

# Annika 1.1 Block Diagram

01

## PCB STACK UP

6L

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

10.1" LCD Panel  
Page 16

CRT  
Page 12

Intel Pineview-M  
Micro-FCBGA8  
22 x 22 mm  
TDP~5.5W  
Page 3~5

DDR3 667MT/s  
Single Channel

DDR3 SO-DIMM  
2GB Max.  
Page 11

XDP  
Page 31

CLOCK GEN  
9LRS3165  
Page 2

SATA

2.5"HDD/SSD  
Page 19

Intel  
Tigerpoint  
17 x 17 mm  
MMAP 360 Balls  
TDP~1.5W  
Page 6~10

USB 2.0

0,1,2  
USB2.0  
Port x3  
Page 21

4  
Card  
Reader  
Page 13  
Card Reader  
Socket  
Page 13

5  
Bluetooth  
/WLAN  
Page 20

6  
Touch Screen  
Page 22

7  
WWAN  
Page 20  
SIM Card Socket  
Page 20

8  
Webcam  
Page 16

SYSTEM POWER  
+3VPCU/+5VPCU(RT8206)  
PAGE 24

DDR 3 SMDDR\_VTERM  
+0.75VSMVREF/+1.5VSUS(RT8207)  
PAGE 25

CPU CORE RT8152D  
PAGE 26

SYSTEM CHARGER ISL6251AHAZ-T  
PAGE 27

GFX CORE(RT9025)  
+1.2V(RT9025)  
+1.5V(RT9025)  
PAGE 28  
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PAGE 30

VCCP 1.05V(RT8209A)  
PAGE 29

PCI-Express

X1  
WWAN  
Page 20  
SIM Card  
Page 20

X1  
LAN  
Realtek  
RTL8103EL-VB  
10/100  
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RJ 45  
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X1  
WLAN  
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X1  
HD Decoder  
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DDR II  
64MByte  
Page 18

Touch Pad  
Keyboard  
Page 22

Power SW  
Page 14

ENC KBC  
KB3926D2  
Page 23

AUDIO CODEC  
92HD80BX  
Page 17

BIOS  
SPI Flash  
Page 23

FAN  
G991  
Page 22

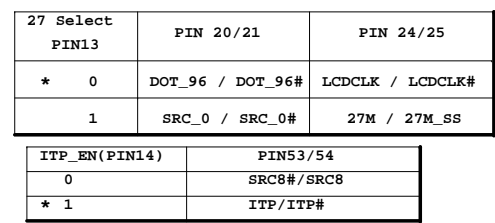
Int SPK  
Page 17

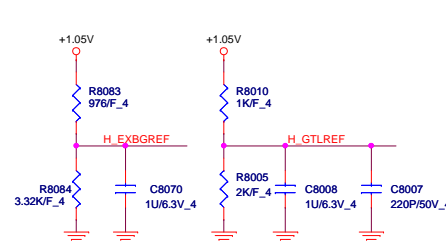
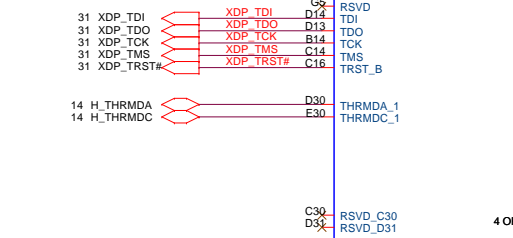
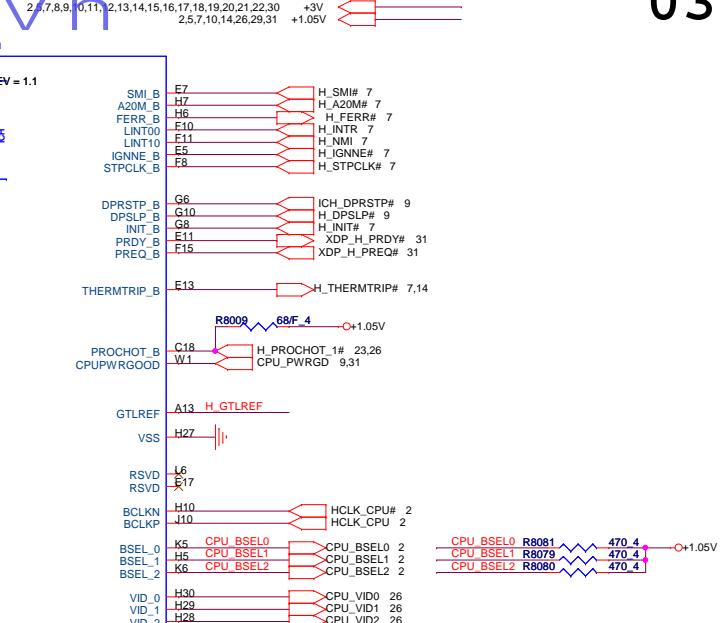
Digital MIC  
Page 17

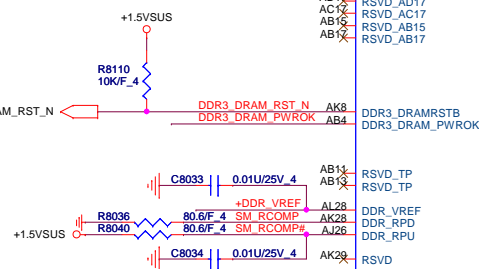
HP/MIC  
COMBO JACK  
Page 17

Quanta Computer Inc.  
PROJECT : Annika

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	BLOCK DIAGRAM	1A
Date:	Thursday, January 21, 2010	Sheet 1 of 32

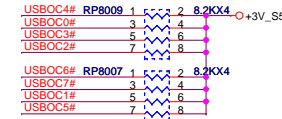
[illegible]

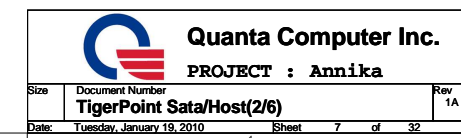


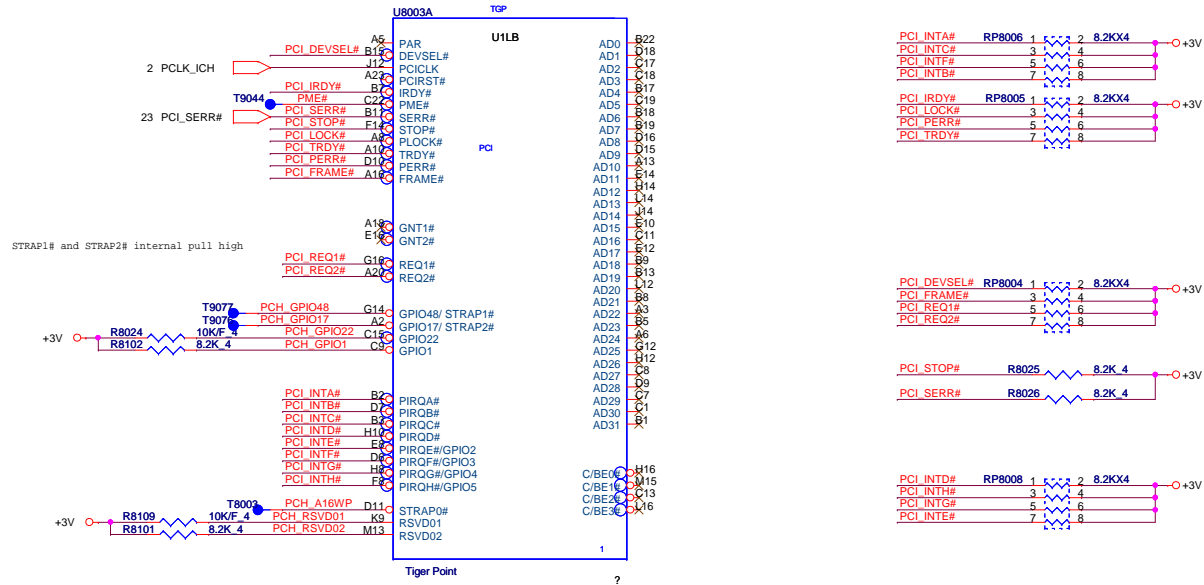


Pineview









## ICH Boot BIOS select

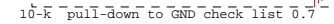
PCH_GPIO17 (INT PU)	PCH_GPIO48 (INT PU)	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	IPC (Default)

## A16 SWAP Override strap

PCH_A16WP (INT PU)	Low = A16 swap override enabled High = Default
-----------------------	---

IRQ	Description
PIRQA	USB UHCI Controller #1, #4
PIRQB	AC'97 Codec; option for SMBUS
PIRQC	USB UHCI Controller #3; SATA/IDE Native Mode
PIRQD	USB UHCI Controller #2
PIRQE	Internal LAN; Option for SCI, TCO, HPET#0,1,2
PIRQF	Option for SCI, TCO, HPET#0,1,2
PIRQG	Option for SCI, TCO, HPET#0,1,2
PIRQH	USB EHCI Controller; Option for SCI, TCO, HPET#0,1,2
PCI_GNT#2	Internal PU Should not be PD





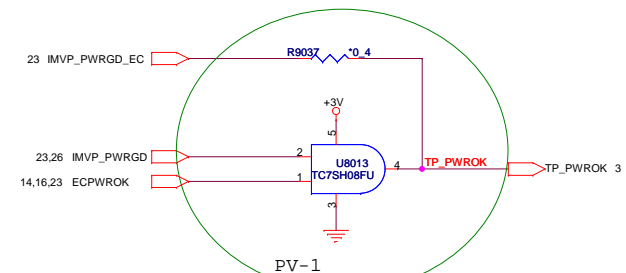
Board ID	ID0	ID1	ID2
Annika 1.0 WO SIM	0	0	0
Annika 1.0 W/ SIM	1	0	0
Annika 1.1 WO SIM	0	1	0
Annika 1.1 W/ SIM	1	1	0

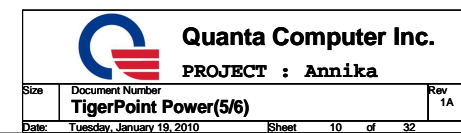
**GPIO25** This signal has a weak internal pull-up.

