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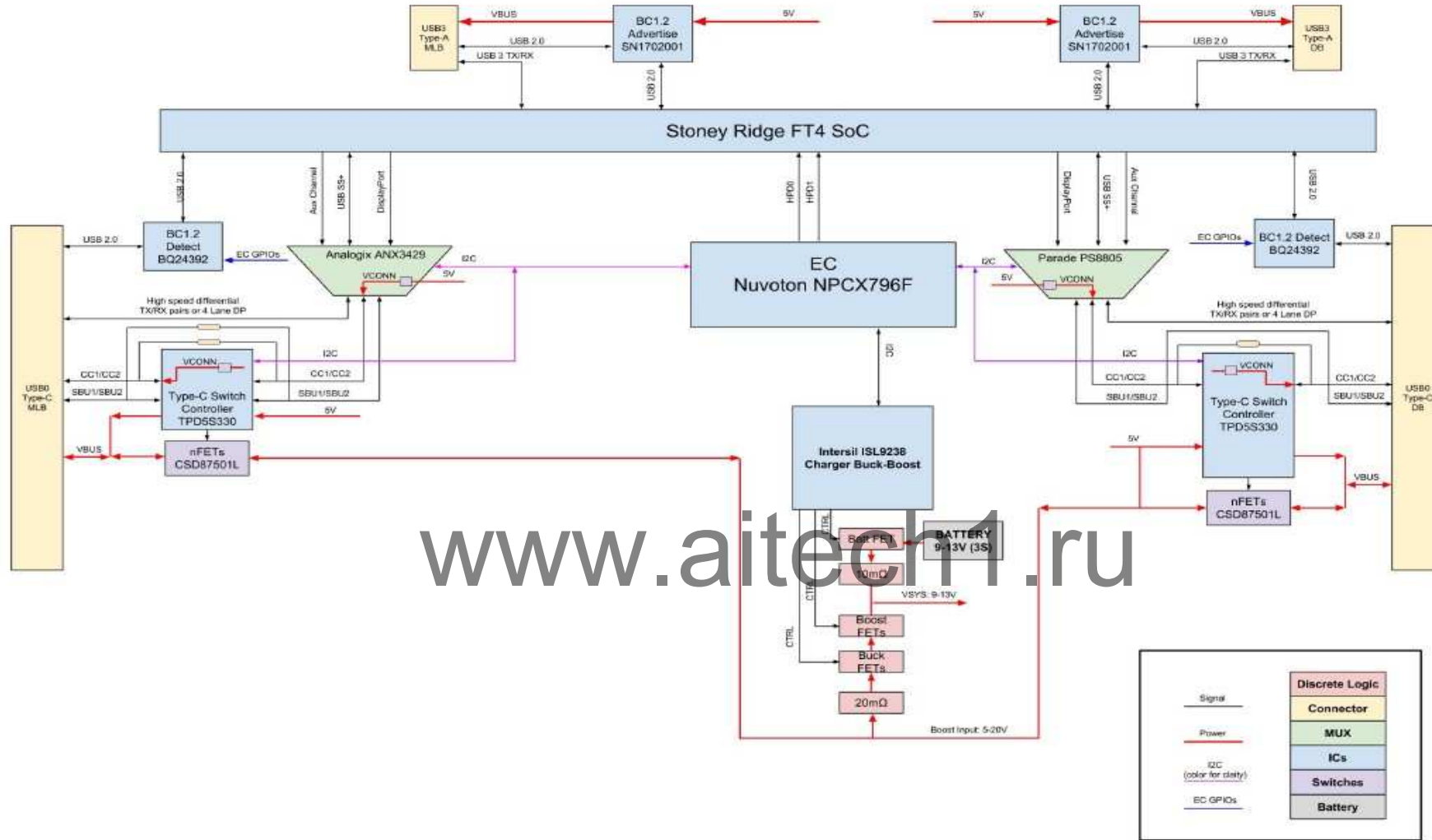
[illegible]

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# Grunt USB Block Diagram

Accurate: 2017/10/11



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	USB TYPE-C BLOCK DIAGRAM	2A
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# Grunt I2C Map

