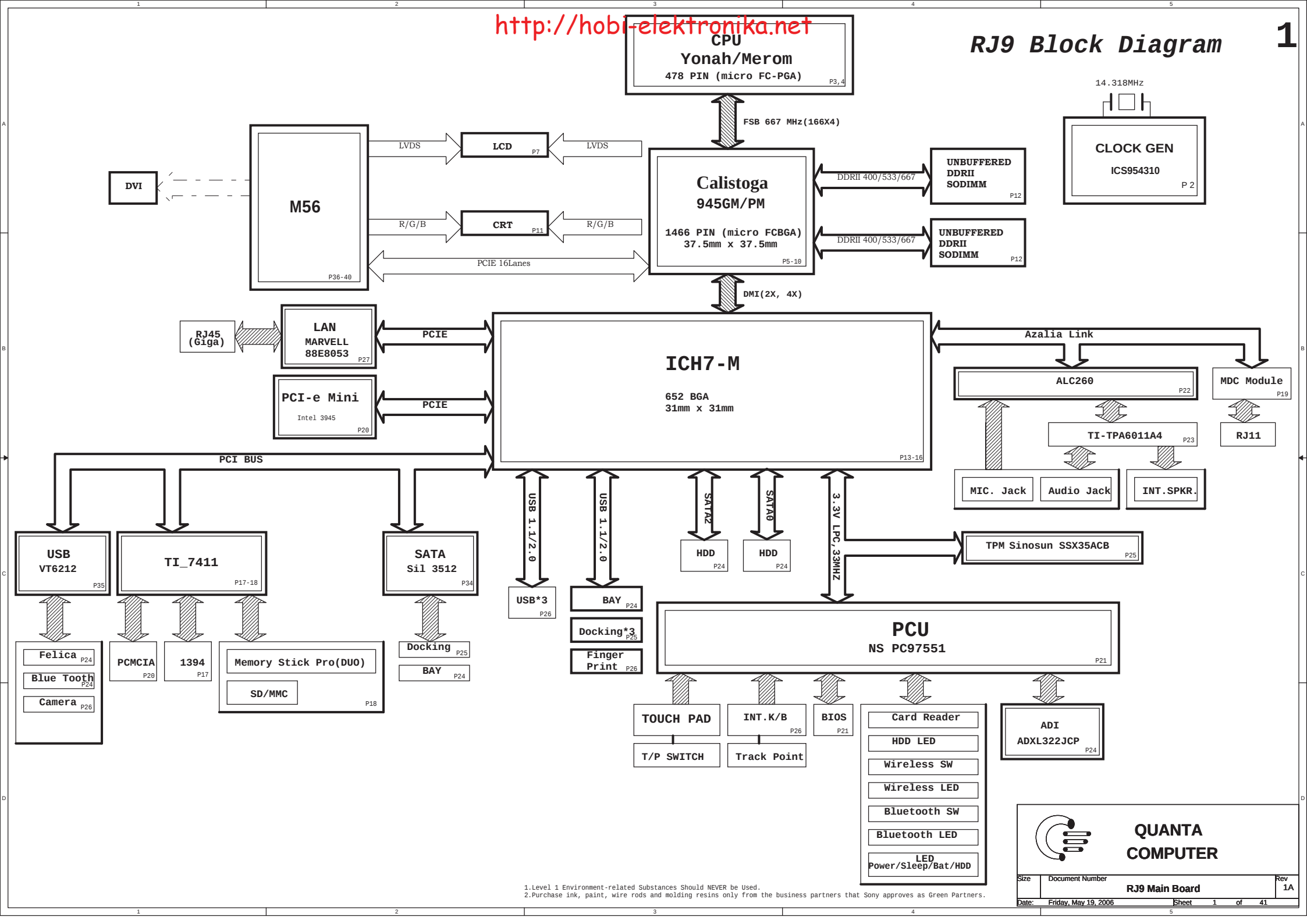




1. Level 1 Environment-related Substances Should NEVER be Used.  
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.



| Signal       |      | 945GM  | 945PM |
|--------------|------|--------|-------|
|              | R578 | NI     | 71.5  |
| CLK_PCTE_M56 | RP32 | NI     | 33X2  |
|              | RP49 | NI     | 49.9  |
| DREFSSCLK    | RP36 | 33X2   | NI    |
|              | RP52 | 49.9X2 | NI    |
|              | R528 | NI     | 121   |
|              | R529 | NI     | 33    |
| DREFCLK      | RP37 | 33X2   | NI    |
|              | RP53 | 49.9X2 | NI    |
| R_PCLK_ICH   | R6   | NI     | 10K   |

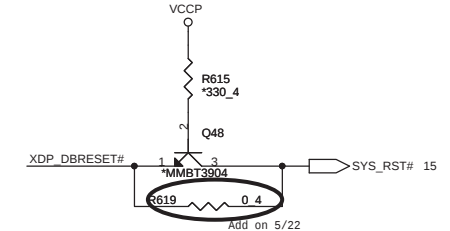


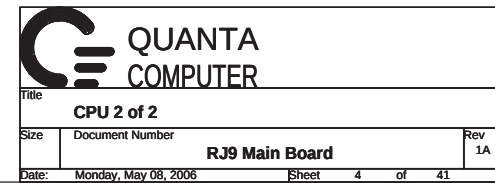
QUANTA  
COMPUTER

Title **CLOCK GENERATOR**

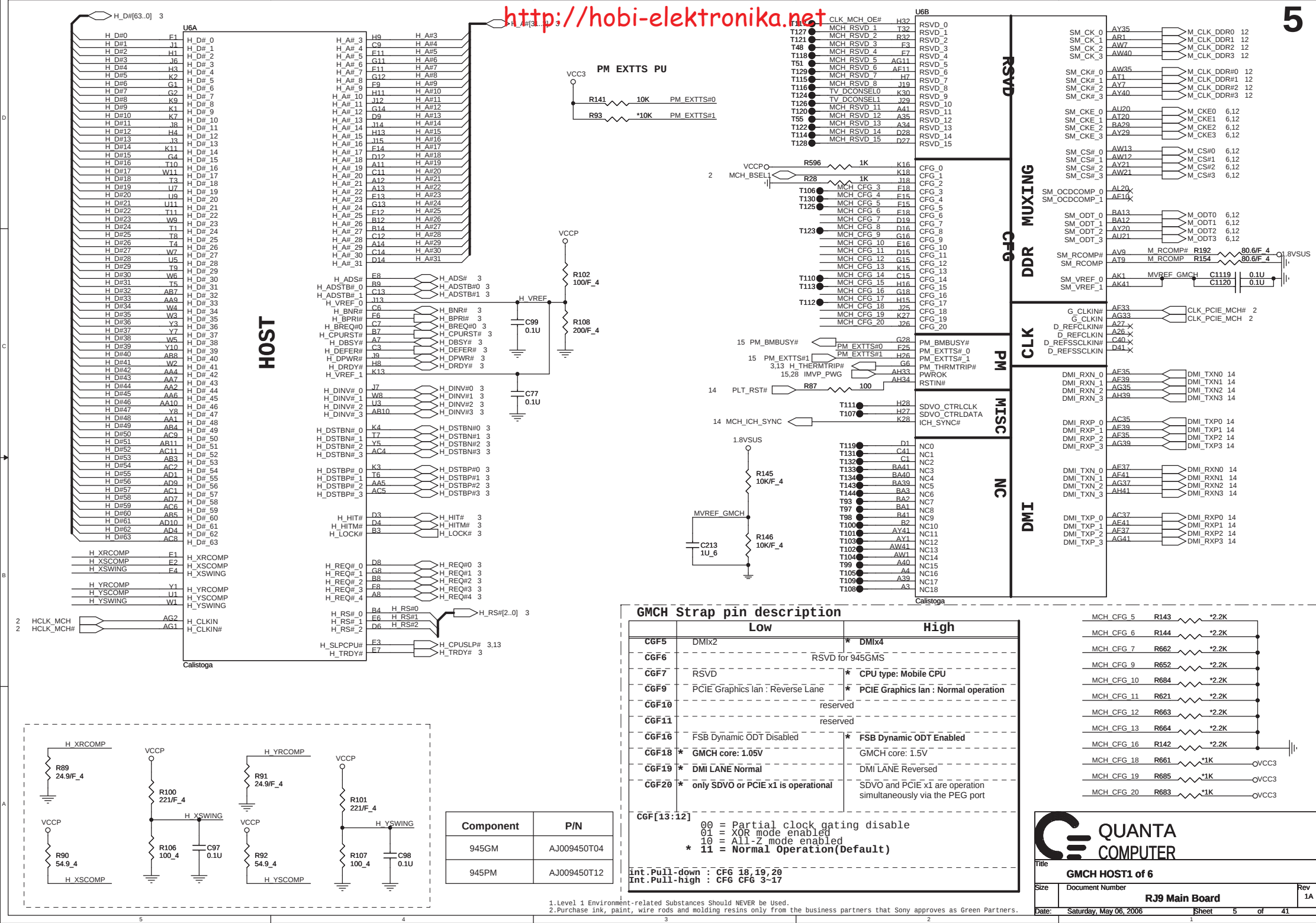
|        |                       |
|--------|-----------------------|
| Size   | Document Number       |
| Custom | <b>RJ9 Main Board</b> |

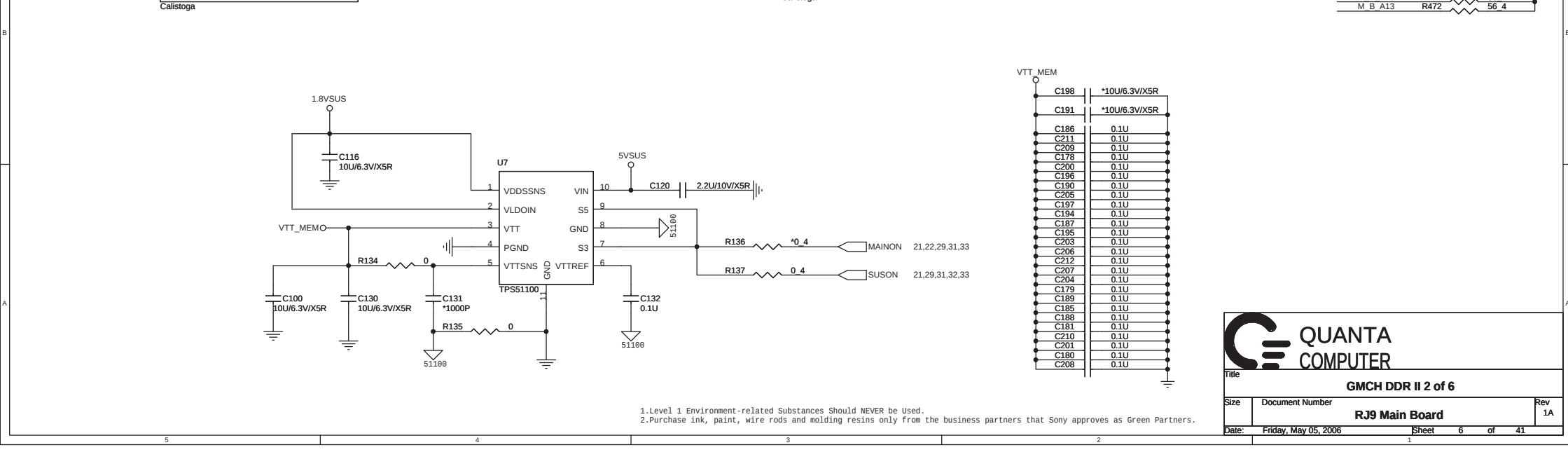
Date: Tuesday, May 23, 2006 Sheet 2 of 41

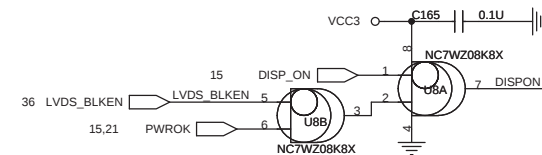
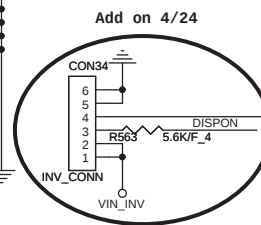
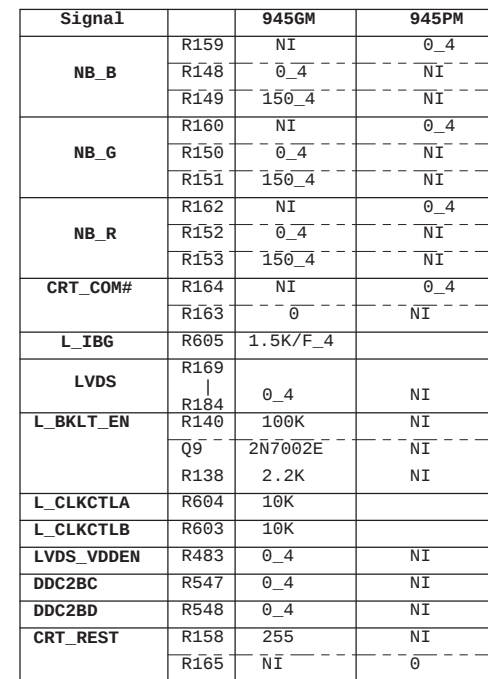


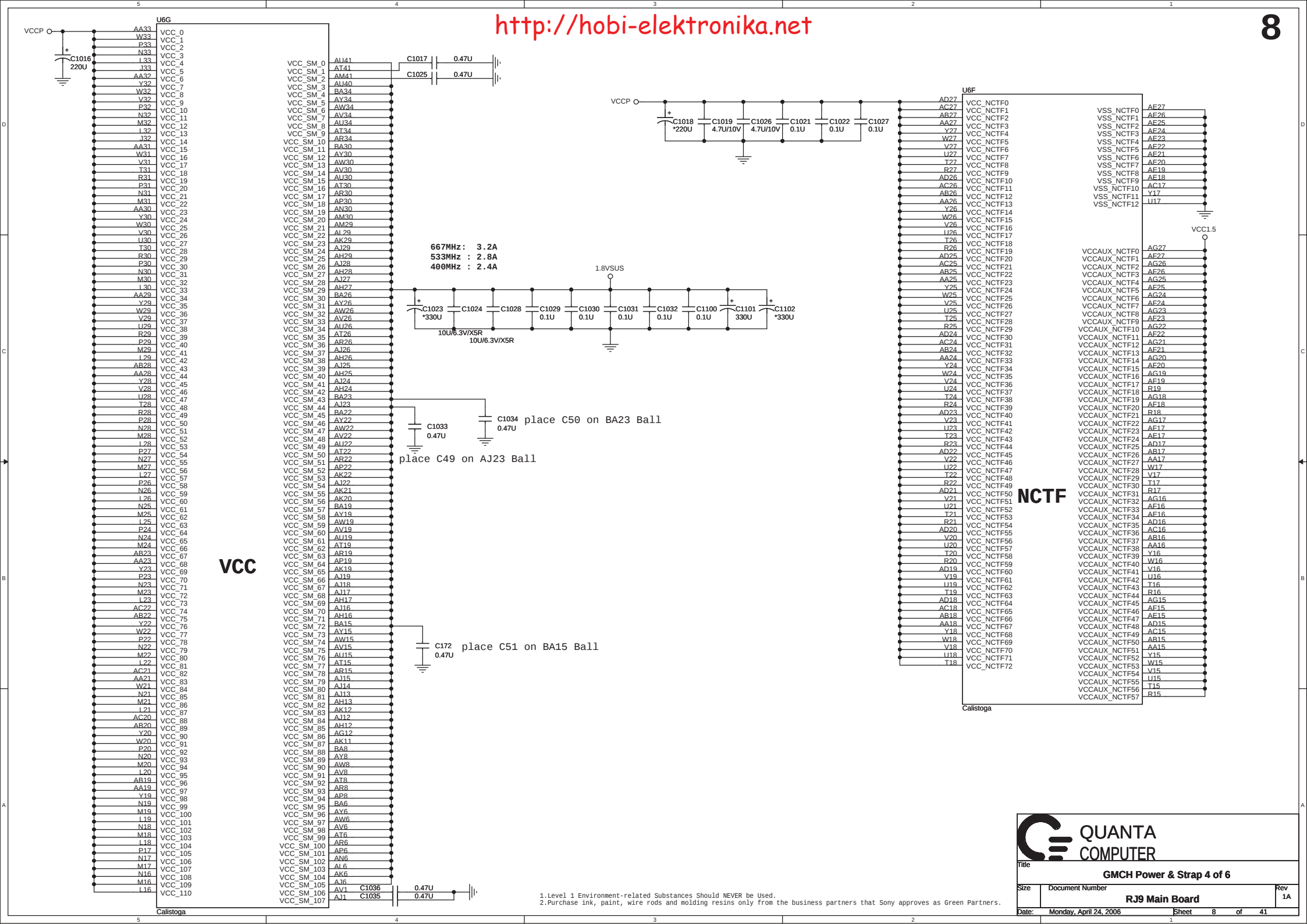


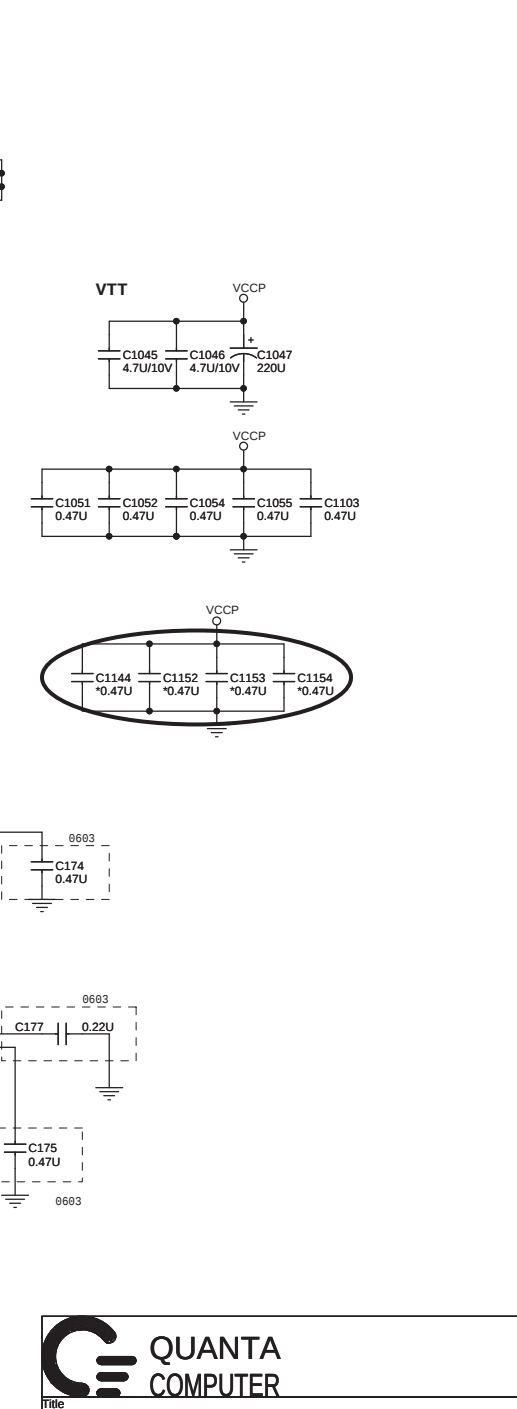
|            |                      |       |         |
|------------|----------------------|-------|---------|
| Title      |                      |       |         |
| CPU 2 of 2 |                      |       |         |
| Size       | Document Number      | Rev   |         |
|            | RJ9 Main Board       | 1A    |         |
| Date:      | Monday, May 08, 2006 | Sheet | 4 of 41 |



