VM5 MLB
Block Diagram

01

CPU
INTEL P4
(SOCKET-478)
P3 P4 P5

Thermal P29
Thermal sensor & Fan

HostBus

NB
SIS 650
(702 PIN BGA)
P6 P7 P8 P9

Memory
P14 P15 P16
DDR 2100MB/s (133MHz)

CRT DDC2B
CRT
1x D-SUB 15-Pin P11

VB 12bit
VA 12bit
LVDS Transmitter
SIS302ELV
P10

LVDS
NTSC/PAL
LCD
1x 14" XGA P11

TV-OUT
1x3.5 Jack P12

MuTIOL(533 MB/s)
266MHz

SB
SIS 962L
(371 PIN BGA)
P17 P18 P19

HDD
Primary Master P27
ATA 66/100MHz

ODD
Secondary Master P27
ATA 66/100MHz

USB
3x connector P28
USB 2.0

PCI 2.2
Mini PCI
WLAN 802.11g P22
Antenna

133MB/s (33MHZ)
CardBus
TI PCI1510 P20
PC Card
1x type-I/II P21
IEEE1394
1x 4-Pin S400 P21

MII
LAN PHY
RTL 8201BL P23
RJ-45
1x 8P8C P24

AC'97 2.1
MDC
56K MODEM
RJ-11 X1
1x 6P2C

AC97 Codec
AD1981B P25
MIC-In Jack P26
HP-Out Jack
AMP
MAX9761
Int. Speaker

LPC

Int. Keyboard
87-Key, P18.0, S3.0 P31

Track Pad
2-button w/Scroll bar

PCU
NS PC87591L
P30

BIOS
P30

P36 Battery
DC In
DC/DC & Charge
P33

QUANTA COMPUTER

Title: Block Diagram
Size: Custom | Document Number: VM5 Main Board | Rev: 1A
Date: Thursday, April 22, 2004 | Sheet 1 of 40

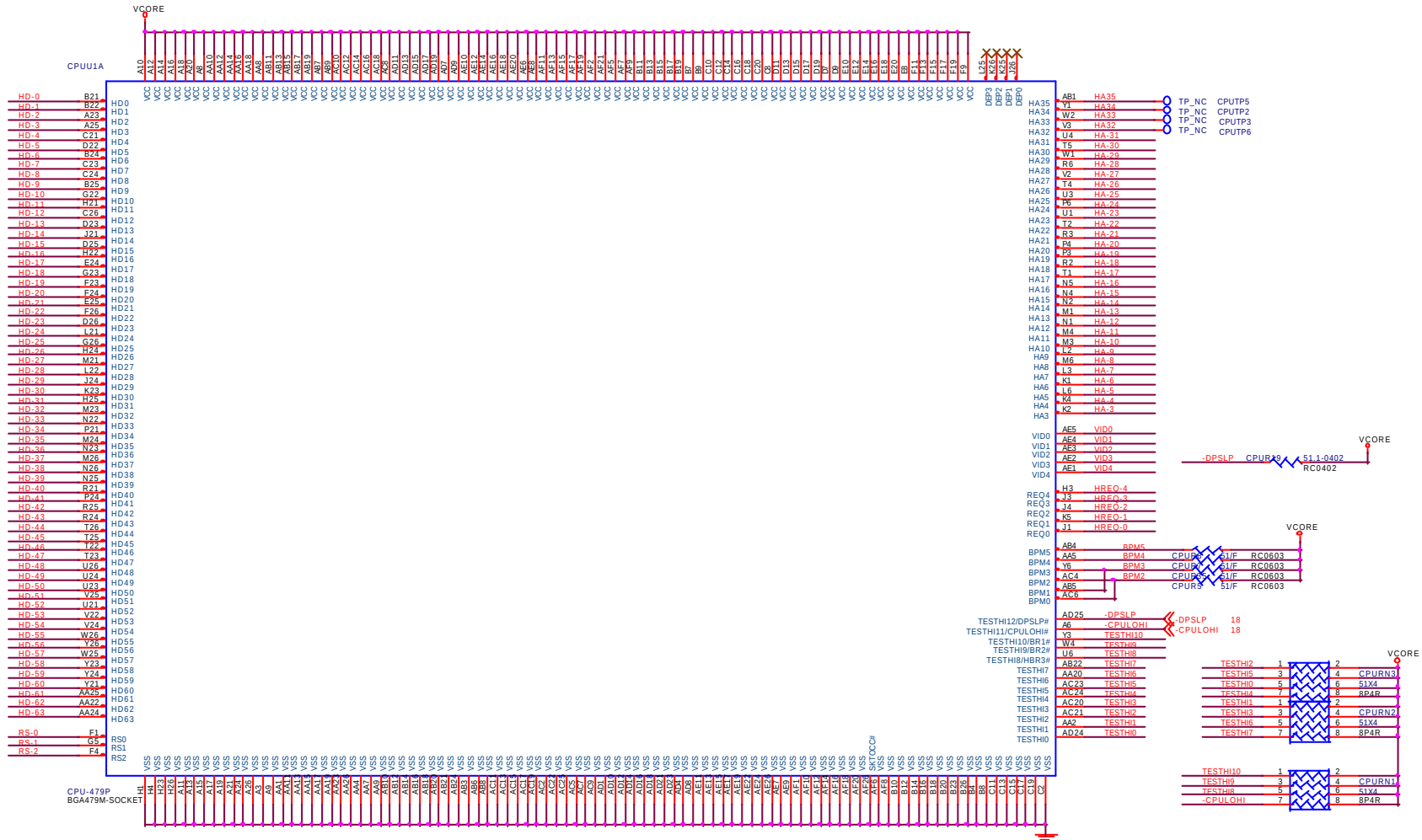
Page List

QUANTA COMPUTER

Title: Page List

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 2 of 40

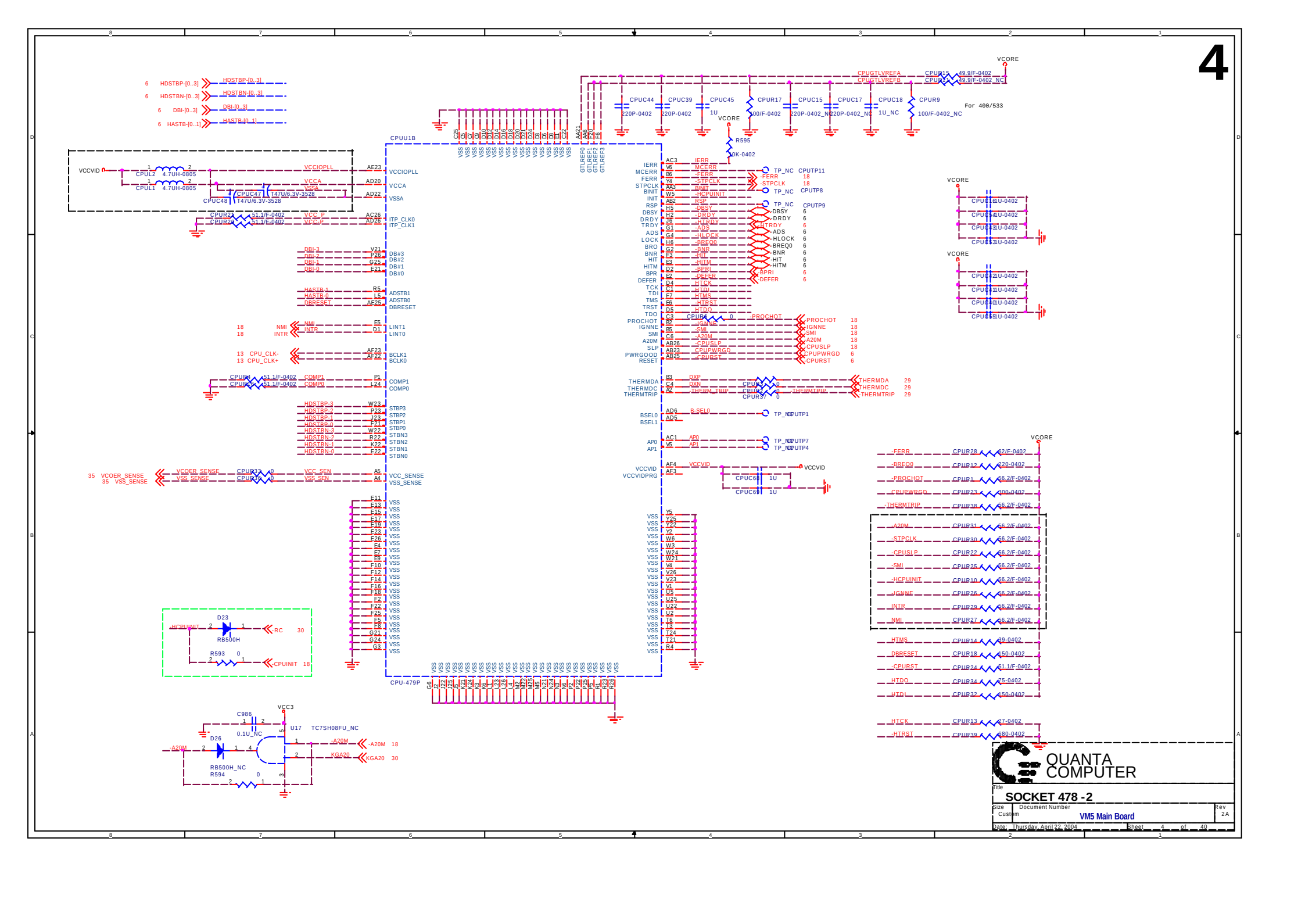


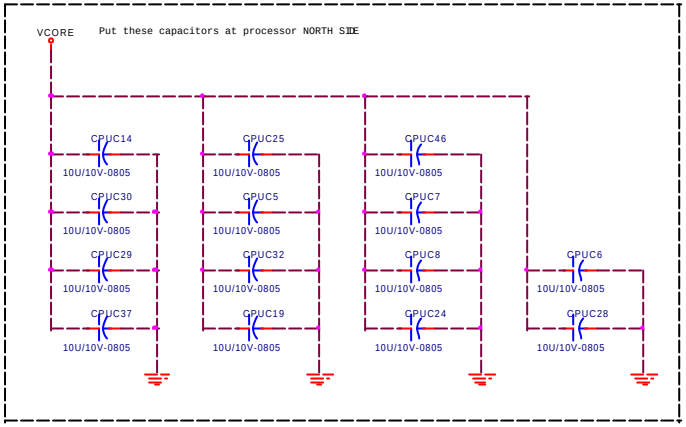
QUANTA COMPUTER

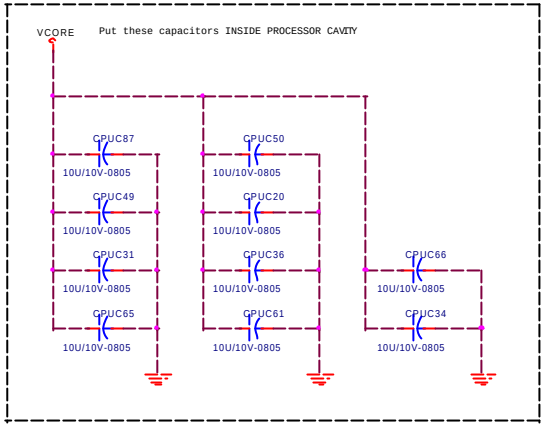
Title: SOCKET 478 -1

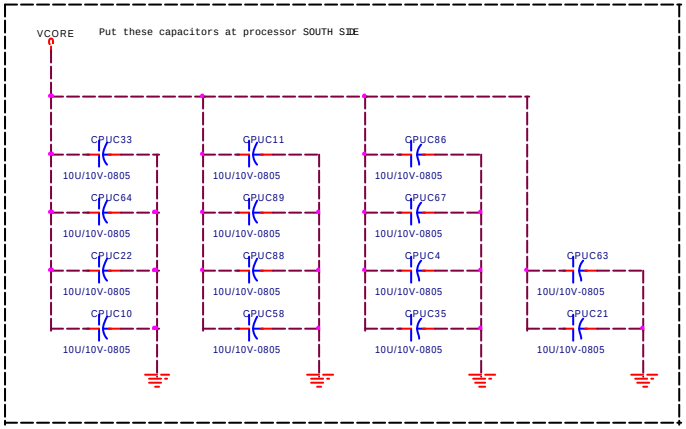
Size: Custom | Document Number: VM5 Main Board | Rev: 2A

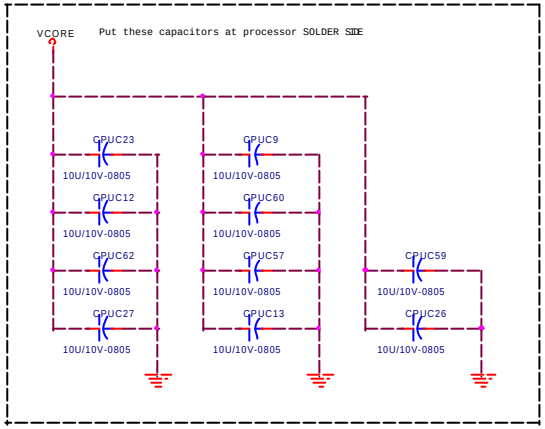
Date: Thursday, April 22, 2004 | Sheet 3 of 40


4
CPUU1B
CPU-479P
VCCVID
VCCIOPLL
VCCA
VSSA
VCORE
R595
200-0402
CPUC44
CPUC39
CPUC45
CPUR17
CPUC15
CPUC17
CPUC18
CPUR9
220P-0402
1U
100/F-0402
For 400/533
CPUGTLVREFA
CPUGTLVREFB
CPUR15
CPUR16
49.9/F-0402
39.9/F-0402_NC
HDSTBP-[0..3]
HDSTBN-[0..3]
DBI-[0..3]
HASTB-[0..1]
CPUC47
CPUC48
T47U/6.3V-3528
CPUR23
CPUR24
51.1/F-0402
ITP_CLK0
ITP_CLK1
DBI-3
DBI-2
DBI-1
DBI-0
DB#3
DB#2
DB#1
DB#0
HASTB-1
HASTB-0
DBRESET
ADSTB1
ADSTB0
OBRESET
NMI
INTR
LINT1
LINT0
CPU_CLK-
CPU_CLK+
BCLK1
BCLK0
CPUR31
CPUR32
COMP1
COMP0
HDSTBP-3
HDSTBP-2
HDSTBP-1
HDSTBP-0
HDSTBN-3
HDSTBN-2
HDSTBN-1
HDSTBN-0
STBP3
STBP2
STBP1
STBP0
STBN3
STBN2
STBN1
STBN0
VCOER_SENSE
VSS_SENSE
VCC_SEN
VSS_SEN
VCC_SENSE
VSS_SENSE
CPUR33
CPUR34
IERR
MCERR
FERR
STPCLK
BINIT
INIT
RSP
DBSY
DRDY
TRDY
ADS
LOCK
BRO
BNR
HIT
HITM
BPR
DEFER
TCK
TDI
TMS
TRST
TDO
PROCHOT
IGNNE
SMI
A20M
SLP
PWRGOOD
RESET
THERMDA
THERMDC
THERMTRIP
BSEL0
BSEL1
AP0
AP1
VCCVIDPRG
CPUC60
CPUC61
CPUR35
CPUR36
CPUR37
CPUR38
CPUTP11
CPUTP8
CPUTP9
CPUTP1
CPUTP7
CPUTP4
D23
RB500H
R593
HCPUINIT
RC
CPUINIT
C986
0.1U_NC
D26
RB500H_NC
R594
U17
TC7SH08FU_NC
A20M
KGA20
CPUR28
CPUR12
CPUR1
CPUR23
CPUR38
CPUR31
CPUR30
CPUR22
CPUR25
CPUR10
CPUR26
CPUR29
CPUR27
CPUR14
CPUR18
CPUR24
CPUR34
CPUR32
CPUR13
CPUR39
62/F-0402
220-0402
66.2/F-0402
200-0402
39-0402
150-0402
61.1/F-0402
75-0402
27-0402
680-0402
QUANTA COMPUTER
SOCKET 478 -2
VM5 Main Board
Size
Custom
Document Number
Rev
2A
Date: Thursday, April 22, 2004
Sheet 4 of 40

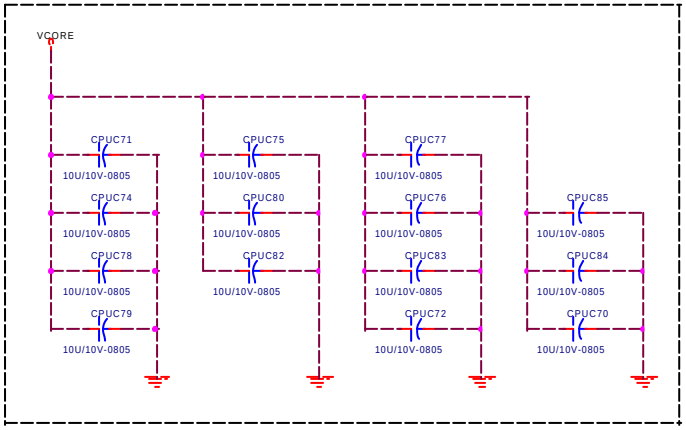


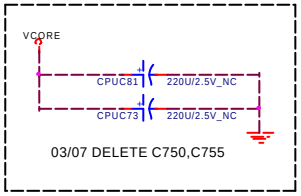






P.S. Choose X7R/X5R components instead of Y5V for all 10uF_1206 capacitors on this page.





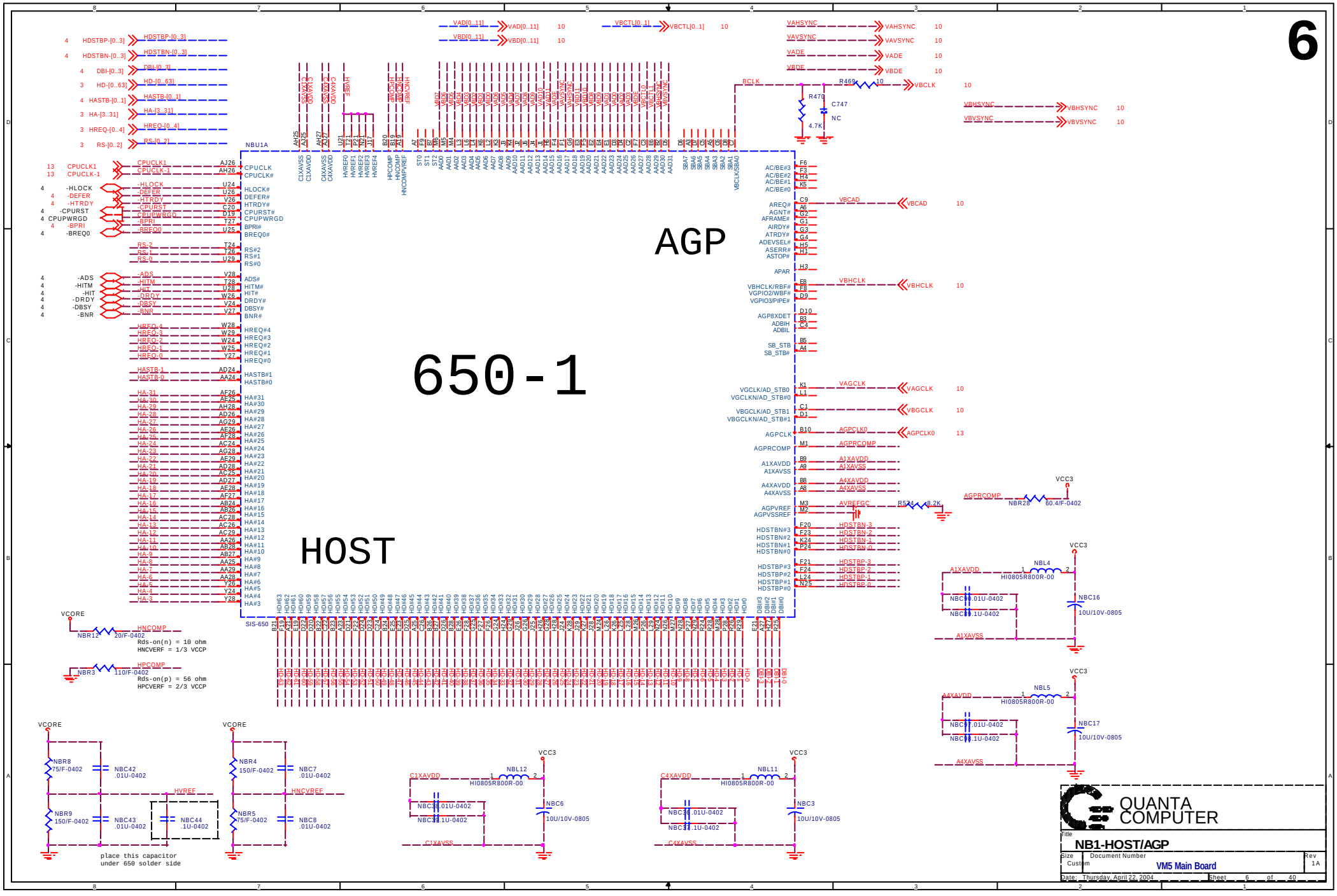
03/07 DELETE C750,C755

QUANTA COMPUTER

Title: SOCKET 478 -3

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 5 of 40


6
650-1
AGP
HOST
NBU1A
SIS-650
HDSTBP-[0..3]
HDSTBN-[0..3]
DBI-[0..3]
HD-[0..63]
HASTB-[0..1]
HA-[3..31]
HREQ-[0..4]
RS-[0..2]
VAD[0..11]
VBD[0..11]
VBCTL[0..1]
VAHSYNC
VAVSYNC
VADE
VBDE
VBCLK
VBHSYNC
VBVSYNC
CPUCLK1
CPUCLK-1
-HLOCK
-DEFER
-HTRDY
-CPURST
CPUPWRGD
-BPRI
-BREQ0
-ADS
-HITM
-HIT
-DRDY
-DBSY
-BNR
VBCAD
VBHCLK
VAGCLK
VBGCLK
AGPCLK0
AGPRCOMP
AVREFGC
HDSTBN-3
HDSTBN-2
HDSTBN-1
HDSTBN-0
HDSTBP-3
HDSTBP-2
HDSTBP-1
HDSTBP-0
VCORE
HNCOMP
NBR12
20/F-0402
Rds-on(n) = 10 ohm
HNCVERF = 1/3 VCCP
HPCOMP
NBR3
110/F-0402
Rds-on(p) = 56 ohm
HPCVERF = 2/3 VCCP
HVREF
HNCVREF
NBR8
75/F-0402
NBC42
.01U-0402
NBR9
150/F-0402
NBC43
.01U-0402
NBC44
.1U-0402
NBR4
150/F-0402
NBC7
.01U-0402
NBR5
75/F-0402
NBC8
.01U-0402
place this capacitor
under 650 solder side
C1XAVDD
C4XAVDD
NBL12
NBL11
HI0805R800R-00
NBC36
.01U-0402
NBC37
.1U-0402
NBC6
NBC3
10U/10V-0805
C1XAVSS
C4XAVSS
VCC3
A1XAVDD
A4XAVDD
NBL4
NBL5
NBC16
NBC17
A1XAVSS
A4XAVSS
R470
4.7K
C747
NC
R469
10
R574
8.2K
NBR28
60.4/F-0402
QUANTA
COMPUTER
Title
NB1-HOST/AGP
Size
Custom
Document Number
VM5 Main Board
Rev
1A
Date: Thursday, April 22, 2004
Sheet 6 of 40

