

UT8A V2.0 (Morpheus) BLOCK DIAGRAM

01

PCB STACK UP 8L - DIS

LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1
LAYER 4 : SVCC
LAYER 5 : IN2
LAYER 6 : IN3
LAYER 7 : SGND1
LAYER 8 : BOT

Cable Docking

- VGA
- RJ-45
- CIR/Pwr btn
- SPDIF Out
- Stereo MIC
- Headphone Jack
- USB Port
- VOL Cntr

PAGE 38

SYSTEM CHARGER
(ISL6251AHZ-T) PAGE 36

SYSTEM POWER +5V/+3V
(RT8206BGQW) PAGE 37

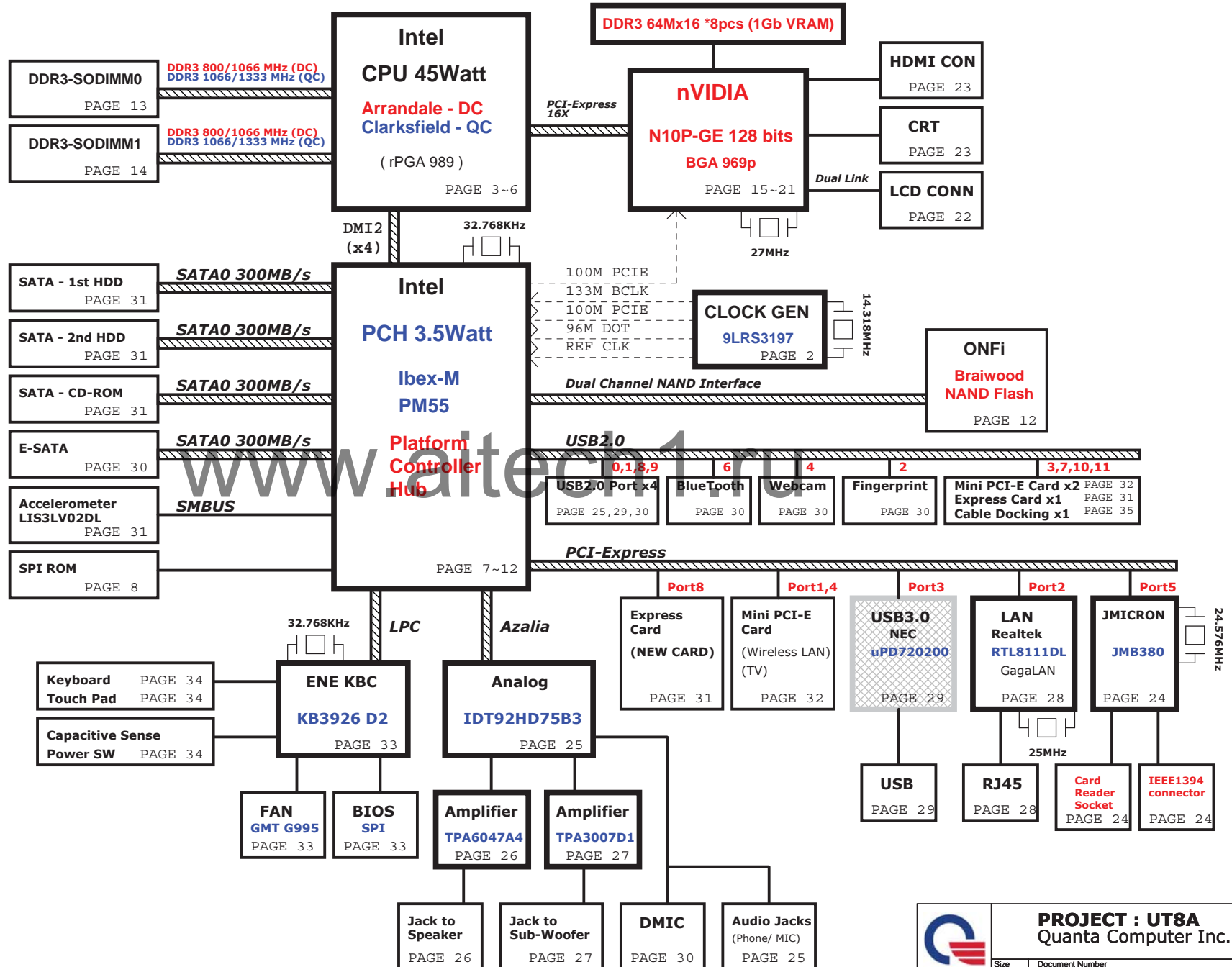
+1.1V_VTT/ +1.05V_PCH/ +1.8V
(RT8208AGQW/ RT8204PQW) PAGE 38

CPU CORE (ISL62882) PAGE 39

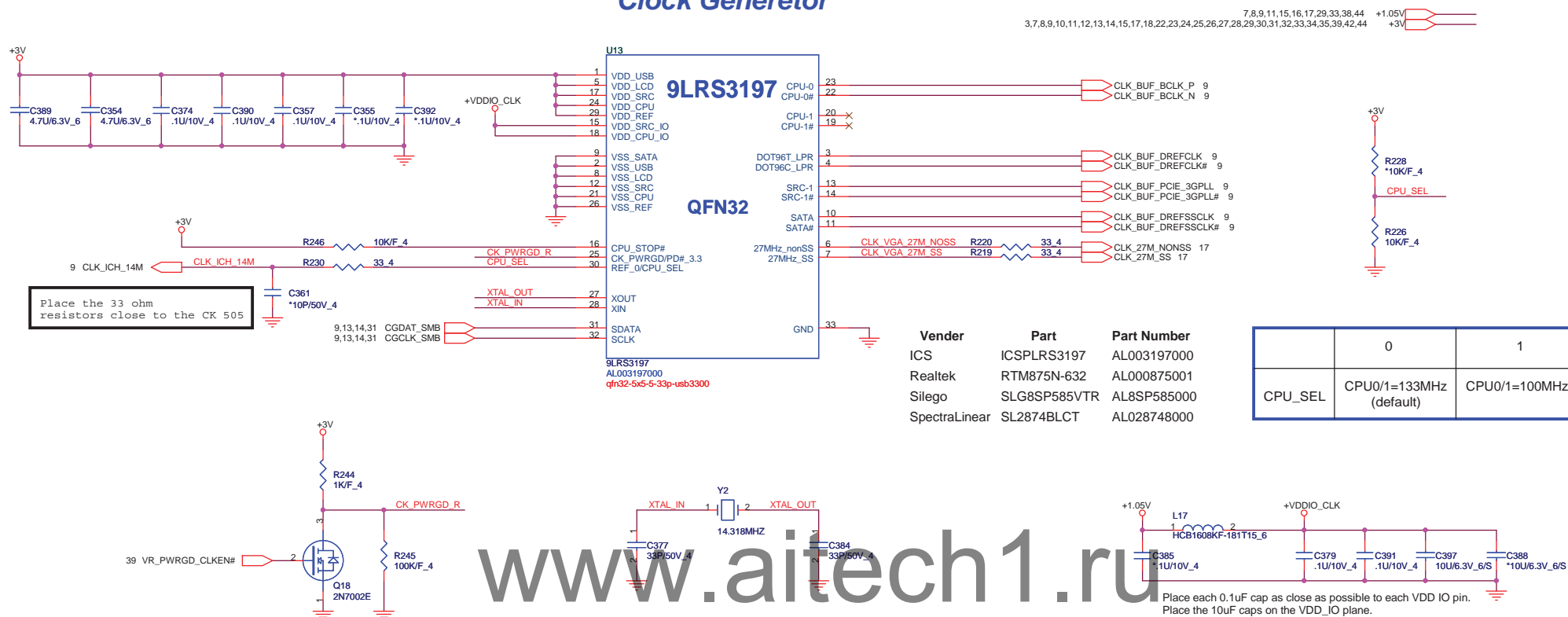
VGA CORE (RT8208AGQW) PAGE 40

DDR3 +1.8VSUS/ VTERM +0.75V
(RT8207GQW) PAGE 41

DISCHARGE / +3V/+3VS5/
+5V/+5VSUS/+5VS5 /LANVCC PAGE 42

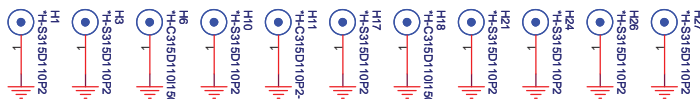


Clock Generetor

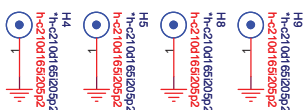


M/B Screw Holes

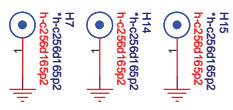
M/B Screw Holes



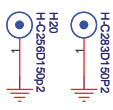
CPU Breaket



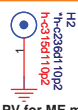
VGA Breaket



TV Screw Holes

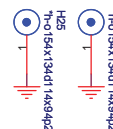


BAT Screw Holes

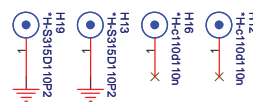


5/18 PV for ME modify.

M/B Fix Holes



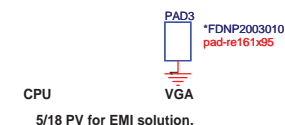
ODD Screw Holes



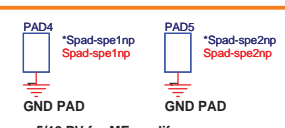
EMI Spring PAD



*pad-re236x394np
pad-re236x394np



CPU
VGA
5/18 PV for EMI solution.

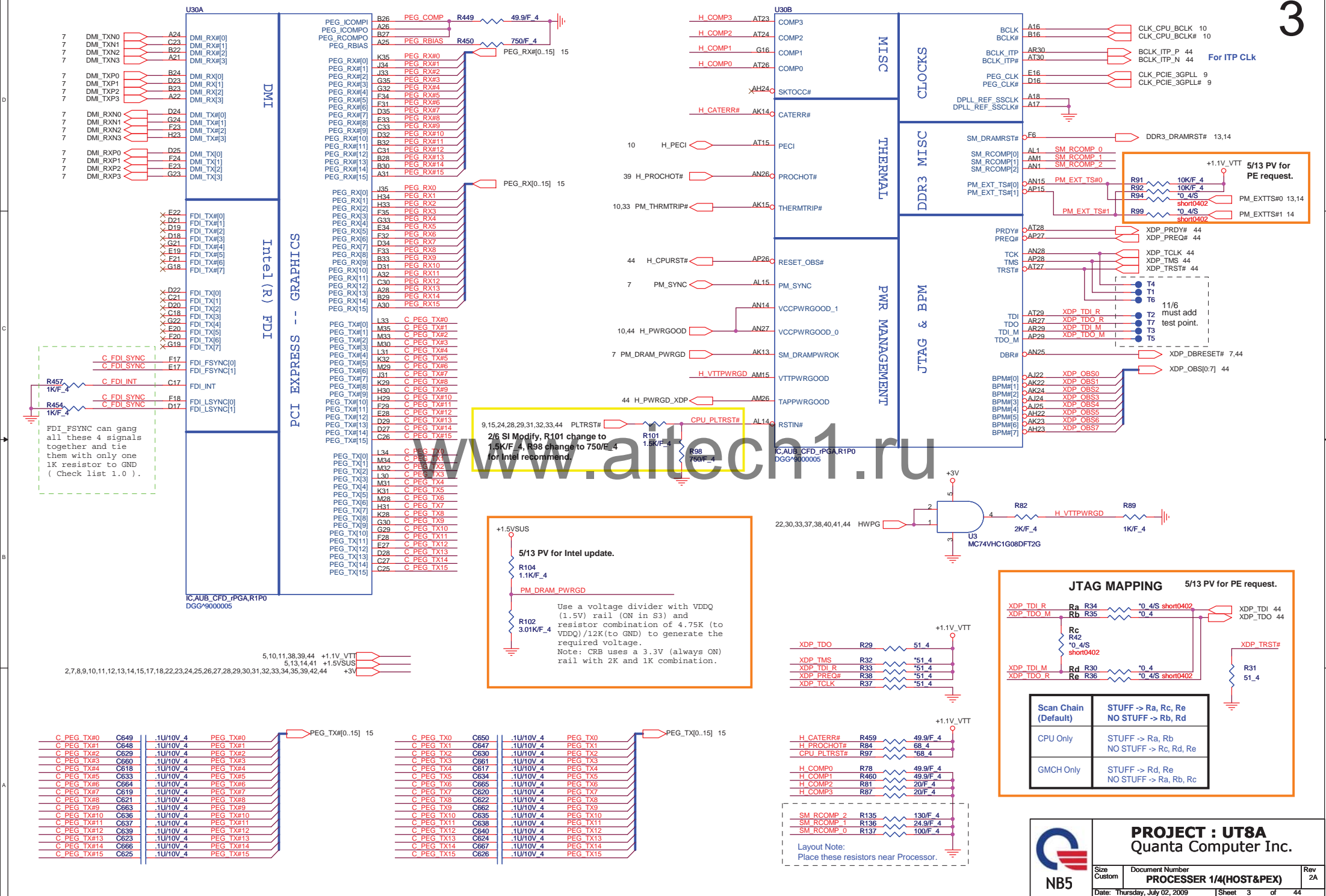


GND PAD
GND PAD
5/18 PV for ME modify.



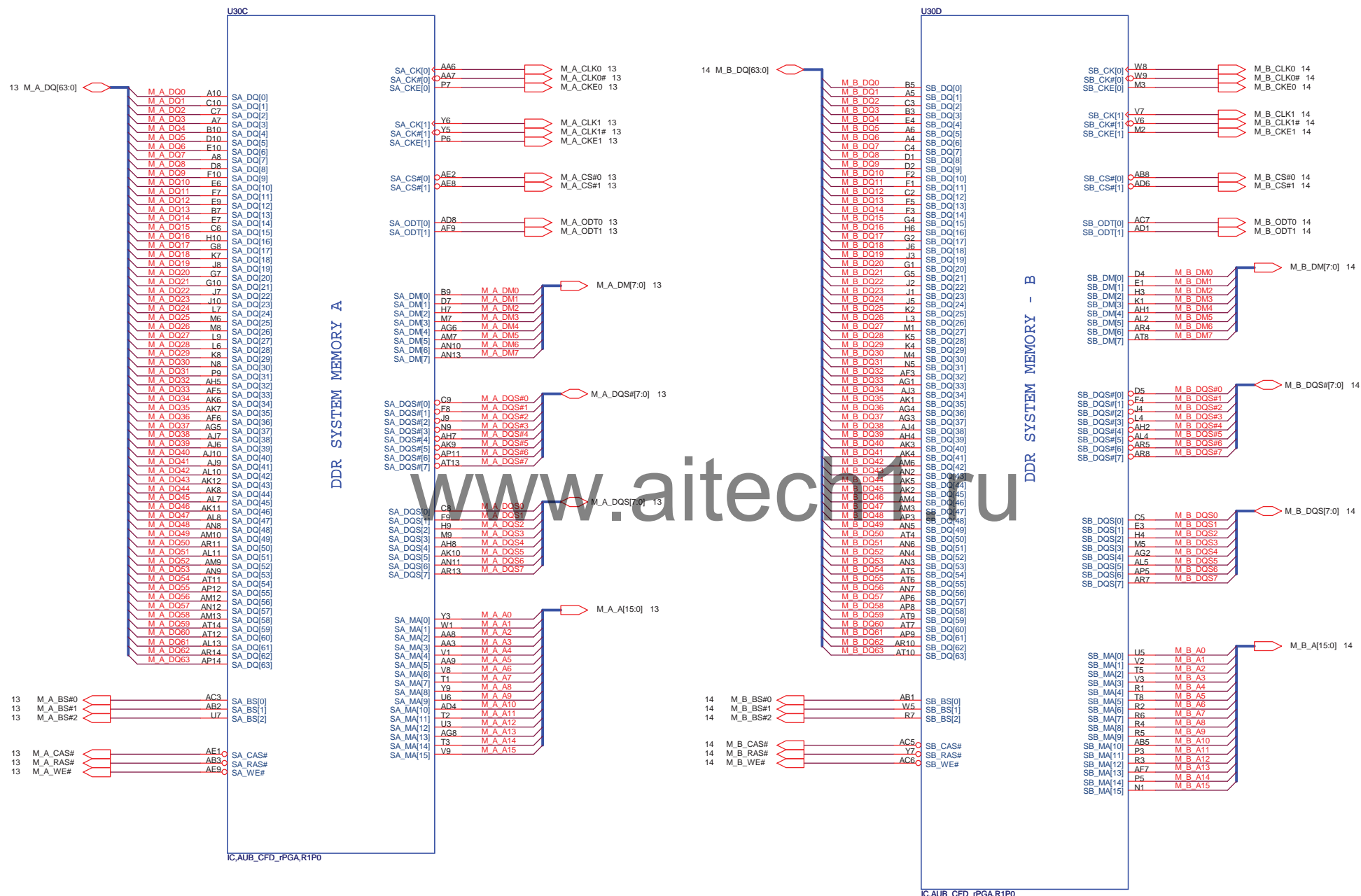
PROJECT : UT8A
Quanta Computer Inc.

Size Custom	Document Number	Rev 2A
	Clock Gen/Screw Holes	
Date: Thursday, July 02, 2009	Sheet 2 of 44	

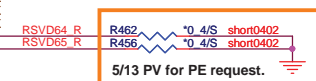
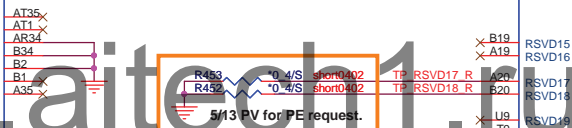


AUBURNDALE/CLARKSFIELD PROCESSOR (DDR3)