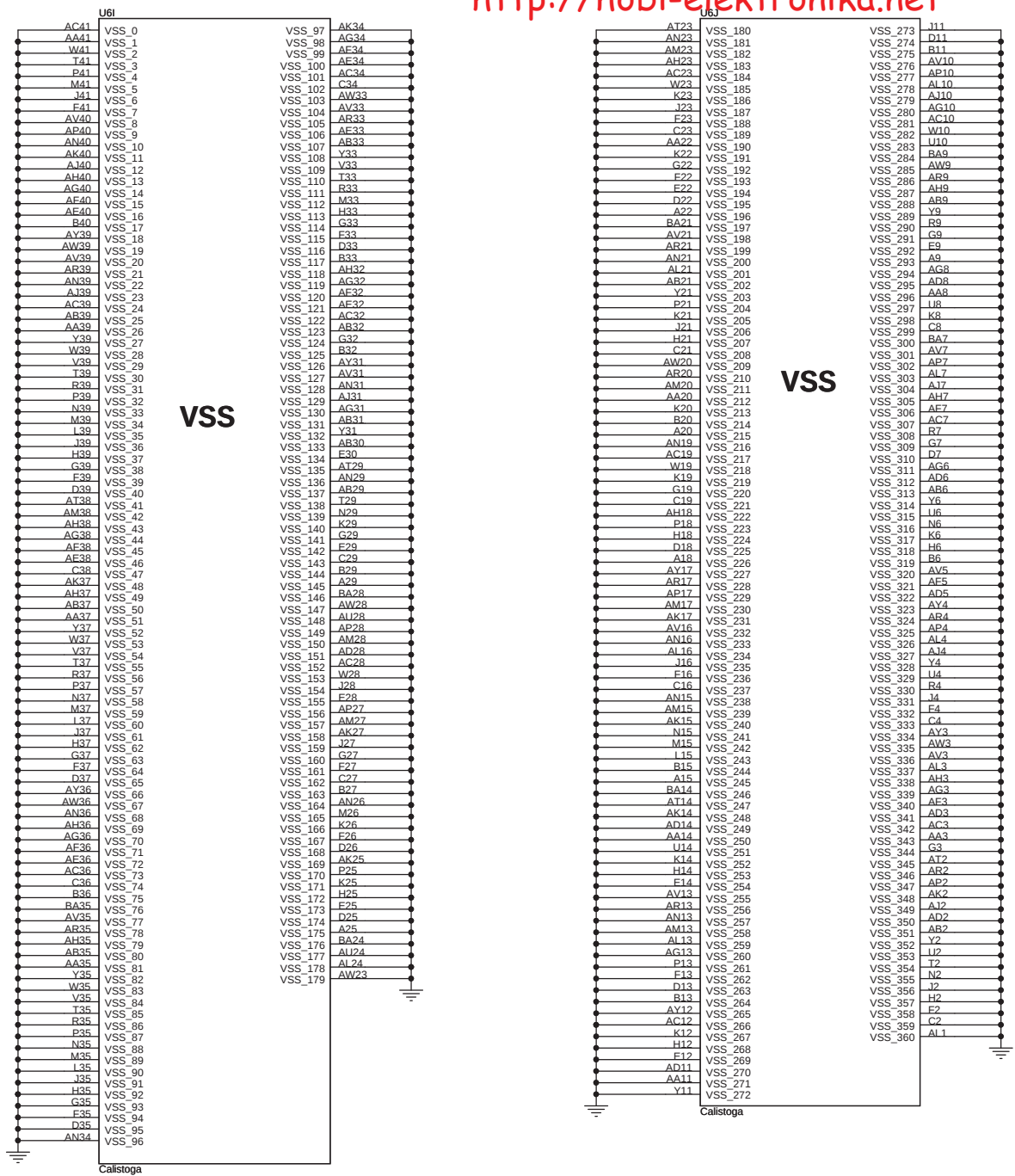






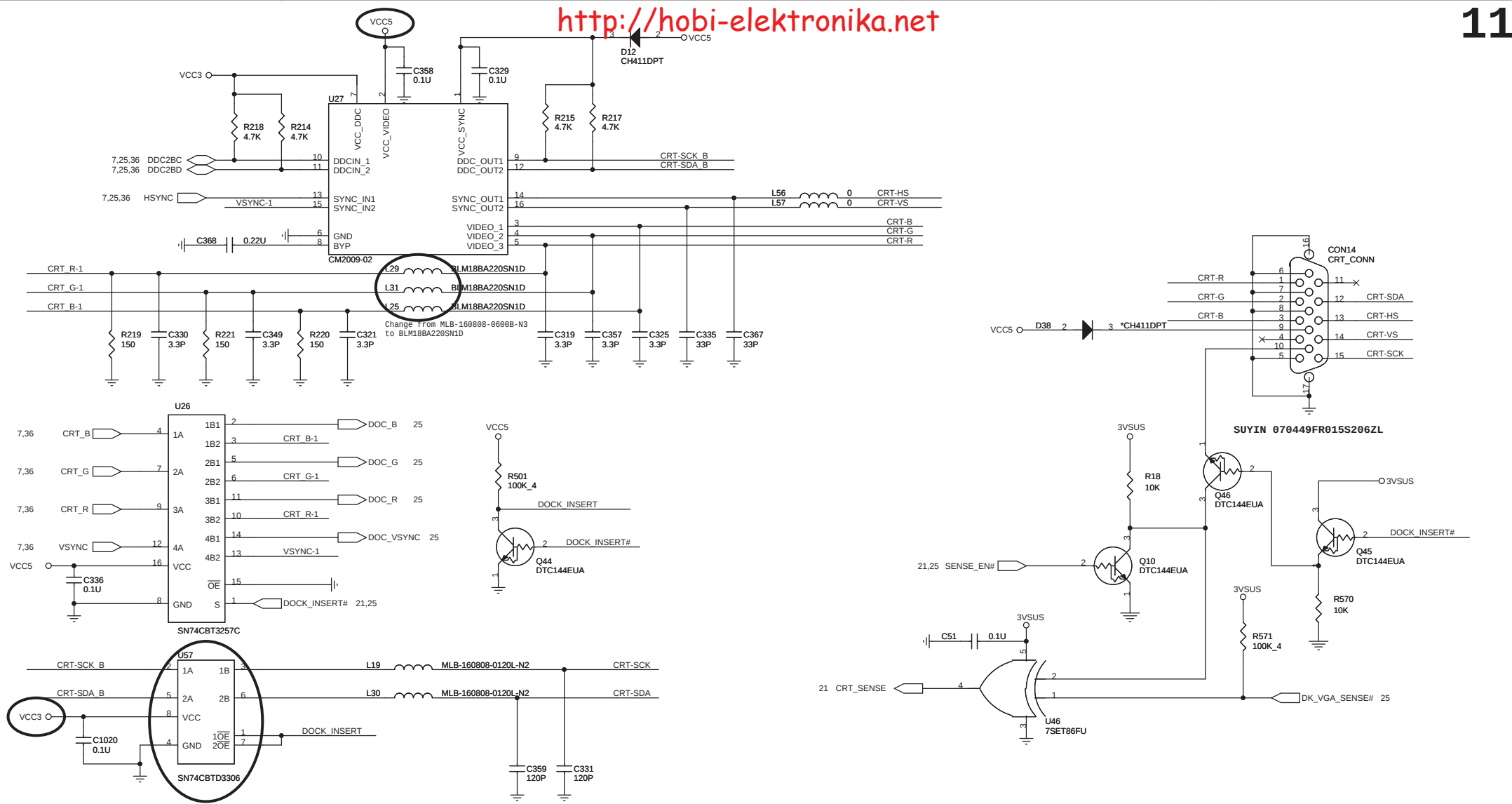


- 1.Level 1 Environment-related Substances Should NEVER be Used.
- 2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.



|                 |                        |  |                |
|-----------------|------------------------|--|----------------|
|                 |                        |  |                |
| Title           |                        |  |                |
| GMCH GND 6 of 6 |                        |  |                |
| Size            | Document Number        |  | Rev            |
|                 | RJ9 Main Board         |  | 1A             |
| Date            | Monday, March 27, 2006 |  | Sheet 10 of 41 |

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.



|                      | SENSE_EN# | MB CRT | DOCK CRT | DOCK DVI | CRT_SENSE |
|----------------------|-----------|--------|----------|----------|-----------|
| All no Plug          | L         | H      | H        | L        | L         |
| MB CRT Plug          | L         | L      | H        | L        | H         |
| DOCK CRT Plug        | L         | H      | L        | L        | H         |
| DOCK DVI Plug        | L         | H      | H        | H        | H         |
| SENSE EN             | H         | X      | X        | X        | L         |
| DOCK CRT/DVI Plug    | L         | H      | L        | H        | L         |
| DOCK CRT/MB CRT Plug | L         | L      | L        | L        | L         |

7SET86FU

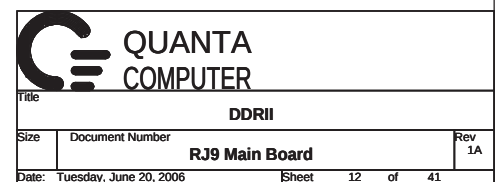
| A | B | Y |
|---|---|---|
| H | H | L |
| H | L | H |
| L | H | H |
| L | L | L |

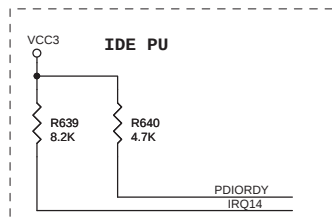
QUANTA  
COMPUTER

Title: CRT

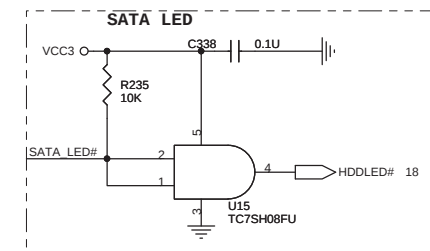
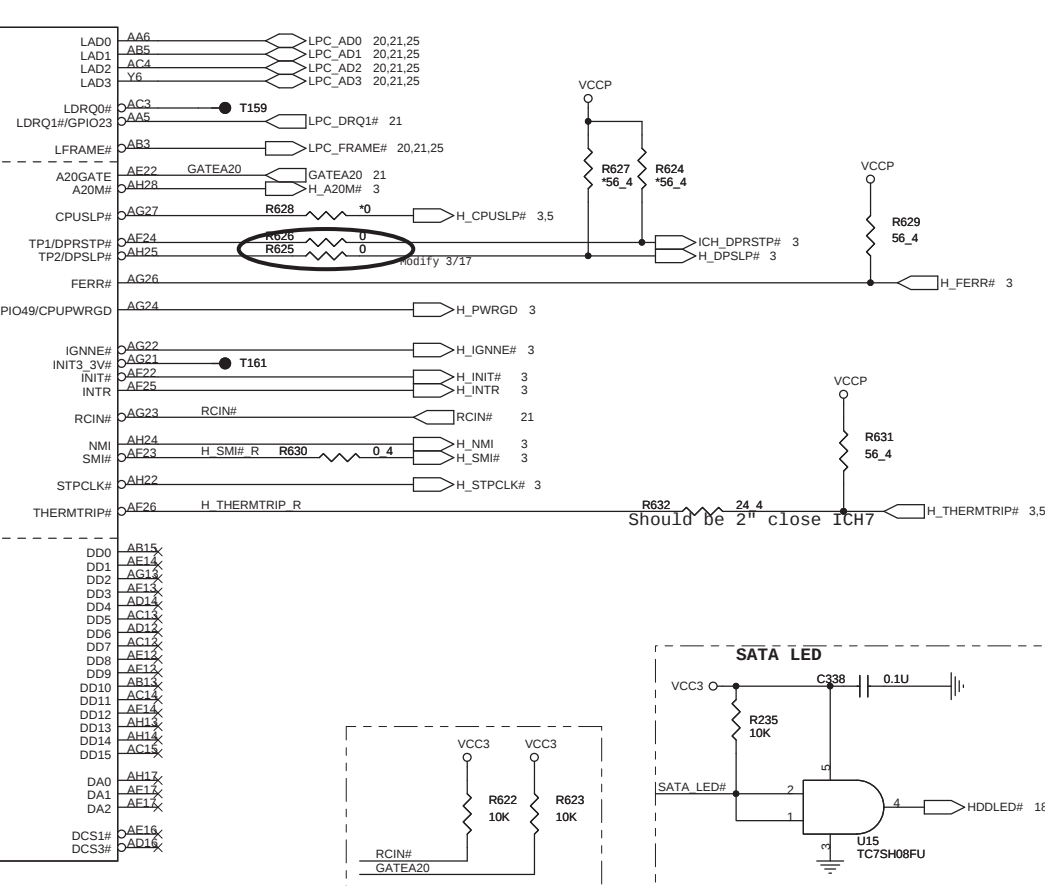
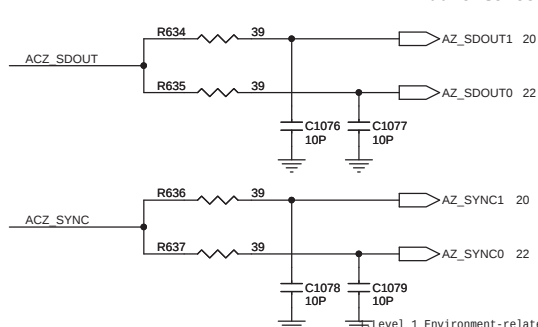
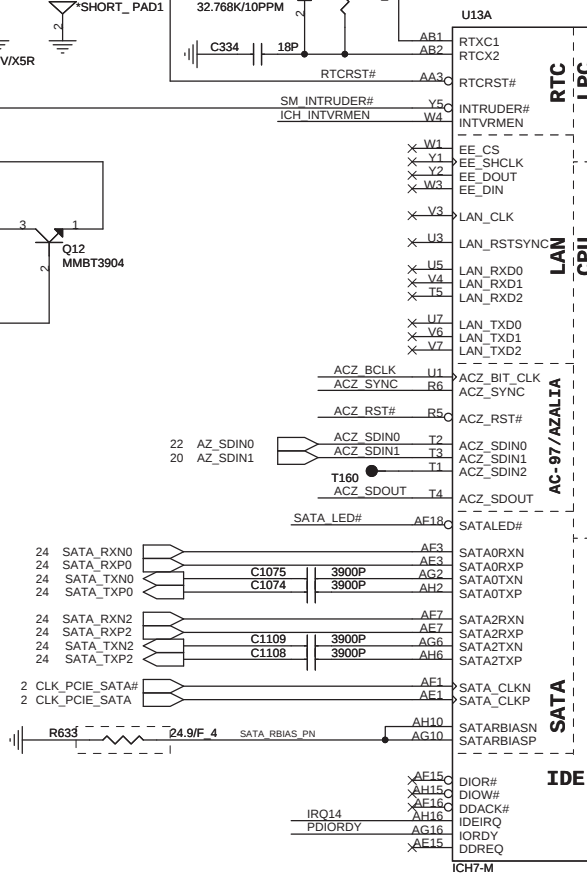
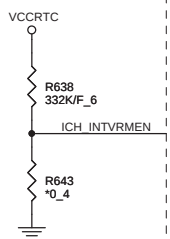
|                             |                 |        |
|-----------------------------|-----------------|--------|
| Size                        | Document Number | Rev 1A |
| R99 Main Board              |                 |        |
| Date: Tuesday, May 23, 2006 | Sheet 11 of 41  |        |

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 (default) | 1        |
| Disable          | 0        |





|                  | STRAP | GNT5#<br>R1 | GNT4#<br>R2 |
|------------------|-------|-------------|-------------|
| LPC<br>(default) | 11    | UNSTUFF     | UNSTUFF     |
| PCI              | 10    | UNSTUFF     | STUFF       |
| SPI              | 01    | STUFF       | UNSTUFF     |

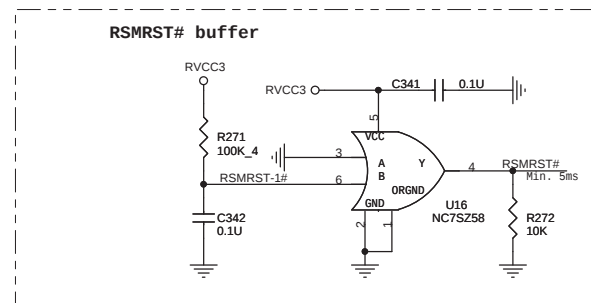
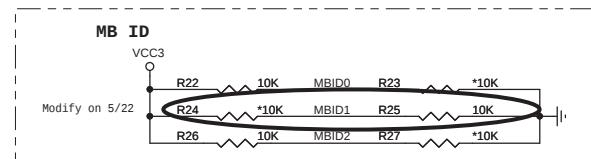
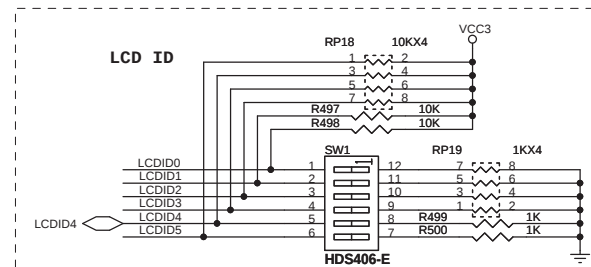
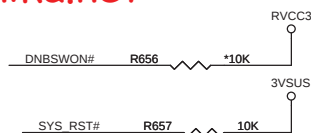
| PCI DEVICE | IDSEL# | REQ# / GNT#   | Interrupts |
|------------|--------|---------------|------------|
| PCI7411    | AD25   | REQ0# / GNT0# | PIRQ E/F/H |
| MINI-PCI_A | AD26   | REQ3# / GNT3# | PIRQ C/H   |
| Sil3512    | AD24   | REQ2# / GNT2# | PIRQ B     |
| VT6212     | AD27   | REQ1# / GNT1# | PIRQ A/D   |



ICH7-M PCIe 2 of 4

### RJ9 Main Board

Date: Tuesday, June 20, 2006 Sheet 14 of 41





|                        |     |
|------------------------|-----|
| Document Number        | Rev |
| <b>B.19 Main Board</b> | 1A  |

