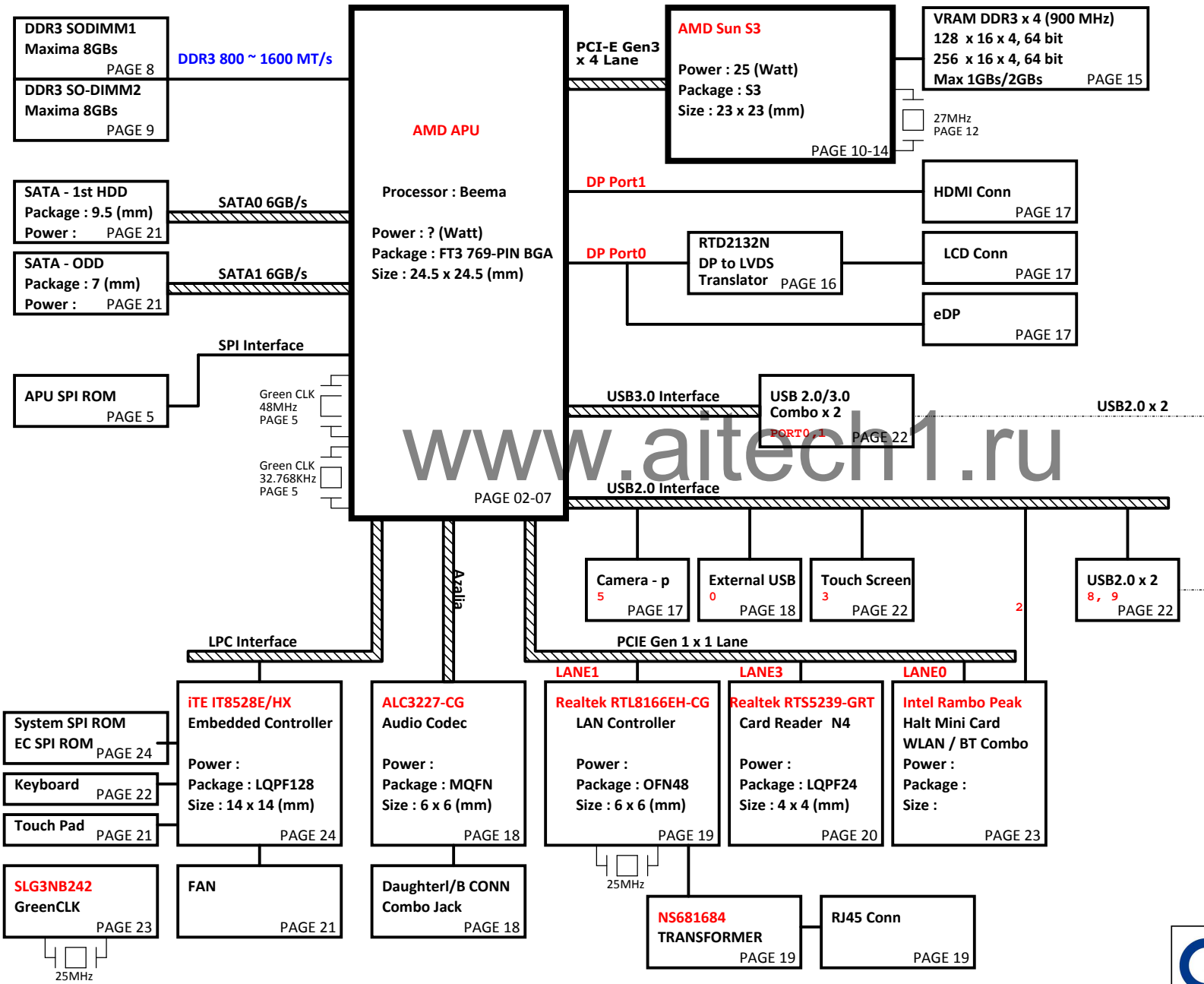
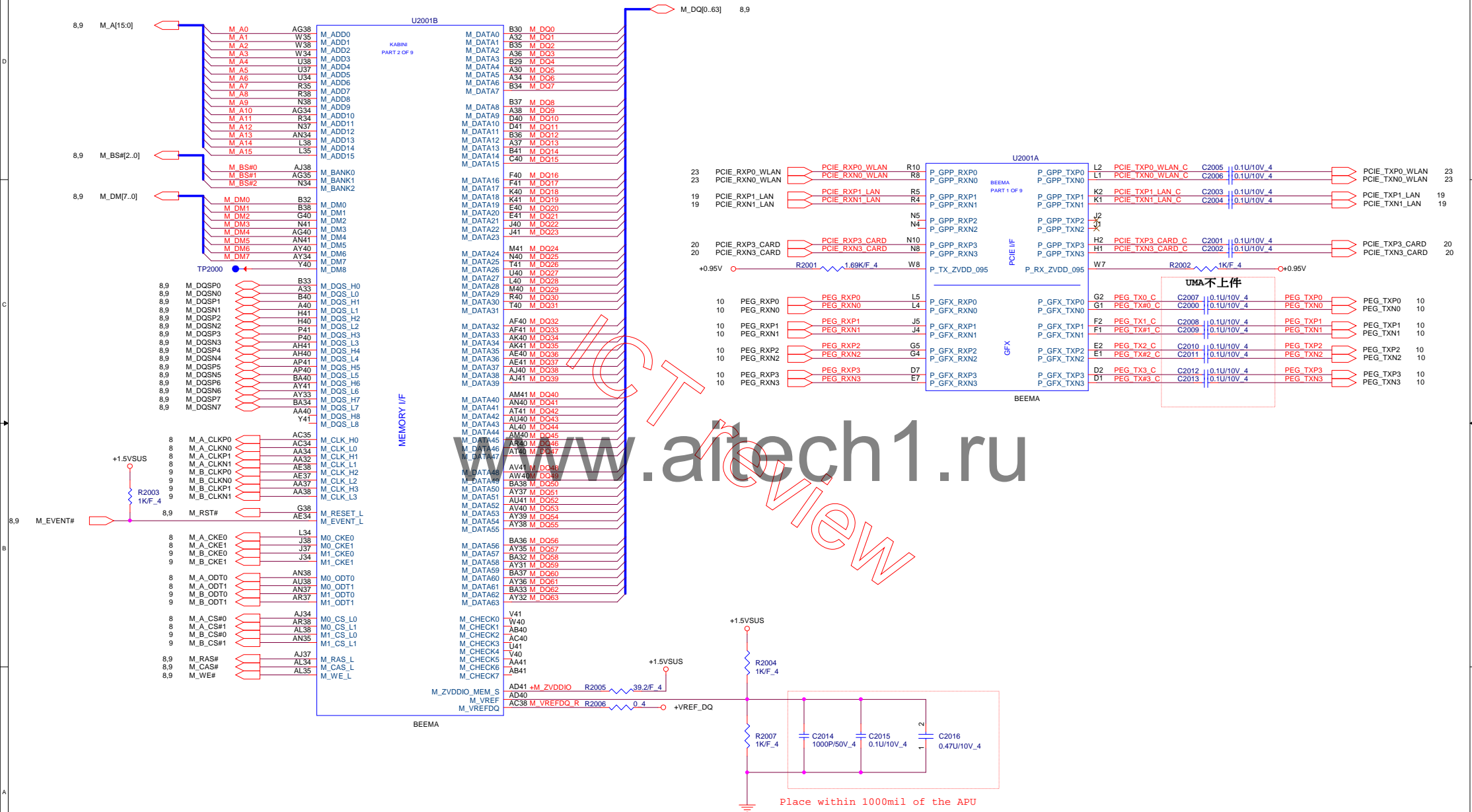


Lean G_AMD Beema DIS/UMA (14"/15.6")

Ultra/Slim⁰¹

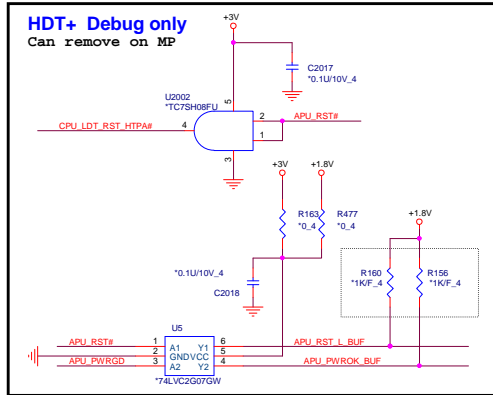
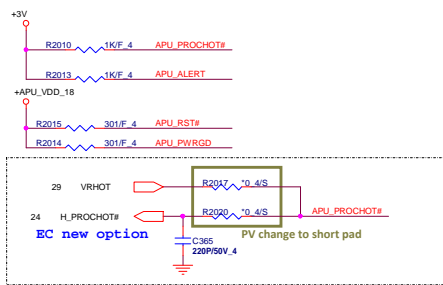


- PCB 6L STACK UP**
- LAYER 1 : TOP
 - LAYER 2 : SGND
 - LAYER 3 : IN1(High)
 - LAYER 4 : IN2(Low)
 - LAYER 5 : SVCC
 - LAYER 6 : BOT
- Power Source**
- TI BQ24728**
System Charge Power (+BATCHG)
PAGE 25
 - Ricteck RT8223PZ**
System Power (+3VPCU/+5VPCU/
+3VSS/+5VSS)
PAGE 26
 - AOZ1237QI/APW8824CTI/G9183**
KABINI Power (+0.95V/+0.95VSS
/+1.5VSS)
PAGE 27
 - TI TPS51216**
System Memory Power (+1.5VSUS/
+0.75V_DDR_VTT)
Ricteck RT8068A
KABINI Power (+1.8VSS)
PAGE 28
 - Intersil ISL6277HRTZ/ISL6208BCRZ**
Processor Power (+VCC_CORE/
+VDDNB_CORE)
PAGE 29~30
 - GMT G5934RZ1U**
System Discharge Power
(+1.5V/+3V/+5V)
(+3VSUS/+3VLANVCC/+1.8V)
PAGE 31
 - On-semi ADP3211A**
VGA Power (+VGA_CORE)
PAGE 32
 - Ricteck RT8086A**
DGPU Power (+1.0V_VGA/+3V_VGA
/+1.5V_VGA/+1.8V_VGA/)
PAGE 33

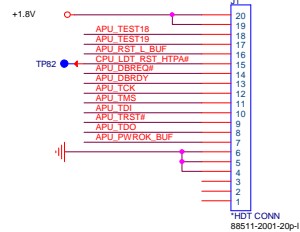
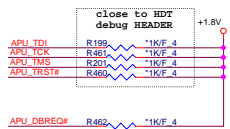


