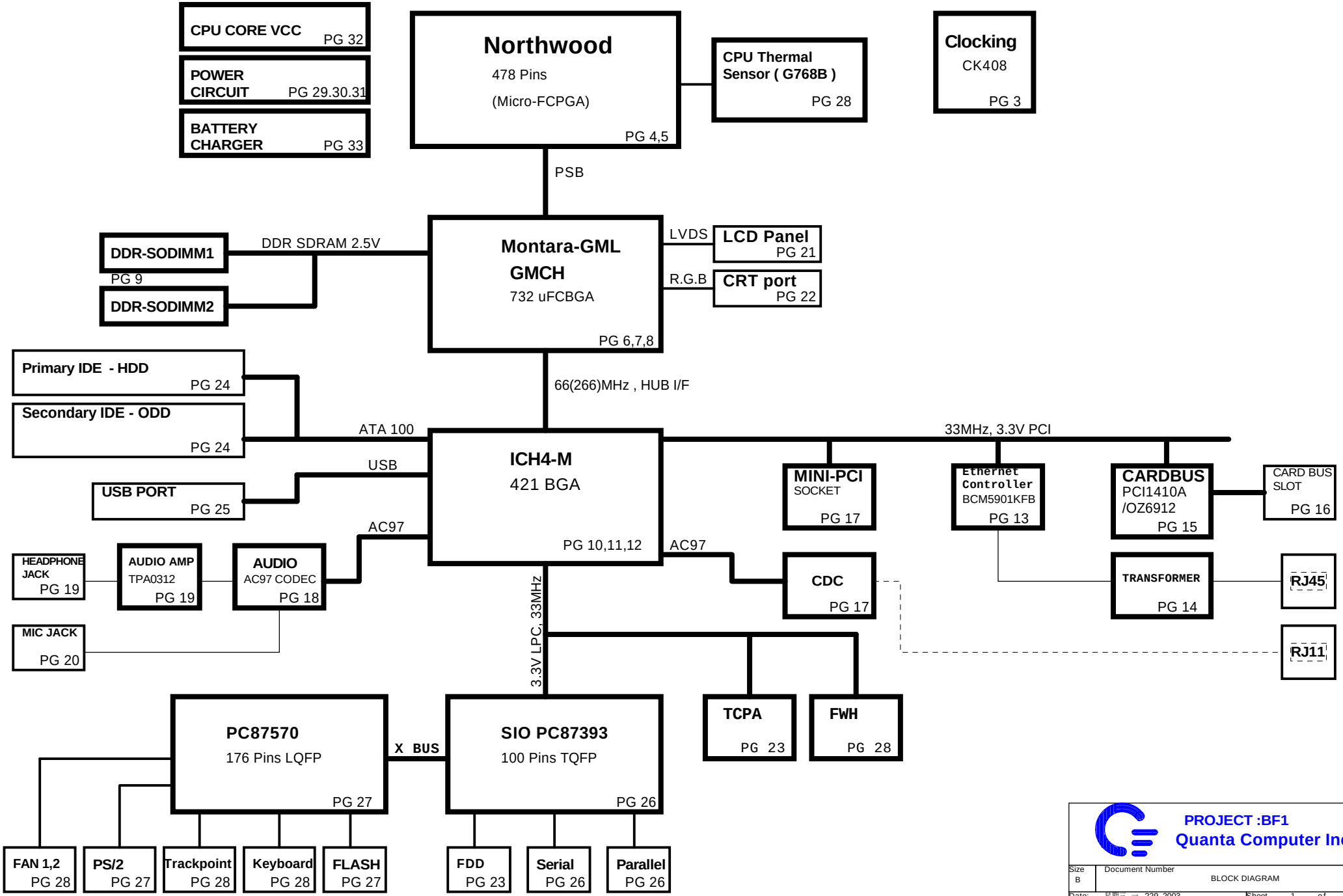
BF1 BLOCK DIAGRAM

NORTHWOOD / MONTARA-GML



PROJECT :BF1

Quanta Computer Inc.

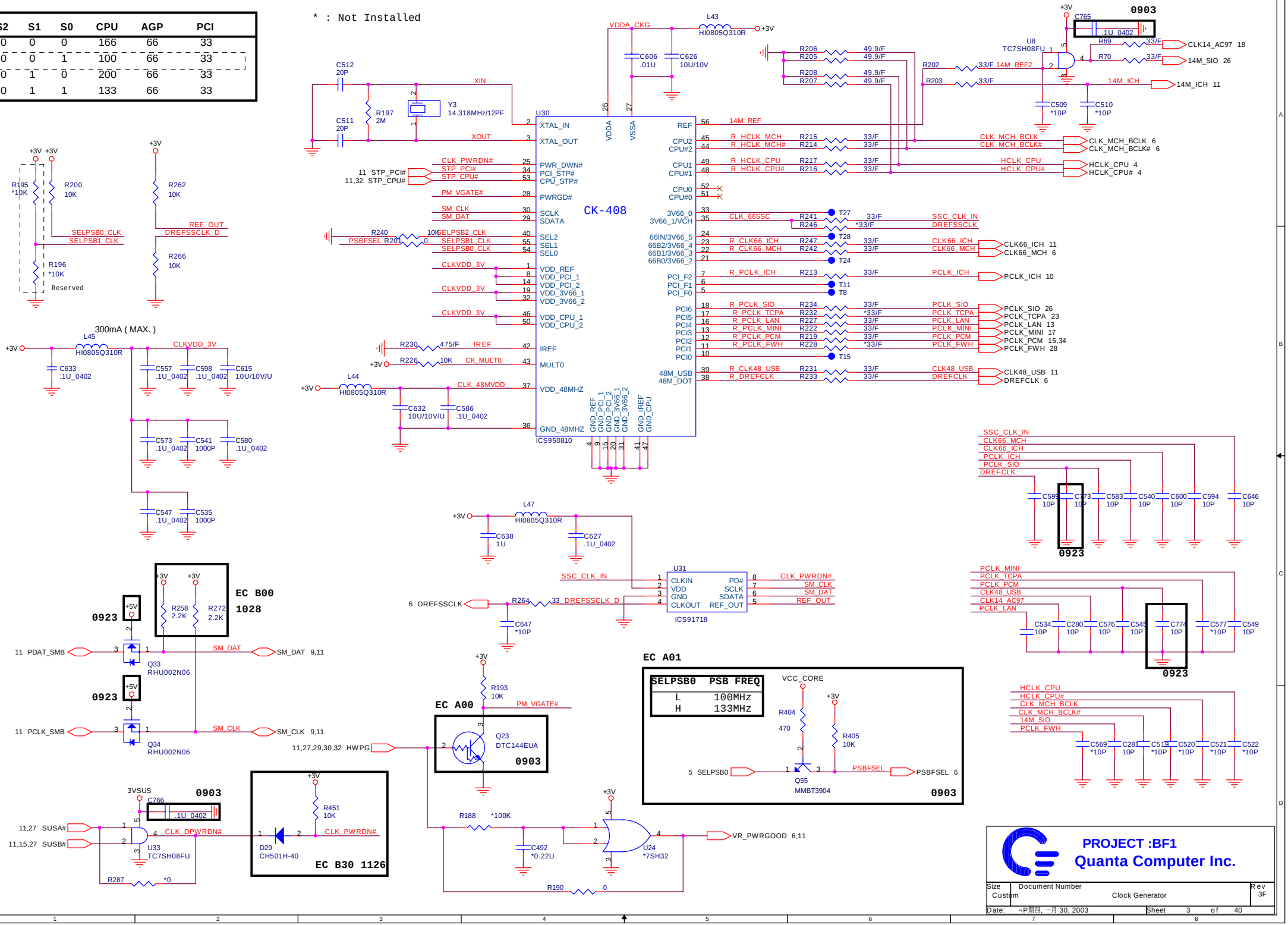
Size	Document Number	Rev
B	BLOCK DIAGRAM	3F

