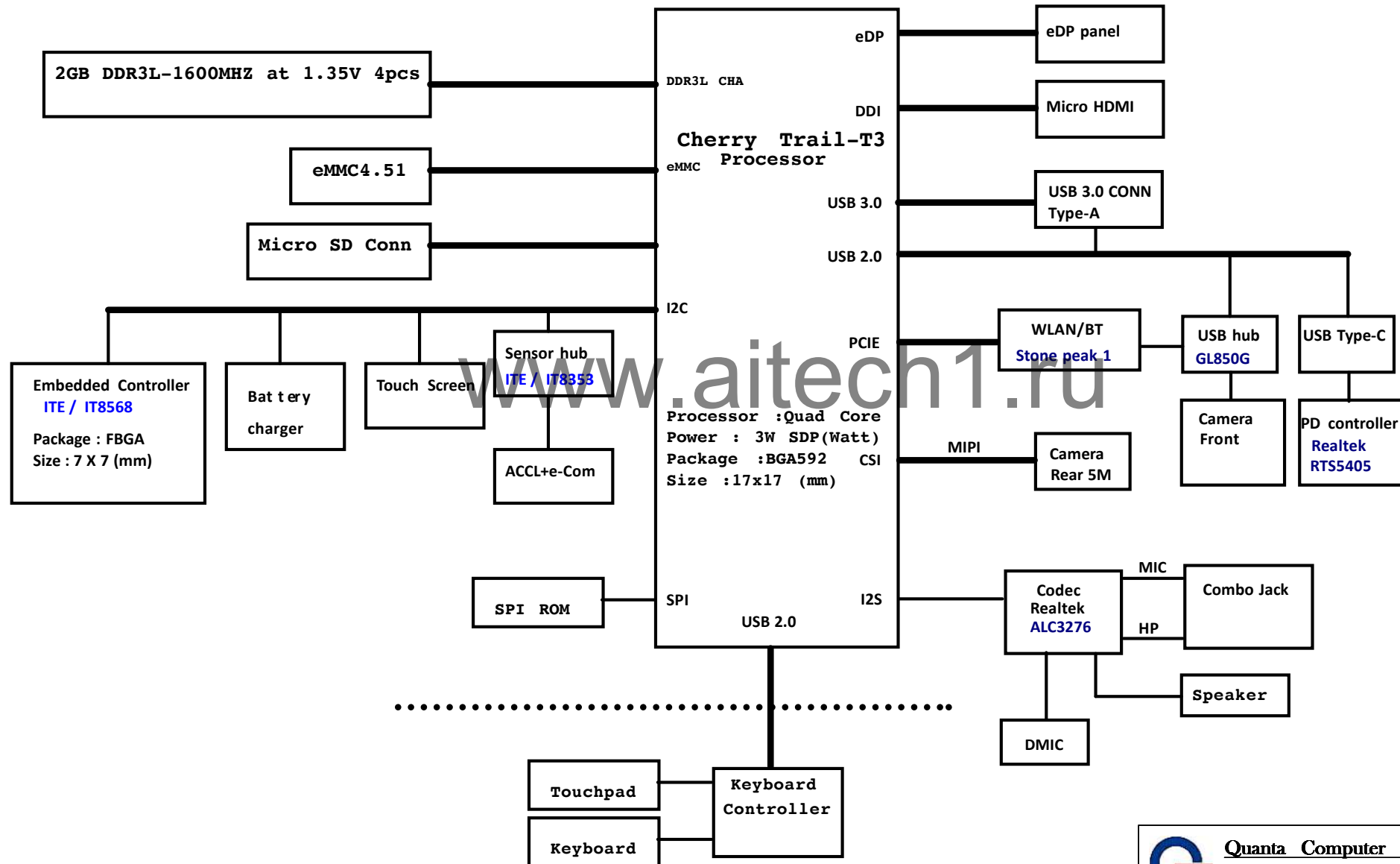


Sweet Cherry Trail T3 Block Diagram

01



3.4 Cherry Trail Power Map

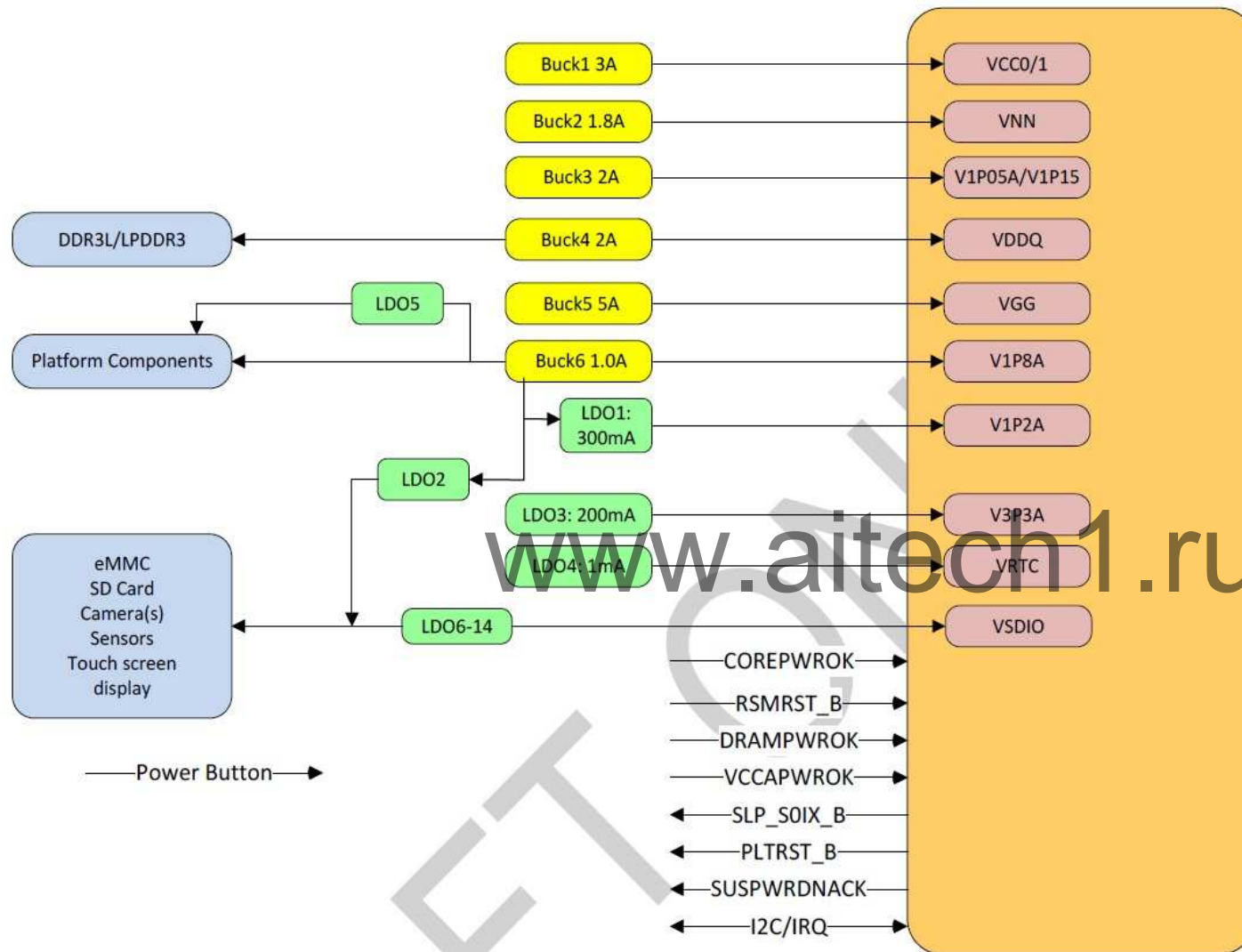
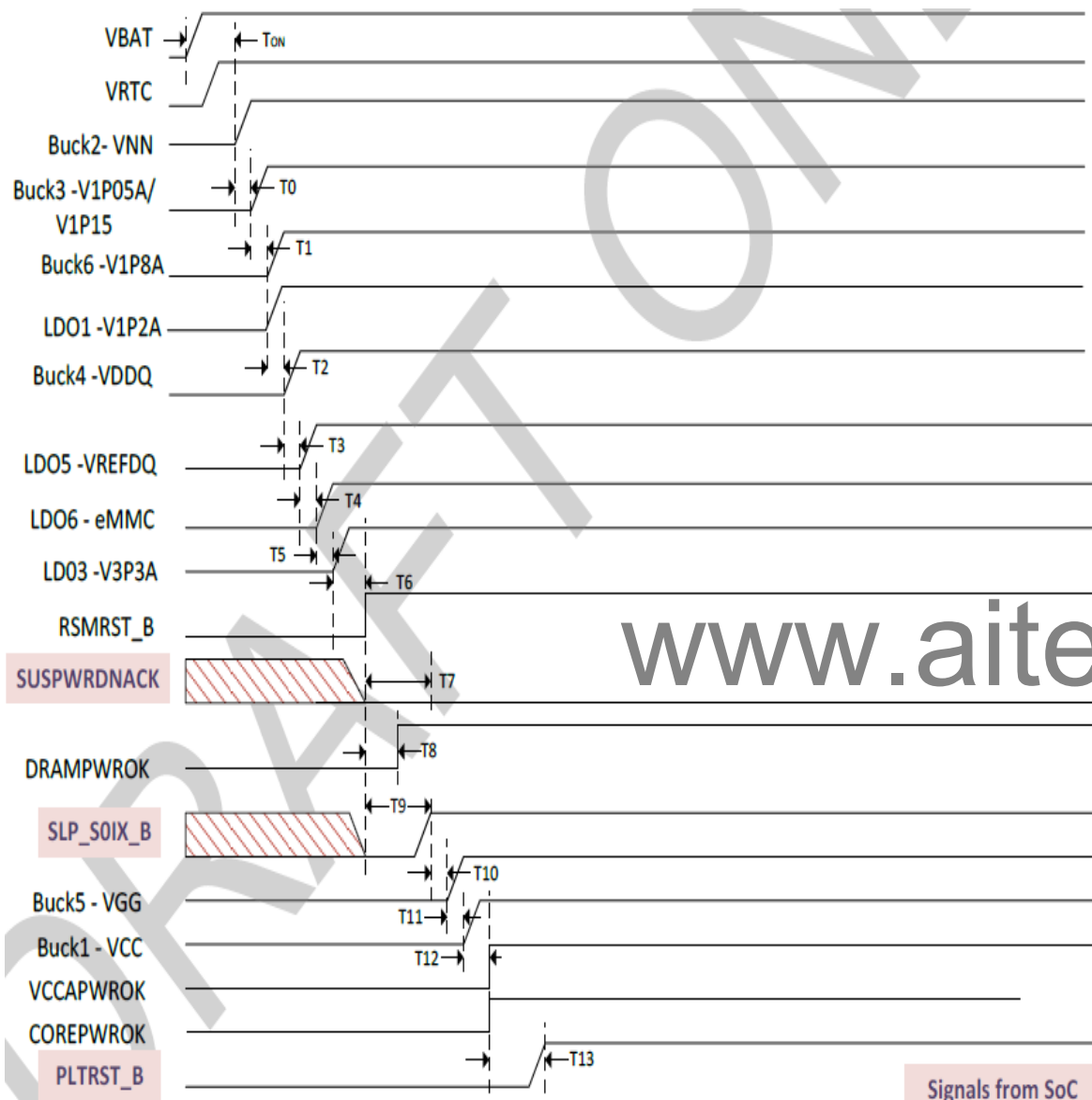


Figure 3-2: Cherry Trail Power Map



Parameter	Description	Min	Typ	Max	Units
T_{ON}	VBAT_PUP to BUCK2 Turn-On Delay		110		ms
T0	BUCK2 to BUCK3 turn on delay (BUCK2 to BUCK3 turn on delay should follow the standard delay (T0), but have an option to support no delay (to be compliant with CHT A0))		300		us
T1	BUCK3 Rail to Subsequent BUCK6 and LDO1 Rail Turn-On Delay		2		ms
T2	BUCK6 and LDO1 Rail to Subsequent BUCK4 Rail Turn-On Delay		2		ms
T3	LDO1 Rail to Subsequent LDO5 Rail Turn-On Delay		2		ms
T4	LDO5 Rail to Subsequent LDO6 Rail Turn-On Delay		2		ms
T5	LDO6 Rail to Subsequent LDO3 Rail Turn-On Delay		2		ms
T6	LDO3 Turn-On Delay to RSMRSTB de-assertion		2		ms
T7	SUSPWRDNACK de-assertion (LOW) to RSMRSTB de-assertion	0			us
T8	RSMRSTB de-assertion to DRAMPWROK assertion	0		100	us
T9	RSMRSTB de-assertion to SLP_S0IXB de-assertion	20			us
T10	SLP_S0IXB de-assertion to first subsequent voltage rail (BUCK5) start to turn-on delay	0	24	100	us
T11	BUCK5 Rail to Subsequent BUCK1 Rail Turn-On Delay		2		ms
T12	BUCK1 Rail Turn-On Delay to VCCAPWROK and COREPWROK assertion		2		ms
T13	COREPWROK assertion to PLTRSTB de-assertion	60			ms

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Size
B

Document Number

POWER SEQUENCE

Rev.
1A

Date:

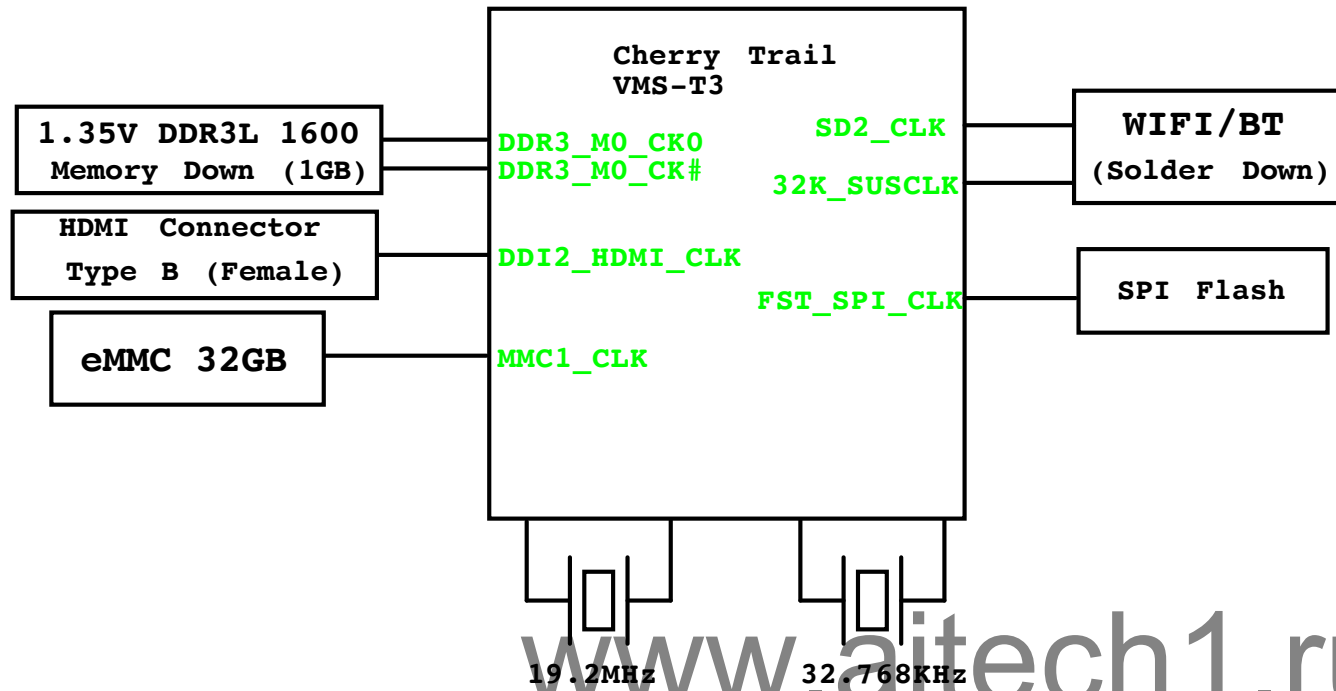
Wednesday, April 27, 2016

Sheet :

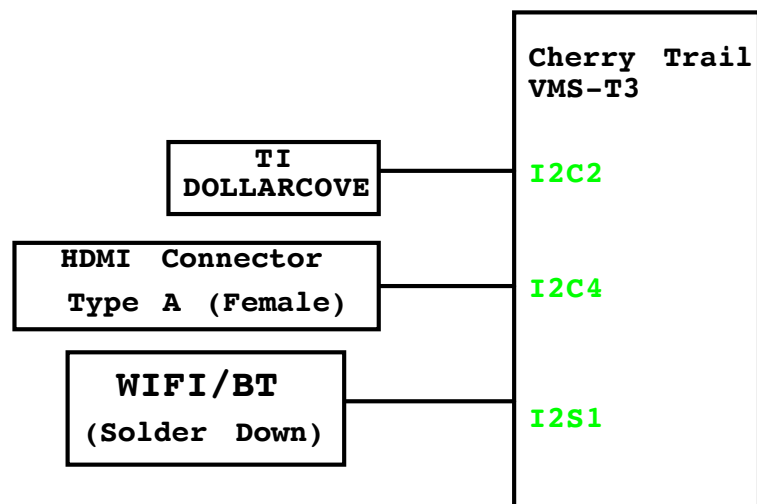
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CLOCK MAP

04



I2C MAP

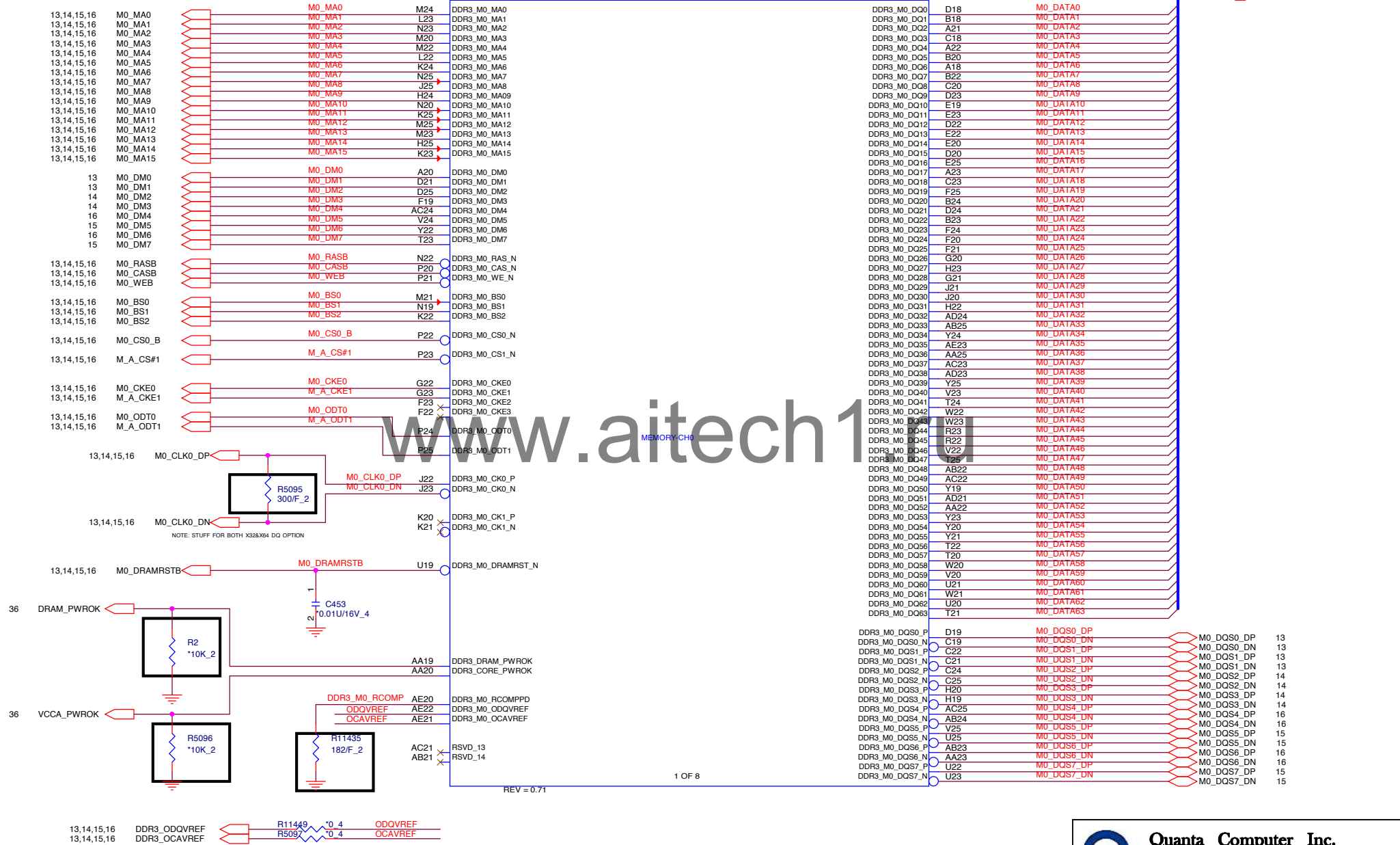


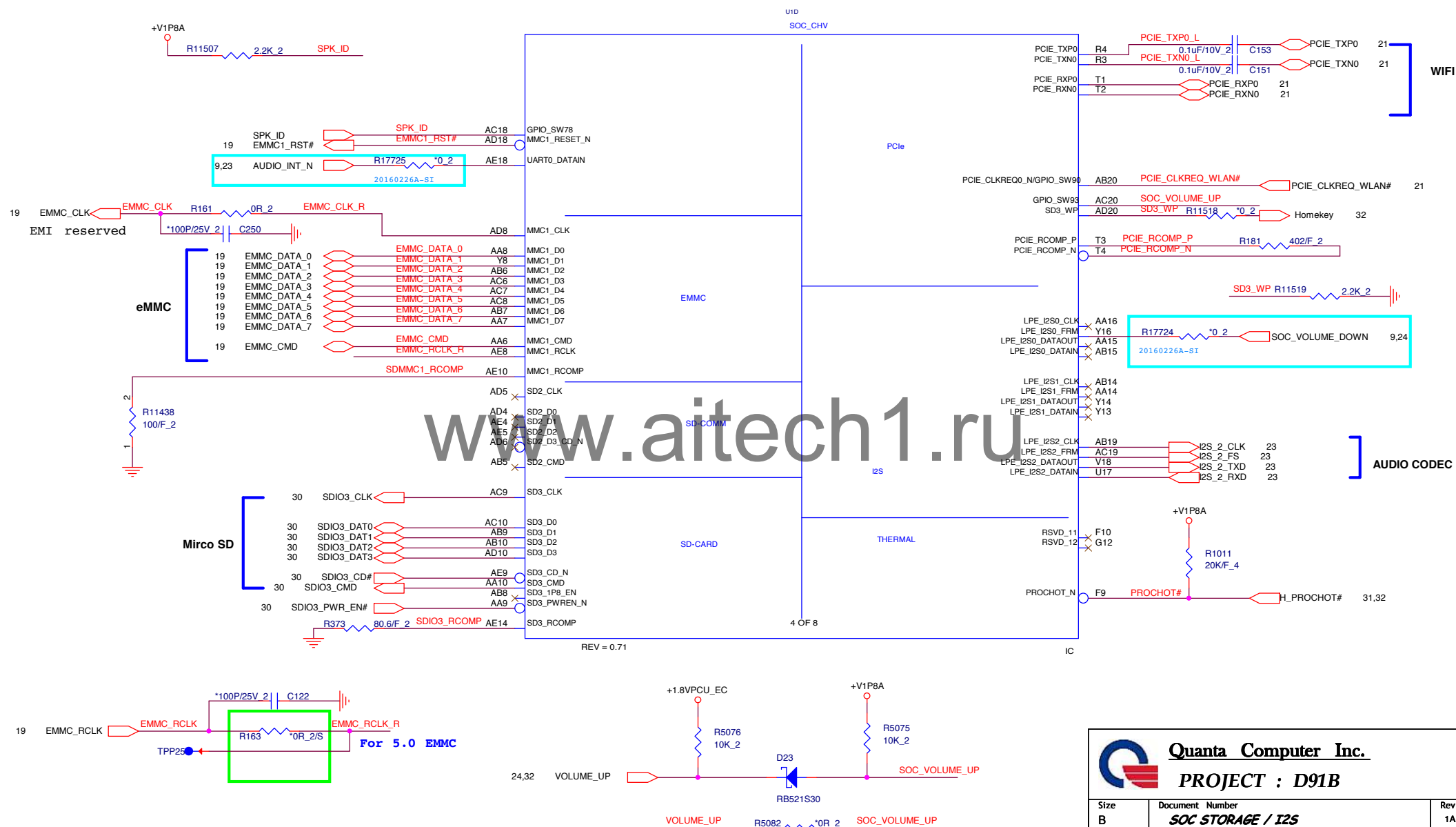
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Custom	Clock Map	1A
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SOC:MEMORY

U1A
SOC_CHV



Pin Name	Purpose	Polarity	Internal PU/PD	
GPIO_CAMERAB08	ICLK Xtal OSC Bypass	0 = No Bypass 1 = Bypass	PD	 R144 ~~~~~*10K 2 GP_CAM8
GPIO_CAMERAB09	CCU SUS RO Bypass	0 = No Bypass 1 = Bypass	PD	 R147 ~~~~~*10K 2 CAM_LED_EN
GPIO_CAMERAB11	RTC OSC Bypass	0 = No Bypass 1 = Bypass	PD	 R128 ~~~~~*10K 2 GP_CAM11



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Document Number
DISPLAY / CAMERA


Rev.	1A
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Date: Wednesday, April 27, 2016

