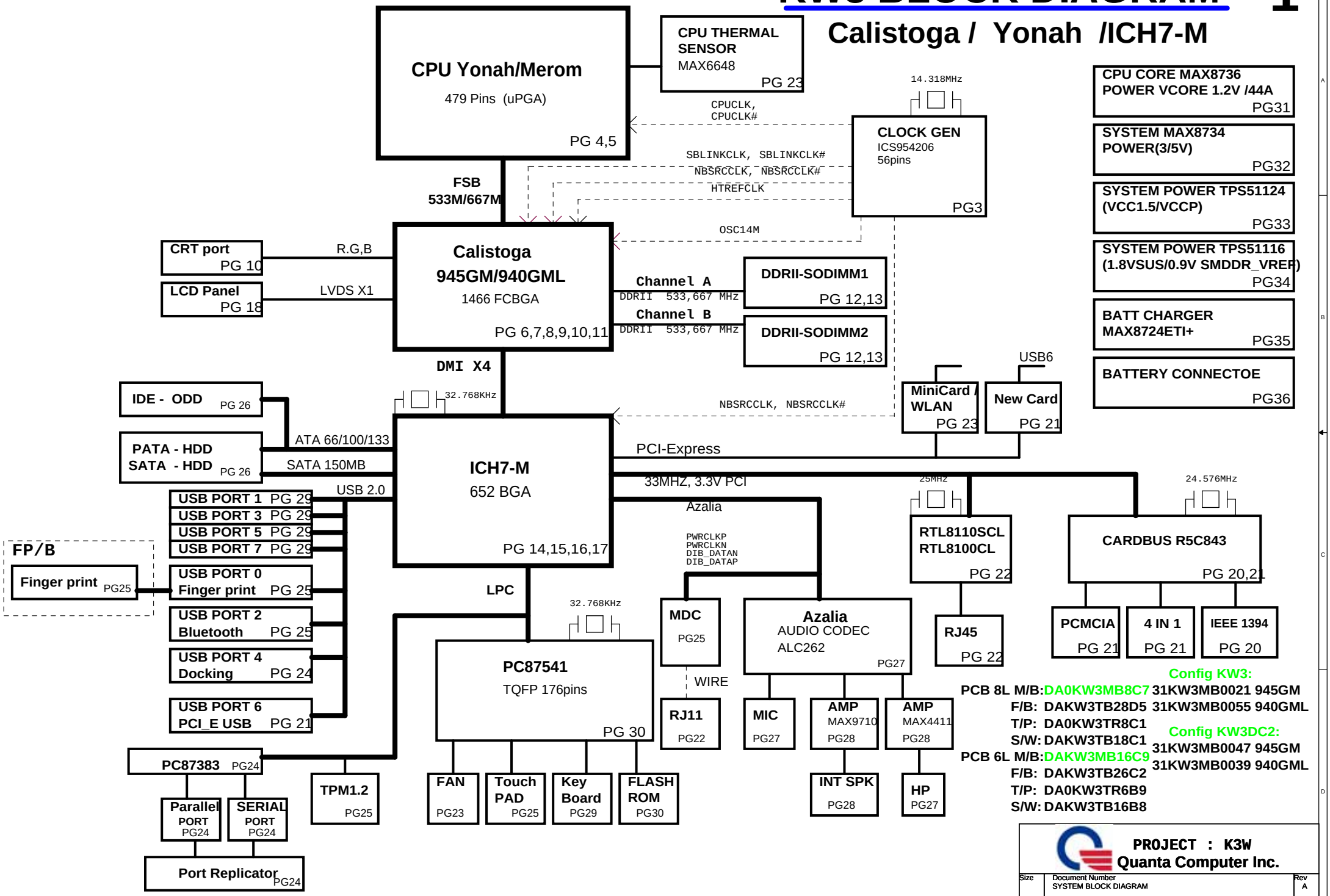
KW3 BLOCK DIAGRAM 1

Calistoga / Yonah /ICH7-M



Config KW3:

PCB 8L M/B: DA0KW3MB8C7 31KW3MB0021 945GM
F/B: DAKW3TB28D5 31KW3MB0055 940GML
T/P: DA0KW3TR8C1
S/W: DAKW3TB18C1

Config KW3DC2:

PCB 6L M/B: DAKW3MB16C9 31KW3MB0047 945GM 31KW3MB0039 940GML
F/B: DAKW3TB26C2
T/P: DA0KW3TR6B9
S/W: DAKW3TB16B8

PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	SYSTEM BLOCK DIAGRAM	A

Date: Tuesday, May 16, 2006 Sheet 1 of 36

Voltage Rails

Voltage Rails		ON S0~S2	ON S3	ON S4	ON S5	Ctl Signal
VCC_CORE	Core voltage for Processor	X				VR_ON
GMCH_VTT	Core voltage for CPU / NB	X				MAINON
SMDDR_VREF	0.9V for DDR2 Termination voltage	X				MAINON
VMEM_VTT	1.25V for VRAM Termination voltage	X				MAINON
RVCC3		X	X	X		RVCCD
VCC1.5		X				MAINON
VCC1.8		X				MAINON
VCC2.5		X				MAINON
VCC3		X				MAIND
VCC5		X				MAIND
1.8VSUS		X	X			SUSON
3VSUS		X	X			SUSD
5VSUS		X	X			SUSD
3VPCU		X	X	X	X	VL
5VPCU		X	X	X	X	VL
9VPCU		X	X	X	X	5VPCU

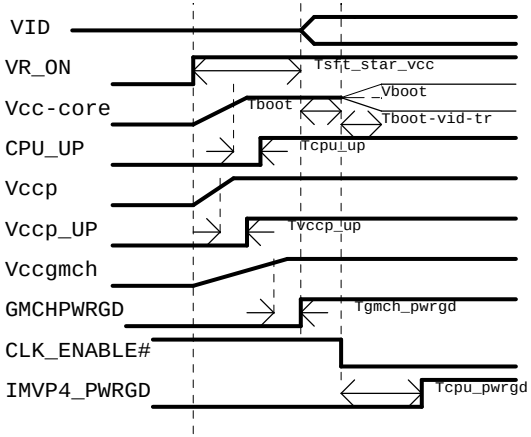
PCB STACK UP

LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 6 : SVCC
LAYER 6 : BOT

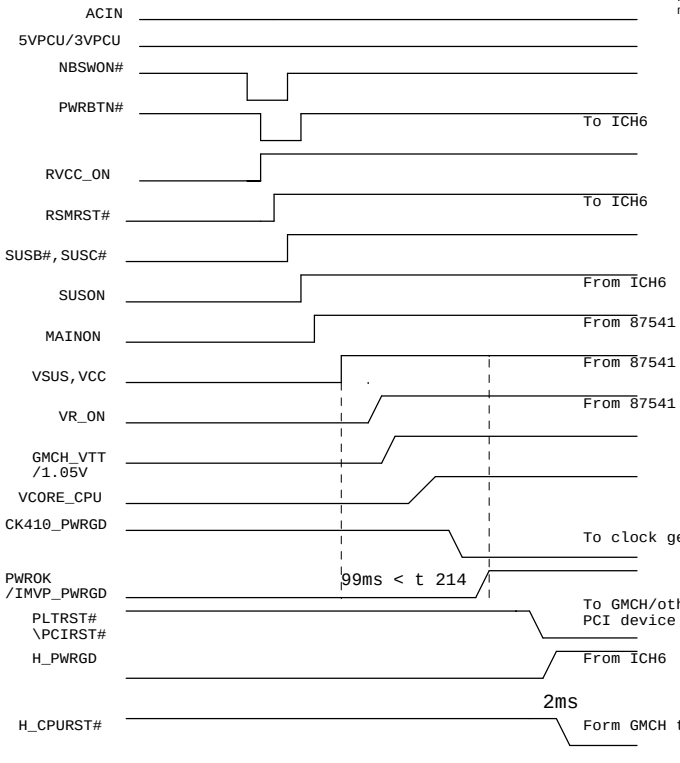
PCI DEVICES IRQ ROUTING

K3W PCI DEVICE	IDSEL#	REQ# / GNT#	Interrupts
RTL Lan	AD16	REQ0# / GNT0#	INT D#
R5C843	AD23	REQ1# / GNT1#	INT A/B/C#

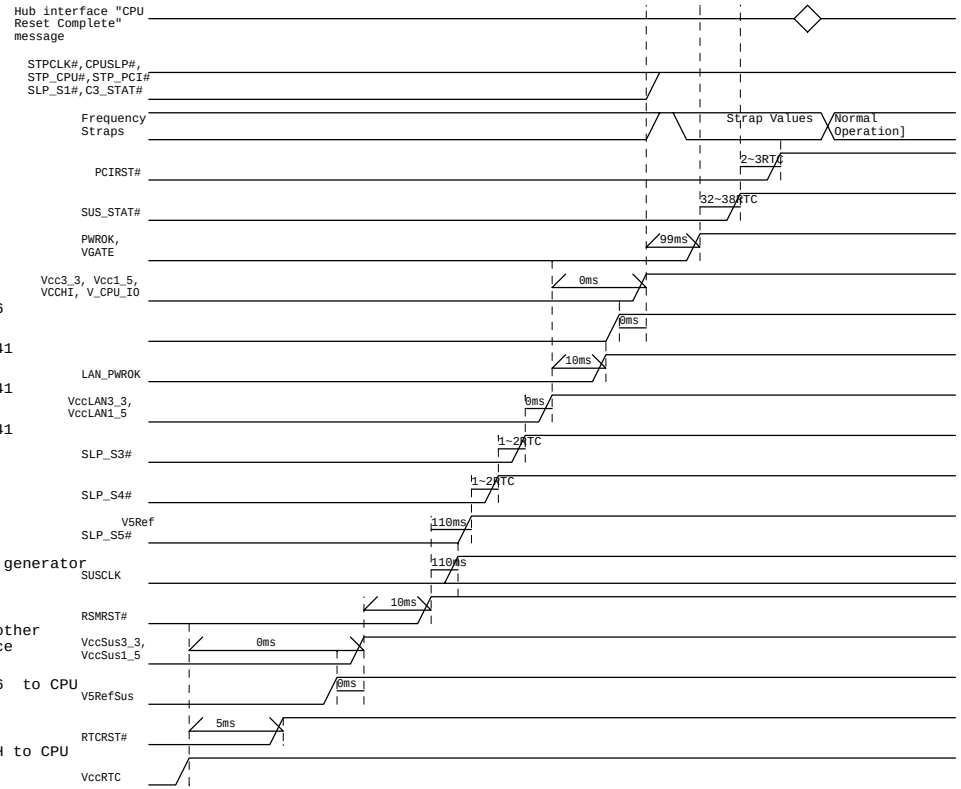
CPU Power On Sequence



ACIN POWER ON TIMING



Power Sequencing and Reset Signal Timings



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	SYSTEM INFORMATION	A

Date: Tuesday, May 16, 2006 Sheet 2 of 36

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	200	100	33

Default

SEL2 SEL1 SEL0

25 mils

L14 ACB2012L-120-T

VCC3 — 120 ohms@100Mhz — VDD_PCI

C58 0.1U/10V, C51 0.1U/10V, C50 10U

R43 2.2/F VDD_48

C63 0.1U/10V, C47 10U (16)

R47 1 VDD_REF

C60 0.1U/10V, C55 10U

SMbus address D2 /IDT

VCC3

Q7 RHU002N06

R56 10K, R58 10K

(16) PDAT_SMB — CGDAT_SMB

Q8 RHU002N06

(16) PCLK_SMB — CGCLK_SMB

Use 1% R

Iref=5mA, Ioh=4*Iref

R62 475/F IREF

(8) DREFCLK, (8) DREFCLK#

RP58 33X2

R_DOT96, R_DOT96#

BSEL strappings need to be set for 533MHz Moby Dick (Intel?915GM - Calistoga Interposer)
(if Calistoga is designed for 667MHz board).

GMCH_VTT — R443 *56/F — (4,8) CPU_BSEL0 — CPU_BSEL0

GMCH_VTT — R59 *1K — (4,8) CPU_BSEL1 — CPU_BSEL1

*0_4 R442

Stuff 0 ohm for 533MHz, NC for 667MHz

(4,8) CPU_BSEL2 — CPU_BSEL2

*0_4 R46

L15 ACB2012L-120-T

25 mils

VCC3 — 120 ohms@100Mhz — VDD_SRC_CPU

C74 0.1U/10V, C83 0.1U/10V, C82 0.1U/10V, C64 0.1U/10V, C87 10U

R69 2.2/F VDD_A

C73 0.1U/10V, C80 10U

(8,9,10,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,30,31,32) VCC3

(4,5,6,9,10,14,17,33) GMCH_VTT

Close to IC <500mils

33P/0402 C564 — CG_XIN

Y6 14.318MHZ CL=20 - 22P

33P/0402 C563 — CG_XOUT

VCC3 — R55 *10K

(16,31) VR_PWRGD_CK410#

(16) PM_STPPCI#

(16) PM_STPCPU#

(13,23) CGCLK_SMB

(13,23) CGDAT_SMB

CLKUSB_48 — R57 33

CPU_BSEL0 R440 8.2K

CPU_BSEL1

CPU_BSEL2 R428 8.2K

VDD_REF

VDD_SRC_CPU

VDD_PCI

VDD_SRC_CPU

VDD_48

VDD_A

U34

50	XTAL_IN	REF0	52
49	XTAL_OUT	CPU0	44
		CPU0#	43
10	Vtt_PwrGd#/PD	CPU1	41
55	PCI/SRC_STOP#	CPU1#	40
54	CPU_STOP#	CPU2_ITP/SRC7	36
		CPU2#_ITP/SRC7#	35
46	SCLK	SRC6	33
47	SDATA	SRC6#	32
12	FSA/USB_48MHz	SRC5	31
16	FSB/TEST_MODE	SRC5#	30
53	FSC/REF1	SRC4_SATA	26
48	VDD_REF	SRC4#_SATA	27
42	VDD_CPU	SRC3	24
1	VDD_PCI_1	SRC3#	25
7	VDD_PCI_2	SRC2	22
21	VDD_SRC0	SRC2#	23
28	VDD_SRC1	SRC1	19
34	VDD_SRC2	SRC1#	20
11	VDD_48	SRC0/DREFSSCLK	17
39	IREF	SRC0#/DREFSSCLK#	18
14	DOT96MHz	PCI5	5
15	DOT96MHz#	PCI4	4
		PCI3	3
		PCI2	56
		PCIF1/100_96M#	9
		PCIF0/ITP_EN	8
13	GND_48		
51	GND_REF		
2	GND_PCI_1		
6	GND_PCI_2		
29	GND_SRC		
45	GND_CPU		

VDDA 37, GNDA 38

CK-410M

ICS954206AG-T

IDT CV140 /56pins
ICS954206AGT /56pins

Place these termination to close CK410M.

14M_REF — R434 12.1/F — 14M_SIO (24)

R431 12.1/F — 14M_ICH (16)

C572 *10P, C570 *10P

R36 33X2: R_HCLK_CPU, R_HCLK_CPU# — HCLK_CPU (4), HCLK_CPU# (4)

R37 33X2: R_HCLK_MCH, R_HCLK_MCH# — HCLK_MCH (6), HCLK_MCH# (6)

T46, T47

RP39 33X2: RCLK_PCIE_MINI, RCLK_PCIE_MINI# — CLK_PCIE_MINI (23), CLK_PCIE_MINI# (23)

RP42 33X2: RPCIE_MCH, RPCIE_MCH# — CLK_PCIE_MCH (8), CLK_PCIE_MCH# (8)

RP43 33X2: RPCIE_SATA, RPCIE_SATA# — CLK_PCIE_SATA (14), CLK_PCIE_SATA# (14)

CLK_PCIE_NEW, CLK_PCIE_NEW#

RP40 33X2: RPCIE_ICH, RPCIE_ICH# — CLK_PCIE_ICH (15), CLK_PCIE_ICH# (15)

T1, T2

RP38 33X2: R_DREFSSCLK, R_DREFSSCLK# — DREFSSCLK (8), DREFSSCLK# (8)

R_PCLK_541, R_PCLK_R5C841, R_PCLK_LAN, PCLK_MINI_LPC, R_PCLK_ICH, R_PCLK_SIO

R430 33 — PCLK_541 (30)

R427 33 — PCLK_R5C841 (20)

R424 33 — PCLK_LAN (22)

R425 12.1/F — PCLK_LPC_DEBUG (18,23)

R436 33 — PCLK_ICH (15)

R423 12.1/F — PCLK_TPM (25)

R433 33 — PCLK_SIO (24)

R49 10K VCC3

R51 *10K VCC3

R50 10K

Use 1% R

DREFSSCLK Frequency Select.
"0" : 96MHz
"1" : 100MHz

Place these termination to close CK410M.

HCLK_CPU	R437	49.9/F/B
HCLK_CPU#	R439	49.9/F/B
HCLK_MCH	R441	49.9/F/B
HCLK_MCH#	R444	49.9/F/B
CLK_PCIE_MINI	R445	49.9/F/B
CLK_PCIE_MINI#	R446	49.9/F/B
CLK_PCIE_MCH	R448	49.9/F/B
CLK_PCIE_MCH#	R450	49.9/F/B
CLK_PCIE_SATA	R71	49.9/F/B
CLK_PCIE_SATA#	R72	49.9/F/B
CLK_PCIE_ICH	R67	49.9/F/B
CLK_PCIE_ICH#	R70	49.9/F/B
DREFSSCLK	R466	49.9/F/B
DREFSSCLK#	R465	49.9/F/B
DREFCLK	R119	49.9/F/B
DREFCLK#	R117	49.9/F/B

PCLK_541, PCLK_R5C841, PCLK_LAN — PCLK_541 (30), PCLK_R5C841 (20), PCLK_LAN (22)

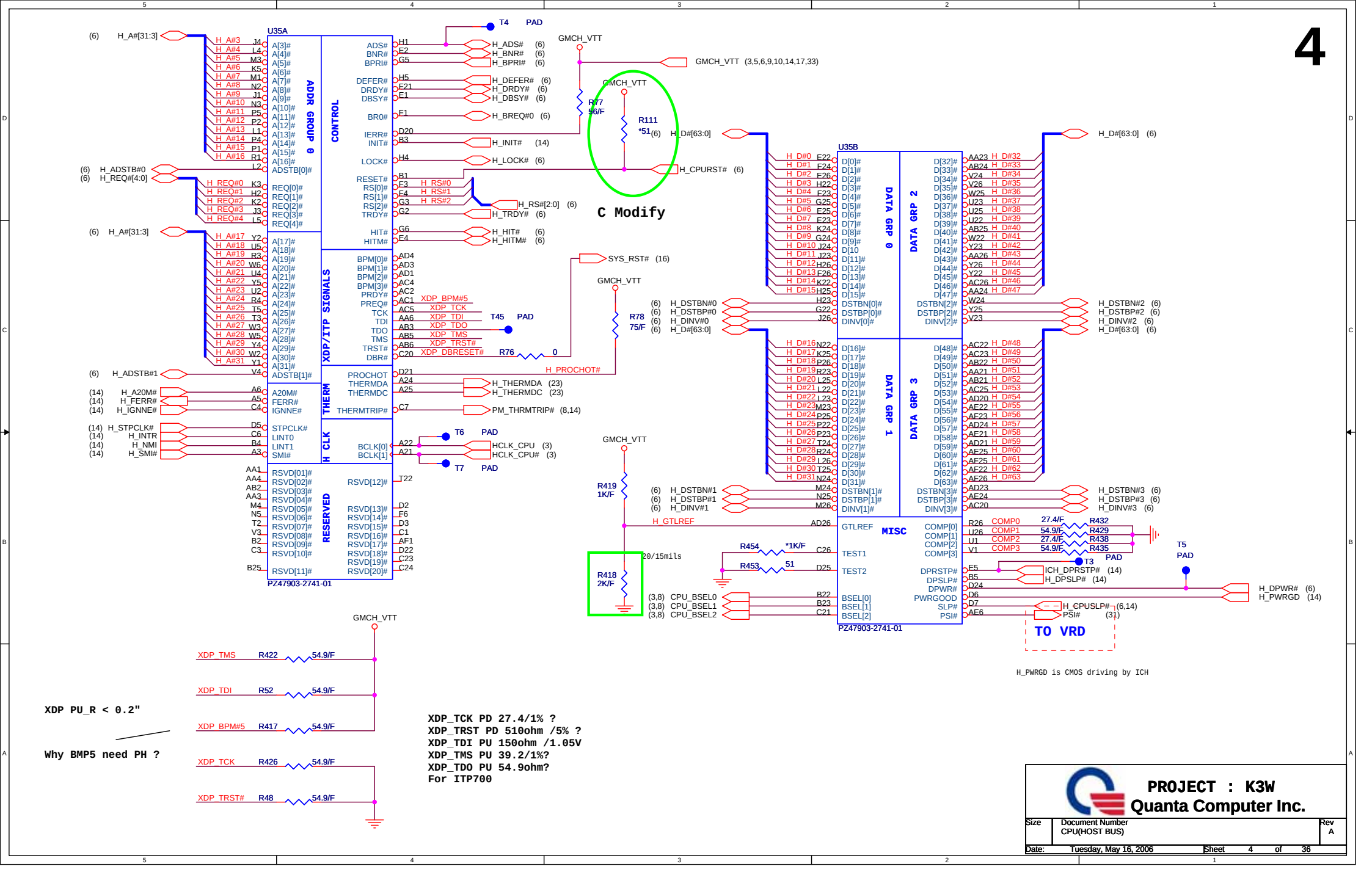
PCLK_LPC_DEBUG, PCLK_ICH, PCLK_TPM, PCLK_SIO — PCLK_LPC_DEBUG (18,23), PCLK_ICH (15), PCLK_TPM (25), PCLK_SIO (24)

