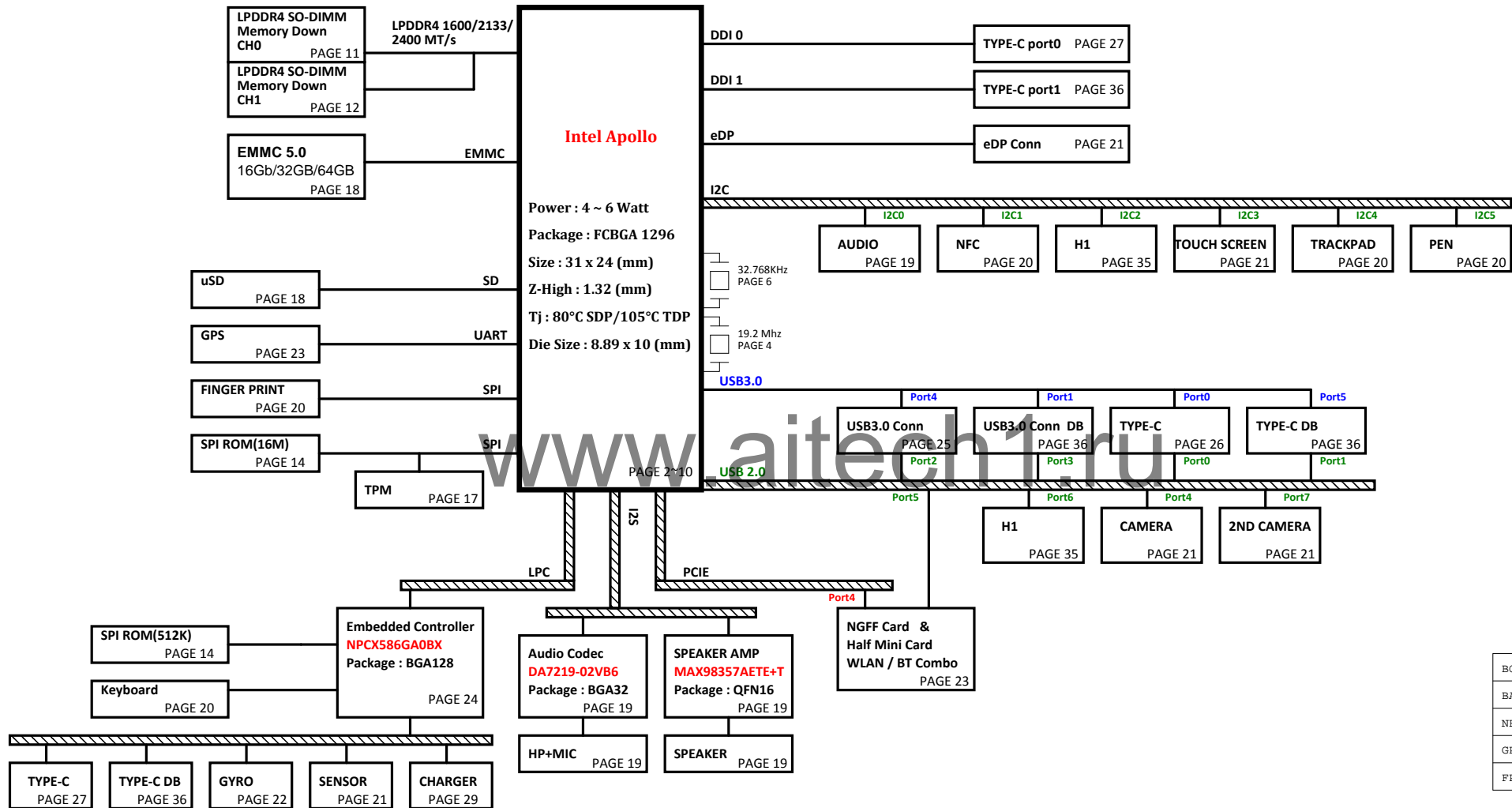


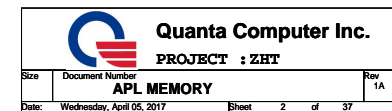
Intel Apollo Platform Block Diagram

PCB 6L STACK UP

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

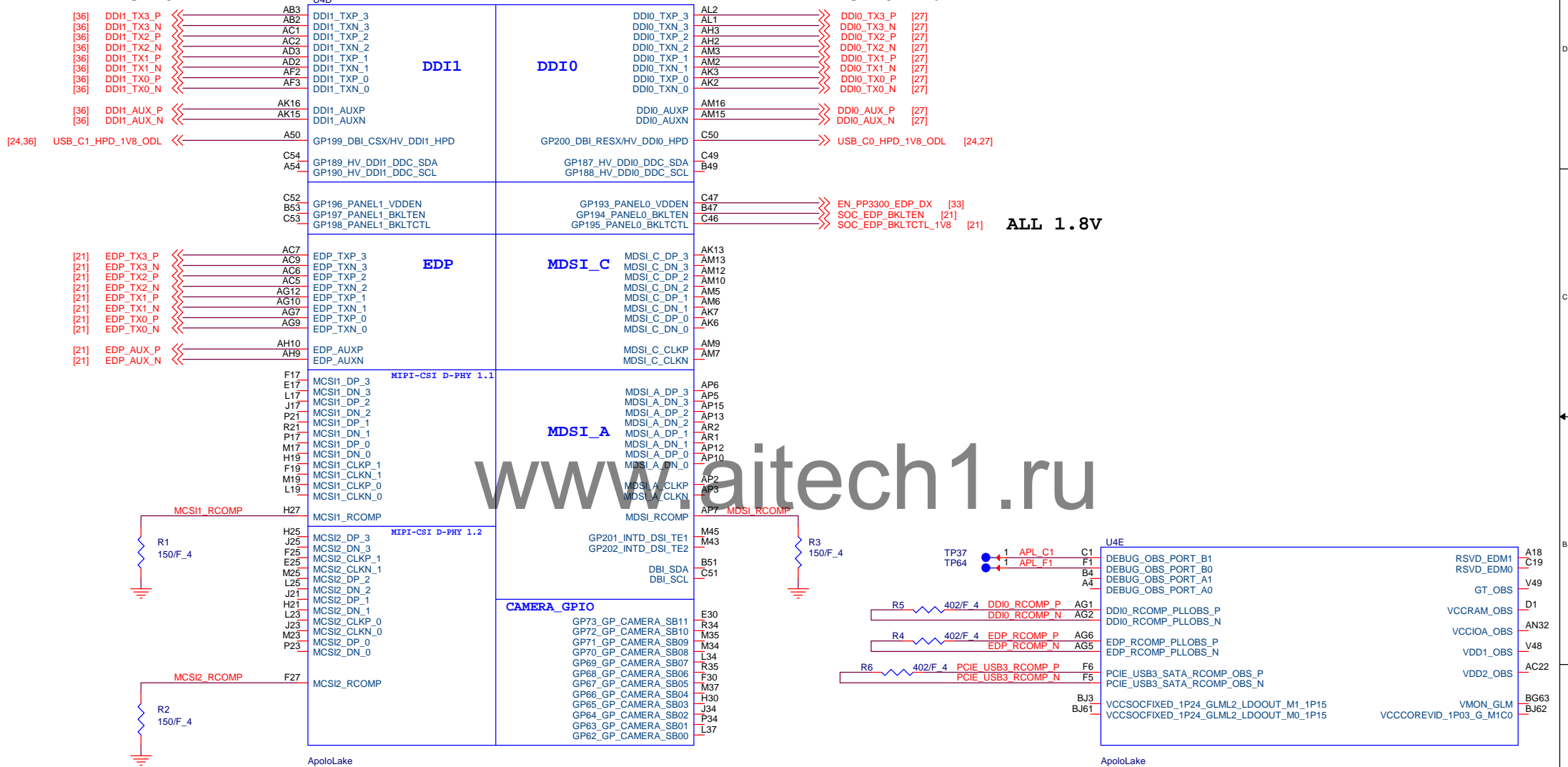


BOM value option	
BAR@	Barometer
NFC@	NFC
GPS@	GPS
FP@	Finger Print



TYPE-C PORT 1

TYPE-C PORT 0



Quanta Computer Inc.

PROJECT : ZHT

Size Document Number APL eDP/RCOMP Rev 1A

Date: Wednesday, April 05, 2017 Sheet 3 of 37

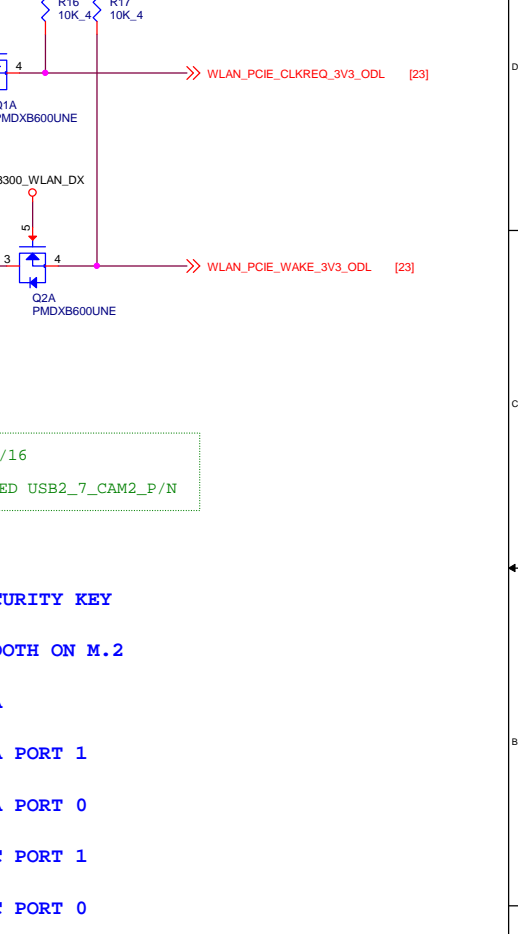
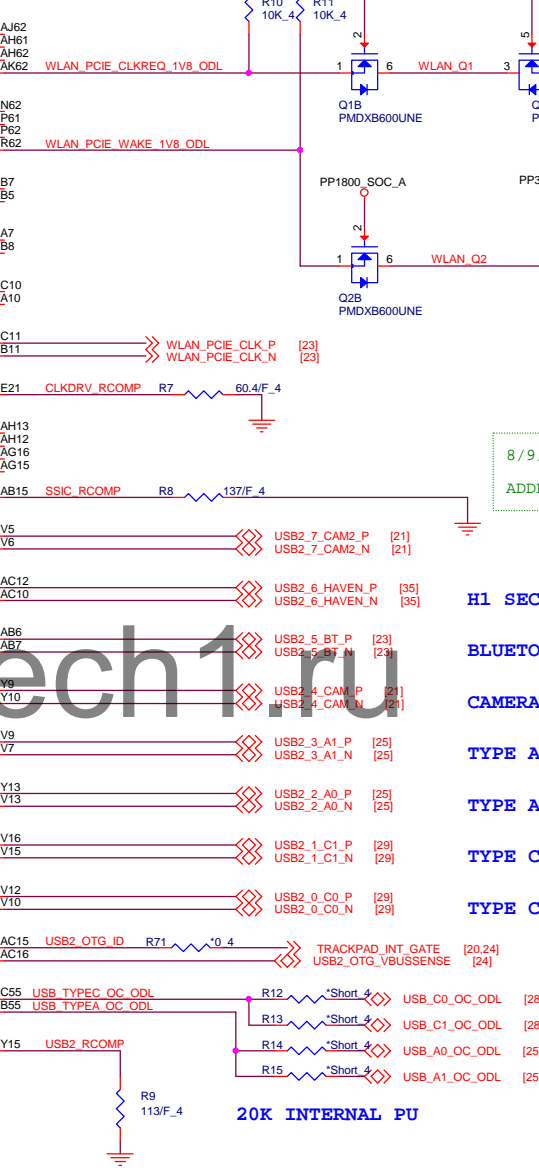
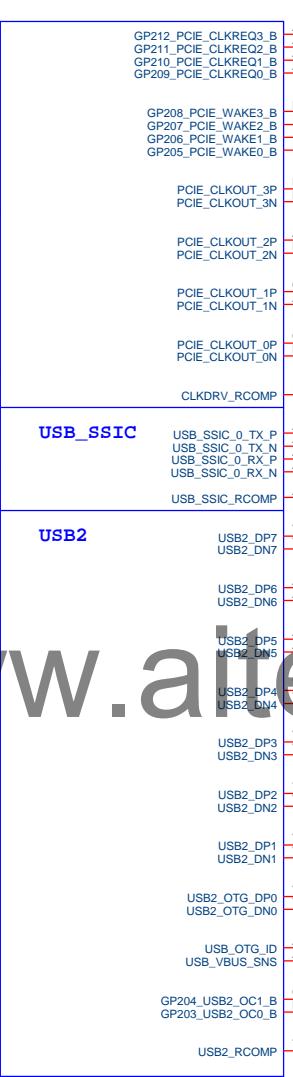
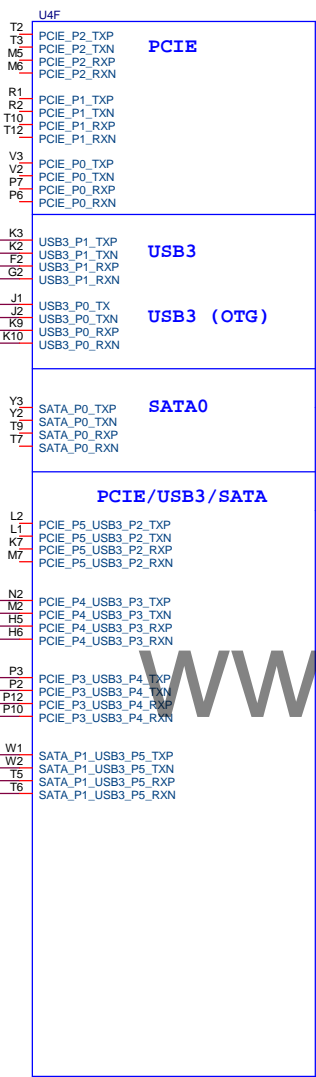
11/11/16
RENAMED USB3_5_A1_X TO USB3_5_C1_X
RENAMED USB3_1_C1_X TO USB3_1_A1_X

TYPE A PORT 1
TYPE C PORT 0

TYPE C PORT 0

TYPE A PORT 0

TYPE C PORT 1



Quanta Computer Inc.

