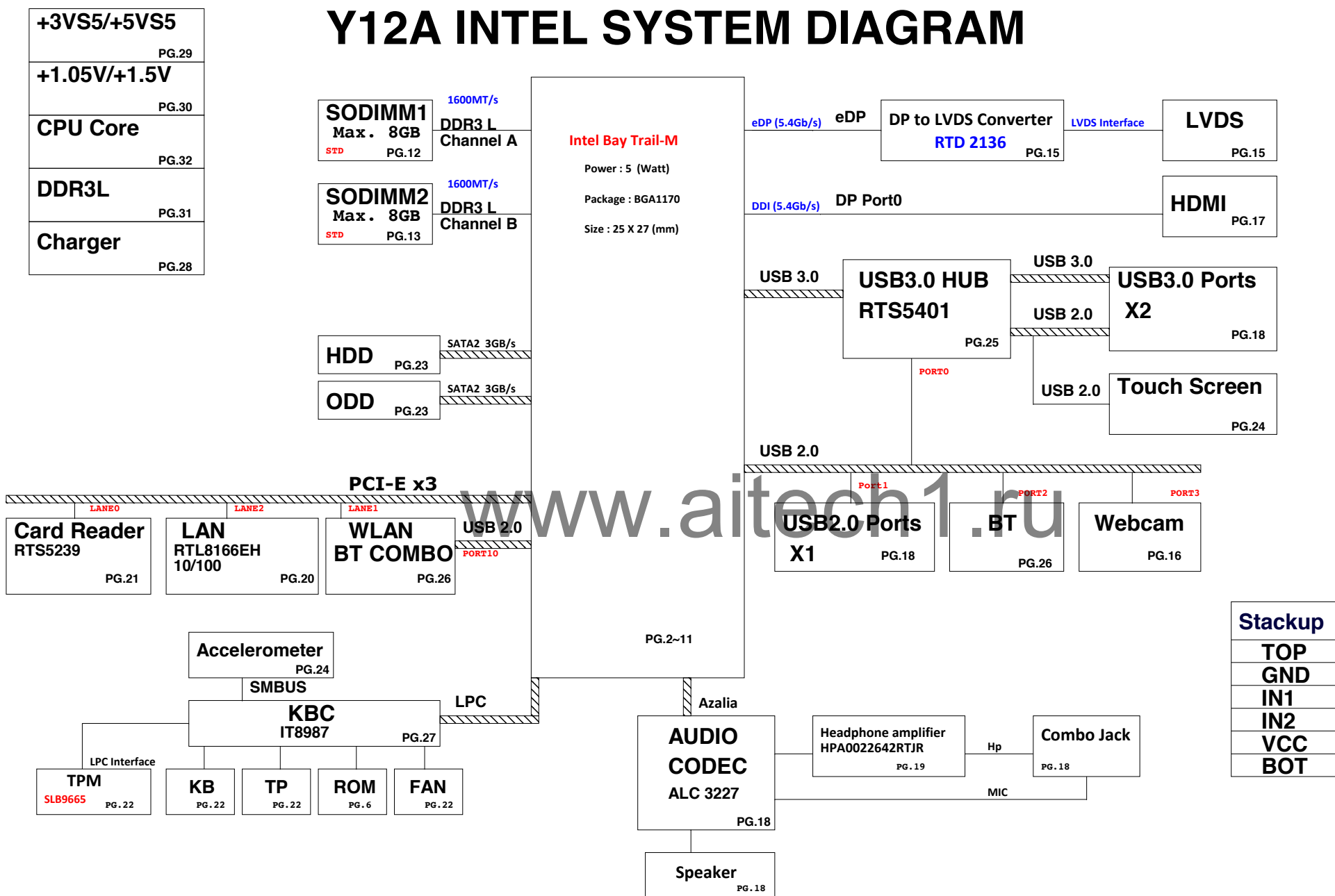


Y12A INTEL SYSTEM DIAGRAM



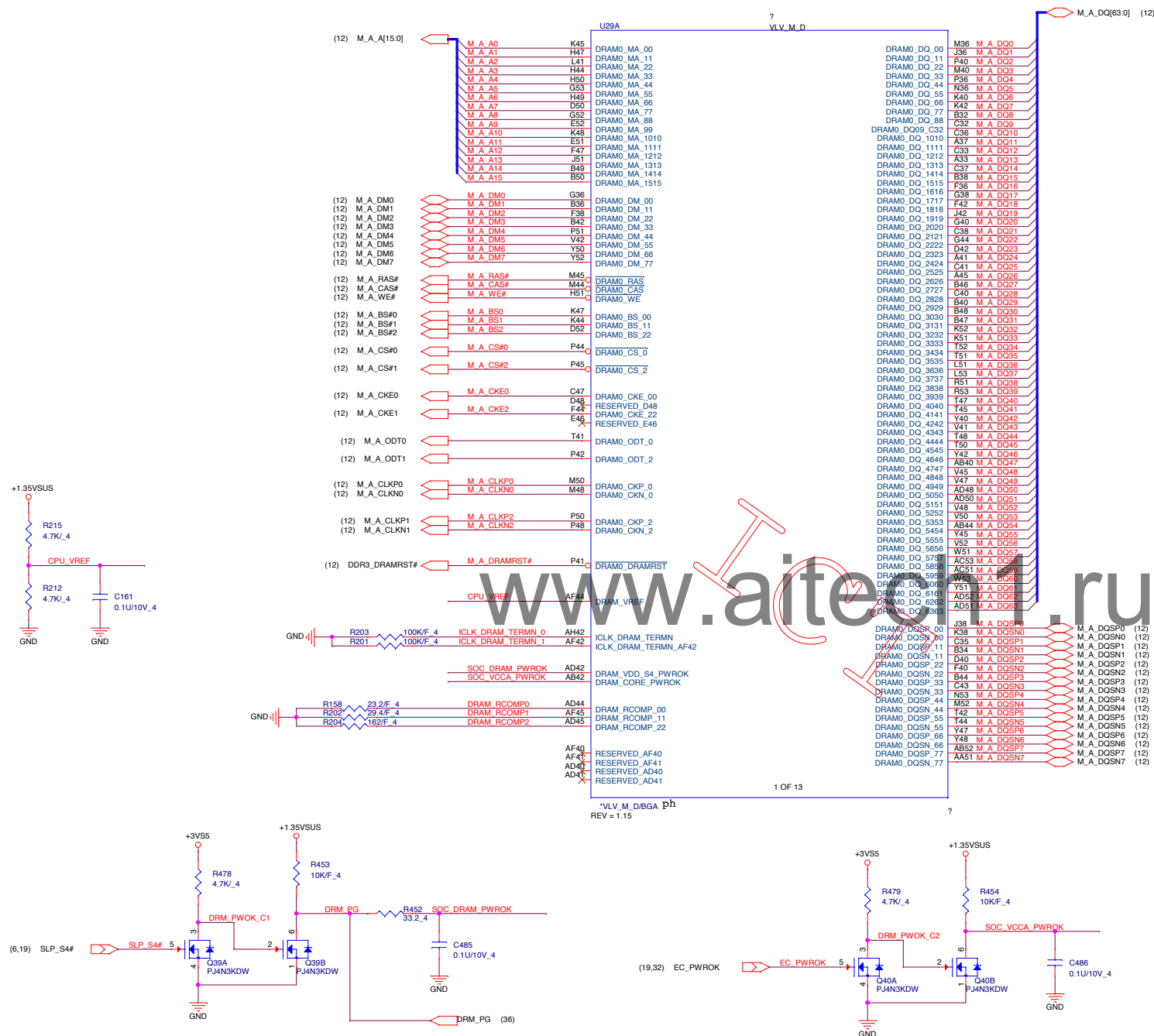
PROJECT : Y12E-BTM
Quanta Computer Inc.

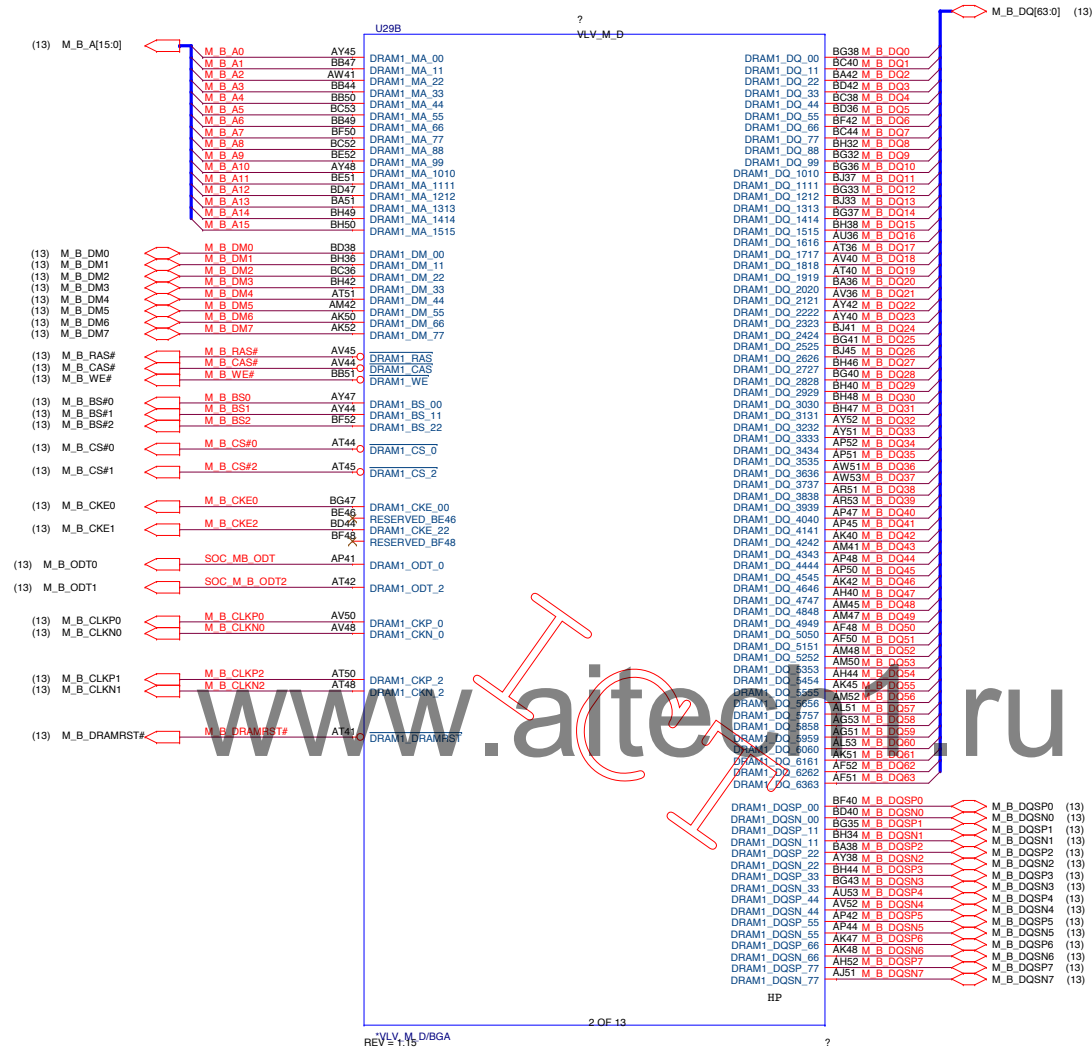
Document Number
 BLOCK DIAGRAM

Date: Thursday, May 08, 2014

Rev
 1A

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PROJECT : Y12E-BTM
Quanta Computer Inc.

Document Number
Valley 2/9 (DDR8)