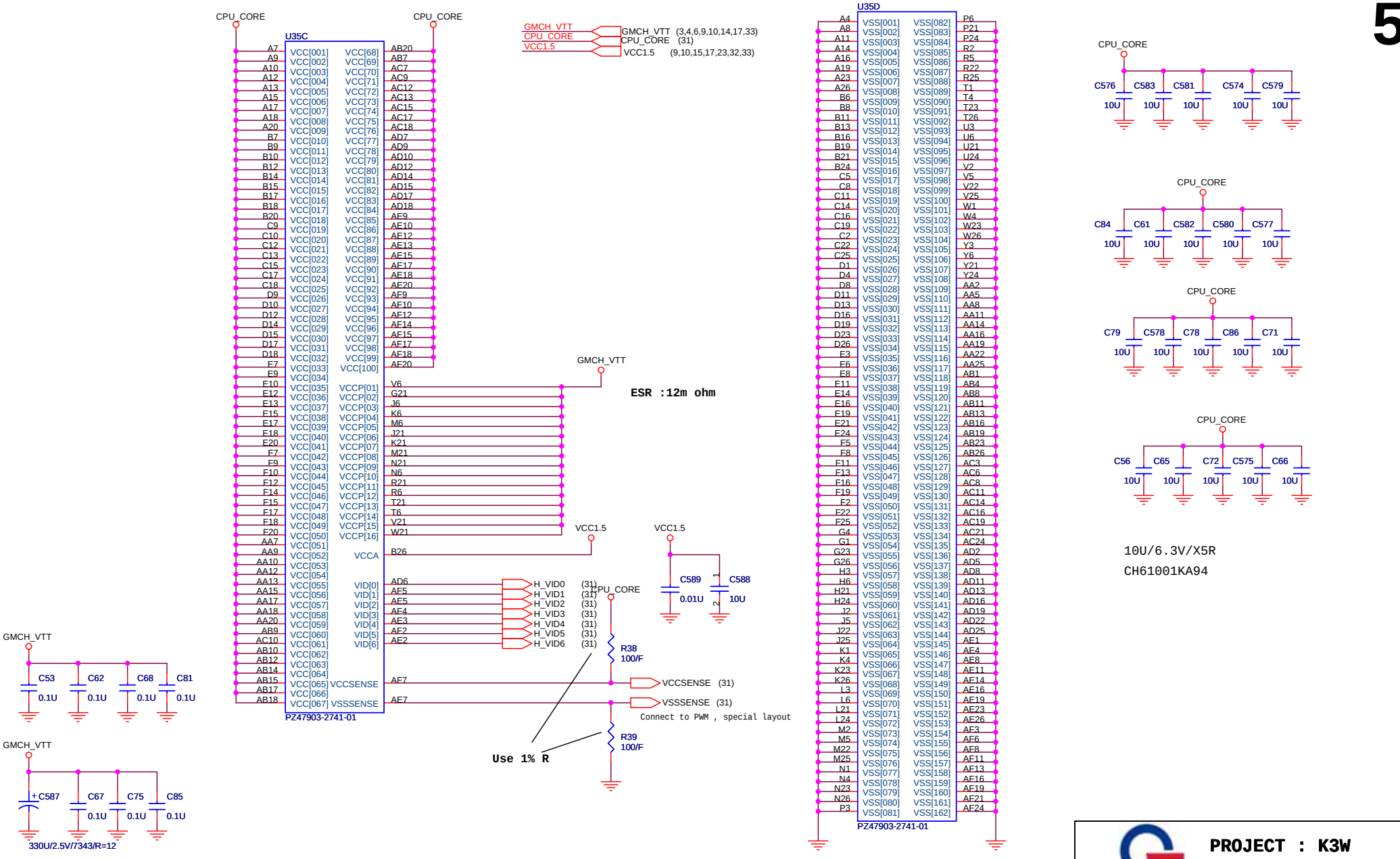
*0.1U/10V: C569, C567, C565, C568, C573, C566, C571

PROJECT : K3W
Quanta Computer Inc.

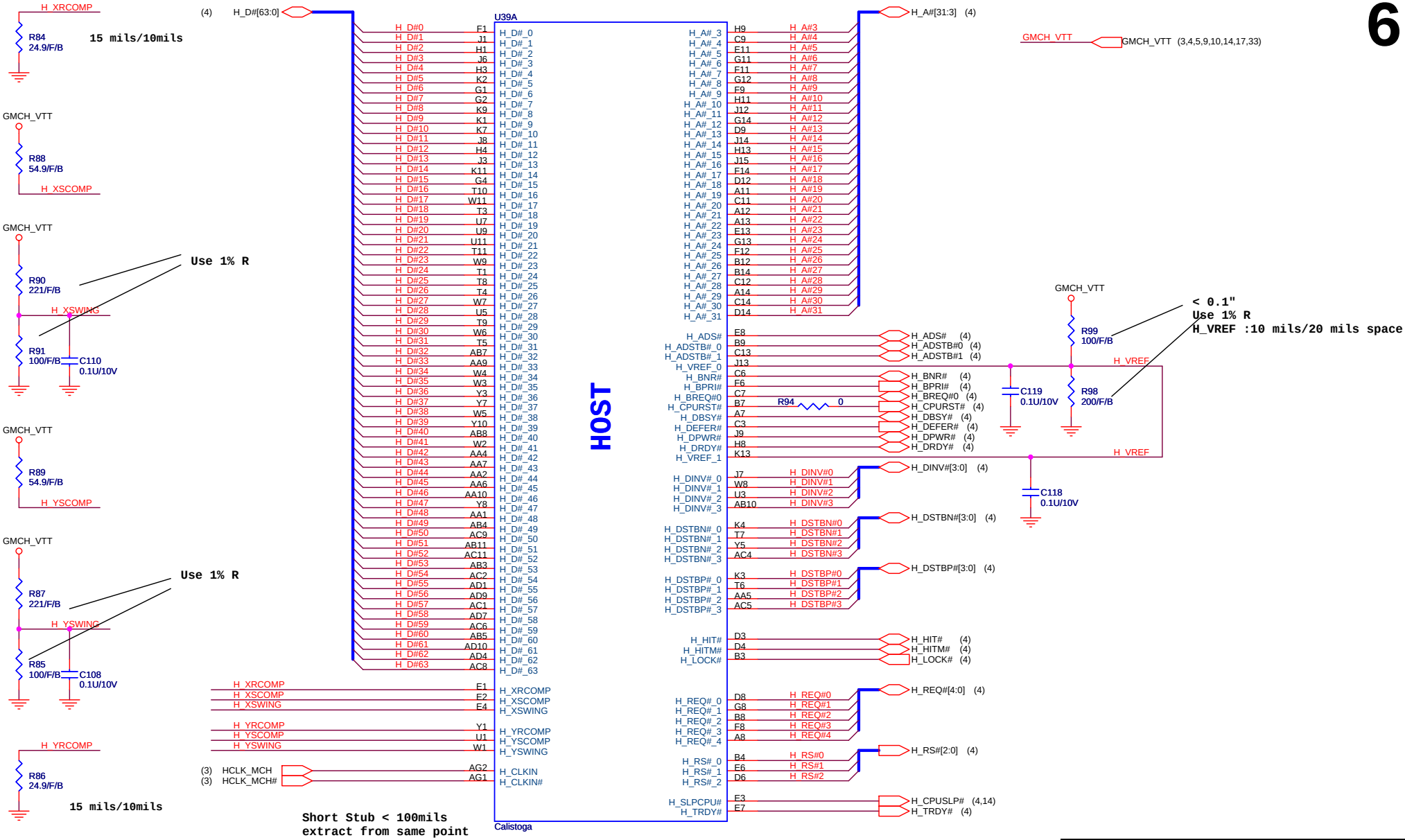
Size	Document Number	Rev
	CLOCK GENERATOR	A

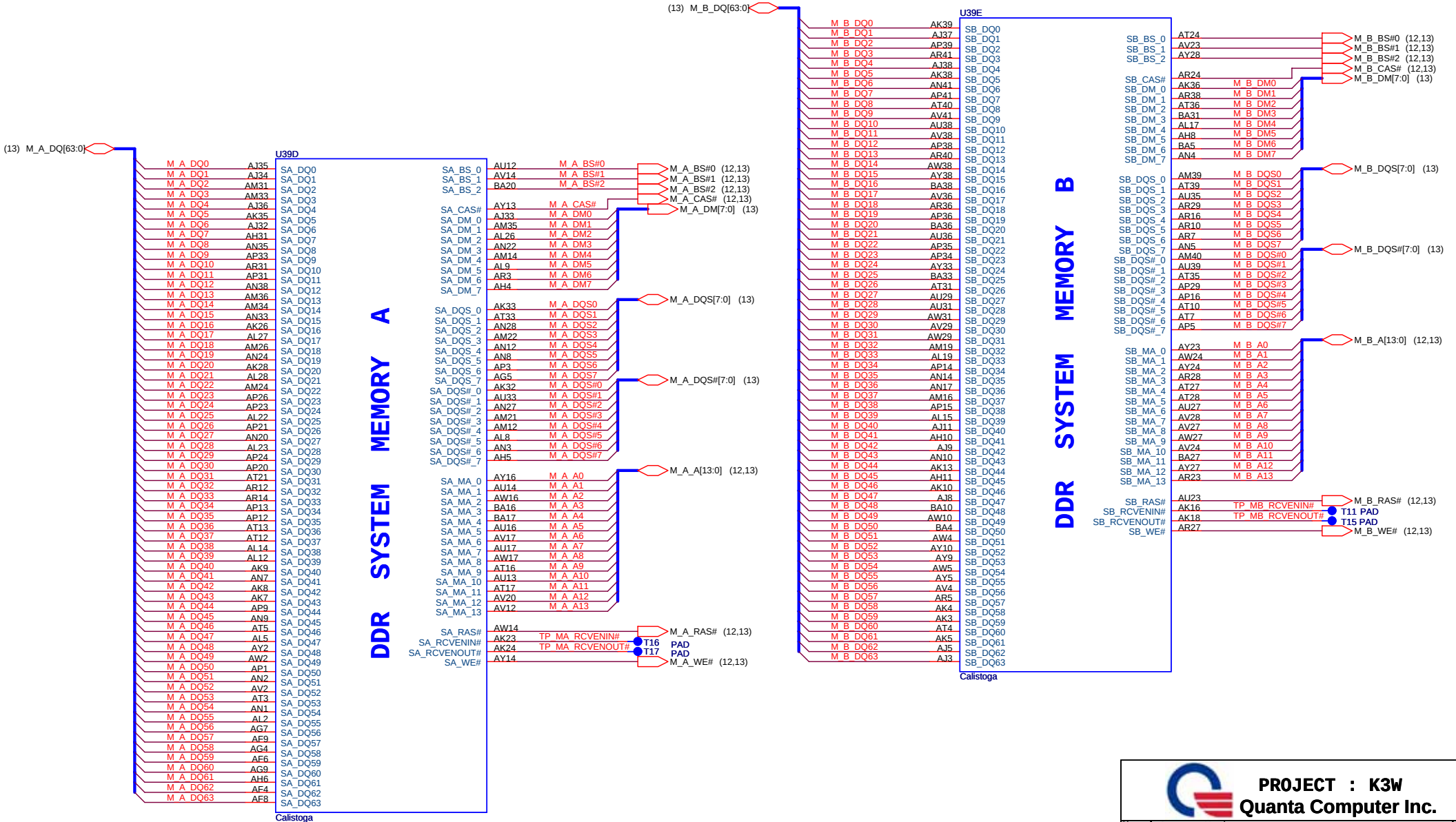
Date: Tuesday, May 16, 2006 Sheet 3 of 36


4
U35A
ADDR GROUP 0
CONTROL
XDP/ITP SIGNALS
THERM
H CLK
RESERVED
PZ47903-2741-01
U35B
DATA GRP 0
DATA GRP 2
DATA GRP 1
DATA GRP 3
MISC
PZ47903-2741-01
C Modify
TO VRD
H_PWRGD is CMOS driving by ICH
XDP PU_R < 0.2"
Why BMP5 need PH ?
XDP_TCK PD 27.4/1% ?
XDP_TRST PD 510ohm /5% ?
XDP_TDI PU 150ohm /1.05V
XDP_TMS PU 39.2/1%?
XDP_TDO PU 54.9ohm?
For ITP700
PROJECT : K3W
Quanta Computer Inc.
Size
Document Number
CPU(HOST BUS)
Rev
A
Date: Tuesday, May 16, 2006
Sheet 4 of 36



PROJECT : K3W		
Quanta Computer Inc.		
Size	Document Number CPU(POWER)	Rev A
Date: Tuesday, May 16, 2006	Sheet 5 of 36	

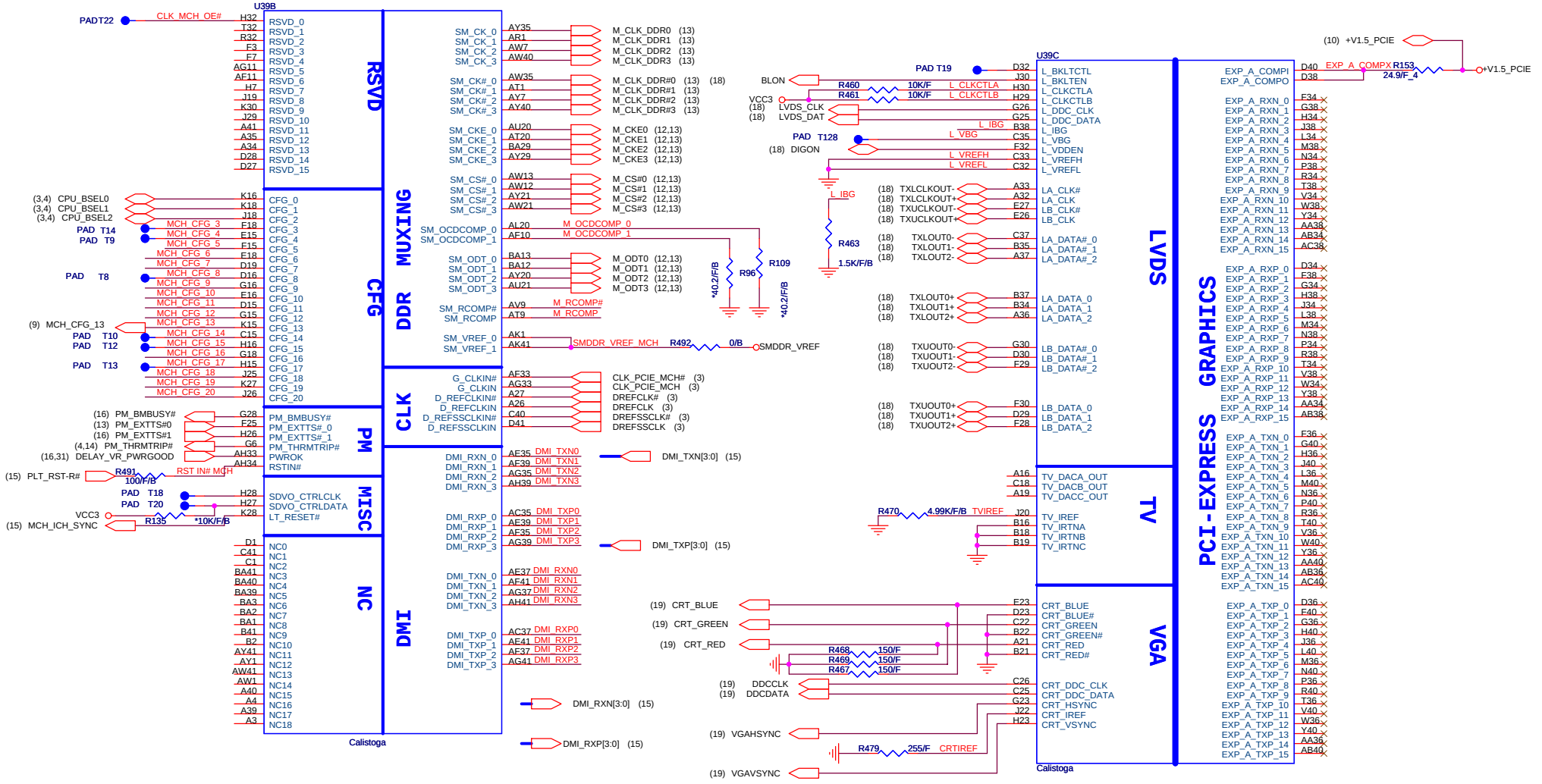

6
H_XRCOMP
R84
24.9/F/B
15 mils/10mils
GMCH_VTT
R88
54.9/F/B
H_XSCOMP
GMCH_VTT
R90
221/F/B
Use 1% R
H_XSWING
R91
100/F/B
C110
0.1U/10V
GMCH_VTT
R89
54.9/F/B
H_YSCOMP
GMCH_VTT
R87
221/F/B
Use 1% R
H_YSWING
R85
100/F/B
C108
0.1U/10V
H_YRCOMP
R86
24.9/F/B
15 mils/10mils
(4) H_D#[63:0]
U39A
HOST
Calistoga
H_D#0 F1
H_D#1 J1
H_D#2 H1
H_D#3 J6
H_D#4 H3
H_D#5 K2
H_D#6 G1
H_D#7 G2
H_D#8 K9
H_D#9 K1
H_D#10 K7
H_D#11 J8
H_D#12 H4
H_D#13 J3
H_D#14 K11
H_D#15 G4
H_D#16 T10
H_D#17 W11
H_D#18 T3
H_D#19 U7
H_D#20 U9
H_D#21 U11
H_D#22 T11
H_D#23 W9
H_D#24 T1
H_D#25 T8
H_D#26 T4
H_D#27 W7
H_D#28 U5
H_D#29 T9
H_D#30 W6
H_D#31 T5
H_D#32 AB7
H_D#33 AA9
H_D#34 W4
H_D#35 W3
H_D#36 Y3
H_D#37 Y7
H_D#38 W5
H_D#39 Y10
H_D#40 AB8
H_D#41 W2
H_D#42 AA4
H_D#43 AA7
H_D#44 AA2
H_D#45 AA6
H_D#46 AA10
H_D#47 Y8
H_D#48 AA1
H_D#49 AB4
H_D#50 AC9
H_D#51 AB11
H_D#52 AC11
H_D#53 AB3
H_D#54 AC2
H_D#55 AD1
H_D#56 AD9
H_D#57 AC1
H_D#58 AD7
H_D#59 AC6
H_D#60 AB5
H_D#61 AD10
H_D#62 AD4
H_D#63 AC8
H_XRCOMP E1
H_XSCOMP E2
H_XSWING E4
H_YRCOMP Y1
H_YSCOMP U1
H_YSWING W1
(3) HCLK_MCH AG2
(3) HCLK_MCH# AG1
H_CLKIN
H_CLKIN#
Short Stub < 100mils
extract from same point
H_A#_3 H9
H_A#_4 C9
H_A#_5 E11
H_A#_6 G11
H_A#_7 F11
H_A#_8 G12
H_A#_9 F9
H_A#_10 H11
H_A#_11 J12
H_A#_12 G14
H_A#_13 D9
H_A#_14 J14
H_A#_15 H13
H_A#_16 J15
H_A#_17 F14
H_A#_18 D12
H_A#_19 A11
H_A#_20 C11
H_A#_21 A12
H_A#_22 A13
H_A#_23 E13
H_A#_24 G13
H_A#_25 F12
H_A#_26 B12
H_A#_27 B14
H_A#_28 C12
H_A#_29 A14
H_A#_30 C14
H_A#_31 D14
H_A#3
H_A#4
H_A#5
H_A#6
H_A#7
H_A#8
H_A#9
H_A#10
H_A#11
H_A#12
H_A#13
H_A#14
H_A#15
H_A#16
H_A#17
H_A#18
H_A#19
H_A#20
H_A#21
H_A#22
H_A#23
H_A#24
H_A#25
H_A#26
H_A#27
H_A#28
H_A#29
H_A#30
H_A#31
H_A#[31:3] (4)
GMCH_VTT
GMCH_VTT (3,4,5,9,10,14,17,33)
H_ADS# E8
H_ADSTB#_0 B9
H_ADSTB#_1 C13
H_VREF_0 J13
H_BNR# C6
H_BPRI# F6
H_BREQ#0 C7
H_CPURST# B7
H_DBSY# A7
H_DEFER# C3
H_DPWR# J9
H_DRDY# H8
H_VREF_1 K13
H_ADS# (4)
H_ADSTB#0 (4)
H_ADSTB#1 (4)
H_BNR# (4)
H_BPRI# (4)
H_BREQ#0 (4)
H_CPURST# (4)
H_DBSY# (4)
H_DEFER# (4)
H_DPWR# (4)
H_DRDY# (4)
R94 0
GMCH_VTT
R99
100/F/B
< 0.1"
Use 1% R
H_VREF :10 mils/20 mils space
H_VREF
C119
0.1U/10V
R98
200/F/B
H_VREF
C118
0.1U/10V
H_DINV#_0 J7
H_DINV#_1 W8
H_DINV#_2 U3
H_DINV#_3 AB10
H_DINV#0
H_DINV#1
H_DINV#2
H_DINV#3
H_DINV#[3:0] (4)
H_DSTBN#_0 K4
H_DSTBN#_1 T7
H_DSTBN#_2 Y5
H_DSTBN#_3 AC4
H_DSTBN#0
H_DSTBN#1
H_DSTBN#2
H_DSTBN#3
H_DSTBN#[3:0] (4)
H_DSTBP#_0 K3
H_DSTBP#_1 T6
H_DSTBP#_2 AA5
H_DSTBP#_3 AC5
H_DSTBP#0
H_DSTBP#1
H_DSTBP#2
H_DSTBP#3
H_DSTBP#[3:0] (4)
H_HIT# D3
H_HITM# D4
H_LOCK# B3
H_HIT# (4)
H_HITM# (4)
H_LOCK# (4)
H_REQ#_0 D8
H_REQ#_1 G8
H_REQ#_2 B8
H_REQ#_3 F8
H_REQ#_4 A8
H_REQ#0
H_REQ#1
H_REQ#2
H_REQ#3
H_REQ#4
H_REQ#[4:0] (4)
H_RS#_0 B4
H_RS#_1 E6
H_RS#_2 D6
H_RS#0
H_RS#1
H_RS#2
H_RS#[2:0] (4)
H_SLPCPU# E3
H_TRDY# E7
H_CPUSLP# (4,14)
H_TRDY# (4)
PROJECT : K3W
Quanta Computer Inc.
Size
Document Number
GMCH HOST(1 OF 6)
Rev
A
Date: Tuesday, May 16, 2006
Sheet 6 of 36