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Size Document Number Rev 1A

APL PCIE/USB/SATA

Date: Wednesday, April 05, 2017 Sheet 4 of 37

11/11/16
DNS R19, R179

8/31/16
CHANGED R19/R179 TO 2.2K

10/14/16
RENAMED GP83 TO DMIC_CAM2_DATA
REMOVED TP4

6/6/16
ADDED TP TO PCH_I2C_ISH0_SCL
ADDED TP TO PCH_I2C_ISH0_SDA
ADDED TP TO ISH_GPIO_8

ADDED R478
ADDED DMIC_CLK2
CHANGED DMIC_CLK TO DMIC_CLK1
CHANGED DMIC_CLK_R TO DMIC_CLK1_R

11/11/16
CHANGED R30, R31, R38, R39 TO 2,2K
STUFFED R30, R31

6/30/16
DNS R30, R31

10/26/16
ADDED R522
ADDED IMIC_STRAP AND TABLE

12/6/16
ADDED R532, R533
ADDED R534, SHIPPING_STRAP

8/15/16
REMOVED PCH_I2C_ISH0_SCL/SDA
REMOVED TP81/TP82
ADDED PCH_I2C_PEN_SCL/SDA
ADDED R511, R512

ADDED PEN_PDCT_ODL TO GP24
ADDED PEN_INT_ODL TO GP13
ADDED PEN_RESET TO GP35

REMOVED GPIO_35 NET
REMOVED TP2

8/17/16
SWITCHED PCH_I2C_PEN_SCL/SDA

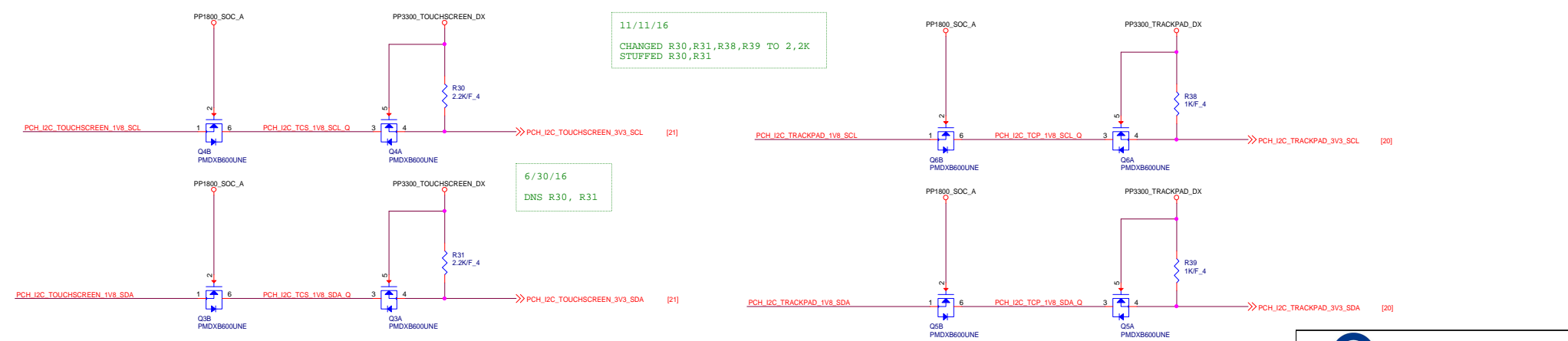
8/30/16
REMOVED GPIO_82 NET
MOVED TP4 TO M52

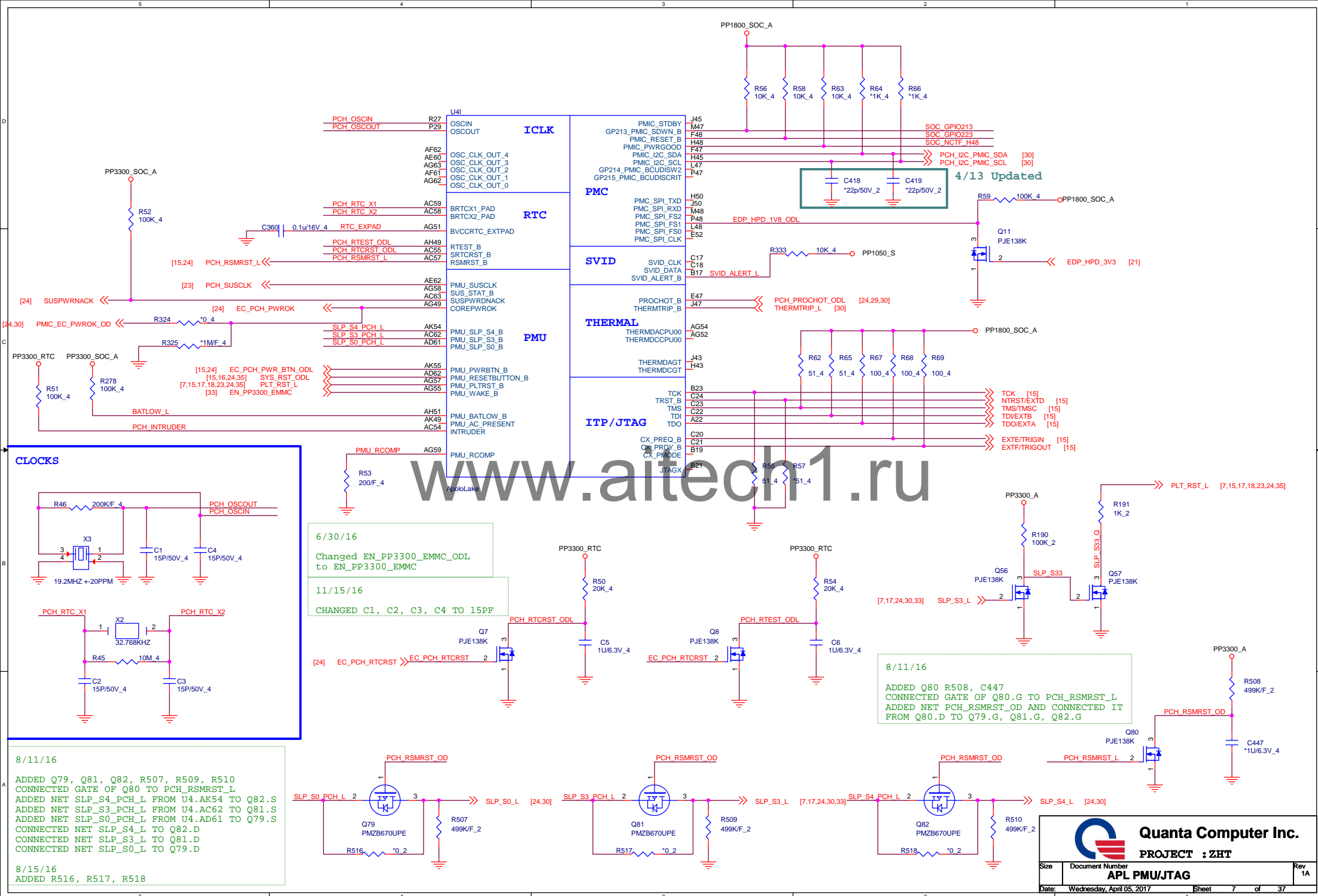
6/23/16
ADDED TRACKPAD_INT_1V8_ODL TO GP15
RENAMED TRC_DATA0[3] TO FP_INT_L

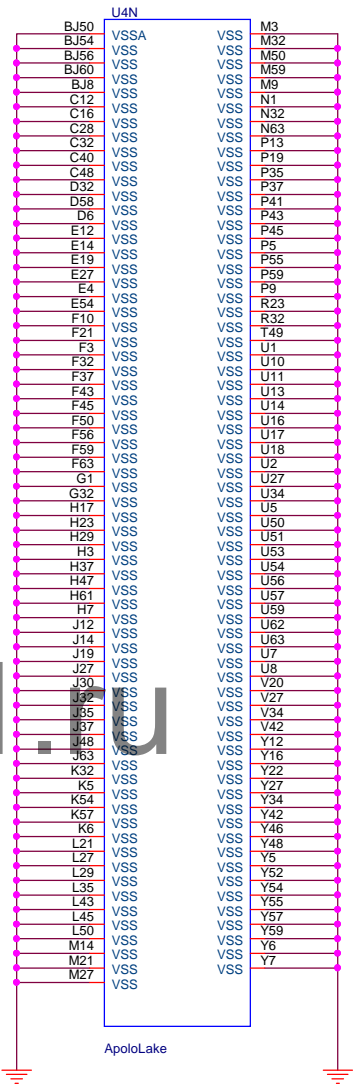
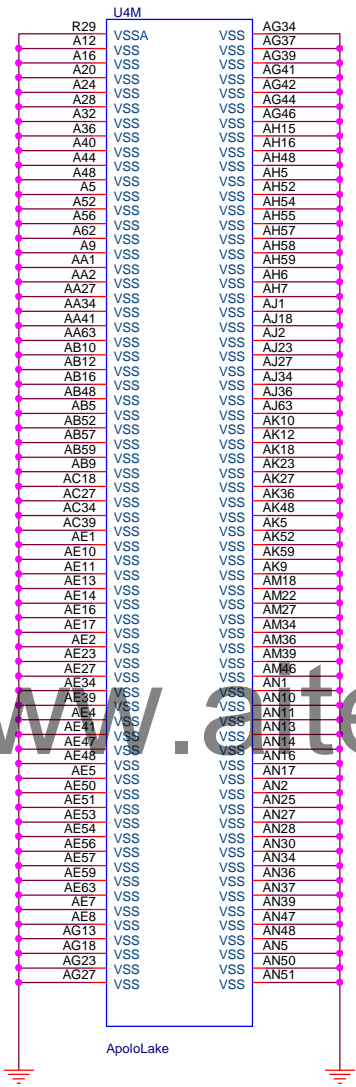
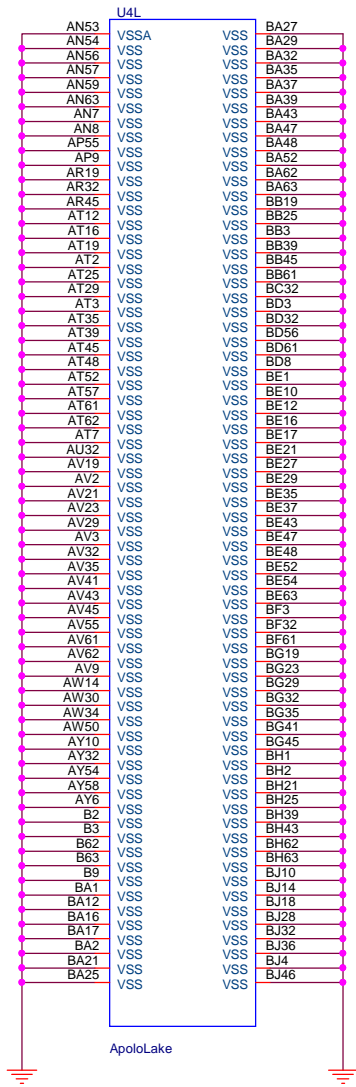
11/11/16
DNS R40, R42

8/23/16
CHANGED FP_INT_L TO FP_INT

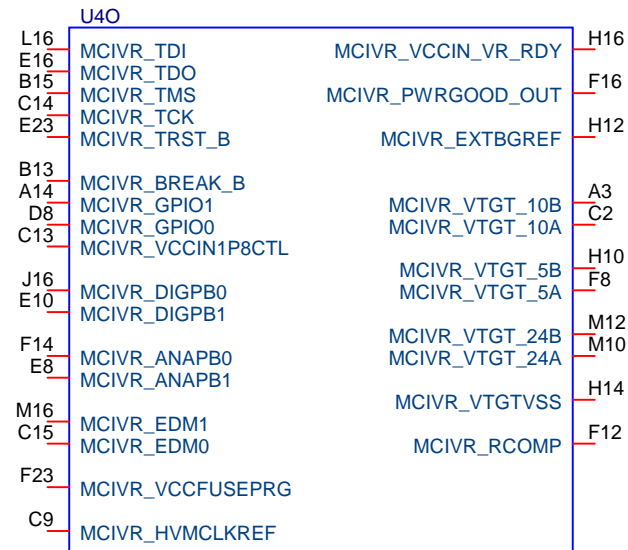
CONFIG_STRAP1	CONFIG_STRAP2	CONFIG
PU	PU	CONFIG_0
PU	PD	CONFIG_1
PU	Z	CONFIG_2
PD	PU	CONFIG_3
PD	PD	CONFIG_4
PD	Z	CONFIG_5
Z	PU	CONFIG_6
Z	PD	CONFIG_7
*Z	*Z	CONFIG_8





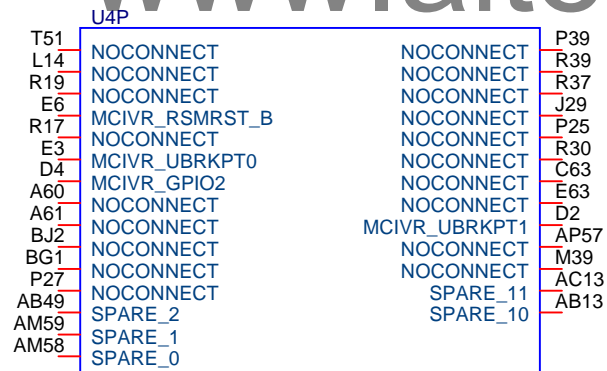


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ApoloLake

www.aitech1.ru



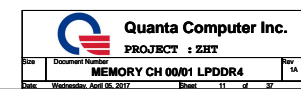
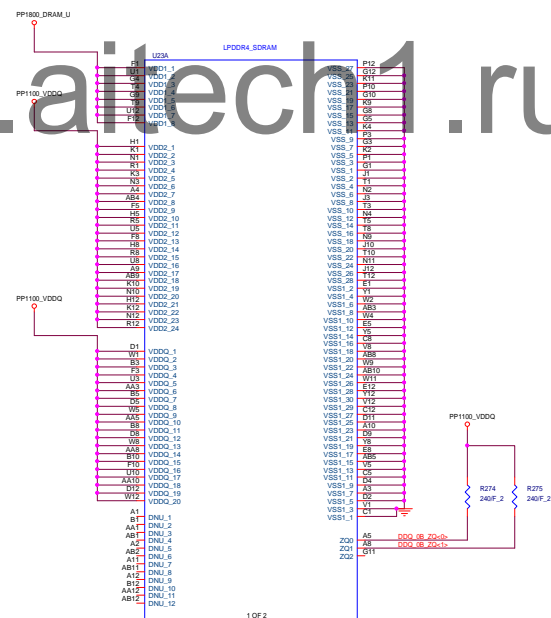
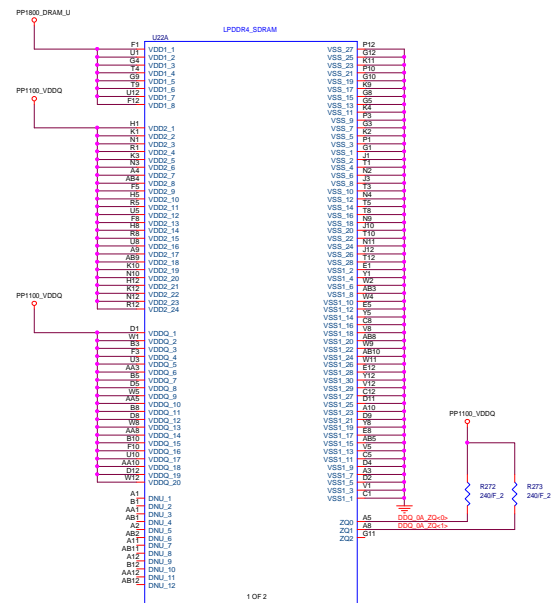
ApoloLake