2017-10-12

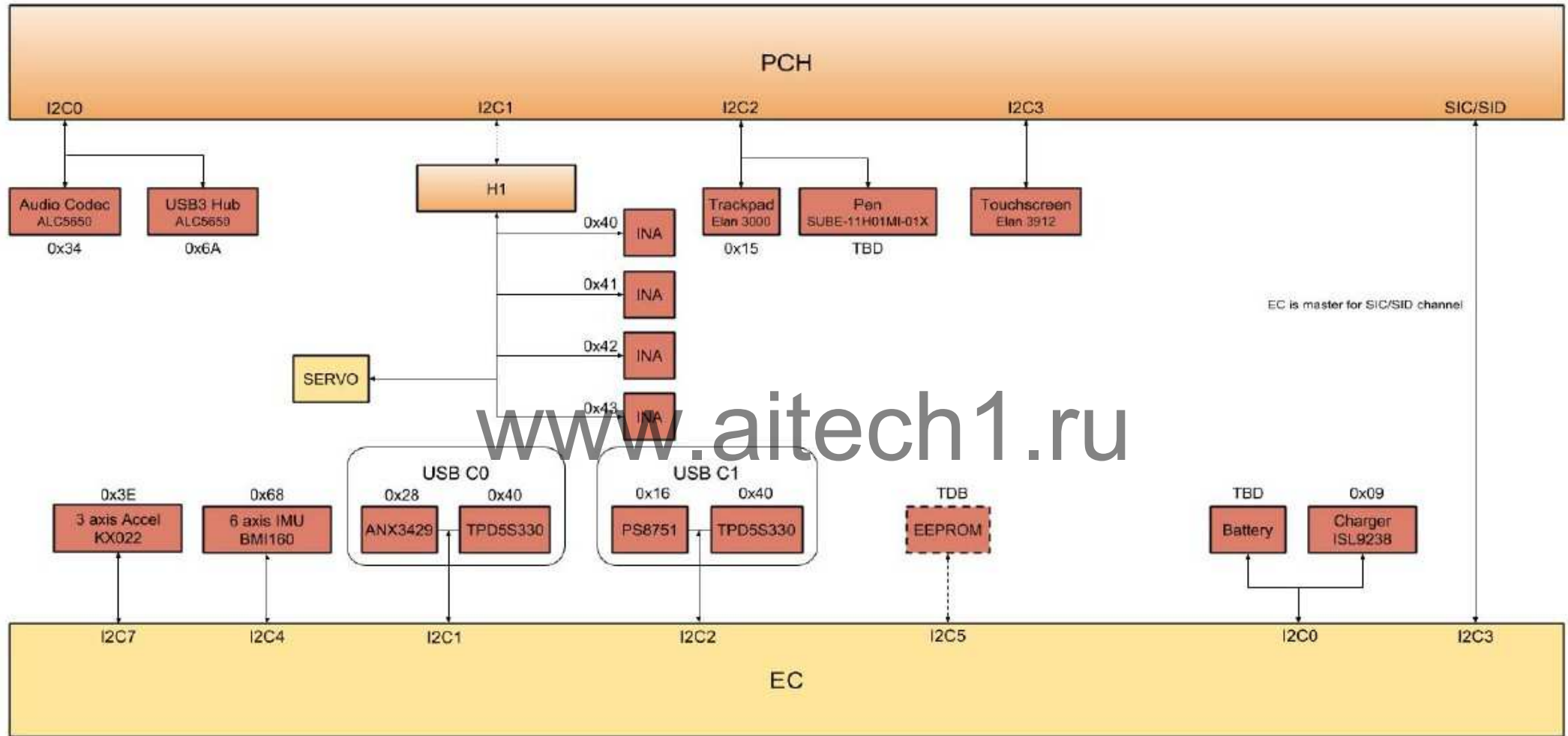
## LEGEND

I2C Master & Slave

I2C Master

I2C Slaves

I2C addresses given in 7-bit form

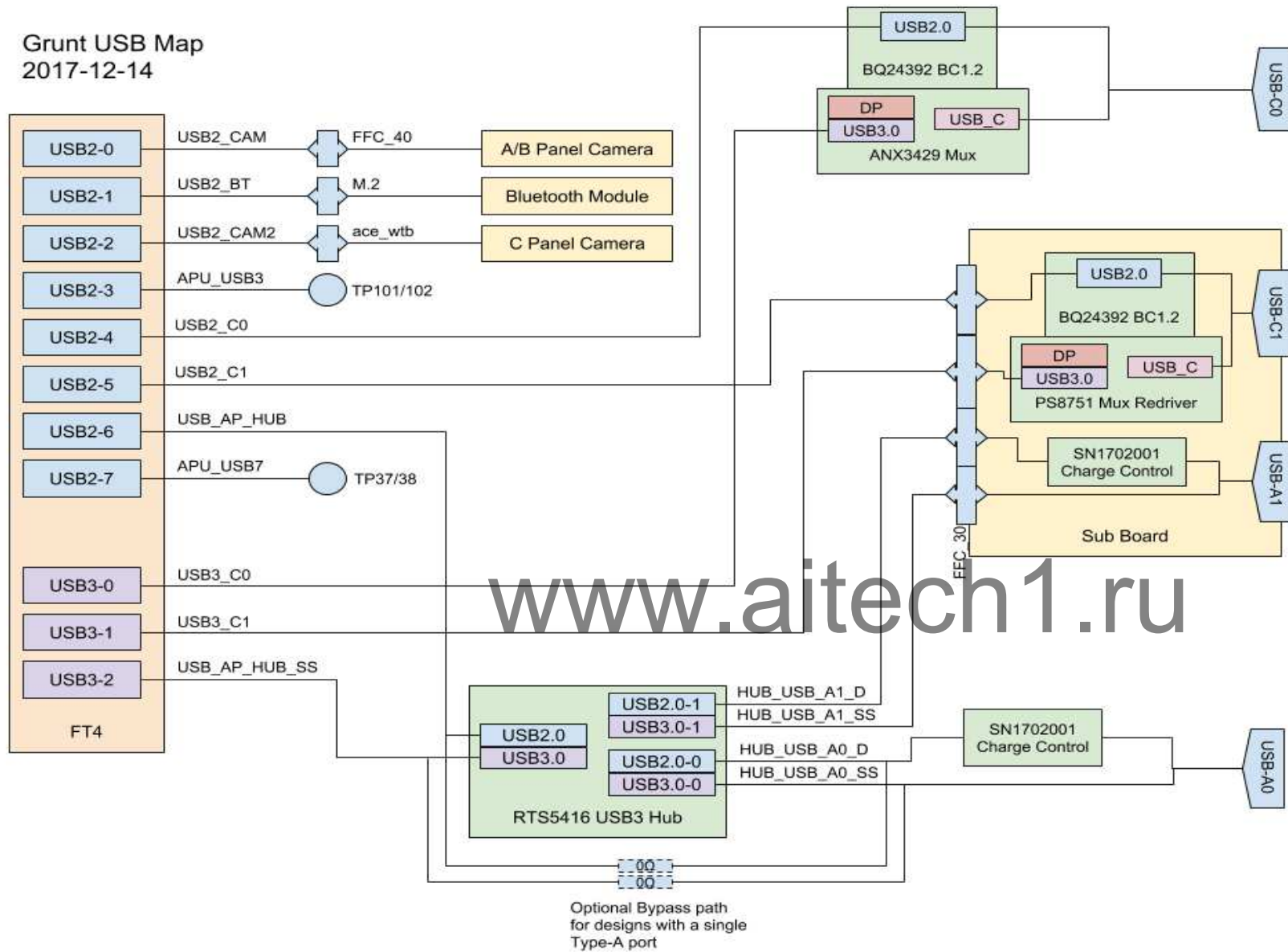


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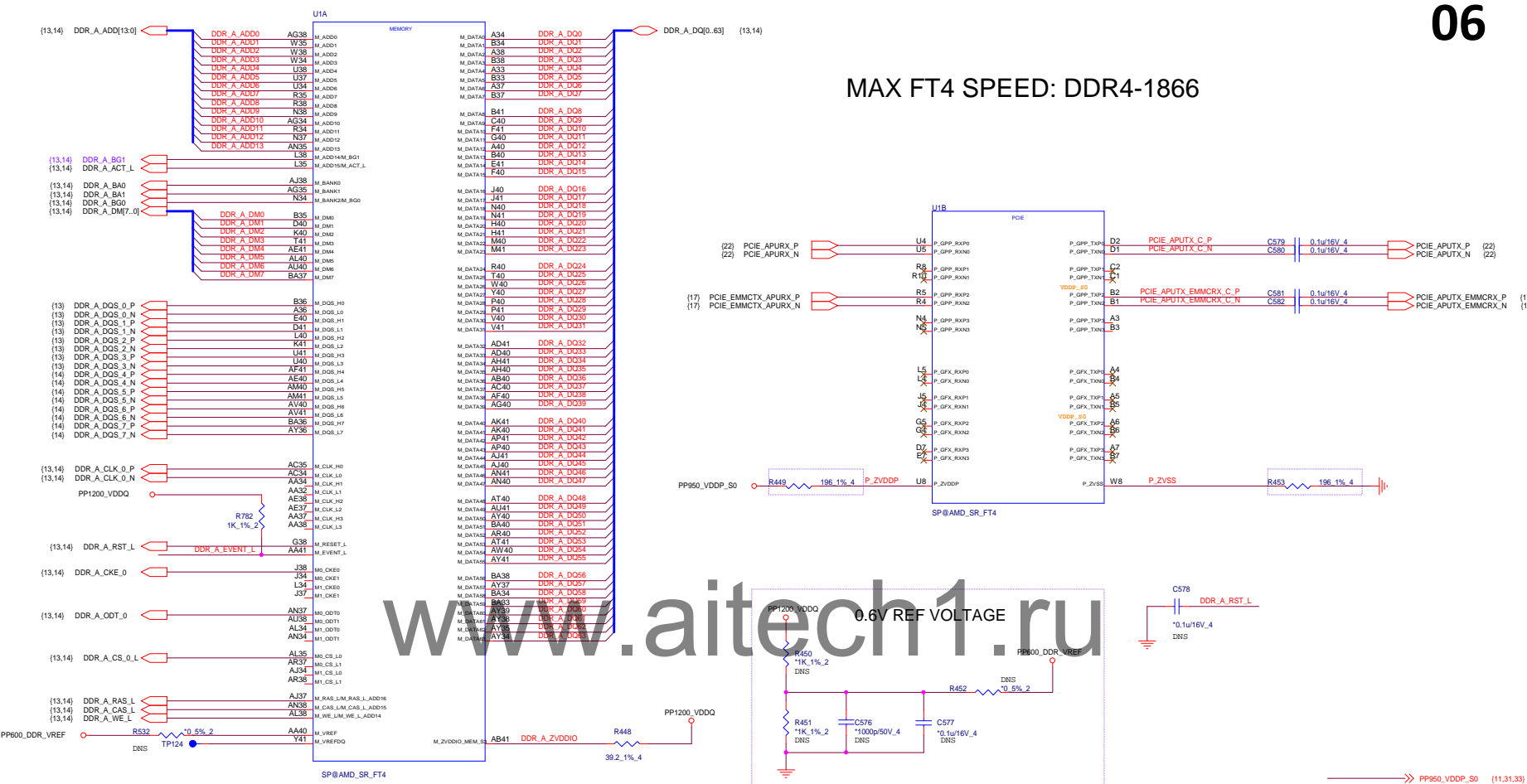
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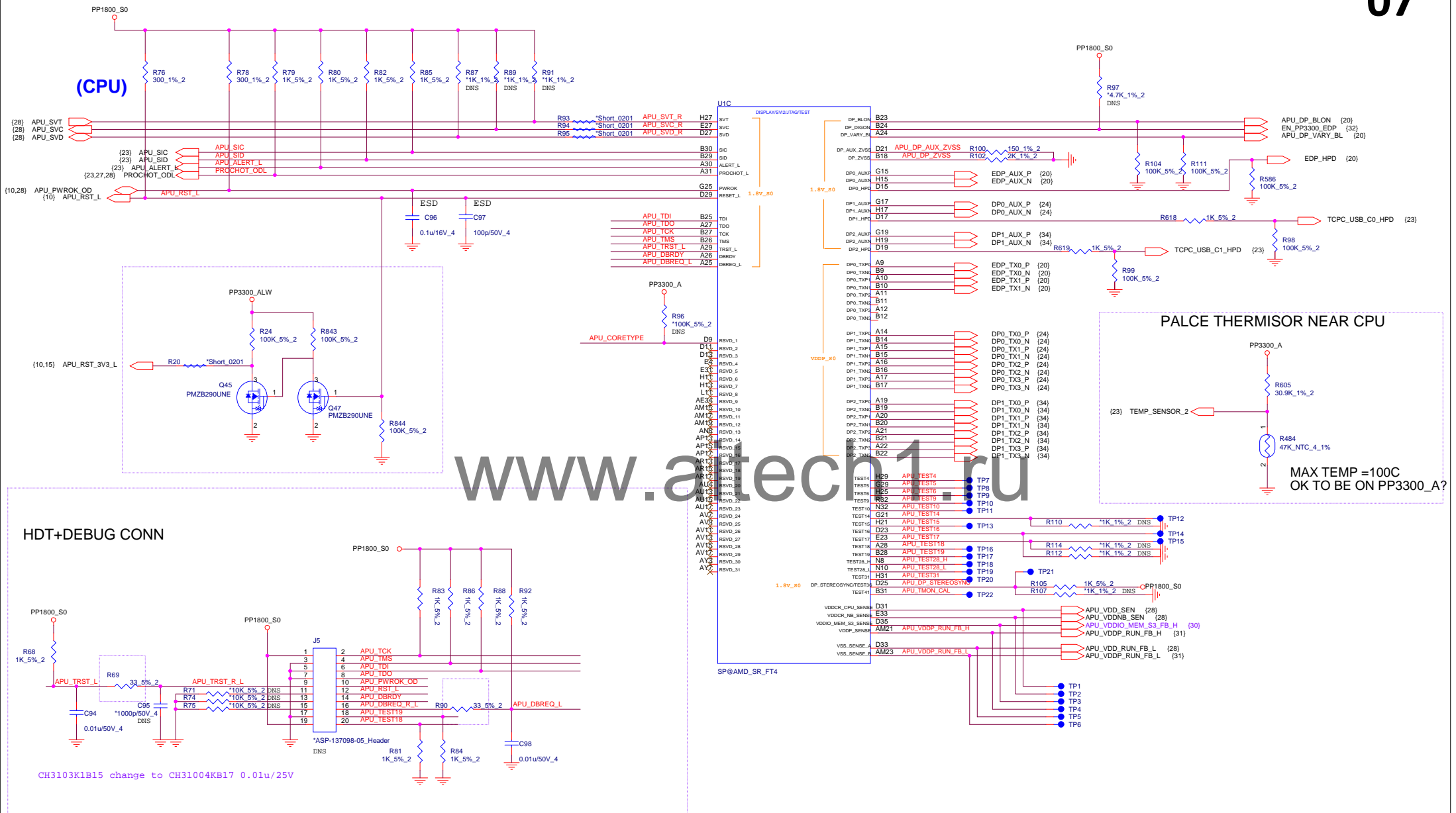
# Grunt USB Map 2017-12-14





MAX FT4 SPEED: DDR4-1866



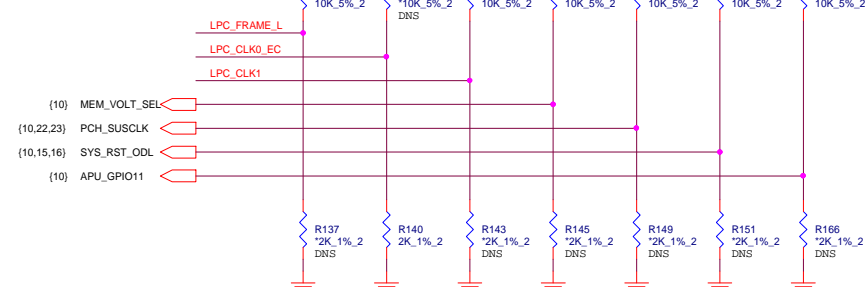




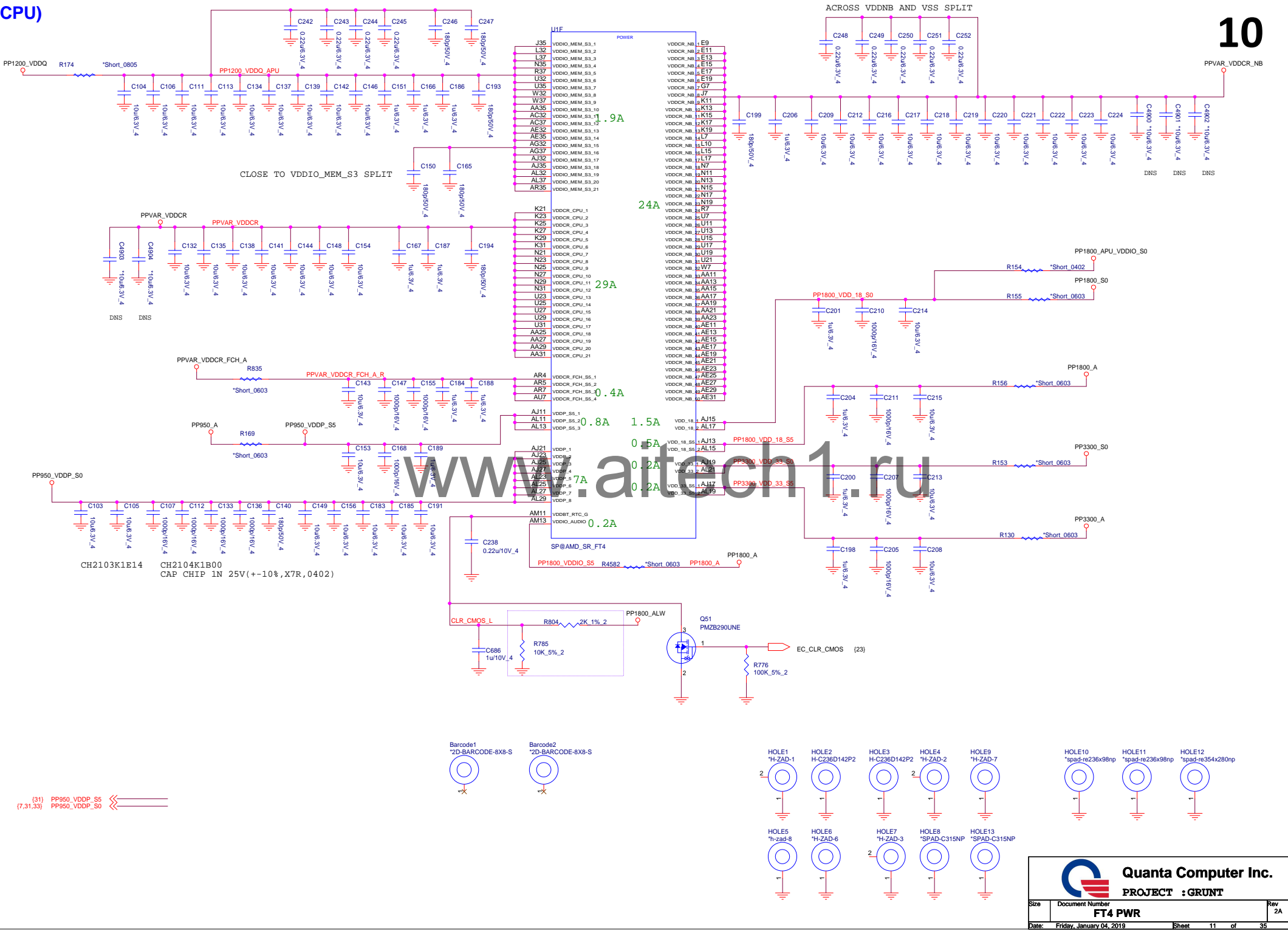


LPC\_SMI DOES NOT WORK PROPERLY ON FT4.  
THE SIGNAL IS REROUTED TO ANOTHER PIN AS PER THE FT4 ERRATA.