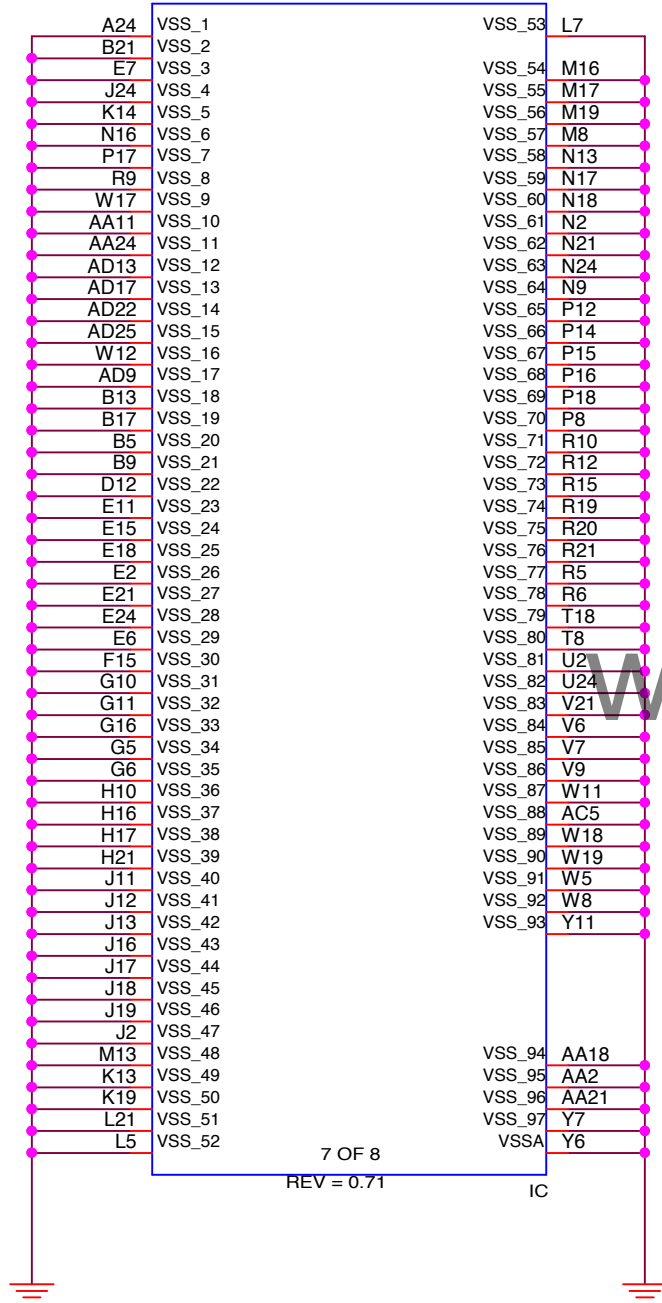
Sheet : 7 of 41



The schematic diagram shows the power supply for the VCCRTC_1 pin of the MMBT3904-1 transistor (Q44). The circuit is powered by a +5VPCU source. A network of resistors (R564, R566, R565) and a capacitor (2.2K/F_2) is connected to the VCCRTC_1 pin. The transistor's emitter is connected to VCCRTC_3, and its collector is connected to the VDD_V3P3A_1 pin of the BAT_CON module. The BAT_CON module also has other pins connected to CN5, DFHD02M, and 50281-002.

 <u>Quanta Computer Inc.</u> PROJECT : D91B		
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U1G
SOC_CHV

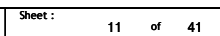
BALL	C16	F16	AA13	D16	E16
GPIO	N6	N2	SE79	N8	N4
PU PD NET	R11537 R11538	R11516 R11517	R11503 R11504	R11500 R11502	R11499 R11501
	MEM_ID1	MEM_ID0	BOARD_ID3	BOARD_ID1	BOARD_ID0
DDR3L-2GB Samsung (TH) K4B4G1646E-BYK0	0	0	0	0	0
DDR3L-2GB Hynix (TG) H5TC4G63CFR-PBA	0	0	0	0	1
DDR3L-4GB Hynix (TG) H5TC8G63CMR-PBA	0	0	0	1	0
DDR3L-4GB MT41K256M16TW-107:P	0	0	0	1	1
DDR3L-2GB Micron (TF) MT41K256M16TW-107:P	0	0	1	0	0
reseve reseve	0	0	1	0	1

**Quanta Computer Inc.****PROJECT : D91B**

Size A	Document Number SOC GND	Rev. 1A
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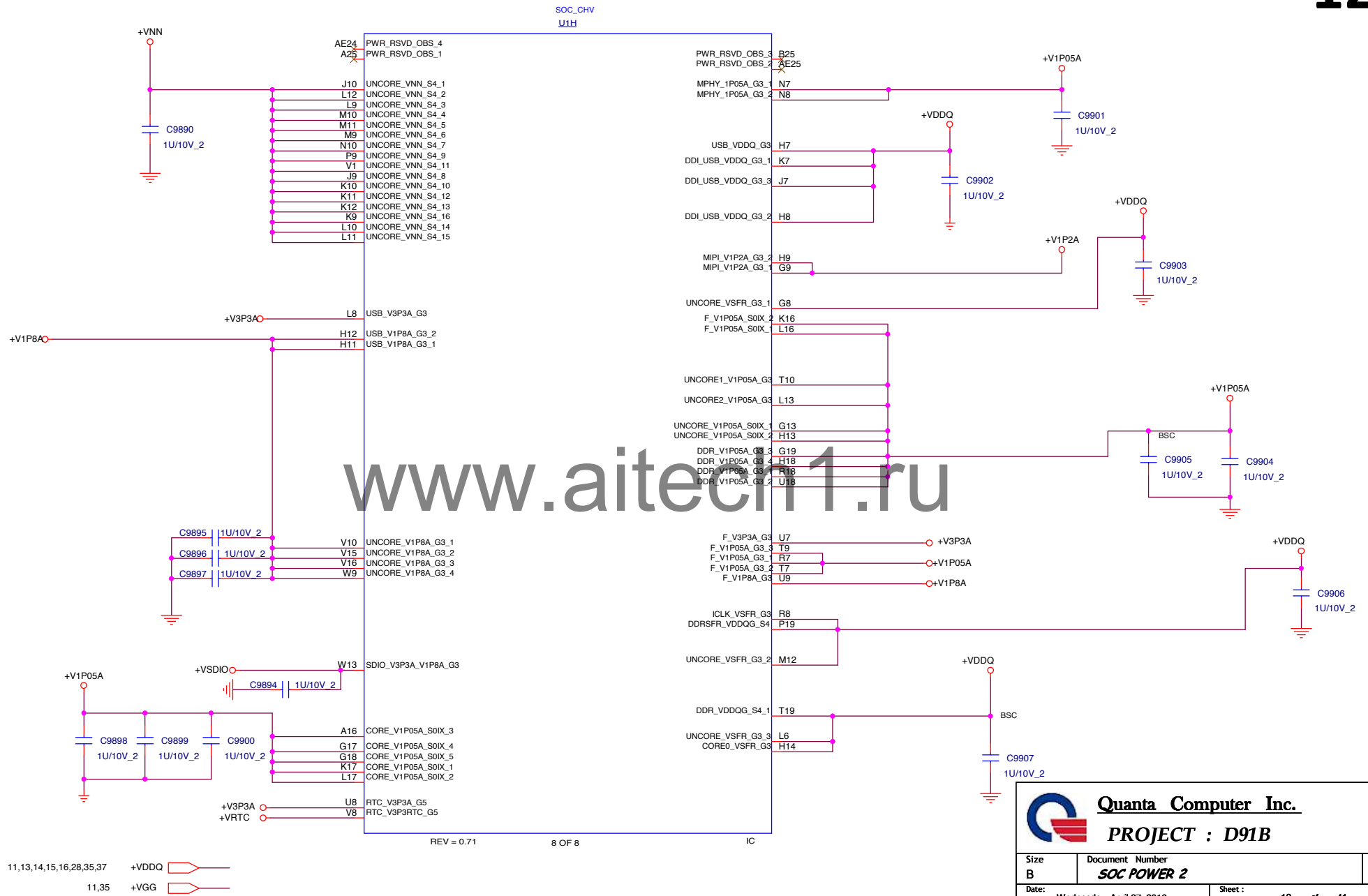



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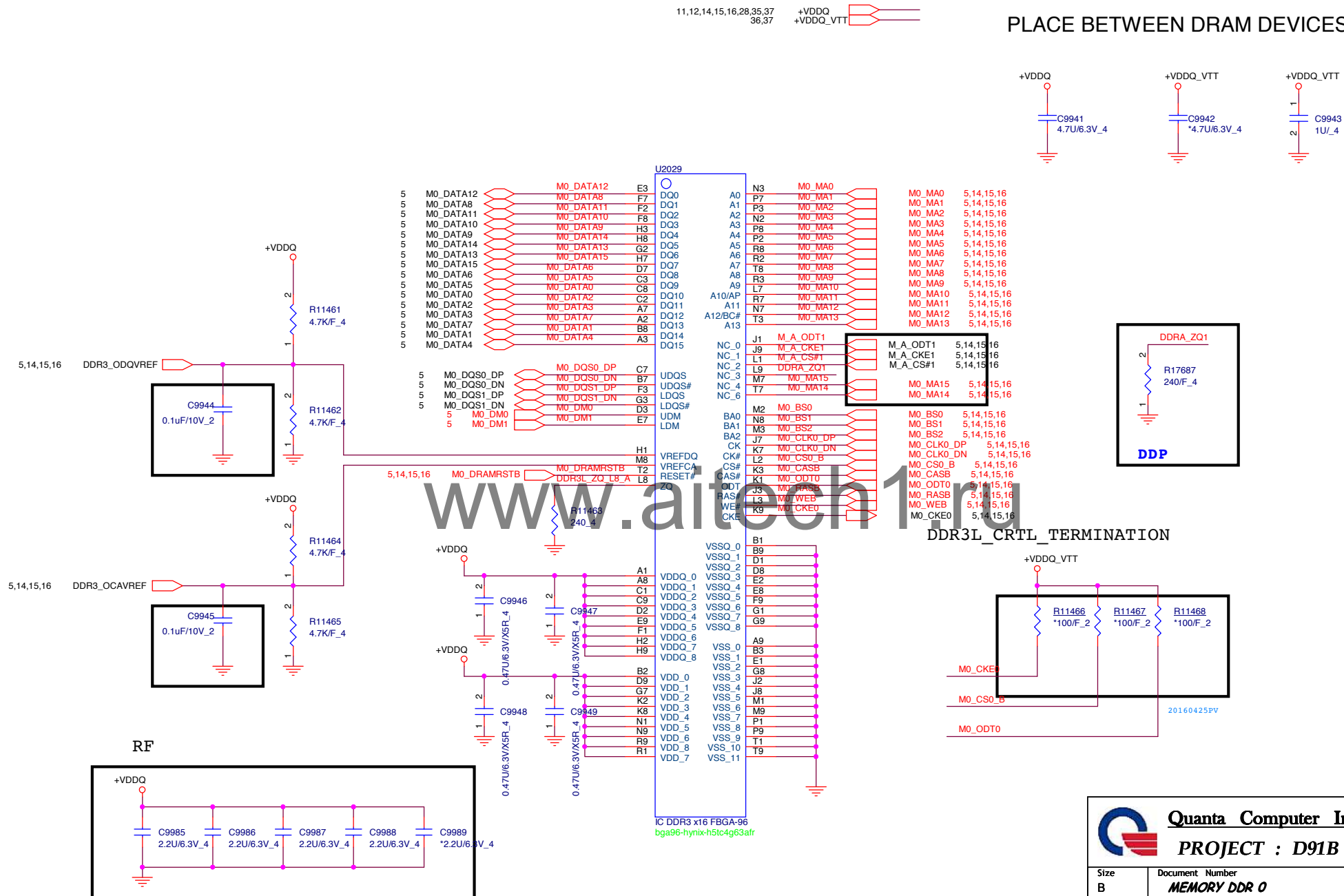