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	GMCH DDR(2 OF 6)	A

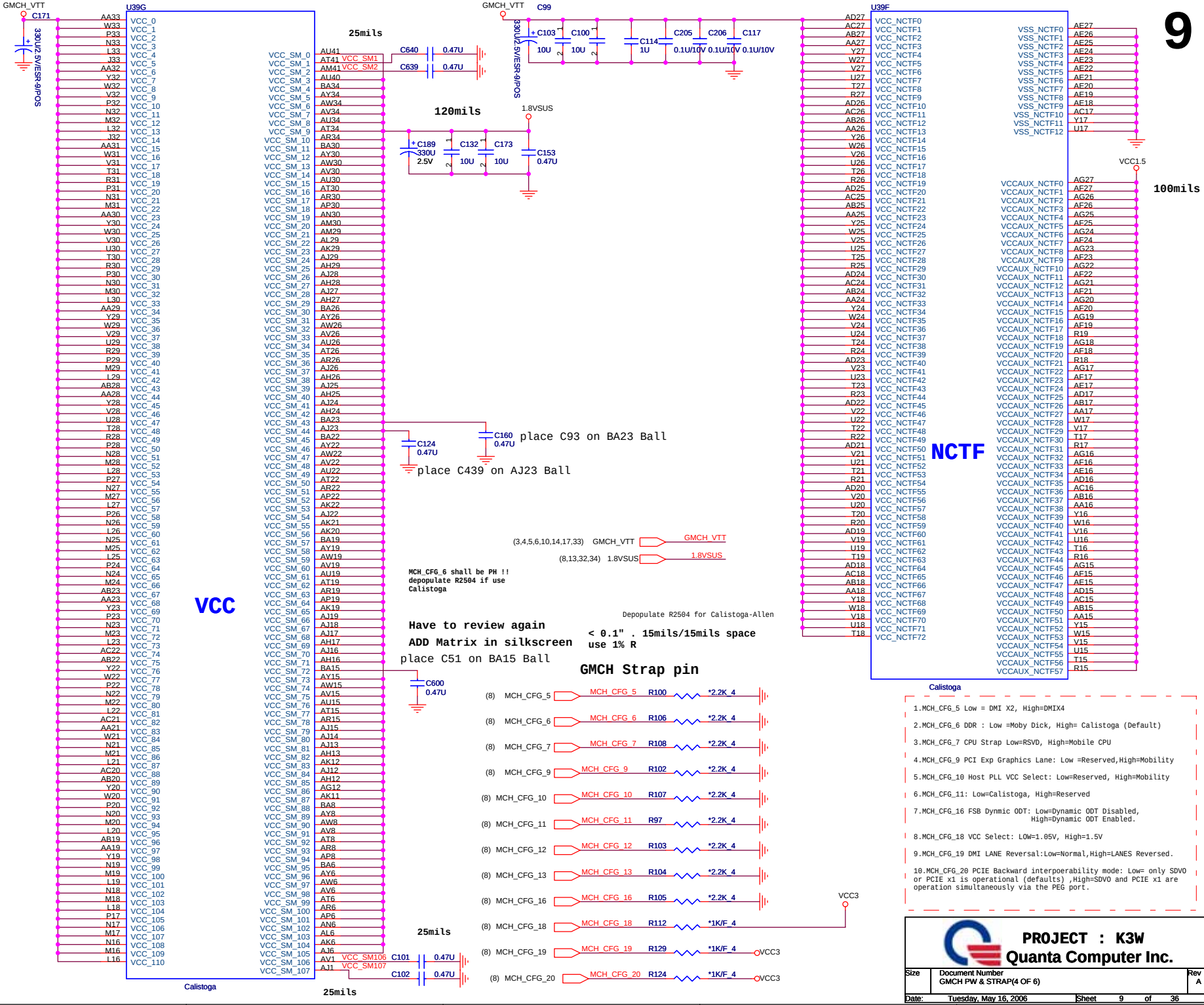
Date: Tuesday, May 16, 2006 Sheet 7 of 36

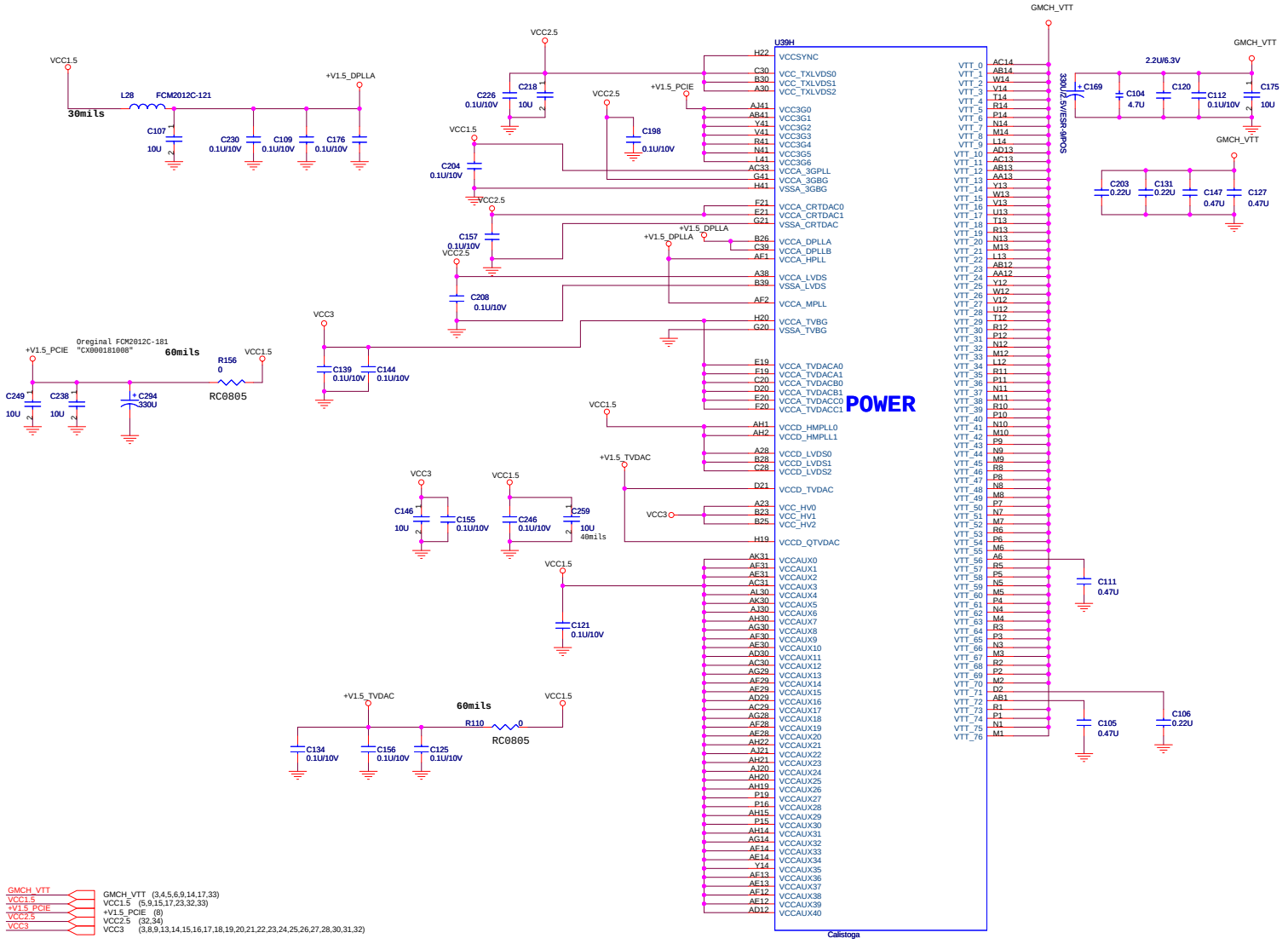


Size	Document Number	Rev
	GMCH DMI VEDIO(3 OF 6)	A

PROJECT : K3W
Quanta Computer Inc.

Date: Tuesday, May 16, 2006 Sheet 8 of 36

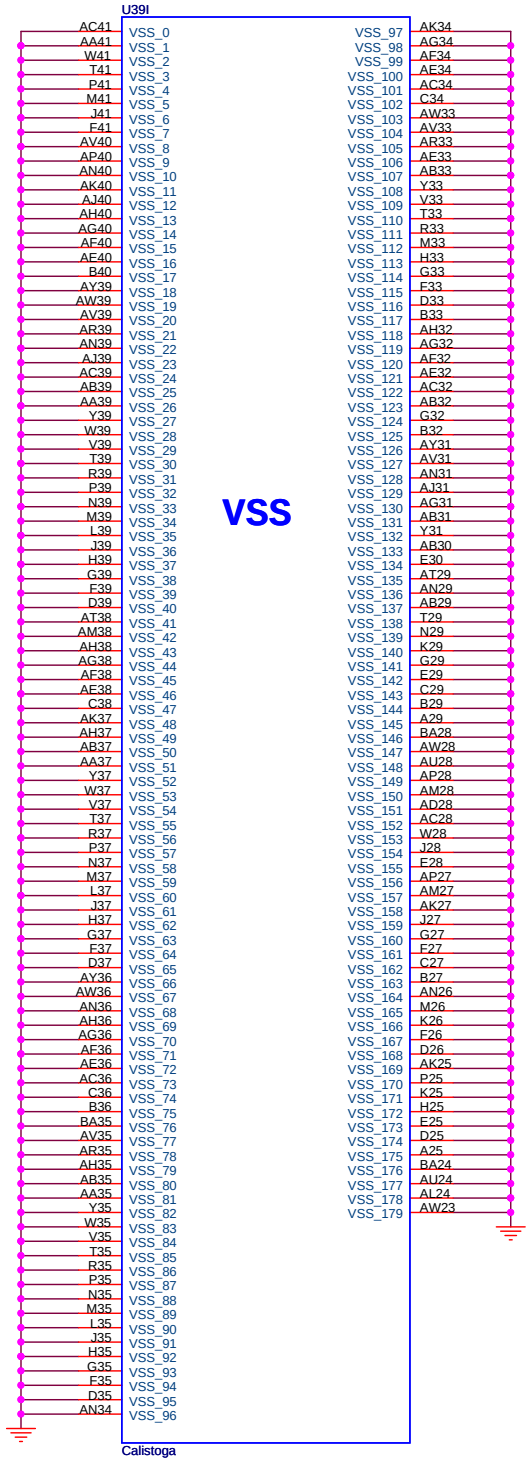

U39G
VCC
Calistoga
U39F
NCTF
Calistoga
GMCH_VTT
C171
330U/2.5V/ESR-9/POS
C99
C103
C100
C114
C205
C206
C117
10U
1U
0.1U/10V
25mils
C640
C639
0.47U
120mils
1.8VSUS
C189
330U
2.5V
C132
C173
C153
C124
C160
place C93 on BA23 Ball
place C439 on AJ23 Ball
(3,4,5,6,10,14,17,33) GMCH_VTT
(8,13,32,34) 1.8VSUS
MCH_CFG_6 shall be PH !!
depopulate R2504 if use
Calistoga
Depopulate R2504 for Calistoga-Allen
Have to review again
ADD Matrix in silkscreen
place C51 on BA15 Ball
< 0.1" . 15mils/15mils space
use 1% R
C600
0.47U
GMCH Strap pin
MCH_CFG_5 R100 *2.2K_4
MCH_CFG_6 R106 *2.2K_4
MCH_CFG_7 R108 *2.2K_4
MCH_CFG_9 R102 *2.2K_4
MCH_CFG_10 R107 *2.2K_4
MCH_CFG_11 R97 *2.2K_4
MCH_CFG_12 R103 *2.2K_4
MCH_CFG_13 R104 *2.2K_4
MCH_CFG_16 R105 *2.2K_4
MCH_CFG_18 R112 *1K/F_4
MCH_CFG_19 R129 *1K/F_4
MCH_CFG_20 R124 *1K/F_4
VCC3
C101
C102
VCC_SM106
VCC_SM107
25mils
100mils
VCC1.5
1.MCH_CFG_5 Low = DMI X2, High=DMIX4
2.MCH_CFG_6 DDR : Low =Moby Dick, High= Calistoga (Default)
3.MCH_CFG_7 CPU Strap Low=RSVD, High=Mobile CPU
4.MCH_CFG_9 PCI Exp Graphics Lane: Low =Reserved,High=Mobility
5.MCH_CFG_10 Host PLL VCC Select: Low=Reserved, High=Mobility
6.MCH_CFG_11: Low=Calistoga, High=Reserved
7.MCH_CFG_16 FSB Dynmic ODT: Low=Dynamic ODT Disabled,
High=Dynamic ODT Enabled.
8.MCH_CFG_18 VCC Select: LOW=1.05V, High=1.5V
9.MCH_CFG_19 DMI LANE Reversal:Low=Normal,High=LANES Reversed.
10.MCH_CFG_20 PCIE Backward interpoerability mode: Low= only SDVO
or PCIE x1 is operational (defaults) ,High=SDVO and PCIE x1 are
operation simultaneously via the PEG port.
PROJECT : K3W
Quanta Computer Inc.
Size
Document Number
GMCH PW & STRAP(4 OF 6)
Rev
A
Date: Tuesday, May 16, 2006
Sheet 9 of 36
9

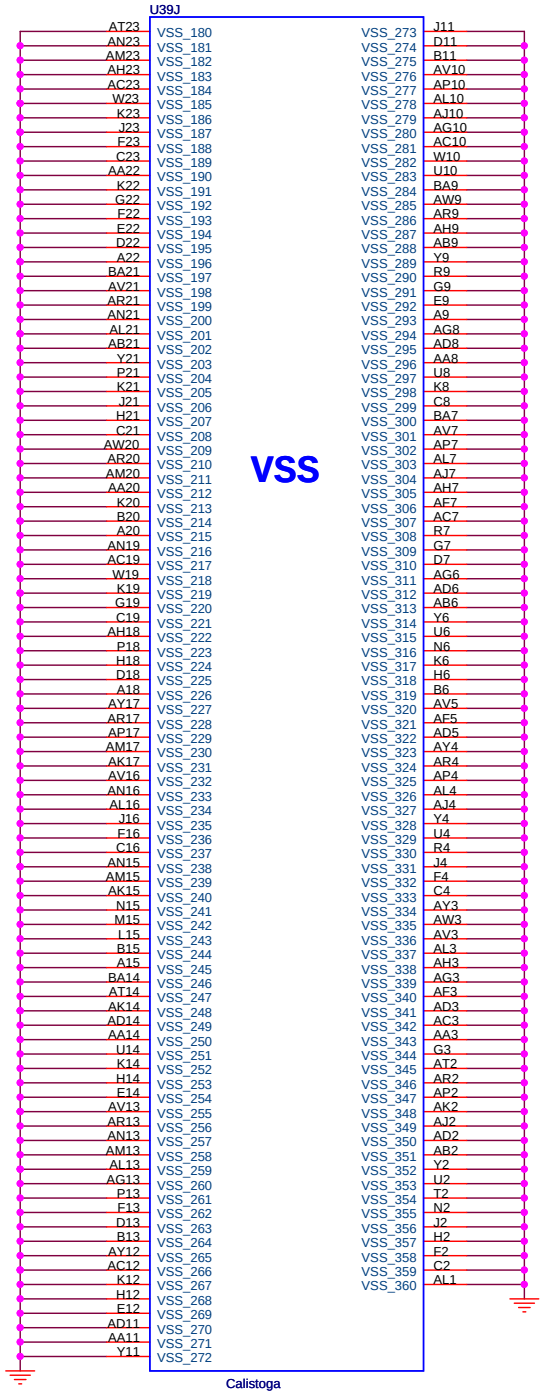


PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	GMCH POWER (5 OF 6)	A

Date: Tuesday, May 16, 2006 Sheet 10 of 36





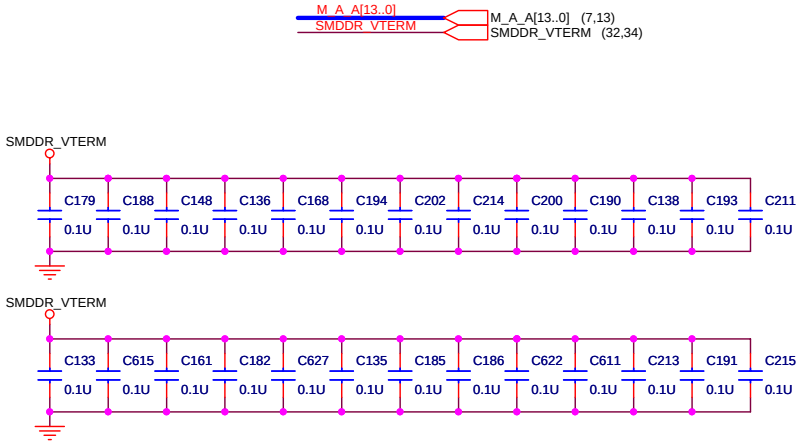
PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	GMCH GND(6 OF 6)	A

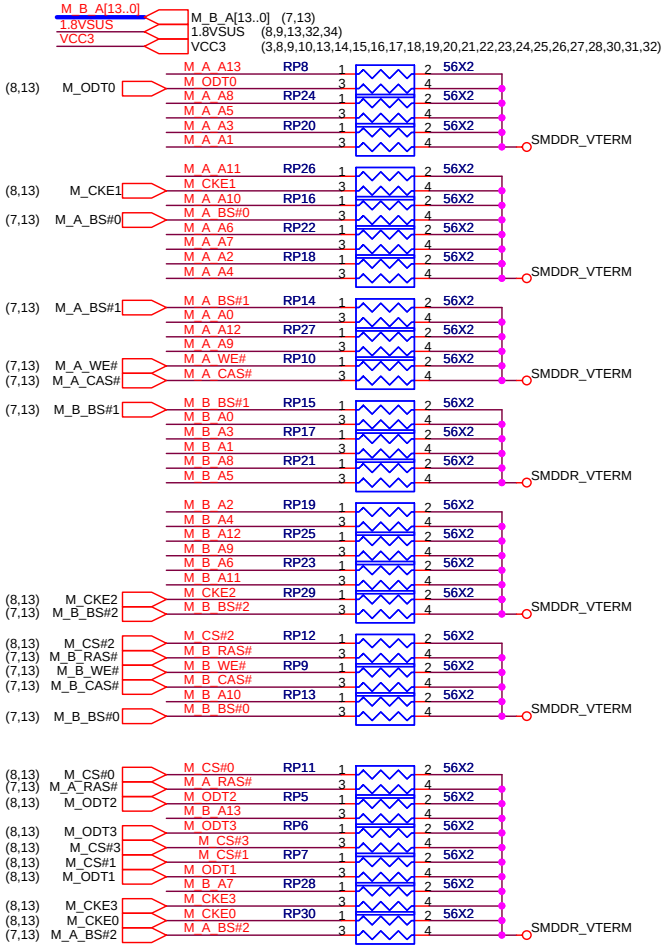
Date: Tuesday, May 16, 2006 Sheet 11 of 36

DDRII DUAL CHANNEL A,B.

