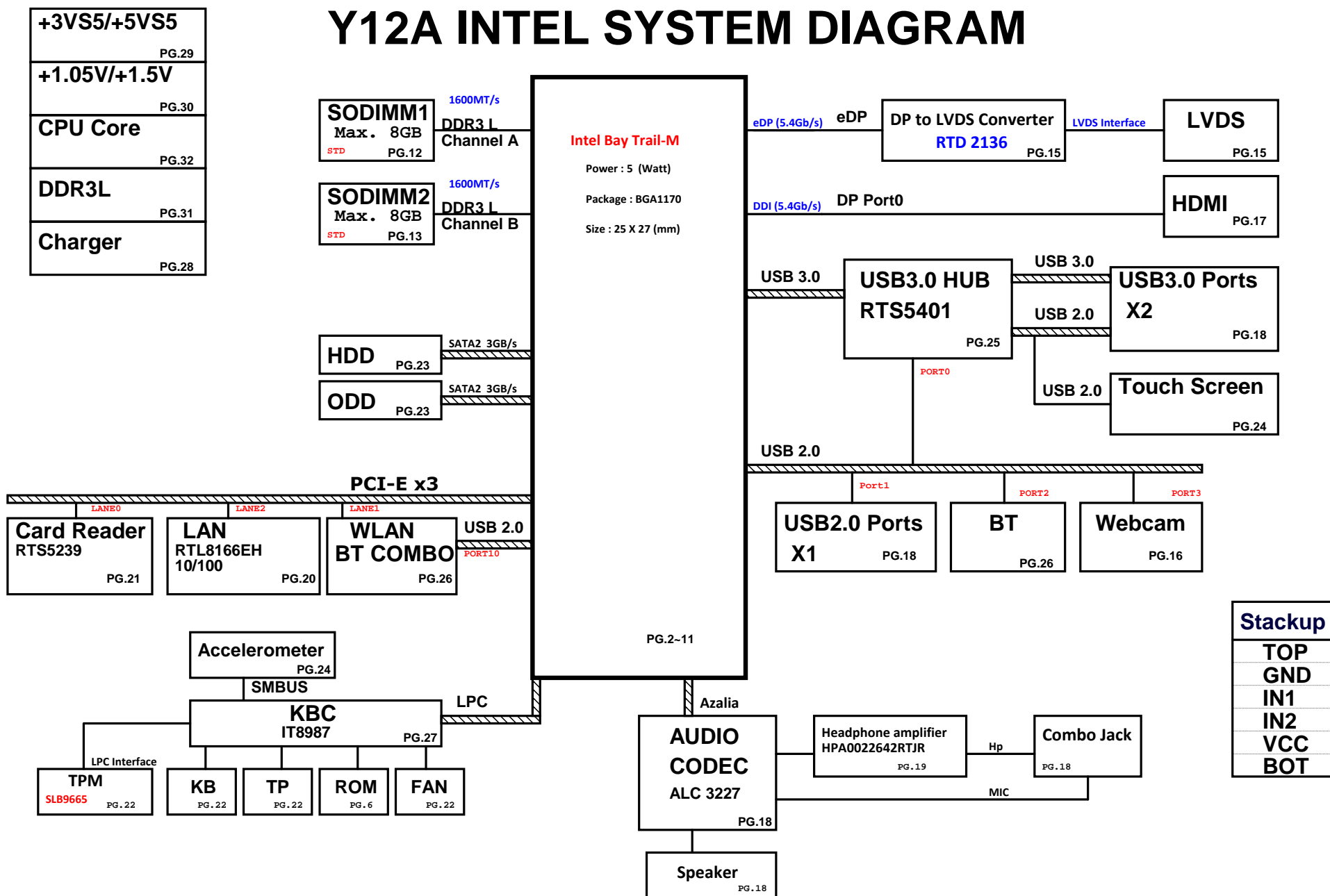
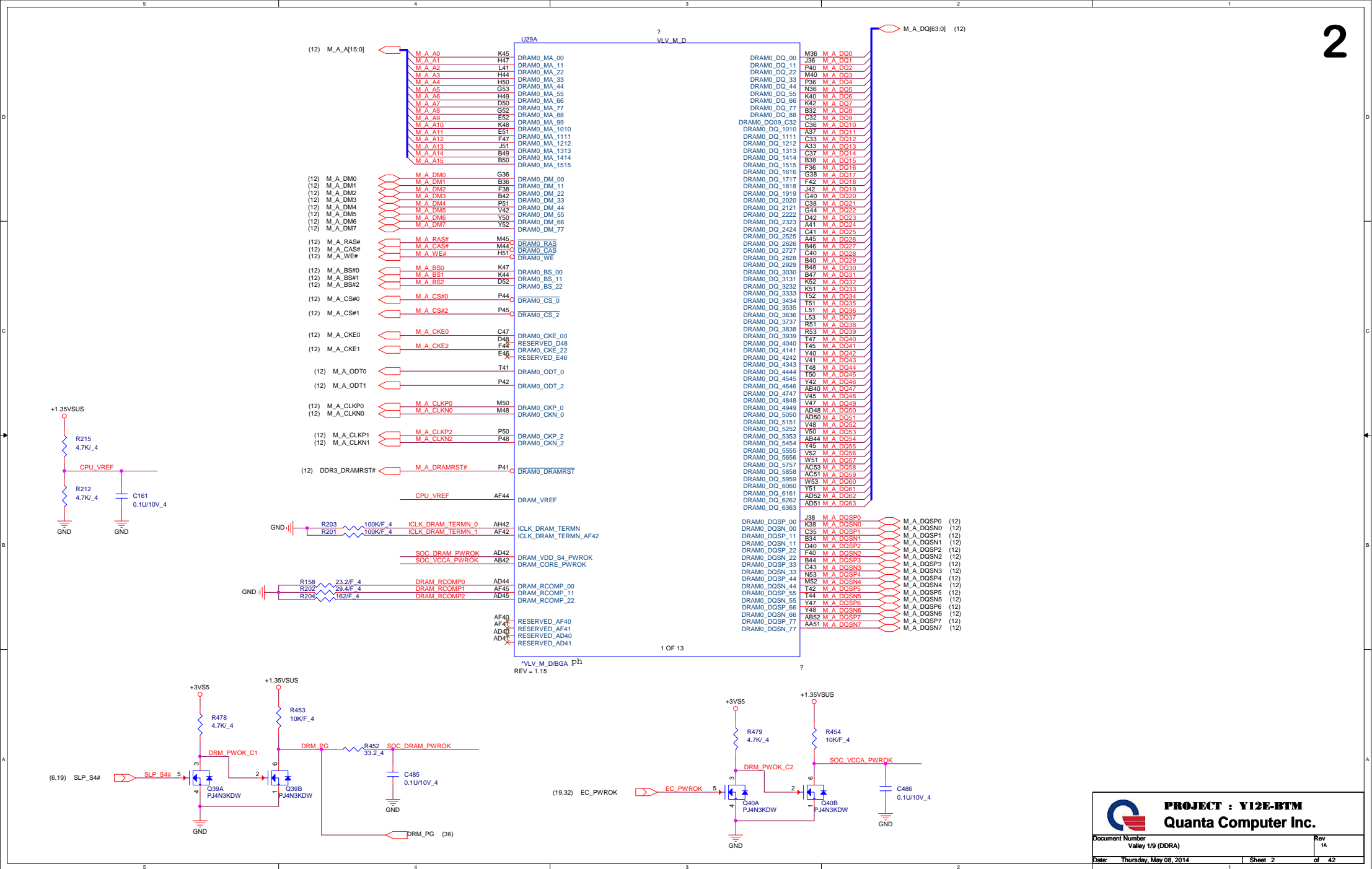
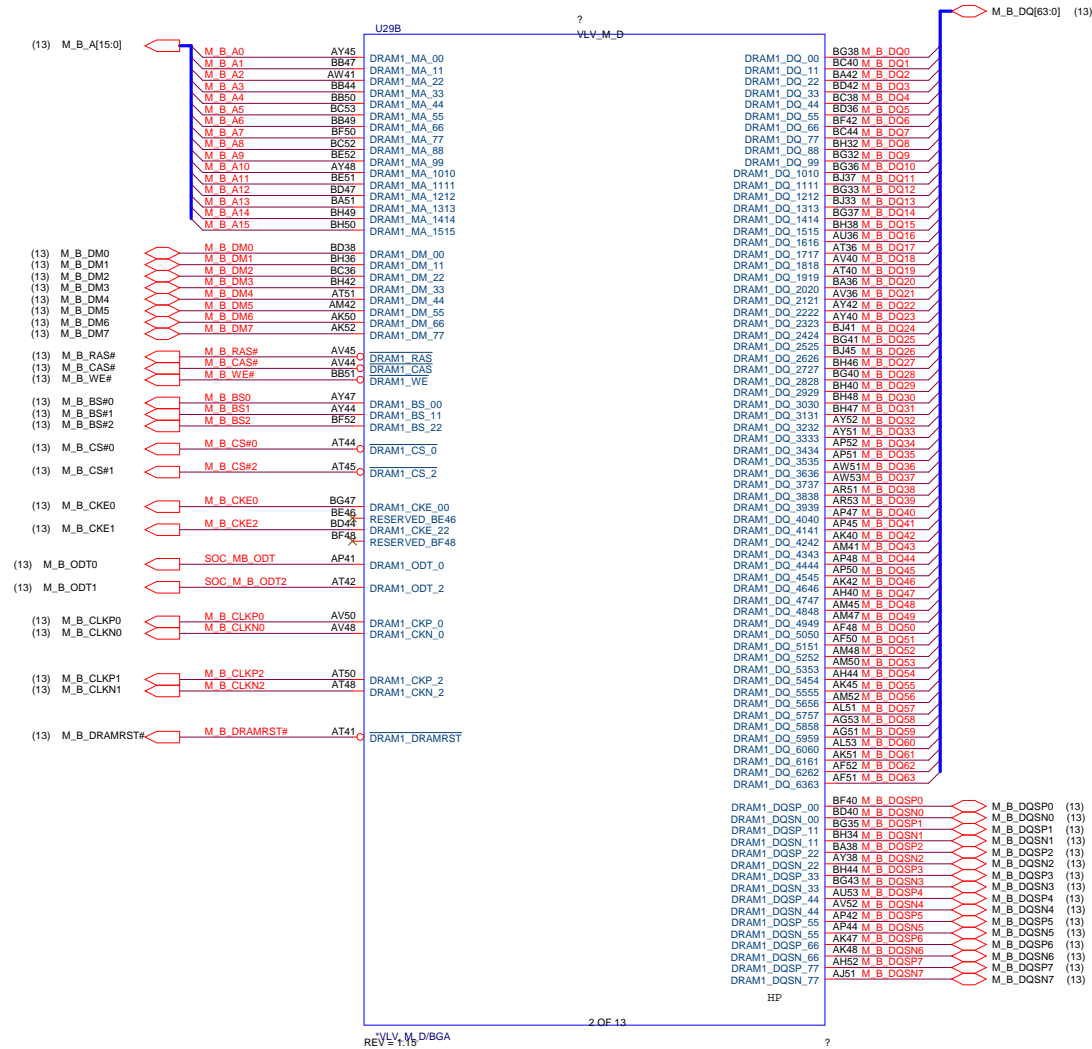


Y12A INTEL SYSTEM DIAGRAM







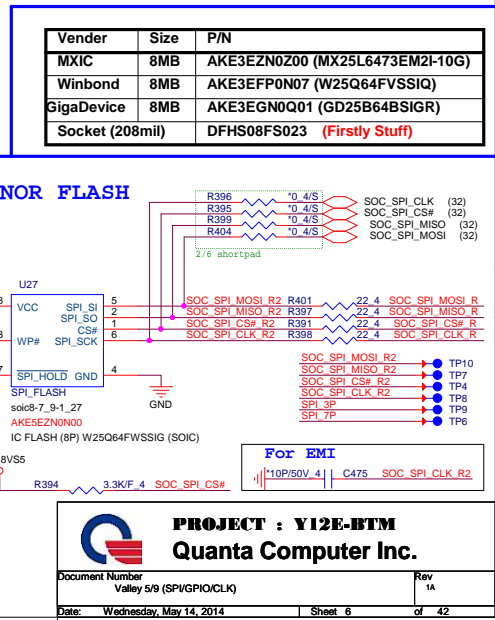
PROJECT : Y12E-BTM
Quanta Computer Inc.

