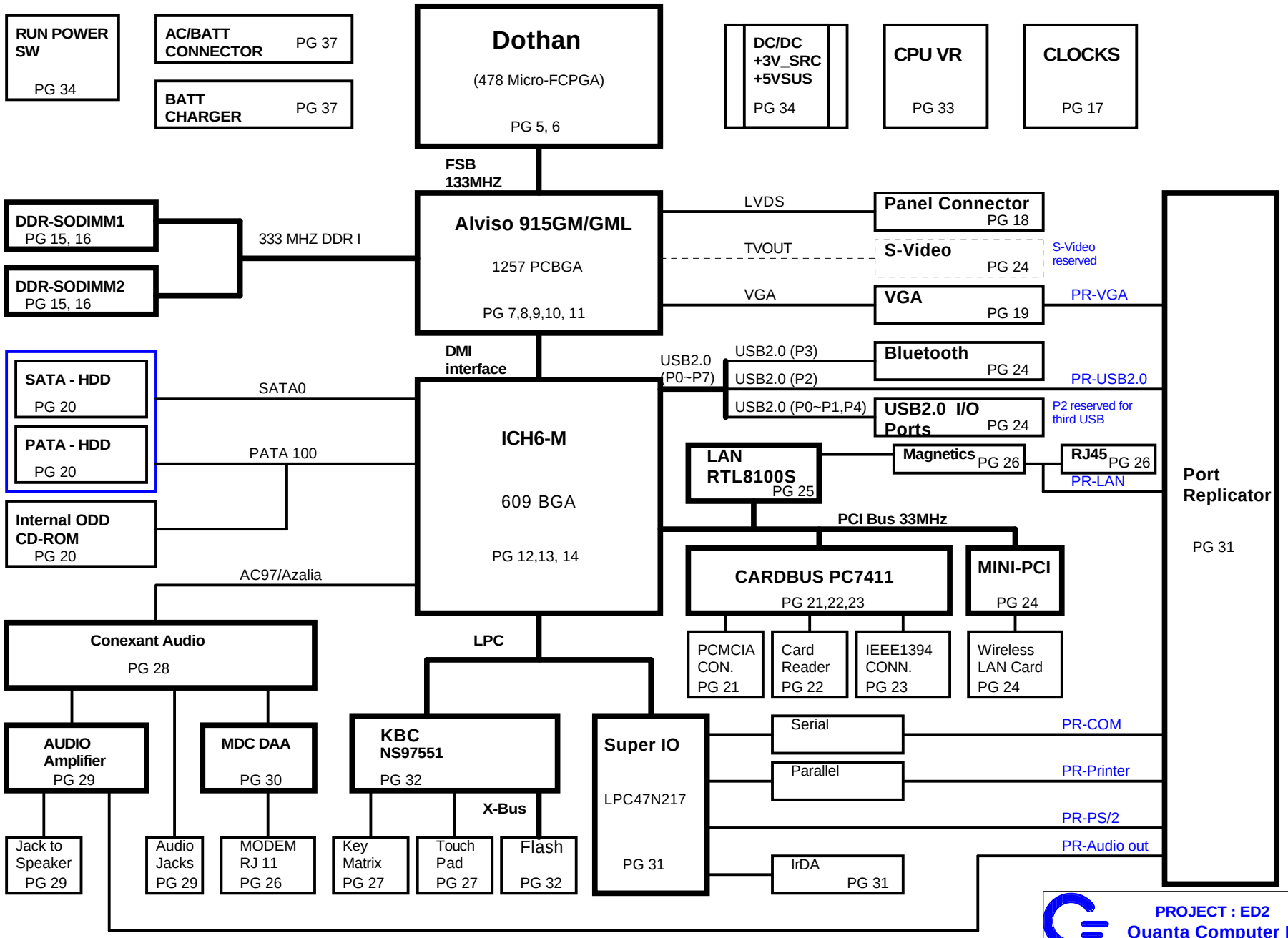
ED2-UMA DESIGN

VER : 1C



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Quanta Computer Inc.

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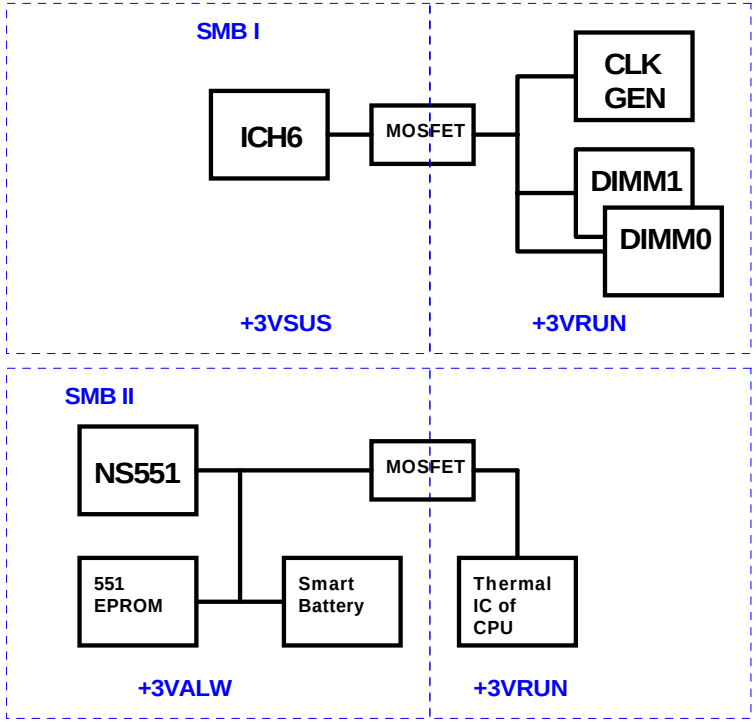
PCI ROUTING TABLE	IDSEL	INTERUPT	DEVICE
REQ0# / GNT0#	AD24	PIRQA#	RTL8110S
REQ2# / GNT2#	AD19	PIRQB# , PIRQD#	MINI-PCI
REQ1# / GNT1#	AD17	PIRQC#,PIRQD#,PIRQA#	TI 7411



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Quanta Computer Inc.

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	Block Diagram 2	C2A
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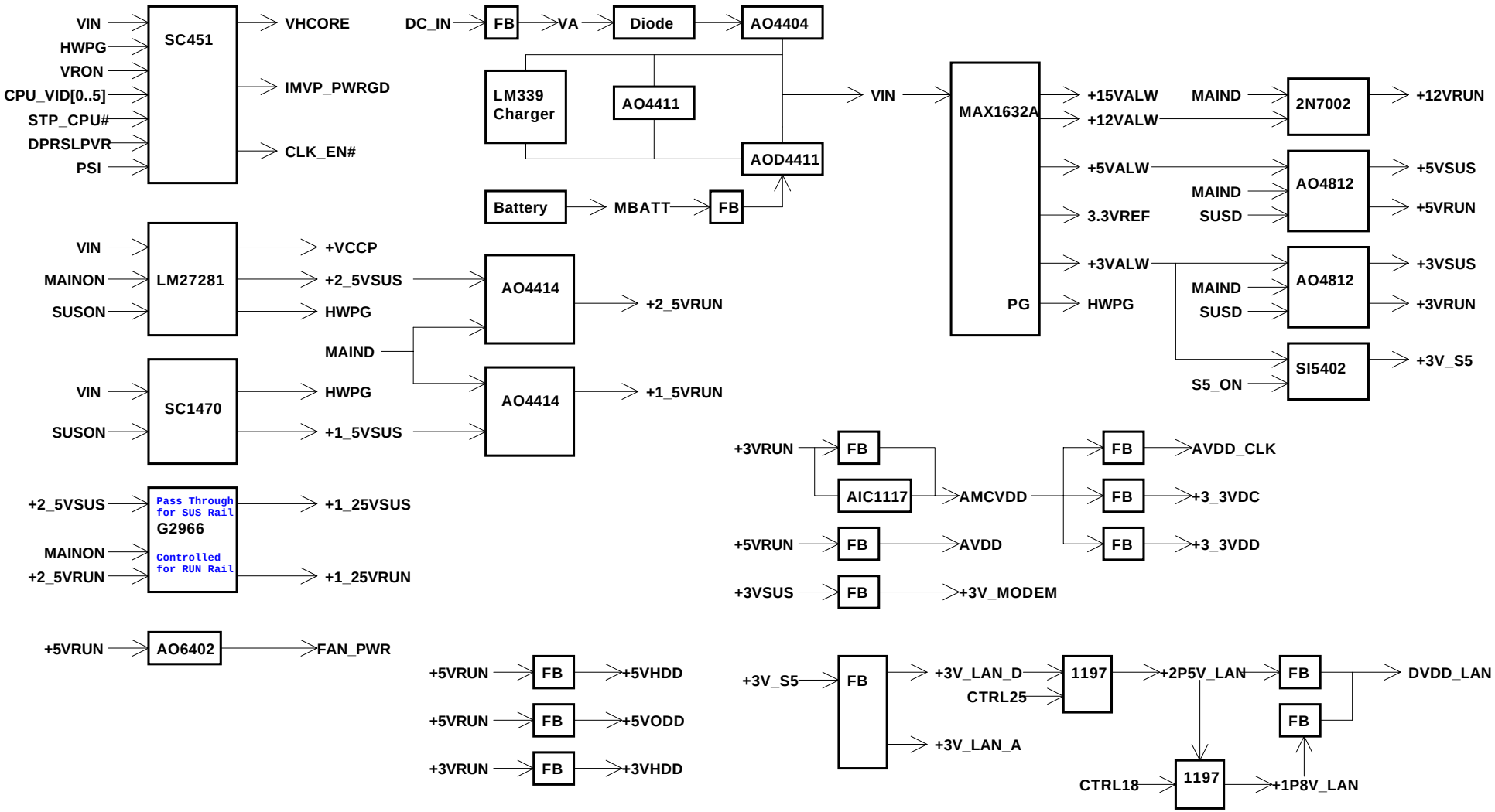
Power Rail Flow



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Power and Ground

New Label	NOTE	Description	Control Signal or Source
VA		AC ADAPTER (20V)	
VIN		MAIN POWER (10~20V)	
MBATT		MAIN BATTERY + (10~17V)	
+15VALW		+15V ALWAYS	
+12VALW		+12V ALWAYS	
+12VRUN		+12V RUN	MAINON
+5VALW		+5V ALWAYS & KBC POWER	
+5V_S5	NO USE	THIS POWER WILL BE TUNEED OFF IN S5 BATTERY MODE	S5_ON
+5VSUS		+5V S5 CONTROLED POWER	SUSD
+5VRUN		+5V S3 CONTROLED POWER	MAIND
+5VHDD	CONNECT TO +5VRUN DIRECTLY	+5V HDD POWER	+5VHDD_EN#
+5VODD	CONNECT TO +5VRUN DIRECTLY	+5V ODD POWER	+5VMOD_EN#
+5VFDD	NO USE	EXTERNAL FDD POWER (5V)	+5VFDD_EN#
FAN_PWR		FAN POWER (5V)	VFAN, MAX6657_OV#
VDDA		Amplifier Power 5V RUN Plane	+5VRUN
AMCVDD		AC97 Code DAC Power 3VRUN	+3VSUS
3V_MODEM		MODEM Power 3VSUS	+5VRUN or +3VRUN
+3VALW		8051 POWER (3V)	
+3V_S5		THIS POWER WILL BE TUNEED OFF IN S5 BATTERY MODE	S5_ON
+3VSUS		SLP_S5# CTRLD POWER	SUSD
+3VRUN		SLP_S3# CTRLD POWER	MAIND
+3VHDD	CONNECT TO +3VRUN DIRECTLY	SATA HDD Power	+3VHDD_EN#
+3V_LAN_D		LAN Digital Power	+3V_S5
+3V_LAN_A		LAN Analog Power	+3V_S5
+2P5V_LAN		LAN Analog Power	+3V_LAN_D (+3V_S5)
DVDD_LAN		LAN Digital Power 1.8 or 2.5V	+2P5V_LAN(+3V_S5)
RTCVCC		RTC & PCL POWER	
REF3V			
+2_5VSUS			SUSON
+2_5VRUN			MAIND
+1_8VSUS	NO USE		
+1_8VRUN	NO USE		+2_5VRUN
+1_8V_M24	NO USE		+1_8VSUS or +1_8VRUN
+1_5V_S5		THIS POWER WILL BE TUNEED OFF IN S5 BATTERY MODE	S5_ON
+1_5VSUS			SUSON
+1_5VRUN		AGP I/O POWER	MAIND
+1_25VSUS		SMDDR_VTERM	+2_5VSUS
+1_25VRUN			MAINON
VGA1_2V	NO USE	ATI VGA 1.2V	+2_5VRUN
VGACORE	NO USE	ATI VGA CORE 1.0/1.2V	MAINON, POW_SW
+VCCP		AGTL+ POWER (1.05V)	MAINON
VHCORE		CPU CORE POWER (1.25/1.15V)	VR_ON, HWPG
GND	ALL PAGES	DIGITAL GROUND	
AGND	Page 28,29	AUDIO GND	
GNDP	NO USE	CPU POWER GND	
CGNDP	NO USE	CHARGER GND	
DC_GND	DC Jcak	DC/DC POWER GND	
LANGND	NO USE	COMBO CONN GND	

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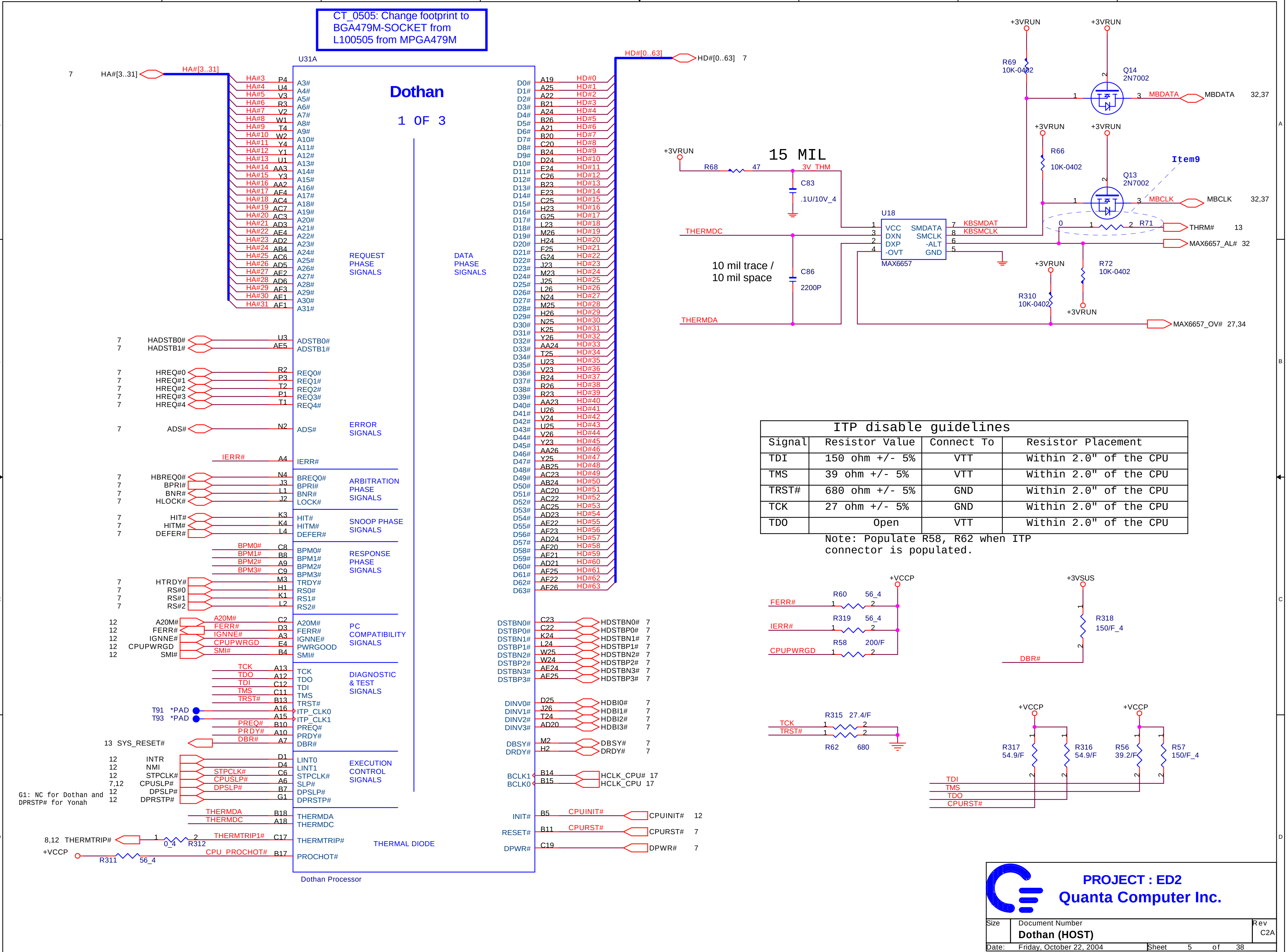

ITP disable guidelines

Signal	Resistor Value	Connect To	Resistor Placement
TDI	150 ohm +/- 5%	VTT	Within 2.0" of the CPU
TMS	39 ohm +/- 5%	VTT	Within 2.0" of the CPU
TRST#	680 ohm +/- 5%	GND	Within 2.0" of the CPU
TCK	27 ohm +/- 5%	GND	Within 2.0" of the CPU
TDO	Open	VTT	Within 2.0" of the CPU

Note: Populate R58, R62 when ITP connector is populated.

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Quanta Computer Inc.

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Place pulldown resistors within 0.5" of COMP pins

18mils Trace Width of COMP0,2
5mils Trace Width of COMP1,3

COMP0 COMP1 COMP2 COMP3

R27 27.4/F R307 54.9/F R19 27.4/F R22 54.9/F

Place voltage divider within 0.5" of GTLREF pin

Trace as Wider as possible.

+VCCP

R15 1K/F-0402

R16 2K/F

GTLREF0

CPU_VCCA

C71 01U/16V_4 C75 10U_6.3V_8

+1_5VRUN

R55 0_4

Removed +1_8VRUN

TEST1 TEST2

U31B

Dothan
2 OF 3

POWER, GROUND, RESERVED SIGNALS

COMP0 P25
COMP1 P26
COMP2 AB2
COMP3 AB1
GTLREF0 AD26
TEST1 C5
TEST2 F23
NC1 B2
RSVD2 C3
RSVD3 AE7
RSVD4 AC1
RSVD5 E26
VCCA3 AC26
VCCA2 N1
VCCA1 B1
VCCA0 F26

VHCORE

VCC00 D6, D8
VCC01 D18, D20
VCC02 D22, E5
VCC03 E7, E9
VCC04 F17, F19
VCC05 E21, F6
VCC06 F8, F18
VCC07 F20, F22
VCC08 G5, G21
VCC09 H6, H22
VCC10 J5, J21
VCC11 K22, U5
VCC12 V6, V22
VCC13 W5, W21
VCC14 Y6, Y22
VCC15 AA5, AA7
VCC16 AA9, AA11
VCC17 AA13, AA15
VCC18 AA17, AA19
VCC19 AA21, AB6
VCC20 AB8, AB10
VCC21 AB12, AB14
VCC22 AB16, AB18
VCC23 AB20, AB22
VCC24 AC9, AC11
VCC25 AC13, AC15
VCC26 AC17, AC19
VCC27 AD8, AD10
VCC28 AD12, AD14
VCC29 AD16, AD18
VCC30 AE9, AE11
VCC31 AE13, AE15
VCC32 AE17, AE19
VCC33 AF8, AF10
VCC34 AF12, AF14
VCC35 AF16, AF18
VCC36
VCC37
VCC38
VCC39
VCC40
VCC41
VCC42
VCC43
VCC44
VCC45
VCC46
VCC47
VCC48
VCC49
VCC50
VCC51
VCC52
VCC53
VCC54
VCC55
VCC56
VCC57
VCC58
VCC59
VCC60
VCC61
VCC62
VCC63
VCC64
VCC65
VCC66
VCC67
VCC68
VCC69
VCC70
VCC71

VSS00 A2, A5
VSS01 A8, A11
VSS02 A14, A17
VSS03 A20, A23
VSS04 A26, B3
VSS05 B6, B9
VSS06 B12, B16
VSS07 B19, B22
VSS08 B25, C1
VSS09 C4, C7
VSS10 C10, C13
VSS11 C15, C18
VSS12 C21, C24
VSS13 D2, D5
VSS14 D7, D9
VSS15 D11, D13
VSS16 D15, D17
VSS17 D19, D21
VSS18 D23, D26
VSS19 E3, E6
VSS20 E8, E10
VSS21 E12, E14
VSS22 E16, E18
VSS23 E20, E22
VSS24 E25, F1
VSS25 F4, F5
VSS26 F7, F9
VSS27 F11, F13
VSS28 F15, F17
VSS29 F19, F21
VSS30 F24, G2
VSS31 G6, G22
VSS32 G23, G26
VSS33 H3, H5
VSS34 H21, H25
VSS35 J1, J4
VSS36 J6, J22
VSS37 J24, K2
VSS38 K5, K21
VSS39 K23, K26
VSS40 L3, L6
VSS41 L22, L25
VSS42 M1, M4
VSS43 M5, M21
VSS44 M24, N3
VSS45 N6, N22
VSS46 N23, N26
VSS47 P2, P5
VSS48 P21, P24
VSS49 R1, R4
VSS50
VSS51
VSS52
VSS53
VSS54
VSS55
VSS56
VSS57
VSS58
VSS59
VSS60
VSS61
VSS62
VSS63
VSS64
VSS65
VSS66
VSS67
VSS68
VSS69
VSS70
VSS71
VSS72
VSS73
VSS74
VSS75
VSS76
VSS77
VSS78
VSS79
VSS80
VSS81
VSS82
VSS83
VSS84
VSS85
VSS86
VSS87
VSS88
VSS89
VSS90
VSS91
VSS92
VSS93
VSS94
VSS95
VSS96
VSS97
VSS98
VSS99

Dothan Processor

U31C

Dothan
3 OF 3

POWER, GROUND AND NC

+VCCP

VCCP0 D10, D12
VCCP1 D14, D16
VCCP2 E11, E13
VCCP3 E15, F10
VCCP4 F12, F14
VCCP5 F16, K6
VCCP6 L5, L21
VCCP7 M6, M22
VCCP8 N5, N21
VCCP9 P6, P22
VCCP10 R5, R21
VCCP11 T6, T22
VCCP12 U21
VCCP13
VCCP14
VCCP15
VCCP16
VCCP17
VCCP18
VCCP19
VCCP20
VCCP21
VCCP22
VCCP23
VCCP24
VCCQ0 P23, W4
VCCQ1

