

Y0B 13.3" INTEL SYSTEM DIAGRAM

+3VS5/+5VS5	PG.29
+1.05V/+1.5V	PG.30
CPU Core	PG.32
DDR3L	PG.31
Charger	PG.28

Stackup
TOP
GND
IN1
IN2
VCC
BOT

Memory DDR3L 4PCs (x16)	1600MT/s DDR3 L Channel A	PG.12
Memory DDR3L 4PCs (x16)	1600MT/s DDR3 L Channel B	PG.13

Intel Bay Trail-M

Power : 5 (Wat t)
Package : BGA1170
Size : 25 X 27 (mm)_{EP}

PG.2-11

eMMC
32G
PAGE 23

PCI-E x3

LANE3

Card Reader
RTS5239
PG.20

LANE1

WLAN
BT COMBO
PG.26

**KBC
IT8987**
PG.27

LPC

LPC Interface

TPM
SLB9665
PG. 21

KB
PG. 22

TP
PG. 22

ROM
PG. 6

Azalia

**AUDIO
CODEC
ALC 3227**
PG.18

Hp

Combo Jack
PG. 19

MIC

Front Speaker
PAGE 19

eDP (5.4Gb/s)

**DP to LVDS Converter
RTD 2132**
PG.15

LVDS Interface

LVDS
PG.16

DDI (5.4Gb/s) DP Port0

HDMI
PG.17

USB 3.0

**USB2.0 /3.0 Combo
X1**
PG.23

Port1

**BT
(combo card)**
PG.26

Port2

**USB2.0 HUB
GL850**
PG.24

Port3

WWAN card
PG.23

Port1 & 2

USB2.0*2
PG.23

USB 2.0

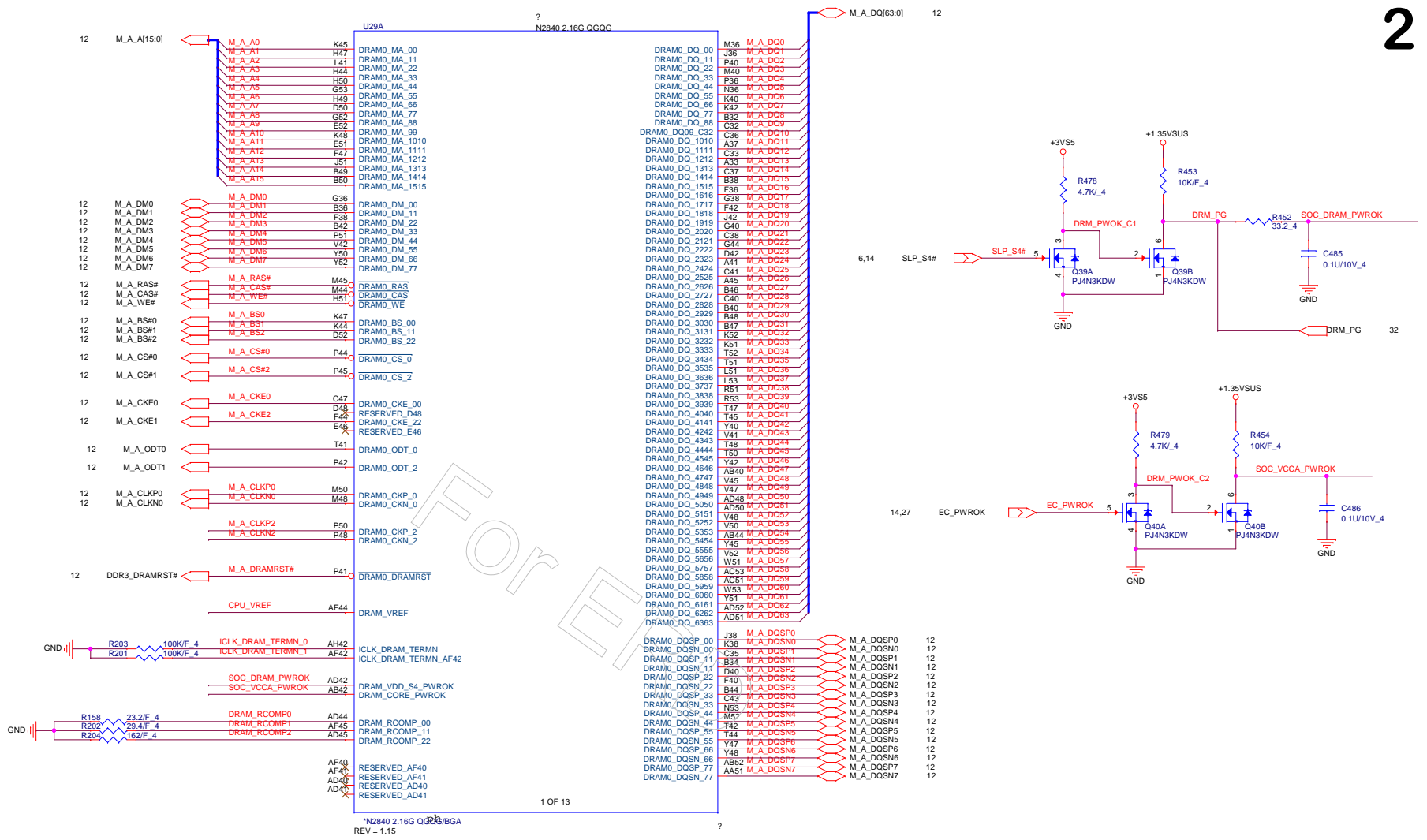
Touch Screen
PG.16

PORT0

Webcam
PG.16

www.vinafix.com

	PROJECT : Y0B		
	Quanta Computer Inc.		
Size	Document Number	Rev	1A
BLOCK DIAGRAM		Date: Wednesday, August 06, 2014 Sheet 1 of 35	

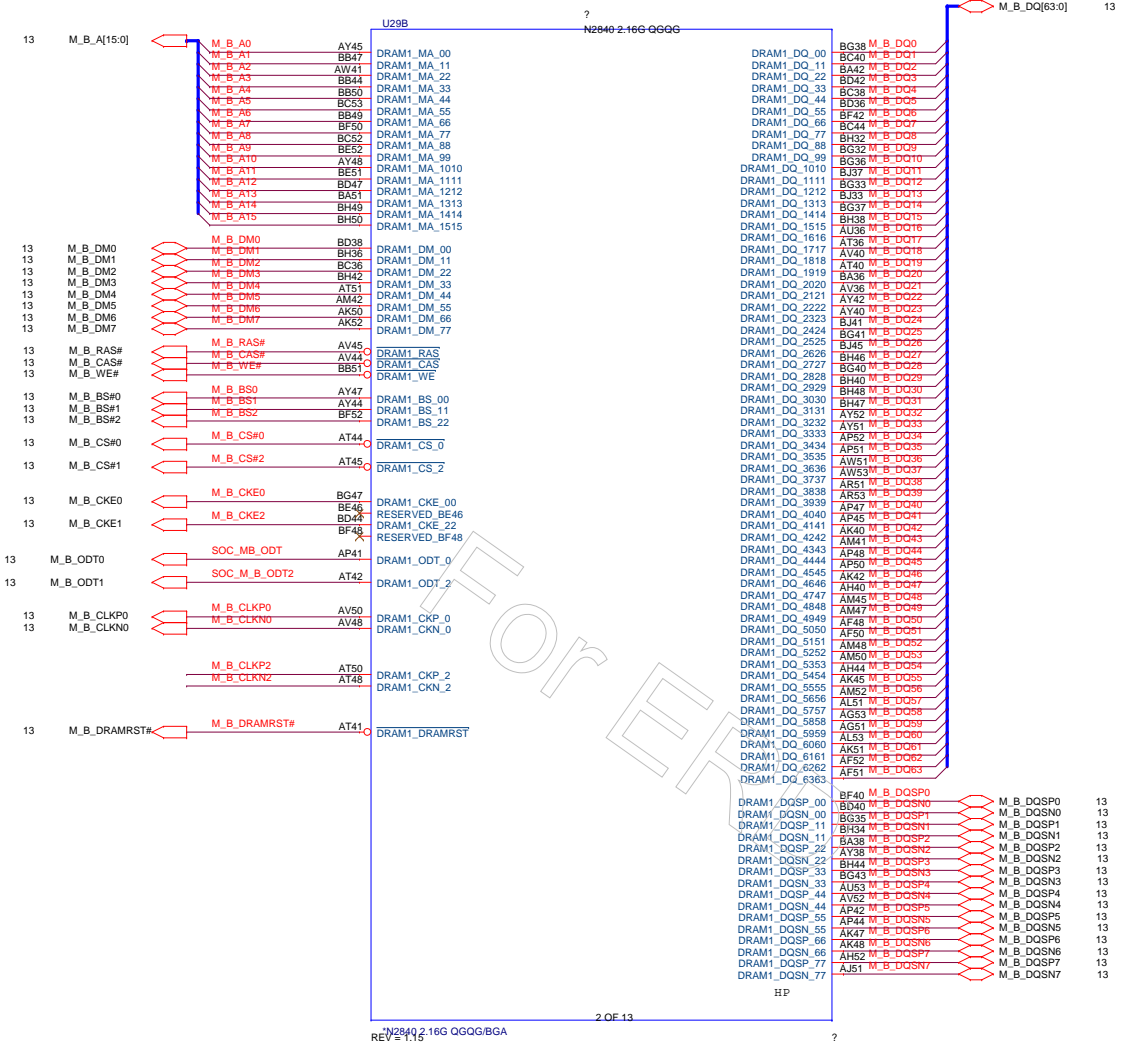


INTEL CPU				
TOPBS PN	QBCON	Vender PN	Description	
AJ0QGQLUT02			CPU(1170P)N2940 1.83G QGQL(FCBGA)TOPBSQ	N2940
	AJ0QGQLUT03		CPU(1170P)N2940 1.83G QGQL(FCBGA)QBCON	N2940
AJ0QGQGUT02			CPU(1170P)N2840 2.16G QGGG(FCBGA)TOPBSQ	N2840
	AJ0QGQGUT04	Default	CPU(1170P)N2840 2.16G QGGG(FCBGA)QBCON	N2840
	AJ0QGQGUT01			
	AJ0QGQGUT05			

PROJECT : Y0B
Quanta Computer Inc.

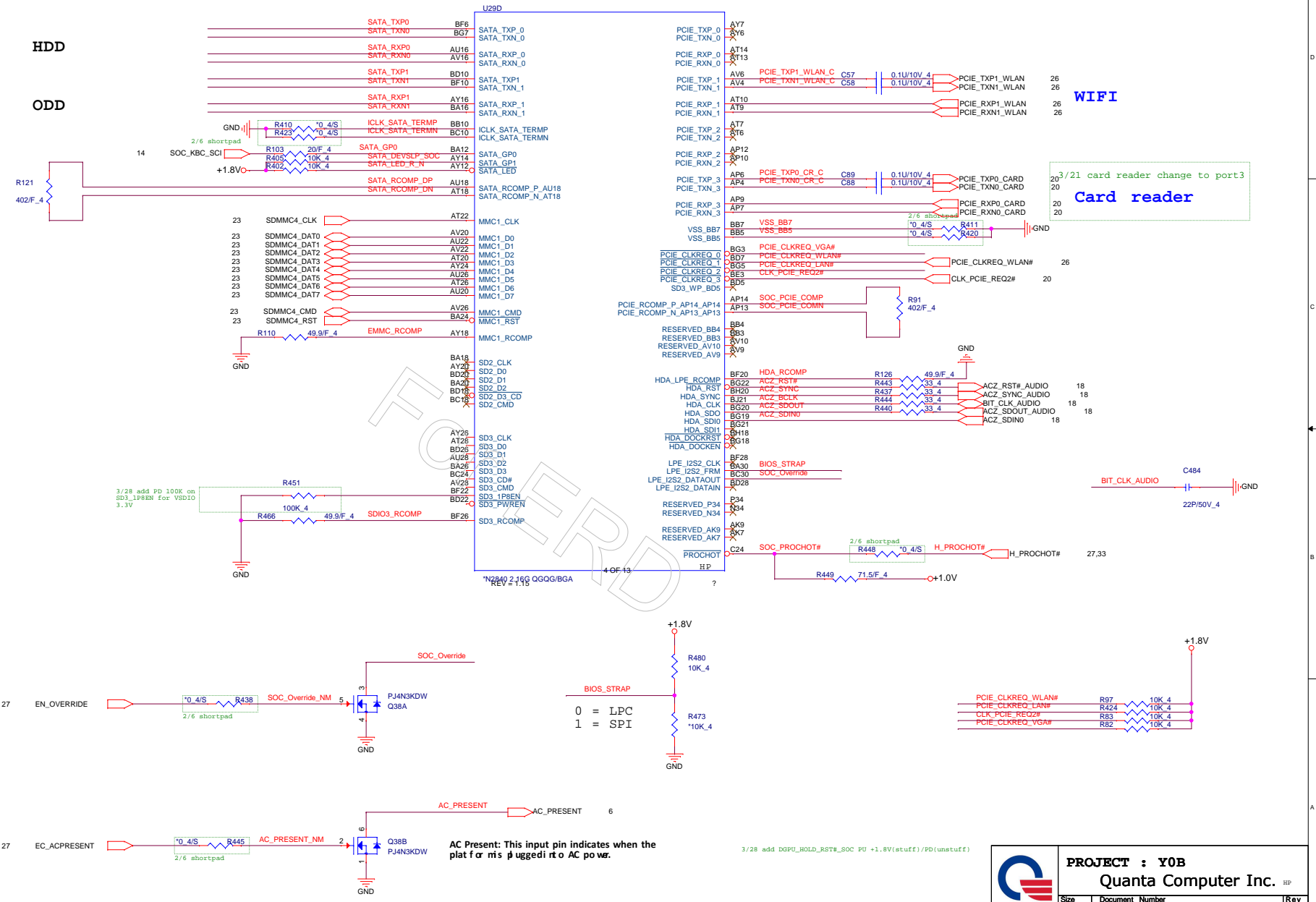
Size: [] Document Number: [] Rev: []
 Valley 1/9 (DDRA) 1A