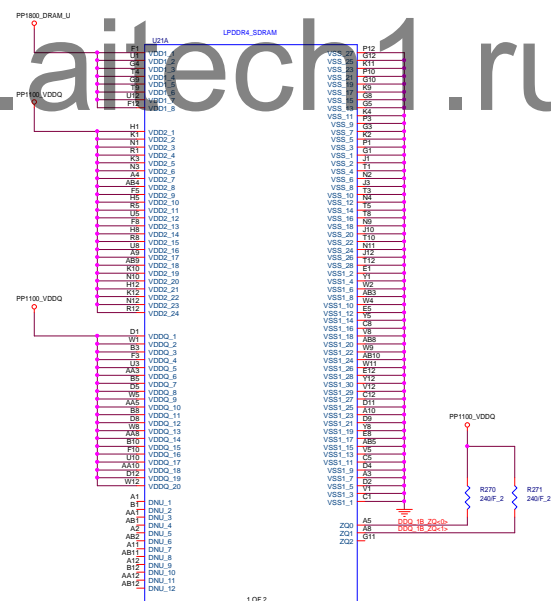
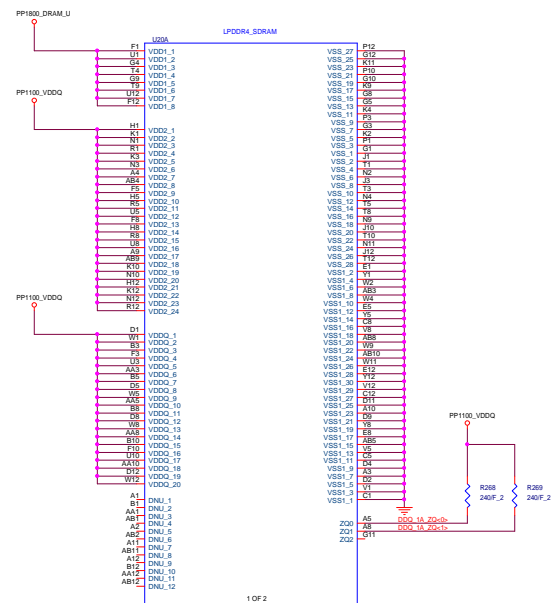


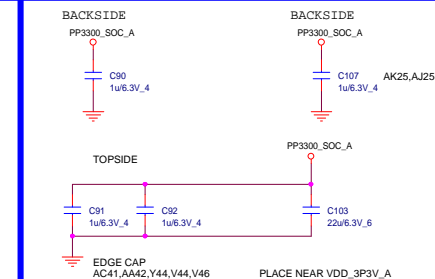
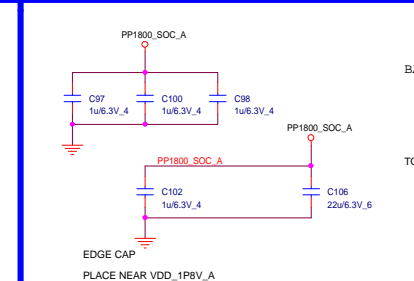
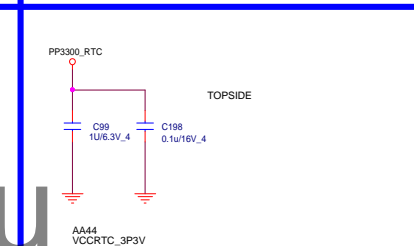
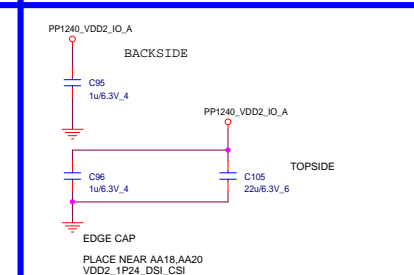
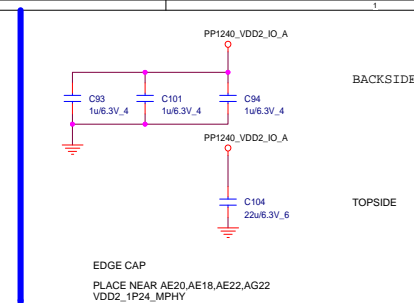
Quanta Computer Inc.

PROJECT : ZHT

Size	Document Number	Rev
	APL NO CONNECT	1A
Date:	Wednesday, April 05, 2017	Sheet 10 of 37



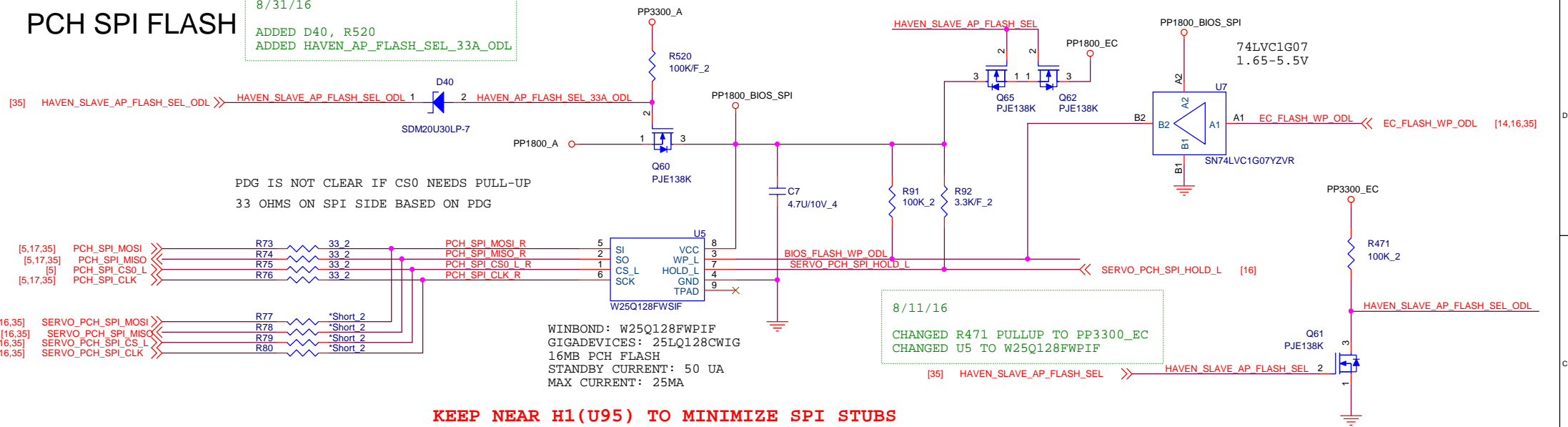




PCH SPI FLASH

8/31/16

ADDED D40, R520
ADDED HAVEN_AP_FLASH_SEL_33A_ODL

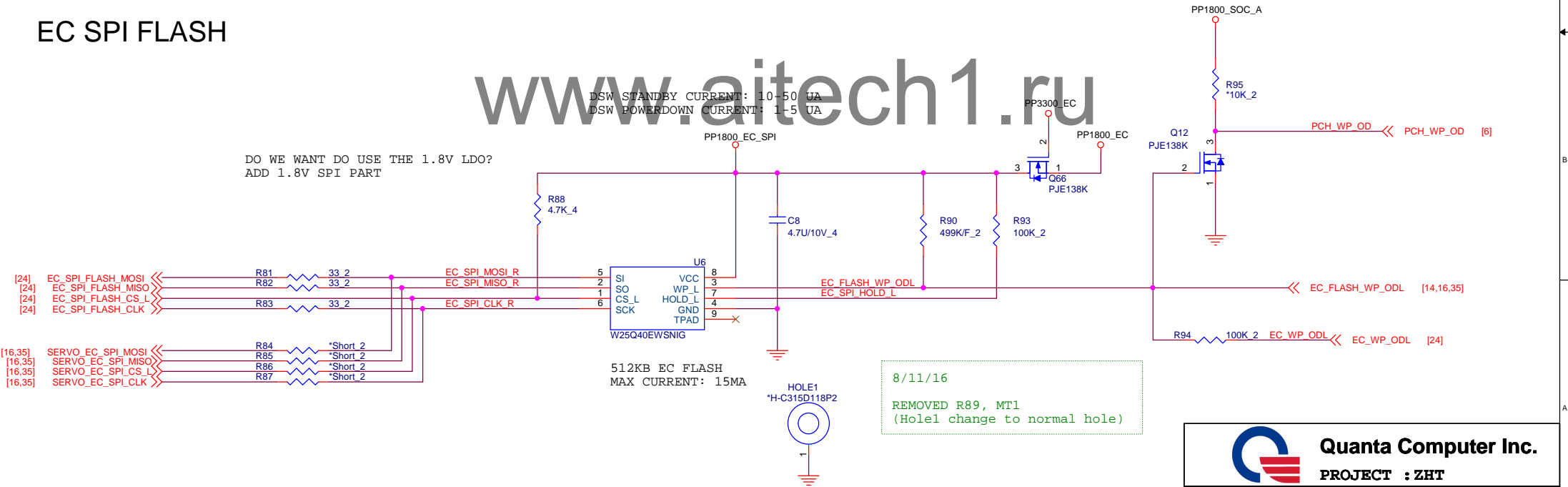



EC SPI FLASH

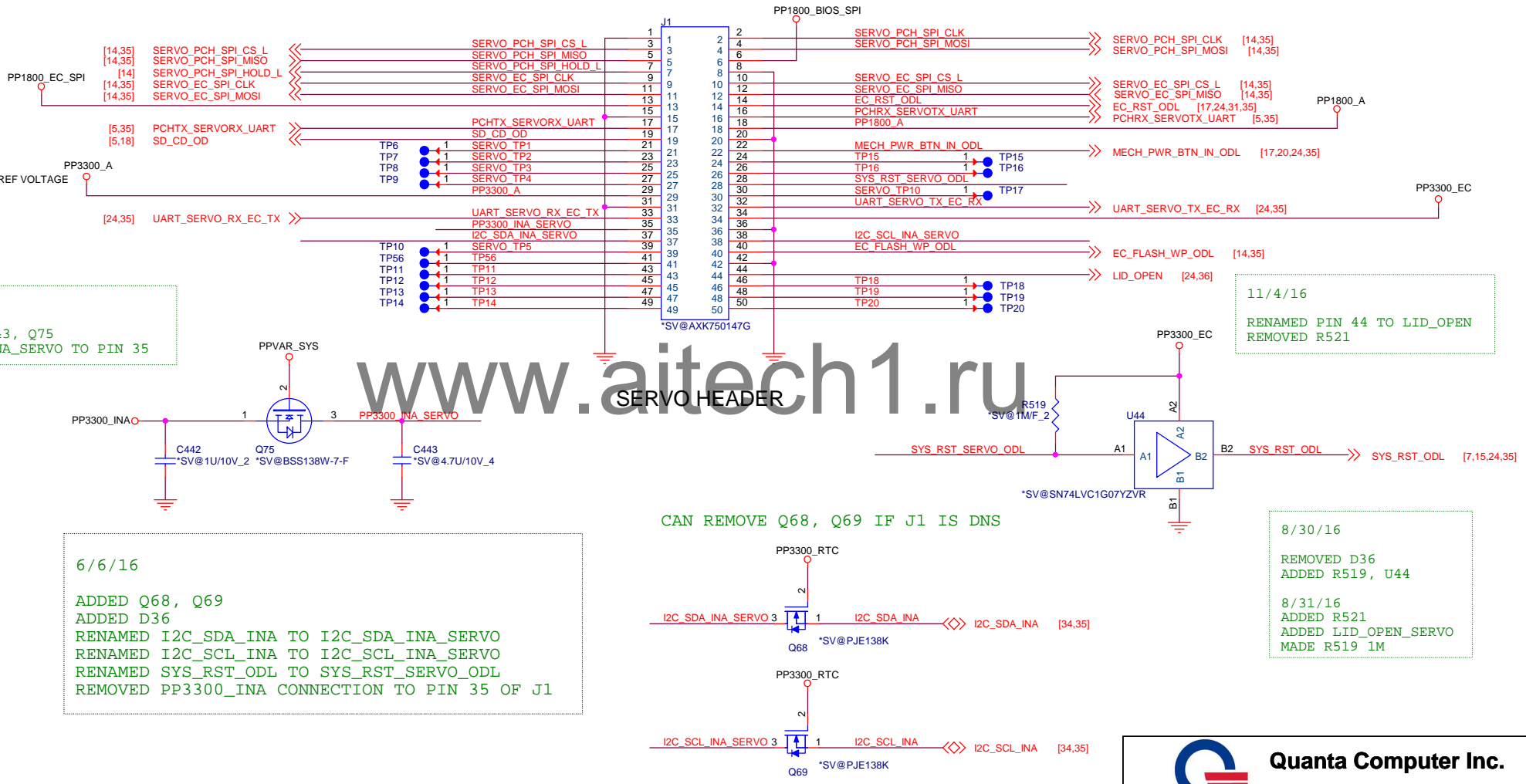
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DSW STANDBY CURRENT: 10-50 UA
DSW POWERDOWN CURRENT: 1-5 UA

DO WE WANT DO USE THE 1.8V LDO?
ADD 1.8V SPI PART



 Quanta Computer Inc. PROJECT : ZHT		Rev
		1A
Size	Document Number	SPI ROM
Date:	Wednesday, April 05, 2017	Sheet 14 of 37

