LE9E(LE8) BLOCK DIAGRAM

01

PCB STACK UP
8L

PAGE 30

- LAYER 1 : TOP
- LAYER 2 : SGND1
- LAYER 3 : IN1
- LAYER 4 : IN2
- LAYER 5 : VCC
- LAYER 6 : IN3
- LAYER 7 : SGND2
- LAYER 8 : BOT

CPU CORE(ISL6266A) PAGE 43

CPU Penryn
478P (uPGA)/35W
PAGE 4,5

CPU THERMAL SENSOR PAGE 5

FSB 667/800/1066

14.318MHz

CLOCK GEN
ICS9LPRS365BGLFT
PAGE 3

CLK_CPU_BCLK, CLK_CPU_BCLK#
CLK_MCH_BCLK, CLK_MCH_BCLK#
DREFCLK, DREFCLK#
DREFSSCLK, DREFSSCLK#

VCCP +1.5V AND GMCH 1.05V(RT8204) PAGE 41

VGACORE(OZ8118) PAGE 44

NORTH BRIDGE
Cantiga
PAGE 6~10

27MHz

NVIDIA NB9M-NS
PAGE 13~18

DDRIII-SODIMM1 PAGE 11
DDRII 800/1066 MHz

DDRIII-SODIMM2 PAGE 12
DDRII 800/1066 MHz

DDR III (TPS51116REGR)
1.5VSUS/SMDDR_VTERM
/SMDDR_VREF PAGE 39

PCI-Express 16X

CRT PAGE 23

LCD CONN PAGE 24

DMI LINK

32.768KHz

NBSRCCLK, NBSRCCLK#

USB2.0

SOUTH BRIDGE
ICH-9M
PAGE 19,20,21,22

USB2.0 Ports X2

USB+eSATA Port X1 PAGE 30

BlueTooth PAGE 33

Finger Printer CONN PAGE 33

SATA - HDD PAGE 30
SATA0 150MB

SATA - CD-ROM PAGE 30
SATA1 150MB

PCI-E

24.576Hz

Azalia

X2 Mini PCI-E Card X 2 (WLAN/ WWAN) PAGE 35

X1 LAN BROADCOM BCM 5906M/5784 (10/100/1G LAN) PAGE 31,32

X1 Express Card (NEW CARD) PAGE 33

X1 RICOH R5C847 PAGE25,26

SYSTEM POWER(ISL6237) PAGE 42

SYSTEM CHARGER(ISL6251A) PAGE 38

32.768KHz

LPC

NS
ITE 8502E-L
PAGE 36

Keyboard Touch Pad PAGE 34

TPM PAGE 34

SIO CONN PAGE 27

FAN PAGE 34

SPI PAGE 36

MDC CONN PAGE 28

RJ11 PAGE 32

microphone PAGE 28

AUDIO CODEC CX20561-12Z PAGE 28

AUDIO Amplifier TPA6017A2 PAGE 29

Audio Jacks (External MIC) PAGE 29

Head-Phone Jack PAGE 29

25MHz

RJ45 PAGE 32

PCMCIA CONN PAGE 26

IEEE1394 on Daughter B PAGE 25

Ultra I/O CardReader PAGE 26

PROJECT : LE8
Quanta Computer Inc.

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Custom	BLOCK DIAGRAM	1A

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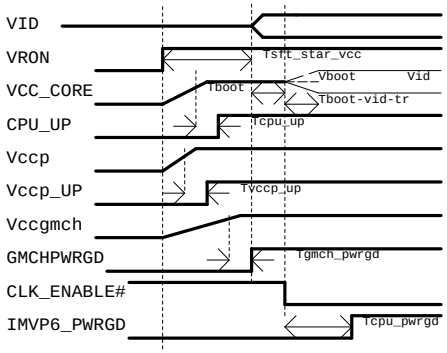
Board Stack up Description

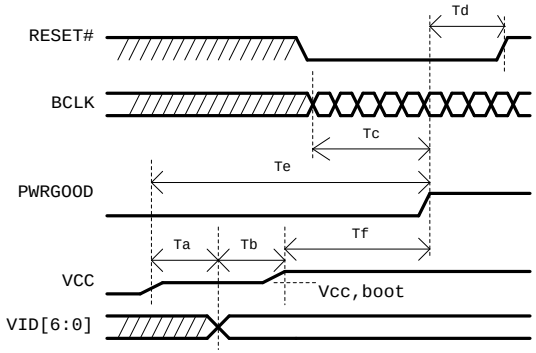
PCB Layers

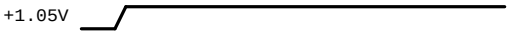
Layer 1		TOP
Layer 2		GND
Layer 3		IN1
Layer 4		IN2
Layer 5		SVCC
Layer 6		IN3
Layer 7		GND
Layer 8		BOTTOM

Power On Sequencing Timing Diagram



MEROM Power-up Timing Specifications



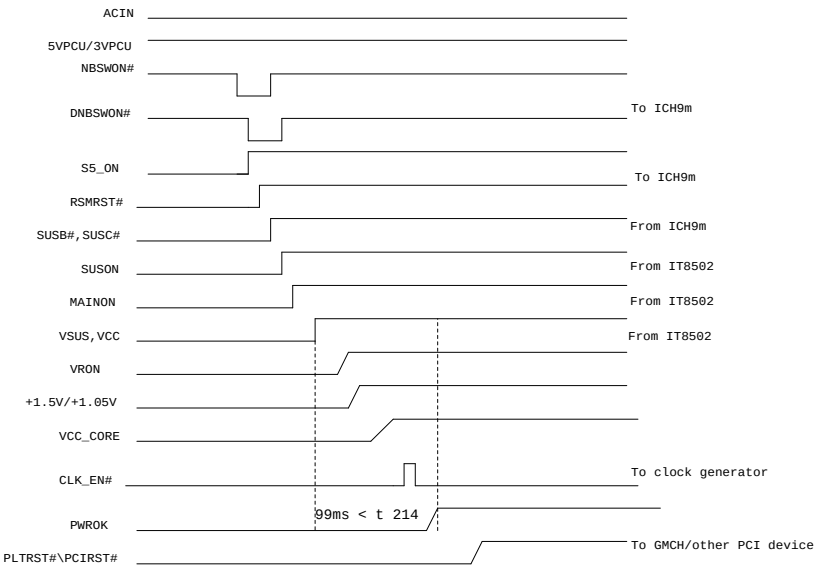


Ta=VCC and VCCP asseration to VID[6:0] vaild
Tb=VID[6:0] stable to VCC vaild
Tc=BCLK stable to PWRGOOD assertion
Td=PWRGOOD to RESET# de-assertion time
Te=Vcc,boot vaild to PWRGOOD assertion time

Voltage Rails

Voltage Rails	ON S0~S2	ON S3	ON S4	ON S5	Control signal
VCC_CORE	X				VRON
+1.5V	X				MAINON
+1.05V	X				MAINON
5V_S5/3V_S5	X	X	X	X	S5_ON
5VSUS/3VSUS/1.5VSUS	X	X			SUSON
SMDDR_VTERM/+3V/+5V/+15V/+1.8V	X				MAINON
+VGACORE/+VGA1.1V	X				MAINON
LANVCC	X	X	X	X	LAN_ON
3VPCU	X	X	X	X	VL
5VPCU	X	X	X	X	VL

ACIN POWER ON TIMING



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	SYSTEM INFORMATION	1A

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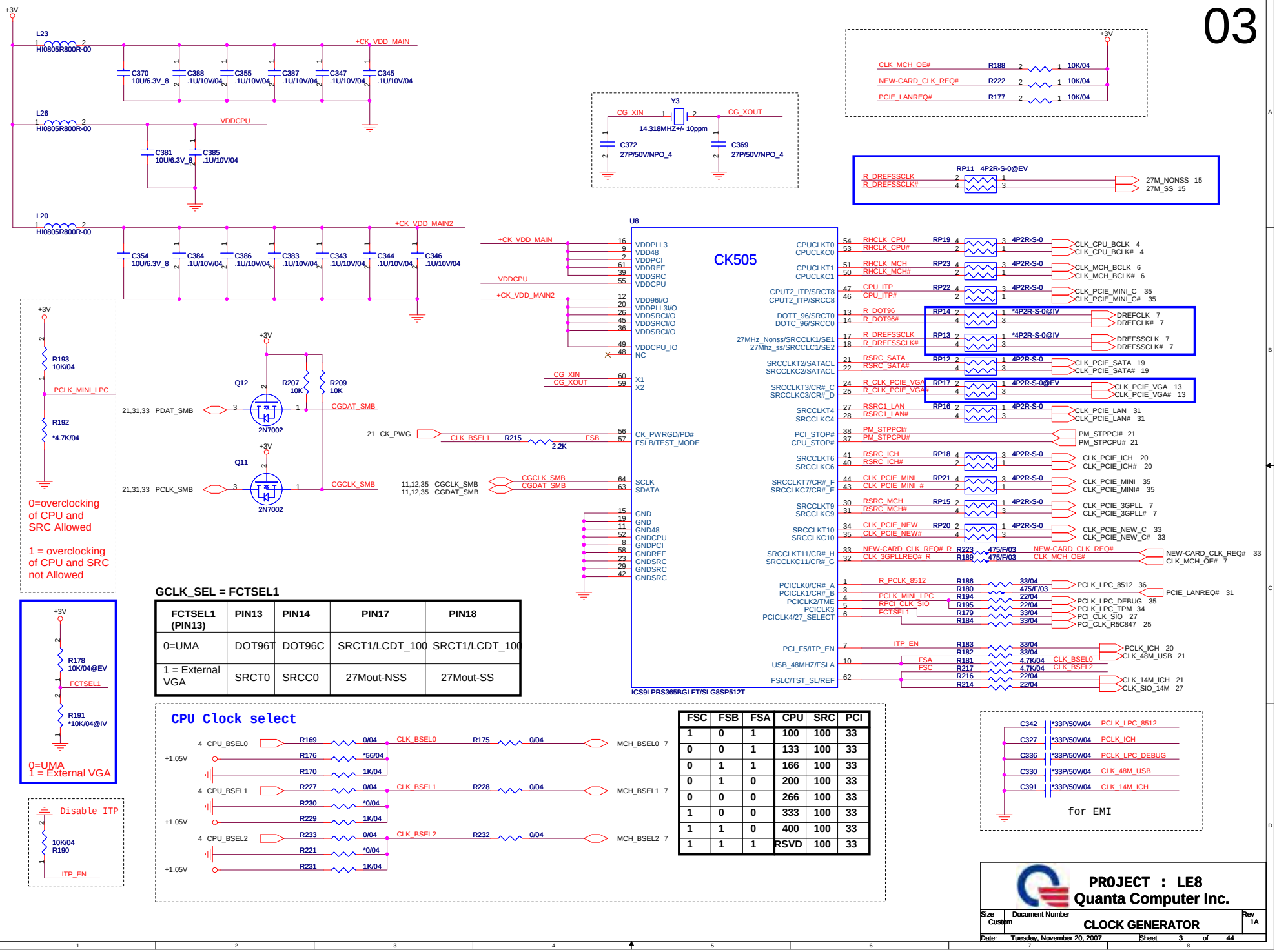
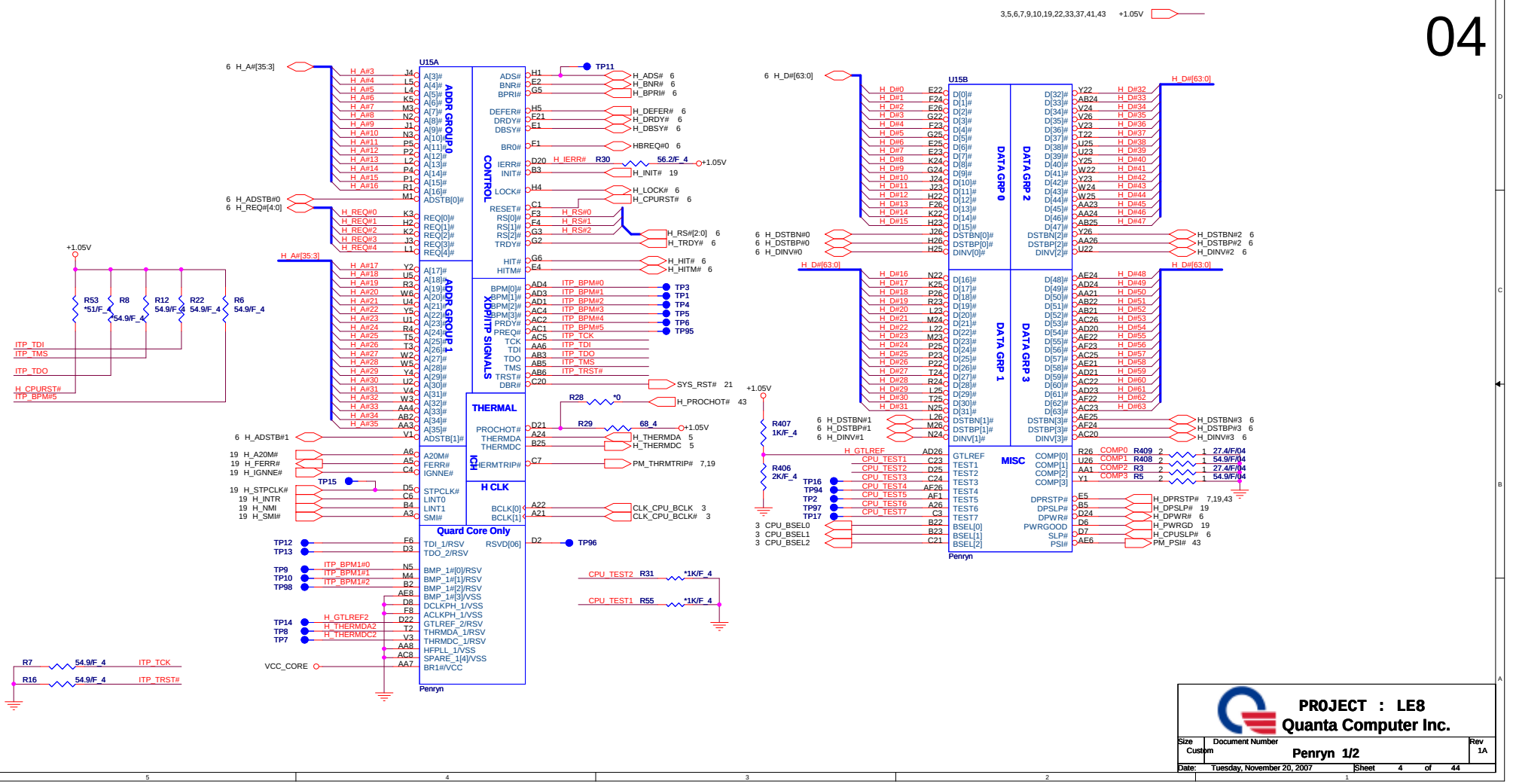
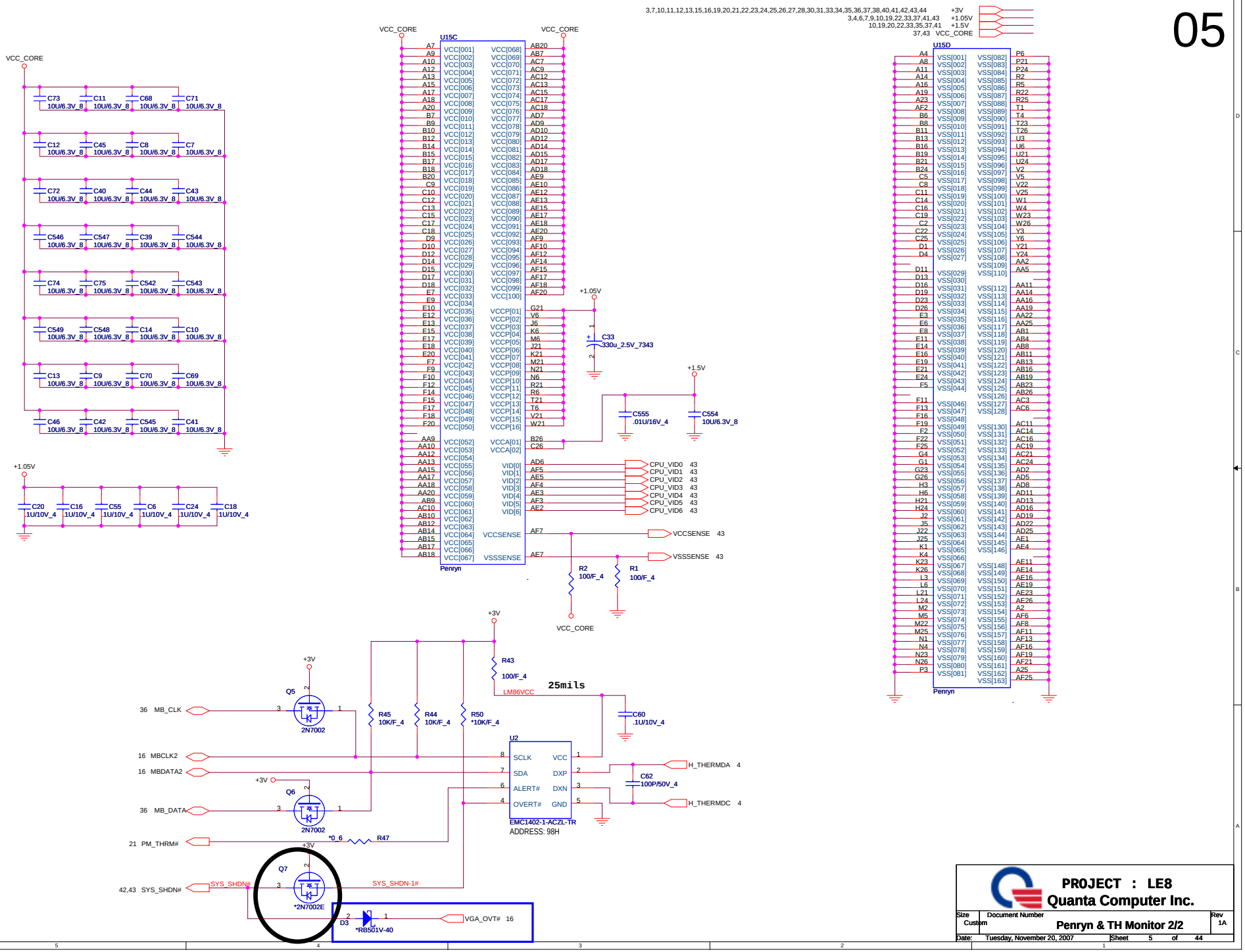

03
+3V
L23
HI0805R800R-00
+CK_VDD_MAIN
C370 10U/6.3V_8
C388 .1U/10V/04
C355 .1U/10V/04
C387 .1U/10V/04
C347 .1U/10V/04
C345 .1U/10V/04
L26
HI0805R800R-00
VDDCPU
C381 10U/6.3V_8
C385 .1U/10V/04
L20
HI0805R800R-00
+CK_VDD_MAIN2
C354 10U/6.3V_8
C384 .1U/10V/04
C386 .1U/10V/04
C383 .1U/10V/04
C343 .1U/10V/04
C344 .1U/10V/04
C346 .1U/10V/04
Y3
CG_XIN
CG_XOUT
14.318MHZ+/- 10ppm
C372 27P/50V/NPO_4
C369 27P/50V/NPO_4
CLK_MCH_OE# R188 10K/04
NEW-CARD_CLK_REQ# R222 10K/04
PCIE_LANREQ# R177 10K/04
RP11 4P2R-S-0@EV
R_DREFSSCLK
R_DREFSSCLK#
27M_NONSS 15
27M_SS 15
U8
CK505
ICS9LPRS365BGLFT/SLG8SP512T
VDDPLL3
VDD48
VDDPCI
VDDREF
VDDSRC
VDDCPU
VDD96I/O
VDDPLL3I/O
VDDSRCI/O
VDDSRCI/O
VDDSRCI/O
VDDCPU_IO
NC
X1
X2
CK_PWRGD/PD#
FSLB/TEST_MODE
SCLK
SDATA
GND
GND
GND48
GNDCPU
GNDPCI
GNDREF
GNDSRC
GNDSRC
GNDSRC
CPUCLKT0
CPUCLKC0
CPUCLKT1
CPUCLKC1
CPUT2_ITP/SRCT8
CPUT2_ITP/SRCC8
DOTT_96/SRCT0
DOTC_96/SRCC0
27MHz_Nonss/SRCCLK1/SE1
27Mhz_ss/SRCCLC1/SE2
SRCCLKT2/SATACL
SRCCLKC2/SATACL
SRCCLKT3/CR#_C
SRCCLKC3/CR#_D
SRCCLKT4
SRCCLKC4
PCI_STOP#
CPU_STOP#
SRCCLKT6
SRCCLKC6
SRCCLKT7/CR#_F
SRCCLKC7/CR#_E
SRCCLKT9
SRCCLKC9
SRCCLKT10
SRCCLKC10
SRCCLKT11/CR#_H
SRCCLKC11/CR#_G
PCICLK0/CR#_A
PCICLK1/CR#_B
PCICLK2/TME
PCICLK3
PCICLK4/27_SELECT
PCI_F5/ITP_EN
USB_48MHZ/FSLA
FSLC/TST_SL/REF
RP19 4P2R-S-0
RP23 4P2R-S-0
RP22 4P2R-S-0
RP14 *4P2R-S-0@IV
RP13 *4P2R-S-0@IV
RP12 4P2R-S-0
RP17 4P2R-S-0@EV
RP16 4P2R-S-0
RP18 4P2R-S-0
RP21 4P2R-S-0
RP15 4P2R-S-0
RP20 4P2R-S-0
R223 475/F/03
R189 475/F/03
R186 33/04
R180 475/F/03
R194 22/04
R195 22/04
R179 33/04
R184 33/04
R183 33/04
R182 33/04
R181 4.7K/04
R217 4.7K/04
R216 22/04
R214 22/04
R_PCLK_8512
PCLK_MINI_LPC
RPCI_CLK_SIO
FCTSEL1
ITP_EN
FSA
FSC
CLK_BSEL0
CLK_BSEL2
CLK_CPU_BCLK
CLK_CPU_BCLK#
CLK_MCH_BCLK
CLK_MCH_BCLK#
CLK_PCIE_MINI_C
CLK_PCIE_MINI_C#
DREFCLK
DREFCLK#
DREFSSCLK
DREFSSCLK#
CLK_PCIE_SATA
CLK_PCIE_SATA#
CLK_PCIE_VGA
CLK_PCIE_VGA#
CLK_PCIE_LAN
CLK_PCIE_LAN#
PM_STPPCI#
PM_STPCPU#
CLK_PCIE_ICH
CLK_PCIE_ICH#
CLK_PCIE_MINI
CLK_PCIE_MINI#
CLK_PCIE_3GPLL
CLK_PCIE_3GPLL#
CLK_PCIE_NEW_C
CLK_PCIE_NEW_C#
NEW-CARD_CLK_REQ#
CLK_MCH_OE#
PCLK_LPC_8512
PCIE_LANREQ#
PCLK_LPC_DEBUG
PCLK_LPC_TPM
PCI_CLK_SIO
PCI_CLK_R5C847
PCLK_ICH
CLK_48M_USB
CLK_14M_ICH
CLK_SIO_14M
+CK_VDD_MAIN
VDDCPU
+CK_VDD_MAIN2
CG_XIN
CG_XOUT
CK_PWG
CLK_BSEL1
R215 2.2K
FSB
CGCLK_SMB
CGDAT_SMB
11,12,35 CGCLK_SMB
11,12,35 CGDAT_SMB
Q12
Q11
2N7002
R207 10K
R209 10K
21,31,33 PDAT_SMB
21,31,33 PCLK_SMB
R193 10K/04
R192 *4.7K/04
PCLK_MINI_LPC
0=overclocking of CPU and SRC Allowed
1 = overclocking of CPU and SRC not Allowed
R178 10K/04@EV
R191 *10K/04@IV
FCTSEL1
0=UMA
1 = External VGA
Disable ITP
10K/04
R190
ITP_EN
GCLK_SEL = FCTSEL1
FCTSEL1 (PIN13)
PIN13
PIN14
PIN17
PIN18
0=UMA
DOT96T
DOT96C
SRCT1/LCDT_100
SRCT1/LCDT_100
1 = External VGA
SRCT0
SRCC0
27Mout-NSS
27Mout-SS
CPU Clock select
4 CPU_BSEL0
4 CPU_BSEL1
4 CPU_BSEL2
+1.05V
R169 0/04
R176 *56/04
R170 1K/04
R227 0/04
R230 *0/04
R229 1K/04
R233 0/04
R221 *0/04
R231 1K/04
R175 0/04
R228 0/04
R232 0/04
MCH_BSEL0 7
MCH_BSEL1 7
MCH_BSEL2 7
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
C342 *33P/50V/04 PCLK_LPC_8512
C327 *33P/50V/04 PCLK_ICH
C336 *33P/50V/04 PCLK_LPC_DEBUG
C330 *33P/50V/04 CLK_48M_USB
C391 *33P/50V/04 CLK_14M_ICH
for EMI
PROJECT : LE8
Quanta Computer Inc.
Size Custom
Document Number
CLOCK GENERATOR
Rev 1A
Date: Tuesday, November 20, 2007
Sheet 3 of 44


04
3,5,6,7,9,10,19,22,33,37,41,43 +1.05V
U15A
ADDR GROUP 0
ADDR GROUP 1
CONTROL
XDP/ITP SIGNALS
THERMAL
ICH
H CLK
Quard Core Only
Penryn
U15B
DATA GRP 0
DATA GRP 2
DATA GRP 1
DATA GRP 3
MISC
Penryn
PROJECT : LE8
Quanta Computer Inc.
Penryn 1/2
Tuesday, November 20, 2007