PU	SPI ROM (DEFAULT)	BOOT FAIL TIMER ENABLED	CLKEN ENABLED (DEFAULT)	ENHANCED RESET LOGIC	COIN BATT ON BOARD (DEFAULT)	NORMAL RESET MODE (DEFAULT)	LDI RST#/PG OUTPUT TO APU (DEFAULT)	1.6V SPI ROM (DEFAULT)	ENHANCED RESET
PD	LPC ROM	BOOT FAIL TIMER DISABLED (DEFAULT)	CLKEN DISABLED	TRADITIONAL RESET LOGIC	COIN BATT NOT ON BOARD	SHORT RESET MODE	OUTPUT TO PADS	3.3V SPI ROM	TRADITIONAL RESET (DEFAULT)

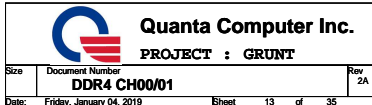




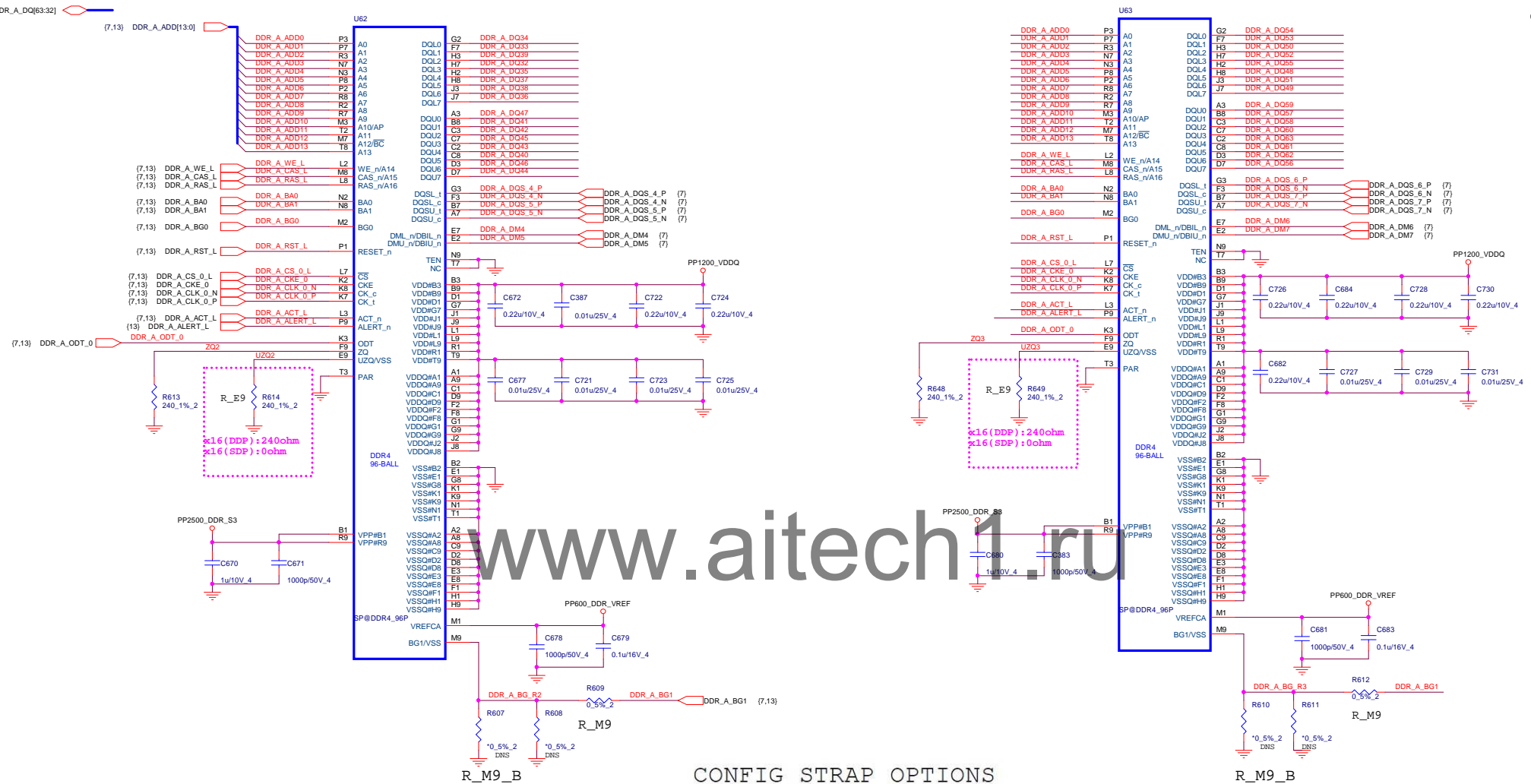




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## On board memory(OBM)



SDP = 4GB

DDP = 8GB

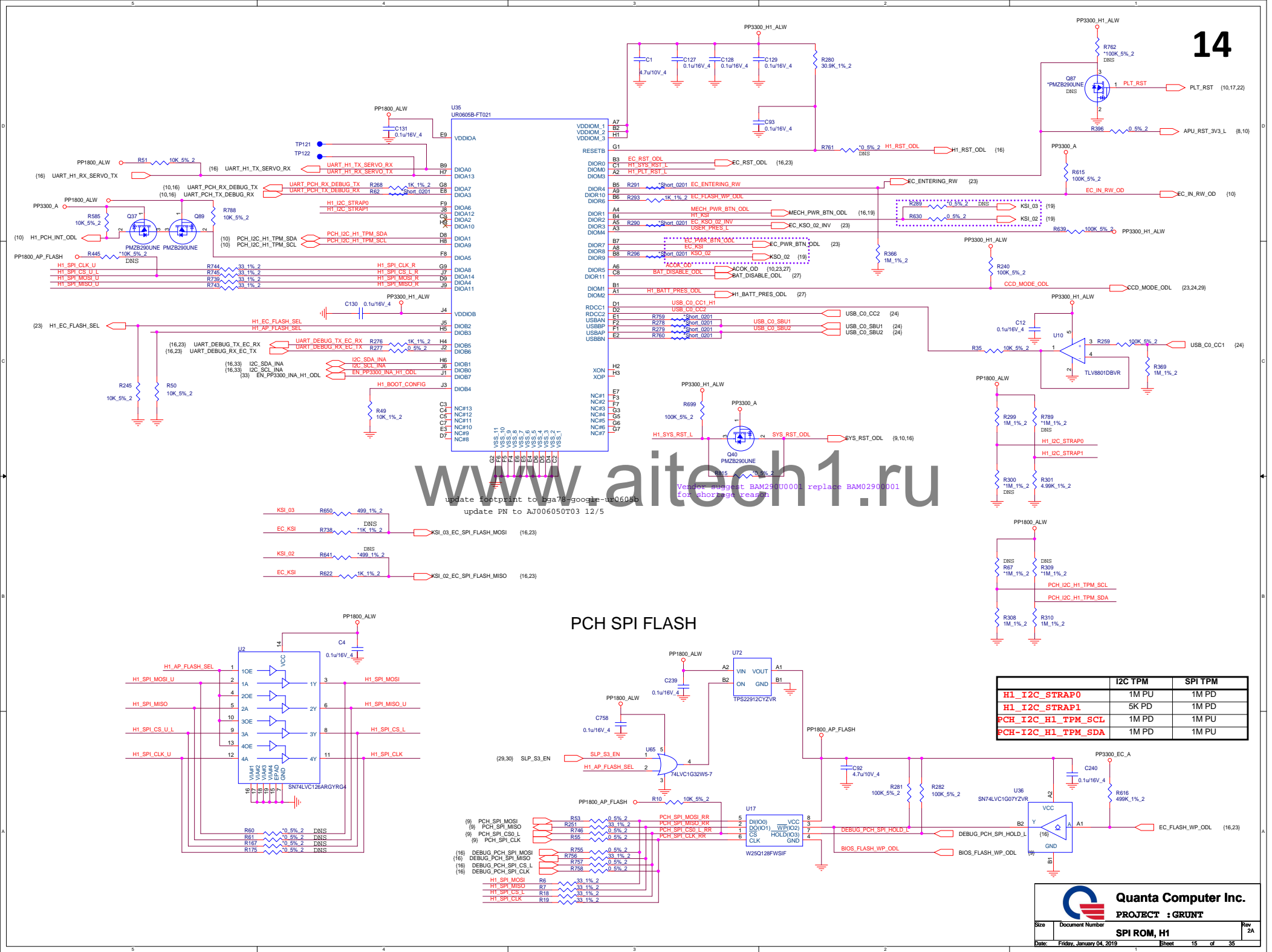
## SDP VS. DDP DRR4 STUFF OPTIONS

	SDP	DDP
R_E9	0 OHM	240 OHM
R_M9	OPEN	0 OHM
R_M9_B	0 OHM	OPEN
R_B9	OPEN	39 OHM

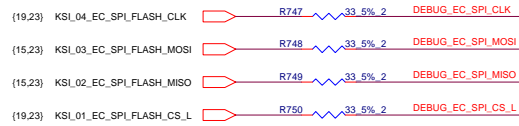
## CONFIG\_STRAP OPTIONS

CONFIG_STRAP	4	3	2	1	DDR4 IC	DDR4 P/N
0	0	0	0	0	HYNIX 8GBIT	H5AN8G6NAFR-UHC
0	0	0	0	1	HYNIX 16GBIT DDP	H5ANAG6NAMR-UHC
0	0	0	1	0	MICRON 8GBIT	MT40A512M16JY-083E
0	0	0	1	1	MICRON 16GBIT DDP	MT40A1G16KNR-075E
0	0	1	0	0	SAMSUNG 8GBIT	K4A8G165WB-BCRC
0	0	1	0	1	SAMSUNG 16GBIT DDP	K4AAG165WB-MCRC
0	0	1	1	0		
0	0	1	1	1		
0	1	0	0	0		
0	1	0	0	1		
0	1	0	1	0		
0	1	0	1	1		
0	1	1	0	0		
0	1	1	0	1		
0	1	1	1	0		
0	1	1	1	1		



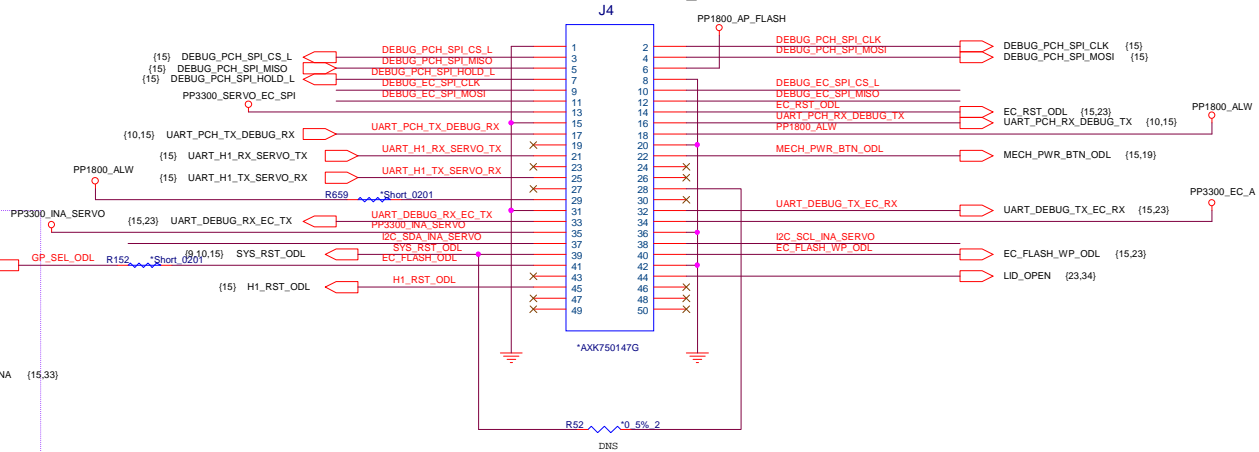


## SPI SERIES RESISTORS



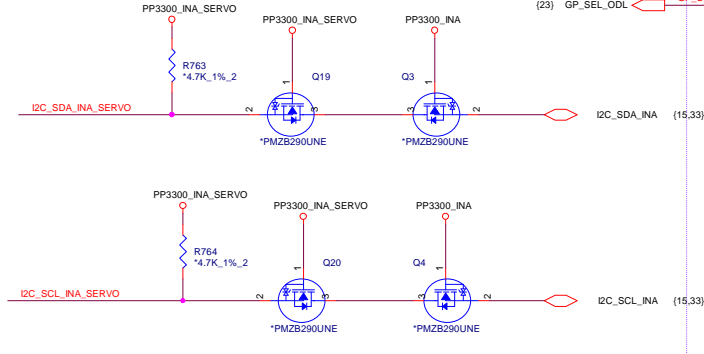
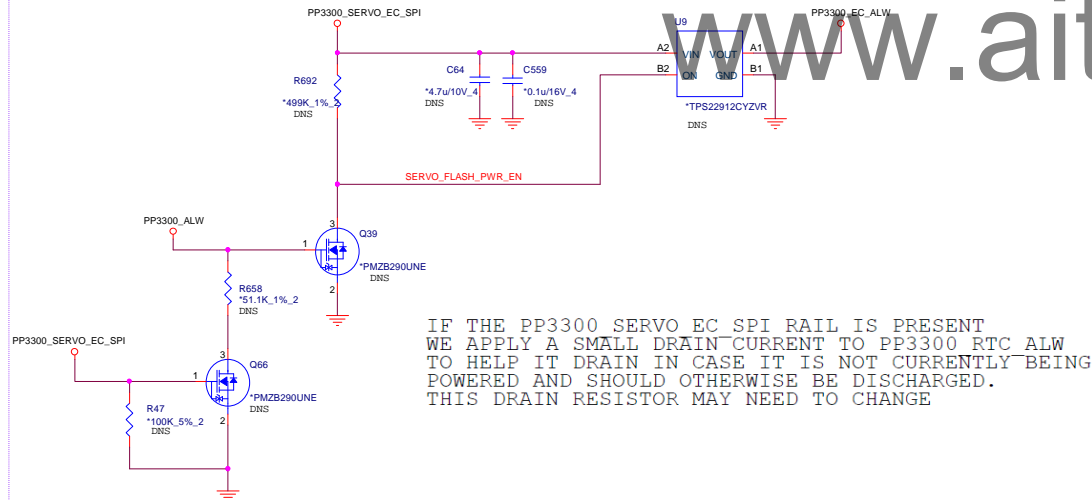
## SERVO HEADER