6,8,9,28,31,33
8,9
5,6,27

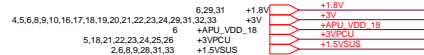
+1.5VSUS
+VREF_DQ
+0.95V



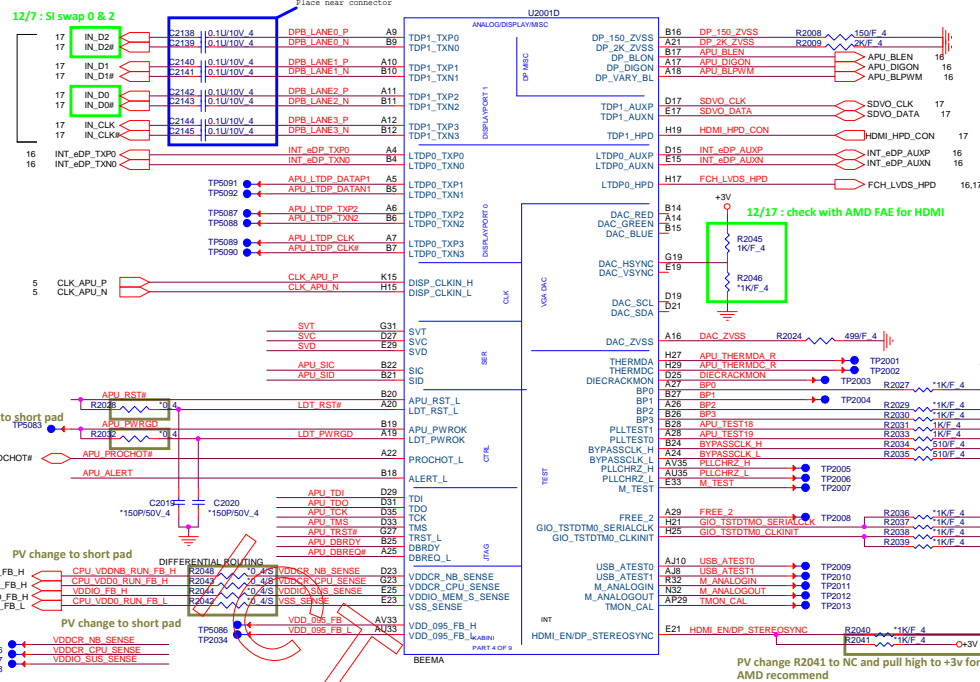
HDT+ Connector for Debug only



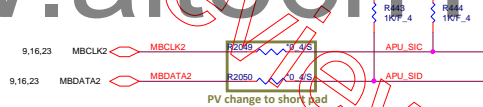
Serial VID



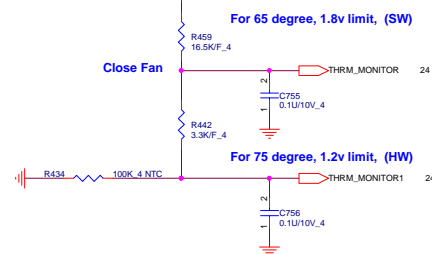
VFIX MODE		VID Override table (VDD)	
SVC	SVD	Boot Voltage	
0	0	1.1V	
0	1	1.0V	
1	0	0.9V	
1	1	0.8V	



Thermal Sensor

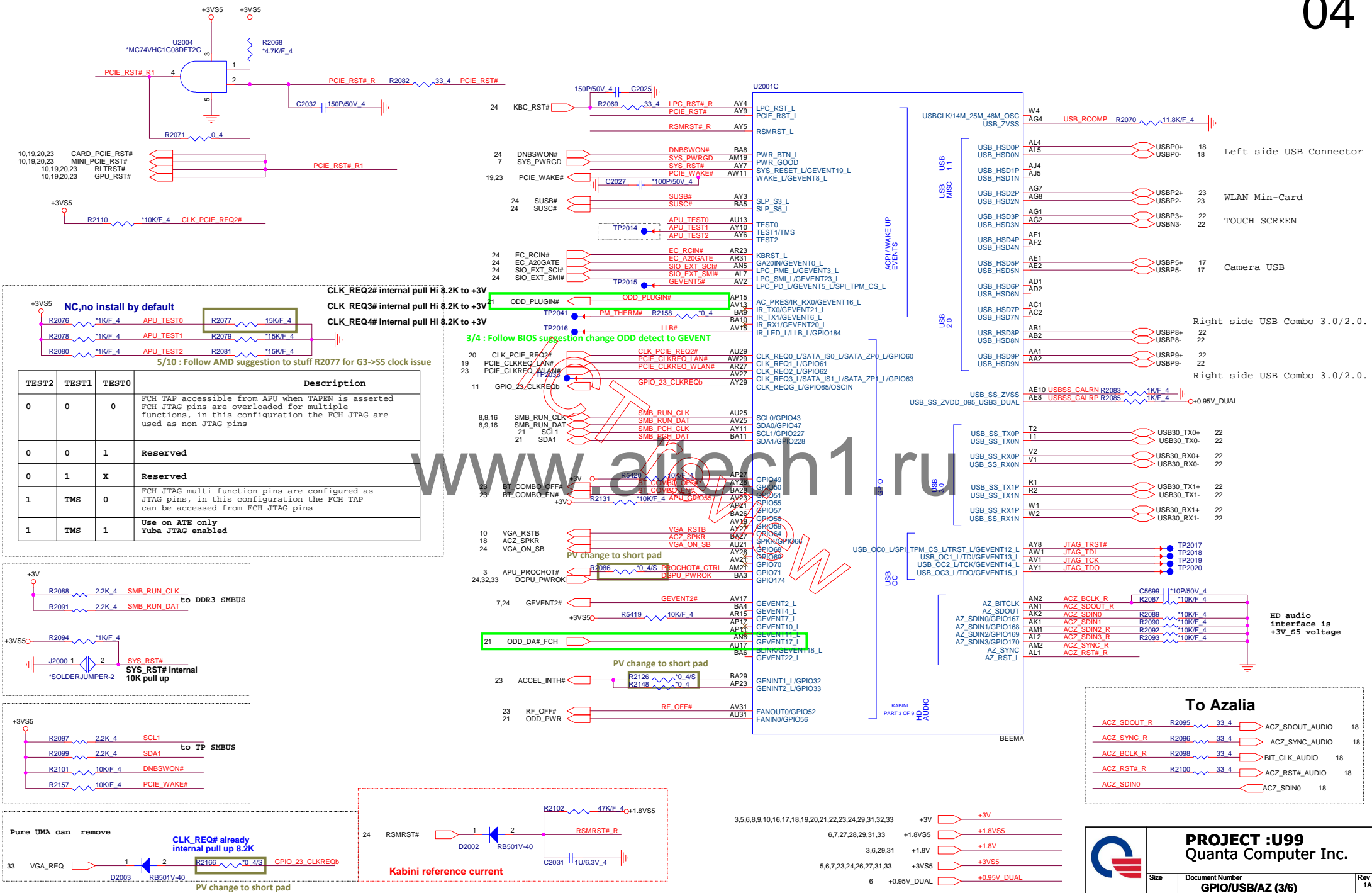


IO Thrm Protect



PROJECT :U99
Quanta Computer Inc.

Size	Document Number	Rev
	DIS/MI (2/6)	1A
Date:	Monday, May 19, 2014	Sheet 3 of 33

