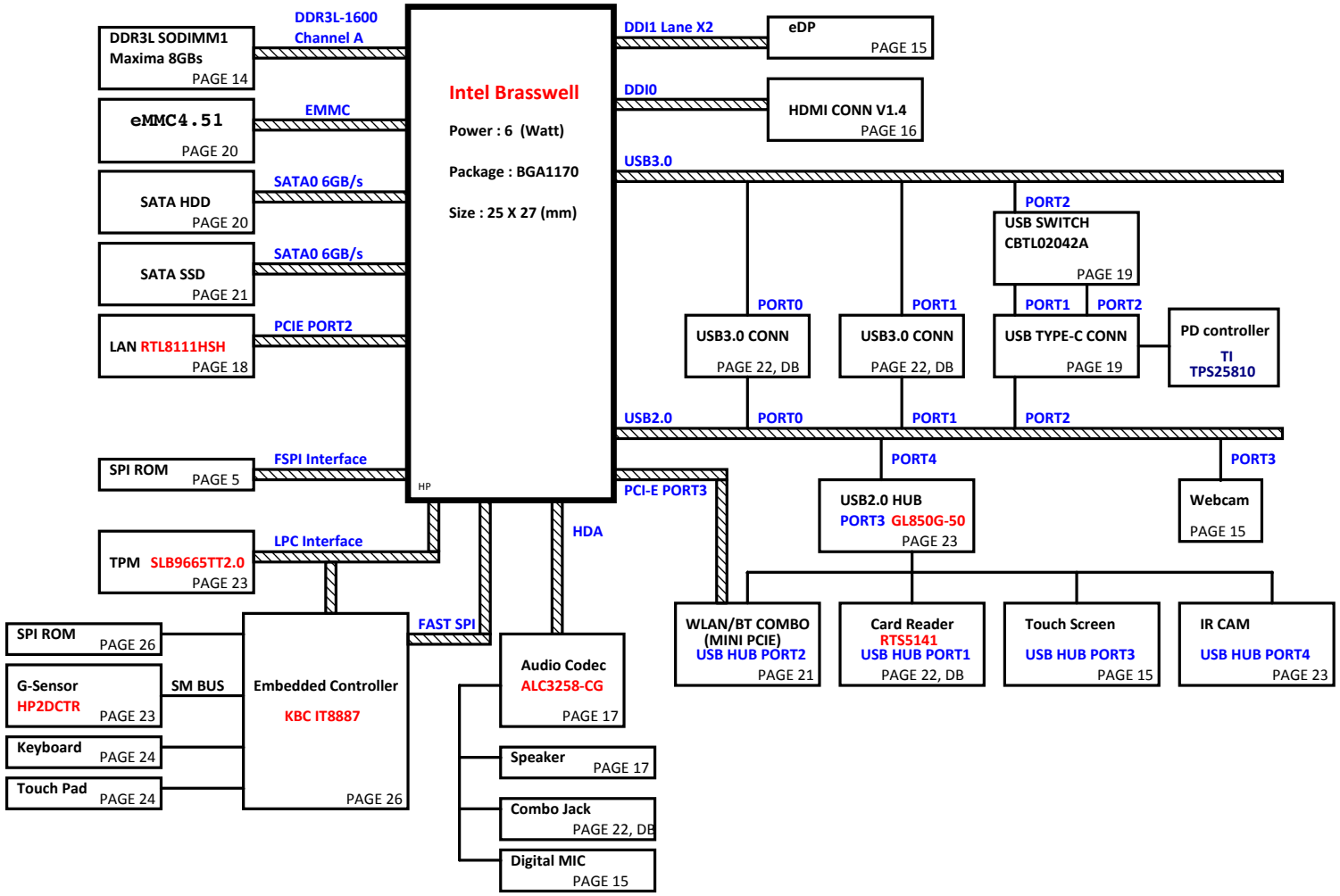
NFL-P G72D BSW UMA (14"/15.6")
Intel Braswell-M Platform Block Diagram



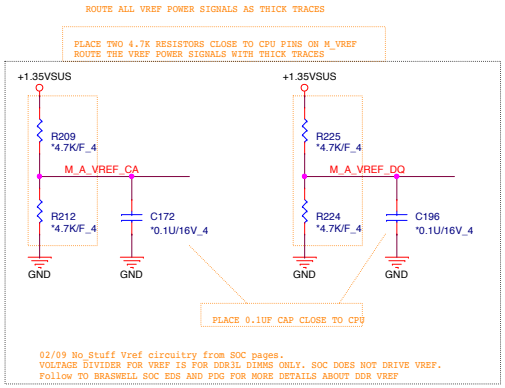
PCB 6L STACK UP

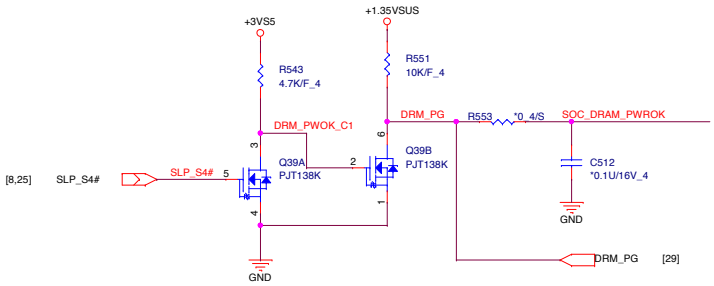
LAYER 1 : TOP
LAYER 2 : SVCC
LAYER 3 : IN1(LOW)
LAYER 4 : IN2(HIGH)
LAYER 5 : SGND
LAYER 6 : BOT

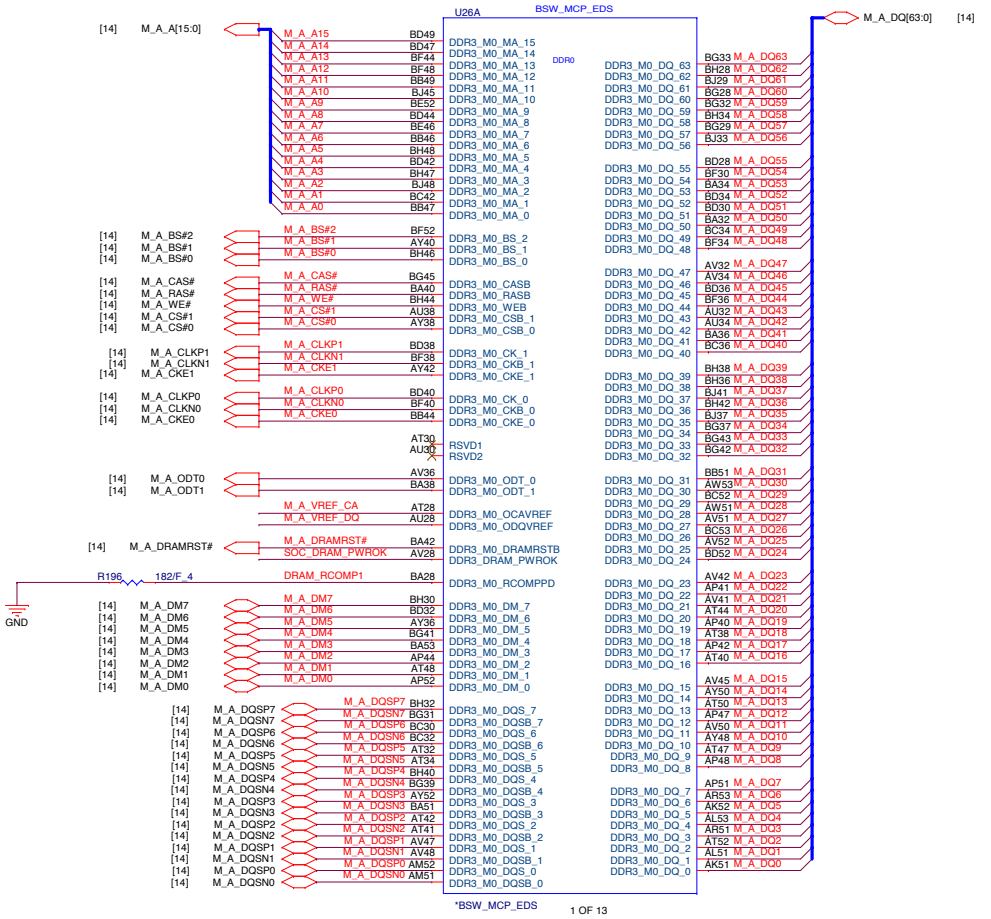
PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswell Block Diagram	1A