DDRII A CHANNEL



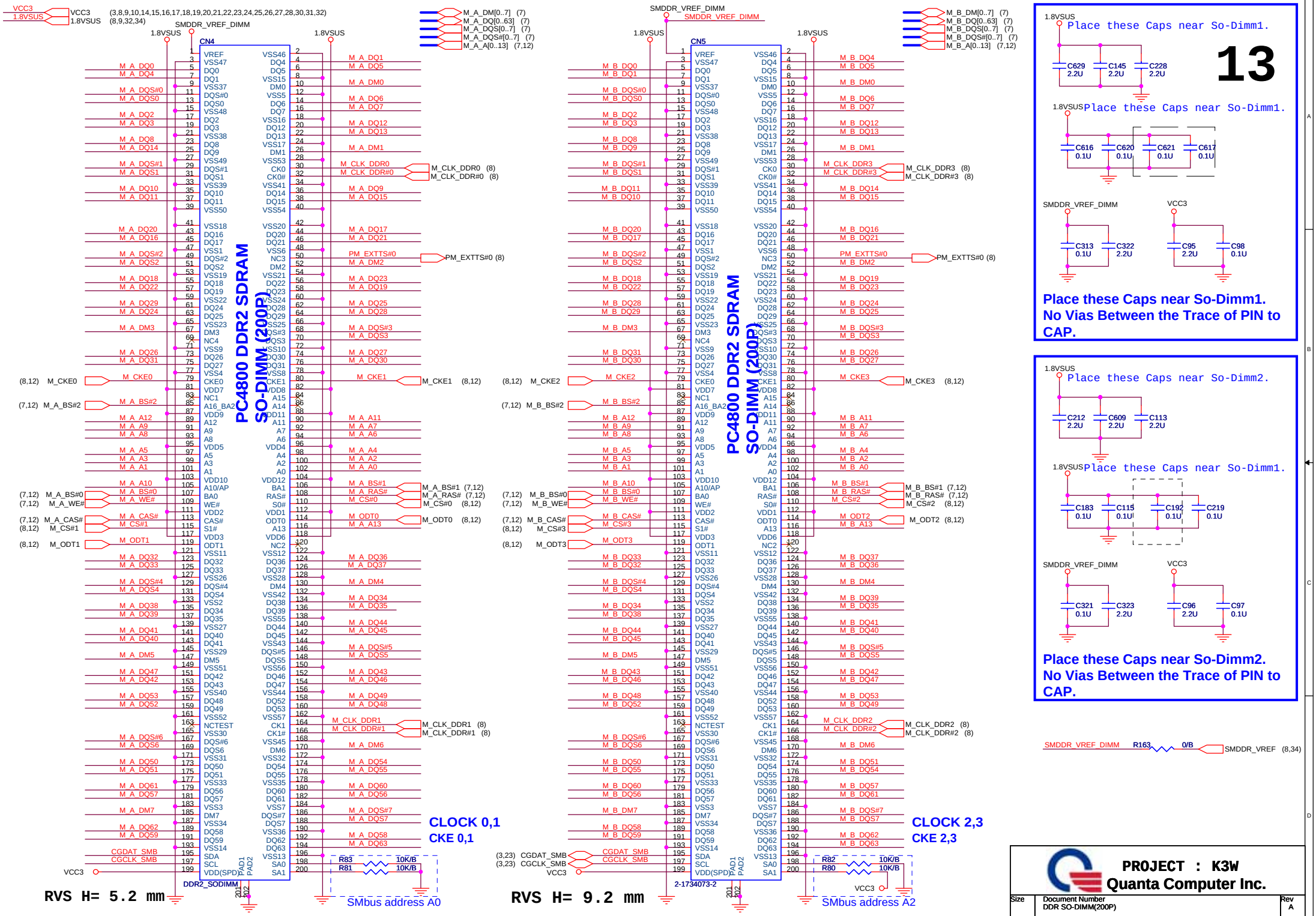
DDRII B CHANNEL

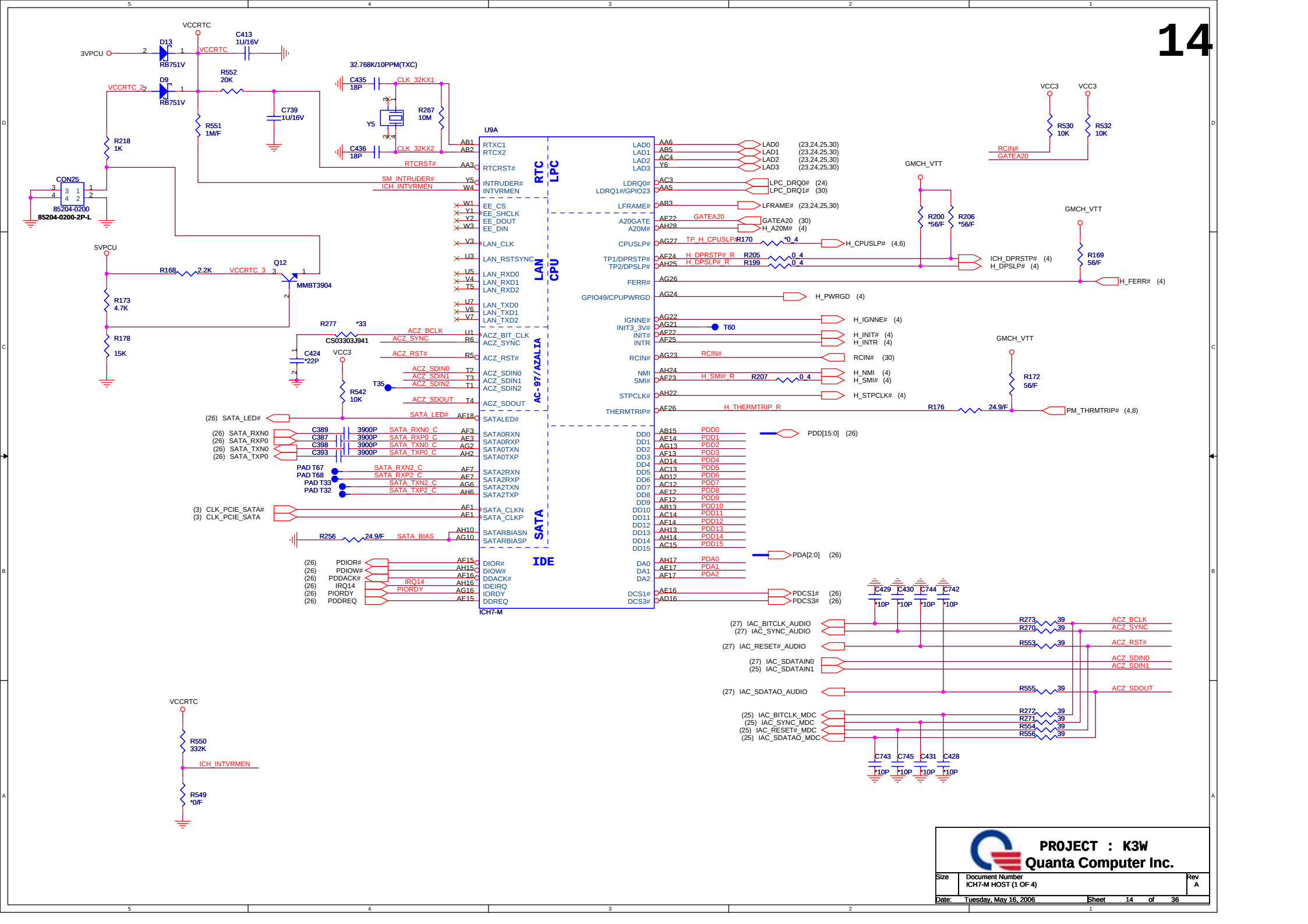


PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	DDR RES. ARRAY	A

Date: Tuesday, May 16, 2006 Sheet 12 of 36


CN4
PC4800 DDR2 SDRAM
SO-DIMM (200P)
DDR2_SODIMM
RVS H= 5.2 mm
CLOCK 0,1
CKE 0,1
SMBus address A0
CN5
PC4800 DDR2 SDRAM
SO-DIMM (200P)
2-1734073-2
RVS H= 9.2 mm
CLOCK 2,3
CKE 2,3
SMBus address A2
Place these Caps near So-Dimm1.
13
Place these Caps near So-Dimm1.
No Vias Between the Trace of PIN to CAP.
Place these Caps near So-Dimm2.
Place these Caps near So-Dimm2.
No Vias Between the Trace of PIN to CAP.
PROJECT : K3W
Quanta Computer Inc.
Document Number
DDR SO-DIMM(200P)
Rev A
Tuesday, May 16, 2006
Sheet 13 of 36



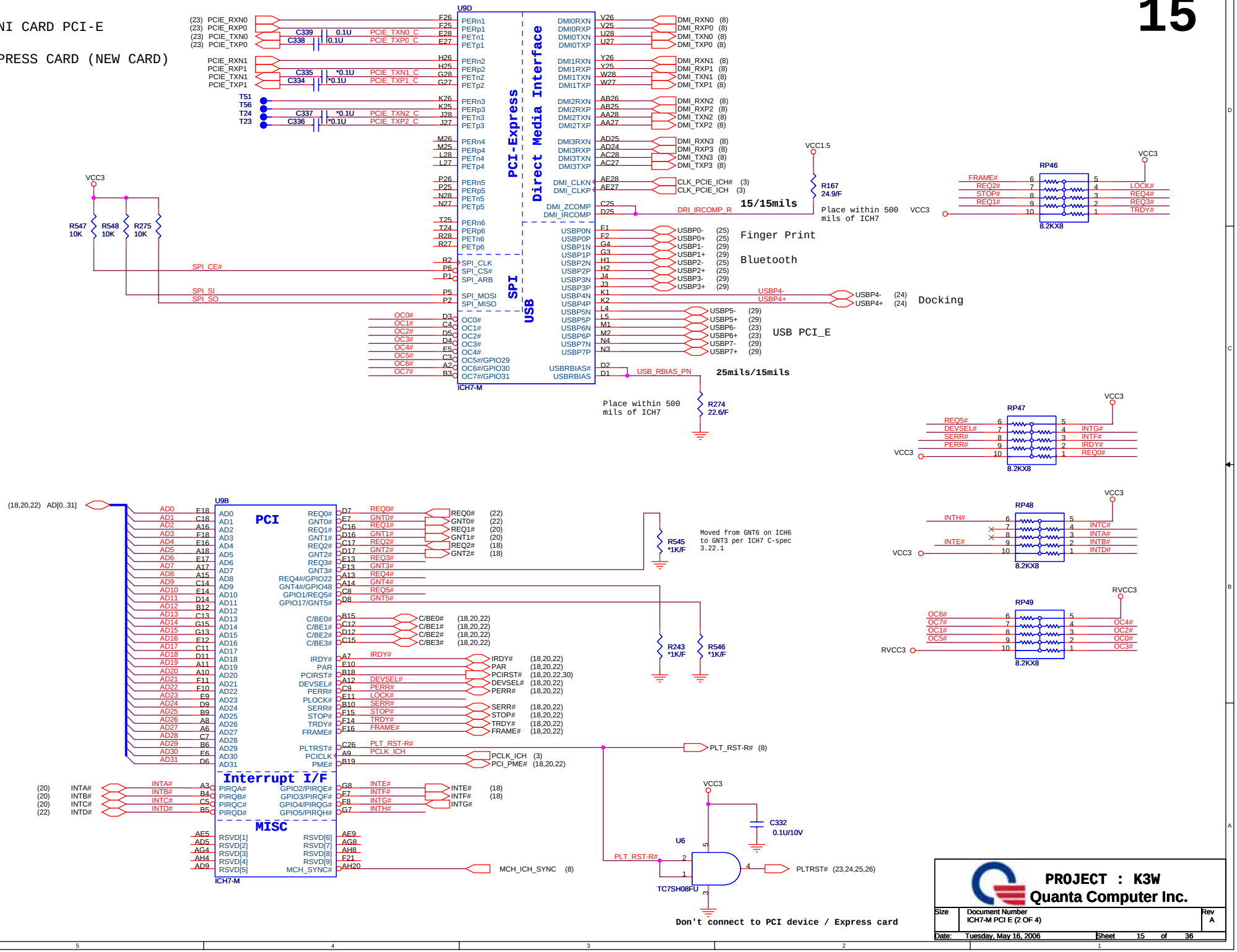
PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	ICH7-M HOST (1 OF 4)	A

Date: Tuesday, May 16, 2006 Sheet 14 of 36

MINI CARD PCI-E

EXPRESS CARD (NEW CARD)

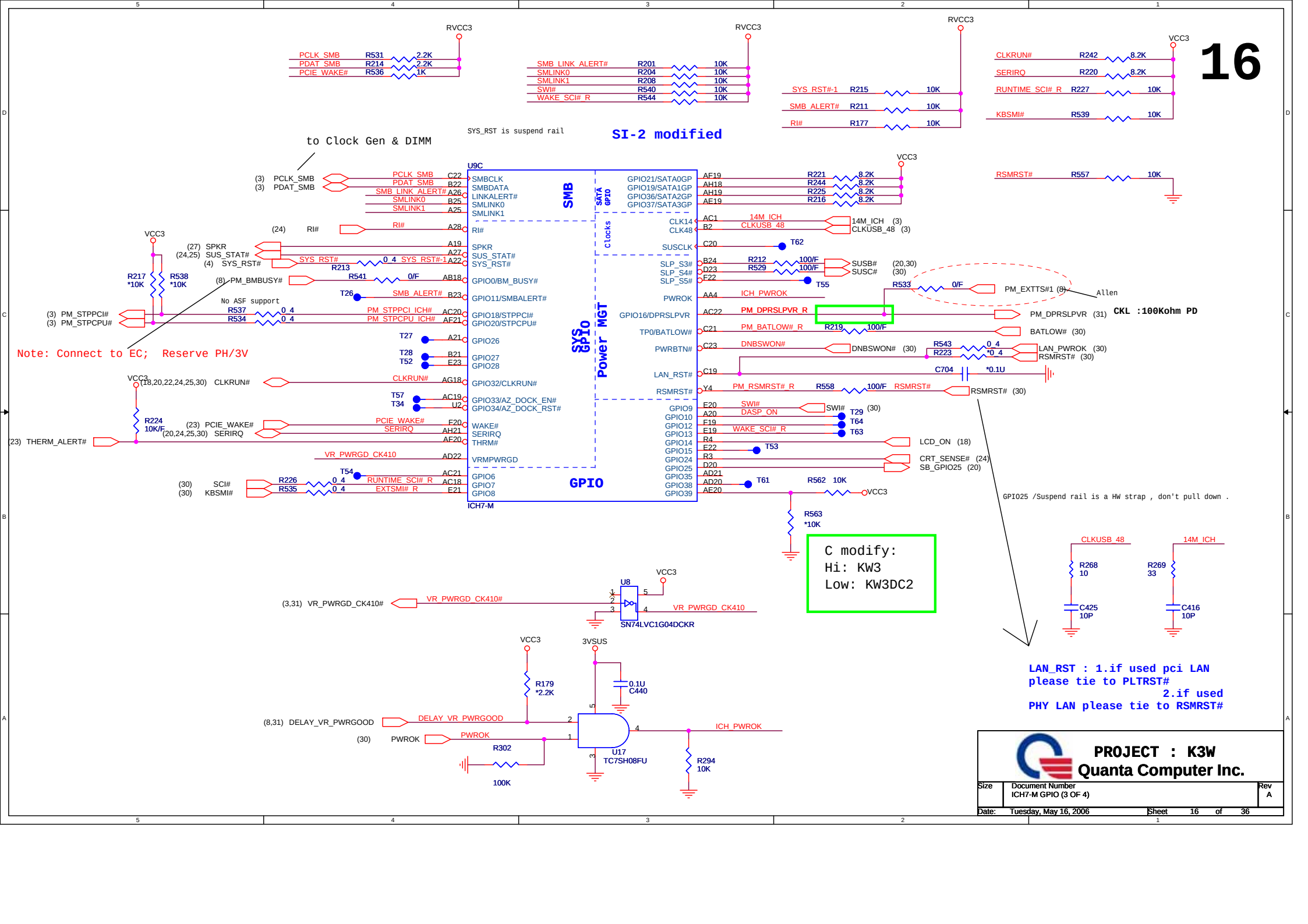


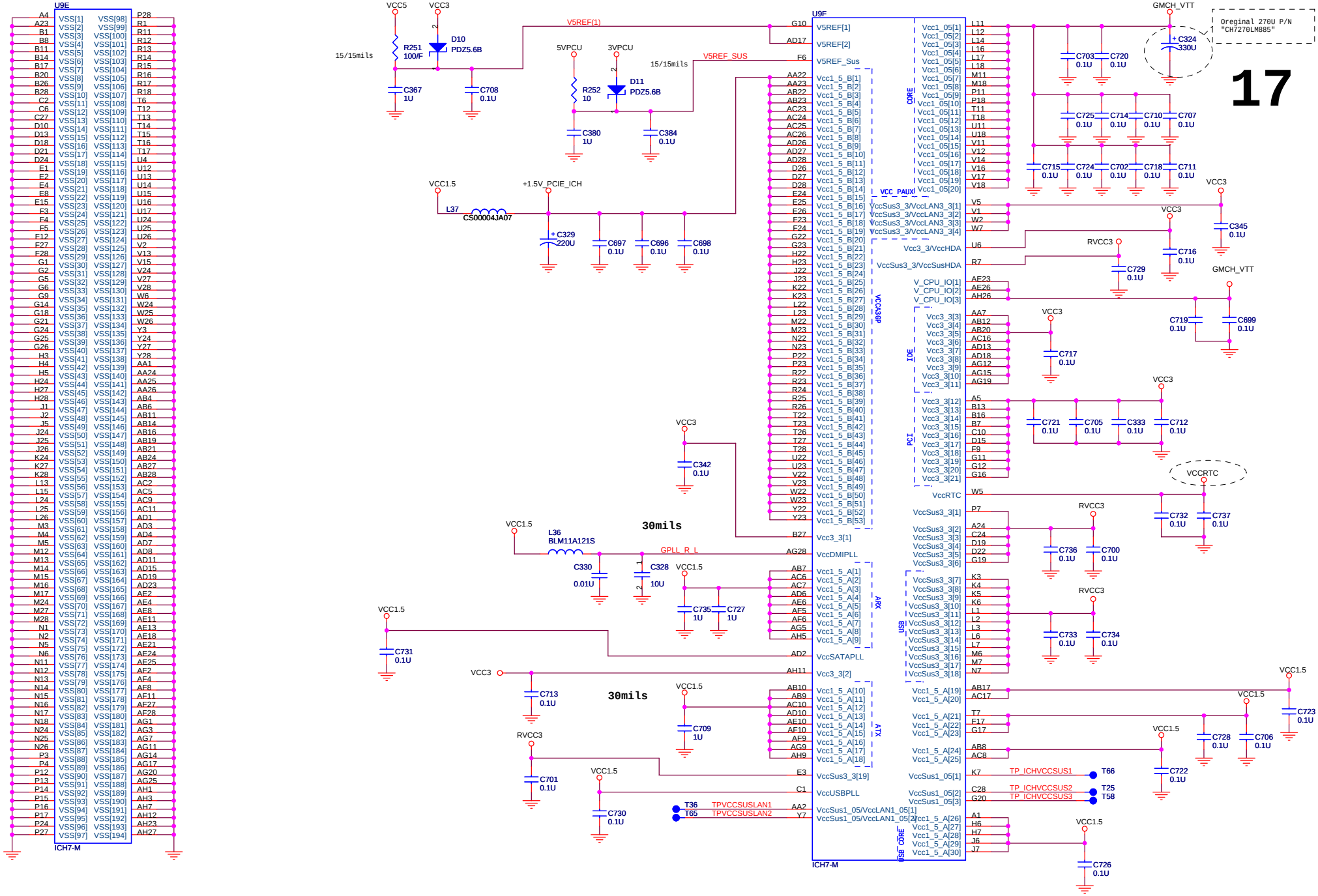
PROJECT : K3W

Quanta Computer Inc.