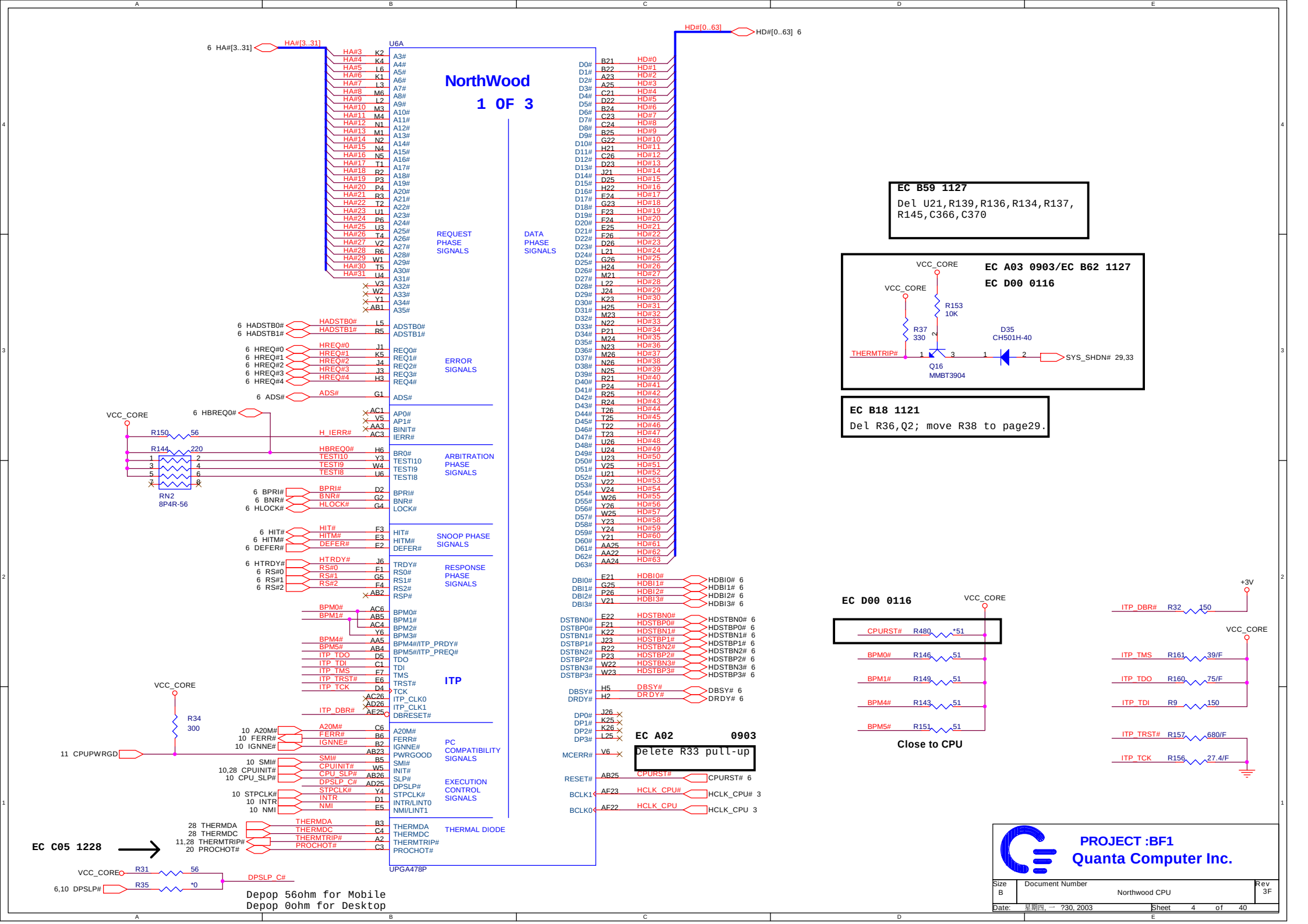
Date: 星期三, 一 ?29, 2003 Sheet 1 of 40

TABLE OF CONTENTS

S2	S1	S0	CPU	AGP	PCI
0	0	0	166	66	33
0	0	1	100	66	33
0	1	0	200	66	33
0	1	1	133	66	33

* : Not Installed




U6A
NorthWood
1 0F 3
REQUEST PHASE SIGNALS
DATA PHASE SIGNALS
ERROR SIGNALS
ARBITRATION PHASE SIGNALS
SNOOP PHASE SIGNALS
RESPONSE PHASE SIGNALS
ITP
PC COMPATIBILITY SIGNALS
EXECUTION CONTROL SIGNALS
THERMAL DIODE
UPGA478P
HA#[3..31]
HD#[0..63]
HD#[0..63] 6
6 HA#[3..31]
6 HADSTB0#
6 HADSTB1#
6 HREQ#0
6 HREQ#1
6 HREQ#2
6 HREQ#3
6 HREQ#4
6 ADS#
6 HBREQ0#
VCC_CORE
R150 56
H_IERR#
R144 220
RN2
8P4R-56
6 BPRI#
6 BNR#
6 HLOCK#
6 HIT#
6 HITM#
6 DEFER#
6 HTRDY#
6 RS#0
6 RS#1
6 RS#2
BPM0#
BPM1#
BPM4#
BPM5#
ITP_TDO
ITP_TDI
ITP_TMS
ITP_TRST#
ITP_TCK
ITP_DBR#
VCC_CORE
R34
300
11 CPUPWRGD
10 A20M#
10 FERR#
10 IGNNE#
10 SMI#
10,28 CPUINIT#
10 CPU_SLP#
DPSLP_C#
10 STPCLK#
10 INTR
10 NMI
28 THERMDA
28 THERMDC
11,28 THERMTRIP#
20 PROCHOT#
EC C05 1228
VCC_CORE
R31 56
R35 *0
6,10 DPSLP#
Depop 56ohm for Mobile
Depop 0ohm for Desktop
DBI0#
DBI1#
DBI2#
DBI3#
HDBI0# 6
HDBI1# 6
HDBI2# 6
HDBI3# 6
DSTBN0#
DSTBP0#
DSTBN1#
DSTBP1#
DSTBN2#
DSTBP2#
DSTBN3#
DSTBP3#
HDSTBN0# 6
HDSTBP0# 6
HDSTBN1# 6
HDSTBP1# 6
HDSTBN2# 6
HDSTBP2# 6
HDSTBN3# 6
HDSTBP3# 6
DBSY#
DRDY#
DBSY# 6
DRDY# 6
MCERR#
RESET#
CPURST# 6
BCLK1
HCLK_CPU# 3
BCLK0
HCLK_CPU 3
EC A02 0903
Delete R33 pull-up
EC B59 1127
Del U21,R139,R136,R134,R137,
R145,C366,C370
VCC_CORE
VCC_CORE
R153
10K
R37
330
D35
CH501H-40
THERMTRIP#
Q16
MMBT3904
SYS_SHDN# 29,33
EC A03 0903/EC B62 1127
EC D00 0116
EC B18 1121
Del R36,Q2; move R38 to page29.
EC D00 0116
VCC_CORE
CPURST# R480 *51
BPM0# R146 51
BPM1# R149 51
BPM4# R143 51
BPM5# R151 51
Close to CPU
+3V
ITP_DBR# R32 150
VCC_CORE
ITP_TMS R161 39/F
ITP_TDO R160 75/F
ITP_TDI R9 150
ITP_TRST# R157 680/F
ITP_TCK R156 27.4/F
PROJECT :BF1
Quanta Computer Inc.
Size B
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Northwood CPU
Rev 3F
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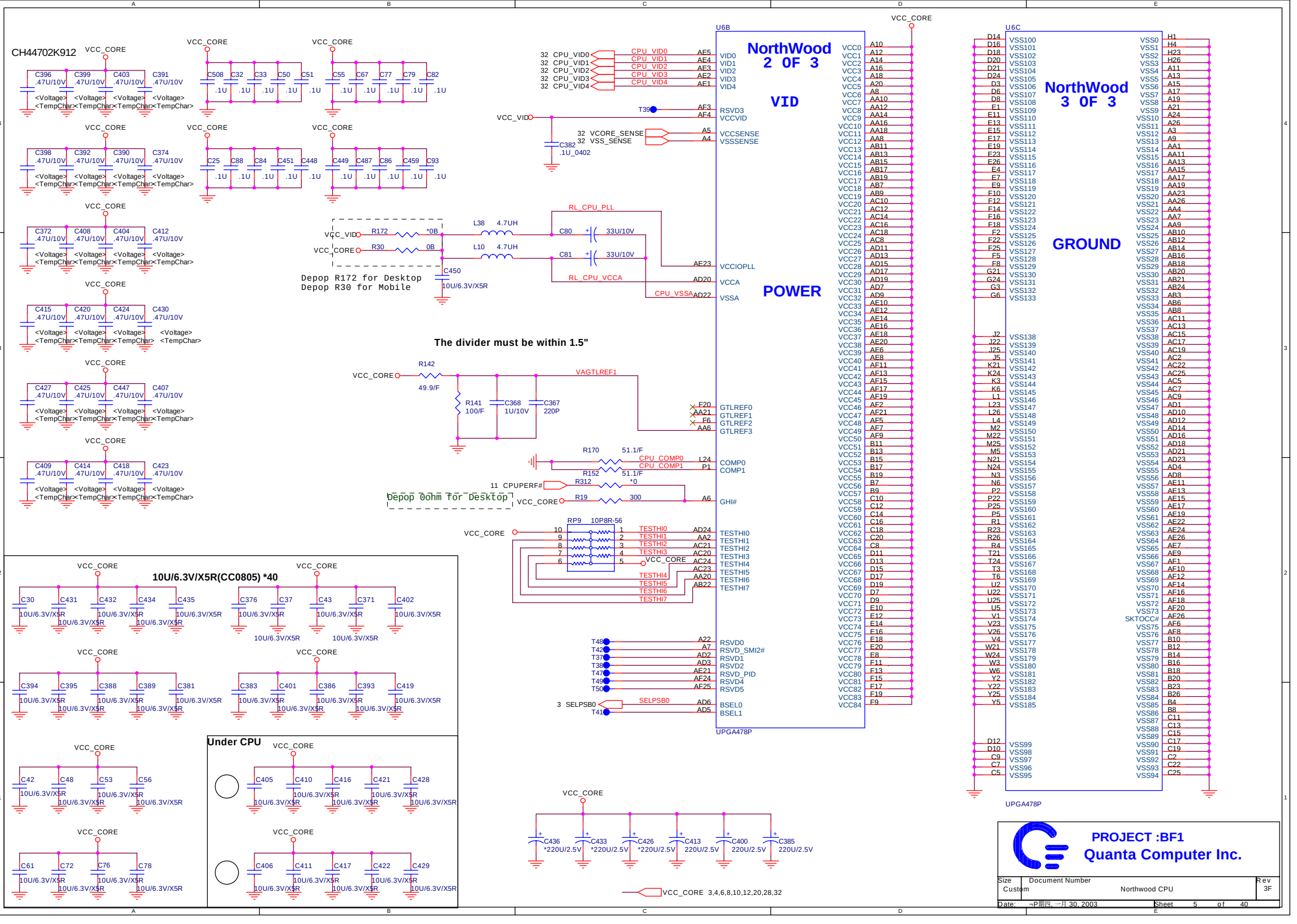
CH44702K912
VCC_CORE
C396 C399 C403 C391 .47U/10V
C508 C32 C33 C50 C51 C55 C67 C77 C79 C82 .1U
C398 C392 C390 C374 .47U/10V
C25 C88 C84 C451 C448 C449 C487 C86 C459 C93 .1U
C372 C408 C404 C412 .47U/10V
C415 C420 C424 C430 .47U/10V
C427 C425 C447 C407 .47U/10V
C409 C414 C418 C423 .47U/10V
<Voltage> <TempChar>
U6B
NorthWood 2 0F 3
VID
POWER
VID0 VID1 VID2 VID3 VID4
32 CPU_VID0 32 CPU_VID1 32 CPU_VID2 32 CPU_VID3 32 CPU_VID4
CPU_VID0 CPU_VID1 CPU_VID2 CPU_VID3 CPU_VID4
AE5 AE4 AE3 AE2 AE1
T39 AF3 AF4 RSVD3 VCCVID
VCC_VID
C382 .1U_0402
32 VCORE_SENSE 32 VSS_SENSE
A5 A4 VCCSENSE VSSSENSE
R172 *0B R30 0B
L38 4.7UH L10 4.7UH
C80 C81 33U/10V
C450 10U/6.3V/X5R
RL_CPU_PLL RL_CPU_VCCA
AE23 VCCIOPLL
AD20 VCCA
CPU_VSSA AD22 VSSA
Depop R172 for Desktop
Depop R30 for Mobile
The divider must be within 1.5"
R142 49.9/F
R141 100/F C368 1U/10V C367 220P
VAGTLREF1
F20 AA21 F6 AA6 GTLREF0 GTLREF1 GTLREF2 GTLREF3
R170 51.1/F R152 51.1/F
CPU_COMP0 CPU_COMP1
L24 P1 COMP0 COMP1
11 CPUPERF# R312 *0
Depop 0ohm for Desktop
R19 300
A6 GHI#
RP9 10P8R-56
TESTHI0 TESTHI1 TESTHI2 TESTHI3 TESTHI4 TESTHI5 TESTHI6 TESTHI7
AD24 AA2 AC21 AC20 AC24 AC23 AA20 AB22
T48 T42 T37 T38 T47 T49 T50
A22 A7 AD2 AD3 AE21 AF24 AF25
RSVD0 RSVD_SMI2# RSVD1 RSVD2 RSVD_PID RSVD4 RSVD5
3 SELPSB0 T41
SELPSB0 AD6 AD5 BSEL0 BSEL1
UPGA478P
U6C
NorthWood 3 0F 3
GROUND
UPGA478P
C436 C433 C426 C413 C400 C385 *220U/2.5V 220U/2.5V
VCC_CORE 3,4,6,8,10,12,20,28,32
10U/6.3V/X5R(CC0805) *40
C30 C431 C432 C434 C435 C376 C37 C43 C371 C402
C394 C395 C388 C389 C381 C383 C401 C386 C393 C419
C42 C48 C53 C56 C61 C72 C76 C78
Under CPU
C405 C410 C416 C421 C428 C406 C411 C417 C422 C429
PROJECT :BF1
Quanta Computer Inc.
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Document Number Northwood CPU
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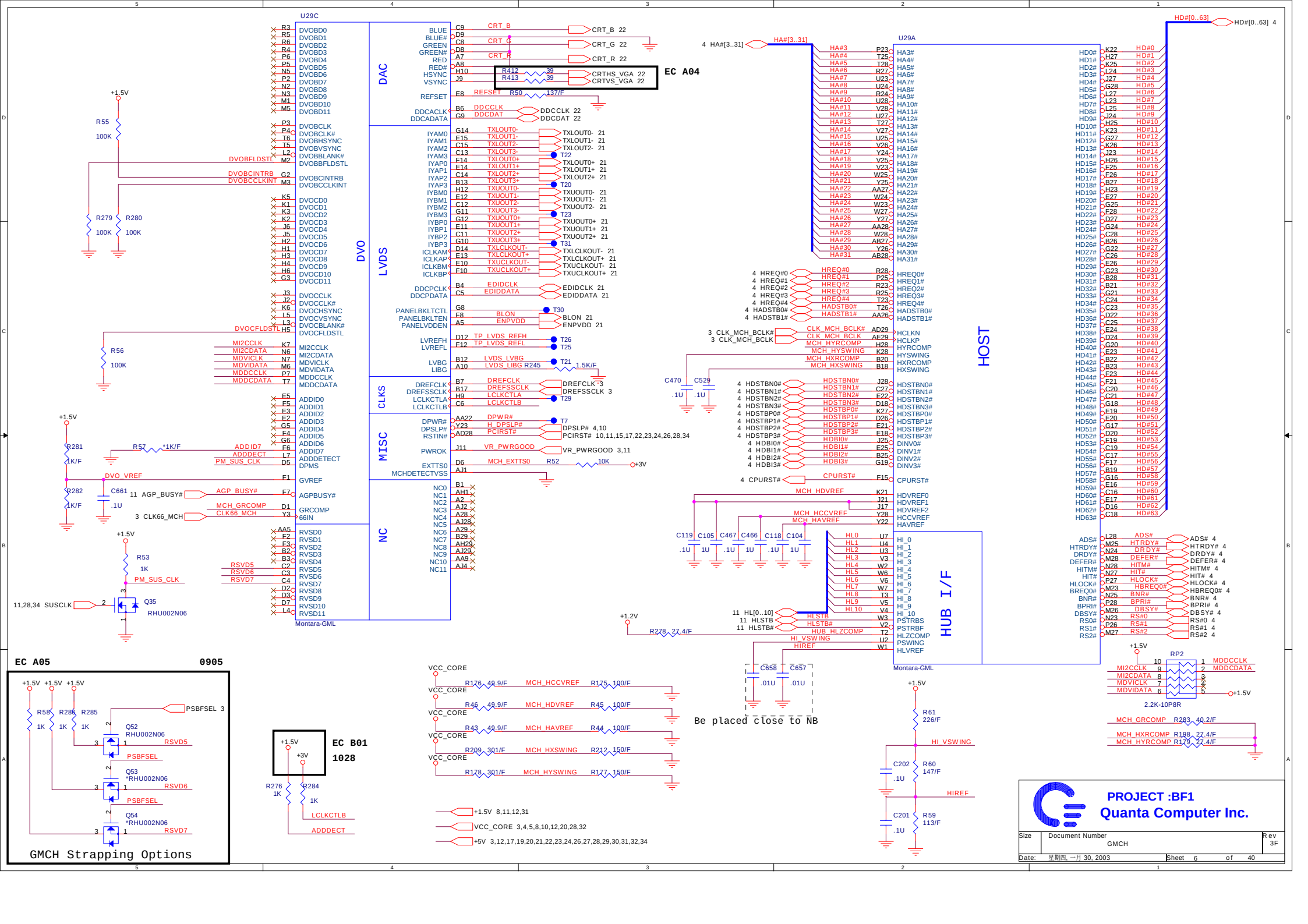
U29C
DVO
DAC
LVDS
CLKS
MISC
NC
Montara-GML
U29A
HOST
HUB I/F
Montara-GML
EC A04
EC A05
0905
GMCH Strapping Options
EC B01
1028
Be placed close to NB
PROJECT :BF1
Quanta Computer Inc.
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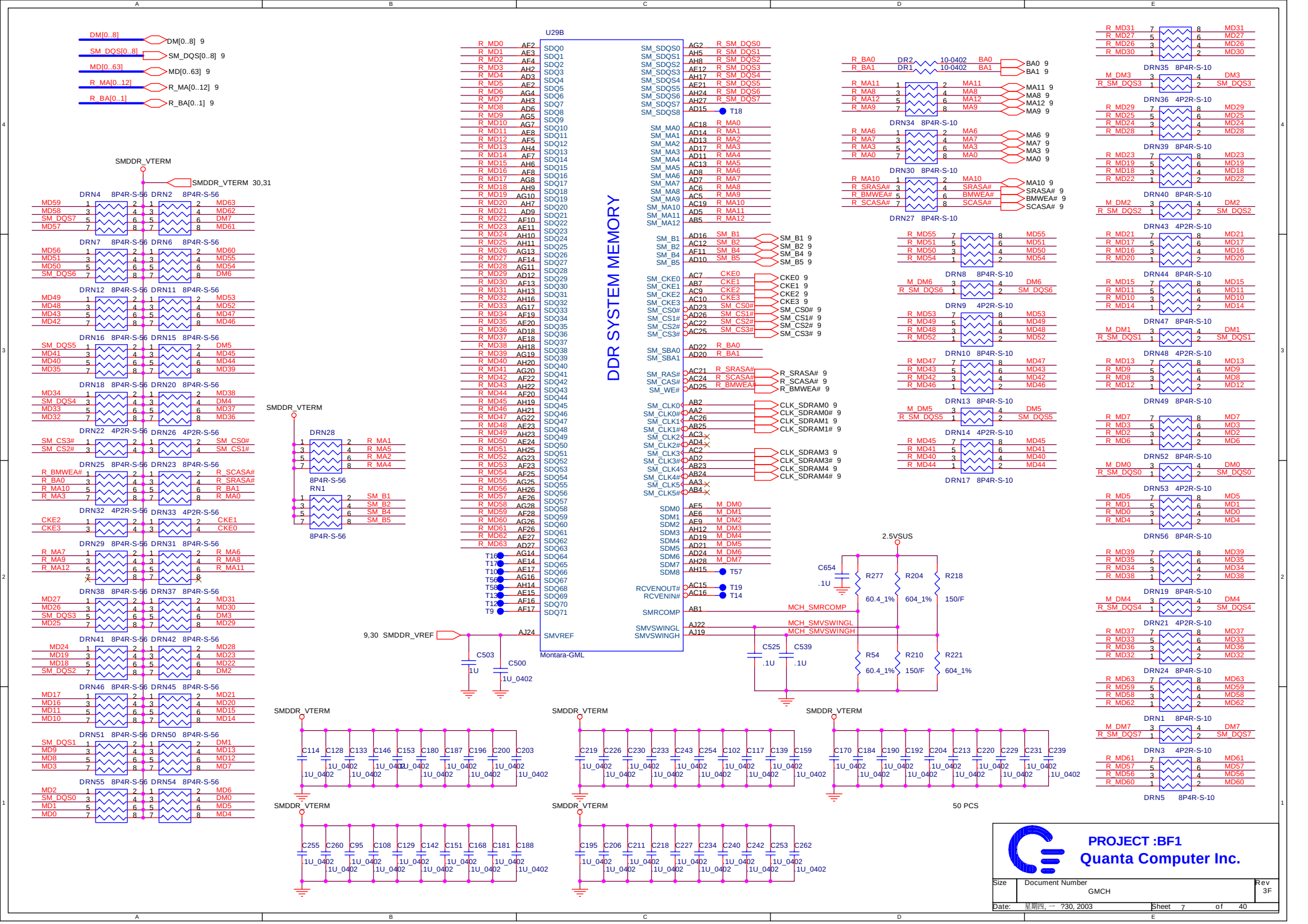
DM[0..8]
DM[0..8] 9
SM_DQS[0..8]
SM_DQS[0..8] 9
MD[0..63]
MD[0..63] 9
R_MA[0..12]
R_MA[0..12] 9
R_BA[0..1]
R_BA[0..1] 9
SMDDR_VTERM
SMDDR_VTERM 30,31
U29B
DDR SYSTEM MEMORY
Montara-GML
SMVREF
9,30 SMDDR_VREF
C503
1U
C500
.1U_0402
2.5VSUS
C654
.1U
R277
60.4_1%
R204
604_1%
R218
150/F
MCH_SMRCOMP
MCH_SMVSWINGL
MCH_SMVSWINGH
C525
.1U
C539
.1U
R54
60.4_1%
R210
150/F
R221
604_1%
50 PCS
PROJECT :BF1
Quanta Computer Inc.
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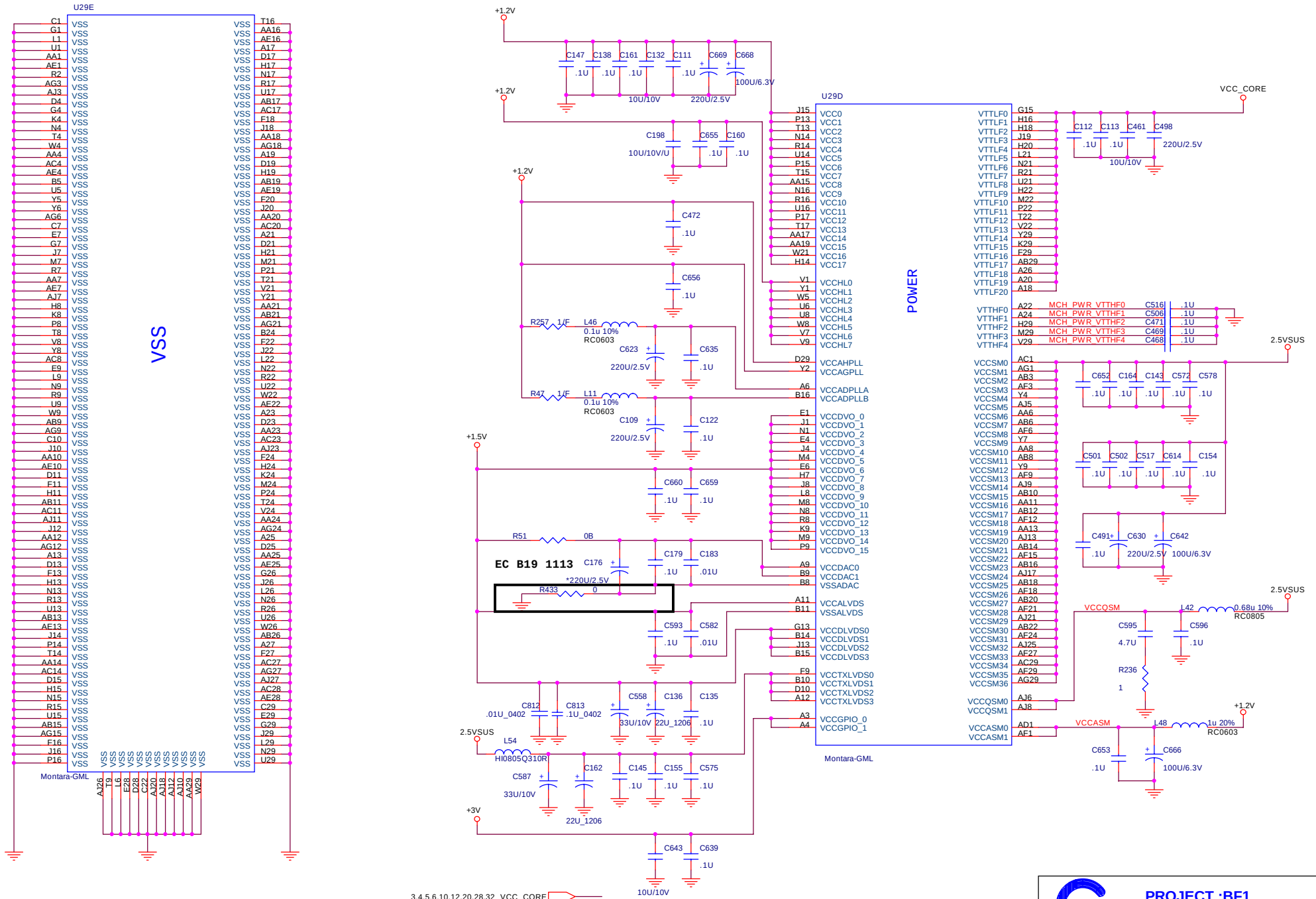
U29E
VSS
Montara-GML
U29D
POWER
Montara-GML
EC B19 1113
*220U/2.5
VCC_CORE
2.5VSUS
+1.2V
+1.5V
+3V
2.5VSUS
VCCQSM
VCCASM
MCH_PWR_VTTHF0
MCH_PWR_VTTHF1
MCH_PWR_VTTHF2
MCH_PWR_VTTHF3
MCH_PWR_VTTHF4
3,4,5,6,10,12,20,28,32 VCC_CORE
6,31 +1.2V
6,11,12,31 +1.5V
3,4,6,9,10,11,12,13,15,17,18,21,22,23,24,26,27,28,29,31,32,34 +3V
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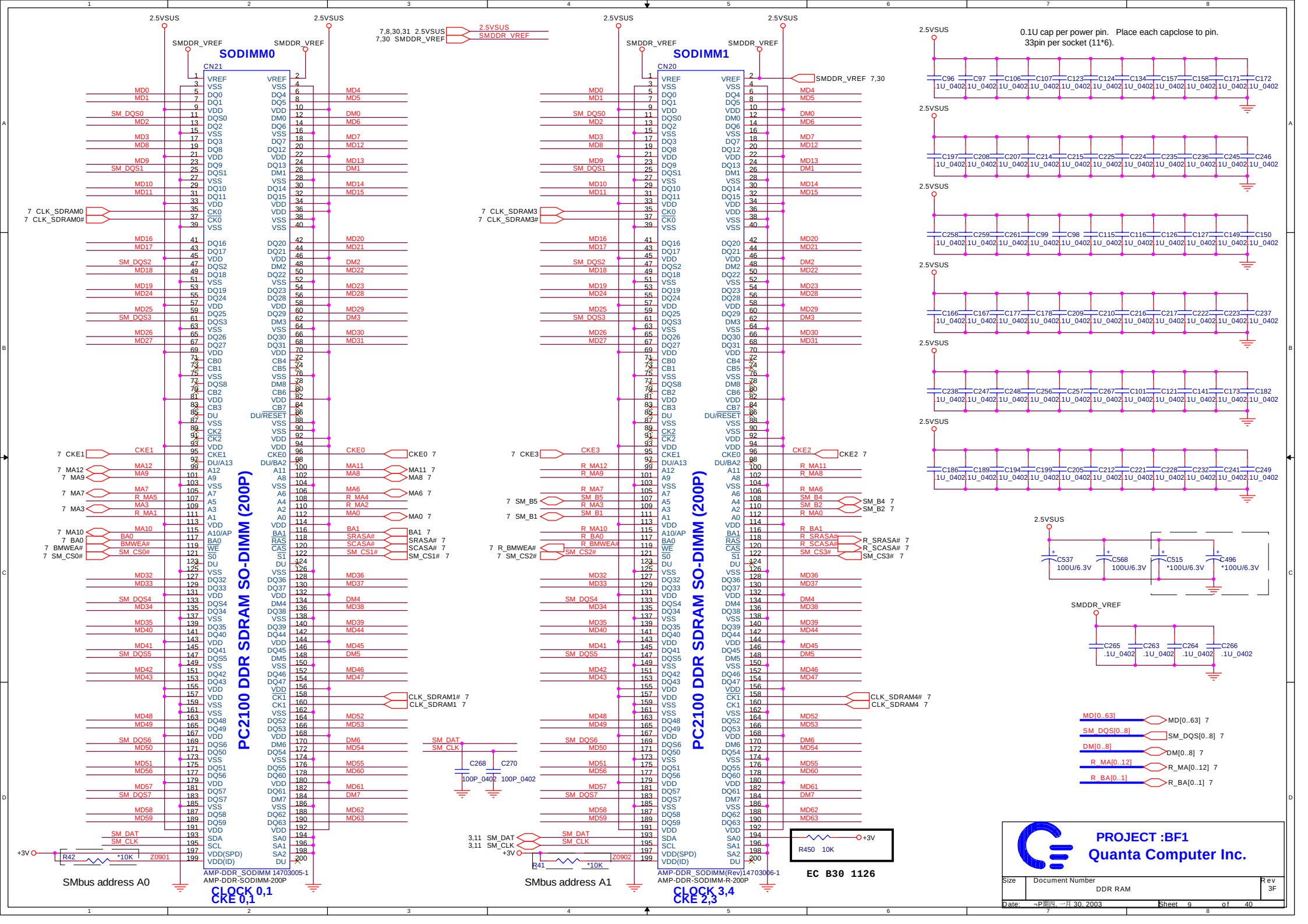
SODIMM0
SODIMM1
PC2100 DDR SDRAM SO-DIMM (200P)
CN21
CN20
2.5VSUS
SMDDR_VREF
7,8,30,31 2.5VSUS
7,30 SMDDR_VREF
SMDDR_VREF 7,30
0.1U cap per power pin. Place each capclose to pin.
33pin per socket (11*6).
C96 C97 C106 C107 C123 C124 C134 C157 C158 C171 C172
C197 C208 C207 C214 C215 C225 C224 C235 C236 C245 C246
C258 C259 C261 C99 C98 C115 C116 C126 C127 C149 C150
C166 C167 C177 C178 C209 C210 C216 C217 C222 C223 C237
C238 C247 C248 C256 C257 C267 C101 C121 C141 C173 C182
C186 C189 C194 C199 C205 C212 C221 C228 C232 C241 C249
.1U 0402
C537 C568 C515 C496
100U/6.3V
*100U/6.3V
C265 C263 C264 C266
.1U 0402
7 CLK_SDRAM0
7 CLK_SDRAM0#
7 CLK_SDRAM3
7 CLK_SDRAM3#
CLK_SDRAM1# 7
CLK_SDRAM1 7
CLK_SDRAM4# 7
CLK_SDRAM4 7
7 CKE1
7 CKE3
CKE0 7
CKE2 7
7 MA12
7 MA9
7 MA7
7 MA3
7 MA10
7 BA0
7 BMWEA#
7 SM_CS0#
MA11 7
MA8 7
MA6 7
MA0 7
BA1 7
SRASA# 7
SCASA# 7
SM_CS1# 7
7 SM_B5
7 SM_B1
7 R_BMWEA#
7 SM_CS2#
SM_B4 7
SM_B2 7
R_SRASA# 7
R_SCASA# 7
SM_CS3# 7
SM_DAT
SM_CLK
3,11 SM_DAT
3,11 SM_CLK
C268 C270
100P_0402
+3V
R42 *10K Z0901
R41 *10K Z0902
R450 10K
MD[0..63]
MD[0..63] 7
SM_DQS[0..8]
SM_DQS[0..8] 7
DM[0..8]
DM[0..8] 7
R_MA[0..12]
R_MA[0..12] 7
R_BA[0..1]
R_BA[0..1] 7
SMbus address A0
SMbus address A1
CLOCK 0,1
CKE 0,1
CLOCK 3,4
CKE 2,3
AMP-DDR_SODIMM 14703005-1
AMP-DDR-SODIMM-200P
AMP-DDR_SODIMM(Rev)14703006-1
AMP-DDR-SODIMM-R-200P
EC B30 1126
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Quanta Computer Inc.
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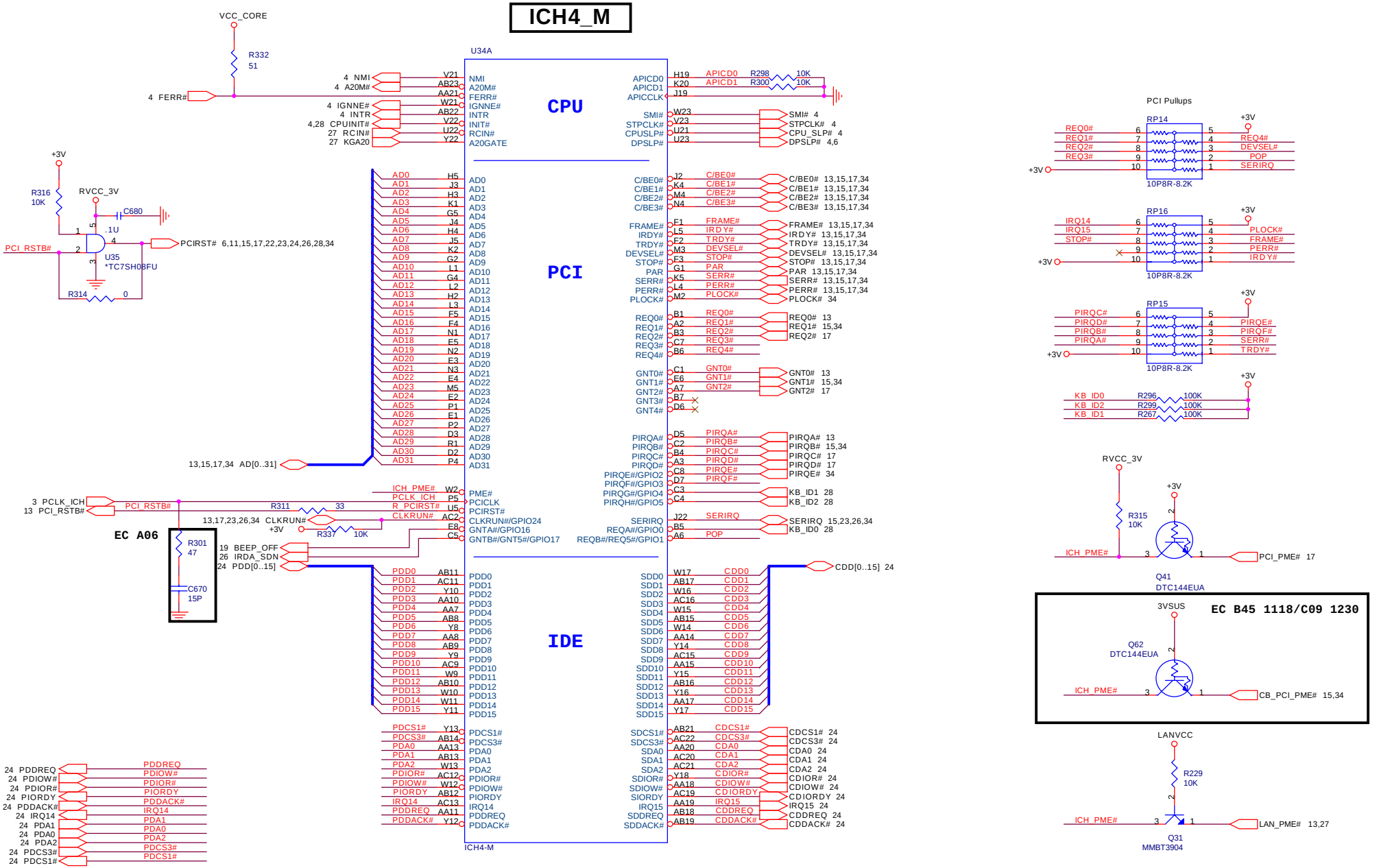
ICH4_M



PROJECT :BF1
Quanta Computer Inc.

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Custom	ICH4 IDE,PCI,CPU INTERFACE	3F

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ICH4_M

EC A09/B44 1118/C07 1228/D04 0116/E02 0129

EC A36/EC B02 1028

EC B40 1129

EC B60 1127

EC B50 1128/C02 1228

EC C02 1231

EC A08 0903 EC C05 1228

EC B21 1127

EC A08 Delete R329 pull-up 0903

EC B25 1114

EC C07 0107

EC B14 1104

For EMI

EMI

Reserved

RTC

delay 10ms at least

18ms~25ms delay

Be placed close to SB

ID3 ID2 ID1 ID0

0 1 X X X

DESKTOP CPU
MOBILE CPU
PCB VERSION

3VPCU 21,23,27,28,29,30,31
RVCC_3V 10,12,30
+3V 3,4,6,8,9,10,12,13,15,17,18,21,22,23,24,26,27,28,29,31,32,34
VCC_CORE 3,4,5,6,8,10,12,20,28,32
VCCRTC 23,27

U34B

USB
HUB LINK
LPC&FWH
AC97&RTC
SM
PM
MISC&GPIO
SpeedStep
LAN

ICH4-M

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Quanta Computer Inc.

