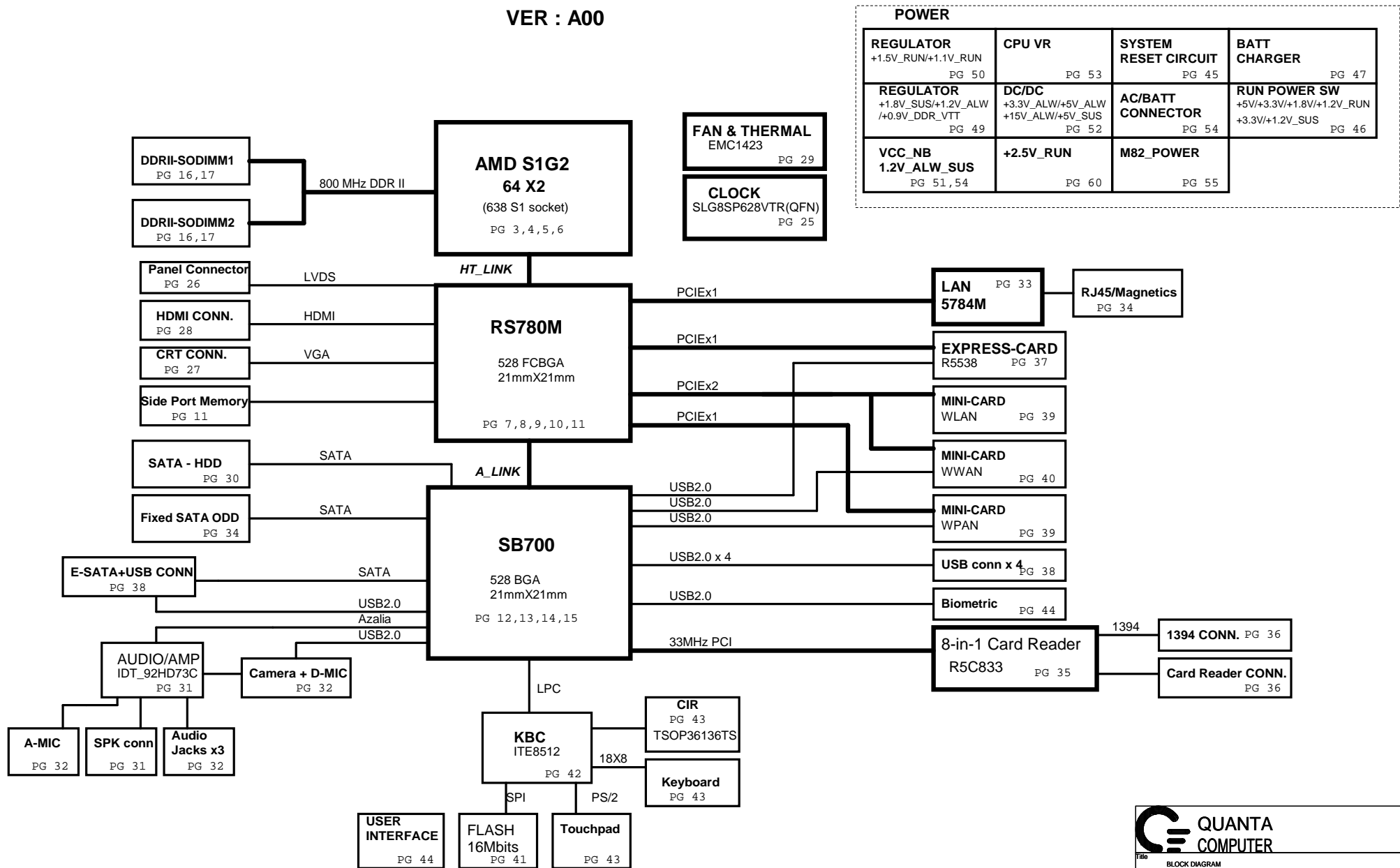


Hepburn AMD UMA

VER : A00



| POWER | | | |
|--|--|--------------------------------------|--|
| REGULATOR +1.5V_RUN/+1.1V_RUN PG 50 | CPU VR PG 53 | SYSTEM RESET CIRCUIT PG 45 | BATT CHARGER PG 47 |
| REGULATOR +1.8V_SUS/+1.2V_ALW /+0.9V_DDR_VTT PG 49 | DC/DC +3.3V_ALW/+5V_ALW +15V_ALW/+5V_SUS PG 52 | AC/BATT CONNECTOR PG 54 | RUN POWER SW +5V/+3.3V/+1.8V/+1.2V_RUN +3.3V/+1.2V_SUS PG 46 |
| VCC_NB 1.2V_ALW_SUS PG 51,54 | +2.5V_RUN PG 60 | M82_POWER PG 55 | |

INDEX

| Pg# | Description |
|-------|---|
| 1 | Schematic Block Diagram |
| 2 | Index/Power States and USB/PCI/PCle map |
| 3-6 | CPU page |
| 7-11 | RS780M page |
| 12-15 | SB700 page |
| 16-17 | DDRII SO-DIMM(200P) |
| 18-23 | Blank |
| 24 | LCD/CRT HYBRID |
| 25 | Clock Generator |
| 26 | LCD Conn. |
| 27 | CRT Conn |
| 28 | HDMI |
| 29 | FAN /THERMAL |
| 30 | SATA (HDD&CD_ROM) |
| 31-32 | Audio CODEC(92HD73)/Phone Jack |
| 33-34 | LOM /Switch |
| 35-36 | PC CARD/1394 |
| 37 | EXPRESS |
| 38 | USB |
| 39 | Mini Card |
| 40 | WWAN |
| 41 | Flash ROM, RTC |
| 42 | ITE8512 |
| 43 | TP/KB/CIR/BT |
| 44 | Switch,Keyboard & LED |
| 45 | System Reset Circuit |
| 46 | RUN POWER |
| 47 | Battery Charger |
| 48 | DCIN,Batt |
| 49 | 1.8V_SUS,0.9VTT |
| 50 | 1.5V_RUN AND 1.1V_RUN |
| 51 | +VCC_NB |
| 52 | +3.3V_ALW/+5V_SUS |
| 53 | VCC_VCORE |
| 54 | +1.2V_ALW_SUS |
| 55 | Blank |
| 56 | Power Rail for system |
| 57 | Power Sequence Diagram |
| 58 | SMBUS BLOCK |
| 59 | Stitch caps and Screw hole. |

USB PORT#

DESTINATION

| USB PORT# | DESTINATION |
|-----------|----------------|
| 0 | Left side USB. |
| 1 | Left side USB. |
| 2 | IO board |
| 3 | IO board |
| 4 | WLAN |
| 5 | WWAN |
| 6 | WPAN |
| 7 | EXPRESS |
| 10 | Biometric |
| 11 | Camera |

PCI TABLE

| PCI DEVICE | IDSEL | REQ#/GNT# | PIRQ |
|------------|-------|-------------|--------------------|
| CardBus | AD17 | REQ#1/GNT#1 | IRQ_SERIRQ IRQD |

| PCI EXPRESS | DESTINATION |
|-------------|--------------|
| Lane 1 | WLAN |
| Lane 2 | WPAN |
| Lane 3 | LOM |
| Lane 4 | EXPRESS CARD |
| Lane 5 | WWAN |

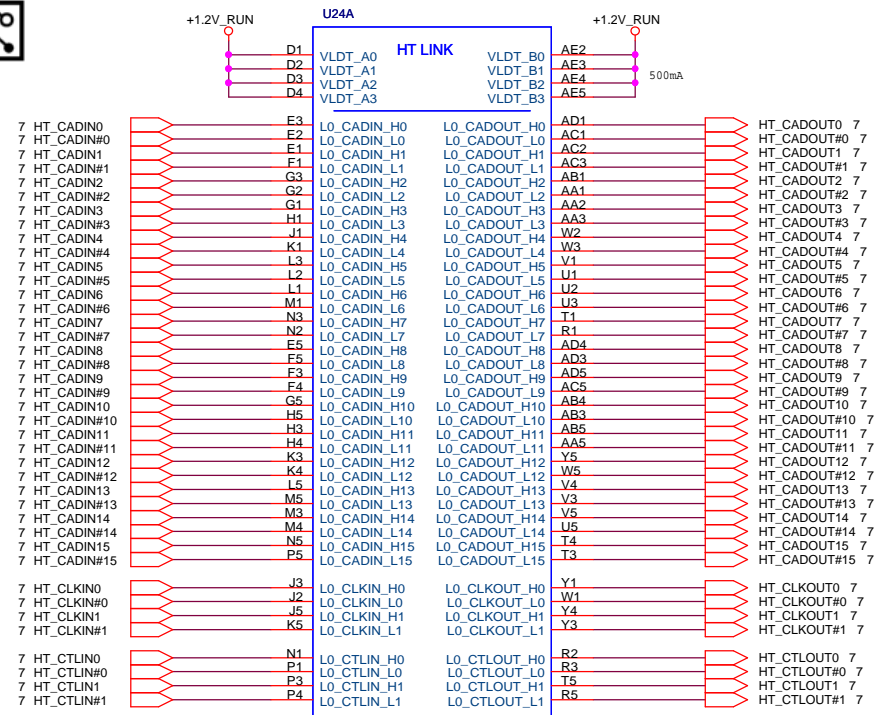
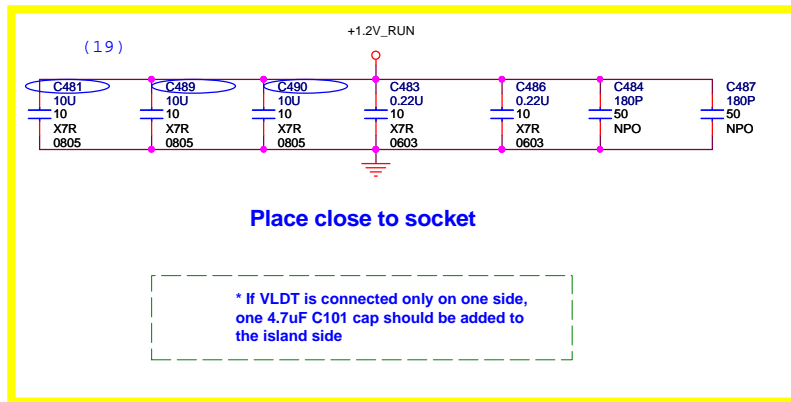
PM TABLE

| power plane \ State | +15V_ALW +5V_ALW +3.3V_ALW | +5V_SUS +3.3V_SUS +1.8V_SUS +0.9V_DDR_VTT +1.2V_ALW_SUS | +5V_RUN +3.3V_RUN +2.5V_RUN +1.8V_RUN +1.2V_RUN +1.5V_RUN +VCC_CORE +NB_VCORE |
|---------------------|----------------------------------|---|--|
| S0 | ON | ON | ON |
| S3 | ON | ON | OFF |
| S5 S4/AC | ON | OFF | OFF |
| S5 S4 on Battery | OFF | OFF | OFF |

POWER STATES

| State \ Signal | SLP S3# | SLP S5# | ALWAYS PLANE | SUS PLANE | RUN PLANE | CLOCKS |
|----------------------|---------|---------|--------------|-----------|-----------|--------|
| S0 (Full ON) | HIGH | HIGH | ON | ON | ON | ON |
| S3 (Suspend to RAM) | LOW | HIGH | ON | ON | OFF | OFF |
| S4 (Suspend to DISK) | LOW | HIGH | ON | OFF | OFF | OFF |
| S5 (SOFT OFF) | LOW | LOW | ON | OFF | OFF | OFF |



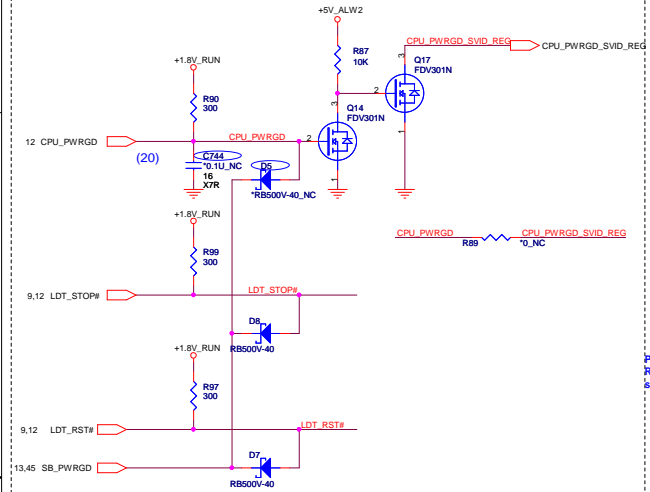
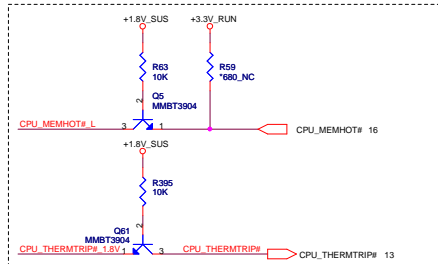
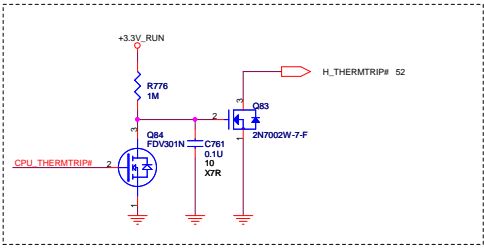
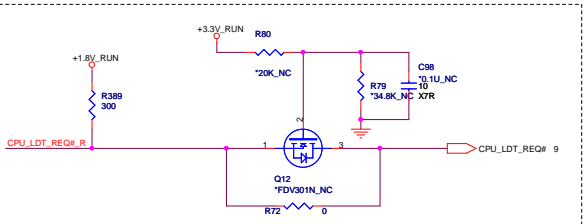


QUANTA COMPUTER

Title: S1G2 HT I/F

Size: FX6 Document Number: Rev 3A

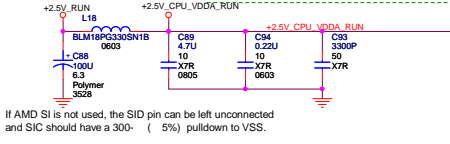
Date: Wednesday, June 25, 2008 Sheet 3 of 70



L65 ferrite bead with an approximate impedance of 33 Ω , a maximum DC resistance of 0.025 ohm, and a current rating of at least 300mA.

LAYOUT: ROUTE VDDA TRACE APPROX. 50 mils WIDE (USE 2x25 mil TRACES TO EXIT BALL FIELD) AND 500 mils LONG. This trace should be kept at least 20 mils away from all other signals.

+2.5V_CPU_VDDA_RUN

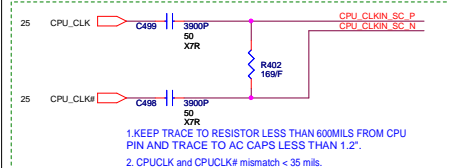
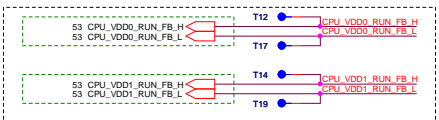
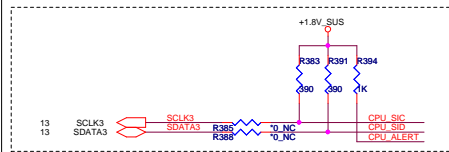
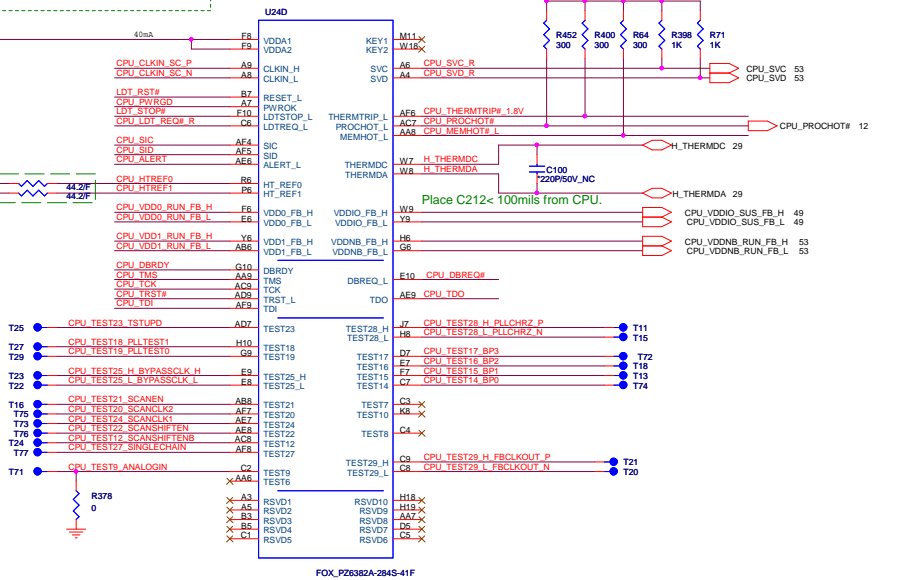


If AMD SI is not used, the SID pin can be left unconnected and SIC should have a 300- (5%) pulldown to VSS.

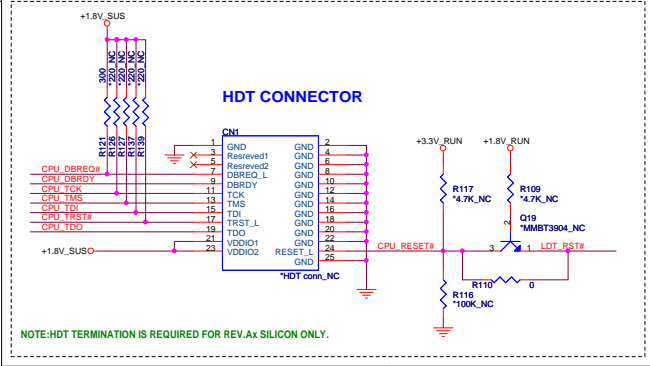
Place R78 and R77 < 1.5". Route CPU_HTRF10 with 5mils trace width and 10mils spacing from other signals in X, Y, Z directions

2-Bit Boot VID Codes

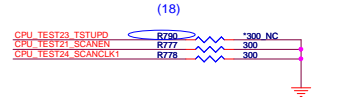
| SVC | SVD | Voltage Output (CPU Power) |
|-----|-----|----------------------------|
| 0 | 0 | 1.1V |
| 0 | 1 | 1.0V |
| 1 | 0 | 0.9V |
| 1 | 1 | 0.8V |



1. KEEP TRACE TO RESISTOR LESS THAN 600MILS FROM CPU PIN AND TRACE TO AC CAPS LESS THAN 1.2".
2. CPUCLK and CPUCLK# mismatch < 35 mils.

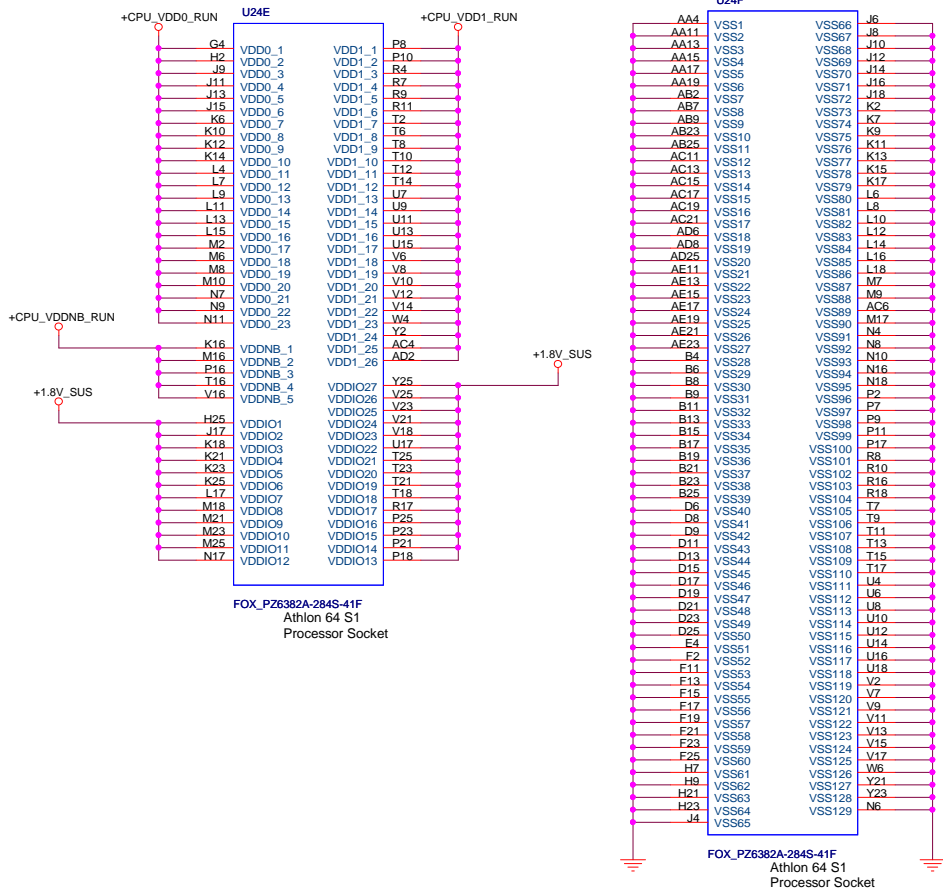


NOTE:HDT TERMINATION IS REQUIRED FOR REV.Ax SILICON ONLY.



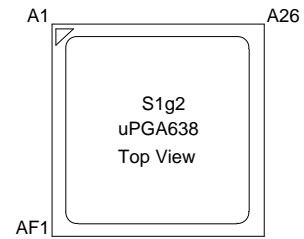
If no use which Net need pull-up or down

PROCESSOR POWER AND GROUND

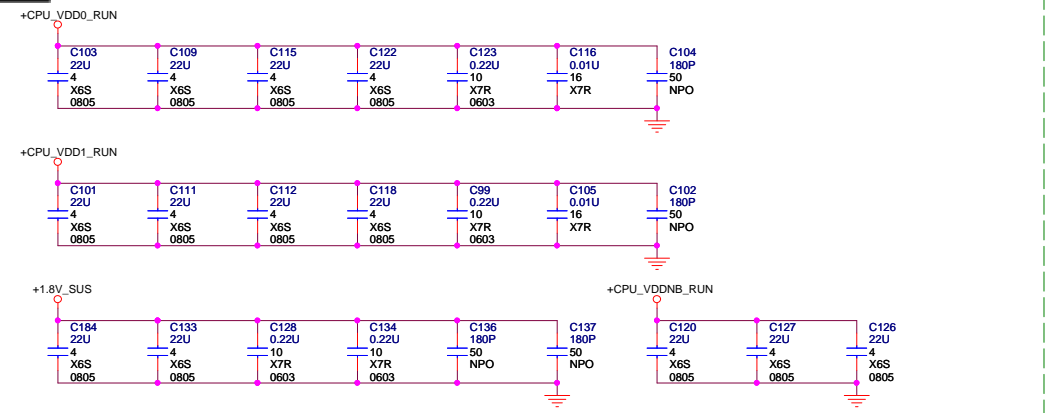


FOX_PZ6382A-284S-41F
Athlon 64 S1
Processor Socket

FOX_PZ6382A-284S-41F
Athlon 64 S1
Processor Socket

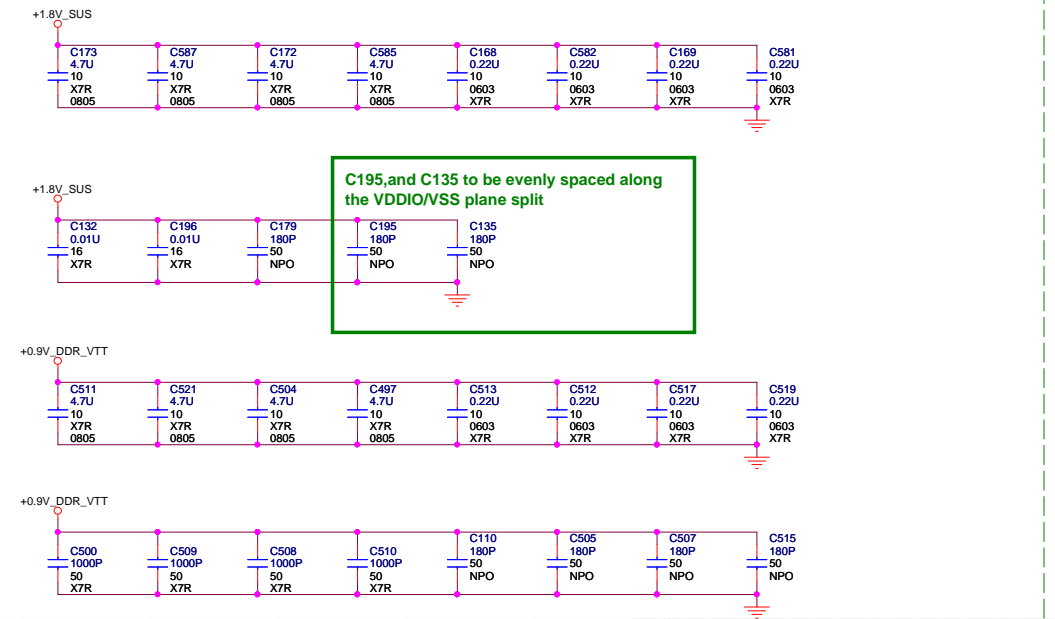


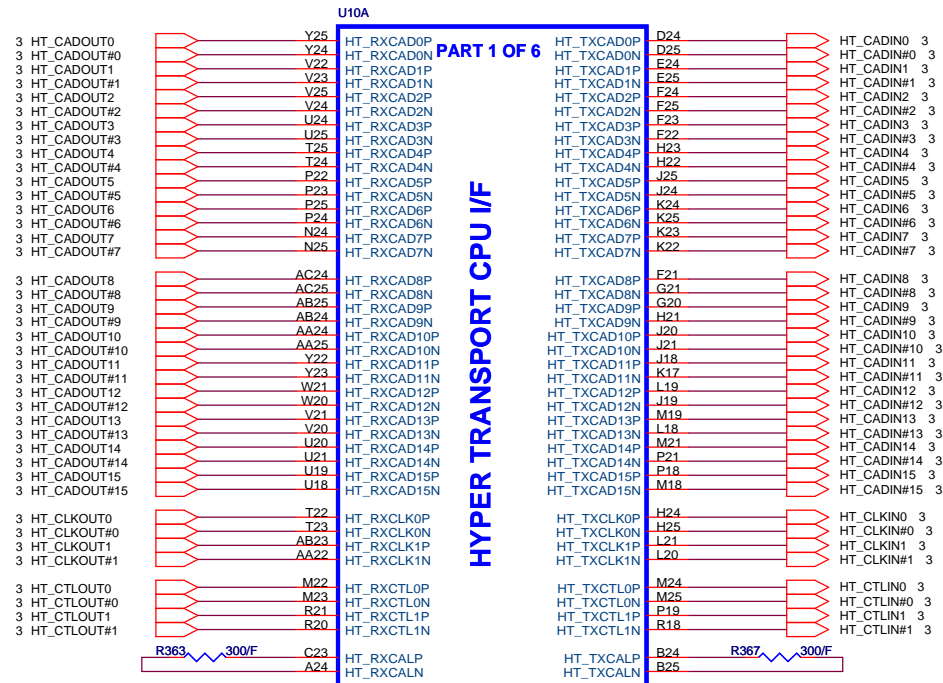
BOTTOMSIDE DECOUPLING



DECOUPLING BETWEEN PROCESSOR AND DIMMs

PLACE CLOSE TO PROCESSOR AS POSSIBLE





RS780M A13

Rev.A12

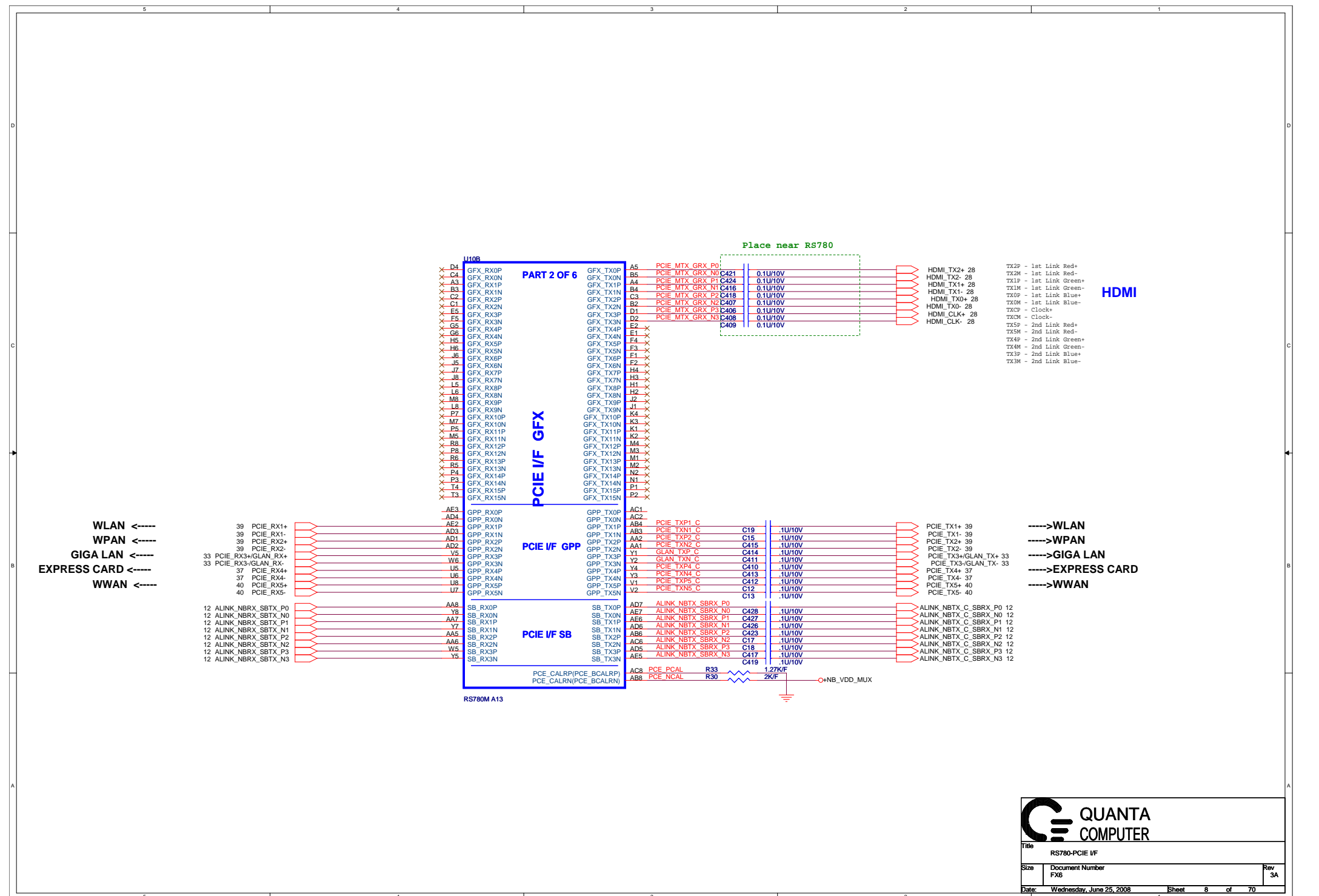
| | |
|-------|------------|
| | R363, R367 |
| RS780 | 301 |
| RX780 | 1.21K |

**QUANTA
COMPUTER**

Title: RS780-HT LINK I/F

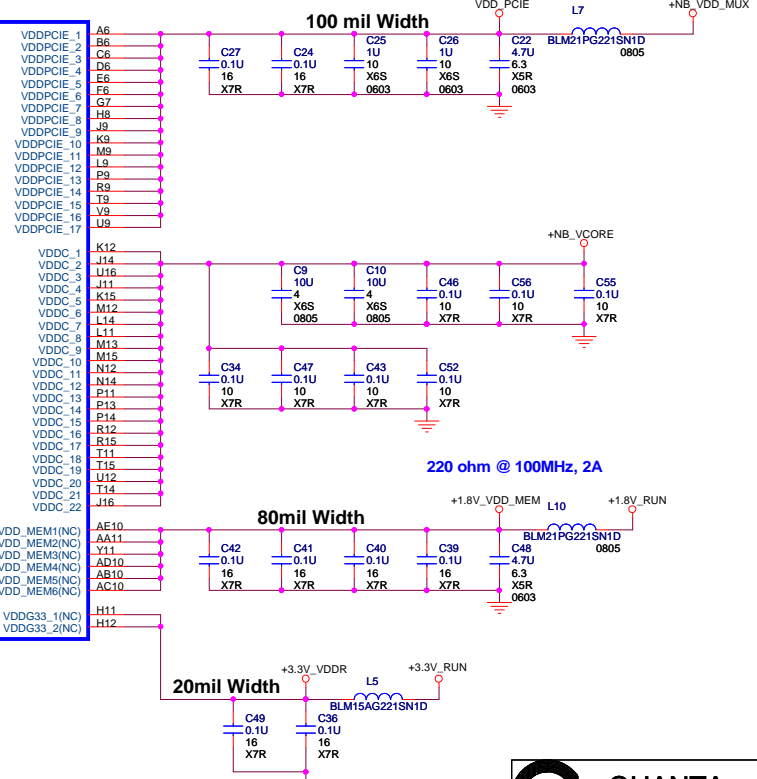
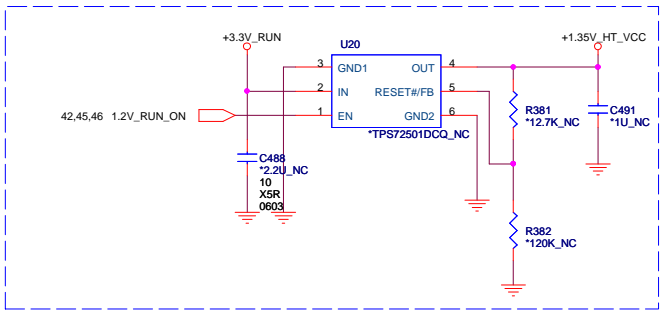
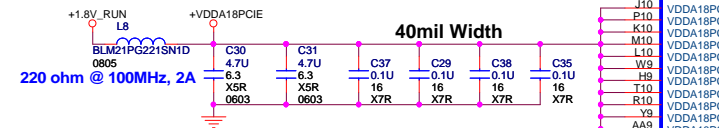
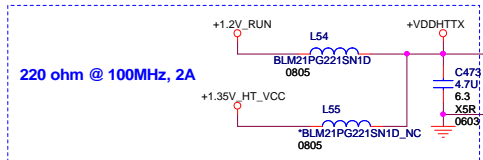
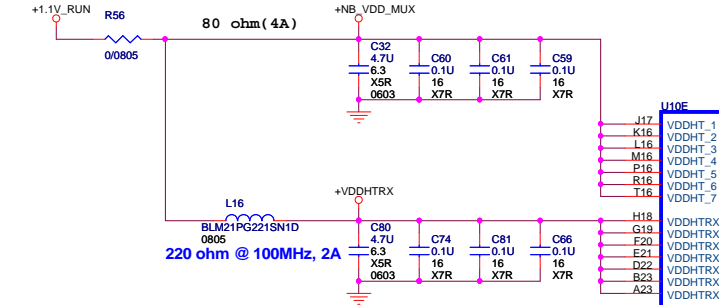
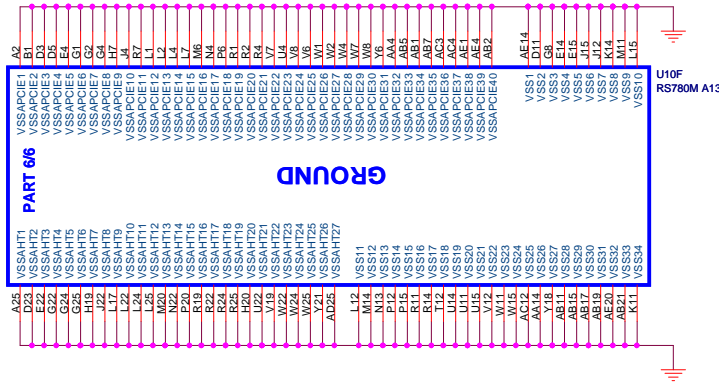
| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

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RX780/RS780 POWER DIFFERENCE TABLE

| PIN NAME | RX780 | RS780 |
|------------|-------|-------------------------|
| VDDHT | +1.1V | +1.1V |
| VDDHTRX | +1.1V | +1.1V |
| VDDHTTX | +1.2V | +1.2V |
| VDDA18PCIE | +1.8V | +1.8V |
| VDDG18 | +1.8V | +1.8V |
| VDD18_MEM | NC | +1.8V |
| VDDPCIE | +1.1V | +1.1V |
| VDDC | +1.1V | +1.1V |
| VDD_MEM | NC | +1.8V/1.5V DDR2/DDR3 |
| VDDG33 | NC | +3.3V |



QUANTA COMPUTER

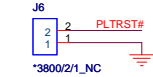
Title: RS780-POWER

Size: Document Number FX6 Rev 3A

Date: Wednesday, June 25, 2008 Sheet 10 of 70

PLACE THESE PCIE AC COUPLING CAPS CLOSE TO U30

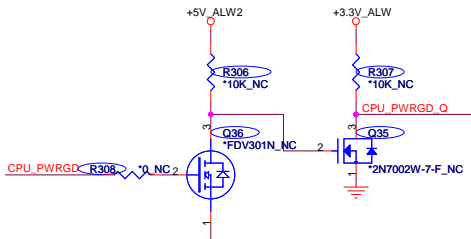
Reserved for Rubuto.