VSS100 W23, R6
VSS101 W26, R22
VSS102 Y2, R25
VSS103 Y5, T3
VSS104 Y21, T5
VSS105 Y24, T21
VSS106 AA1, T23
VSS107 AA4, T26
VSS108 AA6, U2
VSS109 AA8, U6
VSS110 AA10, U22
VSS111 AA12, U24
VSS112 AA14, V1
VSS113 AA16, V4
VSS114 AA18, V5
VSS115 AA20, V21
VSS116 AA22, V25
VSS117 AA25, W3
VSS118 AB3, W6
VSS119 AB5, W22
VSS120 AB7
VSS121 AB9
VSS122 AB11
VSS123 AB13
VSS124 AB15
VSS125 AB17
VSS126 AB19
VSS127 AB21
VSS128 AB23
VSS129 AB26
VSS130 AC2
VSS131 AC5
VSS132 AC8
VSS133 AC10
VSS134 AC12
VSS135 AC14
VSS136 AC16
VSS137 AC18
VSS138 AC21
VSS139 AC24
VSS140 AD1
VSS141 AD4
VSS142 AD7
VSS143 AD9
VSS144 AD11
VSS145 AD13
VSS146 AD15
VSS147 AD17
VSS148 AD19
VSS149 AD22
VSS150 AD25
VSS151 AE3
VSS152 AE6
VSS153 AE8
VSS154 AE10
VSS155 AE12
VSS156 AE14
VSS157 AE16
VSS158 AE18
VSS159 AE20
VSS160 AE23
VSS161 AE26
VSS162 AF2
VSS163 AF5
VSS164 AF9
VSS165 AF11
VSS166 AF13
VSS167 AF15
VSS168 AF17
VSS169 AF19
VSS170 AF21
VSS171 AF24
VSS172
VSS173
VSS174
VSS175
VSS176
VSS177
VSS178
VSS179
VSS180
VSS181
VSS182
VSS183
VSS184
VSS185
VSS186
VSS187
VSS188
VSS189
VSS190
VSS191

Dothan Processor

VID

33 CPU_VID0 E2 VID0
33 CPU_VID1 F2 VID1
33 CPU_VID2 F3 VID2
33 CPU_VID3 G3 VID3
33 CPU_VID4 G4 VID4
33 CPU_VID5 H4 VID5

DothanA NC R313
DothanB Install R313

T81 *PAD AE7 VCCSENSE
T82 *PAD AE6 VSSSENSE

SELPSB2_CLK R313 2_0_4 BSEL0 C16 BSEL0
SELPSB1_CLK R314 2_0_4 BSEL1 C14 BSEL1

PSI R50 *0_NC E1 PSI
No using for MAX1907
R46 *0_NC
13,17,33 STP_CPU#

8,17 SELPSB2_CLK SELPSB2_CLK
8,17 SELPSB1_CLK SELPSB1_CLK

VHCORE

VHCORE

C37 C59 C405 C412 C418
C64 C409 C426 C420 C408
C407 C415 C406 C404 C32
C36 C421 C60 C416 C413
C419 C63 C62 C414 C411
C35 C417 C410 C33 C422
C34 C61 C423 C424 C425

10U_6.3V_8

VHCORE

Total caps = 1670 uF > 1430 uF (Intel Recommendation)
ESR = 9m ohm/4 // 5m ohm/35 ---> = 0.1343m ohm

+VCCP

C427 150U/6.3V_7 CC7343
C44 C51 C73 C76 C46
C27 C52 C30 C45 C74
1U/10V_4

C, mF---------ESR, mW----------ESL, nH
1 x 150 mF-----42 mW (typ) / 2--------2.5 nH / 12
10 x 0.1 mF----16 mW (typ) / 10-------0.6 nH / 10

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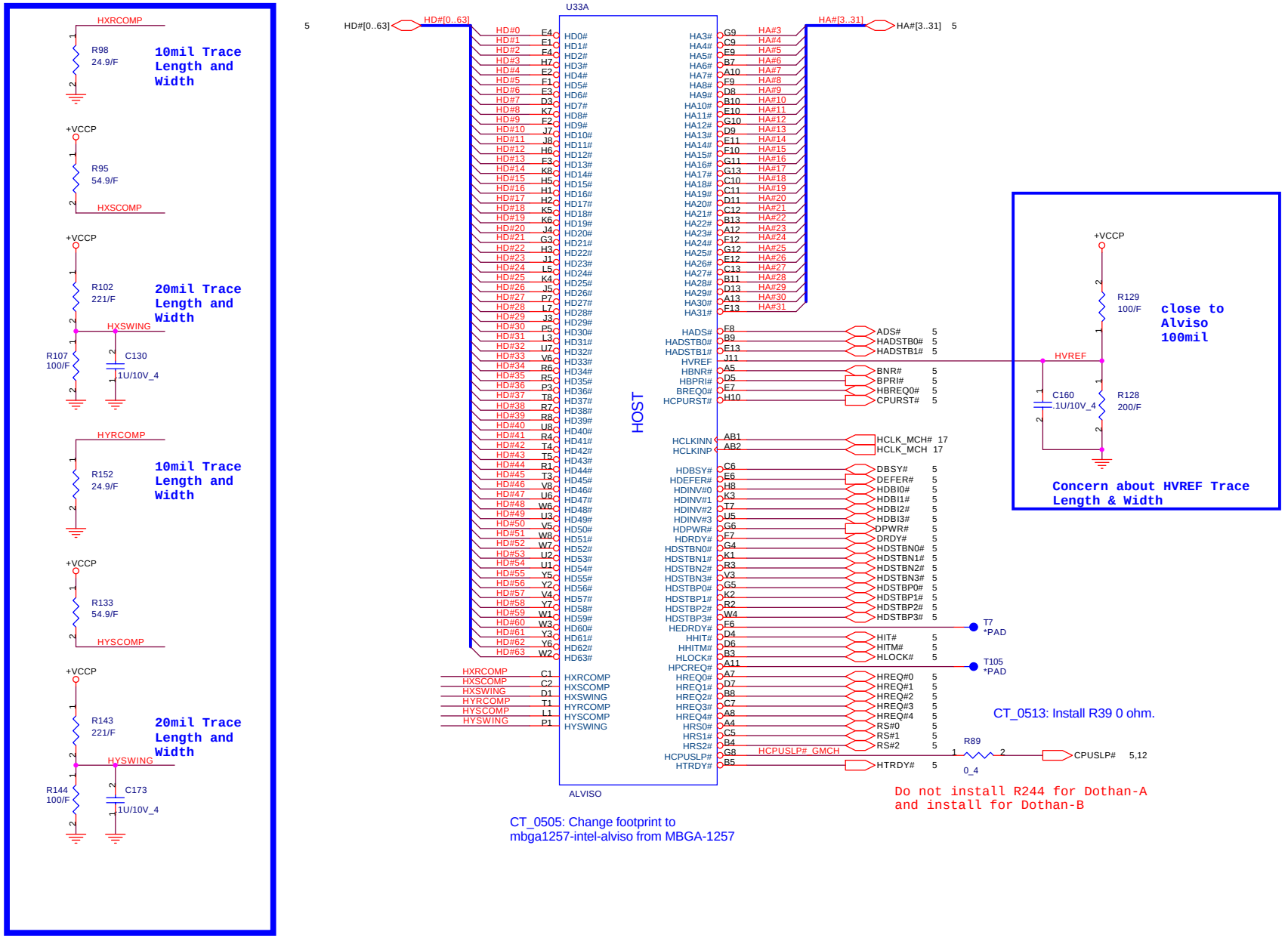

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	Alviso (HOST)	C2A

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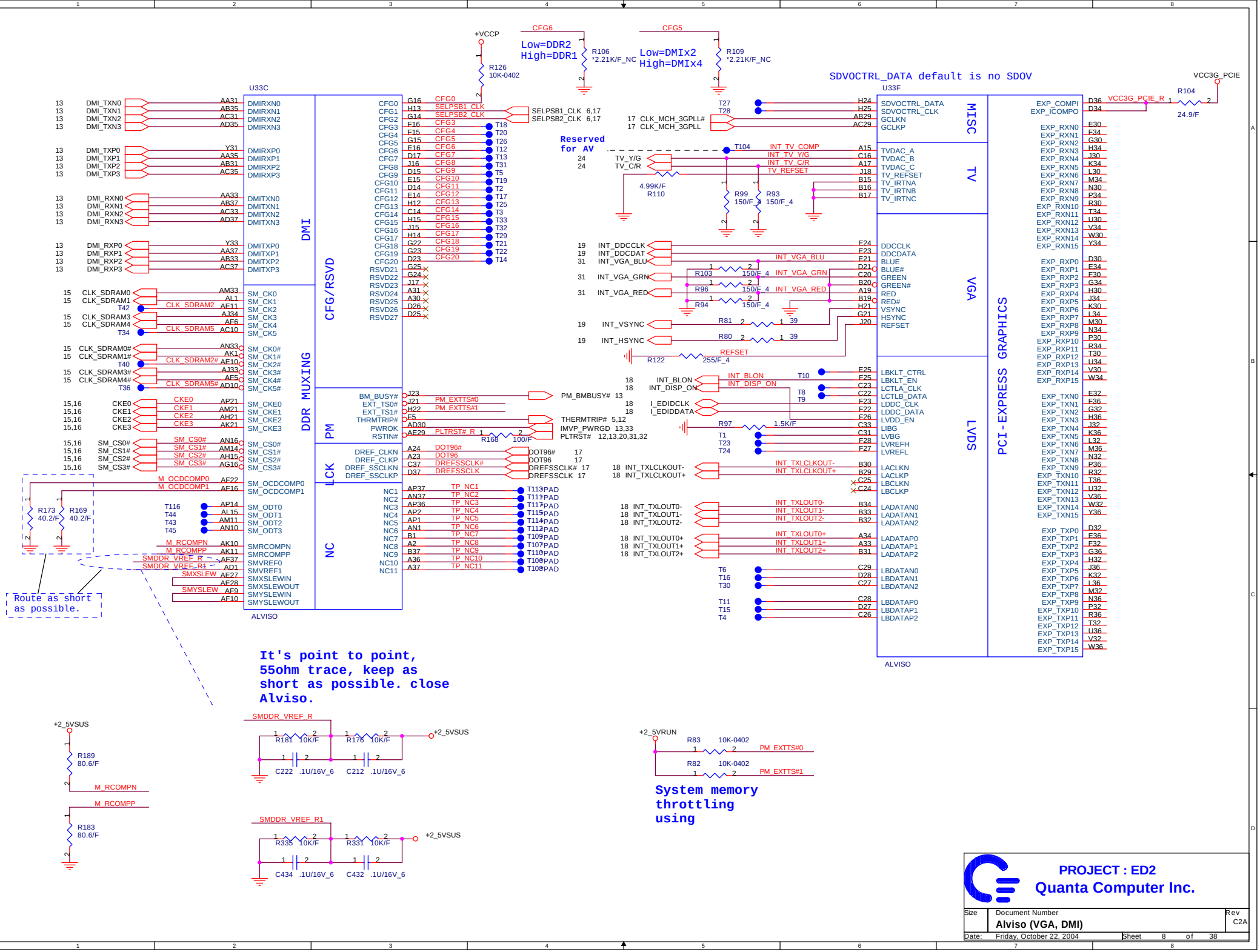
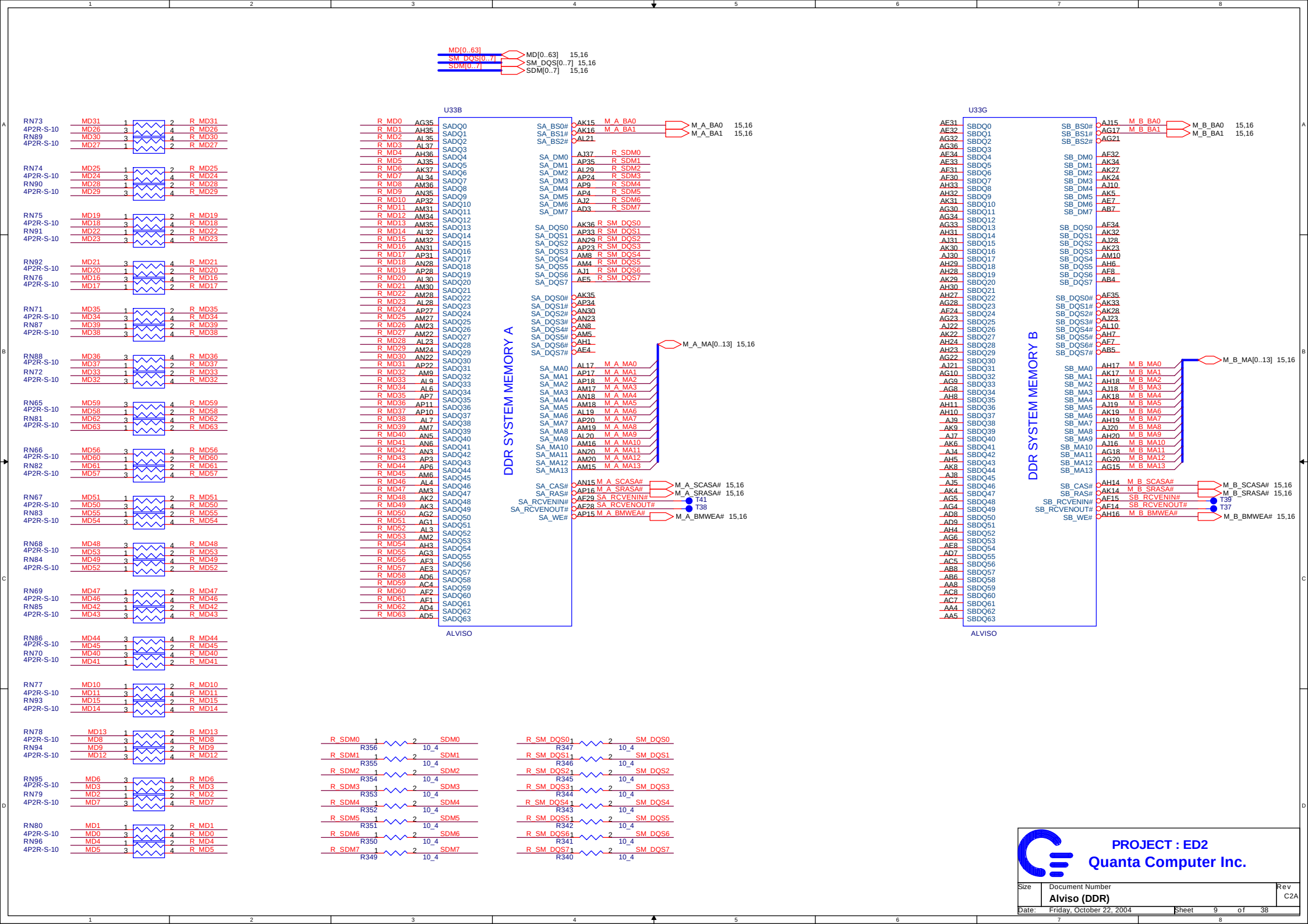

U33C
ALVISO
DMI
DDR MUXING
CFG/RSVD
PM
LCK
NC
U33F
MISC
TV
VGA
LVDS
PCI-EXPRESS GRAPHICS
SDVOCTRL_DATA default is no SDOV
Reserved for AV
Low=DDR2 High=DDR1
Low=DMIx2 High=DMIx4
Route as short as possible.
It's point to point, 55ohm trace, keep as short as possible. close Alviso.
System memory throttling using
PROJECT : ED2
Quanta Computer Inc.
Alviso (VGA, DMI)
Friday, October 22, 2004


MD[0..63]
SM_DQS[0..7]
SDM[0..7]
MD[0..63] 15,16
SM_DQS[0..7] 15,16
SDM[0..7] 15,16
U33B
DDR SYSTEM MEMORY A
ALVISO
U33G
DDR SYSTEM MEMORY B
ALVISO
M_A_BA0 15,16
M_A_BA1 15,16
M_A_MA[0..13] 15,16
M_A_SCASA# 15,16
M_A_SRASA# 15,16
M_A_BMWEA# 15,16
M_B_BA0 15,16
M_B_BA1 15,16
M_B_MA[0..13] 15,16
M_B_SCASA# 15,16
M_B_SRASA# 15,16
M_B_BMWEA# 15,16
T41
T38
T39
T37
RN73 4P2R-S-10
RN89 4P2R-S-10
RN74 4P2R-S-10
RN90 4P2R-S-10
RN75 4P2R-S-10
RN91 4P2R-S-10
RN92 4P2R-S-10
RN76 4P2R-S-10
RN71 4P2R-S-10
RN87 4P2R-S-10
RN88 4P2R-S-10
RN72 4P2R-S-10
RN65 4P2R-S-10
RN81 4P2R-S-10
RN66 4P2R-S-10
RN82 4P2R-S-10
RN67 4P2R-S-10
RN83 4P2R-S-10
RN68 4P2R-S-10
RN84 4P2R-S-10
RN69 4P2R-S-10
RN85 4P2R-S-10
RN86 4P2R-S-10
RN70 4P2R-S-10
RN77 4P2R-S-10
RN93 4P2R-S-10
RN78 4P2R-S-10
RN94 4P2R-S-10
RN95 4P2R-S-10
RN79 4P2R-S-10
RN80 4P2R-S-10
RN96 4P2R-S-10
R356 10_4
R355 10_4
R354 10_4
R353 10_4
R352 10_4
R351 10_4
R350 10_4
R349 10_4
R347 10_4
R346 10_4
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R342 10_4
R341 10_4
R340 10_4
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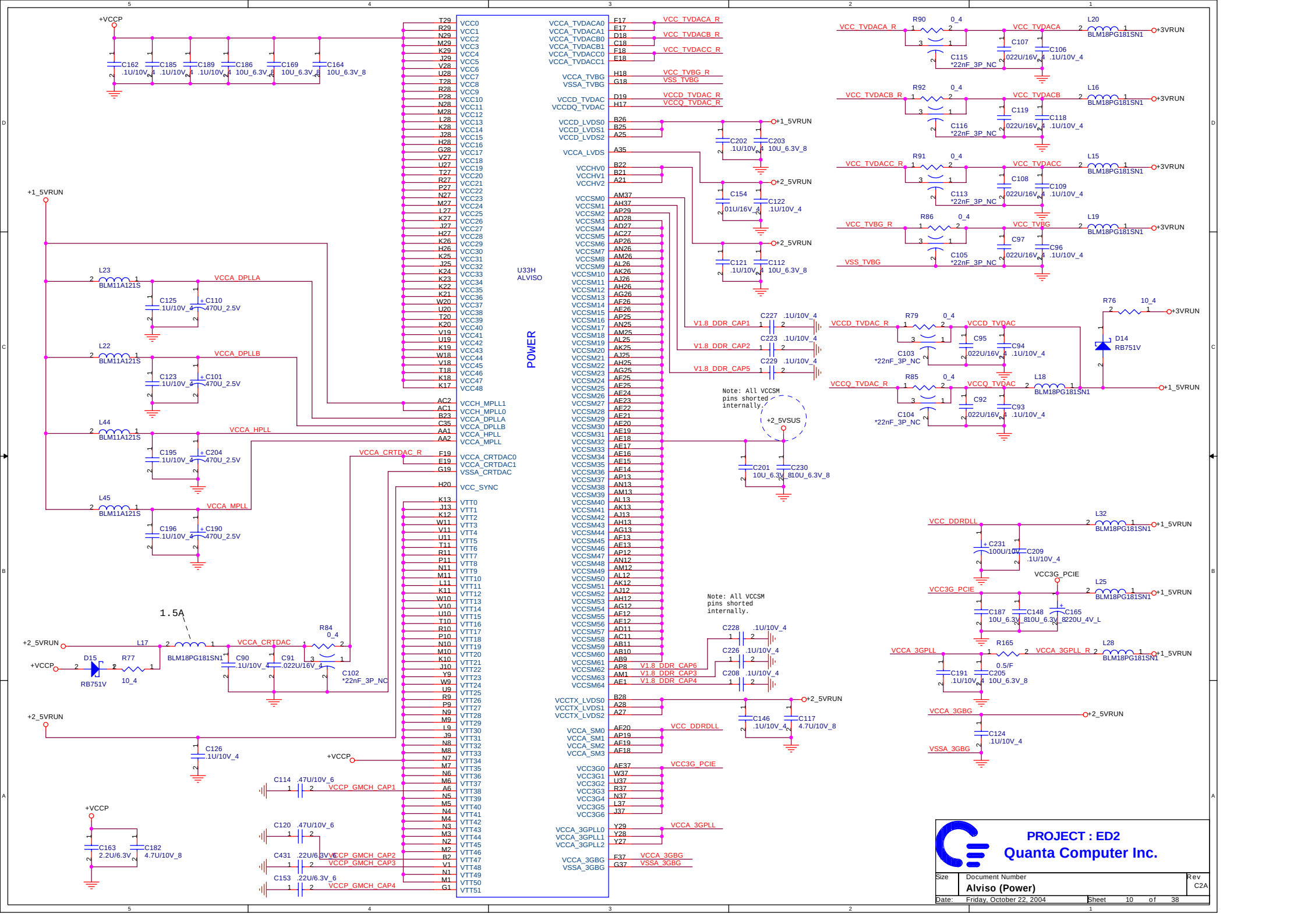
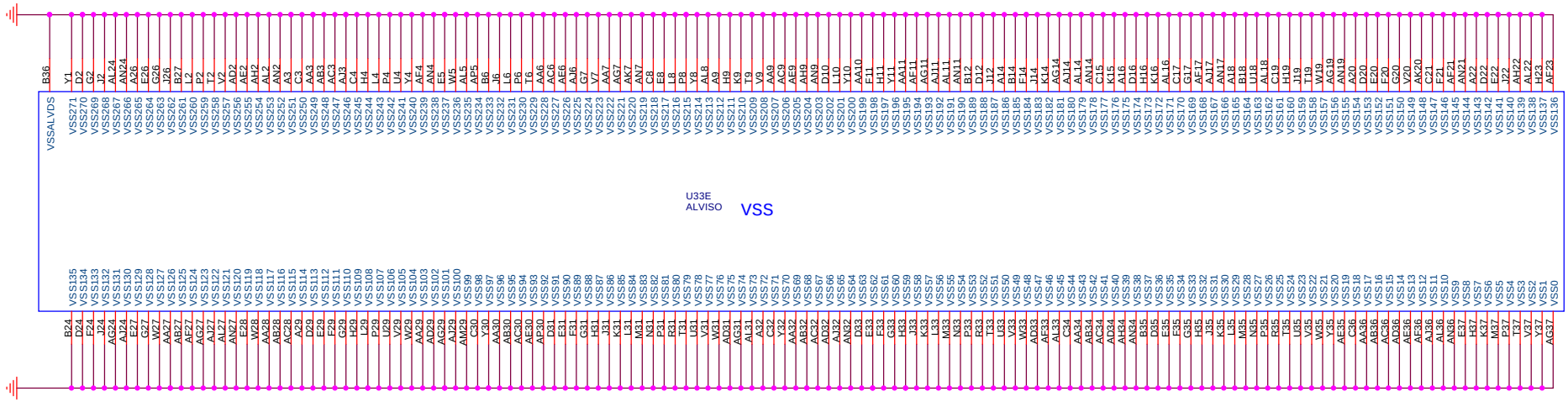
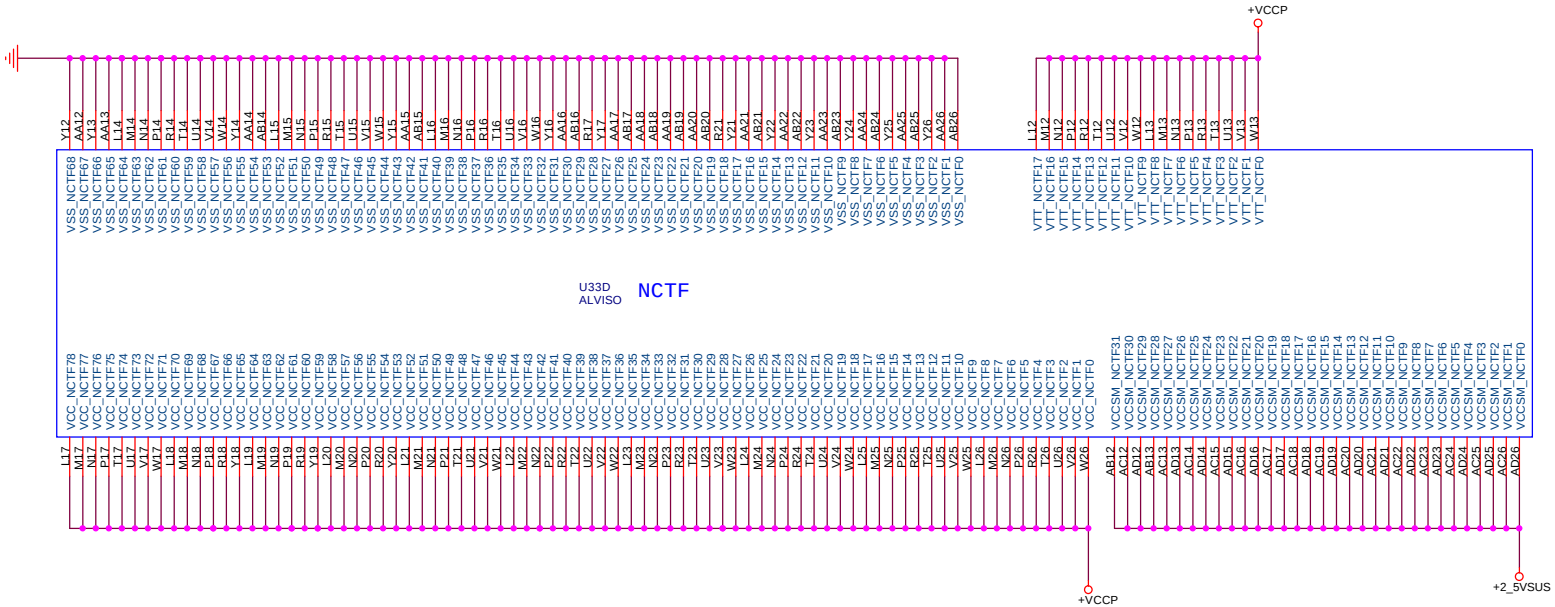

