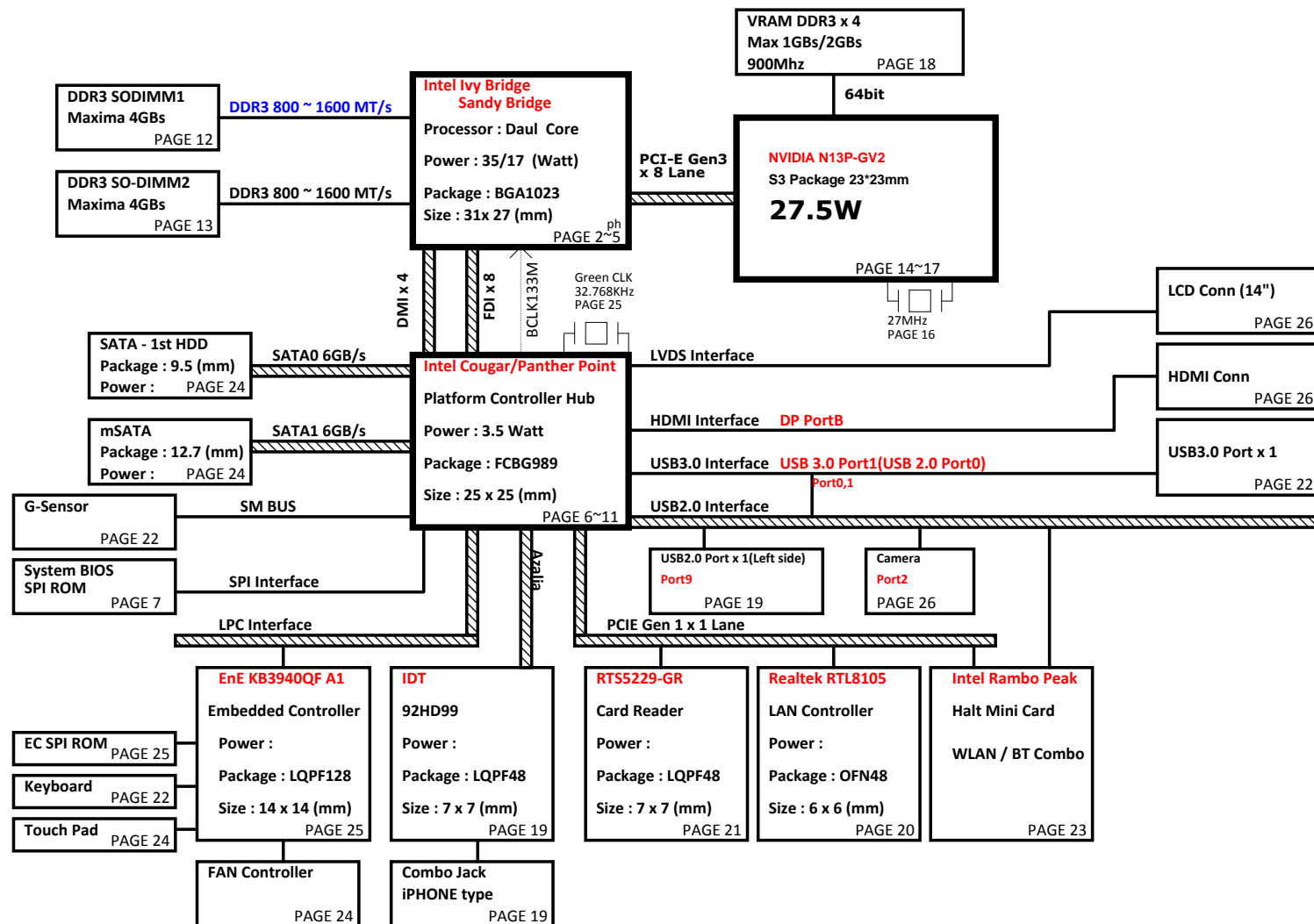
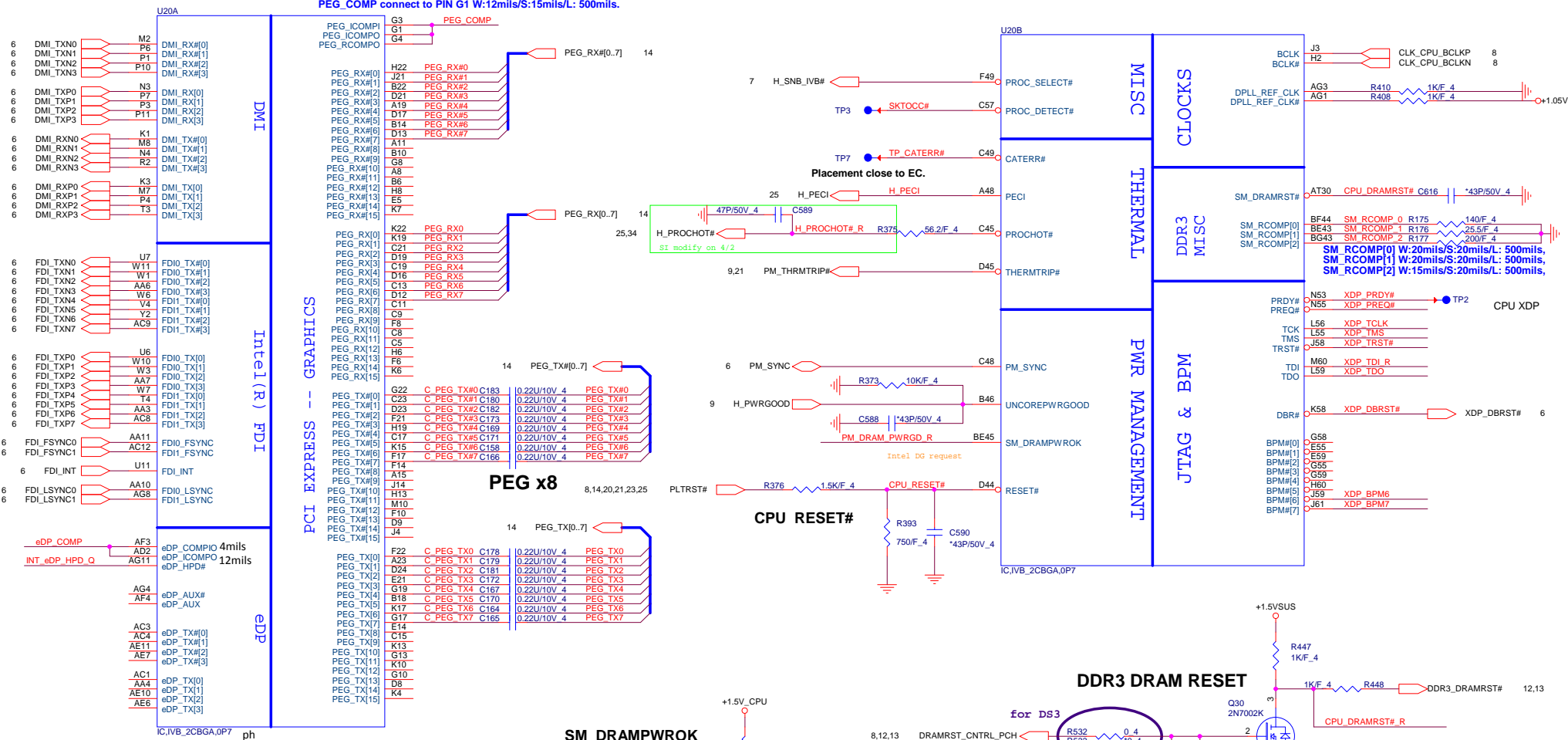


Volks DIS/UMA (14"/15.6") Ultra/Slim

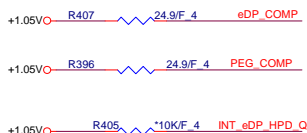
Intel Chief River Platform Block Diagram



PEG_COMP connect to PIN G3/G4 W:4mils/S:15mils/L: 500mils.
PEG_COMP connect to PIN G1 W:12mils/S:15mils/L: 500mils.



eDP_COMPIO and ICOMPO signals should be shorted near balls and routed with typical impedance <25 mohms



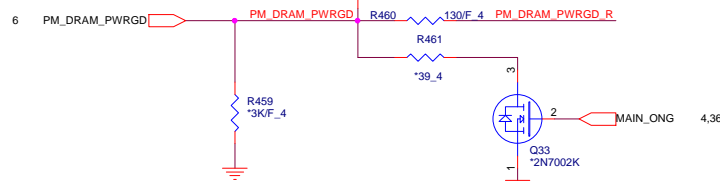
For iFDIM

Trigger Point

Connect a Test Point on BPM# 6 signal, very close to processor.

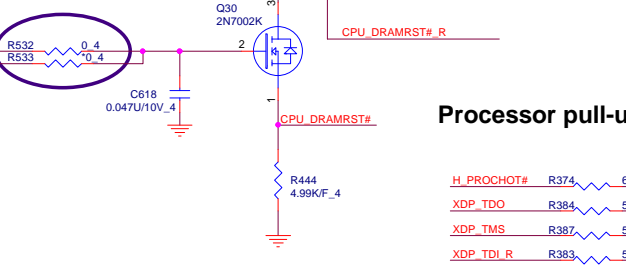
Connect a Test Point on BPM# 7 signal, very close to processor.

SM_DRAMPWROK
Processor Input.

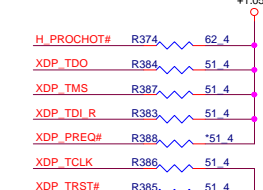


DDR3 DRAM RESET

for DS3

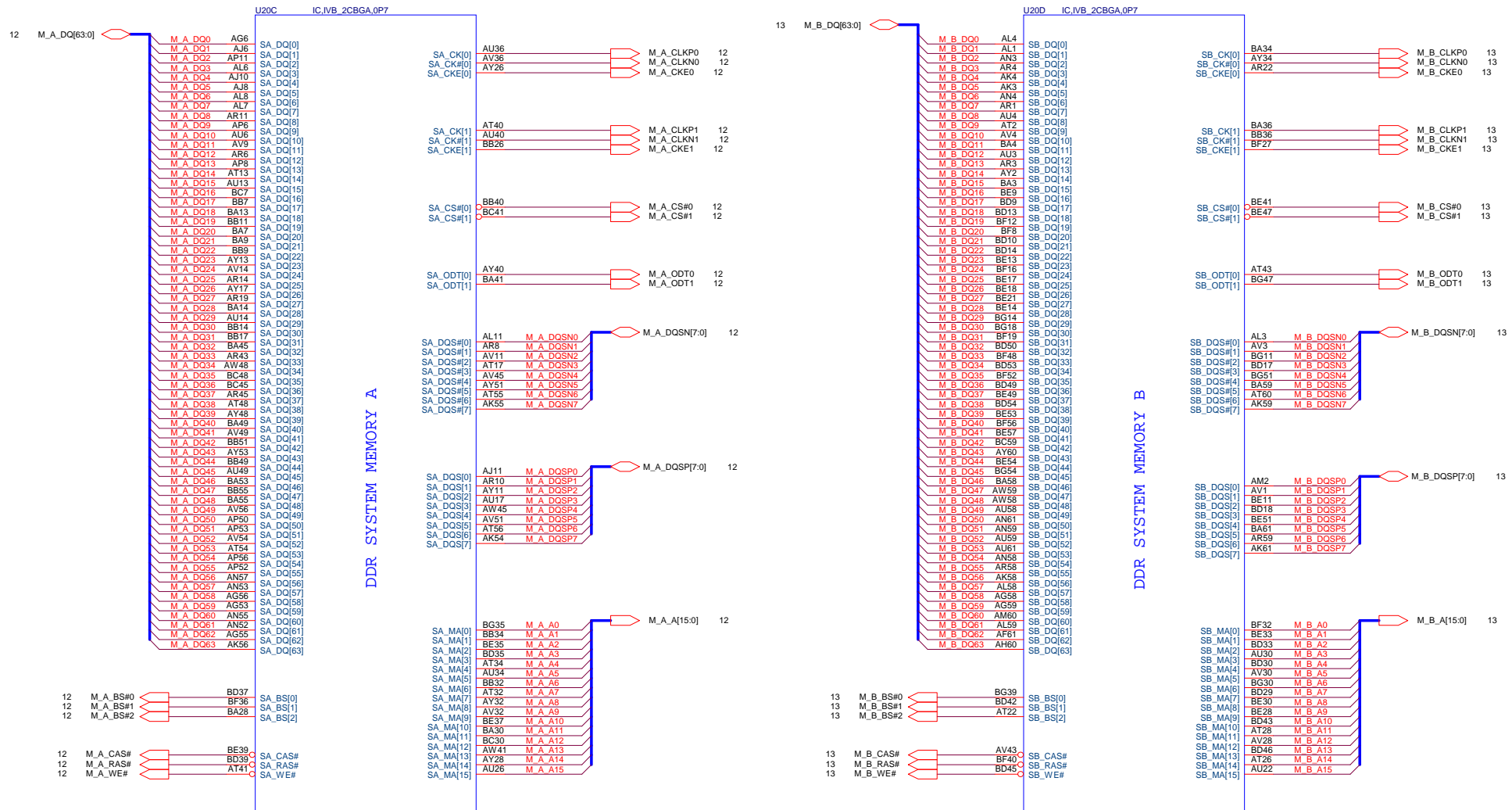


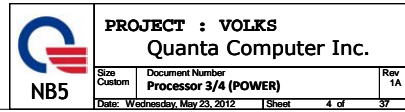
Processor pull-up (CPU)

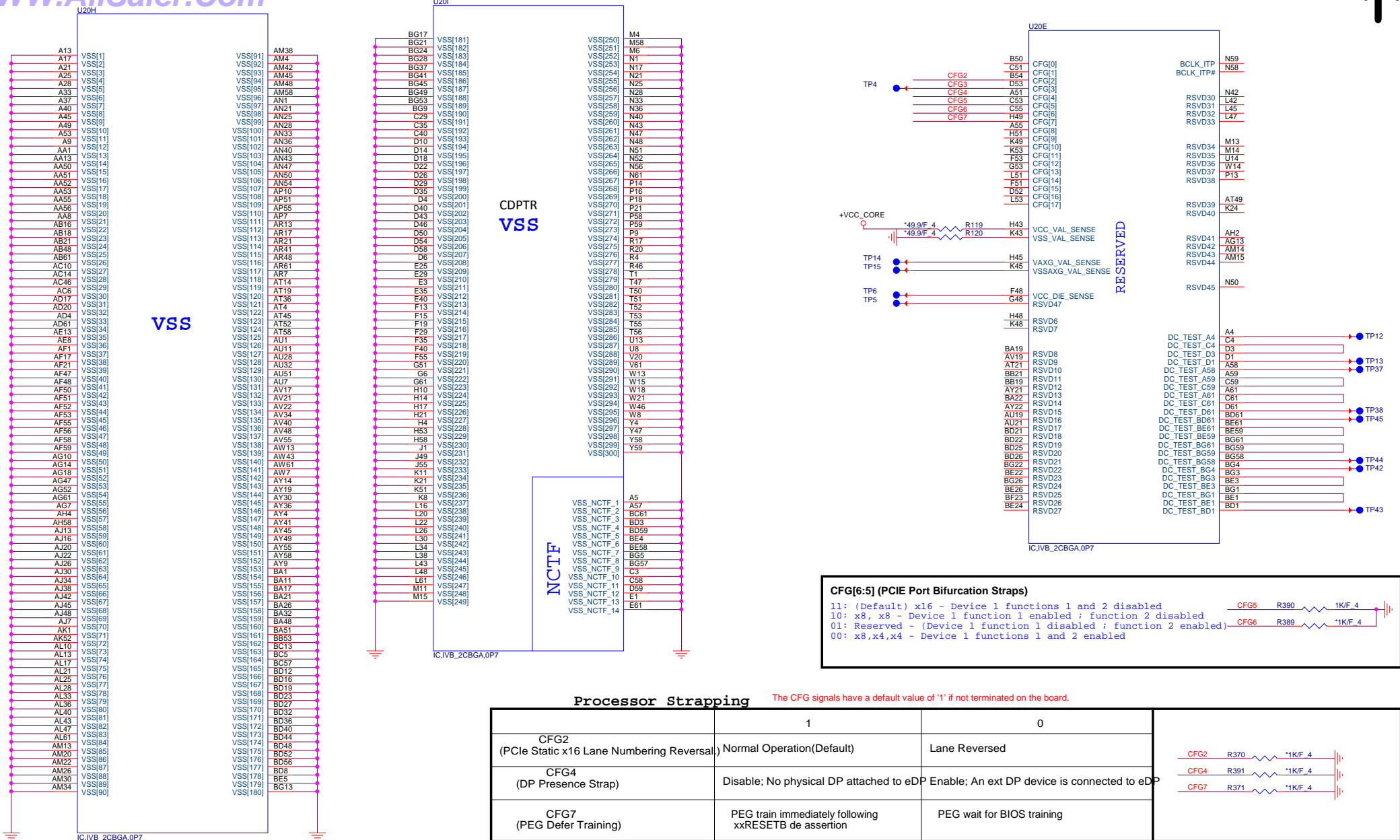


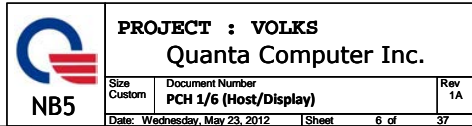
NB5	PROJECT : VOLKS	
	Quanta Computer Inc.	
	Size Custom	Document Number Processor 1/4 (Host/GPU)
Date: Wednesday, May 23, 2012	Sheet 2 of	37

