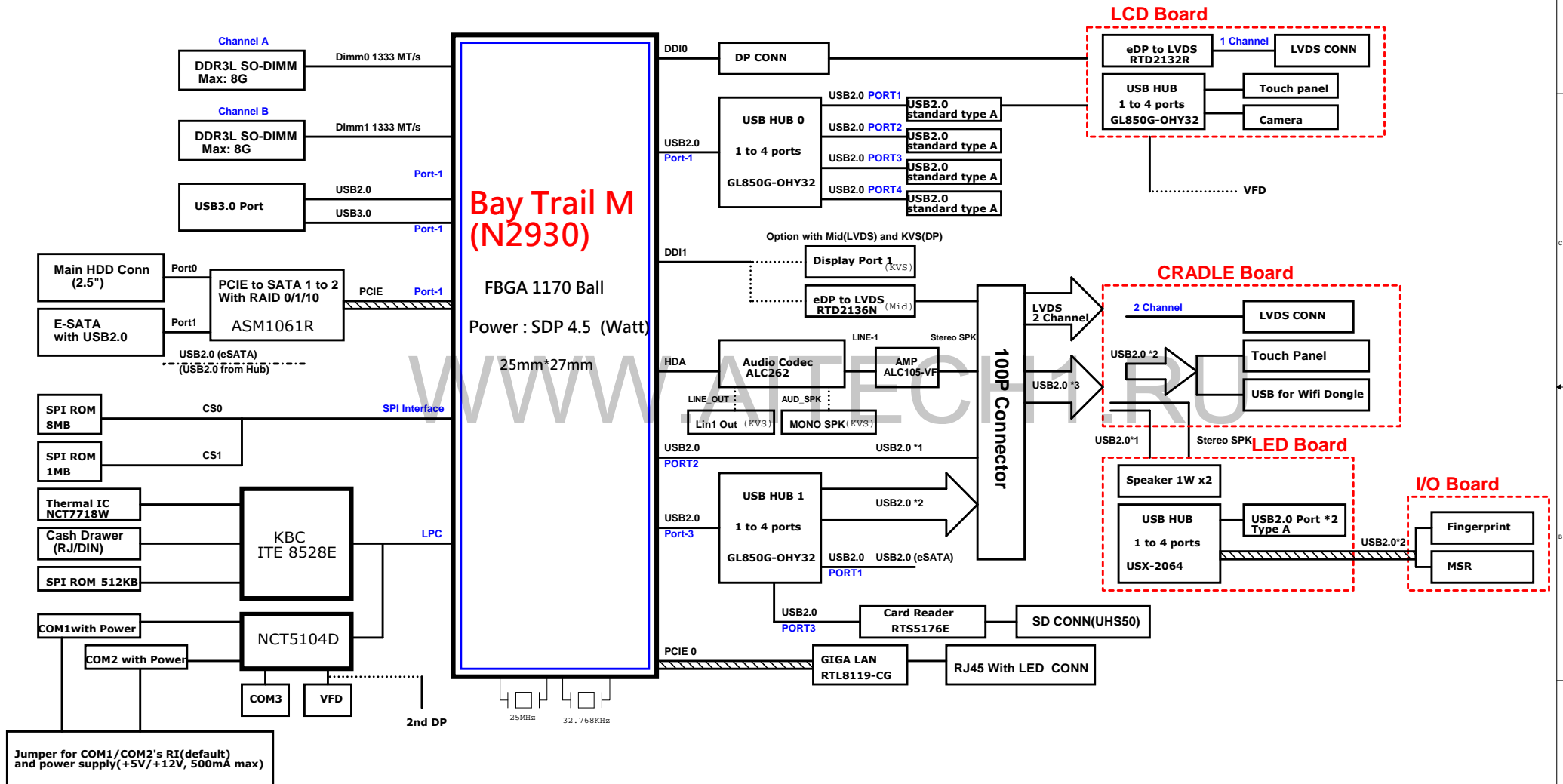


Mid Range/KVS BLOCK DIAGRAM




USB 2.0	Port Assignment	
USBP0	(MB) USB3.0 Conn_1	Note: Debug Port
USBP1	(MB) USB Hub_0	(MB) USB Conn_1 / (MB) USB Conn_2 / (MB) USB Conn_3 / (MB) USB Conn_4
USBP2	(DB_LED) USB Hub_2	(DB_LED) USB CONN_1 / (DB_LED) USB CONN_2 / (DB_LED to main DP) Fingerprint / (DB_LED to main DP) MSR
USBP3	(MB) USB Hub_1	(MB) eSATA / (DB_main DP) USB CONN for WiFi Dongle / (MB) CardReader / (DB_main DP) Touch Panel

USB 3.0	Port Assignment
USBP0	(MB) USB3.0 Conn_1

Display Port	Port Assignment
DDI0	DP
DDI1	1.DP to (DB_main DP)LVDS 2.For KVS only, Display Port

PCIE Master	Port Assignment	Note
PCIE 0	LAN	
PCIE 1	PCIE to SATA	SATA1: HDD SATA2: eSATA
PCIE 2	(NC)	
PCIE 3	(NC)	

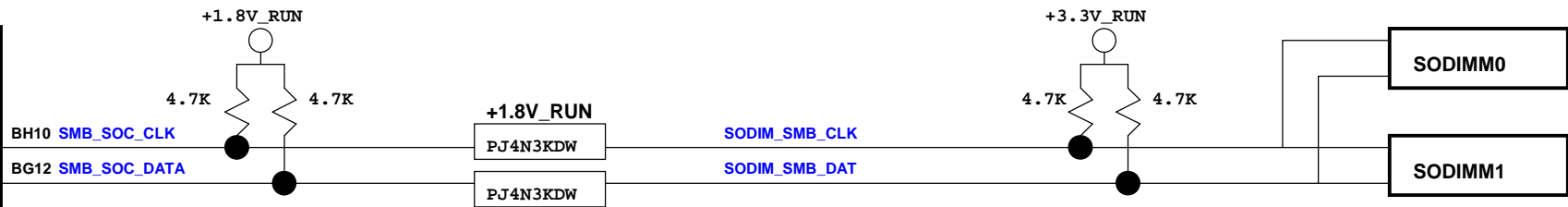
SATA Master	Port Assignment
SATA0	(NC)
SATA1	(NC)


Quanta Computer Inc.
 PROJECT :Mid-Range POS

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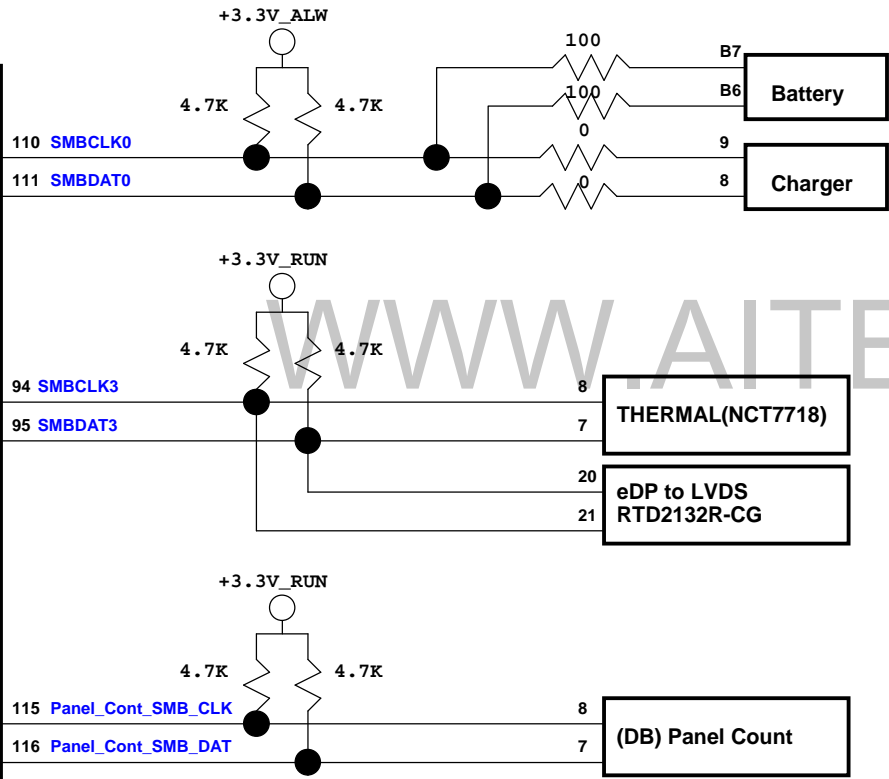
MB

**Bay Trail
M**



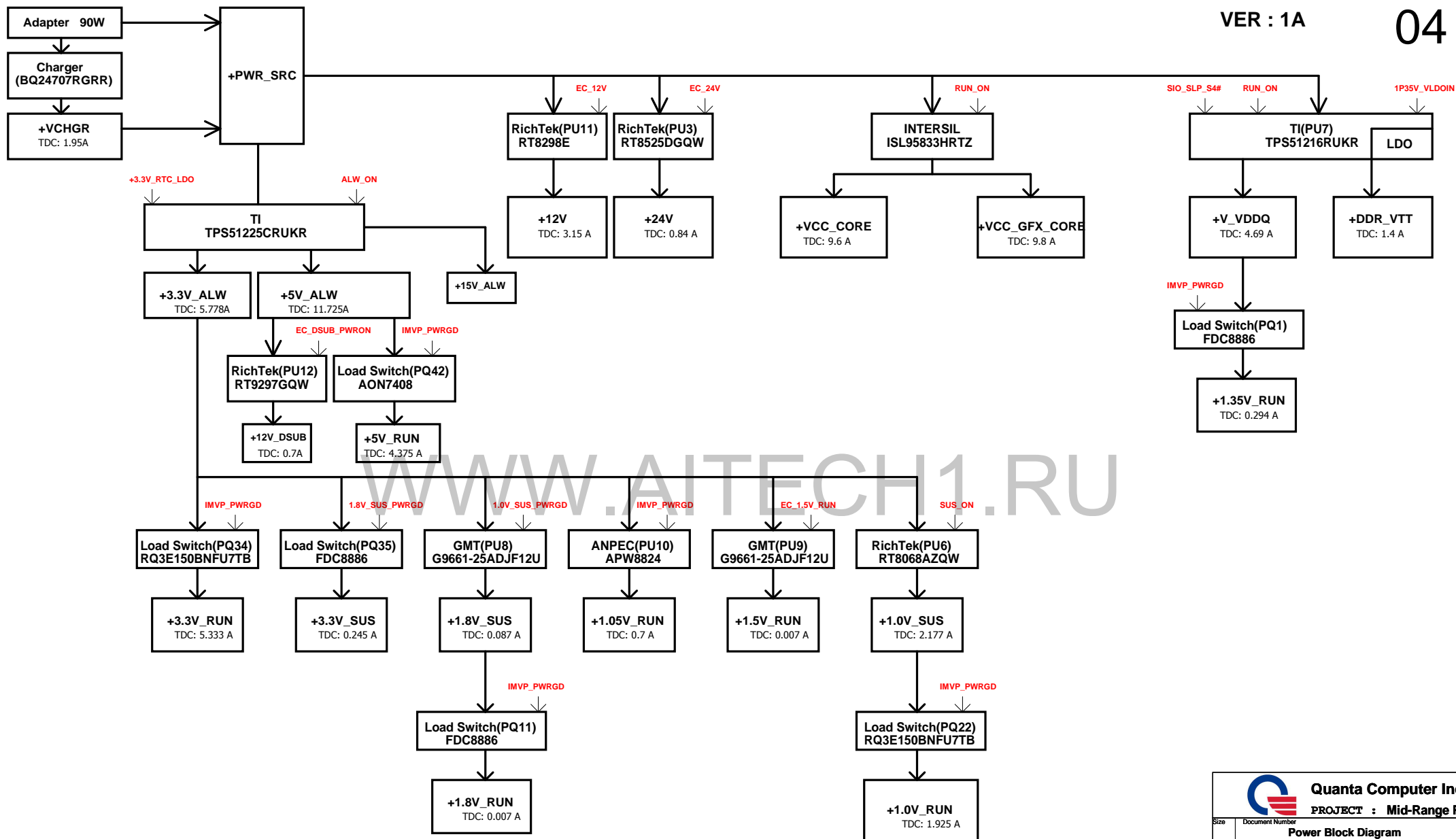
MB

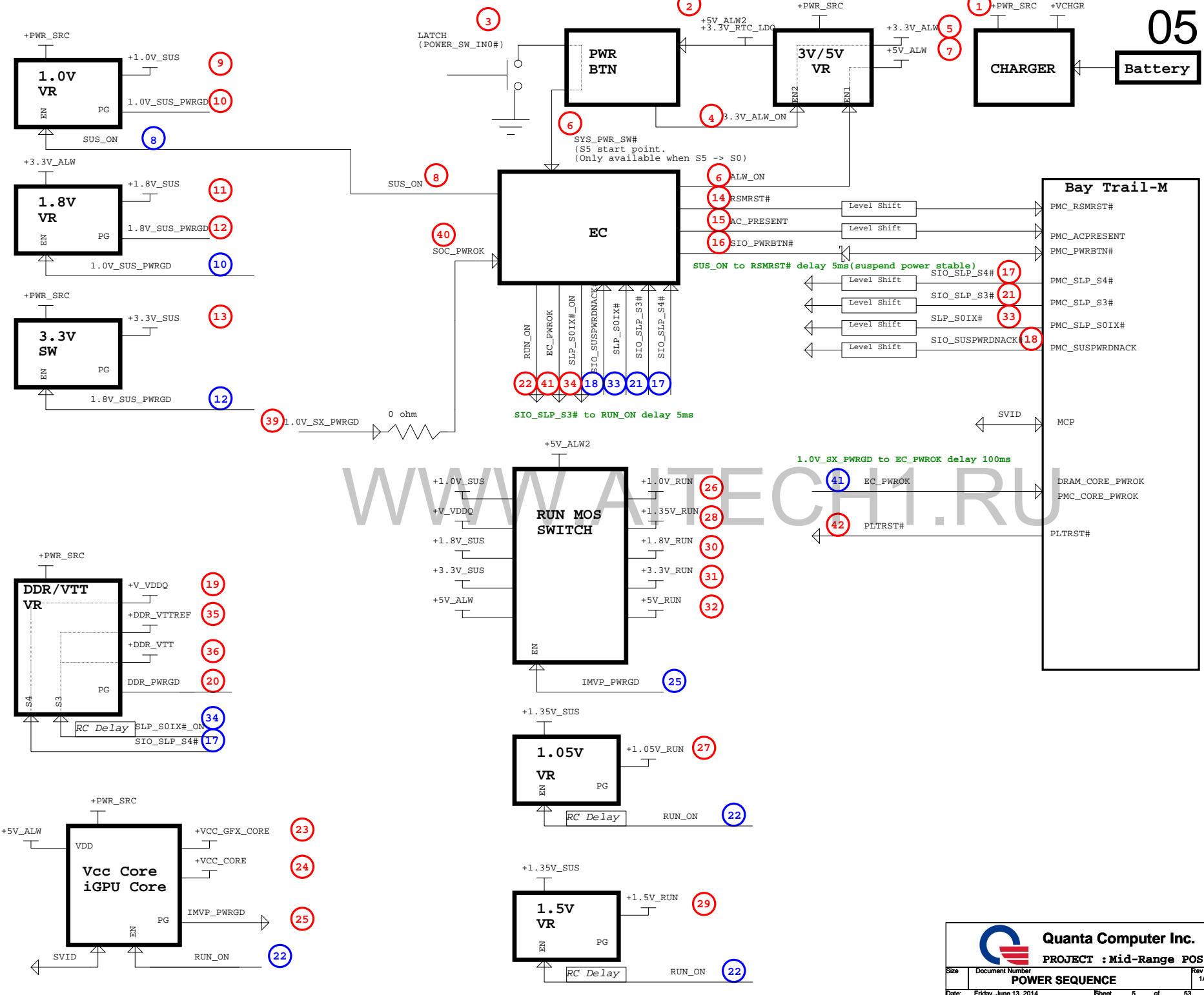
**SIO
ITE8528E**



	Function	IC	Address
SMBUS	Thermal IC	NCT7718	1001100xb (98h)
	eDP to LVDS	RTD2132R-CG	0x94
	Charge IC	BQ24737RGRR	00010010 (0x12h)
	Battery	Battery	00010110 (0x16h)
	DDR3	JDIM1A	A0h

It need to check



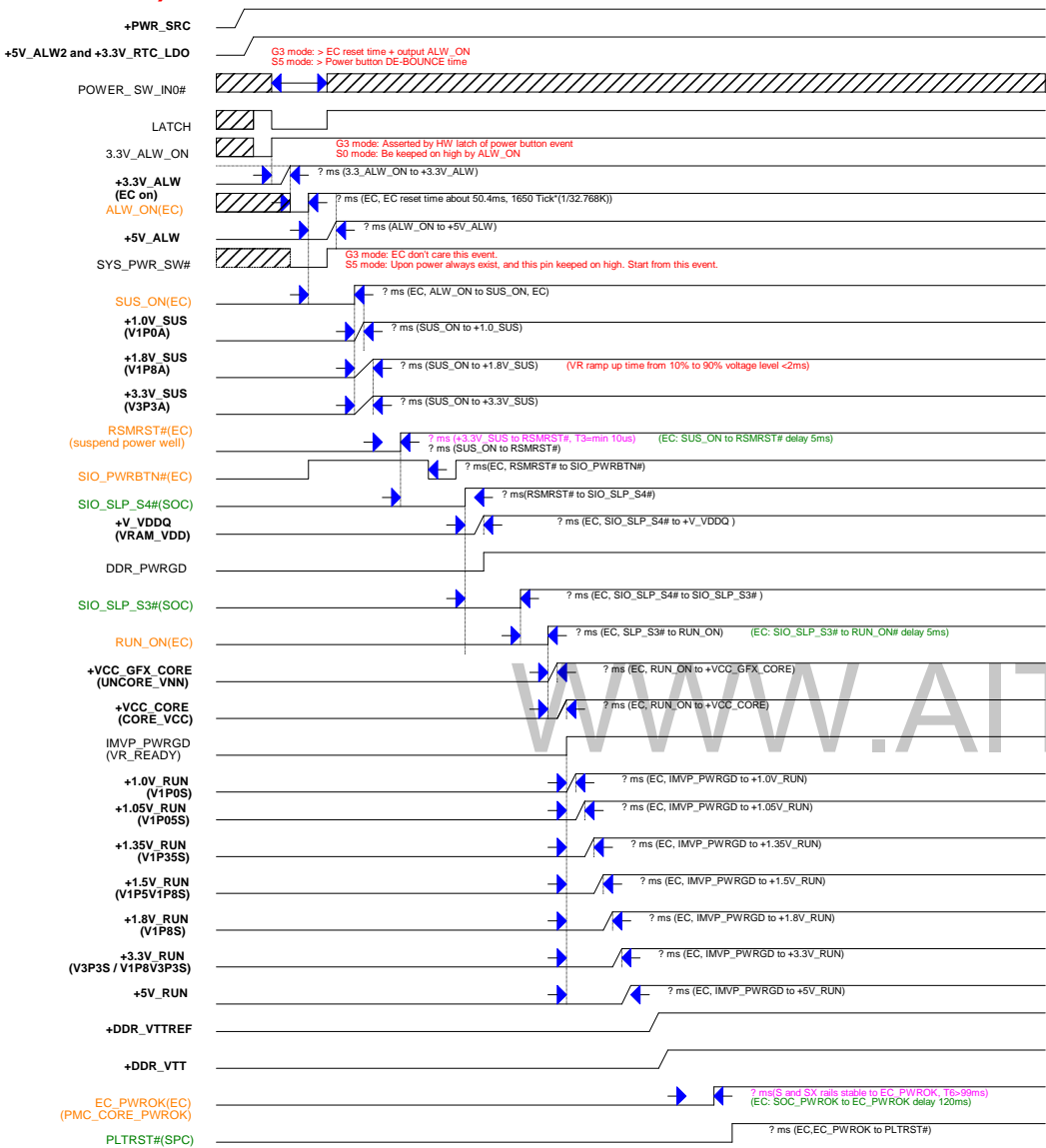


05

K92 Power Sequence
(G3 to S0)