05
VCC_CORE
C73 10U/6.3V_8
C11 10U/6.3V_8
C68 10U/6.3V_8
C71 10U/6.3V_8
C12 10U/6.3V_8
C45 10U/6.3V_8
C8 10U/6.3V_8
C7 10U/6.3V_8
C72 10U/6.3V_8
C40 10U/6.3V_8
C44 10U/6.3V_8
C43 10U/6.3V_8
C546 10U/6.3V_8
C547 10U/6.3V_8
C39 10U/6.3V_8
C544 10U/6.3V_8
C74 10U/6.3V_8
C75 10U/6.3V_8
C542 10U/6.3V_8
C543 10U/6.3V_8
C549 10U/6.3V_8
C548 10U/6.3V_8
C14 10U/6.3V_8
C10 10U/6.3V_8
C13 10U/6.3V_8
C9 10U/6.3V_8
C70 10U/6.3V_8
C69 10U/6.3V_8
C46 10U/6.3V_8
C42 10U/6.3V_8
C545 10U/6.3V_8
C41 10U/6.3V_8
+1.05V
C20 1U/10V_4
C16 1U/10V_4
C55 1U/10V_4
C6 1U/10V_4
C24 1U/10V_4
C18 1U/10V_4
U15C
Penryn
VCC_CORE
VCCP[01] G21
VCCP[02] V6
VCCP[03] J6
VCCP[04] K6
VCCP[05] M6
VCCP[06] J21
VCCP[07] K21
VCCP[08] M21
VCCP[09] N21
VCCP[10] N6
VCCP[11] R21
VCCP[12] R6
VCCP[13] T21
VCCP[14] T6
VCCP[15] V21
VCCP[16] W21
VCCA[01] B26
VCCA[02] C26
+1.05V
C33 330u_2.5V_7343
+1.5V
C555 .01U/16V_4
C554 10U/6.3V_8
VID[0] AD6
VID[1] AF5
VID[2] AE5
VID[3] AF4
VID[4] AE3
VID[5] AF3
VID[6] AE2
CPU_VID0 43
CPU_VID1 43
CPU_VID2 43
CPU_VID3 43
CPU_VID4 43
CPU_VID5 43
CPU_VID6 43
VCCSENSE AF7
VSSSENSE AE7
VCCSENSE 43
VSSSENSE 43
R2 100/F_4
R1 100/F_4
VCC_CORE
3,7,10,11,12,13,15,16,19,20,21,22,23,24,25,26,27,28,30,31,33,34,35,36,37,38,40,41,42,43,44 +3V
3,4,6,7,9,10,19,22,33,37,41,43 +1.05V
10,19,20,22,33,35,37,41 +1.5V
37,43 VCC_CORE
U15D
Penryn
+3V
R43 100/F_4
LM86VCC
25mils
C60 .1U/10V_4
Q5
2N7002
36 MB_CLK
R45 10K/F_4
R44 10K/F_4
R50 *10K/F_4
U2
SCLK VCC
SDA DXP
ALERT# DXN
OVERT# GND
EMC1402-1-ACZL-TR
ADDRESS: 98H
16 MBCLK2
16 MBDATA2
H_THERMDA 4
H_THERMDC 4
C62 100P/50V_4
Q6
2N7002
36 MB_DATA
21 PM_THRM#
*0_6 R47
Q7
*2N7002E
42,43 SYS_SHDN#
SYS_SHDN-1#
D3
*RB501V-40
VGA_OVT# 16
PROJECT : LE8
Quanta Computer Inc.
Size Custom
Document Number
Penryn & TH Monitor 2/2
Rev 1A
Date: Tuesday, November 20, 2007
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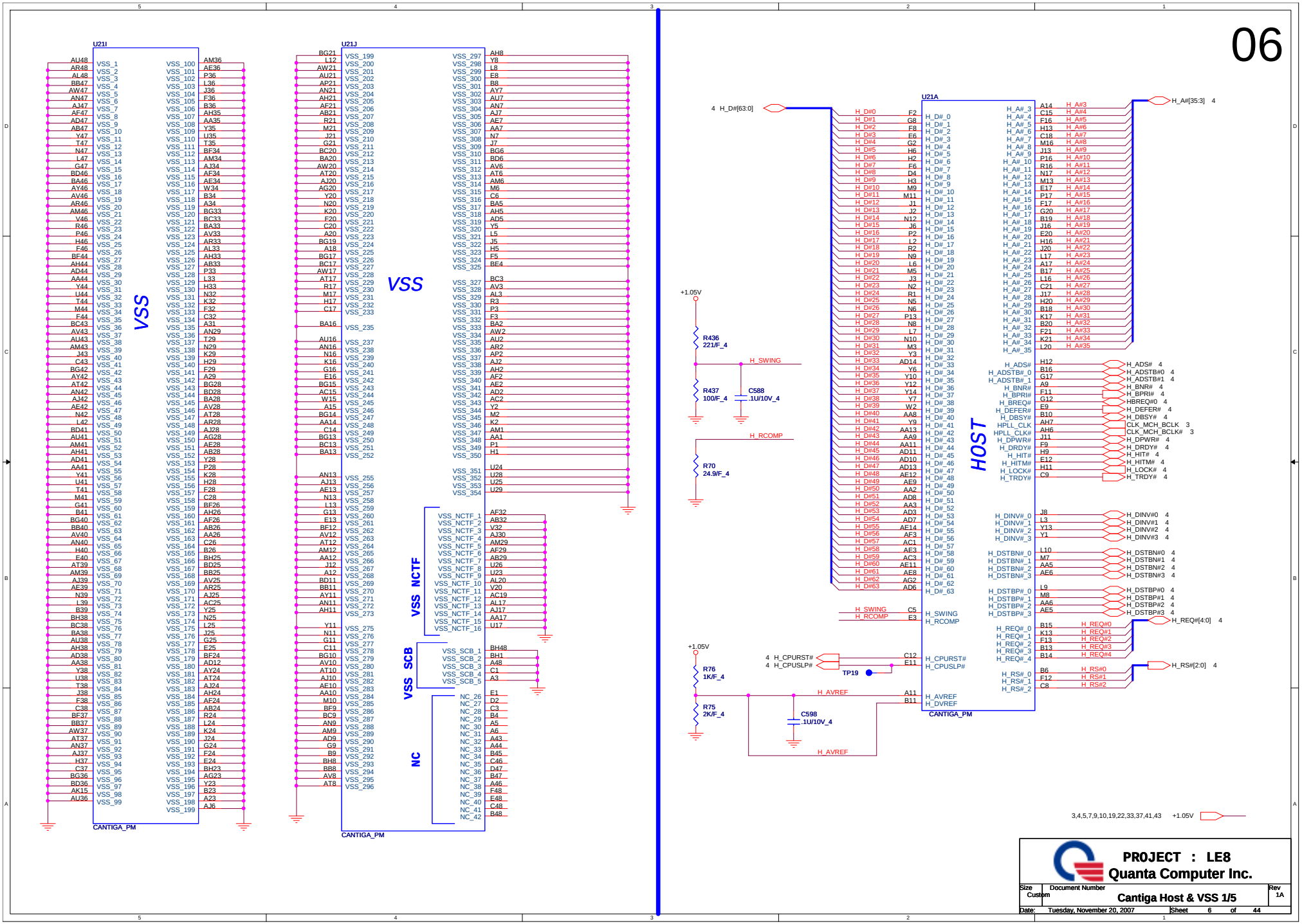

06
U21I
VSS
CANTIGA_PM
U21J
VSS
VSS_NCTF
VSS_SCB
NC
CANTIGA_PM
U21A
HOST
CANTIGA_PM
H_D#[63:0]
H_A#[35:3]
H_ADS#
H_ADSTB#_0
H_ADSTB#_1
H_BNR#
H_BPRI#
H_BREQ#
H_DEFER#
H_DBSY#
HPLL_CLK
HPLL_CLK#
H_DPWR#
H_DRDY#
H_HIT#
H_HITM#
H_LOCK#
H_TRDY#
H_DINV#_0
H_DINV#_1
H_DINV#_2
H_DINV#_3
H_DSTBN#_0
H_DSTBN#_1
H_DSTBN#_2
H_DSTBN#_3
H_DSTBP#_0
H_DSTBP#_1
H_DSTBP#_2
H_DSTBP#_3
H_REQ#[4:0]
H_RS#[2:0]
H_SWING
H_RCOMP
H_CPURST#
H_CPUSLP#
H_AVREF
H_DVREF
TP19
R436 221/F_4
R437 100/F_4
C588 .1U/10V_4
R70 24.9/F_4
R76 1K/F_4
R75 2K/F_4
C598 .1U/10V_4
+1.05V
3,4,5,7,9,10,19,22,33,37,41,43 +1.05V
PROJECT : LE8
Quanta Computer Inc.
Size Custom
Document Number
Cantiga Host & VSS 1/5
Rev 1A
Date: Tuesday, November 20, 2007
Sheet 6 of 44

MCH_CFG_5 DMIx2 selection

Low: DMIx2
High: DMIx4 (Default)

MCH_CFG_16 FSB Dynamic ODT

Low: Dynamic ODT disabled
High: Dynamic ODT enabled (Default)

MCH_CFG_9 PCI Express Graphic Lane

Low: Reverse Lane
High: Normal operation(Default)

MCH_CFG_19 DMI Lane Reversal

Low: Normal (Default)
High: Lane Reserved

MCH_CFG_6 iTPM Host Interface

Low: iTPM Host Interface enabled
High: iTPM Host Interface disabled (Default)

MCH_CFG_7 Intel (R) Management Engine Crypto

Low: Intel (R) Management Engine Crypto
TLS cipher suite with no confidentiality
High: Intel (R) Management Engine Crypto
TLS cipher suite with no confidentiality (Default)

MCH_CFG_10 PCIe Lookback Enable

Low: Enabled
High: Disabled (Default)

MCH_CFG_12/13 XOR/ALLZ/CLOCK Un-gating

MCH_CFG_13	MCH_CFG_12	Configuration
0	0	Reserved
1	0	XOR Mode enabled
0	1	All-Z Mode enabled
1	1	Normal operation (Default)

UMA & Discrete setting
LVDS Discrete / UMA
R131 NC 10K
R137 NC 10K

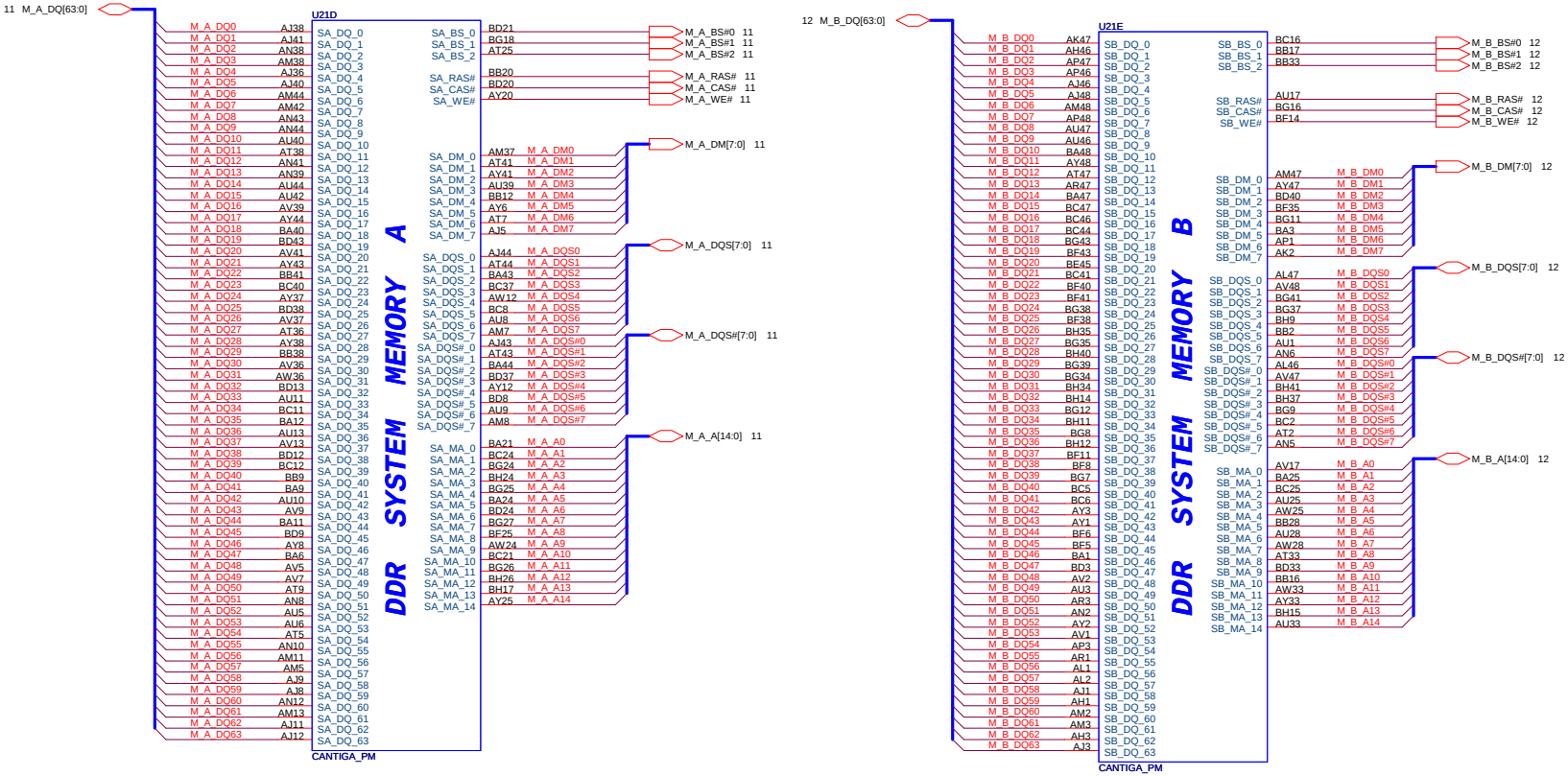
LVDS Discrete / UMA
R479 NC 2.37K
UMA & Discrete setting

UMA & Discrete setting
CRT/TV Discrete / UMA

R111	0	75
R107	0	75
R112	0	75
R133	NC	0
R132	NC	0
R120	0	150
R126	0	150
R123	0	150
R121	NC	33
R127	0	1.02K
R125	NC	33

UMA & Discrete setting
Discrete DREFCLK/ DREFCLK# 0
Discrete DREFSSCLK/ DREFSSCLK# 0
UMA DREFCLK/ DREFCLK# NC
UMA DREFSSCLK/ DREFSSCLK# NC

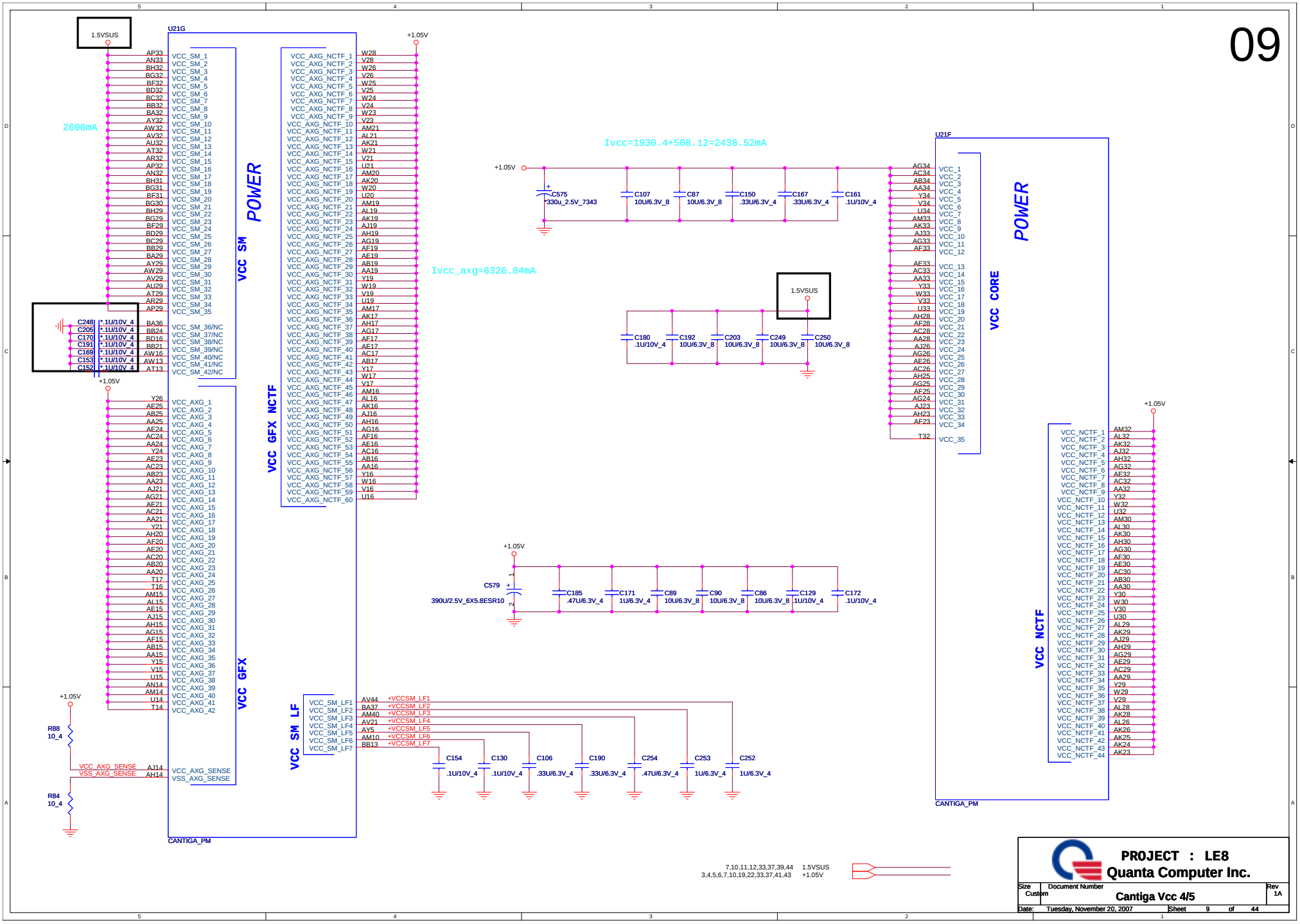
PROJECT : LE8
Quanta Computer Inc.
Size: Custom | Document Number: Cantiga DMI/DISP 2/5 | Rev: 1A
Date: Tuesday, November 20, 2007 | Sheet 7 of 44



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Cantiga DDR3 3/5	1A

Date: Tuesday, November 20, 2007 Sheet 8 of 44


09
U21G
1.5VSUS
+1.05V
2600mA
VCC_SM_1 VCC_SM_2 VCC_SM_3 VCC_SM_4 VCC_SM_5 VCC_SM_6 VCC_SM_7 VCC_SM_8 VCC_SM_9 VCC_SM_10 VCC_SM_11 VCC_SM_12 VCC_SM_13 VCC_SM_14 VCC_SM_15 VCC_SM_16 VCC_SM_17 VCC_SM_18 VCC_SM_19 VCC_SM_20 VCC_SM_21 VCC_SM_22 VCC_SM_23 VCC_SM_24 VCC_SM_25 VCC_SM_26 VCC_SM_27 VCC_SM_28 VCC_SM_29 VCC_SM_30 VCC_SM_31 VCC_SM_32 VCC_SM_33 VCC_SM_34 VCC_SM_35
VCC SM POWER
C248 C205 C170 C191 C169 C153 C152 *.1U/10V_4
VCC_SM_36/NC VCC_SM_37/NC VCC_SM_38/NC VCC_SM_39/NC VCC_SM_40/NC VCC_SM_41/NC VCC_SM_42/NC
VCC_AXG_NCTF_1 VCC_AXG_NCTF_2 VCC_AXG_NCTF_3 VCC_AXG_NCTF_4 VCC_AXG_NCTF_5 VCC_AXG_NCTF_6 VCC_AXG_NCTF_7 VCC_AXG_NCTF_8 VCC_AXG_NCTF_9 VCC_AXG_NCTF_10 VCC_AXG_NCTF_11 VCC_AXG_NCTF_12 VCC_AXG_NCTF_13 VCC_AXG_NCTF_14 VCC_AXG_NCTF_15 VCC_AXG_NCTF_16 VCC_AXG_NCTF_17 VCC_AXG_NCTF_18 VCC_AXG_NCTF_19 VCC_AXG_NCTF_20 VCC_AXG_NCTF_21 VCC_AXG_NCTF_22 VCC_AXG_NCTF_23 VCC_AXG_NCTF_24 VCC_AXG_NCTF_25 VCC_AXG_NCTF_26 VCC_AXG_NCTF_27 VCC_AXG_NCTF_28 VCC_AXG_NCTF_29 VCC_AXG_NCTF_30 VCC_AXG_NCTF_31 VCC_AXG_NCTF_32 VCC_AXG_NCTF_33 VCC_AXG_NCTF_34 VCC_AXG_NCTF_35 VCC_AXG_NCTF_36 VCC_AXG_NCTF_37 VCC_AXG_NCTF_38 VCC_AXG_NCTF_39 VCC_AXG_NCTF_40 VCC_AXG_NCTF_41 VCC_AXG_NCTF_42 VCC_AXG_NCTF_43 VCC_AXG_NCTF_44 VCC_AXG_NCTF_45 VCC_AXG_NCTF_46 VCC_AXG_NCTF_47 VCC_AXG_NCTF_48 VCC_AXG_NCTF_49 VCC_AXG_NCTF_50 VCC_AXG_NCTF_51 VCC_AXG_NCTF_52 VCC_AXG_NCTF_53 VCC_AXG_NCTF_54 VCC_AXG_NCTF_55 VCC_AXG_NCTF_56 VCC_AXG_NCTF_57 VCC_AXG_NCTF_58 VCC_AXG_NCTF_59 VCC_AXG_NCTF_60
VCC GFX NCTF
Ivcc_axg=6326.84mA
VCC_AXG_1 VCC_AXG_2 VCC_AXG_3 VCC_AXG_4 VCC_AXG_5 VCC_AXG_6 VCC_AXG_7 VCC_AXG_8 VCC_AXG_9 VCC_AXG_10 VCC_AXG_11 VCC_AXG_12 VCC_AXG_13 VCC_AXG_14 VCC_AXG_15 VCC_AXG_16 VCC_AXG_17 VCC_AXG_18 VCC_AXG_19 VCC_AXG_20 VCC_AXG_21 VCC_AXG_22 VCC_AXG_23 VCC_AXG_24 VCC_AXG_25 VCC_AXG_26 VCC_AXG_27 VCC_AXG_28 VCC_AXG_29 VCC_AXG_30 VCC_AXG_31 VCC_AXG_32 VCC_AXG_33 VCC_AXG_34 VCC_AXG_35 VCC_AXG_36 VCC_AXG_37 VCC_AXG_38 VCC_AXG_39 VCC_AXG_40 VCC_AXG_41 VCC_AXG_42
VCC GFX
R88 10_4
R84 10_4
VCC_AXG_SENSE VSS_AXG_SENSE
VCC_AXG_SENSE VSS_AXG_SENSE
VCC_SM_LF1 VCC_SM_LF2 VCC_SM_LF3 VCC_SM_LF4 VCC_SM_LF5 VCC_SM_LF6 VCC_SM_LF7
VCC SM LF
+VCCSM_LF1 +VCCSM_LF2 +VCCSM_LF3 +VCCSM_LF4 +VCCSM_LF5 +VCCSM_LF6 +VCCSM_LF7
C154 .1U/10V_4
C130 .1U/10V_4
C106 .33U/6.3V_4
C190 .33U/6.3V_4
C254 .47U/6.3V_4
C253 1U/6.3V_4
C252 1U/6.3V_4
CANTIGA_PM
Ivcc=1930.4+508.12=2438.52mA
C575 *330u_2.5V_7343
C107 10U/6.3V_8
C87 10U/6.3V_8
C150 .33U/6.3V_4
C167 .33U/6.3V_4
C161 .1U/10V_4
U21F
VCC_1 VCC_2 VCC_3 VCC_4 VCC_5 VCC_6 VCC_7 VCC_8 VCC_9 VCC_10 VCC_11 VCC_12 VCC_13 VCC_14 VCC_15 VCC_16 VCC_17 VCC_18 VCC_19 VCC_20 VCC_21 VCC_22 VCC_23 VCC_24 VCC_25 VCC_26 VCC_27 VCC_28 VCC_29 VCC_30 VCC_31 VCC_32 VCC_33 VCC_34 VCC_35
VCC CORE POWER
C180 .1U/10V_4
C192 10U/6.3V_8
C203 10U/6.3V_8
C249 10U/6.3V_8
C250 10U/6.3V_8
C579 390U/2.5V_6X5.8ESR10
C185 .47U/6.3V_4
C171 1U/6.3V_4
C89 10U/6.3V_8
C90 10U/6.3V_8
C86 10U/6.3V_8
C129 1U/10V_4
C172 .1U/10V_4
VCC_NCTF_1 VCC_NCTF_2 VCC_NCTF_3 VCC_NCTF_4 VCC_NCTF_5 VCC_NCTF_6 VCC_NCTF_7 VCC_NCTF_8 VCC_NCTF_9 VCC_NCTF_10 VCC_NCTF_11 VCC_NCTF_12 VCC_NCTF_13 VCC_NCTF_14 VCC_NCTF_15 VCC_NCTF_16 VCC_NCTF_17 VCC_NCTF_18 VCC_NCTF_19 VCC_NCTF_20 VCC_NCTF_21 VCC_NCTF_22 VCC_NCTF_23 VCC_NCTF_24 VCC_NCTF_25 VCC_NCTF_26 VCC_NCTF_27 VCC_NCTF_28 VCC_NCTF_29 VCC_NCTF_30 VCC_NCTF_31 VCC_NCTF_32 VCC_NCTF_33 VCC_NCTF_34 VCC_NCTF_35 VCC_NCTF_36 VCC_NCTF_37 VCC_NCTF_38 VCC_NCTF_39 VCC_NCTF_40 VCC_NCTF_41 VCC_NCTF_42 VCC_NCTF_43 VCC_NCTF_44
VCC NCTF
7,10,11,12,33,37,39,44 1.5VSUS
3,4,5,6,7,10,19,22,33,37,41,43 +1.05V
PROJECT : LE8
Quanta Computer Inc.
Size Custom
Document Number
Cantiga Vcc 4/5
Rev 1A
Date: Tuesday, November 20, 2007
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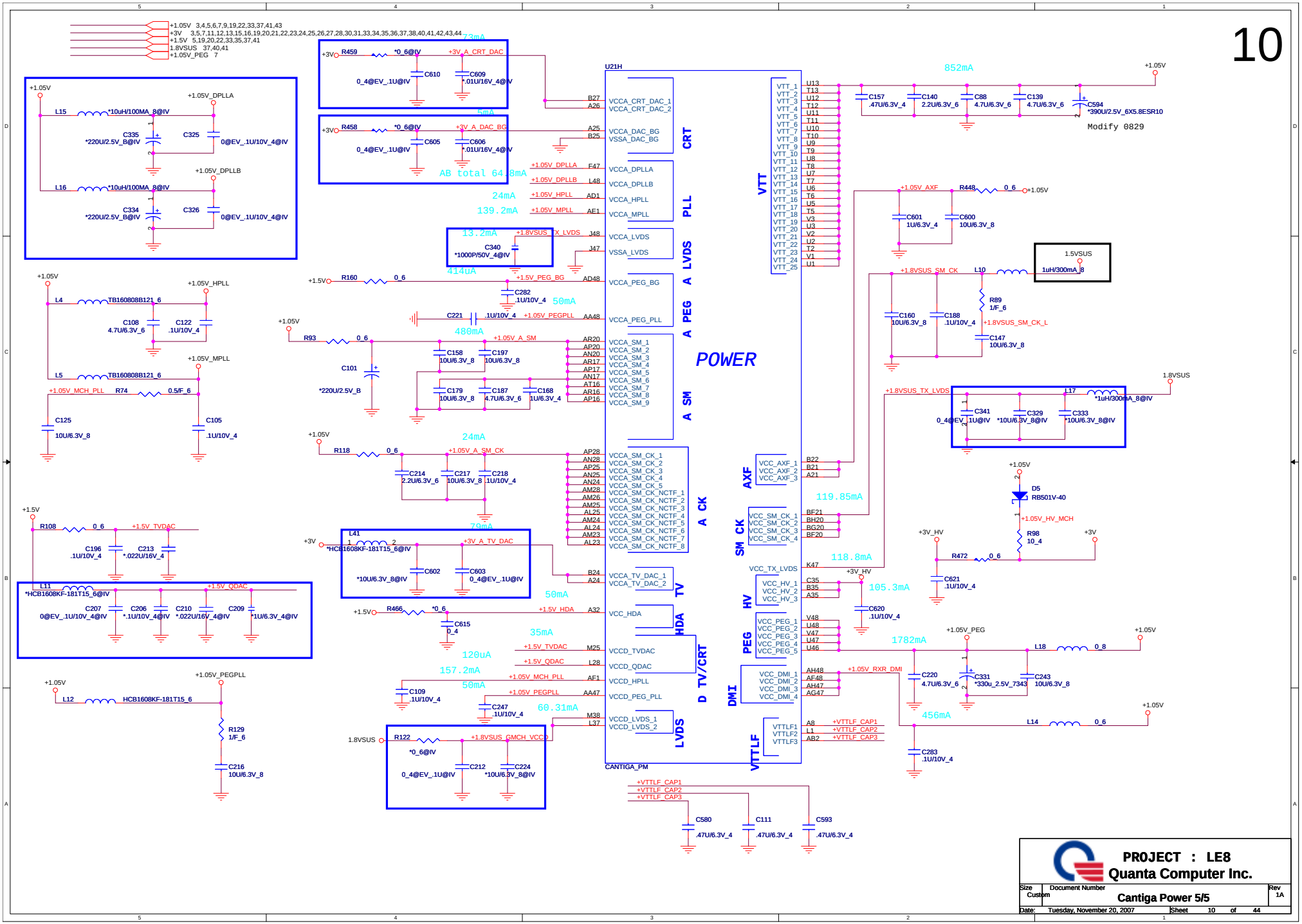
+1.05V 3,4,5,6,7,9,19,22,33,37,41,43
+3V 3,5,7,11,12,13,15,16,19,20,21,22,23,24,25,26,27,28,30,31,33,34,35,36,37,38,40,41,42,43,44
+1.5V 5,19,20,22,33,35,37,41
1.8VSUS 37,40,41
+1.05V_PEG 7
U21H
POWER
CRT
PLL
A LVDS
A PEG
A SM
A CK
AXF
SM CK
TV
HV
PEG
D TV/CRT
DMI
LVDS
VTT
VTTLF
CANTIGA_PM
73mA
5mA
AB total 64.8mA
24mA
139.2mA
13.2mA
414uA
50mA
480mA
24mA
79mA
50mA
35mA
120uA
157.2mA
50mA
60.31mA
852mA
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105.3mA
1782mA
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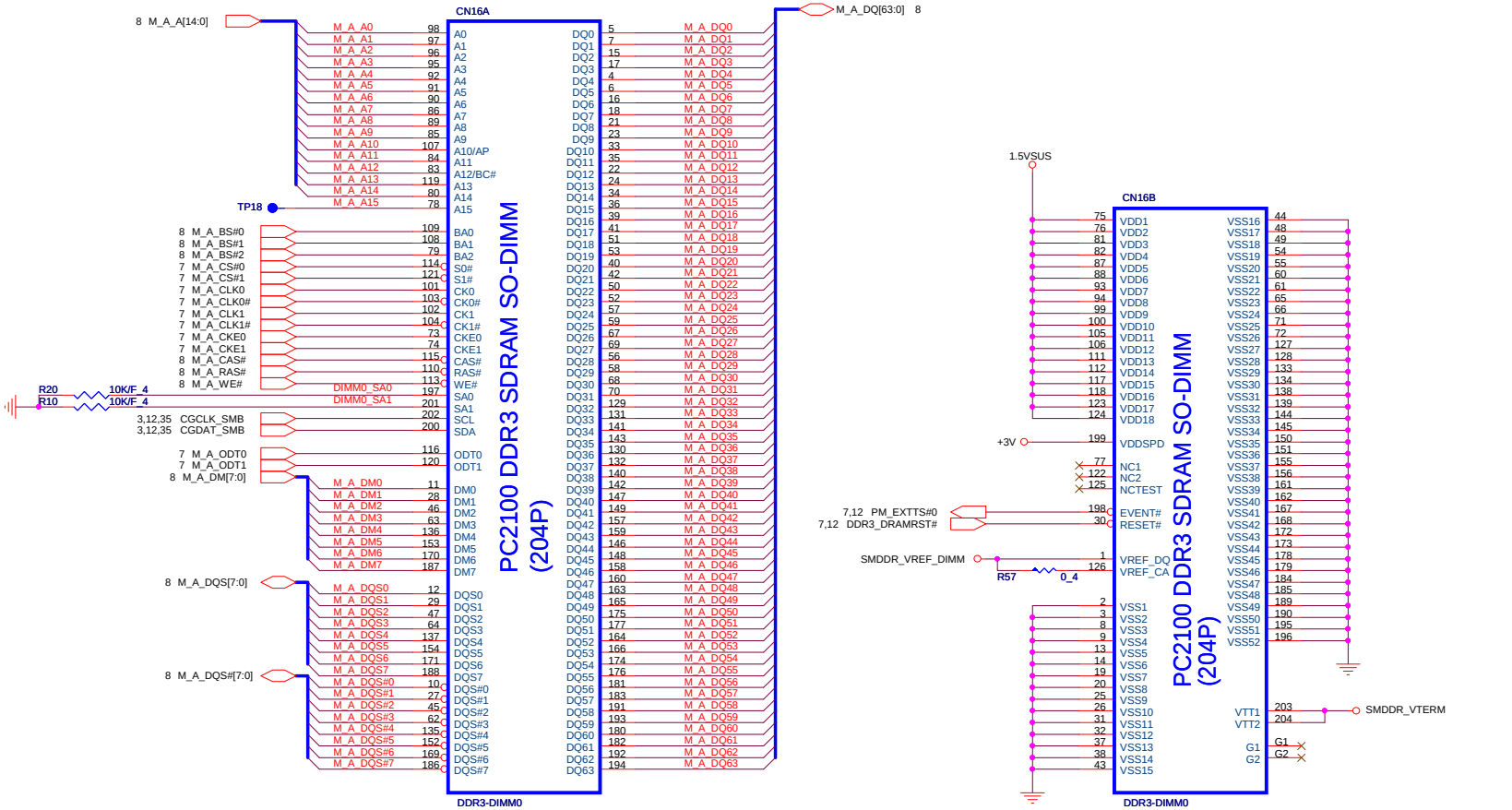
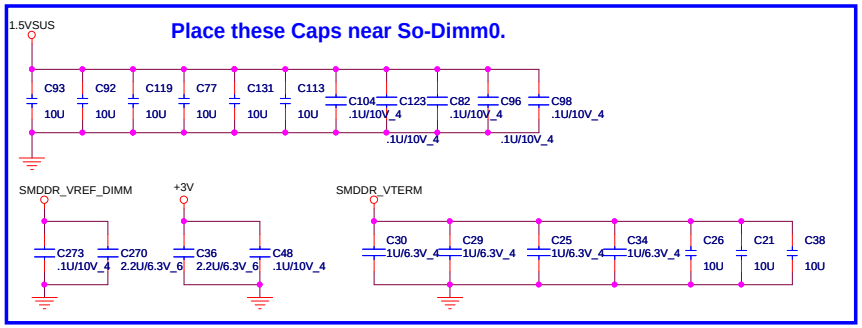
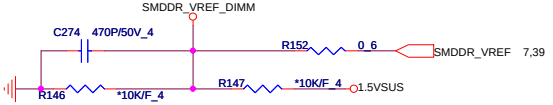
Modify 0829
PROJECT : LE8
Quanta Computer Inc.
Cantiga Power 5/5
Size Custom
Document Number
Rev 1A
Date: Tuesday, November 20, 2007
Sheet 10 of 44







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Quanta Computer Inc.

