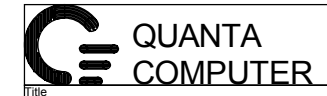
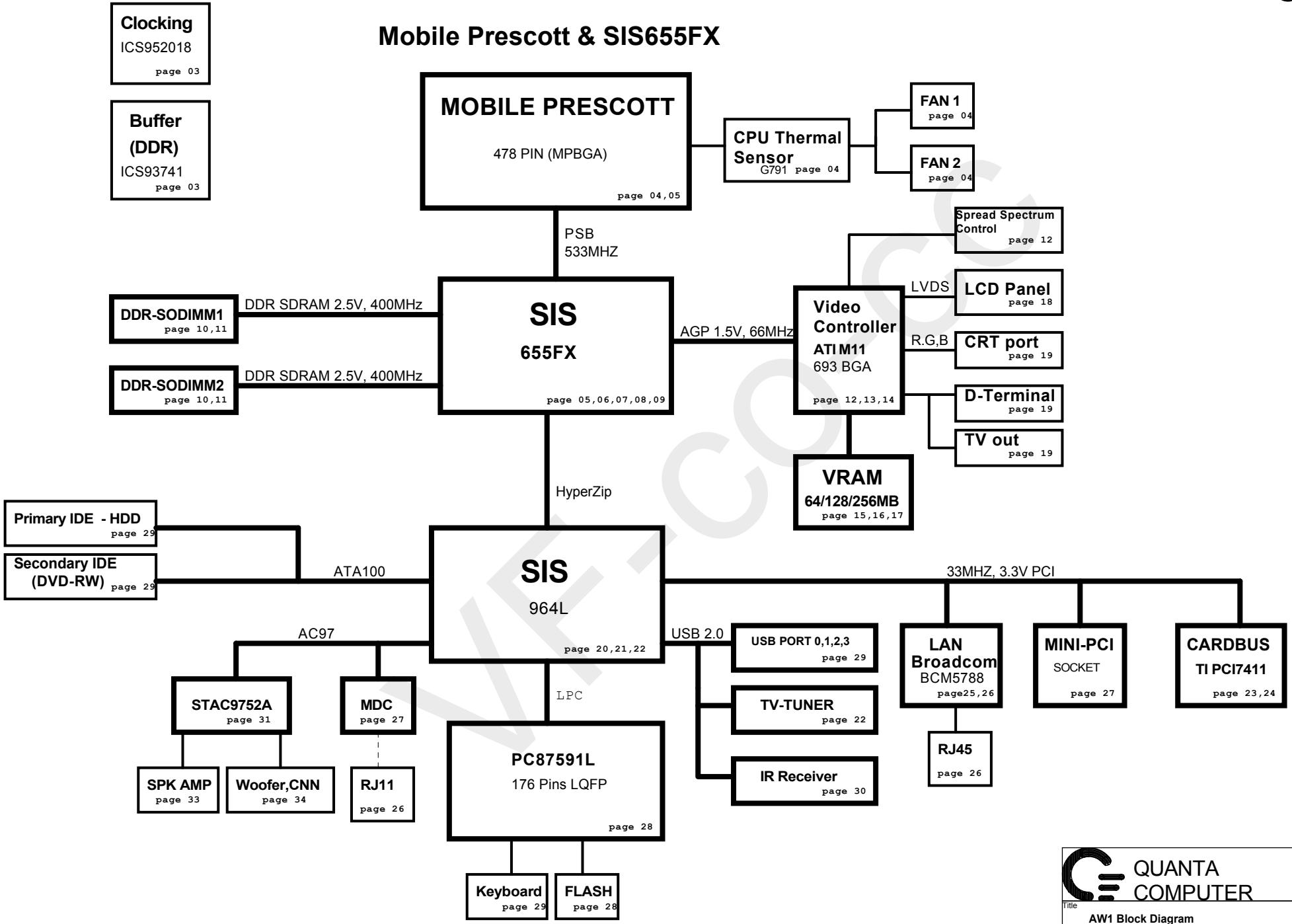


AW1 BLOCK DIAGRAM

01

Mobile Prescott & SIS655FX



- 01--BLOCK DIAGRAM
- 02--Schematic Sheet Number
- 03--CLOCK GENERATOR
- 04--Mobile Prescott CPU-1
- 05--Mobile Prescott CPU-2
- 06--NB(655FX HOST & AGP)
- 07--NB(655FX UMCA&B)
- 08--NB(655FX LINK)
- 09--NB(655FX POWER)
- 10--SYSTEM DIMM1&2
- 11--DDR_TERMINASION
- 12--VGA(M11-P AGP INTERFACE)
- 13--VGA(M11-P MEM A&B)
- 14--VGA(M11-P PWR&GROUN)
- 15--VGA(VIDEO MEM A)
- 16--VGA(VIDEO MEM B)
- 17--VGA(TERMINATION & VGA ROM)
- 18--PANEL I/F,LED
- 19--CRT&S-VIDEO
- 20--964L-1 PCI/IDE/Link.SCH
- 21--964L-2 LPC/MII/CPU/GPIO.SCH
- 22--964L-3 USB/SATA.SCH
- 23--PCI7411 PCMCIA CONTROLLER
- 24--PCMCIA CNN & 3 IN 1
- 25--LAN (BCM5788-10/100/GIGA)
- 26--LAN (TR & CONNECTOR)
- 27--MINI-PCI/MDC
- 28--PCU-87591 & FLASH
- 29--K/B,USB,HDD,CDROM
- 30--RTC,BEEP,T/P,BUTTON,RECEIVE
- 31--AUDIO(STAC9752A,MIC CON)
- 32--AUDIO(AMP & POWER & HP CON)
- 33--AUDIO (Power AMP, SP CON)
- 34--AUDIO (Sub Woofer AMP)
- 35--1.5V/1.8V/2.5V & DDRVTT
- 36--VGA POWER
- 37--DC/DC 3V/5V
- 38--BATTERY CHARGER
- 39--BATTERY CONNECTOR
- 40--CPU POWER-1
- 41--CPU POWER-2

2. PCI & IRQ & DMA Description :

| IDSEL | CHIP |
|-------|-------------------------|
| AD17 | Mini PCI Wireless LAN |
| AD23 | R5C551(1394&CardBus) |
| AD21 | Lan/ Broadcom 4401/5788 |

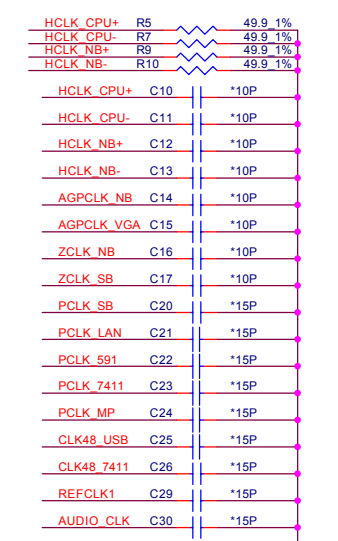
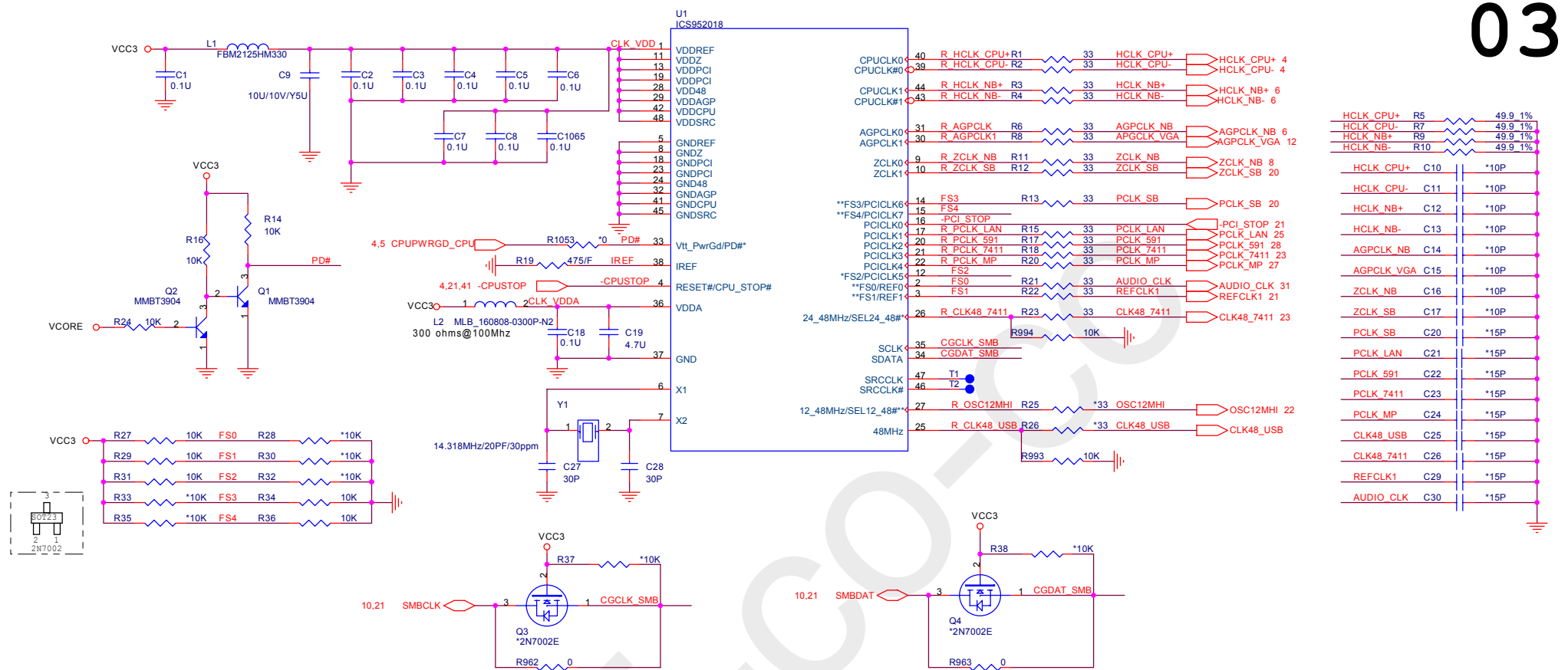
| PCIINT | CHIP |
|--------|---------------------------|
| IRQA | MiniPCI / CardBus |
| IRQB | MiniPCI // IEEE1394/ AC97 |
| IRQC | Intel 82540EM |
| IRQD | ICH4-M Embedded USB2.0 |

BUSMASTER

| REQ | CHIP |
|-------------|----------------------|
| REQ0 / GNT0 | Mini PCI Lan |
| REQ1 / GNT1 | R5C551(1394&CardBus) |
| REQ2 / GNT2 | Mini PCI Modem |
| REQ3 / GNT3 | |
| REQ4 / GNT4 | Intel 82540EM |

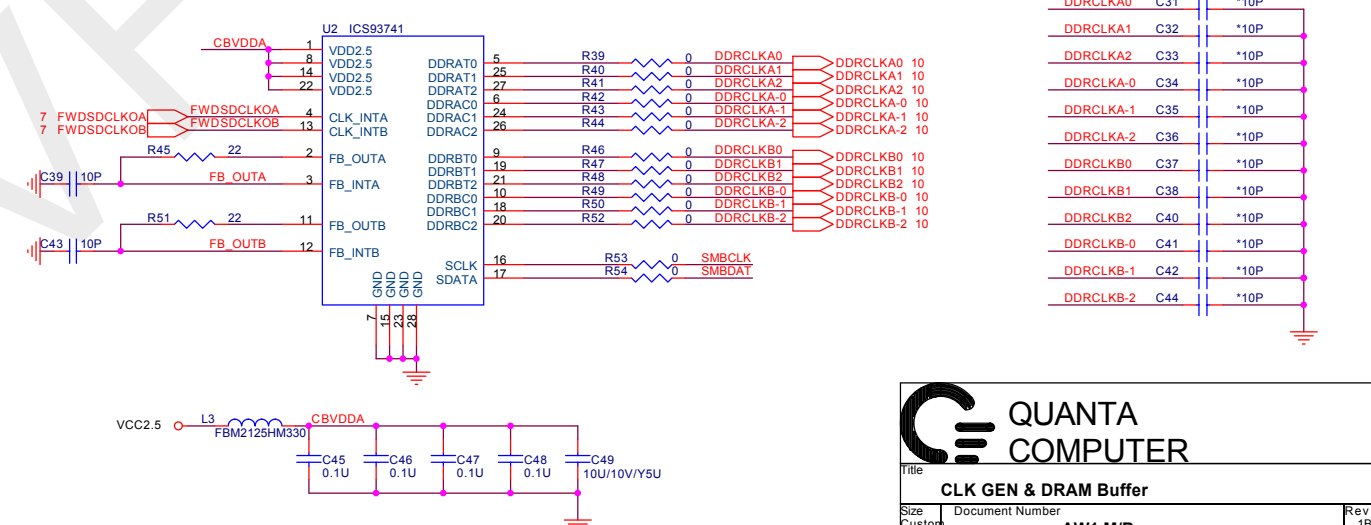
| IRQ Channel | Description |
|-------------|--------------------------------------|
| IRQ0 | System timer |
| IRQ1 | Keyboard |
| IRQ2 | (Casacde) |
| IRQ3 | LAN / MODEM |
| IRQ4 | Serial Port |
| IRQ5 | AUDIO / VGA / USB |
| IRQ6 | FLOPPY DISK |
| IRQ7 | LPT |
| IRQ8 | RTC |
| IRQ9 | ACPI |
| IRQ10 | FIR (Disable by default) (MODEM/LAN) |
| IRQ11 | Cardbus |
| IRQ12 | PS/2 mouse |
| IRQ13 | FPU |
| IRQ14 | HDD |
| IRQ15 | CDROM |

| DMA Channel | Device |
|-------------|--|
| DMA0 | FIR (disable by default) (MODEM / LAN) |
| DMA1 | ECP |
| DMA2 | FLOPPY DISK |
| DMA3 | AUDIO |
| DMA4 | (Cascade) |
| DMA5 | Unused |
| DMA6 | Unused |
| DMA7 | Unused |



| FS4 | FS3 | FS2 | FS1 | FS0 | CPU (MHz) | ZCLK (MHz) | AGP (MHz) | PCI (MHz) |
|-----|-----|-----|-----|-----|-----------|------------|-----------|-----------|
| 0 | 0 | 0 | 0 | 0 | 100.00 | 133.33 | 66.67 | 33.33 |
| 0 | 0 | 0 | 0 | 1 | 100.99 | 134.65 | 67.33 | 33.66 |
| 0 | 0 | 0 | 1 | 0 | 103.00 | 137.33 | 68.67 | 34.33 |
| 0 | 0 | 0 | 1 | 1 | 100.00 | 133.33 | 66.67 | 33.33 |
| 0 | 0 | 1 | 0 | 0 | 133.33 | 133.33 | 66.67 | 33.33 |
| 0 | 0 | 1 | 0 | 1 | 134.65 | 134.65 | 67.32 | 33.66 |
| 0 | 0 | 1 | 1 | 0 | 137.33 | 137.33 | 68.66 | 34.33 |
| 0 | 0 | 1 | 1 | 1 | 133.33 | 133.33 | 66.67 | 33.33 |
| 0 | 1 | 0 | 0 | 0 | 200.00 | 133.33 | 66.67 | 33.33 |
| 0 | 1 | 0 | 0 | 1 | 201.98 | 134.65 | 67.33 | 33.66 |
| 0 | 1 | 0 | 1 | 0 | 206.00 | 137.33 | 68.67 | 34.33 |
| 0 | 1 | 0 | 1 | 1 | 200.00 | 133.33 | 66.67 | 33.33 |
| 0 | 1 | 1 | 0 | 0 | 166.66 | 125.00 | 66.66 | 33.33 |
| 0 | 1 | 1 | 0 | 1 | 168.31 | 126.23 | 67.32 | 33.66 |
| 0 | 1 | 1 | 1 | 0 | 171.66 | 128.74 | 68.66 | 34.33 |
| 0 | 1 | 1 | 1 | 1 | 166.66 | 125.00 | 66.66 | 33.33 |
| 1 | 0 | 0 | 0 | 0 | 105.00 | 140.00 | 70.00 | 35.00 |
| 1 | 0 | 0 | 0 | 1 | 107.00 | 142.67 | 71.33 | 35.67 |
| 1 | 0 | 0 | 1 | 0 | 109.00 | 145.33 | 72.67 | 36.33 |
| 1 | 0 | 0 | 1 | 1 | 110.00 | 146.67 | 73.33 | 36.67 |
| 1 | 0 | 1 | 0 | 0 | 140.00 | 140.00 | 70.00 | 35.00 |
| 1 | 0 | 1 | 0 | 1 | 142.66 | 142.66 | 71.33 | 35.67 |
| 1 | 0 | 1 | 1 | 0 | 145.33 | 145.33 | 72.66 | 36.33 |
| 1 | 0 | 1 | 1 | 1 | 146.66 | 146.66 | 73.33 | 36.67 |
| 1 | 1 | 0 | 0 | 0 | 210.00 | 140.00 | 70.00 | 35.00 |
| 1 | 1 | 0 | 0 | 1 | 214.00 | 142.67 | 71.33 | 35.67 |
| 1 | 1 | 0 | 1 | 0 | 218.00 | 145.33 | 72.67 | 36.33 |
| 1 | 1 | 0 | 1 | 1 | 220.00 | 146.67 | 73.33 | 36.67 |
| 1 | 1 | 1 | 0 | 0 | 266.66 | 133.33 | 66.67 | 33.33 |
| 1 | 1 | 1 | 0 | 1 | 269.33 | 134.67 | 67.33 | 33.67 |
| 1 | 1 | 1 | 1 | 0 | 274.66 | 137.33 | 68.67 | 34.33 |
| 1 | 1 | 1 | 1 | 1 | 266.66 | 133.33 | 66.67 | 33.33 |

Clock Buffer (DDR)



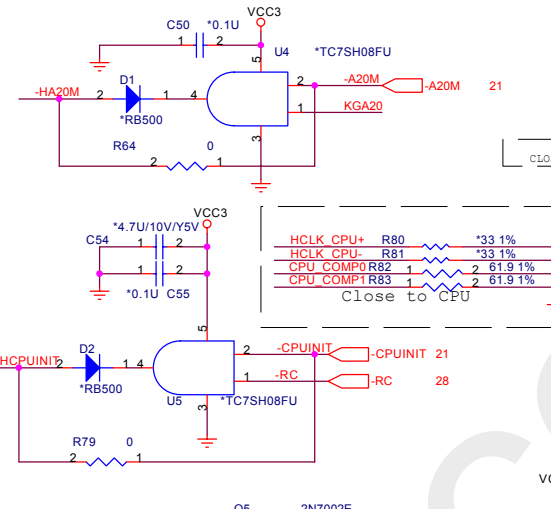
QUANTA
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Title: **CLK GEN & DRAM Buffer**

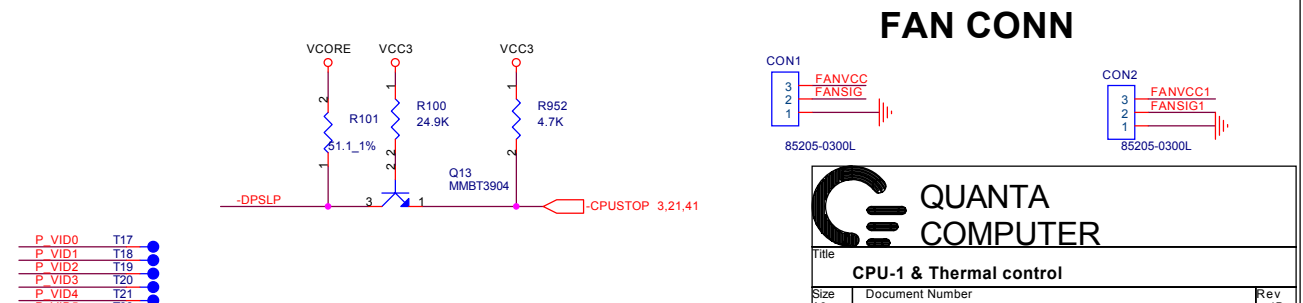
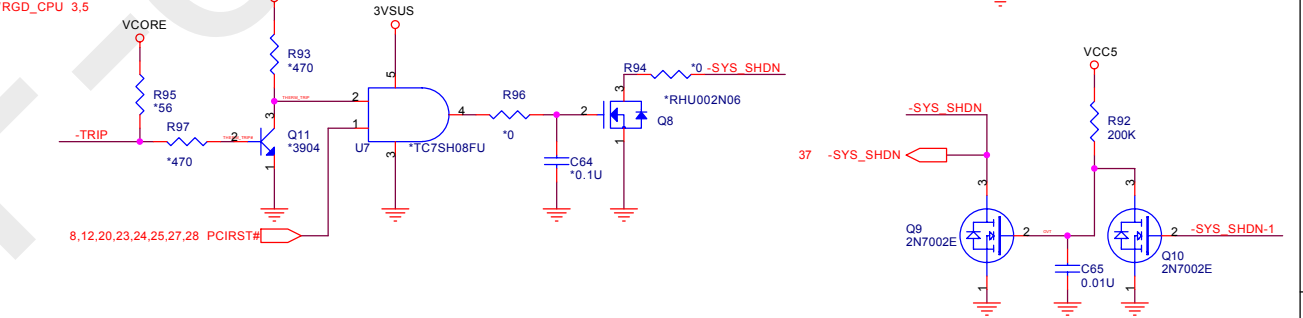
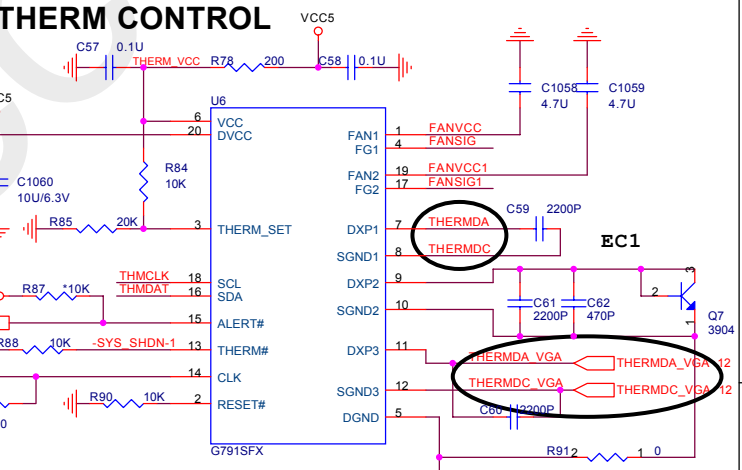
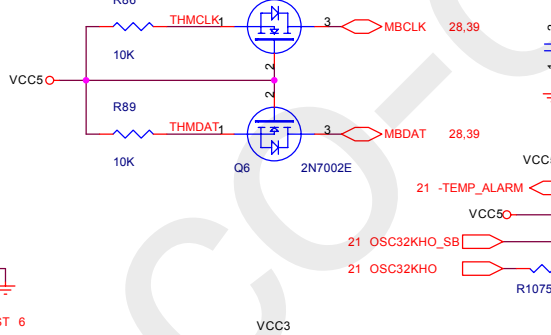
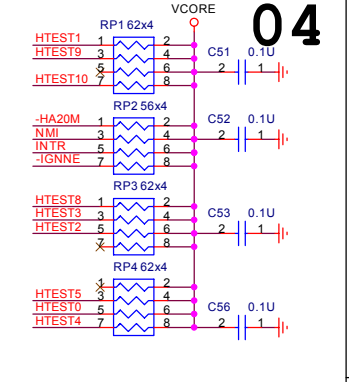
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Date: Tuesday, July 06, 2004 Sheet 3 of 41

| | | | |
|-------------|------|-------------|------|
| HA3 | K2 | A#3 | A#3 |
| HA4 | K4 | A#4 | A#4 |
| HA5 | L6 | A#5 | A#5 |
| HA6 | L3 | A#6 | A#6 |
| HA7 | K3 | A#6 | A#6 |
| HA8 | M6 | A#7 | A#7 |
| HA9 | L2 | A#8 | A#8 |
| HA10 | M3 | A#9 | A#9 |
| HA11 | M4 | A#11 | A#11 |
| HA12 | N1 | A#12 | A#12 |
| HA13 | M1 | A#13 | A#13 |
| HA14 | M2 | A#14 | A#14 |
| HA15 | N4 | A#15 | A#15 |
| HA16 | N5 | A#16 | A#16 |
| HA17 | T1 | A#17 | A#17 |
| HA18 | R2 | A#18 | A#18 |
| HA19 | P4 | A#19 | A#19 |
| HA20 | P3 | A#19 | A#19 |
| HA21 | R3 | A#20 | A#20 |
| HA22 | I2 | A#21 | A#21 |
| HA23 | P1 | A#22 | A#22 |
| HA24 | U6 | A#23 | A#23 |
| HA25 | V3 | A#25 | A#25 |
| HA26 | U2 | A#26 | A#26 |
| HA27 | U3 | A#26 | A#26 |
| HA28 | W6 | A#27 | A#27 |
| HA29 | W1 | A#28 | A#28 |
| HA30 | T5 | A#30 | A#30 |
| HA31 | U4 | A#31 | A#31 |
| T3 | V3 | A#32 | A#32 |
| T4 | W2 | A#33 | A#33 |
| T5 | Y2 | A#34 | A#34 |
| T6 | AB1 | A#35 | A#35 |
| HD0 | B21 | D#0 | D#0 |
| HD1 | B22 | D#1 | D#1 |
| HD2 | B23 | D#1 | D#1 |
| HD3 | A25 | D#2 | D#2 |
| HD4 | C21 | D#3 | D#3 |
| HD5 | D22 | D#4 | D#4 |
| HD6 | B24 | D#6 | D#6 |
| HD7 | C23 | D#7 | D#7 |
| HD8 | B25 | D#7 | D#7 |
| HD9 | B25 | D#8 | D#8 |
| HD10 | G22 | D#9 | D#9 |
| HD11 | H21 | D#10 | D#10 |
| HD12 | C26 | D#12 | D#12 |
| HD13 | D23 | D#13 | D#13 |
| HD14 | D24 | D#14 | D#14 |
| HD15 | J21 | D#14 | D#14 |
| HD16 | H22 | D#15 | D#15 |
| HD17 | E24 | D#16 | D#16 |
| HD18 | G23 | D#18 | D#18 |
| HD19 | F23 | D#19 | D#19 |
| HD20 | F24 | D#20 | D#20 |
| HD21 | F25 | D#21 | D#21 |
| HD22 | F25 | D#21 | D#21 |
| HD23 | D26 | D#22 | D#22 |
| HD24 | L21 | D#23 | D#23 |
| HD25 | G26 | D#25 | D#25 |
| HD26 | H24 | D#26 | D#26 |
| HD27 | M21 | D#27 | D#27 |
| HD28 | J24 | D#28 | D#28 |
| HD29 | J24 | D#28 | D#28 |
| HD30 | K23 | D#29 | D#29 |
| HD31 | H25 | D#31 | D#31 |
| HD32 | M23 | D#32 | D#32 |
| HD33 | N23 | D#33 | D#33 |
| HD34 | P21 | D#34 | D#34 |
| HD35 | M24 | D#35 | D#35 |
| HD36 | N23 | D#35 | D#35 |
| HD37 | M26 | D#36 | D#36 |
| HD38 | N26 | D#38 | D#38 |
| HD39 | N25 | D#39 | D#39 |
| HD40 | R24 | D#40 | D#40 |
| HD41 | P24 | D#40 | D#40 |
| HD42 | R25 | D#41 | D#41 |
| HD43 | R24 | D#42 | D#42 |
| HD44 | T26 | D#44 | D#44 |
| HD45 | T25 | D#45 | D#45 |
| HD46 | T22 | D#46 | D#46 |
| HD47 | T23 | D#47 | D#47 |
| HD48 | U26 | D#48 | D#48 |
| HD49 | U24 | D#48 | D#48 |
| HD50 | U23 | D#49 | D#49 |
| HD51 | V25 | D#51 | D#51 |
| HD52 | U21 | D#52 | D#52 |
| HD53 | V22 | D#53 | D#53 |
| HD54 | V24 | D#54 | D#54 |
| HD55 | W26 | D#54 | D#54 |
| HD56 | Y26 | D#55 | D#55 |
| HD57 | W25 | D#57 | D#57 |
| HD58 | Y23 | D#58 | D#58 |
| HD59 | Y24 | D#59 | D#59 |
| HD60 | Y21 | D#60 | D#60 |
| HD61 | AA25 | D#61 | D#61 |
| HD62 | AA22 | D#62 | D#62 |
| HD63 | AA24 | D#63 | D#63 |
| -HDBI0 | E21 | DBI0 | DBI0 |
| -HDBI1 | G26 | DBI1 | DBI1 |
| -HDBI2 | P26 | DBI2 | DBI2 |
| -HDBI3 | V21 | DBI3 | DBI3 |
| HD0[.63] | | HD0[.63] | |
| -HDBI[0..3] | | -HDBI[0..3] | |



| | | | | | |
|--------------|------|---|---|------|----|
| -SMI | R55 | 1 | 2 | 56 | 1% |
| -STPCLK | R56 | 1 | 2 | 56 | 1% |
| -SLP | R57 | 1 | 2 | 56 | 1% |
| CPUPWRGD_CPU | R58 | 1 | 2 | 51.1 | 1% |
| -TRIP | R59 | 1 | 2 | 1K | |
| -HBREQ0 | R61 | 1 | 2 | 62 | |
| -CPURST | R62 | 1 | 2 | 51.1 | 1% |
| ITP_CLK+ | R63 | 1 | 2 | 1K | |
| ITP_CLK- | R65 | 1 | 2 | 1K | |
| TDI | R66 | 1 | 2 | 150 | |
| DBRESE | R67 | 1 | 2 | 150 | |
| -PROCHOT | R68 | 1 | 2 | 62 | |
| -FERR | R69 | 1 | 2 | 75 | |
| TDO | R70 | 1 | 2 | 75 | 1% |
| TMS | R71 | 1 | 2 | 51.1 | 1% |
| -HCPUINIT | R72 | 1 | 2 | 56 | 1% |
| ITPCLK1 | R73 | 1 | 2 | 62 | |
| ITPCLK0 | R75 | 1 | 2 | 62 | |
| -GHI | R98 | 1 | 2 | 56 | 1% |
| KGA20 | R115 | 1 | 2 | *1K | |
| TCK | R76 | 1 | 2 | 27 | |
| -TRST | R77 | 1 | 2 | 680 | |