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B	ICH4 USB,HUB LINK,AC97,PM,LAN INTERFACE	3F

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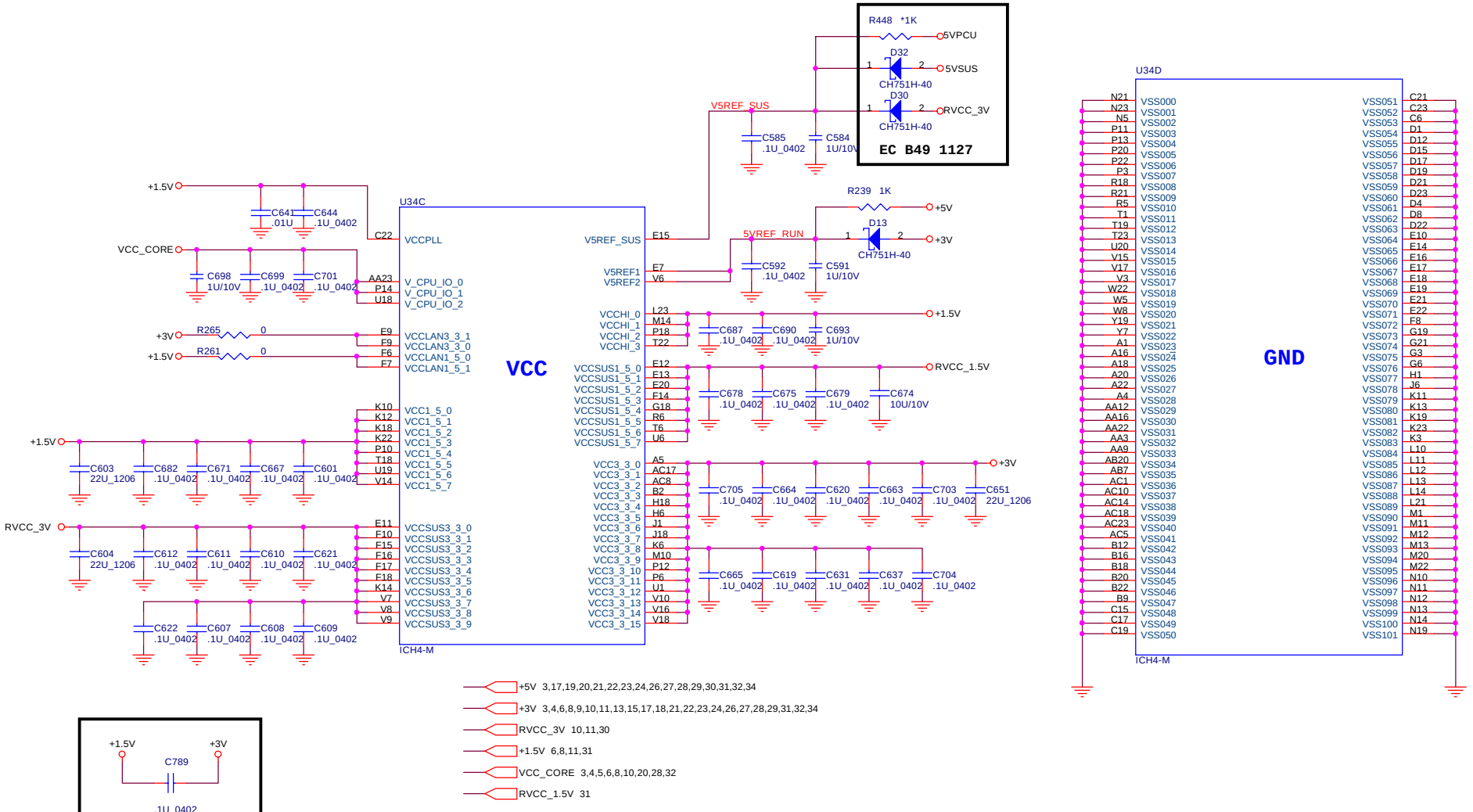
U34C
VCC
ICH4-M
U34D
GND
ICH4-M
R448 *1K
5VPCU
D32
5VSUS
CH751H-40
D30
RVCC_3V
CH751H-40
EC B49 1127
V5REF_SUS
C585 .1U_0402
C584 1U/10V
R239 1K
+5V
D13
+3V
CH751H-40
5VREF_RUN
C592 .1U_0402
C591 1U/10V
V5REF_SUS
V5REF1
V5REF2
+1.5V
C687 .1U_0402
C690 .1U_0402
C693 1U/10V
RVCC_1.5V
C678 .1U_0402
C675 .1U_0402
C679 .1U_0402
C674 10U/10V
+3V
C705 .1U_0402
C664 .1U_0402
C620 .1U_0402
C663 .1U_0402
C703 .1U_0402
C651 22U_1206
C665 .1U_0402
C619 .1U_0402
C631 .1U_0402
C637 .1U_0402
C704 .1U_0402
+1.5V
VCC_CORE
C641 .01U
C644 .1U_0402
C698 1U/10V
C699 .1U_0402
C701 .1U_0402
R265 0
R261 0
+3V
+1.5V
RVCC_3V
C603 22U_1206
C682 .1U_0402
C671 .1U_0402
C667 .1U_0402
C601 .1U_0402
C604 22U_1206
C612 .1U_0402
C611 .1U_0402
C610 .1U_0402
C621 .1U_0402
C622 .1U_0402
C607 .1U_0402
C608 .1U_0402
C609 .1U_0402
+5V 3,17,19,20,21,22,23,24,26,27,28,29,30,31,32,34
+3V 3,4,6,8,9,10,11,13,15,17,18,21,22,23,24,26,27,28,29,31,32,34
RVCC_3V 10,11,30
+1.5V 6,8,11,31
VCC_CORE 3,4,5,6,8,10,20,28,32
RVCC_1.5V 31
+1.5V
+3V
C789
.1U_0402
EC B51 1120
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Quanta Computer Inc.
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ICH4 POWER PLANE
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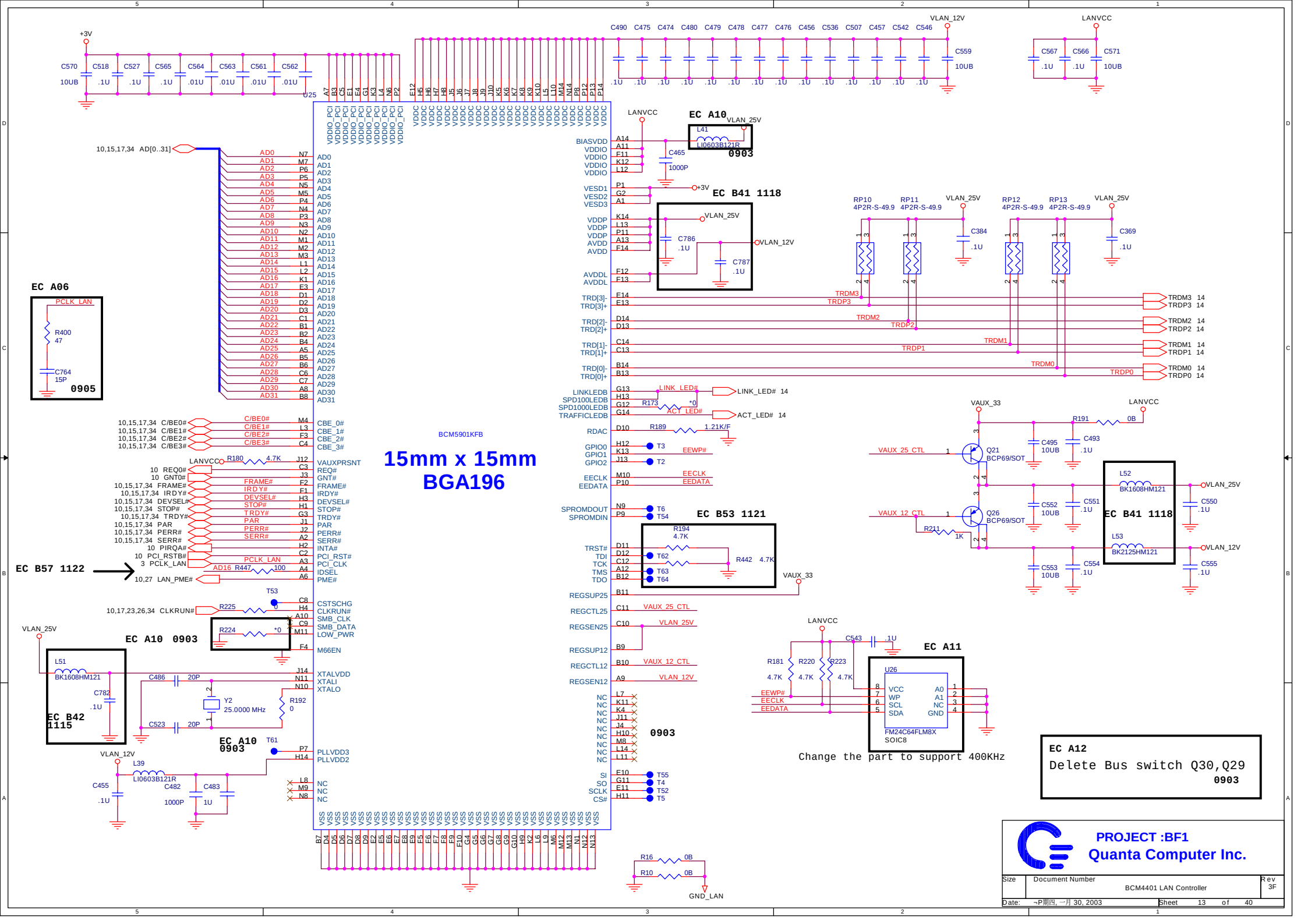
BCM5901KFB
15mm x 15mm
BGA196
EC A06
EC A10
EC B41 1118
EC B57 1122
EC B53 1121
EC A10 0903
EC B42 1115
EC A11
EC A12
Delete Bus switch Q30,Q29
0903
Change the part to support 400KHz
PROJECT :BF1
Quanta Computer Inc.
BCM4401 LAN Controller
Size
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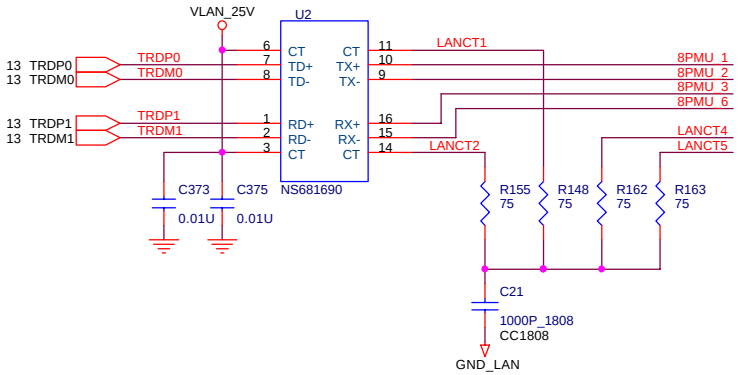

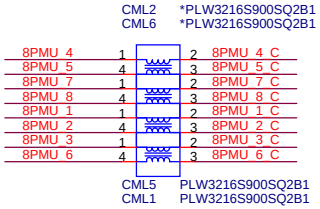

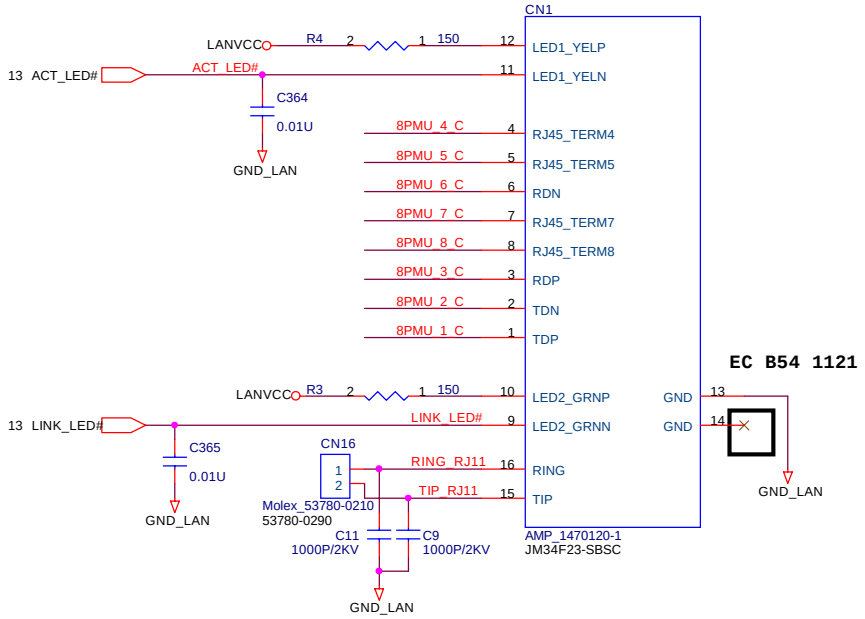

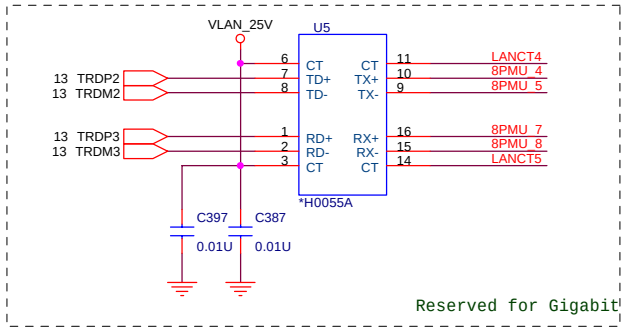

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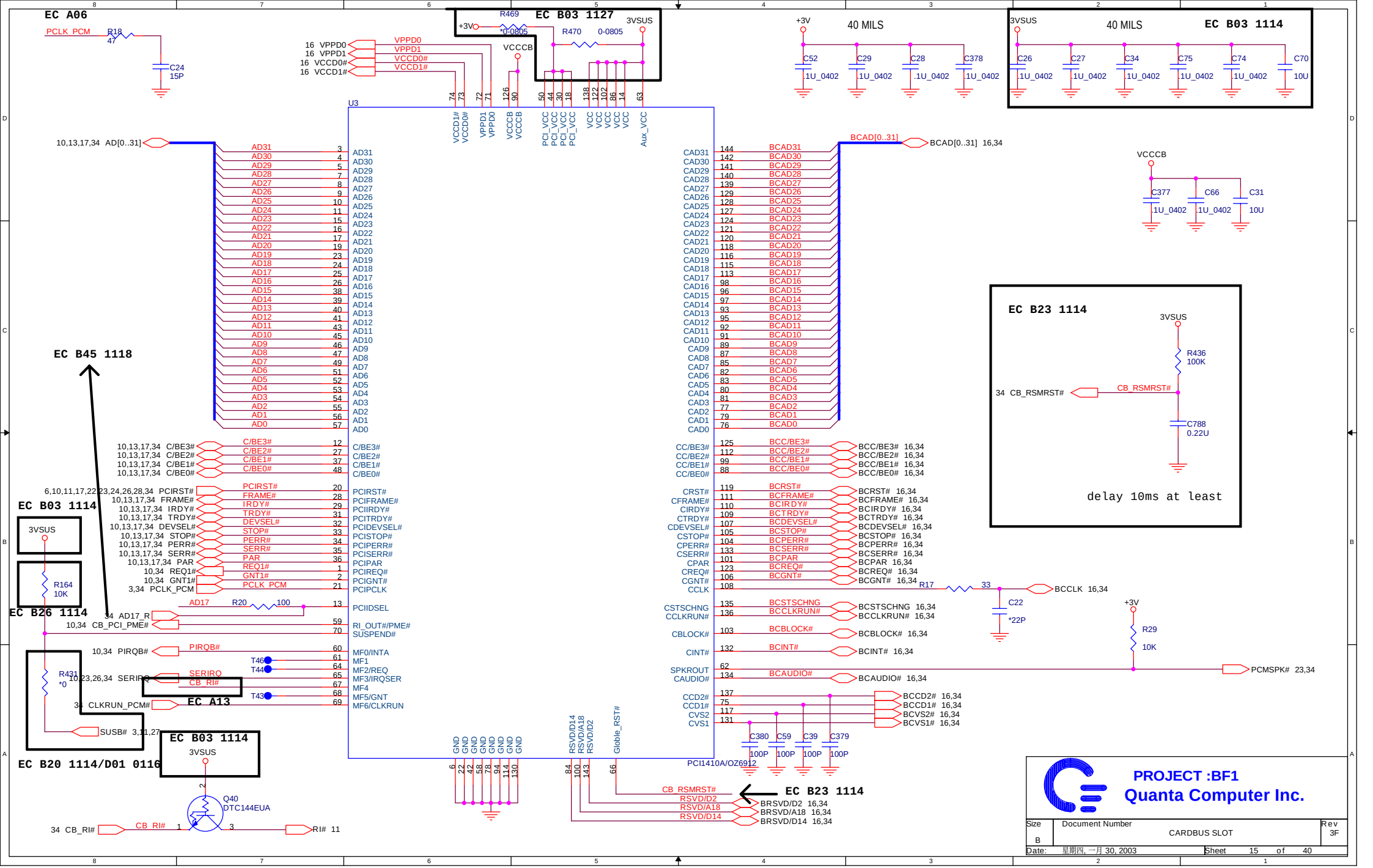
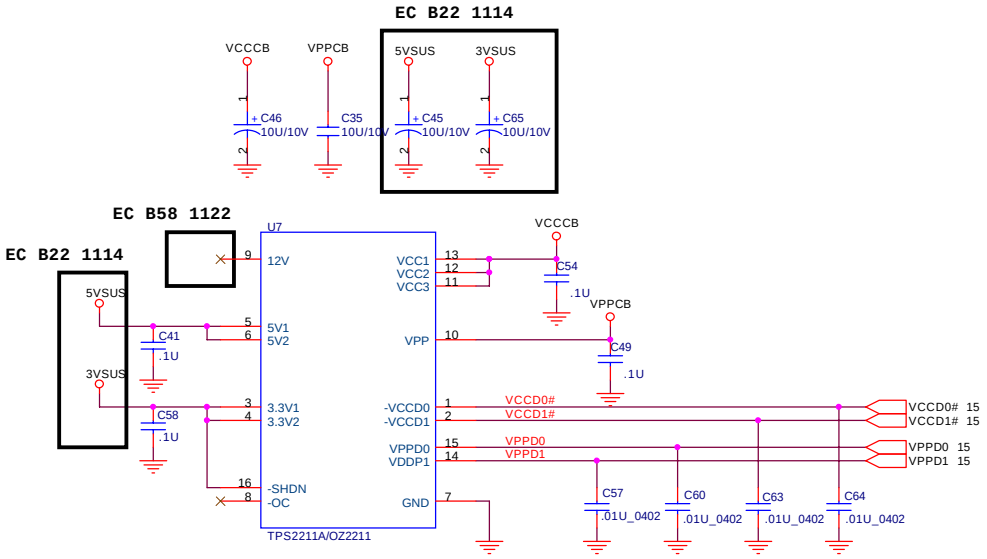
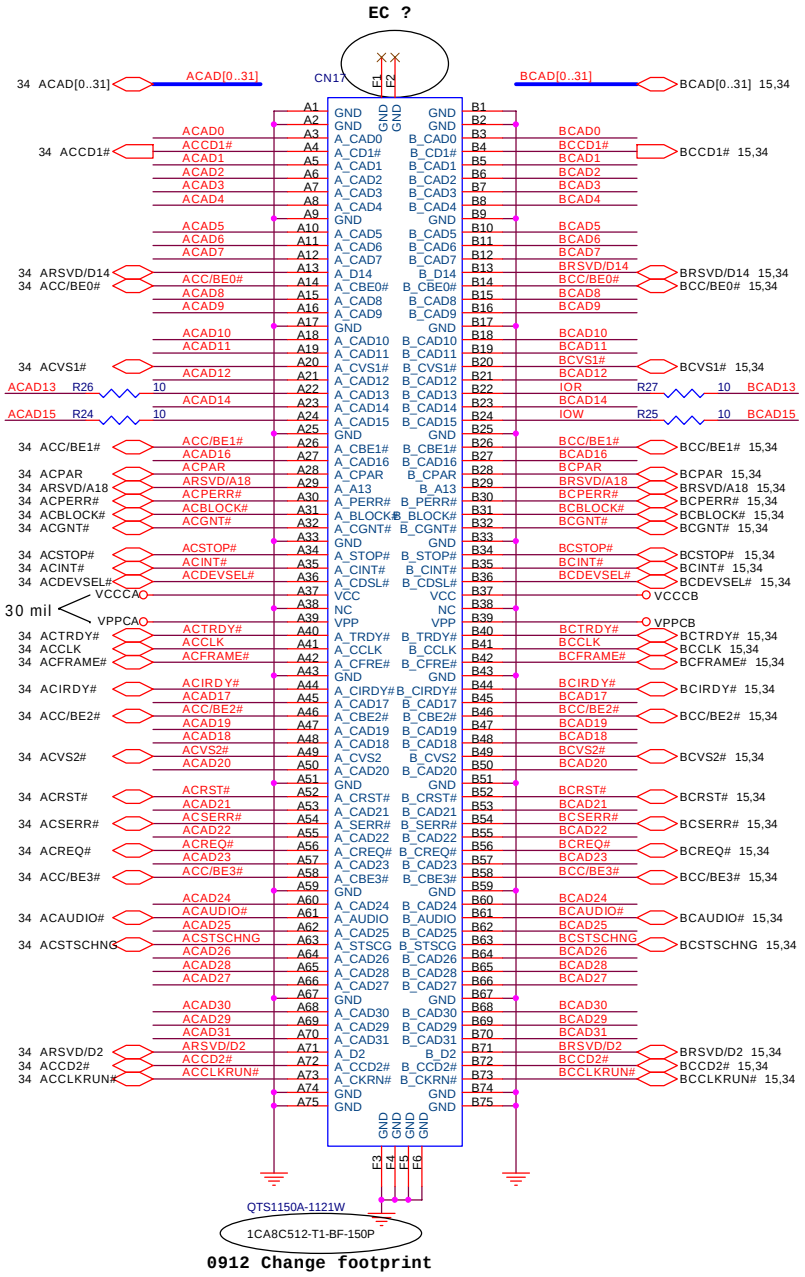

EC A06
PCLK_PCM
R18
47
C24
15P
EC B03 1127
R469
*0-0805
+3V
R470
0-0805
3VSUS
VCCCB
VPPD0
VPPD1
VCCD0#
VCCD1#
U3
10,13,17,34 AD[0..31]
AD31
AD30
AD29
AD28
AD27
AD26
AD25
AD24
AD23
AD22
AD21
AD20
AD19
AD18
AD17
AD16
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
10,13,17,34 C/BE3#
10,13,17,34 C/BE2#
10,13,17,34 C/BE1#
10,13,17,34 C/BE0#
6,10,11,17,22,23,24,26,28,34 PCIRST#
10,13,17,34 FRAME#
10,13,17,34 IRDY#
10,13,17,34 TRDY#
10,13,17,34 DEVSEL#
10,13,17,34 STOP#
10,13,17,34 PERR#
10,13,17,34 SERR#
10,13,17,34 PAR
10,34 REQ1#
10,34 GNT1#
3,34 PCLK_PCM
AD17
R20
100
34 AD17_R
10,34 CB_PCI_PME#
10,34 PIRQB#
10,23,26,34 SERIRQ
34 CLKRUN_PCM#
SUSB# 3,11,27
EC B03 1114
3VSUS
R164
10K
EC B26 1114
EC B45 1118
EC B20 1114/D01 0116
EC A13
R431
*0
T46
T44
T43
SERIRQ
CB_RI#
Q40
DTC144EUA
34 CB_RI#
RI# 11
PCIIRDY#
PCITRDY#
PCIDEVSEL#
PCISTOP#
PCIPERR#
PCISERR#
PCIPAR
PCIREQ#
PCIGNT#
PCIPCLK
PCIIDSEL
RI_OUT#/PME#
SUSPEND#
MF0/INTA
MF1
MF2/REQ
MF3/IRQSER
MF4
MF5/GNT
MF6/CLKRUN
VCCD1#
VCCD0#
VPPD1
VPPD0
VCCCB
PCI_VCC
VCC
Aux_VCC
GND
RSVD/D14
RSVD/A18
RSVD/D2
Globle_RST#
CB_RSMRST#
RSVD/D2
RSVD/A18
RSVD/D14
EC B23 1114
BRSVD/D2 16,34
BRSVD/A18 16,34
BRSVD/D14 16,34
PCI1410A/OZ6912
BCAD[0..31]
BCAD[0..31] 16,34
CC/BE3#
CC/BE2#
CC/BE1#
CC/BE0#
CRST#
CFRAME#
CIRDY#
CTRDY#
CDEVSEL#
CSTOP#
CPERR#
CSERR#
CPAR
CREQ#
CGNT#
CCLK
CSTSCHNG
CCLKRUN#
CBLOCK#
CINT#
SPKROUT
CAUDIO#
CCD2#
CCD1#
CVS2
CVS1
BCC/BE3# 16,34
BCC/BE2# 16,34
BCC/BE1# 16,34
BCC/BE0# 16,34
BCRST# 16,34
BCFRAME# 16,34
BCIRDY# 16,34
BCTRDY# 16,34
BCDEVSEL# 16,34
BCSTOP# 16,34
BCPERR# 16,34
BCSERR# 16,34
BCPAR 16,34
BCREQ# 16,34
BCGNT# 16,34
BCCLK 16,34
BCSTSCHNG 16,34
BCCLKRUN# 16,34
BCBLOCK# 16,34
BCINT# 16,34
BCAUDIO# 16,34
PCMSPK# 23,34
BCCD2# 16,34
BCCD1# 16,34
BCVS2# 16,34
BCVS1# 16,34
R17
33
C22
*22P
R29
10K
+3V
C380
C59
C39
C379
100P
EC B03 1114
3VSUS
40 MILS
C52
C29
C28
C378
.1U_0402
EC B03 1114
3VSUS
40 MILS
C26
C27
C34
C75
C74
C70
10U
VCCCB
C377
C66
C31
EC B23 1114
3VSUS
R436
100K
34 CB_RSMRST#
CB_RSMRST#
C788
0.22U
delay 10ms at least
PROJECT :BF1
Quanta Computer Inc.
Size
B
Document Number
CARDBUS SLOT
Rev
3F
Date: 星期四, 一月 30, 2003
Sheet 15 of 40



