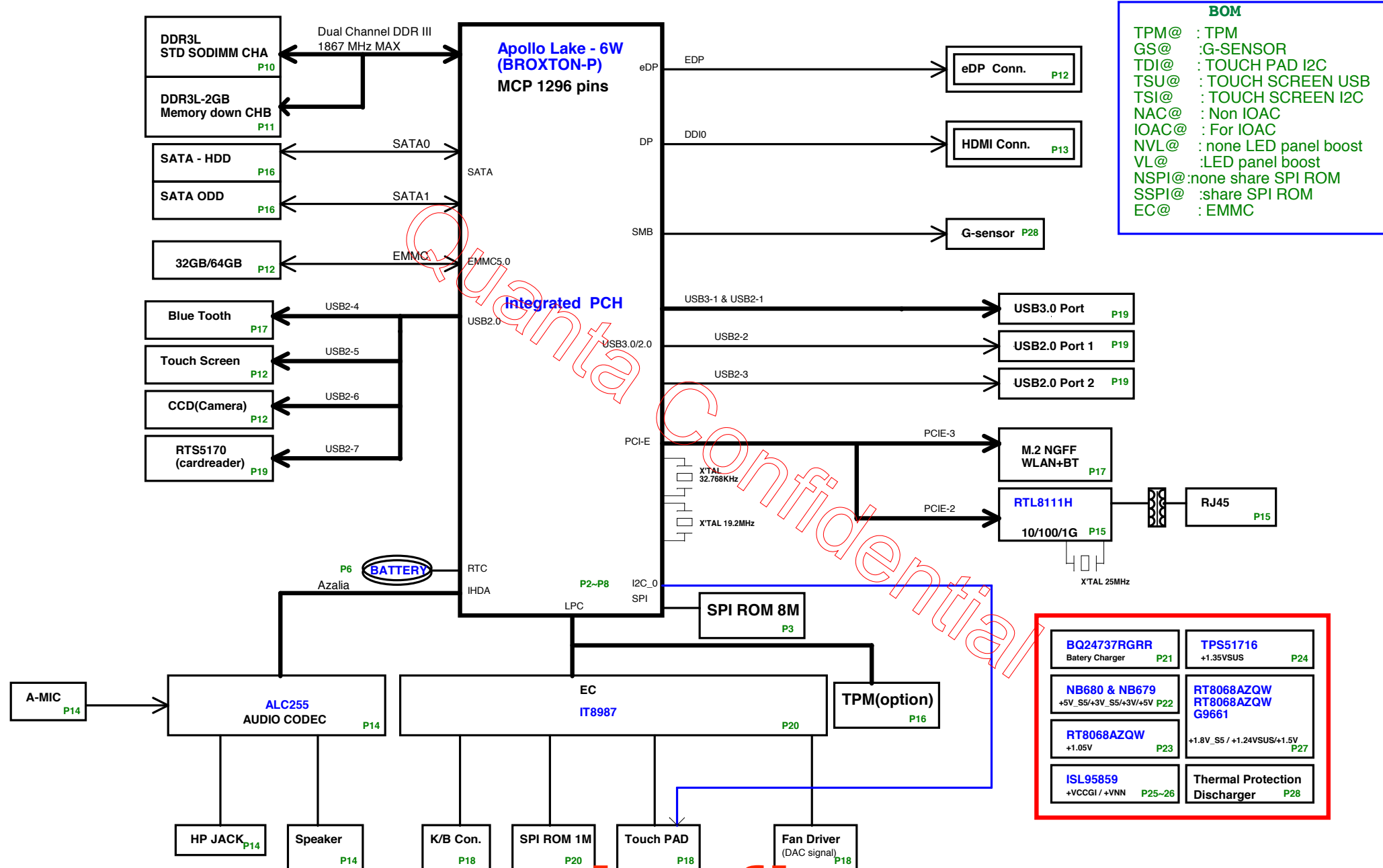
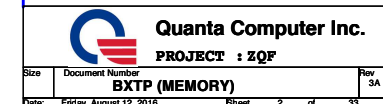
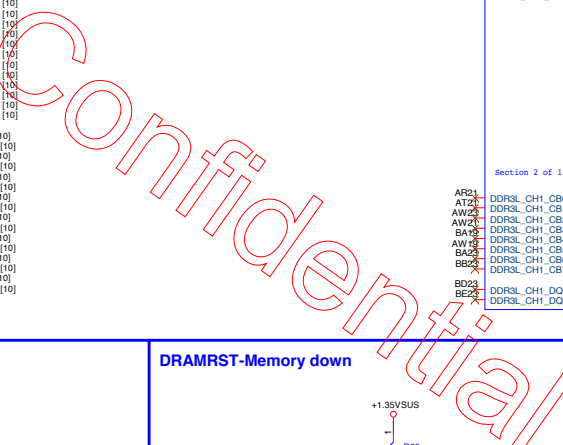
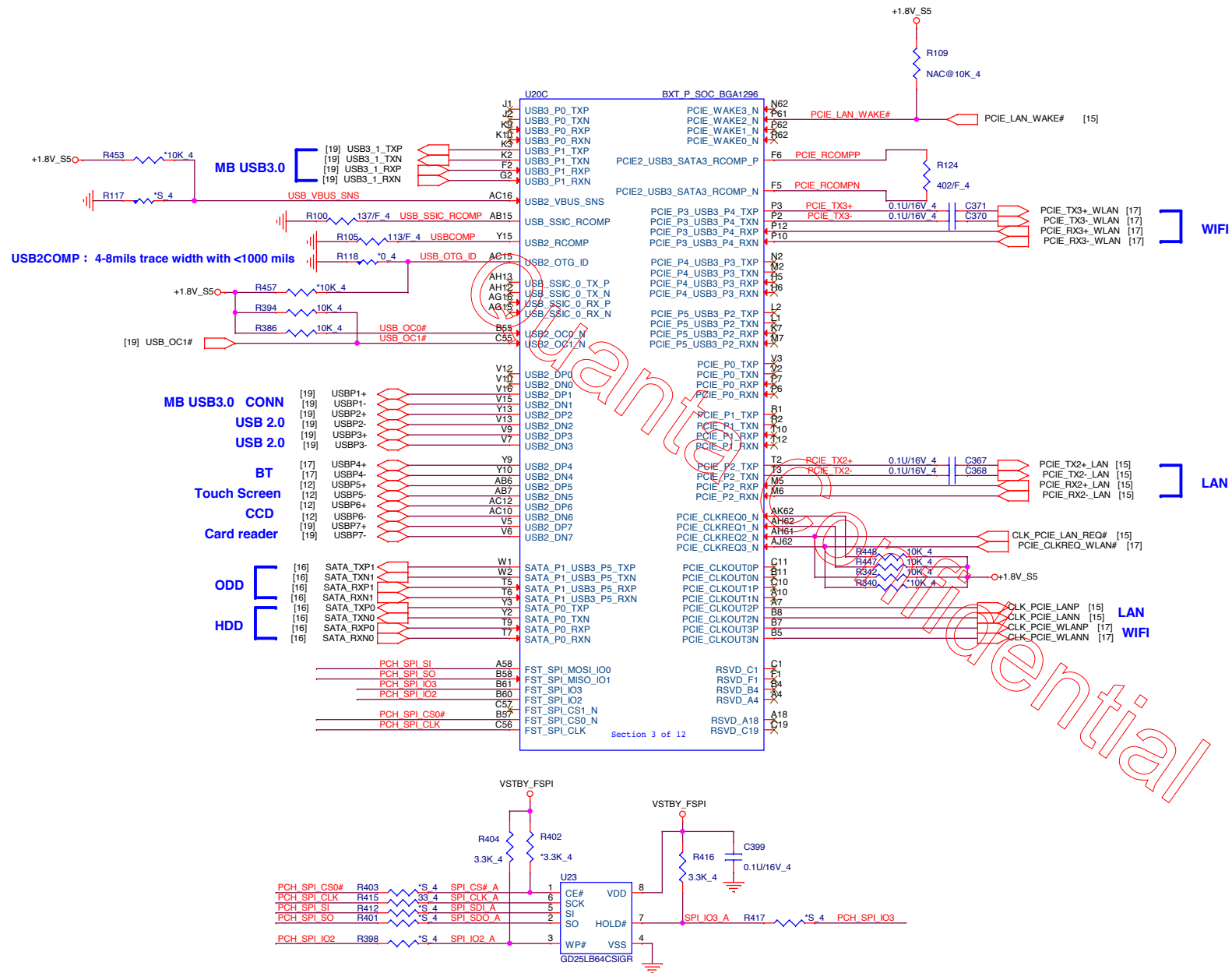


ZQF SYSTEM BLOCK DIAGRAM







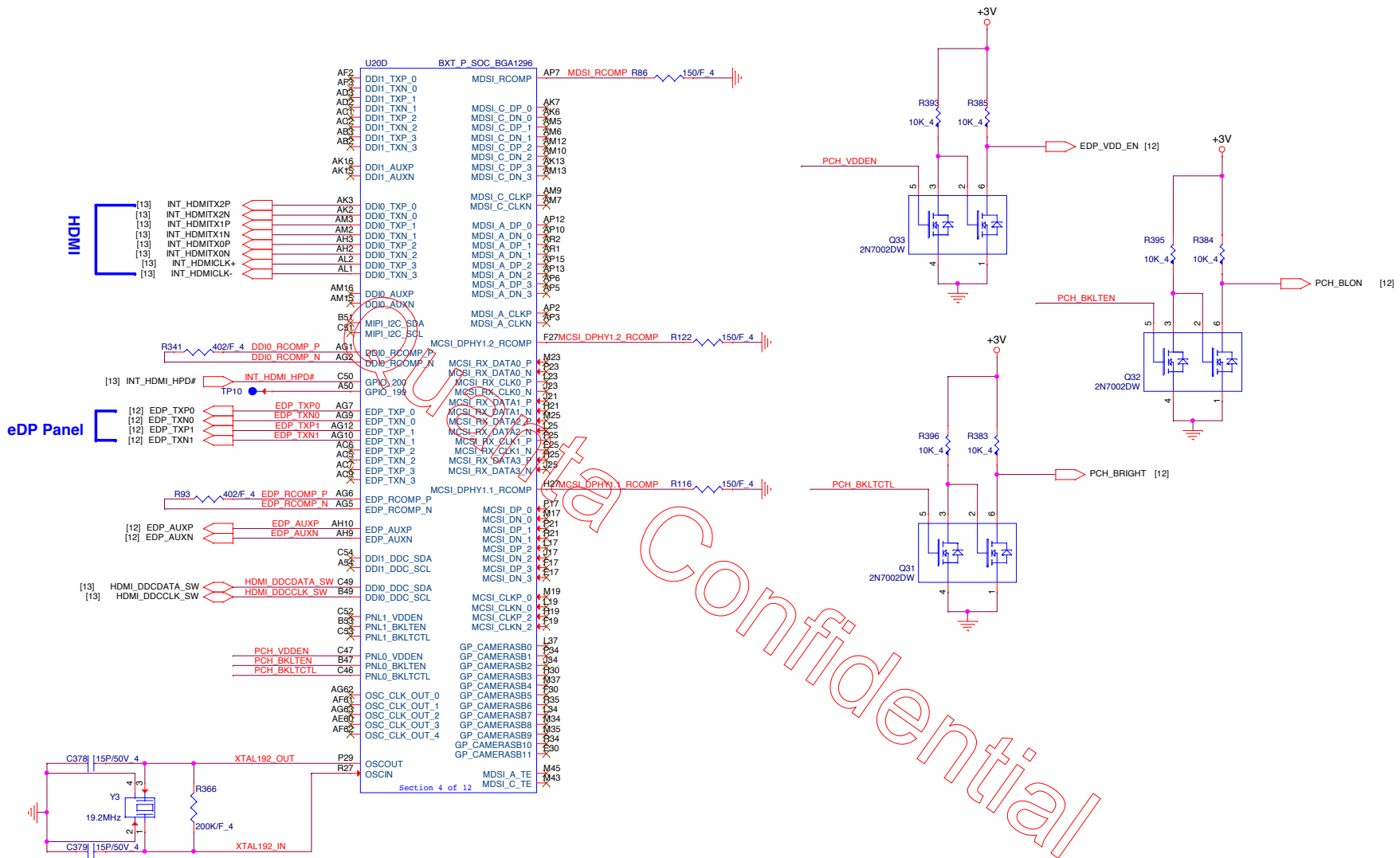
SP@ socket P/N: DFHS08FS023 only for A-TEST