Size	Document Number	Rev
Custom	DDR3 DIMM-0(H=5.2)	1A
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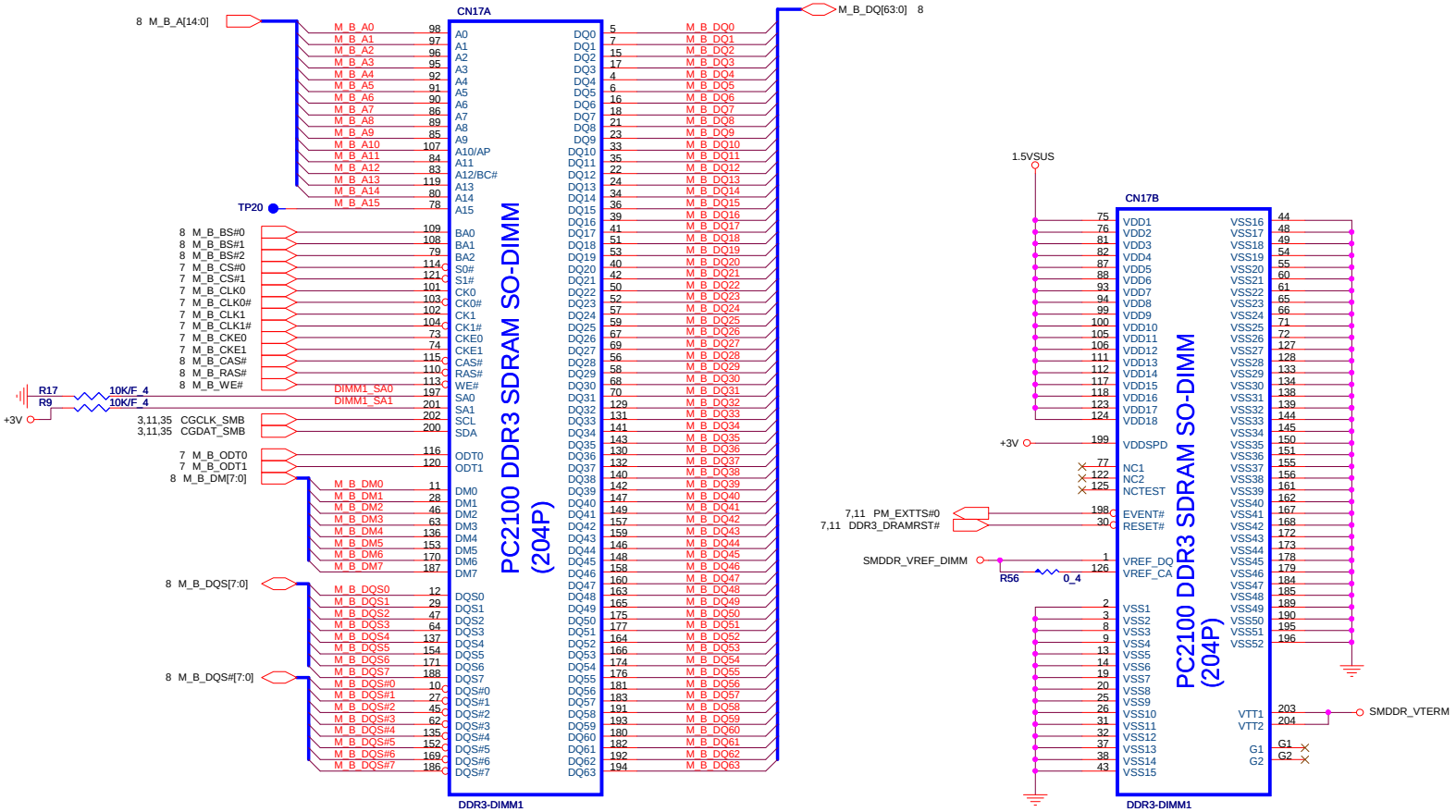

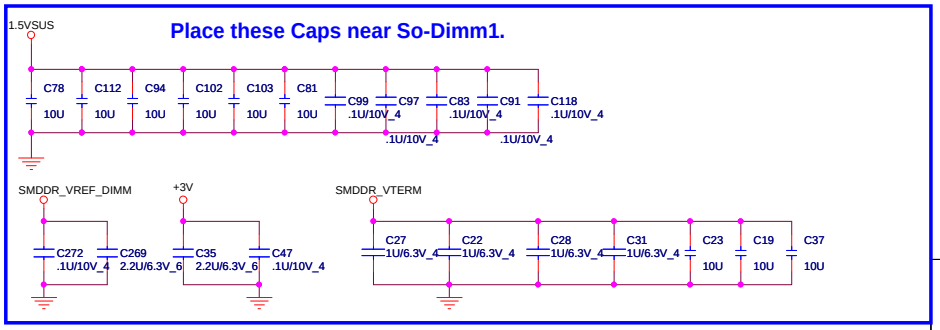

PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	DDR3 DIMM-1(H=9.2)	1A
Date: Tuesday, November 20, 2007	Sheet 12 of 44	

NB9M-NS (G98)

Part Value have show "@NC" is No Stuff

13

33,37,44 +VGACORE
14,15,33,37,44 +VGA1.1V
3,5,7,10,11,12,15,16,19,20,21,22,23,24,25,26,27,28,30,31,33,34,35,36,37,38,40,41,42,43,44 +3V

U20A

1/13 PCI_EXPRESS

NB9M-NS@EV

+VGA1.1V

C251 10U/6.3V/X5R_8@EV
C268 4.7U/6.3V/X5R_6@EV
C202 1U/6.3V/X5R_4@EV
C208 1U/6.3V/X5R_4@EV
C201 .1U/10V_4@EV
C630 .1U/10V_4@EV

PEX_IOVDD/Q 1400mA

AC9 PEX_IOVDD_01
AD7 PEX_IOVDD_02
AD8 PEX_IOVDD_03
AE7 PEX_IOVDD_04
AF7 PEX_IOVDD_05
AG7 PEX_IOVDD_06

+VGA1.1V

Near BGA

C276 10U/6.3V/X5R_8@EV
C625 4.7U/6.3V/X5R_6@EV
C626 1U/6.3V/X5R_4@EV
C271 1U/6.3V/X5R_4@EV
C199 .1U/10V_4@EV
C629 .1U/10V_4@EV
C204 .1U/10V_4@EV

AB13 PEX_IOVDDQ_01
AB16 PEX_IOVDDQ_02
AB17 PEX_IOVDDQ_03
AB7 PEX_IOVDDQ_04
AB8 PEX_IOVDDQ_05
AB9 PEX_IOVDDQ_06
AC13 PEX_IOVDDQ_07
AC7 PEX_IOVDDQ_08
AD6 PEX_IOVDDQ_09
AE6 PEX_IOVDDQ_10
AF6 PEX_IOVDDQ_11
AG6 PEX_IOVDDQ_12

+VGACORE

PLACE NEAR BALLS

VDD 11.57A

Near BGA

C145 4.7U/6.3V/X5R_6@EV
C159 1U/6.3V/X5R_4@EV
C184 .47U/6.3V_4@EV
C195 .1U/10V_4@EV
C194 .1U/10V_4@EV
C193 .1U/10V_4@EV

C144 4.7U/6.3V/X5R_6@EV
C200 1U/6.3V/X5R_4@EV
C178 .1U/10V_4@EV
C166 .1U/10V_4@EV
C163 .1U/10V_4@EV
C164 .1U/10V_4@EV

C564 4.7U/6.3V/X5R_6@EV
C571 1U/6.3V/X5R_4@EV
C568 .1U/10V_4@EV
C570 .1U/10V_4@EV
C567 .1U/10V_4@EV
C165 .1U/10V_4@EV

C558 *100U/10V_7343@NC
C569 .1U/10V_4@EV
C186 .1U/10V_4@EV
C156 .1U/10V_4@EV

J10 VDD_01
J12 VDD_02
J13 VDD_03
J9 VDD_04
L9 VDD_05
M11 VDD_06
M17 VDD_07
M9 VDD_08
N11 VDD_09
N12 VDD_10
N13 VDD_11
N14 VDD_12
N15 VDD_13
N16 VDD_14
N17 VDD_15
N19 VDD_16
N9 VDD_17
P11 VDD_18
P12 VDD_19
P13 VDD_20
P14 VDD_21
P15 VDD_22
P16 VDD_23
P17 VDD_24
R11 VDD_25
R12 VDD_26
R13 VDD_27
R14 VDD_28
R15 VDD_29
R16 VDD_30
R17 VDD_31
R9 VDD_32
T11 VDD_33
T17 VDD_34
T9 VDD_35
U19 VDD_36
U9 VDD_37
W10 VDD_38
W12 VDD_39
W13 VDD_40
W18 VDD_41
W19 VDD_42
W9 VDD_43

T10
T9
W15 VDD_SENSE
W16 GND_SENSE

+3V

C577 1U/6.3V/X5R_4@EV
C578 .1U/10V_4@EV
C120 .1U/10V_4@EV

A12 VDD33_01
B12 VDD33_02
C12 VDD33_03
D12 VDD33_04
E12 VDD33_05
F12 VDD33_06

+VGA1.1V

L43 10nH_6@EV

+PEX_PLLVDD

+PEX_PLLVDD 110mA

C619 4.7U/6.3V/X5R_6@EV
C622 4.7U/6.3V/X5R_6@EV
C279 1U/6.3V/X5R_4@EV
C277 .1U/10V_4@EV
C278 .01U/16V_4@EV

AF9 PEX_PLLVDD

R136 *200/F_4@NC

AE10 PEX_TSTCLK_OUT*
AF10 PEX_TSTCLK_OUT

T32

AG9 RFU_5

R467 2.49K/F_4@EV

PEX_TERMP

AG10 PEX_TERMP

AF9 RFU_6
AD9 PEX_RST*

T8

VGA_RST#

R478 0_4@EV
D11 *RB501V-40@NC
R477 *100K/F_4@NC

PLT_RST-R# PLT_RST-R# 7,20

AB10 CLK_PCIE_VGA
AC10 CLK_PCIE_VGA#

PEX_REFCLK
PEX_REFCLK*

CLK_PCIE_VGA 3
CLK_PCIE_VGA# 3

AD10 PEX_TX0	C_PEG_RX0	C238 .1U/10V_4@EV	PEG_RX0 7
AD11 PEX_TX0*	C_PEG_RX#0	C237 .1U/10V_4@EV	PEG_RX#0 7
AD12 PEX_TX1	C_PEG_RX1	C239 .1U/10V_4@EV	PEG_RX1 7
AC12 PEX_TX1*	C_PEG_RX#1	C240 .1U/10V_4@EV	PEG_RX#1 7
AB11 PEX_TX2	C_PEG_RX2	C266 .1U/10V_4@EV	PEG_RX2 7
AB12 PEX_TX2*	C_PEG_RX#2	C265 .1U/10V_4@EV	PEG_RX#2 7
AD13 PEX_TX3	C_PEG_RX3	C236 .1U/10V_4@EV	PEG_RX3 7
AD14 PEX_TX3*	C_PEG_RX#3	C235 .1U/10V_4@EV	PEG_RX#3 7
AD15 PEX_TX4	C_PEG_RX4	C242 .1U/10V_4@EV	PEG_RX4 7
AC15 PEX_TX4*	C_PEG_RX#4	C241 .1U/10V_4@EV	PEG_RX#4 7
AB14 PEX_TX5	C_PEG_RX5	C263 .1U/10V_4@EV	PEG_RX5 7
AB15 PEX_TX5*	C_PEG_RX#5	C264 .1U/10V_4@EV	PEG_RX#5 7
AC16 PEX_TX6	C_PEG_RX6	C262 .1U/10V_4@EV	PEG_RX6 7
AD16 PEX_TX6*	C_PEG_RX#6	C261 .1U/10V_4@EV	PEG_RX#6 7
AD17 PEX_TX7	C_PEG_RX7	C246 .1U/10V_4@EV	PEG_RX7 7
AD18 PEX_TX7*	C_PEG_RX#7	C245 .1U/10V_4@EV	PEG_RX#7 7
AC18 PEX_TX8	C_PEG_RX8	C260 .1U/10V_4@EV	PEG_RX8 7
AB18 PEX_TX8*	C_PEG_RX#8	C259 .1U/10V_4@EV	PEG_RX#8 7
AB19 PEX_TX9	C_PEG_RX9	C234 .1U/10V_4@EV	PEG_RX9 7
AB20 PEX_TX9*	C_PEG_RX#9	C233 .1U/10V_4@EV	PEG_RX#9 7
AD19 PEX_TX10	C_PEG_RX10	C232 .1U/10V_4@EV	PEG_RX10 7
AD20 PEX_TX10*	C_PEG_RX#10	C231 .1U/10V_4@EV	PEG_RX#10 7
AD21 PEX_TX11	C_PEG_RX11	C230 .1U/10V_4@EV	PEG_RX11 7
AC21 PEX_TX11*	C_PEG_RX#11	C229 .1U/10V_4@EV	PEG_RX#11 7
AB21 PEX_TX12	C_PEG_RX12	C258 .1U/10V_4@EV	PEG_RX12 7
AB22 PEX_TX12*	C_PEG_RX#12	C257 .1U/10V_4@EV	PEG_RX#12 7
AC22 PEX_TX13	C_PEG_RX13	C256 .1U/10V_4@EV	PEG_RX13 7
AD22 PEX_TX13*	C_PEG_RX#13	C255 .1U/10V_4@EV	PEG_RX#13 7
AD23 PEX_TX14	C_PEG_RX14	C228 .1U/10V_4@EV	PEG_RX14 7
AD24 PEX_TX14*	C_PEG_RX#14	C227 .1U/10V_4@EV	PEG_RX#14 7
AE25 PEX_TX15	C_PEG_RX15	C226 .1U/10V_4@EV	PEG_RX15 7
AE26 PEX_TX15*	C_PEG_RX#15	C225 .1U/10V_4@EV	PEG_RX#15 7

AE12 PEX_RX0	PEG_TX0	PEG_TX0 7
AF12 PEX_RX0*	PEG_TX#0	PEG_TX#0 7
AG12 PEX_RX1	PEG_TX1	PEG_TX1 7
AG13 PEX_RX1*	PEG_TX#1	PEG_TX#1 7
AF13 PEX_RX2	PEG_TX2	PEG_TX2 7
AE13 PEX_RX2*	PEG_TX#2	PEG_TX#2 7
AE15 PEX_RX3	PEG_TX3	PEG_TX3 7
AF15 PEX_RX3*	PEG_TX#3	PEG_TX#3 7
AG15 PEX_RX4	PEG_TX4	PEG_TX4 7
AG16 PEX_RX4*	PEG_TX#4	PEG_TX#4 7
AF16 PEX_RX5	PEG_TX5	PEG_TX5 7
AE16 PEX_RX5*	PEG_TX#5	PEG_TX#5 7
AE18 PEX_RX6	PEG_TX6	PEG_TX6 7
AF18 PEX_RX6*	PEG_TX#6	PEG_TX#6 7
AG18 PEX_RX7	PEG_TX7	PEG_TX7 7
AG19 PEX_RX7*	PEG_TX#7	PEG_TX#7 7
AF19 PEX_RX8	PEG_TX8	PEG_TX8 7
AE19 PEX_RX8*	PEG_TX#8	PEG_TX#8 7
AE21 PEX_RX9	PEG_TX9	PEG_TX9 7
AF21 PEX_RX9*	PEG_TX#9	PEG_TX#9 7
AG21 PEX_RX10	PEG_TX10	PEG_TX10 7
AG22 PEX_RX10*	PEG_TX#10	PEG_TX#10 7
AF22 PEX_RX11	PEG_TX11	PEG_TX11 7
AE22 PEX_RX11*	PEG_TX#11	PEG_TX#11 7
AE24 PEX_RX12	PEG_TX12	PEG_TX12 7
AF24 PEX_RX12*	PEG_TX#12	PEG_TX#12 7
AG24 PEX_RX13	PEG_TX13	PEG_TX13 7
AF25 PEX_RX13*	PEG_TX#13	PEG_TX#13 7
AG25 PEX_RX14	PEG_TX14	PEG_TX14 7
AG26 PEX_RX14*	PEG_TX#14	PEG_TX#14 7
AE27 PEX_RX15	PEG_TX15	PEG_TX15 7
AF27 PEX_RX15*	PEG_TX#15	PEG_TX#15 7

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Quanta Computer Inc.

Size	Document Number	Rev
Custom	NV9X (PCIE I/F) 1/5	1A
Date: Tuesday, November 20, 2007	Sheet 13 of 44	

18 VMA_DQ[63..0]
18 VMA_DM[7..0]
18 VMA_WDQS[7..0]
18 VMA_RDQS[7..0]

15,18,33,37,40 +1.8V

U20B

2/13 FRAME_BUFFER

VMA_DQ0	D21	FBA_D0	FBVDDQ_01 A13
VMA_DQ1	C22	FBA_D1	FBVDDQ_02 B13
VMA_DQ2	B22	FBA_D2	FBVDDQ_03 C13
VMA_DQ3	A22	FBA_D3	FBVDDQ_04 D13
VMA_DQ4	C24	FBA_D4	FBVDDQ_05 D14
VMA_DQ5	B25	FBA_D5	FBVDDQ_06 E13
VMA_DQ6	A25	FBA_D6	FBVDDQ_07 F13
VMA_DQ7	A26	FBA_D7	FBVDDQ_08 F14
VMA_DQ8	D22	FBA_D8	FBVDDQ_09 F15
VMA_DQ9	E22	FBA_D9	FBVDDQ_10 F16
VMA_DQ10	E24	FBA_D10	FBVDDQ_11 F17
VMA_DQ11	D24	FBA_D11	FBVDDQ_12 F19
VMA_DQ12	D26	FBA_D12	FBVDDQ_13 F22
VMA_DQ13	D27	FBA_D13	FBVDDQ_14 H23
VMA_DQ14	C27	FBA_D14	FBVDDQ_15 H26
VMA_DQ15	B27	FBA_D15	FBVDDQ_16 J15
VMA_DQ16	D16	FBA_D16	FBVDDQ_17 J16
VMA_DQ17	E16	FBA_D17	FBVDDQ_18 J18
VMA_DQ18	D17	FBA_D18	FBVDDQ_19 J19
VMA_DQ19	F18	FBA_D19	FBVDDQ_20 L19
VMA_DQ20	D20	FBA_D20	FBVDDQ_21 L23
VMA_DQ21	F20	FBA_D21	FBVDDQ_22 L26
VMA_DQ22	E21	FBA_D22	FBVDDQ_23 M19
VMA_DQ23	F21	FBA_D23	FBVDDQ_24 N22
VMA_DQ24	C16	FBA_D24	FBVDDQ_25 U22
VMA_DQ25	B18	FBA_D25	FBVDDQ_26 Y22
VMA_DQ26	C18	FBA_D26	
VMA_DQ27	D18	FBA_D27	
VMA_DQ28	C19	FBA_D28	
VMA_DQ29	C21	FBA_D29	
VMA_DQ30	B21	FBA_D30	
VMA_DQ31	A21	FBA_D31	
VMA_DQ32	P22	FBA_D32	
VMA_DQ33	P24	FBA_D33	
VMA_DQ34	R23	FBA_D34	
VMA_DQ35	R24	FBA_D35	
VMA_DQ36	T23	FBA_D36	
VMA_DQ37	U24	FBA_D37	
VMA_DQ38	V23	FBA_D38	
VMA_DQ39	V24	FBA_D39	
VMA_DQ40	N25	FBA_D40	
VMA_DQ41	N26	FBA_D41	
VMA_DQ42	R25	FBA_D42	
VMA_DQ43	R26	FBA_D43	
VMA_DQ44	T25	FBA_D44	
VMA_DQ45	V26	FBA_D45	
VMA_DQ46	V25	FBA_D46	
VMA_DQ47	V27	FBA_D47	
VMA_DQ48	V22	FBA_D48	
VMA_DQ49	W22	FBA_D49	
VMA_DQ50	W23	FBA_D50	
VMA_DQ51	W24	FBA_D51	
VMA_DQ52	AA22	FBA_D52	
VMA_DQ53	AB23	FBA_D53	
VMA_DQ54	AB24	FBA_D54	
VMA_DQ55	AC24	FBA_D55	
VMA_DQ56	W25	FBA_D56	
VMA_DQ57	W26	FBA_D57	
VMA_DQ58	W27	FBA_D58	
VMA_DQ59	AA25	FBA_D59	
VMA_DQ60	AB25	FBA_D60	
VMA_DQ61	AB26	FBA_D61	
VMA_DQ62	AD26	FBA_D62	
VMA_DQ63	AD27	FBA_D63	

VMA_DM0	D23	FBA_DQM0	
VMA_DM1	C26	FBA_DQM1	
VMA_DM2	D19	FBA_DQM2	
VMA_DM3	B19	FBA_DQM3	
VMA_DM4	T24	FBA_DQM4	
VMA_DM5	T26	FBA_DQM5	
VMA_DM6	AA23	FBA_DQM6	
VMA_DM7	AB27	FBA_DQM7	

VMA_WDQS0	A24	FBA_DQS_WP0	
VMA_WDQS1	C25	FBA_DQS_WP1	
VMA_WDQS2	E19	FBA_DQS_WP2	
VMA_WDQS3	A19	FBA_DQS_WP3	
VMA_WDQS4	T22	FBA_DQS_WP4	
VMA_WDQS5	T27	FBA_DQS_WP5	
VMA_WDQS6	AA24	FBA_DQS_WP6	
VMA_WDQS7	AA26	FBA_DQS_WP7	

VMA_RDQS0	B24	FBA_DQS_RN0	
VMA_RDQS1	D25	FBA_DQS_RN1	
VMA_RDQS2	E18	FBA_DQS_RN2	
VMA_RDQS3	A18	FBA_DQS_RN3	
VMA_RDQS4	R22	FBA_DQS_RN4	
VMA_RDQS5	R27	FBA_DQS_RN5	
VMA_RDQS6	Y24	FBA_DQS_RN6	
VMA_RDQS7	AA27	FBA_DQS_RN7	

+FB_VREF1 A16 — FB_VREF

NB9M-NS@EV

+1.8V — FBVDDQ 1720mA

C100 4700P/25V_4@EV, C182 4700P/25V_4@EV, C198 4700P/25V_4@EV, C162 .022U/10V_4@EV, C155 .022U/10V_4@EV, C148 .1U/10V_4@EV, C138 .1U/10V_4@EV, C132 .1U/10V_4@EV, C124 1U/6.3V/X5R_4@EV, C566 4.7U/6.3V/X5R_6@EV

C143 4700P/25V_4@EV, C135 4700P/25V_4@EV, C127 4700P/25V_4@EV, C136 .022U/10V_4@EV, C134 .022U/10V_4@EV, C110 .1U/10V_4@EV, C121 .1U/10V_4@EV, C584 .1U/10V_4@EV, C576 1U/6.3V/X5R_4@EV, C565 4.7U/6.3V/X5R_6@EV

FBA_CMD0	F26	VMA_MA3 18
FBA_CMD1	J24	VMA_MA0 18
FBA_CMD2	F25	VMA_MA2 18
FBA_CMD3	M23	VMA_MA1 18
FBA_CMD4	N27	VMA_MA3H 18
FBA_CMD5	M27	VMA_MA4H 18
FBA_CMD6	K26	VMA_MA5H 18
FBA_CMD7	J25	
FBA_CMD8	J27	
FBA_CMD9	G23	VMA_CS0# 18
FBA_CMD10	G26	VMA_WE# 18
FBA_CMD11	J23	VMA_BA0 18
FBA_CMD12	M25	VMA_CKE 18
FBA_CMD13	K27	VMA_ODT 18
FBA_CMD14	G25	VMA_MA2H 18
FBA_CMD15	L24	VMA_MA12 18
FBA_CMD16	K23	VMA_RAS# 18
FBA_CMD17	K24	VMA_MA11 18
FBA_CMD18	G22	VMA_MA10 18
FBA_CMD19	K25	VMA_BA1 18
FBA_CMD20	H22	VMA_MA8 18
FBA_CMD21	M26	VMA_MA9 18
FBA_CMD22	H24	VMA_MA6 18
FBA_CMD23	F27	VMA_MA5 18
FBA_CMD24	J26	VMA_MA7 18
FBA_CMD25	G24	VMA_MA4 18
FBA_CMD26	G27	VMA_CAS# 18
FBA_CMD27	M24	FBA_CMD27 18
FBA_CMD28	K22	

R417 10K/F_4@EV VMA_ODT
R416 10K/F_4@EV VMA_CKE

for DDR2 need use CMD11(CKE) and CMD12(ODT)