Date: Wednesday, August 06, 2014 | Sheet 2 of 35



N2840 2.16G QGQG/BGA
REV = 1.13

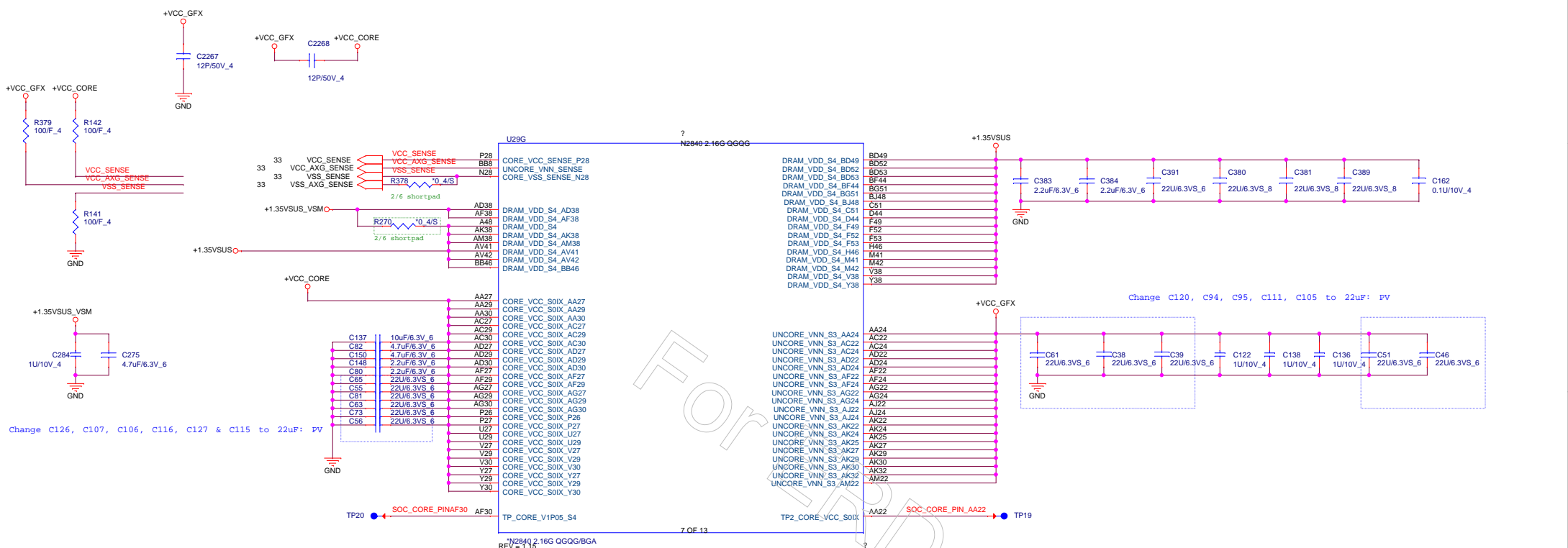
	PROJECT : Y0B		
	Quanta Computer Inc.		
Size	Document Number	Rev	
	Valley 2/9 (DDR8)	1A	
Date:	Wednesday, August 06, 2014	Sheet	3 of 35



PROJECT : Y0B
Quanta Computer Inc. HP

Size	Document Number	Rev
	Valley 4/9 (SD/PCIE/SATA)	1A

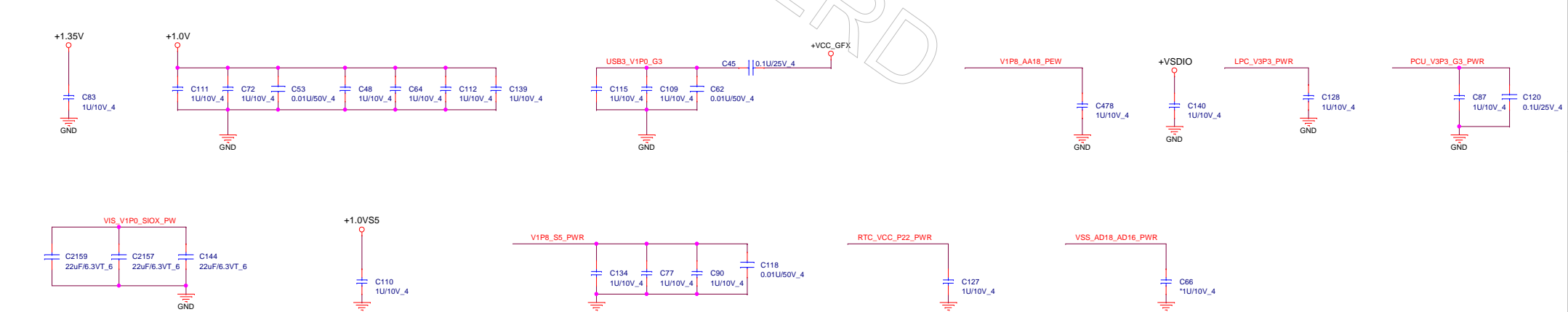
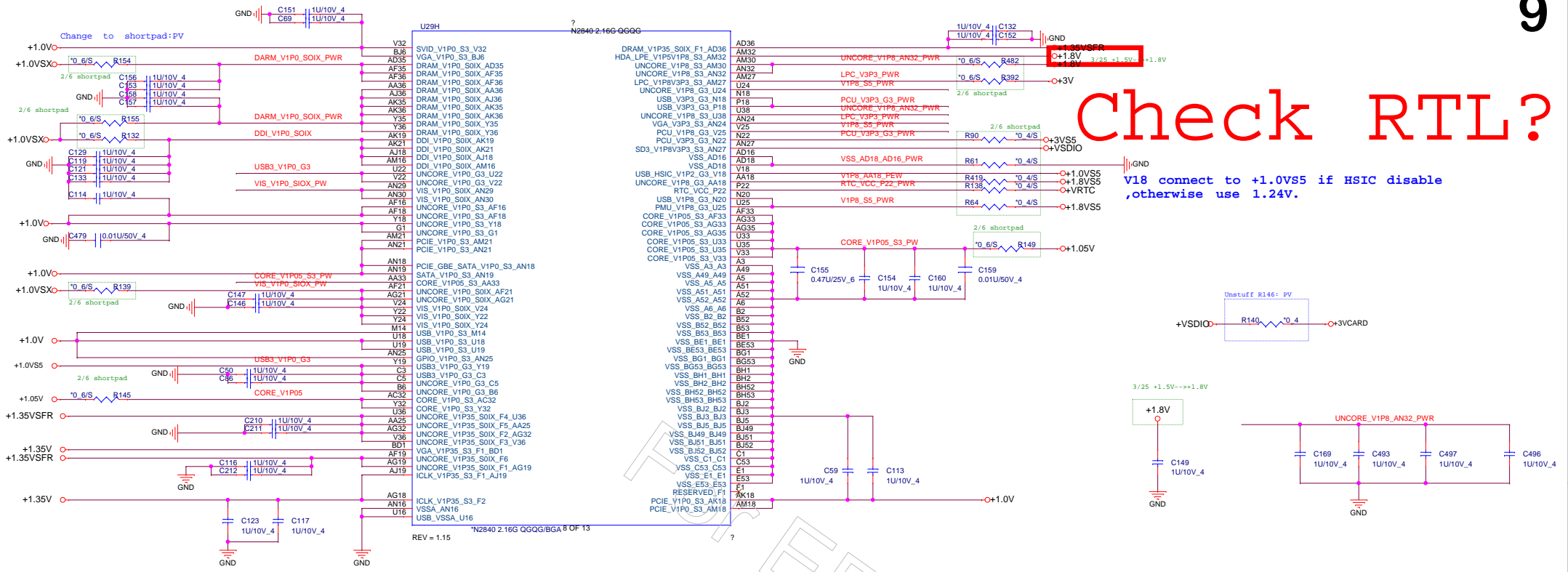
Date: Wednesday, August 06, 2014 | Sheet 5 of 35



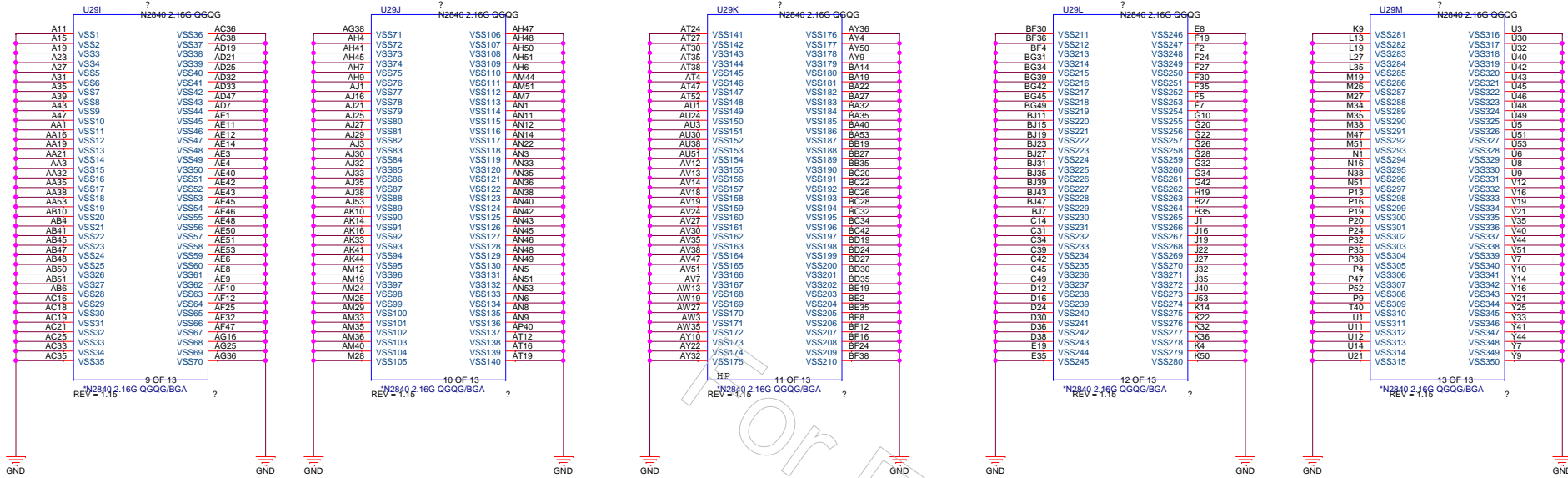
	PROJECT : Y0B Quanta Computer Inc.		Rev 1A
	Size	Document Number Valley 7/9 (Power 1)	


Check RTL?

V18 connect to +1.0V55 if HSIC disable, otherwise use 1.24V.




PROJECT : Y0B			
Quanta Computer Inc.			
Size	Document Number	Valley 8/9 (Power 2)	Rev 1A
Date:	Wednesday, August 06, 2014	Sheet 9 of 35	

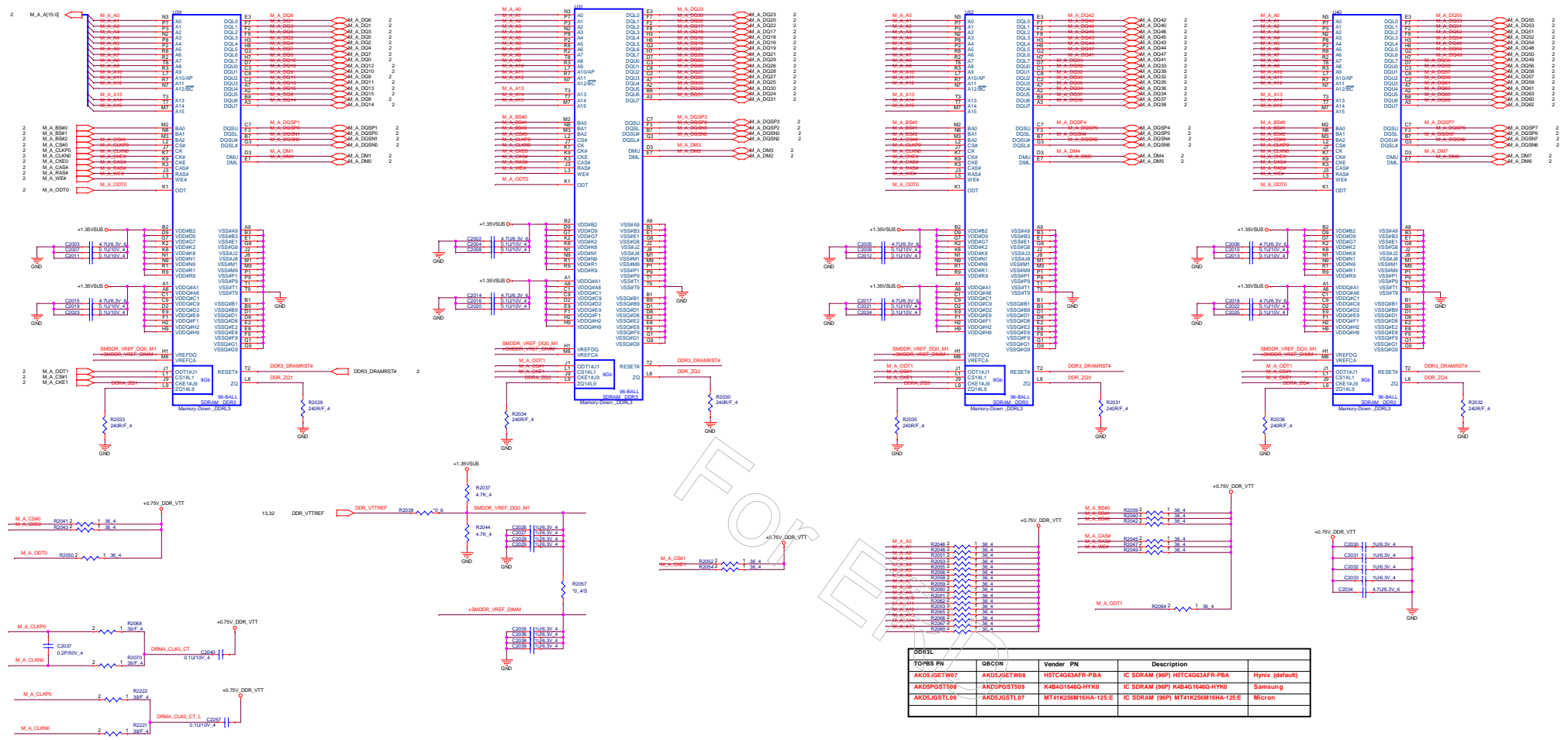


	PROJECT : Y0B Quanta Computer Inc.		
	Size	Document Number Valley 9/9 (GND)	Rev 1A
Date: Wednesday, August 06, 2014 Sheet 10 of 35			