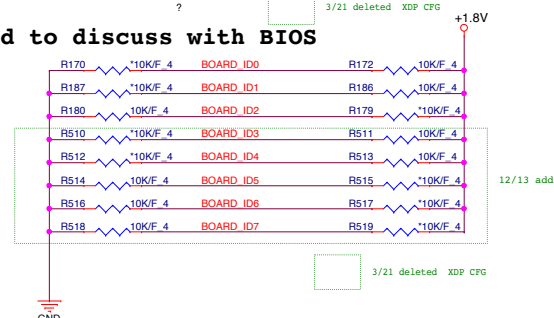
Rev
1A

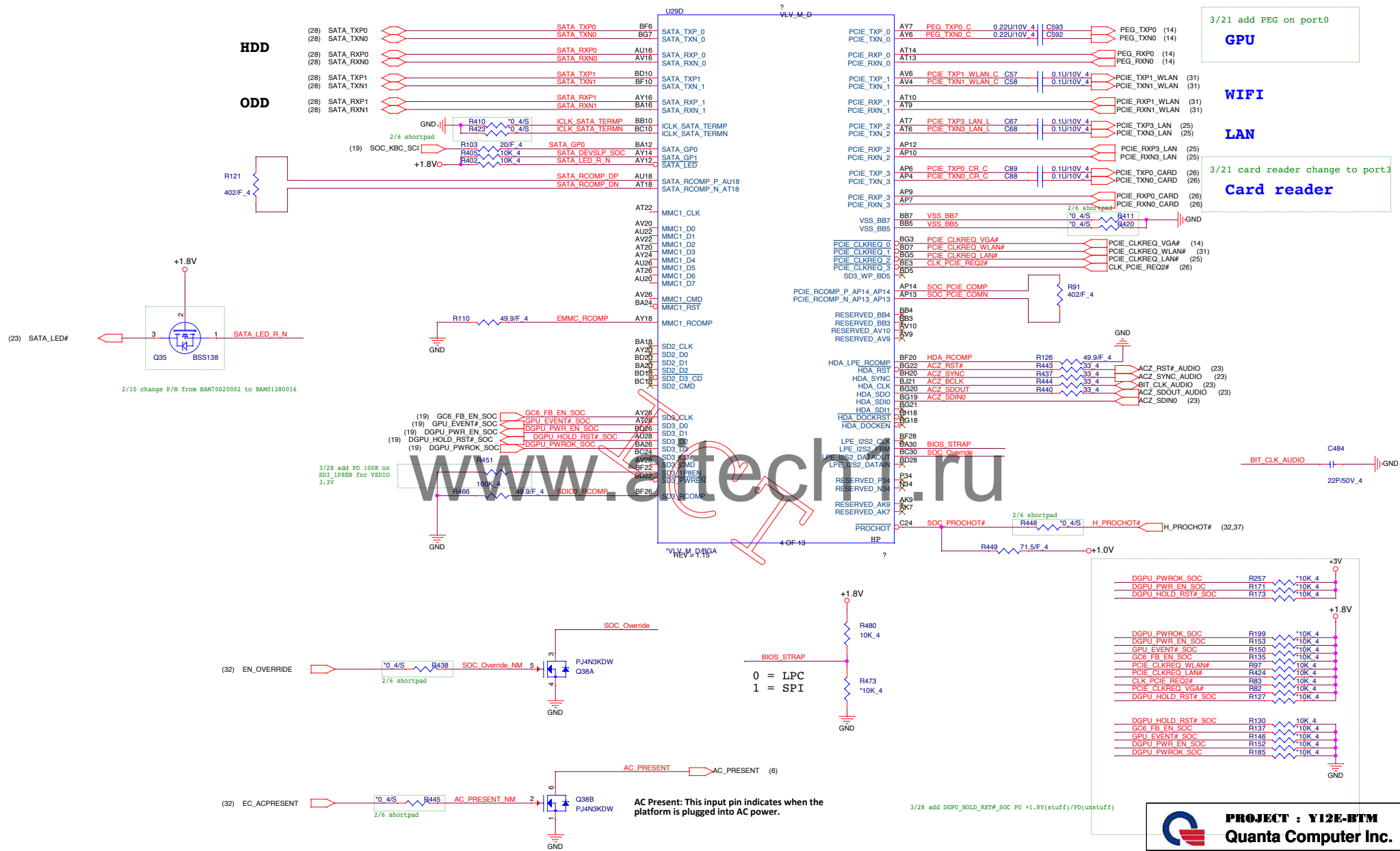
Date: Thursday, May 08, 2014

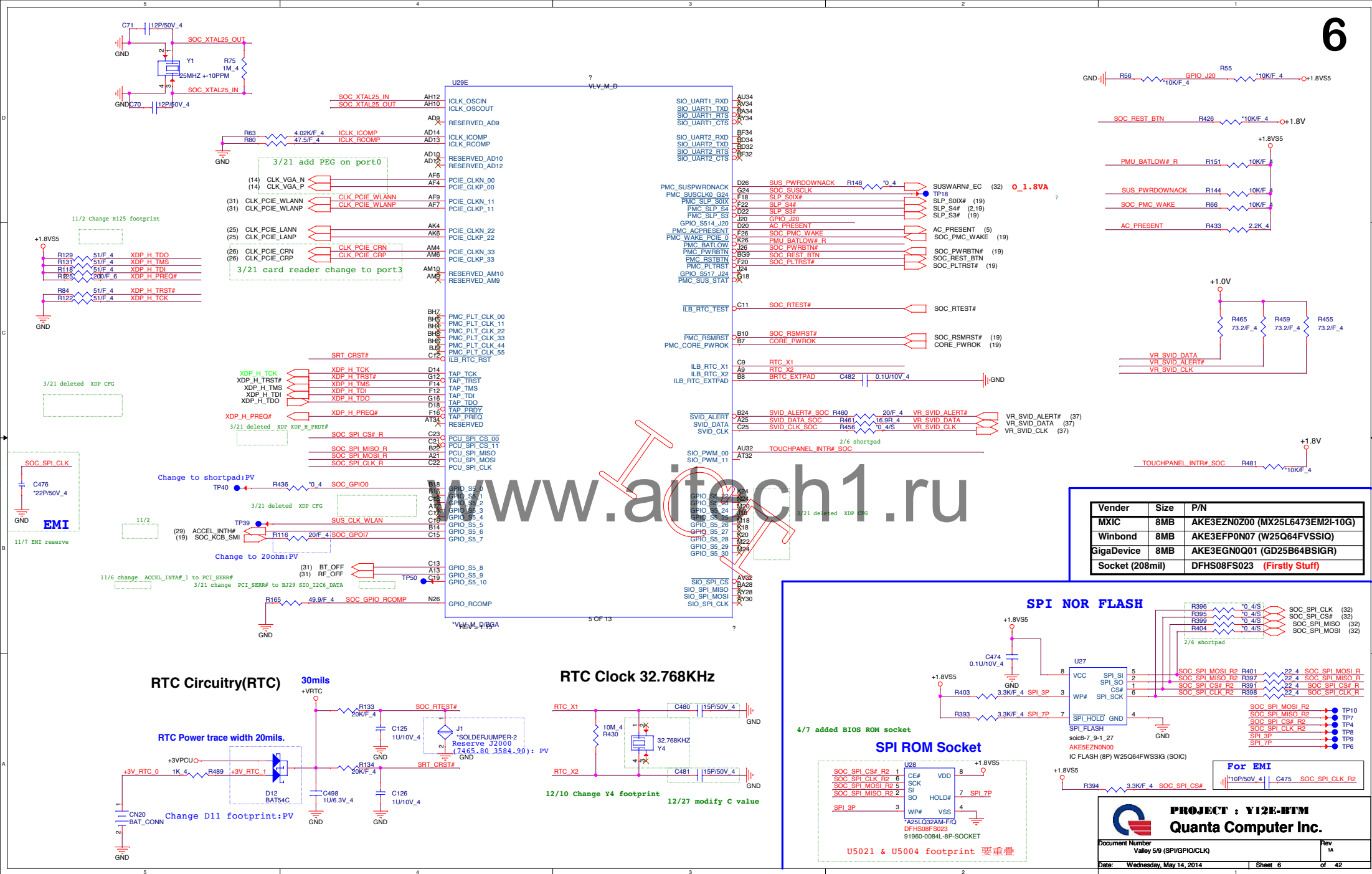
Sheet 3 of 42

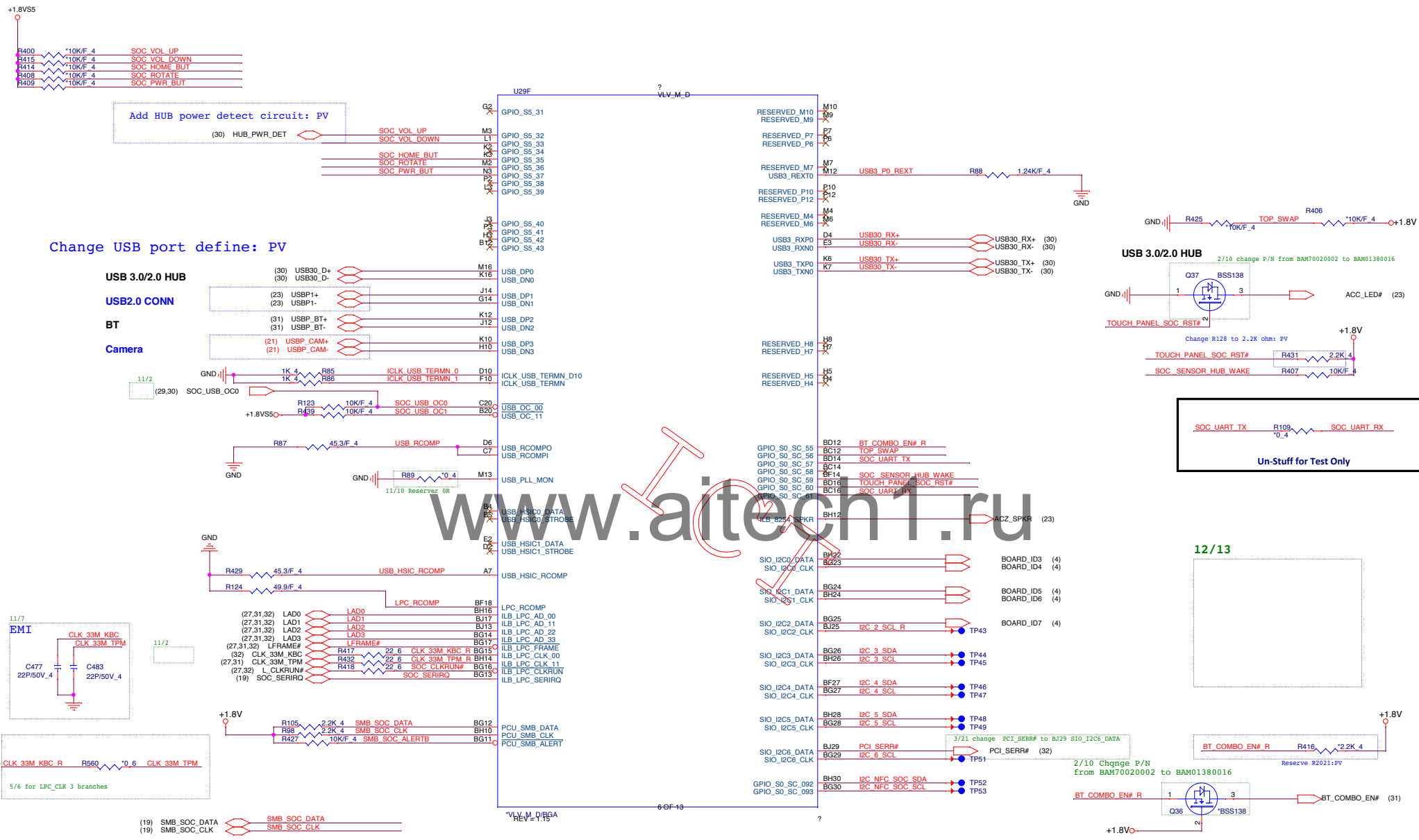
[illegible]

