

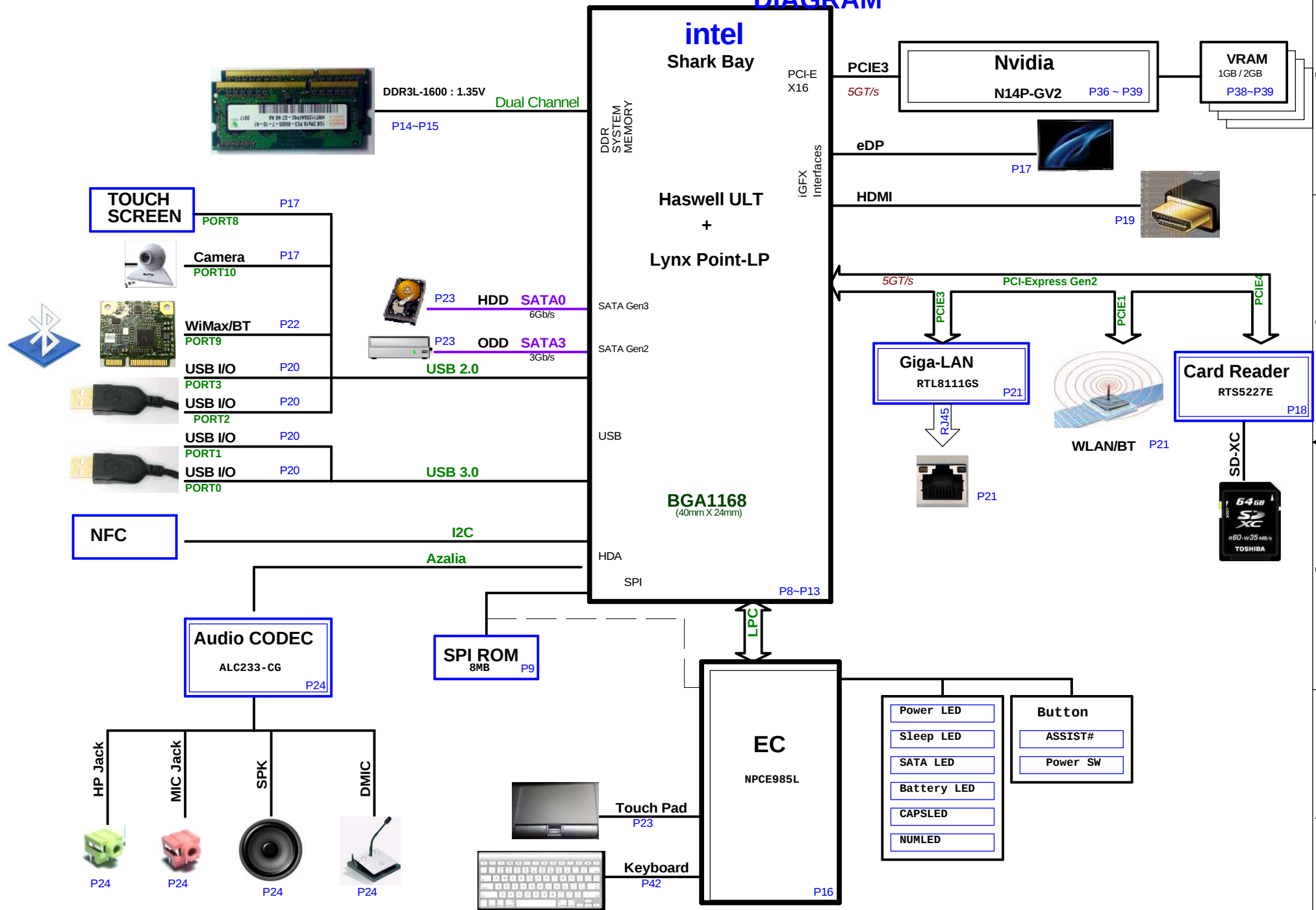
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| 22   | WLAN/KB-BL                  | 1A   |      |
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| 24   | Audio ALC233-CG             | 1A   |      |
| 25   | LED/PS/DMIC                 | 1A   |      |
| 26   | POWER +VCC_CORE (NCP81101)  | 1A   |      |
| 27   | POWER 3VPCU&RVCC5(TPS51427) | 1A   |      |
| 28   | POWER 1.35VSUS/VTT_MEM      | 1A   |      |
| 29   | POWER +1.05V(G5602R41U)     | 1A   |      |
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|      |                         | 1A   |      |
|      |                         | 1A   |      |

\* : No mount  
L@ : For LVDS output  
D@ : For eDP output  
E@ : For DIS GFX  
I@ : For UMA

# HKC Haswell ULT BLOCK DIAGRAM

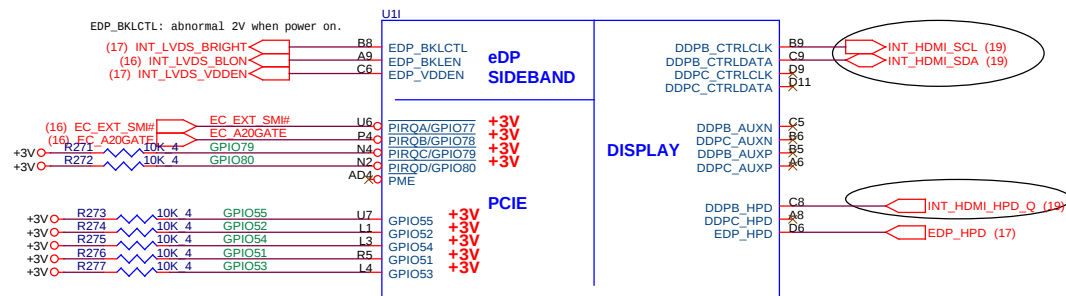
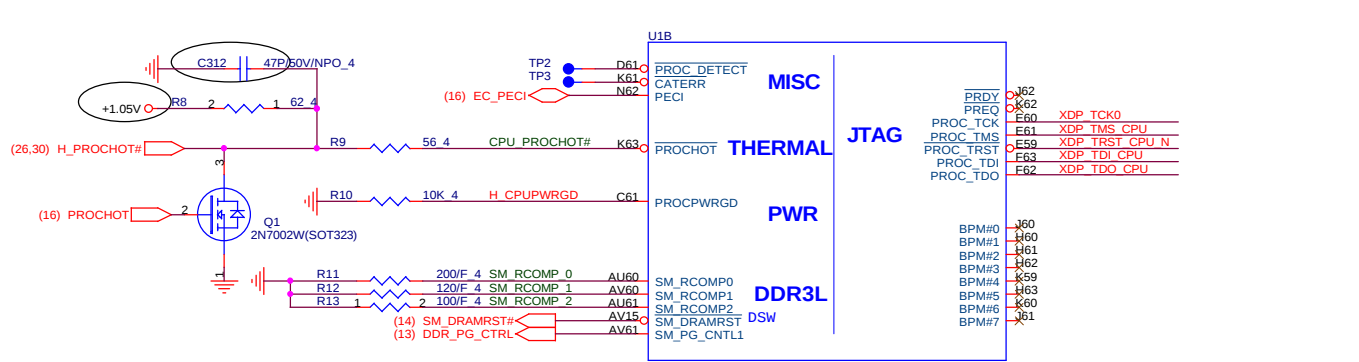
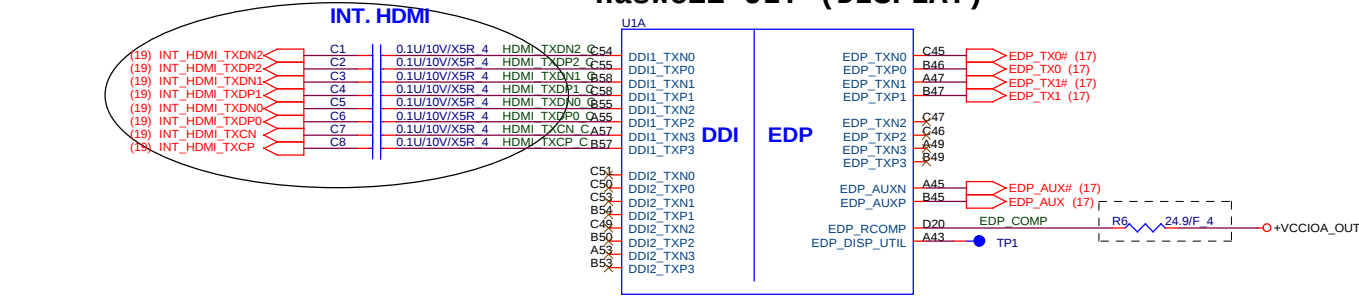
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| Change List |  |  |  |  | 03 |  |  |  |  |
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# Haswell ULT (DISPLAY)

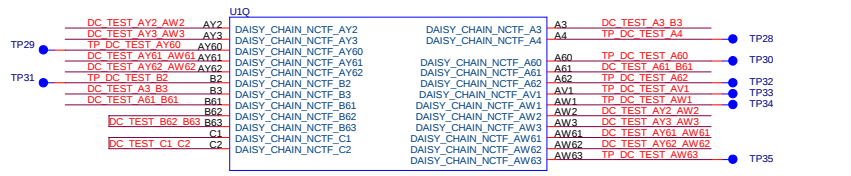
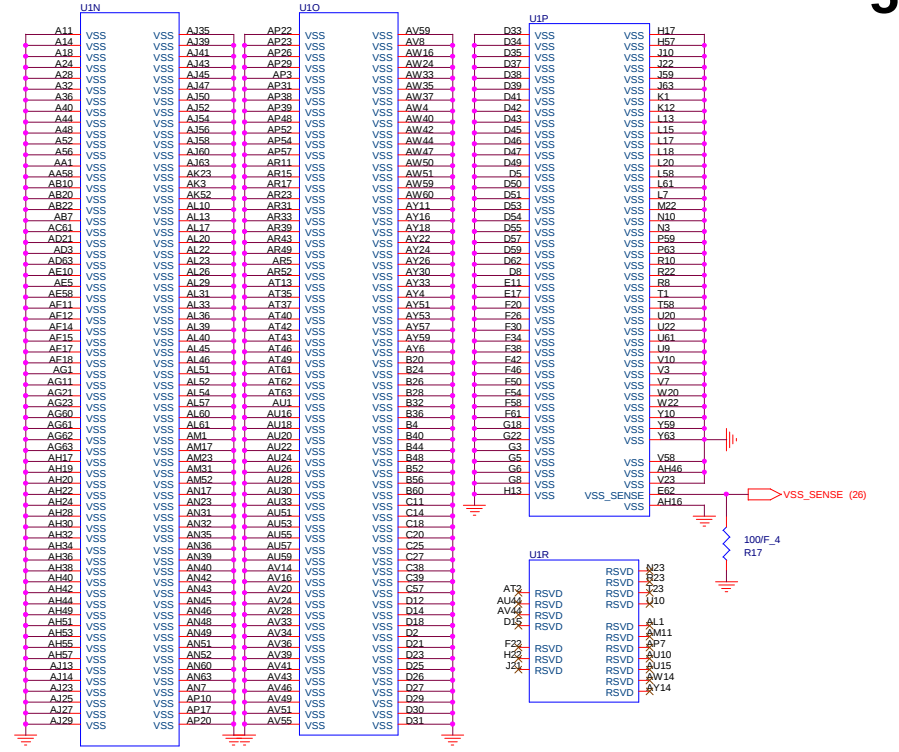
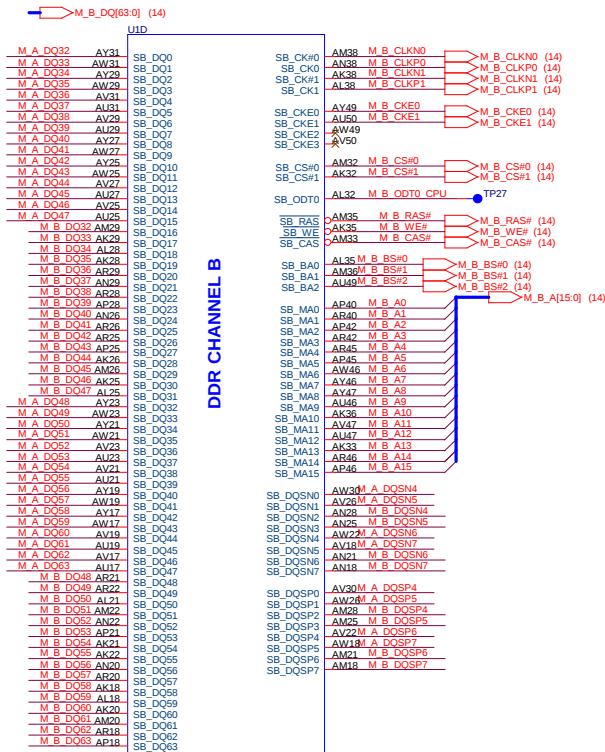
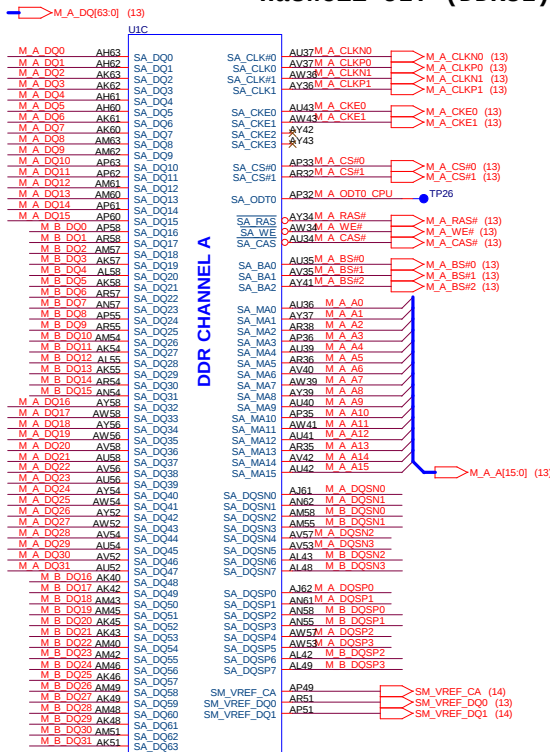
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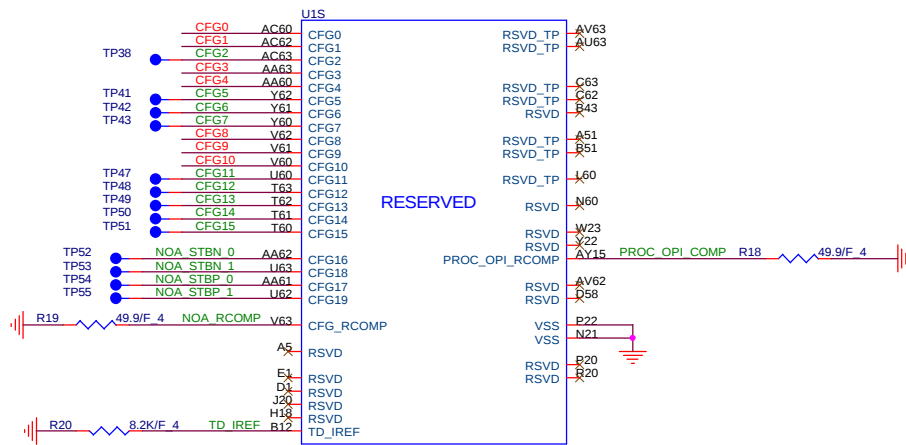


1.Level 1 Environment-related Substances Should Never be Used.  
 2.Recycled Resin and Coated Wire should be procured from Green Partners.

|      |                            |               |
|------|----------------------------|---------------|
| Size | Document Number            | Rev           |
|      | HSW MCP(Display/eDP)       | 1A            |
| Date | Thursday, January 31, 2013 | Sheet 4 of 40 |

# Haswell ULT (DDR3L)





## Processor Strapping

|                                                                       | 1                                                                                                             | 0                                                                                                |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--|
| CFG0<br>EAR-STALL/NOT STALL RESET SEQUENCE<br>AFTER PCU PLL IS LOCKED | (DEFAULT) NORMAL OPERATION; NO STALL                                                                          | STALL                                                                                            |  |
| CFG1<br>PCH/ PCH LESS MODE<br>SELECTION                               | (DEFAULT) NORMAL OPERATION                                                                                    | PCH-LESS MODE                                                                                    |  |
| CFG3<br>PHYSICAL_DEBUG_ENABLED (DFX PRIVACY)                          | DISABLED                                                                                                      | ENABLED<br>SET DFX ENABLED BIT IN DEBUG<br>INTERFACE MSR                                         |  |
| CFG4<br>DISPLAY PORT PRESENCE STRAP                                   | DISABLED<br>NO PHYSICAL DISPLAY PORT ATTACHED TO<br>EMBEDDED DISPLAY PORT                                     | ENABLED; NOA WILL BE AVAILABLE<br>REGARDLESS OF THE LOCKING OF<br>THE UNIT                       |  |
| CFG 8<br>ALLOW THE USE OF NOA<br>ON LOCKED UNITS                      | DISABLED(DEFAULT); IN THIS CASE,<br>NOA WILL BE DISABLED IN LOCKED<br>UNITS AND ENABLED IN UN-LOCKED<br>UNITS | ENABLED<br>AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED<br>TO THE EMBEDDED DISPLAY PORT          |  |
| CFG9<br>NO SVID PROTOCOL CAPABLE VR<br>CONNECTED                      | VRS SUPPORTING SVID PROTOCOL ARE<br>PRESENT                                                                   | NO VR SUPPORTING SVID IS PRESENT. THE<br>CHIP WILL NOT GENERATE (OR RESPOND TO)<br>SVID ACTIVITY |  |
| CFG10<br>SAFE<br>MODE<br>BOOT                                         | POWER FEATURES ACTIVATED<br>DURING RESET                                                                      | POWER FEATURES (ESPECIALLY CLOCK<br>GATINE ARE NOT ACTIVATED                                     |  |



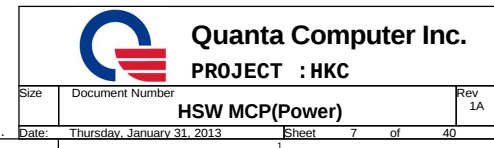
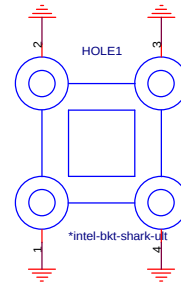
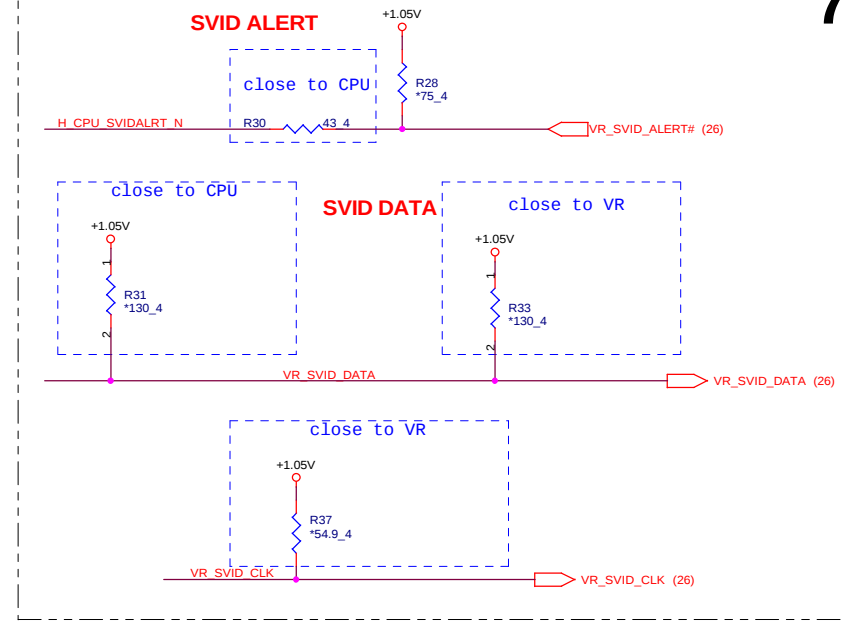
Quanta Computer Inc.

