

Annika Block Diagram



RUSEFIX
Rusefix.com

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

DDR2 667MT/s
Single Channel

DDR2 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
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Card Reader
Page 13
Card Reader Socket
Page 13

5
Bluetooth/WLAN
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Touch Screen
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WWAN
Page 20
SIM Card Socket
Page 20

8
Webcam
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PCI-Express

X1
WWAN
Page 20
SIM Card
Page 20

X1
LAN
Realtek
RTL8103EL-VB
10/100
Page 15
RJ 45
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X1
WLAN
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X1
HD Decoder
Page 18
DDR II
64MByte
Page 18

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

DDR II SMDDR_VTERM
+0.9VSMVREF/+1.8VSUS(RT8207)
PAGE 25

CPU CORE RT8152D
PAGE 26

SYSTEM CHARGER ISL6251AH4Z-T
PAGE 27

GFX CORE(RT9025)
+1.2V(RT9025)
+1.5V(RT9025)
PAGE 28
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VCCP 1.05V(RT8209A)
PAGE 29

Touch Pad
Keyboard
Page 22

Power SW
Page 14

LPC

ENC KBC
KB3926D2
Page 23

HDA

AUDIO CODEC
92HD80BX
Page 17

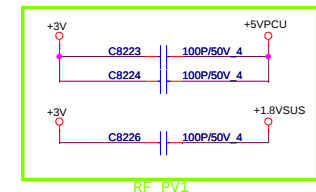
BIOS
SPI Flash
Page 23

FAN
G991
Page 22

Int SPK
Page 17

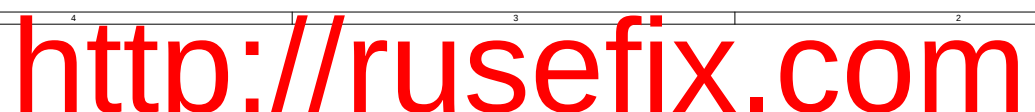
Digital MIC
Page 17

HP/MIC
COMBO JACK
Page 17



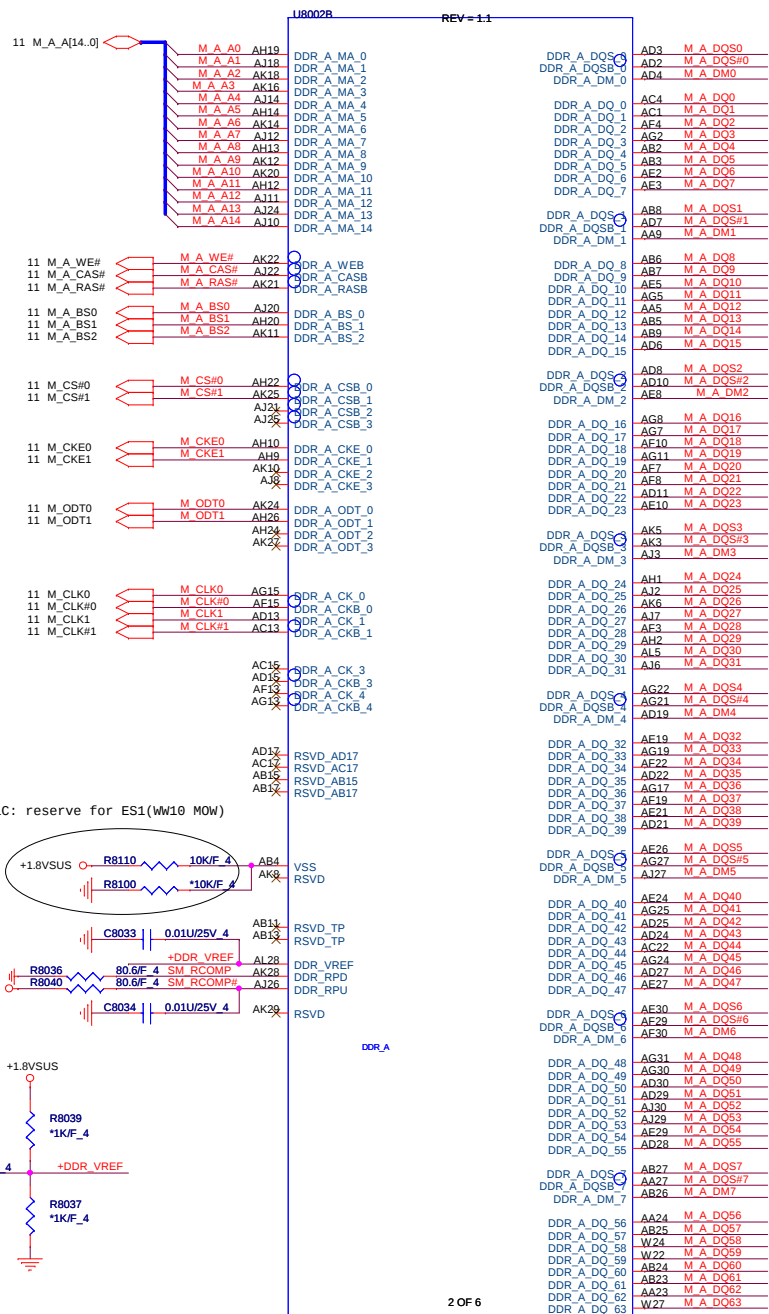
ITP_EN(PIN14)	PIN53/54
0	SRC8#/SRC8
* 1	ITP/ITP#

 Quanta Computer Inc. PROJECT : Annika		Rev 1A
Size	Document Number Clock Gen	
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+1.8VSUS 2.5,11,25,28,29,30

PINEVIEW_M



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Pineview

M_A_DQ[63..0] 11
M_A_DM[7..0] 11
M_A_DQS[7..0] 11
M_A_DQS#7[7..0] 11

+0.9VSMVTT

M_A A10 RN8003 1 2 47X4
M_A A2 3 4
M_A A0 5 6
M_A A5 7 8M_A A8 RN8005 1 2 47X4
M_A A14 3 4
M_A A11 5 6
M_A A9 7 8M_A A6 RN8004 1 2 47X4
M_A A4 3 4
M_A A3 5 6
M_A A7 7 8M_CS#0 RN8001 1 2 47X4
M_ODT0 3 4
M_A A13 5 6
M_A WE# 7 8M_A_RAS# RN8002 1 2 47X4
M_A BS0 3 4
M_A BS1 5 6
M_A A1 7 8M_A A12 RN8006 1 2 47X4
M_CKE1 3 4
M_A BS2 5 6
M_CKE0 7 8M_ODT1 RN8000 1 2 47X4
M_A_CAS# 3 4
M_CS#1 5 6

+0.9VSMVTT

C8135 0.1U/10V_4
C8136 0.1U/10V_4
C8146 0.1U/10V_4
C8147 0.1U/10V_4
C8133 0.1U/10V_4
C8134 0.1U/10V_4
C8138 0.1U/10V_4
C8141 0.1U/10V_4
C8143 0.1U/10V_4
C8144 0.1U/10V_4
C8139 0.1U/10V_4
C8142 0.1U/10V_4
C8149 0.1U/10V_4
C8150 0.1U/10V_4

+0.9VSMVTT

C8132 0.1U/10V_4
C8140 0.1U/10V_4
C8148 0.1U/10V_4
C8131 0.1U/10V_4
C8137 0.1U/10V_4
C8151 0.1U/10V_4
C8145 0.1U/10V_4

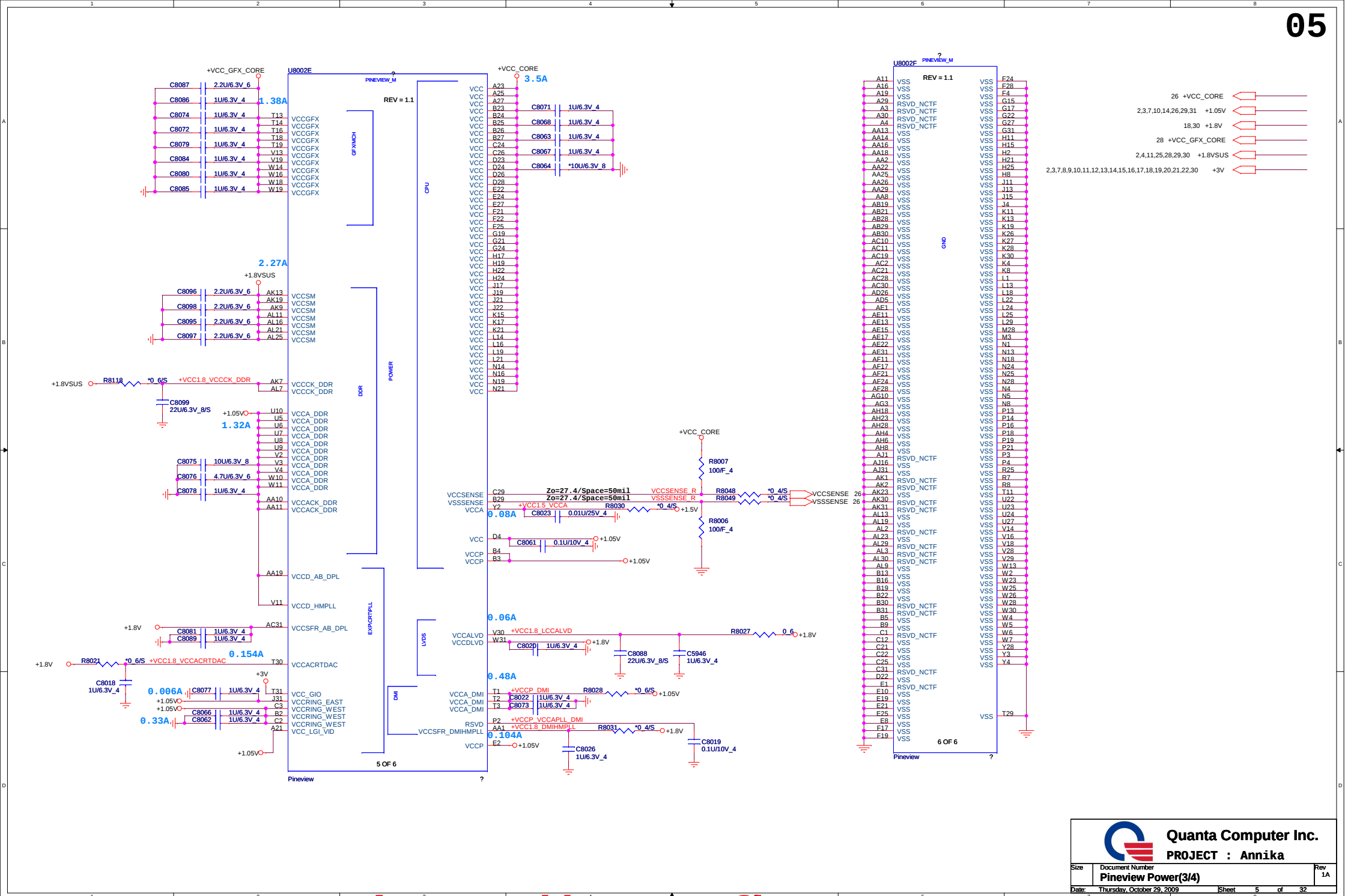
1D: add 7 0.1u for VTT_MEM(Intel)