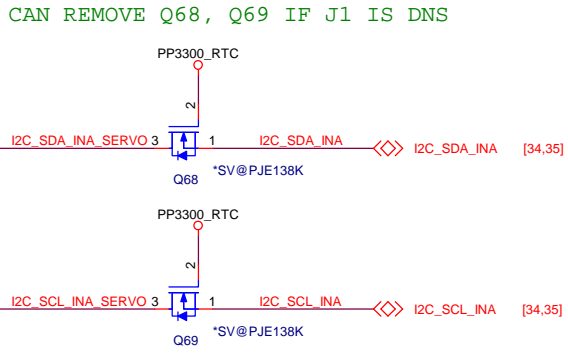


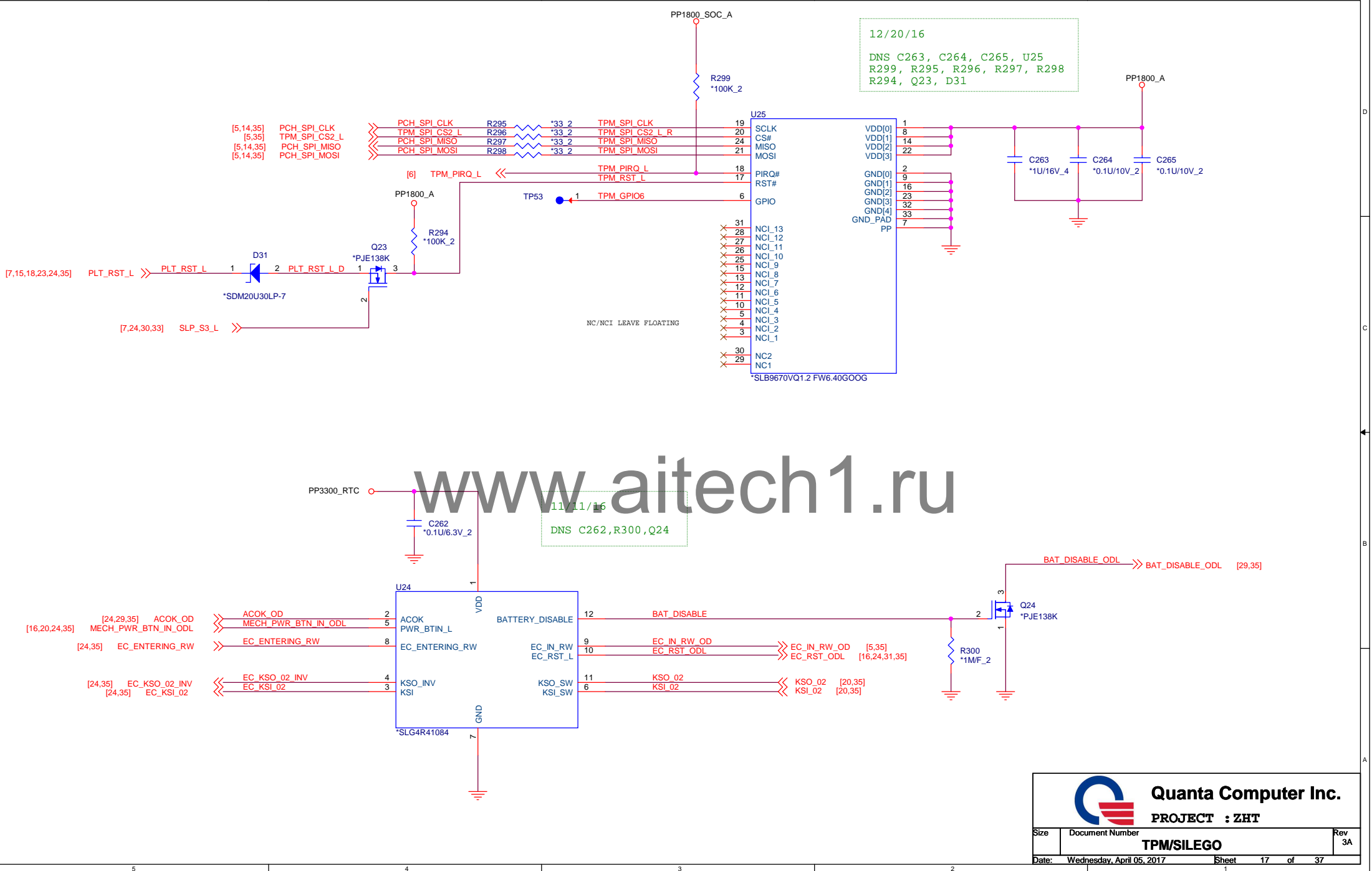
6/23/16
 ADDED C442, C443, Q75
 ADDED PP3300_INA_SERVO TO PIN 35

11/4/16
 RENAMED PIN 44 TO LID_OPEN
 REMOVED R521

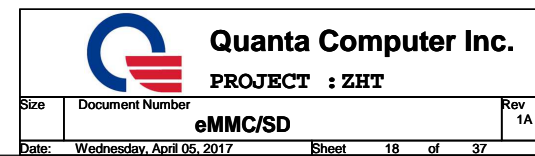
6/6/16
 ADDED Q68, Q69
 ADDED D36
 RENAMED I2C_SDA_INA TO I2C_SDA_INA_SERVO
 RENAMED I2C_SCL_INA TO I2C_SCL_INA_SERVO
 RENAMED SYS_RST_ODL TO SYS_RST_SERVO_ODL
 REMOVED PP3300_INA CONNECTION TO PIN 35 OF J1

8/30/16
 REMOVED D36
 ADDED R519, U44
 8/31/16
 ADDED R521
 ADDED LID_OPEN_SERVO
 MADE R519 1M





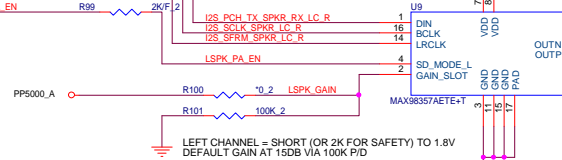
150 UA SLEEP CURRENT



[6] I2S_PCH_TX_SPKR_RX
[6] I2S_SCLK_SPKR
[6] I2S_SFRM_SPKR
[6] SPK_PA_EN

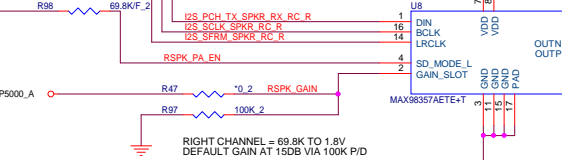
I2S_PCH_TX_SPKR_RX R96
I2S_SCLK_SPKR R43
I2S_SFRM_SPKR R44
SPK_PA_EN R99

LEFT CHANNEL

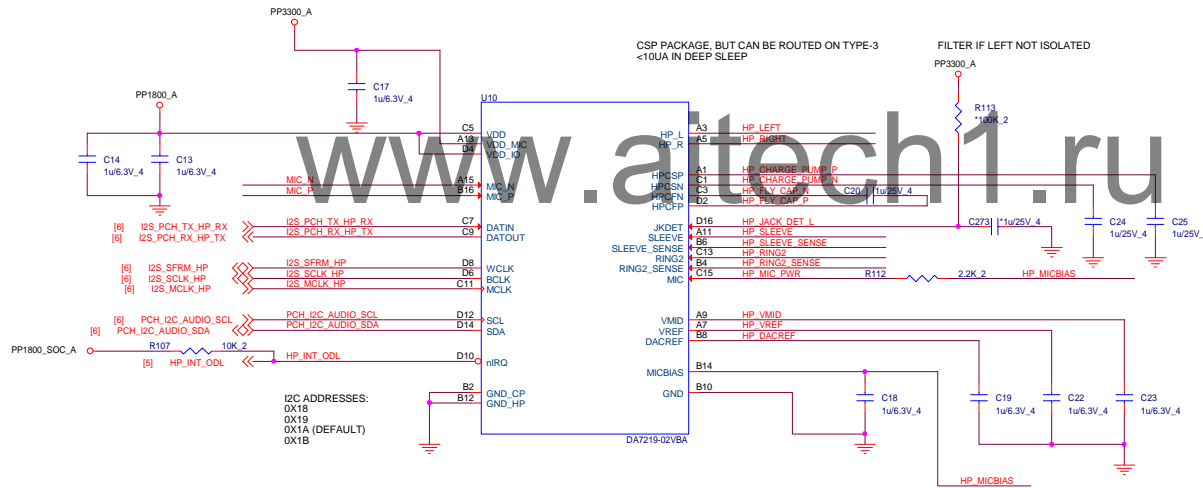


I2S_PCH_TX_SPKR_RX R48
I2S_SCLK_SPKR R49
I2S_SFRM_SPKR R110
SPK_PA_EN R98

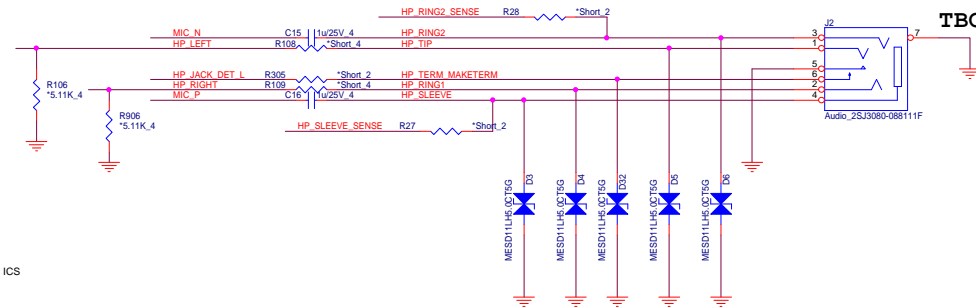
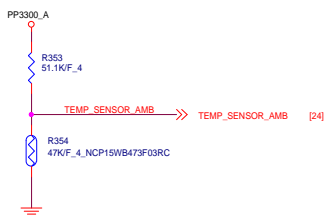
RIGHT CHANNEL



RIGHT CHANNEL = 69.8K TO 1.8V
DEFAULT GAIN AT 15DB



5K TO FILTER LEFT IF NOT ISOLATED



```
11/11/16
DNS C185,C186,J10
```

[illegible]

SUBJECT TO CHANGE PER QUANTA REQUEST

NFC CONNECTOR

SUBJECT TO CHANGE PER QUANTA REQUEST

NPC300 MODULE I2C ADDR: 0x29
NPC300 I2C MAX FREQ = 3.4MHZ

11/11/16
DNS R251,C187,C188,C189,C191,C193,C194,J11

[6] NFC_INT_L << NFC_INT_L

[6] PCH_I2C_NFC_SDA << PCH_I2C_NFC_SDA

[6] PCH_I2C_NFC_SCL << PCH_I2C_NFC_SCL

[6] NFC_RESET_ODL << NFC_RESET_ODL

[6] NFC_FW_DL << NFC_FW_DL

PP5000_NFC_S

PP1800_SENSOR_S

R251 *NFC@100K_2

C187 *NFC@10u/6.3V_4

C188 *NFC@0.1U/10V_2

C189 *NFC@0.1U/10V_2

C194 *NFC@0.1U/10V_2

J11

15 15

14 14

13 13

12 12

11 11

10 10

9 9

8 8

7 7

6 6

5 5

4 4

3 3

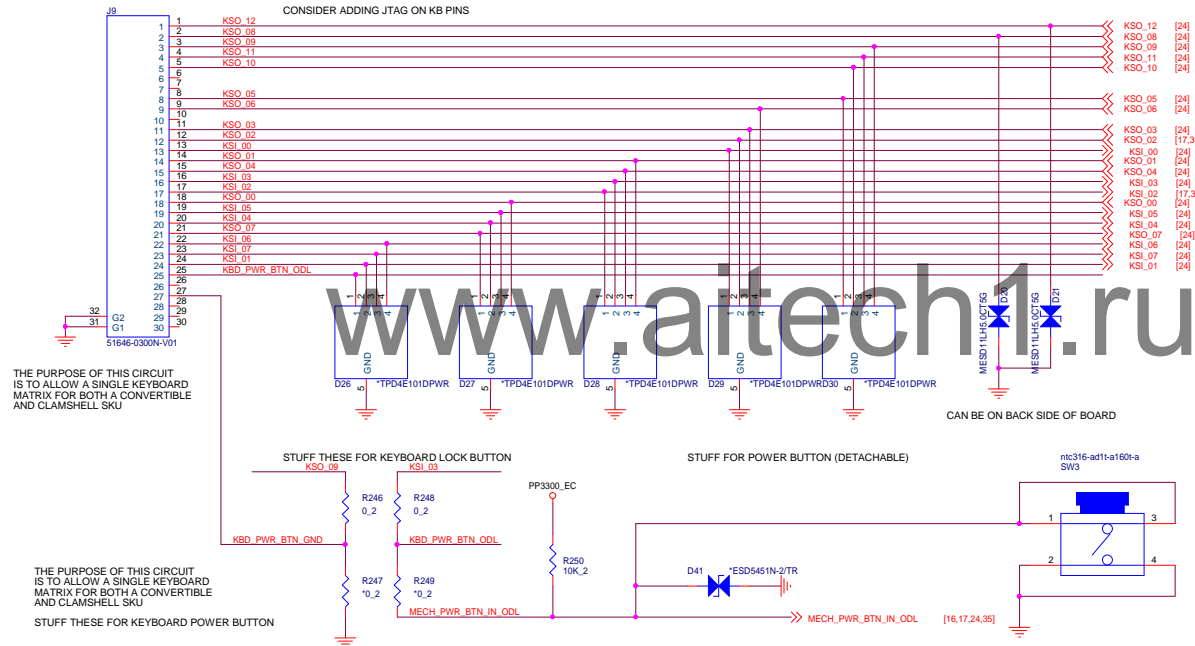
2 2

1 1

NFC@NFC_FFC_15P

BSW REF DESIGN ERRATA MENTIONED
A LEAKAGE PROBLEM INTO THE EC
VIA THE KSO PINS. THE FIX WAS
TO ADD 100K PULLUPS TO 3P3A_EC
ON THE KSO SIGNALS
0C2A COMPATIBLE