3/21 deleted XDP CM6

For ERD

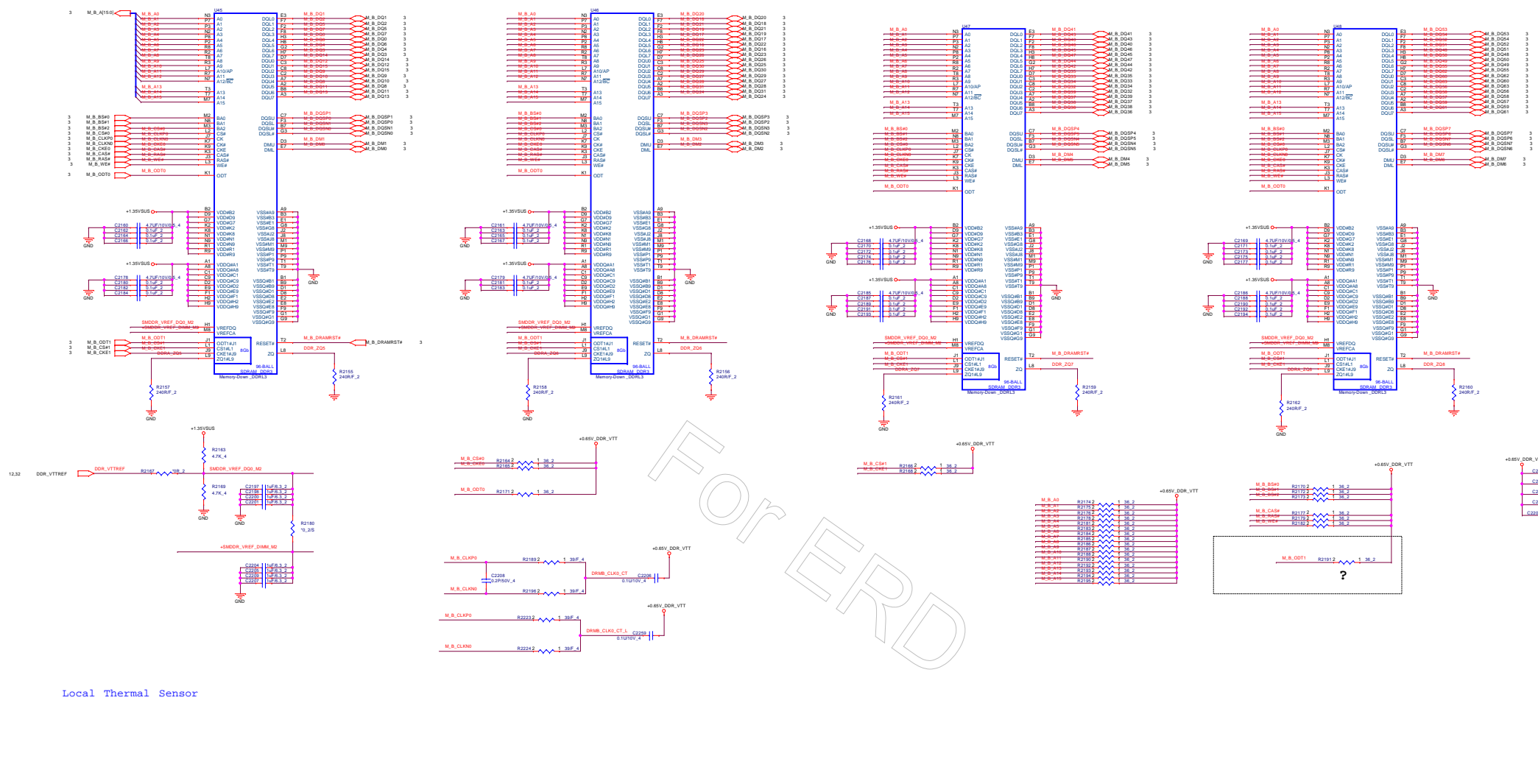
	PROJECT : Y0B		Rev 1A
	Quanta Computer Inc.		
Size	Document Number	Date: Wednesday, August 06, 2014 Sheet 11 of 35	
	HSW XDP & APS		



TOP/BS PN	GC/CN	Vendor PN	Description
AKD5JGETW07	AKD5JGETW08	HSTC4G63AFR-PBA	IC SDRAM (9P) HSTC4G63AFR-PBA
AKD5PGST508	AKD5PGST509	K4B4G1644G-HYK0	IC SDRAM (9P) K4B4G1644G-HYK0
AKD5JGSL04	AKD5JGSL07	MT41K56M16HA-125-E	IC SDRAM (9P) MT41K56M16HA-125-E

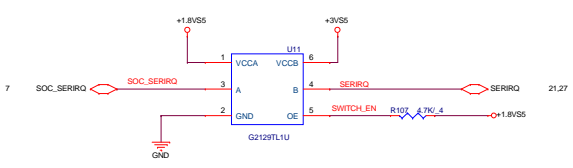
PROJECT : YOB
Quanta Computer Inc.

Doc: **DD03 DRAM-0704-09**
 Date: **Wednesday, August 06, 2014 11:08:19 AM**

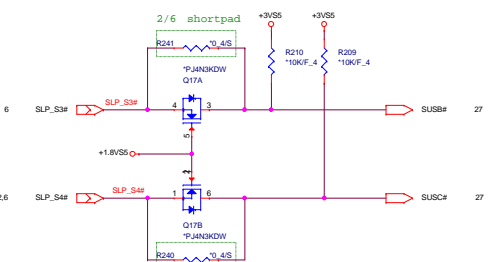
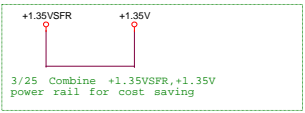
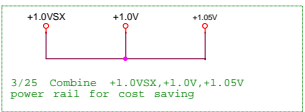
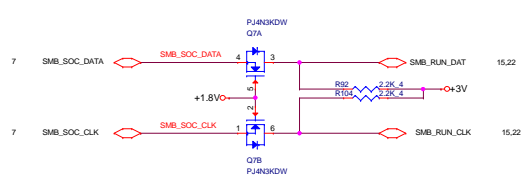
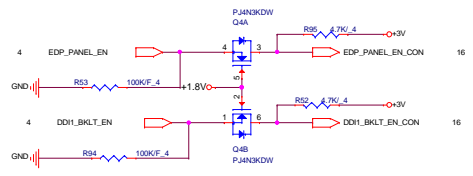


	PROJECT : Y08	
	Doc# DMM1-STD(04)	
Rev#	Date: Wednesday, August 06, 2014 10:44	13 of 35

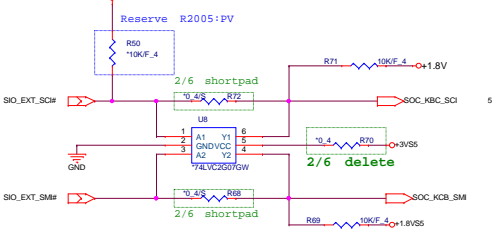
I'm from VIETNAM sualaptop365



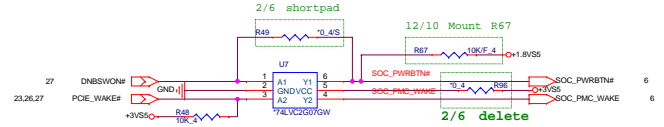
11/4 Delete duplicate TP lever shift



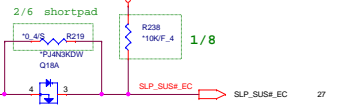
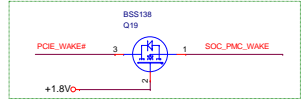
12/11 Mount R240
2/6 shortpad



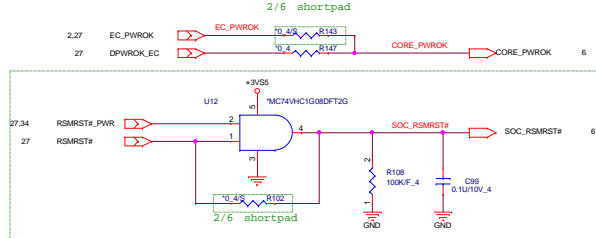
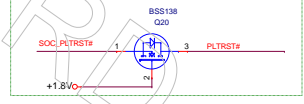
2/6 delete



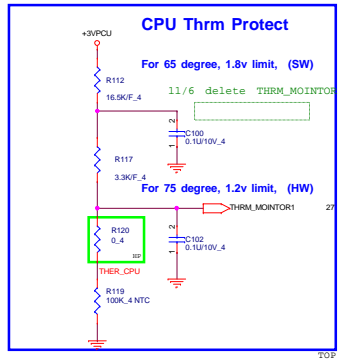
2/6 delete



1/8



11/5 Add AND gate

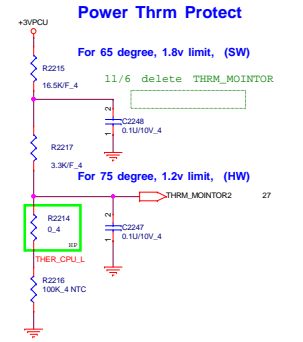


CPU Thrm Protect

For 65 degree, 1.8v limit, (SW)

11/6 delete THRM_MOINTOR

For 75 degree, 1.2v limit, (HW)



Power Thrm Protect

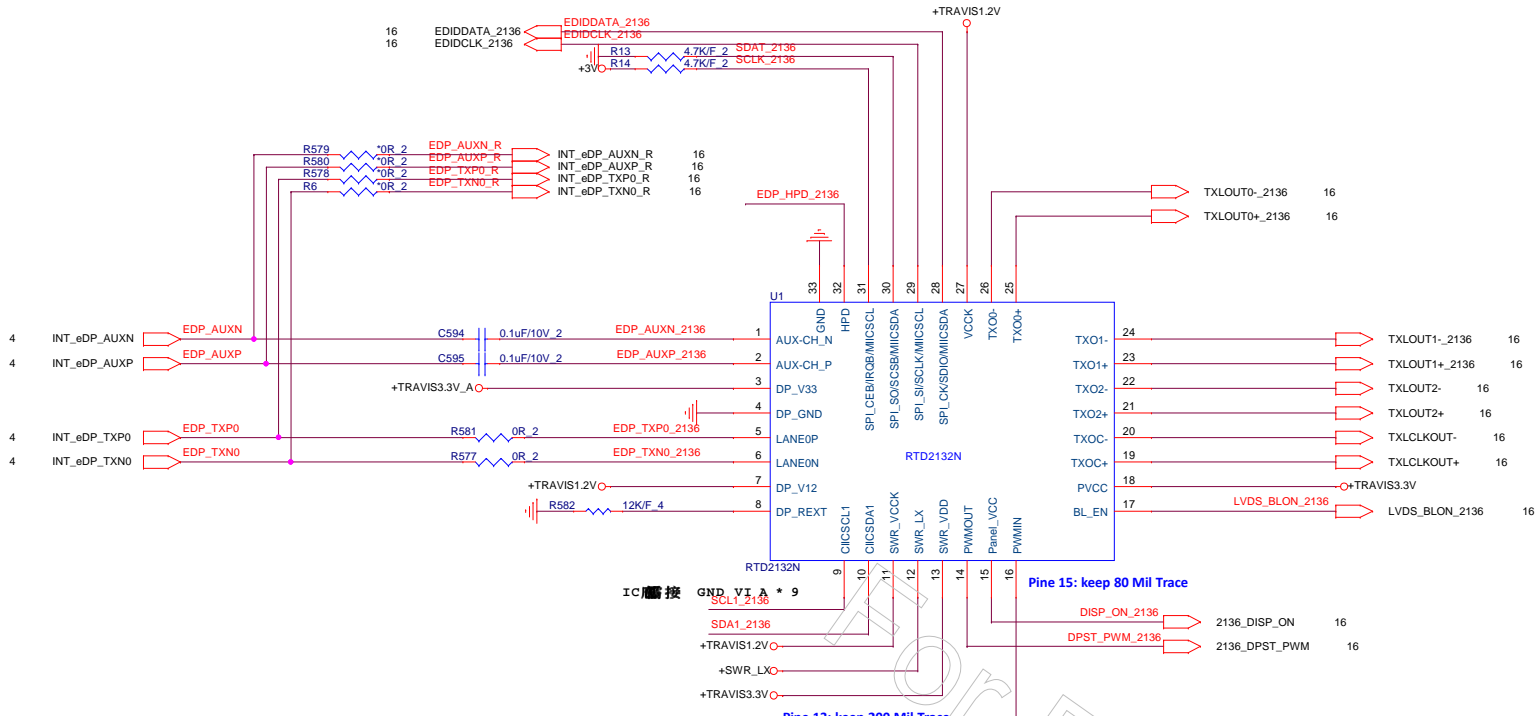
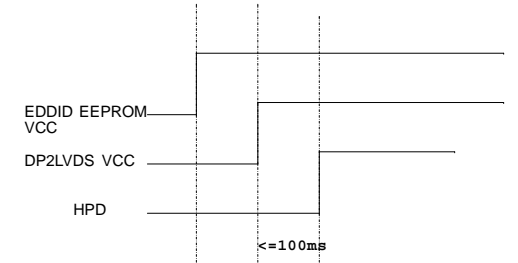
For 65 degree, 1.8v limit, (SW)