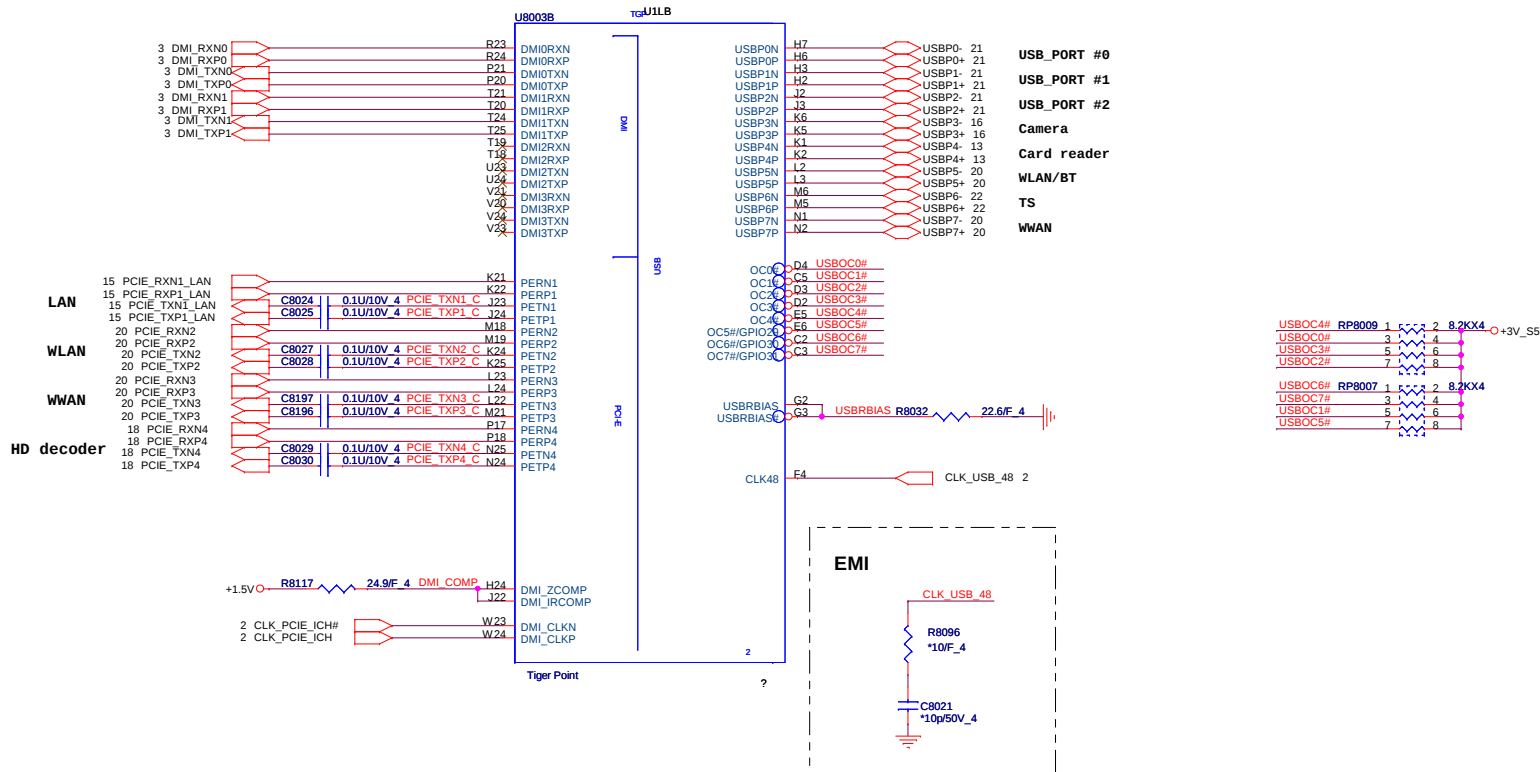
Quanta Computer Inc.
PROJECT : Annika

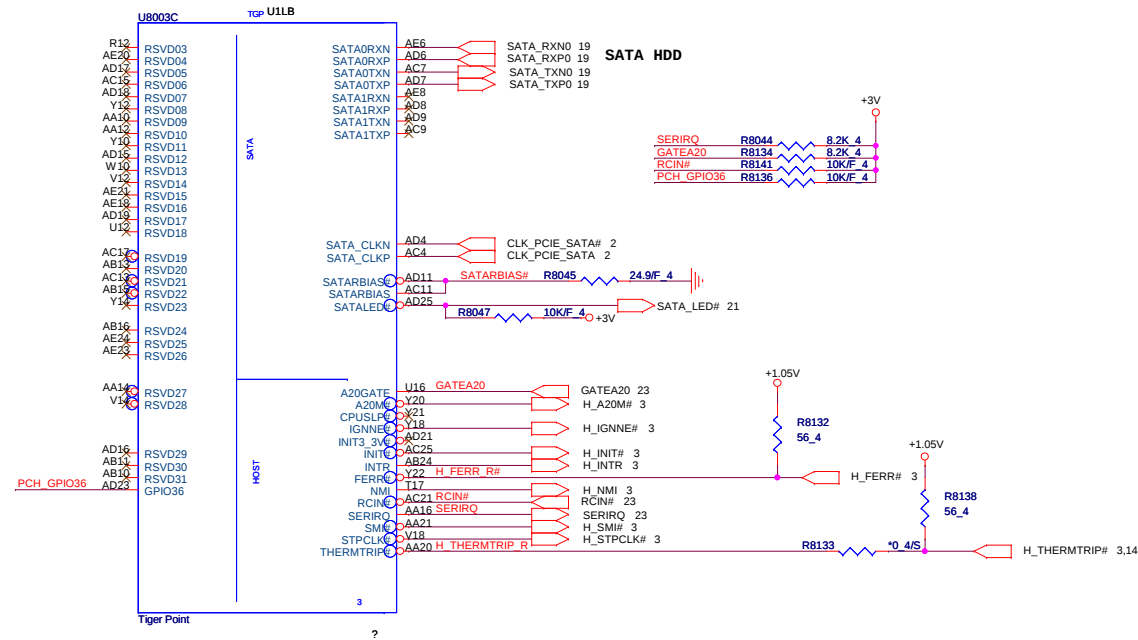
Size Document Number
Pineview DDR(2/4) Rev 1A

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5,10,20,30 +1.5V
9,10,30 +3V_S5







ICH Boot BIOS select

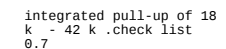
PCH_GPIO17 (INT PU)	PCH_GPIO48 (INT PU)	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	IPC (Default)

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
-----------	---------------------------------



	INTVRMEN
Enable (default)	1
Disable	0

Board ID	ID1	ID0
WO decoder WO SIM	0	0
WO decoder W/ SIM	0	1
W/ decoder WO SIM	1	0
W/ decoder W/ SIM	1	1

ACZ_SDOUT (INT PD)	ACZ_SYNC (INT PD)	Description
0	0	* 4 x 1s
1	0	Reserved
0	1	Reserved
1	1	1 x 4s(1 port/4 lanes)

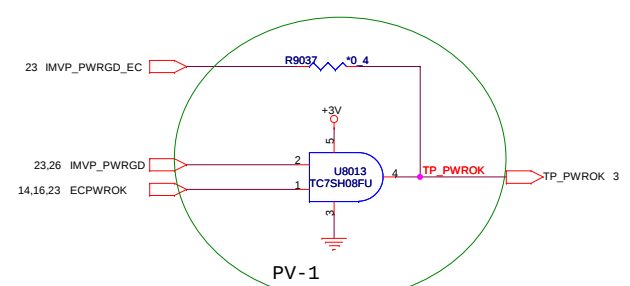
GPIO25 This signal has a weak internal pull-up.

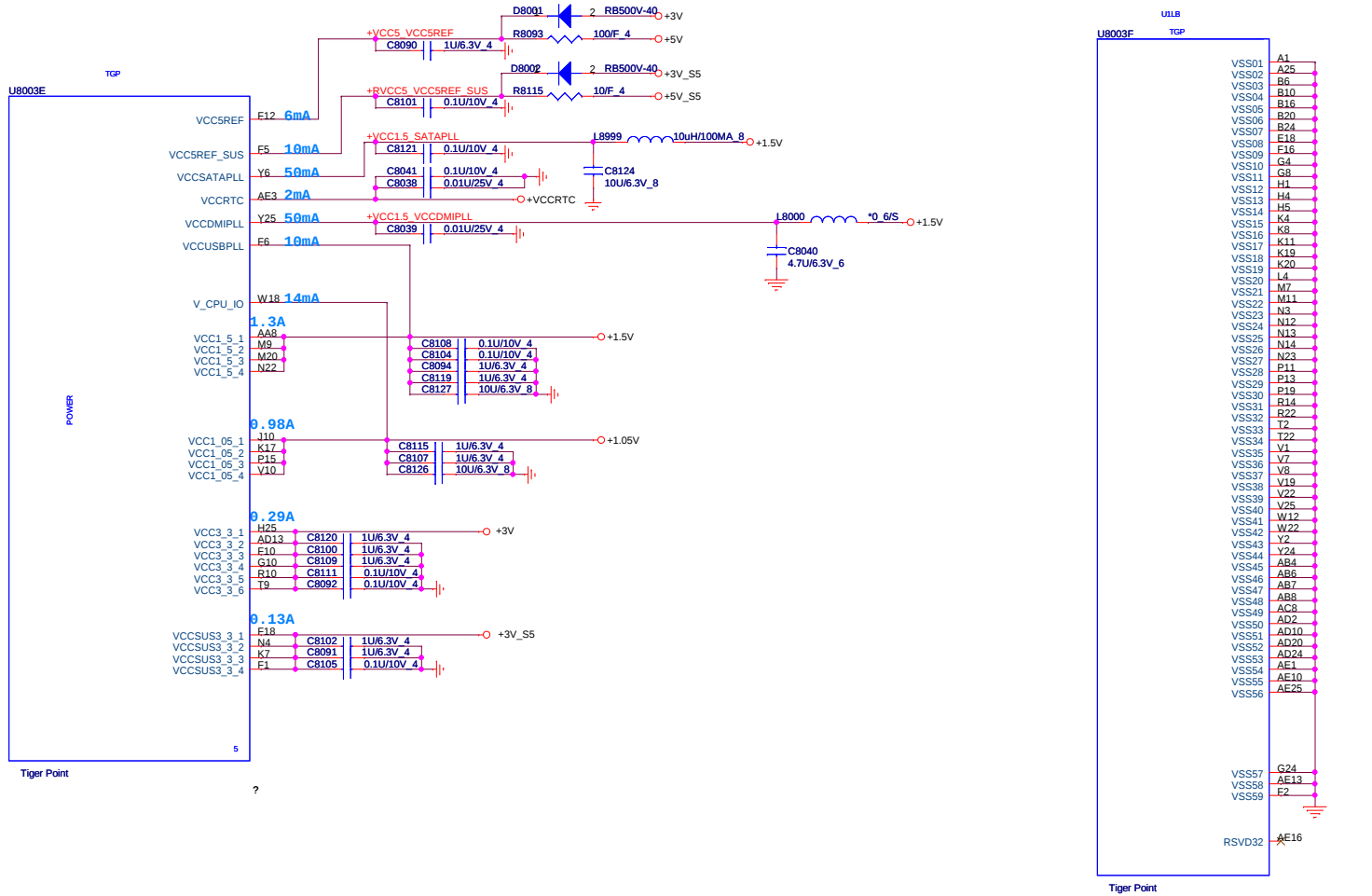
If the signal is sampled high, the DMI interface is strapped to operate in DC coupled mode (No coupling capacitors are required on DMI differential pairs).