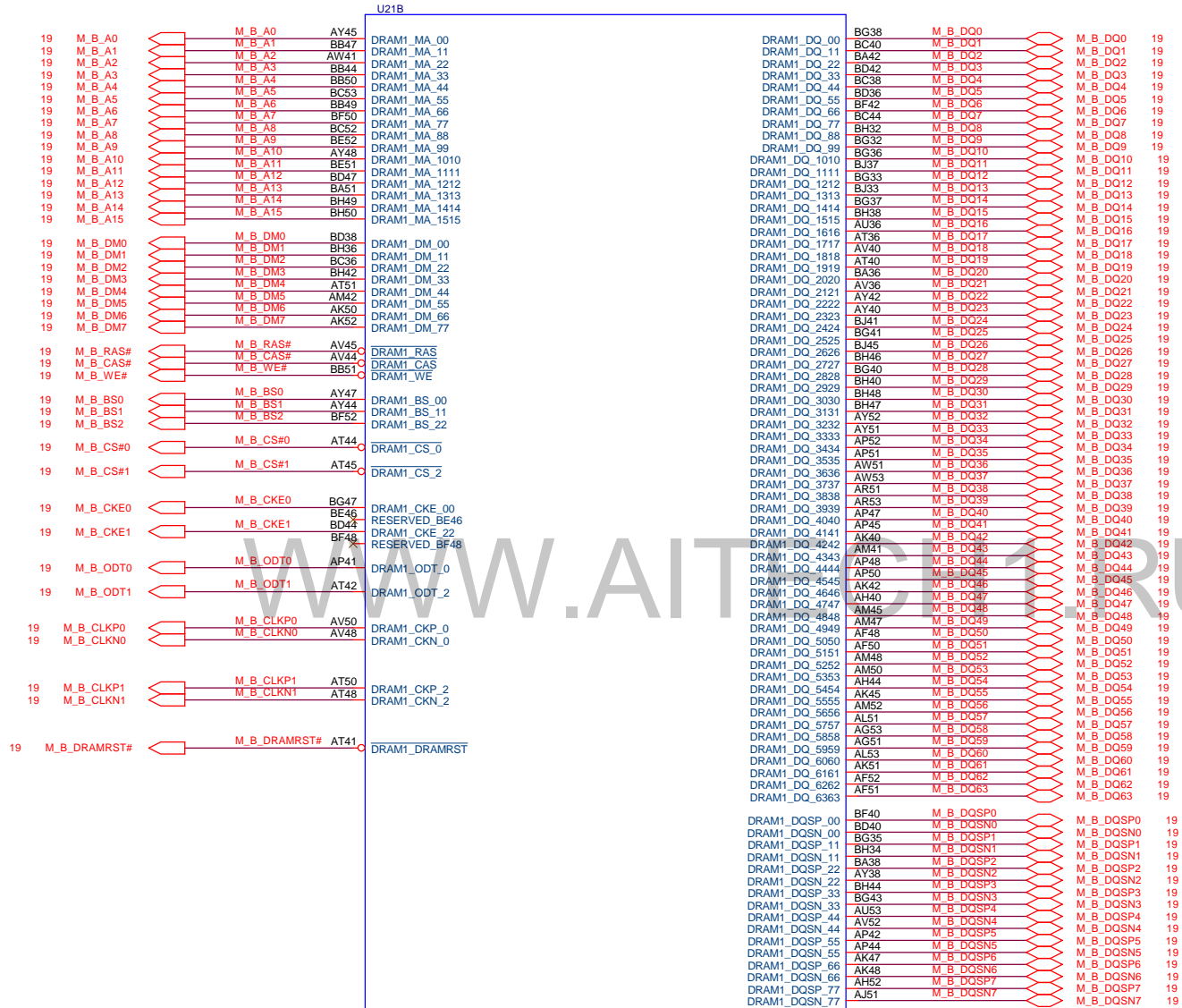
Bay Trail-M EDS 512177, Rev1.2

06



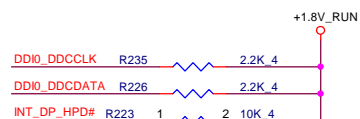
G3

S0



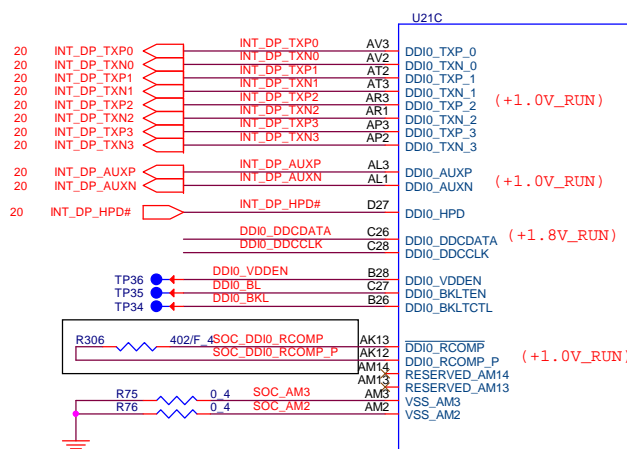
Bay Trail-M/D

Display Port 0

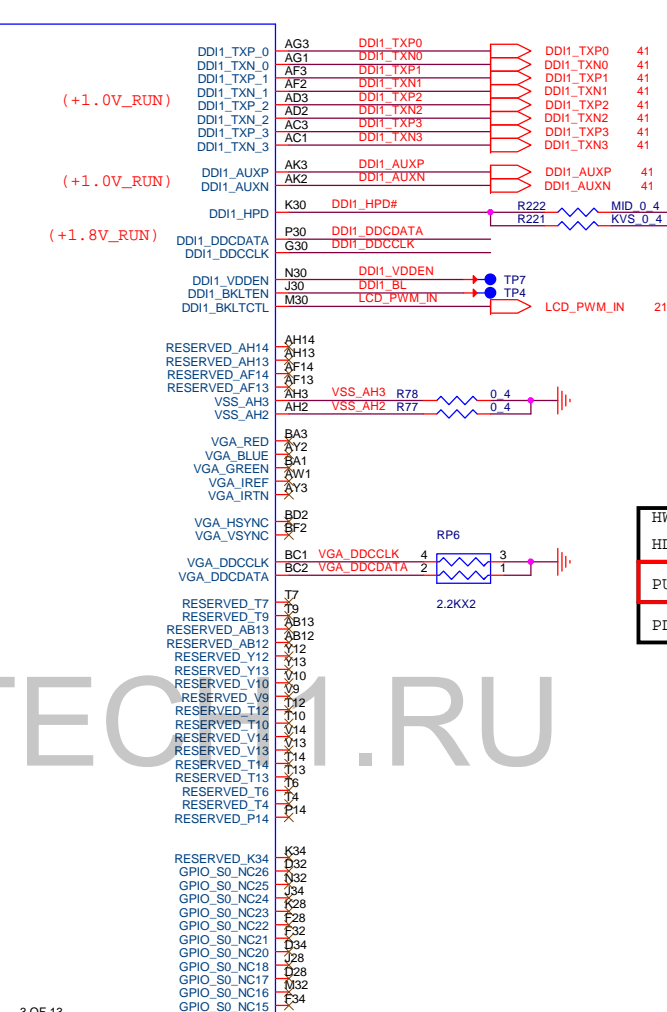
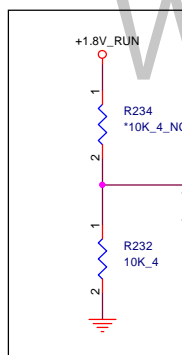


HW Strap:DDIO Detect	
DDIO_DDCDATA	
PU	1 = DDI0 detected
PD	0 = DDI0 not detected(Default)

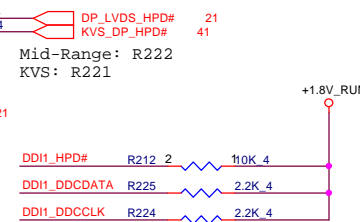
DDI for RCOMP:
This could be NC when DDI is disable



Strap pin, follow CRB

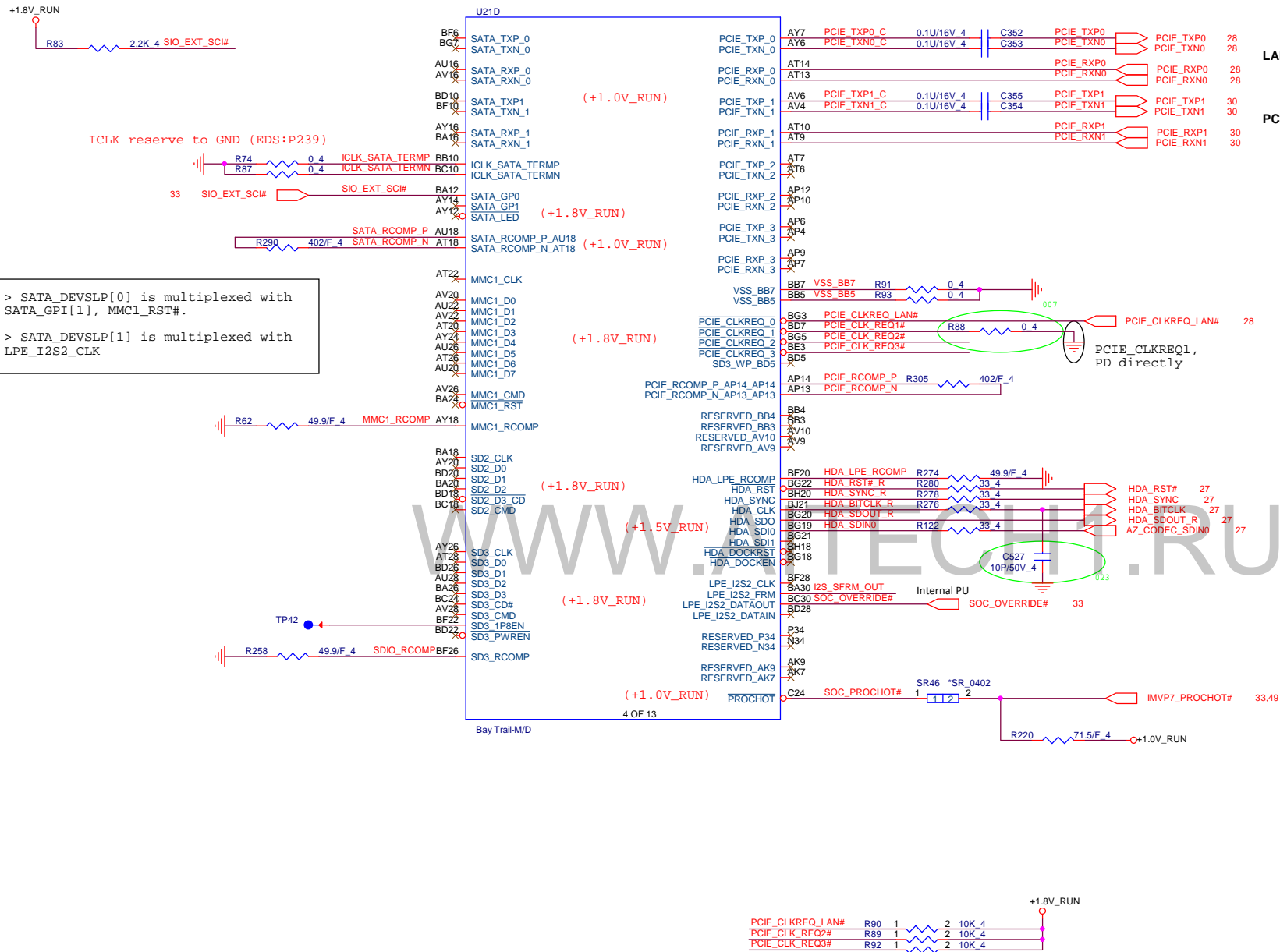


DP to LVDS



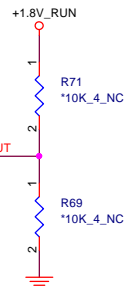
HW Strap:DDI1 Detect	
HDMI_SDA	
PU	1 = DDI1 detected
PD	0 = DDI1 not detected(Default)





LAN

PCIe to SATA



HW Strap: BIOS Boot Selection	
GPIO_S0_SC[063]/LPE_I2S2_FRM	
PU	1 = SPI(Default)
PD	0 = LPC

HW Strap: Security Flash Descriptors	
GPIO_S0_SC[065]/ LPE_I2S2_DATAOUT	
PU	1 = Normal Operation(Default)
PD	0 = Override

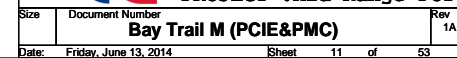
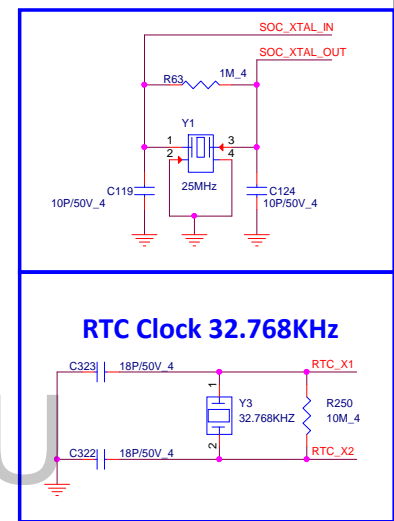


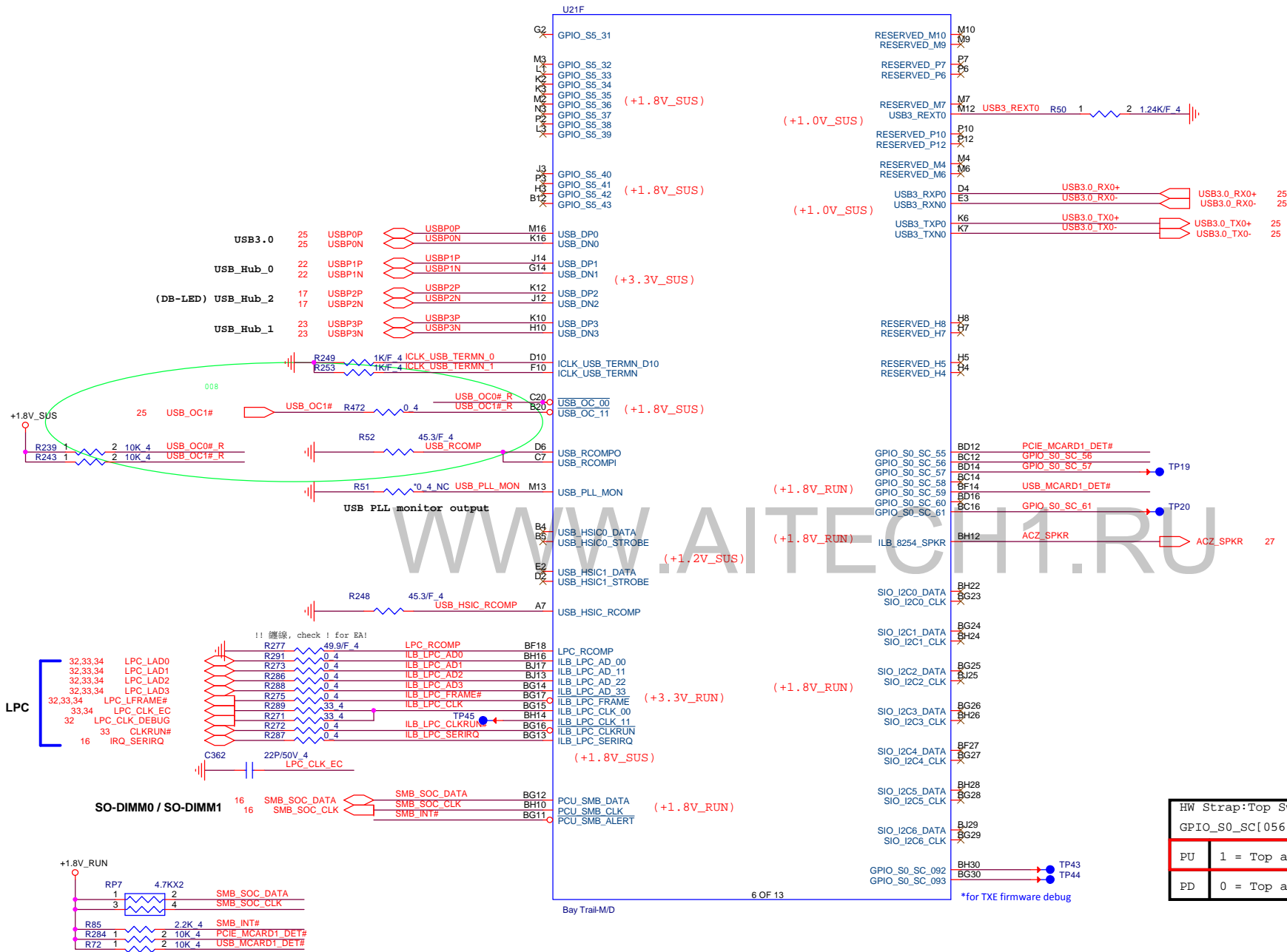
Quanta Computer Inc.