U33H
ALVISO
POWER
VCC0 VCC1 VCC2 VCC3 VCC4 VCC5 VCC6 VCC7 VCC8 VCC9 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15 VCC16 VCC17 VCC18 VCC19 VCC20 VCC21 VCC22 VCC23 VCC24 VCC25 VCC26 VCC27 VCC28 VCC29 VCC30 VCC31 VCC32 VCC33 VCC34 VCC35 VCC36 VCC37 VCC38 VCC39 VCC40 VCC41 VCC42 VCC43 VCC44 VCC45 VCC46 VCC47 VCC48
VCCH_MPLL1 VCCH_MPLL0 VCCA_DPLLA VCCA_DPLLB VCCA_HPLL VCCA_MPLL
VCCA_CRTDAC0 VCCA_CRTDAC1 VSSA_CRTDAC
VCC_SYNC
VTT0 VTT1 VTT2 VTT3 VTT4 VTT5 VTT6 VTT7 VTT8 VTT9 VTT10 VTT11 VTT12 VTT13 VTT14 VTT15 VTT16 VTT17 VTT18 VTT19 VTT20 VTT21 VTT22 VTT23 VTT24 VTT25 VTT26 VTT27 VTT28 VTT29 VTT30 VTT31 VTT32 VTT33 VTT34 VTT35 VTT36 VTT37 VTT38 VTT39 VTT40 VTT41 VTT42 VTT43 VTT44 VTT45 VTT46 VTT47 VTT48 VTT49 VTT50 VTT51
VCCA_TVDACA0 VCCA_TVDACA1 VCCA_TVDACB0 VCCA_TVDACB1 VCCA_TVDACC0 VCCA_TVDACC1
VCCA_TVBG VSSA_TVBG
VCCD_TVDAC VCCDQ_TVDAC
VCCD_LVDS0 VCCD_LVDS1 VCCD_LVDS2
VCCA_LVDS
VCCHV0 VCCHV1 VCCHV2
VCCSM0 VCCSM1 VCCSM2 VCCSM3 VCCSM4 VCCSM5 VCCSM6 VCCSM7 VCCSM8 VCCSM9 VCCSM10 VCCSM11 VCCSM12 VCCSM13 VCCSM14 VCCSM15 VCCSM16 VCCSM17 VCCSM18 VCCSM19 VCCSM20 VCCSM21 VCCSM22 VCCSM23 VCCSM24 VCCSM25 VCCSM26 VCCSM27 VCCSM28 VCCSM29 VCCSM30 VCCSM31 VCCSM32 VCCSM33 VCCSM34 VCCSM35 VCCSM36 VCCSM37 VCCSM38 VCCSM39 VCCSM40 VCCSM41 VCCSM42 VCCSM43 VCCSM44 VCCSM45 VCCSM46 VCCSM47 VCCSM48 VCCSM49 VCCSM50 VCCSM51 VCCSM52 VCCSM53 VCCSM54 VCCSM55 VCCSM56 VCCSM57 VCCSM58 VCCSM59 VCCSM60 VCCSM61 VCCSM62 VCCSM63 VCCSM64
VCCTX_LVDS0 VCCTX_LVDS1 VCCTX_LVDS2
VCCA_SM0 VCCA_SM1 VCCA_SM2 VCCA_SM3
VCC3G0 VCC3G1 VCC3G2 VCC3G3 VCC3G4 VCC3G5 VCC3G6
VCCA_3GPLL0 VCCA_3GPLL1 VCCA_3GPLL2
VCCA_3GBG VSSA_3GBG
VCC_TVDACA_R VCC_TVDACB_R VCC_TVDACC_R VCC_TVBG_R VSS_TVBG VCCD_TVDAC_R VCCQ_TVDAC_R
V1.8_DDR_CAP1 V1.8_DDR_CAP2 V1.8_DDR_CAP5 V1.8_DDR_CAP6 V1.8_DDR_CAP3 V1.8_DDR_CAP4
VCC_DDRDLL VCC3G_PCIE VCCA_3GPLL VCCA_3GBG
VCCA_CRTDAC_R VCCP_GMCH_CAP1 VCCP_GMCH_CAP2 VCCP_GMCH_CAP3 VCCP_GMCH_CAP4
+1_5VRUN +2_5VRUN +2_5VSUS +3VRUN +VCCP
VCCA_DPLLA VCCA_DPLLB VCCA_HPLL VCCA_MPLL VCCA_CRTDAC
L23 BLM11A121S
L22 BLM11A121S
L44 BLM11A121S
L45 BLM11A121S
L17 BLM18PG181SN1
C125 .1U/10V_4
C110 470U_2.5V
C123 .1U/10V_4
C101 470U_2.5V
C195 .1U/10V_4
C204 470U_2.5V
C196 .1U/10V_4
C190 470U_2.5V
C90 .1U/10V_4
C91 .022U/16V_4
C102 *22nF_3P_NC
R84 0_4
R77 10_4
D15 RB751V
1.5A
C126 .1U/10V_4
C114 .47U/10V_6
C120 .47U/10V_6
C431 .22U/6.3V_6
C153 .22U/6.3V_6
C163 2.2U/6.3V
C182 4.7U/10V_8
C162 .1U/10V_4
C185 .1U/10V_4
C189 .1U/10V_4
C186 10U_6.3V_8
C169 10U_6.3V_8
C164 10U_6.3V_8
C202 .1U/10V_4
C203 10U_6.3V_8
C154 .01U/16V_4
C122 .1U/10V_4
C121 .1U/10V_4
C112 10U_6.3V_8
C227 .1U/10V_4
C223 .1U/10V_4
C229 .1U/10V_4
C201 10U_6.3V_8
C230 10U_6.3V_8
Note: All VCCSM pins shorted internally.
C228 .1U/10V_4
C226 .1U/10V_4
C208 .1U/10V_4
C146 .1U/10V_4
C117 4.7U/10V_8
R90 0_4
R92 0_4
R91 0_4
R86 0_4
C107 .022U/16V_4
C106 .1U/10V_4
C115 *22nF_3P_NC
C119 .022U/16V_4
C118 .1U/10V_4
C116 *22nF_3P_NC
C108 .022U/16V_4
C109 .1U/10V_4
C113 *22nF_3P_NC
C97 .022U/16V_4
C96 .1U/10V_4
C105 *22nF_3P_NC
L20 BLM18PG181SN1
L16 BLM18PG181SN1
L15 BLM18PG181SN1
L19 BLM18PG181SN1
R79 0_4
C95 .022U/16V_4
C94 .1U/10V_4
C103 *22nF_3P_NC
R85 0_4
C92 .022U/16V_4
C93 .1U/10V_4
C104 *22nF_3P_NC
R76 10_4
D14 RB751V
L18 BLM18PG181SN1
L32 BLM18PG181SN1
C231 100U/10V
C209 .1U/10V_4
L25 BLM18PG181SN1
C187 10U_6.3V
C148 10U_6.3V
C165 220U_4V_L
R165 0.5/F
L28 BLM18PG181SN1
C191 .1U/10V_4
C205 10U_6.3V_8
C124 .1U/10V_4
PROJECT : ED2
Quanta Computer Inc.
Size
Document Number
Alviso (Power)
Rev
C2A
Date: Friday, October 22, 2004
Sheet 10 of 38



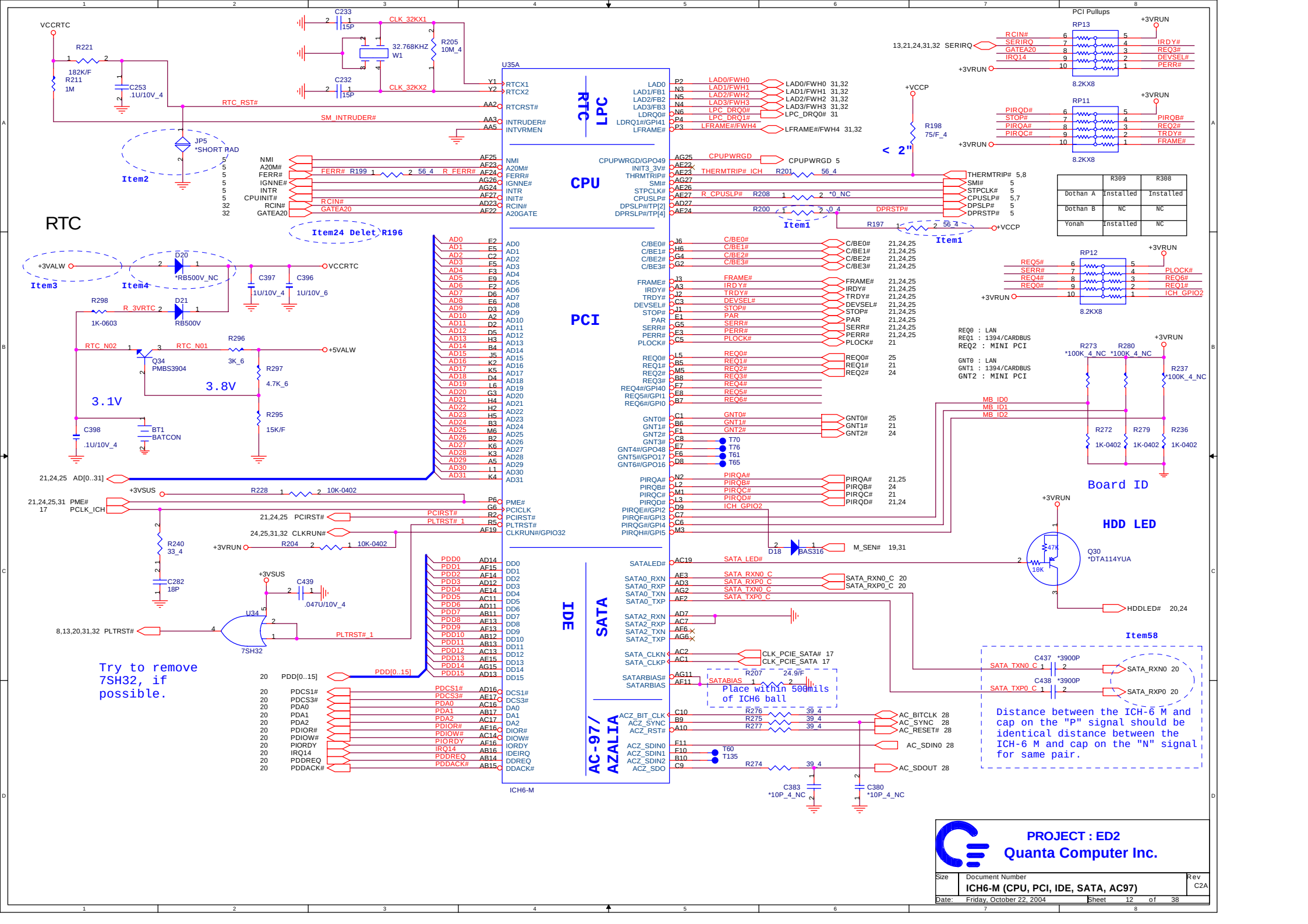


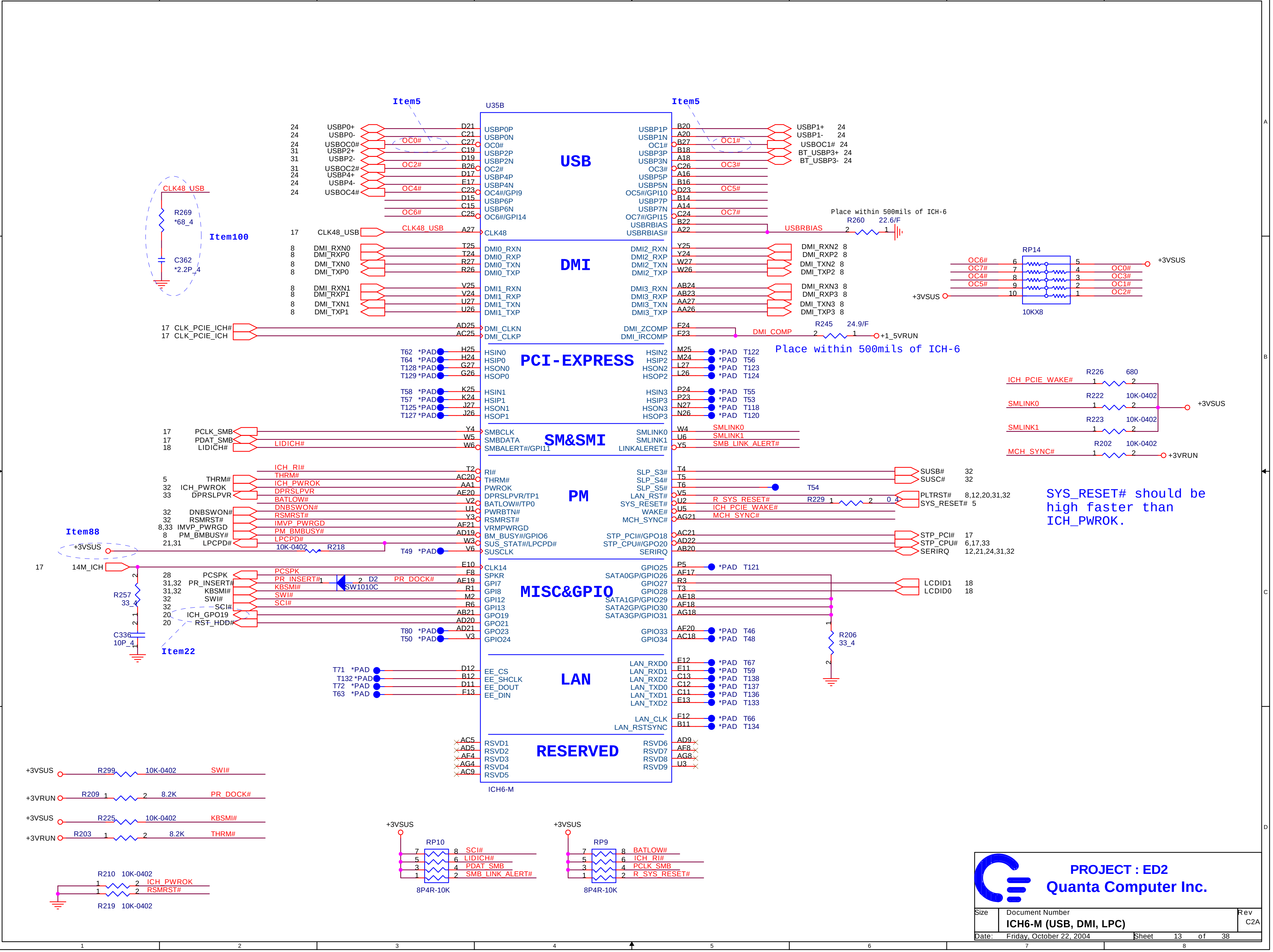
DDRI is 2.5V, DDRII is 1.8V.

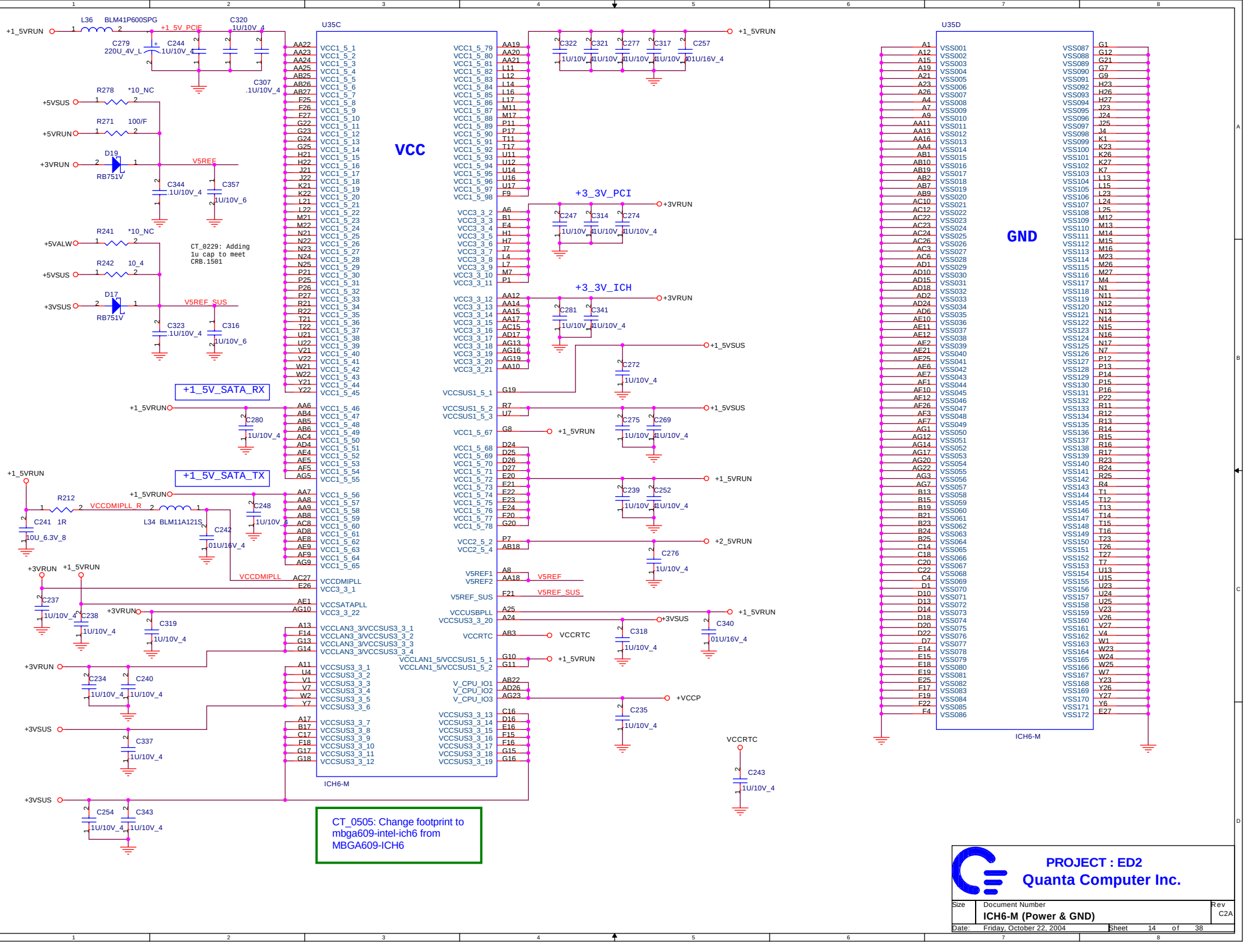
PROJECT : ED2

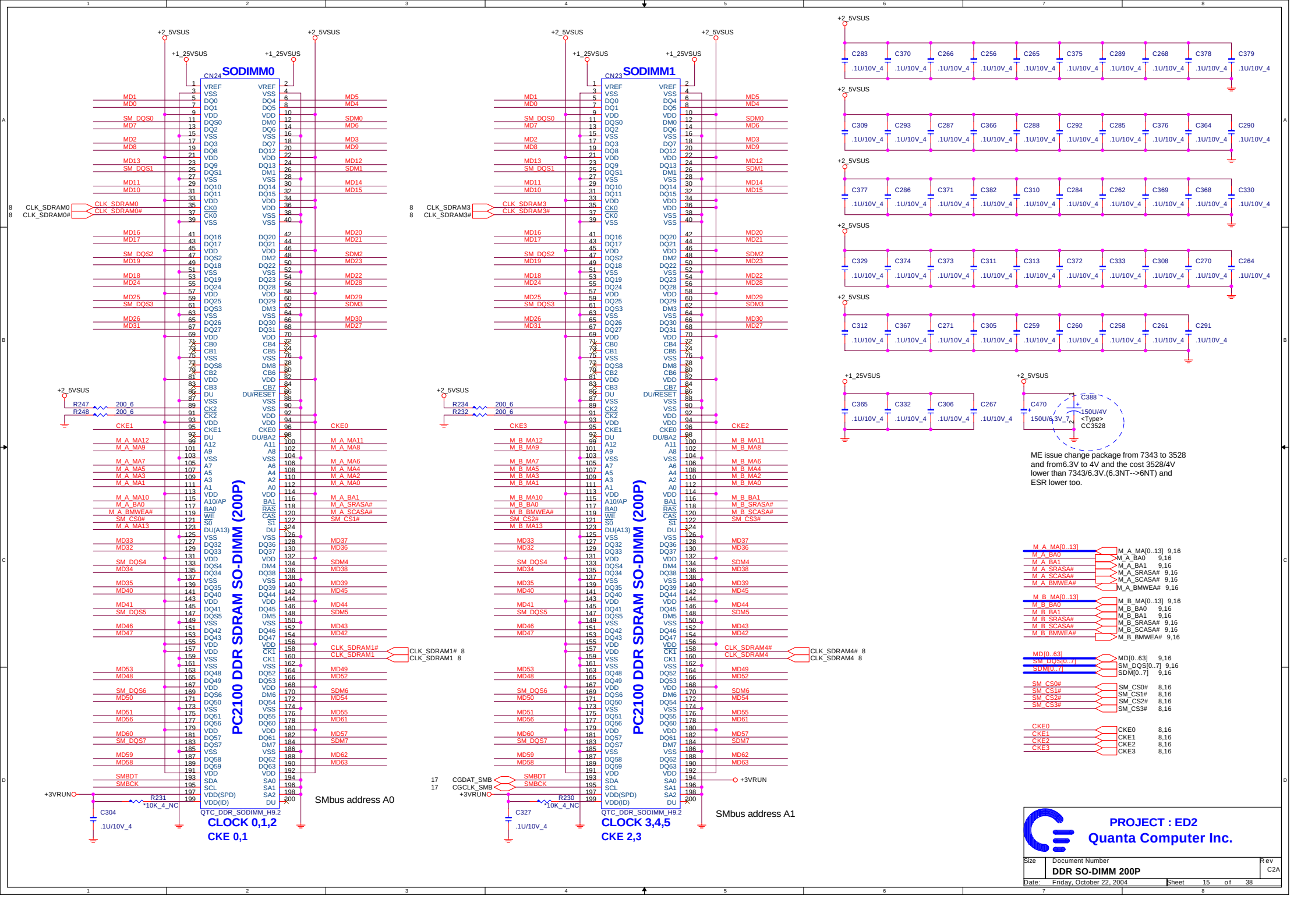
Quanta Computer Inc.