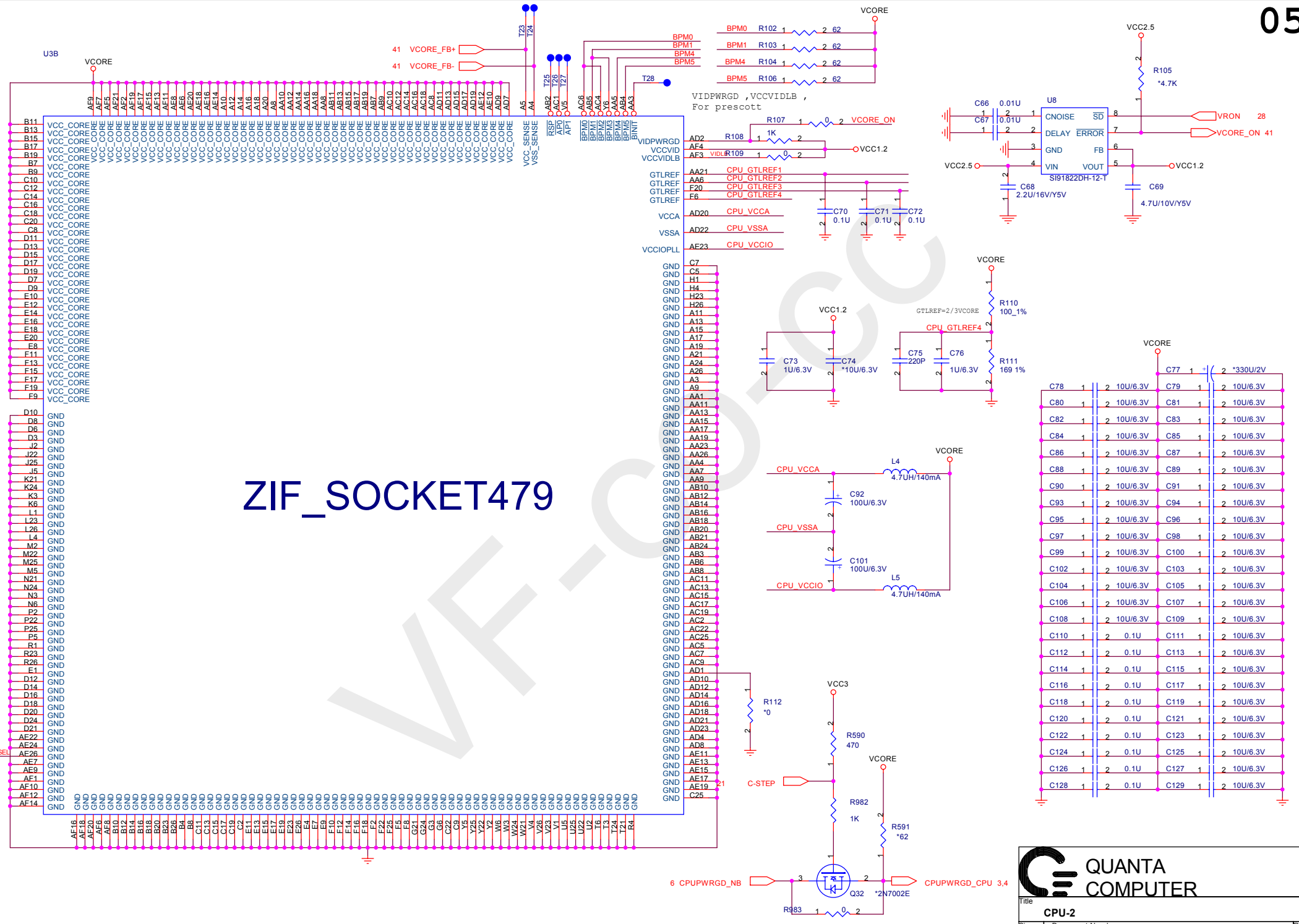
QUANTA COMPUTER

File: **CPU-1 & Thermal control**

Size A3 Document Number **AW1 M/B** Rev 1B

Date: Tuesday, July 06, 2004 Sheet 4 of 41

ZIF_SOCKET479



QUANTA COMPUTER

Title: **CPU-2**

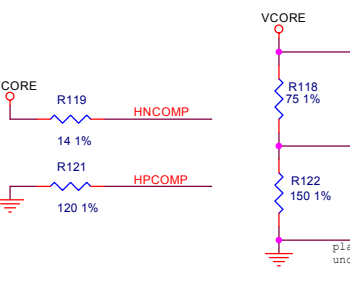
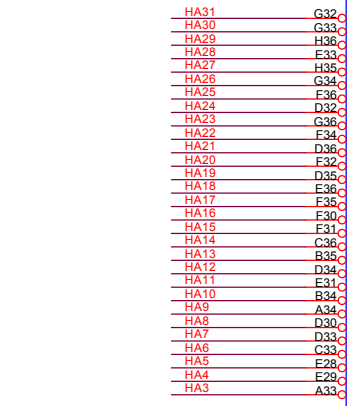
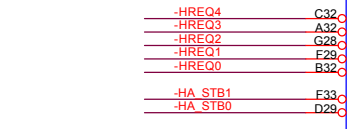
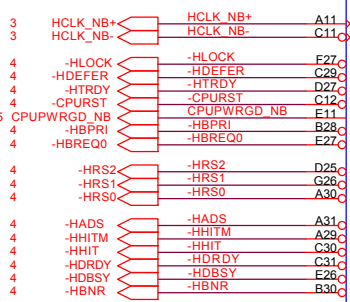
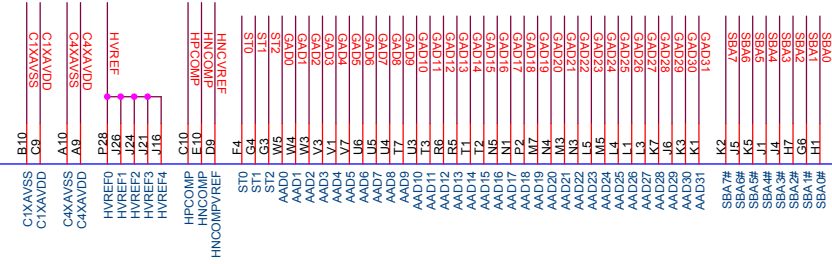
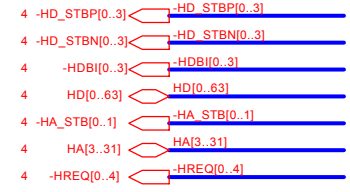
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Date: Tuesday, July 06, 2004

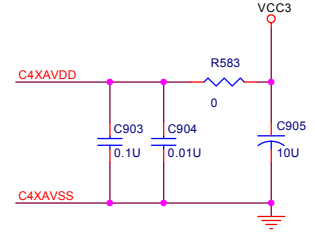
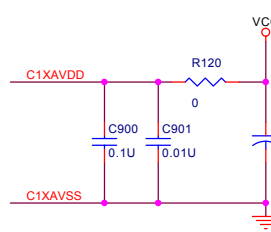
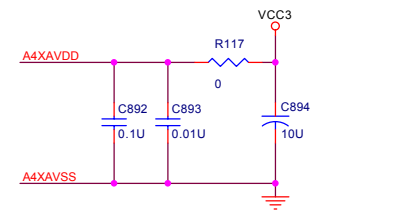
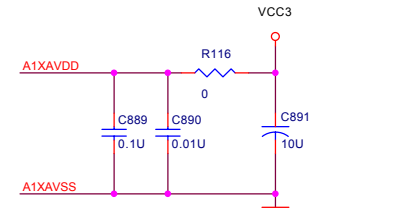
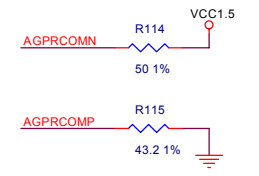
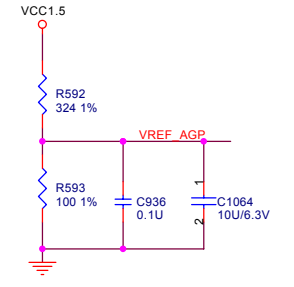
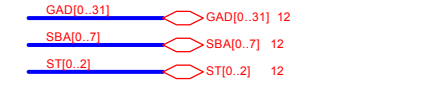
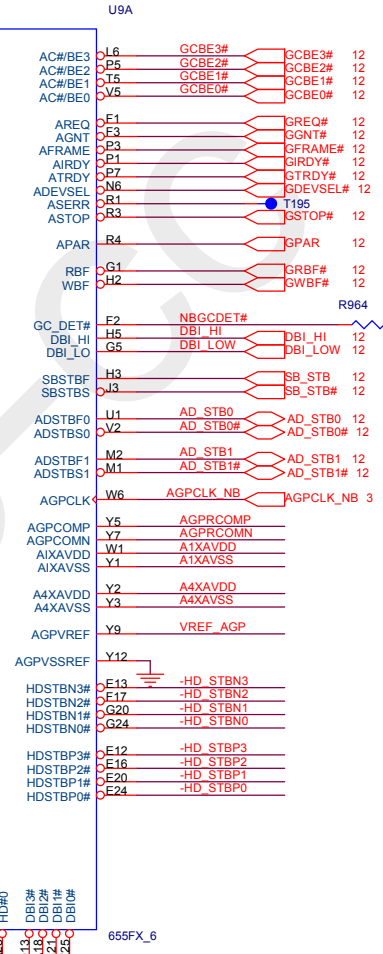
Sheet: 5 of 41

Rev: 1B



AGP

HOST



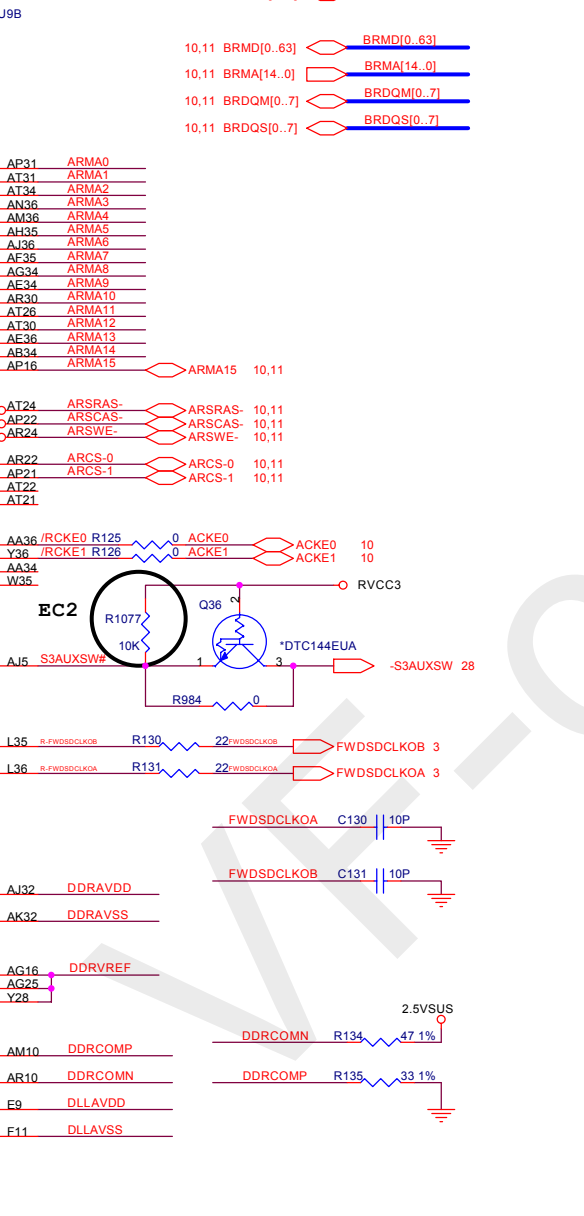
QUANTA COMPUTER

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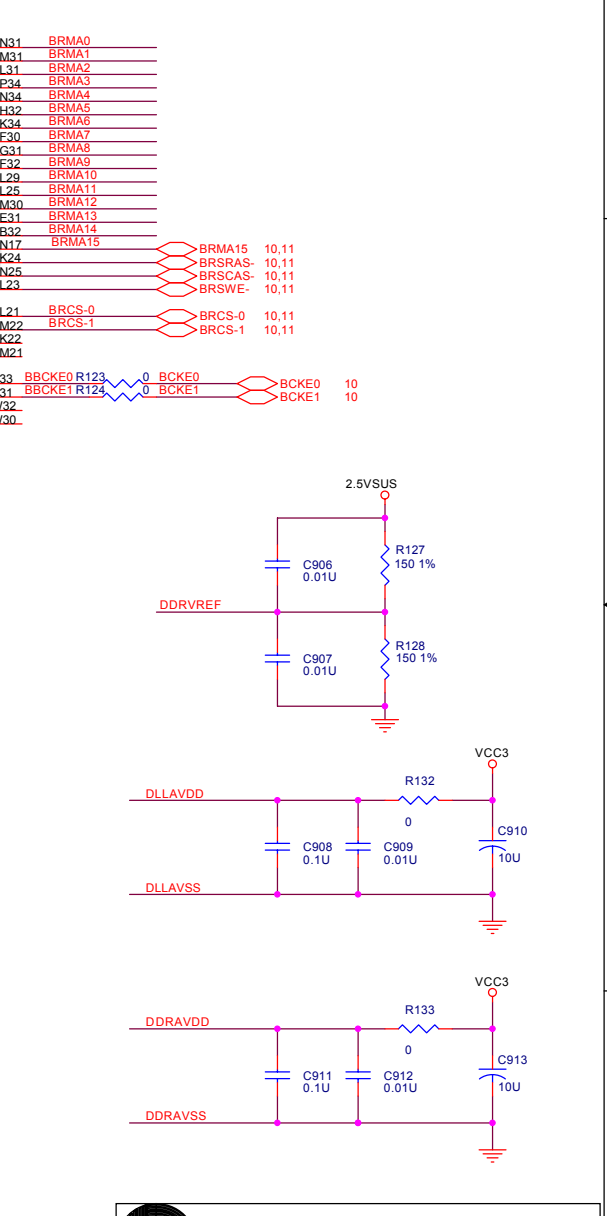
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| | | |
|--------|------|-------|
| ARM0 | M36 | MD0A |
| ARM1 | N36 | MD1A |
| ARM2 | P34 | MD2A |
| ARM3 | R35 | MD3A |
| ARM4 | M34 | MD4A |
| ARM5 | N34 | MD5A |
| ARM6 | R34 | MD6A |
| ARM7 | P36 | MD7A |
| ARDQM0 | P36 | DQM0A |
| ARDQS0 | N35 | DQS0A |
| ARM8 | T36 | MD8A |
| ARM9 | T34 | MD9A |
| ARM10 | W36 | MD10A |
| ARM11 | Y34 | MD11A |
| ARM12 | U34 | MD12A |
| ARM13 | U35 | MD13A |
| ARM14 | V34 | MD14A |
| ARM15 | W34 | MD15A |
| ARDQM1 | V36 | DQM1A |
| ARDQS1 | U36 | DQS1A |
| ARM16 | AB36 | MD16A |
| ARM17 | AC34 | MD17A |
| ARM18 | AF36 | MD18A |
| ARM19 | AH34 | MD19A |
| ARM20 | AK35 | MD20A |
| ARM21 | AL35 | MD21A |
| ARM22 | AC36 | MD22A |
| ARM23 | AH36 | MD23A |
| ARDQM2 | AF34 | DQM2A |
| ARDQS2 | AC36 | DQS2A |
| ARM24 | AJ34 | MD24A |
| ARM25 | AL35 | MD25A |
| ARM26 | AP36 | MD26A |
| ARM27 | AR35 | MD27A |
| ARM28 | AK36 | MD28A |
| ARM29 | AL36 | MD29A |
| ARM30 | AP35 | MD30A |
| ARM31 | AR32 | MD31A |
| ARDQM3 | AM34 | DQM3A |
| ARDQS3 | AK35 | DQS3A |
| ARM32 | AT29 | MD32A |
| ARM33 | AP28 | MD33A |
| ARM34 | AT27 | MD34A |
| ARM35 | AT25 | MD35A |
| ARM36 | AP29 | MD36A |
| ARM37 | AT28 | MD37A |
| ARM38 | AP26 | MD38A |
| ARM39 | AR26 | MD39A |
| ARDQM4 | AT27 | DQM4A |
| ARDQS4 | AR28 | DQS4A |
| ARM40 | AP25 | MD40A |
| ARM41 | AP23 | MD41A |
| ARM42 | AR20 | MD42A |
| ARM43 | AT19 | MD43A |
| ARM44 | AT24 | MD44A |
| ARM45 | AT23 | MD45A |
| ARM46 | AP19 | MD46A |
| ARM47 | AP18 | MD47A |
| ARDQM5 | AT20 | DQM5A |
| ARDQS5 | AP20 | DQS5A |
| ARM48 | AT18 | MD48A |
| ARM49 | AR18 | MD49A |
| ARM50 | AP15 | MD50A |
| ARM51 | AT14 | MD51A |
| ARM52 | AT17 | MD52A |
| ARM53 | AP17 | MD53A |
| ARM54 | AT15 | MD54A |
| ARM55 | AP14 | MD55A |
| ARDQM6 | AT16 | DQM6A |
| ARDQS6 | AR16 | DQS6A |
| ARM56 | AT13 | MD56A |
| ARM57 | AP12 | MD57A |
| ARM58 | AP11 | MD58A |
| ARM59 | AP10 | MD59A |
| ARM60 | AR14 | MD60A |
| ARM61 | AP13 | MD61A |
| ARM62 | AT11 | MD62A |
| ARM63 | AT10 | MD63A |
| ARDQM7 | AT12 | DQM7A |
| ARDQS7 | AR12 | DQS7A |



| | | |
|--------|------|-------|
| BRMD0 | M31 | MD0B |
| BRMD1 | M33 | MD1B |
| BRMD2 | P32 | MD2B |
| BRMD3 | R30 | MD3B |
| BRMD4 | M32 | MD4B |
| BRMD5 | L32 | MD5B |
| BRMD6 | N32 | MD6B |
| BRMD7 | P33 | MD7B |
| BRDQM0 | N30 | DQM0B |
| BRDQS0 | P31 | DQS0B |
| BRMD8 | T31 | MD8B |
| BRMD9 | T32 | MD9B |
| BRMD10 | Y32 | MD10B |
| BRMD11 | Y32 | MD11B |
| BRMD12 | R32 | MD12B |
| BRMD13 | U30 | MD13B |
| BRMD14 | V32 | MD14B |
| BRMD15 | U32 | MD15B |
| BRDQM1 | V31 | DQM1B |
| BRDQS1 | T33 | DQS1B |
| BRMD16 | AB31 | MD16B |
| BRMD17 | AA32 | MD17B |
| BRMD18 | AE33 | MD18B |
| BRMD19 | AE32 | MD19B |
| BRMD20 | AG30 | MD20B |
| BRMD21 | AD32 | MD21B |
| BRMD22 | AG32 | MD22B |
| BRMD23 | AG33 | MD23B |
| BRDQM2 | AD32 | DQM2B |
| BRDQS2 | AD33 | DQS2B |
| BRMD24 | AJ33 | MD24B |
| BRMD25 | AL34 | MD25B |
| BRMD26 | AP33 | MD26B |
| BRMD27 | AT33 | MD27B |
| BRMD28 | AK33 | MD28B |
| BRMD29 | AL33 | MD29B |
| BRMD30 | AR33 | MD30B |
| BRMD31 | AM32 | MD31B |
| BRDQM3 | AN33 | DQM3B |
| BRDQS3 | AM33 | DQS3B |
| BRMD32 | AM29 | MD32B |
| BRMD33 | AP20 | MD33B |
| BRMD34 | AM27 | MD34B |
| BRMD35 | AM26 | MD35B |
| BRMD36 | AN29 | MD36B |
| BRMD37 | AK28 | MD37B |
| BRMD38 | AN27 | MD38B |
| BRMD39 | AK26 | MD39B |
| BRDQM4 | AM28 | DQM4B |
| BRDQS4 | AL27 | DQS4B |
| BRMD40 | AM25 | MD40B |
| BRMD41 | AM24 | MD41B |
| BRMD42 | AL19 | MD42B |
| BRMD43 | AM19 | MD43B |
| BRMD44 | AN23 | MD44B |
| BRMD45 | AM23 | MD45B |
| BRMD46 | AM20 | MD46B |
| BRMD47 | AN19 | MD47B |
| BRDQM5 | AK20 | DQM5B |
| BRDQS5 | AN21 | DQS5B |
| BRMD48 | AK18 | MD48B |
| BRMD49 | AL17 | MD49B |
| BRMD50 | AM16 | MD50B |
| BRMD51 | AK14 | MD51B |
| BRMD52 | AM17 | MD52B |
| BRMD53 | AM18 | MD53B |
| BRMD54 | AM15 | MD54B |
| BRMD55 | AN15 | MD55B |
| BRDQM6 | AK16 | DQM6B |
| BRDQS6 | AL15 | DQS6B |
| BRMD56 | AM13 | MD56B |
| BRMD57 | AN13 | MD57B |
| BRMD58 | AM12 | MD58B |
| BRMD59 | AN11 | MD59B |
| BRMD60 | AL13 | MD60B |
| BRMD61 | AM14 | MD61B |
| BRMD62 | AM11 | MD62B |
| BRMD63 | AK10 | MD63B |
| BRDQM7 | AK12 | DQM7B |
| BRDQS7 | AL11 | DQS7B |



QUANTA COMPUTER

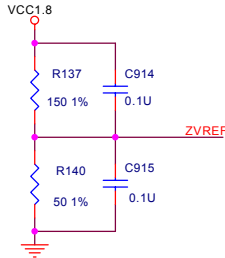
Title: **NB(655FX UMC A&B)**

Size Custom: **AW1 M/B**

Date: **Tuesday, July 06, 2004** Sheet **7** of **41**

Rev **1B**

20 ZAD[0..16] ZAD[0..16]

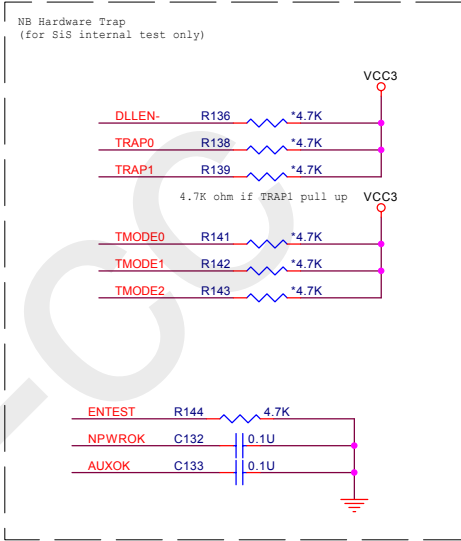
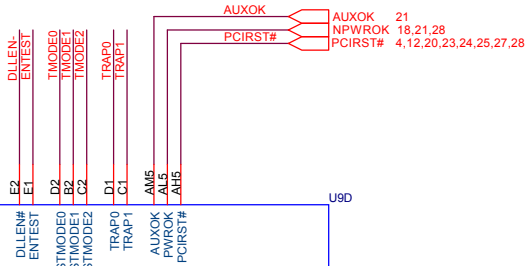
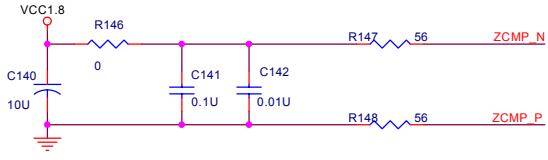
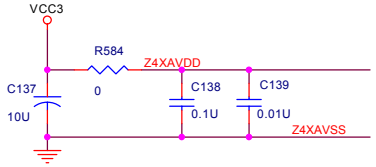
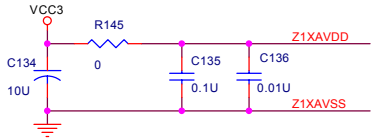


3 ZCLK_NB ZCLK_NB AH6
 20 ZUREQ ZUREQ AP4
 20 ZDREQ ZDREQ AK4
 20 ZSTB0 ZSTB0 AP3
 20 ZSTB-0 ZSTB-0 AR2
 20 ZSTB1 ZSTB1 AK1
 20 ZSTB-1 ZSTB-1 AM1

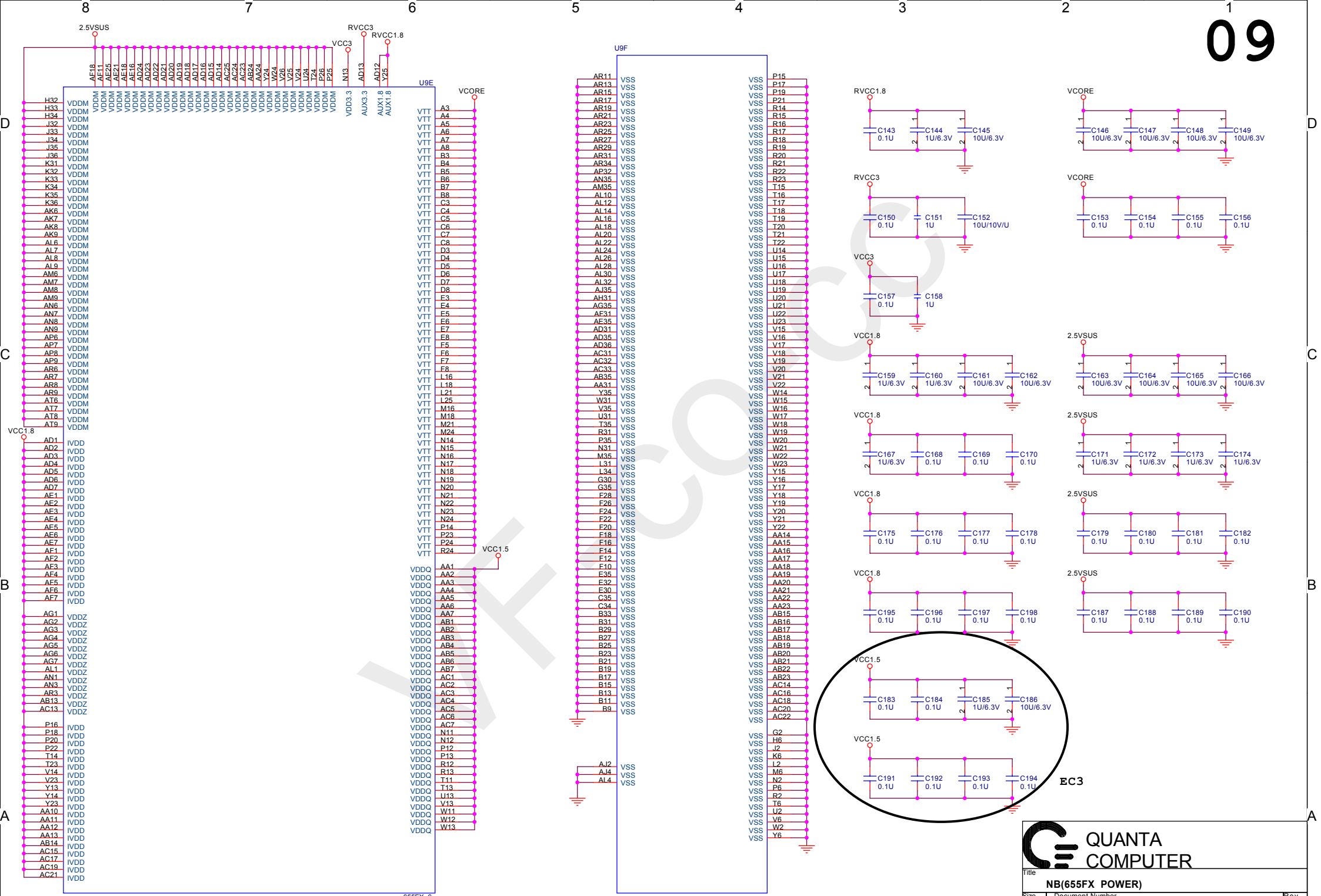
ZAD0 AM4 ZAD0
 ZAD1 AP2 ZAD1
 ZAD2 AM3 ZAD2
 ZAD3 AL3 ZAD3
 ZAD4 AF1 ZAD4
 ZAD5 AJ3 ZAD5
 ZAD6 AM2 ZAD6
 ZAD7 AK3 ZAD7
 ZAD8 AJ1 ZAD8
 ZAD9 AN2 ZAD9
 ZAD10 AH1 ZAD10
 ZAD11 AH2 ZAD11
 ZAD12 AL2 ZAD12
 ZAD13 AH3 ZAD13
 ZAD14 AK2 ZAD14
 ZAD15 AH4 ZAD15
 ZAD16 AT3 ZAD16