4






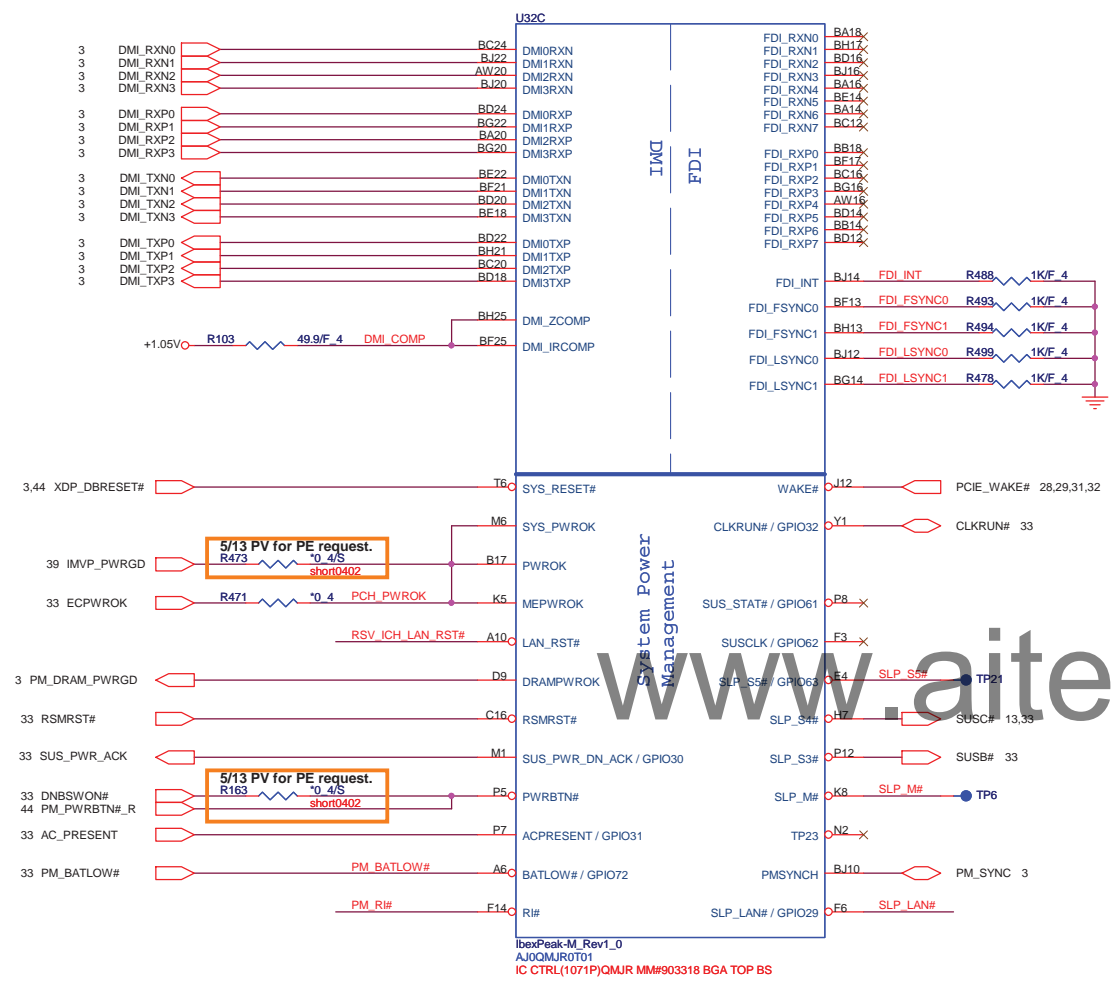


CFG4 R58 *3.01K/F 4
CFG0 R39 *3.01K/F 4
CFG3 R54 3.01K/F 4
CFG7 R40 *3.01K/F 4

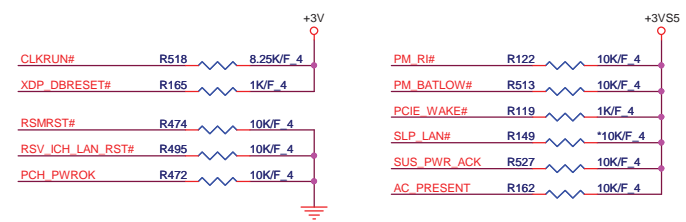
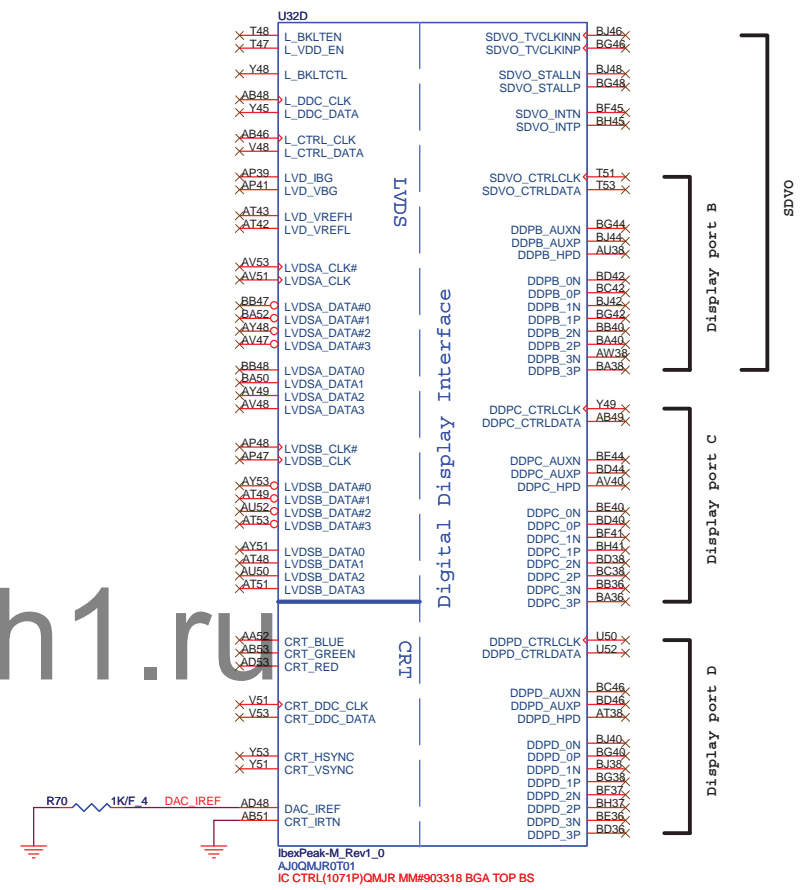
CFG[1:0] - PCI_Epress Configuration Select
 * 11= 1 x 16 PEG
 * 10= 2 x 8 PEG

 NB5	PROJECT : UT8A Quanta Computer Inc.		
	Size Custom	Document Number PROCESSER 4/4(GND)	Rev 2A
Date: Thursday, July 02, 2009		Sheet 6 of 44	

IBEX PEAK-M (DMI, FDI, GPIO)

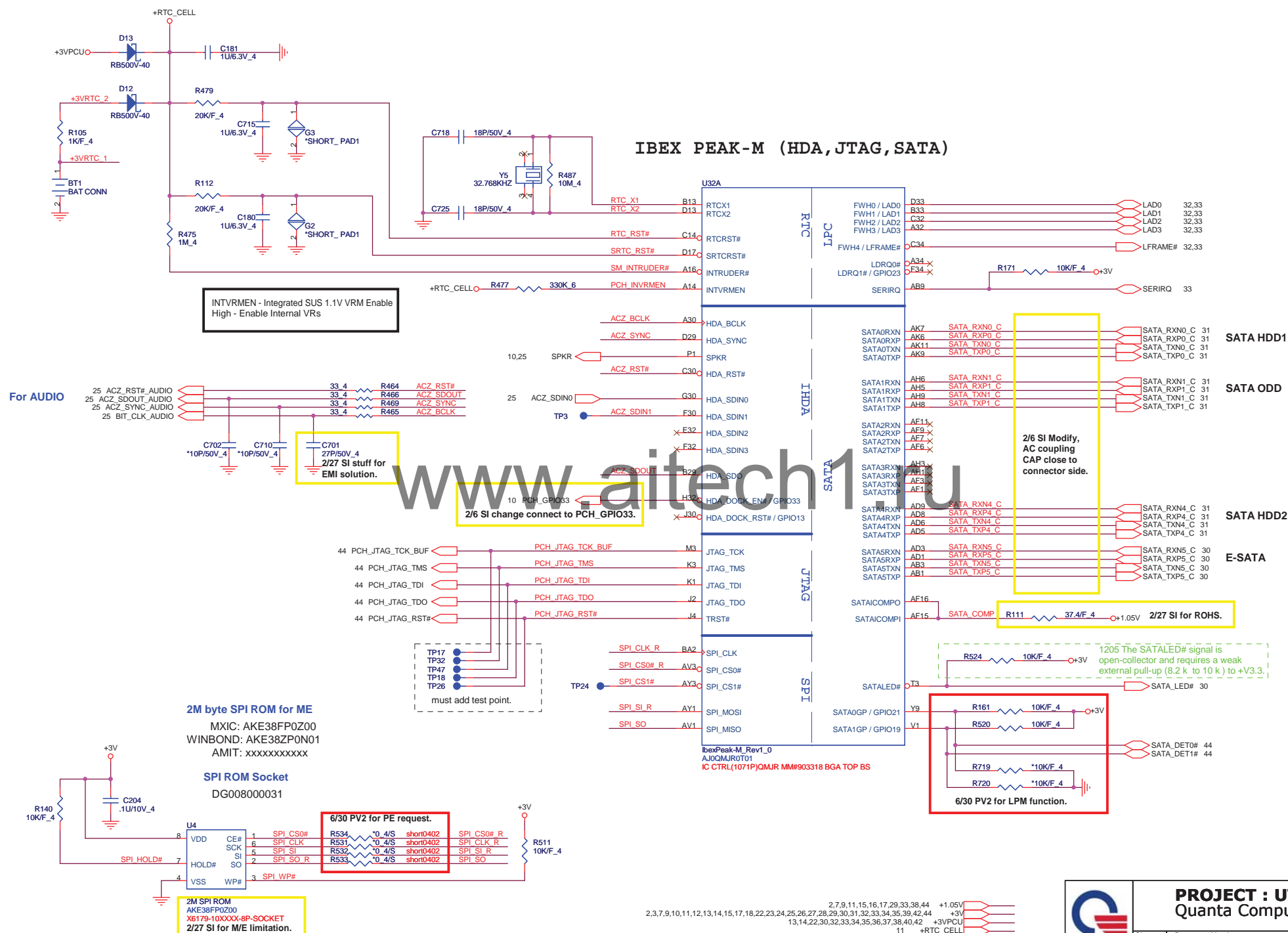


IBEX PEAK-M (LVDS, DDI)



2,8,9,11,15,16,17,29,33,38,44 +1.05V
9,10,11,31,42,44 +3V
9,10,11,31,42,44 +3VSS

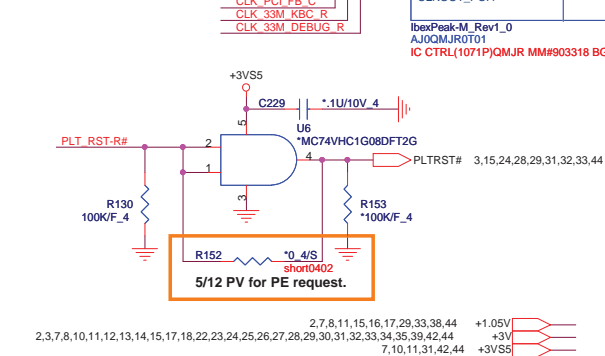
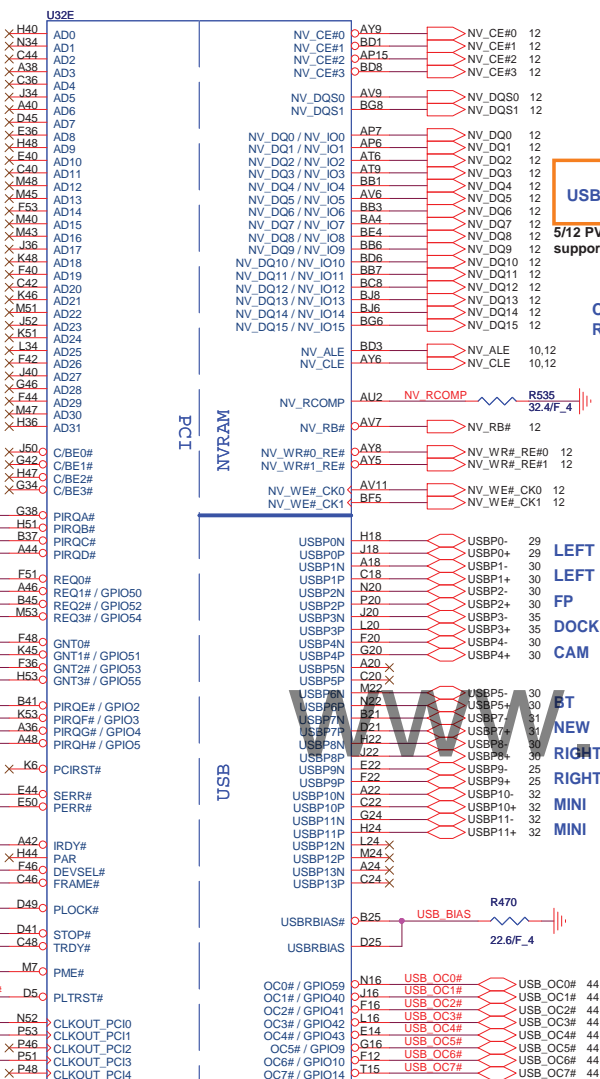
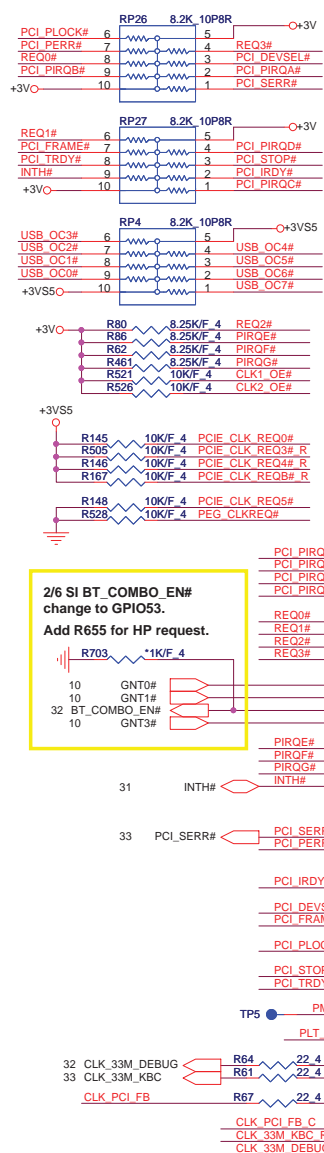
IBEX PEAK-M (HDA, JTAG, SATA)



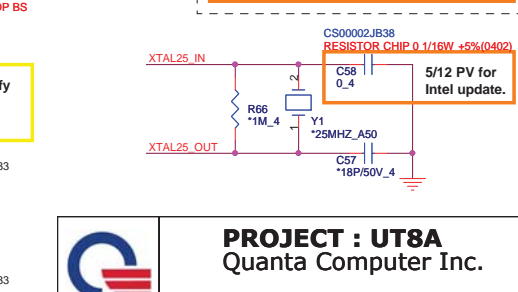
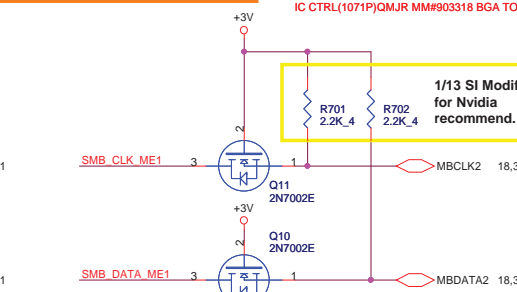
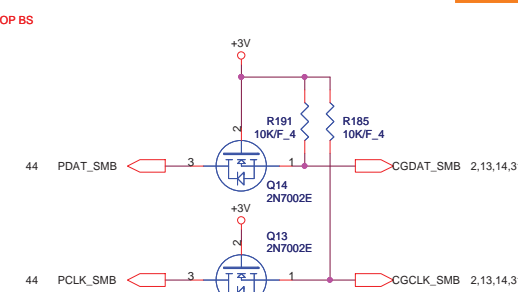
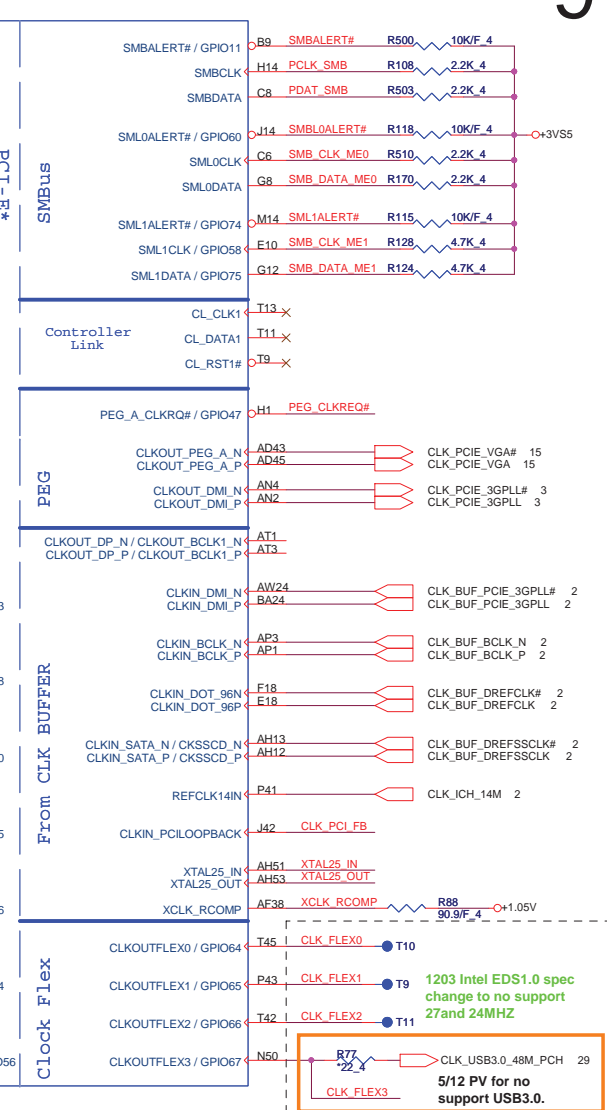
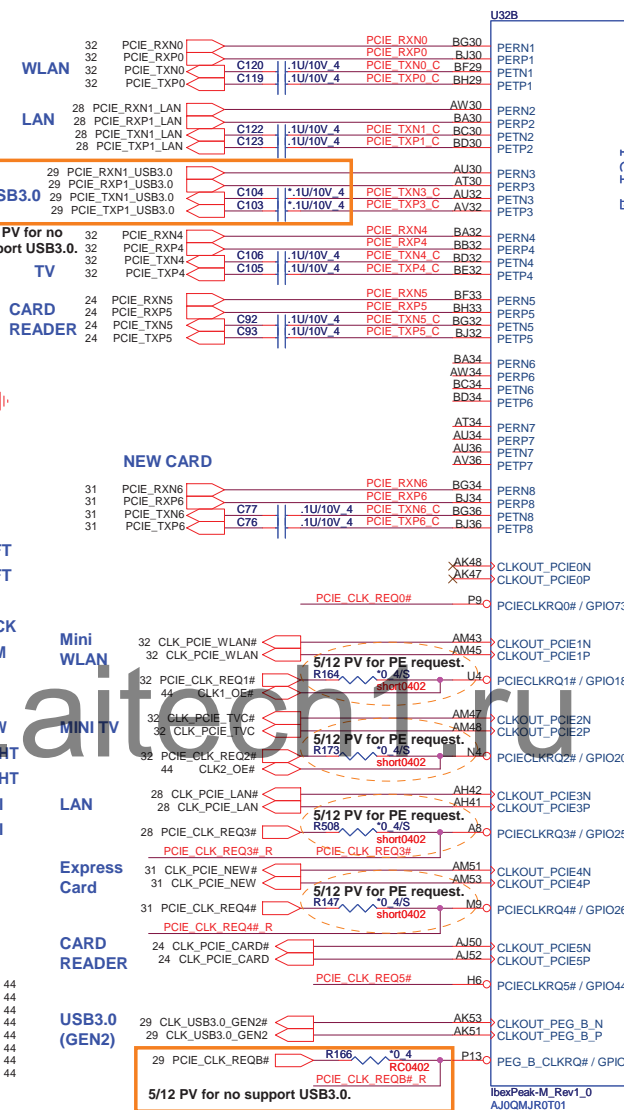
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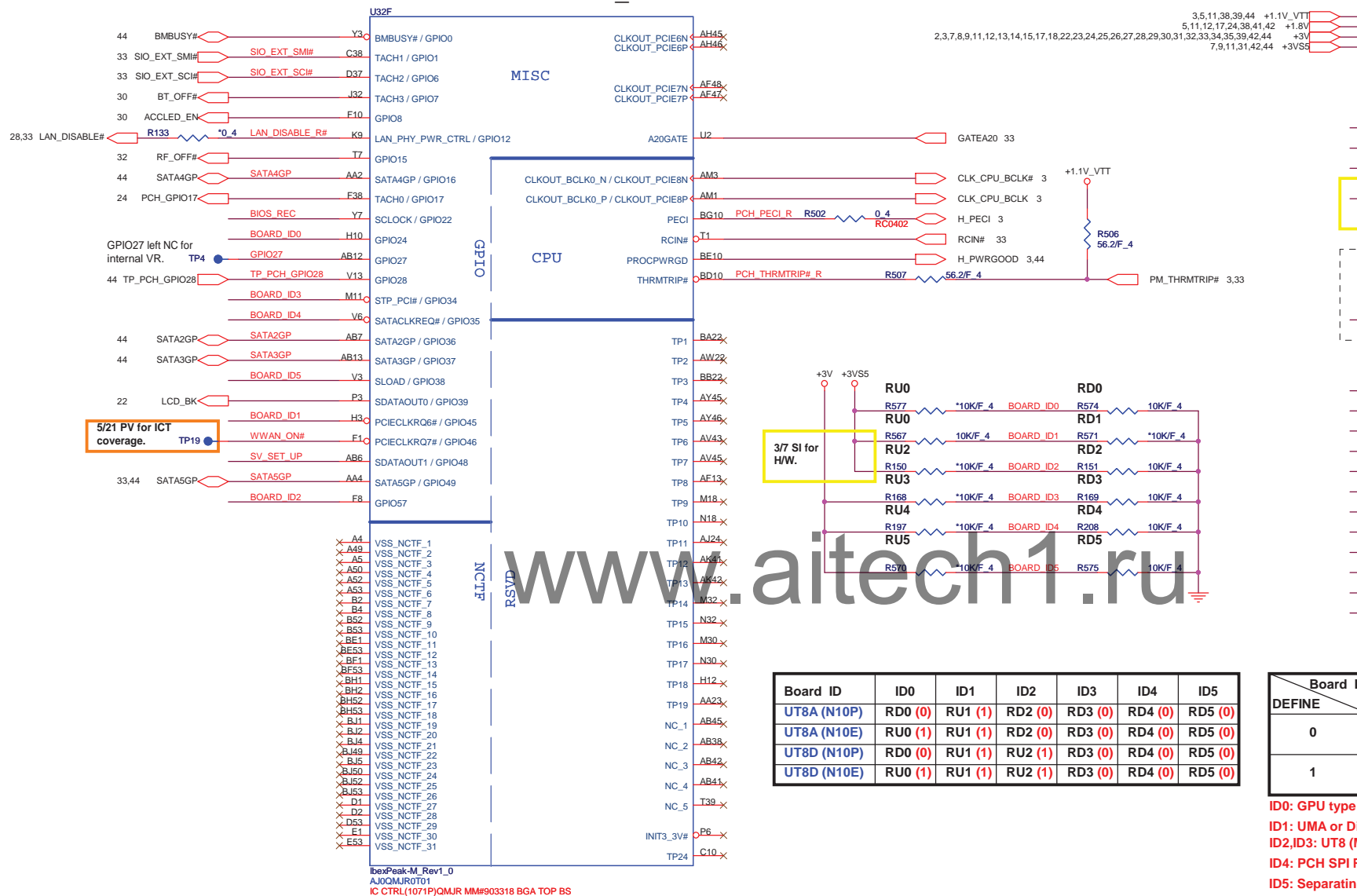
Size Custom	Document Number PCH 2/6 (SATA,HDA,LPC)	Rev 2A
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IBEX PEAK-M (PCI,USB,NVRAM)