Size	Document Number	Rev
	Alviso (VSS, NCTF0	C2A
Date: Friday, October 22, 2004	Sheet 11 of 38	


RTC
U35A
RTC
LPC
CPU
PCI
IDE
SATA
AC-97/ AZALIA
ICH6-M
PCI Pullups
Item2
Item24 Delet R196
Item3
Item4
Item1
Item58
3.1V
3.8V
Board ID
HDD LED
Try to remove 7SH32, if possible.
Place within 500mils of ICH6 ball
Distance between the ICH-6 M and cap on the "P" signal should be identical distance between the ICH-6 M and cap on the "N" signal for same pair.
REQ0 : LAN
REQ1 : 1394/CARDBUS
REQ2 : MINI PCI
GNT0 : LAN
GNT1 : 1394/CARDBUS
GNT2 : MINI PCI
PROJECT : ED2
Quanta Computer Inc.
ICH6-M (CPU, PCI, IDE, SATA, AC97)
Friday, October 22, 2004
Sheet 12 of 38


U35B
USB
DMI
PCI-EXPRESS
SM&SMI
PM
MISC&GPIO
LAN
RESERVED
ICH6-M
Item5
Item5
Item100
Item88
Item22
USBP0P
USBP0N
OC0#
USBP2P
USBP2N
OC2#
USBP4P
USBP4N
OC4#/GPI9
USBP6P
USBP6N
OC6#/GPI14
CLK48
USBP1P
USBP1N
OC1#
USBP3P
USBP3N
OC3#
USBP5P
USBP5N
OC5#/GPI10
USBP7P
USBP7N
OC7#/GPI15
USBRBIAS
USBRBIAS#
DMI0_RXN
DMI0_RXP
DMI0_TXN
DMI0_TXP
DMI1_RXN
DMI1_RXP
DMI1_TXN
DMI1_TXP
DMI_CLKN
DMI_CLKP
DMI2_RXN
DMI2_RXP
DMI2_TXN
DMI2_TXP
DMI3_RXN
DMI3_RXP
DMI3_TXN
DMI3_TXP
DMI_ZCOMP
DMI_IRCOMP
HSIN0
HSIP0
HSON0
HSOP0
HSIN1
HSIP1
HSON1
HSOP1
HSIN2
HSIP2
HSON2
HSOP2
HSIN3
HSIP3
HSON3
HSOP3
SMBCLK
SMBDATA
SMBALERT#/GPI11
SMLINK0
SMLINK1
LINKALERT#
RI#
THRM#
PWROK
DPRSLPVR/TP1
BATLOW#/TP0
PWRBTN#
RSMRST#
VRMPWRGD
BM_BUSY#/GPIO6
SUS_STAT#/LPCPD#
SUSCLK
SLP_S3#
SLP_S4#
SLP_S5#
LAN_RST#
SYS_RESET#
WAKE#
MCH_SYNC#
STP_PCI#/GPO18
STP_CPU#/GPO20
SERIRQ
CLK14
SPKR
GPI7
GPI8
GPI12
GPI13
GPO19
GPO21
GPO23
GPIO24
GPIO25
SATA0GP/GPIO26
GPIO27
GPIO28
SATA1GP/GPIO29
SATA2GP/GPIO30
SATA3GP/GPIO31
GPIO33
GPIO34
EE_CS
EE_SHCLK
EE_DOUT
EE_DIN
LAN_RXD0
LAN_RXD1
LAN_RXD2
LAN_TXD0
LAN_TXD1
LAN_TXD2
LAN_CLK
LAN_RSTSYNC
RSVD1
RSVD2
RSVD3
RSVD4
RSVD5
RSVD6
RSVD7
RSVD8
RSVD9
24 USBP0+
24 USBP0-
24 USBOC0#
31 USBP2+
31 USBP2-
31 USBOC2#
24 USBP4+
24 USBP4-
24 USBOC4#
17 CLK48_USB
8 DMI_RXN0
8 DMI_RXP0
8 DMI_TXN0
8 DMI_TXP0
8 DMI_RXN1
8 DMI_RXP1
8 DMI_TXN1
8 DMI_TXP1
17 CLK_PCIE_ICH#
17 CLK_PCIE_ICH
USBP1+ 24
USBP1- 24
USBOC1# 24
BT_USBP3+ 24
BT_USBP3- 24
DMI_RXN2 8
DMI_RXP2 8
DMI_TXN2 8
DMI_TXP2 8
DMI_RXN3 8
DMI_RXP3 8
DMI_TXN3 8
DMI_TXP3 8
Place within 500mils of ICH-6
R260 22.6/F
USBRBIAS
R245 24.9/F
DMI_COMP
+1_5VRUN
Place within 500mils of ICH-6
CLK48_USB
R269 *68_4
C362 *2.2P_4
RP14 10KX8
OC6# OC7# OC4# OC5#
OC0# OC3# OC1# OC2#
+3VSUS
17 PCLK_SMB
17 PDAT_SMB
18 LIDICH#
LIDICH#
SMLINK0
SMLINK1
SMB_LINK_ALERT#
R226 680 ICH_PCIE_WAKE#
R222 10K-0402 SMLINK0
R223 10K-0402 SMLINK1
R202 10K-0402 MCH_SYNC# +3VRUN
5 THRM#
32 ICH_PWROK
33 DPRSLPVR
32 DNBSWON#
32 RSMRST#
8,33 IMVP_PWRGD
8 PM_BMBUSY#
21,31 LPCPD#
ICH_RI#
THRM#
ICH_PWROK
DPRSLPVR
BATLOW#
DNBSWON#
RSMRST#
IMVP_PWRGD
PM_BMBUSY#
LPCPD#
10K-0402 R218
T49 *PAD
SUSB# 32
SUSC# 32
T54
R_SYS_RESET#
R229 0
PLTRST# 8,12,20,31,32
SYS_RESET# 5
ICH_PCIE_WAKE#
MCH_SYNC#
STP_PCI# 17
STP_CPU# 6,17,33
SERIRQ 12,21,24,31,32
SYS_RESET# should be high faster than ICH_PWROK.
17 14M_ICH
R257 33_4
C336 10P_4
28 PCSPK
31,32 PR_INSERT#
31,32 KBSMI#
32 SWI#
32 SCI#
20 ICH_GPO19
20 RST_HDD#
PCSPK
PR_INSERT#
KBSMI#
SWI#
SCI#
D2 SW1010C
PR_DOCK#
T80 *PAD
T50 *PAD
T121 *PAD
LCDID1 18
LCDID0 18
T46 *PAD
T48 *PAD
R206 33_4
T71 *PAD
T132 *PAD
T72 *PAD
T63 *PAD
T67 T59 T138 T137 T136 T133
T66 T134
+3VSUS R299 10K-0402 SWI#
+3VRUN R209 8.2K PR_DOCK#
+3VSUS R225 10K-0402 KBSMI#
+3VRUN R203 8.2K THRM#
R210 10K-0402 ICH_PWROK
R219 10K-0402 RSMRST#
+3VSUS
RP10 8P4R-10K
SCI#
LIDICH#
PDAT_SMB
SMB_LINK_ALERT#
+3VSUS
RP9 8P4R-10K
BATLOW#
ICH_RI#
PCLK_SMB
R_SYS_RESET#
PROJECT : ED2
Quanta Computer Inc.
Size
Document Number
ICH6-M (USB, DMI, LPC)
Rev
C2A
Date: Friday, October 22, 2004
Sheet 13 of 38


U35C
VCC
ICH6-M
U35D
GND
ICH6-M
+1_5V_SATA_RX
+1_5V_SATA_TX
+3_3V_PCI
+3_3V_ICH
CT_0229: Adding 1u cap to meet CRB.1501
CT_0505: Change footprint to mbga609-intel-ich6 from MBGA609-ICH6
PROJECT : ED2
Quanta Computer Inc.
Size
Document Number
ICH6-M (Power & GND)
Rev
C2A
Date: Friday, October 22, 2004
Sheet 14 of 38



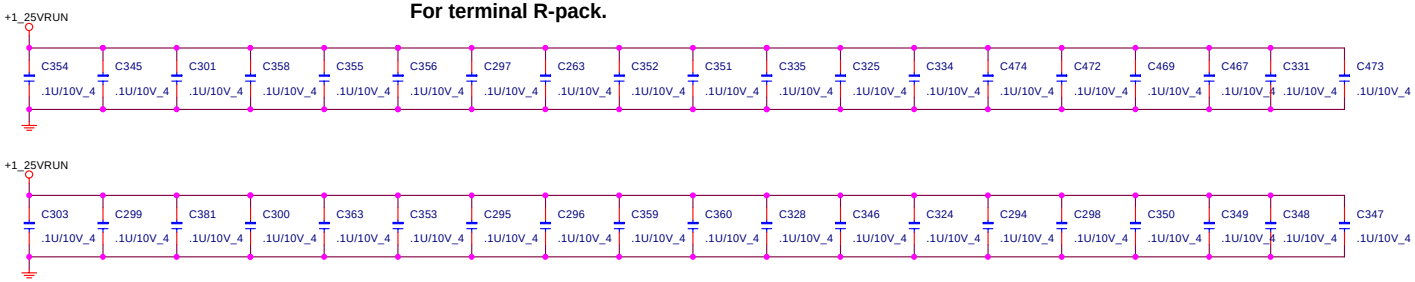
ME issue change package from 7343 to 3528 and from6.3V to 4V and the cost 3528/4V lower than 7343/6.3V.(6.3NT-->6NT) and ESR lower too.

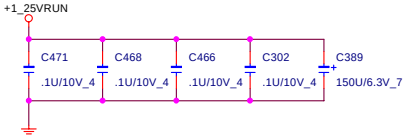
PROJECT : ED2

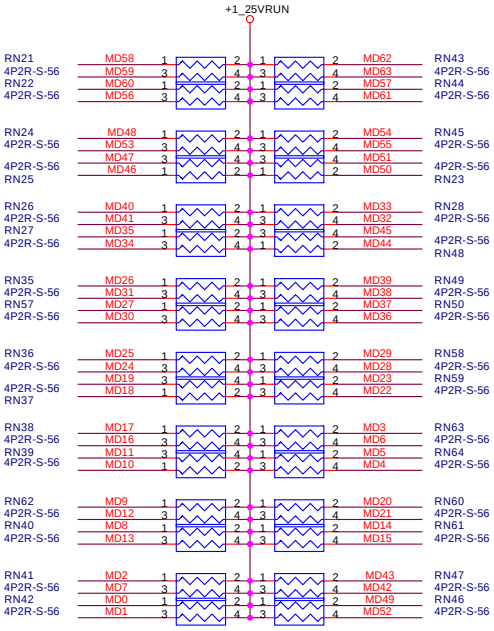
Quanta Computer Inc.

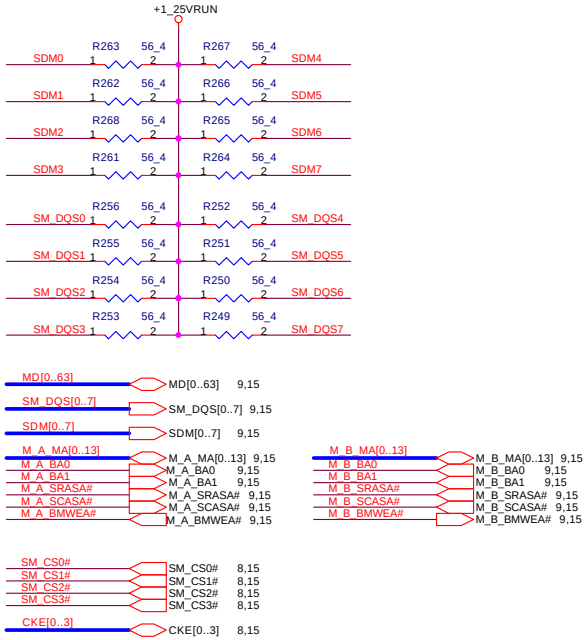
Size	Document Number	Rev
	DDR SO-DIMM 200P	C2A
Date: Friday, October 22, 2004	Sheet 15 of 38	

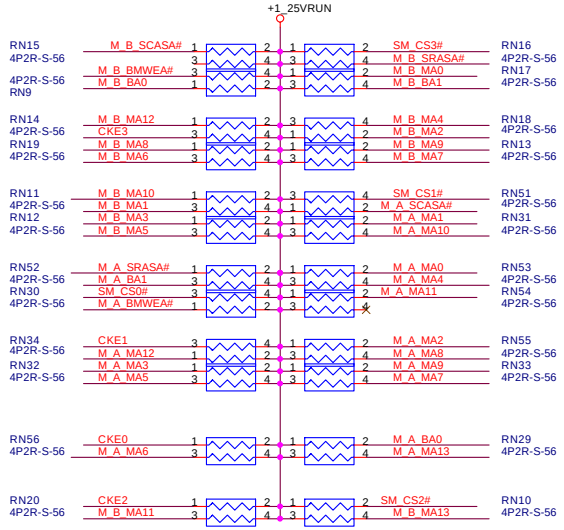
For terminal R-pack.











PROJECT : ED2

Quanta Computer Inc.

Size	Document Number	Rev
	DDR TERMINATION	C2A
Date: Friday, October 22, 2004	Sheet 16 of 38	

FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33

	DothanA	DothanB
R137	Install	NC
R330	NC	NC

Place these termination to close CK410M. Cause those Pin-out is for Current-Mode.

SMbus address D2

FSB and FSC are directly controlled by Dothan-B

Iref=5mA, Ioh=4*Iref

CK-410M

ICS954206/CY284XX
250mA (MAX.)

CT_0505: Change footprint to TSSOP56-8_1-5 from TSSOP56-240

CK-410M PIN 35,36 Strap Pin. for ITP or PCIE using.

Tie to VCC (Logic 1) is for ITP using.
Tie to GND (Logic 0) is for PCIE using.

Connect ICH6 SMB

Connect DDR Module's SMB

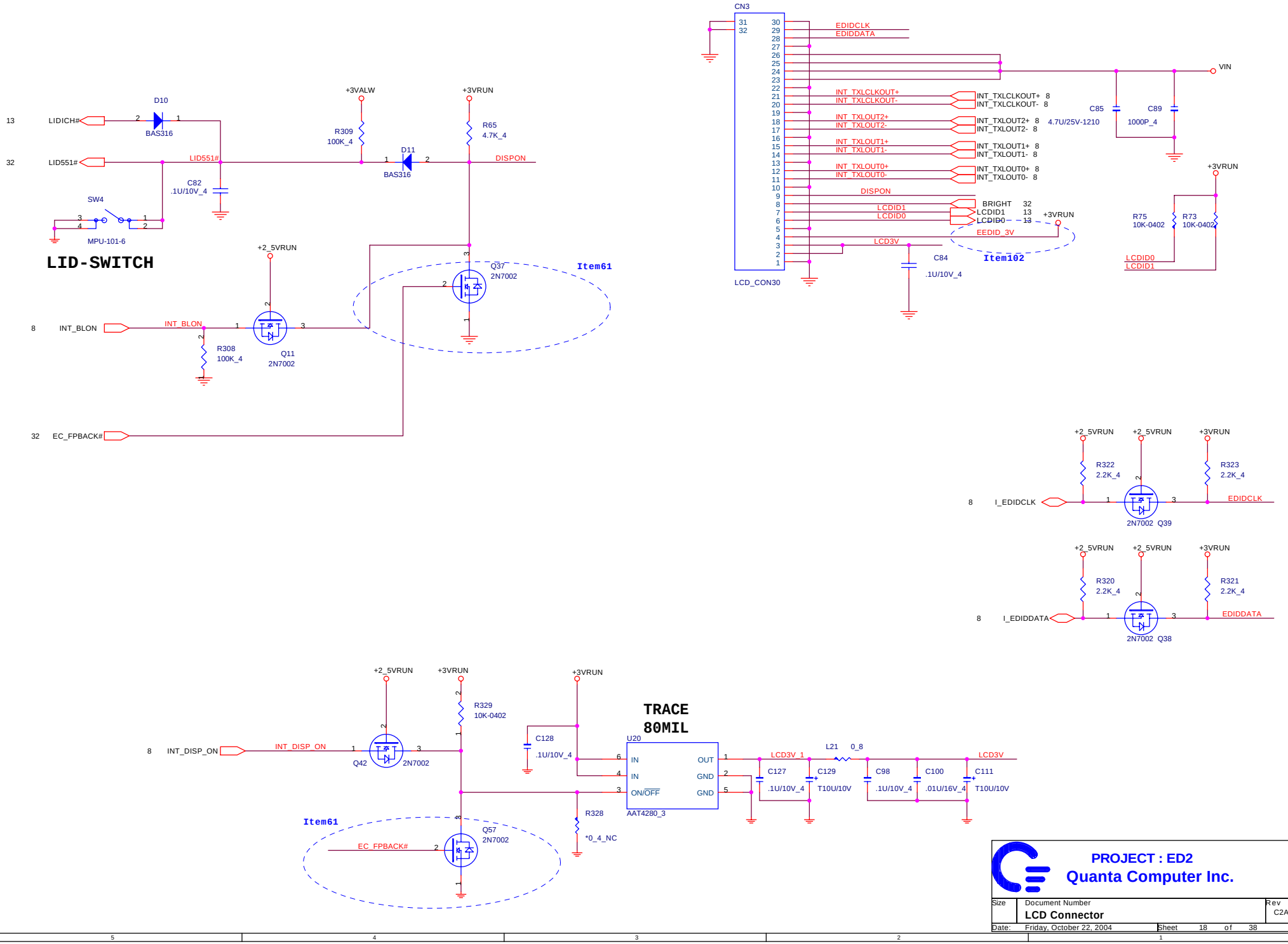
These are for backdrive issue

CT_0229: Change MOS to RHU002N06 due to layout concern.

Bypass CAPs need to follow Bypass CAP. Routing Rule, no vias between CAP to CHIPSET VCC Pin or GND.

Place these termination to close CK410M. Cause those Pin-out is for Current-Mode.

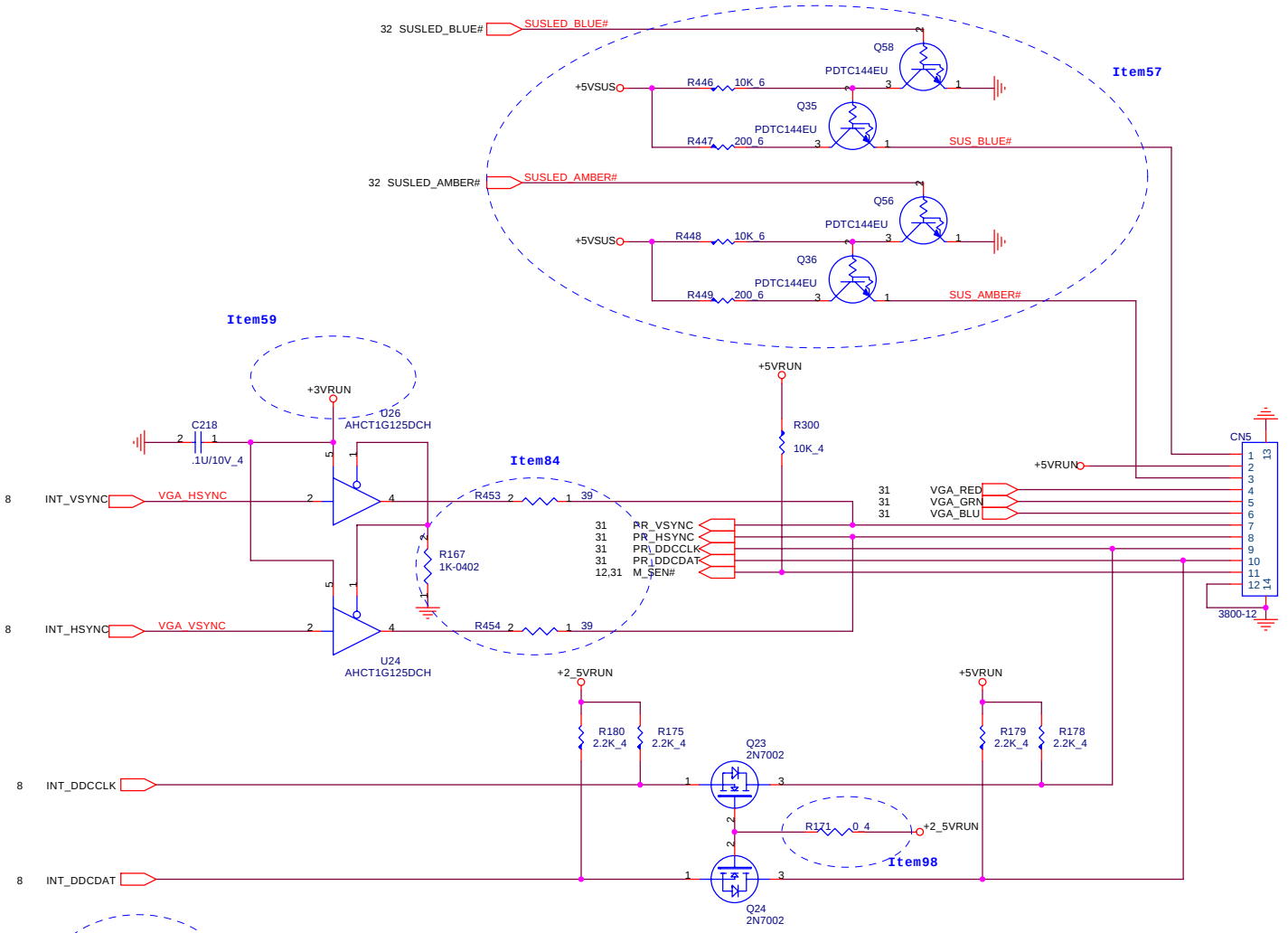
PROJECT : ED2			
Quanta Computer Inc.			
Size	Document Number		Rev
	CLOCK Generator		C2A
Date:	Friday, October 22, 2004	Sheet 17 of 38	

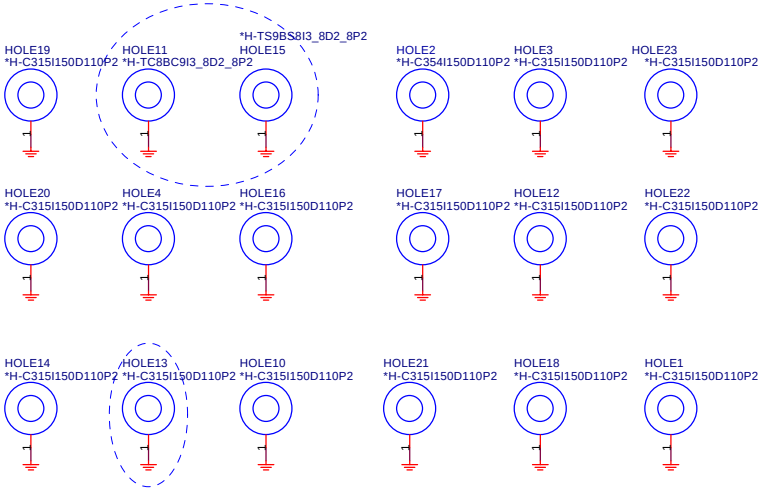


PROJECT : ED2

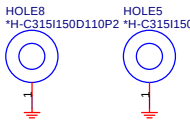
Quanta Computer Inc.