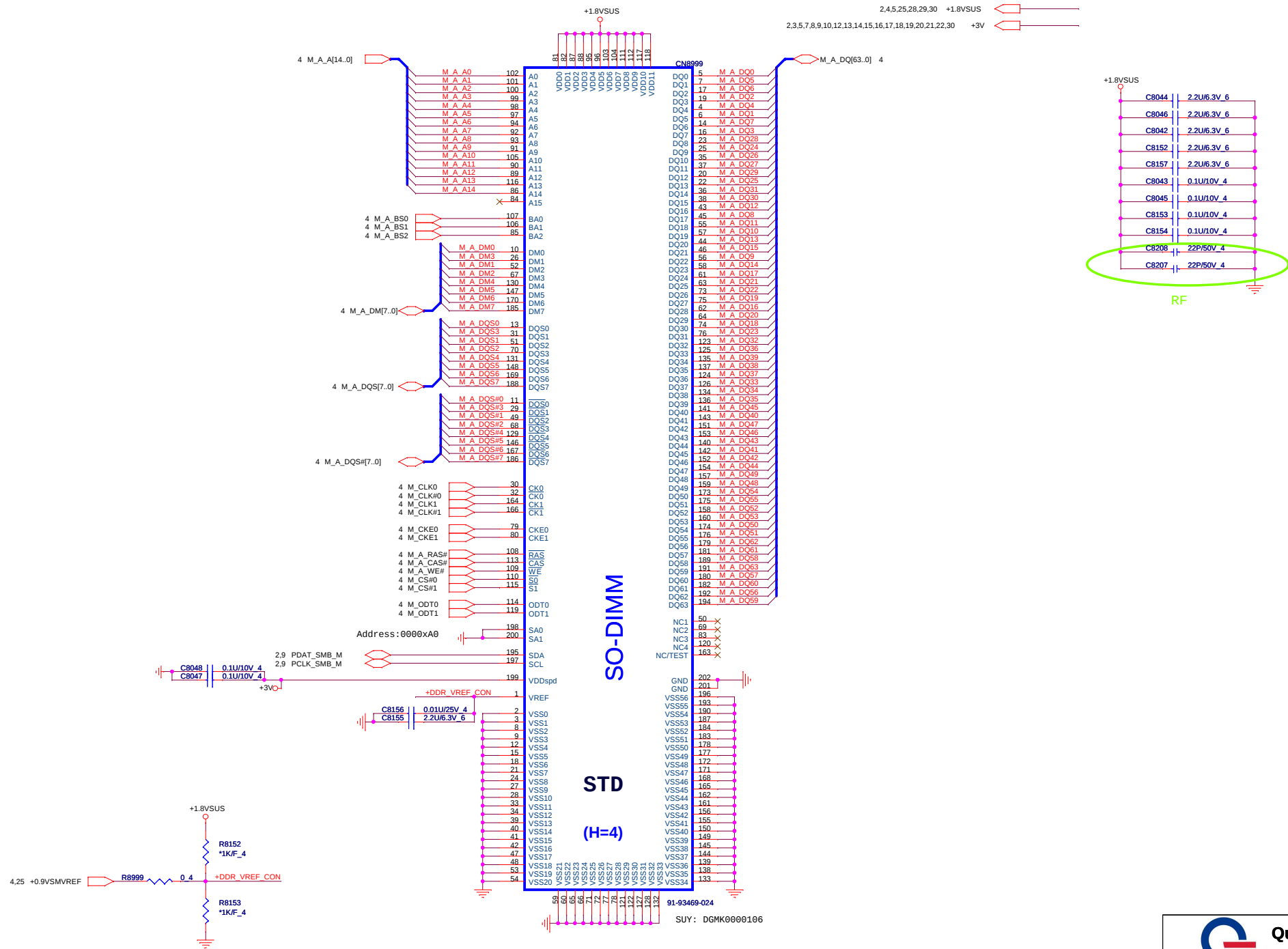
If the signal is sampled low, the DMI interface is strapped to operate in AC coupled mode (Coupling capacitors are required on DMI differential pairs).