RFU_3 J22
RFU_4 L22

FBA_CLK0	F24	VMA_CLK0	VMA_CLK0 18
FBA_CLK0*	F23	VMA_CLK0#	VMA_CLK0# 18
FBA_CLK1	N24	VMA_CLK1	VMA_CLK1 18
FBA_CLK1*	N23	VMA_CLK1#	VMA_CLK1# 18

FB_CAL_PD_VDDQ B15 — R421 30.1/F_4@EV — +1.8V
FB_CAL_PU_GND A15 — R422 30.1/F_4@EV
FB_CAL_TERM_GND B16 — FBA_DEBUG — *60.4/F_4@NC R426

For Debug only

FBA_DEBUG M22 — R87 10K_4@EV — +1.8V

+FB_PLLAVDD — L45 HCB1608KF-181T15_6@EV — +VGA1.1V
C173 .1U/10V_4@EV, C627 4.7U/6.3V/X5R_6@EV
+FB_PLLAVDD 10mA

FB_PLLAVDD R19
FB_DLLAVDD T19

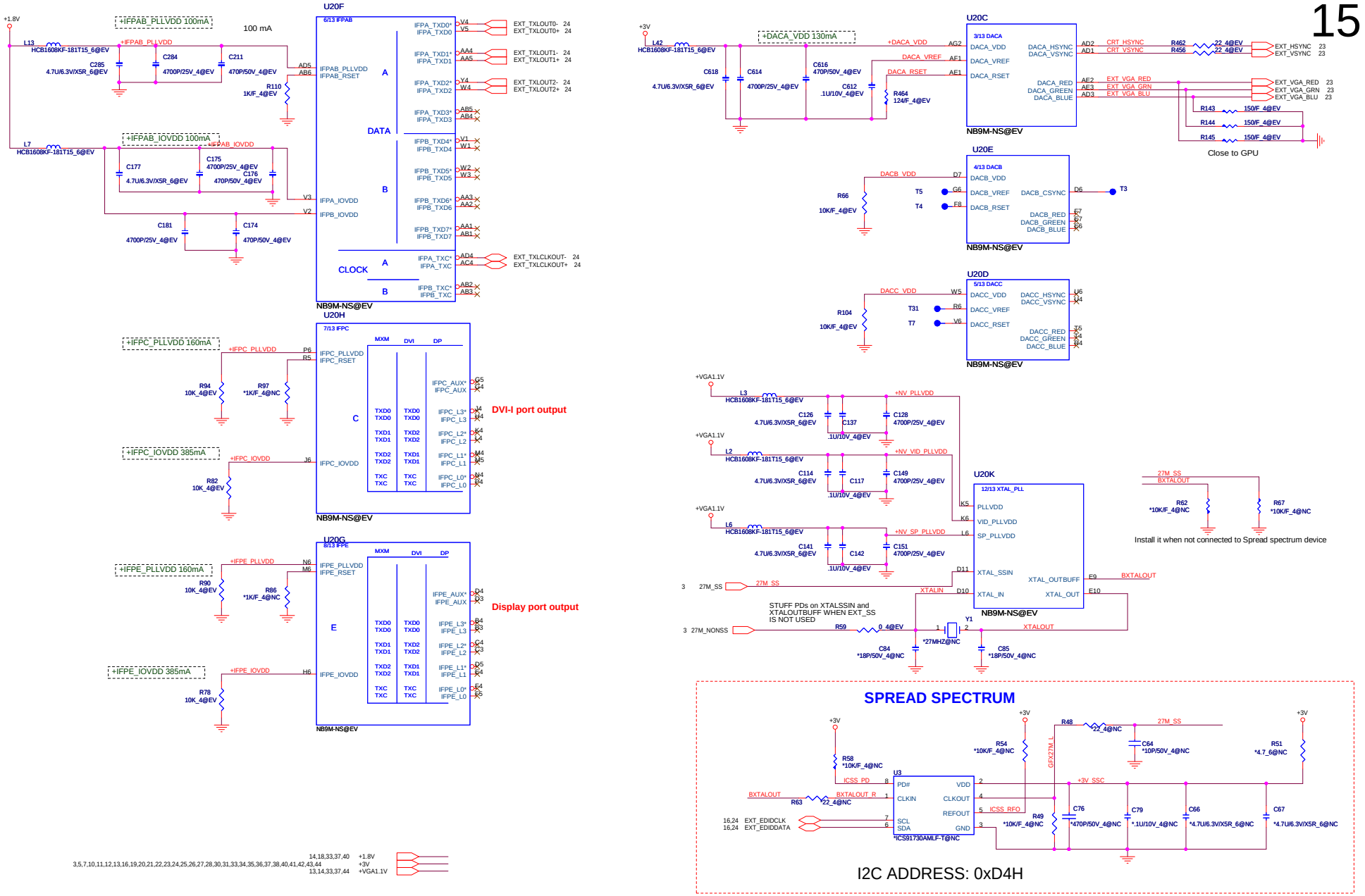
+FB_DLLAVDD — L46 HCB1608KF-181T15_6@EV — +VGA1.1V
C183 0.01U/16V_4@EV, C275 1U/6.3V/X5R_4@EV, C628 4.7U/6.3V/X5R_6@EV
+FB_DLLAVDD 25mA

+1.8V
R420 *1.02K/F_4@NC
15mils width
R425 *1.02K/F_4@NC
C583 *.1U/10V_4@NC

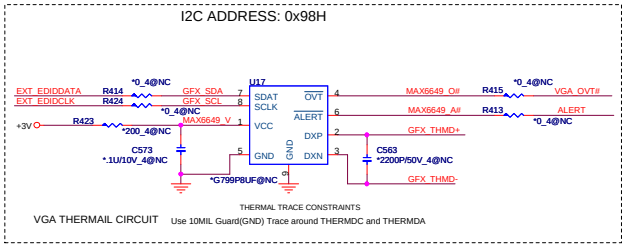
PROJECT : LE8
Quanta Computer Inc.

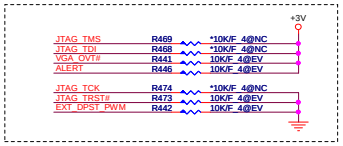
Size	Document Number	Rev
Custom	NV9X (MEMORY I/F) 2/5	1A

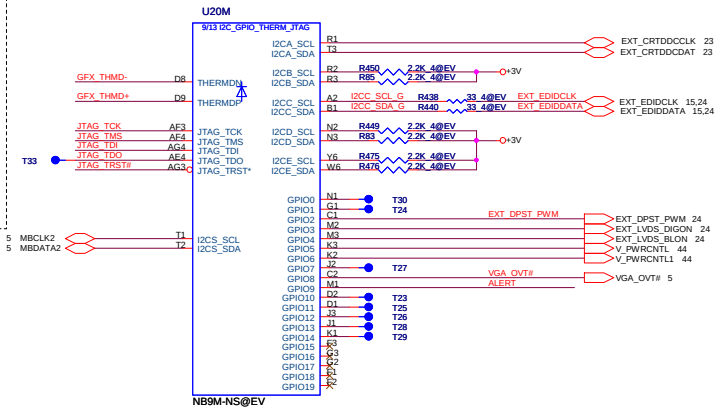
Date: Tuesday, November 20, 2007 Sheet 14 of 44



PROJECT : LE8			
Quanta Computer Inc.			
Size: Custom	Document Number: NV9X (DISPLAY) 3/5		Rev: 1A
Date: Tuesday, November 20, 2007		Sheet 15 of 44	



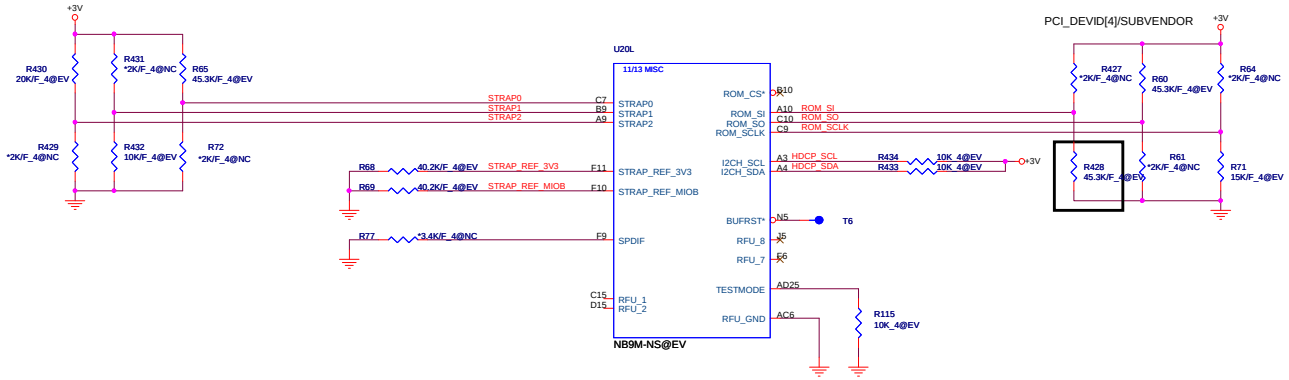




GPIO ASSIGNMENTS

SEE Datasheet for details on G9x Straps!

GPIO	I/O	ACTIVE	USAGE
0	IN	N/A	NVGEM HOTPLUG DETECT
1	IN	N/A	DVI/HDMI LINKC HOTPLUG DETECT
2	OUT	HIGH	PANEL BACKLIGHT PWM
3	OUT	HIGH	PANEL POWER ENABLE
4	OUT	HIGH	PANEL BACKLIGHT ENABLE
5	OUT	HIGH	NVVDD ALTV0
6	OUT	HIGH	NVVDD ALTV1
7	OUT	HIGH	FBVDD VID0
8	IN	LOW	OVERTEMP ALERT
9	OUT	LOW	THERMAL ALERT
10	OUT	HIGH	DYNAMIC FB VREF GDDR3(not used for DDR2)
11	OUT	HIGH	SLI SYNC0(not used for GB1-64)
12	IN	N/A	AC DETECT
13	OUT	LOW	POWER SUPPLY CONTROL0
14	OUT	HIGH	POWER SUPPLY CONTROL1
15	IN	N/A	HPD_E
16	IN	N/A	DVI_E
17	IN	N/A	HDMI_E
18	IN	N/A	DVI_F(not used)
19	IN	N/A	HDMI_F(not used)

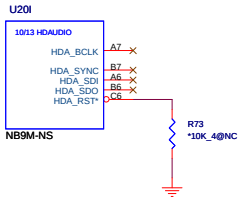


NB9M-NS Straps

NB9M-NS VRAM Configuration Table

ROM_SI VRAM CONFIG SET

STRAP	VALUE		MEMORY Vendor
0	5K	PD	NOT USED
1	10K	PD	Samsung DDR2 16Mx16
2	15K	PD	Qmnd DDR2 16Mx16
3	20K	PD	HYNX DDR2 16Mx16
4	25K	PD	NOT USED
5	30K	PD	Samsung DDR2 32Mx16
6	35K	PD	Qmnd DDR2 32Mx16
7	45K	PD	HYNX DDR2 32Mx16



3,5,7,10,11,12,13,15,19,20,21,22,23,24,25,26,27,28,30,31,33,34,35,36,37,38,40,41,42,43,44 +3V

PROJECT : LE8
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Size	Document Number	Rev
C	NV9X (GPIO & STRRAPS) 4/5	1A

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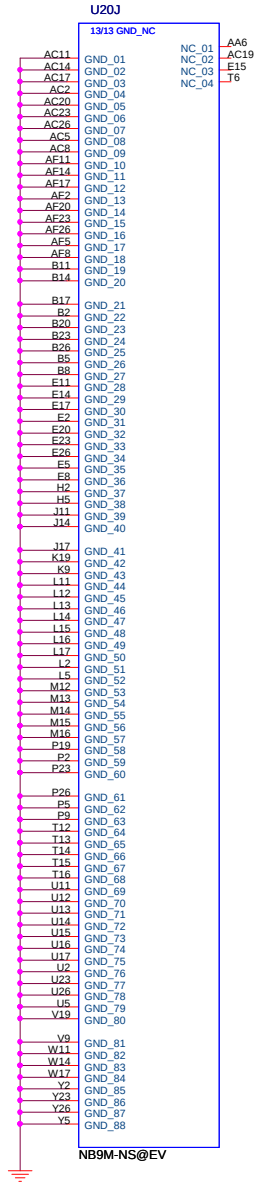
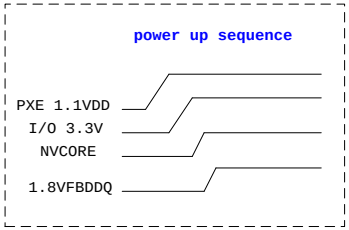


NB9M: VGACORE +0.9V ~ +1.0V



PROJECT : LE8
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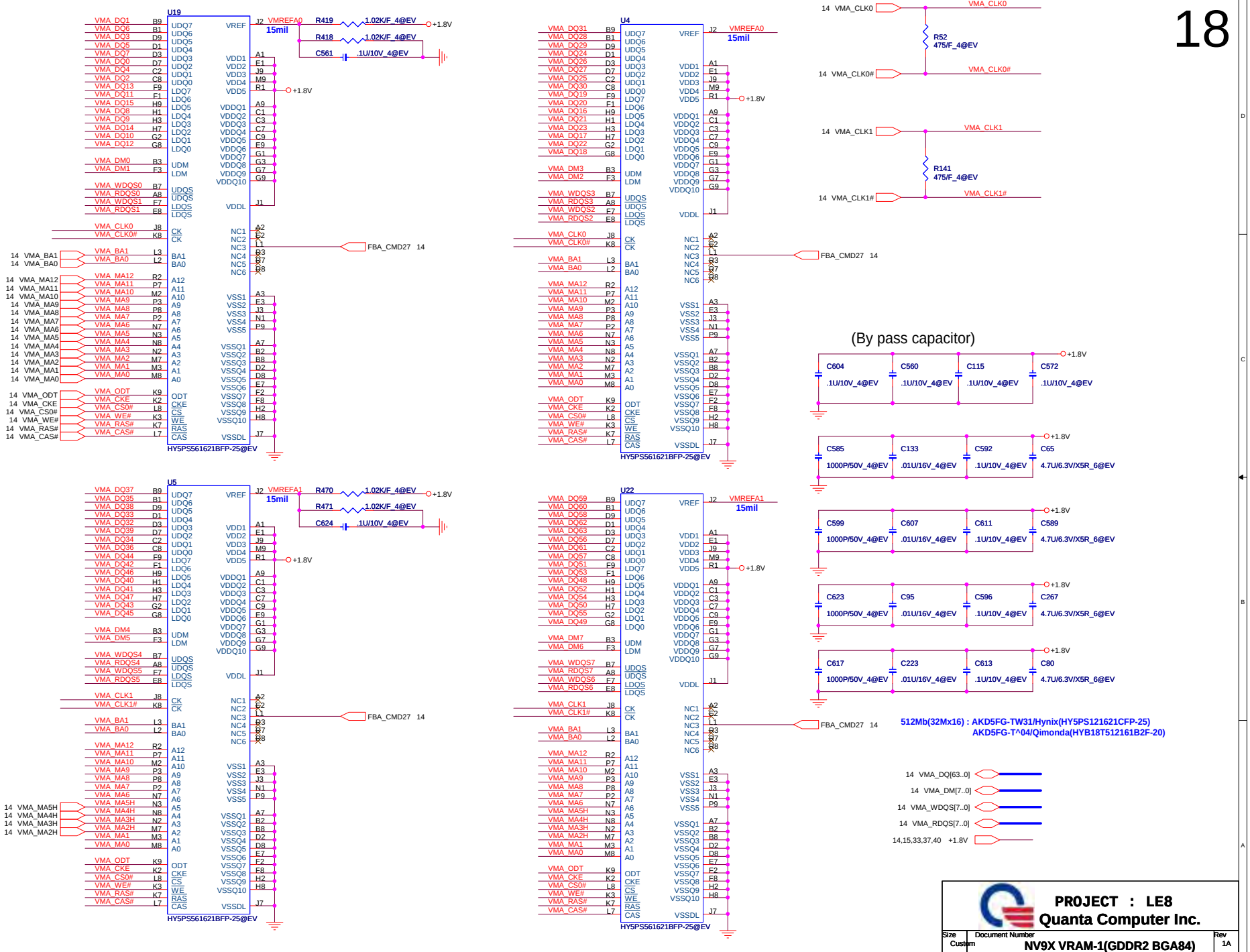
Size	Document Number	Rev
Custom	NV9X GND 5/5	1A
Date: Tuesday, November 20, 2007	Sheet 17 of 44	



PROJECT : LE8
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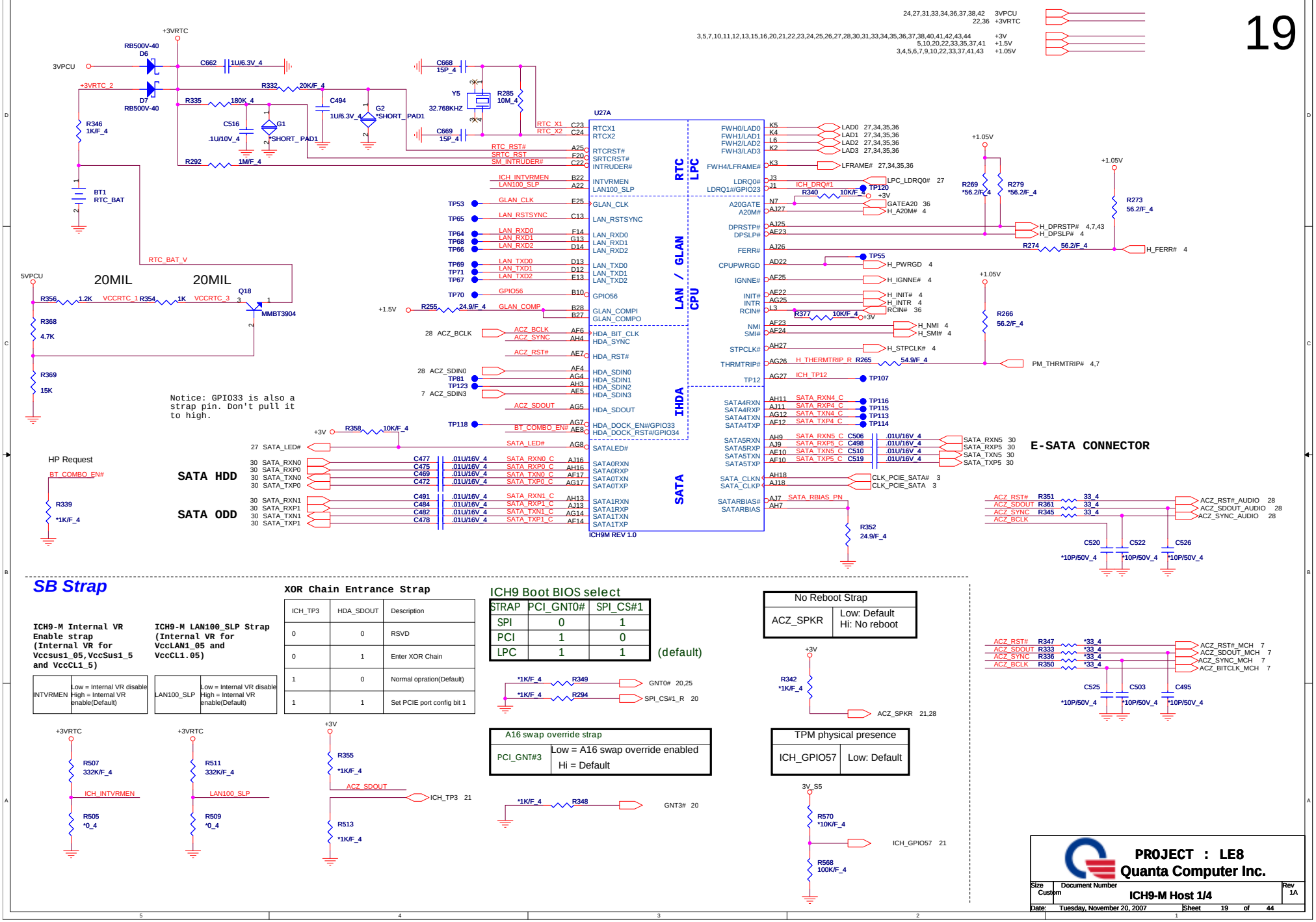
Size	Document Number	Rev
Custom	NV9X VRAM-1(GDDR2 BGA84)	1A
Date: Tuesday, November 20, 2007	Sheet 18 of 44	

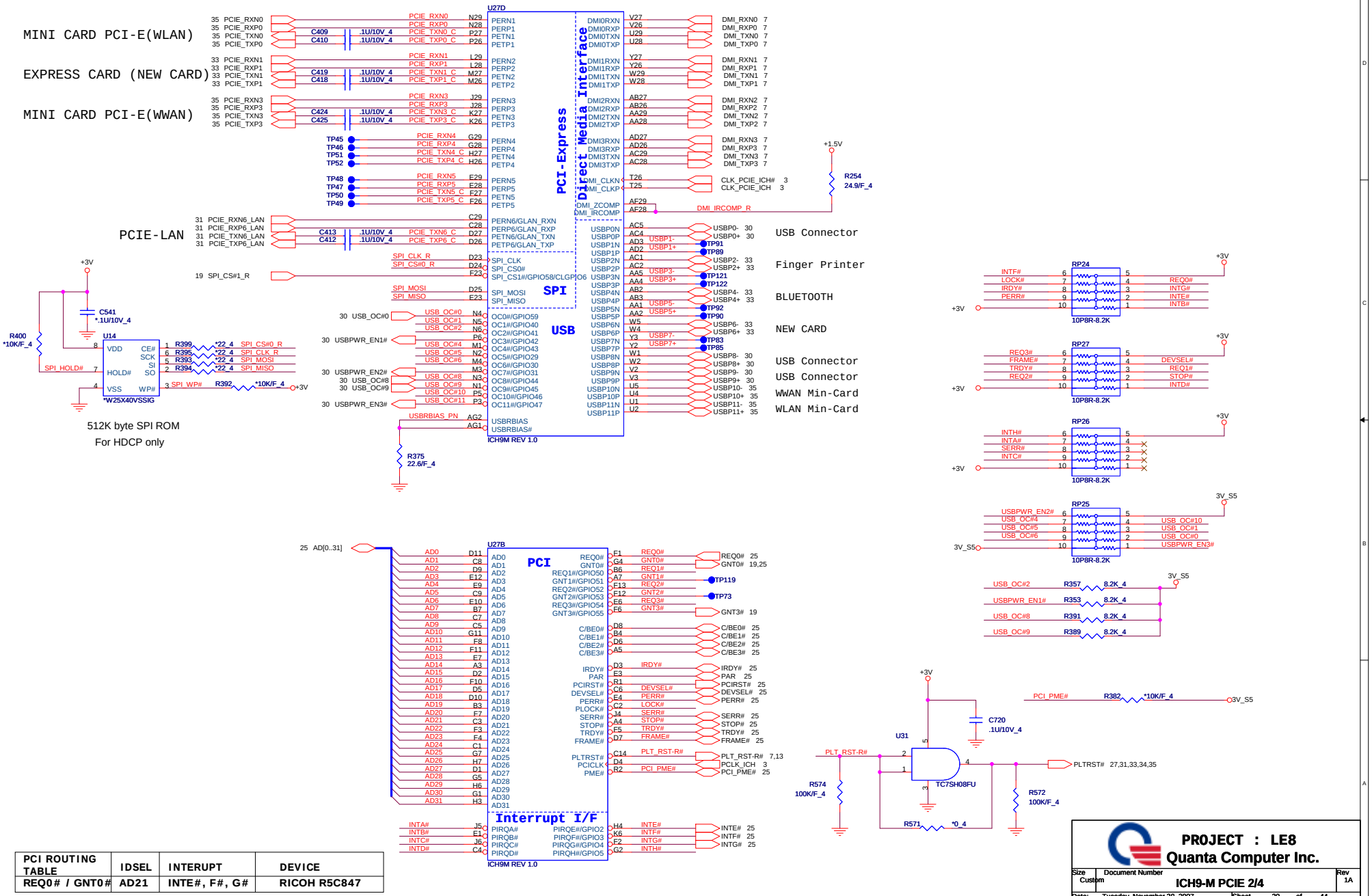

U27A
ICH9M REV 1.0
RTC
LPC
LAN / GLAN
CPU
IHDA
SATA
E-SATA CONNECTOR
SATA HDD
SATA ODD
HP Request
Notice: GPIO33 is also a strap pin. Don't pull it to high.
20MIL
20MIL
SB Strap
ICH9-M Internal VR Enable strap (Internal VR for Vccsus1_05,VccSus1_5 and VccCL1_5)
ICH9-M LAN100_SLP Strap (Internal VR for VccLAN1_05 and VccCL1.05)
XOR Chain Entrance Strap
ICH9 Boot BIOS select
(default)
No Reboot Strap
ACZ_SPKR
Low: Default
Hi: No reboot
A16 swap override strap
PCI_GNT#3
Low = A16 swap override enabled
Hi = Default
TPM physical presence
ICH_GPIO57
Low: Default
PROJECT : LE8
Quanta Computer Inc.
ICH9-M Host 1/4
Tuesday, November 20, 2007

MINI CARD PCI-E(WLAN)

EXPRESS CARD (NEW CARD)

MINI CARD PCI-E(WWAN)

PCIE-LAN



PCI ROUTING TABLE	IDSEL	INTERUPT	DEVICE
REQ0# / GNT0#	AD21	INTE#, F#, G#	RICOH R5C847

PROJECT : LE8
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Size	Document Number	Rev
Custom	ICH9-M PCIE 2/4	1A

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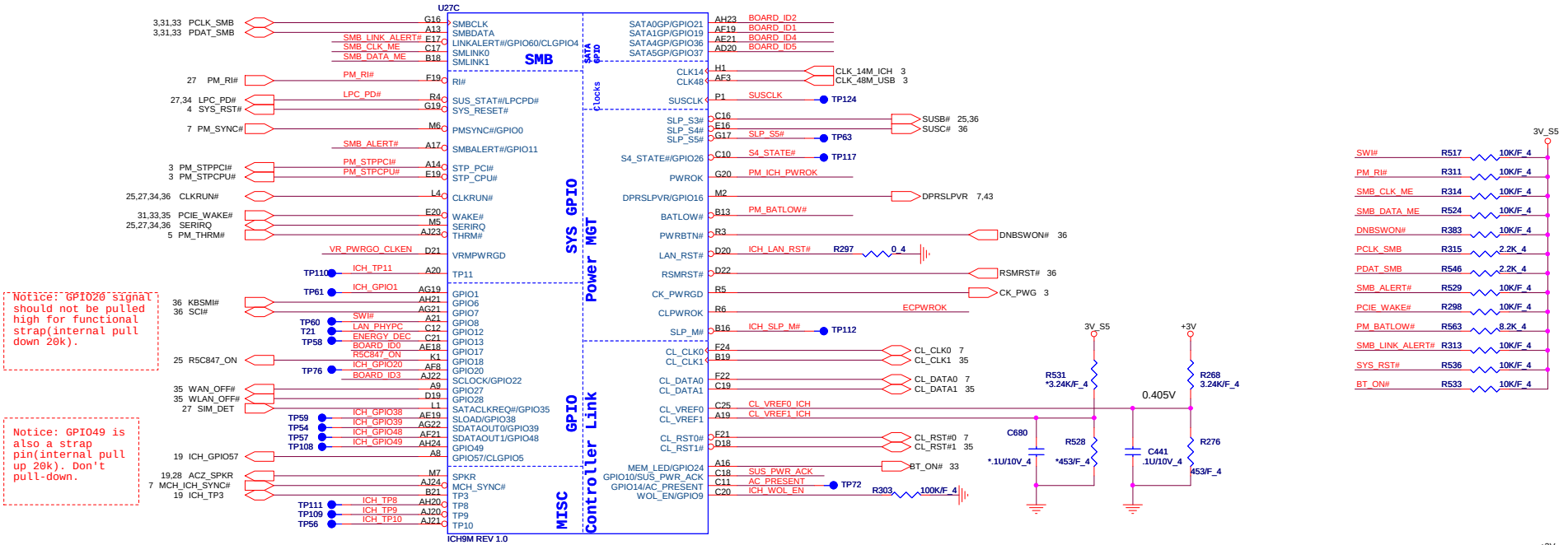
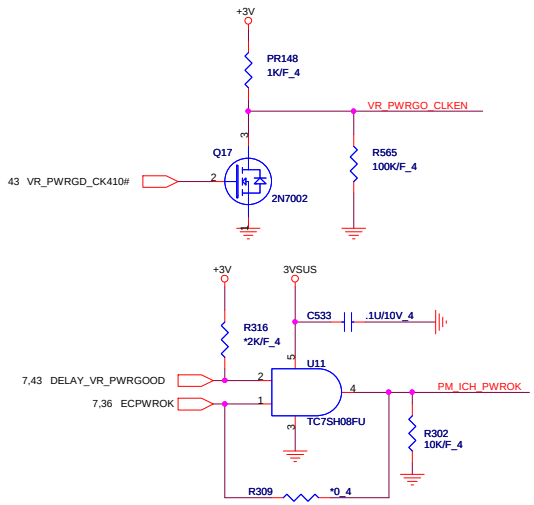
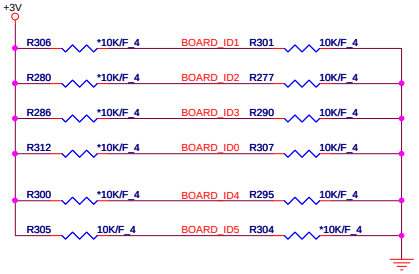
5,10,19,20,22,33,35,37,41 +1.5V
3,5,7,10,11,12,13,15,16,19,20,22,23,24,25,26,27,28,30,31,33,34,35,36,37,38,40,41,42,43,44 +3V
19,20,22,37 3V_S5
25,26,28,33,34,35,37,39,43 3VSUS