Date: Tuesday, January 24, 2017 Sheet 1 of 35

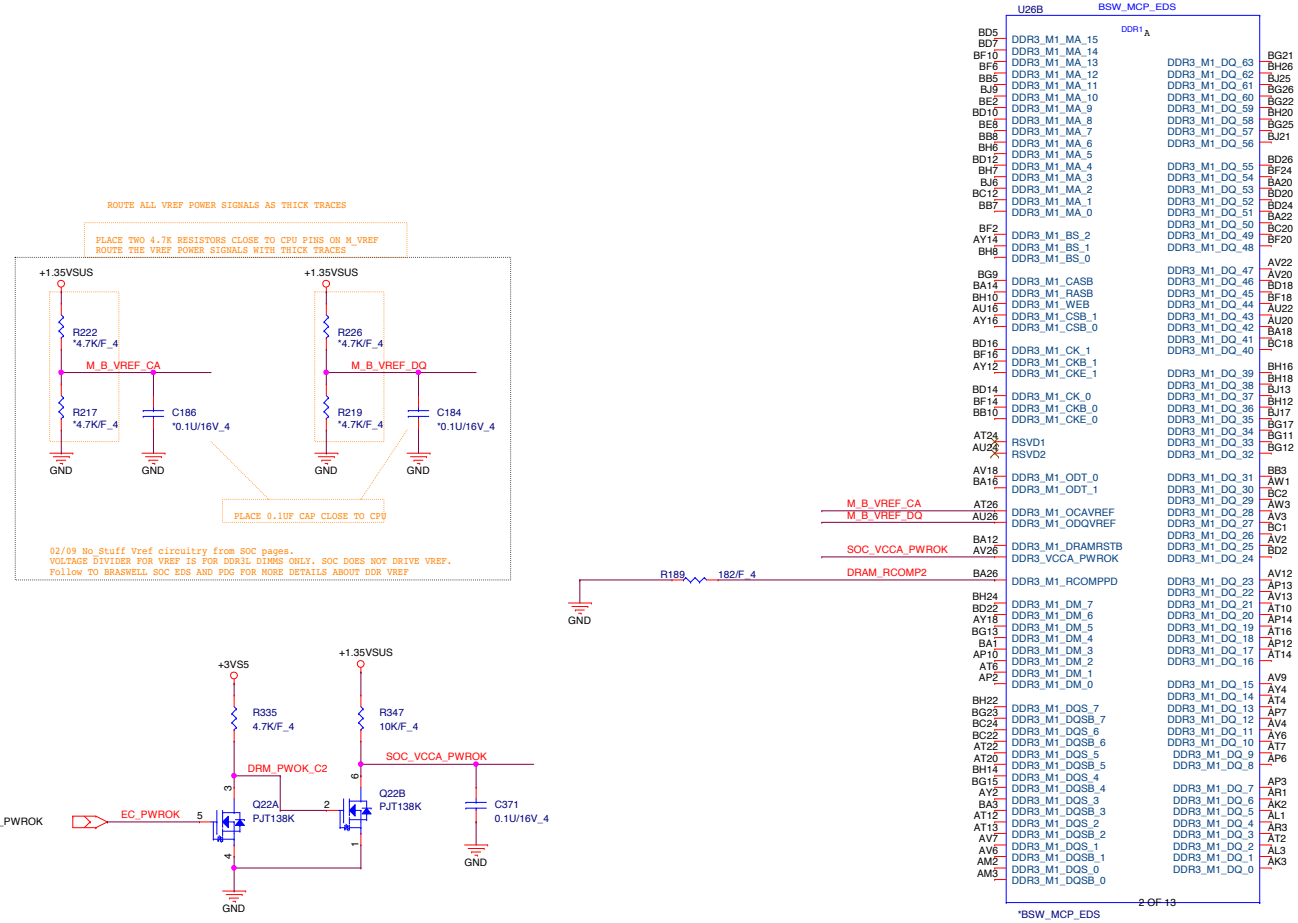




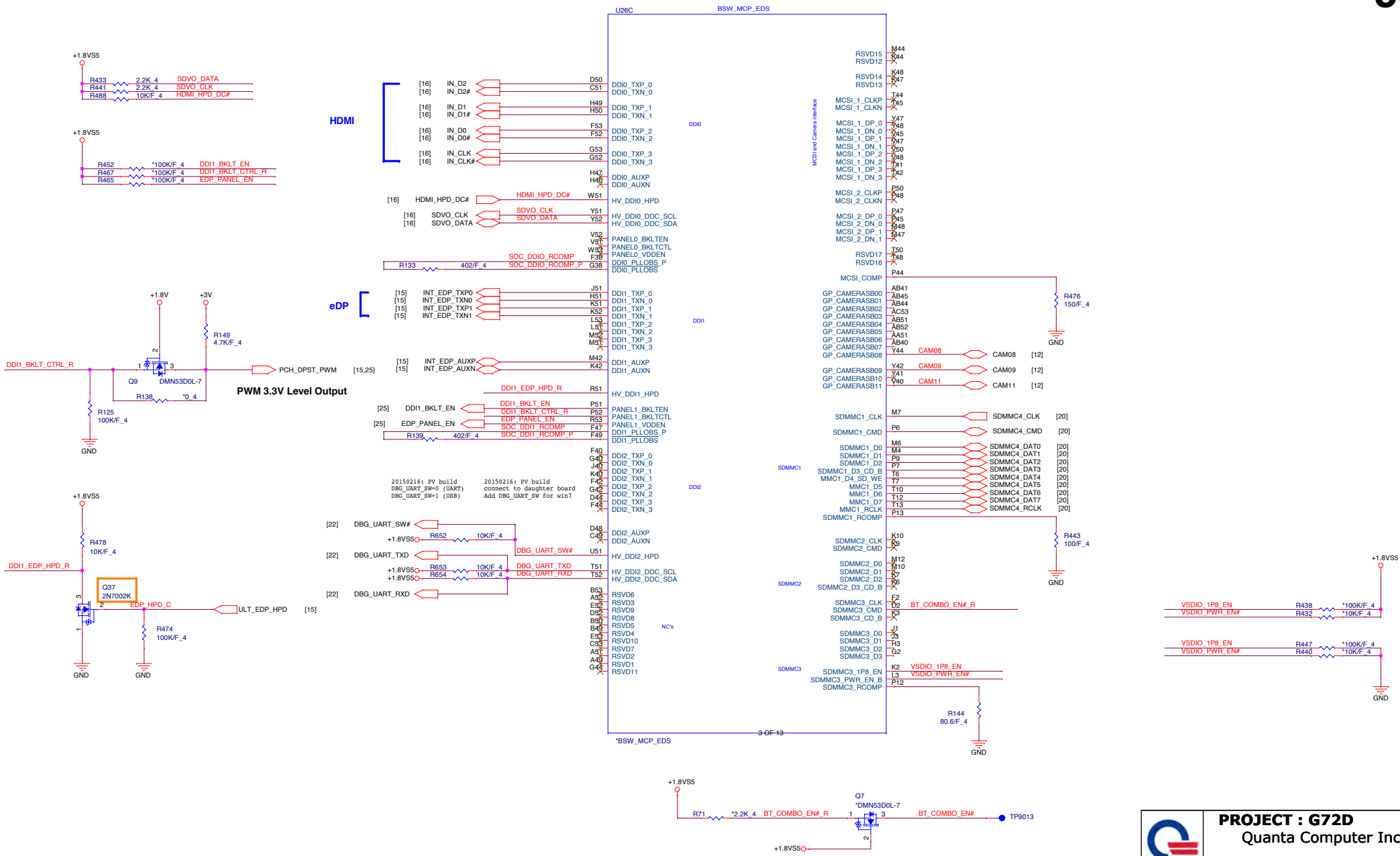


PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswell 1/11 (DDRA)	1A
Date: Tuesday, January 24, 2017	Sheet 2 of 35	

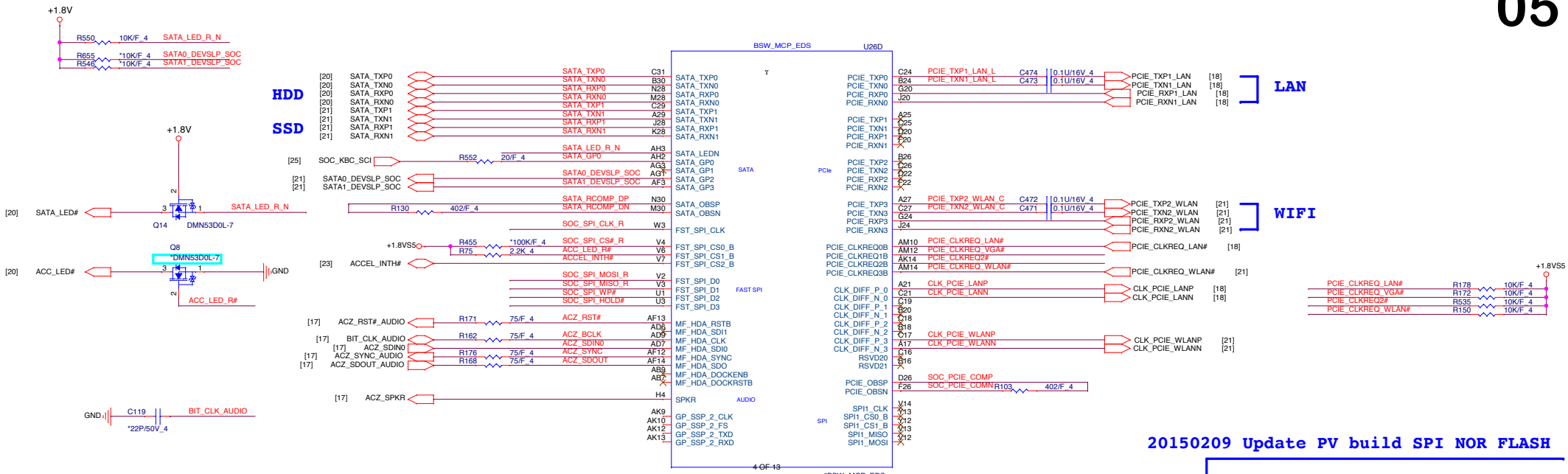