MAA[0..14] MAA[0..14] 14,15,16
-CSA[0..3] CSA[0..3] 14,15,16
CKE[0..3] CKE[0..3] 15,16
RMD[0..63] RMD[0..63] 14,15,16
RDQM[0..7] RDQM[0..7] 14,15,16
RDQS[0..7] RDQS[0..7] 14,15,16

RMD59 RMD63 RMD62 RMD58 MD59 MD63 MD62 MD58 8P4R-S-10 RN10
RMD31 RMD27 RMD30 RMD26 MD31 MD27 MD30 MD26 8P4R-S-10 RN18
RDQM7 RDQS7 DQM7 DQS7 4P2R-S-10 RN28
RDQM3 RDQS3 DQM3 DQS3 4P2R-S-10 RN32
RMD57 RMD61 RMD60 RMD56 MD57 MD61 MD60 MD56 8P4R-S-10 RN11
RMD29 RMD25 RMD28 RMD24 MD29 MD25 MD28 MD24 8P4R-S-10 RN19
RMD51 RMD55 RMD54 RMD50 MD51 MD55 MD54 MD50 8P4R-S-10 RN12
RMD19 RMD23 RMD22 RMD18 MD19 MD23 MD22 MD18 8P4R-S-10 RN20
RDQM6 RDQS6 DQM6 DQS6 4P2R-S-10 RN29
RDQM2 RDQS2 DQM2 DQS2 4P2R-S-10 RN33
RMD49 RMD53 RMD52 RMD48 MD49 MD53 MD52 MD48 8P4R-S-10 RN13
RMD17 RMD21 RMD20 RMD16 MD17 MD21 MD20 MD16 8P4R-S-10 RN21
RMD47 RMD43 RMD46 RMD42 MD47 MD43 MD46 MD42 8P4R-S-10 RN14
RMD11 RMD15 RMD10 RMD14 MD11 MD15 MD10 MD14 8P4R-S-10 RN22
RDQM5 RDQS5 DQM5 DQS5 4P2R-S-10 RN30
RDQM1 RDQS1 DQM1 DQS1 4P2R-S-10 RN23
RMD45 RMD41 RMD44 RMD40 MD45 MD41 MD44 MD40 8P4R-S-10 RN15
RMD13 RMD9 RMD12 RMD8 MD13 MD9 MD12 MD8 8P4R-S-10 RN24
RMD39 RMD35 RMD38 RMD34 MD39 MD35 MD38 MD34 8P4R-S-10 RN16
RMD7 RMD3 RMD6 RMD2 MD7 MD3 MD6 MD2 8P4R-S-10 RN25
RDQM4 RDQS4 DQM4 DQS4 4P2R-S-10 RN31
RDQM0 RDQS0 DQM0 DQS0 4P2R-S-10 RN26
RMD37 RMD33 RMD36 RMD32 MD37 MD33 MD36 MD32 8P4R-S-10 RN17
RMD1 RMD5 RMD4 RMD0 MD1 MD5 MD4 MD0 8P4R-S-10 RN27

NBU1B

MD0 AJ23 MD0
MD1 AG22 MD1
MD2 AH21 MD2
MD3 AJ21 MD3
MD4 AD23 MD4
MD5 AE23 MD5
MD6 AF22 MD6
MD7 AF21 MD7
DQM0 AD22 DQM0
DQS0 AH22 DQS0/CSB#0
MD8 AD21 MD8
MD9 AG20 MD9
MD10 AE19 MD10
MD11 AF19 MD11
MD12 AE21 MD12
MD13 AD20 MD13
MD14 AD19 MD14
MD15 AH19 MD15
DQM1 AF20 DQM1
DQS1 AH20 DQS1/CSB#1
MD16 AF18 MD16
MD17 AG18 MD17
MD18 AH17 MD18
MD19 AD16 MD19
MD20 AD18 MD20
MD21 AD17 MD21
MD22 AF17 MD22
MD23 AJ17 MD23
DQM2 AE17 DQM2
DQS2 AH18 DQS2/CSB#2
MD24 AD14 MD24
MD25 AG14 MD25
MD26 AJ13 MD26
MD27 AE13 MD27
MD28 AJ15 MD28
MD29 AF14 MD29
MD30 AD13 MD30
MD31 AF13 MD31
DQM3 AH13 DQM3
DQS3 AH14 DQS3/CSB#3
MD32 AD10 MD32
MD33 AH10 MD33
MD34 AE9 MD34
MD35 AD8 MD35
MD36 AG10 MD36
MD37 AF10 MD37
MD38 AH9 MD38
MD39 AF9 MD39
DQM4 AD9 DQM4
DQS4 AJ9 DQS4/CSB#4
MD40 AH5 MD40
MD41 AG4 MD41
MD42 AE5 MD42
MD43 AH3 MD43
MD44 AG6 MD44
MD45 AF6 MD45
MD46 AF5 MD46
MD47 AF4 MD47
DQM5 AH4 DQM5
DQS5 AJ3 DQS5/CSB#5
MD48 AE4 MD48
MD49 AD6 MD49
MD50 AE2 MD50
MD51 AC5 MD51
MD52 AG2 MD52
MD53 AG1 MD53
MD54 AF3 MD54
MD55 AC6 MD55
DQM6 AD4 DQM6
DQS6 AF2 DQS6/CSB#6
MD56 AB6 MD56
MD57 AD5 MD57
MD58 AA6 MD58
MD59 AB3 MD59
MD60 AC4 MD60
MD61 AE1 MD61
MD62 AD2 MD62
MD63 AC1 MD63
DQM7 AB4 DQM7
DQS7 AC2 DQS7/CSB#7

650-2

MA0 AH11 MAA0
MA1 AF12 MAA1
MA2 AH12 MAA2
MA3 AG12 MAA3
MA4 AD12 MAA4
MA5 AH15 MAA5
MA6 AF15 MAA6
MA7 AH16 MAA7
MA8 AE15 MAA8
MA9 AD15 MAA9
MA10 AF11 MAA10
MA11 AG8 MAA11
MA12 AJ11 MAA12
MA13 AG16 MAA13
MA14 AF16 MAA14

SWE# AH7 -DMWA -DMWA 14,15,16
SRAS# AH8 -DRASA -DRASA 14,15,16
SCAS# AJ7 -DCASA -DCASA 14,15,16

CS#0 AE7 -CSA0
CS#1 AF7 -CSA1
CS#2 AH6 -CSA2
CS#3 AJ5 -CSA3
CS#4 AF8
CS#5 AD7

CKE0 AB2 CKE0
CKE1 AA4 CKE1
CKE2 AB1 CKE2
CKE3 Y6 CKE3
CKE4 AA5 CKE4
CKE5 Y5 CKE5

CKE2 CKE3 CKE0 CKE1 NBRN17 470X4
NBR1 470-0402
NBR2 470-0402

2.5VSUS

DDRVREFA AJ19 DDRVREFA
DDRVREFB AH2 DDRVREFB

RVCC3
R575 10K

S3AUXSW# Y4 S3AUXSW# R480 0 S3AUXSW- S3AUXSW- 30

SDCLK AA3 SDCLK SDCLK 13
FWDSDCLKO AD11 FWDSDCLK-O NBR14 22-0402 FWDSDCLKO FWDSDCLKO 13
SDRCLKI AE11 NBC85 10P-0402

SDAVDD Y1 SDAVDD
SDAVSS Y2 SDAVSS
DDRAVDD AA1 DDRAVDD
DDRAVSS AA2 DDRAVSS

DRAM_SEL W3 DRAM-SEL NBR22 4.7K-0402 3VSUS

SIS-650

DDRAVDD NBL10 HI0805R800R-00 NBC128 .01U-0402 NBC127 .1U-0402 NBC32 10U/10V-0805 DDRAVSS VCC3

SDAVDD NBL9 HI0805R800R-00 NBC121 .01U-0402 NBC121 .1U-0402 NBC31 10U/10V-0805 SDAVSS VCC3

2.5VSUS NBC115 .01U-0402 NBR23 150/F-0402 DDRVREFB NBC116 .01U-0402 NBR24 150/F-0402

2.5VSUS NBC60 .01U-0402 NBR11 150/F-0402 DDRVREFA NBC59 .01U-0402 NBR10 150/F-0402

QUANTA COMPUTER

Title: NB1-MEMORY FORDDR

Size: Custom | Document Number: VM5 Main Board | Rev: 2A

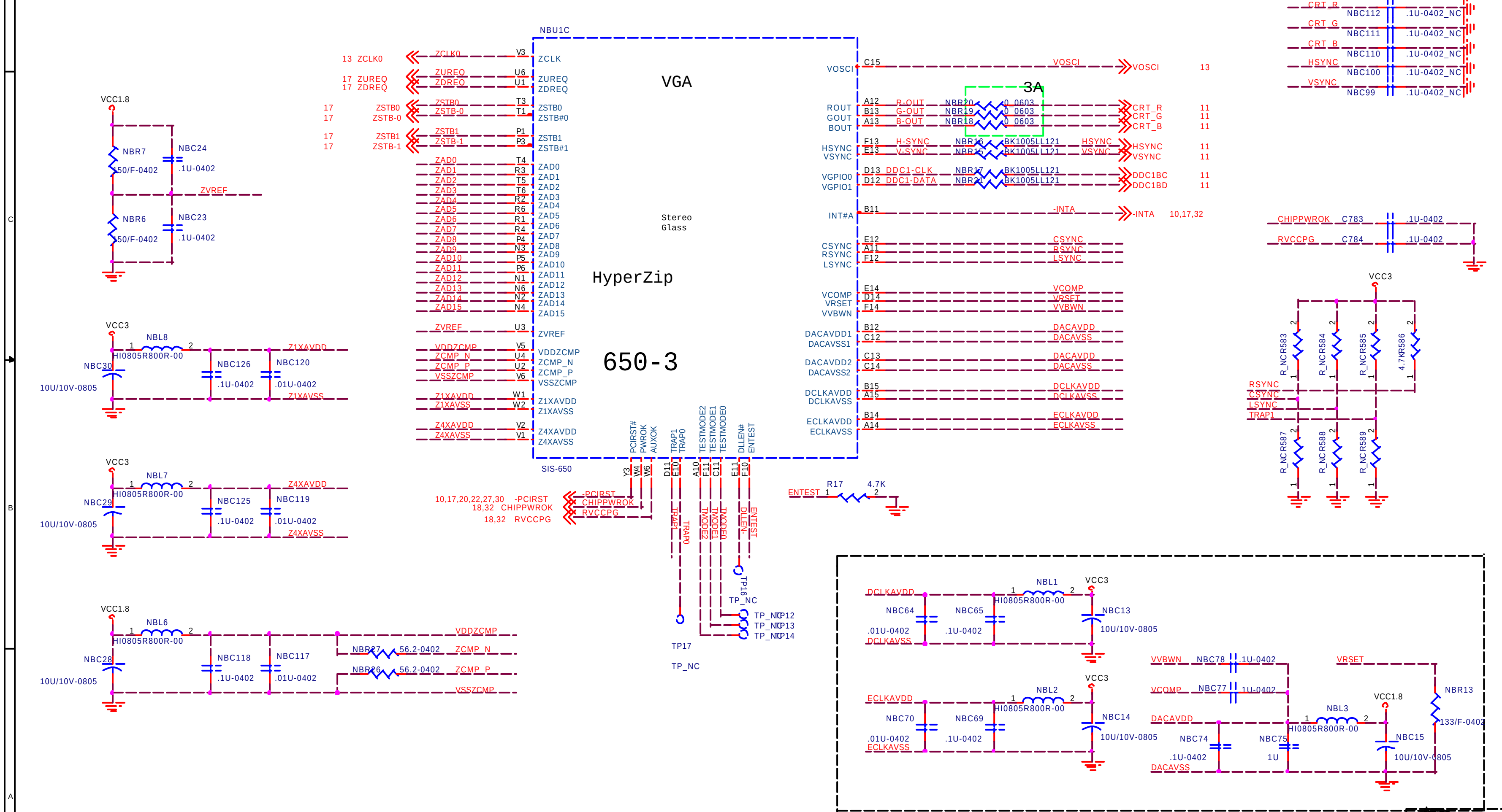
Date: Thursday, April 22, 2004 | Sheet 7 of 40

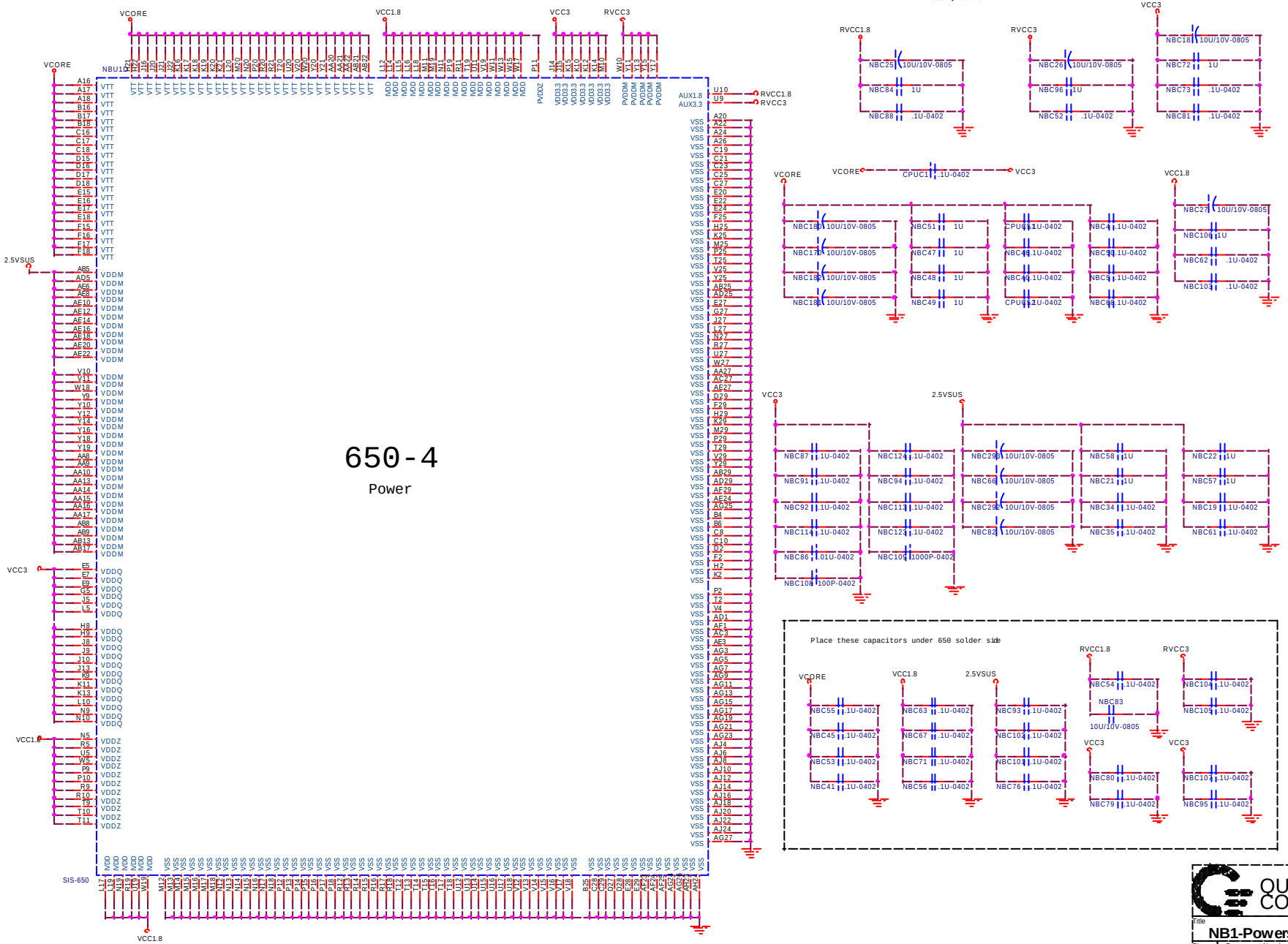
NOTE: This page is for universal PCB design(suitable for both 645 or 650)

17 ZAD[0..15] ZAD[0..15]

NB Hardware Trap Table

	0	1	Default	embedded pull-low (30~50K Ohm)
DLLEN#	enable PLL	disable PLL	0	yes
DRAM_SEL	SDR	DDR	1(DDR)	yes
TRAP0	normal	NB debug mode	0	yes
TRAP1	TV selection, NTSC/PAL(0/1)		0	
CSYNC	enable VB		0	
RSYNC	enable VGA interrupt		1	
LSYNC	enable panel link		0	



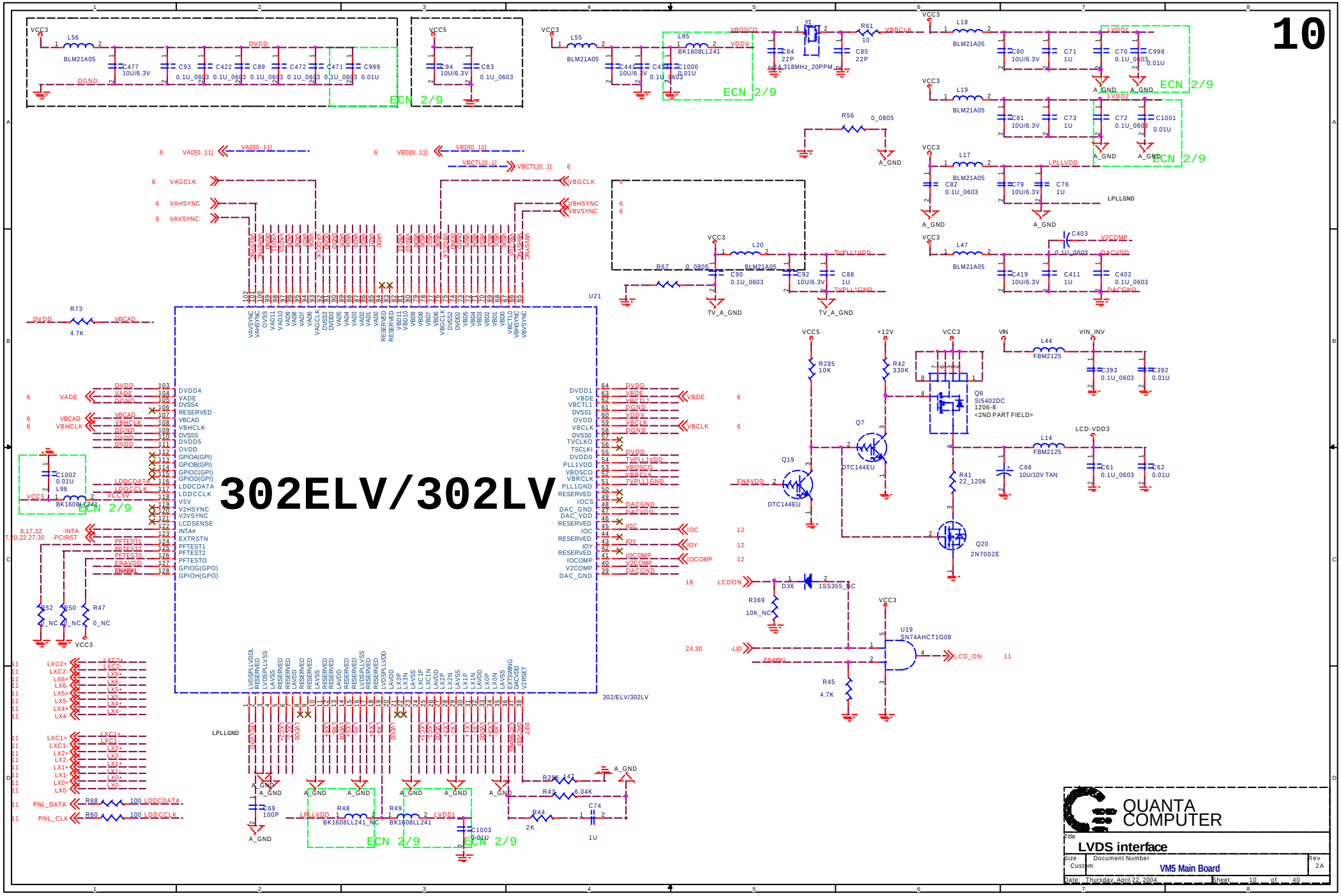


QUANTA COMPUTER

Title: NB1-Powers

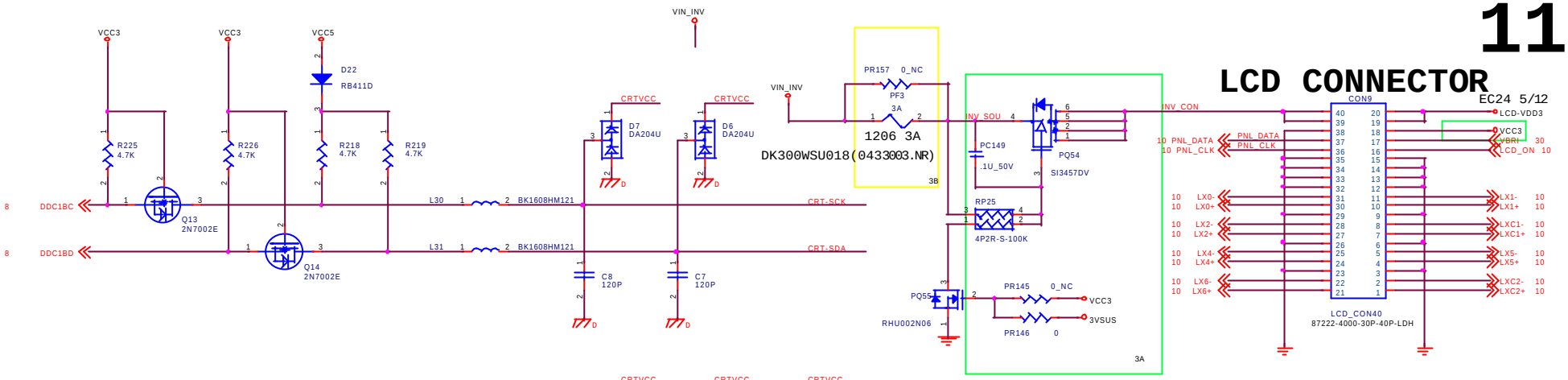
Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 9 of 40