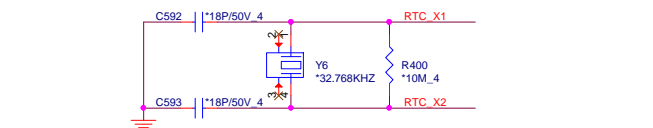
Ivy Bridge Processor (DDR3)



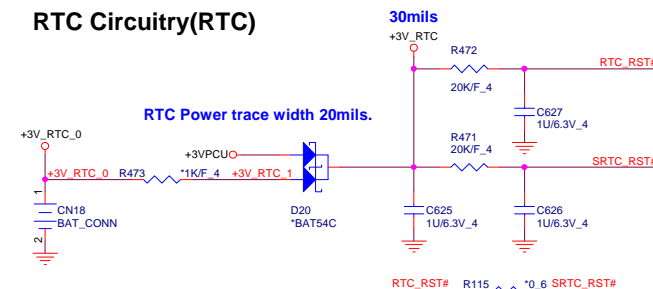




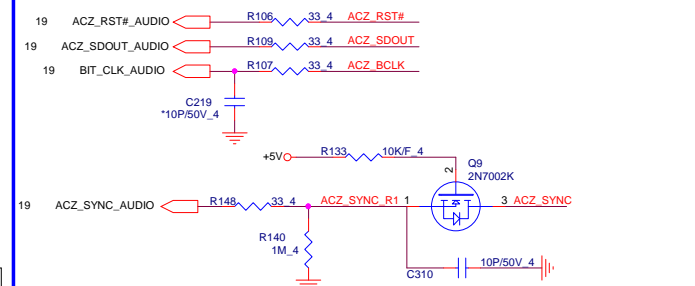




no stuff If use green Clock



HDA Bus(CLG)

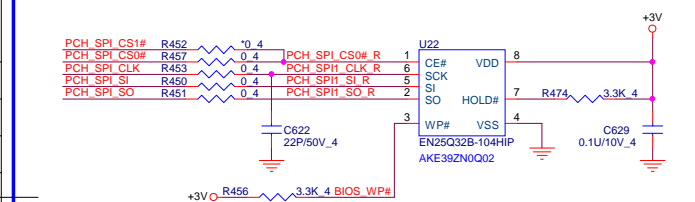


PCH Strap Table

Pin Name	Strap description	Sampled	Configuration	Circuit						
SPKR	No reboot mode setting	PWROK	0 = Default (weak pull-down 20K) 1 = Setting to No-Reboot mode							
GNT3# / GPIO55	Top-Block Swap Override	PWROK	0 = "top-block swap" mode 1 = Default (weak pull-up 20K)							
INTVRMEN	Integrated 1.05V VRM enable	ALWAYS	Should be always pull-up							
HDA_DOCK_EN#/GPIO33	Flash Descriptor Security Only for Interposer	PWROK	0 = Override 1 = Default (weak pull-up 20K)							
GNT1# / GPIO51	Boot BIOS Selection 1 [bit-1]	PWROK	<table border="1"><thead><tr><th>GNT1#</th><th>GNT0#</th><th>Boot Location</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>SPI LPC</td></tr></tbody></table>	GNT1#	GNT0#	Boot Location	0	0	SPI LPC	
GNT1#	GNT0#	Boot Location								
0	0	SPI LPC								
GPIO19 <div>Different from Calpella</div>	Boot BIOS Selection 0 [bit-0]	PWROK								
GNT2# / GPIO53	ESI strap (Server only)	PWROK	Should not be pull-down (weak pull-up 20K)	USE GPIO PIN						
NV_ALE	Intel Anti-Theft HDD protection Only for Interposer	PWROK	0 = Disable (Internal pull-down 20kohm)							
NV_CLE	DMI Termination voltage	PWROK	weak pull-down 20kohm							
HDA_SYNC	On-Die PLL VR Voltage Select	RSMRST	0 = Support by 1.5V (weak pull-down) 1 = Support by 1.5V							
HDA_SDO	Flash Descriptor Security	PWROK	0 = Override 1 = Default (weak pull-up 20K)							
GPIO8	Integrated Clock Chip Enable	RSMRST#	Should be pull-down (weak pull-up 20K)							
GPIO28 <div>Different from Calpella</div>	On-die PLL Voltage Regulator	RSMRST#	0 = Disable 1 = Enable (Default)							
SPI_MOSI	iTPM function Disable	APWROK	0 = Default (weak pull-down 20K) 1 = Enable							

Vender	Size	P/N
EON	4MB	AKE39ZN0Q02 (EN25Q32B-104HIP)
MX	4MB	AKE39FP0Z02 (MX25L3206EM2I-12G)
AMIC	4MB	AKE39F-0800 (A25LQ32AM-F/Q)
Socket		DFHS08FS023

☐ PCH SPI ROM(CLG)



+3V	6,8,9,10,12,13,14,16,19,20,21,22,23,24,25,26,30,32,34,36
+5V	10,19,21,22,23,24,26,36
+1.8V	4,10,31
+1.05V	2,4,6,8,10,21,23,30,33,34
+3VS5	6,10,23,28,30,33,36
+3VPCU	21,22,23,24,25,26,27,28
+3V. RTC	6,10,23

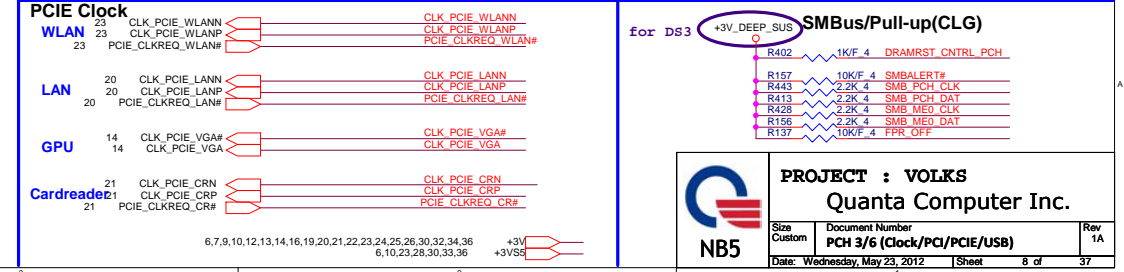
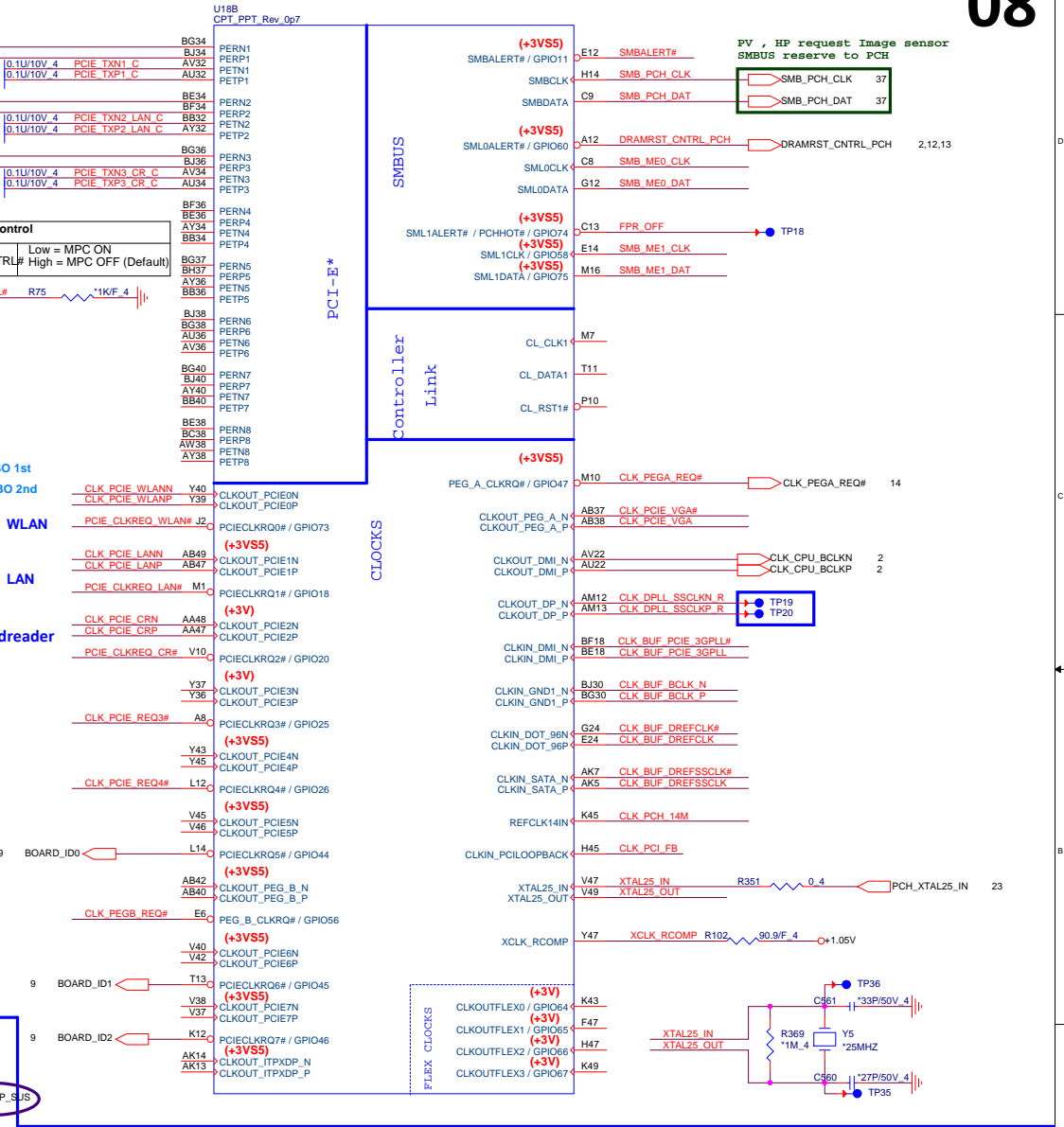
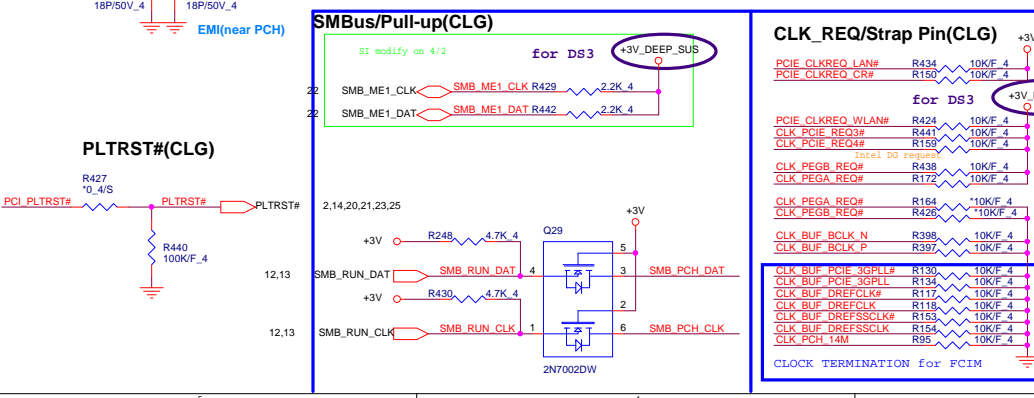
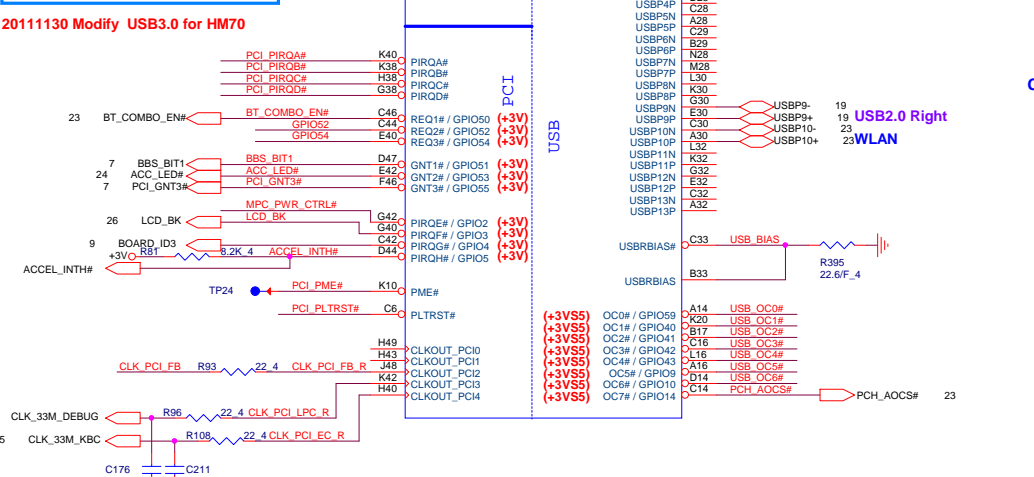
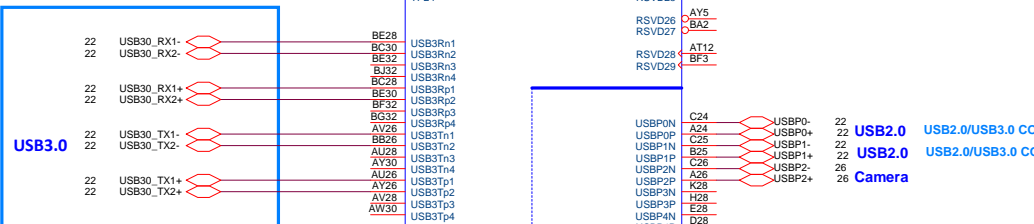
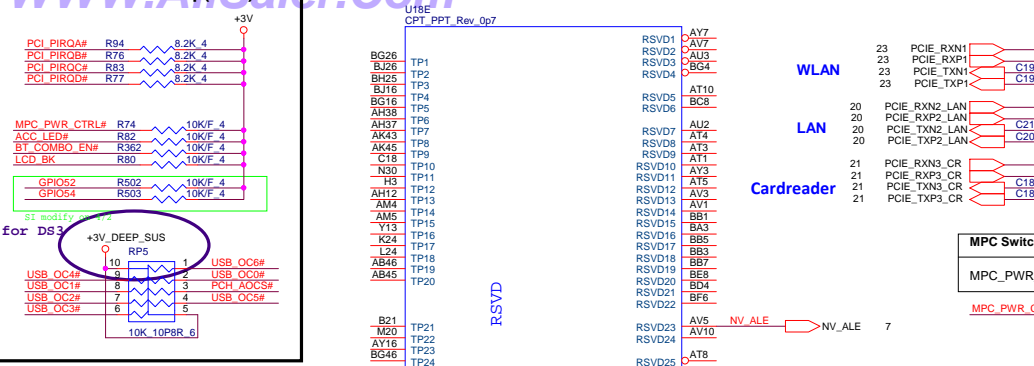