IBEX PEAK-M (PCI-E, SMBUS, CLK)





Board ID	ID0	ID1	ID2	ID3	ID4	ID5
UT8A (N10P)	RD0 (0)	RU1 (1)	RD2 (0)	RD3 (0)	RD4 (0)	RD5 (0)
UT8A (N10E)	RU0 (1)	RU1 (1)	RD2 (0)	RD3 (0)	RD4 (0)	RD5 (0)
UT8D (N10P)	RD0 (0)	RU1 (1)	RU2 (1)	RD3 (0)	RD4 (0)	RD5 (0)
UT8D (N10E)	RU0 (1)	RU1 (1)	RU2 (1)	RD3 (0)	RD4 (0)	RD5 (0)

Board ID DEFINE	ID0	ID1	ID2 : ID3	ID4	ID5
0	N10P	UMA	00: V2.0 10: V2.1 01: TBD 11: TBD	2M	PV
1	N10E	DIS		4M	PV2

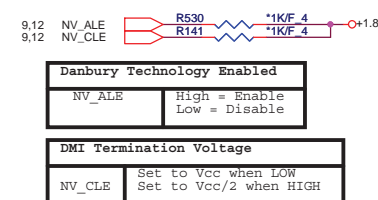
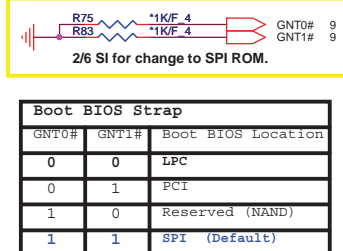
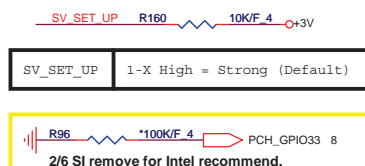
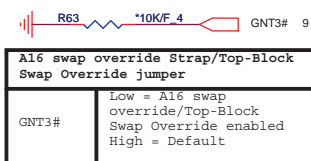
ID0: GPU type (N10P, N10E).

ID1: UMA or Discrete Graphic.

ID2,ID3: UT8 (Morphues) version.

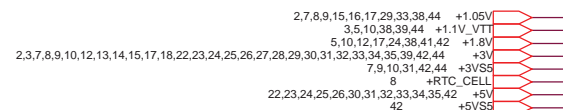
ID4: PCH SPI ROM size, 4M for support Braidwood.

ID5: Separating PV2 afterward stage.

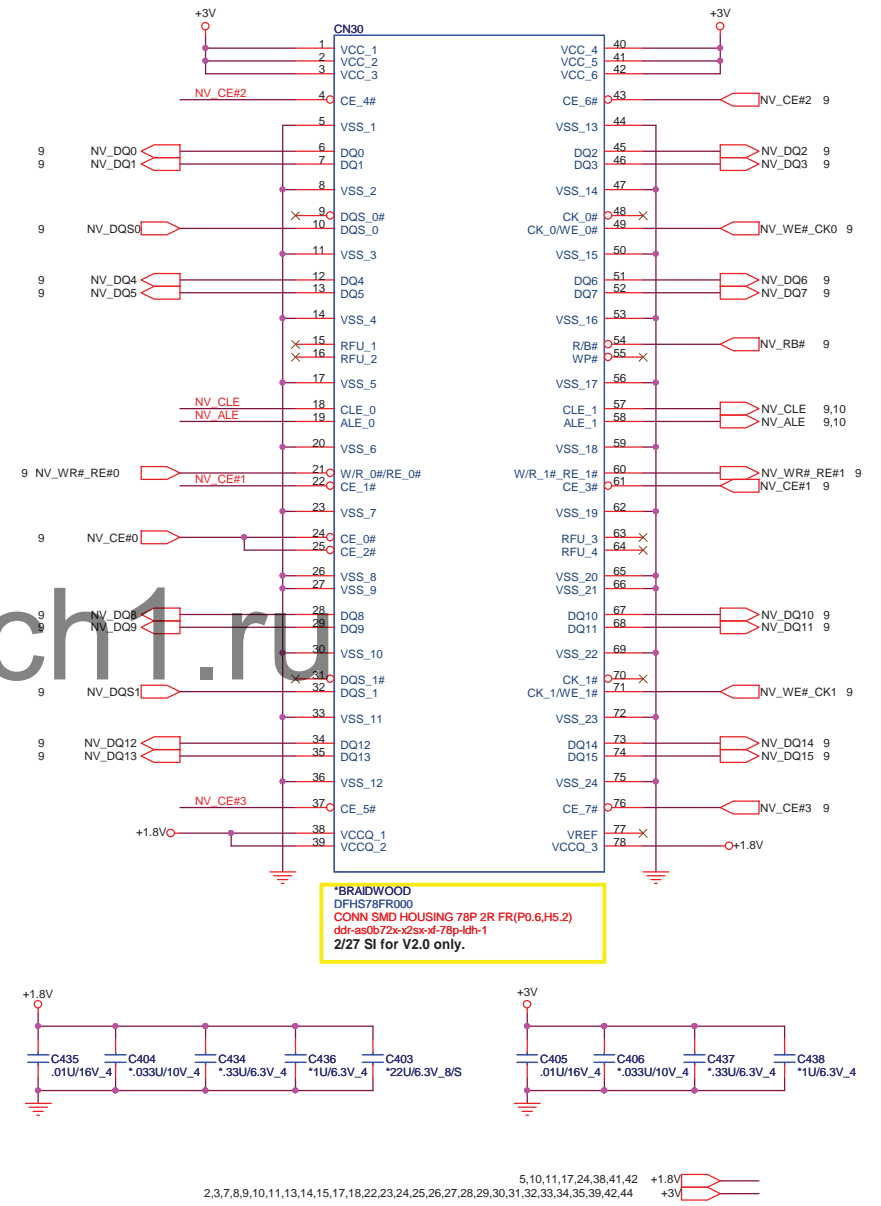


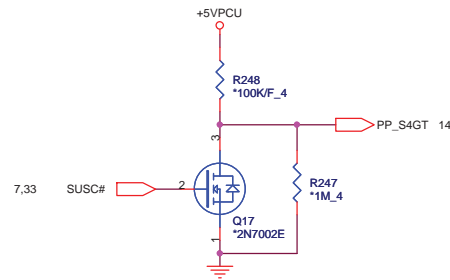
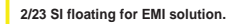
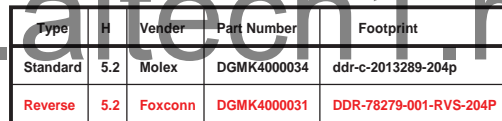
PROJECT : UT8A
Quanta Computer Inc.

Size Custom	Document Number PCH 4/6 (GPIO & Strap)
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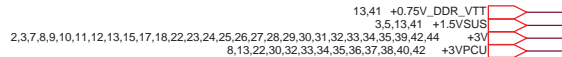
IBEX PEAK-M (GND)

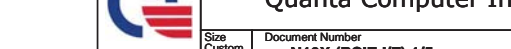
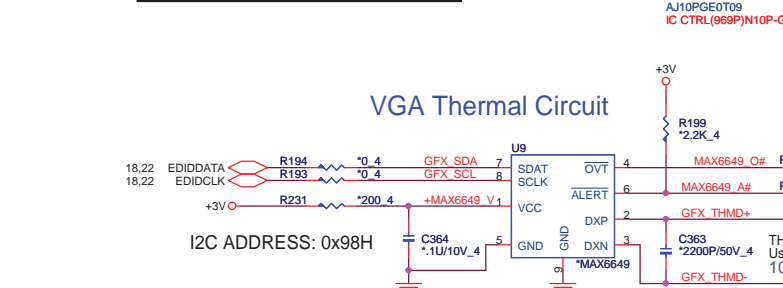


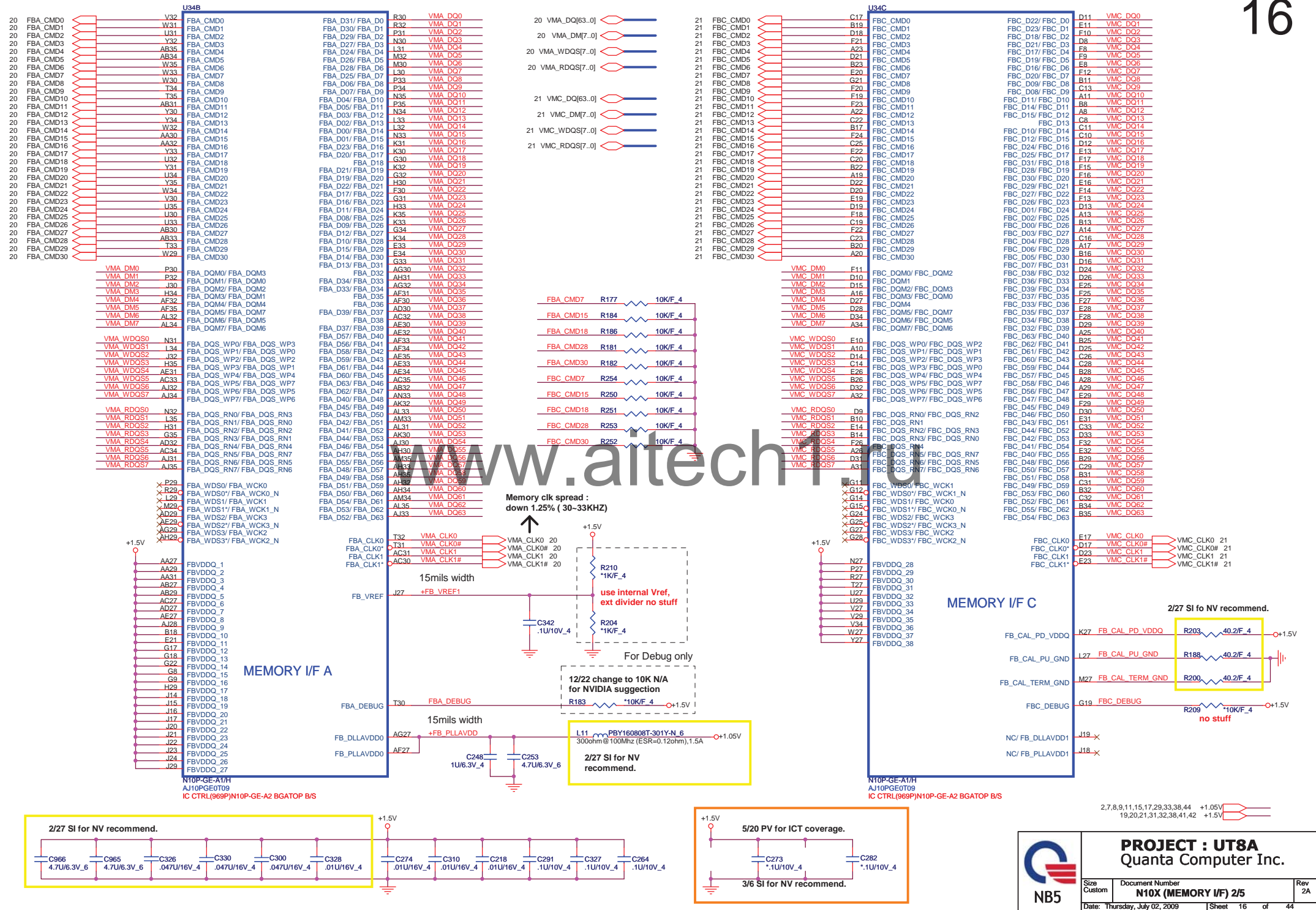


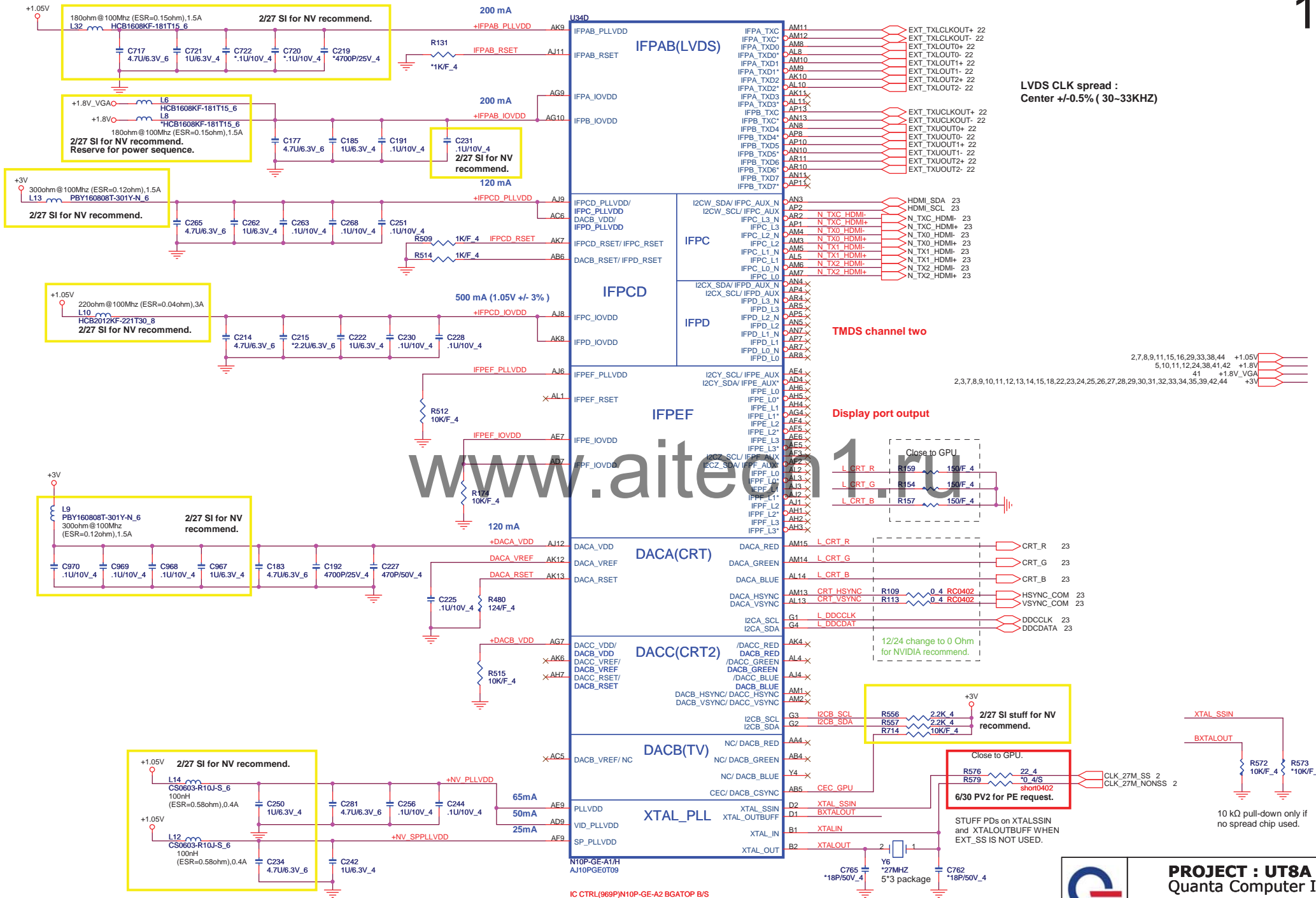


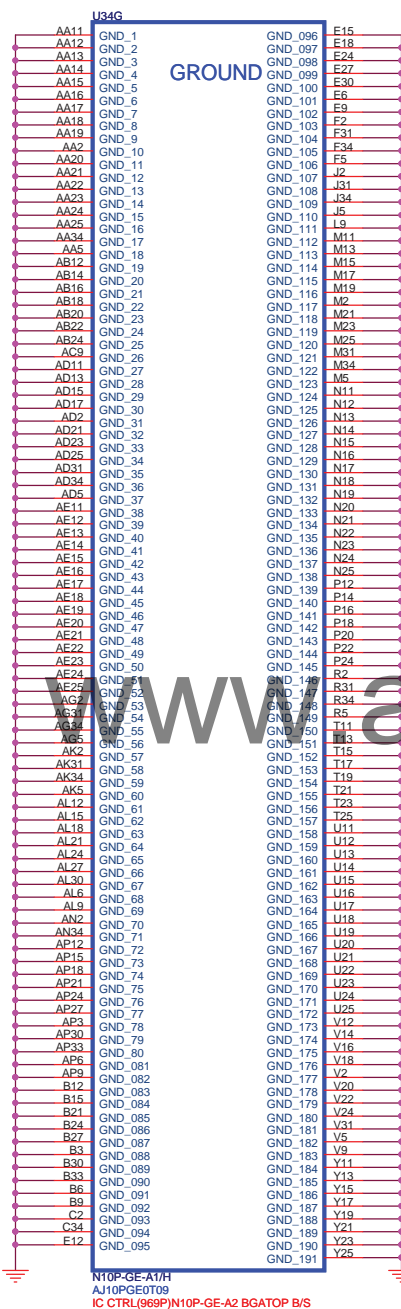
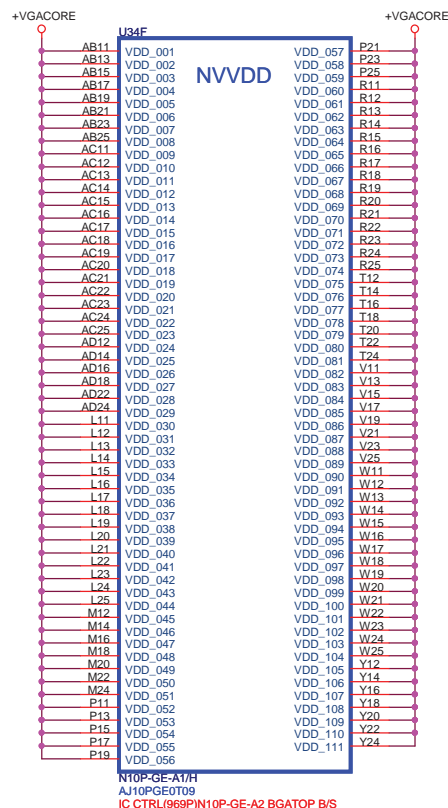
2/23 SI floating for EMI solution.





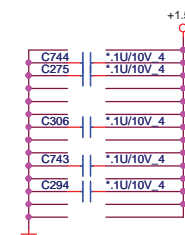




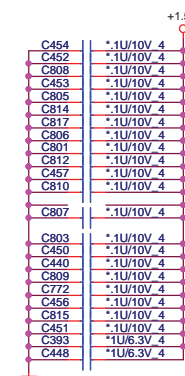


2/6 SI delete All termination for Nvidia recommend.