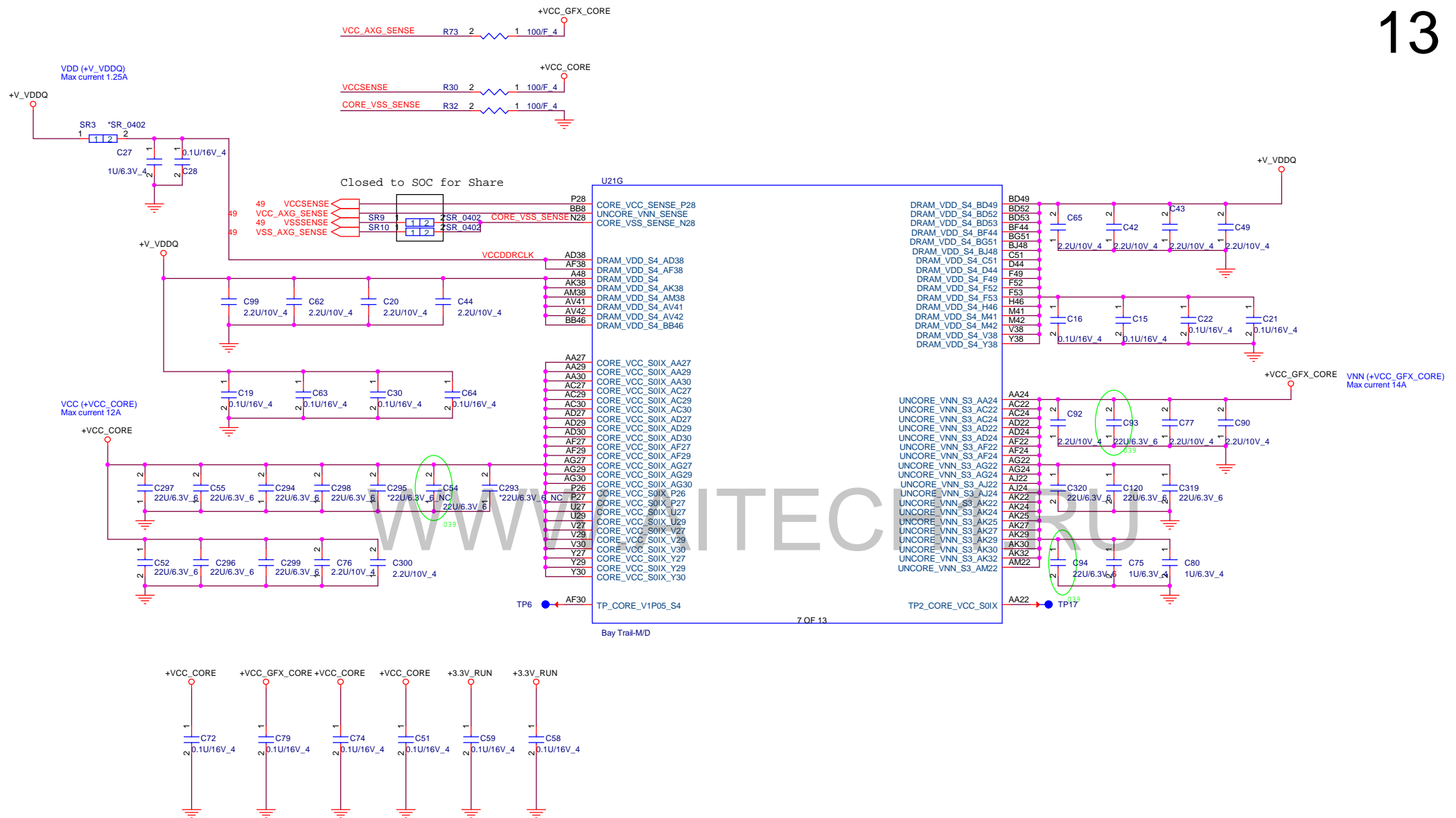
PROJECT : Mid-Range POS

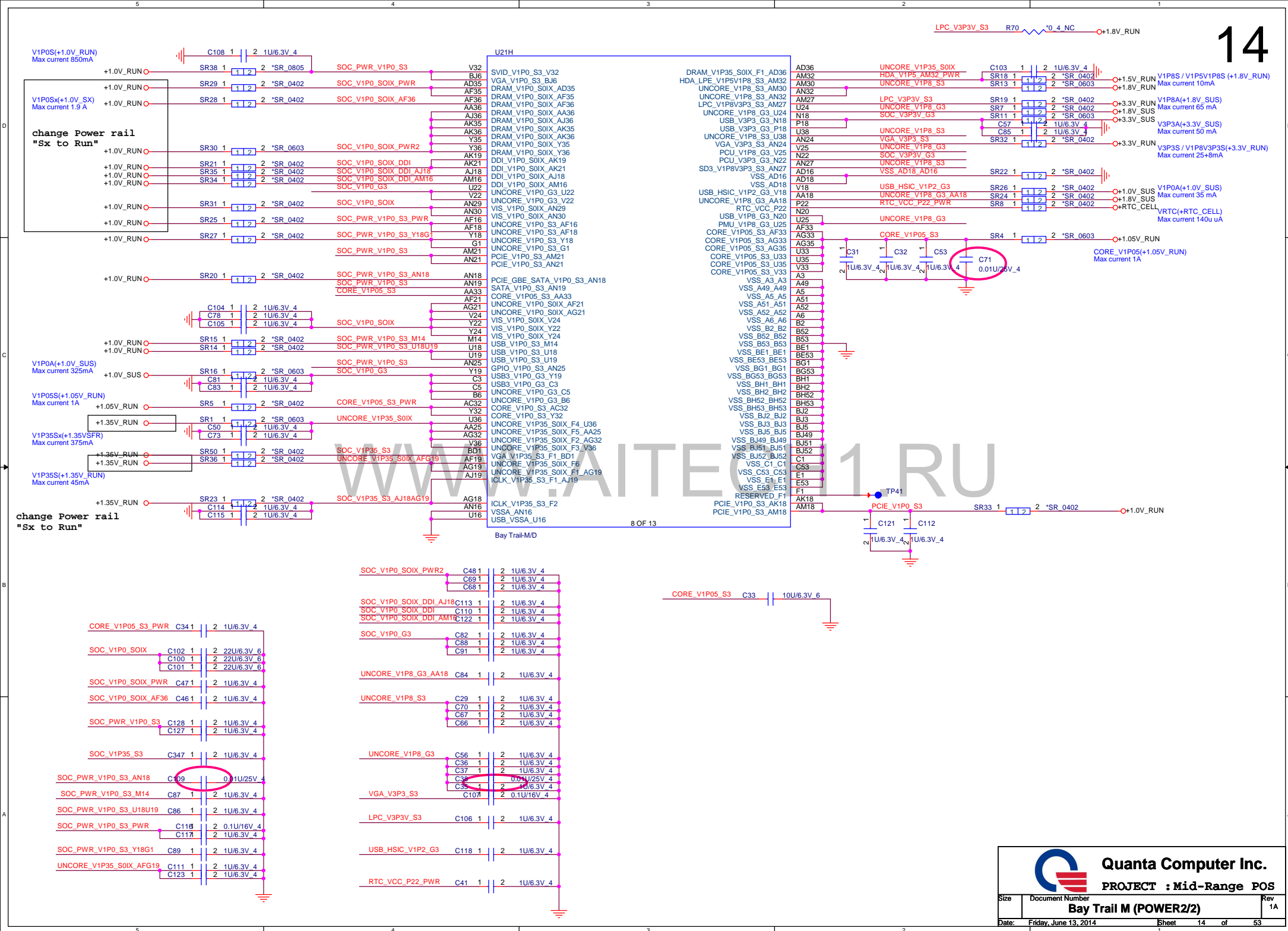
Bay Trail M (SATA&PCIE)

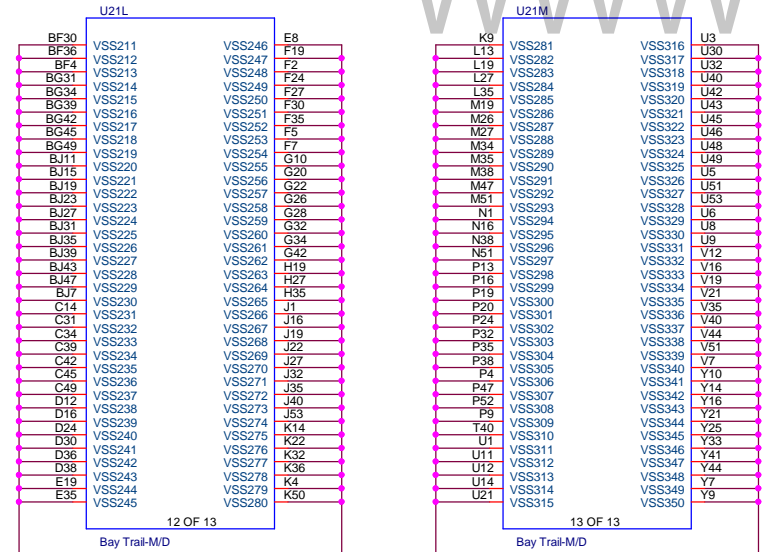
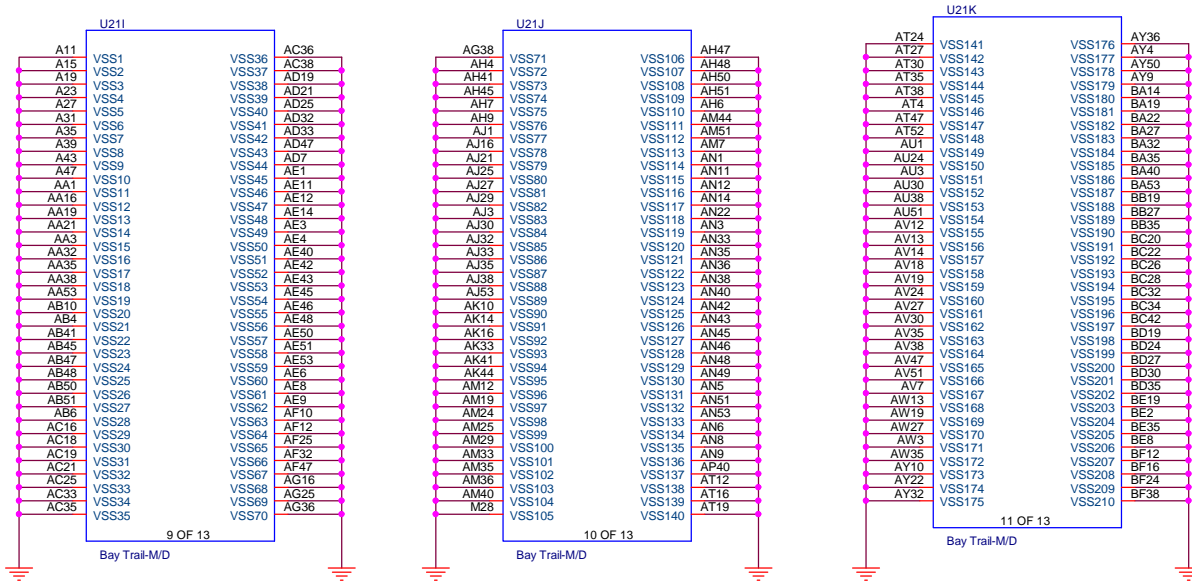
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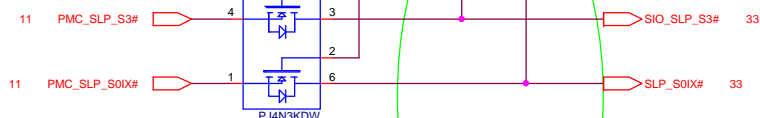




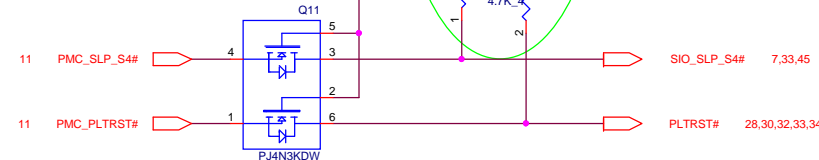


Co-layout:
If mount R736, R744, need NC R511, R512, Q37

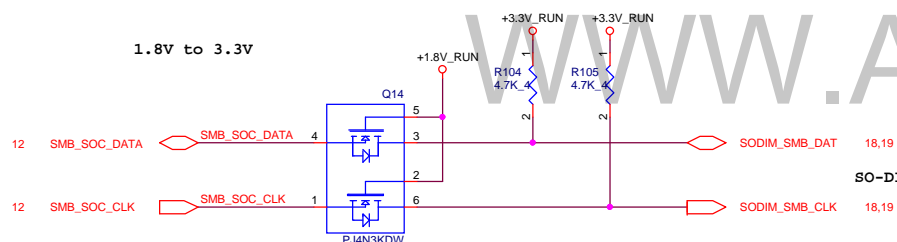
1.8V to 3.3V
PJ4N3KDW
 $V_{th}=0.8-1.5V$



1.8V to 3.3V

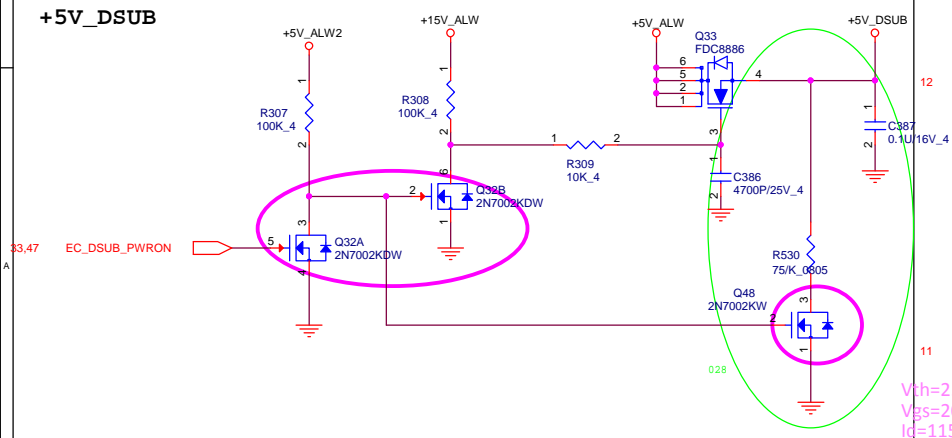


1.8V to 3.3V

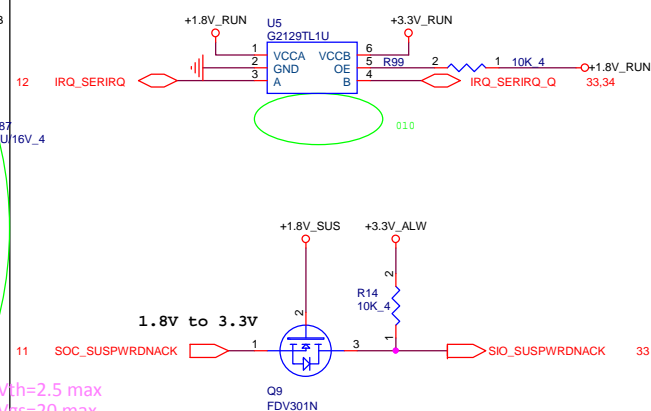


SO-DIMM0 / S0-DIMM1

+5V_DSUB

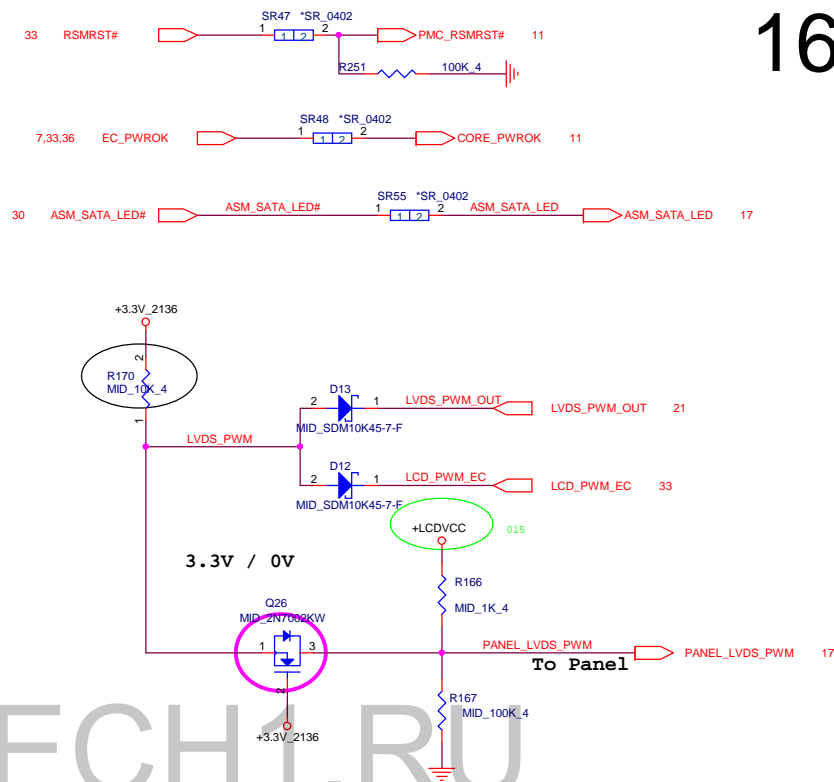


Co-layout:
If mount R745, need NC U18, R522



1.8V to 3.3V

$V_{th}=2.5 \text{ max}$
 $V_{gs}=20 \text{ max}$
 $I_d=115 \text{ mA}$

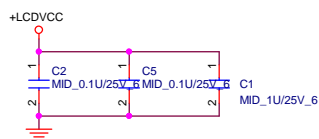


To Panel



Quanta Computer Inc.
PROJECT :Mid-Range POS
Bay Trail M Level Shfr

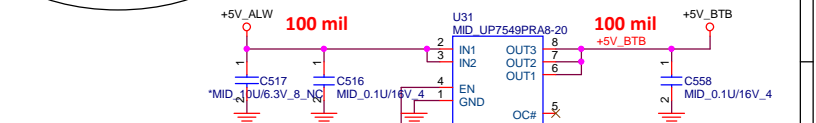
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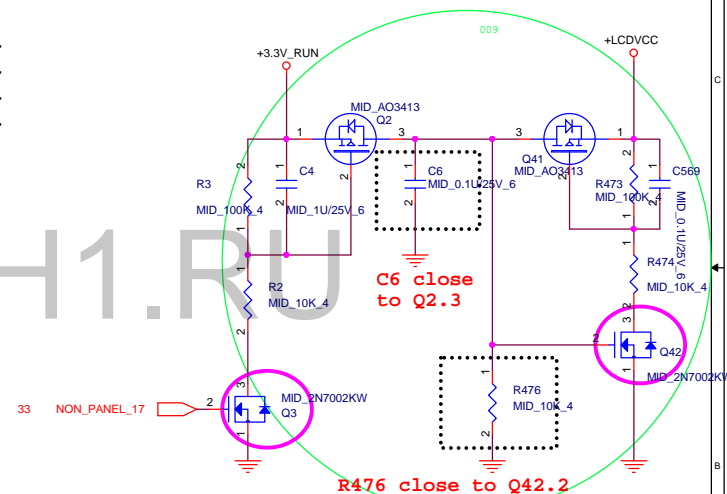
21 EDID_SCL EDID_SCL R459 *MID 0 4 NC PANEL_SEL1_R
21 EDID_SDA EDID_SDA R460 *MID 0 4 NC PANEL_SEL0_R

PANEL_SEL1 R457 *MID 0 4 NC
PANEL_SEL0 R458 *MID 0 4 NC

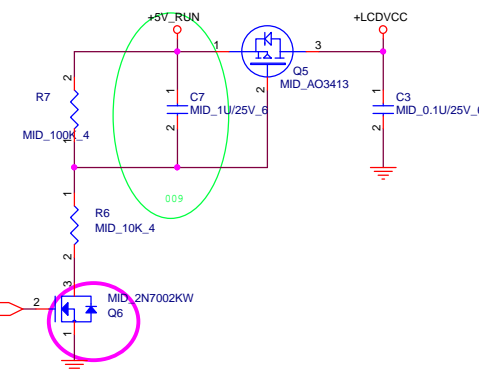
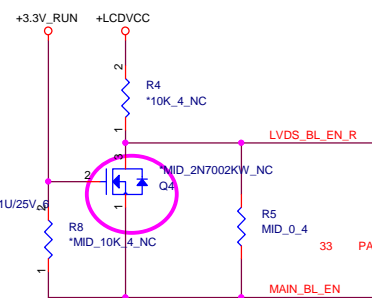
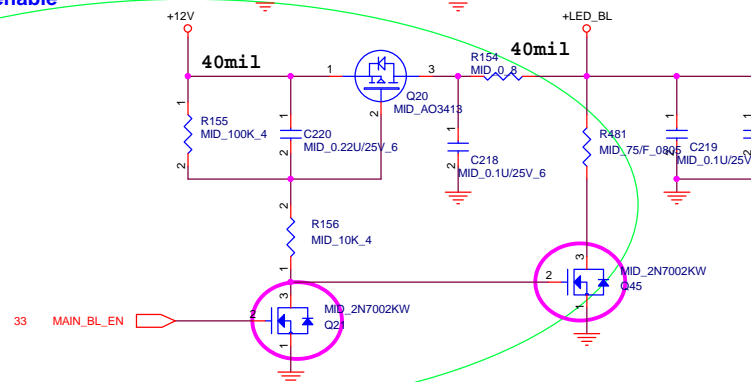
+3.3V_ALW