PROJECT : HKC

|       |                            |               |
|-------|----------------------------|---------------|
| Size  | Document Number            | Rev           |
|       | HSW MCP(CFG)               | 1A            |
| Date: | Thursday, January 31, 2013 | Sheet 6 of 40 |

1.Level 1 Environment-related Substances Should Never be Used.  
2.Recycled Resin and Coated Wire should be procured from Green  
Partners.

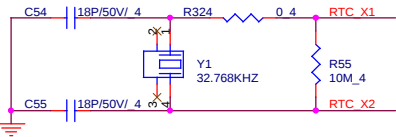
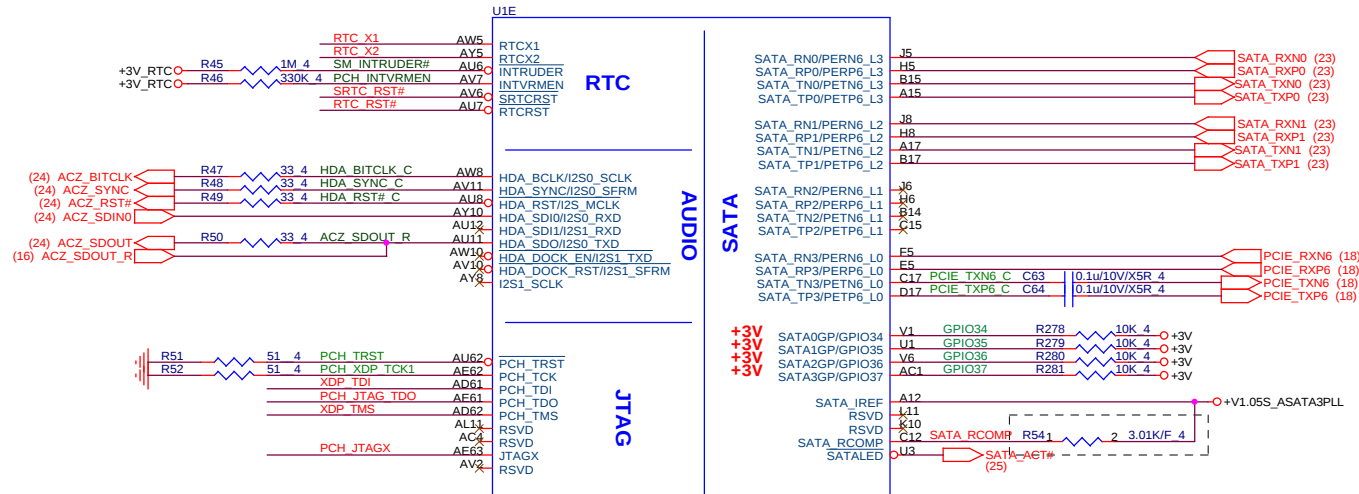
## 7



- 1.Level 1 Environment-related Substances Should Never be Used.
- 2.Recycled Resin and Coated Wire should be procured from Green Partners.

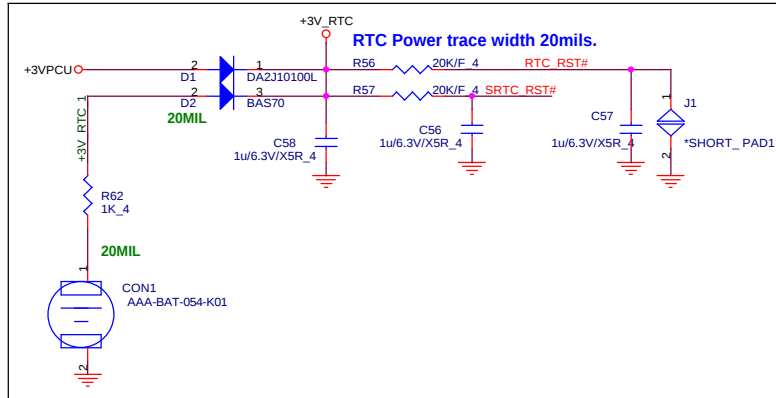
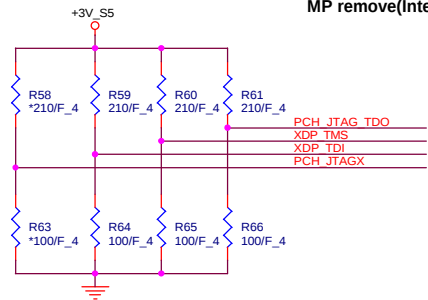
# Haswell ULT (RTC, HDA, JTAG, SATA)

8



## PCH JTAG Debug (CLG)

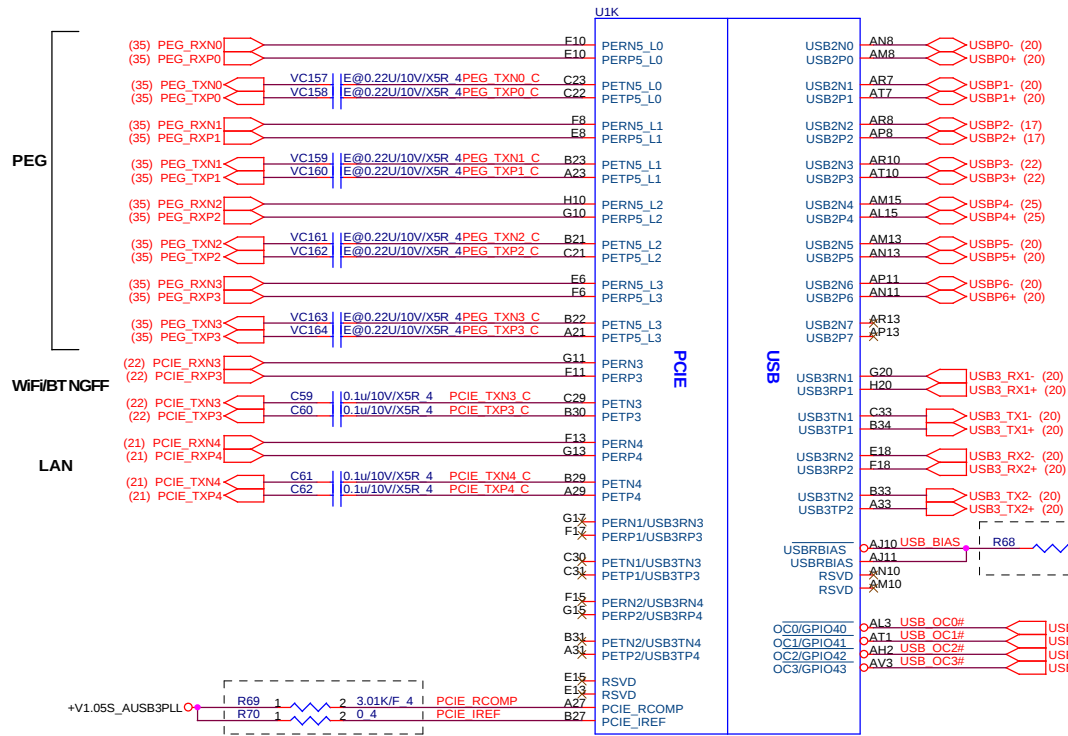
MP remove(Intel)



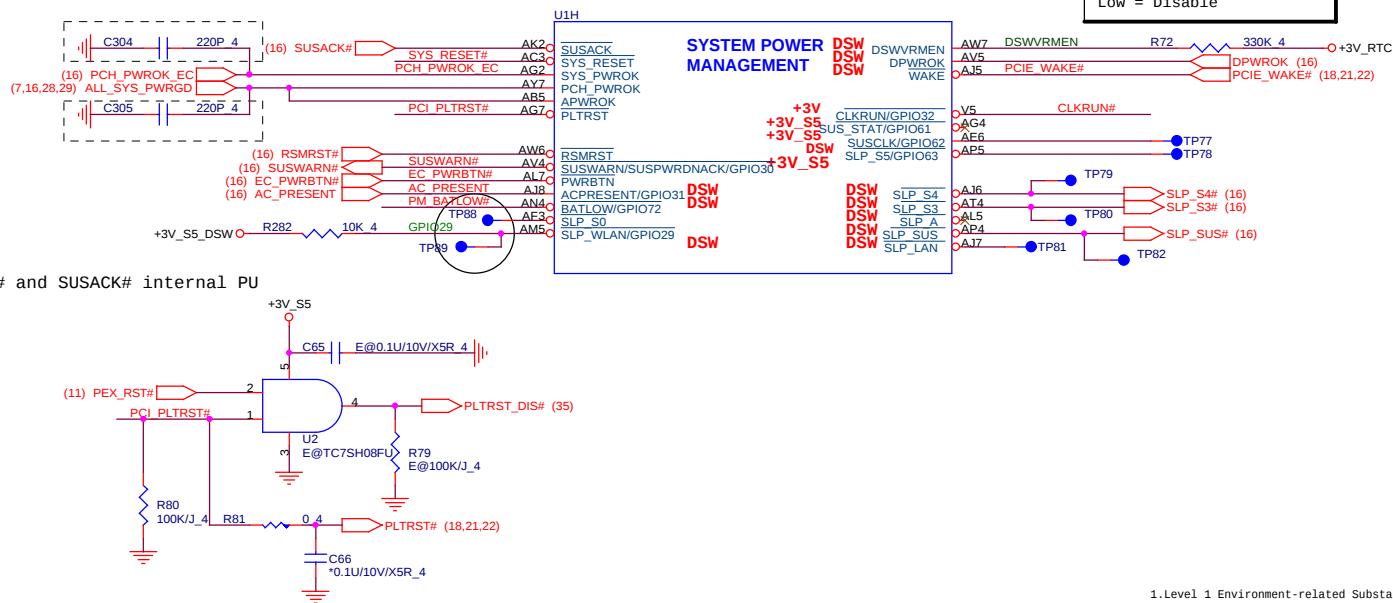
## PCH Strap Table

| Pin Name | Strap description                                   | Sampled | Configuration                                                     | note                               |
|----------|-----------------------------------------------------|---------|-------------------------------------------------------------------|------------------------------------|
| SPKR     | No reboot mode setting                              | PWROK   | 0 = Default (weak pull-down 20K)<br>1 = Setting to No-Reboot mode | +3V ○ — R67 — *1K 4 — SPKR (11,24) |
| HDA_SDO  | Flash Descriptor Security Override / Intel ME Debug | PWROK   | 0 = Security Effect (Int PD)<br>1 = Can be Override               |                                    |
| INTVRMEN | Mode Integrated 1.05V VRM enable                    | ALWAYS  | Should be always pull-up                                          |                                    |

## Haswell ULT (PCIE, USB)

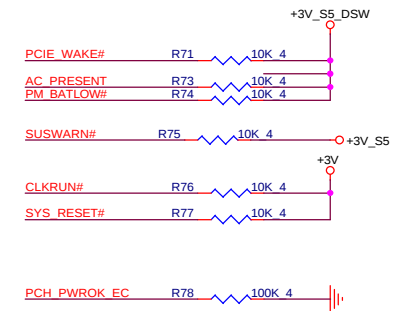


## Haswell ULT (SYSTEM POWER MANAGEMENT)

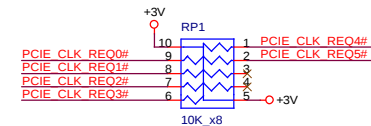
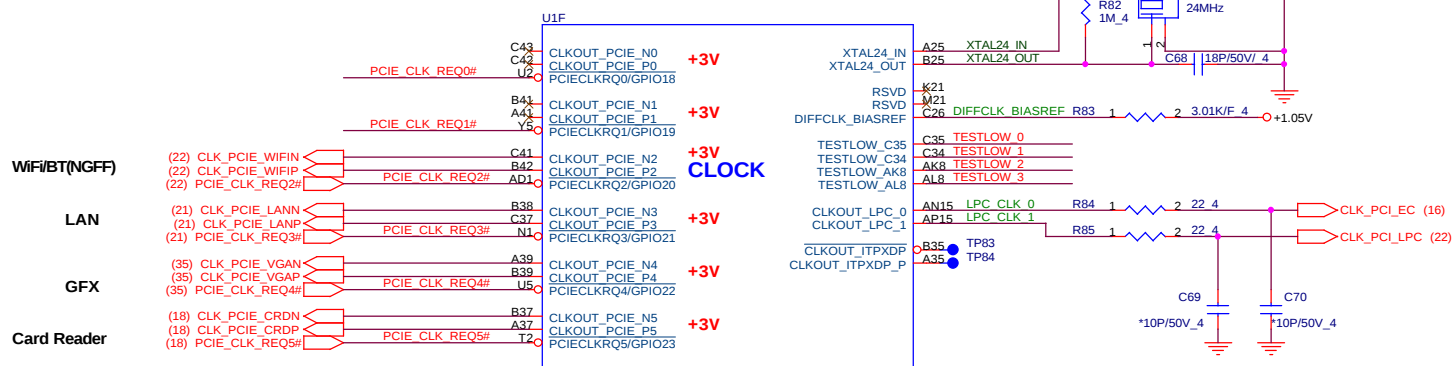


|                         |
|-------------------------|
| On Die DSW VR Enable    |
| High = Enable (Default) |
| Low = Disable           |

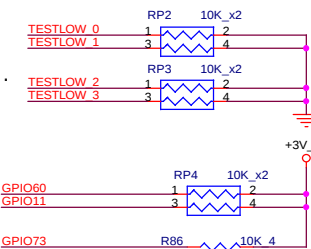
PCH Pull-high/low(CLG)



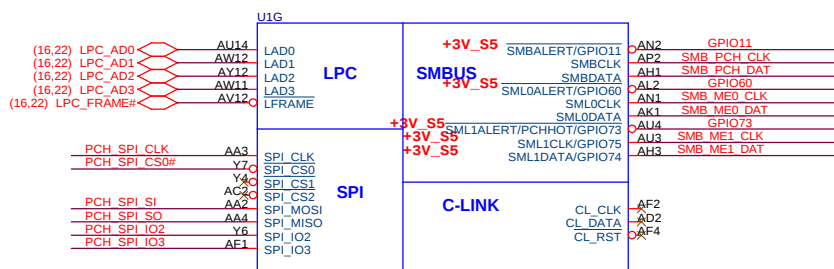
## Haswell ULT (CLK)



Do not short  
the testlow pins together.

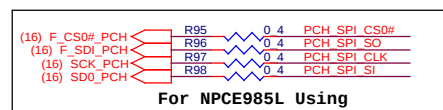
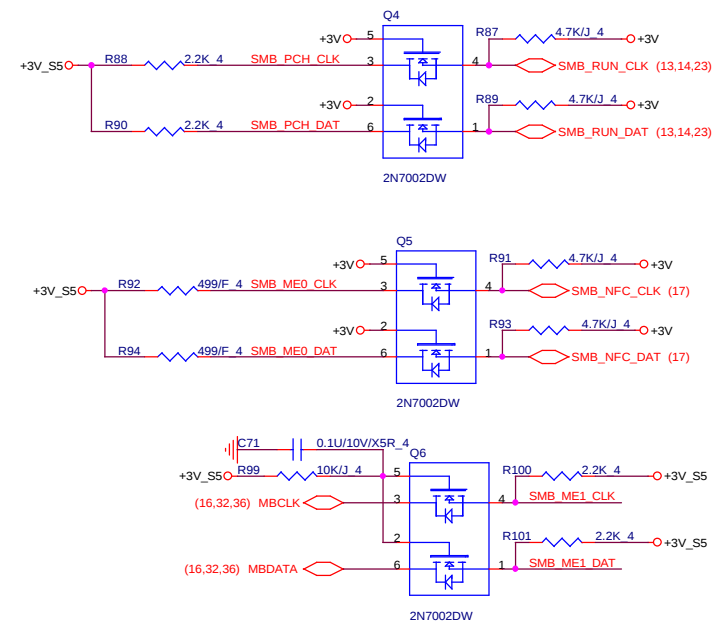


## Haswell ULT (LPC/SPI/SMB/CLINK)

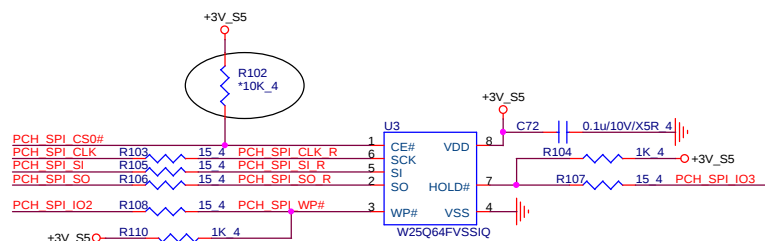


SPD  
NFC  
EC

### SMBus/Pull-up(CLG)



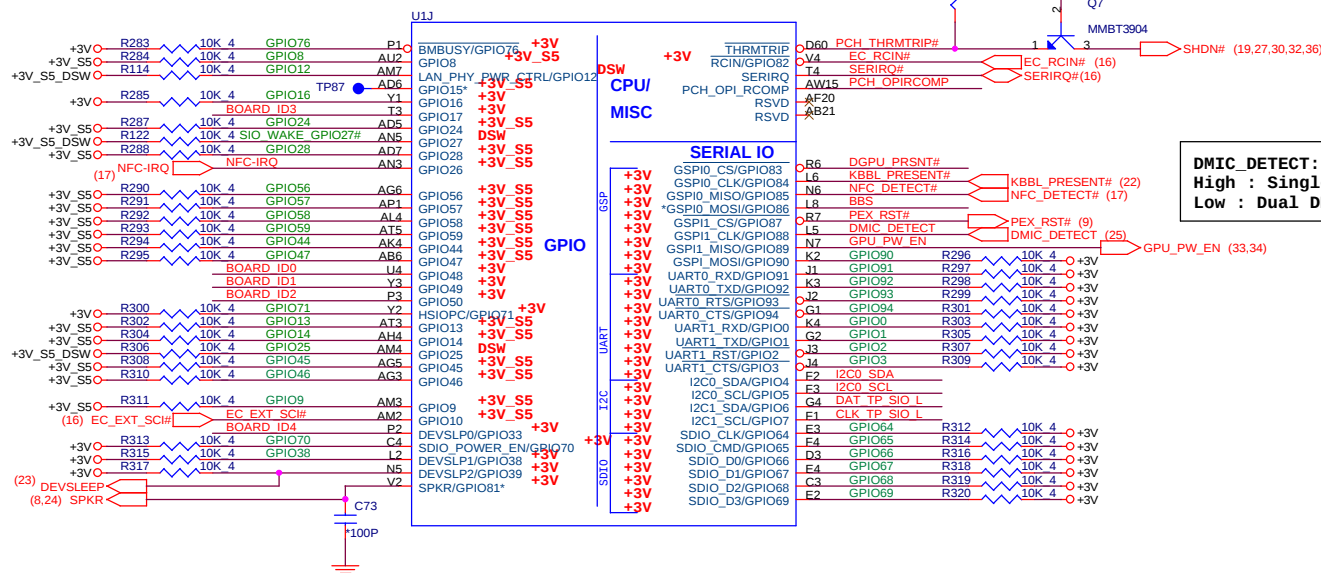
## SPI FLASH



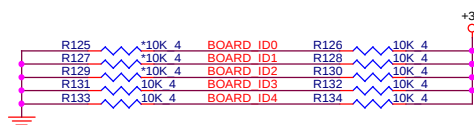
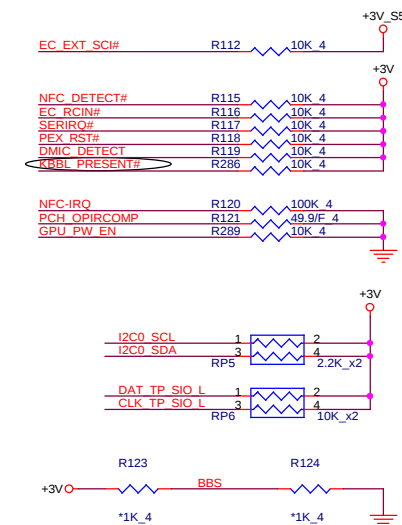
## Hasswell ULT (GPIO, LPIO, MISC)

