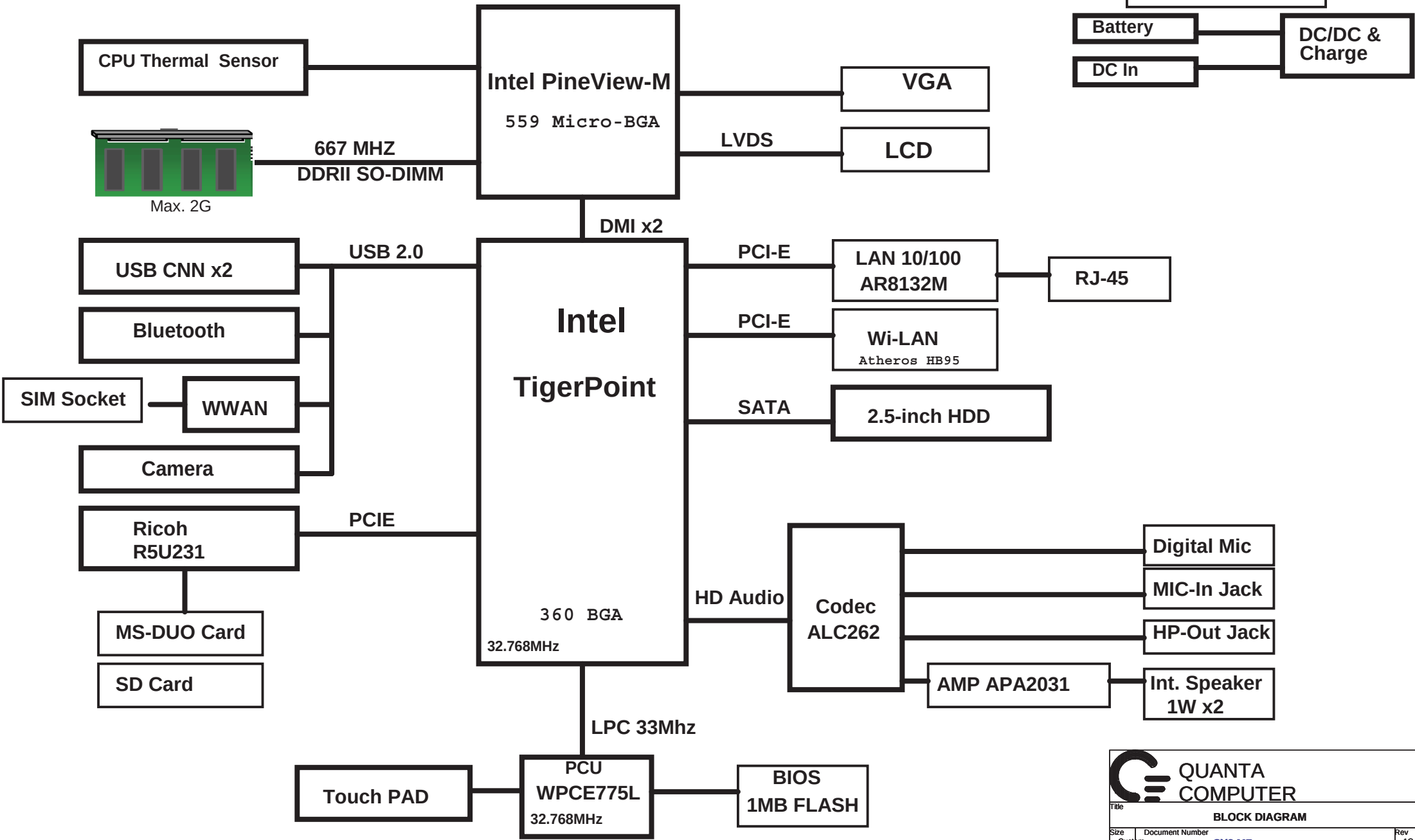


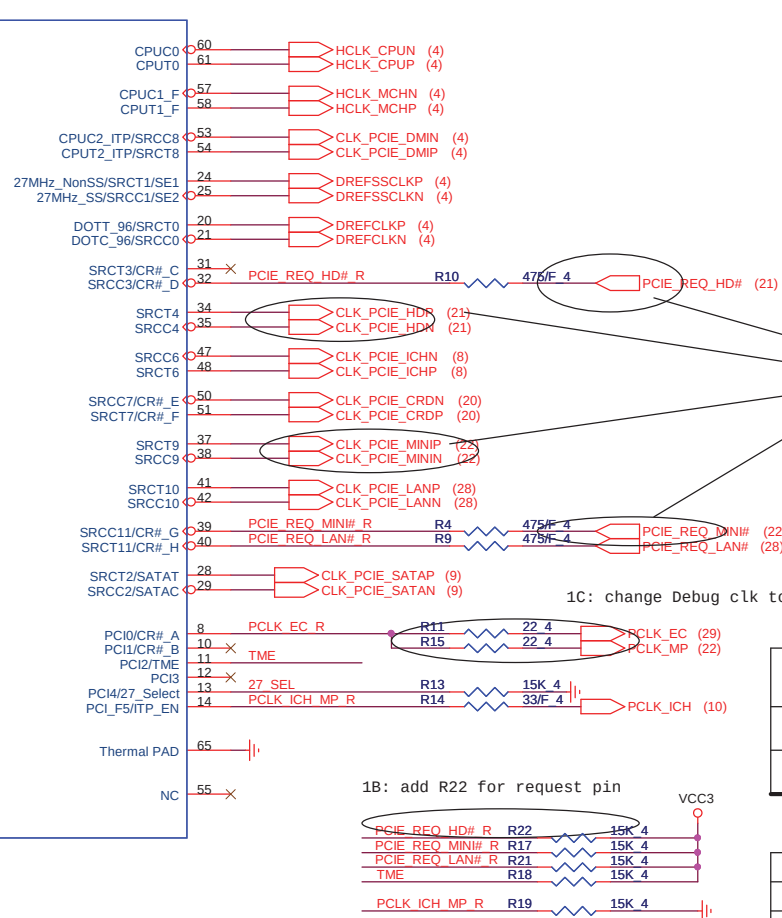
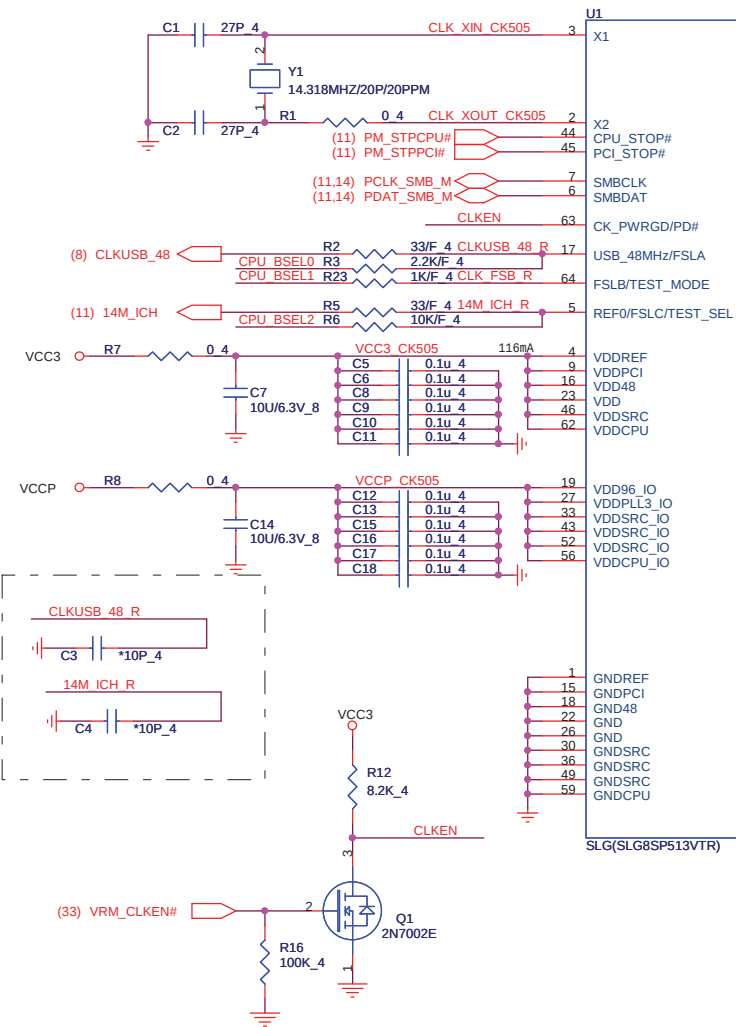
# SY3 BLOCK DIAGRAM

01



1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

|                                                                                                          |                           |       |           |
|----------------------------------------------------------------------------------------------------------|---------------------------|-------|-----------|
|  QUANTA<br>COMPUTER |                           |       |           |
| Title<br>Front Page                                                                                      |                           |       |           |
| Size<br>A                                                                                                | Document Number<br>SY3 MB |       | Rev<br>1G |
| Date:                                                                                                    | Monday, March 30, 2009    | Sheet | 2 of 44   |



| 27 Select<br>PIN13 | PIN 20/21        | PIN 24/25        |
|--------------------|------------------|------------------|
| * 0                | DOT_96 / DOT_96# | LCDCLK / LCDCLK# |
| 1                  | SRC_0 / SRC_0#   | 27M / 27M_SS     |

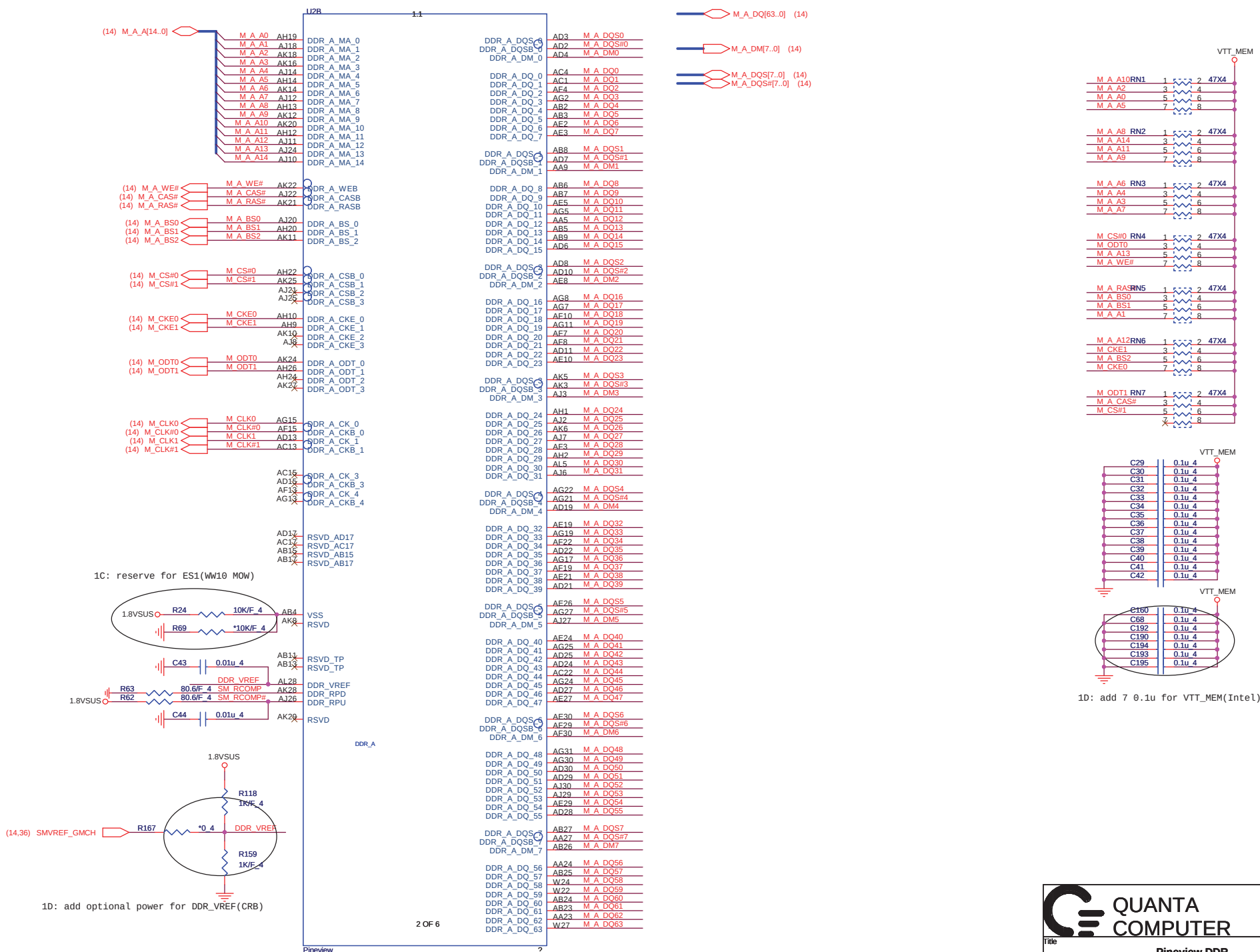
| ITP_EN(PIN14) | PIN53/54   |
|---------------|------------|
| * 0           | SRC8#/SRC8 |
| 1             | ITP/ITP#   |