11/6 delete THRM_MOINTOR

For 75 degree, 1.2v limit, (HW)

NB5	PROJECT : Y0B			Rev 1A
	Quanta Computer Inc.			
Size	Document	Number	Lead	shu/Thermator
Date: Wednesday, August 06, 2014 Sheet 14 of 36				

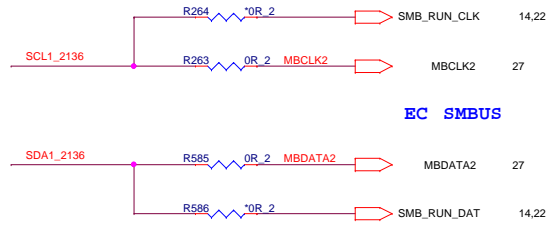
RTD2136S Power Up Sequence 15



IC 腳接

Pine 15: keep 80 Mil Trace

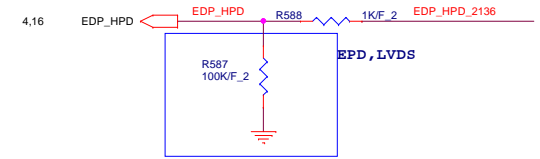
Pine 13: keep 200 Mil Trace



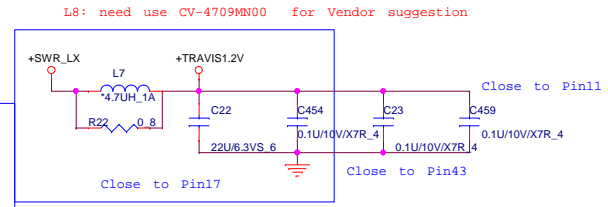
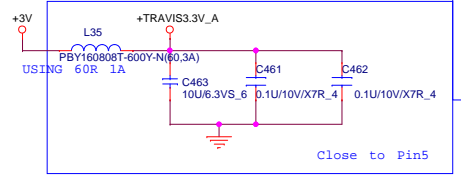
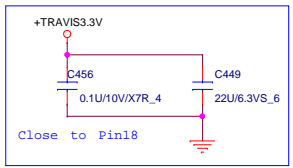
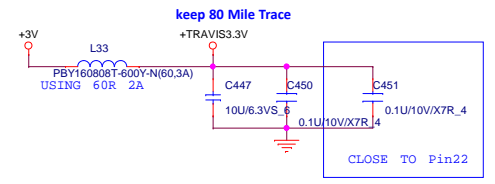
EC SMBUS

Default : ROM ONLY MODE

		MODE_CFG0(PIN47)	
		0	1
MODE_CFG1(PIN48)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE



4,9,14,16,17,18,20,21,22,23,25,26,27,35 +3V

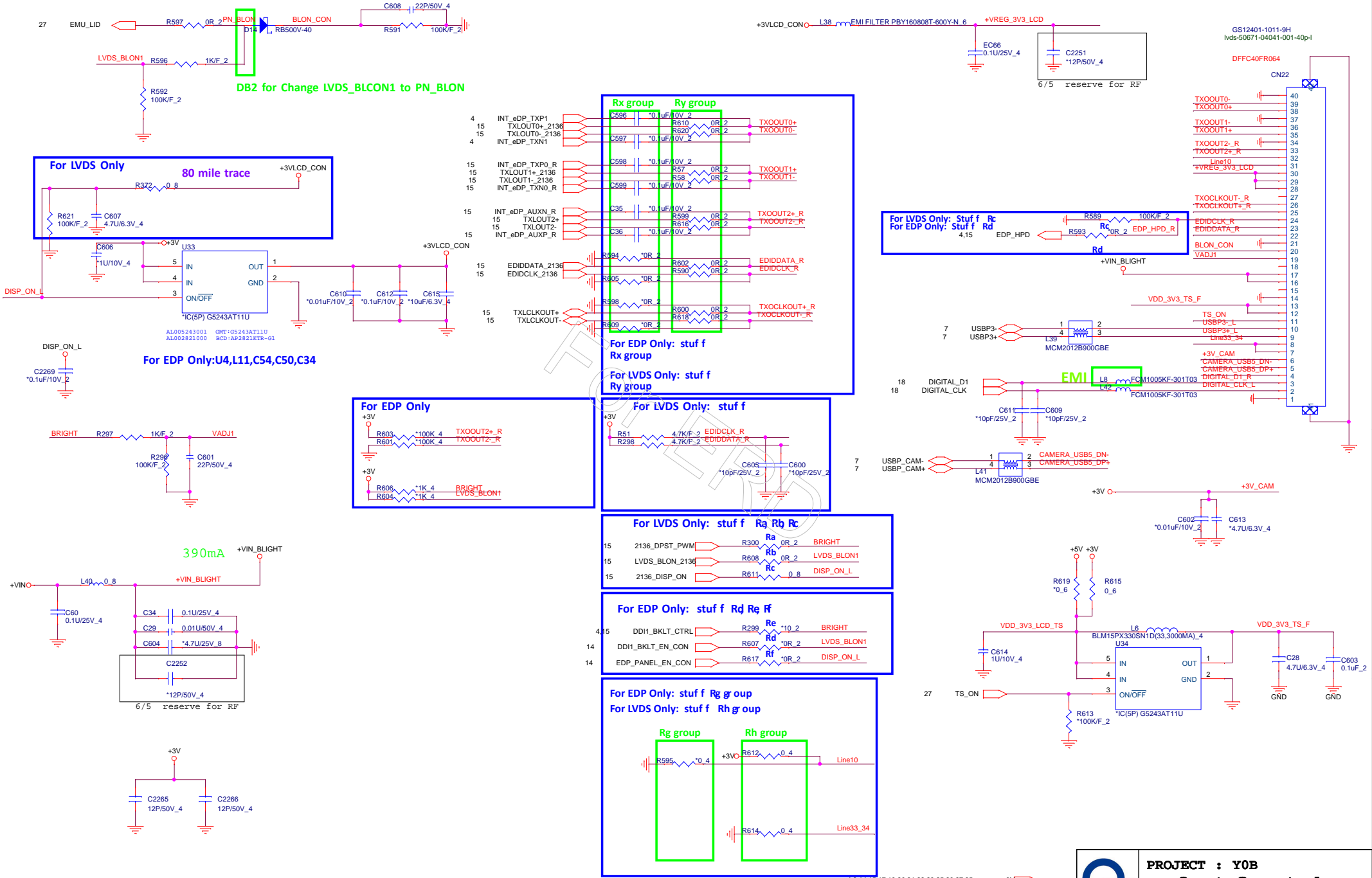


SWR MODE	LDO MODE
Stuff L8	Stuff R86

PROJECT : Y0B
Quanta Computer Inc.

Size	Document Number	Rev
Date: Wednesday, August 06, 2014	RTD2136	1A
Sheet 15 of 35		

LVDS conn.



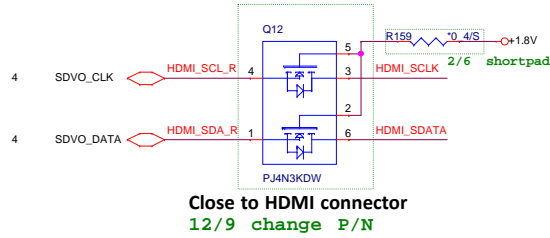
I'm from VIETNAM [sualaptop365](http://sualaptop365.com)

	PROJECT : Y0B		
	Quanta Computer Inc.		
Size	Document Number	LCD CONN/LID/CAM	Rev 1A
Date: Wednesday, August 06, 2014 Sheet 16 of 35			

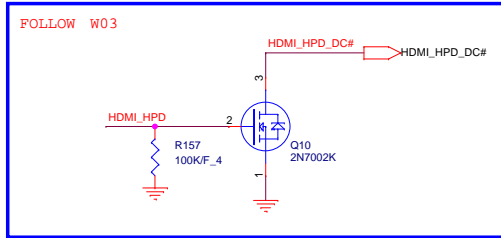
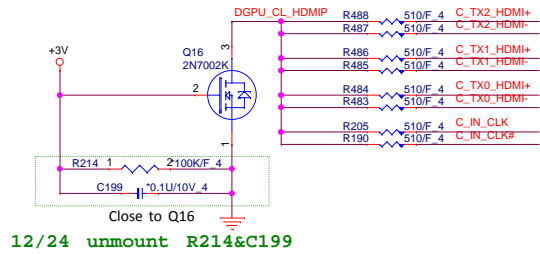
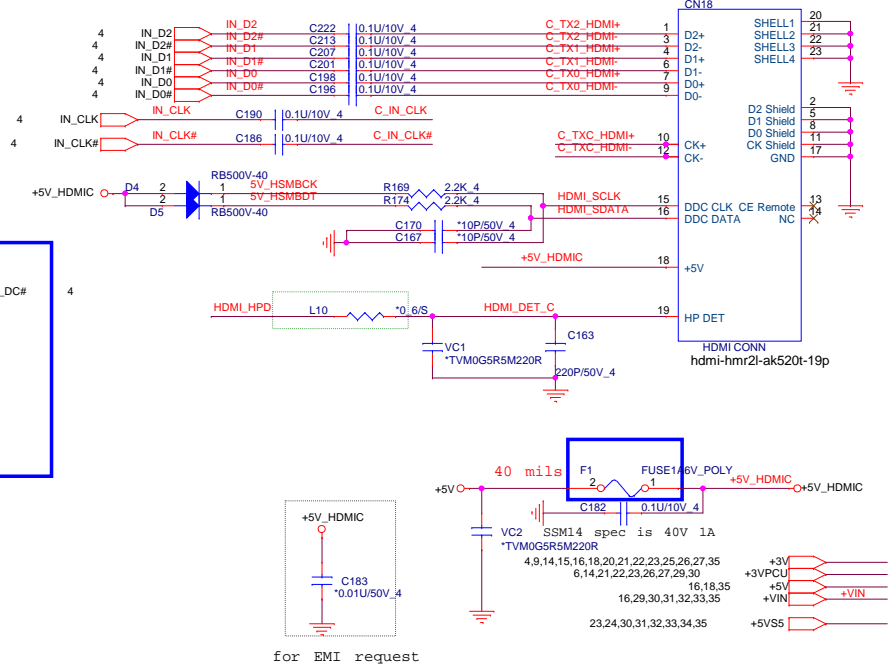
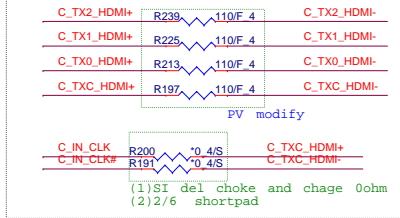
+3V
 +3VPCU
 +5V
 +VIN

HDMI Conn.

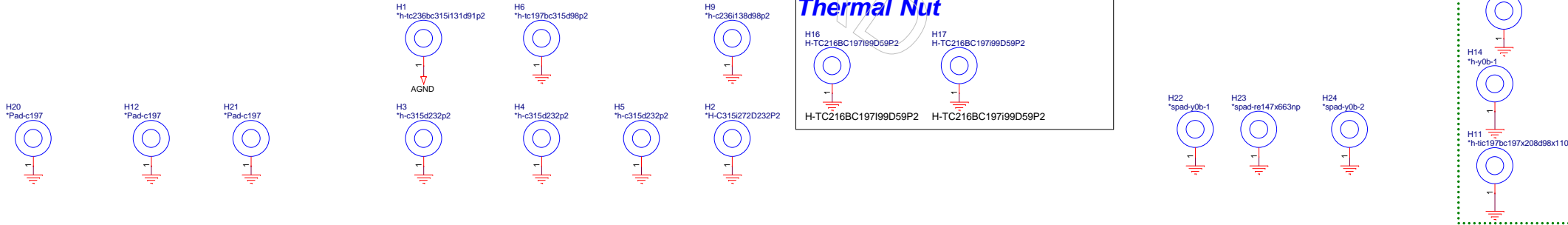
HDMI SMBus Isolat i on



EMI Solut i on



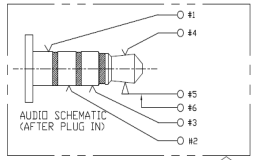
Hole



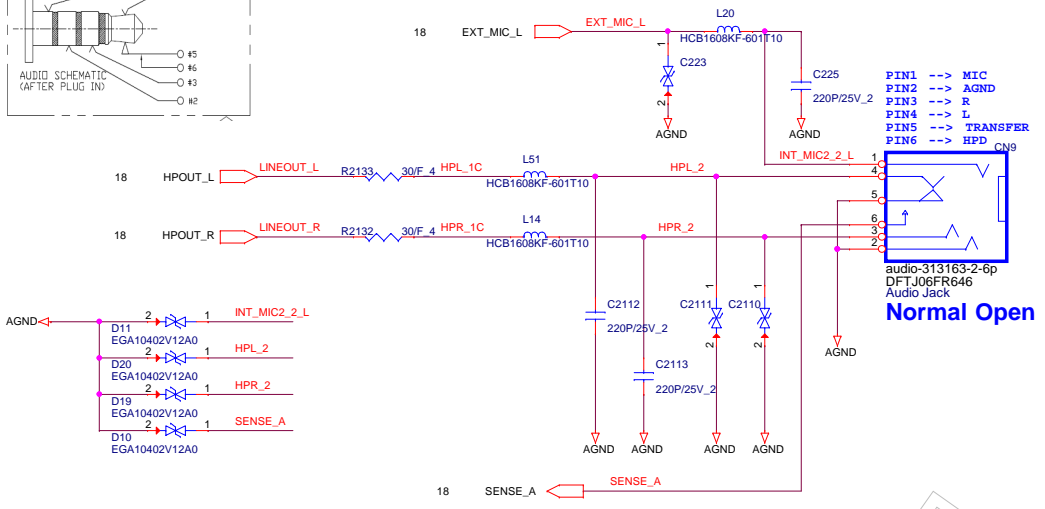
EMI

NB5	PROJECT : Y0B		
	Quanta Computer Inc.		
Size	Document	Number	Rev
		HDMI	1A
Date: Wednesday, August 06, 2014 Sheet 17 of 35			