PROJECT : G72D Quanta Computer Inc.		
Size Custom	Document Number Braswell 2/11 (DDRB)	Rev 1A
Date: Tuesday, January 24, 2017	Sheet 3 of 35	



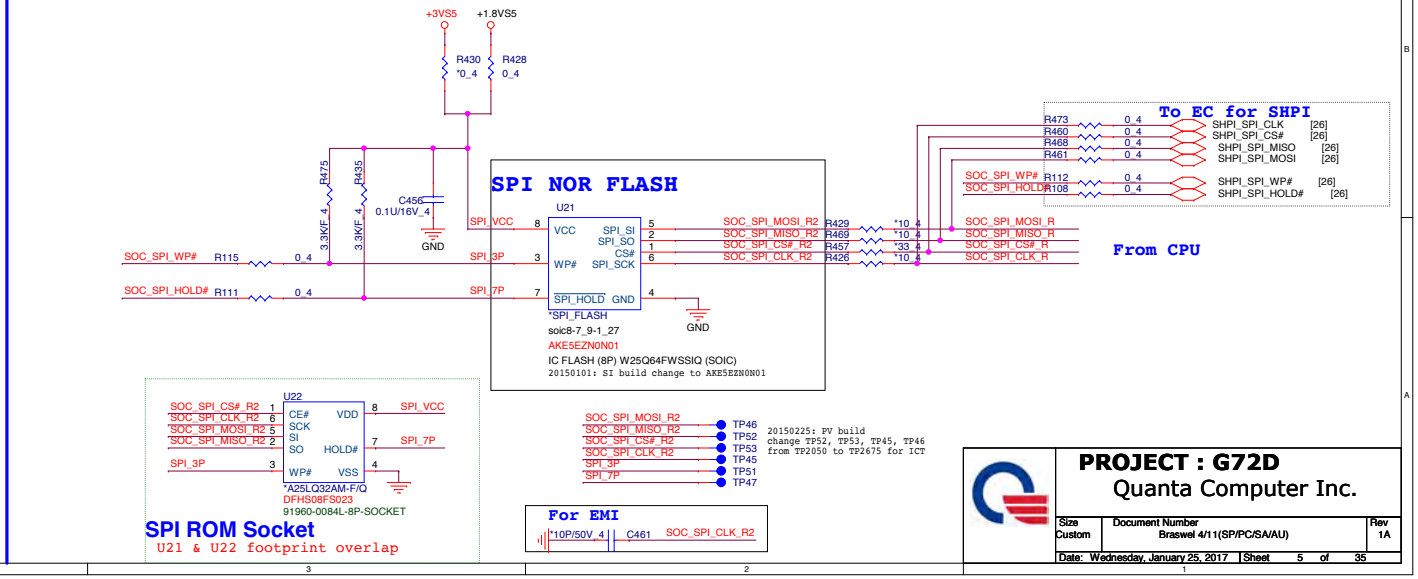
PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswell 3/11 (Display)	1A
Date: Wednesday, January 25, 2017	Sheet 4 of 35	