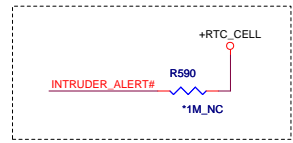
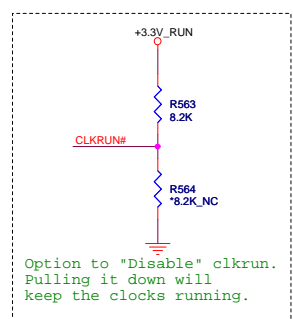
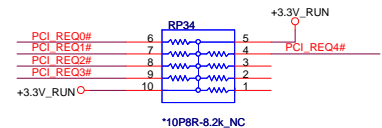
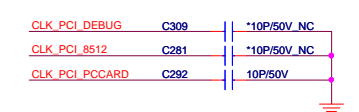
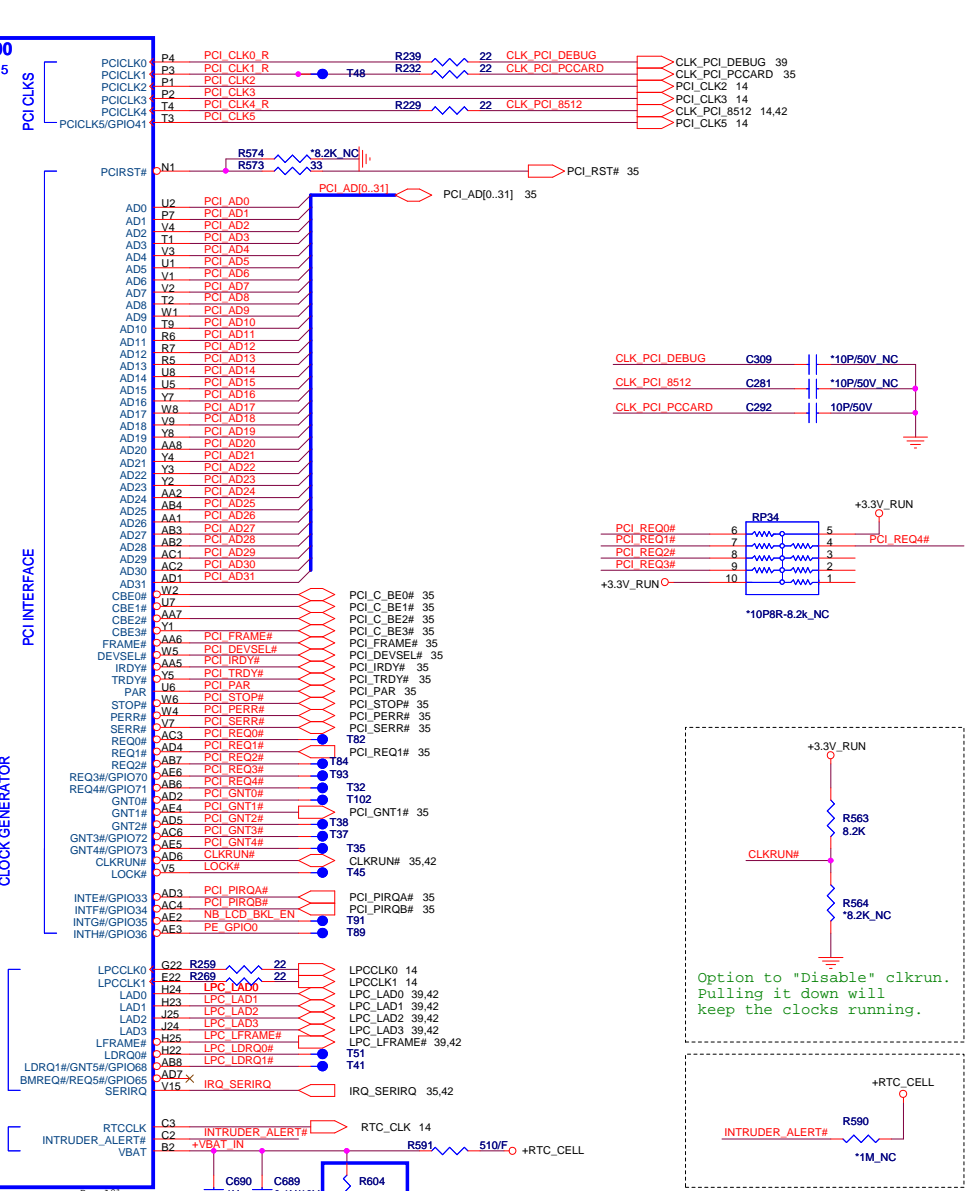
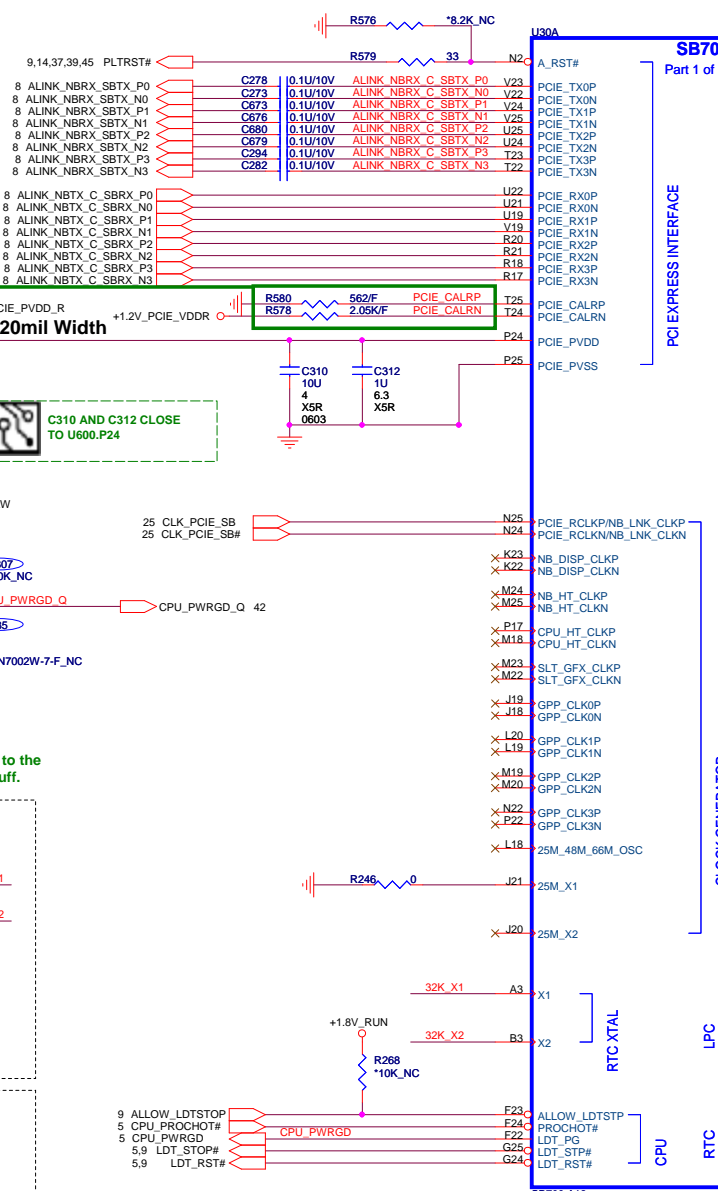
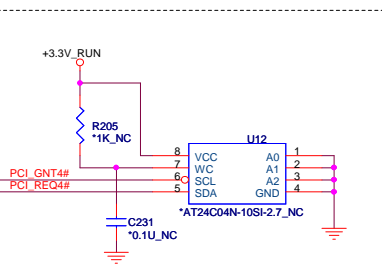
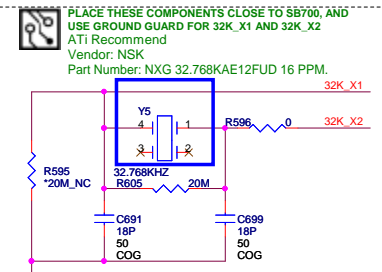
Place R580,R578 < 100mils from pins E27,E28,E29



C310 AND C312 CLOSE TO U600.P24



Place the translation circuit for CPU_PWRGD close to the SB700 to minimize stubbs when the circuit is No Stuff.



CMOS clear (Top or easy access place)

QUANTA COMPUTER

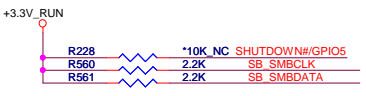
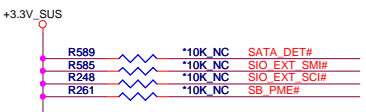
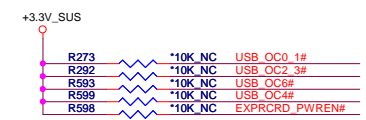
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Size: Document Number FX6

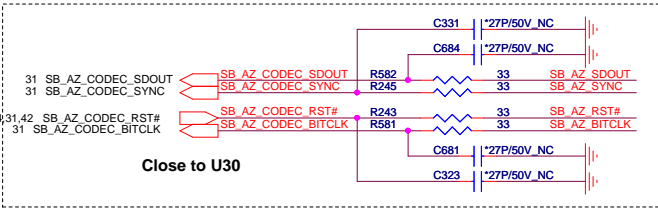
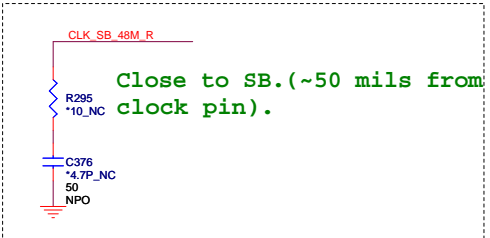
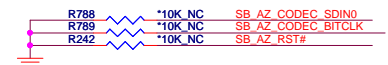
Date: Wednesday, June 25, 2008

Sheet: 12 of 70

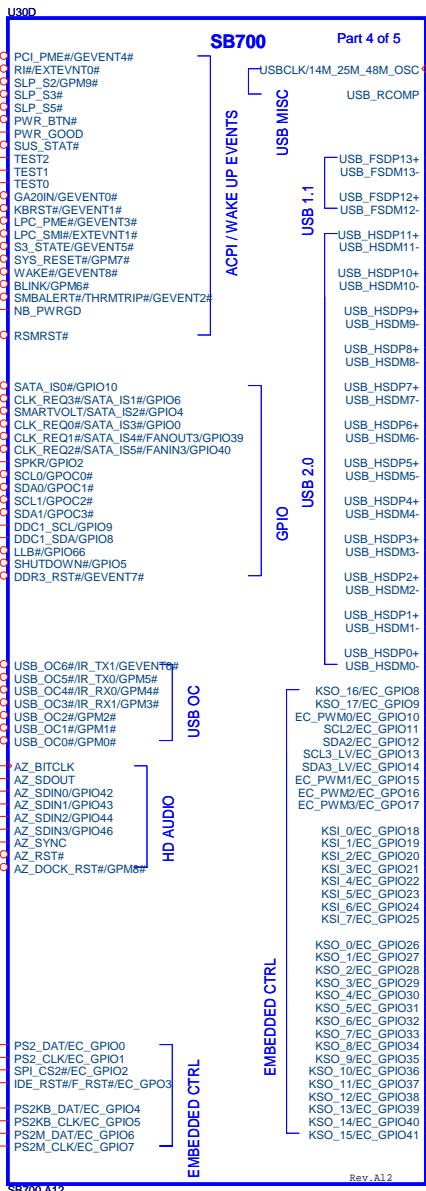
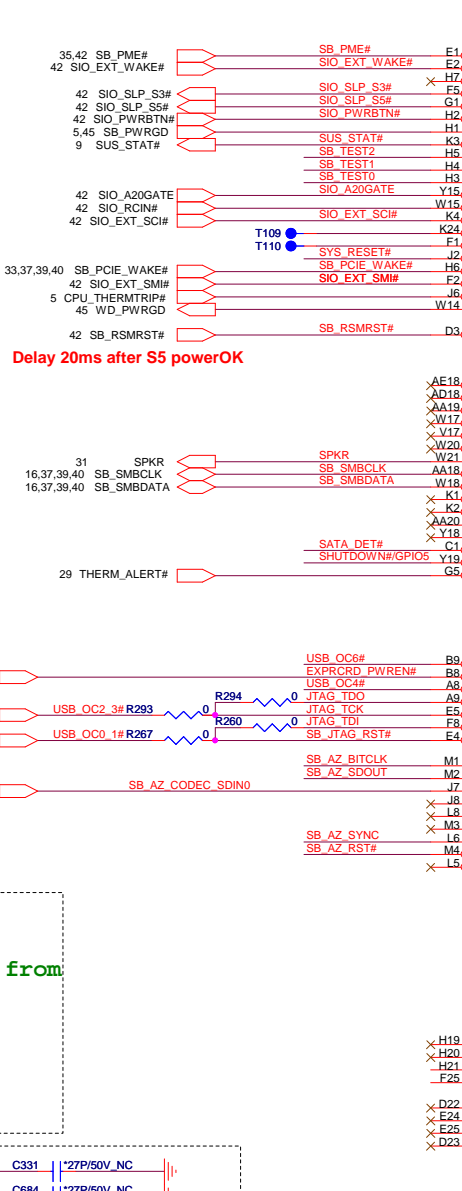
Rev: 3A



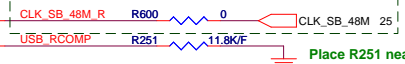
Delay 20ms after S5 powerOK



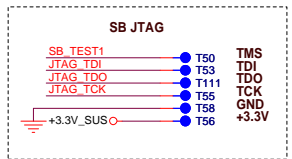
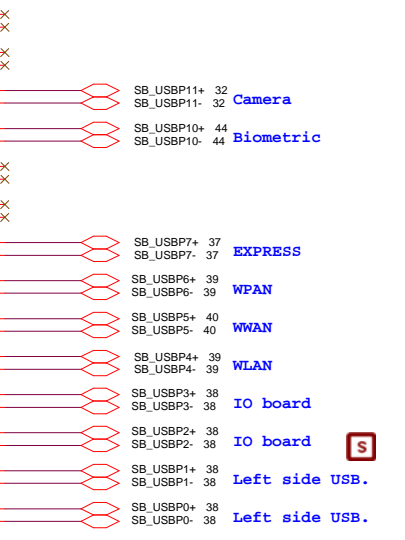
Close to U30



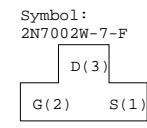
When External Clock Gen, used as 48M Clock input
When Internal Clock Gen, used as 48M Clock output



Place R251 near pin G8. Route it with 10mils Trace width and 25mils spacing to any signals in X, Y, Z directions.



STRAP pin to define use LPC or SPI ROM

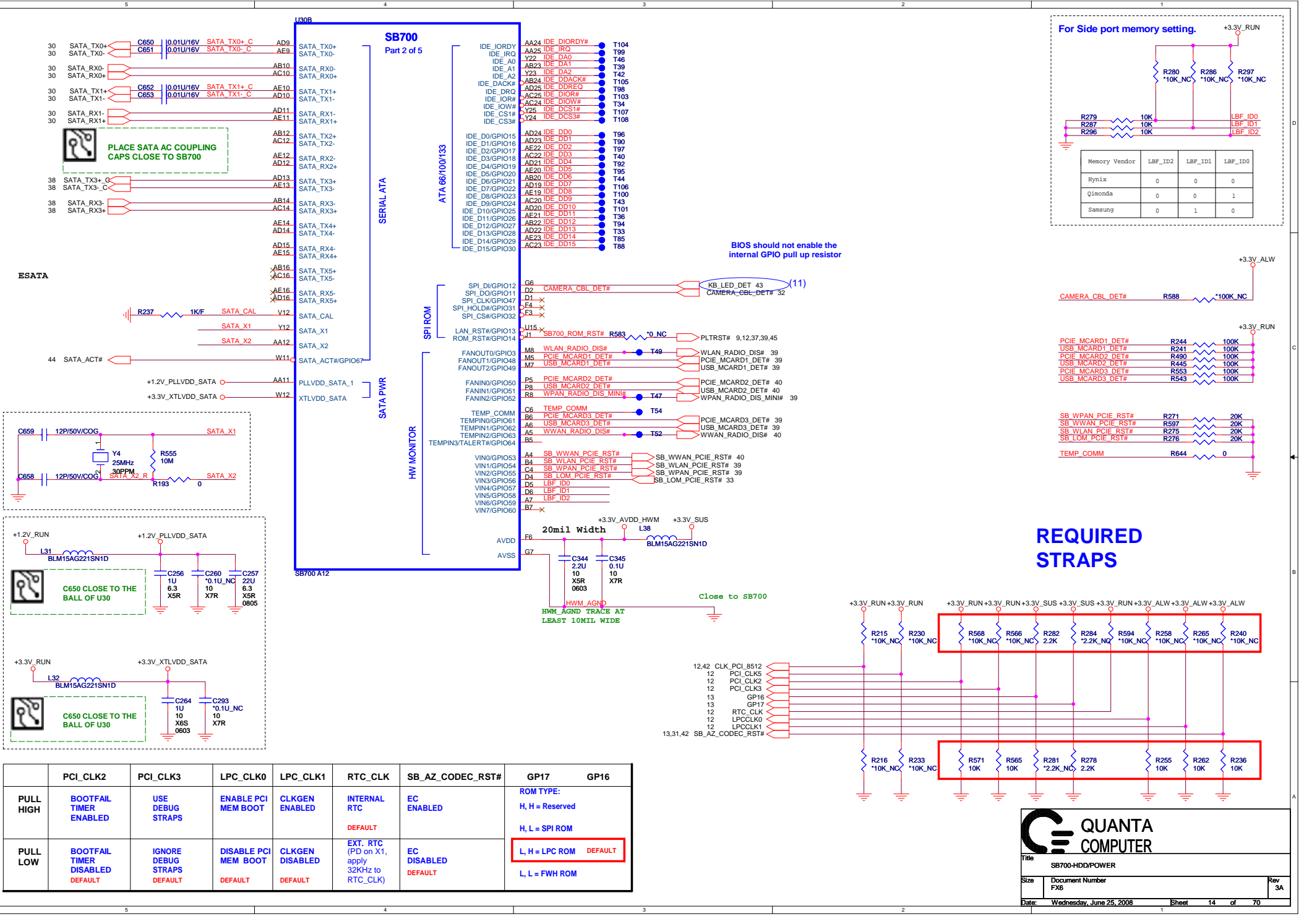


QUANTA COMPUTER

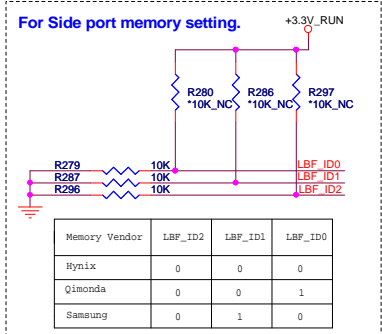
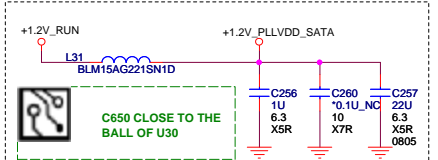
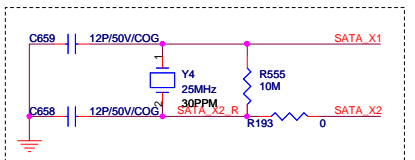
SB700-ACPI/USB/AC97

Symbol: 2N7002W-7-F

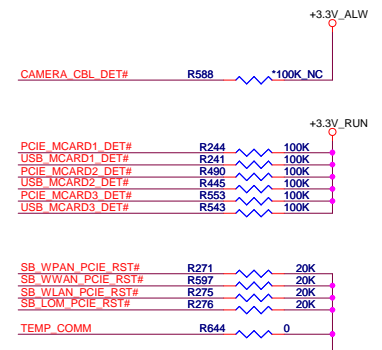
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| Title | SB700-ACPI/USB/AC97 | Rev | 3A |
| Size | Document Number | FX6 | |
| Date: | Wednesday, June 25, 2008 | Sheet | 13 of 70 |



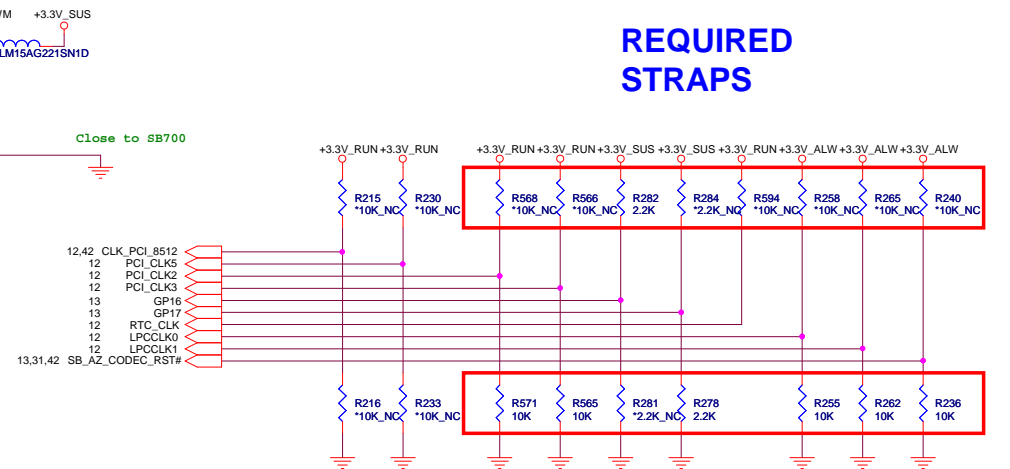
PLACE SATA AC COUPLING CAPS CLOSE TO SB700



BIOS should not enable the internal GPIO pull up resistor



REQUIRED STRAPS



| | PCI_CLK2 | PCI_CLK3 | LPC_CLK0 | LPC_CLK1 | RTC_CLK | SB_AZ_CODECS_RST# | GP17 | GP16 |
|------------------|------------------------------------|--------------------------------|---------------------------------|----------------------------|---|------------------------|--|------|
| PULL HIGH | BOOTFAIL TIMER ENABLED | USE DEBUG STRAPS | ENABLE PCI MEM BOOT | CLKGEN ENABLED | INTERNAL RTC DEFAULT | EC ENABLED | ROM TYPE: H, H = Reserved H, L = SPI ROM | |
| PULL LOW | BOOTFAIL TIMER DISABLED DEFAULT | IGNORE DEBUG STRAPS DEFAULT | DISABLE PCI MEM BOOT DEFAULT | CLKGEN DISABLED DEFAULT | EXT. RTC (PD on X1, apply 32KHz to RTC_CLK) | EC DISABLED DEFAULT | L, H = LPC ROM DEFAULT L, L = FWH ROM | |

QUANTA COMPUTER

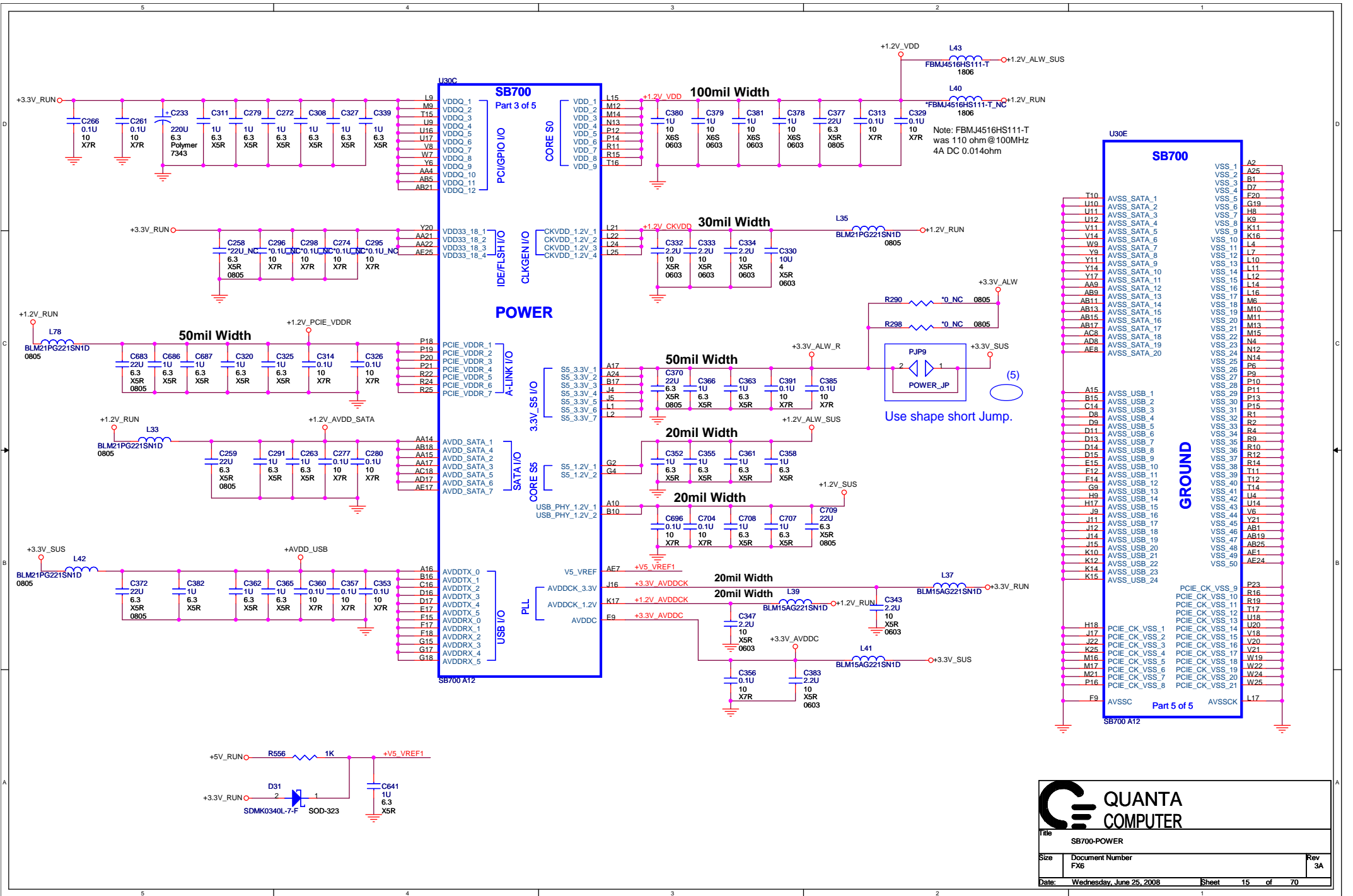
Title: SB700-HDD/POWER

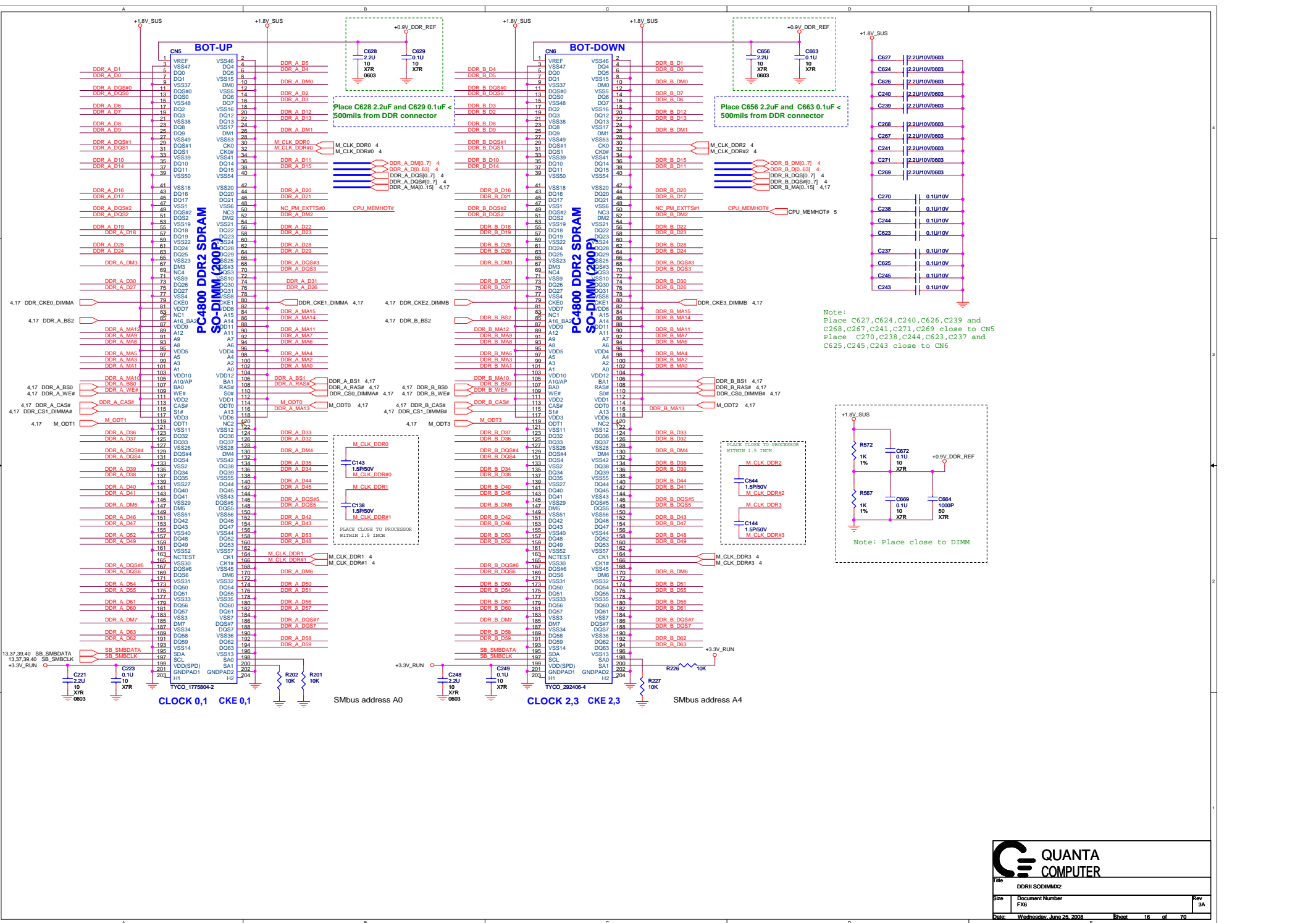
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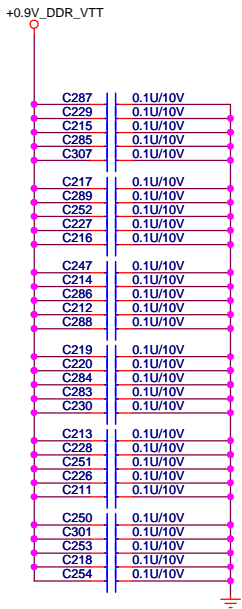
Date: Wednesday, June 25, 2008

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Rev: 3A

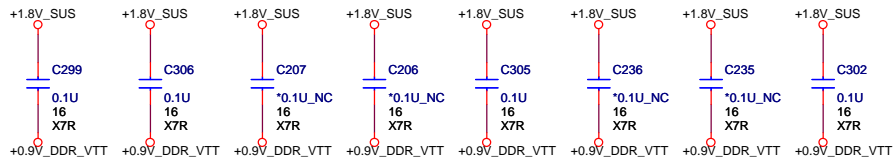




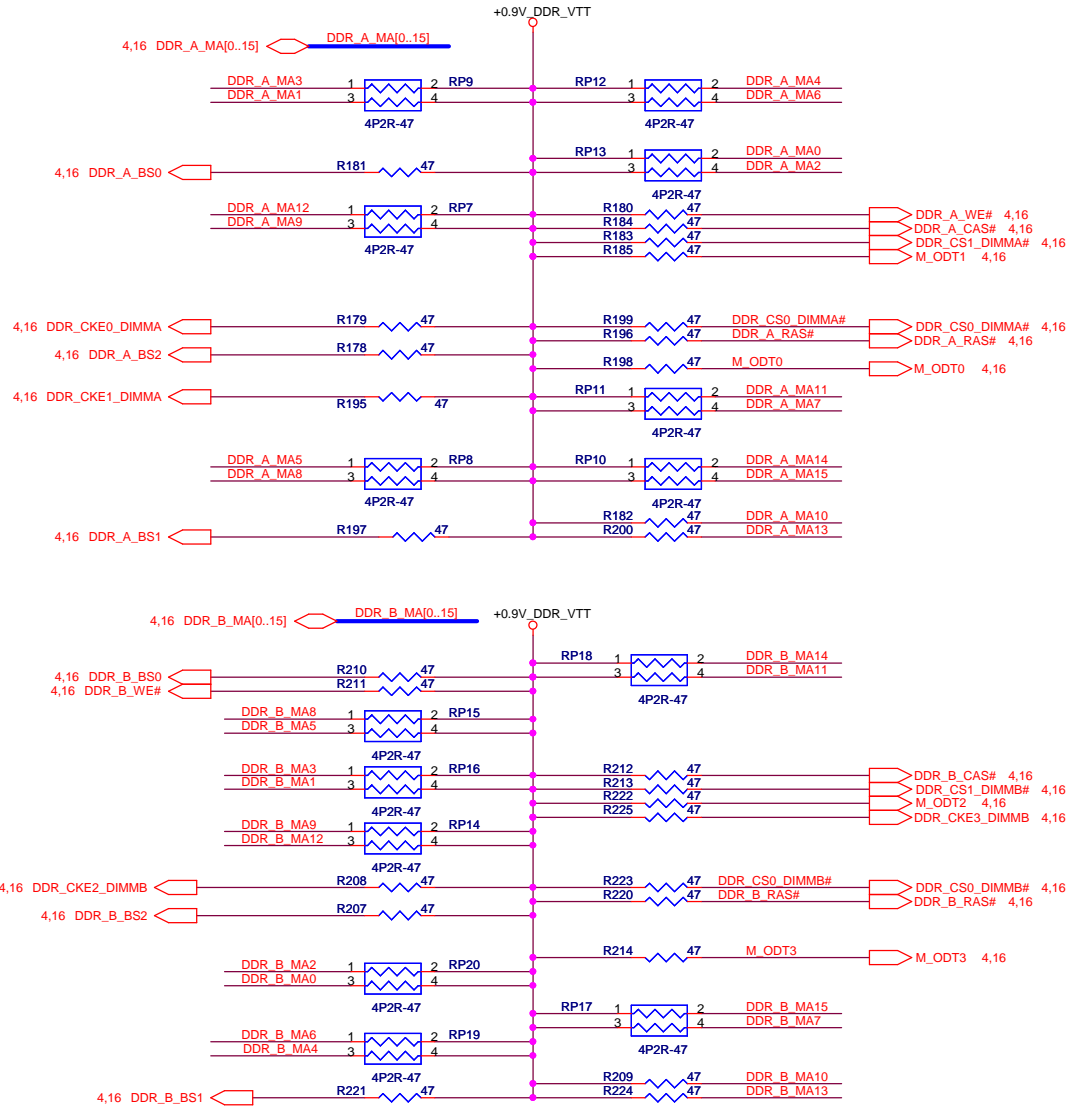
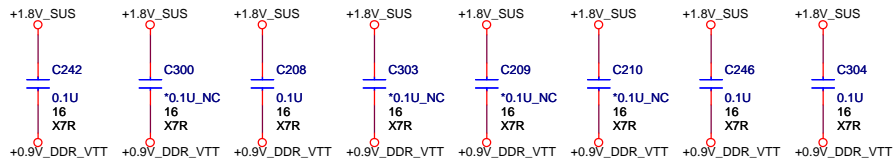


Layout Note:
Place one cap close to every 2 pullup resistors terminated to +0.9V_DDR_VTT

Note: Reserve stitching function for CN5.