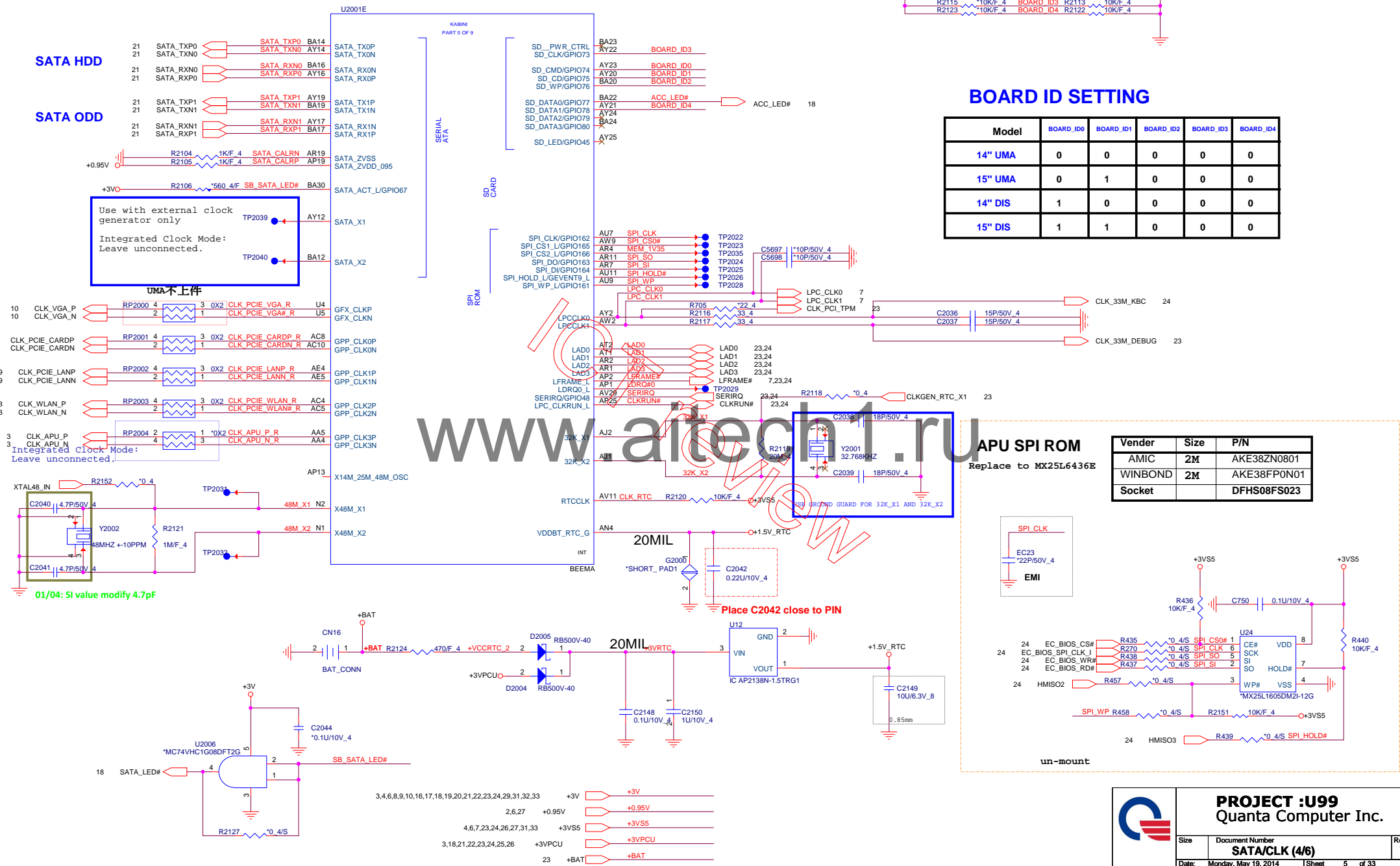



SATA HDD

SATA ODD

BOARD ID SETTING

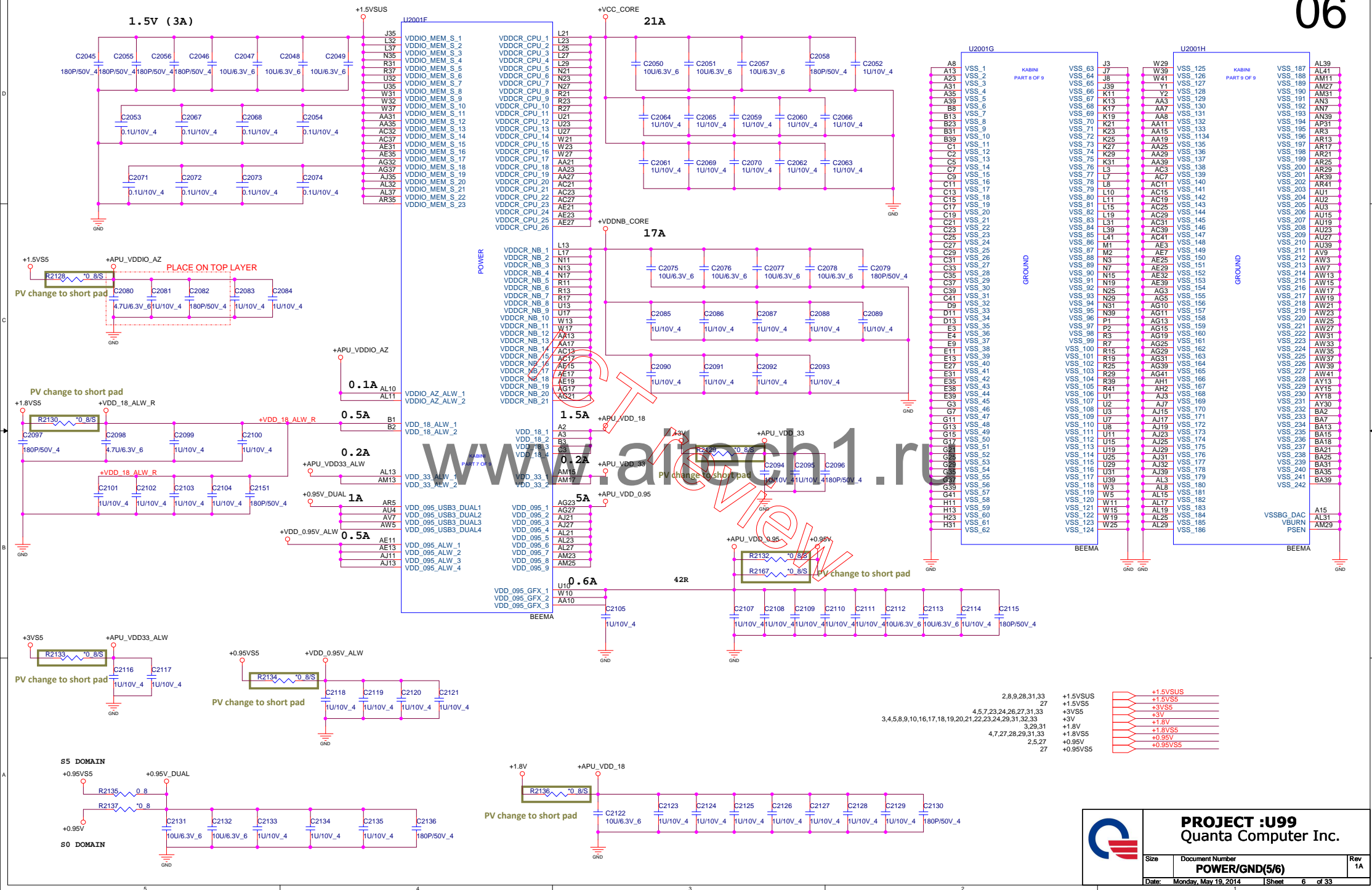
Model	BOARD_ID0	BOARD_ID1	BOARD_ID2	BOARD_ID3	BOARD_ID4
14" UMA	0	0	0	0	0
15" UMA	0	1	0	0	0
14" DIS	1	0	0	0	0
15" DIS	1	1	0	0	0





PROJECT :U99
Quanta Computer Inc.

Size	Document Number	Rev
	SATA/CLK (4/6)	1A
Date:	Monday, May 19, 2014	Sheet 5 of 33

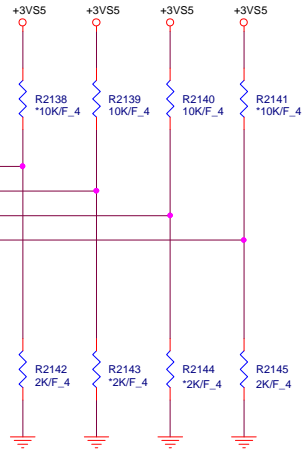


STRAPS PINS

OVERLAP COMMON PADS WHERE
POSSIBLE FOR DUAL-OP RESISTORS.

24,29,31,32,33 +3V

24,26,27,31,33 +3VS5



5 LPC_CLK0

5 LPC_CLK1

5,23,24 LFRAME#

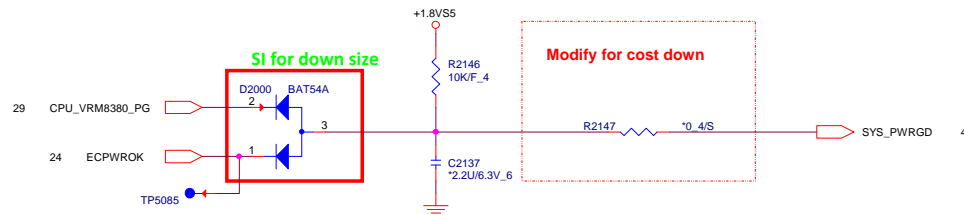
4,24 GEVENT2#

REQUIRED STRAPS

					LPC_CLK0	LPC_CLK1	LFRAME#	GEVENT2#
PULL HIGH					BOOT FAIL TIMER ENABLED	CLKGEN ENABLED DEFAULT	SPI ROM DEFAULT	1.8V SPI ROM
PULL LOW					BOOT FAIL TIMER DISABLED DEFAULT	CLKGEN DISABLED	LPC ROM	3.3V SPI ROM DEFAULT