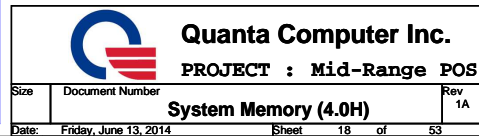


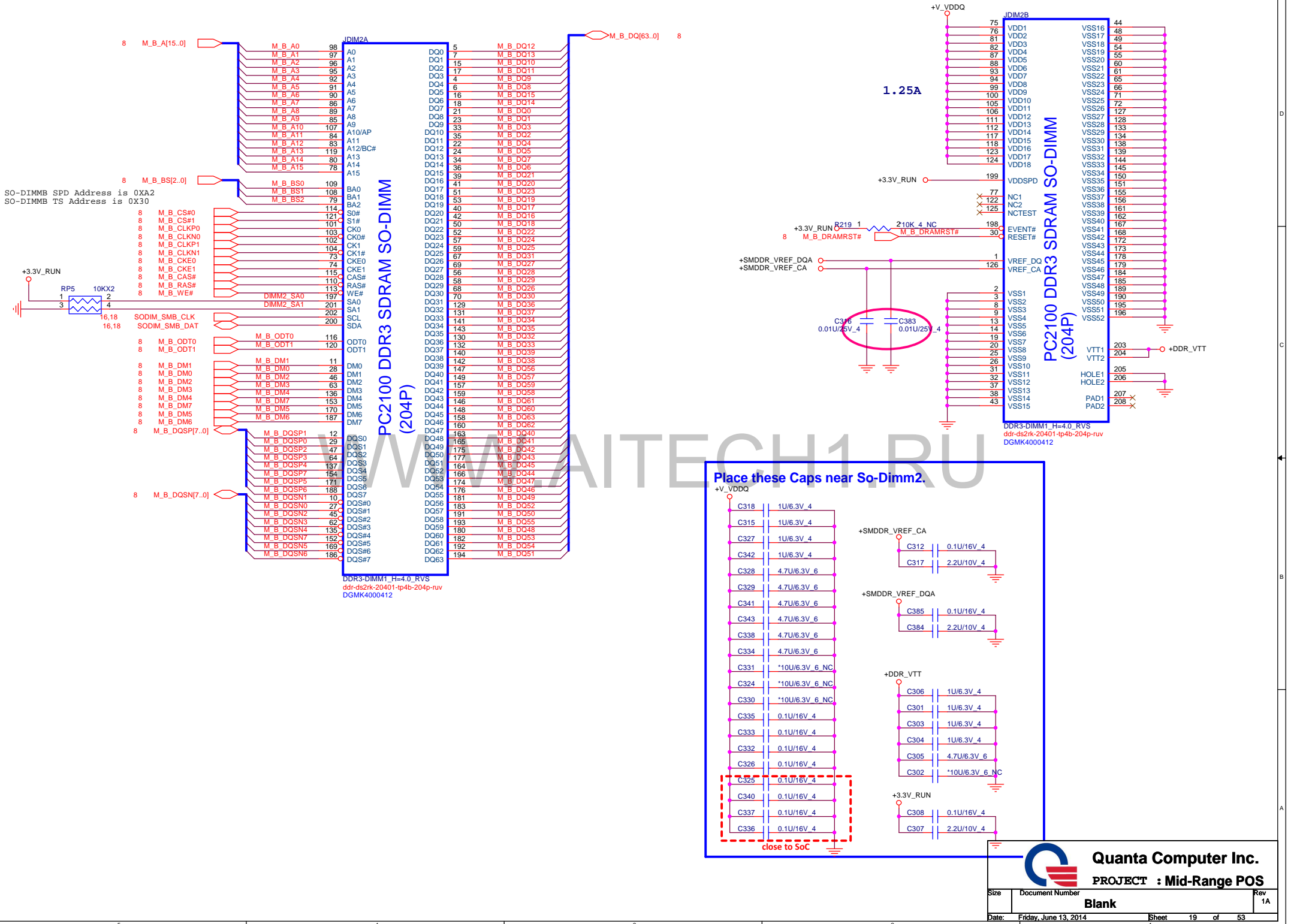
3 DB_USB_PWR



~~R476 close to Q42.2~~







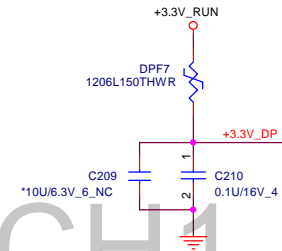
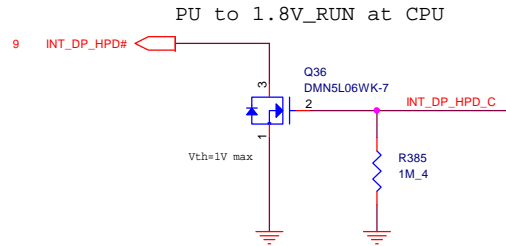
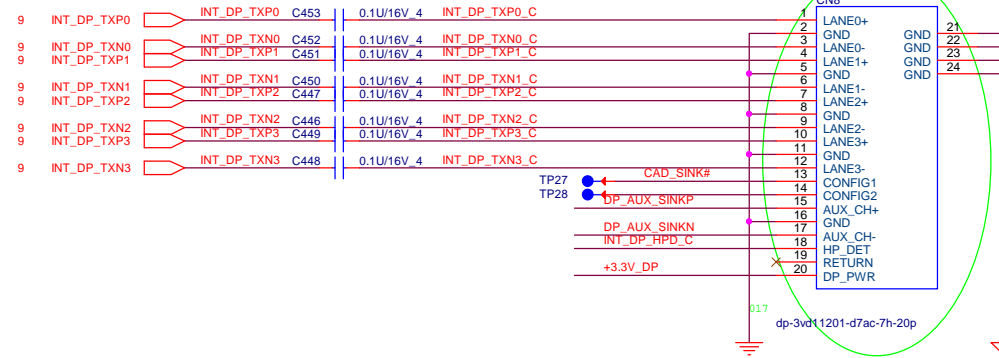
Quanta Computer Inc.

PROJECT : Mid-Range POS

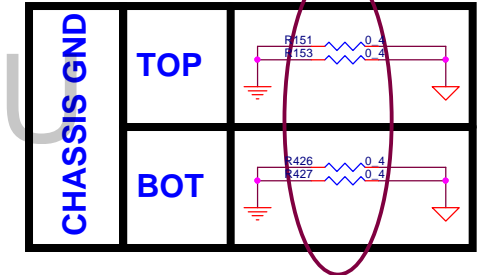
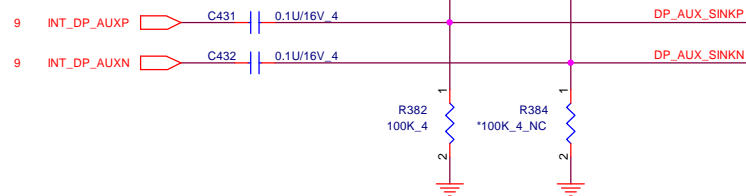
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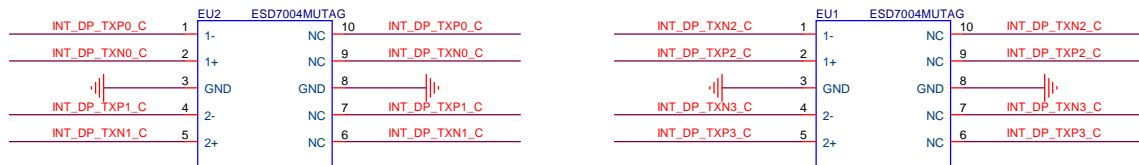
[2nd Display link to CN1 CONN]

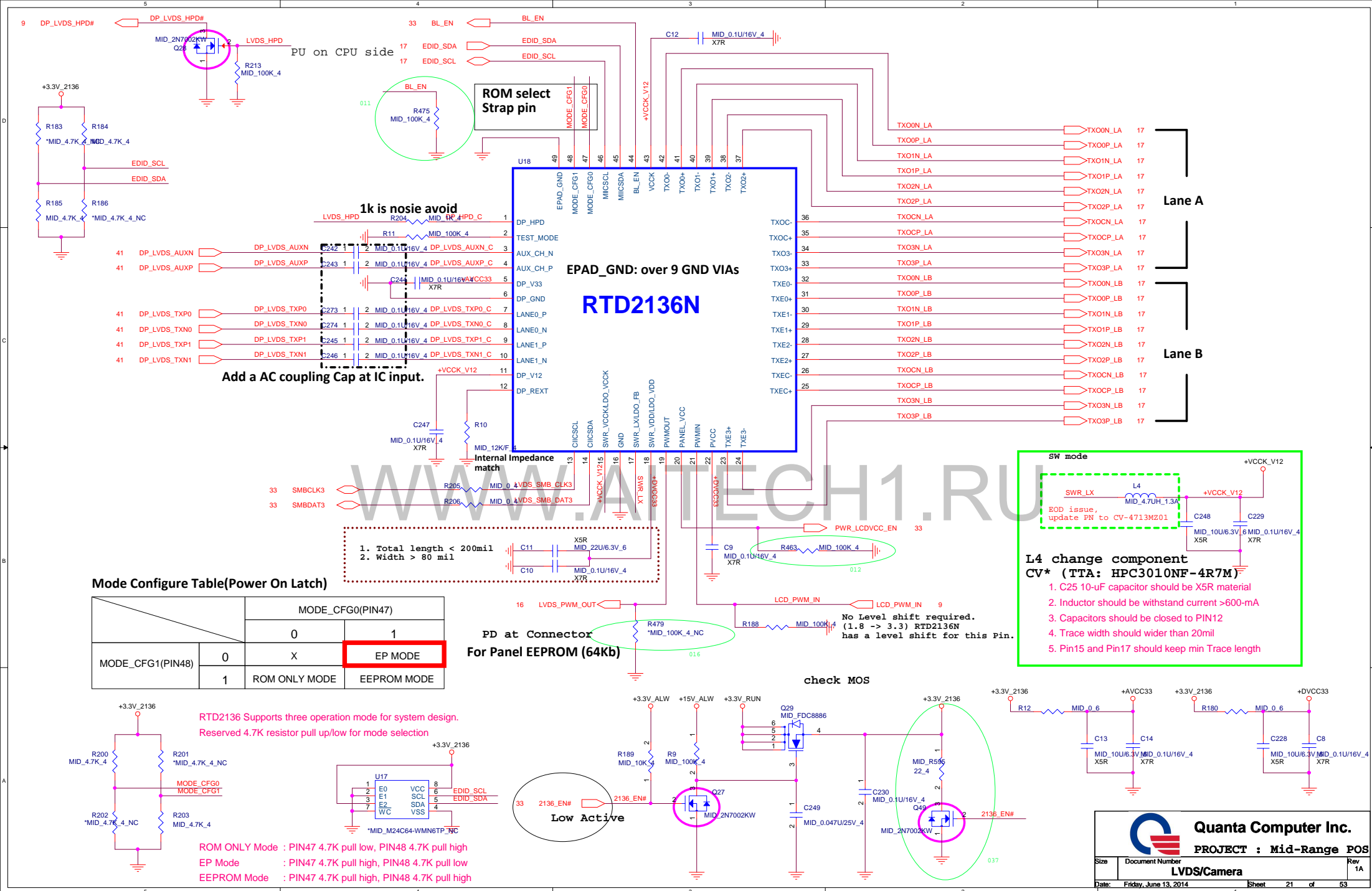


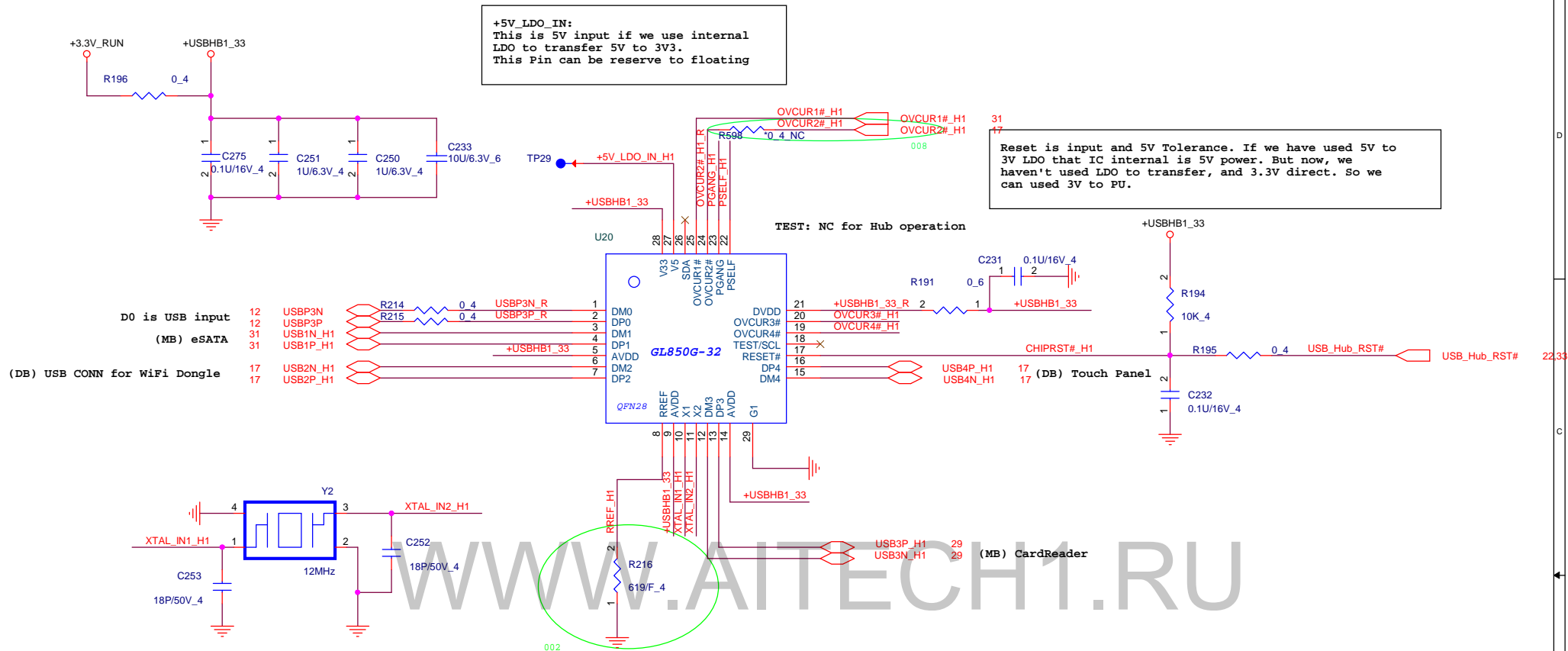
DisplayPort AUX



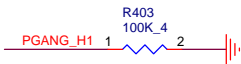
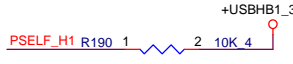
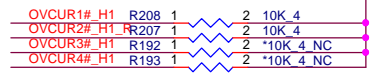
Please closed to DP connector







[Strapping]

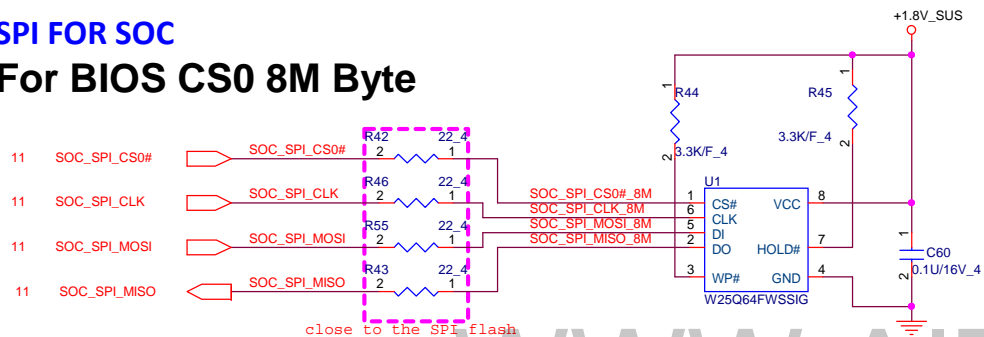
PGANG		PSELF		nOVRx		Port Disable setting	
H	Gang mode: when OC occur, turn off all USB port	H	Power Self: For 500mA device max	Floating	For Non-removable device	Port Number	Pull Port
L	Individual mode: When OC occur, turn off OC port	L	Power Bus: For 100mA device	Pull high	For Removable device	1 (Port1)	Port 2 Pull High
						2 (Port 1/ 2)	Port 3 Pull High
						3 (Port 1/ 2/ 3)	Port 4 Pull High



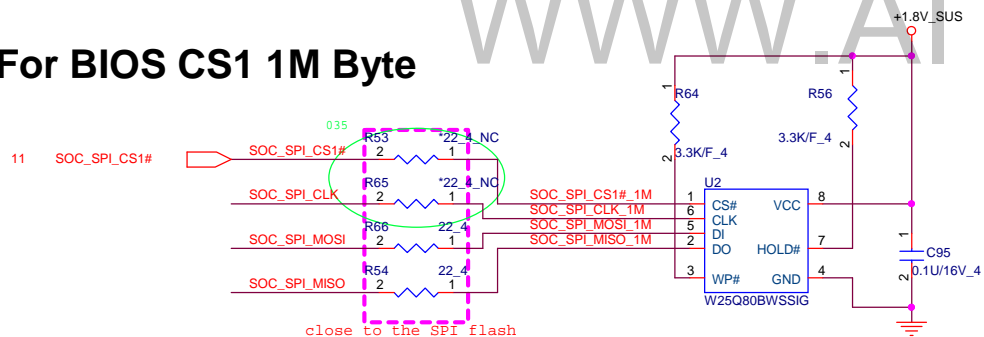
Quanta Computer Inc.
PROJECT :Mid-Range POS
USB HUB IC(GL850G)

SPI FOR SOC

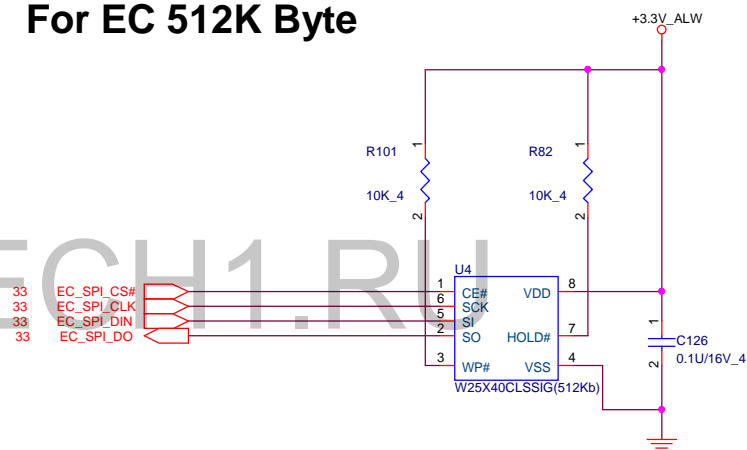
For BIOS CS0 8M Byte

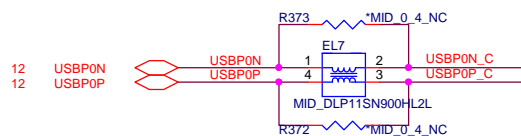
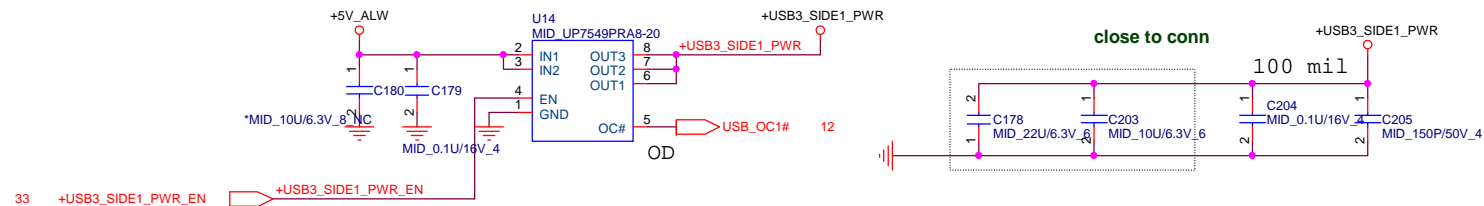


For BIOS CS1 1M Byte

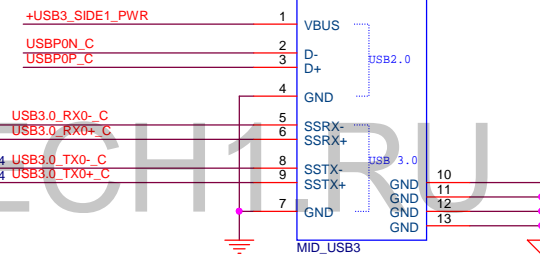
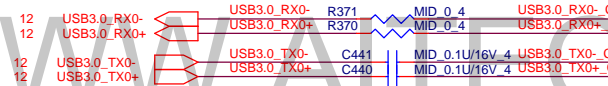
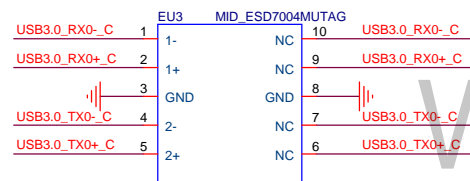


For EC 512K Byte



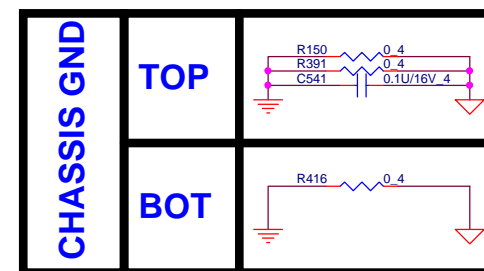
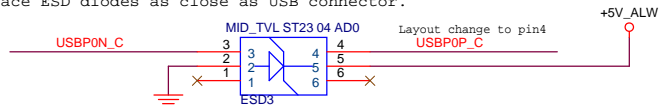


USB 3.0



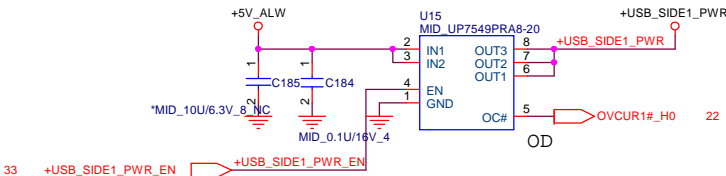
ESD Function

Place ESD diodes as close as USB connector.