Note: Reserve stitching function for CN6.



**QUANTA
COMPUTER**

| | | |
|-----------------------------------|-----------------|-----------|
| Title DDRII TERMINATION | | |
| Size FX6 | Document Number | Rev 3A |
| Date: Wednesday, June 25, 2008 | Sheet 17 | of 70 |

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| Title | | |
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| Size | Document Number | Rev |
| B | FX6 | 3A |
| Date: | Tuesday, June 03, 2008 | Sheet 18 of 70 |


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| Size | Document Number | Rev |
| Custom | FX6 | 3A |
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| Custom | FX6 | 3A | |
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| Date: Tuesday, June 03, 2008 | | Sheet: 21 of 70 |

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| Custom | FX6 | 3A | |
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COMPUTER**

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| CustomFX6 | | | 3A | | |
| Date: | Tuesday, June 03, 2008 | Sheet | 24 | of | 70 |

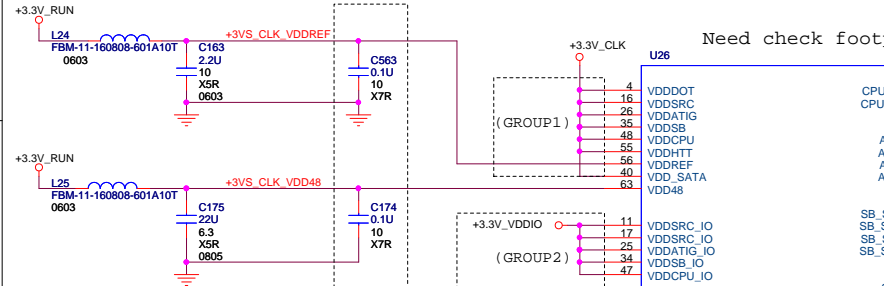
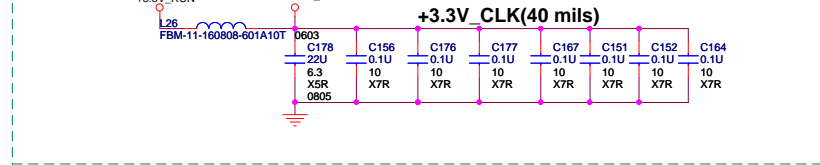
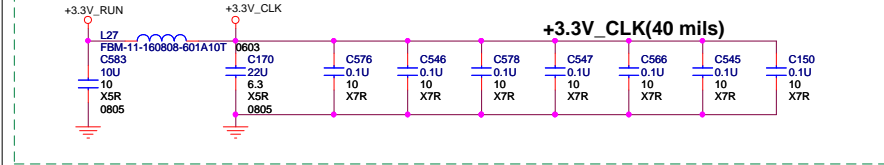
600 ohm +/-25%@100MHz
25m ohm max DC resistance
1A current rating

Place Decoupling Cap close to
GROUP1 each VDD pin as possible.

Place Decoupling Cap close to
GROUP2 each VDD pin as possible.

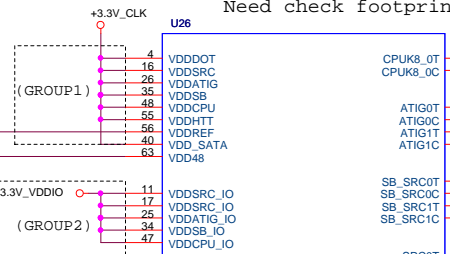
+3.3V_CLK(40 mils)

+3.3V_CLK(40 mils)

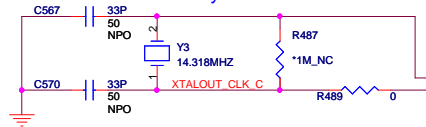


Place Decoupling Cap close to
each VDD pin as possible.

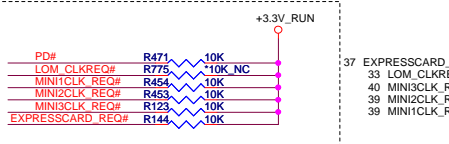
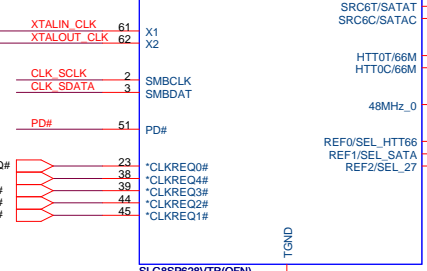
Need check footprint



Parallel Resonance Crystal

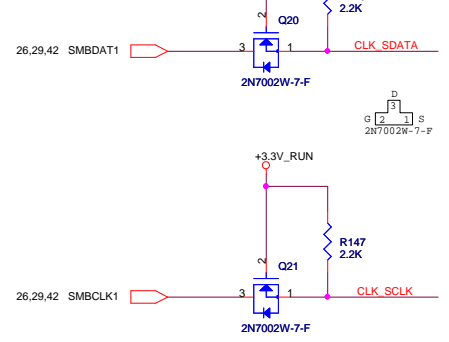


QFN64



SMbus address D2

These are for
backdrive issue.

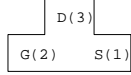


| | | |
|-----------|---|---|
| SEL_HTT66 | 1 | Pin54/53: 66MHz 3.3V single ended HTT clock |
| | 0 | Pin54/53: 100MHz differential HTT clock |
| SEL_SATA | 1 | Pin42/41: 100MHz No_SSC-Differential SATA clock |
| | 0 | Pin42/41: 100MHz SRC clock |
| SEL_27 | 1 | Pin6/5: 27 MHz / 27_SSC MHz |
| | 0 | Pin6/5: 100MHz SRC clock |

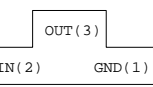
| OSC 14M_NB | | | |
|------------|-------|------|-------|
| | LEVEL | R607 | R637 |
| RX780 | +1.8V | 82R | 130R |
| RS780 | +1.1V | 158R | 90.9R |



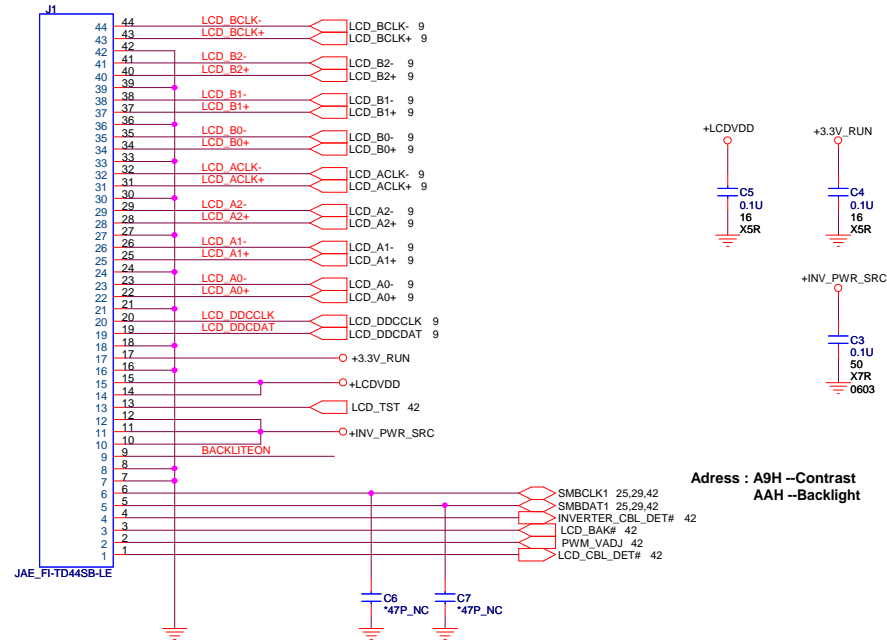
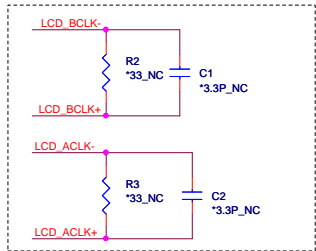
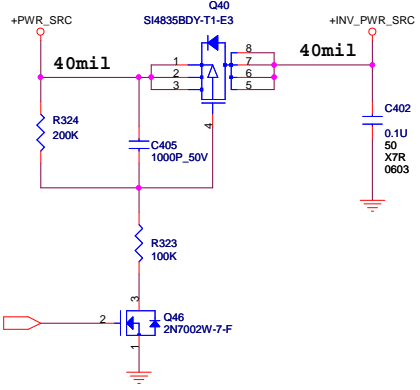
Symbol:
2N7002W-7-F



Symbol:
DTC124EUA

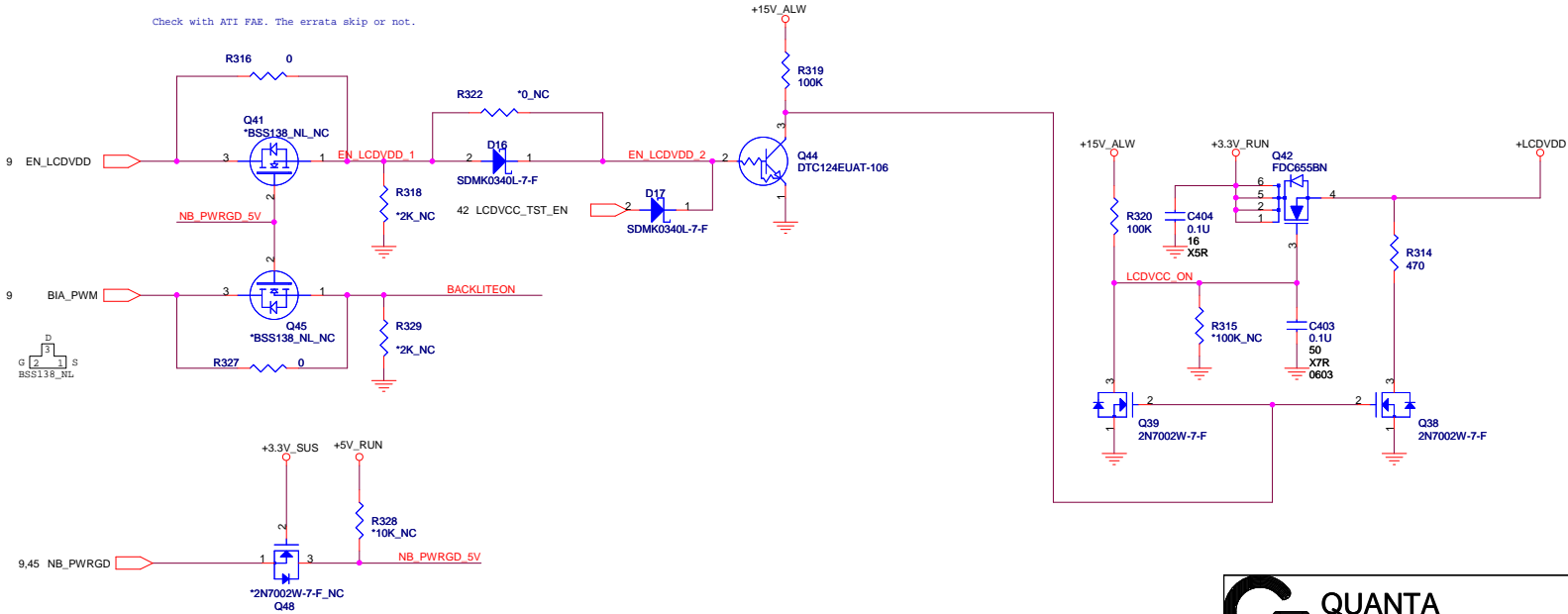


Design current: 560mA
Max current: 800mA



Address : A9H --Contrast
AAH --Backlight

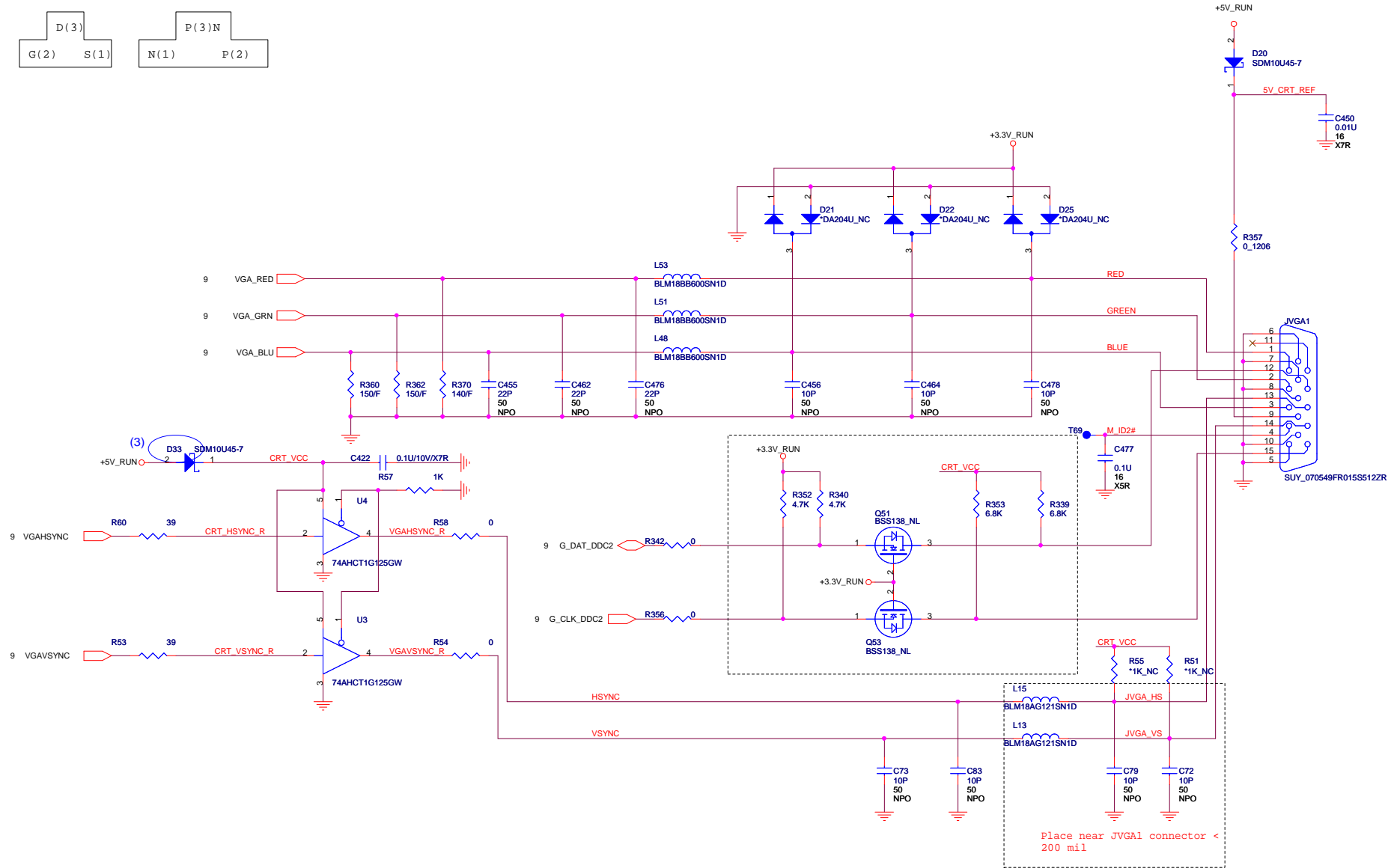
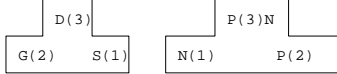
Check with ATI FAE. The errata skip or not.



| | | |
|-----------------------------------|-------------|----------|
| Title LCD_CONN,CK-SSCD | | |
| Size Document Number FX6 | Rev 3A | |
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Symbol:
BSS138_NL

Symbol:
DA204U

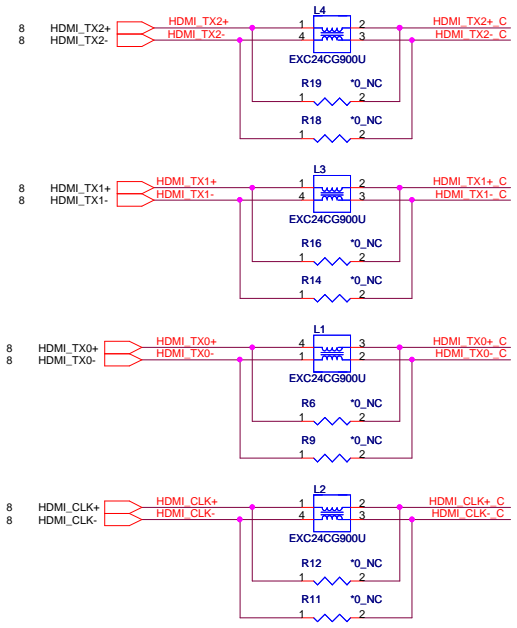
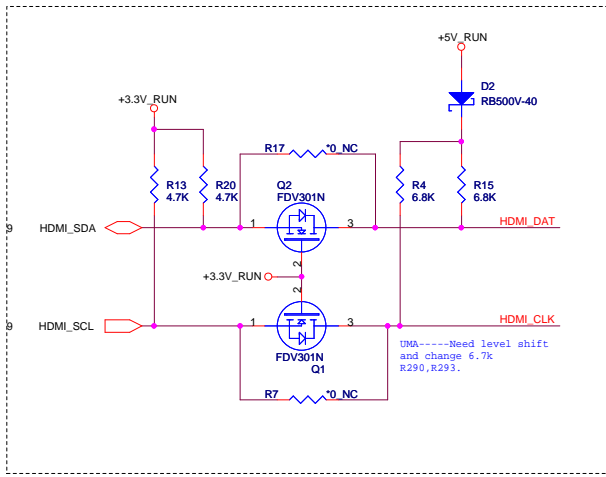
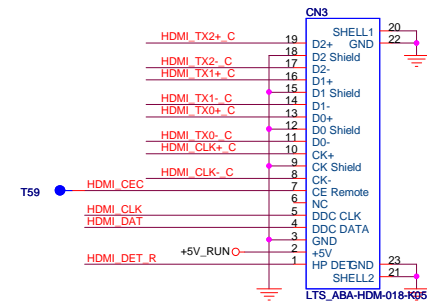


Place near JVG1 connector < 200 mil

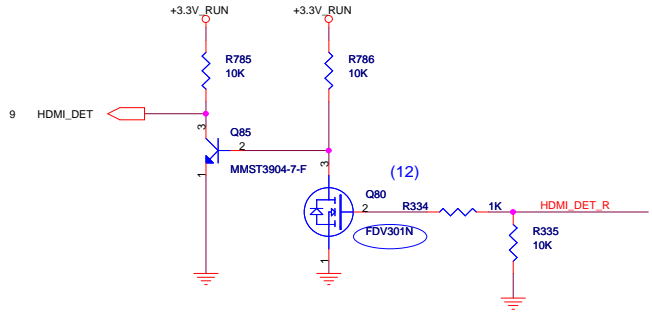
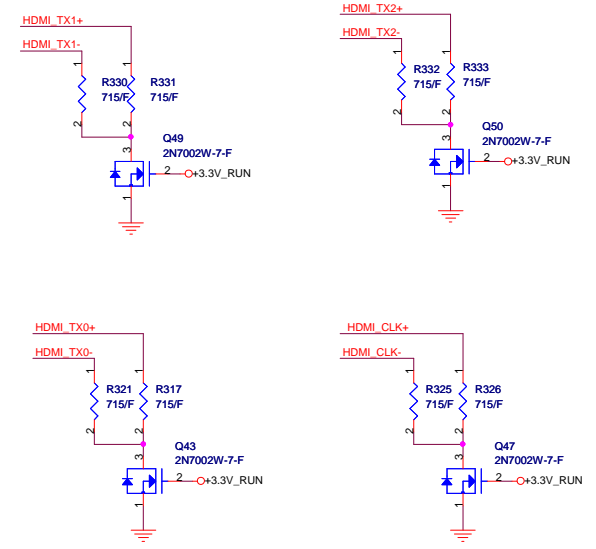


| | | |
|-------------------|--------------------------|----------------|
| Title CRT CONN | | |
| Size | Document Number FX6 | Rev 3A |
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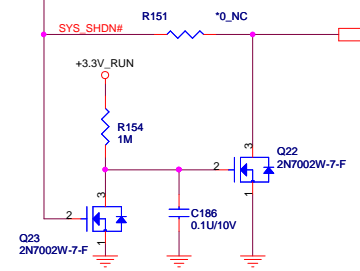
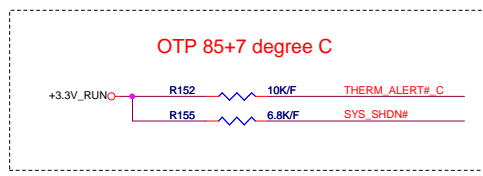
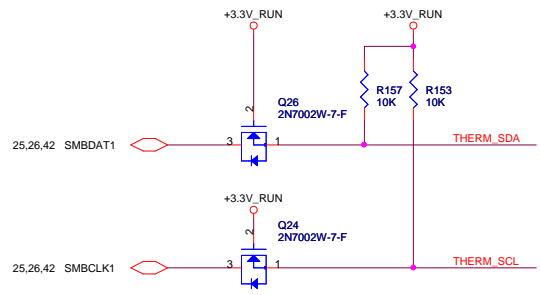
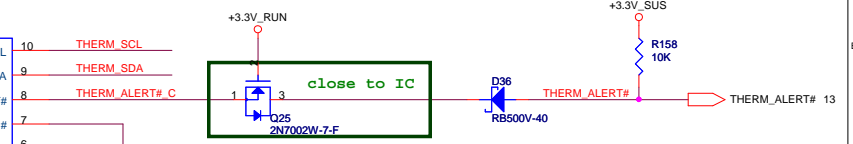
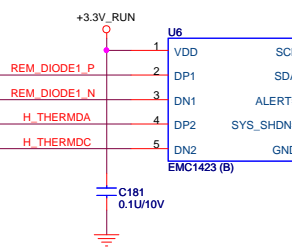
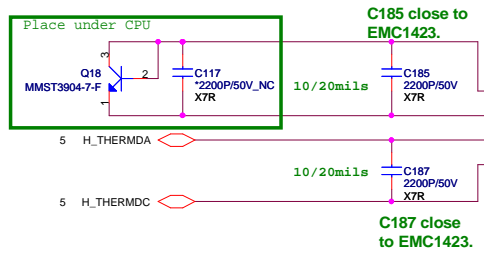
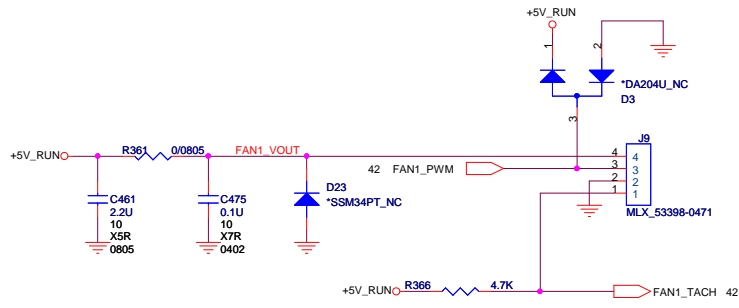
HDMI Connector

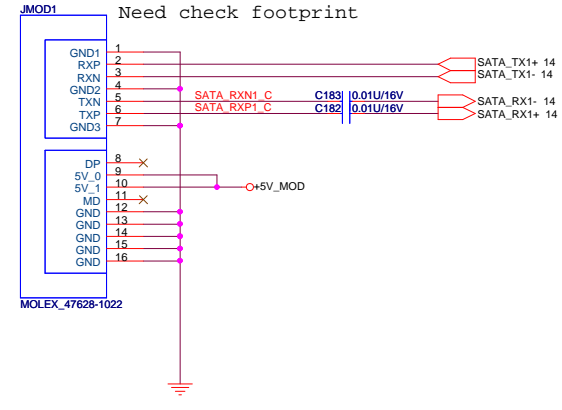
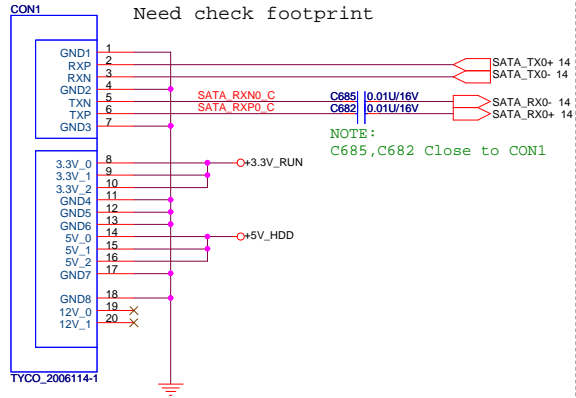
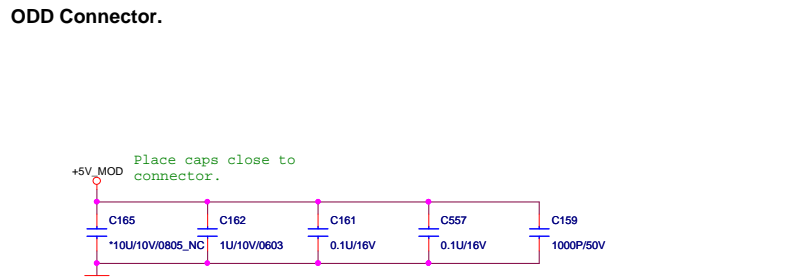
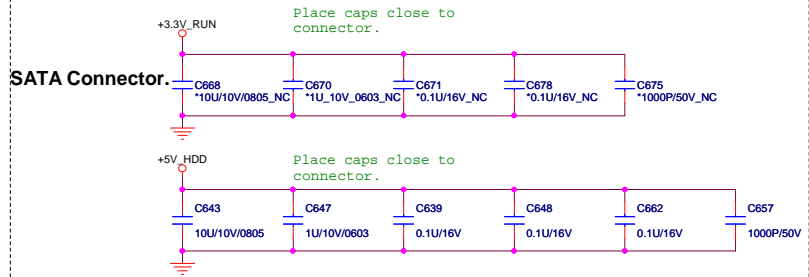


for EMI



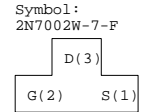
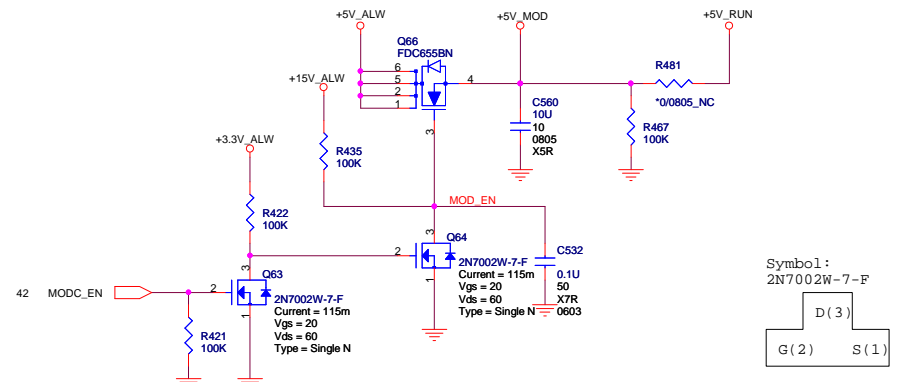
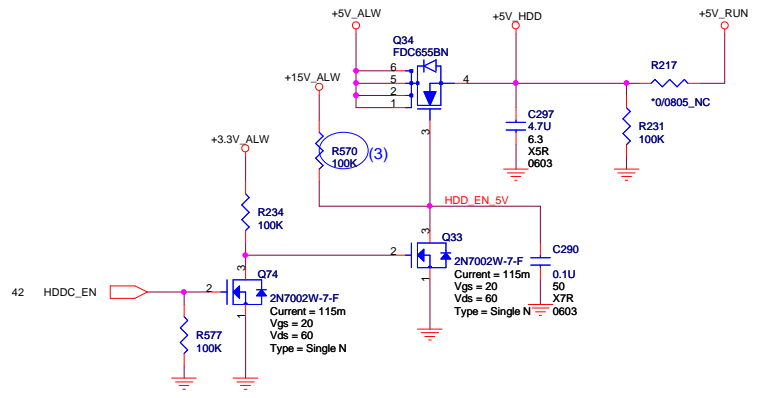
QUANTA COMPUTER
 Title: HDMI
 Size: Document Number FX6 Rev 3A
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Design current: 1050mA
Max current: 1500mA

Design current: 700mA
Max current: 1000mA

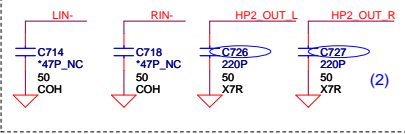
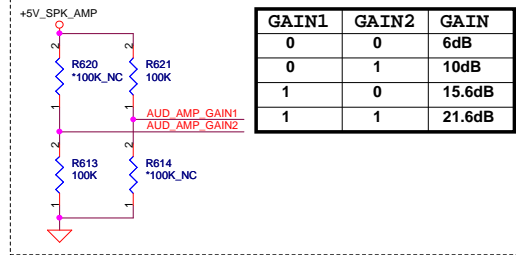


QUANTA COMPUTER

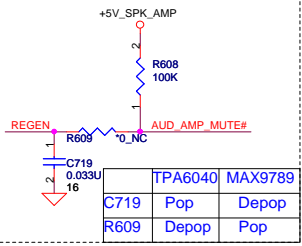
Title: SATA (HDD&CD_ROM)