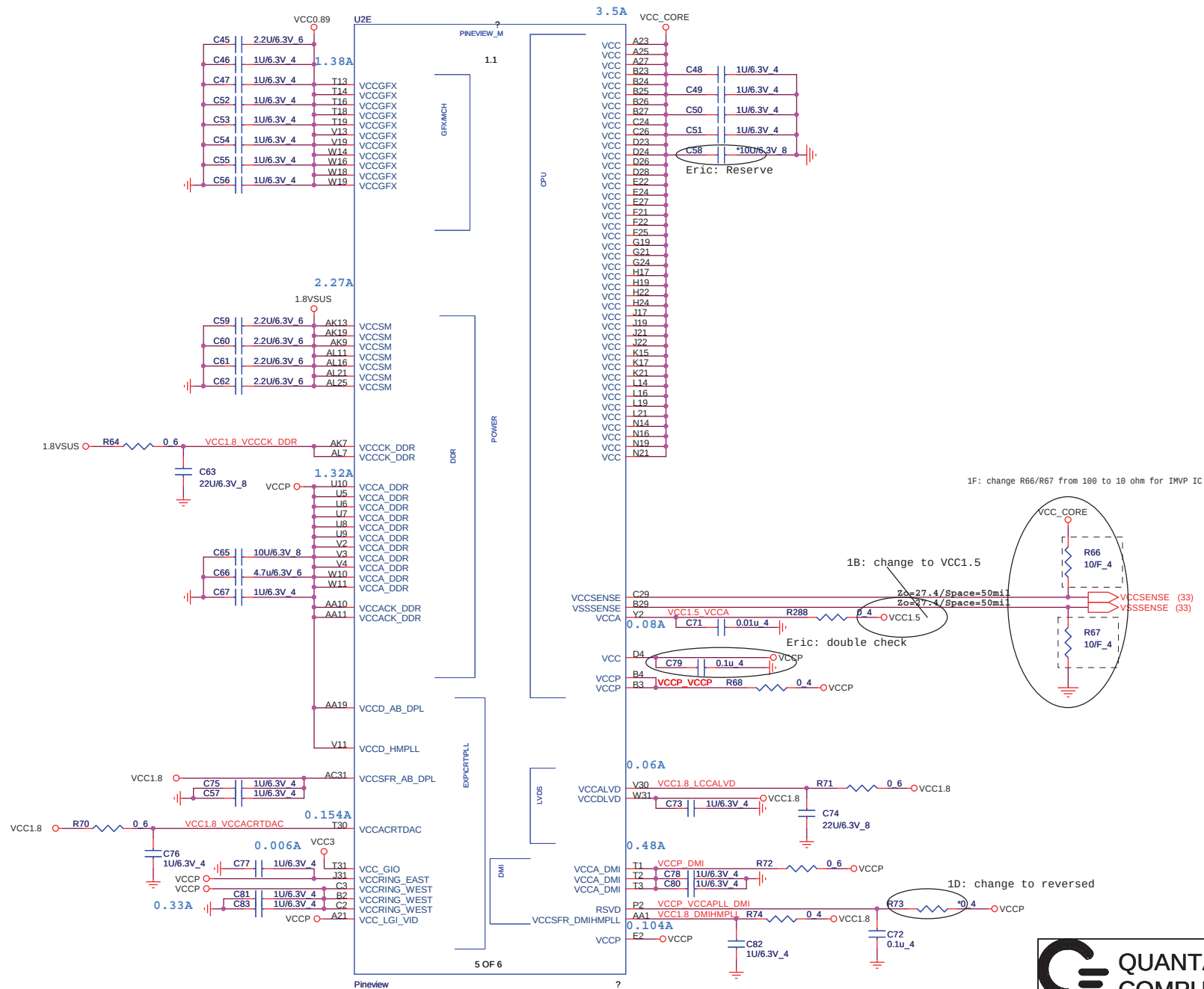
| FSC<br>BSEL2 | FSB<br>BSEL1 | FSA<br>BSEL0 | CPU      | SRC | PCI   | REF    | USB | DOT | Spread<br>% |
|--------------|--------------|--------------|----------|-----|-------|--------|-----|-----|-------------|
| 0            | 0            | 0            | 266.66   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 0            | 0            | 1            | 133.33   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 0            | 1            | 0            | 200.00   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 0            | 1            | 1            | 166.66   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 1            | 0            | 0            | 333.33   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 1            | 0            | 1            | 100.00   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 1            | 1            | 0            | 400.00   | 100 | 33.33 | 14.318 | 48  | 96  | 0.5 Down    |
| 1            | 1            | 1            | RESERVED |     |       |        |     |     |             |

- Level 1 Environment-related Substances Should NEVER be Used.
- Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

|                        |                         |               |
|------------------------|-------------------------|---------------|
|                        |                         |               |
| Title                  |                         |               |
| Clock Gen SLG8SP513VTR |                         |               |
| Size                   | Document Number         | Rev           |
| B                      | SY3 MB                  | 1G            |
| Date:                  | Tuesday, March 31, 2009 | Sheet 3 of 44 |





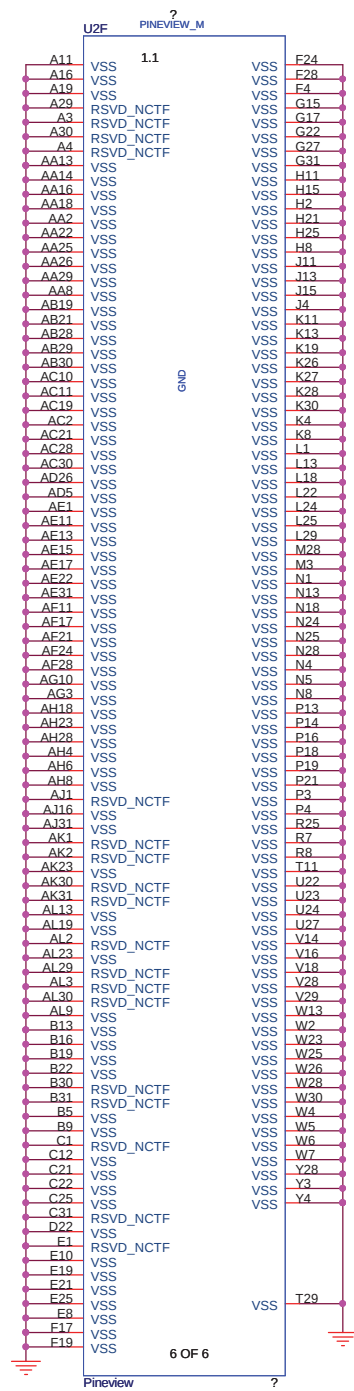


1. Level 1 Environment-related Substances Should NEVER be Used.  
 2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



Title: Pineview Power

|                               |                 |               |
|-------------------------------|-----------------|---------------|
| Size                          | Document Number | Rev           |
| Custom                        | SY3 MB          | 1G            |
| Date: Tuesday, March 31, 2009 |                 | Sheet 6 of 44 |

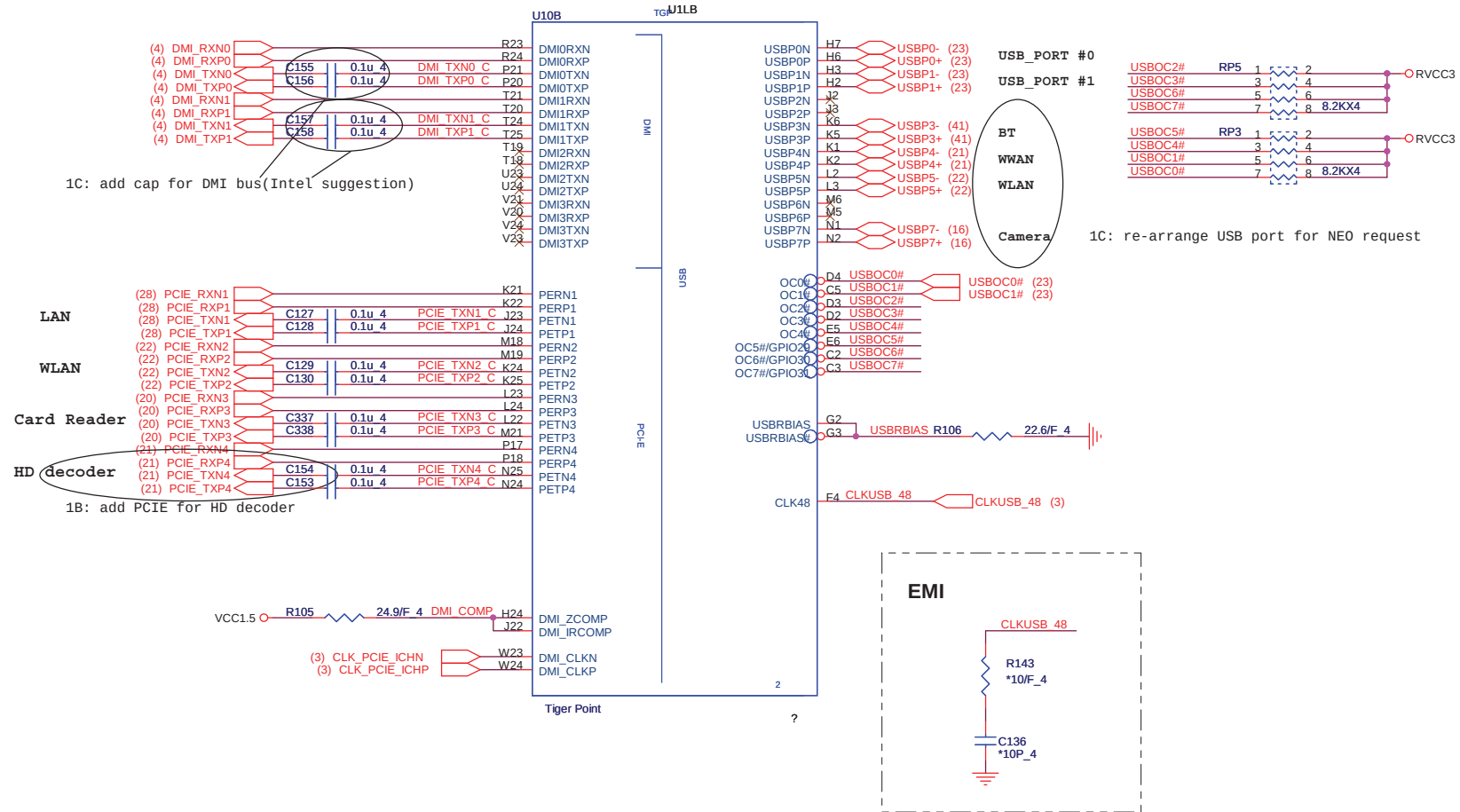


1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

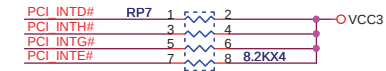
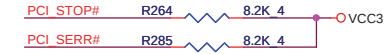
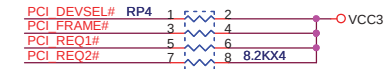
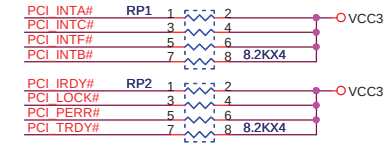
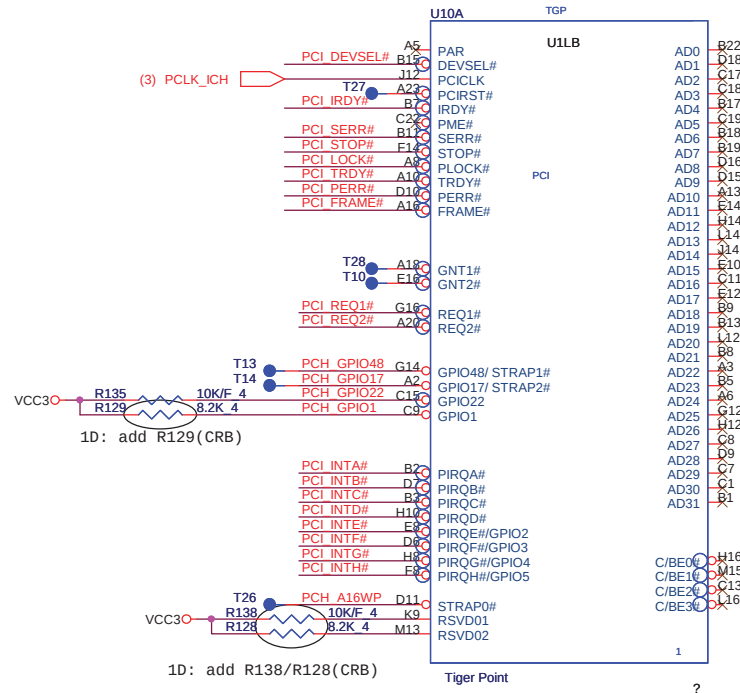