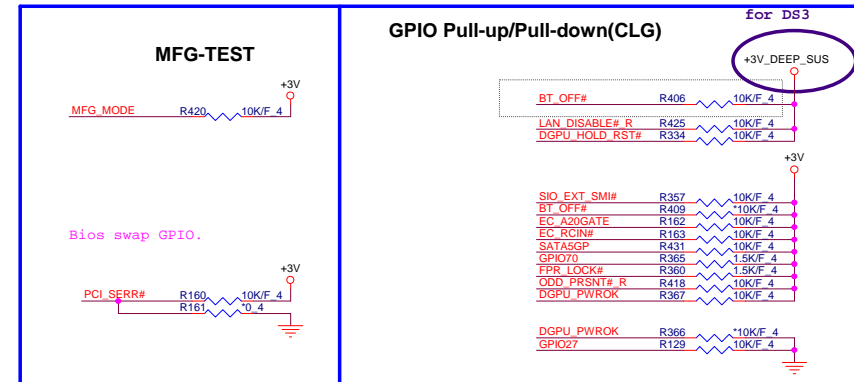
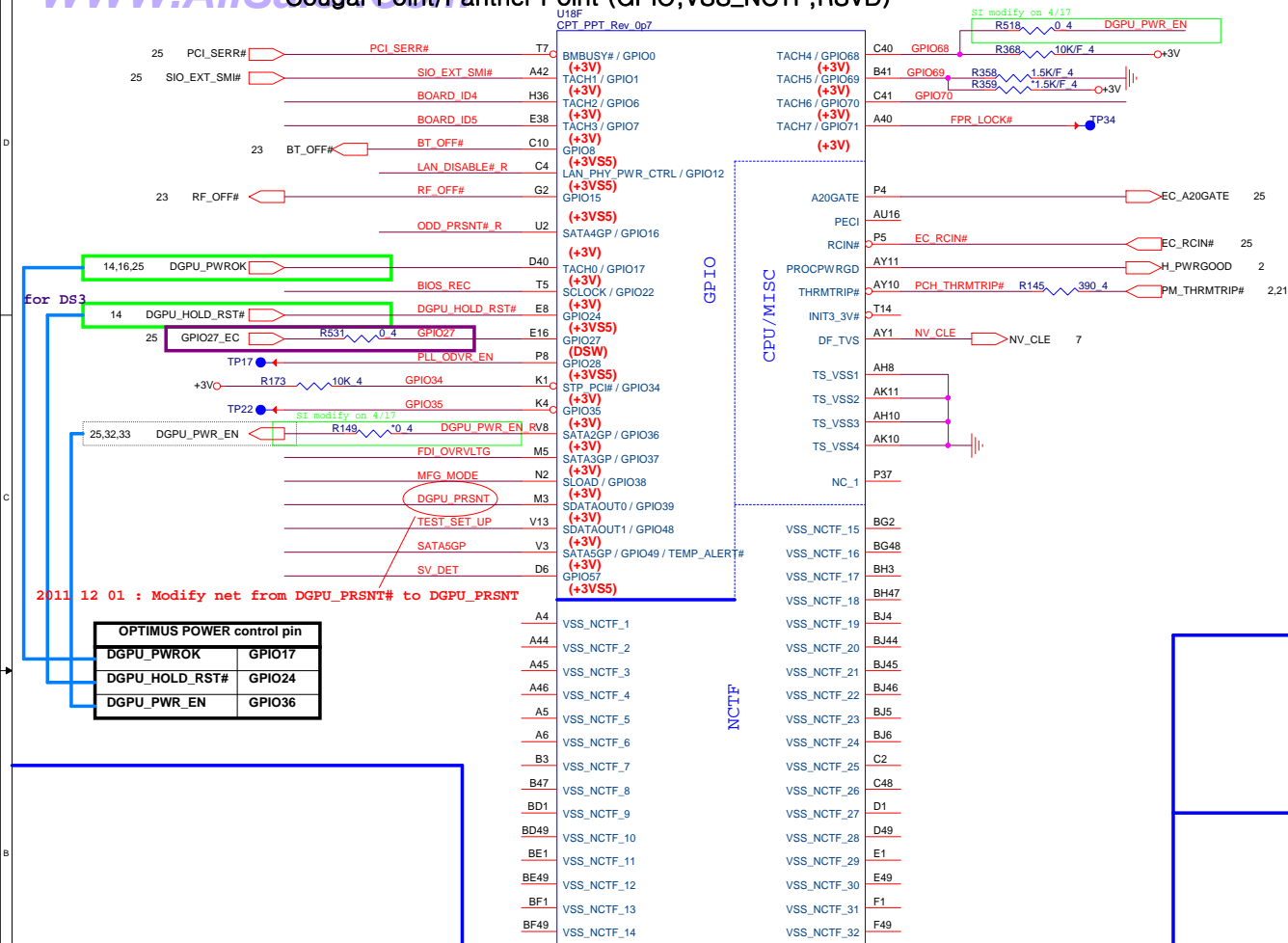
PROJECT : VOLKS
Quanta Computer Inc.

Size Custom	Document Number PCH 2/6 (HDA/RTC/SATA/SPI)	Rev 1.
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PC/USB# Pull-up(CLG) Cougar Point-M/Panther Point (PCI,USB,NVRAM)

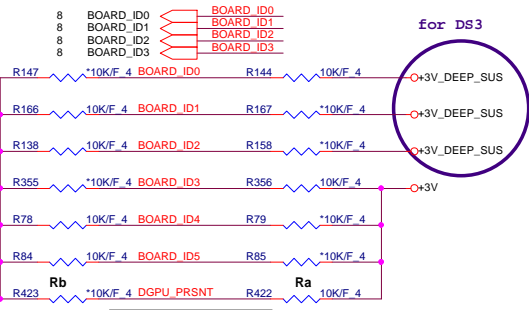
Cougar Point-M/Panther Point (PCI-E,SMBUS,CLK)





Chief River BOARD ID SETTING

Model	BOARD_ID0	BOARD_ID1	BOARD_ID2	BOARD_ID3	BOARD_ID4	BOARD_ID5
U33 UMA	0	0	0	0	0	0
U33 DIS 128*16 VRAM	0	0	0	0	0	1
U33 DIS 256*16 VRAM	0	0	0	0	1	1
U33 HM77	0	0	1	X	X	X
U33 HM70	0	0	0	X	X	X

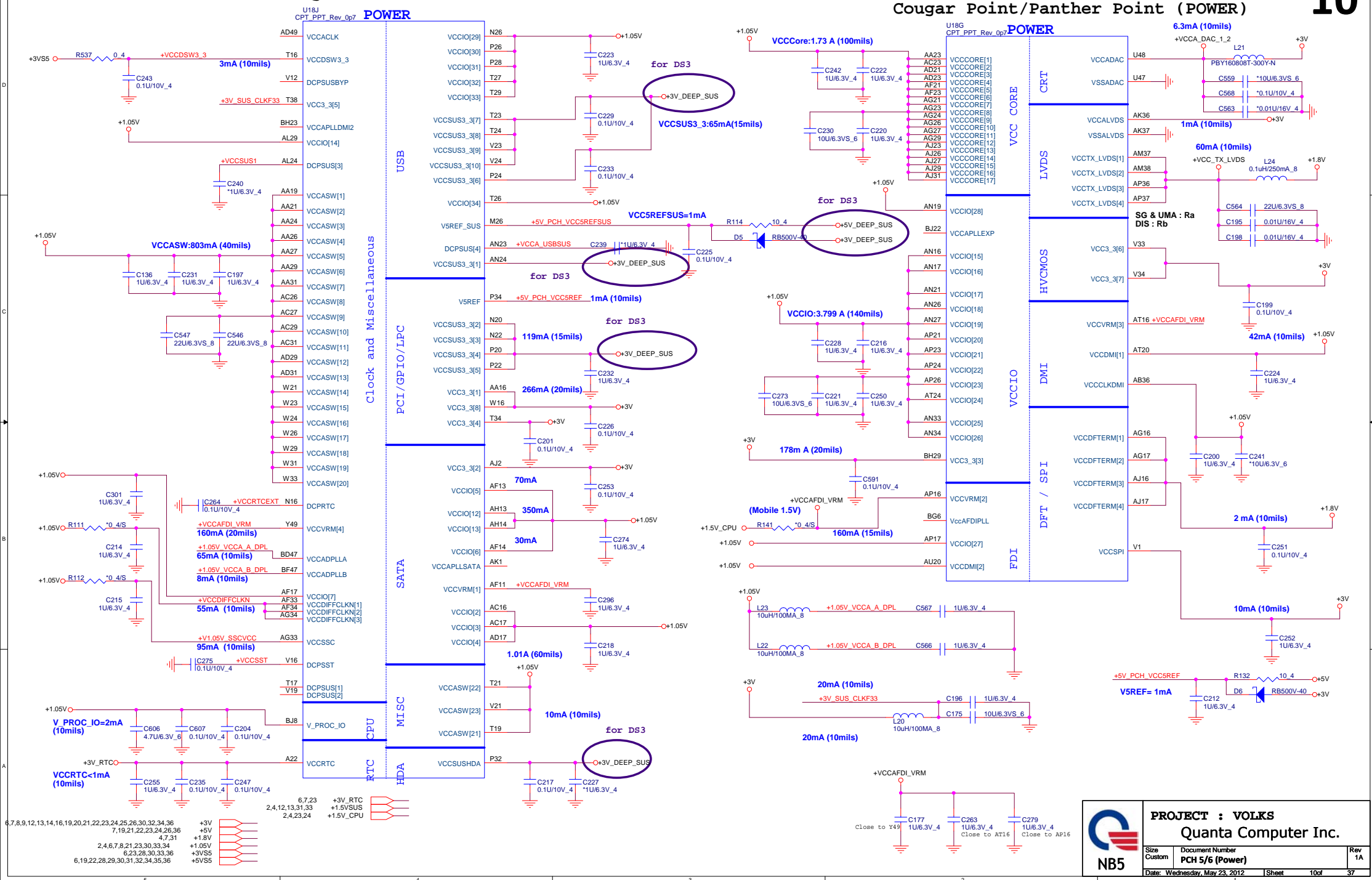


SG	UMA
Stuff	Ra
NC	Rb

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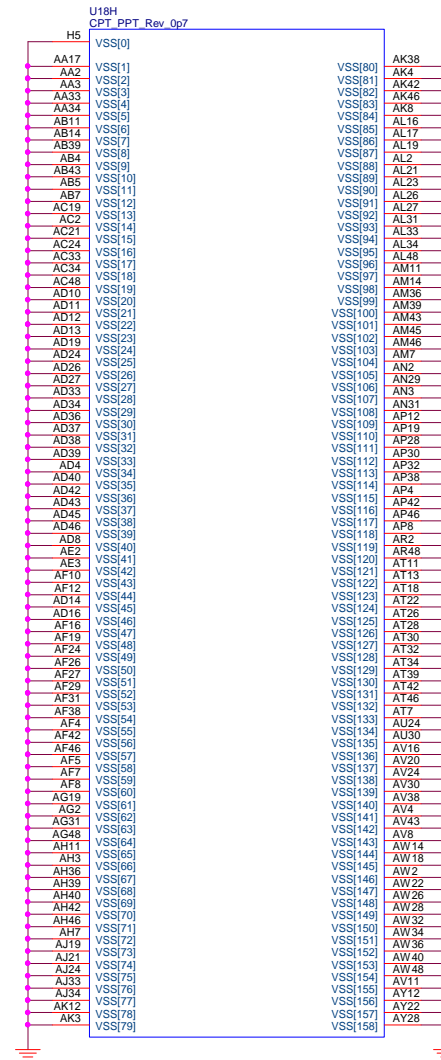
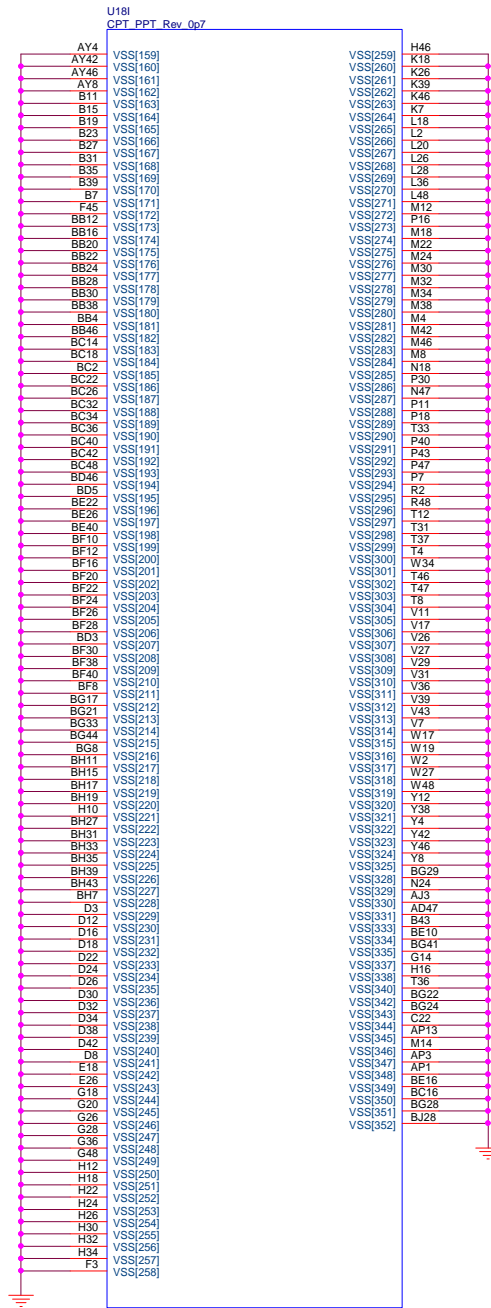
Size Custom
Document Number PCH 4/6 (GPIO)
Rev 1A

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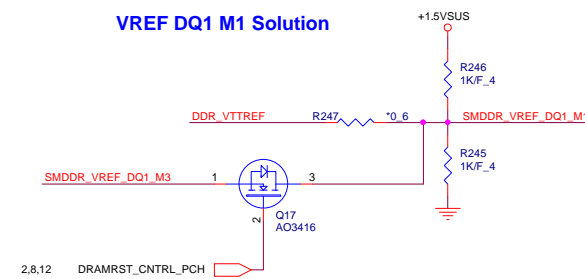


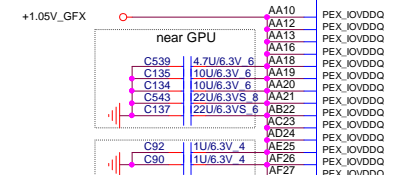
Cougar Point/Panther Point (GND)

Cougar Point/Panther Point (GND)

