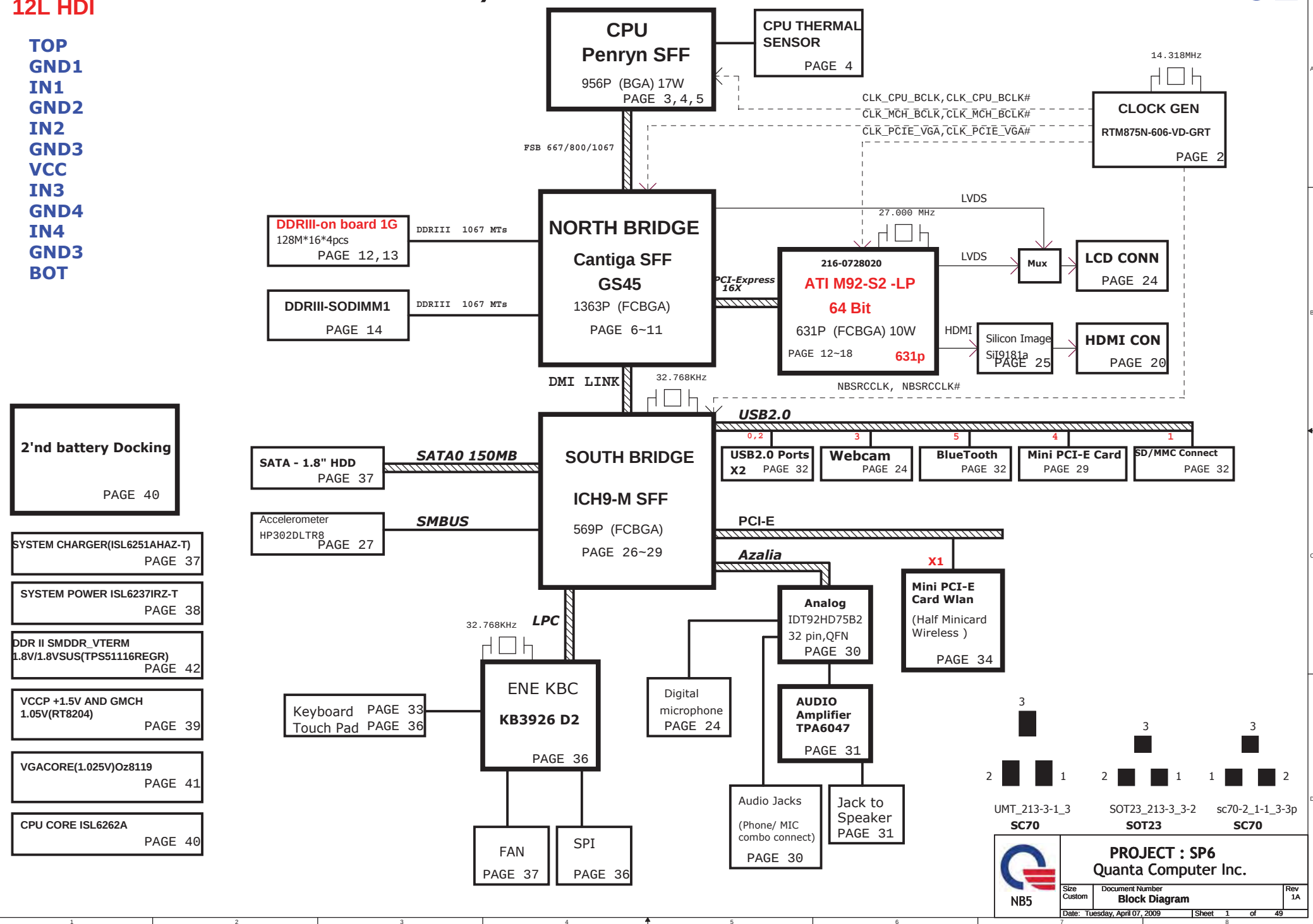
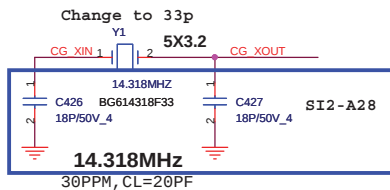
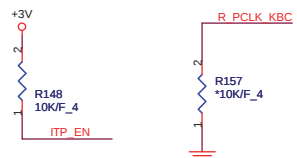
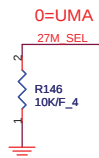
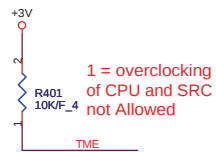
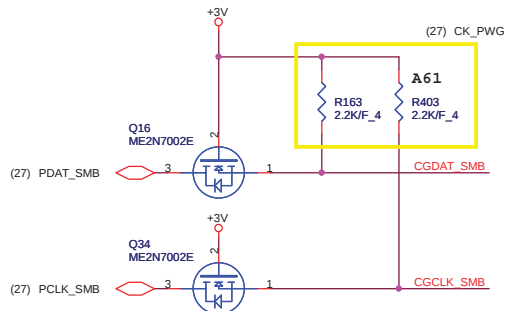
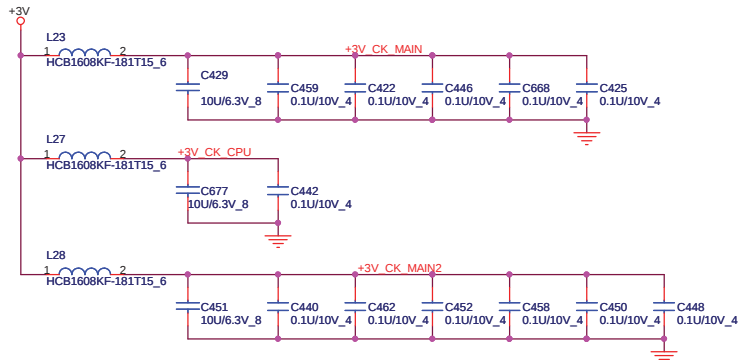


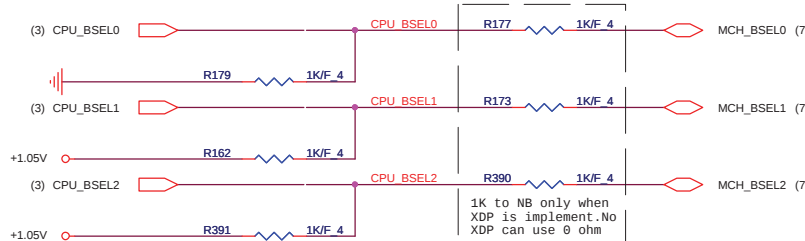
Bond, SP6 BLOCK DIAGRAM



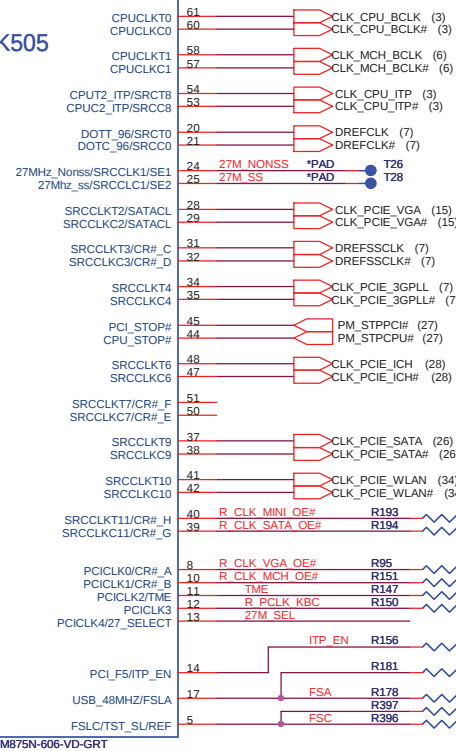


27M_SEL PIN13	PIN20	PIN21	PIN24	PIN25
0=UMA	DOT96T	DOT96C	SRCT1/LCDT_100	SRCT1/LCDT_100
1 = External VGA	SRCT0	SRCC0	27Mout-NSS	27Mout-SS

CPU Clock select



CK505

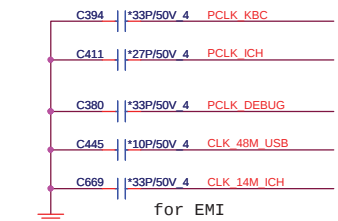
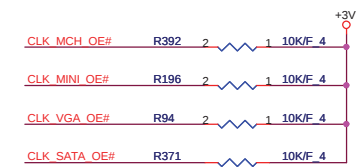


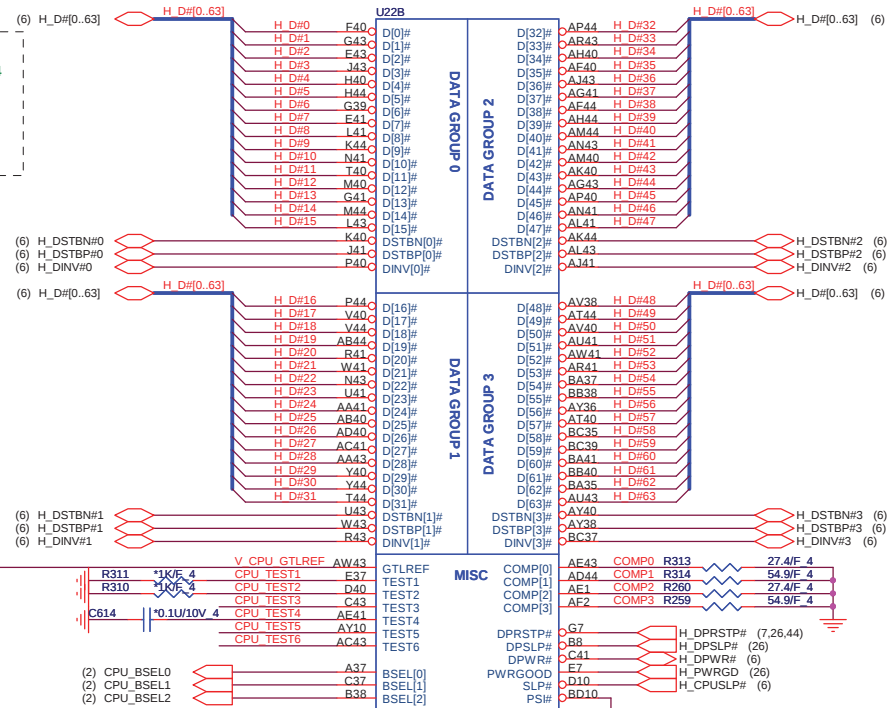
CK505
Realtek
Silego

QFN64

RTM875N-606-VD-GR AL000875000
SLG8SP513VTR AL8SP513000

CR#_B	SRC 1,4	CLK_MCH_OE#	SRC4
CR#_A	SRC 0,2	CLK_VGA_OE#	SRC2
CR#_G	SRC 9	CLK_SATA_OE#	SRC9
CR#_H	SRC 10	CLK_MINI_OE#	SRC10





TDI	Resistor Value		
TMS	150 ohm +/- 5%	Connect To	Resistor Placement
TRST#	39 ohm +/- 5%	VTT	Within 2.0" of the ITP
TCK	680 ohm +/- 5%	VTT	Within 2.0" of the ITP
TDO	27 ohm +/- 5%	OpenGND	Within 2.0" of the ITP
ITP_EN		GND	Within 2.0" of the ITP
	R268 Depop	VTT	Within 2.0" of the ITP
		+3VRUN	Close to CK410M Pin8

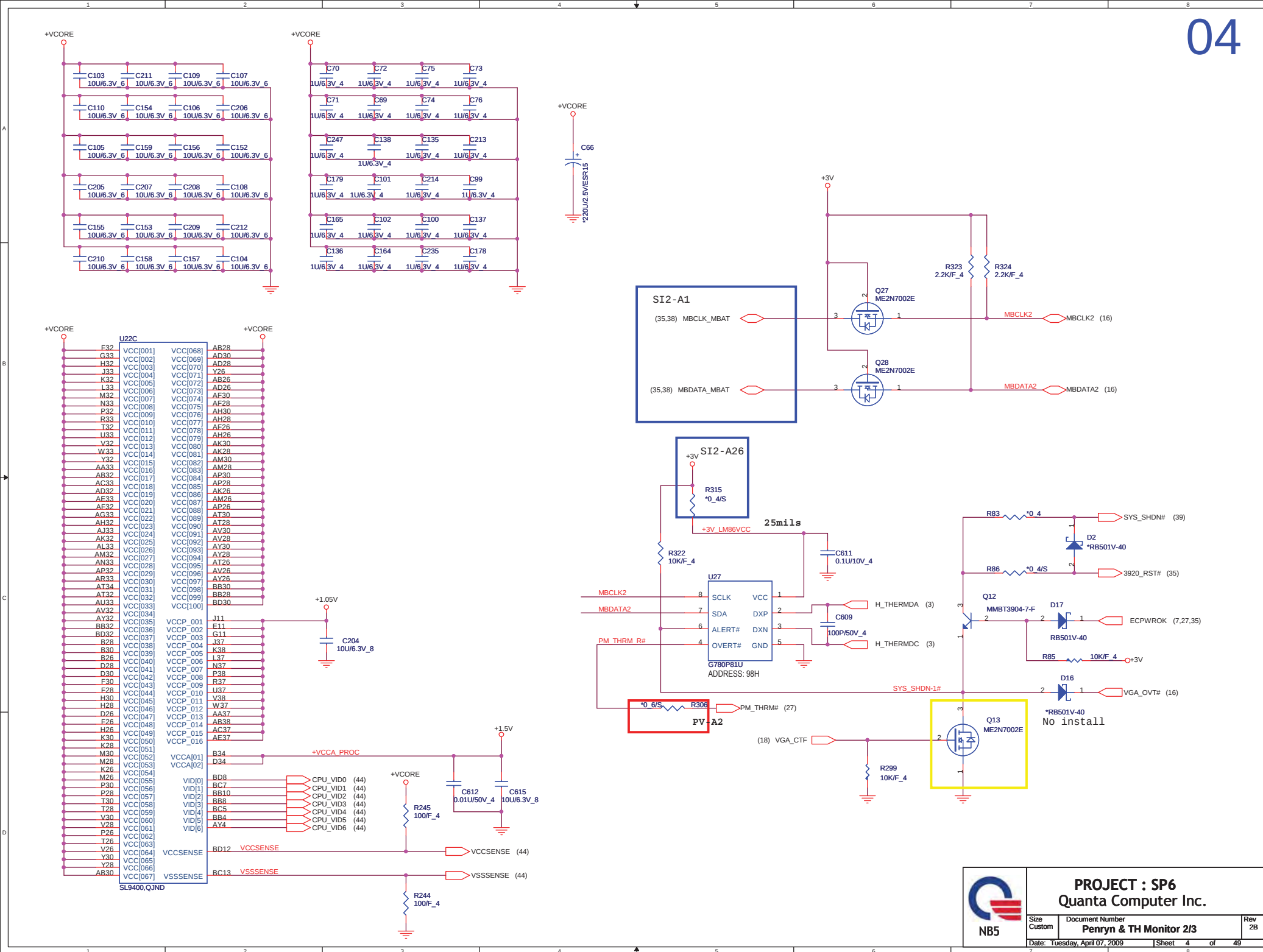
*PAD T78 CPU TEST3
*PAD T53 CPU TEST5
*PAD T77 CPU TEST6

For the purpose of testability, route these signals through a ground referenced Z0 = 55ohm trace that ends in a via that is near a GND via and is accessible through an oscilloscope connection.

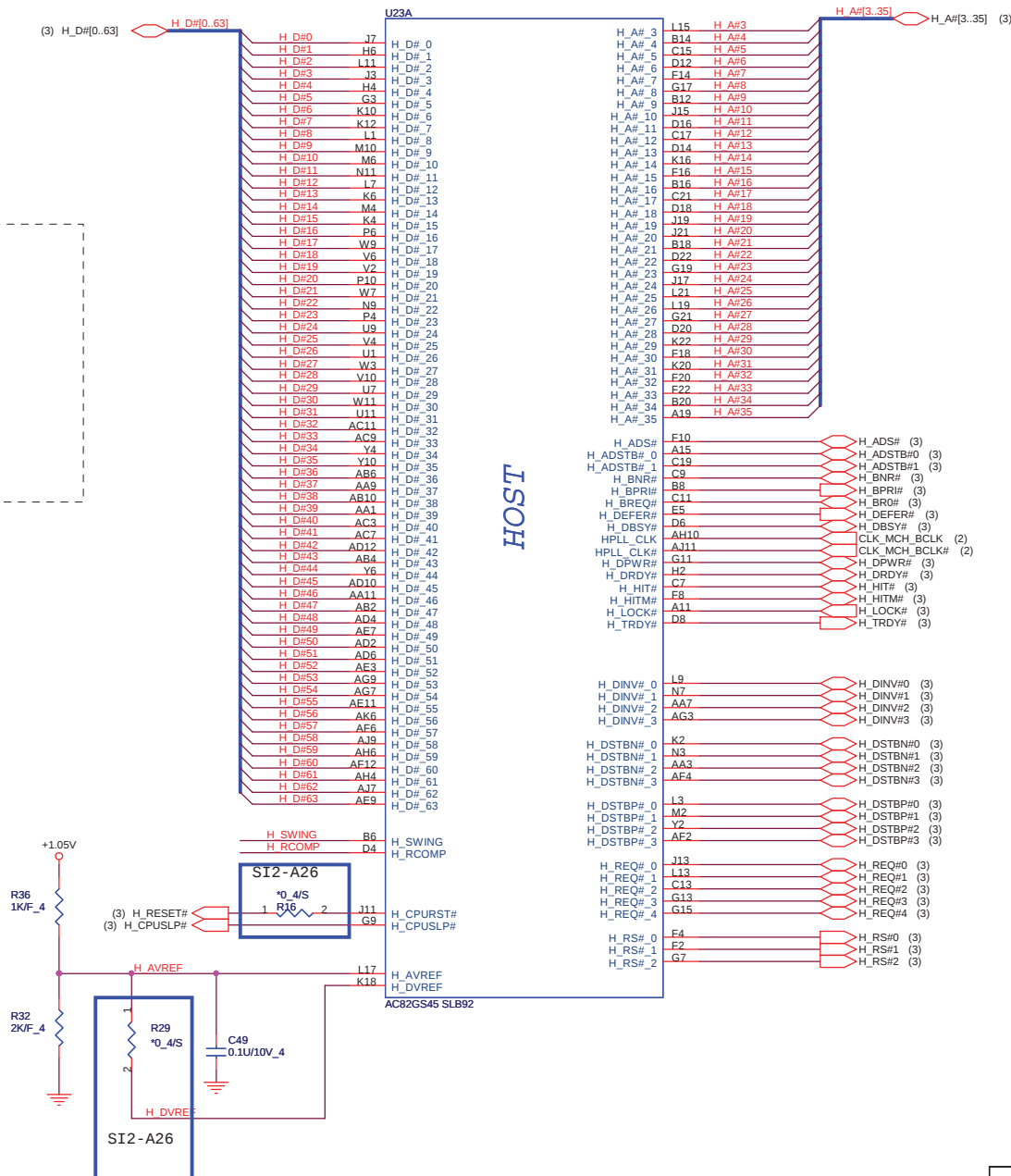
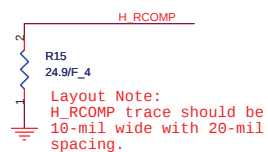
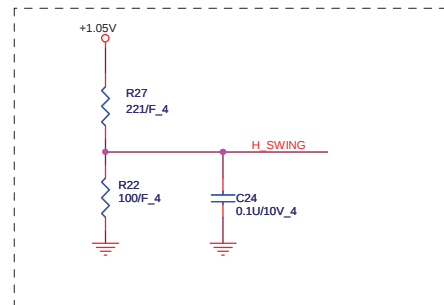


PROJECT : SP6
Quanta Computer Inc.

Size Custom	Document Number Penryn (HOST BUS) 1/3	Rev 1A
Date: Tuesday, April 07, 2009		Sheet 3 of 49

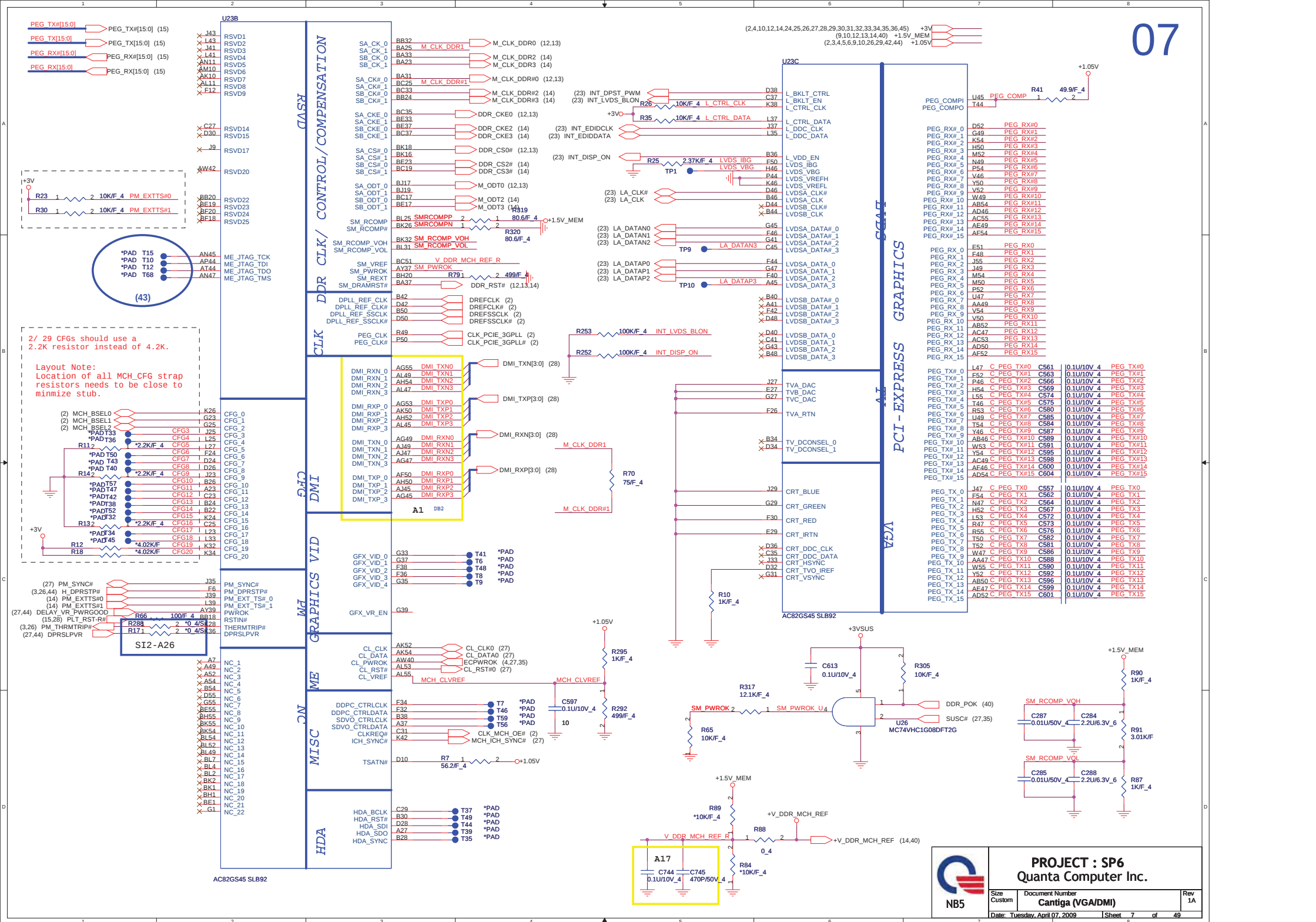


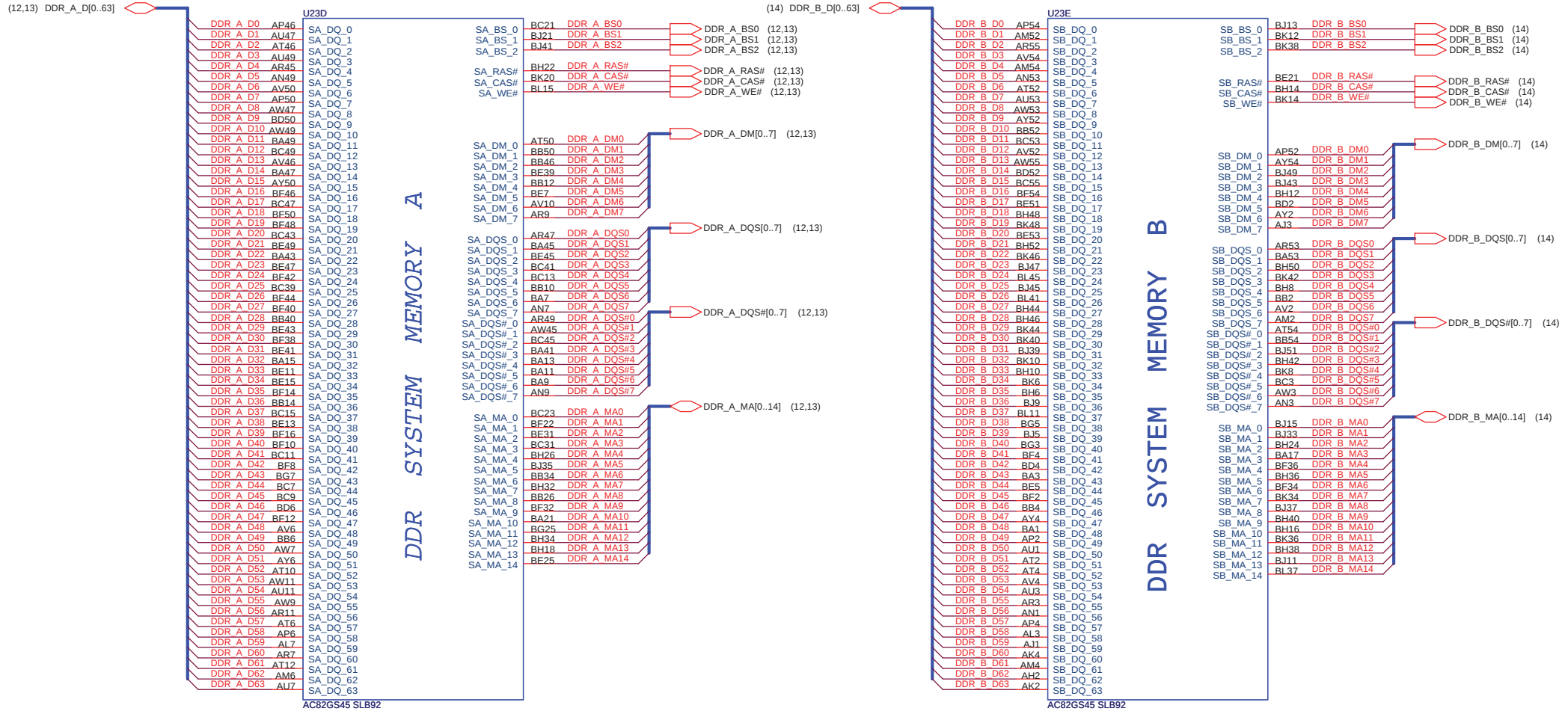




PROJECT : SP6
Quanta Computer Inc.