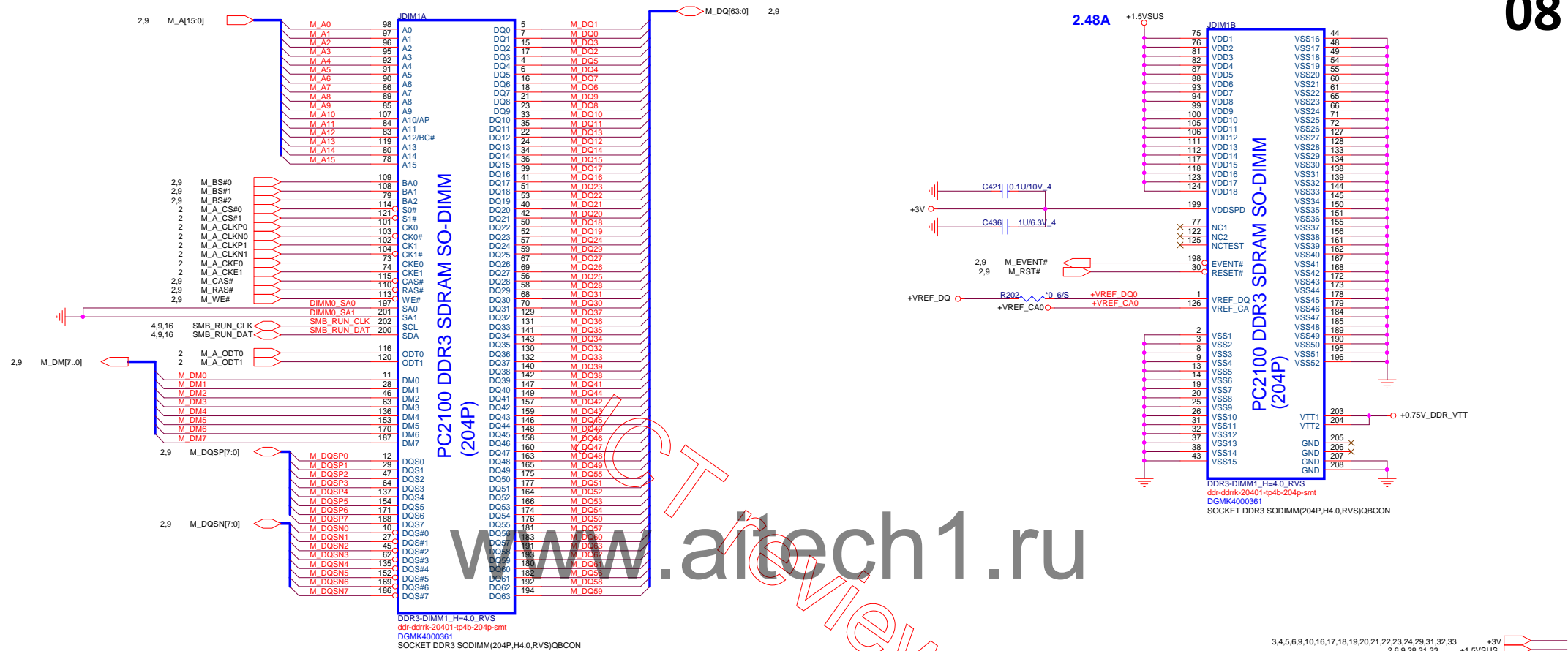
DEBUG STRAPS

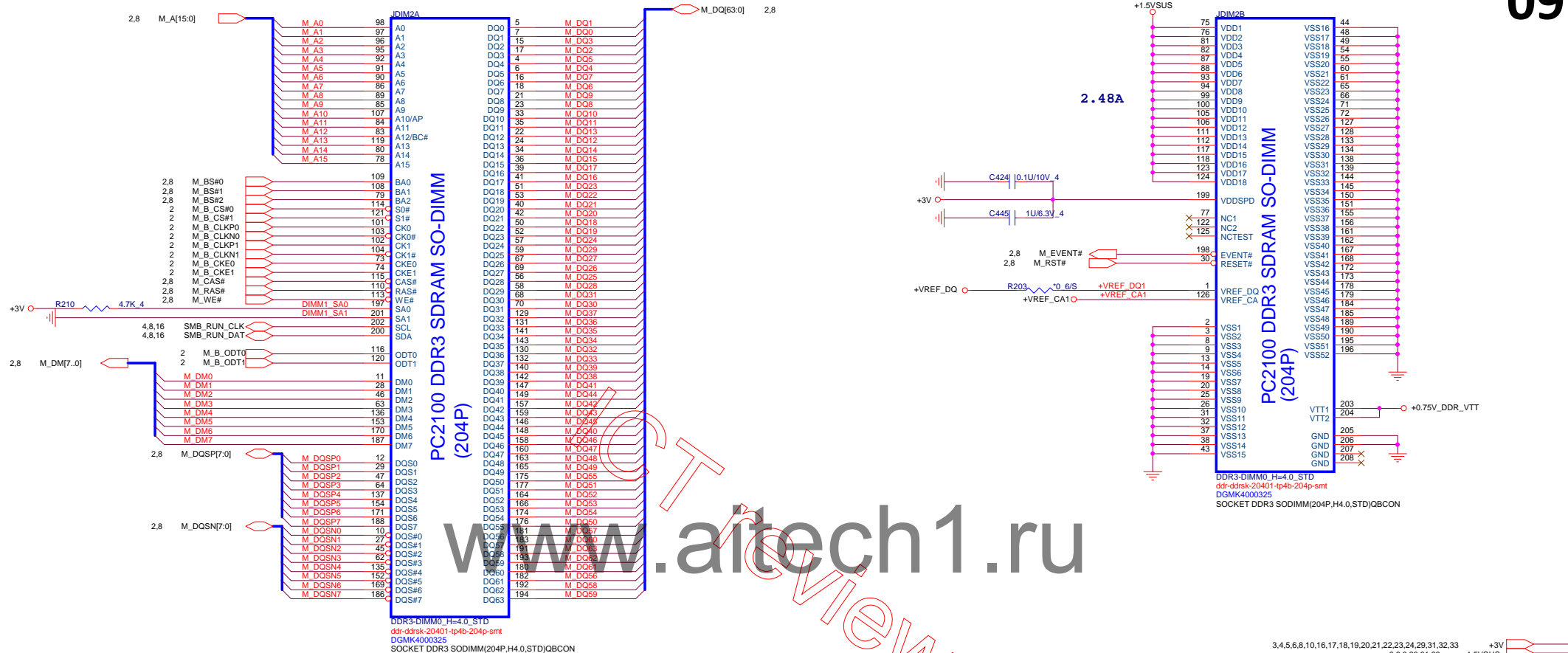
SYS_PWRGD



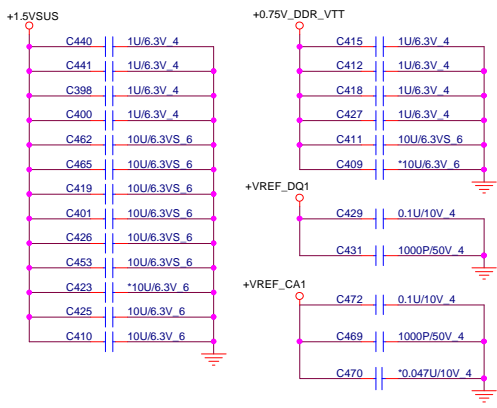
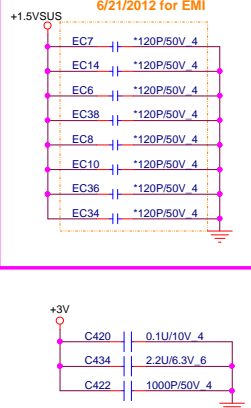
PROJECT :U99
Quanta Computer Inc.

Size	Document Number	Rev
	STRAP (6/6)	1A
Date:	Monday, May 19, 2014	Sheet 7 of 33



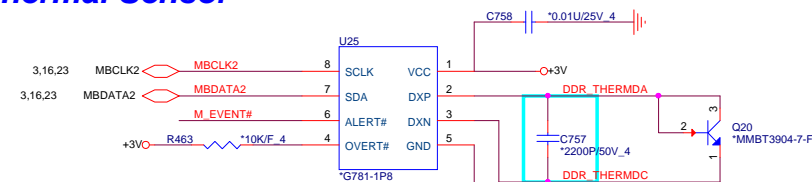


Place these Caps near So-Dimm1.

For EMI RESERVE
6/21/2012 for EMI

Local Thermal Sensor

DDR3 Thermal Sensor

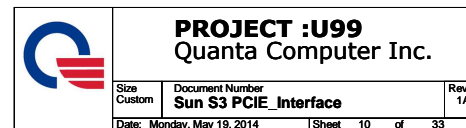


If use internal thermal IC, C9007 use 0ohm.

Main:AL000781039 G781-1P8(9Ah)
2nd:AL001412005 EMC1412-2-ACZL-TR(9Ah)

Main:AL001412003 EMC1412-1-ACZL-TR(98h)
2nd:AL000431014 TMP431ADGKR(98h)

PROJECT :U99 Quanta Computer Inc.		
Size Custom	Document Number System Memory 2/2 (9.2H)	Rev 1A
Date: Monday, May 19, 2014	Sheet 9	of 33



11

Diagram illustrating the MLPS (Memory Local Power Switch) block and its connections.

The MLPS block is shown with four pins: PS_0, PS_1, PS_2, and PS_3. Each pin is connected to an MLPS Circuit block.

Key components and connections:

- PS_0:** Connected to a +3Vrun supply through a DNI (Digital Noise Immunity) block and a 10K resistor. It is also connected to a vdd_ct supply through a resistor R_{gpi} and a capacitor C.
- PS_1:** Connected to a resistor R_{pdi}.
- PS_2:** Connected to a resistor R_{gpi}.
- PS_3:** Connected to a resistor R_{pdi}.

	Default	Legacy
Memory aperture size	xxx	gpio_13 gpio_12

/N	R5045	R5048
FFR-11C	NC	4.75K
M16JT-093G:E	8.45K	2K
6E-HC1A	4.53K	2K
FAFR-11C	6.98K	4.99K
6B-HC1A	4.53K	4.99K
116HA-093G:E	3.24K	5.62K

BIT5 => BIT0

PS0 == 11001

PS1 == 01000

D Tuning purpose

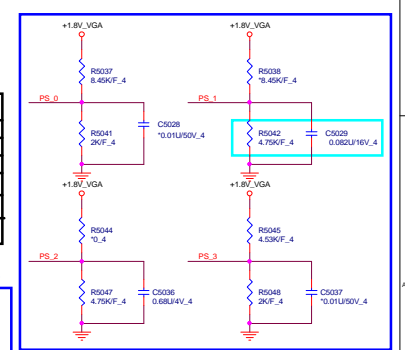
The diagram shows a PLL circuit for tuning. It includes a VCO (Y5000, 27MHz ± 10ppm) and two dividers (R5053, 1Mf₄ and R5046, 10₄). The output of the dividers is connected to GPU_XTAL27_IN. The circuit is powered by 8.2VHSV_4 and 8.2VHSV_4. A note indicates "For Int Cik 27Mhz".


BIT5 => BIT0

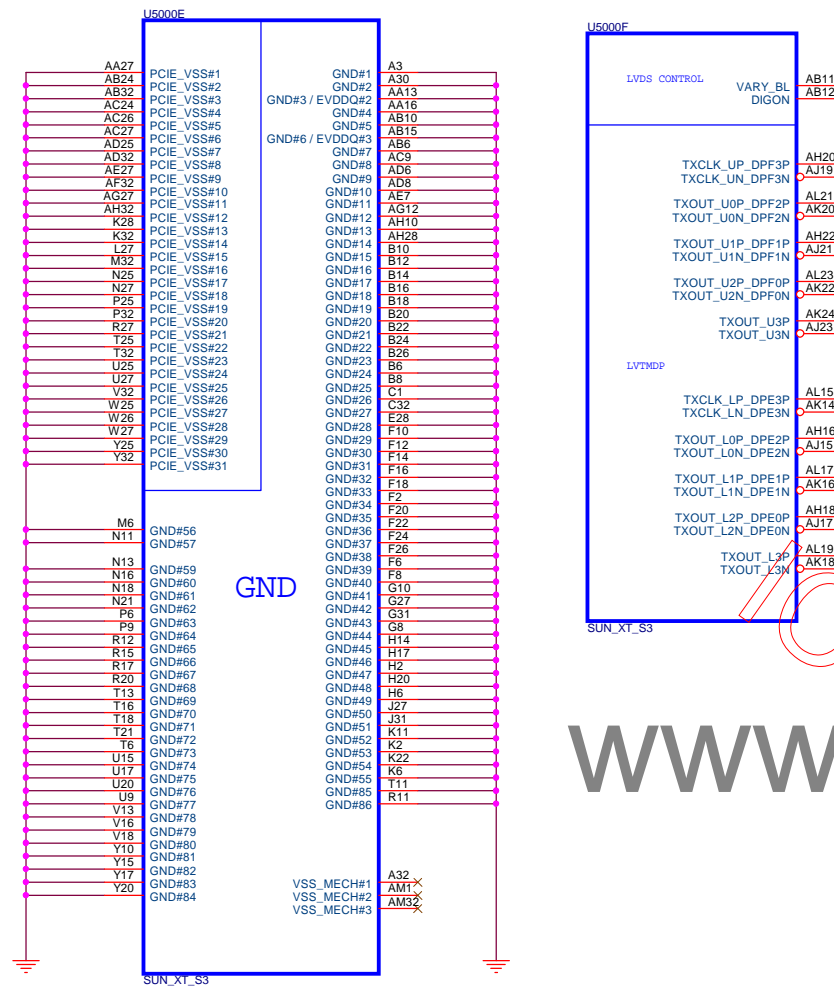
PS0	=>	11001
PS1	=>	01000
PS2	=>	00000
PS3	=>	11000

+1.8V_VGA
+1.8V_VGA

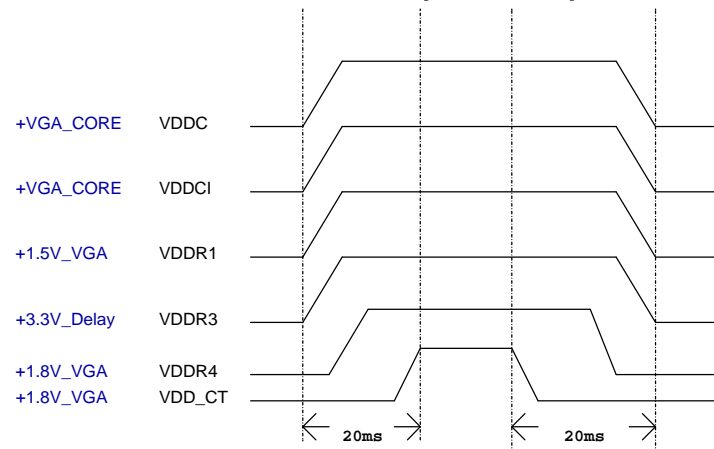
BIT5 => BIT0	
PS0	=> 11001
PS1	=> 01000
PS2	=> 00000
PS3	=> 11000



	PROJECT :U99 Quanta Computer Inc.		
	Size Custom	Document Number Sun S3 Main	Rev 1A
	Date: Monday, May 19, 2014 Sheet 11 of 33		



Power Up/Down Sequence



Memory Aperture size(Seymour)

GPI09		GPI013	GPI012	GPI011
BIOSROM		ROMIDCFG2	ROMIDCFG1	ROMIDCFG0
0	128M	0	0	0
0	256M	0	0	1
0	64M	0	1	0
0	32M	0	1	1
0	512M	1	0	0
0	1G	1	0	1
0	2G	1	1	0
0	4G	1	1	1

It is a shared pin strap with CONFIG[2:0] if BIOS_ROM_EN is set to 0.