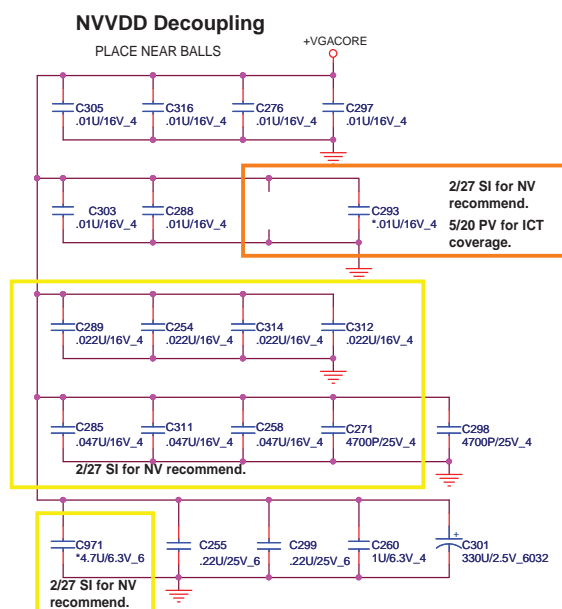
VRAM A Bypass CAP

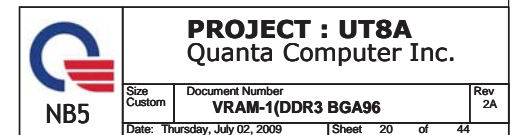


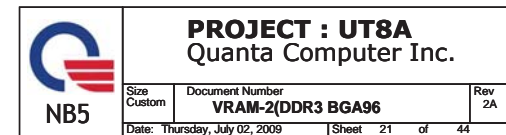
VRAM C Bypass CAP

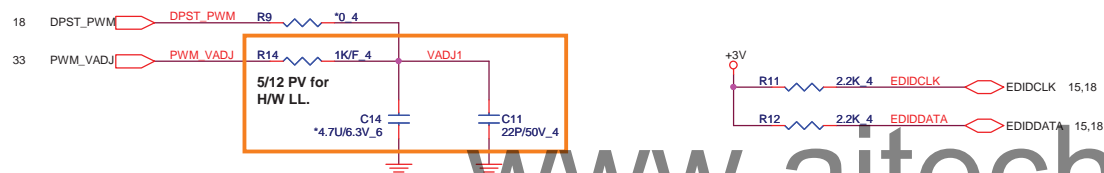
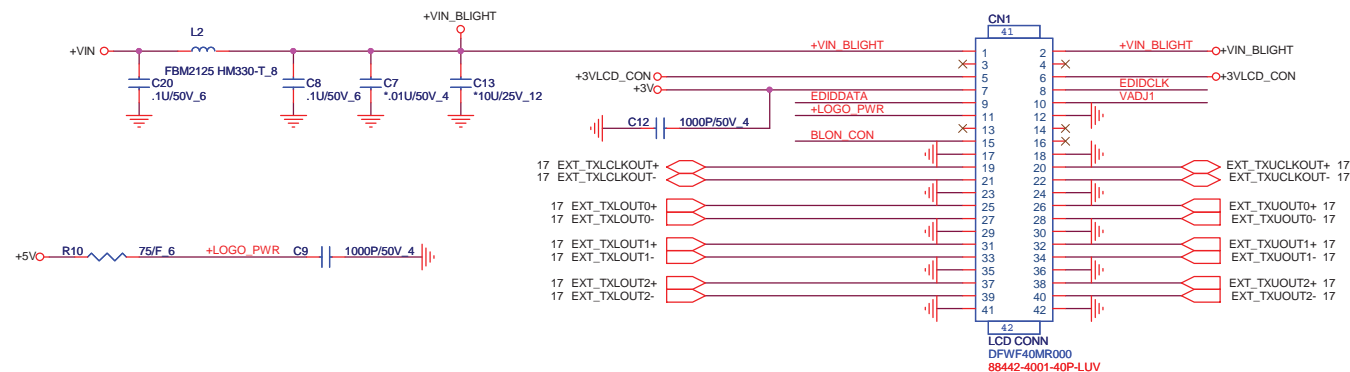


2/27 SI for NV recommend.

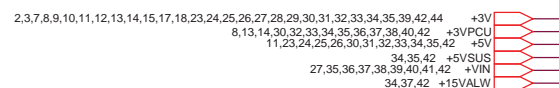
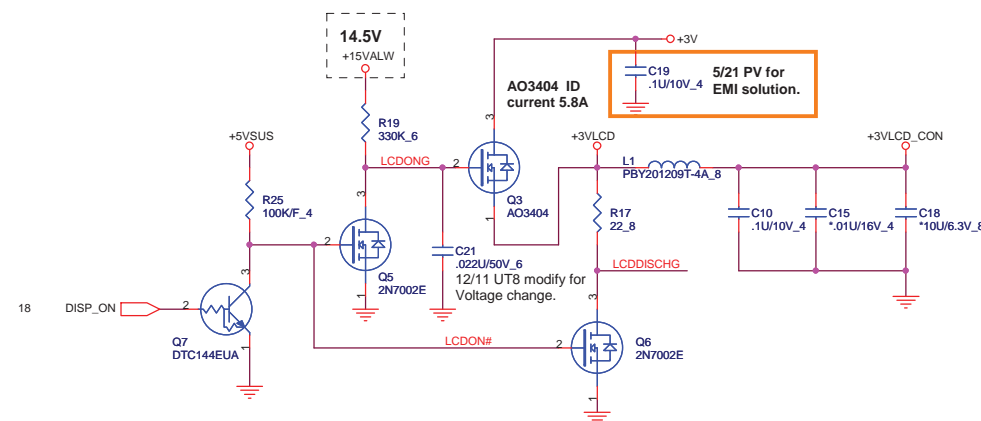
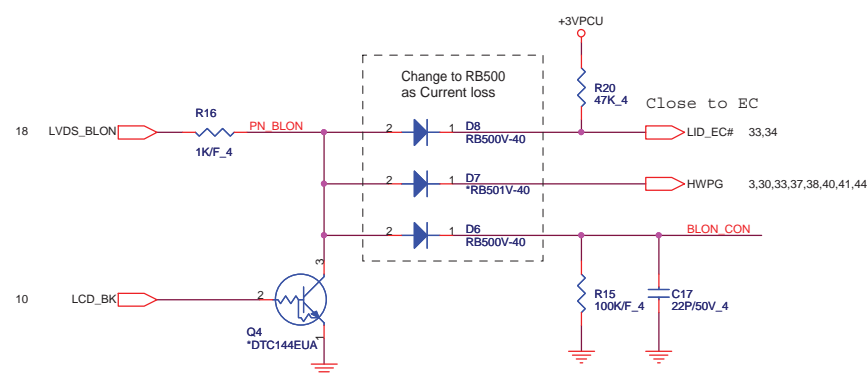




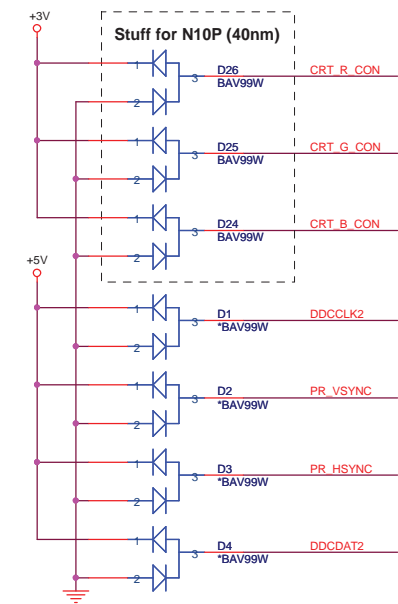
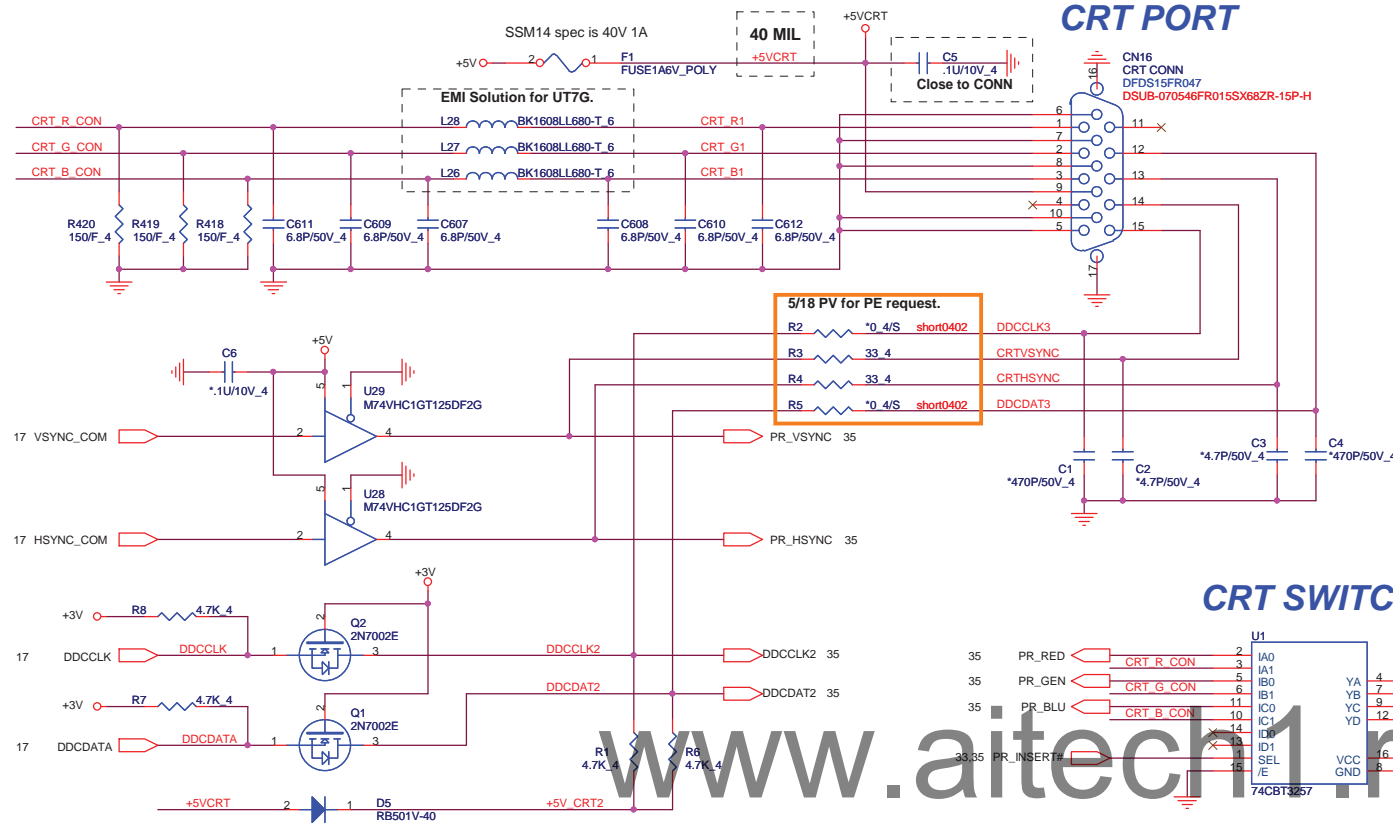




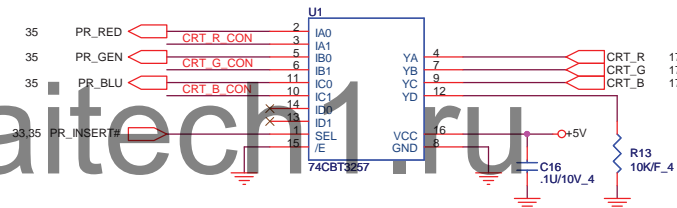
Nvidia suggest:



CRT PORT

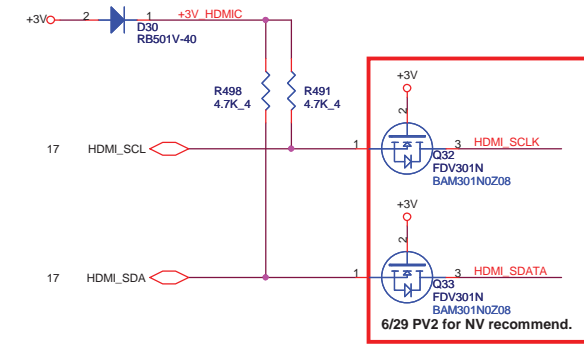
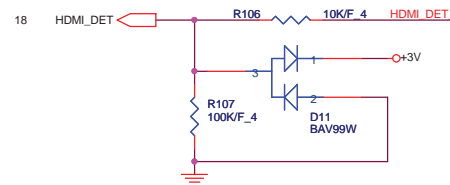
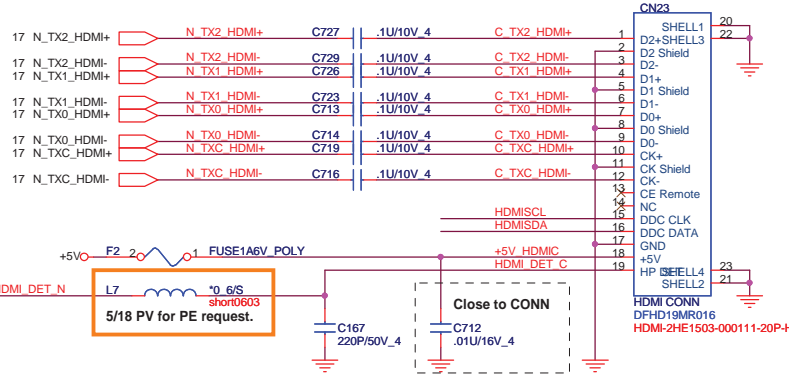
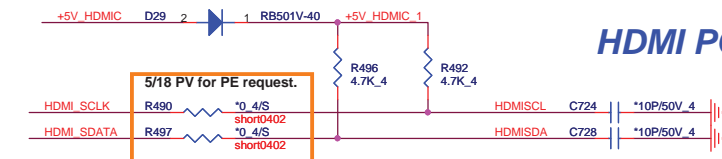


CRT SWITCH

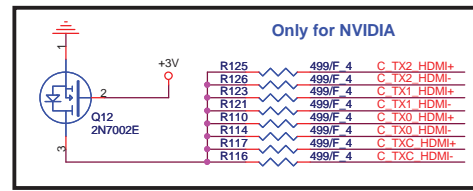


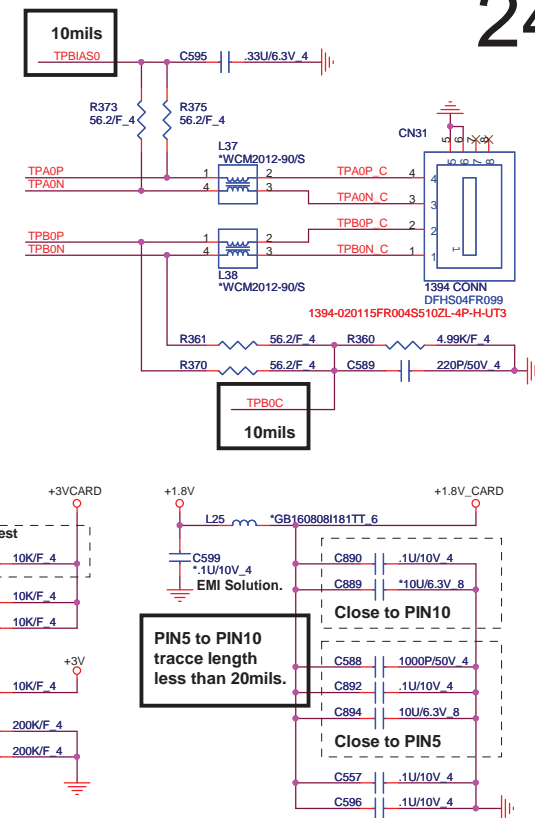
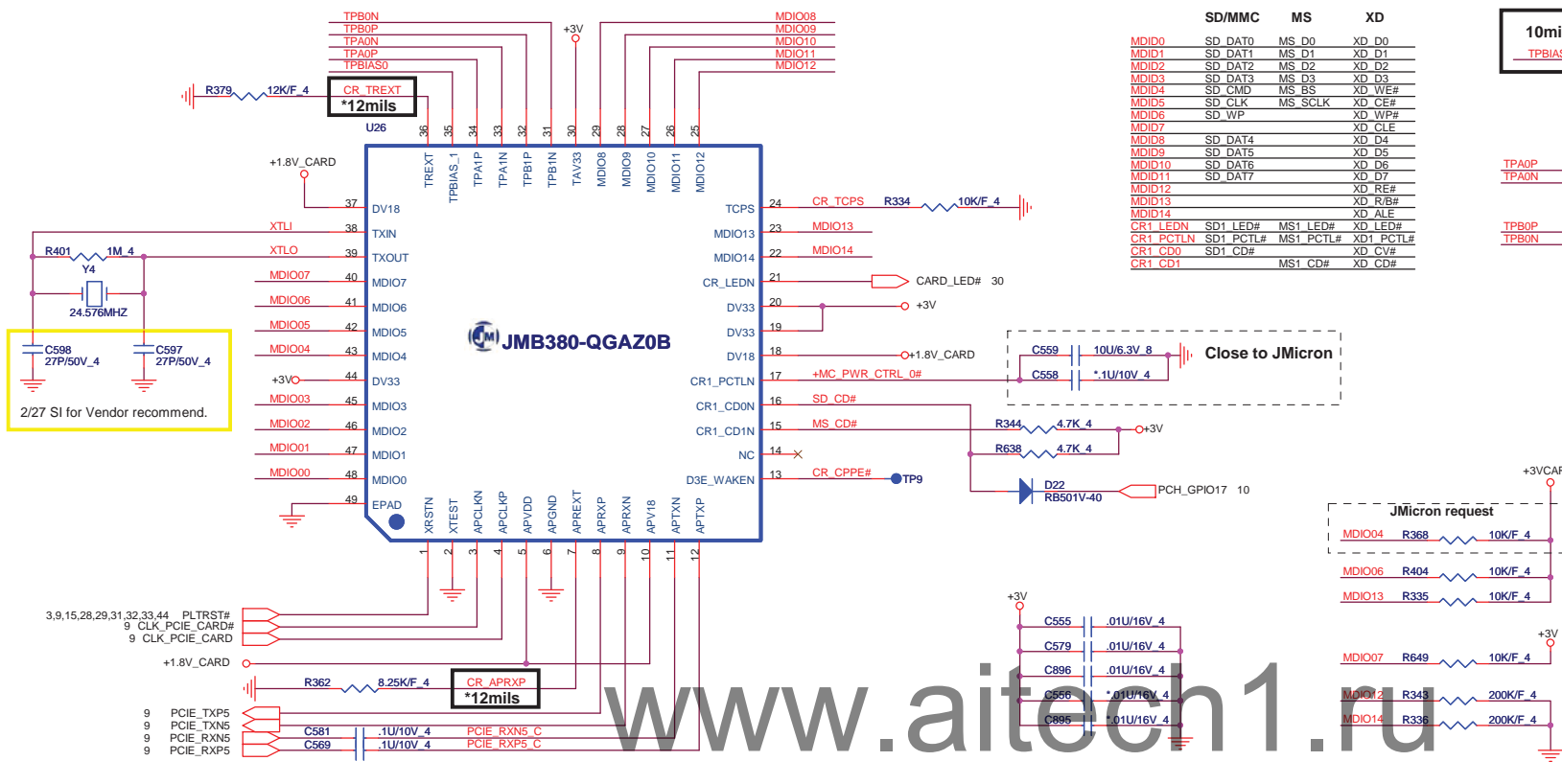
inputs		function
/E	SEL	
L	L	Y - port 0
L	H	Y - port 1
H	X	Disconnect