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



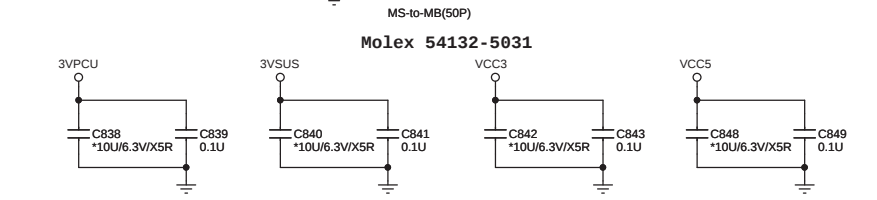
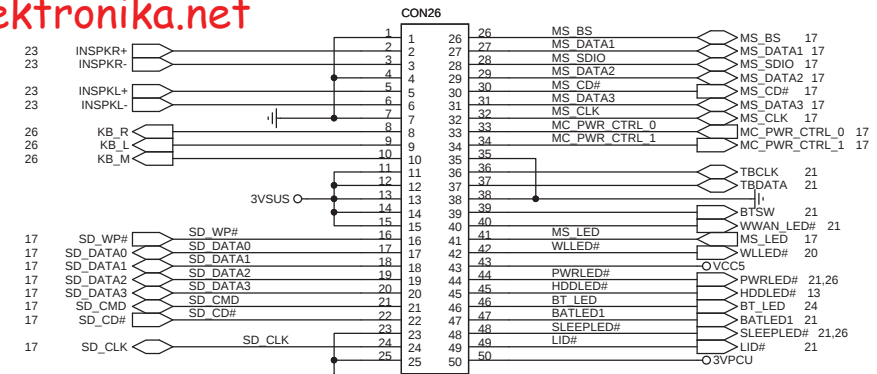
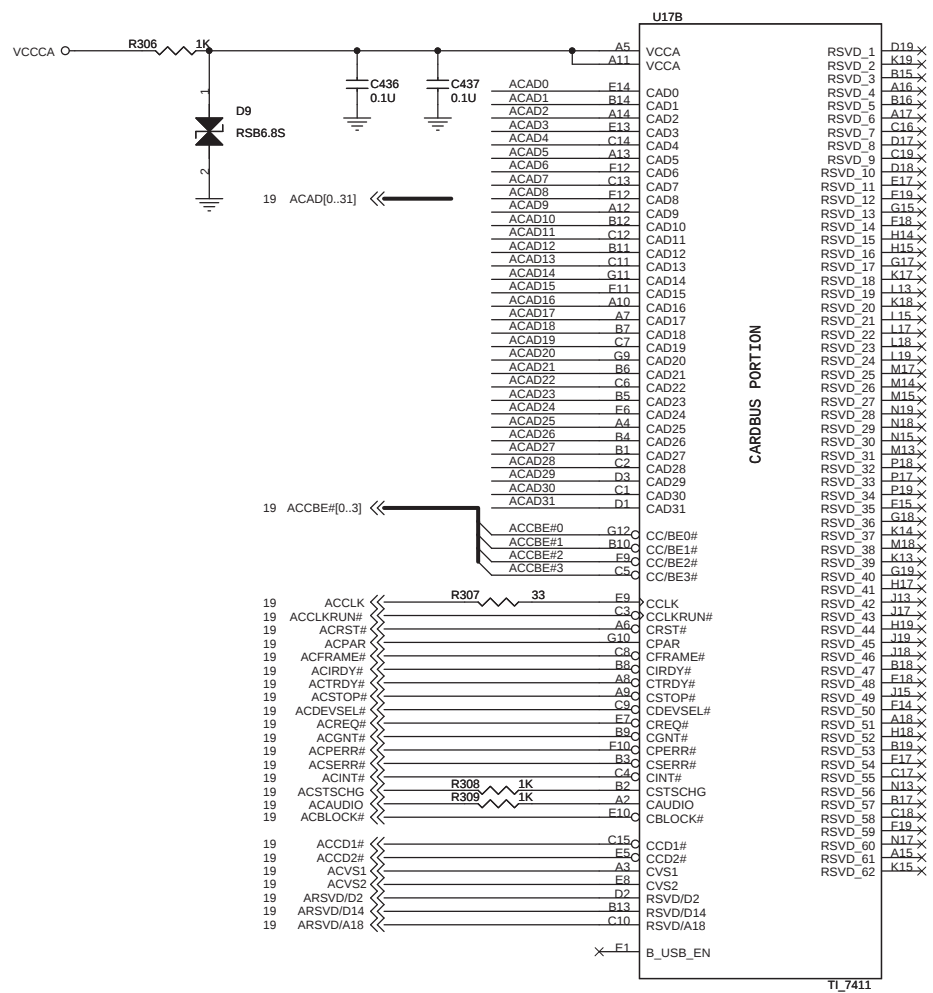
QUANTA  
COMPUTER

Title  
**TI-7411 CardBus Control -- A**

|       |                       |     |
|-------|-----------------------|-----|
| Size  | Document Number       | Rev |
| green | <b>D16 Main Board</b> | 1A  |

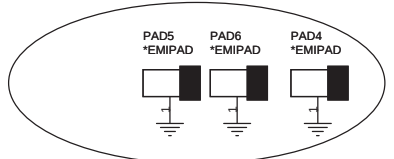
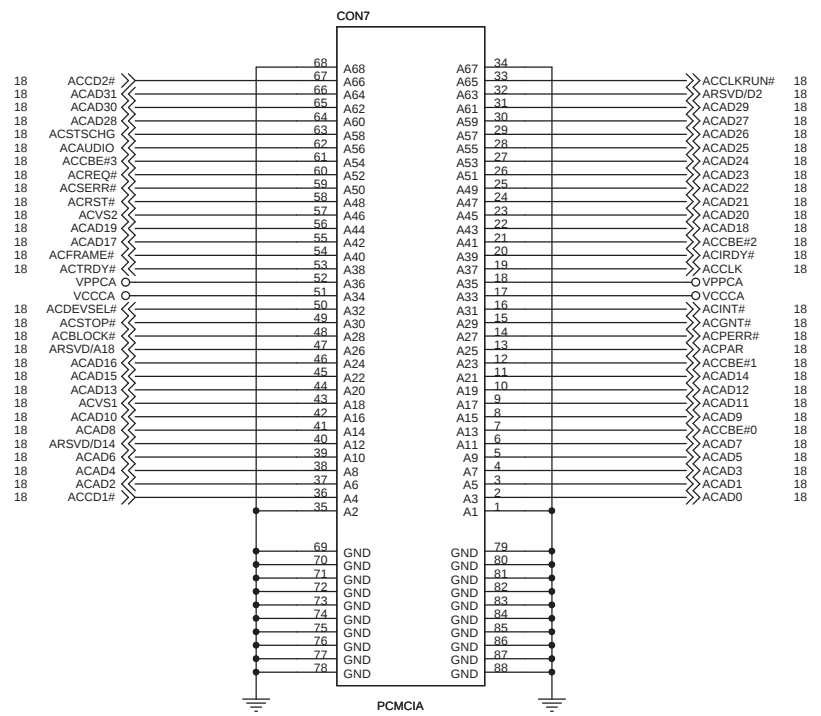
Date: Tuesday, June 20, 2006 Sheet 17 of 41

|   |   |
|---|---|
| 7 | 8 |
|---|---|

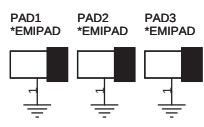


1. Level 1 Environment-related Substances Should NEVER be Used.  
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

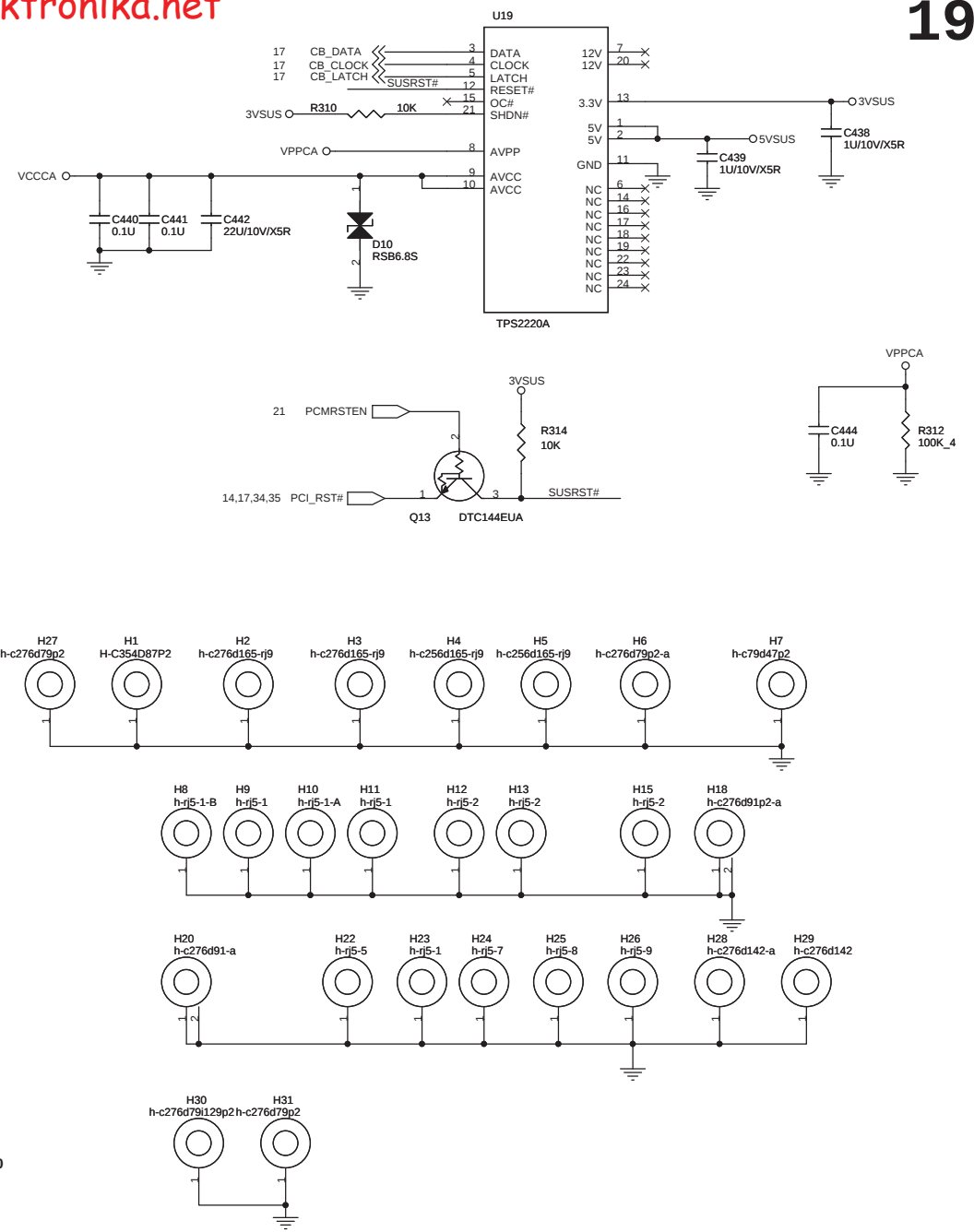
18 ACAD[0..31] <<==  
18 ACCBE#[0..3] <<==



For Docking



Reserve for EMI 3/30





QUANTA  
COMPUTER

Title

CARBUS SLOT

Size

Document Number

RJ9 Main Board

Date: Tuesday, June 20, 2006

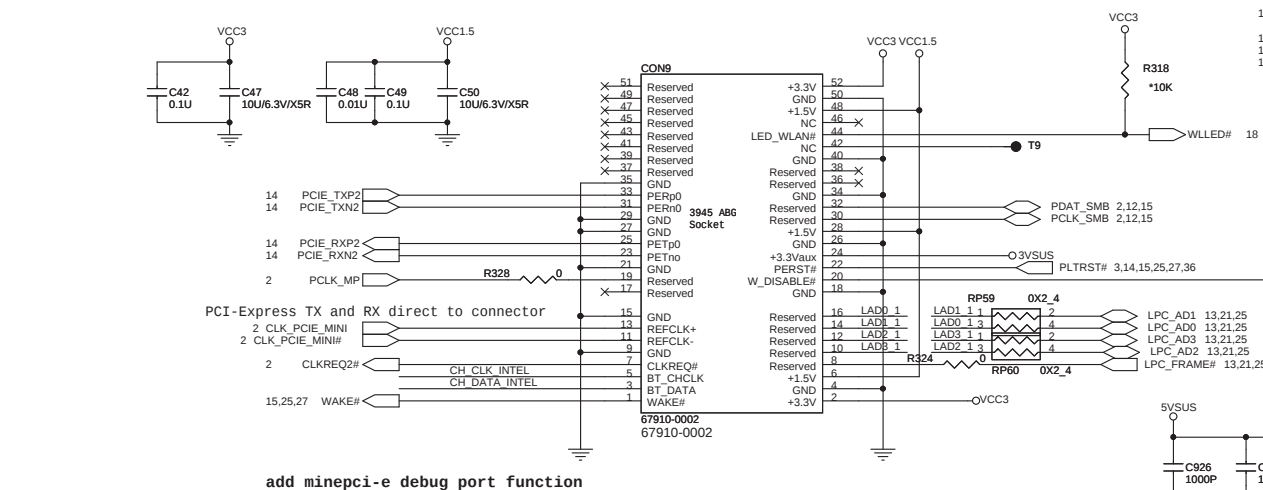
Sheet 19 of 41

Rev 1A

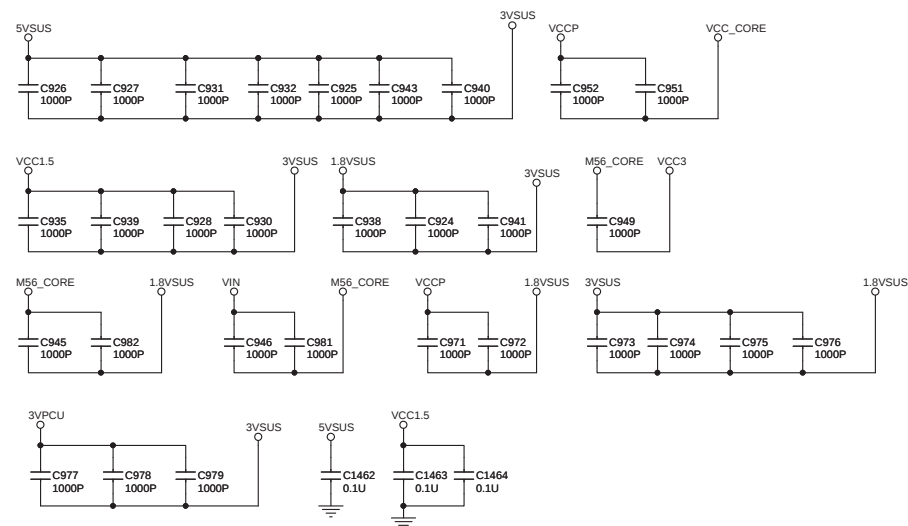
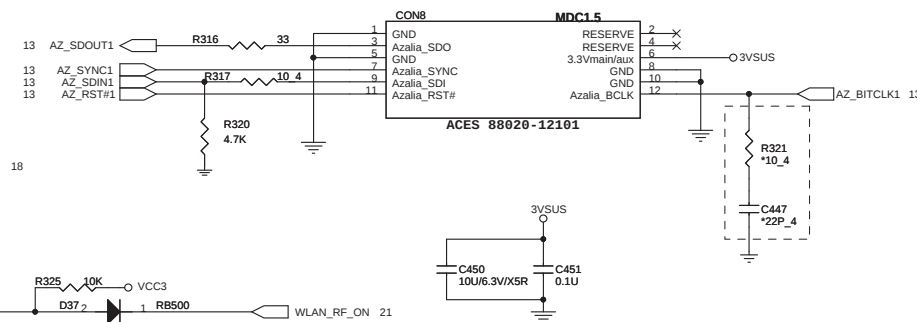
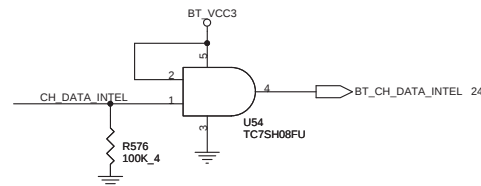
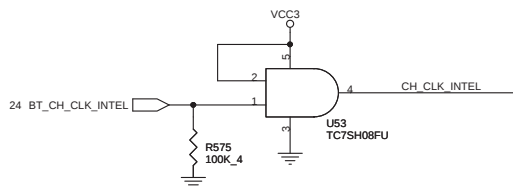
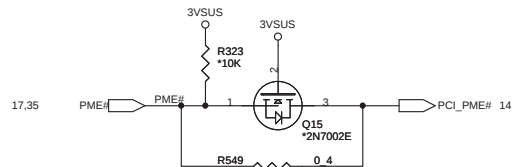
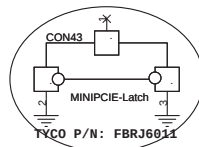
1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

```
WLSW:
Low : disable the radio.
High : Enable the radio.
```