If the signal is sampled high, the DMI interface is strapped to operate in DC coupled mode (No coupling capacitors are required on DMI differential pairs).

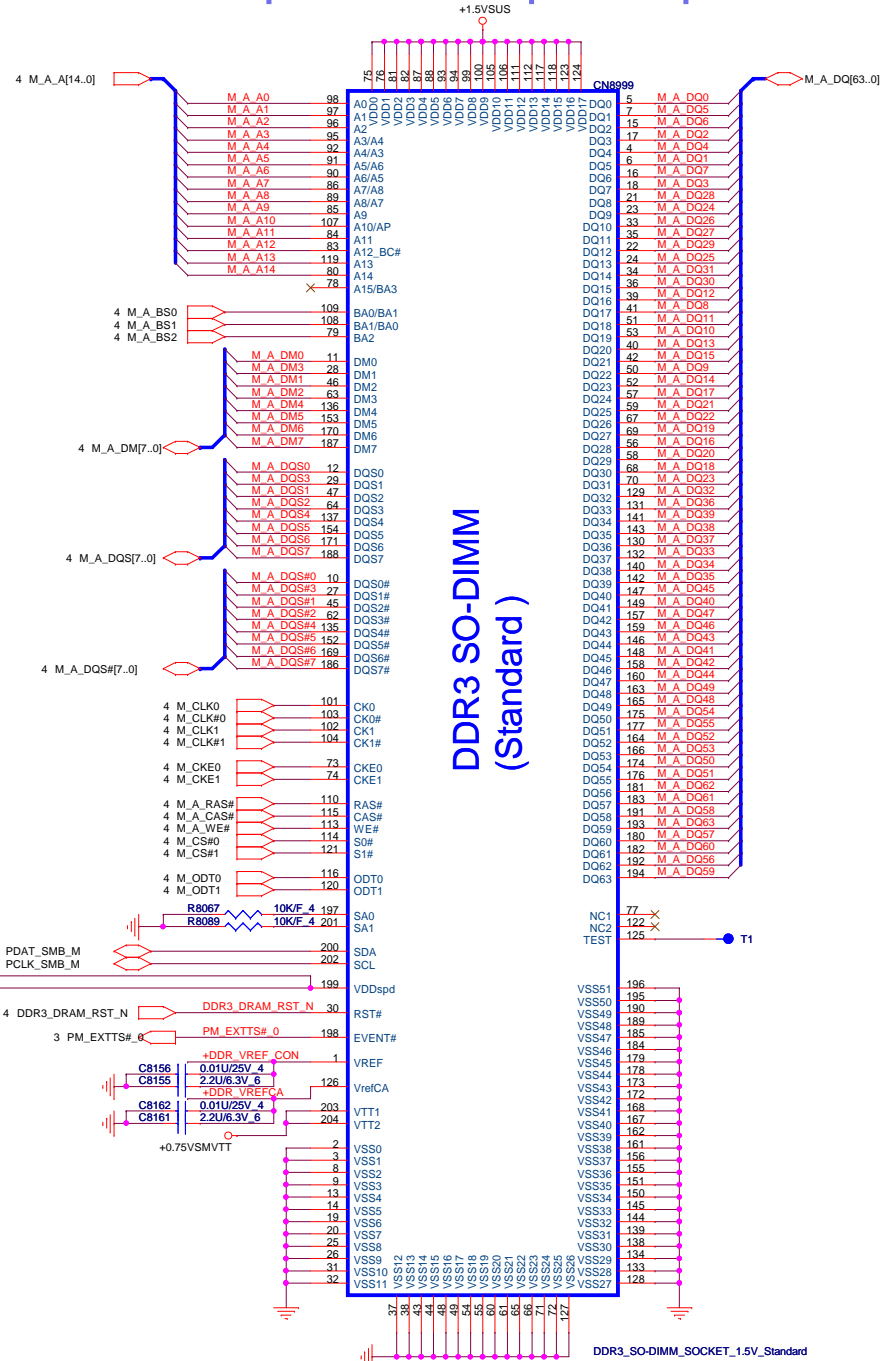
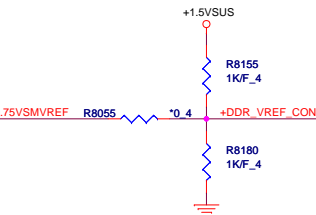
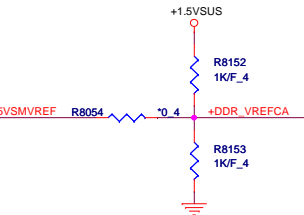
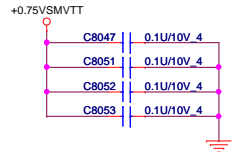
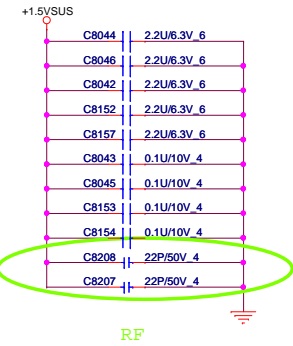
If the signal is sampled low, the DMI interface is strapped to operate in AC coupled mode (Coupling capacitors are required on DMI differential pairs).

**NOTE:** Board designer must ensure that DMI implementation matches the strap selection.





+3V 2,3,5,7,8,9,10,12,13,14,15,16,17,18,19,20,21,22,30  
+1.5VSUS 4,5,25,28,29,30  
+0.75VSMVREF 4,25  
+0.75VSMVTT 25



DDR3 SO-DIMM  
(Standard)

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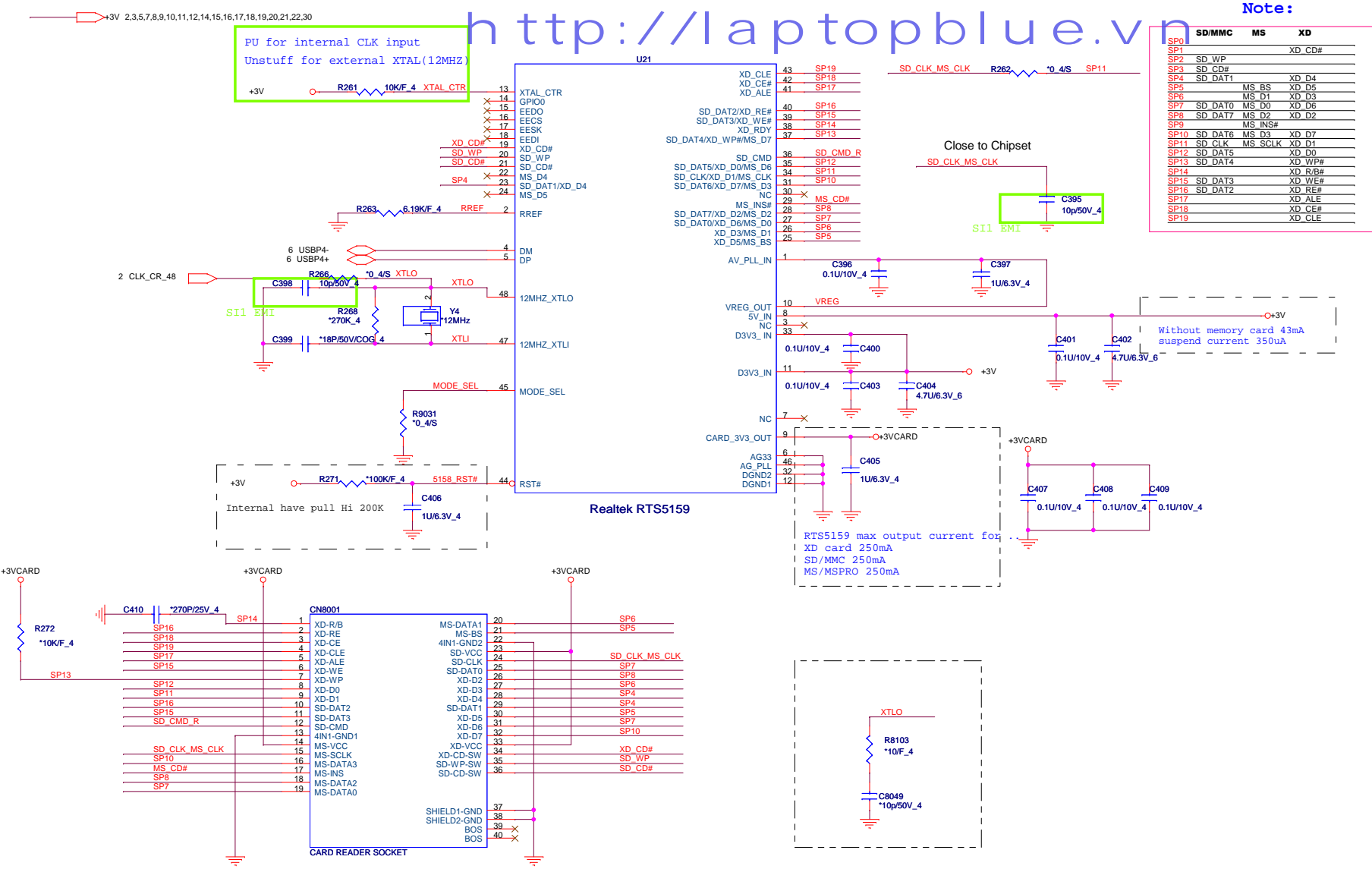
Size Document Number  
**DDR3 SO-DIMM**

