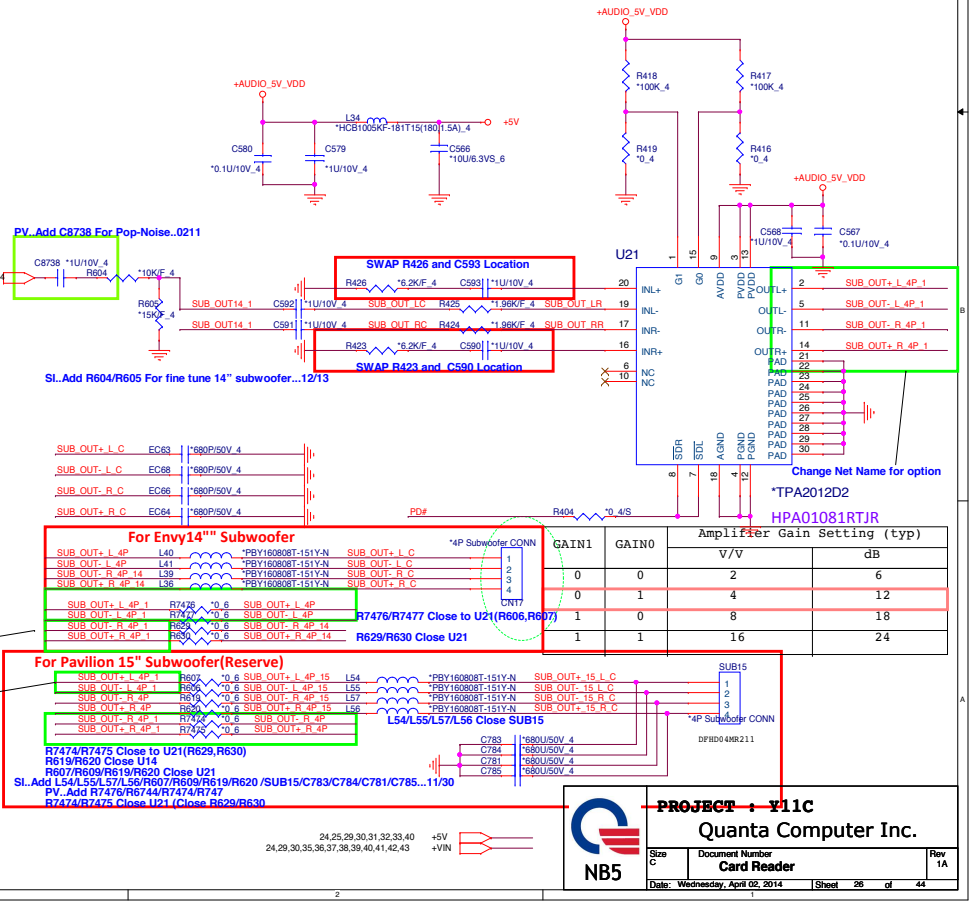


For Envy 15" & 17" Subwoofer



GAIN1	GAIN0	dB
0	0	20
0	1	26
1	0	32
1	1	36

For Pavilion 15" Subwoofer(Reserve)
For Envy14"" Subwoofer



GAIN1	GAIN0	Amplifier Gain Setting (typ) V/V	dB
0	0	2	6
0	1	4	12
1	0	8	18
1	1	16	24

PROJECT : Y11C
Quanta Computer Inc.
NB5
Size C | Document Number Card Reader | Rev 1A
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Green Clk

For EMI 0 ~ 22 ohm

R155 *10/F_4 LAN_XTAL1 XTAL1

R159 *0_4/S LAN_XTAL25_IN → LAN_XTAL25_IN 31

Y2 *25MHZ +-10PPM

C262 *10P/50V_4 C261 *10P/50V_4

Power trace Layout 寬度> 60mil

>60mil >60mil

+1.05V_LAN_REGOUT L15 4.7UH,+-20%,650MA_1210

R151 Ra *0_8

La

Ce C266 *0.1U/10V_4 Ca C264 0.1U/10V_4 Cb C265 4.7U/6.3VS_4

Trace<30 mil
Width > 60 mil

For GbE
Stuff La, Ca ,Cb

For 10/100
NA: La, Ca ,Cb
STUFF : Ra, Ce

For GbE
* Place Cc,Cd,Ce,Cf,C232
close to each VDD10 pin-- 3, 22, 8 , 30

For 10/100 NA Ce,Cf
* Place Ce , Cf ,C250
close to each VDD10 pin-- 8, 30 only,

+1.05V_LAN

Cc C263 0.1U/10V_4 Cd C233 0.1U/10V_4 Ce C228 0.1U/10V_4 Cf C231 0.1U/10V_4 Cg C259 *1U/6.3V_4 Cf C234 1U/6.3V_4 C232 0.1U/10V_4 C250 *0.1U/10V_4

For GbE
* Place Cf close to each VDD10 pin-- 22 (reserve)

For 10/100
* Place Cg close to each VDD10 pin-- 30 (reserve)

For 10/100
* Stuff Cb and Ce only, close to each VDD33 pin-- 23, 32

For GIGA
* Stuff Ca and Cb only, close to each VDD33 pin-- 11, 32

+3V_LAN +3VLANVCC

C227 0.1U/10V_4 Ca C247 0.1U/10V_4 Cb C248 *0.1U/10V_4 Ce C258 4.7U/6.3V_6 C260 4.7U/6.3V_6

* Place Cc and Cd close to each VDD33 pin-- 23

C236 4.7U/6.3VS_4 Cc C237 0.1U/10V_4 Cd

For GIGA
Stuff Cc ,Cd

For 10/100
NA: Cc, Cd

Remove For Not Using SWR mode

+1.05V_LAN TP6

R154 2.49K/F_4 LANRSET

LAN_AMBLED# LAN_WLED# LAN_WLED#

R157 0_4 R156 *0_4

FOR 8176: Stuff R156,DEL R157
FOR 8161: Stuff R157, DEL R156

+3V R144 1K_4 ISOLATEB R145 15K/F_4

if ISOLATEB pin pull-low,the LAN chip will not drive it's PCI-E outputs (excluding PCIE_WAKE# pin)

U8 RTL8161GSH

Please add 9 GND VIAs connection with thermal PAD

MDI0+ MDI0- VDD10 MDI1+ MDI1- MDI2+ MDI2- VDD10

MDIP0 MDIN0 AVDD10(NC) MDIP1 MDIN1 MDIP2(NC) MDIN2(NC) AVDD10

REGOUT(NC) VDDREG(VDD33) DVDD10(NC) LANWAKEB ISOLATEB PERSTB HSON HSOP

+1.05V_LAN_REGOUT DVDDL VDD10 PCIE_WAKE#_R R146 *0_4/S PCIE_WAKE# 6,28,33,34 ISOLATEB R143 *0_4 DSW_WAKE# TP3 PLTRST# 6,11,18,28,31,33,34

PCIE_RXN4_LAN_L C225 0.1U/10V_4 PCIE_RXN4_LAN 8
PCIE_RXP4_LAN_L C226 0.1U/10V_4 PCIE_RXP4_LAN 8

FOR GIGA: 8161GSH: AL008161004
FOR 10/100 : 8176EH:

AL008161004IC CTRL(32P) RTL8161GSH-CG(QFN)
AL008176000IC CTRL(32P) RTL8176EH-CG(QFN)

MDP3(NC) MDN3(NC) AVDD33(NC) CLKREQB HSIP HSIN REFCLK_P REFCLK_N

MDI3+ MDI3- +3V_LAN PCIE_CLKREQ_LAN# R142 *0_4/S 8 PCIE_CLKREQ_LAN# LAN_CLKRQ

CLK_PCIE_LANN CLK_PCIE_LANP PCIE_TXN4_LAN PCIE_TXP4_LAN

CLK_PCIE_LANN 8 CLK_PCIE_LANP 8 PCIE_TXN4_LAN 8 PCIE_TXP4_LAN 8

+3VLANVCC R444 330_4 LAN_WLED C614 1000P/50V_4

+3VLANVCC R21 330_4 C28 1000P/50V_4 LAN_AMBLED

RJ45

(White) CN21

LAN_WLED 9 LAN_WLED# 10 LED_White_P A1 LED_White_N A2

MDI3- 8 MDI3+ 7 MDI1- 6 MDI2- 5 MDI2+ 4 MDI1+ 3 MDI0- 2 MDI0+ 1

RX1- RX1+ RX0- TX1- TX1+ RX0+ TX0- TX0+ GND1 GND 14 13

R454 *0_6/S R439 *0_6/S

LAN_AMBLED 11 LAN_AMBLED# 12 LED_AMB_P B1 LED_AMB_N B2

(Amber)