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

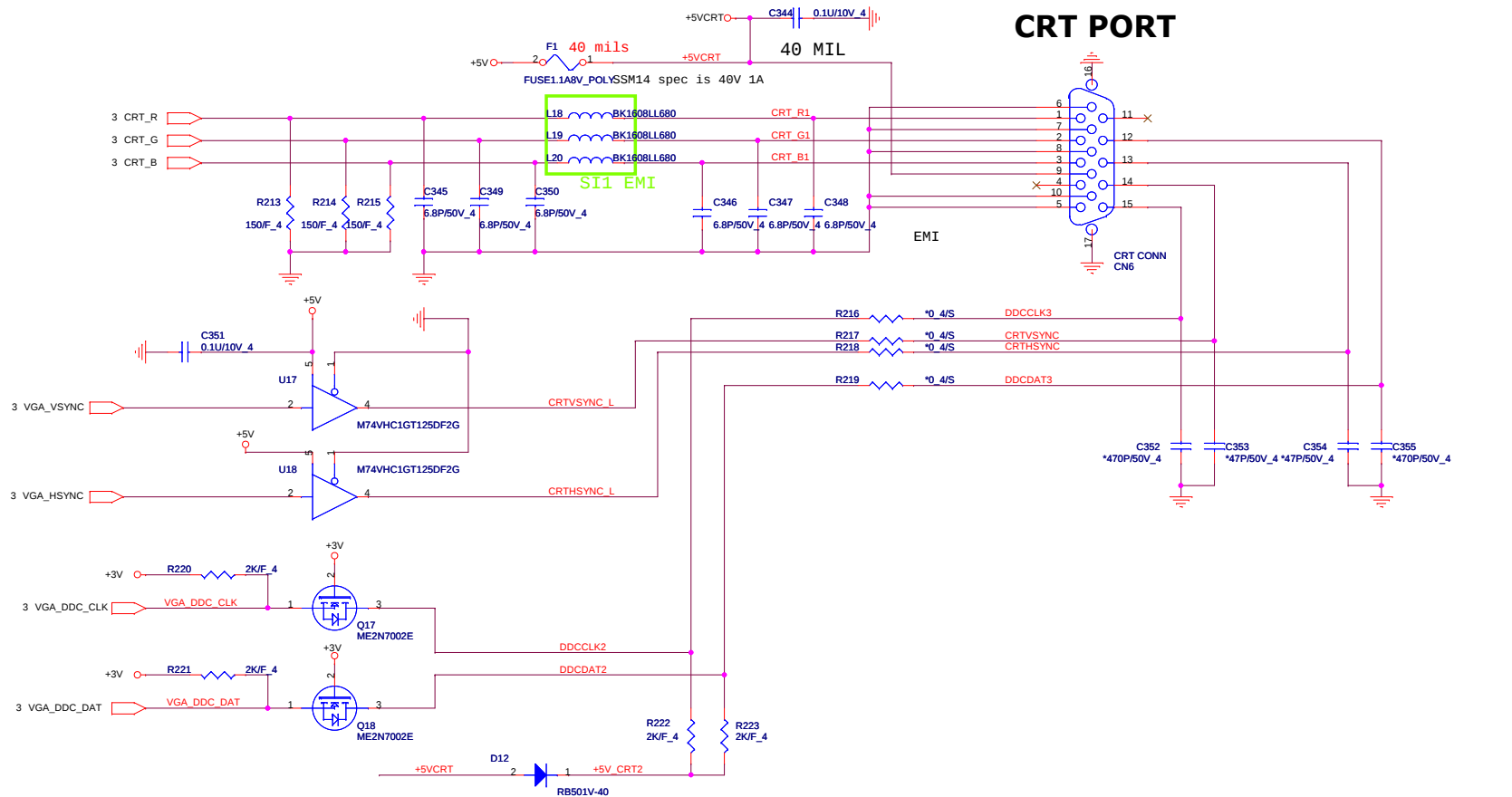
DMI AC_ENABLE R8108 1K/ 4





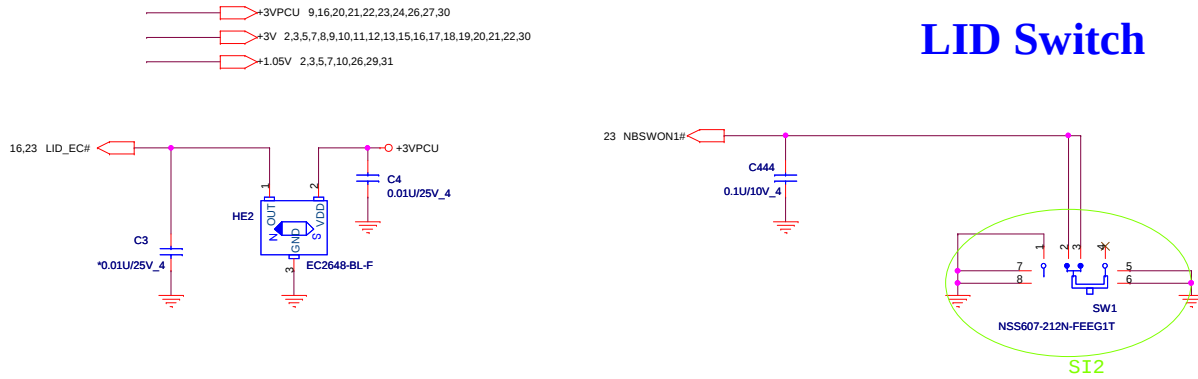


2,3,5,7,8,9,10,11,13,14,15,16,17,18,19,20,21,22,30 +3V
2,3,5,7,10,14,26,29,31 +1.05V

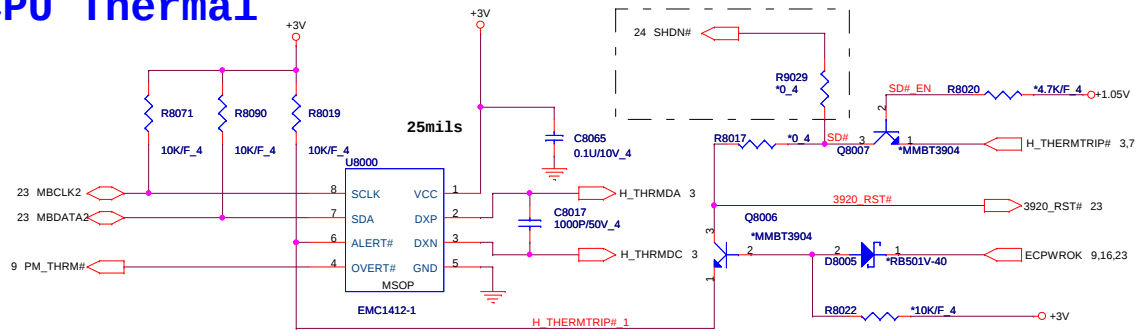




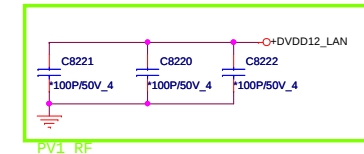
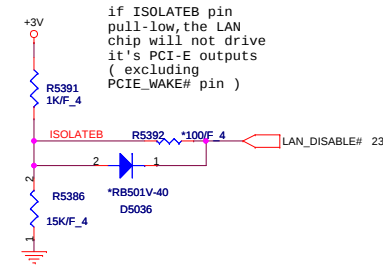
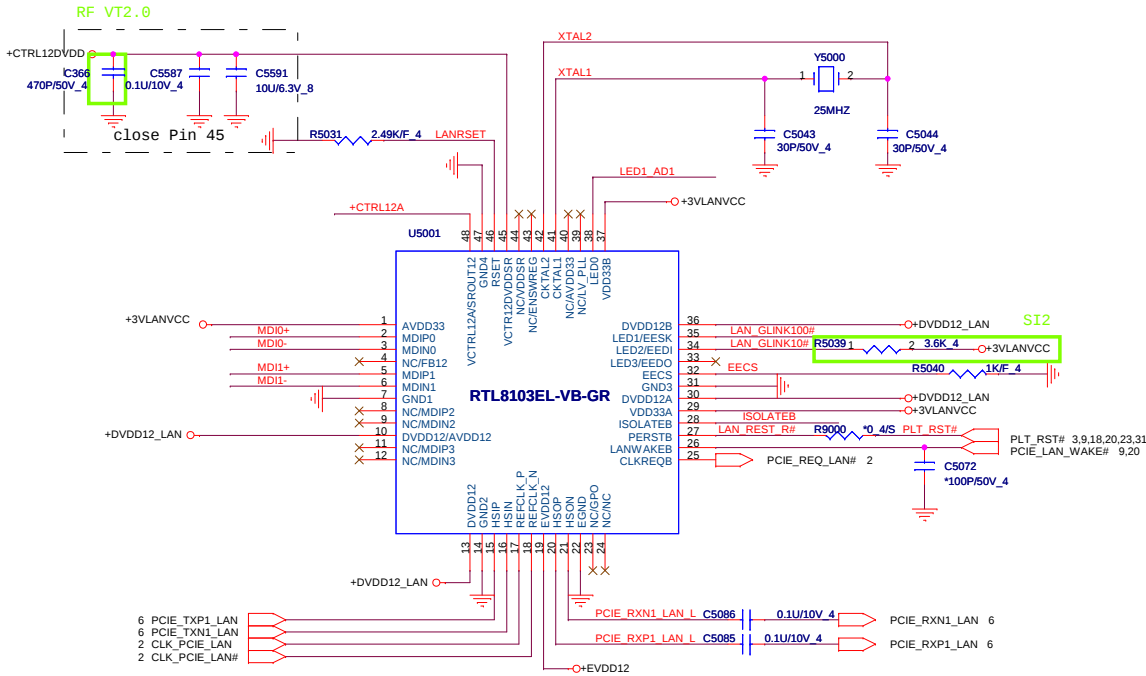
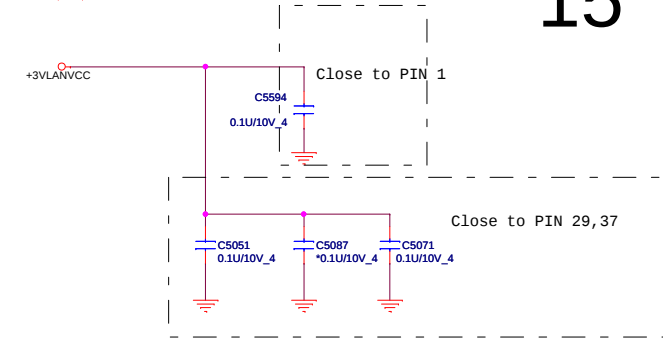
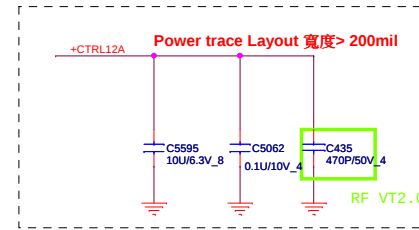
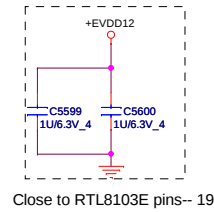
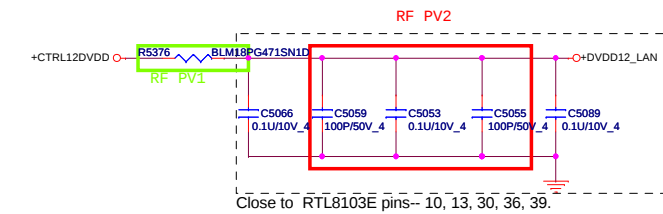
LID Switch



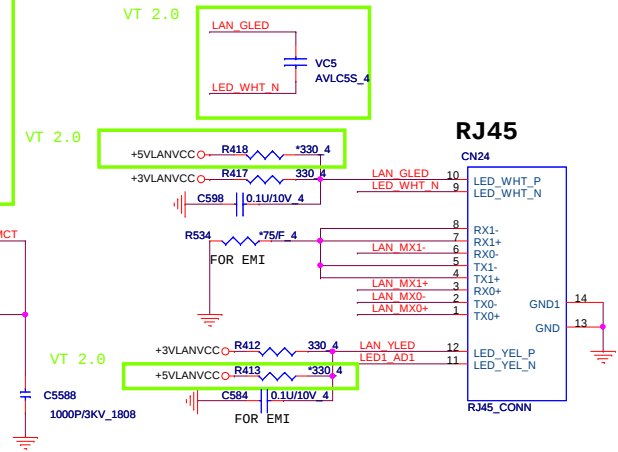
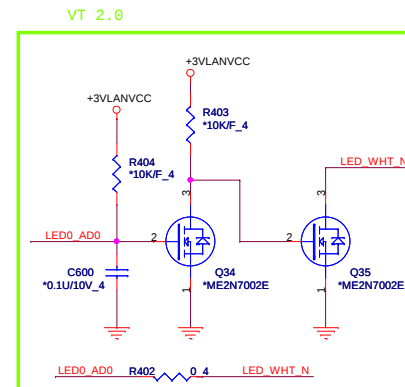
CPU Thermal



- 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.



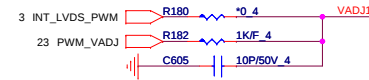
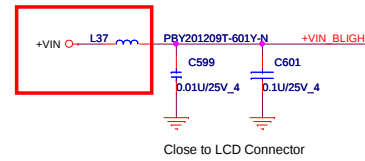
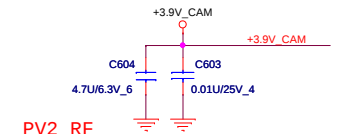
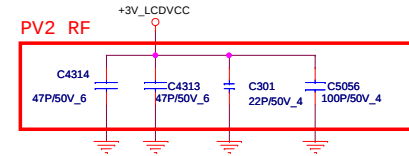
Symbol	Type	Pin No (64-Pin)	Pin No (48-Pin)	Description
LED0	O	57	38	LED0 00 01 10 11
LED1	O	56	35	LED1 LINK100 LINK LINK LINK100
LED2	O	55	34	LED2 LINK10 FULL Rx LINK10
LED3	O	54	33	LED3 NA NA NA NA



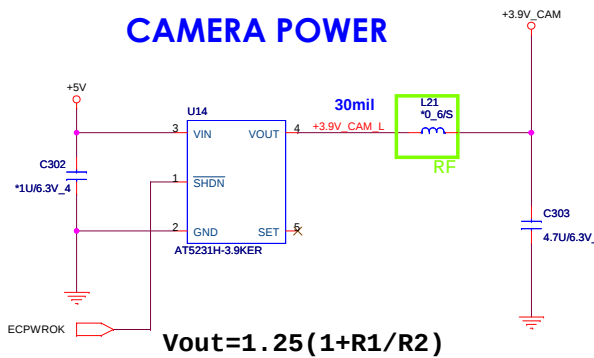
2,3,5,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,30 +3V
 9,14,20,21,22,23,24,26,27,30 +3VPCU
 10,12,17,19,20,22,30 +5V
 24,25,26,27,28,29,30 +VIN

LED Panel(LDS)

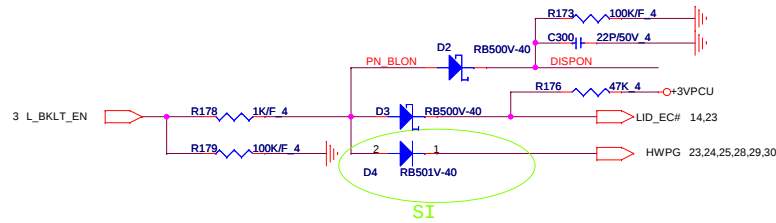
Request by HP RF(47Px2)



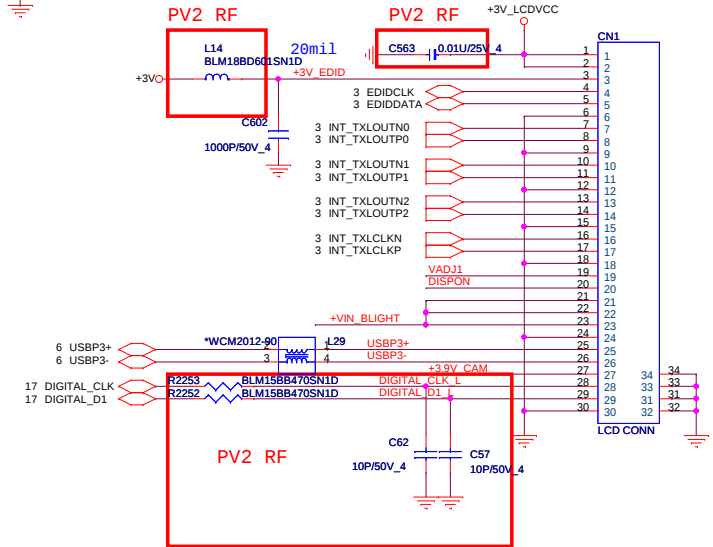
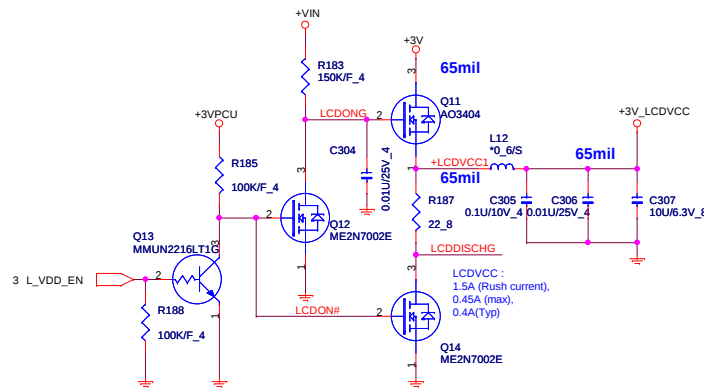
CAMERA POWER



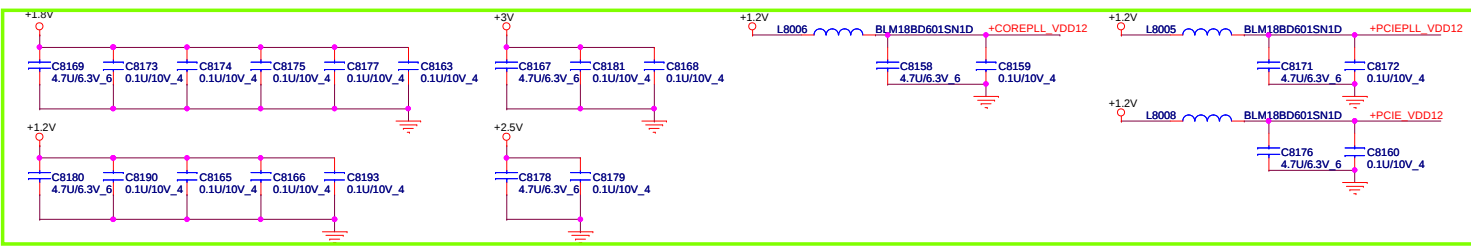
Backlight Control(LDS)