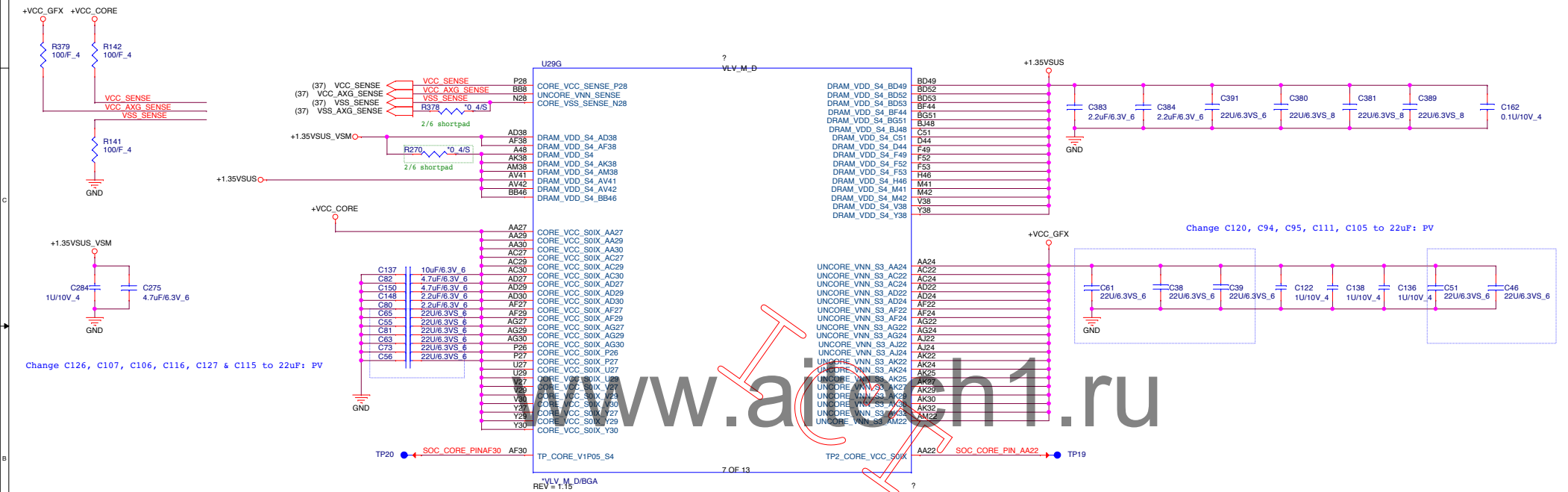
Need to discuss with BIOS



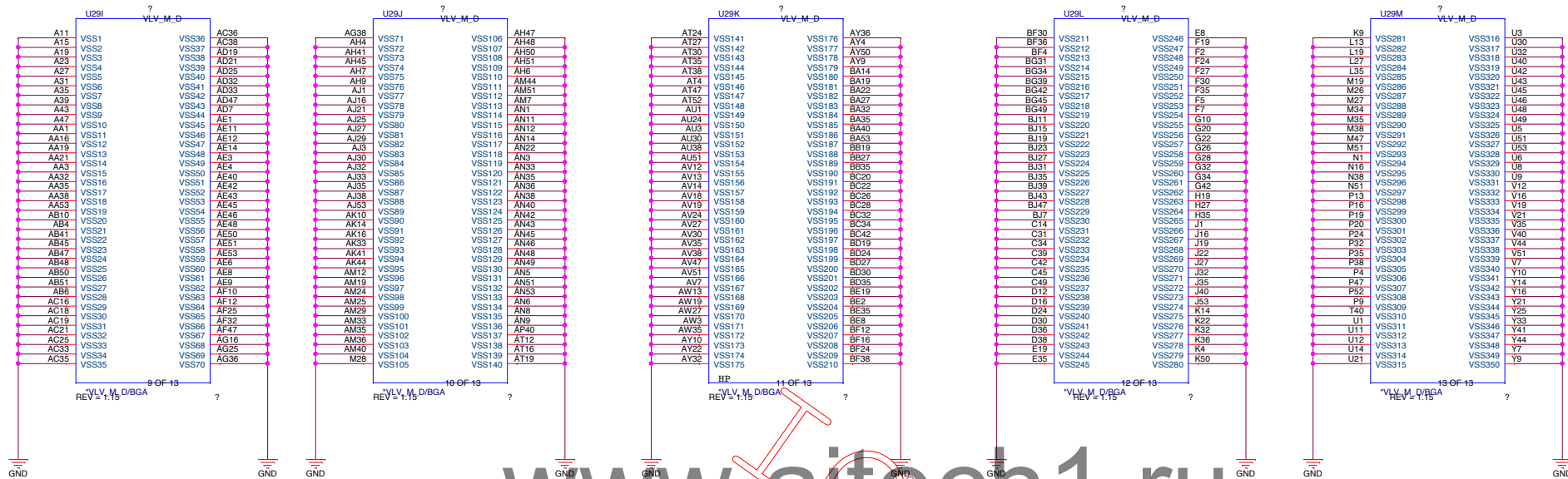






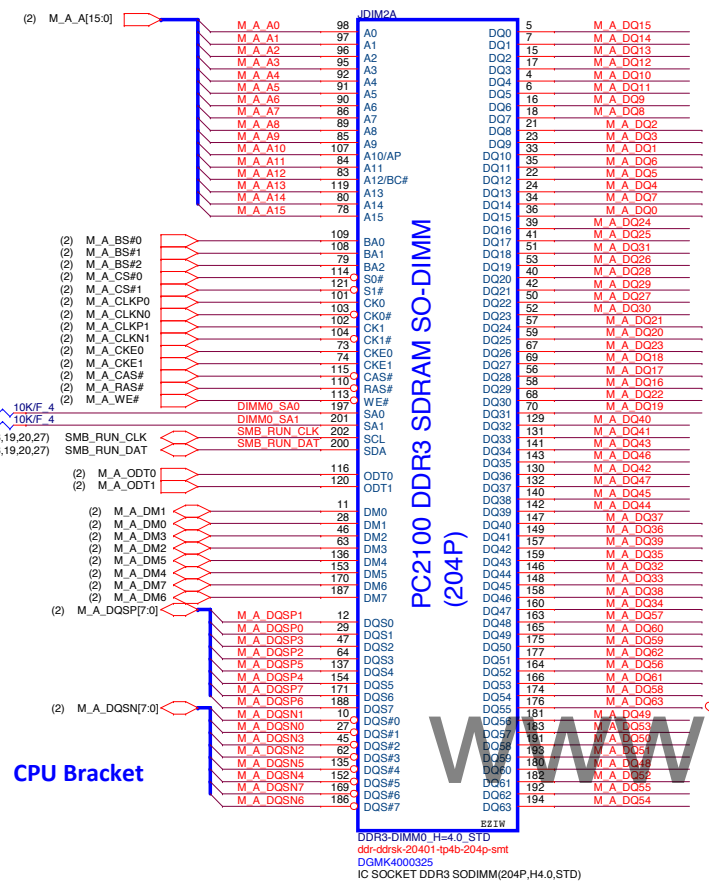




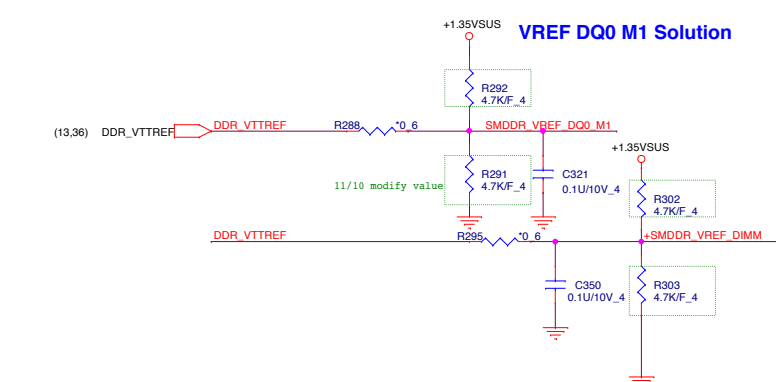
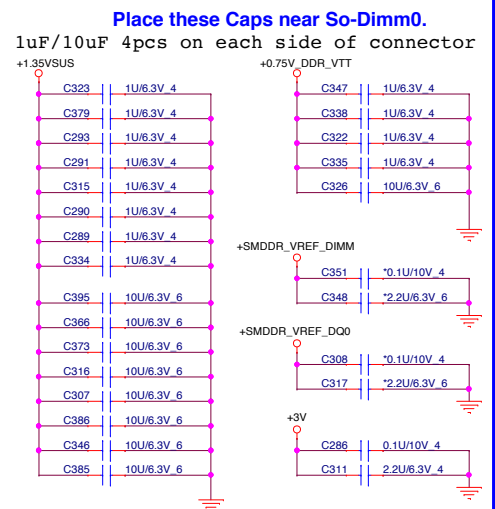
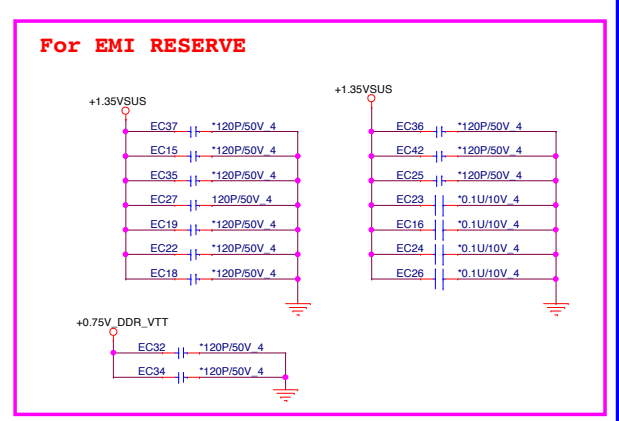
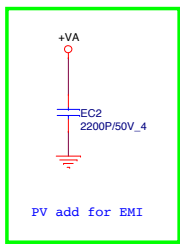
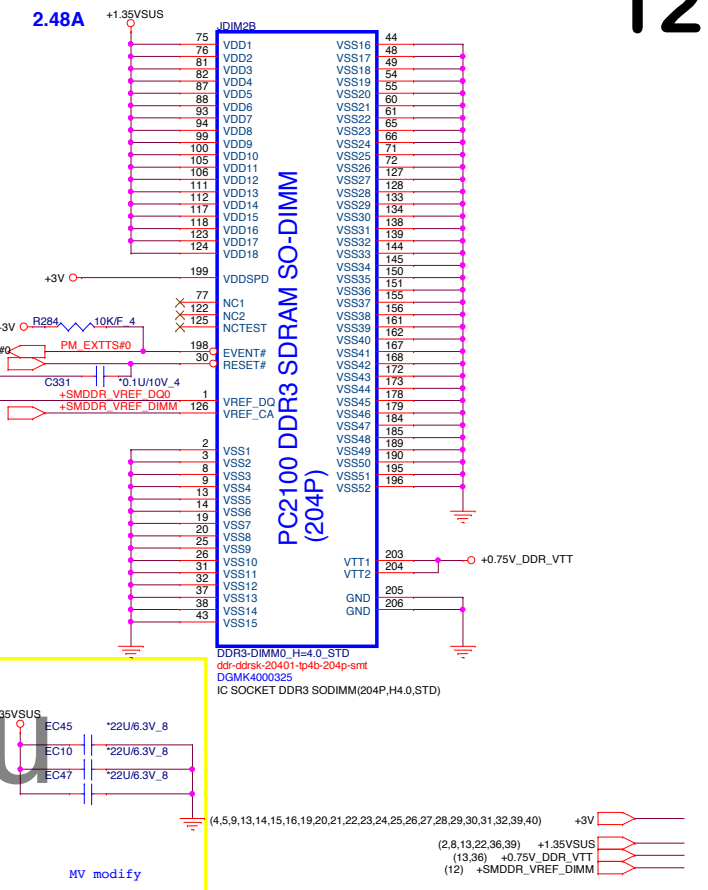
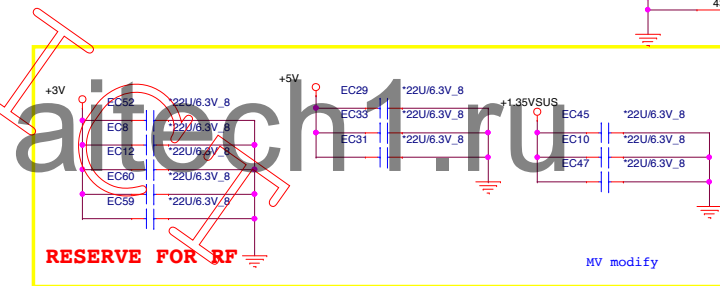


3/21 deleted XDP CH6

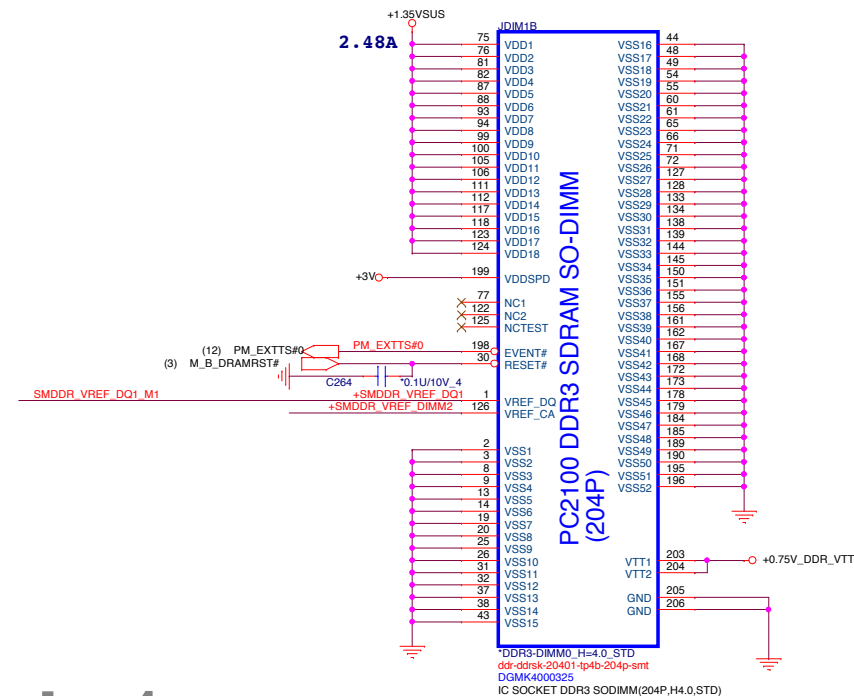
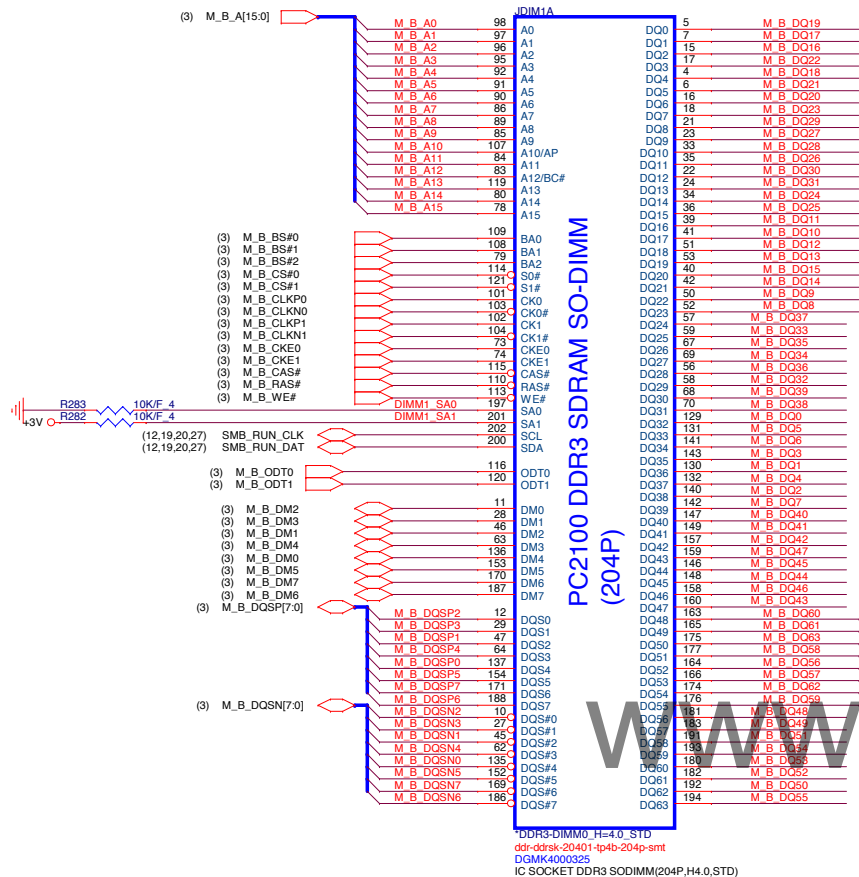
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M_A_DQ[63:0] (2)



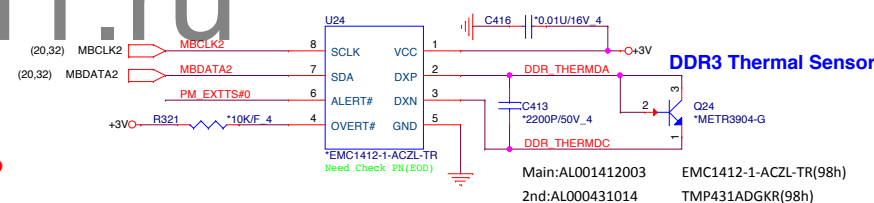
M_B_DQ[63:0] (3)



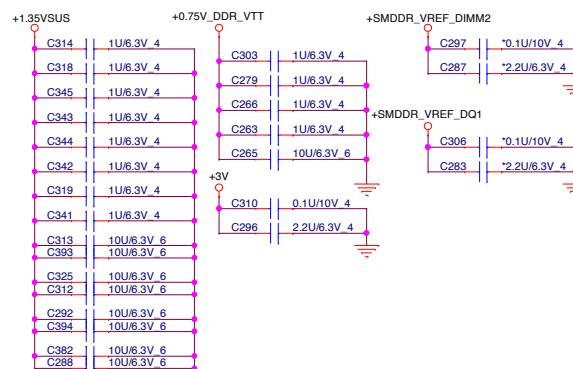
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Local Thermal Sensor

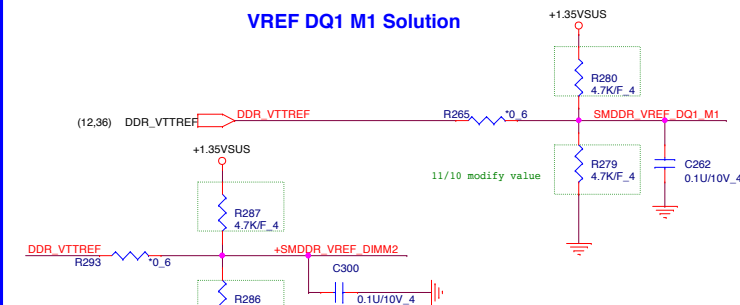
?