20150209 Update PV build SPI NOR FLASH

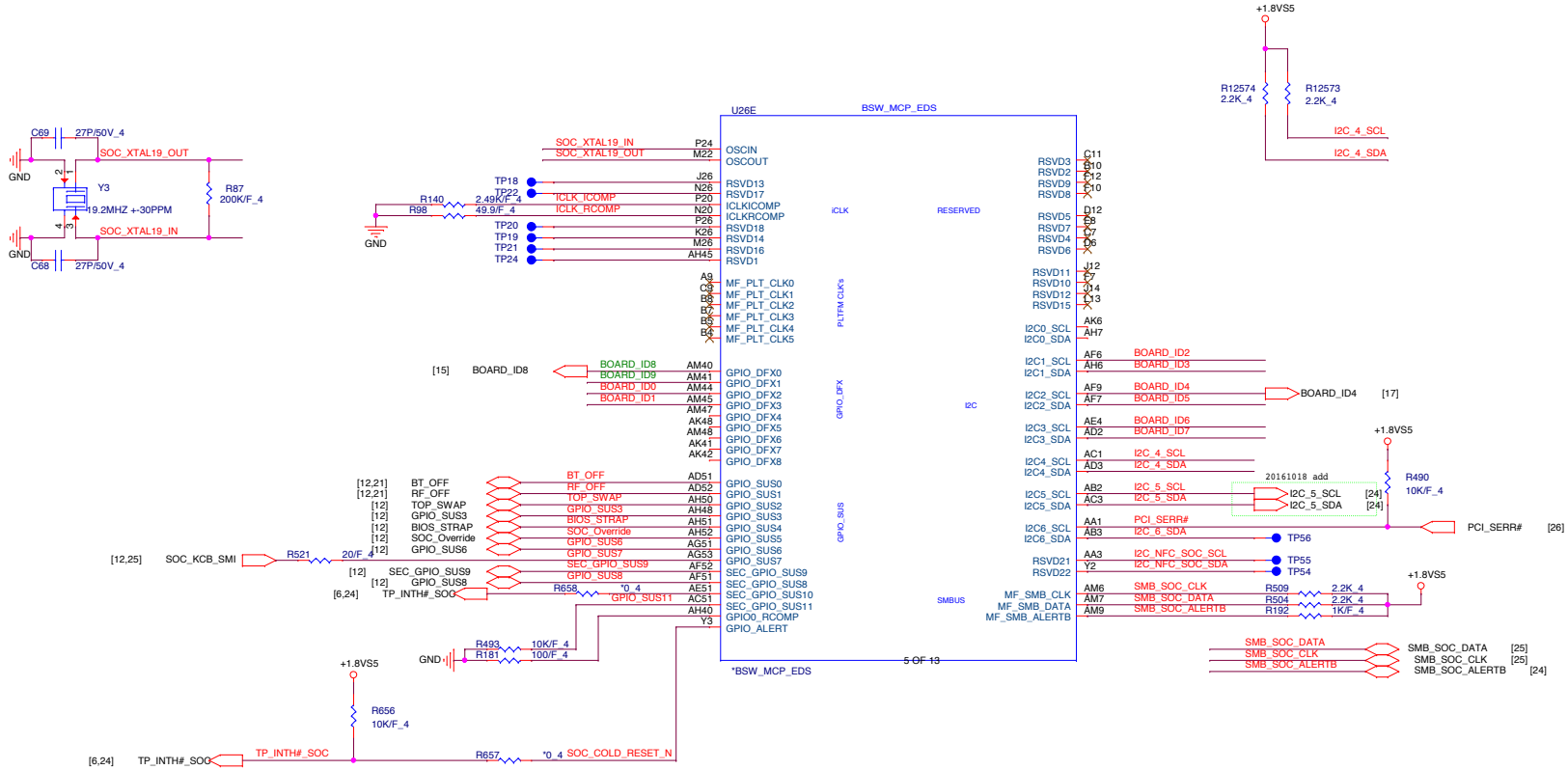
Vender	Size	P/N
Winbond	8MB	AKE5EZN0N01 (W25Q64FWSSIQ)
GigaDevice	8MB	AKE5EG-0Q01 (GD25LB64CSIGR)
EON	8MB	AKE5EFN0Q00 (EN25S64-104HIP)
Socket (208mil)	DFHS08FS023	(Firstly Stuff)



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswel 4/11(SP/PC/SA/AU)	1A

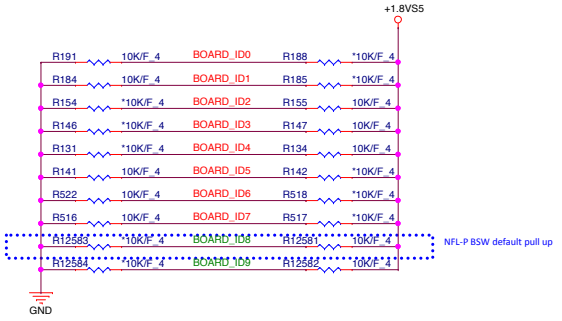
Date: Wednesday, January 25, 2017 | Sheet 5 of 35



Board ID	BIOS Strap Description
BOARD_ID0	(Reserve)
BOARD_ID1	SATA/EMMC SELECT
BOARD_ID2	
BOARD_ID3	1 = TPM 0 = Non-TPM
BOARD_ID4	SPK_ID (Reserve)
BOARD_ID5	Memory Vendor for MD USE
BOARD_ID6	
BOARD_ID7	
BOARD_ID8	0 = ELAN Touchpad 1 = Synaptics Touchpad
BOARD_ID9	1 = SO-DIMM 0 = Memory Down

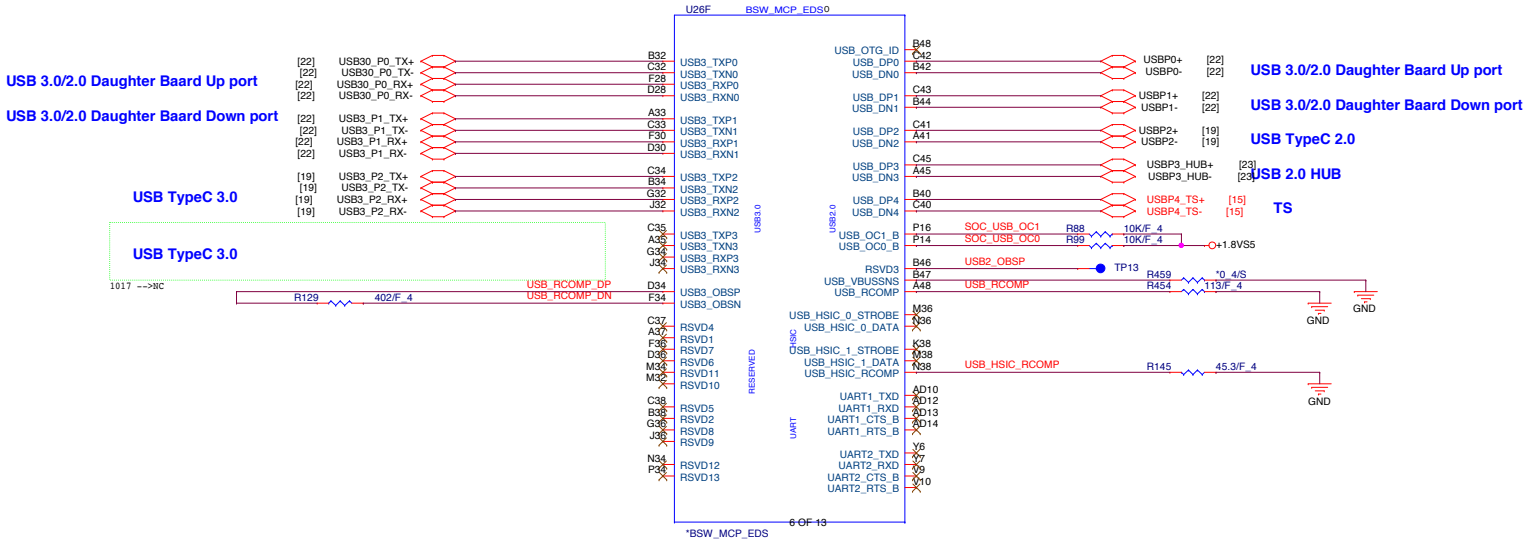
BOARD_ID7	BOARD_ID6	BOARD_ID5	Vender	Quanta PN	Description
0	0	0			
0	0	1			
0	1	0			
0	1	1			
1	0	0			
1	0	1			
1	1	0			
1	1	1			