Size Custom	Document Number Cantiga hot	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 6 of 49	



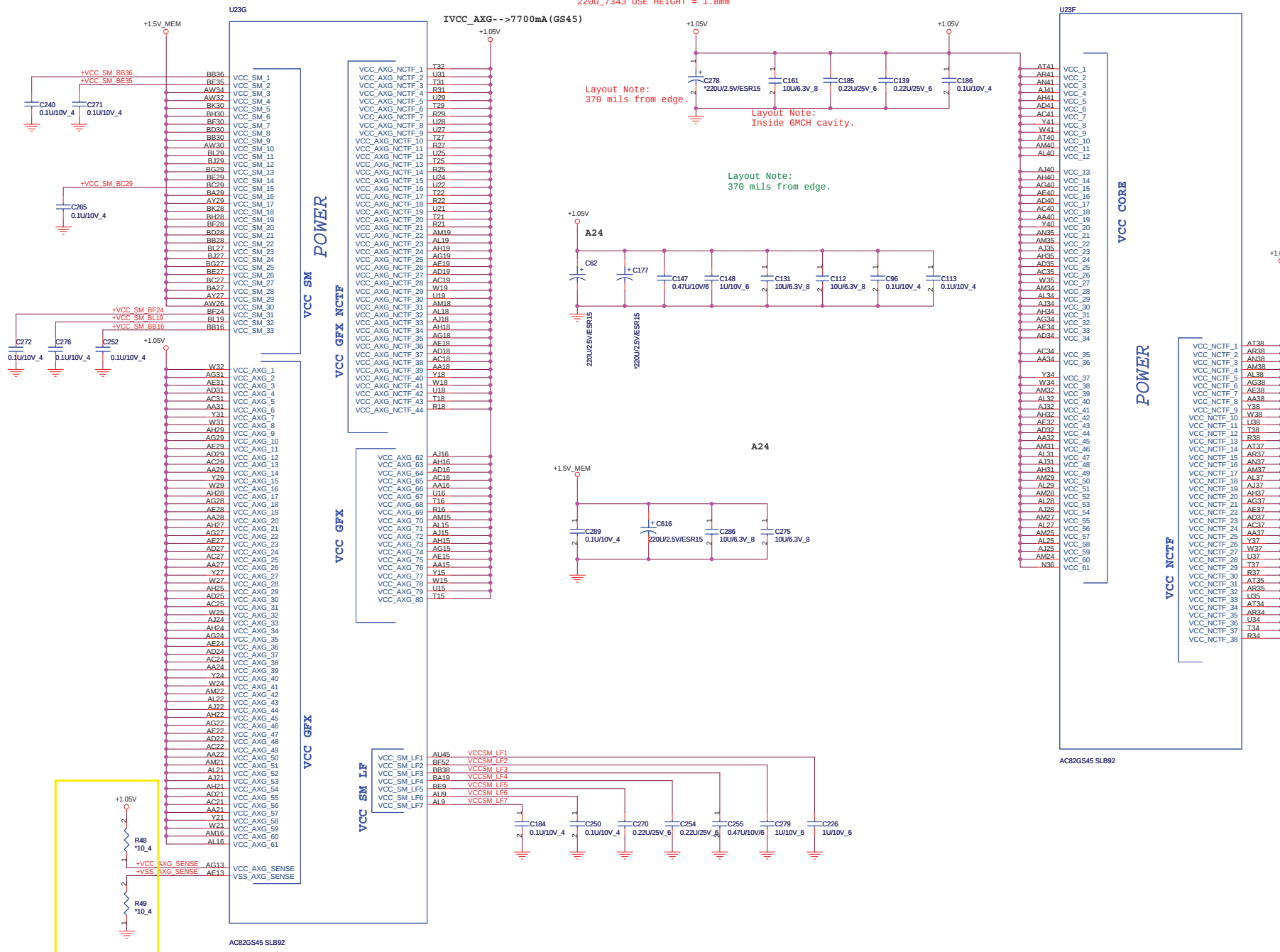


AC82GS45 SLB92

AC82GS45 SLB92

Ivcc sm (DDR3,1.5V,1066MTs) -->4140mA

220U_7343 USE HEIGHT = 1.8mm

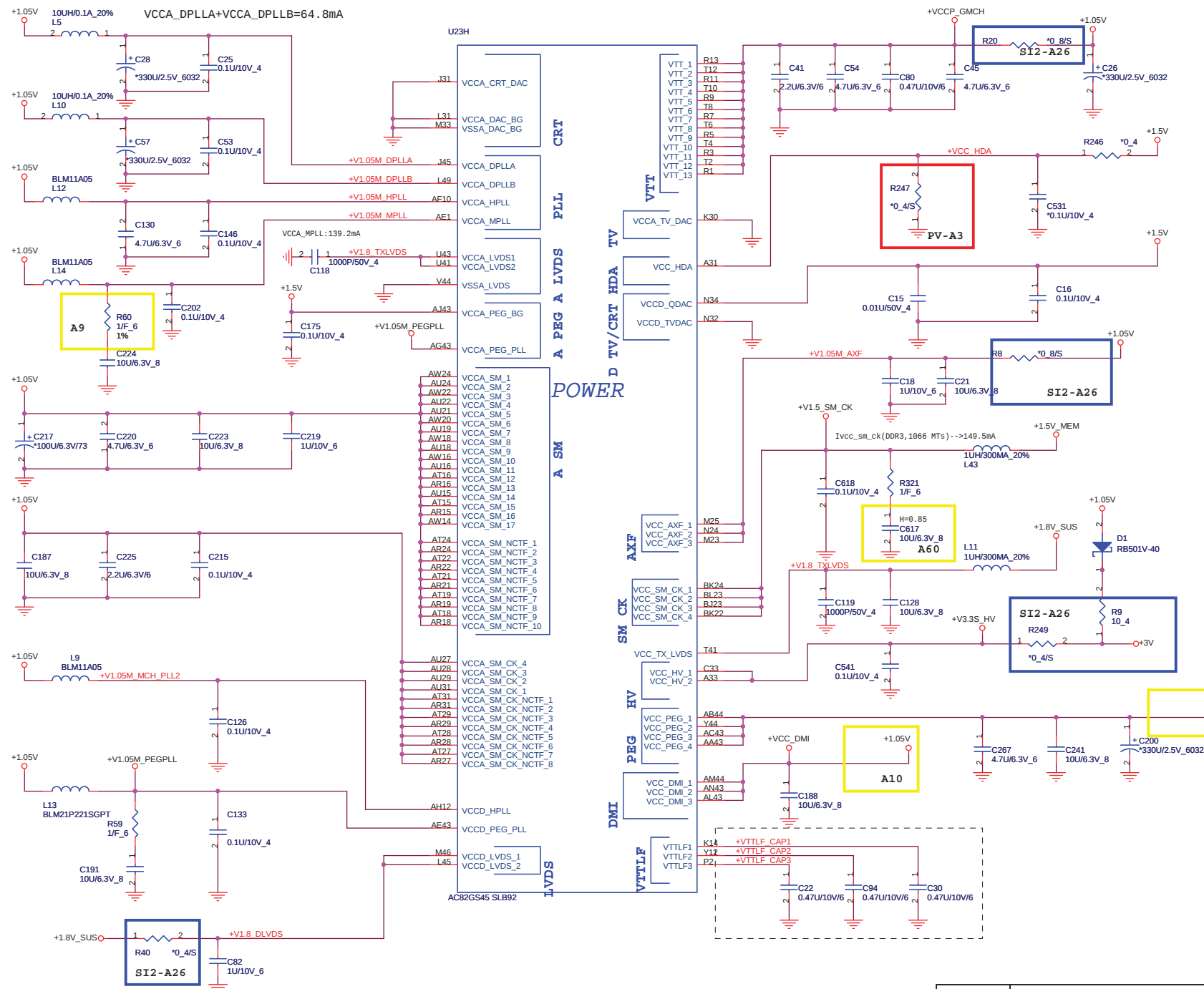


render standby feature is not implemented can be left



PROJECT : SP6
Quanta Computer Inc.

Size Custom	Document Number Cantiga (Vcc)	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 9 of 49	



U23I		
BA55	VSS_1	VSS_100
AU55	VSS_2	VSS_101
AN55	VSS_3	VSS_102
AJ55	VSS_4	VSS_103
AE55	VSS_5	VSS_104
AA55	VSS_6	VSS_105
U55	VSS_7	VSS_106
N55	VSS_8	VSS_107
BD54	VSS_9	VSS_108
BG53	VSS_10	VSS_109
AJ53	VSS_11	VSS_110
AE53	VSS_12	VSS_111
AA53	VSS_13	VSS_112
U53	VSS_14	VSS_113
N53	VSS_15	VSS_114
J53	VSS_16	VSS_115
G53	VSS_17	VSS_116
E53	VSS_18	VSS_117
K52	VSS_19	VSS_118
BG51	VSS_20	VSS_119
BA51	VSS_21	VSS_120
AW51	VSS_22	VSS_121
AU51	VSS_23	VSS_122
AR51	VSS_24	VSS_123
AN51	VSS_25	VSS_124
AL51	VSS_26	VSS_125
AJ51	VSS_27	VSS_126
AG51	VSS_28	VSS_127
AE51	VSS_29	VSS_128
AC51	VSS_30	VSS_129
AA51	VSS_31	VSS_130
W51	VSS_32	VSS_131
U51	VSS_33	VSS_132
R51	VSS_34	VSS_133
N51	VSS_35	VSS_134
L51	VSS_36	VSS_135
J51	VSS_37	VSS_136
G51	VSS_38	VSS_137
C51	VSS_39	VSS_138
BK50	VSS_40	VSS_139
AM50	VSS_41	VSS_140
K50	VSS_42	VSS_141
BG49	VSS_43	VSS_142
E49	VSS_44	VSS_143
C49	VSS_45	VSS_144
BD48	VSS_46	VSS_145
BB48	VSS_47	VSS_146
AV48	VSS_48	VSS_147
AY48	VSS_49	VSS_148
AT48	VSS_50	VSS_149
AP48	VSS_51	VSS_150
AM48	VSS_52	VSS_151
AK48	VSS_53	VSS_152
AH48	VSS_54	VSS_153
AF48	VSS_55	VSS_154
AD48	VSS_56	VSS_155
AB48	VSS_57	VSS_156
Y48	VSS_58	VSS_157
V48	VSS_59	VSS_158
T48	VSS_60	VSS_159
P48	VSS_61	VSS_160
M48	VSS_62	VSS_161
K48	VSS_63	VSS_162
H48	VSS_64	VSS_163
BL47	VSS_65	VSS_164
BG47	VSS_66	VSS_165
E47	VSS_67	VSS_166
C47	VSS_68	VSS_167
A47	VSS_69	VSS_168
RD46	VSS_70	VSS_169
AY46	VSS_71	VSS_170
AM46	VSS_72	VSS_171
AK46	VSS_73	VSS_172
AH46	VSS_74	VSS_173
BG45	VSS_75	VSS_174
AE45	VSS_76	VSS_175
AC45	VSS_77	VSS_176
AA45	VSS_78	VSS_177
W45	VSS_79	VSS_178
R45	VSS_80	VSS_179
N45	VSS_81	VSS_180
E45	VSS_82	VSS_181
BD44	VSS_83	VSS_182
BB44	VSS_84	VSS_183
AV44	VSS_85	VSS_184
AK44	VSS_86	VSS_185
AH44	VSS_87	VSS_186
AF44	VSS_88	VSS_187
AD44	VSS_89	VSS_188
K44	VSS_90	VSS_189
H44	VSS_91	VSS_190
BL43	VSS_92	VSS_191
BG43	VSS_93	VSS_192
AY43	VSS_94	VSS_193
AR43	VSS_95	VSS_194
W43	VSS_96	VSS_195
R43	VSS_97	VSS_196
M43	VSS_98	VSS_197
E43	VSS_99	VSS_198

AC82GS45 SLB92

U23J		
AN25	VSS_199	VSS_300
AG25	VSS_200	VSS_301
AE25	VSS_201	VSS_302
AA25	VSS_202	VSS_303
H42	VSS_203	VSS_304
E25	VSS_204	VSS_305
A25	VSS_205	VSS_306
BD24	VSS_206	VSS_307
AN24	VSS_207	VSS_308
AL24	VSS_208	VSS_309
H24	VSS_209	VSS_310
BG23	VSS_210	VSS_311
AY23	VSS_211	VSS_312
E23	VSS_212	VSS_313
BD22	VSS_213	VSS_314
E41	VSS_214	VSS_315
AN22	VSS_215	VSS_316
Y22	VSS_216	VSS_317
W22	VSS_217	VSS_318
H22	VSS_218	VSS_319
BL21	VSS_219	VSS_320
BG21	VSS_220	VSS_321
AY21	VSS_221	VSS_322
AN21	VSS_222	VSS_323
AG21	VSS_223	VSS_324
AE21	VSS_224	VSS_325
M21	VSS_225	VSS_326
A21	VSS_226	VSS_327
BD20	VSS_227	VSS_328
H20	VSS_228	VSS_329
BG19	VSS_229	VSS_330
AY19	VSS_230	VSS_331
M19	VSS_231	VSS_332
E19	VSS_232	VSS_333
BD18	VSS_233	VSS_334
N18	VSS_234	VSS_335
H18	VSS_235	VSS_336
BL17	VSS_236	VSS_337
BG17	VSS_237	VSS_338
AY17	VSS_238	VSS_339
M17	VSS_239	VSS_340
E17	VSS_240	VSS_341
BD16	VSS_241	VSS_342
AY16	VSS_242	VSS_343
AN16	VSS_243	VSS_344
AG16	VSS_244	VSS_345
AE16	VSS_245	VSS_346
Y16	VSS_246	VSS_347
W16	VSS_247	VSS_348
N16	VSS_248	VSS_349
H16	VSS_249	VSS_350
BG15	VSS_250	VSS_351
AY15	VSS_251	VSS_352
AN15	VSS_252	VSS_353
AD15	VSS_253	VSS_354
AC15	VSS_254	VSS_355
R15	VSS_255	VSS_356
M15	VSS_256	VSS_357
E15	VSS_257	VSS_358
BD14	VSS_258	VSS_359
H14	VSS_259	VSS_360
BL13	VSS_260	VSS_361
BG13	VSS_261	VSS_362
AY13	VSS_262	VSS_363
AN13	VSS_263	VSS_364
AR13	VSS_264	VSS_365
AJ13	VSS_265	VSS_366
AC13	VSS_266	VSS_367
AA13	VSS_268	VSS_368
W13	VSS_269	VSS_369
U13	VSS_270	VSS_370
M13	VSS_271	VSS_371
E13	VSS_272	VSS_372
A13	VSS_273	VSS_373
BD12	VSS_274	VSS_374
AV12	VSS_275	VSS_375
AP12	VSS_276	VSS_376
AM12	VSS_277	VSS_377
AK12	VSS_278	VSS_378
AB12	VSS_279	VSS_379
V12	VSS_280	VSS_380
P12	VSS_281	VSS_381
H12	VSS_282	VSS_382
RG11	VSS_283	VSS_383
AG11	VSS_284	VSS_384
E11	VSS_285	VSS_385
RD10	VSS_286	VSS_386
AY10	VSS_287	VSS_387
AP10	VSS_288	VSS_388
H10	VSS_289	VSS_389
BL9	VSS_290	VSS_390
BG9	VSS_291	VSS_391
E9	VSS_292	VSS_392
BD28	VSS_293	VSS_393
BD8	VSS_294	VSS_394
BB8	VSS_295	VSS_395
AY8	VSS_296	VSS_396
AV8	VSS_297	VSS_397
AT8	VSS_298	VSS_398
AP8	VSS_299	VSS_399

VSS

VSS NCTF

VSS SCB

VSS_NCTF_1	AJ38
VSS_NCTF_2	AH38
VSS_NCTF_3	AD38
VSS_NCTF_4	AC38
VSS_NCTF_5	T35
VSS_NCTF_6	R35
VSS_NCTF_7	AT32
VSS_NCTF_8	AR32
VSS_NCTF_9	U32
VSS_NCTF_10	R32
VSS_NCTF_11	T28
VSS_NCTF_12	R28
VSS_NCTF_13	AT25
VSS_NCTF_14	AR25
VSS_NCTF_15	T24
VSS_NCTF_16	R24
VSS_NCTF_17	AN19
VSS_NCTF_18	AJ19
VSS_NCTF_19	AA19
VSS_NCTF_20	Y19
VSS_NCTF_21	T19
VSS_NCTF_22	R19
VSS_NCTF_23	AN18

VSS_SCB_1	BL55
VSS_SCB_2	BL1
VSS_SCB_3	A55
VSS_SCB_4	D1
VSS_SCB_5	B55
VSS_SCB_6	B2
VSS_SCB_7	A4

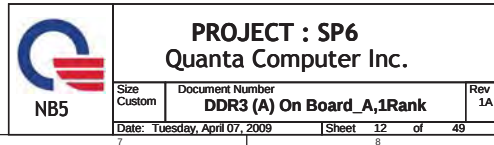
AC82GS45 SLB92

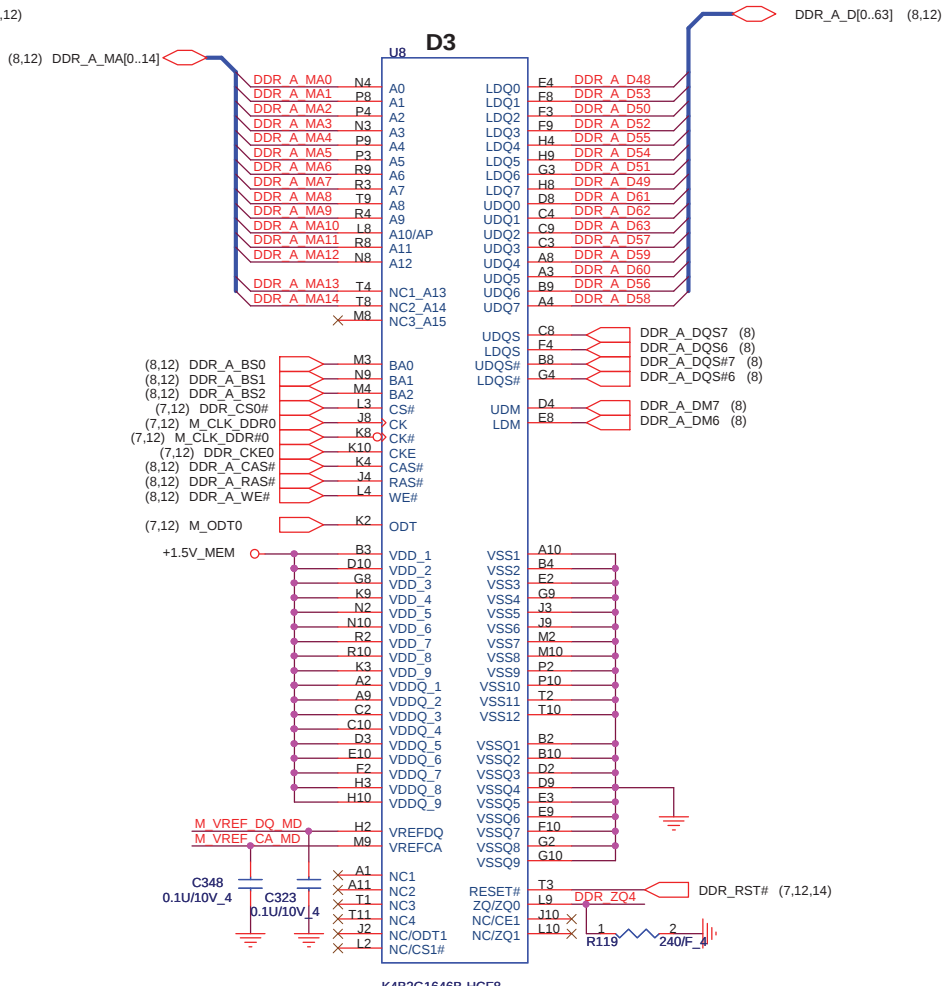
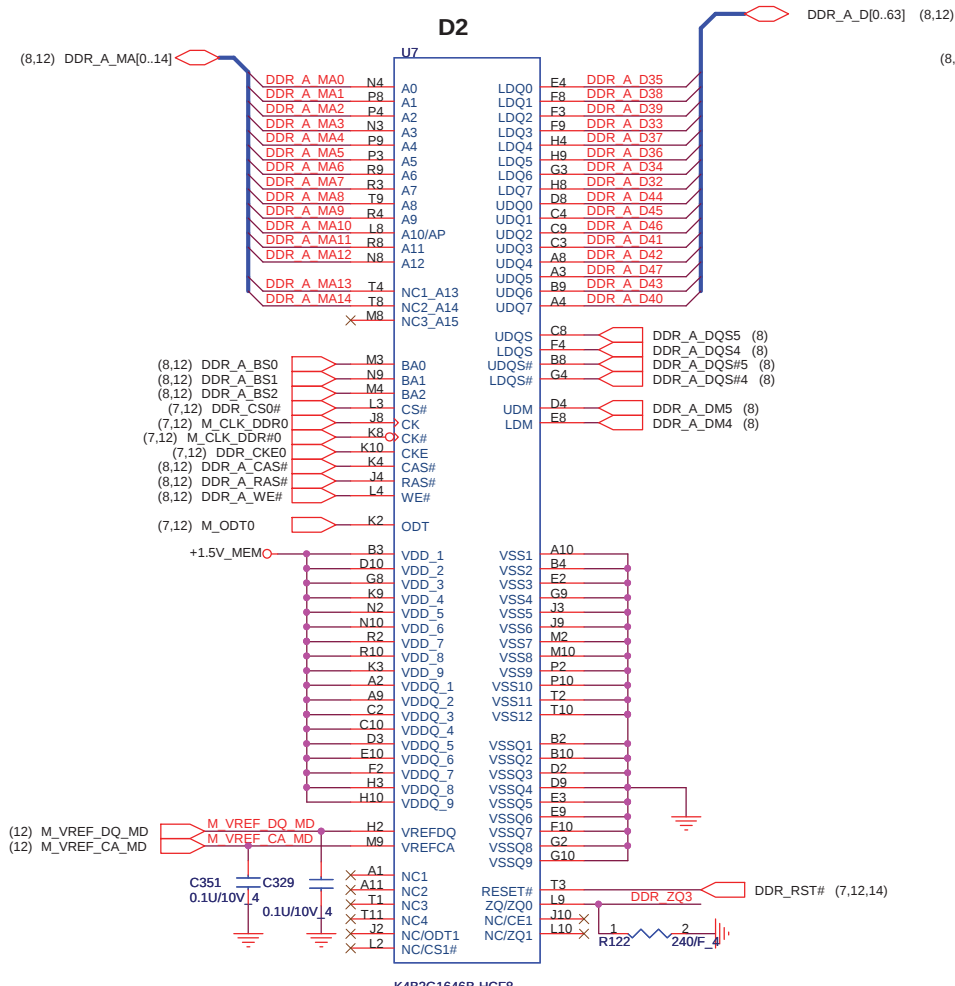


PROJECT : SP6
Quanta Computer Inc.