### Mini PCI-E Card



```
add minepci-e debug port function
```



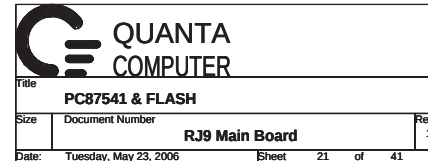
Title **MINIPCI /MDC**

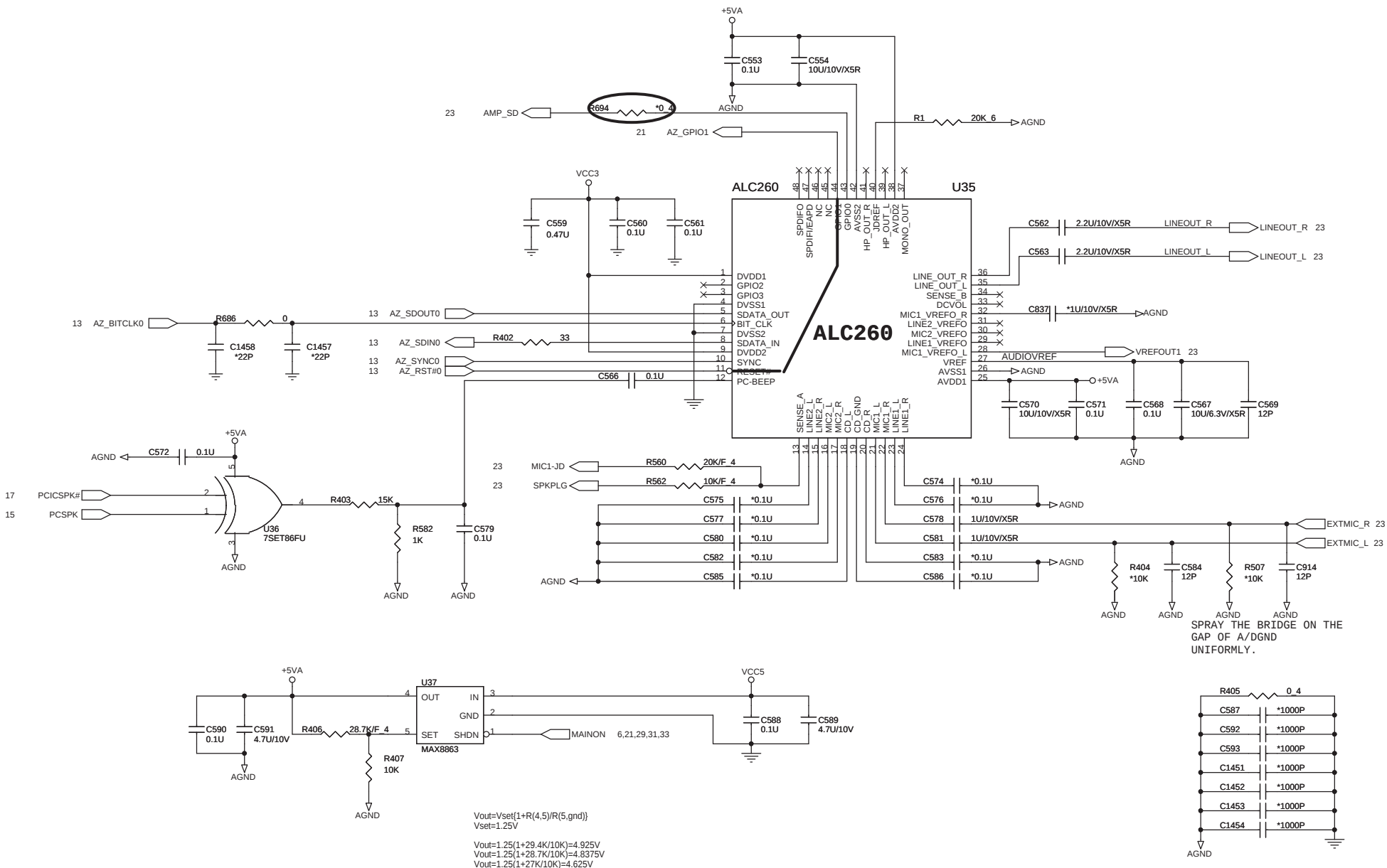
|      |                       |
|------|-----------------------|
| Size | Document Number       |
|      | <b>RJ9 Main Board</b> |

Date: Friday, May 19, 2006 Sheet 20 of 41

|   |   |
|---|---|
| 7 | 8 |
|---|---|

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





$$V_{out} = V_{set} \left( 1 + R(4,5) / R(5, gnd) \right)$$

$$V_{set} = 1.25V$$

$$V_{out} = 1.25 \left( 1 + 29.4K / 10K \right) = 4.925V$$

$$V_{out} = 1.25 \left( 1 + 28.7K / 10K \right) = 4.8375V$$

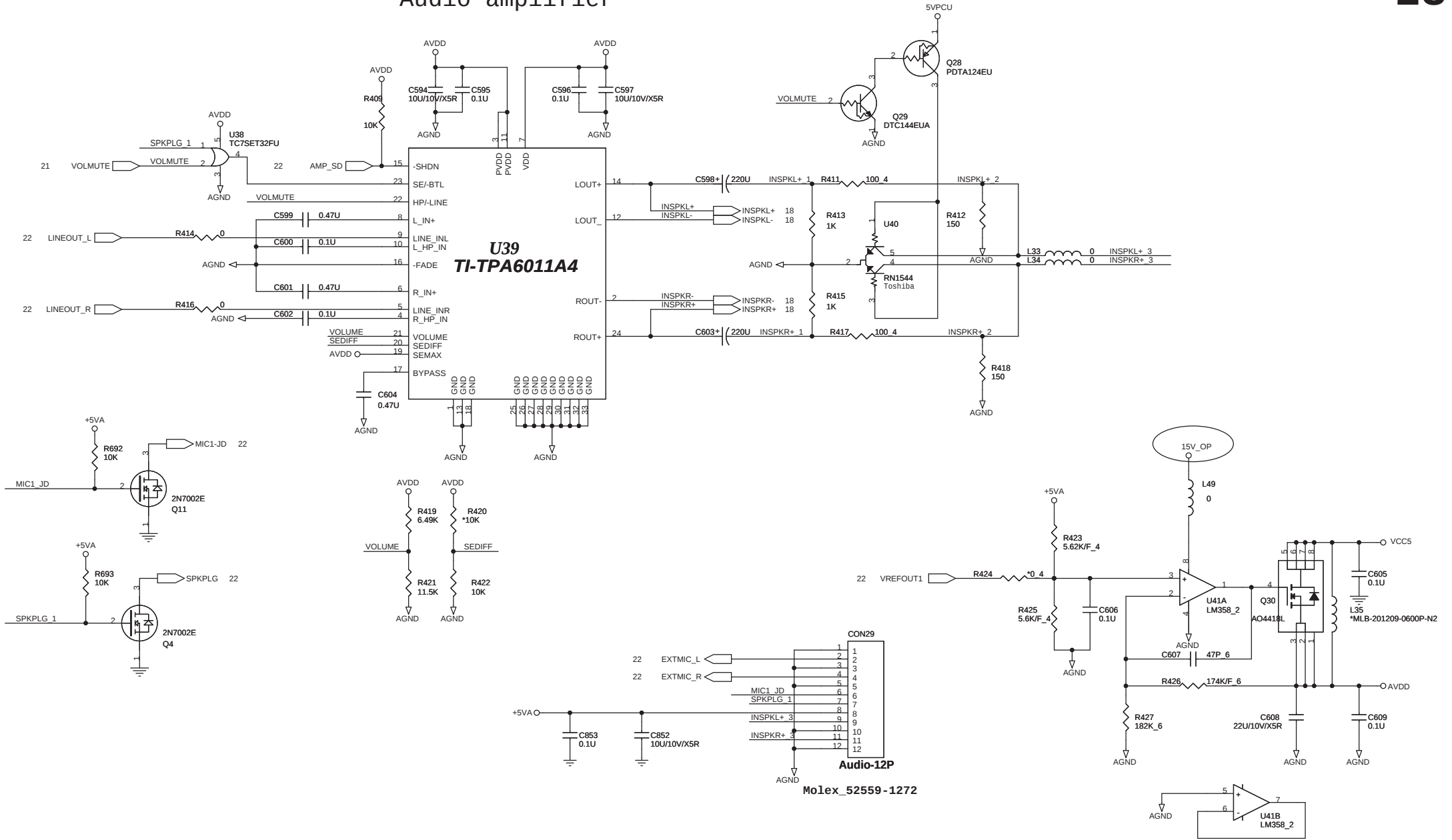
$$V_{out} = 1.25 \left( 1 + 27K / 10K \right) = 4.625V$$

**QUANTA COMPUTER**

Title: **Audio ALC260**

Size: Document Number **RJ6 Audio Board** Rev 1A

Date: Tuesday, June 20, 2006 Sheet 22 of 41



| R419    | FROM | TO   | GAIN  |
|---------|------|------|-------|
| 7.5K    | 2.85 | 2.89 | 8 dB  |
| * 6.49K | 2.96 | 3.0  | 10 dB |

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  
**AUDIO AMP**

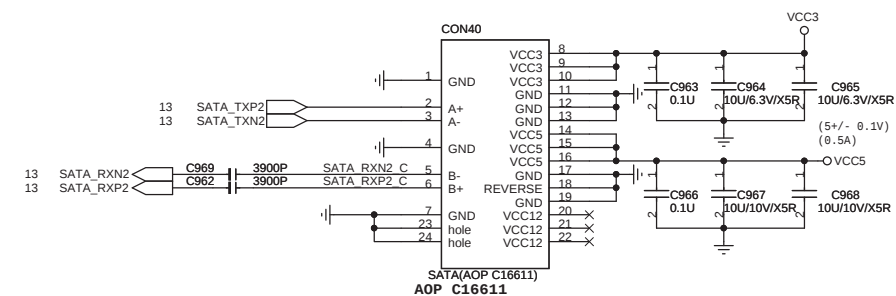
Size  
Document Number

Date: Tuesday, June 20, 2006

Rev  
1A

Sheet 23 of 41

RJ6 Audio Board

[illegible][illegible]

5VSUS

(100mA)

CON31

6 5 4 3 2 1

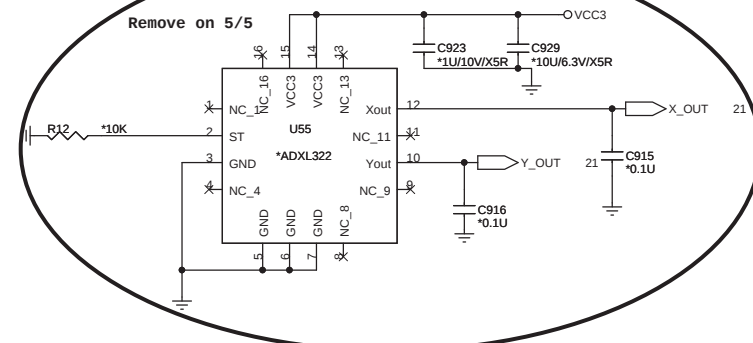
6 5 4 3 2 1

Fe/Ca(52559-0672)

molex 52559-0672

0.5mm FPC

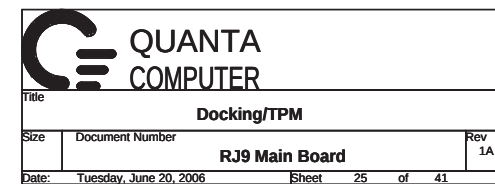
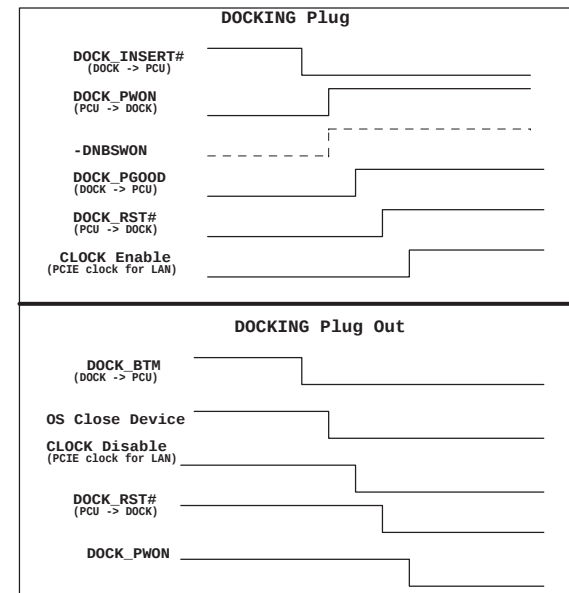
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.



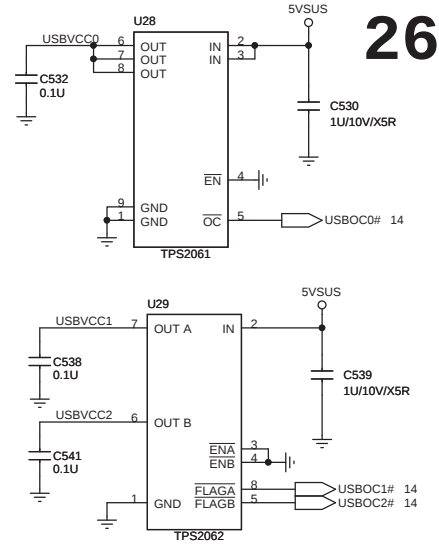
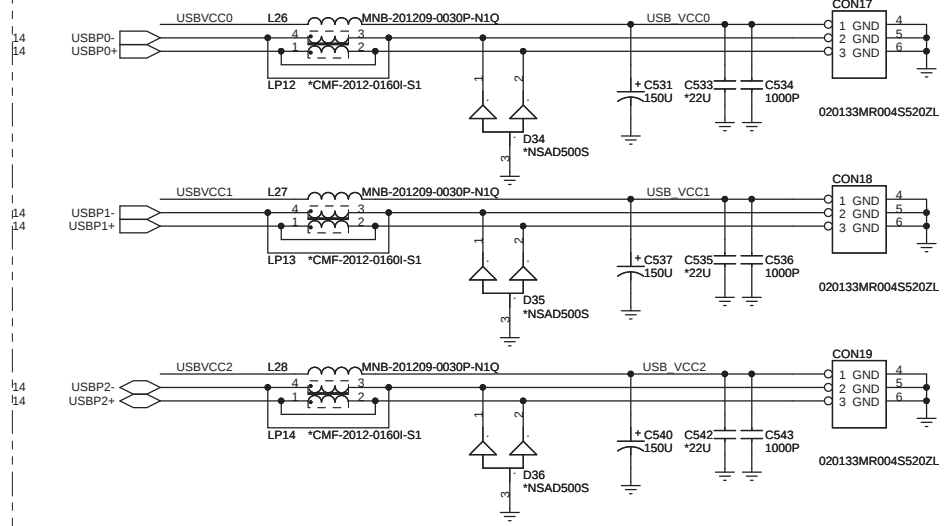
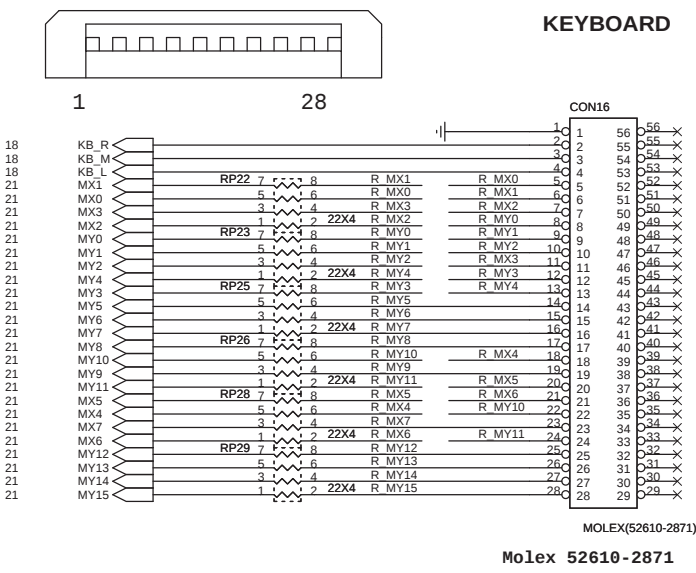
QUANTA  
COMPUTER

|            |                        |       |          |
|------------|------------------------|-------|----------|
| Title      |                        |       |          |
| HDD/BAY/BT |                        |       |          |
| Size       | Document Number        |       |          |
|            | RJ9 Main Board         |       |          |
| Date:      | Tuesday, June 20, 2006 | Sheet | 24 of 41 |

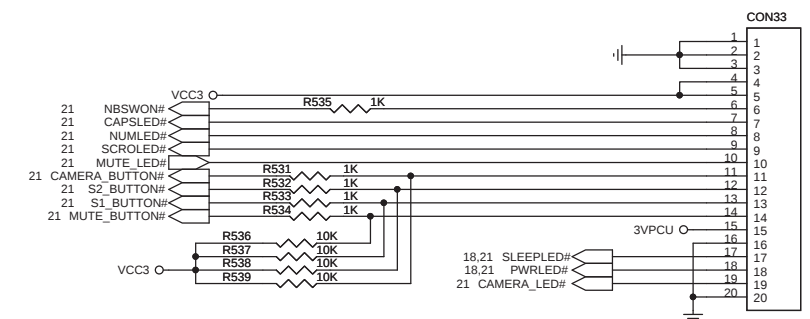
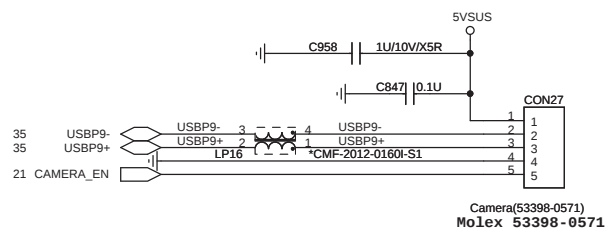
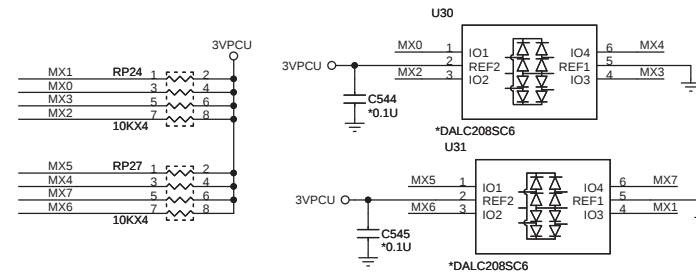
**SUYIN 200136FA010G201ZR**



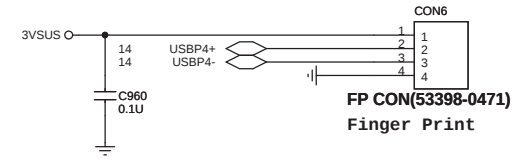
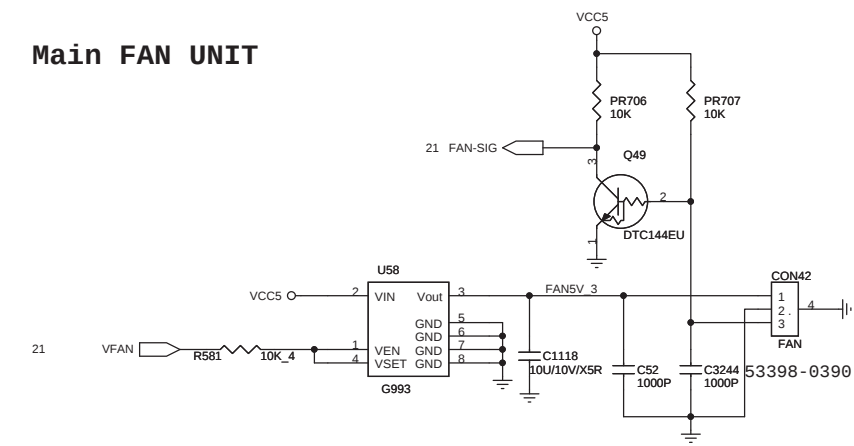
KEYBOARD