CONFIGURATION STRAPS-- SEE EACH DATABOOK FOR STRAP DETAILS

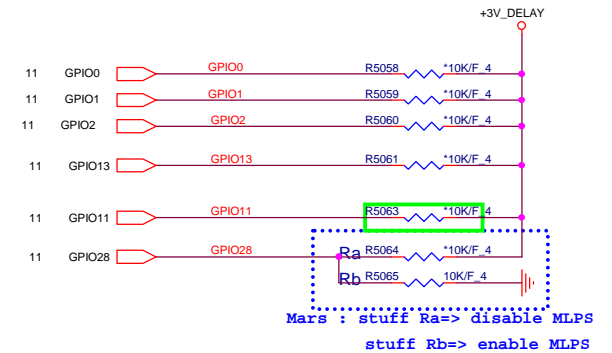
ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOS ARE USED, THEY MUST NOT CONFLICT DURING RESET

STRAPS	PIN	DESCRIPTION OF DEFAULT SETTINGS	RECOMMENDED SETTINGS
TX_PWRS_ENB	GPI00	PCIE FULL TX OUTPUT SWING	0
TX_DEEMPH_EN	GPI01	PCIE TRANSMITTER DE-EMPHASIS ENABLED	X
RSVD	GPI02	RESERVED	0
RSVD	GPI08	RESERVED	0
BIF_VGA_DIS	GPI09	VGA ENABLED	0
RSVD	GPI021	RESERVED	0
BIOS_ROM_EN	GPI022_ROMCSB	ENABLE EXTERNAL BIOS ROM	0
ROMIDCFG(2:0)	GPIQ[13:1]	SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT	0 0 1
VIP_DEVICE_STRAP_ENA	V2SYNC	IGNORE VIP DEVICE STRAPS (Removed on Seymour/Whistler)	0
RSVD	H2SYNC	RESERVED	0
AUD[1]	HSYNC	SEE DATABOOK FOR DETAIL	0
AUD[0]	VSNC	SEE DATABOOK FOR DETAIL	0
RSVD	GENERICC	RESERVED	0

NOTE1: AMD RESERVED CONFIGURATION STRAPS

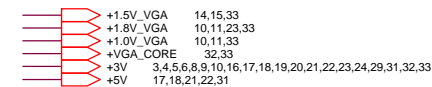
ALLOW FOR PULLUP PADS FOR THESE STRAPS BUT DO NOT INSTALL RESISTOR. IF THESE GPIOS ARE USED, THEY MUST KEEP "LOW" AND NOT CONFLICT DURING RESET.

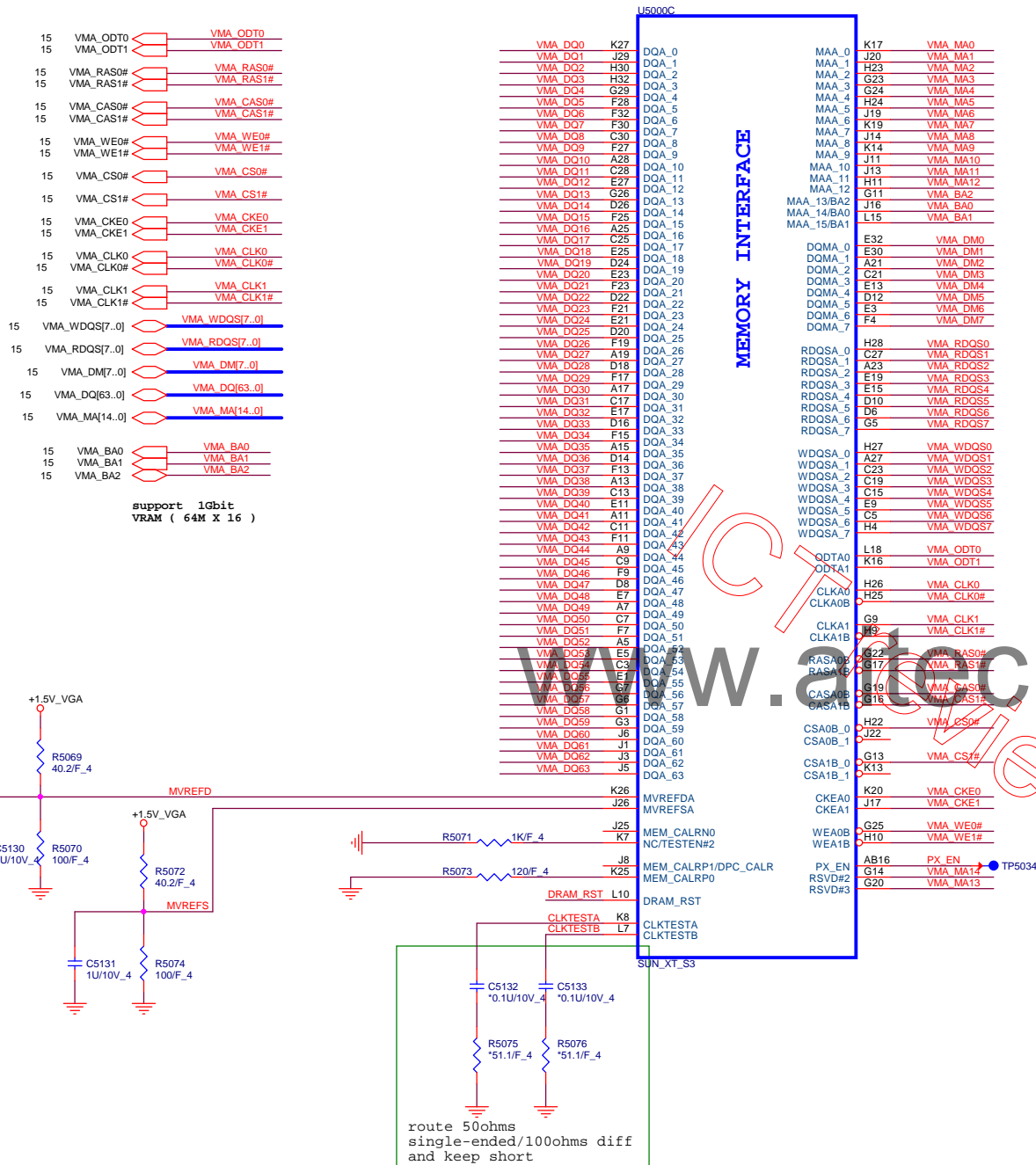
GPI021 H2SYNC GENERICC GPI08 GPI02



PROJECT :U99
Quanta Computer Inc.

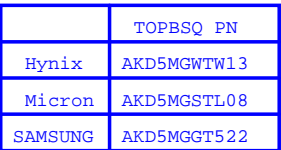
Size Custom	Document Number	Rev 1A
	Sun S3 GND / LVDS/ Straps	
Date: Monday, May 19, 2014	Sheet 12 of 33	

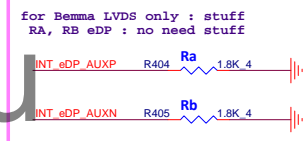
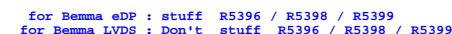




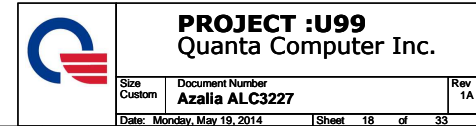
PROJECT :U99
Quanta Computer Inc.

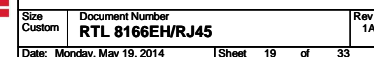
Size Custom	Document Number Sun S3 MEM_Interface	Rev 1A
Date: Monday, May 19, 2014	Sheet 14 of 33	





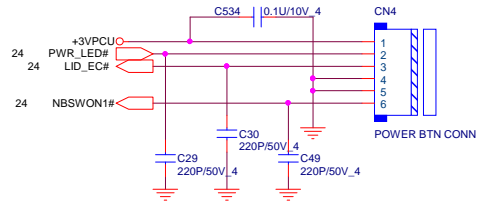
		MODE_CFG0(PIN30)	
		0	1
MODE_CFG1(PIN31)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE



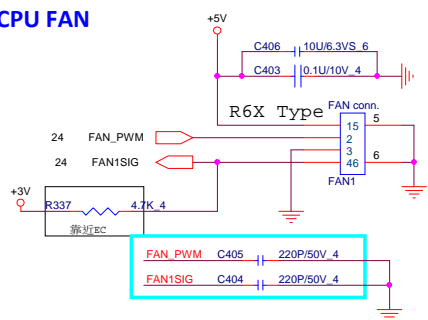


Power Button Connector

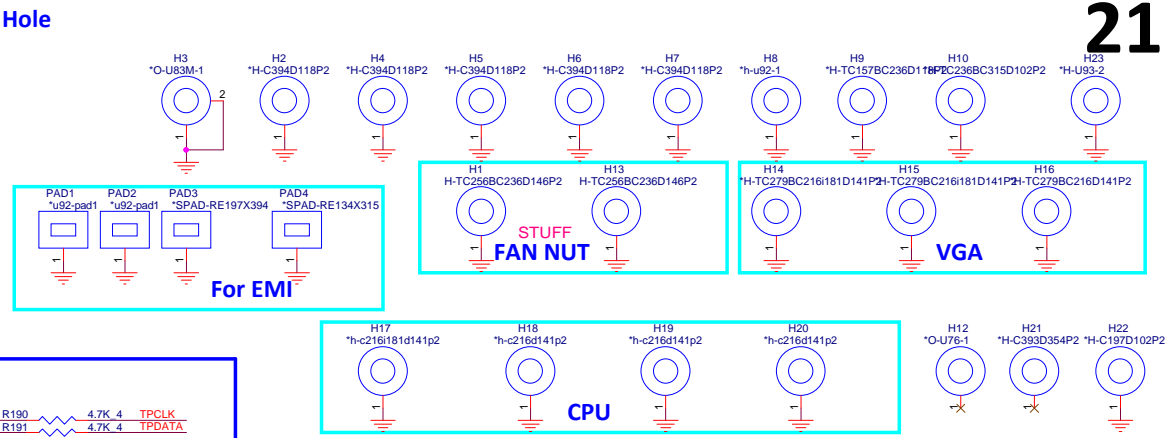
Pin1 : +3VPCU(LIDSWITCH PWR)
Pin2 : POWER LED
Pin3 : LIDSWITCH
Pin4 : GND
Pin5 : GND
Pin6 : POWERON#



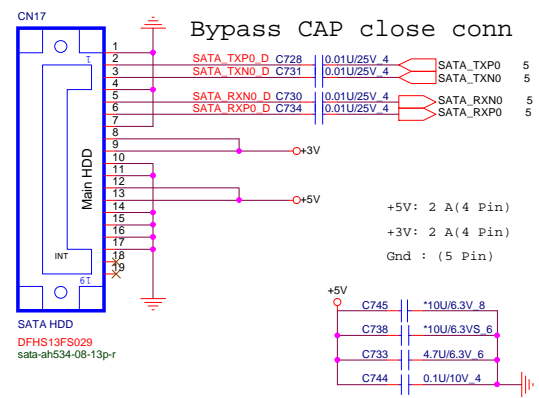
CPU FAN



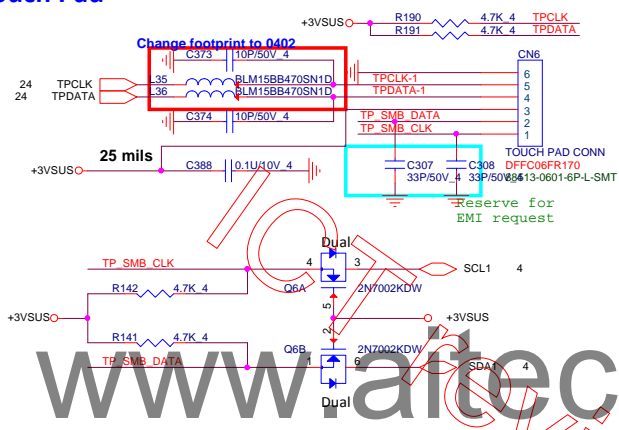
Hole



SATA HDD Connector(Cable type)