Head Phone out



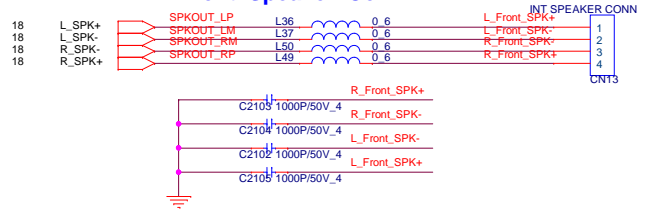
Headphone and Mic Jack



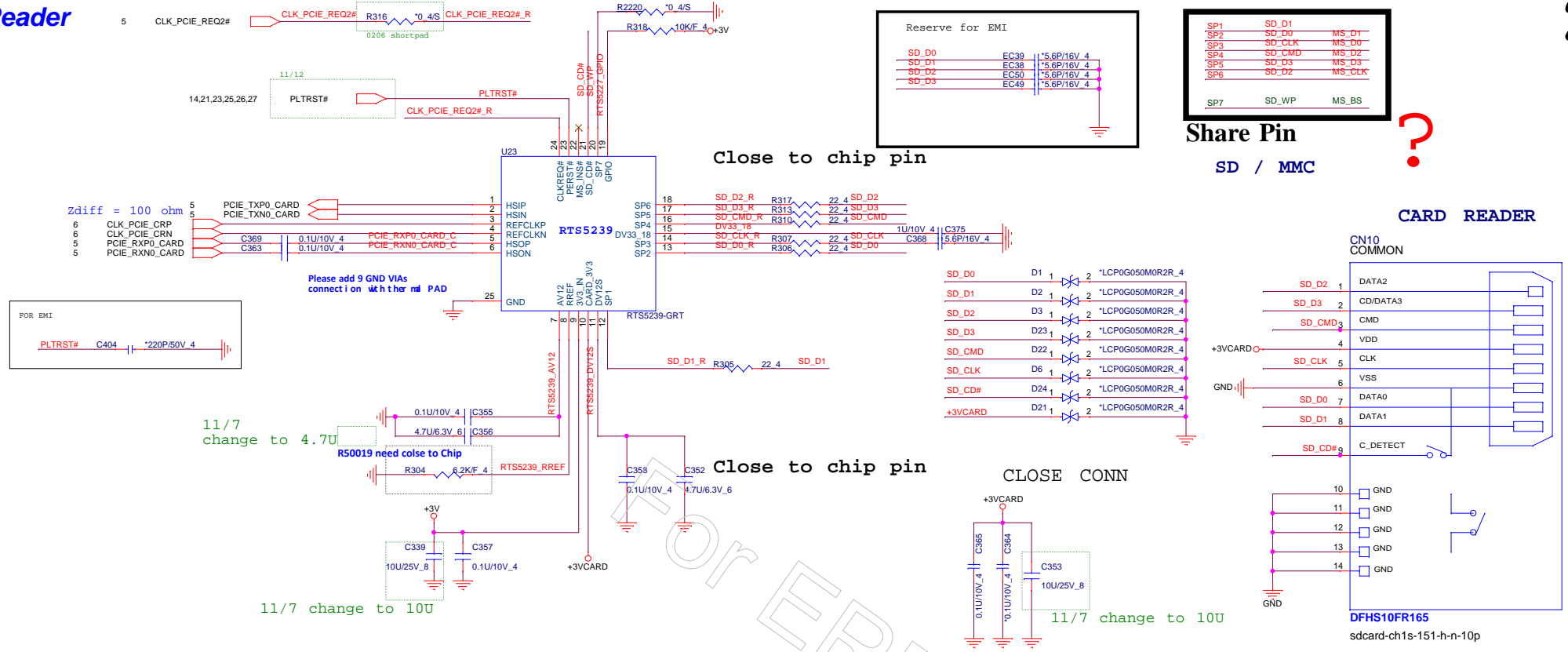
For ERD

Int. SPEAKER

Front Speaker Conn



	PROJECT : Y0B		
	Quanta Computer Inc.		
	Size	Document Number	Rev
	HP Amp	1A	
Date: Wednesday, August 06, 2014 Sheet 19 of 35			



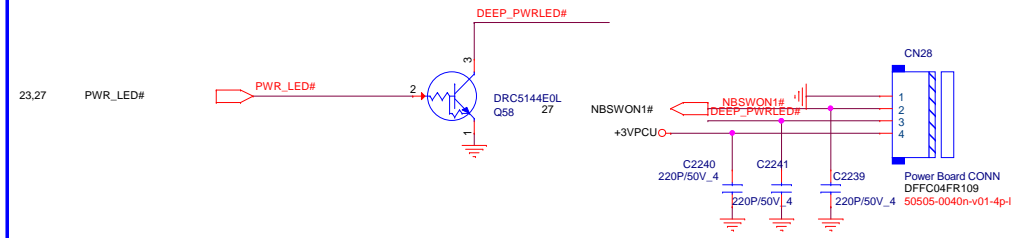
	PROJECT : Y0B		Rev 1A
	Quanta Computer Inc.		
	Size	Document Number CR RTS5237 & CR SOCKET	
Date: Wednesday, August 06, 2014		Sheet 20 of 35	

13.3" Sangui ne Power Bottom Connector

14" Menth Power Bottom Connector

11/14 Only for debug
12/24 Delete debug power switch

Pin1 : +3VPCU(LIDSWITCH PWR)
Pin2 : POWER LED
Pin3 : LIDSWITCH
Pin4 : GND
Pin5 : GND
Pin6 : POWERON#



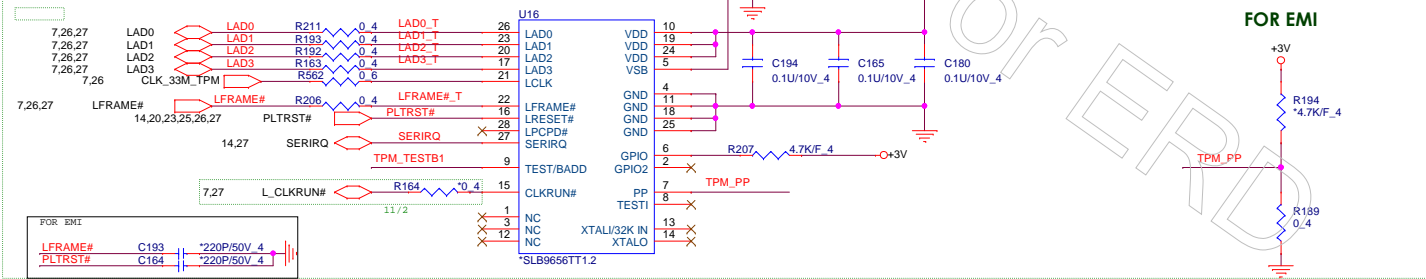
2/6 Unmount TPM and its related component

TPM (1.2)

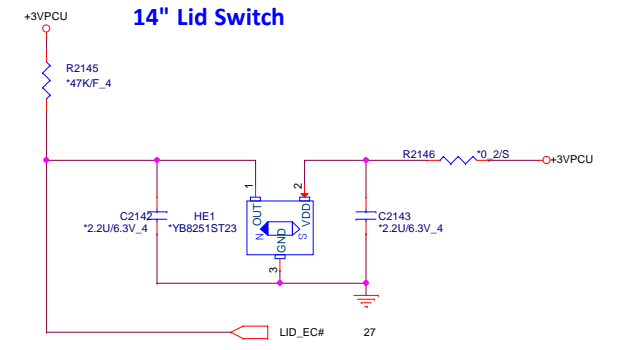
Address

	BADD
HIGH	4EH/4F (default)

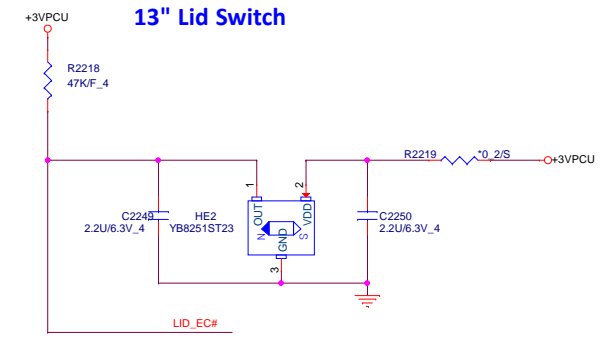
5/6 R562 for LPC_CLK 3 branches, should be 12.5ohm



14" Lid Switch



13" Lid Switch

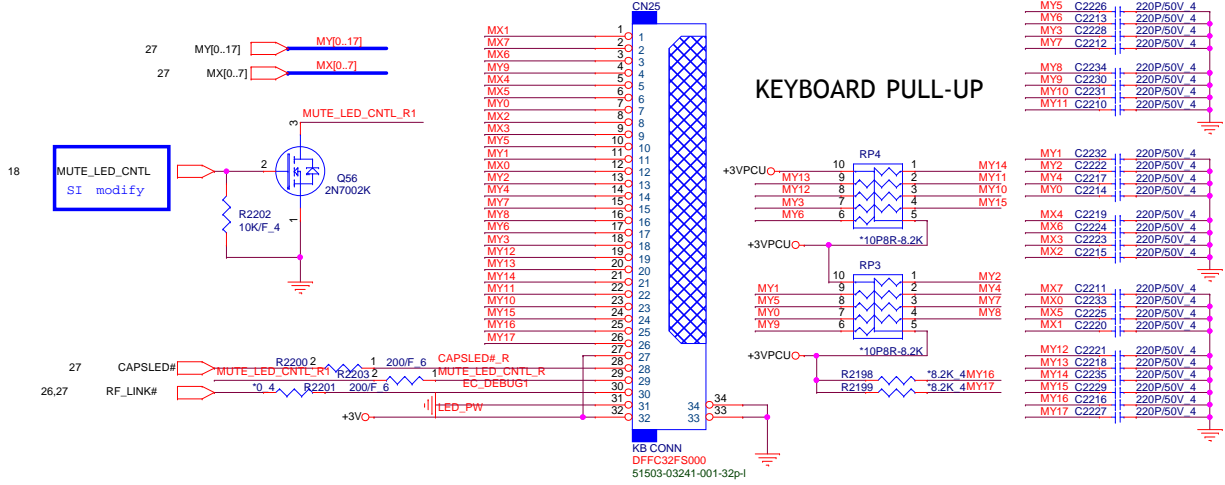


FAN

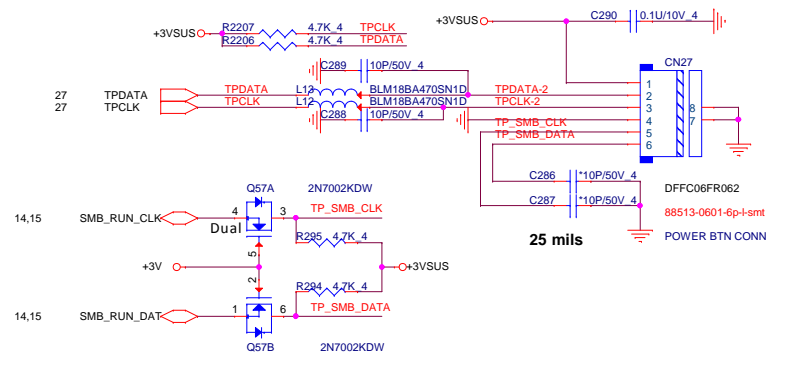
4,9,14,15,16,17,18,20,22,23,25,26,27,35 +3V
16,17,18,35 +5V
6,14,22,23,26,27,29,30 +3VPCU

	PROJECT : Y0B	
	Quanta Computer Inc.	
Size	Document Number	Rev
	TPM/TP/FAN/LED	1A
Date:	Wednesday, August 06, 2014 Sheet 21 of 35	

