

PCB STACK UP

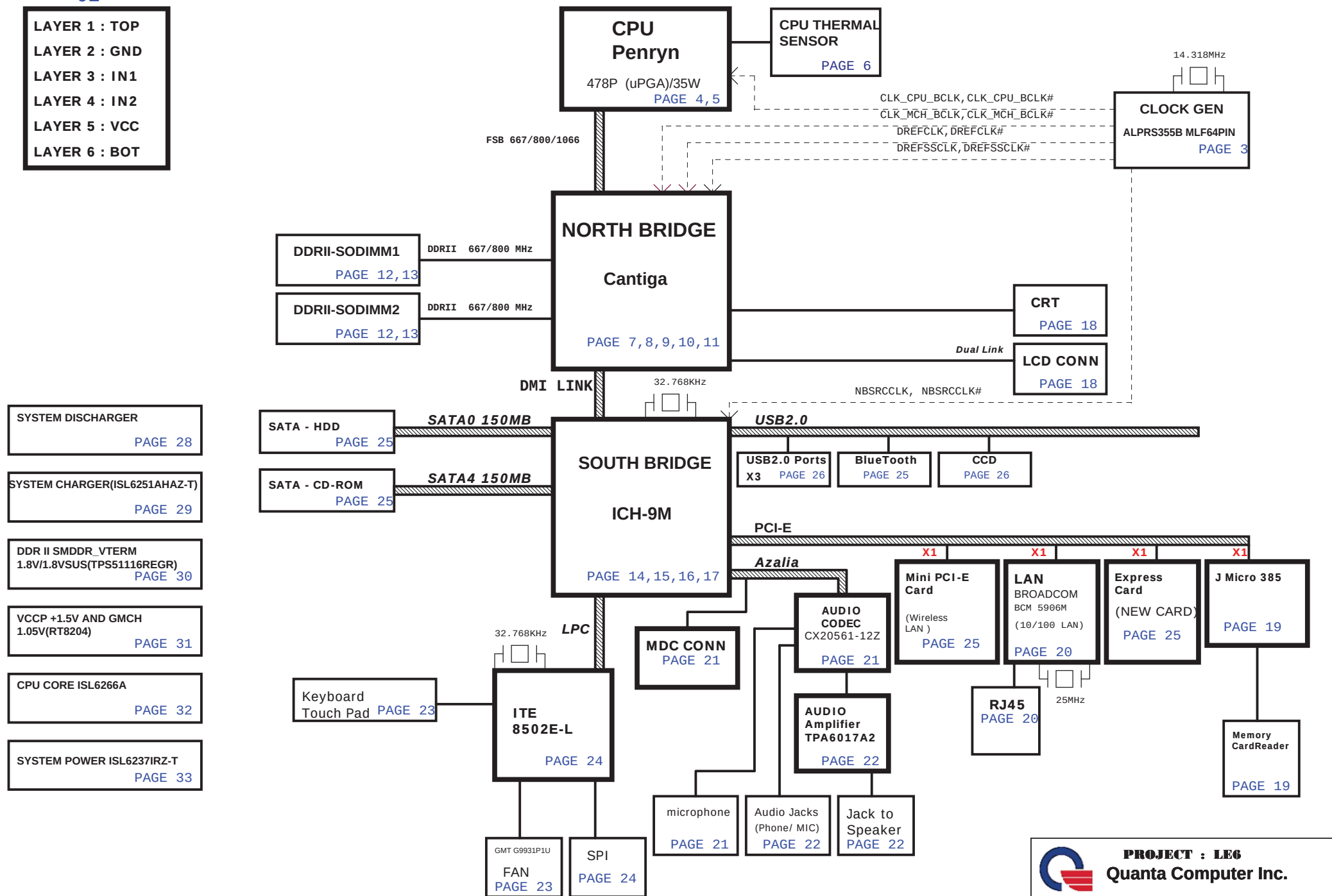
6L

LAYER 1 : TOP
 LAYER 2 : GND
 LAYER 3 : IN1
 LAYER 4 : IN2
 LAYER 5 : VCC
 LAYER 6 : BOT

LE6 BLOCK DIAGRAM

<http://hobi-elektronika.net>

01

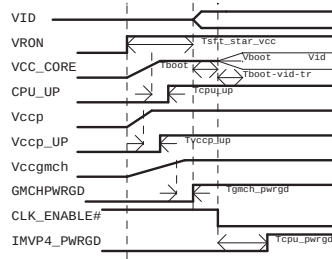


Board Stack up Description

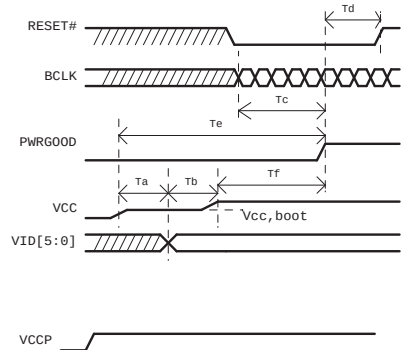
PCB Layers

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

Power On Sequencing Timing Diagram



YONAH Power-up Timing Specifications

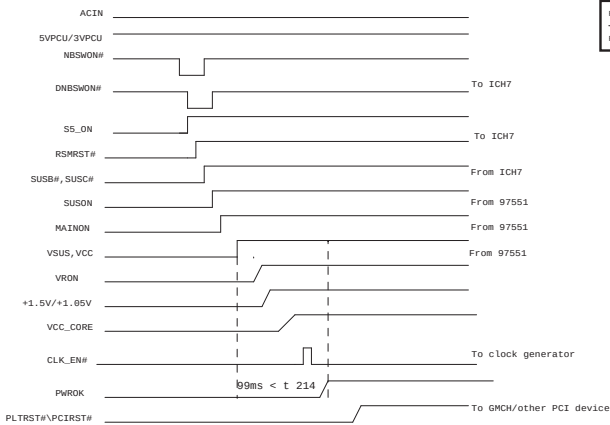


Ta=VCC and VCCP assertion to VID[5:0] valid
Tb=VID[5:0] stable to VCC valid
Tc=BCLK stable to PWRGOOD assertion
Td=PWRGOOD to RESET# de-assertion time
Te=VCC,boot valid to PWRGOOD assertion time

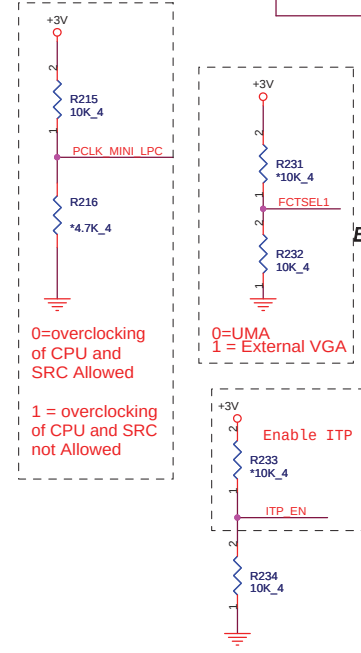
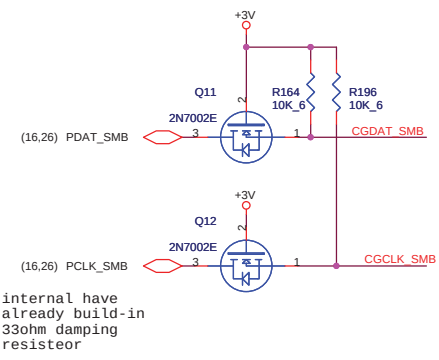
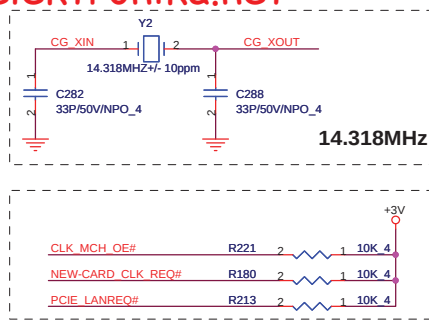
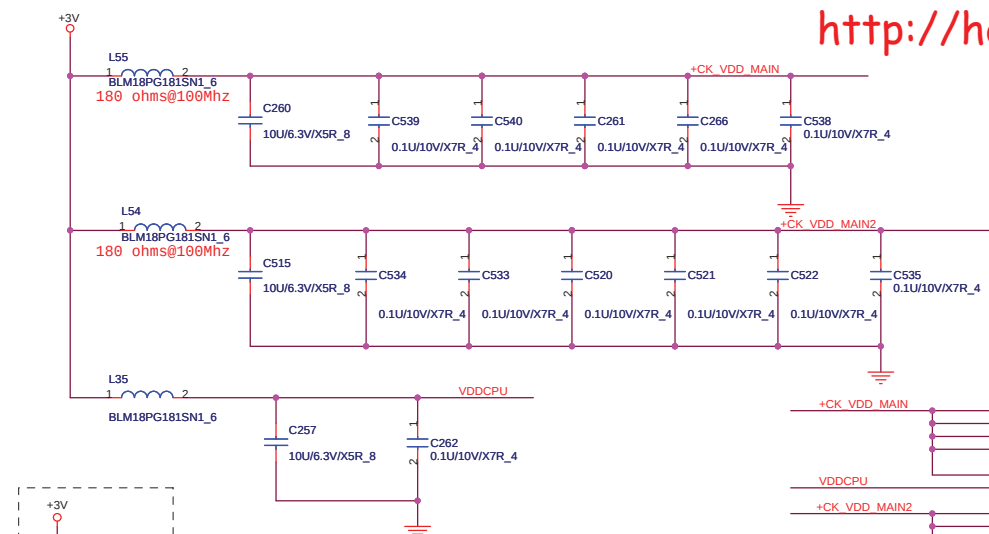
Voltage Rails

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_S5/1.5V_S5	X	X	X	X	S5_ON
5VSUS/3VSUS/1.8VSUS	X	X			SUSON
SMDRR_VTERM/+2.5V/+3V/+5V/+12V	X				MAINON
+VCC GFX_CORE/+1.2V GFX_PCIE	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