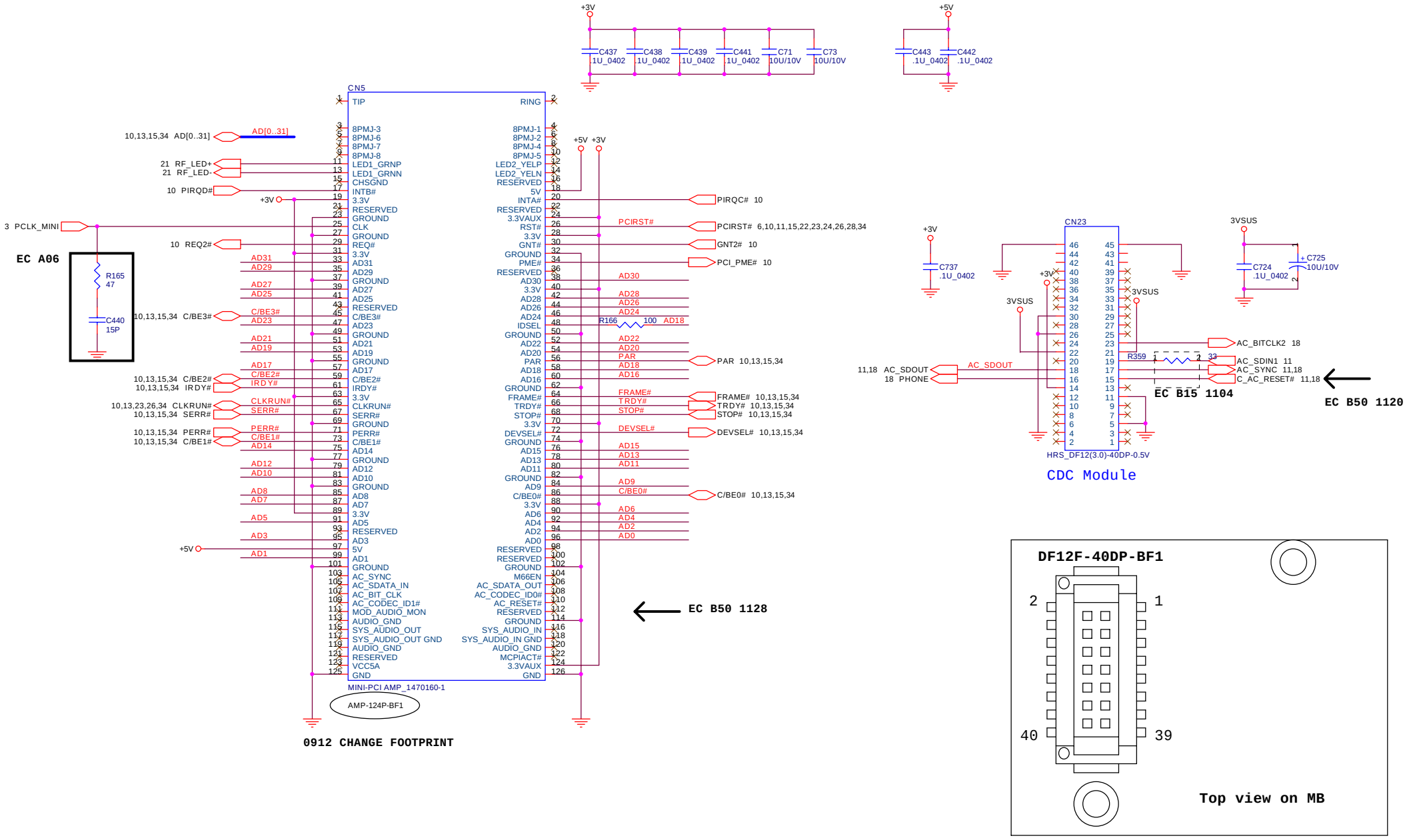


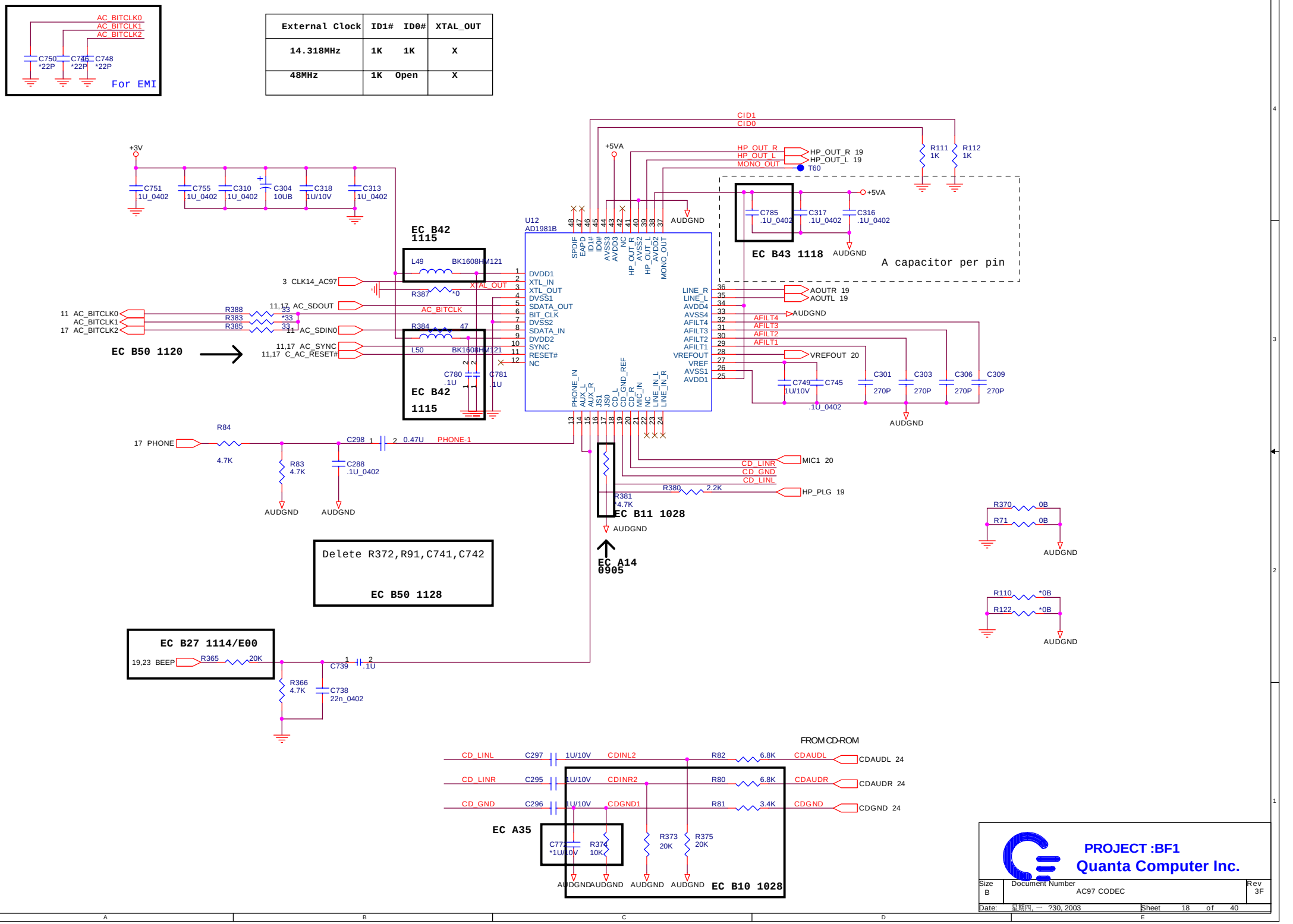
PROJECT :BF1

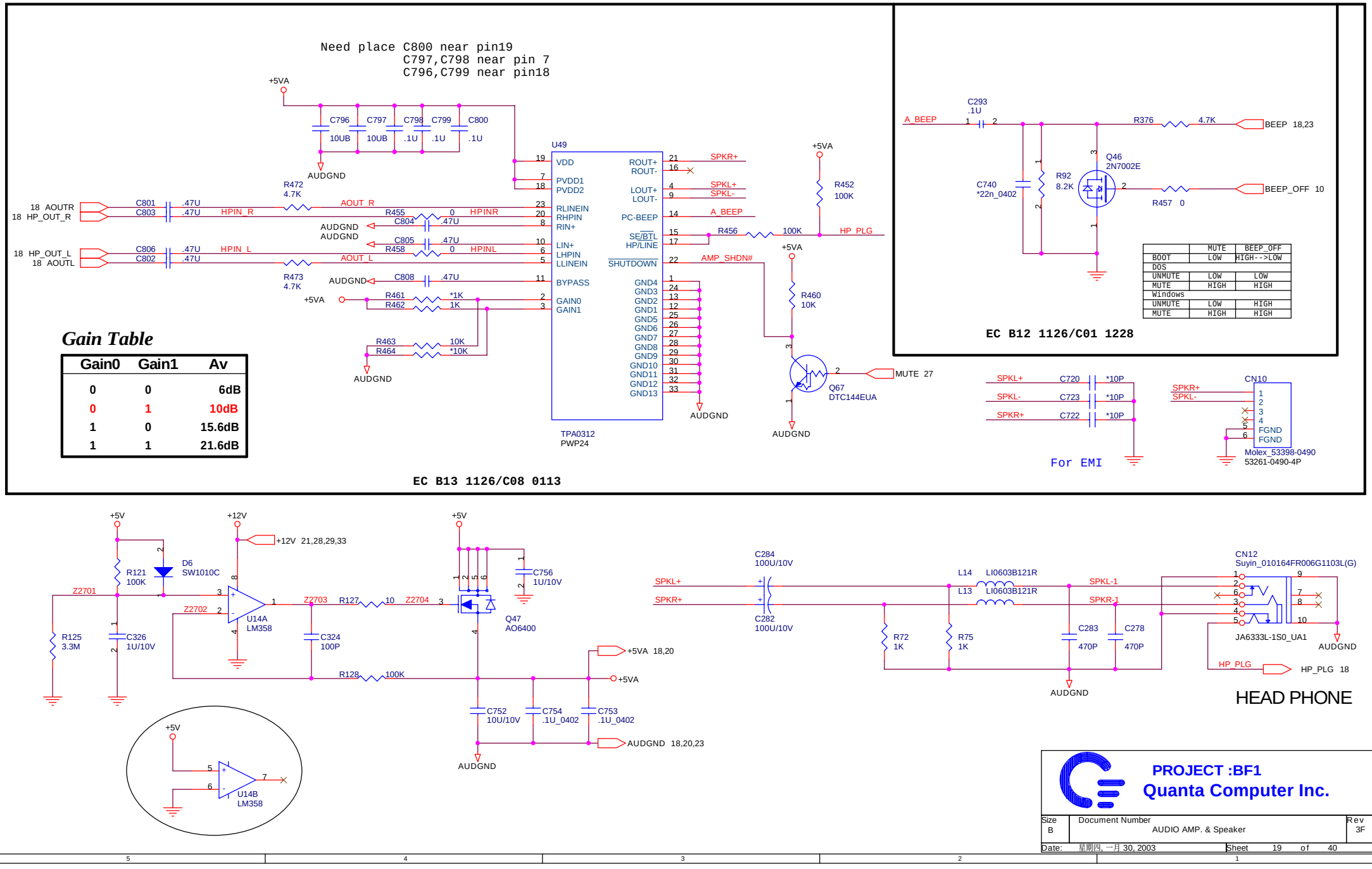
Quanta Computer Inc.

Size	Document Number	Rev
A3	CARDBUS SLOT	3F

Date: ¬P期四, 一月 30, 2003 Sheet 16 of 40


+3V
C437 .1U_0402
C438 .1U_0402
C439 .1U_0402
C441 .1U_0402
C71 10U/10V
C73 10U/10V
+5V
C443 .1U_0402
C442 .1U_0402
CN5
TIP
RING
10,13,15,34 AD[0..31]
AD[0..31]
21 RF_LED+
21 RF_LED-
10 PIRQD#
+3V
3 PCLK_MINI
10 REQ2#
EC A06
R165 47
C440 15P
10,13,15,34 C/BE3#
10,13,15,34 C/BE2#
10,13,15,34 IRDY#
10,13,23,26,34 CLKRUN#
10,13,15,34 SERR#
10,13,15,34 PERR#
10,13,15,34 C/BE1#
+5V
+5V +3V
PIRQC# 10
PCIRST# 6,10,11,15,22,23,24,26,28,34
GNT2# 10
PCI_PME# 10
R166 100 AD18
PAR 10,13,15,34
FRAME# 10,13,15,34
TRDY# 10,13,15,34
STOP# 10,13,15,34
DEVSEL# 10,13,15,34
C/BE0# 10,13,15,34
EC B50 1128
MINI-PCI AMP_1470160-1
AMP-124P-BF1
0912 CHANGE FOOTPRINT
CN23
HRS_DF12(3.0)-40DP-0.5V
C737 .1U_0402
C724 .1U_0402
C725 10U/10V
3VSUS
11,18 AC_SDOUT
18 PHONE
AC_BITCLK2 18
AC_SDIN1 11
AC_SYNC 11,18
C_AC_RESET# 11,18
R359 33
EC B15 1104
EC B50 1120
CDC Module
DF12F-40DP-BF1
2
1
40
39
Top view on MB
PROJECT :BF1
Quanta Computer Inc.
Size
Document Number
MINI-PCI & MDC
Rev 3F
Date: 一月 30, 2003
Sheet 17 of 40


AC_BITCLK0
AC_BITCLK1
AC_BITCLK2
C750 *22P
C746 *22P
C748 *22P
For EMI
External Clock | ID1# | ID0# | XTAL_OUT
14.318MHz | 1K | 1K | X
48MHz | 1K | Open | X
CID1
CID0
R111 1K
R112 1K
+3V
+5VA
HP_OUT_R
HP_OUT_L
MONO_OUT
HP_OUT_R 19
HP_OUT_L 19
T60
C751 .1U_0402
C755 .1U_0402
C310 .1U_0402
C304 10UB
C318 .1U/10V
C313 .1U_0402
EC B42 1115
U12
AD1981B
C785 .1U_0402
C317 .1U_0402
C316 .1U_0402
EC B43 1118
A capacitor per pin
AUDGND
L49 BK1608HM121
3 CLK14_AC97
XTAL_OUT
R387 *0
11,17 AC_SDOUT
AC_BITCLK
11 AC_BITCLK0
AC_BITCLK1
17 AC_BITCLK2
R388 33
R383 *33
R385 33
11 AC_SDIN0
R384 47
11,17 AC_SYNC
11,17 C_AC_RESET#
L50 BK1608HM121
C780 .1U
C781 .1U
EC B42 1115
EC B50 1120
DVDD1
XTL_IN
XTL_OUT
DVSS1
SDATA_OUT
BIT_CLK
DVSS2
SDATA_IN
DVDD2
SYNC
RESET#
NC
SPDIF
EAPD
ID1#
ID0#
AVSS3
AVDD3
NC
HP_OUT_R
AVSS2
HP_OUT_L
AVDD2
MONO_OUT
LINE_R
LINE_L
AVDD4
AVSS4
AFILT4
AFILT3
AFILT2
AFILT1
VREFOUT
VREF
AVSS1
AVDD1
AOUTR 19
AOUTL 19
AFILT4
AFILT3
AFILT2
AFILT1
VREFOUT 20
C749 1U/10V
C745 .1U_0402
C301 270P
C303 270P
C306 270P
C309 270P
PHONE_IN
AUX_L
AUX_R
JS1
JS0
CD_L
CD_GND_REF
CD_R
MIC_IN
NC
LINE_IN_L
LINE_IN_R
R84
17 PHONE
4.7K
C298 0.47U
PHONE-1
R83 4.7K
C288 .1U_0402
CD_LINR
CD_GND
CD_LINL
MIC1 20
R380 2.2K
HP_PLG 19
R381 *4.7K
EC B11 1028
EC A14 0905
R370 0B
R71 0B
R110 *0B
R122 *0B
Delete R372,R91,C741,C742
EC B50 1128
EC B27 1114/E00
19,23 BEEP
R365 20K
C739 .1U
R366 4.7K
C738 22n_0402
FROM CD-ROM
CD_LINL
CD_LINR
CD_GND
C297 1U/10V
C295 1U/10V
C296 1U/10V
CDINL2
CDINR2
CDGND1
R82 6.8K
R80 6.8K
R81 3.4K
CDAUDL
CDAUDR
CDGND
CDAUDL 24
CDAUDR 24
CDGND 24
EC A35
C772 *1U/10V
R374 10K
R373 20K
R375 20K
EC B10 1028
PROJECT :BF1
Quanta Computer Inc.
Size B
Document Number AC97 CODEC
Rev 3F
Date: 星期四, 一 ?30, 2003
Sheet 18 of 40



PROJECT :BF1
Quanta Computer Inc.

Size	Document Number	Rev
B	AUDIO AMP. & Speaker	3F

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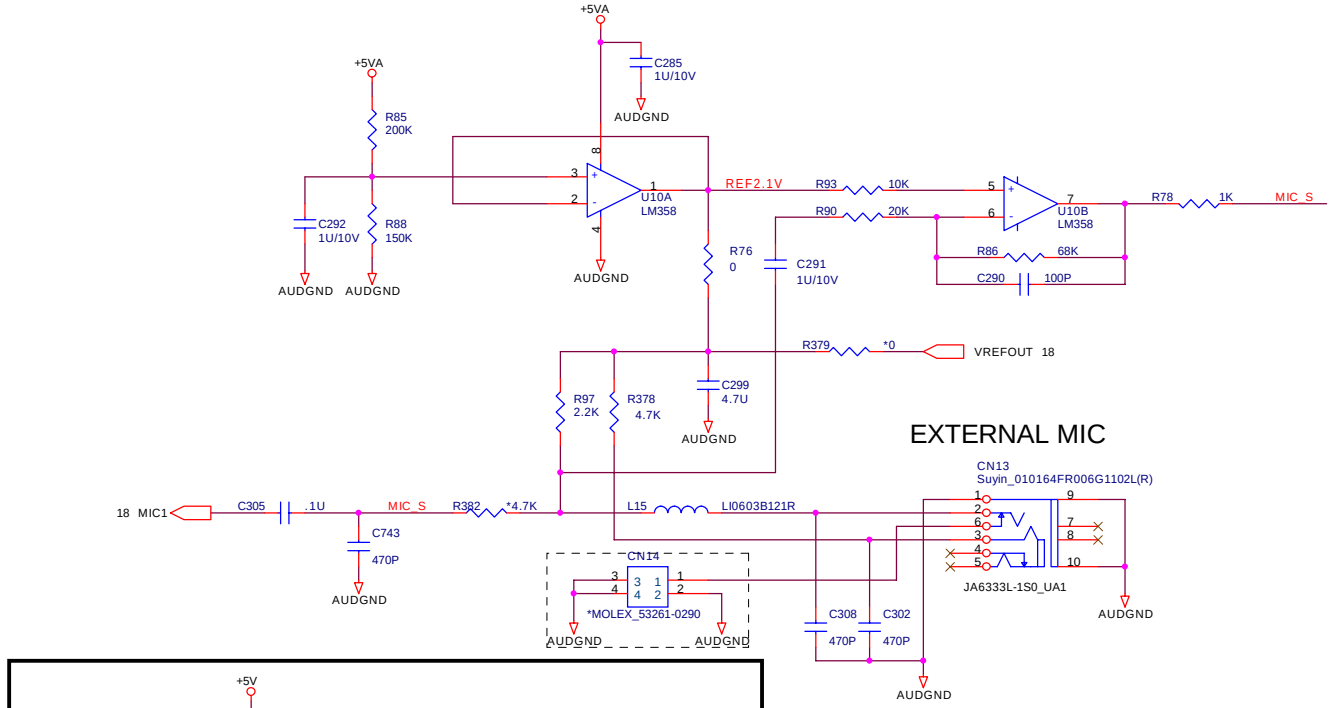
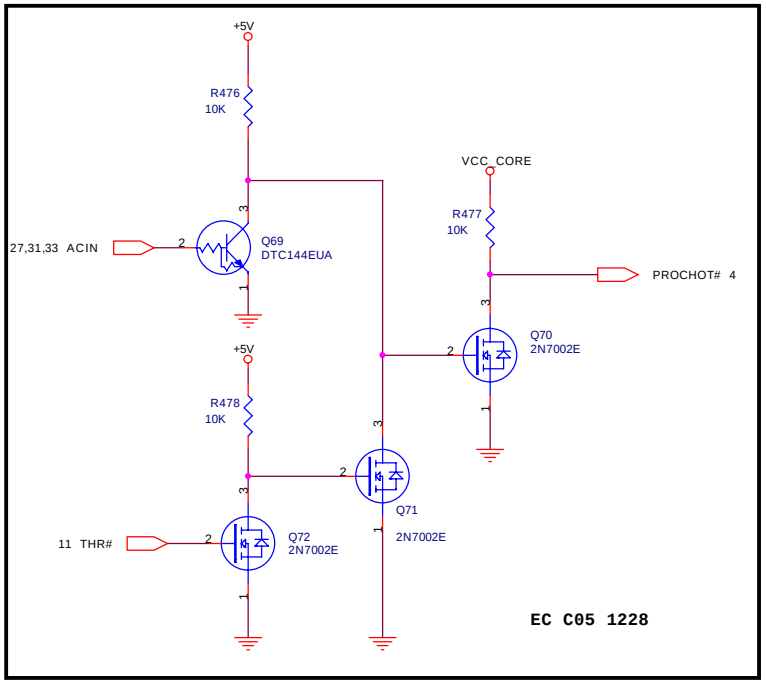
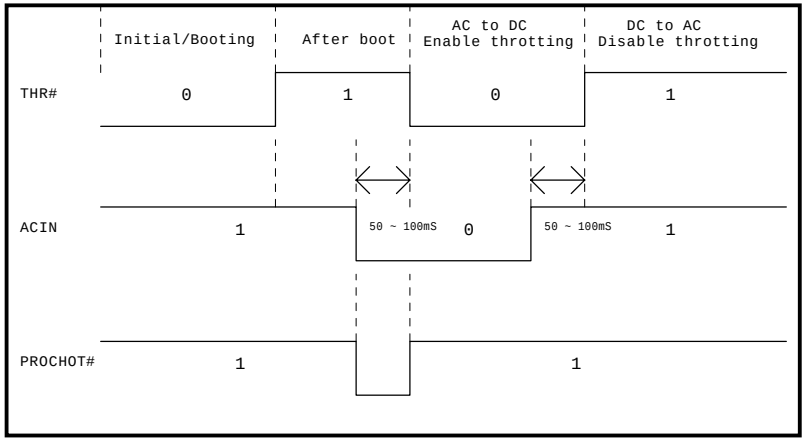




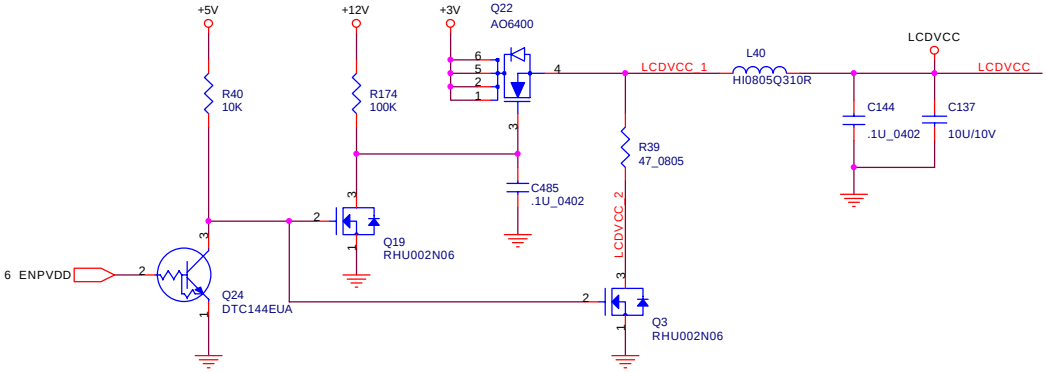


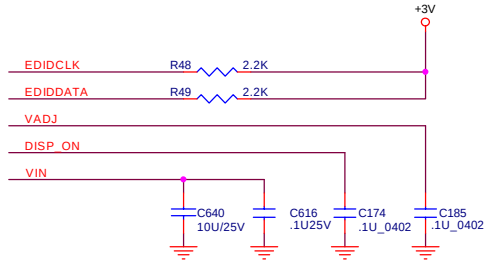
PROJECT :BF1

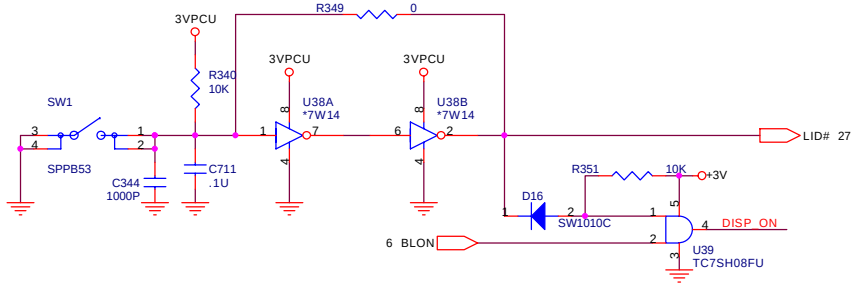
Quanta Computer Inc.