Place these Caps near So-Dimm1.
1uF/10uF 4pcs on each side of connector



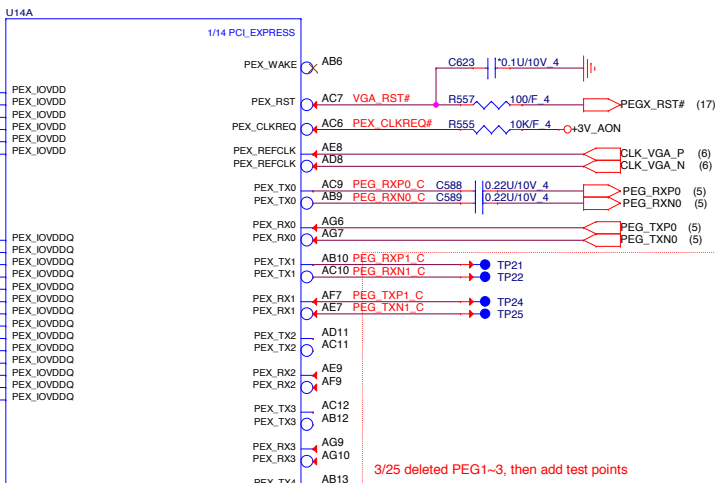
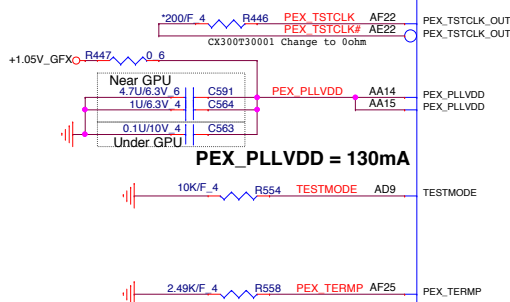
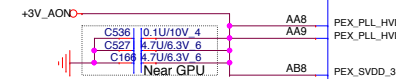
VREF DQ1 M1 Solution



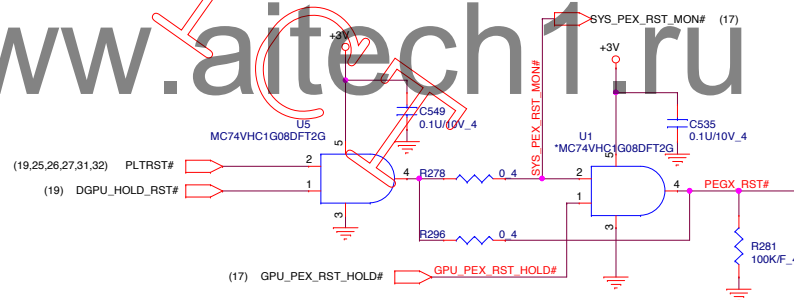
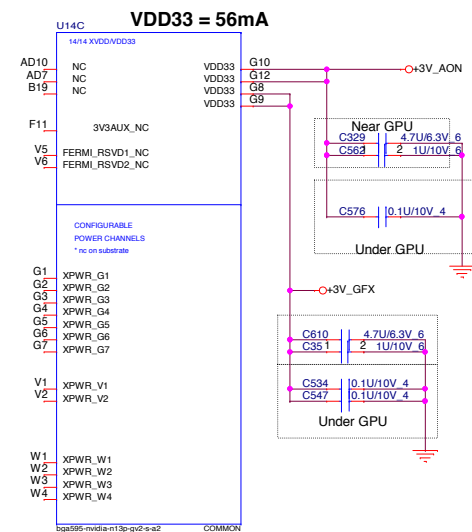
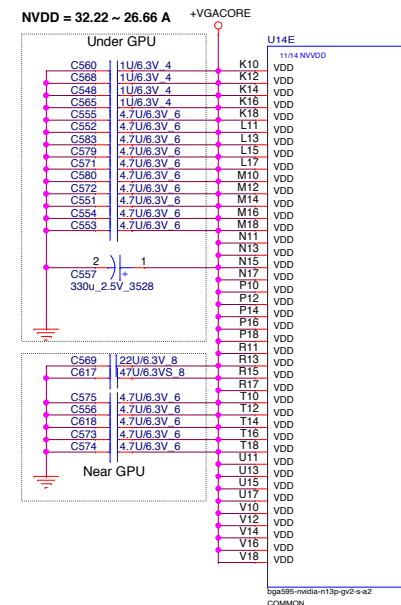
PROJECT : Y12E-BTM
Quanta Computer Inc.

Document Number
DDR3 DIMM1-STD(4.0H)
Date: Thursday, May 08, 2014
Rev 1A
Sheet 13 of 42

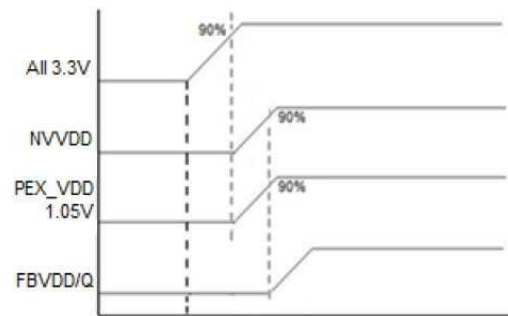

```
stuff 1 22u(AA10)
```

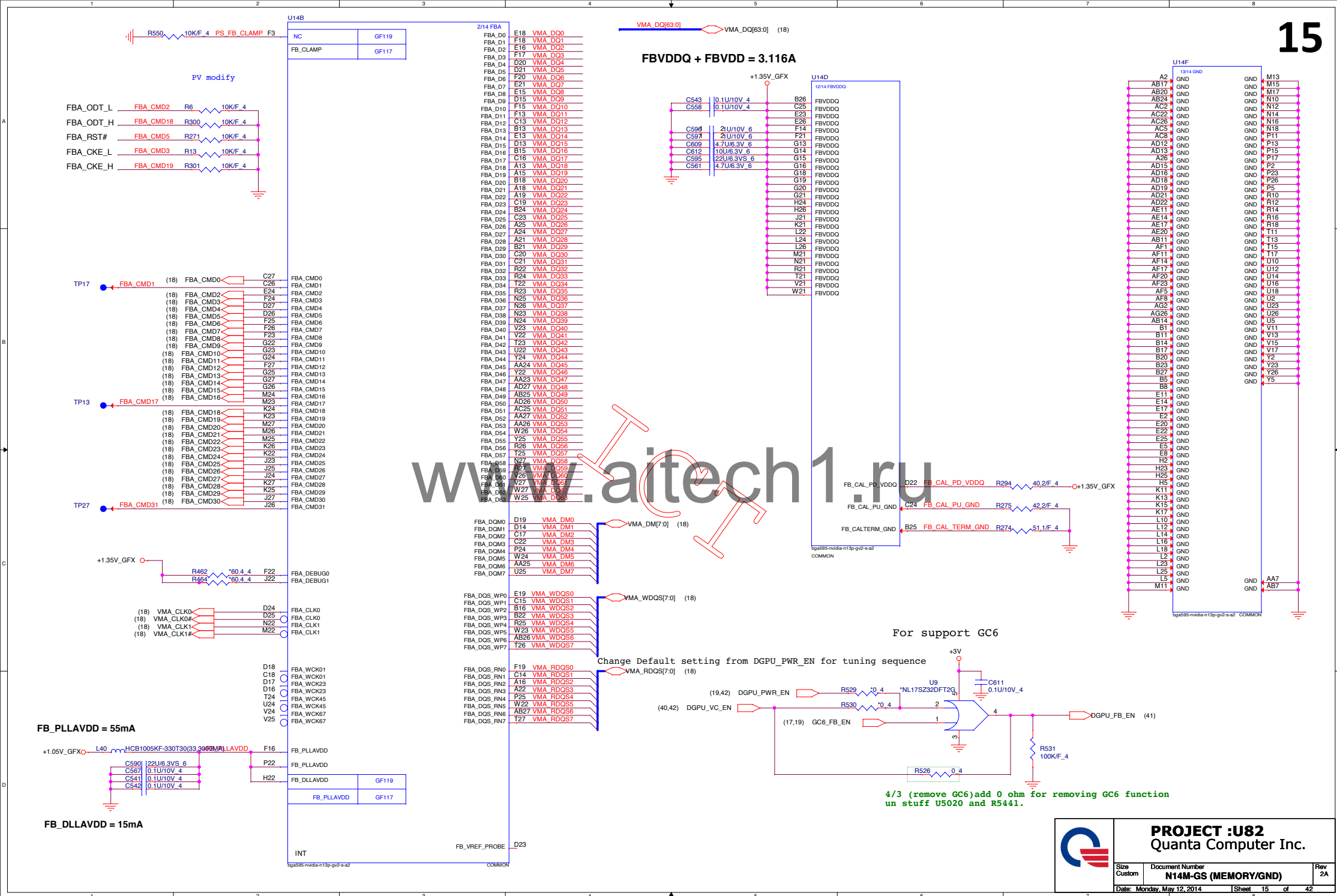


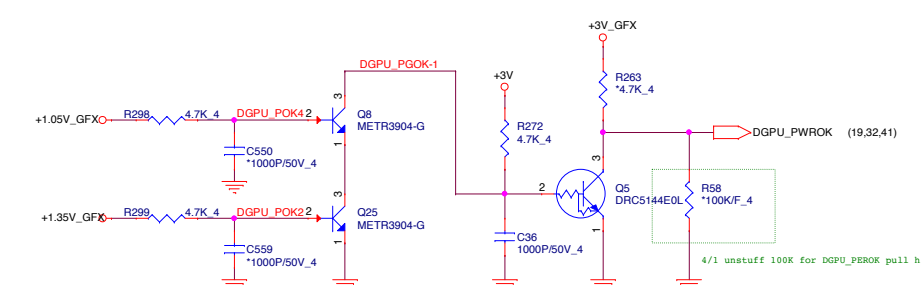
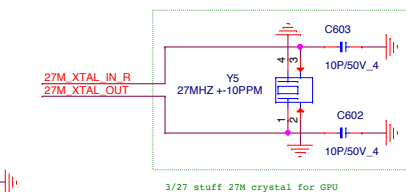
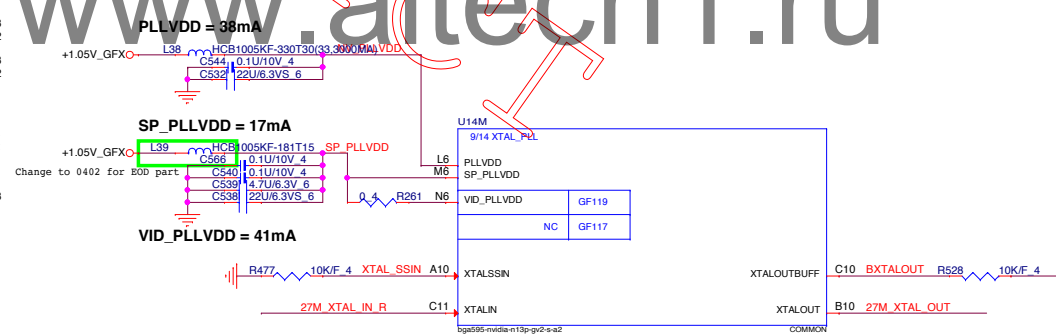
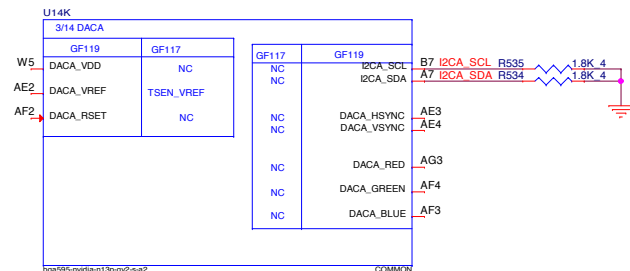
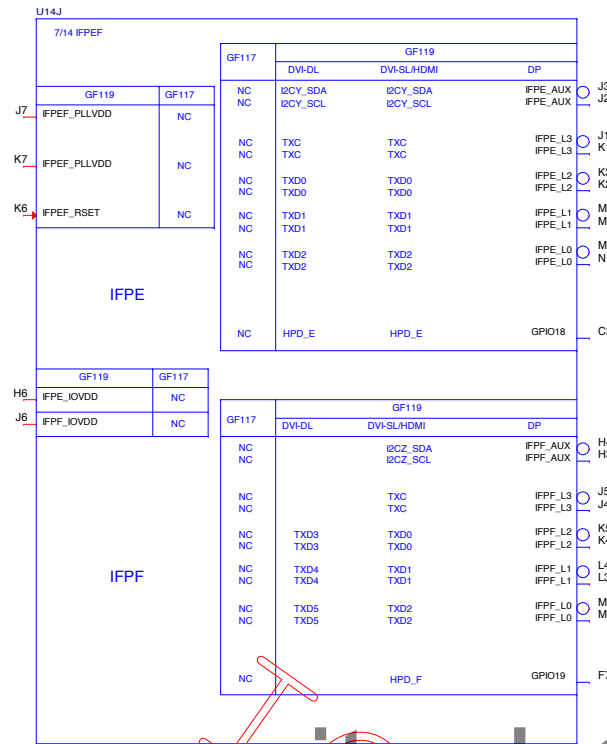
3/25 deleted PEG1~3, then add test points

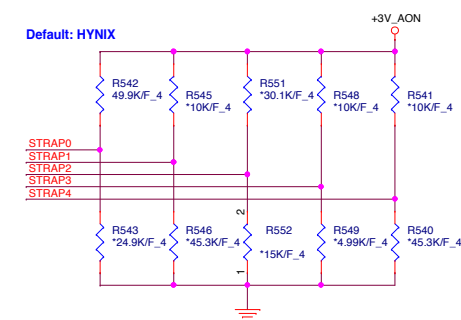


4/3(remove GC6) unstuff U5002 and stuff R5081 for PEGX_RST#.