PCI DEVICE	IDSEL#	REQ# / GNT#	Interrupts
RICOH82	AD25	REQ0# / GNT0#	INT 6/1#



EB1213-0001

(25) PC1_CLK_8502
(21) PCIE_LANREQ#
(26) PCLK_LPC_DEBUG

EB1213-0002

*PAD T38
*PAD T39

EB1213-0003

(15) PCLK_ICH

EB1213-0004

(16) CLK_48M_USB
(16) CLK_14M_ICH

EB1213-0005

C592 *33P/50V/NPO_4 CLK_48M_USB
C311 *33P/50V/NPO_4 PC1_CLK_8502
C302 *33P/50V/NPO_4 FCTSEL1
C303 *33P/50V/NPO_4 ITP_EN
C310 *33P/50V/NPO_4 PCLK_LPC_DEBUG
C255 *33P/50V/NPO_4 CLK_14M_ICH

for EMI

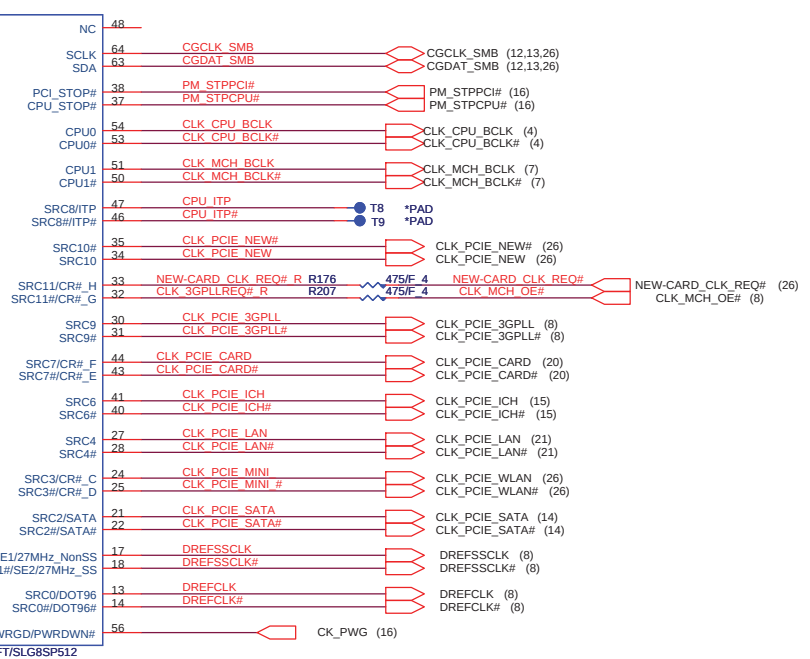
EB1213-0005

U8 CK505

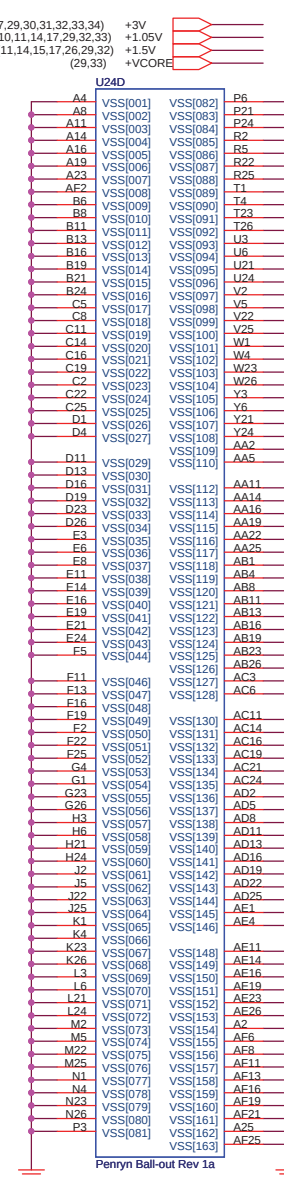
VDD_PCI
VDD_48
VDD_PLL3
VDD_REF
VDD_SRC
VDD_CPU
VDD_96_IO
VDD_PLL3_IO
VDD_SRC_IO_1
VDD_SRC_IO_2
VDD_CPU_IO
VDD_SRC_IO_3

PCIO/CR#_A
PC1I/CR#_B
PCI2/TME
PCI3
PCI4/27MHz_Select
PCIF5/ITP_EN
XTAL_IN
XTAL_OUT
USB_48/FSA
FSB/TEST/MODE
REF0/FSC/TESTSEL
SRC1/SATA
SRC2/SATA#
VSS_PCI
VSS_48
VSS_IO
VSS_PLL3
VSS_CPU
VSS_SRC1
VSS_SRC2
VSS_SRC3
VSS_REF