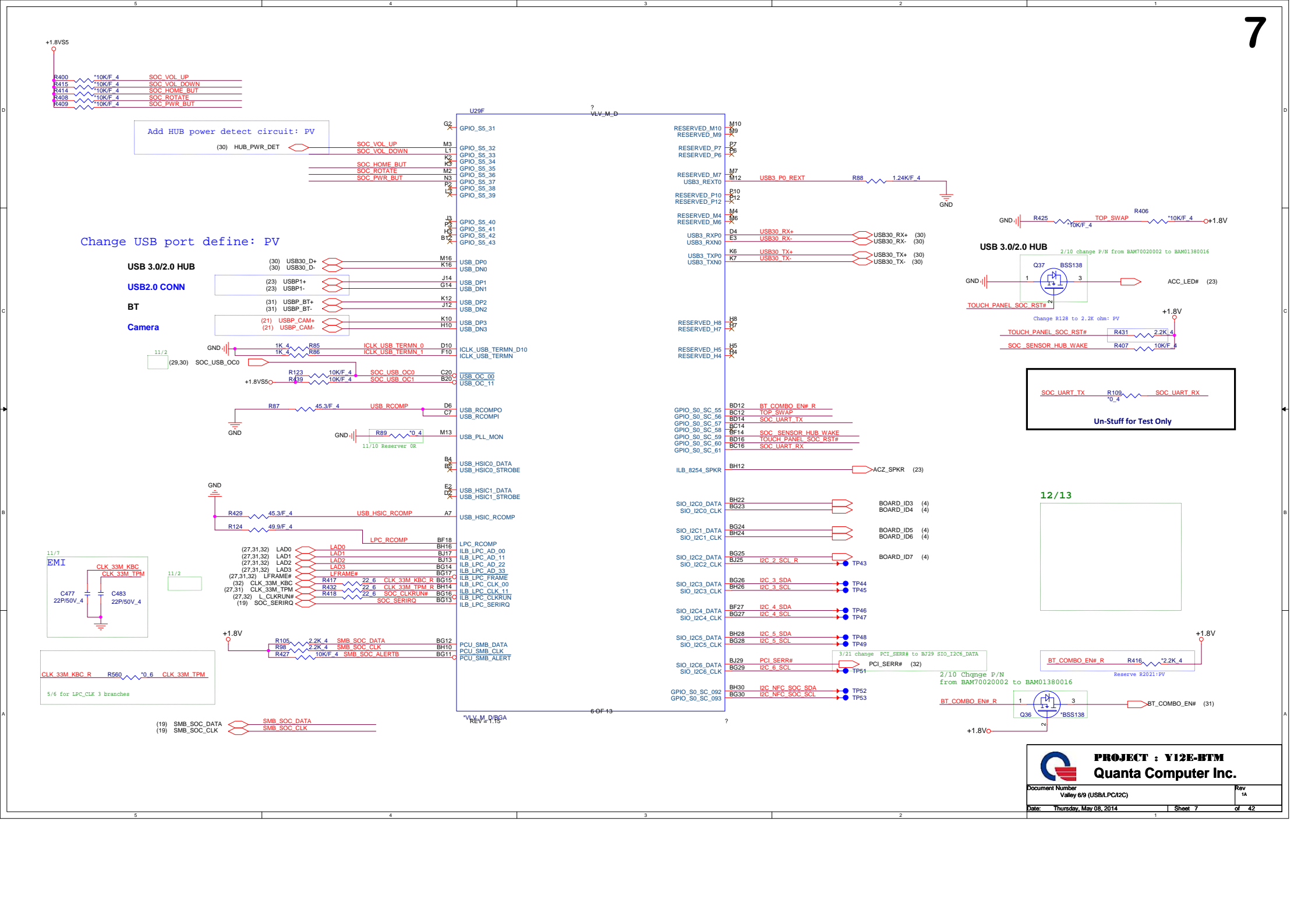
Document Number
Valley 2/9 (DDR8)

Rev
1A

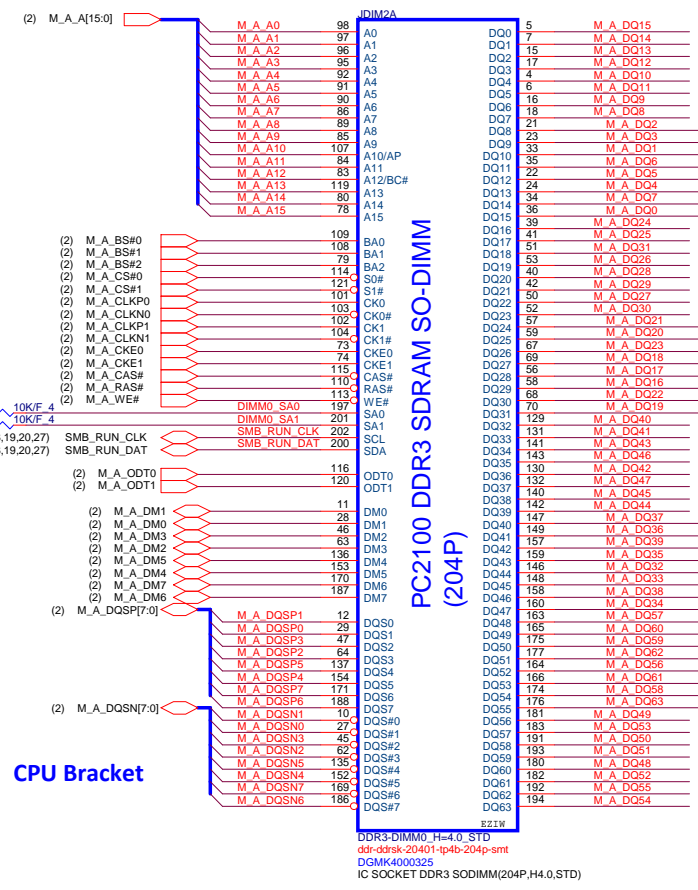
Date: Thursday, May 08, 2014

Sheet 3 of 42



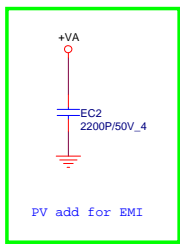
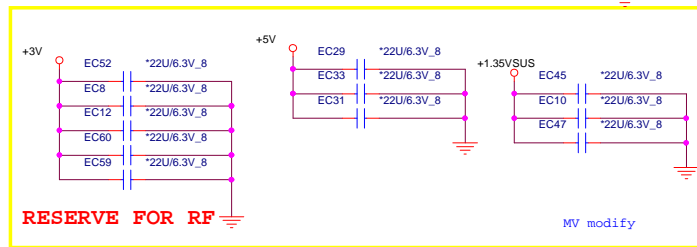
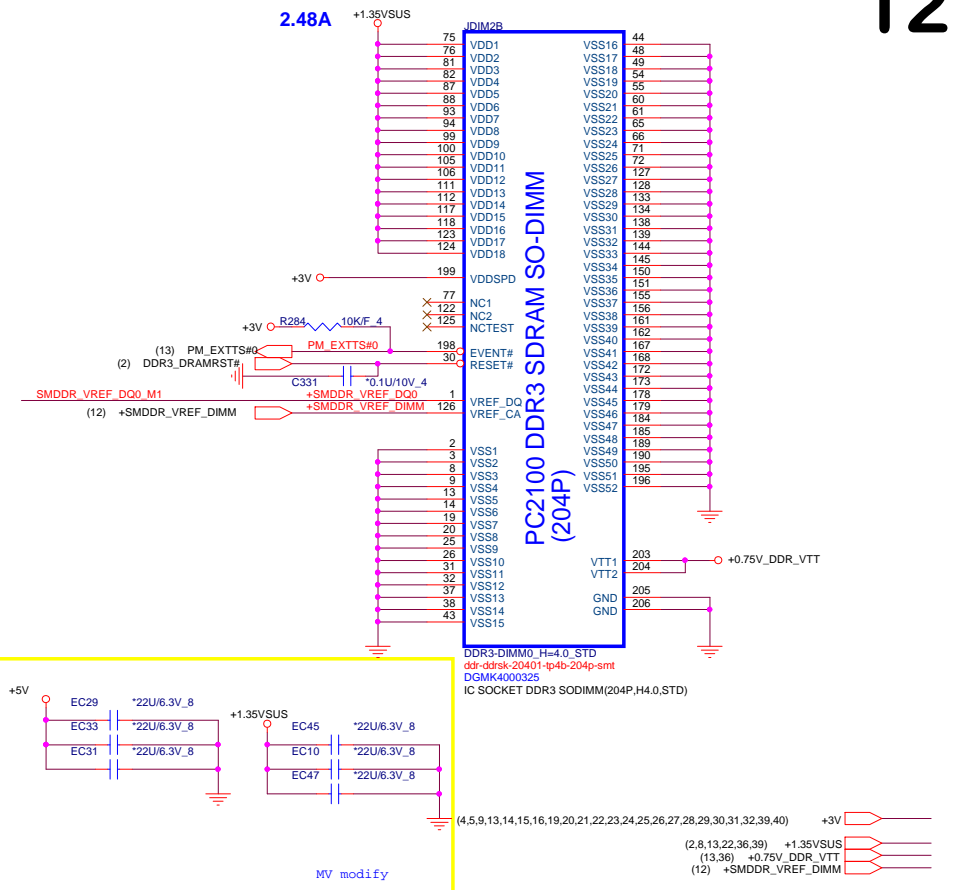


3/21 deleted XDP CH6

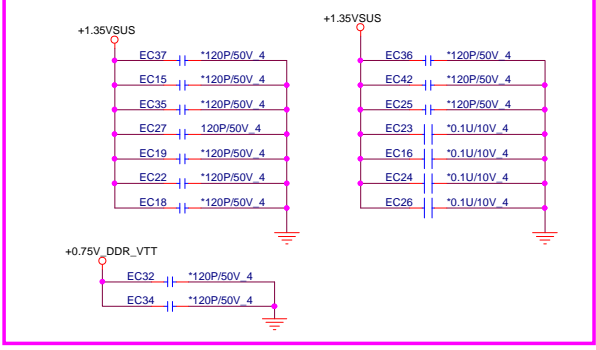


CPU Bracket

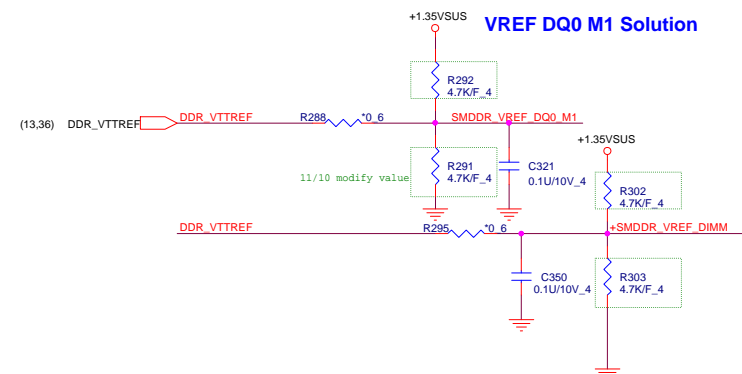
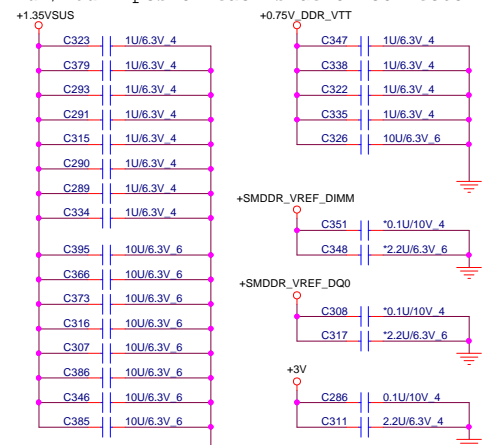
M_A_DQ[63:0] (2)