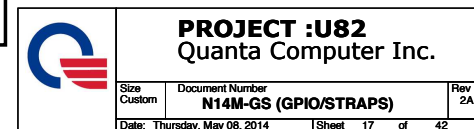




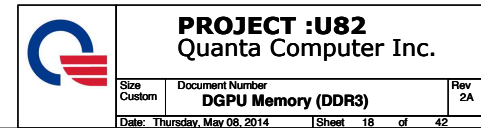
Resistor Values	Pull-Up to 3V3_MAIN	Pull-Down to GND
4.99 kΩ	1000	0000
10.0 kΩ	1001	0001
15.0 kΩ	1010	0010
20.0 kΩ	1011	0011
24.9 kΩ	1100	0100
30.1 kΩ	1101	0101
34.8 kΩ	1110	0110
45.3 kΩ	1111	0111

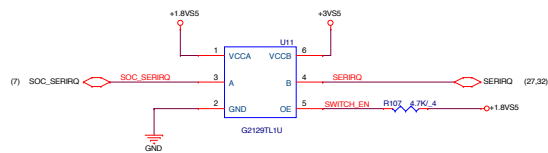
RAMCFG (B-1)	DESCRIPTION	Vendor	Vendor P/N	QCI P/N	QBC	TOP B/S
0000						
0100	DDR3 256Mx16, 64bit, 4Gb,900MHz	micron	MT41J256M16HA-093G:E		AKD5P2SSTL01	AKD5P2SSTL01
0011	DDR3 256Mx16, 64bit, 4Gb,900MHz	HYNIX	H5TC4G63AFR-11C		AKD5PGWT08	AKD5PGWT07
0101	DD3L 256Mx16, 64bit, 4Gb,900MHz	SAMSUNG	4W4G1646D-BC1A	AKD5PGWT500		

GPI/O	I/O	PIN	USAGE
0	IN	FB_CLAMP_MON	FB Clamp monitor
1	OUT	MEM_VDD_CTL	Memory VDD VID
2	OUT	LCD_BL_PWM	Panel Backlight PWM
3	OUT	LCD_VCC	PANEL POWER ENABLE
4	OUT	LCD_BLEN	PANEL BACKLIGHT ENABLE
5	OUT	Reserved	--
6	OUT	FB_CLAMP_TGL_REQ	Active low FB Clamp toggle request
7	OUT	3D_VISION	3D VISION LEFT/RIGHT signal
8	I/O	OVERT	ACTIVE LOW THERMAL OVER TEMP
9	I/O	ALERT	ACTIVE LOW THERMAL ALERT
10	OUT	MEM_VREF_CTL	MEMORY_VREF CONTROL
11	OUT	PWR_VID	GPU_CORE_VDD PWM Control signal
12	IN	PWR_LEVEL	AC Power detect or power supply overdraw input
13	OUT	PSI	Phase Shedding

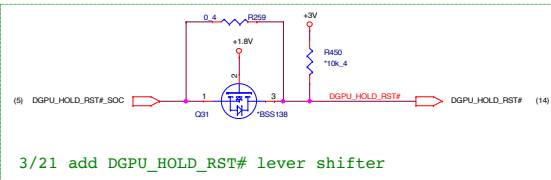


18

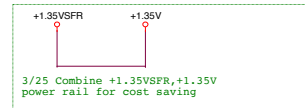
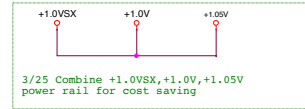
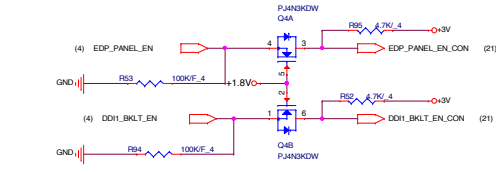




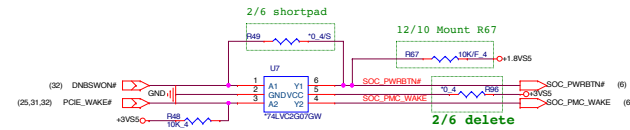
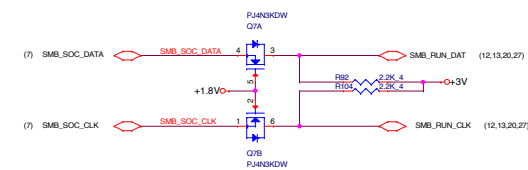
11/4 Delete duplicate TP lever shift



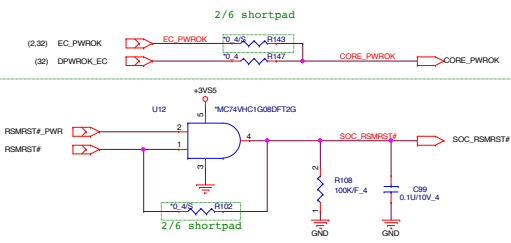
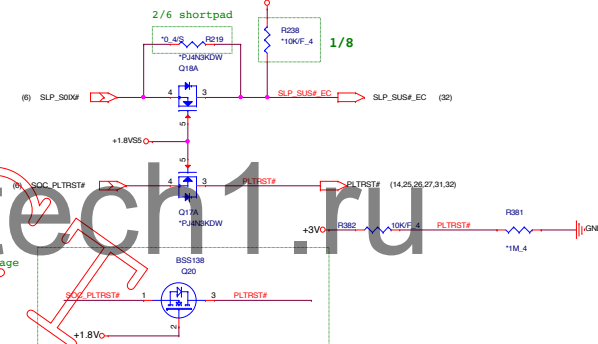
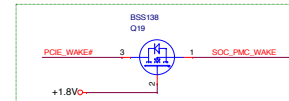
3/21 add DGPU_HOLD_RST# lever shifter



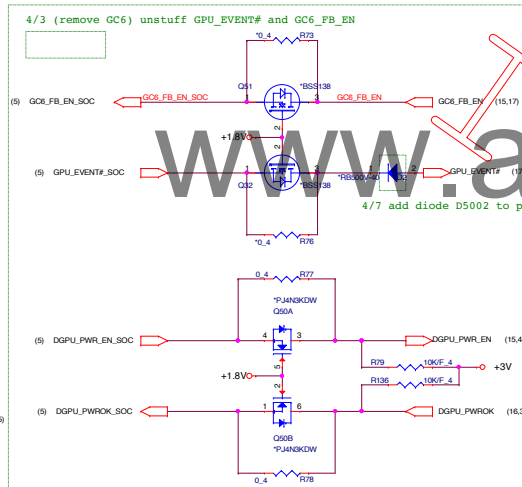
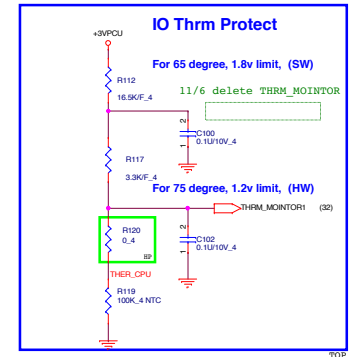
3/25 Combine +1.35VSFR,+1.35V power rail for cost saving



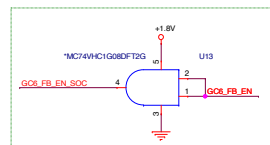
2/6 delete



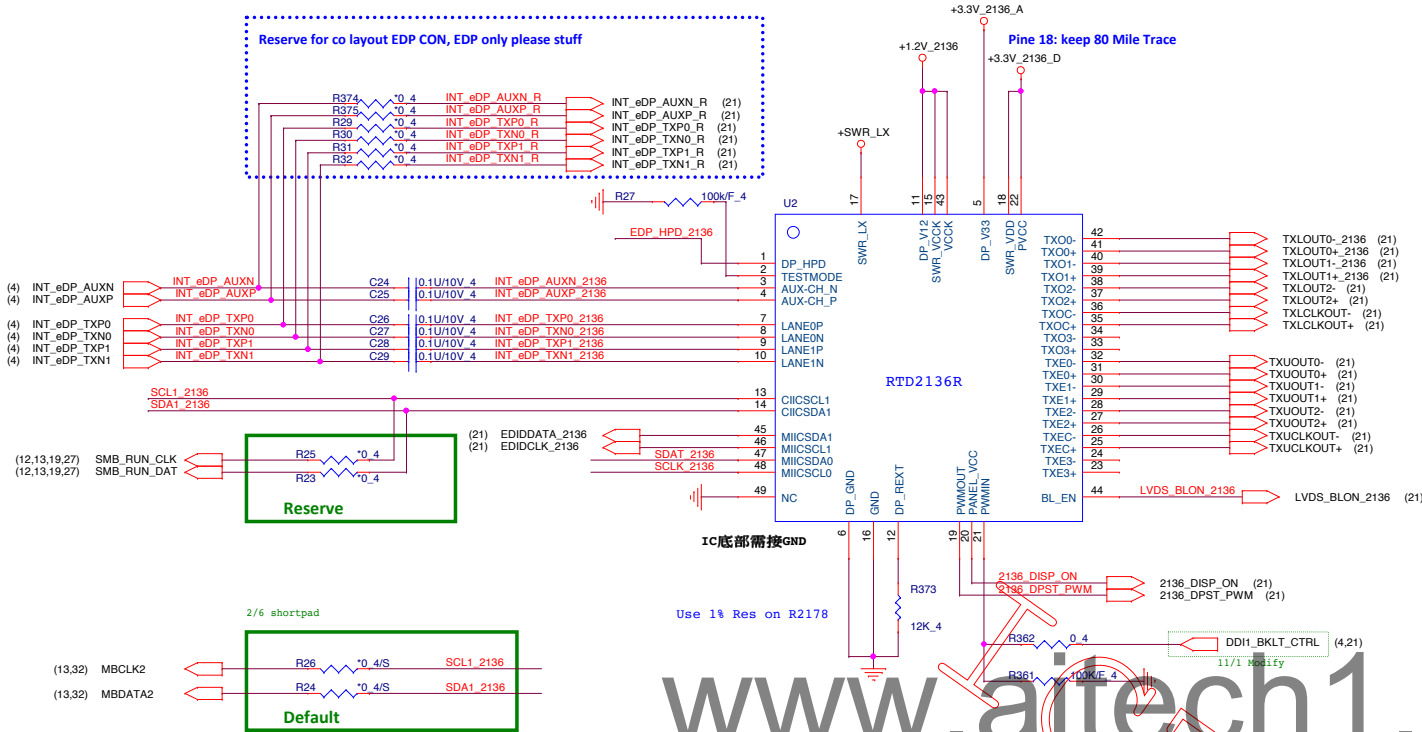
11/5 Add AND gate



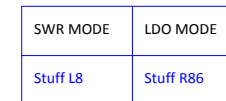
3/28 add level shifter for GPU GPIO

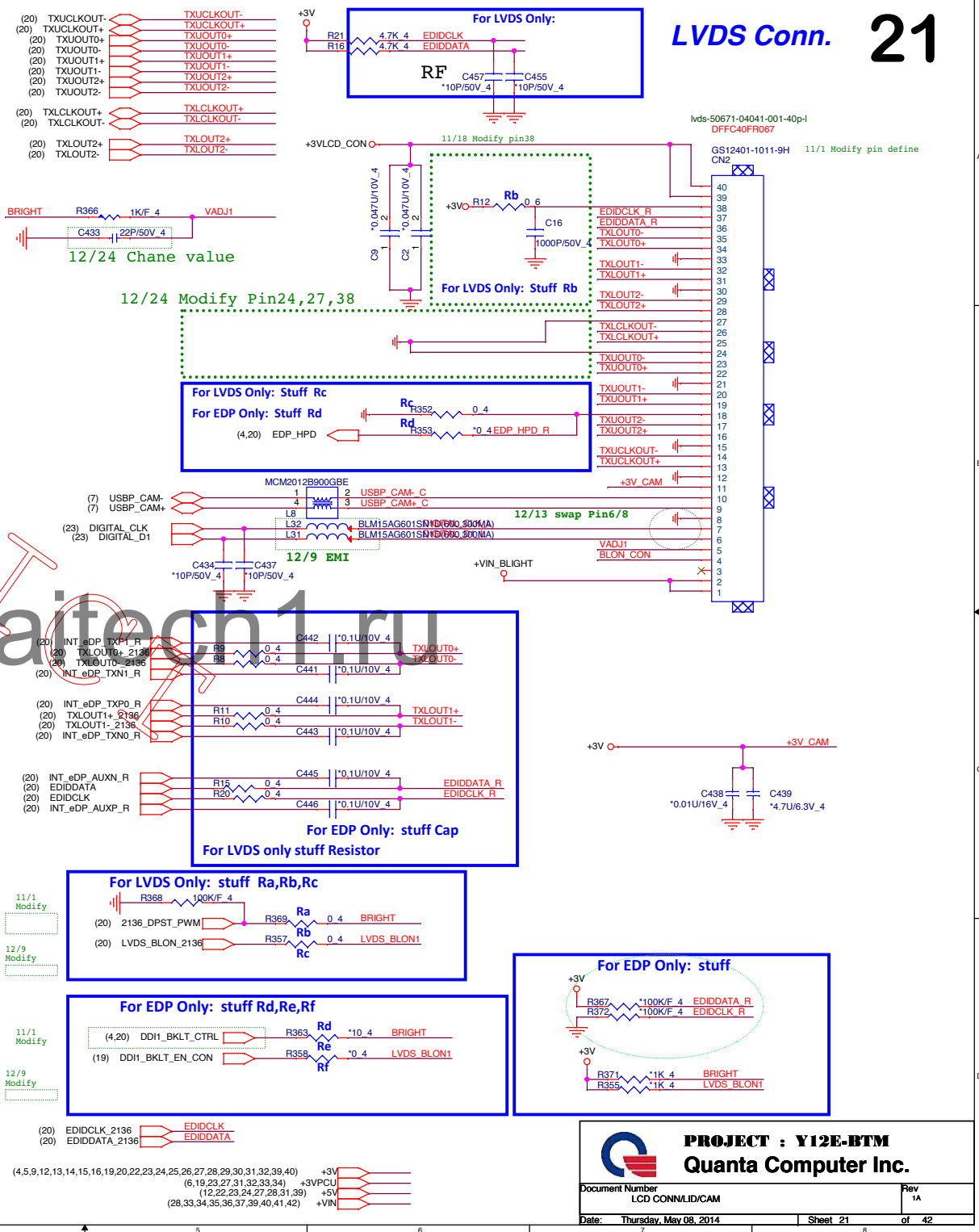
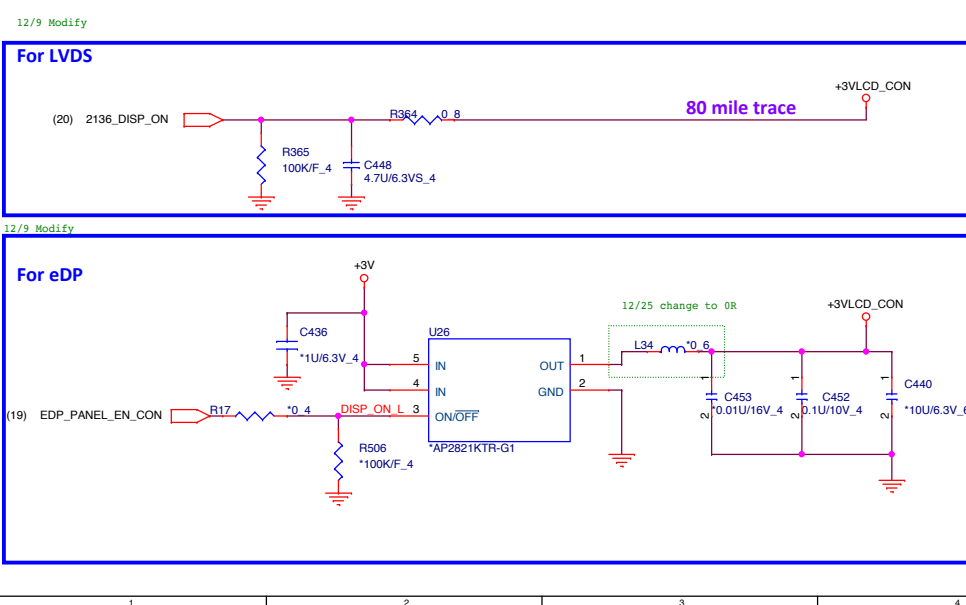
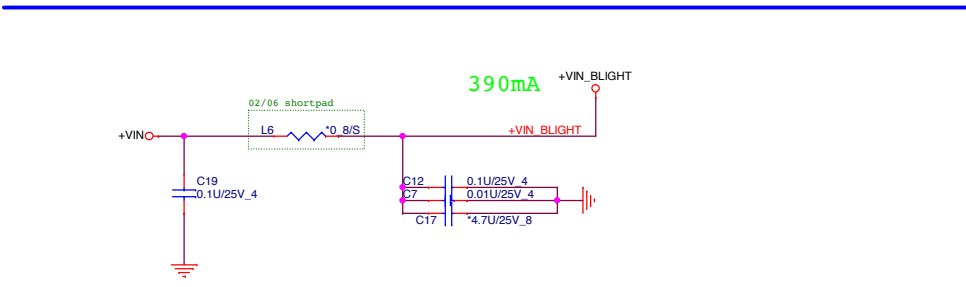
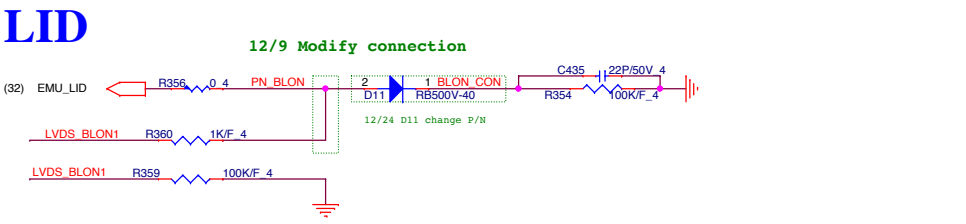