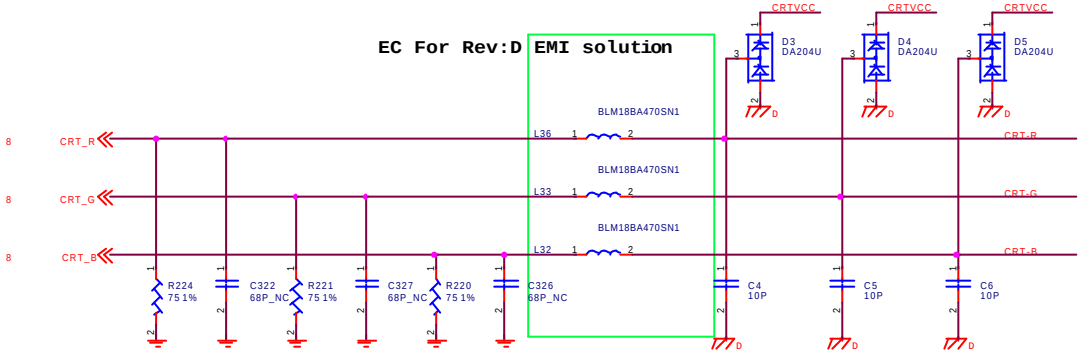

10
302ELV/302LV
QUANTA COMPUTER
LVDS interface
Size: Custom
Document Number: VM5 Main Board
Rev: 2A
Date: Thursday, April 22, 2004
Sheet 10 of 40
ECN 2/9
U21
302/ELV/302LV
LPLLGND
VAD[0..11]
VBD[0..11]
VBCTL[0..1]
VAGCLK
VAHSYNC
VAVSYNC
VBGCLK
VBHSYNC
VBVSYNC
DVDD
DGND
VCC3
VCC5
+12V
A_GND
TV_A_GND
LVDD1
LVDD2
LPLLVDD
LPLLGND
DACVDD
DACGND
V2COMP
VIN
VIN_INV
LCD-VDD3
VBDE
VBCLK
IOC
IOY
IOCOMP
LCDON
LCD_ON
-LID
ENAVDD
-INTA
-PCIRST
LXC2+
LXC2-
LXC1+
LXC1-
LX6+
LX6-
LX5+
LX5-
LX4+
LX4-
LX2+
LX2-
LX1+
LX1-
LX0+
LX0-
PNL_DATA
PNL_CLK
LDDCDATA
LDDCCLK
BLM21A05
BK1608LL241
BK1608LL241_NC
FBM2125
SI5402DC
1206-8
<2ND PART FIELD>
DTC144EU
2N7002E
1SS355_NC
SN74AHCT1G08

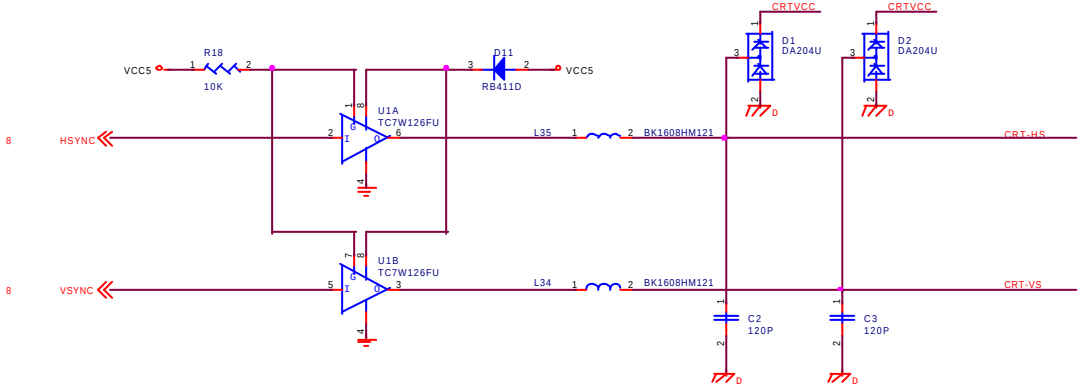
LCD CONNECTOR

EC24 5/12

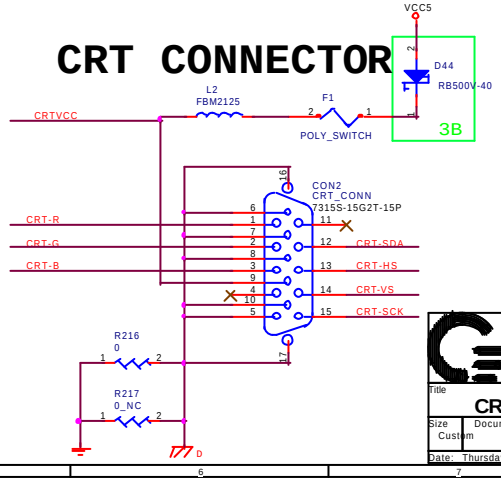


EC For Rev:D EMI solution





CRT CONNECTOR



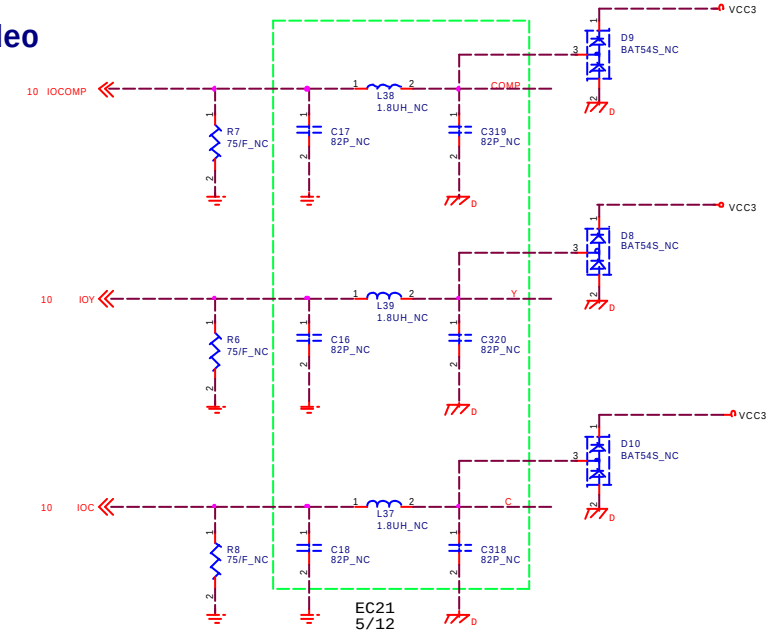
QUANTA COMPUTER

Title: CRT PORT

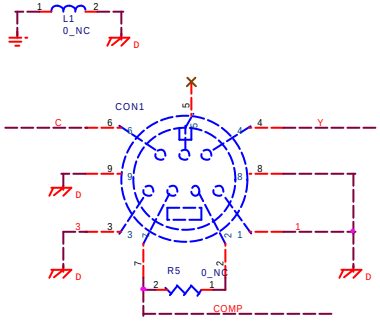
Size: Custom | Document Number: VM5 Main Board | Rev: 3A

Date: Thursday, April 22, 2004 | Sheet 11 of 40

S-video



No Stuff for all S_Video Parts



S-VIDEO_NC

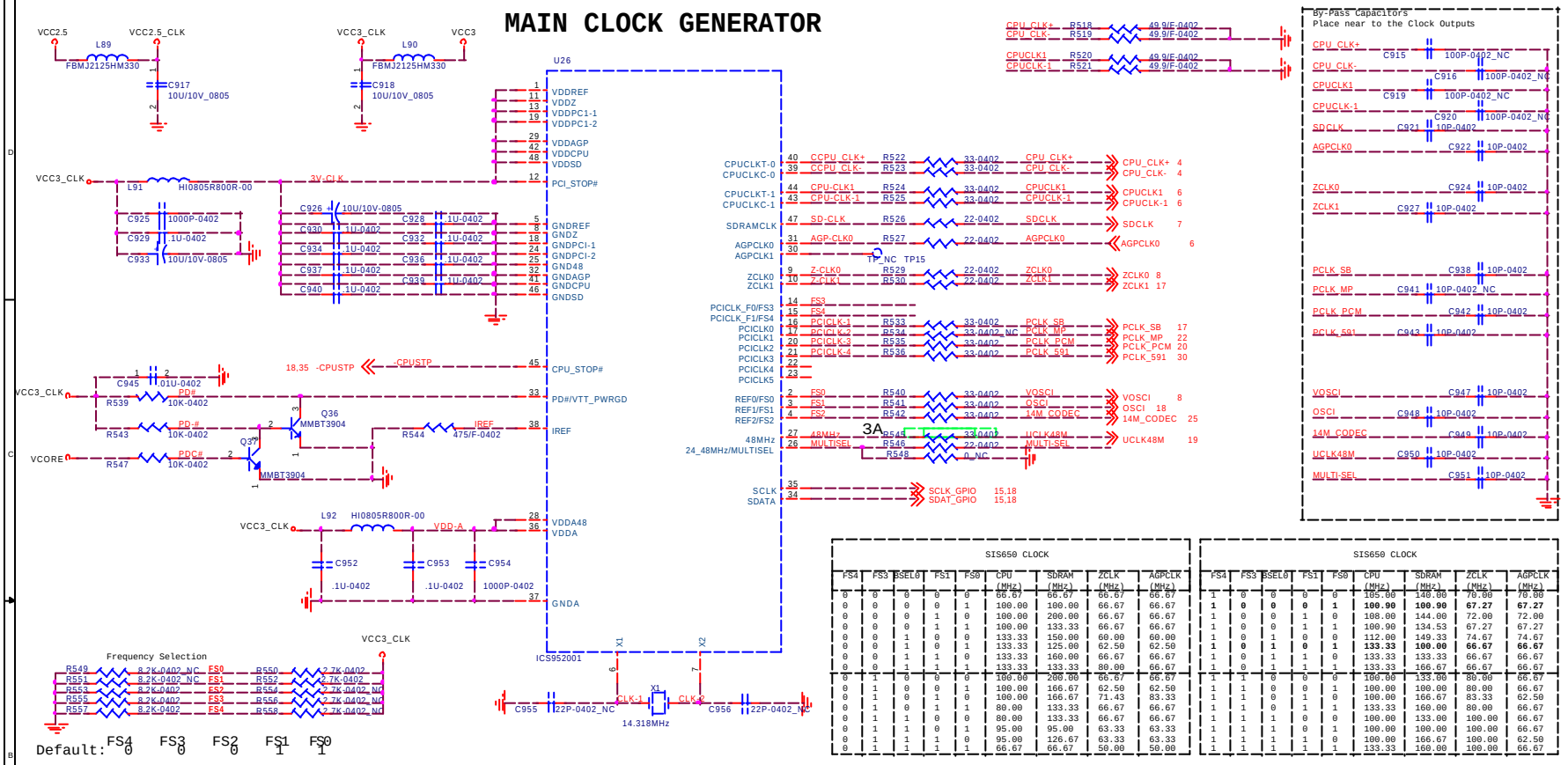
QUANTA COMPUTER

Title: **Hardware Trap & TV-OUT**

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 12 of 40

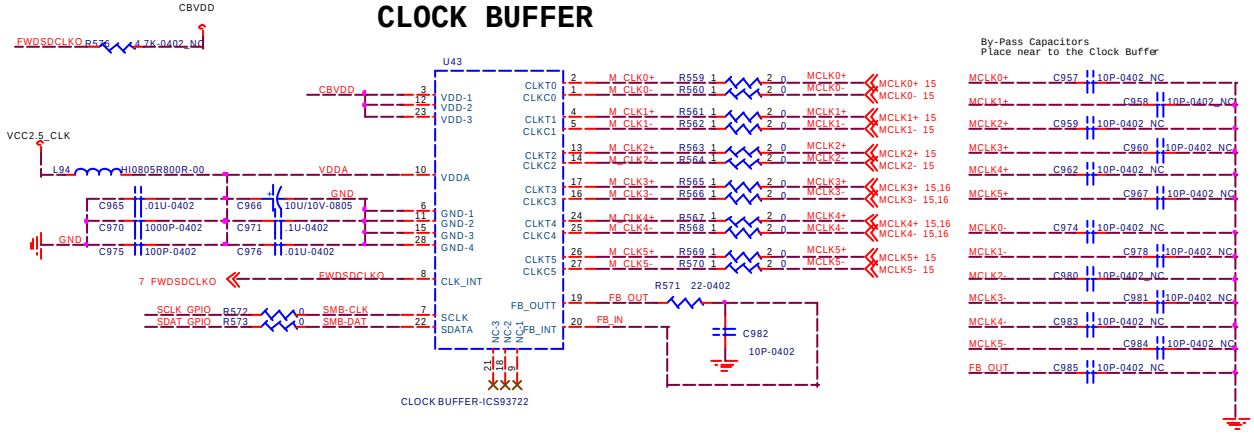
MAIN CLOCK GENERATOR



SIS650 CLOCK								
FS4	FS3	BSEL0	FS1	FS0	CPU (MHz)	SDRAM (MHz)	ZCLK (MHz)	AGPCLK (MHz)
0	0	0	0	0	66.67	66.67	66.67	66.67
0	0	0	0	1	100.00	100.00	66.67	66.67
0	0	0	1	0	100.00	200.00	66.67	66.67
0	0	0	1	1	100.00	133.33	66.67	66.67
0	0	1	0	0	133.33	150.00	60.00	60.00
0	0	1	0	1	133.33	125.00	62.50	62.50
0	0	1	1	0	133.33	160.00	66.67	66.67
0	0	1	1	1	133.33	133.33	80.00	66.67
0	1	0	0	0	100.00	200.00	66.67	66.67
0	1	0	0	1	100.00	166.67	62.50	62.50
0	1	0	1	0	100.00	166.67	71.43	83.33
0	1	0	1	1	80.00	133.33	66.67	66.67
0	1	1	0	0	80.00	133.33	66.67	66.67
0	1	1	0	1	95.00	95.00	63.33	63.33
0	1	1	1	0	95.00	126.67	63.33	63.33
0	1	1	1	1	66.67	66.67	50.00	50.00

SIS650 CLOCK								
FS4	FS3	BSEL0	FS1	FS0	CPU (MHz)	SDRAM (MHz)	ZCLK (MHz)	AGPCLK (MHz)
1	0	0	0	0	105.00	140.00	70.00	70.00
1	**0**	**0**	**0**	**1**	**100.90**	**100.90**	**67.27**	**67.27**
1	0	0	1	0	108.00	144.00	72.00	72.00
1	0	0	1	1	100.90	134.53	67.27	67.27
1	0	1	0	0	112.00	149.33	74.67	74.67
1	**0**	**1**	**0**	**1**	**133.33**	**100.00**	**66.67**	**66.67**
1	0	1	1	0	133.33	133.33	66.67	66.67
1	0	1	1	1	133.33	166.67	66.67	66.67
1	1	0	0	0	100.00	133.00	80.00	66.67
1	1	0	0	1	100.00	100.00	80.00	66.67
1	1	0	1	0	100.00	166.67	83.33	62.50
1	1	0	1	1	133.33	160.00	80.00	66.67
1	1	1	0	0	100.00	133.00	100.00	66.67
1	1	1	0	1	100.00	100.00	100.00	66.67
1	1	1	1	0	100.00	166.67	100.00	62.50
1	1	1	1	1	133.33	160.00	100.00	66.67

CLOCK BUFFER



QUANTA COMPUTER

Title: MAIN CLOCK GENERATOR & BUFFER

Size: Custom | Document Number: VM5 Main Board | Rev: 3A

Date: Thursday, April 22, 2004 | Sheet 13 of 40

DDR TERMINATOR

14

RMD[0..63] RMD[0..63] 7,15,16
RDQM[0..7] RDQM[0..7] 7,15,16
RDQS[0..7] RDQS[0..7] 7,15,16

MAA[0..14] MAA[0..14] 7,15,16
-CSA[0..3] -CSA[0..3] 7,15,16

DDR_VTT

RMD60 RN34 1 2 RMD56
RMD61 33X4 3 4 RMD57
RMD62 8P4R-0402 5 6 RMD58
RMD63 7 8 RMD59

RMD50 RN46 1 2 RMD55
RMD51 33X4 3 4 RMD54
RMD49 8P4R-0402 5 6 RMD53
RMD48 7 8 RMD52

RMD44 RN36 1 2 MAA9
RMD45 33X4 3 4 MAA10
RMD46 8P4R-0402 5 6 MAA11
RMD47 7 8 -DMWA

-DMWA 7,15,16

RMD36 RN37 1 2 RMD40
RMD37 33X4 3 4 RMD41
RMD39 8P4R-0402 5 6 RMD42
RMD38 7 8 RMD43

MAA1 RN51 1 2 RMD32
MAA3 33X4 3 4 RMD33
MAA7 8P4R-0402 5 6 RMD34
MAA5 7 8 RMD35

RMD27 RN52 1 2 RMD8
RMD26 33X4 3 4 RMD9
RMD25 8P4R-0402 5 6 RMD11
RMD24 7 8 RMD10

RMD28 RN41 1 2 -CSA2
RMD29 33X4 3 4 -CSA1
RMD30 8P4R-0402 5 6 -CSA0
RMD31 7 8

RMD19 RN53 1 2 -CSA3
RMD18 33X4 3 4 -DCASA
RMD17 8P4R-0402 5 6 -DRASA
RMD16 7 8 MAA14

-DCASA 7,15,16
-DRASA 7,15,16

RMD13 RN43 1 2 MAA12
RMD12 33X4 3 4 MAA13
RMD14 8P4R-0402 5 6 MAA0
RMD15 7 8 MAA8

RMD3 RN55 1 2 MAA6
RMD2 33X4 3 4 MAA2
RMD0 8P4R-0402 5 6
RMD1 7 8 MAA4

RN45 1 2 RMD56
33X4 3 4 RMD57
8P4R-0402 5 6 RMD58
7 8 RMD59

RN35 1 2 RMD55
33X4 3 4 RMD54
8P4R-0402 5 6 RMD53
7 8 RMD52

RN50 1 2 MAA9
33X4 3 4 MAA10
8P4R-0402 5 6 MAA11
7 8 -DMWA

RN47 1 2 RMD40
33X4 3 4 RMD41
8P4R-0402 5 6 RMD42
7 8 RMD43

RN48 1 2 RMD32
33X4 3 4 RMD33
8P4R-0402 5 6 RMD34
7 8 RMD35

RN54 1 2 RMD8
33X4 3 4 RMD9
8P4R-0402 5 6 RMD11
7 8 RMD10

RN49 1 2 -CSA2
33X4 3 4 -CSA1
8P4R-0402 5 6 -CSA0
7 8

RN38 1 2 -CSA3
33X4 3 4 -DCASA
8P4R-0402 5 6 -DRASA
7 8 MAA14

RN39 1 2 MAA12
33X4 3 4 MAA13
8P4R-0402 5 6 MAA0
7 8 MAA8

RN40 1 2 MAA6
33X4 3 4 MAA2
8P4R-0402 5 6
7 8 MAA4

RN42 1 2 RMD22
33X4 3 4 RMD23
8P4R-0402 5 6 RMD21
7 8 RMD20

RN44 1 2 RMD6
33X4 3 4 RMD7
8P4R-0402 5 6 RMD5
7 8 RMD4

RDQS7 R197 2 1 33 R187 2 1 33 RDQM7
RDQS6 R198 2 1 33 R188 2 1 33 RDQM6
RDQS5 R199 2 1 33 R189 2 1 33 RDQM5
RDQS4 R200 2 1 33 R192 2 1 33 RDQM4
RDQS3 R201 2 1 33 R193 2 1 33 RDQM3
RDQS2 R202 2 1 33 R194 2 1 33 RDQM2
RDQS1 R203 2 1 33 R190 2 1 33 RDQM1
RDQS0 R204 2 1 33 R191 2 1 33 RDQM0

DDR_VTT

C256 0.1U_0402 CC0402
C255 0.1U_0402 CC0402
C251 0.1U_0402 CC0402
C257 0.1U_0402 CC0402
C245 0.1U_0402 CC0402
C277 0.1U_0402 CC0402
C246 0.1U_0402 CC0402
C236 0.1U_0402 CC0402
C267 0.1U_0402 CC0402
C284 0.1U_0402 CC0402
C275 0.1U_0402 CC0402
C237 0.1U_0402 CC0402
C280 0.1U_0402 CC0402
C281 0.1U_0402 CC0402
C243 0.1U_0402 CC0402
C266 0.1U_0402 CC0402

C264 0.1U_0402 CC0402
C283 0.1U_0402 CC0402
C274 0.1U_0402 CC0402
C241 0.1U_0402 CC0402
C248 0.1U_0402 CC0402
C262 0.1U_0402 CC0402
C244 0.1U_0402 CC0402
C278 0.1U_0402 CC0402
C263 0.1U_0402 CC0402
C258 0.1U_0402 CC0402
C260 0.1U_0402 CC0402
C261 0.1U_0402 CC0402
C242 0.1U_0402 CC0402
C239 0.1U_0402 CC0402
C276 0.1U_0402 CC0402
C287 0.1U_0402 CC0402