## GPI027

With Intel LAN:  
Connect to LANWAKE# pin on the LAN  
Without Intel LAN:  
Used to wake event from DSx



### **GPIO Pull-up/Pull-down(CLG)**



|        |                   |
|--------|-------------------|
| GPIO86 |                   |
| PU     | LPC               |
| PD     | SPI (Default IPD) |

|                         |         |
|-------------------------|---------|
| No Reboot Strap(GPI081) |         |
| NC                      | Default |
| PU                      | EN      |

|                                   |         |
|-----------------------------------|---------|
| TLS CONFIDENTIALITY STRAP(GPI015) |         |
| NC                                | Default |
| PU                                | EN      |

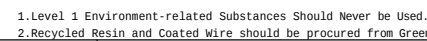
|                                                                                                                                           |                 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|
|  <b>Quanta Computer Inc.</b><br><b>PROJECT : HKC</b> |                 | Rev |
| Size                                                                                                                                      | Document Number | IA  |
| <b>HSW PCH(GPIO/MISC)</b>                                                                                                                 |                 |     |

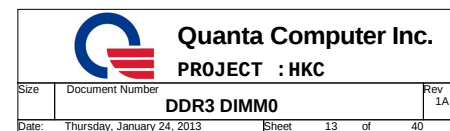
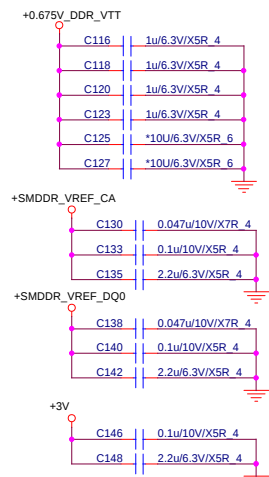
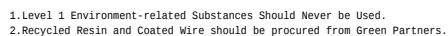
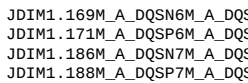
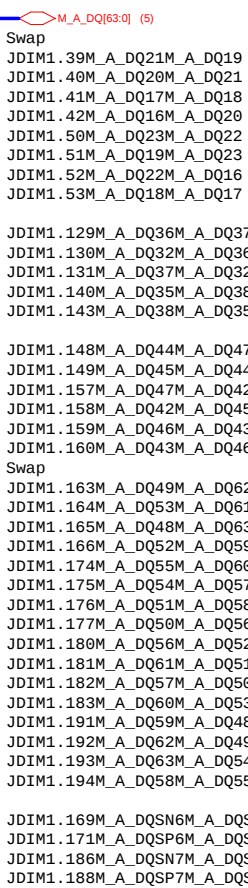
|           | 0                              | 1                                    |
|-----------|--------------------------------|--------------------------------------|
| Board ID0 | CaspiSHA1-CaspiSHB1<br>HKC/HKD | SuperiorSHA1-SuperiorSHB1<br>GD9/GDA |
| Board ID1 | HKC1/GD9 14"                   | HKD-GDA 15"                          |

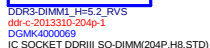
| PCBA SKU        | Discrete | UMA      |
|-----------------|----------|----------|
| R277(Pull High) | Stuff    | No Stuff |
| R275(Pull Low)  | No Stuff | Stuff    |

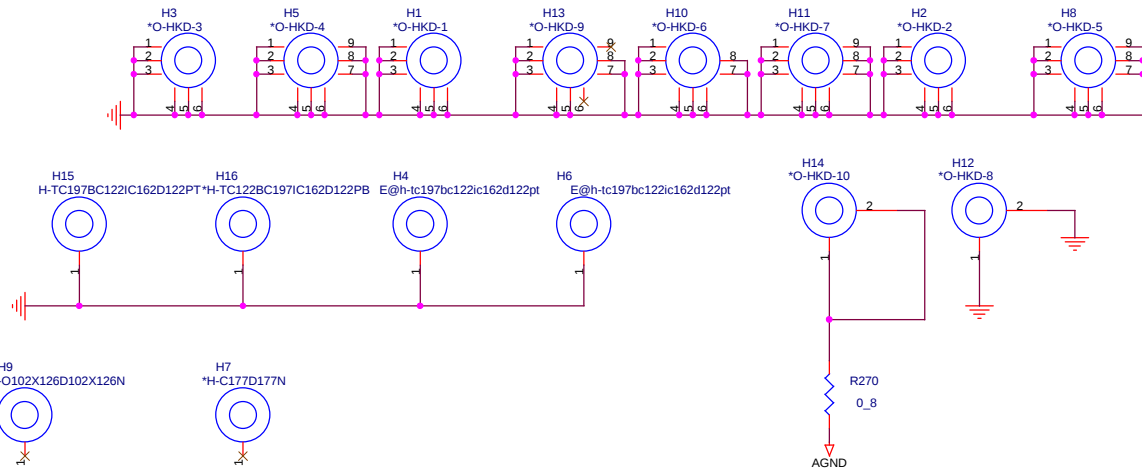
1.Level 1 Environment-related Substances Should Never be Used.

|                                                                           |                                  |                |
|---------------------------------------------------------------------------|----------------------------------|----------------|
| 2. Recycled Resin and Coated Wire should be procured from Green Partners. | Date: Thursday, January 31, 2013 | Sheet 11 of 40 |
|---------------------------------------------------------------------------|----------------------------------|----------------|

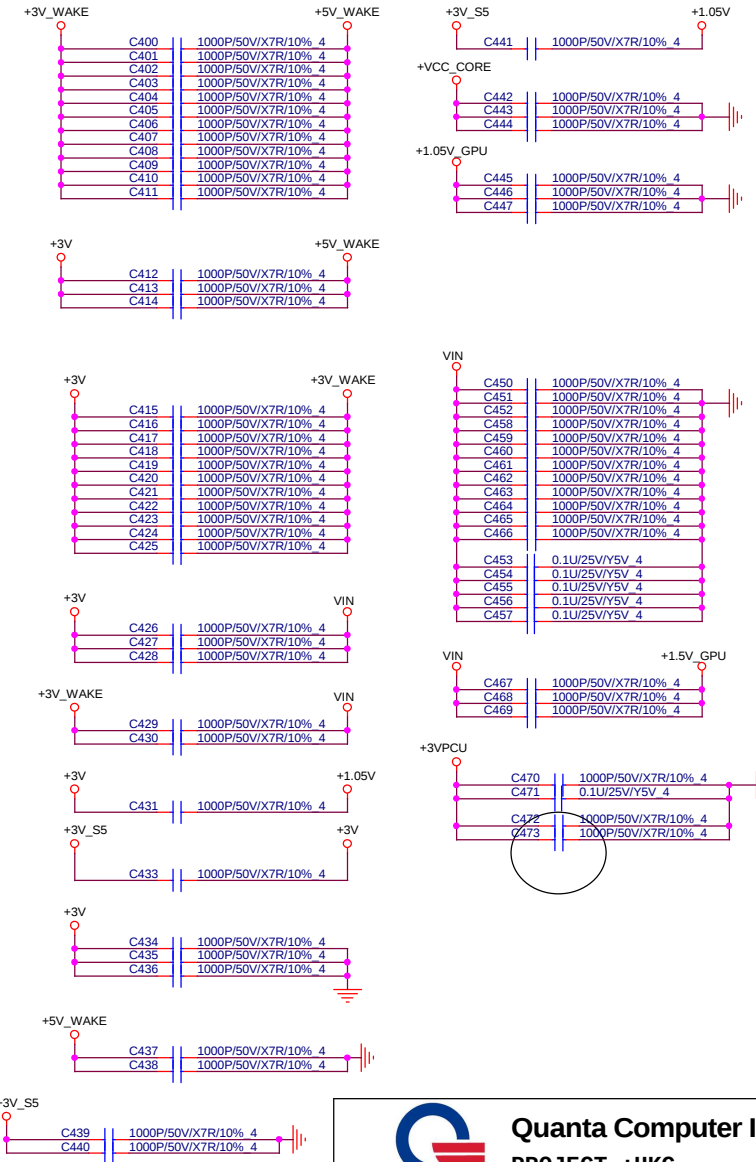
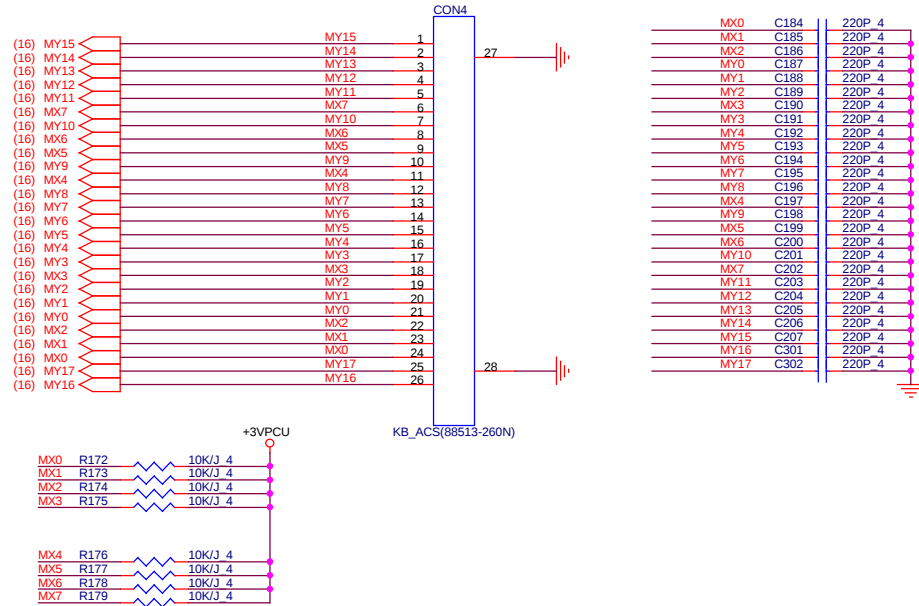








## KEY BOARD Connector

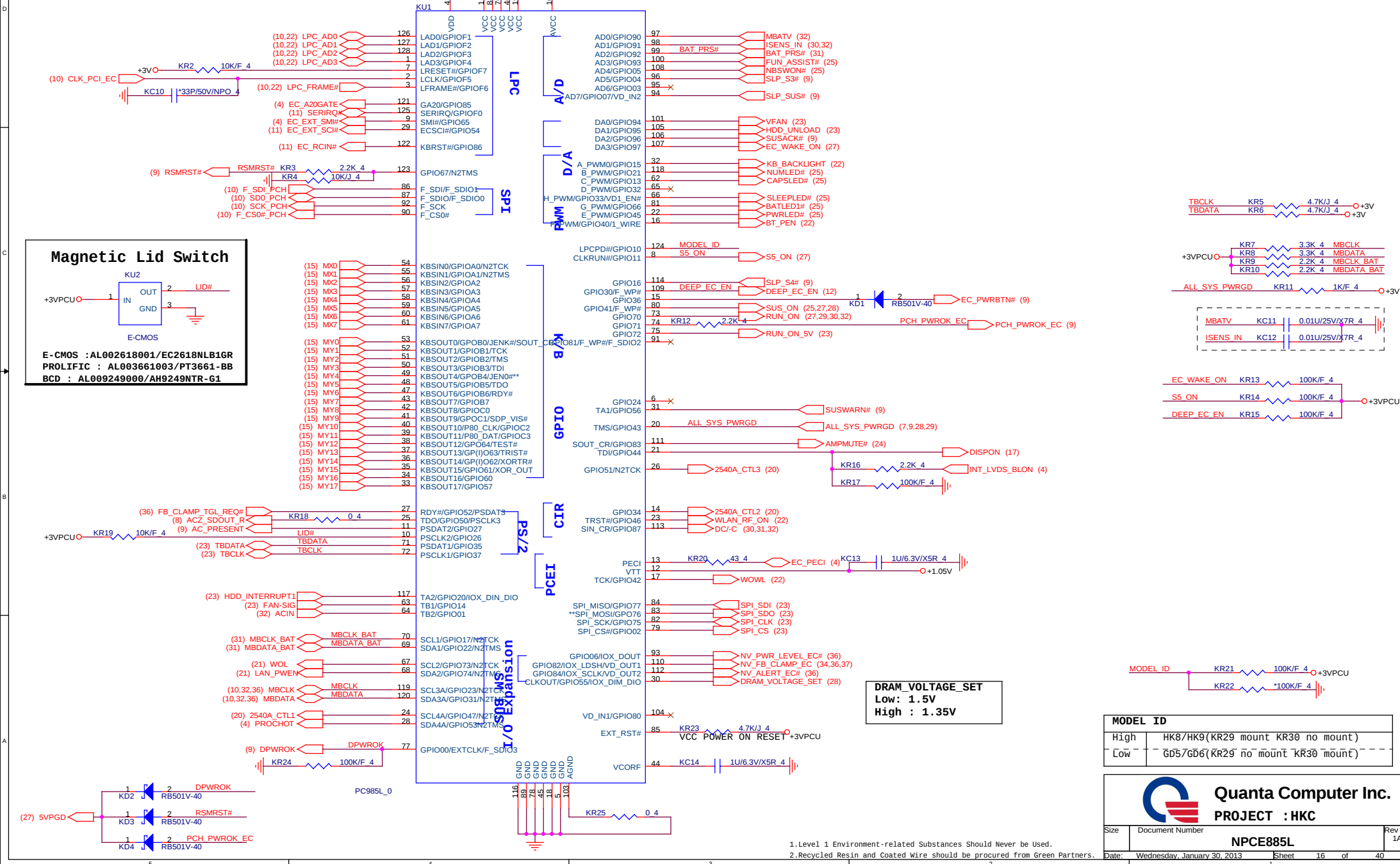


1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.

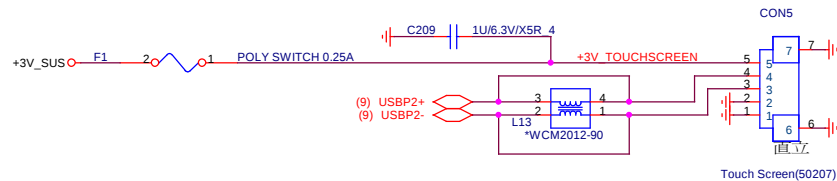
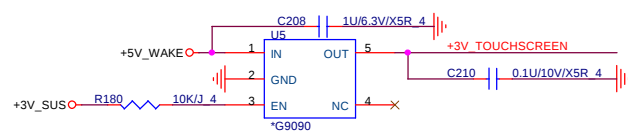
|                                                                                                                                           |                            |       |                 |       |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|-----------------|-------|
|  <b>Quanta Computer Inc.</b><br><b>PROJECT : HKC</b> |                            | Size  | Document Number | Rev   |
|                                                                                                                                           |                            |       |                 | 1A    |
| Date:                                                                                                                                     | Tuesday, February 05, 2013 | Sheet | 15              | of 40 |

\*\* Strapping Pin, Can not pull low.  
Note the input leakage current to the strap pins must be less than 10uA.

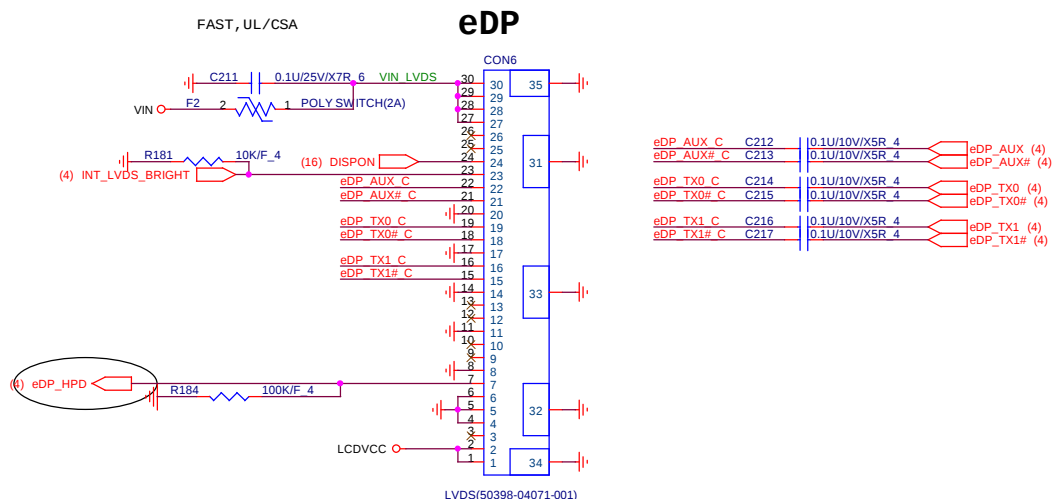
Since ECSCI is OD, no need for a back-drive protection diode on this signal. But note there is internal PU in chipset at default



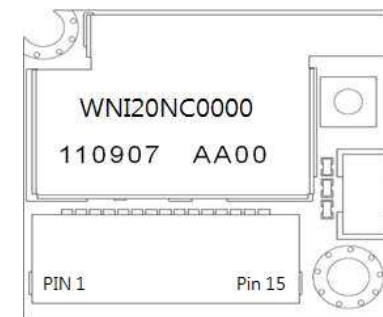
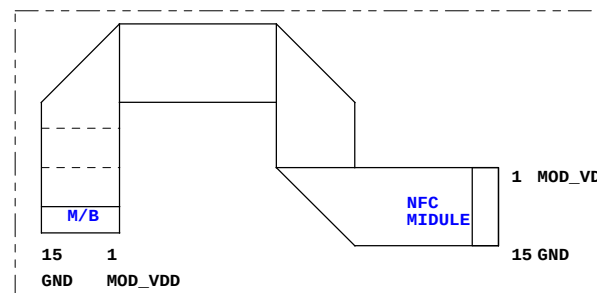
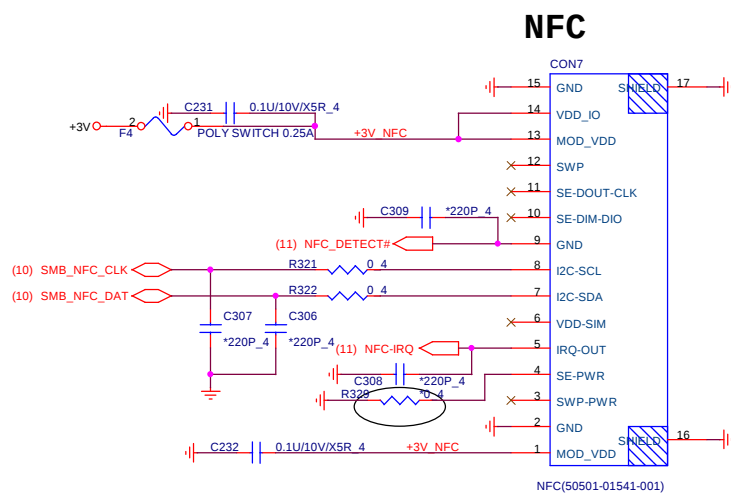
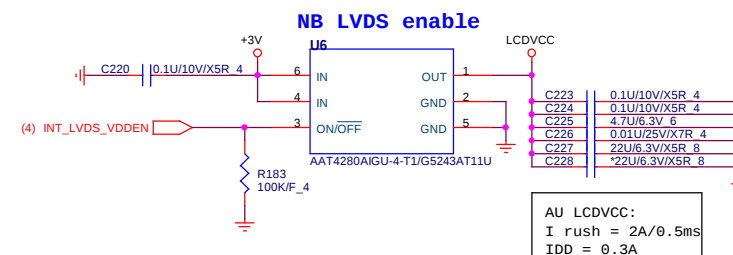
## Touch Screen