Size	Document Number	Rev
	ICH7-M PCI E (2 OF 4)	A

Date: Tuesday, May 16, 2006 Sheet 15 of 36


16
SI-2 modified
to Clock Gen & DIMM
SYS_RST is suspend rail
U9C
ICH7-M
SMB
SATA GPIO
Clocks
SYS GPIO Power MGT
GPIO
PCLK_SMB R531 2.2K
PDAT_SMB R214 2.2K
PCIE_WAKE# R536 1K
SMB_LINK_ALERT# R201 10K
SMLINK0 R204 10K
SMLINK1 R208 10K
SWI# R540 10K
WAKE_SCI# R R544 10K
SYS_RST#-1 R215 10K
SMB_ALERT# R211 10K
RI# R177 10K
CLKRUN# R242 8.2K
SERIRQ R220 8.2K
RUNTIME_SCI# R R227 10K
KBSMI# R539 10K
RSMRST# R557 10K
Note: Connect to EC; Reserve PH/3V
No ASF support
CKL :100Kohm PD
GPIO25 /Suspend rail is a HW strap , don't pull down .
C modify:
Hi: KW3
Low: KW3DC2
LAN_RST : 1.if used pci LAN please tie to PLTRST#
2.if used PHY LAN please tie to RSMRST#
U8
SN74LVC1G04DCKR
U17
TC7SH08FU
PROJECT : K3W
Quanta Computer Inc.
ICH7-M GPIO (3 OF 4)
Tuesday, May 16, 2006
Sheet 16 of 36


U9E
ICH7-M
U9F
ICH7-M
17
Oreginal 270U P/N "CH7270LM885"
PROJECT : K3W
Quanta Computer Inc.
ICH POWER (4 OF 4)
Rev A
Tuesday, May 16, 2006
Sheet 17 of 36

ID Select	: AD24
Interrupt Pin	: INTE#, INTF#
Request indicates	: REQ2#
Grant indicates	: GNT2#

WLSW:
Low : disable the radio.
High : Enable the radio.

*MINIPCI-AMP(440073-124)

CON17

MIPCI-1470464-X-124P-K

H=9.2

LCD CONNECTOR

L50 ACB2012L-120

87222-40XX_LVDS

CON14

87222-4000-40P-LDV

PANEL VCC CONTROL

Q1 G5241T1U

G5241T1U:AL005241008

LID

CON15 85204-0200

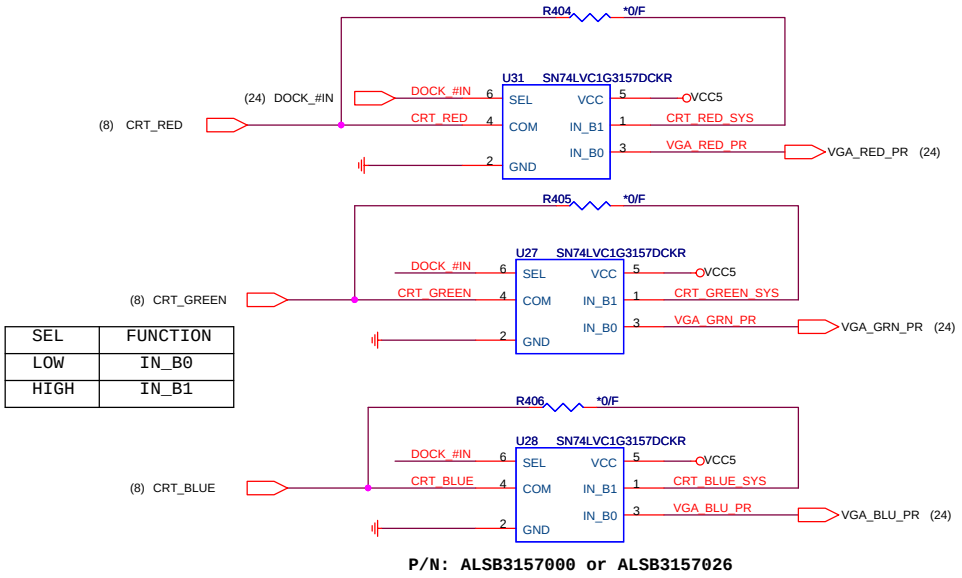
85204-0200-2P-L

BACKLIGHT CONTROL

U30 TC7SH08FU

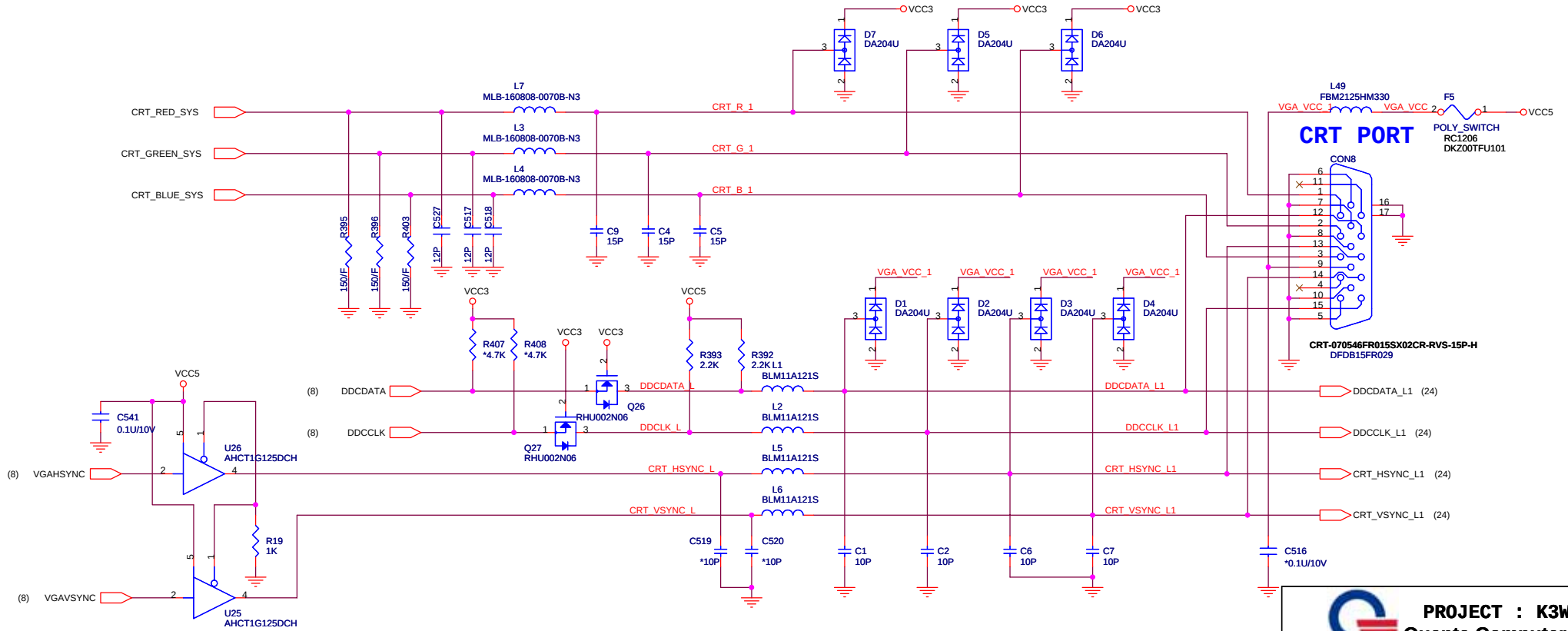
QCIPN:AL07SH08C26

PROJECT : K3W			
Quanta Computer Inc.			
Size	Document Number		Rev
	LCD CNN/DVI		A
Date: Tuesday, May 16, 2006	Sheet 18 of 36		



SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1

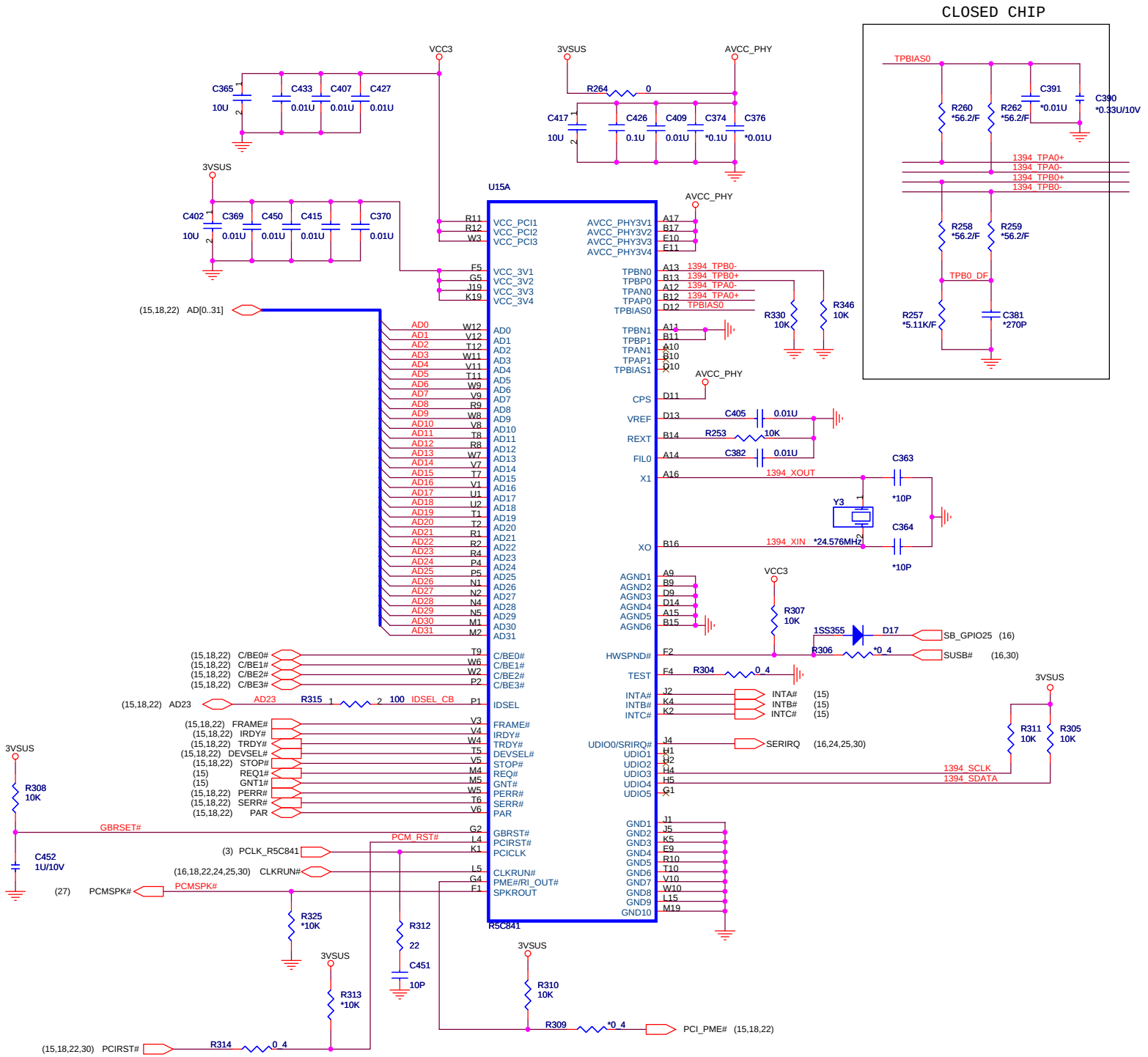
P/N: ALSB3157000 or ALSB3157026



PROJECT : K3W
Quanta Computer Inc.

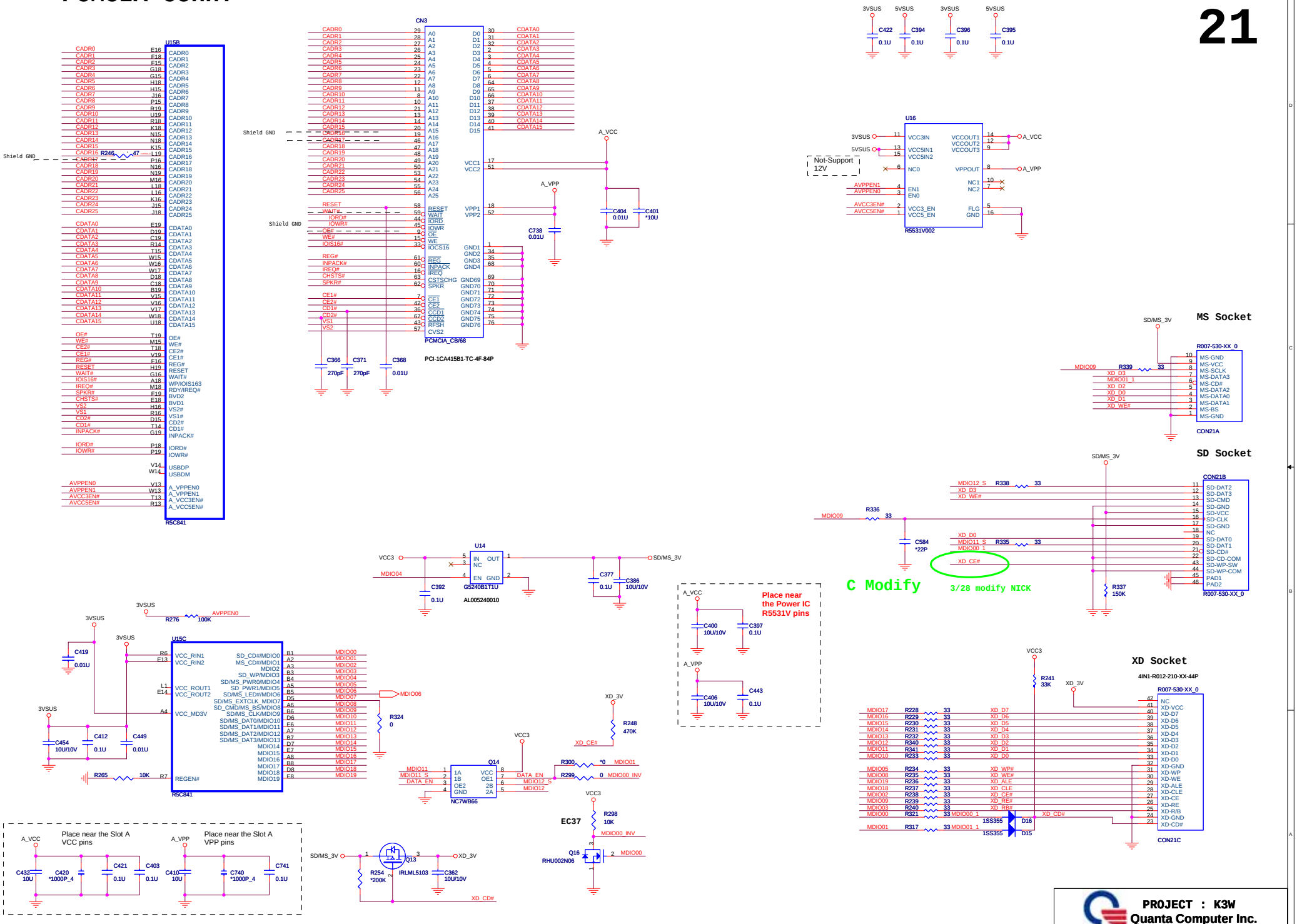
Size	Document Number	Rev
	CRT/S-VIDEO	A

Date: Tuesday, May 16, 2006 Sheet 19 of 36



PROJECT : K3W			
Quanta Computer Inc.			
Size	Document Number R5C841(PCI,CARDBUS)		Rev A
Date: Tuesday, May 16, 2006	Sheet 20 of 36		

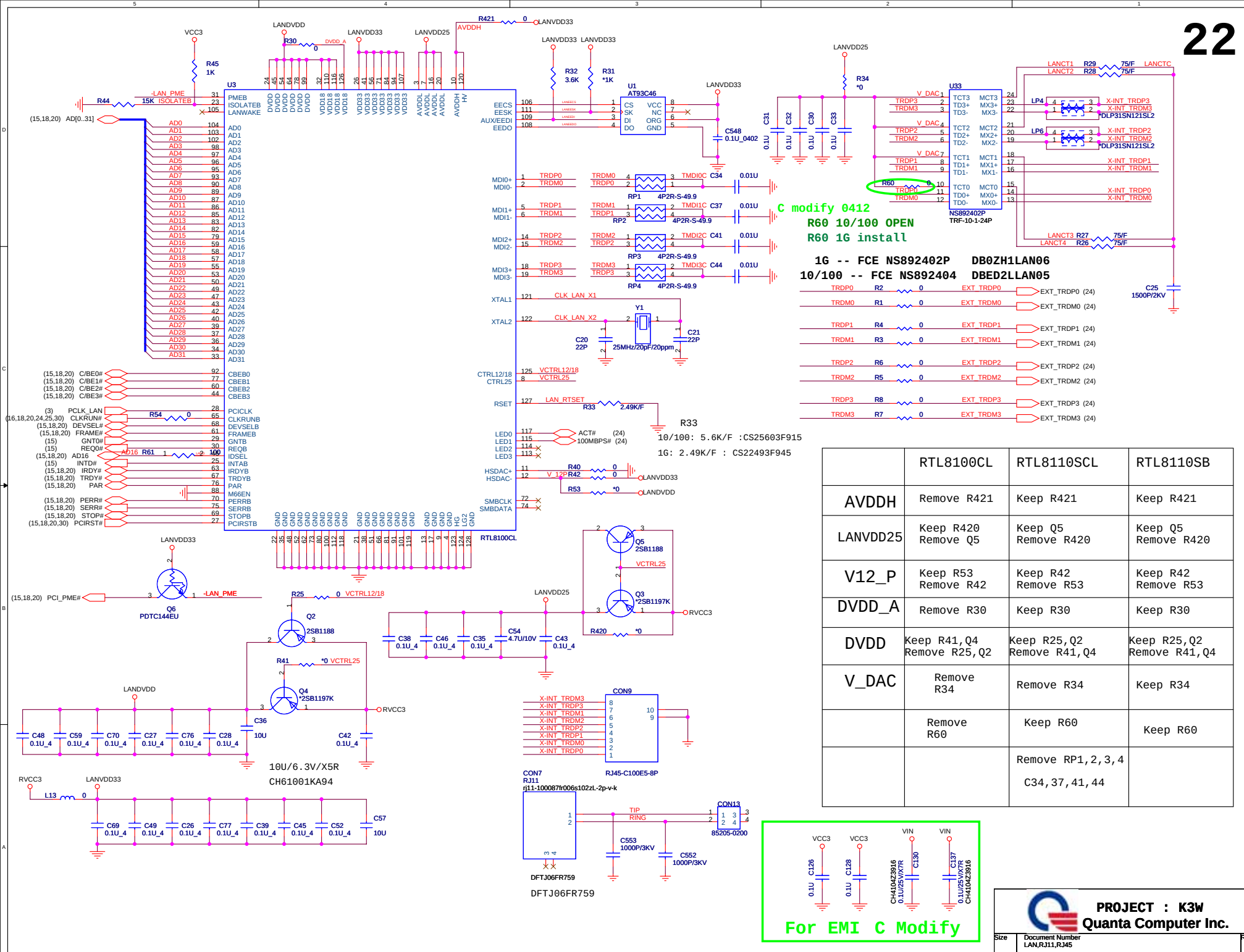
PCMCIA Conn.



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	PCMIA/ 4 in1/NEW CARD	A

Date: Tuesday, May 16, 2006 Sheet 21 of 36



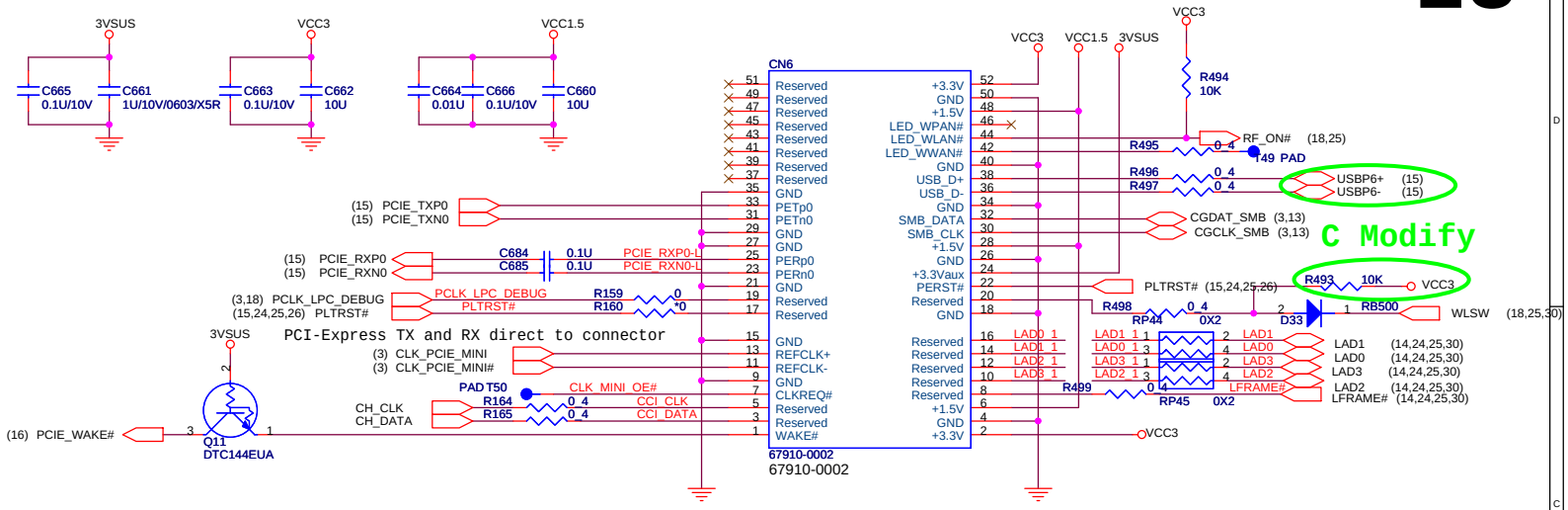
	RTL8100CL	RTL8110SCL	RTL8110SB
AVDDH	Remove R421	Keep R421	Keep R421
LANVDD25	Keep R420 Remove Q5	Keep Q5 Remove R420	Keep Q5 Remove R420
V12_P	Keep R53 Remove R42	Keep R42 Remove R53	Keep R42 Remove R53
DVDD_A	Remove R30	Keep R30	Keep R30
DVDD	Keep R41,Q4 Remove R25,Q2	Keep R25,Q2 Remove R41,Q4	Keep R25,Q2 Remove R41,Q4
V_DAC	Remove R34	Remove R34	Keep R34
	Remove R60	Keep R60	Keep R60
		Remove RP1,2,3,4 C34,37,41,44	

PROJECT : K3W
Quanta Computer Inc.