Place EC, PCH SPI FLASH, and SERVO as close as possible  
MP\_DNS



WIRE 0-OHM TO CONNECT SERVO WARM\_RST  
BUTTON TO WARM\_RST ON PCB

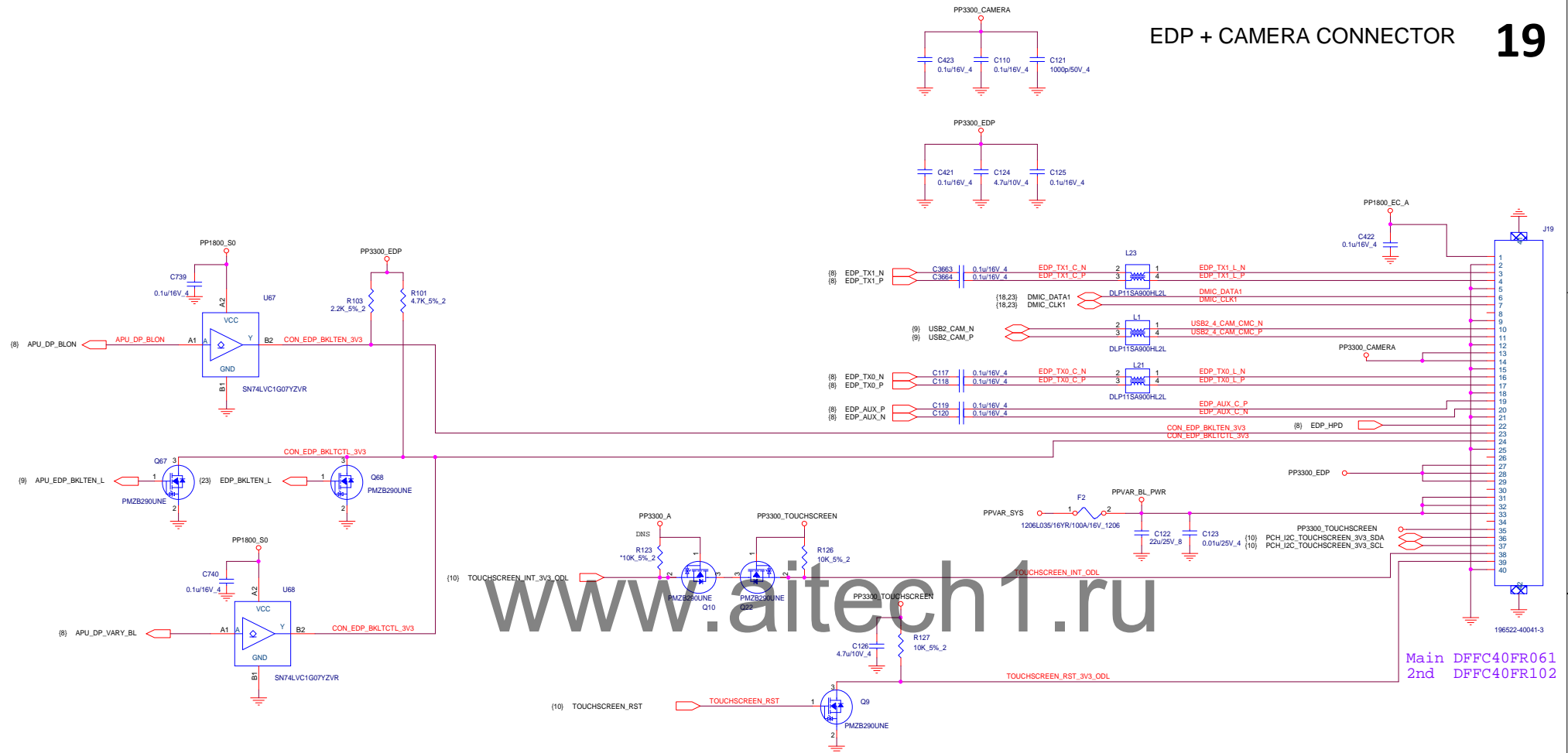
## MP\_DNS

INA LEAKAGE PROTECTION  
THIS SECTION IS MP\_DNSEC POWER FOR FLASHING  
THIS SECTION IS MP\_DNS





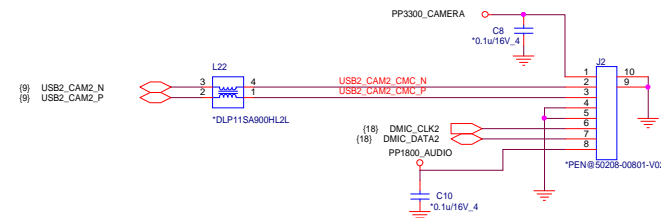




EC WOV SEL

## C-PANEL CAMERA

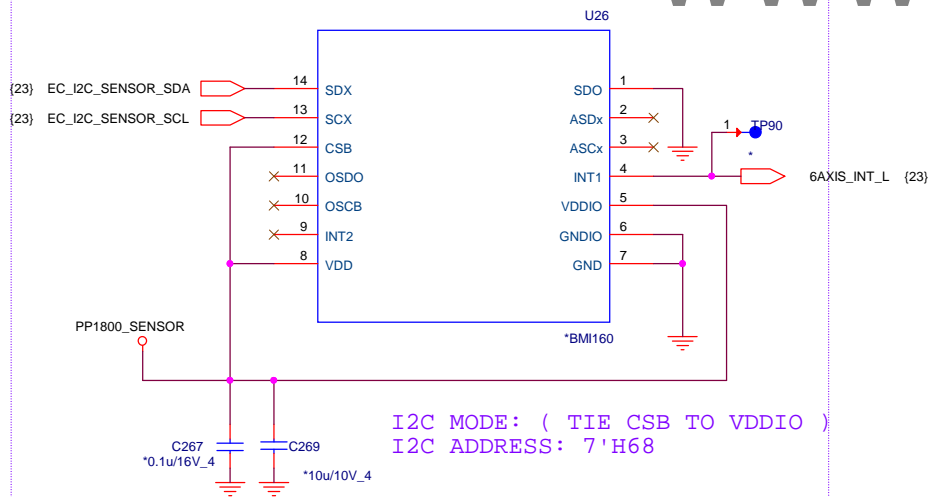
DNS these parts.





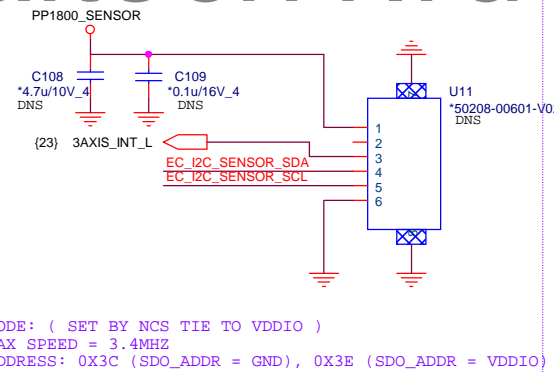
## GYRO

DNS these parts.



## LID ACCEL

DNS these parts.

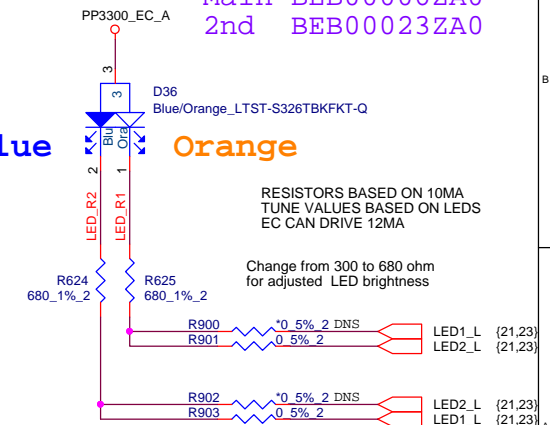


## CHARGE/BATTERY LED

Main BEB00006ZA0  
2nd BEB00023ZA0

Blue

Orange

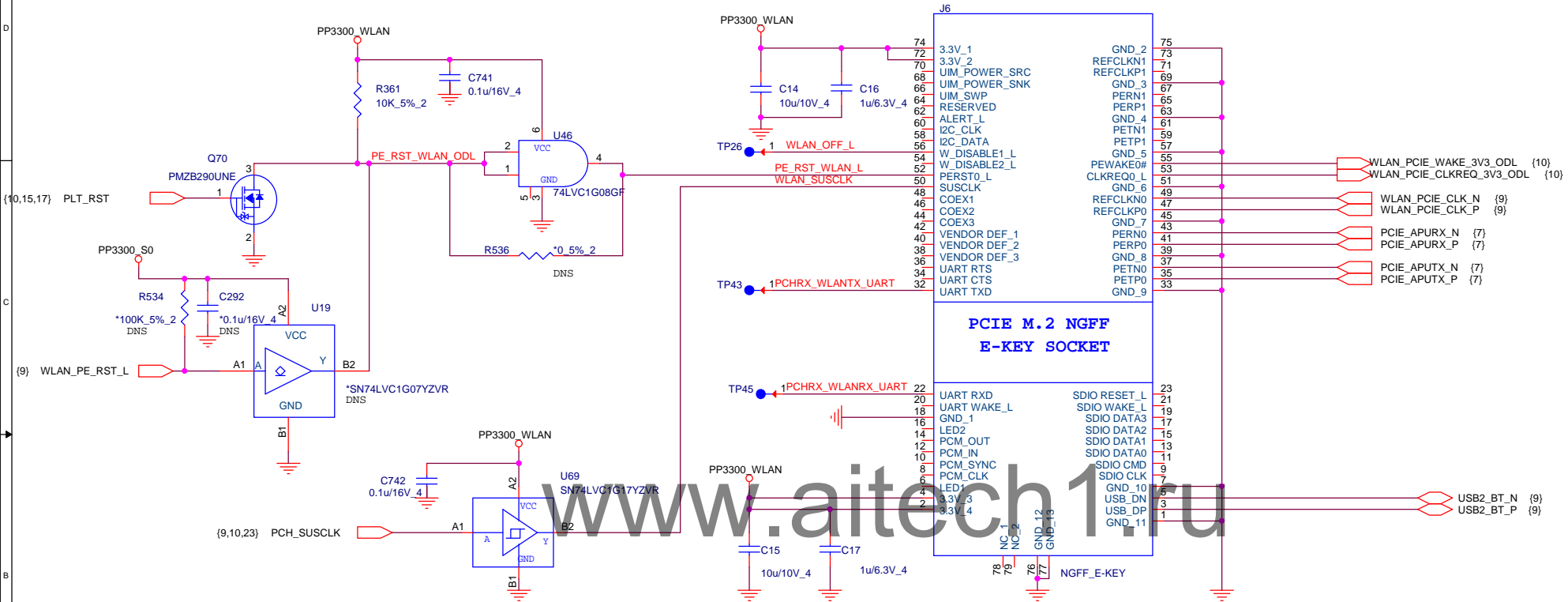


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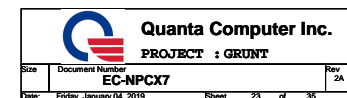
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	SENSOR: GYRO, LED	2A