HDMI PORT

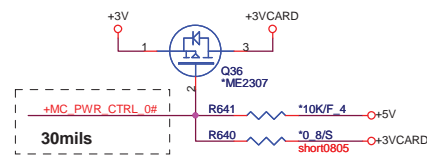
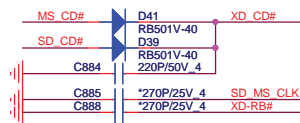
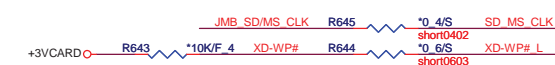
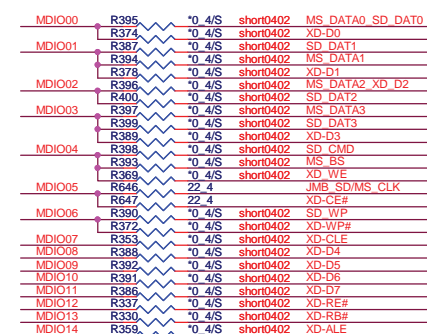
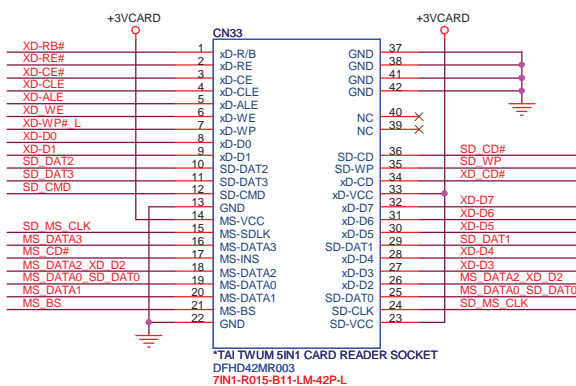
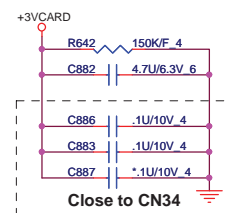
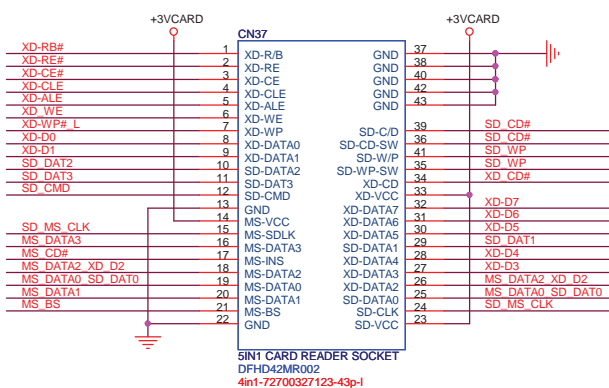


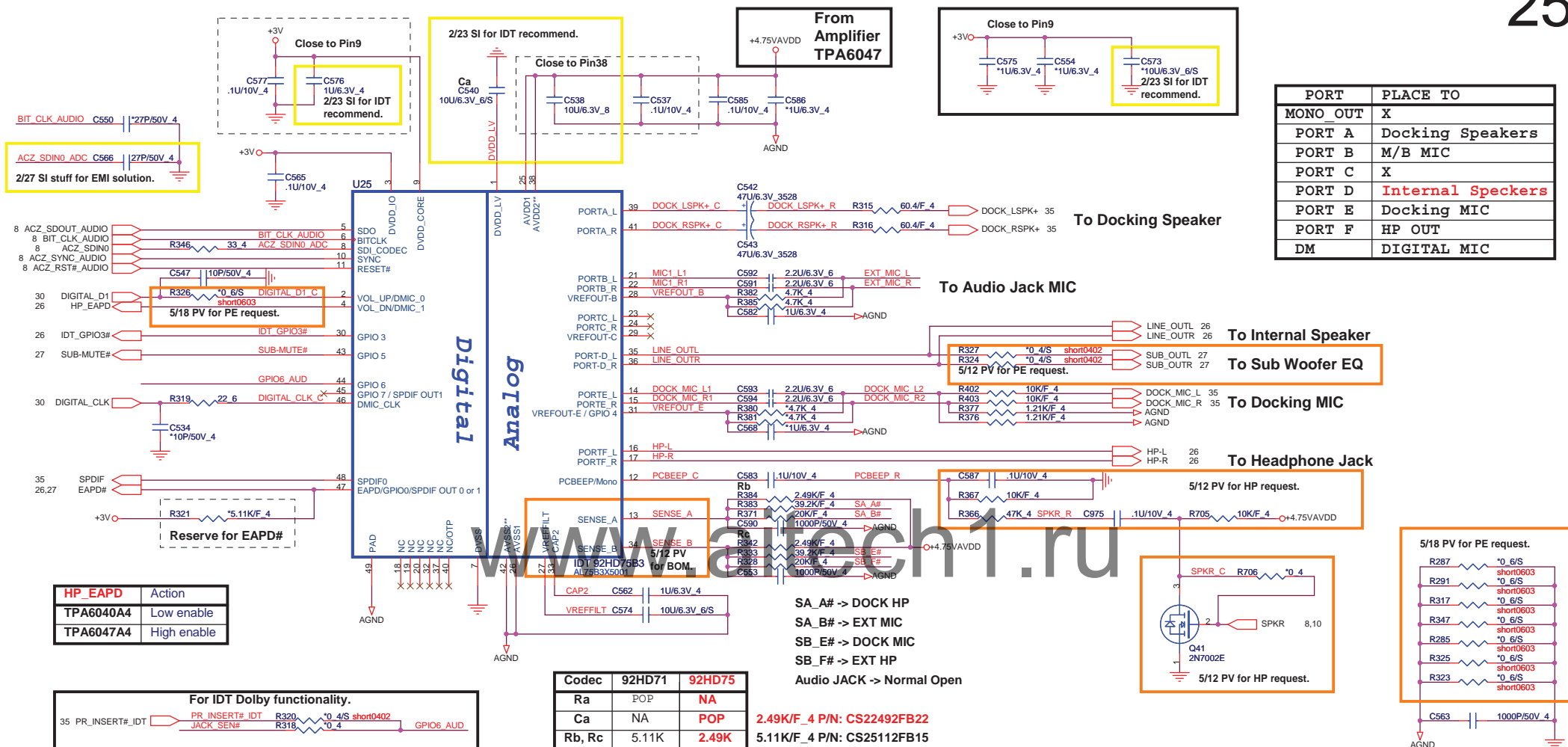
Only for NVIDIA



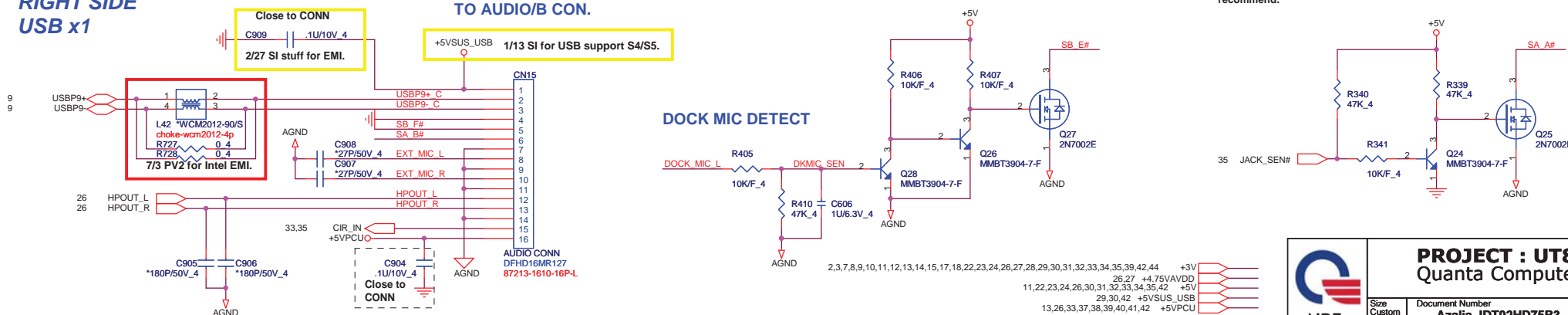


5 IN1 CARD READER (XD,MMC/SD,MS/MSP)

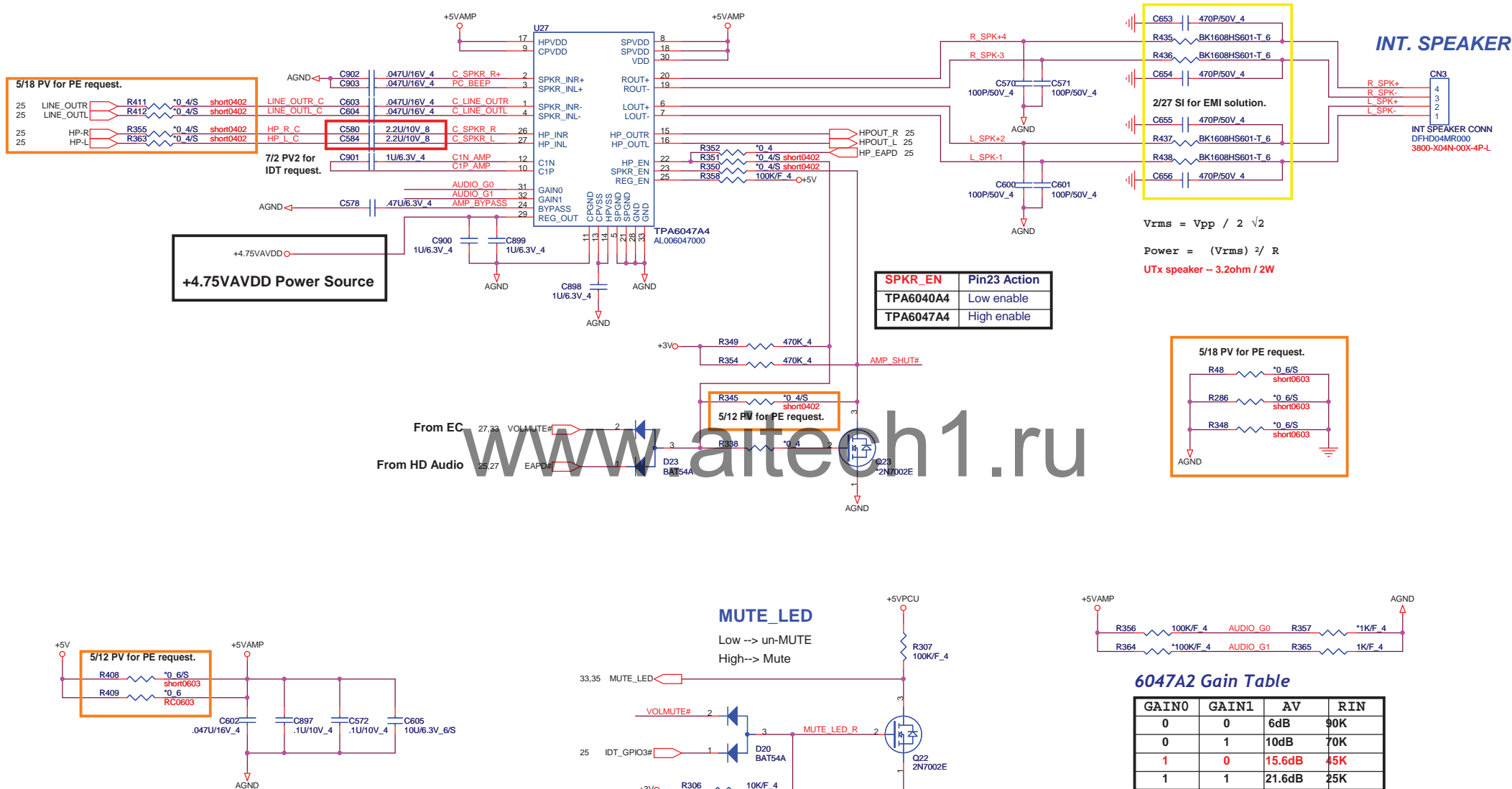




RIGHT SIDE
USB x1



AUDIO AMPLIFIER



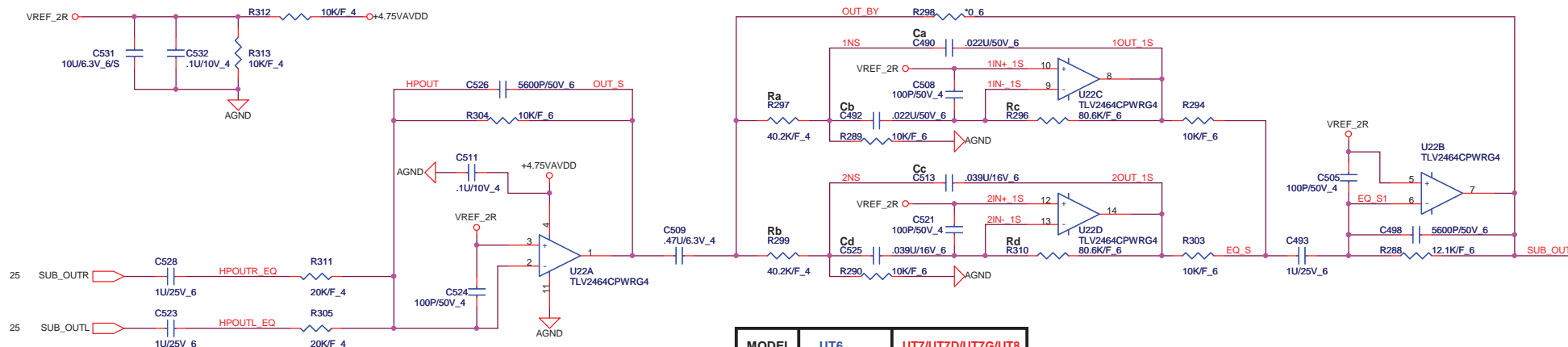
2,3,7,8,9,10,11,12,13,14,15,17,18,22,23,24,25,27,28,29,30,31,32,33,34,35,39,42,44
25,27 +4.75VAVDD
11,22,23,24,25,30,31,32,33,34,35,42 +5V
13,25,33,37,38,39,40,41,42 +5VPCU
27 +5VAMP



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Quanta Computer Inc.

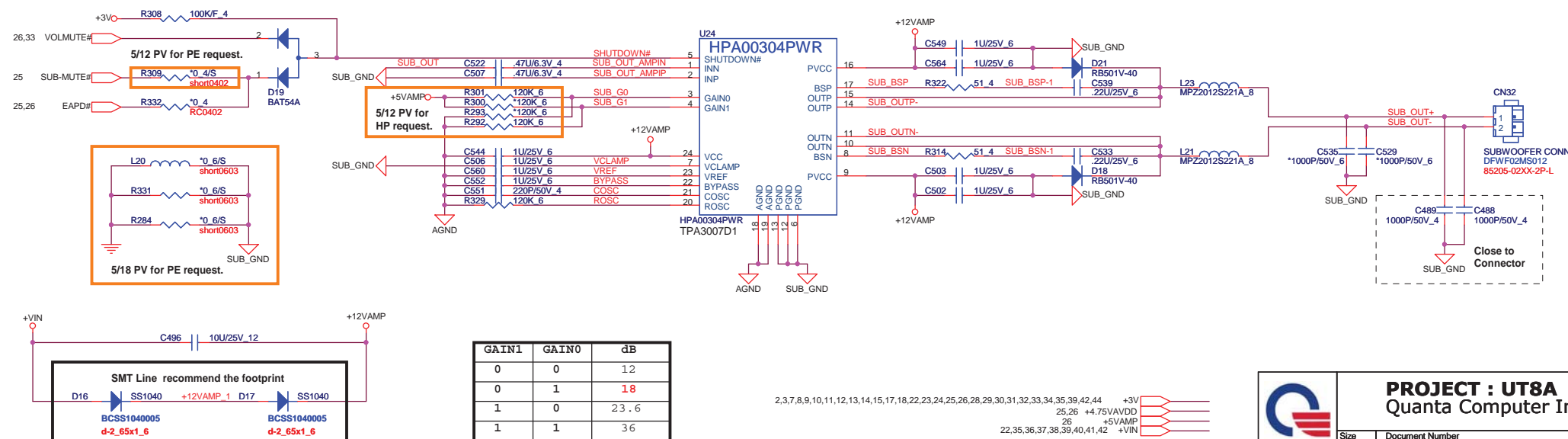
Size Custom Document Number
AMP TPA6047/Speaker Rev 2A
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EQ FOR SUBWOOFER



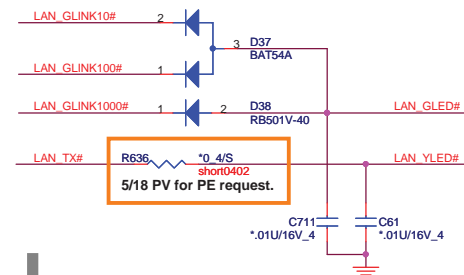
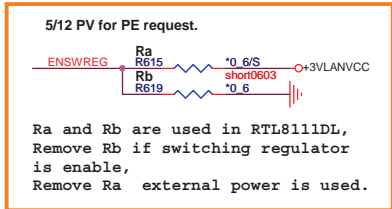
www.aitech1.ru

Sub-Woofer power

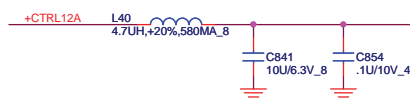


PROJECT : UT8A
Quanta Computer Inc.

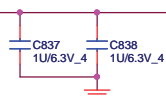
Size Custom Document Number
SUBWOOFER(EQ & AMP.)
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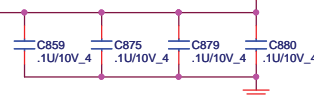
Close to RTL8111DL, trace length < 200mils,
+GTRL12A trace width > 60mils.



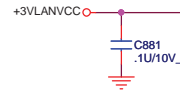
Close to RTL8111DL Pin -> 19



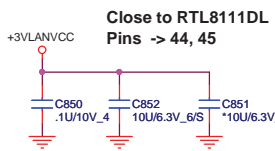
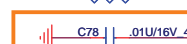
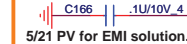
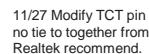
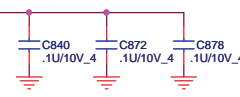
Close to RTL8111DL Pins
-> 10, 13, 30, 36, 39.
Power trace width > 200µm



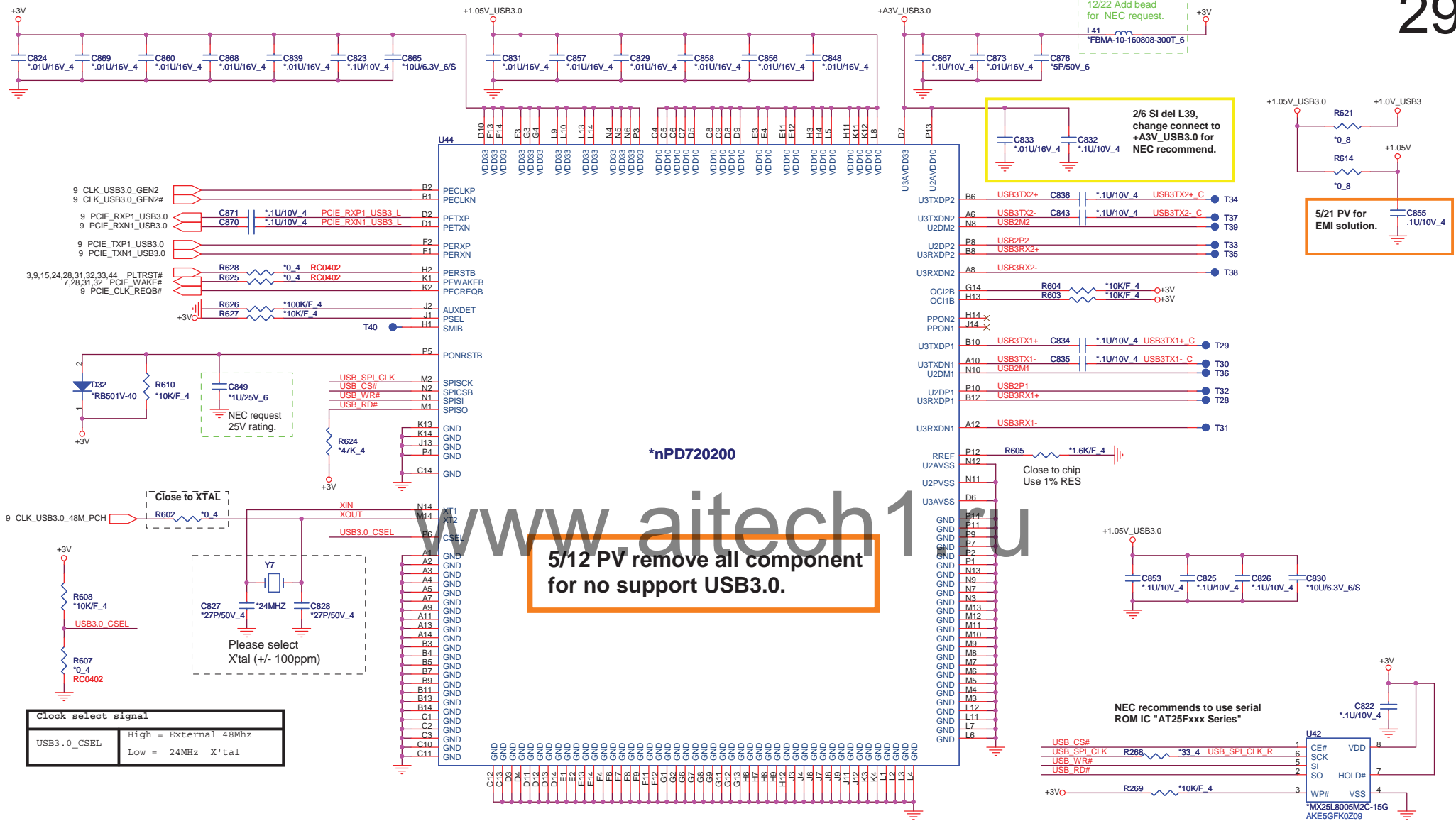
Close to RTL8111DL
Pin 1



Close to RTL8111DL
Pins -> 29, 37, 40

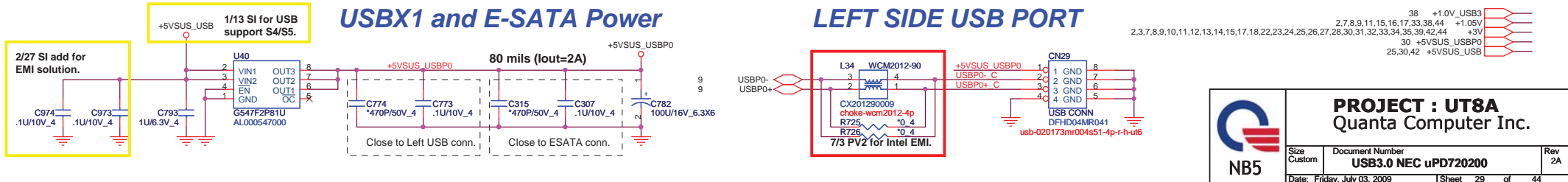


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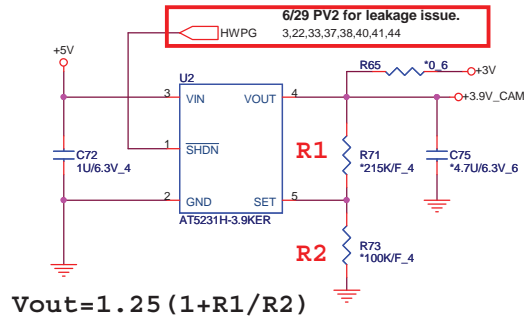
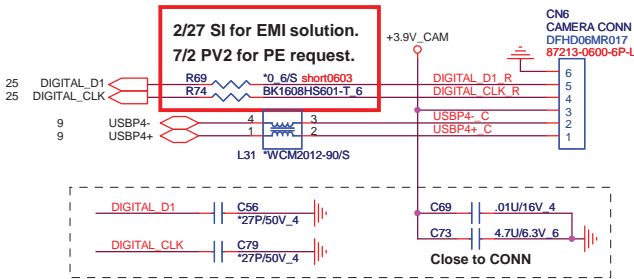