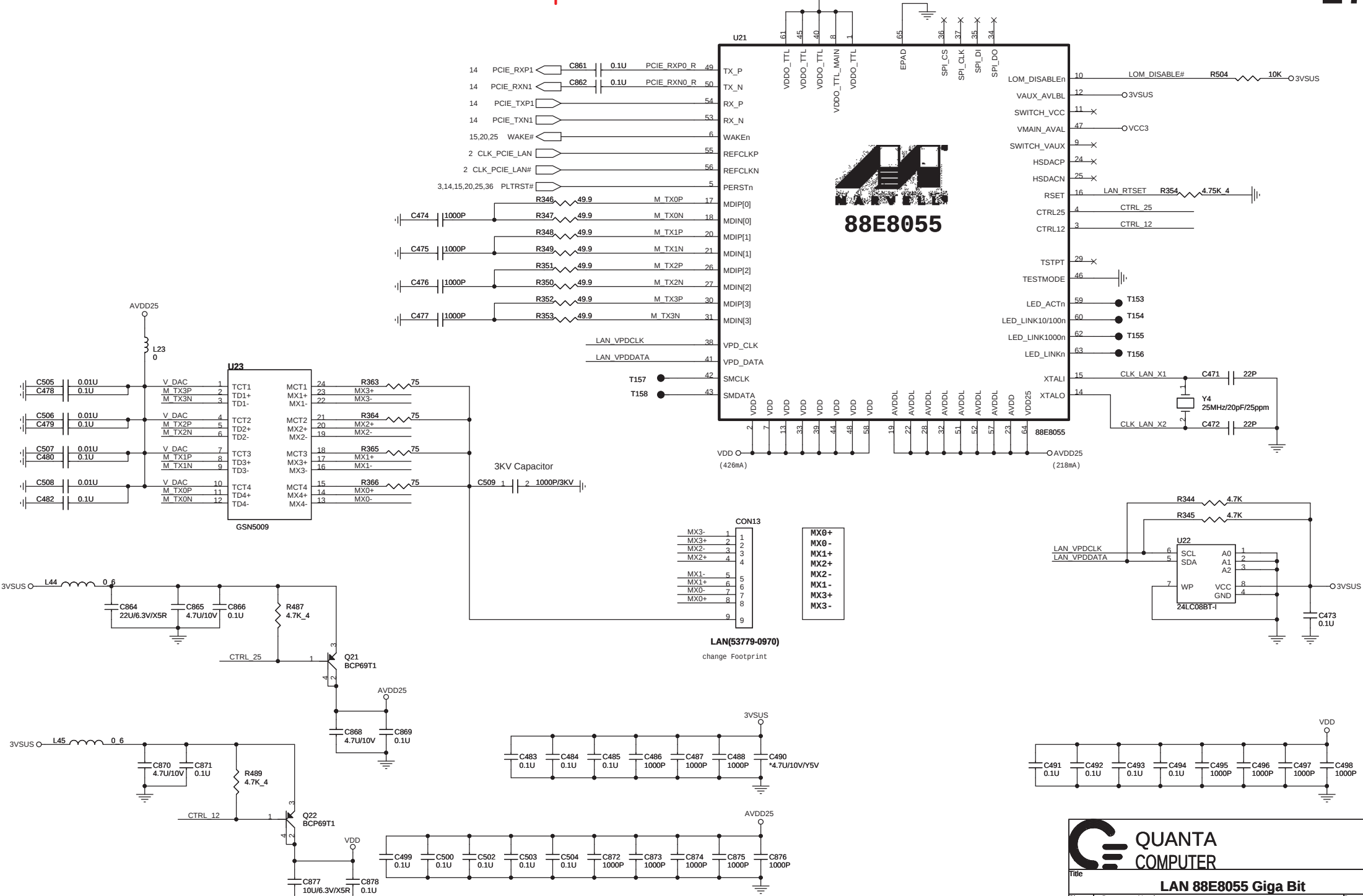


USB Camera



Main FAN UNIT







QUANTA

COMPUTER

Title

LAN 88E8055 Giga Bit

Size

Document Number

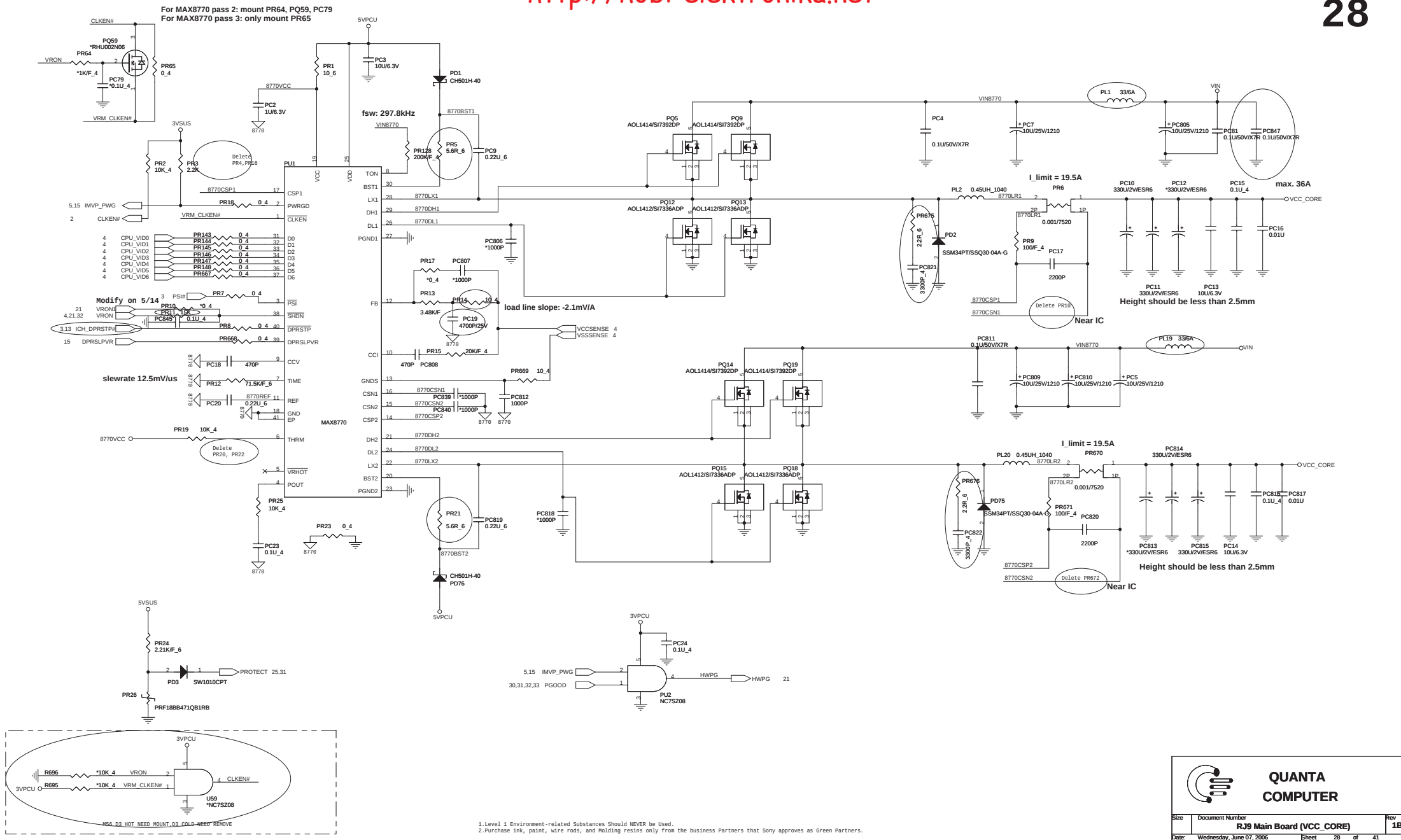
Rev 1A

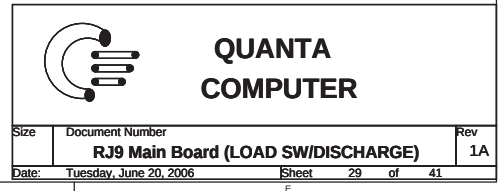
Date

Tuesday, June 20, 2006

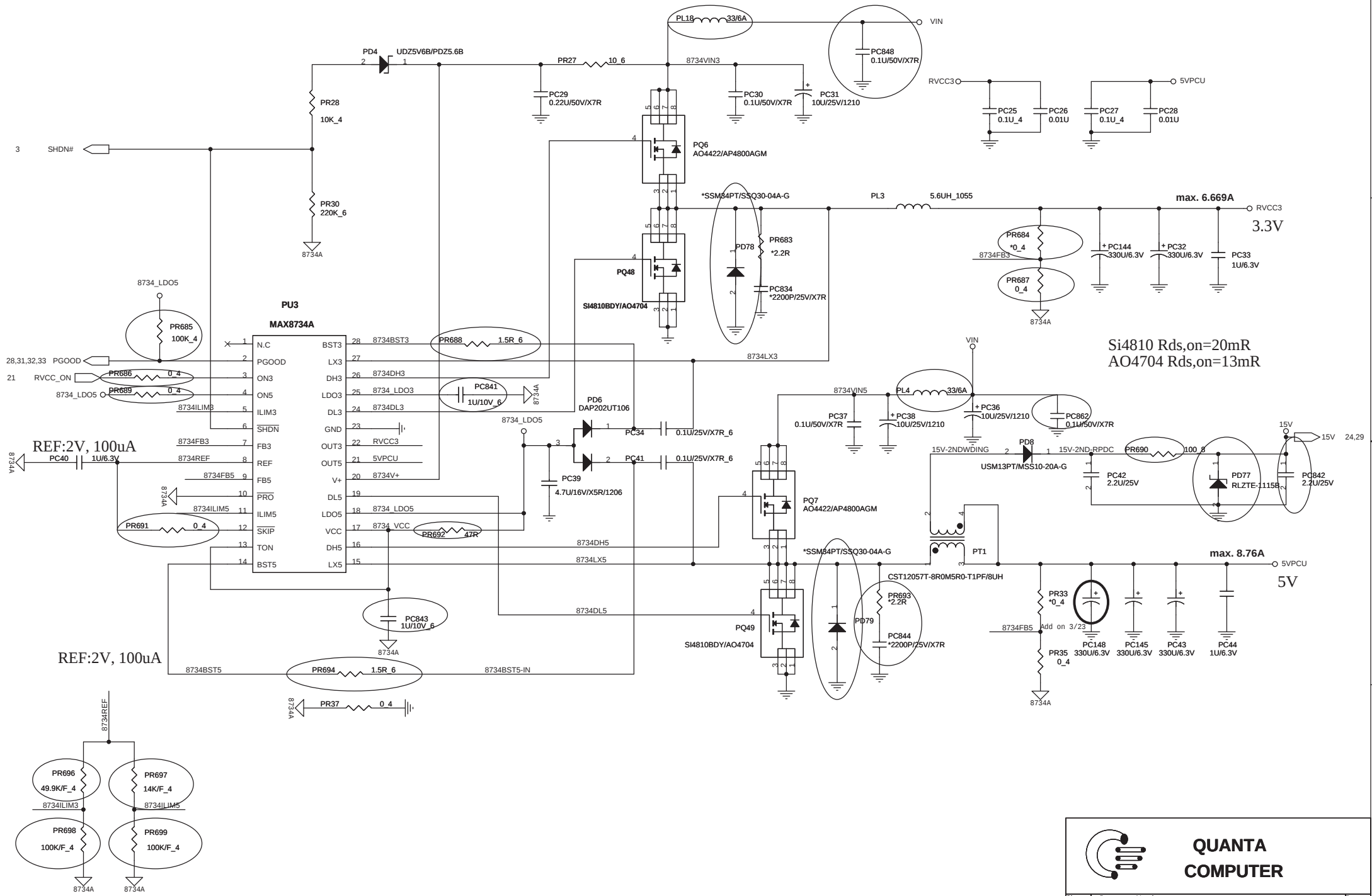
Sheet 27 of 41

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.

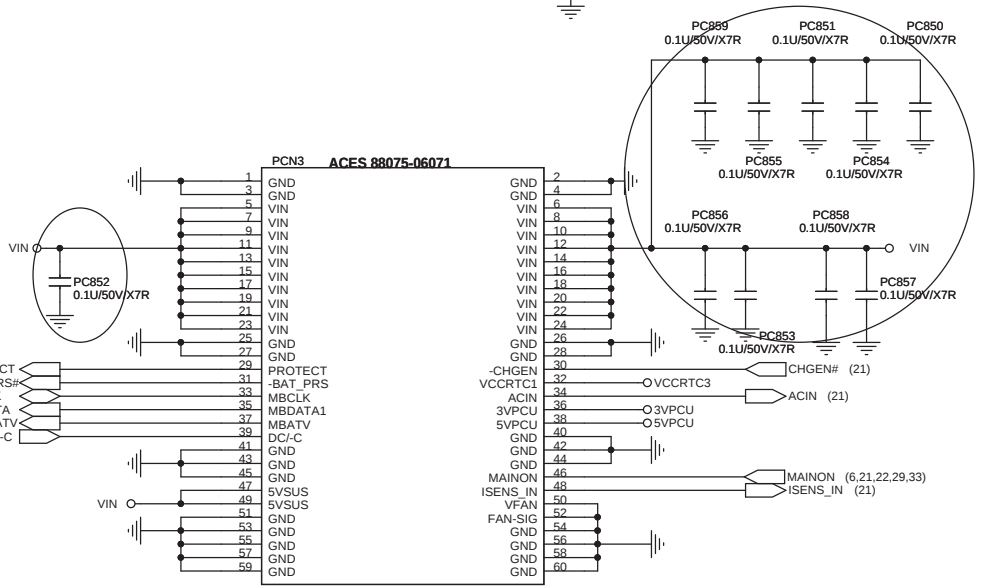
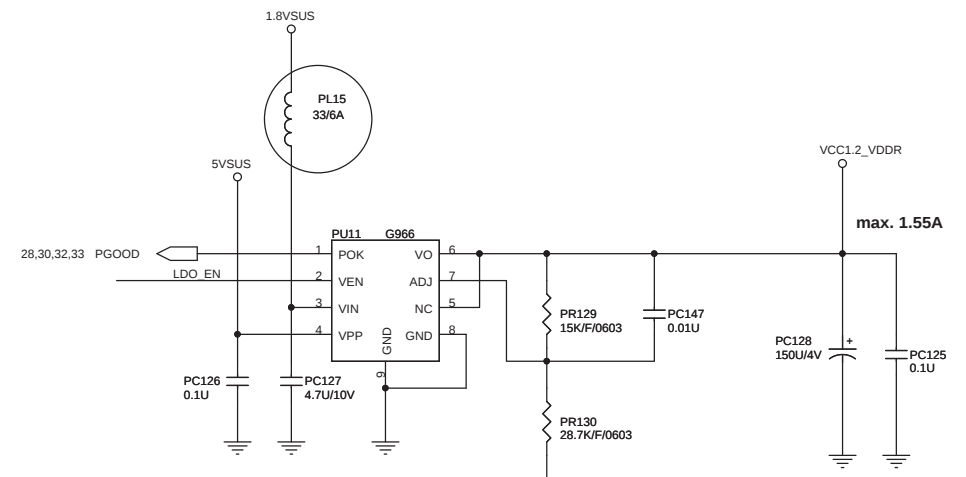
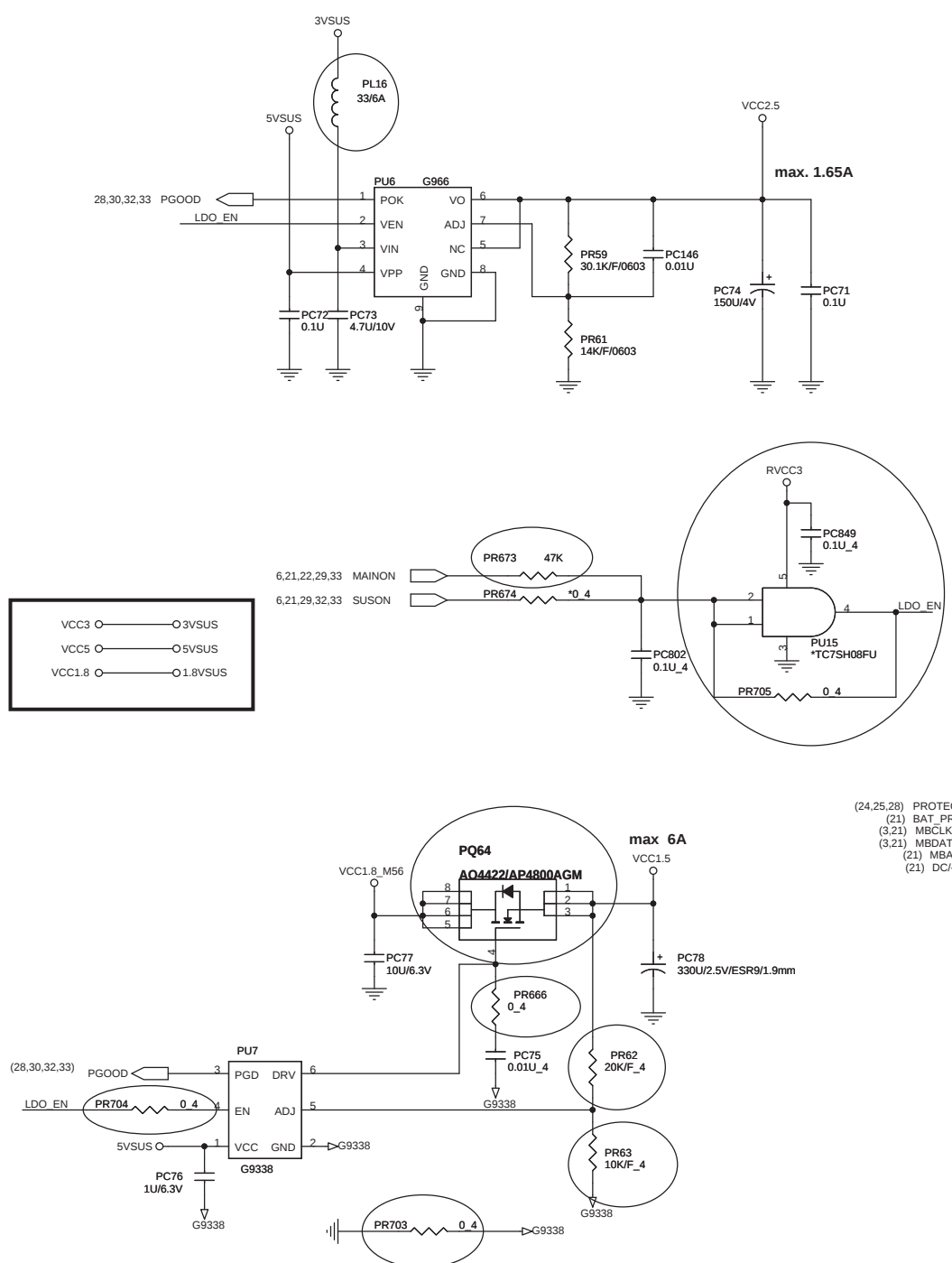




1. Level 1 Environment-related Substances should NEVER be Used.
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.



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.