Size
CustomDocument Number
Cantiga (Vss)Rev
1A

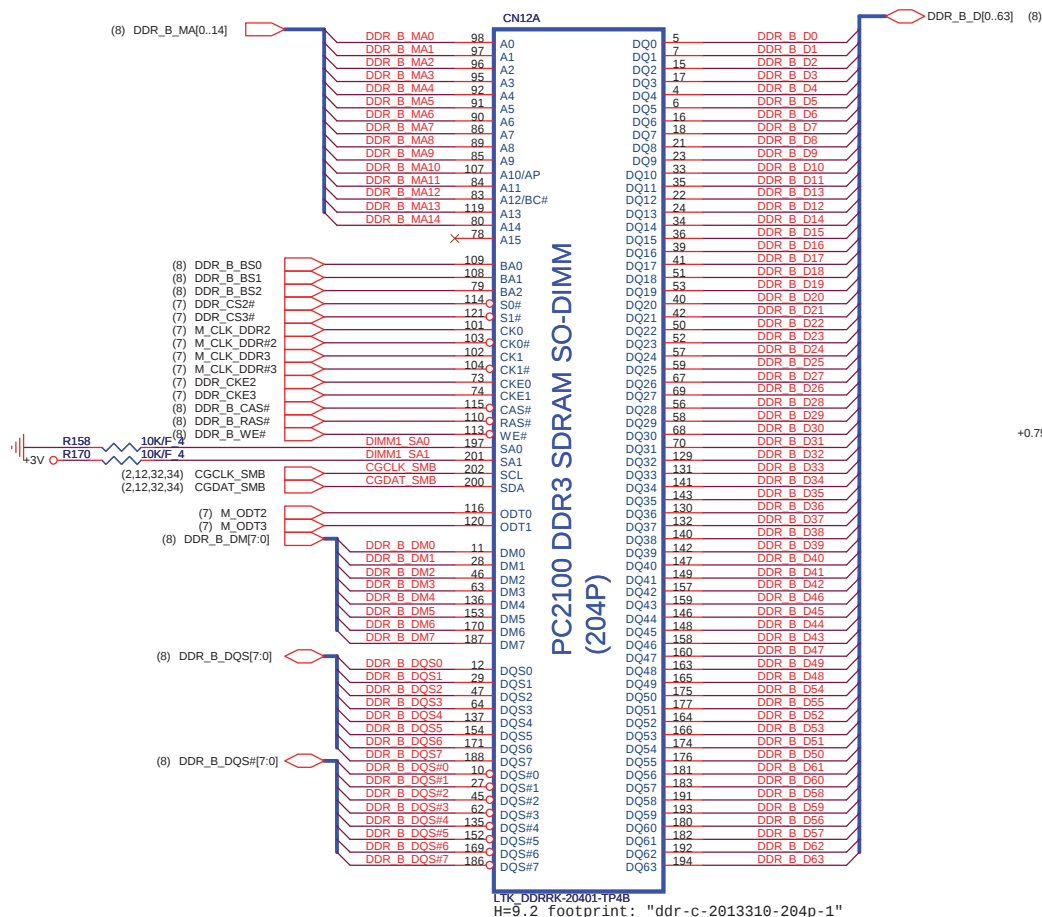
Date: Tuesday, April 07, 2009 Sheet 11 of 49

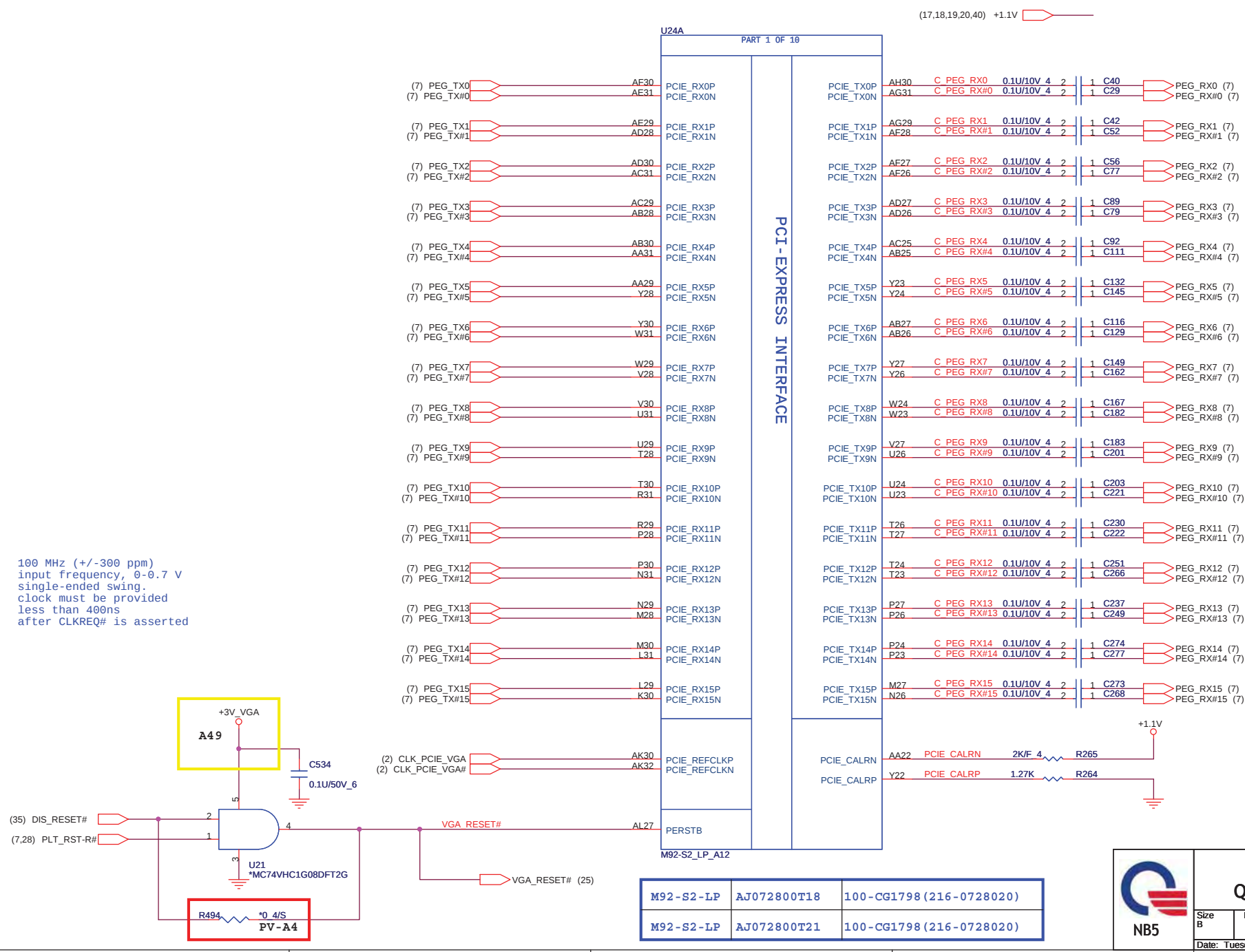




0922-->CN23 update library to DDR-AS0A62X-U4RN-7F-204P type

(7,9,10,12,13,40) +1.5V_MEM
(2,4,7,10,12,24,25,26,27,28,29,30,31,32,33,34,35,36,45) +3V
(12,40) +0.75V_DDR_VTT
(12,40) +0.75V_DDR_VTT





100 MHz (+/-300 ppm)
input frequency, 0-0.7 V
single-ended swing.
clock must be provided
less than 400ns
after CLKREQ# is asserted

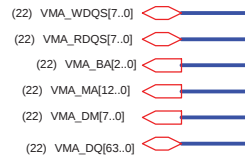
M92-S2-LP	AJ072800T18	100-CG1798 (216-0728020)
M92-S2-LP	AJ072800T21	100-CG1798 (216-0728020)



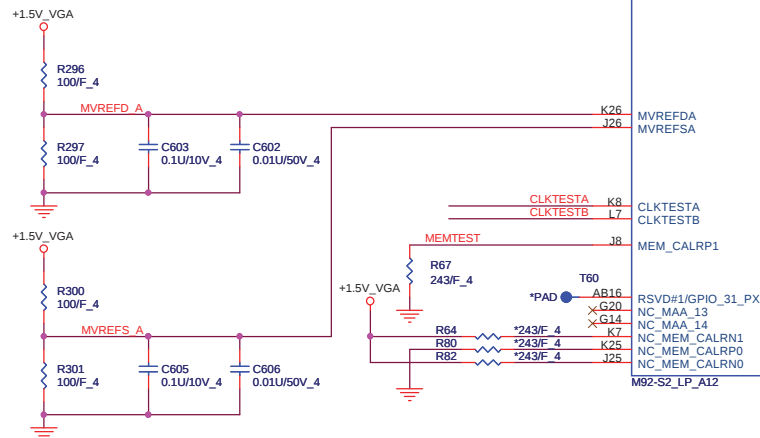
PROJECT : SP6
Quanta Computer Inc.

Size B	Document Number M92 PCIe interface	Rev 1A
Date: Tuesday, April 07, 2009 Sheet 15 of 49		

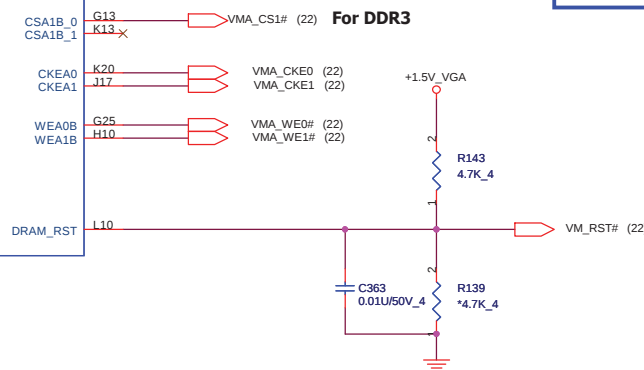
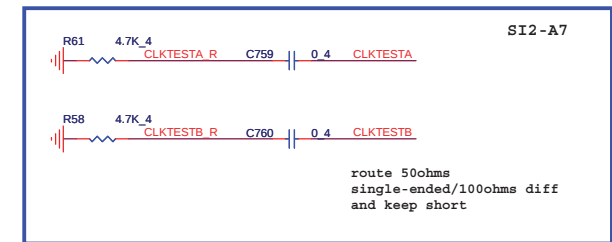
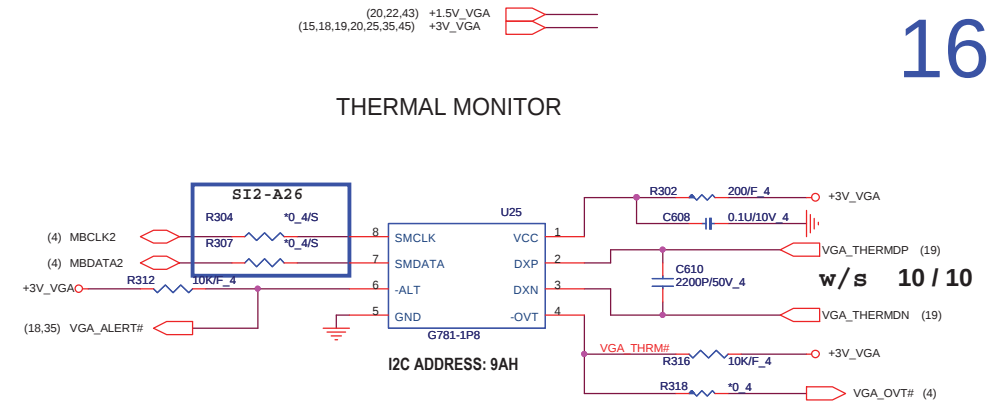
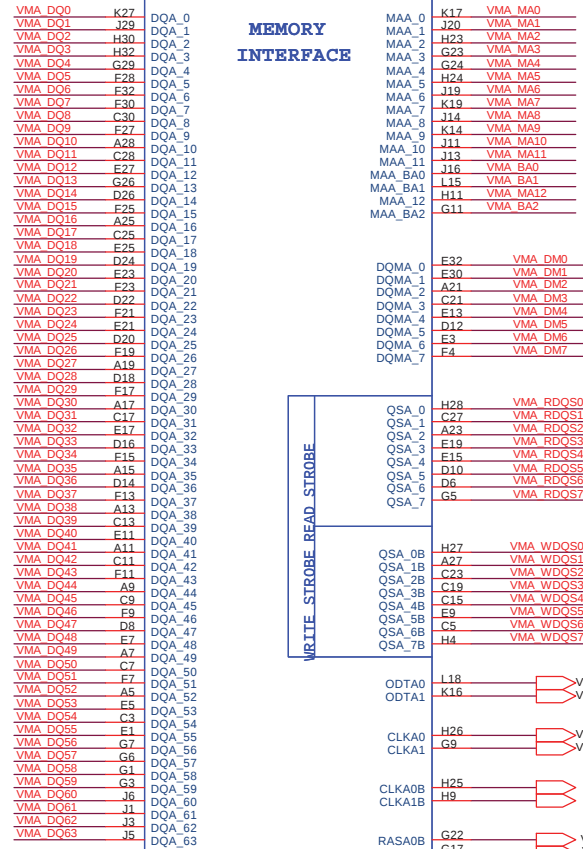
MEMORY INTERFACE



DIVIDER RESISTORS	DDR3
MVREF TO 1.5V	100R
MVREF TO GND	100R



MEMORY INTERFACE

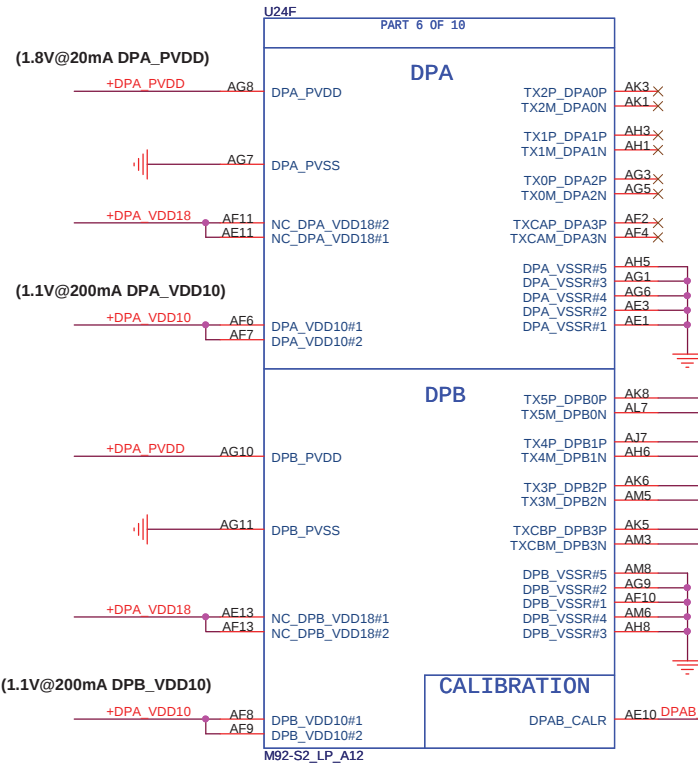


TMDP(HDMI) INTERFACE

(15,18,19,20,40) +1.1V

LVDS INTERFACE

17



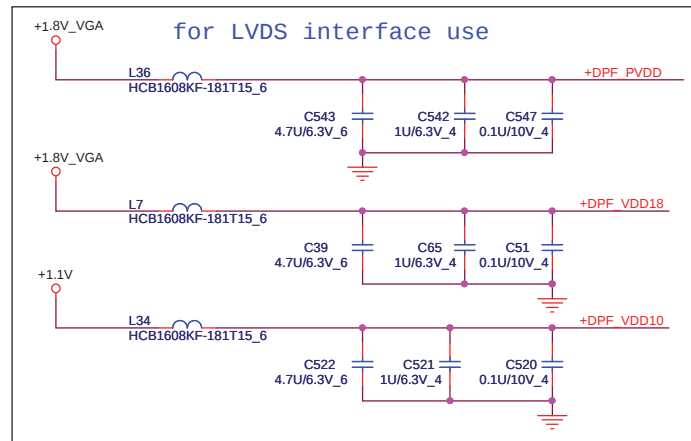
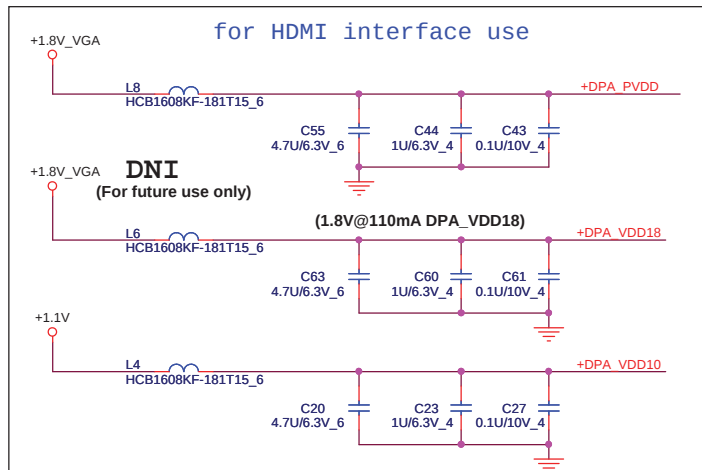
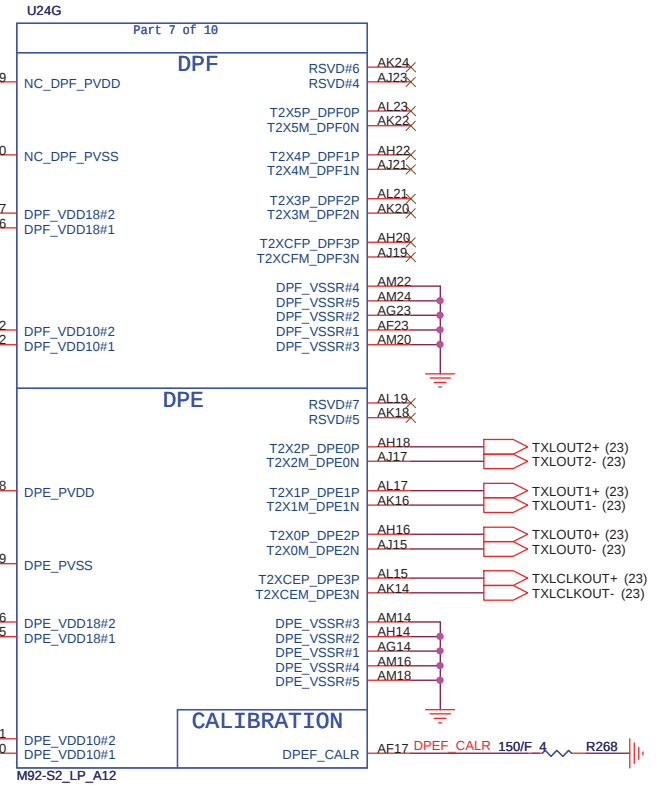
(1.8V@200mA DPF_VDD18 for LVDS,
@110mA for DP/DVI)

(1.1V@100mA DPF_VDD10 For LVDS
@170mA for DP/DVI)

(1.8V@200mA DPE_VDD18 for LVDS,
@110mA for DP/DVI)

(1.1V@100mA DPE_VDD10 For LVDS
@170mA for DP/DVI)

(1.8V@20mA)



PROJECT : SP6
Quanta Computer Inc.