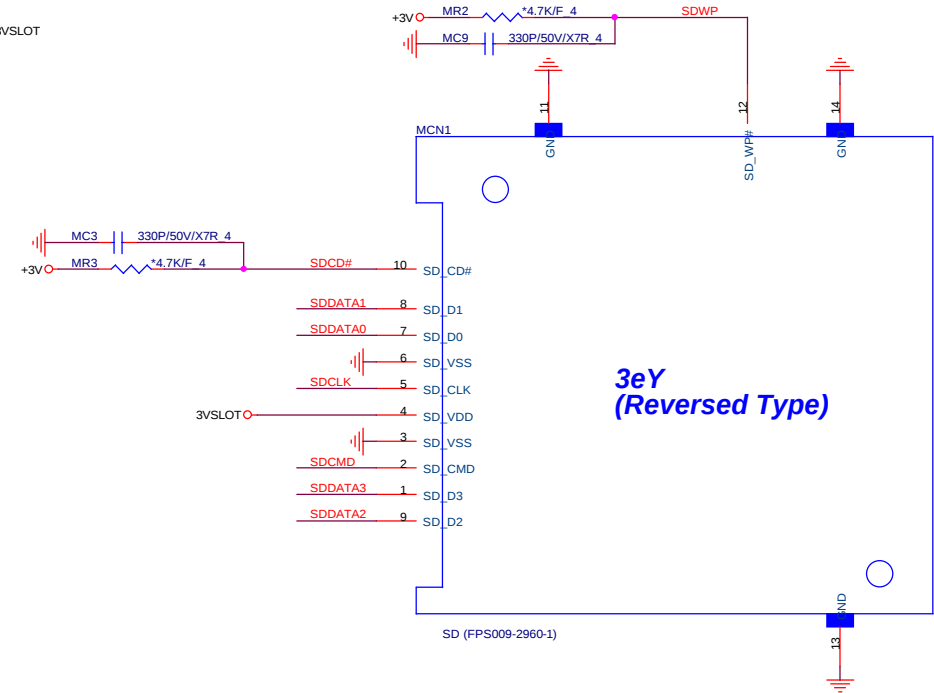
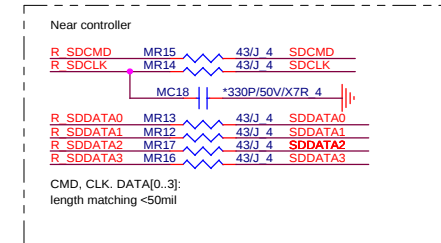
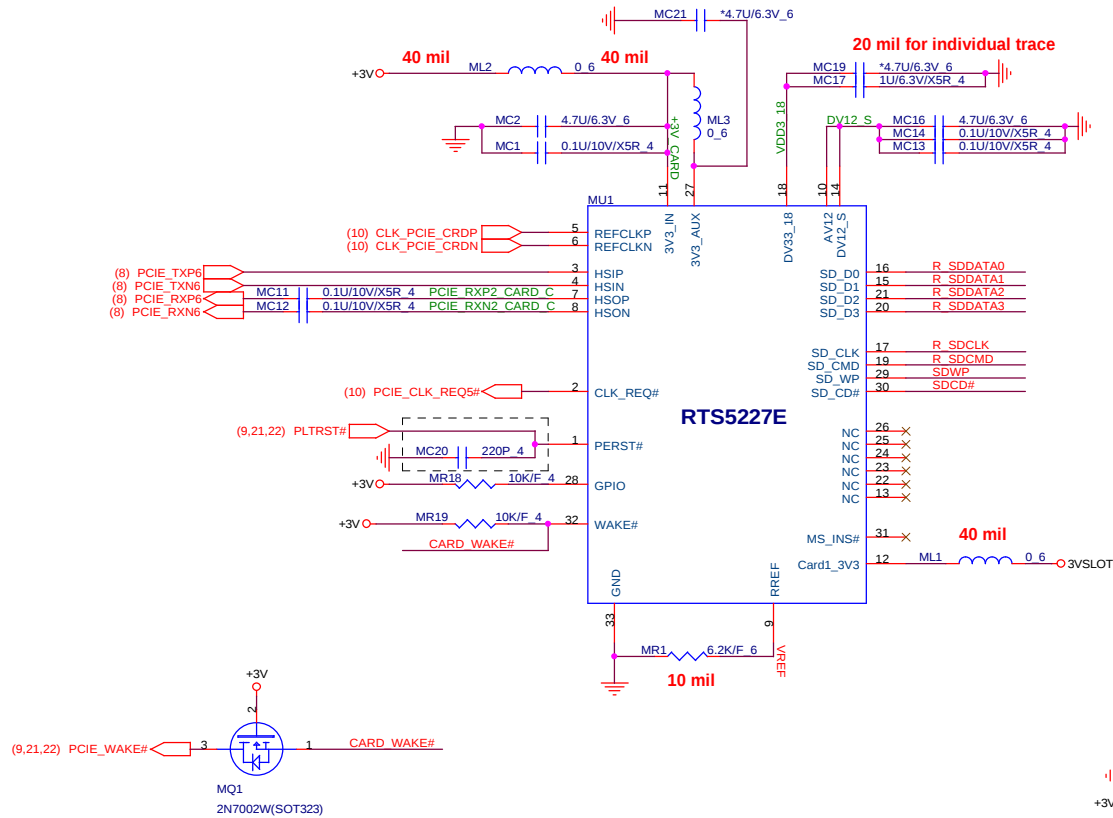
NFC module :  
Vender : Samsung SNC-i20  
Power consumption : Max. 160mW/48mA  
Power Ripple +/- 50mV



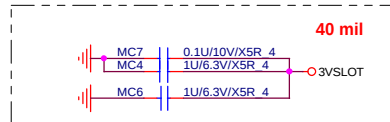
Camera HD specification  
Voltage: Max. 3.6V  
Current : Max. 200mA  
OCP: 200mA ~ 300mA



**Quanta Computer Inc.**  
**PROJECT : HKC**



**These component need to close to Slot**

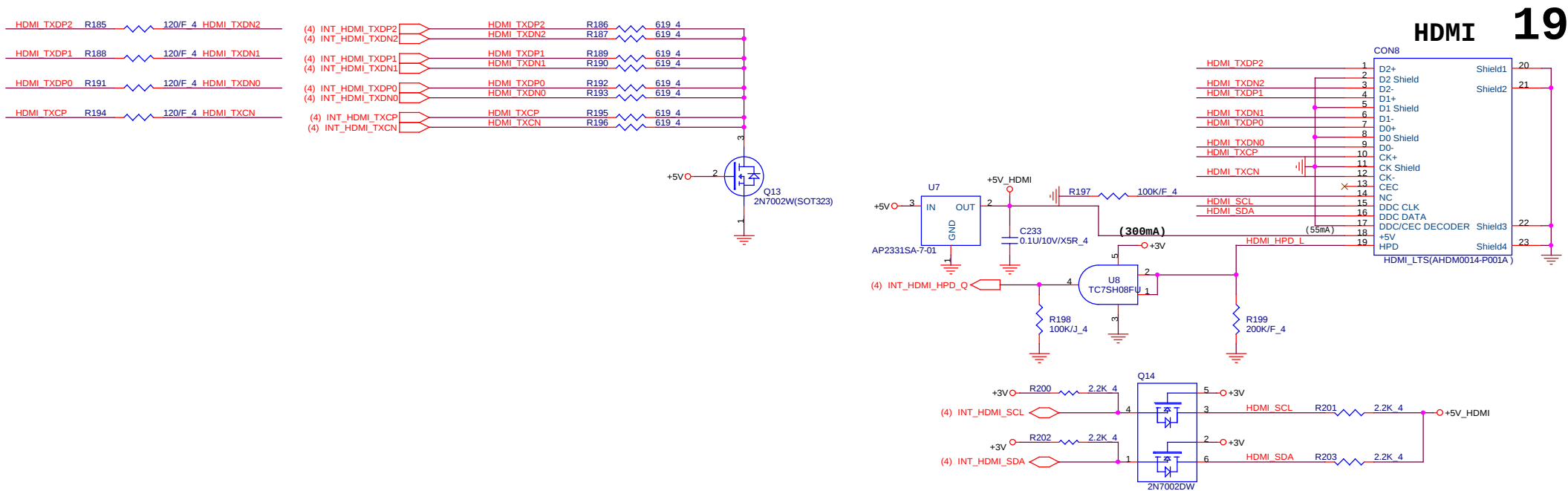


**Quanta Computer Inc.**

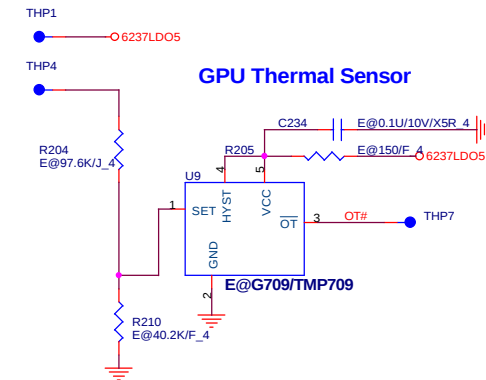
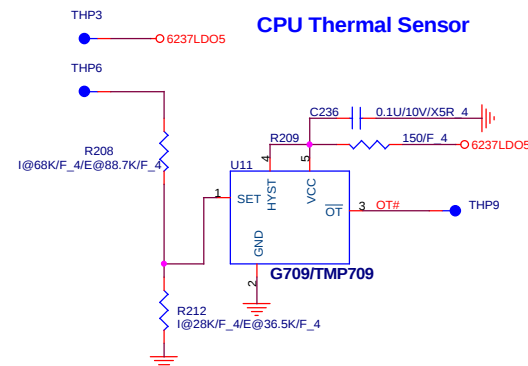
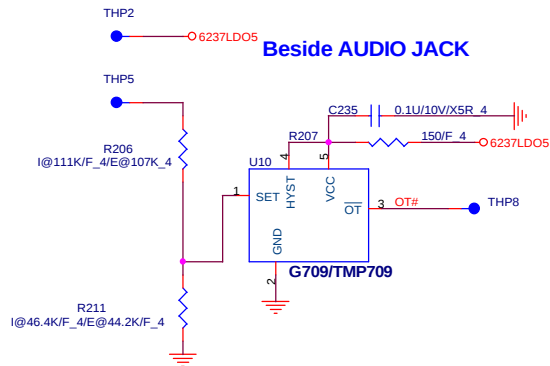
**PROJECT : HKC**

Size Document Number **CARD** Rev 1A

1.Level 1 Environment-related Substances Should Never be Used.  
2.Recycled Resin and Coated Wire should be procured from Green Partners.  
Date: Thursday, January 24, 2013 Sheet 18 of 40



## H/W Thermal Protect



$$RSET(k\Omega) = 0.0012T2 - 0.9308T + 96.147$$

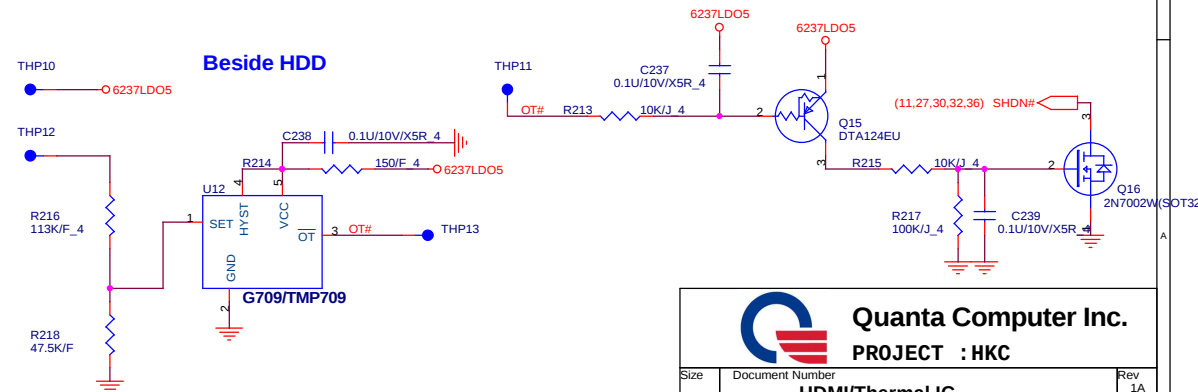
|     |       |
|-----|-------|
| 95  | 18.5K |
| 100 | 15K   |
| 107 | 10.3K |
| 110 | 8.2K  |

### DIS SKU

| Location of IC         | Temp | R-Set       | Parts in BOM | Max  | Min  |
|------------------------|------|-------------|--------------|------|------|
| Near CPU sensor temp   | 70   | R208=36.87K | 36.5K        | 71   | 70   |
| Near GFX sensor temp   | 65   | R146=40.72K | 40.2K        | 66.3 | 65.1 |
| Near AUDIO sensor temp | 60   | R345=44.62K | 44.2K        | 61.2 | 60   |

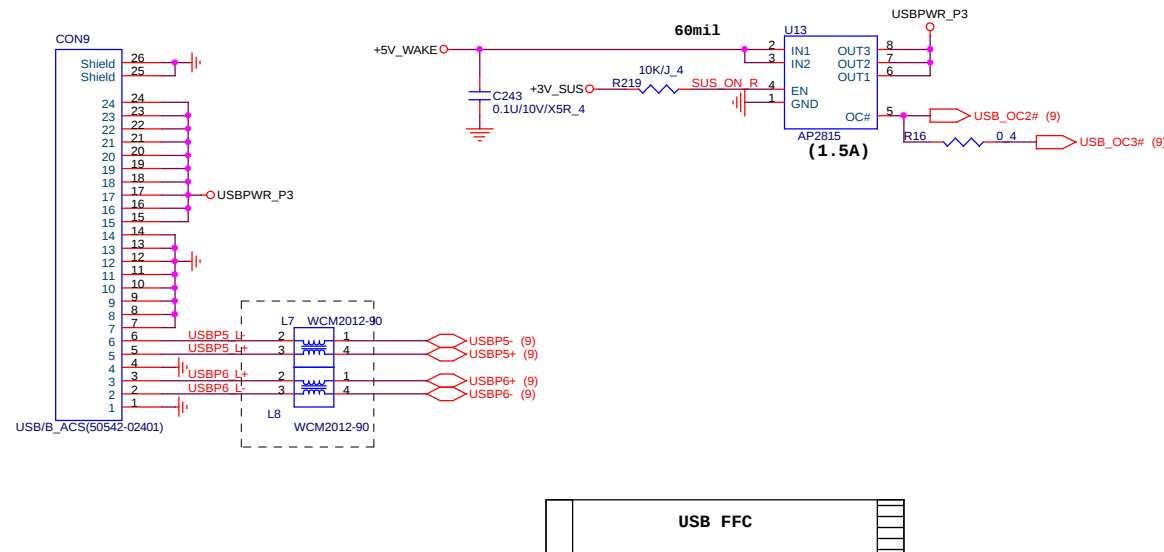
### UMA SKU

| Location of IC         | Temp | R-Set       | Parts in BOM | Max  | Min  |
|------------------------|------|-------------|--------------|------|------|
| Near CPU sensor temp   | 81   | R208=28.63K | 28K          | 82.3 | 81.4 |
| Near AUDIO sensor temp | 58   | R345=46.2K  | 46.4K        | 58.4 | 57.1 |

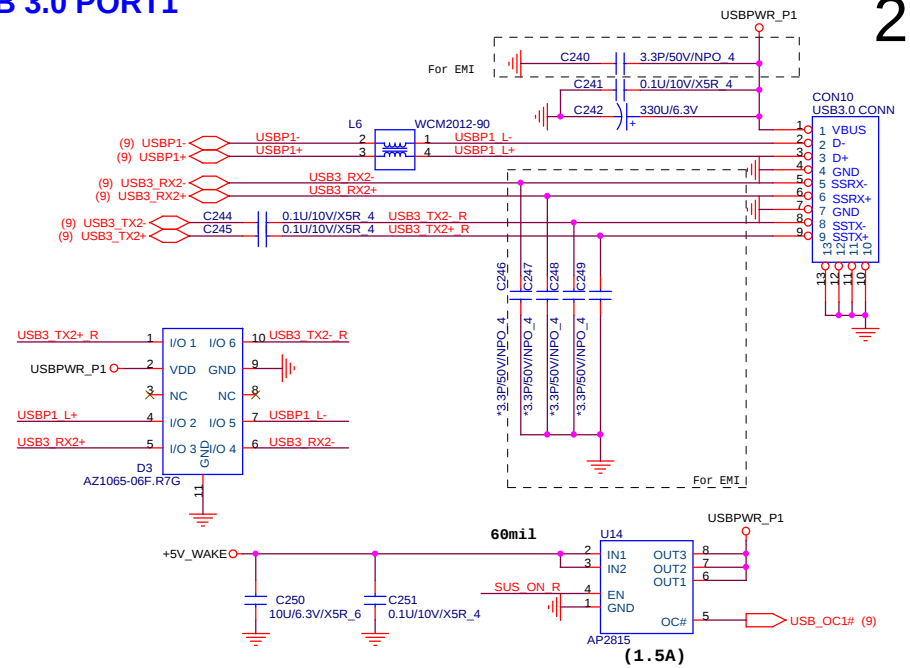


1.Level 1 Environment-related Substances Should Never be Used.  
2.Recycled Resin and Coated Wire should be procured from Green Partners.