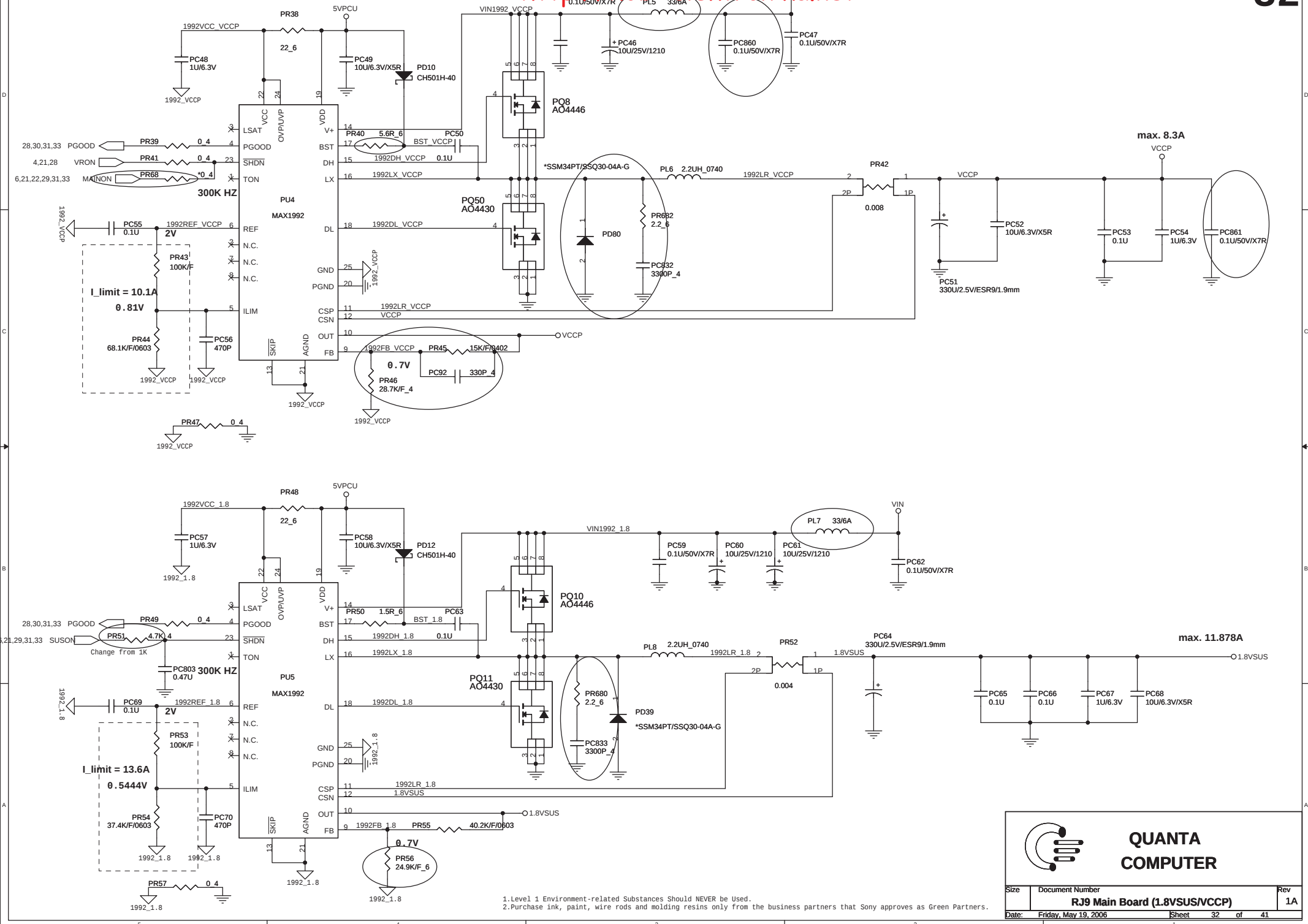




**QUANTA  
COMPUTER**

|       |                             |                |
|-------|-----------------------------|----------------|
| Size  | Document Number             | Rev            |
|       | <b>RJ9 Main Board (LDO)</b> | <b>1A</b>      |
| Date: | Saturday, June 17, 2006     | Sheet 31 of 41 |

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.

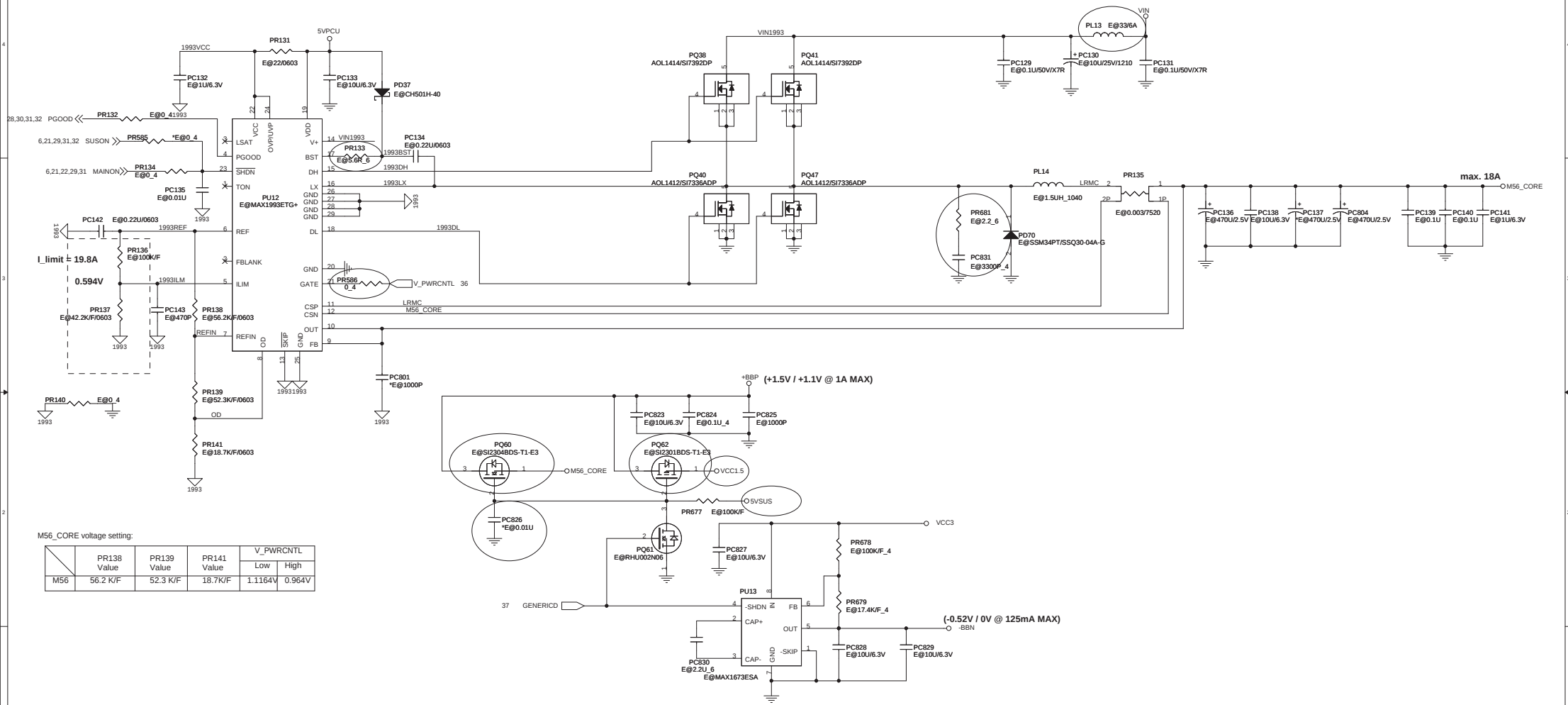


1.Level 1 Environment-related Substances Should NEVER be Used.  
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

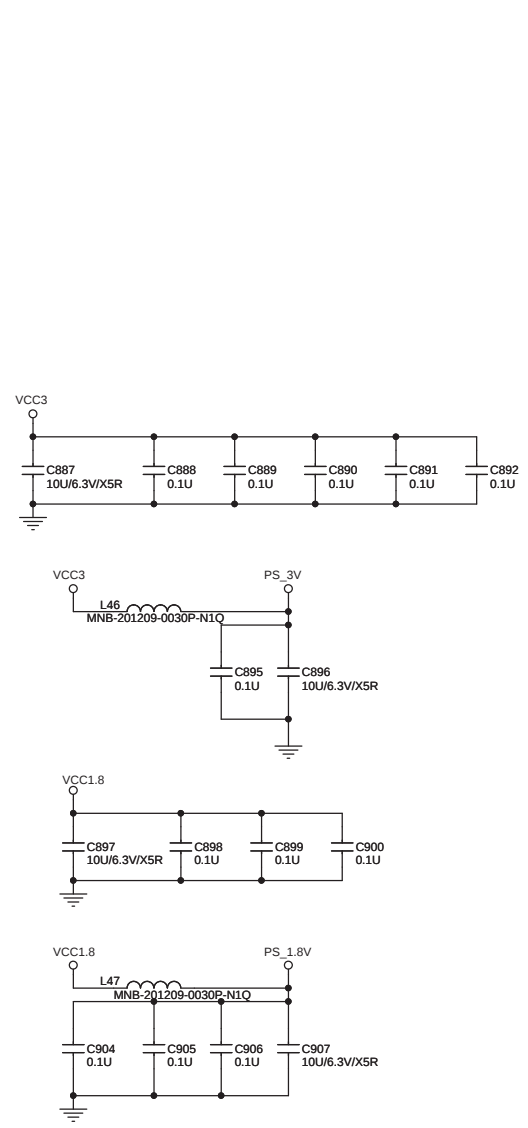
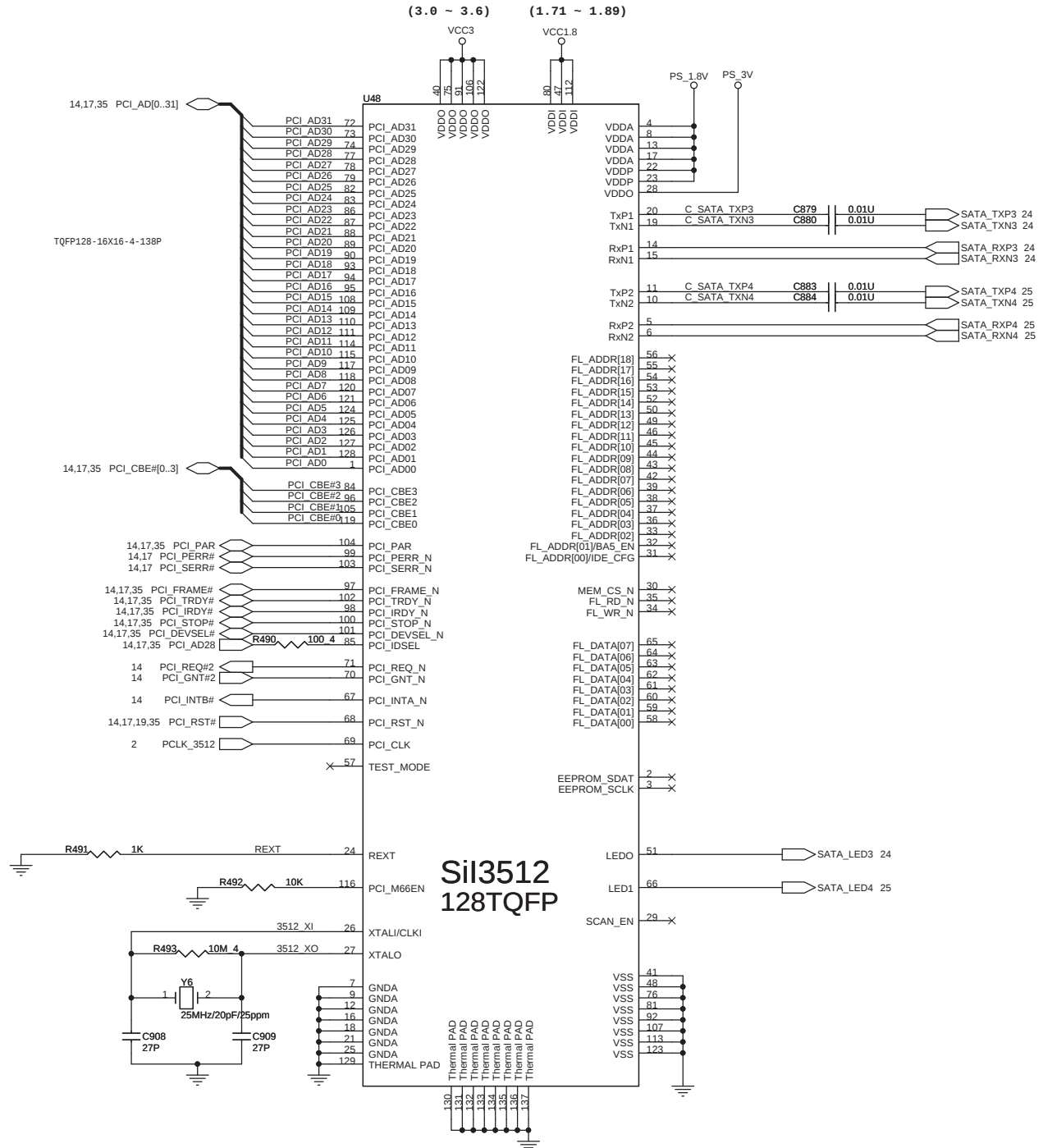


**QUANTA  
COMPUTER**

|       |                                       |                |
|-------|---------------------------------------|----------------|
| Size  | Document Number                       | Rev            |
|       | <b>R.J9 Main Board (1.8VSUS/VCCP)</b> | <b>1A</b>      |
| Date: | Friday, May 19, 2006                  | Sheet 32 of 41 |



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

PCI-SATA SiL3512

Size

Custom

Document Number

RJ9 Main Board

Date:

Tuesday, June 20, 2006

Sheet

34

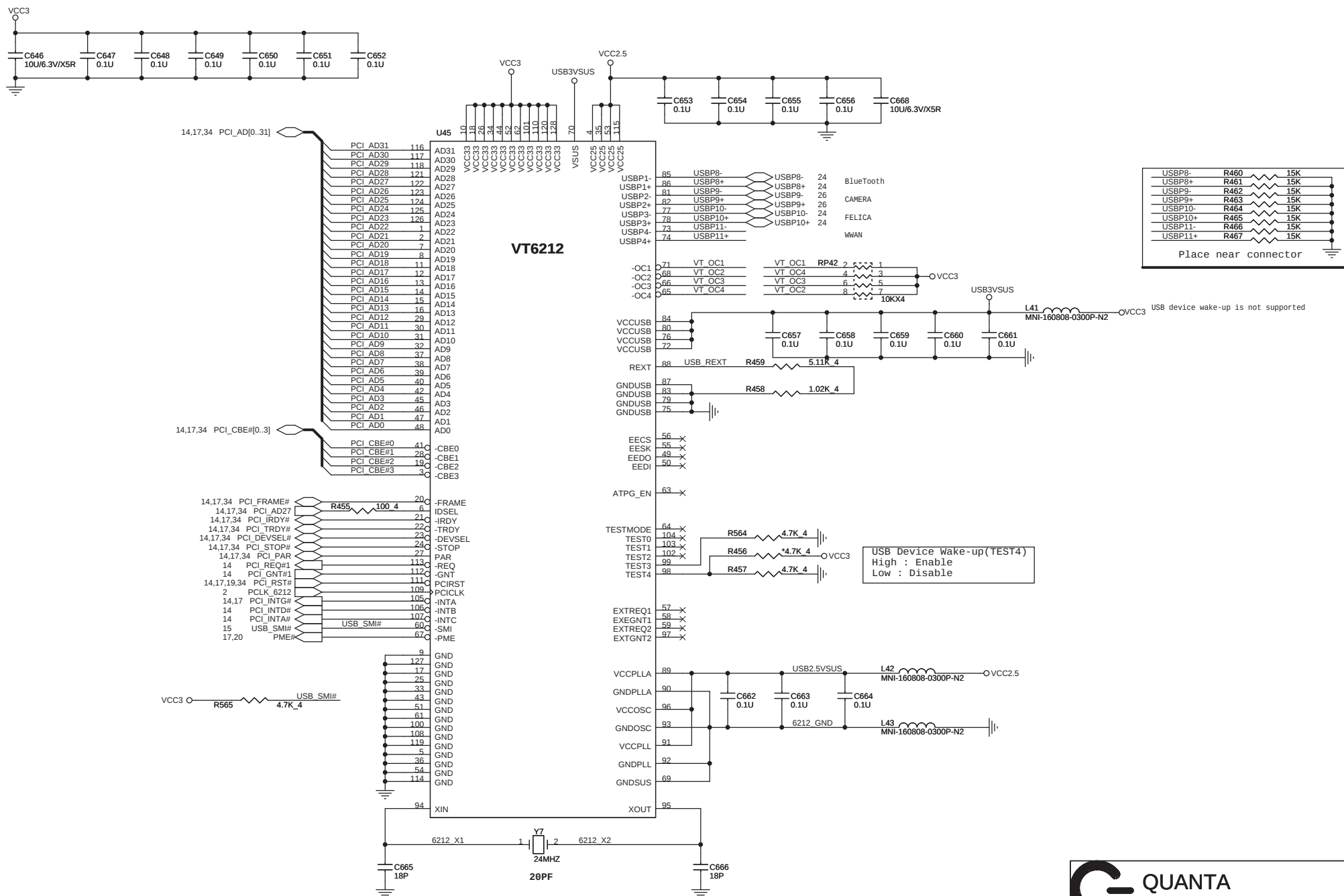
of

41

Rev

1A

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.