USBX1 and E-SATA Power

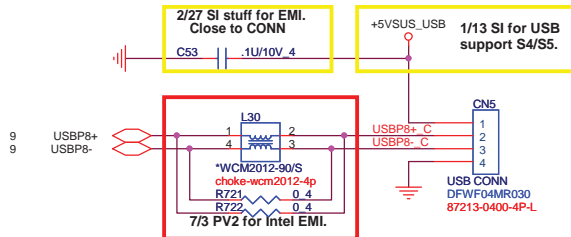
LEFT SIDE USB PORT



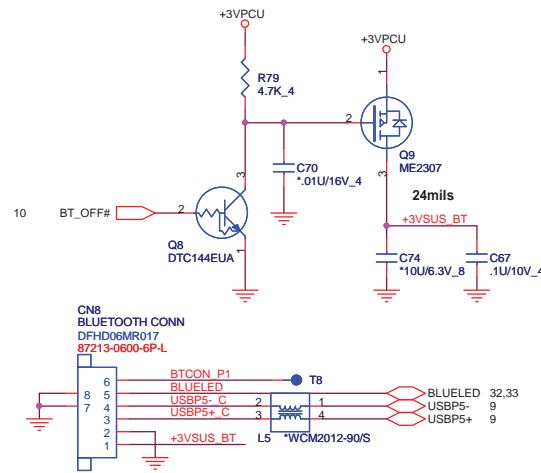
USB CAMERA/ DMIC



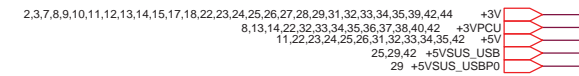
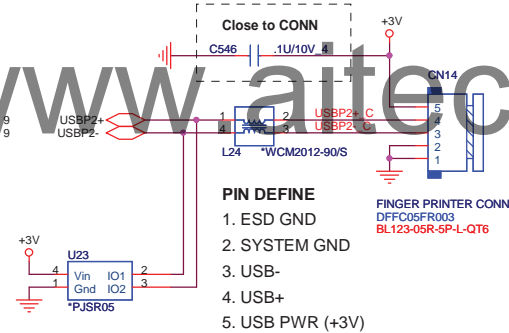
RIGHT SIDE USB CONN x1



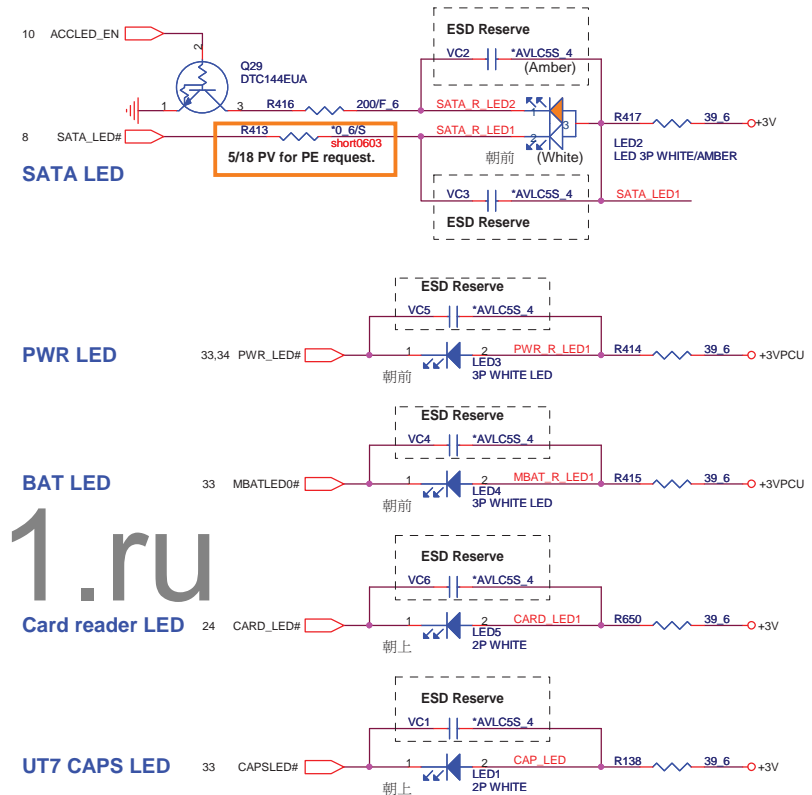
BLUETOOTH



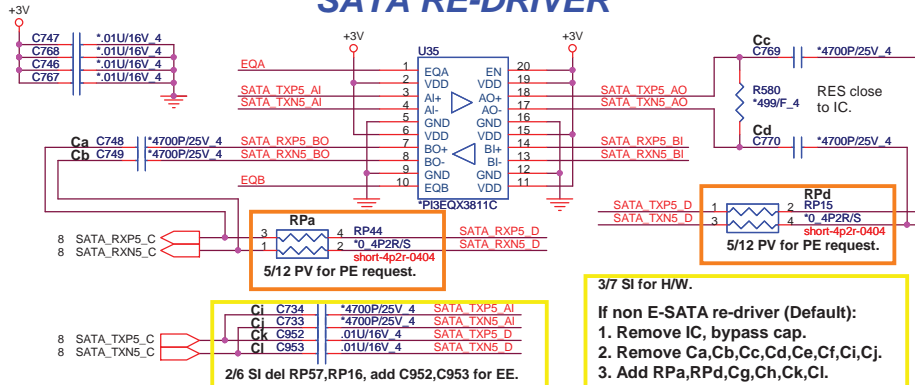
USB Fingerprint



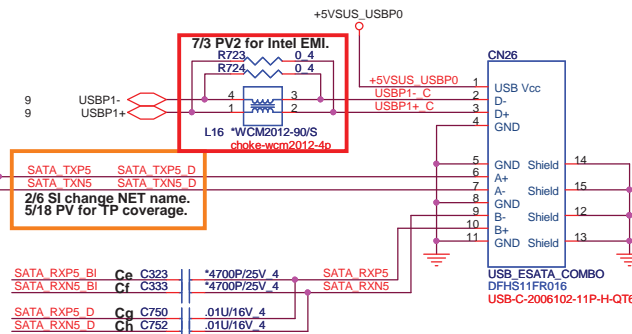
LED



SATA RE-DRIVER



LEFT SIDE USB & E-SATA



Equalizer Selection

EQx	Compliance Channel
0	3.5dB +/- 1.0dB
1	6.5dB +/- 1.0dB

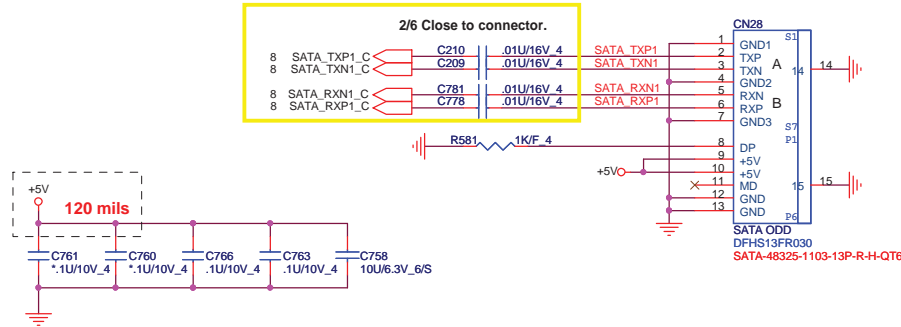


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Custom	BT/WC/FT/ESATA/USB/LED	2A
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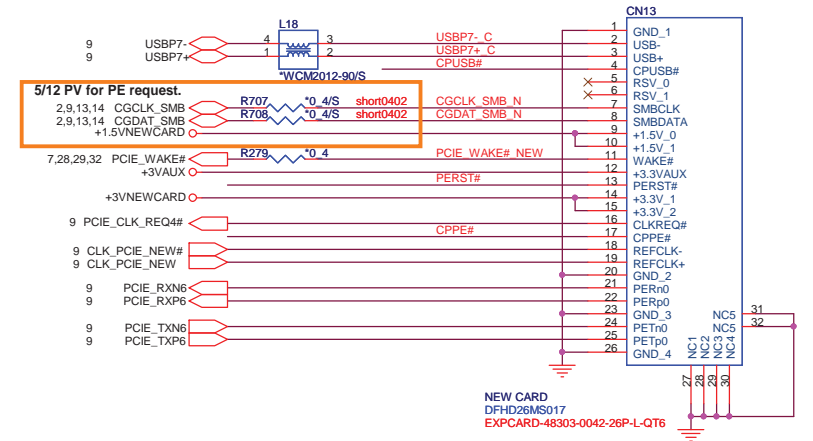
16,19,20,21,32,38,41,42 +1.5V
2,3,7,8,9,10,11,12,13,14,15,17,18,22,23,24,25,26,27,28,29,30,32,33,34,35,39,42,44 +3V
7,9,10,11,42,44 +3V5S
11,22,23,24,25,26,30,32,33,34,35,42 +5V

SATA CD-ROM

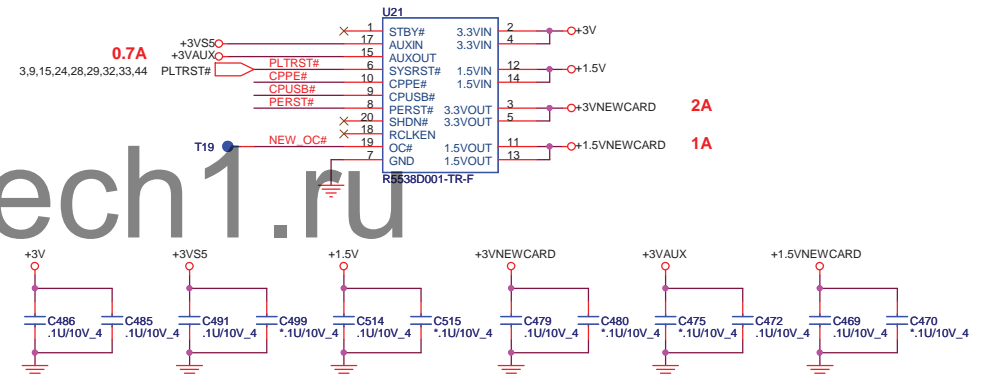
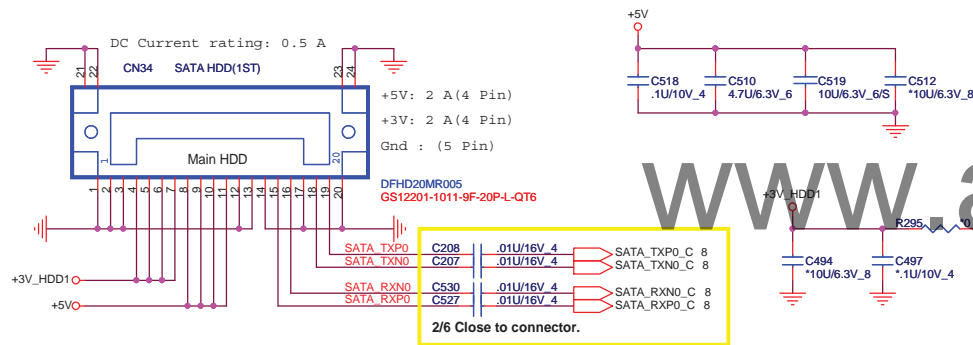


NEWCARD (PCIEXPRESS*1 + USB*1)

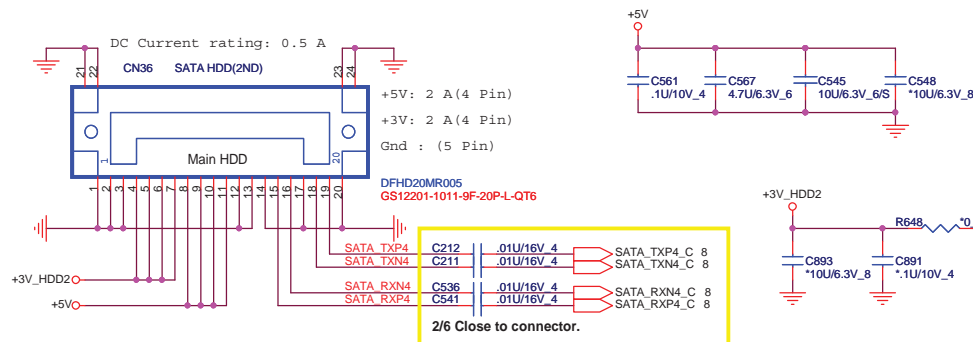
31



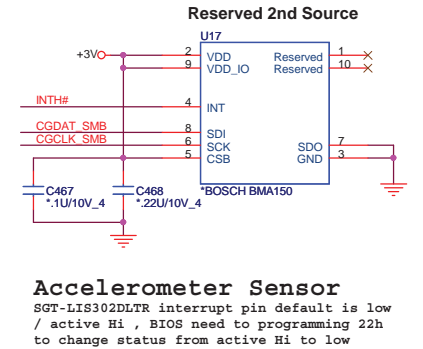
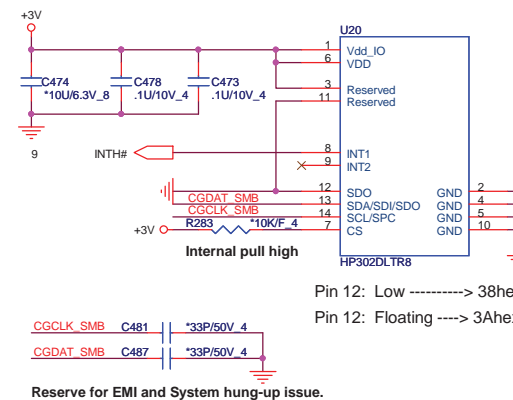
SATA_1 CONNECTOR



SATA_2 CONNECTOR

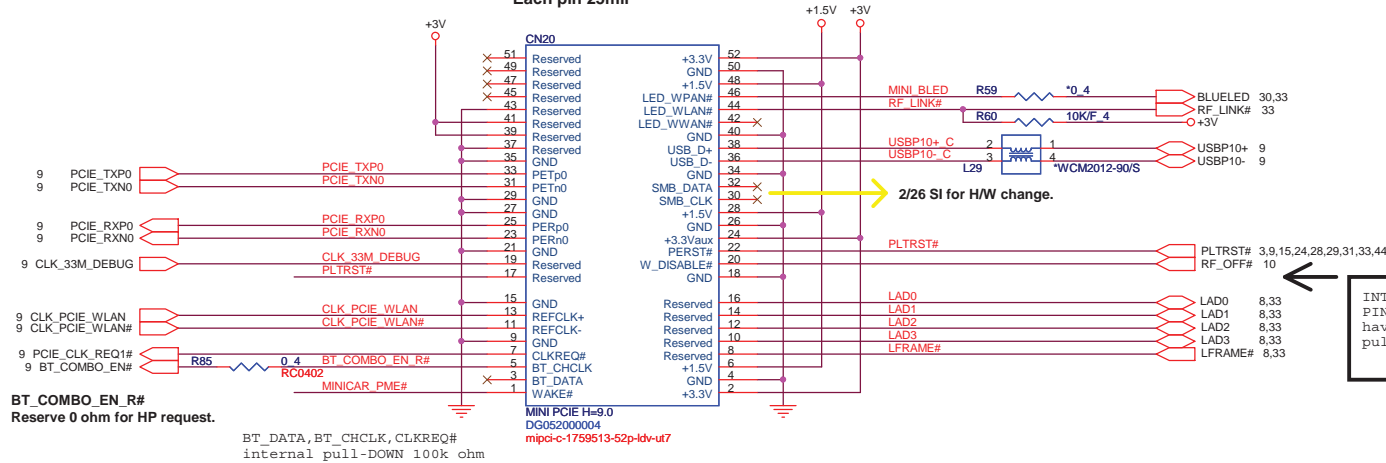


Accelerometer Sensor



MINI PCI-E Card 1 (WLAN)

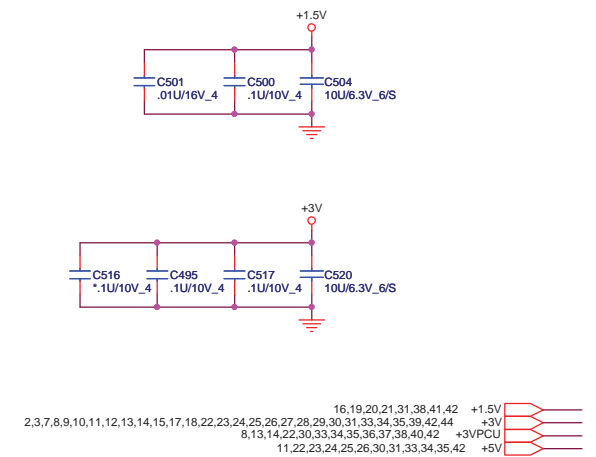
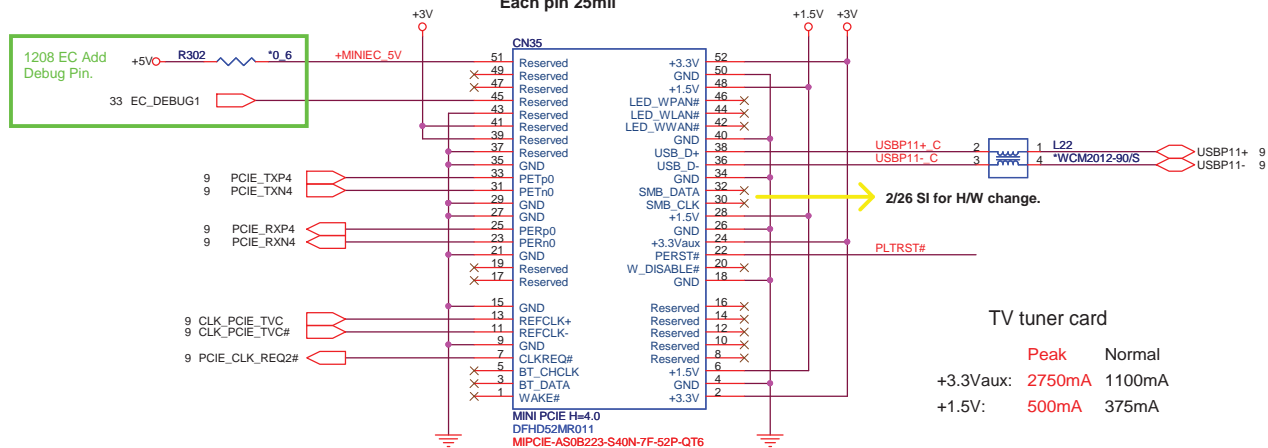
+3V must have a 120mil plane
Each pin 25mil