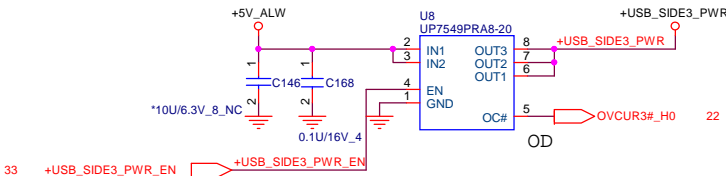


USB Power Switch

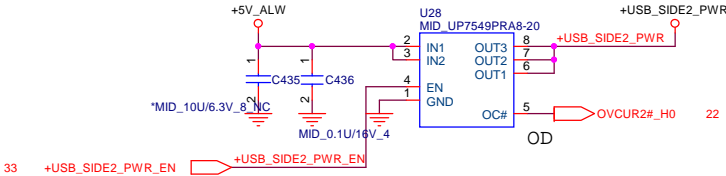
USB Port 1



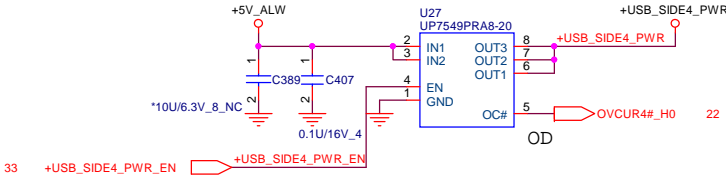
USB Port 3



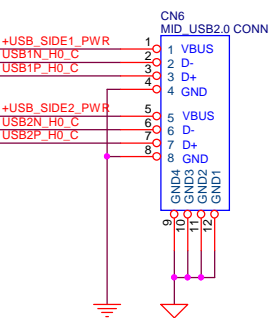
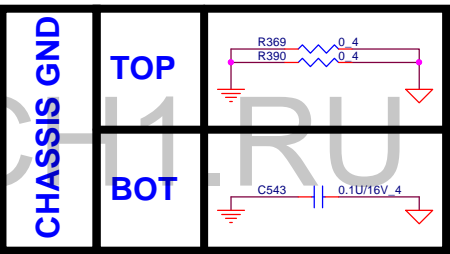
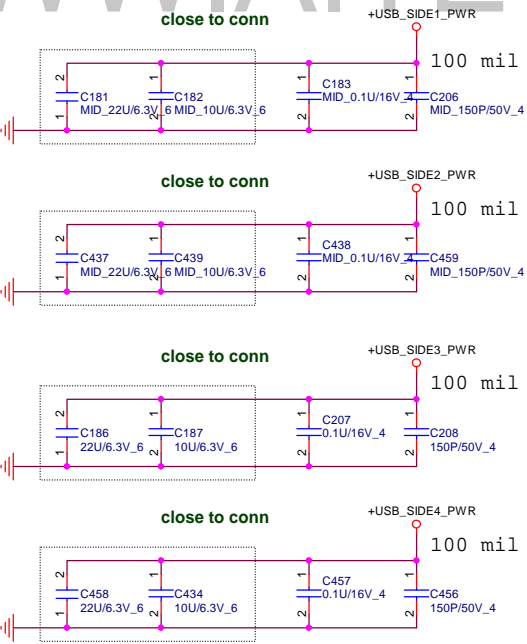
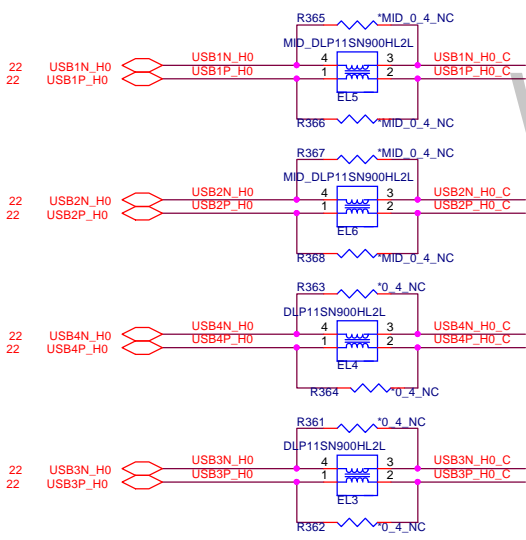
USB Port 2



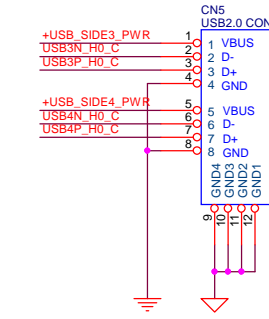
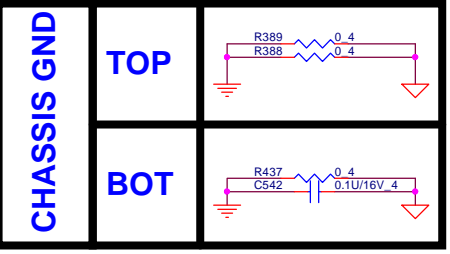
USB Port 4



USB 2.0 Port1 / Port2

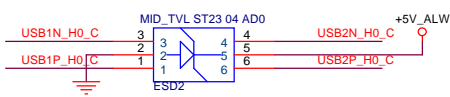


USB 2.0 Port3 / Port4



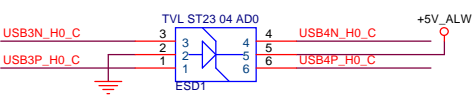
ESD Function

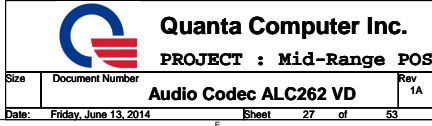
Place ESD diodes as close as USB connector.



ESD Function

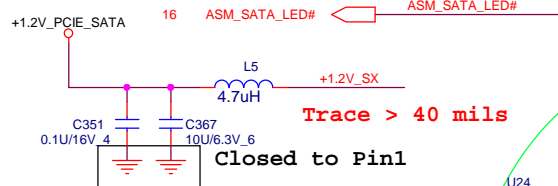
Place ESD diodes as close as USB connector.



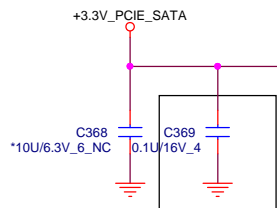


Test Mode: Default is disable(Internal PD)
Test Mode: If used, External PU

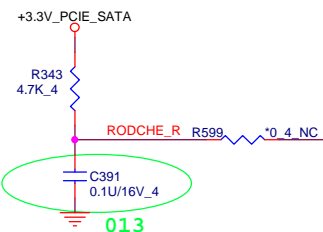
TP47
TP49
PLTRST#
PLTRST# 16,28,32,33,34



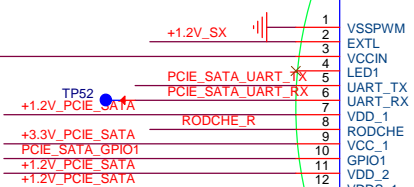
(VCC33IN)
Switch input power



C8644 is mandatory.
And closed to Pin1 and Pin3



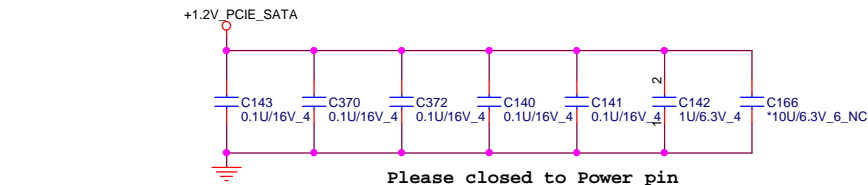
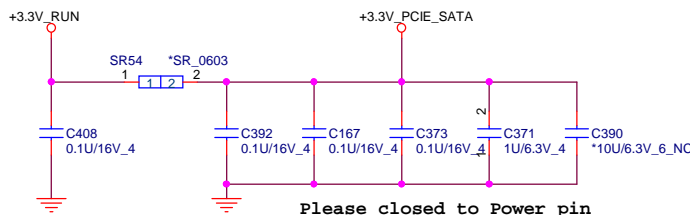
VSSPWM is GND of Pin2



eSATA

Hub_SATA_RXP1
Hub_SATA_RXN1
Hub_SATA_TXN1
Hub_SATA_TXP1

(Closed to Pin)
External Reference for SATA



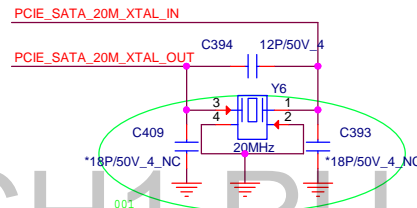
PCIE_SATA_SPI_DI
PCIE_SATA_SPI_CS#
PCIE_SATA_SPI_DO
PCIE_SATA_SPI_CLK

PCIE_SATA_GPIO0

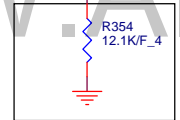
013

VCCP
PTXN1
PTXP1
GND_A3
PRXN1
PRXP1
VDDP
XI
XO
PECLKN
PECLKP
VDD_2

+3.3V_PCIE_SATA
PCIE_RXN1_C
PCIE_RXP1_C
PCIE_TXN1
PCIE_TXP1
PCIE_SATA_20M_XTAL_IN
PCIE_SATA_20M_XTAL_OUT
CLK_PCIE_SATAN
CLK_PCIE_SATAP

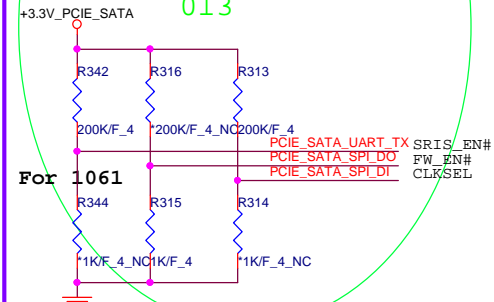
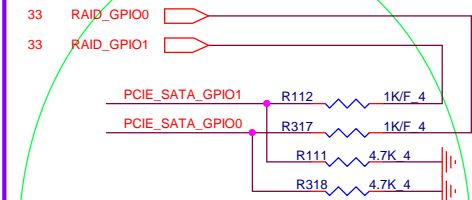


Main HDD



H/W Strapping

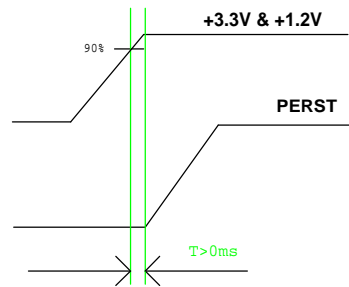
GPIO1	GPIO0	Mode
0	0	AHCI
0	1	RAID0
1	0	RAID1
1	1	SPAN



For 1061

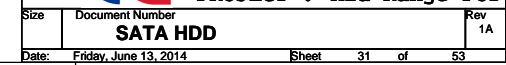
SPI_DO(FW_EN#)		
0	Firmware	1061R
1	OpROM	1061

Power up sequence

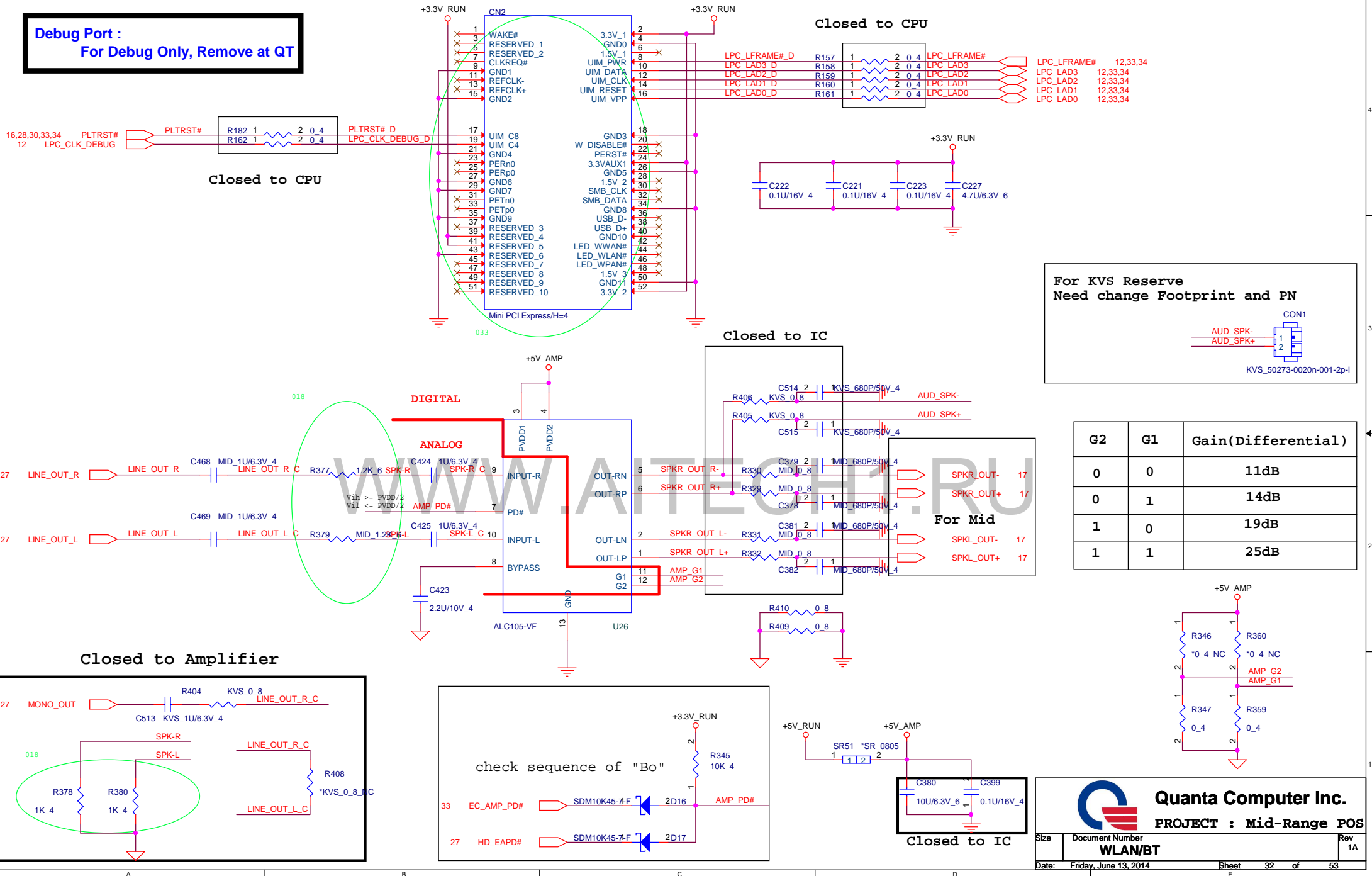


Quanta Computer Inc.
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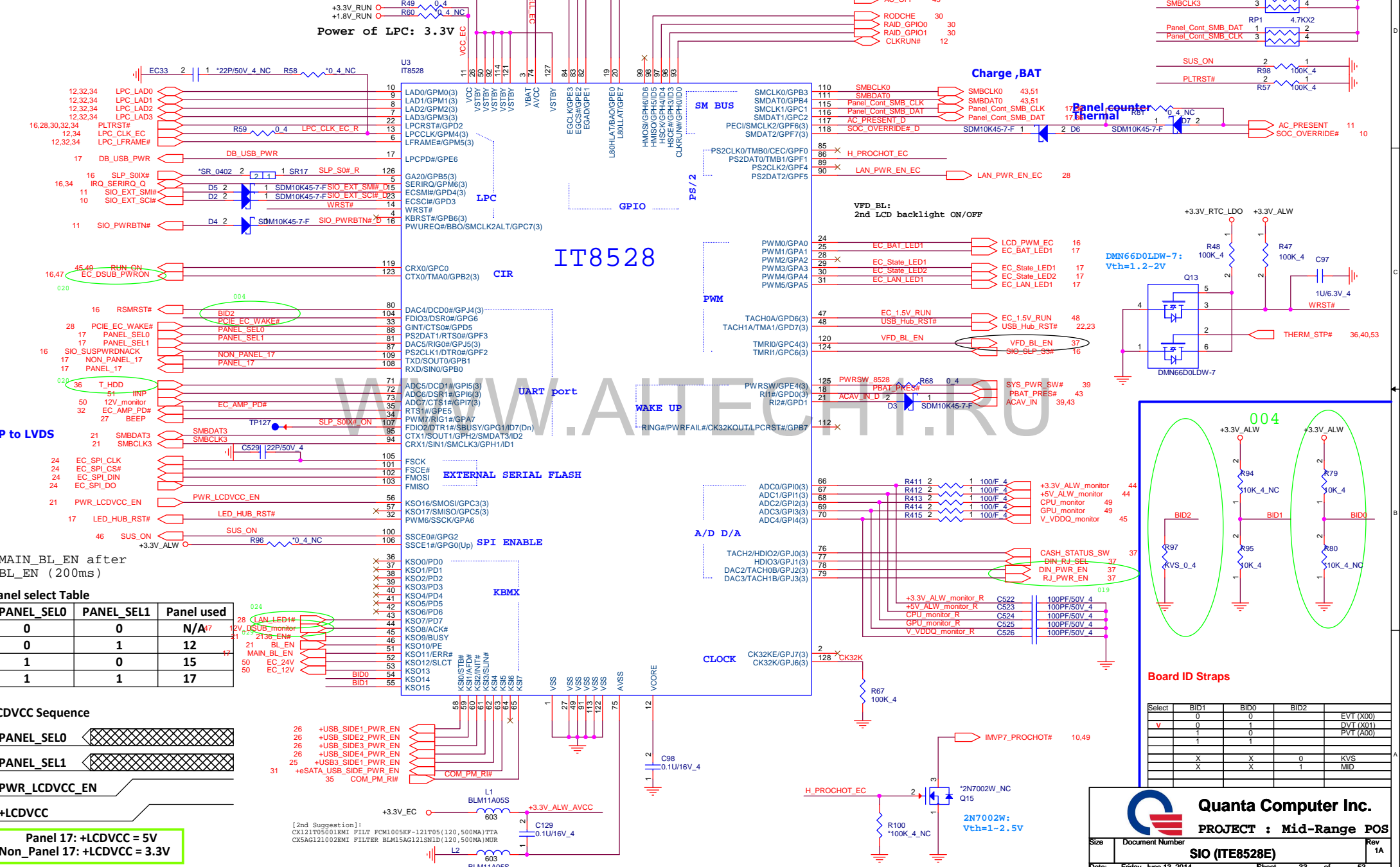


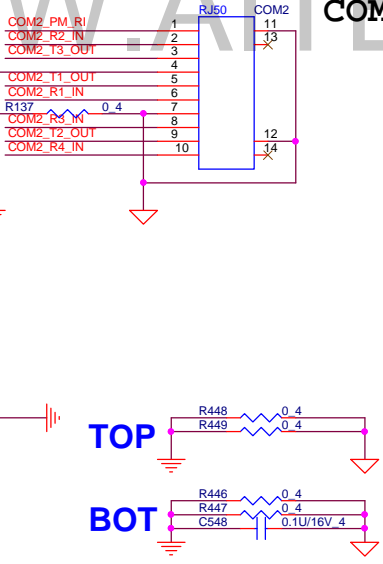
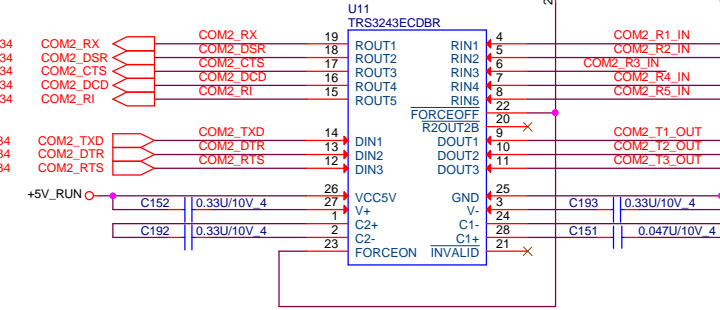
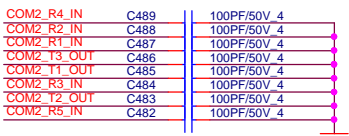
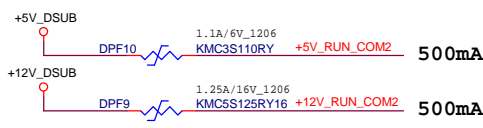
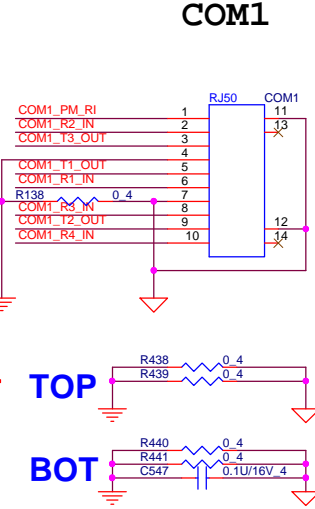
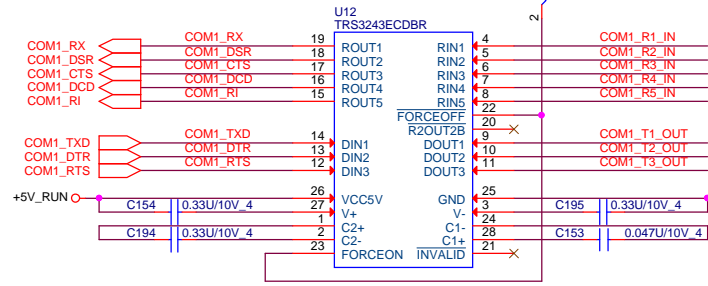
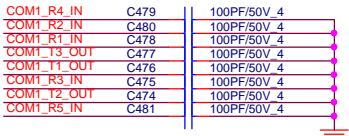
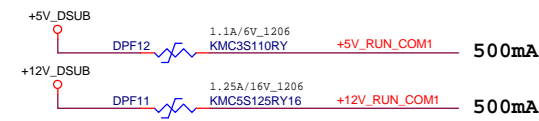
Debug Port :
For Debug Only, Remove at QT