HyperZip

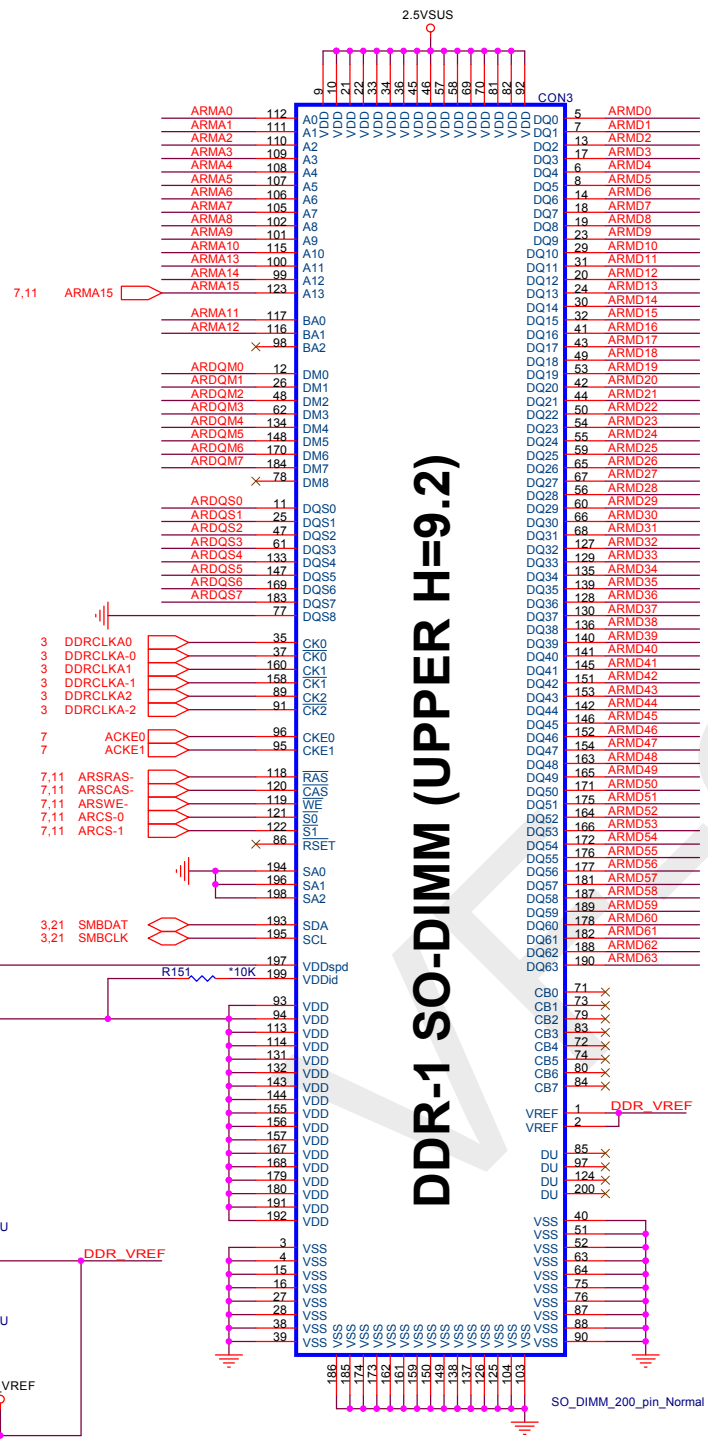
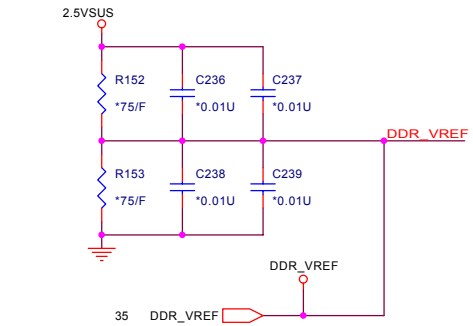
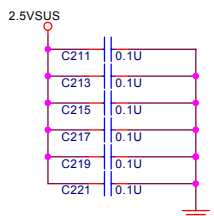
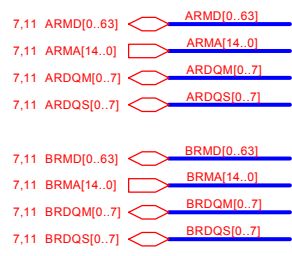
ZVREF AK5 ZVREF
 ZCMP_N AT4 ZCMP_N
 ZCMP_P AR4 ZCMP_P
 Z1XAVDD AP5 Z1XAVDD
 Z1XAVSS AN5 Z1XAVSS
 Z4XAVDD AT5 Z4XAVDD
 Z4XAVSS AR5 Z4XAVSS



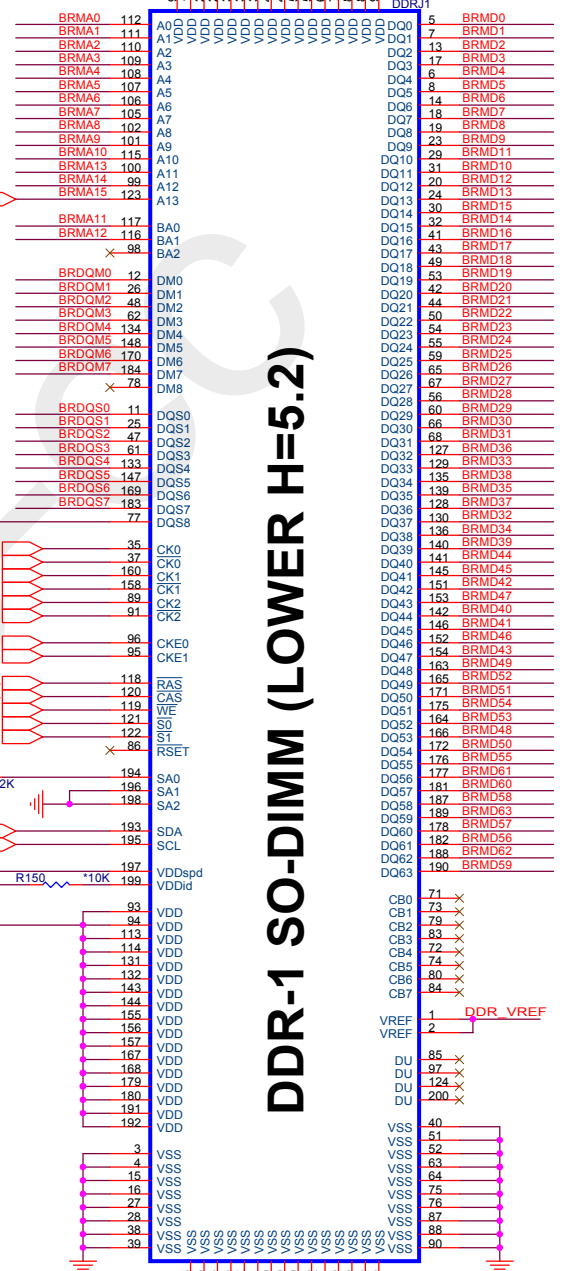
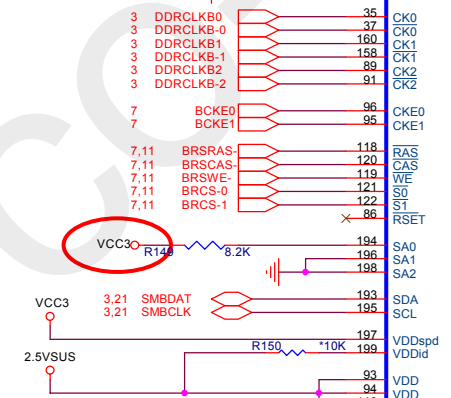
ENTEST pull down: Test Mode disable
 DLEN- pull up: CPUCLK/SDCLK/AGCLK/ZCLK PLL disable
 TRAP0 pull up: 655 debug mode enable
 TRAP1 pull up: 655 MultiTOL type V1, default type V2



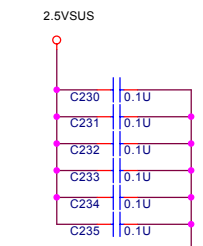
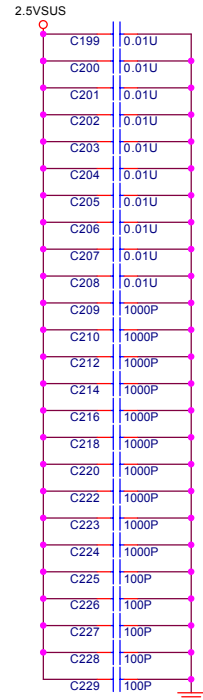
| | |
|--|---------------------------------|
|  QUANTA COMPUTER | |
| Title: NB(655FX POWER) | |
| Size: A3 | Document Number: AW1 M/B |
| Date: Tuesday, July 06, 2004 | Sheet 9 of 41 |
| Rev 1B | |



DDR-1 SO-DIMM (UPPER H=9.2)



DDR-1 SO-DIMM (LOWER H=5.2)

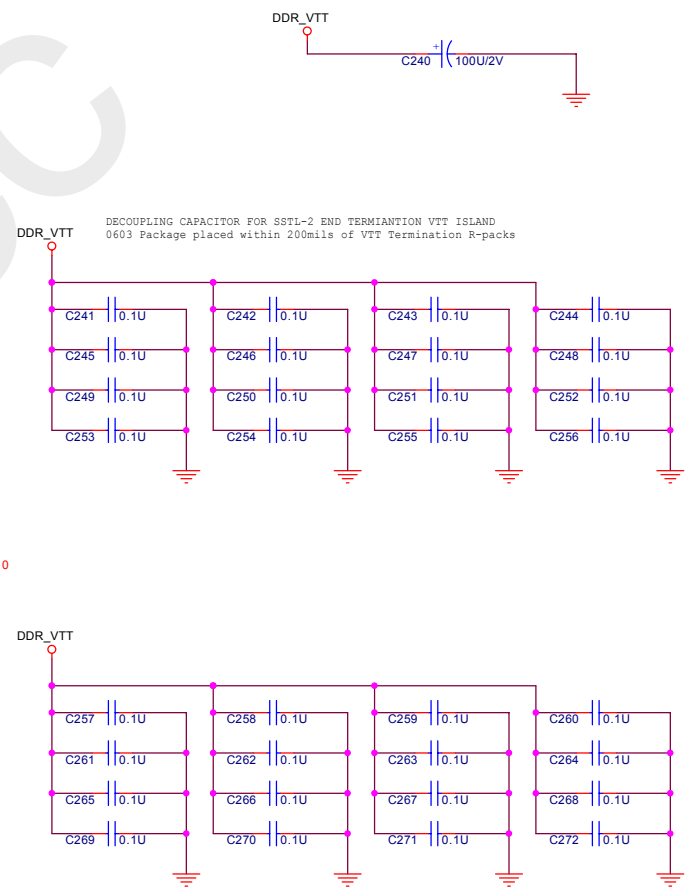
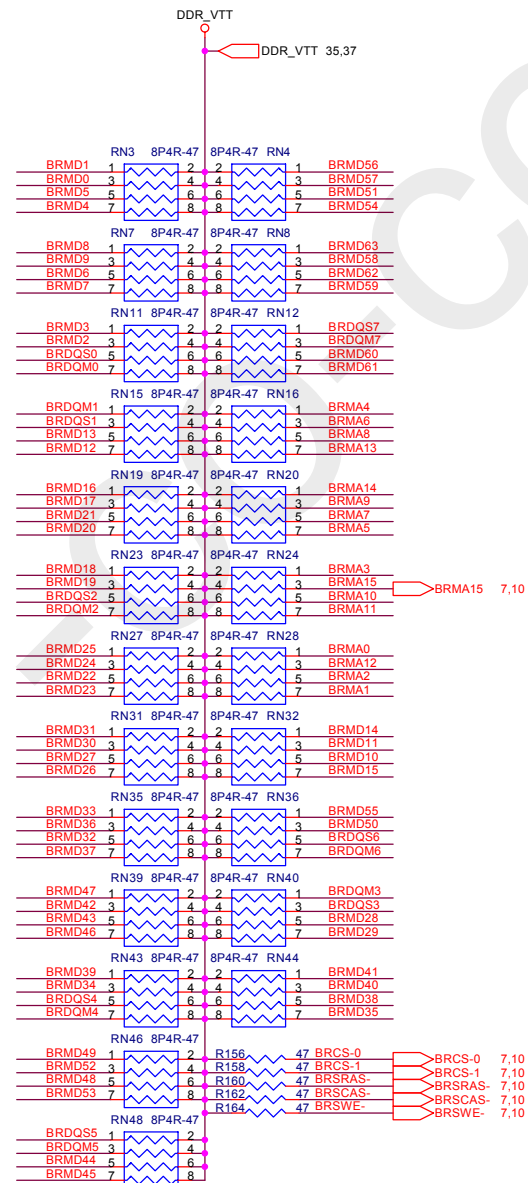
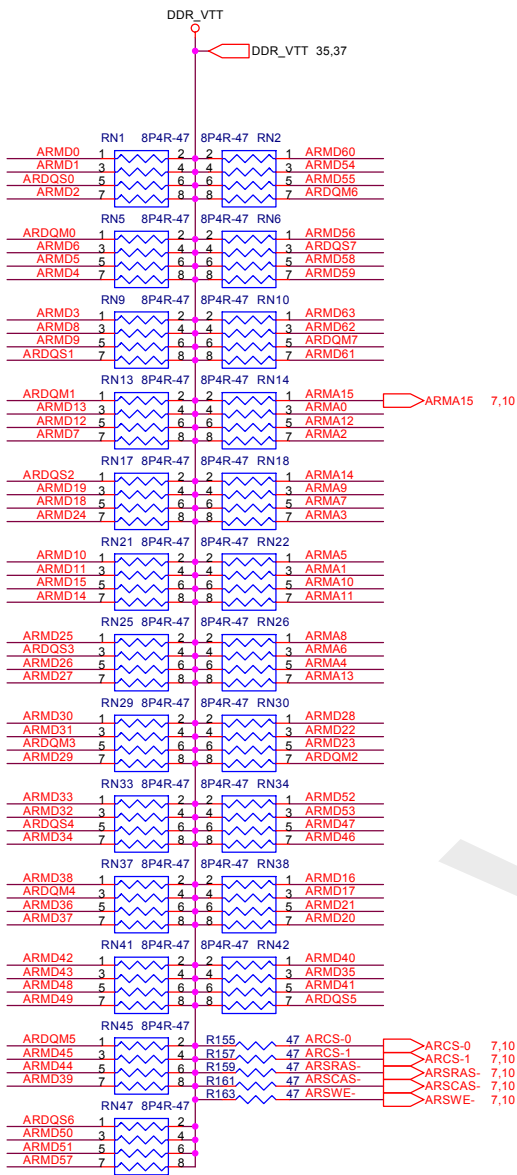


QUANTA COMPUTER

Title: **DDR SO-DIMM1&2**

Size: A3
 Document Number: **AW1 M/B**
 Rev: 1B

Date: Tuesday, July 06, 2004
 Sheet: 10 of 41



QUANTA COMPUTER

Title: **DDR_TERMINATION**

Size: A3
 Document Number: **AW1 M/B**

Date: Tuesday, July 06, 2004
 Sheet: 11 of 41

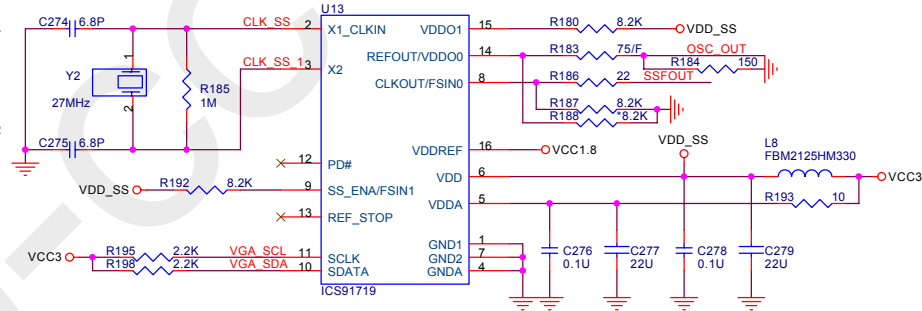
Rev: 1B

Strapping

VMEM 64/128 MB no stuff

| | | |
|-------|-------|---|
| GPI01 | GPI00 | AGP 1X CLOCK FEEDBACK PHASE ADJUST WITH RESPECT TO REFCLK |
| LO | LO | REFCLK SLIGHTLY EARLIER THAN FEEDBACK (DEFAULT) |
| GPI03 | GPI02 | CLOCK PHASE ADJUSTMENT BETWEEN X1 AND X2 CLK |
| LO | LO | 0 TAP DELAY (DEFAULT) |

Spread Spectrum Control



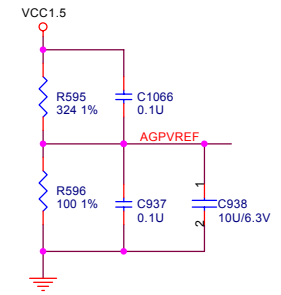
INPUT SELECT FUNCTIONALITY

| PIN14 | PIN15 | REF VOLTAGE |
|-------|-------|-------------|
| 0 | 1 | 1.8V |

REF VOLTAGE SELECT FUNCTIONALITY

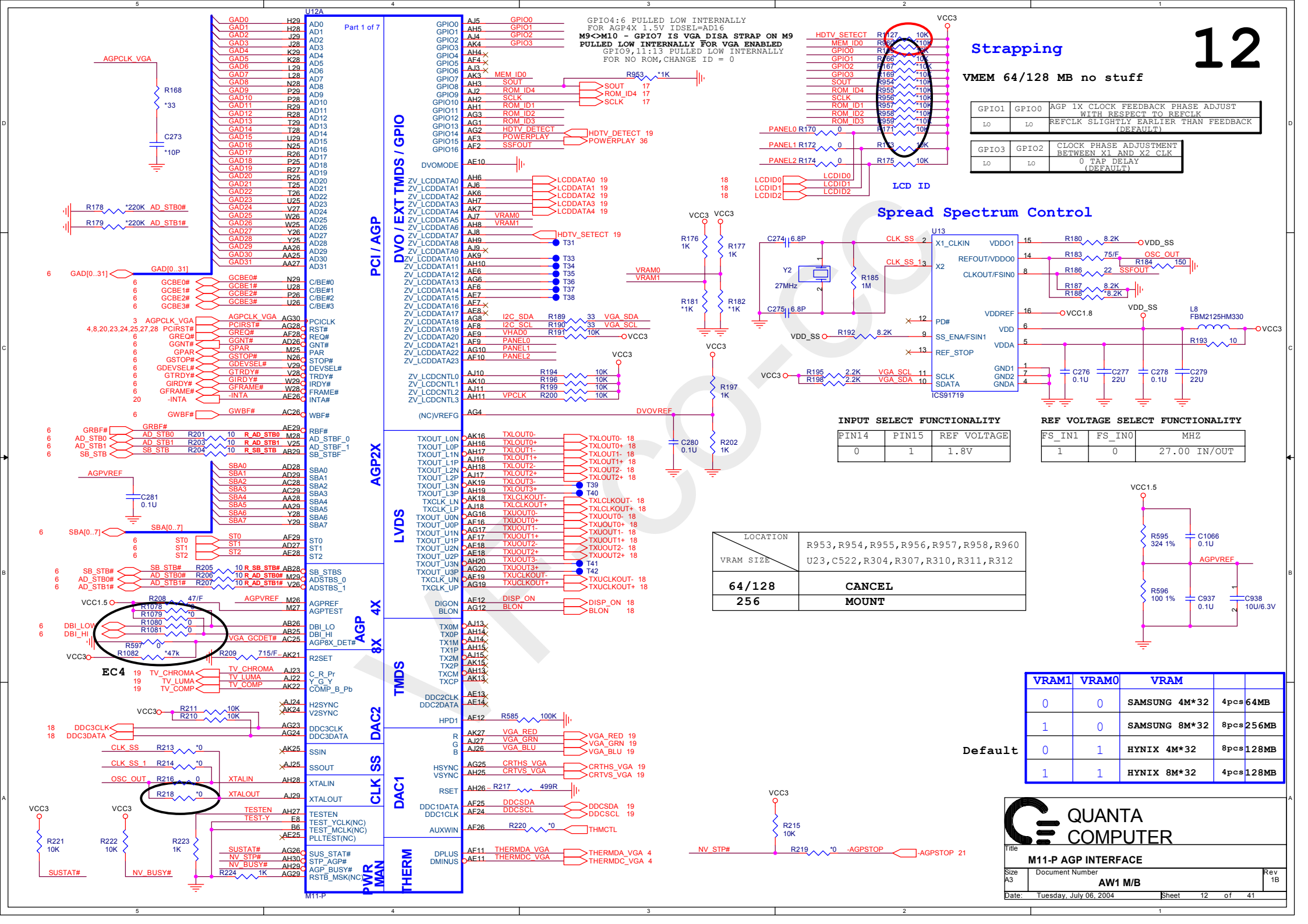
| FS_IN1 | FS_IN0 | MHZ |
|--------|--------|--------------|
| 1 | 0 | 27.00 IN/OUT |

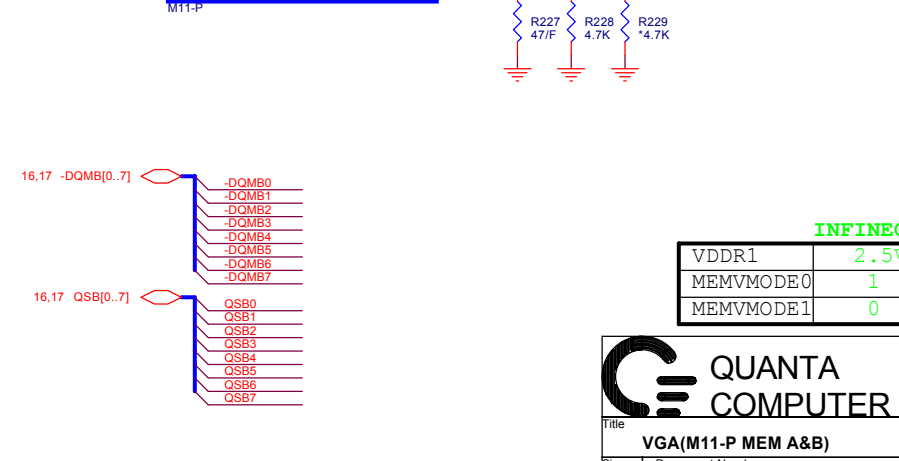
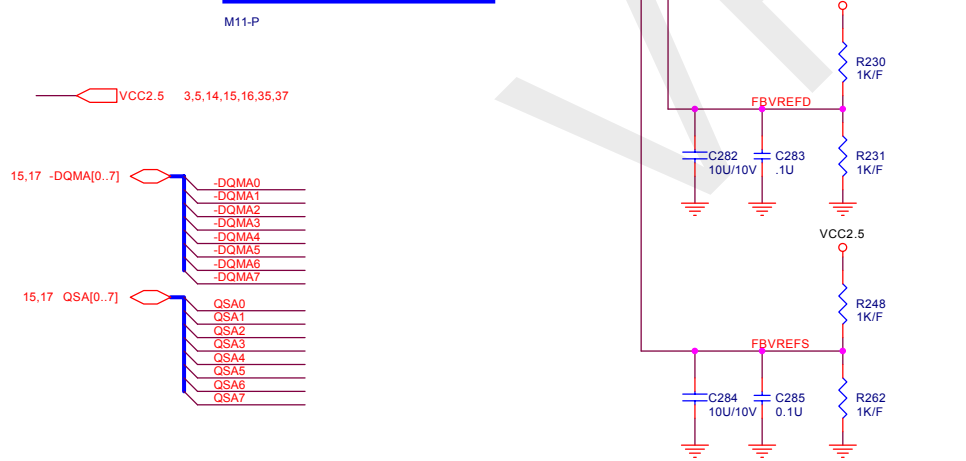
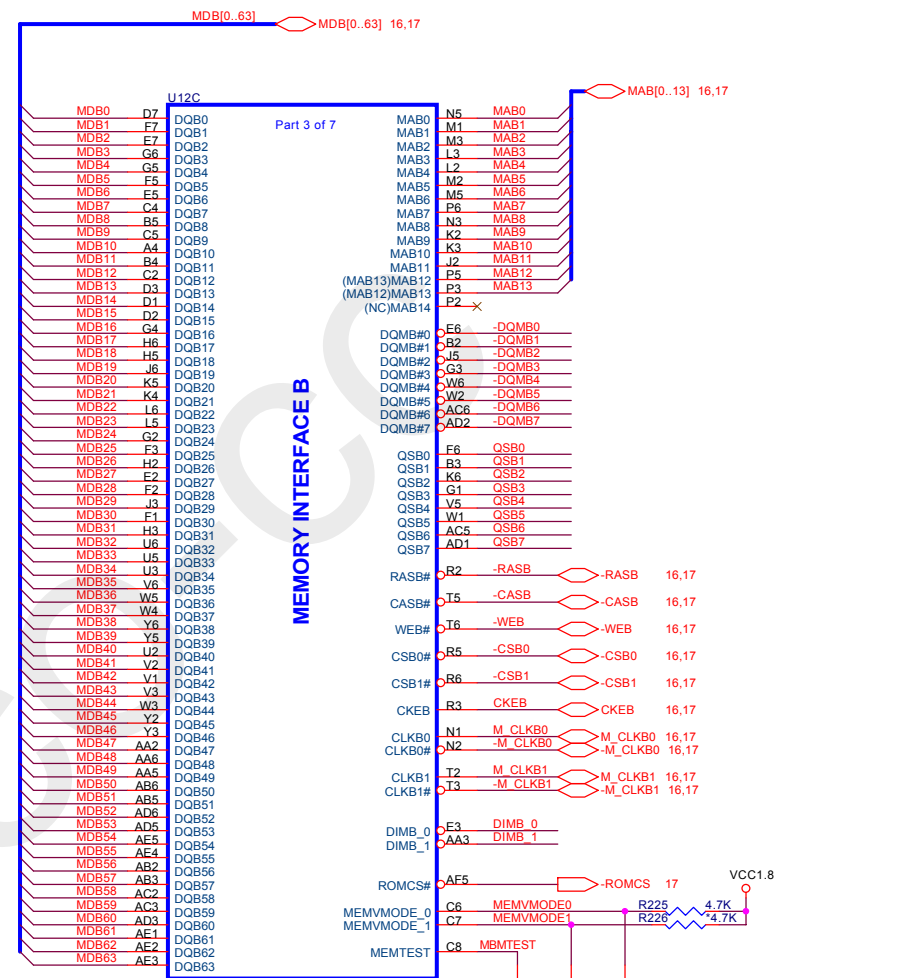
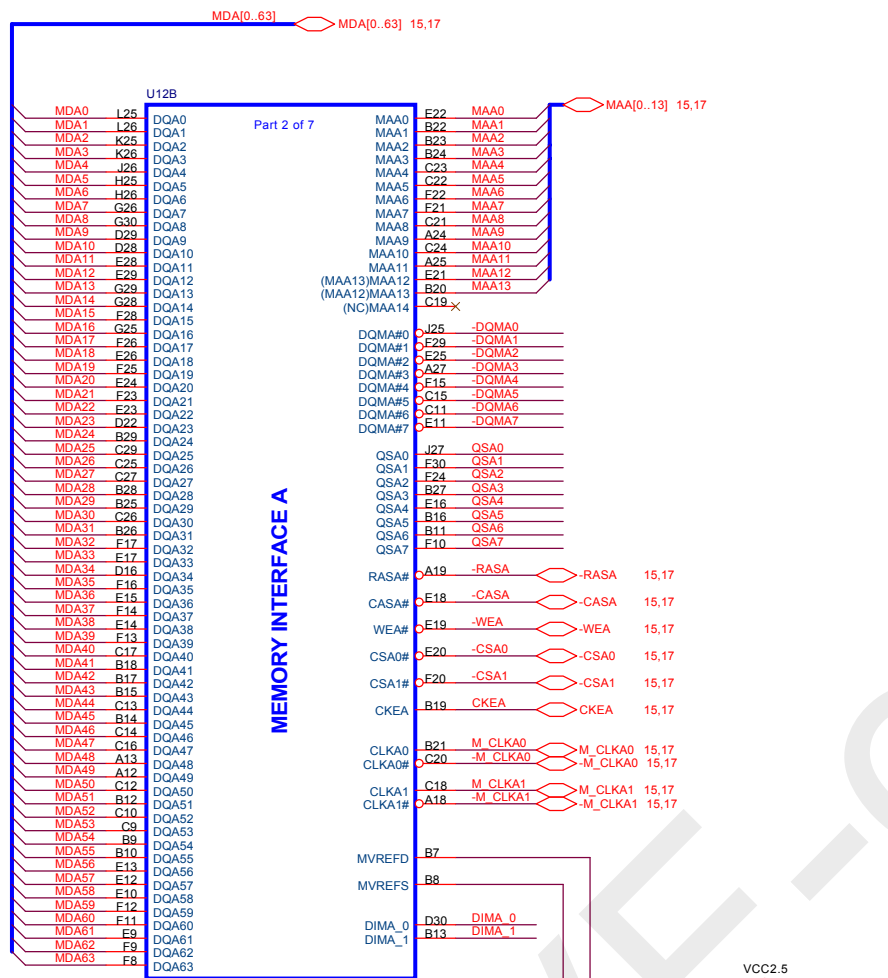
| LOCATION | VRAM1 | VRAM0 | VRAM |
|--|-------|-------|--------------------------|
| R953, R954, R955, R956, R957, R958, R960 | 0 | 0 | SAMSUNG 4M*32 4pcs 64MB |
| U23, C522, R304, R307, R310, R311, R312 | 1 | 0 | SAMSUNG 8M*32 8pcs 256MB |
| 64/128 | 0 | 1 | HYNIX 4M*32 8pcs 128MB |
| 256 | 1 | 1 | HYNIX 8M*32 4pcs 128MB |