IC95LPR3365AGLFT/SLG85P512

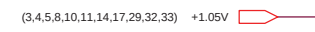


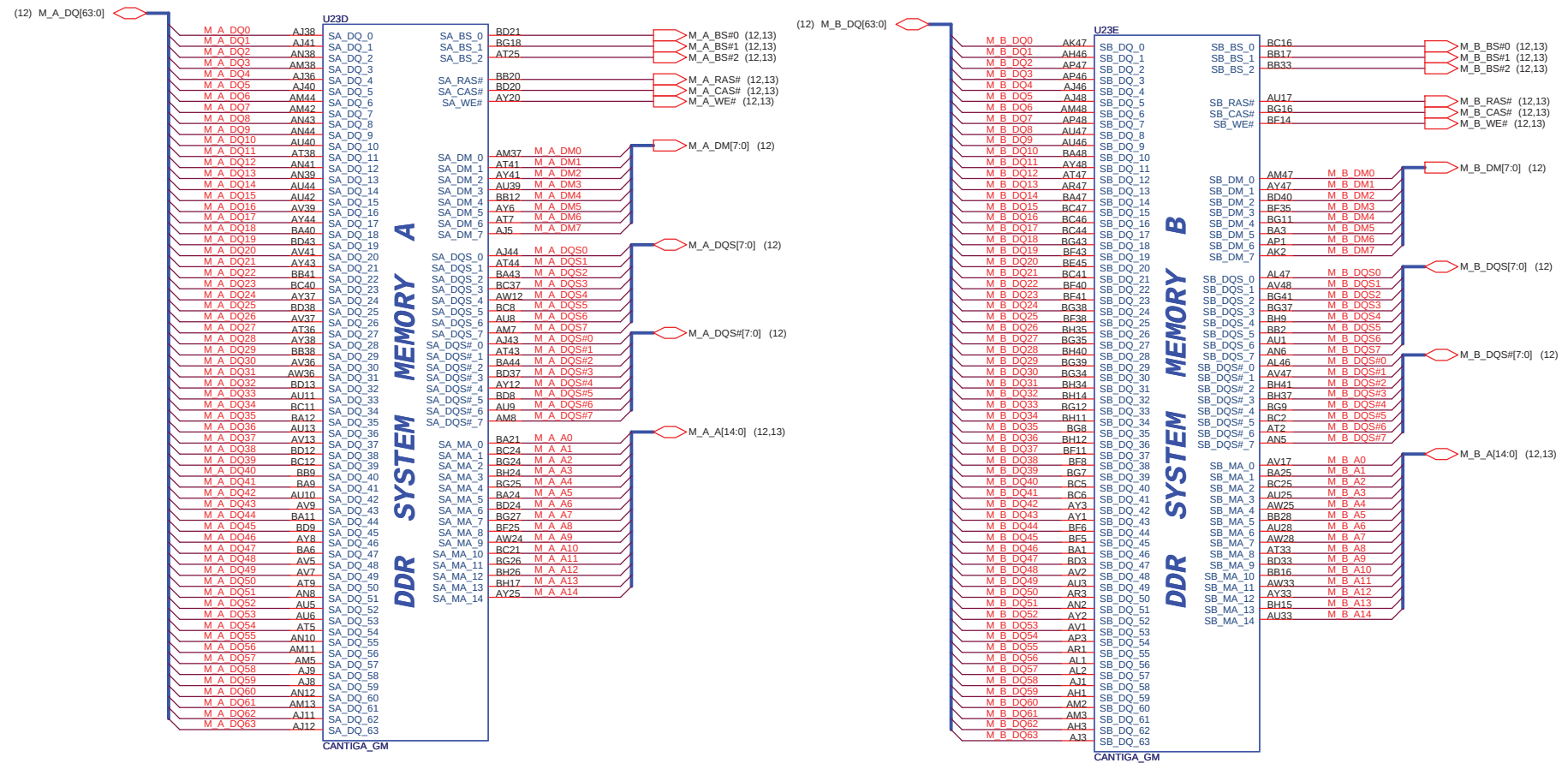


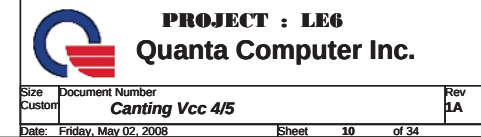


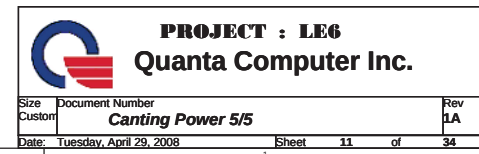
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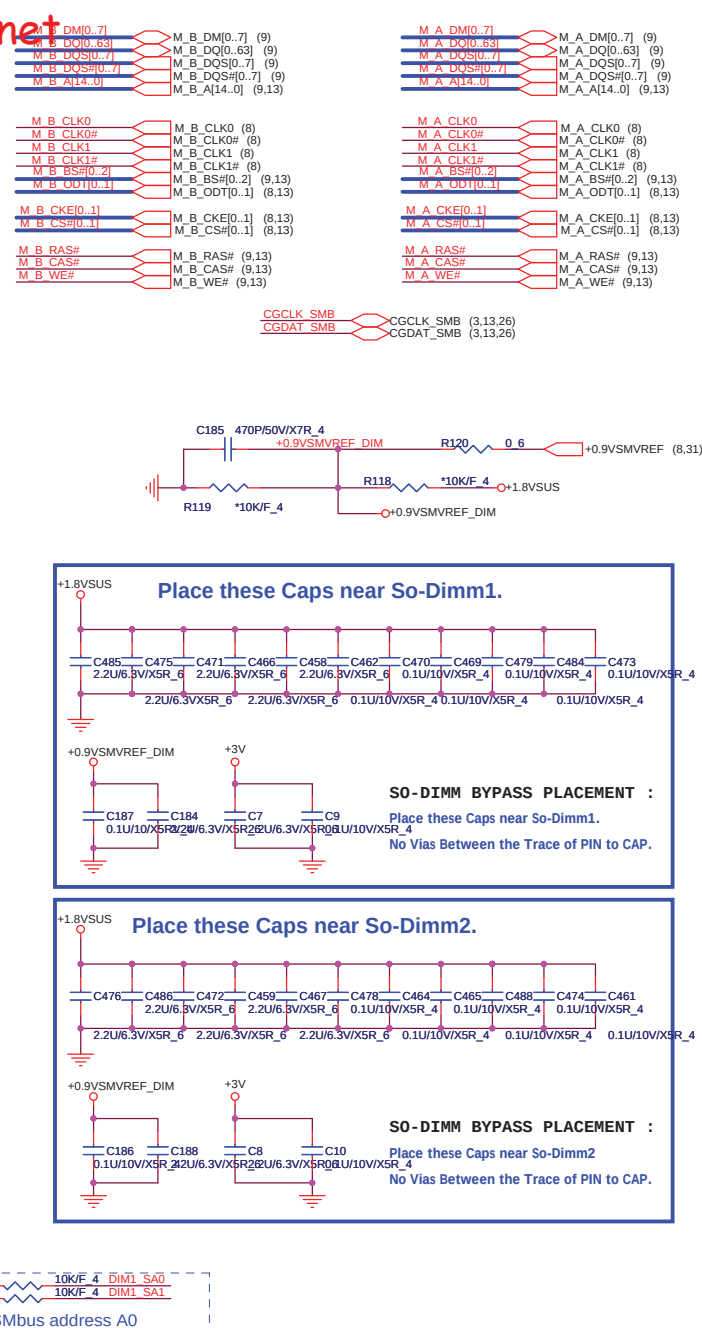
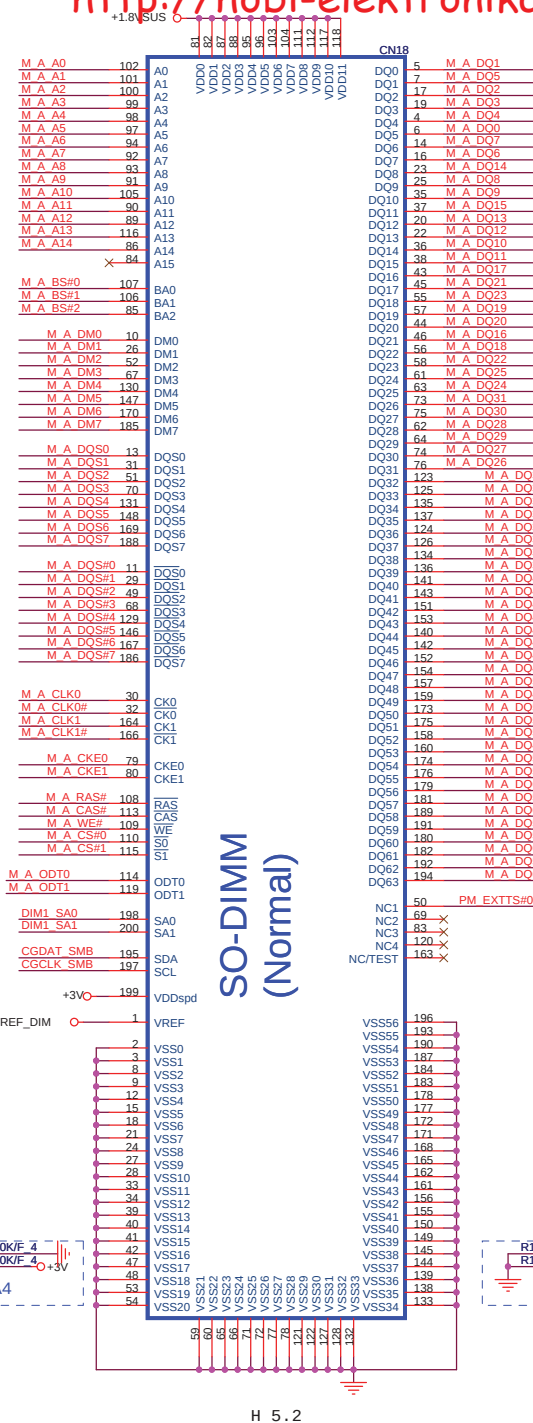
	PROJECT : LE6 Quanta Computer Inc.		
	Size C	Document Number CPU THERMAL/HW PRODC7	Rev 1A
Date: Tuesday, April 29, 2008	Sheet	6	of 34







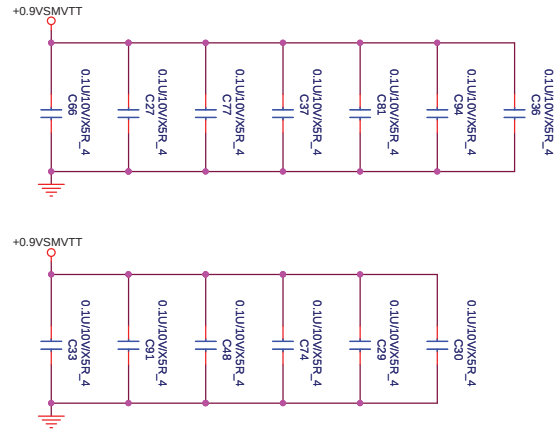




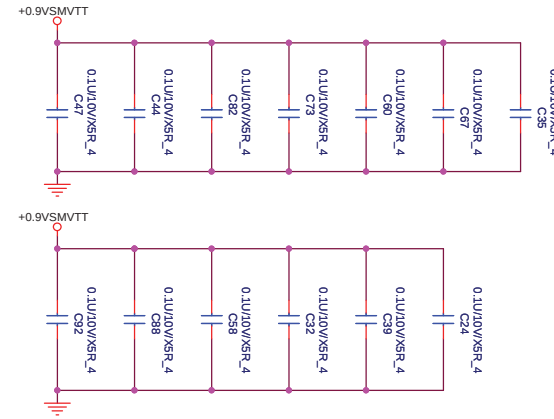
DDRII DUAL CHANNEL A, B.

13

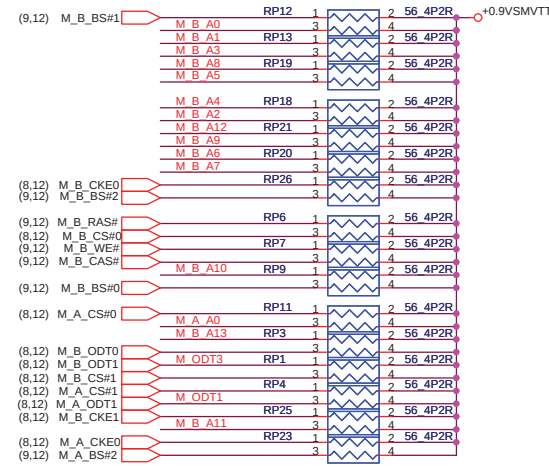
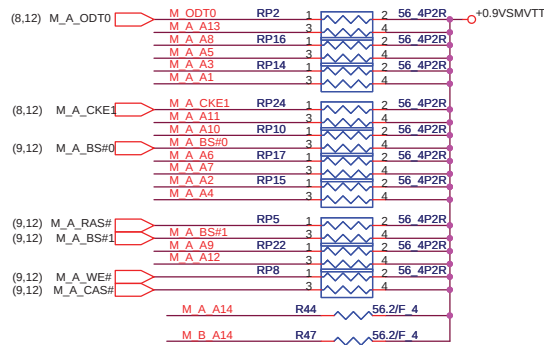
DDRII A CHANNEL



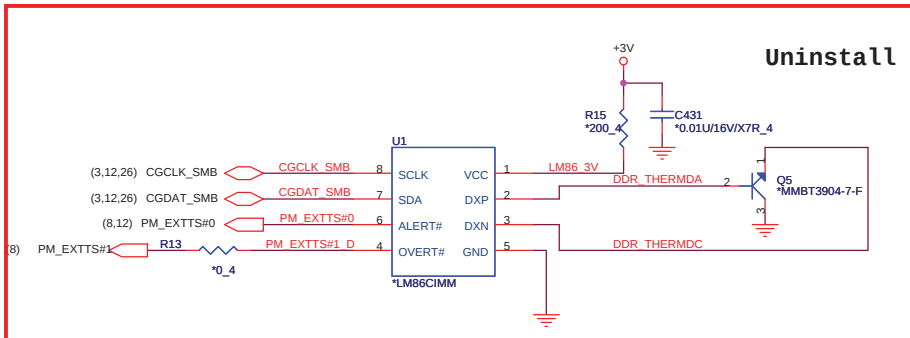
DDRII B CHANNEL



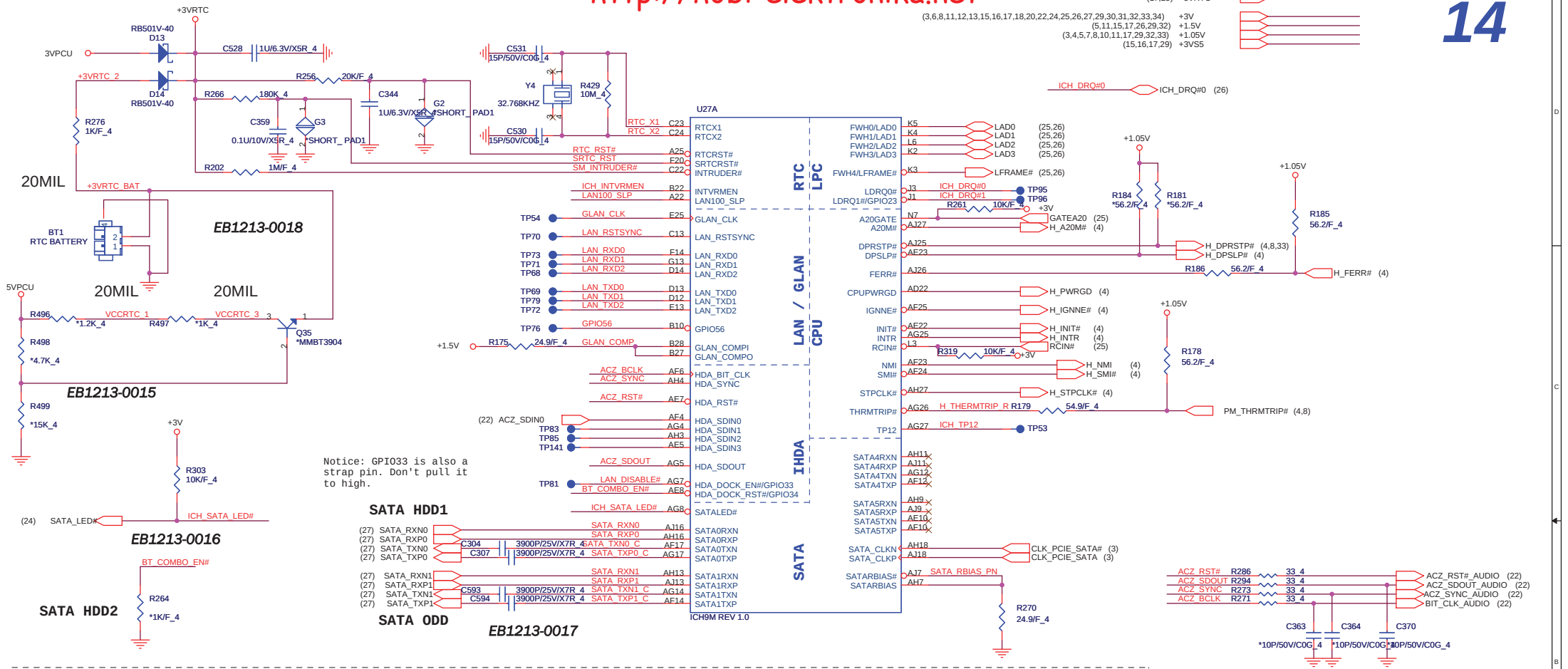
Layout note: Place one cap close to every 2 pullup resistors terminated to SMDR_VTERM