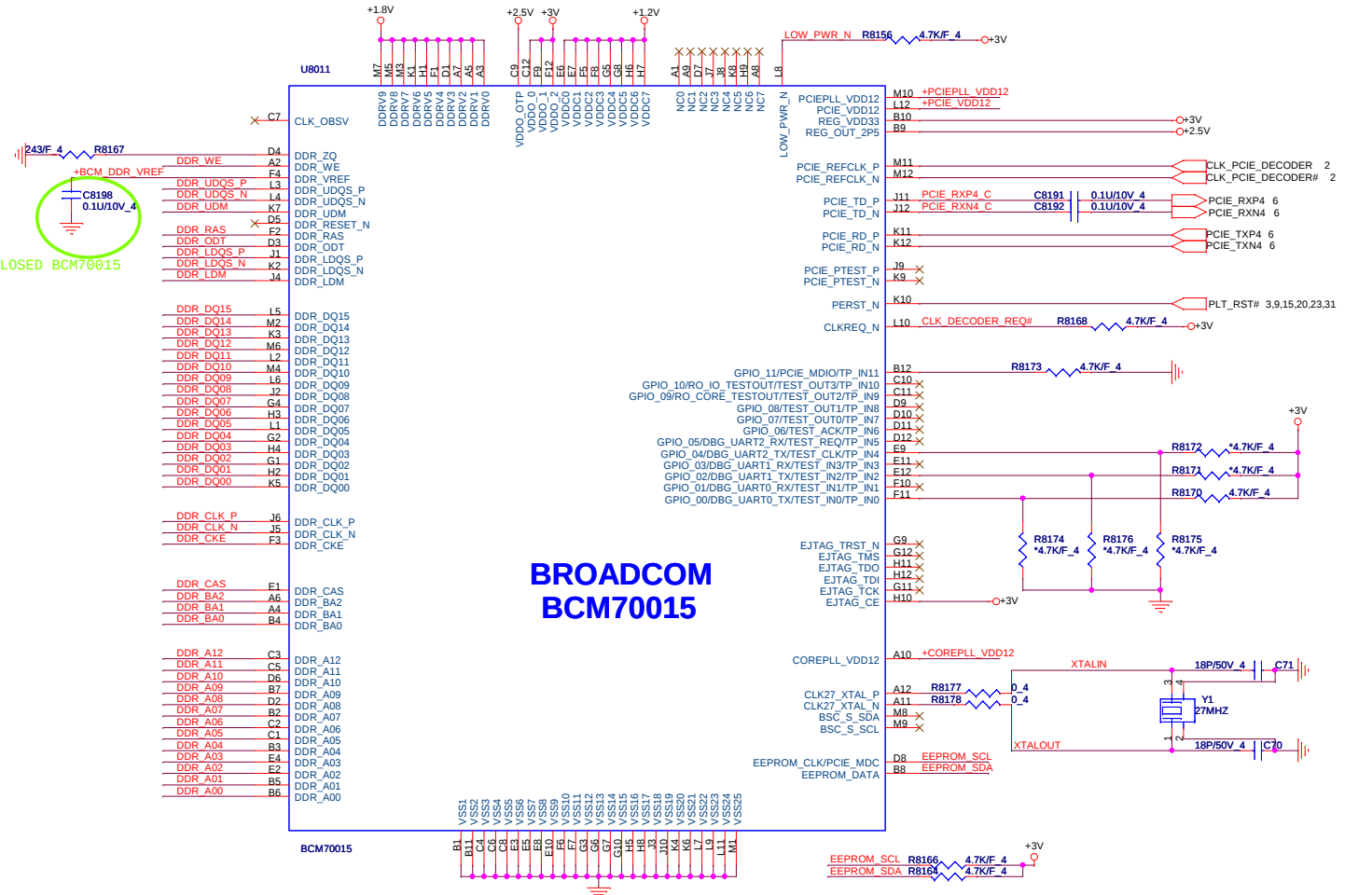
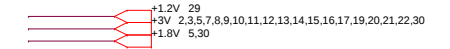
LCD POWER SWITCH



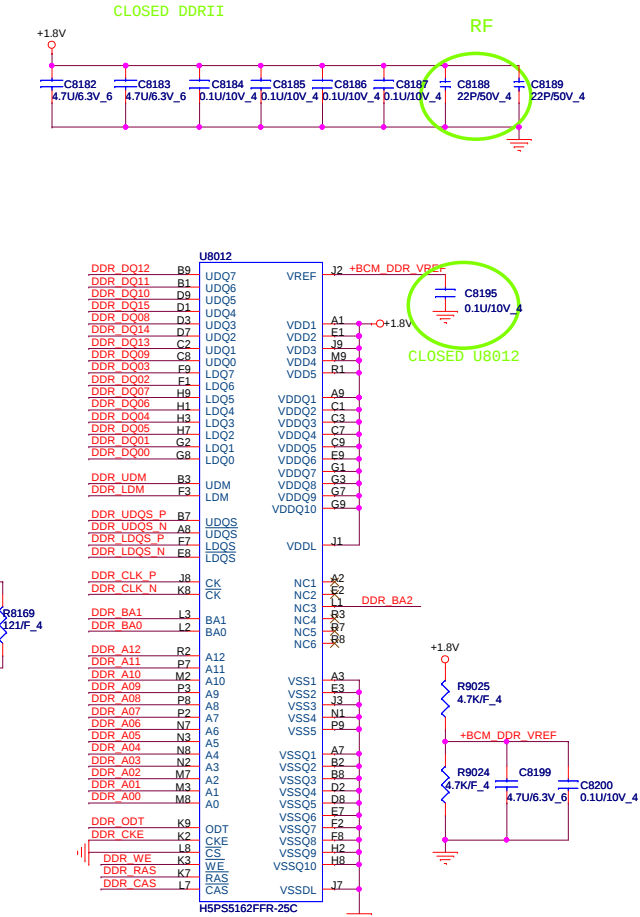




CLOSED BCM70015



BROADCOM BCM70015



DDR2 RAM Configuration Table

DESCRIPTION	Vendor	Vendor P/N	QCI P/N
DDR2 32Mx16, 128bit	400MHZ (-25)	HYNIX	H5PS5162FFR-25C
DDR2 32Mx16, 128bit	400MHZ (-25)	SAMSUNG	K4N51163QG-HC25
			AKD5FG-TW03
			AKD5FG-T501

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PROJECT : Annika

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DFHD20MR008
DC Current rating: 0.5 A

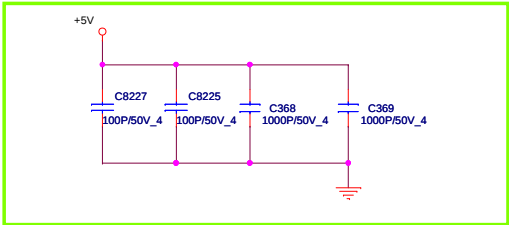


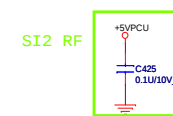
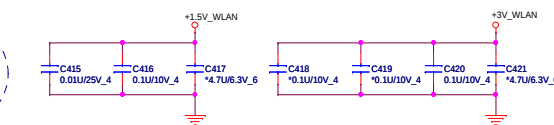
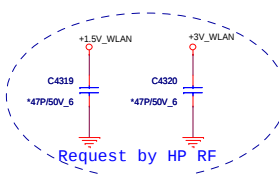
Diagram showing the connection of the CPU BRACKET, mini card, and FA (Fixed Fan) to the H16 board. The CPU BRACKET is connected to pins H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, H21, H22, H23, H24, H25, H26, H27, H28, H29, H30, H31, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H42, H43, H44, H45, H46, H47, H48, H49, H50, H51, H52, H53, H54, H55, H56, H57, H58, H59, H60, H61, H62, H63, H64, H65, H66, H67, H68, H69, H70, H71, H72, H73, H74, H75, H76, H77, H78, H79, H80, H81, H82, H83, H84, H85, H86, H87, H88, H89, H90, H91, H92, H93, H94, H95, H96, H97, H98, H99, H100. The mini card is connected to pins H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, H21, H22, H23, H24, H25, H26, H27, H28, H29, H30, H31, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H42, H43, H44, H45, H46, H47, H48, H49, H50, H51, H52, H53, H54, H55, H56, H57, H58, H59, H60, H61, H62, H63, H64, H65, H66, H67, H68, H69, H70, H71, H72, H73, H74, H75, H76, H77, H78, H79, H80, H81, H82, H83, H84, H85, H86, H87, H88, H89, H90, H91, H92, H93, H94, H95, H96, H97, H98, H99, H100. The FA is connected to pins H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15, H16, H17, H18, H19, H20, H21, H22, H23, H24, H25, H26, H27, H28, H29, H30, H31, H32, H33, H34, H35, H36, H37, H38, H39, H40, H41, H42, H43, H44, H45, H46, H47, H48, H49, H50, H51, H52, H53, H54, H55, H56, H57, H58, H59, H60, H61, H62, H63, H64, H65, H66, H67, H68, H69, H70, H71, H72, H73, H74, H75, H76, H77, H78, H79, H80, H81, H82, H83, H84, H85, H86, H87, H88, H89, H90, H91, H92, H93, H94, H95, H96, H97, H98, H99, H100.

FAN固定螺絲
H16要上件

PAD1
*spad-re236x591np

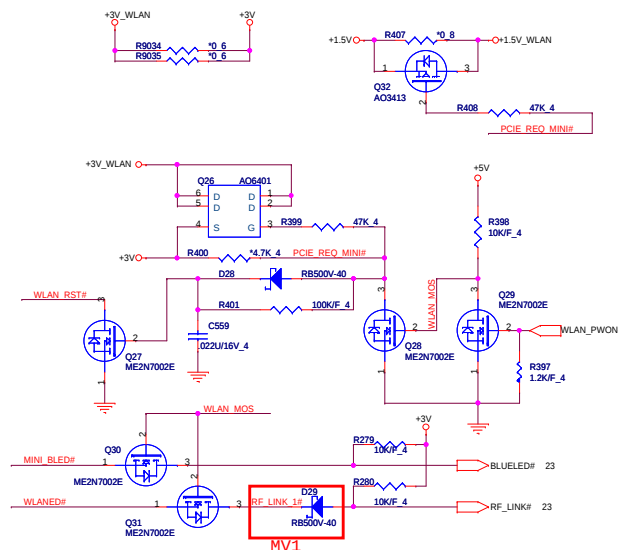
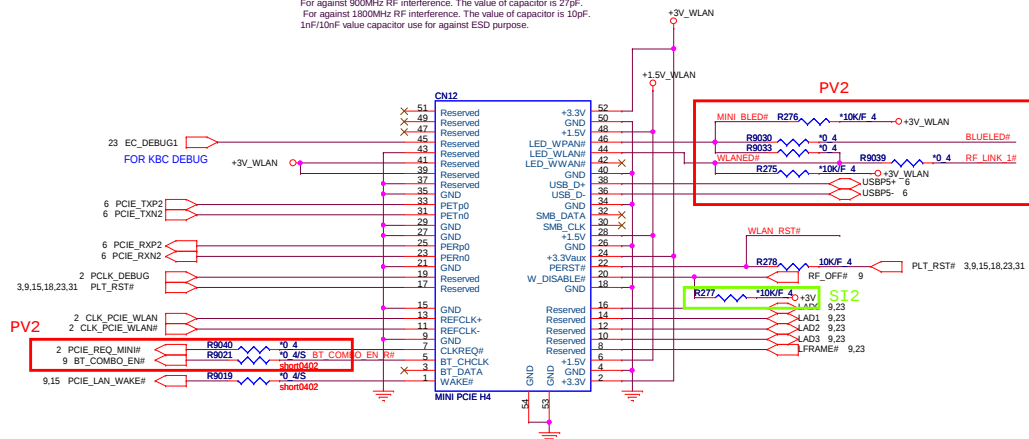
PAD2
*spad-re472x236np