R126 0_4 R125 0_4 R124 0_4

EC19 *68P/50V_4

RJ45_CONN

U6 NS681684

MDI1+_1 MDI1-_1 MDI0+_1 MDI0-_1

TD+ TD- CT RD+ RD- CT

TX+ TX- RX- CT RX+

MDI1+ TRA_V_DAC MDI1- MDI0- TRA_V_DAC MDI0+

R101 75/F_4 LAN_MCTG1 R119 75/F_4 LAN_MCTG0

U7 NS681684

MDI3+_1 MDI3-_1 MDI2+_1 MDI2-_1

MDI3+ TRA_V_DAC MDI3- MDI2- TRA_V_DAC MDI2+

R131 75/F_4 LAN_MCTG3 R140 75/F_4 LAN_MCTG2

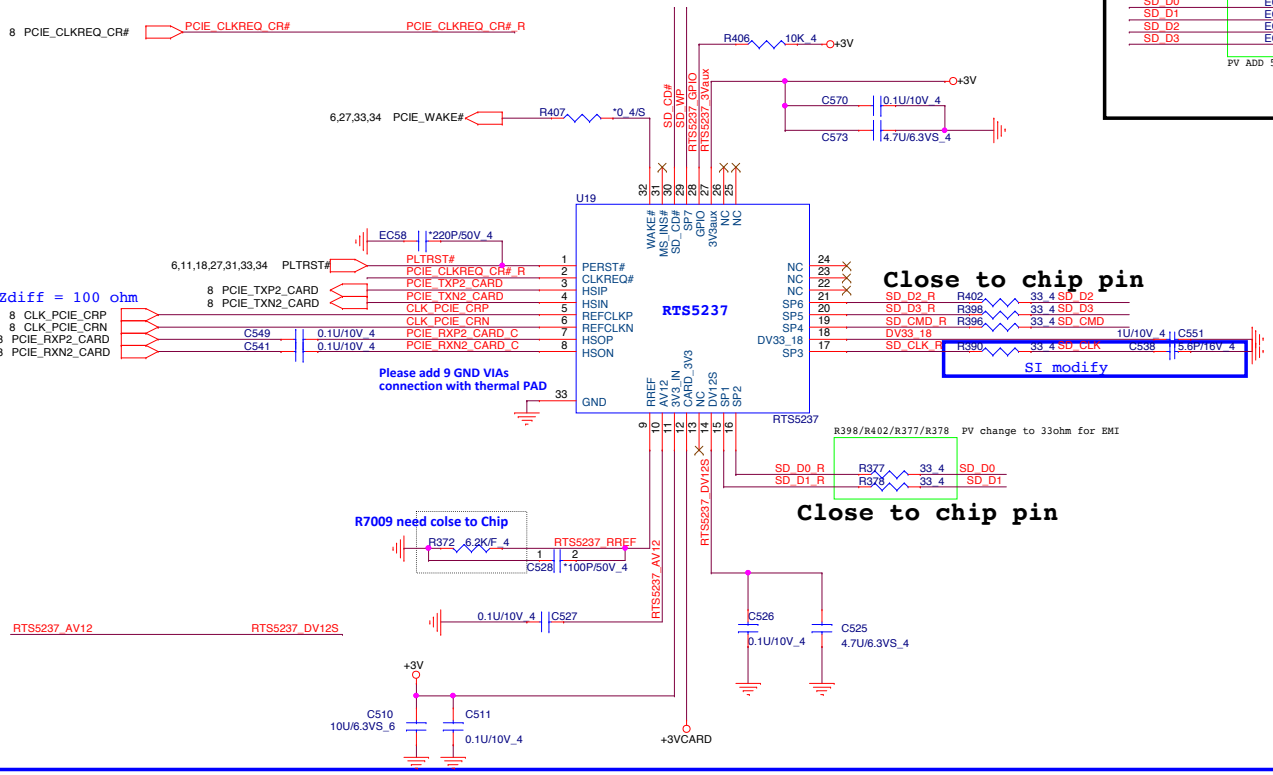
C608 10P/3KV_1808 C115 0.01U/25V_4

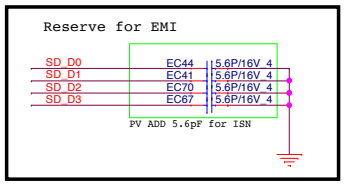
For Giga : U6 + U7
For 10/100 : U6

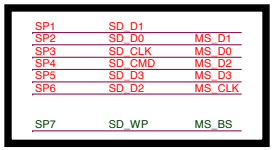
6,7,8,9,10,11,12,13,18,19,20,23,24,25,26,28,29,30,31,33,34,39,40,41 +3V
31,40 +3VLANVCC

FCE :NS892408 ,DB0EF7LAN01

NB5	PROJECT : Y11C Quanta Computer Inc.	
Size Custom	Document Number LAN RTL8161GSH /RJ45 conn	Rev 1A
Date: Wednesday, April 02, 2014	Sheet 27 of 44	

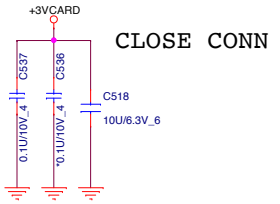




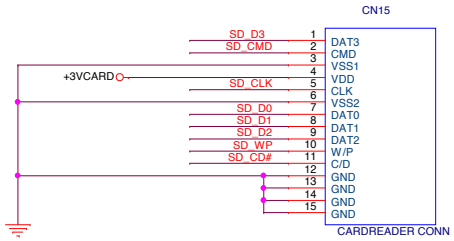


Share Pin

SD / MMC

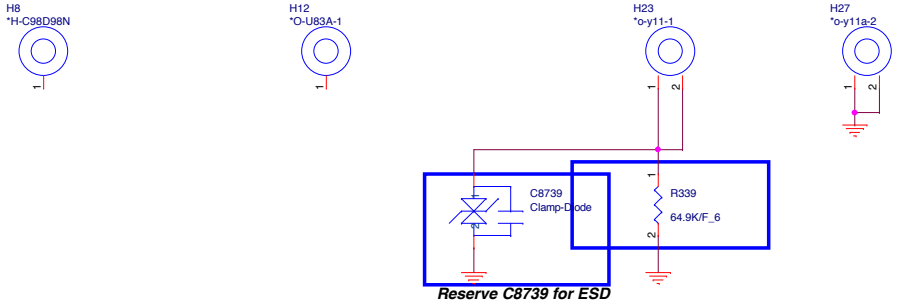


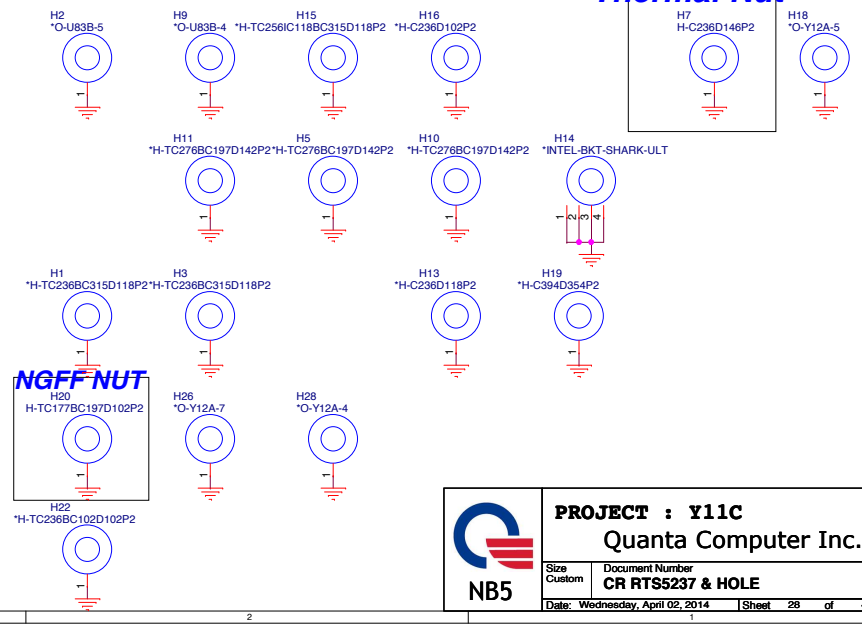
CARD READER



R6x Type

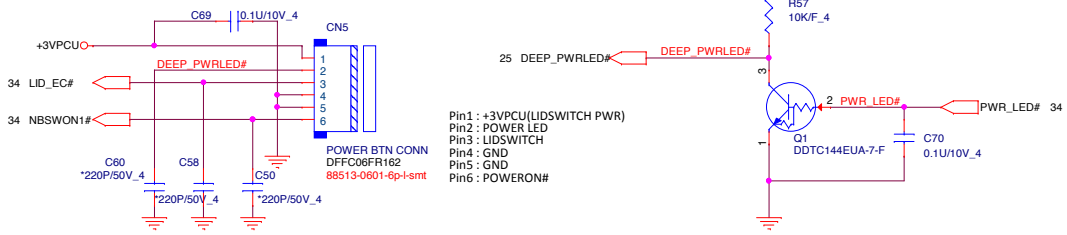
Thermal Nut



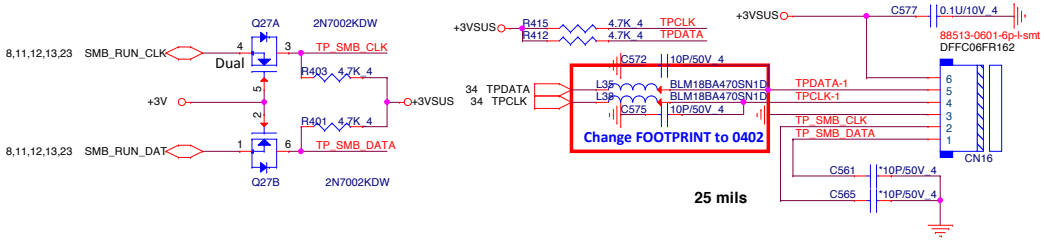


NB5	PROJECT : Y11C Quanta Computer Inc.	
Size: Custom	Document Number: CR RTS5237 & HOLE	Rev: 1A
Date: Wednesday, April 02, 2014	Sheet 28 of 44	