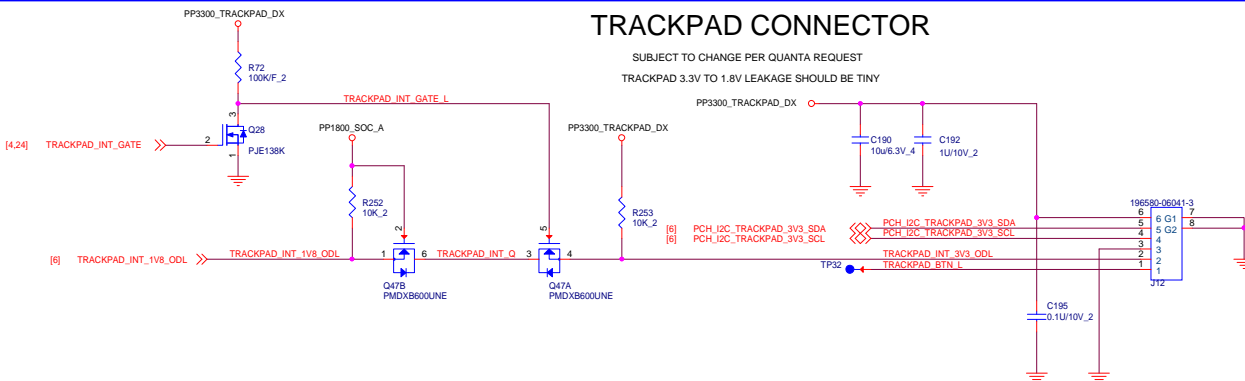
CONSIDER ADDING JTAG ON KB PINS



SUBJECT TO CHANGE PER QUANTA REQUEST
TRACKPAD 3.3V TO 1.8V LEAKAGE SHOULD BE TINY

PP3300_TRACKPAD_DX

CLICKED BY

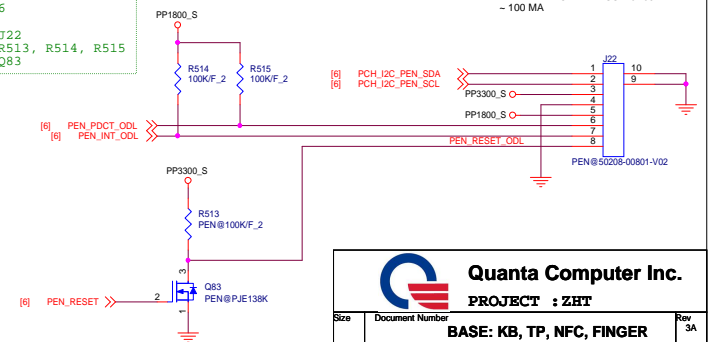


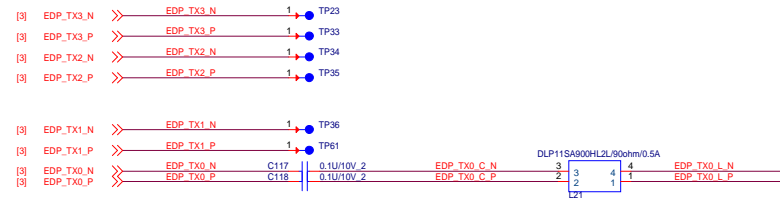
```

8/15/16
ADDED J22
ADDED R513, R514, R515
ADDED Q83

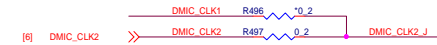
```

PEN 7-BIT I2C ADDRESS = 0X09
~ 100 MA



[illegible]

ADDED R496, R497



PP1800_SENSOR_U

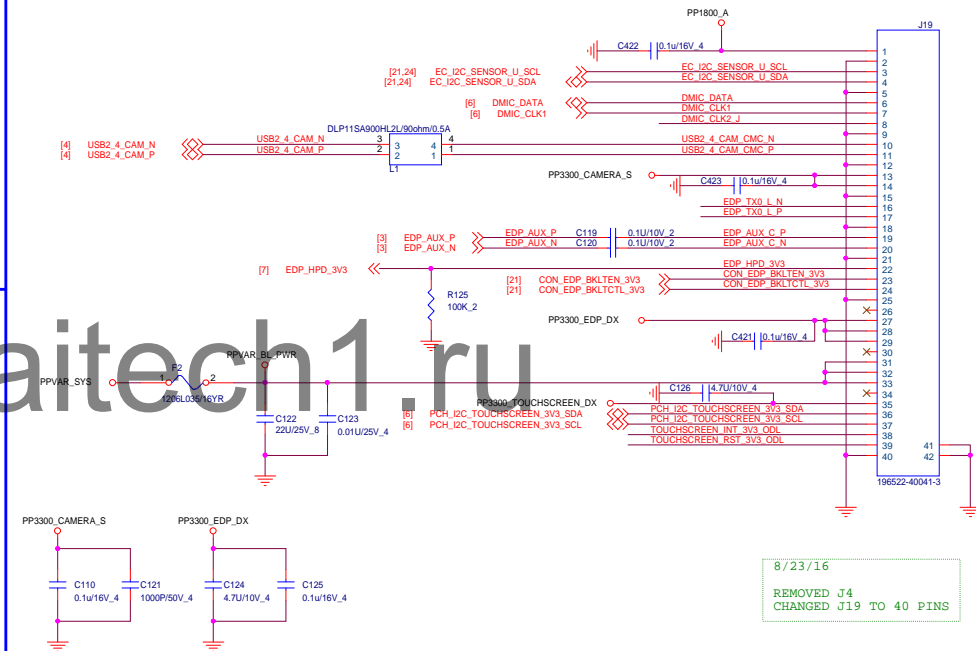
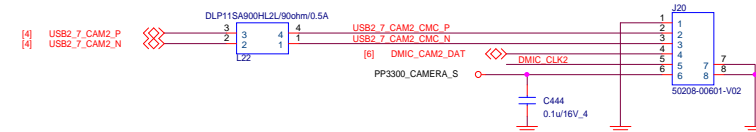
[21:24] LID_ACCEL_INT_L
EC_I2C_SENSOR_U_SDA
[21:24] EC_I2C_SENSOR_U_SCL

I2C MODE: (SET BY NC'S Tie to VDDIO)
I2C 8bit ADDRESS: 0X3E (SDO_ADDR = VDDIO)
I2C MAX SPEED = 3.4MHZ

PP1800_SENSOR_U

C108 4.7uF/10V_4
C109 0.1uF/16V_

11/11/16
DNS Q14,Q15,R121,R122
REMOVED R119, R120

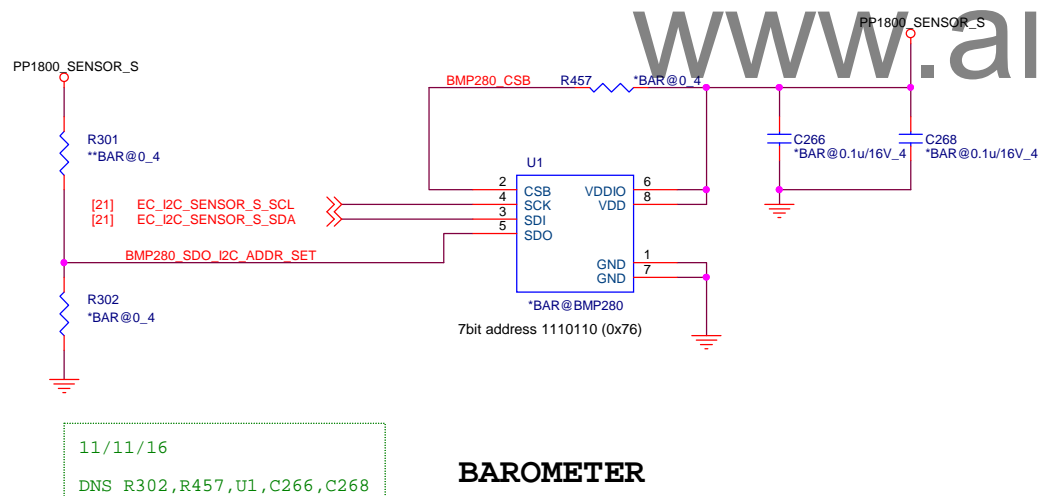
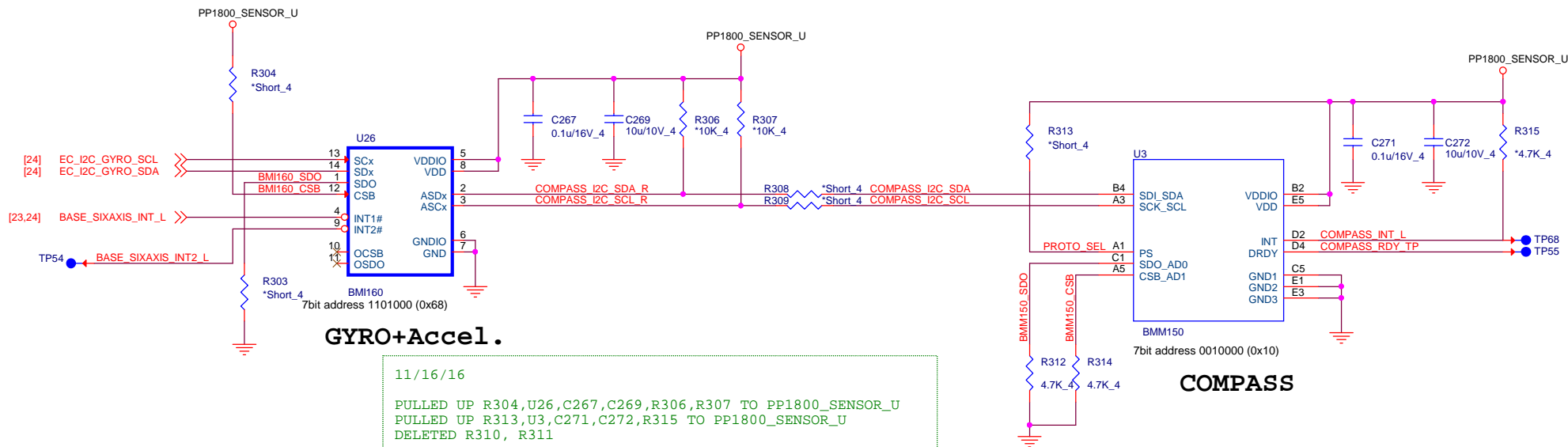
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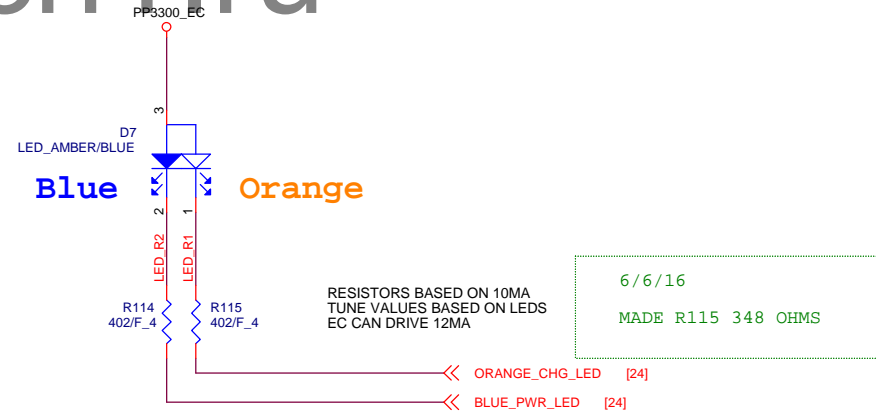
ADDED USB2_7_CAM2_P/N
ADDED J20
ADDED C444

```