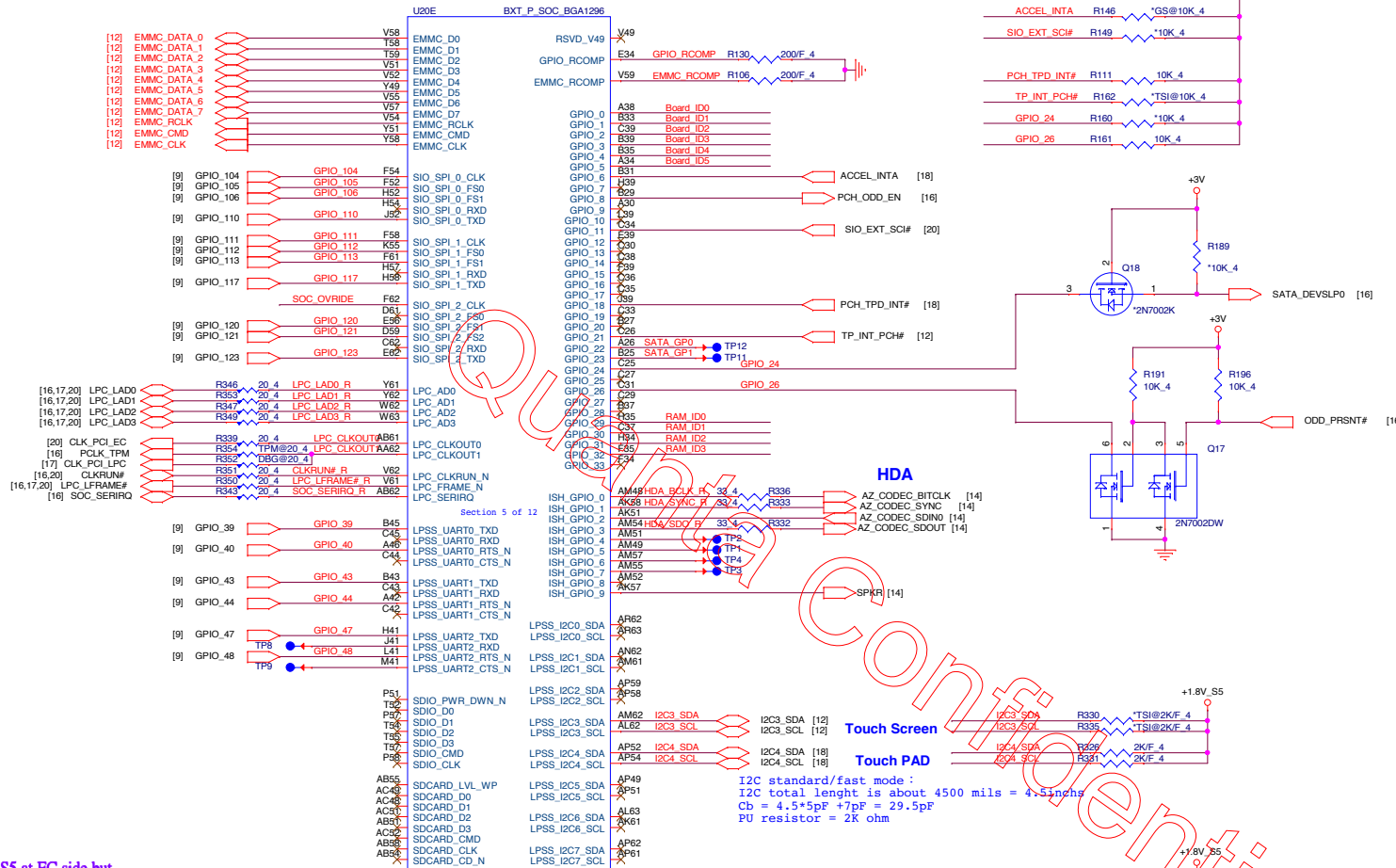
| SPI ROM | Vender | Size | Quanta P/N | Vender P/N |
|---------|--------|------|-------------|---------------|
| 1.8V | WND | 8M | AKE5EZN0N01 | W25Q64FWSSIQ |
| | GGD | 8M | AKE5EG-0Q01 | GD25LB64CSIGR |

Quanta Computer Inc.
PROJECT : ZQF

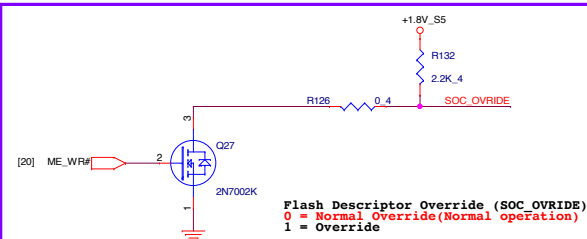
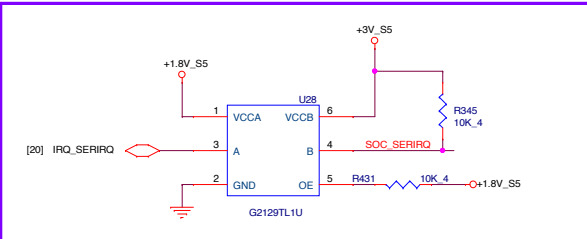
Size Document Number
BXTP (PCIE/USB/SATA/SPI)

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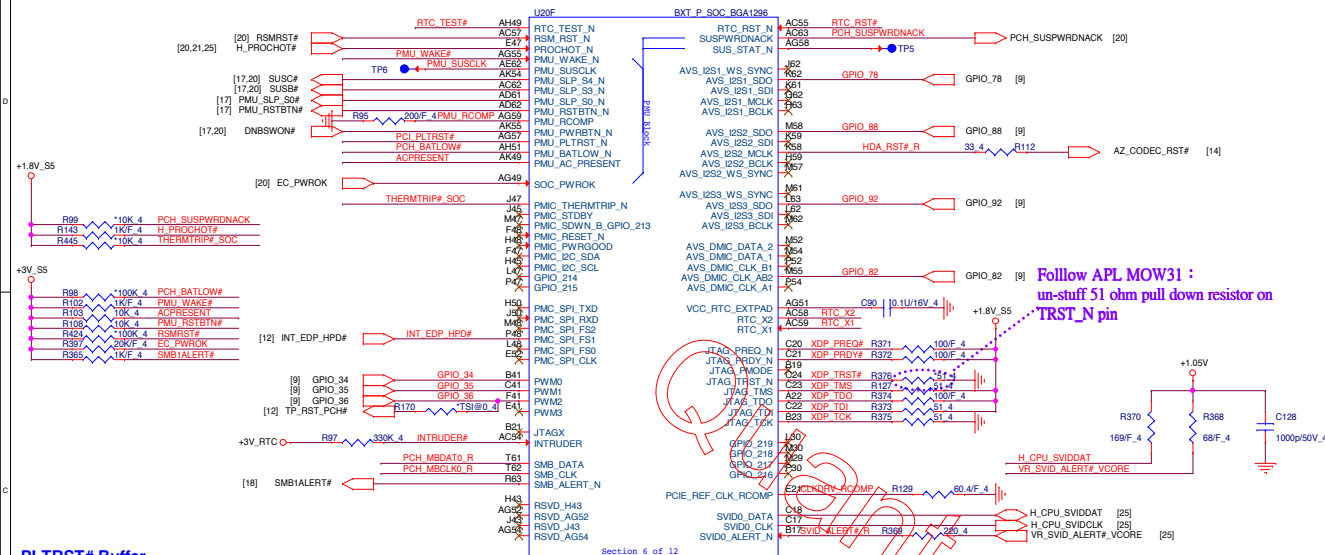


SERIRQ is 1.8V_S5 at EC side but 3V_S5 at CPU/TPM side

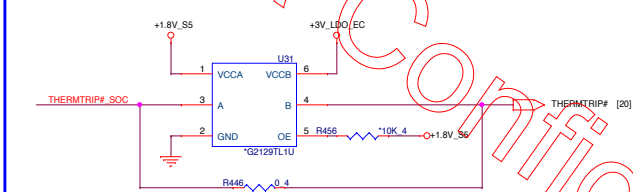


| Board ID | BIOS Strap Description |
|-----------|--|
| Board_ID0 | 0 = none touch panel 1 = touch panel |
| Board_ID1 | 0 = with EMMC <default> 1 = without EMMC <HDD only> |
| Board_ID2 | 0 = Both onboard RAM and SODIMM 1 = SODIMM only |
| Board_ID3 | 0 = none G sensor 1 = G sensor |
| Board_ID4 | 0 = none TPM 1 = TPM |
| Board_ID5 | 0 = ODD 1 = SSD |

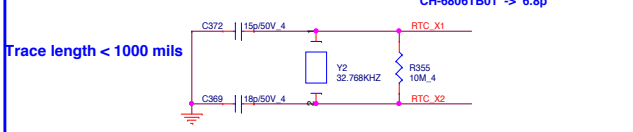
| RAM_ID3 | RAM_ID2 | RAM_ID1 | RAM_ID0 | Vender | Quanta PN | Description |
|---------|---------|---------|---------|-------------|-------------|--|
| 0 | 0 | 0 | 0 | Samuung-2GB | AKD5J00T504 | IC SDRAM(96P)K4B4G164E8-BYK0(FBGA)8TNB8Q |
| 0 | 0 | 0 | 1 | Hynix-2GB | AKD5P08TW13 | IC SDRAM(96P)H5TC4G63CFR-PBA(FBGA)8TNB8Q |
| 0 | 0 | 1 | 0 | Wiron-2GB | AKD5P08TL12 | IC SDRAM(96P)MT41K256M16TW-107-P 8TNB8Q |



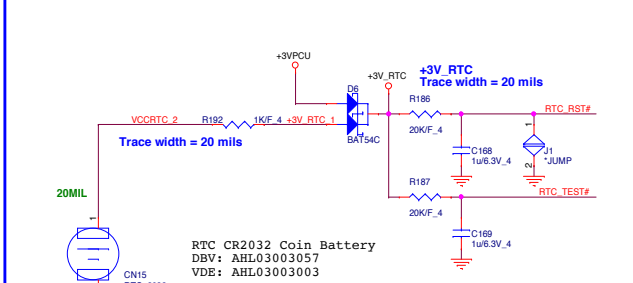
THERMALTRIP#



RTC Clock 32.768KHz (CPU)