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

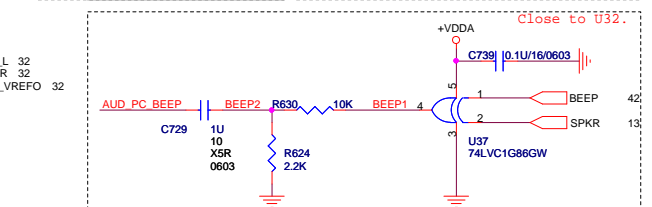
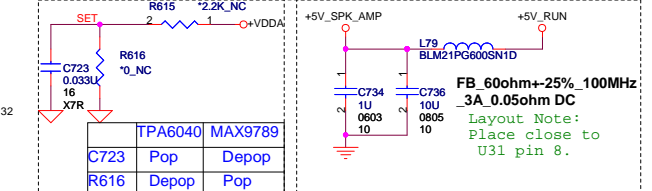
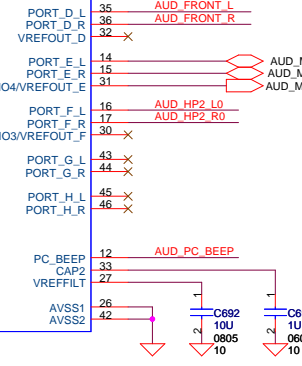
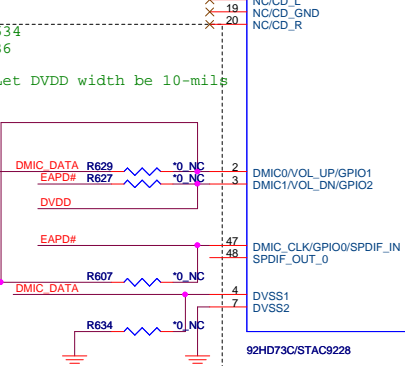
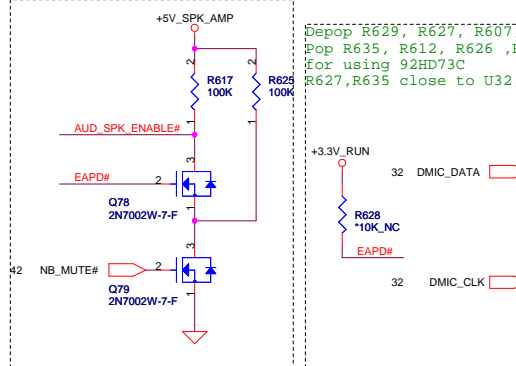
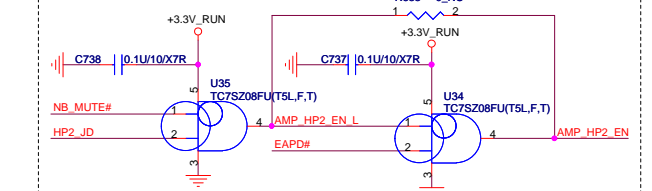
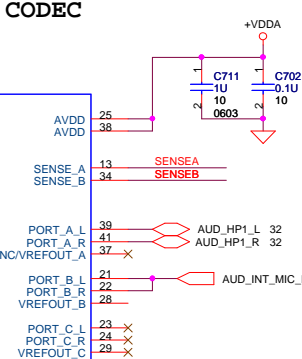
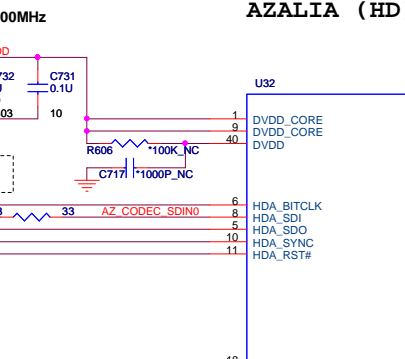
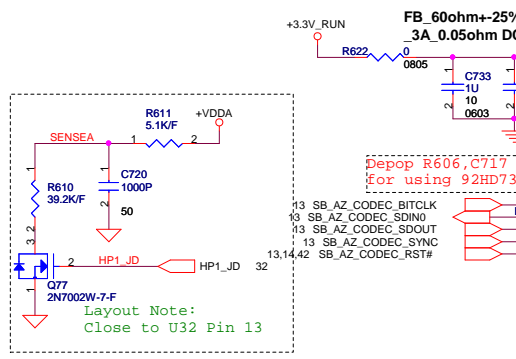
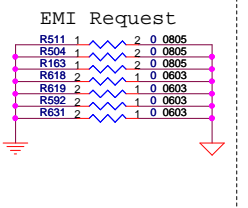
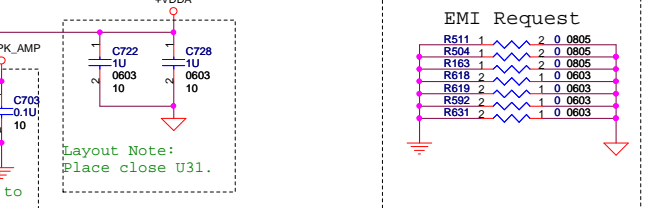
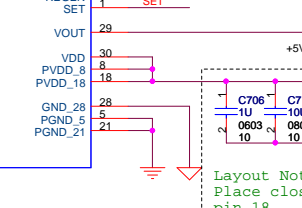
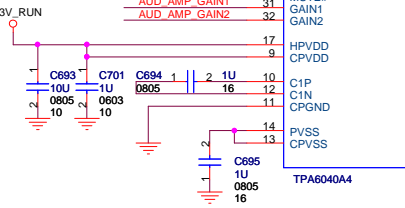
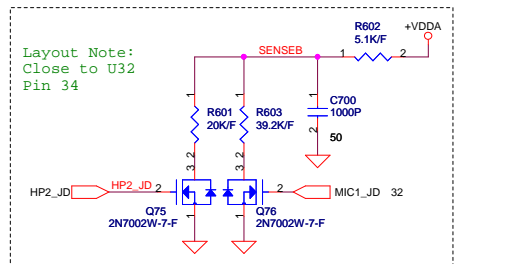
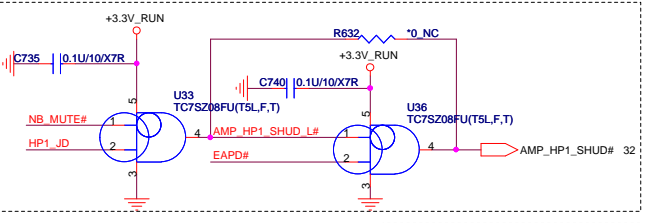
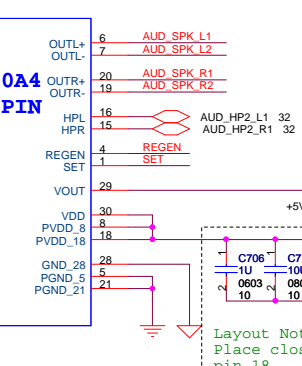
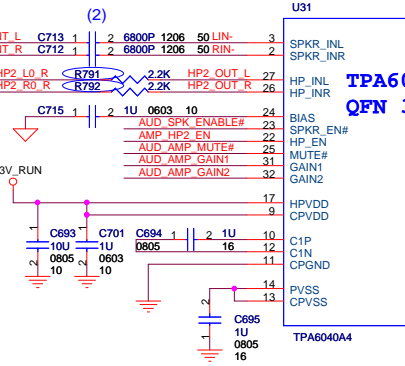
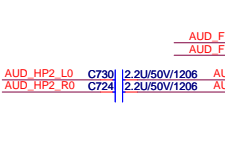
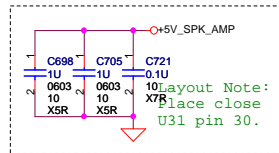
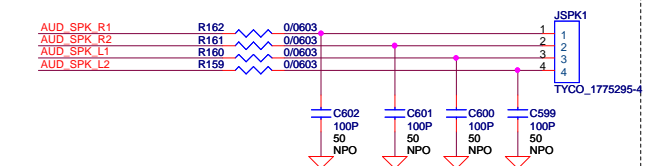
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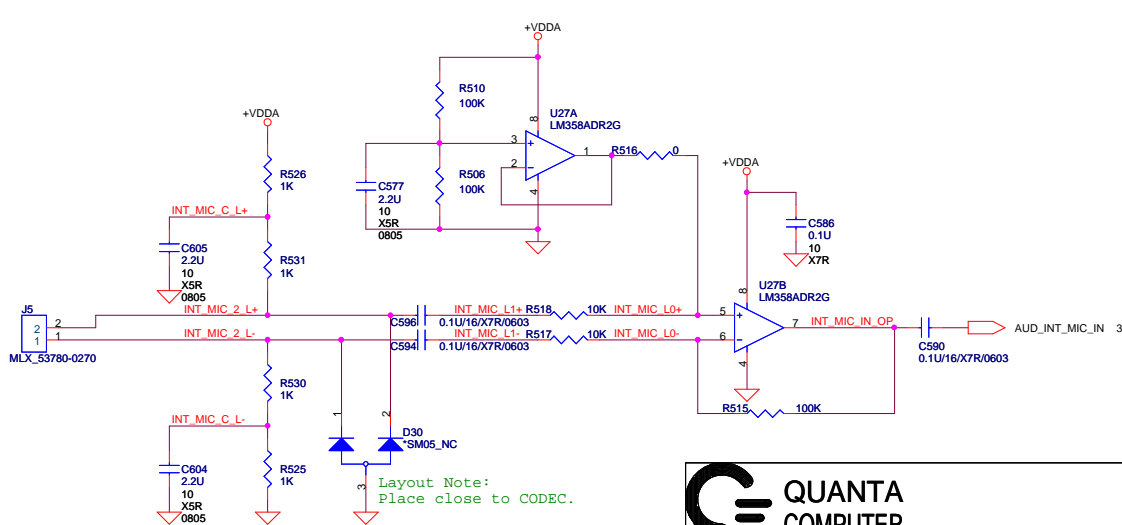
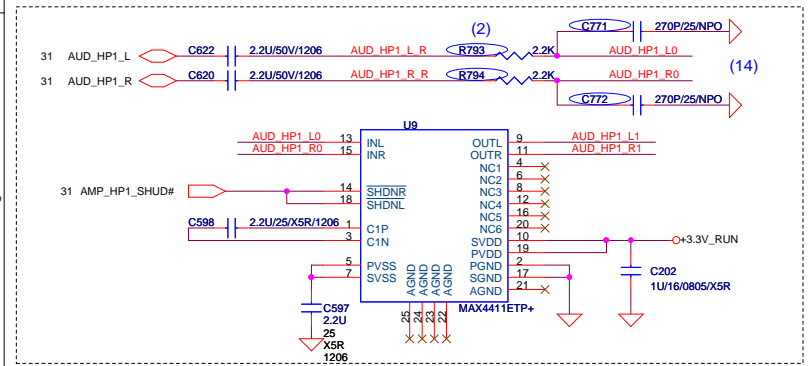
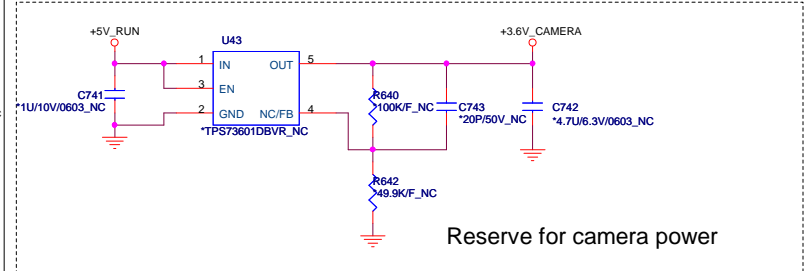
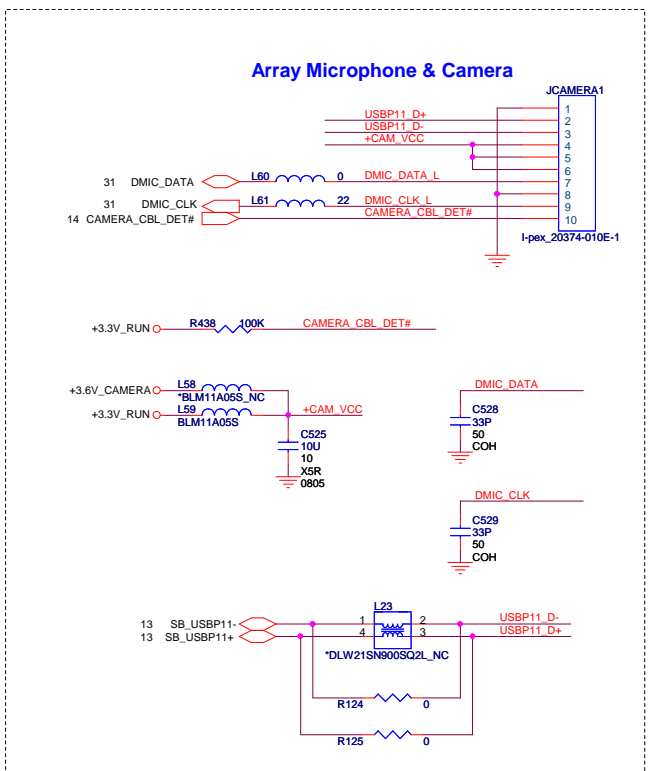
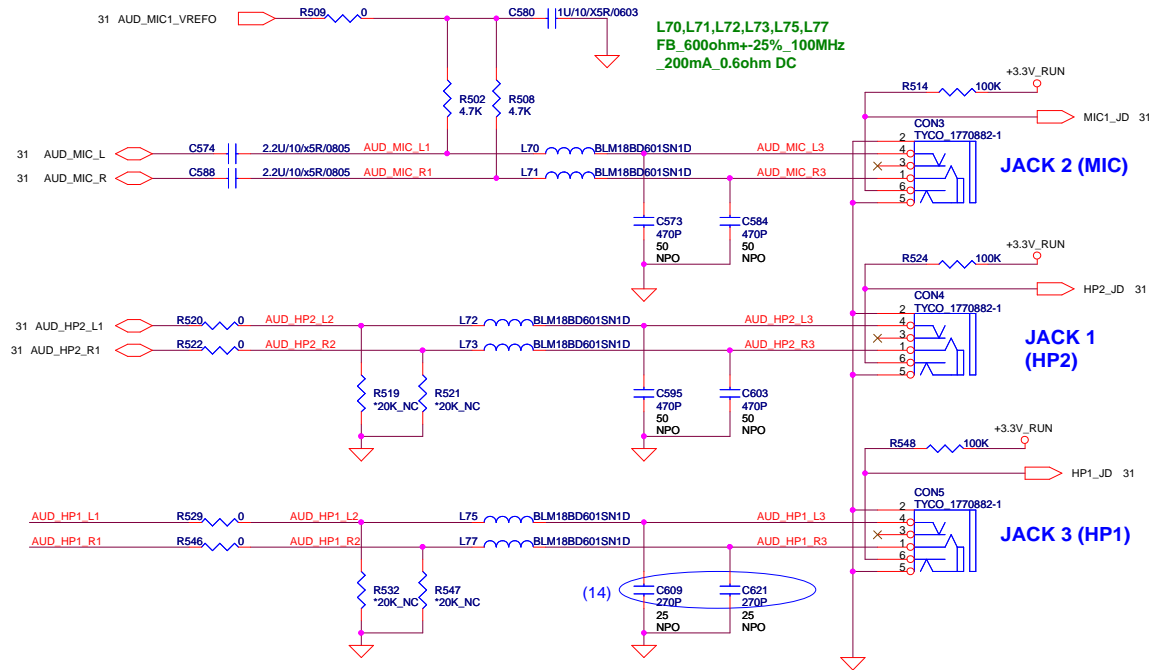
INTERNAL SPEAKER AMP



| TPA6040 | MAX9789 |
|---------|---------|
| C719 | Pop |
| R609 | Depop |
| | Pop |



Headphone Jack Stereo MIC Jack

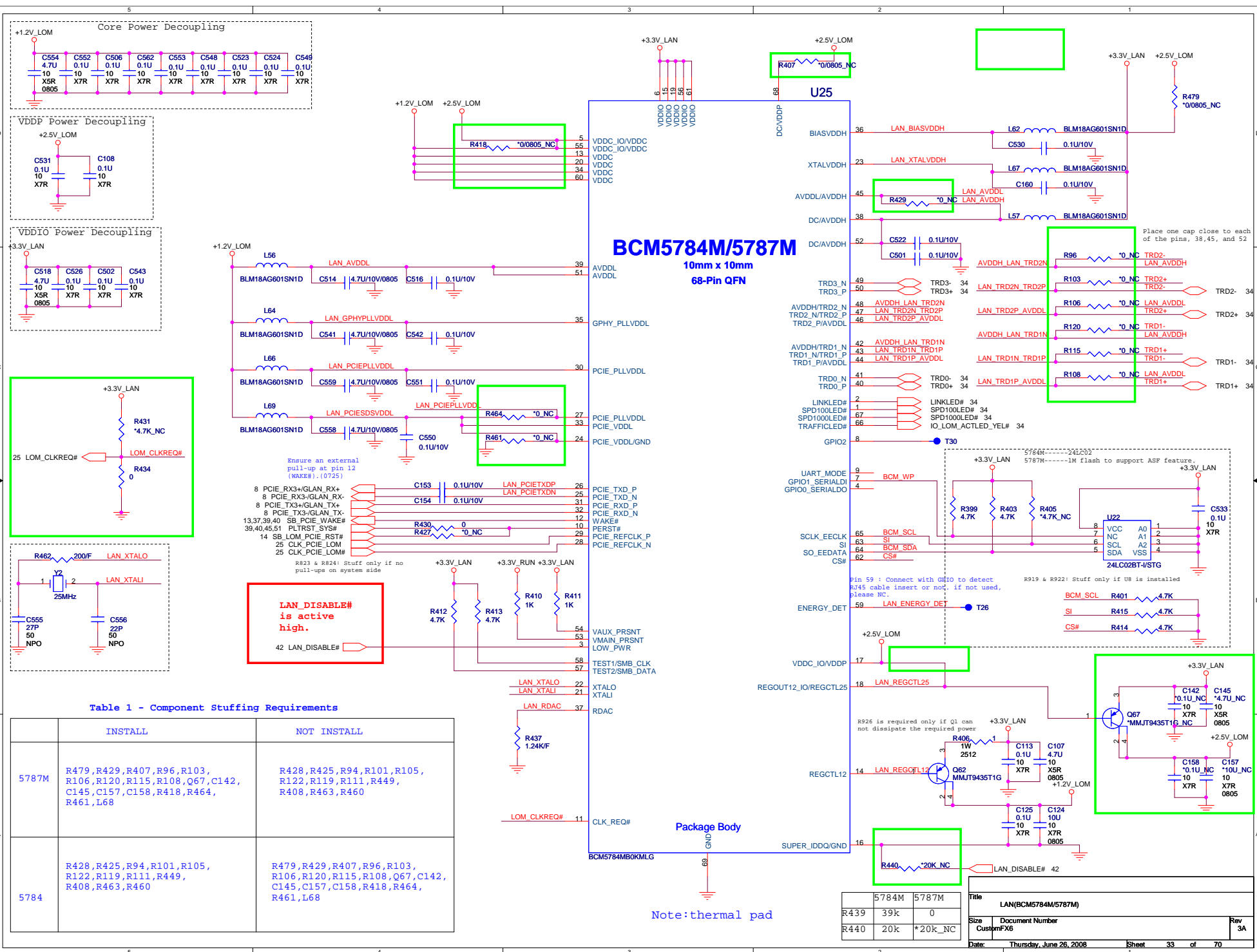


QUANTA COMPUTER

Title: AUDIO CONN

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

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BCM5784M/5787M
10mm x 10mm
68-Pin QFN

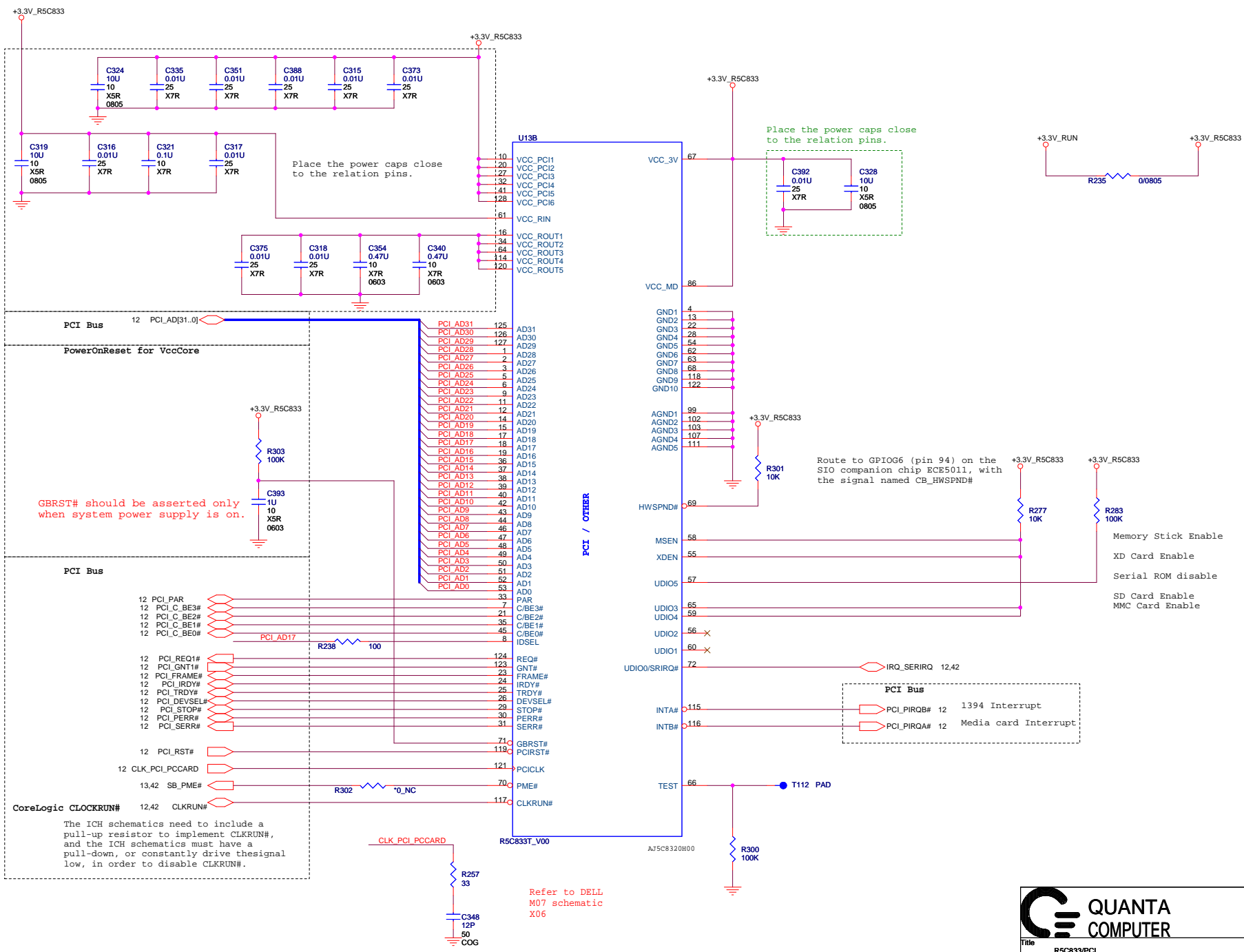
LAN_DISABLE# is active high.

Table 1 - Component Stuffing Requirements

| | INSTALL | NOT INSTALL |
|-------|---|---|
| 5787M | R479, R429, R407, R96, R103, R106, R120, R115, R108, Q67, C142, C145, C157, C158, R418, R464, R461, L68 | R428, R425, R94, R101, R105, R122, R119, R111, R449, R408, R463, R460 |
| 5784 | R428, R425, R94, R101, R105, R122, R119, R111, R449, R408, R463, R460 | R479, R429, R407, R96, R103, R106, R120, R115, R108, Q67, C142, C145, C157, C158, R418, R464, R461, L68 |

| | | | | |
|-------|-------|---------|-----------|-------------------------|
| 5784M | 5787M | Title | | LAN(BCM5784M/5787M) |
| R439 | 39k | 0 | Size | Document Number |
| R440 | 20k | *20k_NC | CustomFX6 | Rev |
| | | | Date: | Thursday, June 26, 2008 |
| | | | Sheet | 33 of 70 |

Note: thermal pad



Place the power caps close to the relation pins.

GBRST# should be asserted only when system power supply is on.

Route to GPIO6 (pin 94) on the SIO companion chip ECE5011, with the signal named CB_HWSPND#

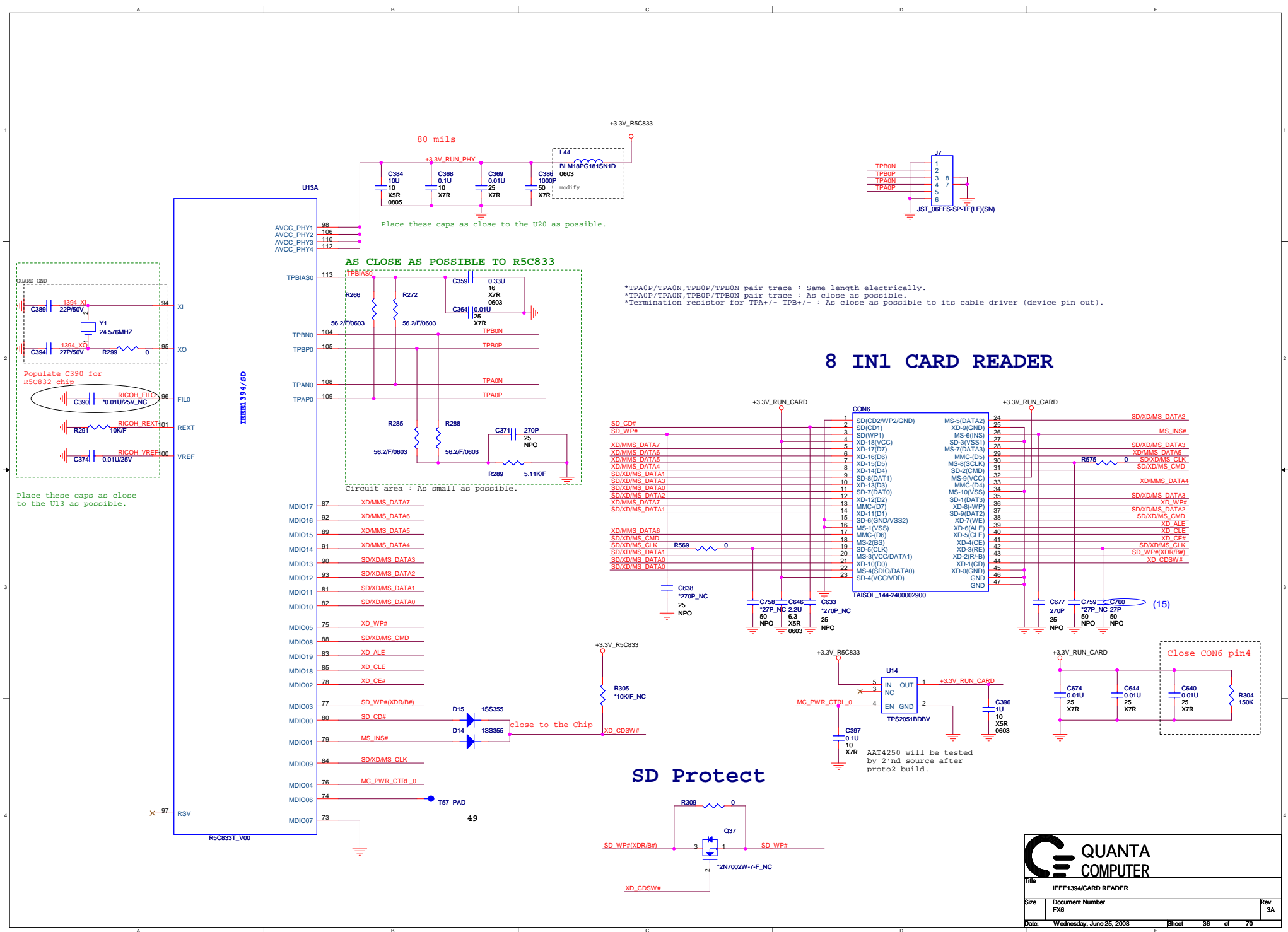
Refer to DELL M07 schematic X06

QUANTA COMPUTER

Title: R5C833/PCI

| | | |
|------|-----------------|-----|
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8 IN1 CARD READER

*TPA0P/TPA0N, TPB0P/TPB0N pair trace : Same length electrically.
 *TPA0P/TPA0N, TPB0P/TPB0N pair trace : As close as possible.
 *Termination resistor for TPA+/- TPB+/- : As close as possible to its cable driver (device pin out).

SD Protect

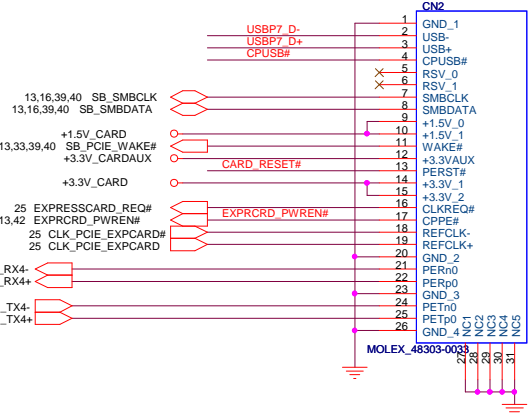
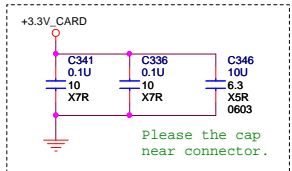
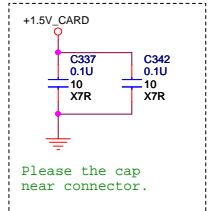
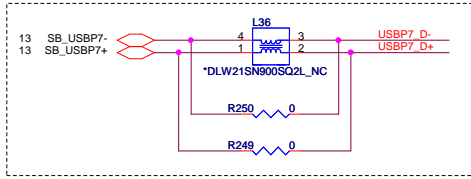
QUANTA COMPUTER

Title: IEEE1394/CARD READER

Size: Document Number FX8 Rev 3A

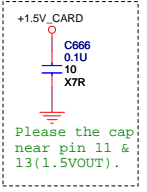
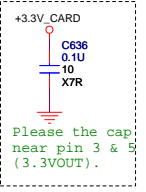
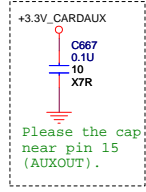
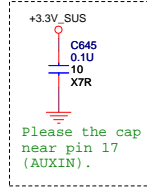
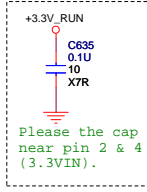
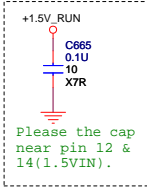
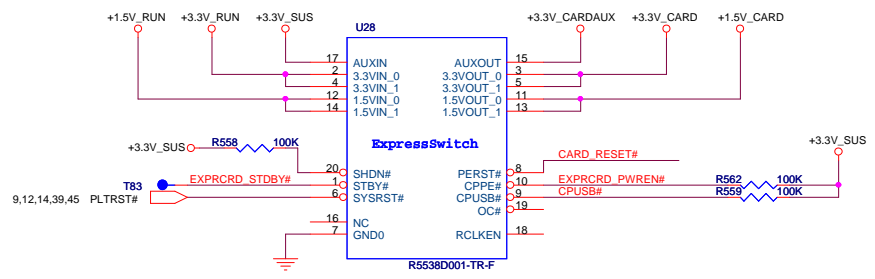
Date: Wednesday, June 25, 2008 Sheet 36 of 70

Express Card



PCI-Express TX and RX direct to connector.

+1.5V_CARD Max. 650mA, Average 500mA.
+3V_CARD Max. 1300mA, Average 1000mA.

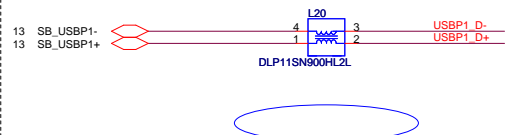
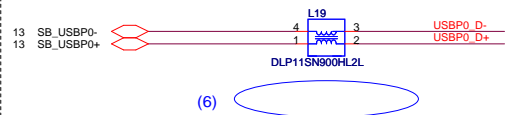


QUANTA COMPUTER

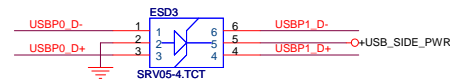
Title: EXPRESS

| | |
|--------------------------------|-----------------|
| Size: Document Number FX6 | Rev: 3A |
| Date: Wednesday, June 25, 2008 | Sheet: 37 of 70 |

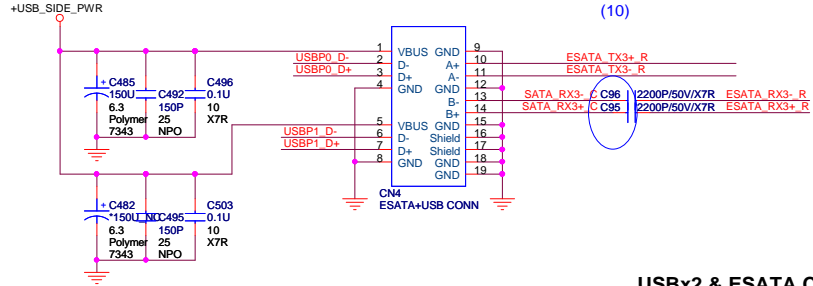
External USB PORT hookup reference. Your design may need more or less external ports and may be mapped differently



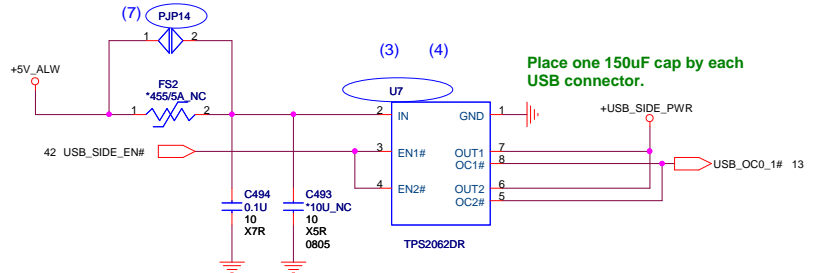
Platforms should put in PADS for the USB chokes if they have the room. Chokes should be NOPOP.



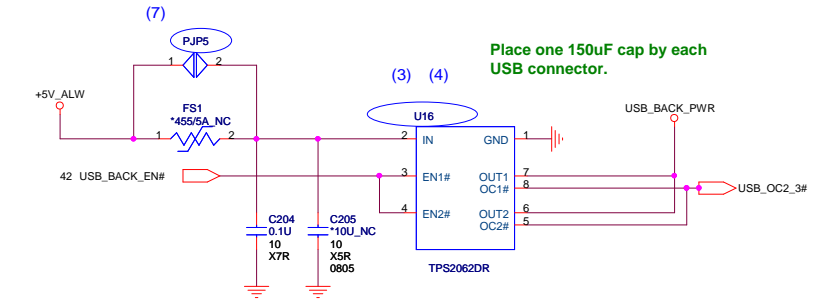
Side External USBX2



USBx2 & ESATA COMBO

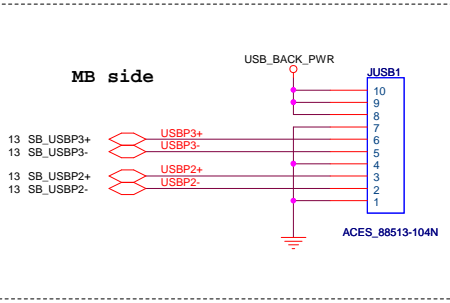
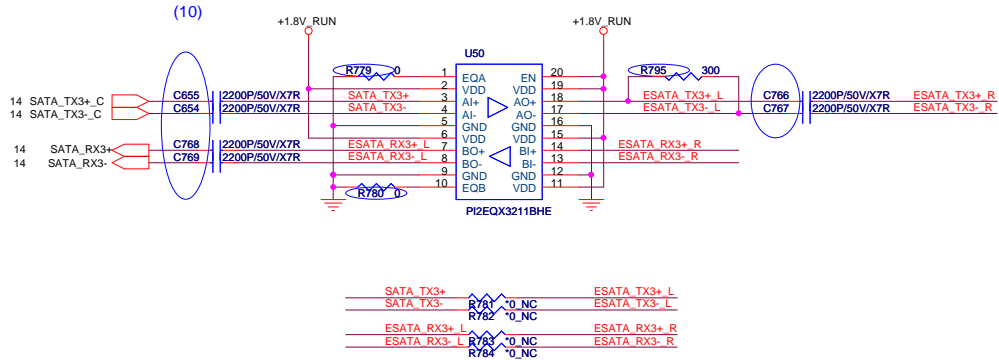
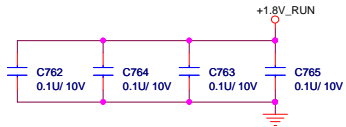


Place one 150uF cap by each USB connector.