```
RENAMED DIMC_CAM2_DAT TO DMIC_CAM2_DATA
REMOVED TP85, TP86
RENAMED DIMC_CAM2_CLK TO DMIC_CLK2
```



CHARGE/BATTERY LED

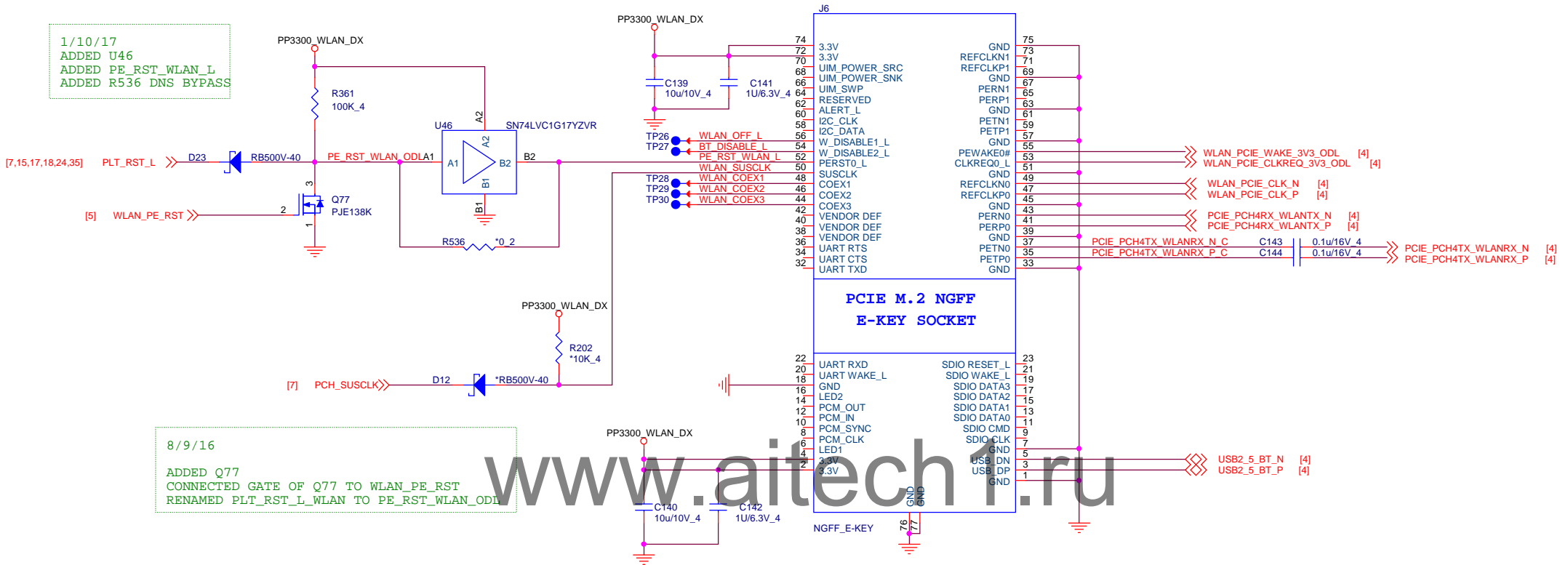


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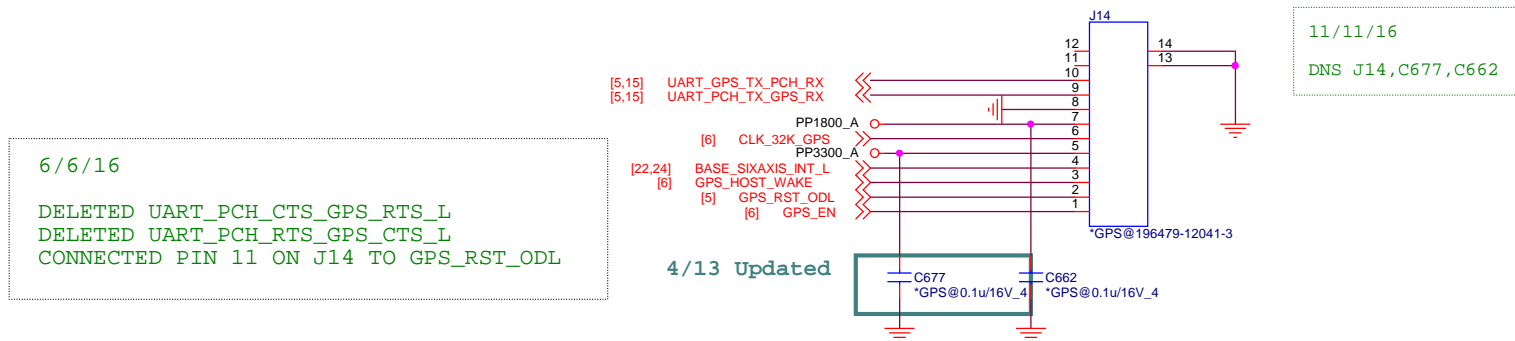
PROJECT : ZHT

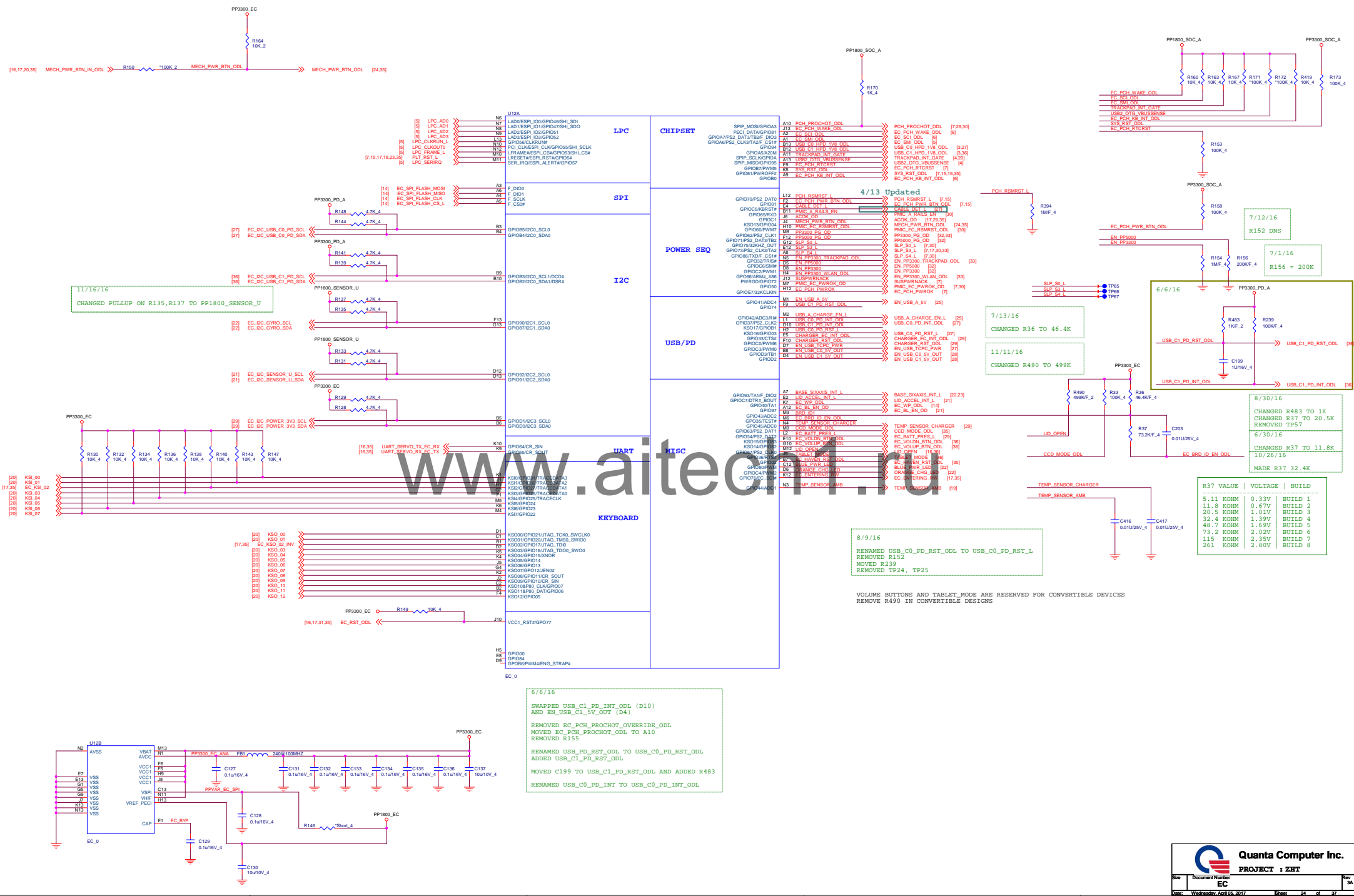
Size	Document Number	Rev
	COMPASS, BARO, GYRO, LID	3A
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M.2 connector

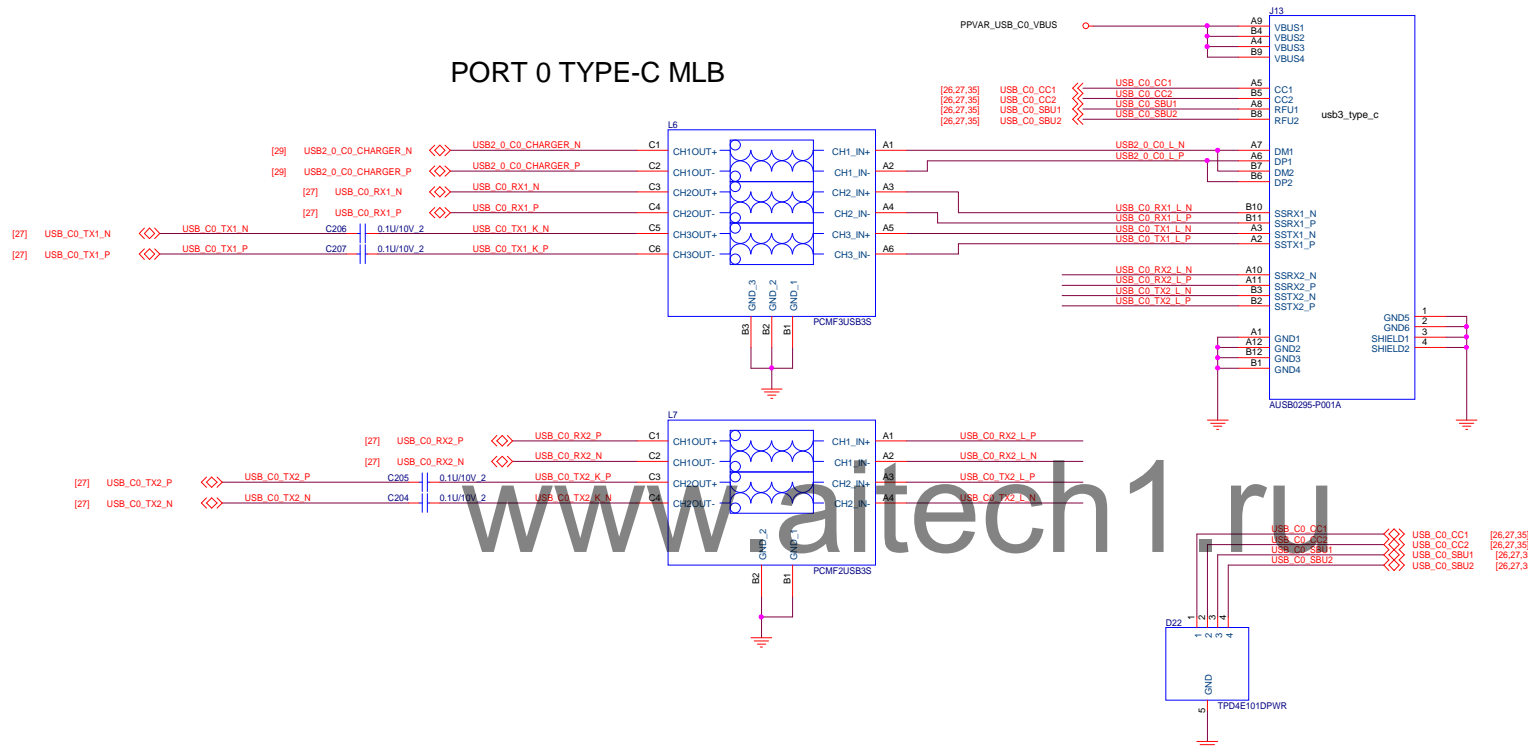


GPS connector





PORT 0 TYPE-C MLB



From PCH

TO CONNECTOR

6/6/16

RENAMED USB_PD_RST_ODL TO USB_C0_PD_RST_ODL

8/9/16

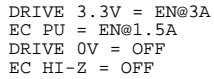
RENAMED USB_C0_PD_RST_ODL TO USB_C0_PD_RST_L
MOVED PIN 13 TO PP3300_PD_ANA
MOVED C158 TO PP3300_PD_ANA

8/15/16

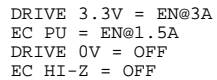
FLOATED TEST_EN

MOTHERBOARD PORT

PROVIDES ESD PROTECTION, PLACE CLOSE TO CONNECTOR



PROVIDES ESD PROTECTION, PLACE CLOSE TO CONNECTOR



D35