M_B_A[14..0] M_B_A[14..0] (9,12)
M_A_A[14..0] M_A_A[14..0] (9,12)



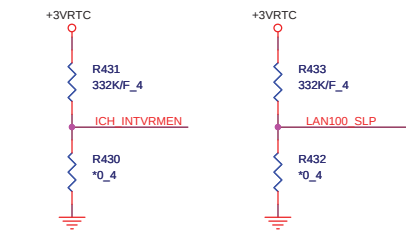
+0.9VSMVTT (29,31)
+3V (3,6,8,11,12,14,15,16,17,18,20,22,24,25,26,27,29,30,31,32,33,34)



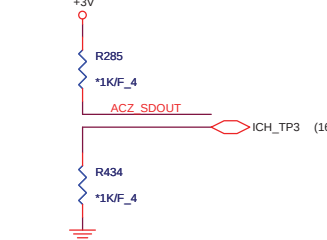
SB Strap

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)

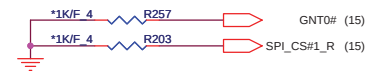


XOR Chain Entrance Strap		
ICH_TP3	HDA_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal operation(Default)
1	1	Set PCIe port config bit 1



ICH9 Boot BIOS select		
STRAP	PCI_GNT0#	SPI_CS#1
SPI	0	1
PCI	1	0
LPC	1	1

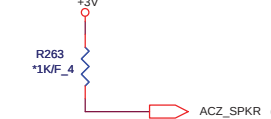
(default)



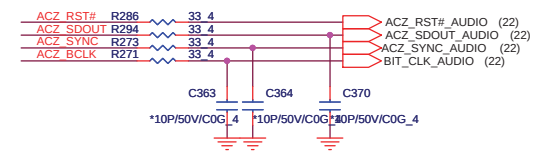
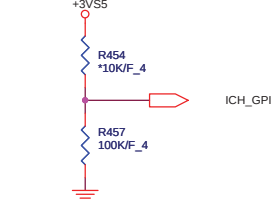
A16 swap override strap	
PCI_GNT#3	Low = A16 swap override enabled Hi = Default



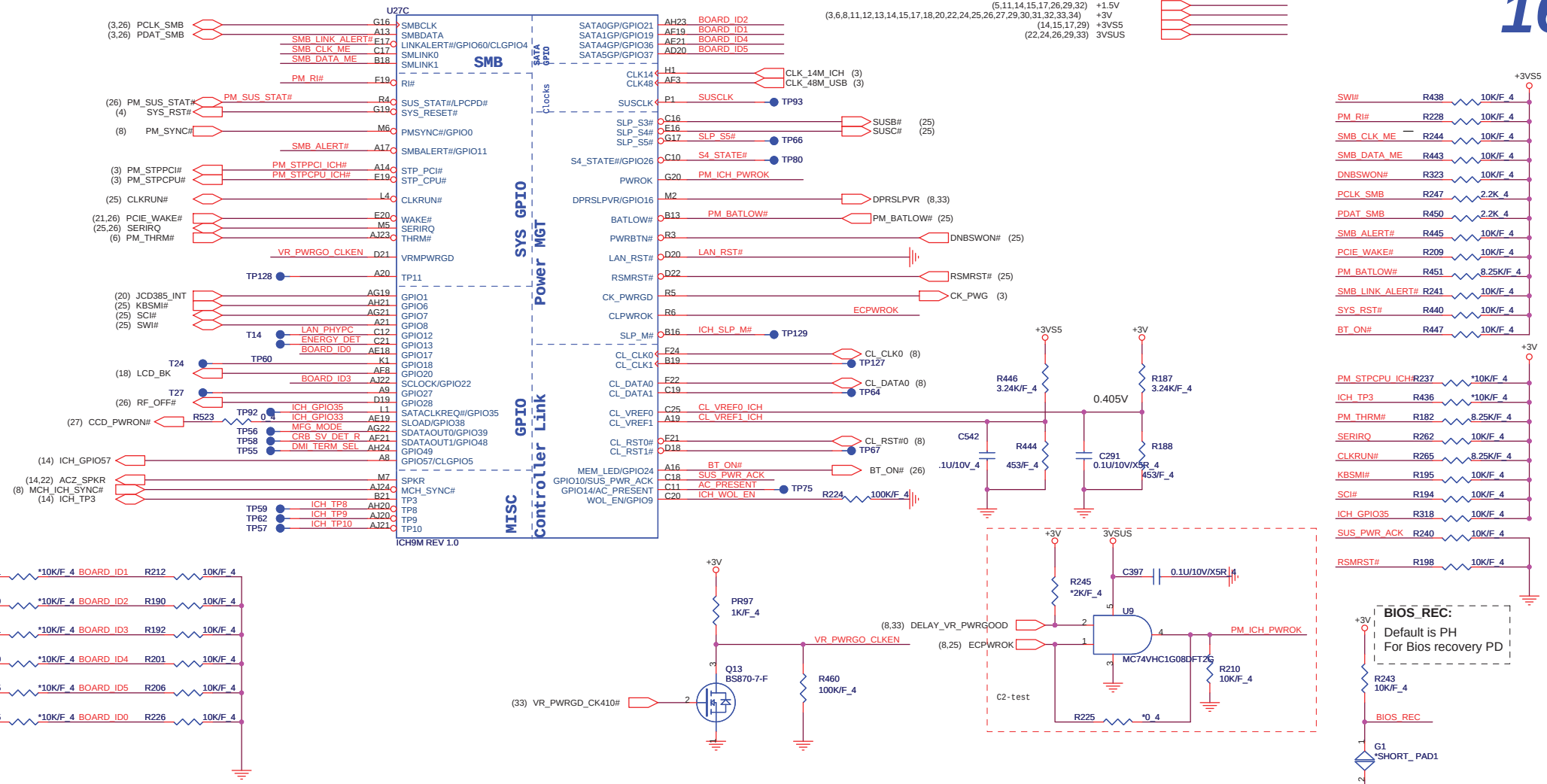
No Reboot Strap	
ACZ_SPKR	Low: Default Hi: No reboot