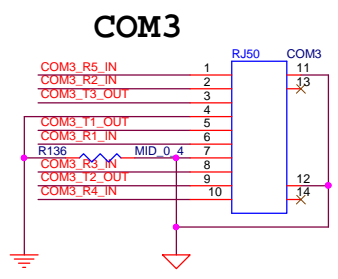
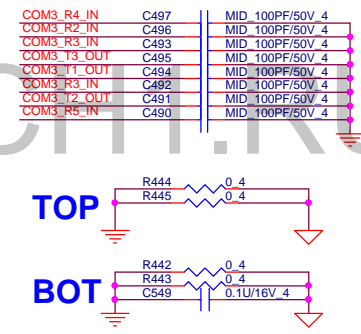
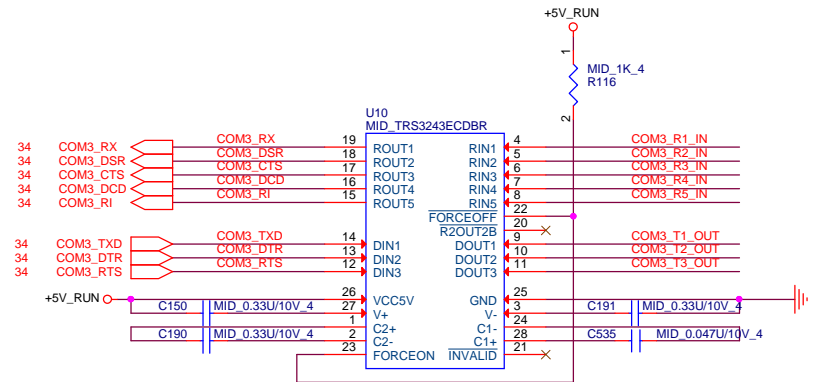
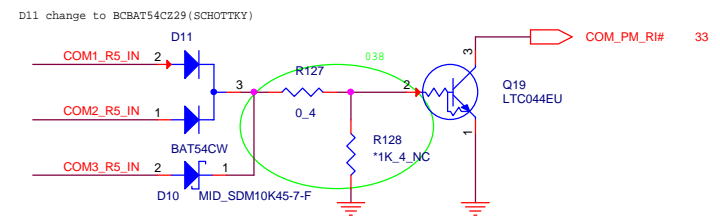
Quanta Computer Inc.
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WLAN/BT
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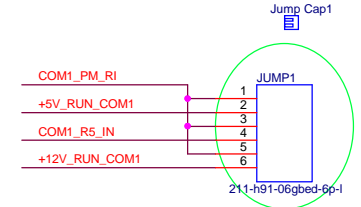




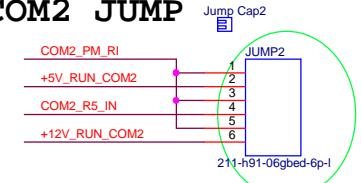
RI



COM1 JUMP



COM2 JUMP



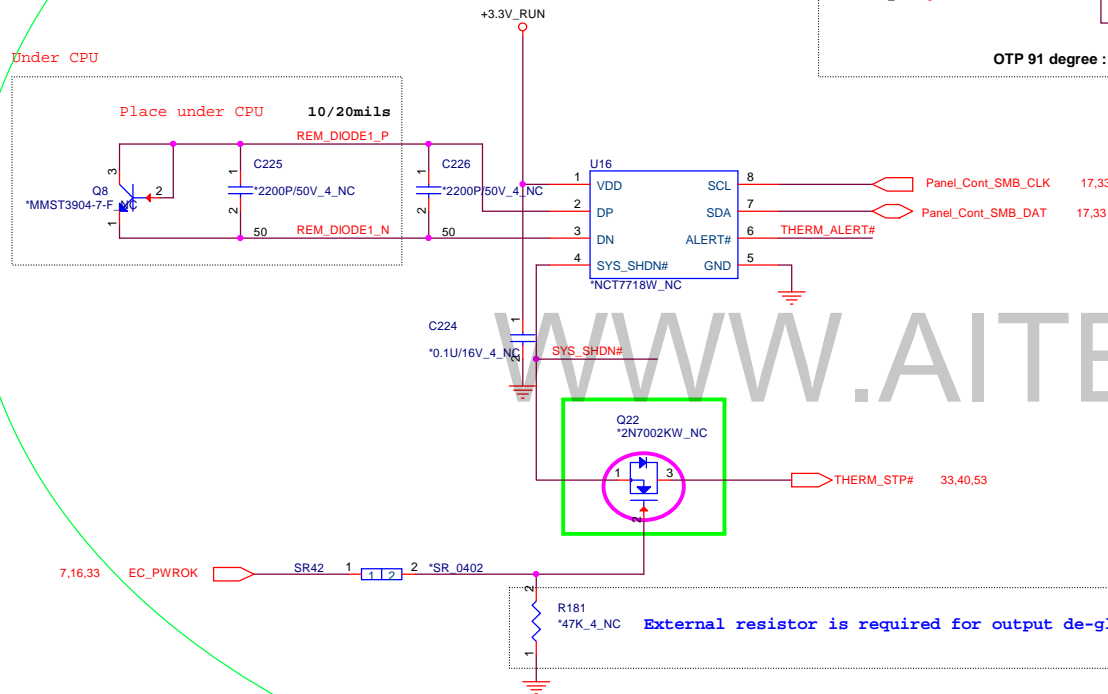
Quanta Computer Inc.

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	KB/TP	1A
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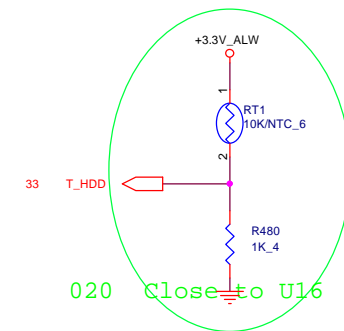
005

THERMAL IC



!! Check OTP !!

SYS_SHD#	2K	7.5K	10.5K	14K	18.7K
ALERT#					
2K	77'C	87'C	97'C	107'C	117'C
7.5K	79'C	89'C	99'C	109'C	119'C
10.5K	81'C	91'C	101'C	111'C	121'C
14K	83'C	93'C	103'C	113'C	123'C
18.7K	85'C	95'C	105'C	115'C	125'C



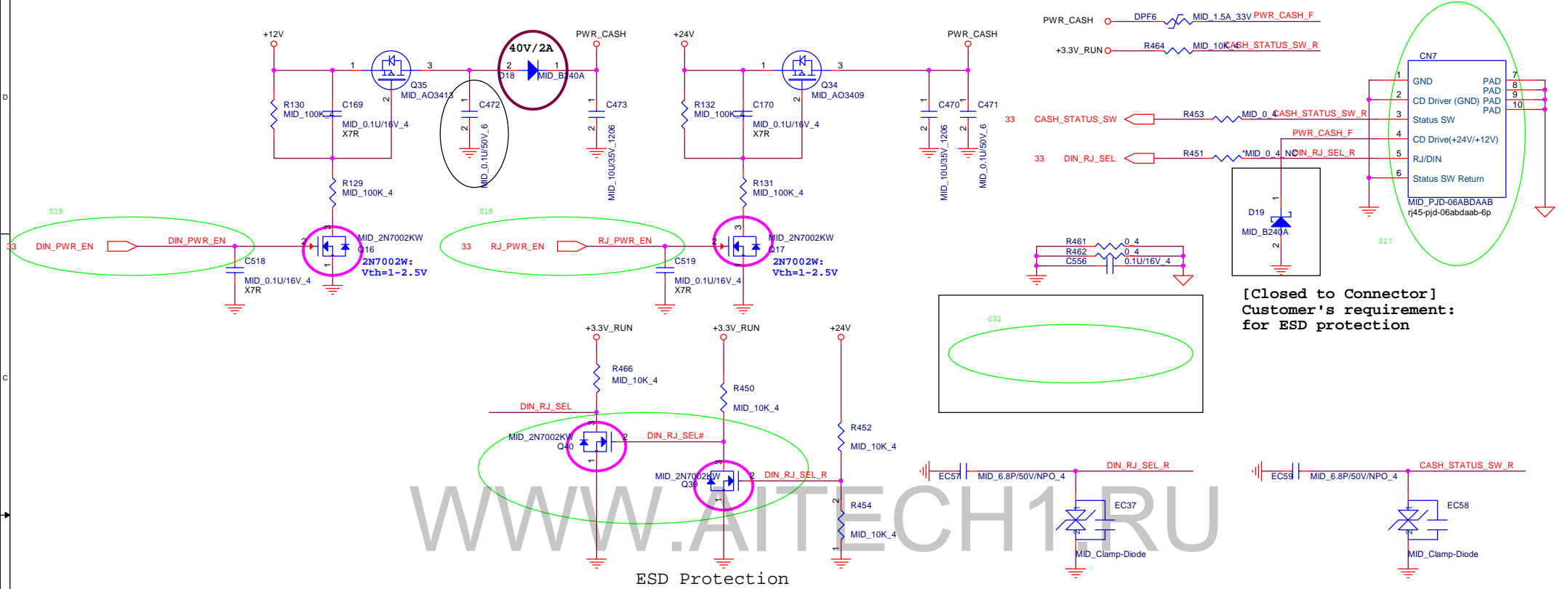
Quanta Computer Inc.

PROJECT : Mid-Range POS

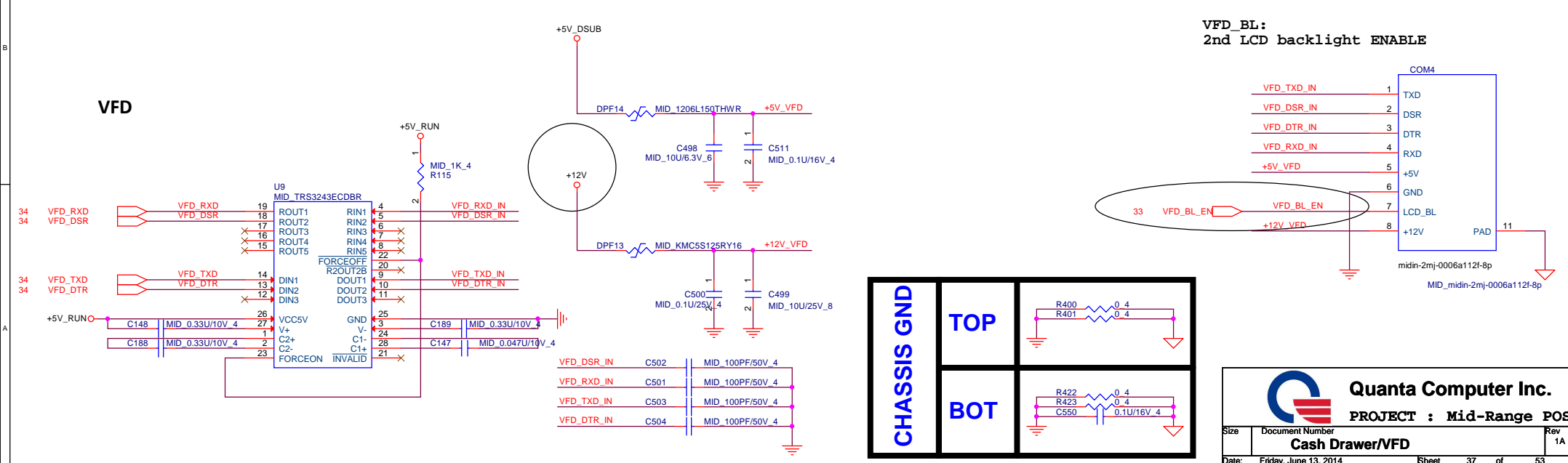
Size Document Number THERMAL Rev 1A

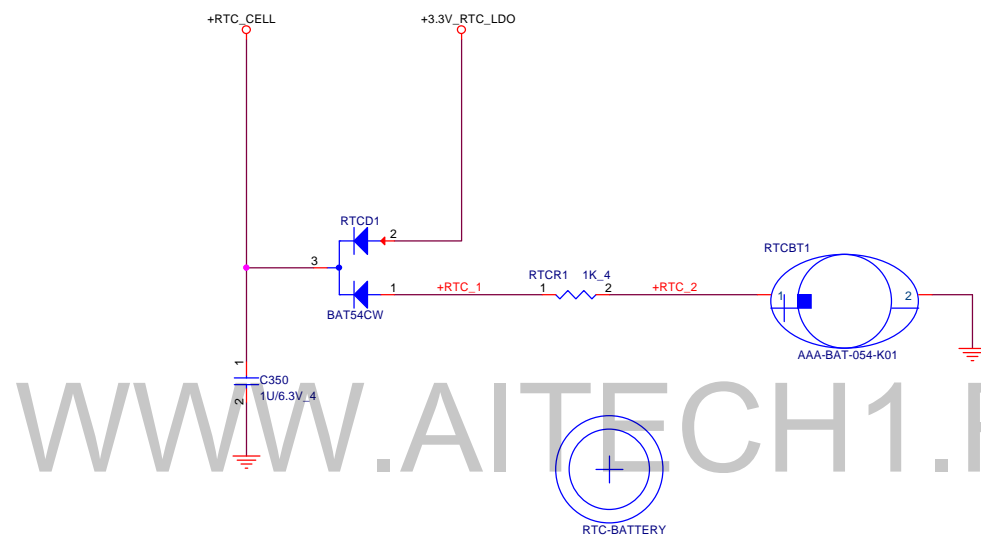
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Cash Drawer



VFD





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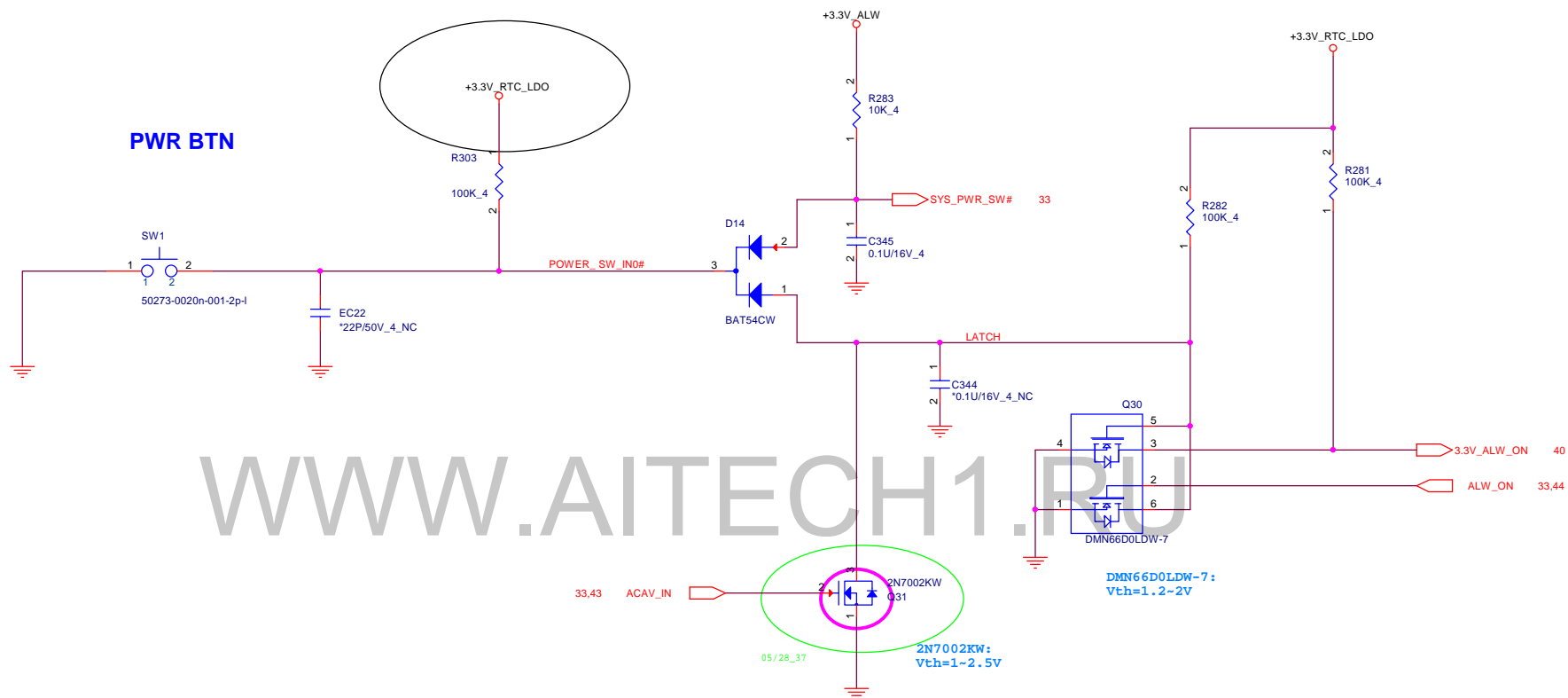
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FLASH / RTC

3VALW ON POWER LOGIC

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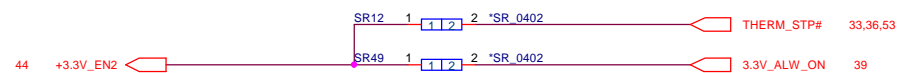


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WWW.AITECH1.RU

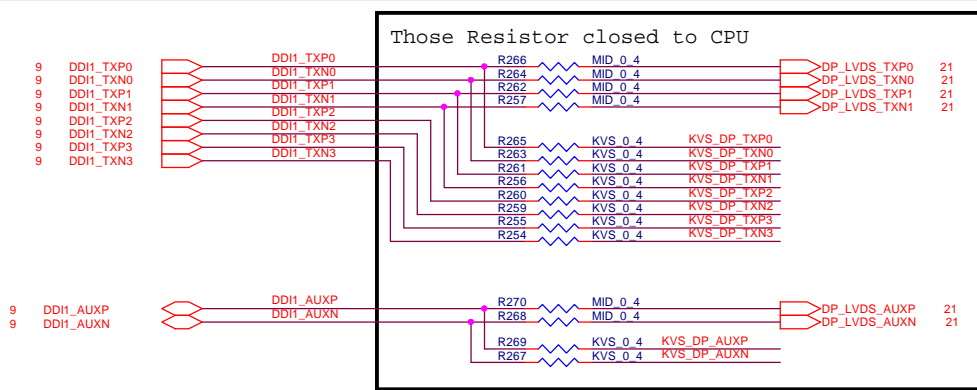


Quanta Computer Inc.