SOC : POWER 2

12



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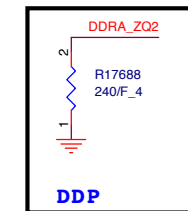
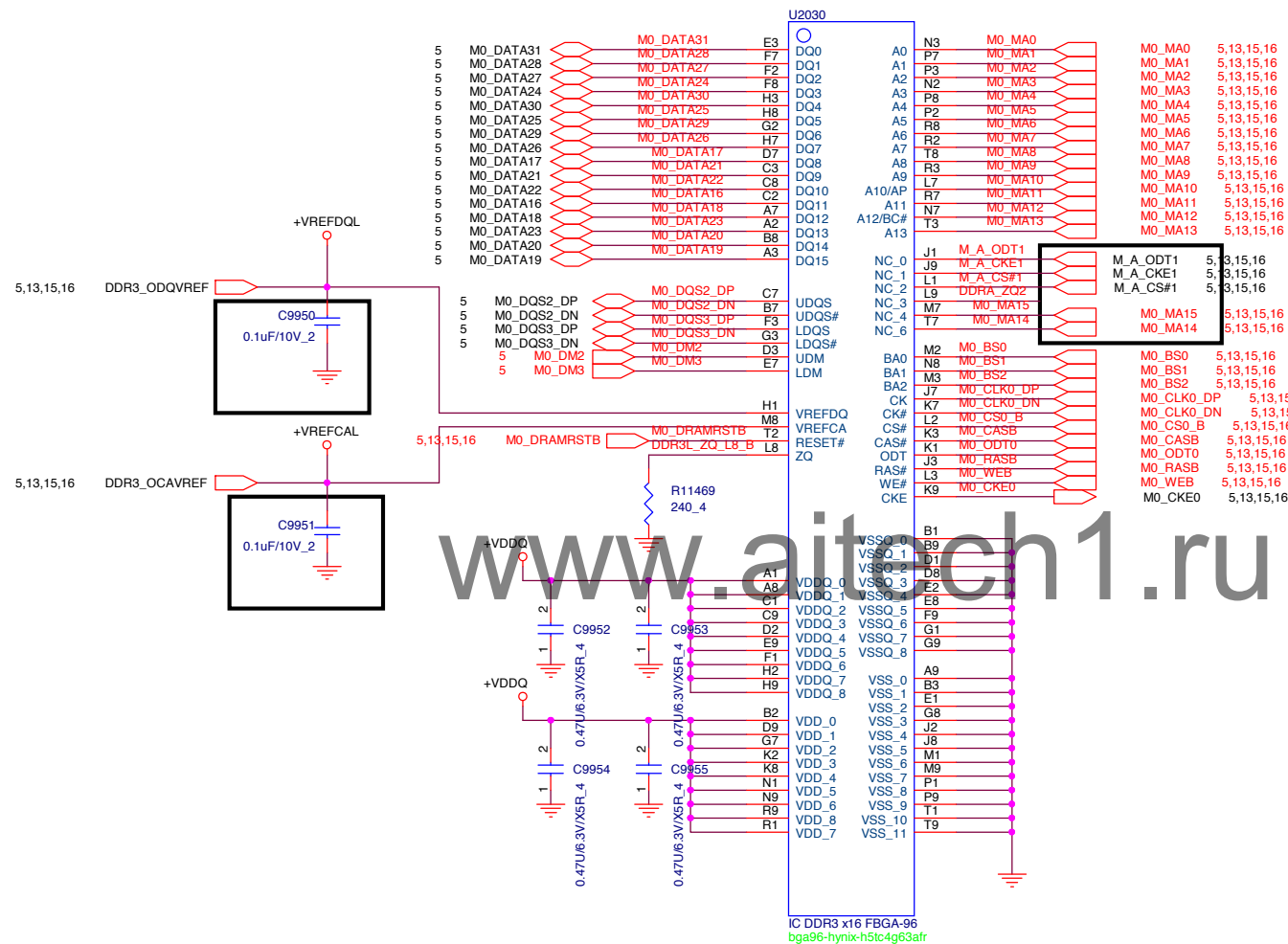
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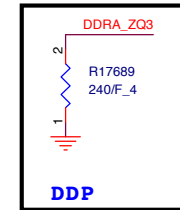
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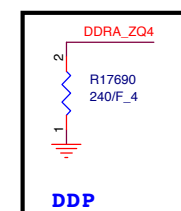
Rev.
1A

Date: **Wednesday, April 27, 2016**

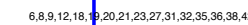
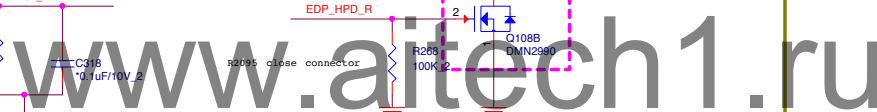
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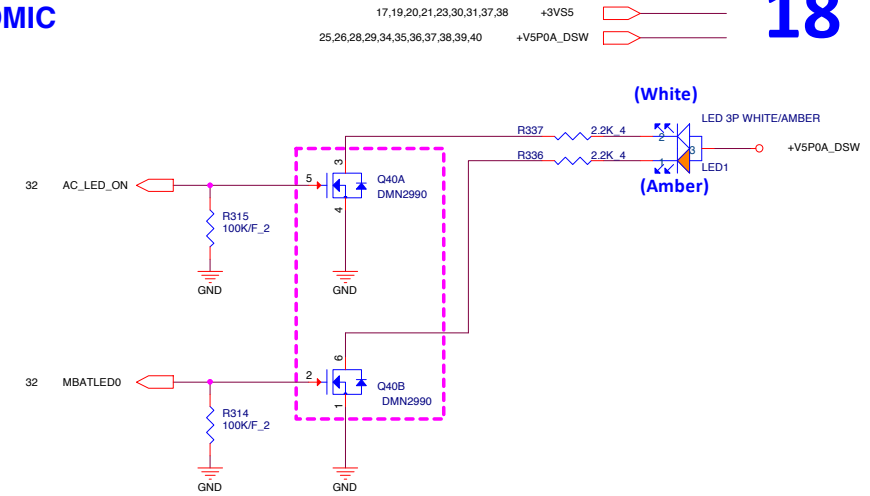
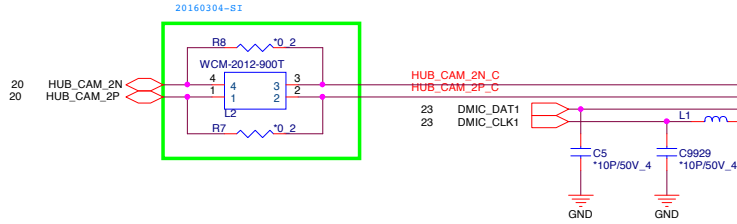


ADXL345 I2C interface schematic. The ADXL345 chip is connected to an external I2C bus. The SDA pin is connected to the SDA pin of the I2C bus, and the SCL pin is connected to the SCL pin of the I2C bus. The chip is also connected to a 3.3V supply and ground. The I2C bus is connected to a microcontroller. The microcontroller's I2C pins are connected to the I2C pins of the ADXL345 chip. The microcontroller's SDA pin is connected to the SDA pin of the ADXL345 chip, and the microcontroller's SCL pin is connected to the SCL pin of the ADXL345 chip. The microcontroller's 3.3V pin is connected to the 3.3V supply, and the microcontroller's GND pin is connected to ground. The ADXL345 chip is also connected to a 3.3V supply and ground.



Suyin 2.0M Webcam / DMIC

18



Front USB HD RGBIR camera only for 12".

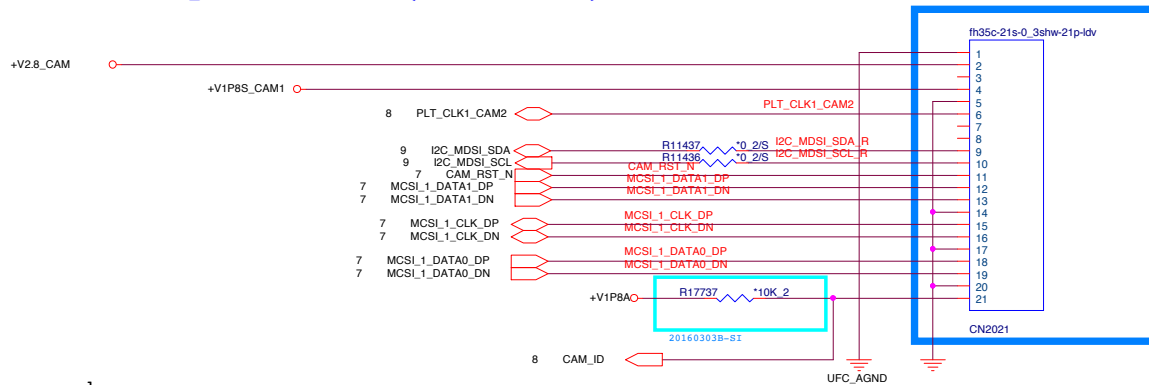


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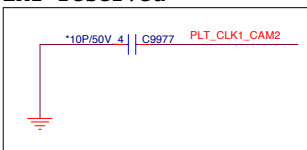
pin define need check


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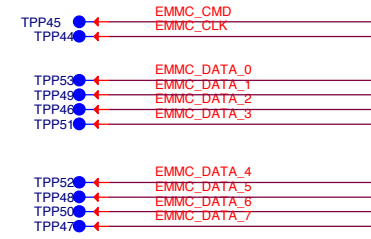
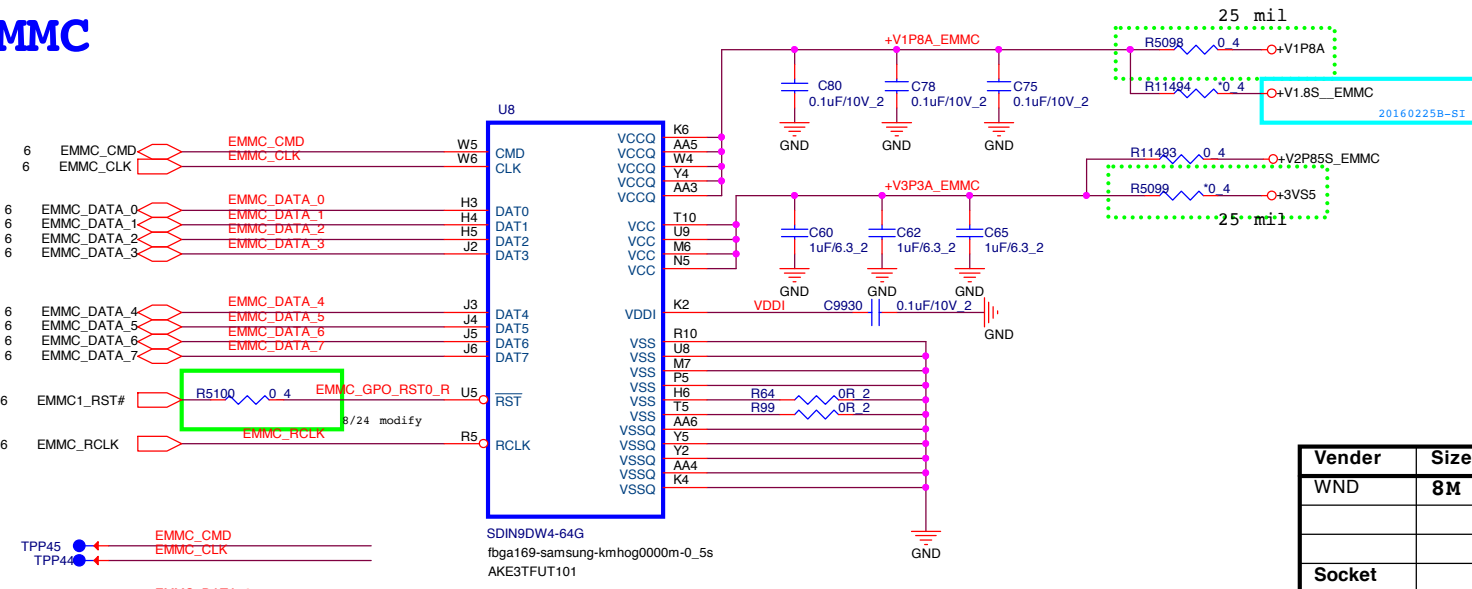
Chicony Camera (Rear 5M)



EMI reserved

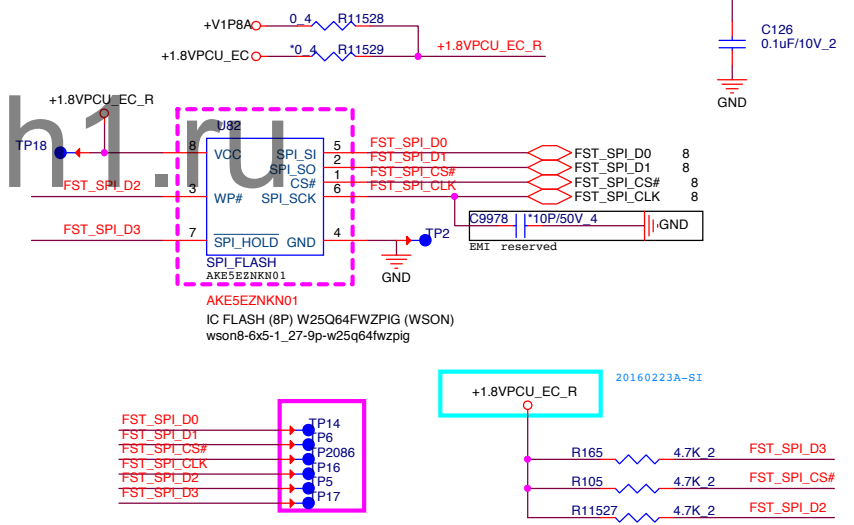


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footprint : BGA 169 BGA 153
BGA 169 PIN :14 mmX18 mm
BGA 169 PIN :12 mmX16 mm
BGA 153 PIN :11.5 mmX13 mm

Vender	Size	P/N
WND	8M	AKE5EZKN01
Socket		DFHS08FS046




INAND (eMMC 5.0)

eMMC 4.51

QBCON	TOPB/S	Vender PN	SIZE	
AKE5SZ0T507	AKE5SZ0T506	KLMBG4GEAC-B031	32G	Samsung
AKE3TZPT516	AKE3TZPT515	KLMCG8GEAC-B031	64G	Samsung
AKE3SZ-TW02	AKE3SZ-TW01	H26M64103EMR	32G	Hynix
AKE3TG-TW02	AKE3TG-TW01	H26M78103CCR	64G	Hynix
AKE3UFPT103	AKE3UFPT102	SDIN8CE4-128G	128G	Sandisk
AKE3SFUT001	AKE3SFUT000	SDIN9DW4-32G	32G	Sandisk
AKE3TFUT102	AKE3TFUT101	SDIN9DW4-64G	64G	Sandisk