Default

| VRAM1 | VRAM0 | VRAM |
|-------|-------|--------------------------|
| 0 | 0 | SAMSUNG 4M*32 4pcs 64MB |
| 1 | 0 | SAMSUNG 8M*32 8pcs 256MB |
| 0 | 1 | HYNIX 4M*32 8pcs 128MB |
| 1 | 1 | HYNIX 8M*32 4pcs 128MB |





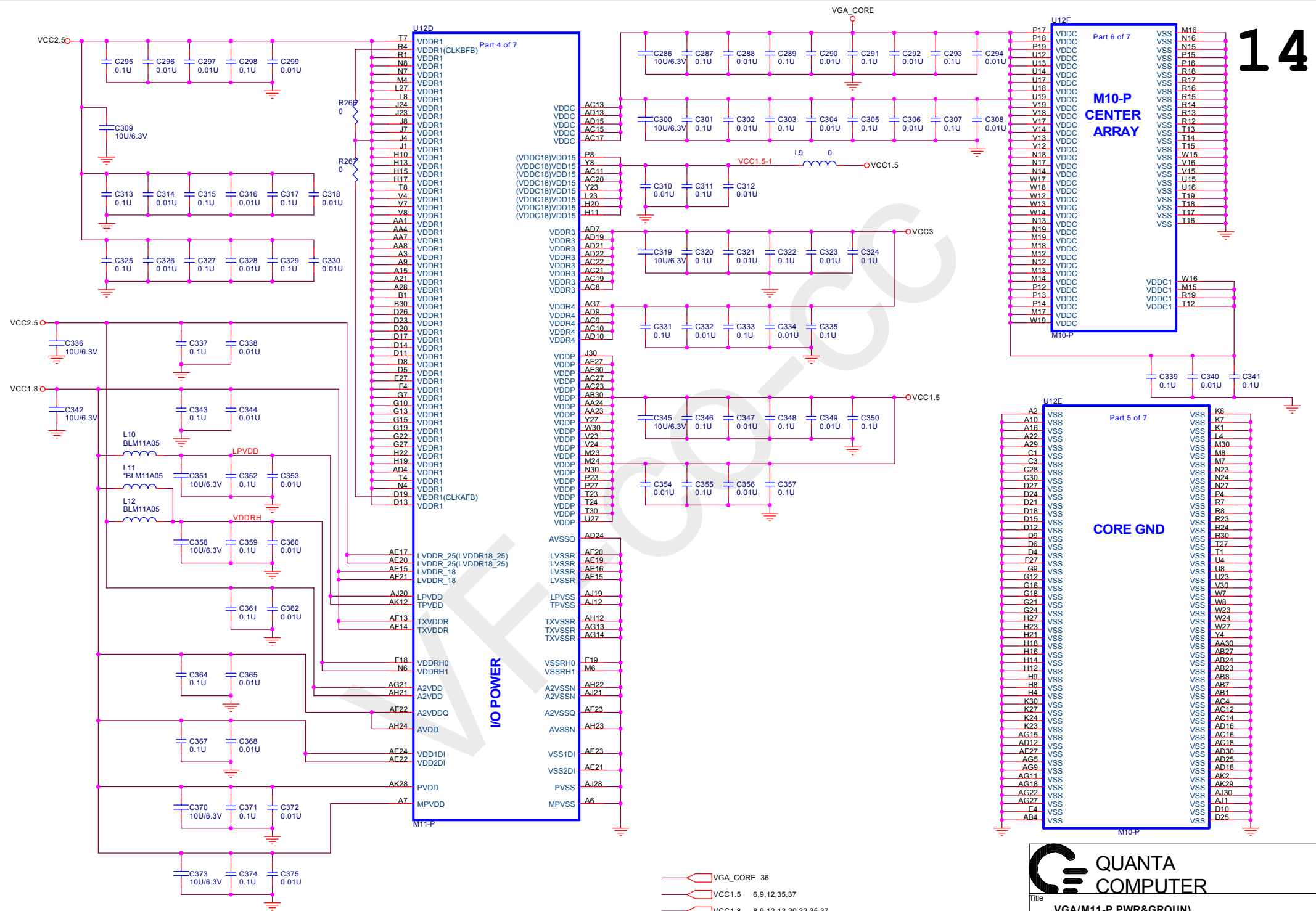
| | INFINEON | EPDIA |
|-----------|----------|-------|
| VDDR1 | 2.5V | 1.8V |
| MEMVMODE0 | 1 | 0 |
| MEMVMODE1 | 0 | 1 |

QUANTA COMPUTER

Title: **VGA(M11-P MEM A&B)**

Size: A3 | Document Number: **AW1 M/B** | Rev: 1B

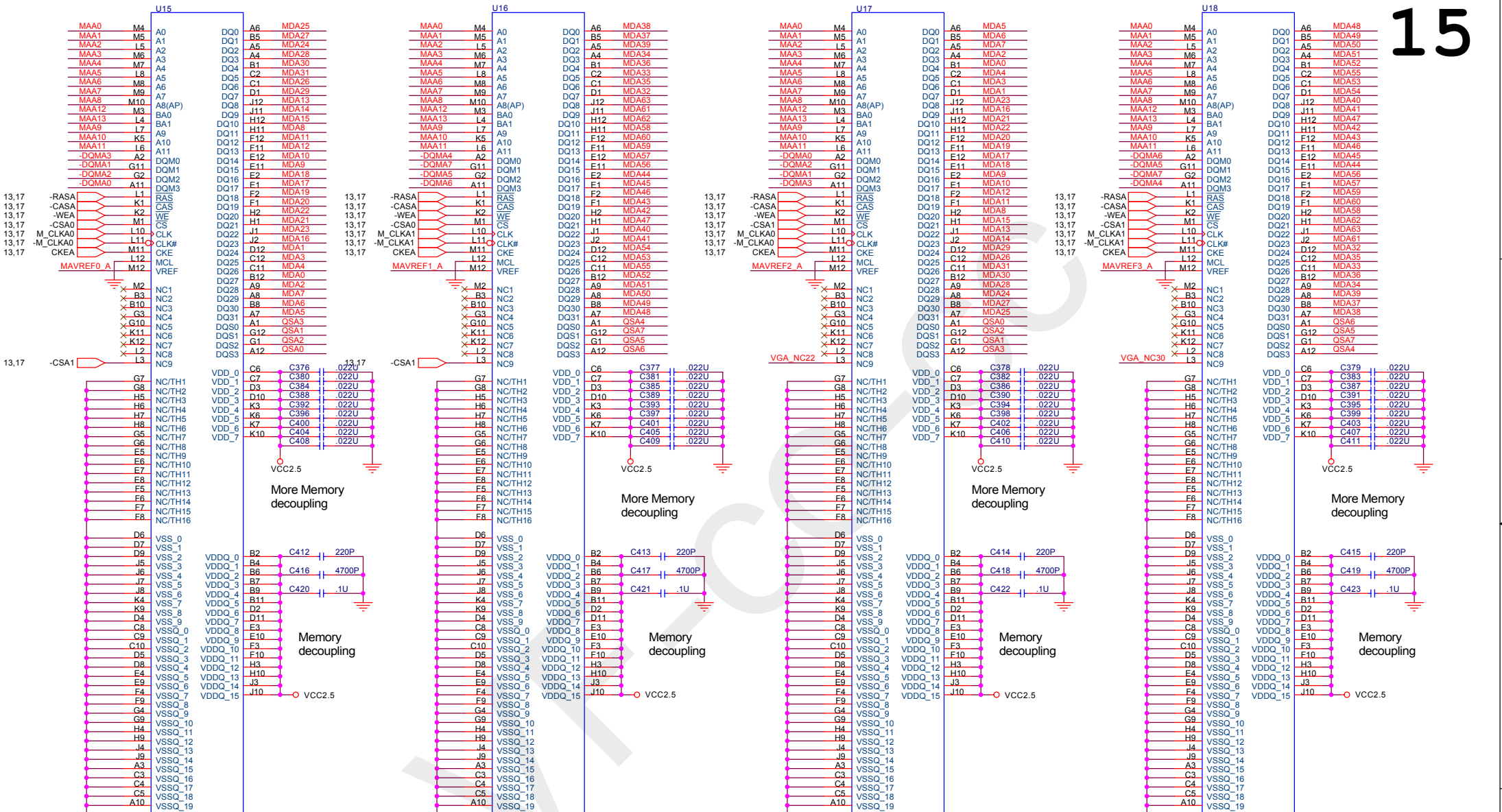
Date: Tuesday, July 06, 2004 | Sheet: 13 of 41



- VGA_CORE 36
- VCC1.5 6,9,12,35,37
- VCC1.8 8,9,12,13,20,22,35,37
- VCC2.5 3,5,13,15,16,35,37

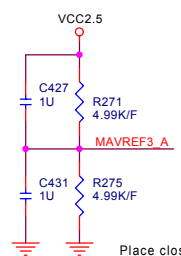
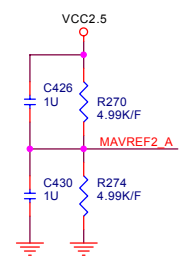
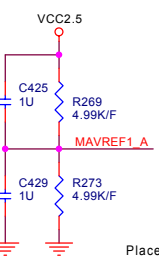
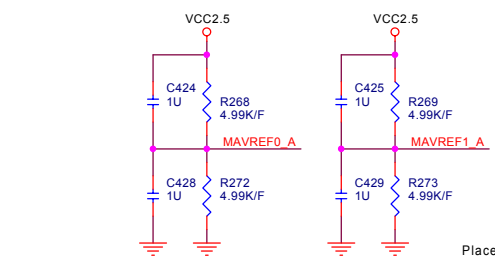
**QUANTA
COMPUTER**

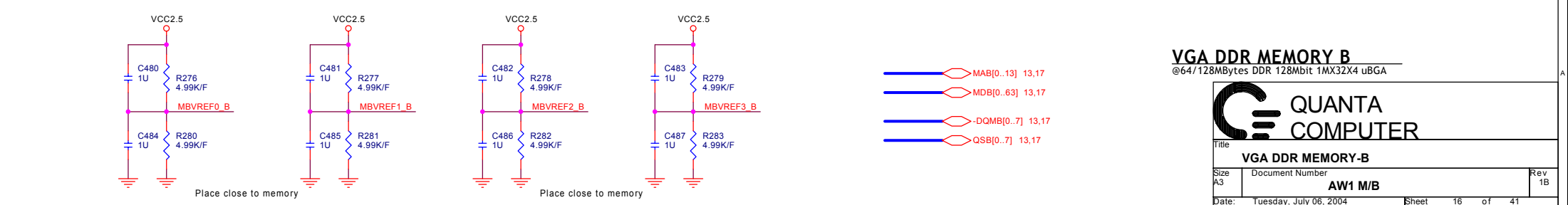
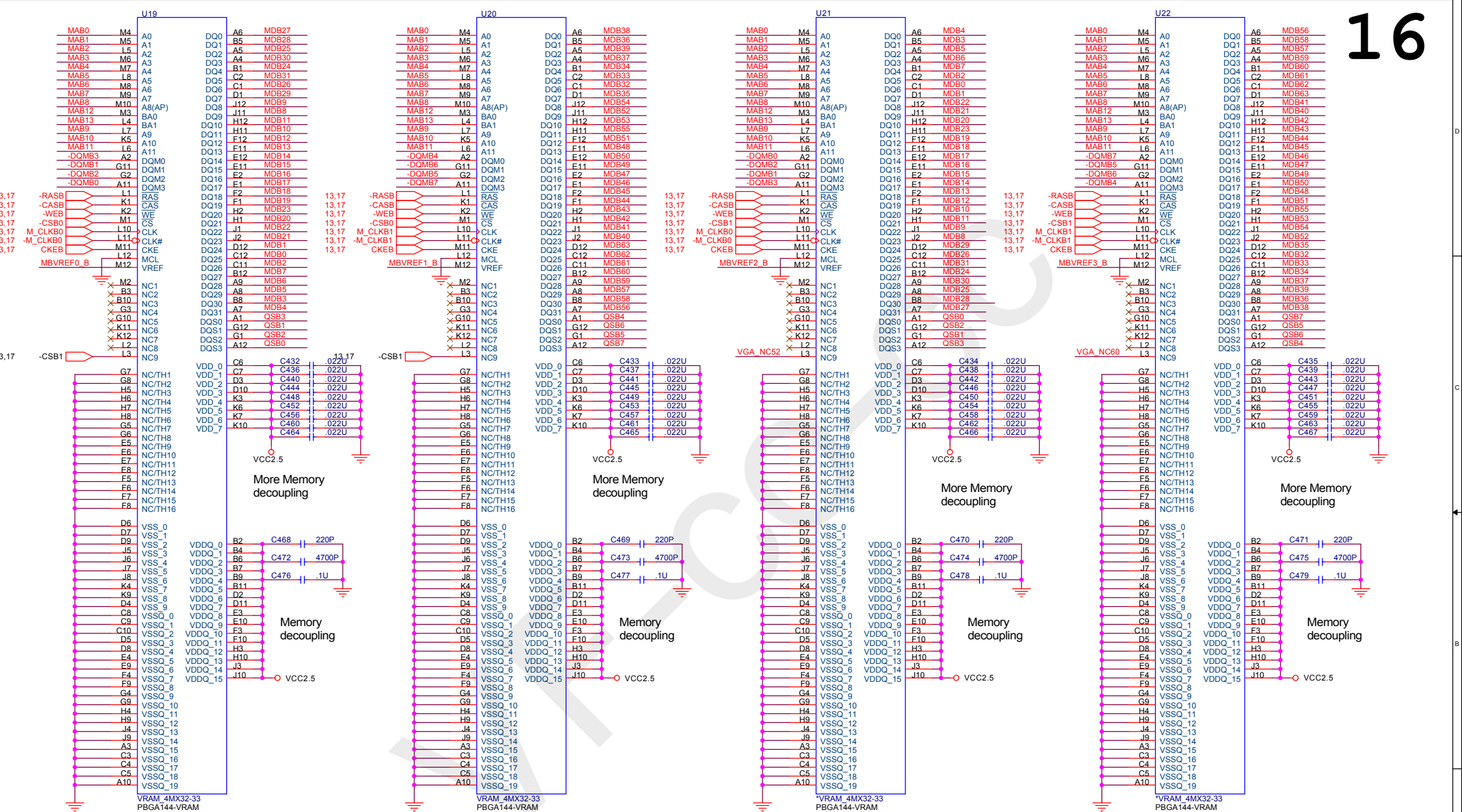
| | | |
|--|-----------------------------------|-------------------|
| Title VGA(M11-P PWR&GND) | | |
| Size A3 | Document Number AW1 M/B | Rev 1B |
| Date Tuesday, July 06, 2004 | | Sheet 14 of 41 |



VGA DDR MEMORY A
@64/128MBytes DDR 128Mbit 1MX32X4 uBGA

- MAA[0..13] 13,17
- MDA[0..63] 13,17
- DQMA[0..7] 13,17
- QSA[0..7] 13,17





VGA DDR MEMORY B
 @64/128MBytes DDR 128Mbit 1MX32X4 uBGA

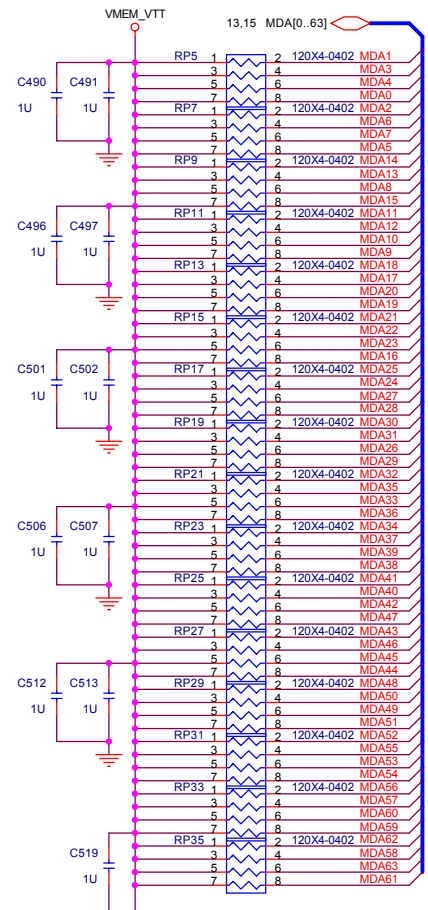
QUANTA COMPUTER

Title: **VGA DDR MEMORY-B**

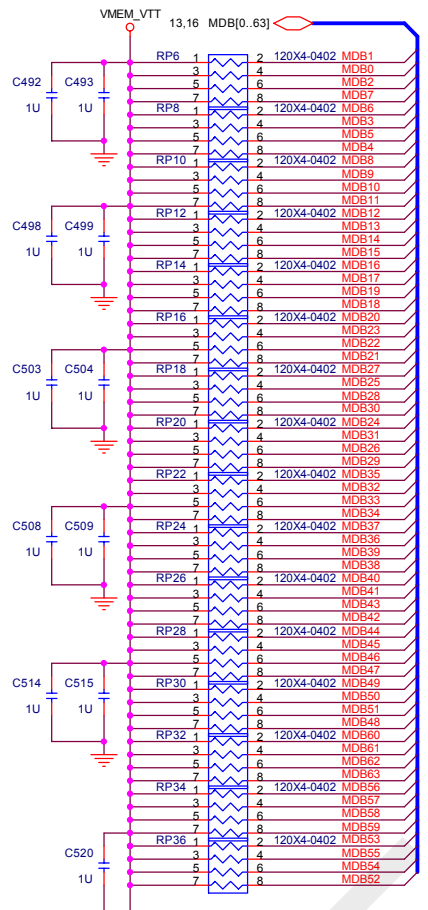
Size: A3 Document Number: **AW1 M/B** Rev: 1B

Date: Tuesday, July 06, 2004 Sheet: 16 of 41

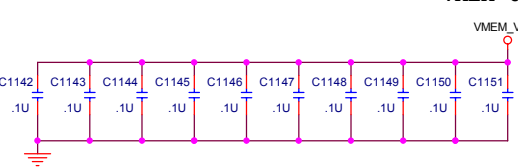
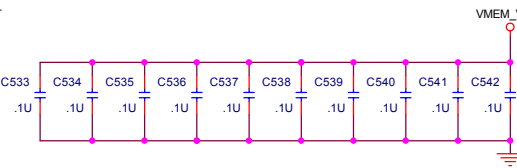
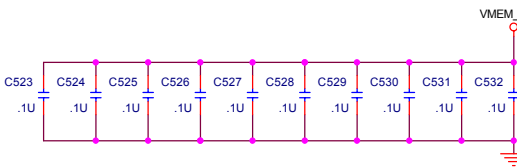
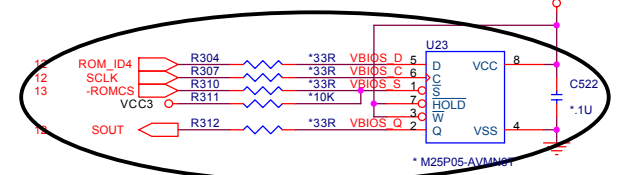
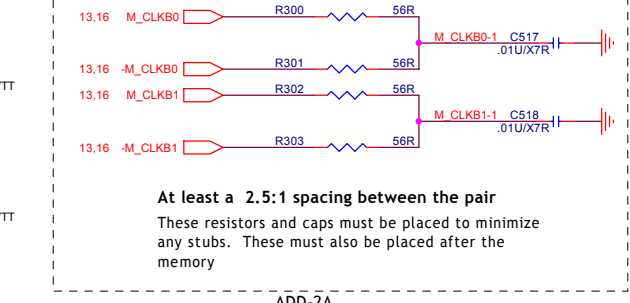
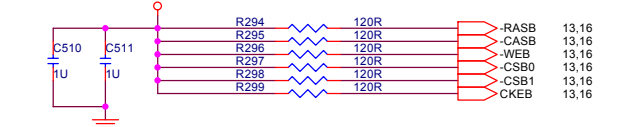
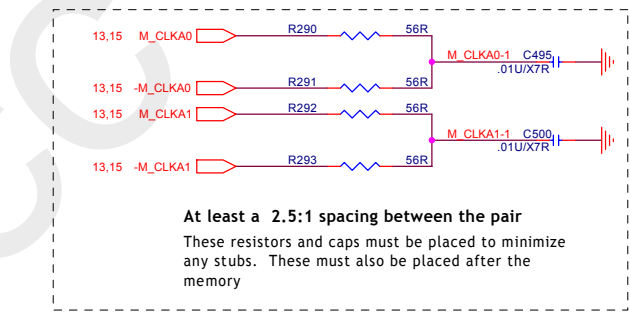
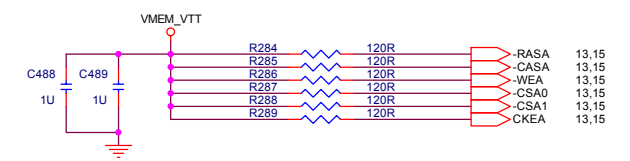
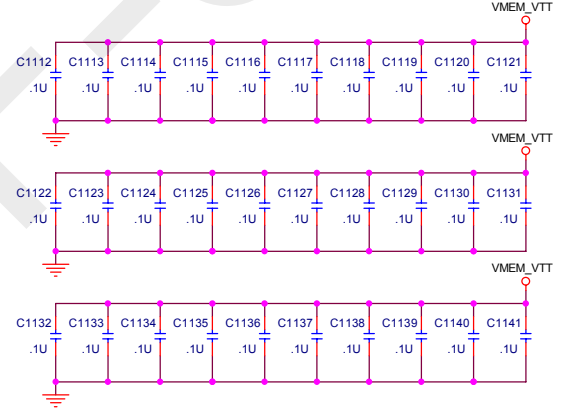
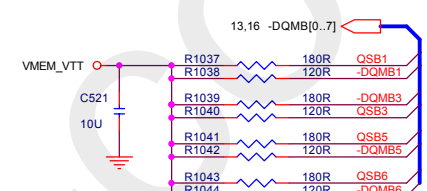
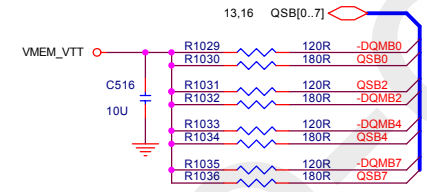
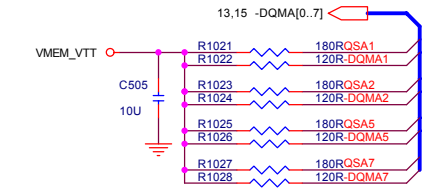
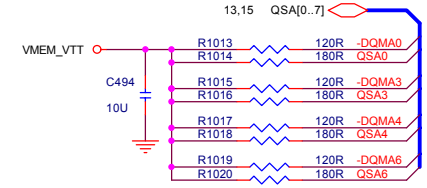
- MAB[0..13] 13,17
- MDB[0..63] 13,17
- DQMB[0..7] 13,17
- QSB[0..7] 13,17



Place at nets mid point



Place at nets mid point



VMEM 64/128 MB no stuff SERIAL ROM

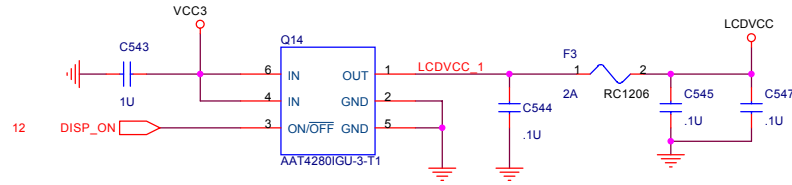
QUANTA COMPUTER

Title: **DDR VRAM PULL UP**

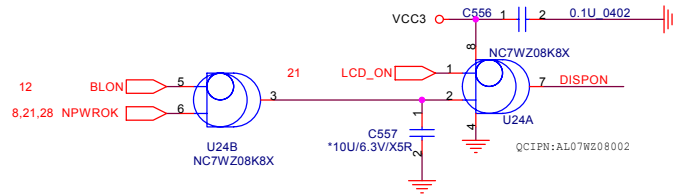
Size: Custom Document Number: **AW1 M/B**