C285 0.1U_0402 CC0402
C286 0.1U_0402 CC0402
C252 0.1U_0402 CC0402
C253 0.1U_0402 CC0402
C265 0.1U_0402 CC0402
C272 0.1U_0402 CC0402
C238 0.1U_0402 CC0402
C268 0.1U_0402 CC0402
C269 0.1U_0402 CC0402
C254 0.1U_0402 CC0402
C279 0.1U_0402 CC0402
C235 0.1U_0402 CC0402
C259 0.1U_0402 CC0402
C240 0.1U_0402 CC0402
C247 0.1U_0402 CC0402
C282 0.1U_0402 CC0402

2.5VSUS

C643 0.1U_0402 CC0402
C640 0.1U_0402 CC0402
C639 0.1U_0402 CC0402
C294 0.1U_0402 CC0402
C641 0.1U_0402 CC0402
C646 0.1U_0402 CC0402
C233 0.1U_0402 CC0402
C644 0.1U_0402 CC0402
C221 0.1U_0402 CC0402
C230 0.1U_0402 CC0402
C229 0.1U_0402 CC0402
C222 0.1U_0402 CC0402
C219 0.1U_0402 CC0402
C218 0.1U_0402 CC0402
C225 0.1U_0402 CC0402
C227 0.1U_0402 CC0402

C224 0.1U_0402 CC0402
C215 0.1U_0402 CC0402
C642 0.1U_0402 CC0402
C197 0.1U_0402 CC0402
C196 0.1U_0402 CC0402
C204 0.1U_0402 CC0402
C232 0.1U_0402 CC0402
C206 0.1U_0402 CC0402
C207 0.1U_0402 CC0402
C213 0.1U_0402 CC0402
C198 0.1U_0402 CC0402
C201 0.1U_0402 CC0402
C214 0.1U_0402 CC0402
C226 0.1U_0402 CC0402
C216 0.1U_0402 CC0402
C217 0.1U_0402 CC0402

C228 0.1U_0402 CC0402
C220 0.1U_0402 CC0402
C295 0.1U_0402 CC0402
C305 0.1U_0402 CC0402
C300 0.1U_0402 CC0402
C299 0.1U_0402 CC0402
C301 0.1U_0402 CC0402
C647 0.1U_0402 CC0402
C202 0.1U_0402 CC0402
C296 0.1U_0402 CC0402
C306 0.1U_0402 CC0402
C304 0.1U_0402 CC0402
C200 0.1U_0402 CC0402
C231 0.1U_0402 CC0402
C205 0.1U_0402 CC0402
C203 0.1U_0402 CC0402

QUANTA COMPUTER

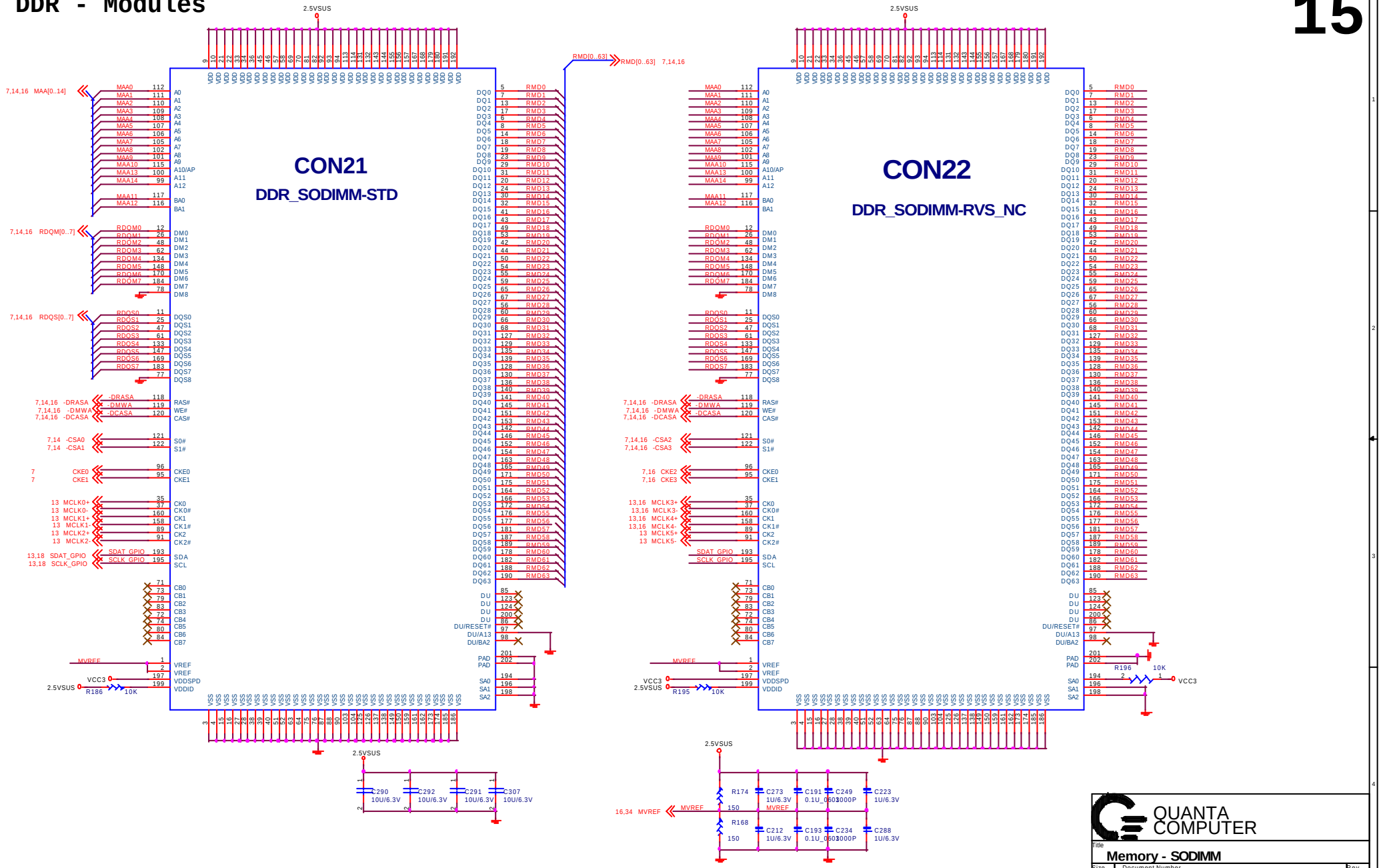
Title: DDR Terminator

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 14 of 40

DDR - Modules

15

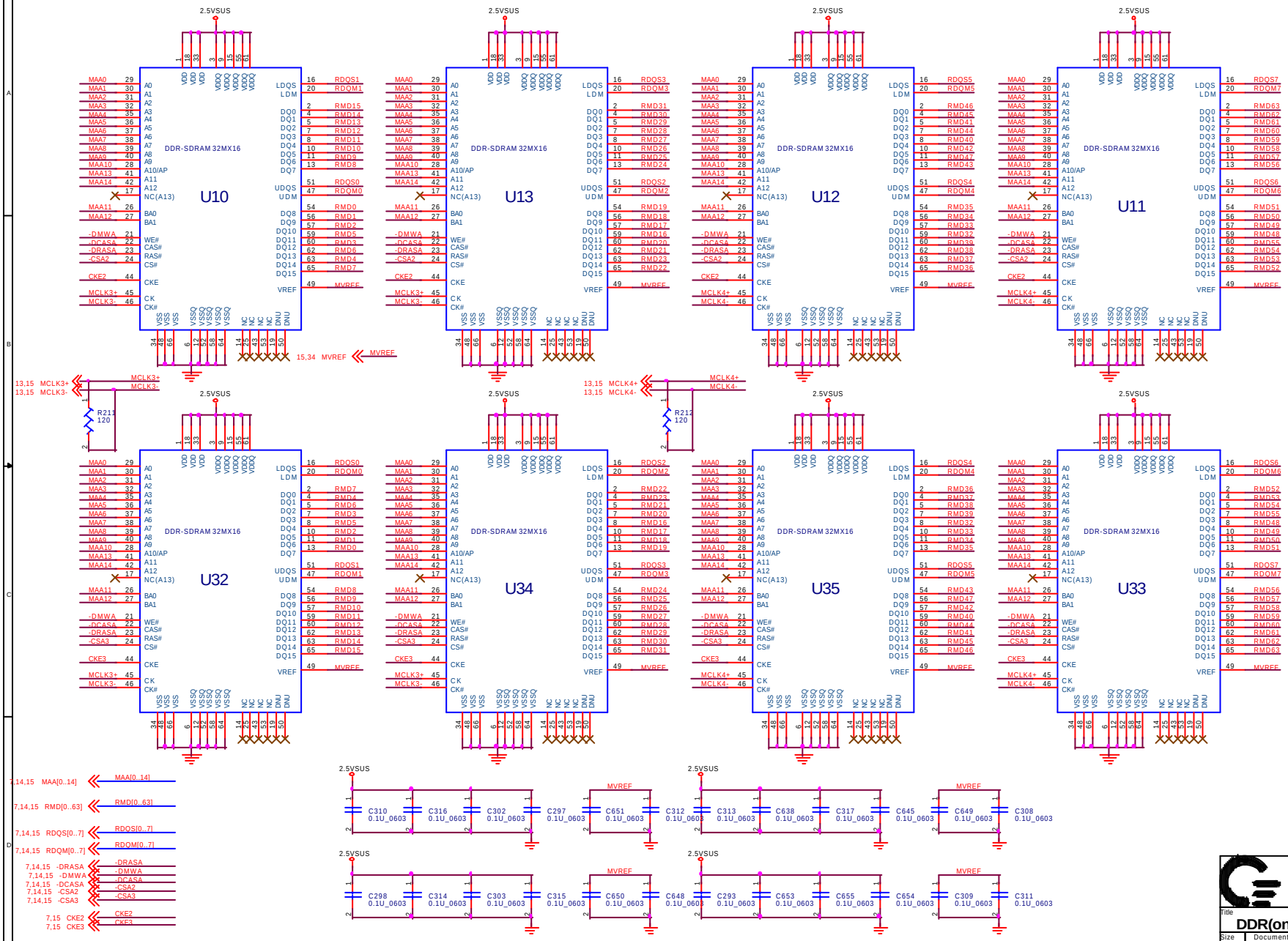


QUANTA COMPUTER

Title: Memory - SODIMM

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 15 of 40



QUANTA COMPUTER

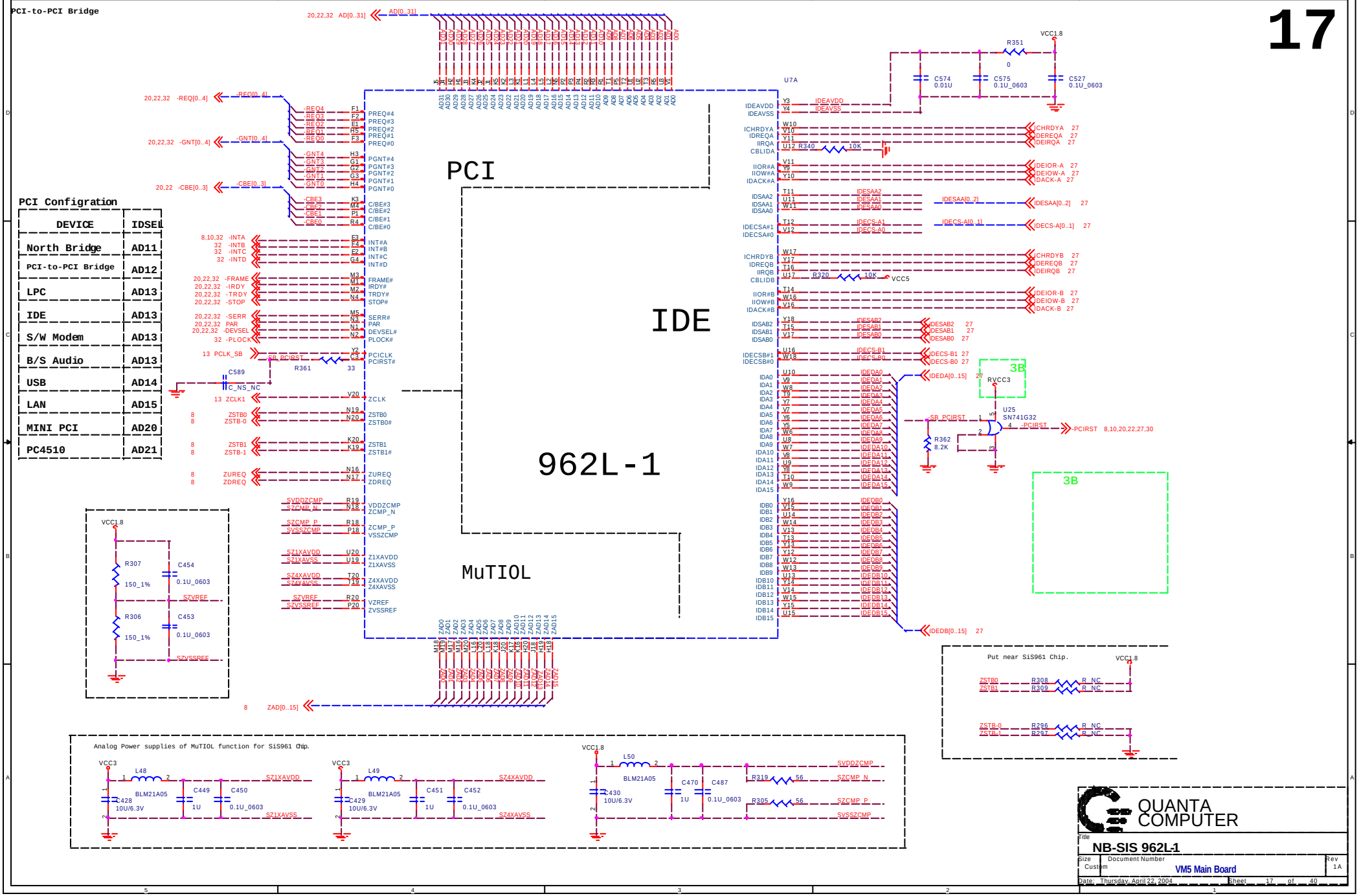
Title: DDR(on board)

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 16 of 40

PCI Configration

DEVICE	IDSEL
North Bridge	AD11
PCI-to-PCI Bridge	AD12
LPC	AD13
IDE	AD13
S/W Modem	AD13
B/S Audio	AD13
USB	AD14
LAN	AD15
MINI PCI	AD20
PC4510	AD21