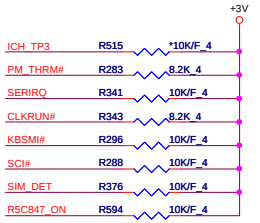


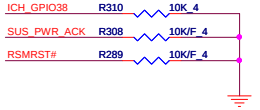


Board ID For Function	ID3 GPIO22	ID2 GPIO21	ID1 GPIO19	ID0 GPIO17
Default	0	0	0	0
	0	0	0	1
	0	0	1	0
	0	0	1	1
	0	1	0	0
	0	1	0	1
	0	1	1	0
	0	1	1	1
	1	0	0	0
	1	0	0	1
	1	0	1	0
	1	0	1	1
	1	1	0	0
	1	1	0	1
	1	1	1	0
	1	1	1	1

Board ID For Model	ID5 GPIO37	ID4 GPIO36
LE6	0	0
LE7	0	1
LE8	1	0
LE9	1	1

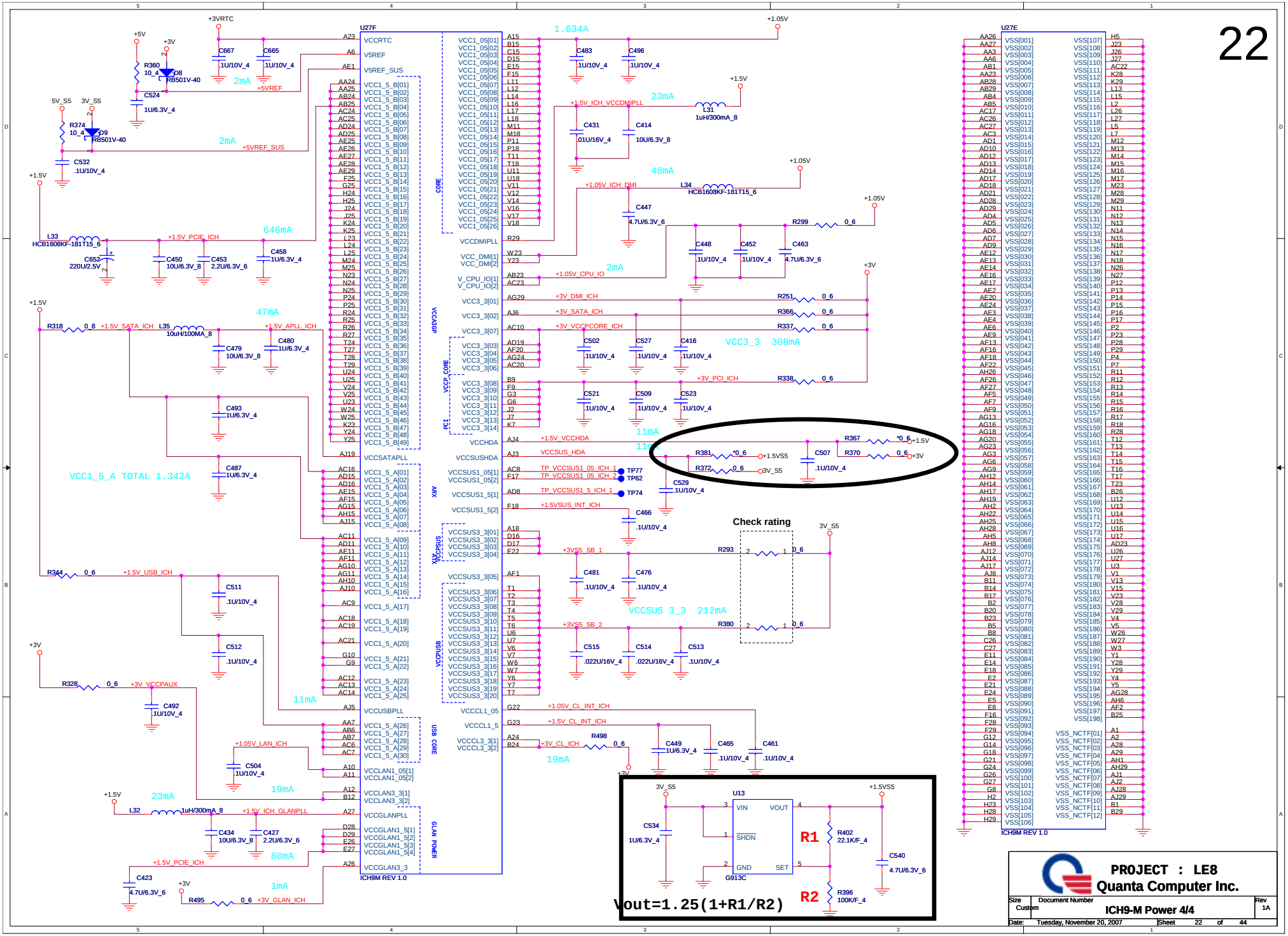






PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ICH9-M GPIO 3/4	1A
Date: Tuesday, November 20, 2007	Sheet 21 of 44	


U27F
ICH9M REV 1.0
U27E
ICH9M REV 1.0
VCC1_5_A TOTAL 1.342A
VCC3_3 308mA
VCCUS 3_3 212mA
Check rating
Vout=1.25(1+R1/R2)
U13
G913C
PROJECT : LE8
Quanta Computer Inc.
ICH9-M Power 4/4
Size Custom
Document Number
Rev 1A
Date: Tuesday, November 20, 2007
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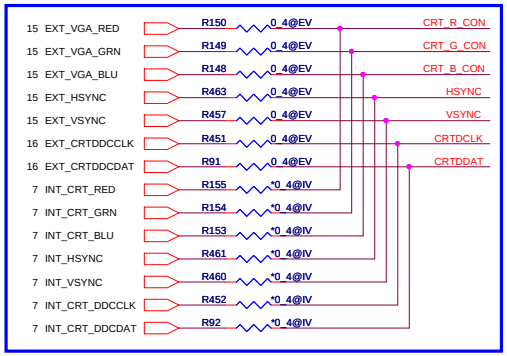
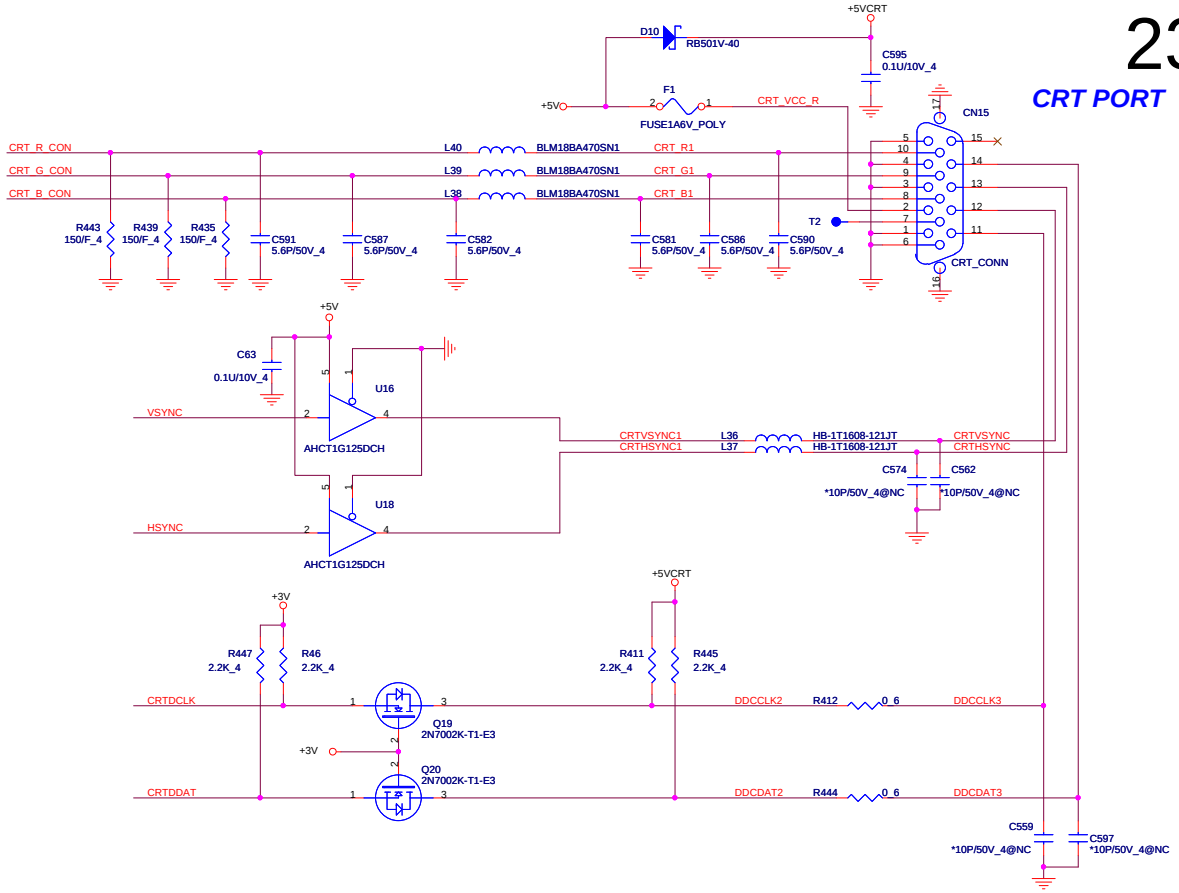
CRT PORT

CRT SWITCH



UMA & Discrete setting

	LVDS	Discrete / UMA
R150	0	NC
R149	0	NC
R148	0	NC
R463	0	NC
R457	0	NC
R451	0	NC
R91	0	NC
R155	NC	0
R154	NC	0
R153	NC	0
R461	NC	0
R460	NC	0
R452	NC	0
R92	NC	0



PROJECT : LE8
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Size	Document Number	Rev
Custom	CRT_CON	1A

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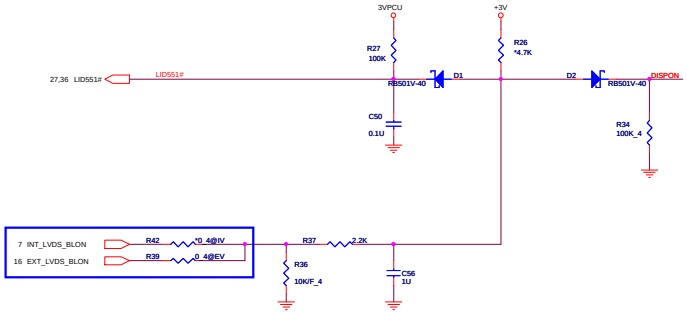

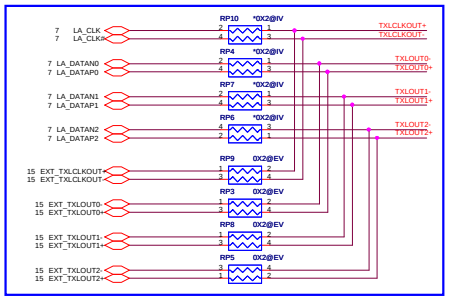

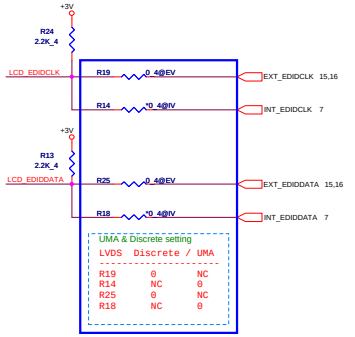

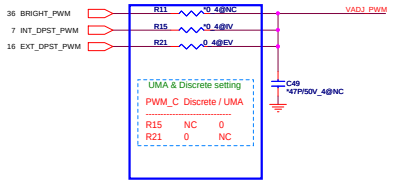

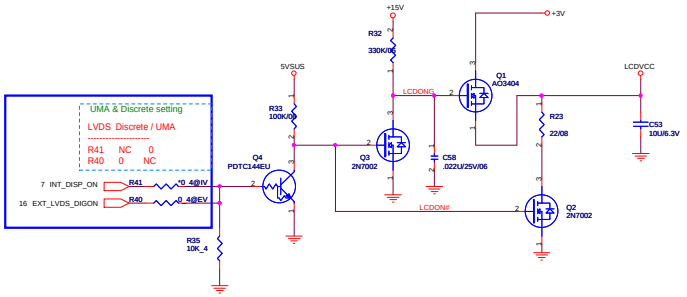

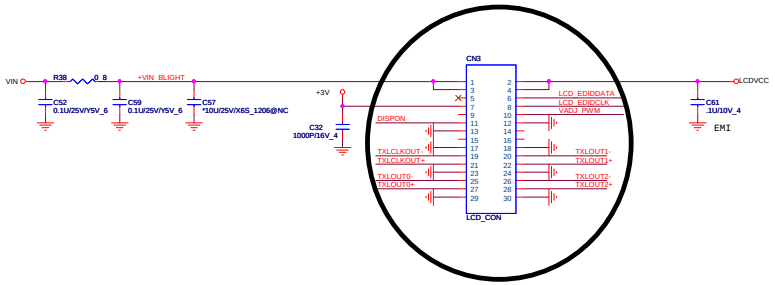

PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LCD & LID CON	1A

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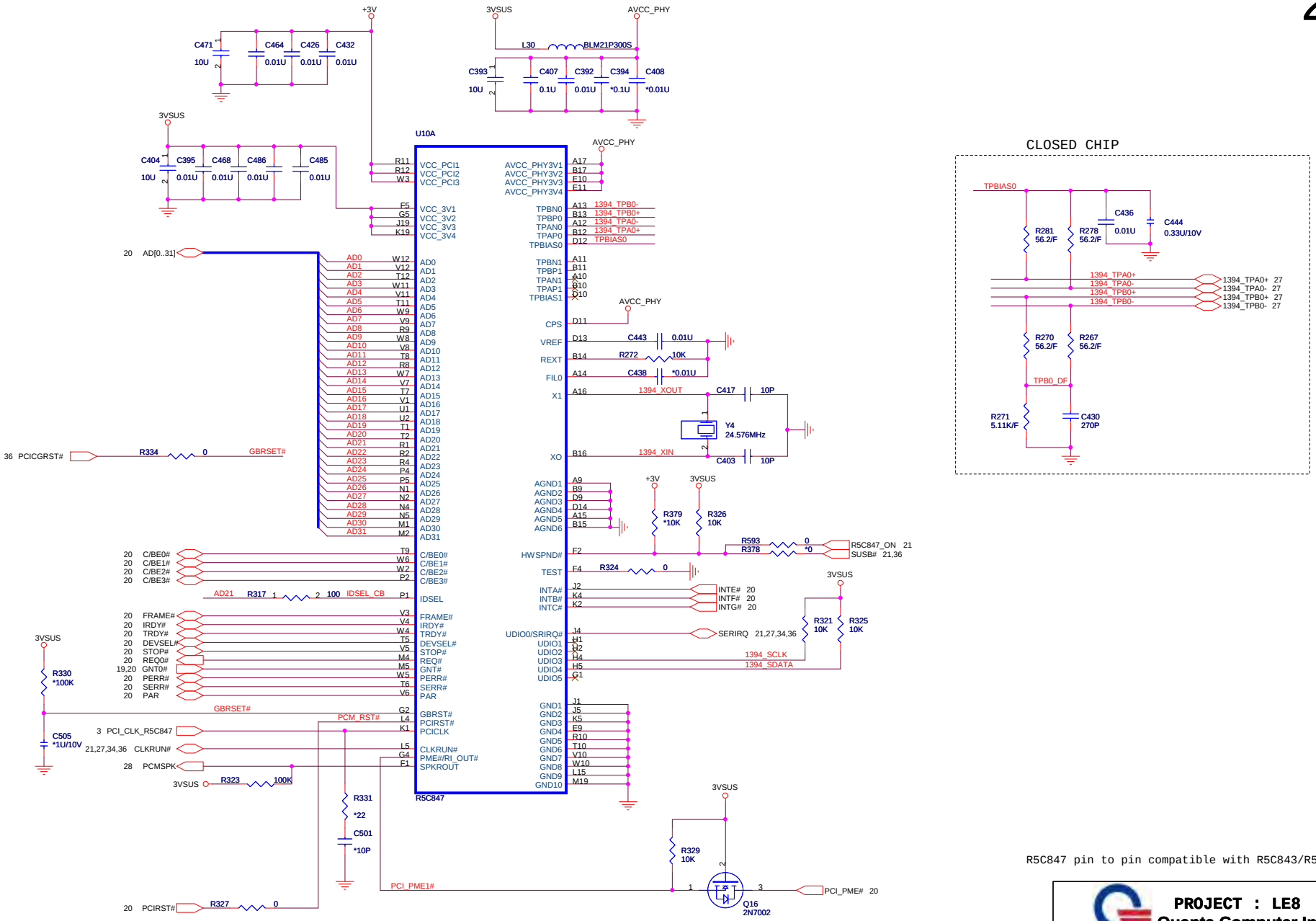

U10A
R5C847
+3V
3VSUS
AVCC_PHY
C471 10U
C464 0.01U
C426 0.01U
C432 0.01U
L30 BLM21P300S
C393 10U
C407 0.1U
C392 0.01U
C394 *0.1U
C408 *0.01U
C404 10U
C395 0.01U
C468 0.01U
C486 0.01U
C485 0.01U
R11 VCC_PCI1
R12 VCC_PCI2
W3 VCC_PCI3
F5 VCC_3V1
G5 VCC_3V2
J19 VCC_3V3
K19 VCC_3V4
A17 AVCC_PHY3V1
B17 AVCC_PHY3V2
E10 AVCC_PHY3V3
E11 AVCC_PHY3V4
A13 TPBN0 1394_TPB0-
B13 TPBP0 1394_TPB0+
A12 TPAN0 1394_TPA0-
B12 TPAP0 1394_TPA0+
D12 TPBIAS0
A11 TPBN1
B11 TPBP1
A10 TPAN1
B10 TPAP1
D10 TPBIAS1
D11 CPS
D13 VREF
C443 0.01U
B14 REXT
R272 10K
A14 FIL0
C438 *0.01U
A16 X1 1394_XOUT
C417 10P
Y4 24.576MHz
B16 XO 1394_XIN
C403 10P
A9 AGND1
B9 AGND2
D9 AGND3
D14 AGND4
A15 AGND5
B15 AGND6
R379 *10K
R326 10K
F2 HWSPND#
R593 0
R378 *0
R5C847_ON 21
SUSB# 21,36
F4 TEST
R324 0
J2 INTA#
K4 INTB#
K2 INTC#
INTE# 20
INTF# 20
INTG# 20
J4 UDIO0/SRIRQ#
H1 UDIO1
J2 UDIO2
H4 UDIO3
H5 UDIO4
G1 UDIO5
SERIRQ 21,27,34,36
1394_SCLK
1394_SDATA
R321 10K
R325 10K
J1 GND1
J5 GND2
K5 GND3
E9 GND4
R10 GND5
T10 GND6
V10 GND7
W10 GND8
L15 GND9
M19 GND10
20 AD[0..31]
AD0 W12
AD1 V12
AD2 T12
AD3 W11
AD4 V11
AD5 T11
AD6 W9
AD7 V9
AD8 R9
AD9 W8
AD10 V8
AD11 T8
AD12 R8
AD13 W7
AD14 V7
AD15 T7
AD16 V1
AD17 U1
AD18 U2
AD19 T1
AD20 T2
AD21 R1
AD22 R2
AD23 R4
AD24 P4
AD25 P5
AD26 N1
AD27 N2
AD28 N4
AD29 N5
AD30 M1
AD31 M2
36 PCICGRST#
R334 0
GBRSET#
20 C/BE0# T9
20 C/BE1# W6
20 C/BE2# W2
20 C/BE3# P2
AD21 R317 1 2 100 IDSEL_CB
P1 IDSEL
20 FRAME# V3
20 IRDY# V4
20 TRDY# W4
20 DEVSEL# T5
20 STOP# V5
20 REQ0# M4
19,20 GNT0# M5
20 PERR# W5
20 SERR# T6
20 PAR V6
R330 *100K
GBRSET#
G2 GBRST#
PCM_RST#
L4 PCIRST#
3 PCI_CLK_R5C847
K1 PCICLK
C505 *1U/10V
21,27,34,36 CLKRUN#
L5 CLKRUN#
28 PCMSPK
G4 PME#/RI_OUT#
F1 SPKROUT
R323 100K
R331 *22
C501 *10P
R329 10K
PCI_PME1#
Q16 2N7002
PCI_PME# 20
20 PCIRST#
R327 0
CLOSED CHIP
TPBIAS0
R281 56.2/F
R278 56.2/F
C436 0.01U
C444 0.33U/10V
1394_TPA0+
1394_TPA0-
1394_TPB0+
1394_TPB0-
1394_TPA0+ 27
1394_TPA0- 27
1394_TPB0+ 27
1394_TPB0- 27
R270 56.2/F
R267 56.2/F
TPB0_DF
R271 5.11K/F
C430 270P
R5C847 pin to pin compatible with R5C843/R5C841
PROJECT : LE8
Quanta Computer Inc.
Size Custom
Document Number R5C847 PCI/1394
Rev 1A
Date: Tuesday, November 20, 2007
Sheet 25 of 44

PCMCIA CONNECTOR

U10B

CADR0 E16
CADR1 E18
CADR2 F15
CADR3 G18
CADR4 G15
CADR5 H18
CADR6 H15
CADR7 J16
CADR8 P15
CADR9 R19
CADR10 U19
CADR11 R18
CADR12 K18
CADR13 N15
CADR14 N18
CADR15 K15
CADR16 L19
CADR17 P16
CADR18 N16
CADR19 N19
CADR20 M16
CADR21 L18
CADR22 L16
CADR23 K16
CADR24 J15
CADR25 J18

Shield GND — R260 15

CDATA0 E19
CDATA1 D19
CDATA2 C19
CDATA3 R14
CDATA4 T15
CDATA5 W15
CDATA6 W16
CDATA7 W17
CDATA8 D18
CDATA9 C18
CDATA10 B19
CDATA11 V15
CDATA12 V16
CDATA13 V17
CDATA14 W18
CDATA15 U18

OE# T19
WE# M15
CE2# T18
CE1# V19
REG# F16
RESET H19
WAIT# G16
IOIS16# A18
IREQ# M18
SPKR# F19
CHSTS# E18
VS2 H16
VS1 R16
CD2# D15
CD1# T14
INPACK# G19

IORD# P18
IOWR# P19

R275 10K

V14 USBDP
W14 USBDM

AVPPEN0 V13
AVPPEN1 W13
AVCC3EN# T13
AVCC5EN# R13

A_VPPEN0
A_VPPEN1
A_VCC3EN#
A_VCC5EN#

R5C847

CN9
PCMCIA_CON

CDATA3	1	GND
CDATA4	2	D3-CAD0
CDATA5	3	D4-CAD1
CDATA6	4	D5-CAD3
CDATA7	5	D6-CAD5
CE1#	6	D7-CAD7
CADR10	7	CE1#-CC/BE0#
OE#	8	A10-CAD9
CADR11	9	OE#-CAD11
CADR9	10	A11-CAD12
CADR8	11	A9-CAD14
CADR13	12	A8-CC/BE1#
CADR14	13	A13-CPAR
WE#	14	A14-CPERR#
IREQ#	15	WE/PGM-CGNT#
	16	RDY/BSY-IRQ/CIN
	17	VCC
	18	VPP1
CADR16	19	A16-CCLK
CADR15	20	A15-CIRDY#
CADR12	21	A12-CC/BE2#
CADR7	22	A7-CAD18
CADR6	23	A6-CAD20
CADR5	24	A5-CAD21
CADR4	25	A4-CAD22
CADR3	26	A3-CAD23
CADR2	27	A2-CAD24
CADR1	28	A1-CAD25
CADR0	29	A0-CAD26
CDATA0	30	D0-CAD27
CDATA1	31	D1-CAD29
CDATA2	32	D2-RFU
IOIS16#	33	WP/IOIS16-CCLKR
	34	GND
	35	GND
CD1#	36	CD1#-CCD1#
CDATA11	37	D11-CAD2
CDATA12	38	D12-CAD4
CDATA13	39	D13-CAD6
CDATA14	40	D14-RFU
CDATA15	41	D15-CAD8
CE2#	42	CE2#-CAD10
VS1	43	VS1#/RFSH-CVS1
IORD#	44	RSVD-CAD13
IOWR#	45	RSVD-CAD15
CADR17	46	A17-CAD16
CADR18	47	A18-RFU
CADR19	48	A19-CBLOCK#
CADR20	49	A20-CSTOP#
CADR21	50	A21-CDEVSEL#
	51	VCC
	52	VPP2/VPP2
CADR22	53	A22-CTRDY#
CADR23	54	A23-CFRAME#
CADR24	55	A24-CAD17
CADR25	56	A25-CAD19
VS2	57	VS2#/RSVD-CVS2
RESET	58	RESET-CRST
WAIT#	59	WAIT#-CSERR#
INPACK#	60	RSVD-CREQ#
REG#	61	REG#-CC/BE3#
SPKR#	62	BVD2/SP-CAUDIO#
CHSTS#	63	BVD1-STSCHG
CDATA8	64	D8-CAD28
CDATA9	65	D9-CAD30
CDATA10	66	D10-CAD31
CD2#	67	CD2#-CCD2#
	68	GND
	69	GND
	85	GND
	86	GND
	87	GND
	88	GND

A_VCC
C420 0.01U
C422 *10U

A_VPP
C435 0.01U

C517 270pF
C389 270pF
C470 0.01U

CARD-READER CONNECTOR (SD / MMC / MS)

CN12

XD-R/B	1	20	MS-DATA1 — MS_DATA1_SD_DAT1
XD-RE	2	21	MS-BS — MS_BS_SD_CMD_XD_WE#
XD-CE	3	22	4IN1-GND2
XD-CLE	4	23	SD-VCC — VCC_XD
XD-ALE	5	24	SD-CLK — SD_CLK_MS_CLK_XD-RE#
XD-WE	6	25	SD-DAT0 — MS_DATA0_SD_DAT0
XD-WP	7	26	XD-D2
XD-D0	8	27	XD-D3
XD-D1	9	28	XD-D4
SD-DAT2 — MS_DATA2_SD_DAT2	10	29	SD-DAT1 — MS_DATA1_SD_DAT1
SD-DAT3 — MS_DATA3_SD_DAT3	11	30	XD-D5
SD-CMD — MS_BS_SD_CMD_XD_WE#	12	31	XD-D6
4IN1-GND1	13	32	XD-D7
MS-VCC — VCC_XD	14	33	XD-VCC
MS-SCLK — SD_CLK_MS_CLK_XD-RE#	15	34	XD-CD-SW
MS-DATA3 — MS_DATA3_SD_DAT3	16	35	SD-WP-SW — SD_WP#_XD_R/B#
MS-INS — MSCD#	17	36	SD-CD-SW — SDCD#
MS-DATA2 — MS_DATA2_SD_DAT2	18		
MS-DATA0 — MS_DATA0_SD_DAT0	19	37	SHIELD1-GND
		38	SHIELD2-GND
		39	SHIELD3-GND
		40	SHIELD4-GND

CARD-READER_CON

C693 270P/50V/06
C692 270P/50V/06

U29
+3V — IN (5), NC (3), OUT (1), EN (4), GND (2) — MDIO04
G5240B1T1U

C705 0.1U
C704 0.1U
C698 10U/10V

VCC_XD
C690 .1U/10V
C689 .1U/10V
C691 .1U/10V
C706 2.2U/6.3V
R566 150K

Place near the Slot A VPP pins
A_VPP — C437 10U — C439 *1000P_4 — C445 0.1U

Place near the Slot A VCC pins
A_VCC — C421 10U — C428 *1000P_4 — C429 0.1U — C433 0.1U