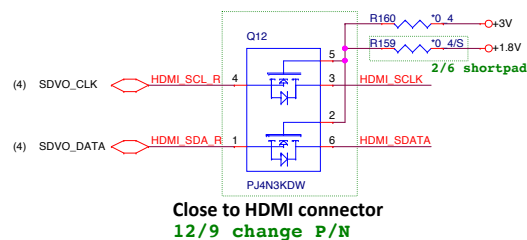
4/2 reserved an And gate to avoid voltage divider circuit from nvidia suggestion (the AND gate need to be replaced to +1.8V Vcc driven)



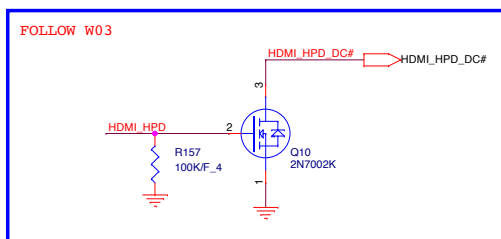
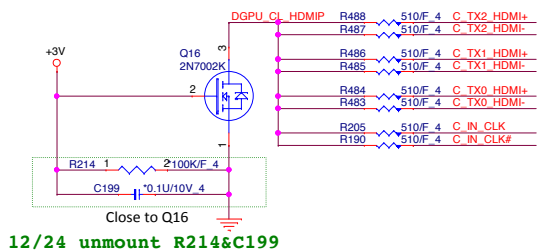
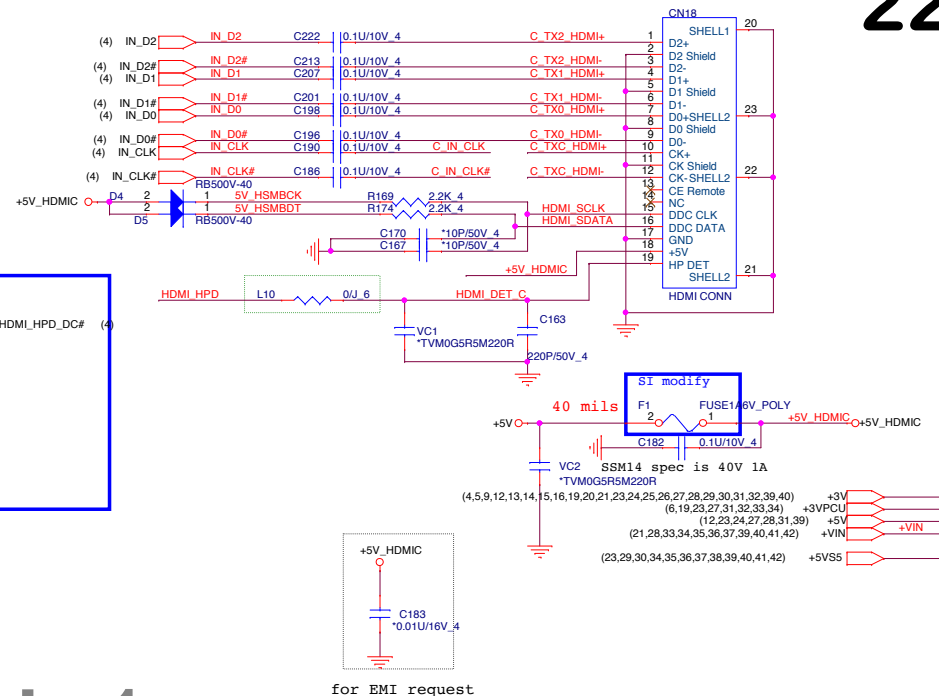
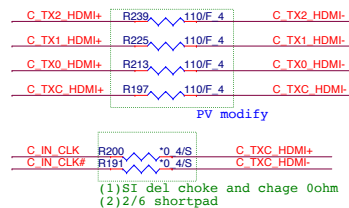
		MODE_CFG0(PIN47)	
		0	1
MODE_CFG1(PIN48)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE



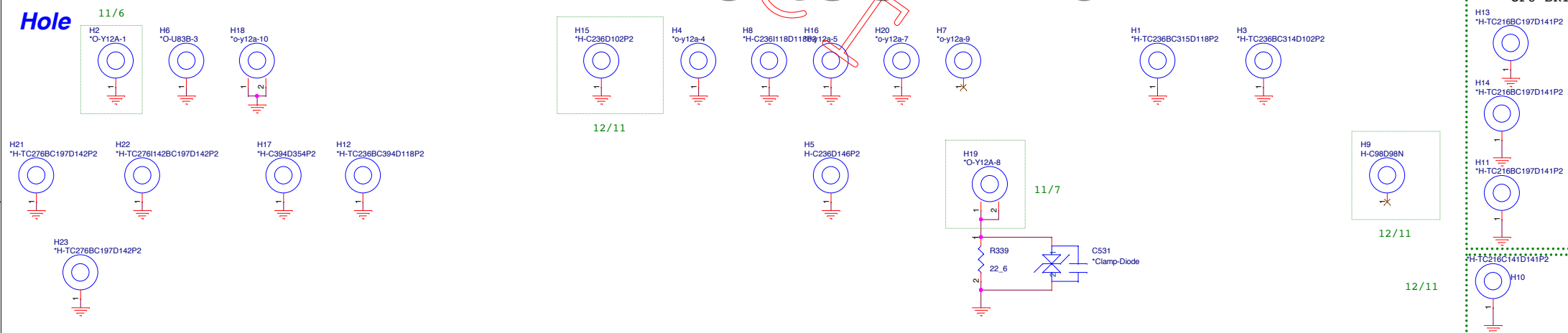
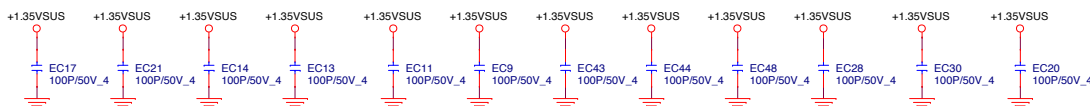


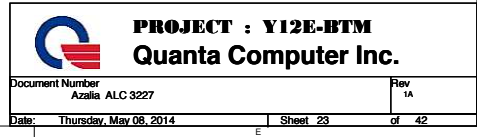


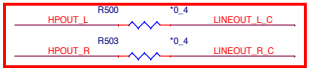
EMI Solution



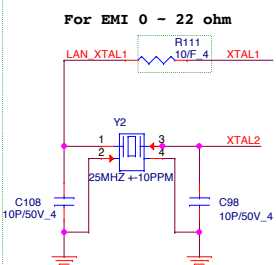
Hole

**EMI**



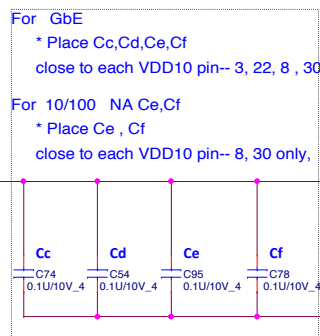
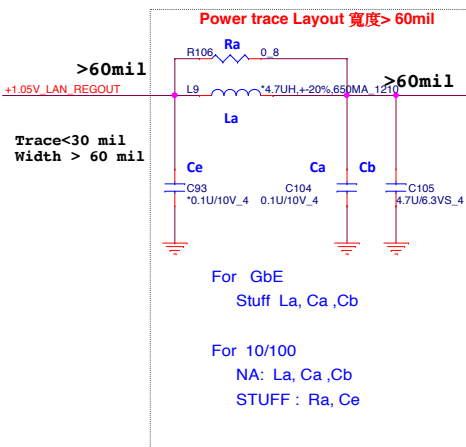


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10/31 add crystal

Change Y1 PN to BG625000121: PV

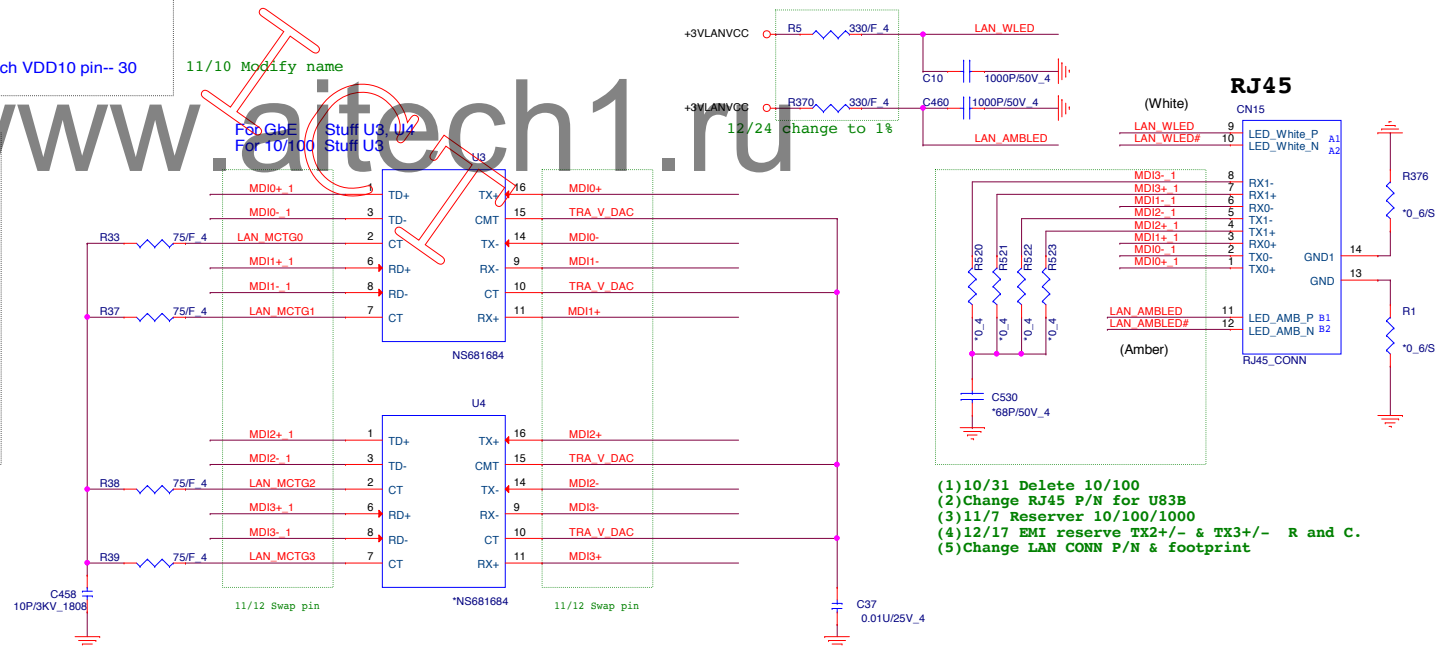
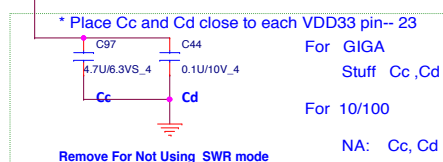
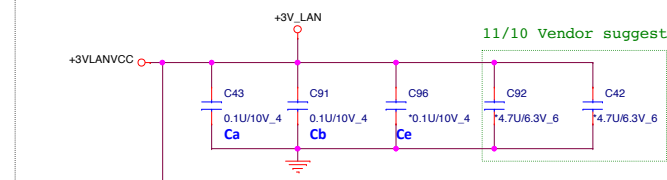
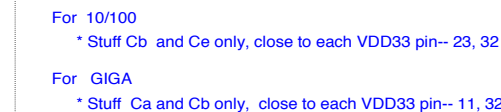


For GbE

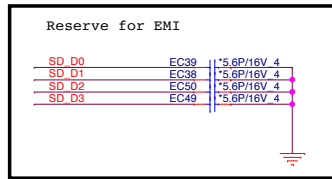
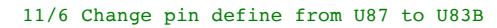
- * Place Cg and Gh close to each VDD10 pin-- 22

For 10/100

* Place C_i and C_j close to each VDD10 pin-- 30



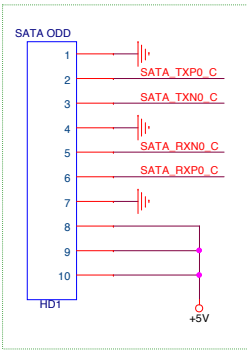
For GiGA BOT:GST5009B LF,DB0Z06LAN00
FCE :NS892407 ,DB0LL1LAN00
For 10/100 BOT: TST1284R LF DB0EL5LAN00
FCE :NS892408 ,DB0EF7LAN01

SD / MMC

Change footprint to
sdcards-psdbtc-09glbs1nn4h3-11p

SATA HDD Connector(Cable type) 14", 15", 17"