Date: Tuesday, July 06, 2004 Sheet 17 of 41

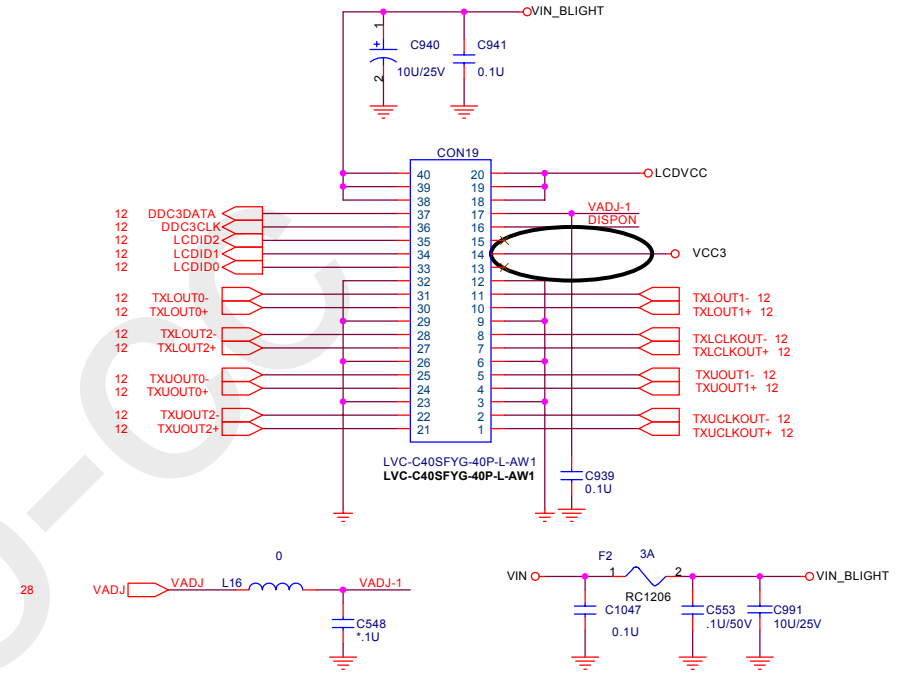
PANEL VCC CONTROL



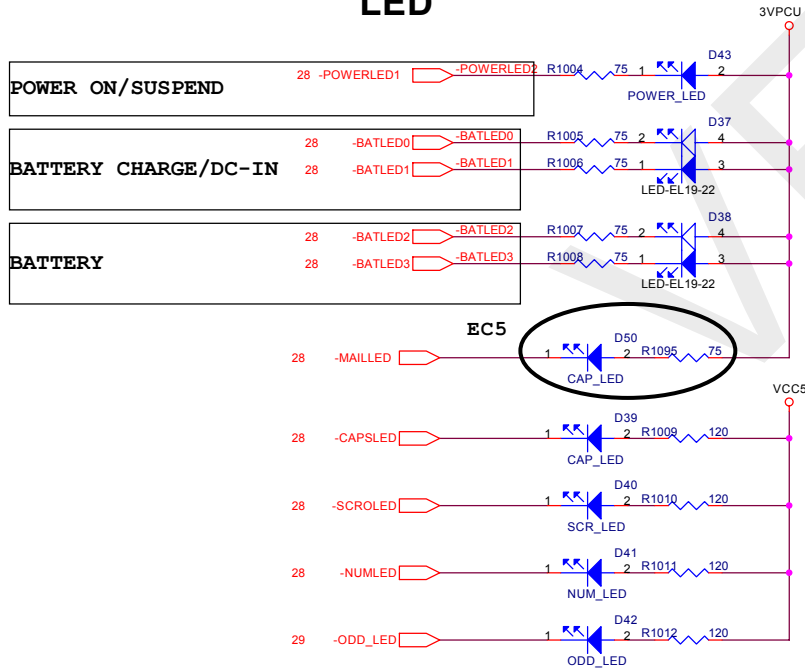
BACKLIGHT CONTROL



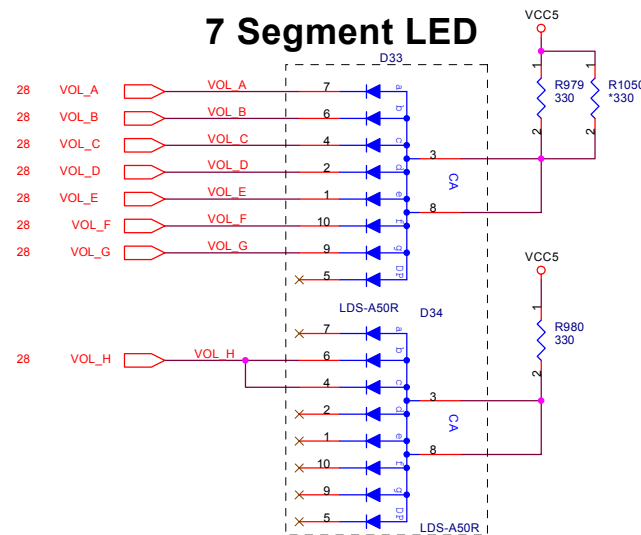
LCD CONNECTOR



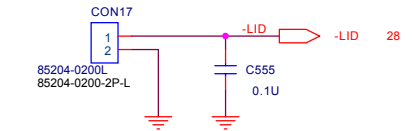
LED



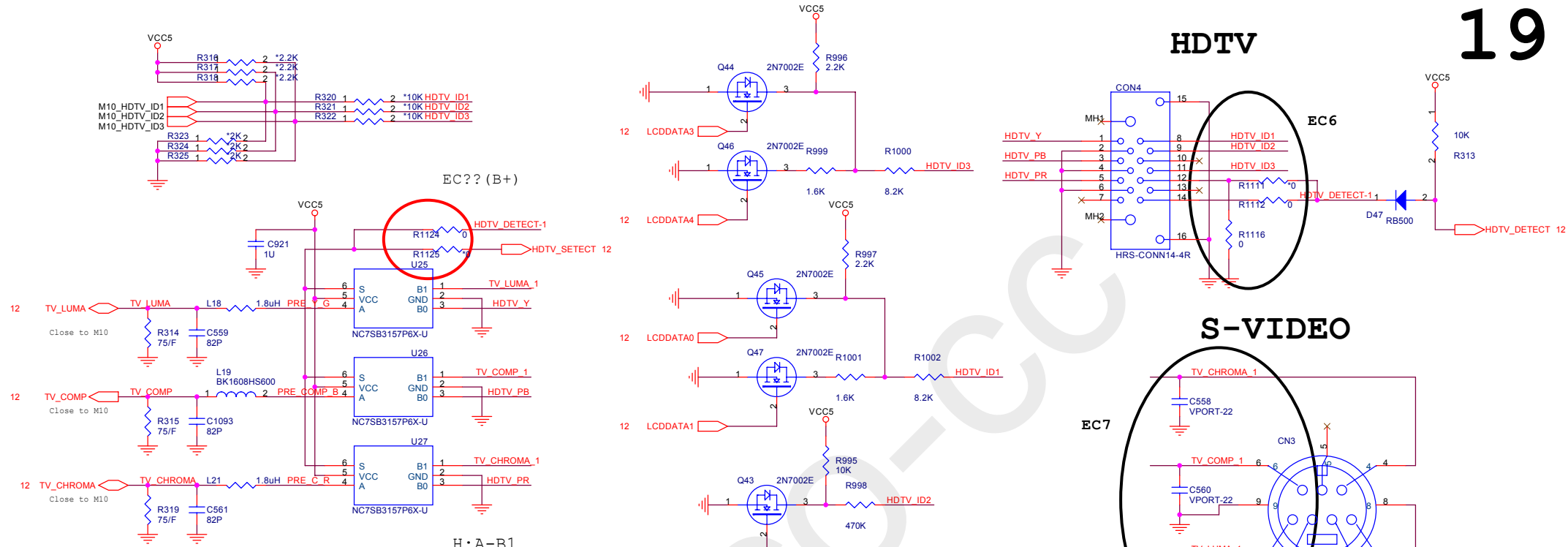
7 Segment LED



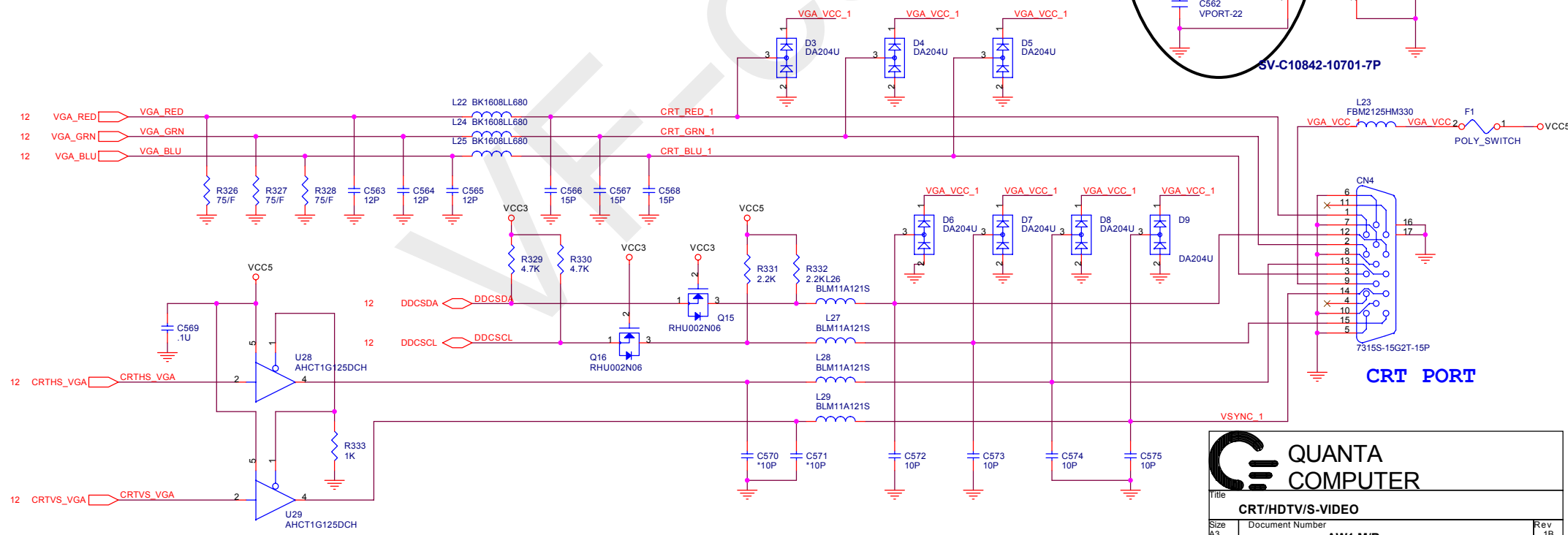
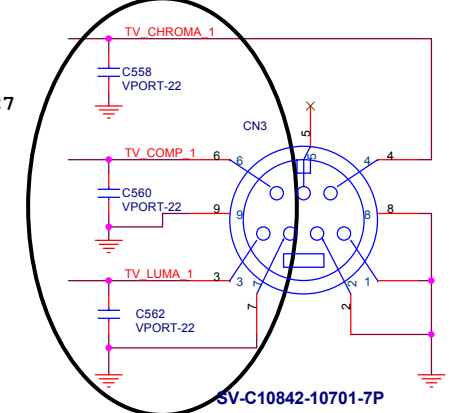
LID



HDTV



S-VIDEO

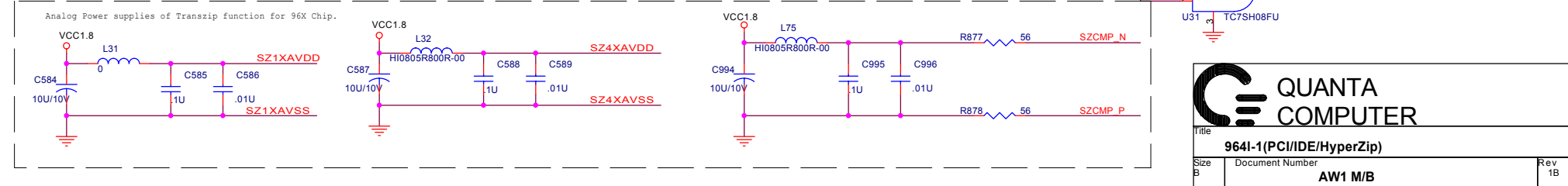
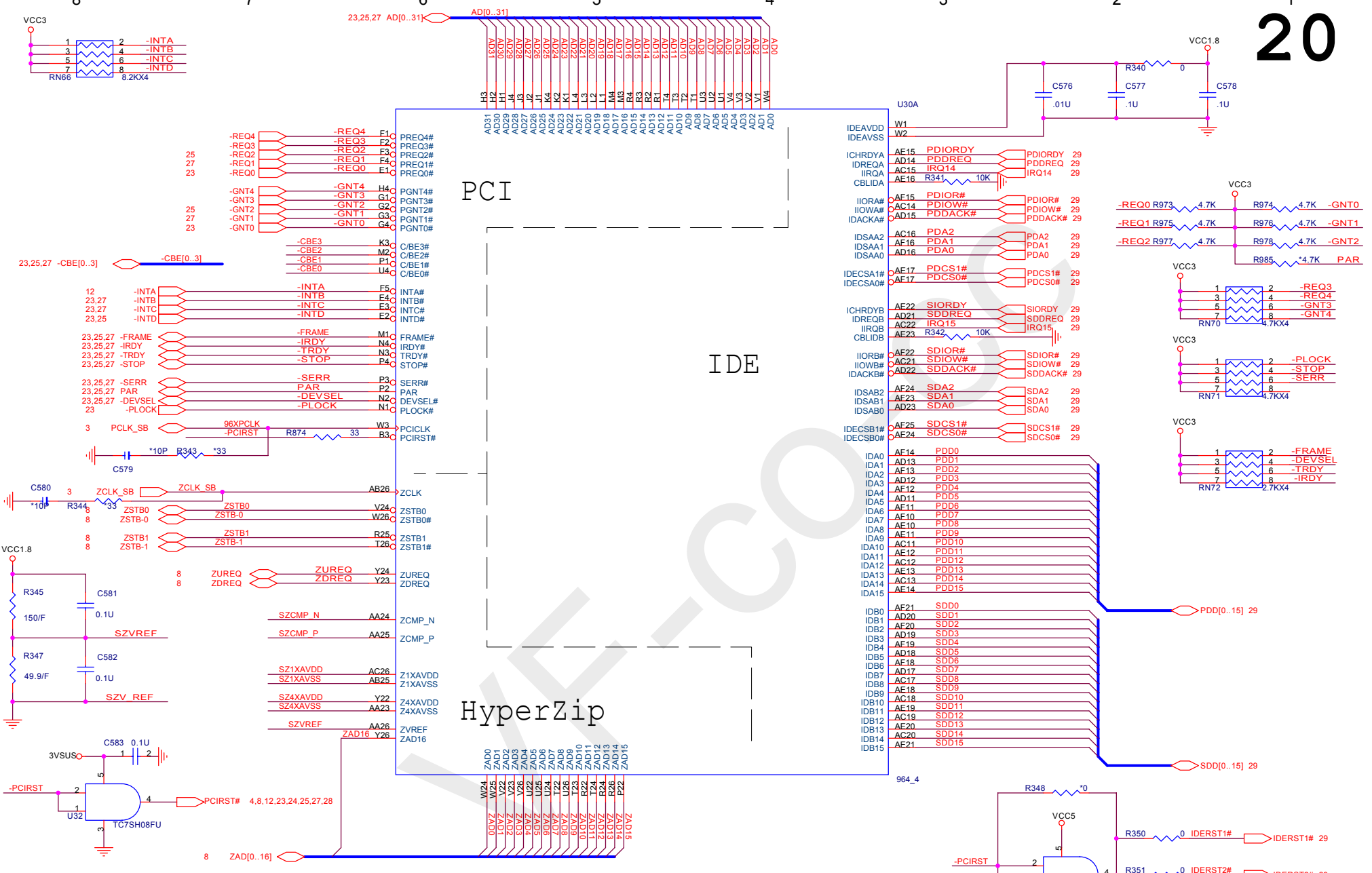


QUANTA COMPUTER

Title: CRT/HDTV/S-VIDEO

Size A3 Document Number: AW1 M/B Rev 1B

Date: Tuesday, July 06, 2004 Sheet 19 of 41

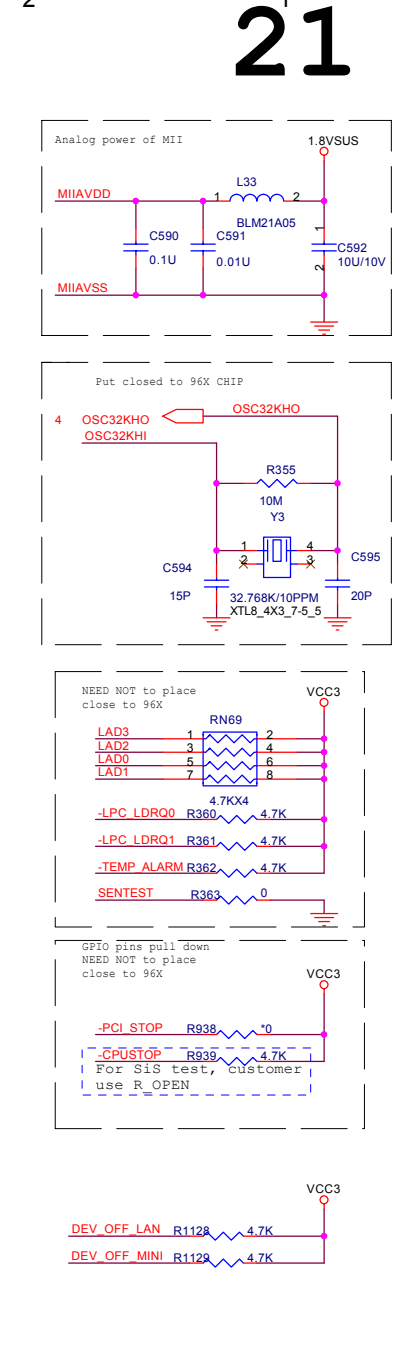
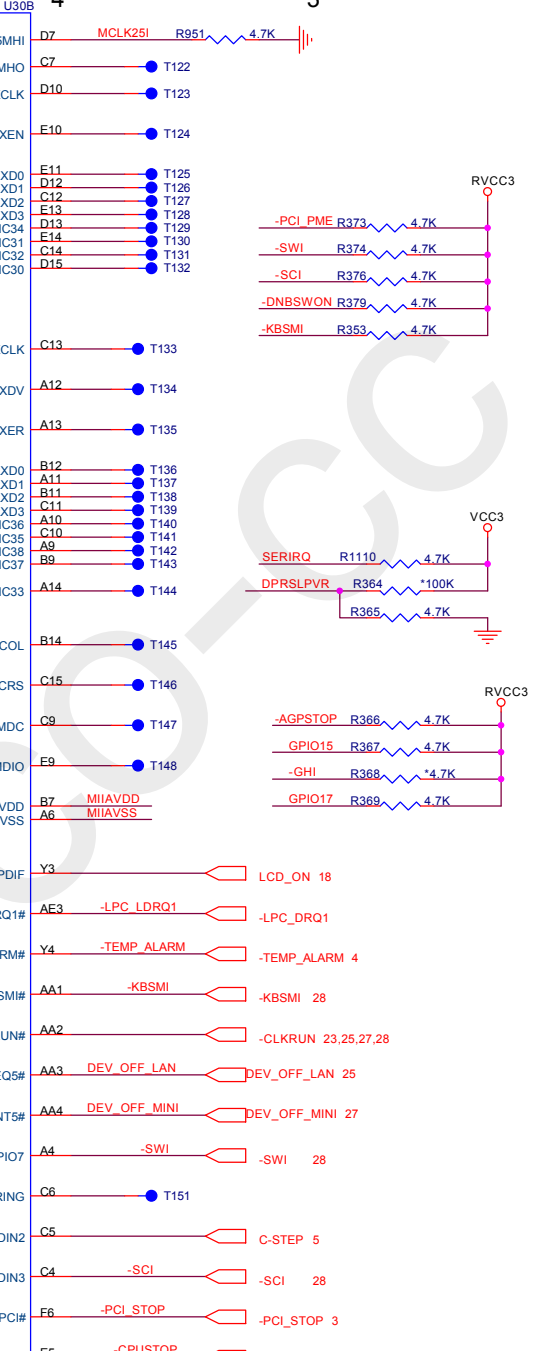
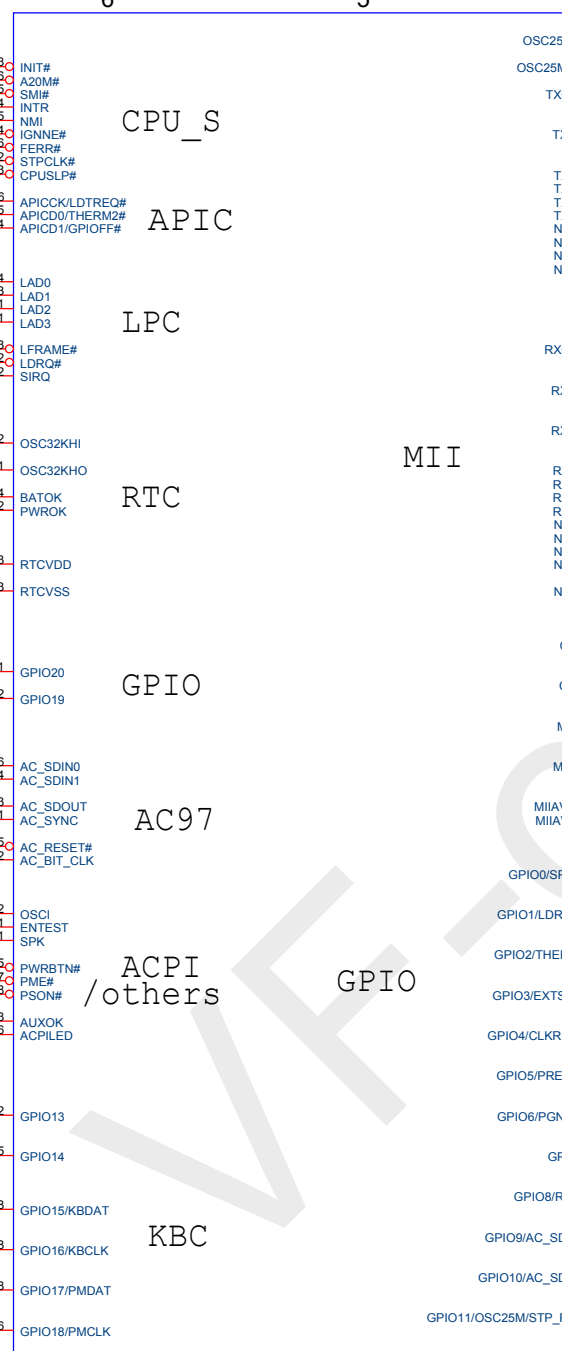
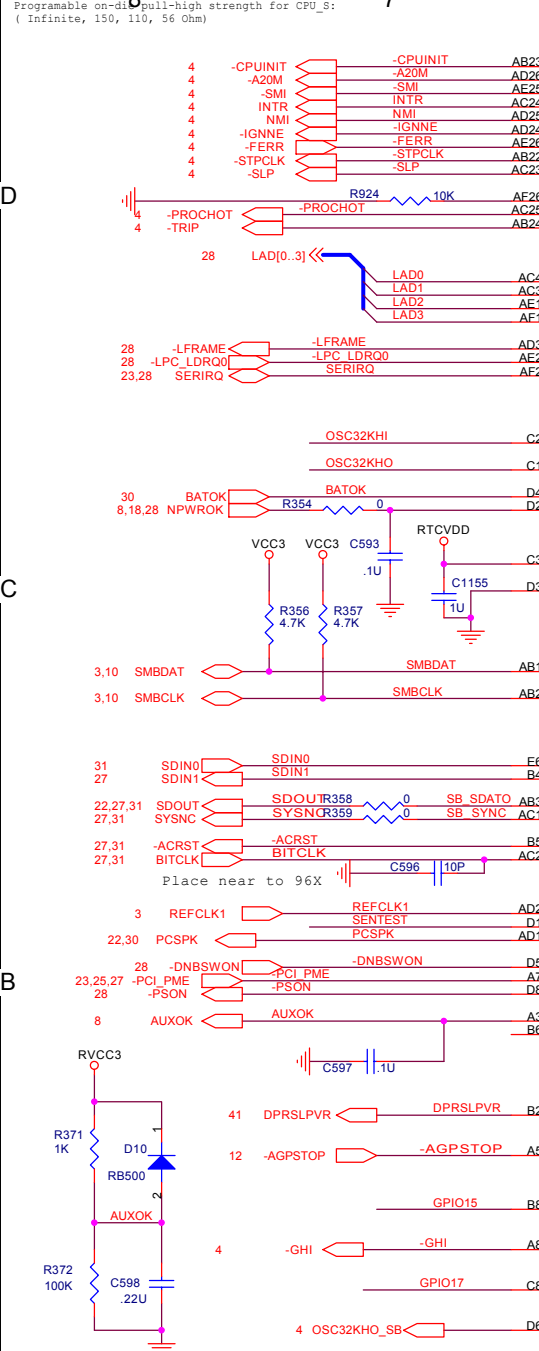


QUANTA COMPUTER

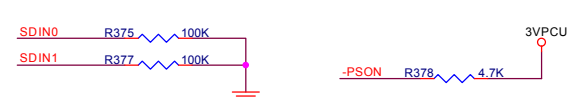
Title: 9641-1(PCI/IDE/HyperZip)

Size: Document Number AW1 M/B

Date: Tuesday, July 06, 2004 Sheet 20 of 41



S18963, 964 GPIO 0-7 internal pull up
 S18963, 964 GPIO 9,10 internal pull down



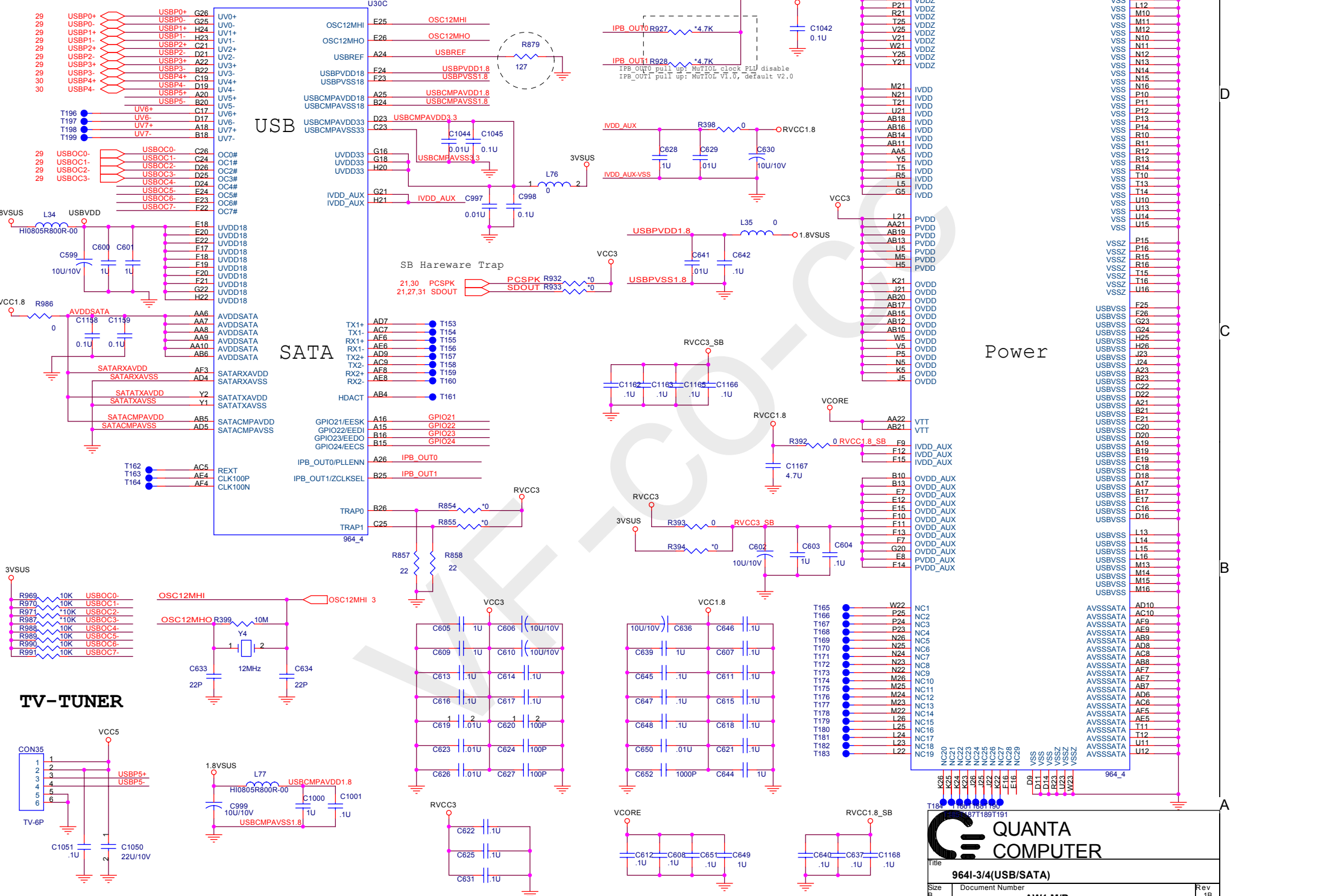
QUANTA COMPUTER

Title: **964I-2(LPC/MII/GPIO)**

Size B Document Number: **AW1 M/B** Rev 1B

Date: Tuesday, July 06, 2004 Sheet 21 of 41

For SiS964L



QUANTA COMPUTER

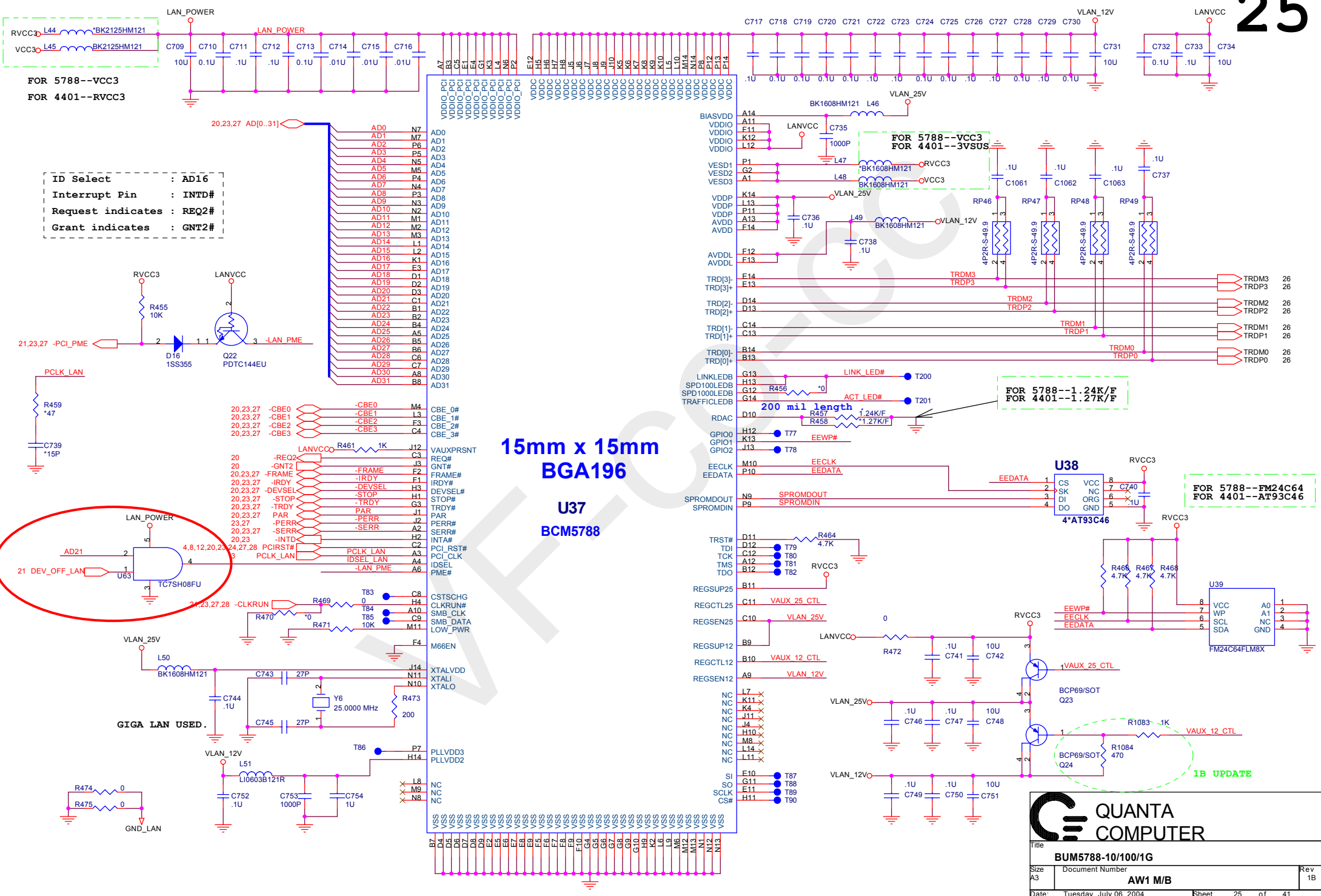
Title: **9641-3/4(USB/SATA)**

Size: Document Number **AW1 M/B** Rev 1B

Date: Tuesday, July 06, 2004 Sheet 22 of 41

LAN-BCM5788 (10/100/GIGA)