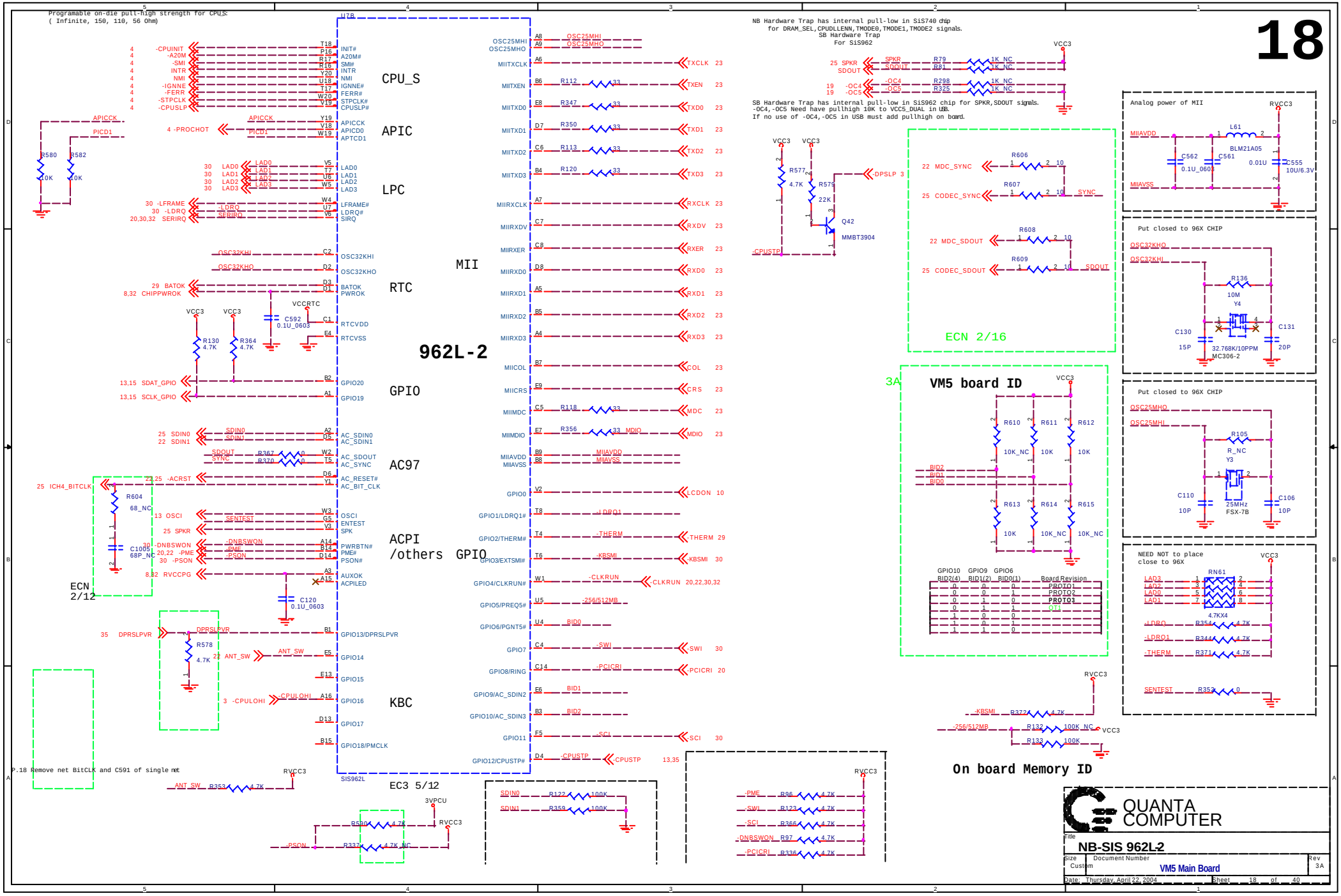


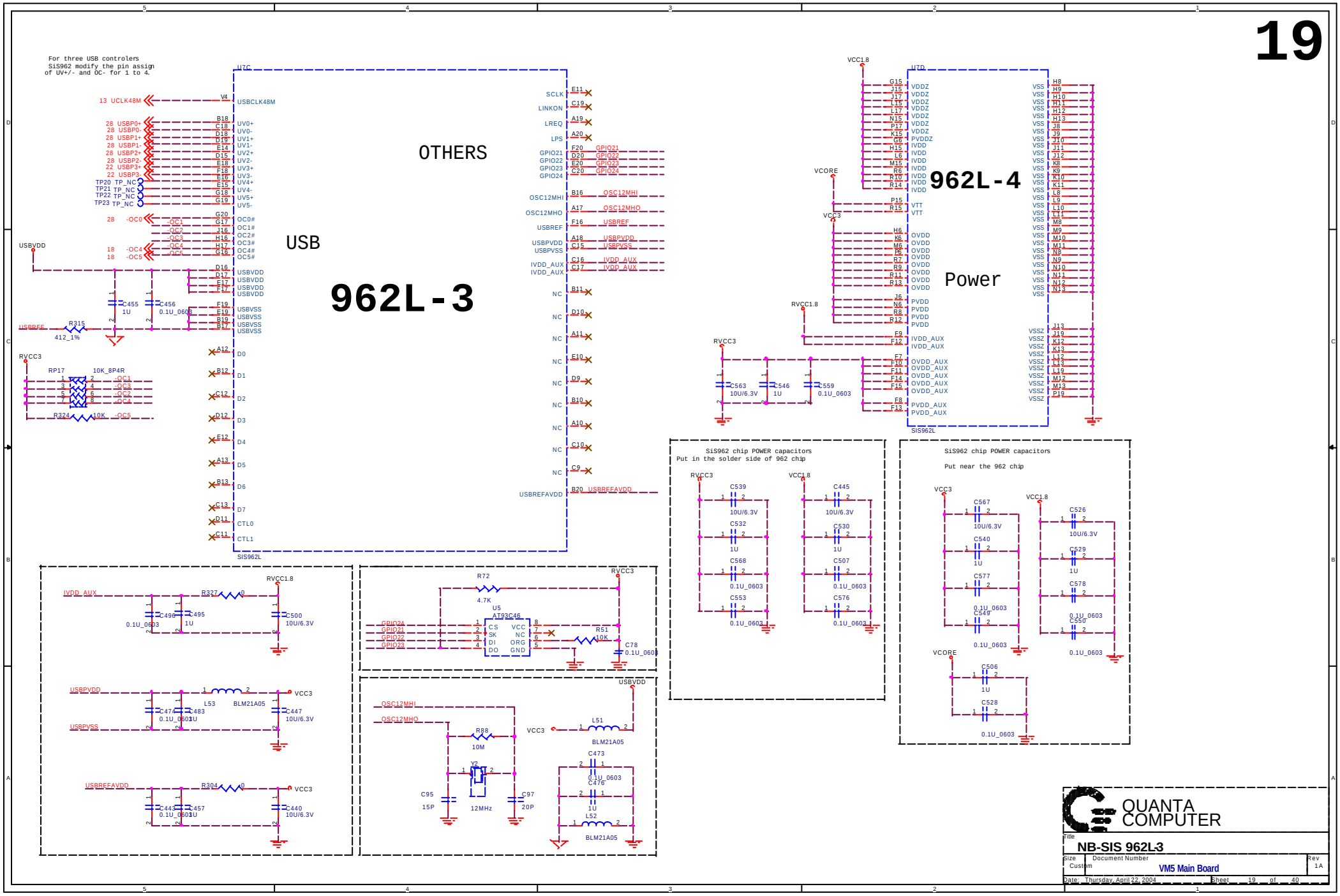
QUANTA COMPUTER

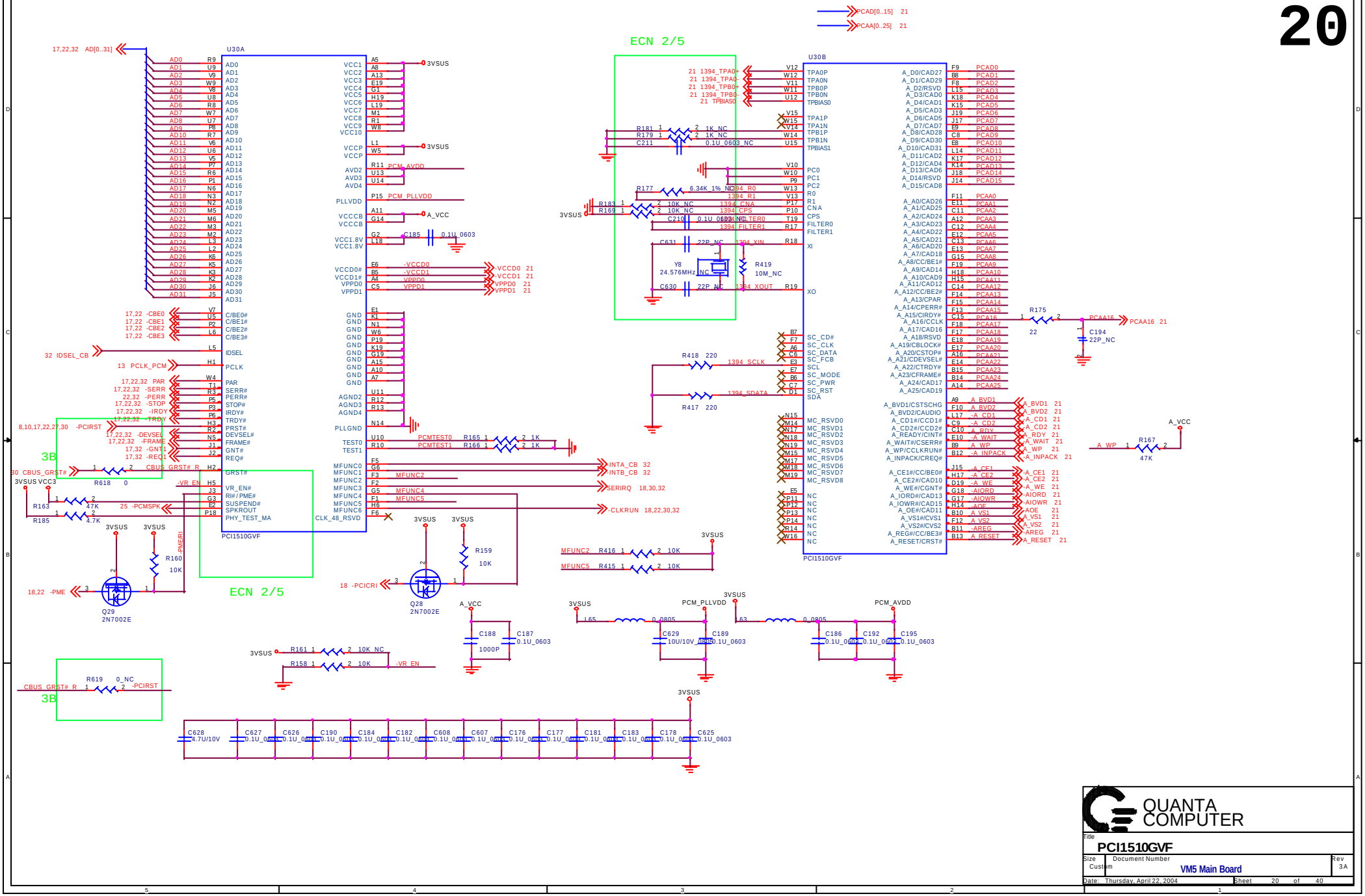
Title: NB-SIS 962L-1

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

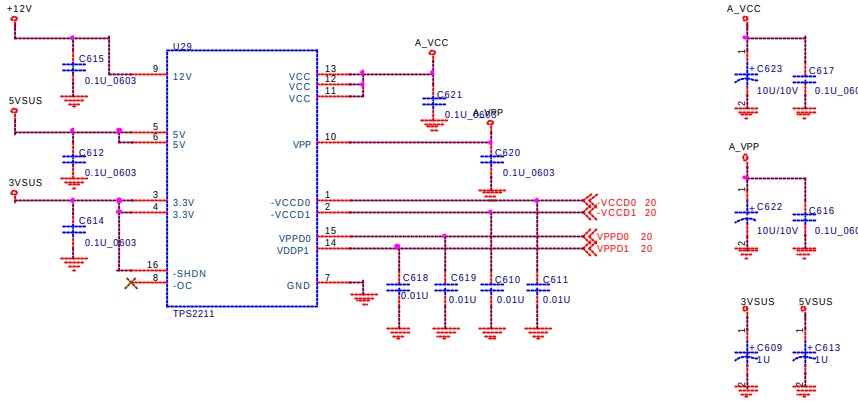
Date: Thursday, April 22, 2004 | Sheet 17 of 40


18
962L-2
CPU_S
APIC
LPC
MII
RTC
GPIO
AC97
ACPI /others GPIO
KBC
Programable on-die pull-high strength for CPUS:
(Infinite, 150, 110, 56 Ohm)
NB Hardware Trap has internal pull-low in SiS740 chip for DRAM_SEL,CPUDLLENN,TMODE0,TMODE1,TMODE2 signals.
SB Hardware Trap For SiS962
SB Hardware Trap has internal pull-low in SiS962 chip for SPKR,SDOUT signals.
-OC4,-OC5 Need have pullhigh 10K to VCC5_DUAL in USB.
If no use of -OC4,-OC5 in USB must add pullhigh on board.
ECN 2/16
VM5 board ID
On board Memory ID
Analog power of MII
Put closed to 96X CHIP
NEED NOT to place close to 96X
ECN 2/12
P.18 Remove net BitCLK and C591 of single net
EC3 5/12
QUANTA COMPUTER
NB-SIS 962L-2
VM5 Main Board
Thursday, April 22, 2004

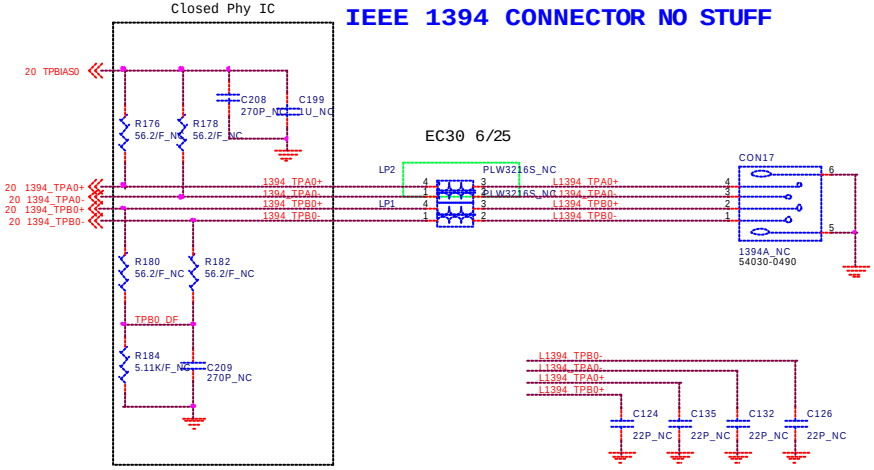

For three USB controlers
SiS962 modify the pin assign
of UV+/- and OC- for 1 to 4.
USB
962L-3
OTHERS
962L-4
Power
SIS962L
SiS962 chip POWER capacitors
Put in the solder side of 962 chip
SiS962 chip POWER capacitors
Put near the 962 chip
NB-SIS 962L-3
VM5 Main Board
QUANTA COMPUTER
Thursday, April 22, 2004


U30A
PCI1510GVF
U30B
PCI1510GVF
ECN 2/5
ECN 2/5
3B
3B
3B
PCAD[0..15] 21
PCAA[0..25] 21
17,22,32 AD[0..31]
32 IDSEL_CB
13 PCLK_PCM
8,10,17,22,27,30 -PCIRST
30 CBUS_GRST#
CBUS_GRST# R
3VSUS VCC3
-VR_EN
25 -PCMSPK
18,22 -PME
18 -PCICRI
Q29
2N7002E
Q28
2N7002E
A_VCC
3VSUS
PCM_PLLVDD
PCM_AVDD
-VCCD0 21
-VCCD1 21
VPPD0 21
VPPD1 21
INTA_CB 32
INTB_CB 32
SERIRQ 18,30,32
CLKRUN 18,22,30,32
1394_SCLK
1394_SDATA
A_WP
A_VCC
PCAA16 21
A_BVD1 21
A_BVD2 21
A_CD1 21
A_CD2 21
A_RDY 21
A_WAIT 21
A_WP 21
A_INPACK 21
A_CE1 21
A_CE2 21
A_WE 21
AIORD 21
AIOWR 21
AOE 21
A_VS1 21
A_VS2 21
AREG 21
A_RESET 21
QUANTA COMPUTER
PCI1510GVF
VM5 Main Board
Size Custom
Document Number
Rev 3A
Date: Thursday, April 22, 2004
Sheet 20 of 40

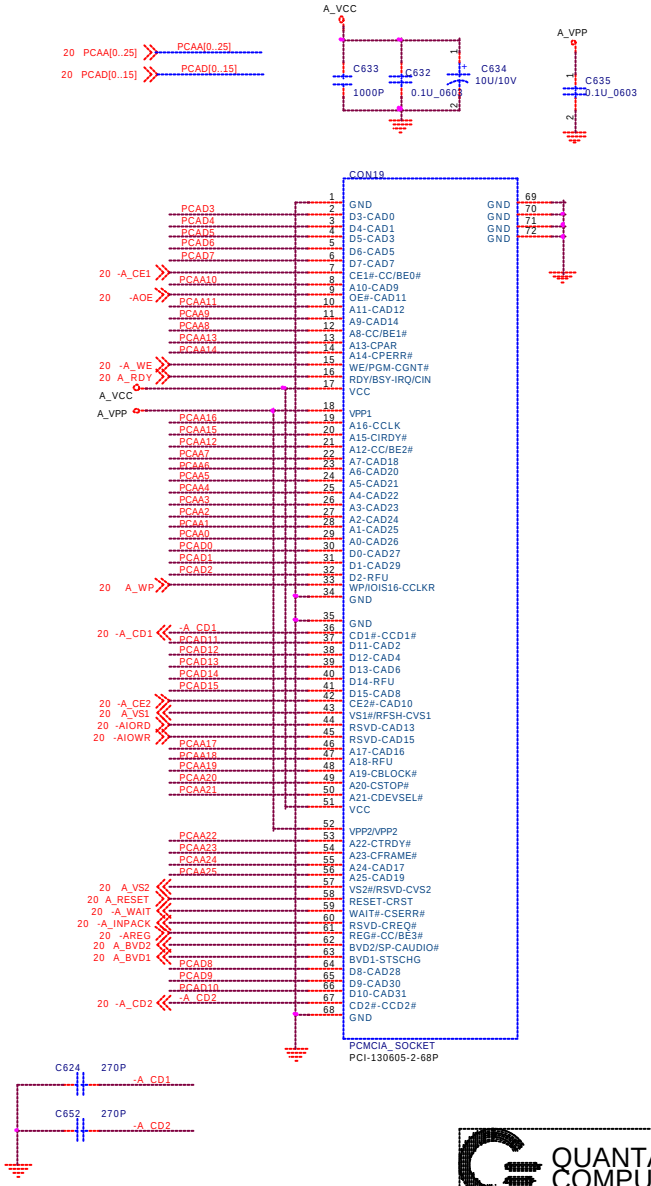
PCMCIA POWER SWITCH



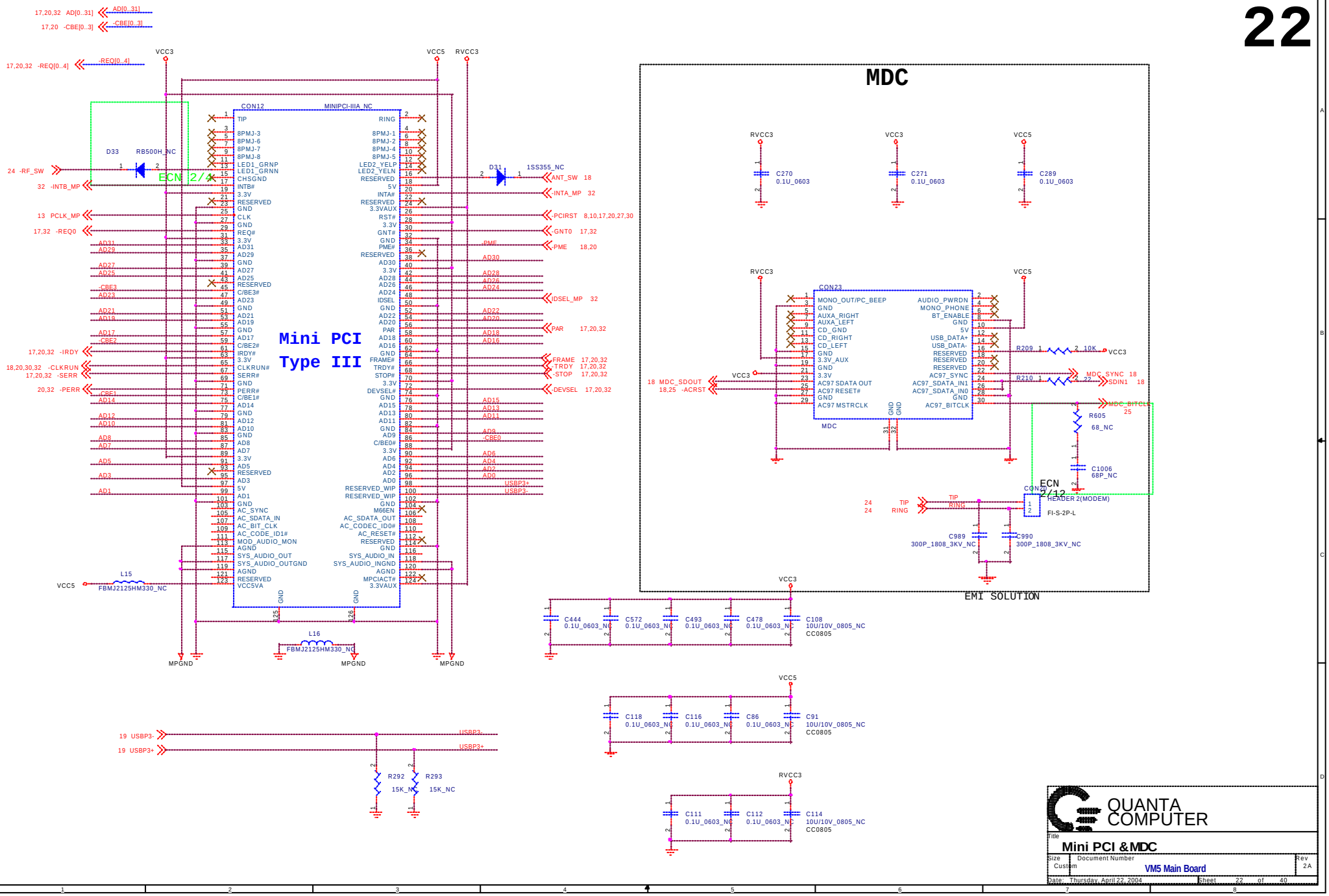
IEEE 1394 CONNECTOR NO STUFF



PCMCIA SOCKET



QUANTA COMPUTER			
Title: PCMCIA SOCKET&POWER			
Size: Custom	Document Number: VM5 Main Board		Rev: 3A
Date: Thursday, April 22, 2004	Sheet 21 of 40		

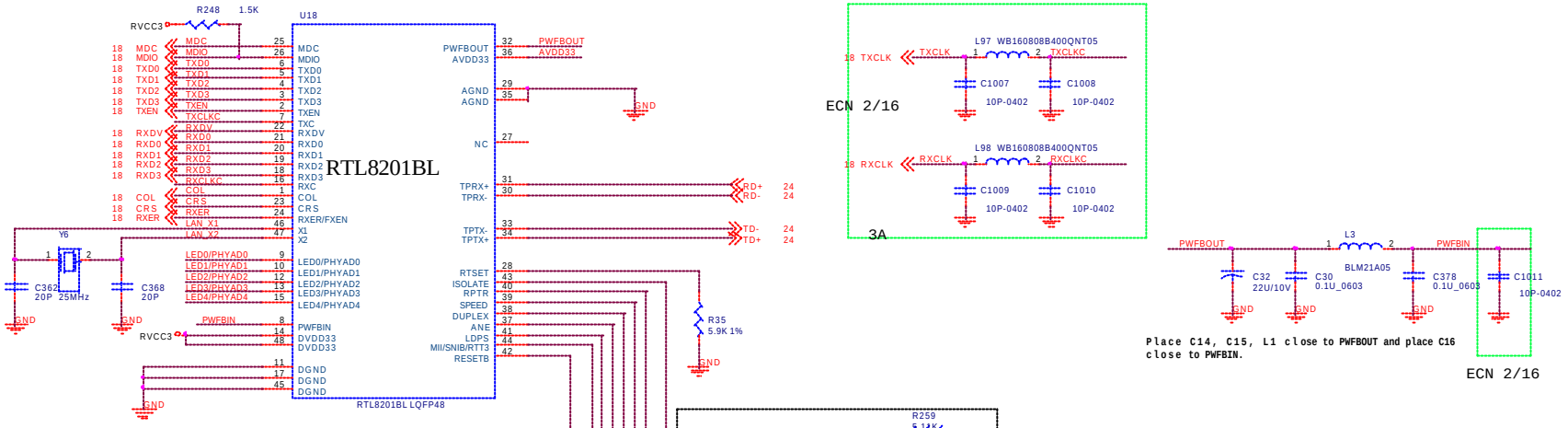


QUANTA COMPUTER

Title: Mini PCI &MDC

Size	Document Number	Rev
Custom	VM5 Main Board	2A

Date: Thursday, April 22, 2004 Sheet 22 of 40

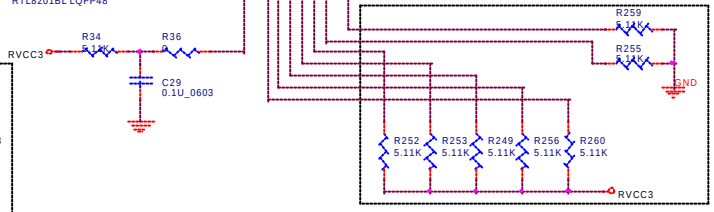


ECN 2/16

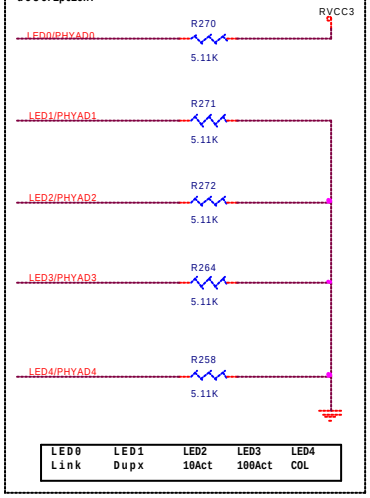
3A

Place C14, C15, L1 close to PWFBOUT and place C16 close to PWFBIN.

ECN 2/16



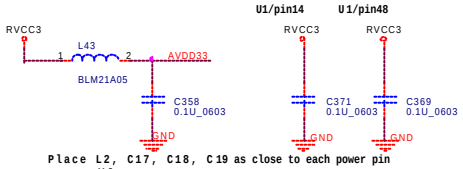
This schematic sets PHY address to 00001b.
You could set PHY address from 00001b to 11111b.
But the LED polarity must matchs the respective PHYAD setting. Refer to datasheet's detailed description.



LED0	LED1	LED2	LED3	LED4
Link	Dupx	10Act	100Act	COL

Hardwire Configuration network:

1. This configuration shows
   Enable: Auto negotiation, Full duplex, 100Mbps, Link Down Power Saving, MII interface
   Disable: Isolate, Repeater mode
2. These seven configuration pins could be connected to VDD or GND directly.



Place L2, C17, C18, C19 as close to each power pin as possible.