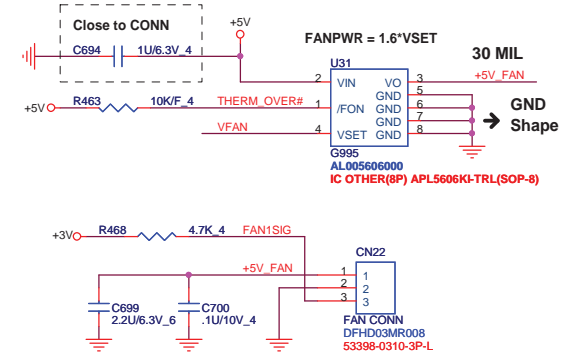


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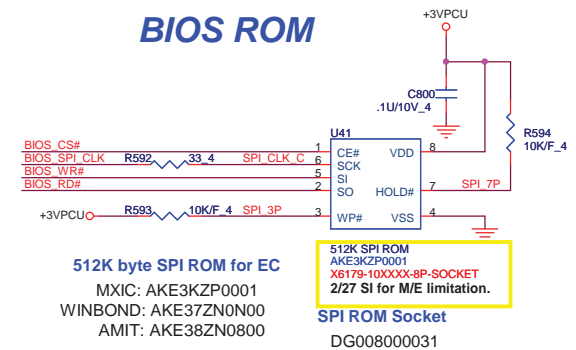
MINI PCI-E Card 2 (TV Tuner)

+3V must have a 120mil plane
Each pin 25mil

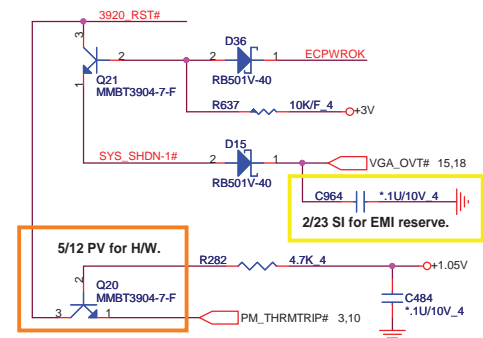




BIOS ROM

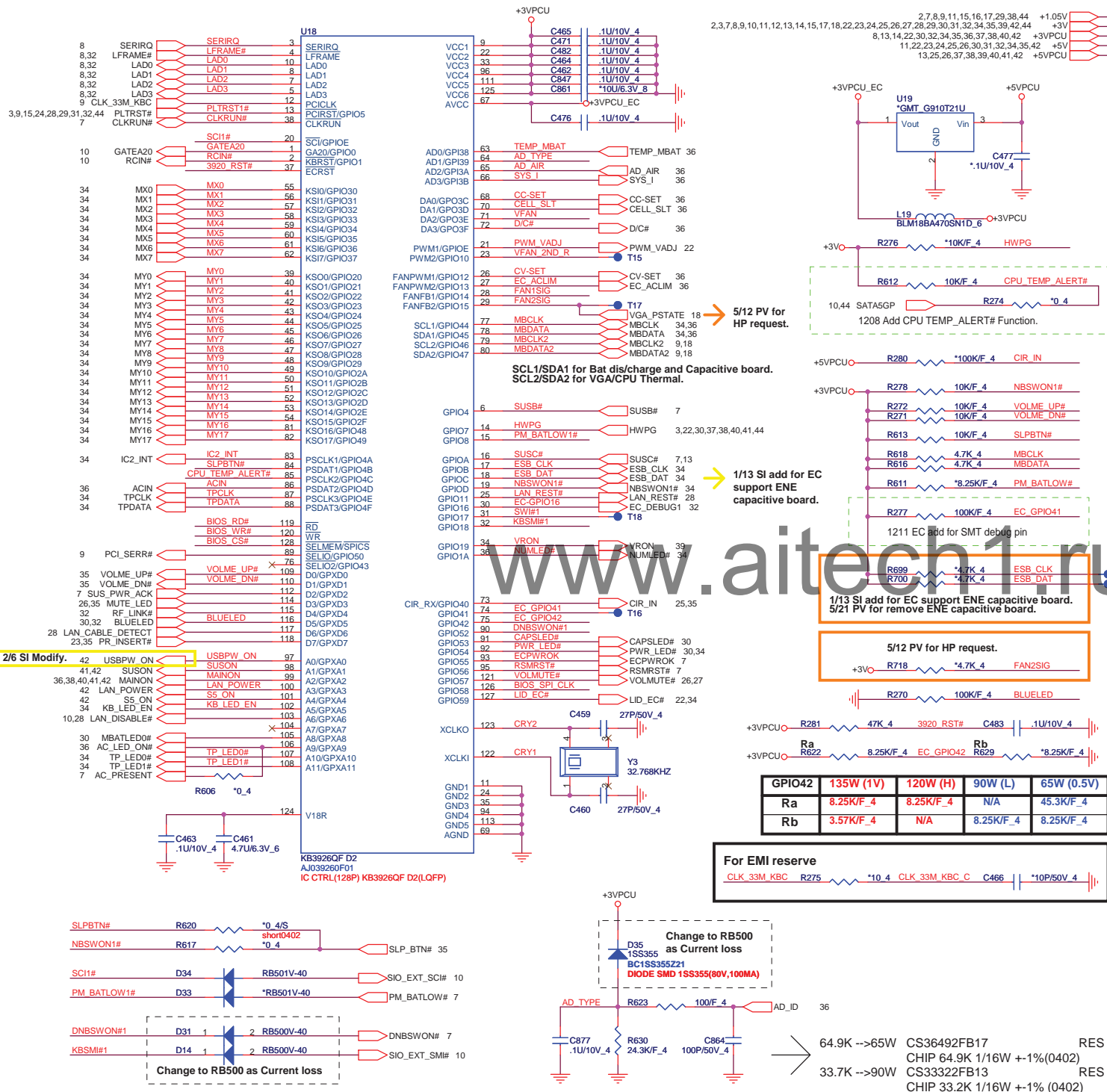


Thermal trip

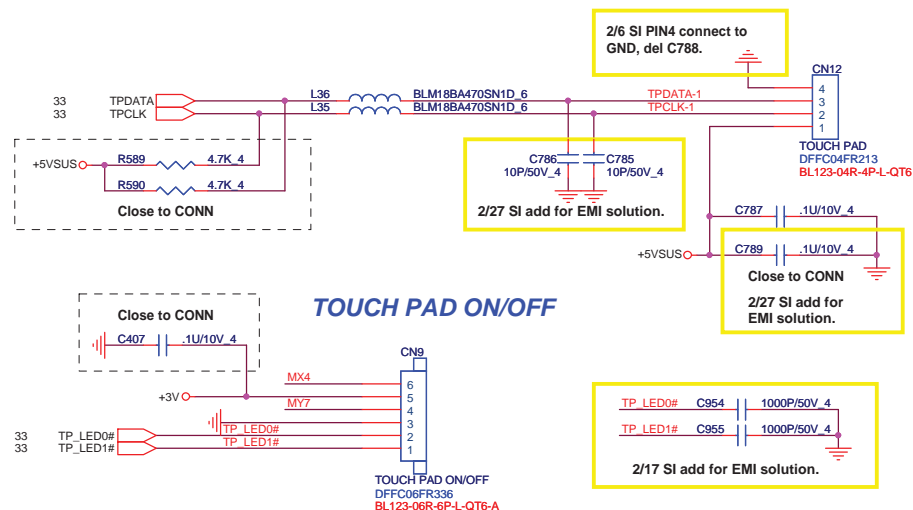


PROJECT : UT8A
Quanta Computer Inc.

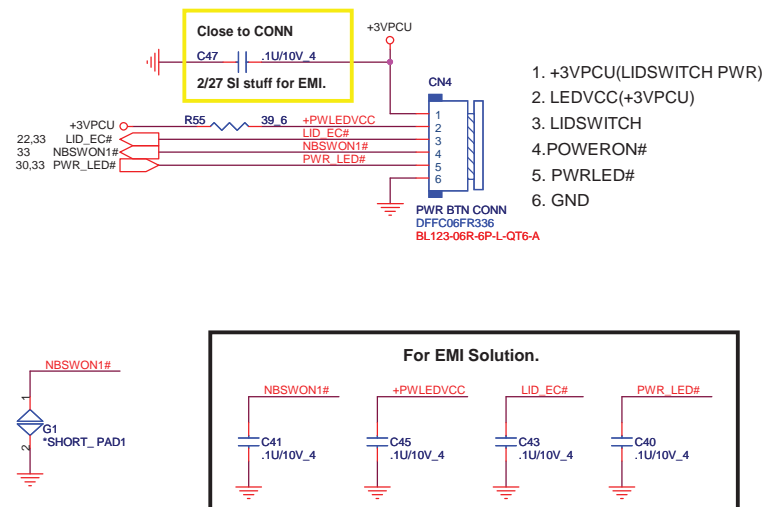
Size	Document Number	Rev
Custom	EC KB3926/ROM/FAN	2A
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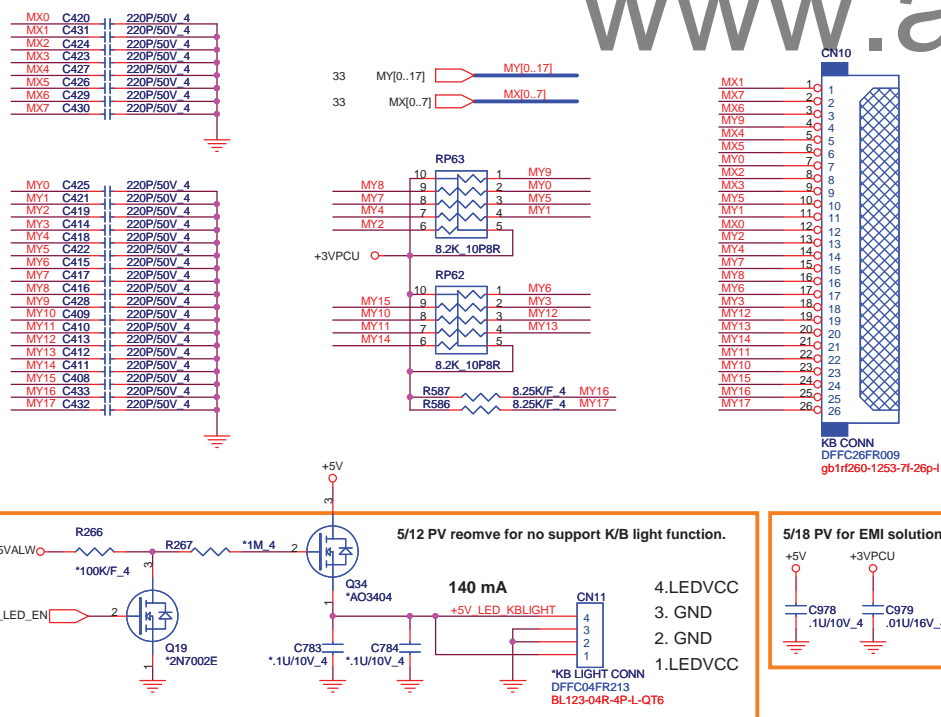
TOUCH PAD CONNECTOR