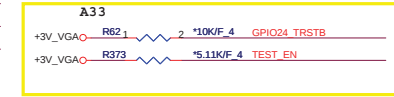
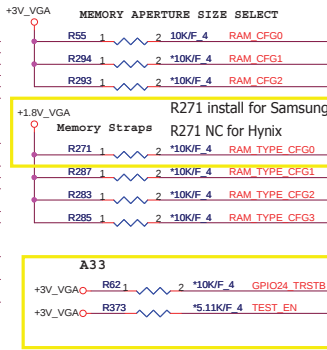
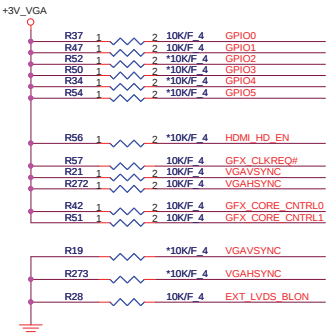
Size B	Document Number	Rev 1A
	M92 HDMI/LVDS interface	
Date: Tuesday, April 07, 2009	Sheet 17 of 49	

MEMORY APERTURE SIZE SELECT				
MEMORY SIZE	CFG3 GPIO9	CFG2 GPIO13	CFG1 GPIO12	CFG0 GPIO11
128MB		0	0	0
256MB		0	0	1
64MB		0	1	0
512MB		1	0	0

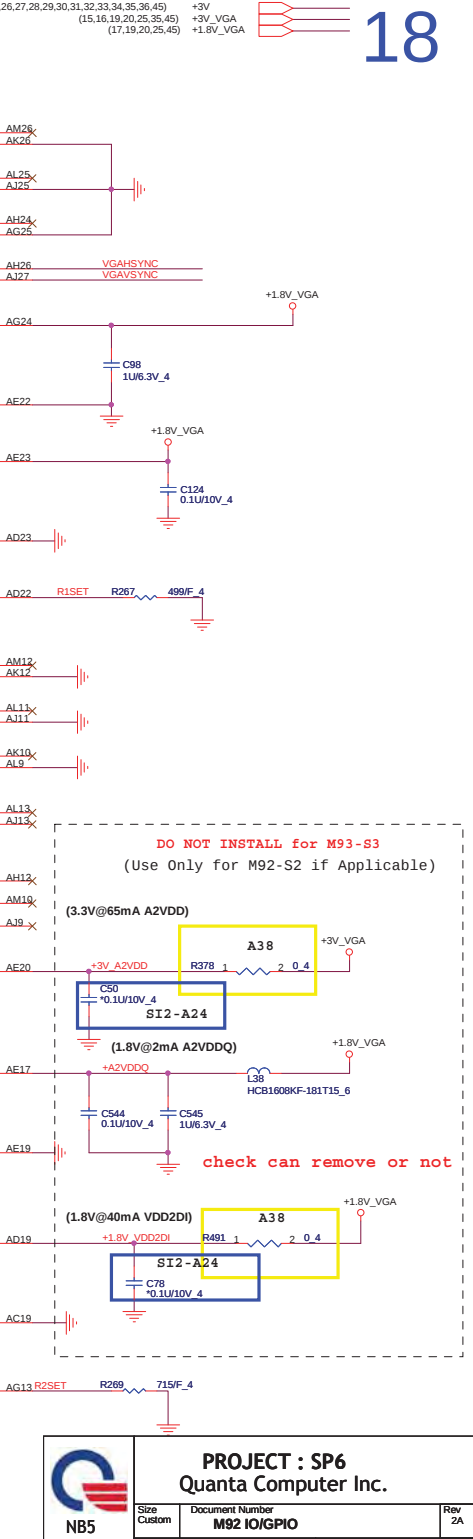
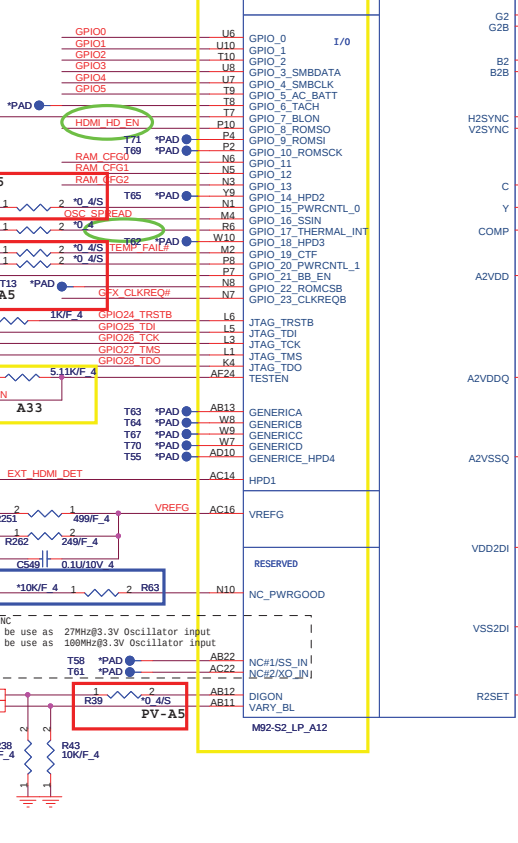
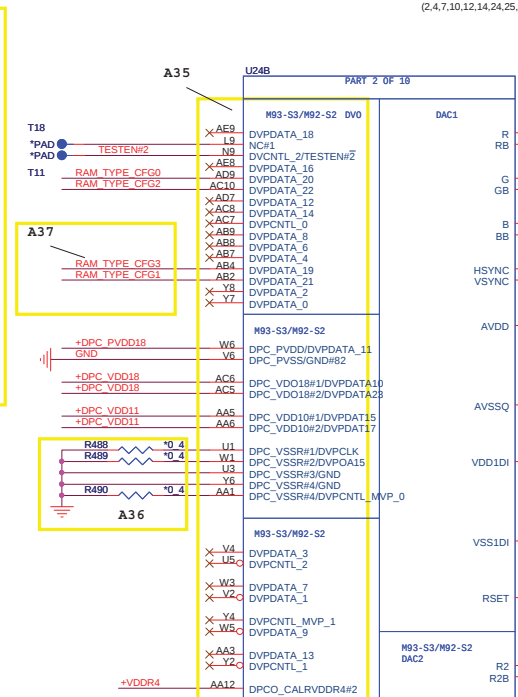
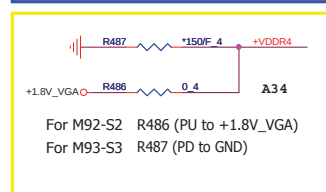
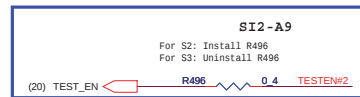
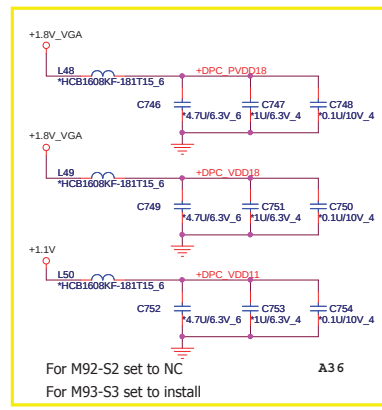
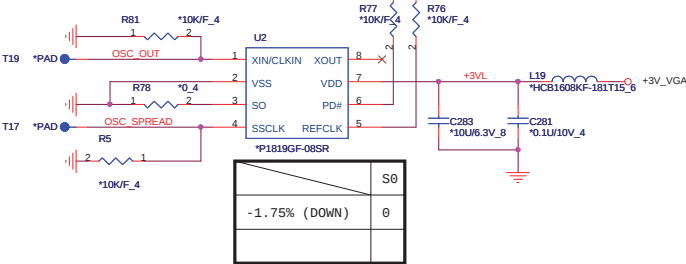
Default

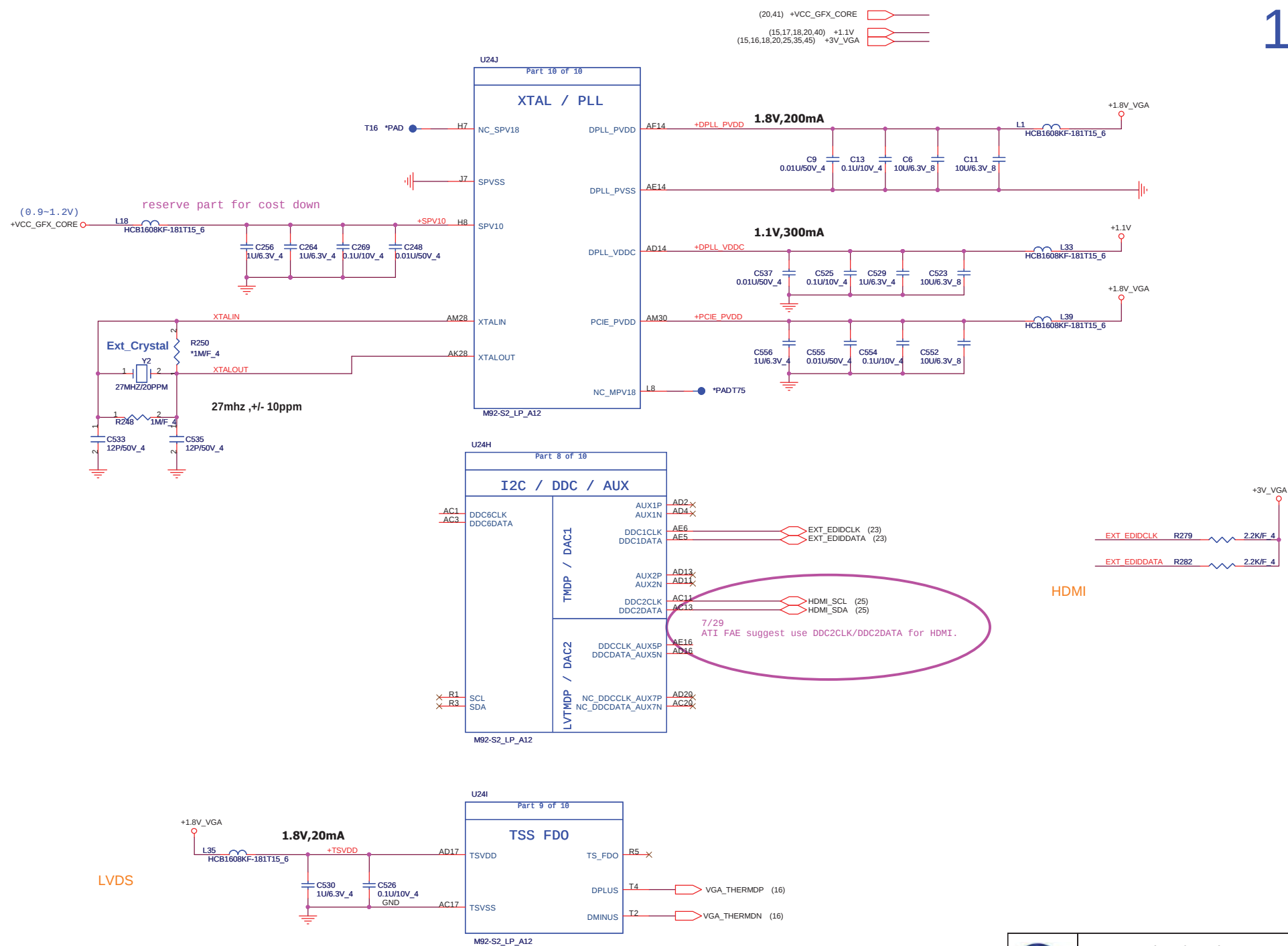
Memory Straps	DDR3	RAM_TYPE_CFG3	RAM_TYPE_CFG2	RAM_TYPE_CFG1	RAM_TYPE_CFG0
667MHz K4W1G16460-EC15 (64M*16) Samsung		X	X	0	1
700MHz H5TQ1G63BFR-14C (64M*16) Hynix		X	X	0	0
Blank		X	X	0	0
Blank		X	X	0	0

GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	SP6 setting
GPIO0	GPIO0 - TX_PWRS_ENB (Transmitter Power Savings Enable) 0: 50% Tx output swing for mobile mode 1: full Tx output swing (Default setting for Desktop)	1
GPIO1	GPIO1 - TX_DEEMPH_EN (Transmitter De-emphasis Enable) 0: Tx de-emphasis disabled for mobile mode 1: Tx de-emphasis enabled (Default setting for Desktop)	1
GPIO2	GPIO2 - BIF_GEN2_EN (S.0 GtIs Enable) 0: Default (Driver Controlled Gen2) 1: Strap Controlled Gen2	0
GPIO3	ATI reserved configuration straps.	0
GPIO4	ATI reserved configuration straps.	0
GPIO5	GPIO 5, AC_BATT 0: Battery saving mode = 0.0 V 1: AC (Performance mode) = 3.3 V	0
GPIO6	ATI Internal use only	0



Spread Spectrum
If U4, the discrete spread spectrum chip is not used, then pop R48 in order to pull-down BXTALOUT for EMI reasons.

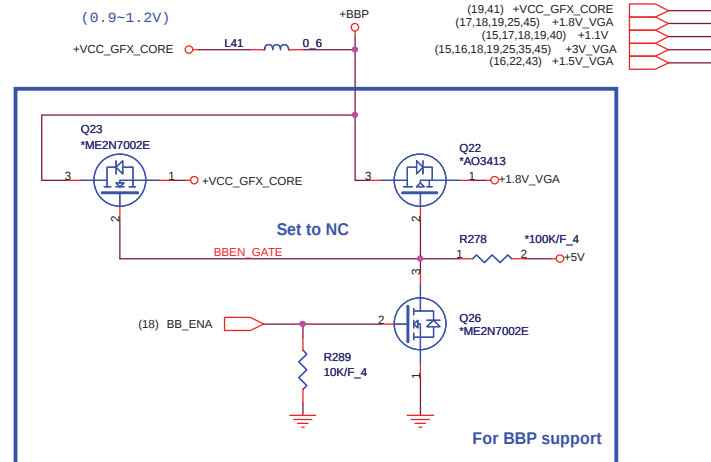
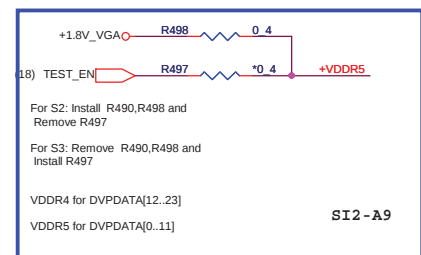
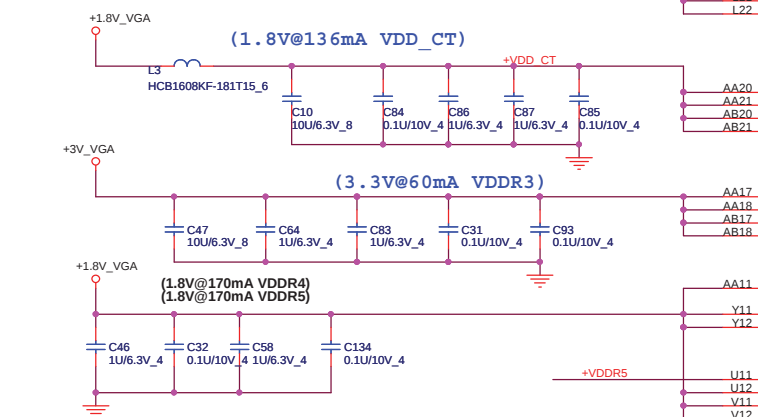
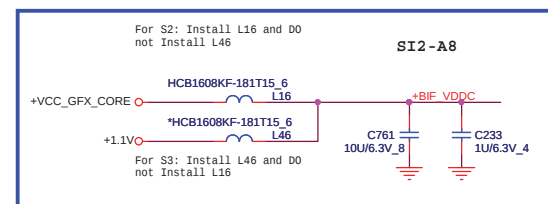
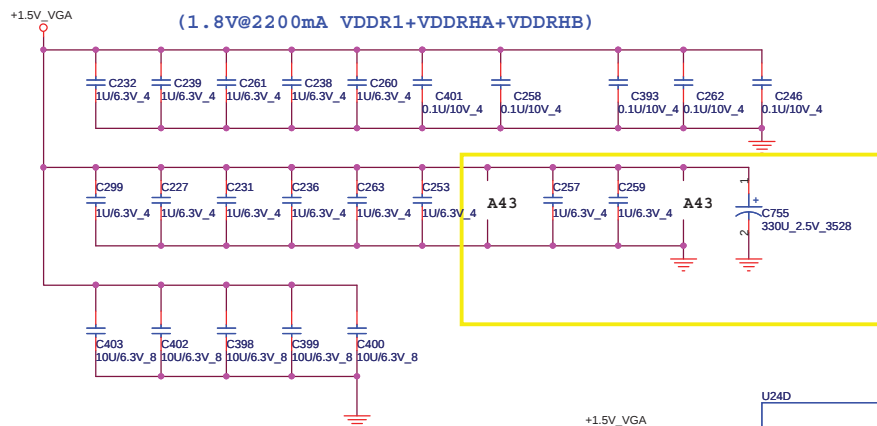




PROJECT : SP6
Quanta Computer Inc.

Size Custom Document Number M92 XTAL/I2C Rev 1A

Date: Tuesday, April 07, 2009 Sheet 19 of 49



PART 4 OF 18

MEM I/O

VDDR1#1
VDDR1#2
VDDR1#3
VDDR1#4
VDDR1#5
VDDR1#6
VDDR1#7
VDDR1#8
VDDR1#9
VDDR1#10
VDDR1#11
VDDR1#12
VDDR1#13
VDDR1#14
VDDR1#15
VDDR1#16
VDDR1#17

LEVEL
TRANSLATION

VDD_CT#1
VDD_CT#2
VDD_CT#3
VDD_CT#4

M93-S3/M92-S2

VDDR3#1
VDDR3#2
VDDR3#3
VDDR3#4

NC#1/VDDR4

DVCLK/VDDR4

VDDR4#2

TESTEN#2/VDDR5

VDDR4#3/VDDR5#2

NC#3/VDDR5#3

VDDR4#1/VDDR5#4

MEM CLK

VDDRHA

VSSRHA

BACK BIAS

BBP#1

BBP#2

M92-S2_LP_A12

PCIE

PCIE_VDDR#1
PCIE_VDDR#2
PCIE_VDDR#3
PCIE_VDDR#4
PCIE_VDDR#5
PCIE_VDDR#6
PCIE_VDDR#7
PCIE_VDDR#8

POWER

CORE

VDDC#1
VDDC#4
VDDC#5
VDDC#6
VDDC#7
VDDC#8
VDDC#9
VDDC#10
VDDC#11
VDDC#12
VDDC#13
VDDC#14
VDDC#15
VDDC#16
VDDC#17
VDDC#18
VDDC#19
VDDC#20
VDDC#24
VDDC#22
VDDC#23

VDDC#25/BIF_VDDC

VDDC#21/BIF_VDDC

ISOLATED
CORE I/O

VDDC#1

VDDC#2

VDDC#3

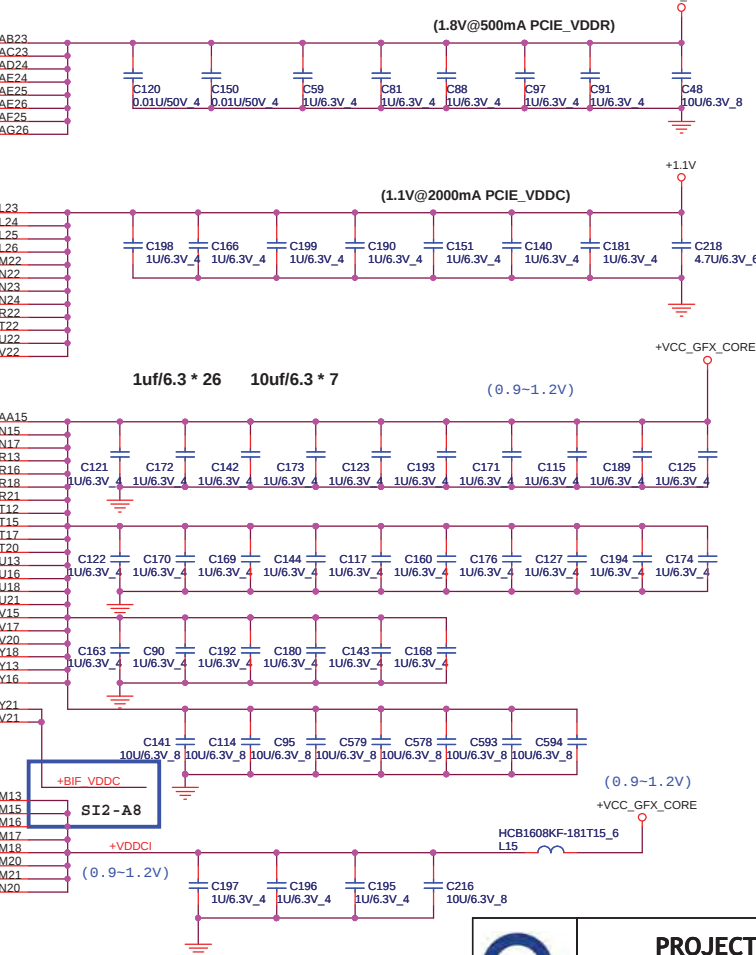
VDDC#4

VDDC#5

VDDC#6

VDDC#7

VDDC#8

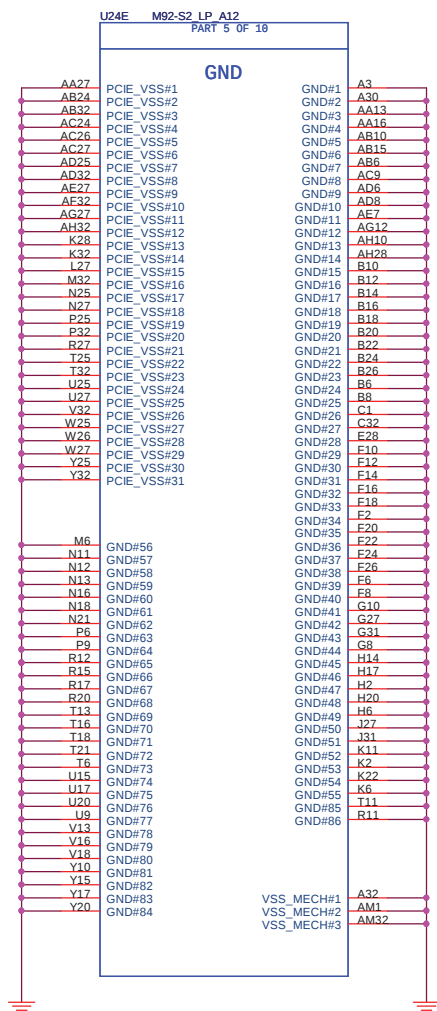


(For M96/92, 0.95V-1.1V@2A VDDCI)



PROJECT : SP6
Quanta Computer Inc.

Size Custom	Document Number M92 POWER/GND	Rev 2B
Date: Tuesday, April 07, 2009	Sheet 20 of 49	



Power up

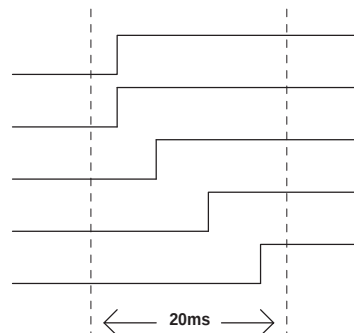
BBP/N=VDDC=VSS=3.3V

+1.1V VDDC=0.9~1.2V

DDR3(+1.5V)

VDD_CT=1.8V

VDDR3=3.3V



Power down

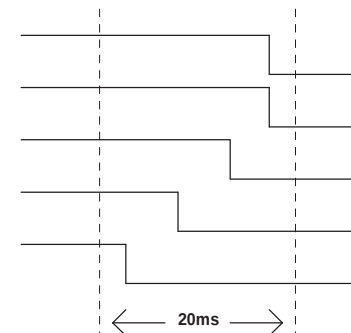
BBP/N=VDDC=VSS=3.3V

+1.1V VDDC=0.9~1.2V

DDR3(+1.5V)

VDD_CT=1.8V

VDDR3=3.3V



CONFIGURATION STRAPS

ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED,
THEY MUST NOT CONFLICT DURING RESET

RECOMMENDED SETTINGS
0= DO NOT INSTALL RESISTOR
1= INSTALL 10K RESISTOR
X = DESIGN DEPENDANT
NA = NOT APPLICABLE

STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	
TX_PWRS_ENB	GPIO0	PCIE FULL TX OUTPUT SWING	X
TX_DEEMPH_EN	GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED	X
BIF_GEN2_EN_A	GPIO2	PCIE GEN2 ENABLED	X
RSVD	GPIO8		0
BIF_VGA_DIS	GPIO9	VGA ENABLED	0
RSVD	GPIO21		0
BIOS_ROM_EN	GPIO_22_ROMCSB	ENABLE EXTERNAL BIOS ROM	X
ROMIDCFG(2:0)	GPIO[13:11]	SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT	X X X
VIP_DEVICE_STRAP_ENA	V2SYNC	IGNORE VIP DEVICE STRAPS	X
RSVD			0
AUD[1]	GENERICC	AUD[1] AUD[0]	0
AUD[0]	HSYNC	0 0 No audio function	X X
	VSYN	0 1 Audio for DisplayPort and HDMI if dongle is detected	
		1 0 Audio for DisplayPort only	
		1 1 Audio for both DisplayPort and HDMI	



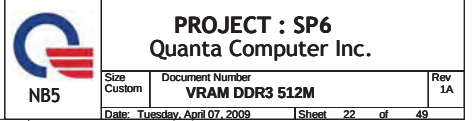
PROJECT : SP6
Quanta Computer Inc.