MDIO03	R551	33	SD_WP#_XD_R/B#
MDIO13	R549	33	MS_DATA3_SD_DAT3
MDIO12	R550	33	MS_DATA2_SD_DAT2
MDIO11	R552	33	MS_DATA1_SD_DAT1
MDIO10	R553	33	MS_DATA0_SD_DAT0
MDIO08	R548	33	MS_BS_SD_CMD_XD_WE#
MDIO19	R287	33	XD-ALE
MDIO18	R291	33	XD-CLE
MDIO09	R554	33	SD_CLK_MS_CLK_XD-RE#

C518 *22P/50V_4

EMI

A_VCC
C473 *10U/10V
C474 *0.1U

A_VPP
C508 *10U/10V
C497 *0.1U

Place near the Power IC R5531V pins

3VSUS
5VSUS
C457 0.1U
C454 0.1U
C456 0.1U
C455 0.1U
C451 10U/10V

U12
VCC3IN 11
VCC5IN1 13
VCC5IN2 15
NC0 6
EN1 4
EN0 3
AVPPEN1
AVPPEN0
AVCC3EN# 2
AVCC5EN# 1
VCCOUT1 14
VCCOUT2 12
VCCOUT3 9
VPPOUT 8
NC1 10
NC2 7
FLG 5
GND 16
VCC3_EN
VCC5_EN

R5531V002

Not-Support 12V

VCC_ROUT
C460 10U/10V
C467 0.01U

U10C
VCC_RIN1 R6
VCC_RIN2 E13
VCC_ROUT1 L1
VCC_ROUT2 E14
VCC_MD3V A4
REGEN# R7

SD_CD#/MDIO0 B1
MS_CD#/MDIO1 A2
MDIO2 A3
SD_WP/MDIO3 B3
SD/MS_PWR0/MDIO4 B4
SD_PWR1/MDIO5 A5
SD/MS_LED#/MDIO6 B5
SD/MS_EXTCLK_MDIO7 D5
SD_CMD/MS_BS/MDIO8 A6
SD/MS_CLK/MDIO9 B6
SD/MS_DAT0/MDIO10 D6
SD/MS_DAT1/MDIO11 E6
SD/MS_DAT2/MDIO12 A7
SD/MS_DAT3/MDIO13 B7
MDIO14 D7
MDIO15 E7
MDIO16 A8
MDIO17 B8
MDIO18 D8
MDIO19 E8

MDIO00 T20
MDIO01
MDIO02
MDIO03
MDIO04
MDIO05 T18
MDIO06 T19
MDIO07
MDIO08
MDIO09
MDIO10
MDIO11
MDIO12
MDIO13 T36
MDIO14 T37
MDIO15 T17
MDIO16 T16
MDIO17
MDIO18
MDIO19

R5C847

3VSUS
C462 0.1U
C459 0.01U
C446 10U/10V
R284 10K

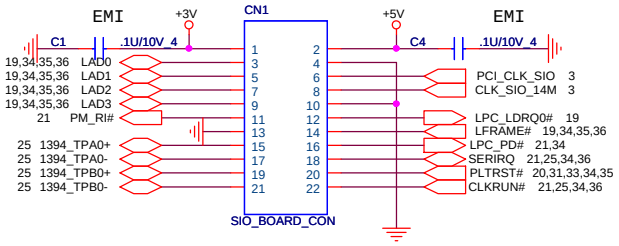
MDIO00 R320 0 SDCD#
MDIO01 R319 0 MSCD#
C499 *270pF
C500 *270pF

R322 0
VCC_ROUT
C488 0.01U
C489 0.01U
C415 0.47U
C405 0.47U

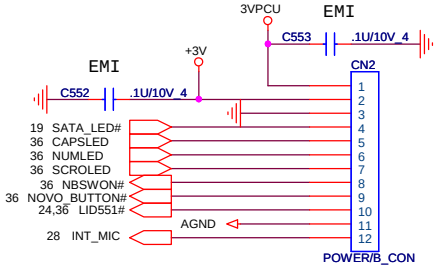
PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	R5C847 PCMCIA/ 3-IN-1 CON	1A
Date: Tuesday, November 20, 2007	Sheet 26 of 44	

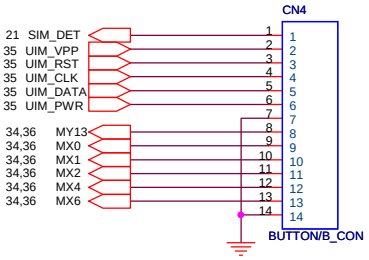
SIO BOARD



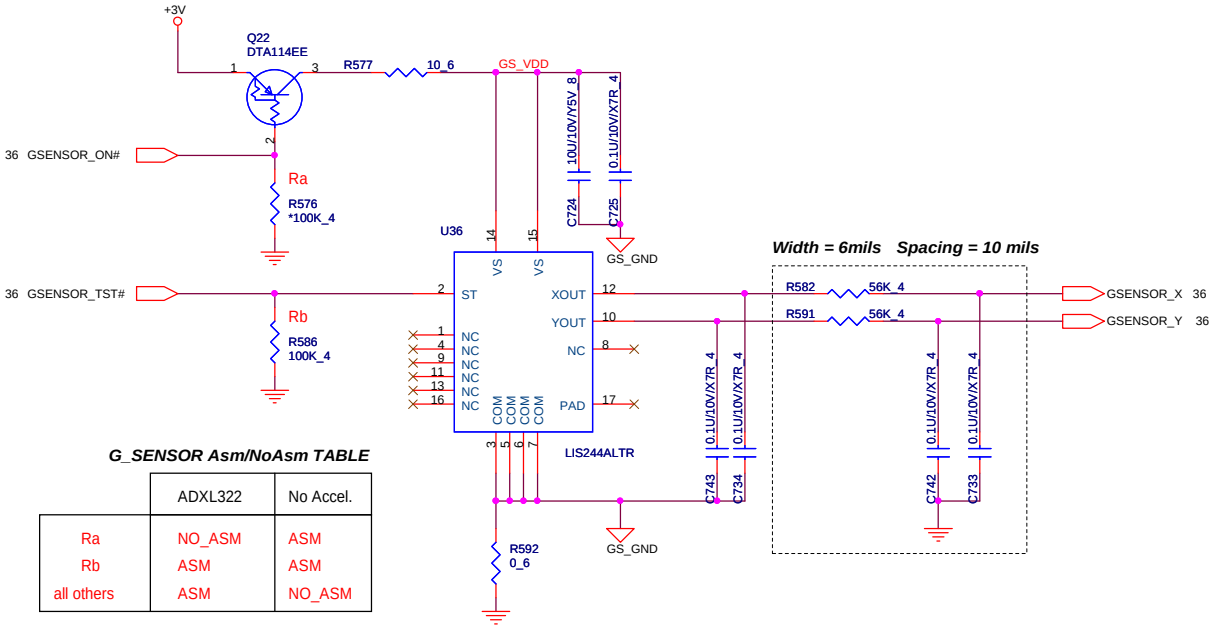
POWER BOARD



BUTTON BOARD



G-SENSOR

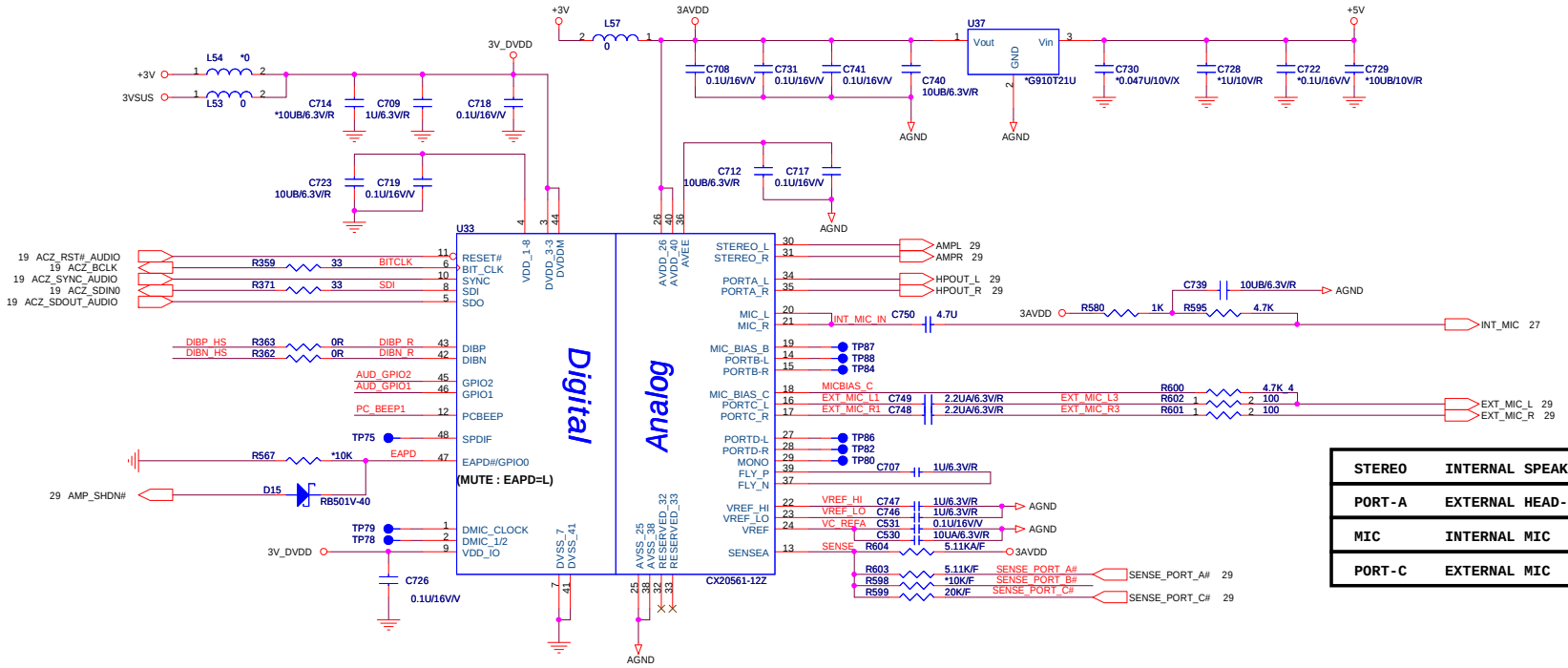


G_SENSOR Asm/NoAsm TABLE

	ADXL322	No Accel.
Ra	NO_ASM	ASM
Rb	ASM	ASM
all others	ASM	NO_ASM

PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	T/Bs & G-SENSOR	1A
Date: Tuesday, November 20, 2007	Sheet 27 of 44	

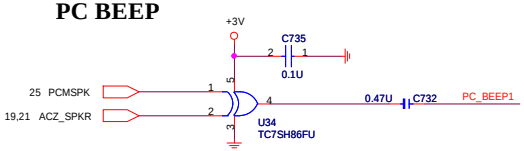


STEREO	INTERNAL SPEAKERS
PORT-A	EXTERNAL HEAD-PHONE
MIC	INTERNAL MIC
PORT-C	EXTERNAL MIC

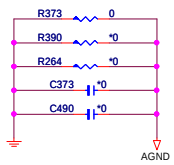
GAIN	10K GPIO RESISTORS GPIO1	GPIO2
0dB	Populate	Populate
-6dB	Omit	Omit
-12dB	Populate	Omit
-16dB	Omit	Populate

Default gain is -6dB without populating the 10K ohm pull down resistors going to GPIO1 and GPIO2

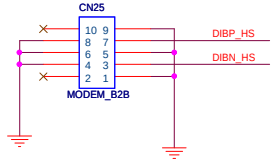
PC BEEP



FOR EMI SOLUTION



MODEM/B CONN.



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	AUDIO CODEC+MODEM	1A

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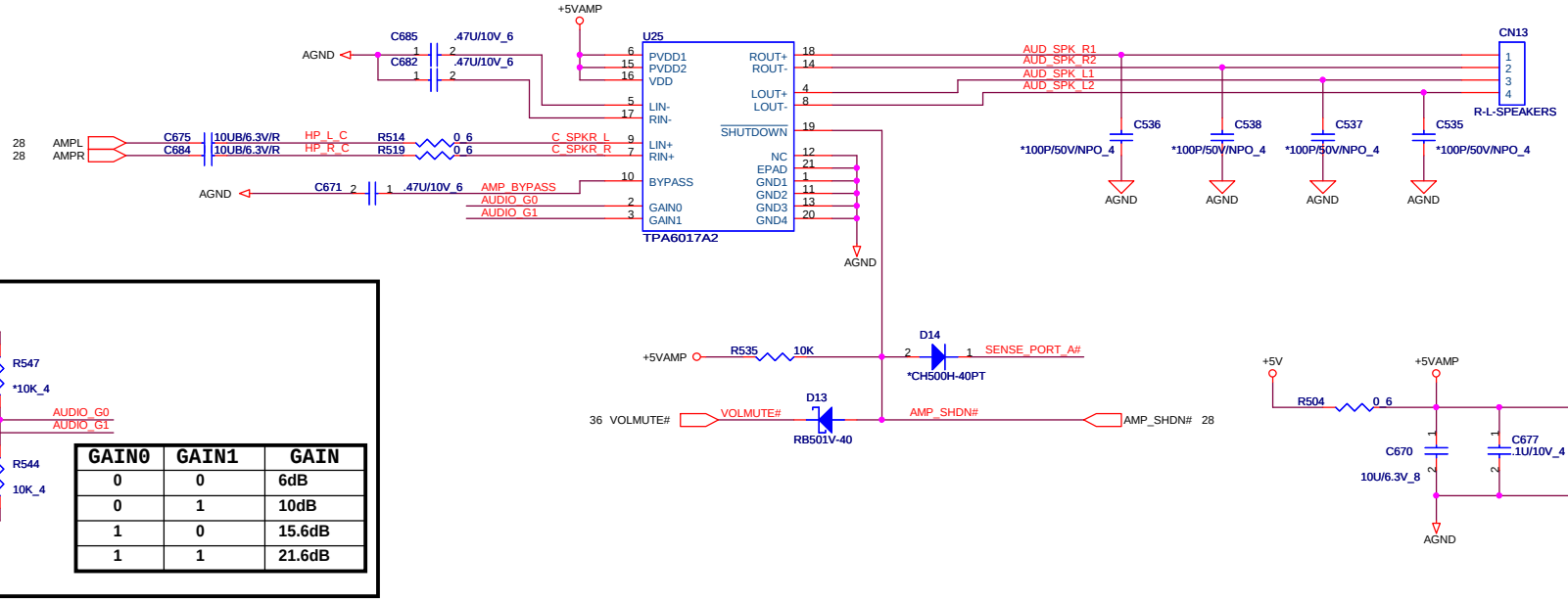
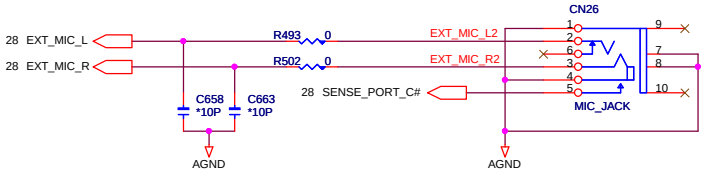
INTERNAL SPEAKER AMPLIFIER

29

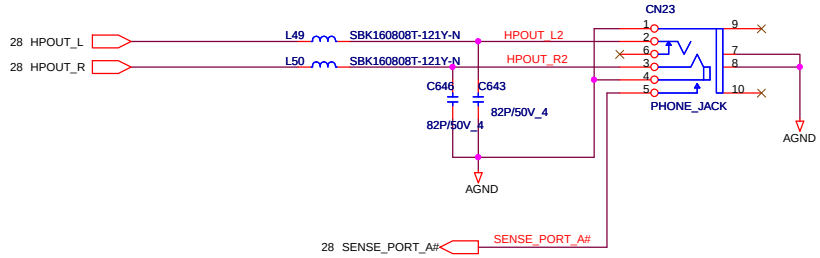


GAIN0	GAIN1	GAIN
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

MIC-IN JACK



HEADPHONE

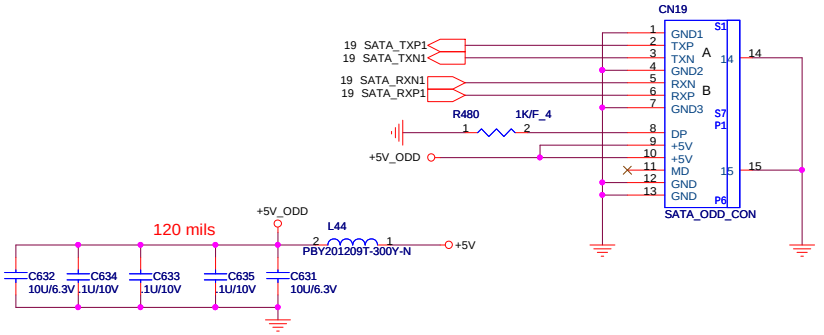


PROJECT : LE8
Quanta Computer Inc.

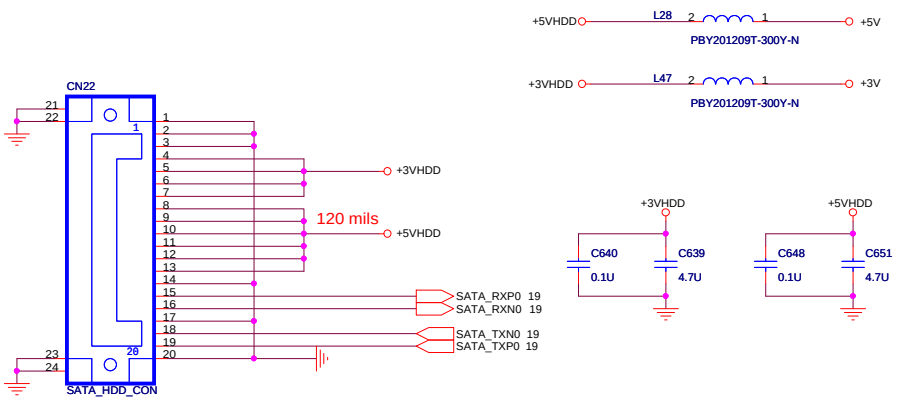
Size	Document Number	Rev
Custom	AMP_TPA6017 & JACKS	1A

Date: Tuesday, November 20, 2007 Sheet 29 of 44

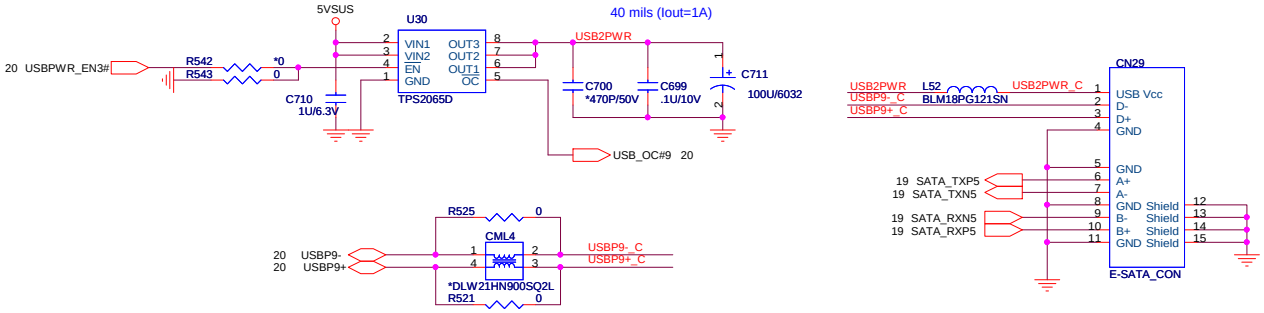
SATA CD-ROM



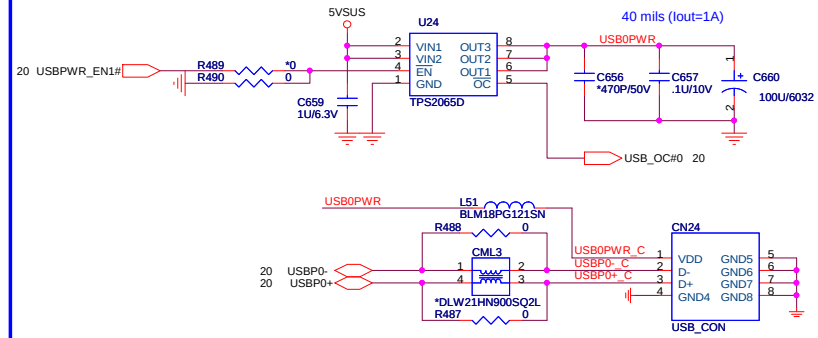
SATA-HDD CONNECTOR

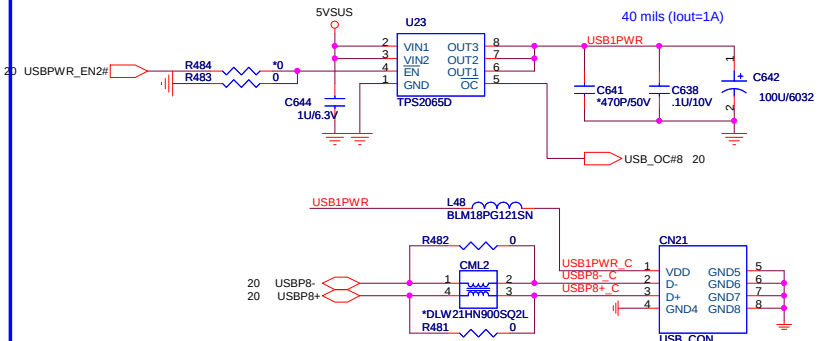


USB + eSATA CONNECTOR



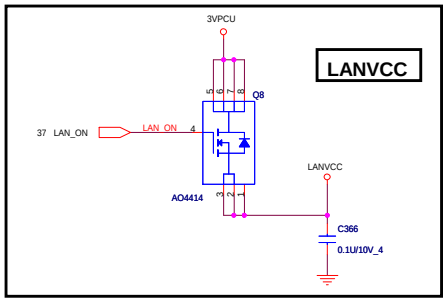
USBX2

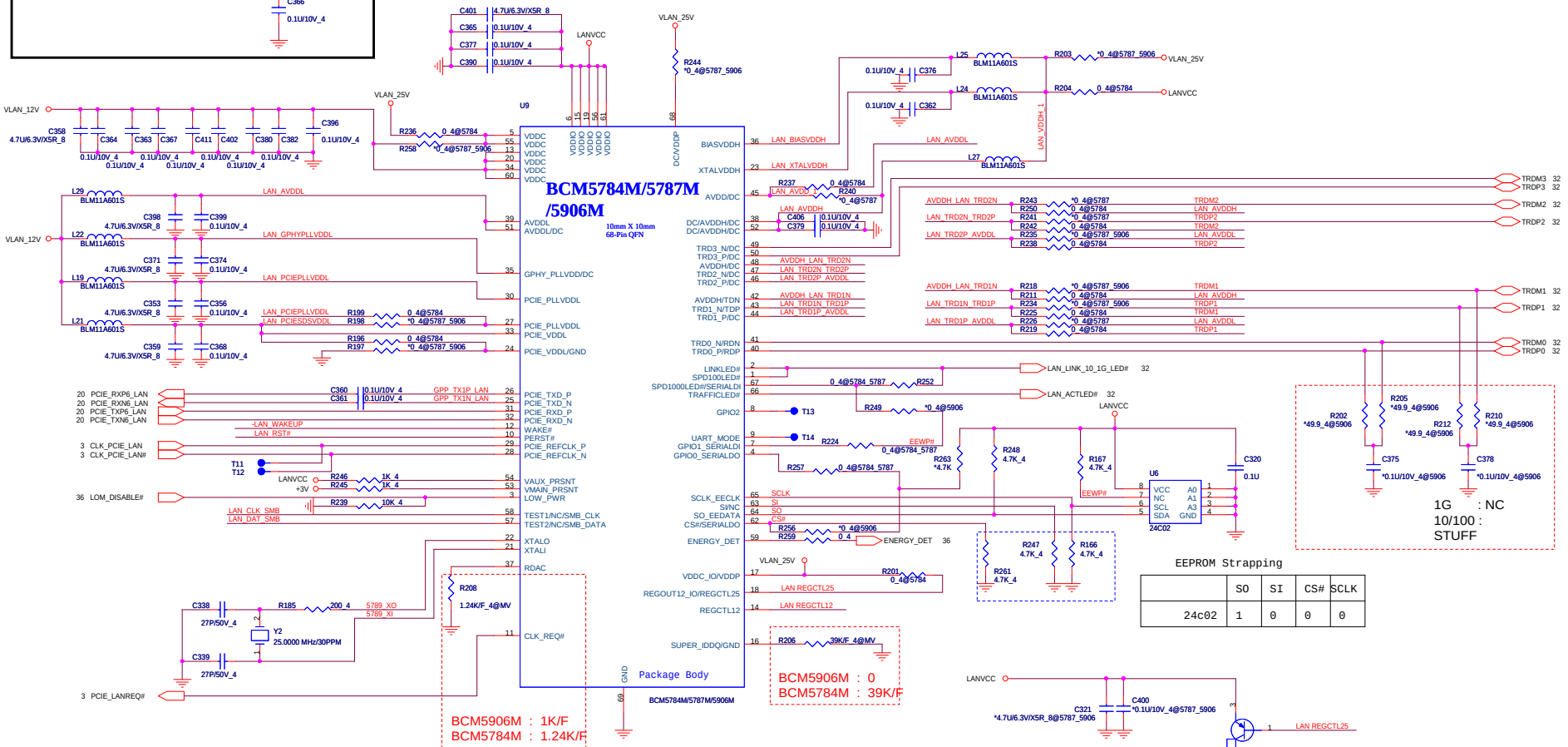




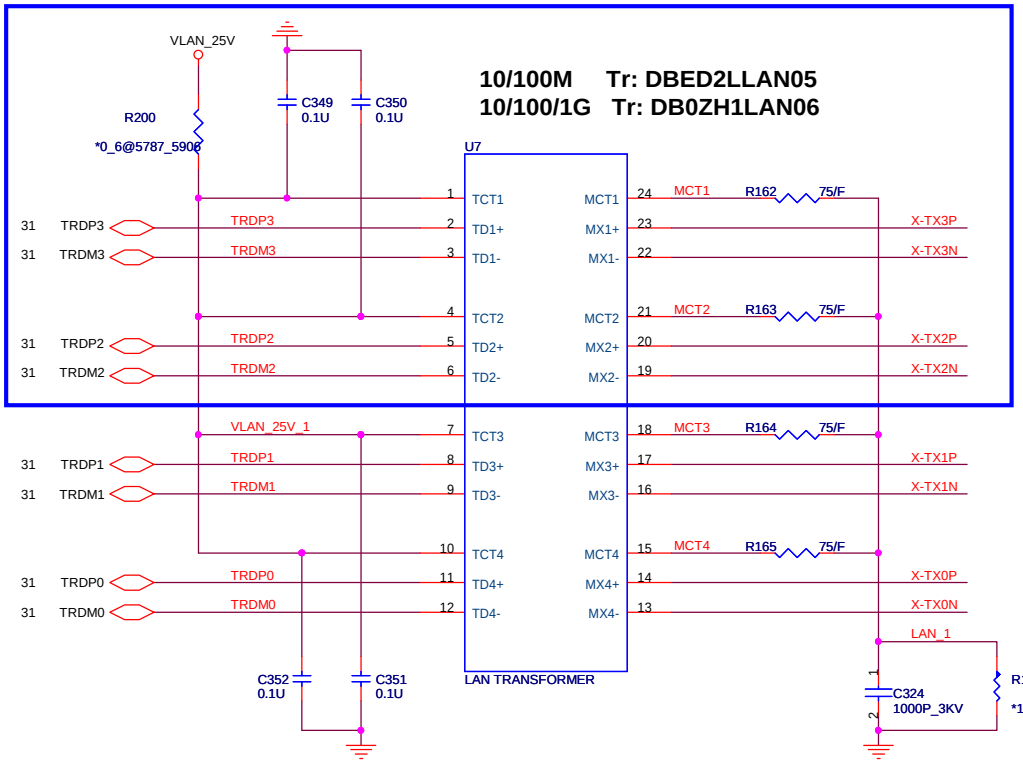
PROJECT : LE8		
Quanta Computer Inc.		
Size: Custom	Document Number: SATA HDD/CD-ROM/USB/ESATA	Rev: 1A
Date: Tuesday, November 20, 2007	Sheet 30 of 44	