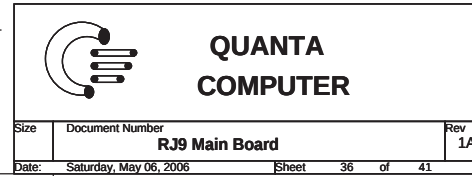
1. Level 1 Environment-related Substances Should NEVER be Used.  
2. Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

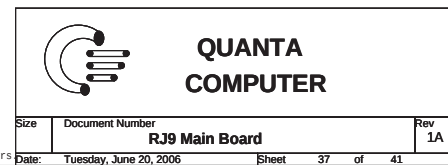
**QUANTA COMPUTER**

**USB Controller VT6212**

**R36 Main Board**

Date: Tuesday, June 20, 2006 Sheet 35 of 41





Channel A

U3001C

Part 3 of 7

MEMORY INTERFACE A

|       |     |        |        |     |                        |
|-------|-----|--------|--------|-----|------------------------|
| MDA0  | M31 | DQA_0  | MAA_0  | D26 | MAA0                   |
| MDA1  | M30 | DQA_1  | MAA_1  | E28 | MAA1                   |
| MDA2  | L30 | DQA_2  | MAA_2  | D28 | MAA2                   |
| MDA3  | L30 | DQA_3  | MAA_3  | D25 | MAA3                   |
| MDA4  | H30 | DQA_4  | MAA_4  | E24 | MAA4                   |
| MDA5  | G31 | DQA_5  | MAA_5  | E26 | MAA5                   |
| MDA6  | G30 | DQA_6  | MAA_6  | D27 | MAA6                   |
| MDA7  | F31 | DQA_7  | MAA_7  | E25 | MAA7                   |
| MDA8  | M27 | DQA_8  | MAA_8  | C26 | MAA8                   |
| MDA9  | M27 | DQA_9  | MAA_9  | B26 | MAA9                   |
| MDA10 | L28 | DQA_10 | MAA_10 | D29 | MAA10                  |
| MDA11 | L27 | DQA_11 | MAA_11 | B27 | MAA11                  |
| MDA12 | J27 | DQA_12 | MAA_12 | E27 | For 8 Banks MAA_13-BA2 |
| MDA13 | H29 | DQA_13 | MAA_13 | E29 | BA2 M56                |
| MDA14 | G29 | DQA_14 | MAA_14 | B25 | BA0 M56                |
| MDA15 | C27 | DQA_15 | MAA_15 | C25 | BA1 M56                |
| MDA16 | M26 | DQA_16 |        |     |                        |
| MDA17 | L26 | DQA_17 |        |     |                        |
| MDA18 | M25 | DQA_18 |        |     |                        |
| MDA19 | L25 | DQA_19 |        |     |                        |
| MDA20 | J25 | DQA_20 |        |     |                        |
| MDA21 | G28 | DQA_21 |        |     |                        |
| MDA22 | H27 | DQA_22 |        |     |                        |
| MDA23 | H26 | DQA_23 |        |     |                        |
| MDA24 | E26 | DQA_24 |        |     |                        |
| MDA25 | G26 | DQA_25 |        |     |                        |
| MDA26 | H25 | DQA_26 |        |     |                        |
| MDA27 | H24 | DQA_27 |        |     |                        |
| MDA28 | H22 | DQA_28 |        |     |                        |
| MDA29 | H22 | DQA_29 |        |     |                        |
| MDA30 | J23 | DQA_30 |        |     |                        |
| MDA31 | J22 | DQA_31 |        |     |                        |
| MDA32 | E23 | DQA_32 |        |     |                        |
| MDA33 | D22 | DQA_33 |        |     |                        |
| MDA34 | D23 | DQA_34 |        |     |                        |
| MDA35 | E22 | DQA_35 |        |     |                        |
| MDA36 | E20 | DQA_36 |        |     |                        |
| MDA37 | E20 | DQA_37 |        |     |                        |
| MDA38 | D19 | DQA_38 |        |     |                        |
| MDA39 | D18 | DQA_39 |        |     |                        |
| MDA40 | B19 | DQA_40 |        |     |                        |
| MDA41 | B18 | DQA_41 |        |     |                        |
| MDA42 | C17 | DQA_42 |        |     |                        |
| MDA43 | B17 | DQA_43 |        |     |                        |
| MDA44 | C14 | DQA_44 |        |     |                        |
| MDA45 | B14 | DQA_45 |        |     |                        |
| MDA46 | C13 | DQA_46 |        |     |                        |
| MDA47 | B13 | DQA_47 |        |     |                        |
| MDA48 | D17 | DQA_48 |        |     |                        |
| MDA49 | E18 | DQA_49 |        |     |                        |
| MDA50 | E17 | DQA_50 |        |     |                        |
| MDA51 | F17 | DQA_51 |        |     |                        |
| MDA52 | F15 | DQA_52 |        |     |                        |
| MDA53 | F14 | DQA_53 |        |     |                        |
| MDA54 | F14 | DQA_54 |        |     |                        |
| MDA55 | D13 | DQA_55 |        |     |                        |
| MDA56 | H18 | DQA_56 |        |     |                        |
| MDA57 | H17 | DQA_57 |        |     |                        |
| MDA58 | G18 | DQA_58 |        |     |                        |
| MDA59 | G17 | DQA_59 |        |     |                        |
| MDA60 | G15 | DQA_60 |        |     |                        |
| MDA61 | G14 | DQA_61 |        |     |                        |
| MDA62 | H14 | DQA_62 |        |     |                        |
| MDA63 | J14 | DQA_63 |        |     |                        |

E@M56-P B11 LF

| Signal        | DDR1, 2 | DDR3  |
|---------------|---------|-------|
| MVREF to 1.8V | 100R    | 40.2R |
| MVREF to GND  | 100R    | 100R  |

|       |     |      |      |          |     |
|-------|-----|------|------|----------|-----|
| MDA15 | T3  | DQ31 | DQ23 | VDDQ     | A1  |
| MDA8  | T2  | DQ30 | DQ22 | VDDQ#A12 | A12 |
| MDA12 | R3  | DQ29 | DQ21 | VDDQ#C1  | C1  |
| MDA11 | R2  | DQ28 | DQ20 | VDDQ#C4  | C4  |
| MDA14 | M3  | DQ27 | DQ19 | VDDQ#C9  | C9  |
| MDA13 | M2  | DQ26 | DQ18 | VDDQ#C12 | C12 |
| MDA10 | M1  | DQ25 | DQ17 | VDDQ#E1  | E1  |
| MDA26 | T10 | DQ24 | DQ16 | VDDQ#E4  | E4  |
| MDA31 | T11 | DQ23 | DQ31 | VDDQ#E9  | E9  |
| MDA25 | R10 | DQ22 | DQ30 | VDDQ#E12 | E12 |
| MDA28 | R11 | DQ21 | DQ29 | VDDQ#J4  | J4  |
| MDA30 | M10 | DQ20 | DQ28 | VDDQ#J9  | J9  |
| MDA29 | M11 | DQ19 | DQ27 | VDDQ#N1  | N1  |
| MDA24 | L10 | DQ18 | DQ26 | VDDQ#N4  | N4  |
| MDA27 | M11 | DQ17 | DQ25 | VDDQ#N9  | N9  |
| MDA16 | G10 | DQ16 | DQ24 | VDDQ#R1  | R1  |
| MDA17 | F11 | DQ15 | DQ23 | VDDQ#R4  | R4  |
| MDA18 | F10 | DQ14 | DQ6  | VDDQ#R9  | R9  |
| MDA19 | F11 | DQ13 | DQ5  | VDDQ#R12 | R12 |
| MDA22 | C10 | DQ12 | DQ4  | VDDQ#V1  | V1  |
| MDA20 | C11 | DQ11 | DQ3  | VDDQ#V12 | V12 |
| MDA21 | B10 | DQ10 | DQ2  |          |     |
| MDA23 | B11 | DQ9  | DQ0  |          |     |
| MDA0  | G3  | DQ8  | DQ0  |          |     |
| MDA1  | E2  | DQ7  | DQ15 |          |     |
| MDA2  | E3  | DQ6  | DQ14 |          |     |
| MDA3  | E2  | DQ5  | DQ13 |          |     |
| MDA7  | C3  | DQ4  | DQ12 |          |     |
| MDA6  | C2  | DQ3  | DQ11 |          |     |
| MDA5  | B3  | DQ2  | DQ10 |          |     |
| MDA4  | B2  | DQ1  | DQ9  |          |     |
|       |     | DQ0  | DQ8  |          |     |

|         |     |     |     |          |     |
|---------|-----|-----|-----|----------|-----|
| BA2 M56 | H10 | BA2 | RA5 | VSSQ#B4  | B4  |
| BA1 M56 | G9  | BA1 | BA0 | VSSQ#B9  | B9  |
| BA0 M56 | G4  | BA0 | BA1 | VSSQ#B12 | B12 |

|       |     |       |     |          |     |
|-------|-----|-------|-----|----------|-----|
| MAA11 | L4  | A11   | A7  | VSSQ#D4  | D4  |
| MAA10 | K2  | A10   | A8  | VSSQ#D9  | D9  |
| MAA9  | M9  | A9    | A3  | VSSQ#D12 | D12 |
| MAA8  | K11 | A8/AP | A10 | VSSQ#G2  | G11 |
| MAA7  | L9  | A7    | A11 | VSSQ#G11 | G11 |
| MAA6  | K10 | A6    | A2  | VSSQ#L11 | L11 |
| MAA5  | H11 | A5    | A1  | VSSQ#P1  | P1  |
| MAA4  | K9  | A4    | A0  | VSSQ#P4  | P4  |
| MAA3  | M4  | A3    | A9  | VSSQ#P9  | P12 |
| MAA2  | K3  | A2    | A6  | VSSQ#P12 | T1  |
| MAA1  | H2  | A1    | A5  | VSSQ#T1  | T4  |
| MAA0  | K4  | A0    | A4  | VSSQ#T4  | T9  |

|          |    |     |     |          |     |
|----------|----|-----|-----|----------|-----|
| CSA0b_0# | E9 | CS  | CAS | VSSQ#T12 | T12 |
| WEA#     | H9 | WE  | CKE | VSS      | A10 |
| RASA#    | H3 | RA5 | BA2 | VSS#A10  | G1  |
| CASA#    | F4 | CAS | CS  | VSS#G12  | G12 |
| CKEA     | H4 | CKE | WE  | VSS#L1   | L1  |
|          |    |     |     | VSS#L12  | L12 |
|          |    |     |     | VSS#V3   | V3  |
|          |    |     |     | VSS#V10  | V10 |

|          |     |    |      |      |      |
|----------|-----|----|------|------|------|
| M CLKA0# | J10 | CK | VDDA | K1   | VDDA |
| M CLKA0  | J11 | CK | K12  | VDDA | K12  |

|        |     |       |       |          |  |
|--------|-----|-------|-------|----------|--|
| RDQSA1 | P3  | RDQS3 | RDQS2 | VDDA#K12 |  |
| RDQSA3 | P10 | RDQS2 | RDQS3 |          |  |
| RDQSA2 | D10 | RDQS1 | RDQS0 |          |  |
| RDQSA0 | D3  | RDQS0 | RDQS1 |          |  |

|        |     |       |       |  |  |
|--------|-----|-------|-------|--|--|
| WDQSA1 | P2  | WDQS3 | WDQS2 |  |  |
| WDQSA3 | P11 | WDQS2 | WDQS3 |  |  |
| WDQSA2 | D11 | WDQS1 | WDQS0 |  |  |
| WDQSA0 | D2  | WDQS0 | WDQS1 |  |  |

|        |     |     |     |      |    |
|--------|-----|-----|-----|------|----|
| DQMA#1 | N3  | DM3 | DM2 | RFU2 | J3 |
| DQMA#3 | N10 | DM2 | DM3 | RFU1 | J2 |
| DQMA#2 | F10 | DM1 | DM0 | RFU0 | V4 |
| DQMA#0 | E3  | DM0 | DM1 |      |    |

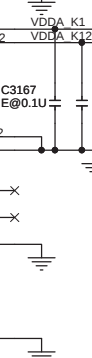
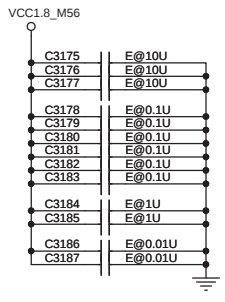
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|----------|-----|----------|--|--|--|
| MEM_RST  | V9  | MEM_RST  |  |  |  |
| ZQ       | A4  | ZQ       |  |  |  |
| VREF 0   | H1  | VREF     |  |  |  |
| VREF#H12 | H12 | VREF#H12 |  |  |  |

|          |     |          |  |  |  |
|----------|-----|----------|--|--|--|
| VREF     | H1  | VREF     |  |  |  |
| VREF#H12 | H12 | VREF#H12 |  |  |  |

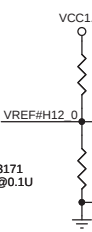
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|------------|--|------------|--|--|--|



VCC1.8\_M56



VRAM\_256Mb



U3004

|       |     |      |      |          |     |
|-------|-----|------|------|----------|-----|
| MDA40 | T3  | DQ31 | DQ23 | VDDQ     | A1  |
| MDA43 | T2  | DQ30 | DQ22 | VDDQ#A12 | A12 |
| MDA41 | R3  | DQ29 | DQ21 | VDDQ#C1  | C1  |
| MDA42 | R2  | DQ28 | DQ20 | VDDQ#C4  | C4  |
| MDA45 | M3  | DQ27 | DQ19 | VDDQ#C9  | C9  |
| MDA47 | M2  | DQ26 | DQ18 | VDDQ#C12 | C12 |
| MDA44 | L3  | DQ25 | DQ17 | VDDQ#E1  | E1  |
| MDA46 | M2  | DQ24 | DQ16 | VDDQ#E4  | E4  |
| MDA37 | T10 | DQ23 | DQ31 | VDDQ#E9  | E9  |
| MDA36 | T11 | DQ22 | DQ30 | VDDQ#E12 | E12 |
| MDA39 | R10 | DQ21 | DQ29 | VDDQ#J4  | J4  |
| MDA38 | R11 | DQ20 | DQ28 | VDDQ#J9  | J9  |
| MDA47 | M10 | DQ19 | DQ27 | VDDQ#N1  | N1  |
| MDA33 | M10 | DQ18 | DQ26 | VDDQ#N4  | N4  |
| MDA35 | L10 | DQ17 | DQ25 | VDDQ#N9  | N9  |
| MDA34 | M11 | DQ16 | DQ24 | VDDQ#R1  | R1  |
| MDA63 | G10 | DQ15 | DQ23 | VDDQ#R4  | R4  |
| MDA58 | F11 | DQ14 | DQ6  | VDDQ#R9  | R9  |
| MDA56 | F10 | DQ13 | DQ5  | VDDQ#R12 | R12 |
| MDA62 | F11 | DQ12 | DQ4  | VDDQ#V1  | V1  |
| MDA59 | C10 | DQ11 | DQ3  | VDDQ#V12 | V12 |
| MDA61 | C11 | DQ10 | DQ2  |          |     |
| MDA57 | B10 | DQ9  | DQ0  |          |     |
| MDA60 | B11 | DQ8  | DQ0  |          |     |
| MDA52 | G3  | DQ7  | DQ15 |          |     |
| MDA53 | E2  | DQ6  | DQ14 |          |     |
| MDA55 | E2  | DQ5  | DQ13 |          |     |
| MDA51 | C3  | DQ4  | DQ12 |          |     |
| MDA49 | C2  | DQ3  | DQ11 |          |     |
| MDA48 | B3  | DQ2  | DQ10 |          |     |
| MDA50 | B2  | DQ1  | DQ9  |          |     |
|       |     | DQ0  | DQ8  |          |     |

|         |     |     |     |          |     |
|---------|-----|-----|-----|----------|-----|
| RASA1#  | H10 | BA2 | RA5 | VSSQ#B4  | B4  |
| BA0 M56 | G9  | BA1 | BA0 | VSSQ#B9  | B9  |
| BA1 M56 | G4  | BA0 | BA1 | VSSQ#B12 | B12 |

|       |     |       |     |          |     |
|-------|-----|-------|-----|----------|-----|
| MAA7  | L4  | A11   | A7  | VSSQ#D4  | D4  |
| MAA8  | K2  | A10   | A8  | VSSQ#D9  | D9  |
| MAA3  | M9  | A9    | A3  | VSSQ#D12 | D12 |
| MAA10 | K11 | A8/AP | A10 | VSSQ#G2  | G11 |
| MAA11 | L9  | A7    | A11 | VSSQ#G11 | G11 |
| MAA2  | K10 | A6    | A2  | VSSQ#L11 | L11 |
| MAA1  | H11 | A5    | A1  | VSSQ#P1  | P1  |
| MAA0  | K9  | A4    | A0  | VSSQ#P4  | P4  |
| MAA9  | M4  | A3    | A9  | VSSQ#P9  | P12 |
| MAA6  | K3  | A2    | A6  | VSSQ#P12 | T1  |
| MAA5  | H2  | A1    | A5  | VSSQ#T1  | T4  |
| MAA4  | K4  | A0    | A4  | VSSQ#T4  | T9  |

|          |    |     |     |          |     |
|----------|----|-----|-----|----------|-----|
| CASA1#   | E9 | CS  | CAS | VSSQ#T12 | T12 |
| CKEA1    | H9 | WE  | CKE | VSS      | A10 |
| BA2 M56  | H3 | RA5 | BA2 | VSS#A10  | G1  |
| CSA1b_0# | F4 | CAS | CS  | VSS#G12  | G12 |
| WEA1#    | H4 | CKE | WE  | VSS#L1   | L1  |
|          |    |     |     | VSS#L12  | L12 |
|          |    |     |     | VSS#V3   | V3  |
|          |    |     |     | VSS#V10  | V10 |

|          |     |    |      |      |      |
|----------|-----|----|------|------|------|
| M CLKA1# | J10 | CK | VDDA | K1   | VDDA |
| M CLKA1  | J11 | CK | K12  | VDDA | K12  |

|        |     |       |       |          |  |
|--------|-----|-------|-------|----------|--|
| RDQSA5 | P3  | RDQS3 | RDQS2 | VDDA#K12 |  |
| RDQSA4 | P10 | RDQS2 | RDQS3 |          |  |
| RDQSA7 | D10 | RDQS1 | RDQS0 |          |  |
| RDQSA6 | D3  | RDQS0 | RDQS1 |          |  |

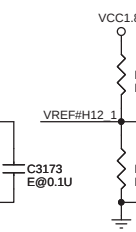
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|--------|-----|-------|-------|--|--|
| WDQSA5 | P2  | WDQS3 | WDQS2 |  |  |
| WDQSA4 | P11 | WDQS2 | WDQS3 |  |  |
| WDQSA7 | D11 | WDQS1 | WDQS0 |  |  |
| WDQSA6 | D2  | WDQS0 | WDQS1 |  |  |

|        |     |     |     |      |    |
|--------|-----|-----|-----|------|----|
| DQMA#5 | N3  | DM3 | DM2 | RFU2 | J3 |
| DQMA#4 | N10 | DM2 | DM3 | RFU1 | J2 |
| DQMA#7 | F10 | DM1 | DM0 | RFU0 | V4 |
| DQMA#6 | E3  | DM0 | DM1 |      |    |

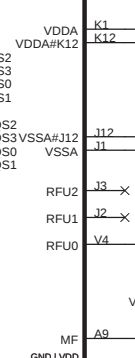
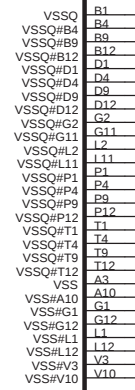
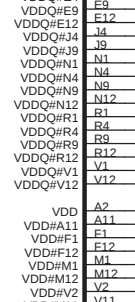
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|----------|-----|----------|--|--|--|
| MEM_RST  | V9  | MEM_RST  |  |  |  |
| ZQ       | A4  | ZQ       |  |  |  |
| VREF 1   | H1  | VREF     |  |  |  |
| VREF#H12 | H12 | VREF#H12 |  |  |  |

|          |     |          |  |  |  |
|----------|-----|----------|--|--|--|
| VREF     | H1  | VREF     |  |  |  |
| VREF#H12 | H12 | VREF#H12 |  |  |  |