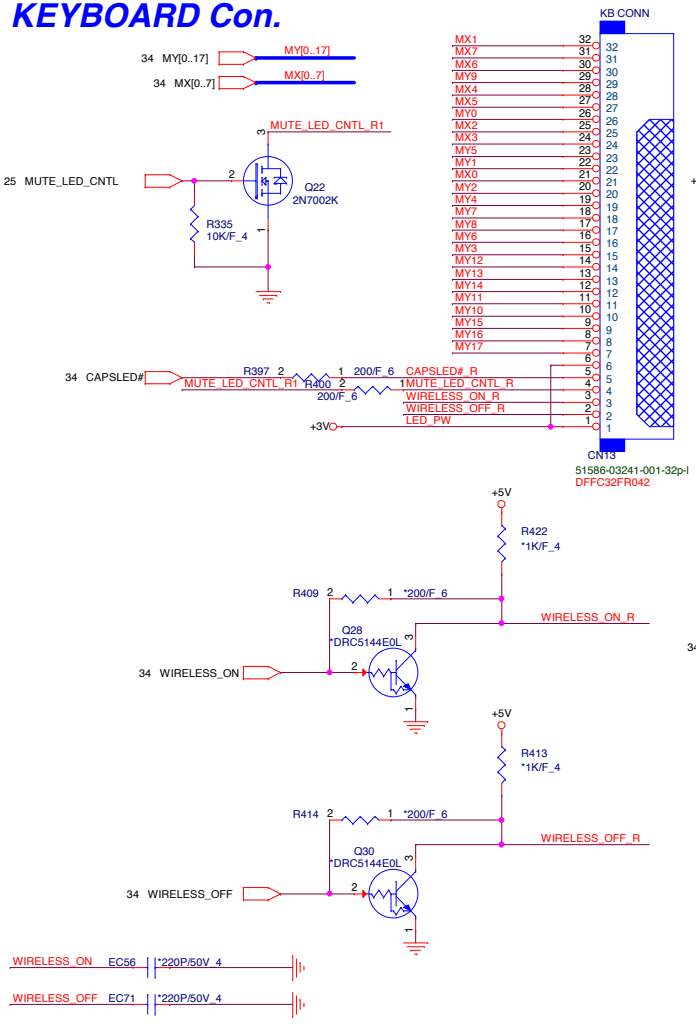
Power Botton Connector



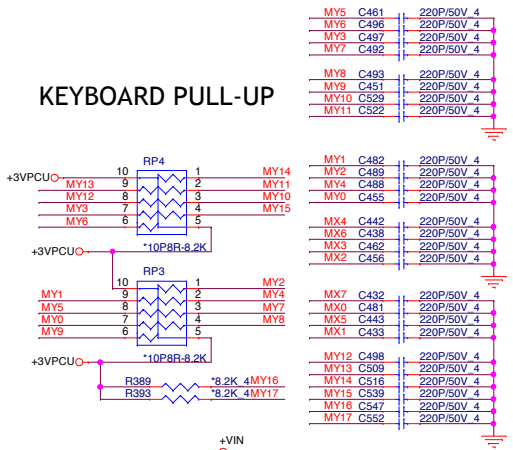
Touch Pad Connector

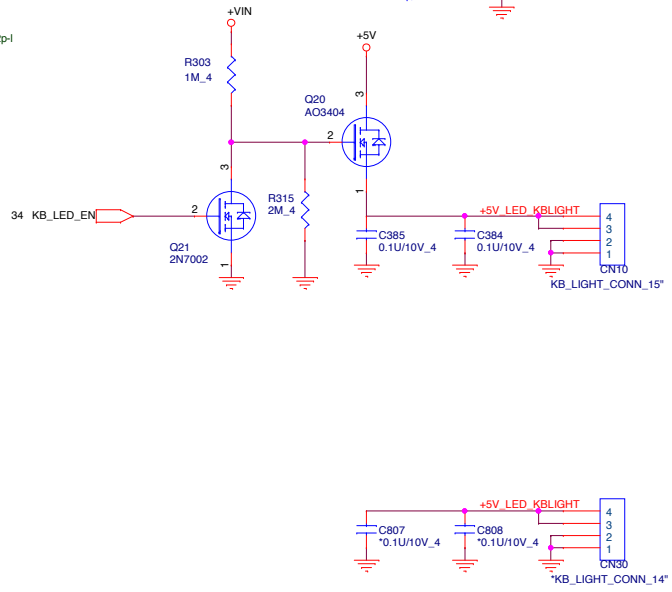


KEYBOARD Con.

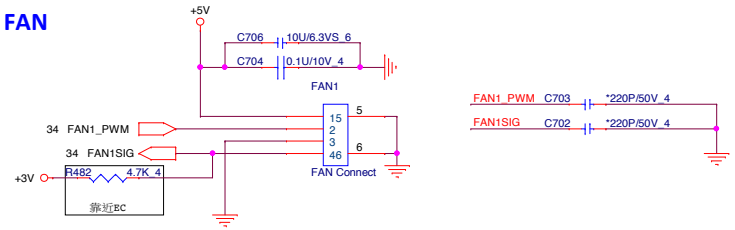


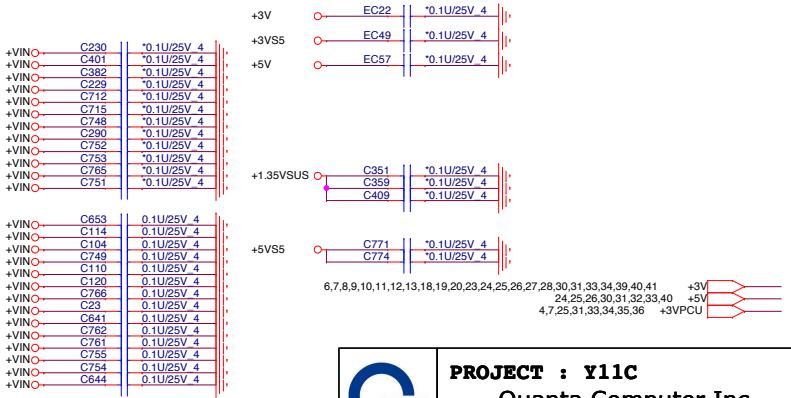
KEYBOARD PULL-UP





FAN





NB5

PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	PB/TP/KB/FAN/EMI Cap	1A

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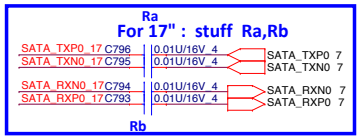
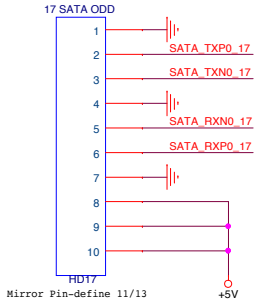
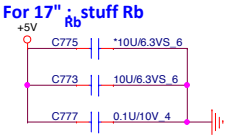
HDD

SATA HDD Connector(Cable type) 15.6"

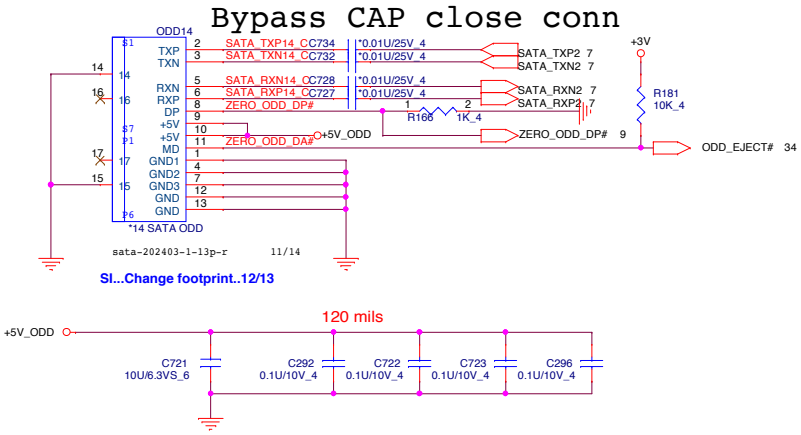






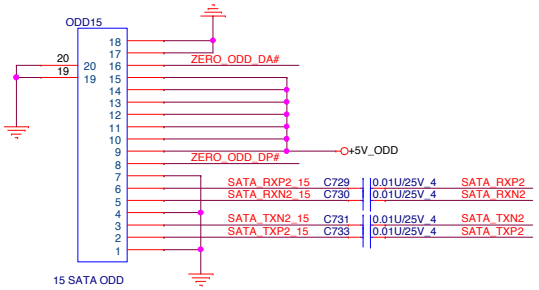
SATA ODD CONNECTOR

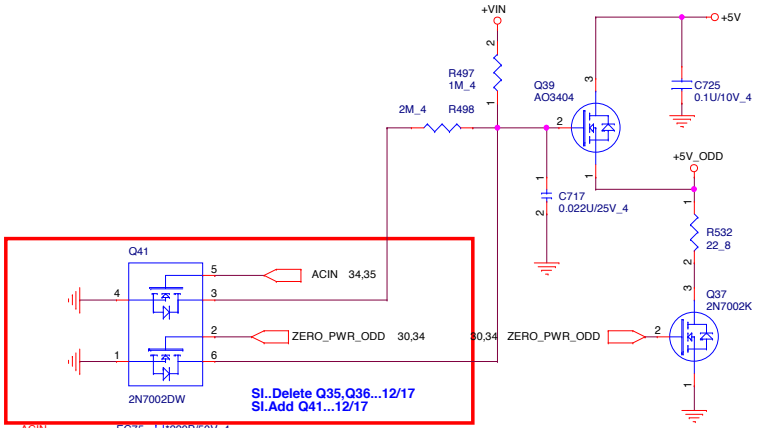
14" SATA ODD



SI...Change footprint..12/13

15" SATA ODD





High : ODD power down
Low : ODD power on

NB5

PROJECT : Y11C
Quanta Computer Inc.

Size	Document Number	Rev
Custom	HDMI	1A

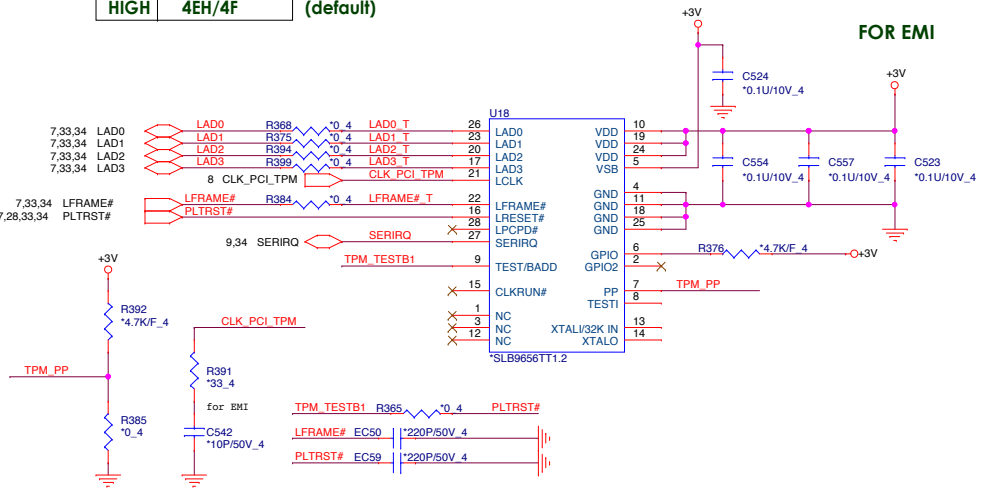
Date: Wednesday, April 02, 2014 Sheet 30 of 44

TPM (1.2)

Address

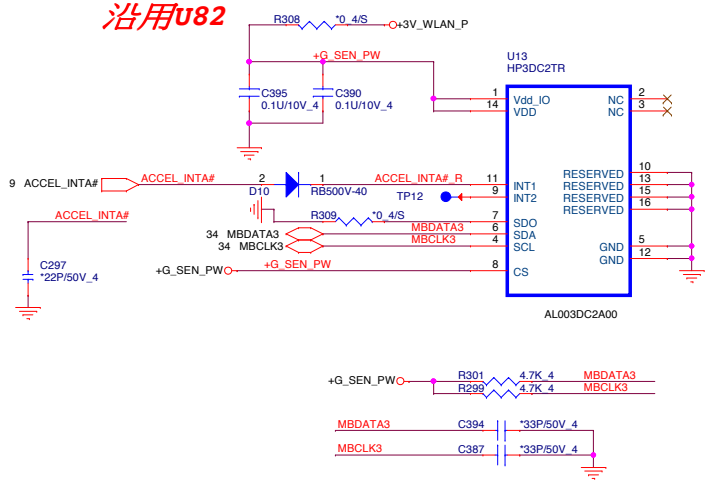
	BADD
HIGH	4EH/4F (default)