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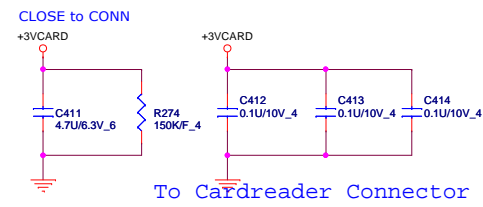
Rev 1A




PU for internal CLK input  
Unstuff for external XTAL(12MHZ)



**5 IN1 CARD-READER (PUSH-PUSH)**  
Support SD/SD PRO/MMC/MS/MS PRO/xD Cards



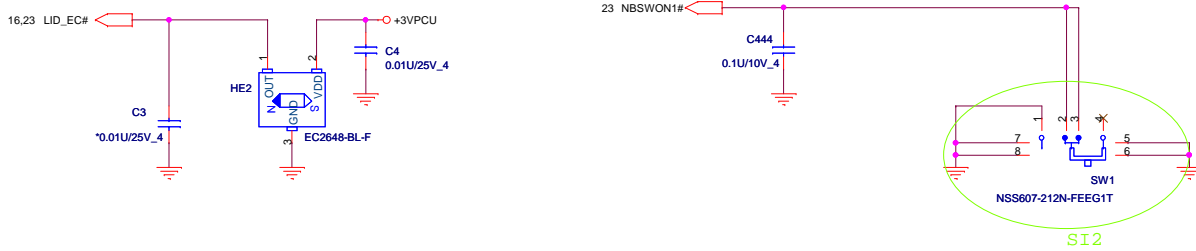


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PROJECT : Annika

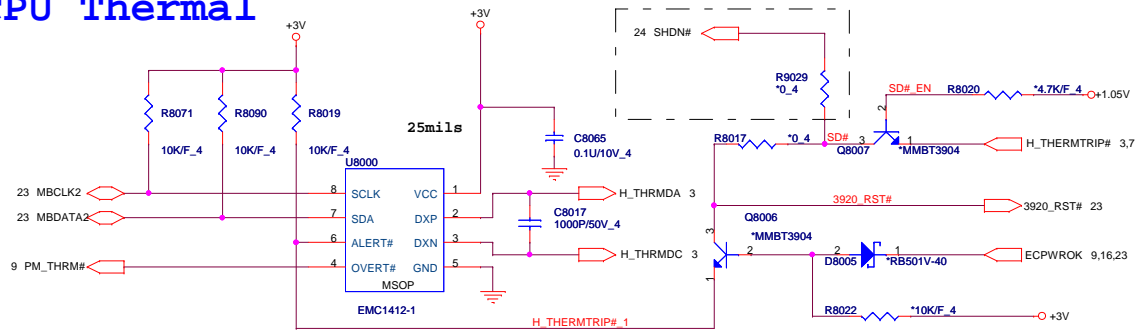
Size	Document Number	Rev
	<b>Realtek RTS5159 &amp; Card Reader</b>	1A
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5  
2  
3  
4  
1

+3VPCU 9,16,20,21,22,23,24,26,27,30  
+3V 2,3,5,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,30  
+1.05V 2,3,5,7,10,26,29,31



## CPU Thermal



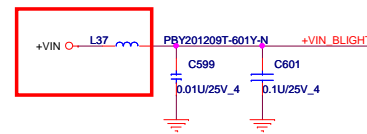
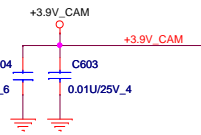
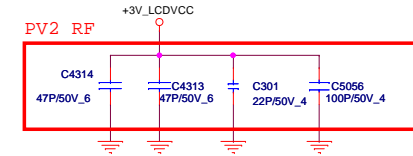
1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



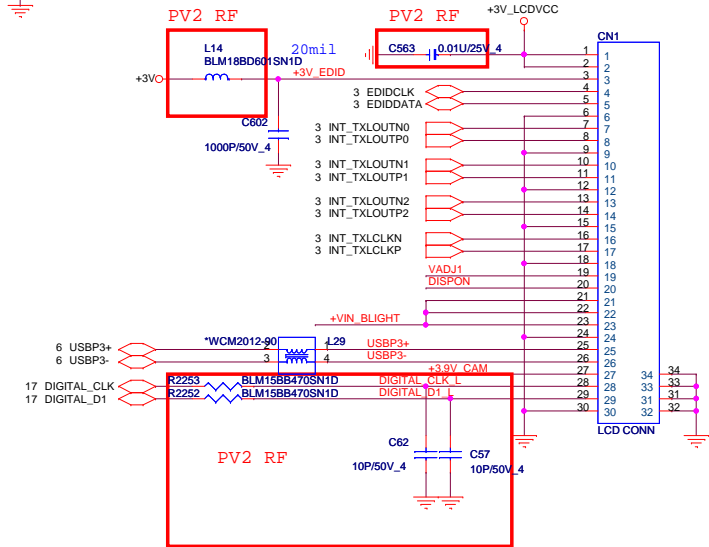
2,3,5,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,30	+3V
9,14,20,21,22,23,24,26,27,30	+3VPCU
10,12,17,19,20,22,30	+5V
24,25,26,27,29,30	+VIN

## LED Panel(LDS)

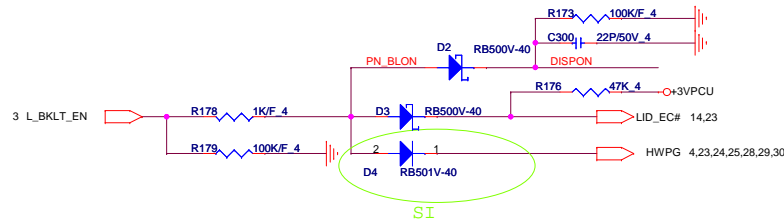
Request by HP RF(47Px2)



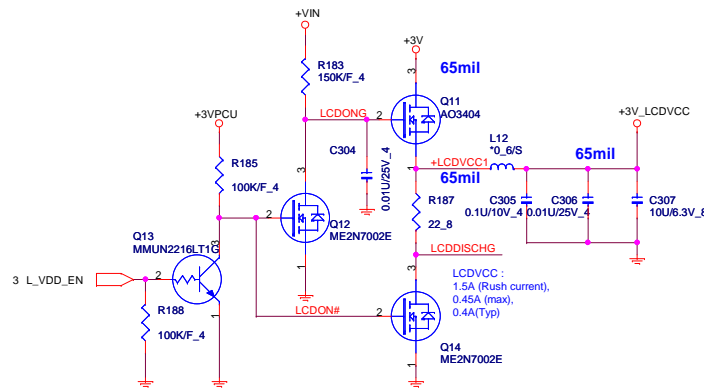
Close to LCD Connector



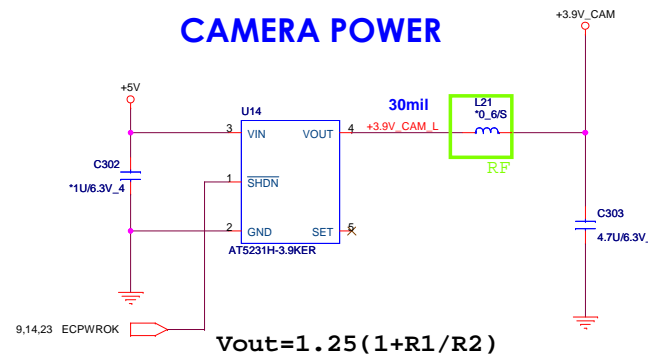
## Backlight Control(LDS)