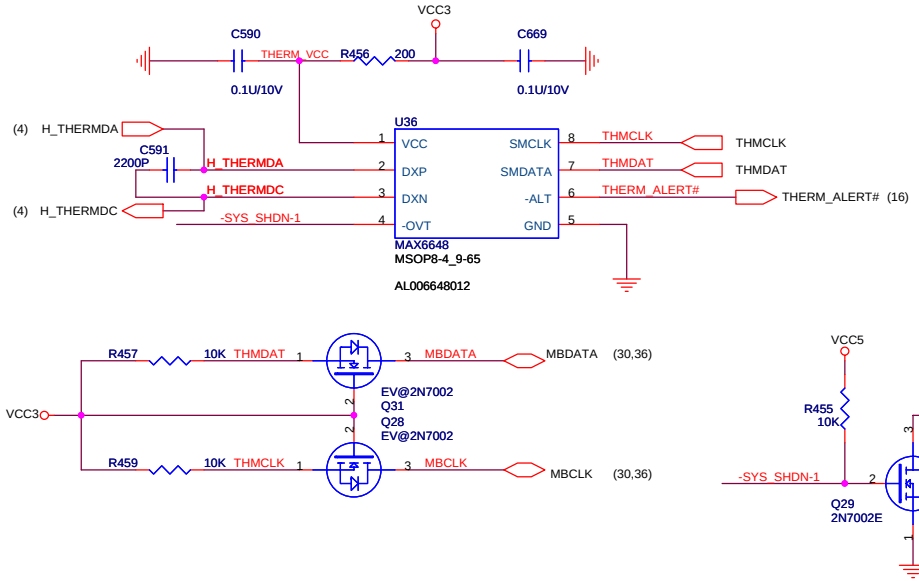
Size	Document Number	Rev
	LAN,RJ11,RJ45	A

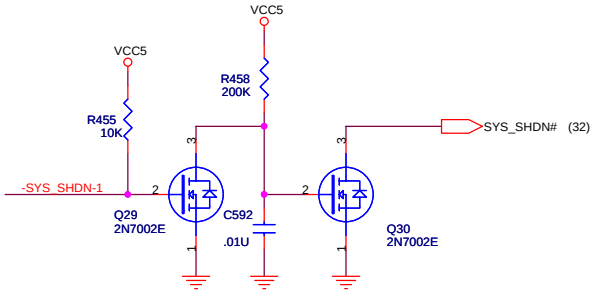
Date: Tuesday, May 16, 2006 Sheet 22 of 36

Mini PCI-E Card

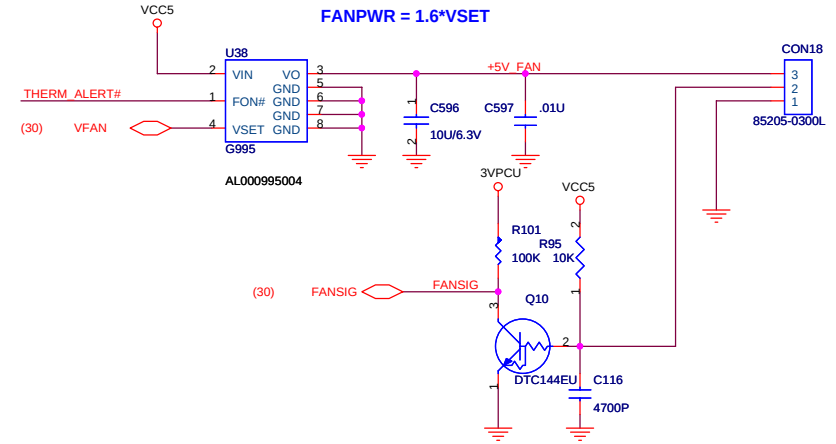


Thermal Senser



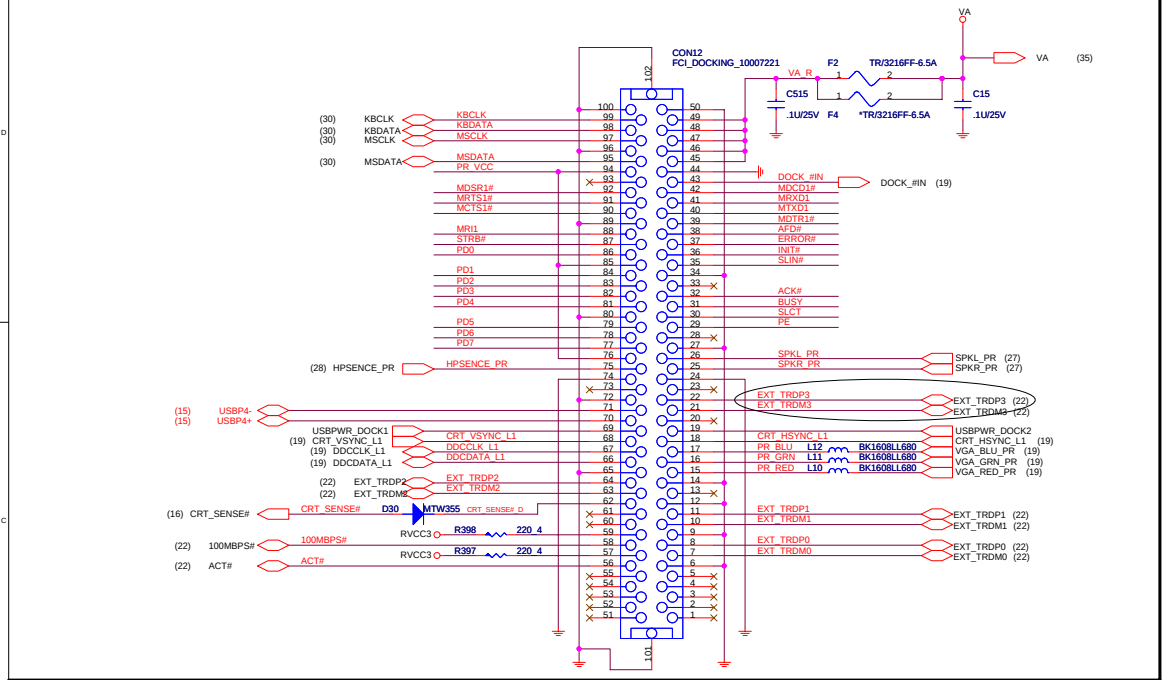


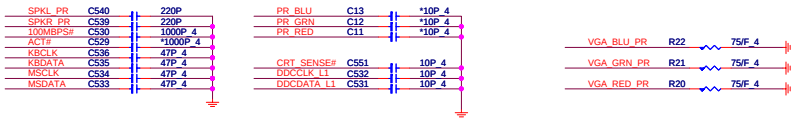
FAN CONN

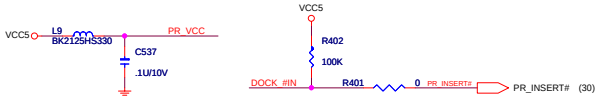


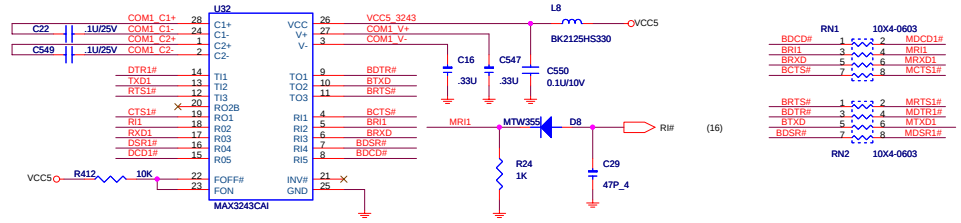
PROJECT : K3W Quanta Computer Inc.		
Size	Document Number MINI CARD/Thermal Senser	Rev A
Date: Tuesday, May 16, 2006	Sheet 23 of 36	

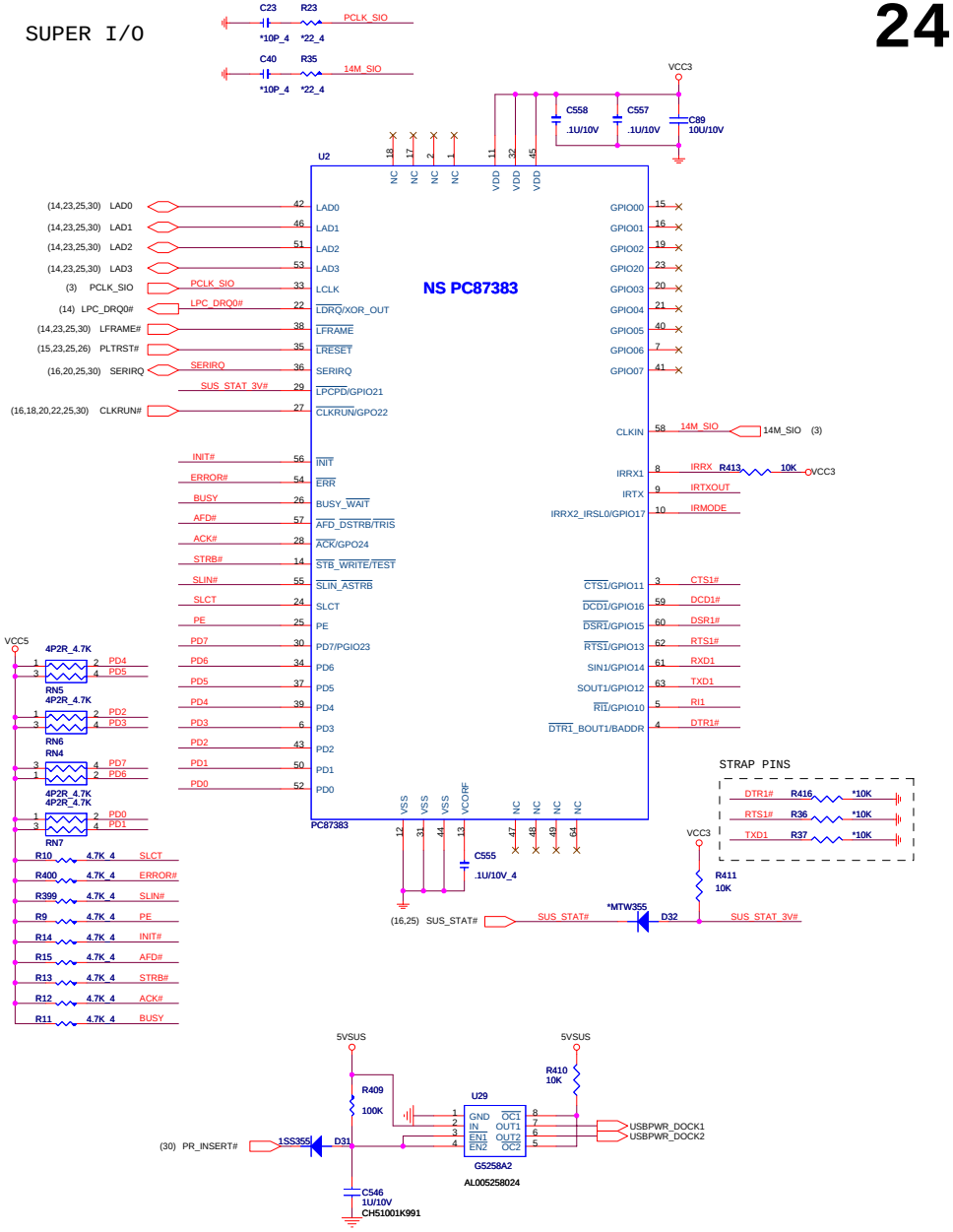
SUPER I/O





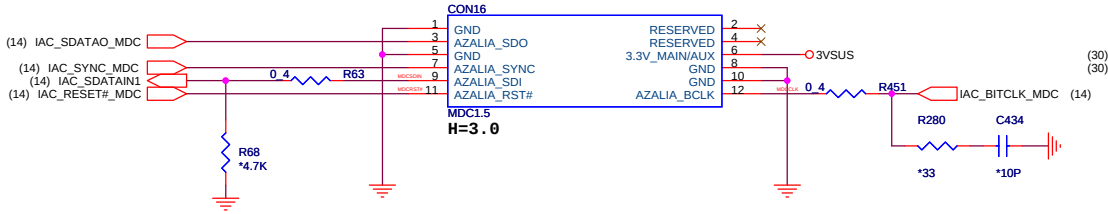




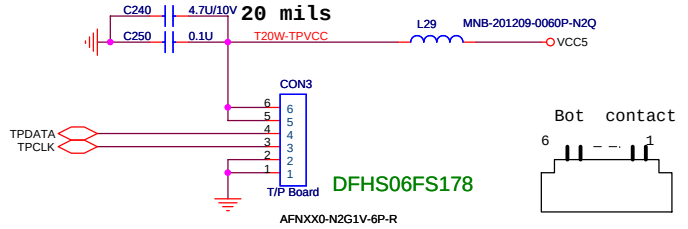


PROJECT : K3W		
Quanta Computer Inc.		
Size	Document Number SIO/TP/TV/IR/CIR	Rev A
Date: Tuesday, May 16, 2006	Sheet 24 of 36	

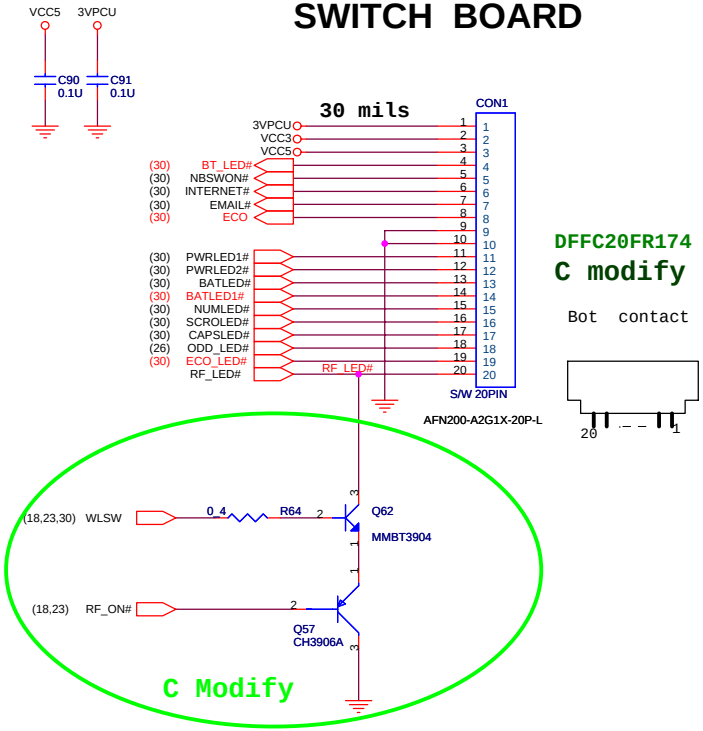
MDC V1.5 12Pin
Azalia MDC interface



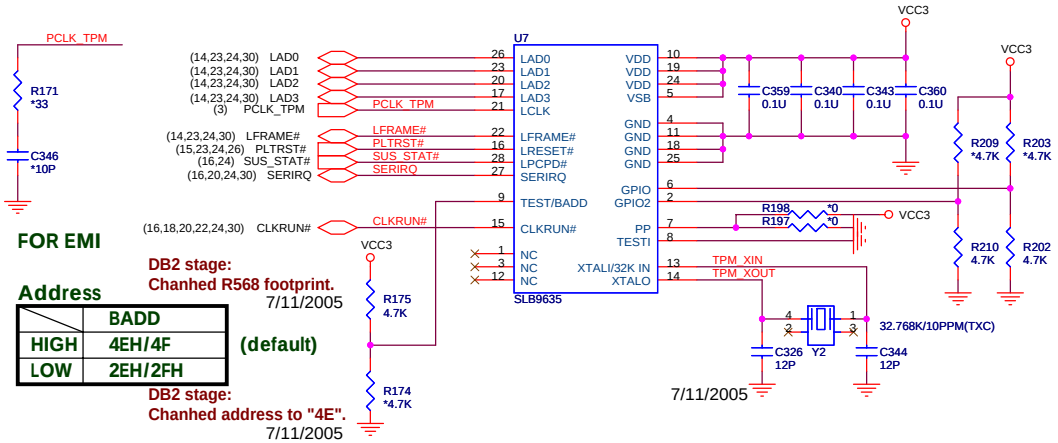
TOUCH PAD



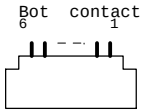
SWITCH BOARD

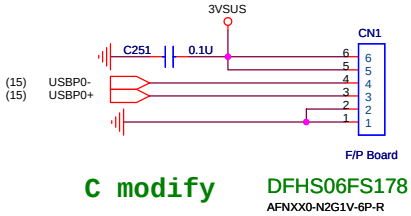


TPM (1.2)