33KOHM=1.51A MIN
1.78A MAX

16.5KOHM=3.01A MIN
3.56A MAX

PPVAR_USB_C0_VBUS

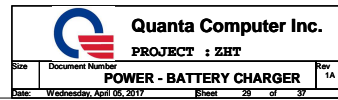
```
20UF LOAD, 21V TO <0.8V IN <80MS
20UF LOAD, 5V TO <0.8V IN <45MS
0402 CAN DISSIPATE 400MW FOR 80MS
0603 CAN DISSIPATE 400MW FOR 500MS
0805 CAN DISSIPATE 400MW FOR 2000MS
```



PROJECT : ZHT

Size	Document Number	Rev
	USB C 5V OUT	1A
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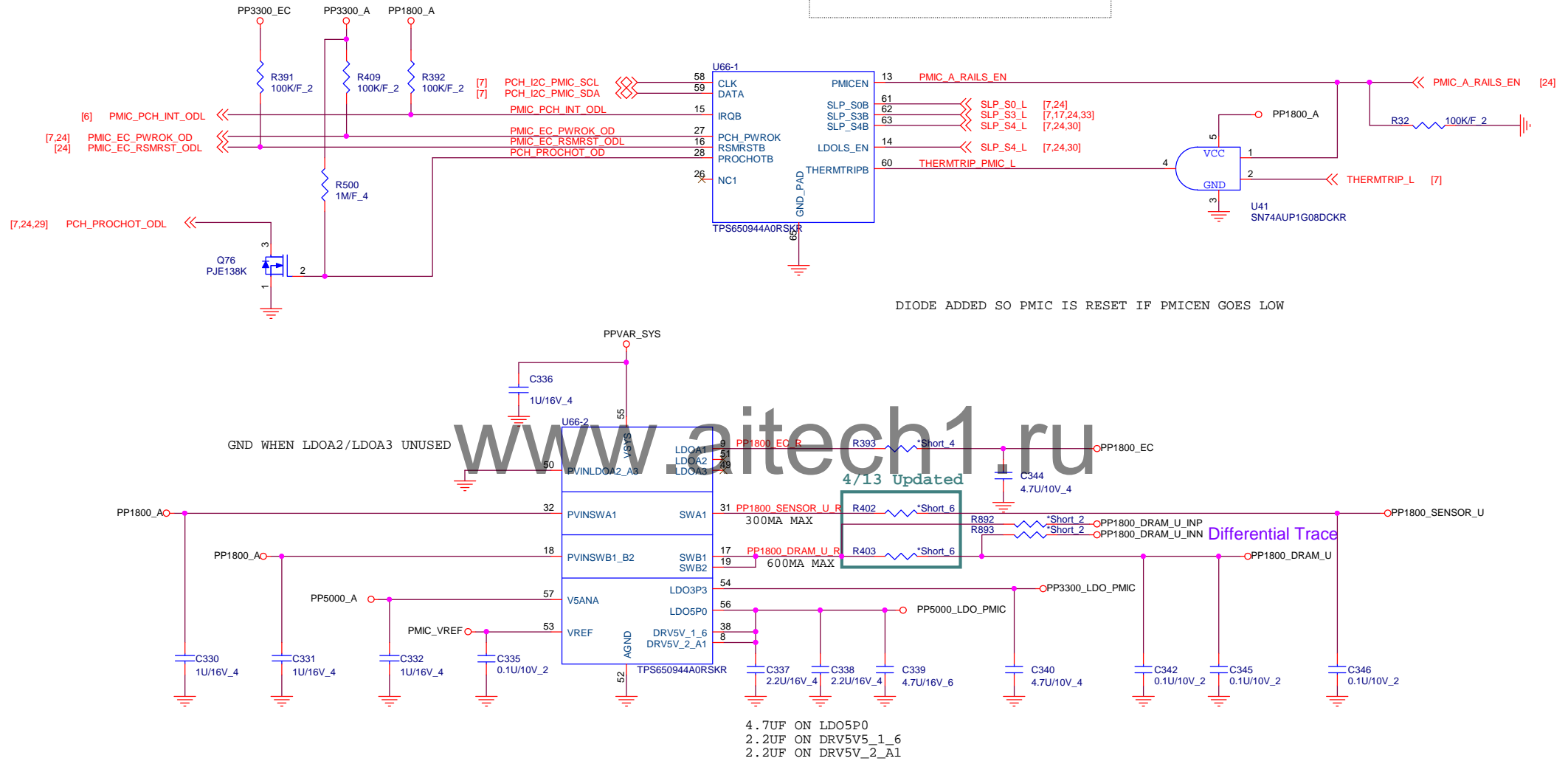
ROHM BUCK-BOOST CHARGER



POWER - PMIC LOGIC

6/6/16

STUFFED D2
ADDED R475
CHANGED R32 TO 51K
ADDED D33

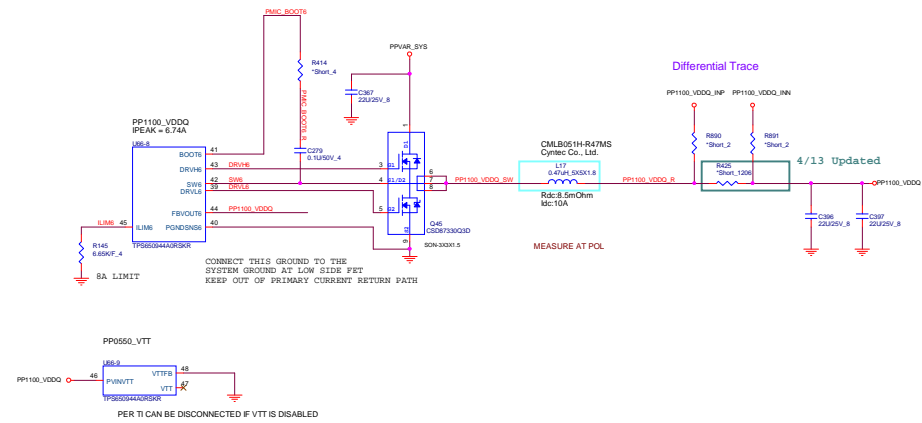
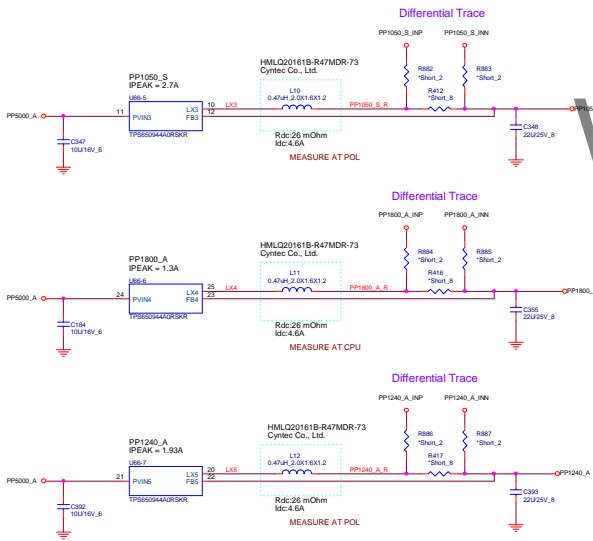
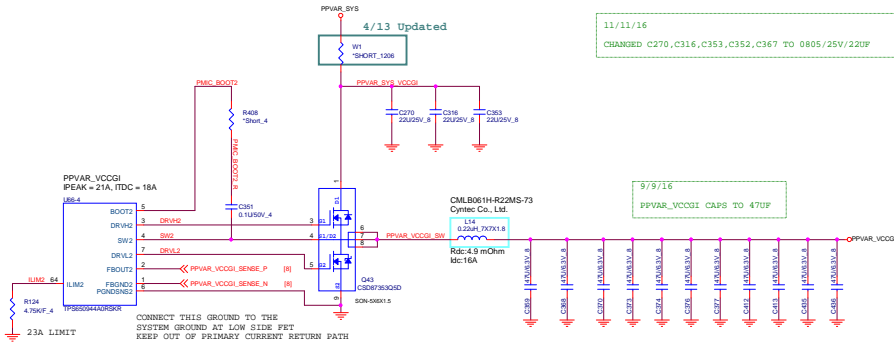
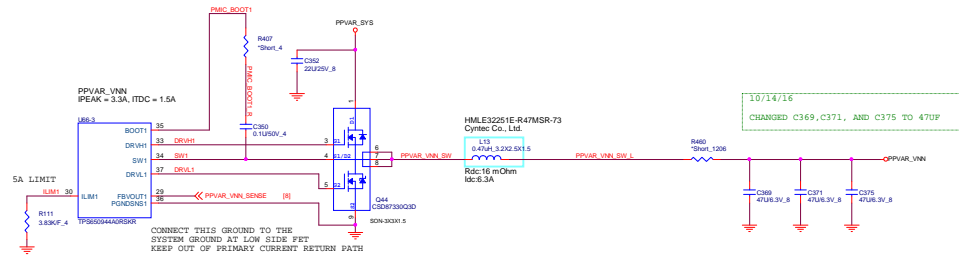


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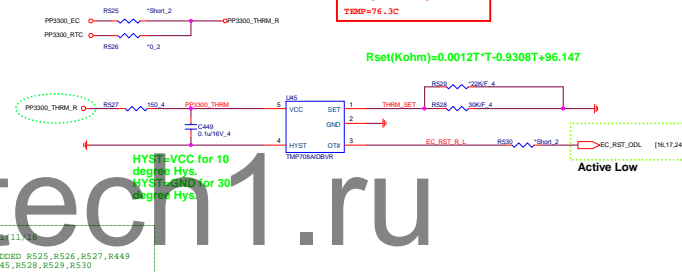
PROJECT : ZHT

Size	Document Number	Rev
	POWER - PMIC LOGIC	1A
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POWER - PMIC RAILS