## LCD POWER SWITCH

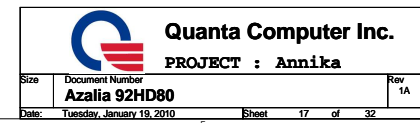


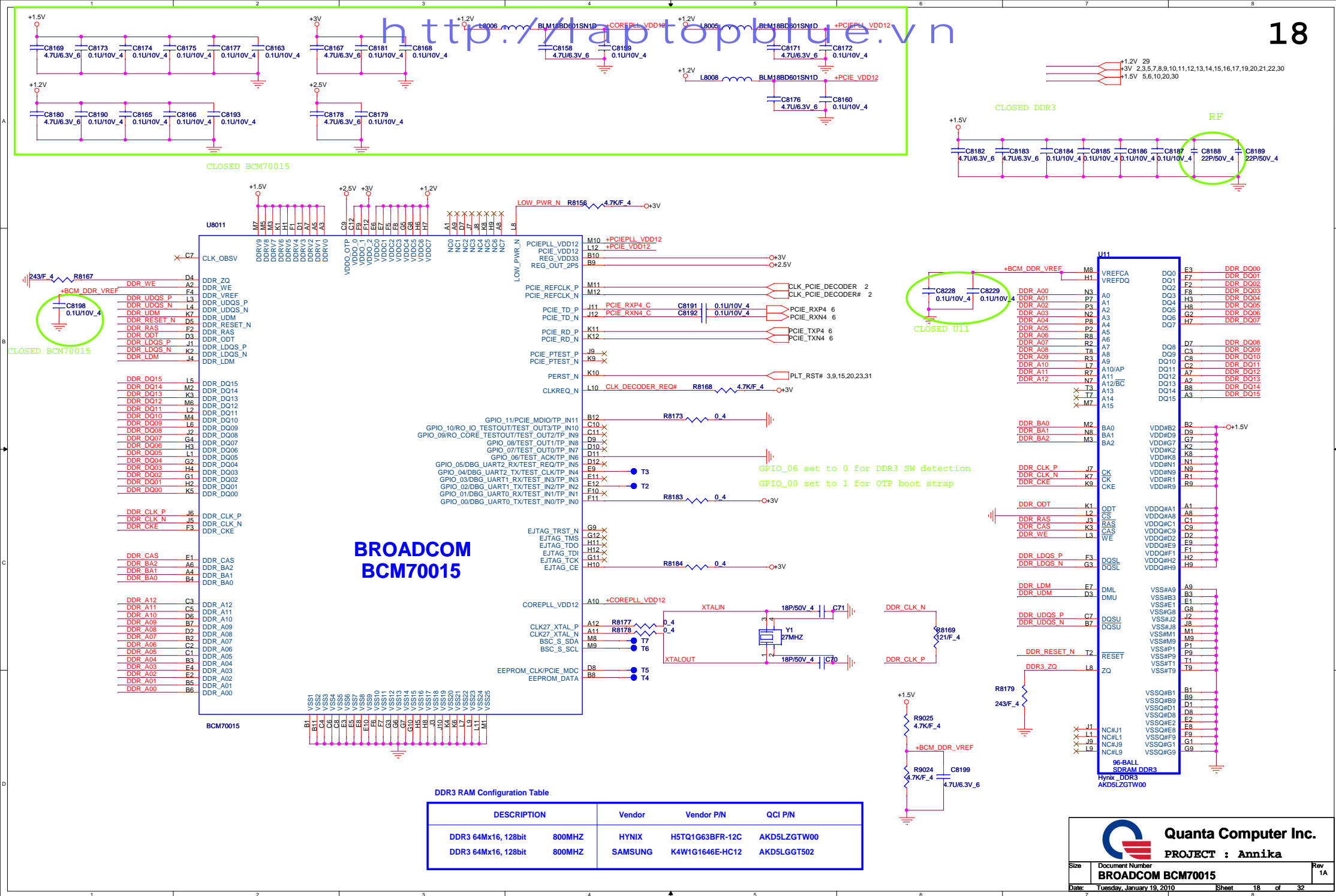
## CAMERA POWER



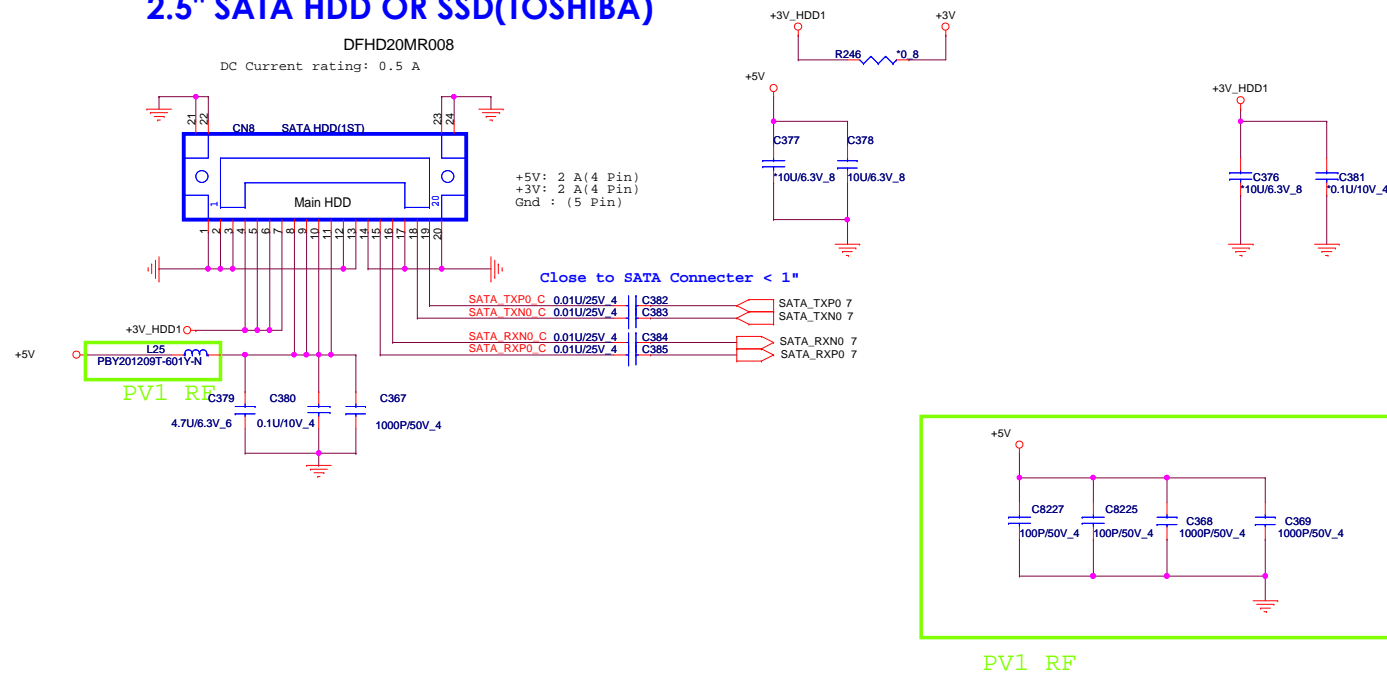
$$V_{out} = 1.25(1 + R1/R2)$$



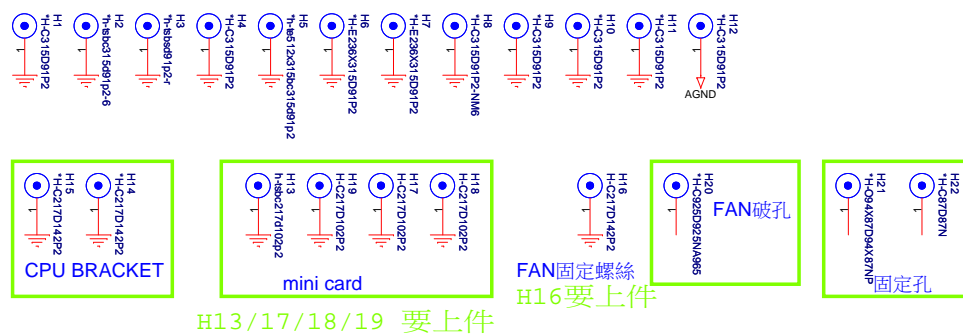




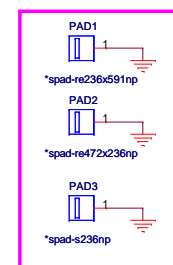
## 2.5" SATA HDD OR SSD(TOSHIBA)