QUANTA  
COMPUTER

|                               |                           |               |
|-------------------------------|---------------------------|---------------|
| Title<br>Pineview GND         |                           |               |
| Size<br>Custom                | Document Number<br>SY3 MB | Rev<br>1G     |
| Date: Tuesday, March 31, 2009 |                           | Sheet 7 of 44 |



|                                                                                                                  |                                  |   |           |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|---|-----------|
|  <b>QUANTA<br/>COMPUTER</b> |                                  |   |           |
| Title                                                                                                            |                                  |   |           |
| <b>Tiger Point Sata/Host</b>                                                                                     |                                  |   |           |
| Size<br>A                                                                                                        | Document Number<br><b>SY3 MB</b> |   | Rev<br>1G |
| Date: Tuesday, March 31, 2009                                                                                    | Sheet                            | 9 | of 44     |



#### ICH Boot BIOS select

| PCH_GPIO17<br>(INT PU) | PCH_GPIO48<br>(INT PU) | Boot BIOS Location |
|------------------------|------------------------|--------------------|
| 0                      | 1                      | SPI                |
| 1                      | 0                      | PCI                |
| 1                      | 1                      | LPC (Default)      |

#### A16 SWAP Override strap

| PCH_A16WP<br>(INT PU) | Low = A16 swap override enabled<br>High = Default |
|-----------------------|---------------------------------------------------|
|-----------------------|---------------------------------------------------|

| IRQ   | Description                                          |
|-------|------------------------------------------------------|
| PIRQA | USB UHCI Controller #1, #4                           |
| PIRQB | AC'97 Codec; option for SMBUS                        |
| PIRQC | USB UH Controller #3; SATA/IDE Native Mode           |
| PIRQD | USB UHCI Controller #2                               |
| PIRQE | Internal LAN; Option for SCI, TCO, HPET#0,1,2        |
| PIRQF | Option for SCI, TCO, HPET#0,1,2                      |
| PIRQG | Option for SCI, TCO, HPET#0,1,2                      |
| PIRQH | USB EHCI Controller; Option for SCI, TCO, HPET#0,1,2 |

|           |                                 |
|-----------|---------------------------------|
| PCI_GNT#2 | Internal PU<br>Should not be PD |
|-----------|---------------------------------|

**QUANTA  
COMPUTER**

Title

**TigerPoint PCI(3/6)**

Size B

Document Number

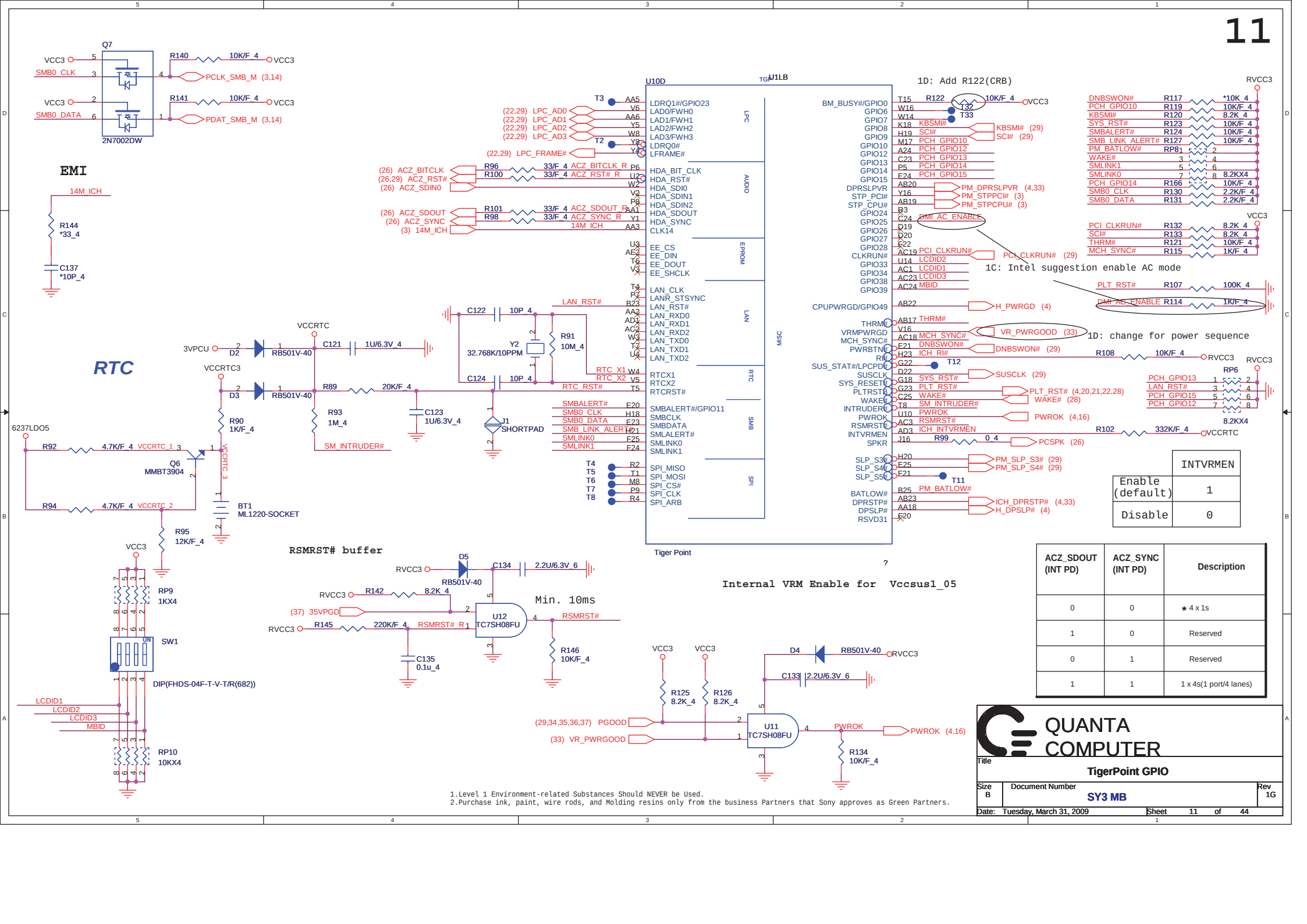
**SY3 MB**

Date: Tuesday, March 31, 2009

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Rev 1G

1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

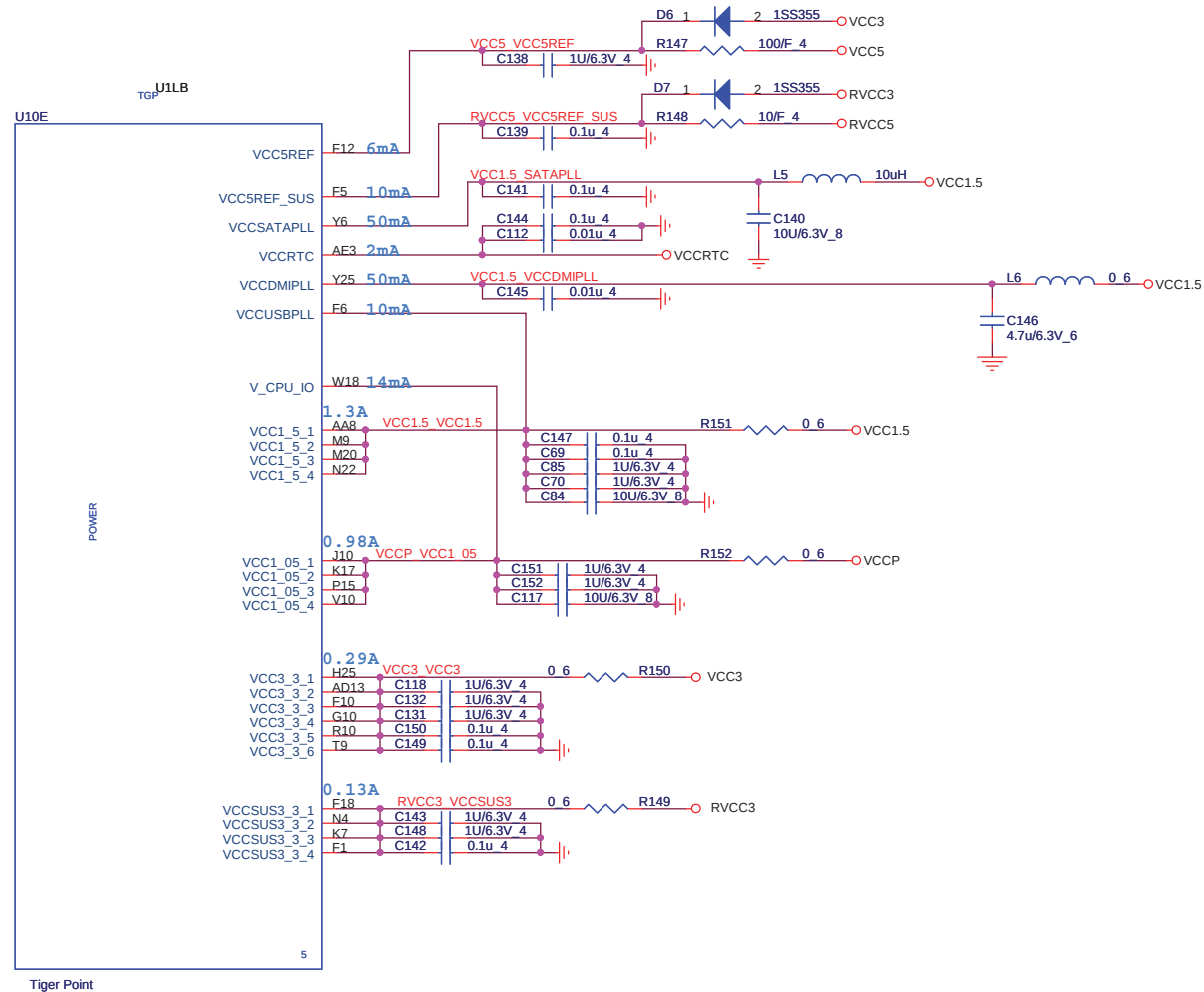


|                     |          |
|---------------------|----------|
|                     | INTVRMEN |
| Enable<br>(default) | 1        |
| Disable             | 0        |

| ACZ_SDOUT<br>(INT PD) | ACZ_SYNC<br>(INT PD) | Description            |
|-----------------------|----------------------|------------------------|
| 0                     | 0                    | ★ 4 x 1s               |
| 1                     | 0                    | Reserved               |
| 0                     | 1                    | Reserved               |
| 1                     | 1                    | 1 x 4s(1 port/4 lanes) |

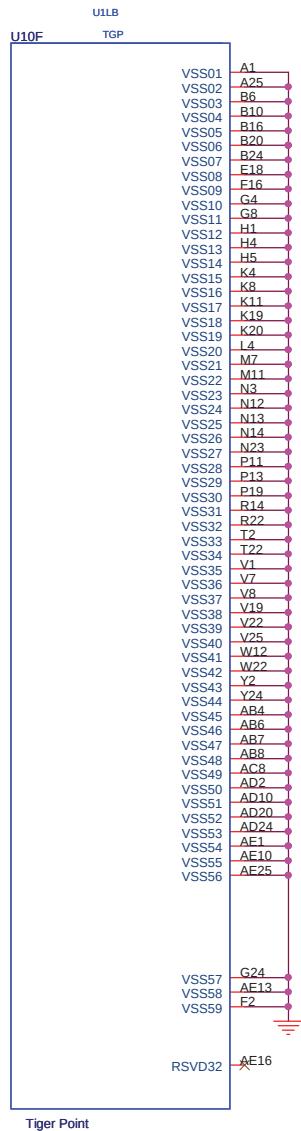
|                                                                                                                  |                               |
|------------------------------------------------------------------------------------------------------------------|-------------------------------|
|  <b>QUANTA<br/>COMPUTER</b> |                               |
| Title <b>TigerPoint GPIO</b>                                                                                     |                               |
| Size B                                                                                                           | Document Number <b>SY3 MB</b> |
| Date: Tuesday, March 31, 2009                                                                                    |                               |
| Sheet 11 of 44                                                                                                   |                               |
| Rev 1G                                                                                                           |                               |

1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners



1. Level 1 Environment-related Substances should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

|                                                                                                                  |                               |        |
|------------------------------------------------------------------------------------------------------------------|-------------------------------|--------|
|  <b>QUANTA<br/>COMPUTER</b> |                               |        |
| Title <b>TigerPoint Power</b>                                                                                    |                               |        |
| Size B                                                                                                           | Document Number <b>SY3 MB</b> | Rev 1G |
| Date: Tuesday, March 31, 2009 Sheet 12 of 44                                                                     |                               |        |