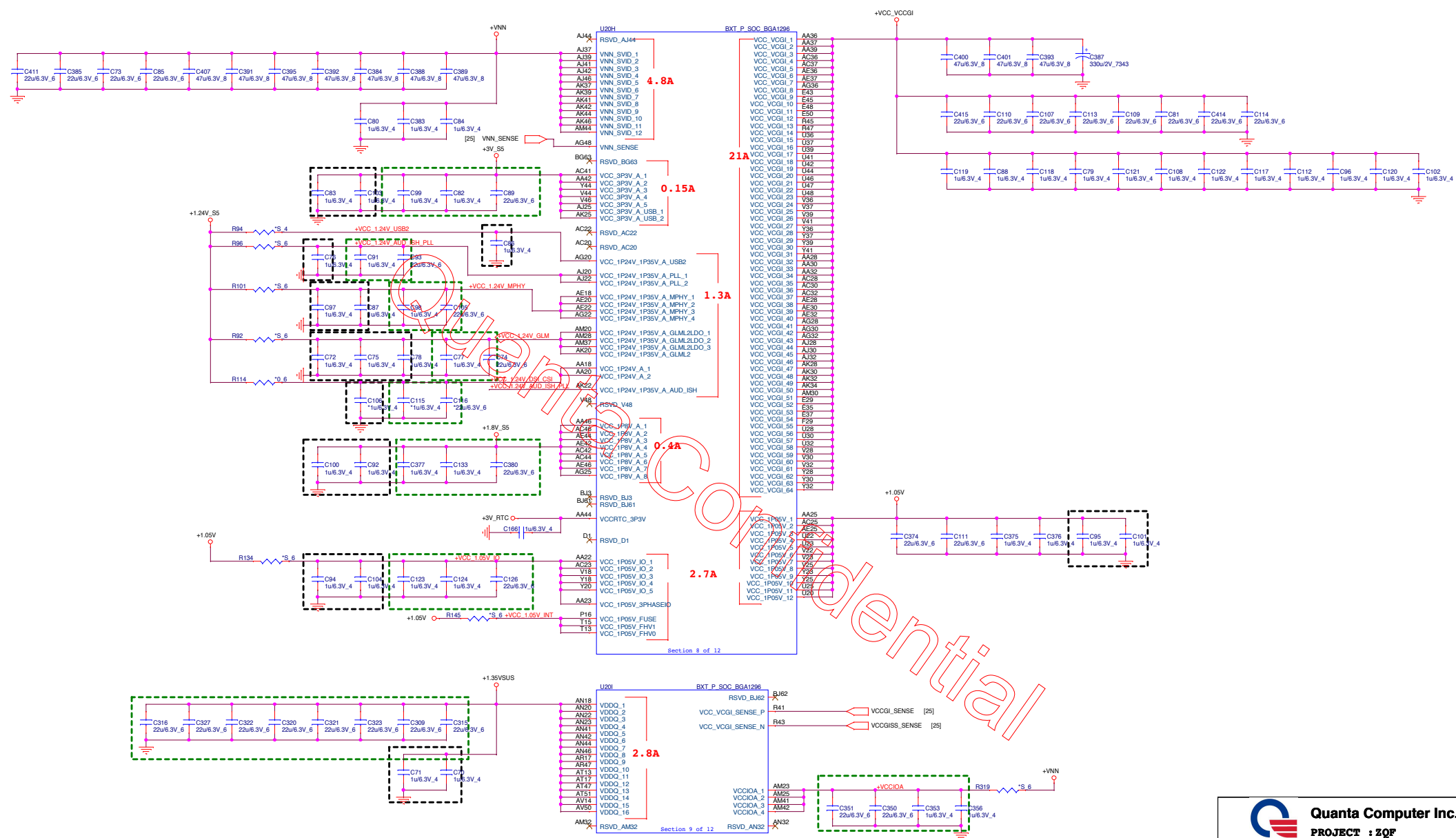


RTC Circuitry (RTC)



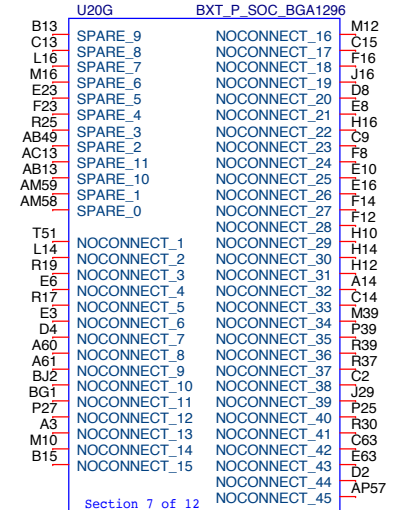
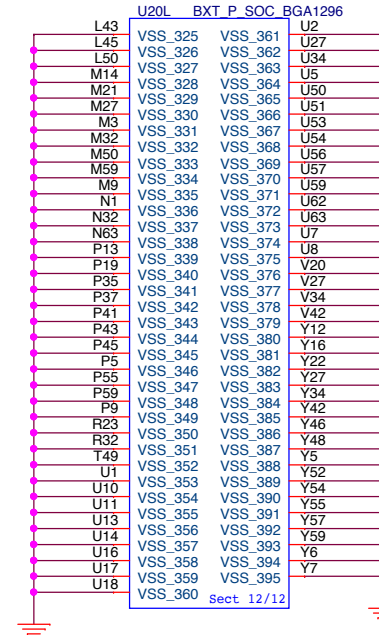
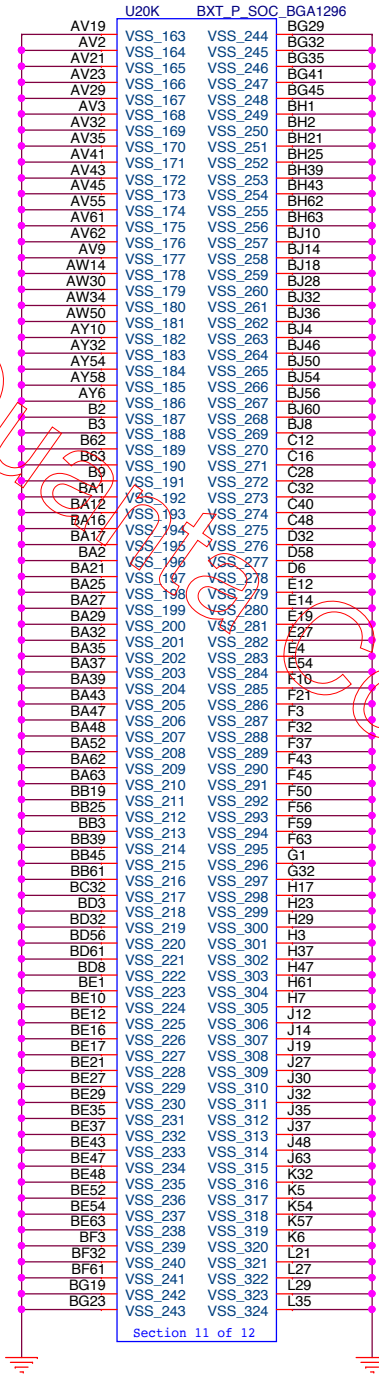
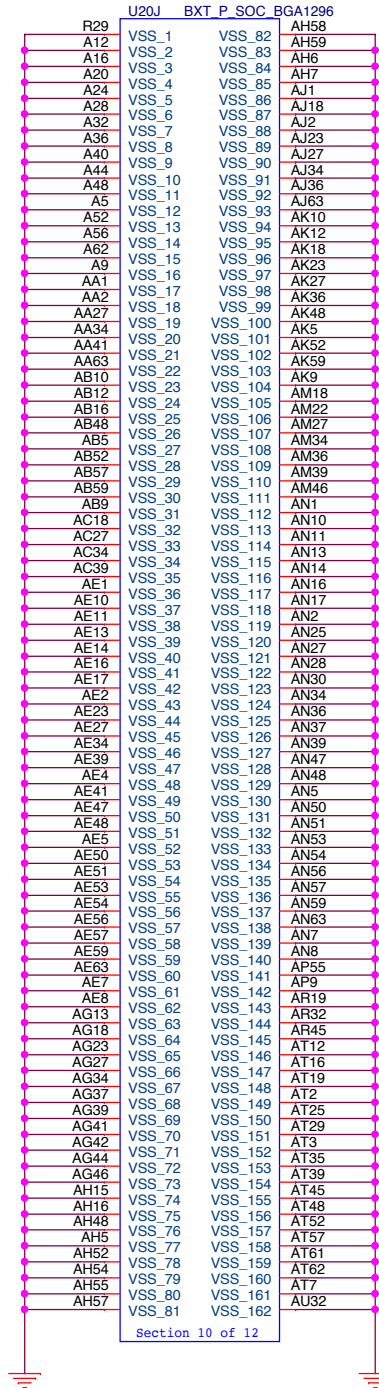
Topside cap Backside cap

Apollolake (POWER)

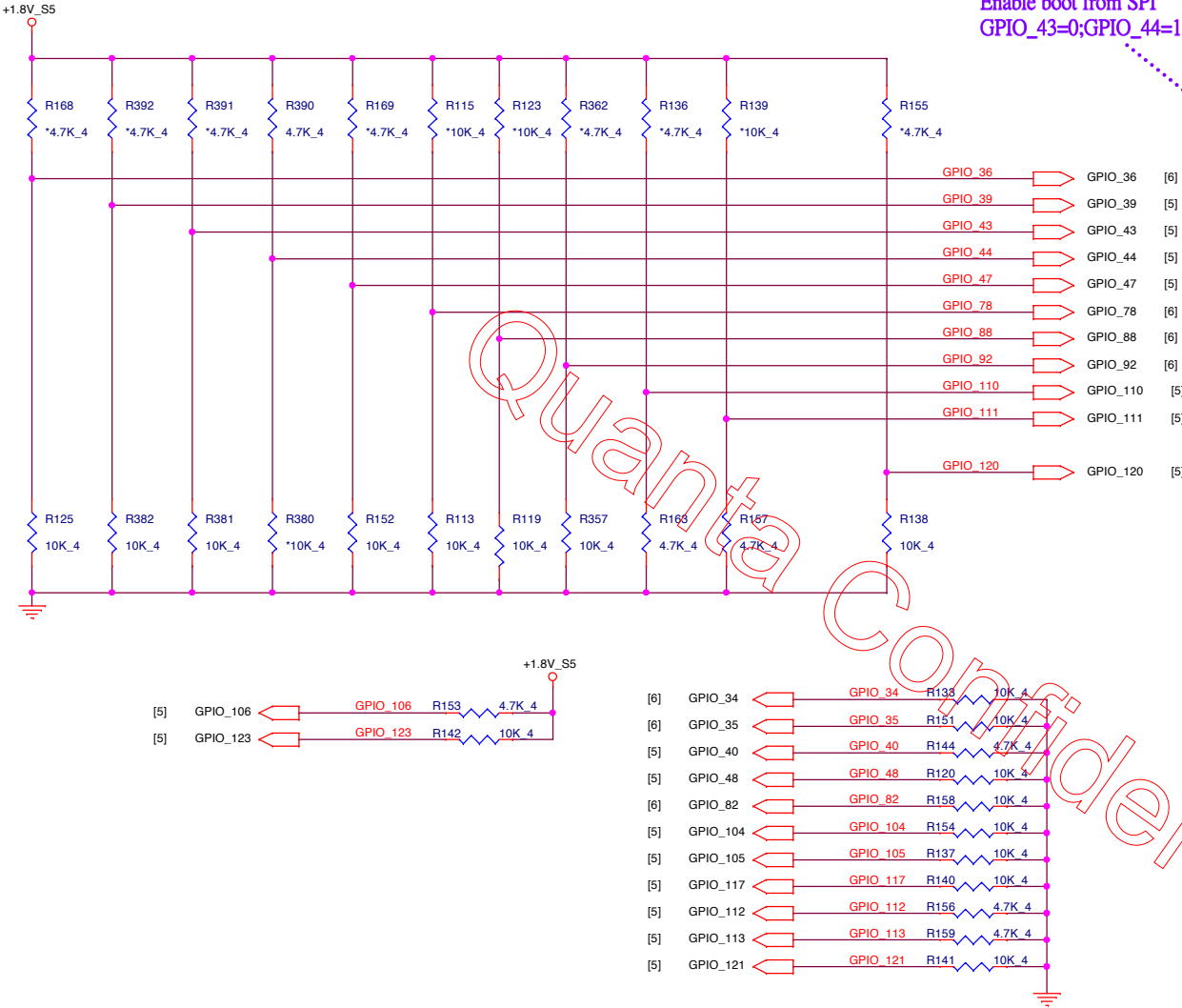


Apollolake ULT (GND)