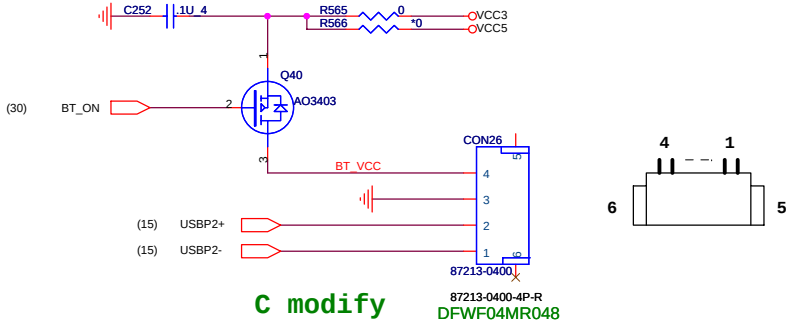


F/P board

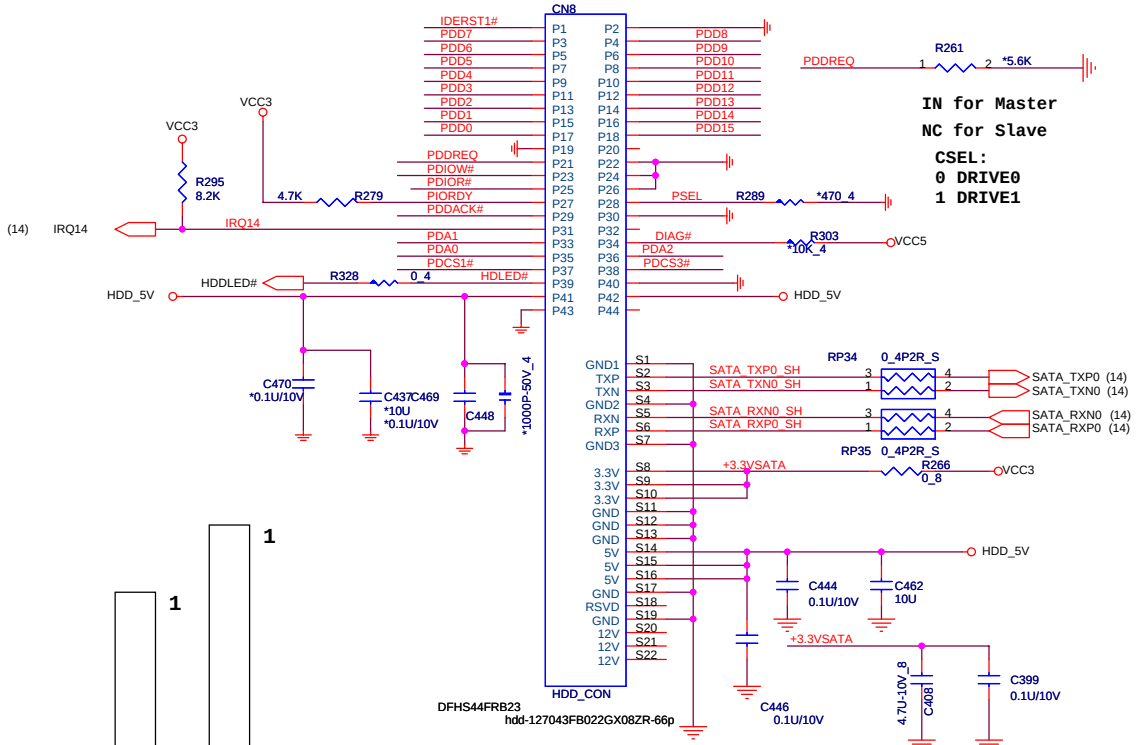




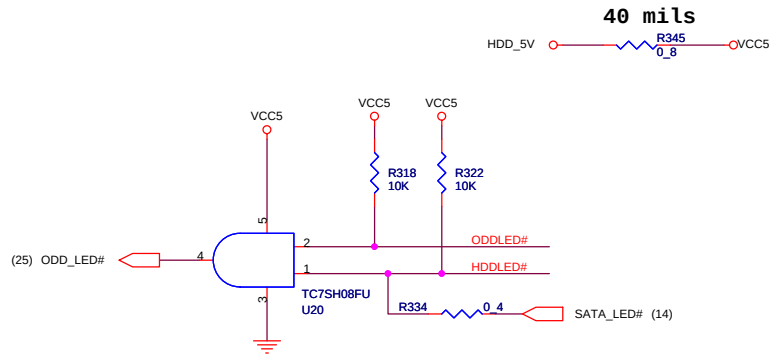
BT Connector



PATA HDD CONNECTOR

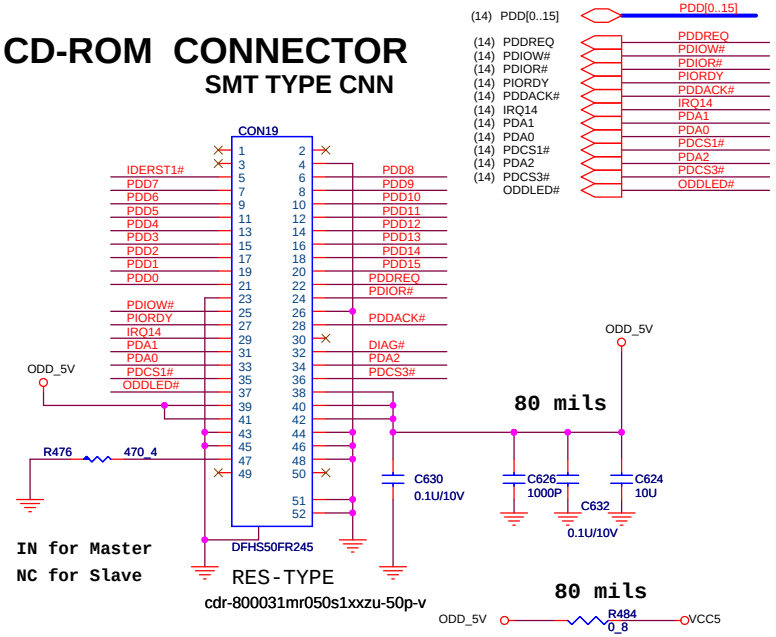


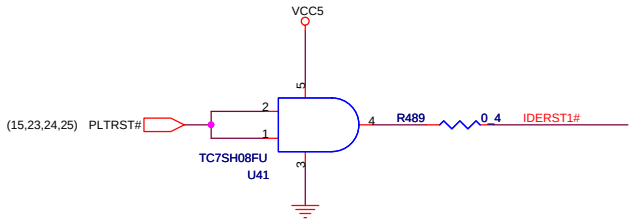
SATA HDD CONNECTOR



CD-ROM CONNECTOR

SMT TYPE CNN



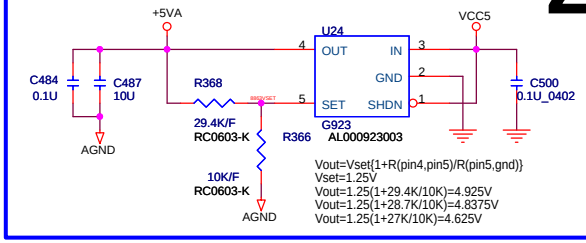


PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	SATA TO PATA & CD_ROM	A
Date: Tuesday, May 16, 2006	Sheet 26 of 36	

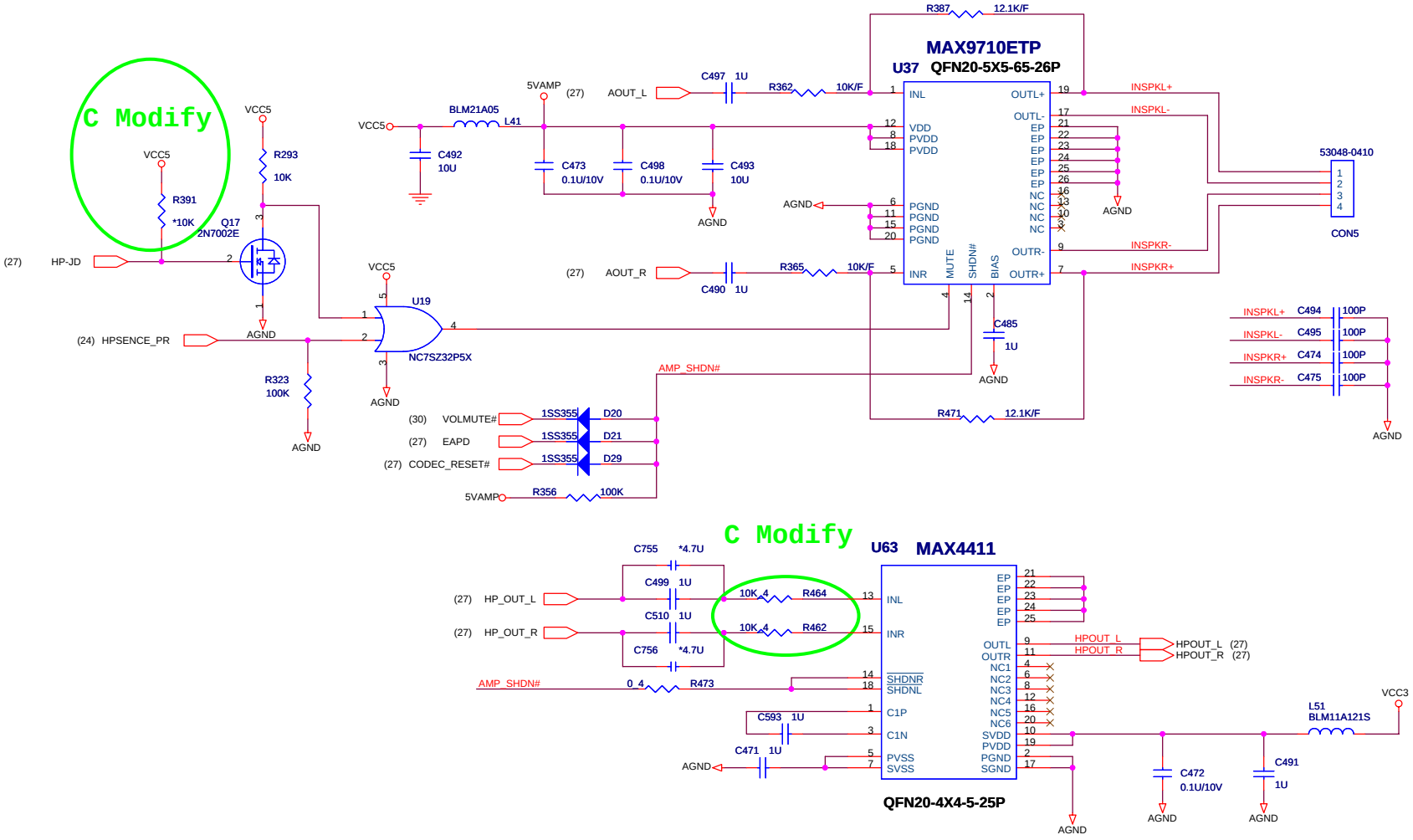
Aucio Codec

Codec Analog Power



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	AUDIO(ALC260,MIC,HP)	A
Date: Tuesday, May 16, 2006	Sheet 27 of 36	



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	AUDIO (Sub Woofer AMP)	A
Date: Tuesday, May 16, 2006	Sheet 28 of 36	

40 mils
F6
5VSUS
USBVCC1
POLY_SWITCH
RC1206
DKZ00TFU101

40 mils
F7
5VSUS
USBVCC3
POLY_SWITCH
RC1206
DKZ00TFU101

80 mils
F3
5VSUS
USBVCC5
POLY_SWITCH
RC1206
DKZ00TFU101
F1
USBVCC7
POLY_SWITCH
RC1206
DKZ00TFU101
C8 0.1U
C528 0.1U
C524 150U/6.3V
CH71501MJB2

D34 DA204U
D35 DA204U
USBVCC1
(15) USBP1-
(15) USBP1+
C675 *47P CH41002KB93
C673 *47P CH41002KB93
CON20 USB
USB-020173MR004GX32ZX-4P-R-V

D36 DA204U
D37 DA204U
USBVCC3
(15) USBP3-
(15) USBP3+
C506 *47P CH41002KB93
C505 *47P CH41002KB93
CON22 USB
USB-020173MR004GX32ZX-4P-R-H

D38 DA204U
D39 DA204U
USBVCC5
(15) USBP5-
(15) USBP5+
C544 *47P CH41002KB93
C545 *47P CH41002KB93
CON10 USB
USB-020173MR004GX32ZX-4P-R-H

D40 DA204U
D41 DA204U
USBVCC7
(15) USBP7-
(15) USBP7+
C3 *47P CH41002KB93
C10 *47P CH41002KB93
CON11 USB
USB-020173MR004GX32ZX-4P-R-H

USBVCC1
C671 0.1U
C659 150U/6.3V
CH71501MJB2

USBVCC3
C754 0.1U
C753 150U/6.3V
CH71501MJB2

PAD20 *EMIPAD142X91
PAD21 *EMIPAD142X91
PAD15 *EMIPAD142X91
PAD19 *EMIPAD142X91
PAD16 *EMIPAD142X91
PAD17 *EMIPAD142X91
PAD18 *EMIPAD142X91

AFN240-A2G1T-24P-L
AFN240-A2G1T-24P-L
(30) MY15 MY13 MY12 MY0 MY2 MY11 MY14 MY10 MY9 MY8 MY7 MY6 MY5 MY3 MY1 MY4 MX5 MX6 MX0 MX3 MX7 MX1 MX4 MX2
CON4

Bot contact
24 1

P/N:DFHS24FR180
C modify

220Px4 CP6: MX2 MX4 MX1 MX7
220Px4 CP5: MX3 MX0 MX6 MX5
220Px4 CP4: MY4 MY1 MY3 MY5
220Px4 CP3: MY6 MY7 MY8 MY9
220Px4 CP2: MY10 MY14 MY11 MY2
220Px4 CP1: MY0 MY12 MY13 MY15

3VPCU
RP31 10KX8: MY9 MY8 MY7 MY6 / MY4 MY1 MY3 MY5
RP32 10KX8: MY15 MY13 MY12 MY0 / MY10 MY14 MY11 MY2
RP33 10KX8: MX5 MX6 MX0 MX3 / MX2 MX4 MX1 MX7

MDC,PCI_E
H3 H7 H10 H11
h-c236d150p2

FAN
H1 H15 H17 H18 H19 H20 H12 H13
H-C276D126P2
h-c236d150p2

CPU
H5 H9 H16 H14 H4 H6 H8
H-C354D126P2
h-c354d150p2

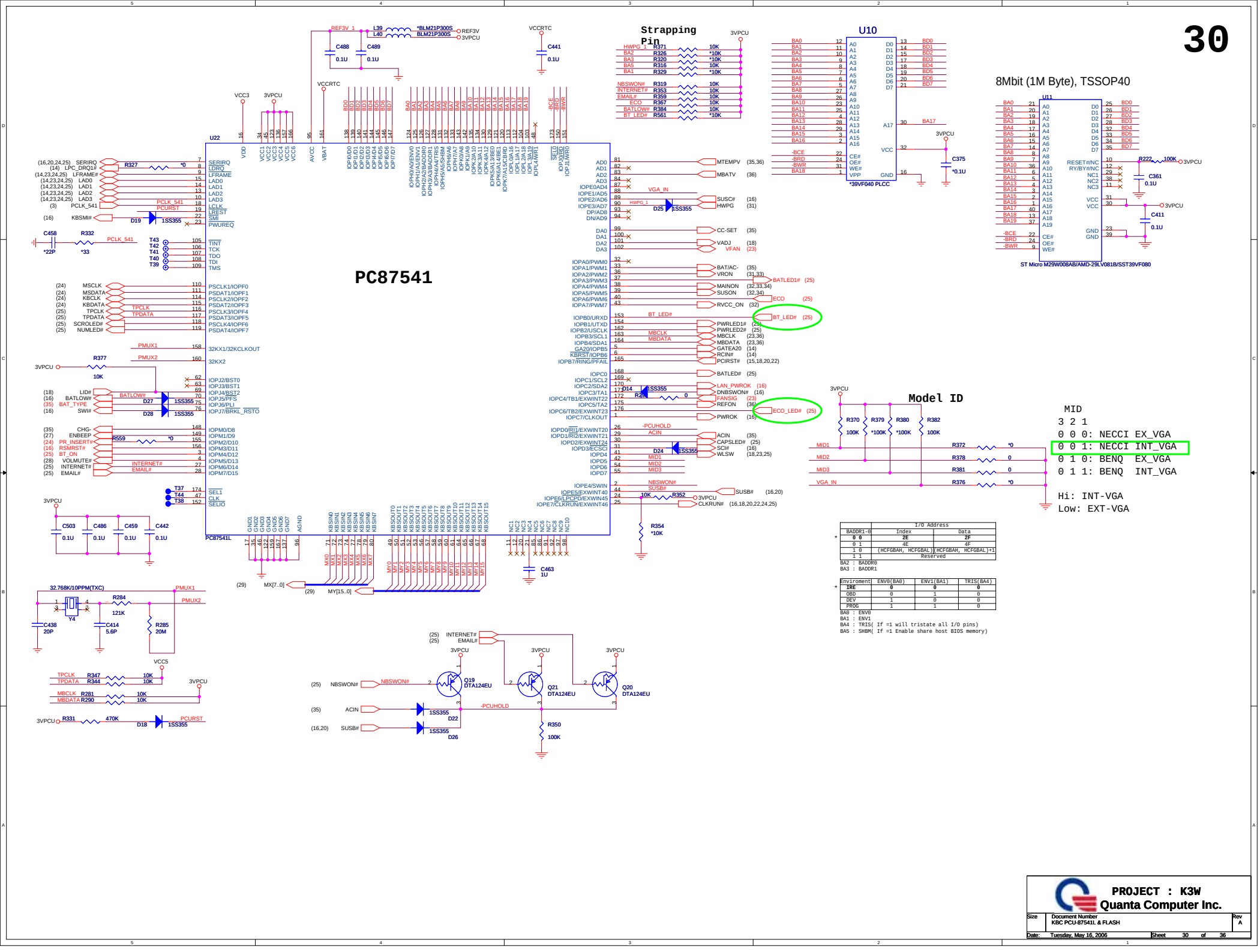
DC_IN
H21
H-C236D126P2

PAD1 PAD2 PAD3 PAD4 PAD5 PAD6 PAD7 PAD8 PAD9 PAD10 PAD11 PAD13 PAD12 PAD14
*EMIPAD142X91

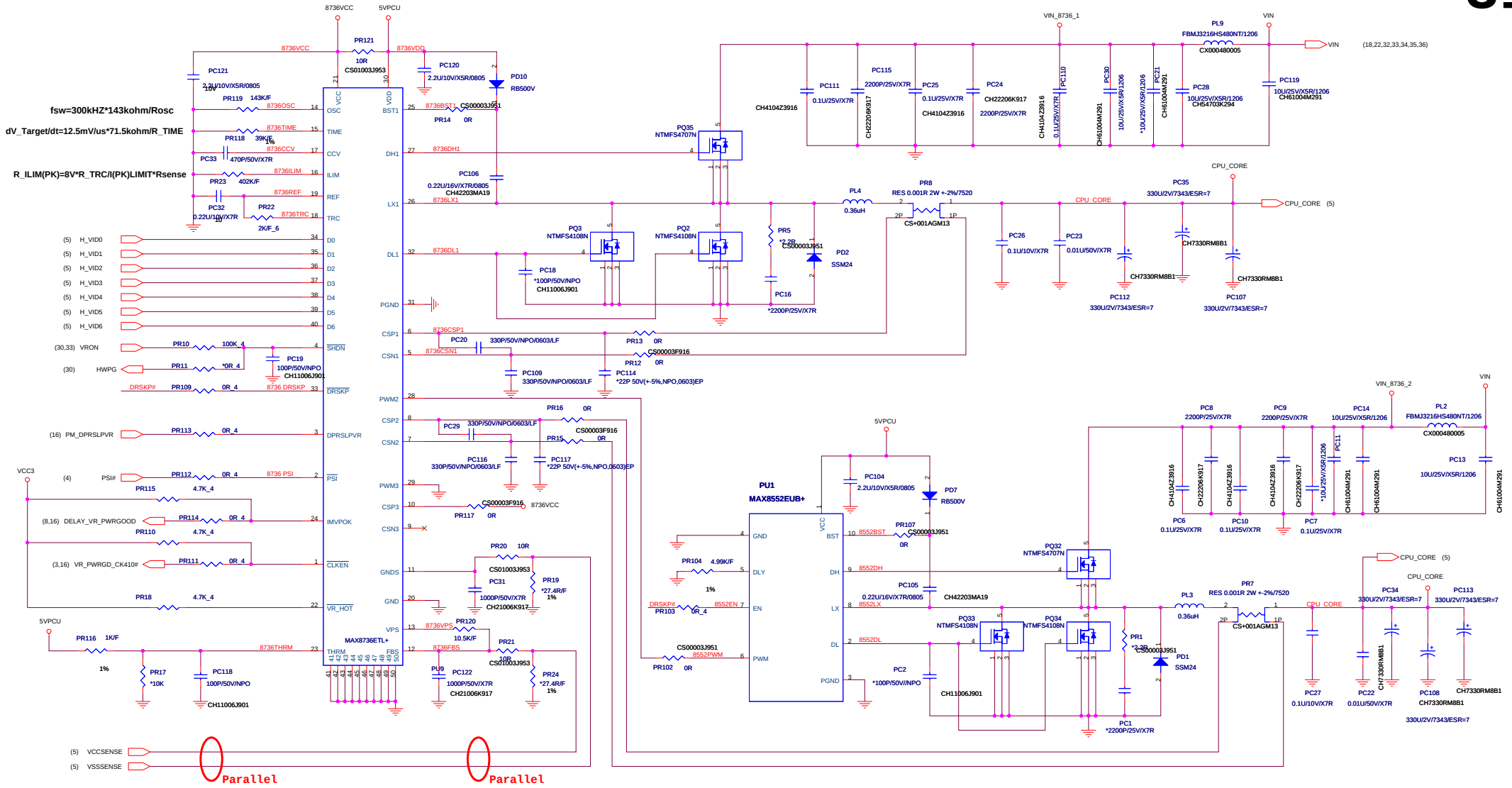
PROJECT : K3W
Quanta Computer Inc.