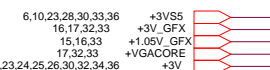
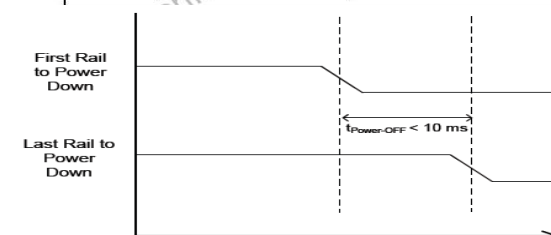
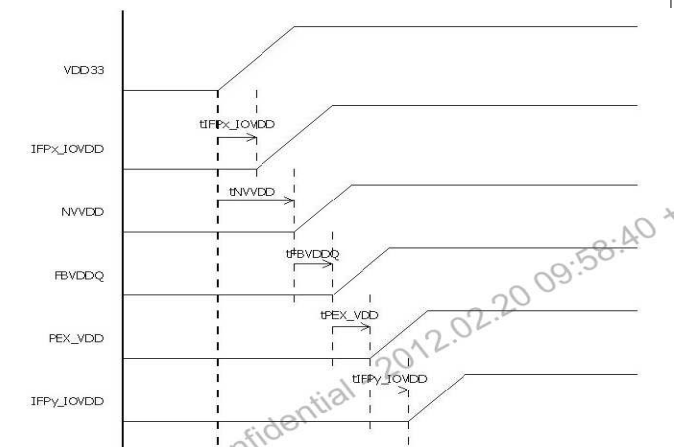
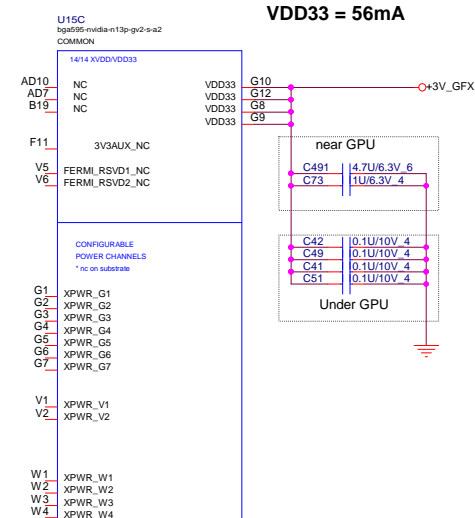
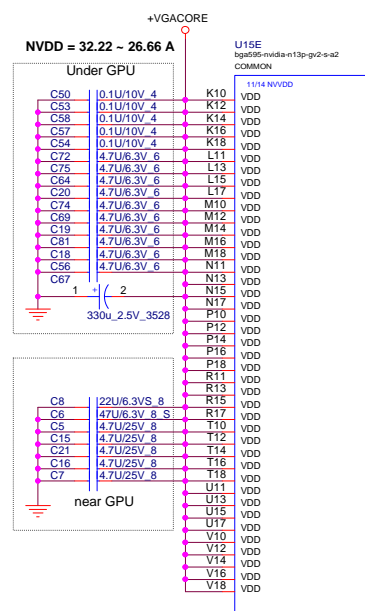
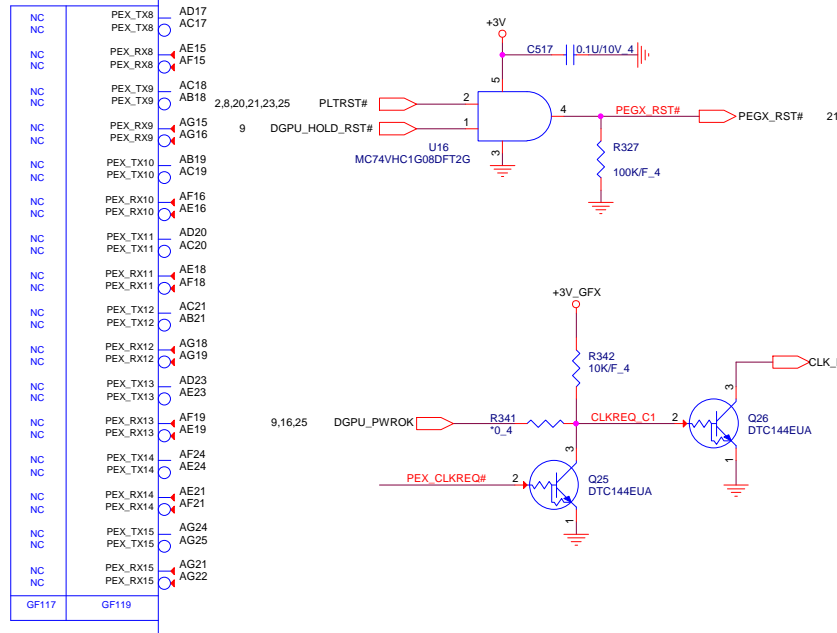
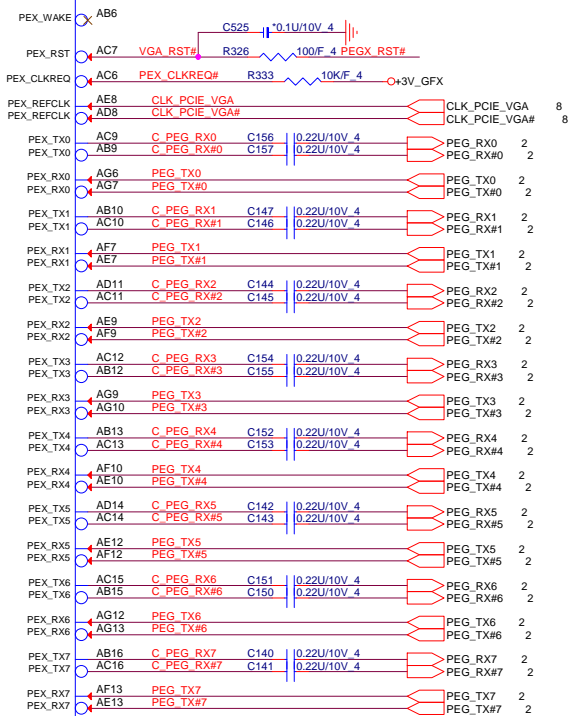
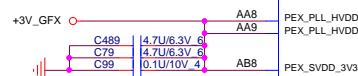


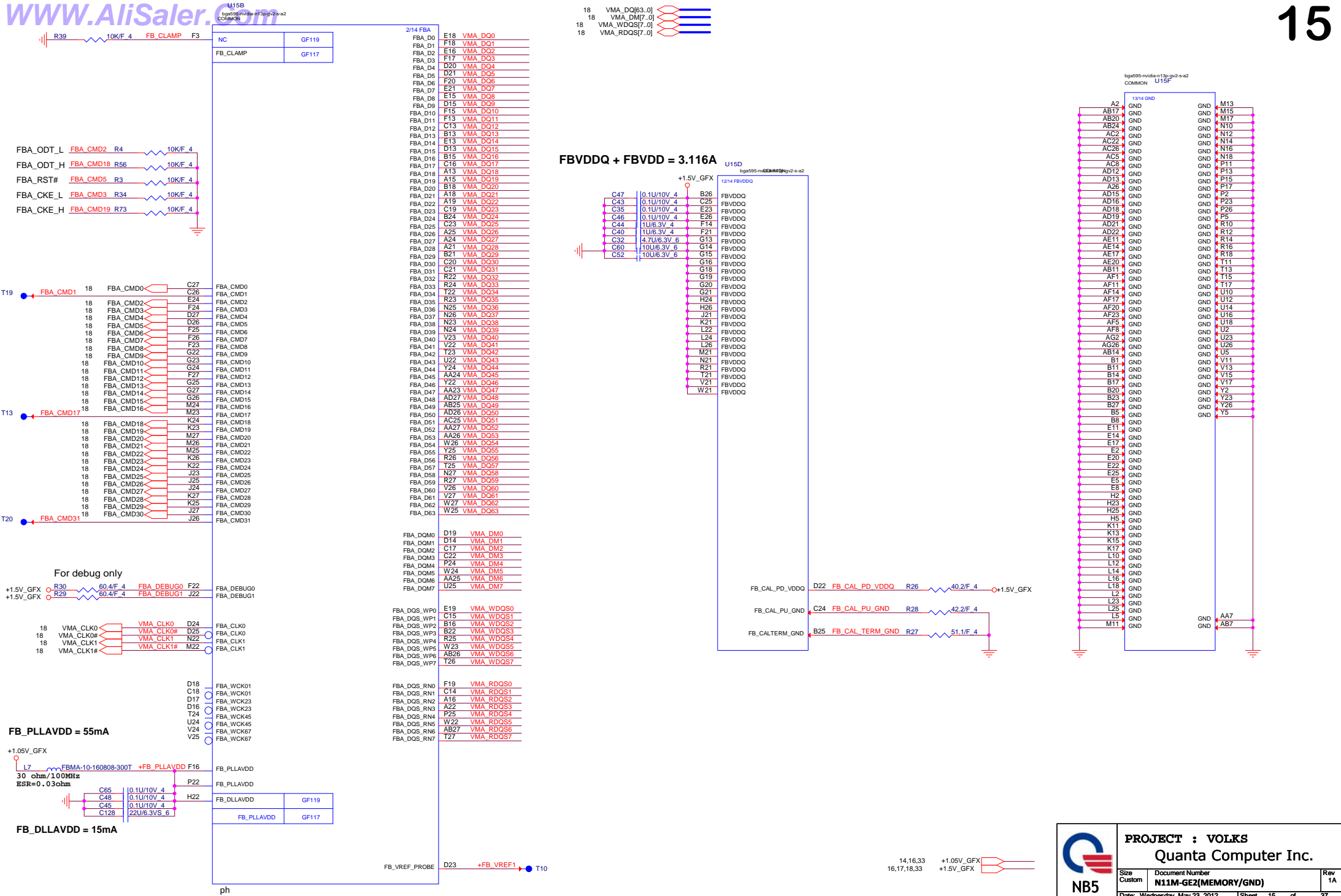
VREF DQ1 M1 Solution





PEX_PLL_HVDD +
PEX_SVDD 3V3 = 143mA



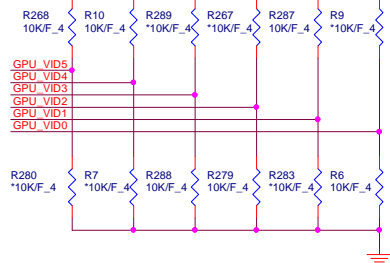


PROJECT : VOLKS
Quanta Computer Inc.

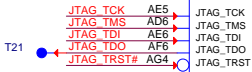
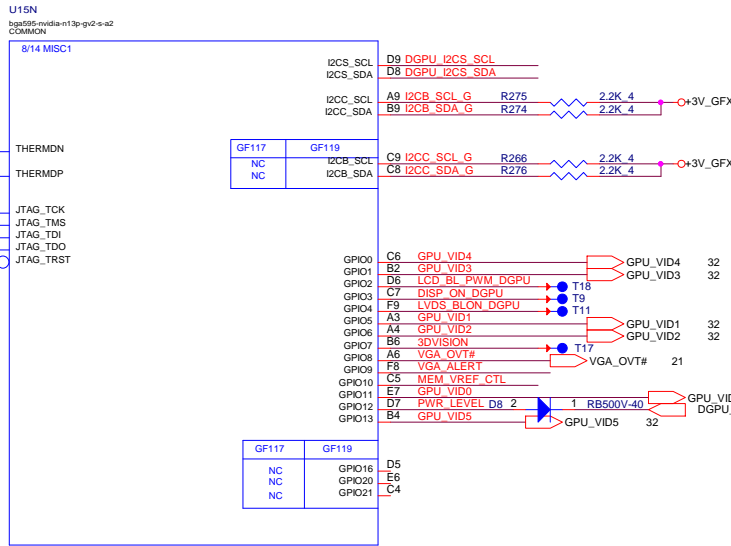
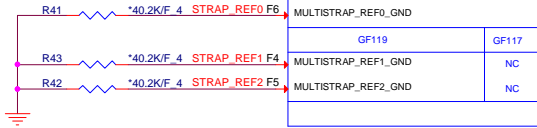
Size Custom Document Number **N11M-GE2(MEMORY/GND)** Rev 1A

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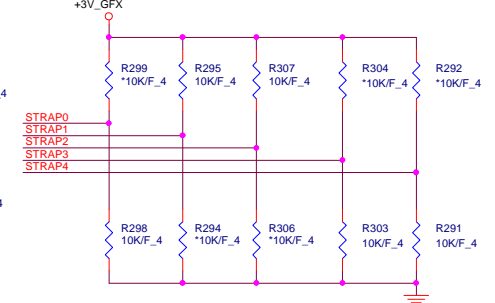
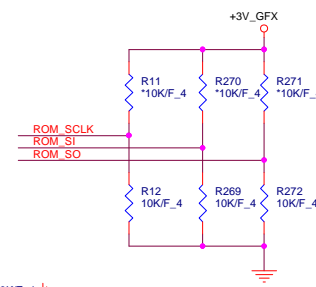
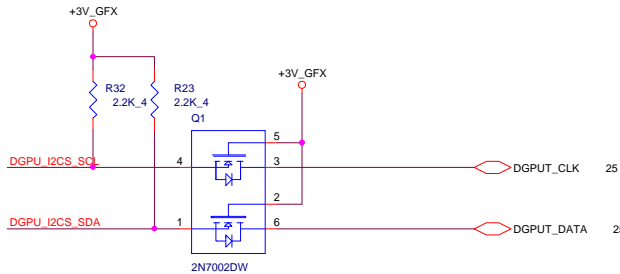
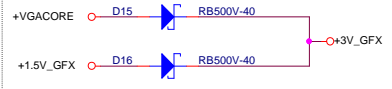




N13P-GV2 NVDD HW BOOT Voltage = 0.875V
VID = 0110010



for meet Power down sequence.
Nvidia request for optimus



Binary Strap Mode Mapping

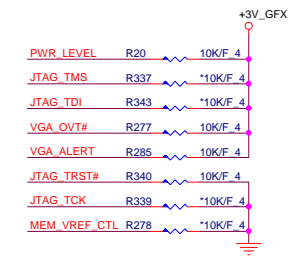
Strap Pin name	Strap Mapping	Resistance	Polarity
ROM_SCLK	SMB_ALT_ADDR	10Kohm	Pull-down to GND
ROM_SI	SUB_VENDOR	10Kohm	Pull-up to 3V3 if VBIOS ROM Exists Pull-down to GND if no VBIOS ROM
ROM_SO	VGA_DEVICE	10Kohm	Pull-down to GND (no dispaly)
STRAP0	RAMCFG[0]	10Kohm	USER defined
STRAP1	RAMCFG[1]	10Kohm	USER defined
STRAP2	RAMCFG[2]	10Kohm	USER defined
STRAP3	RAMCFG[3]	10Kohm	USER defined
STRAP4	PCIE_MAX_SPEED	10Kohm	Pull-down to GND

VRAM Configuration Table

RAMCFG [3:0]	DESCRIPTION	Vendor	Vendor P/N	QBCON P/N	HP P/N
0011 0101 1100 1001	(MP) DDR3 256Mx16x4, 64bit, 2Gb,900MHz DDR3 256Mx16x4, 64bit, 2Gb,900MHz DDR3 128Mx16x4, 64bit, 1Gb,900MHz DDR3 128Mx16x4, 64bit, 1Gb,900MHz	Reserved Hynix Micron Hynix Samsung	H5TQ4G63MFR-11C MT41K256M16HA-107G:E H5TQ2G63DFR-11C K4W2G1646C-HC11	AKD5PGWTW00 AKD5PGSTL01 AKD5MGWTW12 AKD5MGWT513	AKD5PGWTW01 AKD5PGSTL02 AKD5MGWTW13 AKD5MGWT508
0001 0100 1011	(OOC) DDR3 256Mx16x4, 64bit, 2Gb,900MHz DDR3 256Mx16x4, 64bit, 2Gb,900MHz DDR3 128Mx16x4, 64bit, 1Gb,900MHz	Samsung Hynix Samsung	K4W4G1646B-HC11 H5TQ4G63AFR-11C K4W2G1646E-BC11	AKD5MGWT518 AKD5MGWT521	AKD5MGWT517 AKD5MGWT522