TPM physical presence	
ICH_GPIO57	Low: Default

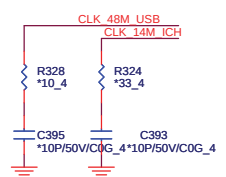


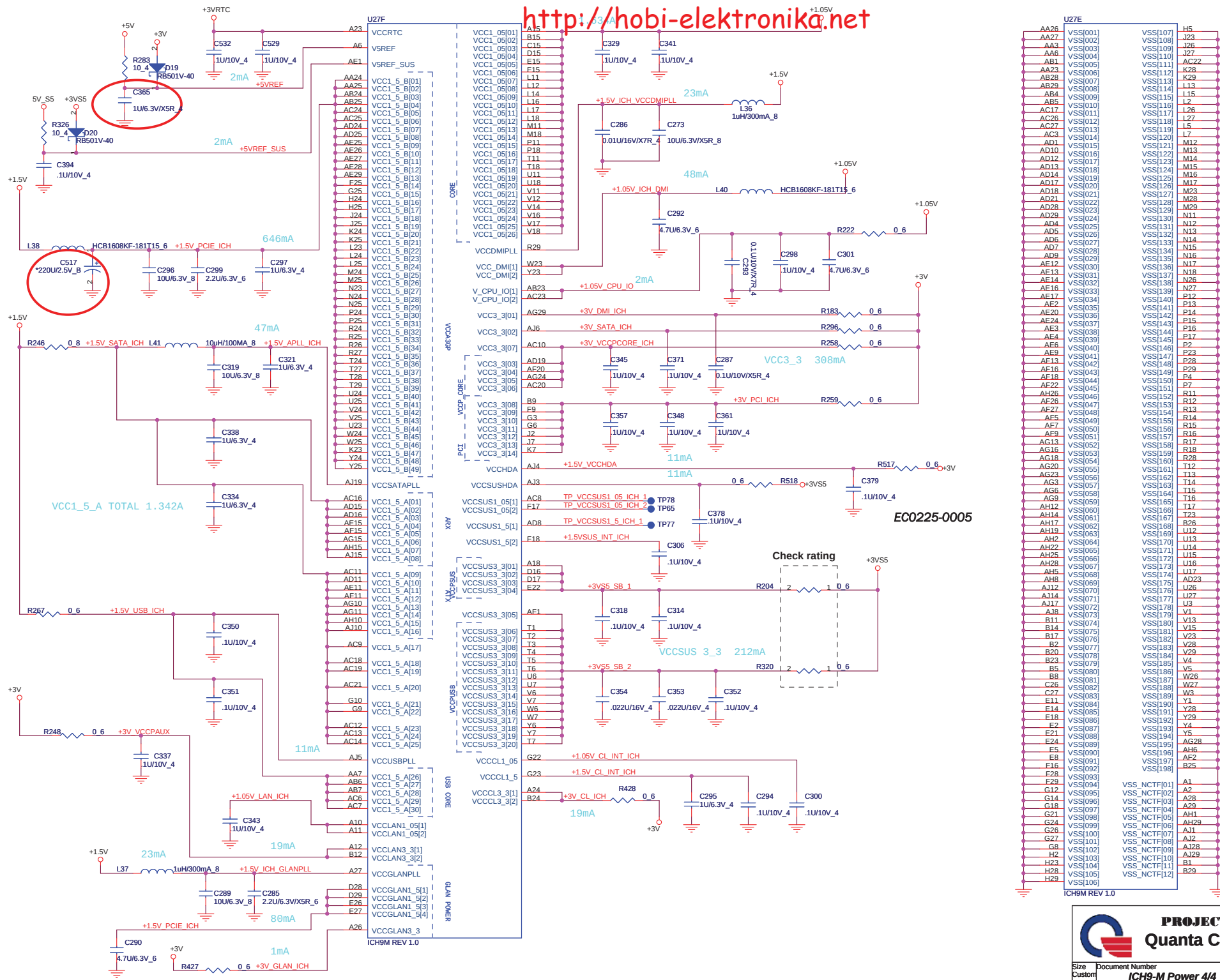
EC0225-0002



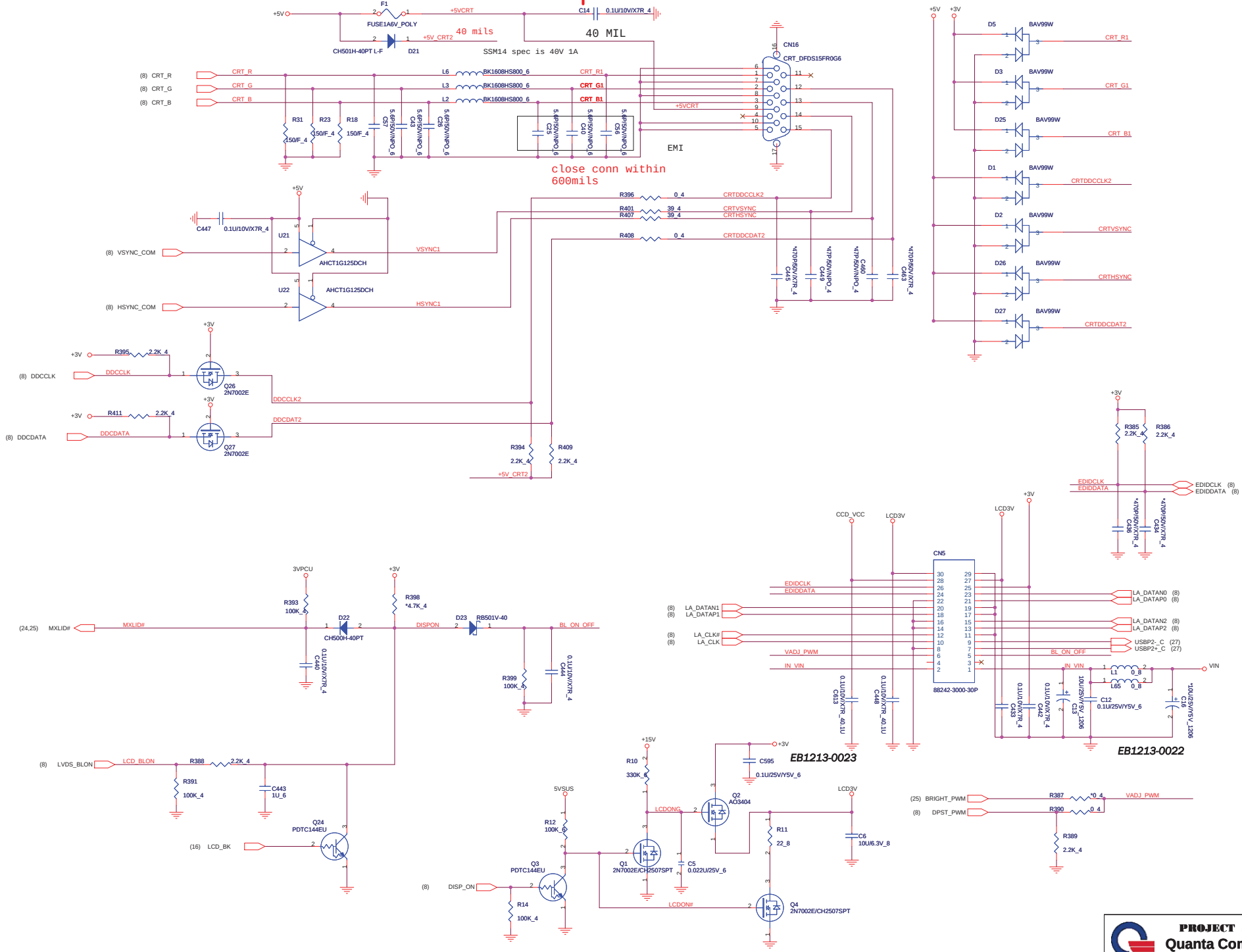
BOARD_ID0 GPI017	BOARD_ID1 GPI019	BOARD_ID2 GPI021	BOARD_ID3 GPI022	BOARD_ID4 GPI036	BOARD_ID5 GPI037	
L	L	L	L	L	L	LE6 (GPI036/GPI037)
L	L	L	L	H	L	LE7 (GPI036/GPI037)

EB1213-0004

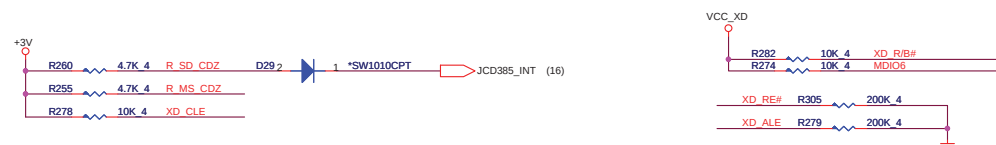
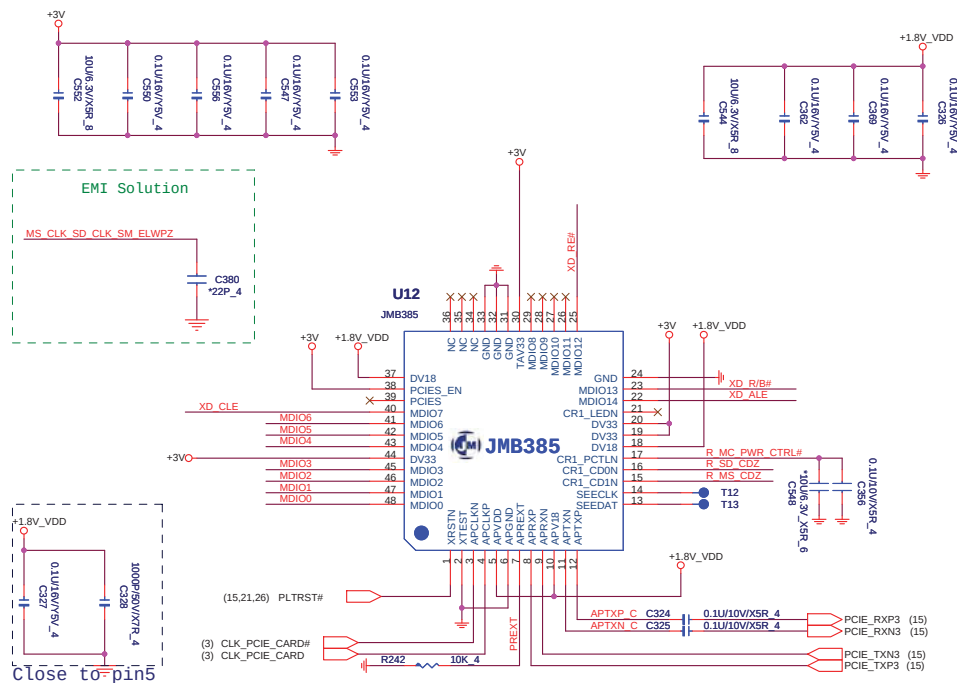