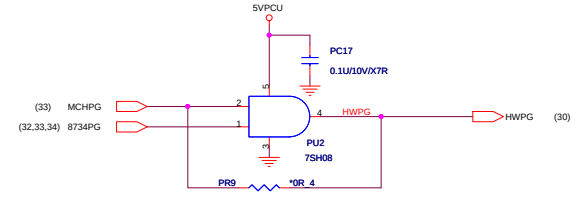
Size	Document Number	Rev
	KB/USB/HDD/CDROM/USB HUB 1X4	A

Date: Tuesday, May 16, 2006 Sheet 29 of 36


PC87541
U22
Strapping Pin
U10
8Mbit (1M Byte), TSSOP40
U11
*39VF040 PLCC
ST Micro M29W008AB/AMD-29LV081B/SST39VF080
Model ID
MID
3 2 1
0 0 0: NECCI EX_VGA
0 0 1: NECCI INT_VGA
0 1 0: BENQ EX_VGA
0 1 1: BENQ INT_VGA
Hi: INT-VGA
Low: EXT-VGA
I/O Address
BADDR1-0
Index
Data
BA2 : BADDR0
BA3 : BADDR1
Enviroment
ENV0(BA0)
ENV1(BA1)
TRIS(BA4)
IRE
OBD
DEV
PROG
BA0 : ENV0
BA1 : ENV1
BA4 : TRIS(If =1 will tristate all I/O pins)
BA5 : SHBM(If =1 Enable share host BIOS memory)
32.768K/10PPM(TXC)
PROJECT : K3W
Quanta Computer Inc.
Document Number
KBC PCU-87541L & FLASH
Rev
A
Date: Tuesday, May 16, 2006
Sheet 30 of 36

CPU CORE





DPRSLPVR	DPRSKP#	-PSI	State	CPU Current
1	0	0	Deeper Sleep	< 3A
1	0	1	Deeper Sleep	> 3A
0	1	0	Active Mode	< 18A
0	1	1	Active Mode	> 15A

DPRSLPVR PSI#

1 X 1-phase pulse-skipping mode(low power)

0 0 1-phase forced-PWM mode(inteermediate power)

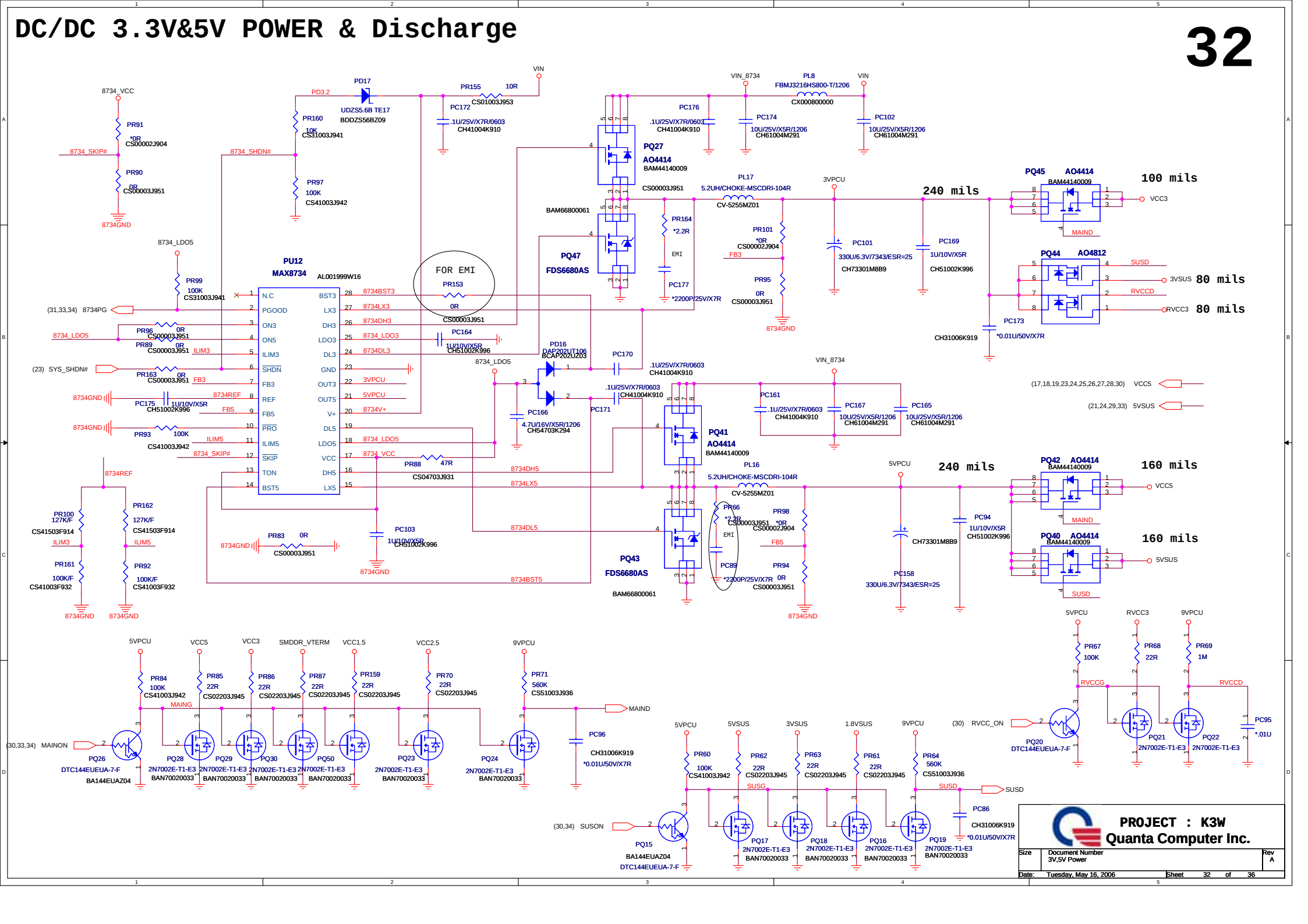
0 1 All phase active,forced-PWM mode(full powr)

PROJECT : K3W
Quanta Computer Inc.

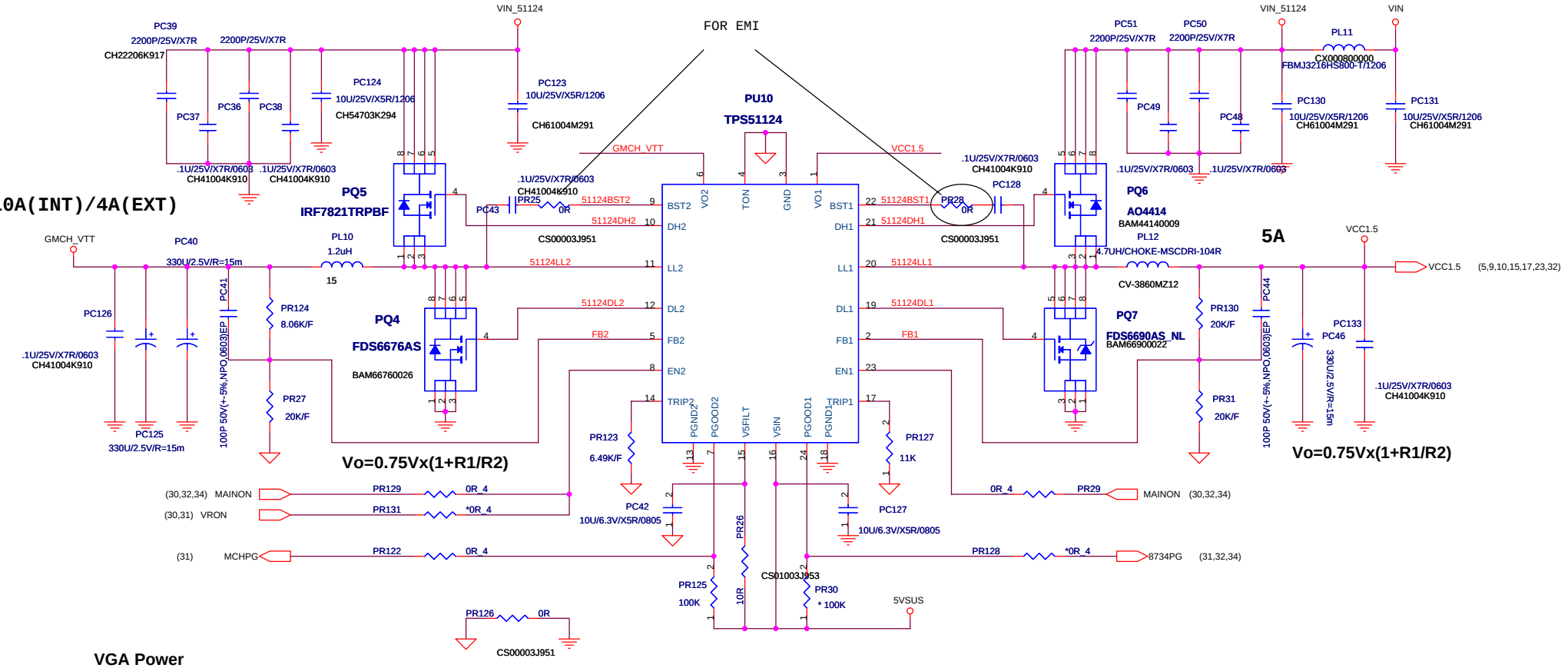
Size	Document Number	Rev
	VCORE(MAX8736)	A

Date: Tuesday, May 16, 2006 Sheet 31 of 36

DC/DC 3.3V&5V POWER & Discharge



+VCCP&VCC1.5V



VGA Power

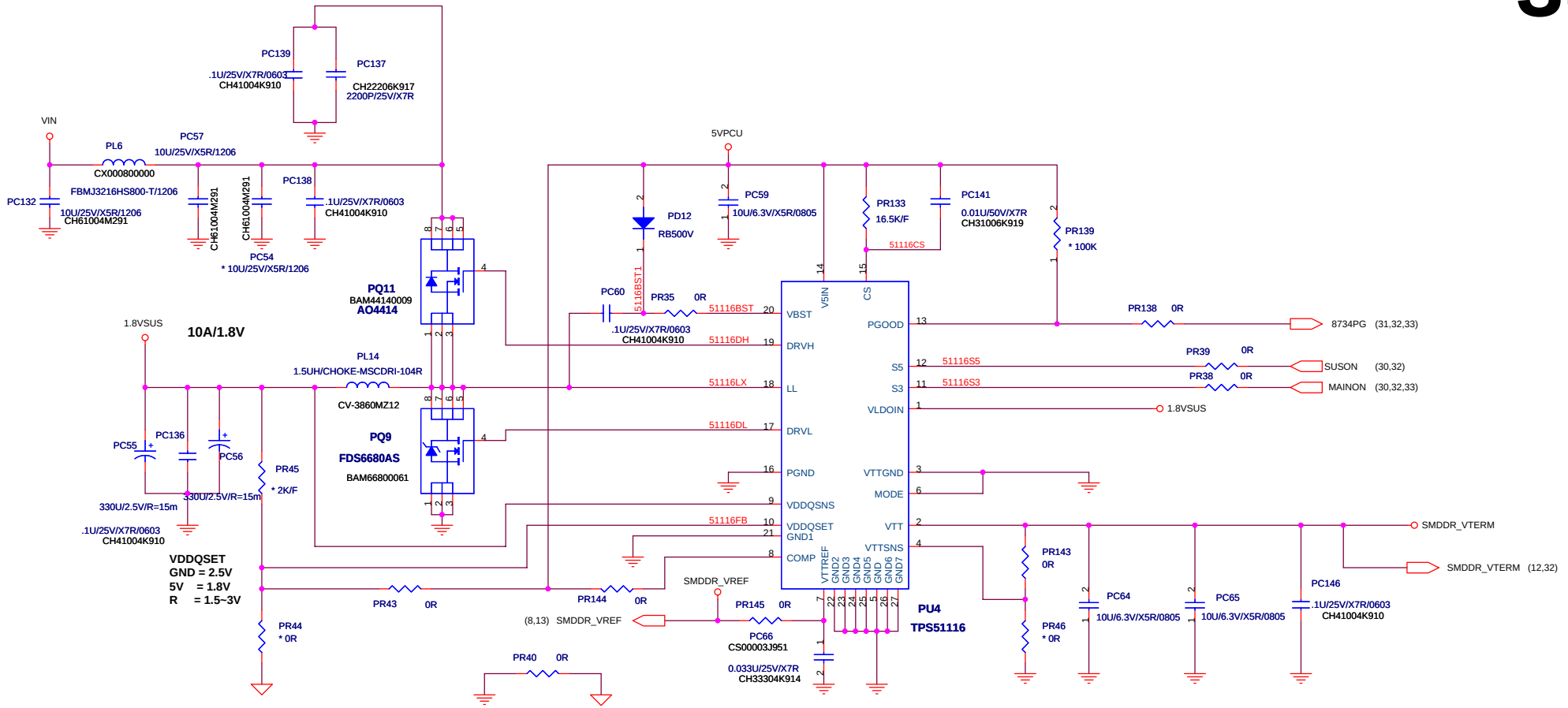
+VCCP	PL8	Current	R_TRIP2	PQ35
INT. Gfx	1.2uH	10A	6.49K	FDS6676S
EXT. Gfx	2uH	4A	11K	FDS6690AS

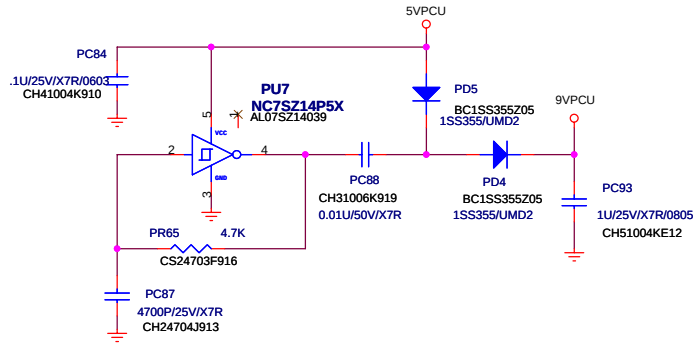
	INT. Gfx	EXT. Gfx
+VCCP	10A	4A
VCC1.5	3A	5.2A

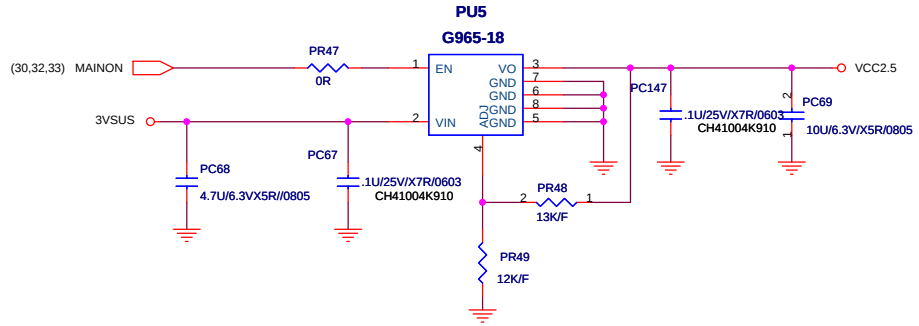
PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	+VCCP & VCC1.5	A
Date: Tuesday, May 16, 2006	Sheet 33 of 36	

1.8VSUS & VTERM(DDR2) & VCC2.5







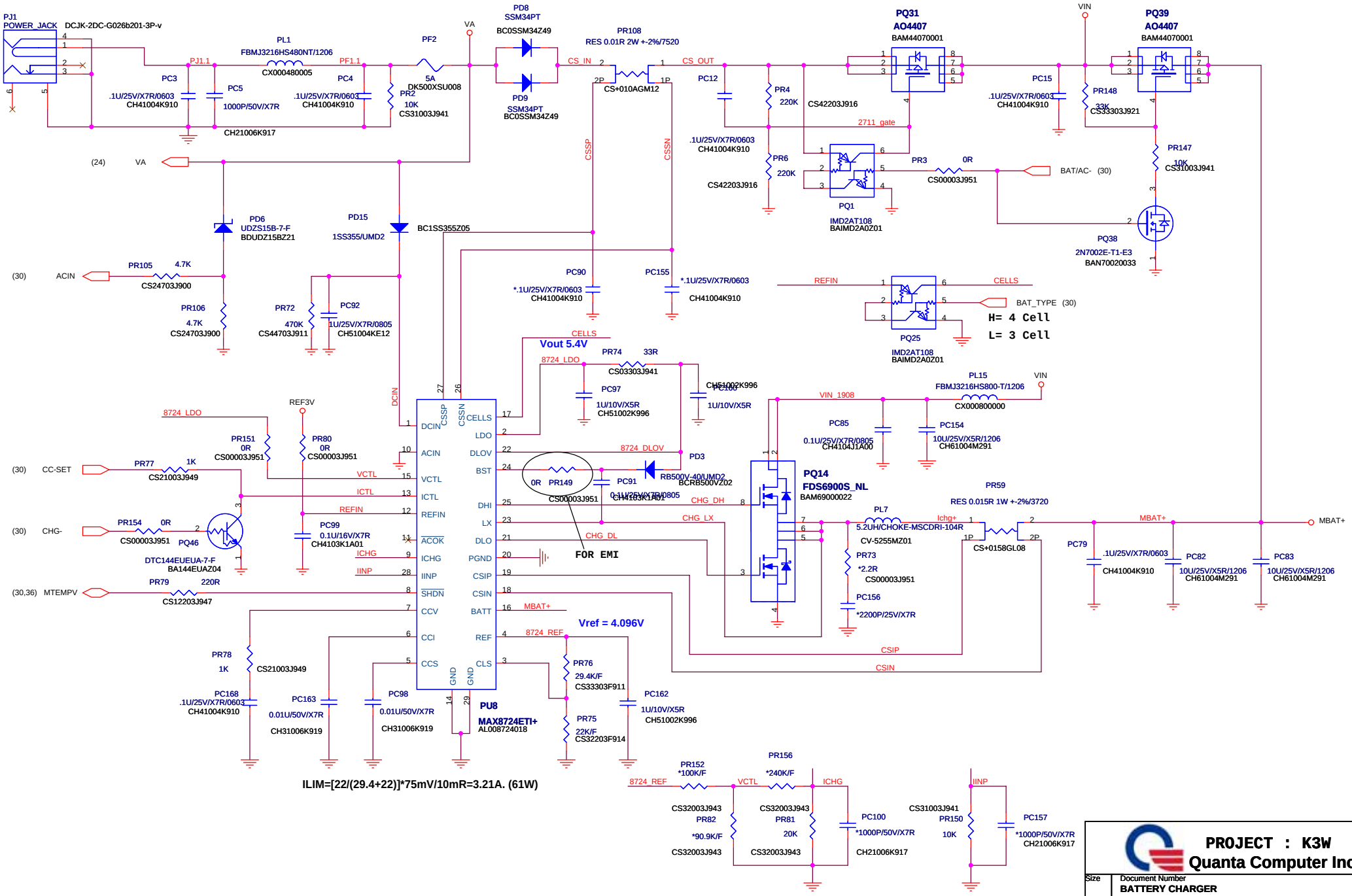
1.8VSUS (8,9,13,32)

VCC2.5 (10,32)

PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	1.8VSUS / DDRVTERM	A
Date: Tuesday, May 16, 2006	Sheet 34 of 36	

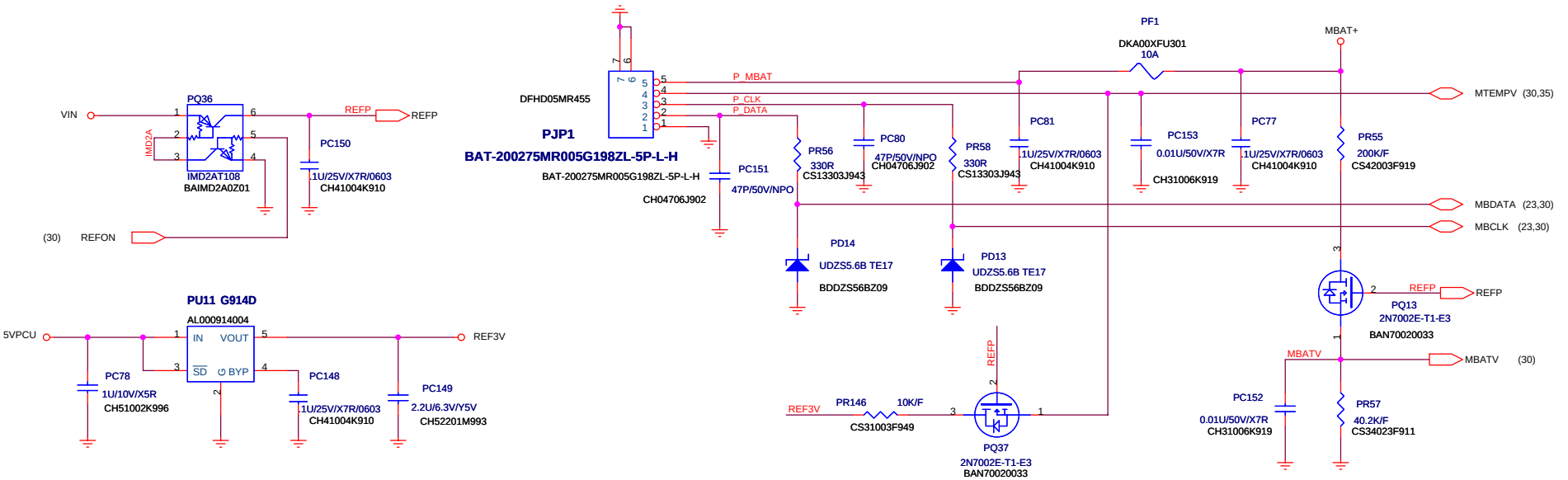
Battery Charger



PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	BATTERY CHARGER	A
Date: Tuesday, May 16, 2006	Sheet 35 of 36	

Battery Connector



MTEMPV voltage :		
	System Off	System On
Battery	0V	1.6V
Adapter	3.3V	3.3V
Battery+Adapter	1.6V	1.6V

MBATV voltage :

16.8V*40.2/(200+40.2)= 2.812V

12.0V*40.2/(200+40.2)= 2.008V

8.0V*40.2/(200+40.2)= 1.34V

PROJECT : K3W
Quanta Computer Inc.

Size	Document Number	Rev
	BATTERY CONNECTOR	A
Date: Tuesday, May 16, 2006	Sheet 36 of 36	