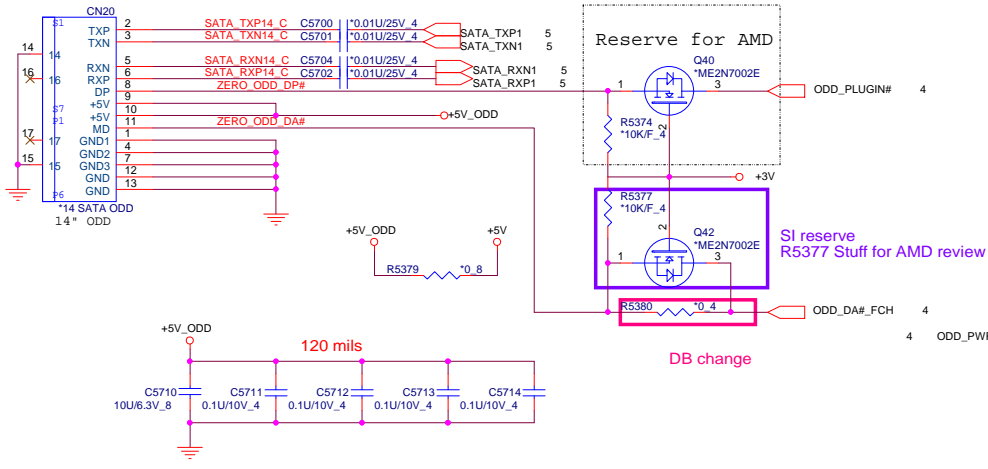


Touch Pad



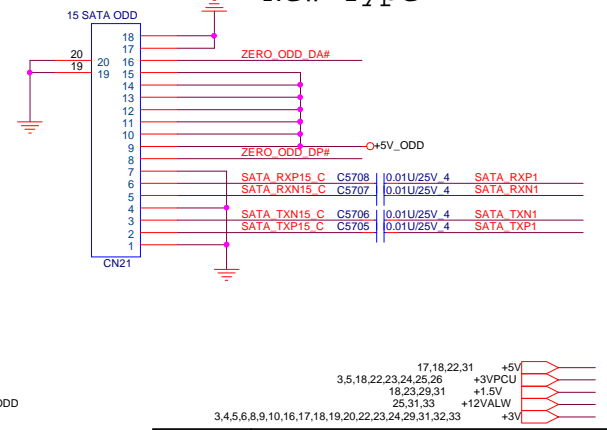
SATA ODD CONNECTOR

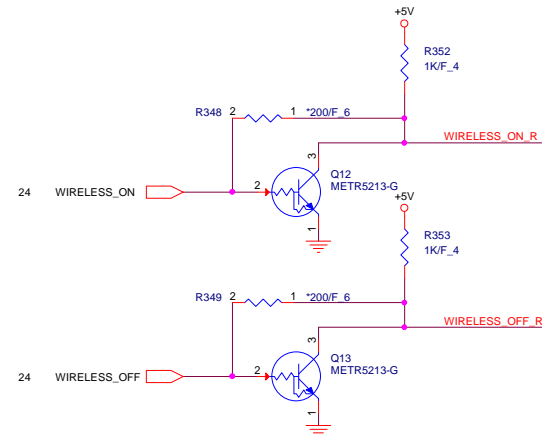
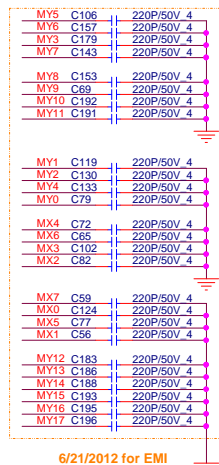
14" SATA ODD Bypass CAP close conn



15" SATA ODD

New Type

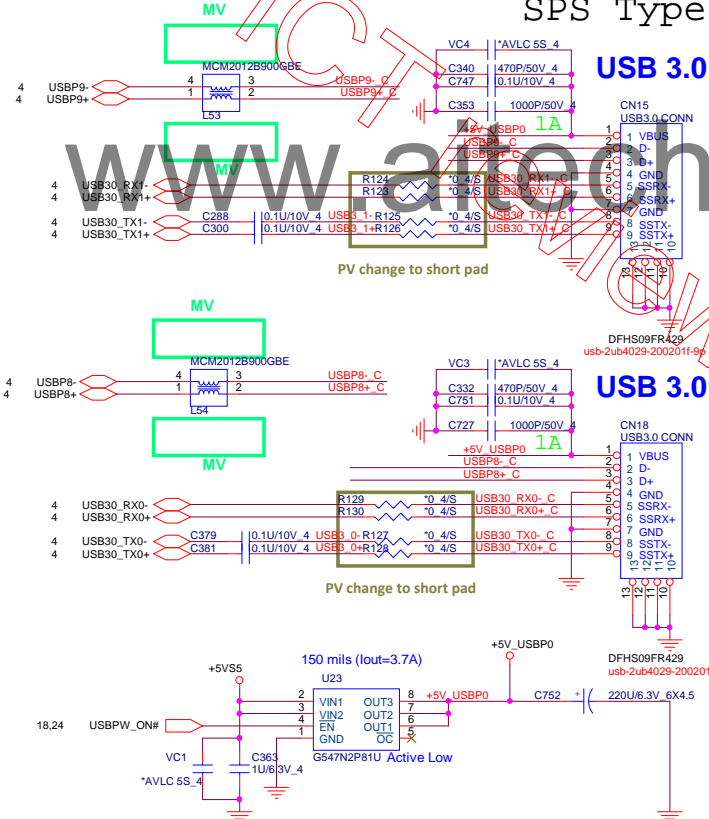




Need Change PN/FP after DB

NM9 Type

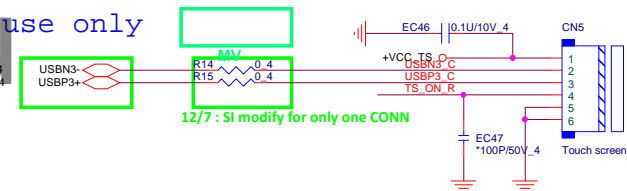
SPS Type



USB 3.0

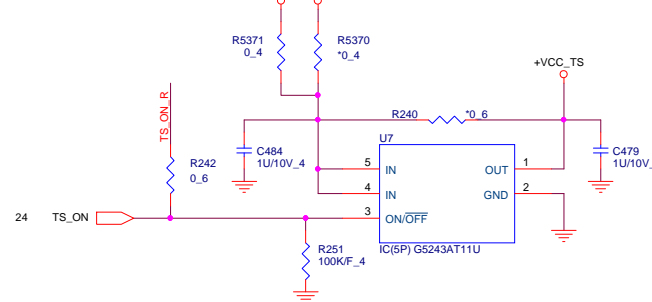
USB 3.0

for 15" use only



12/7 : SI modify for only one CONN

close to TS connector(CN5).



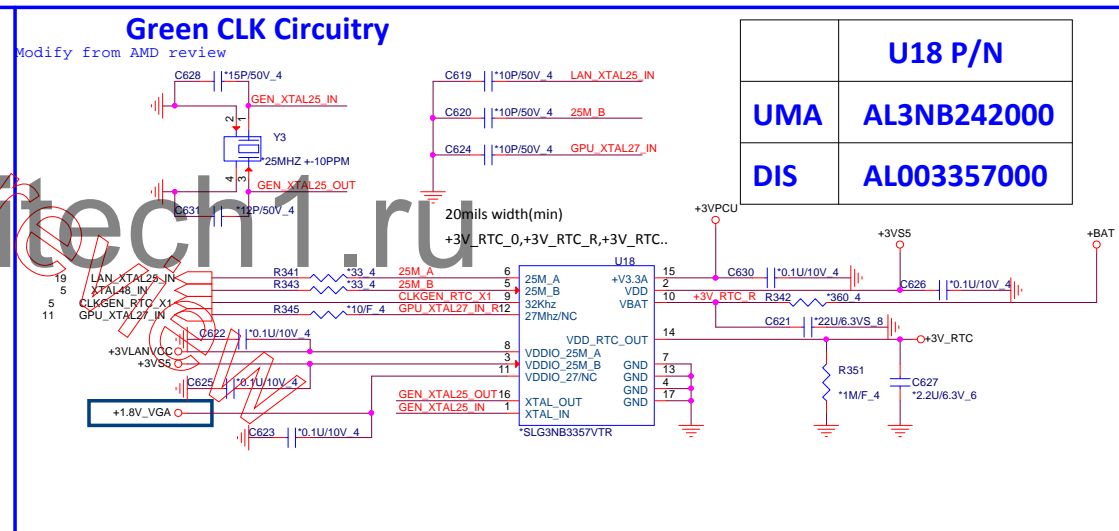
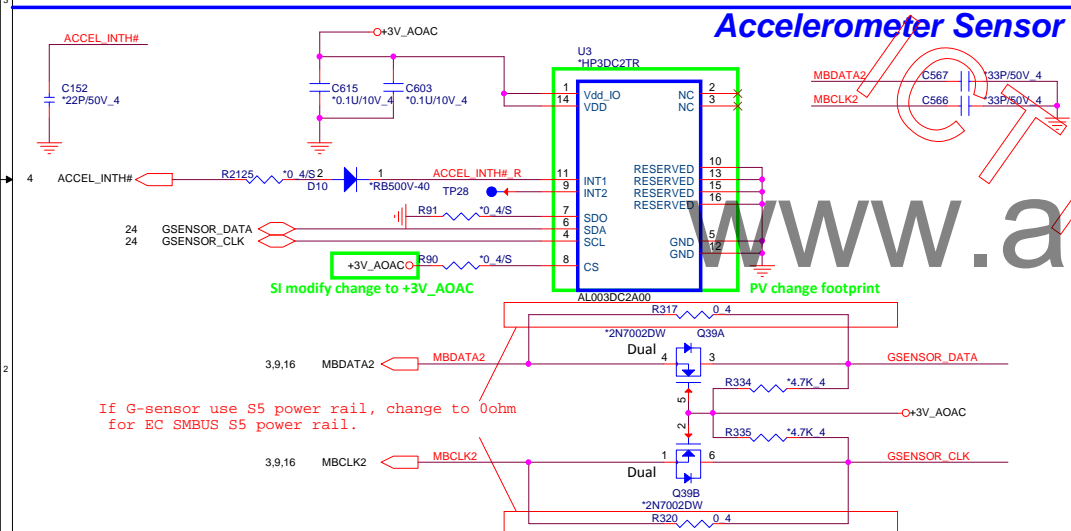
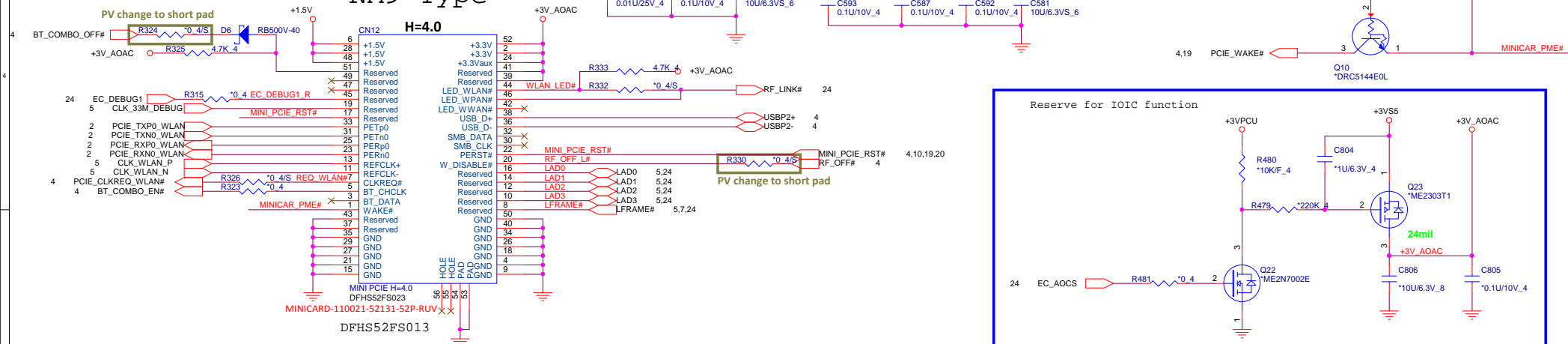
PROJECT :U99
Quanta Computer Inc.