Size	Document Number	Rev
	LCD Connector	C2A
Date: Friday, October 22, 2004	Sheet 18 of 38	

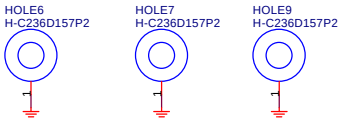


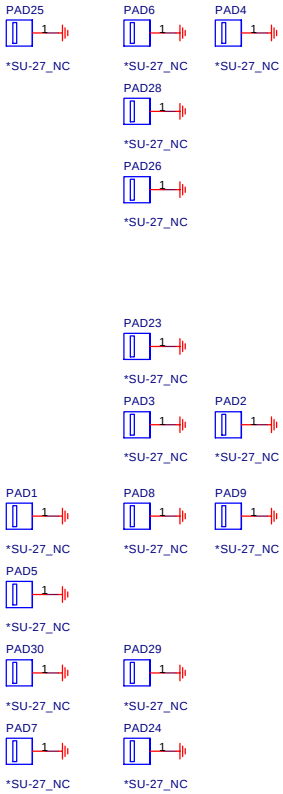


TV-Board fixing Nut



CPU SOCKET

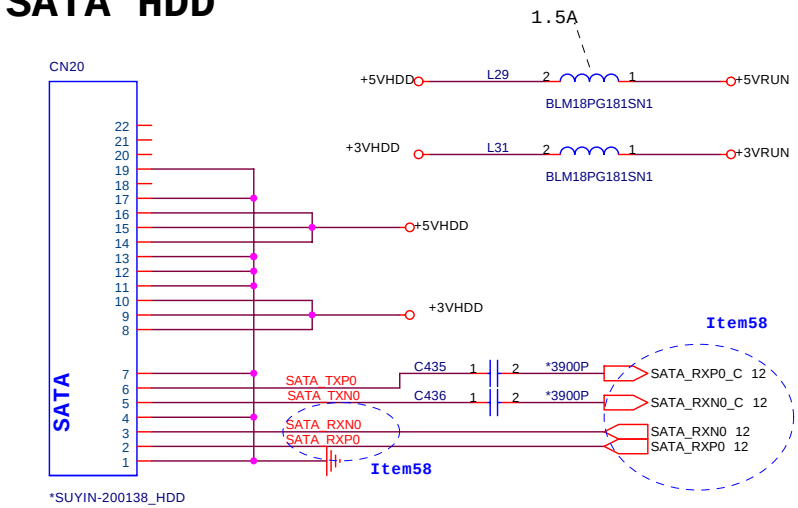


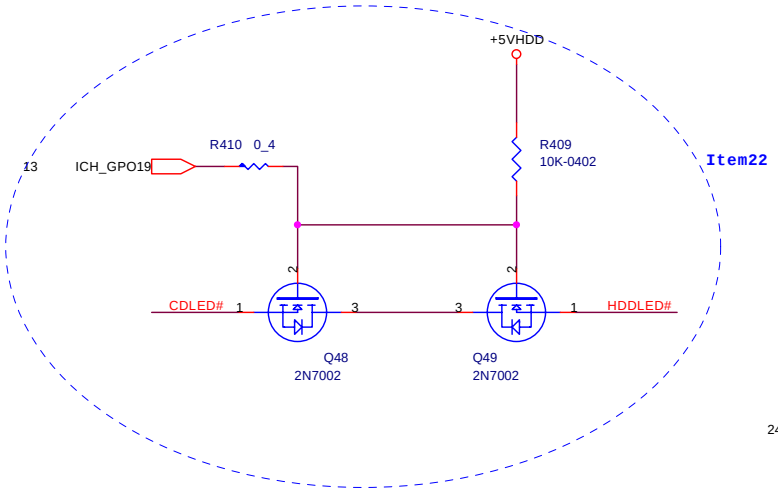


PROJECT : ED2
Quanta Computer Inc.

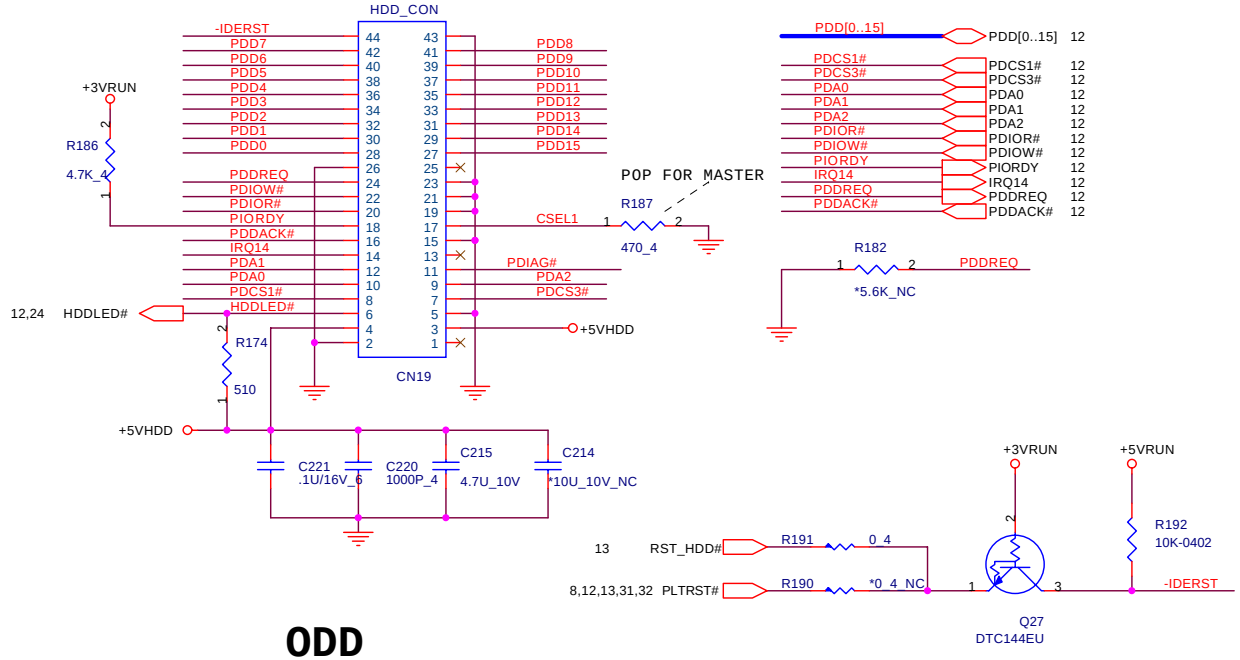
Size	Document Number	Rev
	CRT & TV Connector	C2A
Date: Friday, October 22, 2004	Sheet 19 of 38	

SATA HDD

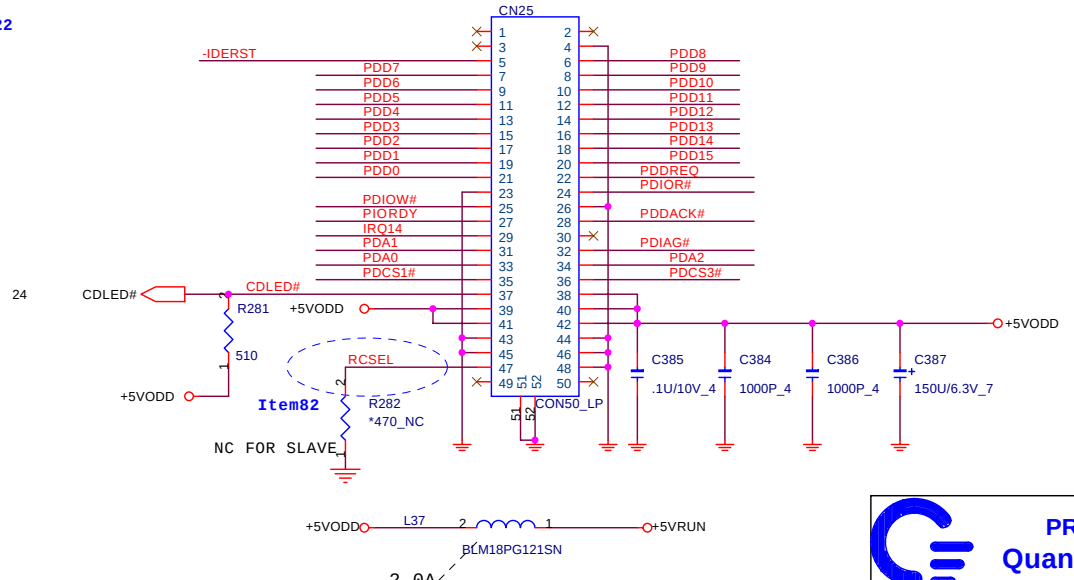




PATA HDD

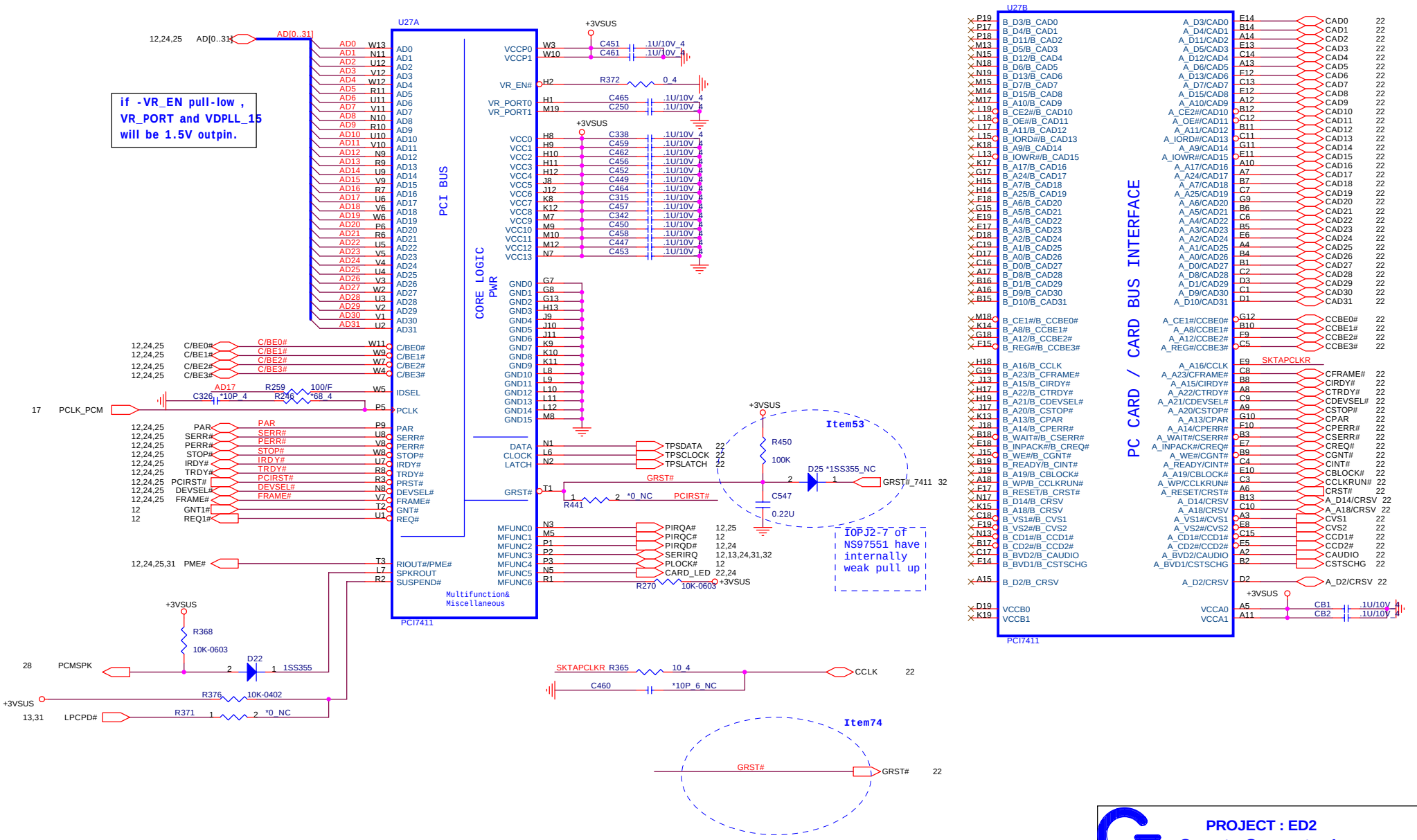


ODD



PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	HDD & CDROM Connector	C2A
Date: Friday, October 22, 2004	Sheet 20 of 38	


if -VR_EN pull-low , VR_PORT and VDPLL_15 will be 1.5V outpin.
U27A
PCI BUS
CORE LOGIC
PWR
PCI7411
Multifunction& Miscellaneous
U27B
PC CARD / CARD BUS INTERFACE
PCI7411
Item53
Item74
IOPJ2-7 of NS97551 have internally weak pull up
PROJECT : ED2
Quanta Computer Inc.
PCMCIA TI7411
Rev C2A
Friday, October 22, 2004
Sheet 21 of 38

PCMCIA SOCKET

CN4

SANTA-1306-68P

		1	GND
21	CAD0	2	D3 - CAD0
21	CAD1	3	D4 - CAD1
21	CAD3	4	D5 - CAD3
21	CAD5	5	D6 - CAD5
21	CAD7	6	D7 - CAD7
21	CCBE0#	7	CE1- CCBE0
21	CAD9	8	A10- CAD9
21	CAD11	9	OE - CAD11
21	CAD12	10	A11- CAD12
21	CAD14	11	A9 - CAD14
21	CCBE1#	12	A8 - CCBE1
21	CPAR	13	A13- CPAR
21	CPERR#	14	A14- CPERR
21	CGNT#	15	WE/PGM - CGNT
21	CINT#	16	RDY/BSY,IRQ*INT
	VCCCB	17	VCC
	VPPCB	18	VPP1
21	CCLK	19	A16- CCLK
21	CIRDY#	20	A15- CIRDY
21	CCBE2#	21	A12- CCBE2
21	CAD18	22	A7 - CAD18
21	CAD20	23	A6 - CAD20
21	CAD21	24	A5 - CAD21
21	CAD22	25	A4 - CAD22
21	CAD23	26	A3 - CAD23
21	CAD24	27	A2 - CAD24
21	CAD25	28	A1 - CAD25
21	CAD26	29	A0 - CAD26
21	CAD27	30	D0 - CAD27
21	CAD29	31	D1 - CAD29
21	A_D2/CRSV	32	D2 - RFU
21	CCLKRUN#	33	WP,IOIS16-CKRUN
		34	GND
		35	GND
21	CCD1#	36	CD1- CCD1
21	CAD2	37	D11- CAD2
21	CAD4	38	D12- CAD4
21	CAD6	39	D13- CAD6
21	A_D14/CRSV	40	D14- RFU
21	CAD8	41	D15- CAD8
21	CAD10	42	CE2- CAD10
21	CVS1	43	RFSH,VS*1-CVS1
21	CAD13	44	IORD-CAD13
21	CAD15	45	IOWR-CAD15
21	CAD16	46	A17- CAD16
21	A_A18/CRSV	47	A18- RFU
21	CBLOCK#	48	A19- CBLOCK
21	CSTOP#	49	A20- CSTOP
21	CDEVSEL#	50	A21- CDEVSEL
	VCCCB	51	VCC
	VPPCB	52	VPP2
21	CTRDY#	53	A22- CTRDY
21	CFRAME#	54	A23- CFRAME
21	CAD17	55	A24- CAD17
21	CAD19	56	A25- CAD19
21	CVS2	57	NC - CVS2
21	CRST#	58	RESET-CRST
21	CSERR#	59	WAIT-CSERR
21	CREQ#	60	INPACK-CREQ
21	CCBE3#	61	REG- CCBE3
21	CAUDIO	62	BVD2,SP-CAUDIO
21	CSTSCHG	63	BVD1,STSCHG-C*
21	CAD28	64	D8 - CAD28
21	CAD30	65	D9 - CAD30
21	CAD31	66	D10- CAD31
21	CCD2#	67	CD2- CCD2
		68	GND
		69	GND
		70	GND
		71	GND
		72	GND
		73	GND
		74	GND

MC_PWR_CTR low active(default) , or change register to high active

U27C

	MC_CTRL0#	F1	MC_PWR_CTRL_0
	T68	F2	MC_PWR_CTRL_1
	-MSCD	F5	MS_CD#
	-SDCD	E3	SD_CD#
	-SMCD	F6	SM_CD#
	MSCLK/SDCLK/-SMELWP R375 33_4 MSCLK/SDCLK/-SMELWP_PCI7411	G5	MS_CLK//SD_CLK//SM_EL_WP#
	MSBS/SDCMD/-SMWE	F3	MS_BS//SD_CMD//SM_WE#
	MS/SD/SM D3	H5	MS_DATA3//SD_DAT3//SM_D3
	MS/SD/SM D2	G3	MS_DATA2//SD_DAT2//SM_D2
	MS/SD/SM D1	G2	MS_DATA1//SD_DAT1//SM_D1
	MS/SD/SM D0	G1	MS_SDIO(DATA0)//SD_DAT0//SM_D0
	SM_RE#	J5	SM_RE#
	SM_ALE	J3	SM_ALE
	SM_D4	H3	SM_D4
	SM_D5	J6	SM_D5
	SM_D6	J1	SM_D6
	SM_D7	J2	SM_D7
	SD_WP/-SMCE	H7	SD_WP//SM_CE#
	SM_CLE/SC_GPIO0	J7	SM_CLE//SC_GPIO0
	SM_R/B#/SC_RFU	K1	SM_R/B#//SC_RFU
	T79	K2	SM_PHYS_WP#//SC_FCB
	T130	L5	SC_PWR_CTRL
	T75	L2	SC_CD#
	T78	K5	SC_CLK
	T69	K3	SC_RST
	T77	L1	SC_DATA
	T131	L3	SC_OC#
		K7	SC_VCC_5V

PCI7411

Six For 1 Card

Flash Media Layout Guidelines:

1. Signal traces should be 60 Ohm +/- 10%.
2. All signal traces should be routed with equal propagation delay, and with trace lengths as short as practical.