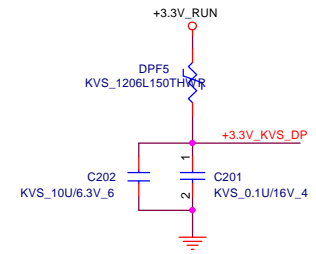
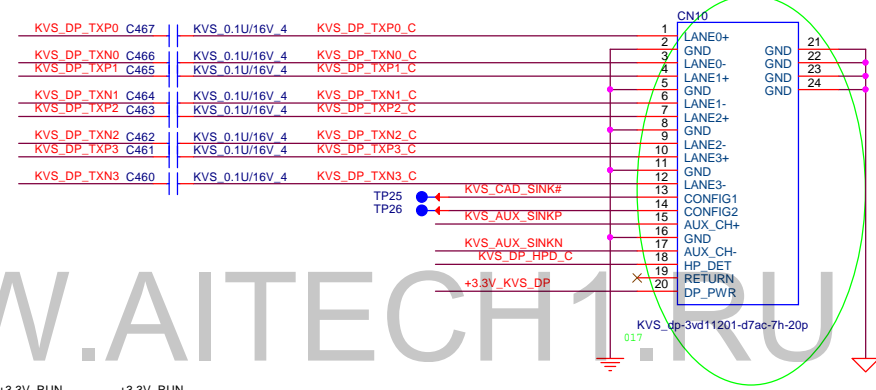
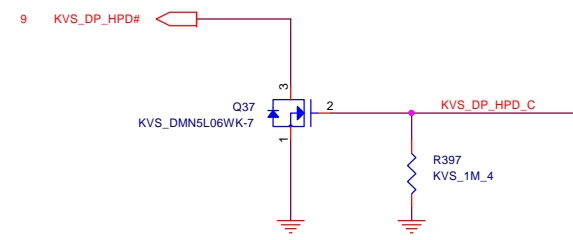
PROJECT : Mid-Range POS

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		1A
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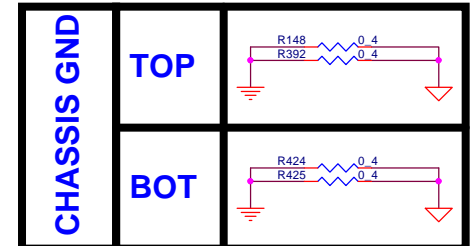
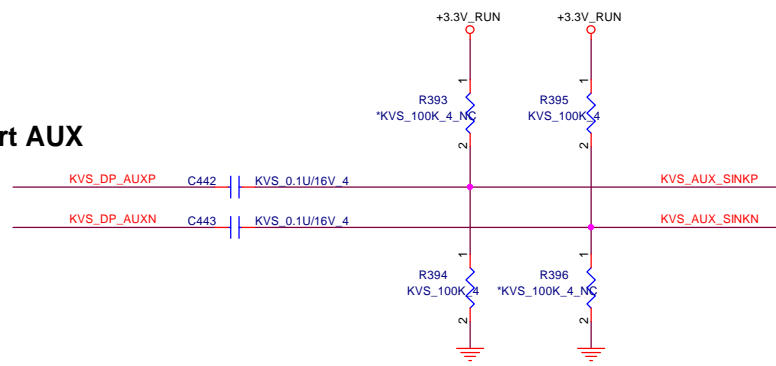
System Reset Circuit



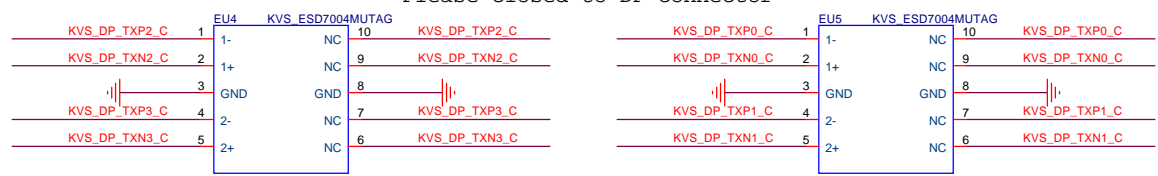
PU to 1.8V_RUN at CPU

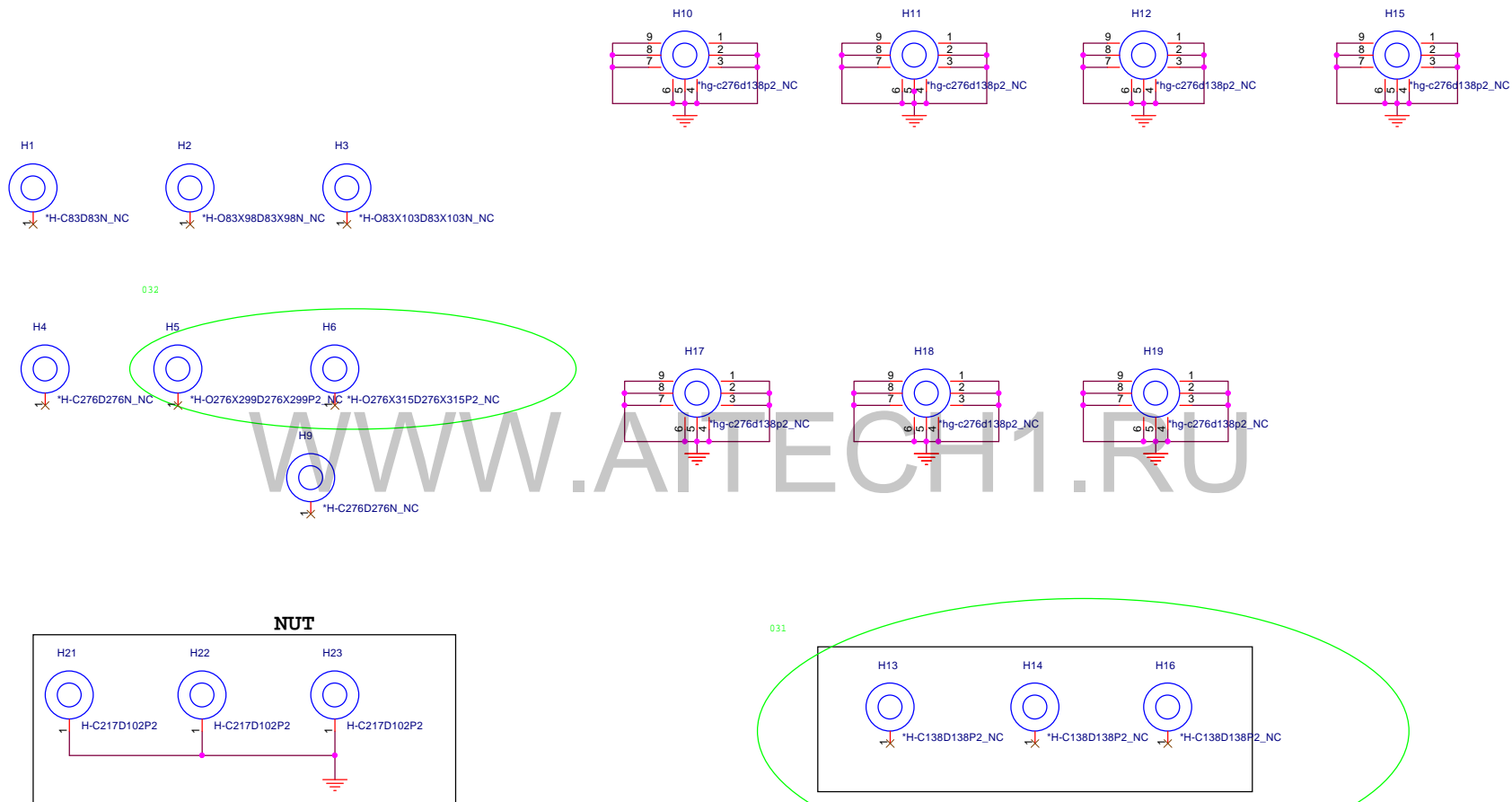


DisplayPort AUX



Please closed to DP connector





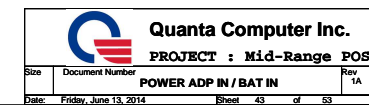
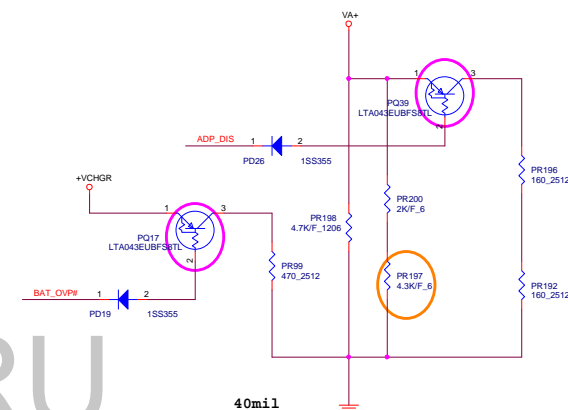
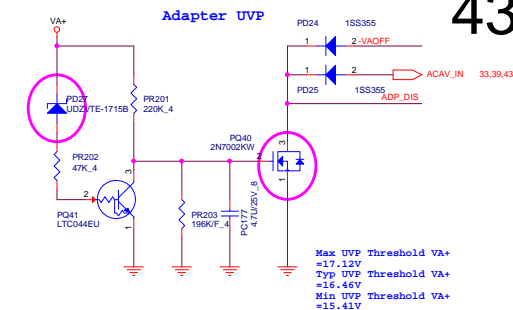
EMI request does not spread Copper

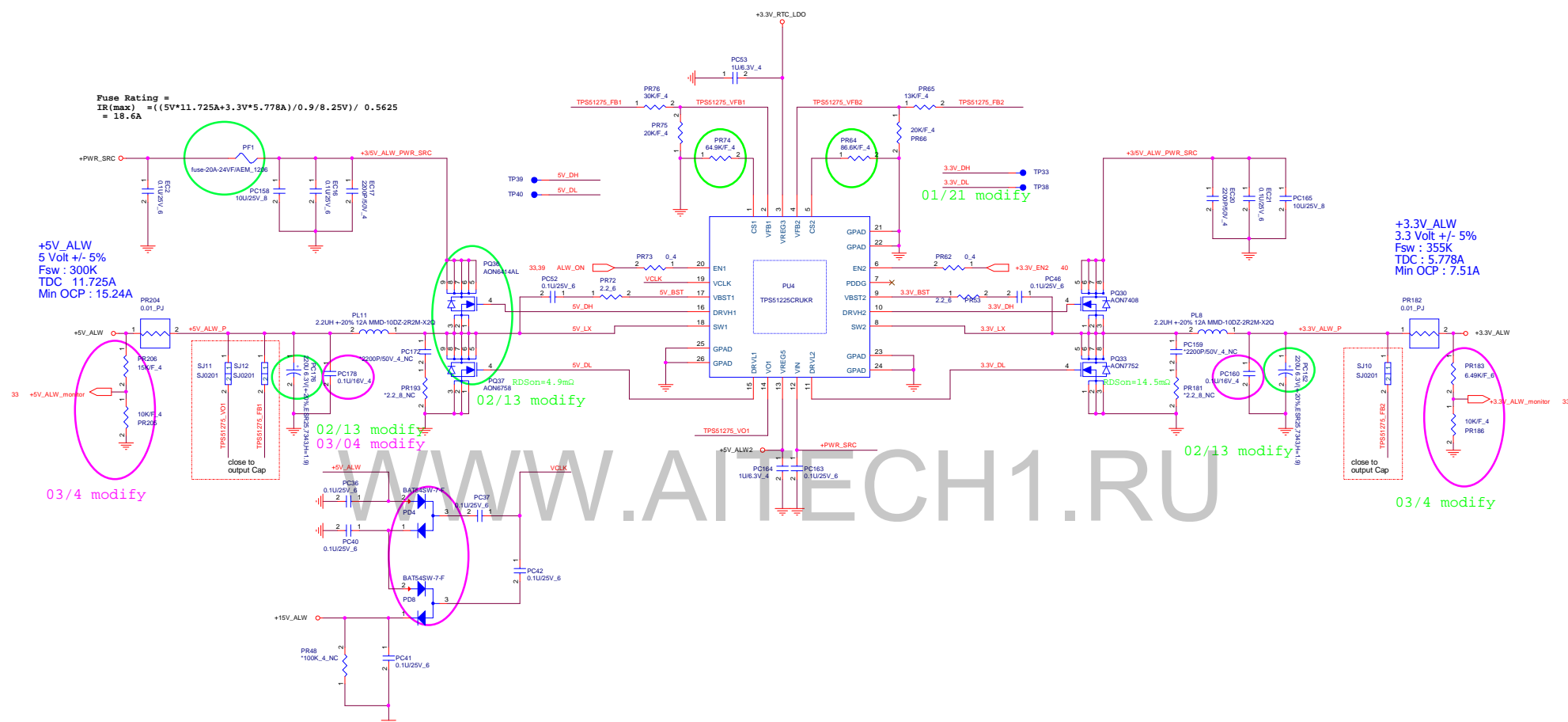


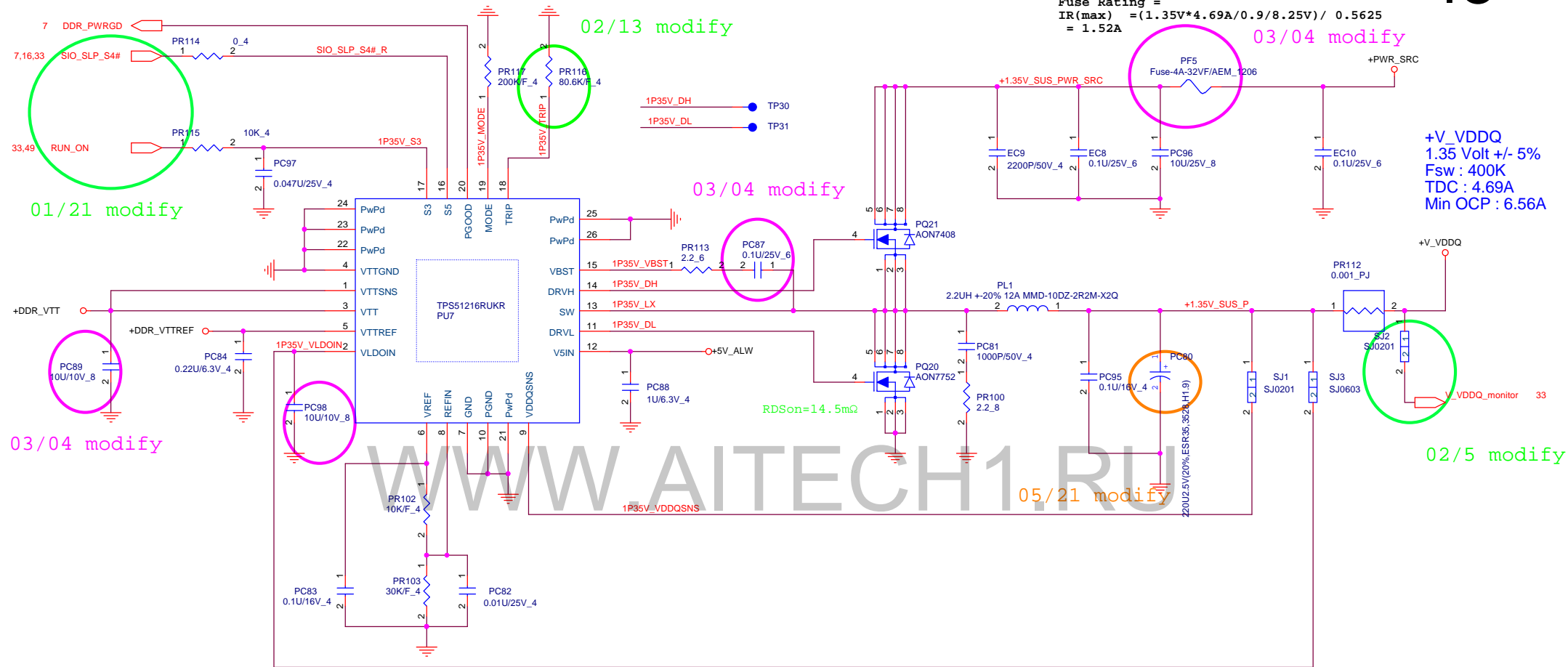
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PROJECT : Mid-Range POS

Size	Document Number	Rev
	HOLE	1A
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PROJECT : Mid-Range POS

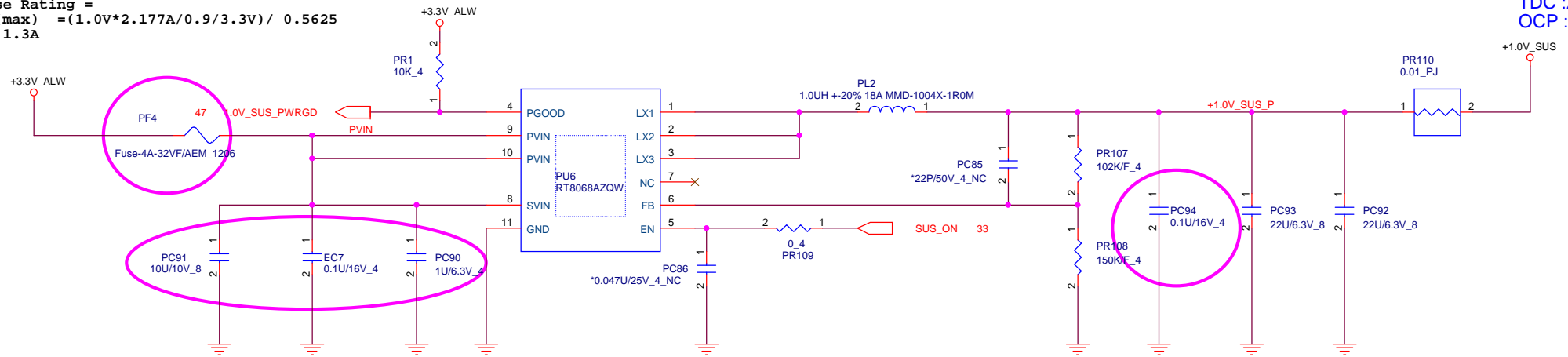
Size	Document Number	Rev
	DDR3L (TPS51216RUKR)	1A

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+1.0V_SUS
TDC : 2.177A
OCP : 4.8A

Fuse Rating =
 $IR(max) = (1.0V * 2.177A / 0.9 / 3.3V) / 0.5625$
 = 1.3A



PIN 7 : IC design isn't connected

WWW.AITECH1.RU

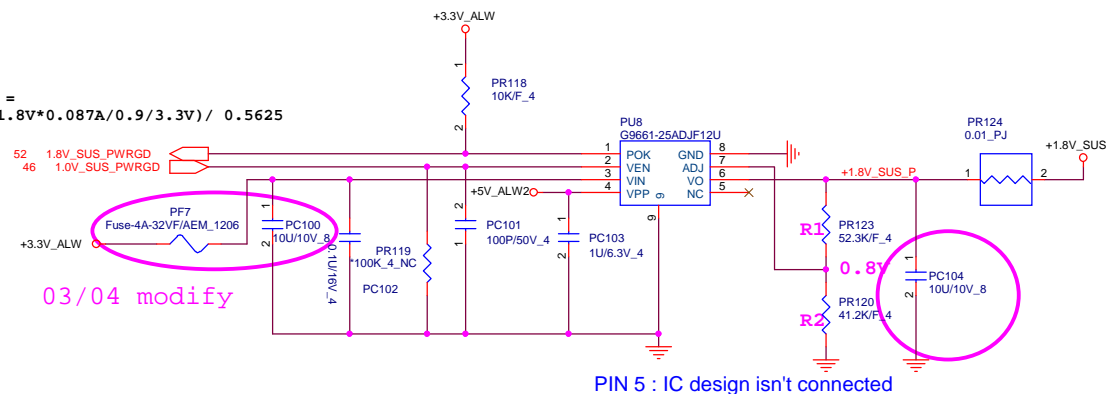


Quanta Computer Inc.

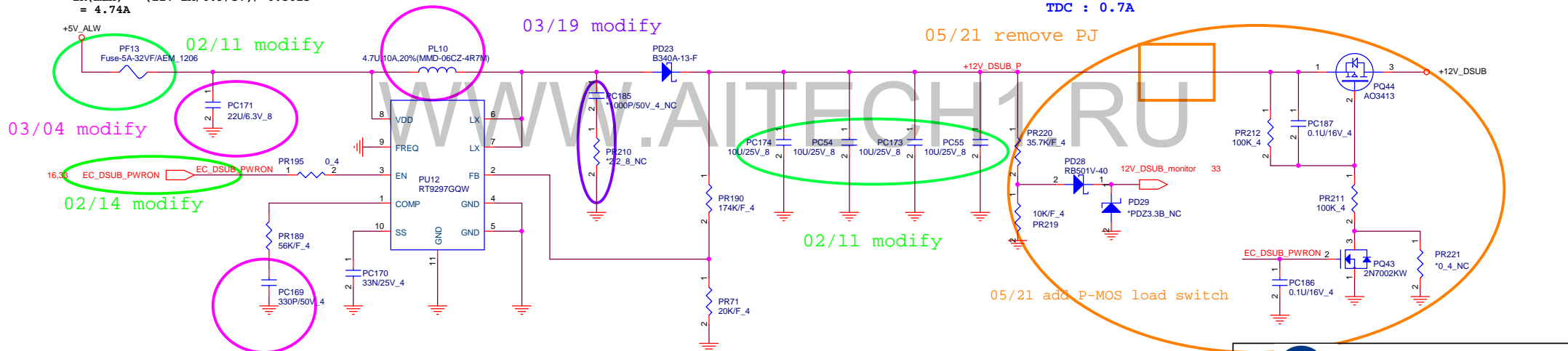
PROJECT :Mid-Range POS

Size	Document Number	Rev
	1.0V_SUS(RT8068AZQW)	1A
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$$\text{Fuse Rating} = \frac{\text{IR(max)}}{1.8V} = \frac{(1.8V \times 0.087A / 0.9 / 3.3V)}{0.5625} = 0.09A$$



$$\text{Fuse Rating} = \frac{\text{IR(max)}}{12V} = \frac{(12V \times 1A / 0.9 / 5V)}{0.5625} = 4.74A$$



Quanta Computer Inc.