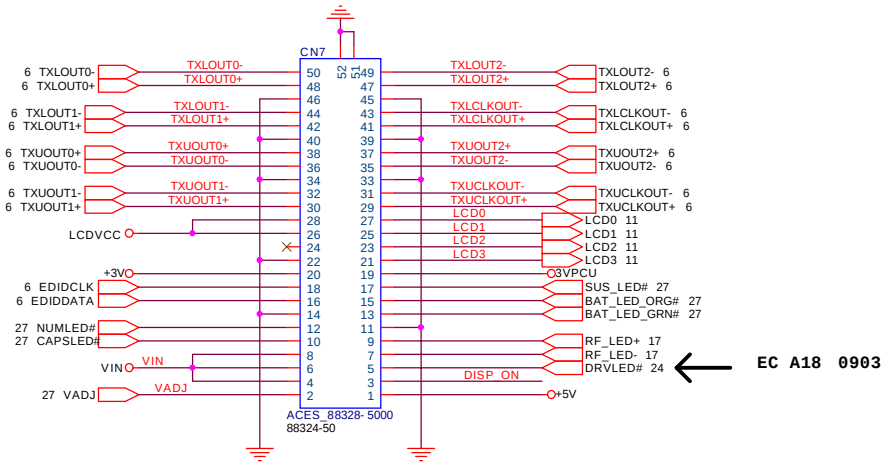
Size	Document Number	Rev
	AUDIO JACK	3F

Date: ~P期四, 一月 30, 2003 Sheet 20 of 40









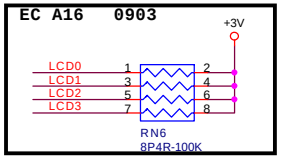
VIN 29,30,31,32,33

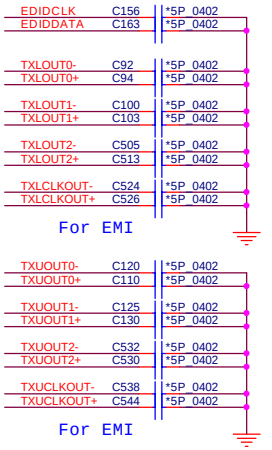
+5V 3,12,17,19,20,22,23,24,26,27,28,29,30,31,32,34

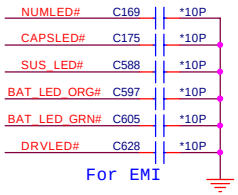
+3V 3,4,6,8,9,10,11,12,13,15,17,18,22,23,24,26,27,28,29,31,32,34

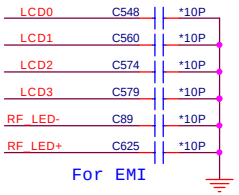
+12V 19,28,29,33

			LCD3	LCD2	LCD1	LCD0
Hydis	14.1" XGA	HT14X19-100	1	1	1	0
IDT	14.1" XGA	IAXG15S/F8915S	1	1	1	1
LG	15" XGA	LP150X2-B2	1	1	0	1
Hitachi	15" XGA	TX38D81VC1CAD	1	0	1	1
Hitachi	15" SXGA+	TX38D91VC1CAD	1	1	0	0
Samsung	15" SXGA+	LTN150P4-L01	0	1	1	1







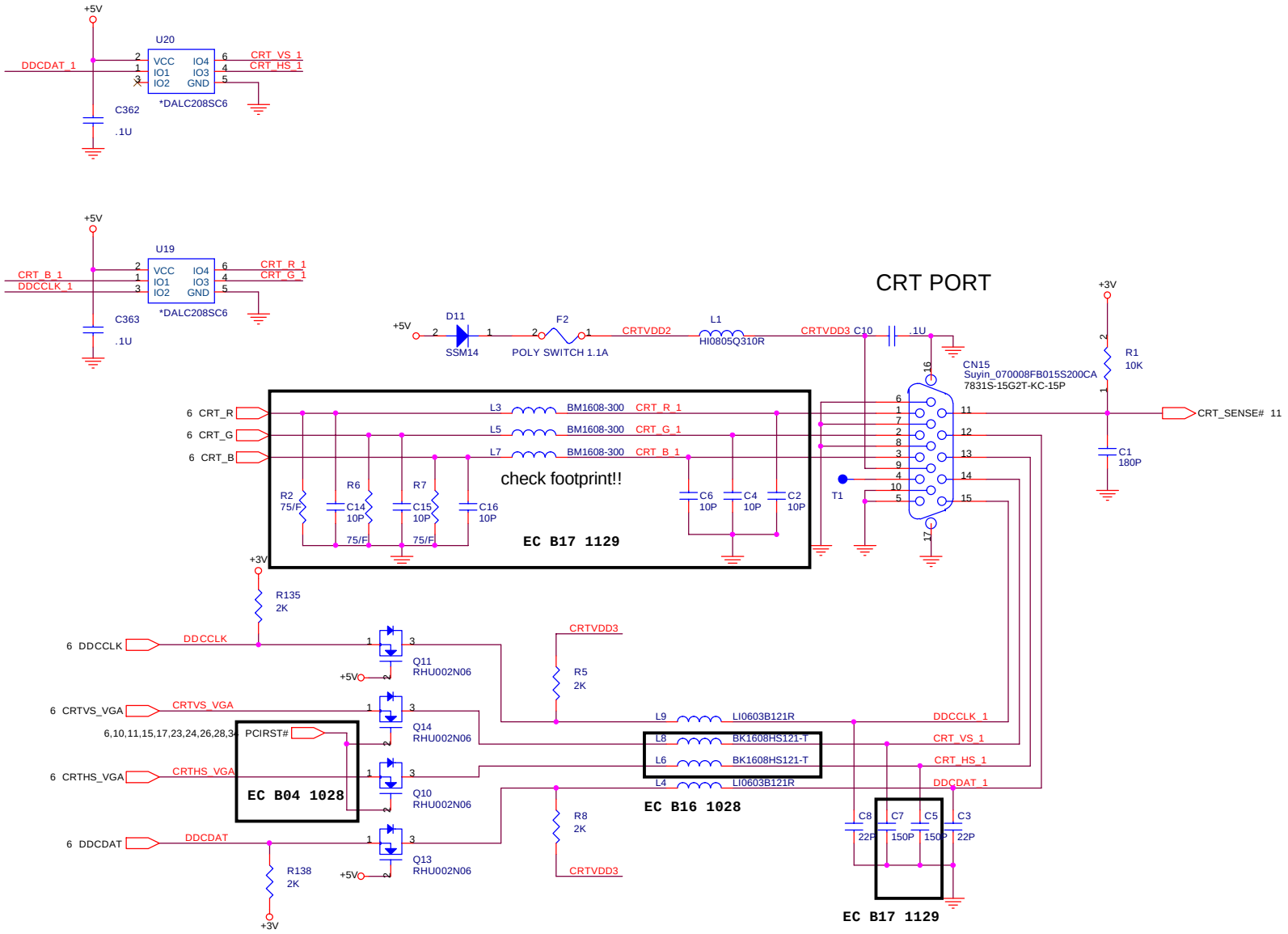


PROJECT :BF1

Quanta Computer Inc.

Size	Document Number	Rev
	LCD CONN	3F

Date: 一P期四, 一月 30, 2003 Sheet 21 of 40

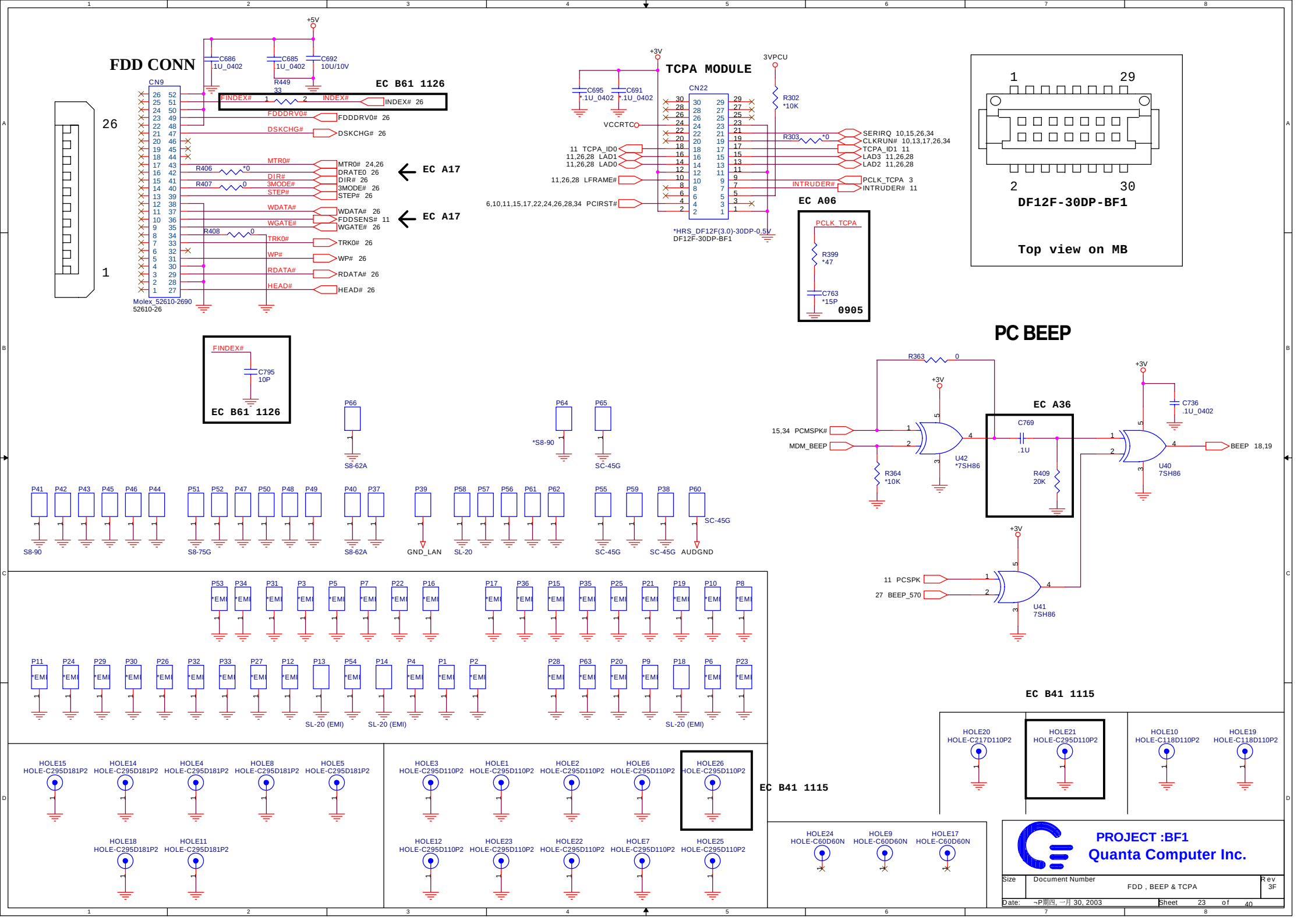


PROJECT : BF1

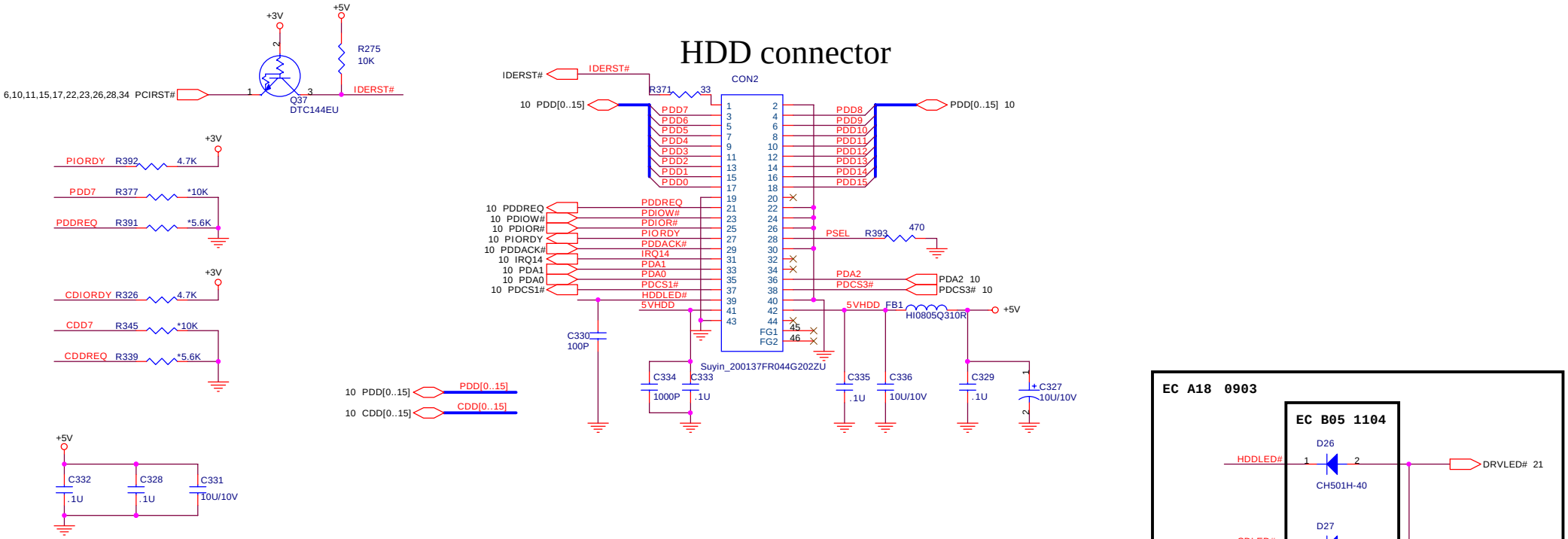
Quanta Computer Inc.

Size	Document Number	Rev
	CRT PORT	3F

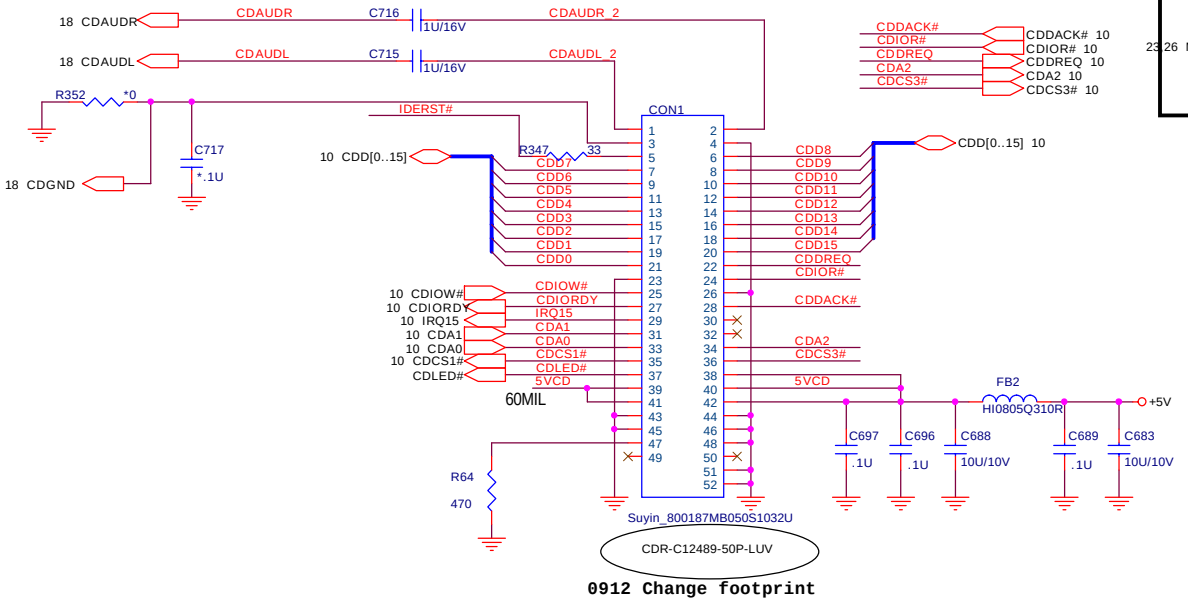
Date: 星期四, 一 ?30, 2003 Sheet 22 of 40


FDD CONN
CN9
Molex_52610-2690
52610-26
EC B61 1126
EC A17
EC A17
TCPA MODULE
CN22
*HRS_DF12F(3.0)-30DP-0.5V
DF12F-30DP-BF1
EC A06
0905
DF12F-30DP-BF1
Top view on MB
PC BEEP
EC A36
U42
*7SH86
U40
7SH86
U41
7SH86
EC B61 1126
EC B41 1115
EC B41 1115
PROJECT :BF1
Quanta Computer Inc.
FDD , BEEP & TCPA
Rev
3F
Sheet 23 of 40

HDD connector



ODD connector



0912 Change footprint

PROJECT :BF1
Quanta Computer Inc.

Size	Document Number	Rev
B	HDD & CDROM	3F

Date: 星期四, 一 ?30, 2003 Sheet 24 of 40

+5V 3,12,17,19,20,21,22,23,24,26,27,28,29,30,31,32,34

5VSUS 12,16,29,30,31,34

CML3 PLW3216S900SQ2B1

11 ICH_USB0-
11 ICH_USB0+
11 ICH_USB1-
11 ICH_USB1+

SYSUSBP0-
SYSUSBP0+
SYSUSBP1-
SYSUSBP1+

CML4 PLW3216S900SQ2B1

90ohm@100Mhz

CML7 PLW3216S900SQ2B1

11 ICH_USB2-
11 ICH_USB2+
11 ICH_USB3-
11 ICH_USB3+

SYSUSBP2-
SYSUSBP2+
SYSUSBP3-
SYSUSBP3+

CML8 PLW3216S900SQ2B1

5VSUS — 40MIL — U27 RT9701 — USBVDD2

C87 .1U

5VSUS — U28 — SYSUSBP2- SYSUSBP2+ — SYSUSBP3- SYSUSBP3+

C165 .1U

*DALC208SC6

5VSUS — 40MIL — U1 RT9701 — 40MIL — USBVDD0

C148 .1U

5VSUS — U18 — SYSUSBP0- SYSUSBP0+ — SYSUSBP1- SYSUSBP1+

C341 .1U

*DALC208SC6

USBVDD2

C131 .1U_0402
C629 100U/10V
C590 22U_1206

CN19

SYSUSBP2-
SYSUSBP2+

C140 *10P_0402
C152 *10P_0402

Suyin_020016MR004S100ZU

USBVDD2

C497 .1U_0402
C504 100U/10V
C514 22U_1206

CN18

SYSUSBP3-
SYSUSBP3+

C90 *10P_0402
C91 *10P_0402

Suyin_020016MR004S100ZU

USBVDD0

C342 .1U_0402
C19 100U/10V
C17 22U_1206

CN4

SYSUSBP0-
SYSUSBP0+
SYSUSBP1-
SYSUSBP1+

PORT1-VCC
PORT1-D-
PORT1-D+
PORT1-GND
GND
GND
GND
GND
PORT2-VCC
PORT2-D-
PORT2-D+
PORT2-GND

Suyin_020018MR008S101ZA
2522A-08GXT

USBVDD0

C343 .1U_0402
C18 100U/10V
C20 22U_1206

EC A36

USBVDD0 — R414 100K — 11 USBOC0# — R416 220K

USBVDD2 — R415 100K — 11 USBOC2# — R417 220K

PROJECT :BF1
Quanta Computer Inc.