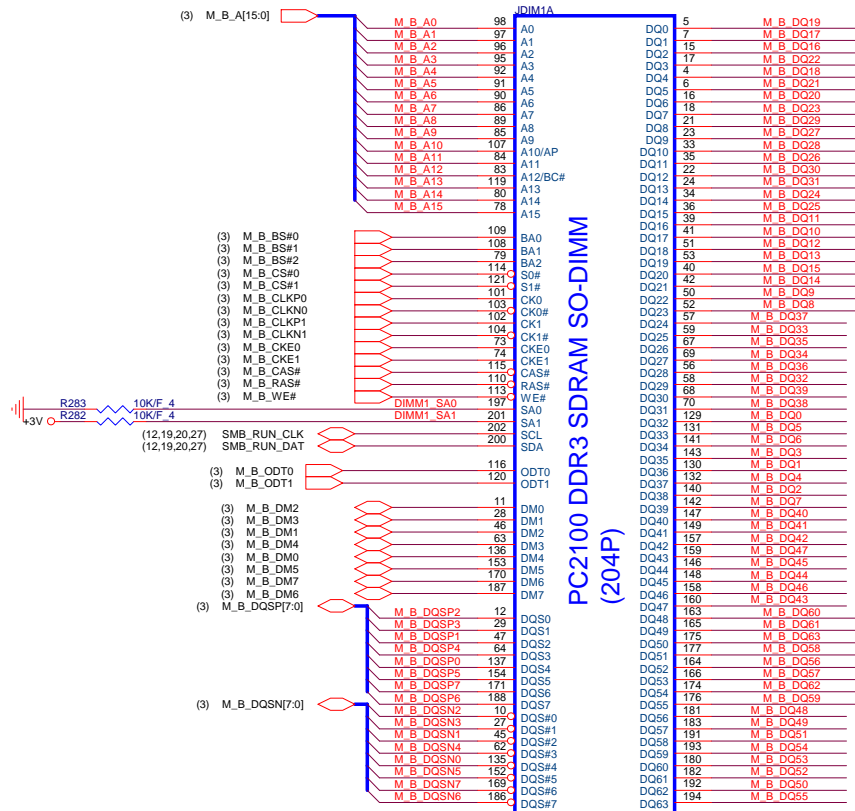
For EMI RESERVE



Place these Caps near So-Dimm0.
1uF/10uF 4pcs on each side of connector

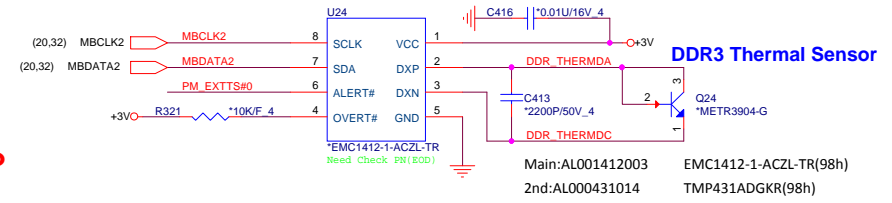


M_B_DQ[63:0] (3)



DDR3-DIMM0_H=4.0.STD
ddr-ddrsk-20401-tp4b-204p-smt
DGMK4000325
IC SOCKET DDR3 SODIMM(204P,H4.0,STD)

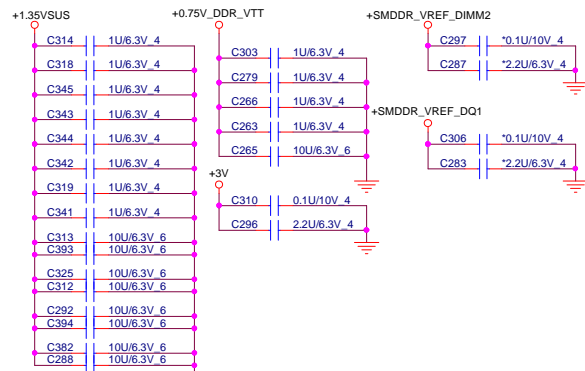
Local Thermal Sensor



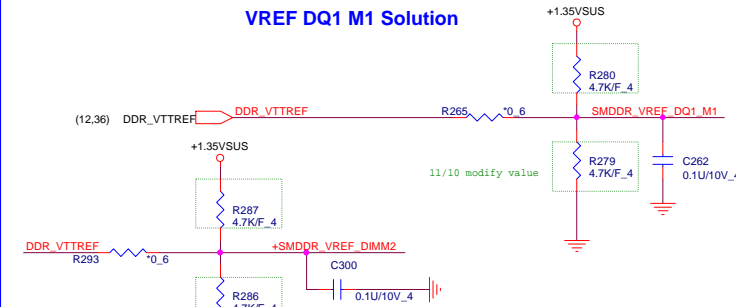
?

Place these Caps near So-Dimm1.

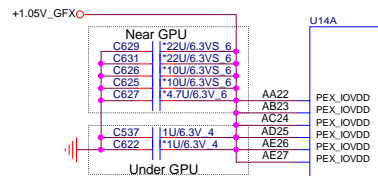
1uF/10uF 4pcs on each side of connector



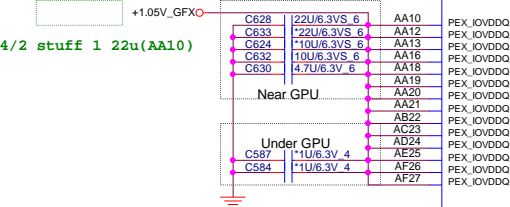
VREF DQ1 M1 Solution



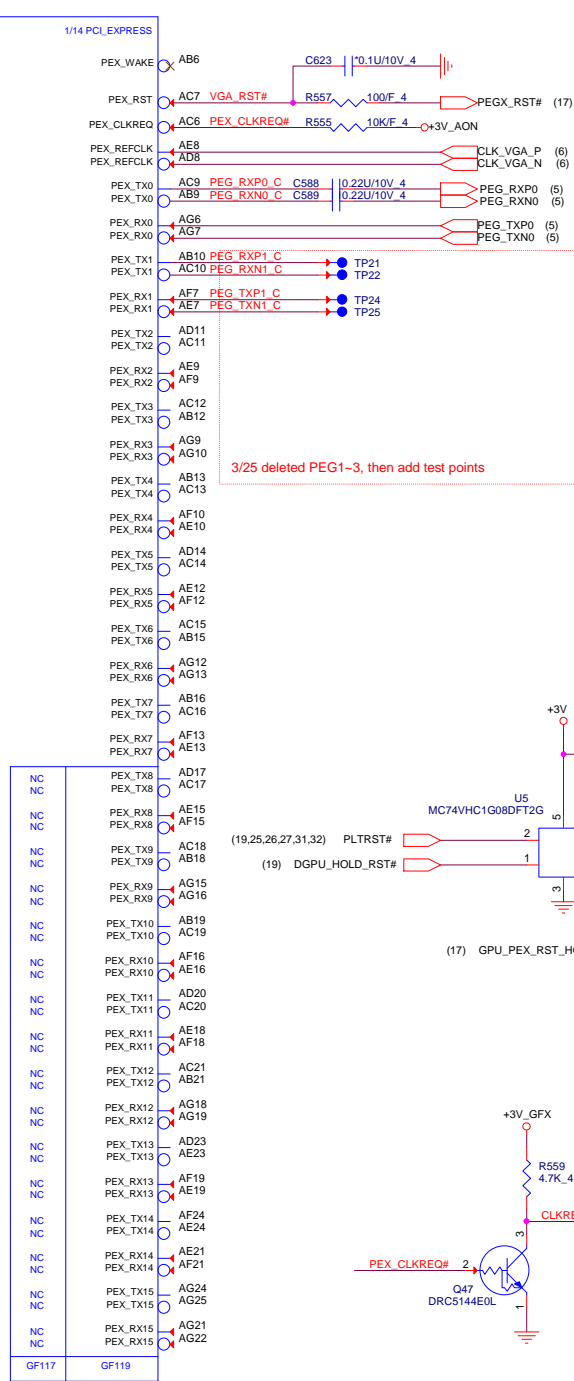
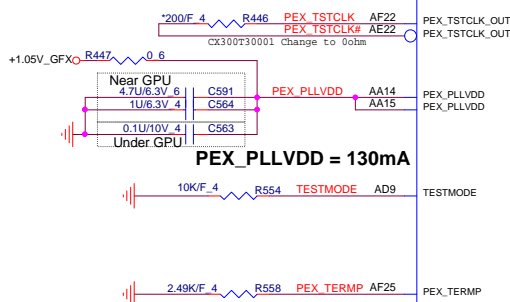
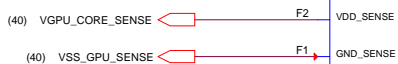
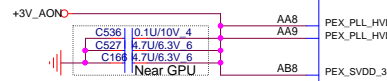
PROJECT : Y12E-BTM
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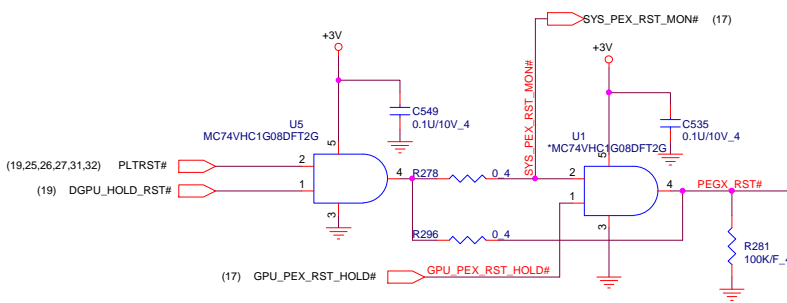
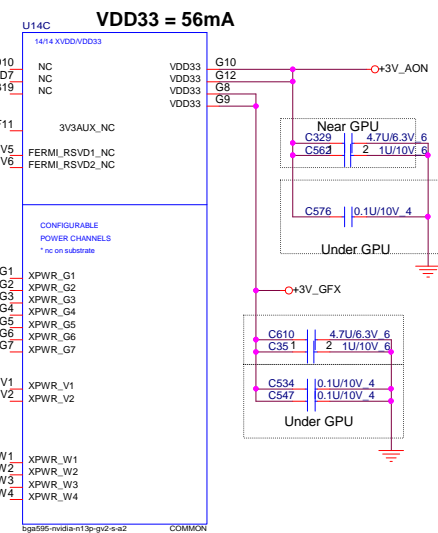
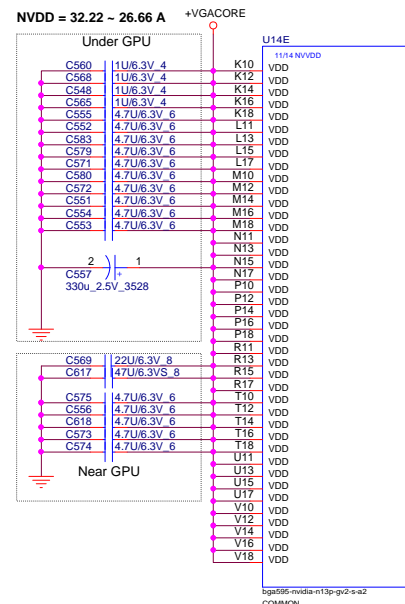
PEX_IOVDD + PEX_IOVDDQ = 1.042A