AA26	VSS1[001]	VSS1[007]	H5
AA27	VSS1[002]	VSS1[008]	J23
AA3	VSS1[003]	VSS1[009]	J26
AA6	VSS1[004]	VSS1[010]	J27
AB1	VSS1[005]	VSS1[011]	K28
AA23	VSS1[006]	VSS1[012]	K29
AB28	VSS1[007]	VSS1[013]	L13
AB29	VSS1[008]	VSS1[014]	L2
AB5	VSS1[009]	VSS1[015]	L26
AC17	VSS1[010]	VSS1[016]	L27
AC26	VSS1[011]	VSS1[017]	L5
AC27	VSS1[012]	VSS1[018]	L7
AC3	VSS1[013]	VSS1[019]	M12
AD1	VSS1[014]	VSS1[020]	M13
AD10	VSS1[015]	VSS1[021]	M14
AD12	VSS1[016]	VSS1[022]	M15
AD13	VSS1[017]	VSS1[023]	M16
AD14	VSS1[018]	VSS1[024]	M17
AD17	VSS1[019]	VSS1[025]	M23
AD18	VSS1[020]	VSS1[026]	M28
AD21	VSS1[021]	VSS1[027]	M29
AD28	VSS1[022]	VSS1[028]	N11
AD29	VSS1[023]	VSS1[029]	N12
AD4	VSS1[024]	VSS1[030]	N13
AD5	VSS1[025]	VSS1[031]	N14
AD6	VSS1[026]	VSS1[032]	N15
AD7	VSS1[027]	VSS1[033]	N16
AD9	VSS1[028]	VSS1[034]	N17
AE12	VSS1[029]	VSS1[035]	N18
AE13	VSS1[030]	VSS1[036]	N27
AE16	VSS1[031]	VSS1[037]	P12
AE17	VSS1[032]	VSS1[038]	P13
AE2	VSS1[033]	VSS1[039]	P14
AE20	VSS1[034]	VSS1[040]	P15
AE24	VSS1[035]	VSS1[041]	P16
AE25	VSS1[036]	VSS1[042]	P17
AE26	VSS1[037]	VSS1[043]	P2
AE3	VSS1[038]	VSS1[044]	P23
AE4	VSS1[039]	VSS1[045]	P28
AE9	VSS1[040]	VSS1[046]	P29
AF13	VSS1[041]	VSS1[047]	P7
AF16	VSS1[042]	VSS1[048]	R11
AF18	VSS1[043]	VSS1[049]	R12
AF22	VSS1[044]	VSS1[050]	R13
AF26	VSS1[045]	VSS1[051]	R14
AF27	VSS1[046]	VSS1[052]	R15
AF5	VSS1[047]	VSS1[053]	R16
AF7	VSS1[048]	VSS1[054]	R17
AF9	VSS1[049]	VSS1[055]	R18
AG13	VSS1[050]	VSS1[056]	R28
AG16	VSS1[051]	VSS1[057]	T12
AG18	VSS1[052]	VSS1[058]	T13
AG20	VSS1[053]	VSS1[059]	T14
AG23	VSS1[054]	VSS1[060]	T15
AG3	VSS1[055]	VSS1[061]	T16
AG6	VSS1[056]	VSS1[062]	T17
AG9	VSS1[057]	VSS1[063]	T23
AH12	VSS1[058]	VSS1[064]	U14
AH14	VSS1[059]	VSS1[065]	U15
AH17	VSS1[060]	VSS1[066]	U16
AH19	VSS1[061]	VSS1[067]	U17
AH2	VSS1[062]	VSS1[068]	U26
AH22	VSS1[063]	VSS1[069]	U27
AH25	VSS1[064]	VSS1[070]	U3
AH28	VSS1[065]	VSS1[071]	V1
AH5	VSS1[066]	VSS1[072]	V15
AH8	VSS1[067]	VSS1[073]	V23
AH12	VSS1[068]	VSS1[074]	V28
AH14	VSS1[069]	VSS1[075]	V29
AH17	VSS1[070]	VSS1[076]	V4
AH19	VSS1[071]	VSS1[077]	V5
AH2	VSS1[072]	VSS1[078]	W26
AH22	VSS1[073]	VSS1[079]	W27
AH25	VSS1[074]	VSS1[080]	W3
AH28	VSS1[075]	VSS1[081]	Y1
AH5	VSS1[076]	VSS1[082]	Y28
AH8	VSS1[077]	VSS1[083]	Y5
AH12	VSS1[078]	VSS1[084]	Y6
AH14	VSS1[079]	VSS1[085]	Y29
AH17	VSS1[080]	VSS1[086]	Y4
AH19	VSS1[081]	VSS1[087]	Y6
AH2	VSS1[082]	VSS1[088]	AC28
AH22	VSS1[083]	VSS1[089]	AH6
AH25	VSS1[084]	VSS1[090]	AF2
AH28	VSS1[085]	VSS1[091]	B25
AH5	VSS1[086]	VSS1[092]	
AH8	VSS1[087]	VSS1[093]	
AH12	VSS1[088]	VSS1[094]	
AH14	VSS1[089]	VSS1[095]	
AH17	VSS1[090]	VSS1[096]	
AH19	VSS1[091]	VSS1[097]	
AH2	VSS1[092]	VSS1[098]	
AH22	VSS1[093]	VSS1[099]	
AH25	VSS1[094]	VSS1[100]	
AH28	VSS1[095]	VSS1[101]	
AH5	VSS1[096]	VSS1[102]	
AH8	VSS1[097]	VSS1[103]	
AH12	VSS1[098]	VSS1[104]	
AH14	VSS1[099]	VSS1[105]	
AH17	VSS1[100]	VSS1[106]	
AH19	VSS1[101]		
AH2	VSS1[102]		
AH22	VSS1[103]		
AH25	VSS1[104]		
AH28	VSS1[105]		
AH5	VSS1[106]		
AH8	VSS1[107]		
AH12	VSS1[108]		
AH14	VSS1[109]		
AH17	VSS1[110]		
AH19	VSS1[111]		
AH2	VSS1[112]		
AH22	VSS1[113]		
AH25	VSS1[114]		
AH28	VSS1[115]		
AH5	VSS1[116]		
AH8	VSS1[117]		
AH12	VSS1[118]		
AH14	VSS1[119]		
AH17	VSS1[120]		
AH19	VSS1[121]		
AH2	VSS1[122]		
AH22	VSS1[123]		
AH25	VSS1[124]		
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AH5	VSS1[126]		
AH8	VSS1[127]		
AH12	VSS1[128]		
AH14	VSS1[129]		
AH17	VSS1[130]		
AH19	VSS1[131]		
AH2	VSS1[132]		
AH22	VSS1[133]		
AH25	VSS1[134]		
AH28	VSS1[135]		
AH5	VSS1[136]		
AH8	VSS1[137]		
AH12	VSS1[138]		
AH14	VSS1[139]		
AH17	VSS1[140]		
AH19	VSS1[141]		
AH2	VSS1[142]		
AH22	VSS1[143]		
AH25	VSS1[144]		
AH28	VSS1[145]		
AH5	VSS1[146]		
AH8	VSS1[147]		
AH12	VSS1[148]		
AH14	VSS1[149]		
AH17	VSS1[150]		
AH19	VSS1[151]		
AH2	VSS1[152]		
AH22	VSS1[153]		
AH25	VSS1[154]		
AH28	VSS1[155]		
AH5	VSS1[156]		
AH8	VSS1[157]		
AH12	VSS1[158]		
AH14	VSS1[159]		
AH17	VSS1[160]		
AH19	VSS1[161]		
AH2	VSS1[162]		
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AH25	VSS1[164]		
AH28	VSS1[165]		
AH5	VSS1[166]		
AH8	VSS1[167]		
AH12	VSS1[168]		
AH14	VSS1[169]		
AH17	VSS1[170]		
AH19	VSS1[171]		
AH2	VSS1[172]		
AH22	VSS1[173]		
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AH5	VSS1[176]		
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AH2	VSS1[182]		
AH22	VSS1[183]		
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AH14	VSS1[189]		
AH17	VSS1[190]		
AH19	VSS1[191]		
AH2	VSS1[192]		
AH22	VSS1[193]		
AH25	VSS1[194]		
AH28	VSS1[195]		
AH5	VSS1[196]		
AH8	VSS1[197]		
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AH14	VSS1[199]		
AH17	VSS1[200]		
AH19	VSS1[201]		
AH2	VSS1[202]		
AH22	VSS1[203]		
AH25	VSS1[204]		
AH28	VSS1[205]		
AH5	VSS1[206]		
AH8	VSS1[207]		
AH12	VSS1[208]		
AH14	VSS1[209]		
AH17	VSS1[210]		
AH19	VSS1[211]		
AH2	VSS1[212]		



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NUMBER SAME AS DISCRETE**



CARDREADER POWER

Memory Card Power Supply

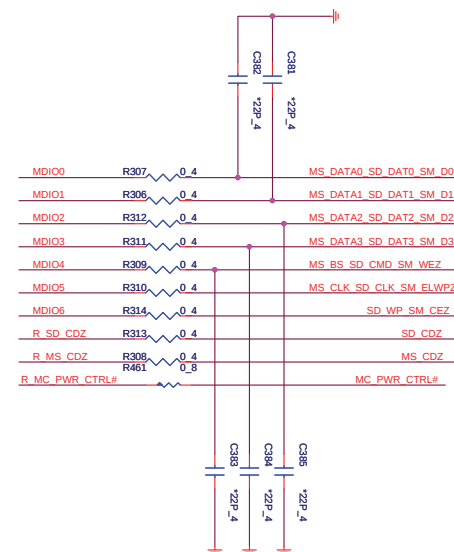
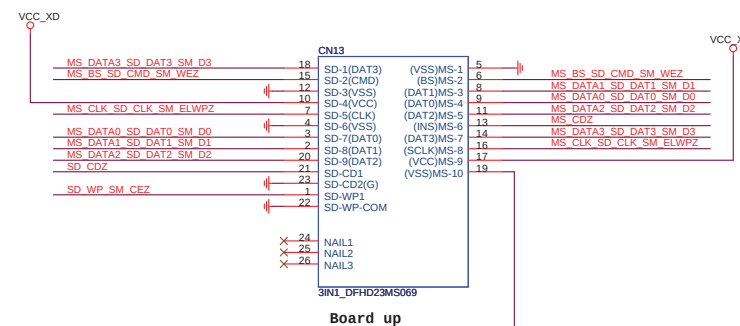
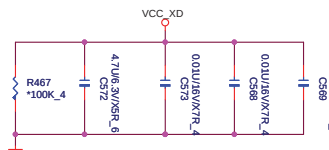
EB1213-0025

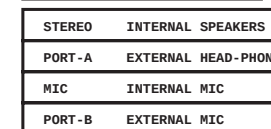


Use 0805 type and over
20 mils trace width on
both side

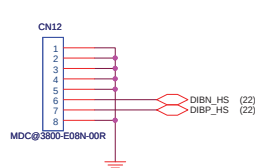
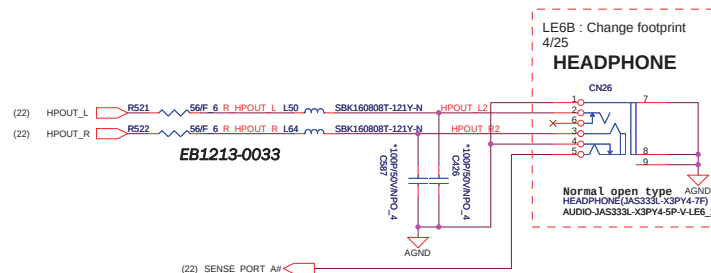
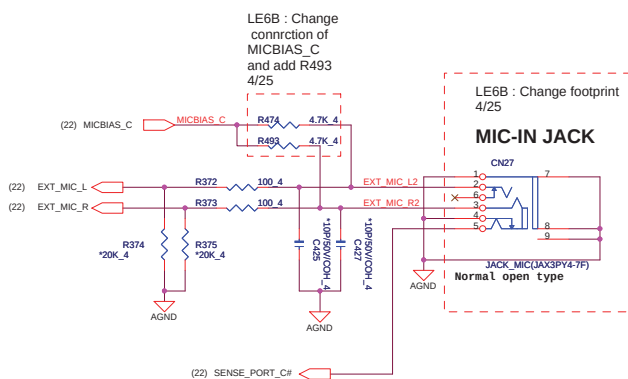
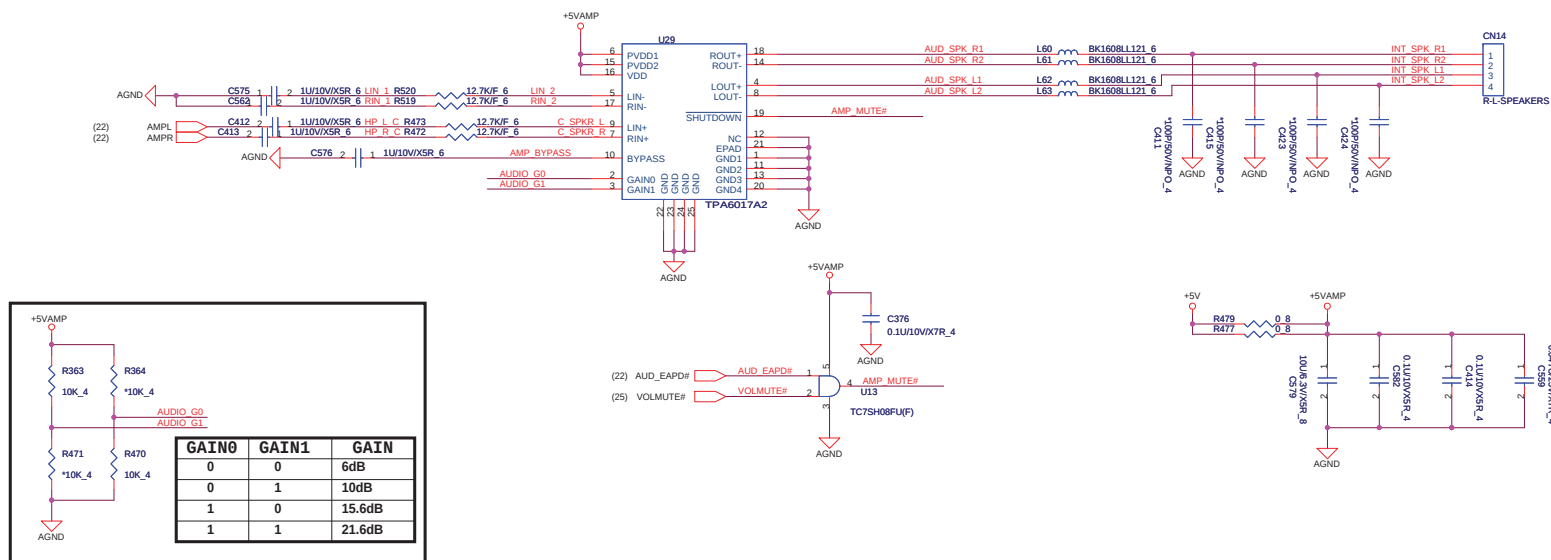
EB1213-0026