Size Custom	Document Number USB 3.0/KB/Green CLK	Rev 1A
Date: Monday, May 19, 2014	Sheet 22of	33

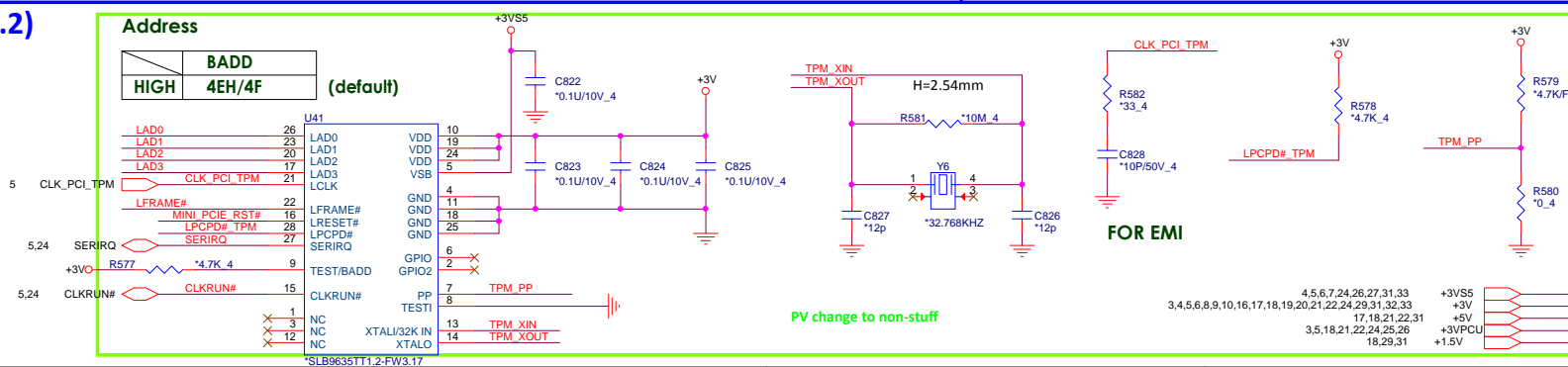
18,26,27,28,29,30,31,32
3,5,18,21,23,24,25,26

+5VS5
+3VPCU

**Mini Card
WLAN/BT(Optional)**



TPM (1.2)



PROJECT :U99
Quanta Computer Inc.

Size Custom	Document Number MINI-PCIE/LED	Rev 1A
Date: Monday, May 19, 2014	Sheet	23 of 33

3,4,5,6,8,9,10,16,17,18,19,20,21,22,23,29,31,32,33
3,5,18,21,22,23,25,26

+3VPCU
+3VPCU

ITE pin 100, 104, 106 default
can not pull up to +3VPCU it
will cause chip into test mode

+3VPCU R300 0.4/S KBC P+3V

+3VPCU

+3VPCU_AC

+3VPCU_EC

+3VPCU_CAP close to EC pin

+3VPCU C594 0.1U/10V_4
C564 0.1U/10V_4
C536 0.1U/10V_4
C538 0.1U/10V_4
C545 0.1U/10V_4

+3VPCU_AC C563 0.1U/10V_4

+3VPCU_EC C537 0.1U/10V_4

Smart adapter Type check

+3VPCU

Change to 1SS355 as Current loss

D7 1SS355

AD_TYPE R329 10K/F_4

R336 100/F_4

C597 0.1U/10V_4

R328 12K/F_4

C605 100P/50V_4

AD_ID 25

HWPNG C549 0.1U/10V_4

FAN1SIG C600 0.1U/10V_4

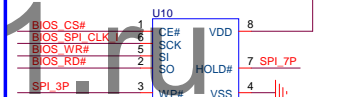
DGPU_PR_EN C539 0.1U/10V_4

For +VIN noise

SERIRQ C546 100P/50V_4

Vender	Size	P/N
AIT	4M	AKE39ZN0800
EON	4M	AKE39ZN0Q03
WND	4M	AKE39FN0N01
Socket		DFHS08FS023

4M SPI EC ROM



U10 A25OE32M-F/Q
AKE39Z0800
91960-00848-8P-SOCKET

TP6

TP1, TP5

TP2

TP3

TP4

TP5

TP6

TP7

TP8

TP9

TP10

TP11

TP12

TP13

TP14

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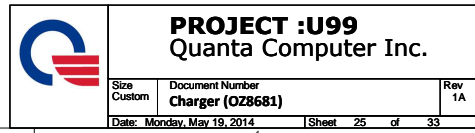
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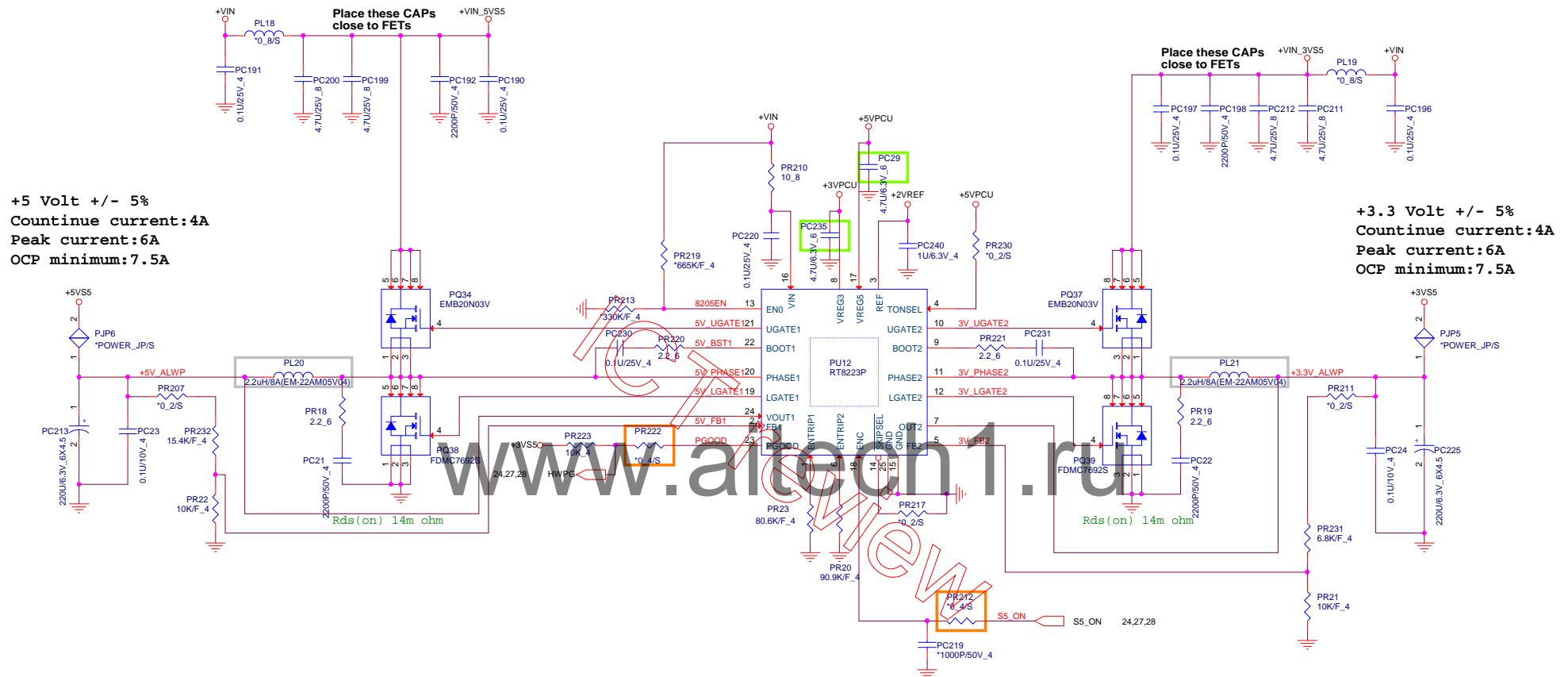
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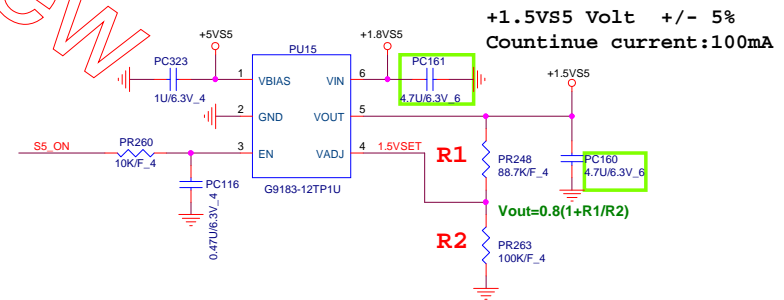
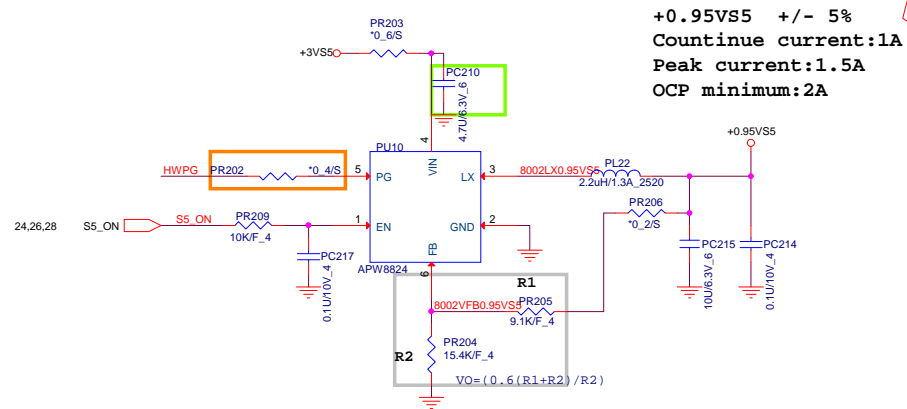
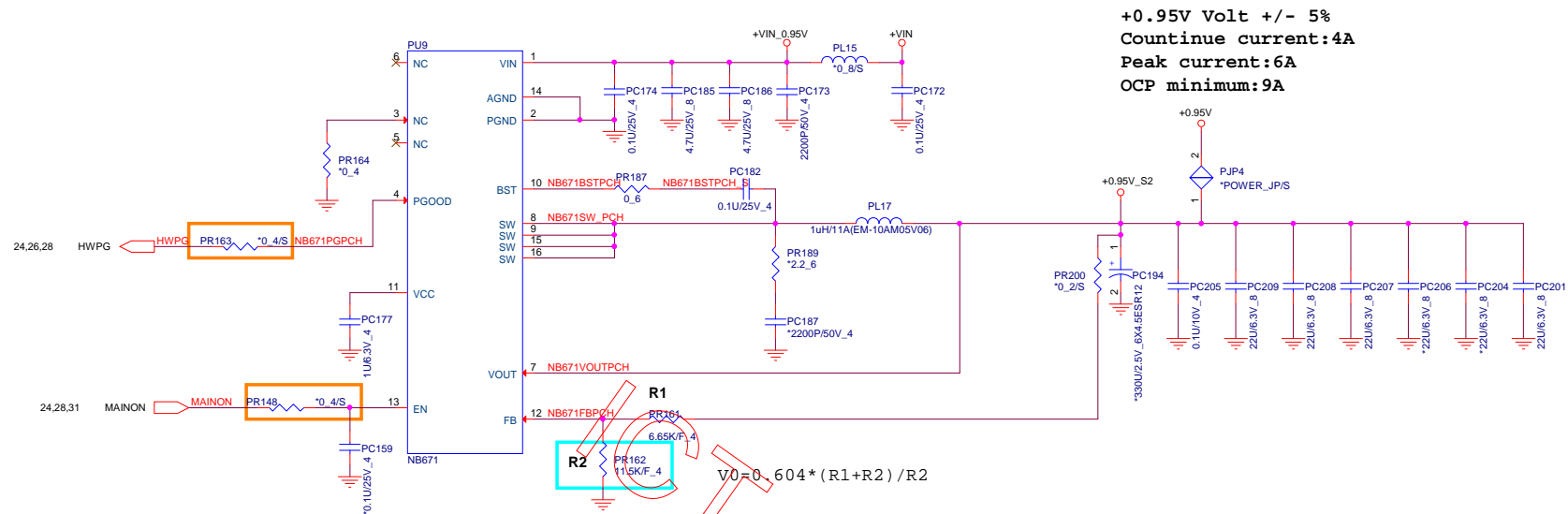
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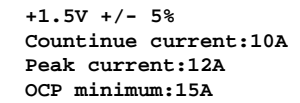
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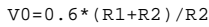