Size	Document Number	Rev
	USB & LED CONN	3F
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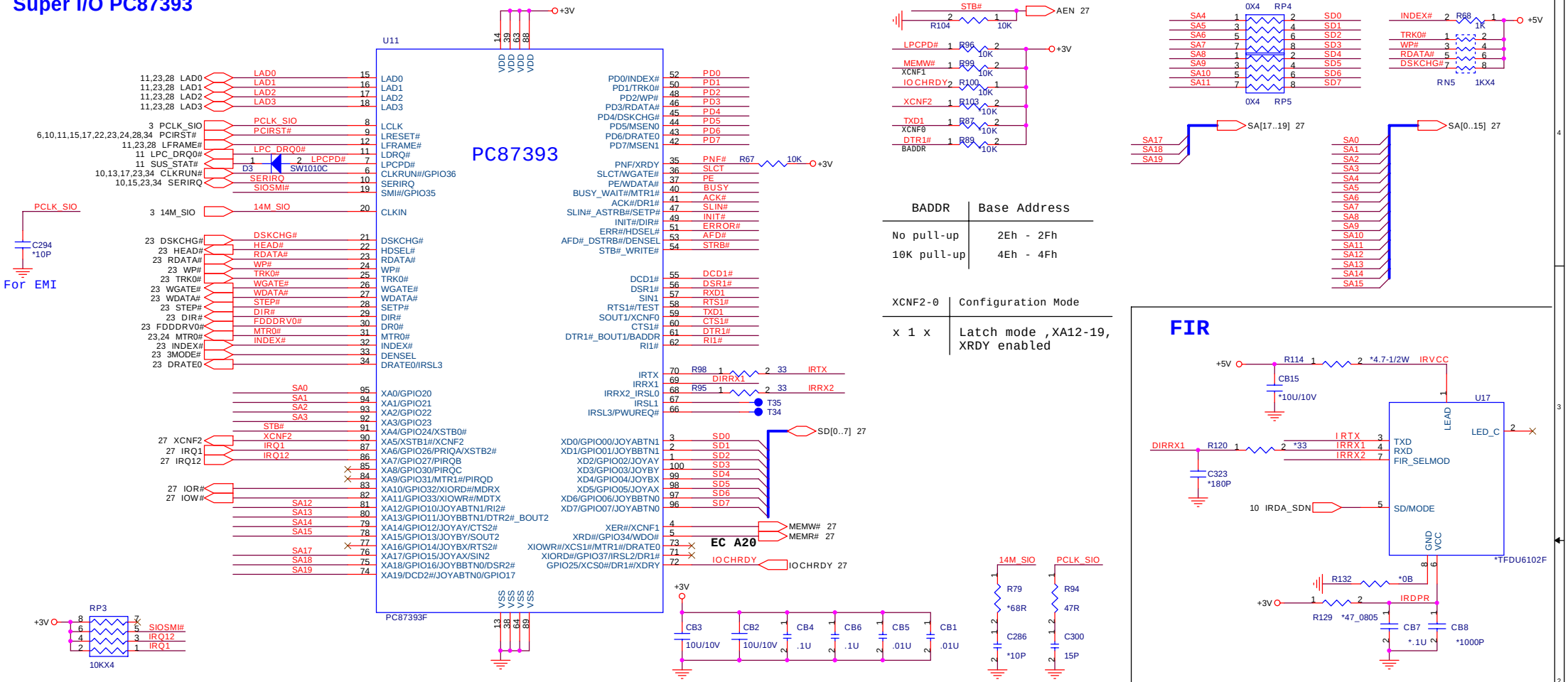
Super I/O PC87393

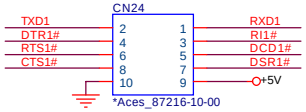


BADDR	Base Address
No pull-up	2Eh - 2Fh
10K pull-up	4Eh - 4Fh

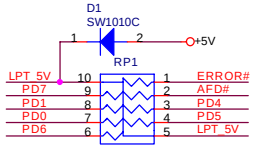
XCNF2-0	Configuration Mode
x 1 x	Latch mode ,XA12-19, XRDY enabled

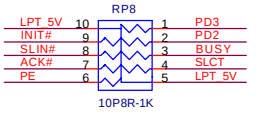
FIR

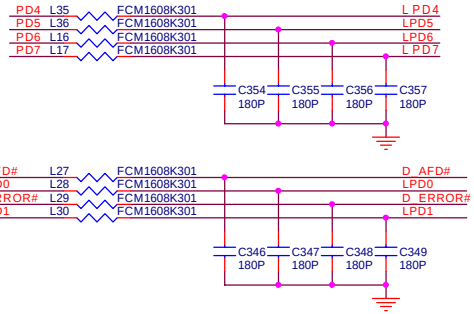
SERIAL DEBUG PORT

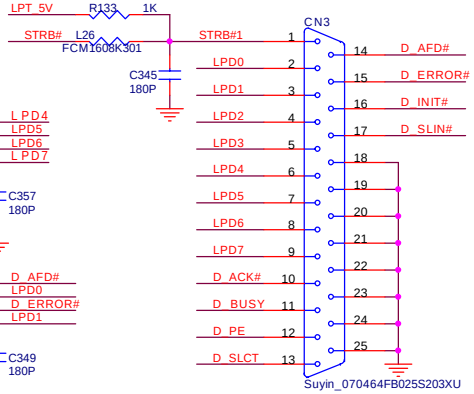


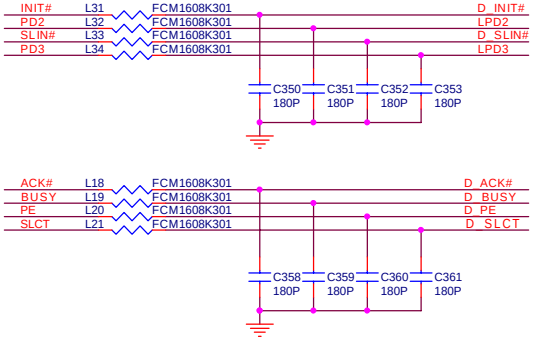
LPT PORT











PROJECT :BF1
Quanta Computer Inc.

Size	Document Number	Rev
A3	87391 SUPER I/O	3F
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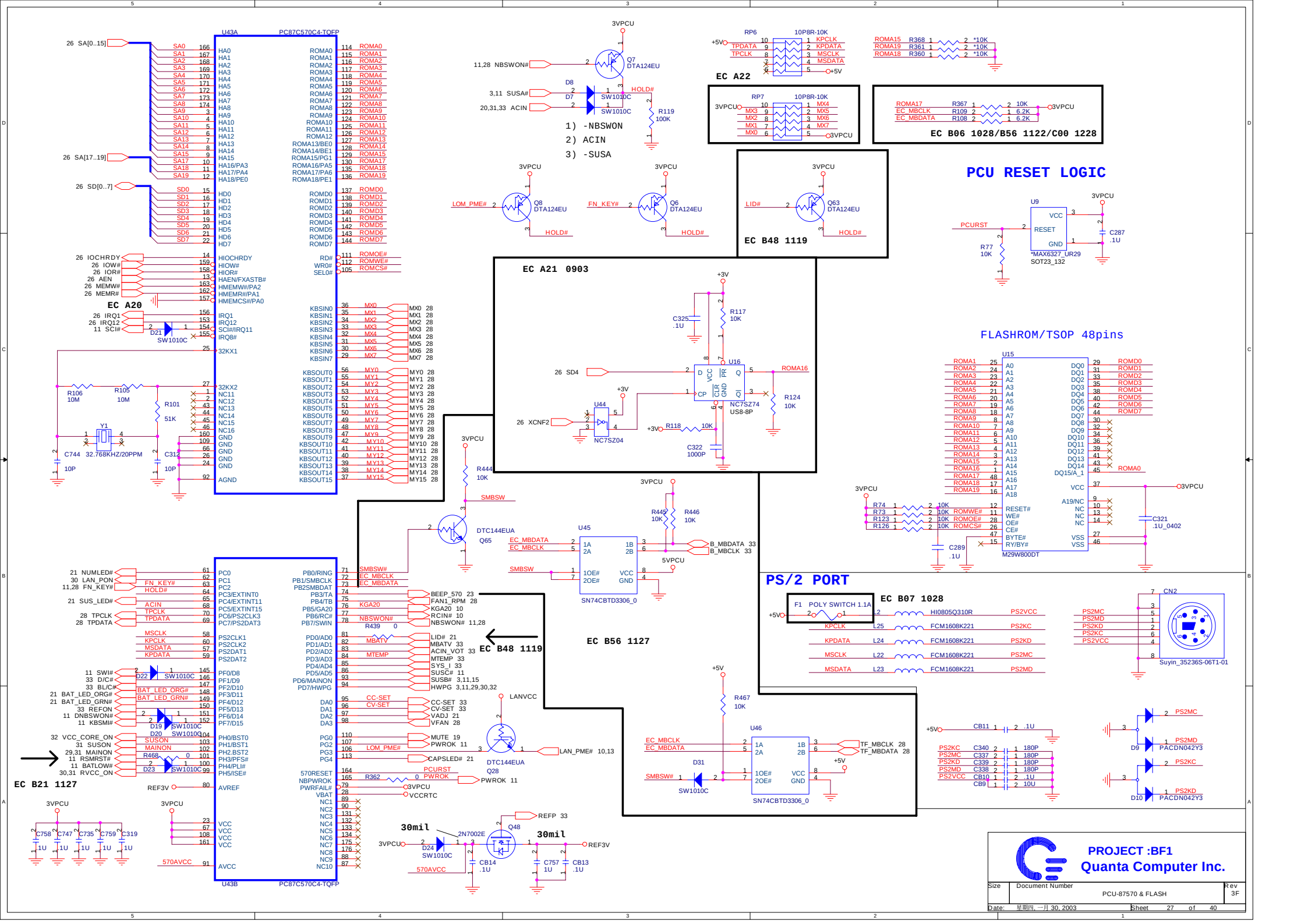
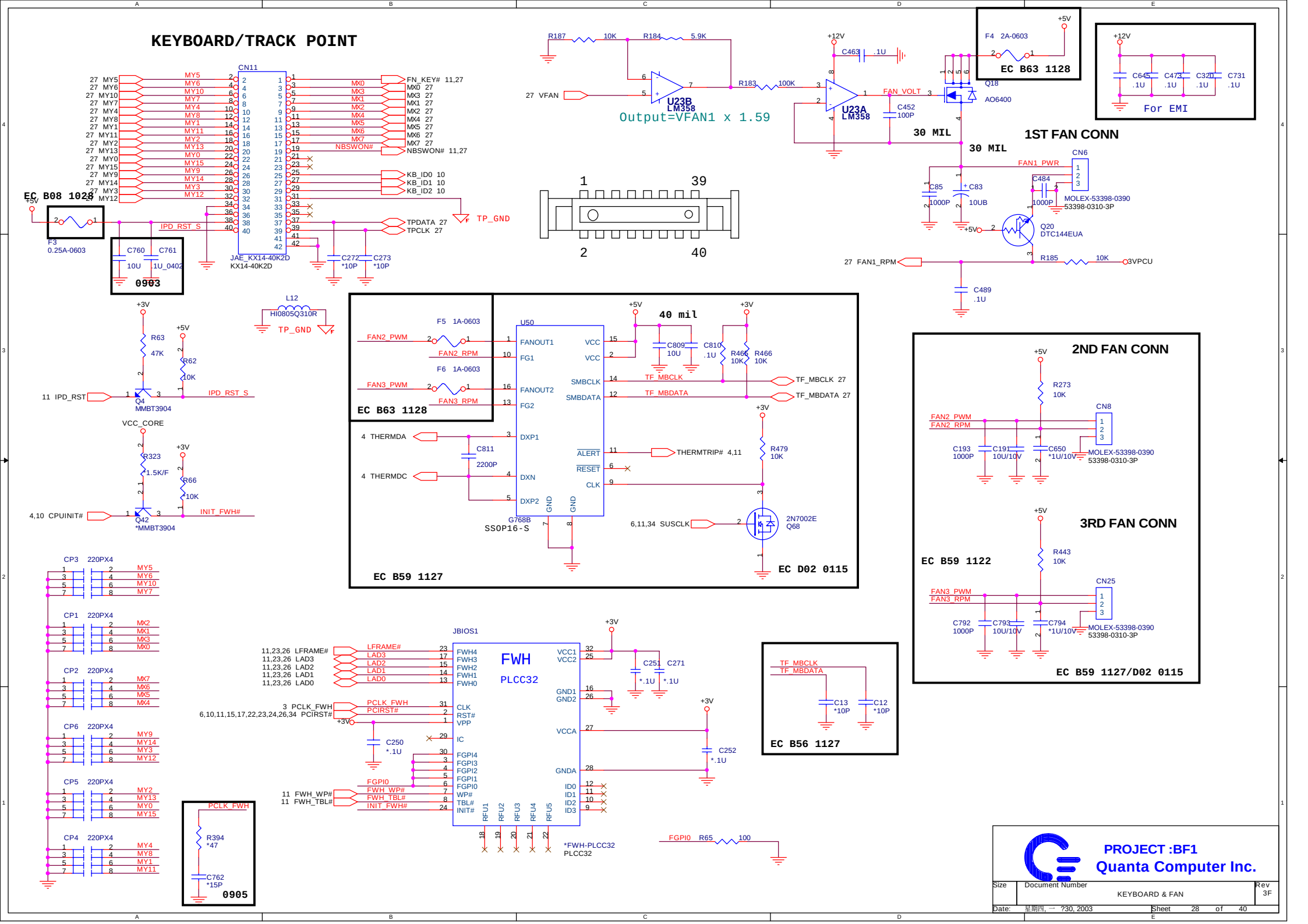

U43A
PC87C570C4-TQFP
U43B
PC87C570C4-TQFP
EC A20
EC A21 0903
EC A22
EC B06 1028/B56 1122/C00 1228
EC B48 1119
EC B56 1127
EC B21 1127
1) -NBSWON
2) ACIN
3) -SUSA
PCU RESET LOGIC
FLASHROM/TSOP 48pins
PS/2 PORT
PROJECT :BF1
Quanta Computer Inc.
PCU-87570 & FLASH
Rev 3F
Sheet 27 of 40
Suyin_35236S-06T1-01
M29W800DT
SN74CBTD3306_0
NC7SZ74
NC7SZ04
*MAX6327_UR29
SOT23_132
30mil
30mil

KEYBOARD/TRACK POINT



PROJECT :BF1

Quanta Computer Inc.

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	KEYBOARD & FAN	3F
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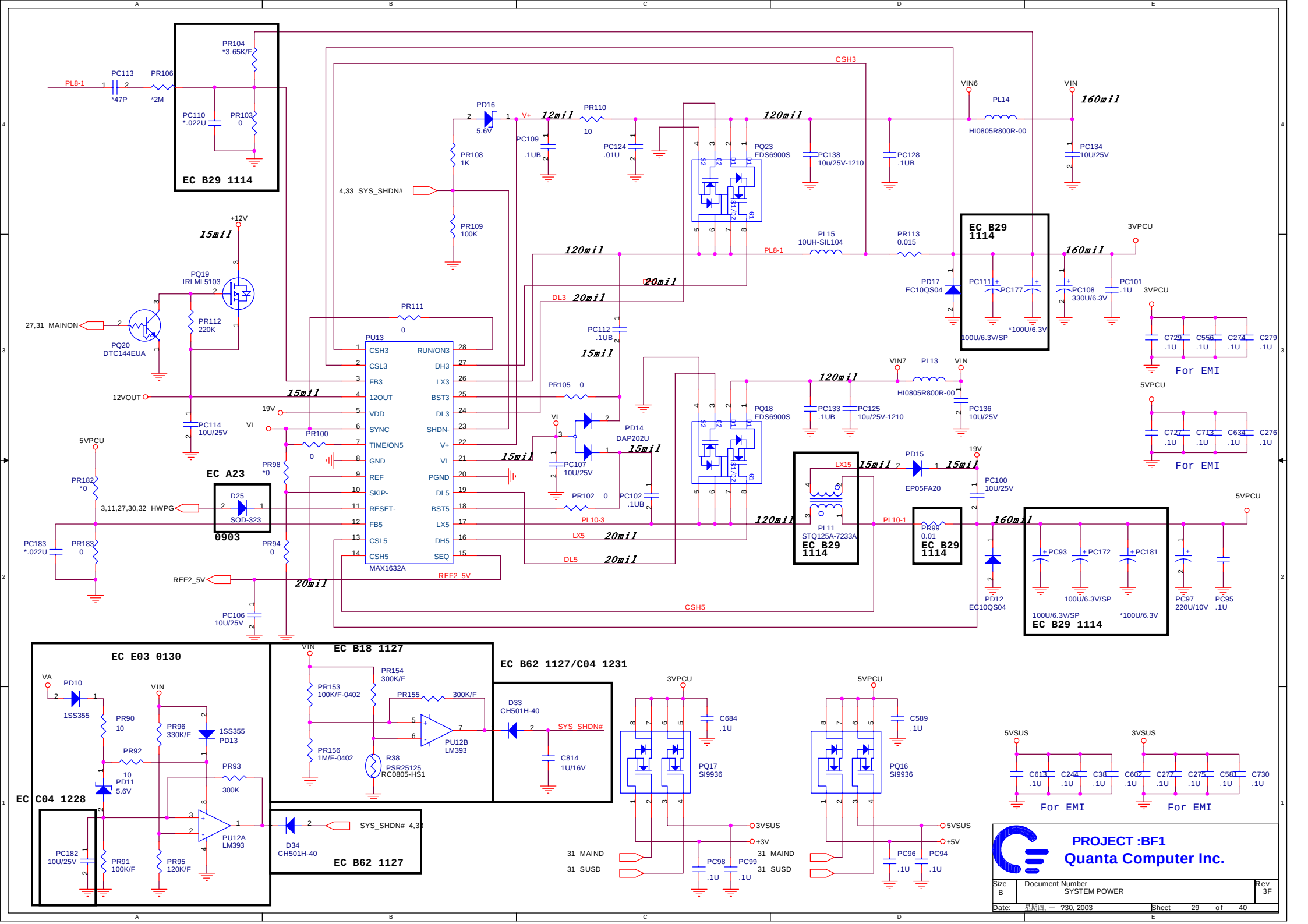
PU13
MAX1632A
CSH3
CSL3
FB3
12OUT
VDD
SYNC
TIME/ON5
GND
REF
SKIP-
RESET-
FB5
CSL5
CSH5
RUN/ON3
DH3
LX3
BST3
DL3
SHDN-
V+
VL
PGND
DL5
BST5
LX5
DH5
SEQ
PR104 *3.65K/F
PR106 *2M
PC113 *47P
PC110 *.022U
PR103 0
EC B29 1114
PD16 5.6V
PR108 1K
PR109 100K
PC109 .1UB
PR110 10
PC124 .01U
PQ23 FDS6900S
PC138 10u/25V-1210
PC128 .1UB
PL14 HI0805R800R-00
PC134 10U/25V
PL15 10UH-SIL104
PR113 0.015
PD17 EC10QS04
PC111
PC177 *100U/6.3V
100U/6.3V/SP
PC108 330U/6.3V
PC101 .1U
PR111 0
PR112 220K
PQ19 IRLML5103
PQ20 DTC144EUA
PC112 .1UB
PR105 0
PD14 DAP202U
PC107 10U/25V
PR102 0
PC102 .1UB
PQ18 FDS6900S
PC133 .1UB
PC125 10u/25V-1210
PL13 HI0805R800R-00
PC136 10U/25V
PR100 0
PR98 *0
PC114 10U/25V
PR182 *0
PR183 0
PC183 *.022U
PR94 0
PC106 10U/25V
D25 SOD-323
EC A23
0903
PL11 STQ125A-7233A
EC B29 1114
PD15 EP05FA20
PR99 0.01
EC B29 1114
PC100 10U/25V
PD12 EC10QS04
PC93
PC172
PC181
100U/6.3V/SP
*100U/6.3V
PC97 220U/10V
PC95 .1U
EC B29 1114
C729 .1U
C556 .1U
C274 .1U
C279 .1U
For EMI
C727 .1U
C713 .1U
C634 .1U
C276 .1U
For EMI
4,33 SYS_SHDN#
27,31 MAINON
3,11,27,30,32 HWPG
REF2_5V
12VOUT
19V
VL
5VPCU
3VPCU
+12V
VIN
VIN6
VIN7
LX15
PL10-1
PL10-3
LX5
DL5
CSH5
REF2_5V
15mil
20mil
120mil
160mil
EC E03 0130
PD10 1SS355
PR90 10
PR92 10
PD11 5.6V
PR96 330K/F
PD13 1SS355
PR93 300K
PR91 100K/F
PR95 120K/F
PC182 10U/25V
PU12A LM393
EC C04 1228
EC B18 1127
PR153 100K/F-0402
PR154 300K/F
PR155 300K/F
PR156 1M/F-0402
R38 PSR25125 RC0805-HS1
PU12B LM393
D34 CH501H-40
EC B62 1127
EC B62 1127/C04 1231
D33 CH501H-40
C814 1U/16V
SYS_SHDN# 4,33
PQ17 SI9936
PQ16 SI9936
C684 .1U
C589 .1U
PC98 .1U
PC99 .1U
PC96 .1U
PC94 .1U
3VSUS
+3V
+5V
5VSUS
31 MAIND
31 SUSD
C613 .1U
C244 .1U
C38 .1U
C602 .1U
C277 .1U
C275 .1U
C581 .1U
C730 .1U
For EMI
For EMI
PROJECT :BF1
Quanta Computer Inc.
Size B
Document Number SYSTEM POWER
Rev 3F
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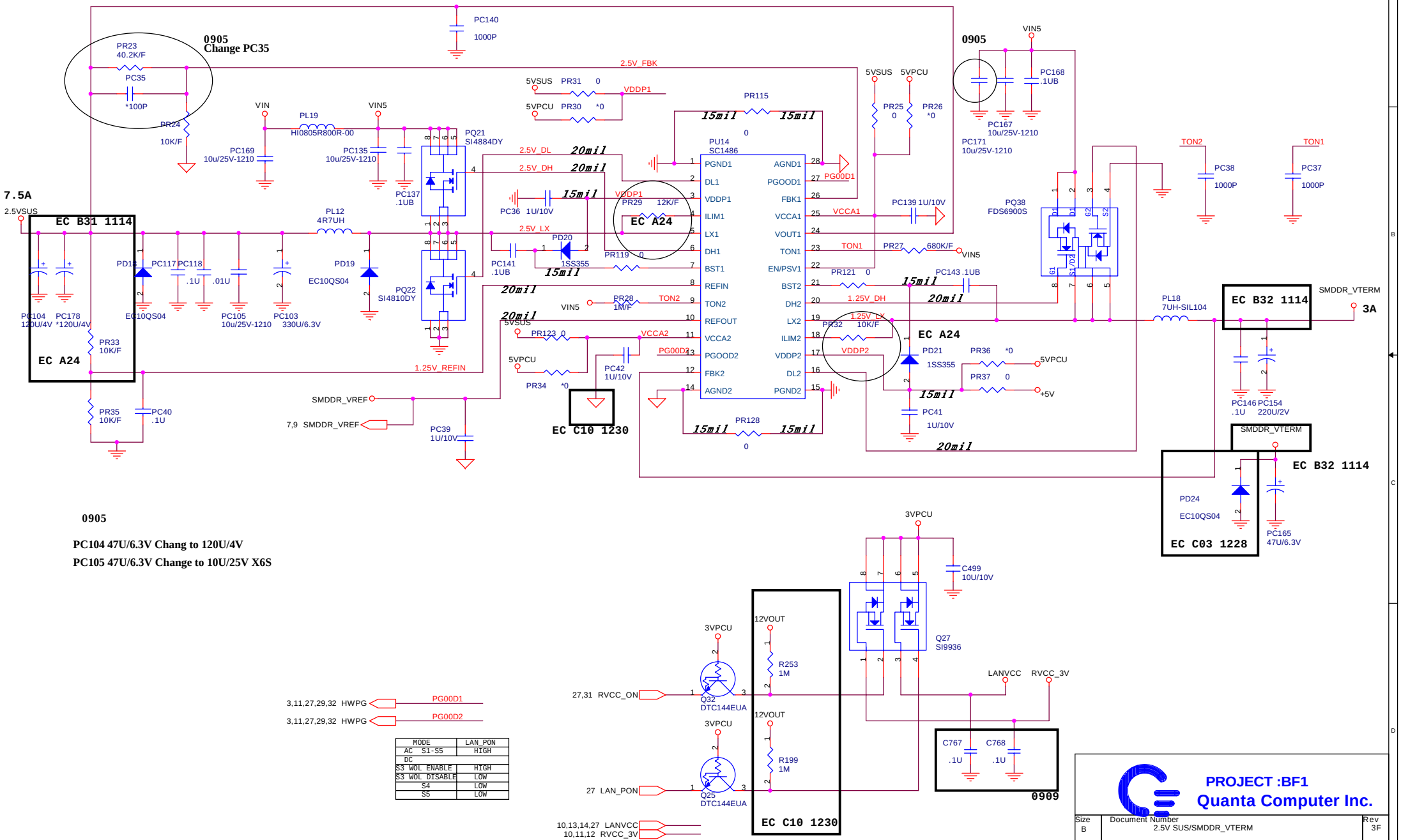
Sheet 29 of 40



0905

PC104 47U/6.3V Chang to 120U/4V

PC105 47U/6.3V Change to 10U/25V X6S

PROJECT :BF1

Quanta Computer Inc.