## M/B Screw Hole

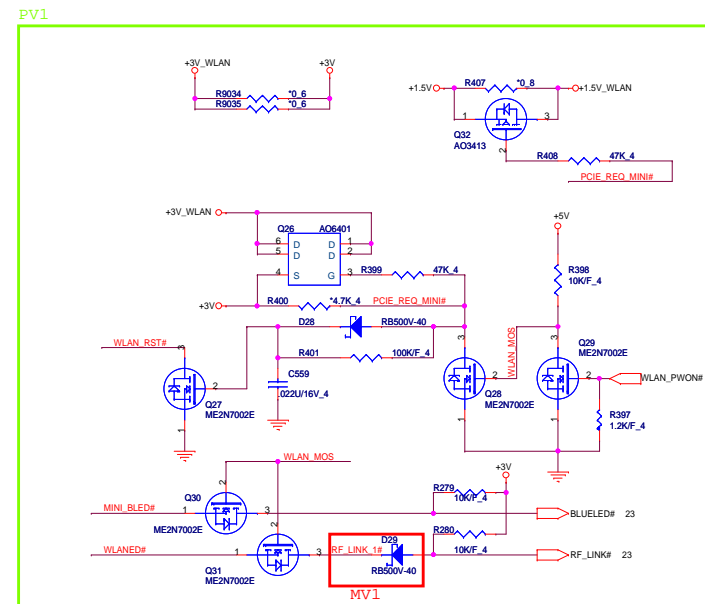


## EMI spring

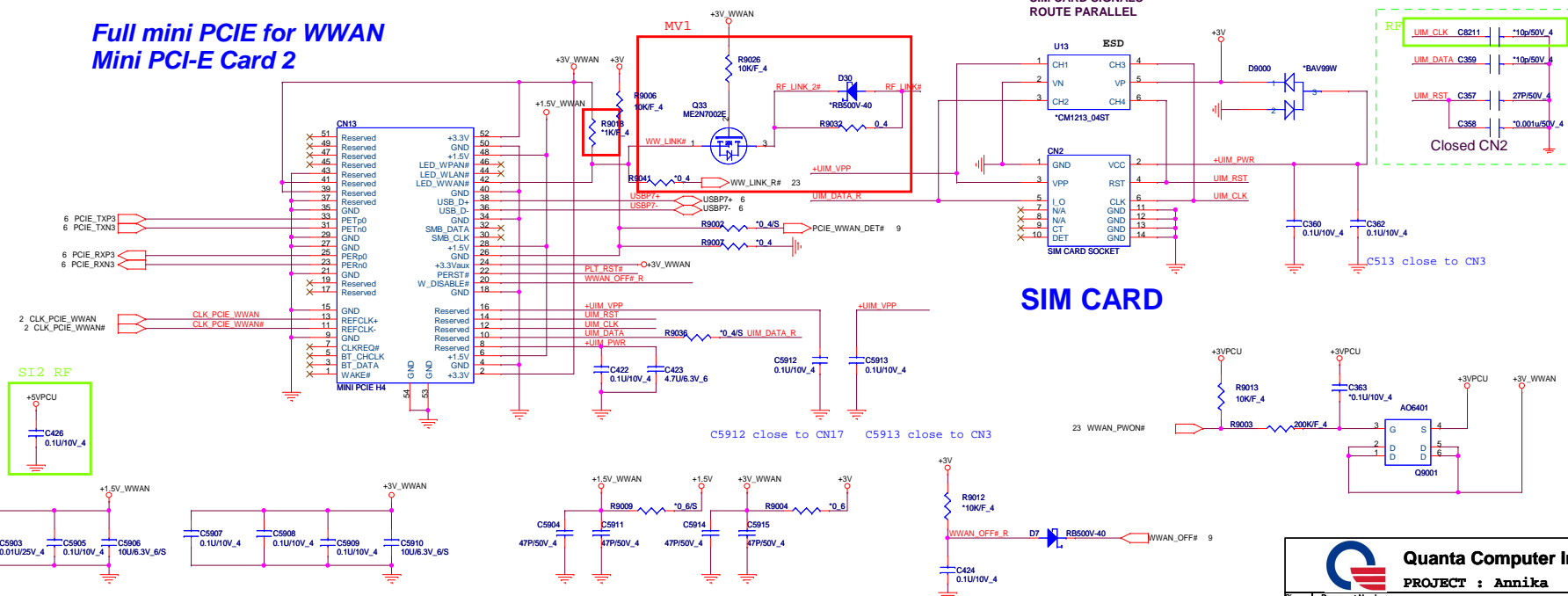




The value of the capacitor is suggest by Siemens HQ expert.  
For against 900MHz RF interference. The value of capacitor is 27pF.  
For against 1800MHz RF interference. The value of capacitor is 10pF  
1nF/10nF value capacitor use for against ESD purpose.

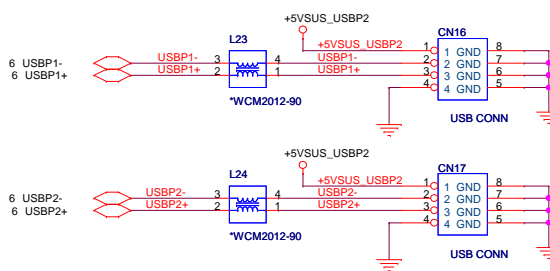
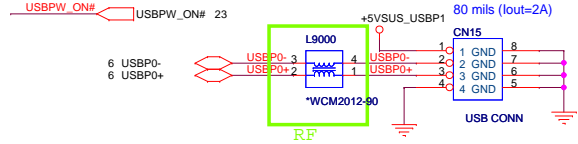
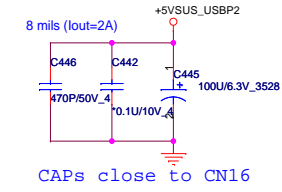
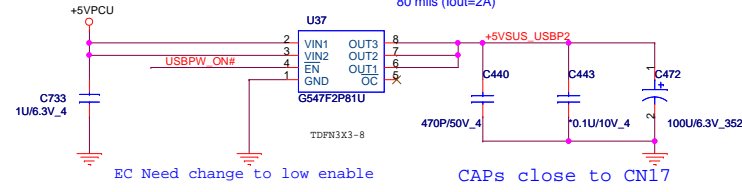
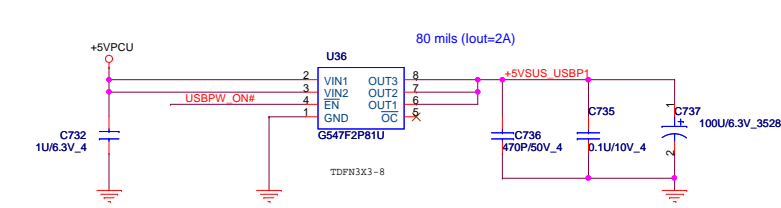


**Full mini PCIE for WWAN**  
**Mini PCI-E Card 2**



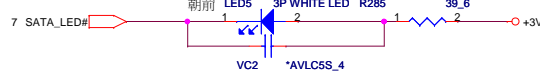
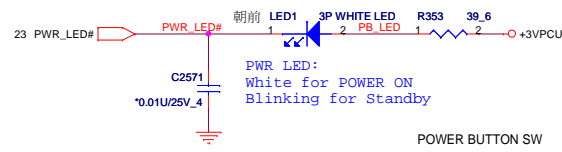
# 1x Left side USB port supports Keyed USB.

# For Right 2xUSB Ports PWR

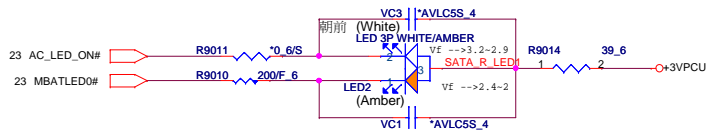


## PWR Button/LED

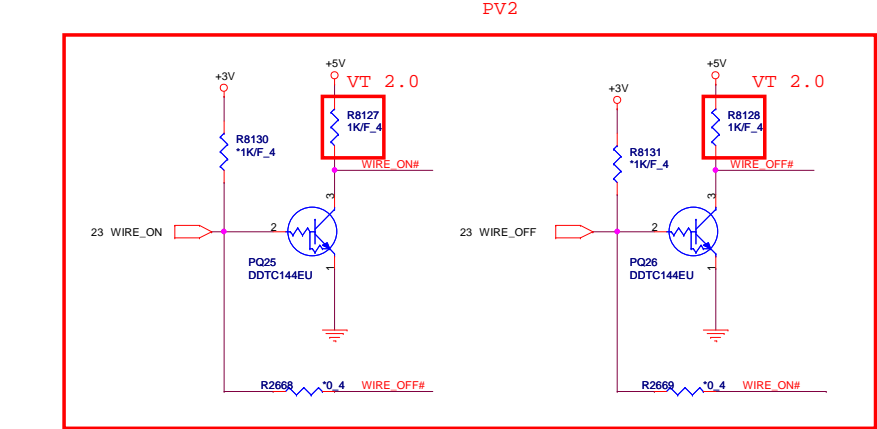
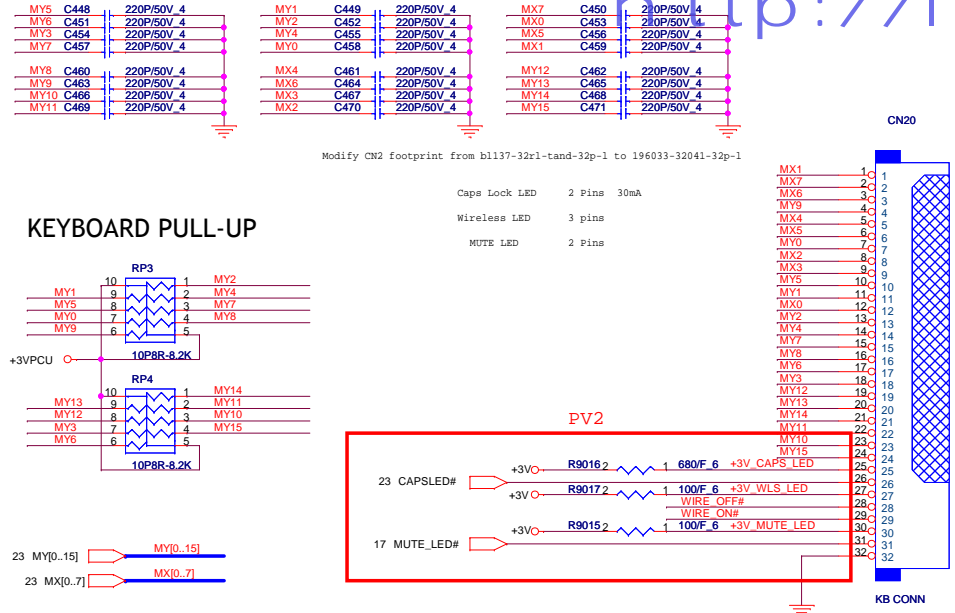
## SATA/LED