BCM4401--10/100
BCM5788--10/100/GIGA



**15mm x 15mm
BGA196**

**U37
BCM5788**

FOR 5788--VCC3
FOR 4401--3VSUS

FOR 5788--1.24K/F
FOR 4401--1.27K/F

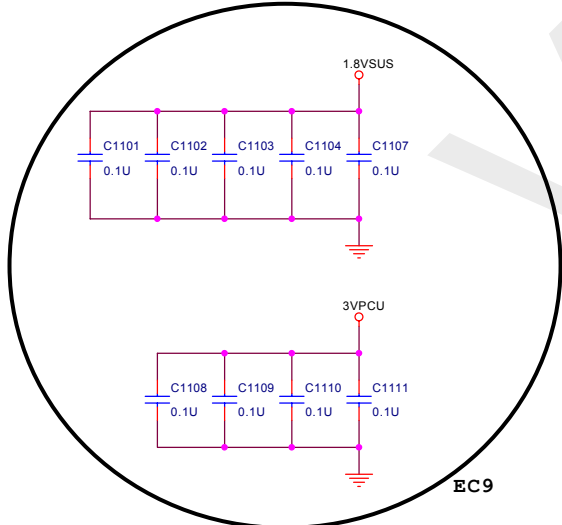
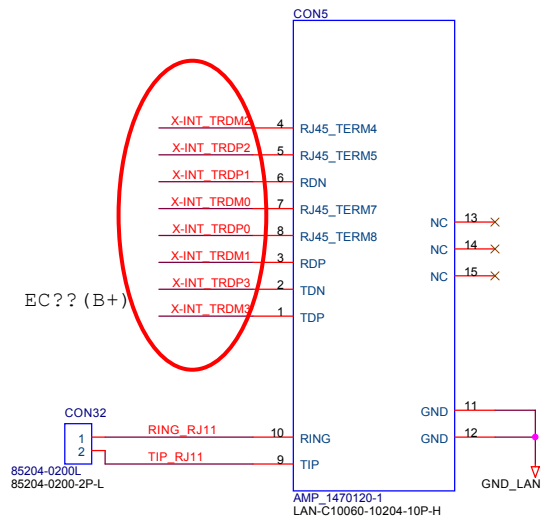
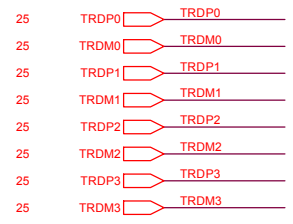
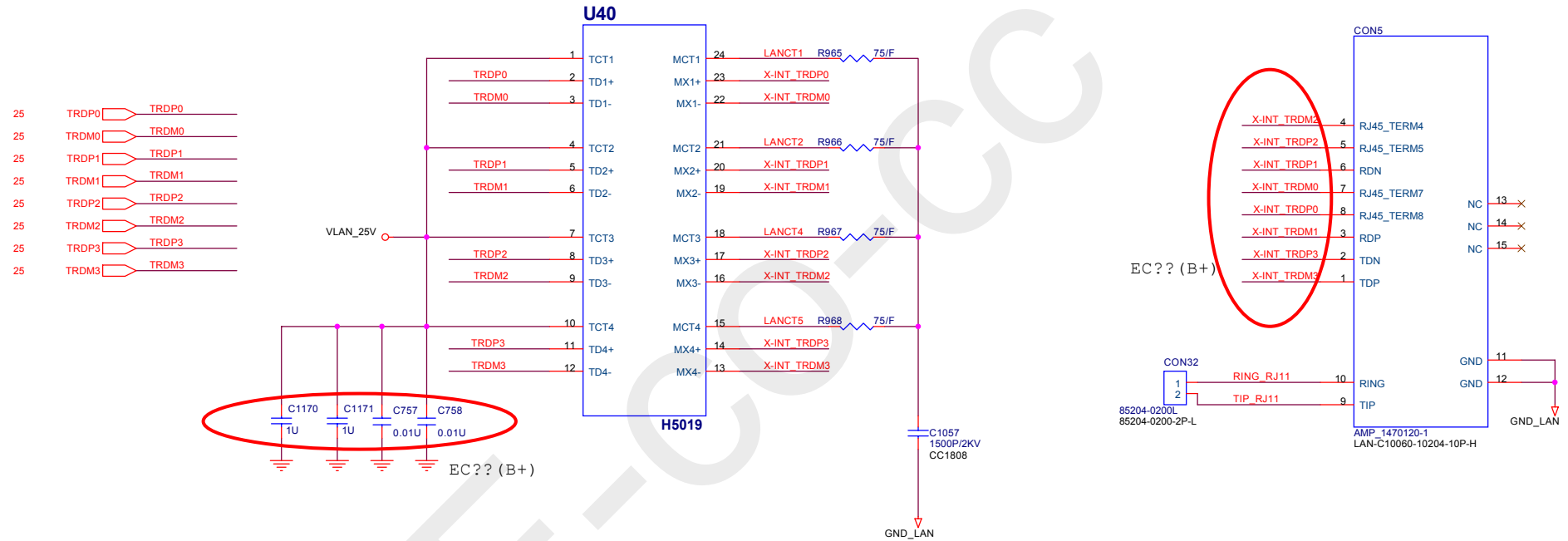
FOR 5788--FM24C64
FOR 4401--AT93C46

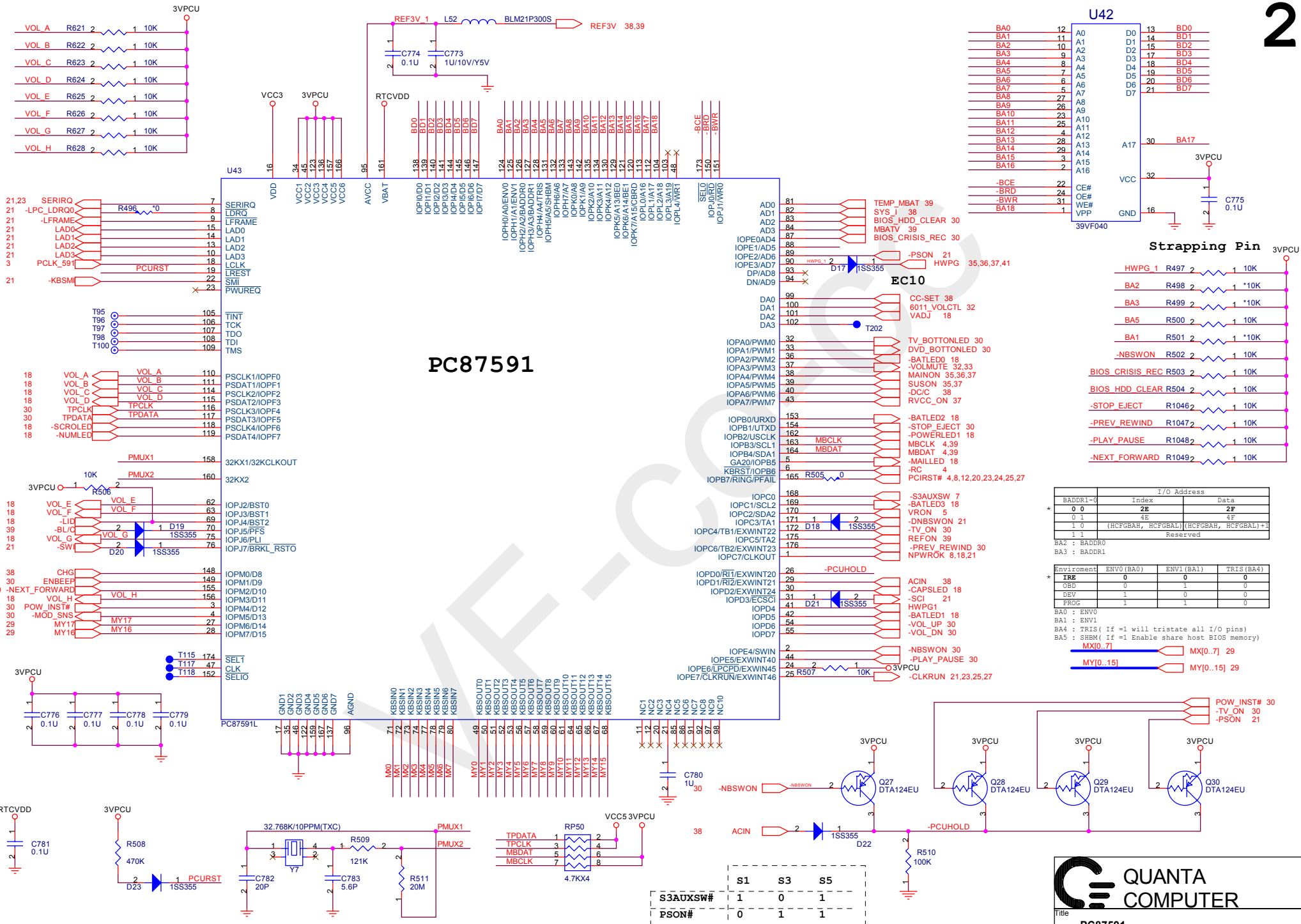
**QUANTA
COMPUTER**

Title: **BUM5788-10/100/1G**

Size: A3 Document Number: **AW1 M/B** Rev: 1B

Date: Tuesday, July 06, 2004 Sheet: 25 of 41





| I/O Address | | |
|-------------|--------------------|----------------------|
| BADDR1=0 | Index | Data |
| 0 0 | 2E | 2F |
| 0 1 | 4E | 4F |
| 1 0 | (HCFGBAH, HCFGBAL) | (HCFGBAH, HCFGBAL)+1 |
| 1 1 | Reserved | |

BA2 : BADDR0
BA3 : BADDR1

| Environment | | | |
|-------------|------------|------------|---|
| ENV0 (BA0) | ENV1 (BA1) | TRIS (BA4) | |
| IRE | 0 | 0 | 0 |
| OBD | 0 | 1 | 0 |
| DEV | 1 | 0 | 0 |
| PROG | 1 | 1 | 0 |

BA0 : ENV0
BA1 : ENV1
BA4 : TRIS (If = 1 will tristate all I/O pins)
BA5 : SHBM (If = 1 Enable share host BIOS memory)



| | S1 | S3 | S5 |
|----------|----|----|----|
| S3AUXSW# | 1 | 0 | 1 |
| -PSON# | 0 | 1 | 1 |

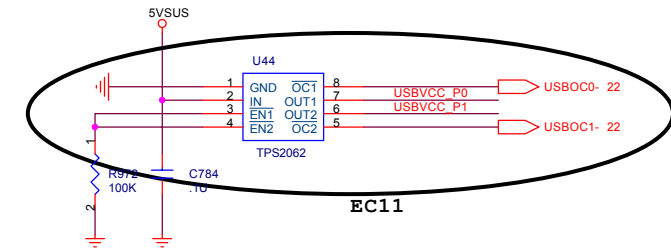
QUANTA COMPUTER

File: **PC87591**

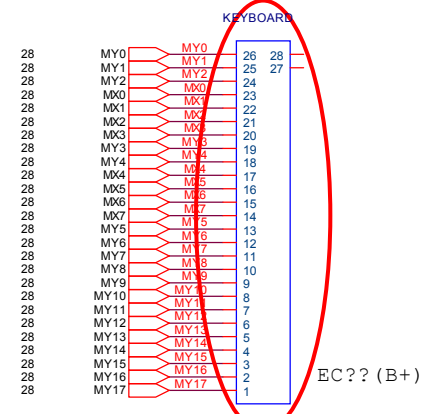
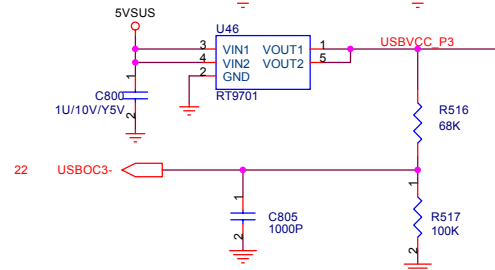
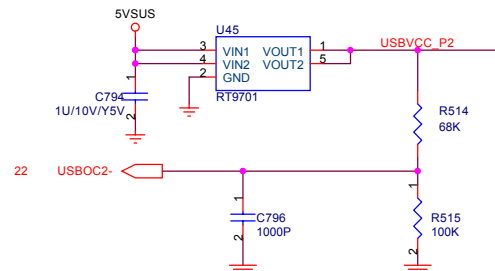
Size: A3 | Document Number: **AW1 M/B** | Rev: 1B

Date: Tuesday, July 06, 2004 | Sheet: 28 of 41

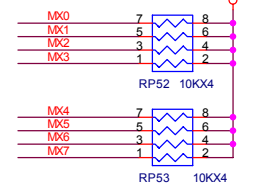
USB Power and Over current



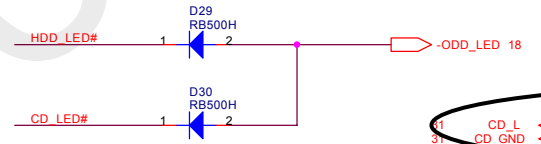
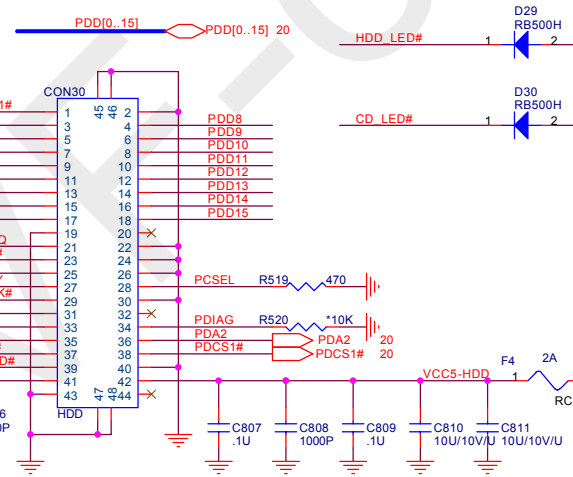
EC11



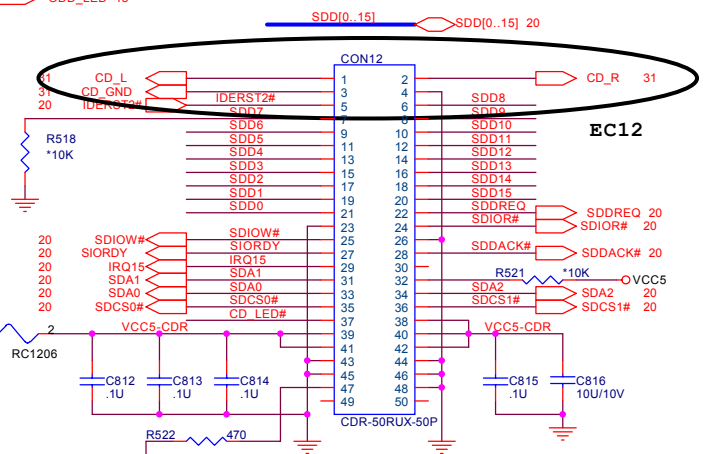
KEYBOARD



HDD CONNECTOR

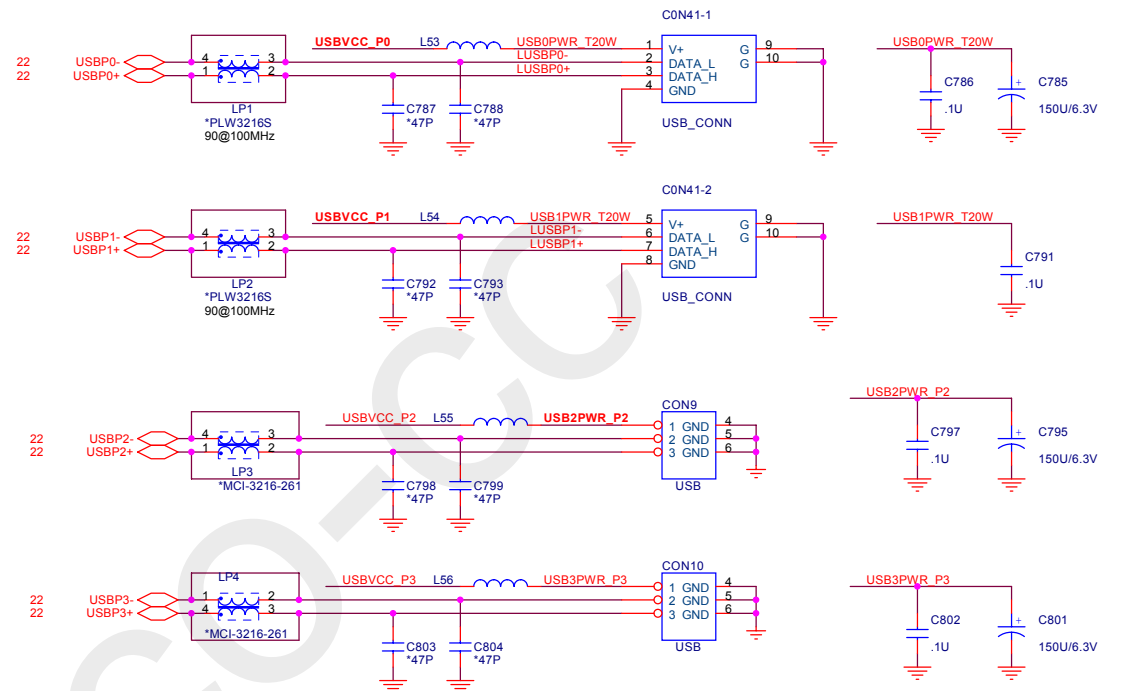


CD-ROM CONNECTOR



EC12

USB Connector



Place near the USB connector

QUANTA COMPUTER

Title: KB/USB/HDD/CDROM

Size: A3

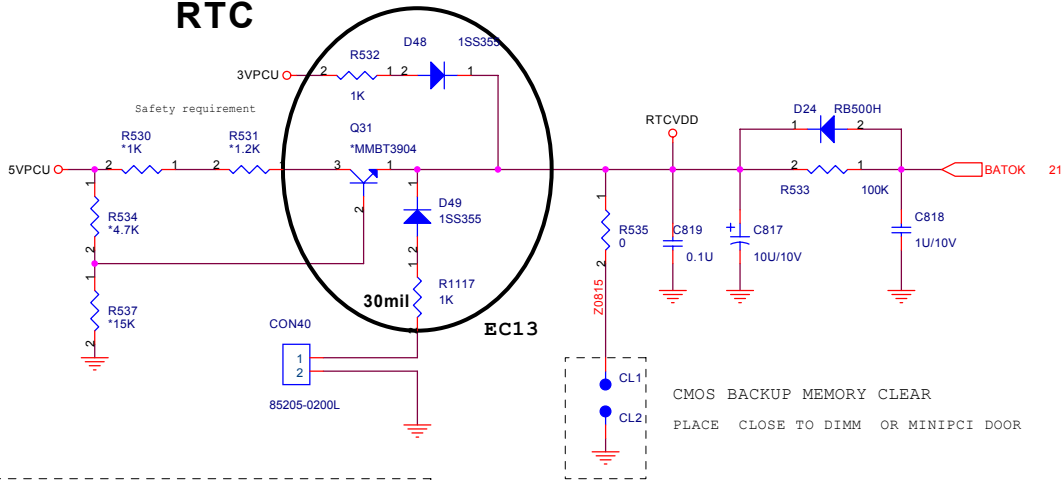
Date: Tuesday, July 06, 2004

Document Number: AW1 M/B

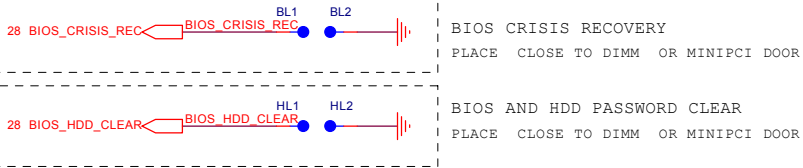
Sheet: 29 of 41

Rev: 1B

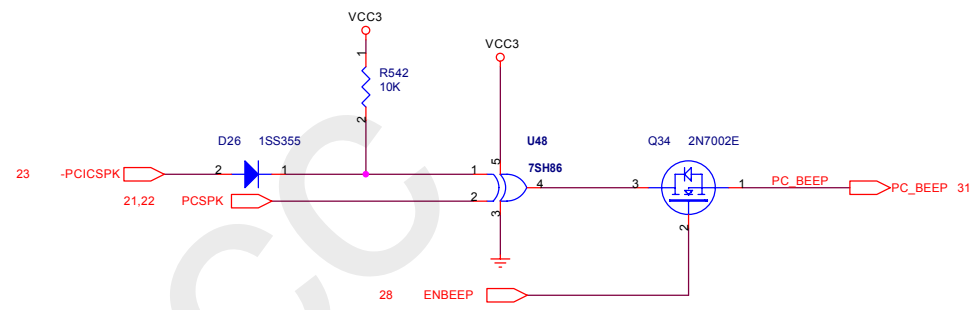
RTC



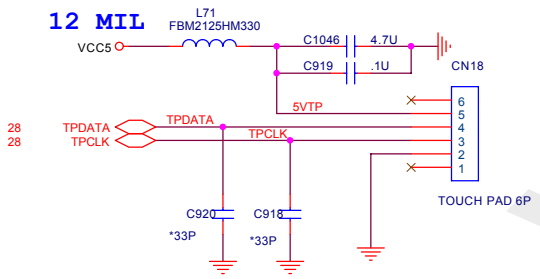
CMOS BACKUP MEMORY CLEAR
PLACE CLOSE TO DIMM OR MINIPCI DOOR



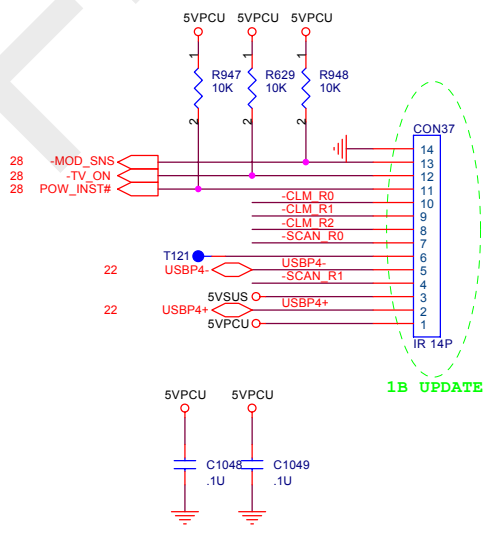
PC-BEEP



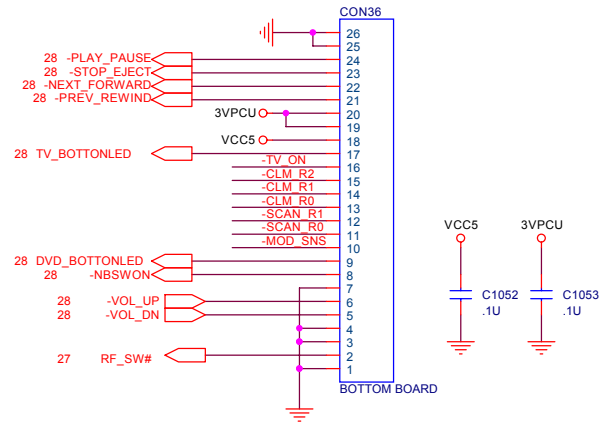
TOUCH PAD



TO RECEIVER MODULE



BUTTON BOARD

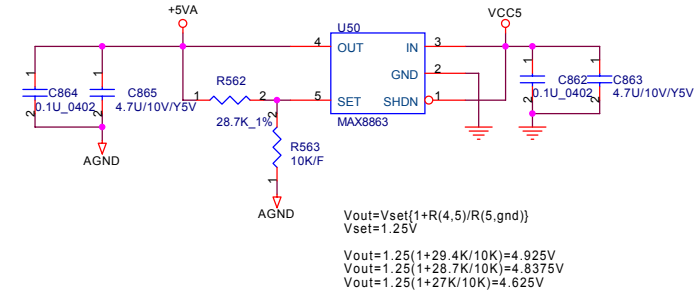
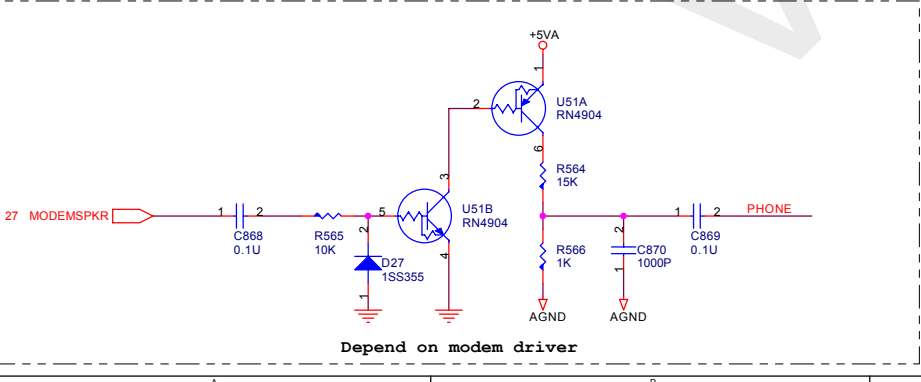
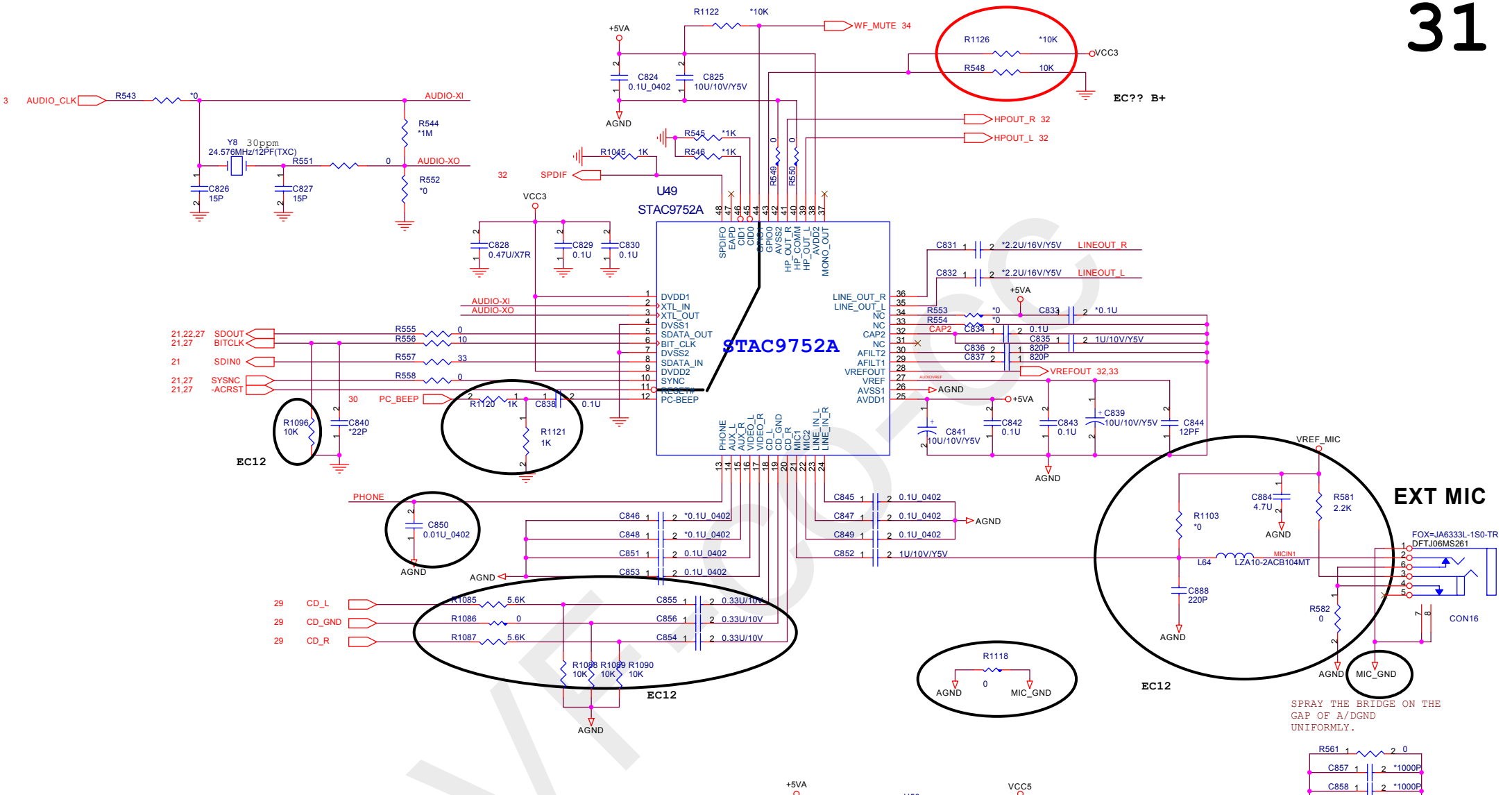