Place one 150uF cap by each USB connector.

E-SATA Re-driver



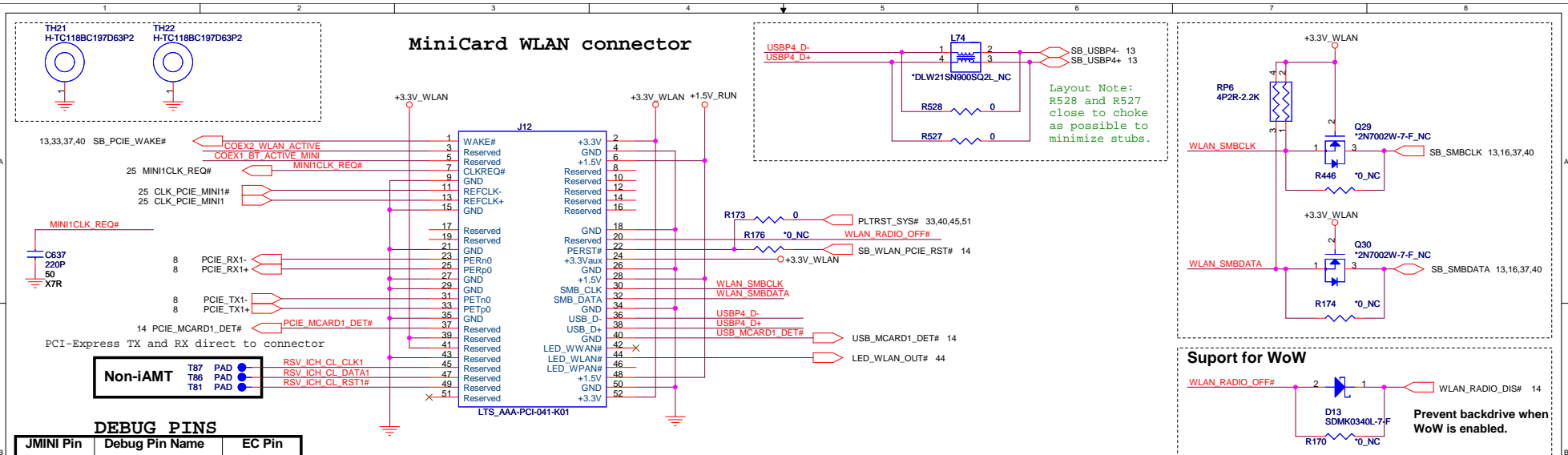
QUANTA COMPUTER

Title: USB

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

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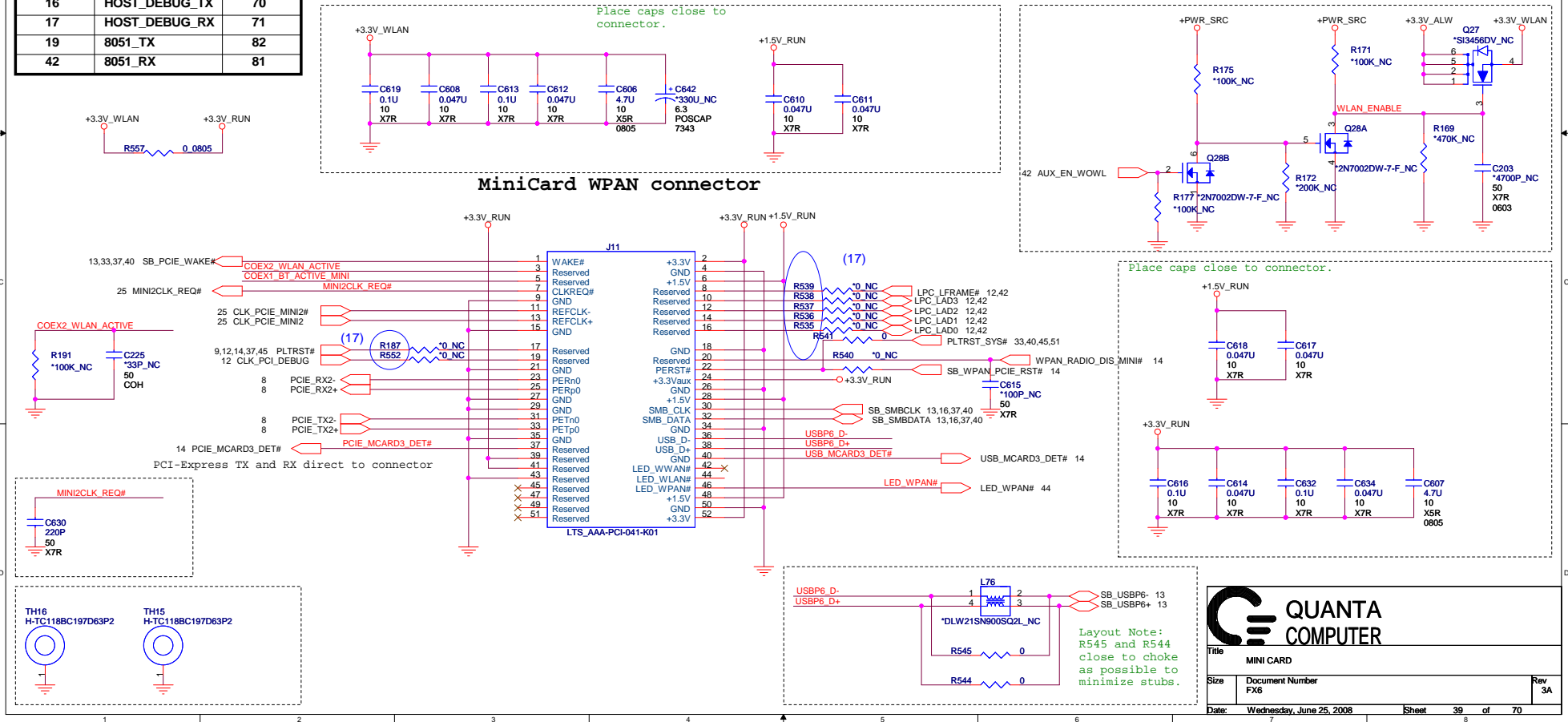
MiniCard WLAN connector

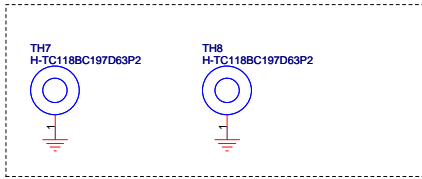


DEBUG PINS

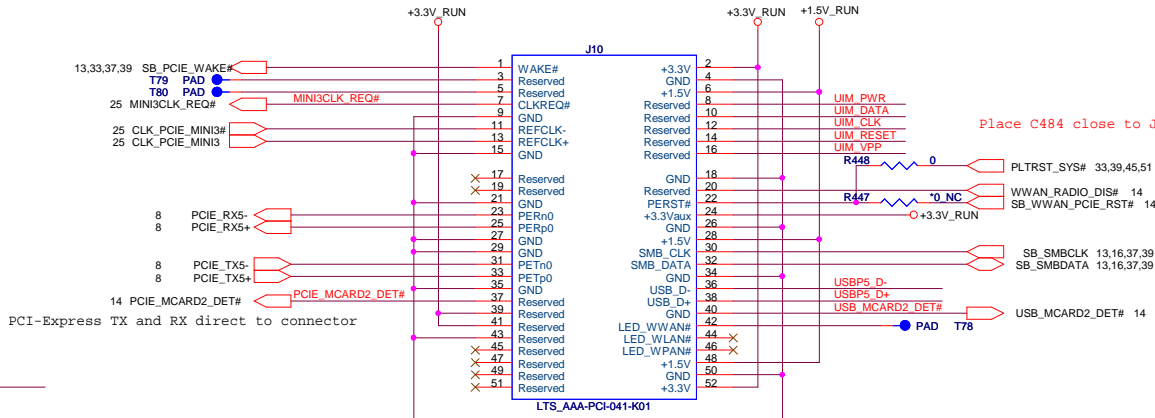
| JMINI Pin | Debug Pin Name | EC Pin |
|-----------|----------------|--------|
| 16 | HOST_DEBUG_TX | 70 |
| 17 | HOST_DEBUG_RX | 71 |
| 19 | 8051_TX | 82 |
| 42 | 8051_RX | 81 |

MiniCard WPAN connector



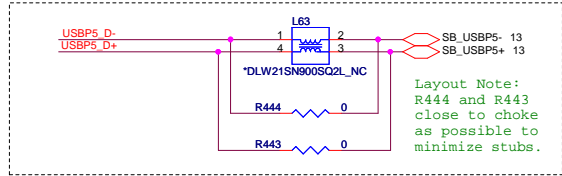
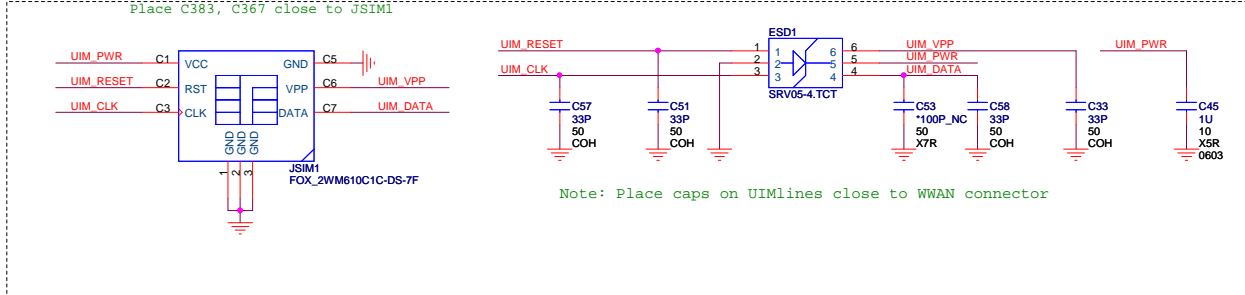
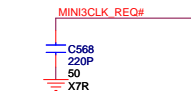
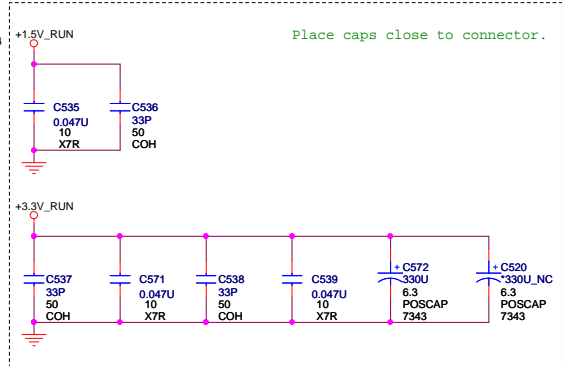


MiniCard WWAN connector



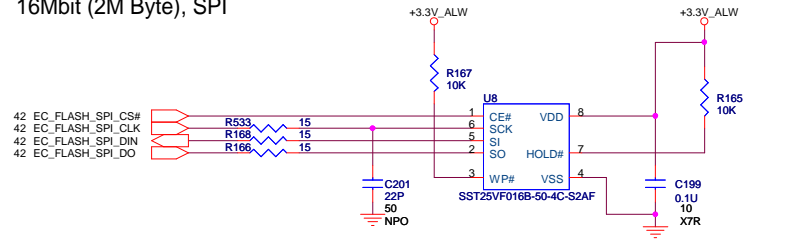
Place C484 close to J10

Place caps close to connector.

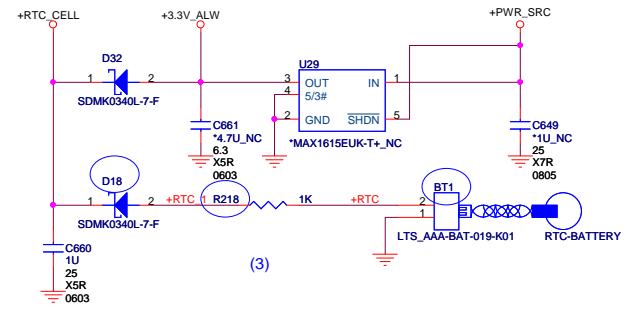



| | | |
|--------------------------------|-----------|-------|
| Title: WWAN | | |
| Size: Document Number: FX6 | Rev: 3A | |
| Date: Wednesday, June 25, 2008 | Sheet: 40 | of 70 |

16Mbit (2M Byte), SPI

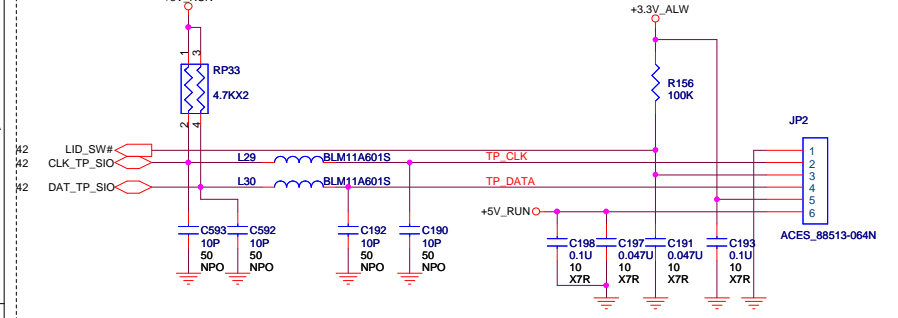


RTC BATTERY

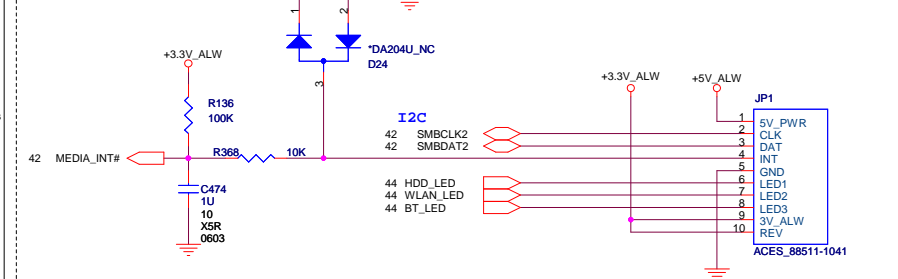


| | | | |
|--|--------------------------|-------------|----------|
|  QUANTA COMPUTER | | Title | |
| | | FLASH / RTC | |
| Size | Document Number | Rev | |
| | FX6 | 3A | |
| Date: | Wednesday, June 25, 2008 | Sheet | 41 of 70 |

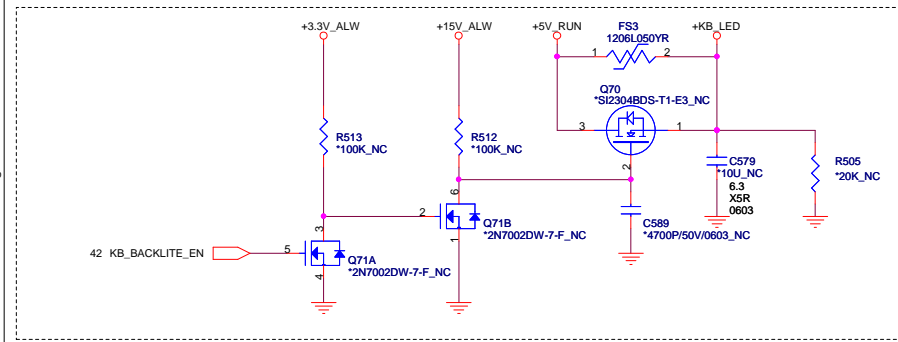
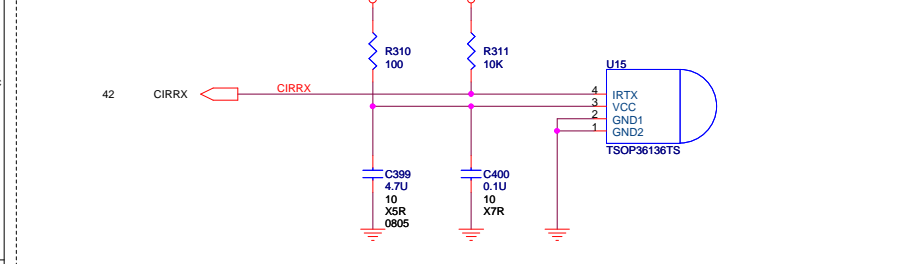
TP



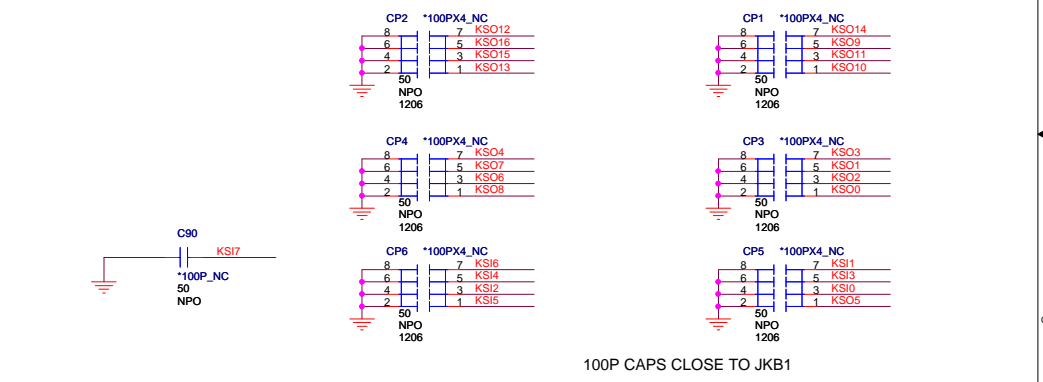
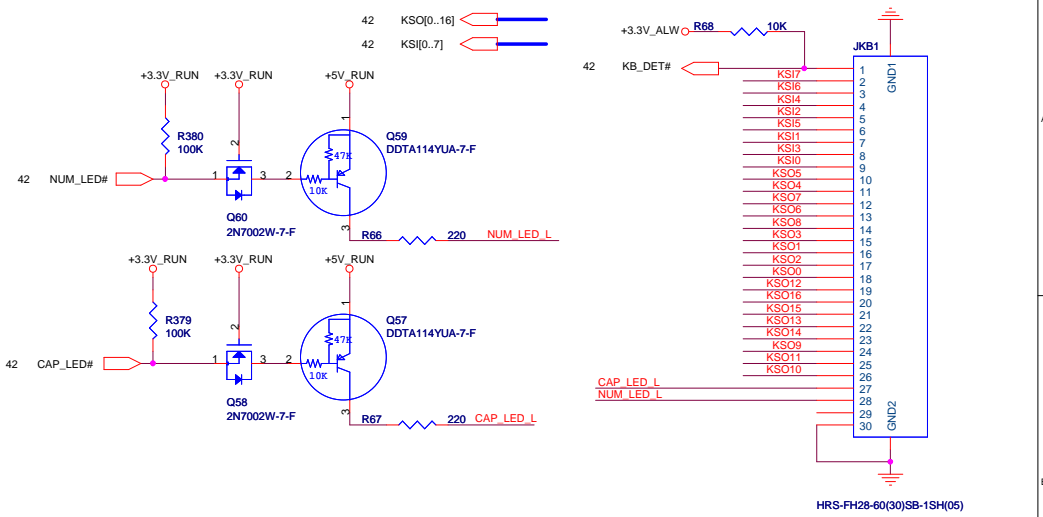
Media Button



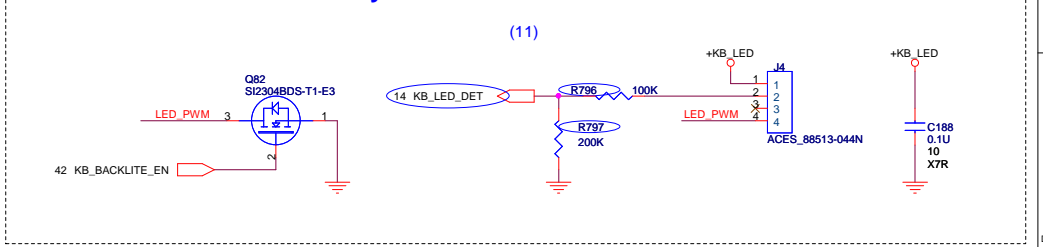
Consumer IR



KEYBOARD CONNECTOR



Key board Illumination



QUANTA COMPUTER

Title: TP/KB/CIR/BT

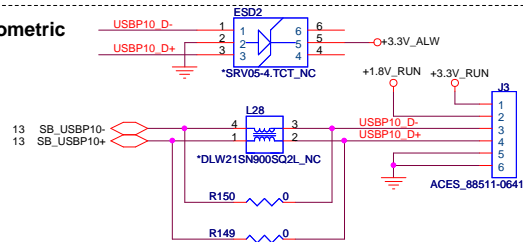
Size: Document Number FX6

Date: Wednesday, June 25, 2008

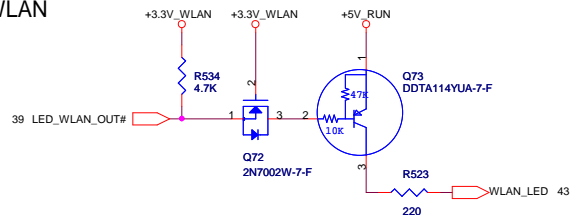
Sheet: 43 of 70

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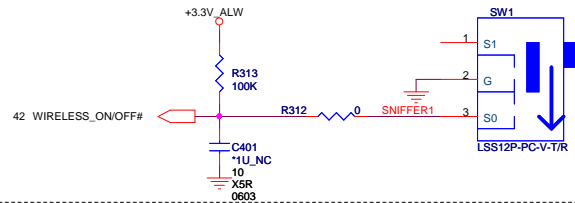
Biometric



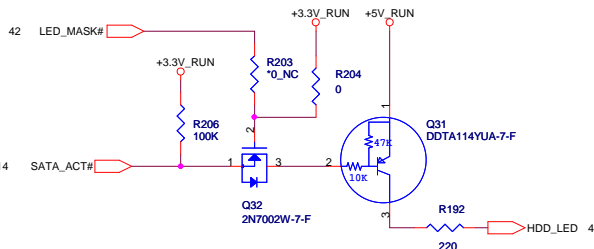
WLAN



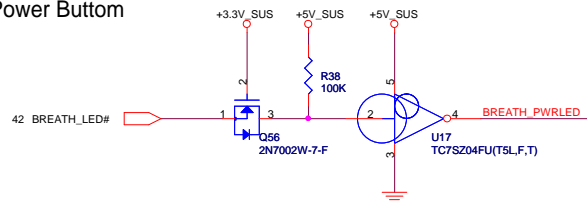
Sniffer Switch ON/OFF Sniffer Switch



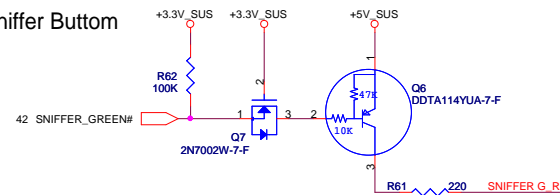
HDD activity LED.



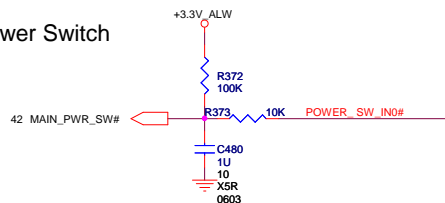
Power Button



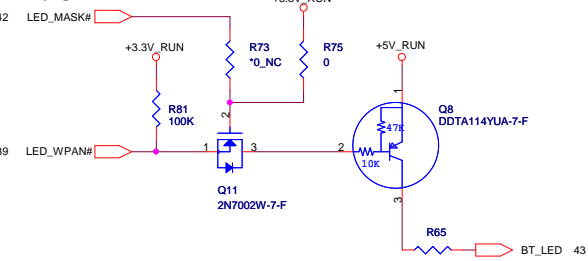
Sniffer Button



Power Switch

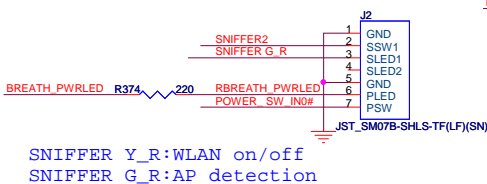
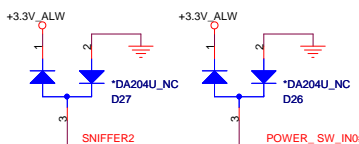
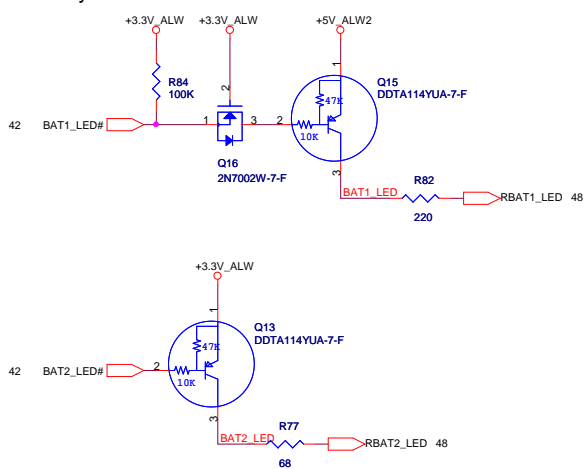


BT / UWb LED



This circuit is only needed if the platform has the SNIFFER.

Battery status.



| | | |
|----------------|------|-------------|
| SNIFFER2 | C746 | 100P/50/X7R |
| SNIFFER G_R | C747 | 100P/50/X7R |
| RBREATH_PWRLED | C748 | 100P/50/X7R |
| POWER_SW_IN0# | C749 | 100P/50/X7R |



Title SWITCH/LED

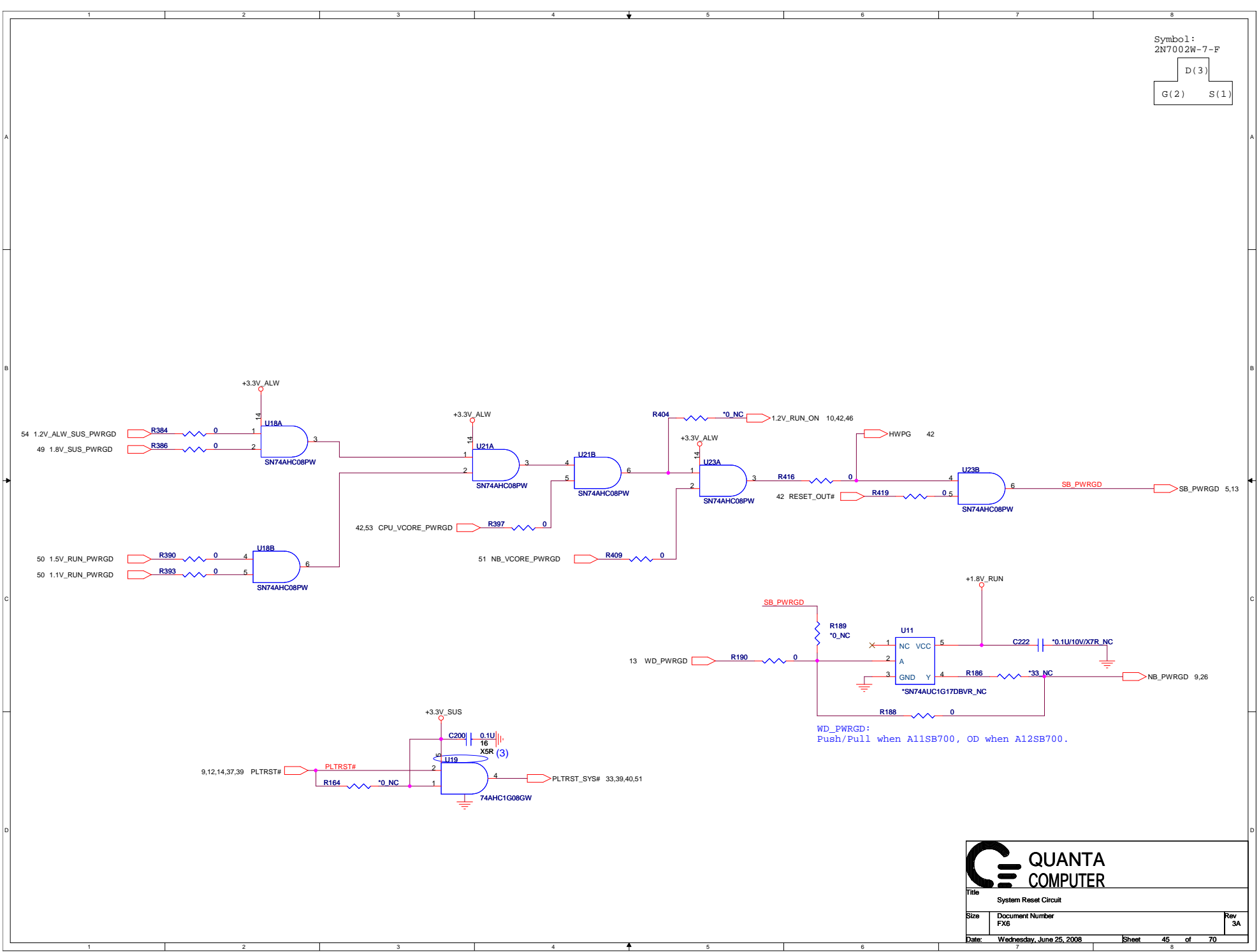
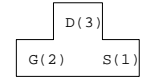
Size Document Number FX6

Rev 3A

Date: Wednesday, June 25, 2008

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Symbol:
2N7002W-7-F

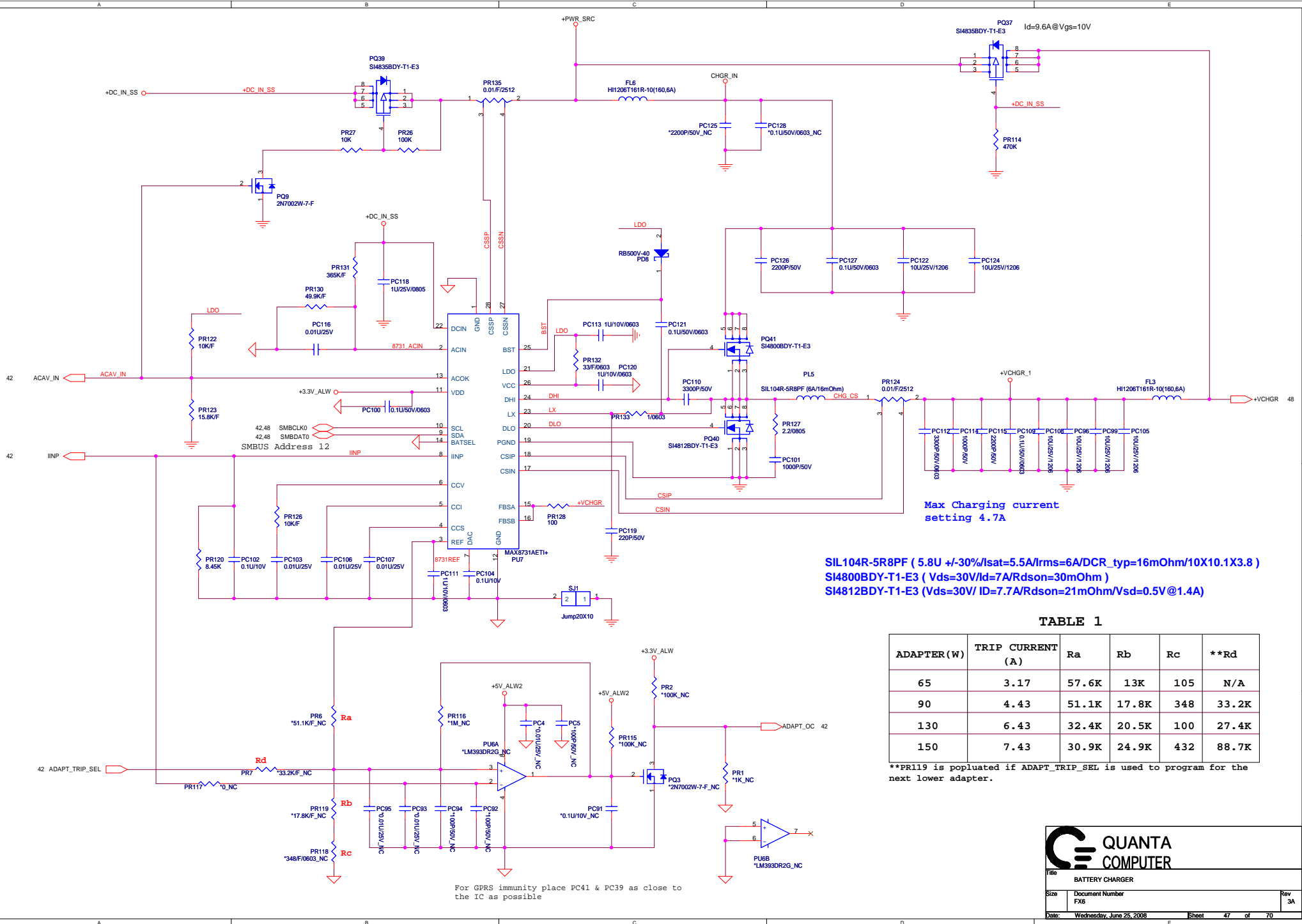


QUANTA COMPUTER

Title: System Reset Circuit

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

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SIL104R-5R8PF (5.8U +/-30%/Isat=5.5A/Irms=6A/DCR_typ=16mOhm/10X10.1X3.8)
 SI4800BDY-T1-E3 (Vds=30V/Id=7A/Rdson=30mOhm)
 SI4812BDY-T1-E3 (Vds=30V/ ID=7.7A/Rdson=21mOhm/Vsd=0.5V@1.4A)

Max Charging current setting 4.7A

TABLE 1

| ADAPTER (W) | TRIP CURRENT (A) | Ra | Rb | Rc | **Rd |
|-------------|------------------|-------|-------|-----|-------|
| 65 | 3.17 | 57.6K | 13K | 105 | N/A |
| 90 | 4.43 | 51.1K | 17.8K | 348 | 33.2K |
| 130 | 6.43 | 32.4K | 20.5K | 100 | 27.4K |
| 150 | 7.43 | 30.9K | 24.9K | 432 | 88.7K |