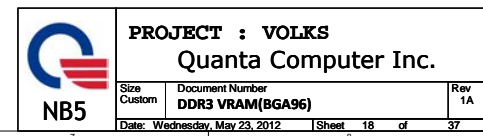
GB2-64 and GB4-128 GPIO Description

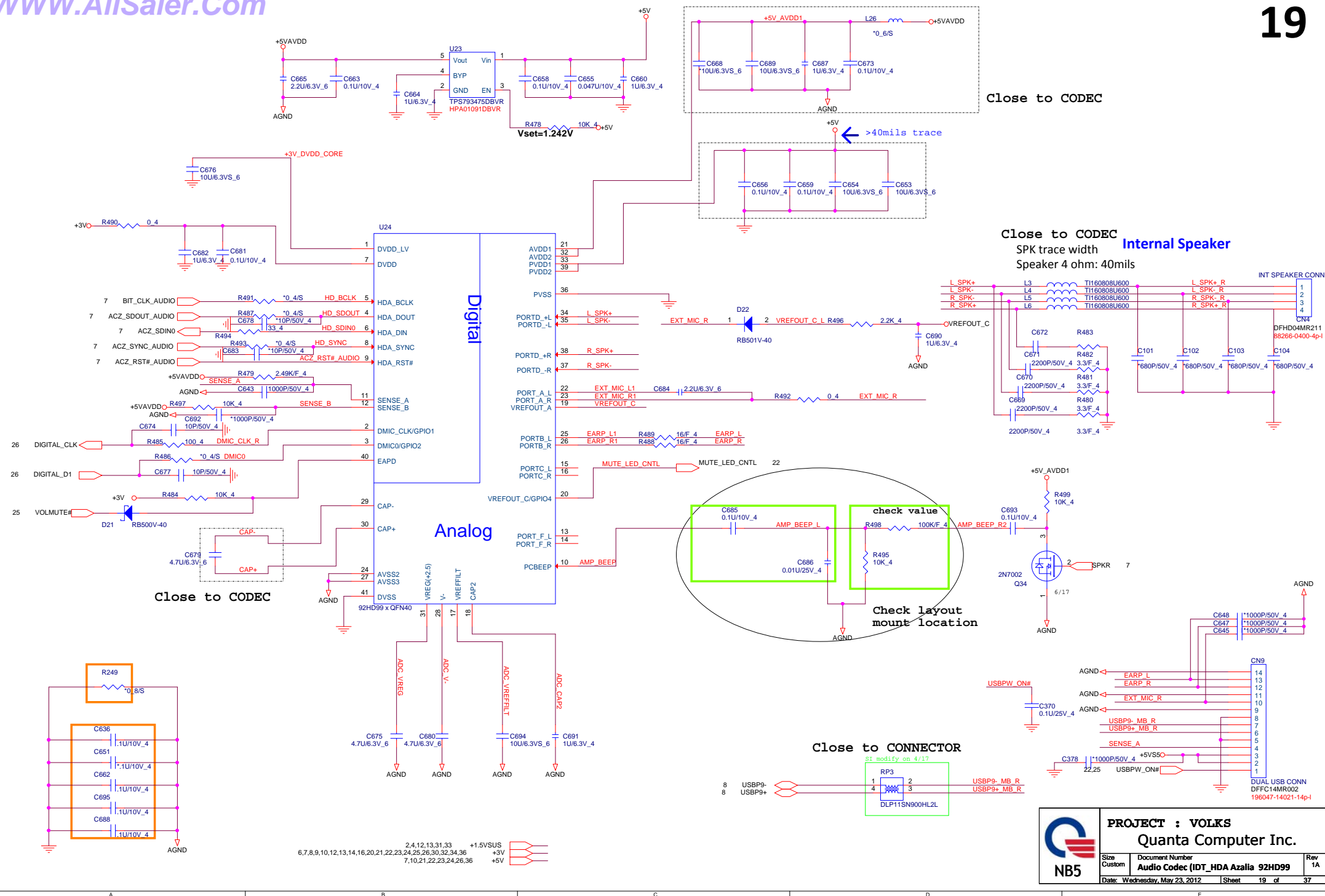
GPIO pin Name	Normal Function	I/O	Functional Description	Recommended Default Pull-up or Pull-down
GPIO0	GPU_VID4	O	GPU Core VDD VID4	Strap to boot NVDD
GPIO1	GPU_VID3	O	GPU Core VDD VID3	Strap to boot NVDD
GPIO2	LCD_BL_PWM	O	Panel Backlight PWM Brightness Control	100 K pull-down
GPIO3	LCD_VCC or PSI	O	Panel Power Enable or Phase Shedding	LCD_VCC: 100K pull-down; PSI: 10K pull-up or pull-down; stuff as needed to disable phase shedding by default
GPIO4	LCD_BLEN	O	Panel Backlight Enable	100 K pull-down
GPIO5	GPU_VID1	O	GPU Core VDD VID1	Strap to boot NVDD
GPIO6	GPU_VID2	O	GPU Core VDD VID2	Strap to boot NVDD
GPIO7	3Dvision	O	3D Vision Left/Right signal	100 K pull-down
GPIO8	OVERT	I/O	Active Low Thermal Catastrophic Over Temperature	100 K pull-up
GPIO9	ALERT	I/O	Active Low Thermal Alert	100 K pull-up
GPIO10	MEM_VREF_CTL	O	Memory VREF Control	100 K pull-down
GPIO11	GPU_VID0	O	GPU Core VDD VID0	Strap to boot NVDD
GPIO12	PWR_LEVEL	I	AC power detect or power supply overdraw input	100 K pull-up
GPIO13	GPU_VID5	O	GPU Core VDD VID5	Strap to boot NVDD
GPIO14	HPD_AB	I	Hot Plug Detect for IFPA	See Figure 76
GPIO15	HPD_C	I	Hot Plug Detect for IFPC	See Figure 76
GPIO16	PSI or MEM_VDD_CTL	O	Phase Shedding or Memory VDD VID	PSI: 10K pull-up or pull-down; stuff as needed to disable phase shedding by default; MEM_VDD_CTL: Strap to boot FBVDD/Q
GPIO17	HPD_D	I	Hot Plug Detect for IFPD	See Figure 76
GPIO18	HPD_E	I	Hot Plug Detect for IFPE	See Figure 76
GPIO19	HPD_F	I	Hot Plug Detect for IFPF	See Figure 76
GPIO20	Reserved			
GPIO21	Reserved			

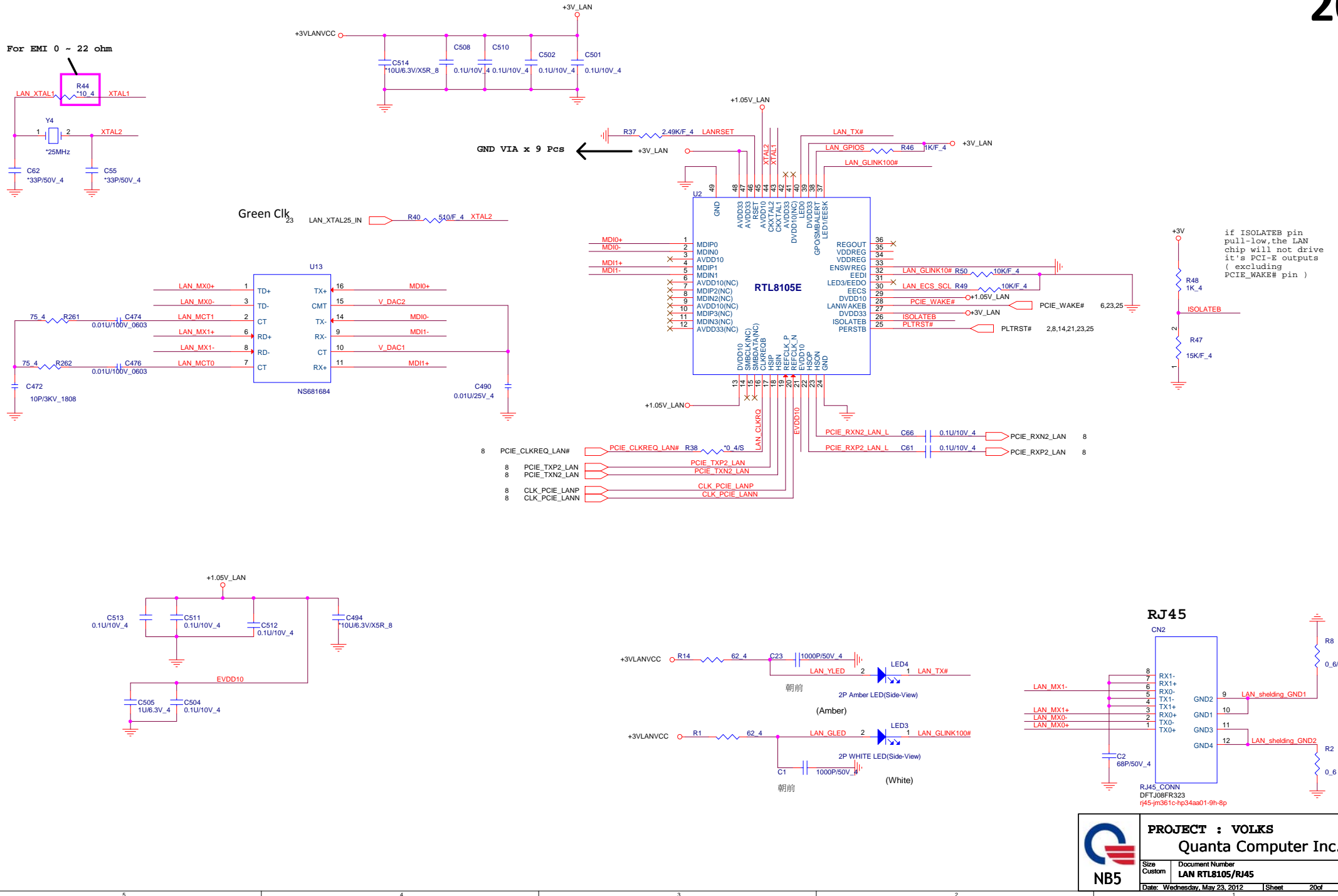


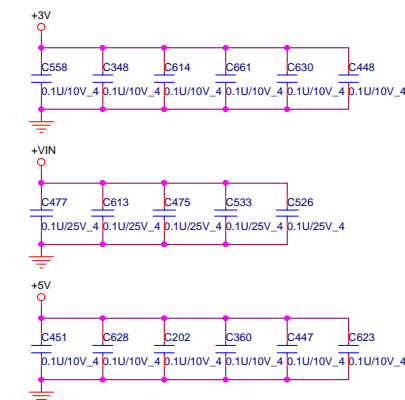
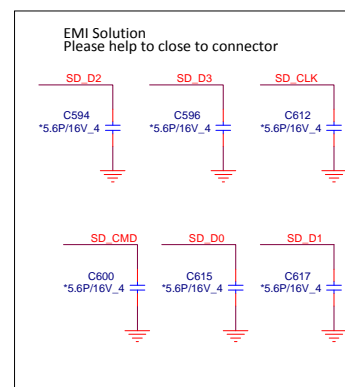
PROJECT : VOLKS
Quanta Computer Inc.

Size Custom	Document Number N12P-GV(GPIO/STRAPS)	Rev 1A
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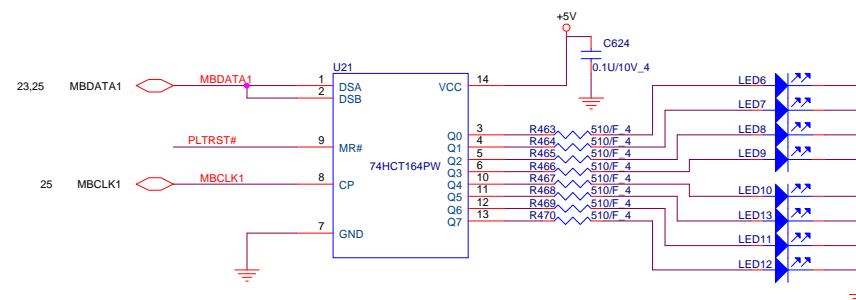
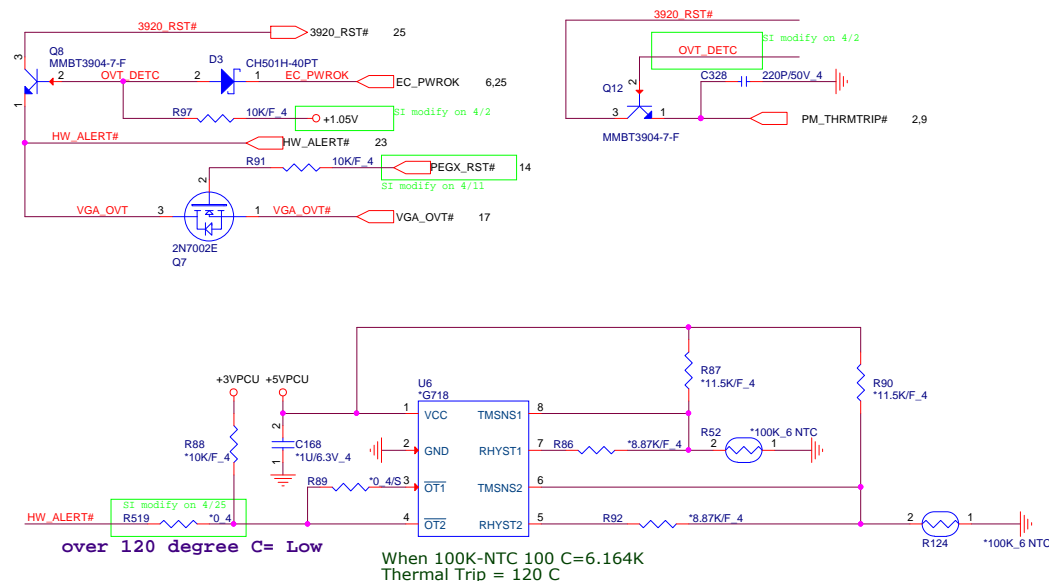





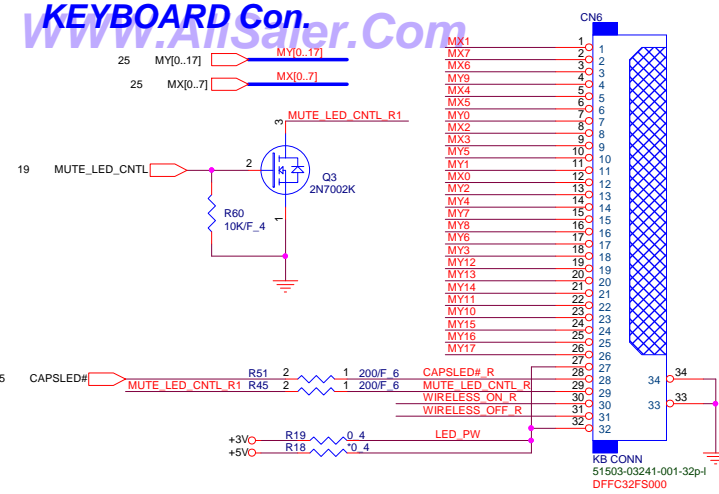




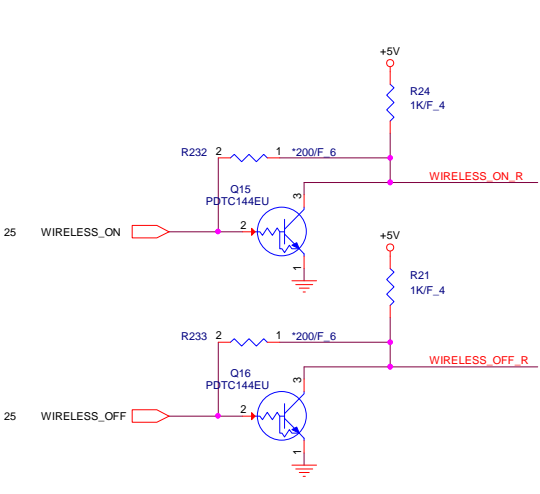
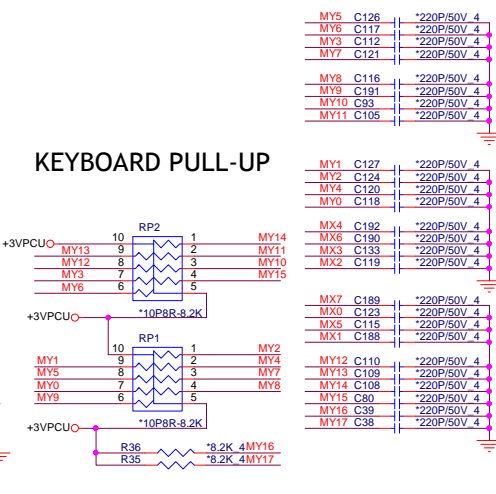
80 port