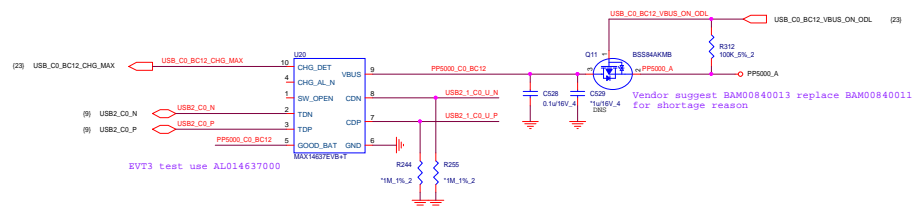
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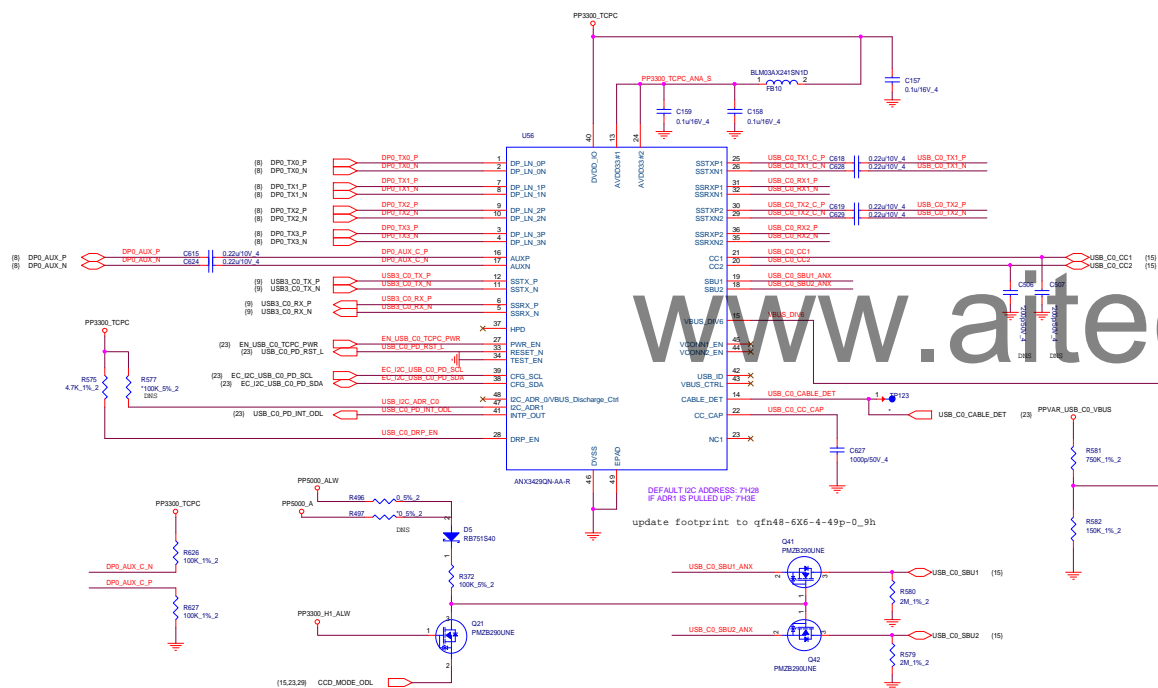
Main DFHS75FR108  
2nd DFHS75FR270



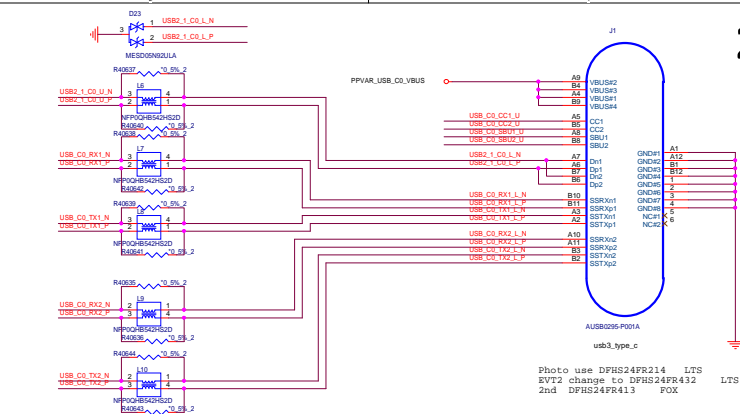
## PORT 0: BC1.2



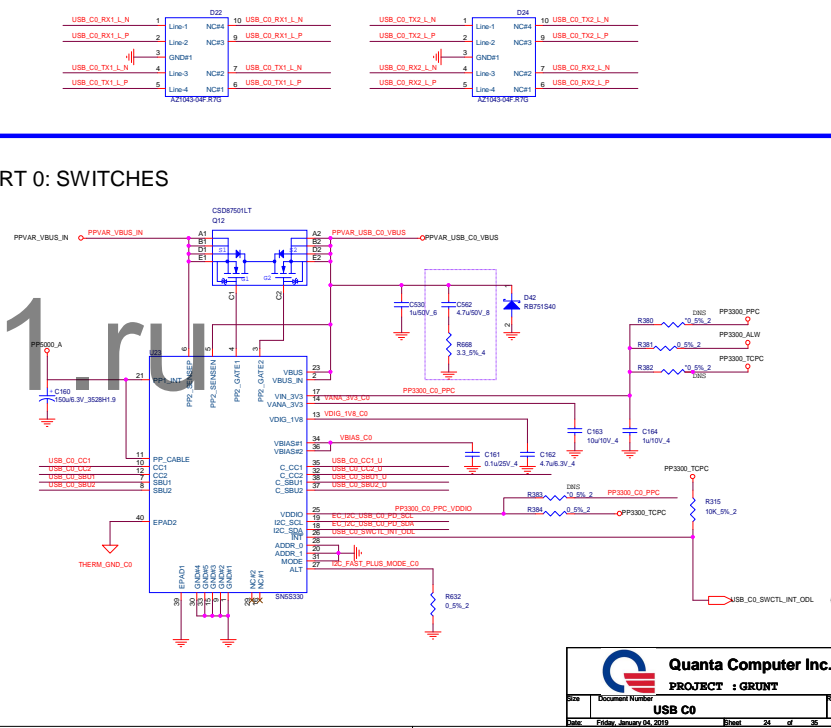
## PORT 0: TCPC

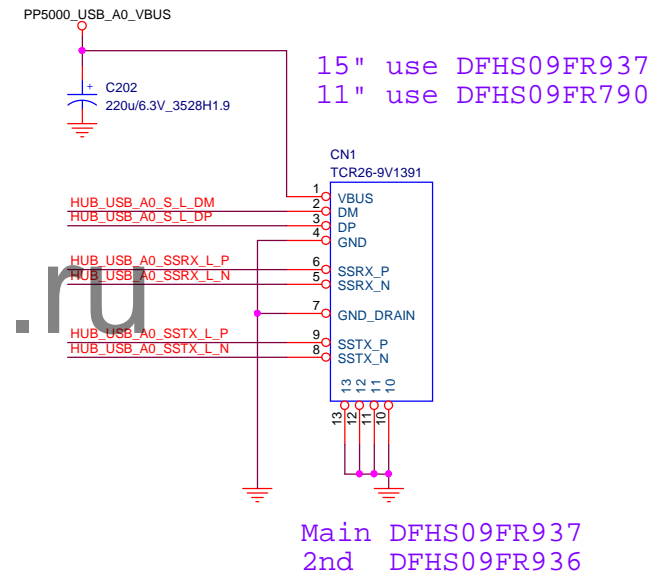
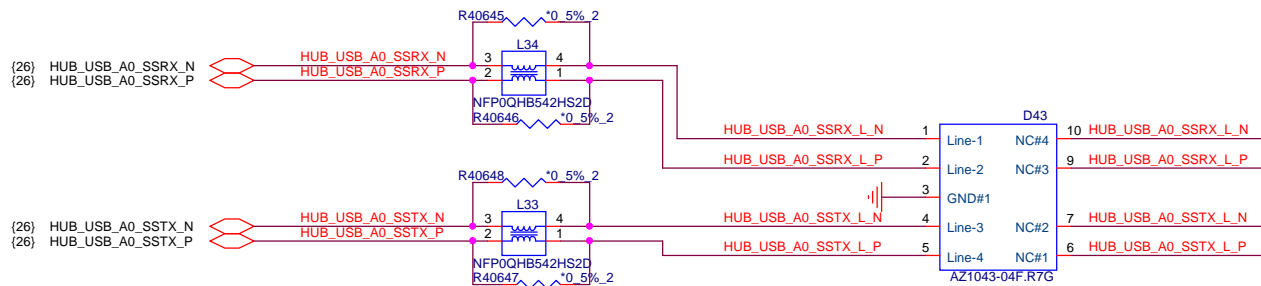
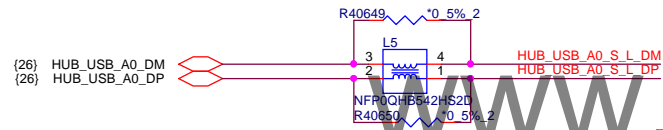
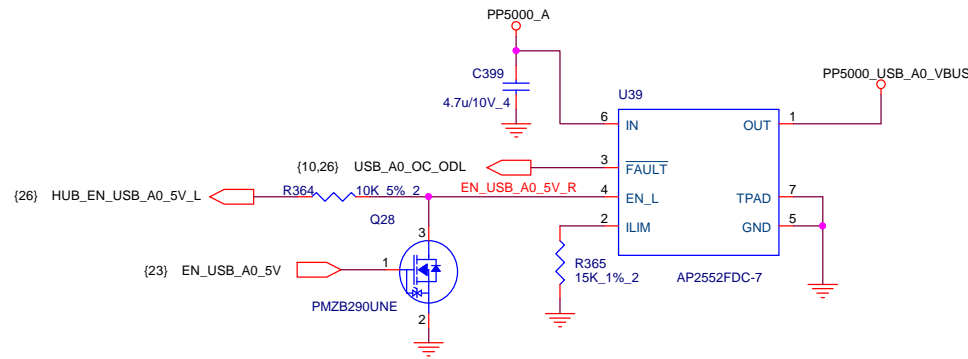