**QUANTA
COMPUTER**


Title: **FAN/RTC/PCBEEP**

Size: A3 Document Number: **AW1 M/B** Rev: 1B

Date: Tuesday, July 06, 2004 Sheet: 30 of 41

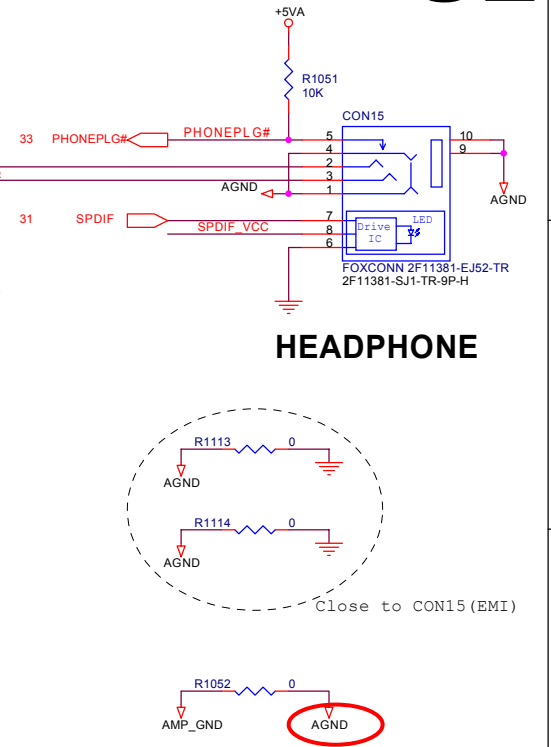
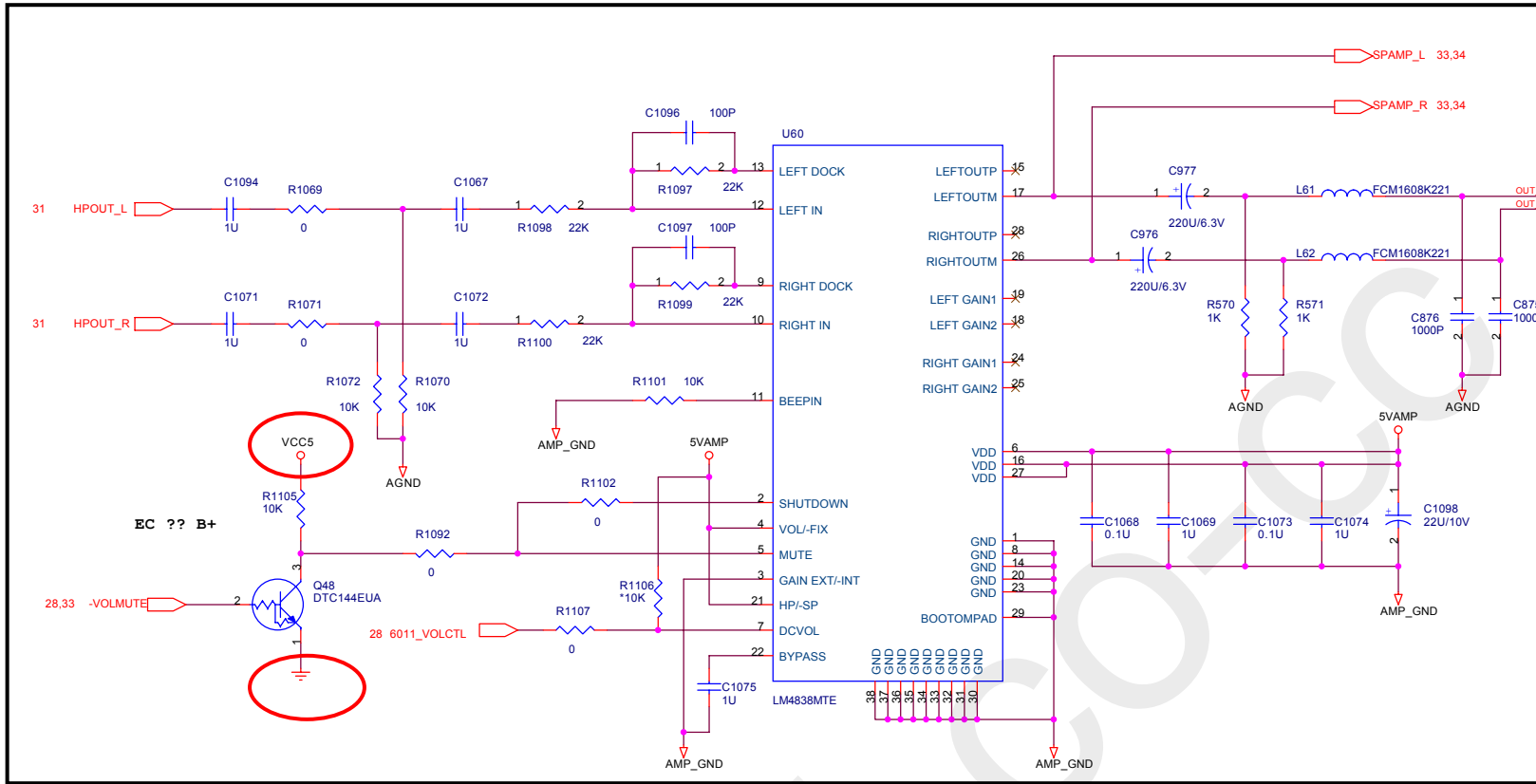


SPRAY THE BRIDGE ON THE GAP OF A/DGND UNIFORMLY.

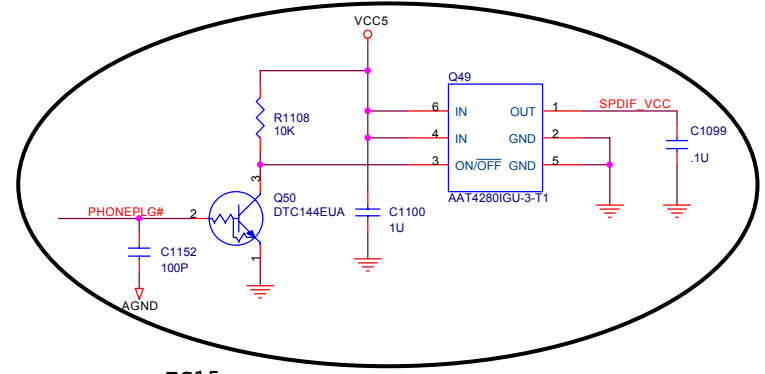
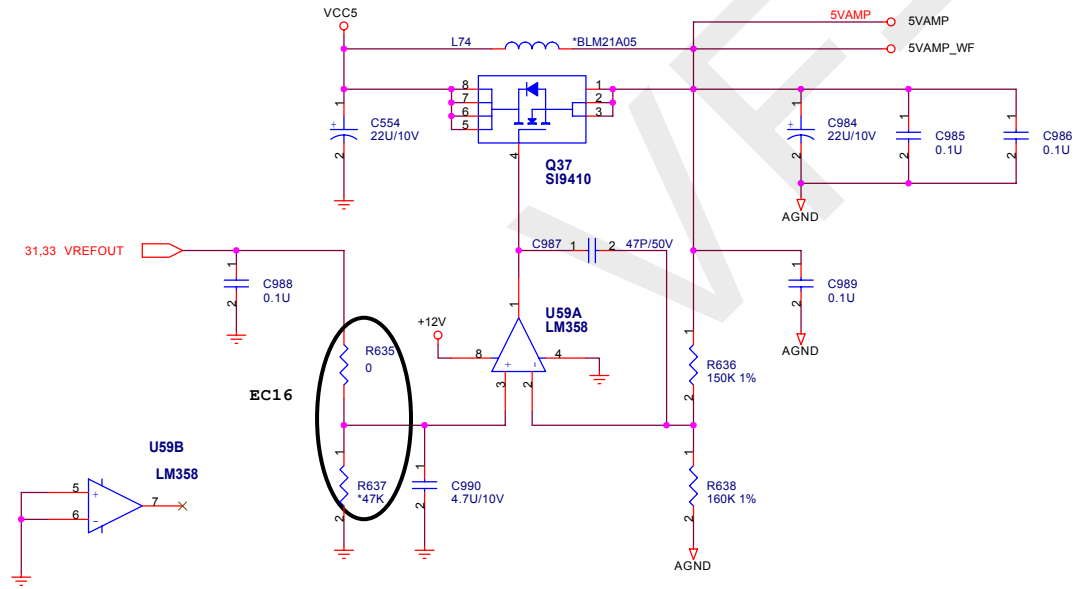


QUANTA COMPUTER

| | | |
|--|------------------------|----------------|
| Title | | |
| AUDIO(CODEC STAC9752A, MIC CON) | | |
| Size | Document Number | Rev |
| A3 | AW1 M/B | 1B |
| Date: | Tuesday, July 06, 2004 | Sheet 31 of 41 |



EC14



EC15

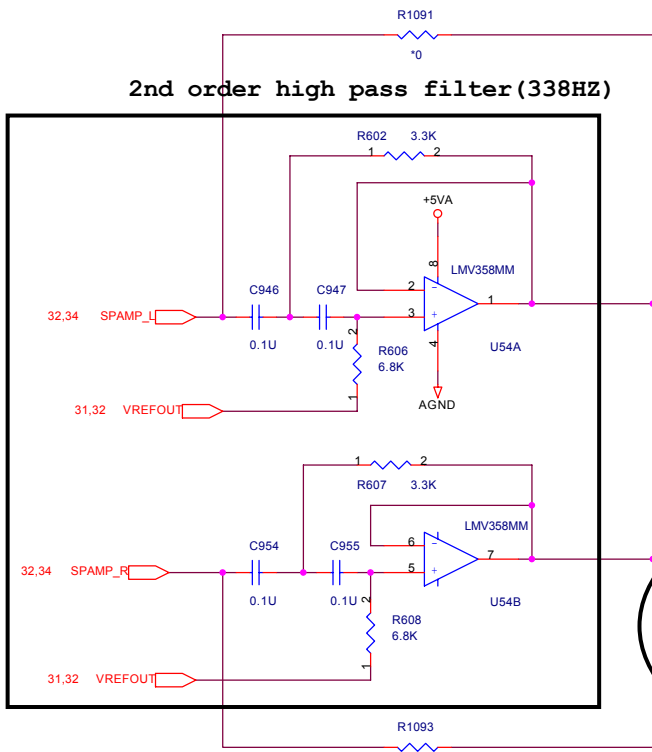
QUANTA COMPUTER

Title: **AMP for Speaker**

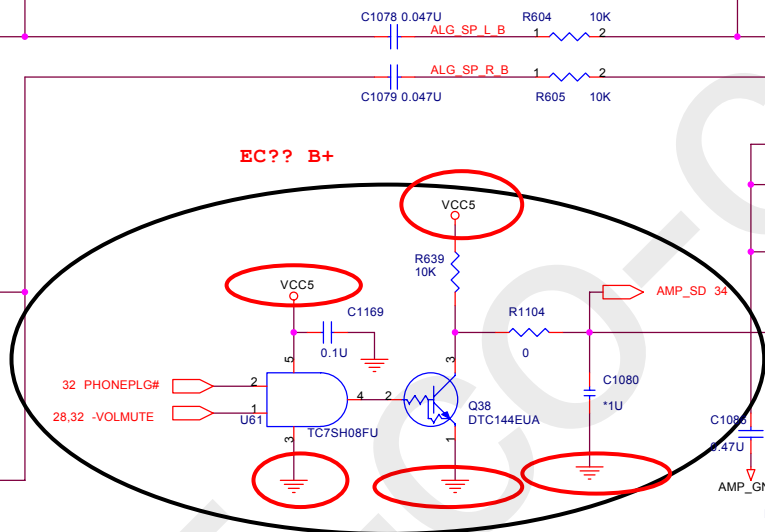
| | | |
|------------------------------|--------------------------|---------|
| Size: A3 | Document Number: AW1 M/B | Rev: 1B |
| Date: Tuesday, July 06, 2004 | Sheet: 32 of 41 | |

Cutoff:12.4KHz

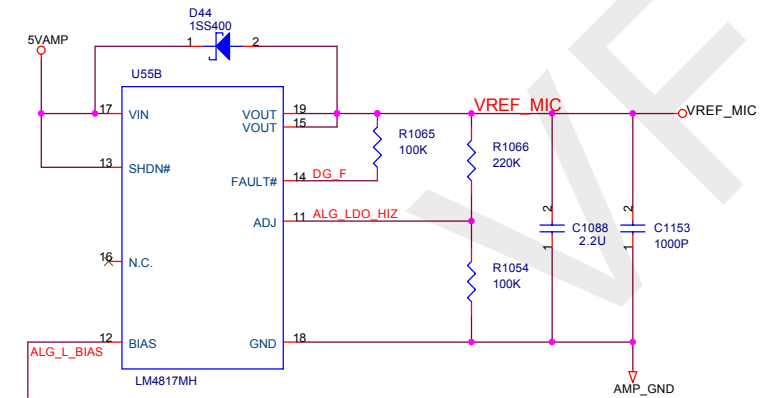
2nd order high pass filter(338HZ)



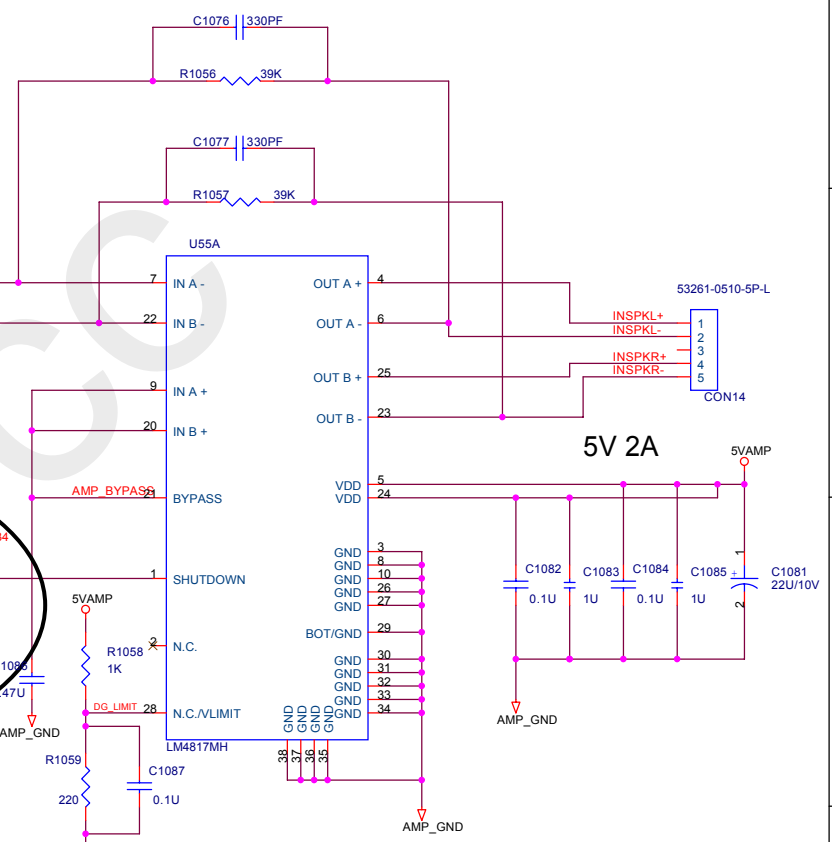
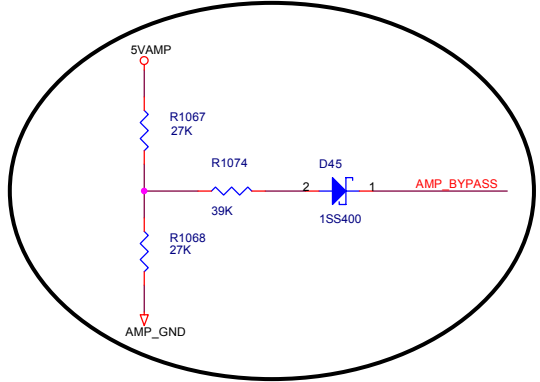
Cutoff:338Hz

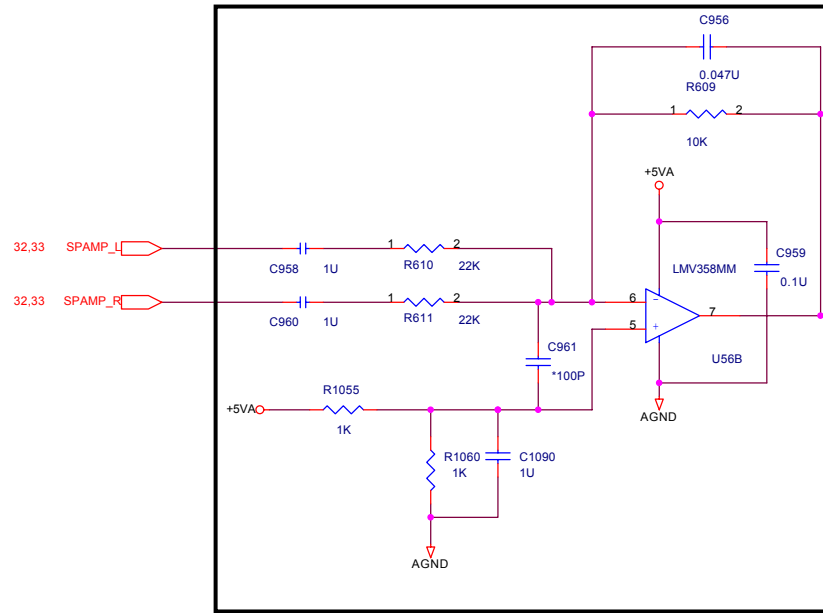


EC17

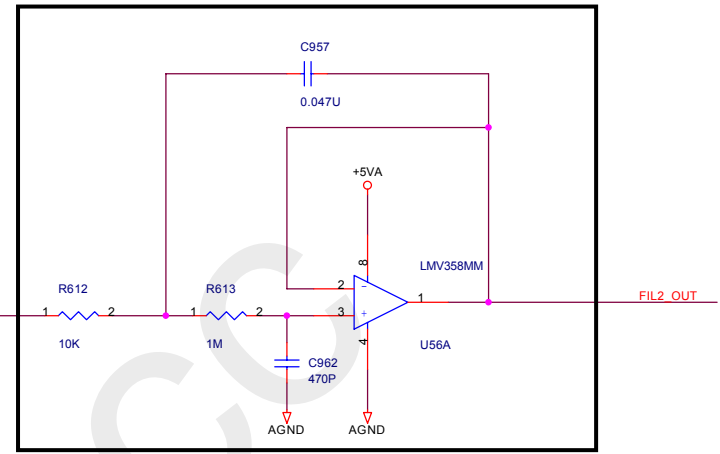


for MIC BIAS(4V 100mA)

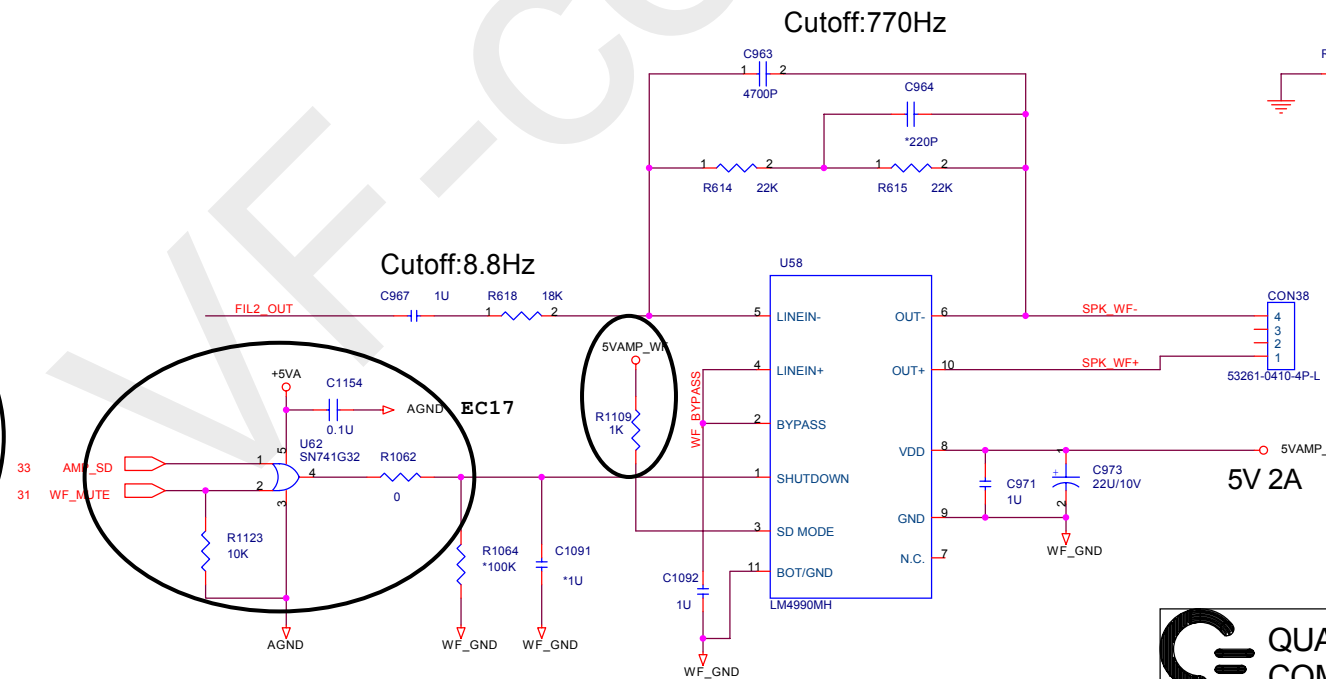
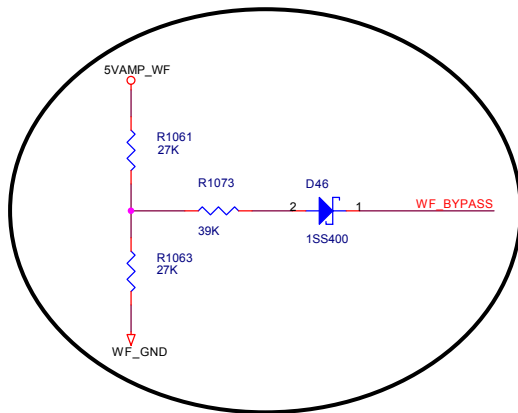




Mixer & 1st order low pass filter(338Hz)



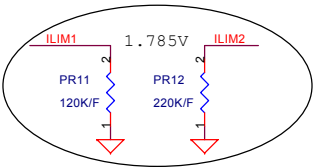
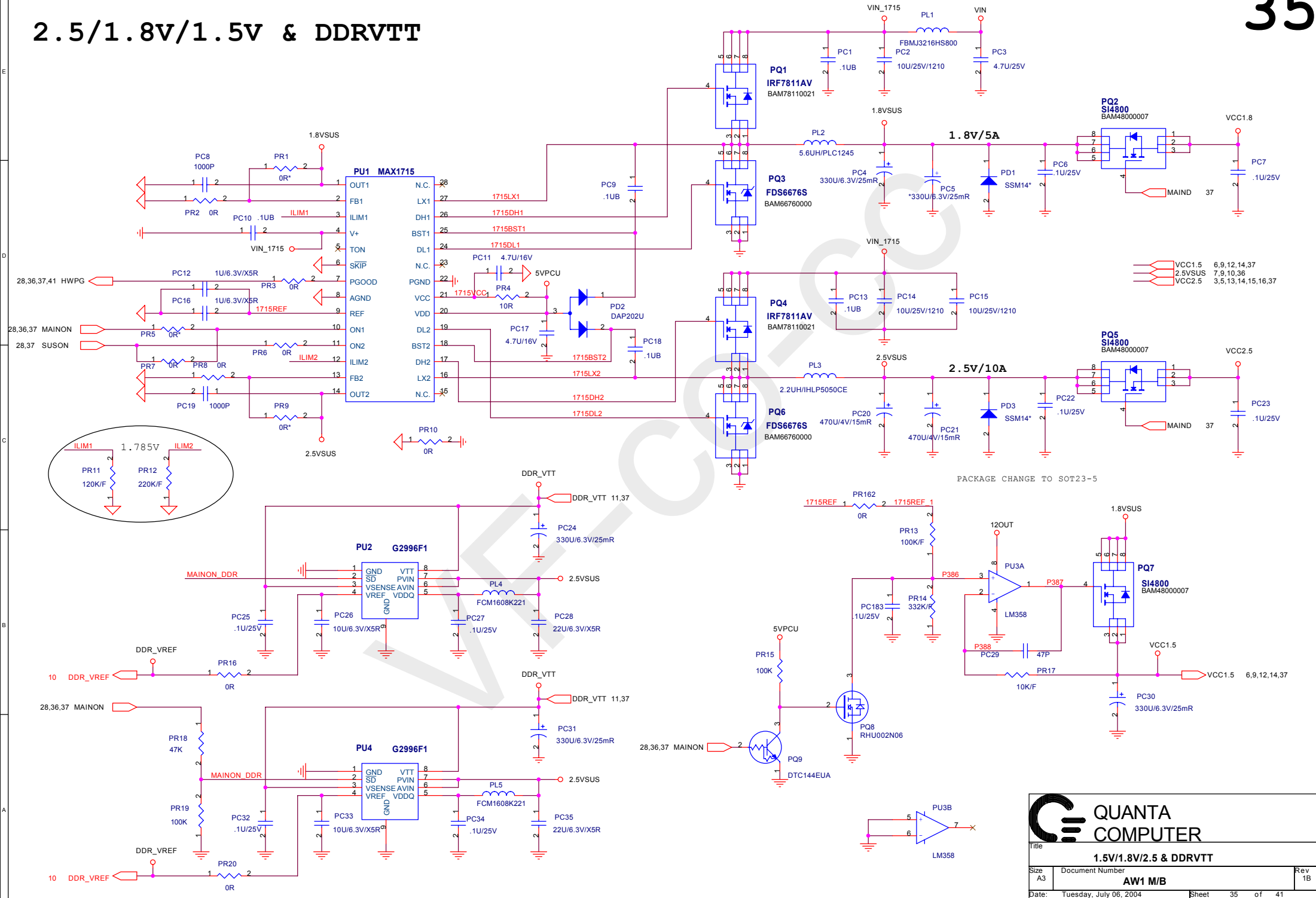
2nd order low pass filter(338Hz)