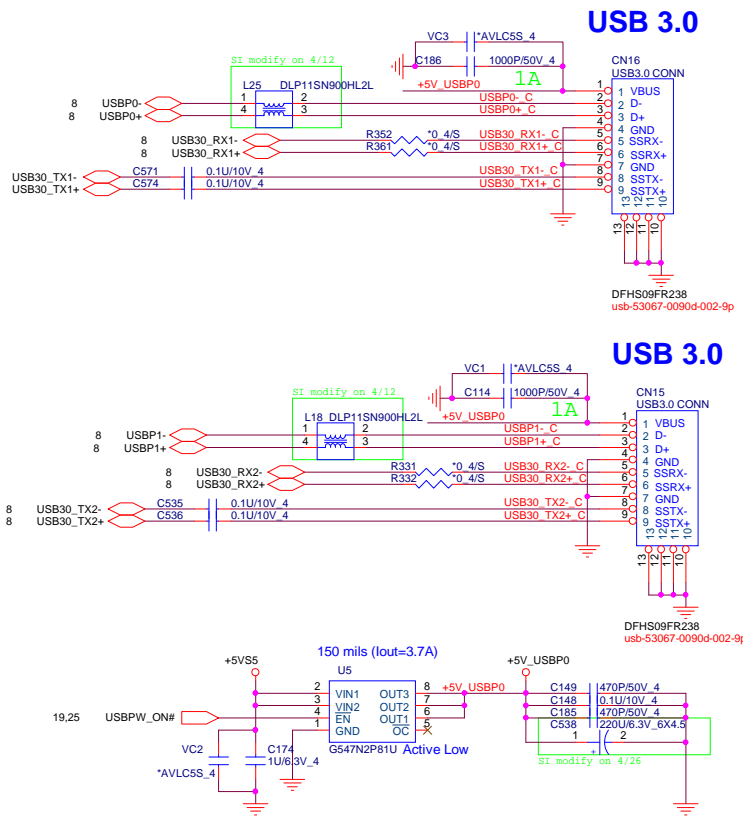
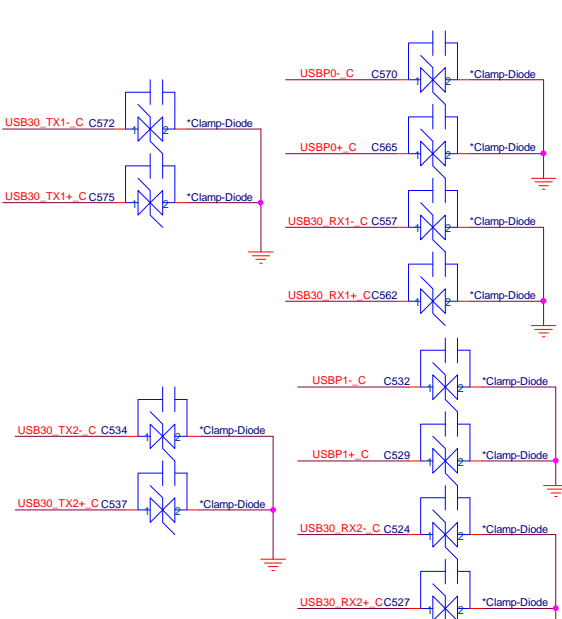
	PROJECT : VOLKS Quanta Computer Inc.		
	Size Custom	Document Number Card Reader control (RTS5229-GR)	Rev 1A
Date: Wednesday, May 23, 2012		Sheet 21 of	37



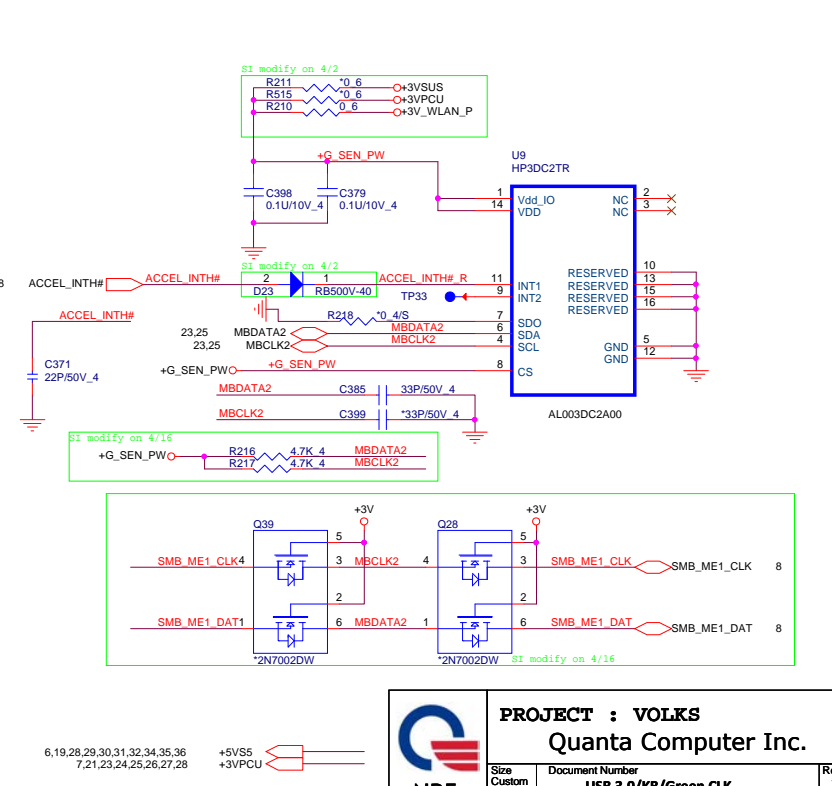
KEYBOARD PULL-UP



USB 2.0/3.0 Combo



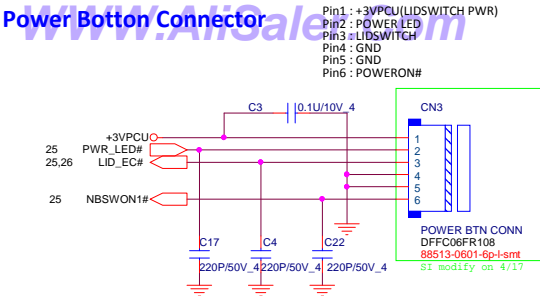
Accelerometer Sensor



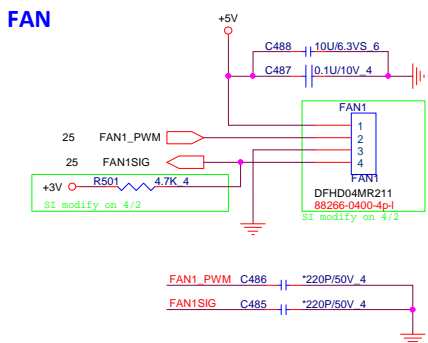
PROJECT : VOLKS
Quanta Computer Inc.

Size Custom	Document Number	Rev 1A
USB 3.0/KB/Green CLK		
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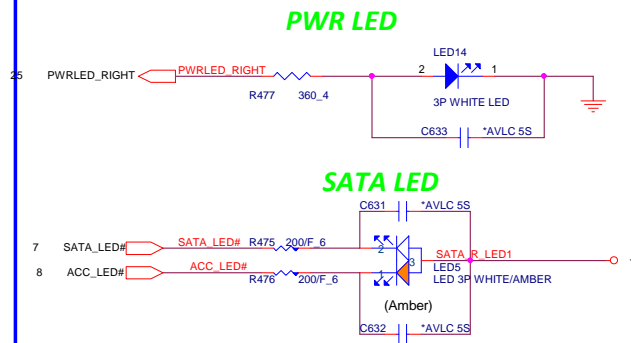
Power Button Connector



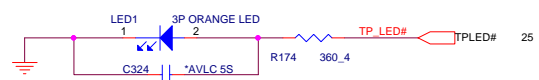
FAN



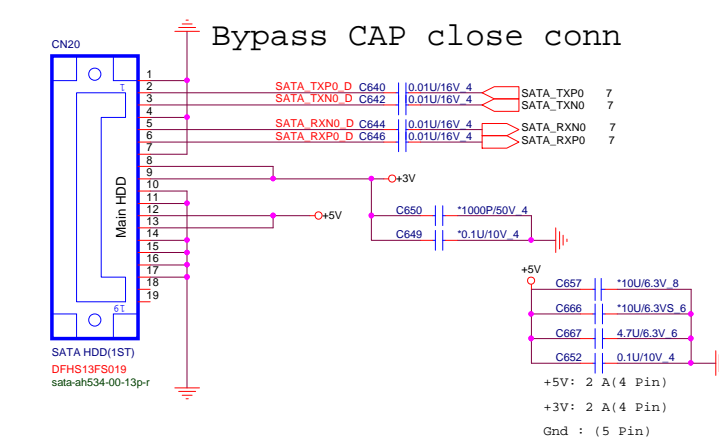
PWR LED



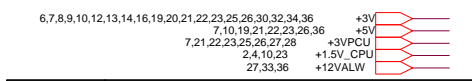
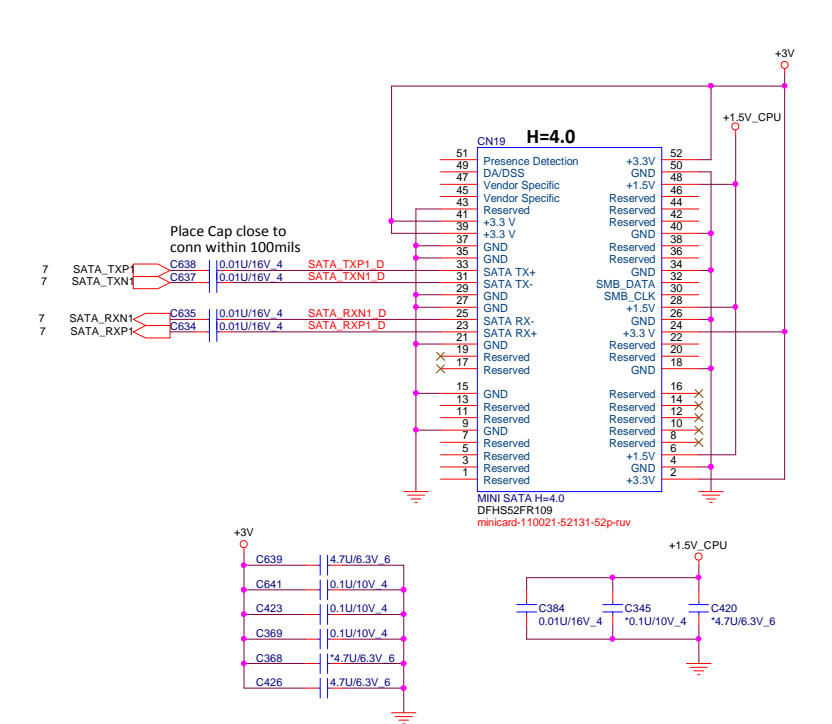
14" TP LED



SATA HDD Connector(Cable type)

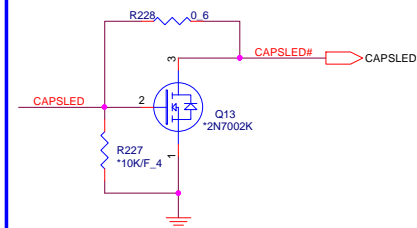


Mini PCI-E Card 2- Full size mSATA

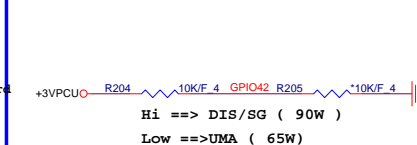


		PROJECT : VOLKS	
		Quanta Computer Inc.	
Size Custom	Document Number	SATA HDD/ODD/MSATA CONN	
Date: Wednesday, May 23, 2012	Sheet	24of	37

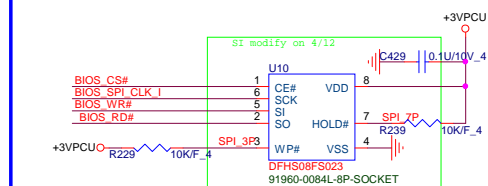
Cap LED



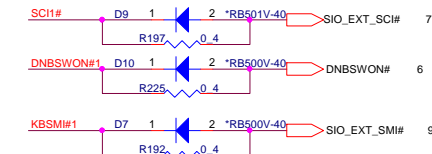
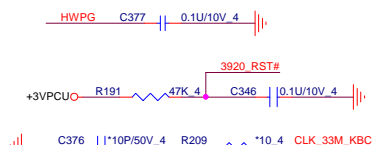
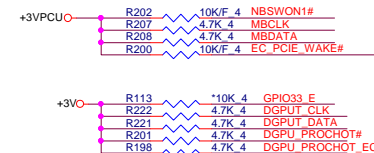
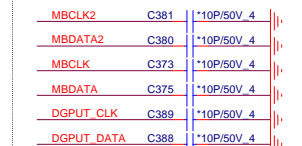
Adapter select for EC



Vender	Size	P/N
EON	1MB	AKE3GZN0Q01 (EON EN25Q80A-100HIF)
MX	1MB	AKE3GFP0Z00 (MX25L8006EM2I-12G)
AMIC	1MB	AKE3GZP0801 (A25L080M-F)
Socket		DFHS08FS023

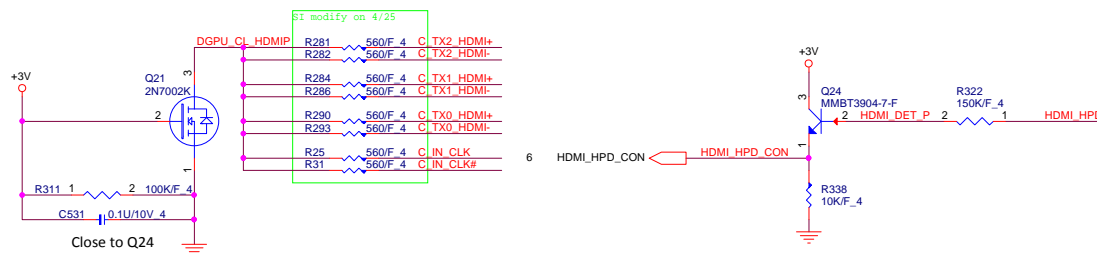
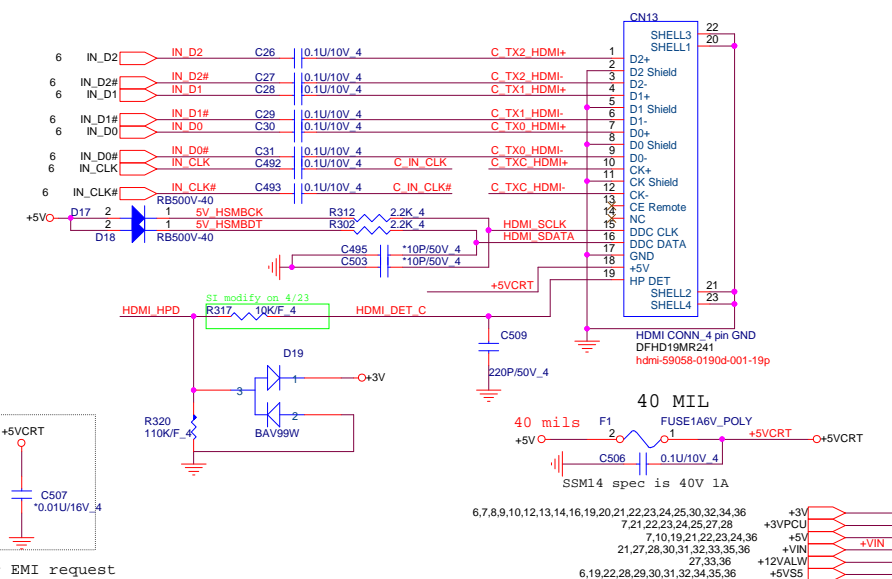
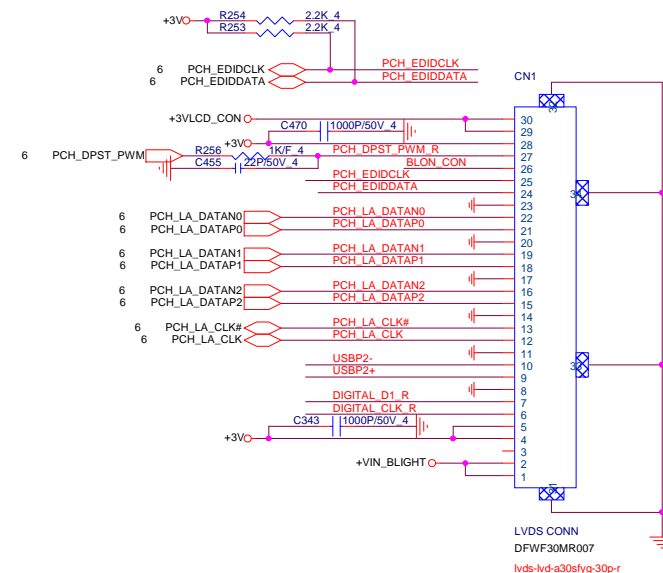



Reserve for ENE Hold time issue



PROJECT : VOLKS
Quanta Computer Inc.