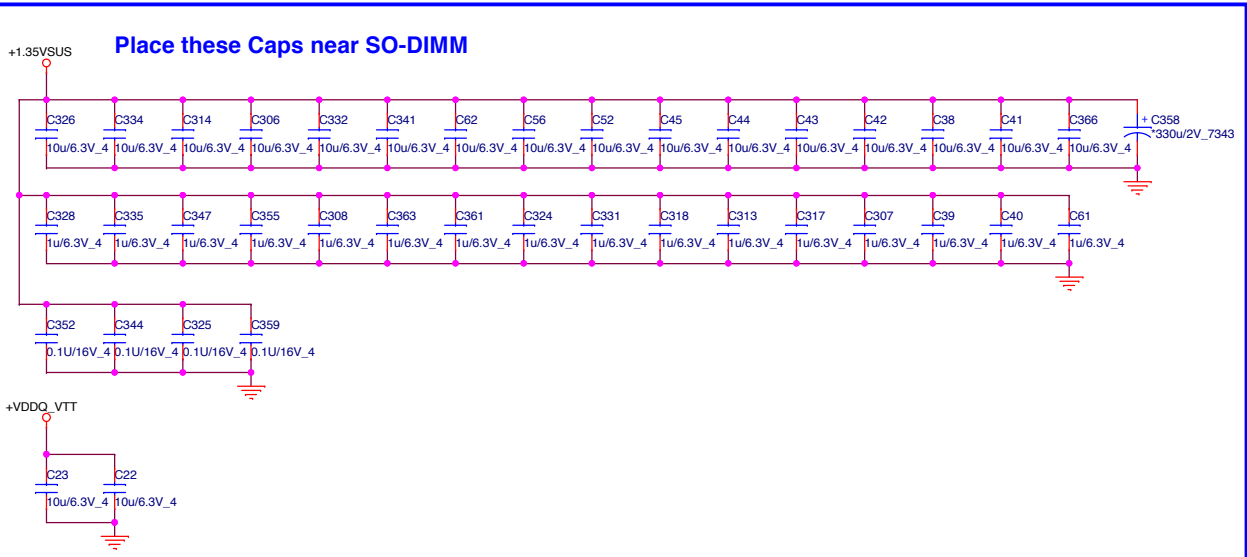
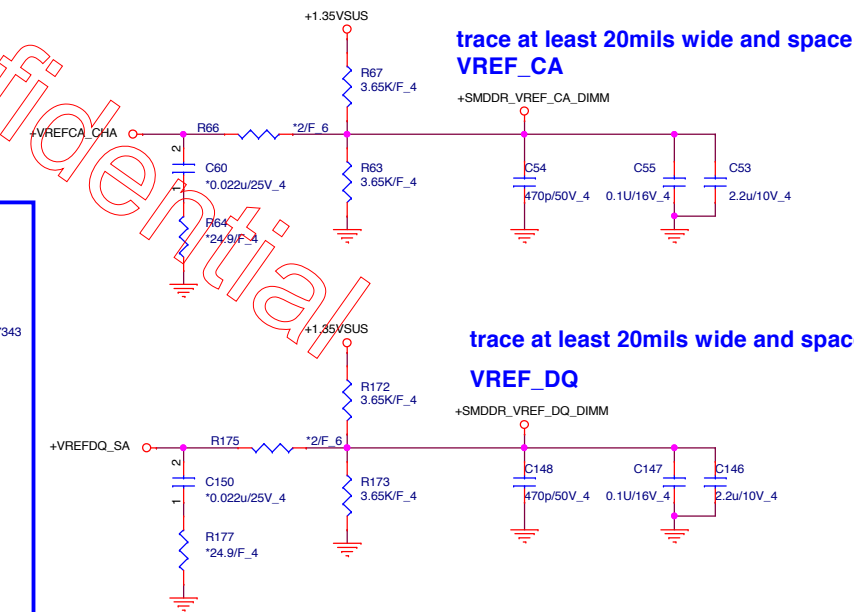
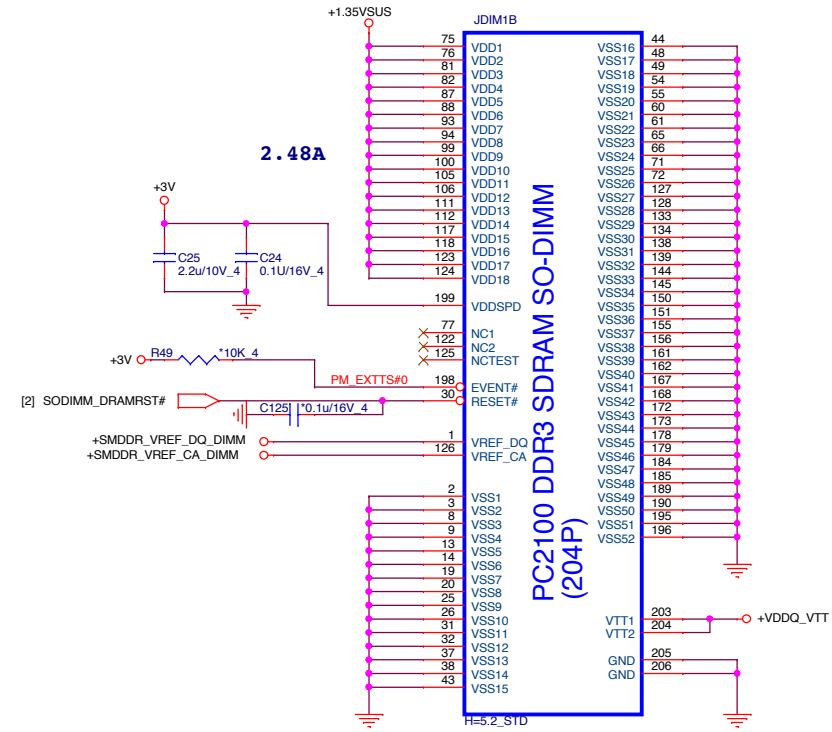
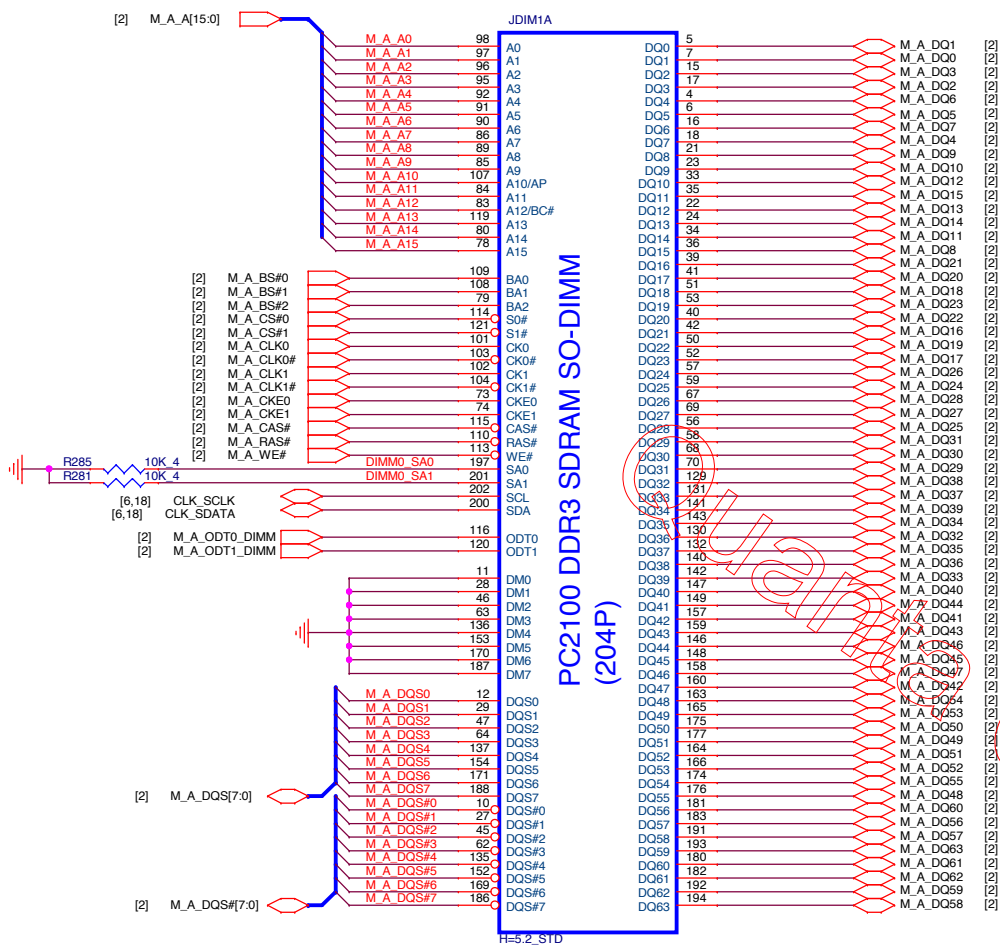
08