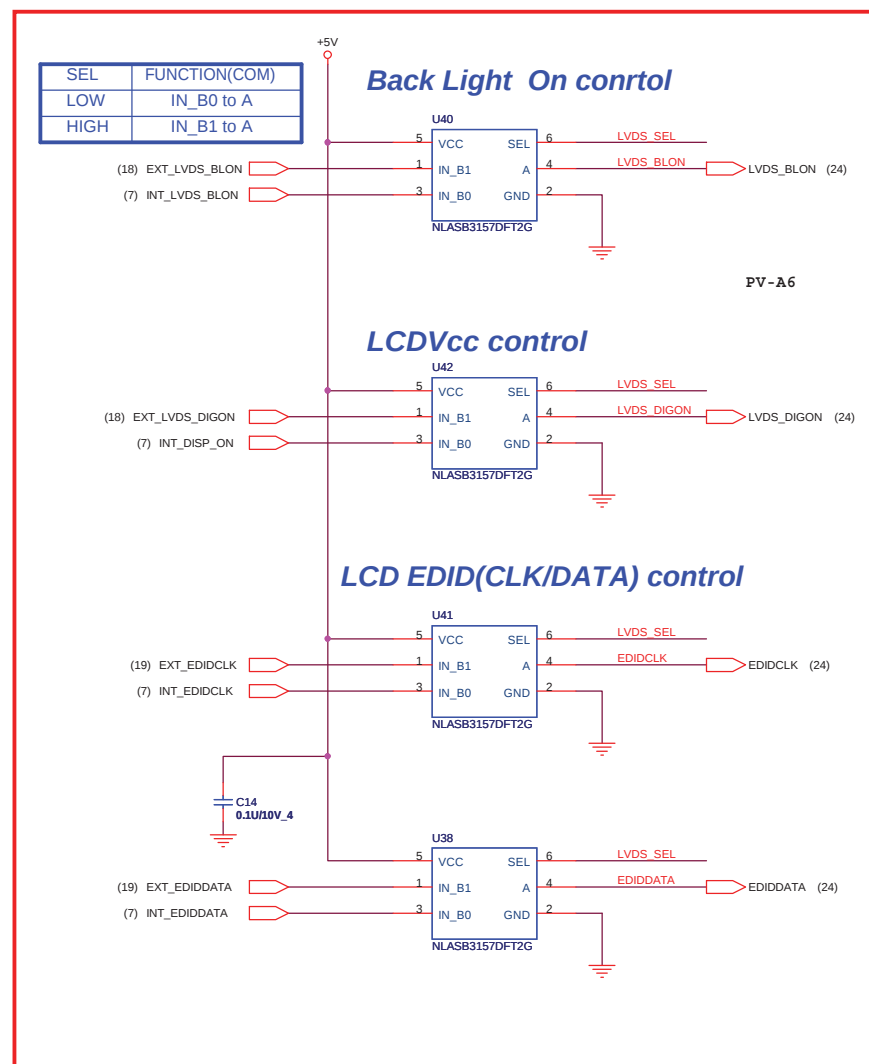
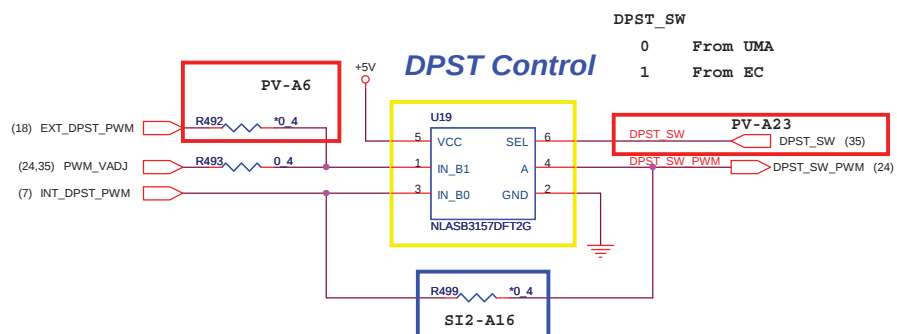
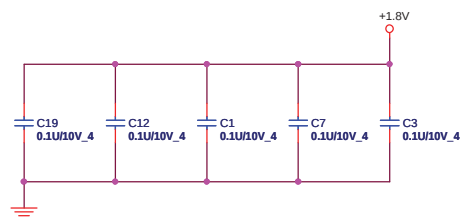
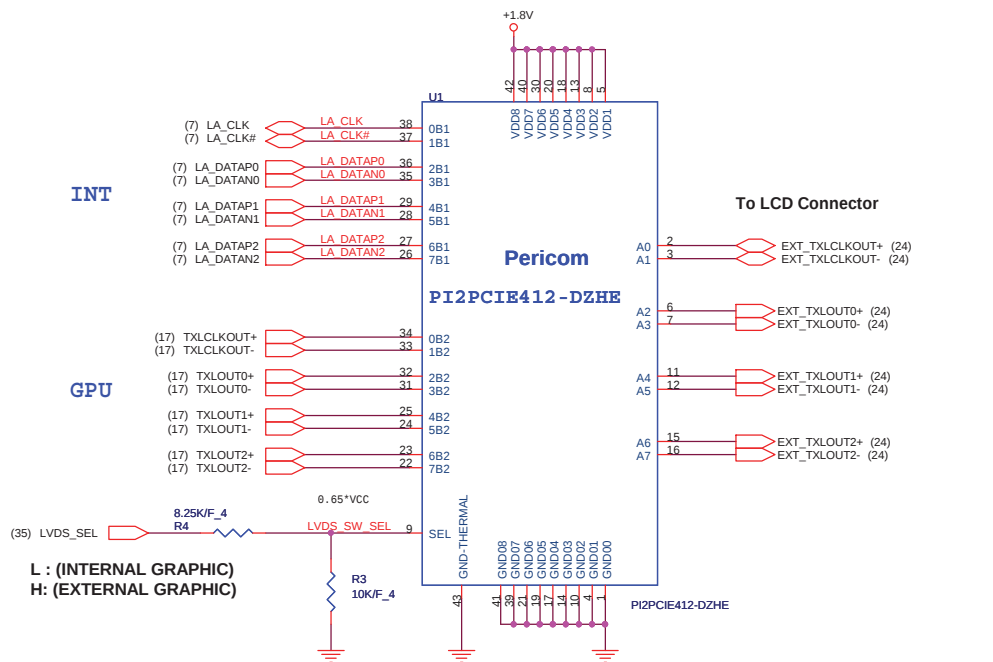
Size
Custom

Document Number
M92-S2-LP_G_GND

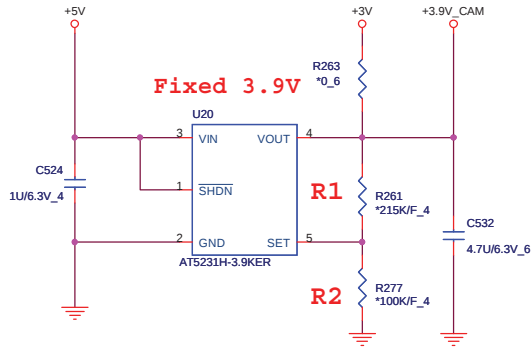
Rev
1A

Date: Tuesday, April 07, 2009 Sheet 21 of 49



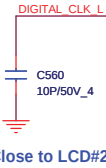


$$V_{out} = 1.25 (1 + R1/R2)$$

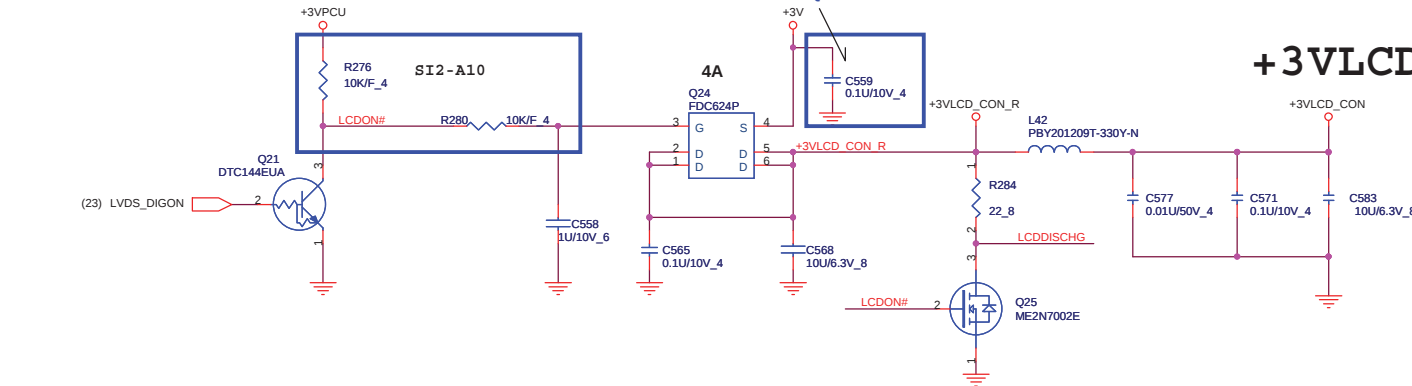
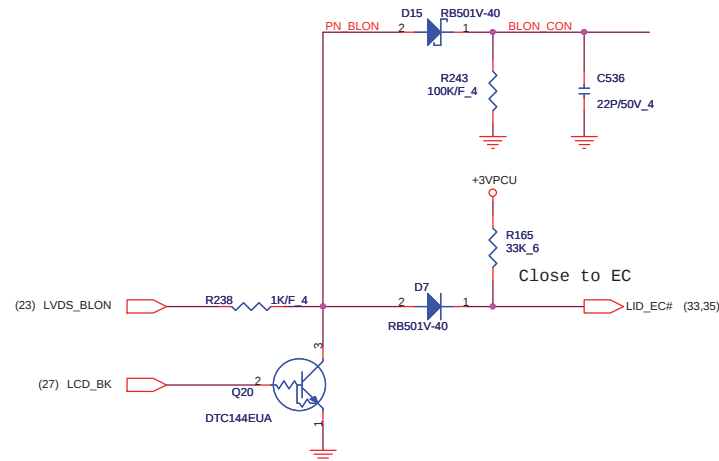


USB CAMERA /DIGITAL MIC CONNECT

Add for EMI solution



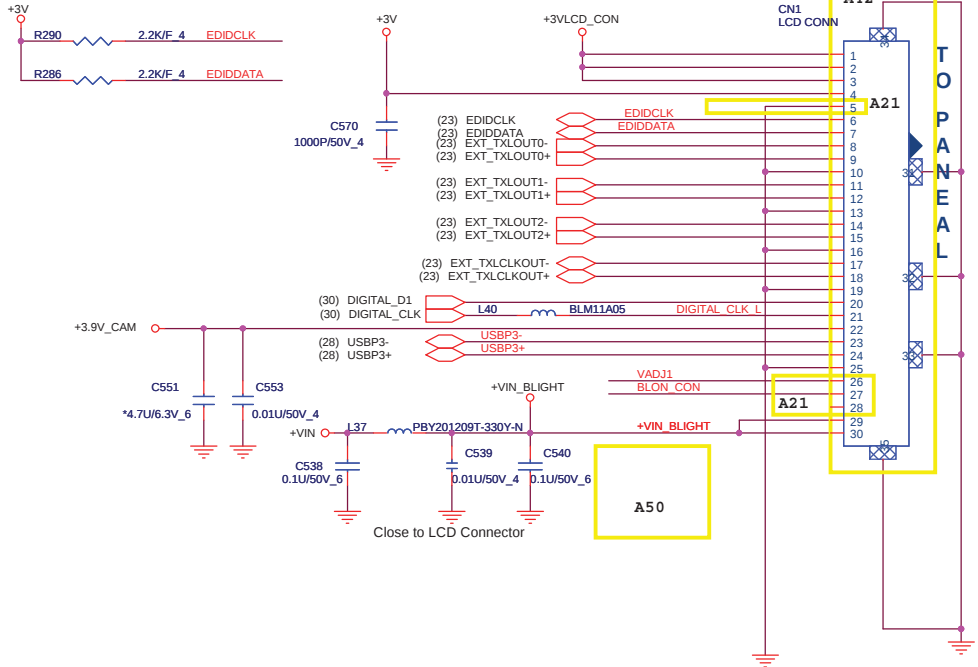
Close to LCD#21



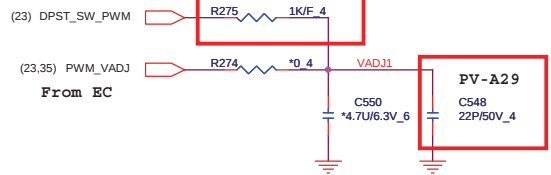
(2,4,7,10,12,14,25,26,27,28,29,30,31,32,33,34,35,36,45)
(20,23,25,29,31,36,45)
(37,39,40,41,42,43,44,45)
(26,32,33,35,37,38,39,43,44,45)

+3V
+5V
+VIN
+3VPCU

LVD-A30SFYG+



From Switch

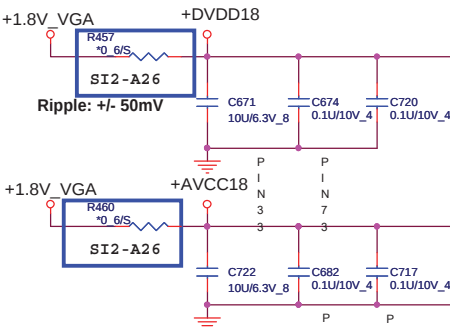


+3VLCD



PROJECT : SP6
Quanta Computer Inc.

Size Custom Document Number LVD5/Camera/Digital MIC Rev 1A
Date: Tuesday, April 07, 2009 Sheet 24 of 49



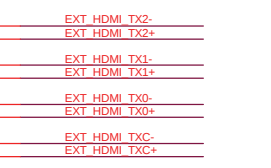
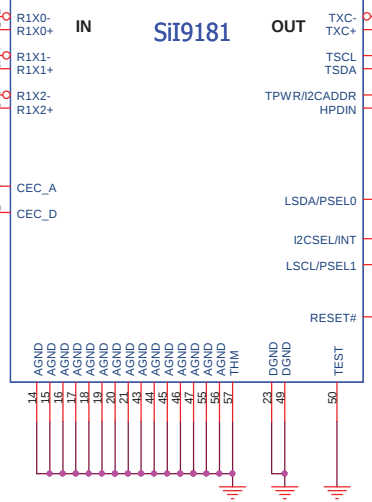
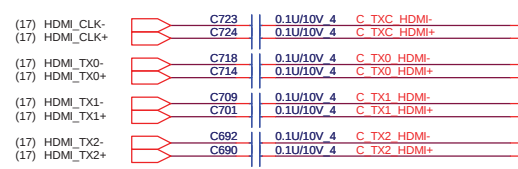
HPDIN

STATE	Status
LOW	Without HDMI Device
HIGH	HDMI Device detect

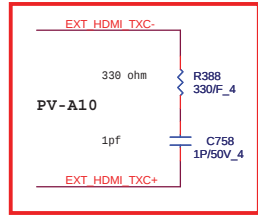
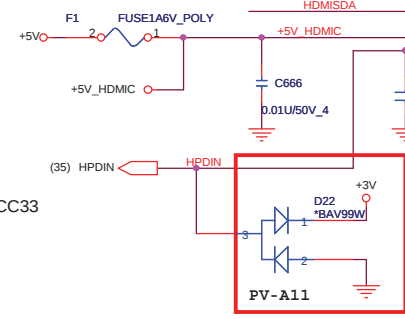
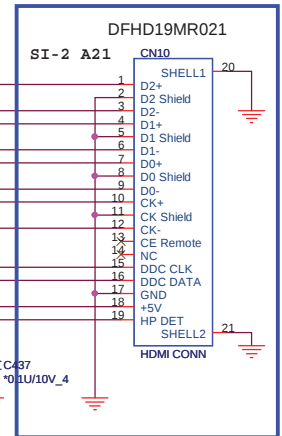
(TPWR/I2CADDR)

STATE	ADDRESS
LOW	0xC0/0xD0/0xE0 (DEFAULT)
HIGH	0xC4/0xD4/0xE4

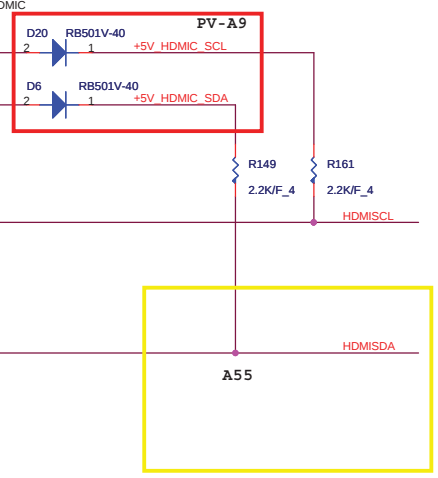
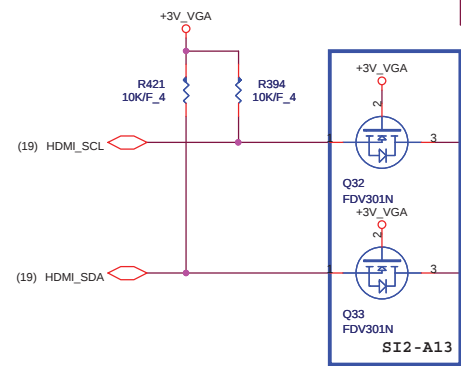
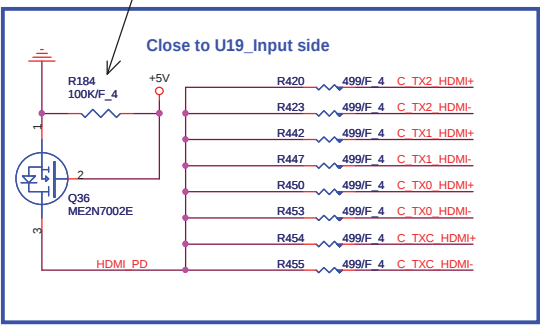
PLACE AC CAPS CLOSE TO CONNECTOR

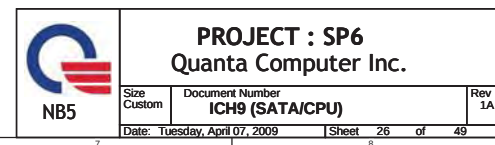


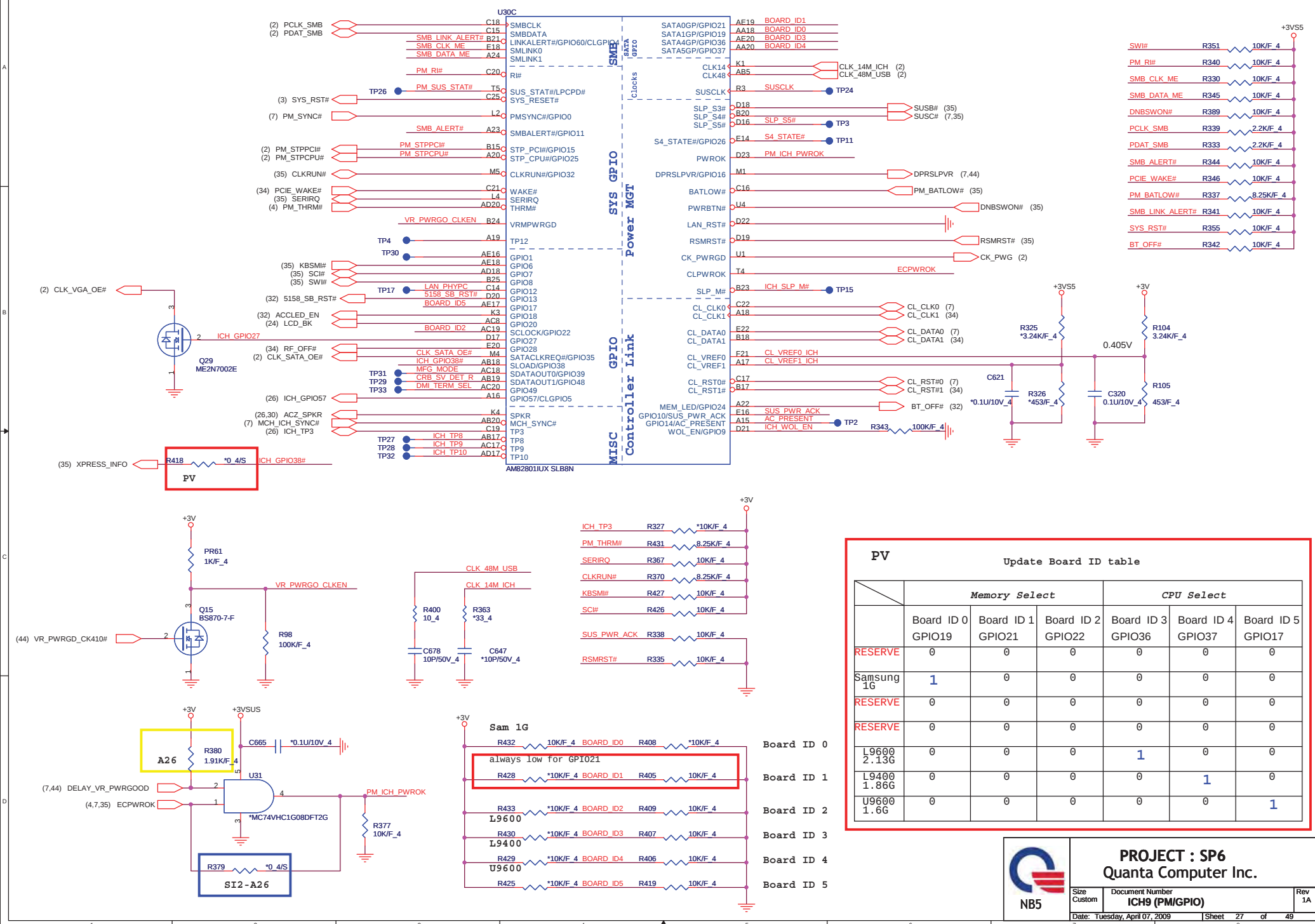
HDMI PORT



MAKE SURE THE MOSFET IS OFF DURING SYSTEM IN STANDBY







Place TX DC blocking caps close ICH9.

WLAN

(34) PCIE_RXN0
(34) PCIE_RXP0
(34) PCIE_TXN0
(34) PCIE_TXP0

C661 1 2 0.1U/10V 4 10
C662 1 2 0.1U/10V 4 10

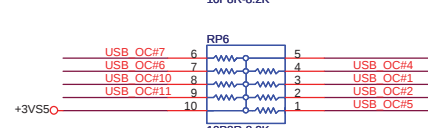
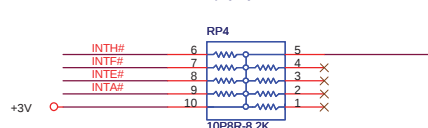
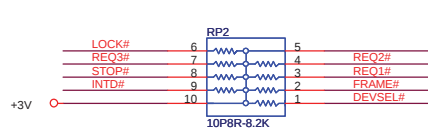
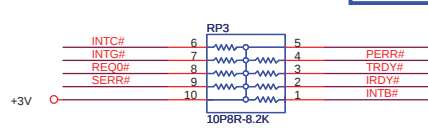
PCIE_TXN0 C
PCIE_TXP0 C

Delete R121,R378 due have the same pd in page 26

A3

T80 *PAD
T79 *PAD
(26) ICH_SPL_CS1#_R
T23 *PAD
T81 *PAD

SI2-A23 (32) USB_OC#0
(32) USB_OC#2



SI2-A23
USB_OC#0 R393 8.25K/F 4
USB_OC#3 R372 8.25K/F 4
USB_OC#8 R374 8.25K/F 4
USB_OC#9 R381 8.25K/F 4
PCI PME# R384 10K/F 4

A14 R373 delete

E24 SPI_CLK
E23 SPI_CS0#
F22 SPI_CS1#/GPIO58/CLGP06
G23 SPI_MISO
G23 SPI_MOSI

USB_OC#0 P4
USB_OC#1 N4
USB_OC#2 N1
USB_OC#3 P5
USB_OC#4 C4
USB_OC#5 P2
USB_OC#6 M3
USB_OC#7 M2
USB_OC#8 P3
USB_OC#9 R1
USB_OC#10 R4
USB_OC#11 R2

USBRBIAS PN
AD5 USBRBIAS
AM82801UX SLB8N

R411 22.6/F

U30B
A11 AD0
B12 AD1
A10 AD2
C12 AD3
A8 AD4
A12 AD5
E10 AD6
C11 AD7
B9 AD8
D8 AD9
A4 AD10
E8 AD11
A3 AD12
D9 AD13
C8 AD14
D7 AD15
B3 AD16
D11 AD17
A18 AD18
B6 AD19
D5 AD20
D3 AD21
F4 AD22
E3 AD23
E4 AD24
B2 AD25
C4 AD26
C1 AD27
E2 AD28
AD29
J4 AD30
H2 AD31

INTA# F1
INTB# E5
INTC# F2
INTD# C7

AM82801UX SLB8N

PCI Express
Direct Media Interface
PCI Express
Direct Media Interface

USB
USB

PCI
PCI

Interrupt I/F
Interrupt I/F

AM82801UX SLB8N

DMIORXN V25
DMIOXP V24
DMIOTXN U24
DMIOTXP U23
DMIORXN W23
DMIOXP W24
DMIOTXN V21
DMIOTXP V22
DMIORXN Y24
DMIOXP Y25
DMIOTXN Y21
DMIOTXP Y22
DMIORXN AB24
DMIOXP AB25
DMIOTXN AA23
DMIOTXP AA24
DMIOCLK T21
DMIOCLKP T22
DMIOZCOMP AB21
DMIOZCOMP AB22

USBP0N AD1
USBP0P AD3
USBP1N AD4
USBP1P AC2
USBP2N AC3
USBP2P AC5
USBP3N AB4
USBP3P AB2
USBP4N AB1
USBP4P AA3
USBP5N AA2
USBP5P V1
USBP6N V2
USBP6P W2
USBP7N W3
USBP7P V1
USBP8N V2
USBP8P V5
USBP9N V4
USBP9P U3
USBP10N U2
USBP10P V4
USBP11N V5
USBP11P V5