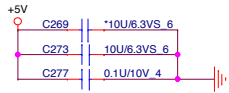
+5V: 2 A(4 Pin)
Gnd : (5 Pin)
+3V: 2 A(4 Pin)



SATA_TXP0_C C302	0.01U/16V_4	SATA_TXP0 (5)
SATA_TXN0_C C298	0.01U/16V_4	SATA_TXN0 (5)
SATA_RXN0_C C294	0.01U/16V_4	SATA_RXN0 (5)
SATA_RXP0_C C282	0.01U/16V_4	SATA_RXP0 (5)

11/12 delete 14" and 15" SATA CONN

11/1 Modify pin define and footprint
11/11 Swap pin
12/25 change footprint

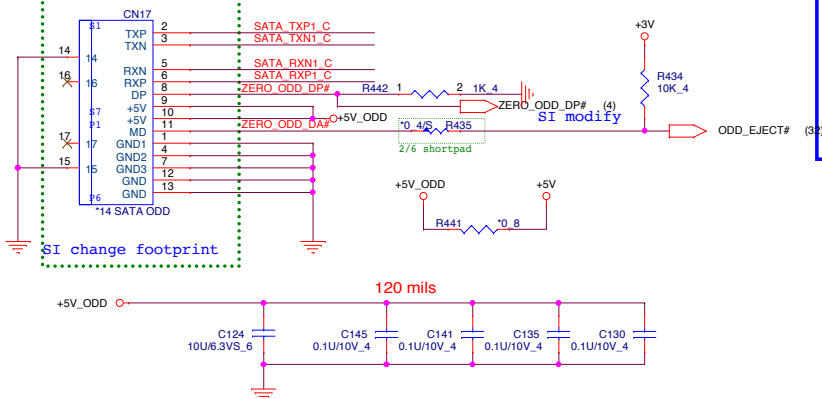


SATA ODD CONNECTOR

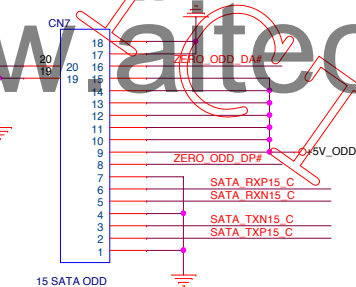
14" SATA ODD

12/24 update footprint

Bypass CAP close conn



15" & 17" SATA ODD New Type



11/6 update footprint

11/1 Colayout 15" & 17" ODD

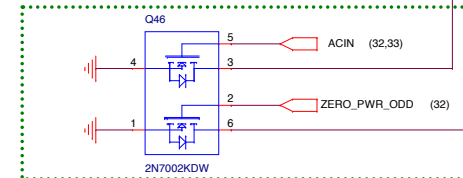
For 15" & 17": stuff Ra

11/11 Swap pin

SATA_TXP15_C C494	0.01U/25V_4	SATA_TXP1 (5)
SATA_TXN15_C C491	0.01U/25V_4	SATA_TXN1 (5)
SATA_RXN15_C C489	0.01U/25V_4	SATA_RXN1 (5)
SATA_RXP15_C C487	0.01U/25V_4	SATA_RXP1 (5)

For 14": stuff Rb

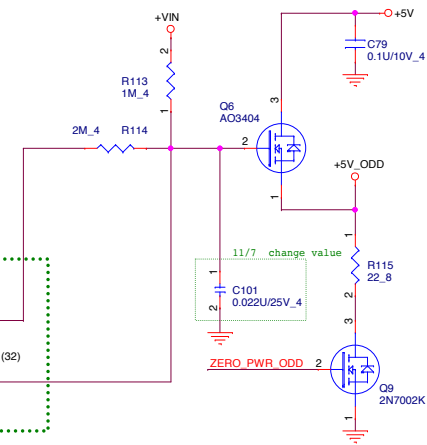
SATA_TXP1_C C495	0.01U/25V_4	SATA_TXP1
SATA_TXN1_C C492	0.01U/25V_4	SATA_TXN1
SATA_RXN1_C C490	0.01U/25V_4	SATA_RXN1
SATA_RXP1_C C488	0.01U/25V_4	SATA_RXP1



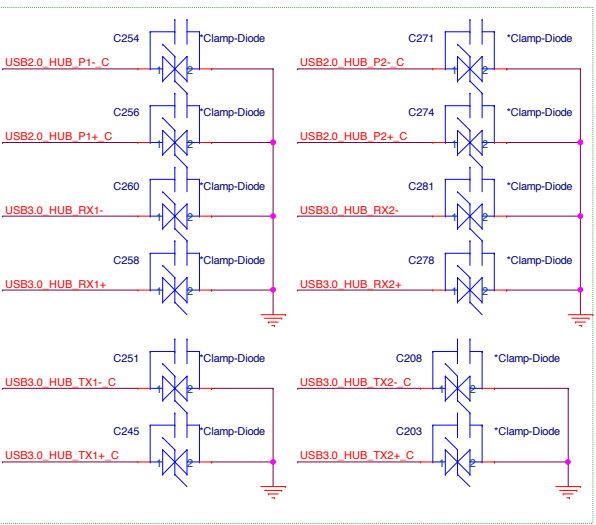
12/24 change to dual MOS

For BM1

ACIN C223	*220P/50V_4
ZERO_PWR_ODD C214	*220P/50V_4

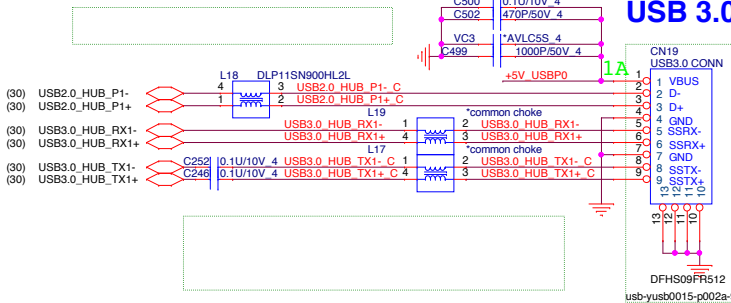


USB 2.0/3.0 Combo



11/1 modify

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



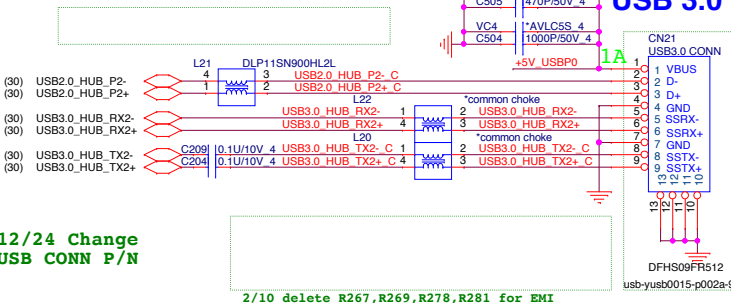
USB 3.0

2/10 delete R254, R257, R263, R264 for EMI

10/31 delet USB3.0 Charger IC

11/12 modify

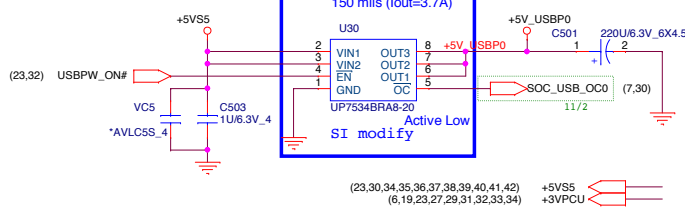
2/10 delete R271 & R275 to mount L21 for EMI



USB 3.0

2/10 delete R267, R269, R278, R281 for EMI

12/24 Change USB CONN P/N



Leap Motion

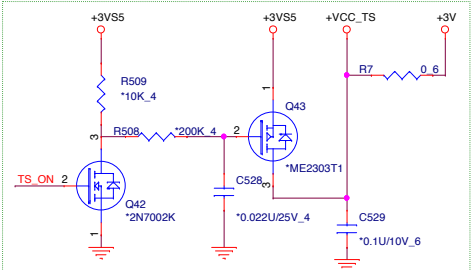
11/7 Delete Leap motion

Fingerprint Conn

11/7 Delete Fingerprint CONN

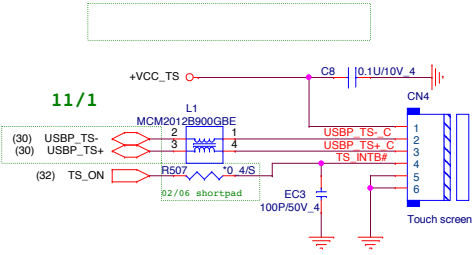
Touch screen

12/24 modify control schematic



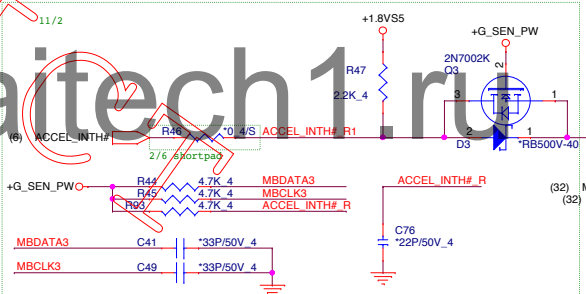
2/10 delete R3 & R4 to mount L1 for EMI

11/1

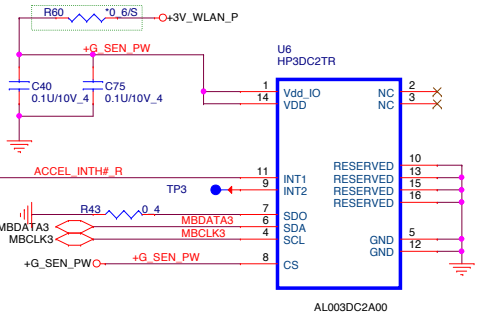


Accelerometer Sensor

沿用U82



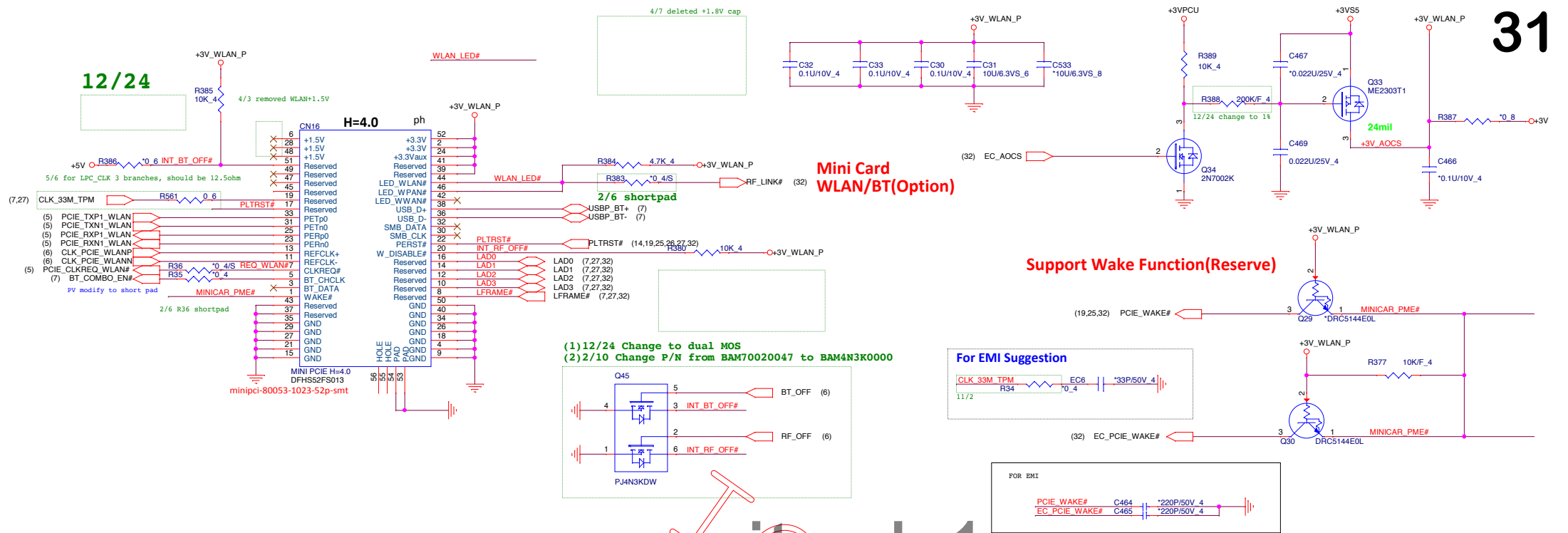
2/6 shortpad



Green CLK Circuitry

10/30 delete Green Clock

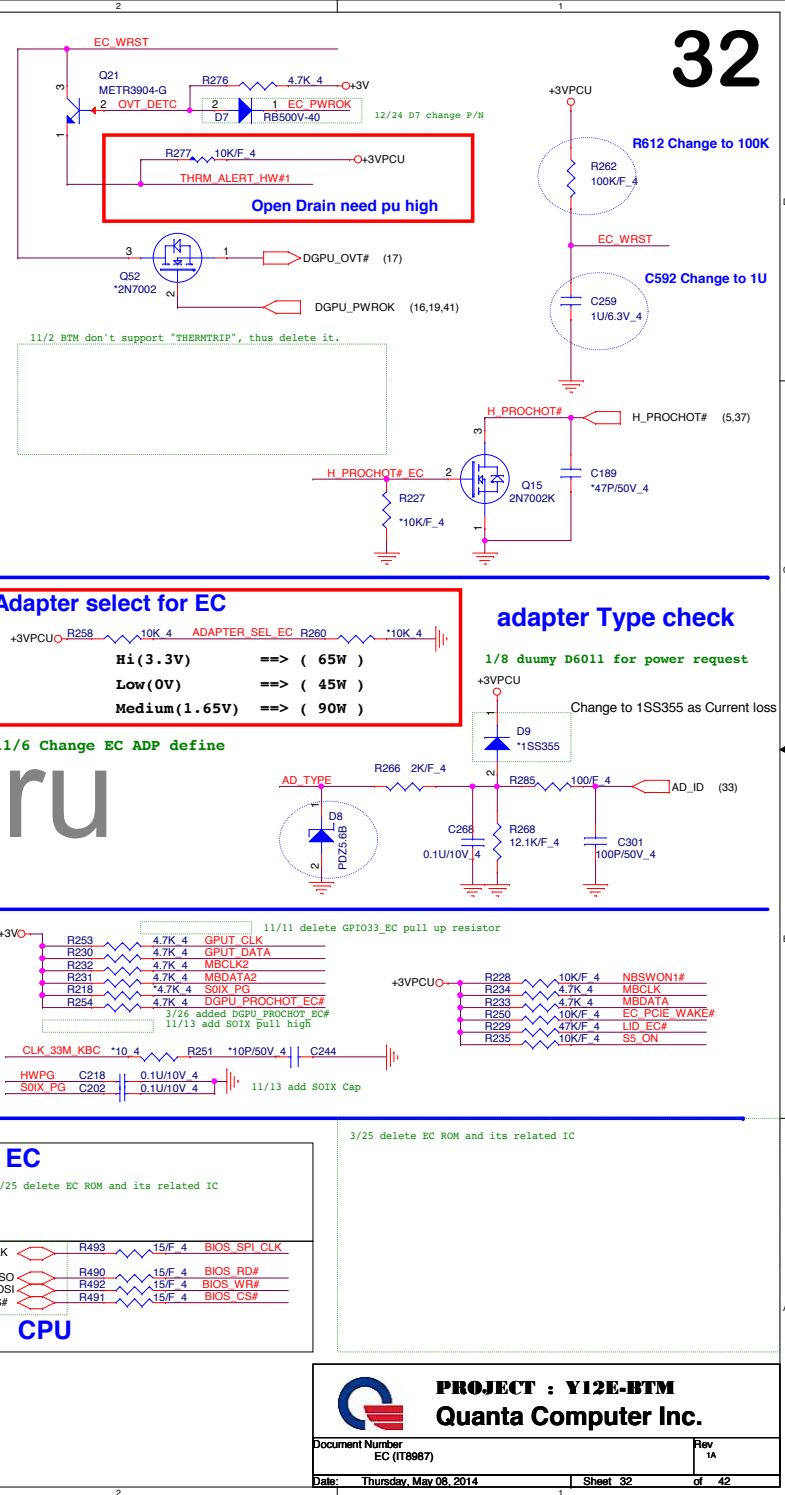
(4,5,9,12,13,14,15,16,19,20,21,22,23,24,25,26,27,28,30,31,32,39,40)
(12,22,23,24,27,28,31,39)
(6,19,23,27,29,31,32,33,34)