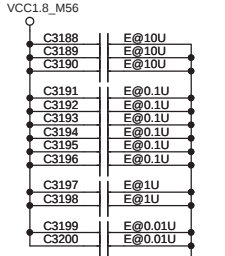
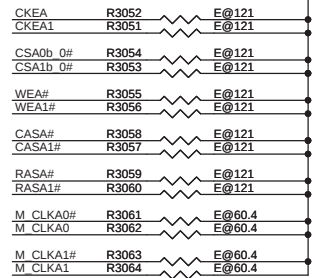
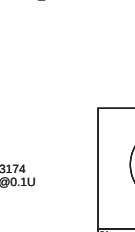
VRAM\_256Mb



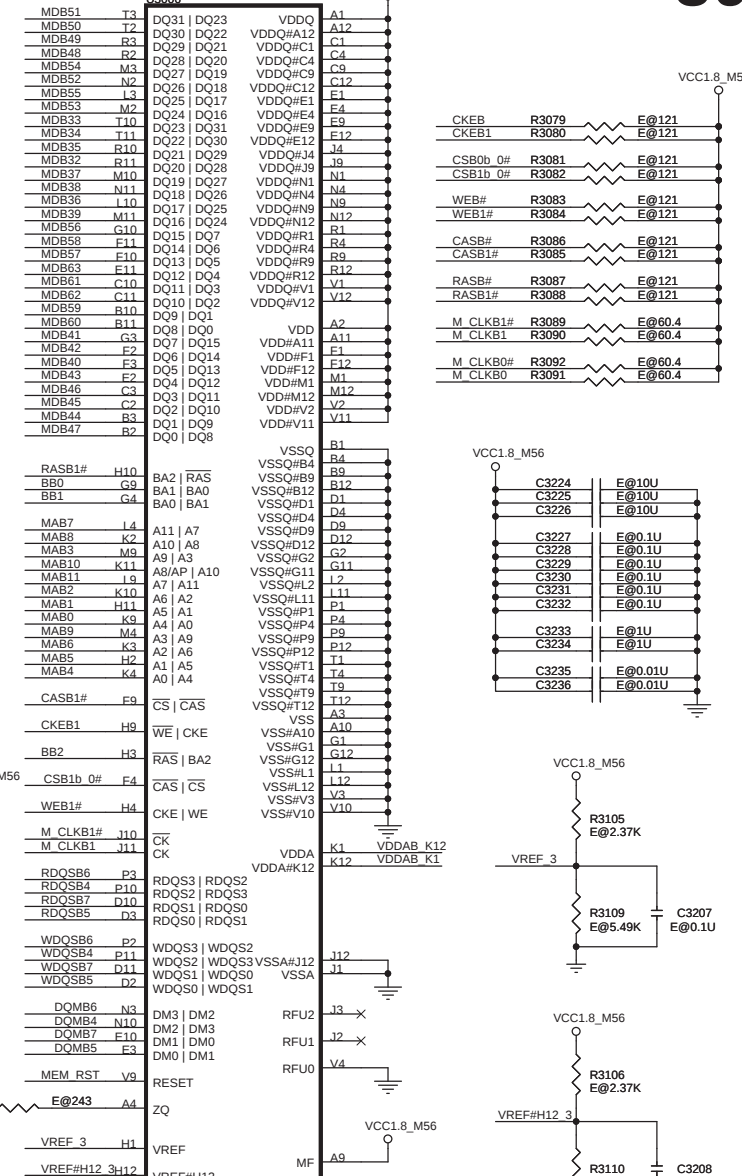
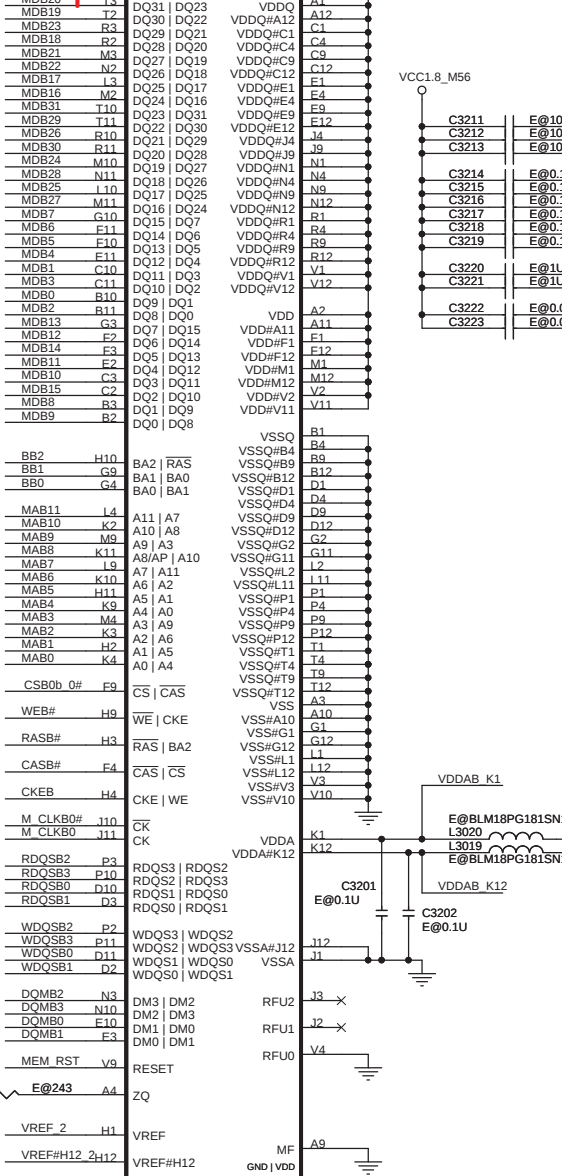
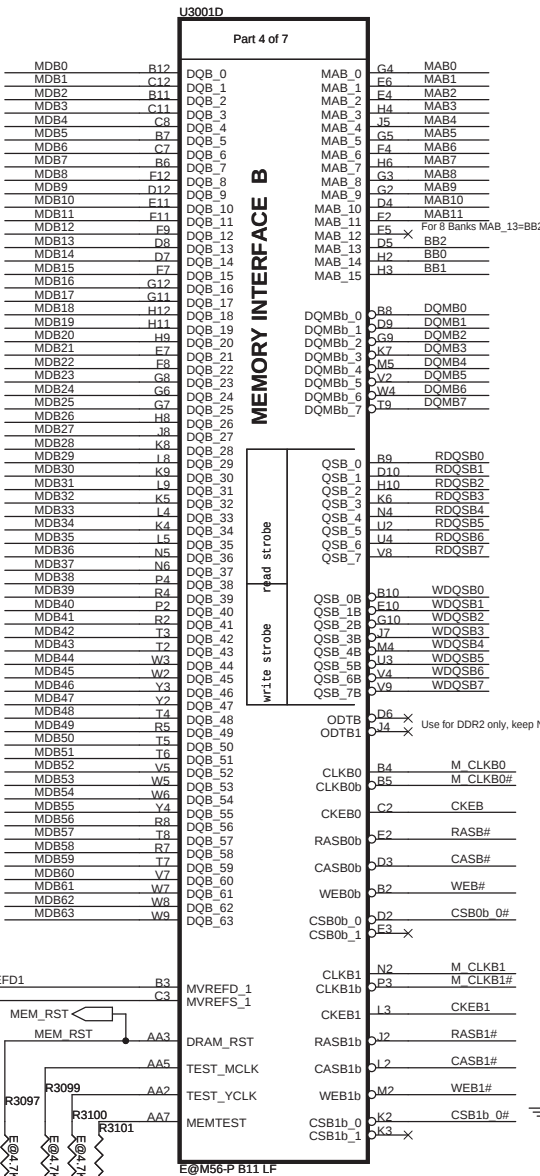
VCC1.8\_M56



VRAM\_256Mb



# Channel B



| Signal        | DDR1,2 | GDDR3 |
|---------------|--------|-------|
| MVREF to 1.8V | 100R   | 40.2R |
| MVREF to GND  | 100R   | 100R  |

1.Level 1 Environment-related Substances Should NEVER be Used.  
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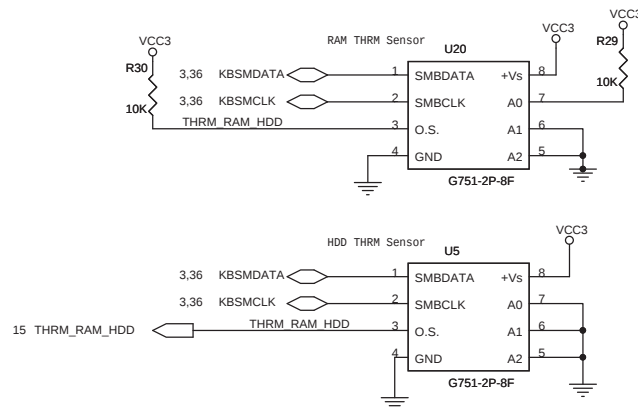
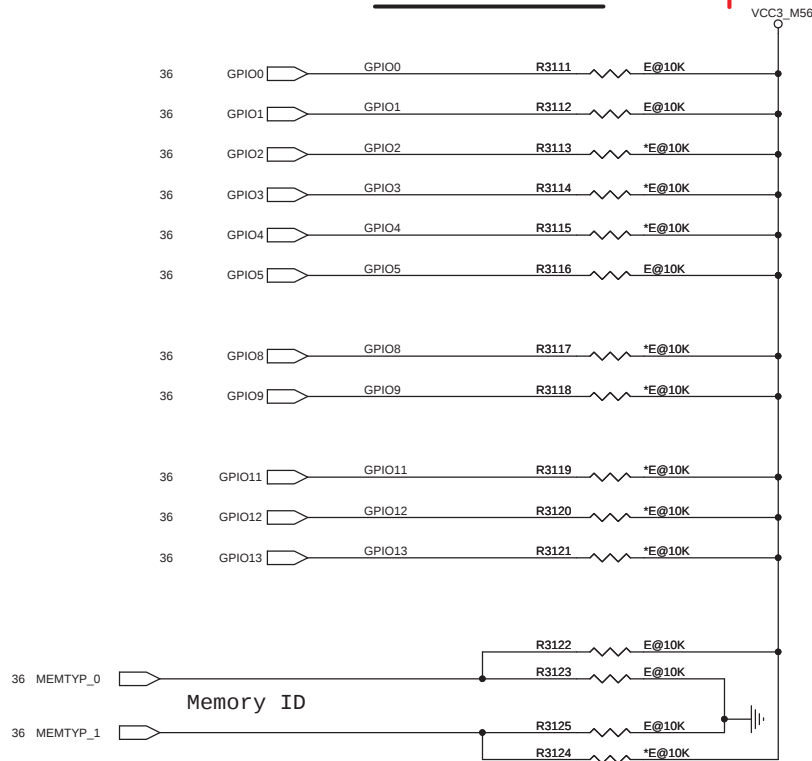
**RJ9 Main Board**

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## OPTION STRAPS

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## M56-P Strap

| STRAPS        | PIN           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ASIC DEFAULT                                     |
|---------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| TX_PWRS_ENB   | GPIO0         | Transmitter Power Savings Enable<br>0: 50% Tx output swing<br>1: full Tx output swing (recommended)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0<br>(internal pull-down)                        |
| TX_DEEMPH_EN  | GPIO1         | Transmitter De-emphasis Enable<br>0: Tx de-emphasis disabled<br>1: Tx de-emphasis enabled (recommended)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0<br>(internal pull-down)                        |
| Reserved      | GPIO(3:2)     | ATI internal use only. Other logic must not affect this signal during RESET.(GPIO2=VDD_VCL)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 00                                               |
| DEBUG_ACCESS  | GPIO4         | Strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0<br>(internal pull-down)                        |
| PLL_IBIAS_RD  | GPIO[6:5]     | Bias Current for the PCI Express PHY PLL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 01                                               |
| Reserved      | GPIO8         | ATI internal use only. Other logic must not affect this signal during RESET.(Serial ROM Output from ROM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                                                |
| ROMIDCFG(3:0) | GPIO(9,13:11) | If no ROM attached, controls chip IDIs. If rom attached identifies ROM type<br>000x - No ROM, MEM_AP_SIZE=00 128MB(Default)<br>001x - No ROM, MEM_AP_SIZE=01 256MB<br>010x - No ROM, MEM_AP_SIZE=10 64MB<br>011x - No ROM, MEM_AP_SIZE=11 Reserved<br>1000 - Parallel ROM, chip IDIs from ROM<br>1001 - Serial AT25F1024 ROM (Atmel), chip IDIs from ROM<br>1010 - Serial AT45DB011 ROM (Atmel), chip IDIs from ROM<br>1011 - Serial M25P10 ROM (ST), chip IDIs from ROM<br>1100 - Serial M25P05 ROM (ST), chip IDIs from ROM<br>1100 - Serial NX25F011B ROM (ISSI), chip IDIs from ROM | GPIO[9,13,12,11]<br>0000<br>(internal pull-down) |
| VIP_DEVICE    | VSYN          | Indicates if any slave VIP host devices drove this pin low during reset. 0- Slave VIP host port device present. 1-No slave VIP port devices reporting presence during reset                                                                                                                                                                                                                                                                                                                                                                                                             | 0<br>(internal pull-down)                        |
| Reserved      | PCIE_TEST     | ATI internal use only. Other logic must not affect this signal during RESET.(Serial ROM Output from ROM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                                                |
| Reserved      | HSYN          | ATI internal use only. Other logic must not affect this signal during RESET.(Serial ROM Output from ROM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                                                |

## Board Straps

REV. 0.1

| STRAPS       | PIN        | DESCRIPTION                                                                                                                     | VALUE |
|--------------|------------|---------------------------------------------------------------------------------------------------------------------------------|-------|
| MEMTYPE(1:0) | GPIO 27,26 | Memory identification for BIOS<br>00 - Infineon GDDR3 : 8M x 32 bits x 4 banks(Default)<br>01 - Samsung<br>10 - TBD<br>11 - TBD | 00    |



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**REV:**

**CHANGE LIST:**

**DVT Revise:**

1. Swap Q20 Pin 1 and Pin 3 connection, keep R619 stuff.....Page3
2. Change U10,R10,R383 from Nonstuff to Stuff, change R9,R377,R384 from Stuff to Nonstuff to support PWM Inv bright control.....Page7
3. Change R625,R626 from Nonstuff to Stuff, Add C1461(10p) for EMI.....Page13
4. Change PU3 from MAX1632 to MAX8734, Remove PR29, PR31, PR32, PR34, PC35, PD5,PD7, PD9, PD73, PD74.....Page30  
Add PR685, PR686, PR687, PR688, PR689, PR690, PR691, PR692, PR694, PR696, PR697, PR698, PR699, PC148, PC841, PC842, PC843, PD77  
Change PC39 from 10u to 4.7u, PC42 from 4.7u to 2.2u
5. Change PU1 from MAX8771 to MAX8770, Remove PR4, PR16, PR10, PR672, PR64, PQ59, PC79, Add PR65.....Page28
6. Change PR673 from 100 to 2K, change PC802 from Nonstuff to stuff and change value from 0.01u to 0.1u .....Page31
7. Change PR51 from 1K to 4K.....Page32
8. Change U21 P/N to AJ080550002 .....Page27
9. Change U57 P/N from ALTD3306K00 to AL3Q3306K04; Change L25,L29,L31 P/N to CX8BA220007.....Page11
10. Change PQ58, PQ60, PQ62 from Nonstuff to Stuff, Remove PR684, PC826, .....Page33
11. Change U1 from ICS954310 to ICS9LPR310 for thermal consideration .....Page2  
Add R702, R703, R704, R705; Remove R700, R528, R529  
Remove RP47, RP48, RP49, RP50, RP51, RP54, RP55, RP56, RP58, R4  
Change R40 to 4.3Kohm, Change R702 to 100ohm, Change RP30,RP31 to 10ohm, Change RP32,RP33,RP34,RP35,RP40,RP41,RP57 to 22ohm, Change R704 to 4.7k
12. Change VCC\_CORE and M56\_CORE high side and low side MOSFET for thermal consideration  
Remove PQ1, PQ2, PQ3, PQ4, PQ54, PQ55, PQ56, PQ57; Add PQ5, PQ9, PQ12, PQ13, PQ14, PQ15, PQ18, PQ19.....Page28  
Remove PQ46, PQ47, PQ53, PQ58; Add PQ38, PQ39, PQ40, PQ41.....Page33
13. Change PL1, PL19 P/N from CX1PG220004 to CX330T60001, Change PR5, PR21 P/N to CS-5603J908, Change PR14 from 100ohm to 10ohm, Change PC19 from 1000p to 4700p.....Page28  
Add PR675, PR676 (2.2ohm), Add PC821, PC822 (3300p), Add PC845, PC847 (0.1u), Change PR14, PR669 P/N to CS01002FB12.....Page28
14. Add PQ65, PQ66, PQ67, PQ68, PQ69, PR695, PR700, PR701, PR702.....Page29  
Add PR622, Remove PR621, Change PR142, PR86, PR700, PR80 from 10ohm to 22ohm.....Page29
15. Change PL4, PL18 P/N from CX1PG220004 to CX330T60001; Add PC848, PC862 (CH41006K911).....Page30
16. Change PU7 from APL5912 to G9338, Remove PL17, Add PR703, PR704, PR705, PC849, PQ64, Change PR666 to 0ohm, PR62 to 20k, PR63 to 10k, Change PL15, PL16 P/N to CX330T60001.....Page31  
Change PCN3 from 50pin to 60pin, Add PC850,PC851, PC852, PC853, PC854, PC855, PC856, PC857, PC858, PC859 (CH41006K911).....Page31
17. Add PR680, PR682, PC832, PC833, PC860, PC861,PC92, Change PL5, PL7 P/N to CX330T60001, Change PR40 P/N to CS-5603J908, Change PR46 from 30.9K to 30K.....Page32
18. Change PR133 P/N to CS-5603J908, Change PL13 P/N to CX330T60001, Add PR586, PR681, PC831.....Page33
19. Add R658 (CS31002FB26), Unstuff R24, Stuff R25.....Page15
20. Remove R512, R561.....Page21
21. Change U51 P/N from ALTD3306K00 to AL3Q3306K04 .....Page24
22. Change CON39 P/N from DFHS12FS602 to DFHS14FS288 .....Page25
23. Change PQ64 P/N from BAM44040012 to BAM44220002 .....Page31
24. Add U33 and C369 for M56\_PLTRST# buffer .....Page14
25. Remove G-sensor (U55) .....Page24
26. Add U32, C38, C39, Remove R8.....Page4

**PVT Revise:**

1. Add R697, R698, C1155, C1156, Change PR95 from 1M to 100k.....Page29
2. Add R3127 10K to pull down GENERICD.....Page37
3. Add R331 100K to pull down PLTRST#.....Page14
4. Change PR673 to 47k to delay LDO\_EN.....Page31
5. Change PR11 to 15K to delay VCC\_CORE.....Page28

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|       |                        |                |
|-------|------------------------|----------------|
| Size  | Document Number        | Rev            |
|       | <b>RJ9 Main Board</b>  | <b>1A</b>      |
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