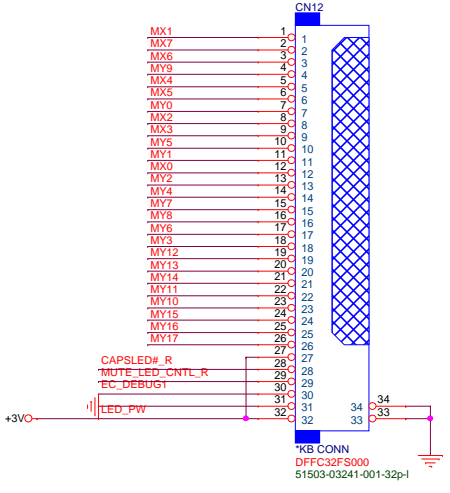
13.3" Sangü ne KEYBOARD Con



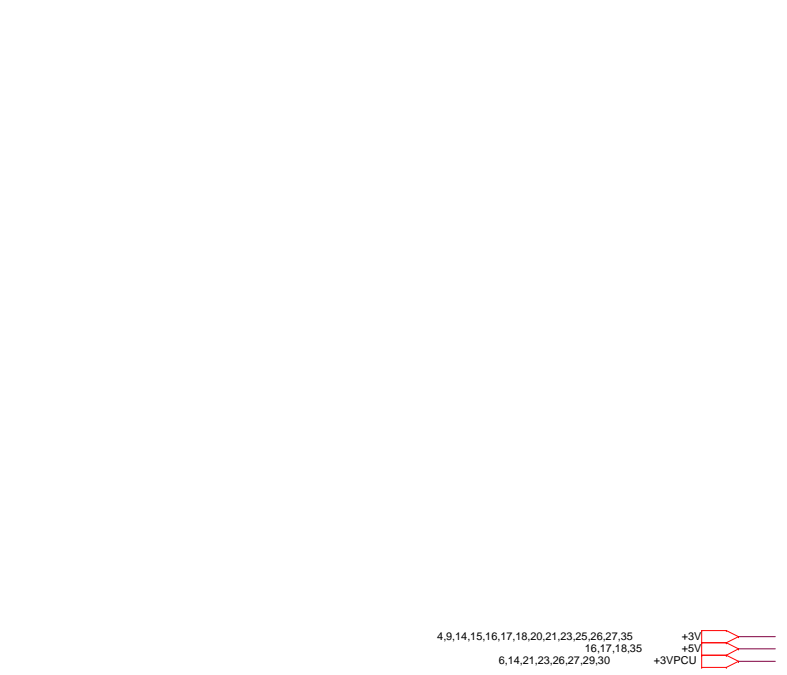
13.3" Sangü ne Touch Pad Connect



14" Mërt h KEYBOARD Con




14" Mërt h Touch Pad Connect

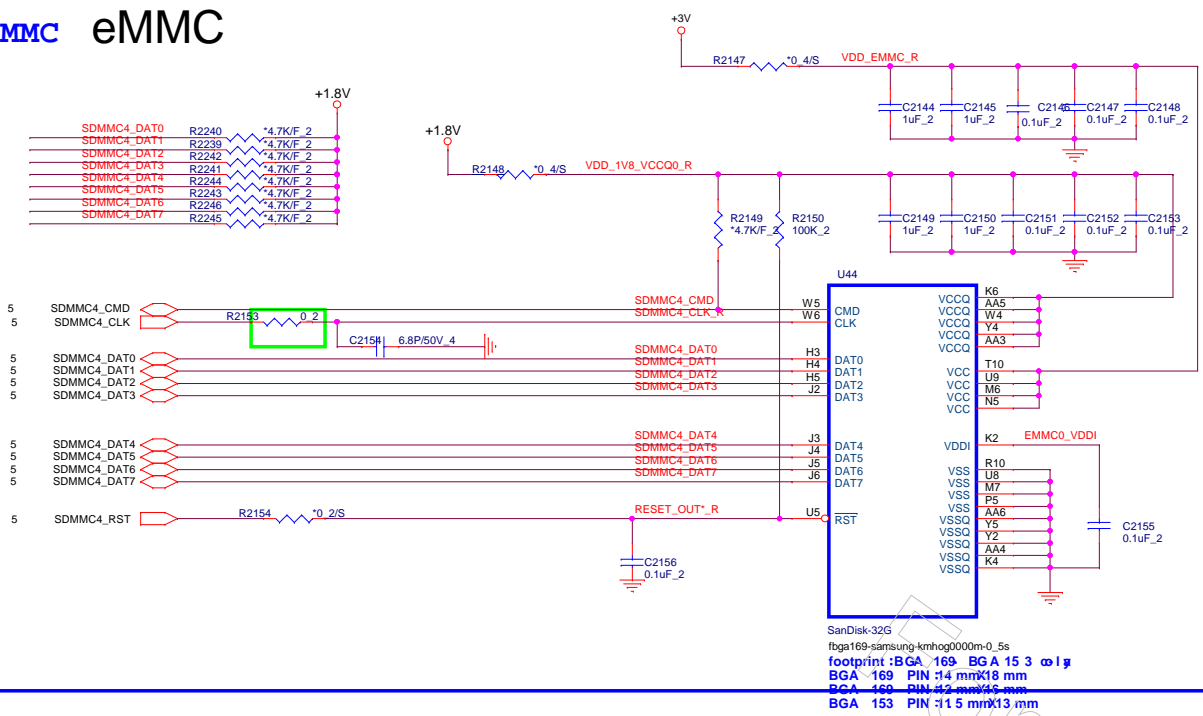


FOR ERD

4,9,14,15,16,17,18,20,21,23,25,26,27,35 +3V
16,17,18,35 +5V
6,14,21,23,26,27,29,30 +3VPCU

	PROJECT : Y0B			Rev 1A
	Quanta Computer Inc.			
Size	Document	Number	TP/KB	Date: Wednesday, August 06, 2014
		Sheet	22	of 35

EMMC eMMC

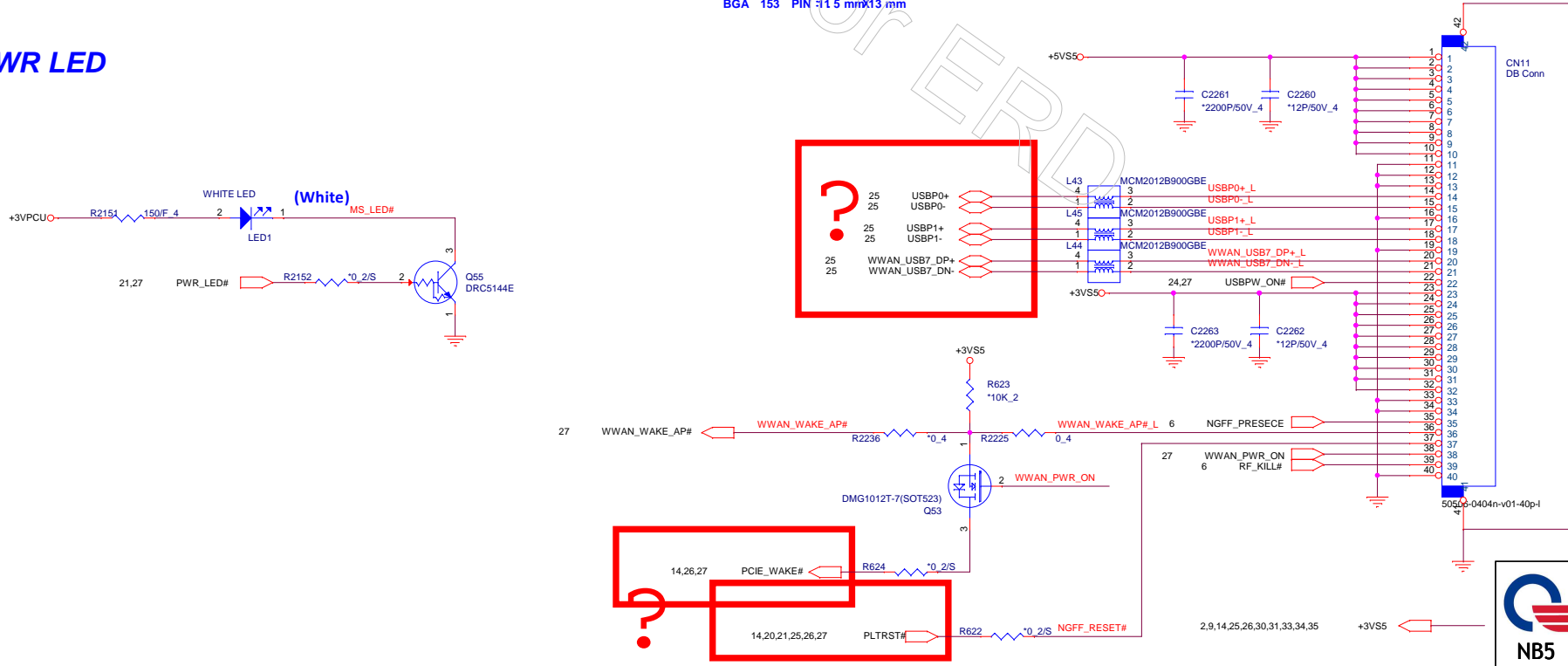


iNAND (eMMC) V4.51

TOPBSQ	QBCON	Description	SIZE	Vender
AKE3SZ-TW01	AKE3SZ-TW02	IC FLASH(153P)H26M64103EMR(FBGA)	32G	Hynix
AKE5SZ0T506	AKE5SZ0T507	IC FLASH(153P)KLMBG4GEAC-B031(BGA)	32G	samaung
AKE3SFUT000	AKE3SFUT001	IC FLASH(153P)SDIN9DW4-32G(FBGA)	32G	SanDisk
AKE3TG-TW01	AKE3TG-TW02	IC FLASH(153P)H26M78103CCR(FBGA)	64G	Hynix
AKE3TZPT515	AKE3TZPT516	IC FLASH(153P)KLMBG8GEAC-B031(BGA)	64G	samaung
AKE3TFUT101	AKE3TFUT102	IC FLASH(153P)SDIN9DW4-64G(FBGA)	64G	SanDisk

SanDisk-32G
 tbg169-samsung-knhog0000m-0.5s
 footprint : BGA_169_BGA_153
 BGA_169_PIN : 14 mm x 18 mm
 BGA_169_PIN : 12 mm x 15 mm
 BGA_153_PIN : 15 mm x 13 mm

PWR LED

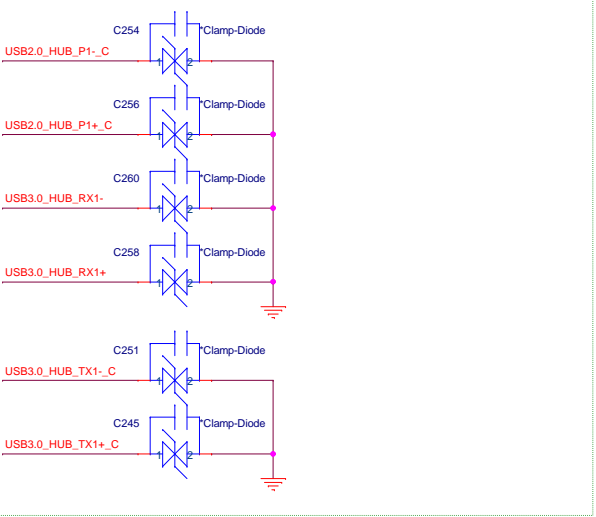


PROJECT : Y0B
Quanta Computer Inc.

Size	Document Number	HDD/ODD	Rev
NB5			1A

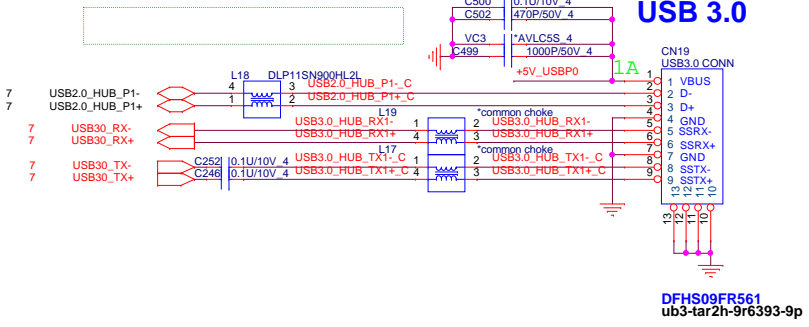
Date: Wednesday, August 06, 2014 | Sheet 23 of 35