REQ0# G4
GNT0# E1
REQ1# A9
GNT1# E12
REQ2# C10
GNT2# D6
REQ3# C6
GNT3# C6

C/BE# D10
C/BE1# A5
C/BE2# E6
C/BE3# C9

IRDY# C3
PAR B1
PCIRST# T3
DEVSEL# A7
PERR# D4
PLOCK# C5
SERR# H5
STOP# A6
TRDY# A2
FRAME# B8

PLTRST# A21
PCICK# B5
PME# T1

REQ0# G4
GNT0# E1
REQ1# A9
GNT1# E12
REQ2# C10
GNT2# D6
REQ3# C6
GNT3# C6

C/BE# D10
C/BE1# A5
C/BE2# E6
C/BE3# C9

IRDY# C3
PAR B1
PCIRST# T3
DEVSEL# A7
PERR# D4
PLOCK# C5
SERR# H5
STOP# A6
TRDY# A2
FRAME# B8

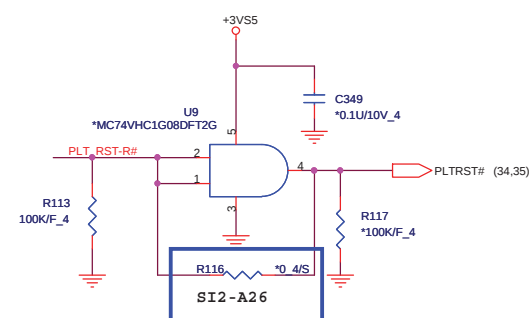
PLTRST# A21
PCICK# B5
PME# T1

USB Connector
Card reader
USB Connector
Carama USB
WLAN Min-Card
BLUETOOTH

USB port

Assignment function

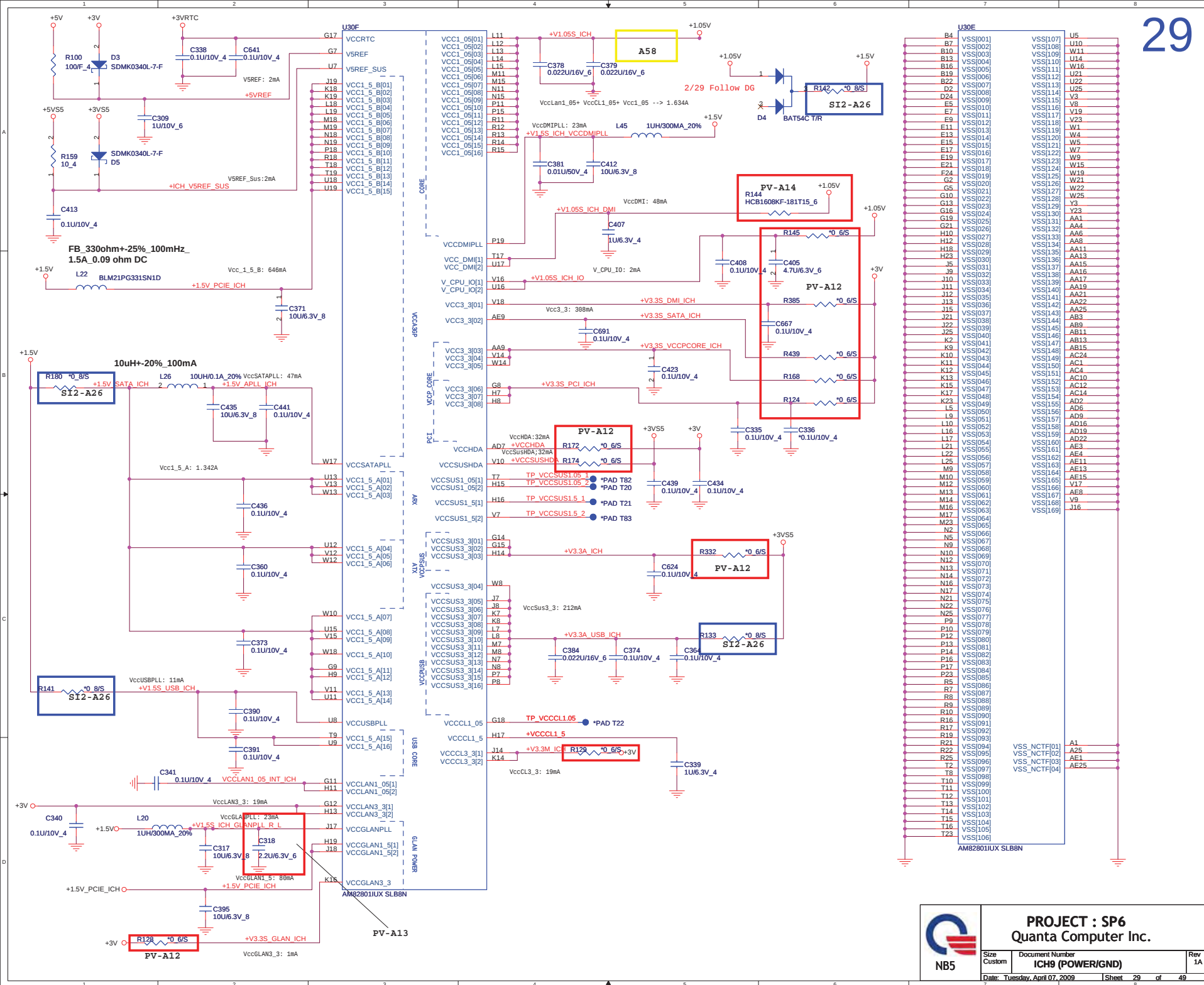
USB0	USB Connector
USB1	USB Card reader
USB2	USB Connector
USB3	USB Camera module
USB4	Reserve for Mini Card
USB5	Bluetooth
USB6	NA
USB7	NA
USB8	NA
USB9	NA
USB10	NA
USB11	NA

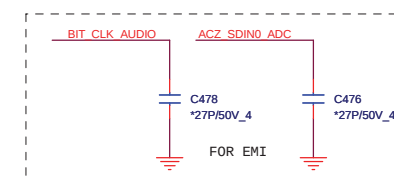
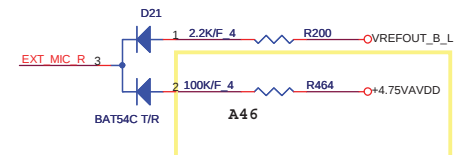


PROJECT : SP6
Quanta Computer Inc.

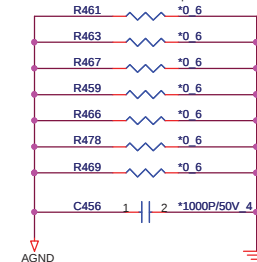
Size Custom Document Number ICH9 (USB/PCIE/DMI) Rev 1A

Date: Tuesday, April 07, 2009 Sheet 28 of 49

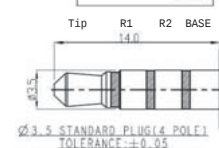
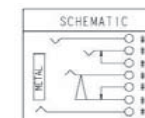




don't need to install due shape short in SGND



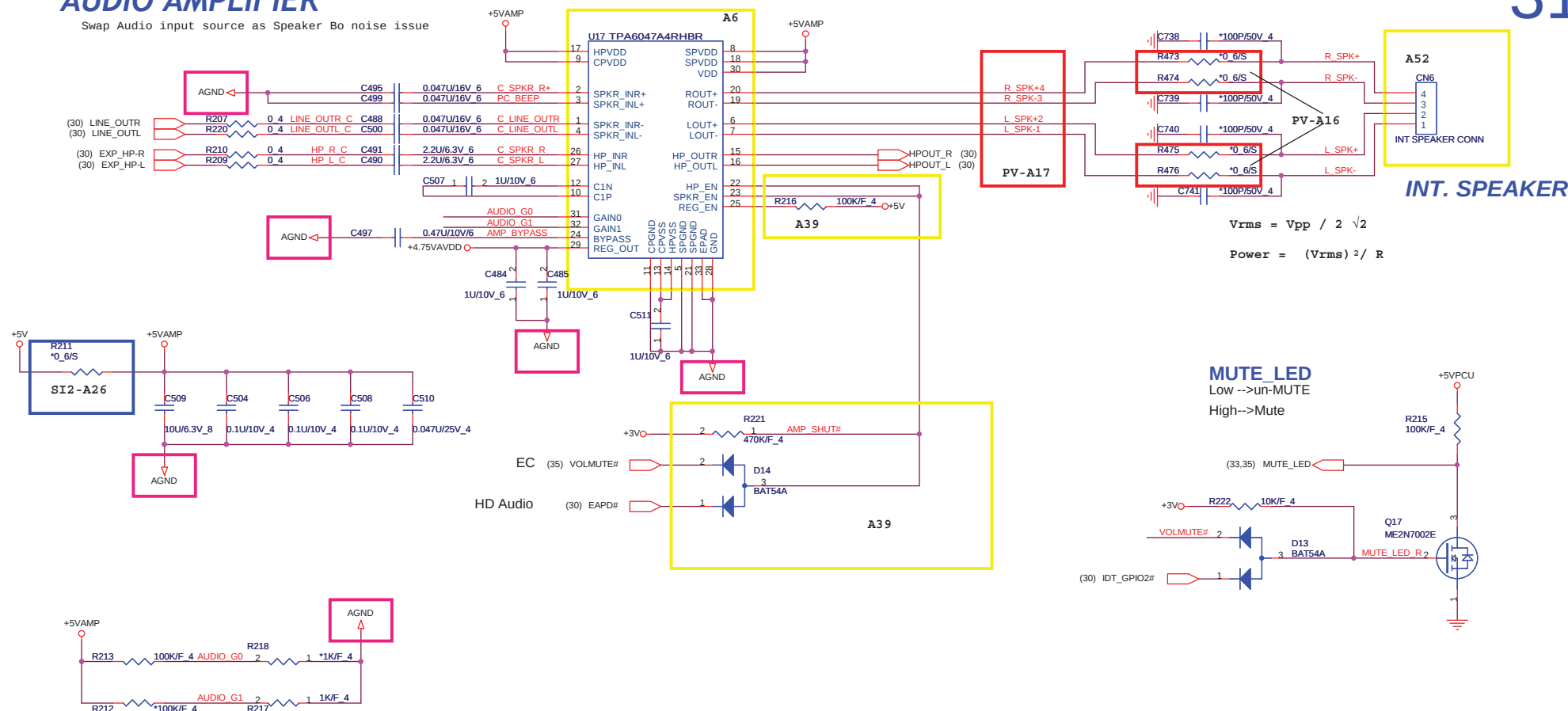
Normal Close		
SI-1	JACK_SEN#	EX_MIC_DET
None	Low	HIGH
Normal HP	HIGH	Low
HP+MIC	HIGH	HIGH



TIP	Headphone Left
R1	Headphone Right
R2	GND
BASE	MIC

AUDIO AMPLIFIER

Swap Audio input source as Speaker Bo noise issue

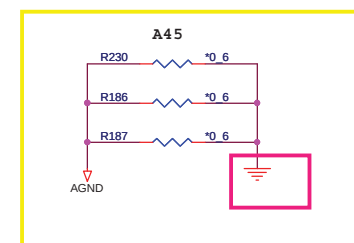


6047A2 Gain Table

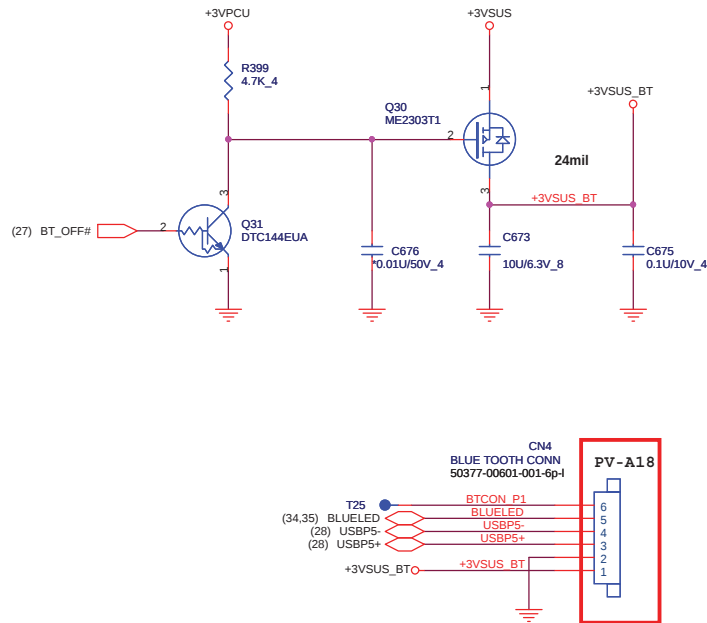
GAIN0	GAIN1	AV	RIN
0	0	6dB	90K
0	1	10dB	70K
1	0	15.6dB	45K
1	1	21.6dB	25K

PIN23 SPKR EN

```
TPA6047A4      High enable
```

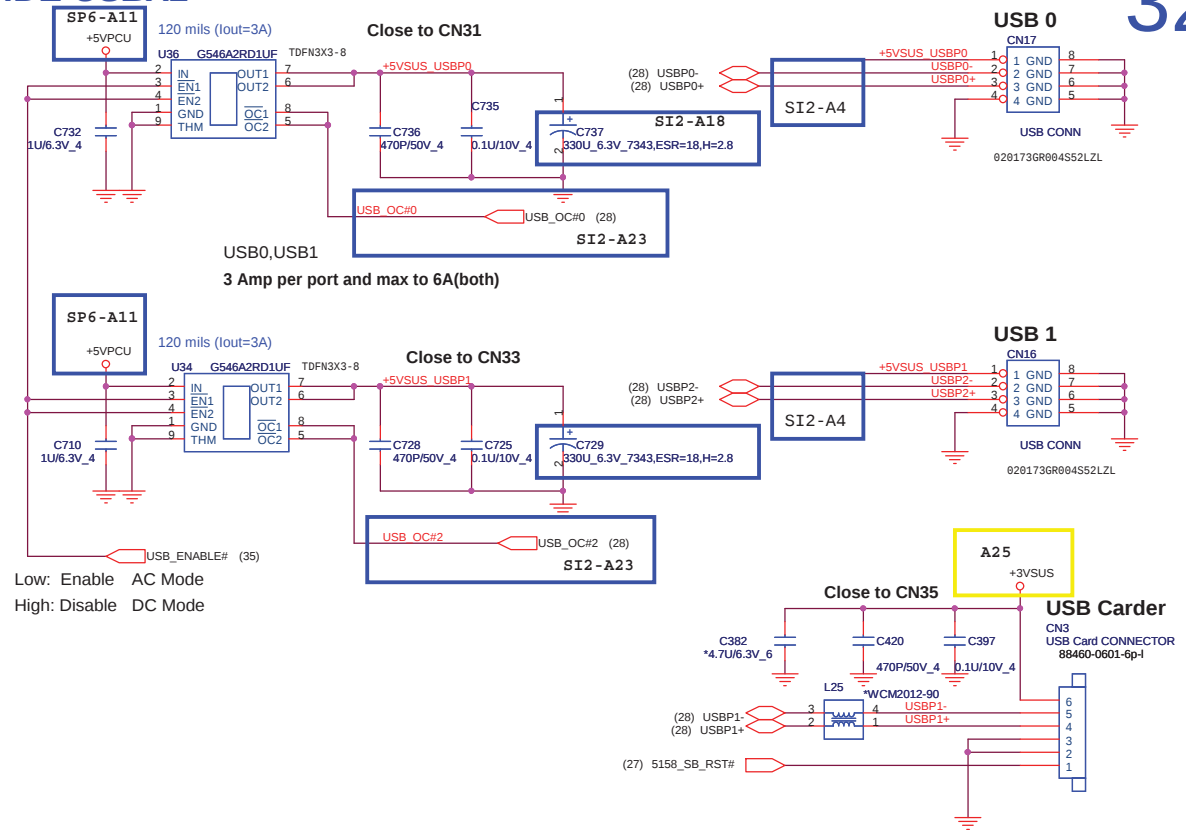


BLUETOOTH



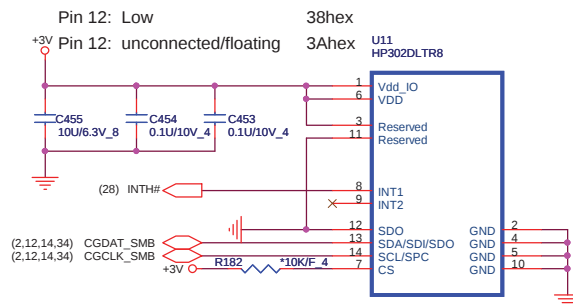
Change CN4 layout footprint to 50377-00601-001-6p-1

LEFT SIDE USBX2



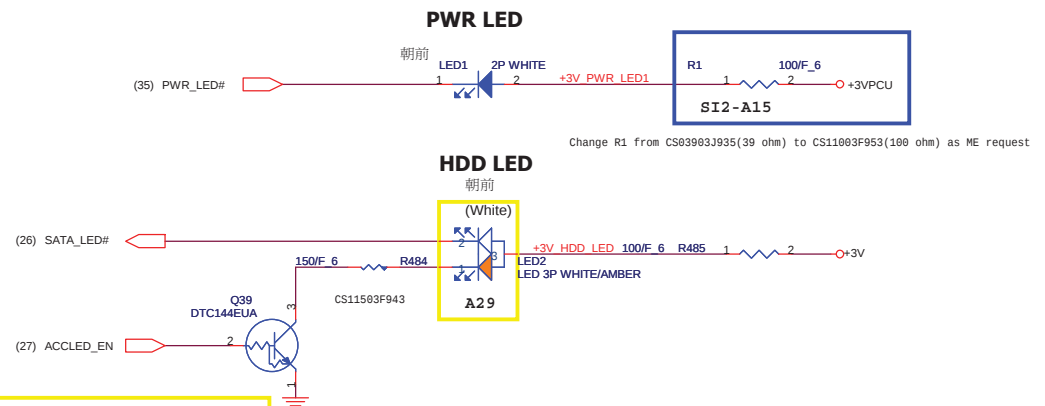
Accelerometer Sensor

SGT-LIS302DLTR interrupt pin default is low / active Hi, BIOS need to programming 22h to change status from active Hi to low

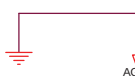


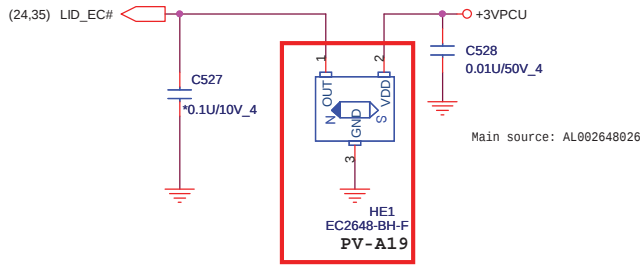
Change R181 to no stuff as internal pull high

LED

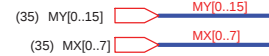
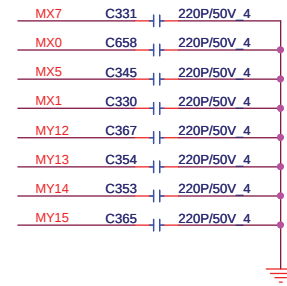
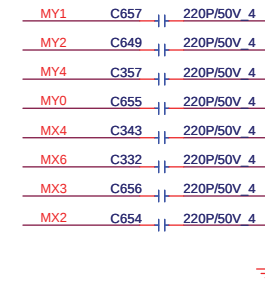
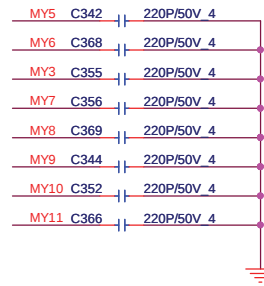
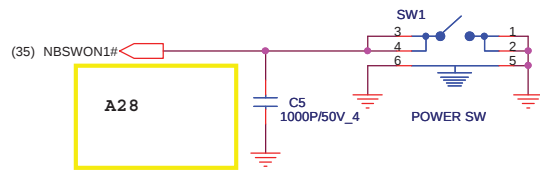


use a single 80 mil copper fill between digital ground and audio ground. None of the 0 ohm resistors should be used.



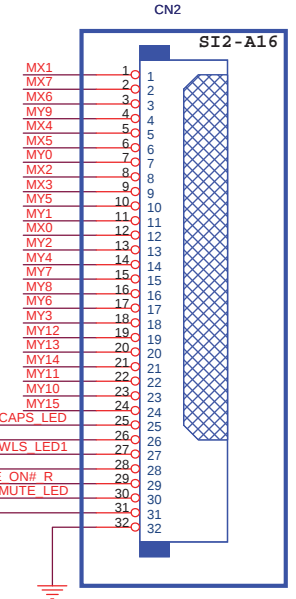
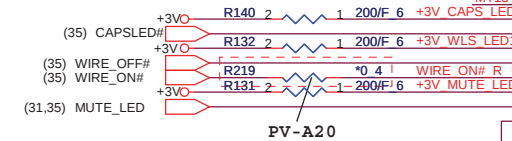
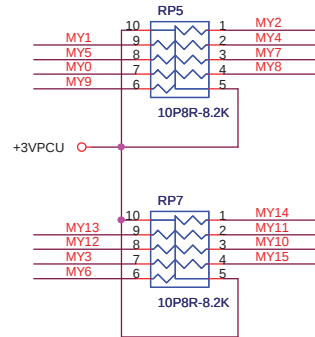


POWER SW



Modify CN2 footprint from bl137-32r1-tand-32p-1 to 196033-32041-32p-1

KEYBOARD PULL-UP



KB CONN

Caps Lock LED 2 Pins 30mA
Wireless LED 3 pins
MUTE LED 2 Pins
Charge LED 3 pins

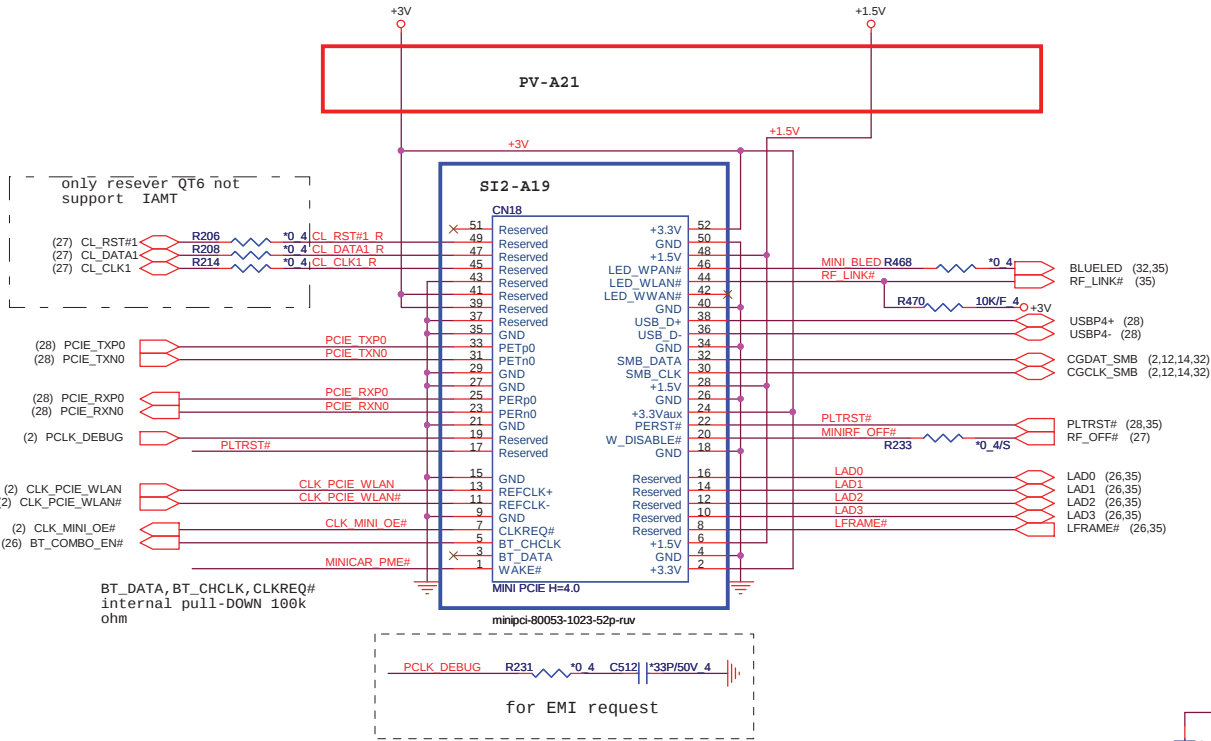
Pin 32

Pin 1

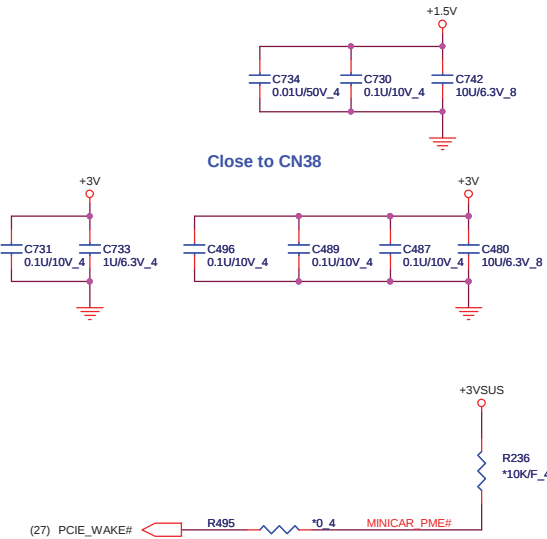
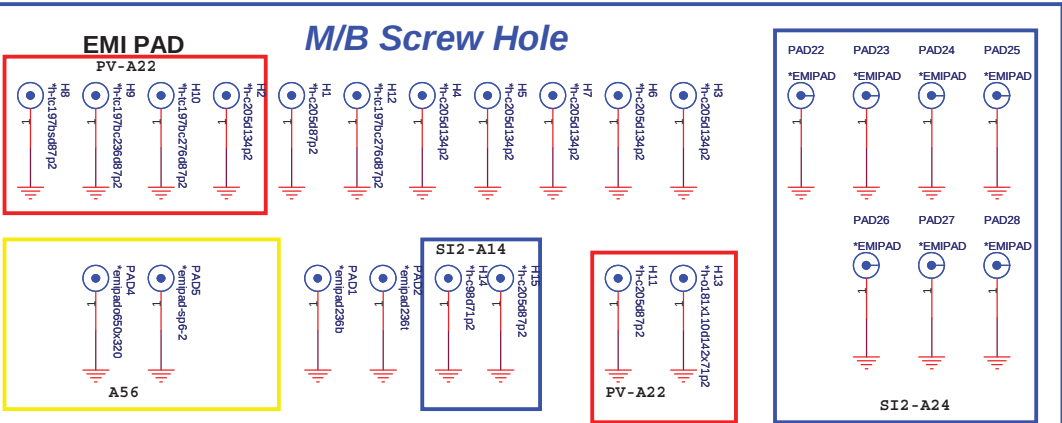


PROJECT : SP6
Quanta Computer Inc.