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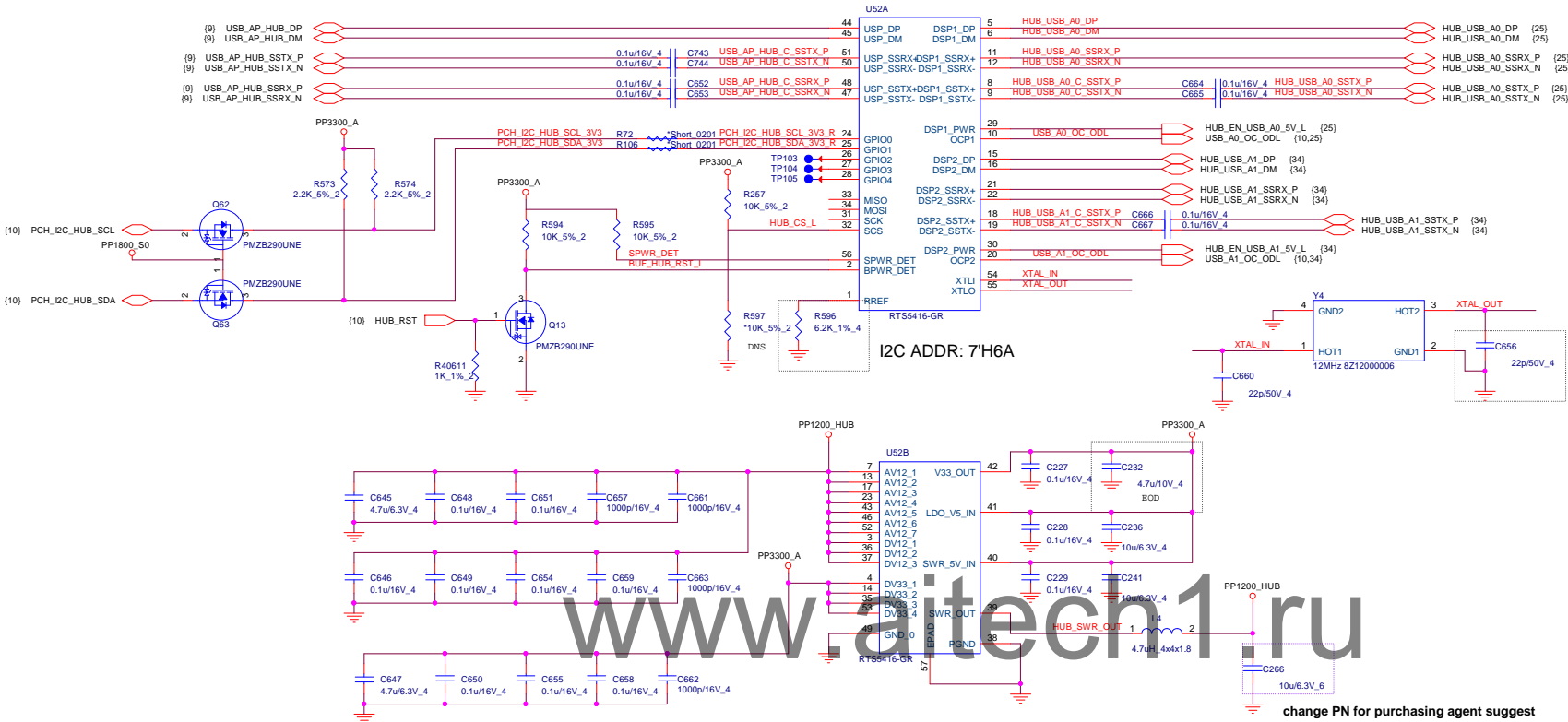


## PORT 0: SWITCHES



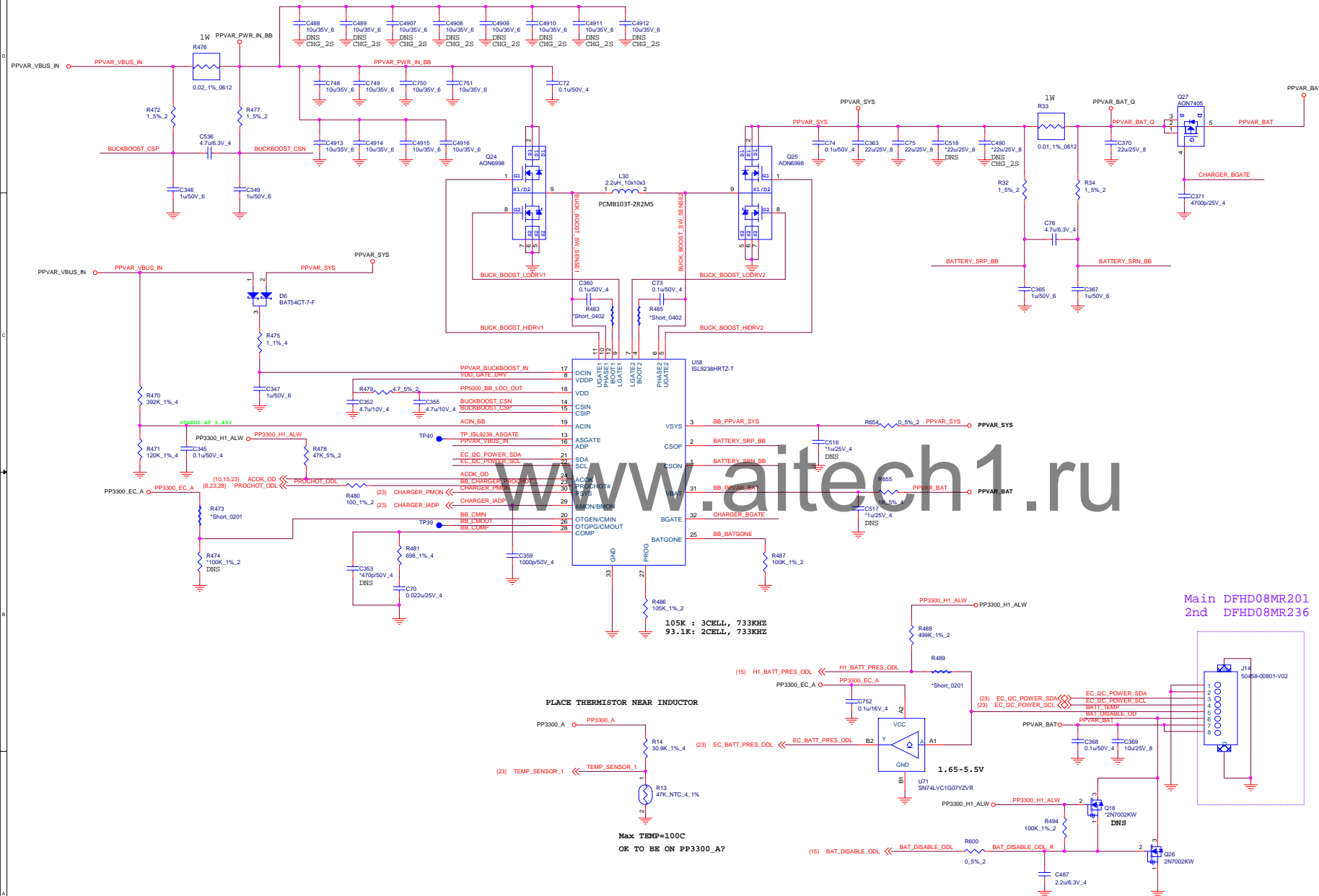


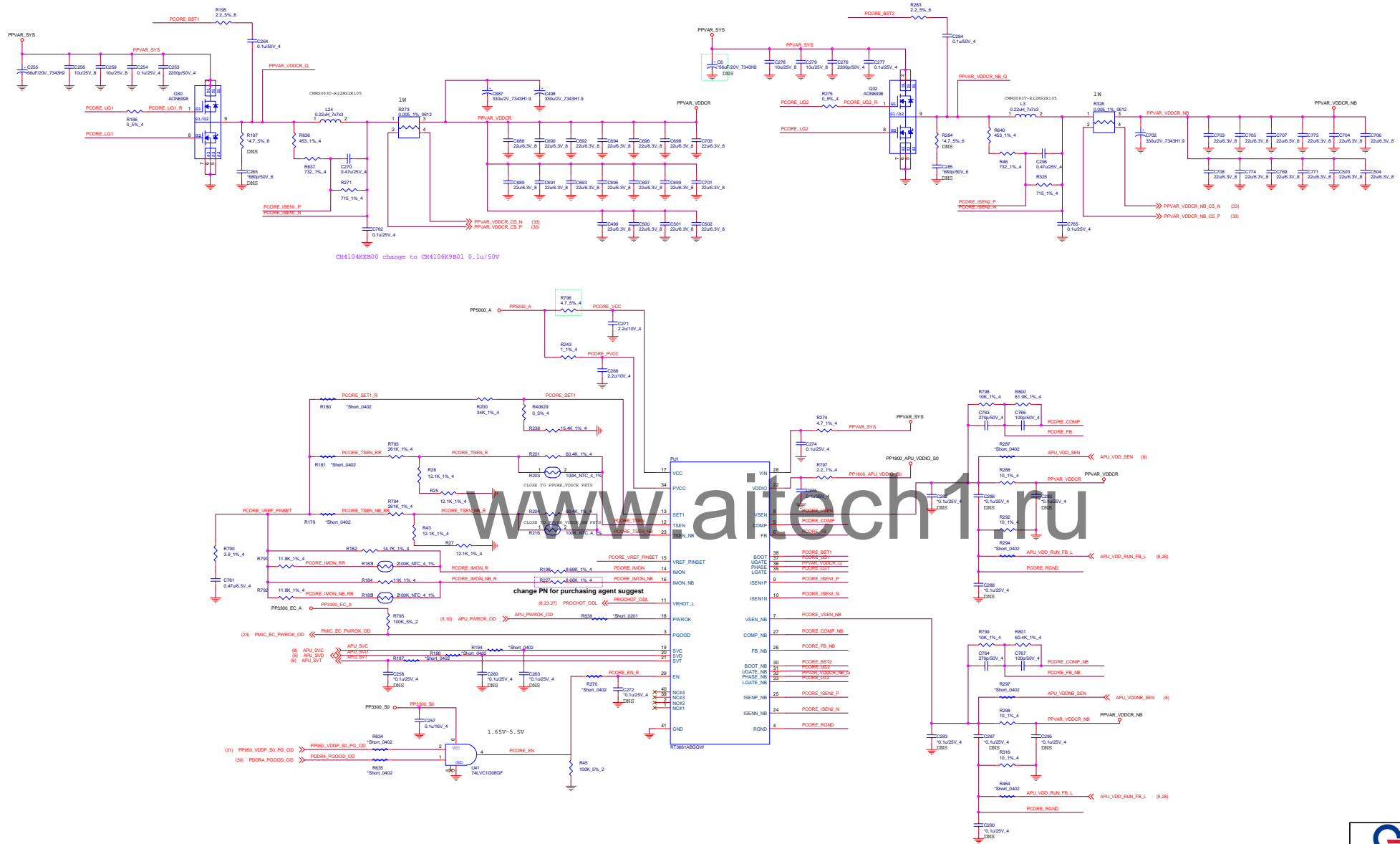
IF ONLY A SINGLE USB3.0 TYPE-A PORT IS NEEDED, THIS HUB CAN BE REMOVED  
AND REPLACED WITH SN1702001 (OR EQUIVALENT)