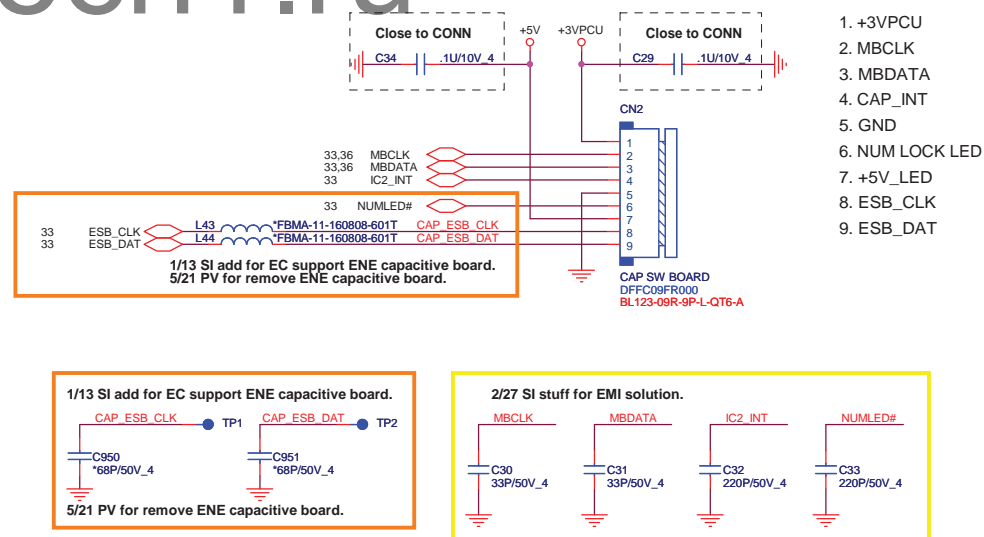
POWER BOTTON CONNECTOR

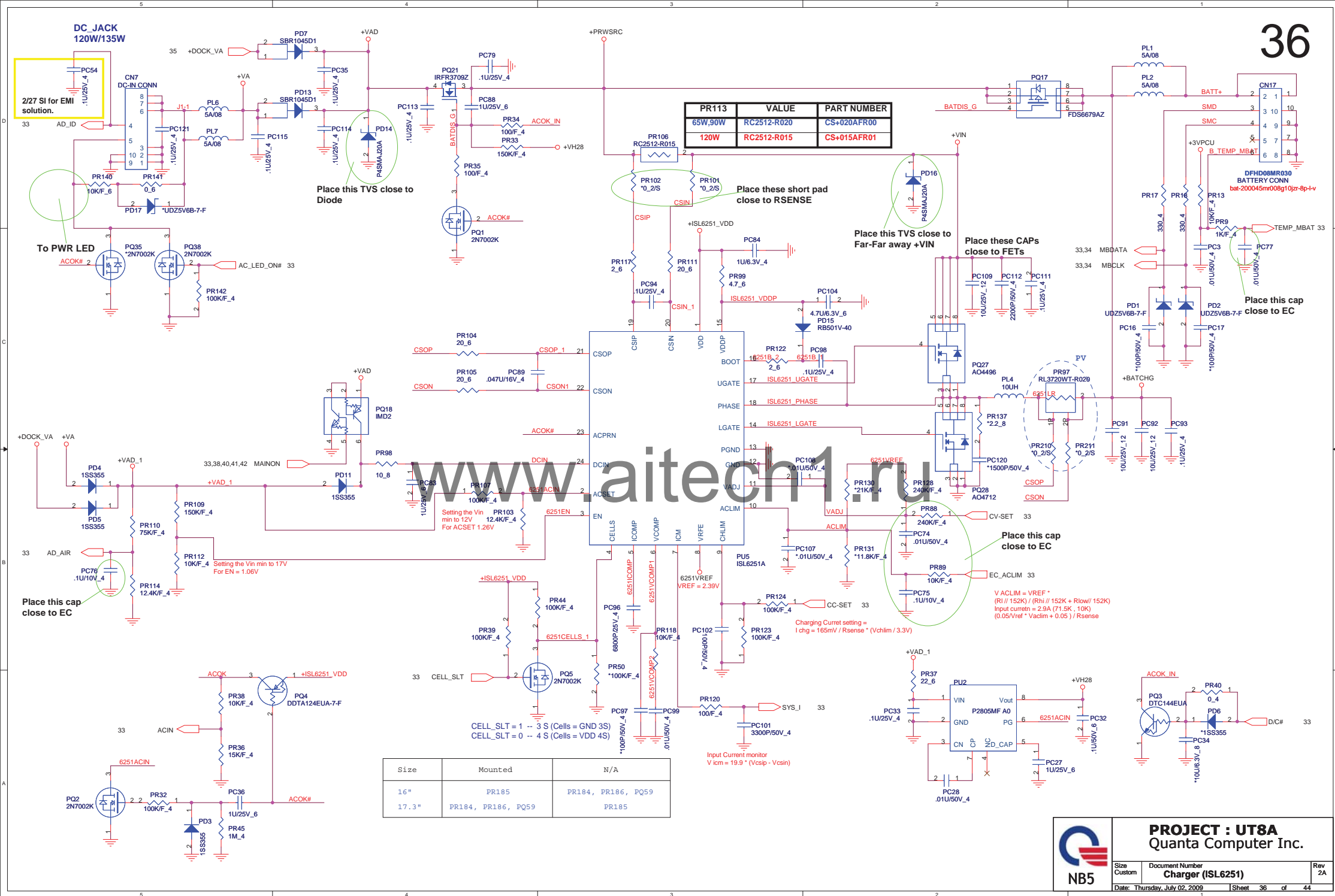


KEYBOARD CONNECTOR

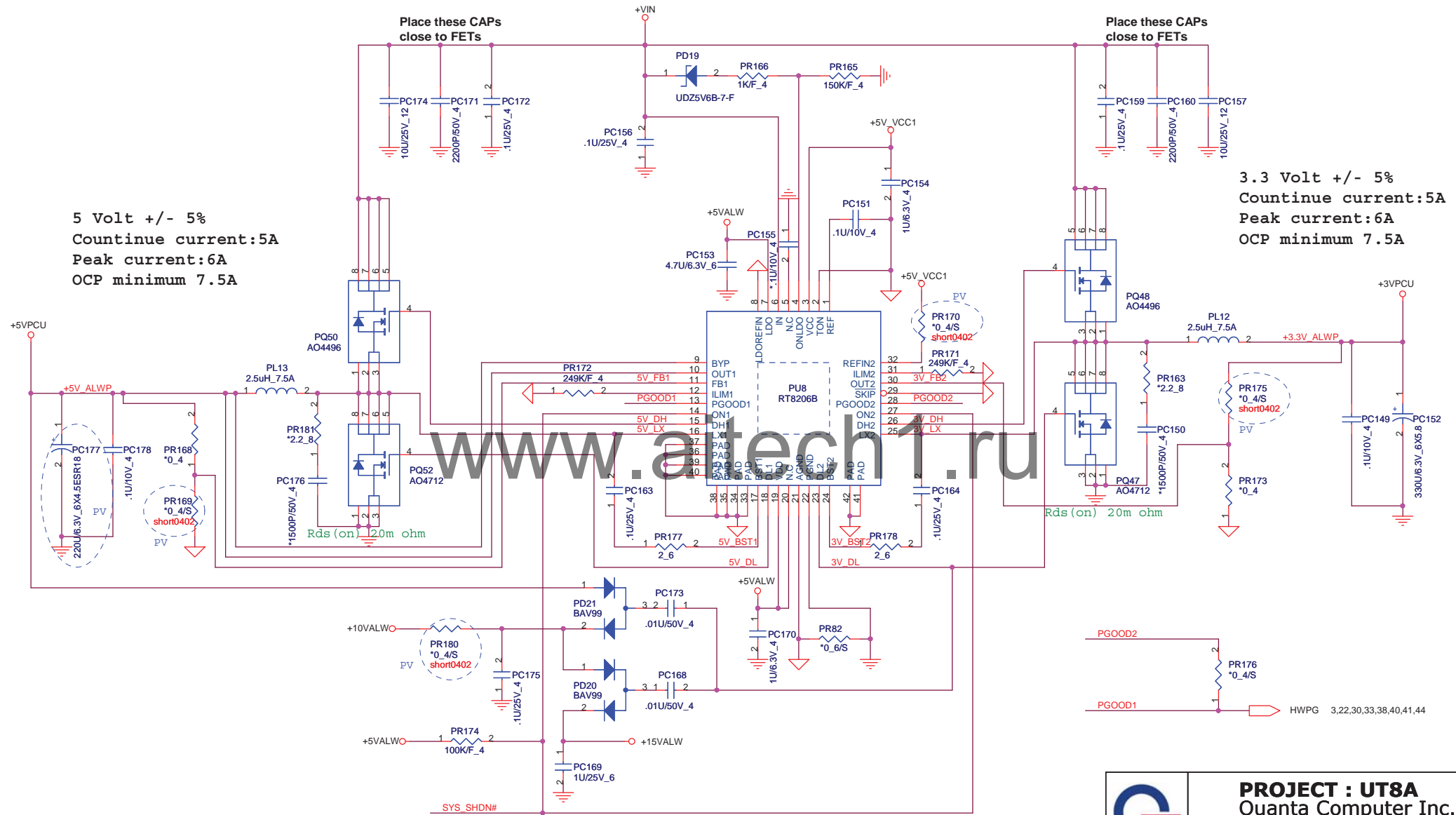


CAP SW CONNECTOR



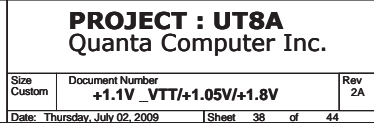


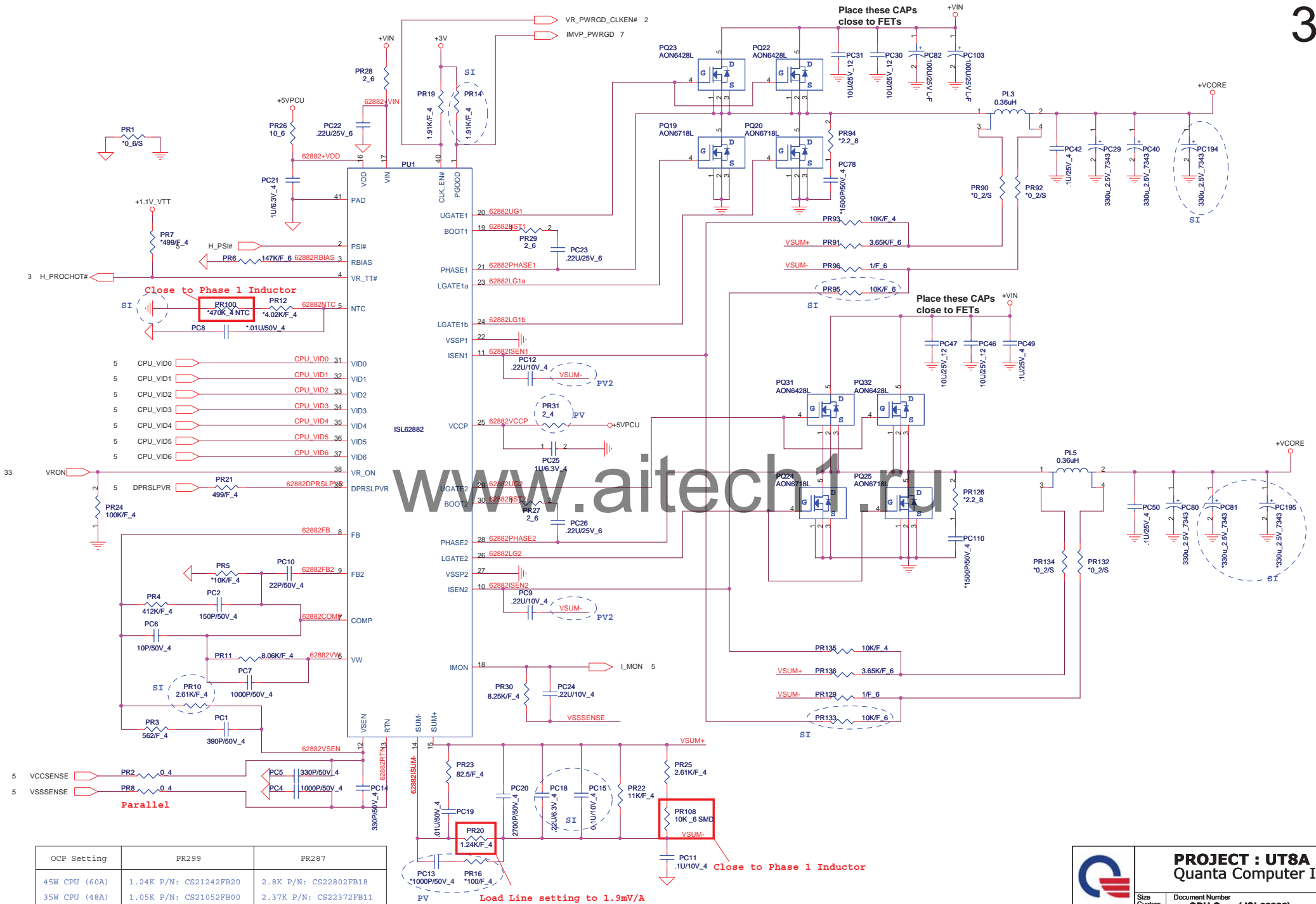
DC/DC +3V_ALW/+5V_ALW/+5V_ALW2 /+15V_ALW



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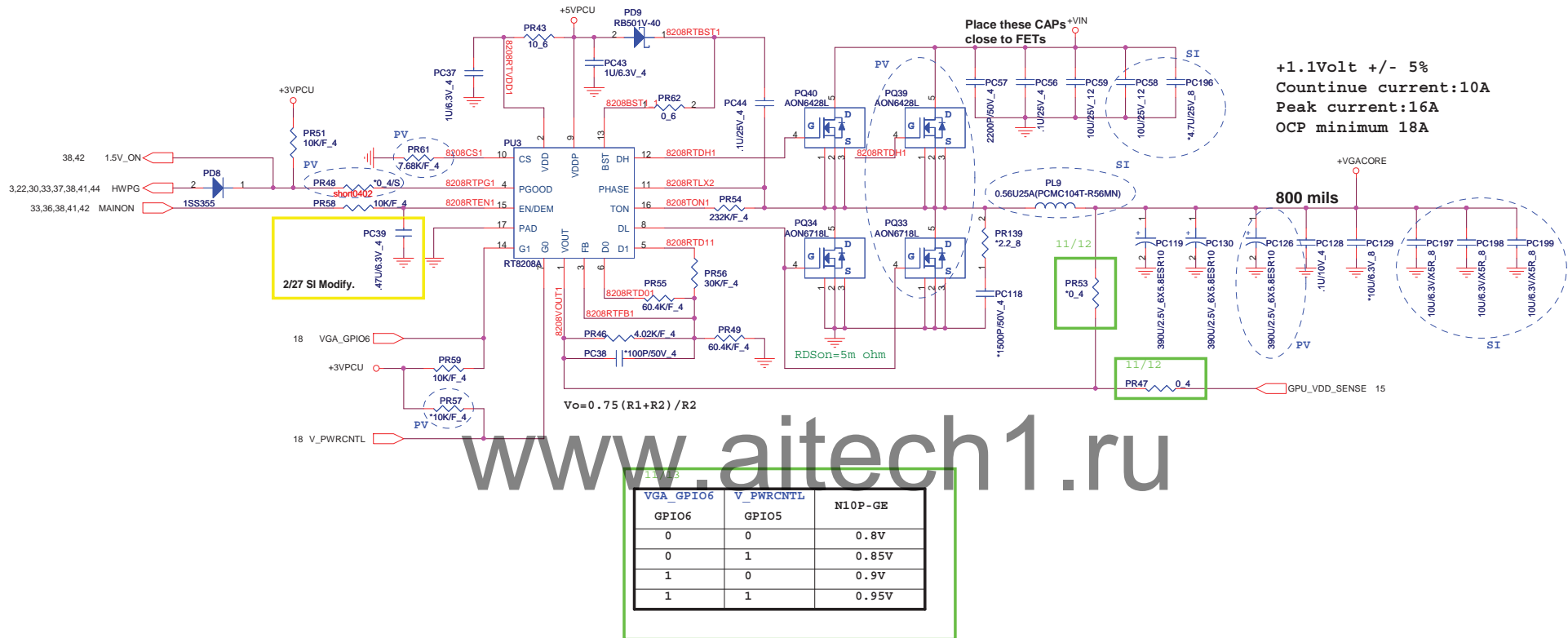
Size	Document Number	Rev
Custom	+5V/+3V (RT8206B)	2A
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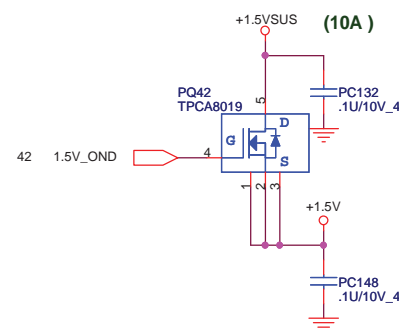
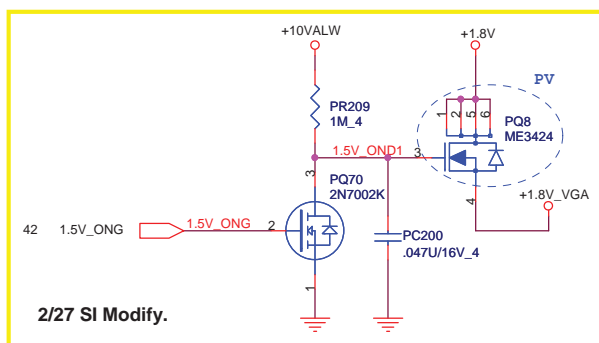


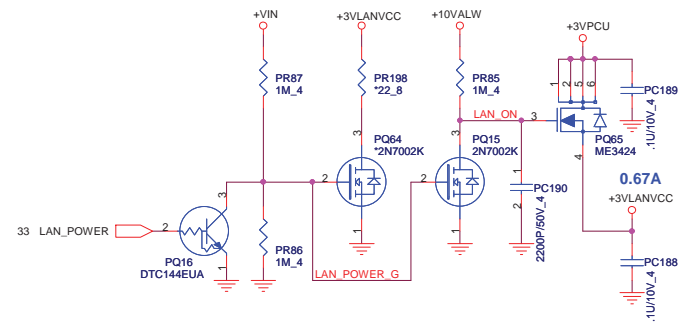
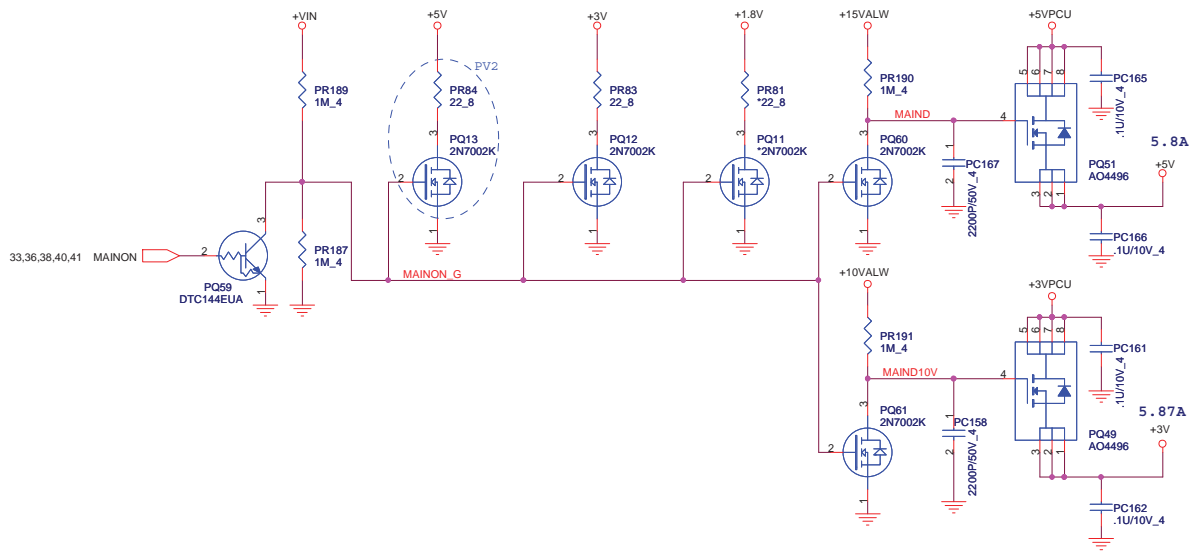
OCP Setting	PR299	PR287
45W CPU (60A)	1.24K P/N: CS21242FB20	2.8K P/N: CS22802FB18
35W CPU (48A)	1.05K P/N: CS21052FB00	2.37K P/N: CS22372FB11

VGA Core & VCC1.1

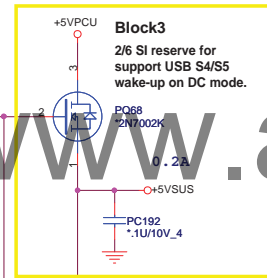
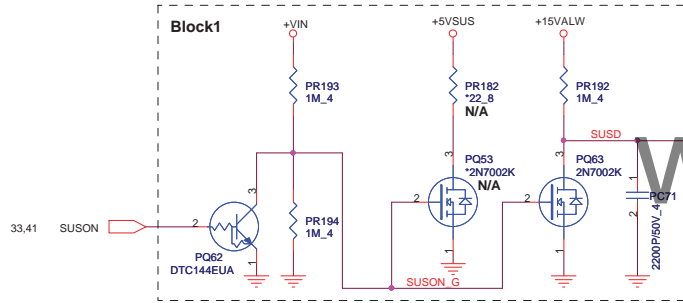
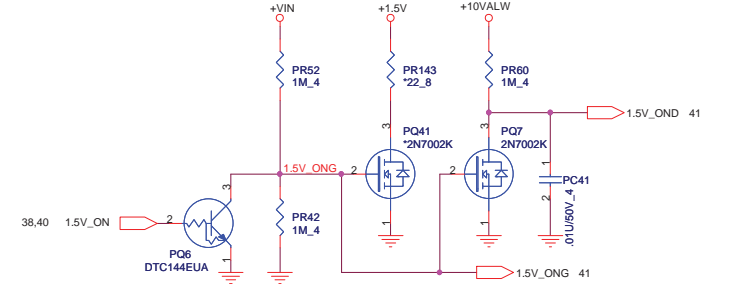


VGA_GPIO6	V_PWRCNTL	N10P-GE
GPI06	GPI05	
0	0	0.8V
0	1	0.85V
1	0	0.9V
1	1	0.95V





For Discrete Only

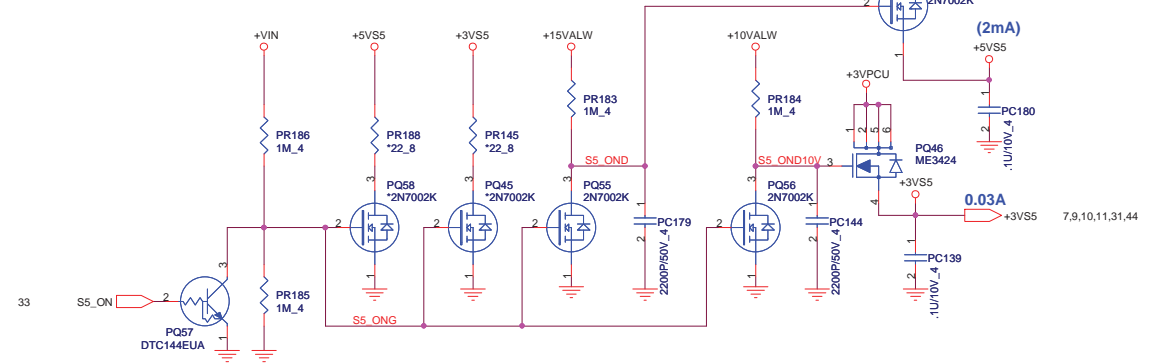
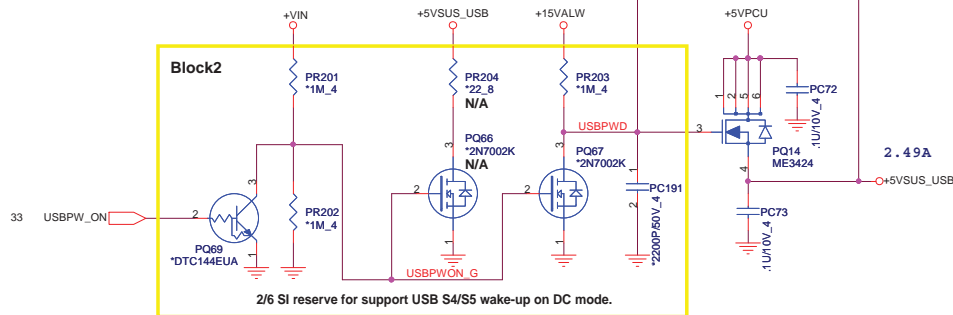


USB support S4/S5 on DC mode

USB Four Ports	LCD TP DOCK	Components				Default
		Block1	Block2	Block3	Ra	Rb
S3	S3	Stuff	N/A	N/A	Stuff	Stuff
S4/S5	S3	Stuff	Stuff	Stuff	N/A	N/A
S4/S5	S4/S5	N/A	Stuff	N/A	N/A	Stuff

2/6 SI add for support USB S4/S5 wake-up on DC mode.

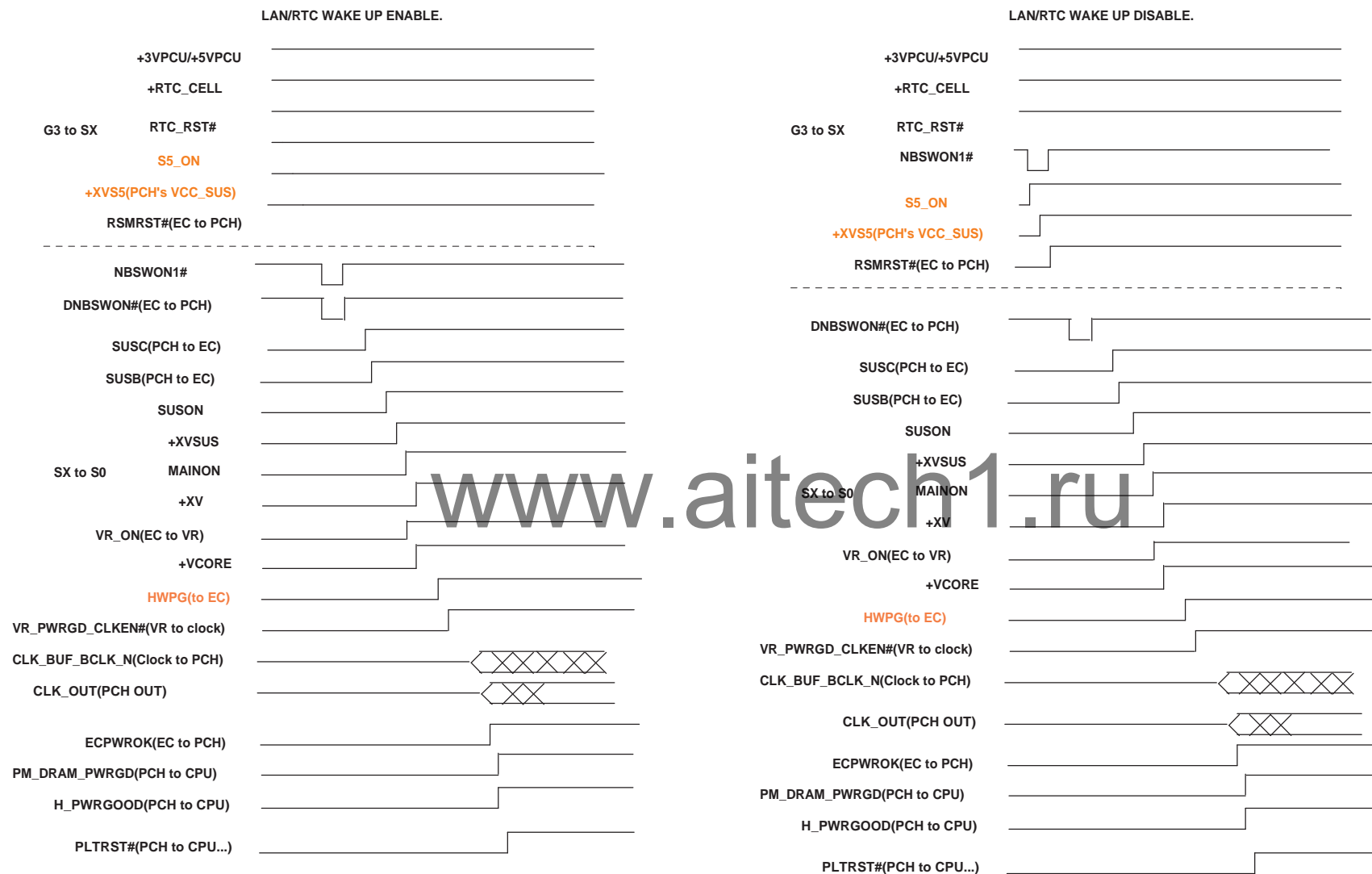
Ra PR199 *0.4/S short0402
Rb PR200 *0.8/S short0805



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Power up sequence



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