17,18,20,21,23,30,31,37,38
6,8,9,12,17,18,20,21,23,27,31,32,35,36,38,42

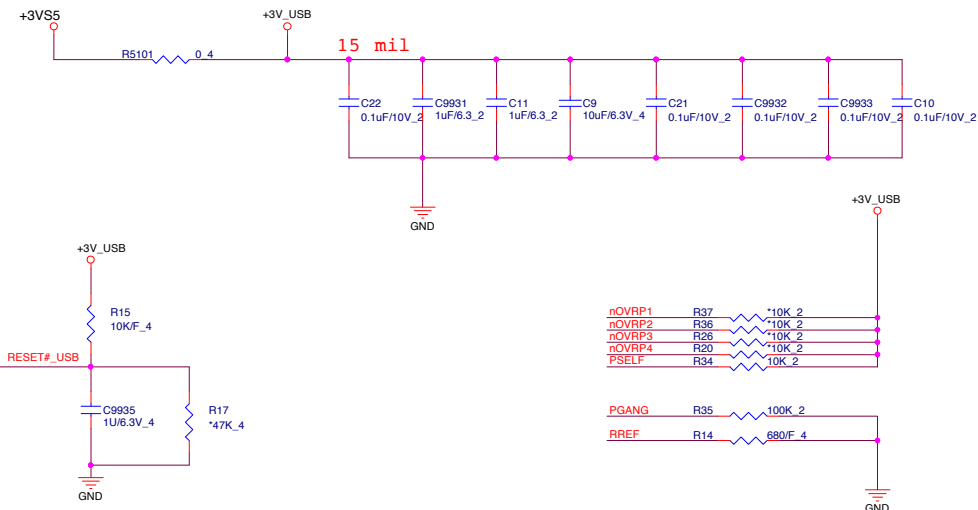
+3VS5
+V1P8A



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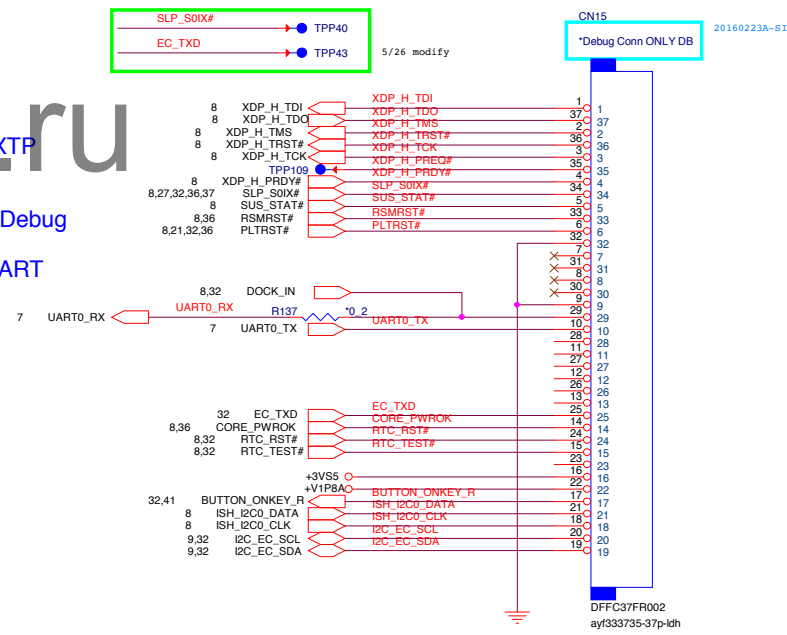
Size	Document Number	Rev.
Custom	eMMC/SPI ROM	1A
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20

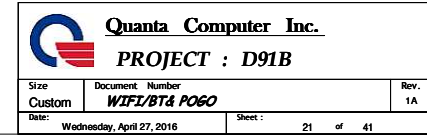


Intel XTP


SoC UART Debug

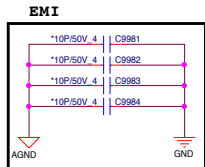
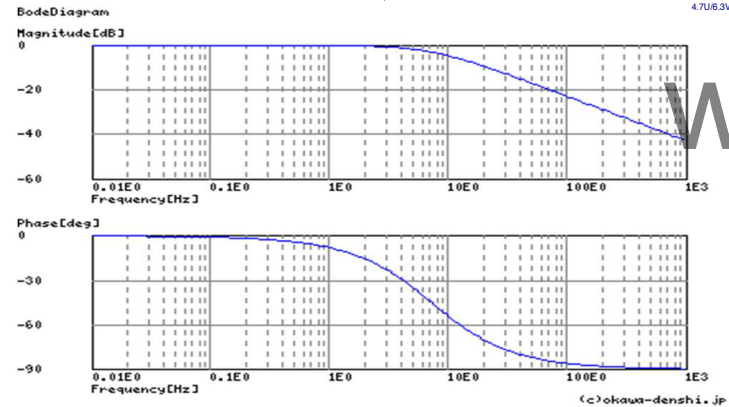


+3VS5
+V1P8A

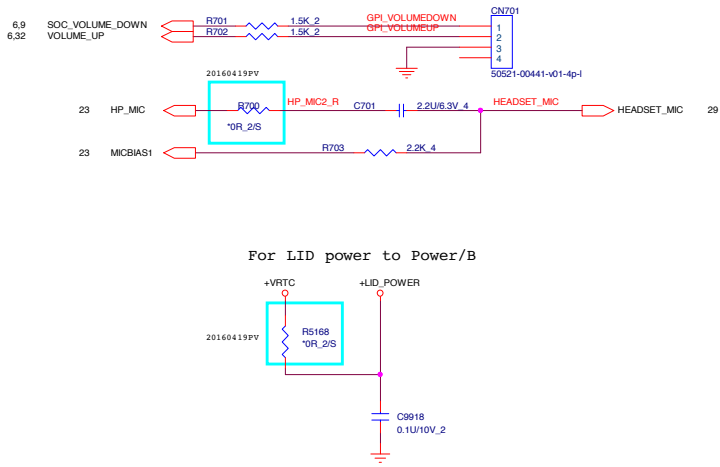


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 Quanta Computer Inc. PROJECT : D91B		
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Head Phone out AMPLIFIER

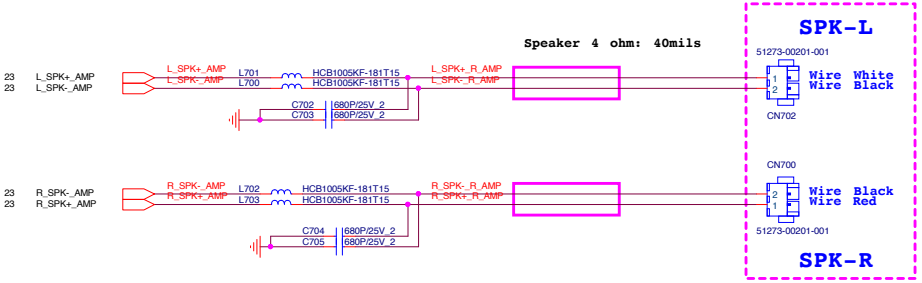


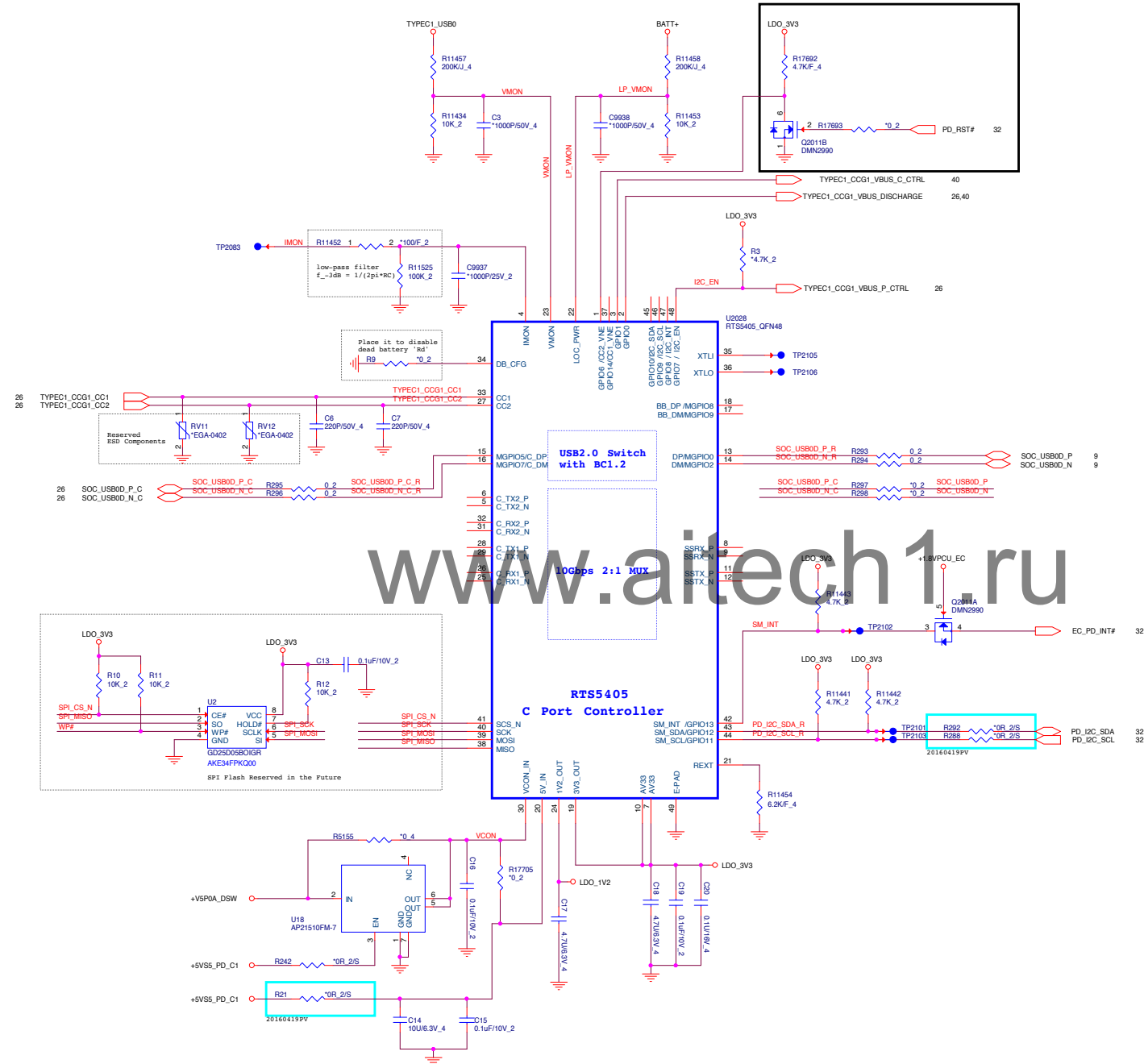
SPEAKER AUDIO AMPLIFIER

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C12 connects with H2 to SPK AMP. C10 keep TP.

TP2107	EC_Boot_Off	32,36
TP2108	I2C_CLK_AUDIO_EC	32
TP2109	I2C_DATA_AUDIO_EC	32





PD Interface Mapping

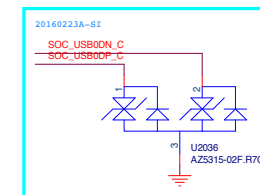
Pin Name	Power Supply Interface	Voltage Limit on this Pin
SP100	VBUS discharge control	3.6V
SP101	used to detect VBUS fault as over current or over voltage	3.6V
SP106	Reserved	5.5V
I2C_EN	VBUS on/off control. If port power supply is I2C PMIC, connect this to the enable pin.	5.5V
MDP109	VBUS voltage select bit1.	3.6V
MDP108	VBUS voltage select bit0.	3.6V
LOC_PWR	Connected to self-power source via resistor divider	1.3V
IMON	Connected to VBUS sensor CSA output. Pull down to GND if not used	1.3V

Note: GPIO output is 5V driving 5V power on reset. No need to connect pull-up/down resistors on these pins. If port power supply is I2C PMIC, connect this to the enable pin. If not, connect this to the enable pin.