3. A 56 Ohm damping resistor for MS_CLK and SD_CLK should be placed near the PCI7411 source.

IRLML5103
Rds(on)=0.6

Item74 +3VSUS — Q46 IRLML5103 — MB_VCC
C511 .1U/10V_4, C503 10U_6.3V_8, R397 *100K_NC
Item74 +3VSUS R387 8.2K
MC_CTRL0#
Item74 +3VSUS — Q47 *IRLML5103
21,24 CARD_LED — D23 *1SS355, D24 *1SS355
-SDCD
-SMCD

Item74 +5VSUS — R217 10K-0603 SC_VCC5V

TI Erratum

TPSDATA C141 *10P_4_NC
TPSCLOCK C142 *10P_4_NC
TPSLATCH C143 *10P_4_NC
VCCCB C134 .1U/10V_4, C133 .1U/10V_4, C132 10U_6.3V_8
VPPCB C135 .1U/10V_4, C136 10U_6.3V_8

4 IN1 CARD READER (XD,MMC/SD,MS)

CN10

MB_VCC

-SDCD	1	CD_SD	VCC 43
MS/SD/SM D2	2	DAT2_SD	
MS/SD/SM D3	3	CD/DAT3_SD	41
MSBS/SDCMD/-SMWE	4	CMD_SD	VCC_XD 40 SM_D7
	5	VSS_SD	D7_XD 39 SM_D6
MSCLK/SDCLK/-SMELWP	6	VDD_SD	D6_XD 38 SM_D5
	7	CLK_SD	D5_XD 37 SM_D4
MS/SD/SM D0	8	VSS_SD	D4_XD 36 MS/SD/SM D3
MS/SD/SM D1	9	DAT0_SD	D3_XD 35 MS/SD/SM D2
SD_WP/-SMCE	10	DAT1_SD	D2_XD 34 MS/SD/SM D1
	11	WP_SD	D1_XD 33 MS/SD/SM D0
	12	VSS_MS	D0_XD 32
MSCLK/SDCLK/-SMELWP	13	VCC_MS	GND_XD 31 MSCLK/SDCLK/-SMELWP
MS/SD/SM D3	14	SCLK_MS	-WP_XD 30 MSBS/SDCMD/-SMWE
-MSCD	15	RESERVE_MS	-WE_XD 29 SM_ALE
MS/SD/SM D2	16	INS_MS	ALE_XD 28 SM_CLE/SC_GPIO0
MS/SD/SM D0	17	RESERVE_MS	CLE_XD 27 SD_WP/-SMCE
MS/SD/SM D1	18	SDIO_MS	-CE_XD 26 SM_RE#
MSBS/SDCMD/-SMWE	19	RESERVE_MS	-RE_XD 25 SM_R/B#/SC_RFU
	20	BS_MS	R/-B_XD 24 -SMCD
	21	VSS_MS	GND_XD 23
	22	GND	GND 42

MSX039-X0-0X00

Item74 +3VSUS — C488 4.7U/10V_8, C491 .1U/10V_4

Item74 +5VSUS — U21 — +5VSUS Item74

21 TPSDATA — TPSDATA
21 TPSCLOCK — TPSCLOCK
21 TPSLATCH — TPSLATCH
VPPCB
VCCCB
Item74 21 GRST#

	1	5V_0	5V_2 24
	2	5V_1	NC_4 23
	3	DATA	NC_3 22
	4	CLOCK	SHDN# 21
	5	LATCH	12V_1 20
	6	NC_1	BVPP/BVCORE 19
	7	12V_0	BVCC1 18
	8	AVPP/AVCORE	BVCC0 17
	9	AVCC0	NC_2 16
	10	AVCC1	OC# 15
	11	GND	3.3VIN0 14
	12	RESET#	3.3VIN1 13

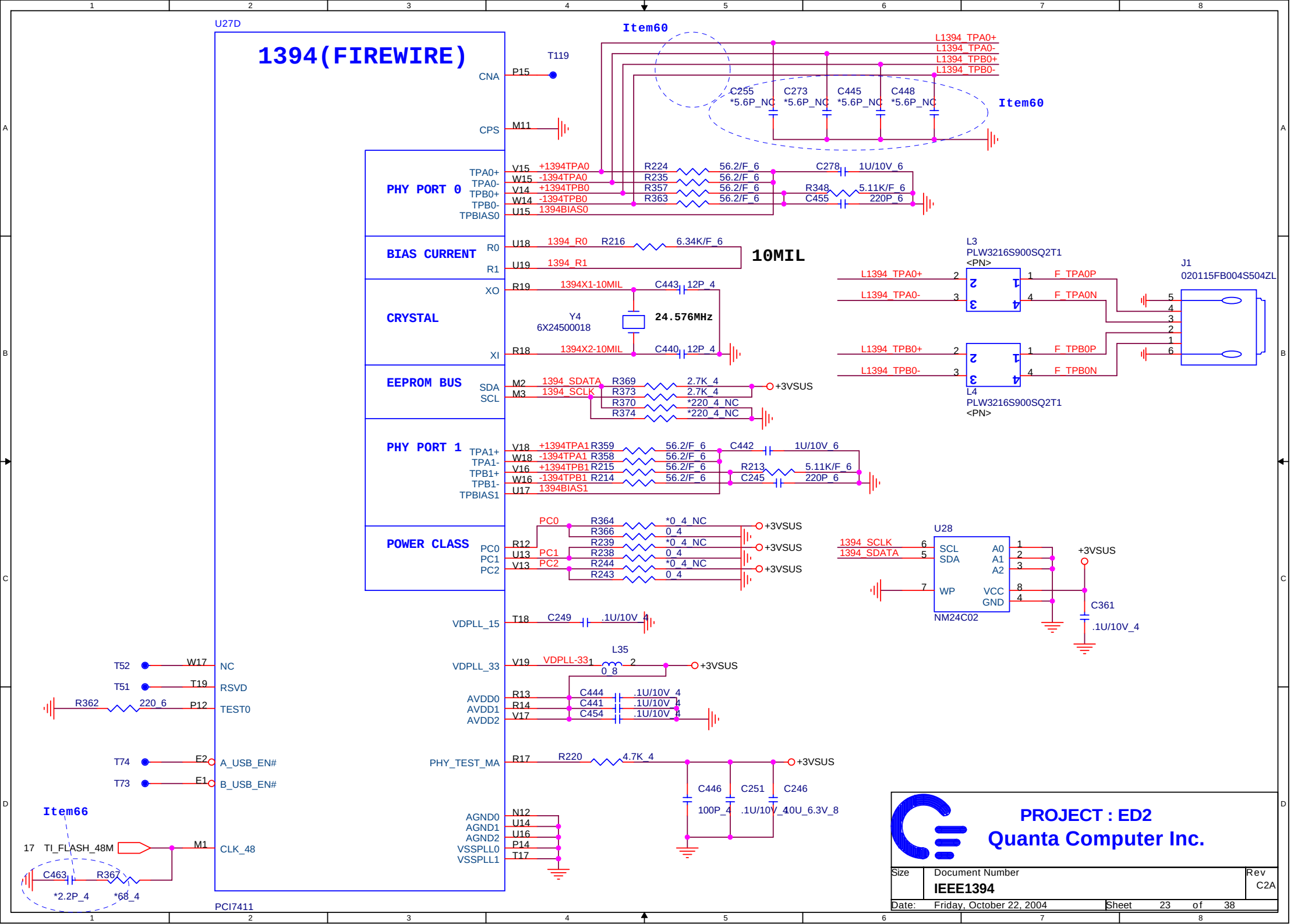
NC_5 25

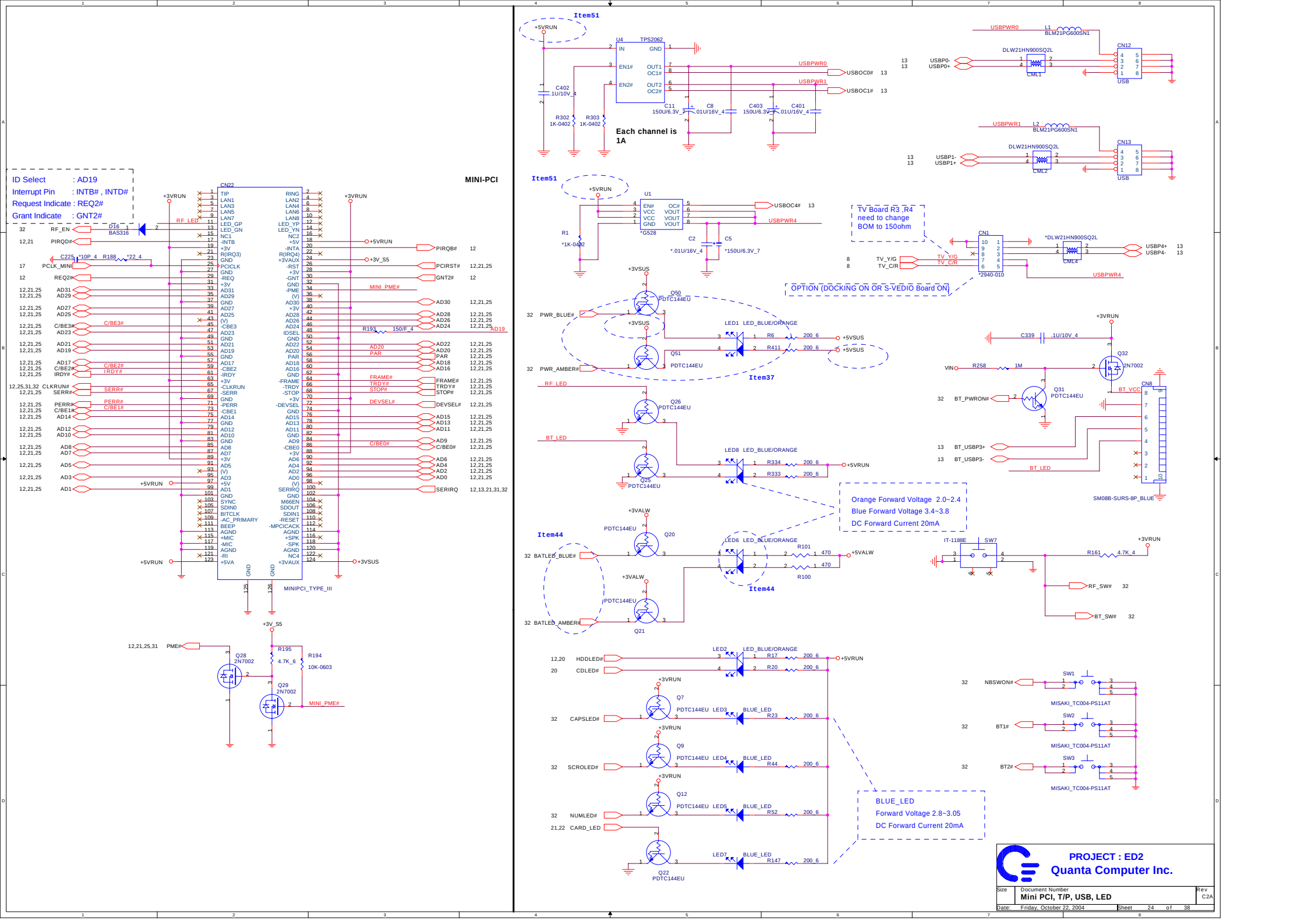
TPS2220A (DB)

C145 10U_6.3V_8, C178 .1U/10V_4, C144 4.7U/10V_8
C180 4.7U/10V_8, C181 10U_6.3V_8, C179 .1U/10V_4 — +3VSUS Item74

PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	PCMCIA Socket & 4-IN-1	C2A
Date: Friday, October 22, 2004	Sheet 22 of 38	


U27D
1394(FIREWIRE)
CNA
P15
T119
CPS
M11
Item60
L1394_TPA0+
L1394_TPA0-
L1394_TPB0+
L1394_TPB0-
C255 *5.6P_NC
C273 *5.6P_NC
C445 *5.6P_NC
C448 *5.6P_NC
Item60
PHY PORT 0
TPA0+
TPA0-
TPB0+
TPB0-
TPBIAS0
V15 +1394TPA0
W15 -1394TPA0
V14 +1394TPB0
W14 -1394TPB0
U15 1394BIAS0
R224 56.2/F_6
R235 56.2/F_6
R357 56.2/F_6
R363 56.2/F_6
C278 1U/10V_6
R348 5.11K/F_6
C455 220P_6
BIAS CURRENT
R0
R1
U18 1394_R0 R216 6.34K/F_6
U19 1394_R1
10MIL
CRYSTAL
XO
XI
R19 1394X1-10MIL C443 12P_4
Y4
6X24500018
24.576MHz
R18 1394X2-10MIL C440 12P_4
EEPROM BUS
SDA
SCL
M2 1394_SDATA R369 2.7K_4
M3 1394_SCLK R373 2.7K_4
R370 *220_4_NC
R374 *220_4_NC
+3VSUS
PHY PORT 1
TPA1+
TPA1-
TPB1+
TPB1-
TPBIAS1
V18 +1394TPA1 R359 56.2/F_6
W18 -1394TPA1 R358 56.2/F_6
V16 +1394TPB1 R215 56.2/F_6
W16 -1394TPB1 R214 56.2/F_6
U17 1394BIAS1
C442 1U/10V_6
R213 5.11K/F_6
C245 220P_6
POWER CLASS
PC0
PC1
PC2
R12 PC0 R364 *0_4_NC
R366 0_4
U13 PC1 R239 *0_4_NC
R238 0_4
V13 PC2 R244 *0_4_NC
R243 0_4
+3VSUS
VDPLL_15
T18 C249 .1U/10V_4
VDPLL_33
V19 VDPLL-33 L35 0_8
+3VSUS
AVDD0
AVDD1
AVDD2
R13 C444 .1U/10V_4
R14 C441 .1U/10V_4
V17 C454 .1U/10V_4
PHY_TEST_MA
R17 R220 4.7K_4
+3VSUS
C446 100P_4
C251 .1U/10V_4
C246 10U_6.3V_8
AGND0
AGND1
AGND2
VSSPLL0
VSSPLL1
N12
U14
U16
P14
T17
T52 W17 NC
T51 T19 RSVD
R362 220_6 P12 TEST0
T74 E2 A_USB_EN#
T73 E1 B_USB_EN#
Item66
17 TI_FLASH_48M
M1 CLK_48
C463 *2.2P_4
R367 *68_4
PCI7411
L3
PLW3216S900SQ2T1
<PN>
L1394_TPA0+
L1394_TPA0-
F_TPA0P
F_TPA0N
L1394_TPB0+
L1394_TPB0-
F_TPB0P
F_TPB0N
L4
PLW3216S900SQ2T1
<PN>
J1
020115FB004S504ZL
U28
1394_SCLK
1394_SDATA
SCL
SDA
A0
A1
A2
WP
VCC
GND
NM24C02
+3VSUS
C361
.1U/10V_4
PROJECT : ED2
Quanta Computer Inc.
Size
Document Number
IEEE1394
Rev
C2A
Date: Friday, October 22, 2004
Sheet 23 of 38


ID Select : AD19
Interrupt Pin : INTB# , INTD#
Request Indicate : REQ2#
Grant Indicate : GNT2#
MINI-PCI
CN22
MINIPCI_TYPE_III
Item51
U4 TPS2062
Each channel is 1A
USBPWR0
USBPWR1
USBOC0#
USBOC1#
USBP0-
USBP0+
USBP1-
USBP1+
CN12
CN13
CML1
CML2
USB
L1 BLM21PG600SN1
L2 BLM21PG600SN1
DLW21HN900SQ2L
Item51
U1 *G528
USBOC4#
USBPWR4
TV Board R3 ,R4 need to change BOM to 150ohm
CN1 *2940-010
CML4
USBP4+
USBP4-
OPTION (DOCKING ON OR S-VEDIO Board ON)
Q50 PDTC144EU
Q51 PDTC144EU
LED1 LED_BLUE/ORANGE
Item37
Q26 PDTC144EU
Q25 PDTC144EU
LED8 LED_BLUE/ORANGE
Orange Forward Voltage 2.0~2.4
Blue Forward Voltage 3.4~3.8
DC Forward Current 20mA
Item44
Q20 PDTC144EU
Q21 PDTC144EU
LED6 LED_BLUE/ORANGE
Item44
Q31 PDTC144EU
Q32 2N7002
BT_VCC
SM08B-SURS-8P-BLUE
IT-1188E SW7
Q28 2N7002
Q29 2N7002
LED2 LED_BLUE/ORANGE
Q7 PDTC144EU
Q9 PDTC144EU
Q12 PDTC144EU
Q22 PDTC144EU
LED3 BLUE_LED
LED4 BLUE_LED
LED5 BLUE_LED
LED7 BLUE_LED
BLUE_LED
Forward Voltage 2.8~3.05
DC Forward Current 20mA
MISAKI_TC004-PS11AT
PROJECT : ED2
Quanta Computer Inc.
Mini PCI, T/P, USB, LED
Friday, October 22, 2004

R117
RTL8110SBL(1G)--DEPOP
RTL8100L(10,100)--POP

R116
RTL8110SBL(1G)--POP
RTL8100L(10,100)--DEPOP

RTL81XX's power for Co-lay :

AS	RTL8110SBL(Giga-Lan)	AVDDL	CONNECT	+2.5V_A
	RTL8100L(10,100M-Lan)	AVDDL	CONNECT	+3V_LAN_A
AS	RTL8110SBL(Giga-Lan)	HSDAC-	CONNECT	+3V_LAN_A
	RTL8100L(10,100M-Lan)	HSDAC-	CONNECT	+2.5V_A
AS	RTL8110SBL(Giga-Lan)	DVDD	CONNECT	+1.8V_D
	RTL8100L(10,100M-Lan)	DVDD	CONNECT	+2.5V_A

RTL8110SBL(1G)--POP 2.49K
RTL8100L(10,100M) POP 5.6K

R113,R114
RTL8110SBL(1G)--POP
RTL8100L(10,100)--DEPOP

R108,R115,Q19
RTL8110SBL(1G)--DEPOP
RTL8100L(10,100) --POP

R412,R414,R416,R418,C531,C533
RTL8110SBL(1G)--POP
RTL8100L(10,100)--DEPOP

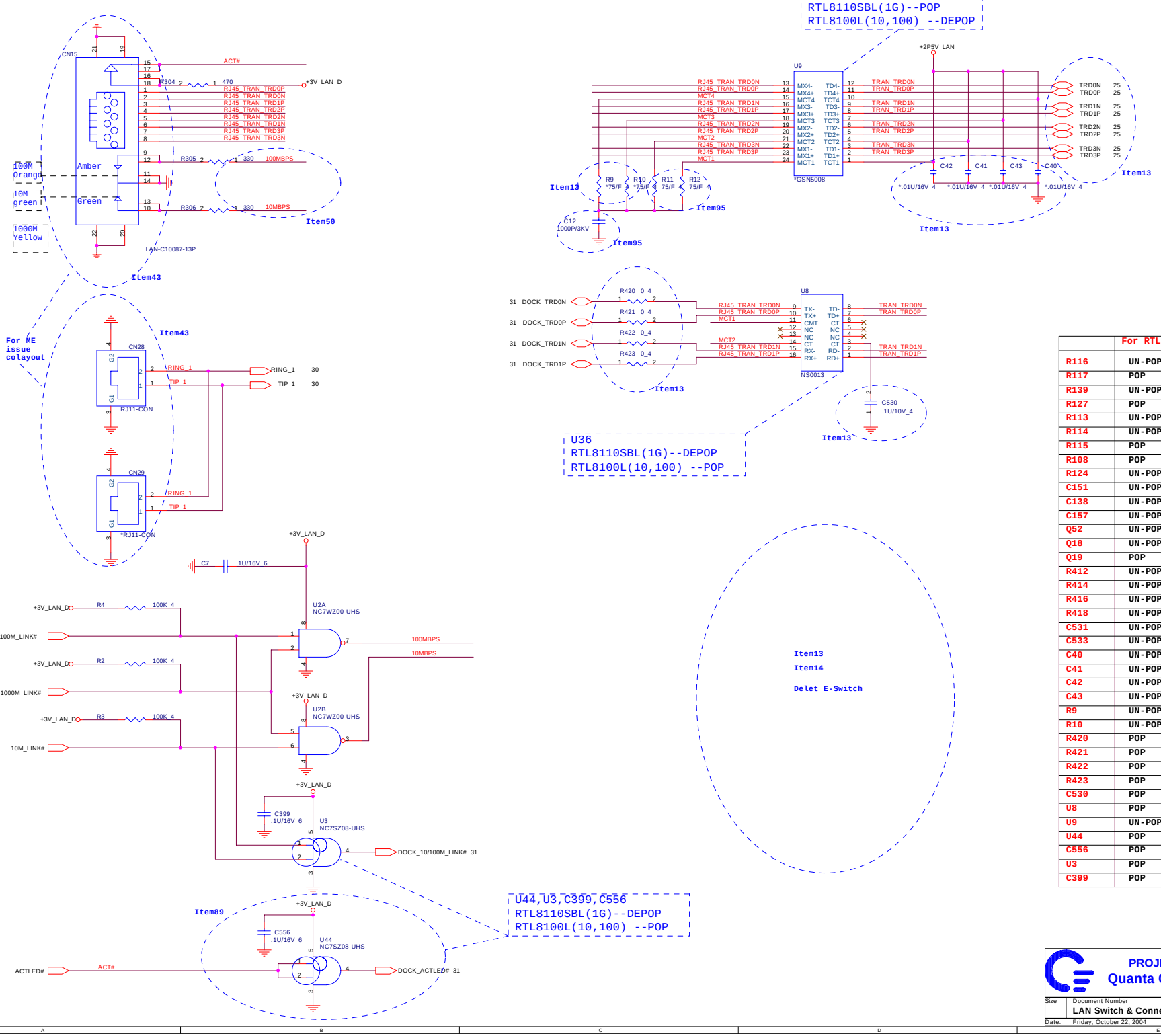
Q52 Colayout with Q19
RTL8110SBL(1G)--POP
RTL8100L(10,100) --DEPOP

Q18,R124,C138,C157,C151
RTL8110SBL(1G)--POP
RTL8100L(10,100) --DEPOP

PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	LAN RTL8110S/8100CL	C2A

Date: Friday, October 22, 2004 Sheet 25 of 38



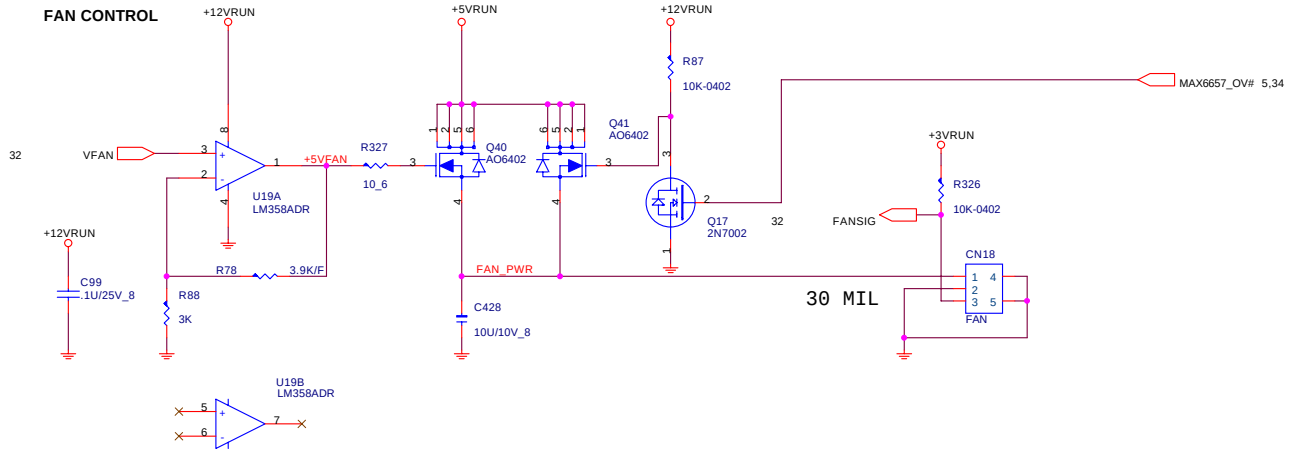
	For RTL8100C	For RTL8110SB
R116	UN-POP	POP
R117	POP	UN-POP
R139	UN-POP	POP
R127	POP	UN-POP
R113	UN-POP	POP
R114	UN-POP	POP
R115	POP	UN-POP
R108	POP	UN-POP
R124	UN-POP	POP
C151	UN-POP	POP
C138	UN-POP	POP
C157	UN-POP	POP
Q52	UN-POP	POP
Q18	UN-POP	POP
Q19	POP	UN-POP
R412	UN-POP	POP
R414	UN-POP	POP
R416	UN-POP	POP
R418	UN-POP	POP
C531	UN-POP	POP
C533	UN-POP	POP
C40	UN-POP	POP
C41	UN-POP	POP
C42	UN-POP	POP
C43	UN-POP	POP
R9	UN-POP	POP
R10	UN-POP	POP
R420	POP	UN-POP
R421	POP	UN-POP
R422	POP	UN-POP
R423	POP	UN-POP
C530	POP	UN-POP
U8	POP	UN-POP
U9	UN-POP	POP
U44	POP	UN-POP
C556	POP	UN-POP
U3	POP	UN-POP
C399	POP	UN-POP