Size Custom	Document Number EC (KB3940 A1)/ROM	Rev 1A
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 NB5	PROJECT : VOLKS Quanta Computer Inc.		
	Size Custom	Document Number LCD Connector (LVDS)	Rev 1A
Date: Wednesday, May 23, 2012		Sheet 26of	37

CN10	P/N
14 "	DFAD08MR036
15 "	DFAD08MR035

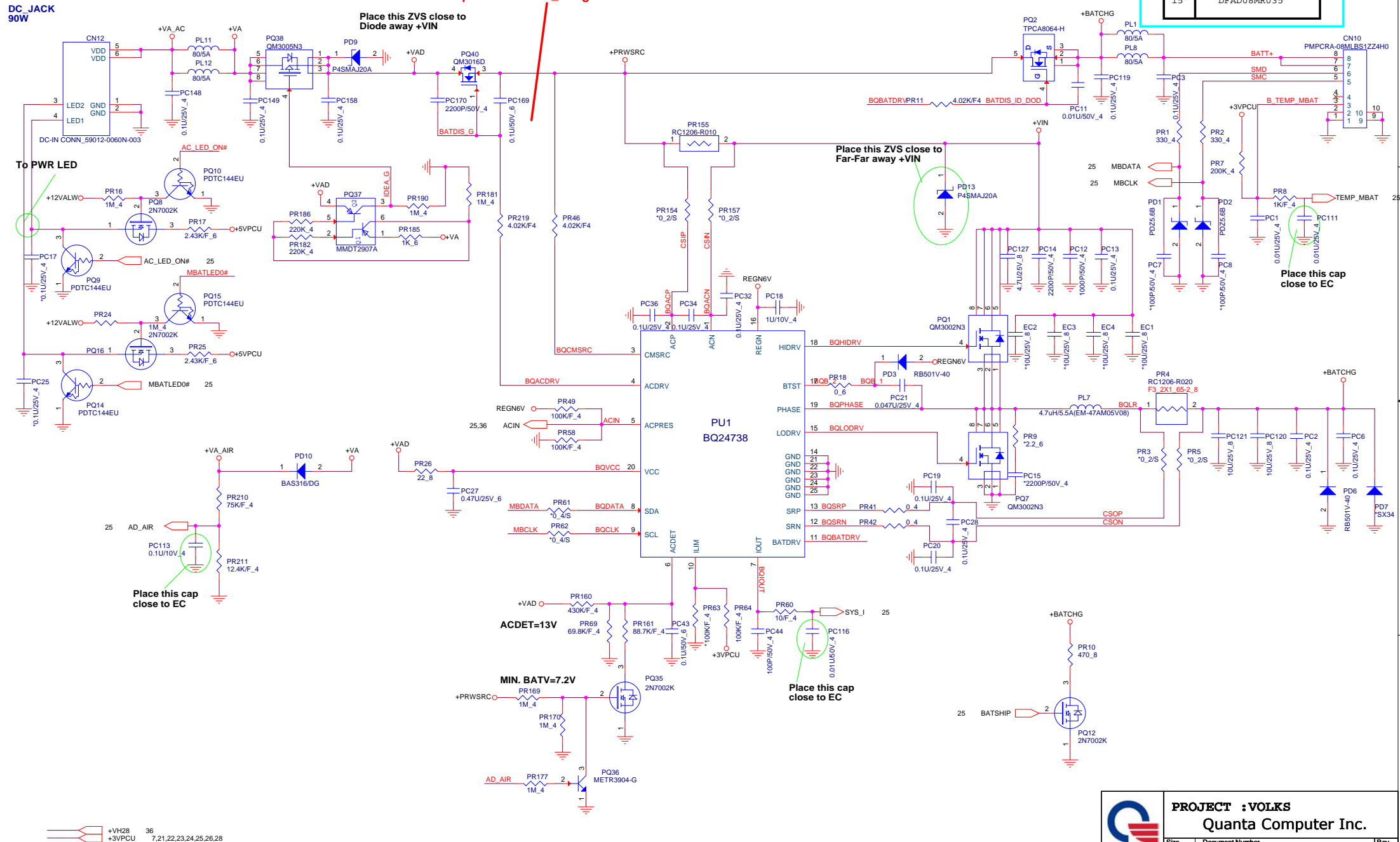
DC JACK
90W

Do Not add test pad on BATDIS_G signal

Place this ZVS close to Diode away +VIN

Place this ZVS close to
Far-Far away +VIN

Place this cap
close to EC



PROJECT :VOLKS
Quanta Computer Inc.

Size Custom	Document Number Charger (OZ8681)	Rev A
Date: Wednesday, May 23, 2012	Sheet 27 of 37	

+5V +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

+3.3 Volt +/- 5%
Countinue current:4A
Peak current:6A
OCP minimum:7.5A

Current Limit setting
 $VILIMx = (RILIMx \times 10\mu A) / 10 = IILIMx \times RDS(ON)$
 $RILIMx = (IILIMx \times RDS(ON)) \times 10 / 10\mu A$

TONSEL= VREG5
 Vout1=400kHz/Vout2=500kHz

Rds(on) 14m ohm

Rds(on) 14m ohm

21,26,27,30,31,32,33,35,36
 6,10,23,30,33,36
 7,21,22,23,24,25,26,27

+VIN
 +3VSS
 +5VSS
 +3VPCU

NB5	PROJECT :VOLKS		
	Quanta Computer Inc.		
	Size Custom	Document Number 3/5VSS (RT8223P)	Rev A
	Date: Wednesday, May 23, 2012	Sheet 28	of 37

TPS51462RGER/AL051462000

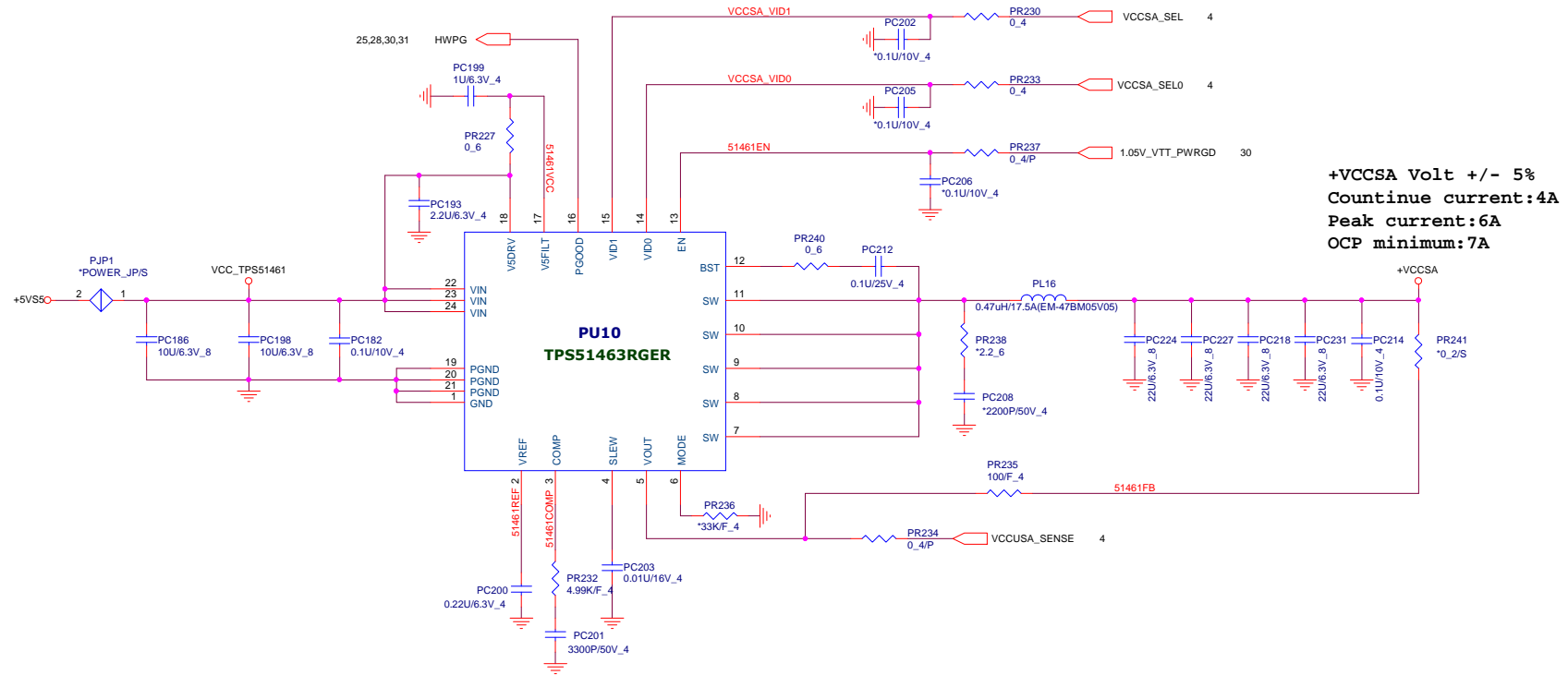
For CPU SV system agent
voltage slew rate of 0.5 -10 mV/μs

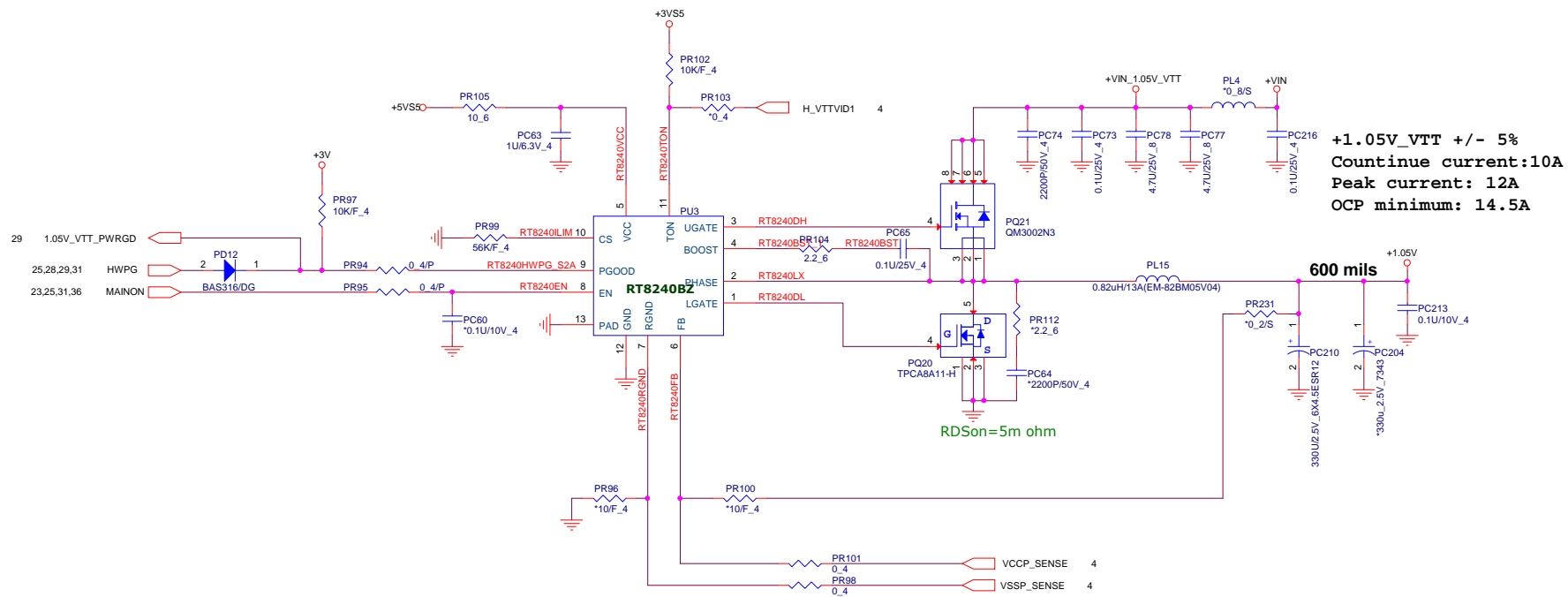
SEL0	SEL1	+VCCSA
0	0	0.9V
0	1	0.8V
1	0	0.725V
1	1	0.675V


TPS51463RGER/AL051463000

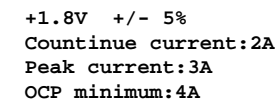
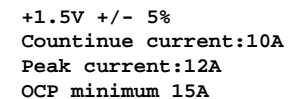
For CPU ULV system agent
voltage slew rate of 0.5 -10 mV/μs