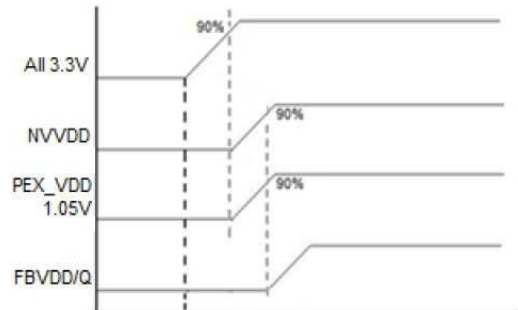
**PEX_PLL_HVDD +
PEX_SVDD_3V3 = 143mA**



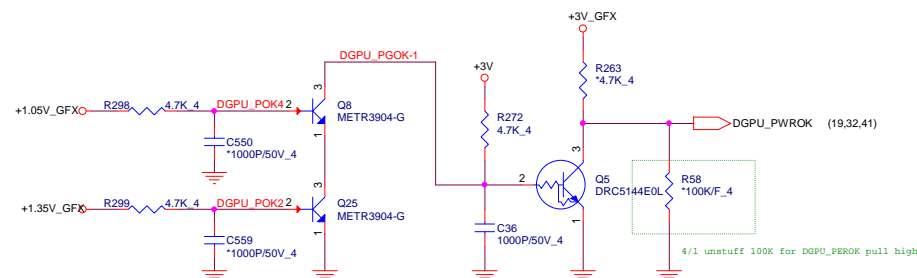
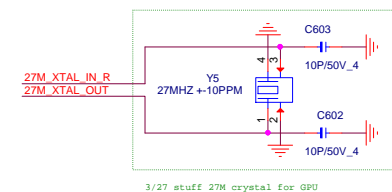
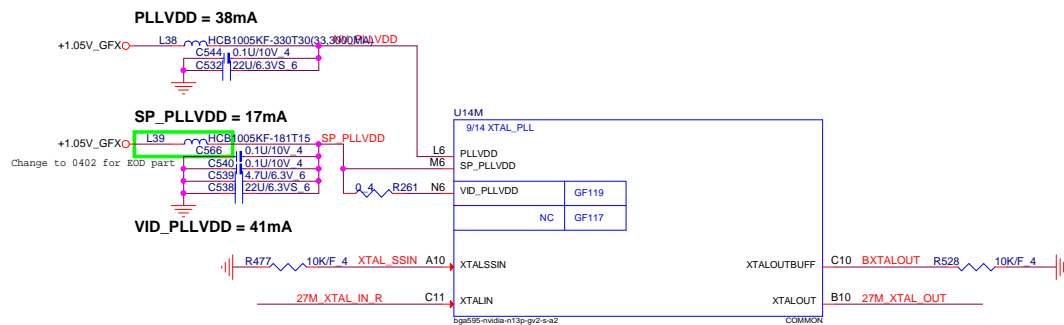
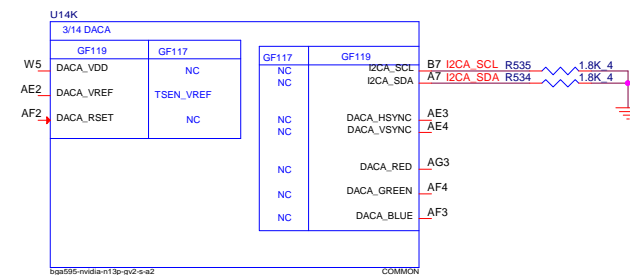
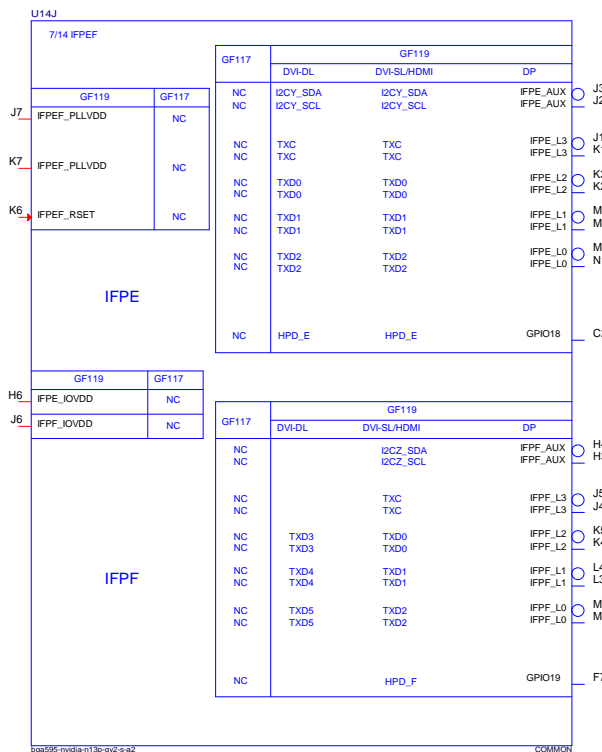
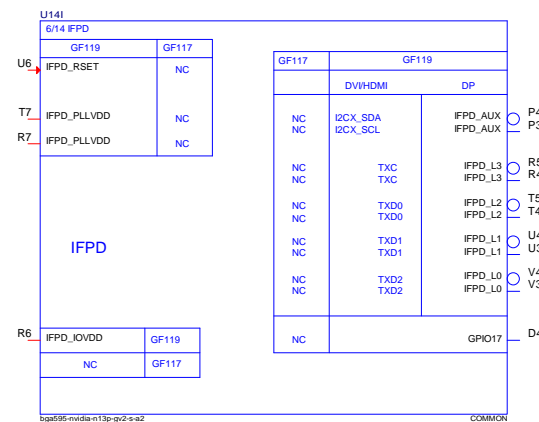
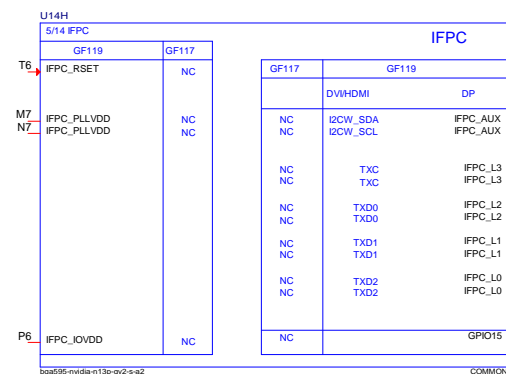
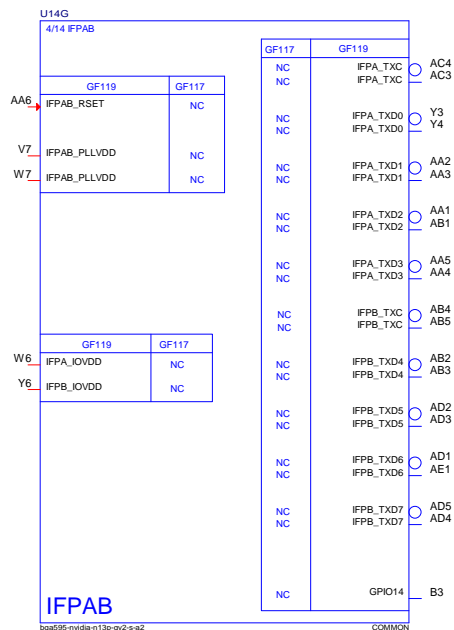
3/25 deleted PEG1~3, then add test points



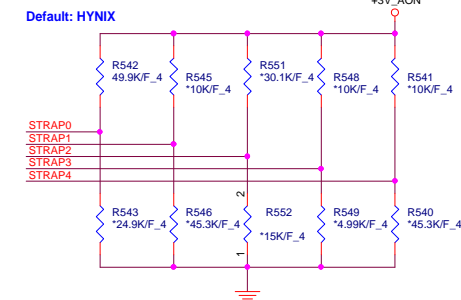
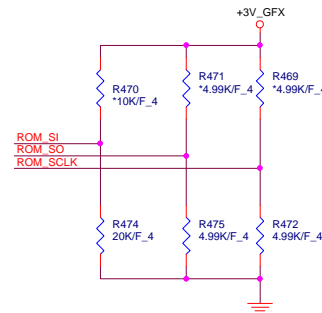
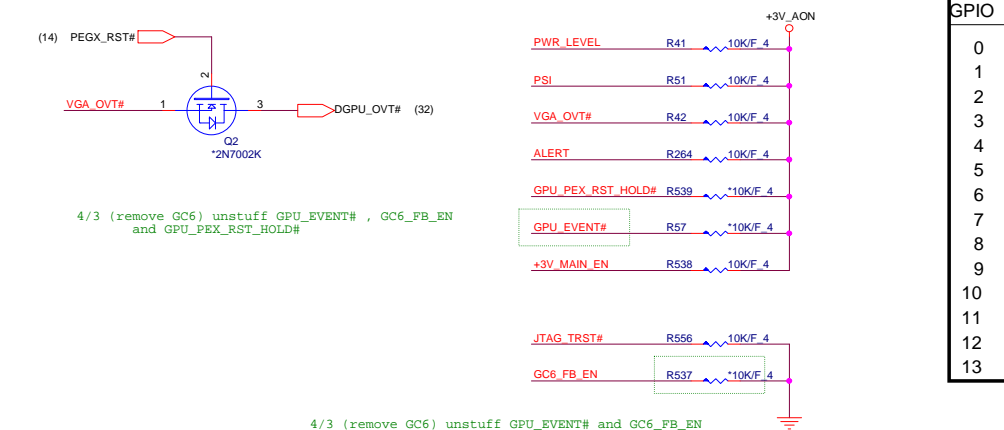
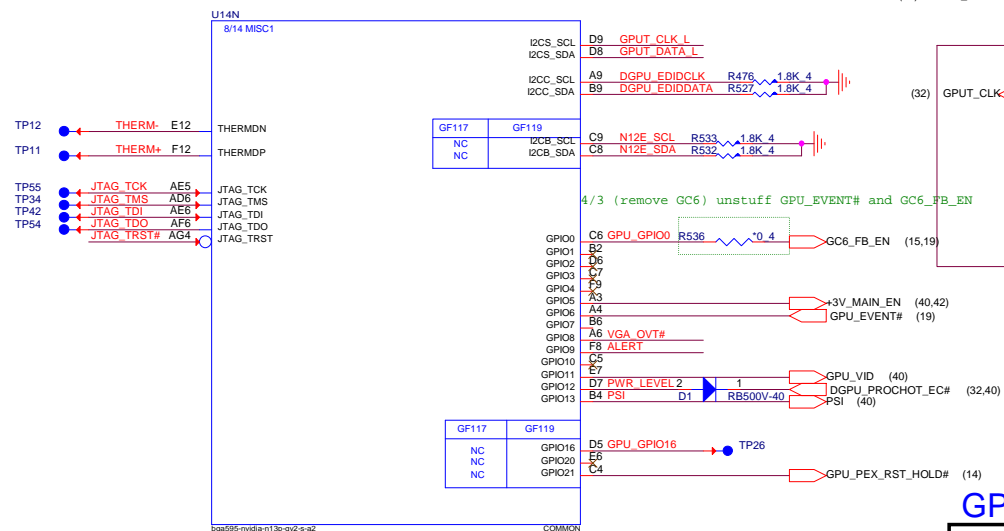
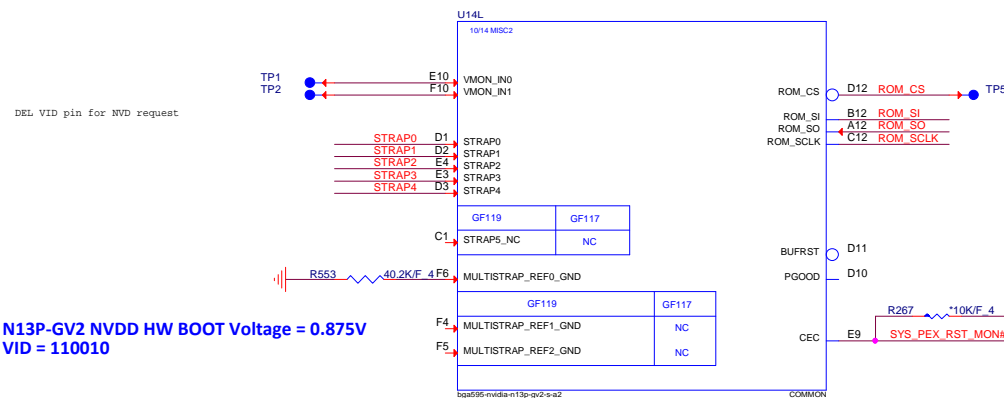
4/3(remove GC6) unstuff U5002 and stuff R5081 for PEGX_RST#.







N13P-GV2 NVDD HW BOOT Voltage = 0.875V
VID = 110010



4.99k	CS24992PB26
10k	CS31002PB26
15k	CS31502PB24
20k	CS32002PB29
24.9k	CS32492PB16
30.1k	CS33012PB18
34.8k	CS33482PB22
45.3k	CS34532PB18

Table 15-2. Resistance Mapping to Hex Values

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

Hynix should be 0x3, R440 20K 1%
Micro should be 0x4, R440 24.9K 1%
Samsung should be 0x5, R440 30.1K 1%

VRAM Configuration Table ROM_SI

RAMCFG [3:0]	DESCRIPTION	Vendor	Vendor P/N	QCI P/N	QBC	TOP B/S
0000	DDR3 256Mx16, 64bit, 4Gb,900MHz	Micron	MT41J256M16HA-093G:E	AKD5PGWT500	AKD5PZSTL01	AKD5PZSTL00
0100	DDR3 256Mx16, 64bit, 4Gb,900MHz	HYNIX	H5TC4G63AFR-11C	AKD5PGWT08	AKD5PGWT08	AKD5PGWT07
0011	DDR3 256Mx16, 64bit, 4Gb,900MHz	SAMSUNG	4W4G1646D-BC1A	AKD5PGWT500	AKD5PGWT08	AKD5PGWT07
0101	DDR3 256Mx16, 64bit, 4Gb,900MHz					

GPIO ASSIGNMENTS

GPIO	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

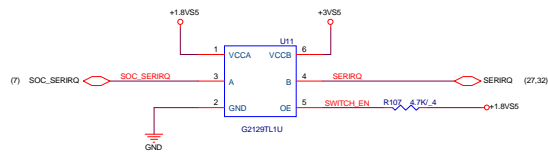


PROJECT :U82
Quanta Computer Inc.

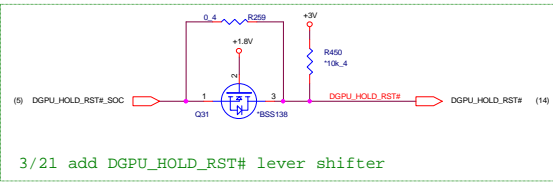
Size	Document Number	Rev
Custom	N14M-GS (GPIO/STRAPS)	2A
Date: Thursday, May 08, 2014	Sheet 17 of 42	

PROJECT :U82
Quanta Computer Inc.