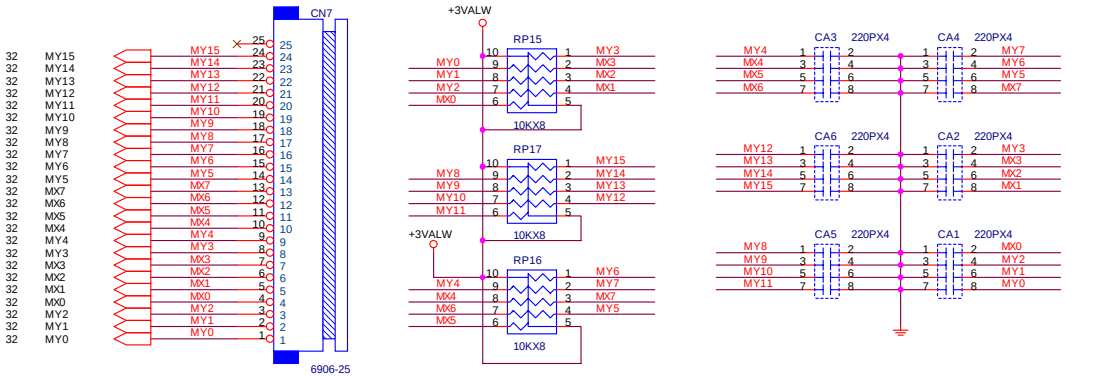
PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	LAN Switch & Connector	C2A

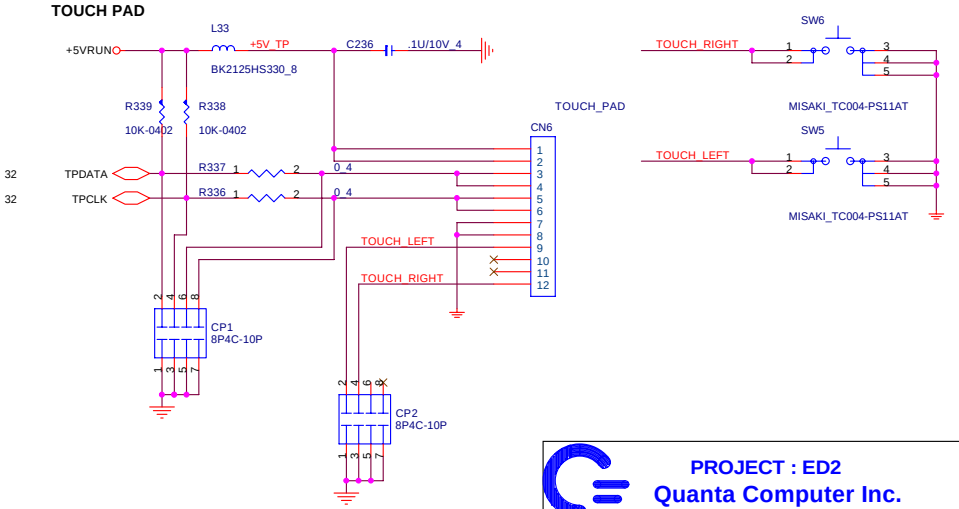
Date: Friday, October 22, 2004 Sheet 26 of 38

FAN CONTROL





TOUCH PAD

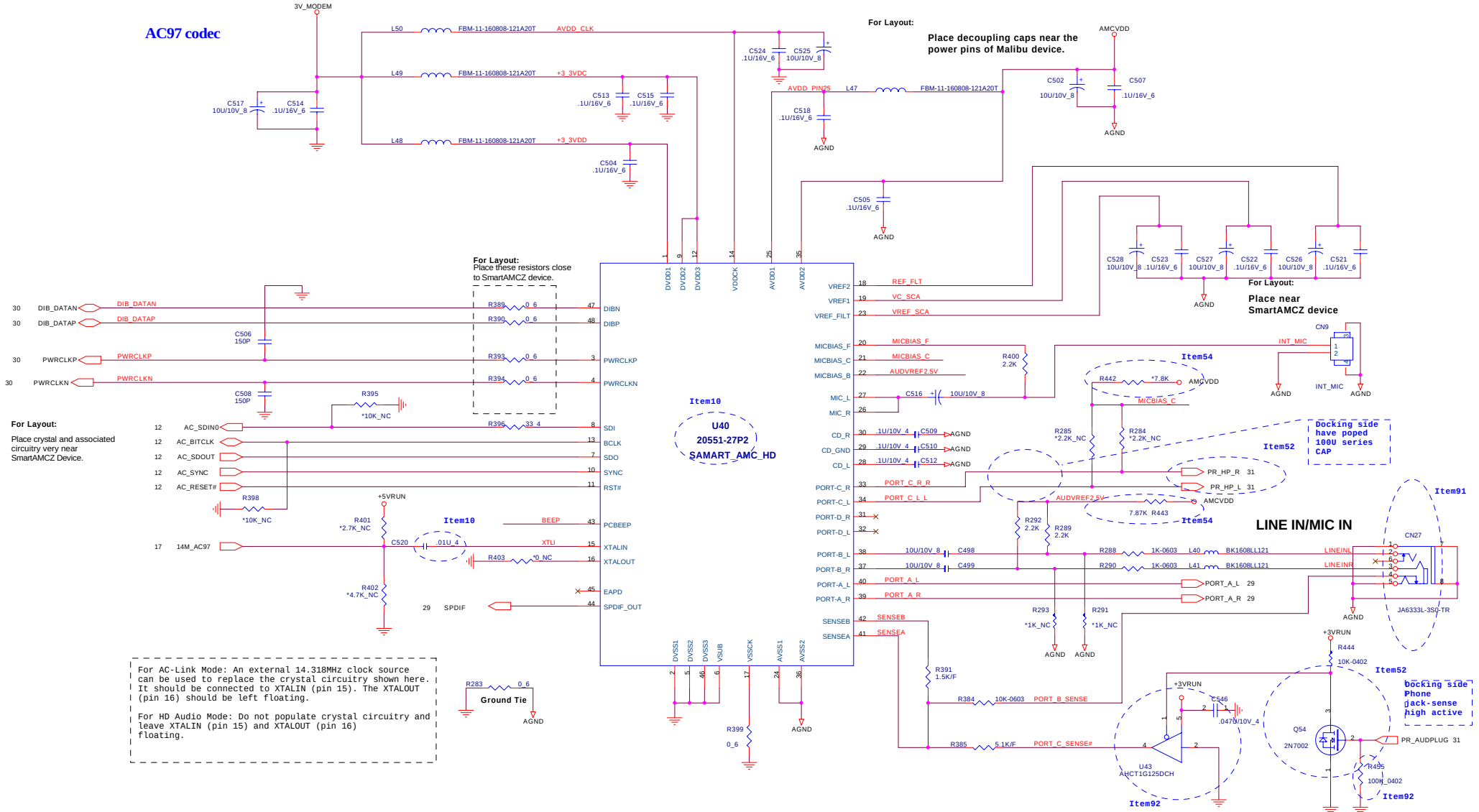


PROJECT : ED2

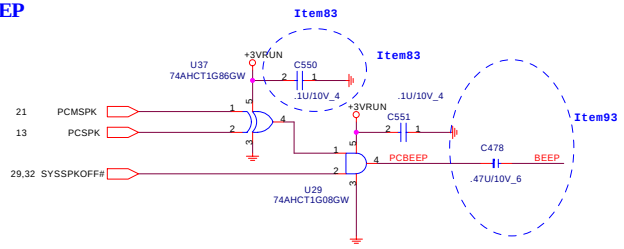
Quanta Computer Inc.

Size	Document Number	Rev
	T/P, FAN, Switch, K/B	C2A
Date: Friday, October 22, 2004	Sheet 27 of 38	

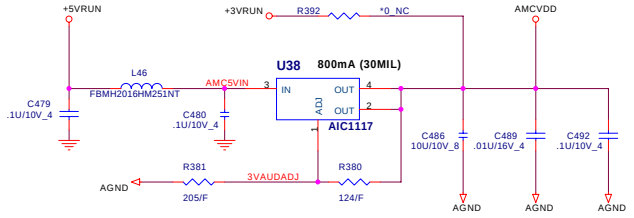
AC97 codec



BEEP



AC97 codec Power



PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	AC97 CODEC + MODEM	C2A

Date: Friday, October 22, 2004 Sheet 28 of 38

GAIN	SPKR MODE	HP MODE
0	10.5	3
1	9	0

AVDD R383 *1K_NC GAIN R382 1K-0603 AGND

+5VRUN R379 0_8 AVDD C496 .1U/10V_4 AGND

C490 1U/10V_6 C485 .1U/10V_4 AVDD AGND

Item40

U39 MAX9755ETI+

NC NC INL INR GAIN GND /SHDN VBIAS VDD HPVDD C1P GND CPGND CPVSS VSS C1N CPVDD PVDDL PGNDL PVDDR PGNDR HPS HPL SPKR OUTL+ OUTL- OUTR- OUTR+

AOUTL AOUTR C482 4.7U/10V C483 4.7U/10V GAIN

Item83 C552 .1U/10V_4 +5VRUN U36 74AHCT1G08GW

32 AMP_MUTE# 28,32 SYSSPKOFF# MUTE

C494 1U/10V_6 C493 1U/10V_6 C484 .1U/10V_4 C487 10U/10V_8 C497 .1U/10V_4 C481 10U/10V_8 AGND

HPS SPKL SPKR INSPKL+ INSPKL- INSPKR- INSPKR+

+5VRUN R428 10K-0402 Item31 Item52 Q53 2N7002 HPS#

FOR EMI SOLUTION

C477 .1U/10V_4 C395 .1U/10V_4 C500 .1U/10V_4 AGND

R294 0_6 C476 .1U/10V_4 C394 .01U/16V_4 AGND

Headphone out / SPDIF OUT

+5VRUN C392 .1U/10V_4 CN26 DLT11M3_SPDIF/O SPDIF-DLT11MX-10P-V

28 SPDIF C475 220U_4V_L C390 220U_4V_L L38 BK1608LL121 L39 BK1608LL121 SPKR1 SPKL1 C393 470P_4 C391 470P_4 AGND

+5VRUN Item52 R445 10K-0402 HPS# New type Phone jack low active

SPEAKER CON.

28 PORT_A_L 28 PORT_A_R *0 R429 AOUTL *0 R430 AOUTR R431 10K C535 10U/10V_8 C536 10U/10V_8 R432 10K R433 10K R434 10K AGND

Item40

U42 NJM2199

PORT_A_L_IN PORT_A_R_IN AOUTL AOUTR LIN RIN LOUT ROUT MODE GND V+ FIL1 FIL2 FIL3 VOL2 VOL1 VREFIN VREF .033U C537 .01U C538 .47U C539 .33U C540 R436 0_4 10K R437 1U C541 10U/10V_8 C542

3D_STEREO_VDD R435 10K-0402 Q55 2N7002 32 3D_ON# C543 10U/10V_8 AGND

IOPJ2-7 for NS97551 have internally weak pull up

When 3D_ON# Keep low then 3D active

+12VRUN +5VRUN 3D_STEREO_VDD R439 *0_8_NC R451 0_8 C544 .1U C545 10U/10V_8 AGND

CN2 3802-02 INSPKL+ INSPKL- L43 0_6 L42 0_6 INSPKL+N INSPKL-N R324 *0_NC R325 *0_NC AGND

CN11 3802-02 INSPKR+ INSPKR- L51 0_6 L52 0_6 INSPKR+N INSPKR-N R405 *0_NC R404 *0_NC AGND

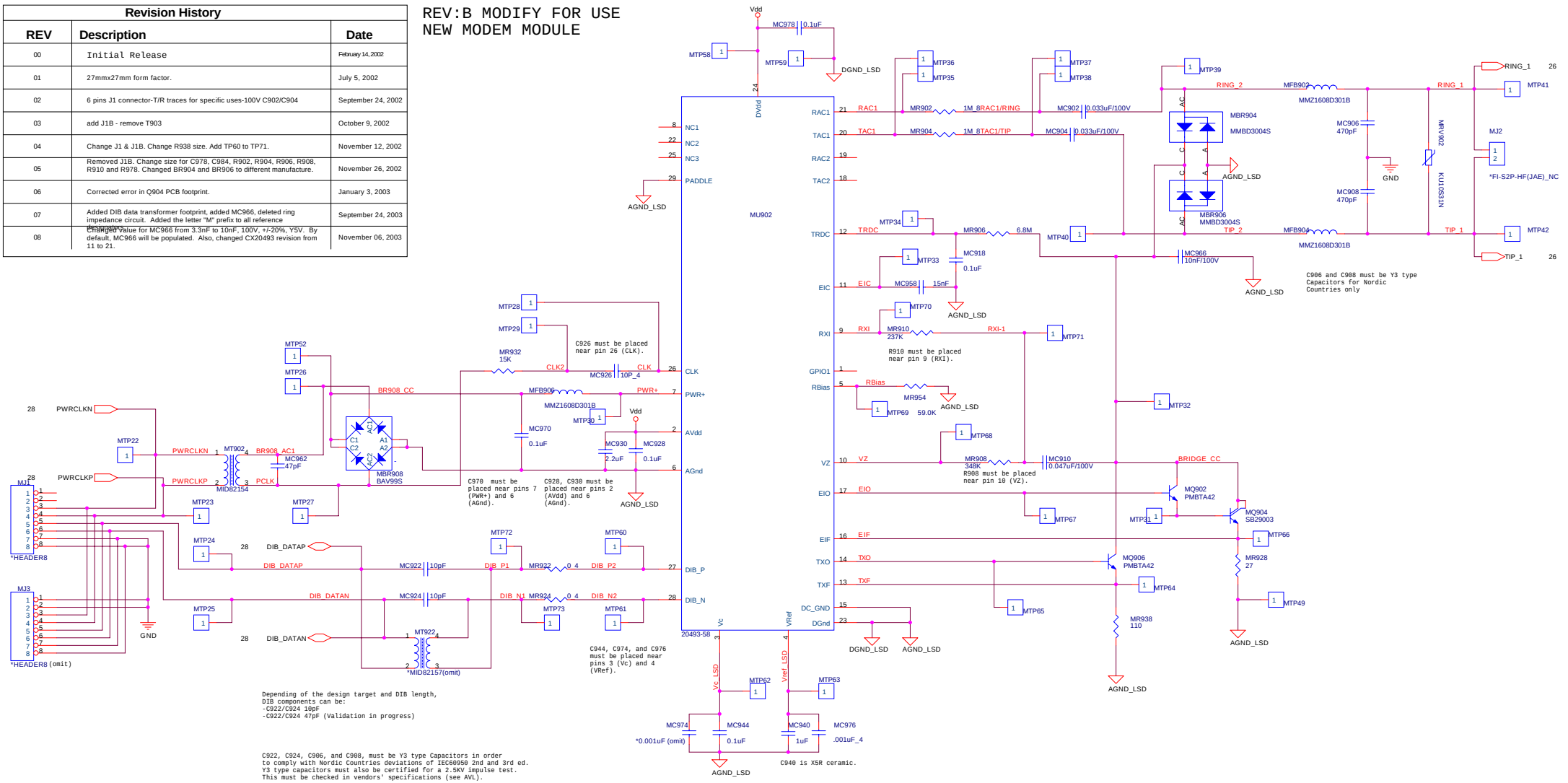
PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	Audio Amplifier & Jack	C2A
Date: Friday, October 22, 2004	Sheet 29 of 38	

Revision History

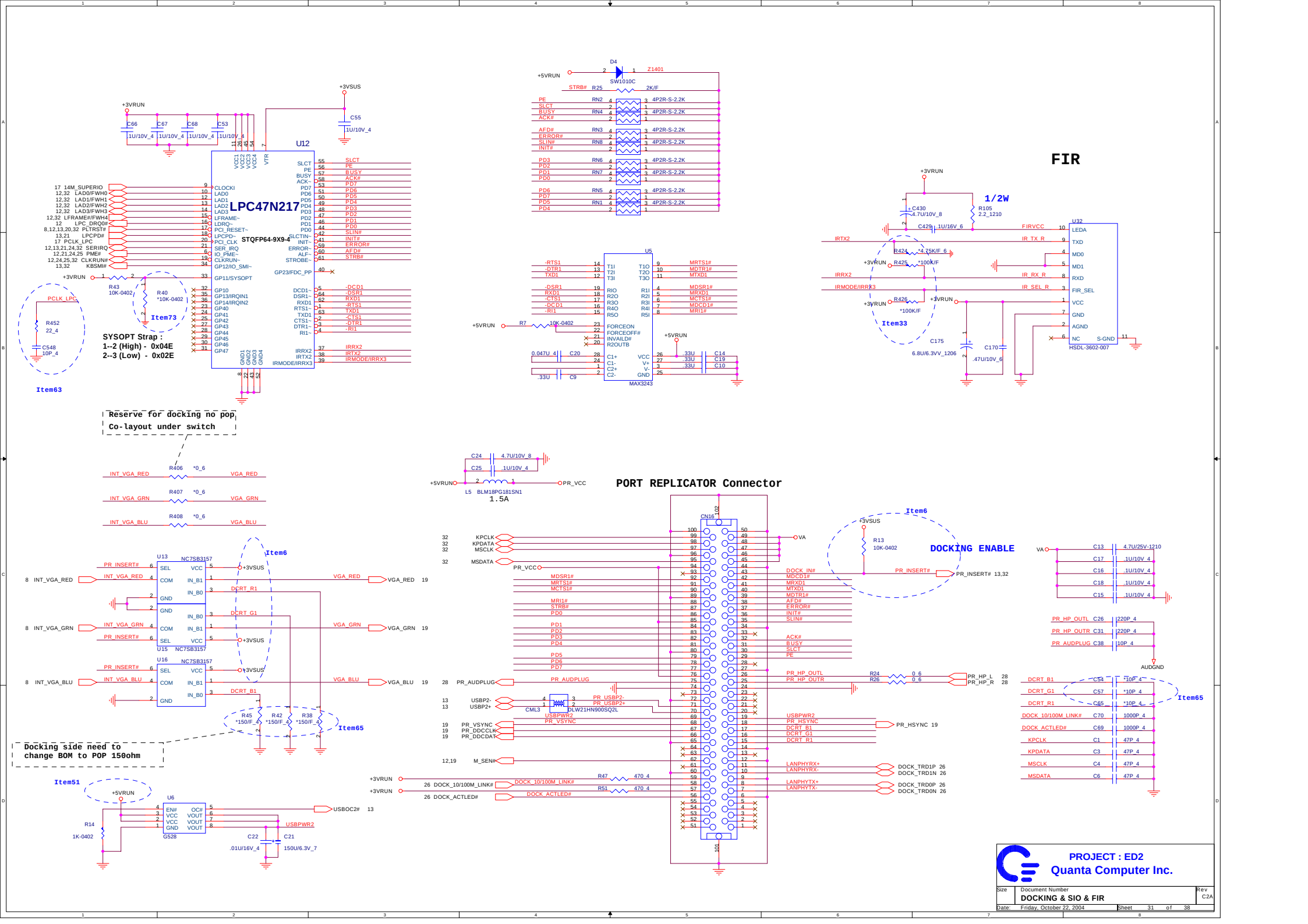
REV	Description	Date
00	Initial Release	February 14, 2002
01	27mmx27mm form factor.	July 5, 2002
02	6 pins J1 connector-T/R traces for specific uses-100V C902/C904	September 24, 2002
03	add J1B - remove T903	October 9, 2002
04	Change J1 & J1B. Change R938 size. Add TP60 to TP71.	November 12, 2002
05	Removed J1B. Change size for C978, C984, R902, R904, R906, R908, R910 and R978. Changed BR904 and BR906 to different manufacture.	November 26, 2002
06	Corrected error in Q904 PCB footprint.	January 3, 2003
07	Added DIB data transformer footprint, added MC966, deleted ring impedance circuit. Added the letter "M" prefix to all reference designators.	September 24, 2003
08	Changed value for MC966 from 3.3nF to 10nF, 100V, +/-20%, Y5V. By default, MC966 will be populated. Also, changed CX20493 revision from 11 to 21.	November 06, 2003

REV:B MODIFY FOR USE
NEW MODEM MODULE



PROJECT : ED2
Quanta Computer Inc.