Size B	Document Number KB/CAP	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 33 of 49	



Modify CN18 footprint from from minipci-asob241-r48n-7h-52p-ruv to minipci-80053-1023-52p-ruv



Change U20 layout footprint

to LQFP128-16X16-4-AA1

(27) SERIRQ
(26,34) LFRAME#
(26,34) LAD0
(26,34) LAD1
(26,34) LAD2
(26,34) LAD3
(2) PCLK_KBC
(28,34) PLTRST#
(27) CLKRUN#

SCI1#
(26) GATEA20
(26) RCIN#
3920 RST#

MX0
(33) MX1
(33) MX2
(33) MX3
(33) MX4
(33) MX5
(33) MX6
(33) MX7

MY0
(33) MY1
(33) MY2
(33) MY3
(33) MY4
(33) MY5
(33) MY6
(33) MY7
(33) MY8
(33) MY9
(33) MY10
(33) MY11
(33) MY12
(33) MY13
(33) MY14
(33) MY15

PV-A23
(23) DPST_SW
(23) LVDS_SEL
(37) ACIN
TPCLK
TPDATA

BIOS_RD#
BIOS_WR#
BIOS_CS#
SERR#
(40,41,43) VGA_PWROK
(27) XPRESS_INFO
(31,33) MUTE_LED
(34) RF_LINK#
HPDIN

MIA#
(40,43,45) SUSON
(37,40,42,43,45) MAINON
(40,41) VGACOREON
(45) SS_ON
(45) VGA_1.8V
(43) VGA_1.5V
(45) VGA_3.3V
(37) MBATLED0#
(37) AC_LED_ON#
(33) WIRE_ON#
(33) WIRE_OFF#

R223 remove for KB3926 C version
DB modified
For KB3926 B, C version
C672 0.1U/10V_4
C670 4.7U/6.3V_6

Change to RB500 as Current loss
SCI1# D9 1 2 RB501V-40 SC# (27)
PM_BATLOW1# D8 1 2 RB501V-40 PM_BATLOW# (27)
DNBSWON1# D10 1 2 RB500V-40 DNBSWON# (27)
KBSMI#1 D12 1 2 RB500V-40 KBSMI# (27)
SWI#1 D11 1 2 RB501V-40 SWI# (27)

Add Pin 117,103 for DSM,116 for Bluetooth,Pin 23 for Key Beep to Amplifier

Add T37,T38,T39 for EC

Delete T10 and tie pin 117 from Lan for DSM

+3VPCU
C726 0.1U/10V_4
C444 0.1U/10V_4
C721 0.1U/10V_4
C713 0.1U/10V_4
C438 0.1U/10V_4
C424 0.1U/10V_4
C719 10U/6.3V_8
C470 0.1U/10V_4
+3VPCU_EC

TEMP_MBAT (38)
AD_AIR (37)
SYS_I (37)
CC-SET (37)
CELL_SLT (37)
SHIP# (37,38)
D/C# (37,38)
PWM_VADJ (23,24)
KEY_BEEP

FAN1ON (36)
FAN2ON (36)
FAN1SIG (36)
FAN2SIG (36)
MBCLK_MBAT (4,38)
MBDATA_MBAT (4,38)
MBCLK_ABAT (38)
MBDATA_ABAT (38)

SUSB# (27)
HWPG (39,40,41,42,43,44)
SUSC# (7,27)
BL/C# (37,38)
NBSWON1# (33)
SWI#1
KBSMI#1

VRON (44)
USB_ENABLE# (32)
DIS_RESET# (15)
DNBSWON1# (33)
CAPSLED# (33)
PWR_LED# (32)
ECPWROK (4,7,27)
RSMRST# (27)
VOLMUTE# (31)
LID_EC# (24,33)

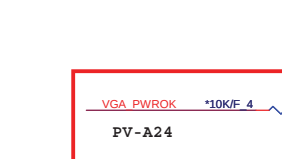
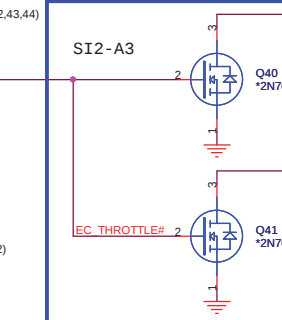
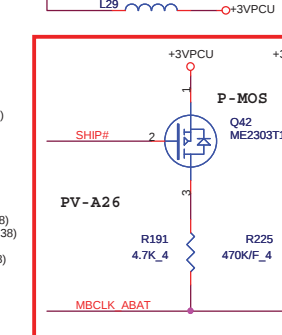
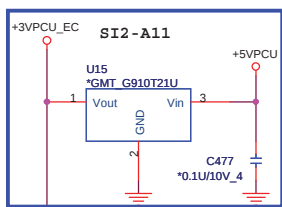
GPIO19/PWM3
GPIO1A/NUMLED#
GPIO40/CIR_RX
GPIO41/CIR_RLC_TX
AD4/GPI42
GPIO52/ES1CS#
GPIO53/CAPSLED#
GPIO54/WDT_LED#
GPIO55/SCROLED#
GPIO56
GPIO57/XCLK32K
GPIO58
GPIO59

GPIO0A
GPIO0B
GPIO0C
GPIO0D
GPIO0E
GPIO0F
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
GPIO15
GPIO16
GPIO17
GPIO18

XCLKO
XCLKI
GND1
GND2
GND3
GND4
GND5
AGND

V18R
KB3926QF D2 A47
C664 18P/50V_4
C663 18P/50V_4
Y4 32.768KHZ

AC_LED_ON# MBATLED0#
0 0 DC mode
0 1 AC mode
1 0 Charge mode

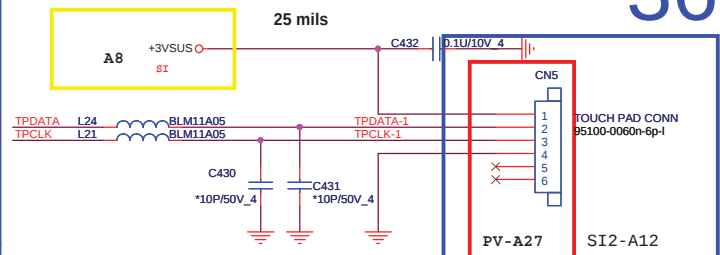


Socket: DG008000031
DB-2 From SI-1
8M bit 16M bit
MXIC AKE5GFK0Z09 AKE38FP0Z00
WINBOND AKE3GFP0N08 AKE38ZP0N01 AKE38FP0N01
EON AKE3GZP0Q00 AKE38ZA0Q00
AMIC AKE3GZP0801 AKE38ZN0800

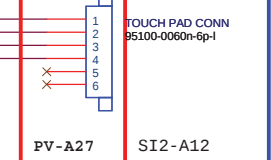
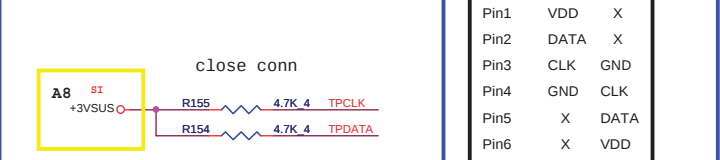
R395 100K/F_4 BLUELED
R430 Change to 100k ohm ,pull low

+3VPCU R458 47K/F_4 C727 0.1U/10V_4

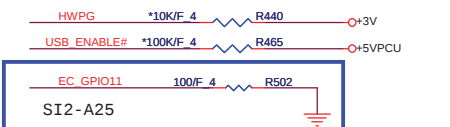
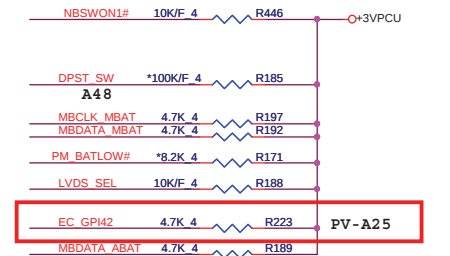
TOUCH PAD CONNECTOR



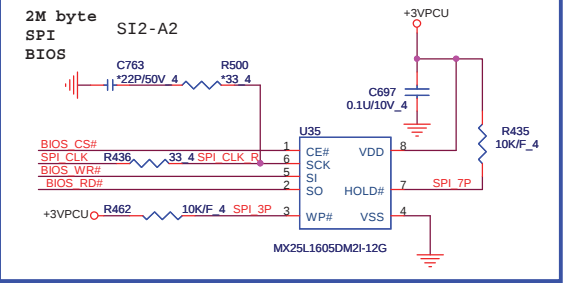
Change CN5 to DFFC06FR044



SI-1	SI-2
Pin1	VDD X
Pin2	DATA X
Pin3	CLK GND
Pin4	CLK
Pin5	X DATA
Pin6	X VDD

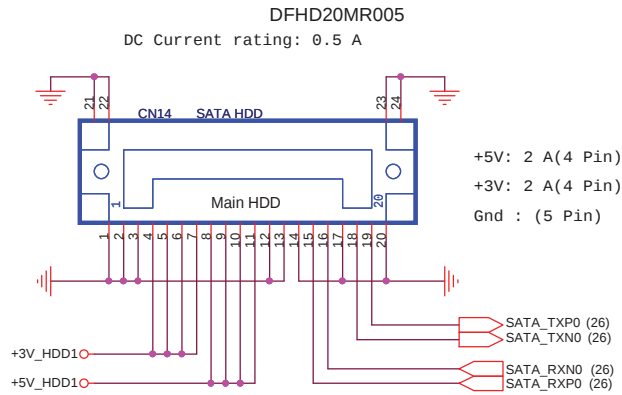


Change U35 from X6179-10XXX-8P-SOCKET to S01C8-8-1_27



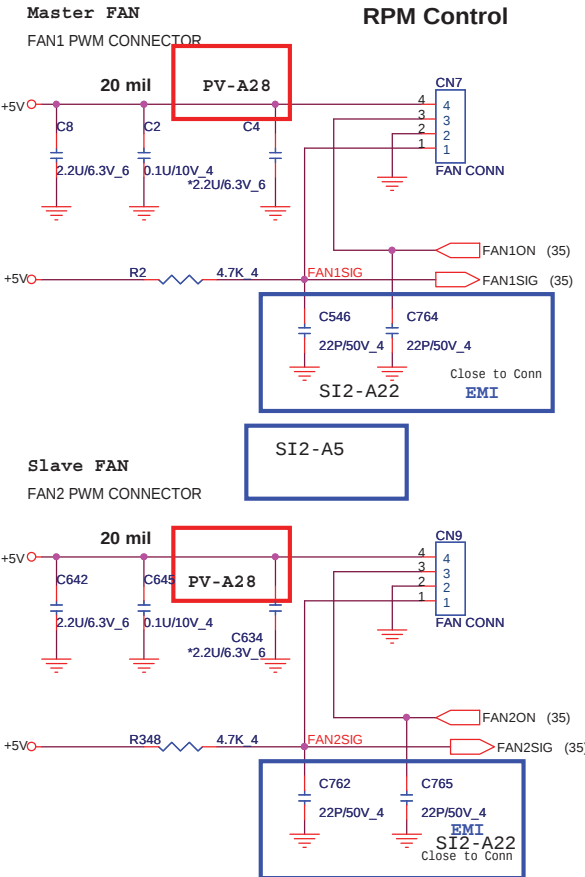
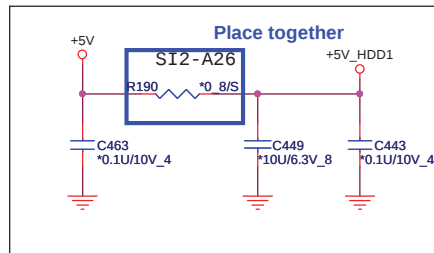
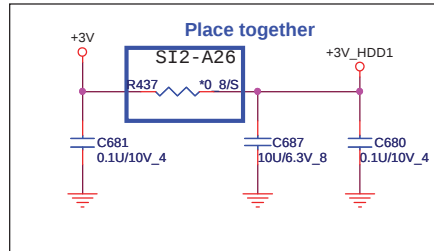
PROJECT : SP6
Quanta Computer Inc.

SATA 1.8" HDD CONNECTOR



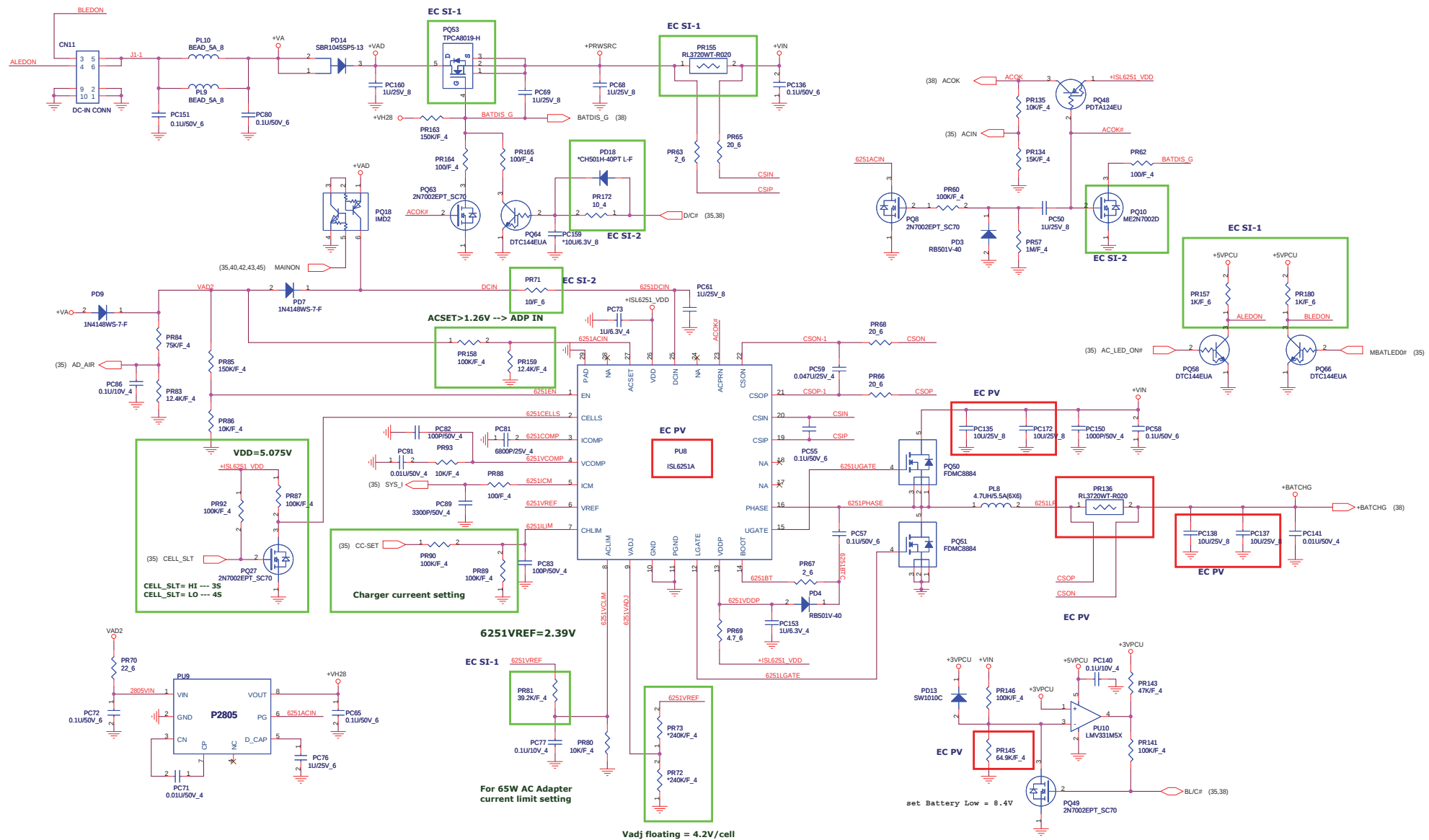
Modify 固定孔 Size as SMT request

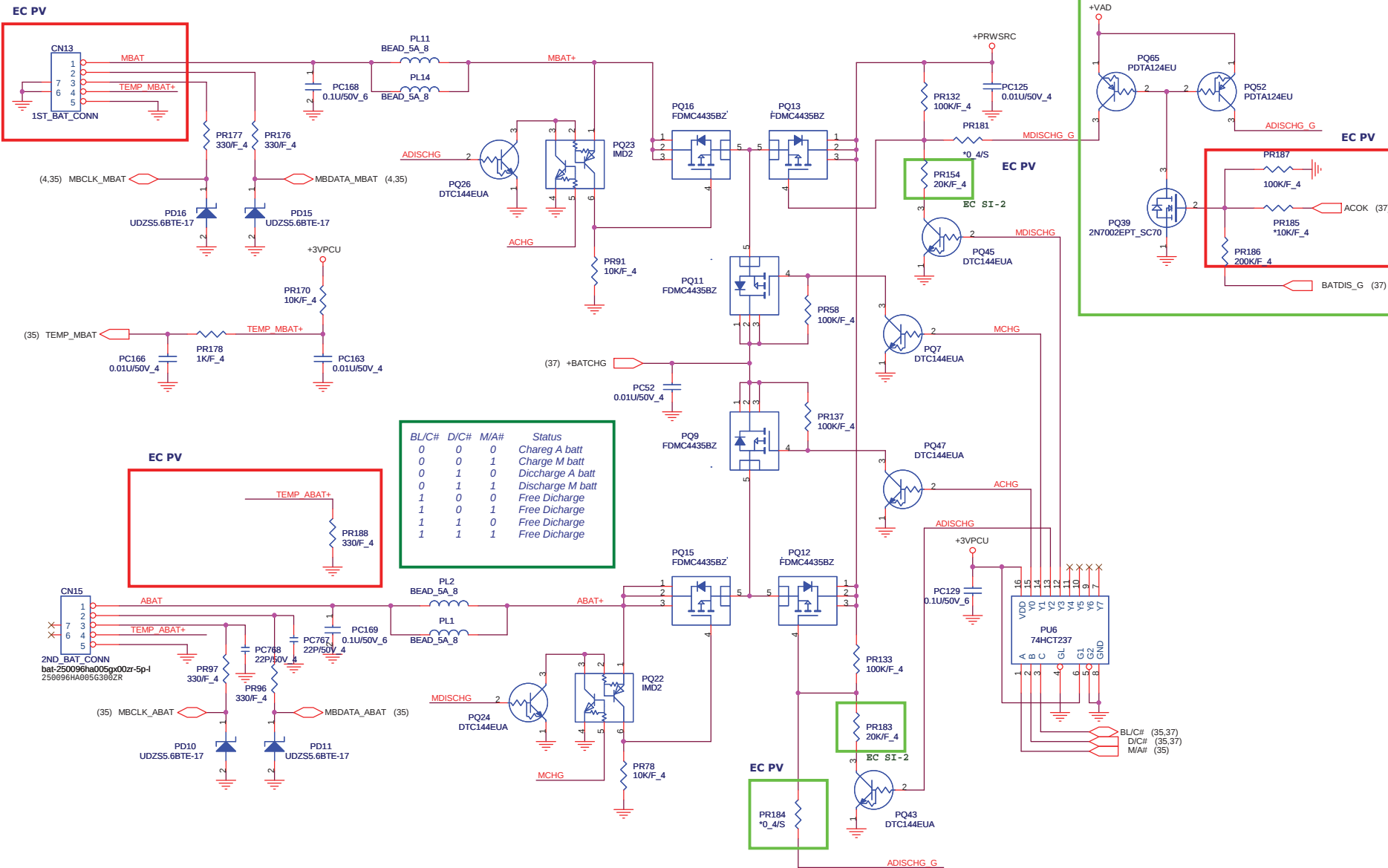
GS12201-1011-9F-20P-L-QT6

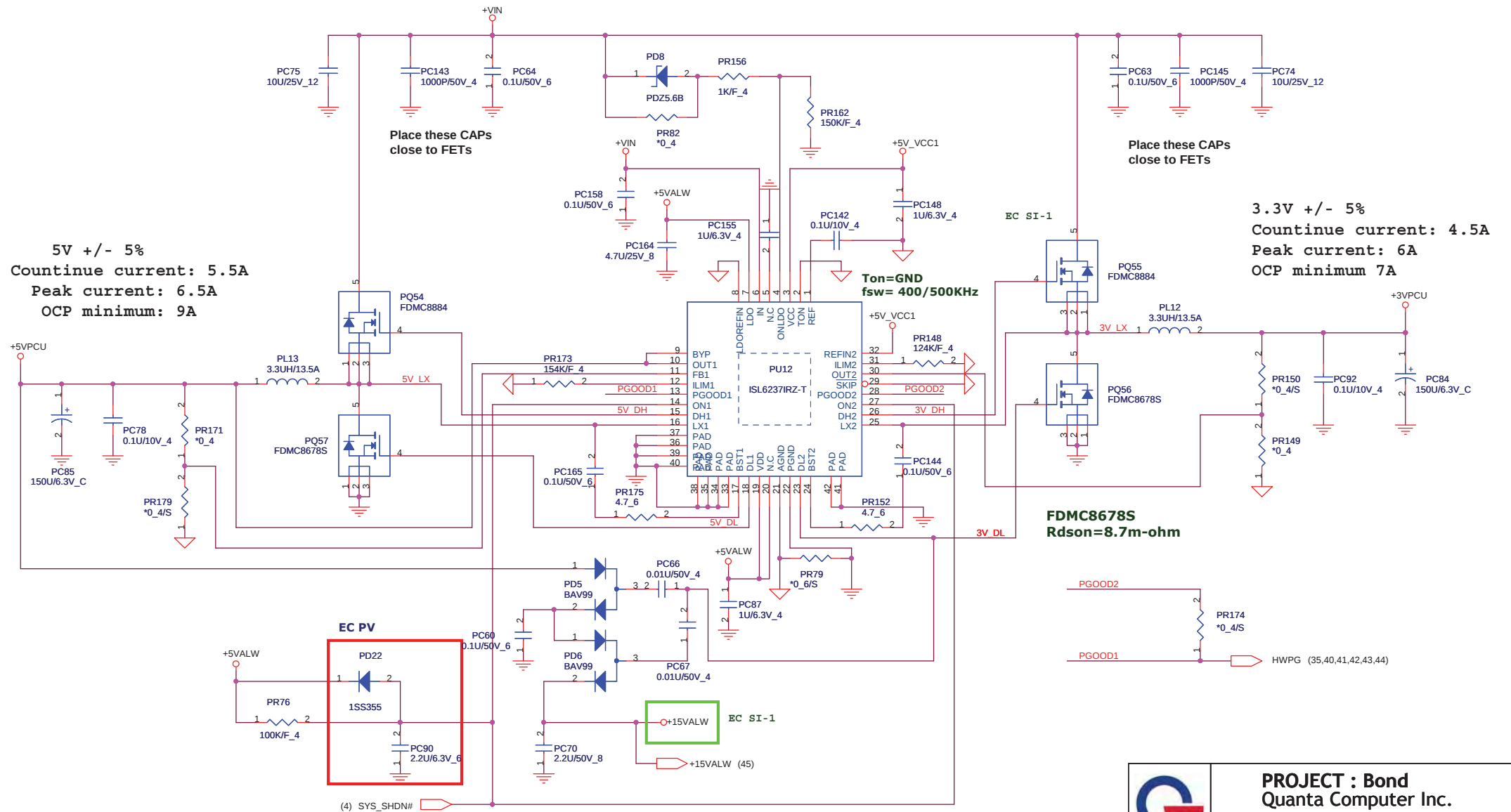


PROJECT : SP6
Quanta Computer Inc.