USB 2.0/3.0 Combo

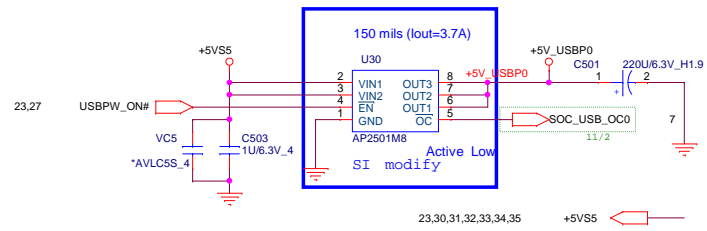


11/1 modify

2/10 delete R259 & R261 to mount L18 for EMI



USB 3.0



2/6 shortpad

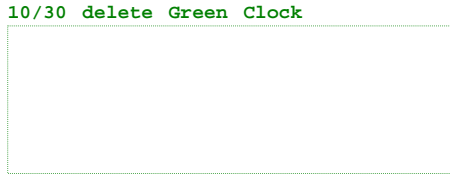
Leap Motion 11/7 Delete Leap motion

Accelerometer Sensor

Fingerprint Conn 11/7 Delete Fingerprint CONN

Green CLK Circuitry

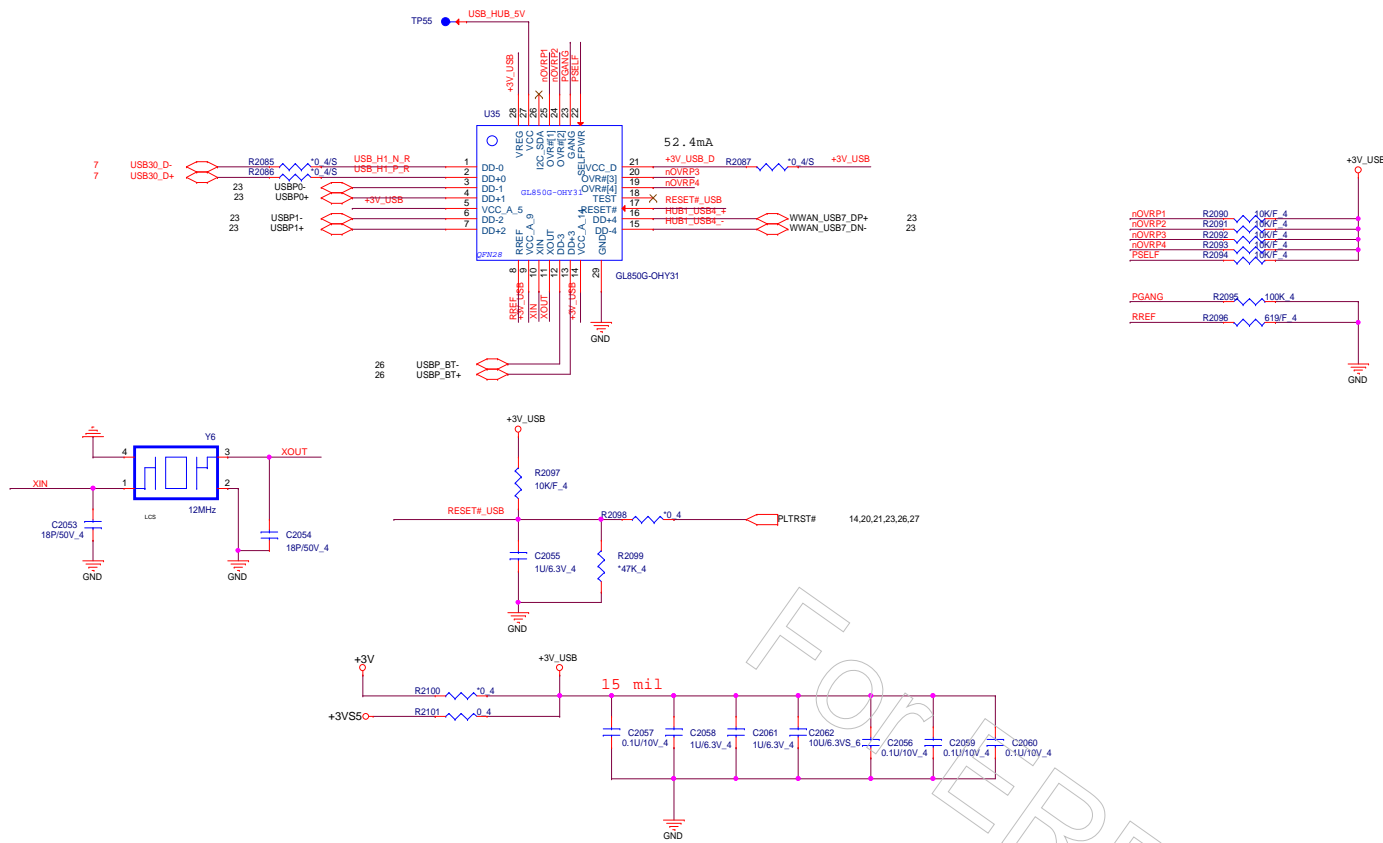
Touch screen



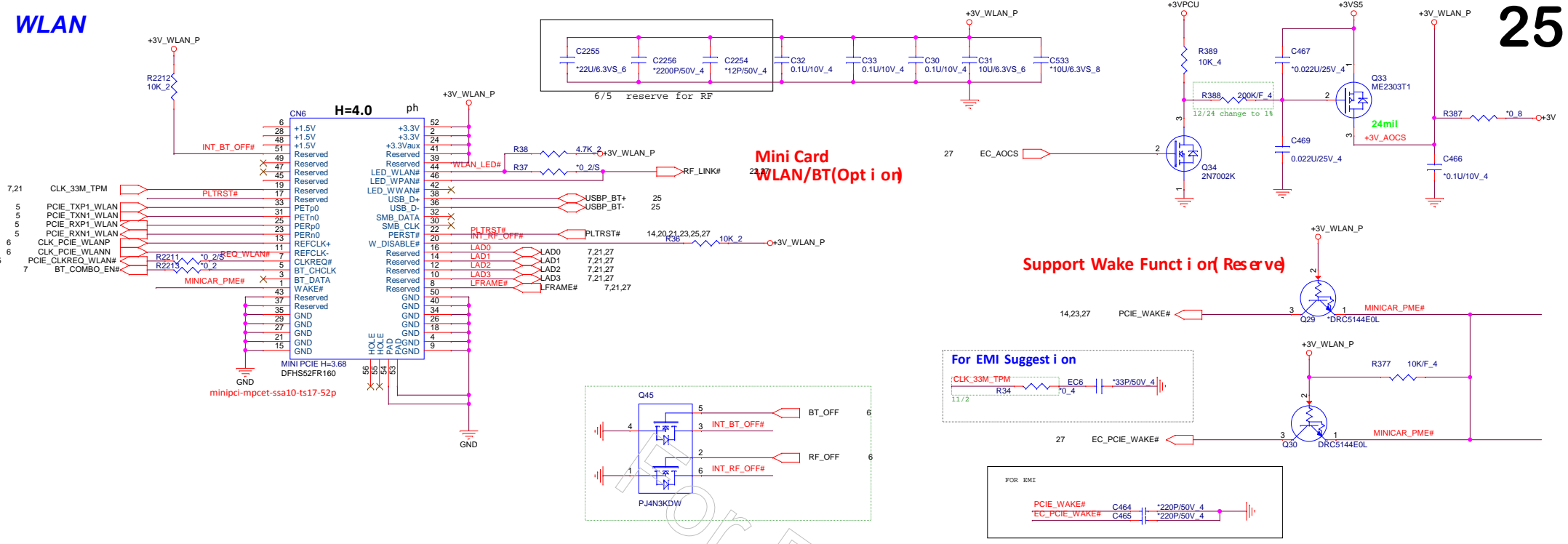
4,9,14,15,16,17,18,20,21,22,23,25,26,27,35
16,17,18,35



	PROJECT : Y0B Quanta Computer Inc.		Rev 1A
	Size	Document Number USB3.0/GCLK/TS/FR	




WLAN

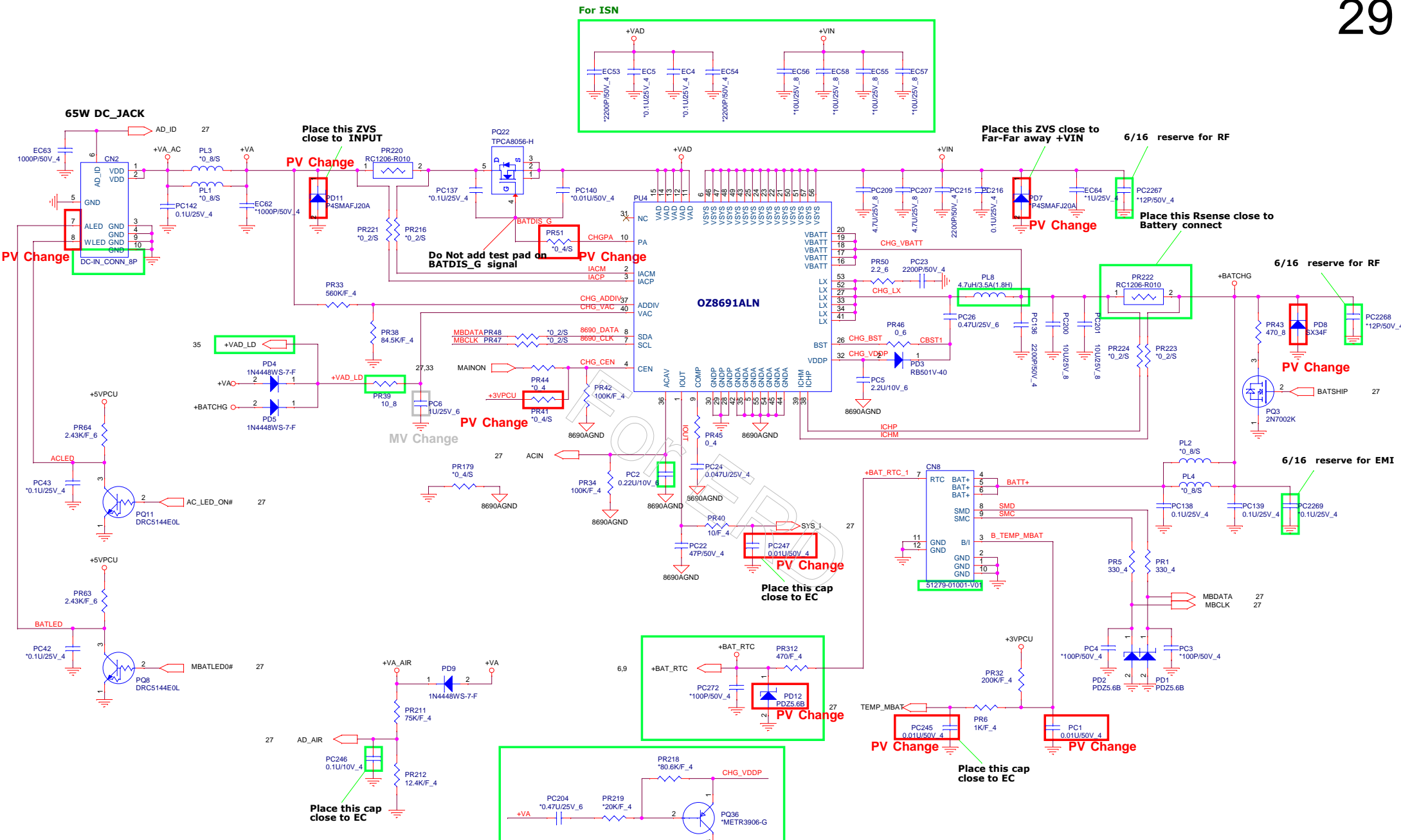


USB 3.0 re-driver

	PROJECT : Y0B Quanta Computer Inc.		
	Size	Document Number WLAN	Rev 1A
	Date: Wednesday, August 06, 2014 Sheet 26 of 35		

For ERD

 NB5	PROJECT : Y0B Quanta Computer Inc.		
	Size	Document Number RTL 8161/RJ45	Rev 1A
	Date: Wednesday, August 06, 2014 Sheet 28 of 35		

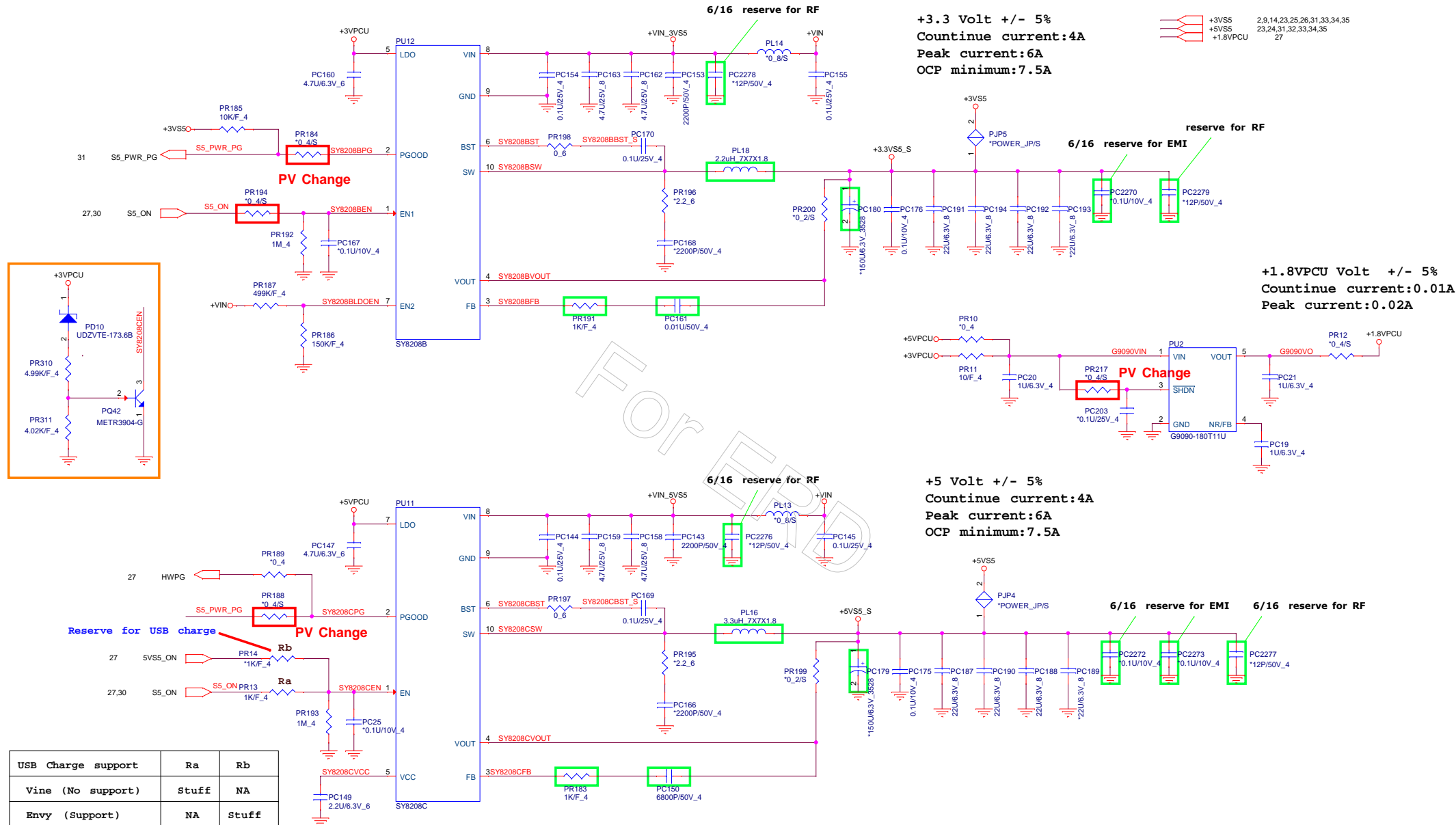


I'm from VIETNAM sualaptop365

PROJECT : U87
Quanta Computer Inc.