BOARD_ID1	BOARD_ID2	
0	0	EMMC only
0	1	EMMC +SATA
1	0	SATA only
1	1	(Reserve)



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswel 5/11(I2C/GPIO/CLK	1A
Date: Tuesday, January 24, 2017	Sheet 6 of 35	

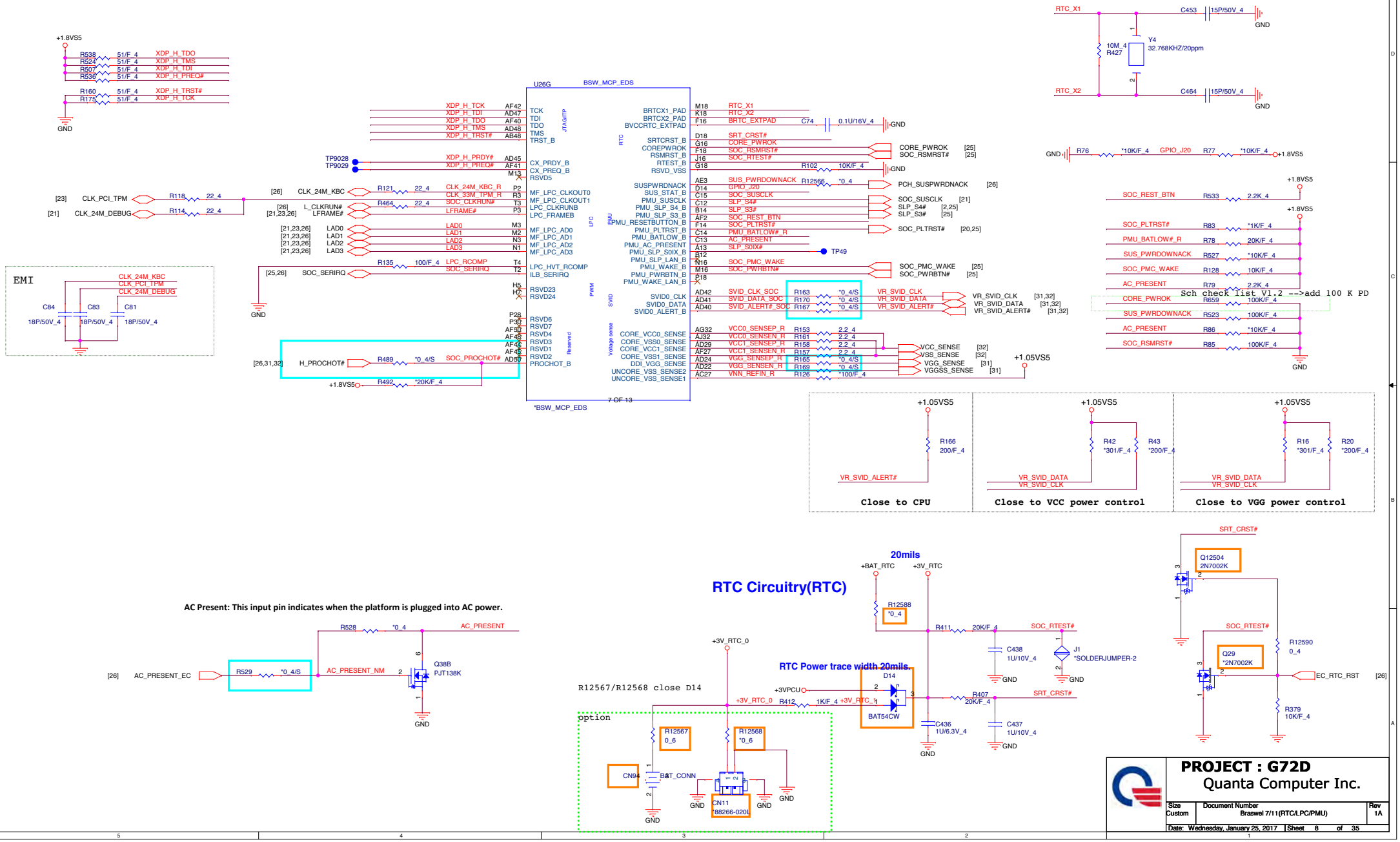


PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswel 6/11 (USB/URAT)	1A
Date: Tuesday, January 24, 2017	Sheet 7 of 35	