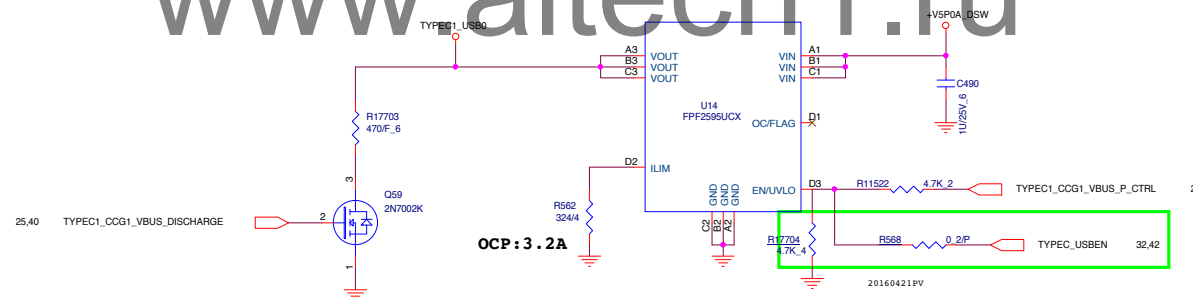


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C	PD RT55405	1A
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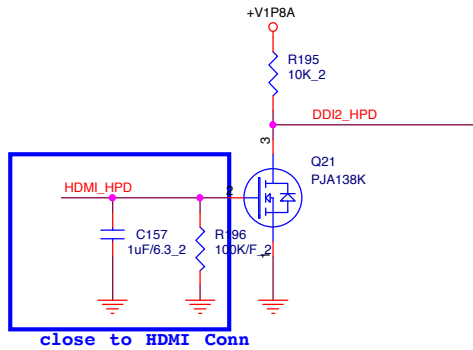


HDMI HOT PLUG

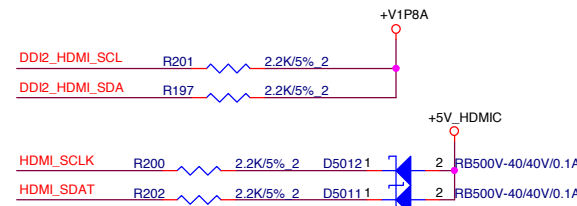
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7	DDI2_TX2_P	DDI2_TX2_P	C313	0.1uF/10V 2C_TX0_HDMI+
7	DDI2_TX1_N	DDI2_TX1_N	C312	0.1uF/10V 2C_TX1_HDMI-
7	DDI2_TX1_P	DDI2_TX1_P	C311	0.1uF/10V 2C_TX1_HDMI+
7	DDI2_TX0_N	DDI2_TX0_N	C310	0.1uF/10V 2C_TX2_HDMI-
7	DDI2_TX0_P	DDI2_TX0_P	C309	0.1uF/10V 2C_TX2_HDMI+
7	DDI2_TX3_N	DDI2_TX3_N	C317	0.1uF/10V 2C_TXC_HDMI-
7	DDI2_TX3_P	DDI2_TX3_P	C316	0.1uF/10V 2C_TXC_HDMI+

9	DDI2_HDMI_SCL	DDI2_HDMI_SCL	
9	DDI2_HDMI_SDA	DDI2_HDMI_SDA	
7	DDI2_HPD	DDI2_HPD	

HDMI HOT PLUG



I2C Pull up

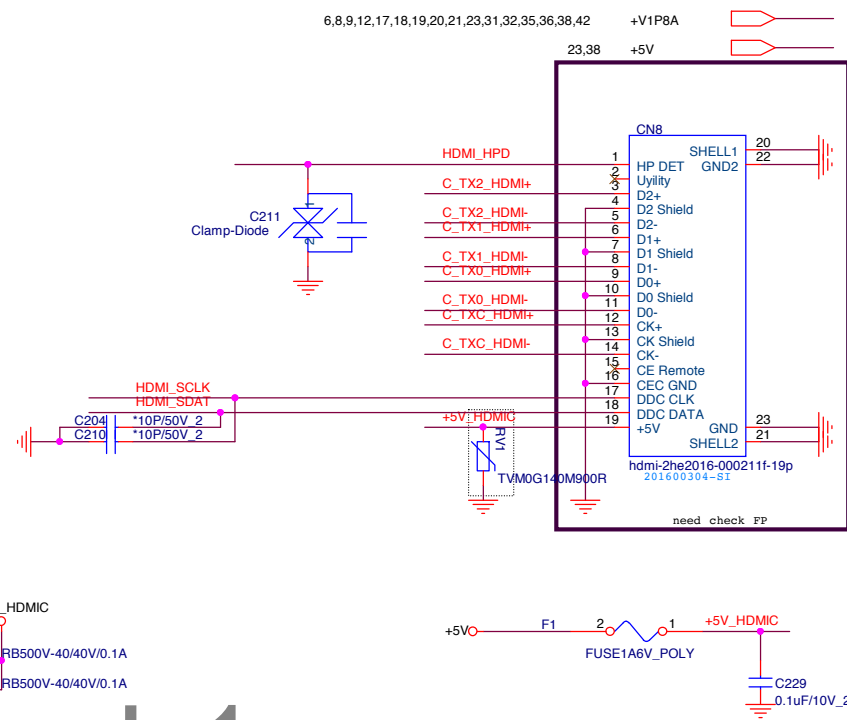


EMI Solut i on

C_TX2_HDMI+	R395	120/F 2	C_TX2_HDMI-
C_TX1_HDMI+	R400	120/F 2	C_TX1_HDMI-
C_TX0_HDMI+	R403	120/F 2	C_TX0_HDMI-
C_TXC_HDMI+	R409	120/F 2	C_TXC_HDMI-

10/21 modify

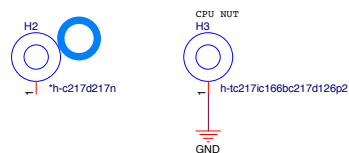
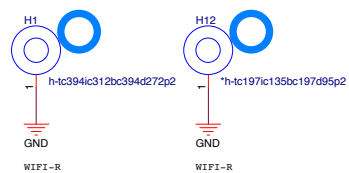
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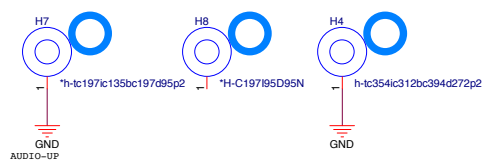
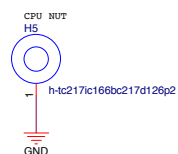
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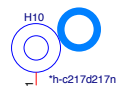
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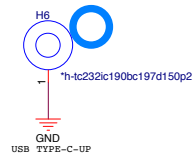
AUDIO-UP

USB3.0-LEFT

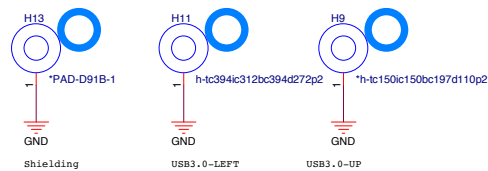
USB TYPE-C-UP



AUDIO-UP



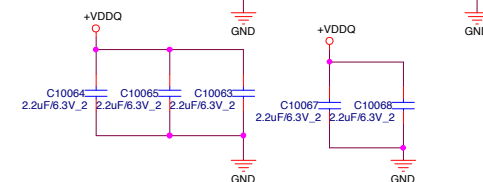
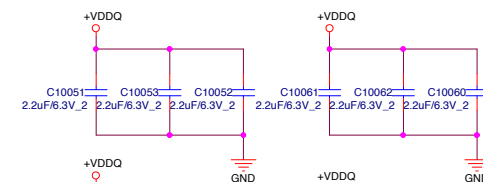
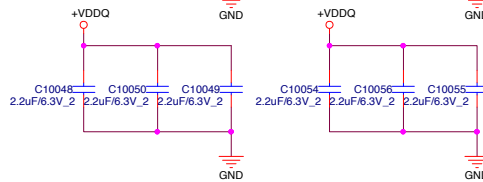
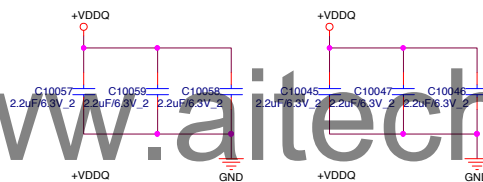
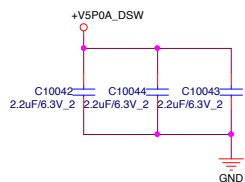
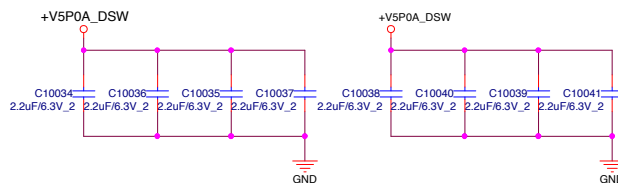
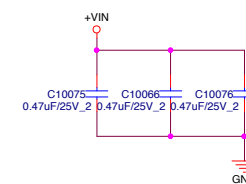
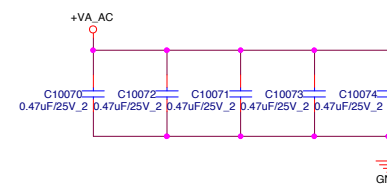
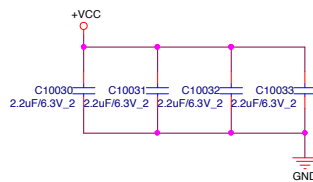
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Shielding

USB3.0-LEFT

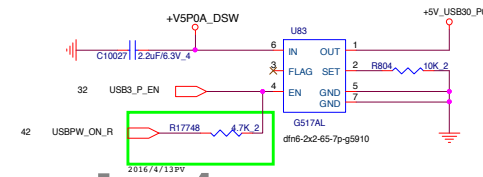
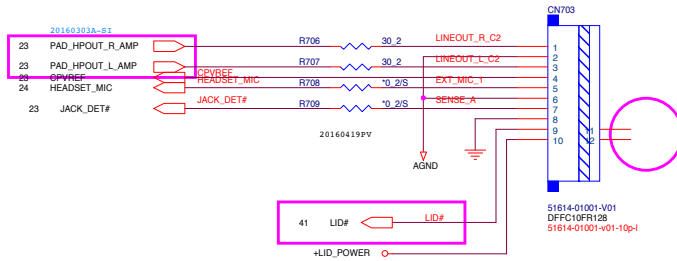
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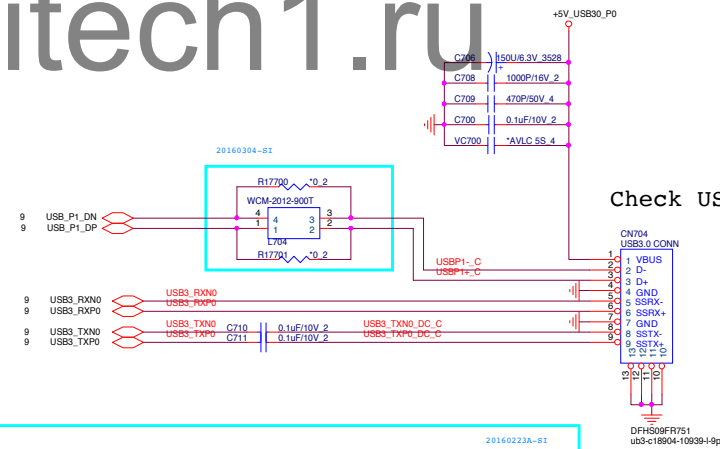
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		PROJECT : D91B	
Size Custom	Document Number HOLE	Rev. 1A	
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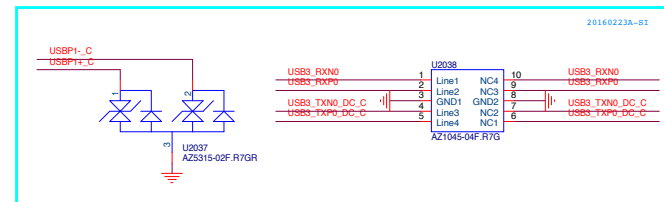
Check Audio/B CN



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Check USB3.0 Type-A CN



CHECK
DFHS09FR659
ub3-c190j8-90909-1-9p

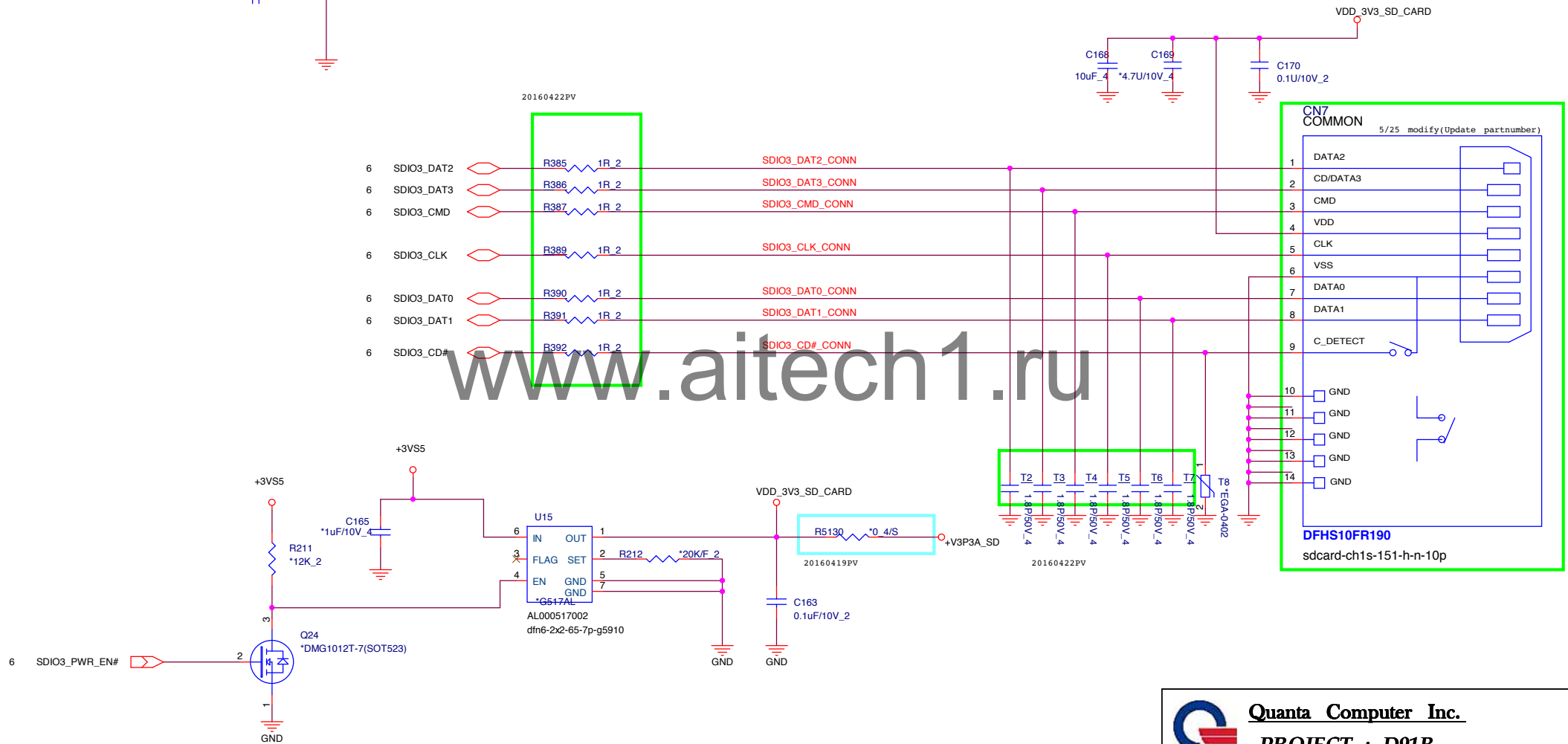
Table 4. C1 pin controls long/medium/short traces