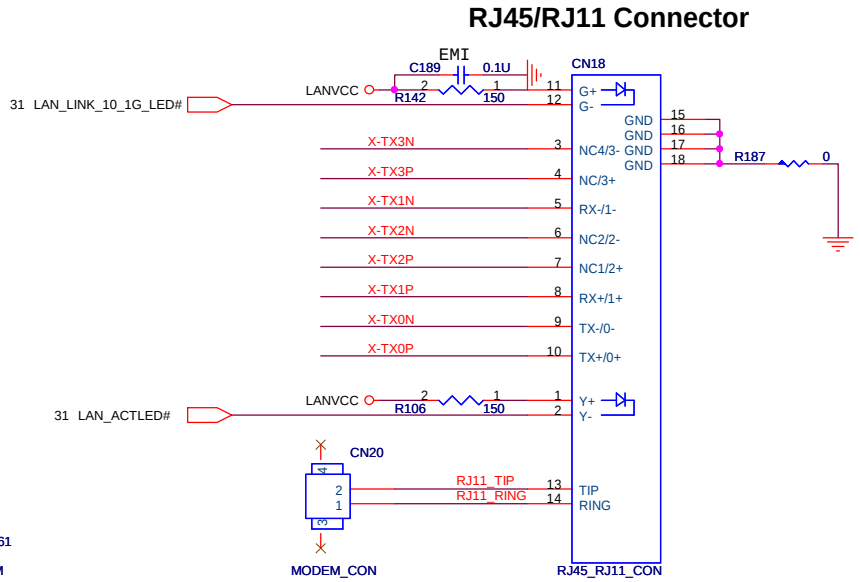
BCM5784M(LAN 10/ 100/ 1G) ==>AJ057840000
BCM5906M(LAN 10/ 100) ==> AJ059060000





	SO	SI	CS#	SCLK
24c02	1	0	0	0





PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	RJ11/RJ45 CONNECTOR	1A
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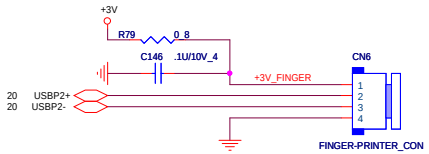
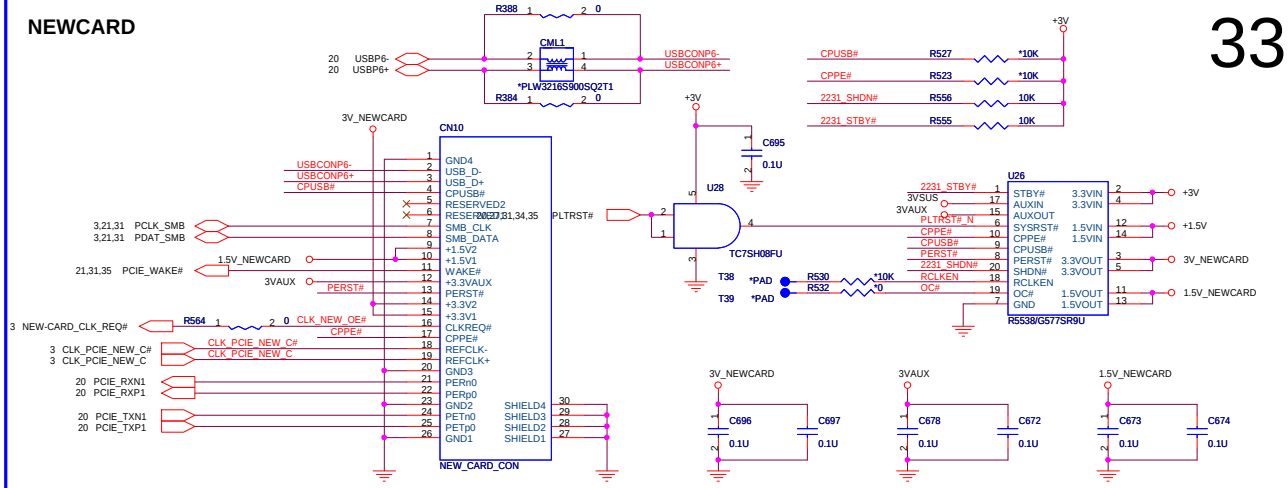
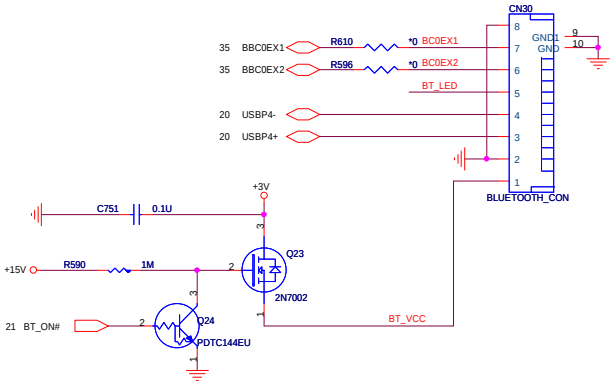
FINGER PRINTER



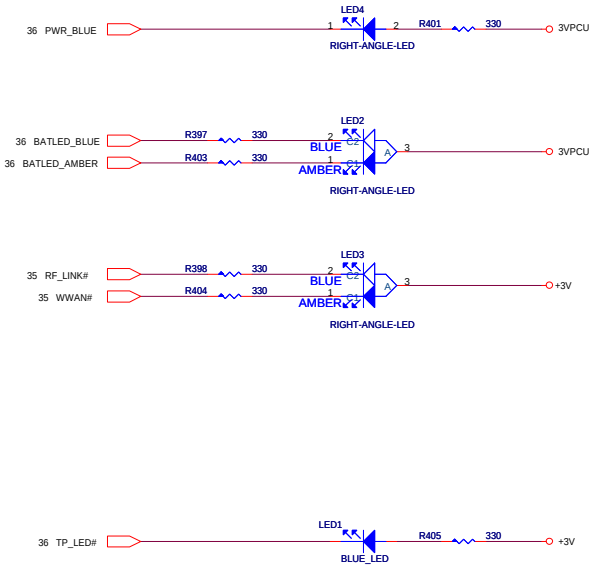
NEWCARD



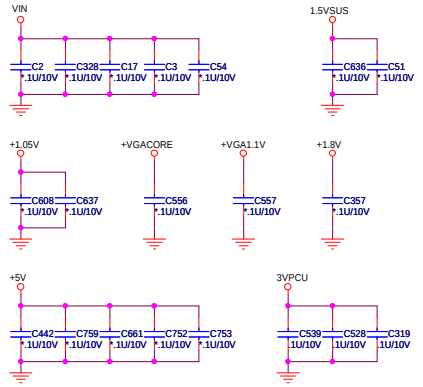
BLUETOOTH



LED



EMI CAPACITORS



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	F/P, NEW CARD, B/T, LED	1A

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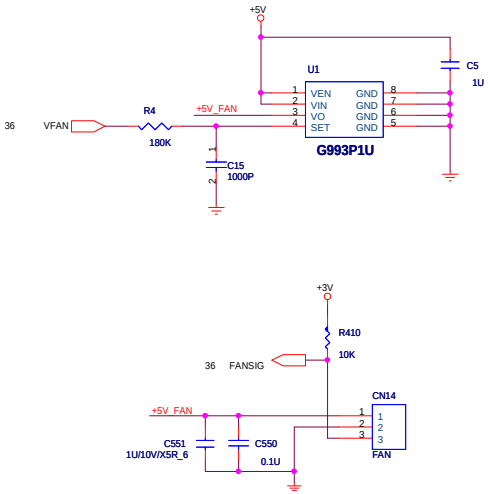
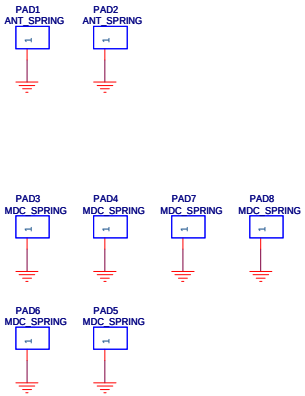
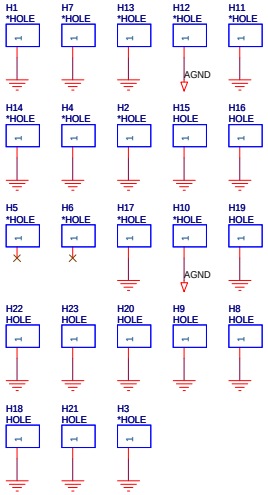
FAN CONTROL



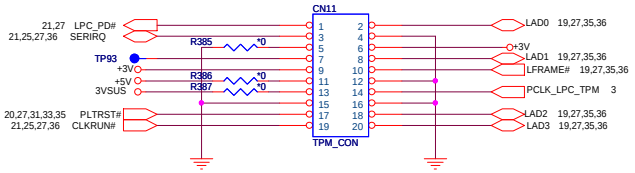
EMI PAD



HOLES

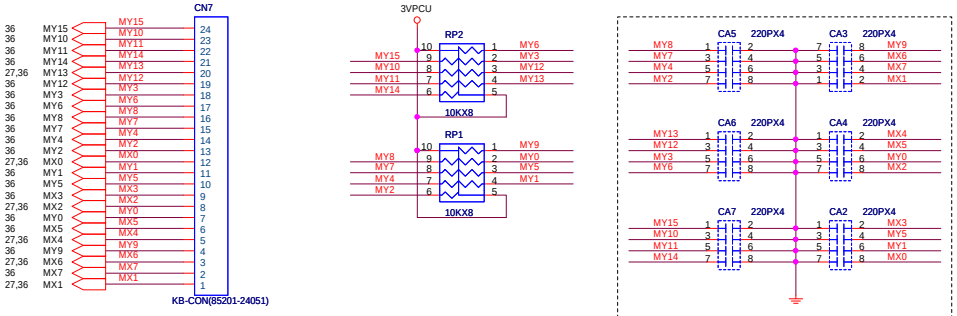


Board TO Board TPM MODULE



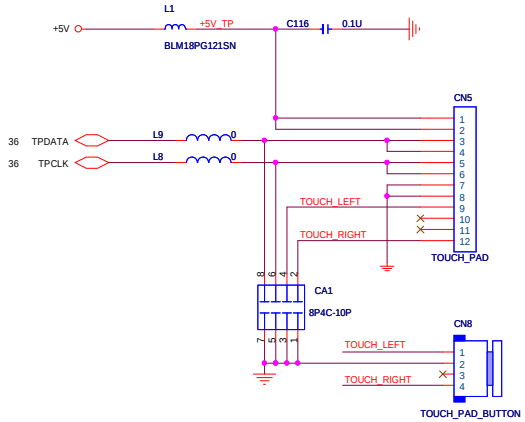
34

KEYBOARD



For EMI request

TOUCH PAD



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	FAN, TPM, K/B, T/P	1A

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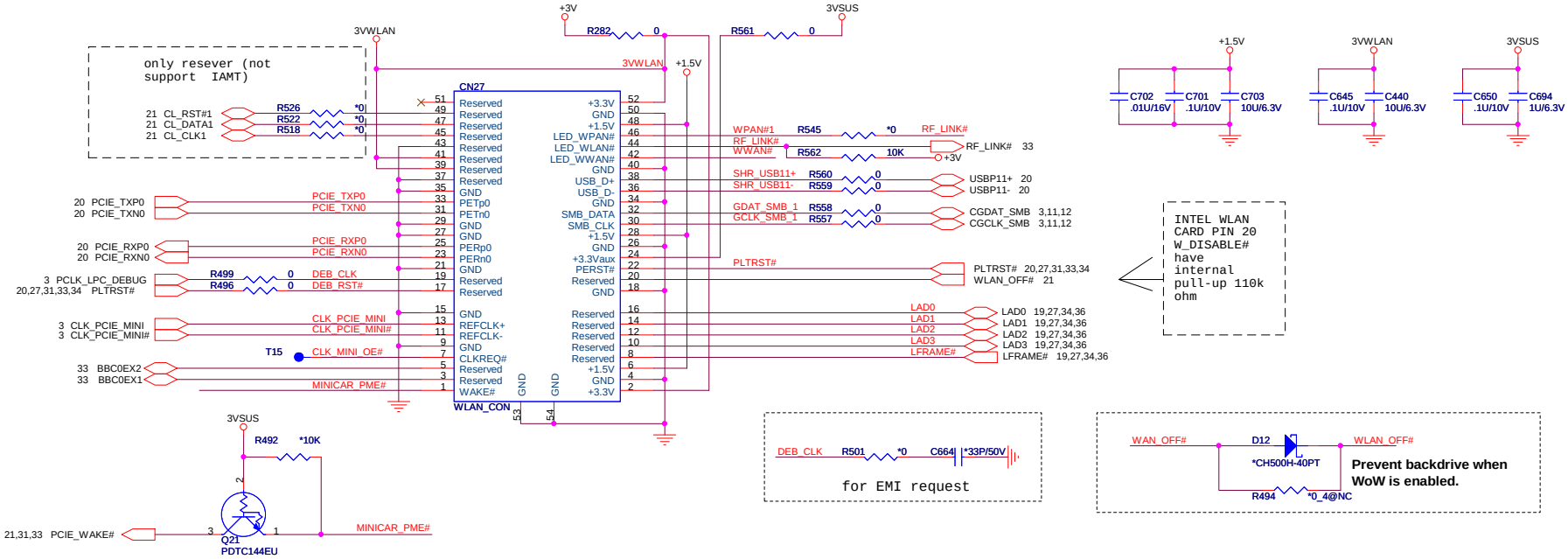
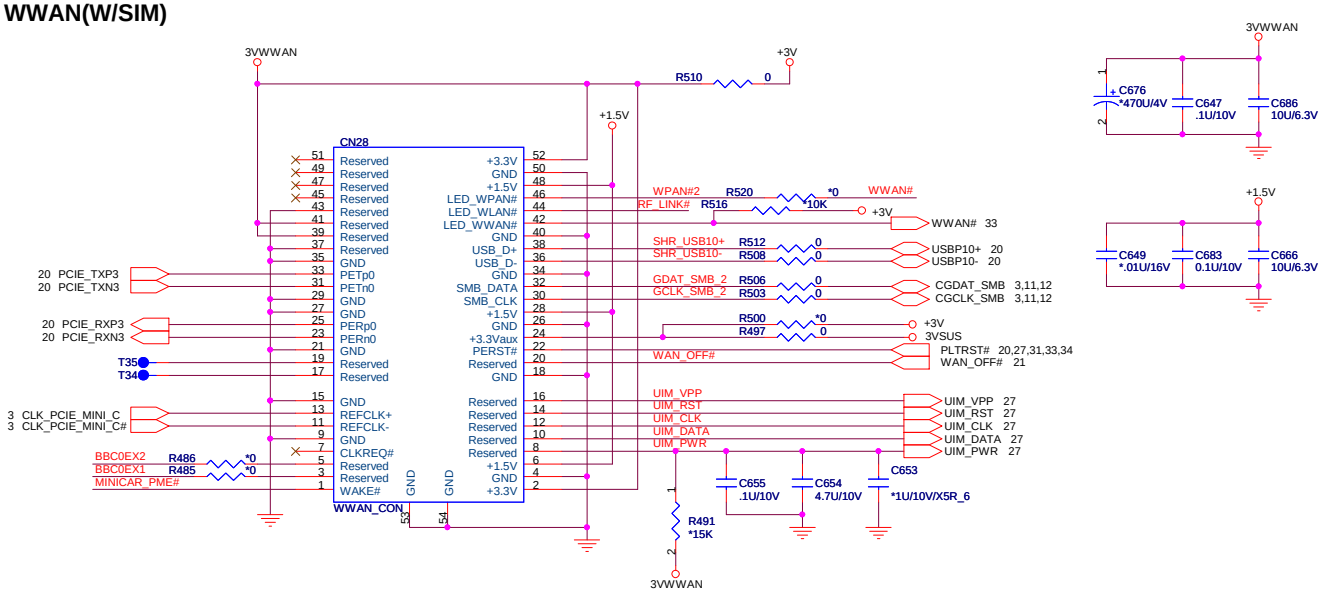
Mini PCI-E Card 1
WLAN



Mini PCI-E Card 2
WWAN(W/SIM)



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Quanta Computer Inc.

Size	Document Number	Rev
Custom	WLAN & WWAN CON	1A
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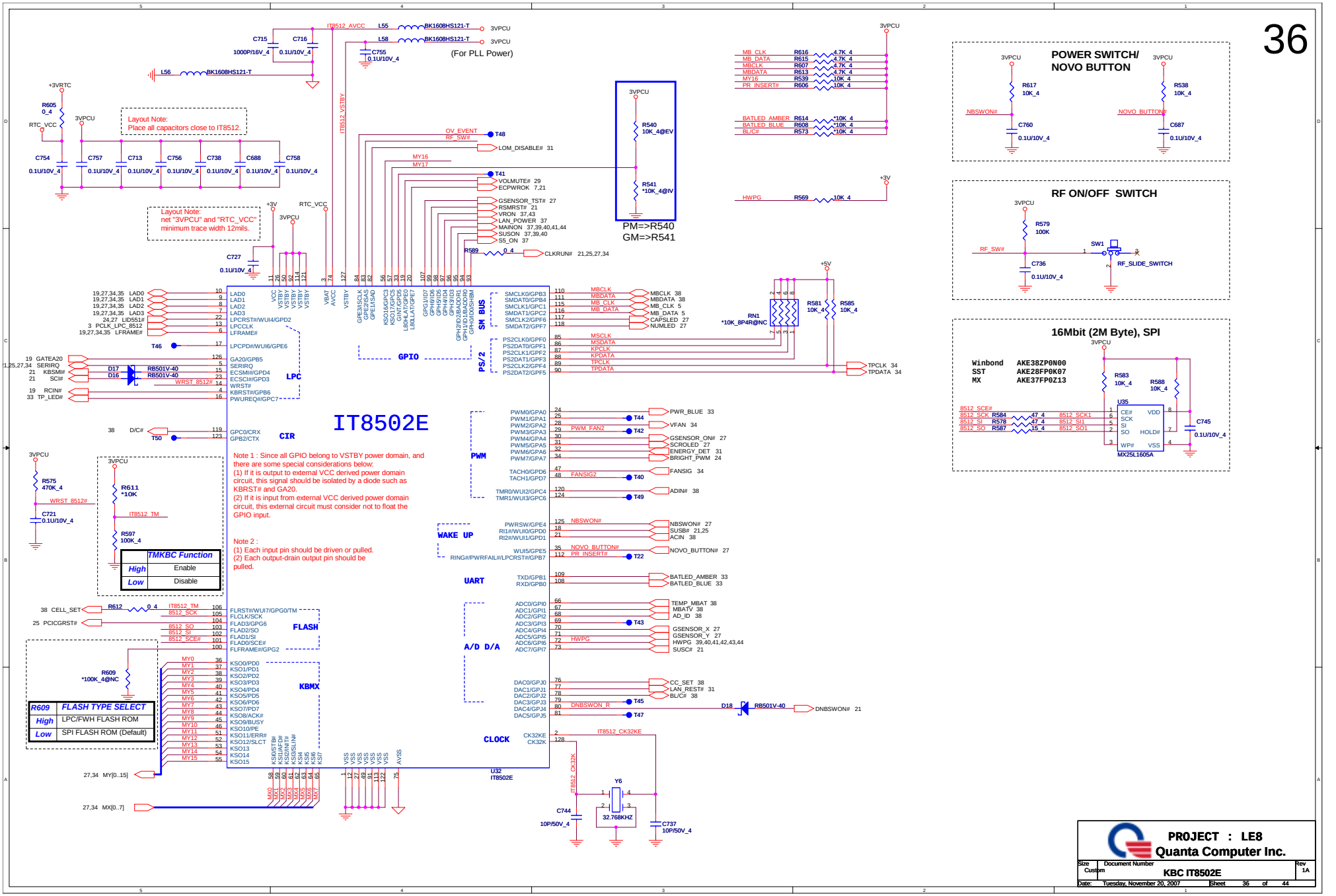
IT8502E
Layout Note:
Place all capacitors close to IT8512.
Layout Note:
net "3VPCU" and "RTC_VCC"
minimum trace width 12mils.
(For PLL Power)
PM=>R540
GM=>R541
POWER SWITCH/
NOVO BUTTON
RF ON/OFF SWITCH
16Mbit (2M Byte), SPI
Winbond AKE38ZP0N00
SST AKE28FP0K07
MX AKE37FP0Z13
MX25L1605A
Note 1 : Since all GPIO belong to VSTBY power domain, and there are some special considerations below:
(1) If it is output to external VCC derived power domain circuit, this signal should be isolated by a diode such as KBRST# and GA20.
(2) If it is input from external VCC derived power domain circuit, this external circuit must consider not to float the GPIO input.
Note 2 :
(1) Each input pin should be driven or pulled.
(2) Each output-drain output pin should be pulled.
TMKBC Function
High Enable
Low Disable
R609 FLASH TYPE SELECT
High LPC/FWH FLASH ROM
Low SPI FLASH ROM (Default)
SM BUS
PS/2
GPIO
LPC
CIR
PWM
WAKE UP
UART
A/D D/A
FLASH
KBMX
CLOCK
PROJECT : LE8
Quanta Computer Inc.
KBC IT8502E
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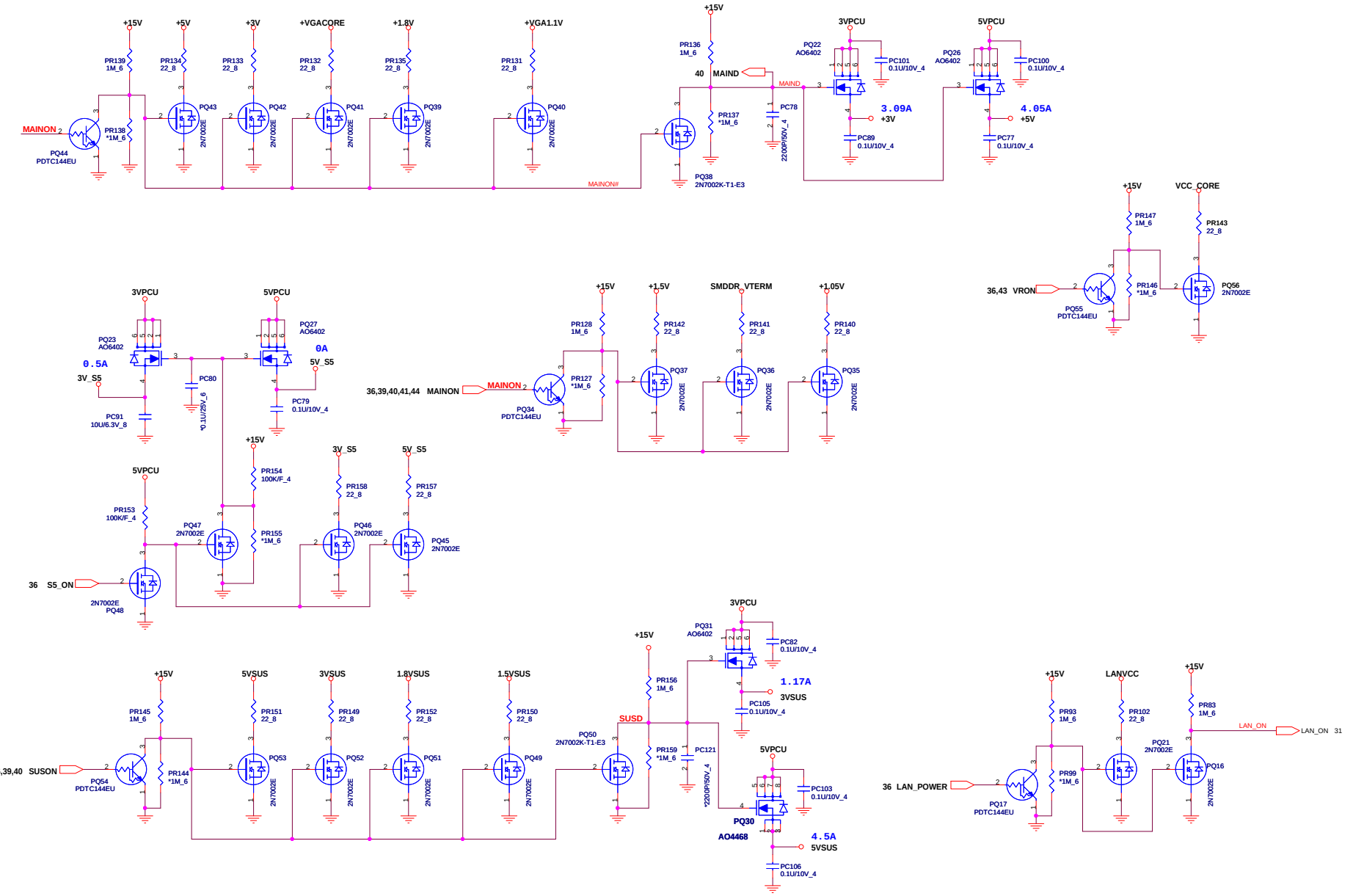
DISCHARGE



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Size	Document Number	Rev
Custom	Discharge	1A

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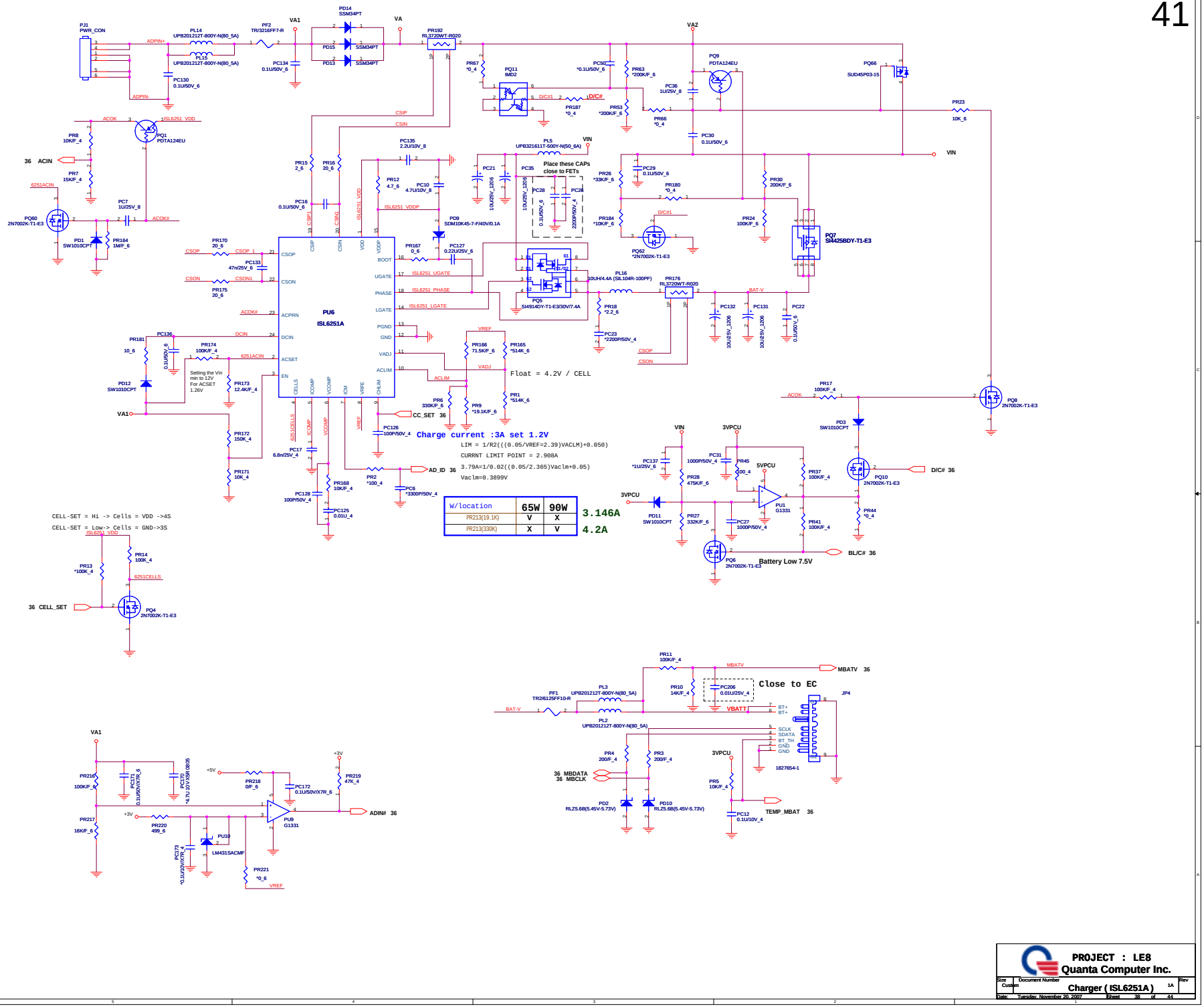
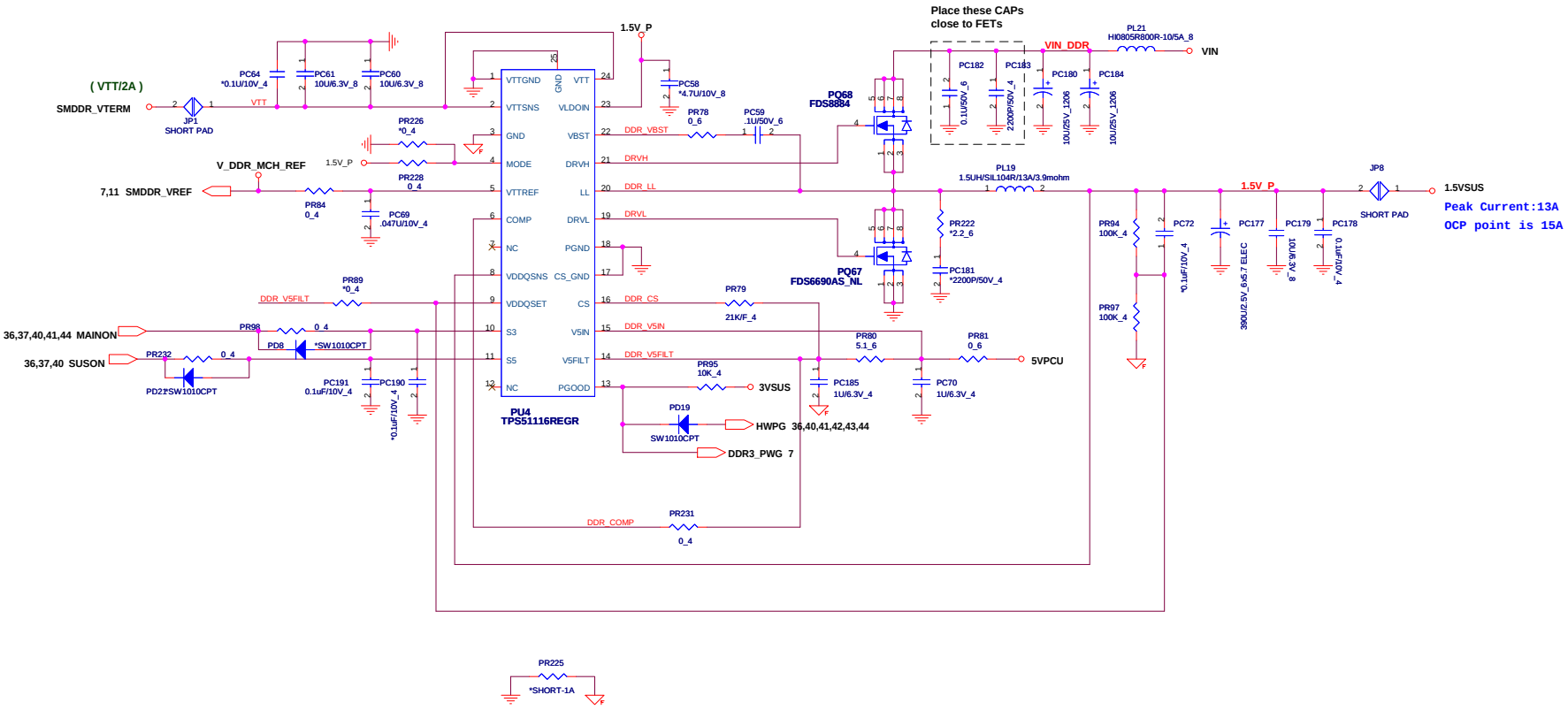