Size	Document Number	Rev
B	2.5V SUS/SMDDR_VTERM	3F

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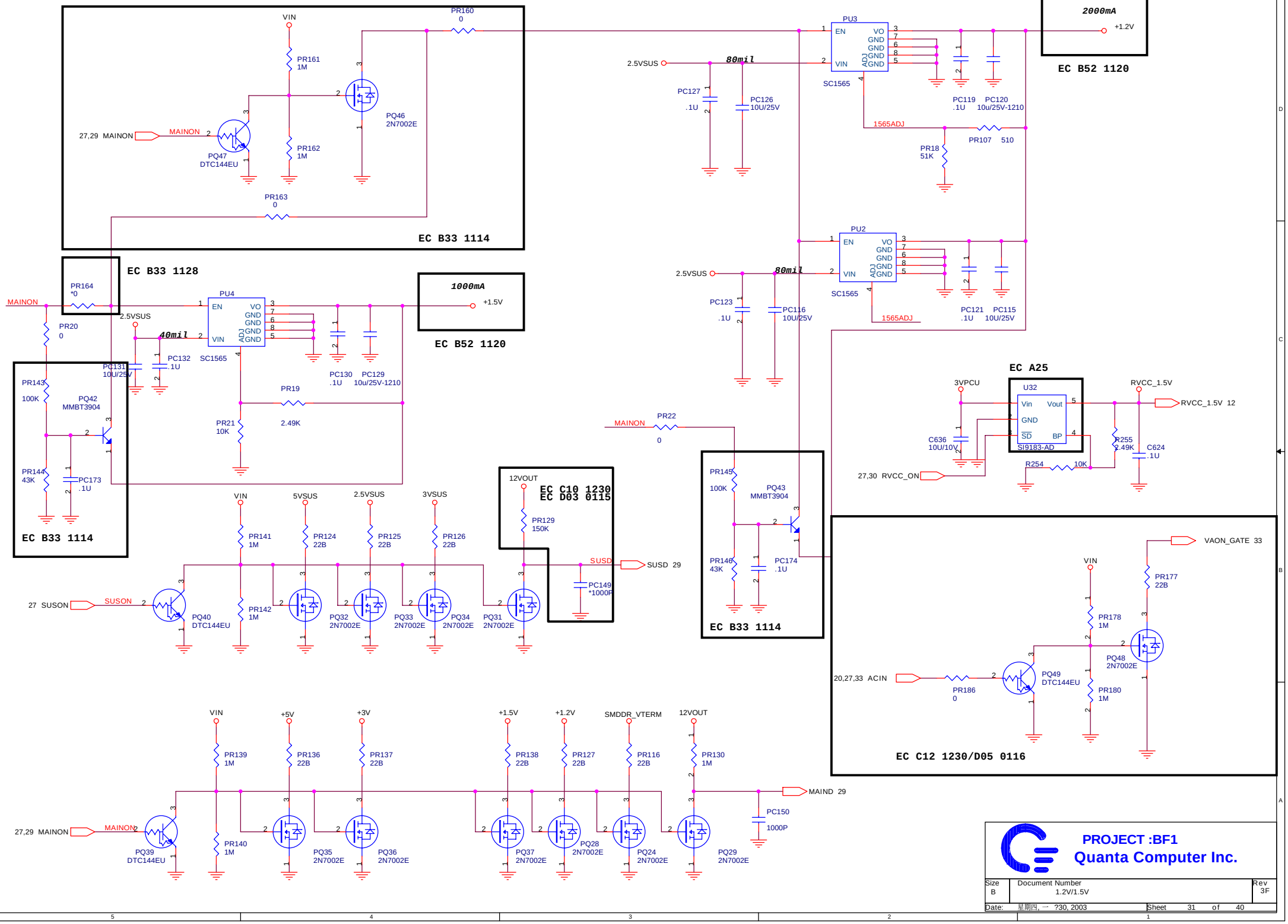
VIN
PR160 0
PR161 1M
PR162 1M
PR163 0
PQ46 2N7002E
PQ47 DTC144EU
27,29 MAINON
MAINON
EC B33 1114
EC B33 1128
PR164 *0
MAINON
PR20 0
2.5VSUS
40mil
PU4
EN
VIN
VO
GND
ADJ
SC1565
PC131 10U/25V
PC132 .1U
PC130 .1U
PC129 10u/25V-1210
1000mA
+1.5V
EC B52 1120
PR143 100K
PQ42 MMBT3904
PR144 43K
PC173 .1U
PR21 10K
PR19 2.49K
PU3
2.5VSUS
80mil
PC127 .1U
PC126 10U/25V
PC119 .1U
PC120 10u/25V-1210
1565ADJ
PR107 510
PR18 51K
2000mA
+1.2V
EC B52 1120
PU2
PC123 .1U
PC116 10U/25V
PC121 .1U
PC115 10U/25V
EC A25
3VPCU
U32
Vin
Vout
GND
SD
BP
SI9183-AD
RVCC_1.5V
RVCC_1.5V 12
C636 10U/10V
R255 2.49K
C624 .1U
R254 10K
27,30 RVCC_ON
MAINON
PR22 0
PR145 100K
PQ43 MMBT3904
PR146 43K
PC174 .1U
EC B33 1114
12VOUT
EC C10 1230
EC D03 0115
PR129 150K
SUSD
SUSD 29
PC149 *1000P
VIN
5VSUS
2.5VSUS
3VSUS
PR141 1M
PR124 22B
PR125 22B
PR126 22B
PR142 1M
PQ40 DTC144EU
PQ32 2N7002E
PQ33 2N7002E
PQ34 2N7002E
PQ31 2N7002E
27 SUSON
SUSON
VAON_GATE 33
PR177 22B
PR178 1M
PR180 1M
PQ48 2N7002E
PQ49 DTC144EU
PR186 0
20,27,33 ACIN
EC C12 1230/D05 0116
VIN
+5V
+3V
+1.5V
+1.2V
SMDDR_VTERM
12VOUT
PR139 1M
PR136 22B
PR137 22B
PR138 22B
PR127 22B
PR116 22B
PR130 1M
PR140 1M
PQ39 DTC144EU
PQ35 2N7002E
PQ36 2N7002E
PQ37 2N7002E
PQ28 2N7002E
PQ24 2N7002E
PQ29 2N7002E
PC150 1000P
MAIND 29
27,29 MAINON
PROJECT :BF1
Quanta Computer Inc.
Size B
Document Number 1.2V/1.5V
Rev 3F
Date: 星期四, 一 ?30, 2003
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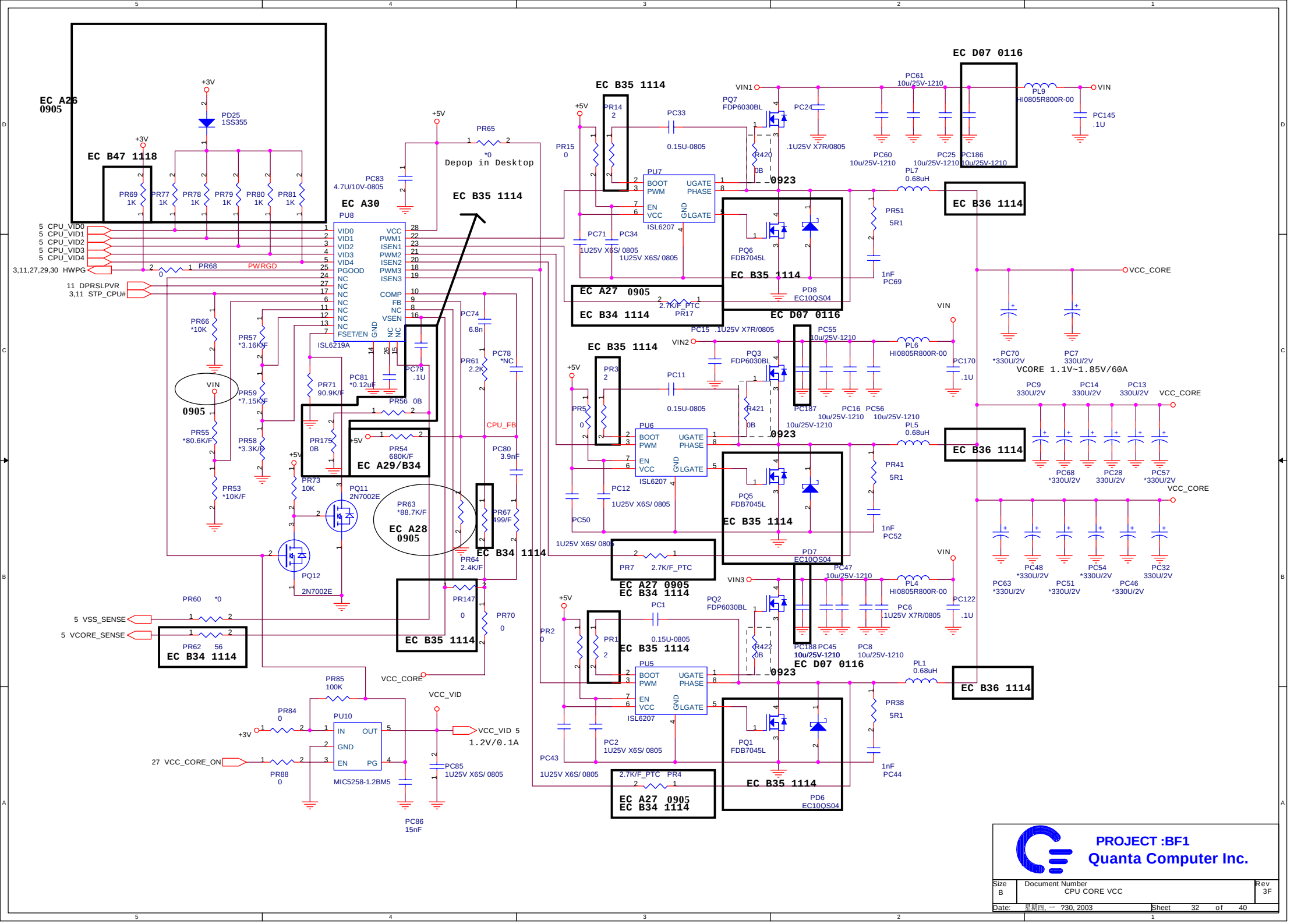
EC A26 0905
EC B47 1118
PD25 1SS355
PR69 1K
PR77 1K
PR78 1K
PR79 1K
PR80 1K
PR81 1K
5 CPU_VID0
5 CPU_VID1
5 CPU_VID2
5 CPU_VID3
5 CPU_VID4
3,11,27,29,30 HWPG
PR68 0
PWRGD
11 DPRSLPVR
3,11 STP_CPU#
EC A30
PU8
ISL6219A
PC83 4.7U/10V-0805
PR65 *0
Depop in Desktop
EC B35 1114
PR66 *10K
PR57 *3.16K/F
PR59 *7.15K/F
PR55 *80.6K/F
PR58 *3.3K/F
PR53 *10K/F
VIN
0905
PR71 90.9K/F
PC81 *0.12uF
PR56 0B
PC74 6.8n
PC79 .1U
PR61 2.2K
PC78 *NC
CPU_FB
PR54 680K/F
EC A29/B34
PR175 0B
PR73 10K
PQ11 2N7002E
PR63 *88.7K/F
EC A28 0905
PR67 499/F
PC80 3.9nF
PR64 2.4K/F
EC B34 1114
PQ12 2N7002E
PR147 0
PR70 0
PR60 *0
5 VSS_SENSE
5 VCORE_SENSE
PR62 56
EC B34 1114
EC B35 1114
VCC_CORE
VCC_VID
PR85 100K
PR84 0
PU10
MIC5258-1.2BM5
27 VCC_CORE_ON
PR88 0
VCC_VID 5
1.2V/0.1A
PC85 1U25V X6S/ 0805
PC86 15nF
EC B35 1114
PR14 2
PR15 0
PC33 0.15U-0805
PU7
ISL6207
PC71 1U25V X6S/ 0805
PC34 1U25V X6S/ 0805
PQ7 FDP6030BL
PC24 .1U25V X7R/0805
R420 0B
0923
PQ6 FDB7045L
PD8 EC10QS04
EC A27 0905
EC B34 1114
2.7K/F_PTC PR17
EC D07 0116
VIN1
PC61 10u/25V-1210
PL9 HI0805R800R-00
VIN
PC145 .1U
PC60 10u/25V-1210
PC25 10u/25V-1210
PC186 10u/25V-1210
PL7 0.68uH
EC B36 1114
PR51 5R1
1nF PC69
VCC_CORE
PC70 *330U/2V
PC7 330U/2V
VCORE 1.1V~1.85V/60A
PC9 330U/2V
PC14 330U/2V
PC13 330U/2V
PC68 *330U/2V
PC28 330U/2V
PC57 *330U/2V
PC15 .1U25V X7R/0805
VIN2
PQ3 FDP6030BL
PC55 10u/25V-1210
PL6 HI0805R800R-00
PC170 .1U
PR3 2
PC11 0.15U-0805
PU6
ISL6207
PC187
PC16 10u/25V-1210
PC56 10u/25V-1210
R421 0B
0923
PR5 0
PC12 1U25V X6S/ 0805
PC50 1U25V X6S/ 0805
PQ5 FDB7045L
PD7 EC10QS04
PL5 0.68uH
EC B36 1114
PR41 5R1
1nF PC52
PR7 2.7K/F_PTC
EC A27 0905
EC B34 1114
VIN3
PC47 10u/25V-1210
PL4 HI0805R800R-00
PC122 .1U
PC6 1U25V X7R/0805
PC188 10u/25V-1210
PC45
PC8 10u/25V-1210
PQ2 FDP6030BL
PC1 0.15U-0805
PU5
ISL6207
PR2 0
PR1 2
R422 0B
0923
EC D07 0116
PC2 1U25V X6S/ 0805
PC43 1U25V X6S/ 0805
PQ1 FDB7045L
PL1 0.68uH
EC B36 1114
PR38 5R1
1nF PC44
2.7K/F_PTC PR4
EC A27 0905
EC B34 1114
PD6 EC10QS04
PC63 *330U/2V
PC48 *330U/2V
PC51 *330U/2V
PC54 *330U/2V
PC46 *330U/2V
PC32 330U/2V
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Quanta Computer Inc.
Size B
Document Number CPU CORE VCC
Rev 3F
Date: 星期四, 一 ?30, 2003
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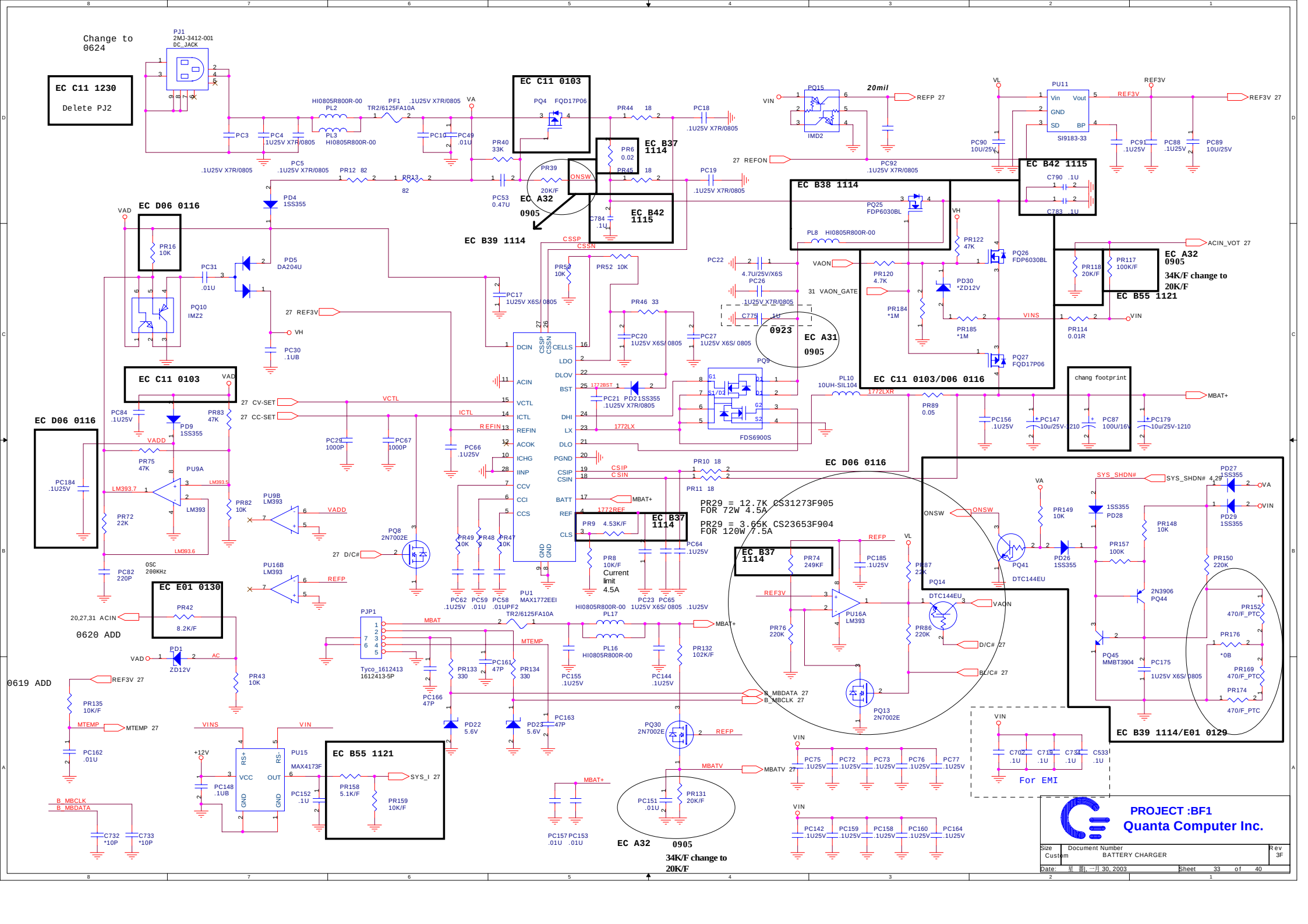
Change to 0624
EC C11 1230
Delete PJ2
PJ1
2MJ-3412-001
DC_JACK
EC C11 0103
EC B37 1114
EC B42 1115
EC B38 1114
EC B39 1114
EC A32 0905
EC D06 0116
EC A31 0905
EC B55 1121
EC E01 0130
EC B39 1114/E01 0129
chang footprint
20mil
IMD2
SI9183-33
IMZ2
DA204U
1SS355
ZD12V
ZD12V
FDP6030BL
FQD17P06
FDS6900S
2N7002E
DTC144EU
MAX1772EEI
LM393
LM393.7
LM393.5
LM393.6
MAX4173F
HI0805R800R-00
TR2/6125FA10A
Tyco_1612413
1612413-5P
34K/F change to 20K/F
For EMI
PROJECT :BF1
Quanta Computer Inc.
BATTERY CHARGER
Size Custom
Rev 3F
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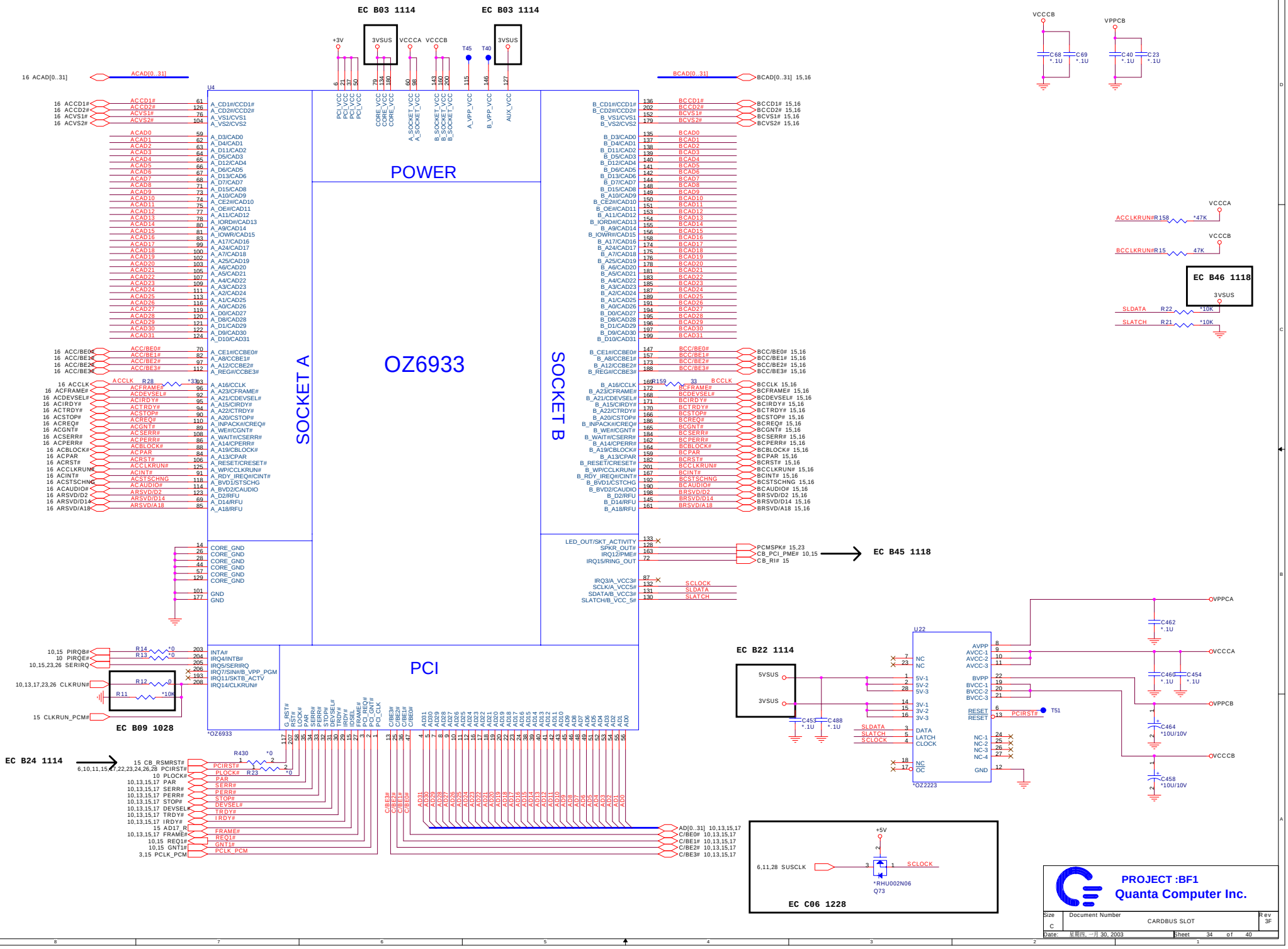
EC B03 1114
EC B03 1114
+3V
3VSUS
VCCCA
VCCCB
T45
T40
3VSUS
16 ACAD[0..31]
ACAD[0..31]
BCAD[0..31]
BCAD[0..31] 15,16
U4
POWER
OZ6933
SOCKET A
SOCKET B
PCI
A_CD1#/CCD1#
A_CD2#/CCD2#
A_VS1/CVS1
A_VS2/CVS2
A_D3/CAD0
A_D4/CAD1
A_D11/CAD2
A_D5/CAD3
A_D12/CAD4
A_D6/CAD5
A_D13/CAD6
A_D7/CAD7
A_D15/CAD8
A_A10/CAD9
A_CE2#/CAD10
A_OE#/CAD11
A_A11/CAD12
A_IORD#/CAD13
A_A9/CAD14
A_IOWR#/CAD15
A_A17/CAD16
A_A24/CAD17
A_A7/CAD18
A_A25/CAD19
A_A6/CAD20
A_A5/CAD21
A_A4/CAD22
A_A3/CAD23
A_A2/CAD24
A_A1/CAD25
A_A0/CAD26
A_D0/CAD27
A_D8/CAD28
A_D1/CAD29
A_D9/CAD30
A_D10/CAD31
A_CE1#/CCBE0#
A_A8/CCBE1#
A_A12/CCBE2#
A_REG#/CCBE3#
A_A16/CCLK
A_A23/CFRAME#
A_A21/CDEVSEL#
A_A15/CIRDY#
A_A22/CTRDY#
A_A20/CSTOP#
A_INPACK#/CREQ#
A_WE#/CGNT#
A_WAIT#/CSERR#
A_A14/CPERR#
A_A19/CBLOCK#
A_A13/CPAR
A_RESET/CRESET#
A_WP/CCLKRUN#
A_RDY_IREQ#/CINT#
A_BVD1/STSCHG
A_BVD2/CAUDIO
A_D2/RFU
A_D14/RFU
A_A18/RFU
B_CD1#/CCD1#
B_CD2#/CCD2#
B_VS1/CVS1
B_VS2/CVS2
B_D3/CAD0
B_D4/CAD1
B_D11/CAD2
B_D5/CAD3
B_D12/CAD4
B_D6/CAD5
B_D13/CAD6
B_D7/CAD7
B_D15/CAD8
B_A10/CAD9
B_CE2#/CAD10
B_OE#/CAD11
B_A11/CAD12
B_IORD#/CAD13
B_A9/CAD14
B_IOWR#/CAD15
B_A17/CAD16
B_A24/CAD17
B_A7/CAD18
B_A25/CAD19
B_A6/CAD20
B_A5/CAD21
B_A4/CAD22
B_A3/CAD23
B_A2/CAD24
B_A1/CAD25
B_A0/CAD26
B_D0/CAD27
B_D8/CAD28
B_D1/CAD29
B_D9/CAD30
B_D10/CAD31
B_CE1#/CCBE0#
B_A8/CCBE1#
B_A12/CCBE2#
B_REG#/CCBE3#
B_A16/CCLK
B_A23/CFRAME#
B_A21/CDEVSEL#
B_A15/CIRDY#
B_A22/CTRDY#
B_A20/CSTOP#
B_INPACK#/CREQ#
B_WE#/CGNT#
B_WAIT#/CSERR#
B_A14/CPERR#
B_A19/CBLOCK#
B_A13/CPAR
B_RESET/CRESET#
B_WP/CCLKRUN#
B_RDY_IREQ#/CINT#
B_BVD1/CSTCHG
B_BVD2/CAUDIO
B_D2/RFU
B_D14/RFU
B_A18/RFU
CORE_GND
GND
LED_OUT/SKT_ACTIVITY
SPKR_OUT#
IRQ12/PME#
IRQ15/RING_OUT
IRQ3/A_VCC3#
SCLK/A_VCC5#
SDATA/B_VCC3#
SLATCH/B_VCC_5#
PCMSPK# 15,23
CB_PCI_PME# 10,15
CB_RI# 15
SCLOCK
SLDATA
SLATCH
EC B45 1118
INTA#
IRQ4/INTB#
IRQ5/SERIRQ
IRQ7/SIN#/B_VPP_PGM
IRQ11/SKTB_ACTV
IRQ14/CLKRUN#
*OZ6933
10,15 PIRQB#
10 PIRQF#
10,15,23,26 SERIRQ
10,13,17,23,26 CLKRUN#
15 CLKRUN_PCM#
EC B09 1028
EC B24 1114
15 CB_RSMRST#
6,10,11,15,17,22,23,24,26,28 PCIRST#
10 PLOCK#
10,13,15,17 PAR
10,13,15,17 SERR#
10,13,15,17 PERR#
10,13,15,17 STOP#
10,13,15,17 DEVSEL#
10,13,15,17 TRDY#
10,13,15,17 IRDY#
15 AD17_R
10,13,15,17 FRAME#
10,15 REQ1#
10,15 GNT1#
3,15 PCLK_PCM
AD[0..31] 10,13,15,17
C/BE0# 10,13,15,17
C/BE1# 10,13,15,17
C/BE2# 10,13,15,17
C/BE3# 10,13,15,17
EC B22 1114
5VSUS
3VSUS
*OZ2223
SLDATA
SLATCH
SCLOCK
PCIRST#
T51
EC C06 1228
+5V
6,11,28 SUSCLK
SCLOCK
*RHU002N06
Q73
VCCCB
VPPCB
VPPCA
VCCCA
ACCLKRUN#
BCCLKRUN#
SLDATA
SLATCH
EC B46 1118
3VSUS
PROJECT :BF1
Quanta Computer Inc.
CARDBUS SLOT
Rev 3F
Size C
Document Number
Date: 星期四, 一月 30, 2003
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PCI Device