## MB to USB board



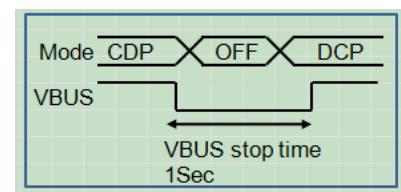
## USB 3.0 PORT1



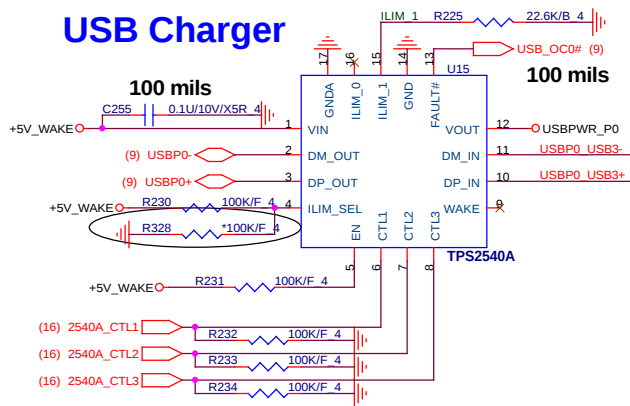
20

|          | TPS2540A | TPS2543 |
|----------|----------|---------|
| ILIM_SEL | Pin15    | Pin16   |
| High     | V        | V       |
| Low      |          | V       |

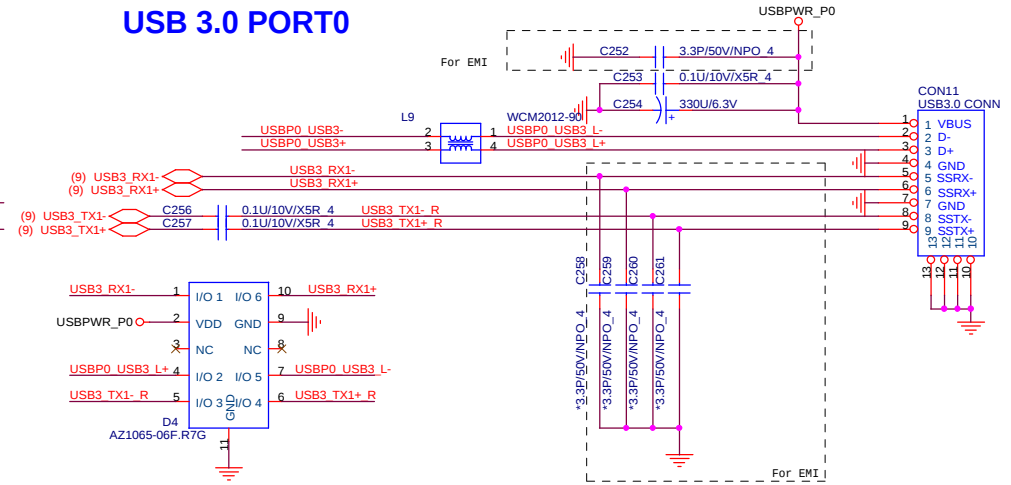
SDP : Standard Downstream Port  
CDP : Charging downstream port  
DCP : Dedicated Charging Port  
Enable/Disable : setting by BIOS



## USB Charger



## USB 3.0 PORT0



| CTL_1 | CTL_2 | CTL_3 | TPS 2540A/2543 Truth Table                         |
|-------|-------|-------|----------------------------------------------------|
| 0     | 0     | 0     | OUT discharge, power switch OFF                    |
| 0     | X     | 1     | DCP, Auto-detect (S3/S4/S5, 1.5A)                  |
| X     | 1     | 0     | SDP, USB2.0 mode (S0, 0.5A)                        |
| 1     | 0     | 0     | DCP, BC SPEC1.2 only (S3/Deep standby/S4/S5, 1.5A) |
| 1     | 0     | 1     | DCP, Divider mode only (S3/S4/S5, 1.5A)            |
| 1     | 1     | 1     | CDP (S0, 1.5A)                                     |

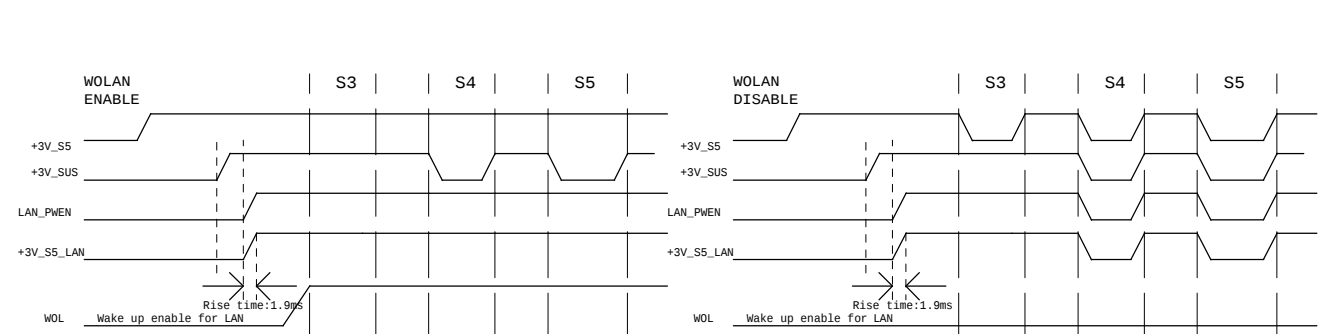
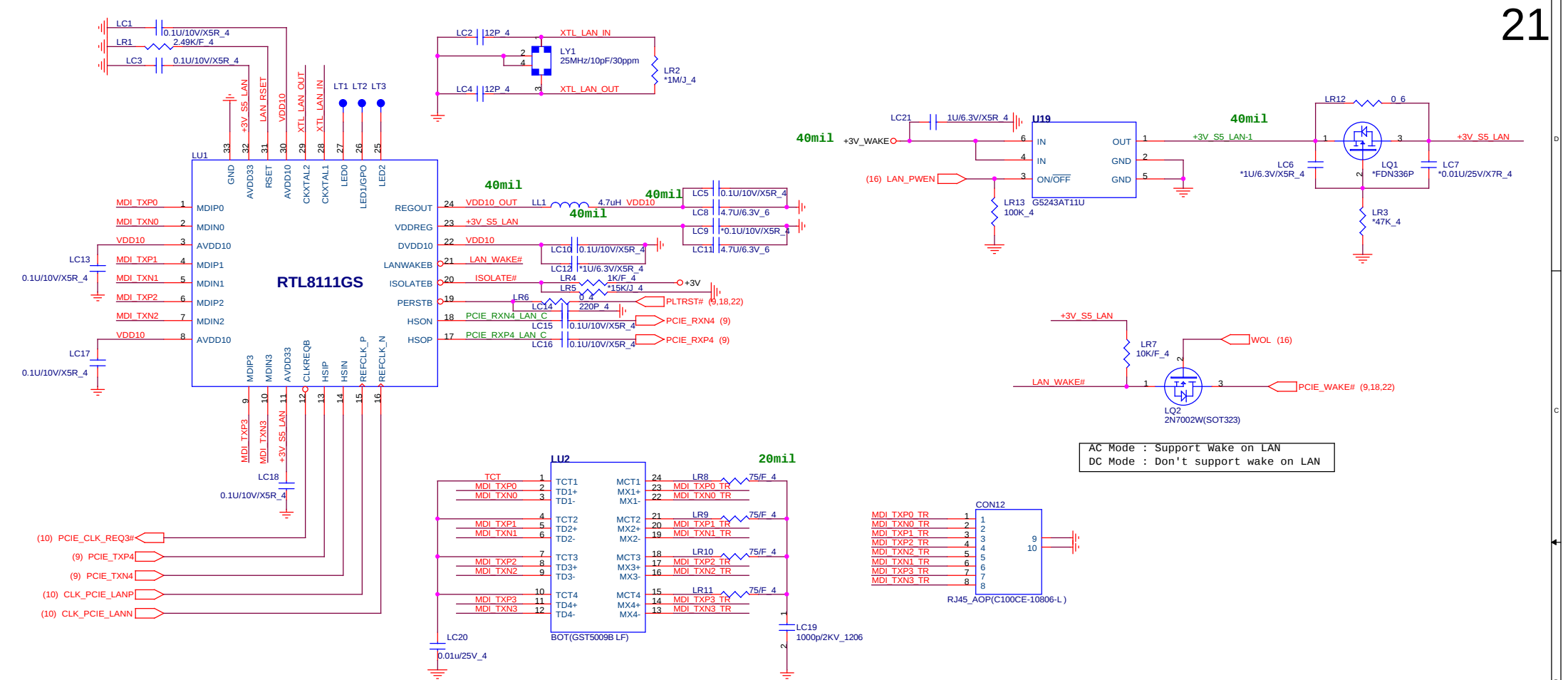
| System State | USB Battery Charging Setting |                 |
|--------------|------------------------------|-----------------|
|              | Disable C(1 2 3)             | Enable C(1 2 3) |
| S0           | SDP (X 1 0)                  | CDP (1 1 1)     |
| S3           | SDP (X 1 0)                  | DCP BC (1 0 0)  |
| DS3          | Charger OFF (0 0 0)          | DCP BC (1 0 0)  |
| S4           | Charger OFF (0 0 0)          | DCP BC (1 0 0)  |
| S5           | Charger OFF (0 0 0)          | DCP BC (1 0 0)  |

| ILIM_SEL | (I LIMIT(A)= 48000/R) |
|----------|-----------------------|
| HI       | I_LIM_1               |
| LO       | I_LIM_0               |

Quanta Computer Inc.  
PROJECT : HKC  
USB/USB Charger

Size: Document Number  
Date: Thursday, January 31, 2013  
Sheet: 20 of 40

1. Level 1 Environment-Related Substances should Never be Used.  
2. Recycled Resin and Coated Wire should be procured from Green Partners.



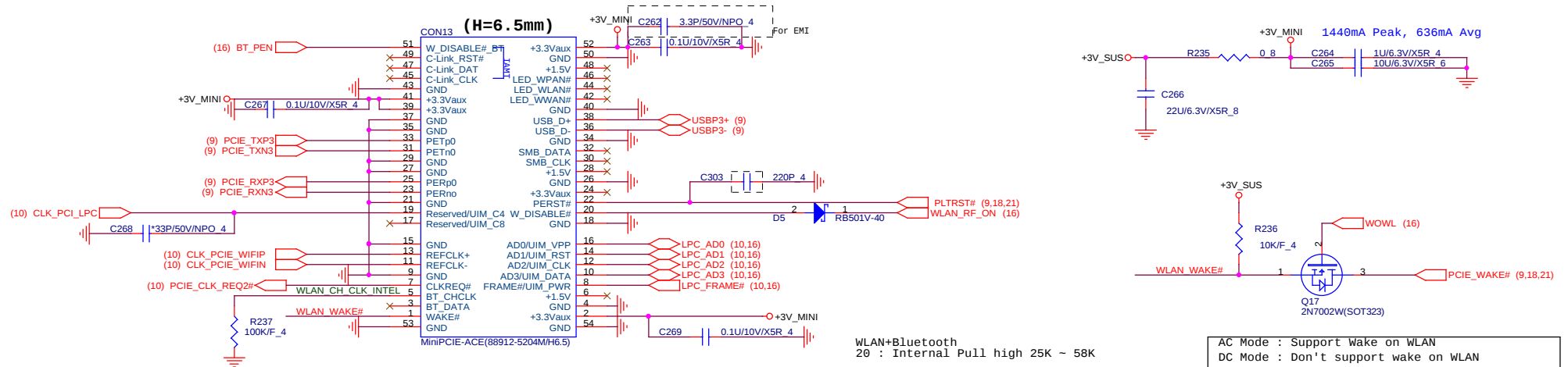
| BIOS Setup | WOLAN DISABLE |     | WOLAN ENABLE |     |
|------------|---------------|-----|--------------|-----|
|            | LAN_PWEN      | WOL | LAN_PWEN     | WOL |
| S3         | H             | H   | H            | H   |
| S4         | L             | L   | H            | H   |
| S5         | L             | L   | H            | H   |



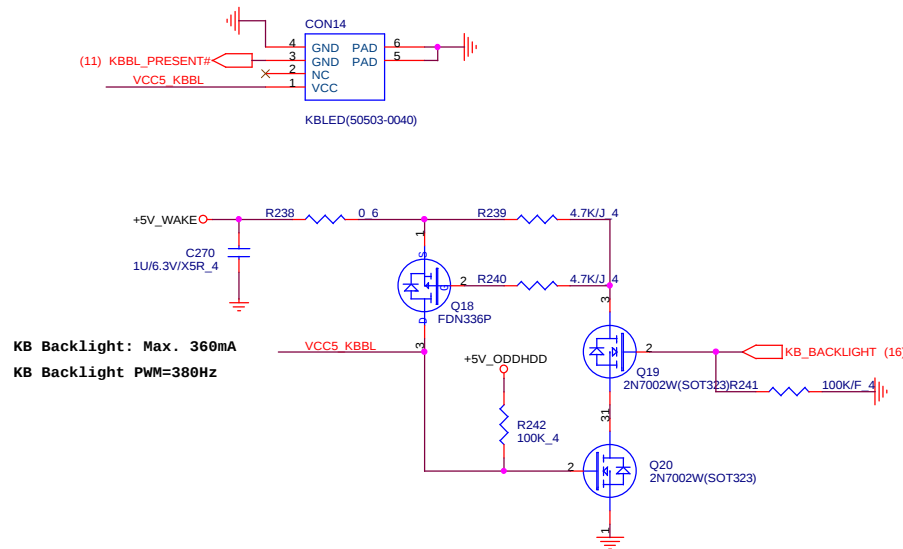
**Quanta Computer Inc.**  
**PROJECT : HKC**  
**Giga LAN RTL8111GS**

|      |                 |                                |                |        |
|------|-----------------|--------------------------------|----------------|--------|
| Size | Document Number | Date: Friday, January 25, 2013 | Sheet 21 of 40 | Rev 1A |
|------|-----------------|--------------------------------|----------------|--------|

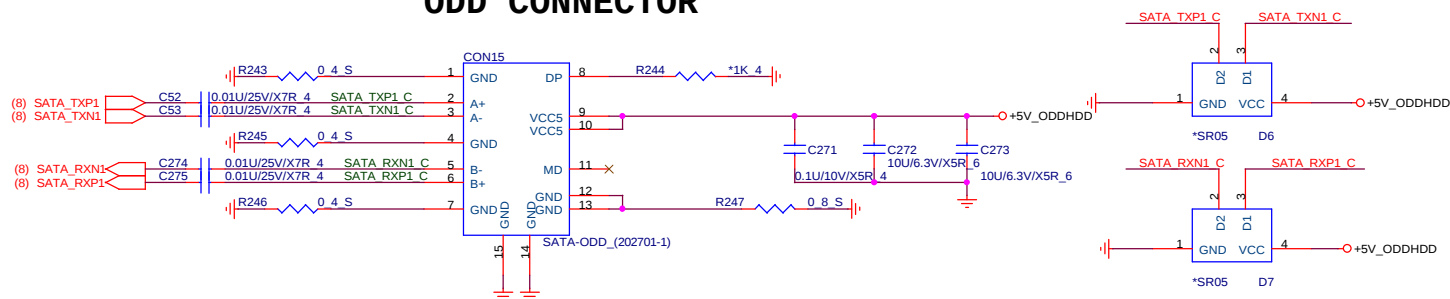
# WLAN/WIMAX/WIDI



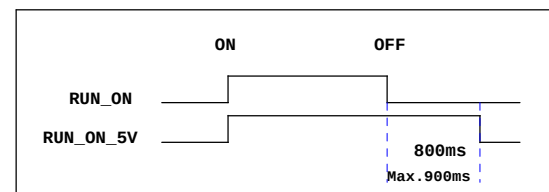
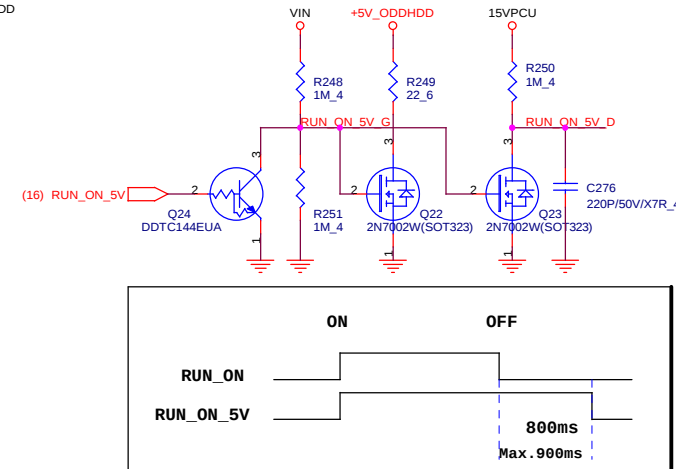
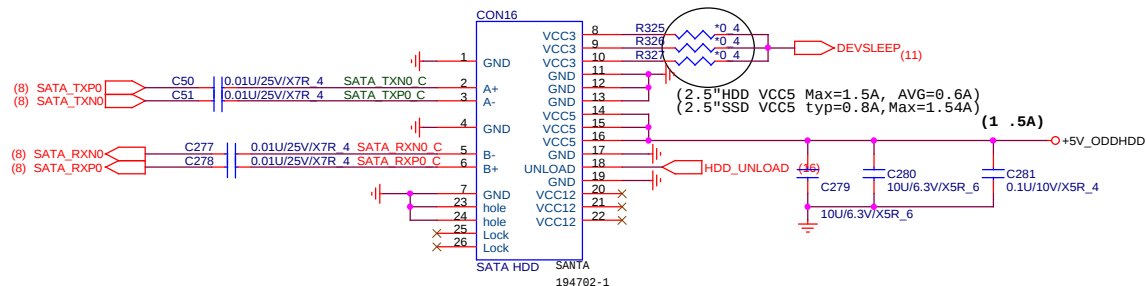
## KB BACKLIGHT



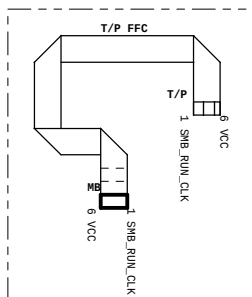
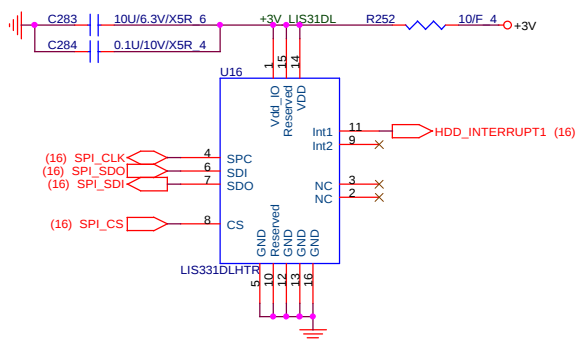
## ODD CONNECTOR



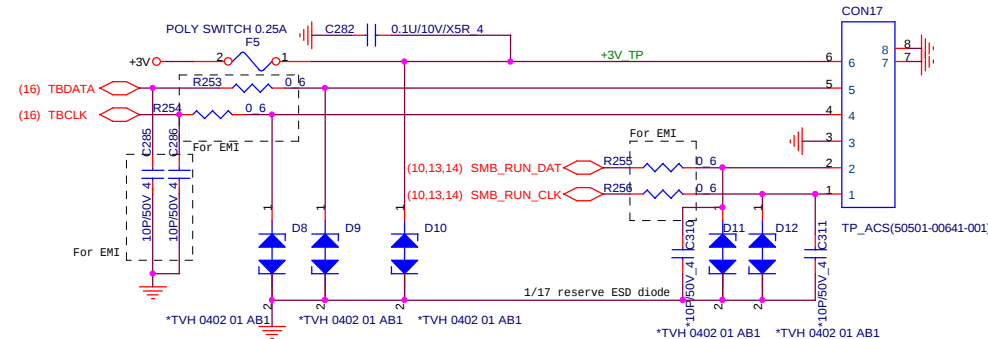
## HDD CONNECTOR



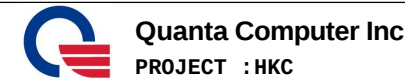
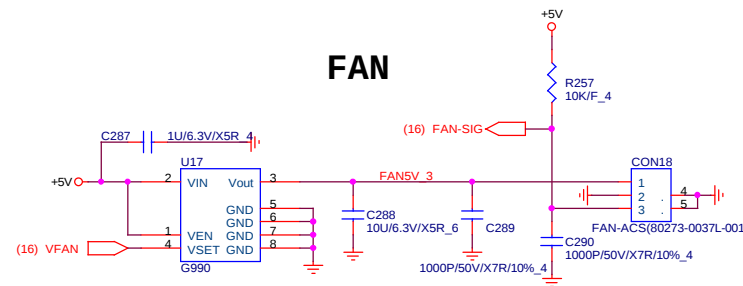
## HDD PROTECT SPI INTERFACE