## Charging & Discharging/LED

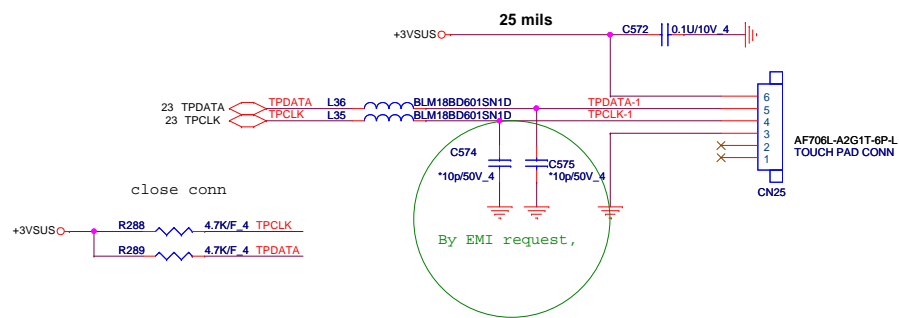


Keyboard (KBC)

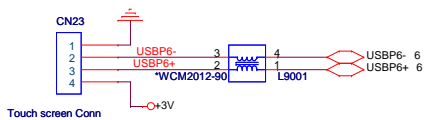


http://laptopblue.vn

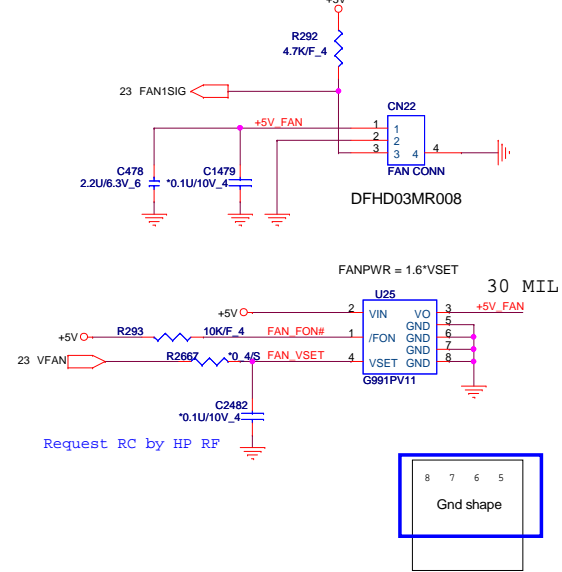
TOUCH PAD CONNECTOR



TOUCH SCREEN

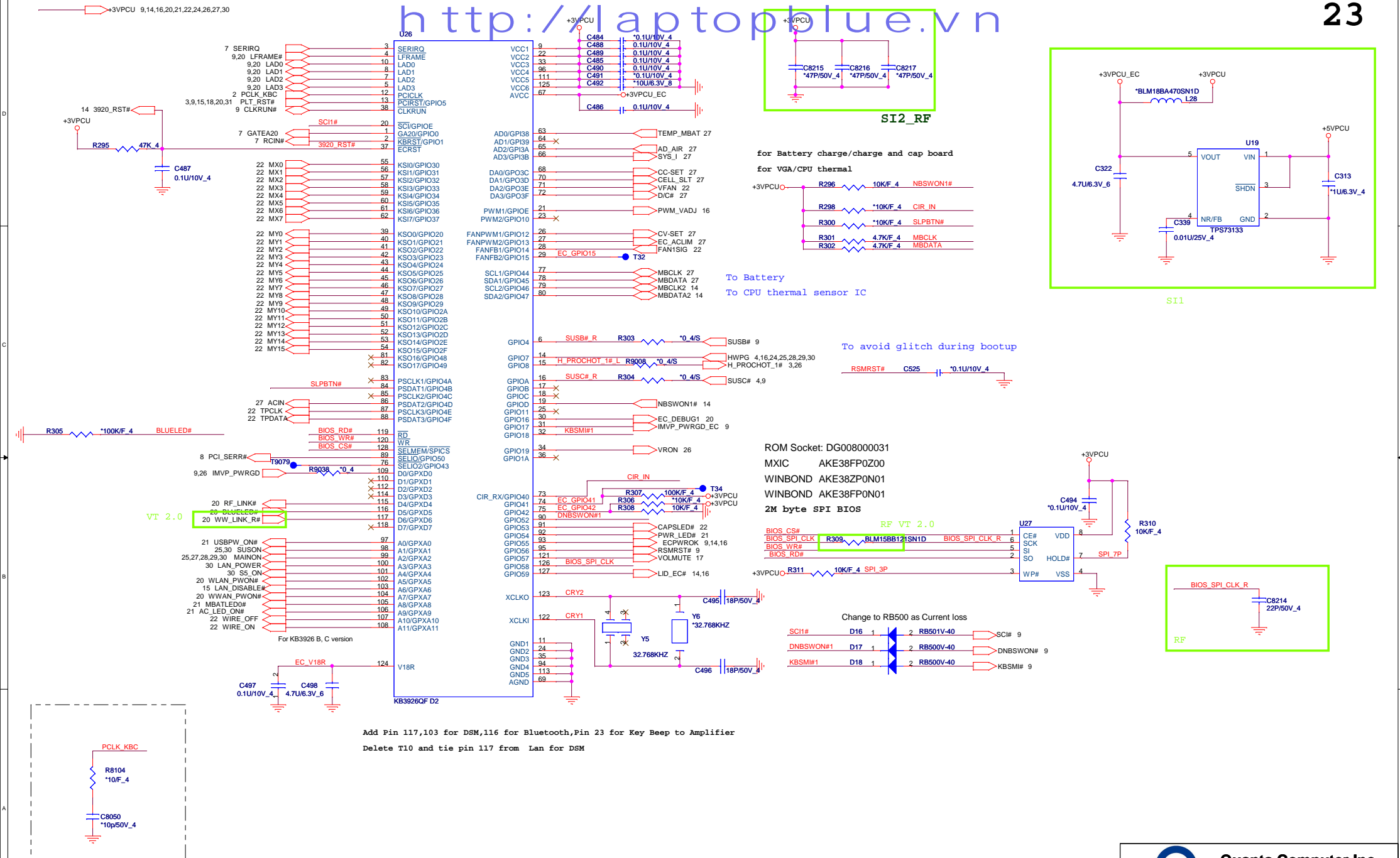


CPU FAN

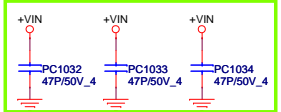


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Size	Document Number	Rev
	KB/TP/BT/CPU FAN/TP SCREEN	1A
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SI2\_RF

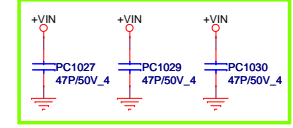


PV1\_RF

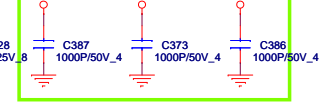


+5VPCU Volt +/- 5%  
Countinue current:4A  
Peak current:5.5A  
OCP minimum 6A

SI2\_RF

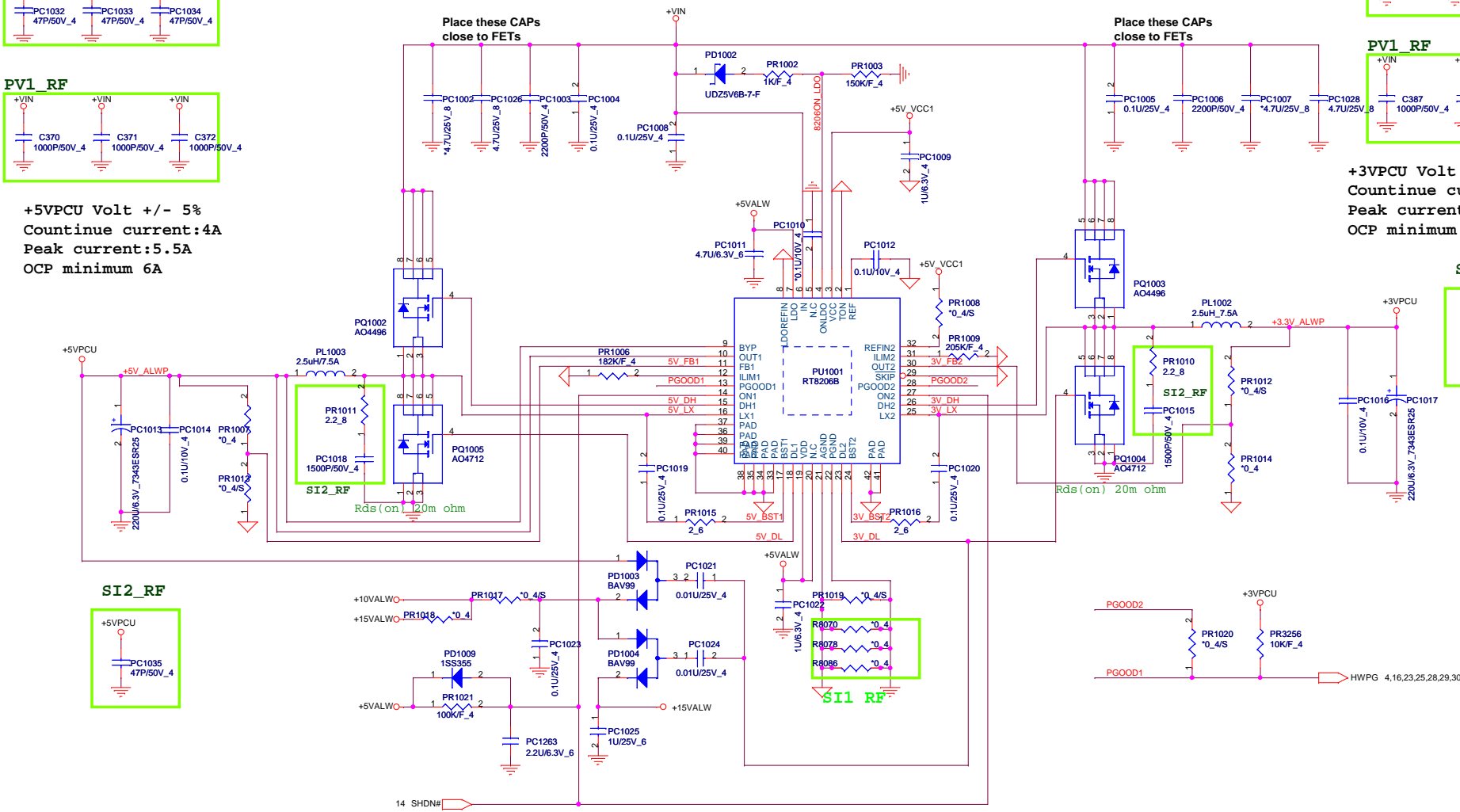
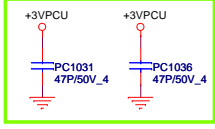