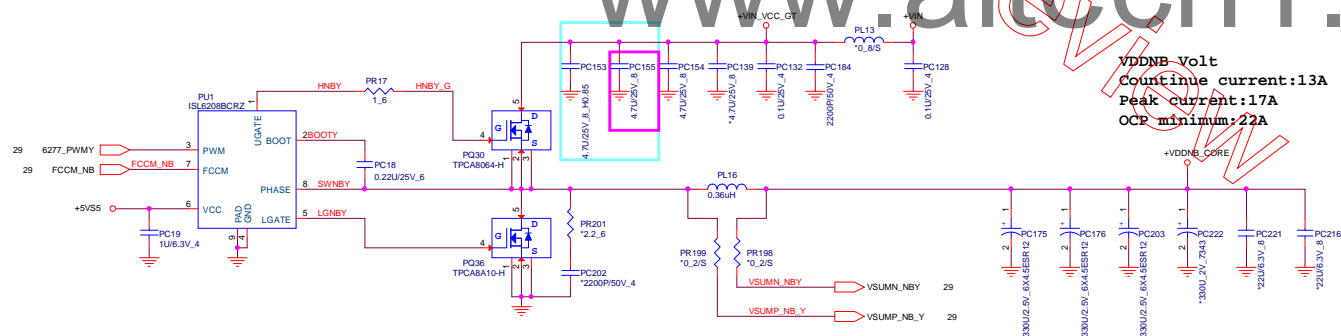
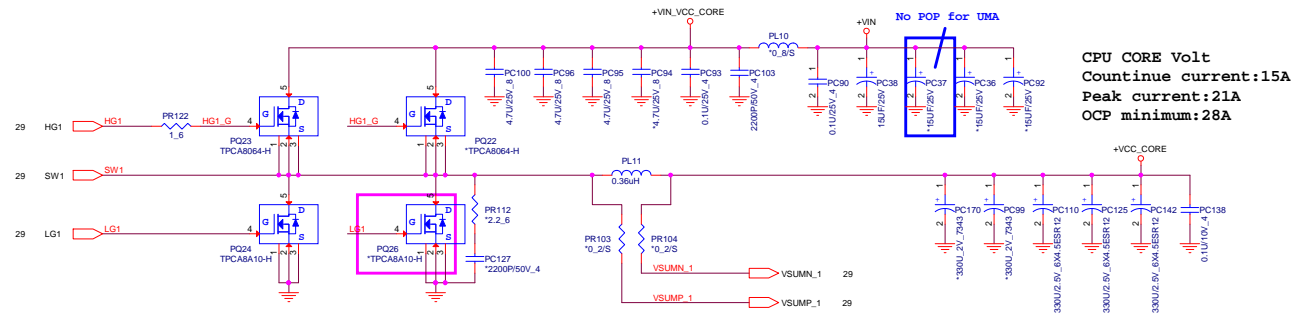




1.8V +/- 3%
Continue current:2A
Peak current:3A
OCP minimum:4A



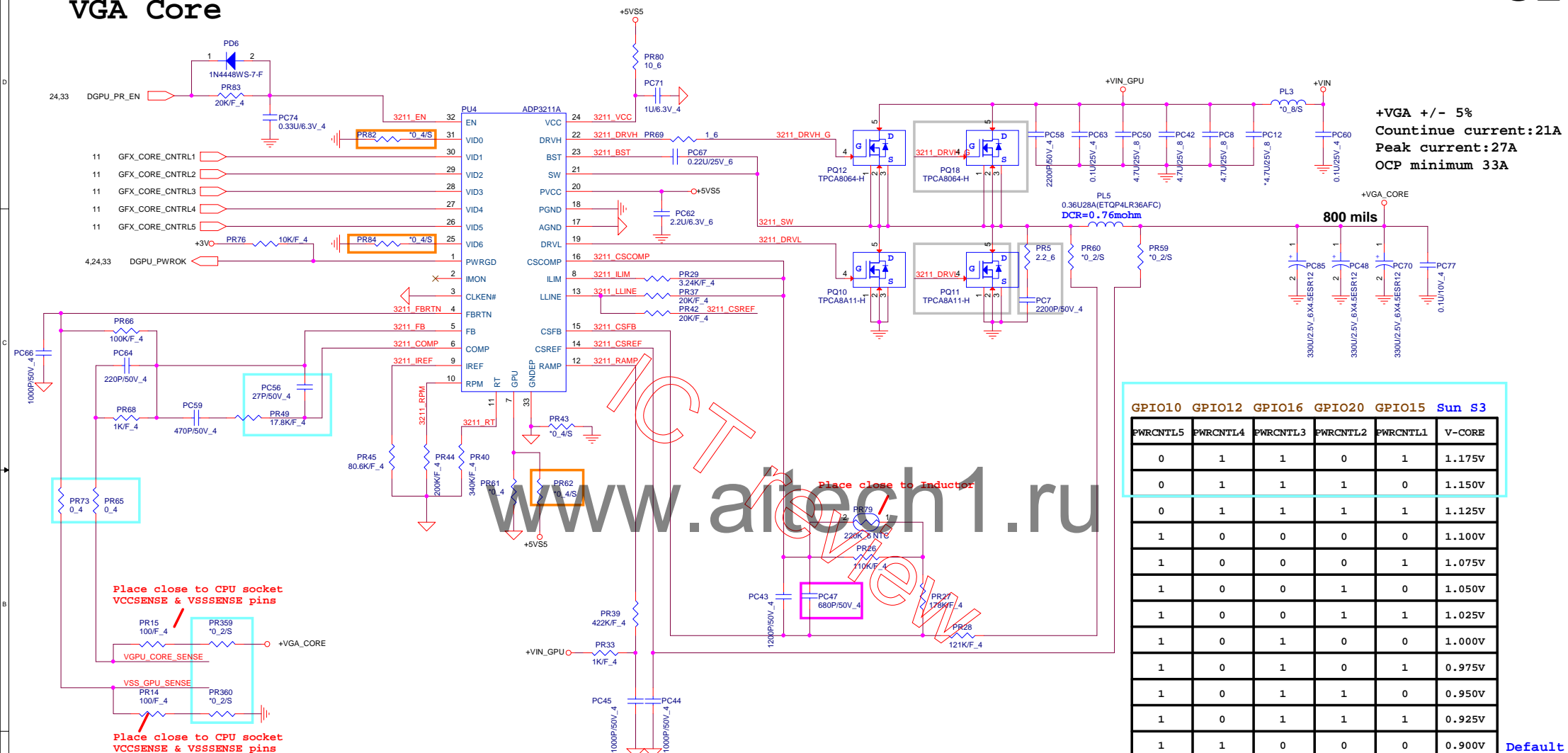
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Date: Monday, May 19, 2014		Sheet 28 of 33



PROJECT :U99
Quanta Computer Inc.

Site Custom	Document Number ISL6208	Rev 1A
Date: Monday, May 15, 2014	Sheet 30 of 33	

VGA Core



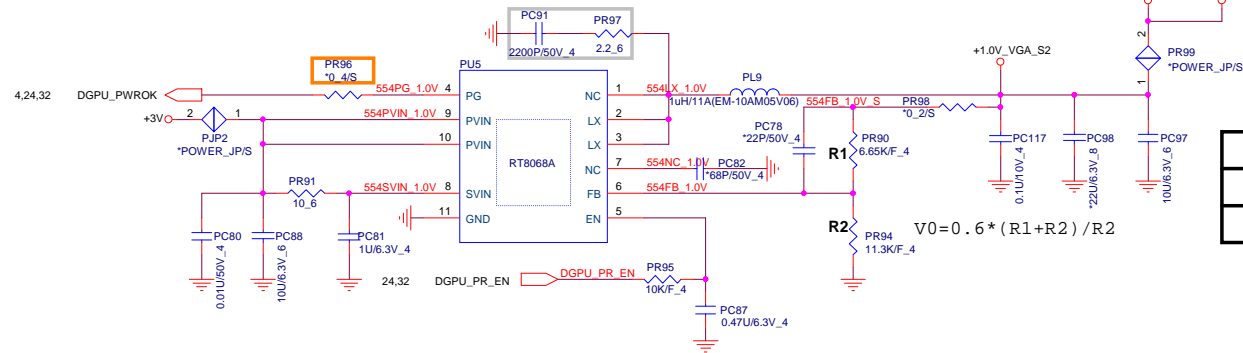
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PROJECT :U99
Quanta Computer Inc.

Size Custom	Document Number +VGACORE NCP3218G)	Rev 1A
Date: Monday, May 19, 2014	Sheet 32 of 33	

+0.95V +/- 3%
Continue current:2A
Peak current:3A
OCP minimum:4A



R2 Value	P/N	1.0V_VGA
10K	CS31002FB26	1.0V
11.3K	CS31132FB07	0.95V