## T/P Board to T/P

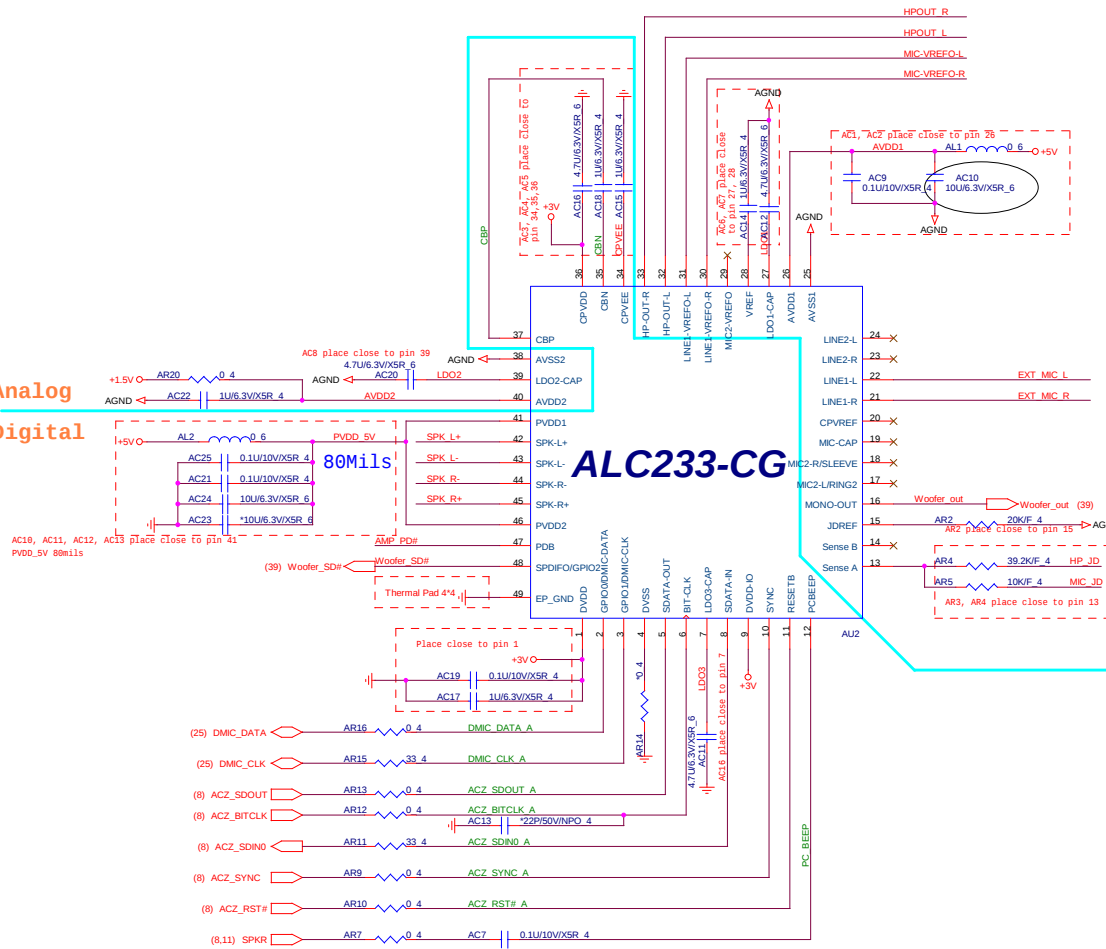


## FAN

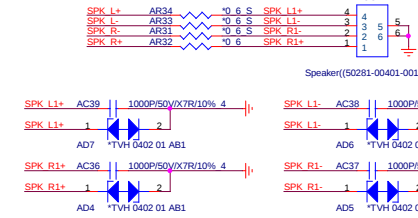


Analog

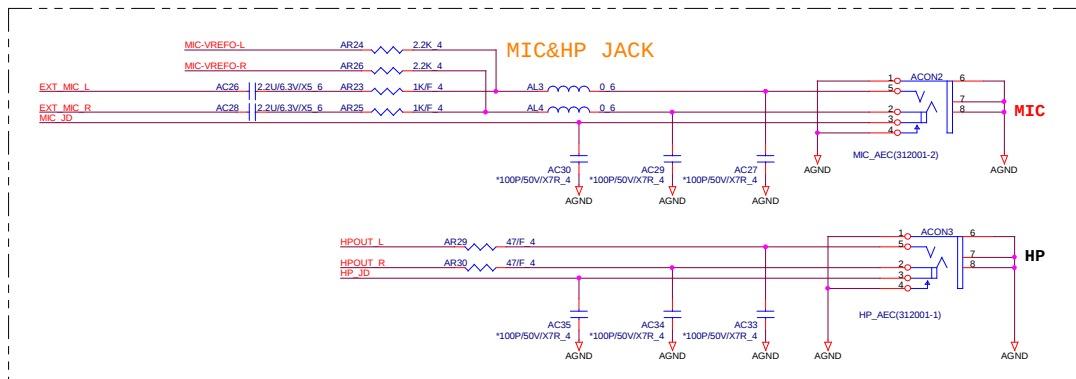
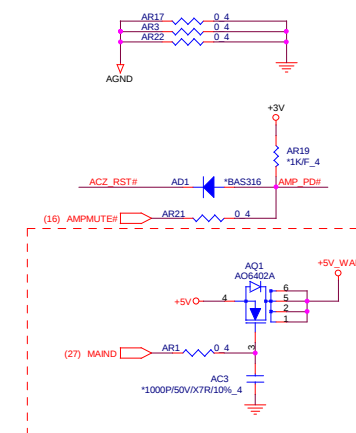
Digital

SPK L+ L- R+ R- trace width  
Speaker 4 ohm ==> 40 mils

SPEAKER CON.

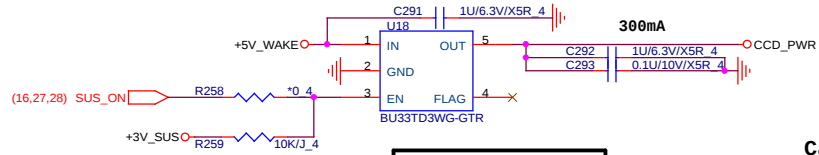
<<Attention>>  
Place these EMI components close to codec; For EMI issue.

For EMI



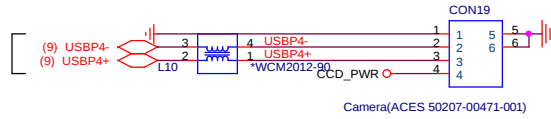
## Camera

## USB Camera Power



Camera HD specification  
Voltage: Max. 3.6V  
Current : Max. 200mA  
OCP: 200mA ~ 300mA

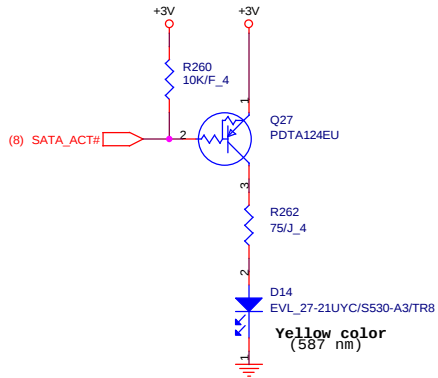
Camera



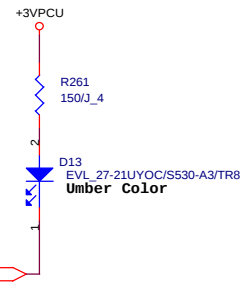
直立

## SATA LED

## BATTERY LED

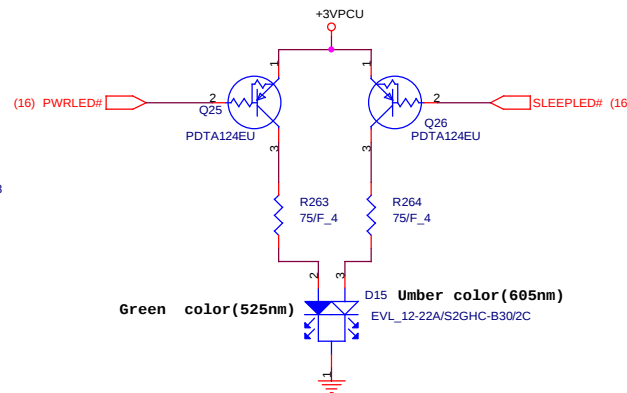


(16) BATLED1#

Yellow color  
(587 nm)

Umber Color

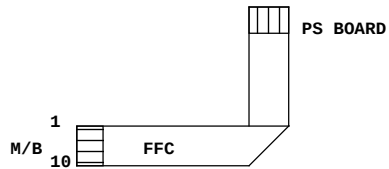
## Power/Sleep LED



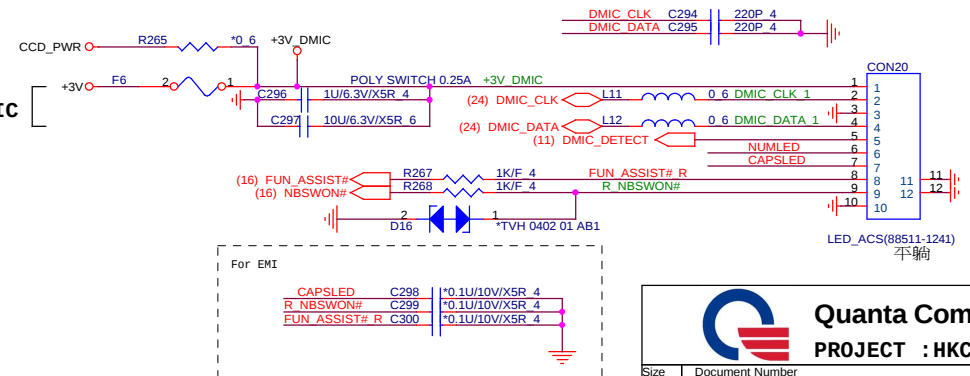
Green color(525nm)

Umber color(605nm)

## Power SW Board Connector



DMIC

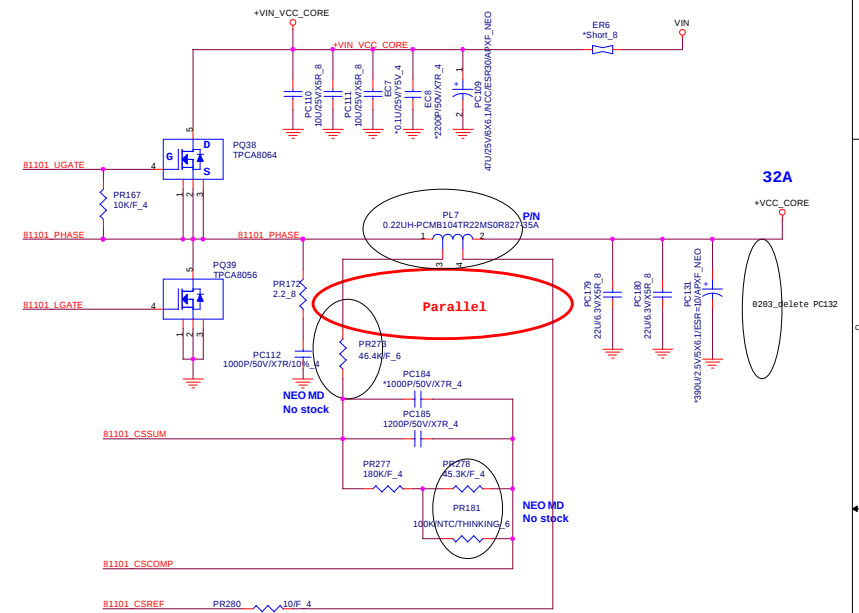


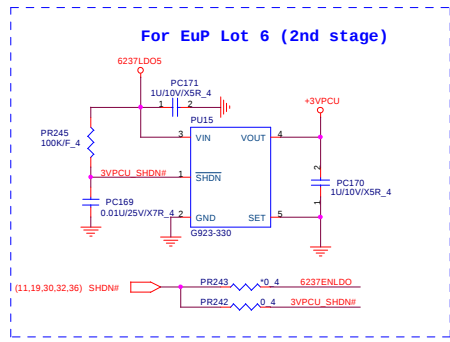
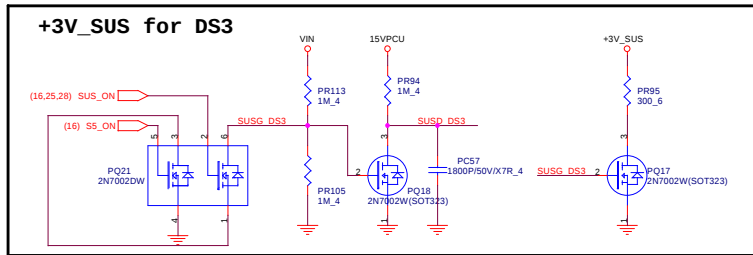
For EMI

CAPSLD C298 \*0.1U/10V/X5R 4  
R NBSWON# C299 \*0.1U/10V/X5R 4  
FUN ASSIST# R C300 \*0.1U/10V/X5R 4

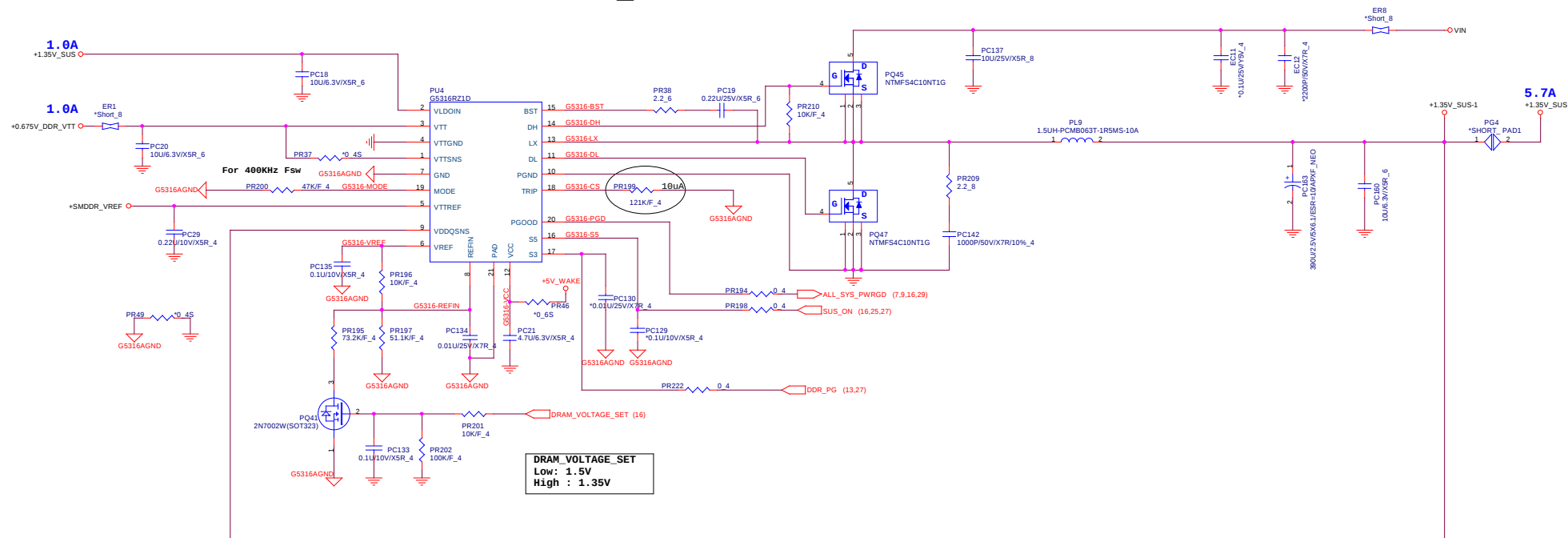


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PROJECT : HKC





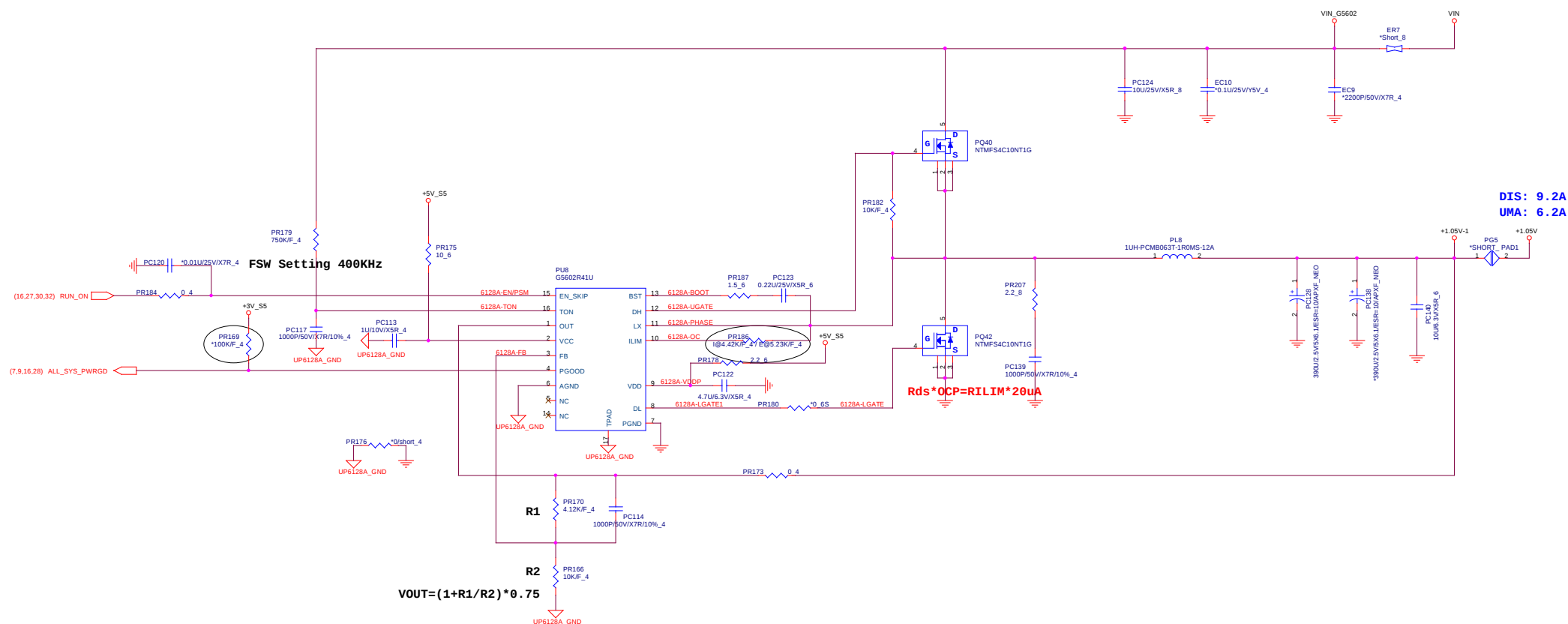
## 1.5VSUS & VTT\_MEM



| MODE | Resistor on Mode | Fsw    | Discharge Mode            |
|------|------------------|--------|---------------------------|
| 3    | 200Kohm          | 400KHZ | Tracking<br>discharge     |
| 2    | 100Kohm          | 300KHZ |                           |
| 1    | 68Kohm           | 300KHZ | Non-tracking<br>discharge |
| 0    | 47Kohm           | 400KHZ |                           |

| STATE | S3 | S5 | 1.5VSUS | VTTREF | VTT        |
|-------|----|----|---------|--------|------------|
| S0    | 1  | 1  | 0n      | 0n     | 0n         |
| S3    | 0  | 1  | 0n      | 0n     | Off/High Z |
| S4/S5 | 0  | 0  | Off     | Off    | Off        |

+1.05V



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PROJECT : HKC

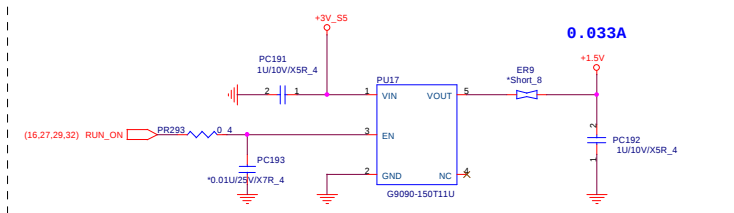
| Size | Document Number     | Rev |
|------|---------------------|-----|
|      | +1.05V (UP1522RQDD) | 1A  |

1. Level 1 Environment-related Substances Should Never be Used.

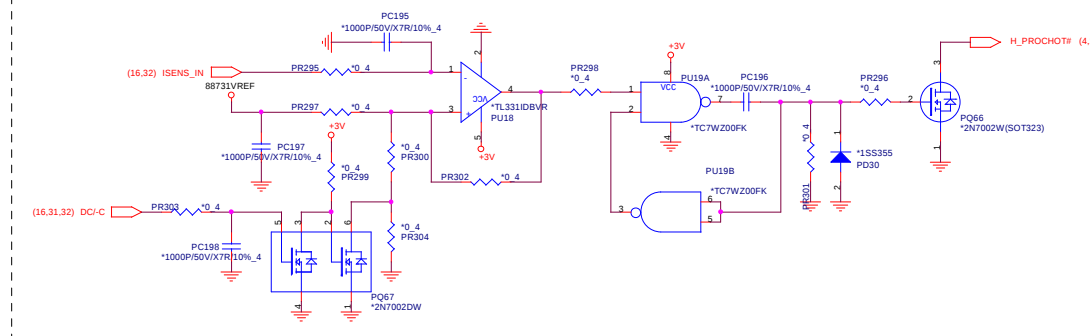
2. Recycled Resin and Coated Wire should be procured from Green Partners.