Cutoff:8.8Hz

Cutoff:770Hz

2.5/1.8V/1.5V & DDRVTT



- VCC1.5 6,9,12,14,37
- 2.5VSUS 7,9,10,36
- VCC2.5 3,5,13,14,15,16,37

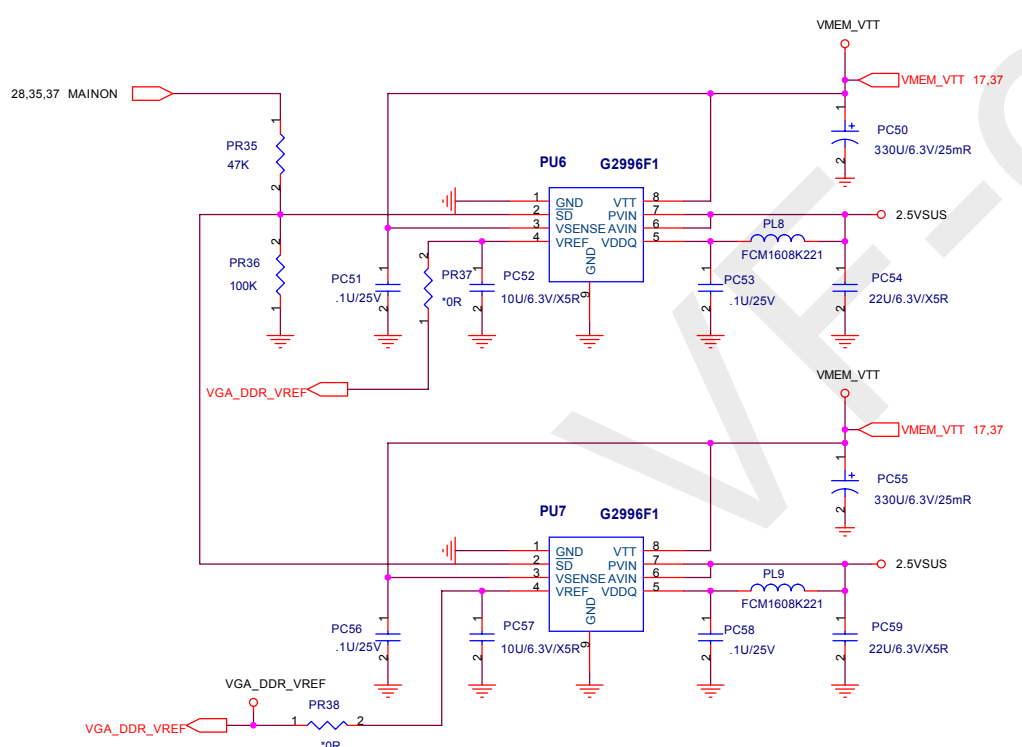
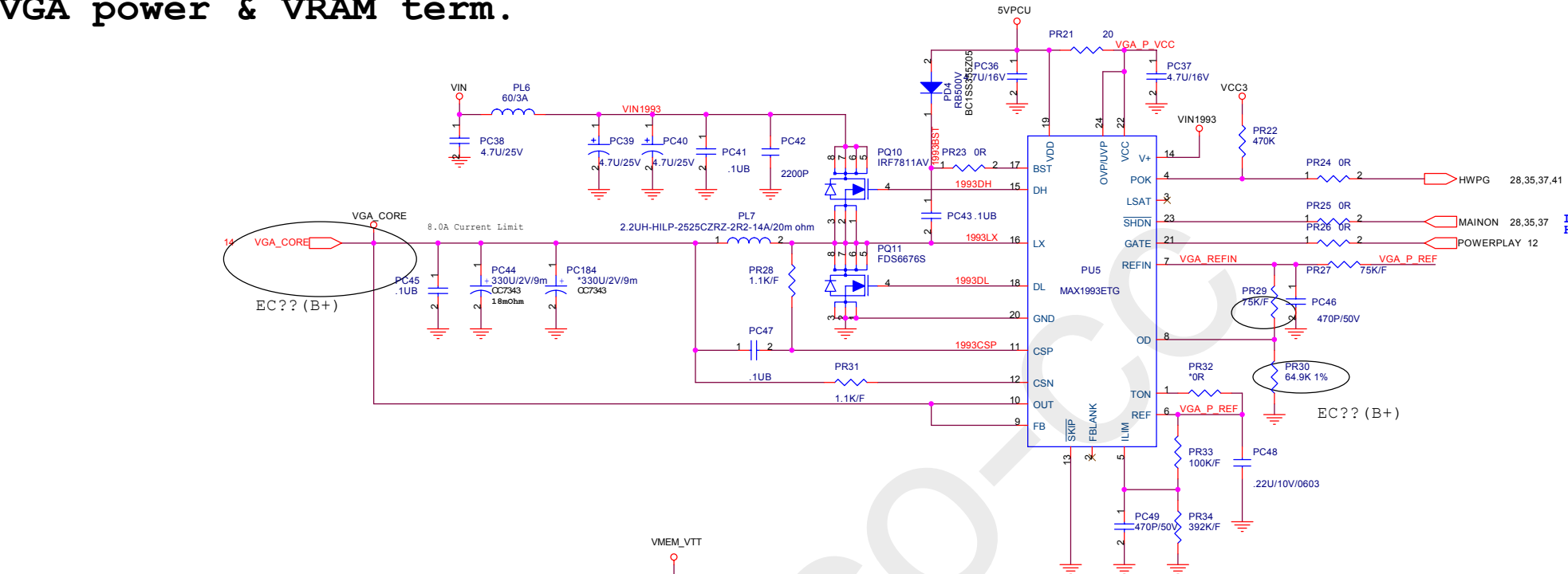
PACKAGE CHANGE TO SOT23-5


**QUANTA
COMPUTER**

Title: **1.5V/1.8V/2.5 & DDRVTT**

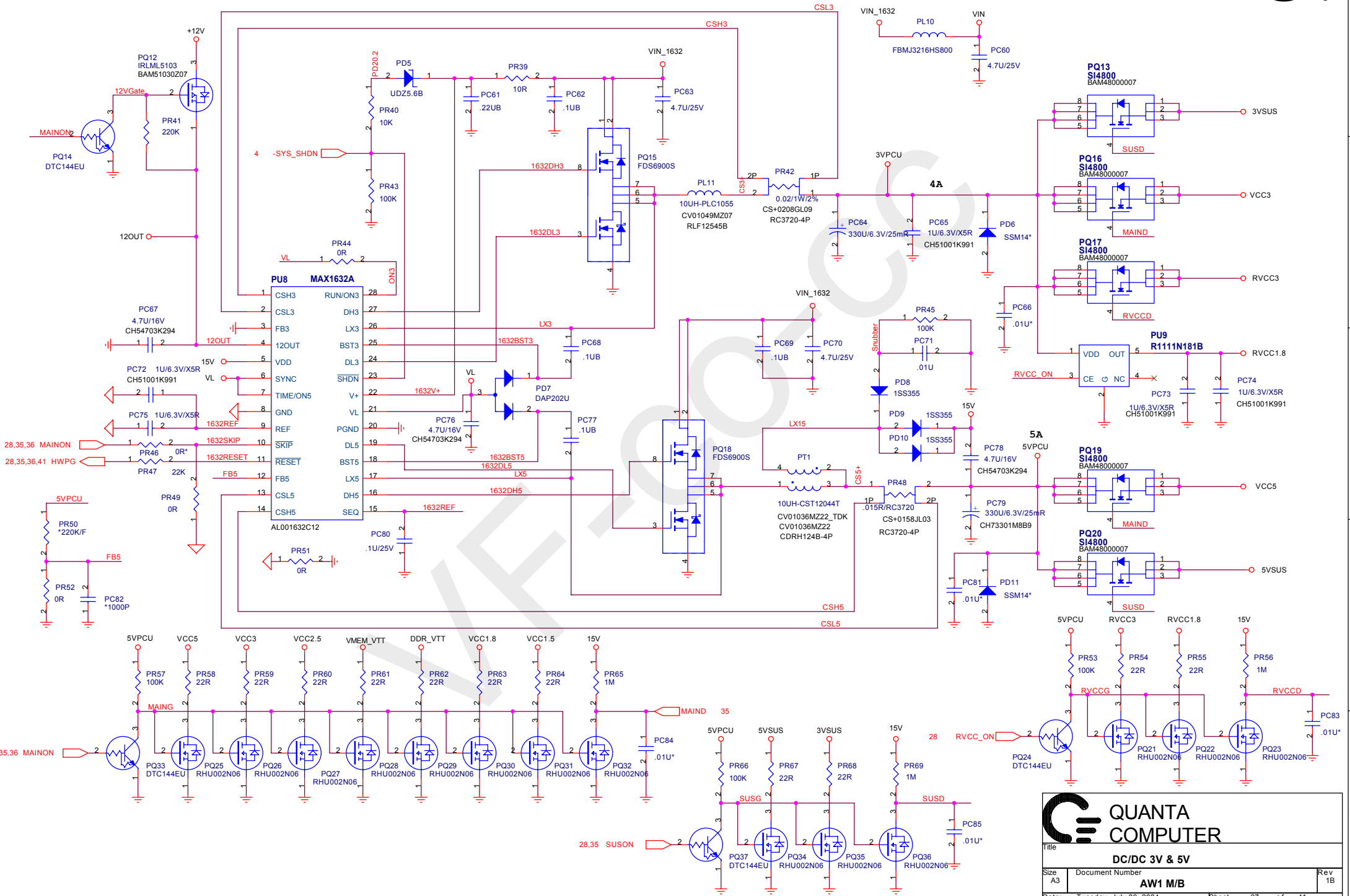
| | | |
|------------------------------|---------------------------------|-----------------|
| Size: A3 | Document Number: AW1 M/B | Rev: 1B |
| Date: Tuesday, July 06, 2004 | | Sheet: 35 of 41 |


VGA power & VRAM term.



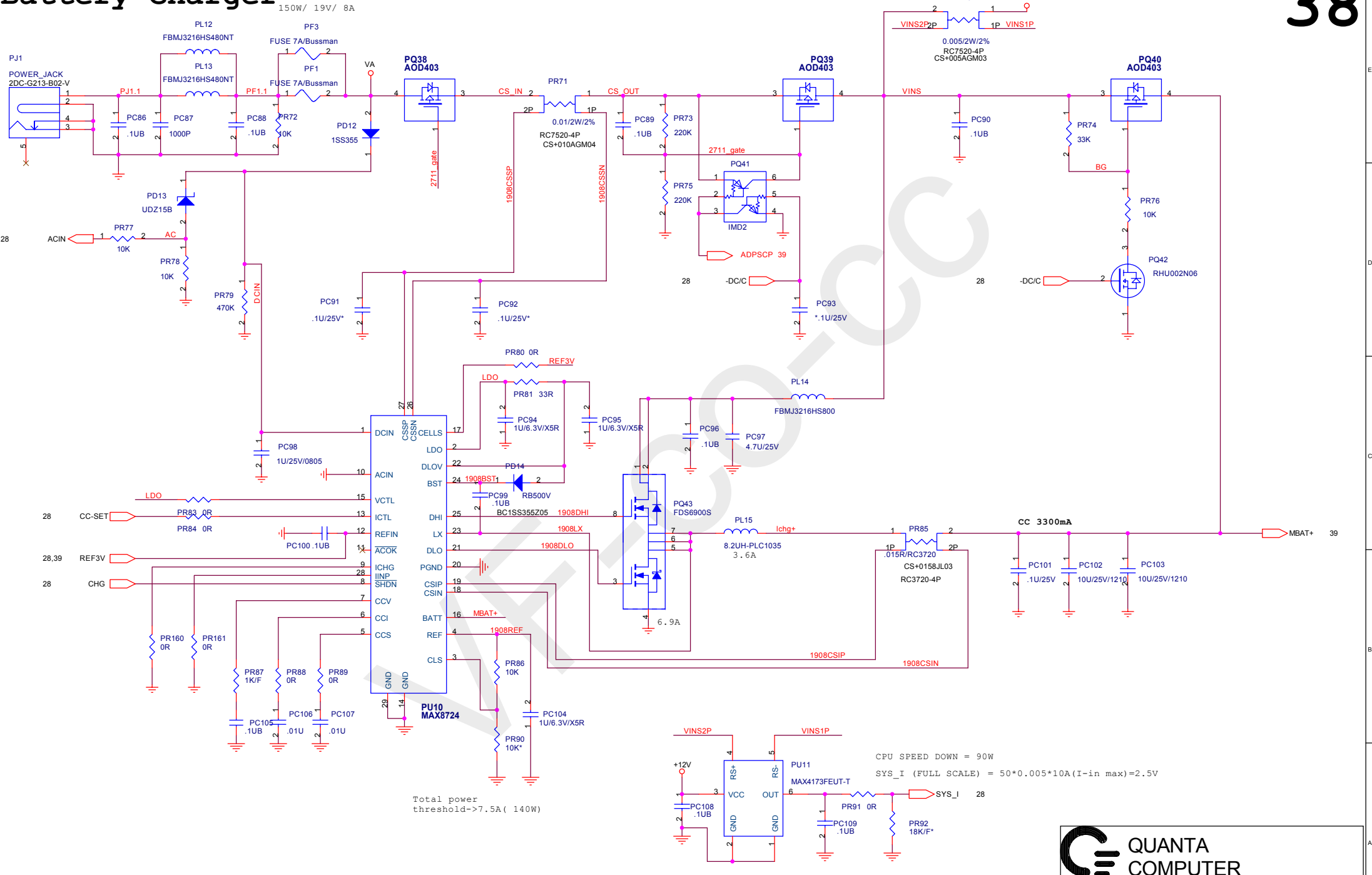
| | | |
|--|---------------------------------|---------|
|  QUANTA COMPUTER | | |
| Title: M11-VGA POWER | | |
| Size: A3 | Document Number: AW1 M/B | Rev: 1B |
| Date: Tuesday, July 06, 2004 | Sheet: 36 of 41 | |

DC/DC 3.3V&5V



| | | |
|--|---------------------------------|---------|
|  QUANTA COMPUTER | | |
| Title: DC/DC 3V & 5V | | |
| Size: A3 | Document Number: AW1 M/B | Rev: 1B |
| Date: Tuesday, July 06, 2004 | Sheet: 37 of 41 | |

Battery Charger



Total power threshold->7.5A (140W)

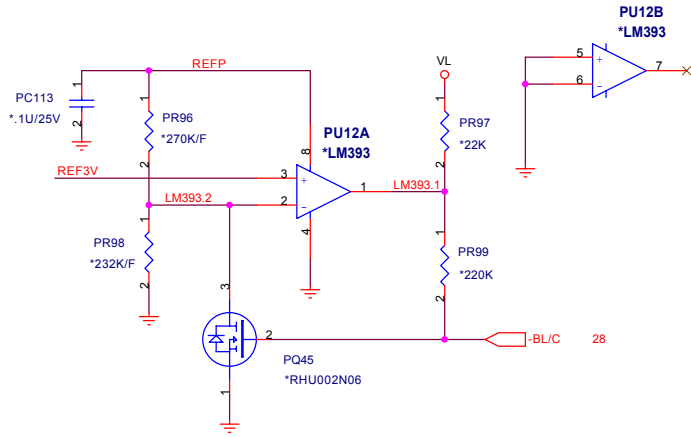
CPU SPEED DOWN = 90W
 SYS_I (FULL SCALE) = 50*0.005*10A(I-in max)=2.5V

Only PWRON will enable this CKT.

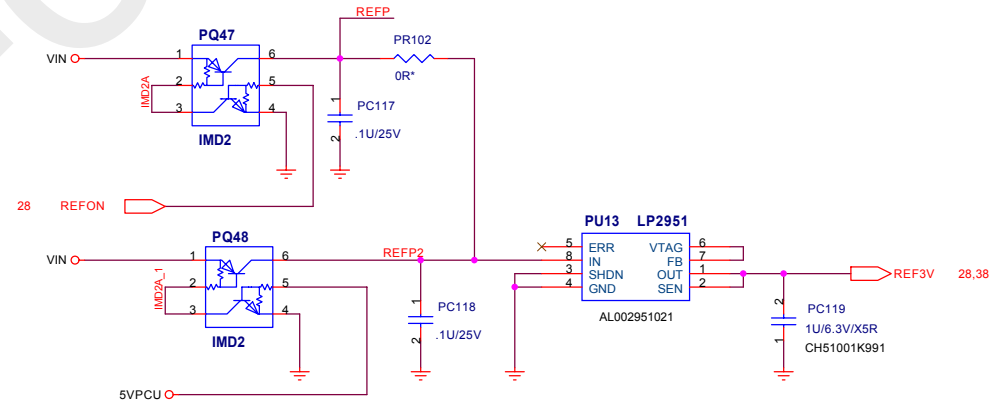
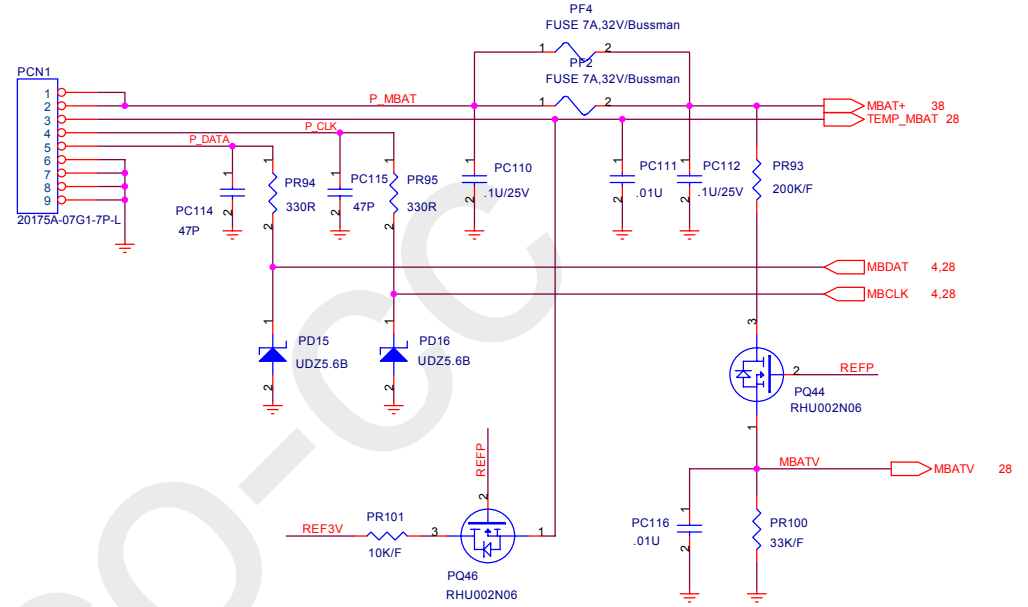
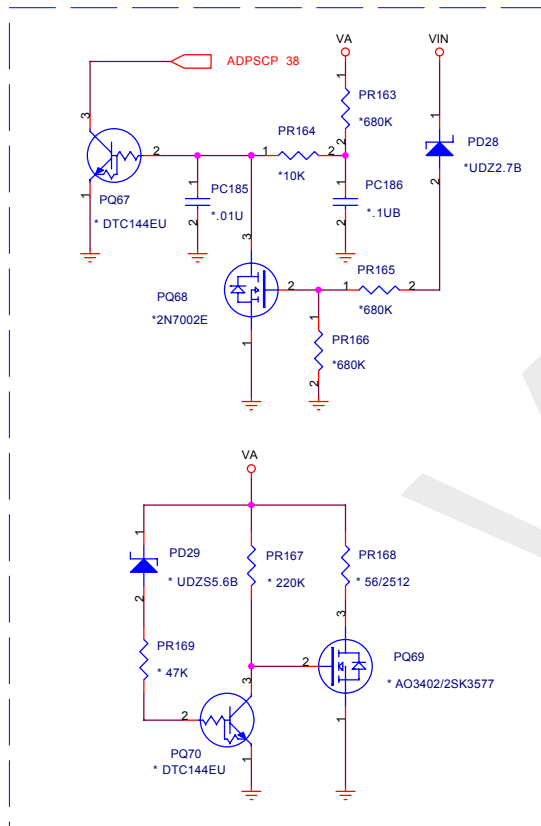
QUANTA COMPUTER

| | | |
|------------------------|------------------------|-----|
| BATTERY CHARGER | | |
| Title | Document Number | Rev |
| AW1 M/B | | 1/B |
| Size | Date: | |
| A3 | Tuesday, July 06, 2004 | |
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| 38 | | 41 |

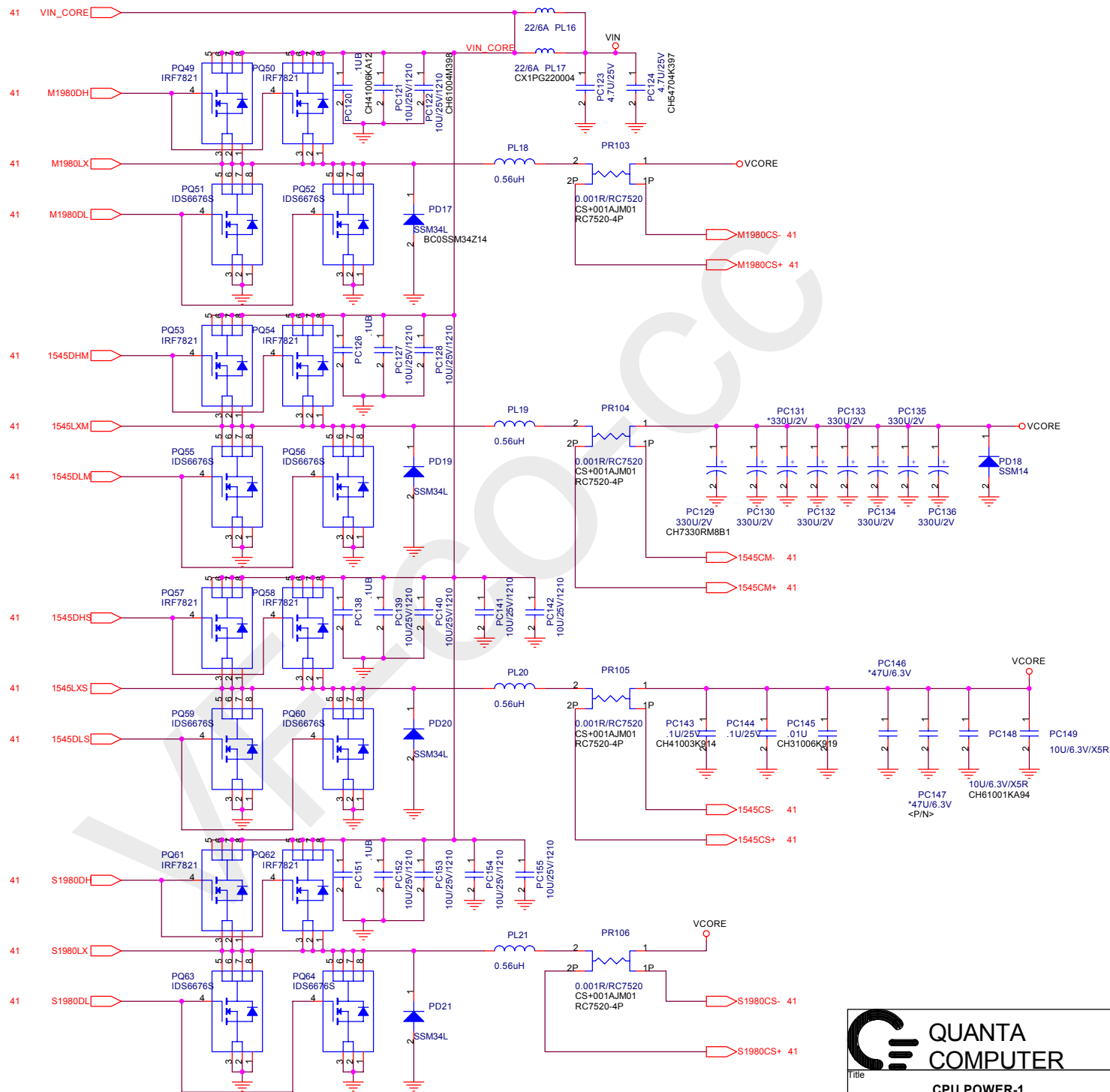
Battery Connector



SCP CKT



| | | | |
|------------------------------|-----------------------------------|-----------------------------------|---|
| | | QUANTA COMPUTER | |
| | | Title BATTERY CONNECTOR | |
| Size A3 | Document Number AW1 M/B | Rev 1B | |
| Date: Tuesday, July 06, 2004 | | Sheet 39 of 41 | 1 |



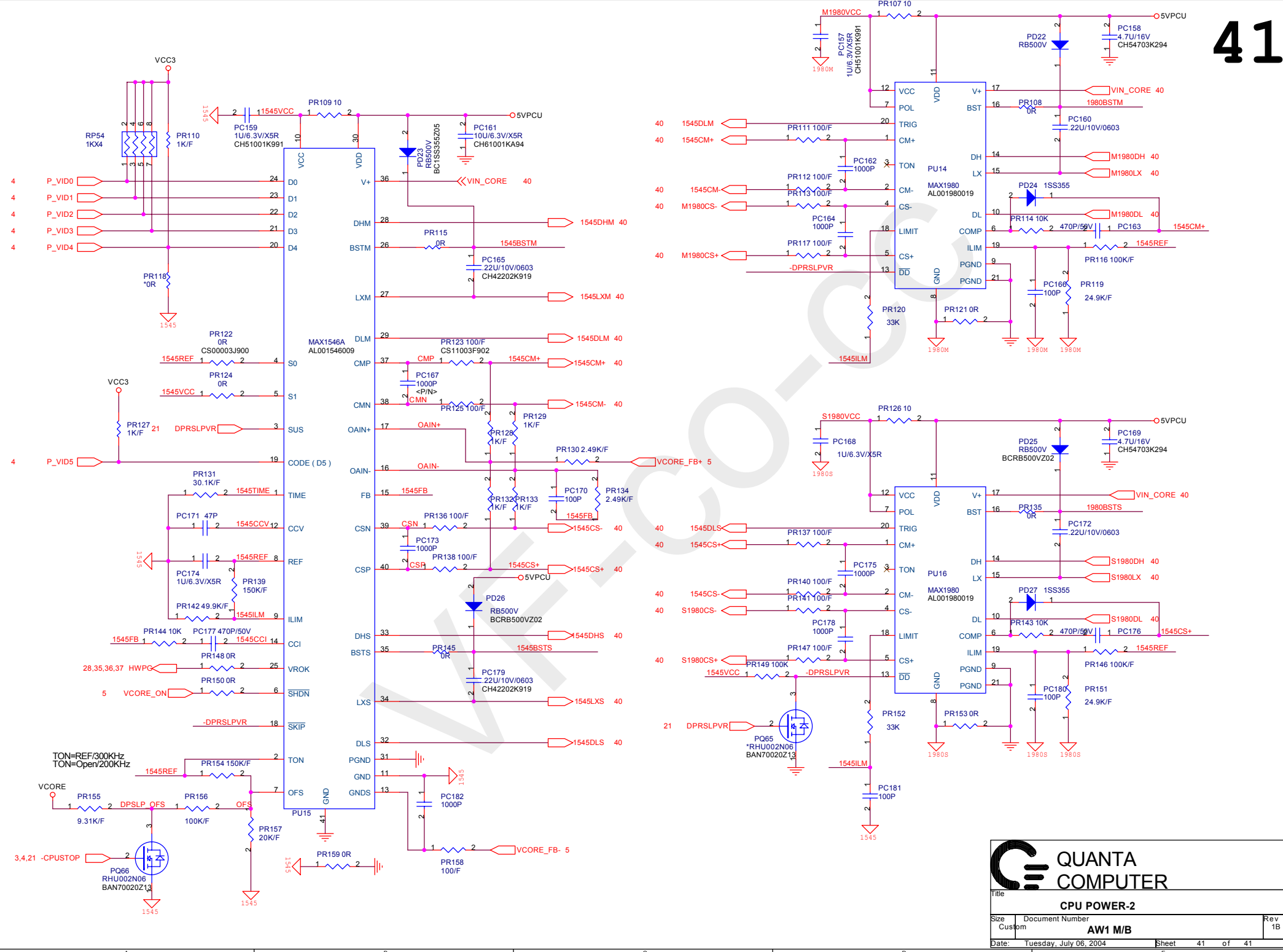
THIS PART SHOULD NOT CONTAIN ANY SUBSTANCES WHICH ARE SPECIFIED IN SS-00259-1.



Title
CPU POWER-1

Size Document Number
Custom **AW1 M/B** Rev 1B

Date: Tuesday, July 06, 2004 Sheet 40 of 41



| | | | |
|-------------|------------------------|-----------------|----------|
| | | QUANTA | |
| | | COMPUTER | |
| Title | | | |
| CPU POWER-2 | | | |
| Size | Document Number | Rev | |
| Custom | AW1 M/B | 1B | |
| Date: | Tuesday, July 06, 2004 | Sheet | 41 of 41 |

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