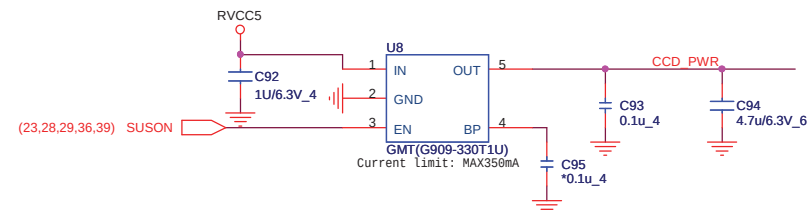
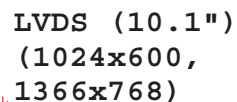
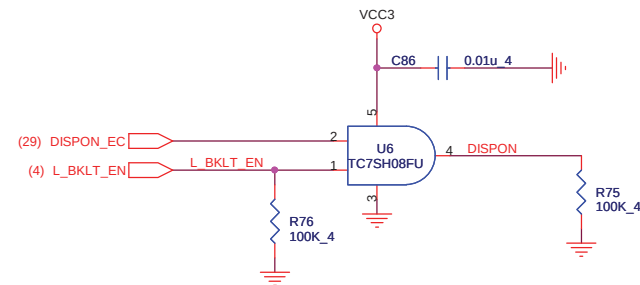
1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

|                                                                                                                  |                                  |                |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|
|  <b>QUANTA<br/>COMPUTER</b> |                                  |                |
| Title<br><b>TigerPoint GND</b>                                                                                   |                                  |                |
| Size<br>B                                                                                                        | Document Number<br><b>SY3 MB</b> | Rev<br>1G      |
| Date: Tuesday, March 31, 2009                                                                                    |                                  | Sheet 13 of 44 |



|                                                                                                          |                           |                |
|----------------------------------------------------------------------------------------------------------|---------------------------|----------------|
|  QUANTA<br>COMPUTER |                           |                |
| Title<br>DDRII SODIMMx1                                                                                  |                           |                |
| Size<br>A                                                                                                | Document Number<br>SY3 MB | Rev<br>1G      |
| Date: Tuesday, March 31, 2009                                                                            |                           | Sheet 15 of 44 |

Display On



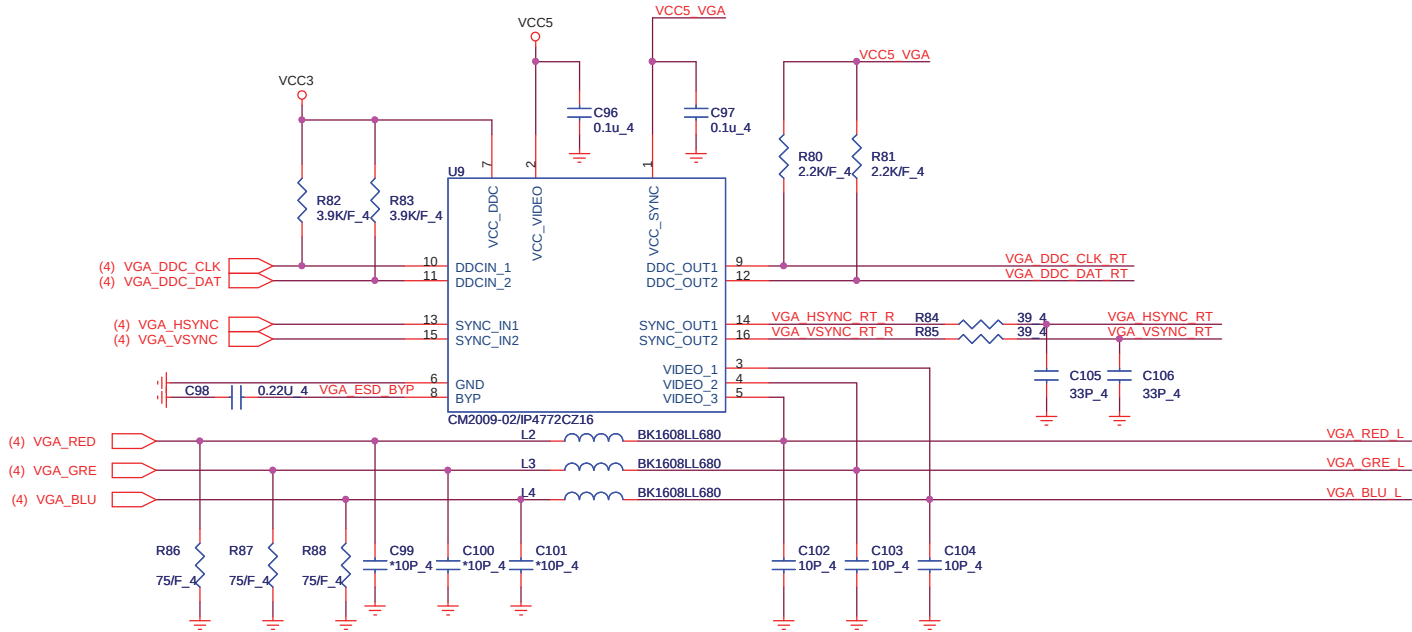
QUANTA  
COMPUTER

## LVDS

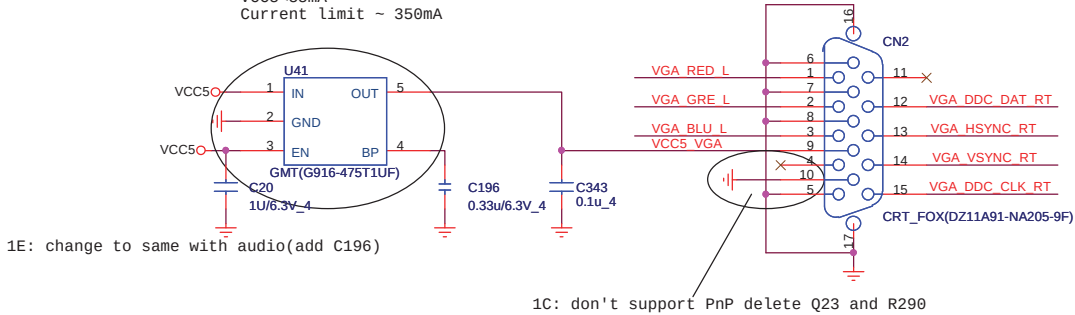
SY3 MB

Sheet 16 of 44

1. Level 1 Environment-related Substances should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



VCC5\_VGA(5V+-10%)  
Current limit <1A  
VCC5<55mA  
Current limit ~ 350mA



1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

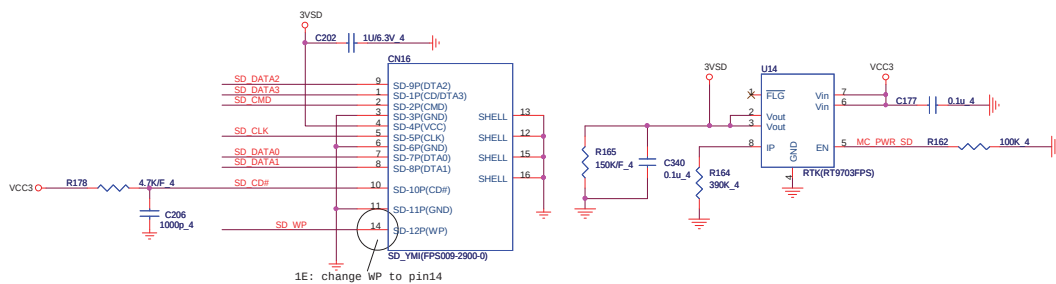
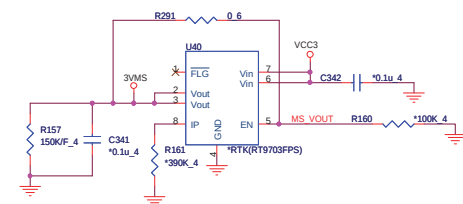
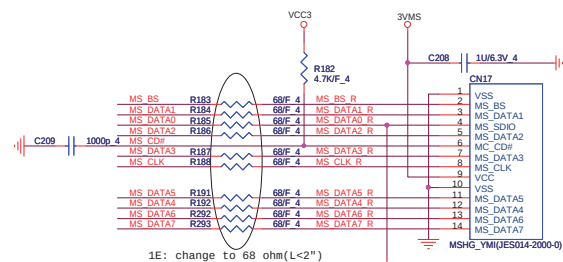
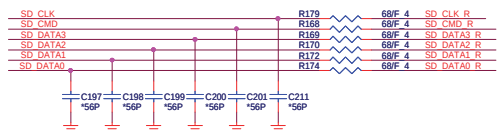
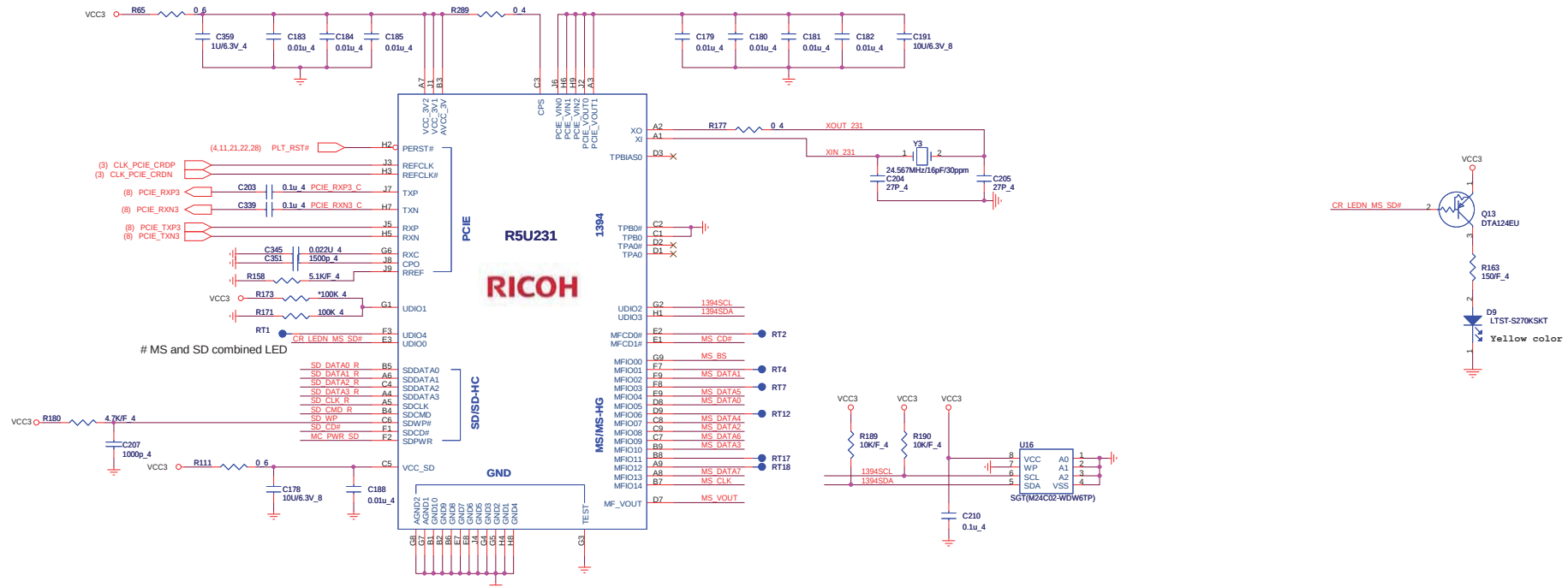


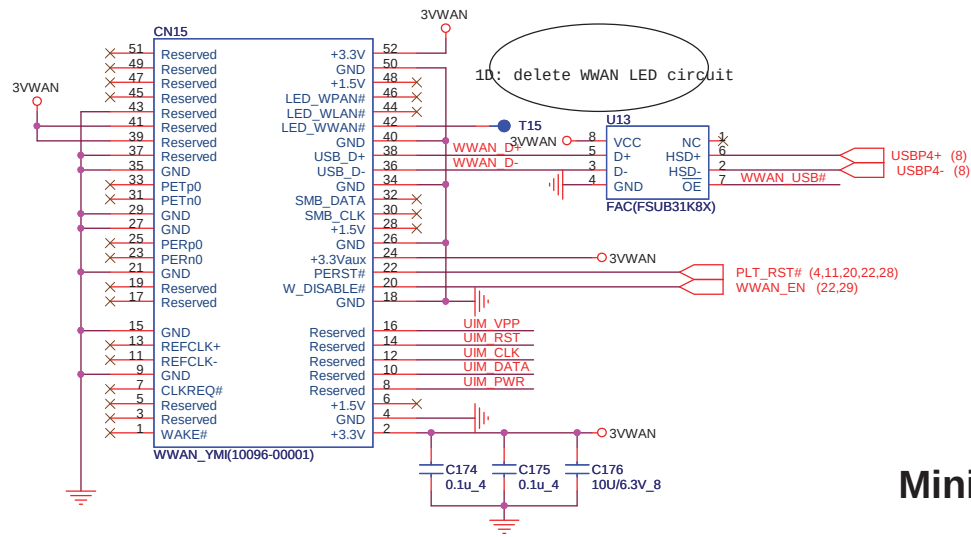
QUANTA  
COMPUTER

|                               |                           |           |
|-------------------------------|---------------------------|-----------|
| Title<br>CRT                  |                           |           |
| Size<br>B                     | Document Number<br>SY3 MB | Rev<br>1G |
| Date: Tuesday, March 31, 2009 |                           |           |
| Sheet 17 of 44                |                           |           |