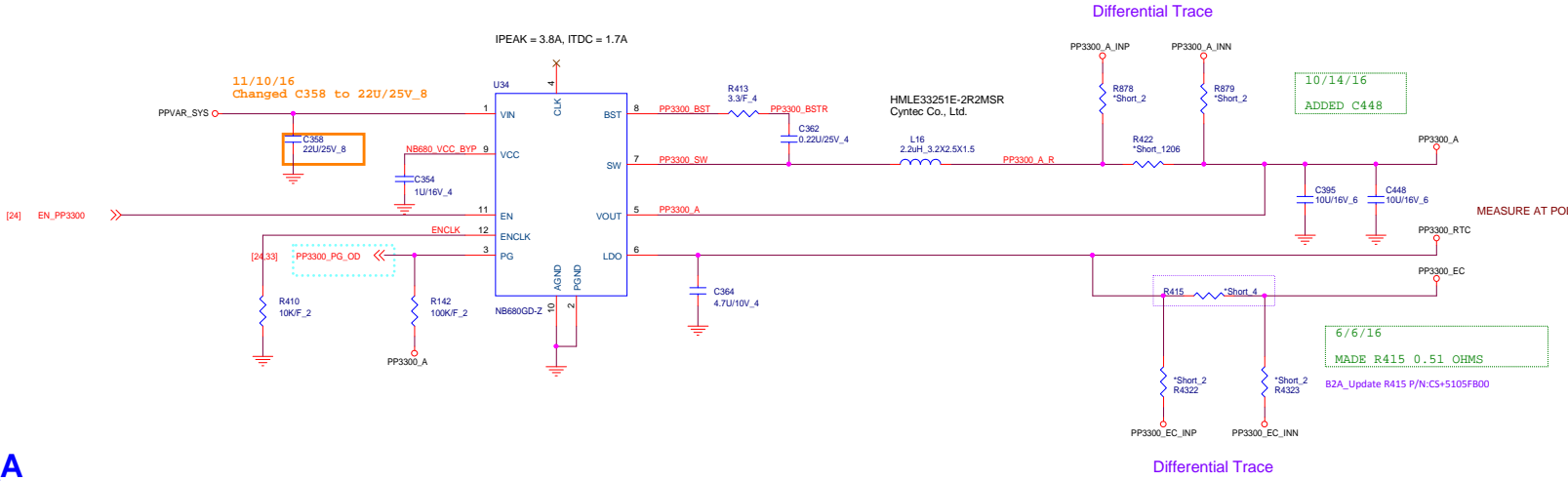


Thermal Protector

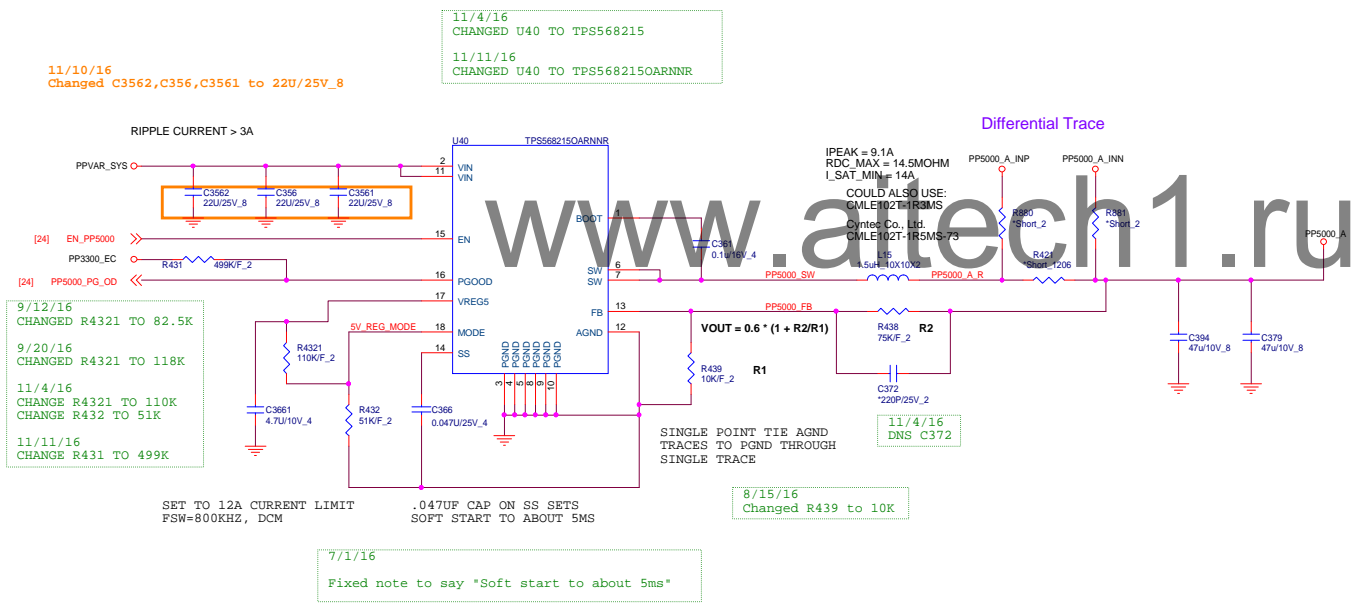


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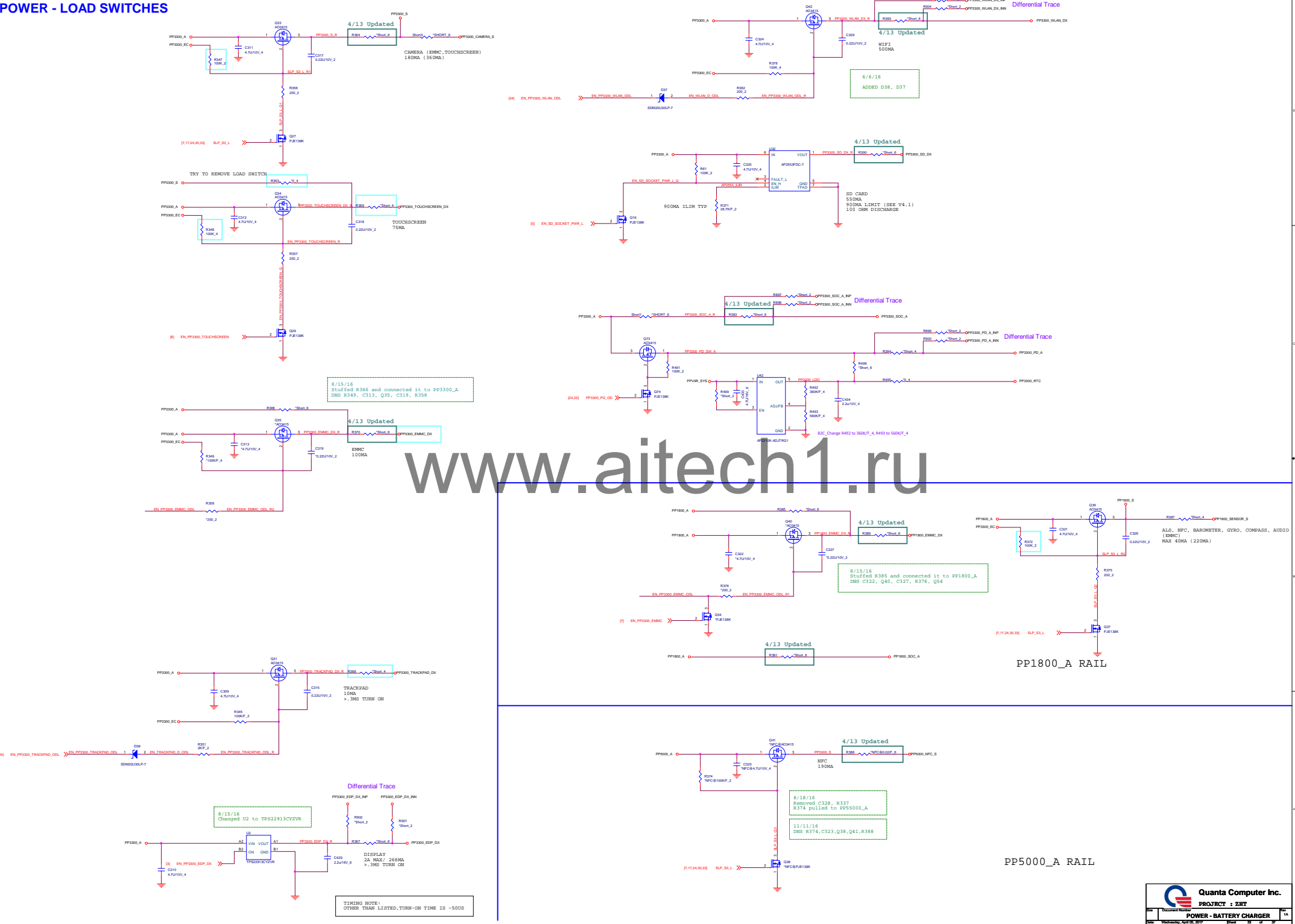
PP3300_A

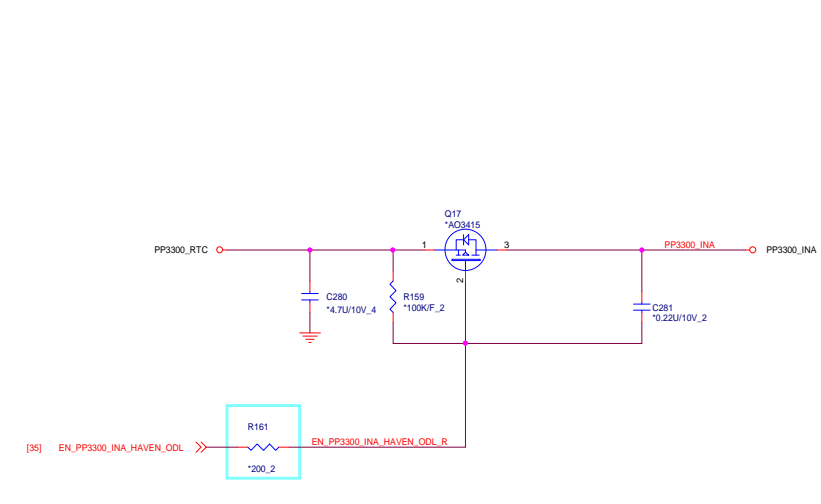
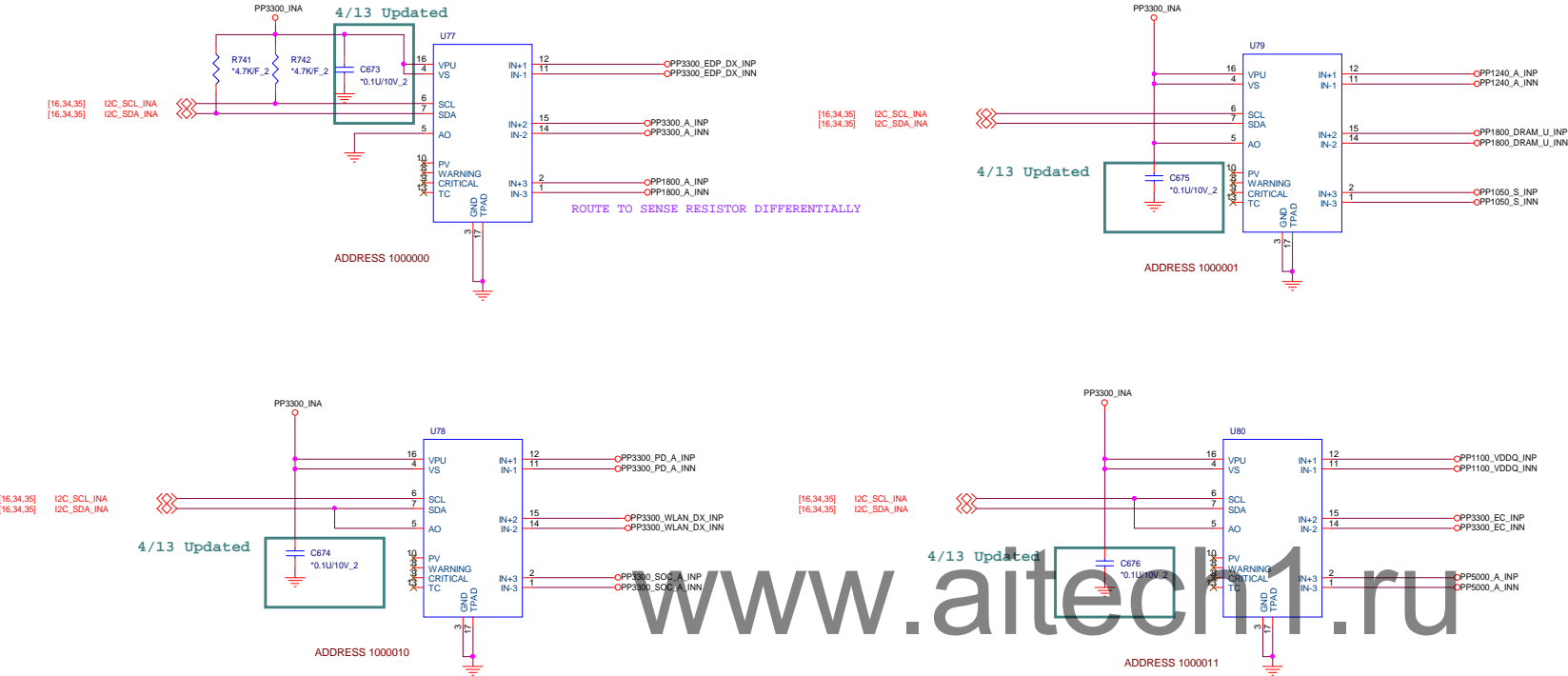


PP5000_A

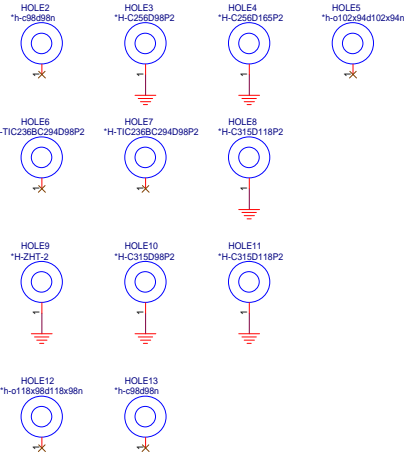


POWER - LOAD SWITCHES



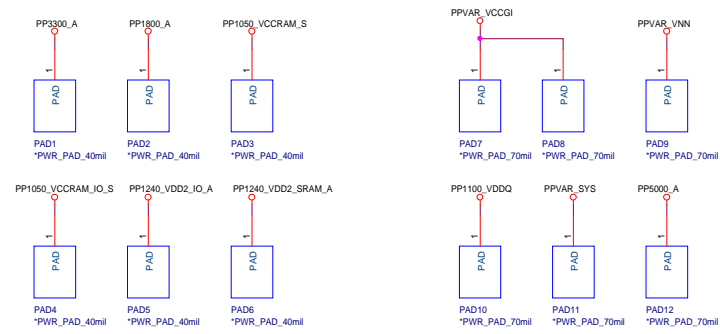


HOLES

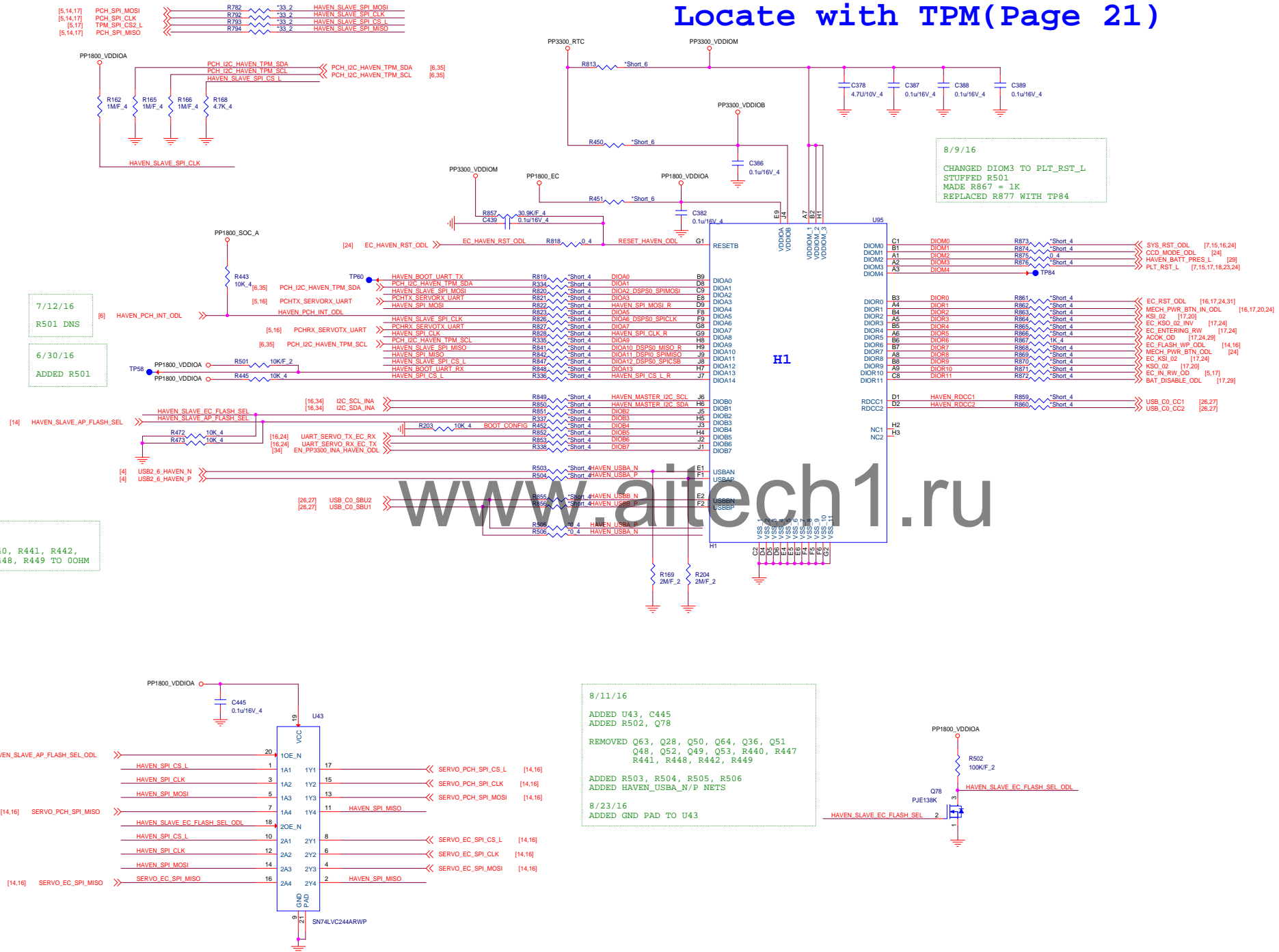


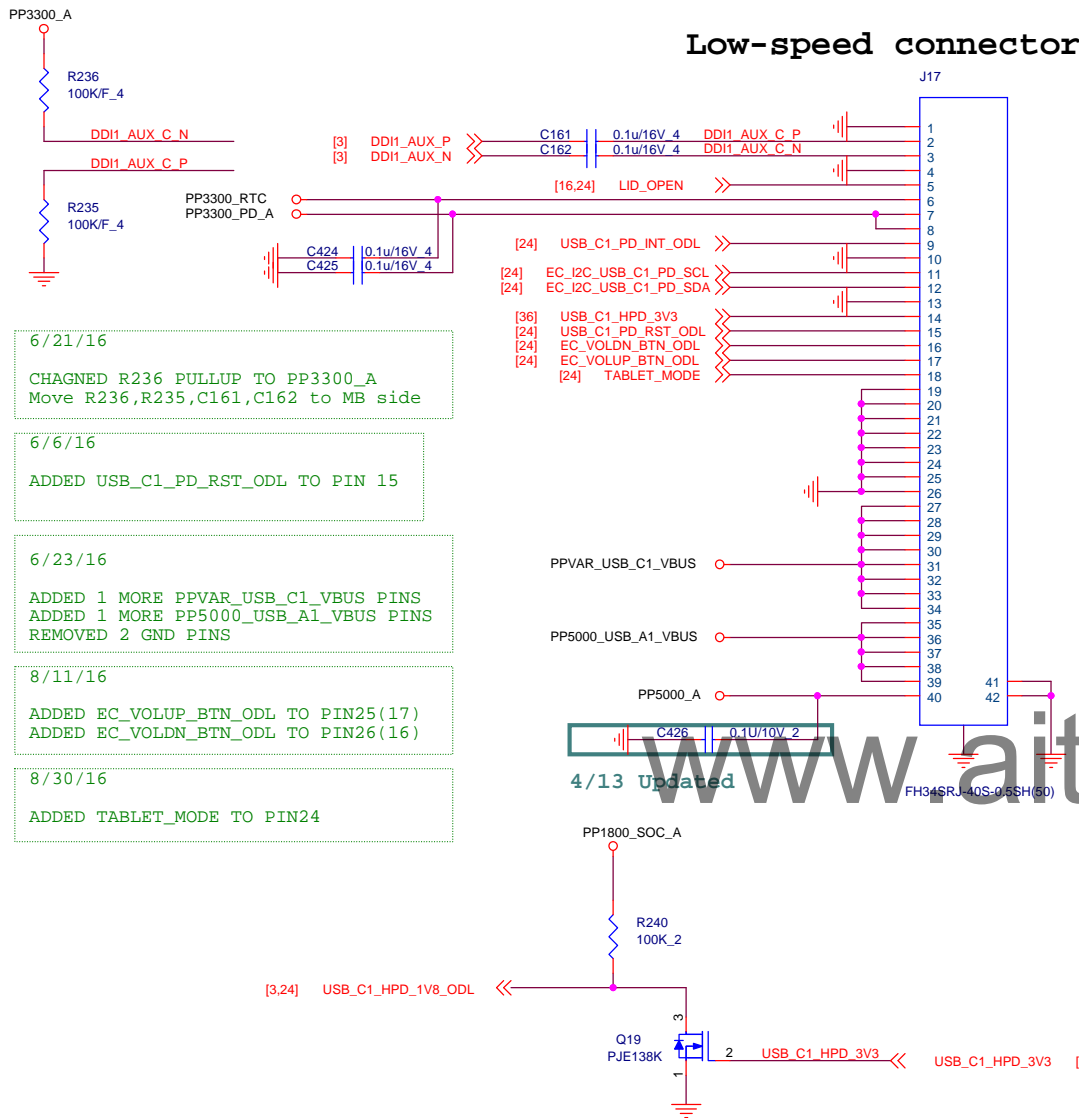
POWER TEST PAD

6/6/16
Remove solder mask on PAD 1 - PAD12
6/29/16
Add solder mask on PAD 1 - PAD12

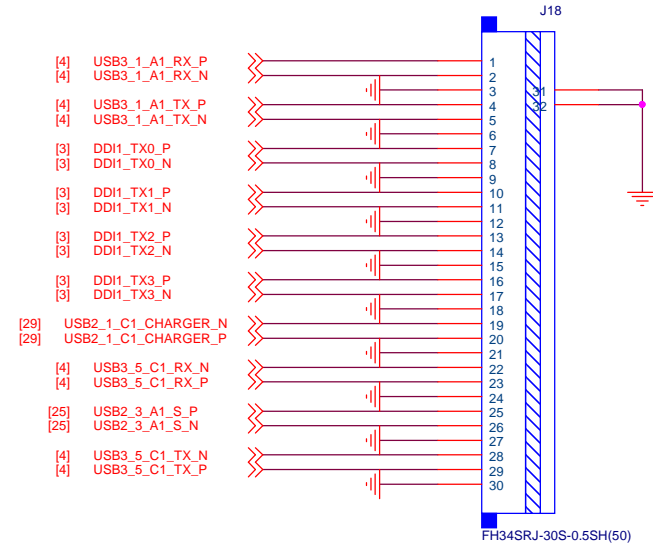


Locate with TPM(Page 21)





High-speed connector



11/11/16

RENAMED USB3_5_A1_X TO USB3_5_C1_X
RENAMED USB3_1_C1_X TO USB3_1_A1_X



Quanta Computer Inc.

PROJECT : ZHT

Size	Document Number	Rev
	MLB CONNECTORS	1A

Date: Wednesday, April 05, 2017

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[illegible]