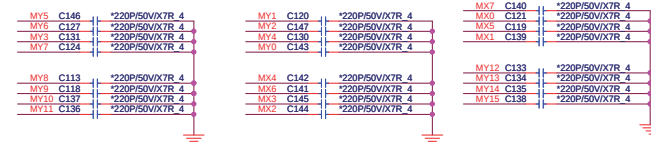
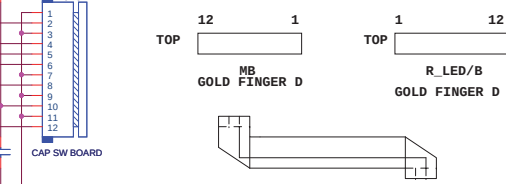
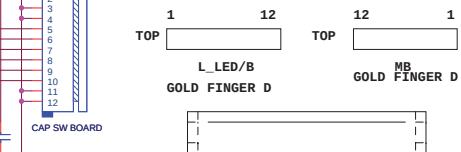
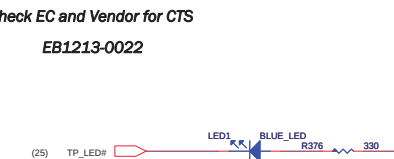
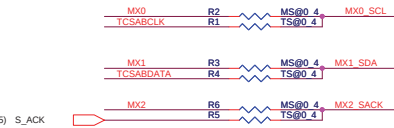
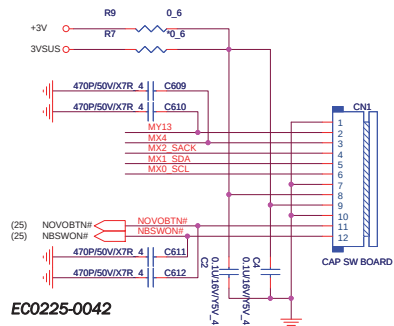
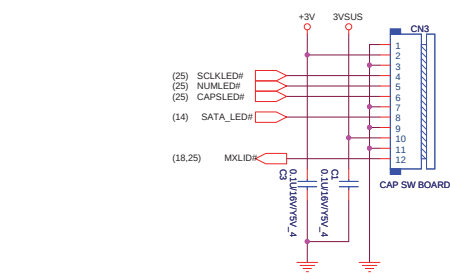
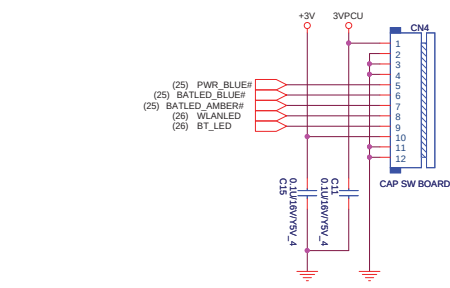
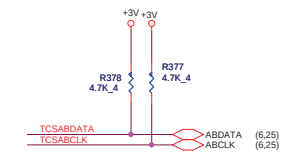
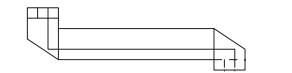
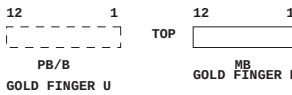
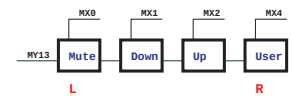
DEL some parts for 032 R469 C577