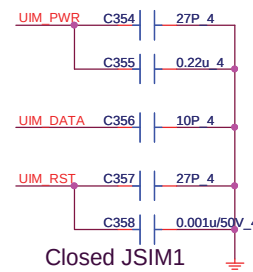
|                                                                                                          |                           |                |
|----------------------------------------------------------------------------------------------------------|---------------------------|----------------|
|  QUANTA<br>COMPUTER |                           |                |
| Title<br>Display I/O                                                                                     |                           |                |
| Size<br>A                                                                                                | Document Number<br>SY3 MB | Rev<br>1G      |
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|                                                                                                          |                           |                |
|----------------------------------------------------------------------------------------------------------|---------------------------|----------------|
|  QUANTA<br>COMPUTER |                           |                |
| Title<br>Display I/O                                                                                     |                           |                |
| Size<br>A                                                                                                | Document Number<br>SY3 MB | Rev<br>1G      |
| Date: Tuesday, March 31, 2009                                                                            |                           | Sheet 19 of 44 |



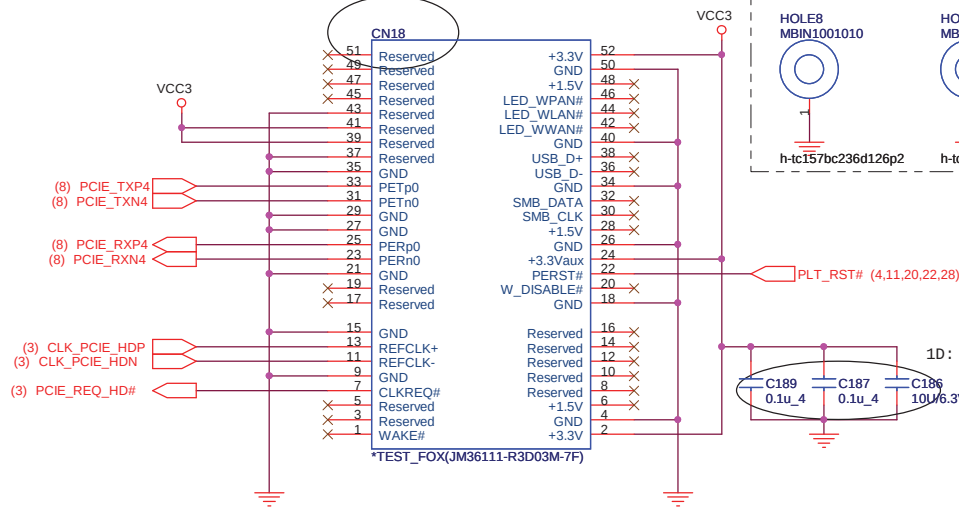


### SIM CARD SIGNALS ROUTE PARALLEL



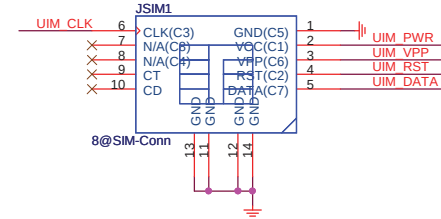
## Mini PCI-E Card FOR WWAN

1B: add HD decoder connector

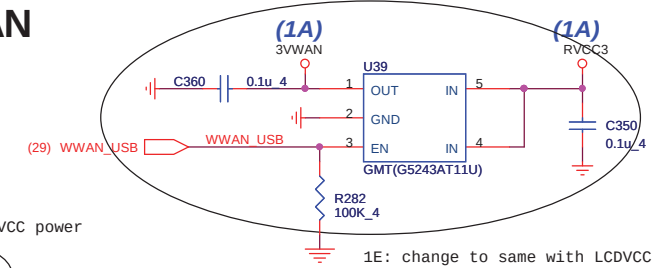


1D: add capacitor C186/C187/C189 for test

## SIM CARD

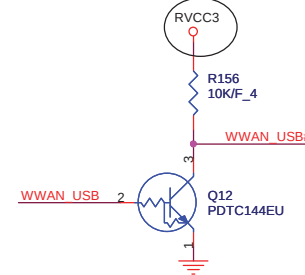


The value of the capacitor is suggest by Siemens HQ expert.  
For against 900MHz RF interference. The value of capacitor is 27pF.  
For against 1800MHz RF interference. The value of capacitor is 10pF.  
1nF/10nF value capacitor use for against ESD purpose.



1B: change to RVCC power

1E: change to same with LCDVCC



- 1.Level 1 Environment-related Substances Should NEVER be Used.
- 2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

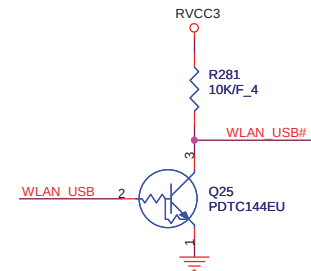
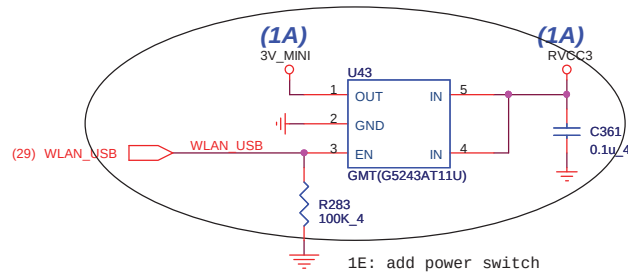
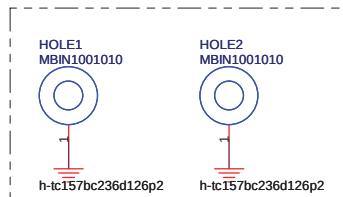
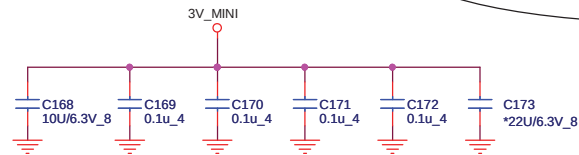
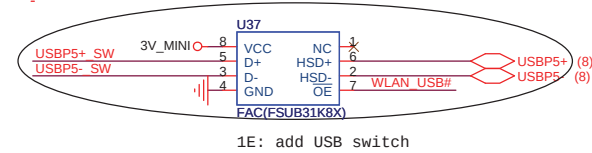
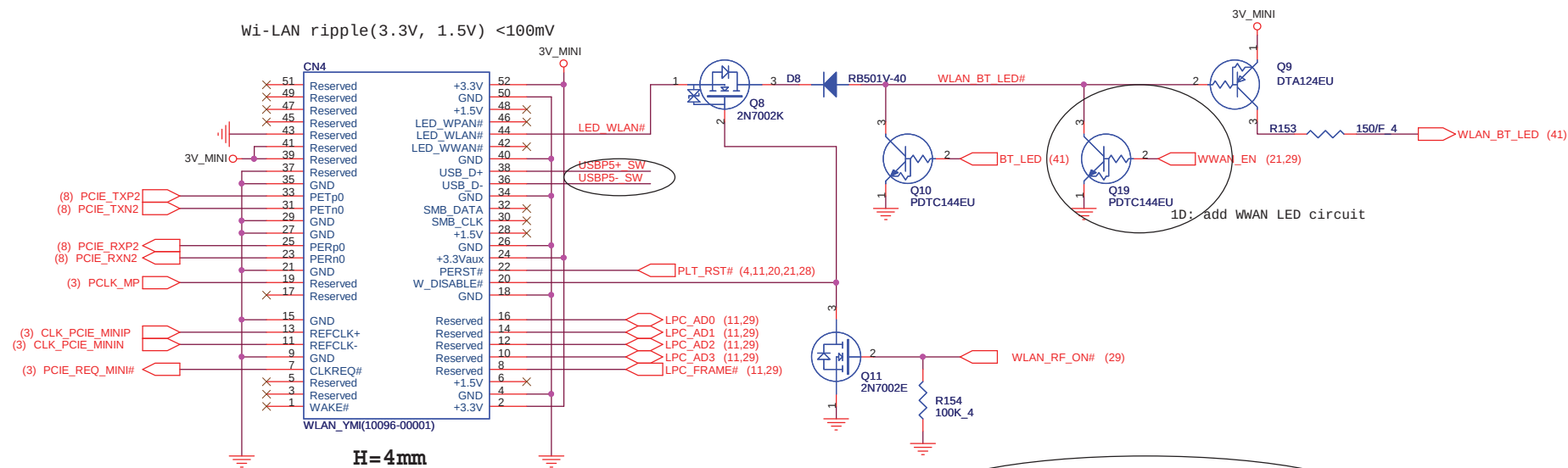


|                               |                 |        |       |
|-------------------------------|-----------------|--------|-------|
| Title                         |                 |        | WWAN  |
| Size B                        | Document Number | SY3 MB |       |
| Date: Tuesday, March 31, 2009 | Sheet           | 21     | of 44 |

Rev 1G

### Mini PCI-E Card--W-LAN

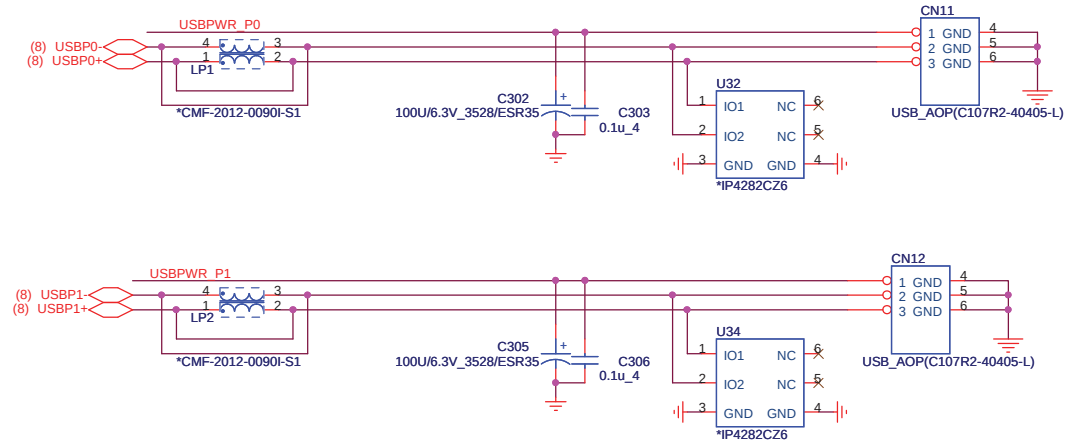
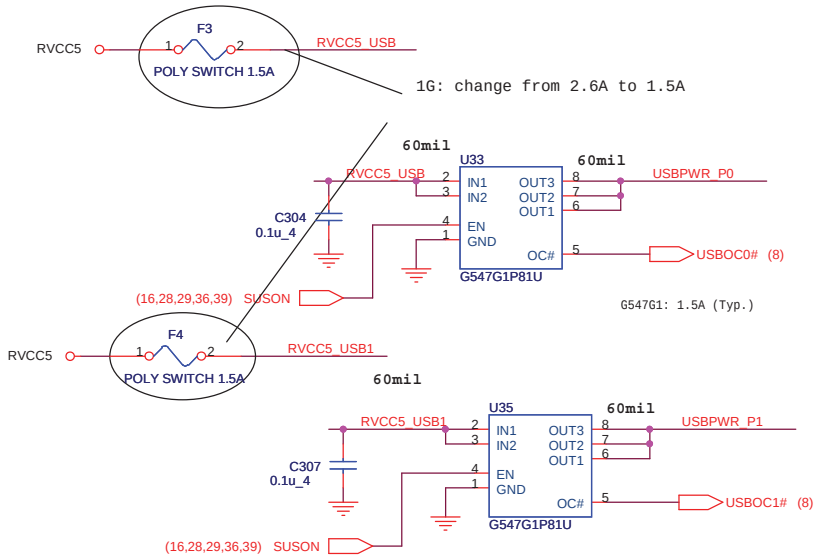
Wi-LAN ripple(3.3V, 1.5V) <100mV



# USB Power and Over current

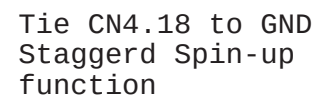
## USB Connector

23



1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

|                                                                                                                  |                               |                 |               |
|------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------|---------------|
|  <b>QUANTA<br/>COMPUTER</b> |                               |                 |               |
| Title <b>USB</b>                                                                                                 |                               |                 |               |
| Size <b>B</b>                                                                                                    | Document Number <b>SY3 MB</b> |                 | Rev <b>1G</b> |
| Date: <b>Tuesday, March 31, 2009</b>                                                                             |                               | Sheet <b>23</b> | of <b>44</b>  |