PV1\_RF

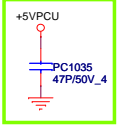


+3VPCU Volt +/- 5%  
Countinue current:4A  
Peak current:5.5A  
OCP minimum 6A

SI2\_RF



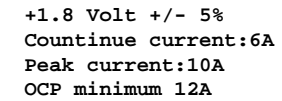
SI2\_RF

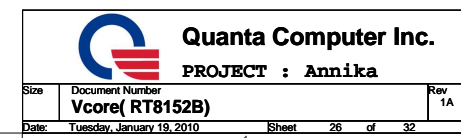


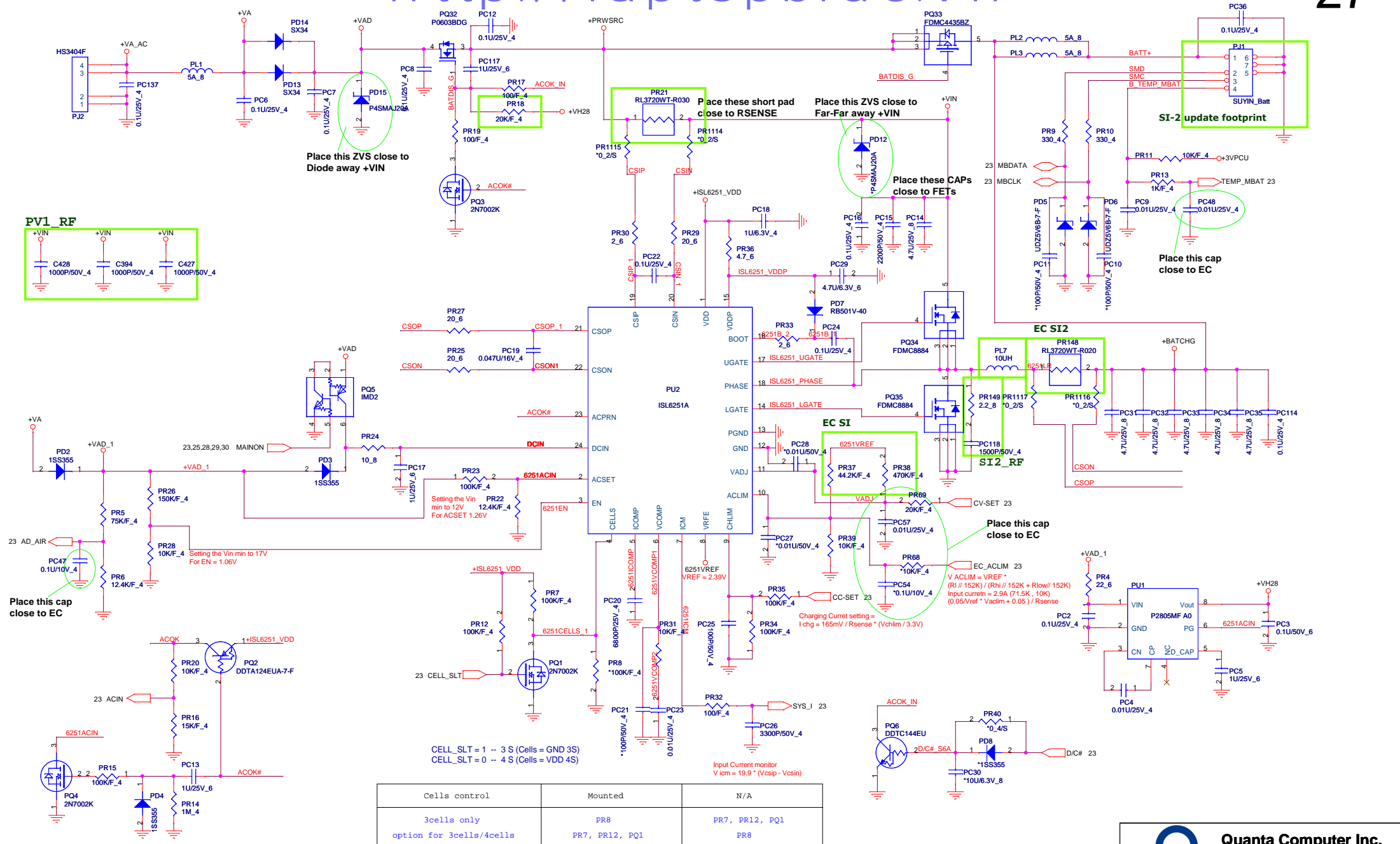
SI1\_RF







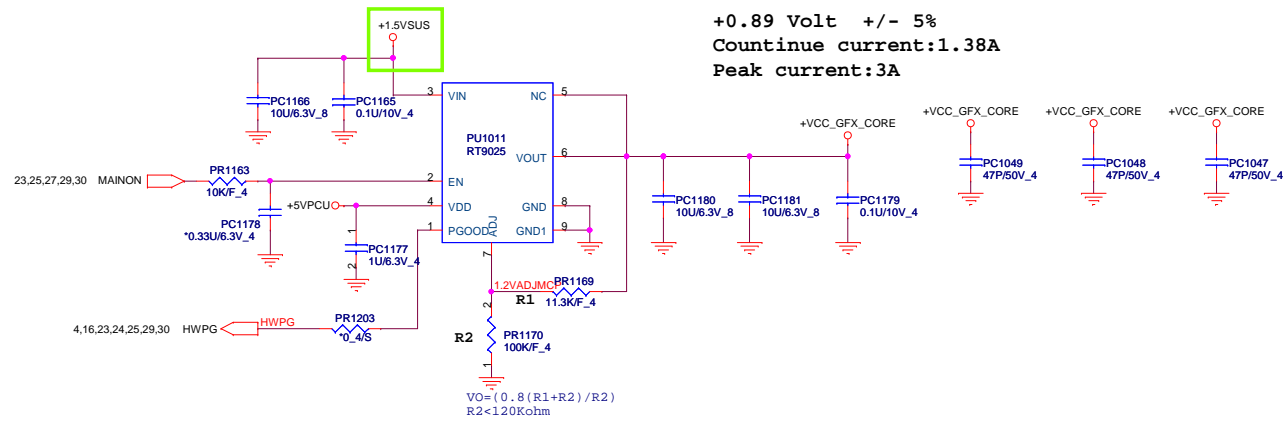


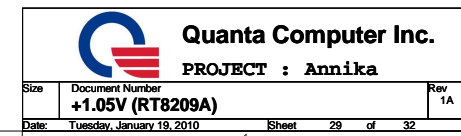


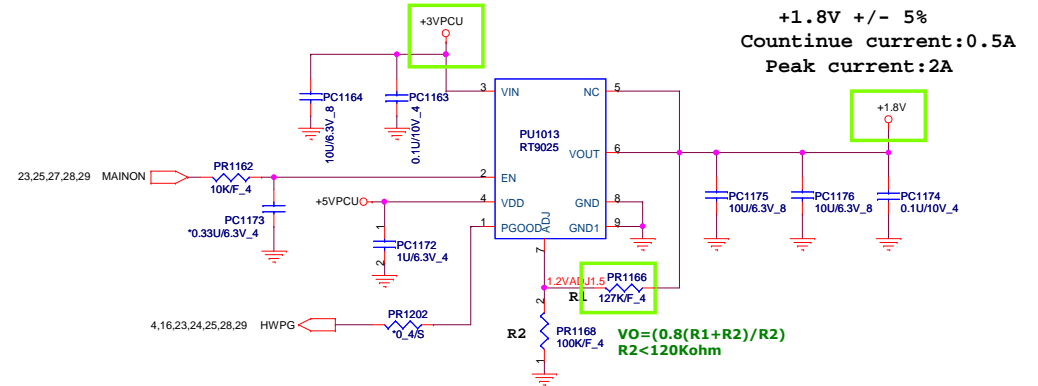
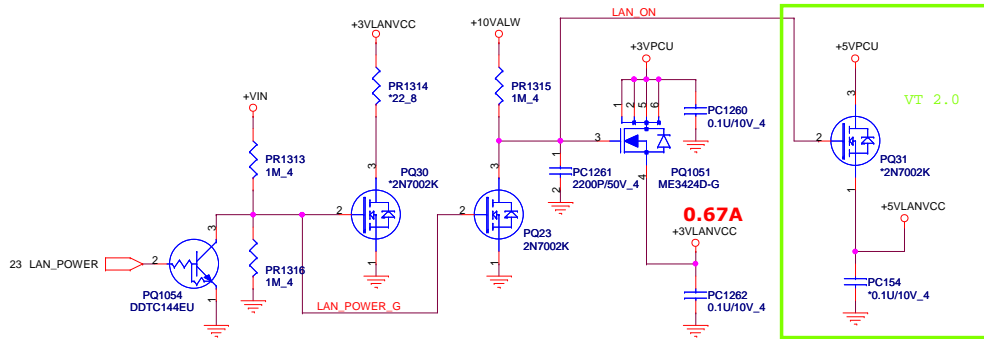
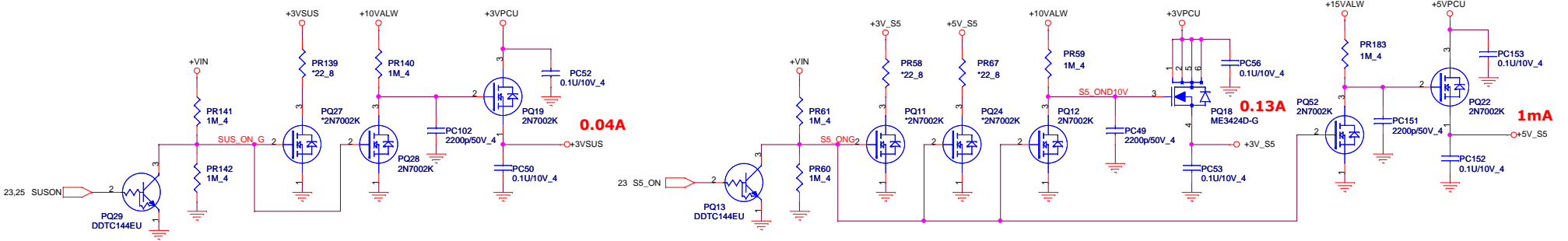
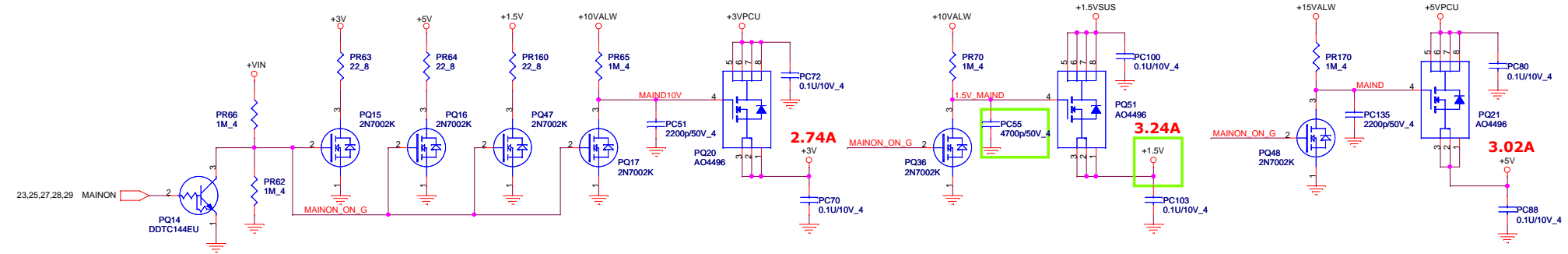
Cells control	Mounted	N/A