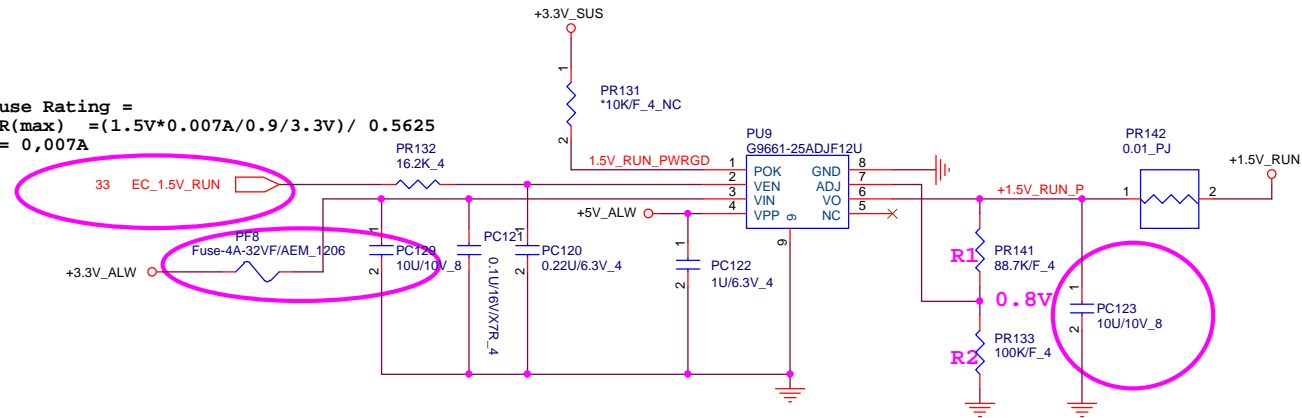
PROJECT : Mid-Range POS

Size	Document Number	Rev
	1.8V_SUS(G9661)/12V(RT9297G)	1A
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$$\text{Fuse Rating} =$$

$$\text{IR(max)} = (1.5\text{V} \cdot 0.007\text{A} / 0.9 / 3.3\text{V}) / 0.5625$$

$$= 0.007\text{A}$$



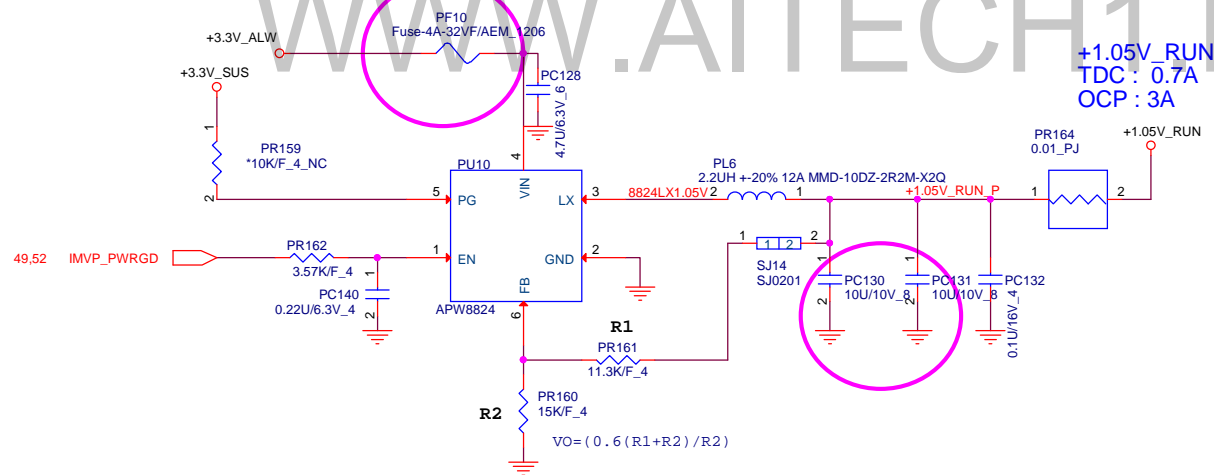
+1.5V_RUN
TDC : 0.007A
OCP : 3A

PIN 5 : IC design isn't connected

$$\text{Fuse Rating} =$$

$$\text{IR(max)} = (1.05\text{V} \cdot 0.7\text{A} / 0.9 / 3.3\text{V}) / 0.5625$$

$$= 0.44\text{A}$$

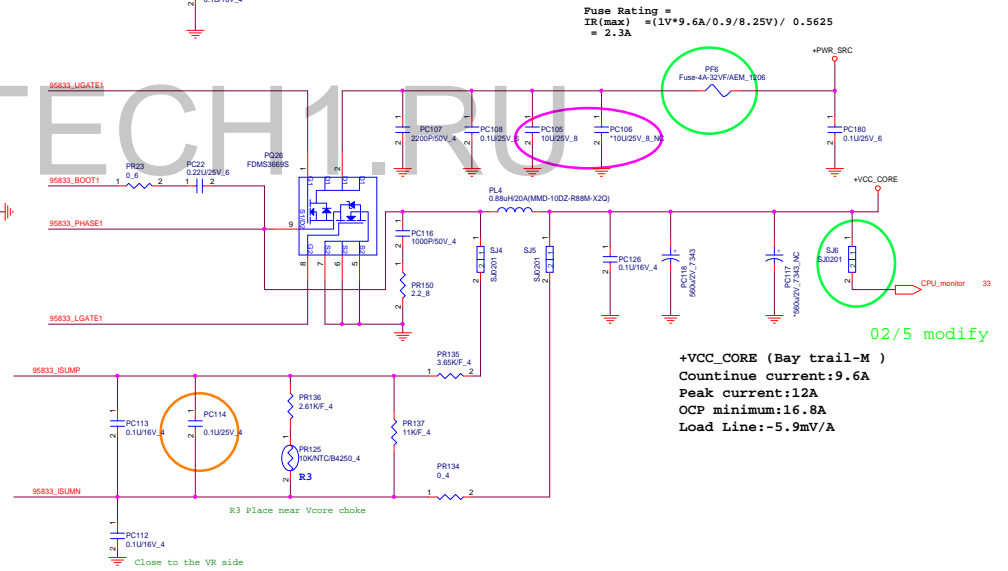
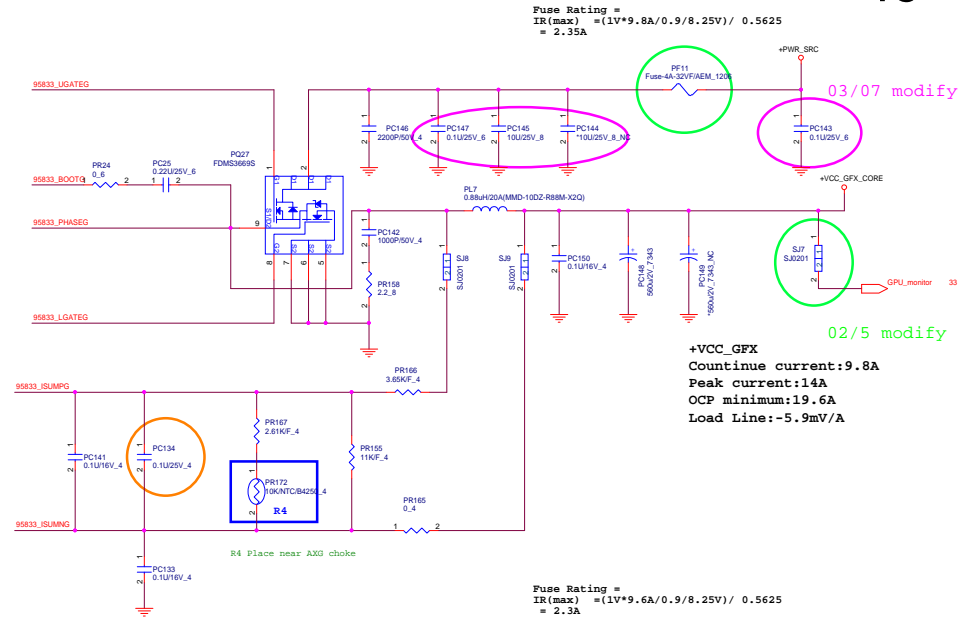
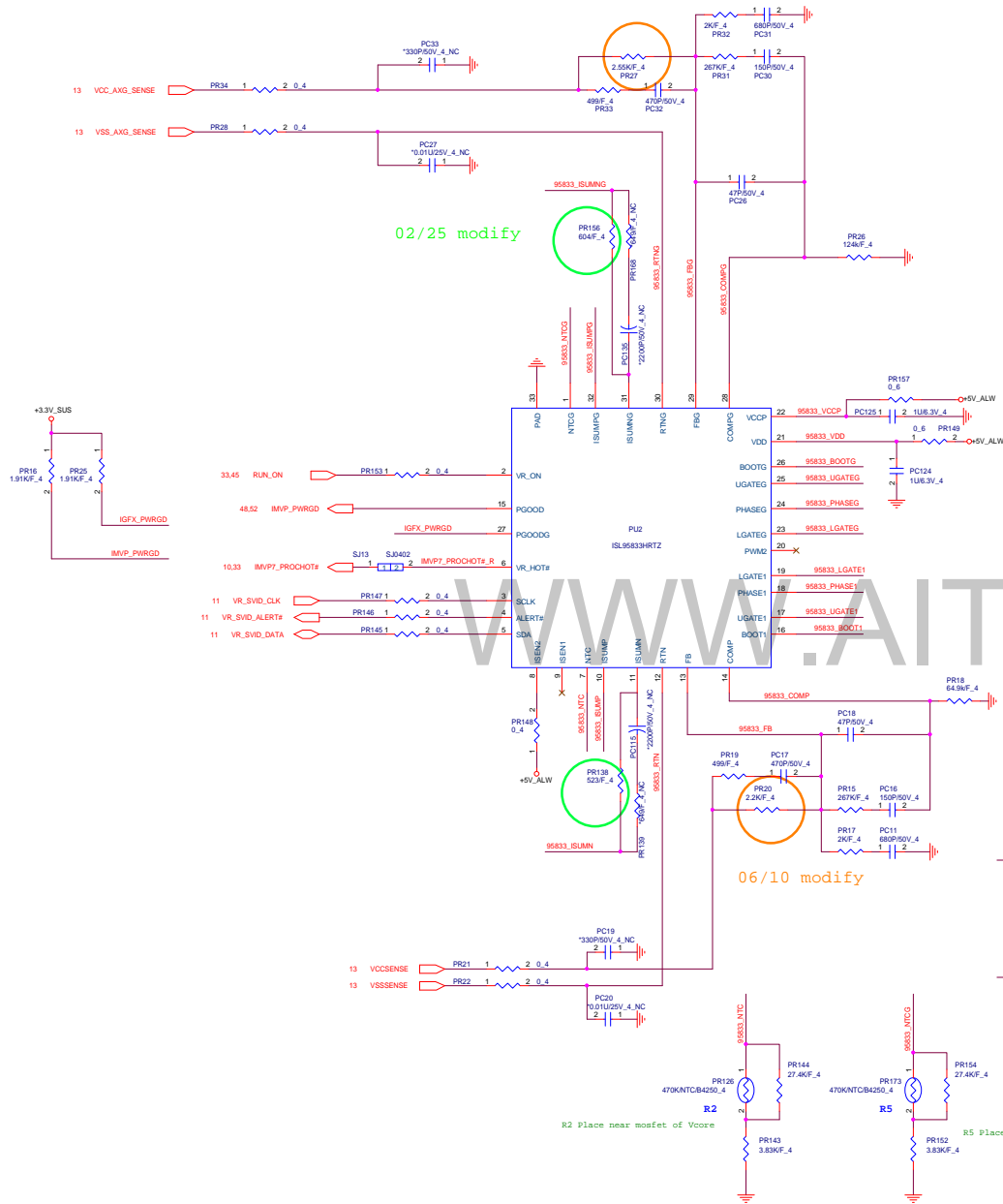


+1.05V_RUN
TDC : 0.7A
OCP : 3A

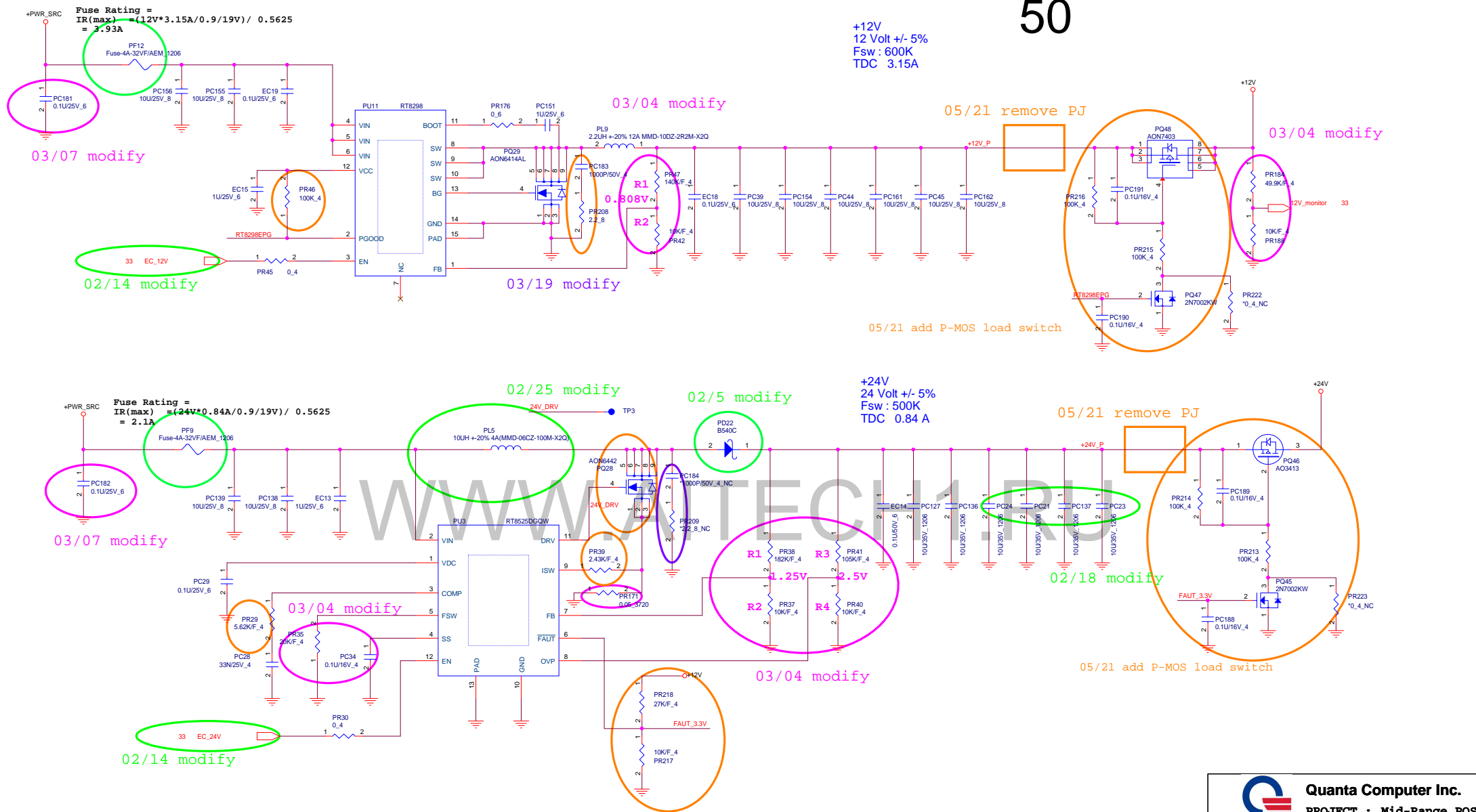


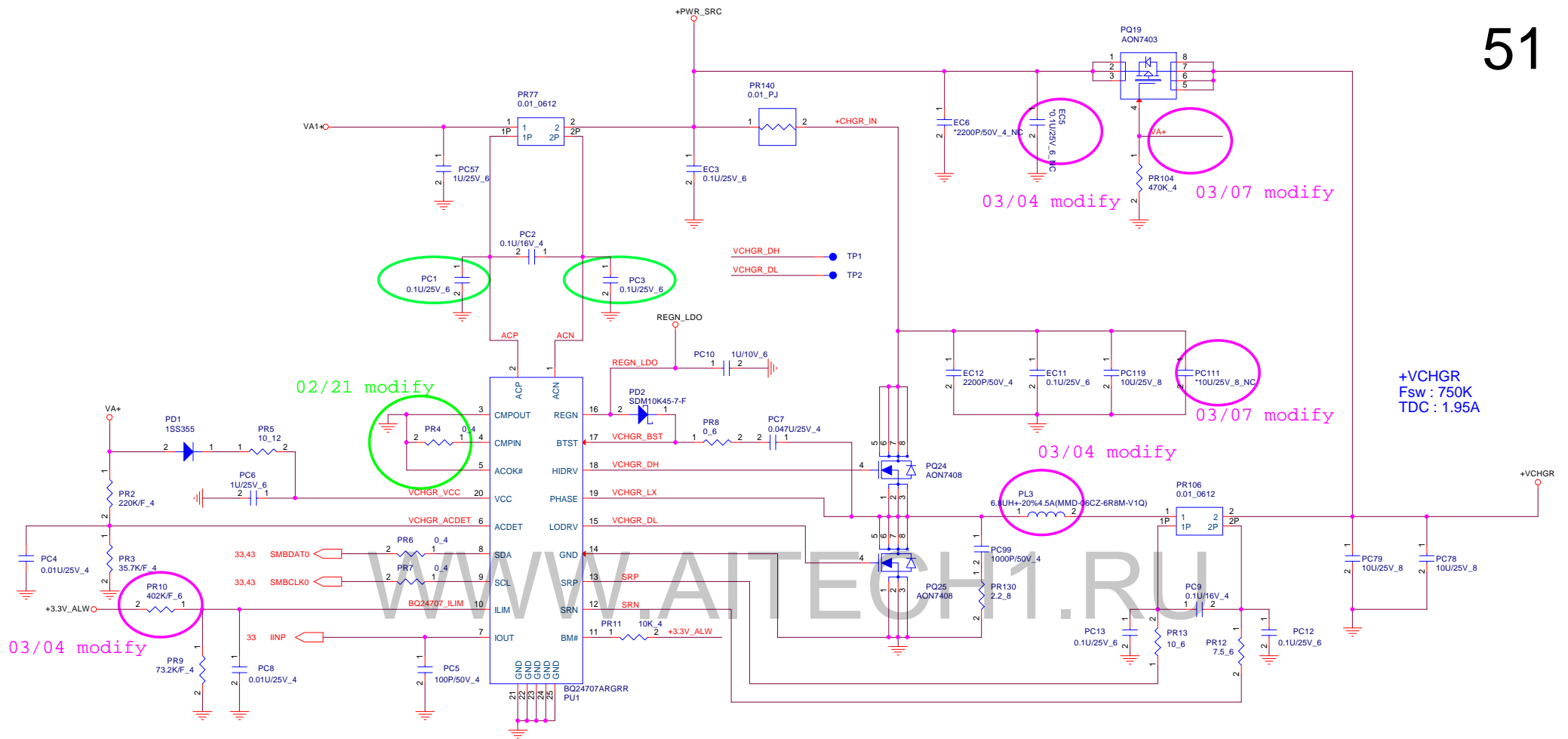
Quanta Computer Inc.
PROJECT : Mid-Range POS

Size	Document Number	Rev
	1.5V/1.05V(G9661/APW8824)	1A
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Adapter type : 90W
 Battery: 3S1P (8.25V ~ 12V)
 Charge Current Limit Set to 2.55A