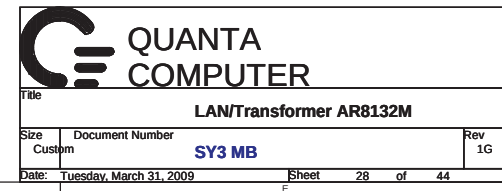


|                                                                                                                  |                                  |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|
|  <b>QUANTA<br/>COMPUTER</b> |                                  |
| Title                                                                                                            |                                  |
| SATA                                                                                                             |                                  |
| Size<br>A                                                                                                        | Document Number<br><b>SY3 MB</b> |
| Date: Tuesday, March 31, 2009                                                                                    | Sheet 24 of 44<br>Rev 1G         |

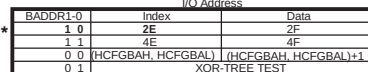
|                                                                                                          |                           |       |           |
|----------------------------------------------------------------------------------------------------------|---------------------------|-------|-----------|
|  QUANTA<br>COMPUTER |                           |       |           |
| Title<br>USB3                                                                                            |                           |       |           |
| Size<br>A                                                                                                | Document Number<br>SY3 MB |       | Rev<br>1G |
| Date: Tuesday, March 31, 2009                                                                            |                           | Sheet | 25 of 44  |







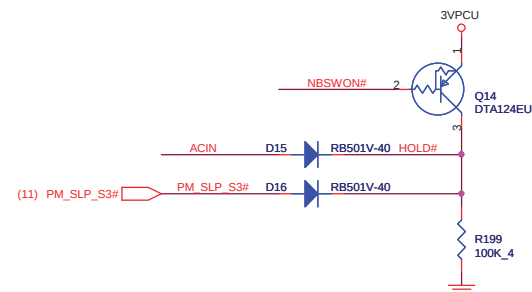
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

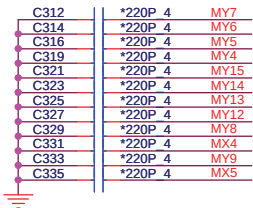
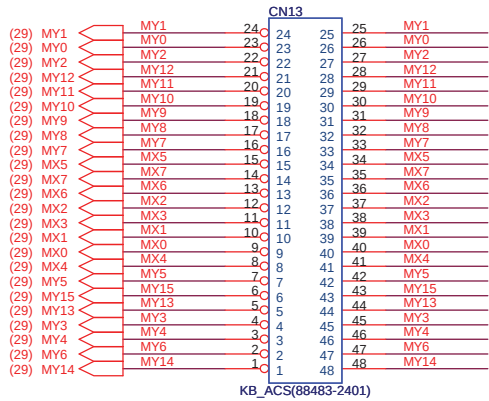
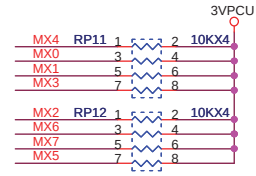


SHMB: SHBM(If = 0 Enable share host BIOS memory)

DOCK RST# : BADDR0

T?: BADDR1

[illegible]

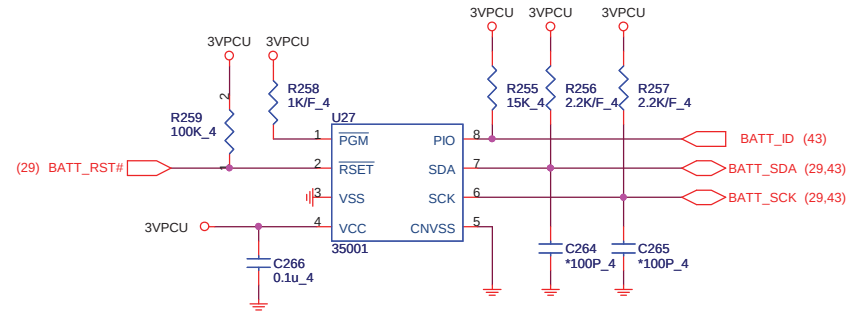
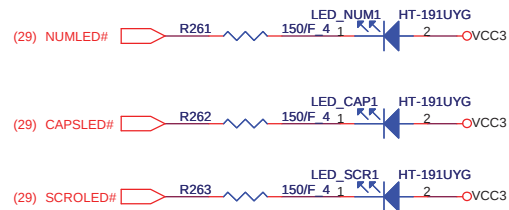


1E: Delete reserved ESD diode for WLAN layout

1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

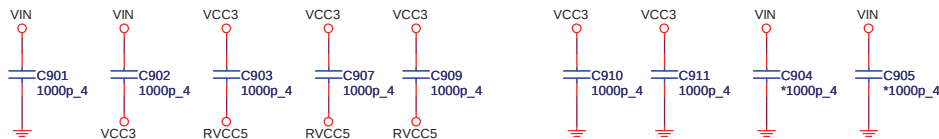
QUANTA  
COMPUTER

|          |                         |                |
|----------|-------------------------|----------------|
| Title    |                         |                |
| KB/BT/TP |                         |                |
| Size     | Document Number         | Rev            |
| B        | SY3 MB                  | 1G             |
| Date:    | Tuesday, March 31, 2009 | Sheet 30 of 44 |



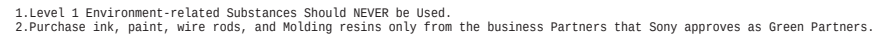
## Decoupling Cap

1E: add decoupling cap

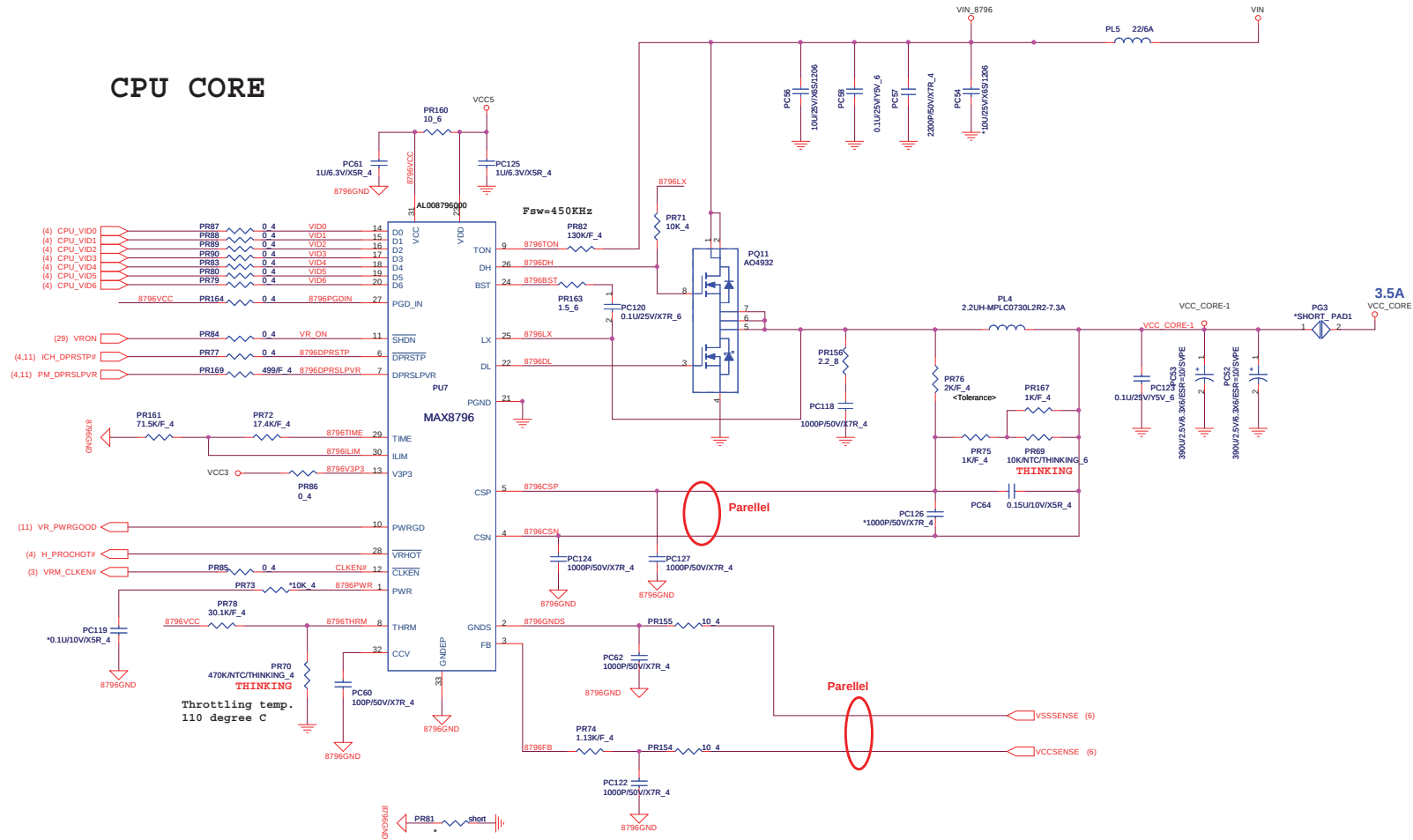


- 1.Level 1 Environment-related Substances Should NEVER be Used.
- 2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

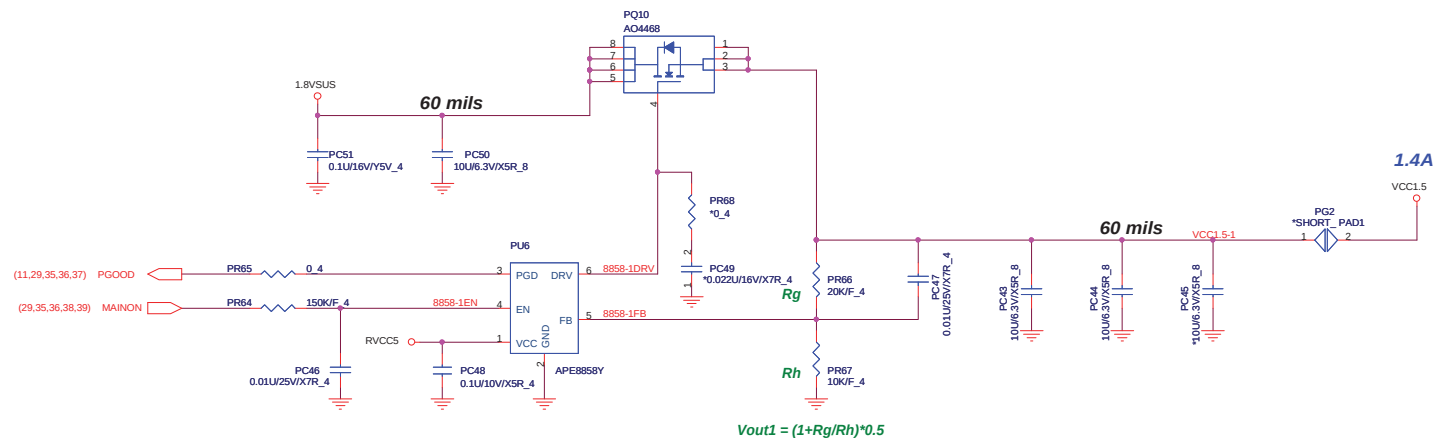
|                                                                                                                  |                                  |           |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------|
|  <b>QUANTA<br/>COMPUTER</b> |                                  |           |
| Title <b>SW/LED/Other</b>                                                                                        |                                  |           |
| Size<br>B                                                                                                        | Document Number<br><b>SY3 MB</b> | Rev<br>1G |
| Date: Tuesday, March 31, 2009 Sheet 31 of 28                                                                     |                                  |           |