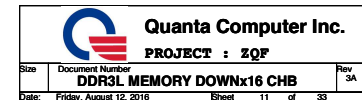


HARDWARE STRAPS

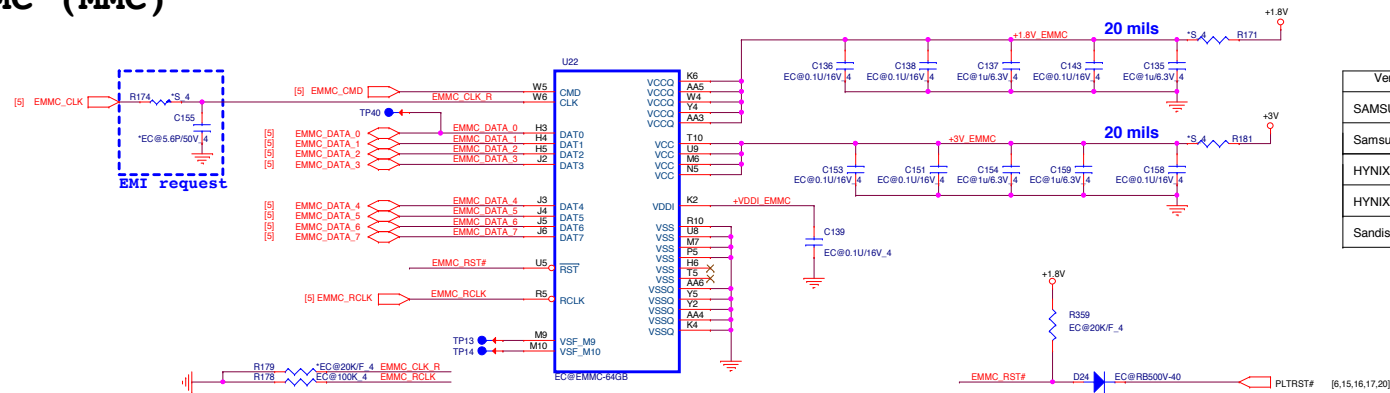


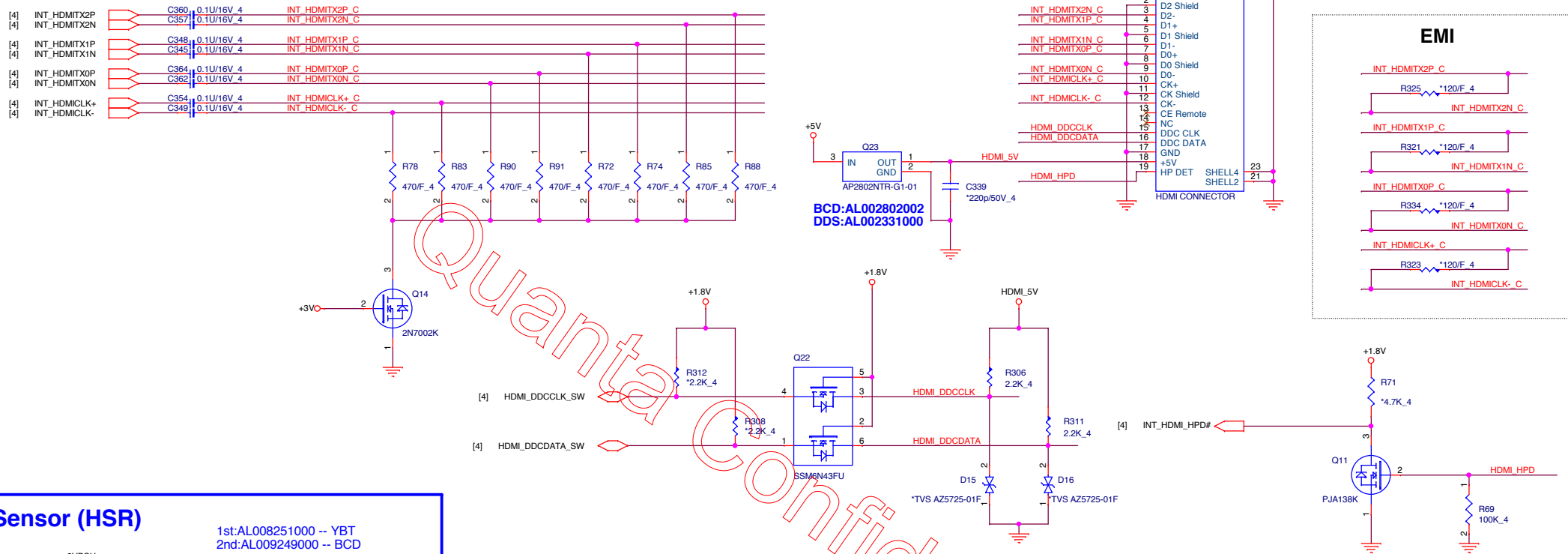
| Hardware Strap | Strap Description |
|----------------|---|
| GPIO_36 | VCC_1P24V_1P35V_A voltage select 0 = 1.24V 1 = 1.35V |
| GPIO_39 | Enable CSE(TXE3.0) ROM Bypass 0 = Disable bypass 1 = Enable Bypass |
| GPIO_43 | Allow eMMC as a boot source 0 = Disable 1 = Enable |
| GPIO_44 | Allow SPI as a boot source 0 = Disable 1 = Enable |
| GPIO_47 | Force DNX FW Load 0 = Do not force 1 = Force |
| GPIO_78 | SMBus 1.8V/3.3V mode select 0=buffers set to 3.3V 1=buffers set to 1.8V |
| GPIO_88 | PMU 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode |
| GPIO_92 | SMBus No Re-Boot 0 = Disable (default) 1 = Enable |
| GPIO_110 | LPC 1.8V/3.3V mode select 0=buffers set to 3.3V mode 1=buffers set to 1.8V mode |
| GPIO_111 | Boot BIOS Strap 0 = Boot from SPI 1 = Do not boot from SPI |
| GPIO_120 | Top swap override 0 = Disable 1 = Enable |





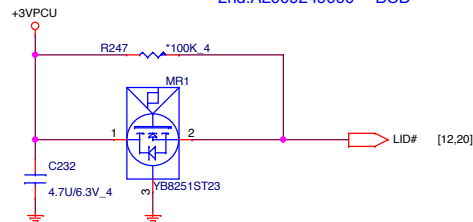
eMMC (MMC)




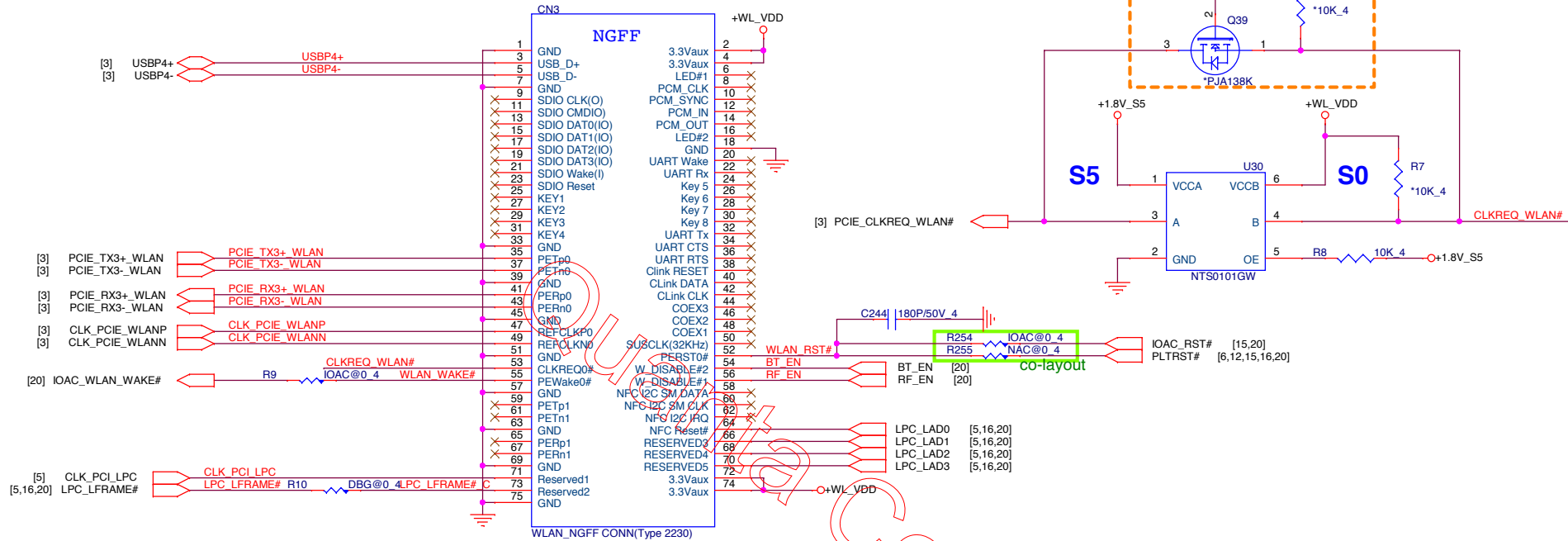


Hall Sensor (HSR)

1st:AL008251000 -- YBT
2nd:AL009249000 -- BCD

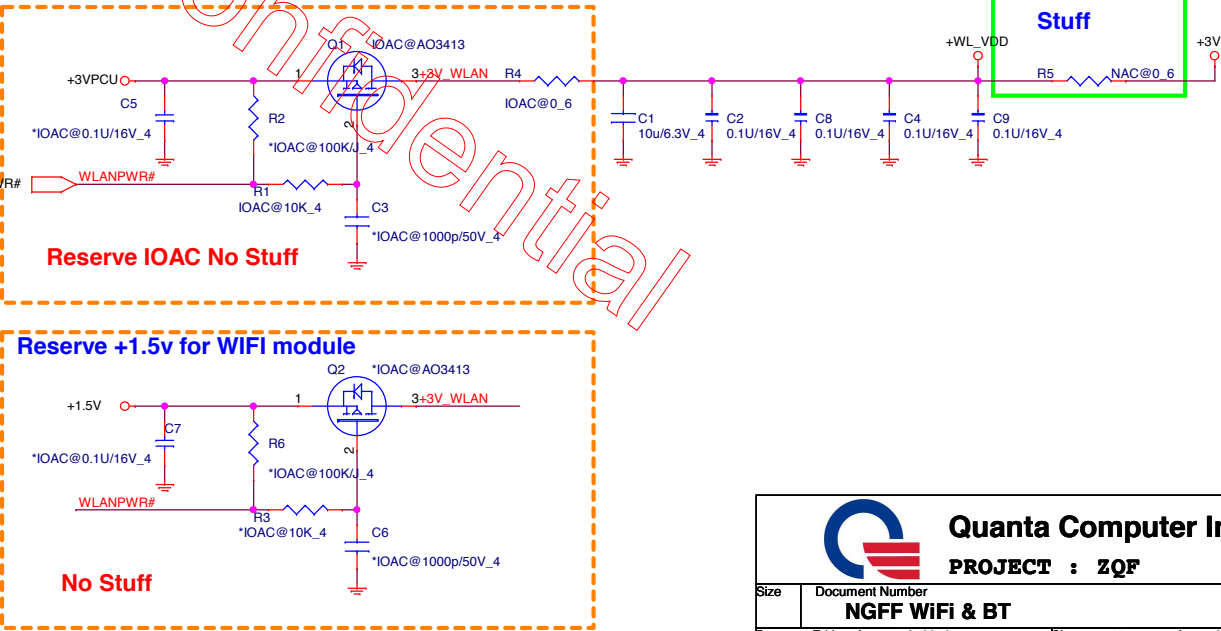


| | | | |
|---|-------------------------|------------------|--------|
|  Quanta Computer Inc. PROJECT : ZQP | | | |
| Size | Document Number | HDMI/Hall sensor | Rev 3A |
| Date | Friday, August 12, 2016 | Sheet 13 of 33 | |

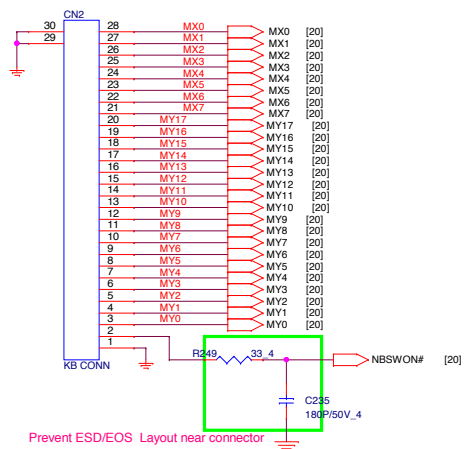


| | |
|------|-----------------------------|
| Low | Mini card +3V power enable |
| High | Mini card +3V power disable |

Intel APS Fixture use

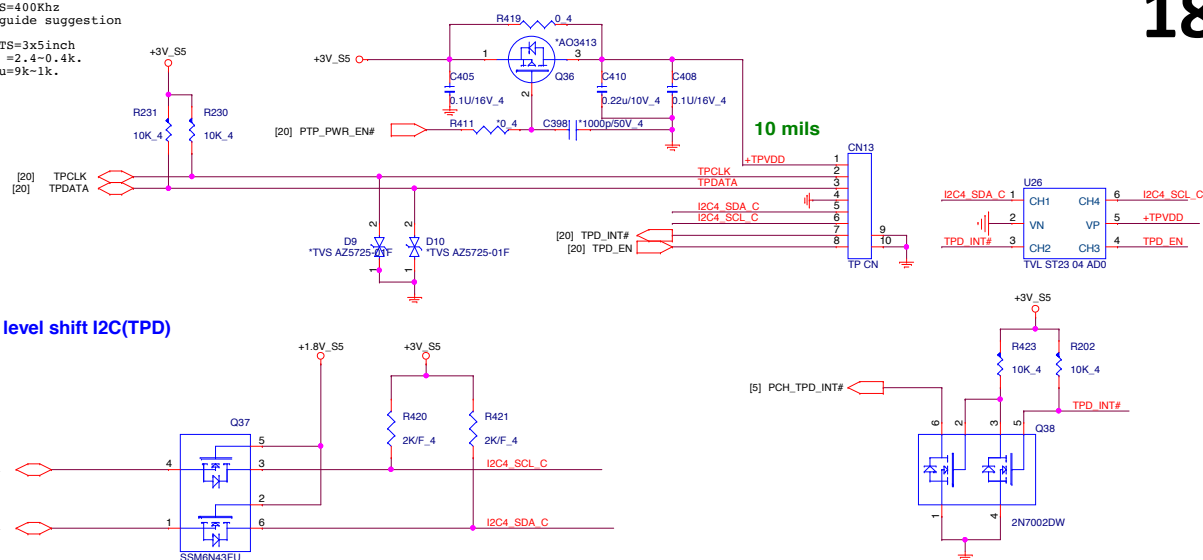


KEYBOARD (KBC)

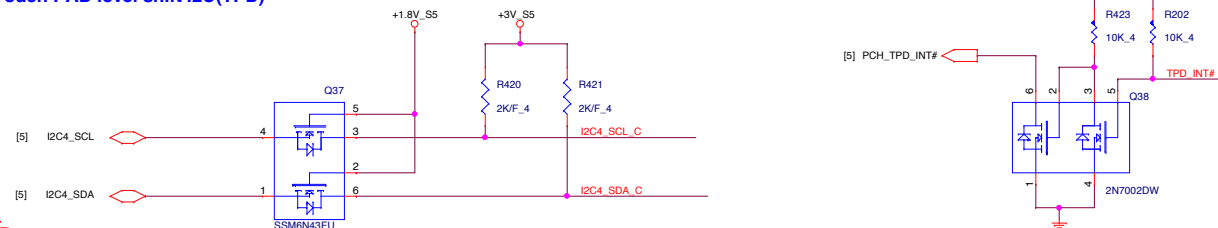


TOUCHPAD BOARD COUP (TPD I2C/PS2 co-lay)

TPD->100kHz, TS=400kHz
Intel design guide suggestion
NCP Pin 10u.
Per inch 3u TS=3x5inch
400kHz10-100u = 2.4-0.4k.
100kHz 10-100u=9k-1k.