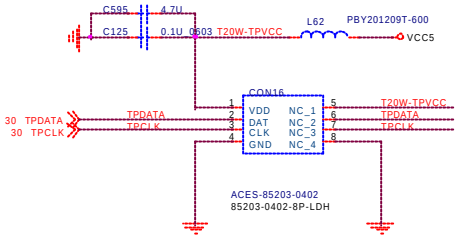
QUANTA COMPUTER

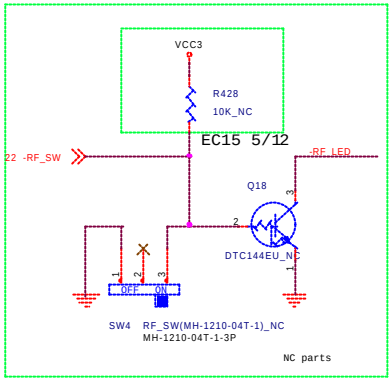
Title: LAN PHY RTL8201BL

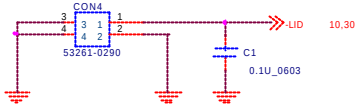
Size: Custom | Document Number: VM5 Main Board | Rev: 3A

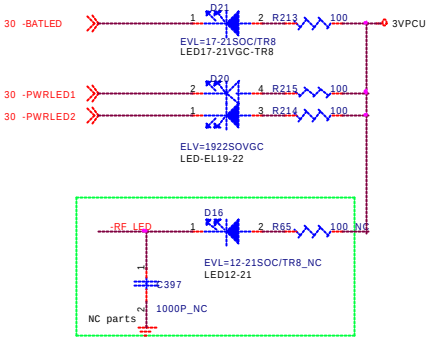
Date: Thursday, April 22, 2004 | Sheet 23 of 40

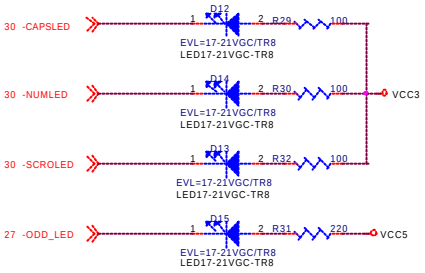
TOUCHPAD BOARD CON

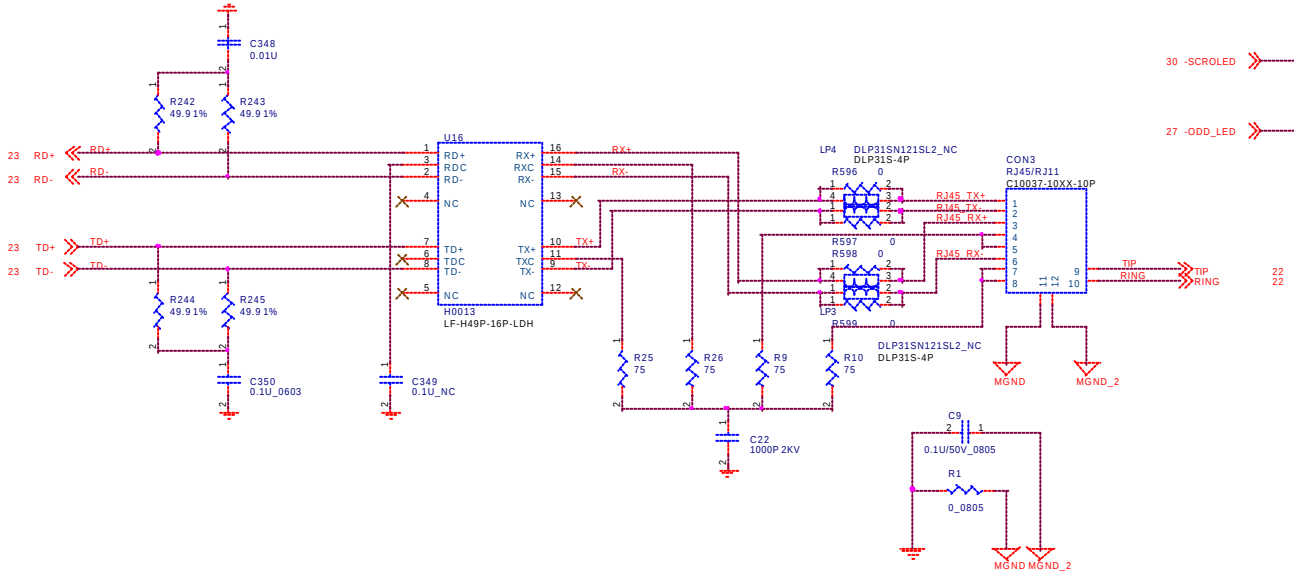










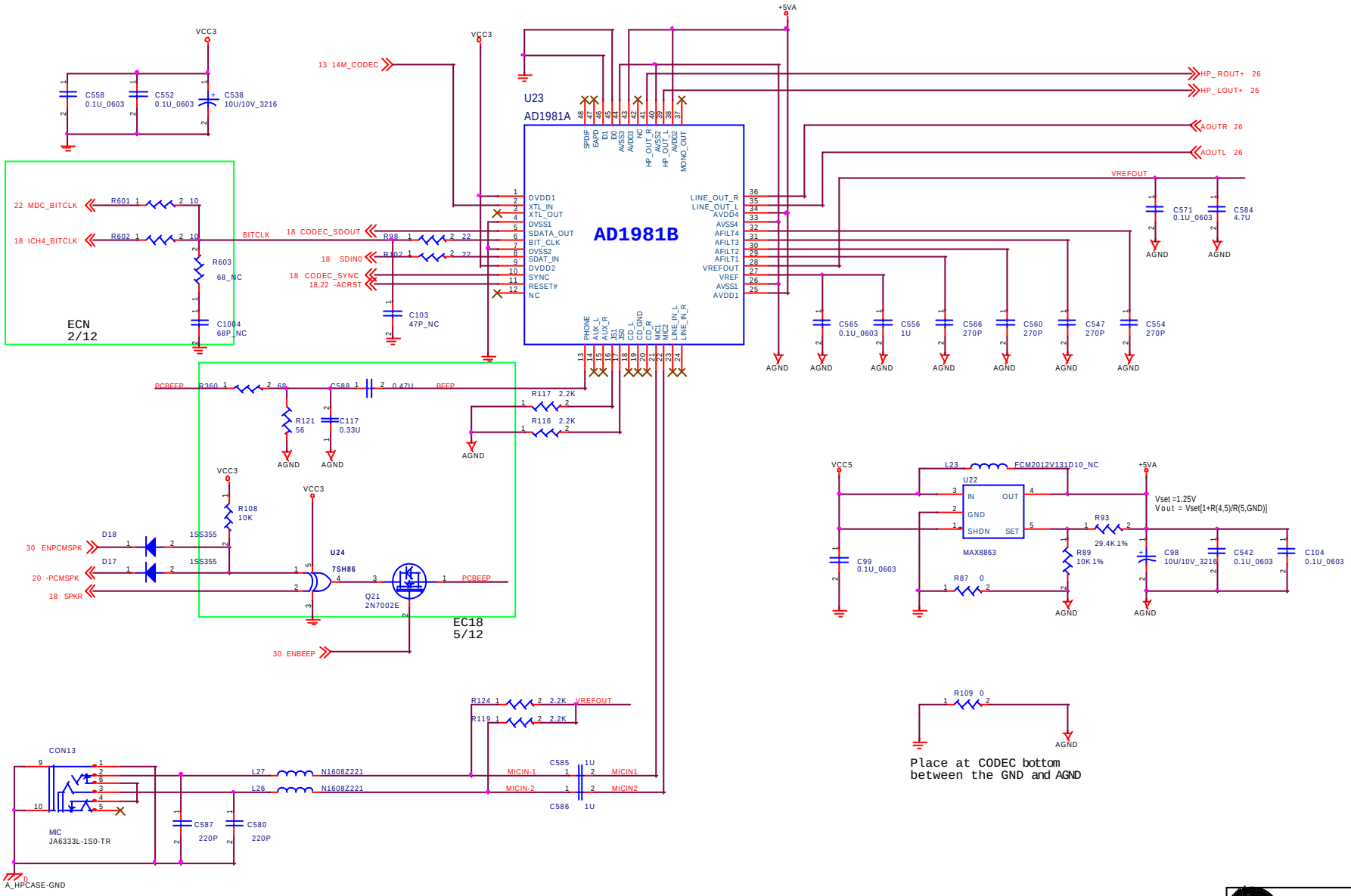


QUANTA COMPUTER

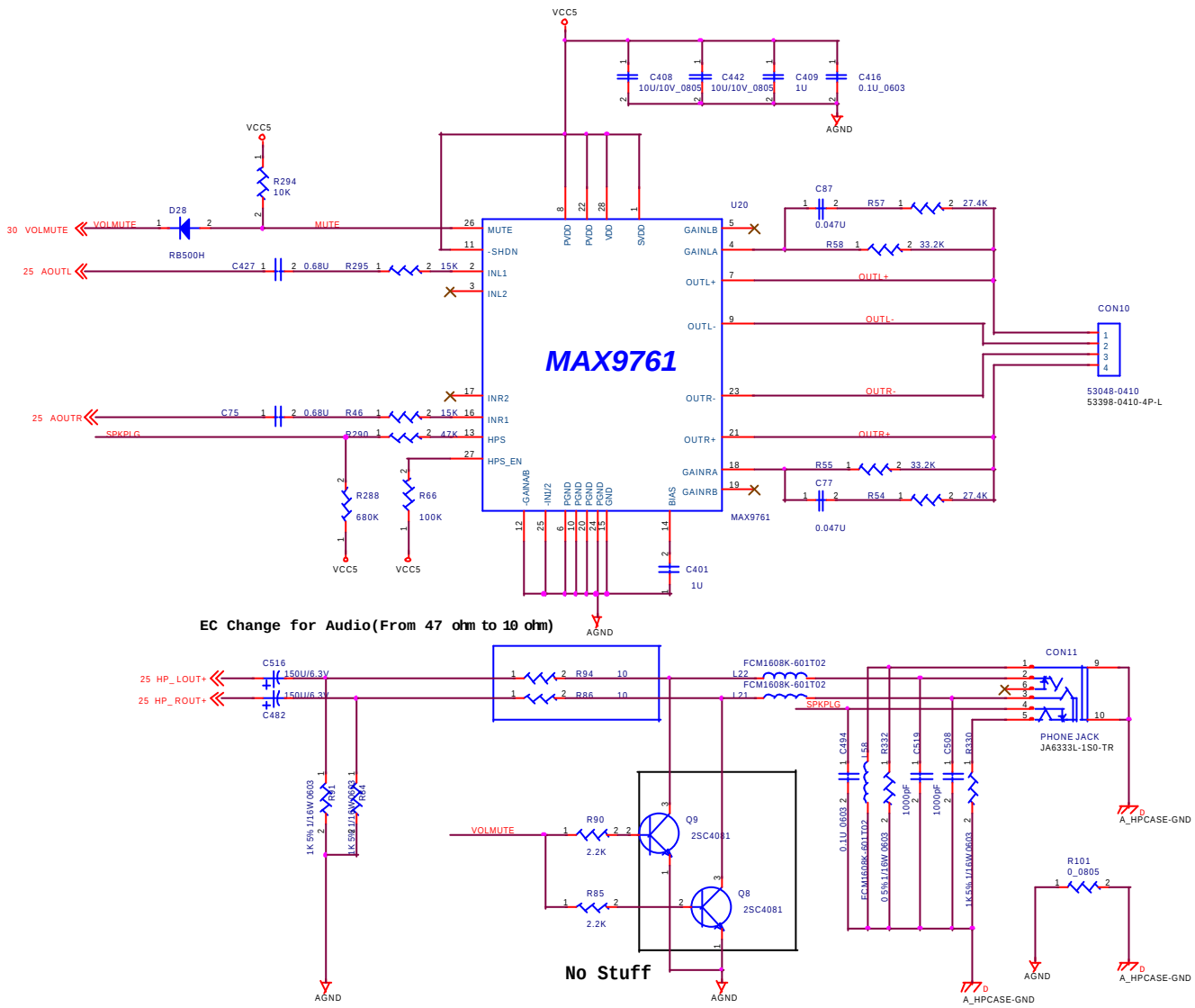
Title: 87570 Expansion,LED,SWs

Size	Document Number	Rev
Custom	VM5 Main Board	2A

Date: Thursday, April 22, 2004 Sheet 24 of 40



QUANTA COMPUTER	
Title	Audio ADI AD1881B
Size: Custom	Document Number: VM5 Main Board
Rev	2A
Date: Thursday, April 22, 2004	Sheet 25 of 40

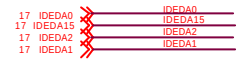


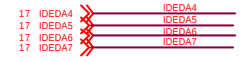
QUANTA COMPUTER

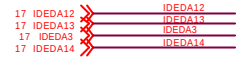
Title: AUDIO AMP&BUZZER&HP-Out

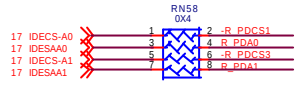
Size: Custom | Document Number: VM5 Main Board | Rev: 1A

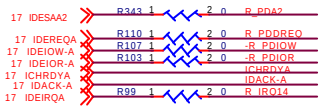
Date: Thursday, April 22, 2004 | Sheet 26 of 40

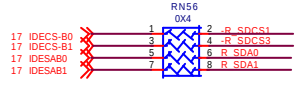


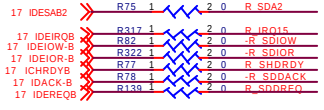


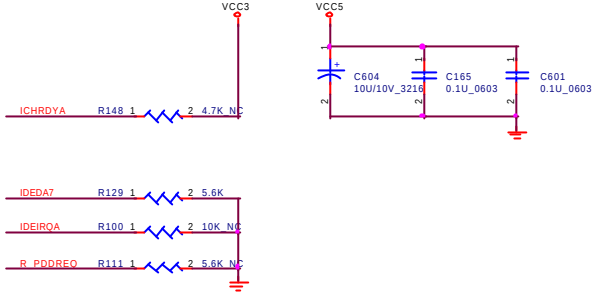


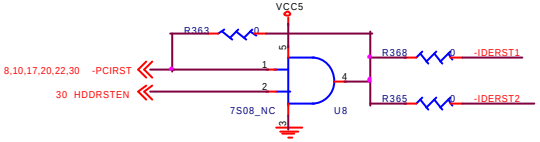


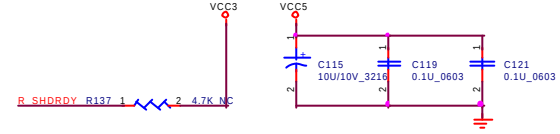


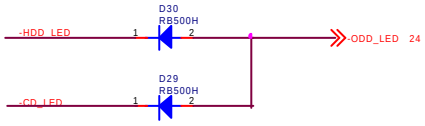


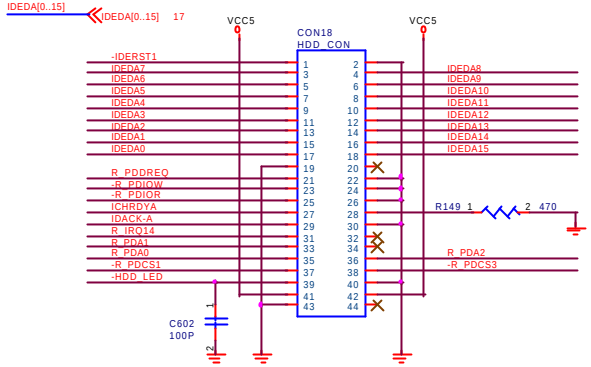


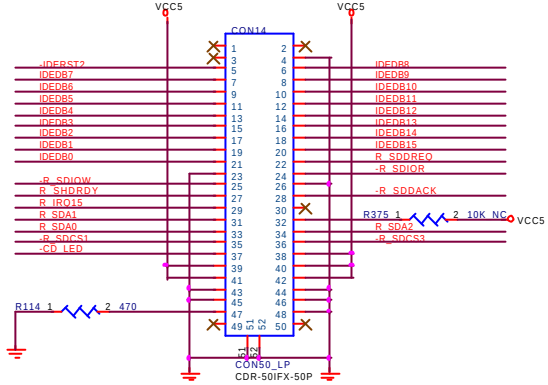










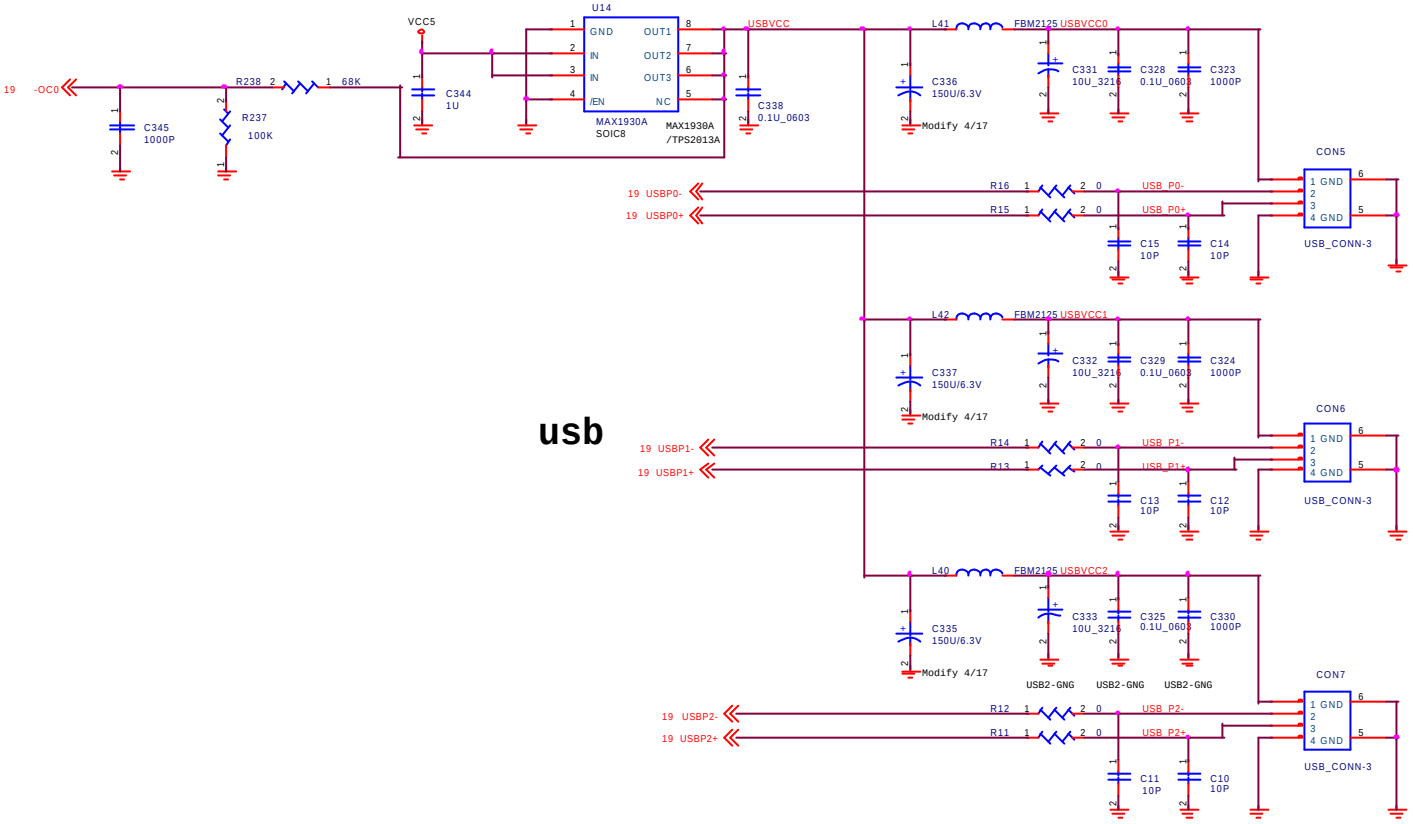


QUANTA COMPUTER

Title: IDE HDD,ODD Connector

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

Date: Thursday, April 22, 2004 | Sheet 27 of 40



QUANTA COMPUTER

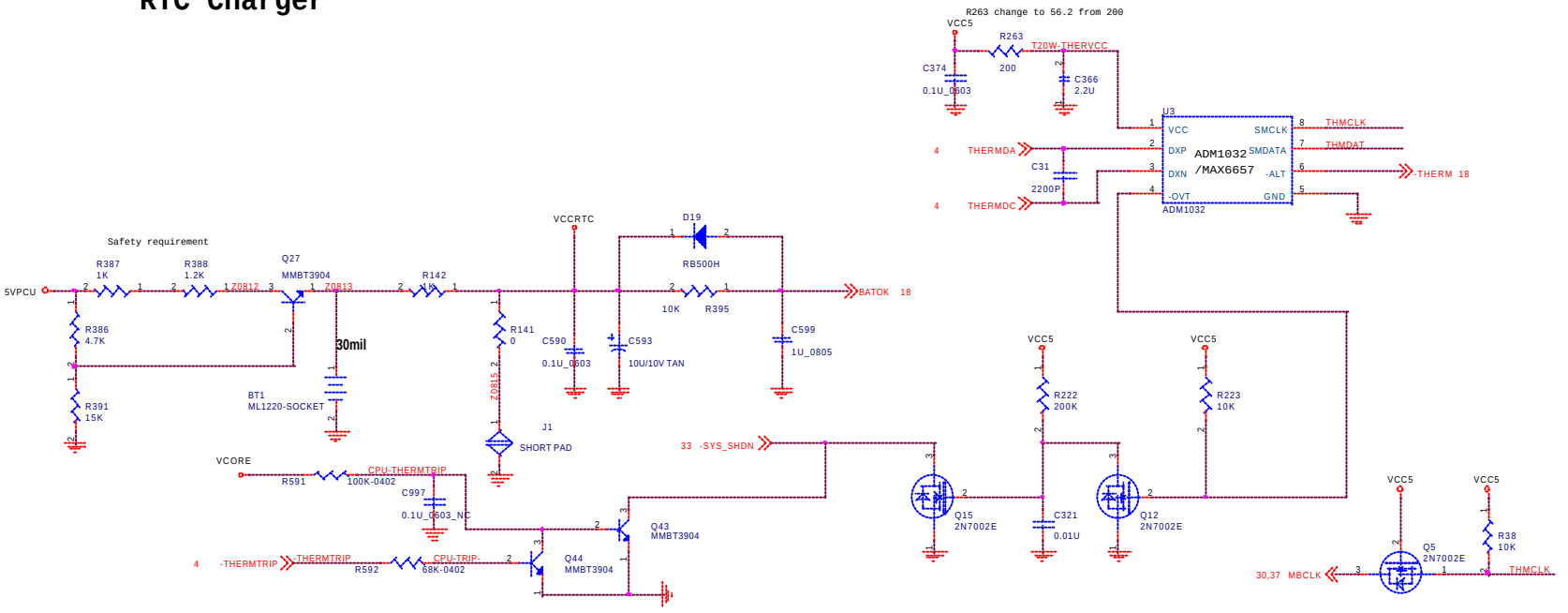
Title: USB,FDD Connector

Size: Custom | Document Number: VM5 Main Board | Rev: 1A

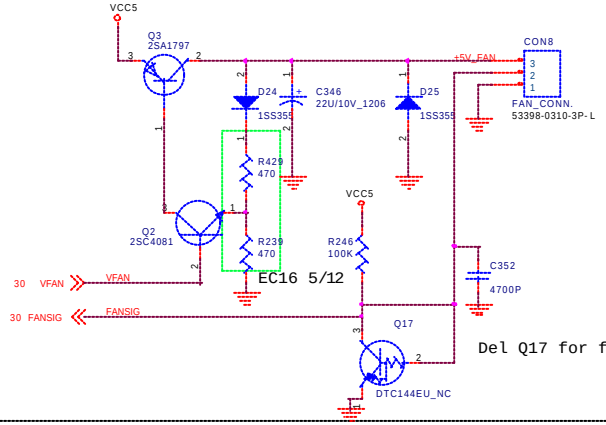
Date: Thursday, April 22, 2004 | Sheet 28 of 40