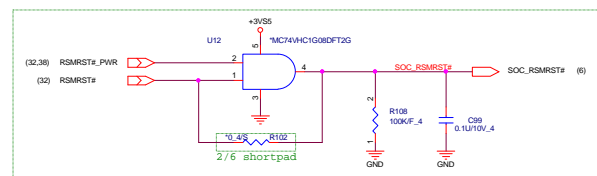
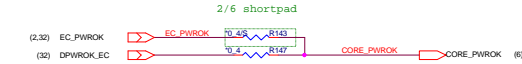
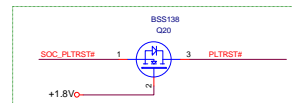
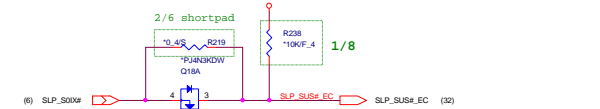
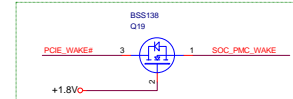
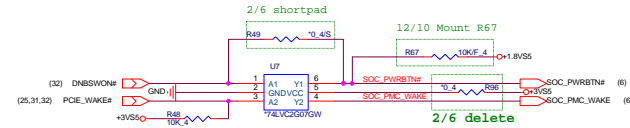
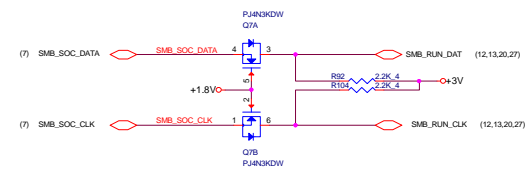
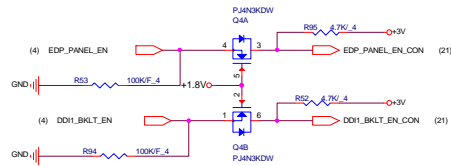
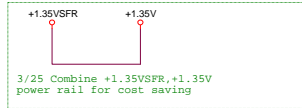
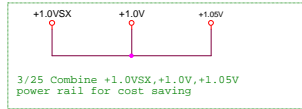
Size Custom	Document Number DGPU Memory (DDR3)	Rev 2A
Date: Thursday, May 08, 2014		Sheet 18 of 42



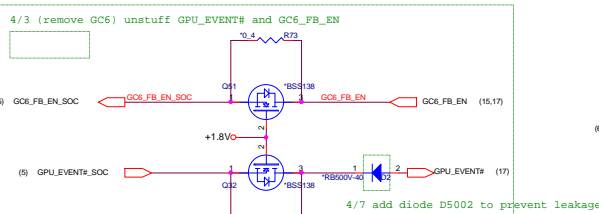
11/4 Delete duplicate TP lever shift



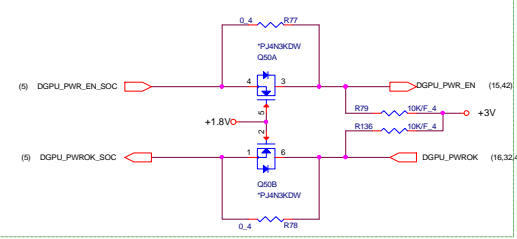
3/21 add DGPU_HOLD_RST# lever shifter



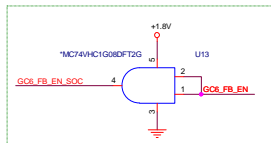
11/5 Add AND gate



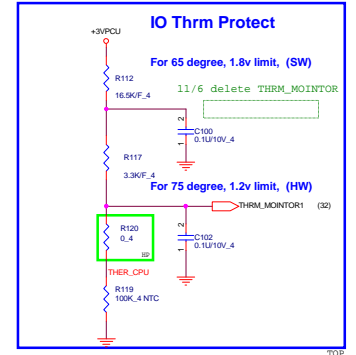
4/7 add diode D5002 to prevent leakage

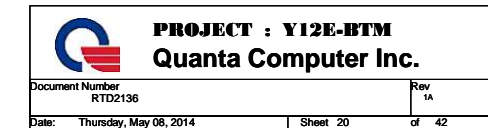
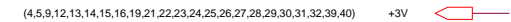
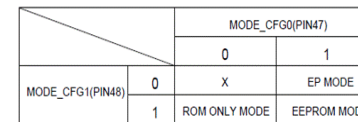
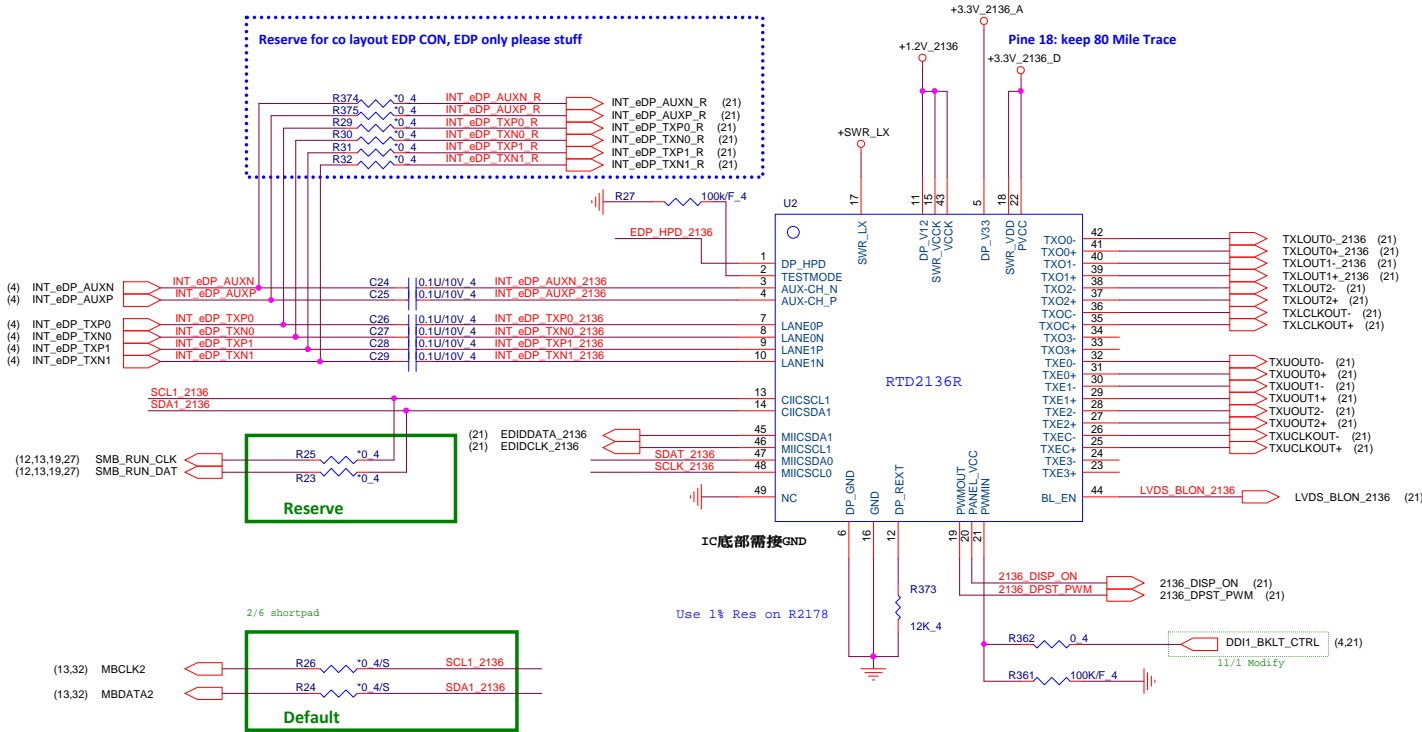


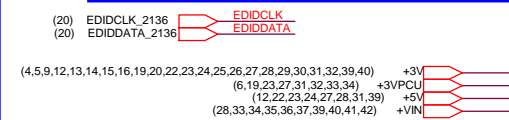
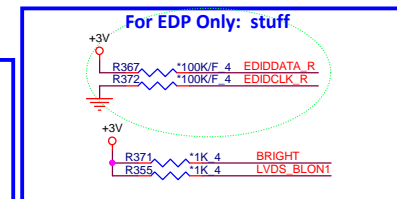
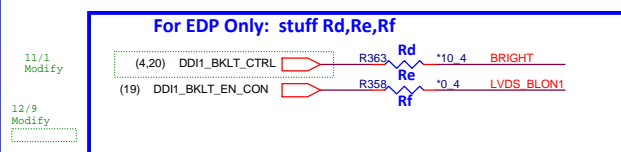
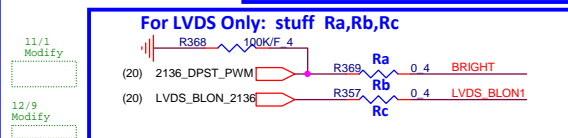
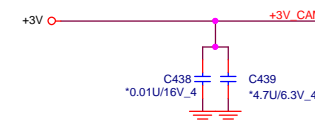
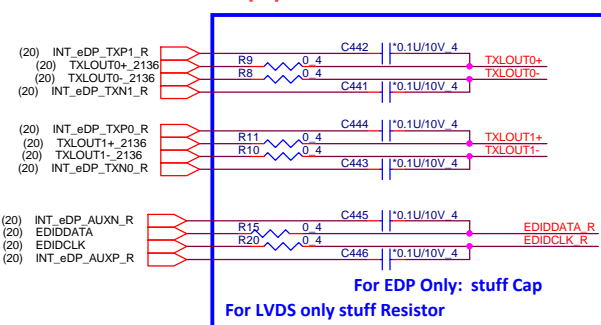
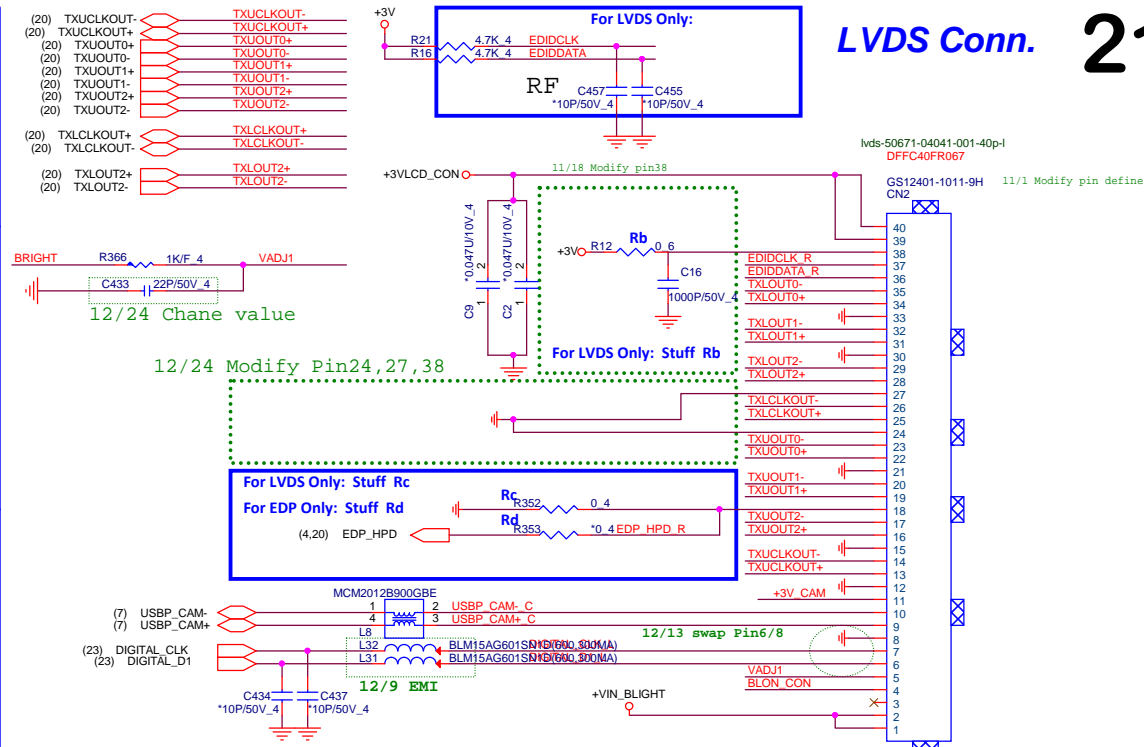
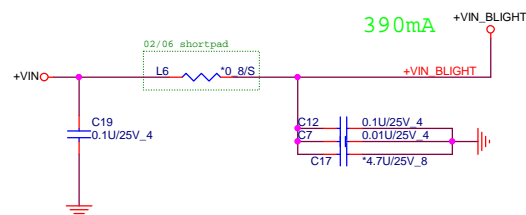
3/28 add level shifter for GPU GPIO