Size	Document	Number	Rev
Custom	Charger	(OZ8691)	1A
Date: Wednesday, August 06, 2014			Sheet 29 of 35

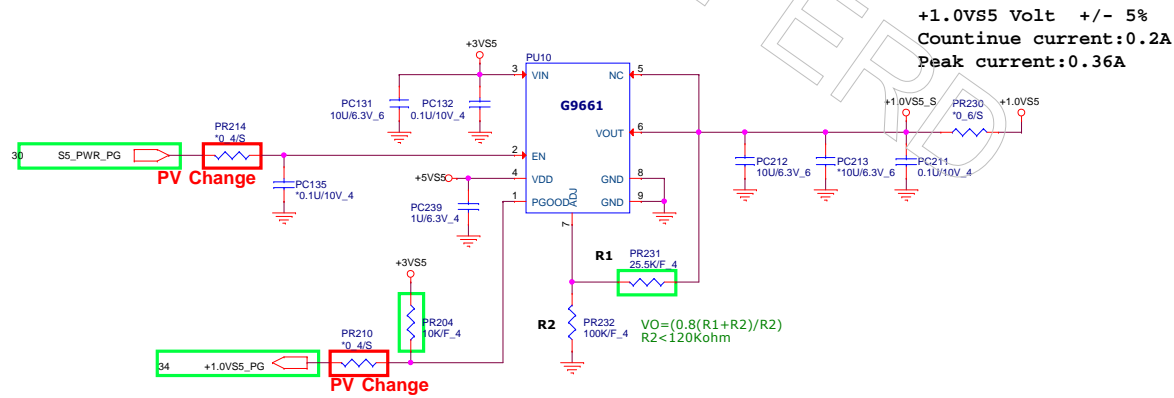
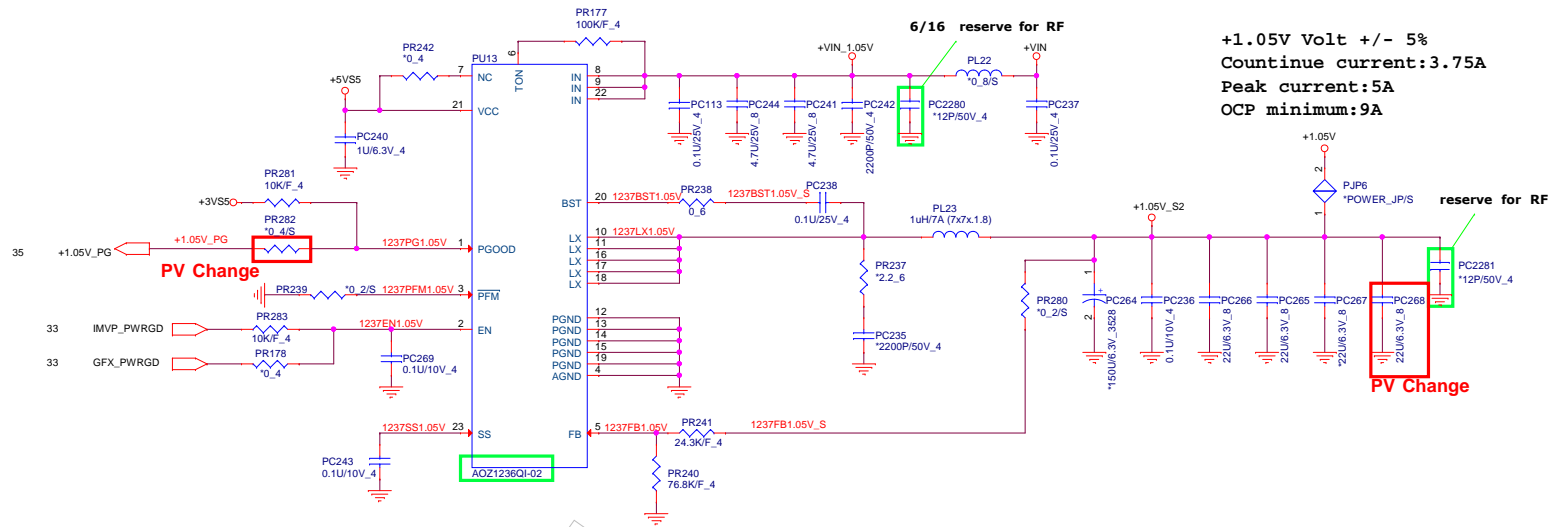
NB5



USB Charge support	Ra	Rb
Vine (No support)	Stuff	NA
Envy (Support)	NA	Stuff

PROJECT : Y12A-BTM
Quanta Computer Inc.

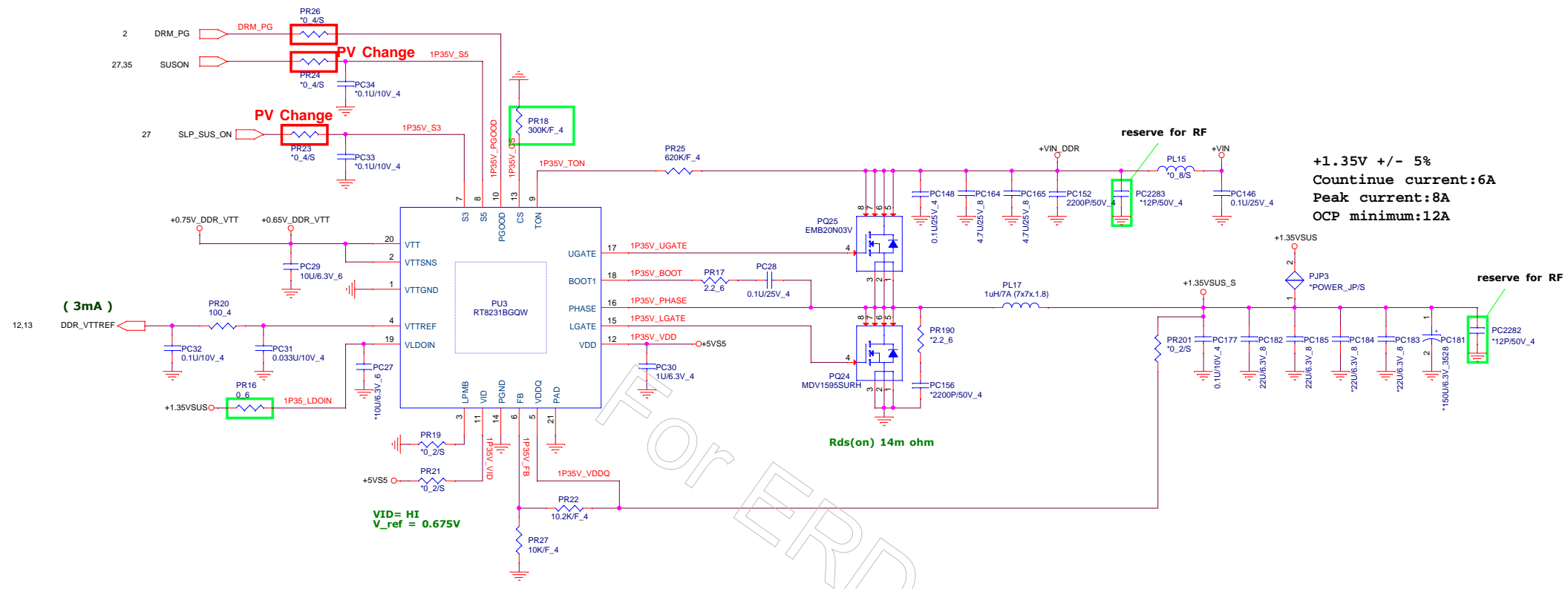
Document Number: 3/5VPCU(SY8208BC) Rev 1A
 Date: Wednesday, August 06, 2014 Sheet 30 of 35



PROJECT : Y12A-BTM
Quanta Computer Inc.

Document Number	+1.05V/+1.5V (SY8002)	Rev	1A
Date:	Wednesday, August 06, 2014	Sheet	31 of 35

+1.35VSUS	2,8,12,13,35
+VIN	16,29,30,31,33,35
+0.75V_DDR_VTT	12,13
+5VS5	23,24,30,31,33,34,35



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

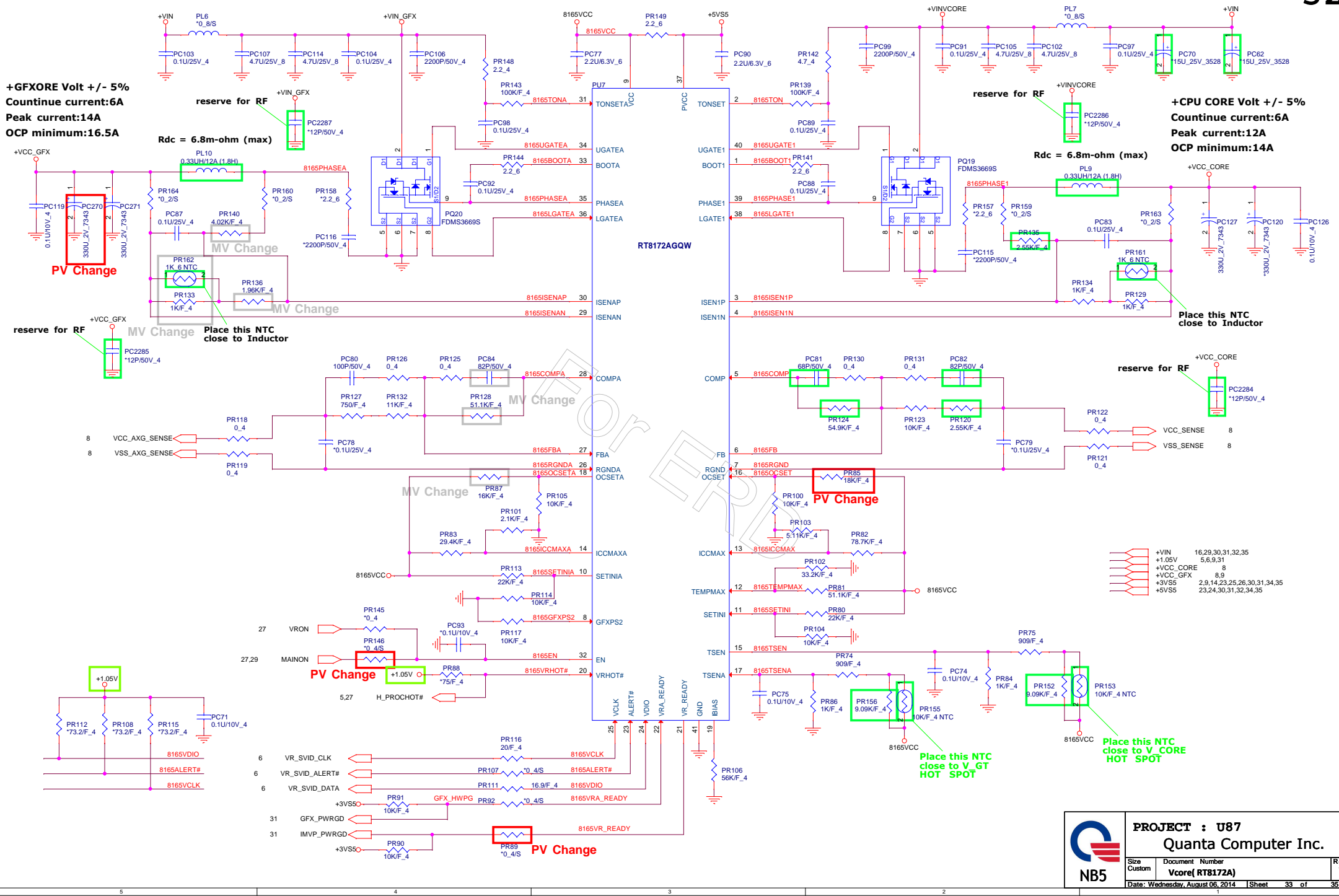
VID= HI
V_ref = 0.675V

Rds(on) 14m ohm

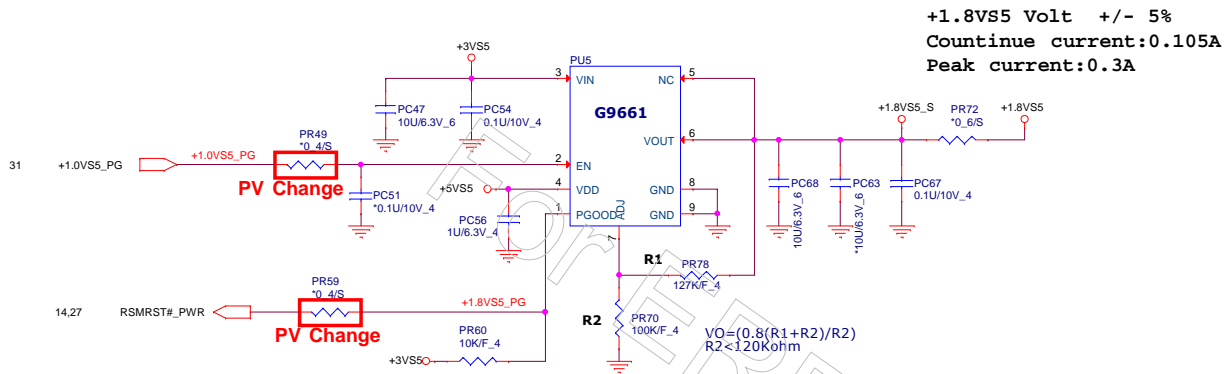
		PROJECT : Y12A-BTM	
		Quanta Computer Inc.	
Document Number	DDR3 (RT8231B)1.8VS5	Rev	1A
Date:	Wednesday, August 06, 2014	Sheet	32 of 35


+GFXORE Volt +/- 5%
Continue current:6A
Peak current:14A
OCP minimum:16.5A

+CPU CORE Volt +/- 5%
Continue current:6A
Peak current:12A
OCP minimum:14A



6,7,9,14,35 +1.8VS5
 2,9,14,23,25,26,30,31,33,35 +3VS5
 23,24,30,31,32,33,35 +5VS5



 PROJECT : Y12A-BTM Quanta Computer Inc.		Rev
		1A
Document Number	1.0VS5/1.8VS5/1.24VS5	Date:
Wednesday, August 06, 2014		Sheet 34 of 35