FOR EMI

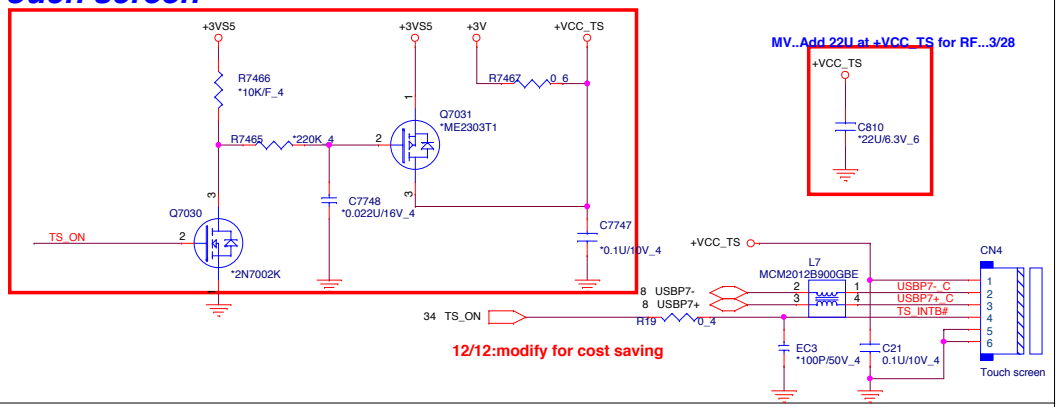


Accelerometer Sensor

沿用U82



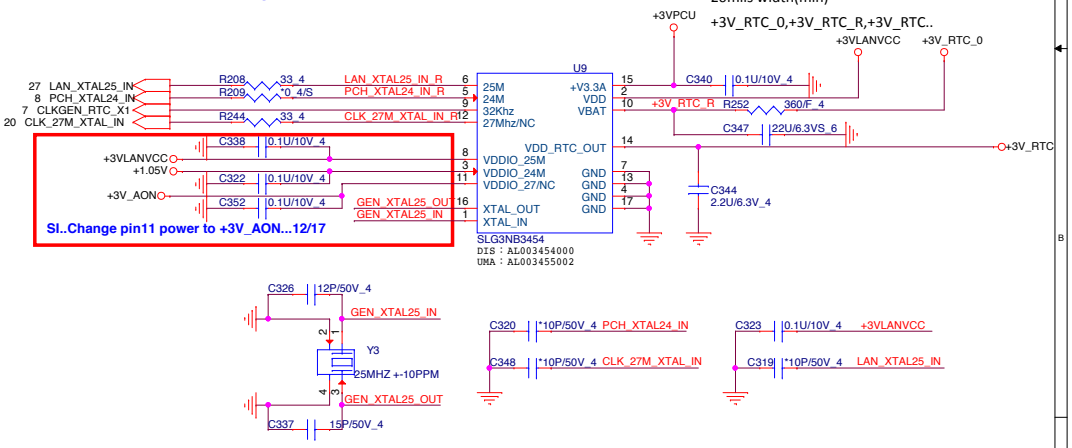
Touch screen



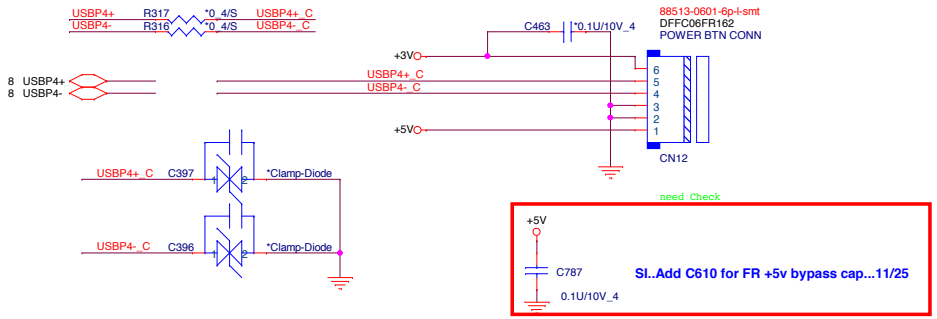
Green CLK Circuitry

20mils width(min)

+3V_RTC_0,+3V_RTC_R,+3V_RTC..



Fingerprint Conn



NB5	PROJECT : Y11C Quanta Computer Inc.	
Size: Custom	Document Number: TPM/G-Sensor/G-CLK/TS/FP	Rev: 1A
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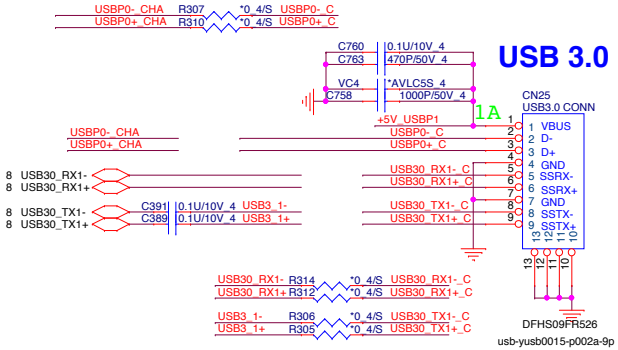
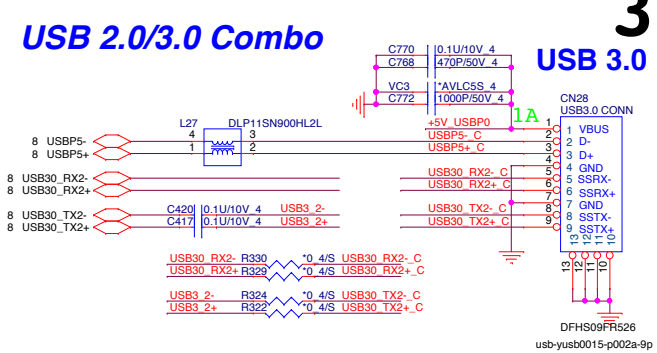
USB 3.0



USB 2.0/3.0 Combo

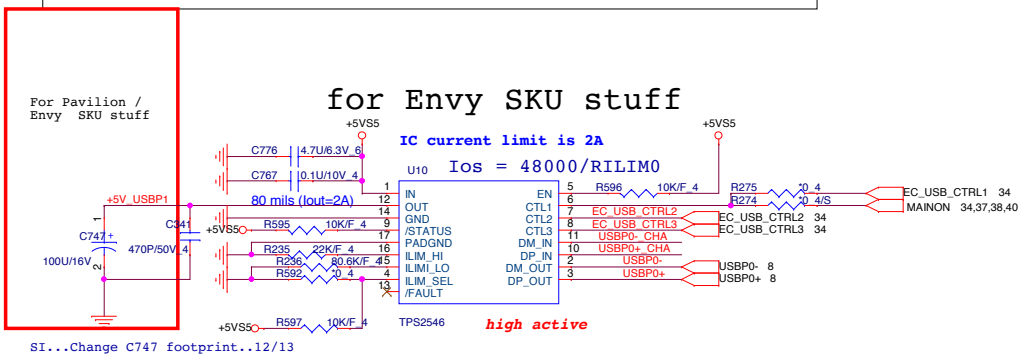
USB 3.0



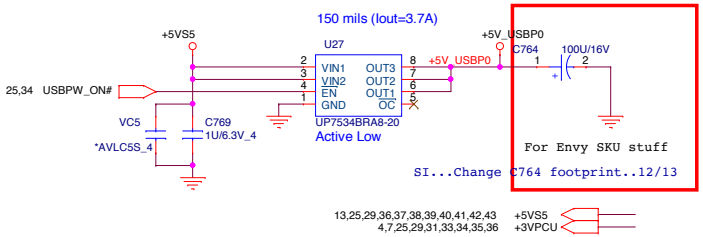
if Envy SKU,non-staff

for Envy SKU stuff

For Pavilion / Envy SKU stuff



SI...Change C747 footprint..12/13



Right-Side USB3.0 Re-Driver

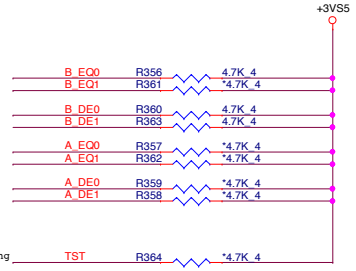
DFFC08FR016

AEQ 9.5db / ADE 3.5db

BEQ 13db / BDE 5db / REXT 5.36K

A_EQ1 / B_EQ1	A_EQ0 / B_EQ0		A_DE1 / B_DE1	A_DE0 / B_DE0	
0	0	9.5dB	0	0	3.5dB
0	1	13dB	0	1	no de-emphasis
1	0	4.5dB	1	0	2.7dB
1	1	7.5dB	1	1	5dB