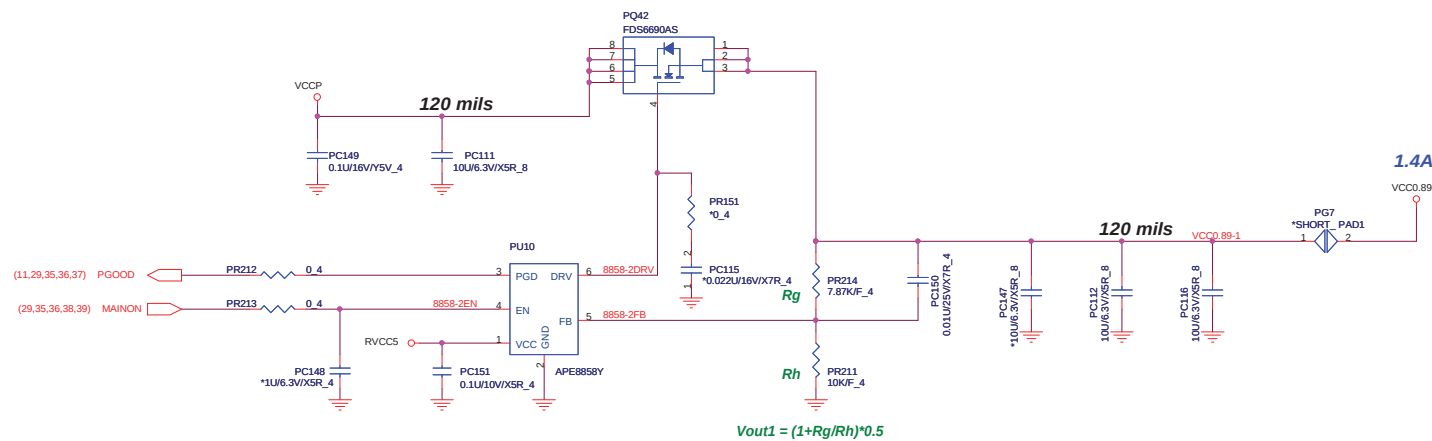
# CPU CORE



## VCC1.5

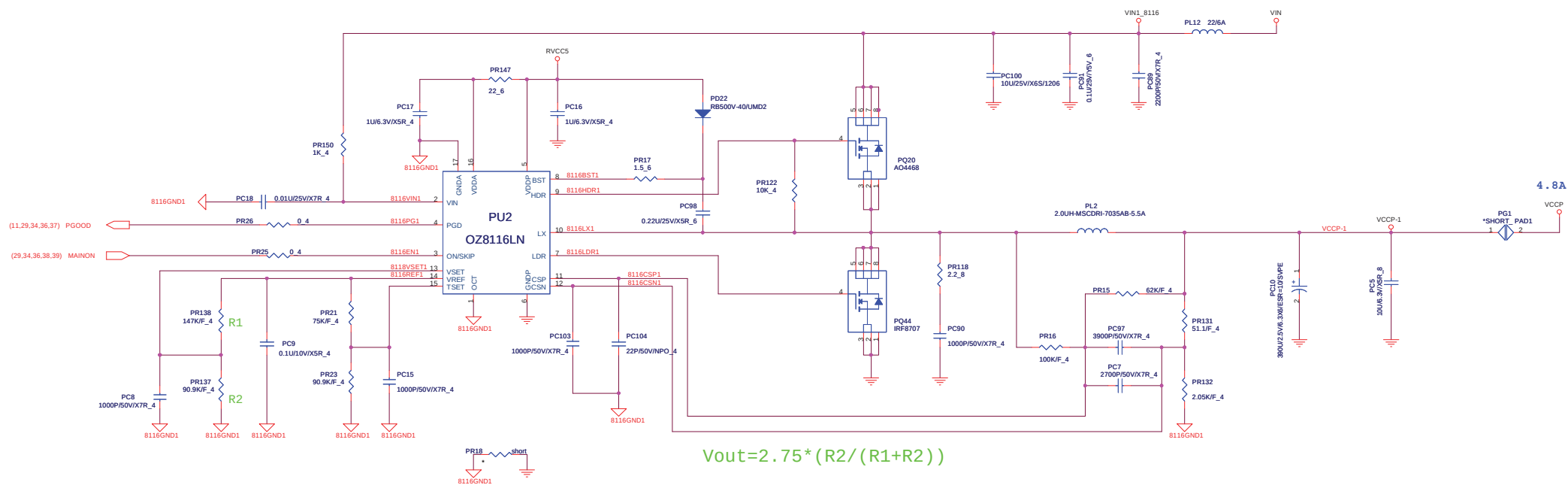


## VCC0.89



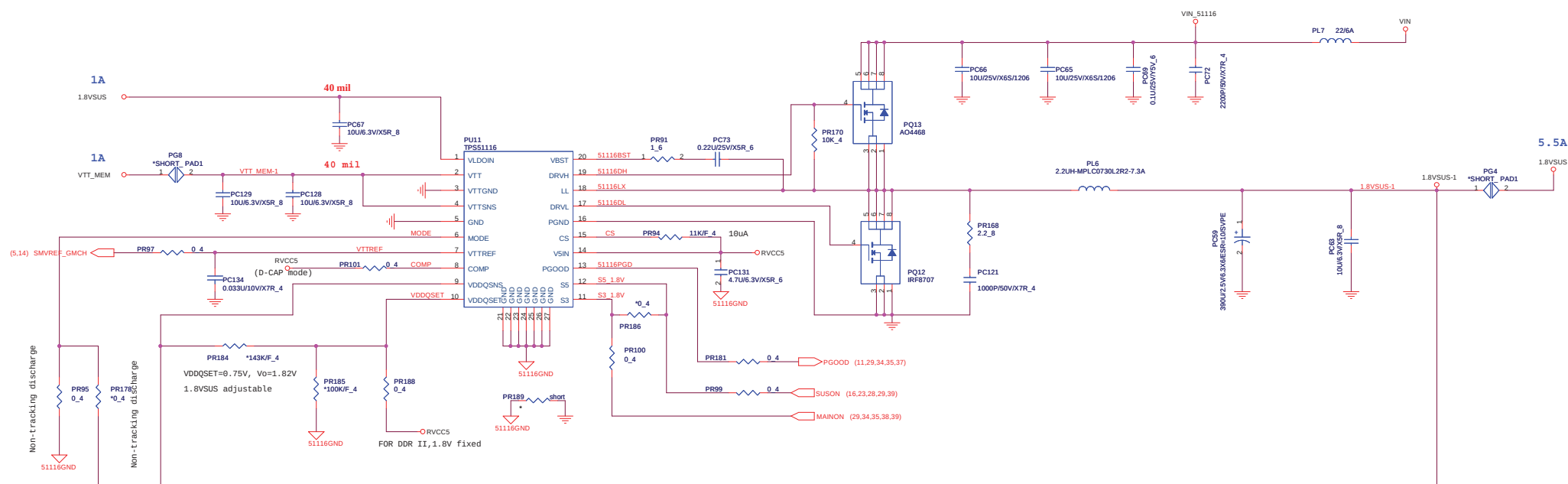
QUANTA  
COMPUTER

## VCCP



**QUANTA  
COMPUTER**

## 1.8VSUS & VTT MEM

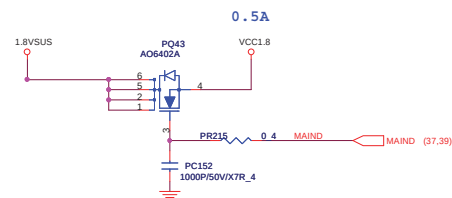


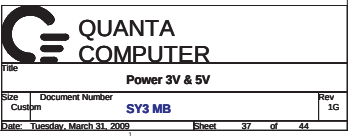
|       |                        |
|-------|------------------------|
| MODE  | DISCHARGE MODE         |
| +5V   | No discharge           |
| +1.8V | Tracking discharge     |
| GND   | Non-tracking discharge |

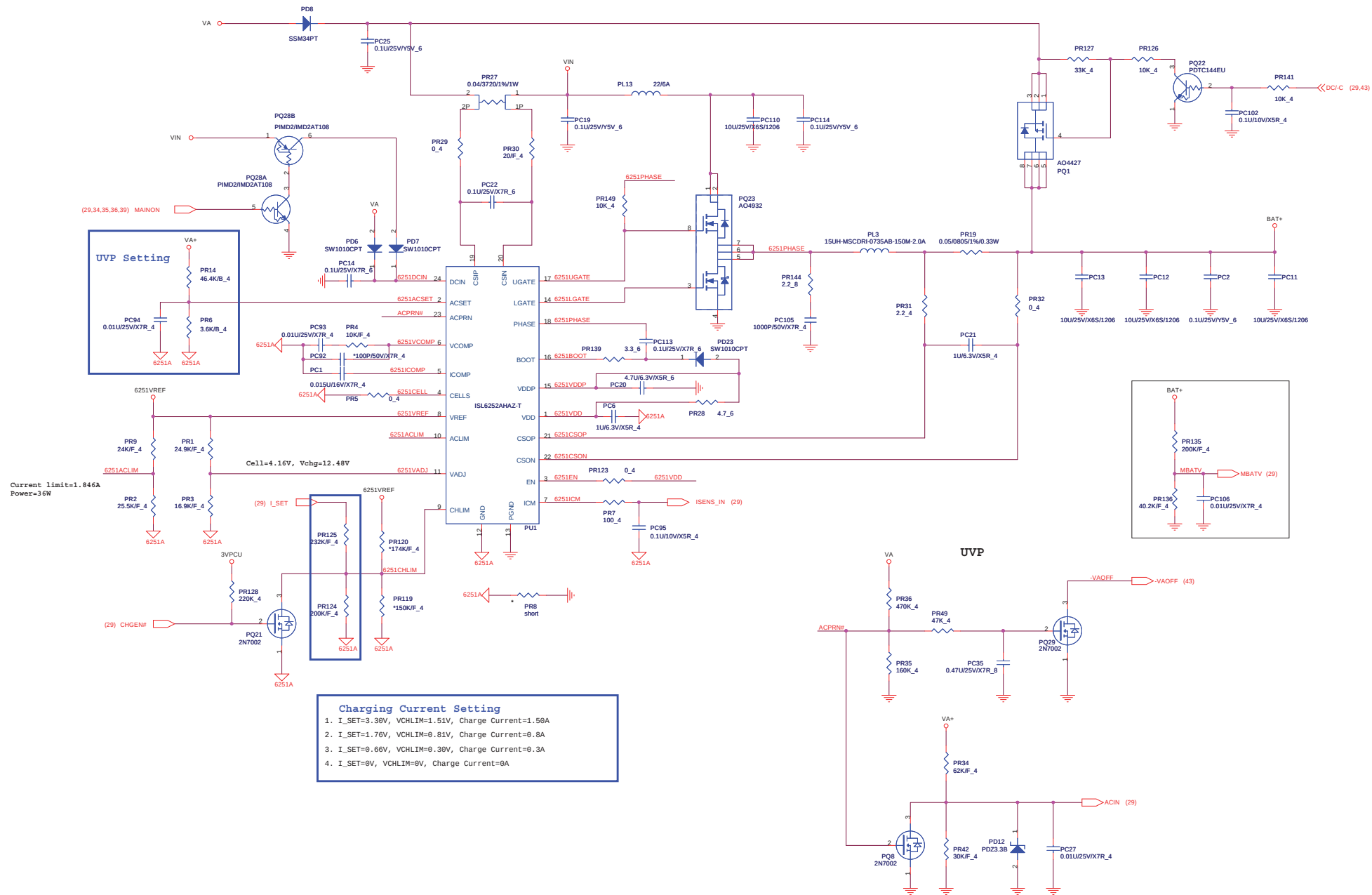
| VDDQSET     | VDDQ(V)    | VTTREF & VTT | NOTE         |
|-------------|------------|--------------|--------------|
| GND         | 2.5 fixed  | VDDQSNS/2    | DDR          |
| 5V          | 1.8 fixed  | VDDQSNS/2    | DDR2         |
| FB-Resistor | Adjustable | VDDQSNS/2    | 1.5V<VDDQ<3V |

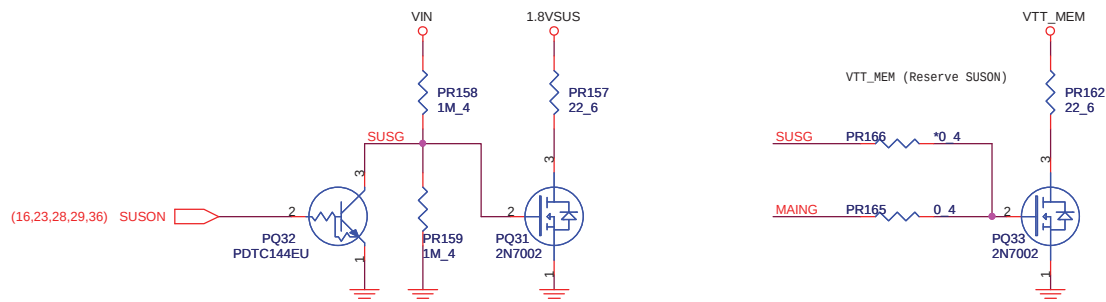
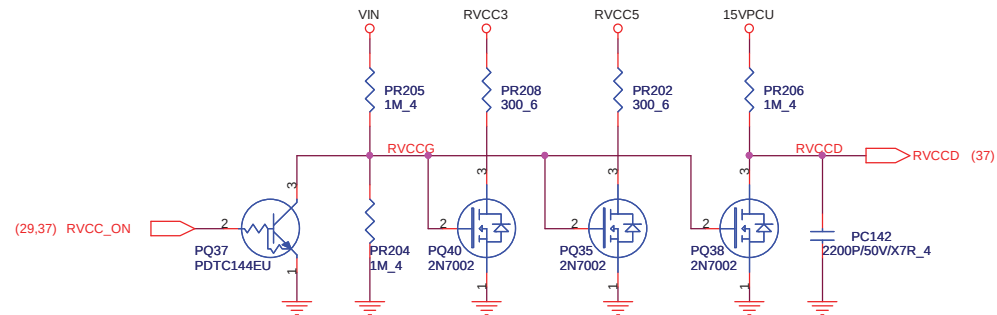
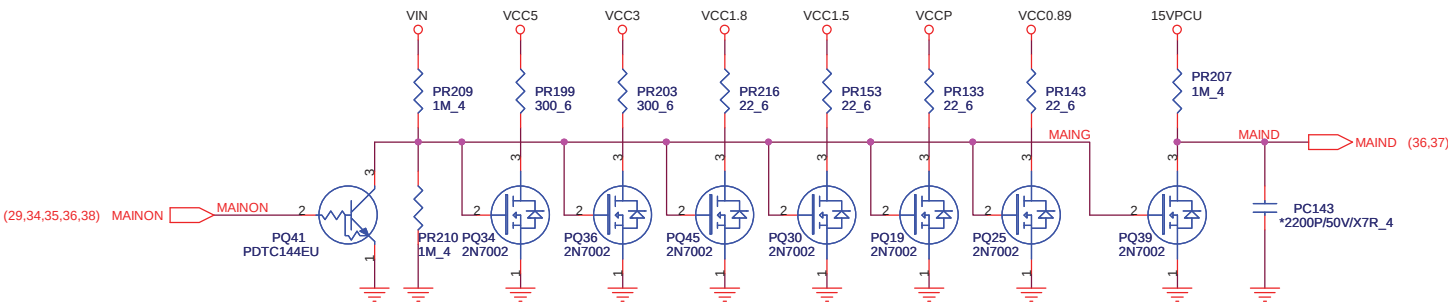
$$V_{TT} = V_{TTREF} = V_{DDQSNS}/2 = 0.9V$$

| STATE | S3 | S5 | 1.8VSUS | VTTREF | VTT |
|-------|----|----|---------|--------|-----|
| S0    | 1  | 1  | on      | on     | on  |
| S3    | 0  | 1  | on      | on     | off |
| S4/S5 | 0  | 0  | off     | off    | off |