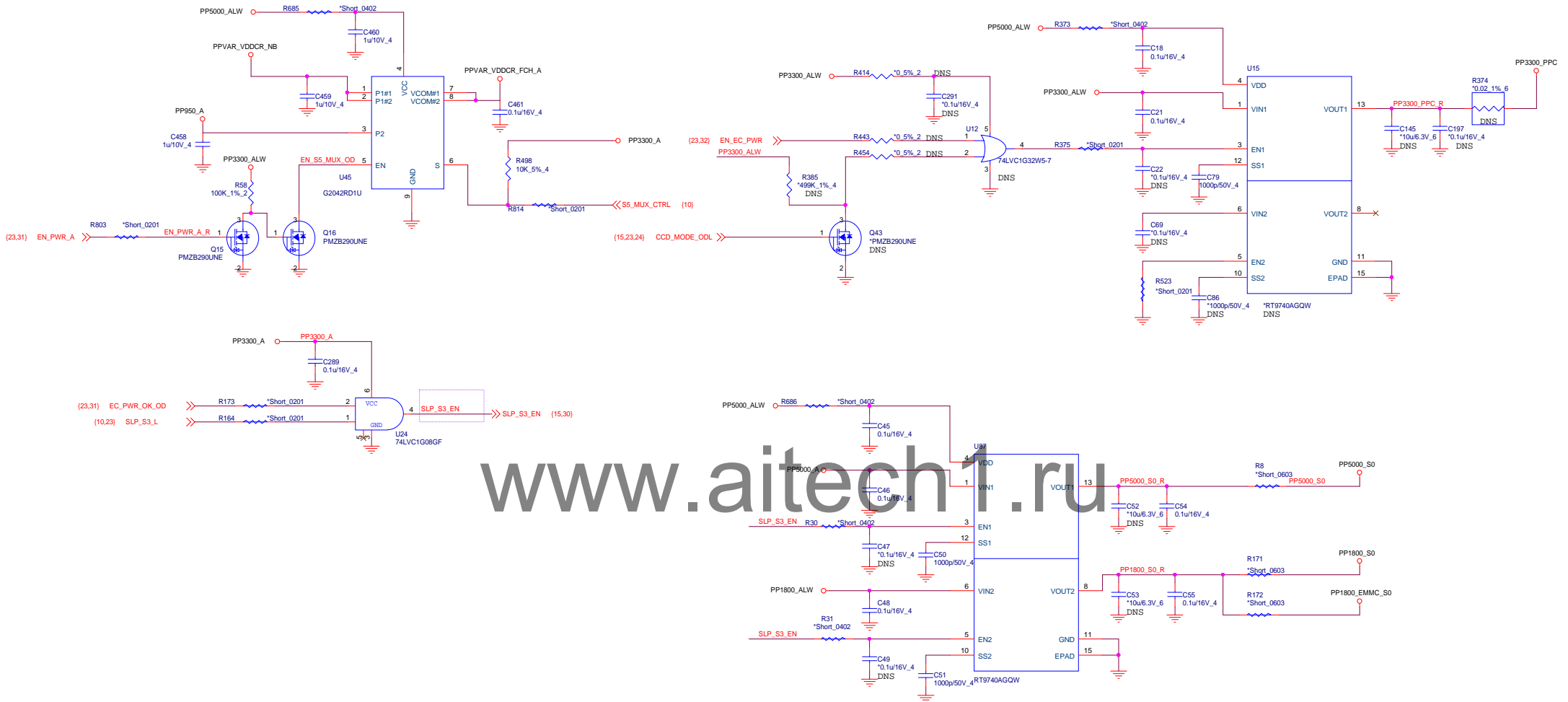




# INTERSIL BUCK - BOOST CHARGER







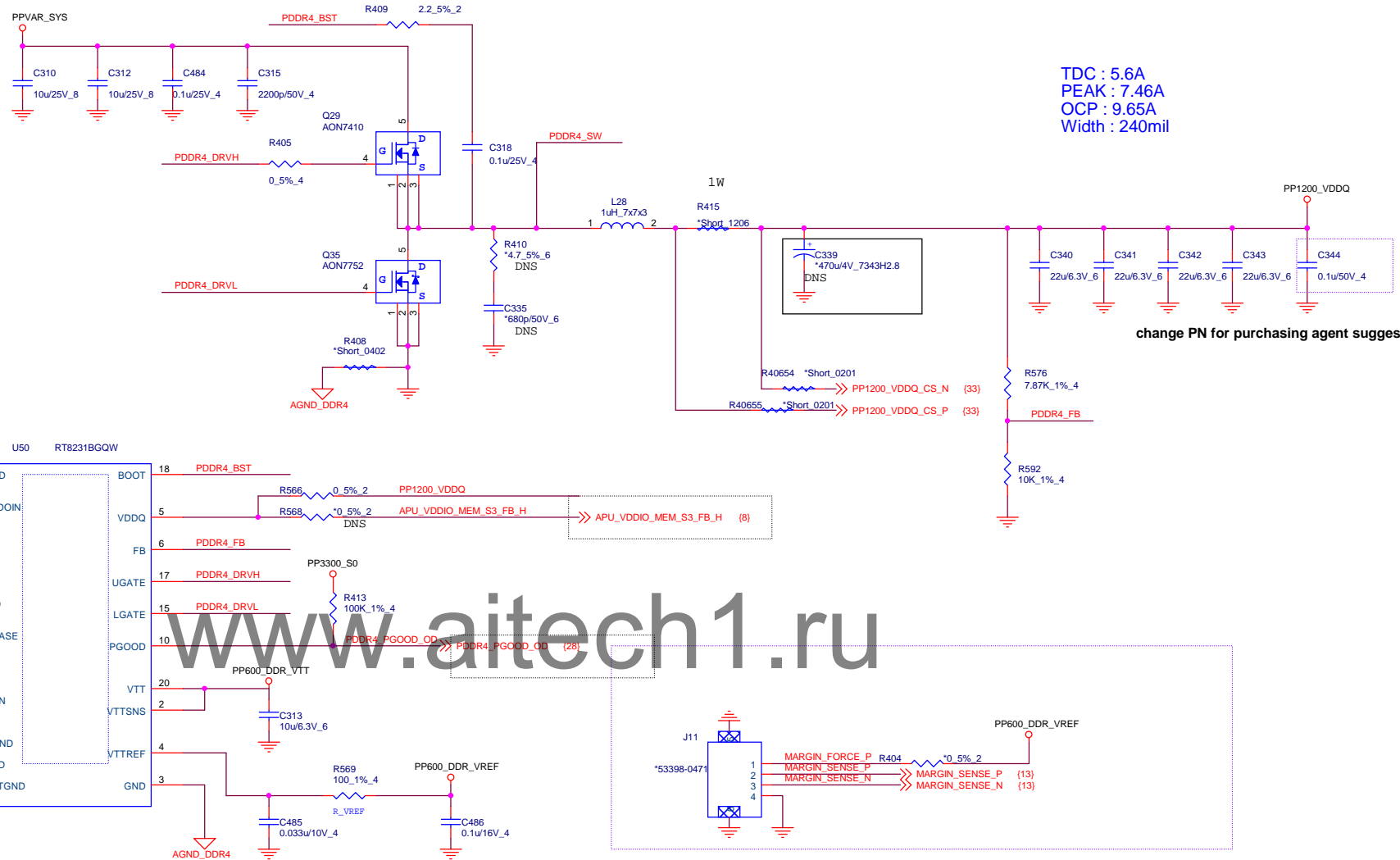
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TDC : 5.6A  
PEAK : 7.46A  
OCP : 9.65A  
Width : 240mil

change PN for purchasing agent suggest

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VID	REF VOLTAGE
HIGH	0.675V
LOW	0.75V



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**PROJECT :**  
**POWER - DDR4**

Size

Document Number

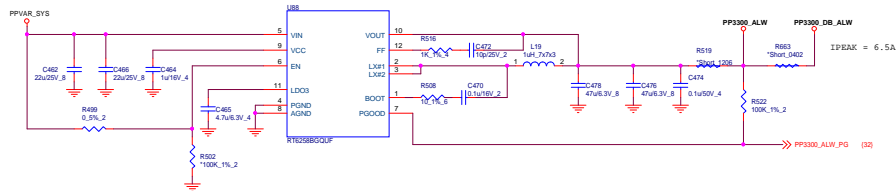
Rev

Date: Friday, January 04, 2019

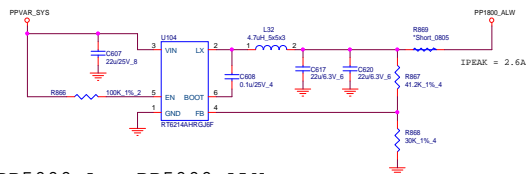
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2A