RTC Clock 32.768KHz

08

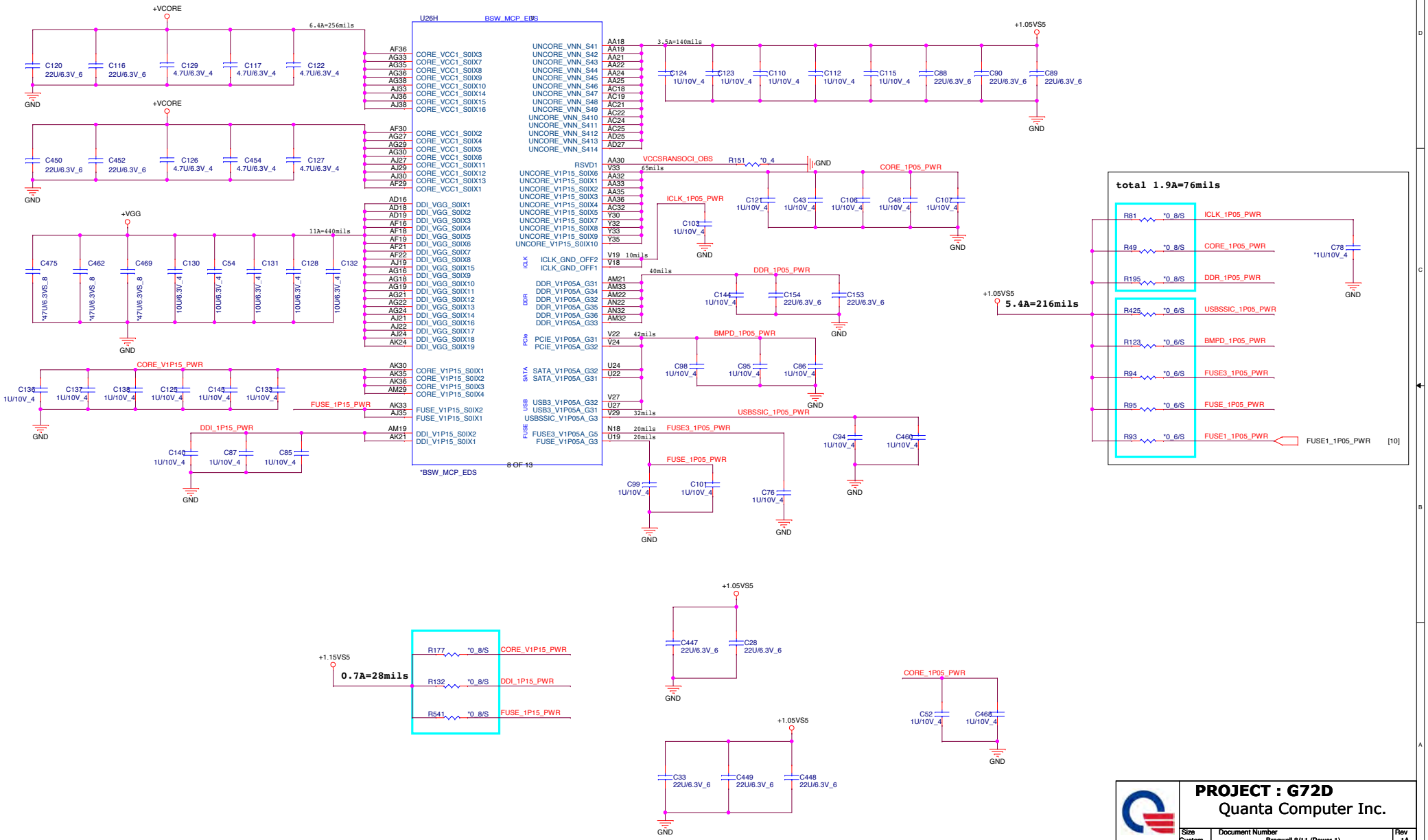


AC Present: This input pin indicates when the platform is plugged into AC power.

RTC Circuitry(RTC)

PROJECT : G72D
Quanta Computer Inc.

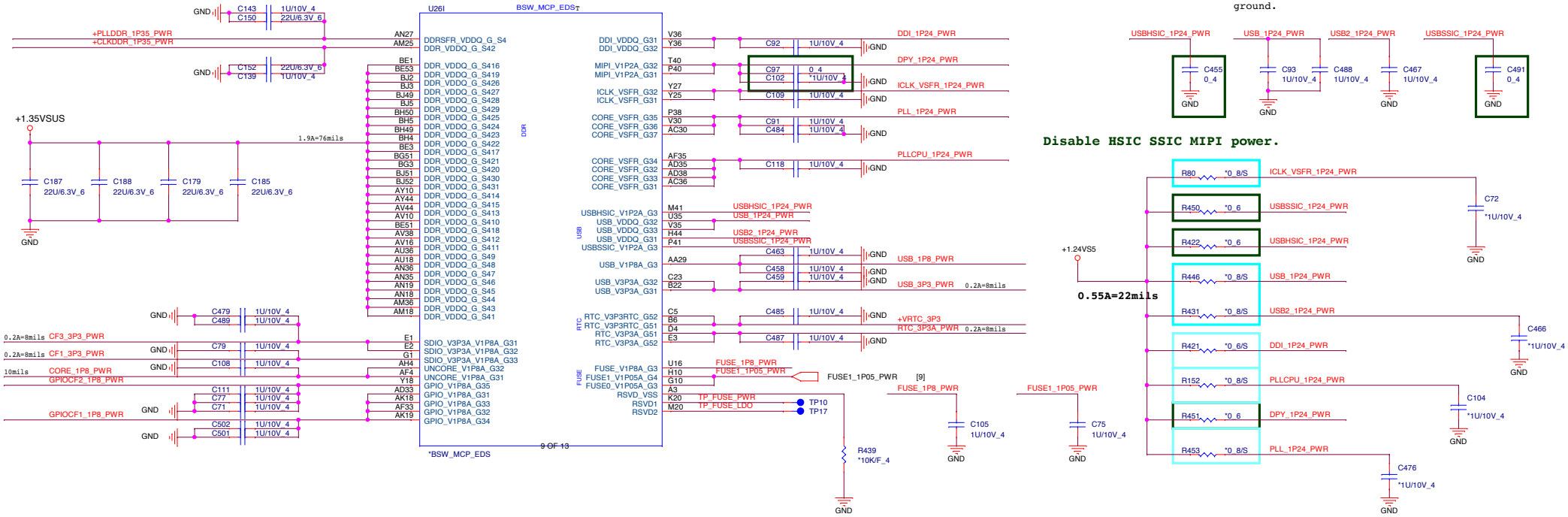
Size	Document Number	Rev
Custom	Braswel 7/11(RTC/LPC/PMU)	1A
Date: Wednesday, January 25, 2017	Sheet 8 of 35	



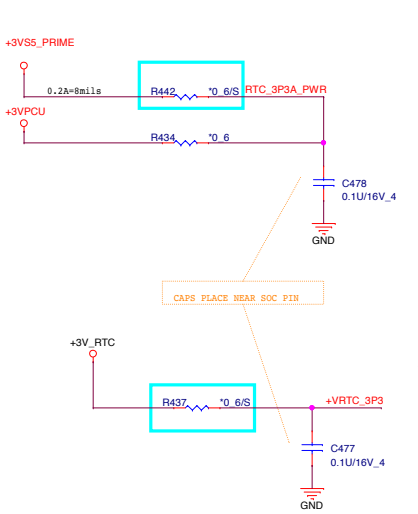
PROJECT : G72D			
Quanta Computer Inc.			
Size: Custom	Document Number: Braswell 8/11 (Power 1)		Rev: 1A
Date: Tuesday, January 24, 2017	Sheet 9 of 35		

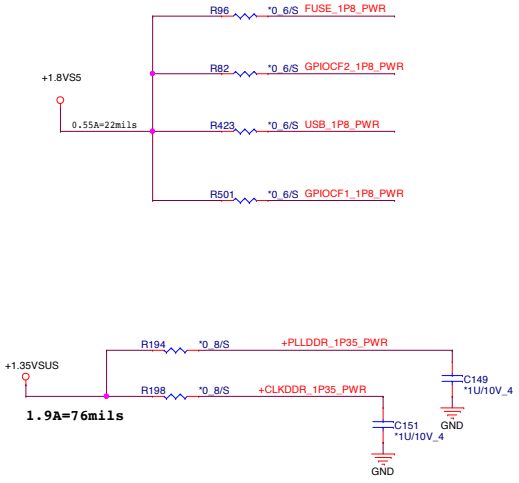
PLACE THE CAPS UNDER THE PKG SHADOW

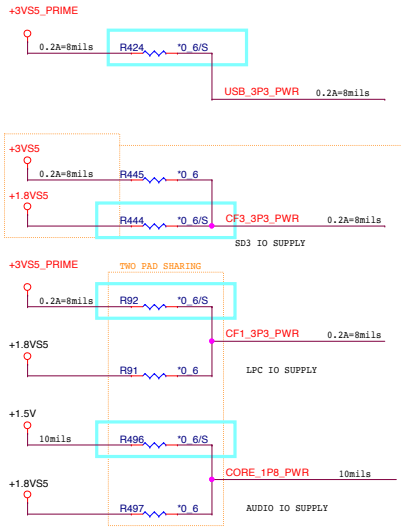
If MIPI, HSIC or SSIC are not used, the interface supply power pins can be connected to ground.