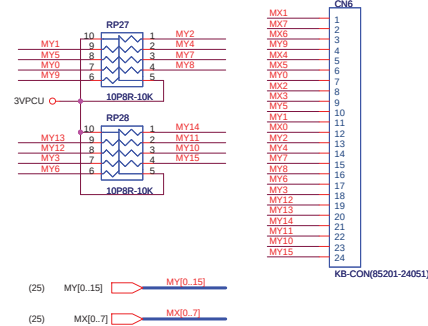


INTERNAL SPEAKER AMPLIFIER

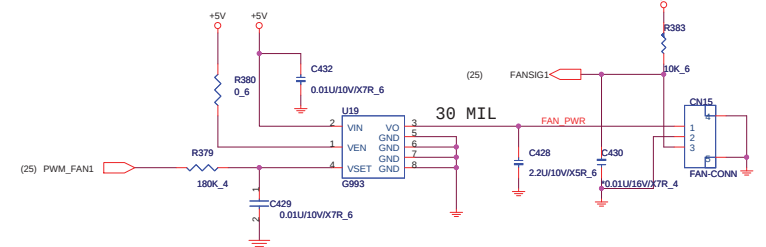




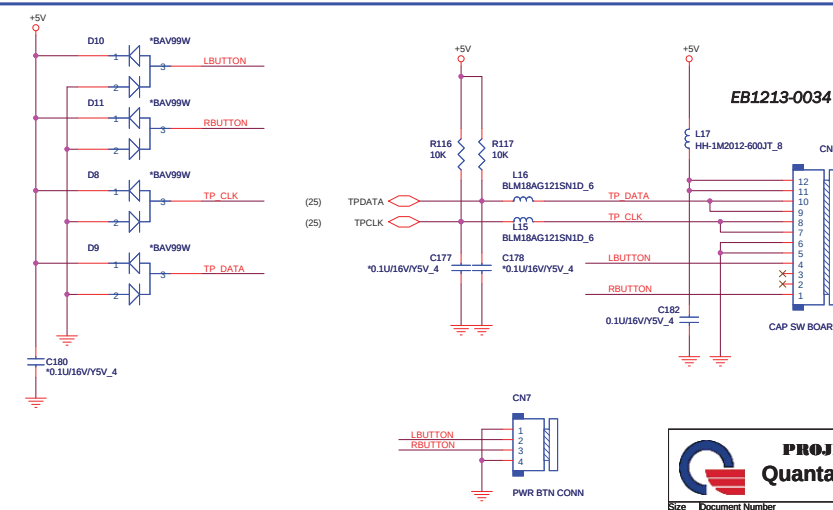
KEYBOARD PULL-UP

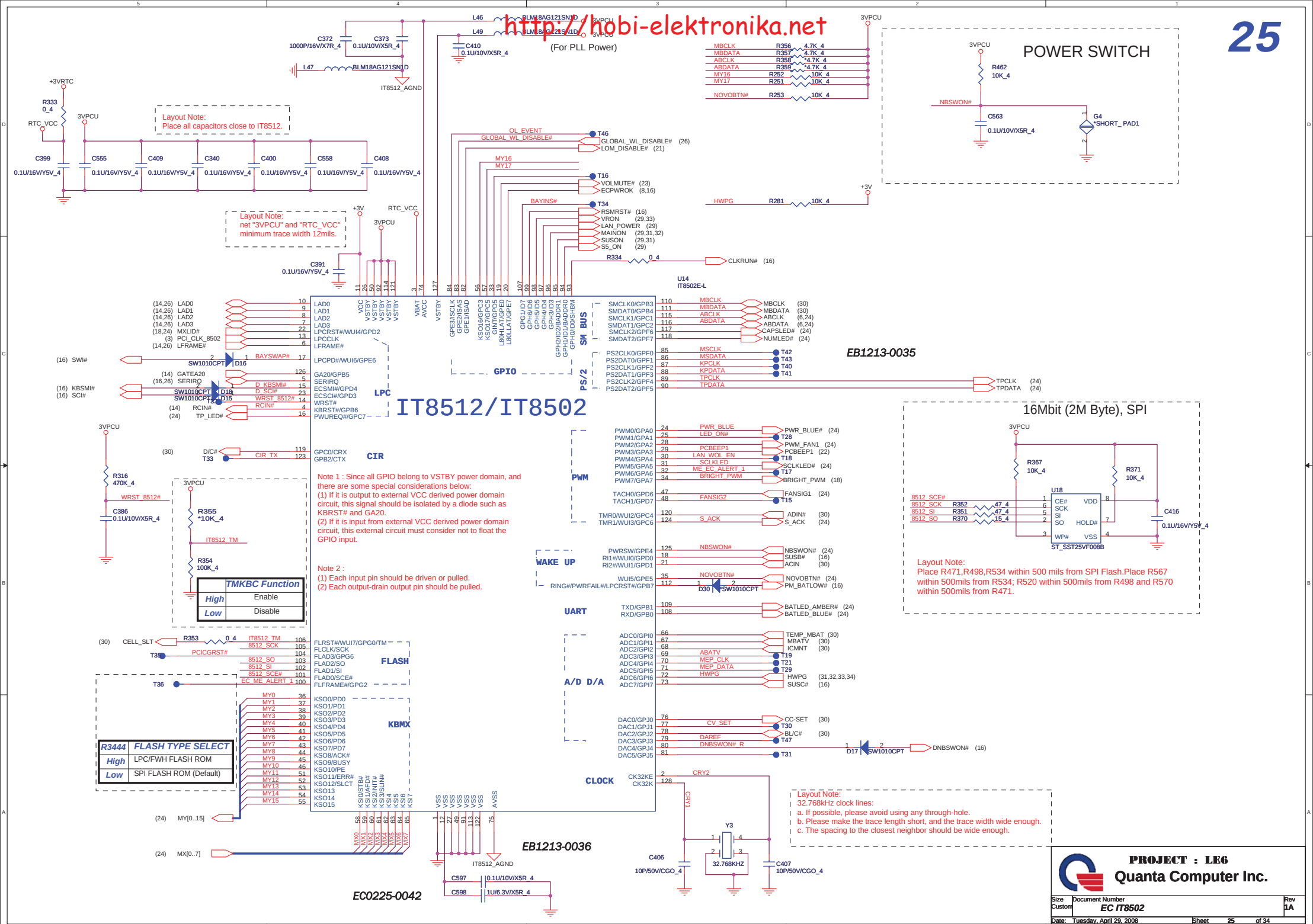


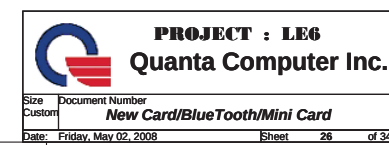
FAN CONTROL



EB1213-0034





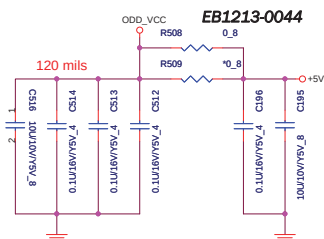


EB1213-0043

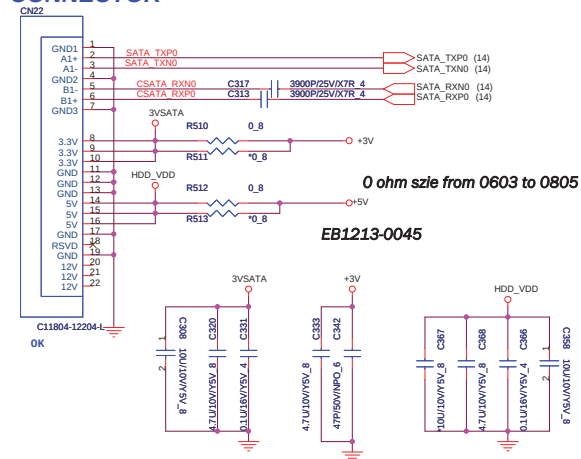
EB1213-0043

0 ohm szle from 0603 to 0805

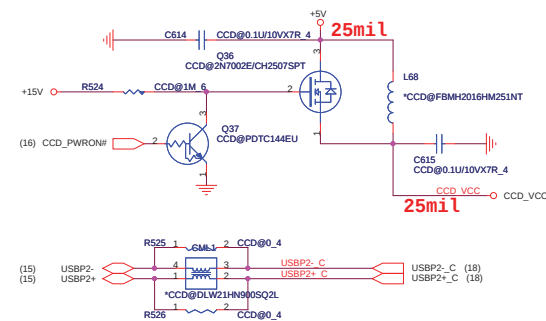
EB1213-0044



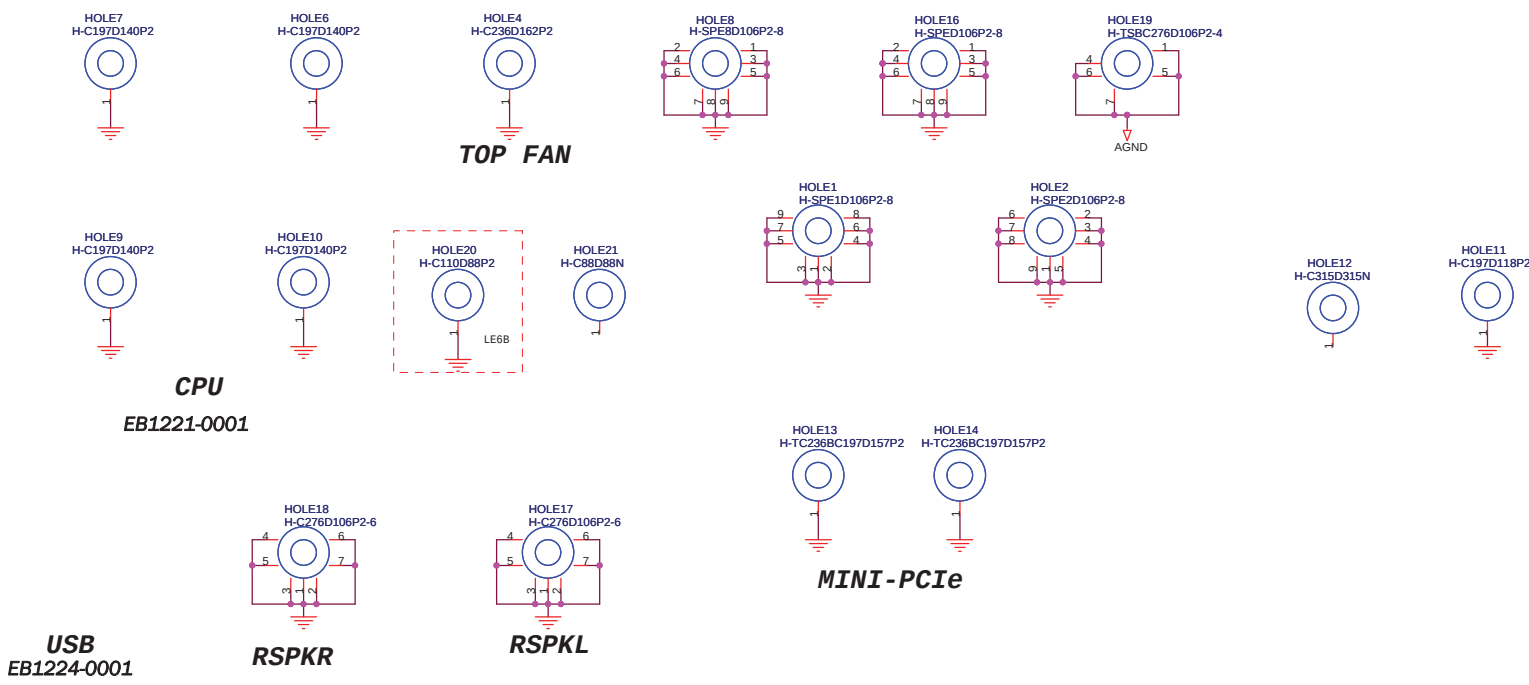
**SATA_1
CONNECTOR**

[illegible][illegible]

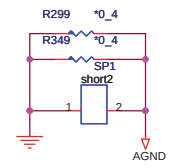
CCD MODULE



CCD_PWRON#	High Disable	Low Enable
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EB1213-0019



B-TEST

3VPCU

5VPCU

PQ45
AO6402

0.5A

+3VS5

PC140
10U63V_8

PC139
0.1U25V_6

PC91
0.1U10V_4

(25,31,32) MAINON

B-TEST

EB1213-0046

5VPCU

+15V

PR102
100K/F_4

PQ31
2N7002E

PR105
*1M_6

+3VS5

PR98
22_8

PQ30
2N7002E

5V S5

PR101
22_8

PQ36
2N7002E

S5, ON

2N7002E
PQ35

0047

(25) LAN_POWER

PQ51
PDS144EU

PR193
1M_6

+15V

PR194
1M_6

LANVCC

PR192
22_5

PQ50
2N7002E

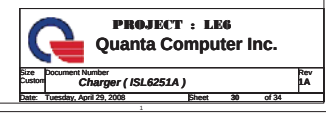
PR195
1M_6

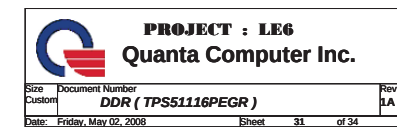
+15V

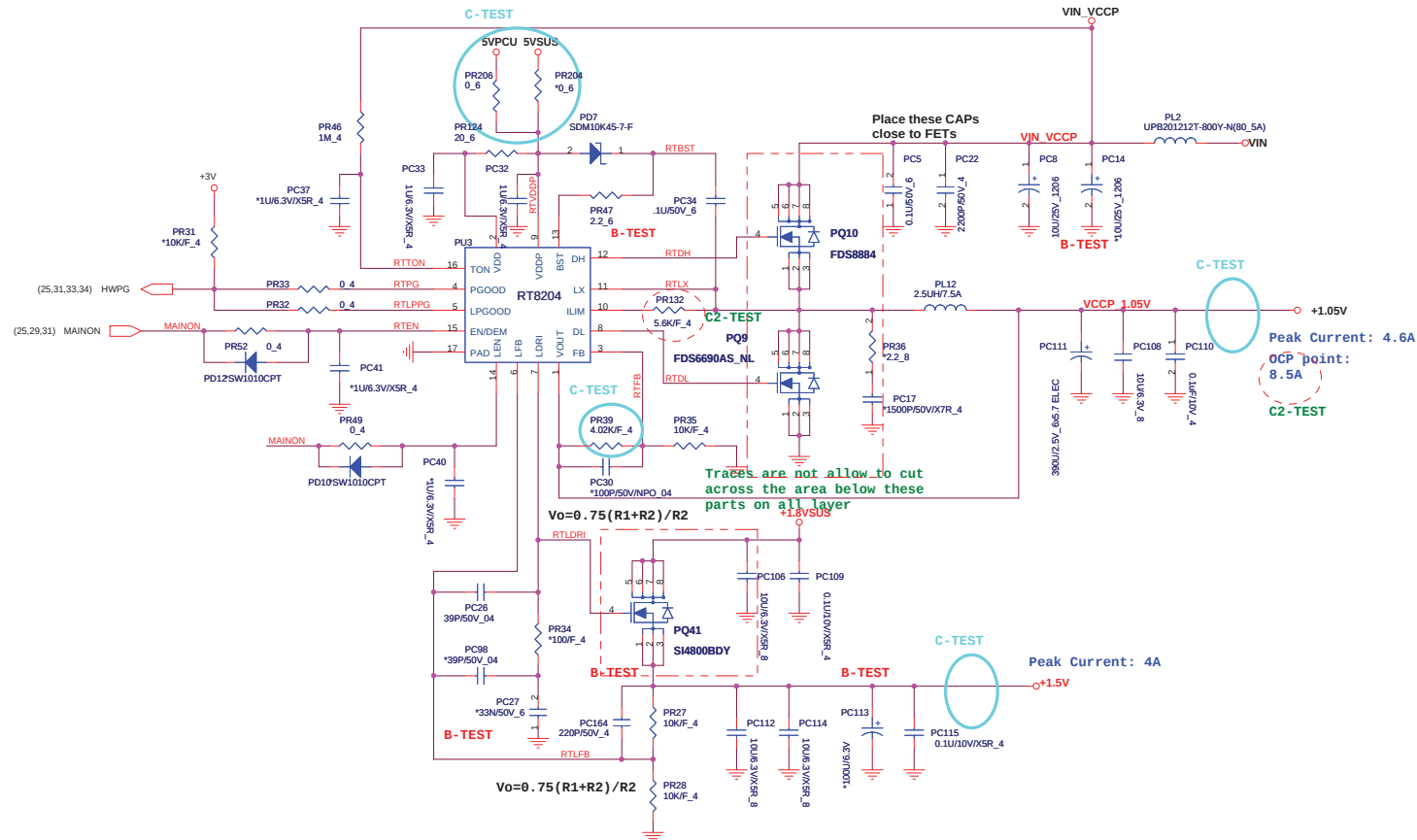
PQ52
2N7002E

LAN_ON

LAN_ON (21)









DC/DC 3VPCU/5VPCU/+15V

Ton:OUT1/OUT2 Switching Frequency
VCC: 200kHz/300kHz
OPEN (REF): 400kHz/300kHz
GND: 400kHz/500kHz