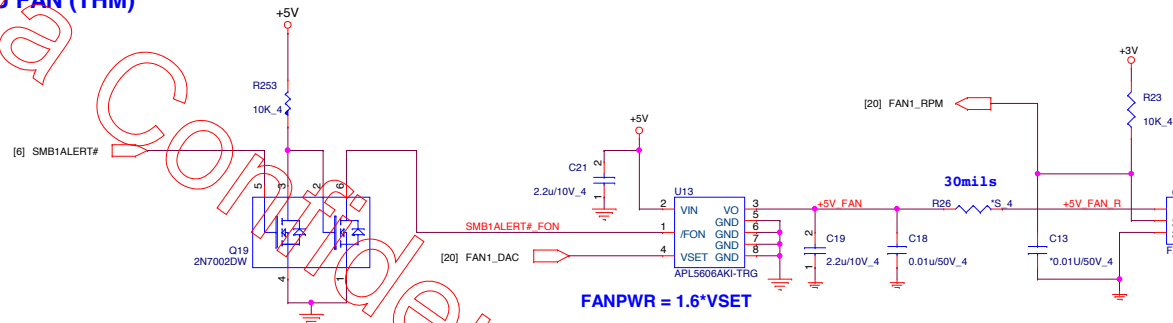


Touch PAD level shift I2C(TPD)

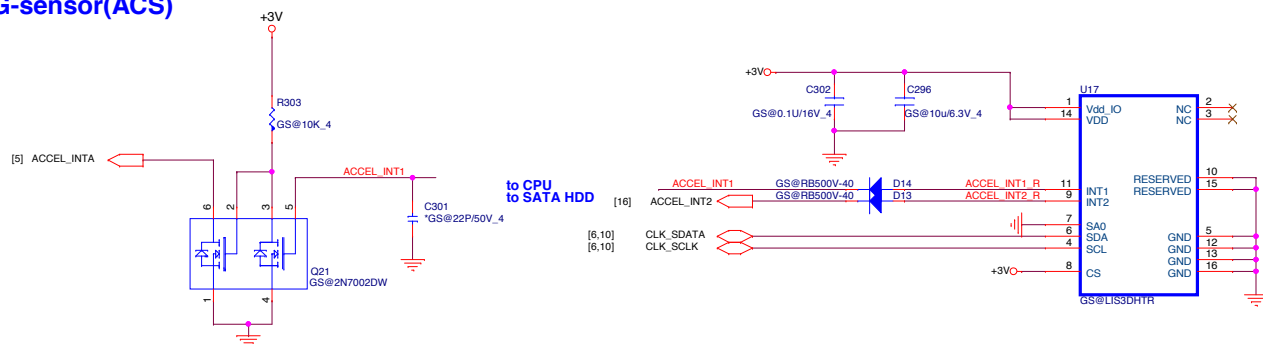


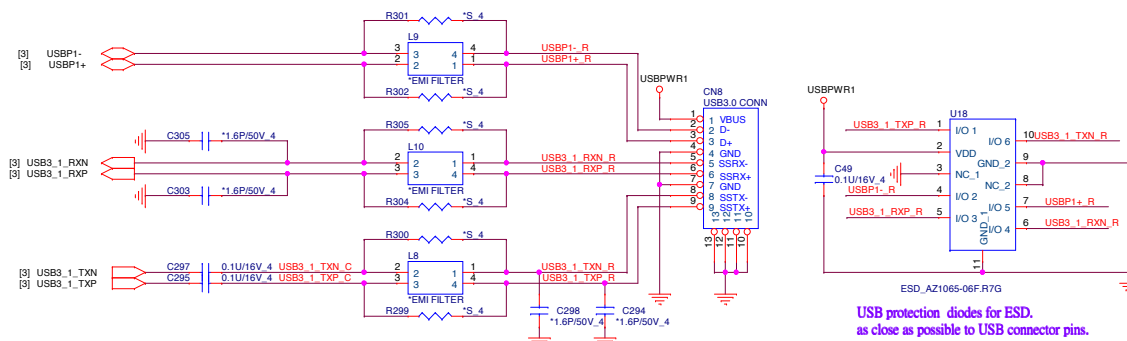
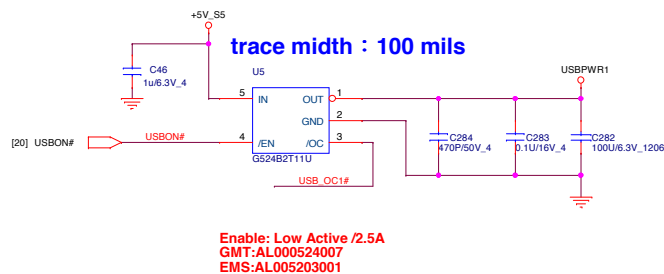
KB_BL LED (KBC)

CPU FAN (THM)

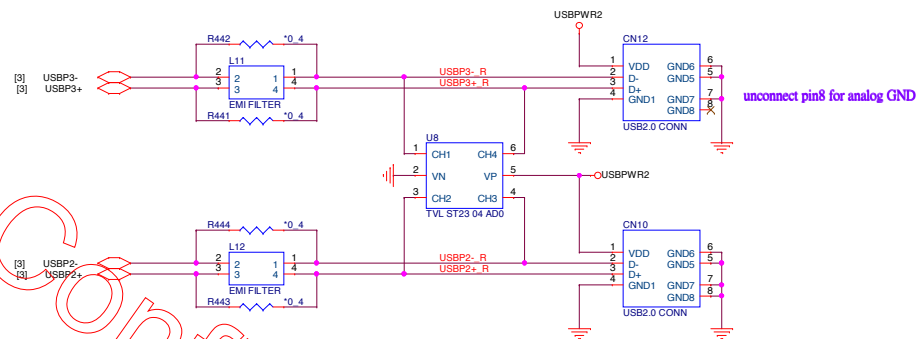
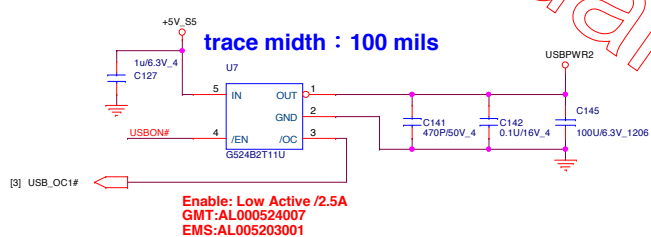


G-sensor(ACS)

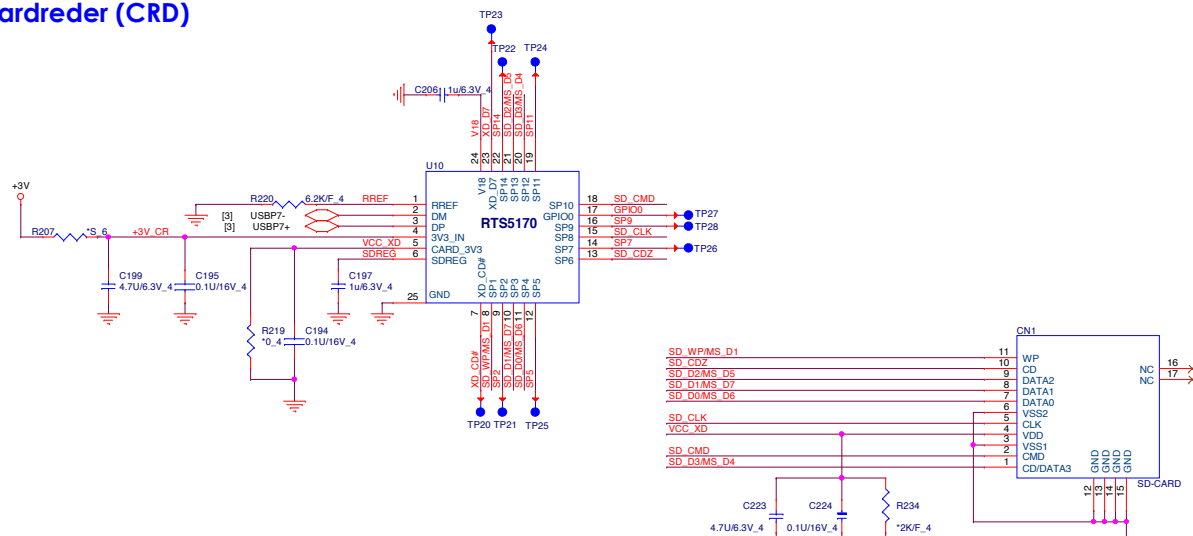




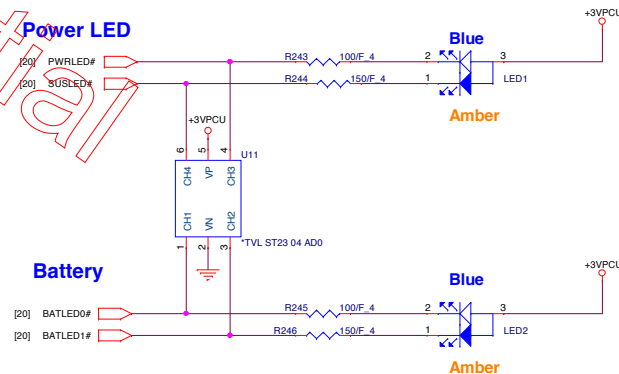
USB 2.0 Connector (UB2)