Size	Document Number	Rev
	MODEM DAA	C2A
Date: Friday, October 22, 2004	Sheet 30 of 38	


U12
LPC47N217
STQFP64-9X9-4
SYSOPT Strap :
1--2 (High) - 0x04E
2--3 (Low) - 0x02E
Item73
Item63
Reserve for docking no pop
Co-layout under switch
U5
MAX3243
FIR
1/2W
U32
HSDL-3602-007
Item33
PORT REPLICATOR Connector
CN16
DOCKING ENABLE
Item6
Item65
Item51
U13
U15
U16
U6
Docking side need to
change BOM to POP 150ohm
PROJECT : ED2
Quanta Computer Inc.
DOCKING & SIO & FIR
Friday, October 22, 2004
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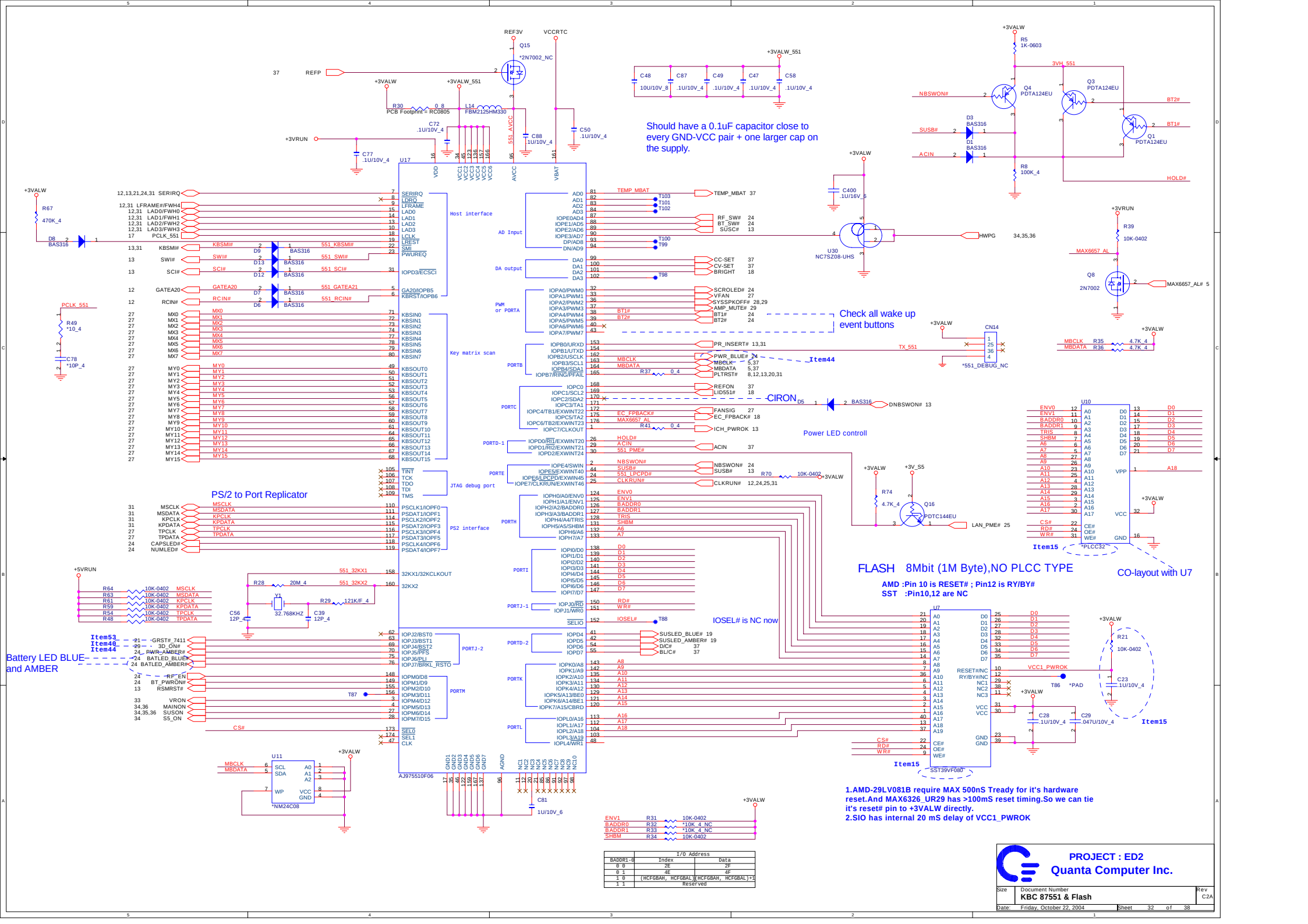
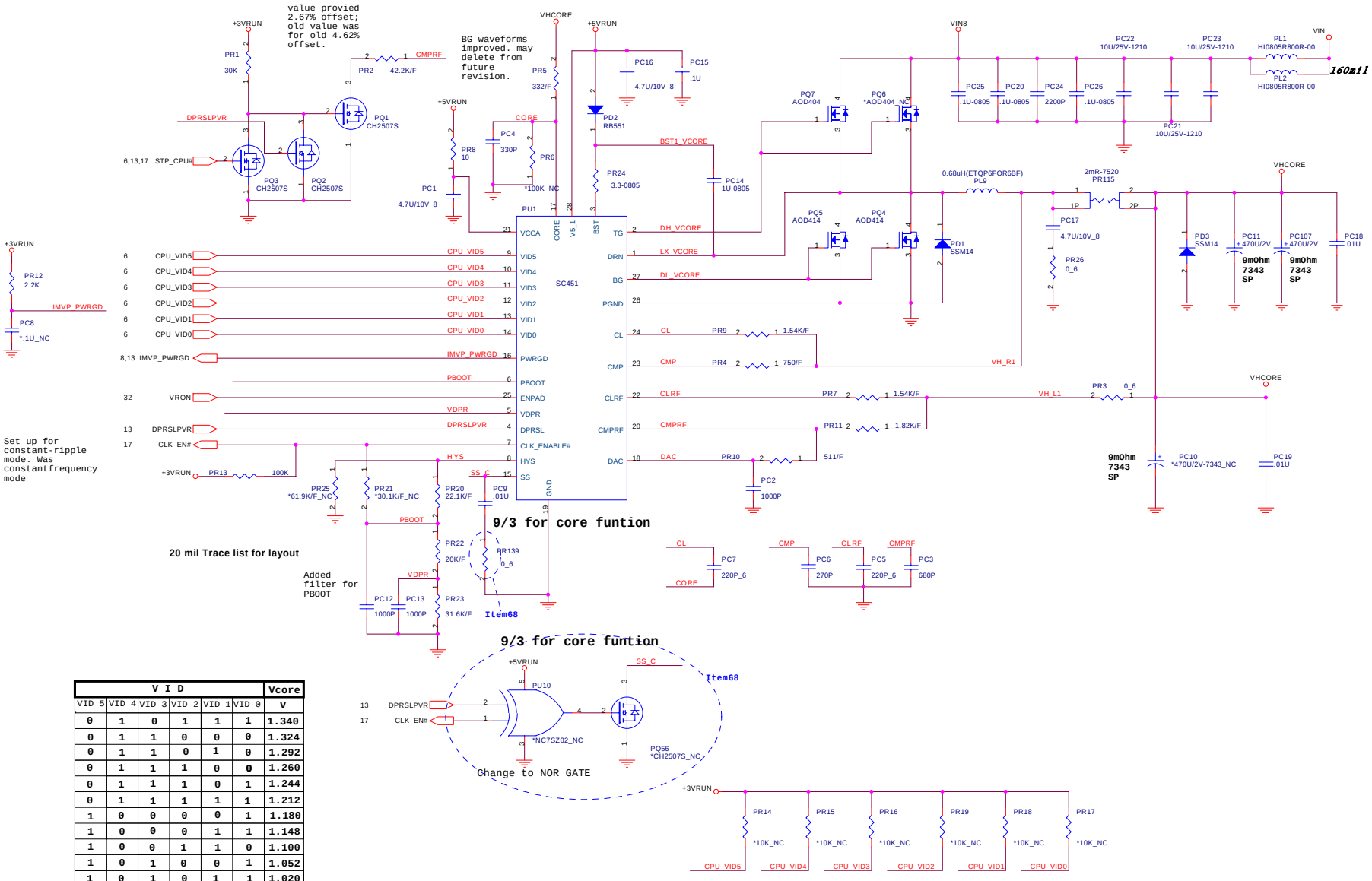

Should have a 0.1uF capacitor close to every GND-VCC pair + one larger cap on the supply.
Check all wake up event buttons
Power LED controll
PS/2 to Port Replicator
Battery LED BLUE and AMBER
FLASH 8Mbit (1M Byte),NO PLCC TYPE
AMD :Pin 10 is RESET# ; Pin12 is RY/BY#
SST :Pin10,12 are NC
IOSEL# is NC now
CO-layout with U7
1.AMD-29LV081B require MAX 500nS Tready for it's hardware reset.And MAX6326_UR29 has >100mS reset timing.So we can tie it's reset# pin to +3VALW directly.
2.SIO has internal 20 mS delay of VCC1_PWROK
PROJECT : ED2
Quanta Computer Inc.
KBC 87551 & Flash
Friday, October 22, 2004
Sheet 32 of 38



V I D						Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	V
0	1	0	1	1	1	1.340
0	1	1	0	0	0	1.324
0	1	1	0	1	0	1.292
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
1	0	1	1	1	0	0.972
1	1	0	0	0	0	0.940

PROJECT : ED2

Quanta Computer Inc.

Size	Document Number	Rev
	CPU CORE (SC451)	C2A
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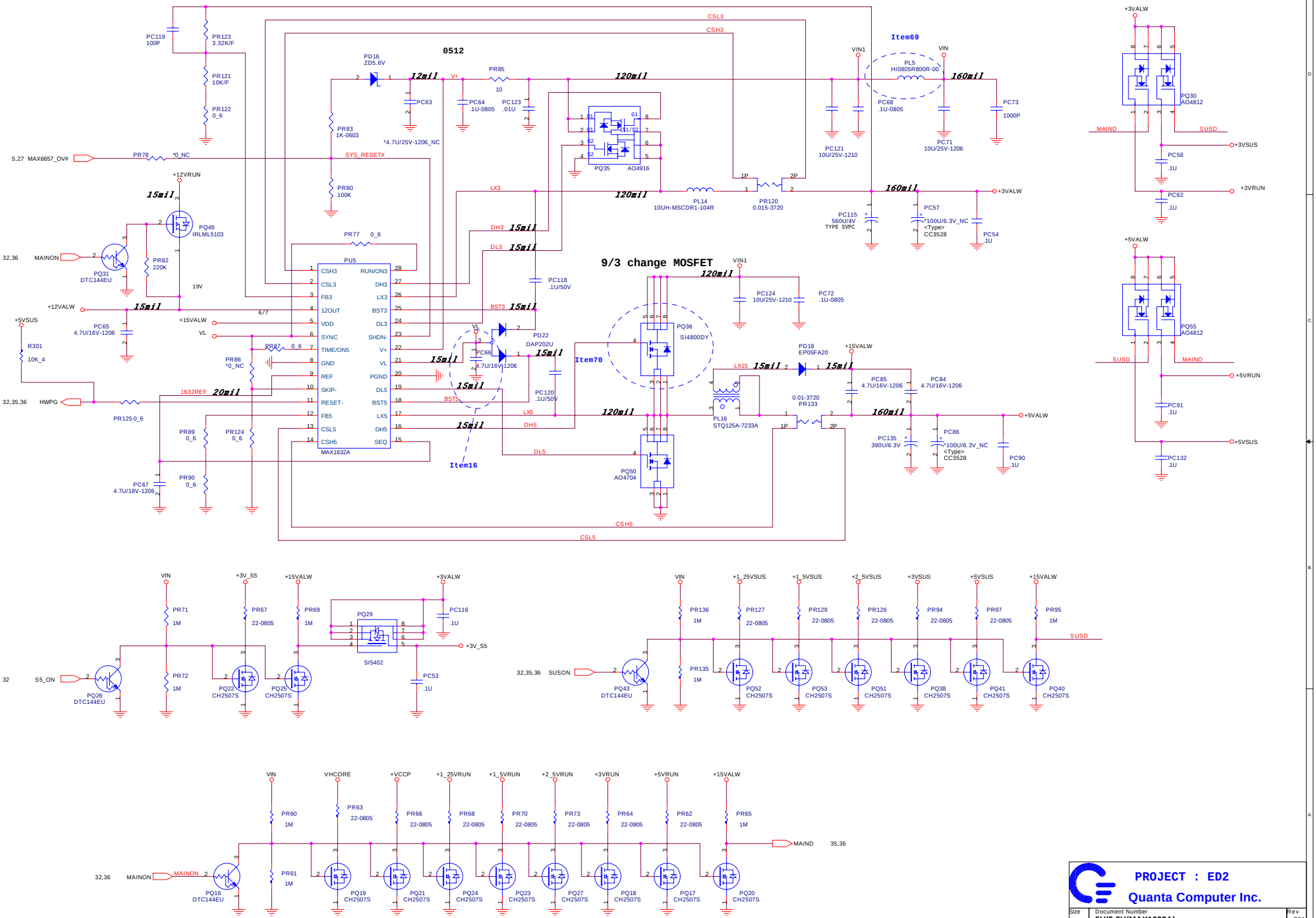
0512
9/3 change MOSFET
MAX1632A
PU5
Item69
Item70
Item16
PQ35 AO4916
PQ36 SI4800DY
PQ50 AO4704
PQ49 IRLML5103
PQ31 DTC144EU
PQ30 AO4812
PQ55 AO4812
PL5 HI0805R800R-00
PL14 10UH-MSCDR1-104R
PL16 STQ125A-7233A
PR120 0.015-3720
PR133 0.01-3720
PD16 ZD5.6V
PD22 DAP202U
PD18 EP05FA20
SYS_RESET#
1632REF
HWPG
MAINON
SUSON
S5_ON
MAIND
SUSD
PQ29 SI5402
PQ26 DTC144EU
PQ43 DTC144EU
PQ16 DTC144EU
PQ22 CH2507S
PQ20 CH2507S
PQ52 CH2507S
PQ53 CH2507S
PQ51 CH2507S
PQ38 CH2507S
PQ41 CH2507S
PQ40 CH2507S
PQ19 CH2507S
PQ21 CH2507S
PQ24 CH2507S
PQ23 CH2507S
PQ27 CH2507S
PQ18 CH2507S
PQ17 CH2507S
PQ20 CH2507S
PROJECT : ED2
Quanta Computer Inc.
5V/3.3V(MAX1632A)
Friday, October 22, 2004
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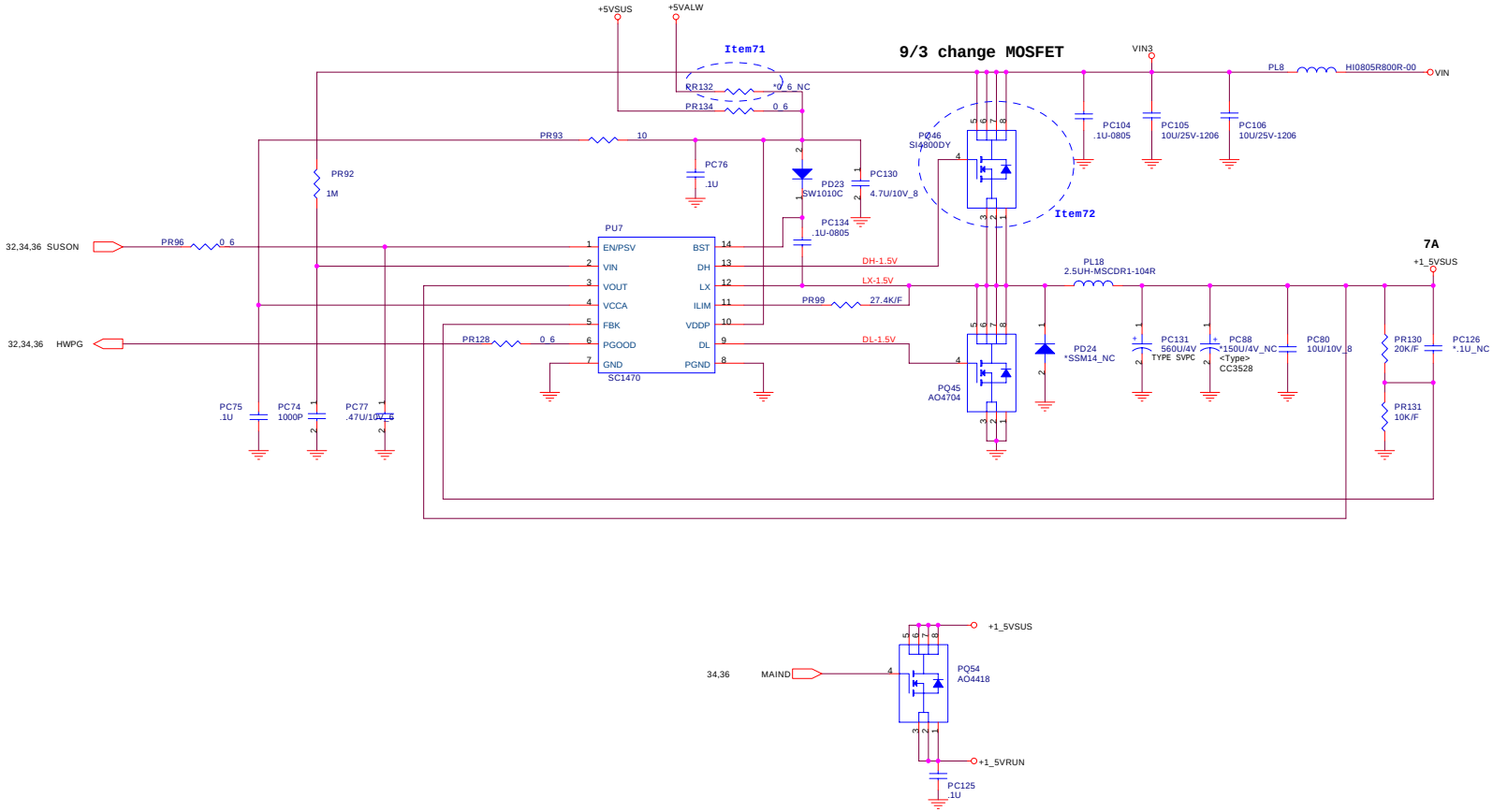
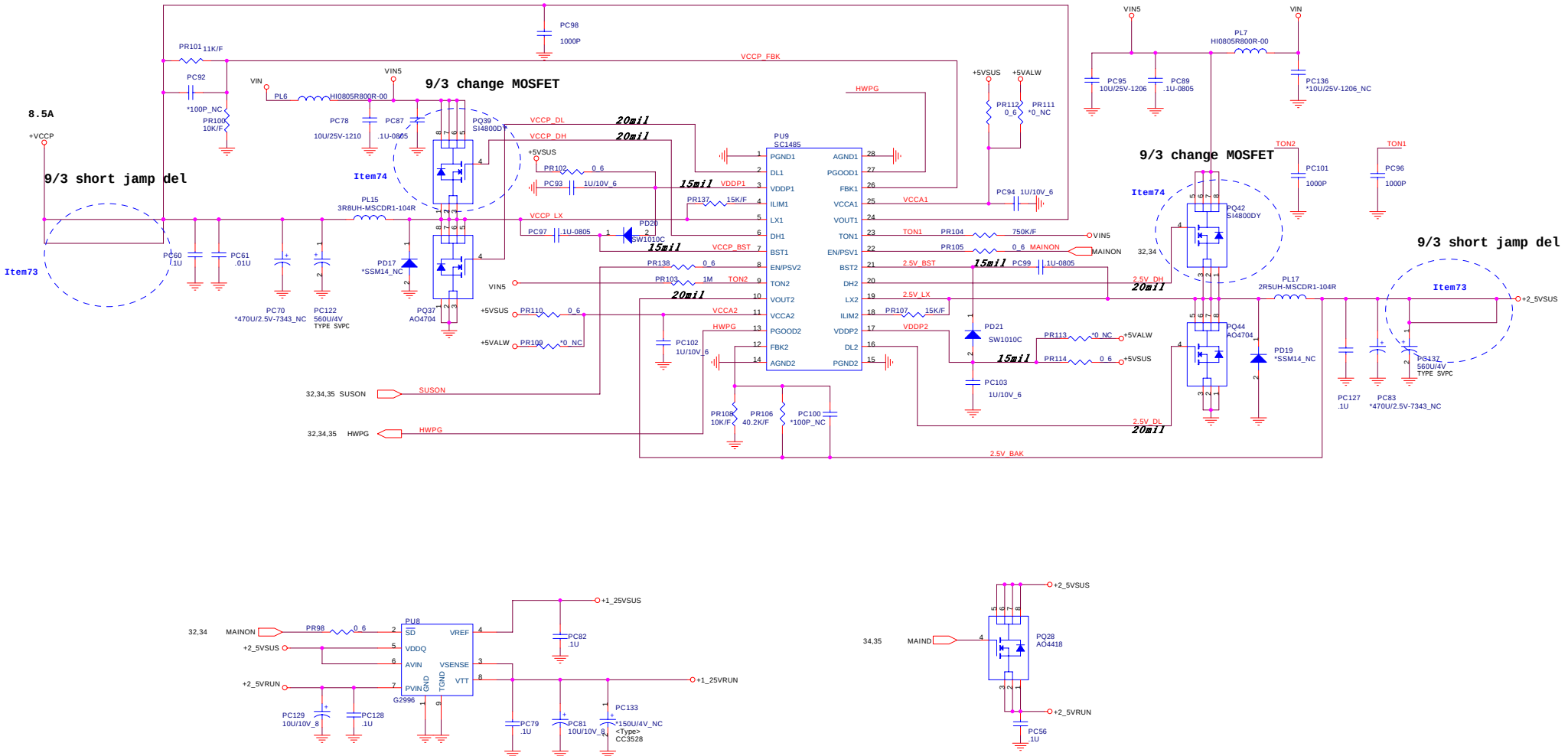
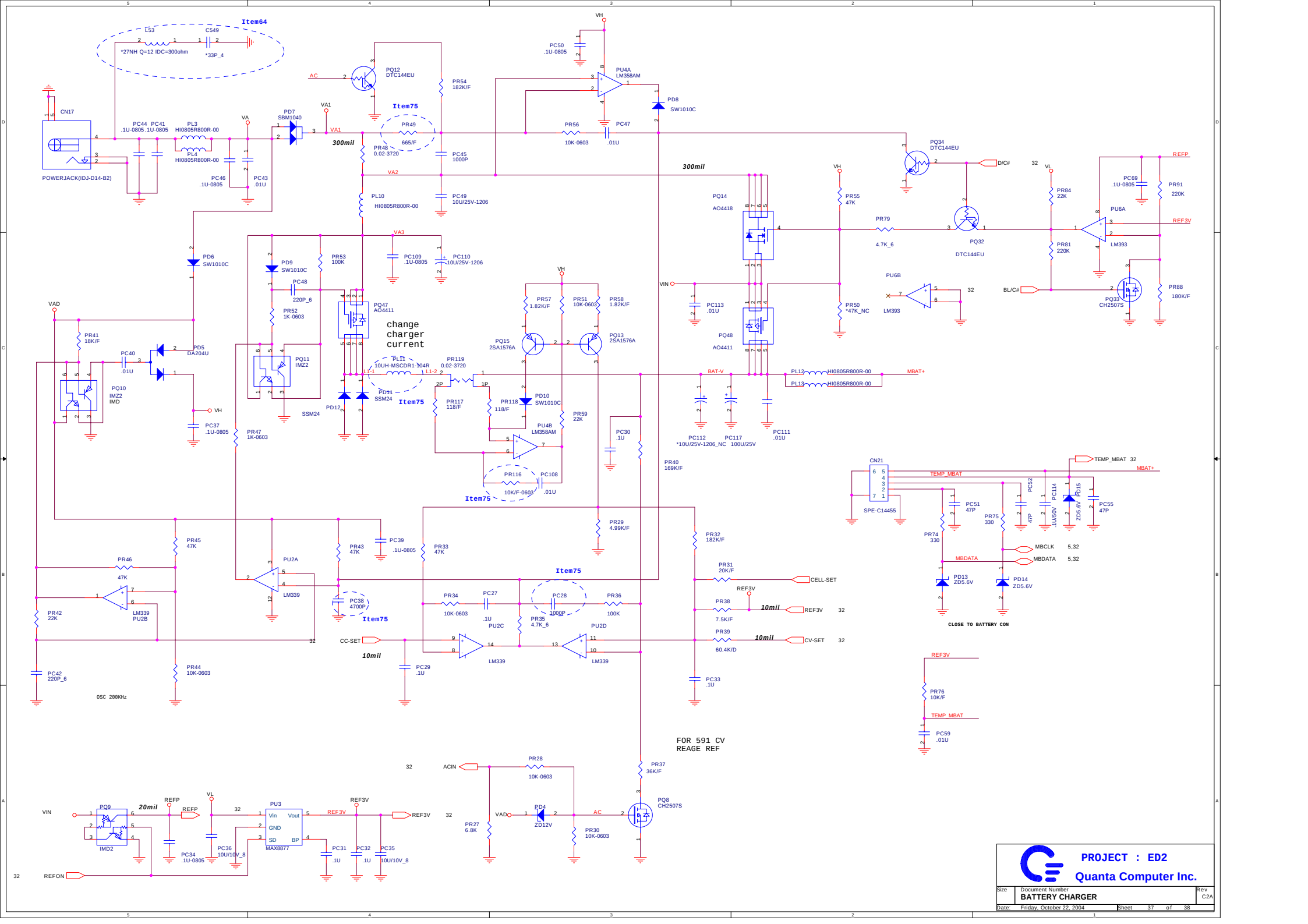


PROJECT : ED2		
Quanta Computer Inc.		
Size	Document Number: 2.5VSUS / +1.25TERM	Rev: C2A
Date: Friday, October 22, 2004	Sheet 35 of 38	



PROJECT : ED2		
Quanta Computer Inc.		
Size	Document Number +VCCP/+1.25V/+2.5V	Rev C2A
Date: Friday, October 22, 2004	Sheet 36 of 38	



PROJECT : ED2		
Quanta Computer Inc.		
Size	Document Number: BATTERY CHARGER	Rev: C2A
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