Disable HSIC SSIC MIPI power.



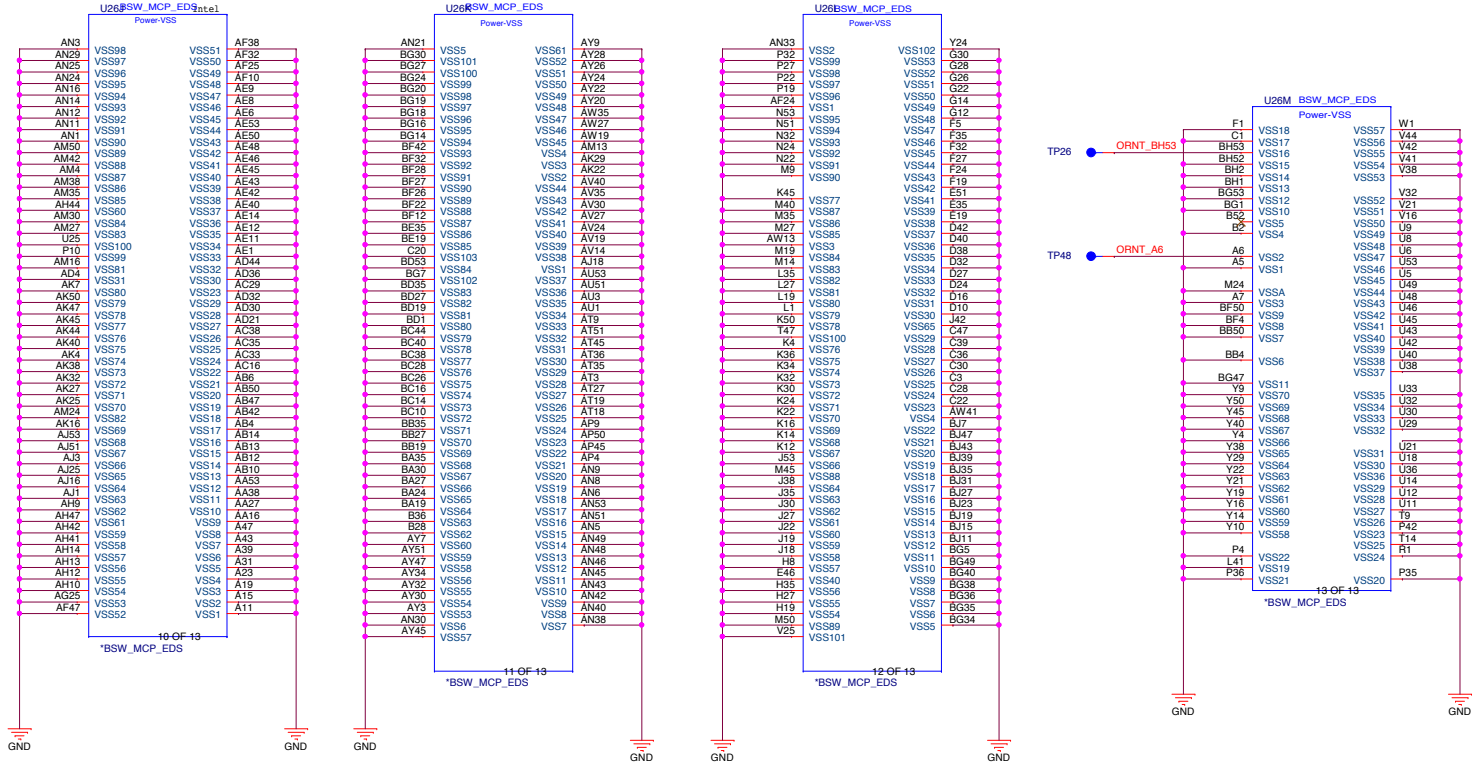




VSDIO VOLTAGE SETTING (CF3_3P3_PWR)		
SDMMC3_PWR_EN_N	SDMMC3_1P8_EN	VSDIO (V)
1	0	0V
1	1	0V
0	0	3.3V
0	1	1.8V

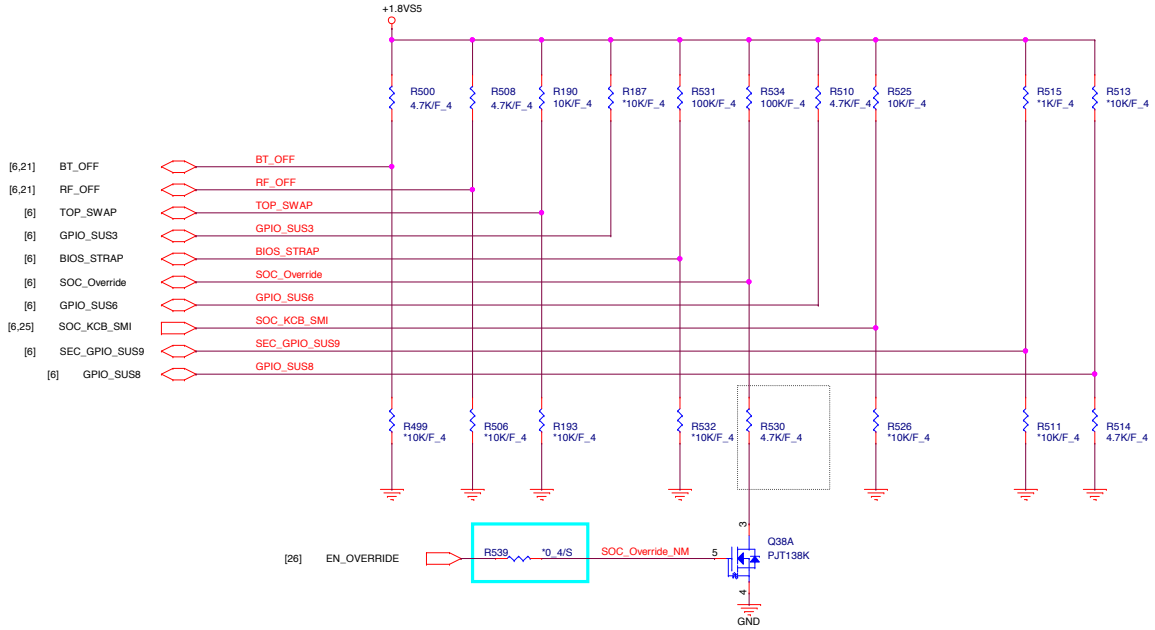
PROJECT : G72D
Quanta Computer Inc.