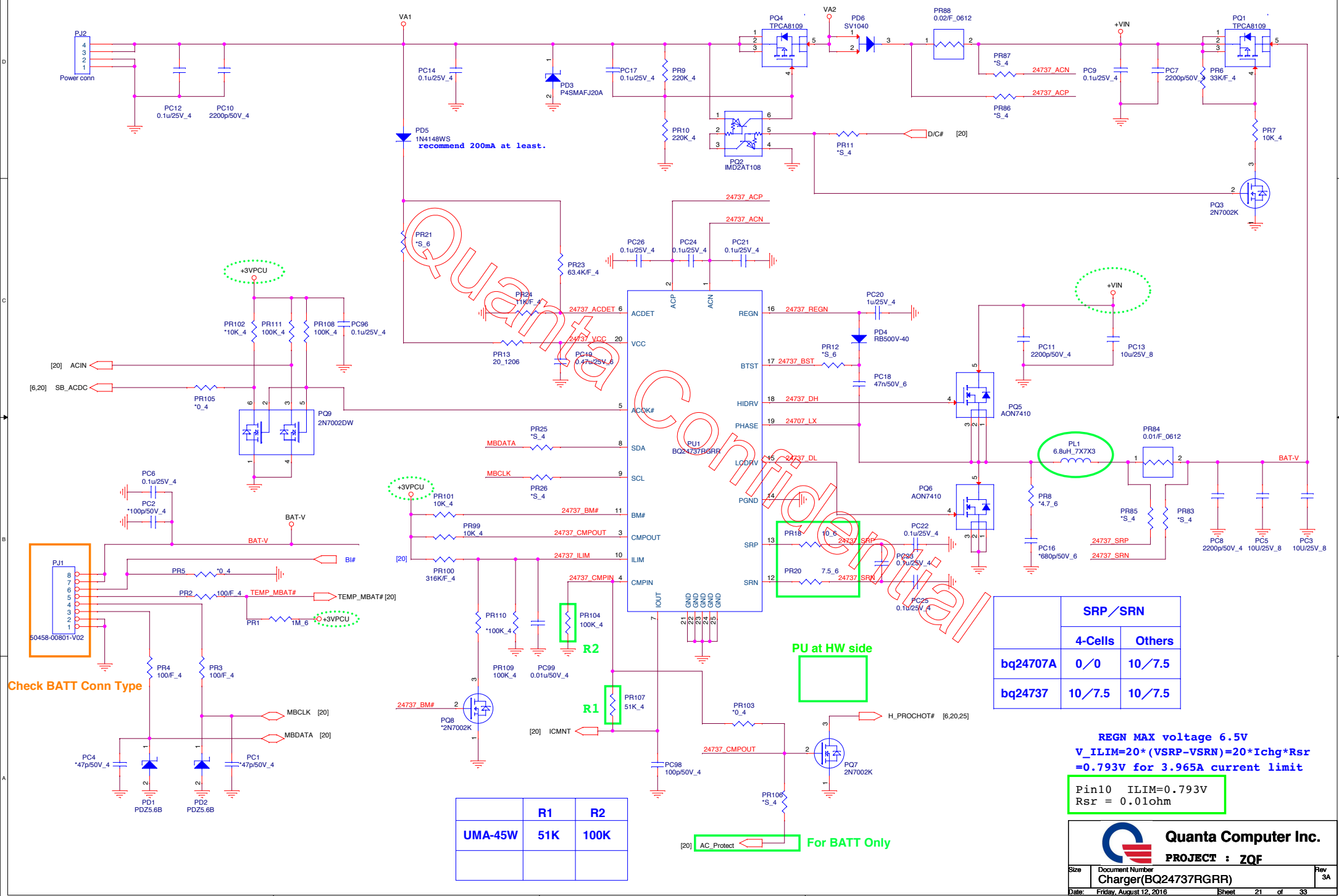


Cardreder (CRD)

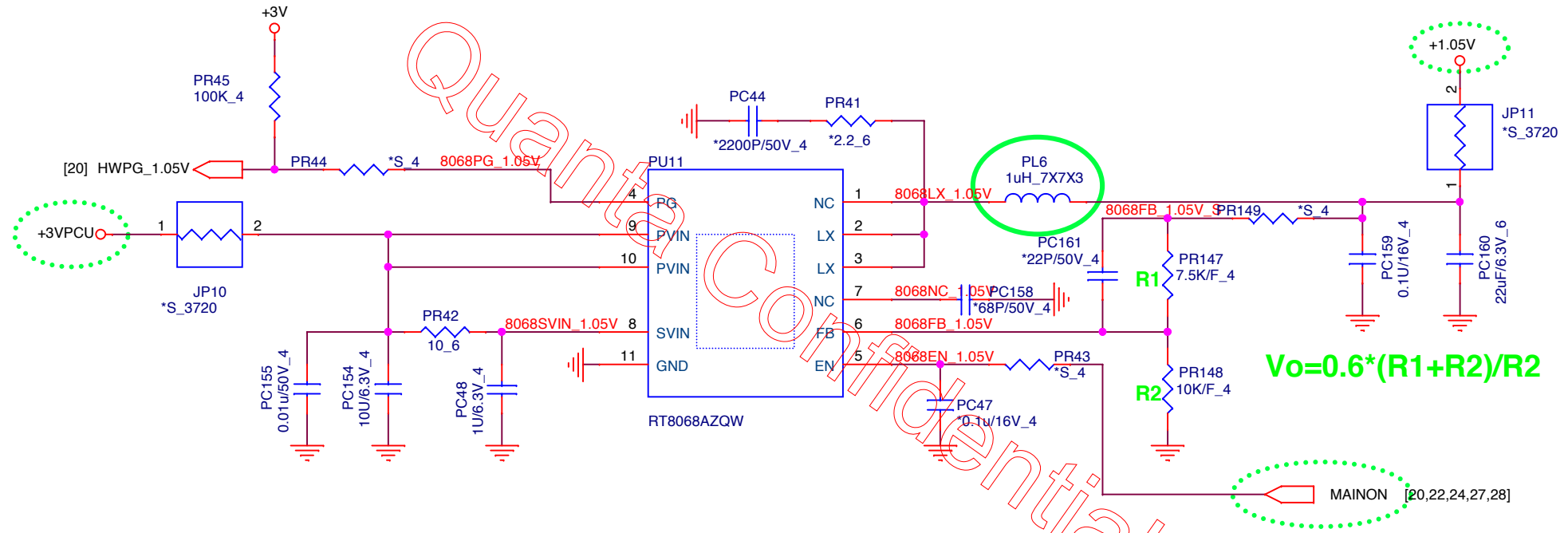


LED(UIF)





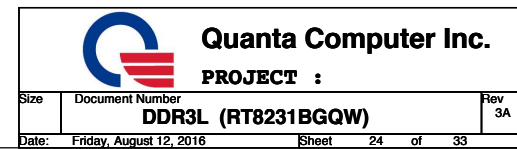
+1.05V
 1.05Volt +/- 5%
 TDC : 2.025A
 PEAK : 2.7A
 Width : 100mil



Quanta Computer Inc.

PROJECT :

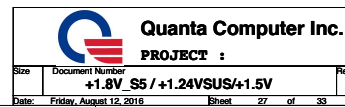
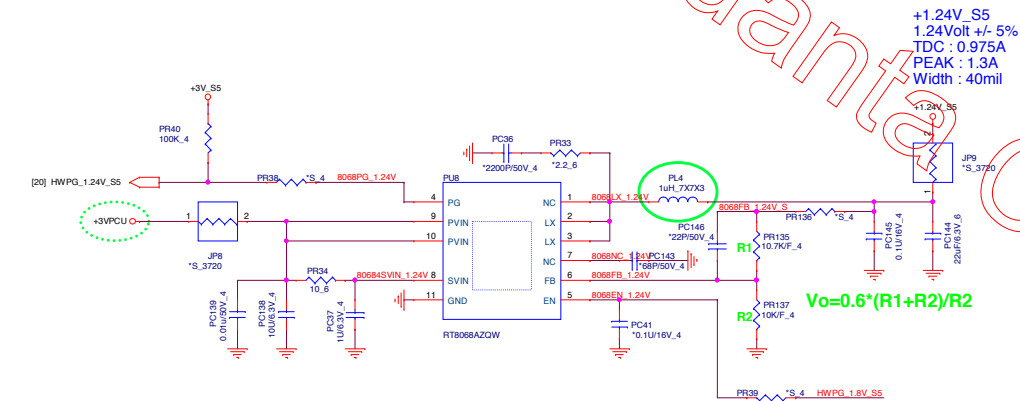
| | | |
|-------|----------------------------|----------------|
| Size | Document Number | Rev |
| | +1.05V (RT8068AZQW) | 3A |
| Date: | Friday, August 12, 2016 | Sheet 23 of 33 |