**PR119 is populated if ADAPT_TRIP_SEL is used to program for the next lower adapter.

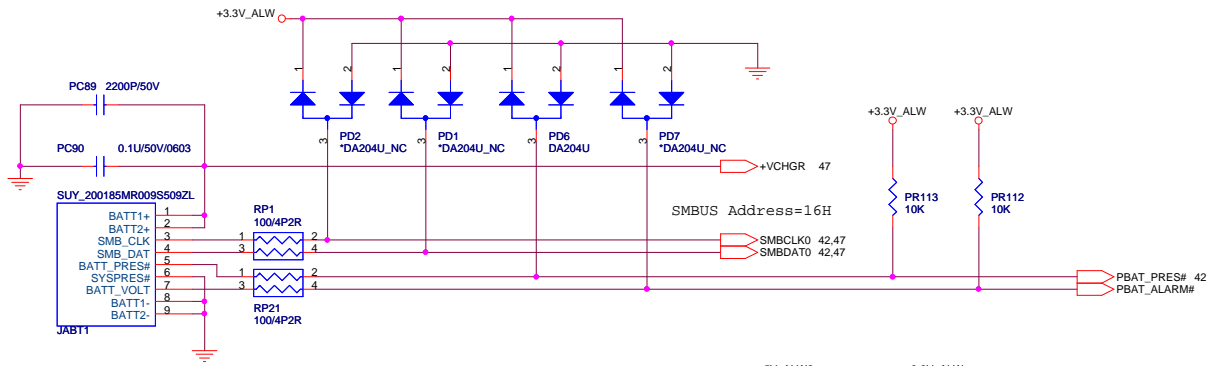
For GPRS immunity place PC41 & PC39 as close to the IC as possible

QUANTA COMPUTER

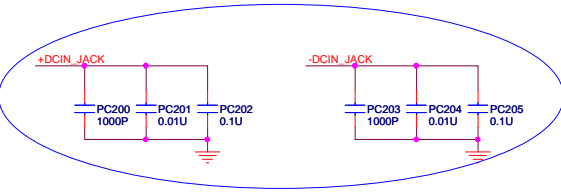
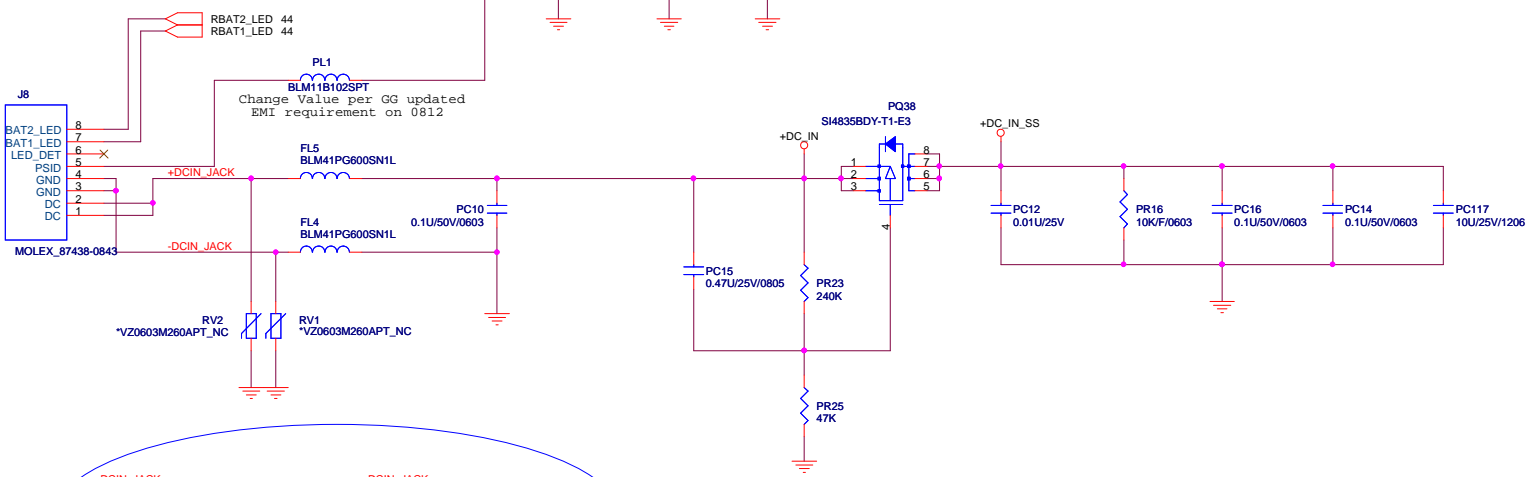
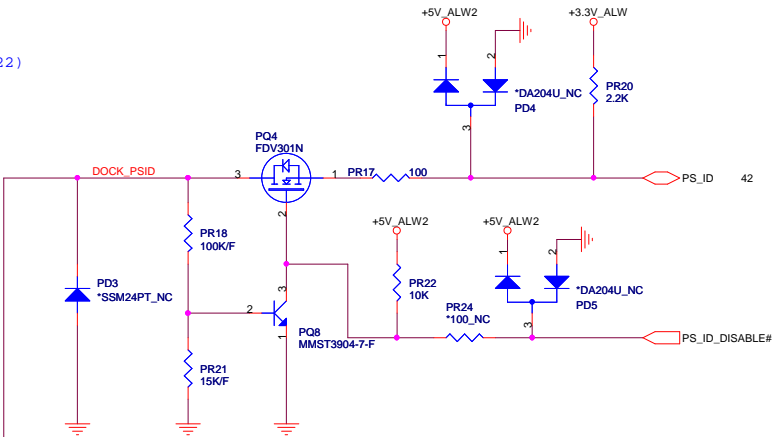
Part: BATTERY CHARGER

Size: Document Number FX6 Rev 3A

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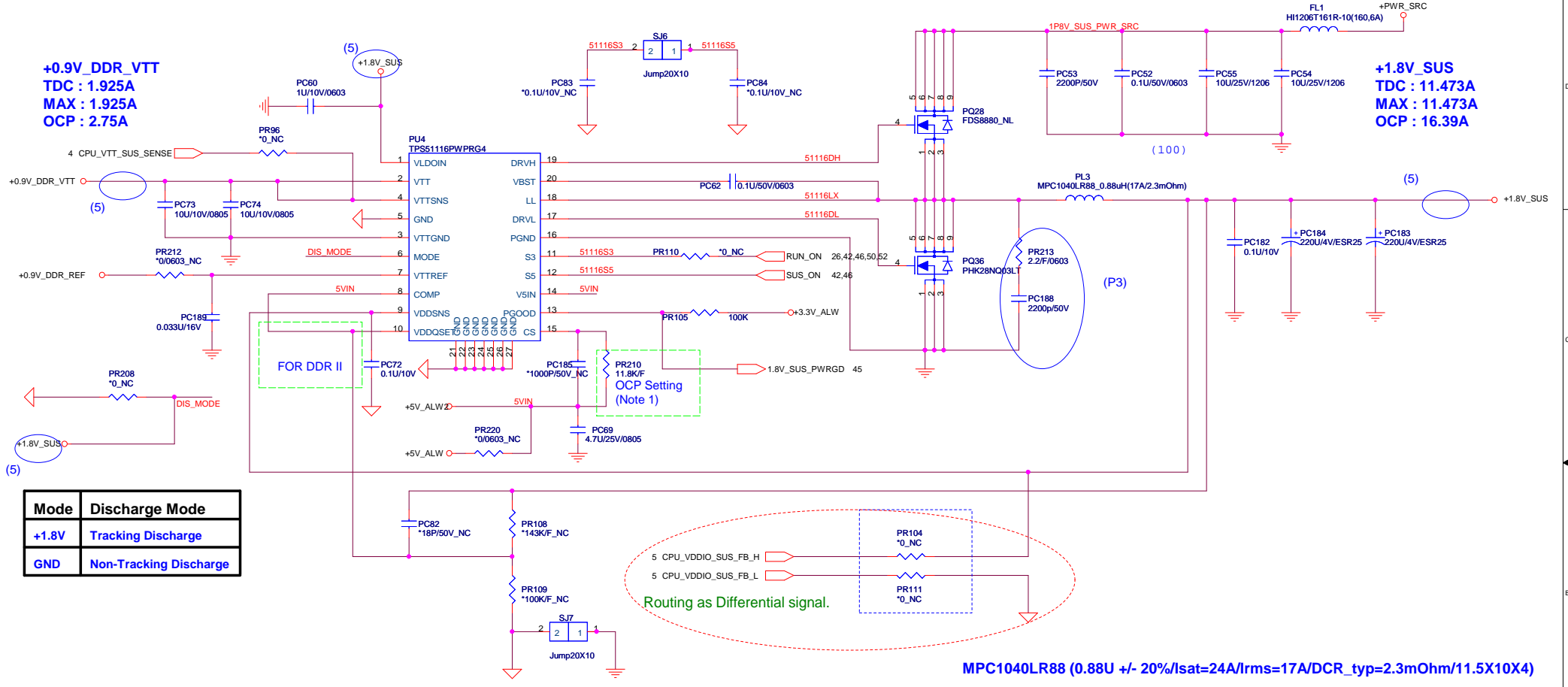
Change F/T:BAT-200045MR009GX31ZR-9P-R-V(0822)



QUANTA COMPUTER

Title: DCIN & BATT

| | | |
|--------------------------------|----------------------|---------|
| Size: FX6 | Document Number: FX6 | Rev: 3A |
| Date: Wednesday, June 25, 2008 | Sheet: 48 of 70 | |



+0.9V_DDR_VTT
 TDC : 1.925A
 MAX : 1.925A
 OCP : 2.75A

+1.8V_SUS
 TDC : 11.473A
 MAX : 11.473A
 OCP : 16.39A

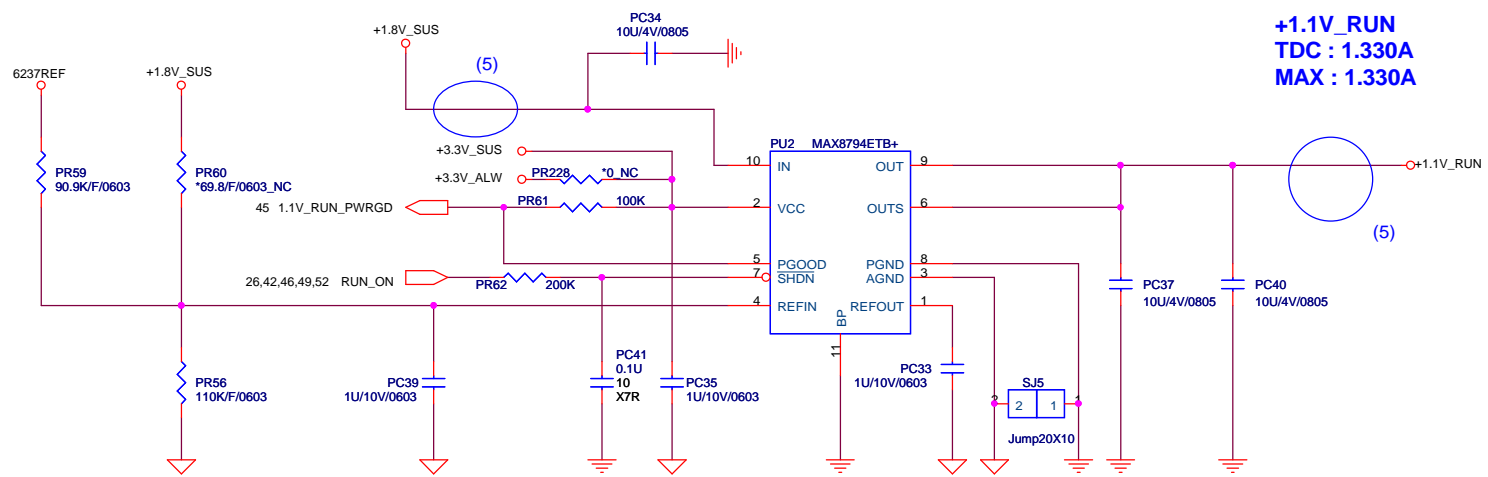
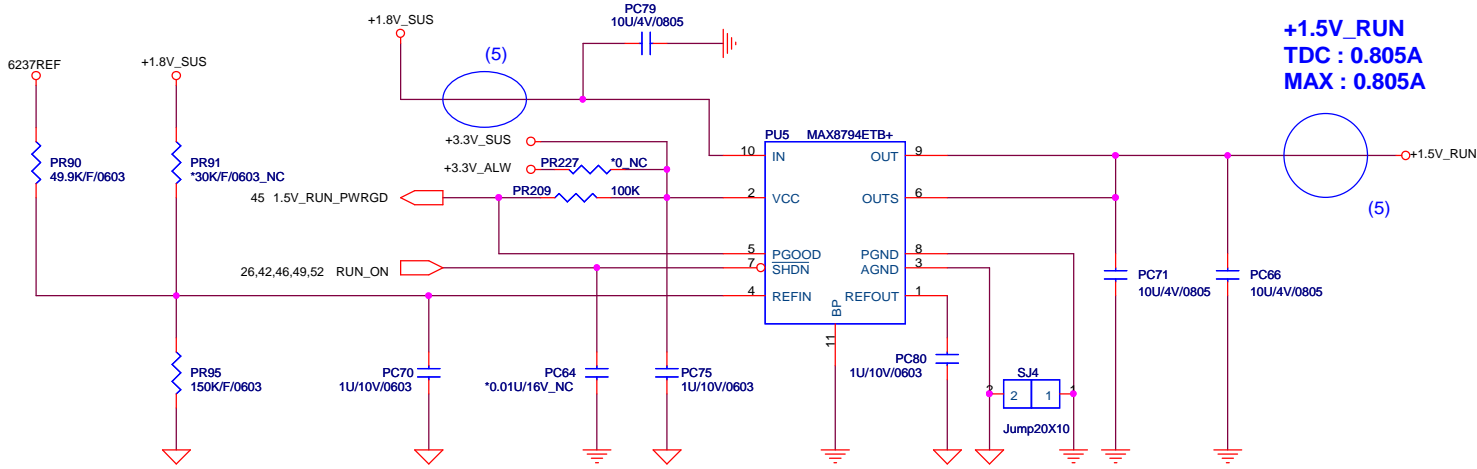
| Mode | Discharge Mode |
|-------|------------------------|
| +1.8V | Tracking Discharge |
| GND | Non-Tracking Discharge |

Frequency=400KHz, I_ripple=4.54A, Rtrip=11.8Kohm
 (Note 1) Current Limiting Setting :
 $Rtrip(Kohm)=100*(Iocp-0.5*Iripple)*Rds(on)$

MPC1040LR88 (0.88U +/- 20%/Isat=24A/Irms=17A/DCR_typ=2.3mOhm/11.5X10X4)

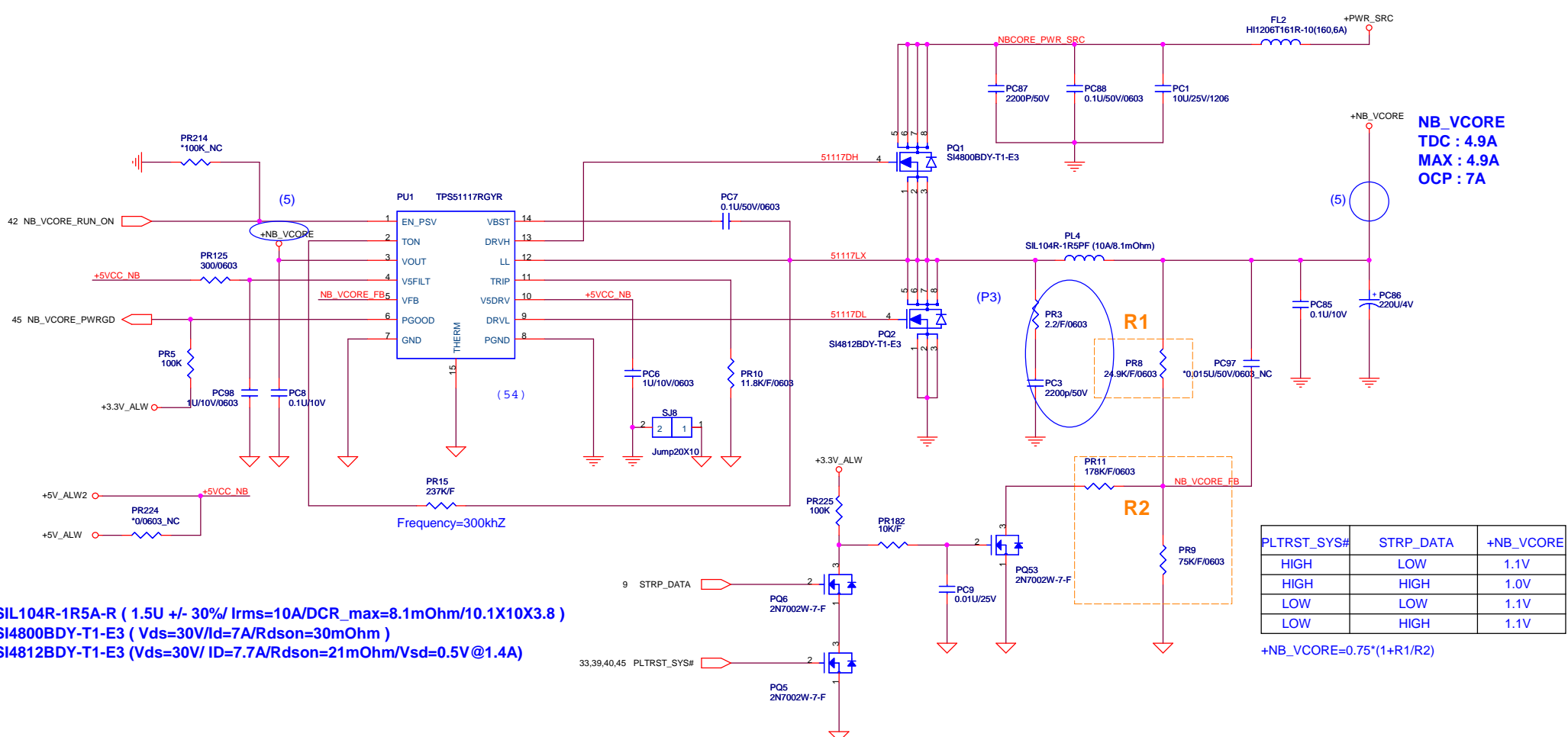
QUANTA COMPUTER

| | | |
|-------|--------------------------|-----------------|
| Title | | 1.8V_SUS&0.9VTT |
| Size | Document Number | FX6 |
| Date: | Wednesday, June 25, 2008 | Sheet 49 of 70 |
| | | Rev 3A |



QUANTA COMPUTER

| | | |
|--------------------------------|----------------------|---------|
| Title: 1.5V_RUN&1.1V_RUN | | |
| Size: FX6 | Document Number: FX6 | Rev: 3A |
| Date: Wednesday, June 25, 2008 | Sheet: 50 of 70 | |



SIL104R-1R5A-R (1.5U +/- 30%/ I_{rms}=10A/DCR_{max}=8.1mOhm/10.1X10X3.8)
SI4800BDY-T1-E3 (V_{ds}=30V/I_d=7A/R_{dson}=30mOhm)
SI4812BDY-T1-E3 (V_{ds}=30V/ I_D=7.7A/R_{dson}=21mOhm/V_{sd}=0.5V@1.4A)

NB_VCORE
TDC : 4.9A
MAX : 4.9A
OCF : 7A

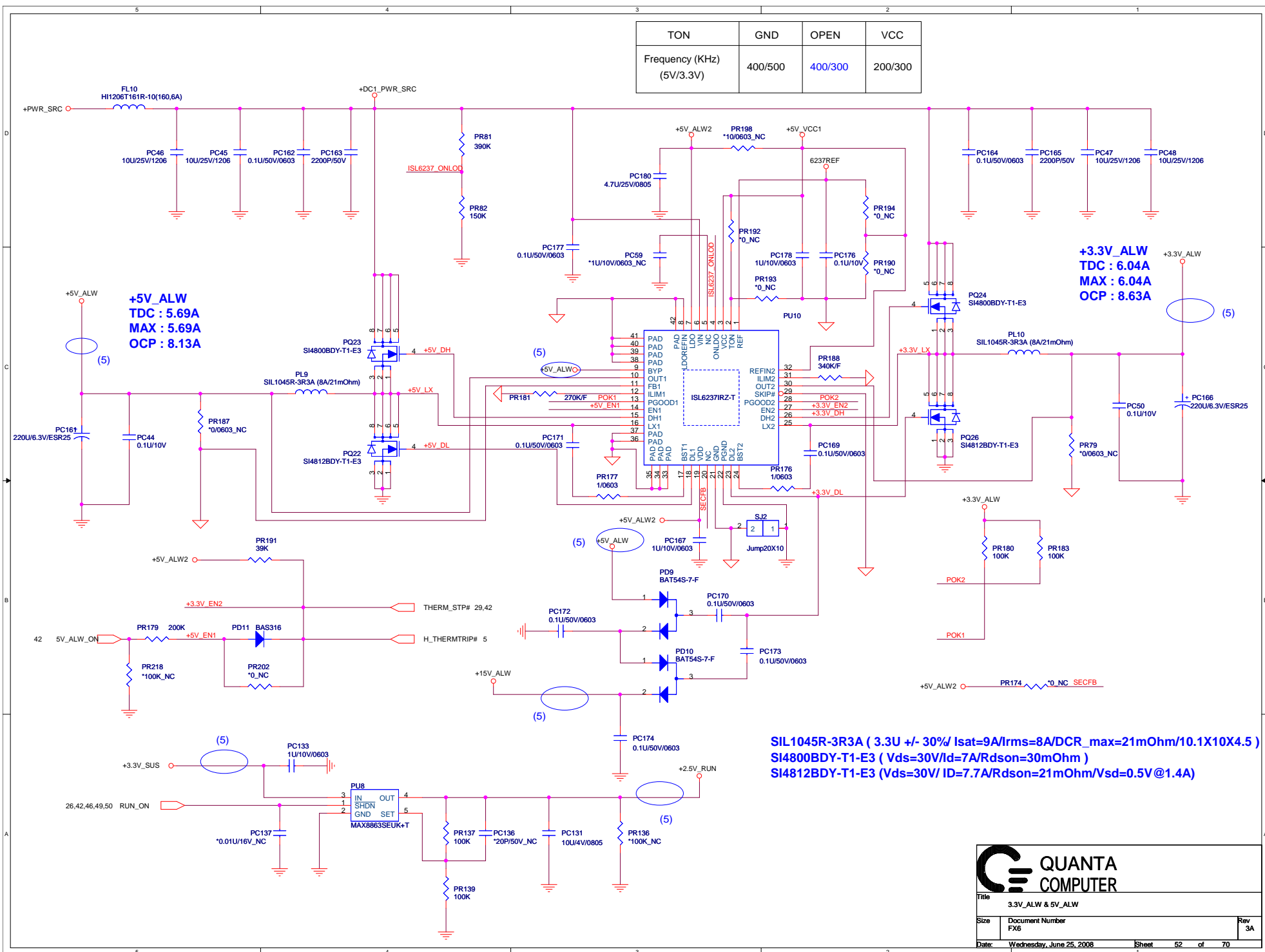
QUANTA COMPUTER

File: VCC_NB

Size: Document Number FX6 Rev 3A

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| TON | GND | OPEN | VCC |
|------------------------------|---------|---------|---------|
| Frequency (KHz) (5V/3.3V) | 400/500 | 400/300 | 200/300 |



+5V_ALW
TDC : 5.69A
MAX : 5.69A
OCP : 8.13A

+3.3V_ALW
TDC : 6.04A
MAX : 6.04A
OCP : 8.63A

SIL1045R-3R3A (3.3U +/- 30%/ Isat=9A/Irms=8A/DCR_max=21mOhm/10.1X10X4.5)
SI4800BDY-T1-E3 (Vds=30V/Id=7A/Rdson=30mOhm)
SI4812BDY-T1-E3 (Vds=30V/ ID=7.7A/Rdson=21mOhm/Vsd=0.5V@1.4A)

QUANTA COMPUTER

Title: 3.3V_ALW & 5V_ALW

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | FX6 | 3A |

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| ISL6265 Pin1 | OFS | VFIXEN |
|--------------|-----|--------|
| 1.2V | V | X |
| 3.3V | X | V |
| 5V | X | X |

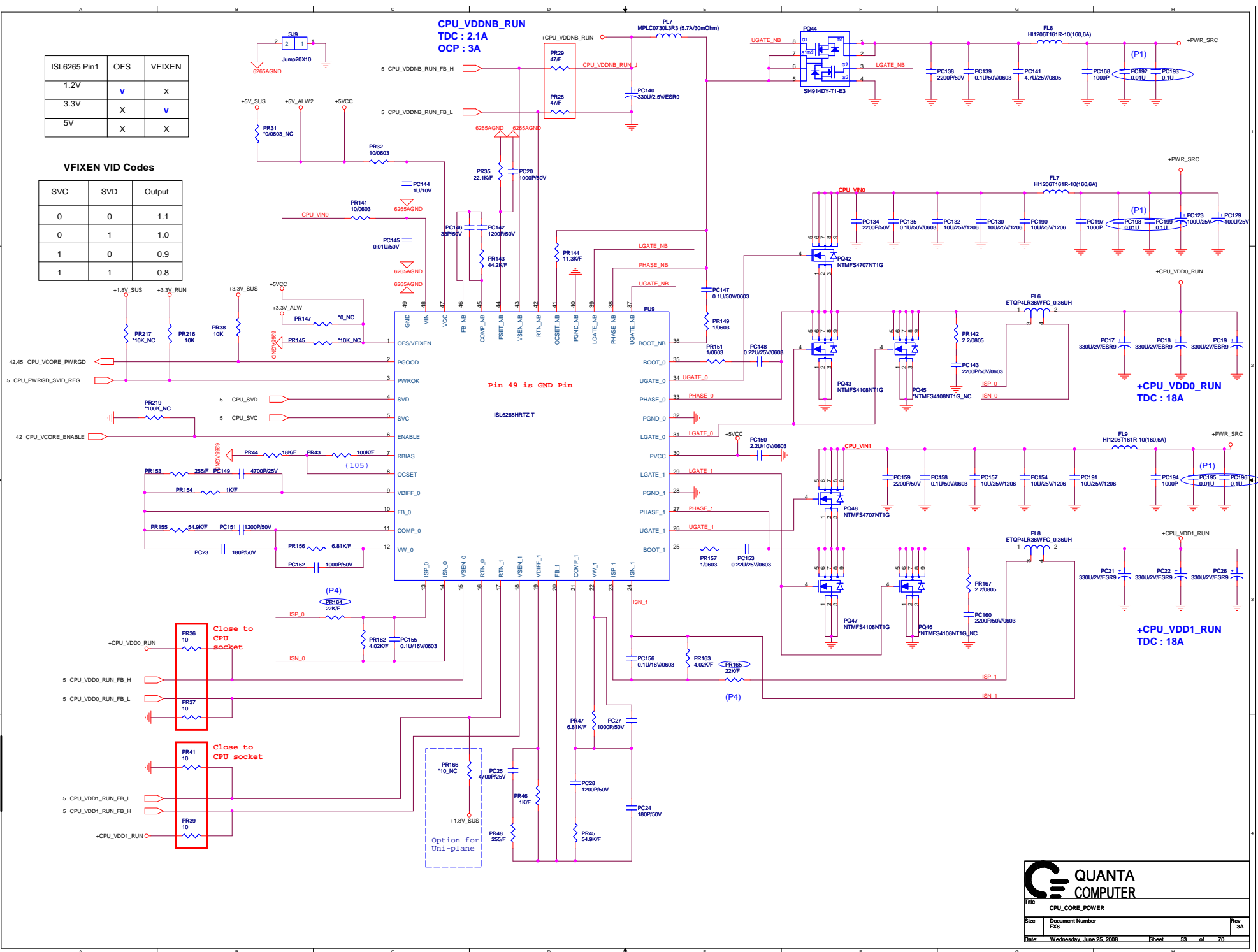
VFIXEN VID Codes

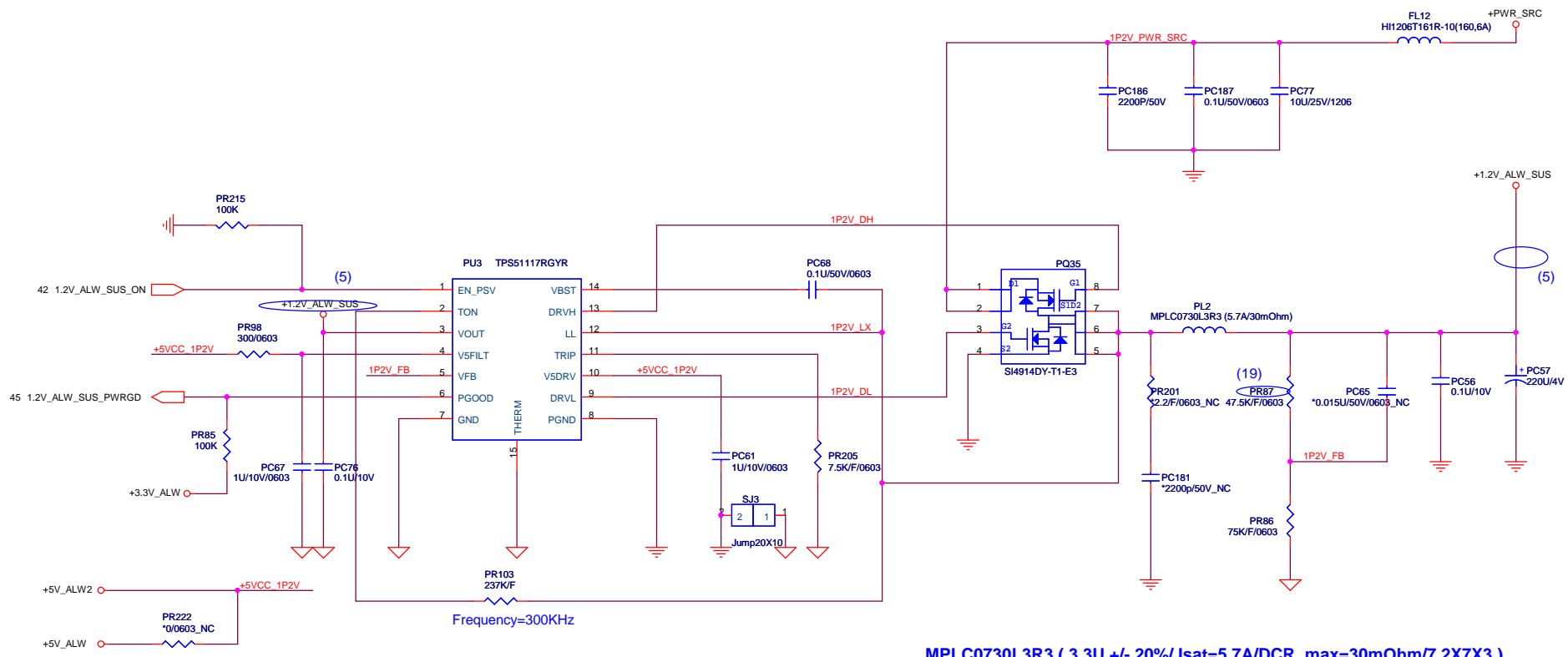
| SVC | SVD | Output |
|-----|-----|--------|
| 0 | 0 | 1.1 |
| 0 | 1 | 1.0 |
| 1 | 0 | 0.9 |
| 1 | 1 | 0.8 |

**CPU_VDDNB_RUN
TDC : 2.1A
OCP : 3A**

Pin 49 is GND Pin

ISL6265HRTZ-T





+1.2V_ALW_SUS
TDC : 2.177A
MAX : 2.177A
OCF : 3.11A

MPLC0730L3R3 (3.3U +/- 20%/ Isat=5.7A/DCR_max=30mOhm/7.2X7X3)
SI4914DY-T1-E3 (Vds=30V/Id_U=5.6A/Id_L=6.4A/Rdson_L=27mOhm)

QUANTA COMPUTER

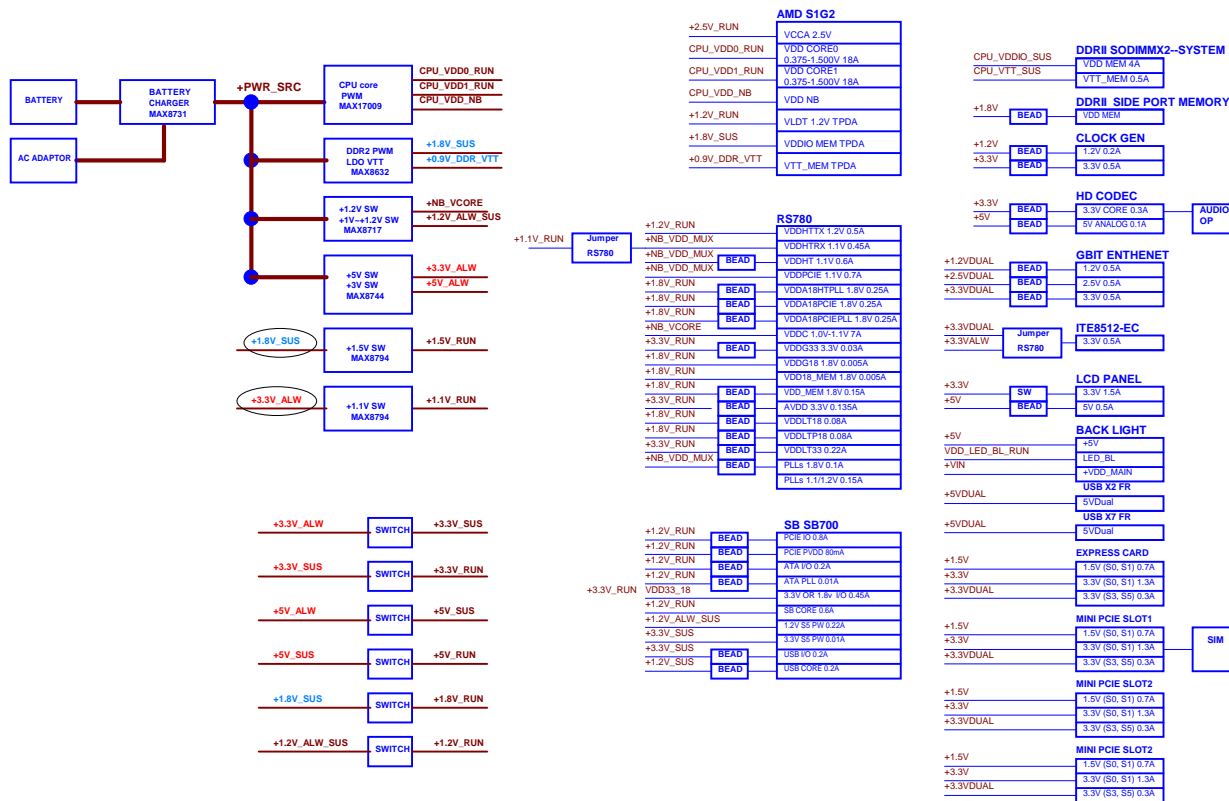
| | | |
|-------|--------------------------|----------------|
| File | | 1.2V_ALW_SUS |
| Size | Document Number | FX6 |
| Date: | Wednesday, June 25, 2008 | Sheet 54 of 70 |
| | | Rev 3A |