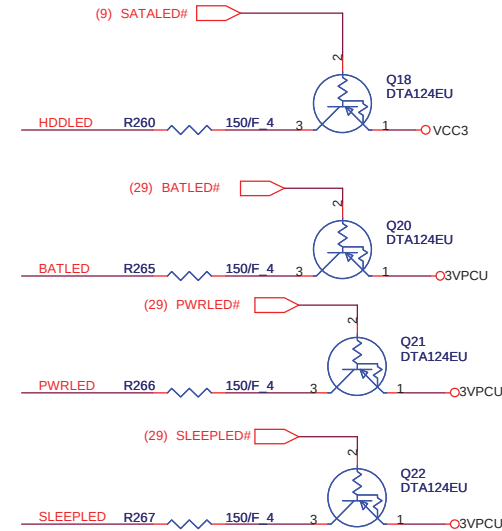






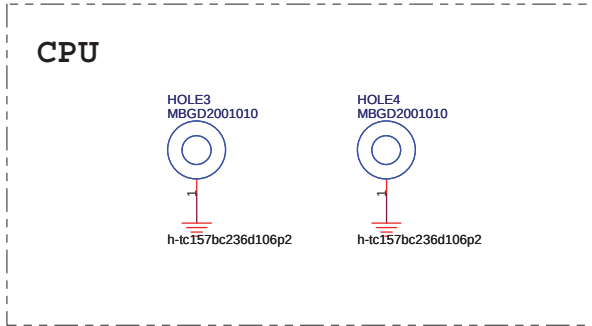
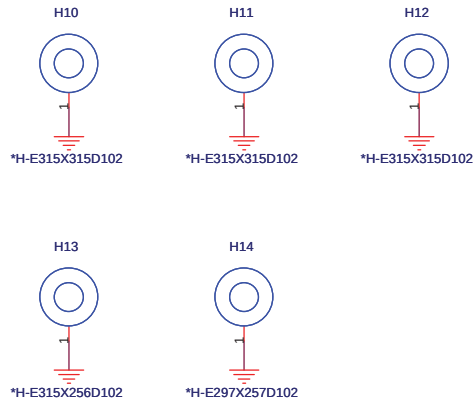
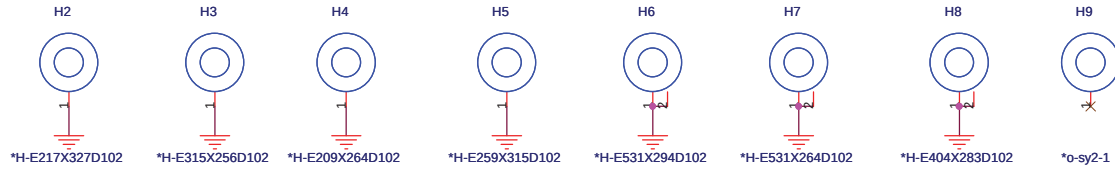
|                                                                                                                  |                 |           |          |
|------------------------------------------------------------------------------------------------------------------|-----------------|-----------|----------|
|  <b>QUANTA<br/>COMPUTER</b> |                 |           |          |
| Title                                                                                                            |                 | Discharge |          |
| Size B                                                                                                           | Document Number | SY3 MB    | Rev 1G   |
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|                                                                                                          |                           |                |
|----------------------------------------------------------------------------------------------------------|---------------------------|----------------|
|  QUANTA<br>COMPUTER |                           |                |
| Title<br>XDP                                                                                             |                           |                |
| Size<br>A                                                                                                | Document Number<br>SY3 MB | Rev<br>1G      |
| Date: Tuesday, March 31, 2009                                                                            |                           | Sheet 40 of 44 |



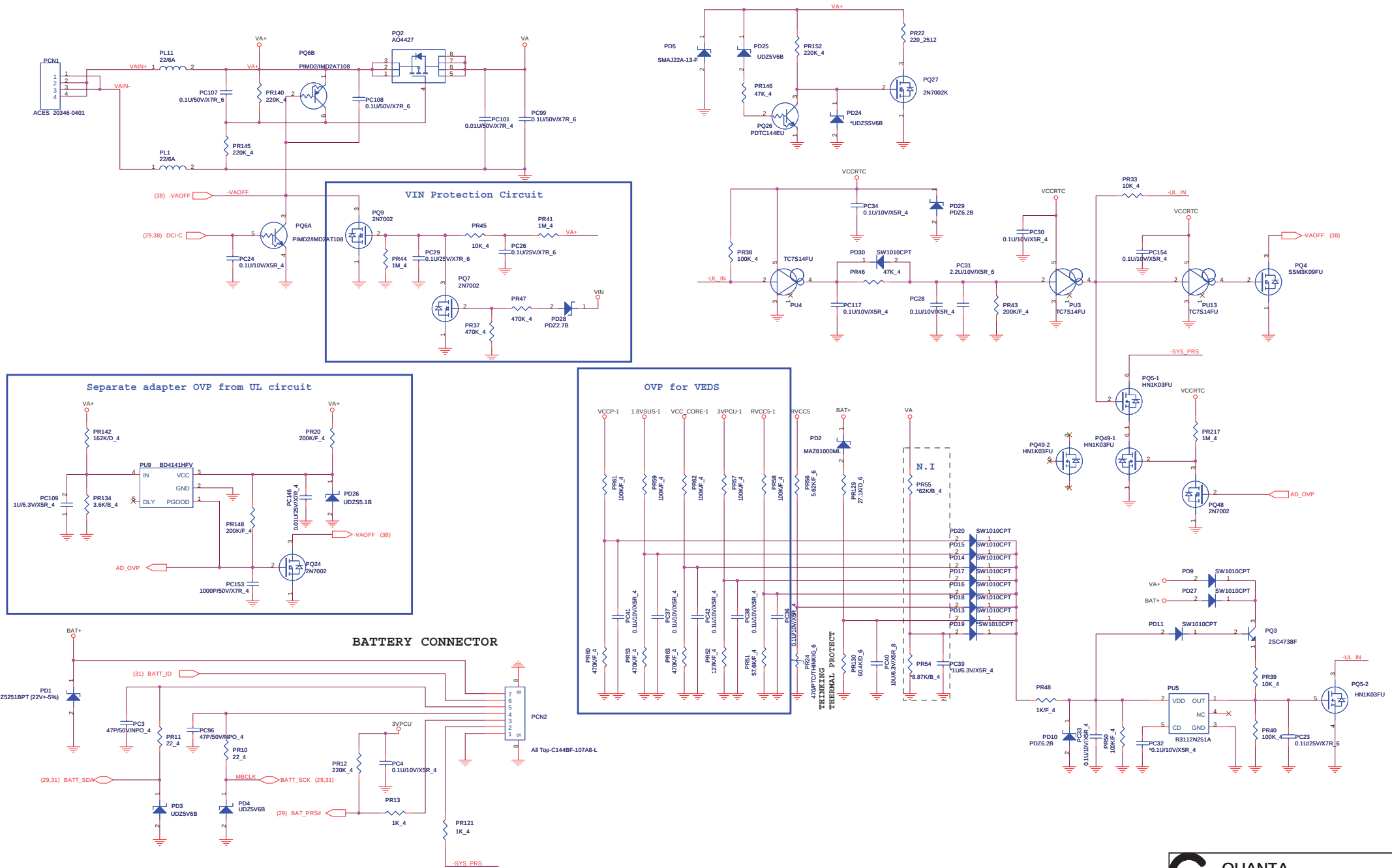
1E: change to the same one with TP board

```
"Power, S0 (green), S3 (Umber flash), S4 (off), S5 (off)
"Charger status in Umber color, Charge (on), Error (flash quickly)
"HDD status, LED in yellow color
"Caps Lock/Num Lock/Scroll Lock in green color
"Wireless status in green color
"Memory Stick Duo/SD Card status in yellow color
"Camera status in green color (on Camera module)
```

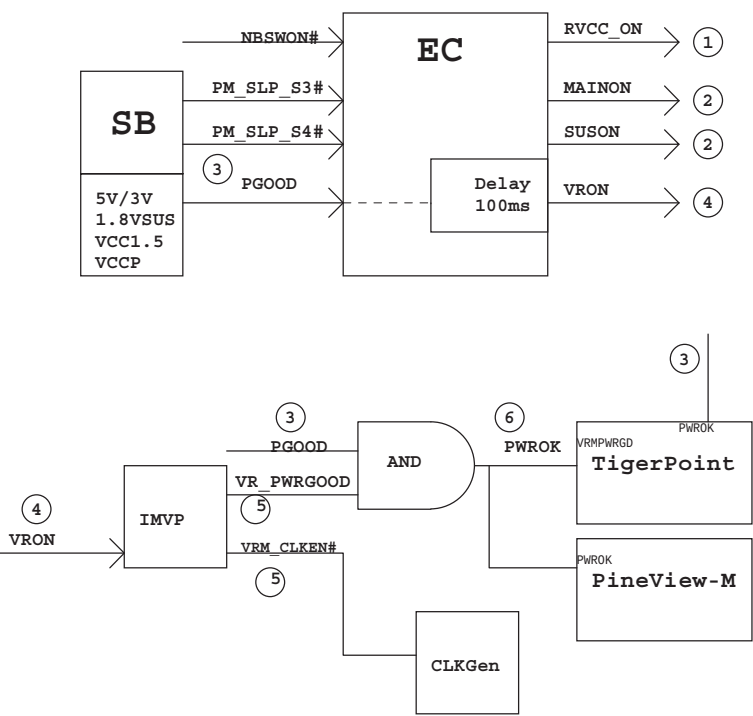


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|                                                                                                                  |                                  |                |
|------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|
|  <b>QUANTA<br/>COMPUTER</b> |                                  |                |
| Title<br><b>Screw Hole</b>                                                                                       |                                  |                |
| Size<br>B                                                                                                        | Document Number<br><b>SY3 MB</b> | Rev<br>1G      |
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SY3 Power-up Block



| Power State Table |    |     |     |     |          |    |     |     |     |
|-------------------|----|-----|-----|-----|----------|----|-----|-----|-----|
| AC Mode           | S0 | S3  | S4  | S5  | BATT     | S0 | S3  | S4  | S5  |
| 6237LDO5          | ON | ON  | ON  | ON  | 6237LDO5 | ON | ON  | ON  | ON  |
| 3VPCU             | ON | ON  | ON  | ON  | 3VPCU    | ON | ON  | ON  | ON  |
| RVCC5             | ON | ON  | ON  | OFF | RVCC5    | ON | ON  | OFF | OFF |
| RVCC3             | ON | ON  | ON  | OFF | RVCC3    | ON | ON  | OFF | OFF |
| 1.8VSUS           | ON | ON  | OFF | OFF | 1.8VSUS  | ON | ON  | OFF | OFF |
| VCC5              | ON | OFF | OFF | OFF | VCC5     | ON | OFF | OFF | OFF |
| VCC3              | ON | OFF | OFF | OFF | VCC3     | ON | OFF | OFF | OFF |
| VCC1.8            | ON | OFF | OFF | OFF | VCC1.8   | ON | OFF | OFF | OFF |
| VCCP              | ON | OFF | OFF | OFF | VCCP     | ON | OFF | OFF | OFF |
| VCC_CORE          | ON | OFF | OFF | OFF | VCC_CORE | ON | OFF | OFF | OFF |

SY3 Power-up Sequencing