Thermal Sensor

RTC Charger



Fan

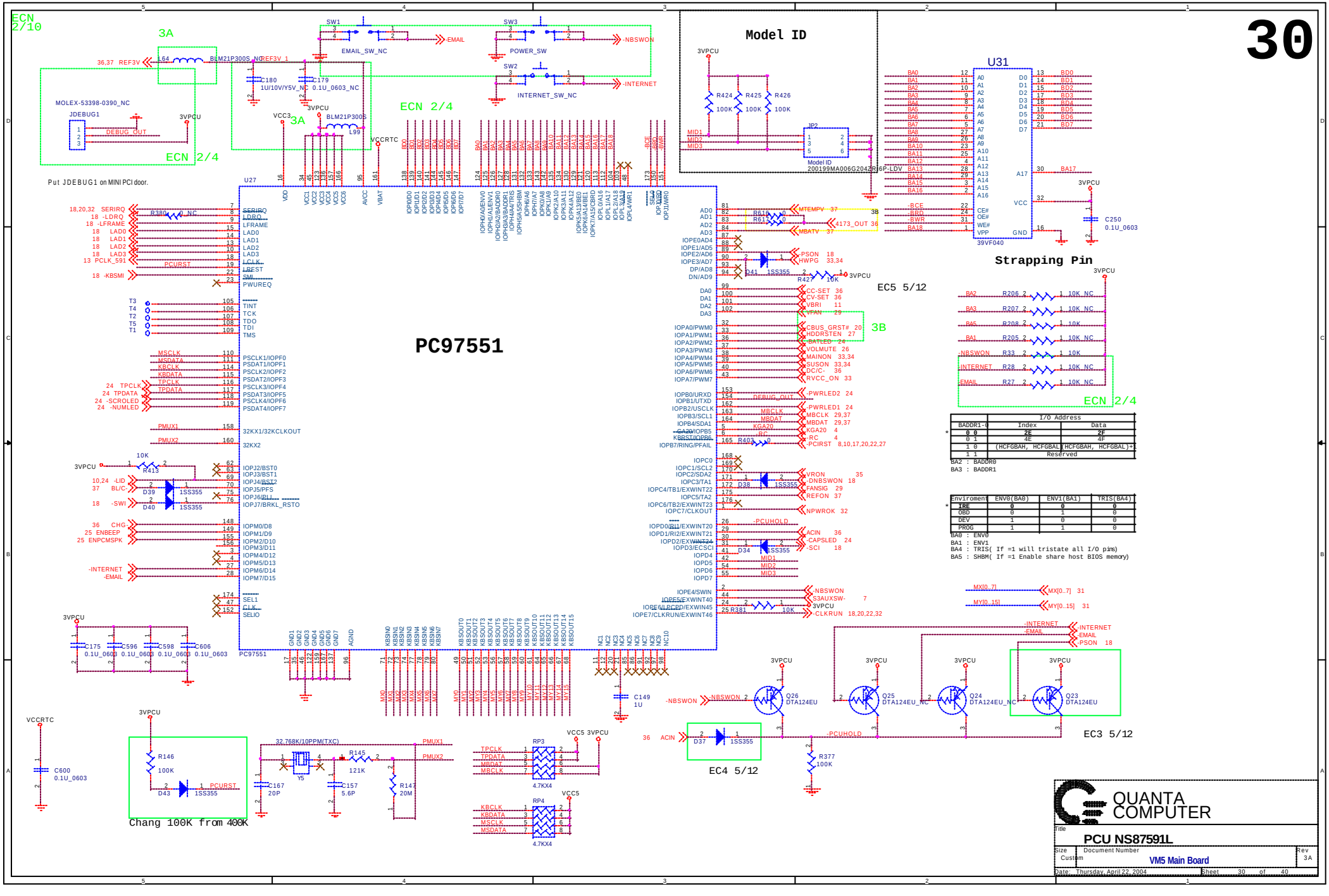


QUANTA COMPUTER

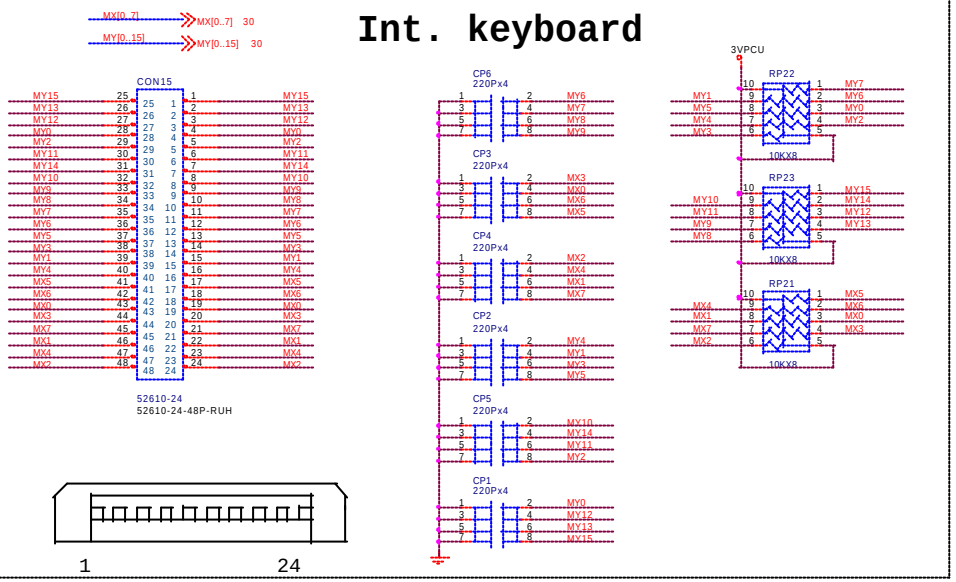
Title: RTC & Thermal IC,FAN

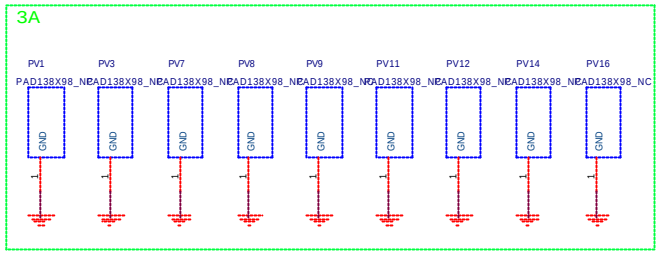
Size	Document Number	Rev
Custom	VM5 Main Board	2A

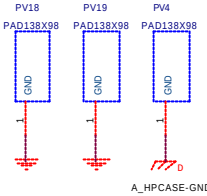
Date: Thursday, April 22, 2004 Sheet 29 of 40

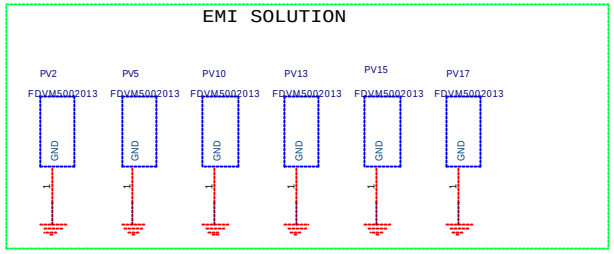

30
ECN 2/10
3A
SW1
EMAIL_SW_NC
-EMAIL
SW3
POWER_SW
-NBSWON
SW2
INTERNET_SW_NC
-INTERNET
36,37 REF3V
L64
BLM21P300S_NC
REF3V_1
C180
1U/10V/Y5V_NC
C179
0.1U_0603_NC
MOLEX-53398-0390_NC
JDEBUG1
DEBUG_OUT
3VPCU
ECN 2/4
VCC3
BLM21P300S
L99
VCCRTC
Put JDEBUG1 on MINI PCI door.
U27
PC97551
SERIRQ
LDRQ
LFRAME
LAD0
LAD1
LAD2
LAD3
LCLK
LRST
SMI
PWUREQ
PCURST
KBSMI
TINT
TCK
TDO
TDI
TMS
PSCLK1/IOPF0
PSDAT1/IOPF1
PSCLK2/IOPF2
PSDAT2/IOPF3
PSCLK3/IOPF4
PSDAT3/IOPF5
PSCLK4/IOPF6
PSDAT4/IOPF7
32KX1/32KCLKOUT
32KX2
IOPJ2/RST0
IOPJ3/BST1
IOPJ4/BST2
IOPJ5/PFS
IOPJ6/PLL
IOPJ7/BRKL_RSTO
IOPM0/D8
IOPM1/D9
IOPM2/D10
IOPM3/D11
IOPM4/D12
IOPM5/D13
IOPM6/D14
IOPM7/D15
SEL1
CLK
SELIO
Model ID
R424 100K
R425 100K
R426 100K
JP2
Model ID
200199MA006G2042R16P-LDV
U31
39VF040
Strapping Pin
EC5 5/12
EC4 5/12
EC3 5/12
Chang 100K from 400K
32.768K/10PPM(TXC)
Y5
C167 20P
C157 5.6P
R145 121K
R147 20M
R146 100K
D43 1SS355
RP3 4.7KX4
RP4 4.7KX4
Q26 DTA124EU
Q25 DTA124EU_NC
Q24 DTA124EU_NC
Q23 DTA124EU
R377 100K
C149 1U
C600 0.1U_0603
C175 0.1U_0603
C596 0.1U_0603
C598 0.1U_0603
C606 0.1U_0603
C250 0.1U_0603
QUANTA COMPUTER
PCU NS87591L
VM5 Main Board
Size Custom
Document Number
Rev 3A
Date: Thursday, April 22, 2004
Sheet 30 of 40

Int. keyboard

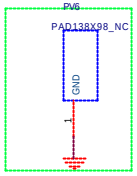




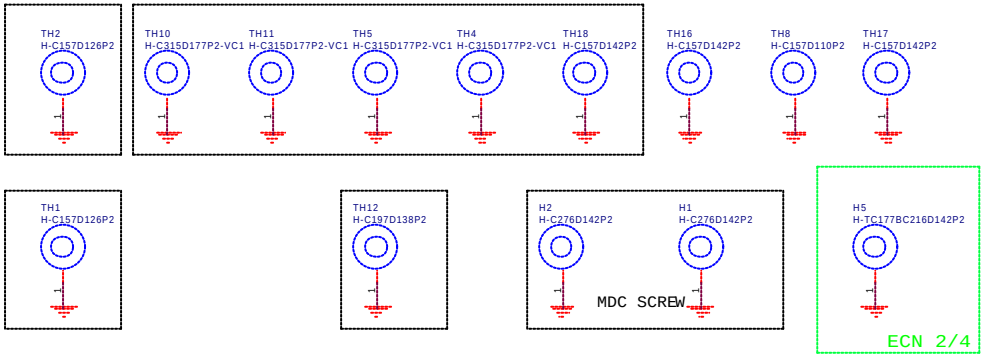




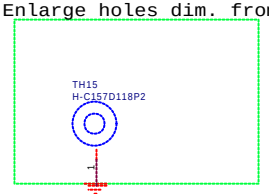
Change P/N



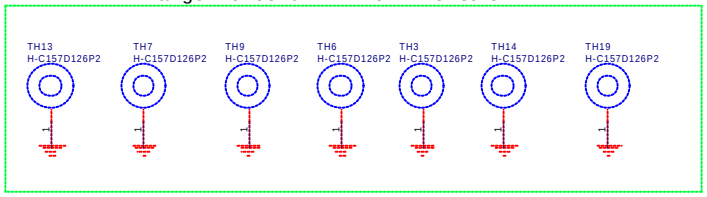
Screw

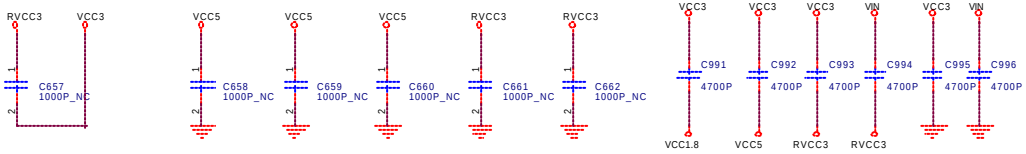


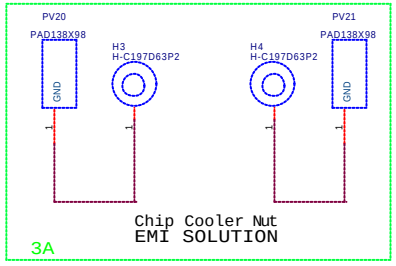
Enlarge holes dim. from 2.8 to 3.0



Enlarge holes dim. from 2.8 to 3.2





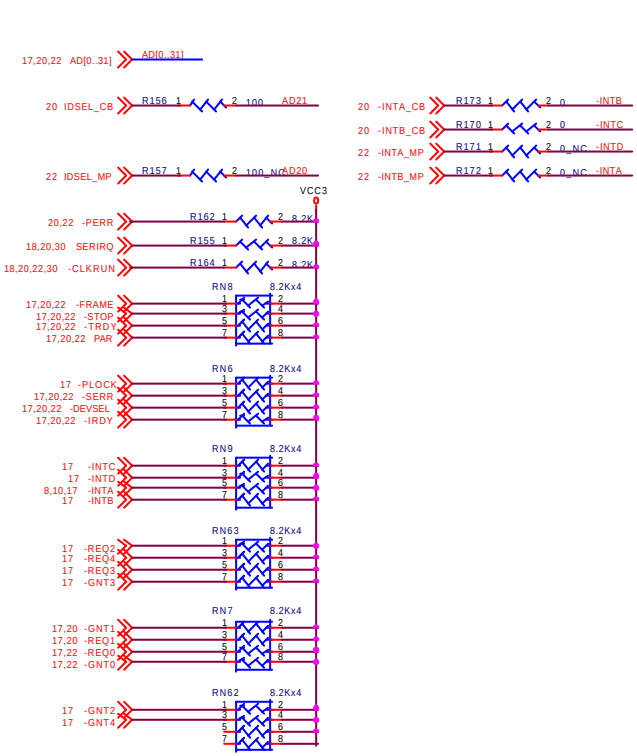


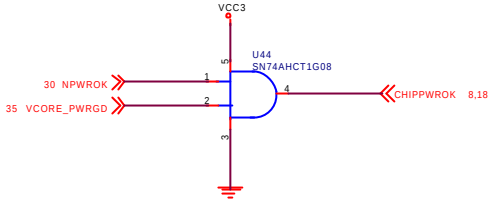
QUANTA COMPUTER

Title: INT. KEYBOARD

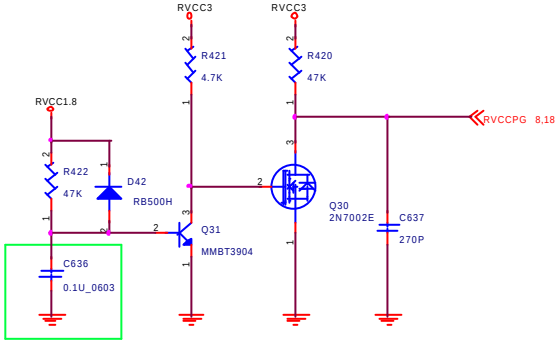
Size: Custom | Document Number: VM5 Main Board | Rev: 3A

Date: Thursday, April 22, 2004 | Sheet 31 of 40





TO CHIPSET POWER GOOD



EC8 5/12

QUANTA COMPUTER

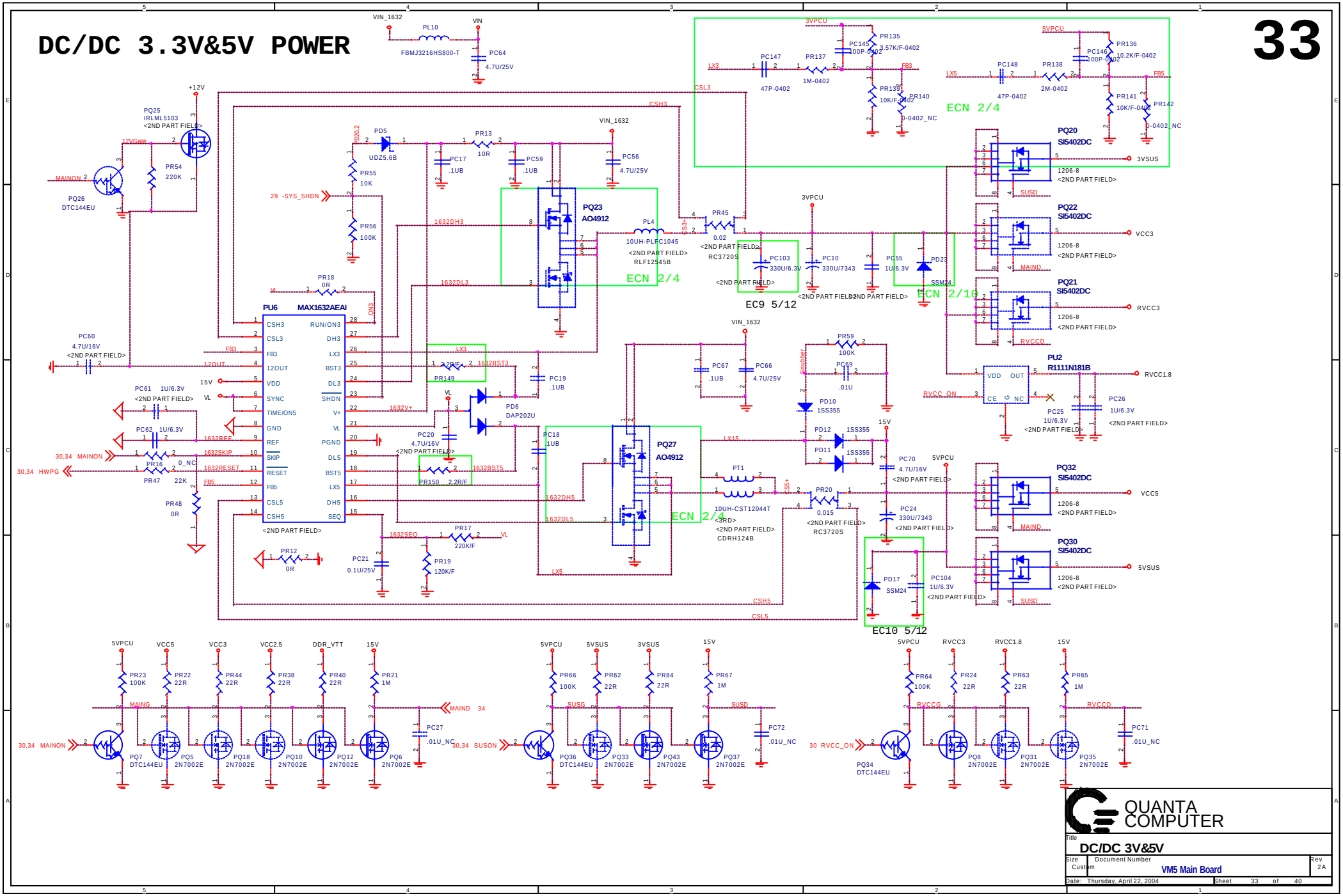
Title: PCI Bus Glue Logic

Size: Custom | Document Number: VM5 Main Board | Rev: 2A

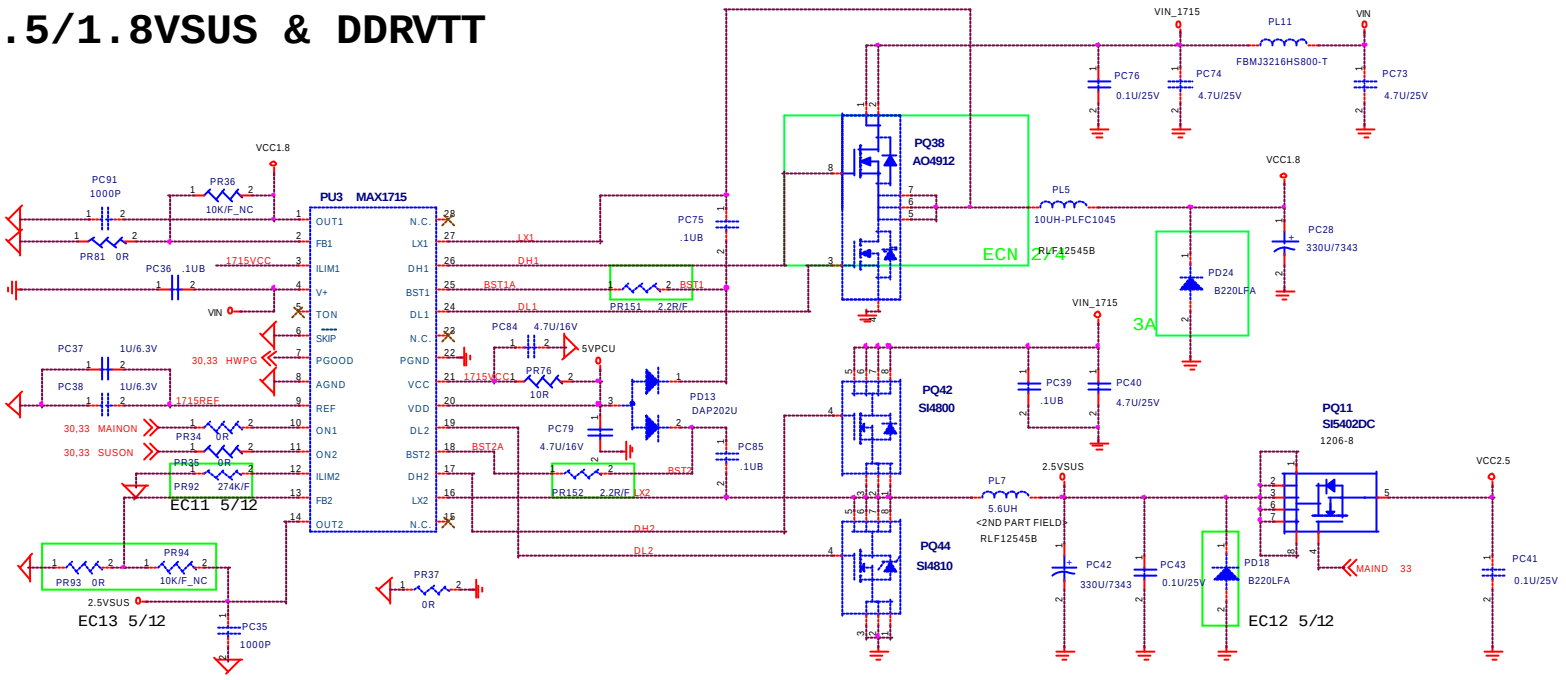
Date: Thursday, April 22, 2004 | Sheet 32 of 40