PU6
ISL6251A
Float = 4.2V / CELL
Charge current :3A set 1.2V
LIM = 1/R2(((0.05/VREF=2.39)VACLM)+0.050)
CURRNT LIMIT POINT = 2.908A
3.79A=1/0.02((0.05/2.365)Vaclm+0.05)
Vaclm=0.8899V
W/location | 65W | 90W
PR213(19.1K) | V | X
PR213(330K) | X | V
3.146A
4.2A
CELL-SET = Hi -> Cells = VDD ->4S
CELL-SET = Low-> Cells = GND->3S
Close to EC
Battery Low 7.5V
PROJECT : LE8
Quanta Computer Inc.
Charger (ISL6251A)



PROJECT : LE8		
Quanta Computer Inc.		
Size: Custom	Document Number: DDR3(TPS51116PEGR)	Rev: 1A
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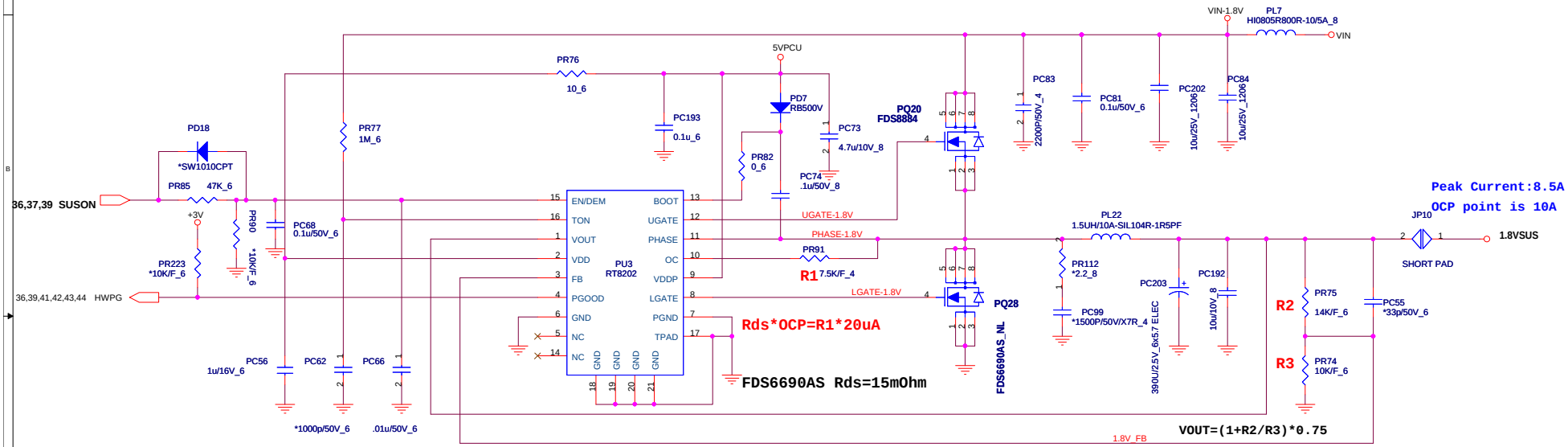
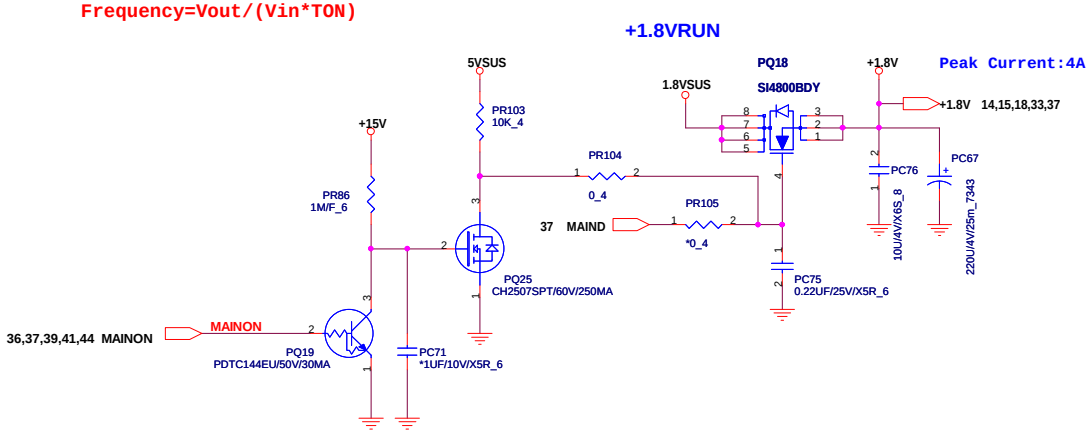


TON=3.85p*RTON*Vout/(Vin-0.5)

Frequency=Vout/(Vin*TON)



PROJECT : LE8 Quanta Computer Inc.			
Size: Custom	Document Number: 1.8VSUS(RT8202)		Rev: 1A
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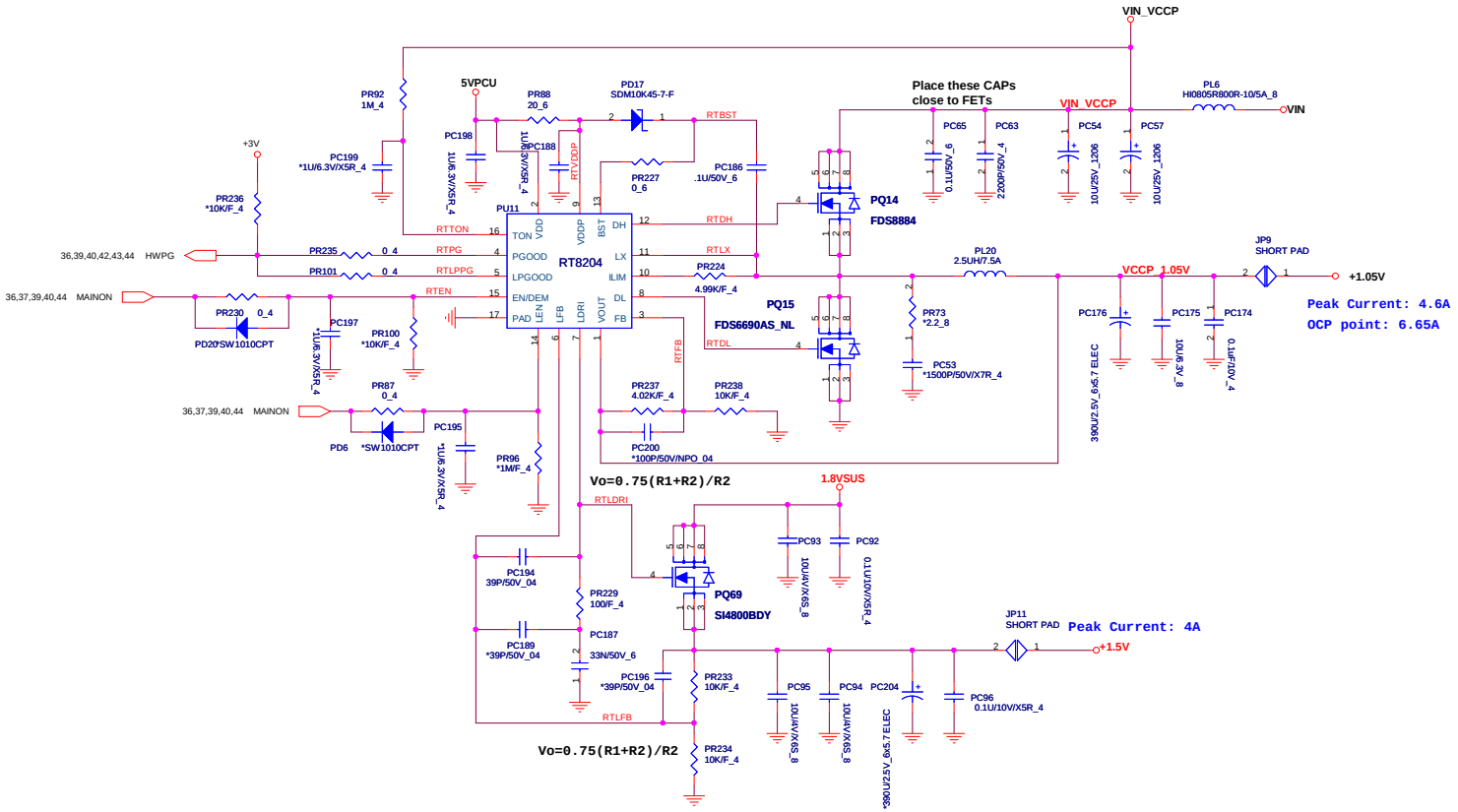

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Quanta Computer Inc.			
Size: Custom	Document Number: 1.05V/1.5V (RT8204)		Rev: 1A
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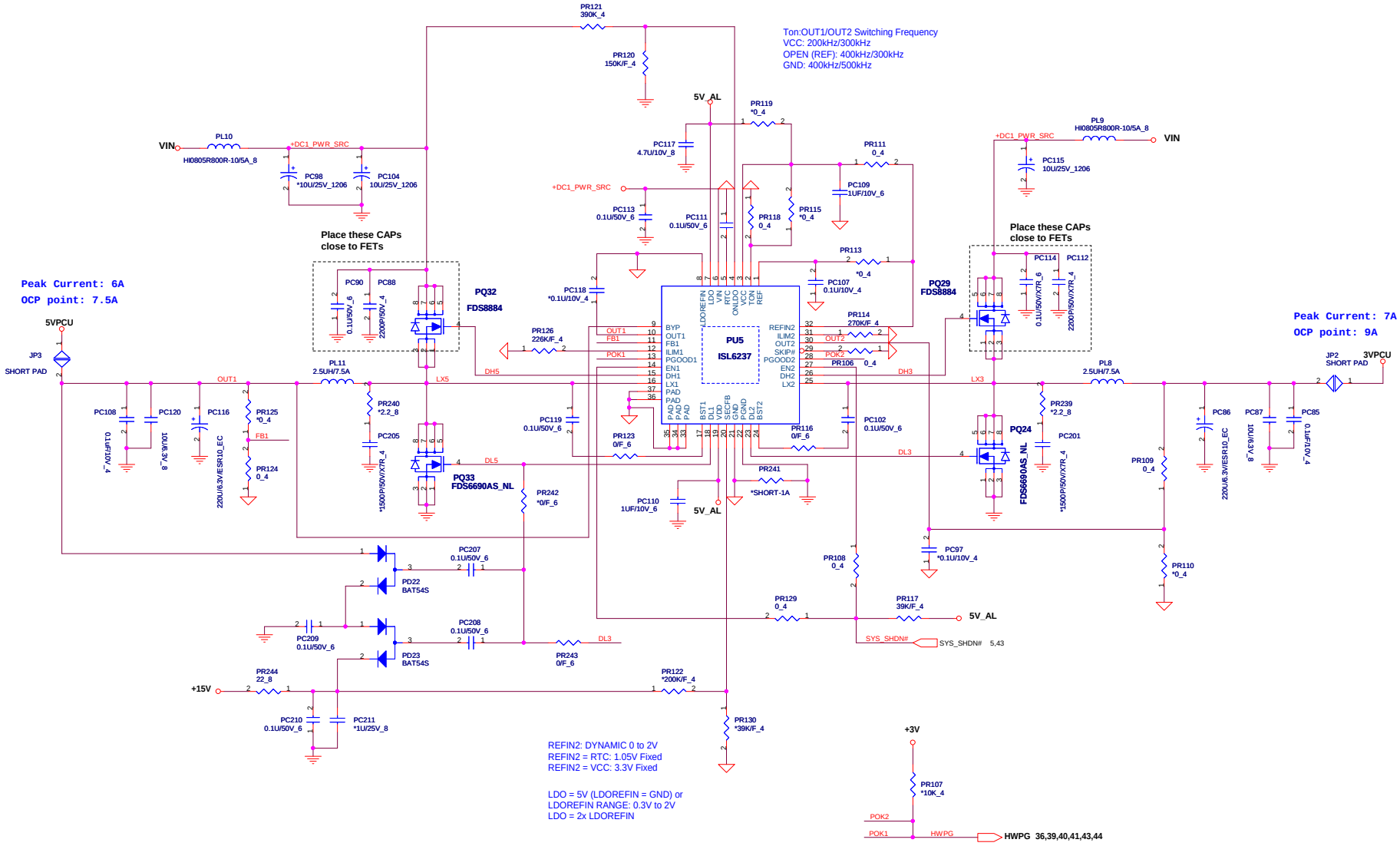
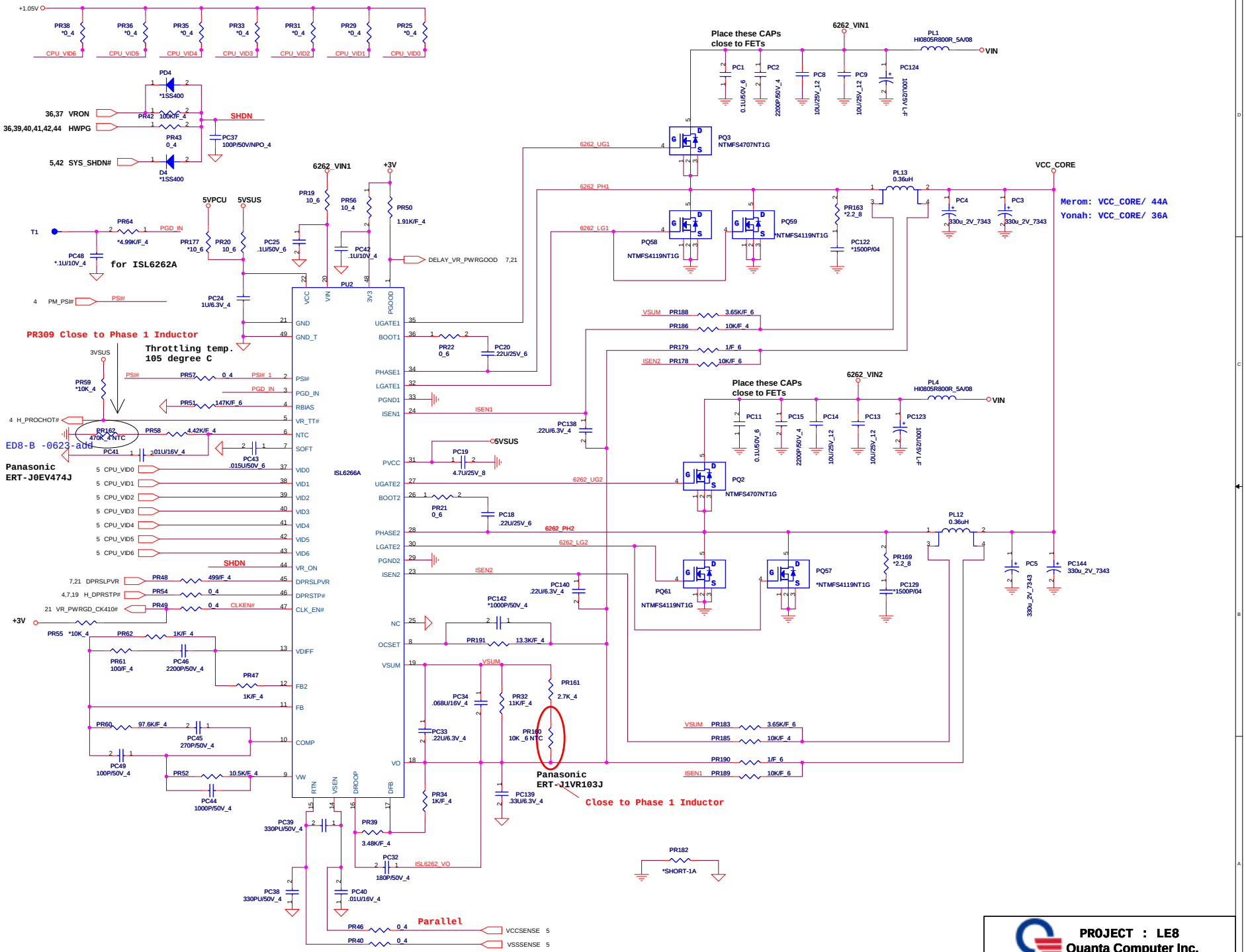
DC/DC 3VPCU/5VPCU/+15V



PROJECT : LE8			
Quanta Computer Inc.			
Size: Custom	Document Number: 3V/5V (ISL6237)		Rev: 1A
Date: Tuesday, November 20, 2007	Sheet 42 of 44		


+1.05V
CPU_VID6
CPU_VID5
CPU_VID4
CPU_VID3
CPU_VID2
CPU_VID1
CPU_VID0
36,37 VRON
36,39,40,41,42,44 HWPG
5,42 SYS_SHDN#
SHDN
T1
PGD_IN
for ISL6262A
PM_PSI#
PSI#
5VPCU
5VSUS
6262_VIN1
+3V
DELAY_VR_PWRGOOD 7,21
PR309 Close to Phase 1 Inductor
Throttling temp.
105 degree C
ED8-B -0623-aud
Panasonic
ERT-J0EV474J
ISL6266A
Place these CAPs
close to FETs
6262_VIN2
VIN
VCC_CORE
Merom: VCC_CORE/ 44A
Yonah: VCC_CORE/ 36A
6262_UG1
6262_LG1
6262_PH1
6262_UG2
6262_LG2
6262_PH2
PQ3 NTMFS4707NT1G
PQ58 NTMFS4119NT1G
PQ59 NTMFS4119NT1G
PQ2 NTMFS4707NT1G
PQ61 NTMFS4119NT1G
PQ57 *NTMFS4119NT1G
PL1 HI0805R800R_5A/08
PL4 HI0805R800R_5A/08
PL13 0.36uH
PL12 0.36uH
Panasonic
ERT-J1VR103J
Close to Phase 1 Inductor
Parallel
VCCSENSE 5
VSSSENSE 5
*SHORT-1A
PROJECT : LE8
Quanta Computer Inc.
CPU (ISL6266)
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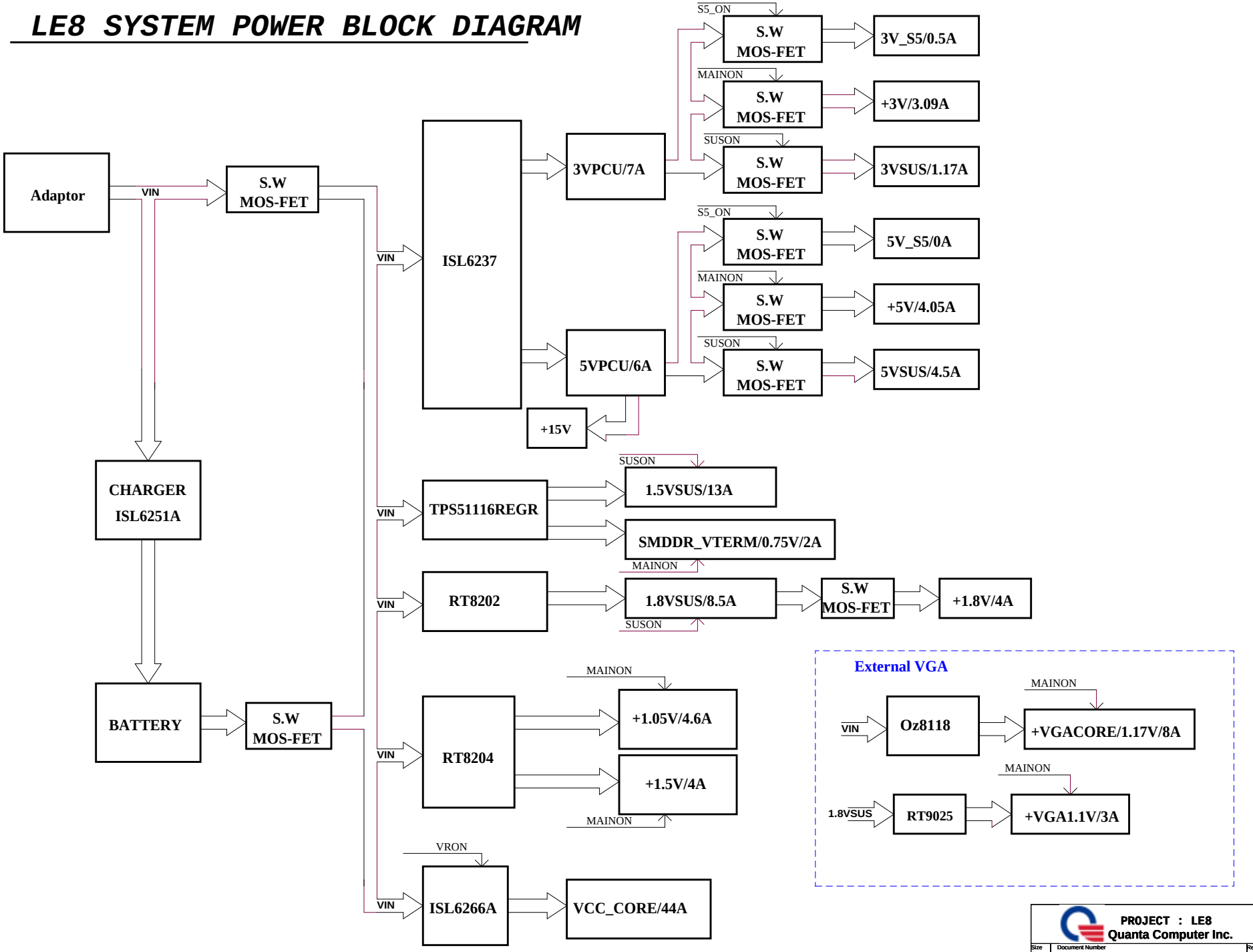
LE8 SYSTEM POWER BLOCK DIAGRAM



PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
C	SYSTEM POWER BLOCK	1A

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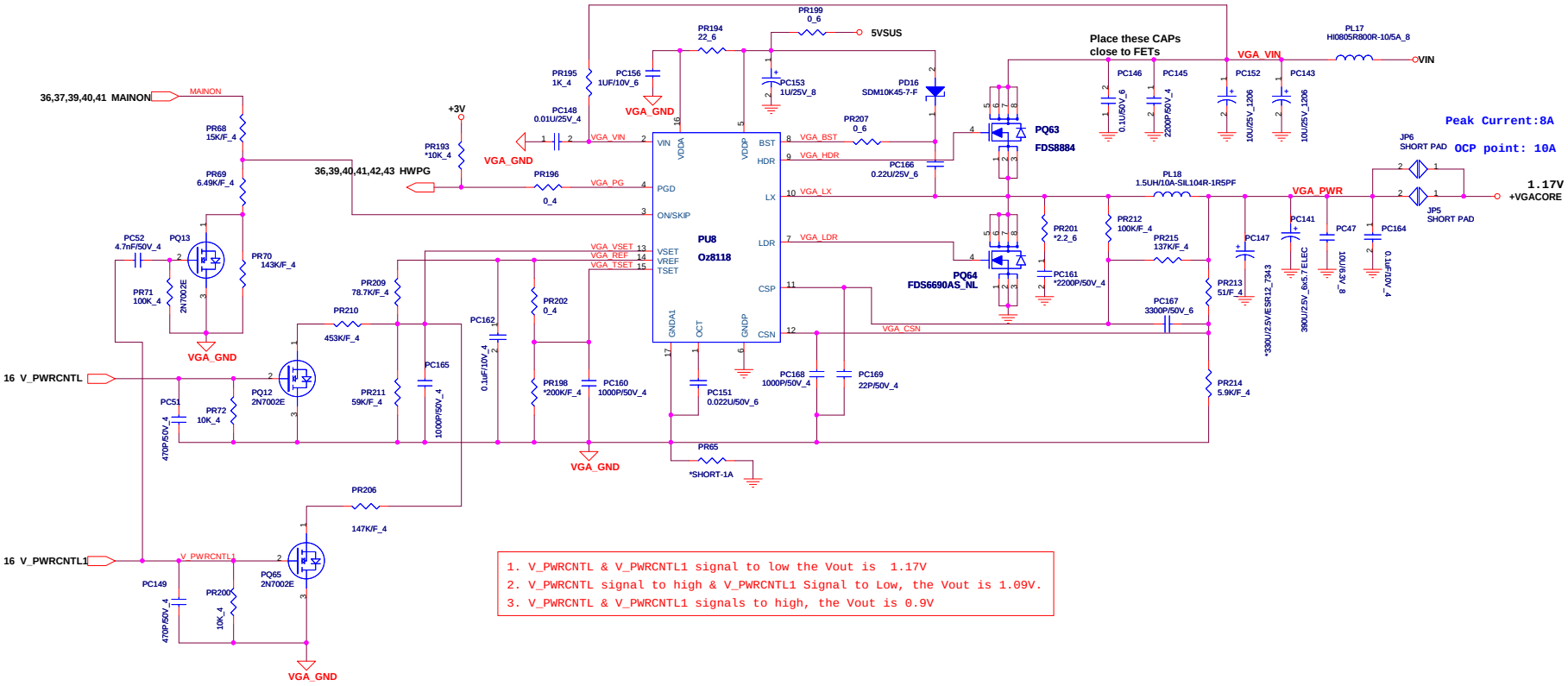

1. V_PWRCNTL & V_PWRCNTL1 signal to low the Vout is 1.17V
2. V_PWRCNTL signal to high & V_PWRCNTL1 Signal to Low, the Vout is 1.09V.
3. V_PWRCNTL & V_PWRCNTL1 signals to high, the Vout is 0.9V

V_PWRCNTL1	V_PWRCNTL	Vout(spec)
0	0	1.17V
0	1	1.09V.
1	0	0.95V
1	1	0.9V

PROJECT : LE8
Quanta Computer Inc.

Size	Document Number	Rev
Custom	VGA (Oz8118)	1A

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