DEVICE	IDSEL#	REQ#/GNT#	IRQ
ETHERNET	AD16	0	A
CARDBUS	AD17	1	B
MINI PCI	AD18	2	C,D

Power State

STATE \ SIGNAL	SLP_S1# (SUSA#)	SLP_S3# (SUSB#)	SLP_S4# (TBD)	SLP_S5# (SUSC#)	CLKs	3/5VPCU	+*V	+*VSUS	RVCC_*V
S0(Full ON)	H	H	H	H	ON	ON	ON	ON	ON
S1(POS)	L	H	H	H	STATIC	ON	ON	ON	ON
S3(S2R)	L	L	H	H	OFF	ON	OFF	ON	ON
S4(S2D)	L	L	L	H	OFF	ON	OFF	OFF	ON(AC_MODE) OFF(BATT_MODE)
S5(Soft OFF)	L	L	L	L	OFF	ON	OFF	OFF	ON(AC_MODE) OFF(BATT_MODE)

Voltage Rails

VOLTAGE	Power Plane	Active State	Control Signal
	VCC_CORE	S0-S1	VCC_CORE_ON
1.2V	VCC_VID	S0-S1	VCC_CORE_ON
	+1.2V	S0-S1	MAINON
1.25V	SMDDR_VTERM	S0-S3	SUSON
1.5V	+1.5V	S0-S1	MAINON
	RVCC_1.5V	(NOTE)	RVCC_ON
2.5V	2.5VSUS	S0-S3	SUSON
3.3V	3VPCU	S0-S5	(Always ON)
	+3V	S0-S1	MAINON
	3VSUS	S0-S3	SUSON
	RVCC_3V	(NOTE)	RVCC_ON
	VCCRTC	S0-S5	(Always ON)
5V	5VPCU	S0-S5	(Always ON)
	+5V	S0-S1	MAINON
	5VSUS	S0-S3	SUSON
3.3V,5V	VCCCB	S0-S1	
	VPPCB	S0-S1	
12V	+12V	S0-S1	MAINON

NOTE: REFER TO THE ABOVE "POWER STATE" TABLE

I2C / SMBUS ADDRESSING

DEVICE		ADDRESS
ICH4	DDR SO-DIMM 0	A0H
	DDR SO-DIMM 1	A2H
	CLOCK GEN (CY28346)	D2H/D3H
	SSC (ICS91718)	D4H/D5H
	EEPROM (24RF08C)	A8H-AFH
87570	GAS GAUGE CHIP	4EH
	G768B (THERMAL MONITOR FAN PWM Controller 2nd and 3rd FAN)	A7H A8H

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Revision History

Rev.	Date	Phase	Change List
1A	08/02 2002	DV	Initial release
2A	10/02 2002	SIV	See page 37
3A	12/04 2002	SIT	See page 38,39
3D	12/28 2002	SIT2	See page 40
3E	01/16 2003	SITR	See page 40
3F	01/29 2003	SVT	See page 40

BF1 / F2-Note Schematic EC Tracking Record (for DV --> SIV)Oct. 8, 2002

EC #/Page/Description/Part Affected/CMVC #

EC A003Change Q23 from NMBT3904 to DTC144EUAQ232069
EC A013Add level shifter on SELPSB0/PSBFSEL0Q552070
3Add EMC cap C766 0.1uF on U33 pin 5C766
3Add EMC cap C765 0.1uF on U8 pin 5C765
EC A024Remove CPURST# pull-upR332071
EC A034Update SYS_SHDN# circuitR38, Q2, Q161905
EC A046Add serial damping on CRTHS_VGA and CRTVS_VGAR412, R4132072
EC A056Add optional FET switch on M-GML strapping pinQ52, Q53, Q542073
EC A0610,13,15,17,23,26,28Add RC parallel terminator on all PCI clocks. R is 47 ohm and C is 15pF.R301/C670, R400/C764,
R18/C24, R165/C440, R399/C763, R94/C300, R394/C7622074
EC A0710Assign GPIO1 for "Power-On-Password Erase". Add PAD G2PAD G22004
EC A0811Connect ICH4 pin W20 to THERMTRIP# and R329 removed.R3291905
EC A0911Change BOARD_ID0 strapingR274, R288
EC A1013Change BCM5901 pin connection. Pin P7 and M11 are changed to NC and R186 is changed to a bead.L41, R224, R1861914
EC A1113Change U26 from Atmel AT24C64 to Fairchild FM24C64FLM8XU262075
EC A1213Remove Q29 and Q30Q29, Q302076
EC A1315Change CB_RI# from U3 pin 68 to 672077
EC A1418Change HP_PLG from U12 pin 18 to 17.R381 de-poped R3812078
EC A1519Change U13 from LM4871 to LM4890 and related circuit and partsU13, Q5, Q56, etc.1930
EC A1621Add 100K pull-up on LCD[0..3]RN61948
EC A1723Modify CN19 connection to support IBM-type FDD. FDDSENS# is moved to pin 36.R406, R407, R4081904
EC A1821, 24Modify HDDLED# circuit to include HDD/FDD/ODDQ49, Q50, Q511912
EC A1925Modify USBOC0# and USBOC2# circuitD2, D12, R414~4172079
EC A2026, 27Change U11 pin 73 to NC and U43 pin 157 to GND1908
EC A2127Modify flash ROM ROMA16 circuitU16, Q9, U441909
EC A2227Mount 10K on RP7 footprintRP71988
EC A2329Change PR101 to a diode SOD-323PR101, D252080
EC A2430Change part value:PC104, PC105, PR29, PR32, PC1652093
PC104 47U/6.3V change to 120U/4V
PC105 47U/6.3V change to 10U/25V X6S
PR29 7.5K/F change to 12K/F (for 2.5VSUS limIt)
PR32 7.5K/F change to 10K/F (for SMDDR_VTERM limit)
PC165 47U/6.3V change to 10U/25V X6S
EC A2531Change U32 from SI9183 to SI9183-ADU322094
EC A2632Change CPU_VID[0..4] connection to PU81910
Add serial diode between PR77, PR78, PR79, PR80, PR81 and 3.3VD?
EC A2732Change PR17, PR7 and PR4 from 1.5K/F PTC to 3.9K/F PTC (for VCC_CORE limIt)PR17, PR7, PR4
EC A2832Remove PR63 88.7K/FPR632095
EC A2932Add PR54 130K/FPR542096
EC A3032Change PU8 footprint from ssop28 to tssop28PU82097
EC A3133PD3 removedPD32098
EC A3233Change part value:2099
PR39 33K change to 20K (add PQ4 Vgs)PR39
PR118 and PR131 34K/F change to 20K/F (down reference voltage for 570 read)PR118, PR131
EC A348,9,19,25Change capacitor type to non-TAN typeC18, C19, C307, C537, C568, C642, C666, C668,
C504, C6292081
EC A35 4 Change thermal chip to MAX6648 U21
EC A36 11,25 Modify USB OC# circuit RN3, R414~417

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BF1 / F2-Note Schematic EC Tracking Record (SIV-SIT)Dec 04, 2002

EC #/ Page/ Description/ Part Affected/ SIV --> SIT

EC B00/3/Change R258 and R272 from 4.7K to 2.2K for rising time/R258,R272/2299
EC B01/6/Change R276 pull-up to +1.5V,and R284 pull-up to +3V/R276,R284
EC B02/11/Delete RN3 and add R423 and R424 pull-up to RVCC_3V for USBOC4# and USBOC#5/R423,R424
EC B03/15,34/Change Cardbus power plane from +3V to 3VSUS and add R469,R470 to support Ti & O2/U3,R164,Q40,C26,C27,C34,C75,C74,C70,U4,R469,R470
EC B04/22/Change gate control signals of Q10 and Q14 to PCIRST# in order to avoid the system into test mode/Q10,Q14/2323
EC B05/24/Del Q49,Q50,Q51 and add D26,D27,D28 to isolate DSAP# per channel/Q49,Q50,Q51,D26,D27,D28
EC B06/27/Change R108 and R109 from 4.7K to 1.5K for rising time/R108,R109/2299
EC B07/27/Change PS/2 fuse(F1) to poly-switch /F1/2411
EC B08/28/Add serial fuse(F3 Stech 39194 1608FF-250MA 0.25A / 0603) to VCC on KB/TP (CN11 pin38)/CN11,F3
EC B09/34/Mount R12 and R11 is un-populated/R12,R11
EC B10/18/Change R80,R373 from 2.7K to 4.7K,the R81,R374 are changed from 47K to 2.7K,and C772 is un-populated/R80,R81,R373,R374,C772
EC B11/18/Change R381 to be un-populated/R381
EC B12/19/Add BEEP control circuit Q46,Q66,R92,R376,R453,R457,C293,C740/Q46,Q66,R92,R376,R453,R457,C293,C740
EC B13/19/Change Audio amp from LM4890 to TAP0312/See page 19
EC B14/11/Populate AC'97 pull-down/R237,R238,R249,R252
EC B15/17/Change R359 from 47 Ohm to 33 Ohm/R359
EC B16/22/Change Bead of HSYNC/VSYNC/L6,L8
EC B17/22/Change Bead&Cap&Res of the pie-filter of RGB/L3,L5,L7,C2,C4,C5,C6,C7,C14,C15,C16,R2,R6,R7
EC B18/4,29/Delete R36,Q2 and add PR153,PR154,PR155,PR156 to modify thermal shutdown circuit/PR153,PR154,PR155,PR156,R38,PU12
EC B19/8/Reserve R433 to GND for CRT ripple/R433
EC B20/15/Add R431 connect to U3.70 SUSPEND# and SUSB#/R431,U3
EC B21/11,27/Add R468 for RSMRST# change to 570 control and un-populated R269,R271,C648/R468,R269,R271,C648
EC B22/16,34/Change +5V to 5VSUS and +3V to 3VSUS/U7,C41,C58,C45,C65,C453,C488
EC B23/15/Change U3.66 Globle_RST# from PCIRST# to 3VSUS RC circuit R436,R437,C788 CB_RSMRST#/U3,R436,R437,C788
EC B24/34/U4.117 through add R430 connect to CB_RSMRST#/U4,R430
EC B25/11/Change R343 pull up from RVCC_3V to 3VSUS for wakeup FN_key/R343
EC B26/15/un-populated R164 for CB suspend/R164
EC B27/18/Change R365 from 4.7K to 47K adjust PC-BEEP sound/R365
EC B28/19/Change R102 from 20K to 200K adjust gain/R102
EC B29/29/Change PR103 from 10KF to 0,PC111,PC93,PC172 from 47U/6.3V to 100U/6.3V,PR99 from 0.015 to 0.01,PL11 from STQ124-1022 to STQ125A-7233A
un-populated PR104,PC110/PR103,PR104,PC110,PC111,PC93,PC172,PR99,PL11
EC B30/3,9/Add R451,D29 to CLK_PERDN# to prevent leakage,add R450 pull up SA0 /R450,R451,D29
EC B31/30/Del JP7,8,11 2.5VS short to 2.5VSUS power plane,Del 2.5VS net ,PC104,PC105 connect to 2.5VSUS/JP7,JP8,JP11,PC104,PC105
EC B32/30/Del JP14,15 VDDR short to SMDDR_VTERM power plane,Del VDDR net ,PC165,PD24 connect to SMDDR_VTERM/JP14,JP15,PC165,PD24
EC B33/31/Add new circuit PR143,PR144,PR145,PR146,PR160-PR164,PC173,PC174,PQ42,PQ43,PQ46,PQ47/PR143,PR144,PR145,PR146,PR160-PR164,PC173,PC174,
PQ42,PQ43,PQ46,PQ47
EC B34/32/Change PR62 from 0 to 56,PR54 from 130KF to 680KF,PR64 from 1.6KF to 2.4KF,PR4,7,17 from 3.9K/PTC to 2.7K/PTC/PR62,PR54,PR64,PR4,PR7,
PR14

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EC B35/32/Mount PC79,PR56,PD6,PD7,PD8,Add PR147,Change PQ1,5,6 from FDP7030BL to FDB7045L,PR1,3,14 from 0 to 2 ,add PR175/PC79,PR56,PD6,PD7,PD8,
PR147,PR175PQ1,PQ5,PQ6,PR1,PR3,PR14
EC B36/32/Del JP2,JP3,JP5 and short/JP2,JP3,JP5
EC B37/33/Change PR9 from 3.65KF to 4.87KF,PR74 from 258KF to 249KF,and change PR6 footprint/PR9,PR74,PR6
EC B38/33/Modify PL8 connect to PQ25 pin5,6,7,8/PL8,PQ25
EC B39/33/Add new circuit PQ44,PQ45,PQ41,PR148,PR149,PR150,PR152,PR169,PR174,PR176,PC175,PD26/PQ44,PQ45,PQ41,PR148,PR149,PR150,PR151,PR152,PR169,
PR174,PR176,PC175,PD26,PD27,PD28,PD29
EC B40/11/Add R435 to GND for USBRBIAS and unpopulated R435/R435
EC B41/23/Add a new HOLE26, and change HOLE21 footprint to HOLE-C295D110P2
EC B42/13,18,33/Add L49,L50,L51,L52,L53,C780,C781,C782,C783,C784,C786,C787,C790 For EMI solution/L49,L50,L51,L52,L53,C780,C781,C782,C783,C784,C790
,C786,C787
EC B43/18/Add a C785 TO U12 AVDD power plane/C785
EC B44/11/Change MB ID form ID1 to ID 2, populated R270,R288, un-populated R268,R274/R268,R274,R270,R288
EC B45/10,15,34/Change U3.59 and U4.163 net from PCI_PME# to CB_PCI_PME# and Add Q62,R438 to protect CB_PCI_PME# leakage/U3,U4,Q62,R438
EC B46/34/Change R22 power plane from +3V to 3VSUS, and Q1 from +5V to 5VSUS/R22,Q1
EC B47/32/Change PR69 from 10K to 1K Strong Pull high/PR69
EC B48/27/Add Q63,R439 support DC mode LID switch S3 resume, and LID# change to U43 pin 81/Q63,R439
EC B49/12/Add R448 to 5VPCU and D30 to RVCC_3V and D32 to 5VSUS for USB OC[5:0]# 5V tolerance/R448,D30,D32
EC B50/11,17,18/Add R441 for AC_RESET# and del minPCI AC LINK signal/R441,R167,R168,R169,R171,C446,L37,C444,R91,R372,C741,C742
EC B51/12/Add C789 between +1.5V and +3V/C789
EC B52/31/Delete JP12,JP13 and short to +1.5V,delete JP9,JP10 and short to +1.2V/JP12,JP13,JP9,JP10
EC B53/13/Add R194,T62,T63,T64 support ATE test/R194,T62,T63,T64
EC B54/14/CN1 pin 14 change to no connect/CN1
EC B55/33/Change PR117 from 102K/F to 100K/F and add PR158,PR159 to PU15 pin6 output/PR117,PR158,PR159
EC B56/27,28/Add U45,U46,R444,R445,R446,Q65,D31,R467, delete Q12,Q15 for separate SMBus/U45,U46,R444,R445,R446,Q65,Q12,Q15,D31,R467
EC B57/13/U25 pin A4 IDSEL add R447/R447
EC B58/27/Delete C47 and U7 pin 9 floating don't suporrt 12Vcard/C47
EC B59/4,28/Delete Max6648 thermal sense change to G768B and FAN2/3 control/U21,R139,R136,R134,R137,R145,C366,C370,U50,Q68,R465,R466,C809,C810,C811
Q36,C649,Q64,C791
EC B60/11/Add R471 Pull-up ICH4 THRM# to +3V/R471
EC B61/23/Add FDD INDEX# signal damper R449 and cap C795/R449,C795
EC B62/4,29/Add D33,D34,D35 to prevent leakage/D33,D34,D35
EC B63/28/Add F4,F5,F6 Fan fuse/F4,F5,F6

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BF1 / F2-Note Schematic EC Tracking Record (SIT-SIT2)Dec 28, 2002

EC #/ Page/ Description/ Part Affected/ SIT --> SIT2

EC C00/27/Change R108,R109 from 1.5K to 6.2K for SMBus/R108,R109
EC C01/19/Change R92 from 47K to 8.2K for Beep sound level/R92
EC C02/11/Change R441 from 10Ohm to 47Ohm for AC_RESET# overshoot, Add C815 1u to thermtrip#/R441,C815
EC C03/30/Populated PD24/PD24
EC C04/29/Add a PC182 10uF/25V parallel to PR91 and a C814 between SYS_SHDN# and GND to absorb Vin Voltage drop/PC182,C814
EC C05/4,11,20/Add H/W throttling circuit Q69-Q72,R476,R477/Q69,Q70,Q71,Q72,R476,R477
EC C06/34/Add a Q73 for SCLOCK/Q73
EC C07/11/Change board ID to REV:D "0011" populated R274 unpopulated R288/R274,R288
EC C08/19/Change gain to 10dB R462,R463 populated,R461,R464 un-populated and change R472,R473 to 4.7K/R461,R462,R463,R464
R472,R473
EC C09/10/Change Q62 to DTC144EUA, and delete R438 for CB_PCI_PME#/Q62,R438
EC C10/30,31/Change R253,R199 to 1M,PR129 to 150K,un-populated PC149 for 5VSUS knee,change PC42 from DGND to AGND/R253,R199,
PR129,PC149,PC42
EC C11/33/Delete PJ2 foot-print,change PQ4,PQ27 from SI4425DY to FQD17P06,PQ25,PQ26 from SI4884 to FDP6676 ,change PR120 from
4.7K to 1KF,REFP change to VAD/PJ2,PQ27,PR120
EC C12/31/Add PQ48,PQ49,PR177-PR181 for decrease leakage current circuit/PQ48,PQ49,PR177-PR181

BF1 / F2-Note Schematic EC Tracking Record (SIT2-SITR)Jan 16, 2003

EC #/ Page/ Description/ Part Affected/ SIT2 --> SITR

EC D00/4/Change R37 from 56 to 330 for SYS_SHDN#,Reserve R480 51 Ohm pull-up to vcore for CPURST#
EC D01/15/Mount R164 10K and unpopulated R431 for CardBus suspend
EC D02/28/Change Q68 circuit for leakage, unpopulated C650,C794
EC D03/31/Change PR129 from 100K to 150K
EC D04/11/Change board ID to REV:E "0100" populated R260,R268,R288 10K unpopulated R263,R274,R270/R274,R270,R260,R288,R268,R263
EC D05/31/Change discharge circuit,delete PR179,PR181/PR179,PR181
EC D06/33/Change PR16 5.1K to 10K, change power circuit PU9,PU16,add bypass capacitor PC184,PC185, and reserve PD30,PR185,PR184(un-populated)
EC D07/32/Add 3 input capacitor PC186,PC187,PC188

BF1 / F2-Note Schematic EC Tracking Record (SITR-SVT)Jan 30, 2003

EC #/ Page/ Description/ Part Affected/ SITR --> SVT

EC E00/18/Change R365 from 47K to 20K for modem card tone sound loudly /R365
EC E01/33/Change PR152,PR169,PR174 footprint to 0603 size,and change PR42 from 10K to 8.2KF/PR152,PR169,PR174,PR42
EC E02/11/Change board ID to REV:F "0101" populated R274 10K unpopulated R288/R274,R288
EC E03/29/Change PR96 to 330KF,PR95 to 120KF,PR91 to 100KF/PR91,PR95,PR96