State	Channel type	Pin C1 state	Channel B	Channel A
			EQ ^[1]	DE ^[2] OS ^[3]
H	Long	H	9 dB	-5.3 dB 1.1 V
high-Z	Medium	high-Z	6 dB	-3.1 dB 1.0 V
L	Short	L	3 dB	0 dB 0.9 V

Table 5. C2 pin controls long/medium/short traces

State	Channel type	Pin C2 state	Channel A	Channel B
			EQ ^[1]	DE ^[2] OS ^[3]
H	Long	H	9 dB	-5.3 dB 1.1 V
high-Z	Medium	high-Z	6 dB	-3.1 dB 1.0 V
L	Short	L	3 dB	0 dB 0.9 V

SDIO3_DAT2_CONN	C301	*5.6P/25V_2
SDIO3_DAT3_CONN	C303	*5.6P/25V_2
SDIO3_CMD_CONN	C304	*5.6P/25V_2
SDIO3_CLK_CONN	C305	*5.6P/25V_2
SDIO3_DAT0_CONN	C306	*5.6P/25V_2
SDIO3_DAT1_CONN	C307	*5.6P/25V_2
SDIO3_CD#_CONN	C308	*5.6P/25V_2

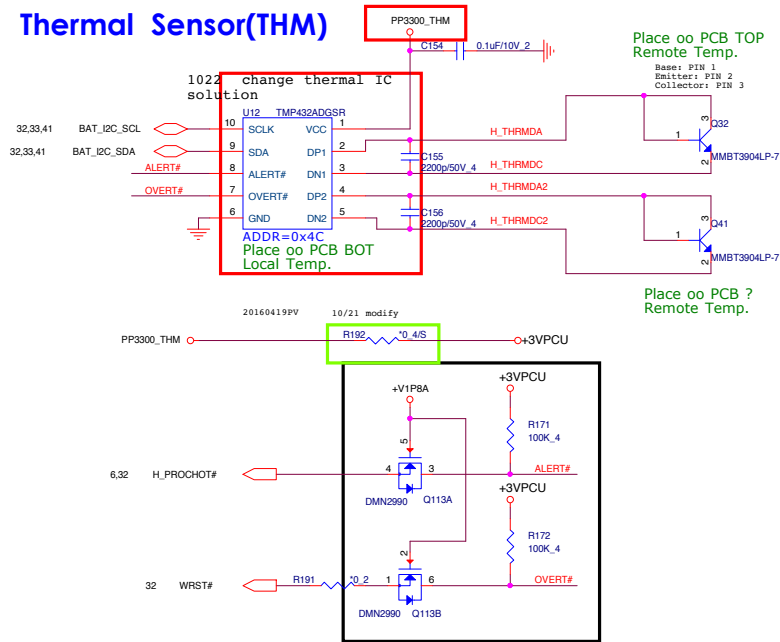


Quanta Computer Inc.

PROJECT : D91B

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Thermal Sensor(THM)



Accelerometer +e-Compass+Gyro Sensor

31

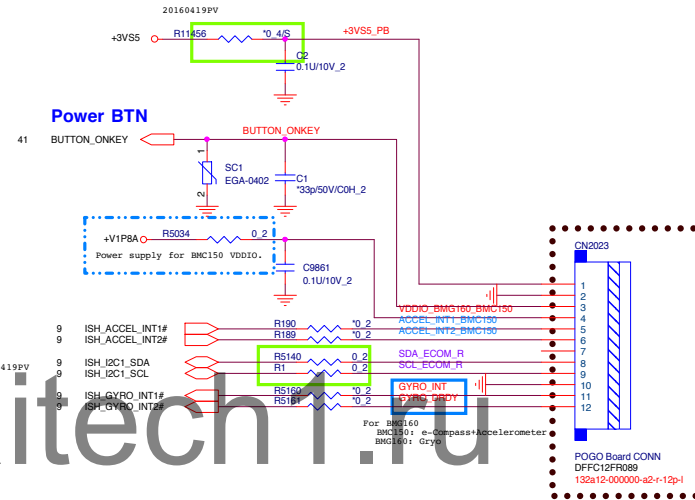
Keepout area is around 10mm

WR Address : 0x3C
RD Address : 0x3D

ALS

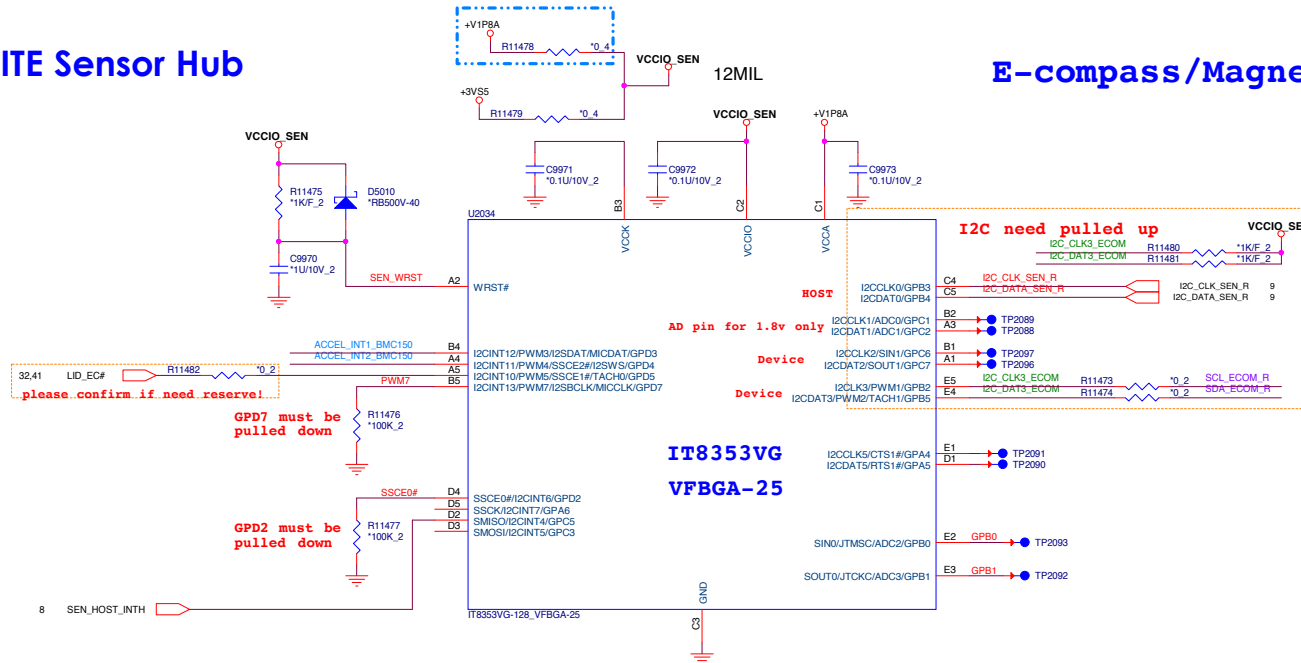
SDO_AG	AG Address
VDDIO	0x6B
GND	0x6A

SDO_M	M Address
VDDIO	0x1E
GND	0x1C



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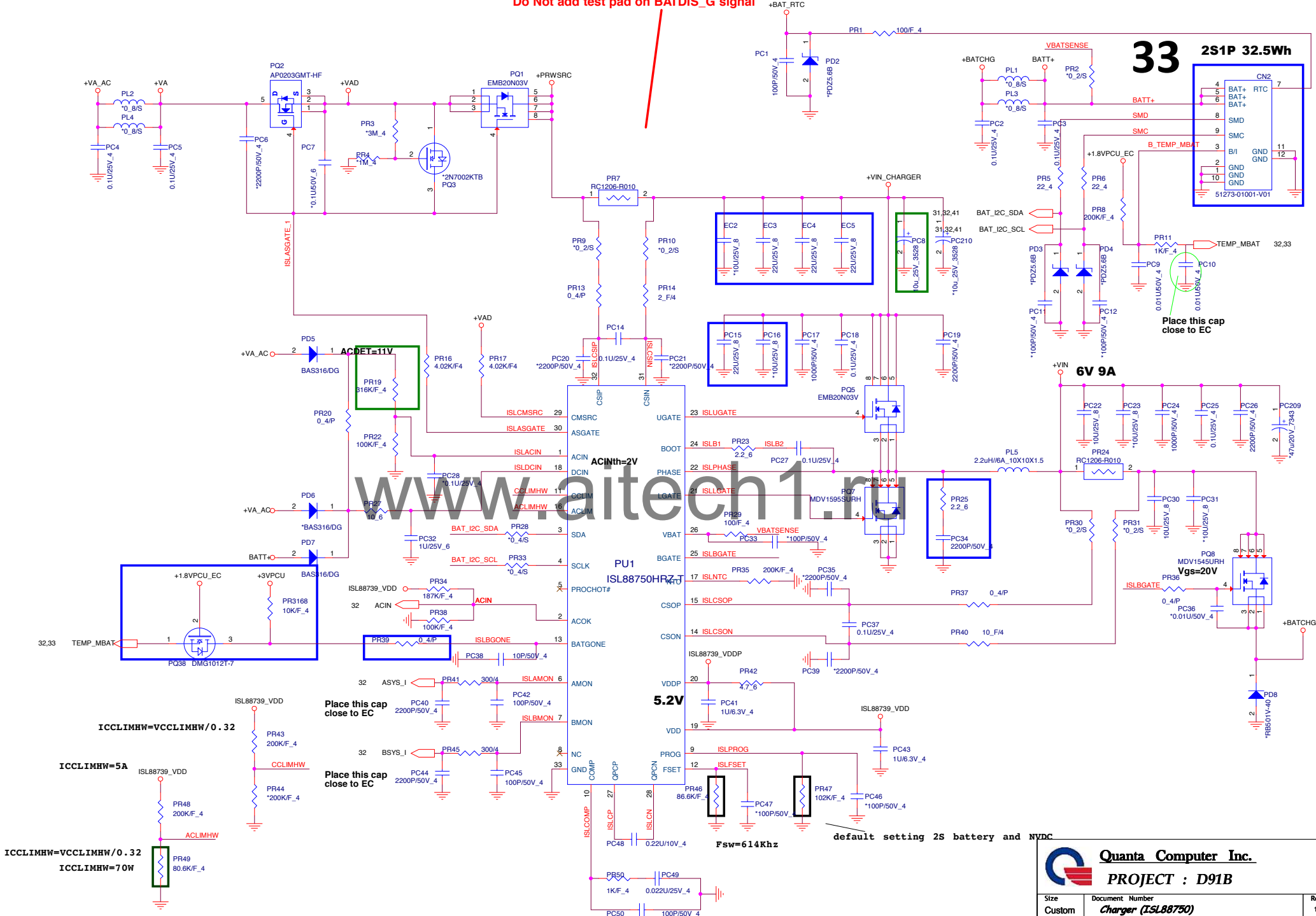
ITE Sensor Hub

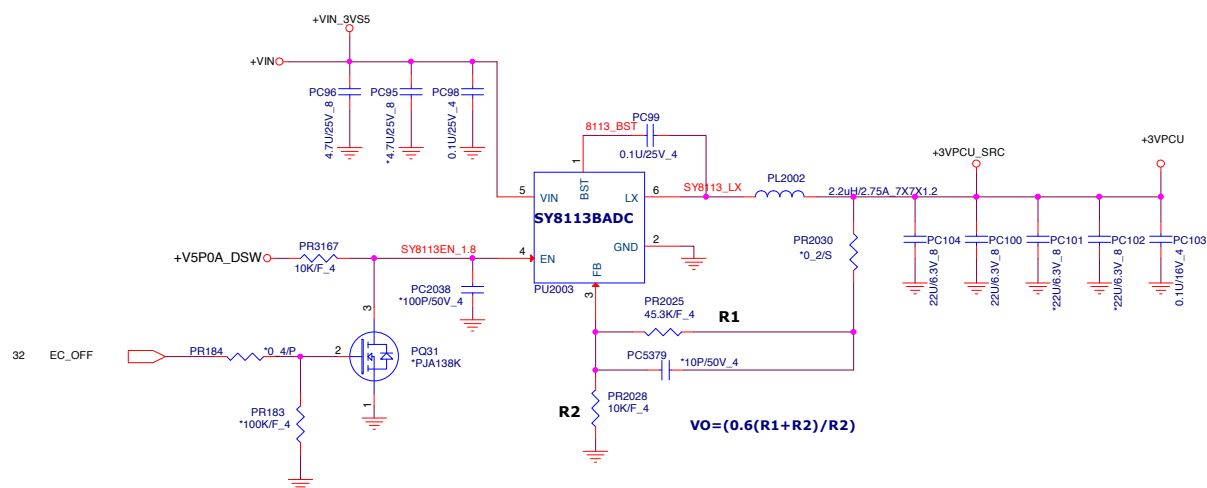


E-compass/Magnetometer/Accelerometer (BMC150)