TST : Low = Normal LFPS swing / Hight =Turn down LFPS swing

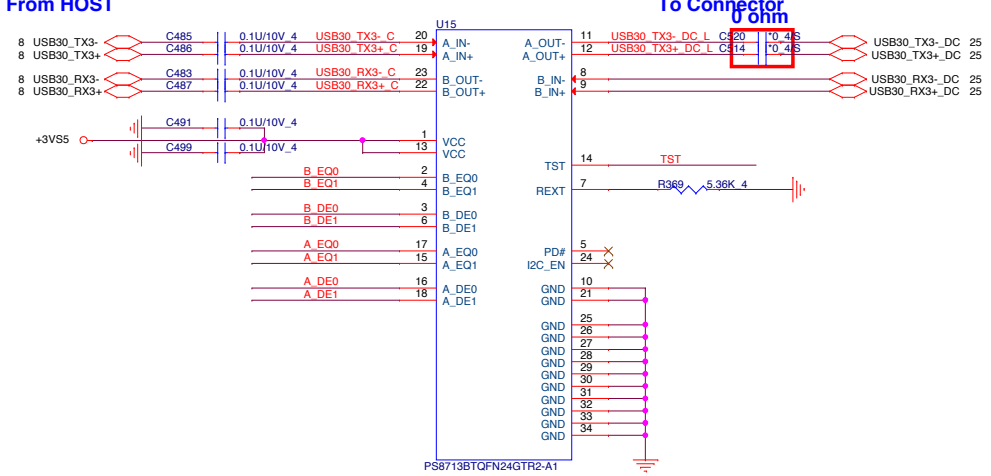


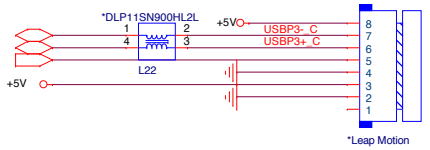
From HOST

USB3.0 Re-driver

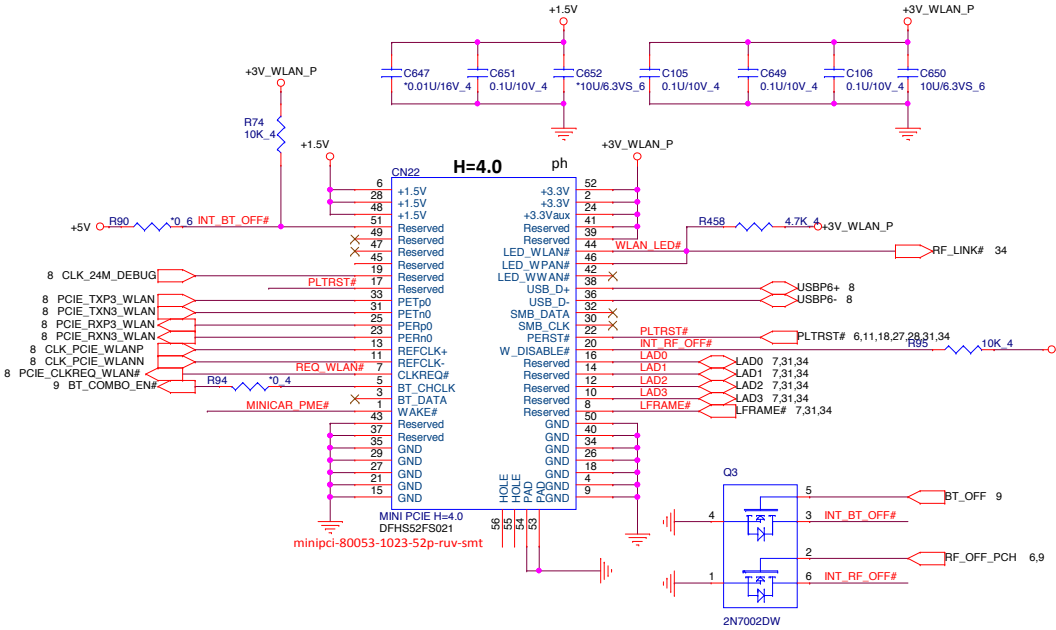
To Connector

0 ohm

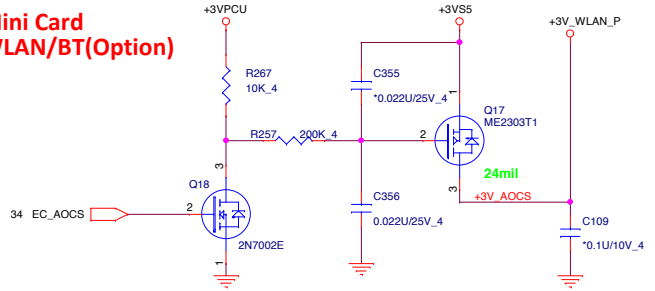




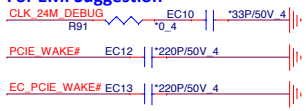
NB5	PROJECT : Y11C Quanta Computer Inc.	
Size: Custom	Document Number: USB 3.0	Rev: 1A
Date: Wednesday, April 02, 2014	Sheet 32 of 44	



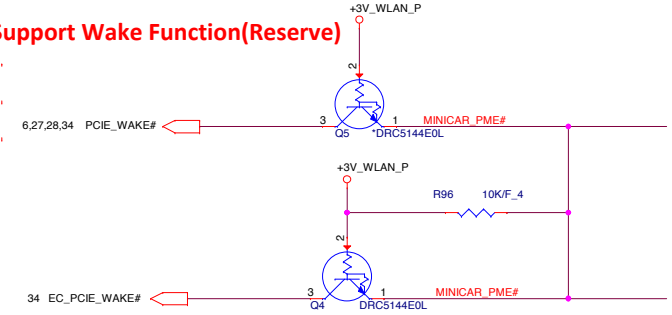
Mini Card WLAN/BT(Option)

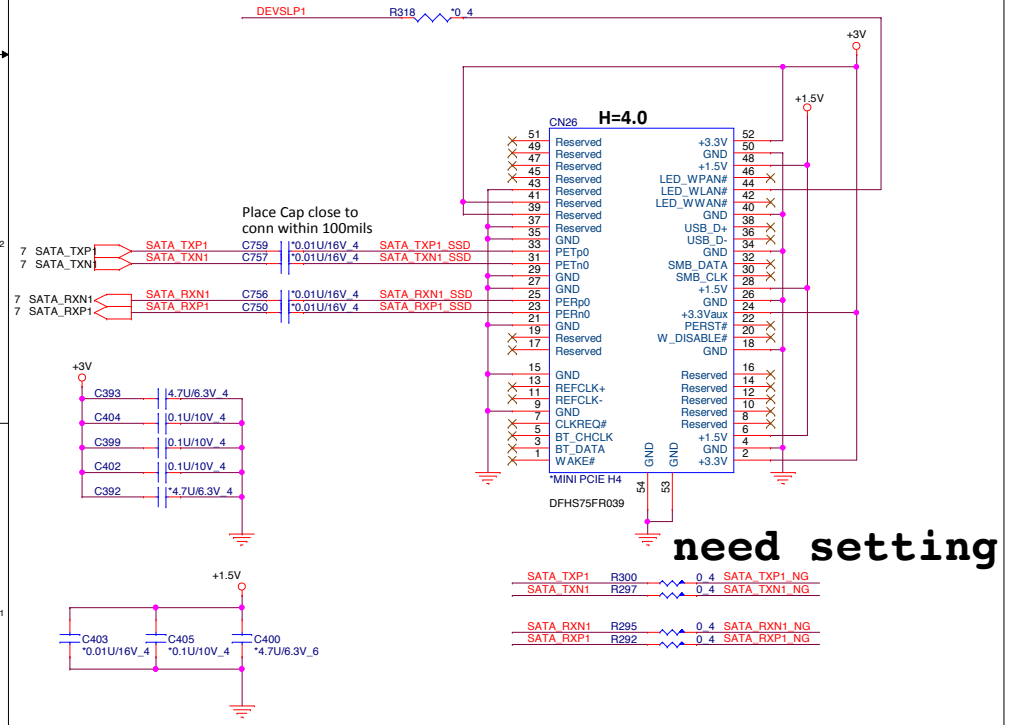


For EMI Suggestion



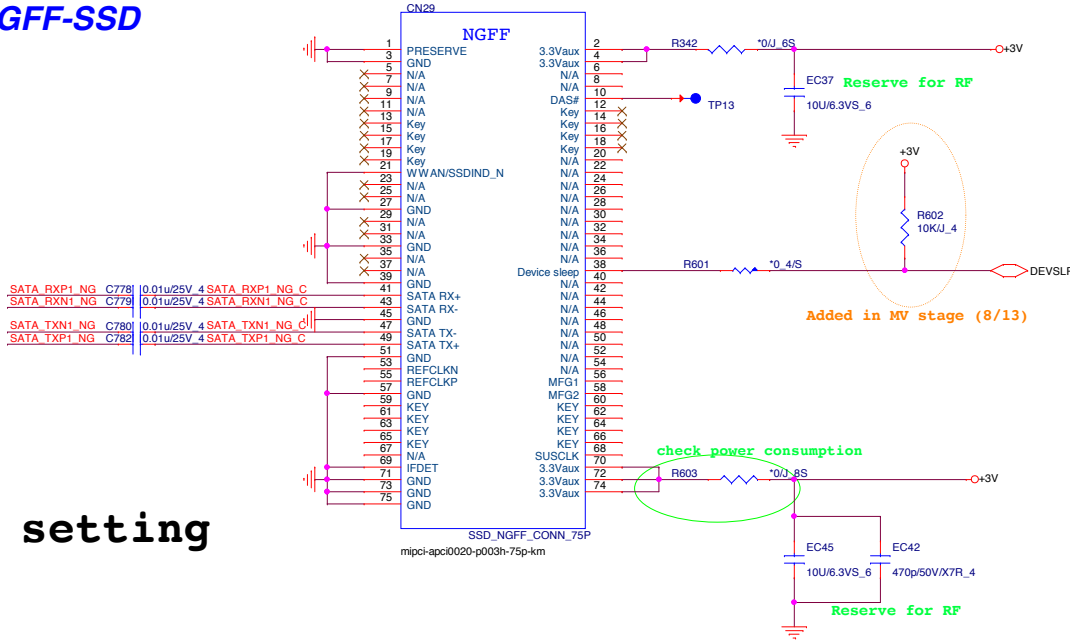
Support Wake Function(Reserve)





need setting

NGFF-SSD



need setting

6,7,8,9,10,11,12,13,18,19,20,23,24,25,26,27,28,29,30,31,34,39,40,41 +3V
24,25,26,29,30,31,32,40 +5V
4,7,25,29,31,34,35,36 +3VPCU

NB5

PROJECT : Y11C

Quanta Computer Inc.

Size	Document Number	Rev
Custom	WLAN/NGFF/MSATA	1A
Date: Wednesday, April 02, 2014	Sheet 33of 44	

申請料號中

IT8987

LPC
GPIO
PS/2
SM_BUS
UART
FLASH
PWM
KBMX
WAKE UP
A/D D/A
CLOCK

AJ089870F01
IT8987E/AX

H_PECI (50ohm)
Route on microstrip only
Spacing >18 mils
Trace Length: 0.4~6.125 iches