PAD3
*spad-s236np

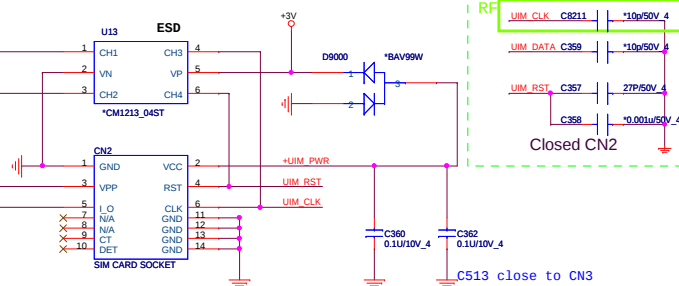
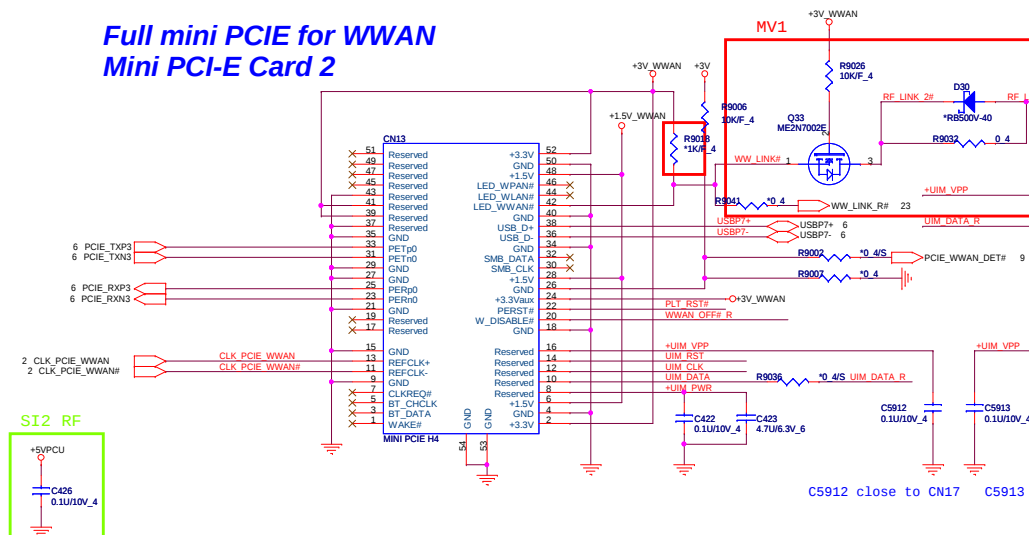


Mini PCI-E Card 1
Half Mini PCI-E WLAN

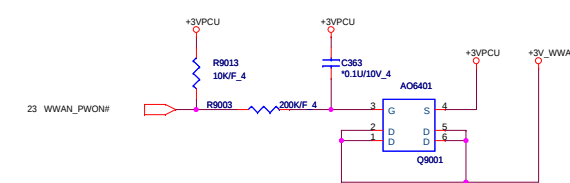
The value of the capacitor is suggest by Siemens HQ expert.
For against 900MHz RF interference. The value of capacitor is 27pF.
For against 1800MHz RF interference. The value of capacitor is 10pF.
1nF/10nF value capacitor use for against ESD purpose.



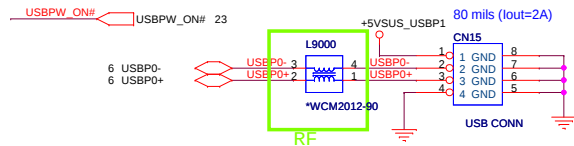
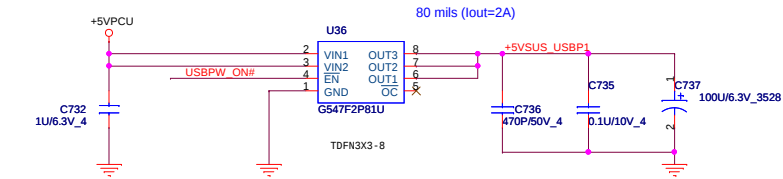
**Full mini PCIE for WWAN
Mini PCI-E Card 2**



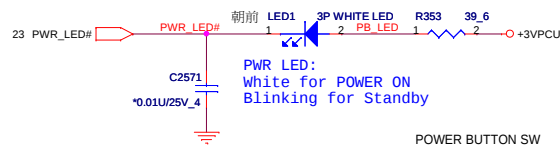
SIM CARD



1x Left side USB port supports Keyed USB.

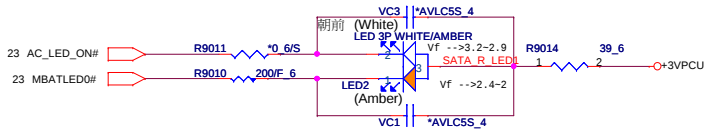


PWR Button/LED

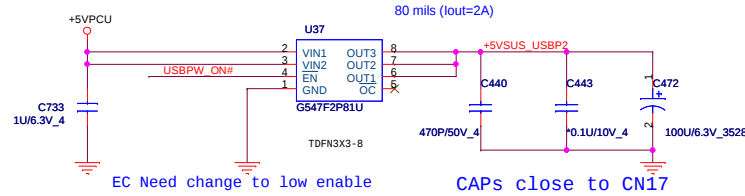


POWER BUTTON SW

SATA/LED

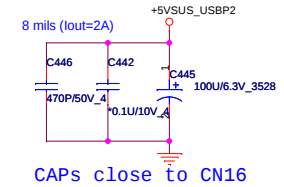


For Right 2xUSB Ports PWR

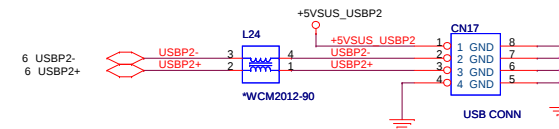
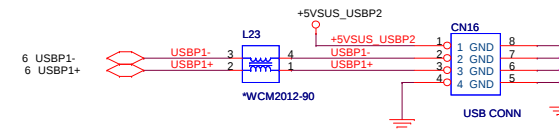


EC Need change to low enable

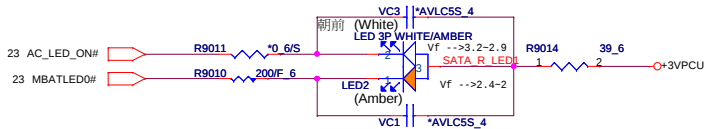
CAPS close to CN17



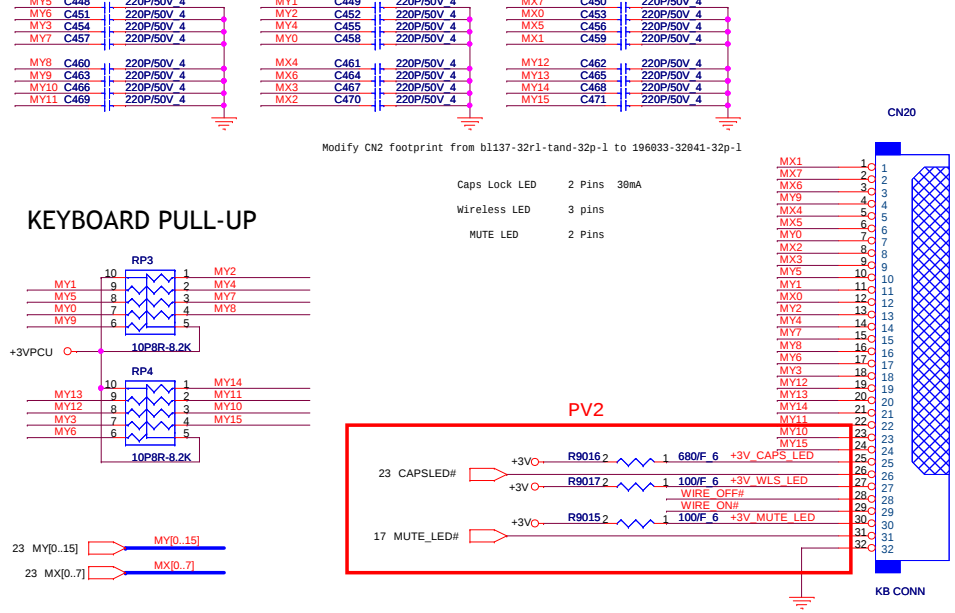
CAPS close to CN16



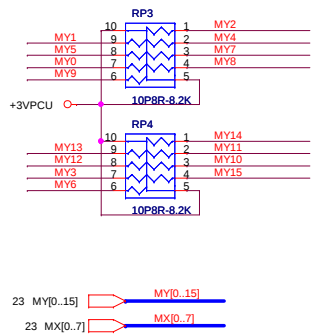
Charging & Discharging/LED



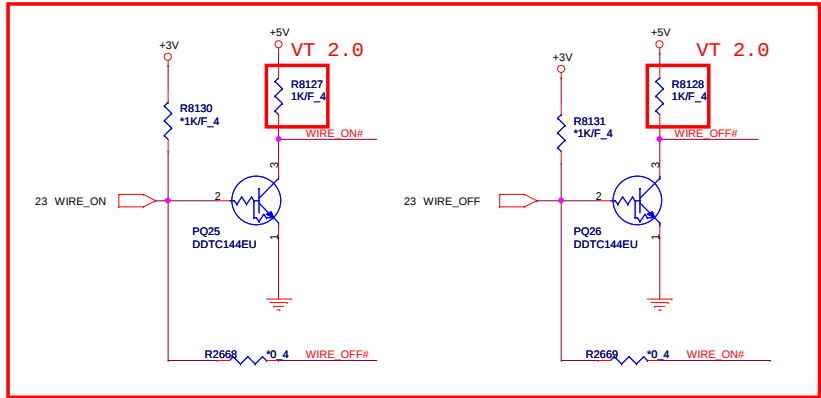
Keyboard (KBC)