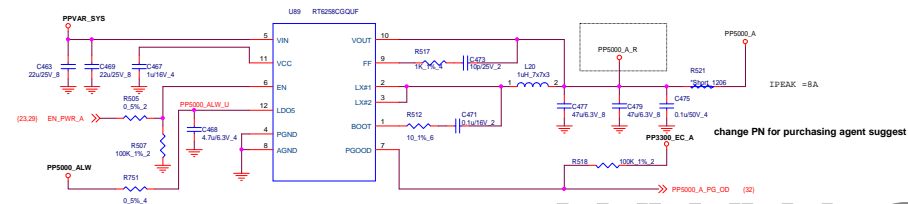
## PP3300\_ALW



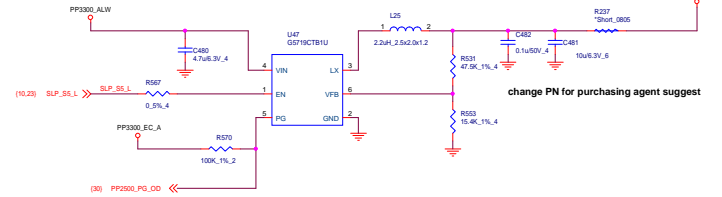
## PP1800\_ALW



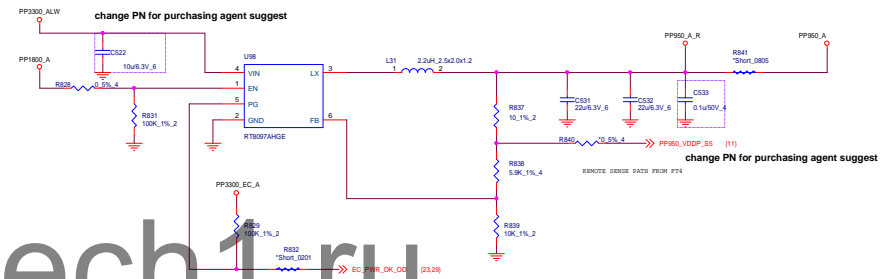
PP5000\_A + PP5000\_ALW



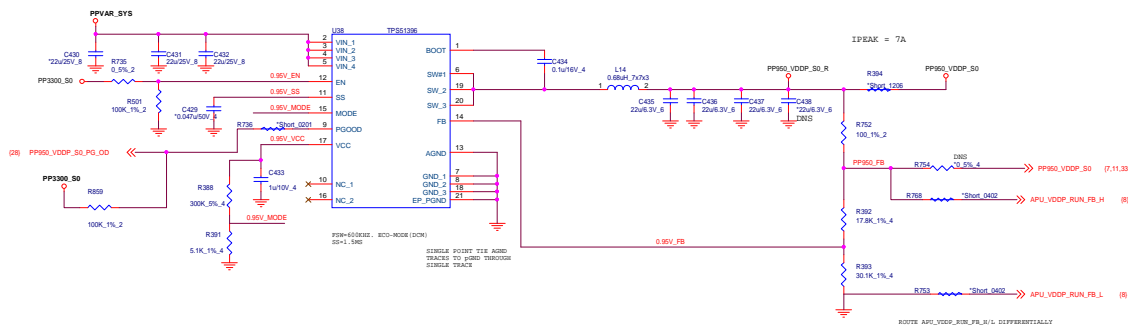
## PP2500\_DDR4\_S3

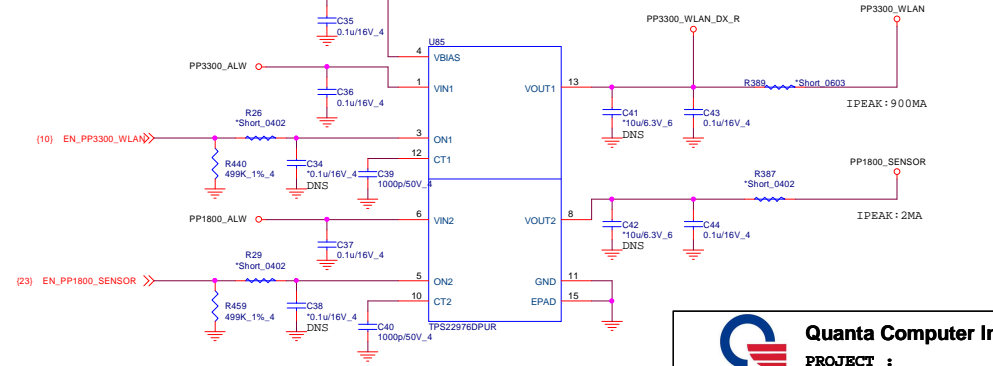
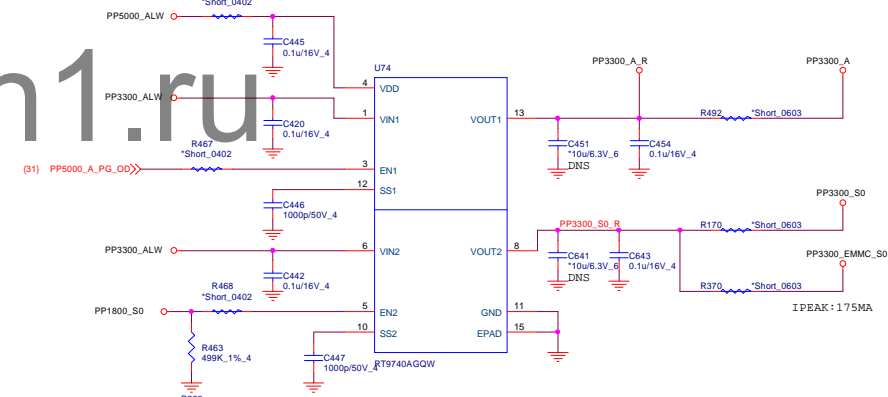
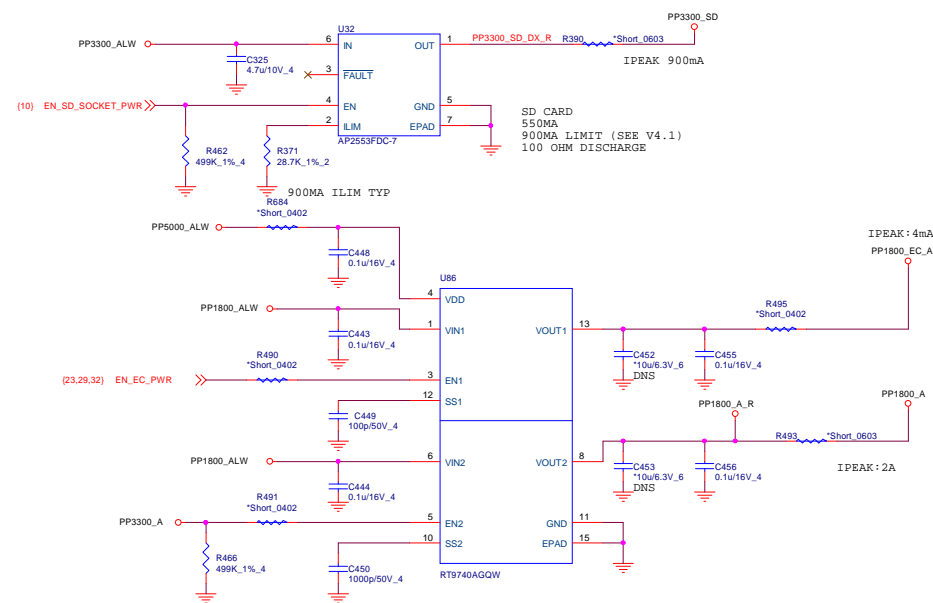
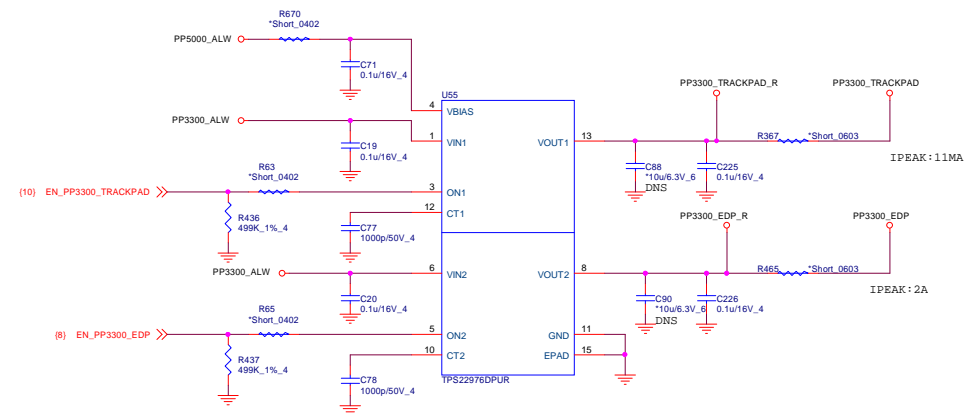
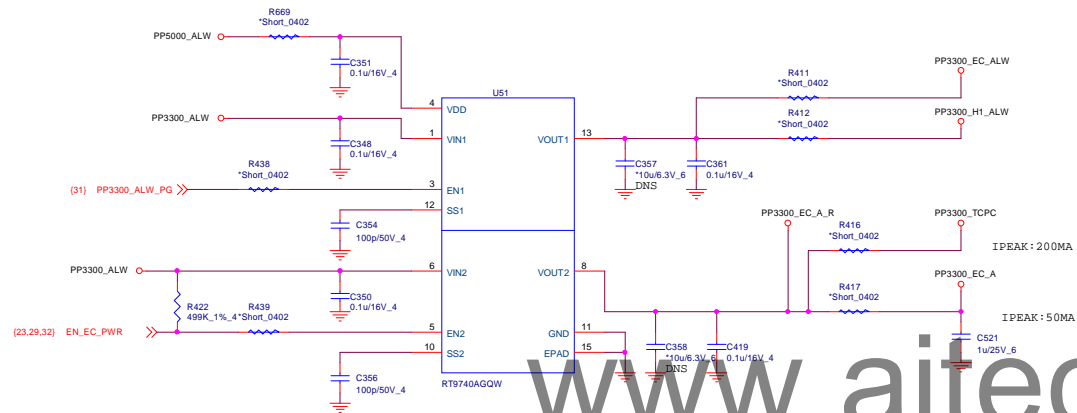
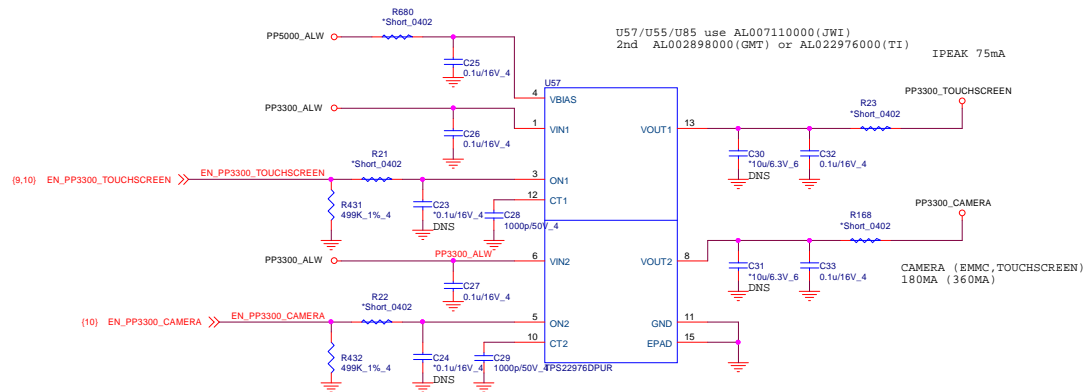


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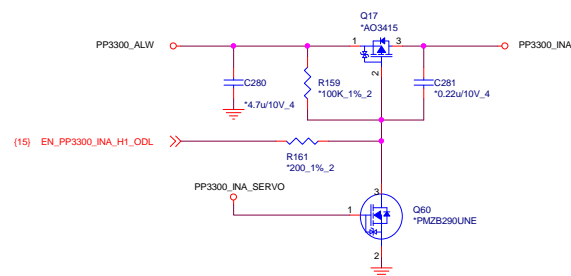
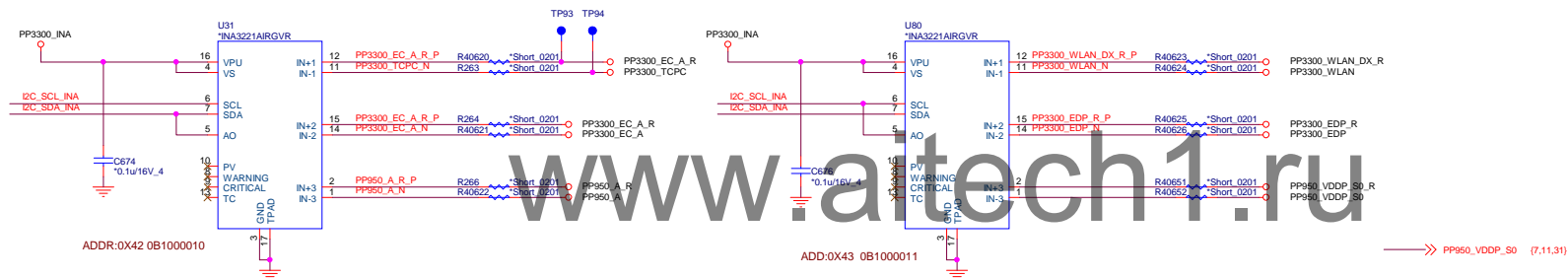
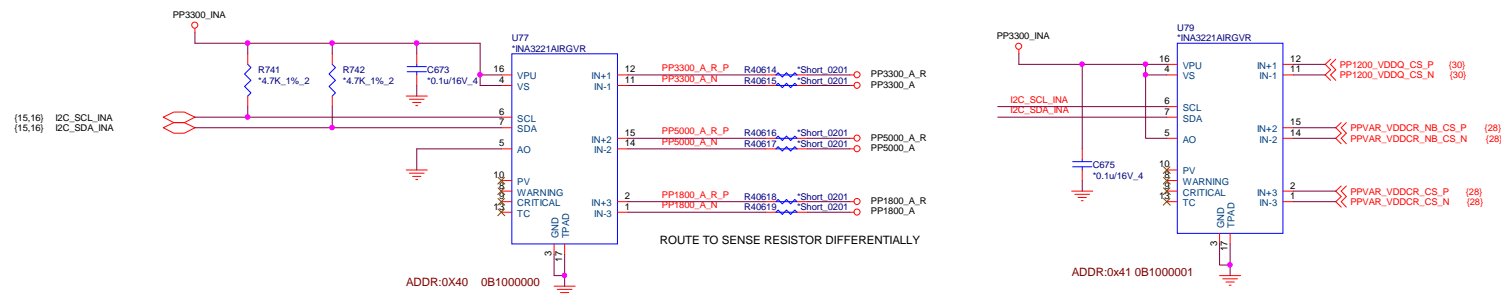
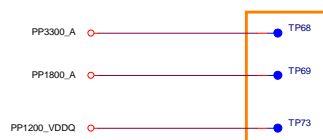


PP950\_S0

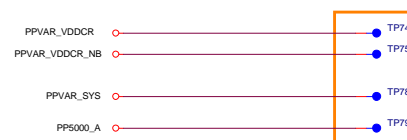


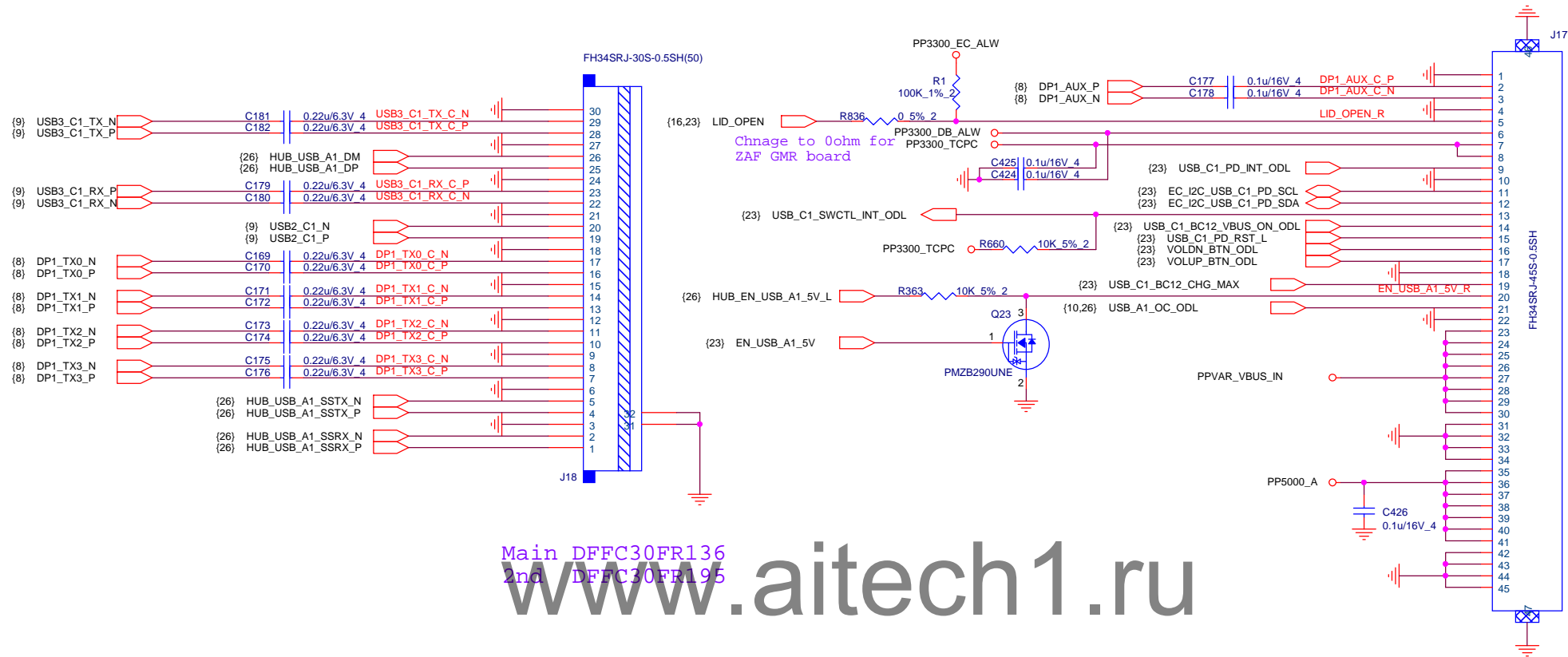




40MIL TESTPAD  
(BACKSIDE)

70MIL TESTPAD  
(BACKSIDE)





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