ACin reserve one of Varister loaction ...MV 3/24

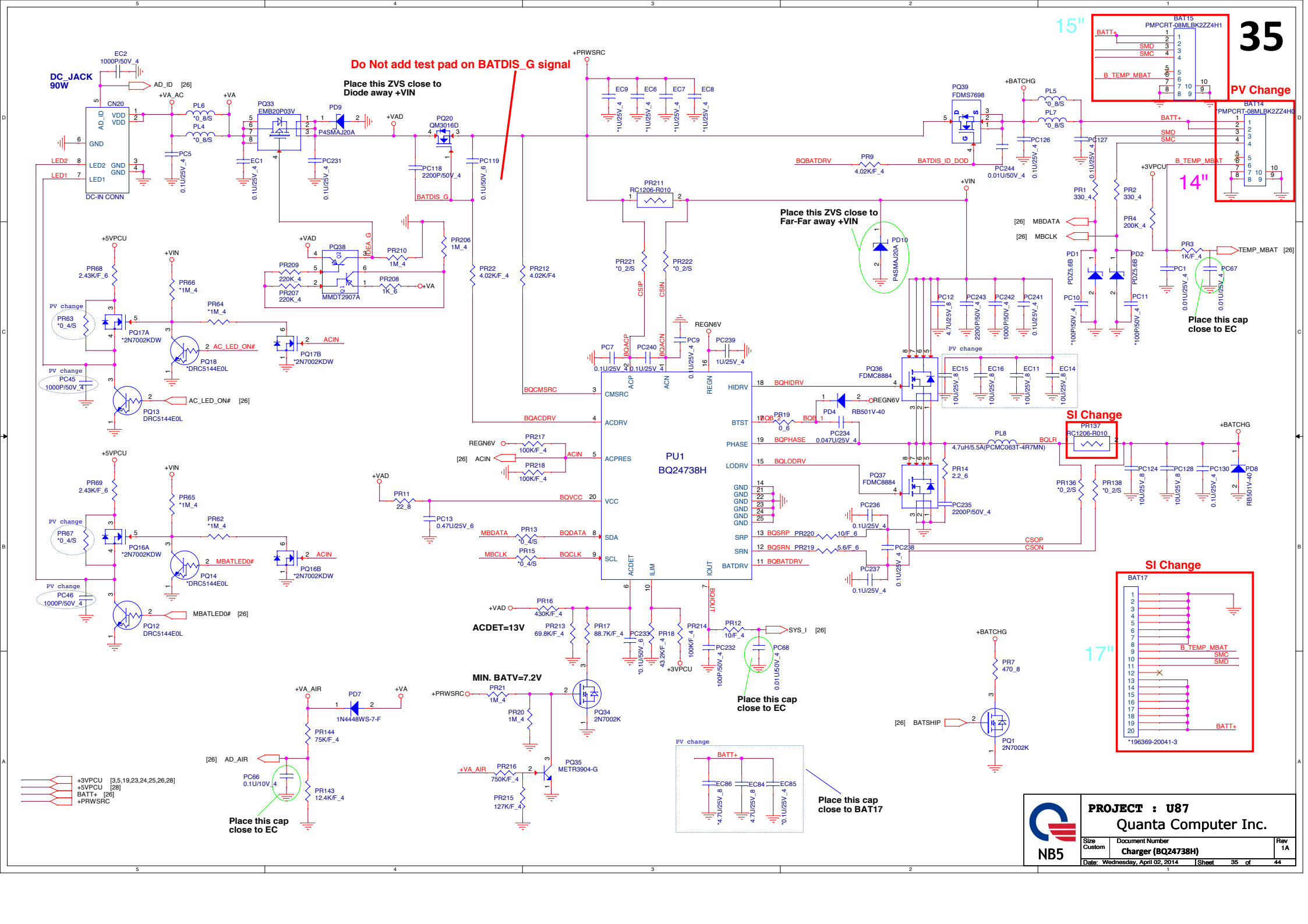
For Gsensor
For GPU thermal
for Battery charge/charge
for DDR Thermal IC
For Touch-Pad

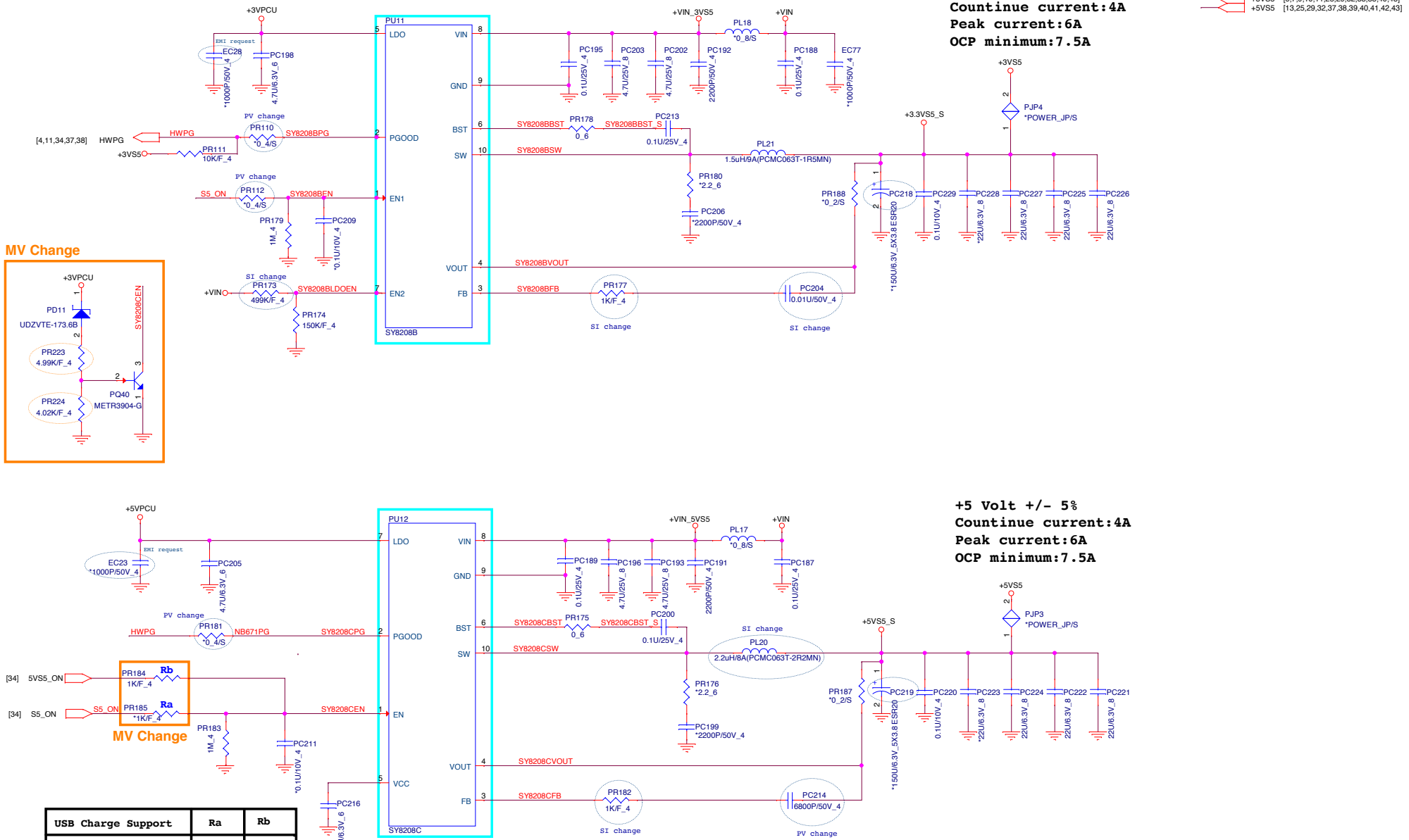
Open Drain need pu high

Adapter select for EC
DIS Hi ==> (90W)
UMA Low ==>(65W)

adapter Type check
Change to 1SS355 as Current loss

PROJECT : Y11C
Quanta Computer Inc.
NB5
Size: Custom
Document Number: WLAN/G-Sensor/G-CLK/TS
Rev: 1A
Date: Wednesday, April 02, 2014
Sheet: 34of 44


35
15"
14"
17"
PV Change
SI Change
SI Change
Do Not add test pad on BATDIS_G signal
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 BAT17
DC_JACK 90W
DC-IN CONN
PU1 BQ24738H
ACDET=13V
MIN. BATV=7.2V
+3VPCU [3,5,19,23,24,25,26,28]
+5VPCU [28]
BATT+ [26]
+PRWSRC
NB5
PROJECT : U87
Quanta Computer Inc.
Size Custom
Document Number
Charger (BQ24738H)
Rev 1A
Date: Wednesday, April 02, 2014
Sheet 35 of 44