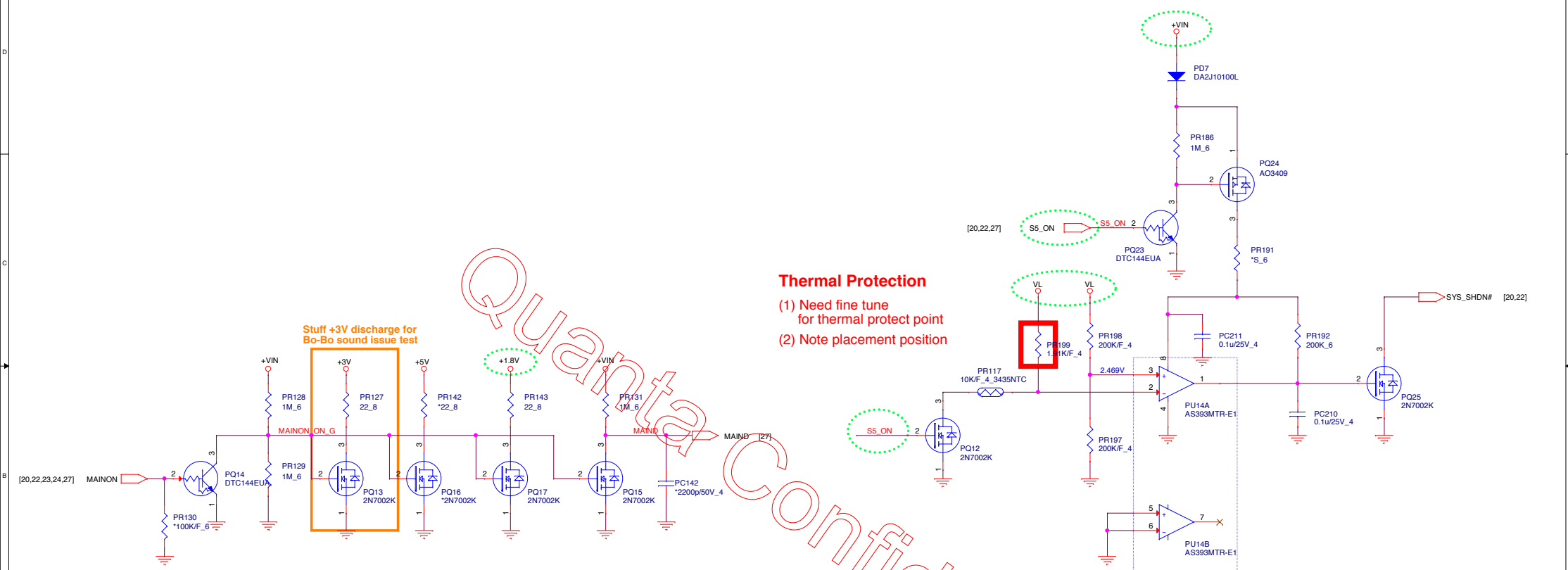




R_DC_LL : 6mV/A
R_AC_LL : 6mV/A

Icc Max : 4.8A
 Icc TDC : N/A
 Vboot : 1.05V
 OCP : 8A
 Fsw : 750KHZ

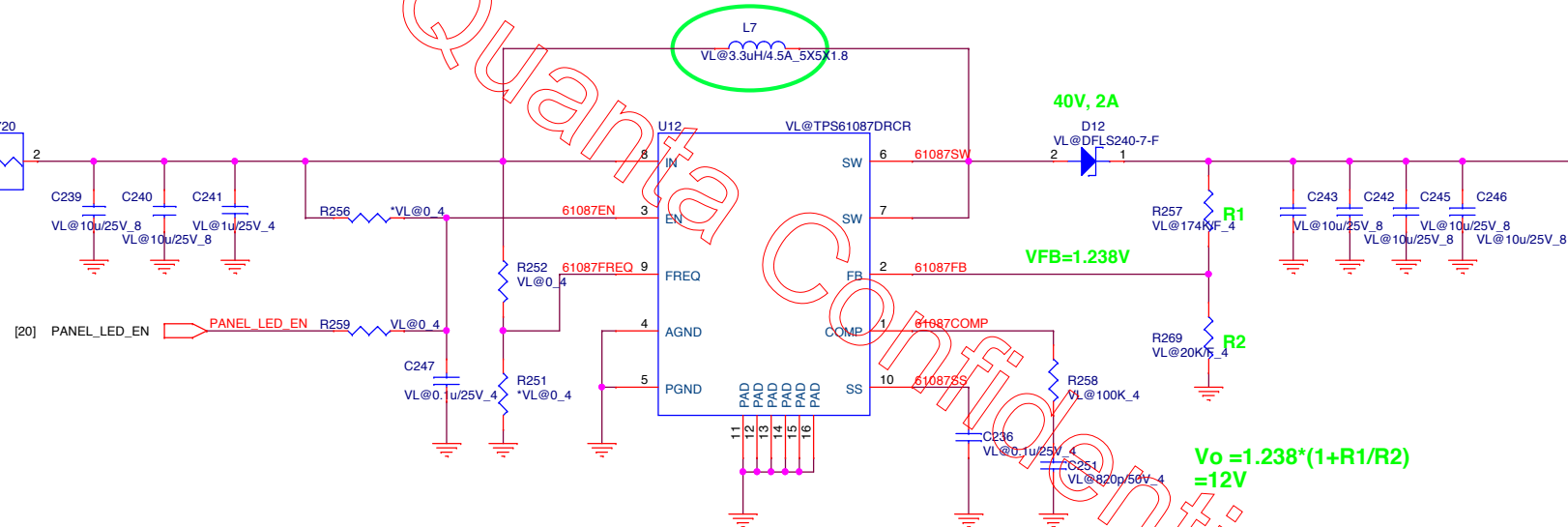




For EC control thermal protection (output 3.3V)

Panel Spec (TFT-LCD 14")
 VLED : 6V~21V (Tpy:12V)
 Power Consumption : 3W (MAX)

+12V_Panel
 12 Volt +/- 5%
 PEAK : 0.35A
 Width : 20mil



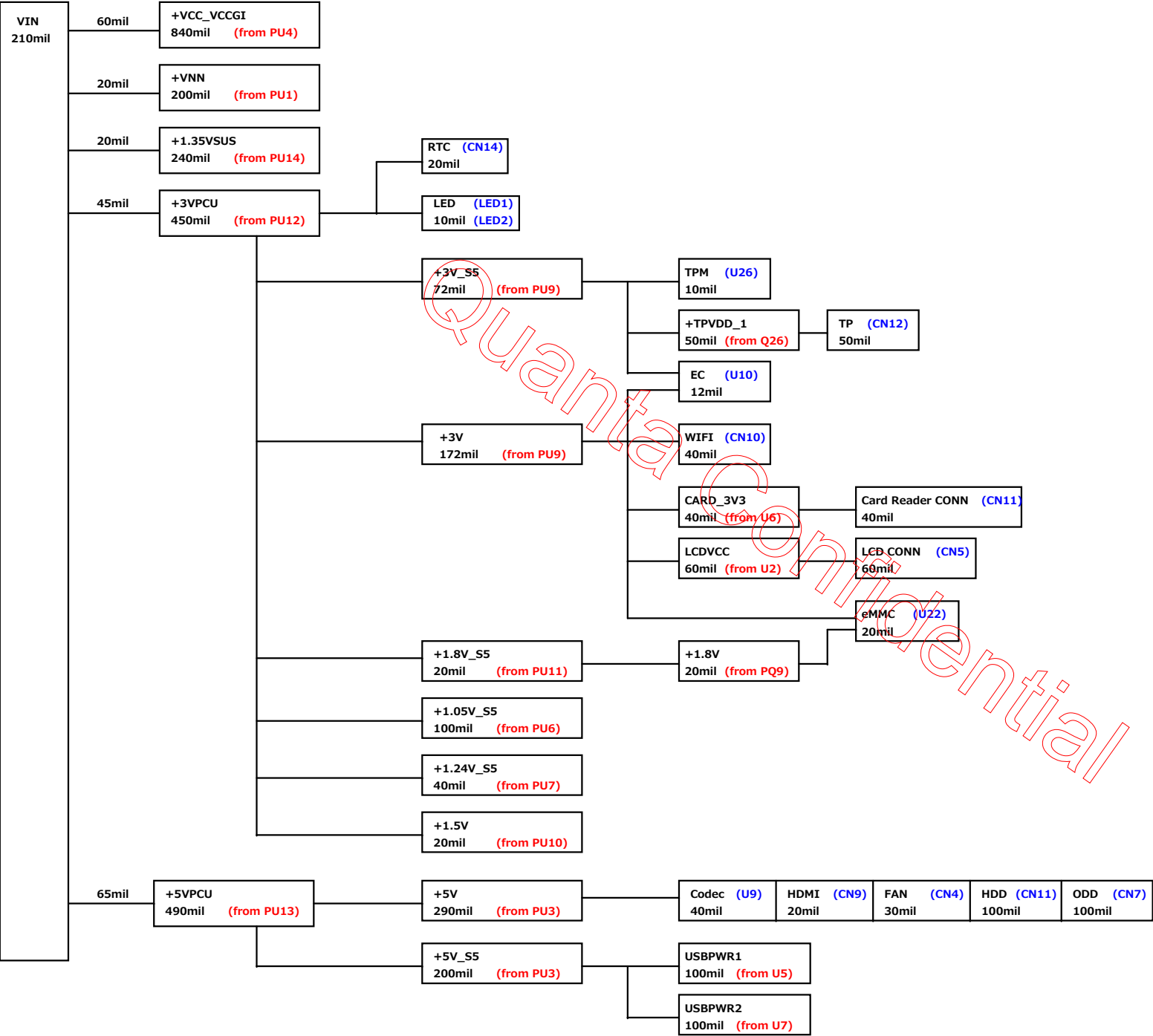
$$V_o = 1.238 * (1 + R1/R2) = 12V$$

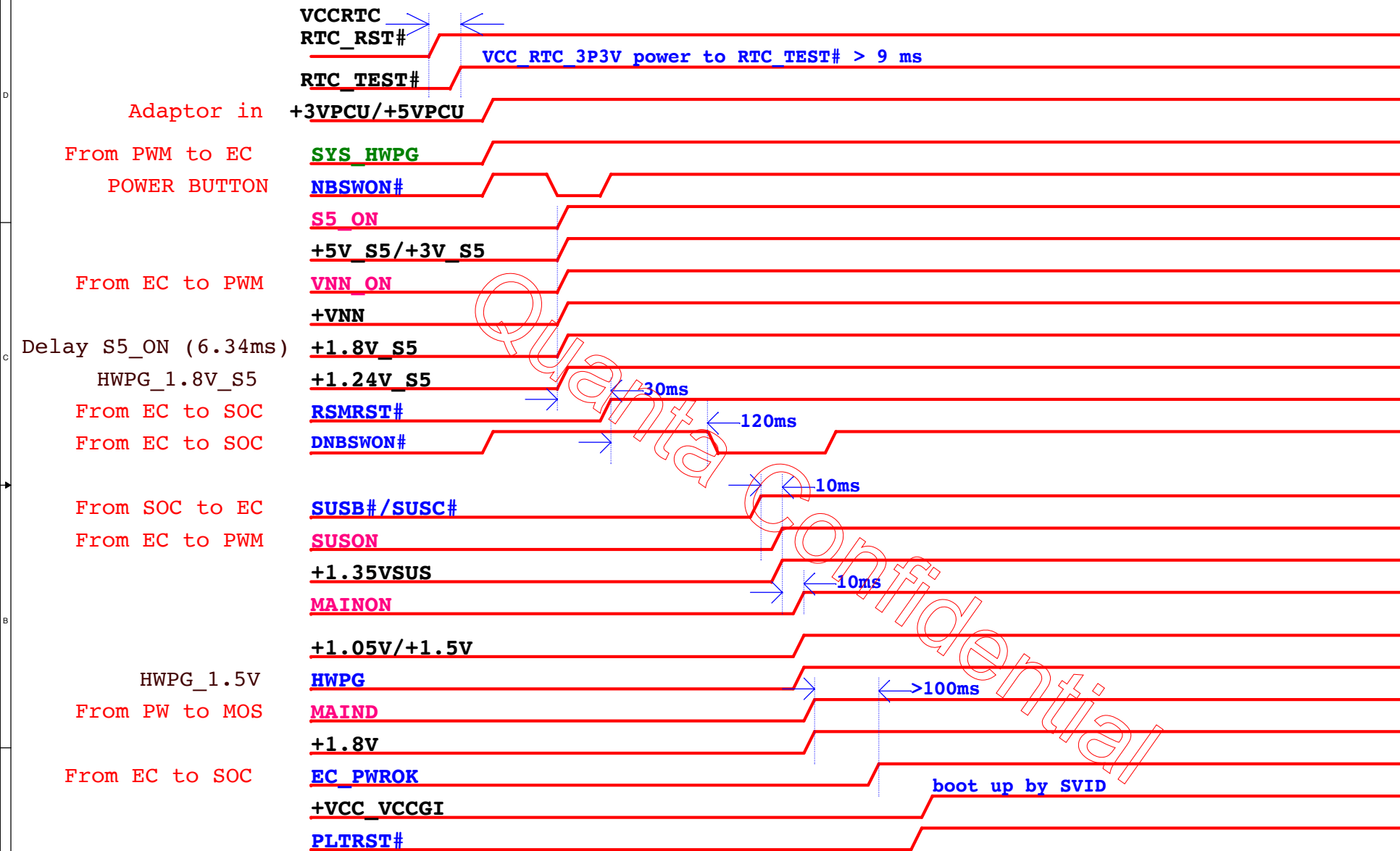


Quanta Computer Inc.

PROJECT :

| | | |
|-------|-------------------------|----------------|
| Size | Document Number | Rev |
| | LED Panel (TPS61087) | 3A |
| Date: | Friday, August 12, 2016 | Sheet 29 of 33 |





| Power plane | Description | S0 | S3 | S5 |
|-------------|---|----|-----|-----|
| +VIN | Adaptor power supply | ON | ON | ON |
| +VCC_VCCGI | Variable voltage supply to CPU and Graphics Core and ISP logic | ON | OFF | OFF |
| +VNN | Variable voltage supply to other (non core) logic | ON | OFF | OFF |
| +1.05V | Fixed voltage rail for SRAM,I/O,internal Logic | ON | OFF | OFF |
| +1.24V_S5 | Fixed voltage rail for SoC L2/ Audio & ISH I/O Logic and PLLs MPHY Logic/ USB2-I/O/MIPI I/Os | ON | ON | ON |
| +1.8V_S5 | Fixed voltage rail for all GPIOs | ON | ON | ON |
| +1.35VSUS | Fixed voltage rail for DDR3L IO | ON | ON | OFF |
| +3V_RTC | Fixed Voltage rail for RTC (Real Time Clock) | ON | ON | ON |
| +1.8V | 1.8V S0 power rail | ON | OFF | OFF |
| +1.5V | 1.5V S0 power rail | ON | OFF | OFF |
| +5VPCU | 5V always on power rail | ON | ON | ON |
| +5V_S5 | 5V S5 power rail | ON | ON | ON |
| +5V | 5V S0 power rail | ON | OFF | OFF |
| +3VPCU | 3V always on power rail | ON | ON | ON |
| +3V_S5 | 3V S5 power rail | ON | ON | ON |
| +3V | 3V S0 power rail | ON | OFF | OFF |