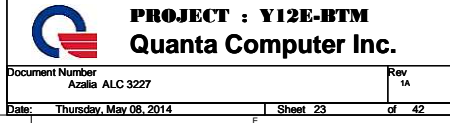


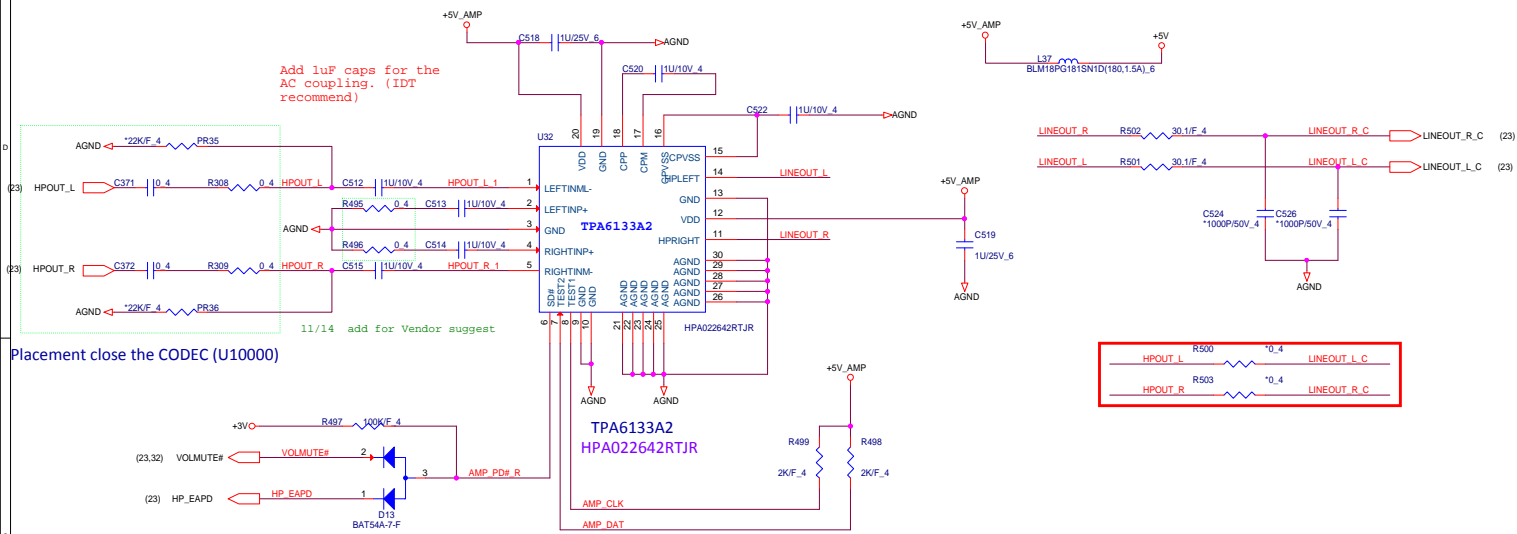
4/2 reserved an And gate to avoid voltage divider circuit from nvidia suggestion (the AND gate need to be replaced to +1.8V Vcc driven)

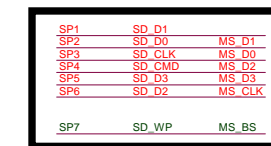
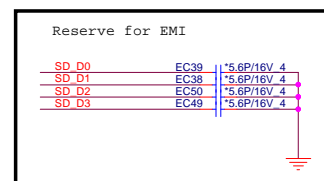
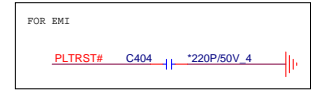






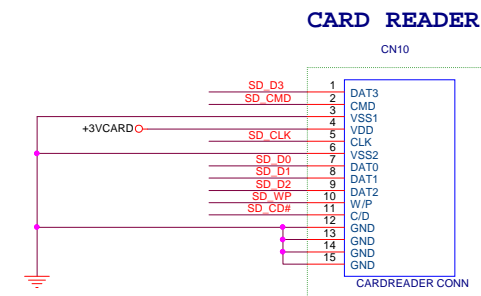






Share Pin

SD / MMC



11/6 Change pin define from U87 to U83B

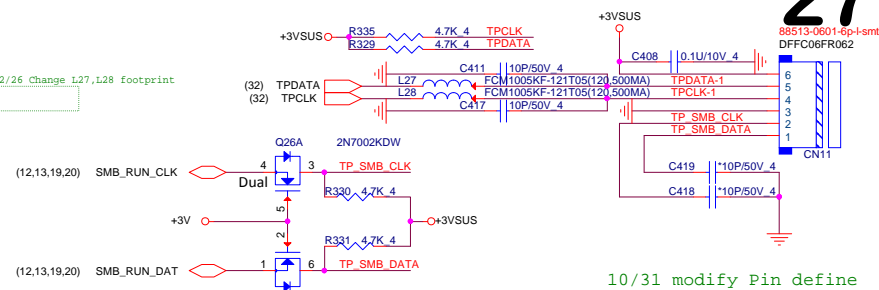
```
Change footprint to
sdcard-psdbtc-09glbs1nn4h3-11p
```

```
11/14 Only for debug
12/24 Delete debug power switch
```

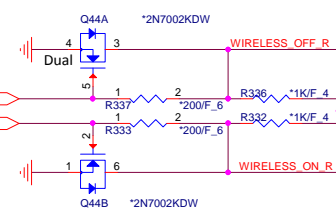


11/2 delete LID switch

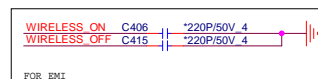
12/26 Change L27,L28 footprint



```
10/31 modify Pin define
```



12/24 Combine to Dual MOS

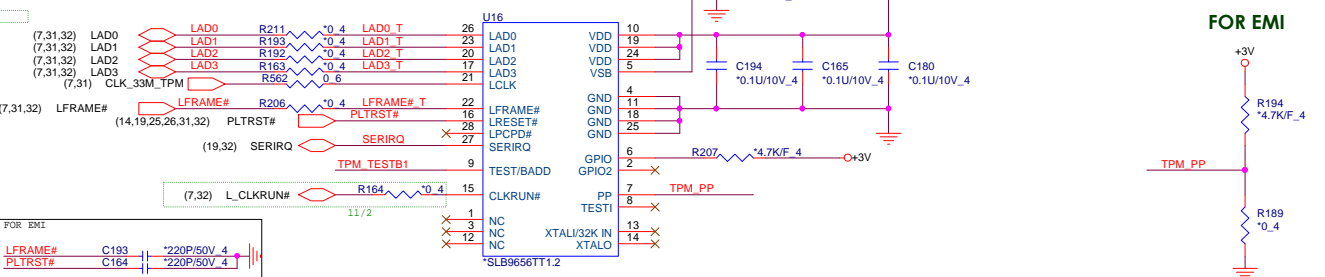


11/7 Delete backlight KB

TPM (1.2)

	BADD
HIGH	4EH/4F (default)

5/6 R562 for LPC_CLK 3 branches, should be 12.5ohm



For 14" stuff Rd

(4.5.9.12.13.14.15.16.19.20.21.22.23.24.25.26.28.29.30.31.32.39.40)


PROJECT : Y12E-BTM
Quanta Computer Inc.Document Number
TPM/TP/FAN/LED

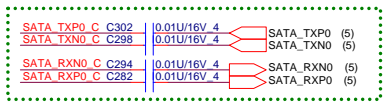
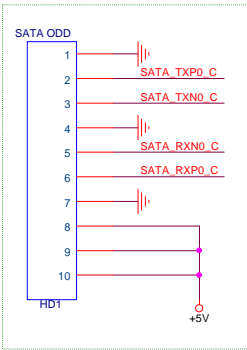
Date: Monday, May 12, 2014

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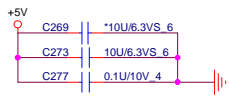
SATA HDD Connector(Cable type) 14", 15", 17"

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



11/12 delete 14" and 15" SATA CONN

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

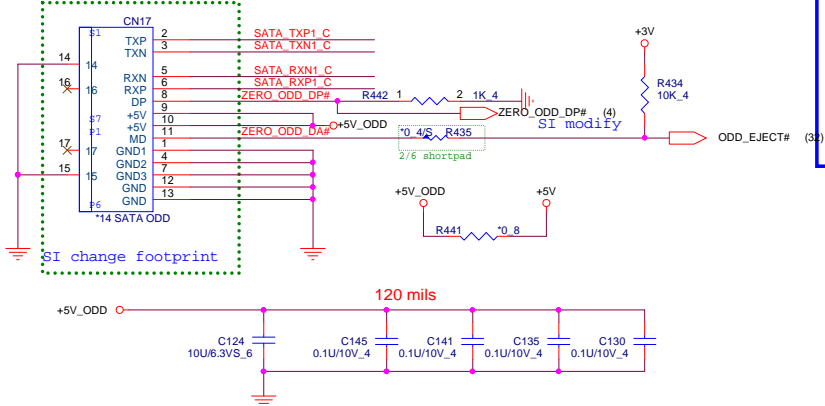


SATA ODD CONNECTOR

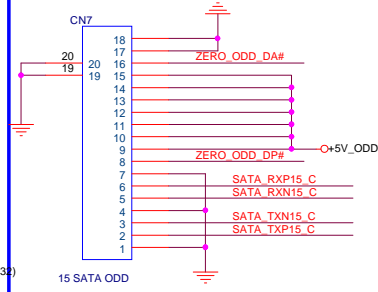
14" SATA ODD

12/24 update footprint

Bypass CAP close conn

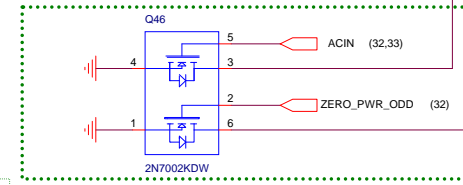
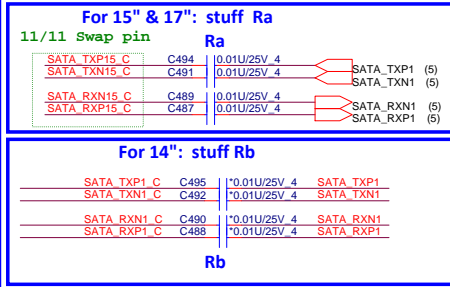


15" & 17" SATA ODD New Type

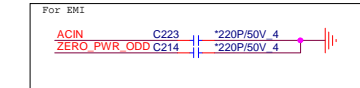
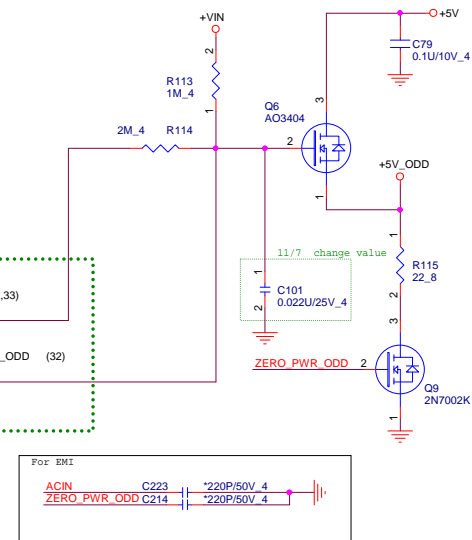