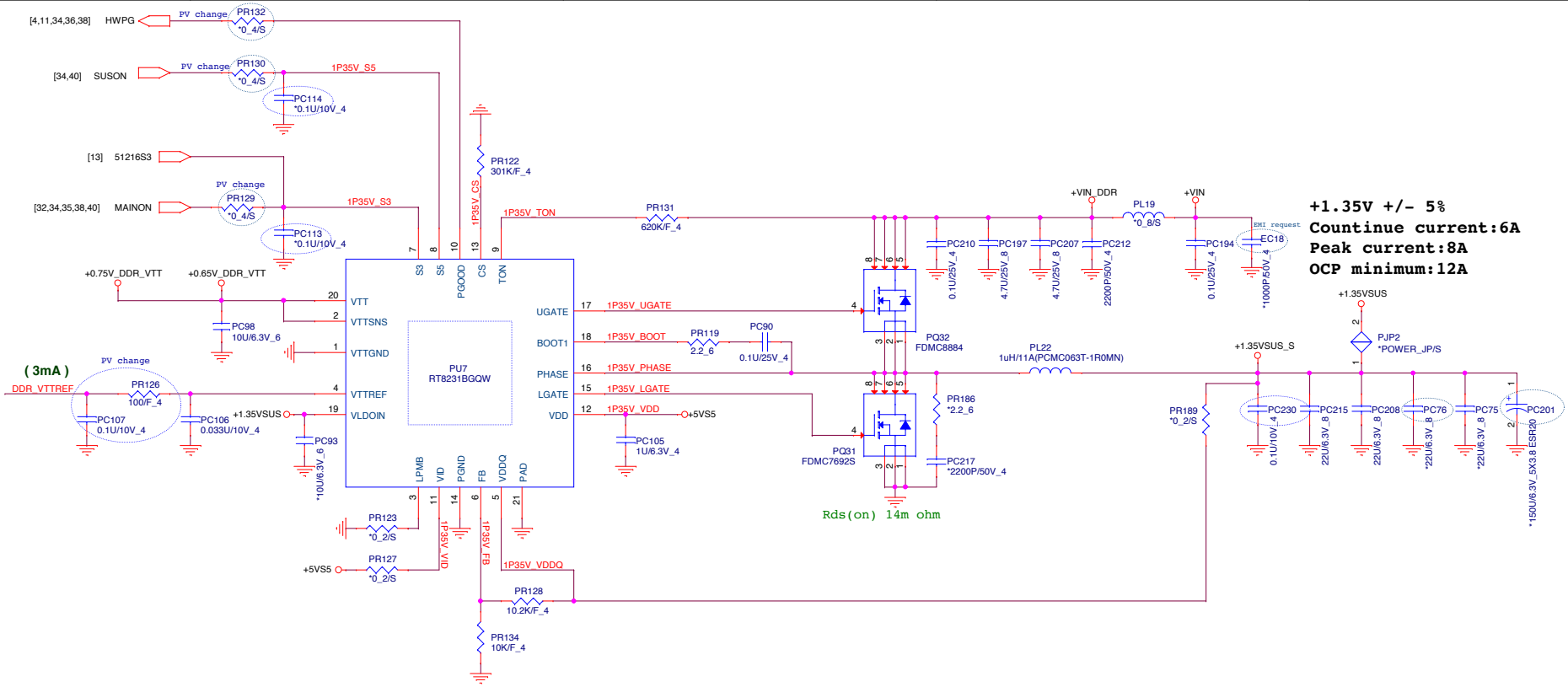


USB Charge Support	Ra	Rb
VINE (No support)	Stuff	NA
ENVY (Support)	NA	Stuff

NB5

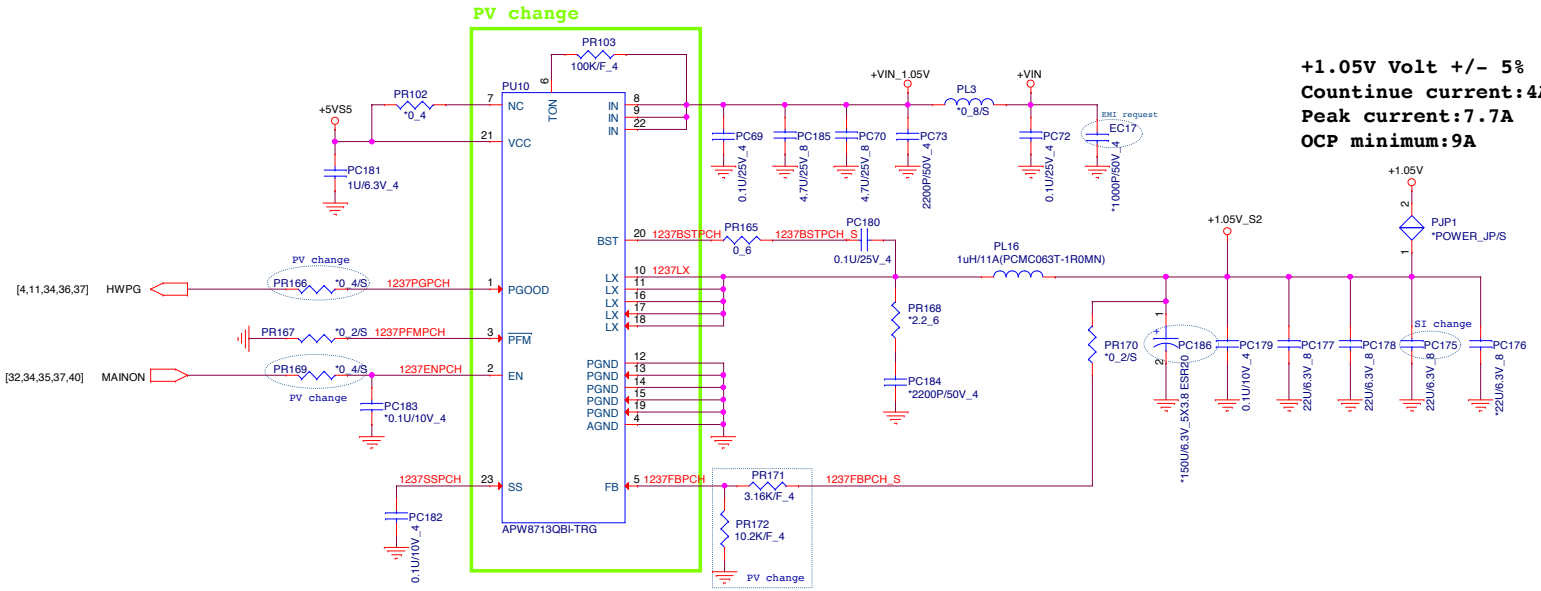
PROJECT : R63
Quanta Computer Inc.

Size	Document Number	Rev
Custom	3/5VPCU(RT8243A)	1A
Date: Wednesday, April 02, 2014	Sheet 36 of 44	

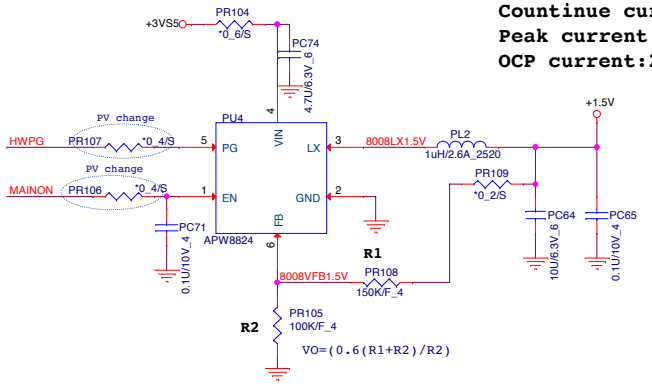


+1.35VSUS [2,4,12,13,29]

NB5	PROJECT : Y02 Quanta Computer Inc.	
Size: Custom	Document Number: DDR3 (RT8231A)/1.8VS5	Rev: 1A
Date: Wednesday, April 02, 2014	Sheet 37 of 44	



+1.05V Volt +/- 5%
Countinue current:4A
Peak current:7.7A
OCP minimum:9A



+1.5V +/- 5%
Countinue current:1.3A
Peak current:1.5A
OCP current:2A

+VIN [24,26,29,30,35,36,37,39,40,41,42,43]
+3VS5 [6,7,9,10,11,25,29,32,33,36,40,43]
+5VS5 [13,25,29,32,36,37,39,40,41,42,43]

PROJECT : U63
Quanta Computer Inc.

Size	Document Number	Rev
Custom	+1.1VS5 (RT8228)/2.5V	1A

N85/RD3

Date: Wednesday, April 02, 2014 Sheet 38 of 44

Place close to inductor

POP Rb and no POP Ra for nex version.

Boot Voltage Table	
R_boot	V_boot
30.1K	0V
49.9K	1.65V
69.8K	1.7V
90.9K	1.75V

Place close to MOSFET

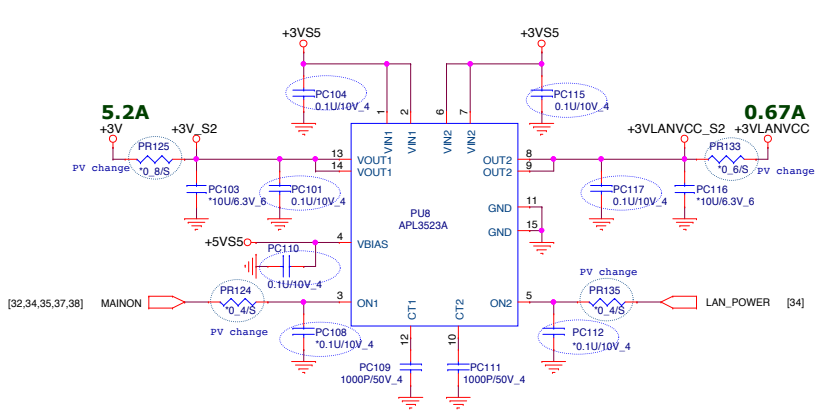
POP for 28W CPU

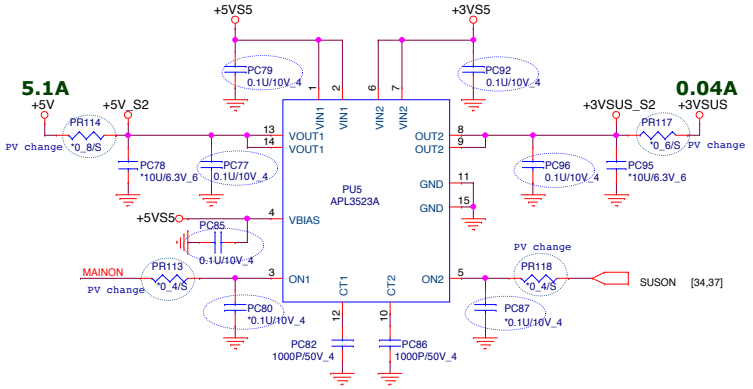
15W
Icc_Max=32A
I_TDC=14A
I_Dynamic=27A
V_Operate=1.6V~1.8V
DC_LL=2m
AC_LL=7m
AC_LL_VOS=9.4m
VBOOT=1.7V

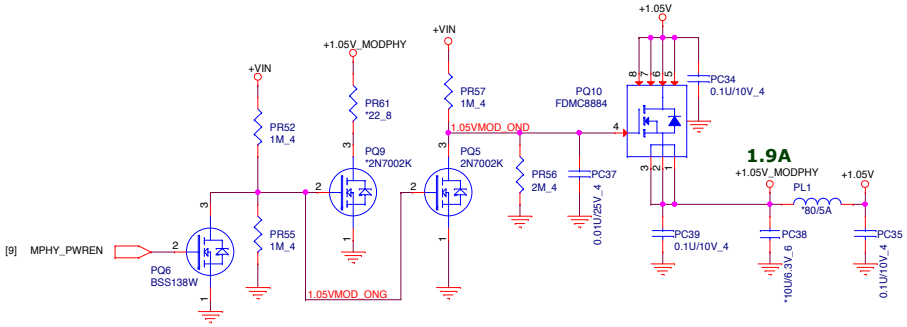
28W
Icc_Max=40A
I_TDC=19A
I_Dynamic=27A
V_Operate=1.6V~1.8V
DC_LL=2m
AC_LL=7m
AC_LL_VOS=9.4m
VBOOT=1.7V

PROJECT :U83
Quanta Computer Inc.

Size	Document Number	Rev
Custom	CPU Core (NCP81101)ULT	1A
Date: Wednesday, April 02, 2014	Sheet 39 of 44	







[6,7,8,9,10,11,12,13,14,17,18,23,24,25,26,27,28,29,30,31,33,34,39,41] +3V
[24,25,26,29,30,31,32,33] +5V
[24,26,29,30,35,36,37,38,39,41,42,43] +VIN
[6,7,9,10,11,25,29,32,33,36,38,43] +3VS5
[13,25,29,32,36,37,38,39,41,42,43] +5VS5
[27,31] +3VLANVCC

PROJECT :U83
Quanta Computer Inc.