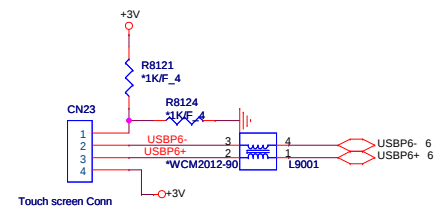
KEYBOARD PULL-UP



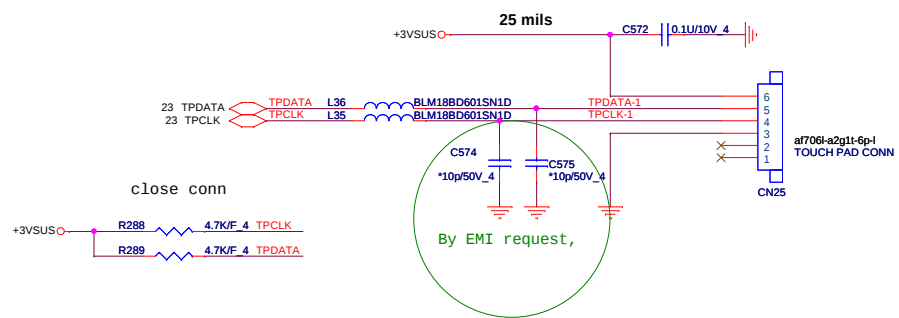
PV2



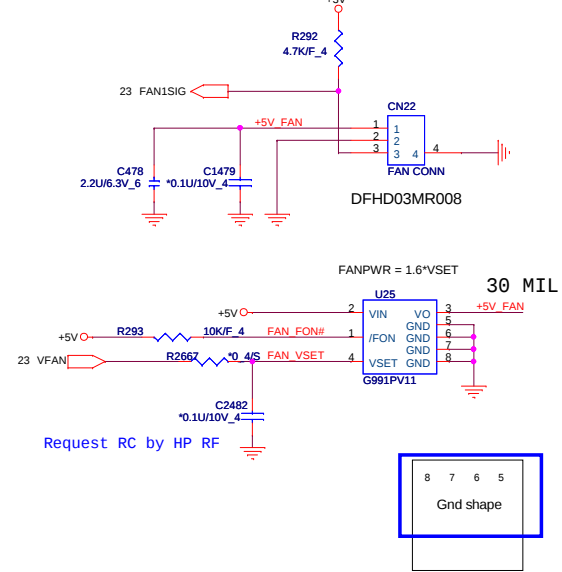
TOUCH SCREEN



TOUCH PAD CONNECTOR

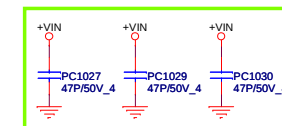


CPU FAN

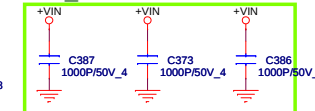




SI2_RF

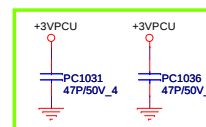


PV1_RF

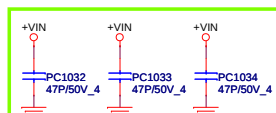


+3VPCU Volt +/- 5%
Countinue current:4A
Peak current:5.5A
OCp minimum 6A

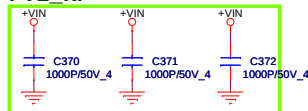
SI2_RF



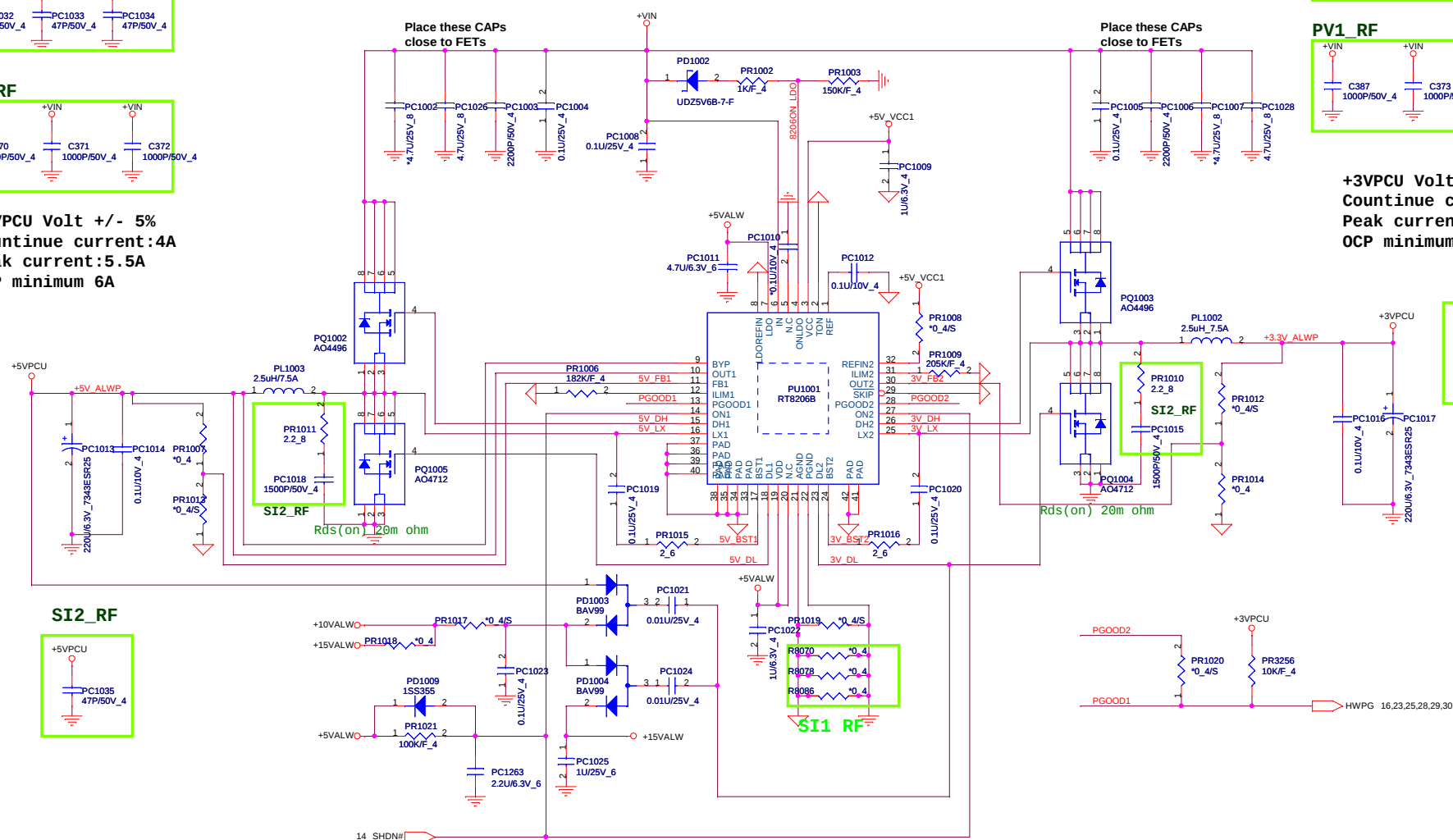
SI2_RF



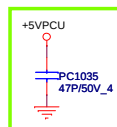
PV1_RF



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

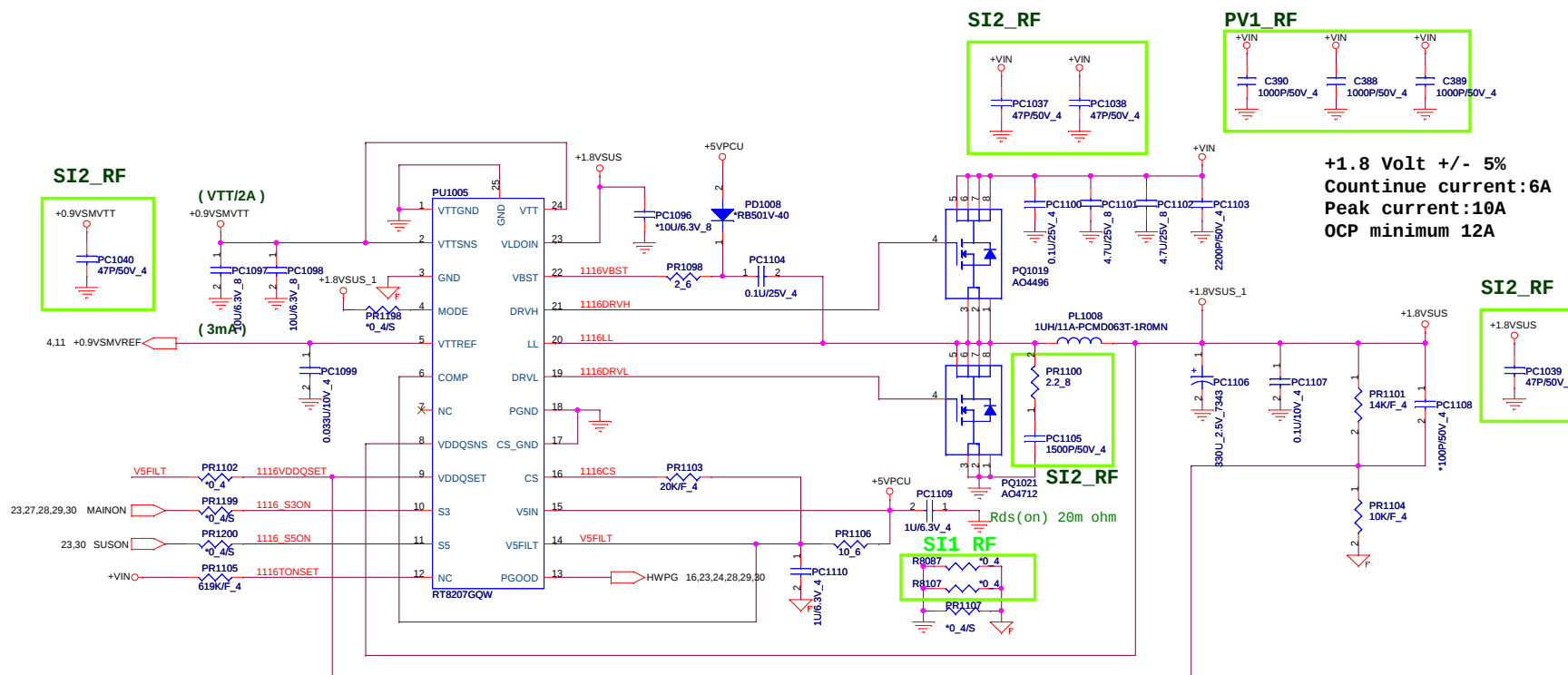


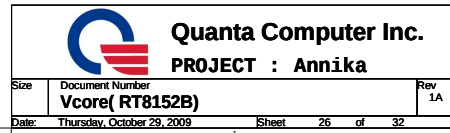
SI2_RF

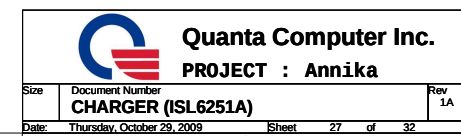


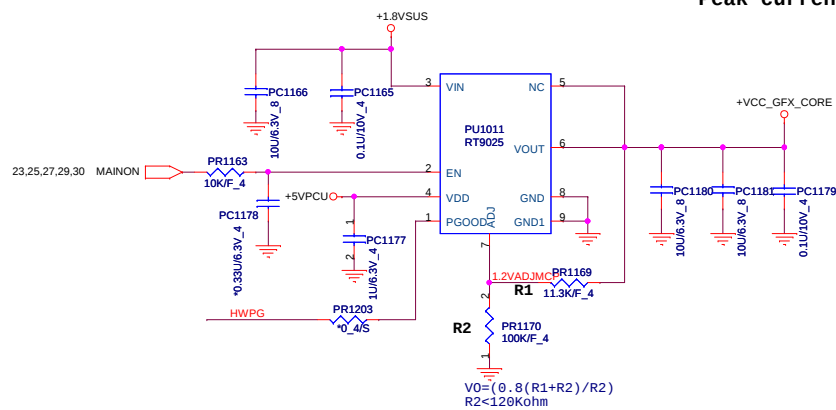
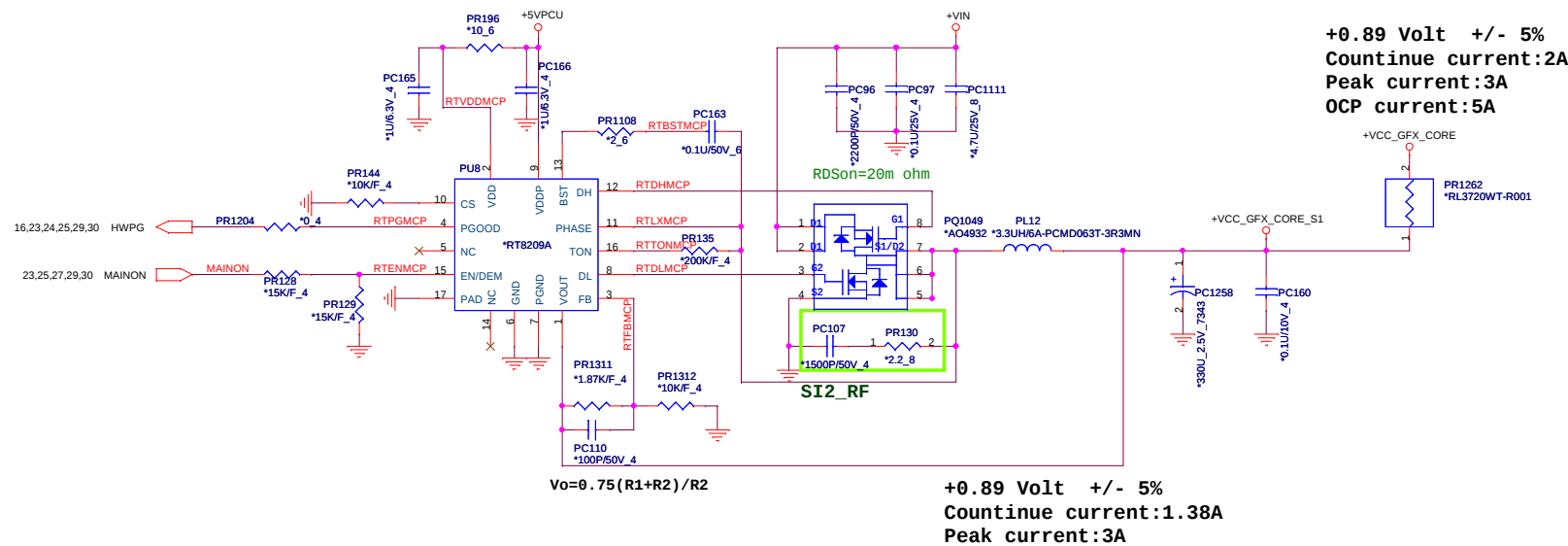
SI1_RF