11/6 update footprint

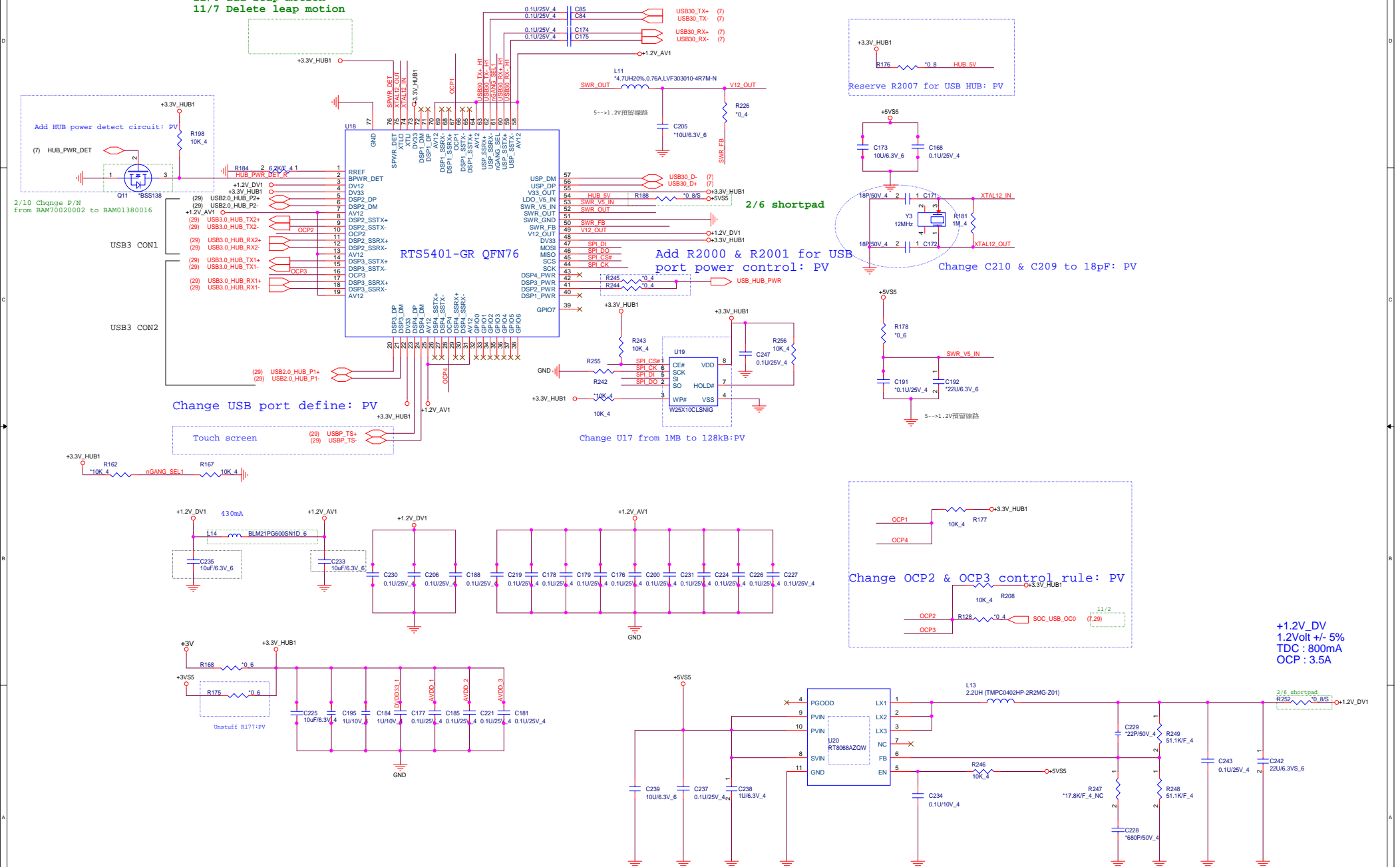
11/1 Colayout 15" & 17" ODD

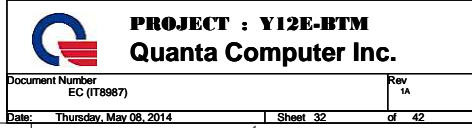


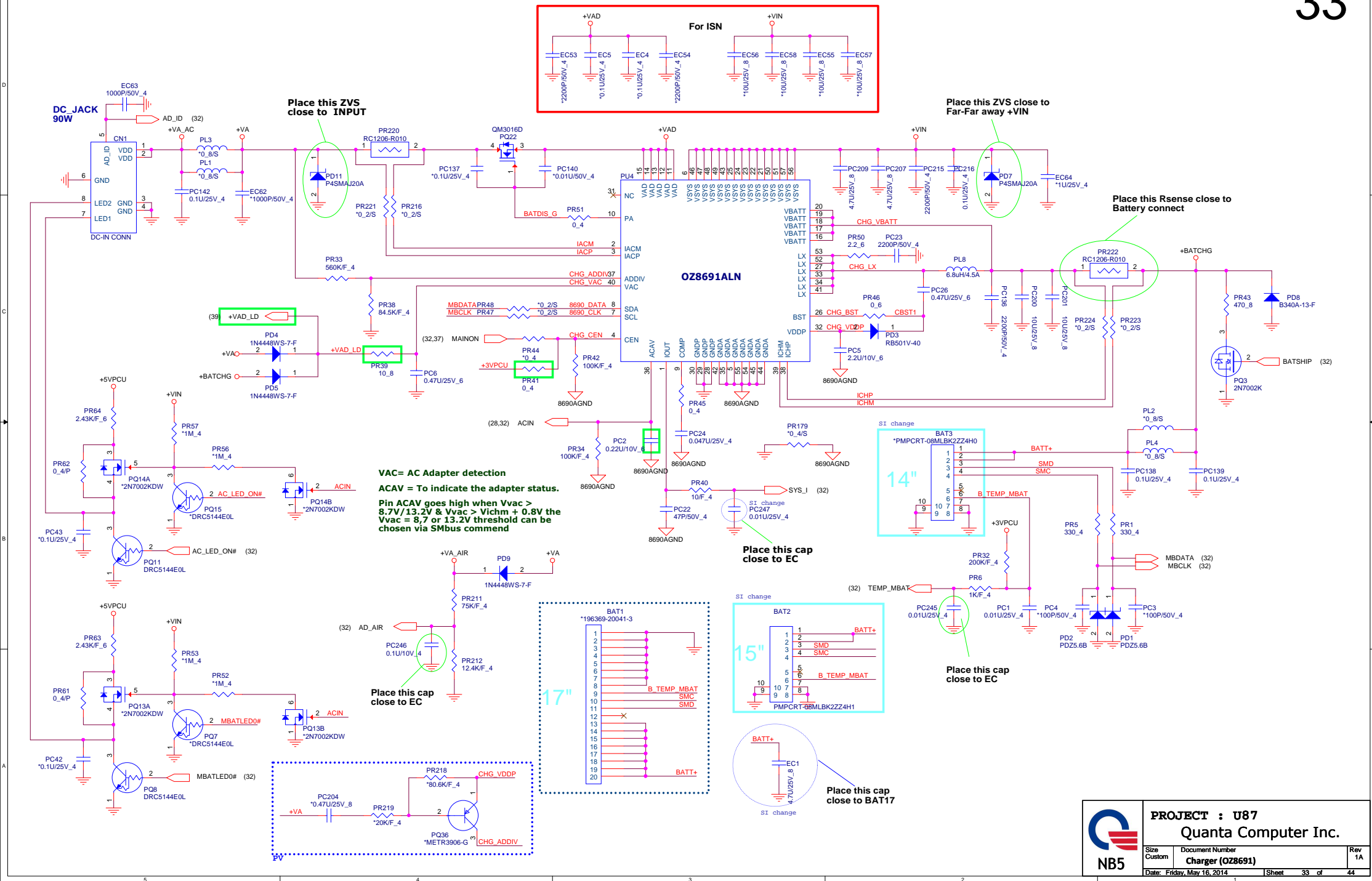
12/24 change to dual MOS



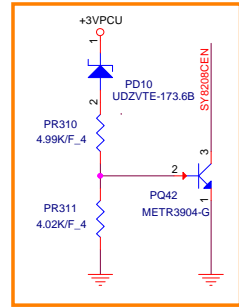
11/6 add leap motion
11/7 Delete leap motion





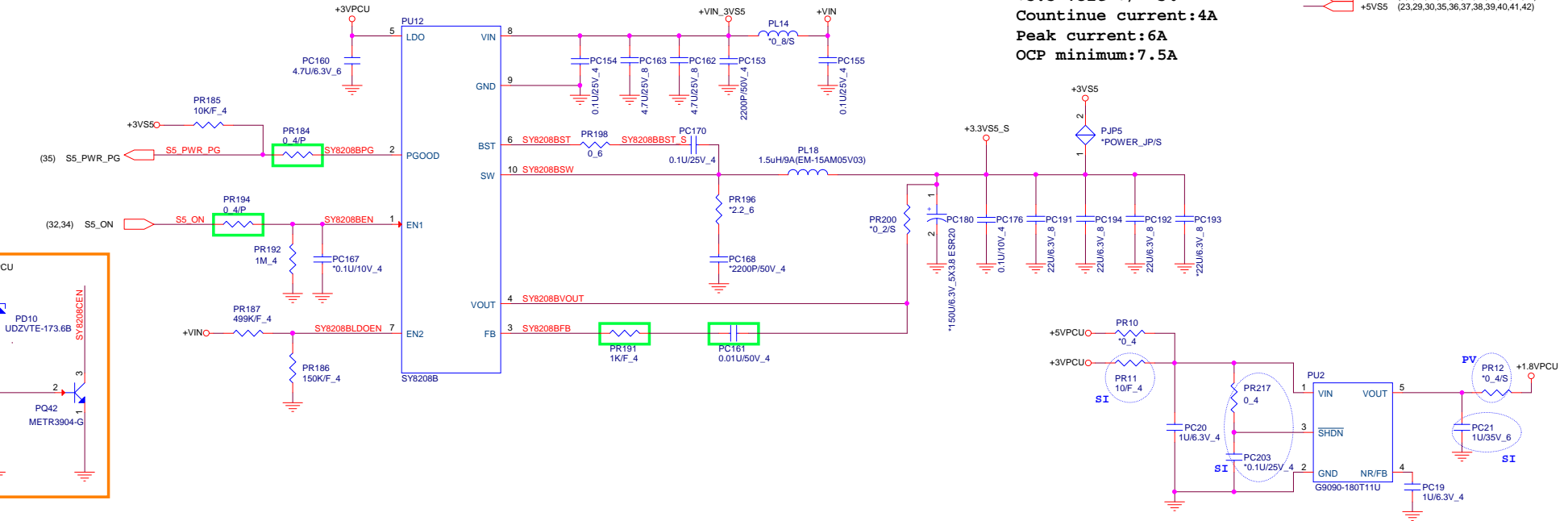


DC/DC +3VS5/+5VS5



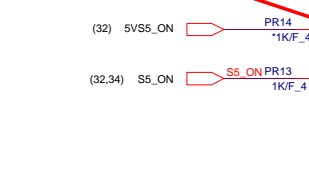
+3.3 Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

+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)

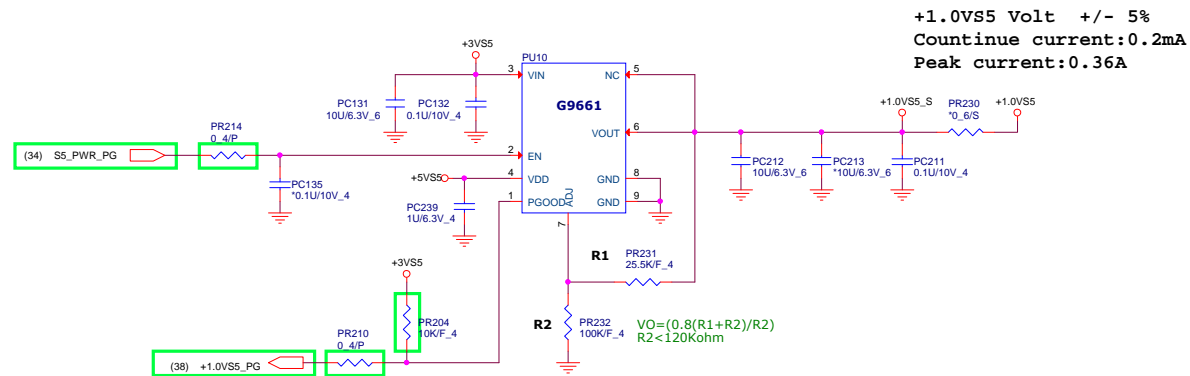
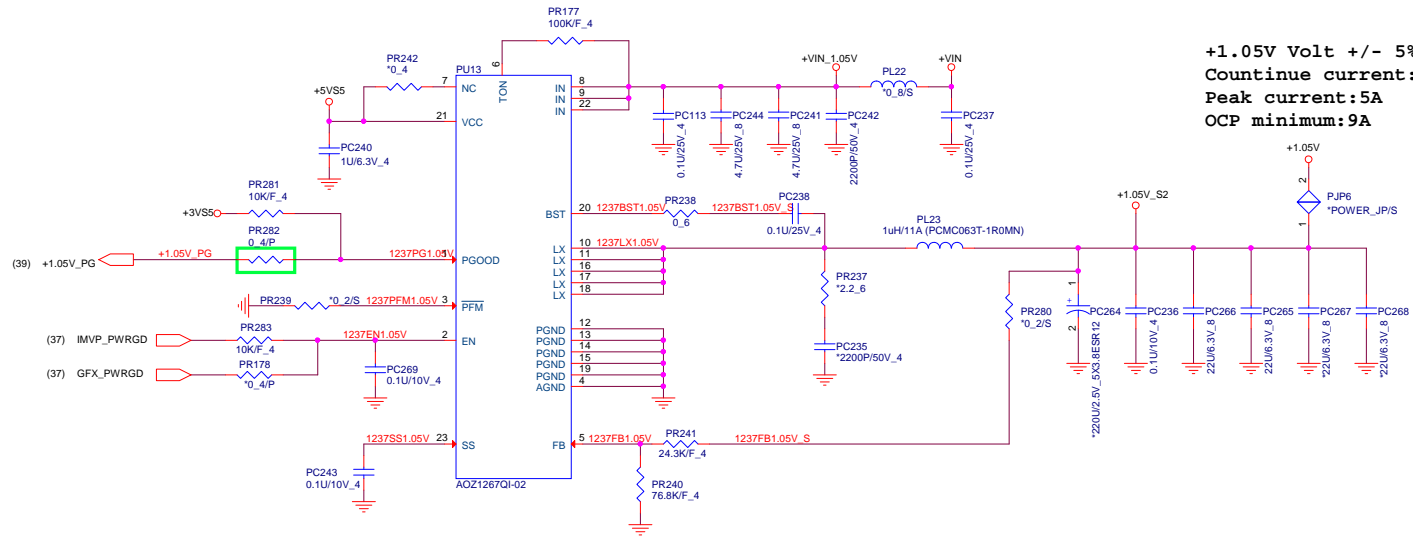