Size B	Document Number Fan1 and Fan2	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 36 of 49	

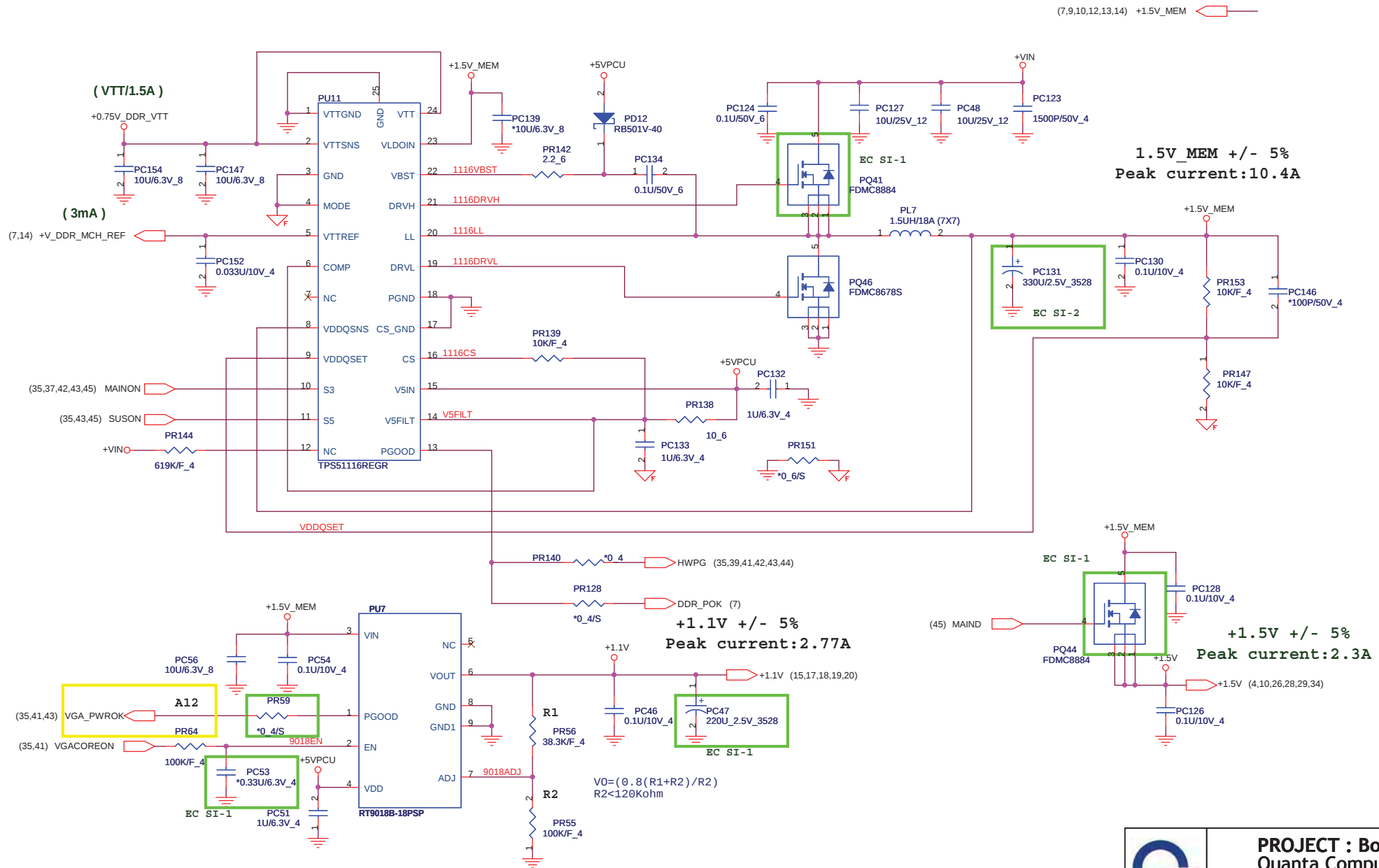






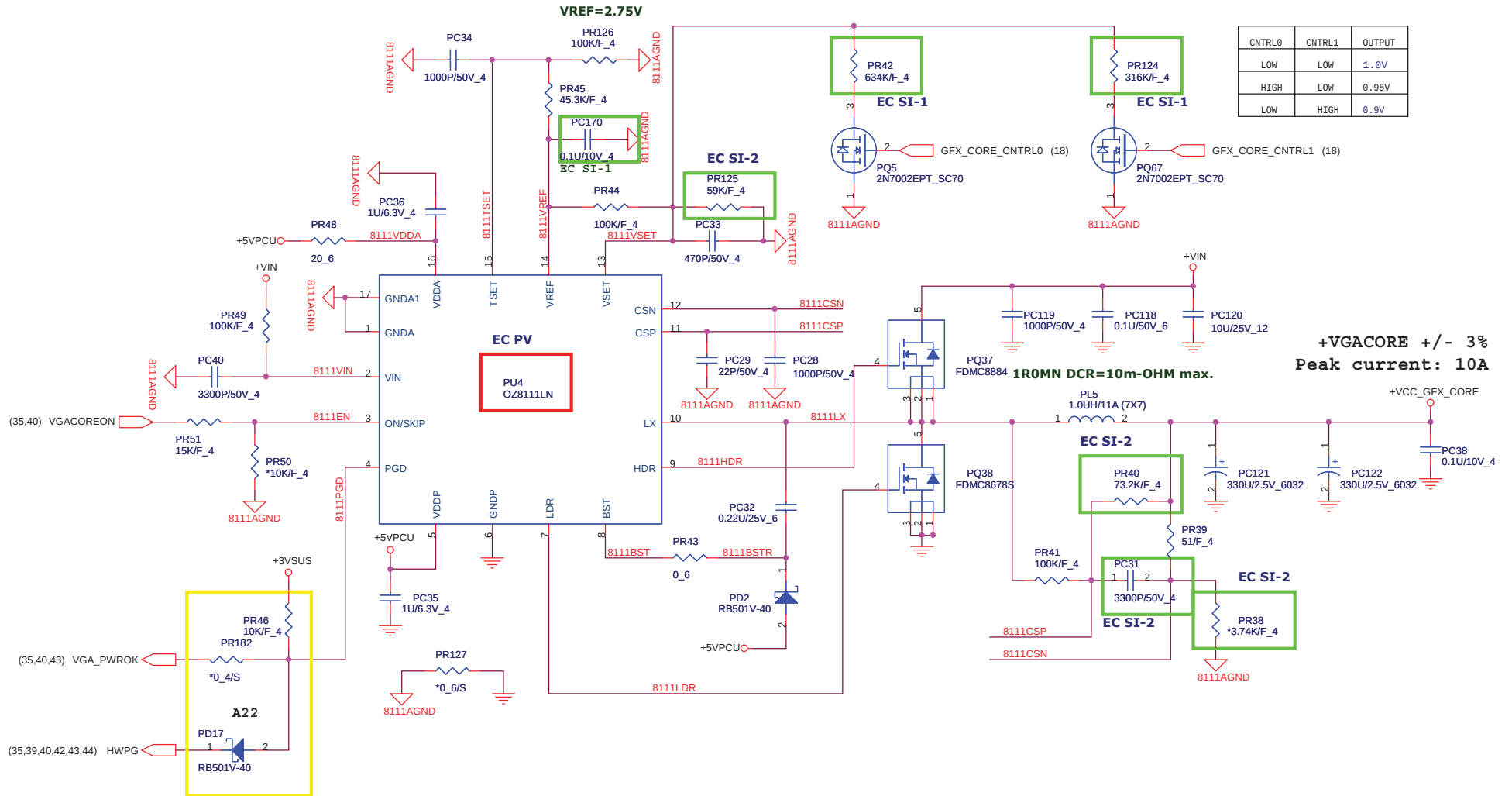
PROJECT : Bond
Quanta Computer Inc.

Size	Document Number	Rev
B	+5V/+3V	1A
Date: Tuesday, April 07, 2009 Sheet 39 of 49		



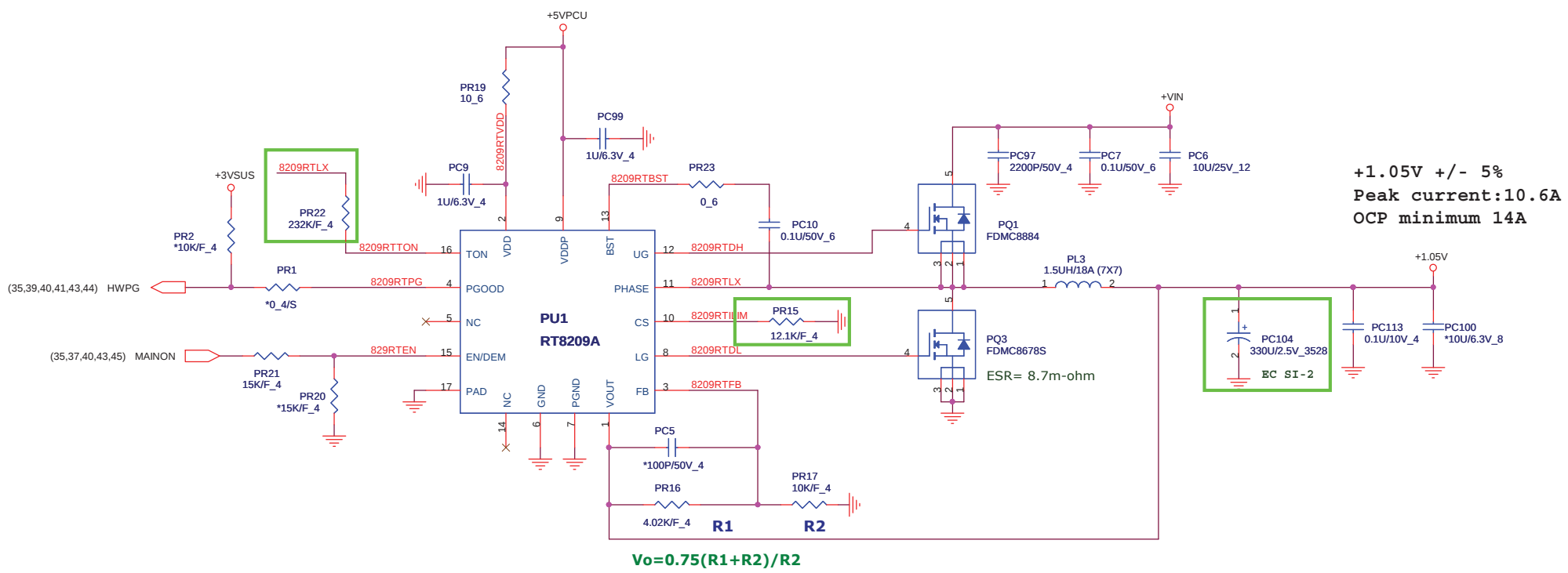
PROJECT : Bond
Quanta Computer Inc.

Size B	Document Number +1.5V_MEN/+1.1V	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 40 of 49	



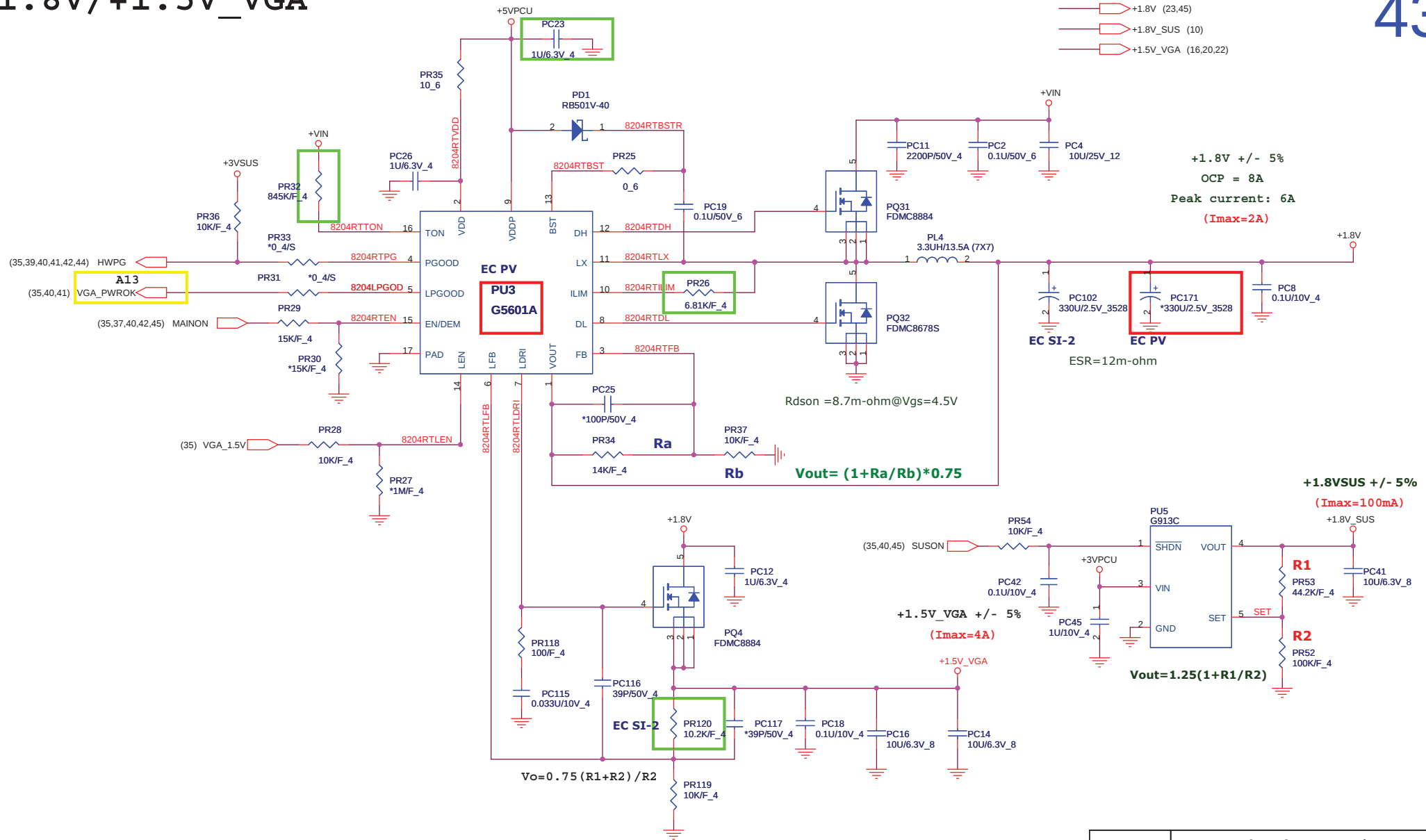
**PROJECT : Bond
Quanta Computer Inc.**

Size B	Document Number VGACORE	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 41 of 49	



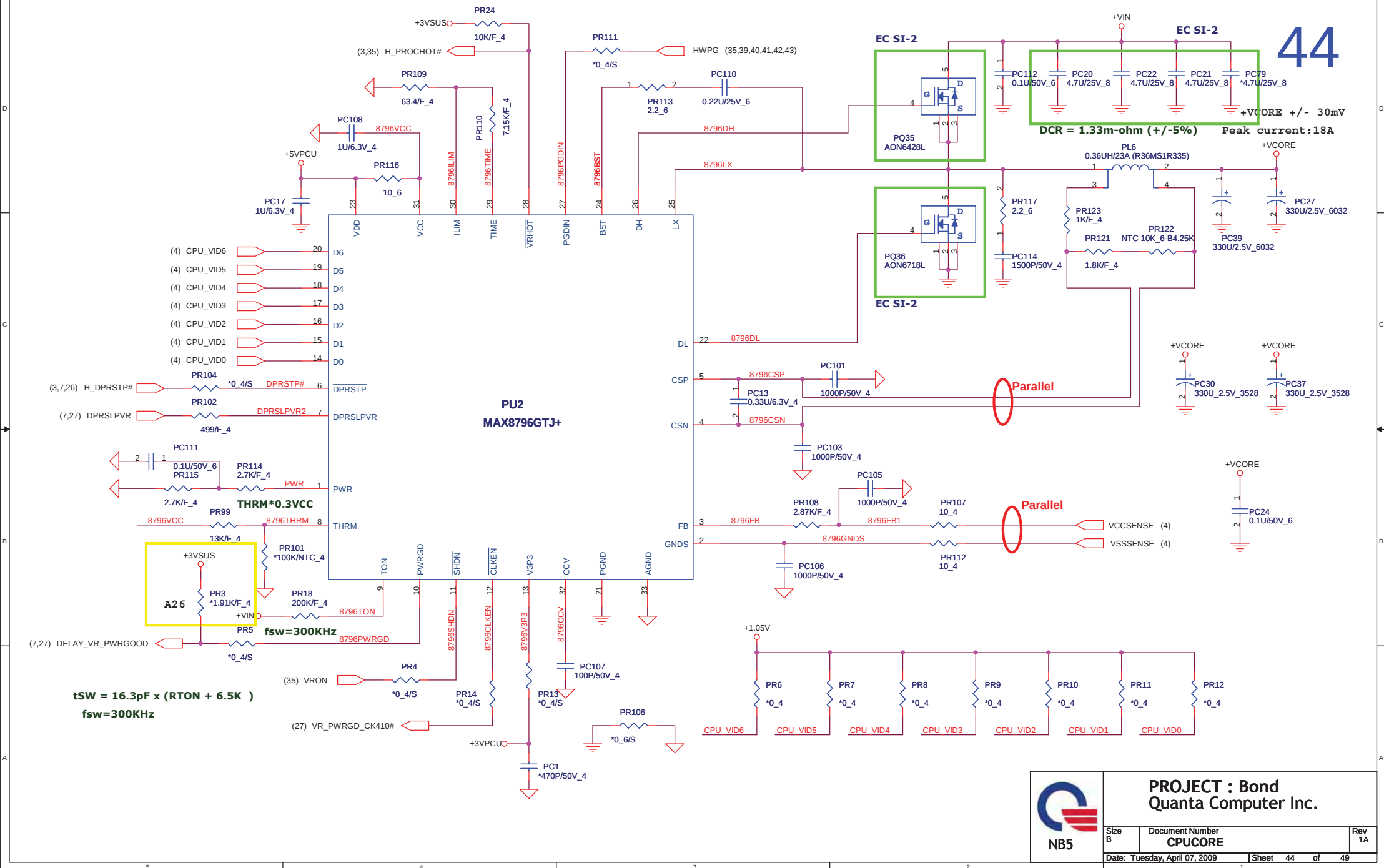
+1.8V/+1.5V_VGA

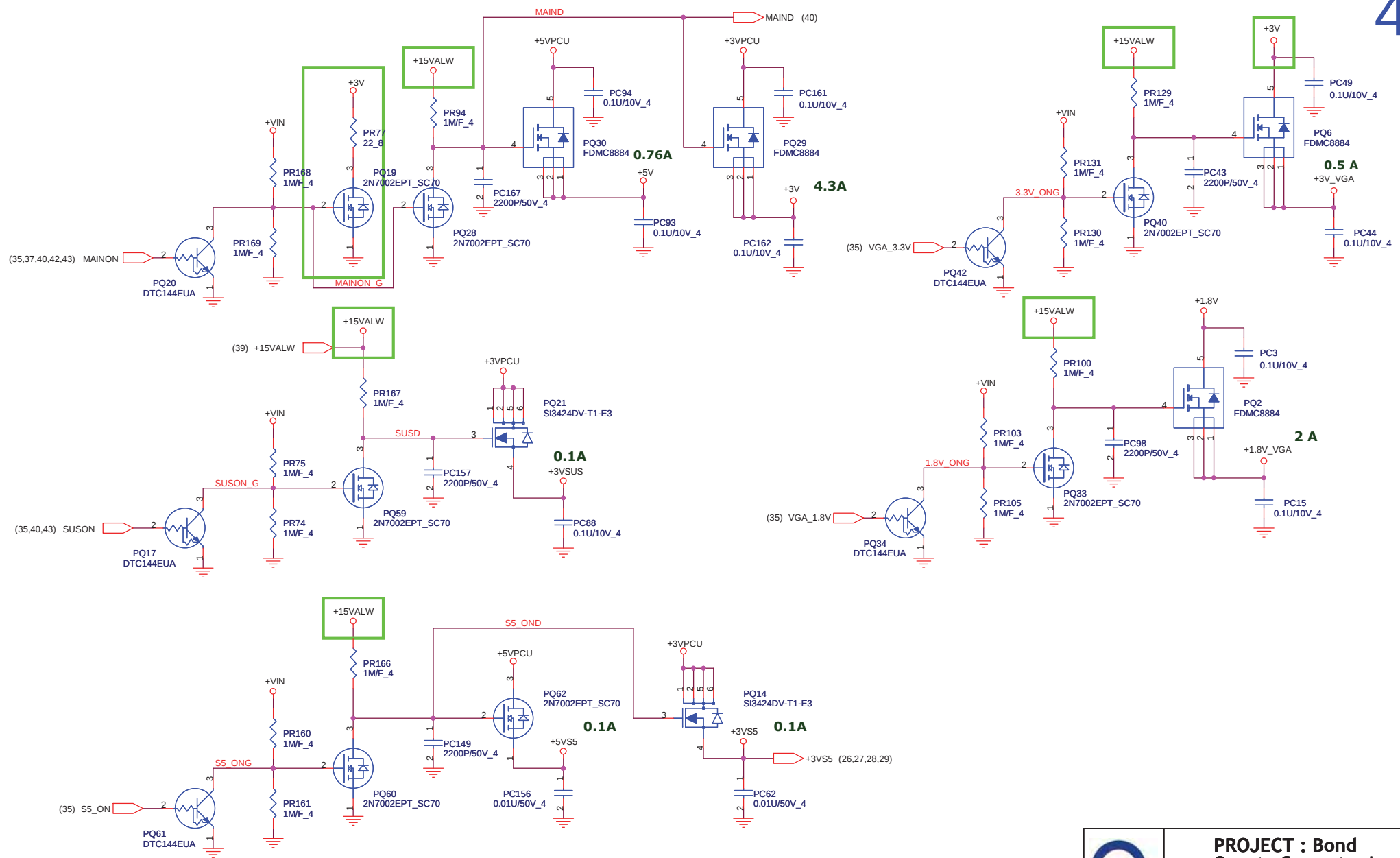
43



**PROJECT : Bond
Quanta Computer Inc.**

Size B	Document Number +1.05V/+1.5V	Rev 1A
Date: Tuesday, April 07, 2009	Sheet 43 of 49	





**PROJECT : Bond
Quanta Computer Inc.**

Size	Document Number	Rev
B	DISCHARGER	1A
Date: Tuesday, April 07, 2009	Sheet 45 of 49	