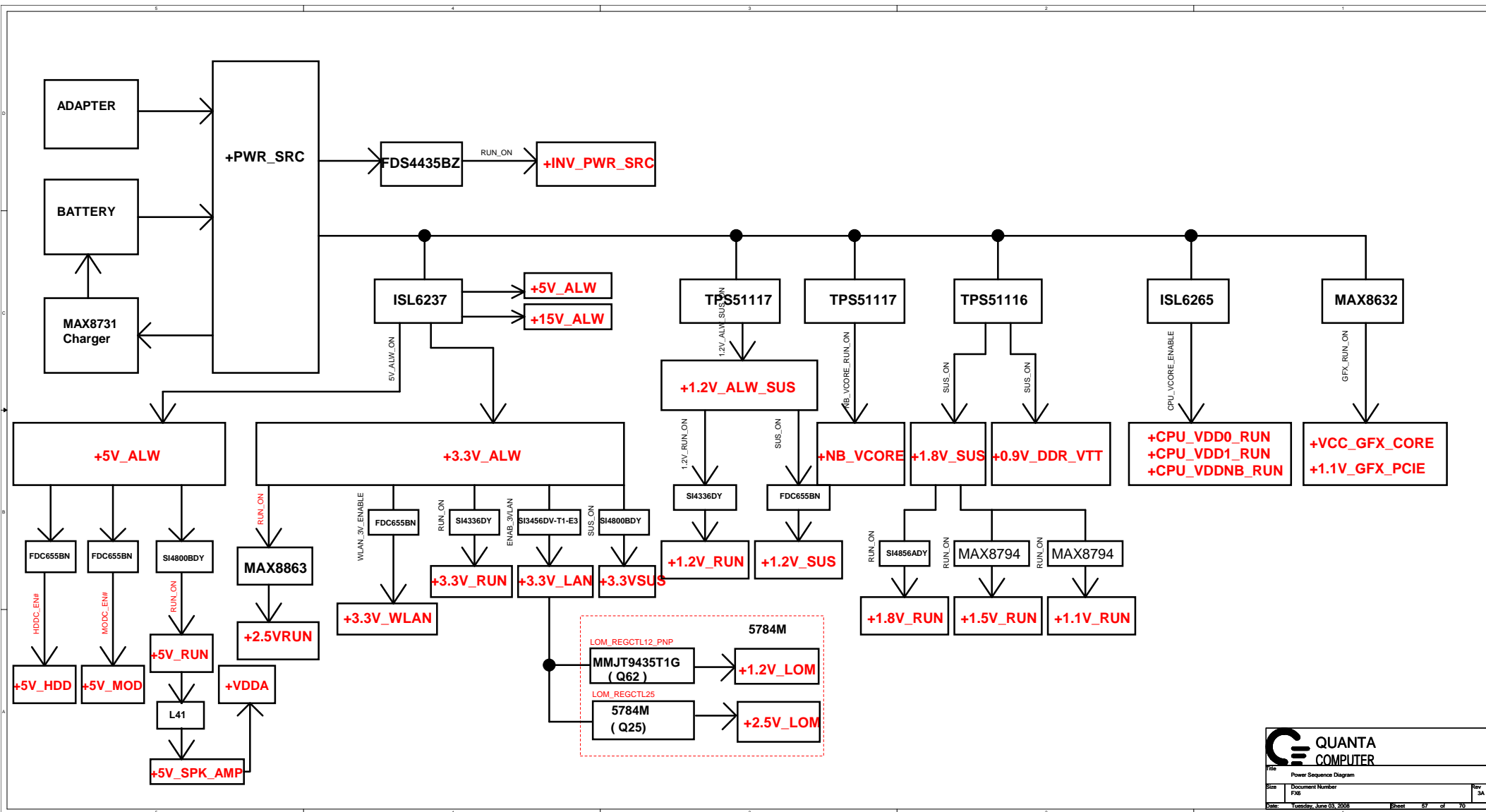
**BLANK PAGE FOR PAGE
NUMBER SAME AS DISCRETE**

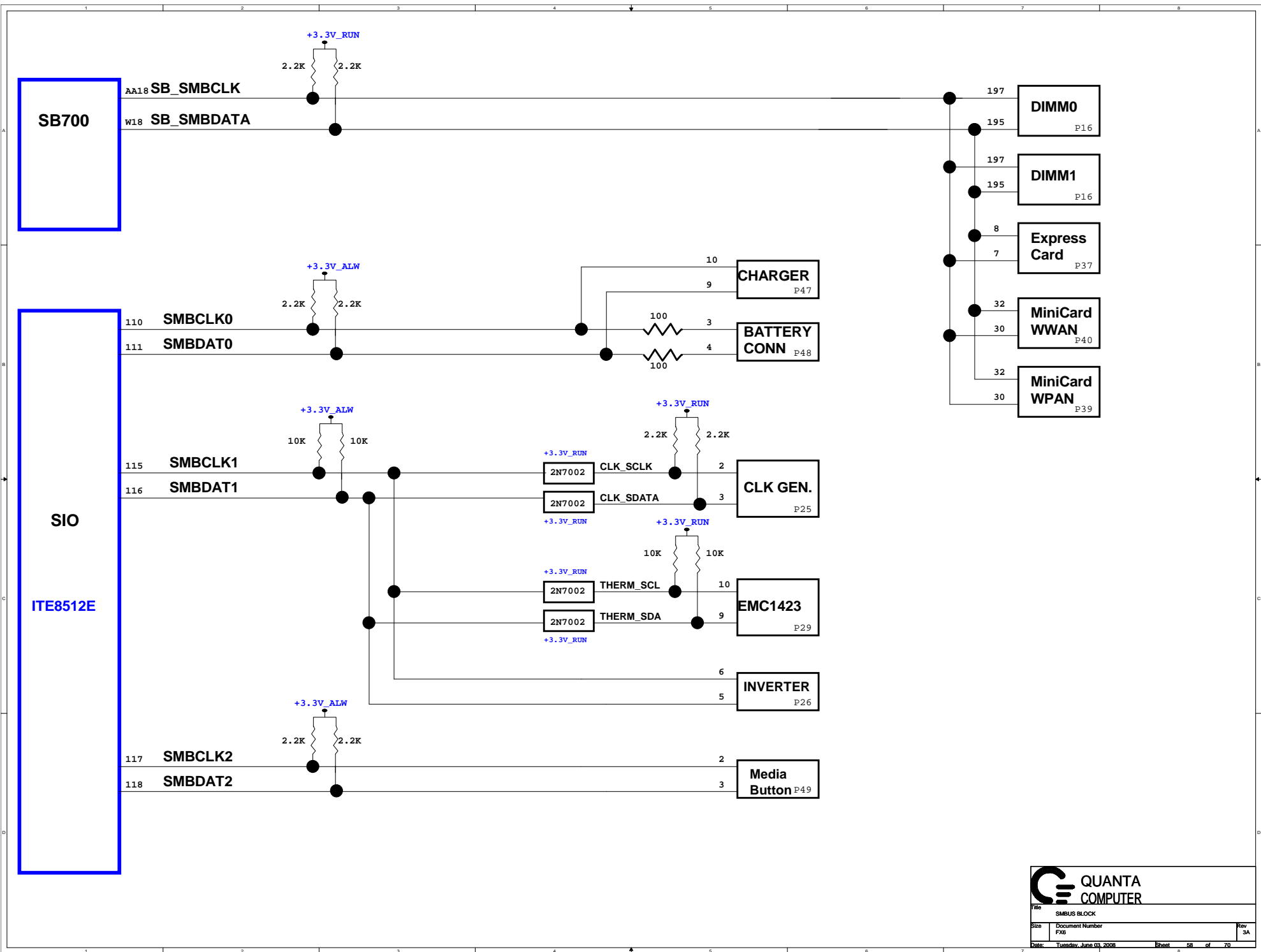


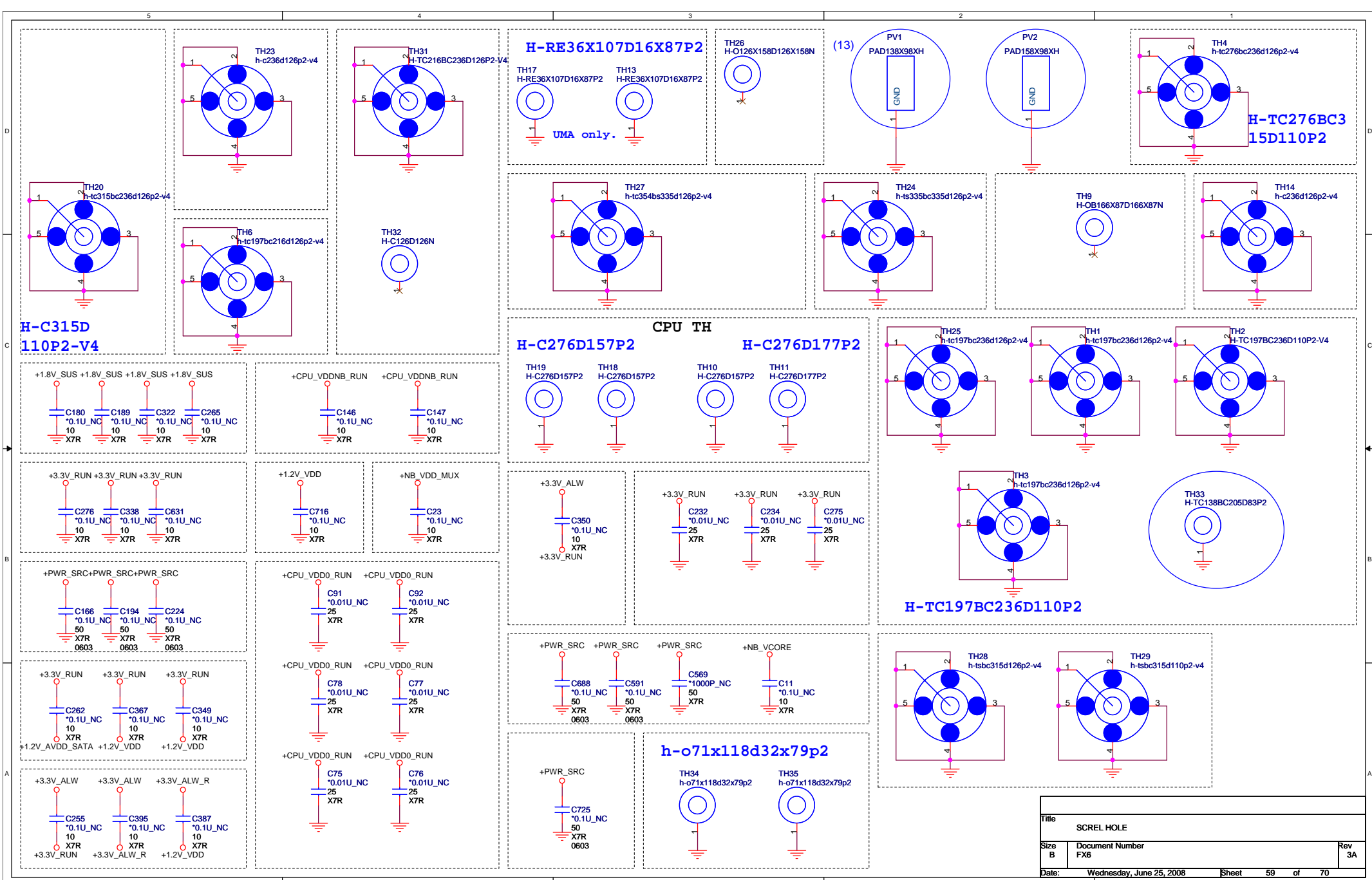
**QUANTA
COMPUTER**

| | | | |
|-------|------------------------|---------|----------|
| Title | | VGA_M82 | |
| Size | Document Number | Rev | |
| | FX6 | 3A | |
| Date: | Tuesday, June 03, 2008 | Sheet | 55 of 70 |









H-C315D
110P2-V4

H-RE36X107D16X87P2

H-TC276BC3
15D110P2

H-C276D157P2

CPU TH

H-C276D177P2

H-TC197BC236D110P2

h-o71x118d32x79p2

| | | |
|------------|--------------------------|----------------|
| Title | | |
| SCREL HOLE | | |
| Size | Document Number | Rev |
| B | FX6 | 3A |
| Date: | Wednesday, June 25, 2008 | Sheet 59 of 70 |

Change List

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| X00-1 | | | | | | |
| 1 | 25 | 8/13/2007 | EE | CLK_NB_14MB need resistor to a voltage divider. RS780 voltage level is +1.1V. | Chagne R607 from 33 ohm to 158/F, added R637 90.9/F, depop R608 10k for RS780. | X00-1 |
| 2 | 4 | 8/13/2007 | EE | Remove R516 0 ohm reserved resistor for MEMVREF. FX6/GX3 use 1.8V/2 | Remove R516 0 ohm. | X00-1 |
| 3 | 5,12 | 8/13/2007 | EE | CPU_LDT_REQ#R should pull up to +1.8V_SUS. | POP R38 and Depop R415. | X00-1 |
| 4 | 8,51 | 8/13/2007 | EE | Connect STRP_DATA to VCORE PWM of NB for Power play. | Connect STRP_DATA from U23.B10 to PQ1.2. | X00-1 |
| 5 | 13 | 8/13/2007 | EE | IDE_RST#F_RST#/IMC_GPO3 defaults to output driven low. | Remove R720 20k. | X00-1 |
| 6 | 14 | 8/13/2007 | EE | GP16,GP17 for ROM sel. Hepburn connect to EC spi rom. For SB, EC is on LPC bus. | Depop R430 and pop R420. For LPC. | X00-1 |
| 7 | 14 | 8/13/2007 | EE | ATI recommend that AVDD should tie to +3.3V_S5 power rail. | Chagne L46 from +3.3V_SUS to +3.3V_ALW. | X00-1 |
| 8 | 14 | 8/13/2007 | EE | ATI recommend that AZ_RST#, LPCCLK0, LPCCLK1 should pull up to +3.3V_S5 with a 10-k. | Chagne R378,R396,R408 from +3.3V_SUS to +3.3V_ALW. | X00-1 |
| 9 | 8 | 8/13/2007 | EE | S1G2 didn't use DDR_CS2_DIMMA/B# pin. | Remove DDR_CS2_DIMMA/B# from CN5,CN6 | X00-1 |
| Chagne from X00-1 to X00-2 | | | | | | |
| 10 | 08 | 8/14/2007 | EE | Follow ATI recommend. | Change Q59,Q20 from MMBT3904 to FDV301N and remove R54,R492. | X00-2 |
| 11 | 5 | 8/14/2007 | EE | Follow ATI recommend. | Modify VID table. | X00-2 |
| 12 | 16 | 8/14/2007 | EE | Remove single net DDR_CS3_DIMMA/B# | Remove single net CN5.120,CN6.120 | X00-2 |
| 13 | 5 | 8/14/2007 | EE | Change the CPU_PWRGD,LDT_STOP#, LDT_RST# from +1.8V_RUN to +1.8V_SUS. | Pull-up R193,R180,R184 from +1.8V_RUN to +1.8V_SUS(VDDIO). | X00-2 |
| 14 | 5 | 8/14/2007 | EE | Follow ATI recommend.CPU pin C2 need pull-down with 0 ohm. | Pop R536 0 ohm. | X00-2 |
| 15 | 5 | 8/14/2007 | EE | To save the space. There is no need to have these resistor in Griffin system. | Remove R556,R169,R161,R554,R553,R555,R172,R191,R165,R168,R196,R205 | X00-2 |
| 16 | 5 | 8/14/2007 | EE | Follow ATI.The HDT we have (you have) right now is Purple Possum system. It's 1.8V level design. | Pop R213 0 ohm and depop R212,Q35,R216. | X00-2 |
| 17 | 5,53 | 8/14/2007 | EE | CPU_PWRGD_SVID_REG should be level shifted to 3.3V for the ISL6265. Vih(min) is 2V. | Added Q76,R161. | X00-2 |
| 18 | 5 | 8/14/2007 | EE | Diode D7 blocks a low input to the CPU MEMHOT_L so the circuit would not work as drawn | Remove D7 and reserved R159 680 ohm for DDRII thermal IC in the future. | X00-2 |
| 19 | 19 | 8/14/2007 | EE | HDMI strap is on Hsync.Add 10k-ohm PU (to 3.3V) on VGAHSYNC before buffer U6. Discrete only. | Pull up R191 10k ohm to +3.3V_RUN at VGASYNC | X00-2 |
| 20 | 8,28 | 8/14/2007 | EE | DDC3 is 5V tolerance. There is no need to add level shifters, Discrete only. | Remove R18,R19,R22,R30,Q12,Q18. Remove off page HDMI_SCL,HDMI_SDA.Add TP on U23.A8 | X00-2 |
| 21 | 39 | 8/14/2007 | EE | For LPC connect to WPAN socket: Reserve 0ohm, and NC when PD. | Added R720,R763-R766 0 ohm for LPC signals. | X00-2 |
| Chagne from X00-2 to X00-3 | | | | | | |
| 22 | 29 | 8/15/2007 | EE | Reserve the caps for any noise coupling issue happening. | Depop C338 and close Q37. Added C920 and close EMC1423. | X00-3 |
| 23 | 29 | 8/15/2007 | EE | Added Q77 2N7002 isolation circuit. | Added Q77 instead R406 ohm and change Q42 from +3.3V_SUS to +3.3V_RUN. | X00-3 |
| 24 | | | | | | X00-3 |
| 25 | | | | | | X00-3 |
| 26 | 49 | 8/15/2007 | P | FAE Suggetion for OCP setting | Change PR97 from 7.15K to 8.45K | X00-3 |
| 27 | 52 | 8/15/2007 | P | Charge pump from +5V LDO, might cause high ripple voltage | Add P112 to reduce ripple voltage | X00-3 |
| 28 | 52 | 8/15/2007 | P | PR219 no need such hige rating component | Change PR219 from 0805 to 0603 and remove one | X00-3 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X00

APPROVED BY : Cory Lin

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DRAWN BY : Leo Tseng

DATE : Aug. 13, 2007

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| 29 | 52 | 8/15/2007 | P | PC474 should populated for filter | Populate PC474 | X00-3 |
| 30 | 52 | 8/15/2007 | P | Reserve feedback circuit for testing | Add PR169 and PR218 | X00-3 |
| 31 | 28 | 8/15/2007 | EE | No need to implement shunt resistors for HDMI on M82S Discrete only. | Remove R159,R160,R163,R164 180 ohm. | X00-3 |
| 32 | 36 | 8/15/2007 | EE | Follow vendor review. Added RC to include more different memory card. | Pop C860 270pF and added C921 0.01u, R456 150k. | X00-3 |
| 33 | 19,27 | 8/15/2007 | EE | Follow M82-S reference schematic. Discrete only. | There is double PU for CRT DDC.Remove R522,R519 2.2k and change R520,R486,R521,R485 to 2.2k. | X00-3 |
| Chagne from X00-3 to X00-4 | | | | | | |
| 34 | 42 | 8/16/2007 | P | Load switch voltage drop is out of spec. | Change PQ13 from SI4800BDY to SI4856BDY | X00-4 |
| 35 | 42 | 8/16/2007 | P | Load switch voltage drop is out of spec. | Change PQ29 from SI4800BDY to SI4336DY | X00-4 |
| 36 | 42 | 8/16/2007 | P | Load switch voltage drop is out of spec. | Change PQ20 from SI4800BDY to SI4336DY | X00-4 |
| 37 | 5,29 | 8/16/2007 | EE | Follow SMSC feedback. | Change C341 from 220p to 2200p and depop C212 | X00-4 |
| 38 | 15 | 8/16/2007 | EE | Follow ATI SB700 checklist. | Change C518,C519,C529 to 1uF, C524 to 22uF. | X00-4 |
| 39 | 15 | 8/16/2007 | EE | Follow ATI SB700 checklist. | Change C496,C494,C495,C489 to 2.2uF. | X00-4 |
| Chagne from X00-4 to X00-5 | | | | | | |
| 40 | 19 | 8/17/2007 | EE | Move CLK_VGA_27M_SS to GPIO16 and reserved it for spread spectrum. Discrete only. | Reserved R196 0 ohm for EXT CLK GEN. | X00-5 |
| 41 | 29,43,44 | 8/17/2007 | EE | Added ESD diode. | Added D35,D36,D37,D38 | X00-5 |
| 42 | 38 | 8/17/2007 | EE | Follow ATI SB700 checklist. | Change C96,C208 from 0.01u to 0.1u to meet SB700 checklist. | X00-5 |
| Chagne from X00-5 to X00-6 | | | | | | |
| 43 | 8 | 8/20/2007 | EE | Change VGAH(V)SYNC to INT_VGAH(V)SYNC from PU to PD for disable side prot memry. Discrete only. | Depop R497 and pop R500. | X00-6 |
| 44 | 25 | 8/20/2007 | EE | It's no need to reserve 49.9 ohm and change R243,R235 from 47.5 to 0 ohm, depop R236 261/F. | Remove 49.9 ohm, change R243,R235 from 47.5 to 0 ohm and depop R236. | X00-6 |
| 45 | 25 | 8/20/2007 | EE | Follow FAE feedback. Added Decoupling caps for U16's VDDIO. | Added Decoupling caps C685,C924-C930 and L93 for U16's VDDIO. | X00-6 |
| 46 | 12,20 | 8/20/2007 | EE | Follow ATI FAE recommend. Set GPIO to turn on M82 +3.3V_DELAY. Discrete only. | Connect GFX_RUN_ON from SB700 pin AC6 to R513. | X00-6 |
| 47 | 12,14,18 | 8/20/2007 | EE | Follow ATI FAE recommend to change the M82 reset signal for power express. Discrete only. | Added R458,R457,D39,D40,R205 for power express. | X00-6 |
| 48 | 14 | 8/20/2007 | EE | Follow ATI FAE recommend. | Change R421,R429 from 10k to 2.2k. | X00-6 |
| 49 | 34 | 8/20/2007 | EE | Follow BCM FAE recommend to remove external RC termination. | Remove (R690-R697 and C794-C797) | X00-6 |
| 50 | 33 | 8/20/2007 | EE | Follow BCM recommend to add the required grounding for all the package signals and powertermination. | Add U29 pin 69 thermal GND pad. | X00-6 |
| Chagne from X00-6 to X00-7 | | | | | | |
| 51 | 42 | 8/21/2007 | EE | Follow Card reader vendor recommend to add PU resistor for IRQ_SERIRQ. | Add R267 10K ohm to pull-up +3.3V_RUN. | X00-7 |
| 52 | 41 | 8/21/2007 | EE | There is no +3.3V_RTC_LDO power rail. | Change the +3.3V_RTC_LDO to +3.3V_ALW. | X00-7 |
| 53 | 21 | 8/21/2007 | EE | Added +1.8V_GFX power rail for M82-S power express Discrete only. | Change the M82-S +1.8V_RUN to +1.8V_GFX and added +1.8V_GFX power switch. | X00-7 |
| 54 | 51 | 8/21/2007 | P | Connect thermal pad to AGND | Add pin15 to AGND | X00-7 |
| 55 | 52 | 8/21/2007 | P | Preserve component for MAX8778 | Add PC115 | X00-7 |
| 56 | 54 | 8/21/2007 | P | Connect thermal pad to AGND | Add pin15 to AGND | X00-7 |

PROJECT : Hepburn

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DATE : Sep. 19, 2007

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| Item | Page# | Date | T | Issue Description | Solution Description | Rev |
|------------------------------------|-------|-----------|----|---|---|--------|
| 57 | 55 | 8/21/2007 | P | Change feedback resistor for 1.1V output | Change PR66 to 63.4K | X00-7 |
| 58 | 55 | 8/21/2007 | P | Change feedback resistor for +1.1V_GFX_PCIE output | Change PR68 to 4.53K | X00-7 |
| Chagne from X00-7 to X00-8 | | | | | | |
| 59 | 12,35 | 8/22/2007 | EE | Change the PCI_PIRQD to PCI_PIRQB. ATI must use INTH#/GPIO36 to control M82-S reset signal. | Change the PCI_PIRQD to PCI_PIRQB and move to U31.AC4 | X00-8 |
| 60 | 12 | 8/22/2007 | EE | ATI use INTH#/GPIO36 (PE_GPIO0) to control M82-S reset signal. | Added PE_GPIO0 on U31.AE3 to control M82-S reset. | X00-8 |
| 61 | 48 | 8/22/2007 | P | Pin define is wrong. | Change JABT1 pin define | X00-8 |
| 62 | 48 | 8/22/2007 | P | Remove AC_OFF function | Remove PQ24 | X00-8 |
| 63 | 9 | 8/23/2007 | EE | Remove resistor for RX780. | Remove R490,R42,R84,R32,R63,R112,R119,R131 for RX780. | X00-8 |
| 64 | 22 | 8/23/2007 | EE | Added level shift on M82-S thermal IC SMBUS2. Discrete only. | Added Q88,Q87 and remove R144,R137 0 ohm. | X00-8 |
| 65 | 34 | 8/23/2007 | EE | Follow FM6 to modify the +3.3V_LAN power source form +3.3V_ALW to +3.3V_SUS. | Depop +3.3V_ALW to +3.3V_LAN switch circuit and added R767 to connect +3.3V_SUS to +3.3V_LAN. | X00-8 |
| 66 | 55 | 8/23/2007 | EE | We don't use RUNPWROK and use GFX_RUN_ON to turn on GFX power. | Remove PR169. | X00-8 |
| 67 | 12 | 8/23/2007 | EE | Follow ATI checklist. Reserved J13 for Rubuto. | Added J13 for Rubuto system. | X00-8 |
| 68 | 34 | 8/23/2007 | EE | Follow Dell. Change the LED signals. | LINKLED connect to G_LED.SPD100LED connect to amber LED. | X00-8 |
| Chagne from X00-8 to X00-9 | | | | | | |
| 69 | 9 | 8/24/2007 | EE | Check the CLK GEN vendor (RT&CLG). They don't have PA_RS7X0A1 issue. | Remove R29,R33,R37,R34 and connect to GPP_SB_REFCLK directly from CLK GEN SB_SRC CLK. | X00-9 |
| 70 | 26 | 8/24/2007 | EE | Added OR gate to support backlight from EC and NB. | Added U225,C932 and pop R464. | X00-9 |
| 71 | 45 | 8/24/2007 | EE | Added AND gate in system reset circuit. | Remove R204,R209 and added U226,U227. | X00-9 |
| 72 | 31,32 | 8/24/2007 | EE | Change the audio to IDT STAC9228/92HD73C. | Change the audio to IDT STAC9228/92HD73C. | X00-9 |
| 73 | 25 | 8/24/2007 | EE | Follow RS780 check list to change the ferrite bead for CLK GEN power. | Change the L34 ,L93 and added L107,L108 to FBM-11-160808-601A10T | X00-9 |
| 74 | 11 | 8/24/2007 | EE | Follow RS780 check list. | Added C997,C998 1U and change L15 from 4.7U to 1U. | X00-9 |
| Chagne from X00-9 to X00-10 | | | | | | |
| 75 | 22,26 | 8/28/2007 | EE | Added reduce WWAN interference solution. | Added C1001-C1008, R835,R836. | X00-10 |
| 76 | 42,43 | 8/28/2007 | EE | Chagne MEDIA_INT to active low. MEDIA_INT# need pull-up +3.3V_ALW. | Move R217 to page 43, pull-up to +3.3V_ALW. Added RC to MEDIA_INT#. | X00-10 |
| 77 | 44 | 8/28/2007 | EE | Chagne power switch and sniffer switch power rail. | Chagne R461,R21 from +RTC_CELL to +3.3V_ALW. | X00-10 |
| 78 | 42,53 | 8/28/2007 | EE | Chagne CPU_VCORE_PWRGD pull up power rail. | Chagne PR35 from +3.3V_ALW to +3.3V_SUS and depop R574. | X00-10 |
| 79 | 43 | 8/28/2007 | EE | Added the NUM, CAP low active circuit and swap keyboard signals. | Added CP7 and Q80,Q82,Q81,Q83,R834,R832. | X00-10 |
| 80 | 39 | 8/28/2007 | EE | Depop debug board's 0 ohm. | Depop debug board's 0 ohm R322,R685,R720,R763,R764,R765,R766 | X00-10 |
| 81 | 30 | 8/28/2007 | EE | ODD SATA is not need +3.3V_RUN. Remove +3.3V_RUN decou cap for ODD SATA. | Remove R745,R747,R307,R744,R313. | X00-10 |
| 82 | 46 | 8/28/2007 | P | USB Charger Function | Add +5V_ALW to +5V_SUS Load Switch for USB Charger | X00-10 |
| 83 | 52 | 8/28/2007 | P | USB Charger Function | Change +5V_ALW to +5V_ALW2 | X00-10 |
| 84 | 52 | 8/28/2007 | P | USB Charger Function | Change +5V_SUS to +5V_ALW | X00-10 |
| 85 | 52 | 8/28/2007 | P | USB Charger Function | Remove PR213 and PD1 | X00-10 |

PROJECT : Hepburn

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Change List

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|-------------------------------------|-------|-----------|----|---|--|--------|
| 86 | 52 | 8/28/2007 | P | USB Charger Function | Change +3.3V_DL to +5V_DL | X00-10 |
| 87 | 51 | 8/28/2007 | P | FAE Suggest 237K for 300KHz frequency | Change from 178K to 237K | X00-10 |
| 88 | 54 | 8/28/2007 | P | FAE Suggest 237K for 300KHz frequency | Change from 178K to 237K | X00-10 |
| 89 | 49 | 8/28/2008 | P | FAE Suggest connect to GND | Change to connect to GND | X00-10 |
| 90 | 49 | 8/28/2008 | EE | Follow AMD recoment. Added buffer work around circuit to NB_PWRGD. | Added U234 buffer to seperate NB_PWRGD and WD_PWRGD. | X00-10 |
| Chagne from X00-10 to X00-11 | | | | | | |
| 91 | 25 | 8/29/2008 | EE | Added MINI3CLK_REQ#,EXPRESSCARD_REQ# pull-up resistor. | Added R837,R859 10k pull up to +3.3V_RUN. | X00-11 |
| 92 | 9 | 8/29/2008 | EE | pop R495 and remove PANEL_BKEN from RS7800 | pop R495 0 ohm and remove R806. | X00-11 |
| 93 | 28,44 | 8/29/2008 | EE | Add ESD, Choke for Biometric and HDMI. | Add ESD3 for Biometric and L109-L112 for HDMI. | X00-11 |
| 94 | 24 | 8/29/2008 | EE | Follow AMD recoment. Change the voltage level for hybrid IC SEL pin. | Change R89 from 0 ohm to 8.2k ohm. | X00-11 |
| 95 | 10 | 8/30/2008 | EE | Add work around TPS72501 to create 1.35V to RS780 VDDHTTX power rail. RS780 Rev.A11 only. | Used TPS72501 to create +1.35V_HT_VCC and added L113 for option. | X00-11 |
| 96 | 9 | 8/30/2008 | EE | Added PD resistor 2.7k for INT_EN_LCDVDD. | Added R863 2.7k for INT_EN_LCDVDD. | X00-11 |
| 97 | 10 | 8/30/2008 | EE | Follow ATI checklist. Added L114 to reduce noise for VDDPCIE. | Added L114 to VDD_PCIE. | X00-11 |
| 98 | 46 | 8/30/2007 | P | For more suitable RDSON | Change to SI4800BDY | X00-11 |
| 99 | 48 | 8/30/2007 | P | Footprint is not correct | Change to new footprint "BAT-200045MR009H577ZR-9P-R-V" | X00-11 |
| 100 | 49 | 8/30/2007 | P | MPL104S-0R9 is not PSL | Change to MPC1040LR88 | X00-11 |
| 101 | 52 | 8/30/2007 | P | Reserve GPIO for USB Charger | Add 5V_ALW_ON GPIO for USB charger enable | X00-11 |
| 102 | 52 | 8/30/2007 | P | FAE suggest connect to +3.3V_DL | Connect to +3.3V_DL | X00-11 |
| 103 | 52 | 8/30/2007 | P | For Uni material | Change to 0.1u/0603 | X00-11 |
| 104 | 53 | 8/30/2007 | P | MPL73-3R3 is not PSL | Change to MPLC0730L3R3 | X00-11 |
| 105 | 53 | 8/30/2007 | P | FAE Suggest PR43=18K, PR42=100K | Change to PR43=18K, PR42=100K | X00-11 |
| 106 | 53 | 8/30/2007 | P | FAE Suggest PR198=16.2K, PR205=4.02K | Change to PR198=16.2K, PR205=4.02K | X00-11 |
| 107 | 53 | 8/30/2007 | P | FAE Suggest PR199=16.2K, PR200=4.02K | Change to PR199=16.2K, PR200=4.02K | X00-11 |
| 108 | 54 | 8/30/2007 | P | MPL73-4R7 is not PSL | Change to MPLC0730L4R7 | X00-11 |
| 109 | 54 | 8/30/2007 | P | For High=1.0, Low=0.9 Output | Change PR207 to 20K/F | X00-11 |
| 110 | 55 | 8/30/2007 | P | For High=1.0, Low=0.9 Output | Change PR64 to 69.8K/F | X00-11 |
| 111 | 56 | 8/30/2007 | P | For High=1.0, Low=0.9 Output | Change PR66 to 22.6K/F | X00-11 |
| Chagne from X00-11 to X00-12 | | | | | | |
| 112 | 32 | 8/31/2007 | EE | Follow ME feedback. Used MIC connector in MB side. | Pop J14 and remove M1 | X00-12 |
| 113 | 19,20 | 8/31/2007 | EE | Follow ATI FAE. Reserved GFX thermal protect function. | Added U241,Q98,Q99,R870,R871.R872 | X00-12 |
| 114 | 53 | 9/1/2007 | P | FAE Suggest to remove sense resistor for saving space | Remove PR179, PR180 | X00-12 |
| 115 | 53 | 9/1/2007 | P | FAE Suggest to remove sense resistor for saving space | Remove PR194, PR195 | X00-12 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X00