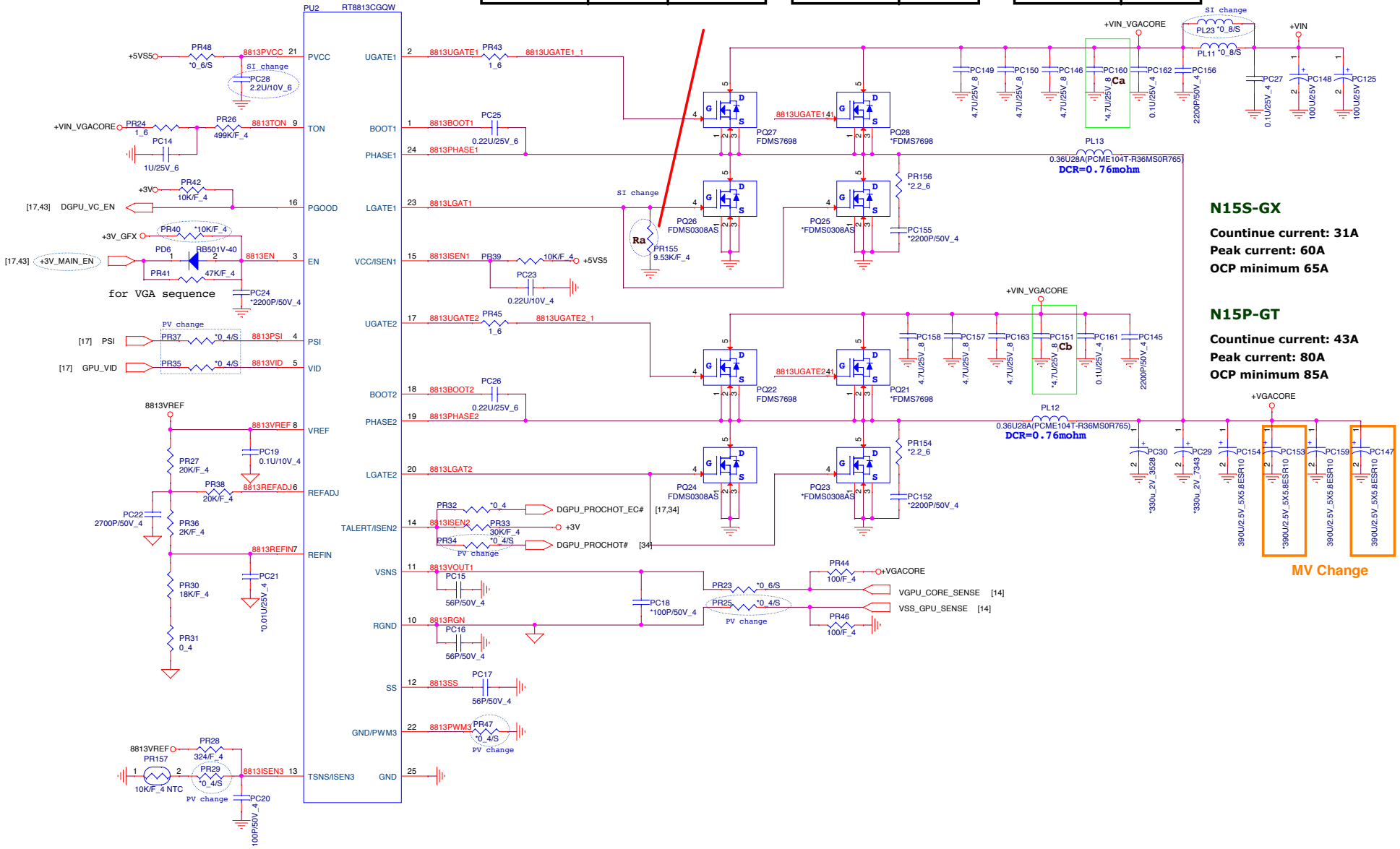
Size	Document Number	Rev
Custom	Dis-charge IC (SLG55448)	1A
Date: Wednesday, April 02, 2014	Sheet 40 of 44	

VGA Core

VGA TYPE	Ra Value	P/N
N15S-GX (25W)	9.53K	CS29532FB10
N15P-GT (35W)	12.4K	CS31242FB13

VGA TYPE	MOSFET
N15S-GX (25W)	1H1L
N15P-GT (35W)	2H2L

VGA TYPE	Ca, Cb
N15S-GX (25W)	No stuff
N15P-GT (35W)	Stuff



N15S-GX

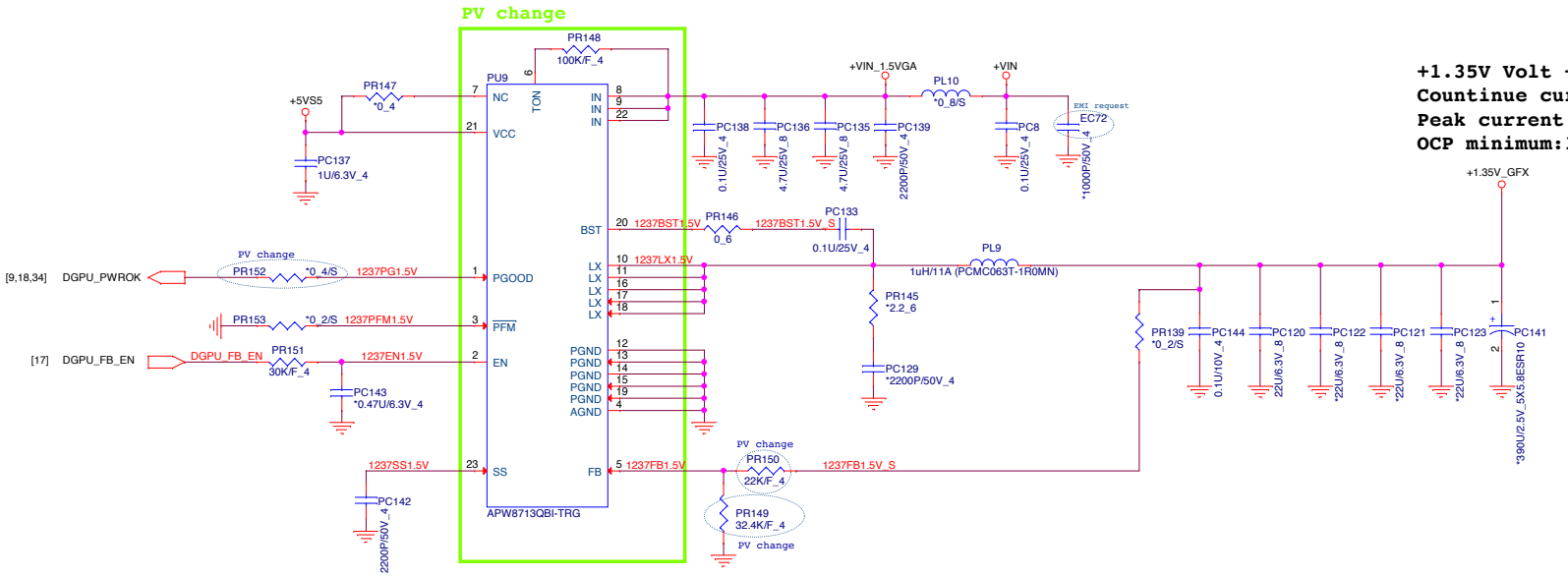
Countinue current: 31A
Peak current: 60A
OCP minimum 65A

N15P-GT

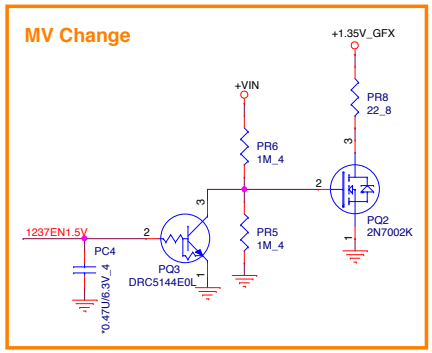
Countinue current: 43A
Peak current: 80A
OCP minimum 85A

PROJECT :U83
Quanta Computer Inc.

Size	Document Number	Rev
Custom	+VGACORE (RT8813A)	1A
Date: Wednesday, April 02, 2014	Sheet 41 of 44	



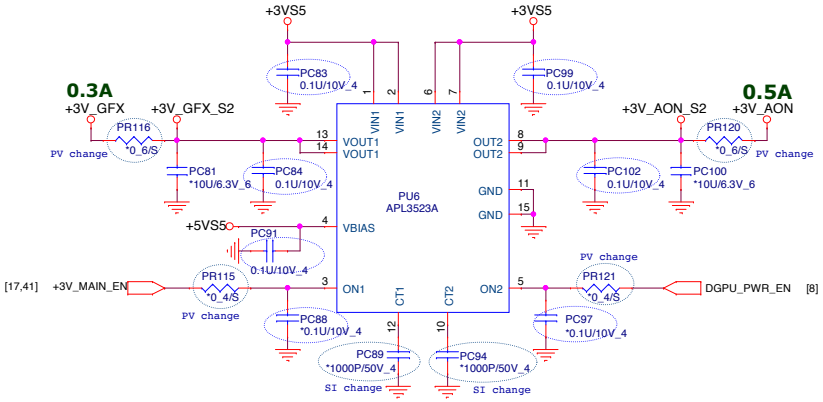
+1.35V Volt +/- 5%
Countinue current:6A
Peak current:8A
OCP minimum:12A

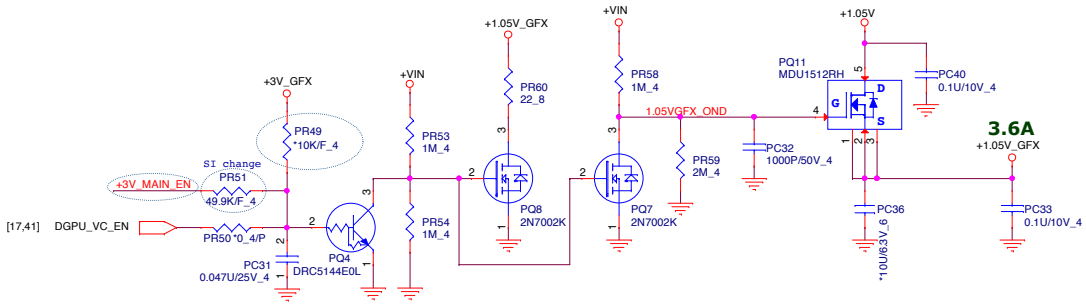


PROJECT :U83
Quanta Computer Inc.

Size	Document Number	Rev
Custom	+1.35V_VGA(AOZ1237)	1A

Date: Wednesday, April 02, 2014 Sheet 42 of 44





PROJECT :U83
Quanta Computer Inc.

Size	Document Number	Rev
Custom	1.05V_VGA/3V_VGA	1A
Date: Wednesday, April 02, 2014	Sheet 43 of 44	

Battery Connector	Pavillion	ENVY
14"	DFAD08MR063	DFAD08MR064
15"	DFAD08MR065	DFAD08MR066
17"	DFFC20FR081	DFFC20FR081

USB Charge Support	PR185	PR184
Pavillion	Stuff	NA
ENVY (USB charge)	NA	Stuff

UMA	Disable Page 41、42、43 ,but keep below location
Page 41	PC161、PC162
Page 42	PC138、PC144、PC4、PC148
Page 43	PC84、PC102、PC88、PC97、PC40、PC33

Discrete	Location	Part Number
N15S (25W)	PR155	CS29532FB10
	PC151、PC160	NA
	PQ21、PQ23、PQ25、PQ28	NA
N15P (35W)	PR155	CS31242FB13
	PC151、PC160	Stuff
	PQ21、PQ23、PQ25、PQ28	Stuff

Title: <Title>		
Size: A	Document Number: <Doc>	Rev: <RevCode>
Date: Wednesday, April 02, 2014	Sheet 44 of 44	