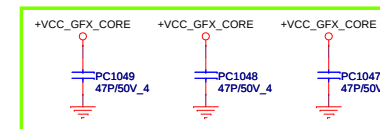




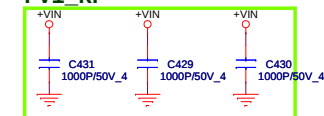


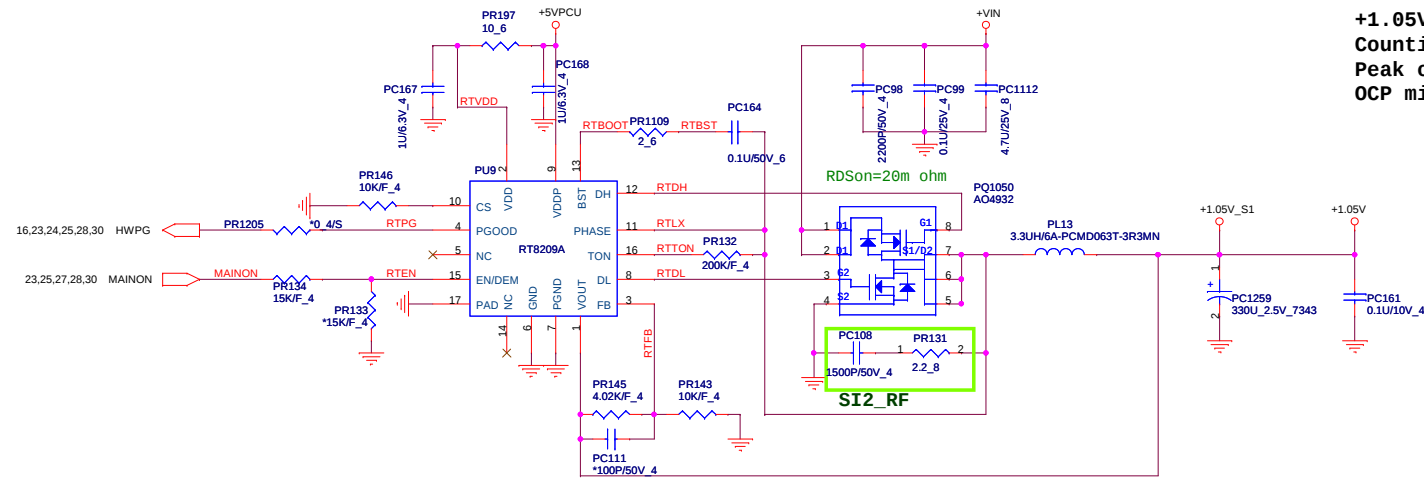


SI2_RF



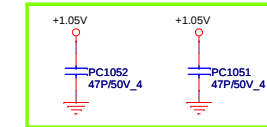
PV1_RF



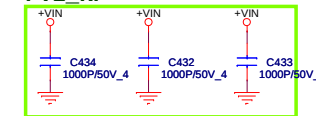


+1.05Volt +/- 5%
Countinue current:3A
Peak current:4A
OCP minimum:5A

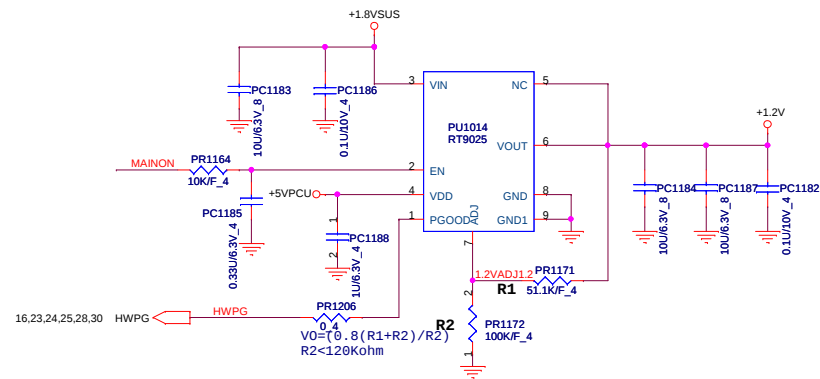
SI2_RF



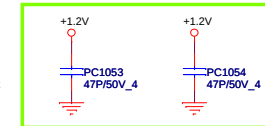
PV1_RF

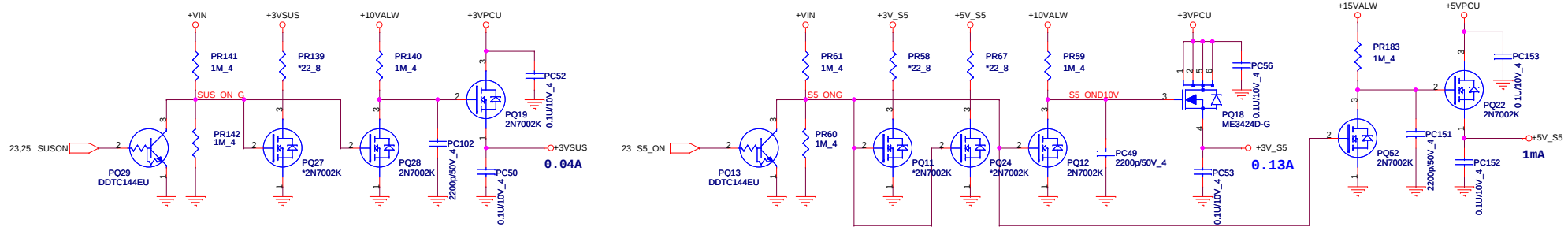
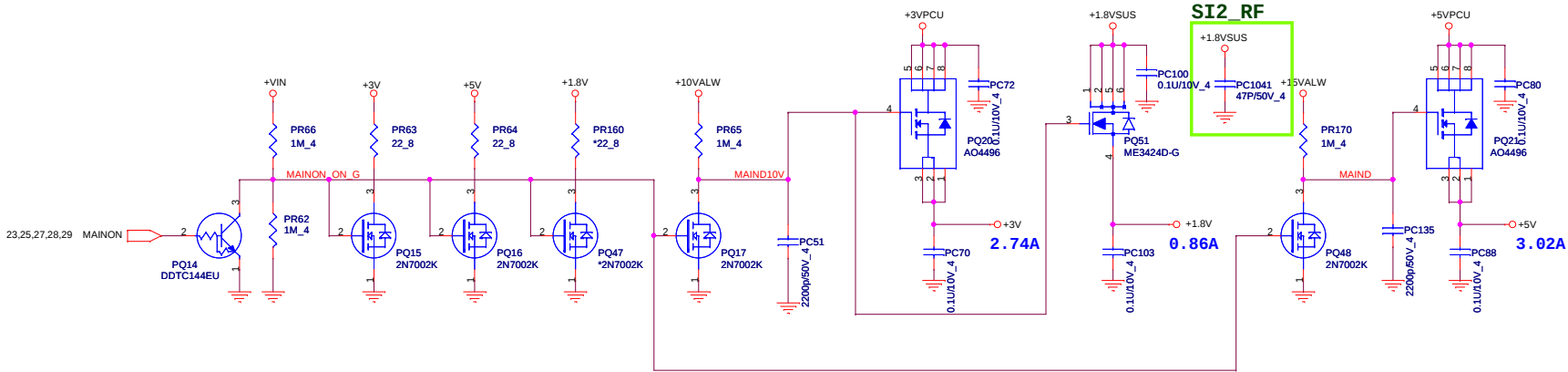


+1.2 Volt +/- 5%
Countinue current:0.8A
Peak current:3A

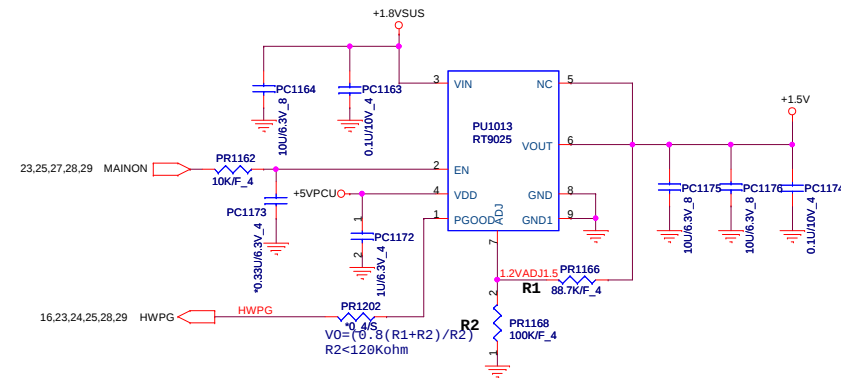
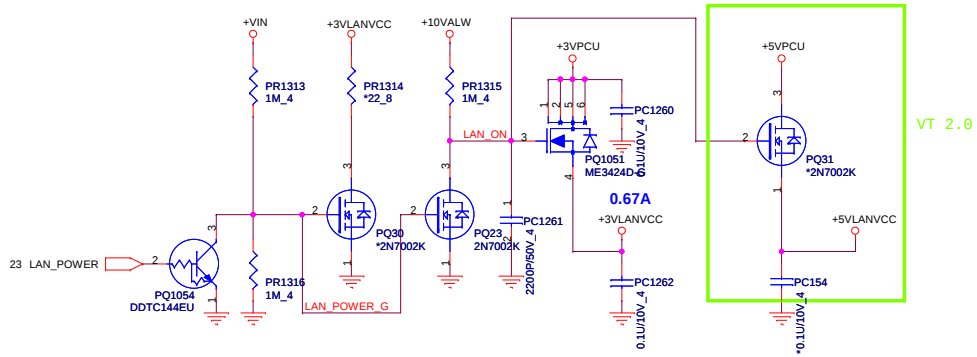


SI2_RF

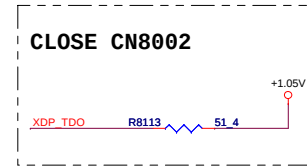
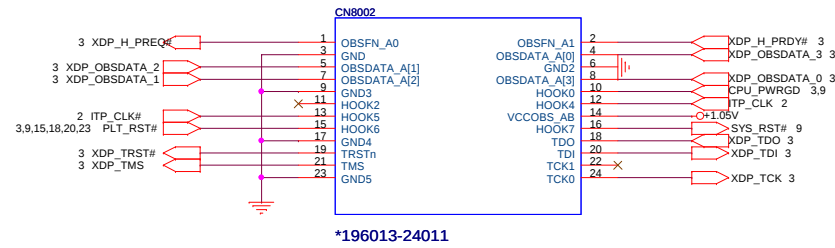




+1.5 Volt +/- 5%
Countinue current:2A
Peak current:3A



CPU XDP



Power up sequence