Date: Wednesday, January 30, 2013 Sheet 29 of 40

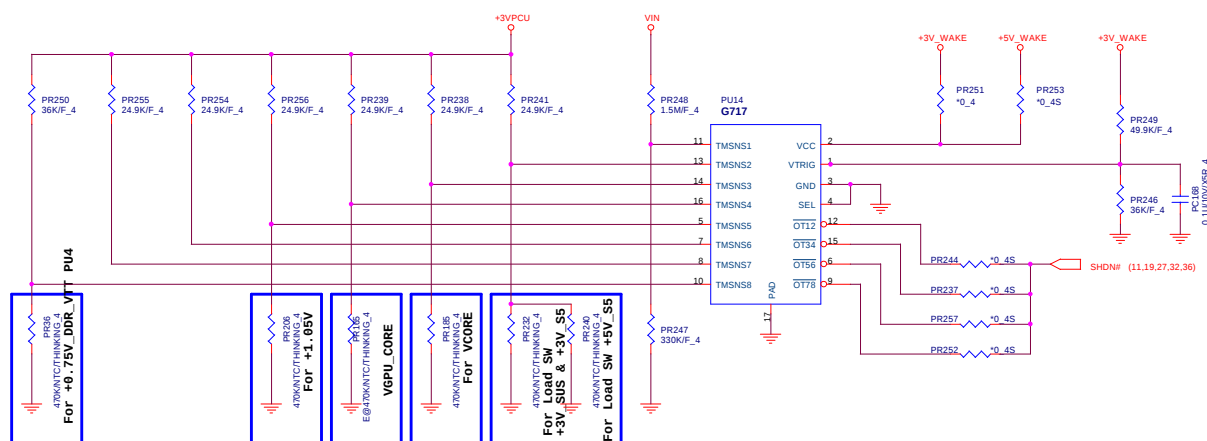
**VCC1.5**



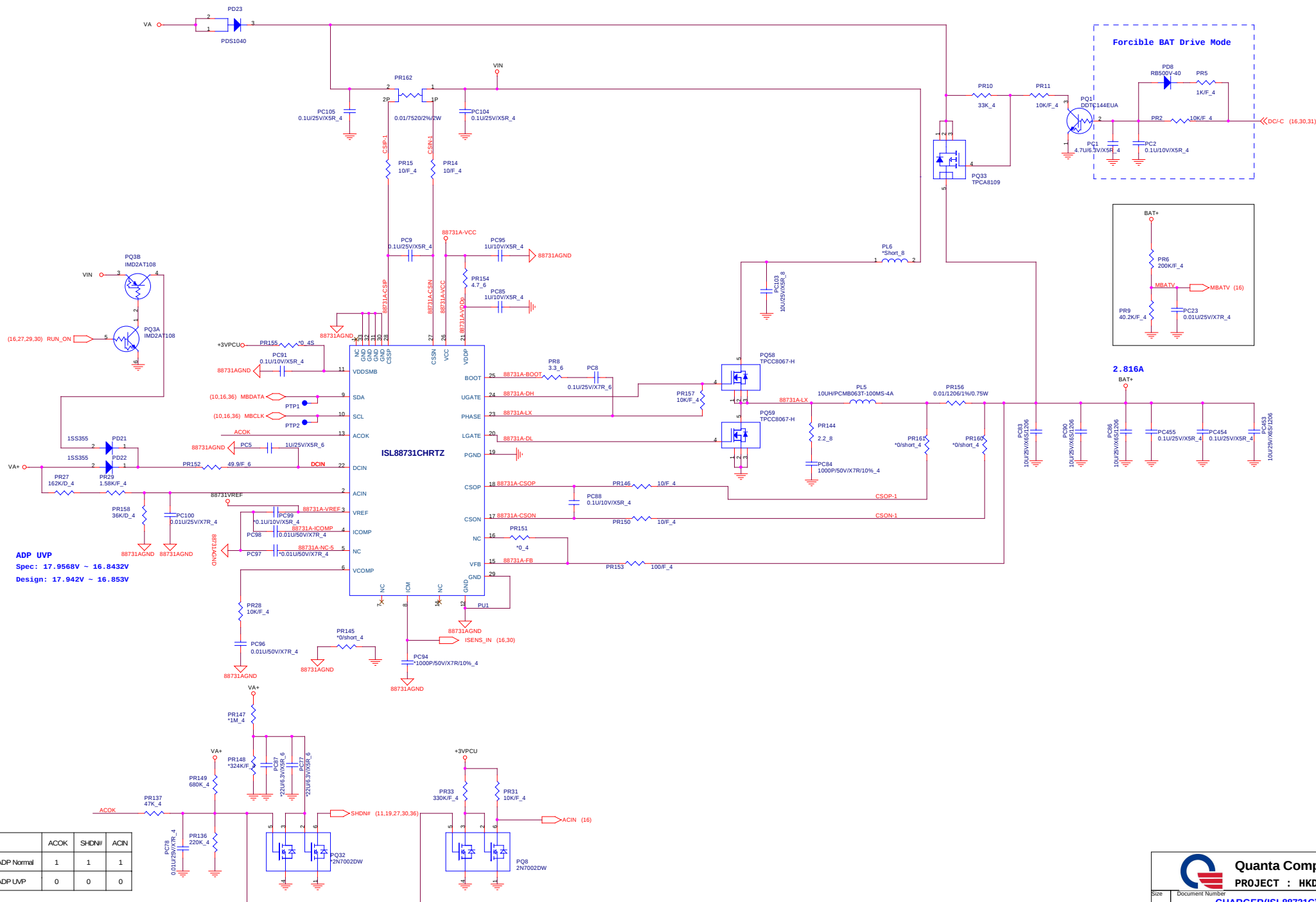
**One-Shot 10ms PROCHOT# For ADP/BAT**

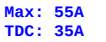


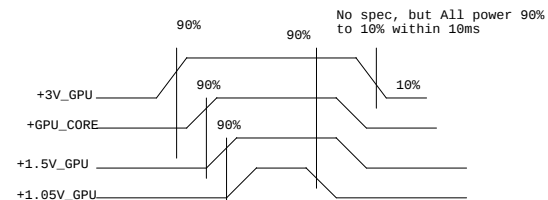
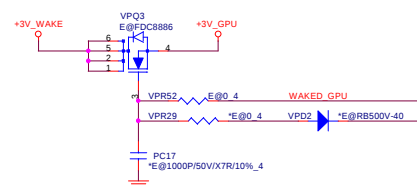
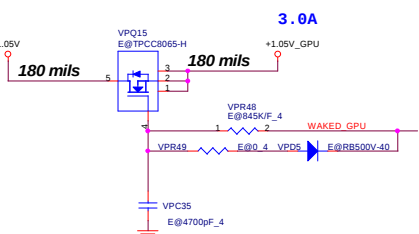
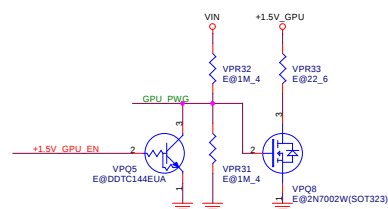
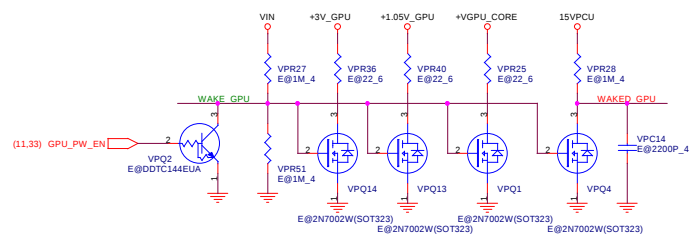
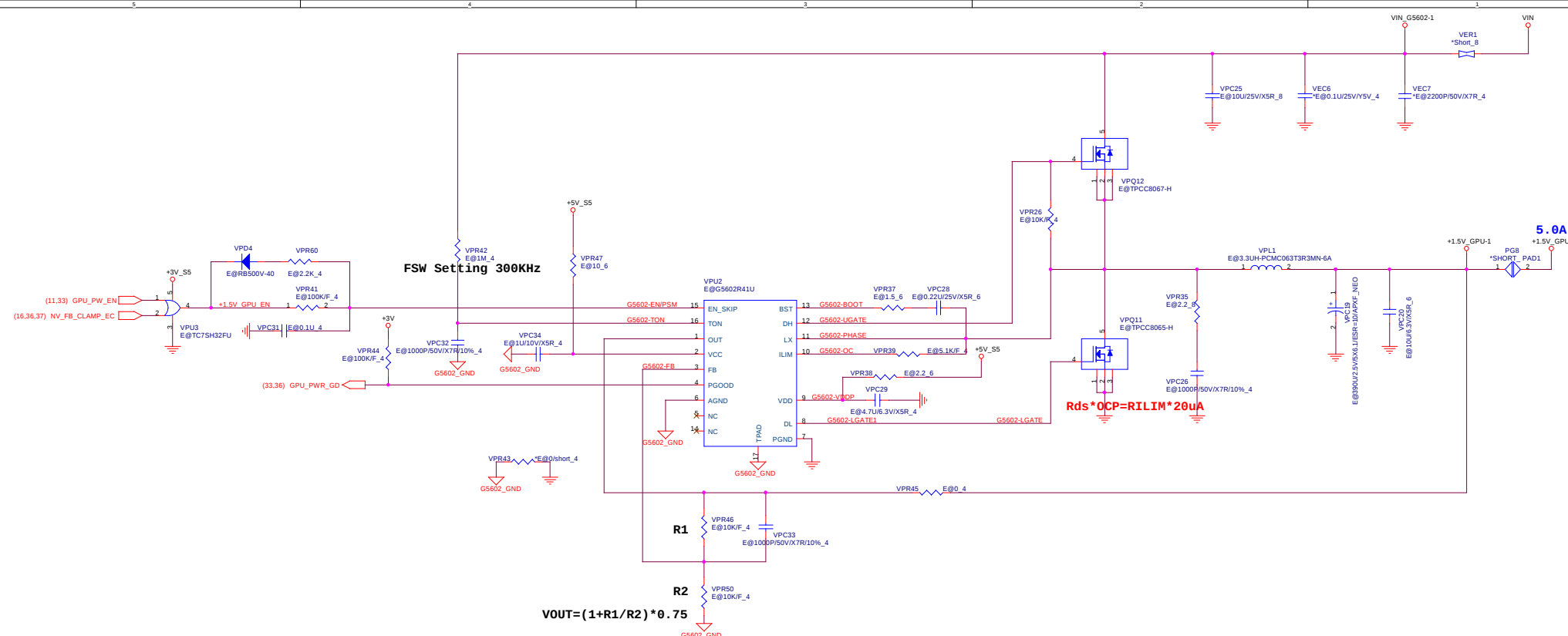
## Thermal Protection and Battery UVP for VEDS