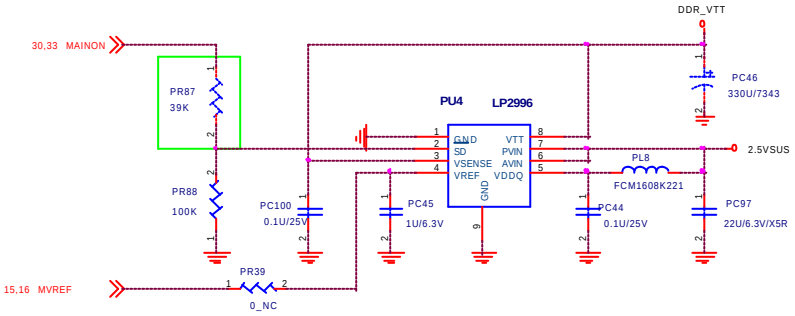
DC/DC 3.3V&5V POWER

33



2.5/1.8VSUS & DDRVTT



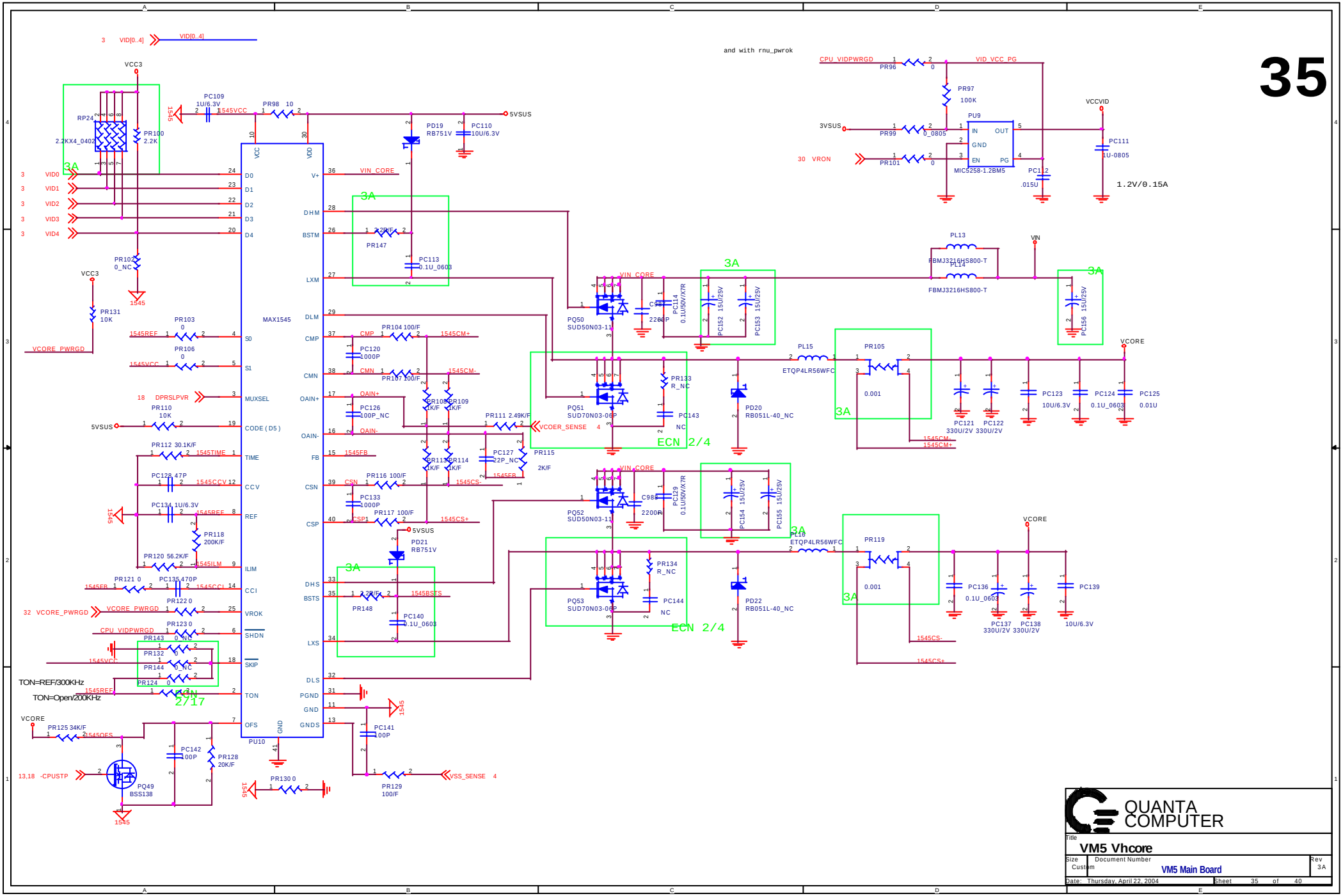


QUANTA COMPUTER

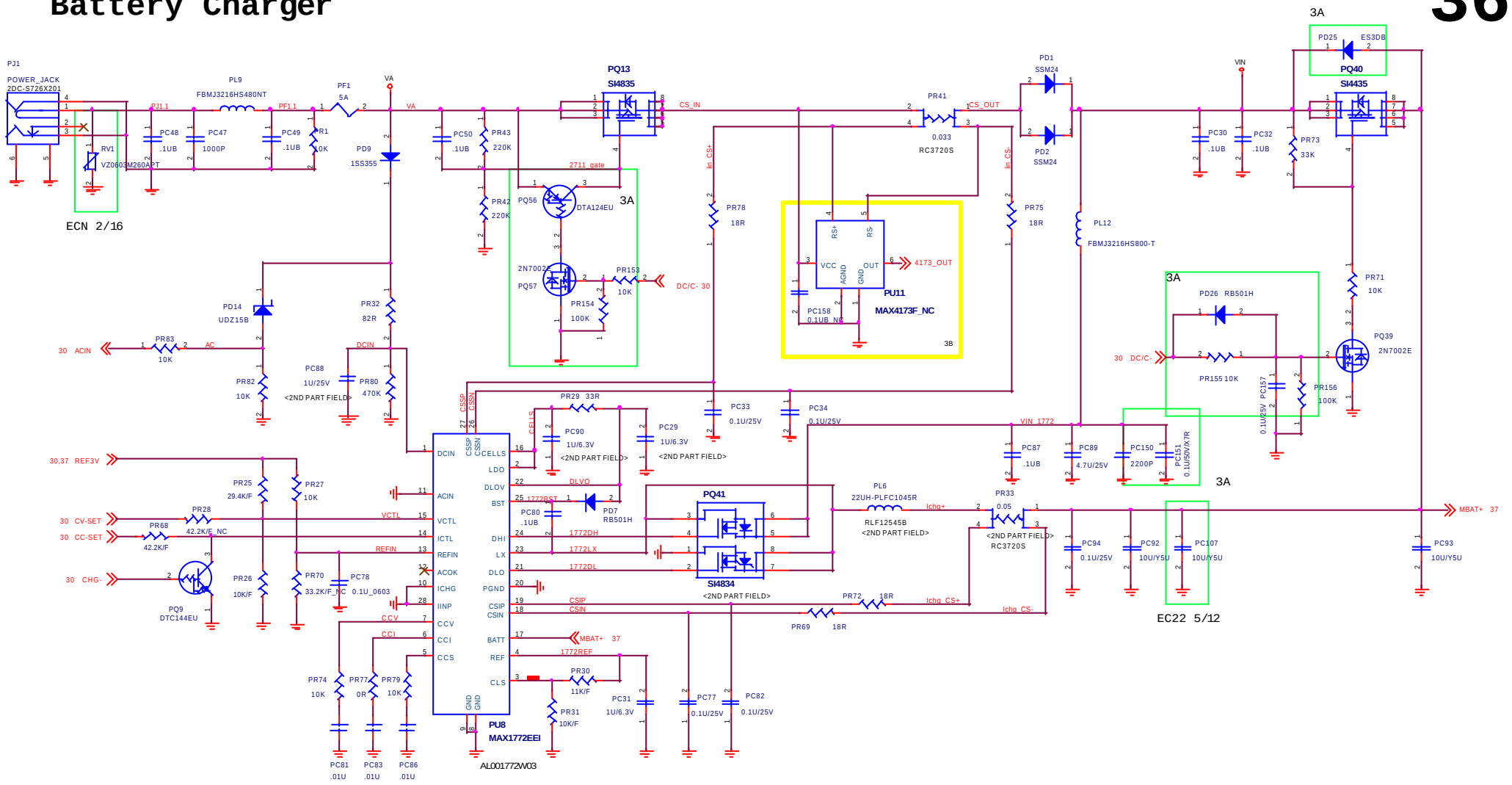
Title: DC/DC 2.5/1.8/1.5VSUS

Size	Document Number	Rev
Custom	VM5 Main Board	3A

Date: Thursday, April 22, 2004 Sheet 34 of 40


35
MAX1545
PU10
PQ49 BSS138
PQ50 SUD50N03-11
PQ51 SUD70N03-06P
PQ52 SUD50N03-11
PQ53 SUD70N03-06P
PU9 MIC5258-1.2BM5
PL13 FBMJ3216HS800-T
PL14 FBMJ3216HS800-T
PL15 ETQP4LR56WFC
PL16 ETQP4LR56WFC
PD19 RB751V
PD20 RB051L-40_NC
PD21 RB751V
PD22 RB051L-40_NC
ECN 2/4
ECN 2/17
1.2V/0.15A
TON=REF/300KHz
TON=Open/200KHz
QUANTA COMPUTER
VM5 Vhcore
VM5 Main Board
Thursday, April 22, 2004

Battery Charger



QUANTA COMPUTER

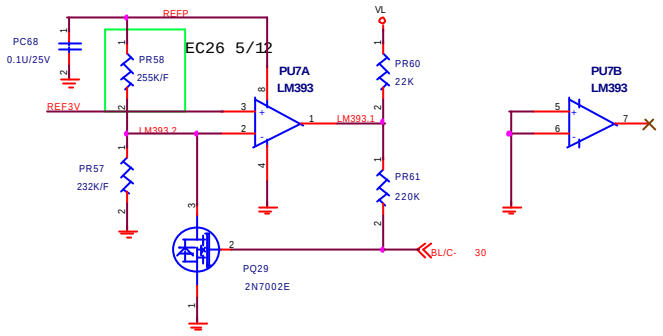
Title: BATTERY CHARGER

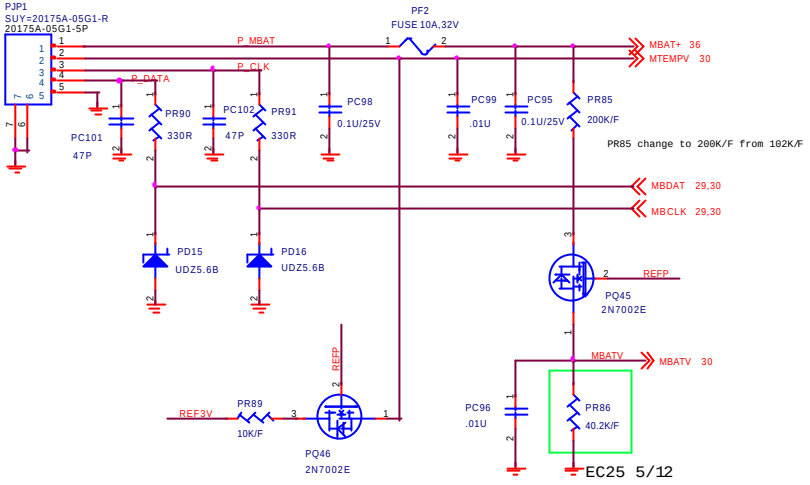
Size	Document Number	Rev
Custom	VM5 Main Board	3A

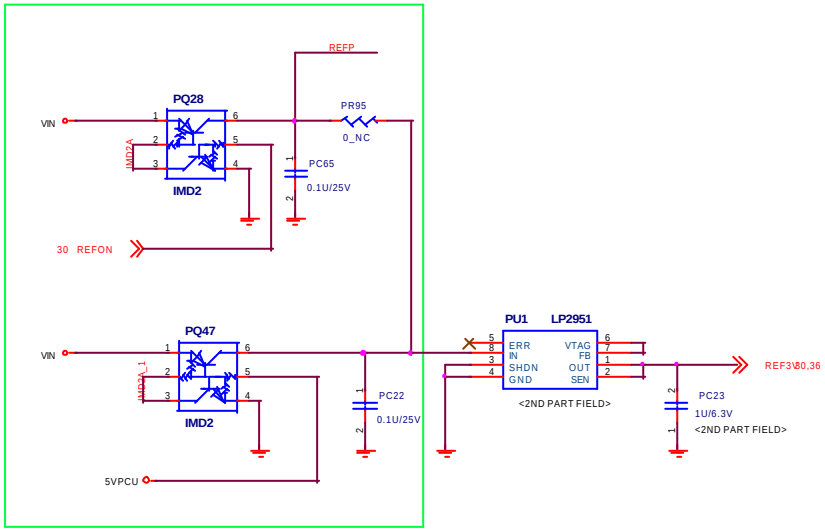
Date: Thursday, April 22, 2004 Sheet 36 of 40

Battery Connector

Voltage low 7.2V detect
for Ni-MH battery







EC19 5/12

QUANTA COMPUTER

Title: BATTERY SELECTOR

Size	Document Number	Rev
Custom	VM5 Main Board	1A

Date: Thursday, April 22, 2004 Sheet 37 of 40

MODEL	REV	CHANGE LIST
VM5 MB	1A	First Release
	2A	as below change is from Intel CRB schematic. P3 CPUR5,CPUR7,CPUR8,CPUR35 Change to 51/F P4 CPUR12 change to 220-0402 P4 CPUR1 change to 56/F-0402 P4 CPUR23 change to 300-0402 P4 CPUR38 change to 56/F-0402 P3 CPURN1 change to 200X4 P4 add R595 10K-0402 P.7 Rename net name 2.5SUS to 2.5VSUS P.10 correction VBGCLK to VAGCLK P.10 U21 change value to 302/ELV/302LV P.29 R591 change pull high to VCORE for Thermtrip timming Update Some net name. P.24 add 4 0R resist R596,R597,R598,R599 for Lan Net P.35 RP24 change Value from 1KX4 to 1KX4_0402 P.3 CPURN1 change Value from 200*4 to 51*4 P.20 L63,L65 Change Value from 0 to 0_0805 P.10 R41 change Value from 22 to 22_1206 P.10,P.26 R56,R67,R101 change Value from 0 to 0_0805 P.29 Del Q17 for FAN Issue. System Changed P.30 Remove Email,Internet buttom function NC parts SW1,SW2,R27,R28,Q24,Q25 P.22,P24 Remove wireless LED function NC parts D33(P.22) R428,Q18,SW4,C397,D16,R65 P.30 Add Mode ID add parts R424,R425,R426,JP2 P.30 Change 51 debug connector JDEBUG1 net name. P.31 Add H3,H4 for NB cooler ,Add H5 for MDC EMI request hole. P.3 Change CPU socket layout library to TM8 used. Power Change: P.35 PQ51,PQ53 change parts to SUD70N03-06P P.33 PQ23,PQ27 change parts to AO4912 P.34 PQ38 change parts to AO4912 P.33 Power add schematic add parts PC145,PC146,PC147,PC148,PR135,PR136,PR137,PR138,PR139,PR140,PR141,PR142 Remove mini-PCI function to unpopulated P.22 C108,C111,C112,C114,C116,C118,C444,C478,C493,C572,C86,C91,CON12,D31,L15,L16 and P.32 R172,R171,P.13 R534,C941,P.32 R157 P.33 Power placement changed footprint from 0603 to 0402 PC145,PC146,PC147,PC148,PR135,PR136,PR137,PR138,PR139,PR140,PR141,PR142 P.20 Remove 1394 function change U30 chip from PCI4510 to PCI1510GVF, and remove 10 compnents C210,C211,C630,C631,R169,R177,R179,R181,R183,Y8

Model / Page	VM5MB FM	VM5MB TO
1	1A	
2	1A	
3	2A	
4	2A	
5	1A	
6	1A	
7	2A	
8	1A	
9	1A	
10	2A	
11	1A	3A
12	1A	
13	1A	3A
14	1A	
15	1A	
16	1A	
17	1A	
18	2A	3A
19	1A	
20	2A	3A
21	1A	3A
22	2A	
23	2A	3A
24	2A	
25	2A	
26	1A	

QUANTA COMPUTER

PROJECT:	VM5	PART NUMBER:	41VM5MB0004	REV:	3A	DOC NO. 204	
APPROVED BY:	VIC Lin	CHECKED BY:	Lit Wu	DRAWN BY:	Wagner Hong	DATE: 4/6 2004	SHEET 1 OF 3

MODEL	REV	CHANGE LIST
VM5 MB		P.10 FOR EMI SOLUTION U21.118 pin add L96 and C1002 DVDD net add C999 VDDV net add L95 and C1000 LVDD1 net R49 change to BK1608LL241,add C1003 C998 LVDD2 net add C1001 P.33 for 3vpcu turn off inrush current solution add diode PD23 P.18 P.30 For Software Boot-Block function use SouthBridge GPIO9 control and add 1 jumper for it, JP2 from 6PIN change to 8PINs,and R600 100K pull-high P.35 PQ49 change Library pin define P.18,P.22,P.25 For prevent Bit-clock failed, put some solution into schematic,Add R601,R602 and NC parts R603,C1004,R605,R604,C1005,C1006 P.36 Add a EMI solution Varistor RV1 on DC-IN jack P.23 Add EMi solution On net PWFBIN add a 10P cap C1011 On TXCLK and RXCLK net add a pi type filter as below components C1007,C1008,C1009,C1010,L97,L98 P.18 Fixed AC97 signal failed add R606,R607,R608,R609 P.30 RVS for NS97591V add L99 P.35 power add rvs item PR143,PR144
	3A	0317 P.18 Change R578 to 10K and Pull Down. P.20 Change page title. P.23 L97,L98 change footprint to 0603 P.35 Change PR111 to 2.49K/F. P.35 Change RP24 Value from 1KX4_0402 to 2.2KX4_0402 0318 Power changed P.35 PR100 from 1K change to 2.2K. P.35 PR105,PR119 change footprint and P/N to RC2512-DM1,CS+0018J104 for Rsens non-accurate. P.34 ADD A DIODE PD24 VCC1.8 NET. P.11 ADD INVERT POWER source start circuit ADD PARTS PC149,PQ54,PQ55,PR145,PR146,RP25. System. P.13 change C985 net to FB_IN close to U43 pin20. P.18 Remove net BitCLK and C591 of single net P.18 Add 6 resists R610,R611,R612,R613,R614,R615 use SB GPIO6,9,10 for VM5 board id circuit. For proto3 VM5 board mount R611,R613,R615 10K others NC. P.30 Remove B_Block function de-populated R600. 0319 P.31 Change H3,H4 library. 0323 P.13 Change C985 net from FB_IN to FB_OUT. 0324 Hole TH13,TH14,TH15,TH19,TH3,TH6,TH7,TH9 Change layout library and hole dim. P.36 EMI add PC150 and PC151 cap. 0325 P.21 Change CON19 layout library.

Model / Page	VM5MB FM	VM5MB TO
27	1A	
28	1A	
29	2A	
30	2A	3A
31	2A	3A
32	2A	
33	2A	
34	2A	3A
35	2A	3A
36	2A	3A
37	1A	

QUANTA COMPUTER

PROJECT :	VM5	PART NUMBER :	41VM5MB0004	REV:	3A	DOC NO. 204	
APPROVED BY :	VIC Lin	CHECKED BY :	Lit Wu	DRAWN BY :	Wagner Hong	DATE : 4/6 2004	SHEET 2 OF 3

MODEL	REV	CHANGE LIST
VM5 MB		0326 P.35 Power add 5 cap PC152,PC153,PC154,PC155,PC156 and REMOVE Parts PC115,PC116,PC117,PC118,PC119,PC130,PC131,PC132. for cap noise P.35 PR147,PR148 P.33 add PR149,PR150 p.34 ADD PR151,PR152 (for anti-EMI) p.34 PR87 CHANGE VALUE TO 39K for PU4 can't supply power P.30 Change KBC to 551 so Change U27 value from PC87591L to PC97551,MOUNT L99 ,UNPOPULATED L64,C179,C180. P.11 To fixed CRT issue fine tune. Change L32,L33,L36 Value from BK1608LL241 to BLM18BA470SN1.,NBR18,NBR19,NBR20 change value from BK1608LL680 to 0/r P.13 To fixed USB Clock 48MHz Issue fine tune R545 to 33_0402. P.31 EMI spring PV10,PV13,PV15,PV17,PV2,PV5 need change P/N FDVM5002013 high 3mm. P.36 Power add PQ56,PQ57,PR153,PR154,PC157,PD25(BC00ES3BZ03),PD26,PR155,PR156 remove PQ14 for PQ13 burn issue. 0329 Add to Spring PV20,PV21 around H3,H4 for EMI requirment. P.34 PD24 Change Value to B220LFA. P.36 PD25 Change Value to ES3B. P.31 Modify PV1,PV11,PV12,PV14,PV16,PV3,PV7,PV8,PV9 to NC parts. 0330 P.36 Change PD25 Value (ES3DB)and library(DIODE-SMB) P.18 R578 change to 4.7K

Model	VM5MB
Page	FM / TO

QUANTA COMPUTER

PROJECT :	VM5	PART NUMBER :	41VM5MB0004	REV:	3A	DOC NO. 204	
APPROVED BY :	VIC Lin	CHECKED BY :	Lit Wu	DRAWN BY :	Wagner Hong	DATE : 4/6 2004	SHEET 3 OF 3