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DATE : Sep. 19, 2007

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QUANTA
COMPUTER

Change List

| Item | Page# | Date | T | Issue Description | Solution Description | Rev |
|-------------------------------------|----------|-----------|----|---|--|--------|
| 116 | 55 | 9/01/2008 | P | Change to high rating mosfet for 9.4A | Change to FDS8880_NL | |
| 117 | 55 | 9/01/2008 | P | Change to high rating mosfet for 9.4A | Change to FDS6676AS_NL | |
| 118 | 55 | 9/01/2008 | P | Change to high rating mosfet for 9.4A | Change to SIL104R-1R0 | |
| 119 | 47 | 9/01/2008 | P | Cancel this function. It's no use. | Remove PR74, PQ15 | |
| 120 | 29 | 9/01/2008 | EE | Follow FAE feedback. Pull up resistor to +3.3V_SUS. | Added R877 10k ohm to pull up +3.3V_SUS. | X00-12 |
| 121 | 36 | 9/01/2008 | EE | Follow FAE feedback. Added C1032 270p_NC to SD_CD# | Added C1032 270p_NC to CON5 pin 2 SD_CD#. | X00-12 |
| 122 | 15 | 9/01/2008 | EE | Follow AMD feedback. Change SB700 VDD power rail from +1.2V_RUN to +1.2V_ALW_SUS. | Added L90 and connect to +1.2V_ALW_SUS. Depop L39. | X00-12 |
| 123 | 24 | 9/01/2008 | EE | Follow AMD feedback. Change R89 from 0 ohm to 8.2k ohm. | Change R89 from 0 ohm to 8.2k ohm. | X00-12 |
| 124 | 26 | 9/01/2008 | EE | Reserved caps for reduce SMBUS1 overshoot and under shoot. | Reserved C1011,C1012 47p in J1 pin5,6 | X00-12 |
| 125 | 52 | 9/03/2008 | P | Reserved for MAX8778 | Add PR114 | X00-12 |
| 126 | 55 | 9/03/2008 | P | Reserved snubber | Add PR245, PC211 | X00-12 |
| 127 | 42 | 9/03/2008 | EE | ITE 8512 FAE concern pin 126,pin 23,pin 4,pin 15 have leakage . | Added D43~D46 to U13 pin 126, pin 23, pin 4, pin 15. | X00-12 |
| 128 | 5 | 9/03/2008 | EE | Follow AMD feedback. Added 2 * MOSFET for CPU_PWRGD_SVID_REG level shift. | Added Q100,R881and modify Q76 to gate by CPU_PWRGD. | X00-12 |
| Chagne from X00-12 to X00-13 | | | | | | X00-12 |
| 129 | 49,51,54 | 9/04/2008 | P | Dell suggest to add 0.1u cap near IC feedback pin to reduce feedback noise. | Add 0.1u cap | X00-13 |
| 130 | 51 | 9/04/2008 | P | FAE suggest to add PR460,PC451 and PQ115 for voltage shift function. | Aadd PR460,PC451 and PQ115 for voltage shift function. | X00-13 |
| 131 | 19 | 9/04/2008 | EE | Follow ATI feedback. | Reserved R889 1M for Y2 27Mhz. | X00-13 |
| 132 | 42 | 9/04/2008 | EE | Added D47 | Added D47 to connect WRST# and THERM_STP# | X00-13 |
| 133 | 33 | 9/04/2008 | EE | Reserved BCM5784M SUPER_IDDQ circuit. | Reserved R888 20k ohm. | X00-13 |
| 134 | 9,27 | 9/04/2008 | EE | Add RS780 CRT I2C function. | Connect U13 pin E8,F8 to CRT DDC bus. | X00-13 |
| 135 | 9,28 | 9/04/2008 | EE | Add RS780 HDMI I2C function. | Connect U13 pin A8,B8 to HDMI DDC bus and Added level shift(R886,R887,Q101,Q102) | X00-13 |
| Chagne from X00-13 to X00-14 | | | | | | |
| 136 | 31 | 9/05/2008 | EE | Added 4 * 0 ohm for EMI. | Added R898~R901 to JSPK1. | X00-14 |
| 137 | 55 | 9/05/2008 | EE | Footprint is different with PL9 sepc. | Change PL9 footprint to SIL104. | X00-14 |
| 138 | 24 | 9/05/2008 | EE | ATI has update power express circuit. | Added R890~R897and depop Q3~Q10. | X00-14 |
| 139 | 13,39 | 9/05/2008 | EE | Added SB_USBPA8 to WLAN. | Added L115, R902, R903. | X00-14 |
| Chagne from X00-14 to X00-15 | | | | | | X00-15 |
| 141 | 43 | 9/06/2008 | EE | Added KB BACKLITE power switch circuit. | Added Q104,Q103,C1033,C1034,R190,R907,R908,R909 to option +KB_LED power source. | X00-15 |
| 142 | 43 | 9/06/2008 | EE | Added TP power rail and change LID_SW# power rail | Added C385 and PU to +3.3V_SUS to JP2.5. Change R455 to +3.3V_ALW. | X00-15 |
| Chagne from X00-15 to X00-16 | | | | | | |
| 143 | 9 | 9/11/2008 | EE | There is on need pull-up resistor to work around for RS780 A11. | Depop R416 | X00-16 |
| 144 | 44 | 9/12/2008 | EE | There is not work in DC IN LED for SSI build. | Depop Q16, Q17, R44, R45 | X00-16 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X00

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DATE : Sep. 19, 2007

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| 145 | 9 | 9/14/2007 | EE | Follow ATI FAE feedback. Change the RS780 strap pin. | Depop R419 and pop R420. | X00-16 |
| | | | | Chagne from X00-16 to X01-1 | | |
| 1 | 9 | 10/01/2007 | EE | Follow ATI FAE feedback. Don't need LDT_STOP#, CPU_LDT_REQ# level shift. | Depop the level shift Q52,Q3,R341,R39 and added R637, R638 0 ohm. | X01-1 |
| 2 | 9 | 10/01/2007 | EE | Follow ATI FAE feedback. Change the RS780 debug strap pin. | Added R639 3k ohm to PU +3.3V_RUN and depop the R349. | X01-1 |
| 3 | 12 | 10/26/2007 | EE | Follow AMD SCL. | Depop R694 1M ohm. | X01-1 |
| P1 | 52 | 10/30/2007 | P | ALW_PWRGD_3V_5V is dummy net | Remove PR178,PR182 and change connect to +3.3V_ALW | X01-1 |
| P2 | 51 | 10/30/2007 | P | NB_VCORE will OVP when voltage switch | Follow FAE suggestion to put PR178 and PR182 | X01-1 |
| P3 | 47,48 | 10/30/2007 | P | +5V_ALW issue when USB charger disabled in S5 | Change +5V_ALW to +5V_ALW2 for below terminal PU6.8, PR115,PR22, PD4.1, PD5.1 | X01-1 |
| P4 | 47 | 10/30/2007 | P | To solve EE noise made by charger | Change charger output Cap 10U/25V from X6S to X5R CAP (PN: CH6104K9207) | X01-1 |
| P5 | 51 | 10/30/2007 | P | Change capacitor to resistor for reserve pull low | Change PC11 to PR214 | X01-1 |
| P6 | 54 | 10/30/2007 | P | 1.2V_ALW_SUS_ON is floating | Add a resistor PR215 to pull low | X01-1 |
| P7 | 47,51,52 | 10/30/2007 | P | SI4810 EOL Issue | Change PQ40,PQ2,PQ22,PQ26 to SI4812 | X01-1 |
| P8 | 51,54 | 10/30/2007 | P | To reduce Vo jitter issue | Change PC57 and PC86 to 220u/2.5V/ESR15 | X01-1 |
| 4 | 10 | 10/31/2007 | EE | RS780M change form A11 to A12 and don't need work around. | Pop L54 and Depop L55,C488,U20,R381,R382,C491. | X01-1 |
| 5 | 13,37,42 | 10/31/2007 | EE | Added Express card power enable on SB700. It's for Express card hot plug. | Change U30.B8 from USB_OC5# to EXPRCRD_PWREN# and connect to CN2. | X01-1 |
| 6 | 28 | 10/31/2007 | EE | Follow ANT HDMI detect circuit. | Added Q80, and remove R336,D19 | X01-1 |
| 7 | 32 | 10/31/2007 | EE | Added +3.6V_CAMERA Camera power circuit | Added U43,C741,C743,C742,R640,R642.Remove C527. Modify JCAMERA1 pin define and L58 power rail. | X01-1 |
| 8 | 38 | 10/31/2007 | EE | Added USB charge circuit for leakage. | Added Q81,R643,U44,U45. | X01-1 |
| 9 | 42 | 10/31/2007 | EE | Swap U5.31 NUM_LED# and U9.98 KB_BACKLITE_EN | Swap U5.31 NUM_LED# and U5.98 KB_BACKLITE_EN | X01-1 |
| 10 | 44 | 10/31/2007 | EE | Depop SNIFFER_YELLOW LED circuit. and Swap WIRELESS_ON/OFF#, SNIFFER_PWR_SW# circuit. | Depop R377,Q55,Q54,R371 and Swap R376 SNIFFER_PWR_SW#, R313 WIRELESS_ON/OFF# signals | X01-1 |
| 11 | 43 | 10/31/2007 | EE | Change KB_LED pwoer ciruit. | Pop R507, Add Q82 and Depop R513,R512,Q71,Q70,C589,C579,R505 and modify J4 pin define. | X01-1 |
| 12 | 9,45 | 10/31/2007 | EE | Depop SB700 A11 WD_PWRGD work around circuit. | Depop U11,C222,R186 and pop R186,R344 | X01-1 |
| 13 | 42 | 11/01/2007 | EE | Change GPIO and remove SNIFFER_YELLOW function. | Move 5V_ALW_ON to U5.83, Move NUM_LED# to U5.88 and remove R377,Q55,Q54,R371 | X01-1 |
| | | | | Chagne from X01-1 to X01-2 | | |
| 14 | 5,12 | 11/01/2007 | EE | +5V_ALW issue when USB charger disabled in S5 | Change R87,R306 from +5V_ALW to +5V_ALW2. | X01-2 |
| 15 | 33,34 | 11/02/2007 | EE | Change BCM5787M to BCM5784M. | Change BCM5787M to BCM5784M. | X01-2 |
| 16 | 31 | 11/02/2007 | EE | Change STAC9228 to 92HD73C. | Change STAC9228 to 92HD73C. | X01-2 |
| 17 | 14 | 11/05/2007 | EE | Follow ATI SCL and feedback. | Added R644 0 ohm connect U30.C6 TEMP_COMM to GND. | X01-2 |
| 18 | 13,39 | 11/05/2007 | EE | Change WLAN from USB port 8 to USB port 4. | Change WLAN from SB_USBP8+/- to SB_USBP4+/- and Move to U30.B12,U30.A12. | X01-2 |
| 19 | 38 | 11/05/2007 | EE | Co-lay USB Q-switch and 0 ohm | Reserved R645~R648 0 ohm with U44 pin 2,3,5,6,U45 pin 2,3,5,6. | X01-2 |
| P1 | 52 | 10/30/2007 | P | ALW_PWRGD_3V_5V is dummy net | Remove PR178,PR182 and change connect to +3.3V_ALW | X01-2 |
| P2 | 51 | 10/30/2007 | P | NB_VCORE will OVP when voltage switch | Follow FAE suggestion to put PR178 and PR182 | X01-2 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X01

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DATE : Sep. 19, 2007

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| P3 | 47,48 | 10/30/2007 | P | +5V_ALW issue when USB charger disabled in S5 | Change +5V_ALW to +5V_ALW2 for below terminal PU6.8, PR115,PR22, PD4.1, PD5.1 | X01-2 |
| P4 | 47 | 10/30/2007 | P | To solve EE noise made by charger | Change charger output Cap 10U/25V from X6S to X5R CAP (PN: CH6104K9207) | X01-2 |
| P5 | 51 | 10/30/2007 | P | Change capacitor to resistor for reserve pull low | Change PC11 to PR214 | X01-2 |
| P6 | 54 | 10/30/2007 | P | 1.2V_ALW_SUS_ON is floating | Add a resistor PR215 to pull low | X01-2 |
| P7 | 47,51,52 | 10/30/2007 | P | SI4810 EOL Issue | Change PQ40,PQ2,PQ22,PQ26 to SI4812 | X01-2 |
| P8 | 51,54 | 10/30/2007 | P | To reduce Vo jitter issue | Change PC57 and PC86 to 220u/2.5V/ESR15 | X01-2 |
| P9 | 46 | 11/05/2007 | P | Modify +5V_SUS load switch | Remove PQ12 | X01-2 |
| P10 | 53 | 11/05/2007 | P | FAE suggest to reserve | Add PR241 | X01-2 |
| P11 | 54 | 11/05/2007 | P | Modify current limit value | Change PR228 from 10K to 5.9K | X01-2 |
| P12 | 49,51,53,54,55 | 11/05/2007 | P | To solve power good glitch issue | Connect IC power to +5V_ALW2 | X01-2 |
| P13 | 49 | 11/05/2007 | P | Set tracking discharge mode | PR206 populate and PR208 NC | X01-2 |
| P14 | 52 | 11/05/2007 | P | 5V_ALW_ON pull low at initial state | Add PR218 | X01-2 |
| P15 | 53 | 11/05/2007 | P | CPU_VCORE_ENABLE pull low at initial state | Add PR219 | X01-2 |
| 20 | 42,44,48 | 11/06/2007 | EE | Remove DC IN LED circuit and change signal name DCIN_DETECT_LED# to CHIPSET_ID1. | Remove R37,Q10,Q9,R69 and change U5.99 signal name DCIN_DETECT_LED# to CHIPSET_ID1. | X01-2 |
| P16 | 51,54 | 11/06/2007 | P | For space saving. | Remove PC2,PC81. | X01-2 |
| 21 | 42 | 11/07/2007 | EE | Add BID1 to EC pin98 | Connect R130,R131 to U5.98 | X01-2 |
| 22 | 25,42 | 11/07/2007 | EE | Remove double pull-up resistor. | Remove R107,RP2,R455 | X01-2 |
| Chagne from X01-2 to X01-3 | | | | | | |
| 23 | 5 | 11/09/2007 | EE | Solve glitch from CPU_PWRGD. | Added C744 0.1uF on CPU_PWRGD. | X01-3 |
| 24 | 14,42 | 11/09/2007 | EE | Solve S5 leakage. | Connect L38 from +3.3V_ALW to +3.3V_SUS and remove R92 for SIO_SLP_S5#. | X01-3 |
| P17 | 49,51,54 | 11/12/2007 | P | Reserve for solving glitch issue caused by IC power rail | Add PR220,PR221,PR222,PR223,PR224 | X01-3 |
| P18 | 51 | 11/12/2007 | P | Follow AMD FAE suggest +NB_VCORE dynamic voltage design | Remove PQ7,PC13,PR19,PR12 | X01-3 |
| P19 | 54 | 11/12/2007 | P | To solve jitter issue | Change PL2 from 4R7 to 3R3 | X01-3 |
| 25 | 43 | 11/14/2007 | EE | Follow ANT reference to solve S3 leakage. | Change R389,R99,R97,R90 pull-up from +1.8V_SUS to +1.8V_RUN. | X01-3 |
| 26 | 12 | 11/15/2007 | EE | Solve CPU_PWRGD voltage too low(+1.5V). | Change Q36 from MMBT3904 to FDV301N. | X01-3 |
| 27 | 42 | 11/15/2007 | EE | Check with power team and EC. The charge IC INP pin can be read with EC ADC function. | Pop R86 0 ohm and depop R91 0 ohm. | X01-3 |
| 28 | 14,33,36,42 | 11/15/2007 | EE | Follow XTAL vendor feedback to change the XTAL caps. | Change C139, C149 to 18pF. C394 to 27pF. C556 to 22pF, C658, C659 to 12pF | X01-3 |
| 29 | 43 | 11/15/2007 | EE | Follow Dell recommend. | Change R507 0 ohm to FS3. | X01-3 |
| 30 | 31,32 | 11/16/2007 | EE | Follow IDT recommend to change caps for batter Audio Precision. | Change C730, C724, C622, C620 from 1uF to 2.2uF. | X01-3 |
| 31 | 5,12 | 11/16/2007 | EE | Follow ANT 3.2 reference schematic to remove CPU_PROCHOT# level shift. | Remove R441, R436, Q65. | X01-3 |
| Chagne from X01-3 to X01-4 | | | | | | |
| 32 | 9 | 11/19/2007 | EE | Update RS780M symbol. | Update U16 symbol. | X01-4 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X01

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|------|-------|------------|----|--|---|-------|
| P20 | 46 | 11/19/2007 | P | Reduce RUN/SUS PW switch circuit. | Remove PR(89,93,197,200,170,168,68,66) and change PQ(34,51,49,20) to 2N7002W-7-F. | X01-4 |
| P21 | 46 | 11/19/2007 | P | Reduce RUN/SUS PW switch circuit. | PC58,PC32,PC43,PC51,PC30,PC36,PC175 from 10U/1206 to 0.1U/0603 | X01-4 |
| 33 | 44 | 11/19/2007 | EE | Sniffer should be during S5.Dell define our Sniffer switch need to stay 'ON' after the WiFi can be enable. | change R313 to +3.3V_ALW. | X01-4 |
| 34 | 14 | 11/19/2007 | EE | Follow AMD SB700 design guideline to add series resistor. | Add R649, R650 4.99 ohm at U39 AD13,AE13 SATA_TX3+/- for ESATA signals. | X01-4 |
| 35 | 14 | 11/20/2007 | EE | Depop Q-switch function on PT build. | Depop Q81,R643,U44,U45 and pop R645~R648. | X01-4 |
| P22 | 47 | 11/20/2007 | P | UL schemaitc are going to be replaced by EC control | UL schemaitc components are NC | X01-4 |
| P23 | 49 | 11/20/2007 | P | Reduce Jitter | Change PC183 and PC184 from 330u/ESR15 to 220u/ESR25 | X01-4 |
| P24 | 52 | 11/20/2007 | P | PC168 is no use for schematic | Remove PC168 | X01-4 |
| P25 | 53 | 11/20/2007 | P | To reduce input ripple | Add PC190 and PC191 | X01-4 |
| P26 | 47,48 | 11/20/2007 | P | 2nd Source suggest to change | Change PD8 to RB500V-40 , PQ4 to FDV301N | X01-4 |
| 36 | 42 | 11/21/2007 | EE | Follow ITE feedback to reserve caps for ITE8512JX. | Add C745, R651 to U9 pin 12. | X01-4 |
| 37 | 38 | 11/21/2007 | EE | Change USB Q-switch power rail from +3.3V_RUN to +3.3V_SUS. | Change U44 pin 8, U45 pin 8 from +3.3V_RUN to +3.3V_SUS, Q81 pin2 from RUN_ON to SUS_ON. | X01-4 |
| 38 | 33,34 | 11/21/2007 | EE | Modify LAN 1000 LED circuit to solve BCM5784M LED issue. | Add D36,R774 to solve BCM5784M 1000 LED issue. | X01-4 |
| 39 | 28 | 11/22/2007 | EE | Change HDMI connector symbol. | Change CN3 connector symbol. | X01-4 |
| 40 | 28 | 11/22/2007 | EE | Remove these 20K ohm resistors because it is for desktop design or codec internal headphone amplifier. | Depop R519, R521, R532, and R547. | X01-4 |
| 41 | 38 | 11/22/2007 | EE | For EMI solution to pop choke. | Pop L19,L20 and depop R78, R83,R85,R88. | X01-4 |
| 42 | 50 | 11/23/2007 | EE | Base on RS780M T13 timing. +1.8V_RUN rise need before then +1.1V_RUN. | Change PR62 from 0 ohm to 200k ohm and depop PC41 from 0.01u to 0.1u. | X01-4 |
| P27 | 53 | 11/24/2007 | P | EMI Solution | Add PC168,PC192,PC193,PC197,PC198,PC199,PC194,PC195,PC196 | X01-4 |
| P28 | 48 | 11/24/2007 | P | For ESD protect | EMI Suggestion PD6 populate | X01-4 |
| 43 | 25 | 11/23/2007 | EE | EMI Solution | EMI Suggestion C565, C575 populate | X01-4 |
| 44 | 12 | 11/23/2007 | EE | EMI Solution | EMI Suggestion C292 populate | X01-4 |
| 45 | 32 | 11/23/2007 | EE | EMI Solution | EMI Suggestion C573,C584,C595,C603 change form 220pF to 470pF. | X01-4 |
| 46 | 32 | 11/23/2007 | EE | IDT had found out the resonance on portA and suggested change 220pF to 47pF for EMI. | Change C621, C609 from 220pF to 47pF. | X01-4 |
| | | | | Chagne from X01-4 to X01-5 | | |
| 47 | 41 | 11/26/2007 | EE | BT1 connector pin define is different before. | Change BT1 pin 2 to GND, pin 1 to +RTC. | X01-5 |
| 48 | 42 | 11/26/2007 | EE | Sniffer power switch needs to wake up EC, when battery only. So it needs to use WUI pin. | Swap U5.108 SNIFFER_PWR_SW# and U5.35 WIRELESS_ON/OFF# | X01-5 |
| 49 | 36 | 11/26/2007 | EE | EMI Solution | Add C758~C760 27pF for EMI solution. | X01-5 |
| P29 | 51 | 11/26/2007 | P | FAE suggest to reserve RC to slow down voltage switch | add the R/C at PQ53 to slow down PQ53 switcher to against OVP, and remove R/C in front of PQ5 | X01-5 |
| P30 | 51,54 | 11/26/2007 | P | Got more performance for jitter issue | Change PC97 and PC72 from 220u/2.5V/ESR15 to 220u/4V/ESR40 | X01-5 |
| 50 | 32 | 11/26/2007 | EE | Follow FAE suggest. | Change U9 pin 21~25 to NC. | X01-5 |
| 51 | 38 | 11/26/2007 | EE | EMI Solution | Populate ESD3 for EMI suggest. | X01-5 |
| 52 | 5 | 11/26/2007 | EE | Solve system shut down issue from CPU_THERMTRIP#. | Add Q83,Q84,R776,C761 and connect H_THERMTRIP# to 3V, 5V ALW circuit. | X01-5 |

PROJECT : Hepburn

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REV: X01

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| 53 | 12 | 11/28/2007 | EE | Follow ANT 3.2 schematic. | Depop R576, R574. | X01-5 |
| 54 | 33 | 11/28/2007 | EE | Follow Broadcom FAE feedback. BCM5784M CLKREQ# can't work. | Pop R434 ohm and depop R431 4.7k ohm before CLKREQ can work. | X01-5 |
| Chagne from X01-5 to X02-1 | | | | | | |
| 1 | 5 | 12/28/2007 | EE | Follow AMD Griffin sighting Dec 18.pdf to reserve resistor for system hang or shut downboot issue. | Add R777,R778 and pop R121 300 ohm resistor for system hang or shut down issue. | X02-1 |
| 2 | 43 | 1/2/2008 | EE | Change MMB pin 1 power source to 5V_ALW to fix LED flash issue when AC/Bat plug in. | Change JP1.1 from +5V_ALW2 to +5V_ALW. | X02-1 |
| 3 | 43 | 1/4/2008 | EE | Change Num, Cap power rail to +5V_RUN to fix Num, Cap LED flash issue when AC/Bat plug in. | Change Q57-Q60, R380, R379 power rail to +5V_RUN. | X02-1 |
| 4 | 38 | 1/10/2008 | EE | Fulfill Reliability team request. | Connect JUSB1.8 to USB_BACK_PWR. | X02-1 |
| 5 | 43 | 1/11/2008 | EE | Avoid system can enter S3 mode but wake up fail problem. | Change the lid switch IC power source from 3.3V_SUS to 3.3V_ALW. | X02-1 |
| 6 | 32 | 1/11/2008 | EE | Change L61 to 22 ohm. It will help DMIC_CLK_L performance. | Change L61 to from 0 ohm to 22 ohm. | X02-1 |
| 7 | 38 | 1/11/2008 | EE | Remove USB charge function. | Remove R643, Q81, U44, U45, R645-R648. | X02-1 |
| 8 | 38 | 1/14/2008 | EE | Follow AMD AN_SB700AB5. Added re-driver IC to increase signal stress for ESATA. | Remove R649,R650 4.99 ohm. Added U50 3211B,R769-R784 0 ohm, C762-C765 0.1u, C766-C769 0.01u | X02-1 |
| 9 | 28 | 1/14/2008 | EE | Modify HDMI detect circuit. | Added Q85,R785,R786. | X02-1 |
| 10 | 42 | 1/14/2008 | EE | Change EC from ITE8512IX to ITE8512JX. The pin12 need connect to 0.1uF, 1uF. | Change R651 to C770 0.1u, pop C745 1u for EC ITE8512 rev change. | X02-1 |
| 11 | 12,14, | 1/16/2008 | EE | Follow DELL recommend to void the PCICLK5 emission issue even AMD solved it in BIOS code | Move R232 22 ohm and CLK_PCI_PCCARD signal form PCICLK5 to PCICLK1. | X02-1 |
| P1 | 47 | 1/21/2008 | P | Change to X6S material due to not support pulse charge | Change PC105, PC99, PC96 and PC108 to X6S material | X02-1 |
| P2 | 51 | 1/21/2008 | P | Derating team suggest for WCETPA | Change PR10 from 10K ohm to 11.8K ohm. | X02-1 |
| P3 | 52 | 1/21/2008 | P | Derating team suggest for WCETPA | Change PR188 from 294K ohm to 340K ohm. | X02-1 |
| P4 | 54 | 1/21/2008 | P | Derating team suggest for WCETPA | Change PR205 from 5.9K ohm to 7.5K ohm. | X02-1 |
| Chagne from X02-1 to X02-2 | | | | | | |
| 12 | 28 | 1/29/2008 | EE | DDC Capacitance over spec 50pf. We will add level shift circuit to reduce Capacitance. | Change Q1, Q2 to FDV301N. It will reduce the DDC Capacitance. | X02-2 |
| 13 | 15 | 1/29/2008 | EE | Follow AMD feedback.IDE and Flash Interface Not Implemented: Decoupling caps not used. | Depop C258, C296, C298, C274, C295. | X02-2 |
| 14 | 15 | 1/29/2008 | EE | Follow AMD SB700 checklist item 1-34, 1-35. | Change L35 to BLM21PG221SN1D, C330 to 10U. | X02-2 |
| 15 | 9, 13 | 1/29/2008 | EE | Follow AMD RS780M item 8-7, SB700 item 7-1, 7-2 checklist to reserve PD resistor. | Reserve R787 4.7k ohm and R788, R789 10k ohm. | X02-2 |
| 16 | 12 | 1/30/2008 | EE | Follow AMD SB700 checklist item 12-4 to depop RP34. | Depop RP34 8.2k ohm. | X02-2 |
| 17 | 9 | 1/30/2008 | EE | Follow AMD SB700 checklist item 24-17. Change PU resistor to 300 ohm. | Change R344 4.7k to 300 ohm. | X02-2 |
| 18 | 13 | 1/30/2008 | EE | Follow AMD SB700 checklist item 24-24. Depop PU resistor. | Depop R264 10k ohm. | X02-2 |
| 19 | 11 | 1/30/2008 | EE | Follow AMD checklist item 17-2, 17-4, 17-6. Depop termination resistors. | Depop R343, RP22-RP32 47 ohm. | X02-2 |
| 20 | 9 | 1/30/2008 | EE | Follow AMD checklist item 18-31. Depop PD resistors. | Depop R338 100k ohm. | X02-2 |
| 21 | 28 | 1/30/2008 | EE | Follow EMI suggest to pop comon mode choke for HDMI. | Pop L1-L4 EXC24CG240Uand depop R6, R9, R11, R12, R14, R16, R18, R19 ohm. | X02-2 |
| 22 | 28 | 1/30/2008 | EE | HDMI test Voltage level fail. | Change R317, R321, R325, R326, R330-R333 to 715 ohm. | X02-2 |
| 23 | 38 | 1/30/2008 | EE | Follow EMI suggest to pop comon mode choke for USB. | Pop L19, L20 DLP11SN900HL2L. Depop R78, R83, R85, R88 0 ohm. | X02-2 |
| 24 | 29 | 1/30/2008 | EE | OTP change to 85C.THERM_ALERT#_C and SYS_SHDN# leakage will affect OTP thermal limit. | Change OTP resistor to 10k, 6.8k ohm. Add D35 to prevent leakage. | X02-2 |

PROJECT : Hepburn

DOC. NO. : 204

REV: X01

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DATE : Sep. 19, 2007

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|-----------------------------------|-------------------|-----------|----|--|--|-------|
| 25 | 27 | 1/31/2008 | EE | Follow EMI suggest to pop caps for CRT. | Pop C455, C462, C476 22pF and C456, C464, C478, C79, C72 10pF. | X02-2 |
| 26 | 9,25 | 2/1/2008 | EE | Follow CLK Gen vendor feedback to solve EA fail. | Change R146 to 43.2 ohm, R40 to 0 ohm, C50 to 49.9 ohm. | X02-2 |
| P5 | 53 | 2/1/2008 | EE | To solve transient response fail | Change PC17~PC19, PC21, PC22, PC26. | X02-2 |
| 27 | 27 | 2/1/2008 | EE | Follow AMD AN_RS780G1.pdf. DAC Output Imbalance. | Change R48, R370 to 140 ohm. | X02-2 |
| 28 | 42 | 2/12/2008 | EE | Use ITE8512 pin 22 detect SB_AZ_CODEC_RST# to mute speaker pop noise. | Connect SB_AZ_CODEC_RST# and U5 pin 22. | X02-2 |
| 29 | 5 | 2/12/2008 | EE | Follow ANT 4.1d. CPU_TEST23_TSTUPD need PD 300 ohm. | PD R790 300 ohm for CPU_TEST23_TSTUPD. | X02-2 |
| 30 | 43 | 2/12/2008 | EE | Add JP1 pin 10 to +3.3V_ALW, let +3.3V_ALW get lower drop voltage on MMB side. | Add JP1 pin 10 to +3.3V_ALW. | X02-2 |
| P6 | 50,52 | 2/13/2008 | P | Change PU2, PU5 and PU8 VCC power rail to reduce S5 power consumption. | Change PJP2.1 to +3.3V_SUS and add PR226~PR229 0 ohm. | X02-2 |
| 31 | 38 | 2/22/2008 | EE | Pop ESATA re-driver for stress ESATA signals on formal build. | Pop C726~C765, U50, depop R781~R784 and change C654, C655, C768, C769 to 0.01u. | X02-2 |
| 32 | 31 | 2/22/2008 | EE | Dell recommend change caps for IDT AP test on formal build. | Change C712, C713 to 6800pF. | X02-2 |
| Chagne from X02-2 to A00-1 | | | | | | |
| 1 | 42 | 3/14/2008 | EE | Chagne board ID for A00. | Pop R129 and depop R128. | A00-1 |
| P1 | 53 | 3/14/2008 | P | Follow EMI suggest. | Pop PC192, PC198, PC195 0.01u and PC193, PC196, PC199 0.1u. | A00-1 |
| 2 | 31,32 | 3/14/2008 | EE | Need meet WLP4.0 : 1. Add 2.2K-ohm resistors to prevent amplifier clipping. | Add R791~R794 2.2k ohm. | A00-1 |
| | | | | Need meet WLP4.0 : 2. Add 220PF capacitors to allow proper dynamic range measurent. | Add C771, C772 220pF and pop C726, C727 to 220pF. | A00-1 |
| 3 | 7~11,27,30,38,45 | 3/17/2008 | EE | Follow Safety request. Change USB power control IC location same as FM6 location. | Swap U7, U19 and U10, U16 location. U7 and U16 are 2062AD. Swap D33 and D18, R218 and R570 | A00-1 |
| 4 | 38 | 3/18/2008 | EE | TI can't finish some necessary legal submission for new 2062AD. Change to old part 2062DR. | Change U7, U16 to 2062DR (AL002062005). | A00-1 |
| 5 | 15,49,50,51,52,55 | 3/18/2008 | EE | Remove Power Jump for QT build. | Remove PJP1~PJP4, PJP6~PJP8, PJP10~PJP13, PJP15~PJP17 and short PJP9. | A00-1 |
| 6 | 38 | 3/18/2008 | EE | Follow QSMC request to remove USB co-lay 0 ohm. | Remove R78, R83, R85, R88 0 ohm. | A00-1 |
| 7 | 38 | 3/18/2008 | EE | Change the USB Power Jump to short pad fp. | Change PJP5, PJP14 fp to SHORT-10A. | A00-1 |
| 8 | 42 | 3/19/2008 | EE | Follow IT8512JX glitch.doc FA report. Depop 1uF for ITE8512JX pin 12. | Depop C745 1uF. | A00-1 |
| 10 | 38 | 3/20/2008 | EE | Pericom request. Add 300ohm to reduce output swing, change AC caps to 2.2nF and set EQ to GND. | Add R795 300 ohm. Chagne C95,C96,C654,C655,C766~C769 to 2.2nF and PD U50 pin1, pin10 to GND. | A00-1 |
| 11 | 14, 43 | 3/20/2008 | EE | Follow Dell request. Add LED KB BK detect function. | Add R796 100k ohm , PD R797 200k ohm to J4 pin2 and connect to U30 pin G6. | A00-1 |
| 12 | 28 | 3/20/2008 | EE | Change to FDV301N will pass HDMI 7-12 HDMI detect test. | Change Q80 from MM3904 to FDV301N. | A00-1 |
| 13 | 59 | 3/26/2008 | EE | Follow EMI team request, add two EMI SPRING near sniffer switch area and HDMI connector. | Add PV1 near SW1 and PV2 near CN3. | A00-1 |
| 14 | 32 | 3/26/2008 | EE | Follow IDT request, change 220pF to 270pF will over 80db on DTM. | Change C609, C621, C771, C772 from 220pF to 270pF. | A00-1 |
| 15 | 36 | 3/27/2008 | EE | Follow EMI team request, add a 27p capacitor for 8 in 1 card reader. | Pop C760 27pF for EMI. | A00-1 |
| P2 | 48 | 3/27/2008 | EE | Follow EMI team request, add two set of 1000pF, 0.01uF, 0.1uF on J8 +DCIN_JACK , -DCIN_JACK. | Add PC200~PC202 on J8 +DCINI_JACK, PC203~PC205 on J8 -DCIN_JACK. | A00-1 |
| P3 | 49, 51 | 3/27/2008 | EE | Follow EMI team request, pop PR3, PC3 for NB_VCORE and pop PR213, PC188 for +1.8V_SUS | pop PR3, PC3 for NB_VCORE and pop PR213, PC188 for +1.8V_SUS | A00-1 |
| 16 | 5, 42 | 3/27/2008 | EE | Use BID1 to control CPU_PROCHOT#. When system need change state to P1 by HTC. | Add Q86 2N7002W-7-F and remove R420 0 ohm for use BID1 to control CPU_PROCHOT#. | A00-1 |

PROJECT : Hepburn

DOC. NO. : 204

REV: A00

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DATE : Mar. 20 , 2008

SHEET 9 OF 11



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