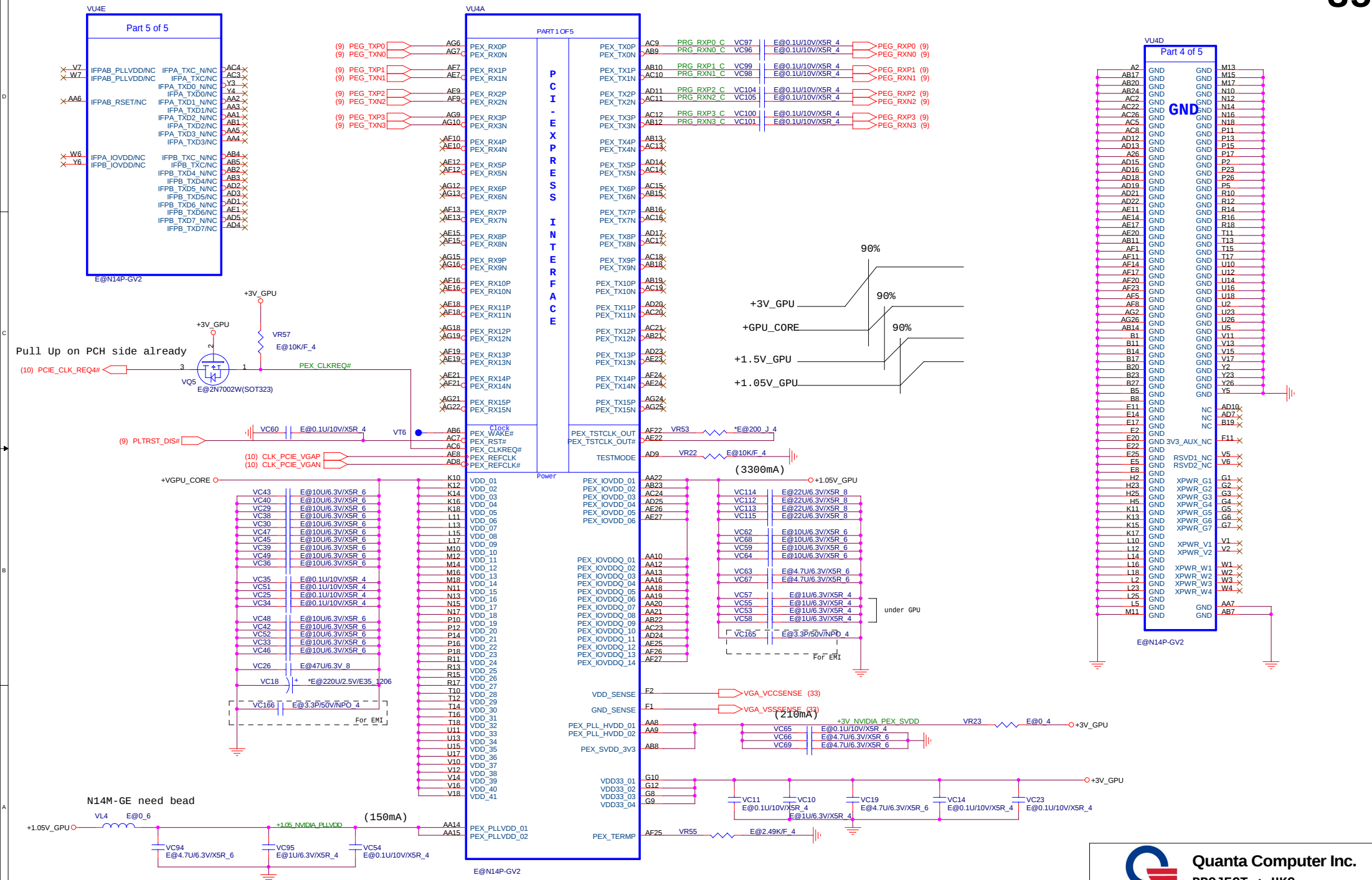




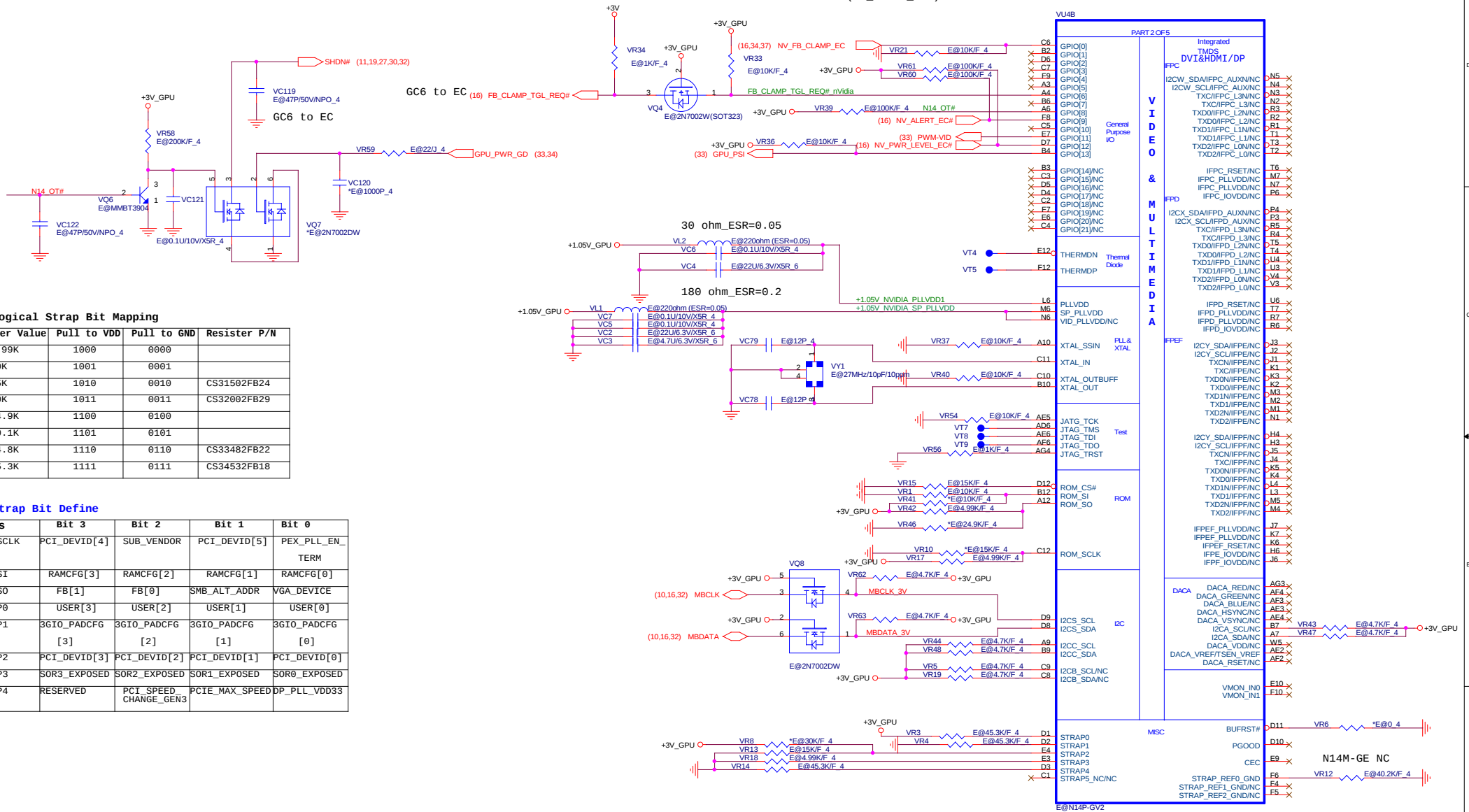








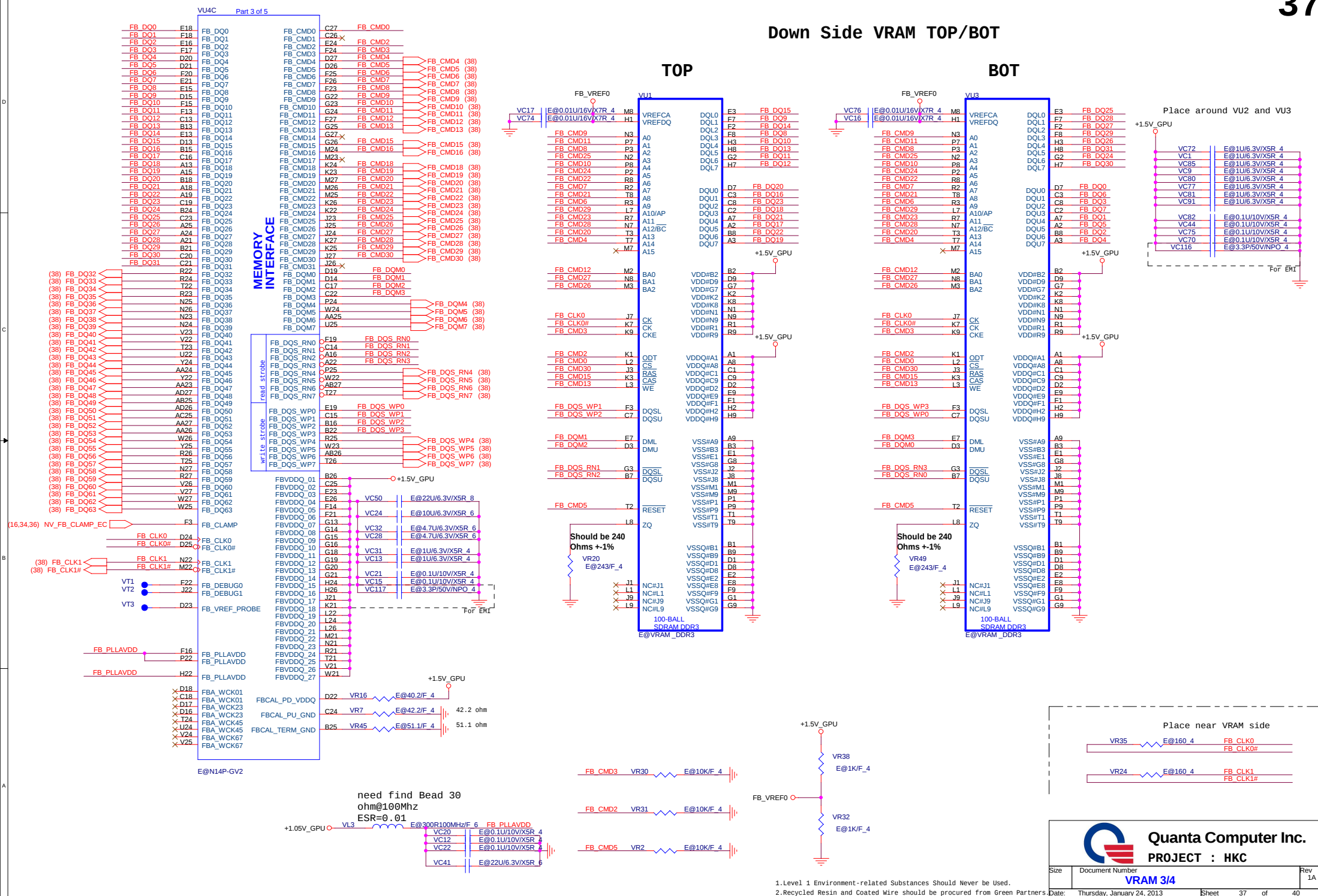
For GC6 GPU Monitor  
Status(FB\_CLAMP\_MON)



|                     | VRAM Capacity | VRAM Vender | ID         | VR1     | Mfr P/N         | Quanta P/N  |
|---------------------|---------------|-------------|------------|---------|-----------------|-------------|
| N14M-LP<br>N14P-6V2 | 128Mx16 DDR3  | Samsung     | 0111       | PD45.3K | K4W2G1646E-BC11 | AKD5MGGT525 |
|                     |               | Hynix       | 0110       | PD34.8K | H5TQ2G63DFR-11C | AKD5MGW1W15 |
|                     | 256Mx16 DDR3  | Samsung     | 0011       | PD20K   | K4W4G1646B-HC11 | AKD5MGW1525 |
|                     |               | Hynix       | 0010 (TBD) | PD15K   | H5TC4G63AFR-11C | AKD5PGW1W10 |

1.Level 1 Environment-related Substances Should Never be Used.  
2.Recycled Resin and Coated Wire should be procured from Green Partners.

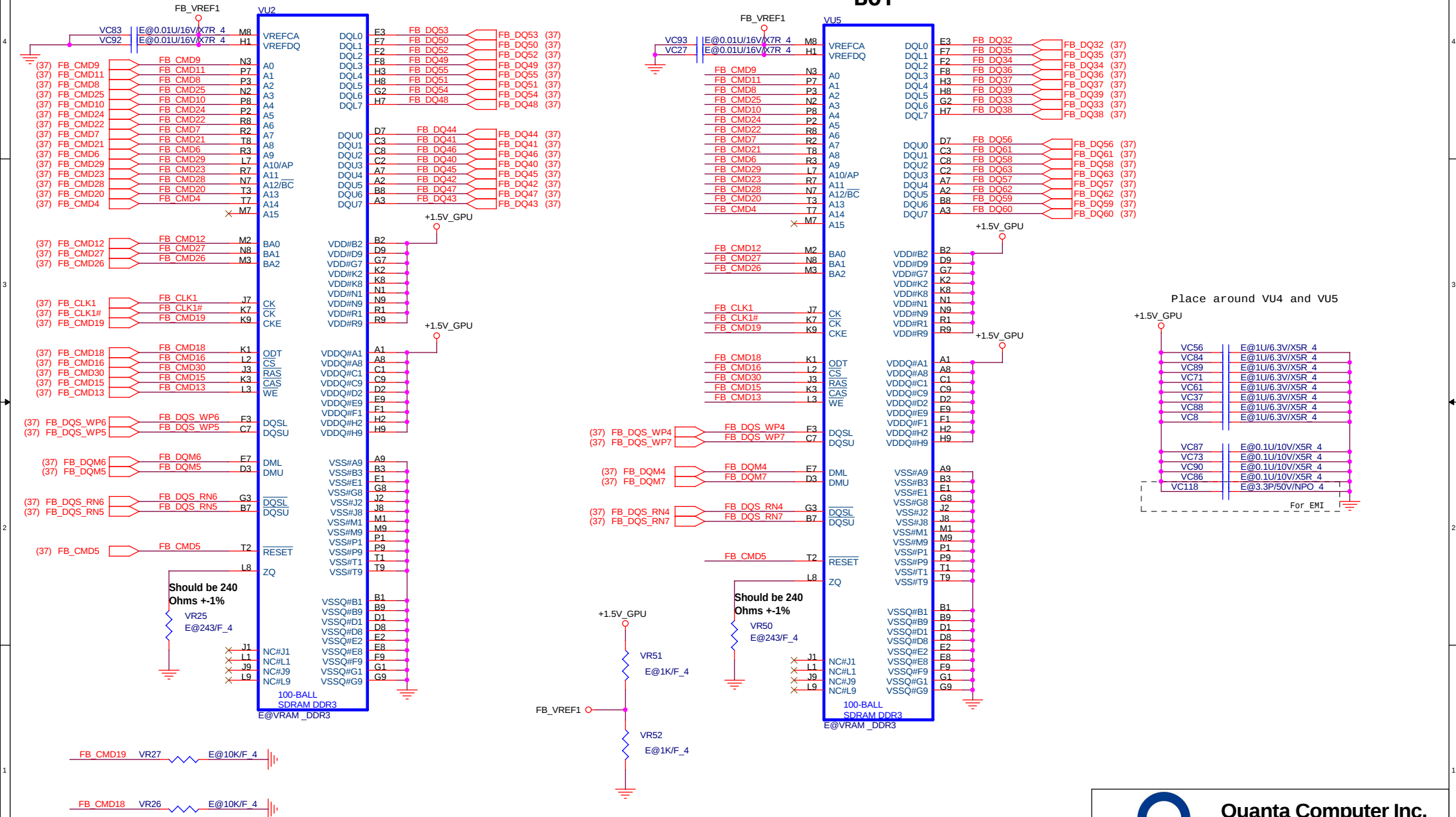
### Down Side VRAM TOP/BOT



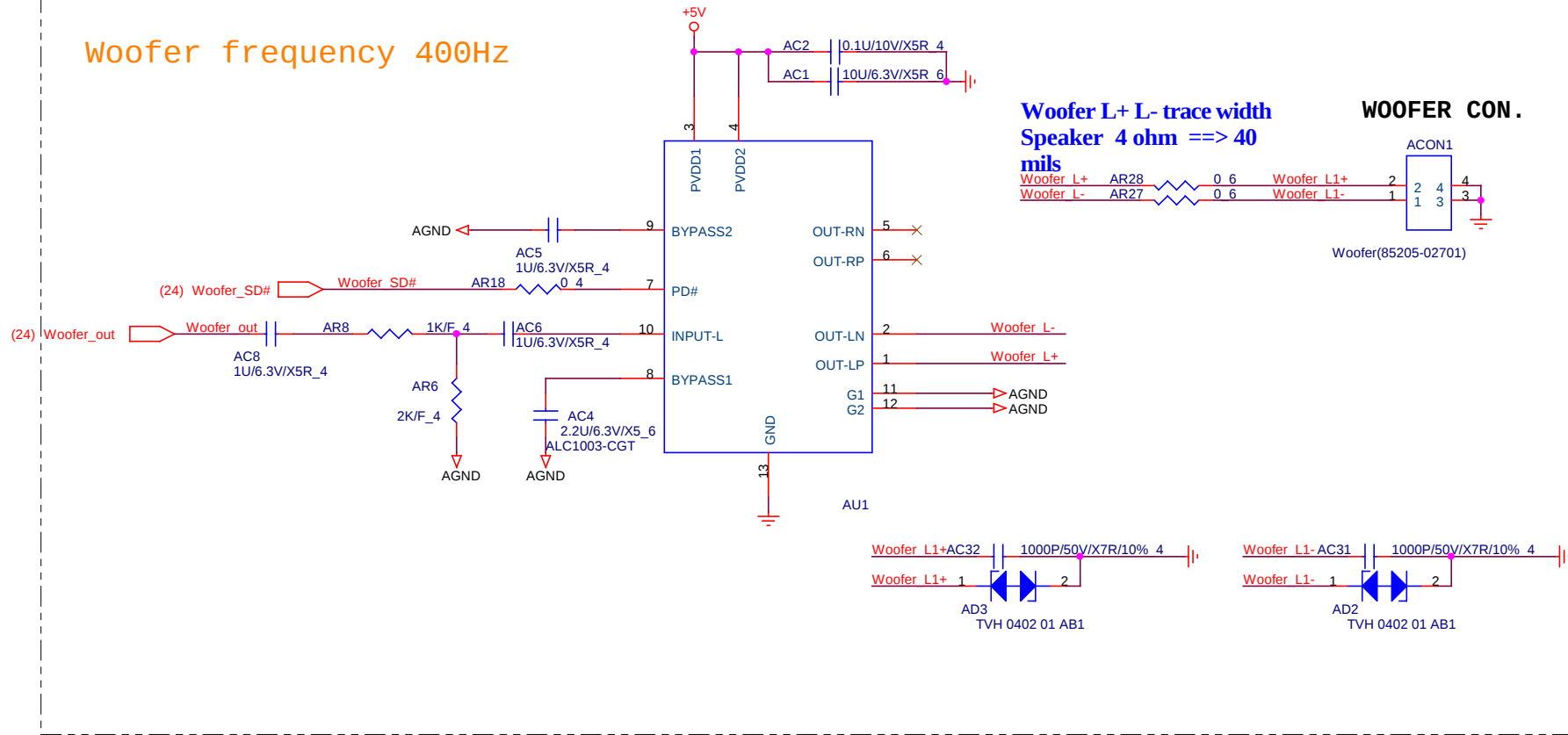
## Up Side VRAM TOP/BOT

**TOP**

**BOT**



Woofer frequency 400Hz



1.Level 1 Environment-related Substances Should Never be Used.  
 2.Recycled Resin and Coated Wire should be procured from Green  
 Partners.



Quanta Computer Inc.

PROJECT : HKC

|       |                            |                |
|-------|----------------------------|----------------|
| Size  | Document Number            | Rev            |
|       | Audio Codec Woofer         | 1A             |
| Date: | Thursday, January 24, 2013 | Sheet 39 of 40 |

| USB PORT Architecture |              |
|-----------------------|--------------|
| PORT 0                | USB3.0       |
| PORT 1                | USN3.0       |
| PORT 2                | USN2.0       |
| PORT 3                | USB2.0       |
| PORT 4                | NFC          |
| PORT 5                | N/A          |
| PORT 6                | N/A          |
| PORT 7                | N/A          |
| PORT 8                | N/A          |
| PORT 9                | WiMax/BT     |
| PORT 10               | Camera       |
| PORT 11               | Card Reader  |
| PORT 12               | Touch Screen |
| PORT 13               | N/A          |

| PCIE BUS |                |
|----------|----------------|
| PORT 1   | WLAN Port      |
| PORT 2   | CARD READER    |
| PORT 3   | GLAN(RTL8111G) |
| PORT 4   | N/A            |
| PORT 5   | N/A            |
| PORT 6   | N/A            |
| PORT 7   | N/A            |
| PORT 8   | N/A            |

| SATA BUS |     |
|----------|-----|
| PORT 0   | HDD |
| PORT 1   | N/A |
| PORT 2   | N/A |
| PORT 3   | N/A |
| PORT 4   | ODD |
| PORT 5   | N/A |

| SM BUS        | MBCLK/MBDATA | WRITE     | READ      | Function |
|---------------|--------------|-----------|-----------|----------|
| ISL88731CHRTZ | 0001 001X    | 0001 0010 | 0001 0011 | Charger  |
| Nvidia        | 1001 1110    | -         | 1001 1110 | Graphice |
| LIS331DL      | 0011 101X    | 0011 1010 | 0011 1011 | G Sensor |

| SM BUS     | MBCLK_BAT/MBDATA_BAT | WRITE     | READ      | Function |
|------------|----------------------|-----------|-----------|----------|
| VGP-BPS35A | 0001 011X            | 0001 0110 | 0001 0111 | Battery  |

| SM BUS        | SMB_PCH_CLK/SMB_PCH_DAT | WRITE     | READ      | Function  |
|---------------|-------------------------|-----------|-----------|-----------|
| DIMM Module0  | 1010 000X               | 1010 0000 | 1010 0001 | DDRIII    |
| DIMM Module 1 | 1010 010X               | 1010 0100 | 1010 0101 | DDRIII    |
| Synaptics     | 0010 110X               | 0010 1100 | 0010 1101 | Click PAD |

|         | R363(High)<br>R362(Low) | R294(High)<br>R297(Low) |
|---------|-------------------------|-------------------------|
|         | Board ID3               | Board ID0               |
| 14"/HK6 | 0                       | 0                       |
| 15"/HK5 | 0                       | 1                       |
| 17"/HK7 | 1                       | 0                       |

|                               |            |          |
|-------------------------------|------------|----------|
| Board ID1<br>(VRAM<br>Vendor) | Samaung(1) | Hynix(0) |
| R47(High)                     | Stuff      | No Stuff |
| R48(Low)                      | No Stuff   | Stuff    |

| Board ID2 |          |          |
|-----------|----------|----------|
| 14" 4PCS  | 1G       | 512M     |
| 15" 8PCS  | 1G       | 2G       |
| R39(High) | Stuff    | No Stuff |
| R27(Low)  | No Stuff | Stuff    |

|                 |          |          |
|-----------------|----------|----------|
| PCBA SKU        | Discrete | UMA      |
| R277(Pull High) | Stuff    | No Stuff |
| R275(Pull Low)  | No Stuff | Stuff    |

| OS status       | S0 | S3 | DS3 | (Soft OFF)                                       | (Soft OFF)                                         | (Soft OFF)          | (Soft OFF)                          | (Soft OFF)       |
|-----------------|----|----|-----|--------------------------------------------------|----------------------------------------------------|---------------------|-------------------------------------|------------------|
| H/W status      | S0 | S3 | DS3 | S4 (Win8 off)<br>RTC wake Enable<br>WOLAN Enable | S4 (Win8 off)<br>RTC wake Disable<br>WOLAN Disable | S5<br>Charge Enable | S5<br>Charge Disable<br>WoL Disable | S5<br>WoL Enable |
| RUN_ON          | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +3V             | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +5V             | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +0.675V_DDR_VTT | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +1.05V          | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +0.85V          | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +1.5V           | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +3V_GPU         | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +1.05V_GPU      | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +VGPU_CORE      | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| +VCC_CORE       | H  | L  | L   | L                                                | L                                                  | L                   | L                                   | L                |
| SUS_ON          | H  | H  | H   | L                                                | L                                                  | L                   | L                                   | L                |
| +1.35V_SUS      | H  | H  | H   | L                                                | L                                                  | L                   | L                                   | L                |
| S5_ON           | H  | H  | L   | H                                                | L                                                  | L                   | L                                   | H                |
| +5V_S5          | H  | H  | L   | H                                                | L                                                  | L                   | L                                   | H                |
| +3V_S5          | H  | H  | L   | H                                                | L                                                  | L                   | L                                   | H                |
| EC_WAKE_ON      | H  | H  | H   | H                                                | L                                                  | H                   | L                                   | H                |
| +3V_WAKE        | H  | H  | H   | H                                                | L                                                  | H                   | L                                   | H                |
| +5V_WAKE        | H  | H  | H   | H                                                | L                                                  | H                   | L                                   | H                |
| DEEP_EC_EN      | H  | H  | H   | H                                                | L                                                  | L                   | L                                   | L                |
| +3V_S5_DSW      | H  | H  | H   | H                                                | L                                                  | L                   | L                                   | L                |
| +3V_SUS         | H  | H  | L   | L                                                | L                                                  | L                   | L                                   | L                |

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