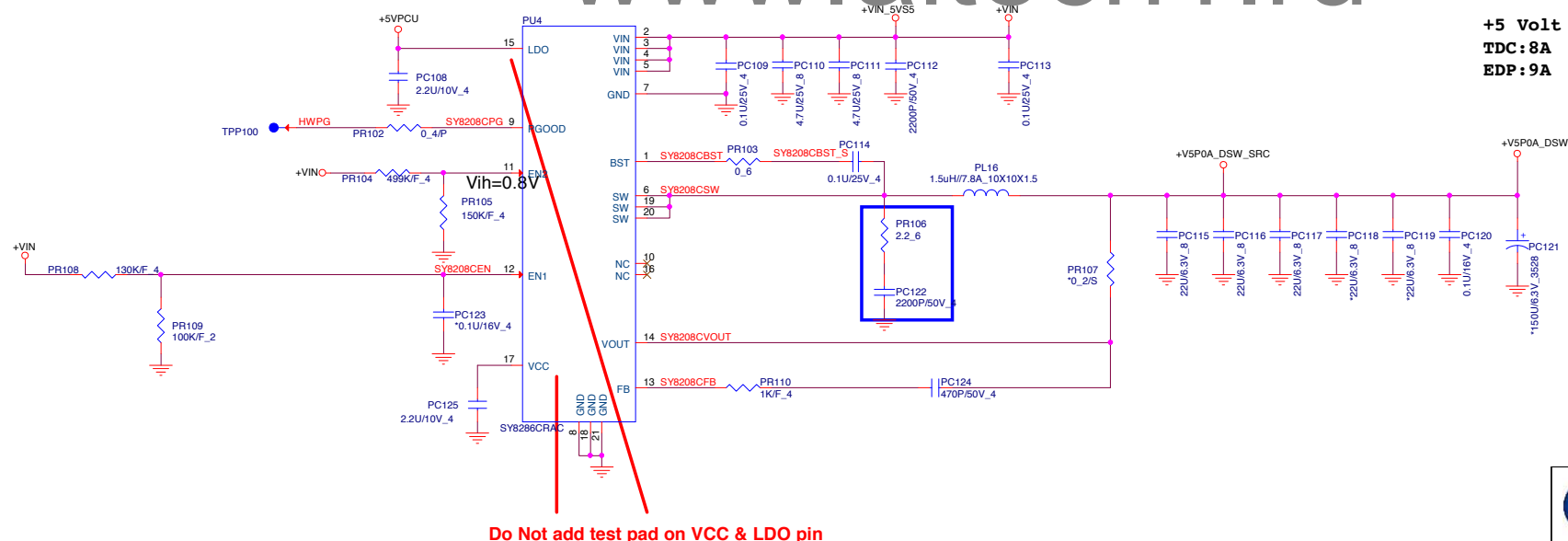


Do Not add test pad on BATDIS_G signal

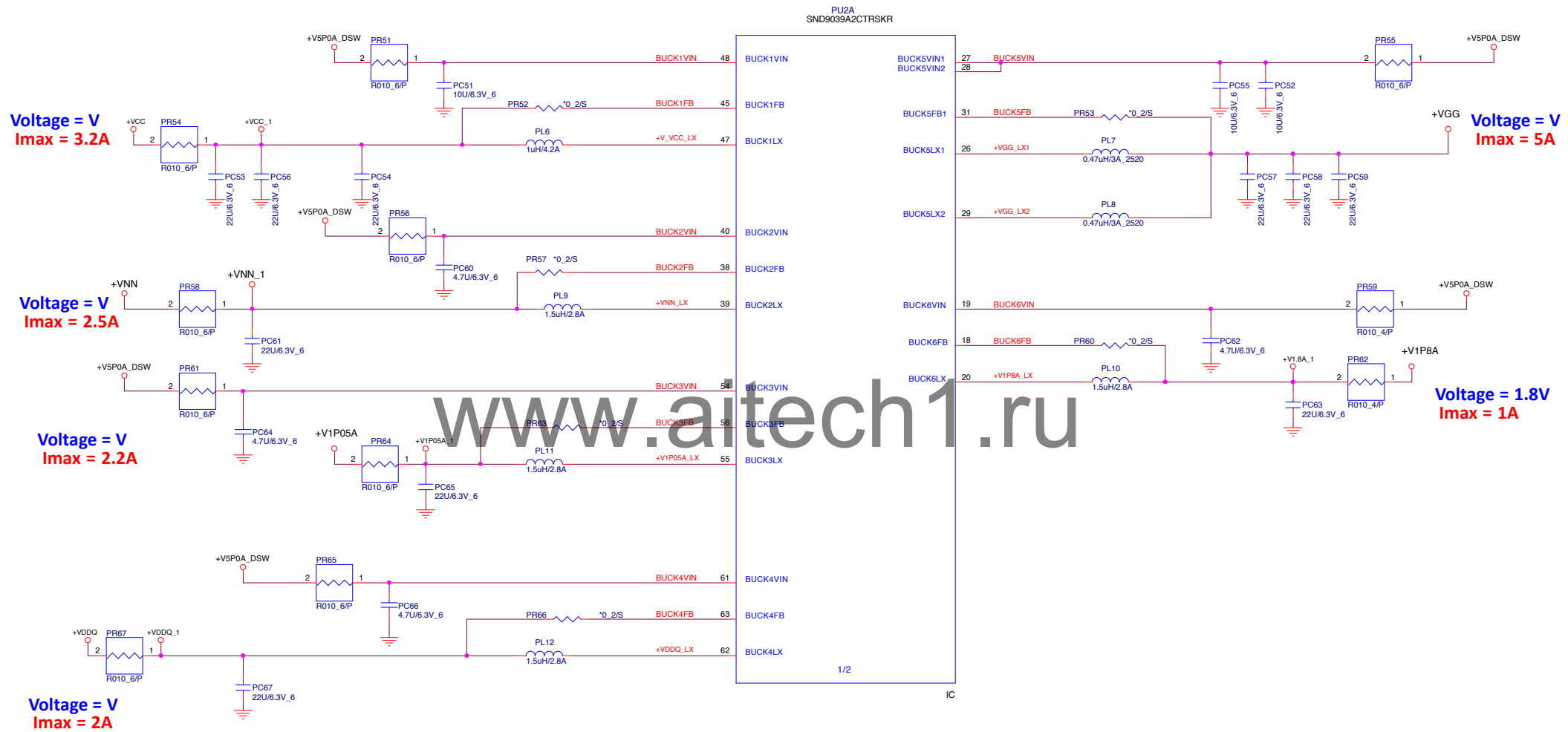


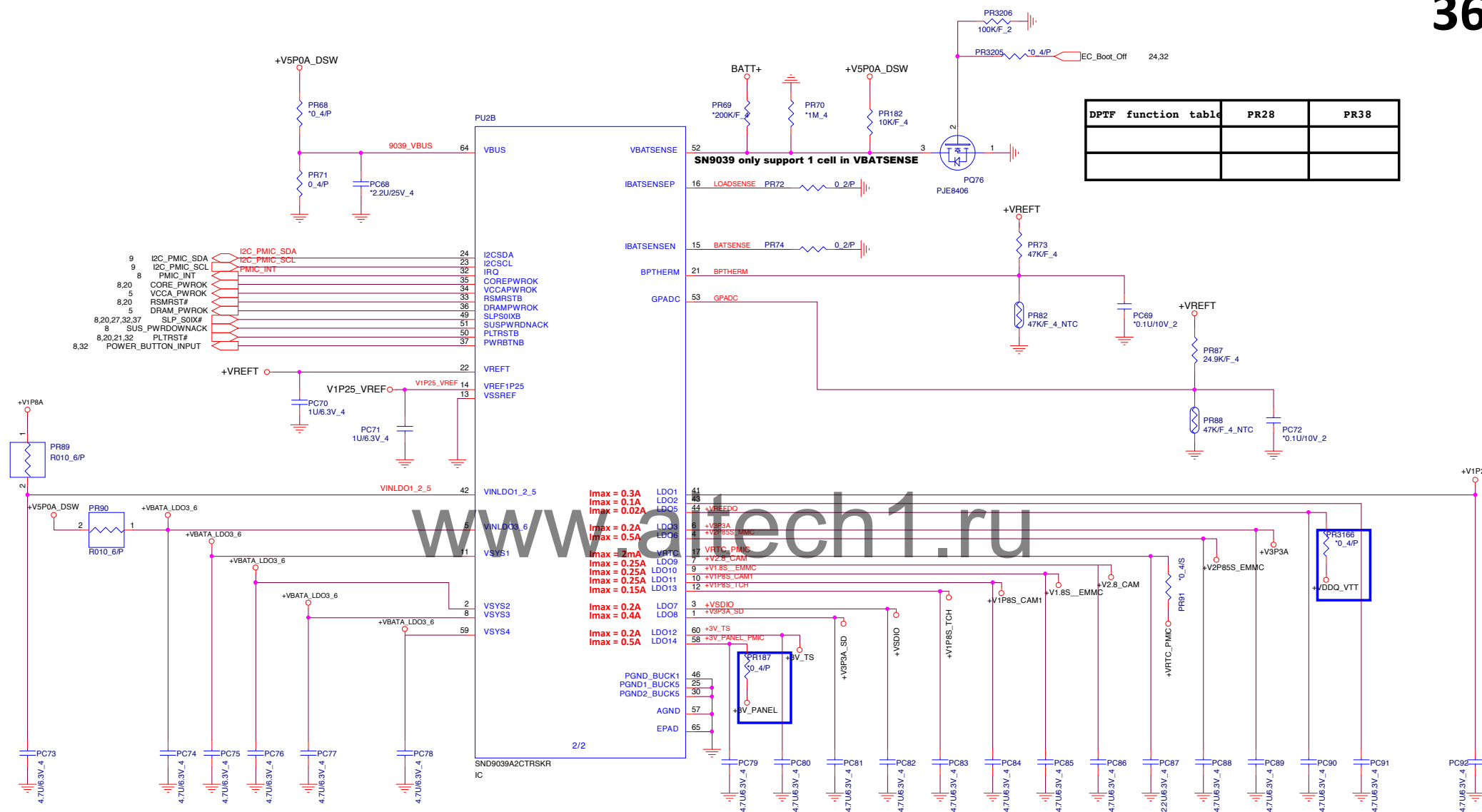


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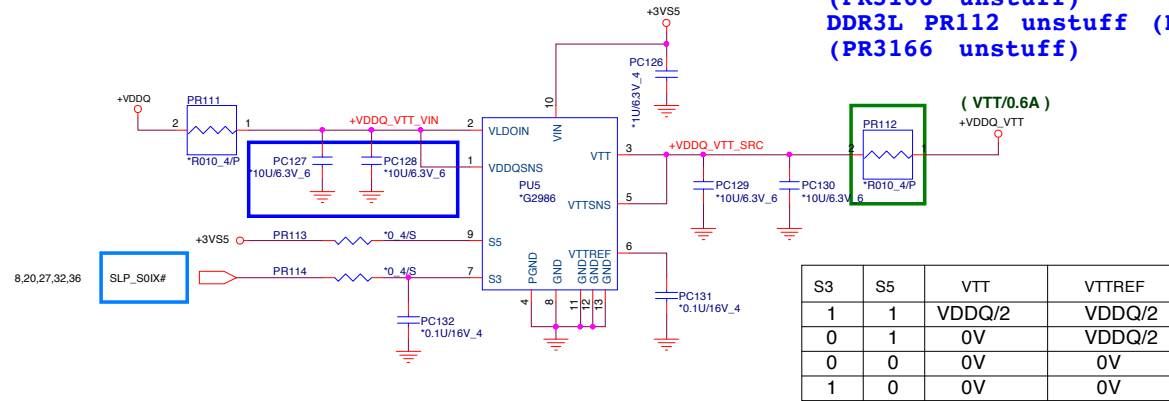
Cherry trail T3 :SND9039A2CTRSKR -> AL009039004
 Bay trail TCR : SND9039A2BT -> AL009039001



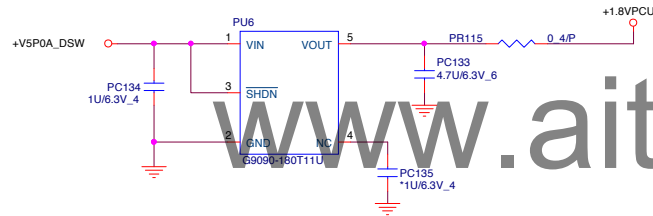


LD00~6 boot sequence
LD07~14 can program 0.9V~3.3V

LPDDR3 PR112 stuff (D91A)
(PR3166 unstuff)
DDR3L PR112 unstuff (D91B)
(PR3166 unstuff)



10mA







For TypeC PORT1