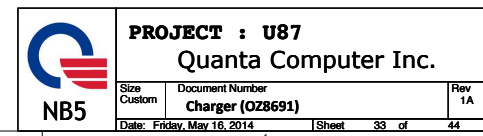


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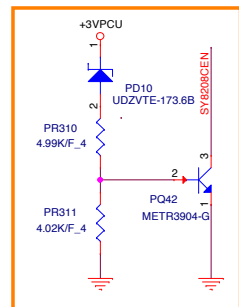
USB 3.0 re-driver

10/31 delet USB3.0 re-driver IC



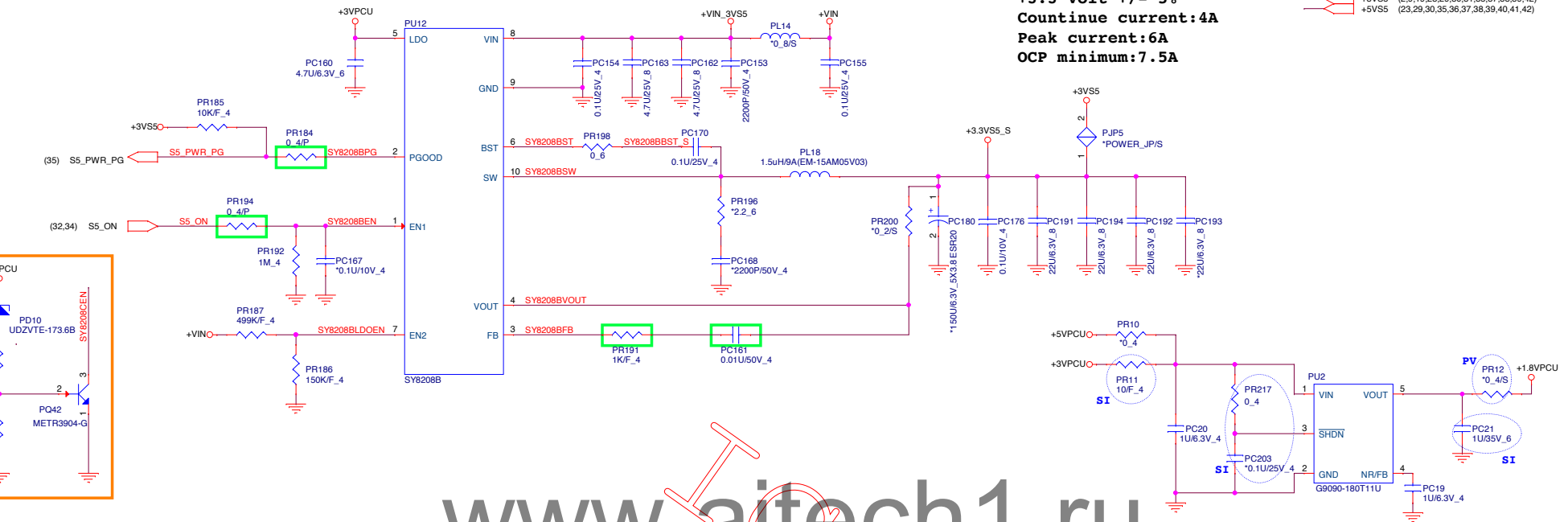


DC/DC +3VS5/+5VS5



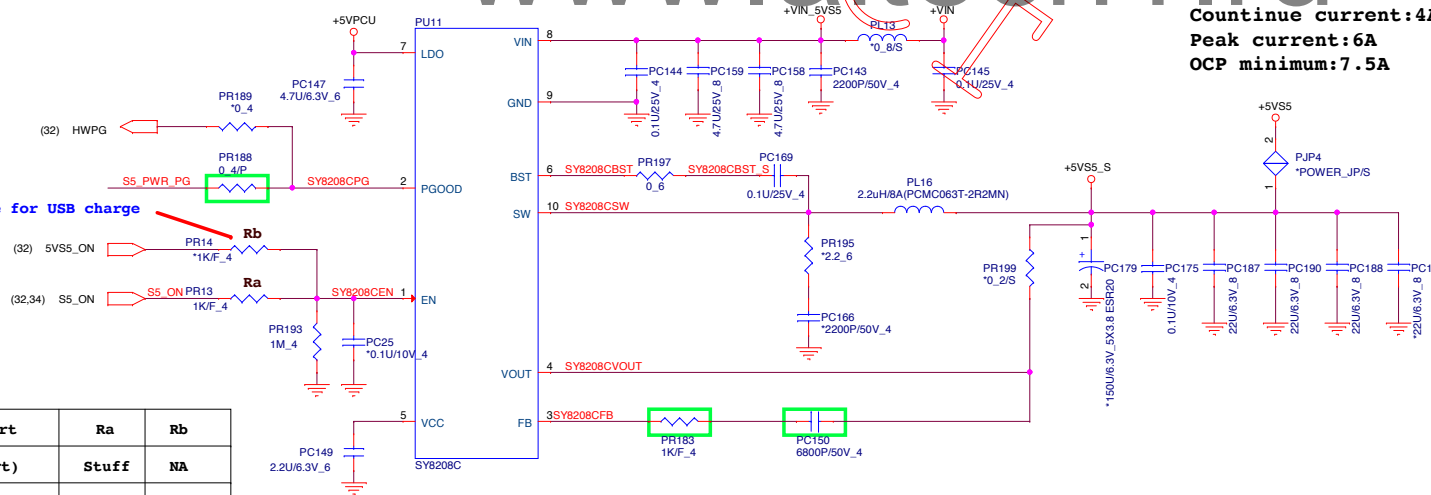
+3.3 Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

+3VS5 (2,9,19,23,29,30,31,35,37,38,39,42)
 +5VS5 (23,29,30,35,36,37,38,39,40,41,42)

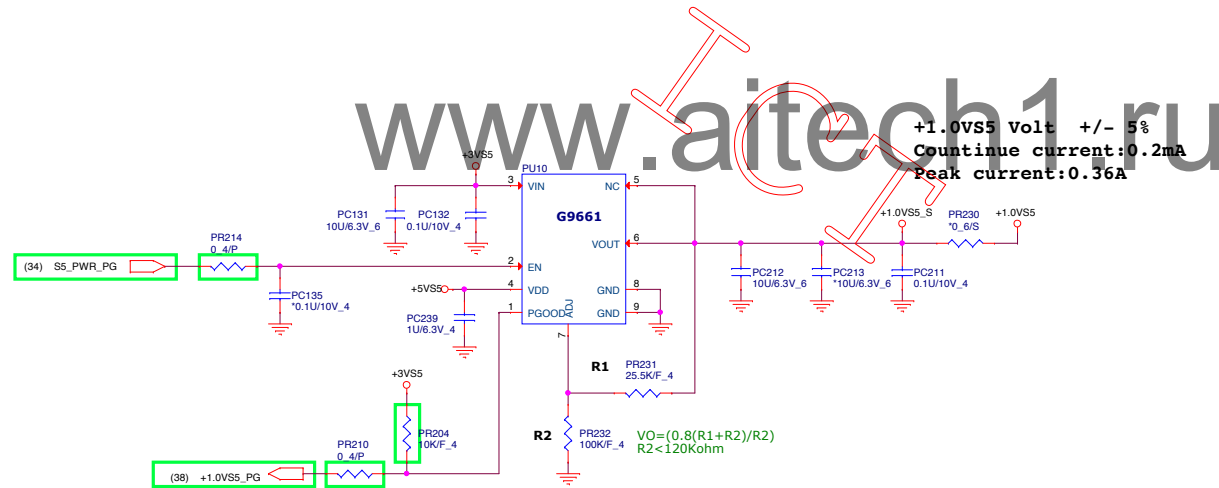
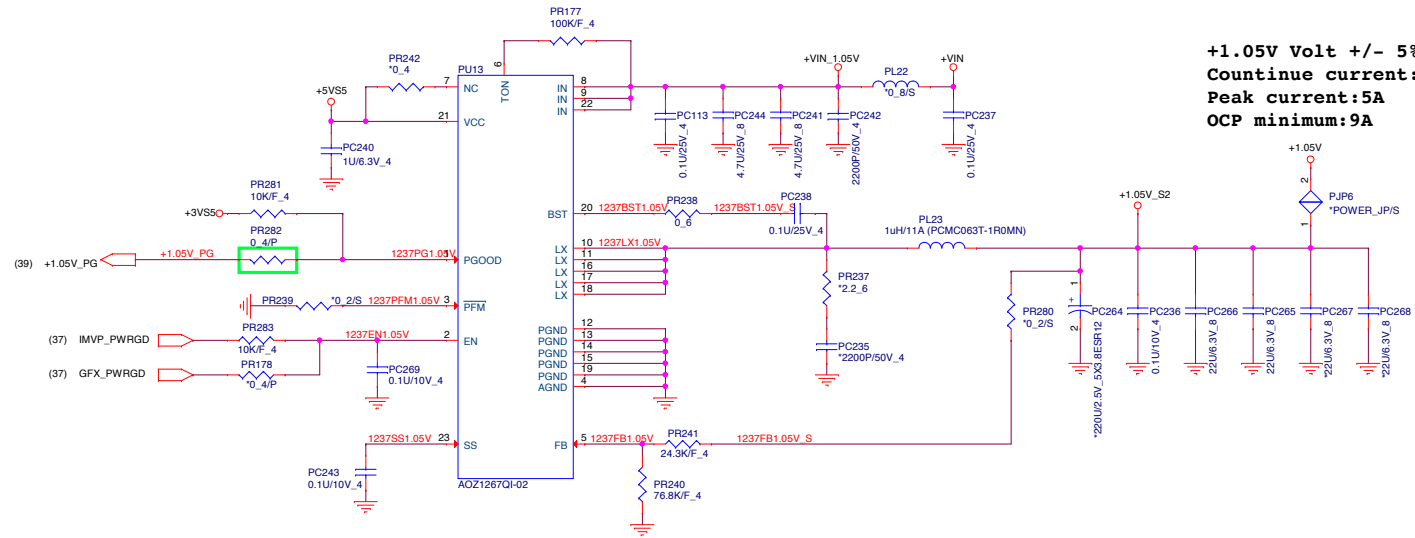


+5 Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

Reserve for USB charge



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



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Quanta Computer Inc.

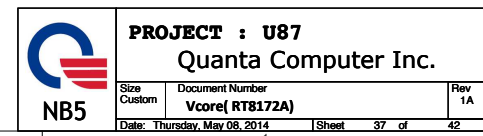
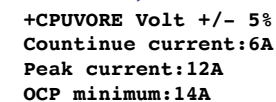
Document Number
 +1.05V/+1.5V (SY8002)

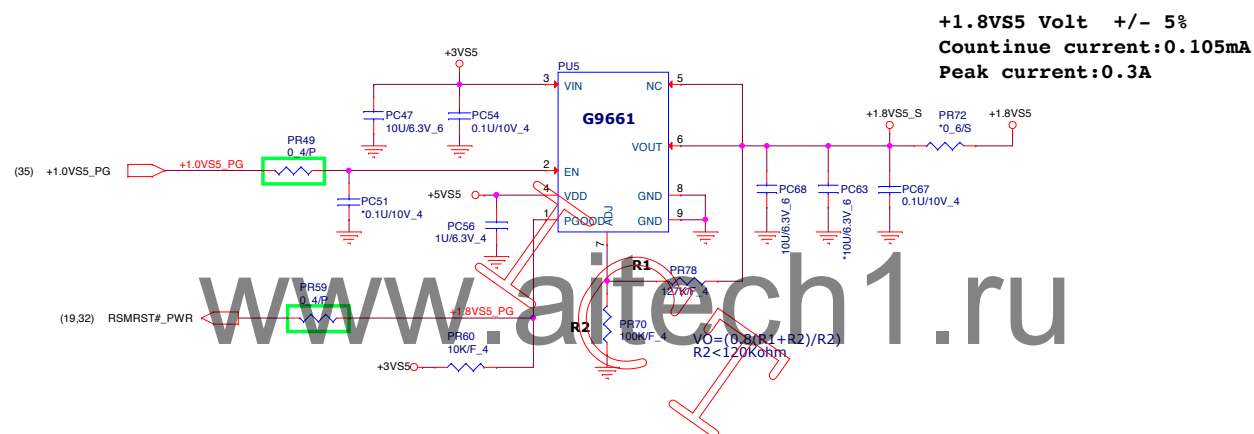
Rev
 1A

Date: Thursday, May 08, 2014

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Document Number
 1.0VS5/1.8VS5/1.24VS5

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 1A

Date: Thursday, May 08, 2014

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