+5 Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

Reserve for USB charge



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



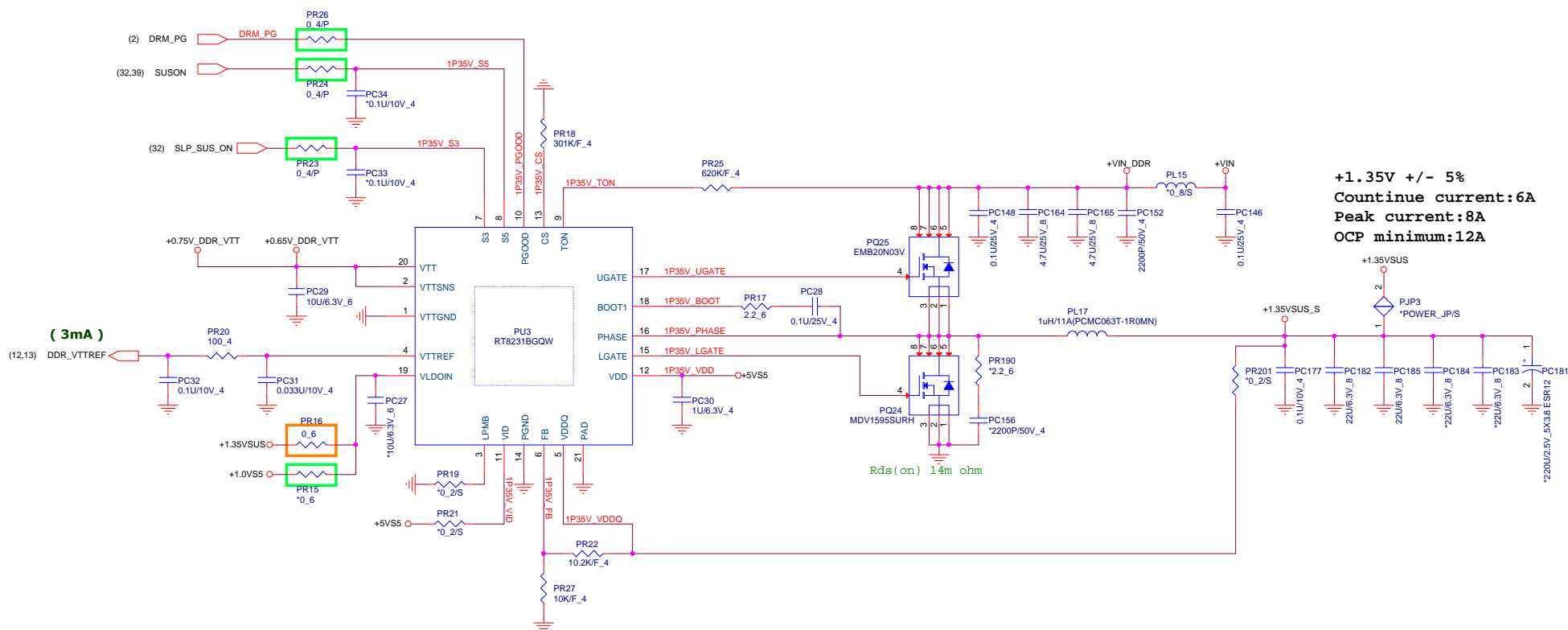
PROJECT : Y12E-BTM
Quanta Computer Inc.

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

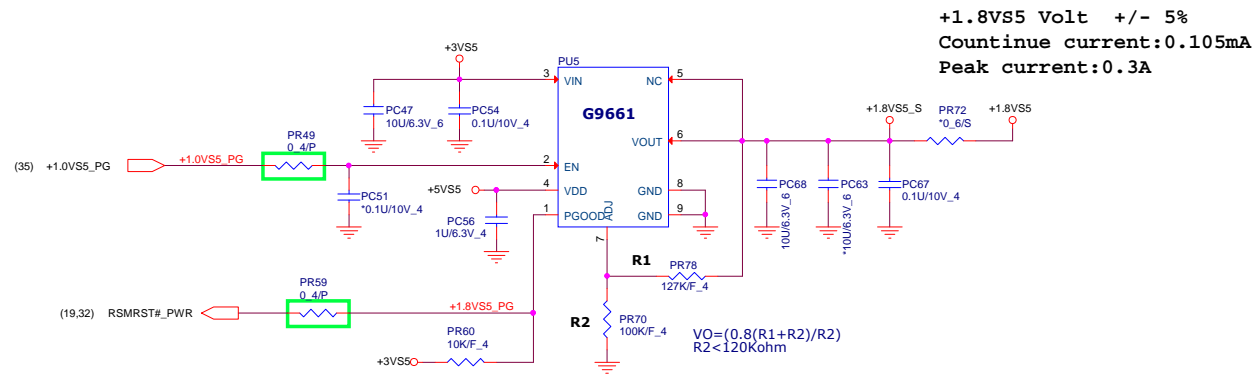
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Date: Thursday, May 08, 2014

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 +1.35VSUS (2,8,12,13,22,39)



PROJECT : Y12E-BTM
Quanta Computer Inc.

Document Number
 1.0VS5/1.8VS5/1.24VS5

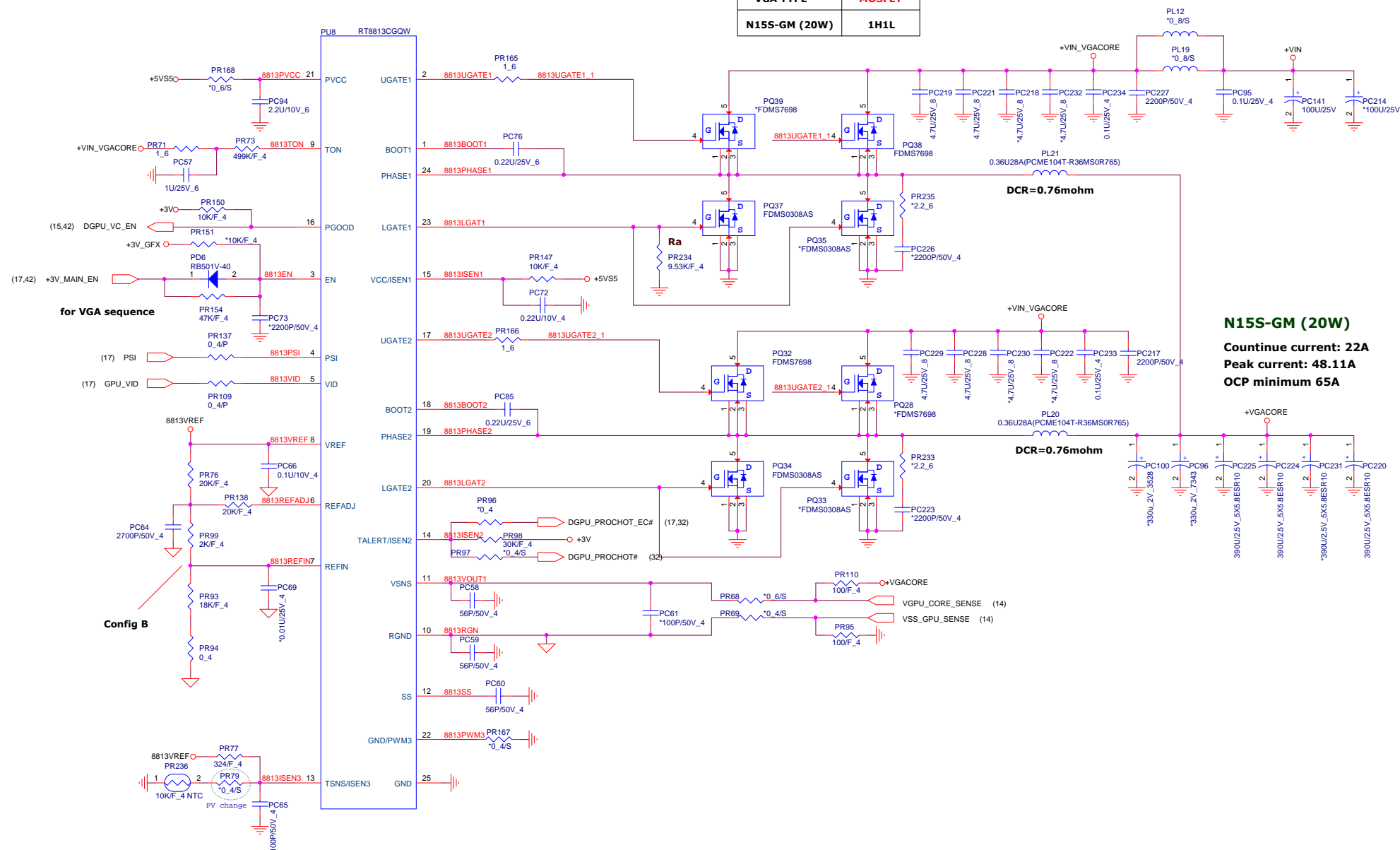
Rev
 1A

Date: Thursday, May 08, 2014

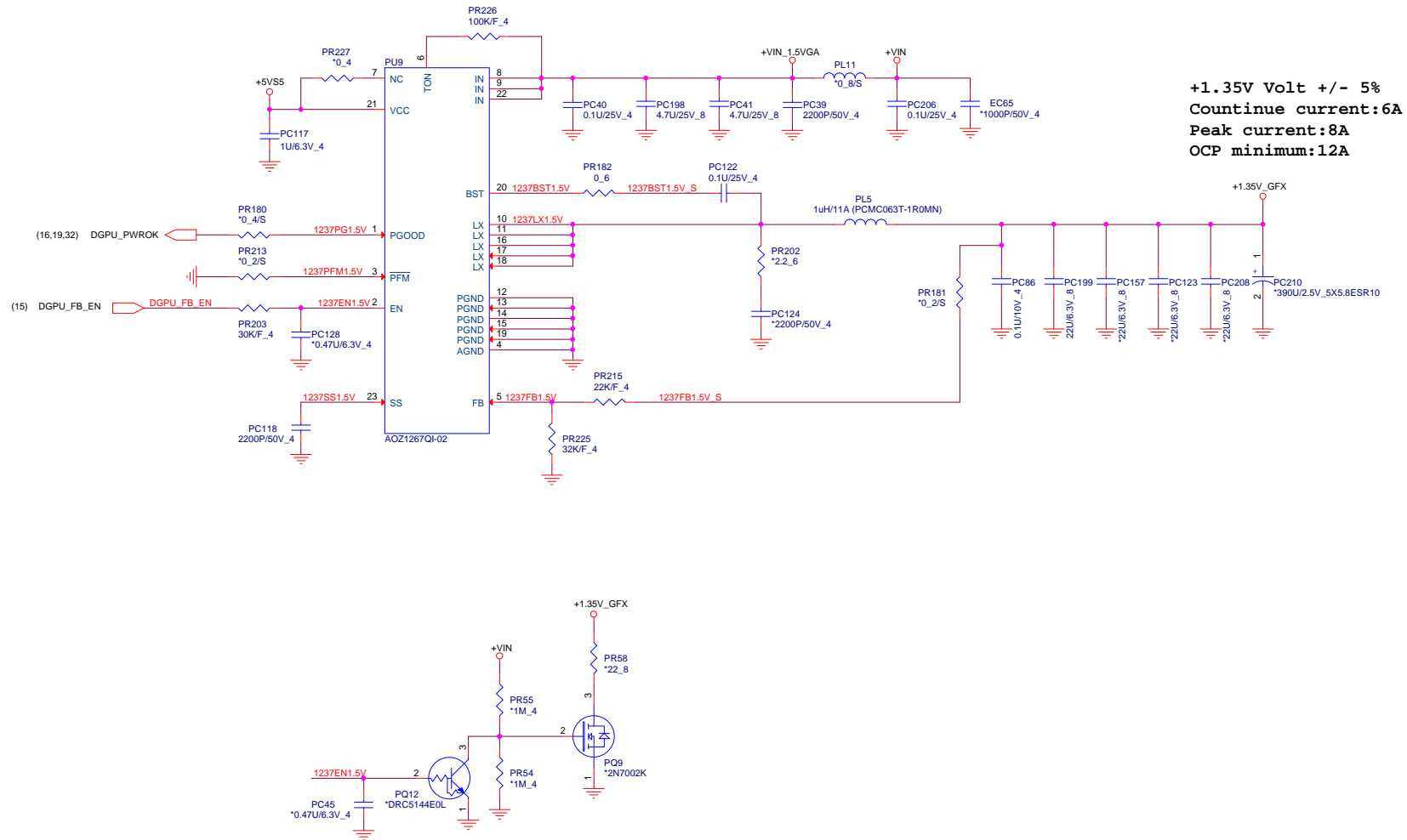
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VGA TYPE	MOSFET
N15S-GM (20W)	1H1L



N15S-GM (20W)
 Countinue current: 22A
 Peak current: 48.11A
 OCP minimum 65A



GC6 Support	PR65/PR229	PR67
NA	NA	Stuff
GC6 2.0	Stuff	NA