3cells only option for 3cells/4cells	PR8 PR7, PR12, PQ1	PR7, PR12, PQ1 PR8

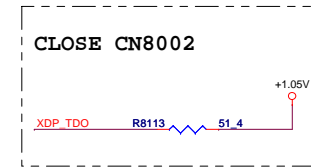
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PROJECT : Annika

Size	Document Number	Rev
	<b>CHARGER (ISL6251A)</b>	1A
Date:	Wednesday, January 20, 2010	Sheet 27 of 32

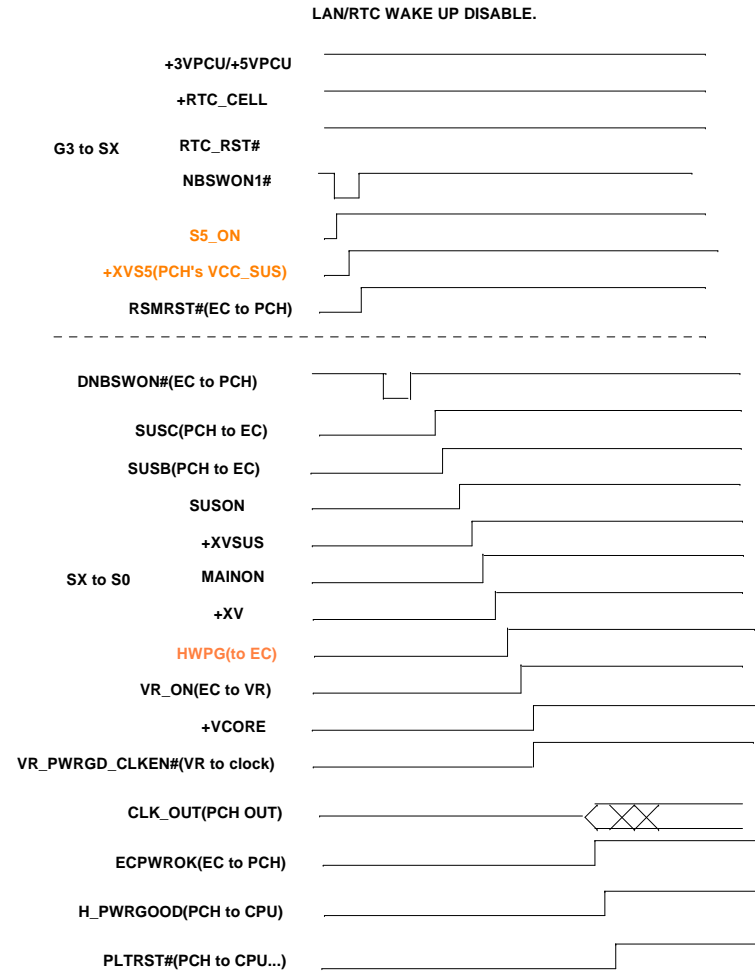
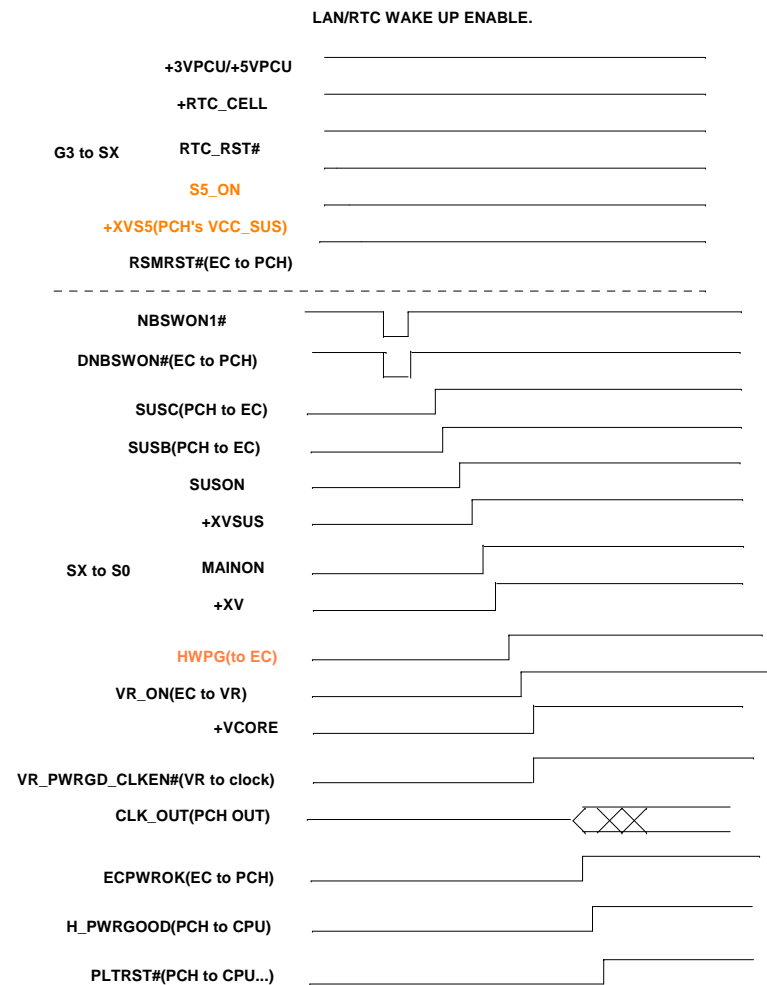








## Power up sequence



Quanta Computer Inc.

PROJECT : Annika

Size	Document Number	Rev
	Power Sequence	1A

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