SEL0	SEL1	+VCCSA
0	0	0.9V
0	1	0.85V
1	0	0.775V
1	1	0.75V





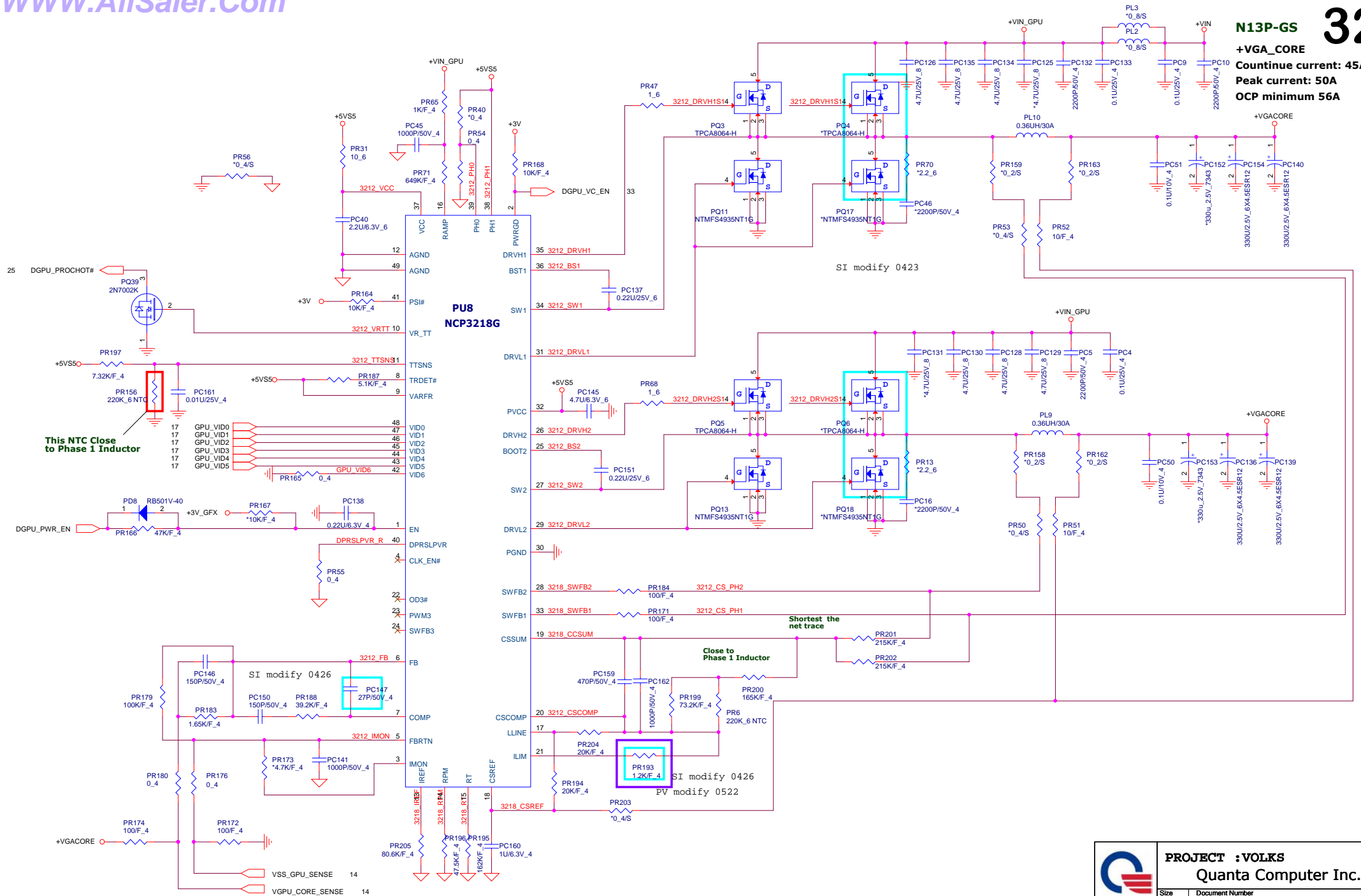
		PROJECT :VOLKS	
		Quanta Computer Inc.	
Size Custom	Document Number +1.05V (RT8240B)	Rev A	
Date: Wednesday, May 23, 2012	Sheet	30of	37

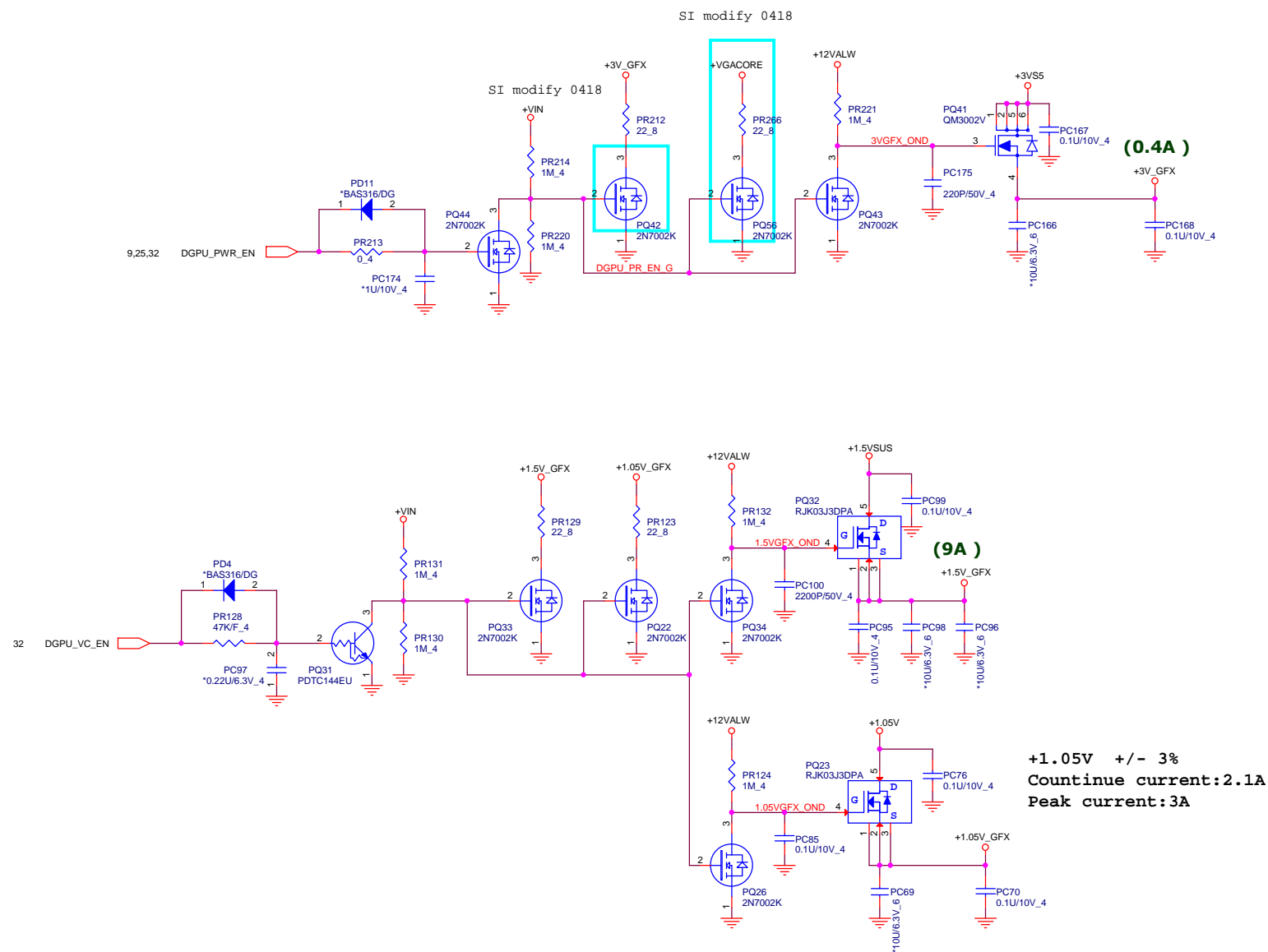
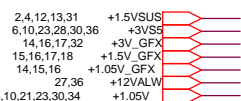


	PROJECT :VOLKS Quanta Computer Inc.		
	Size Custom	Document Number DDR3 (RT8207)	Rev A
	Date: Wednesday, May 23, 2012		Sheet 31 of 37

Continue current: 45A
Peak current: 50A
OCP minimum 56A

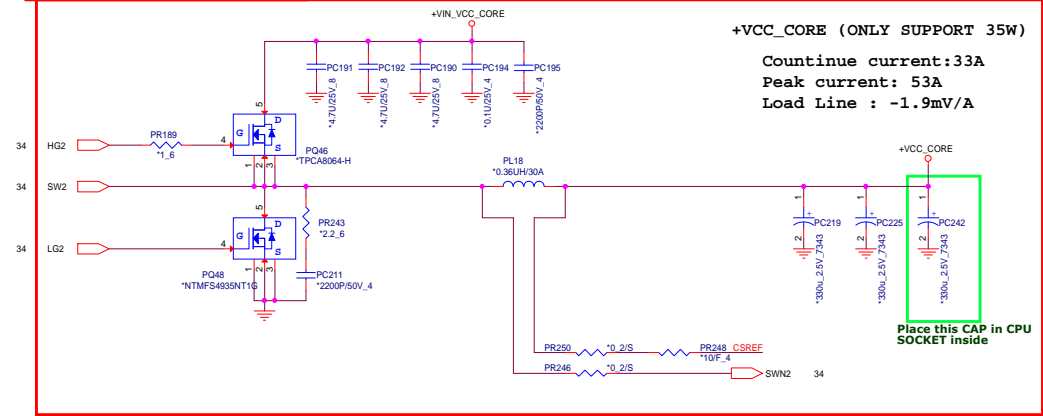
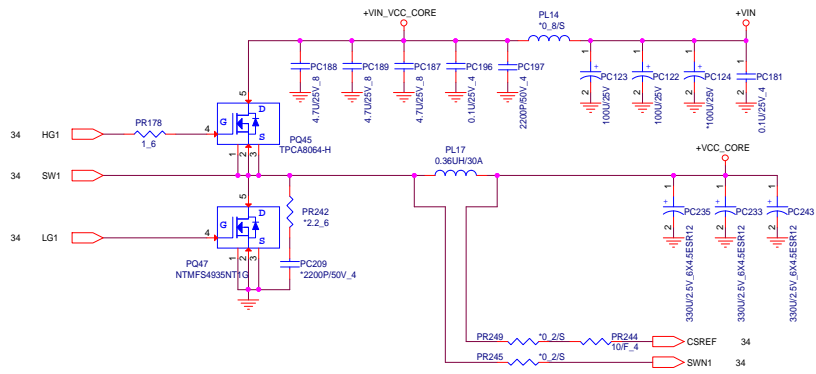
32







Dummy This Schematic
For CPU 1-Phase operation

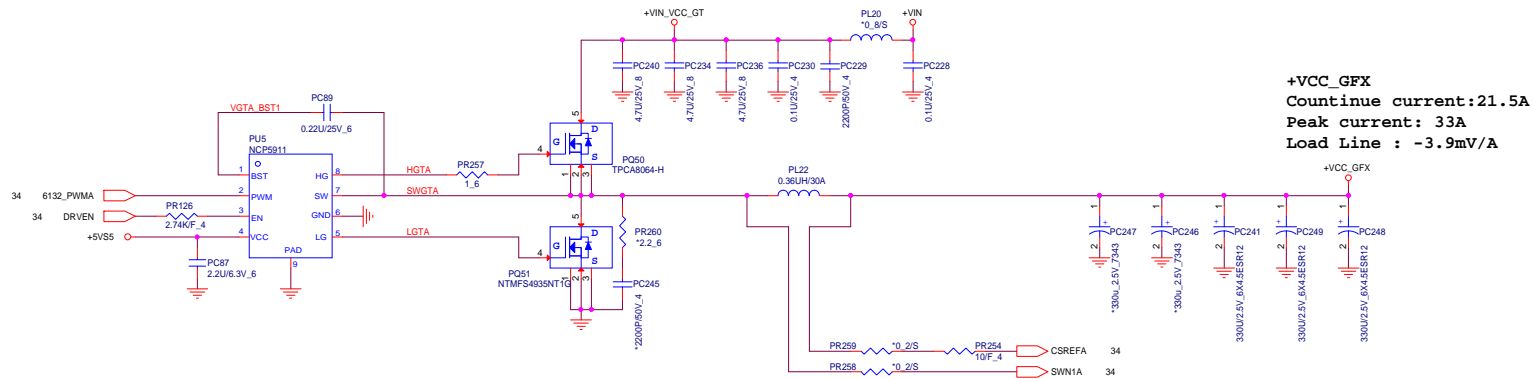


+VCC_CORE (ONLY SUPPORT 35W)

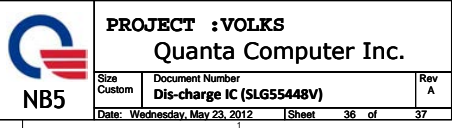
Countinue current:32A
Peak current: 53A
Load Line : -1.9mV/A

+VCC_CORE (ULV 17W)

Countinue current:16A
Peak current: 33A
Load Line : -2.9mV/A



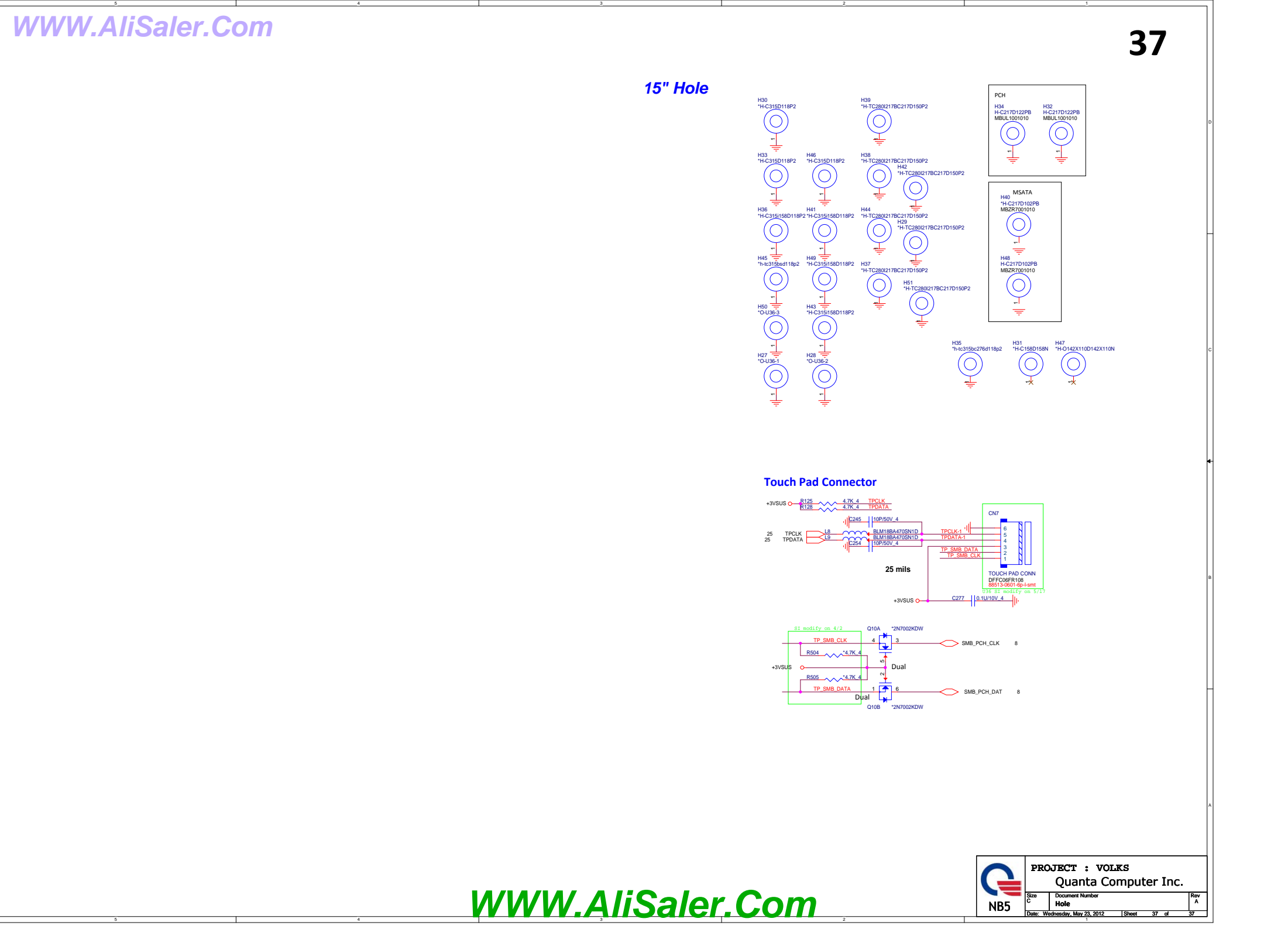
+VCC_GFX
Countinue current:21.5A
Peak current: 33A
Load Line : -3.9mV/A



WWW.AliSaler.Com

37

15" Hole



WWW.AliSaler.Com

37

15" Hole