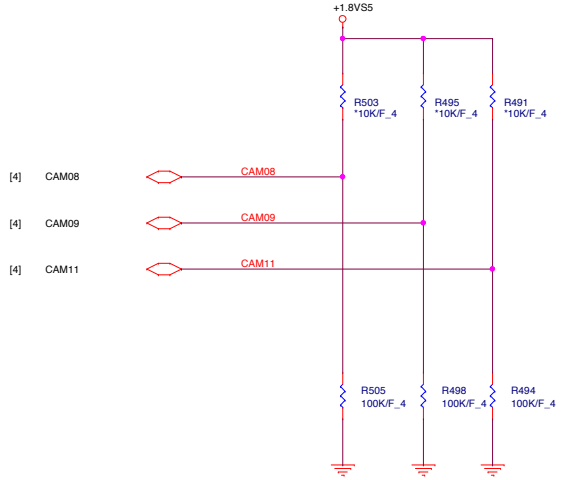
Size	Document Number	Rev
Custom	Braswell 9/11 (Power 2)	1A
Date: Tuesday, January 24, 2017	Sheet 10 of 35	



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Braswell 10/11 (GND)	1A
Date: Tuesday, January 24, 2017	Sheet 11 of 35	





REQUIRED STRAPS

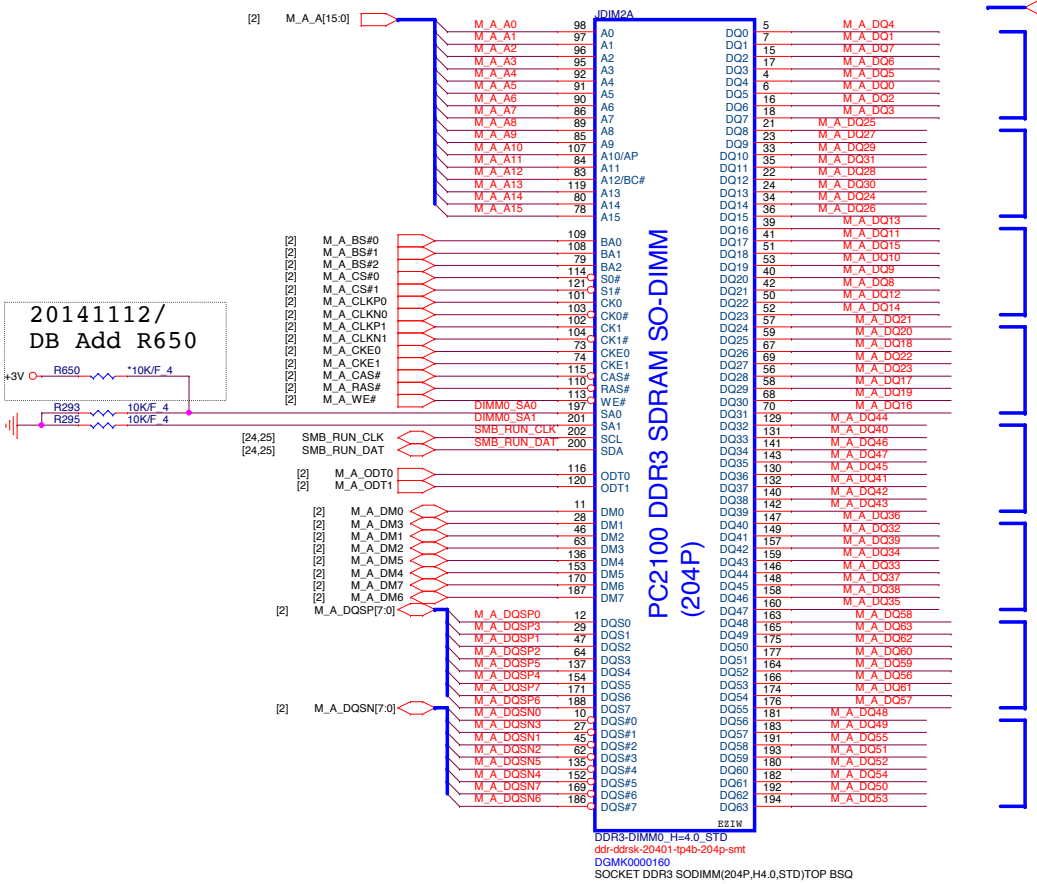
	GPIO_SUS0	GPIO_SUS1	TOP_SWAP	GPIO_SUS3	BIOS_STRAP	SOC_Override	GPIO_SUS6	SOC_KCB_SMI	GPIO_SUS8
PULL HIGH	DDI0 detected DEFAULT	DDI1 detected DEFAULT	Normal Operation DEFAULT	Reserve 10 KΩ PU DEFAULT	SPI DEFAULT	Normal Operation DEFAULT 20150209 PV change	10 KΩ PU to 1.8V DEFAULT	Reserve 10 KΩ PU DEFAULT	Supply is 1.35V
PULL LOW	DDI0 not detected	DDI1 not detected	Change Boot Loader address		LPC	Override			Supply is 1.25V DEFAULT

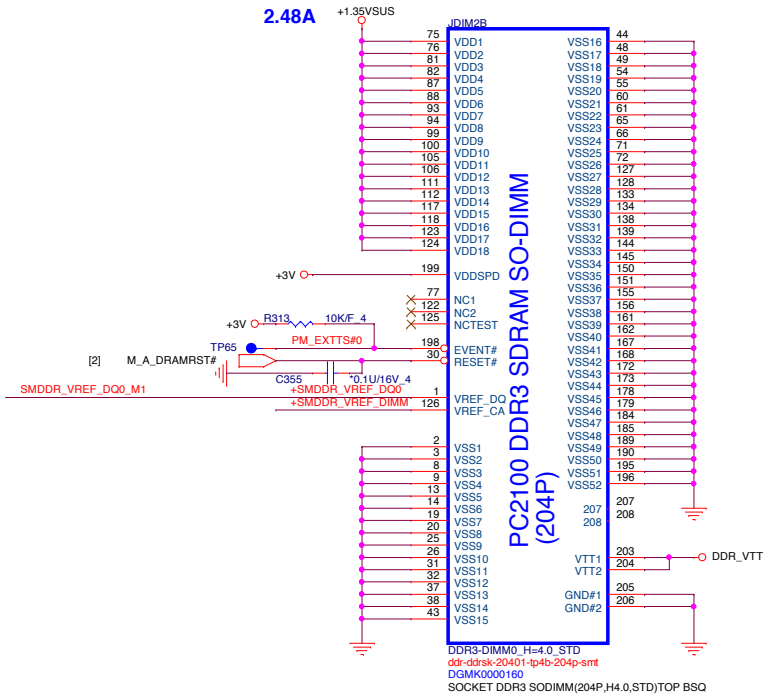
	CAM08	CAM09	CAM11
PULL HIGH	ICLK Xtal OSC Bypass	CCU SUS RO Bypass	RTC OSC Bypass
PULL LOW	ICLK Xtal OSC No Bypass DEFAULT	CCU SUS RO No Bypass DEFAULT	RTC OSC No Bypass DEFAULT

PROJECT : G72D
Quanta Computer Inc.

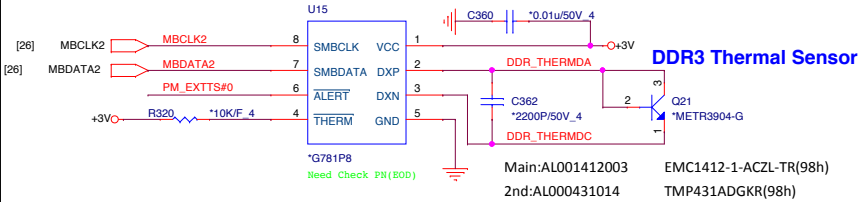
Size	Document Number	Rev
Custom	Braswell 11/11 (Strap)	1A
Date: Tuesday, January 24, 2017	Sheet 12 of 35	

C	**PROJECT : G72D** Quanta Computer Inc.	
	Size:	Document Number: BSW XDP/APS — Rev: 1A
	Date: Tuesday, January 24, 2017	Sheet 13 of 35





Local Thermal Sensor



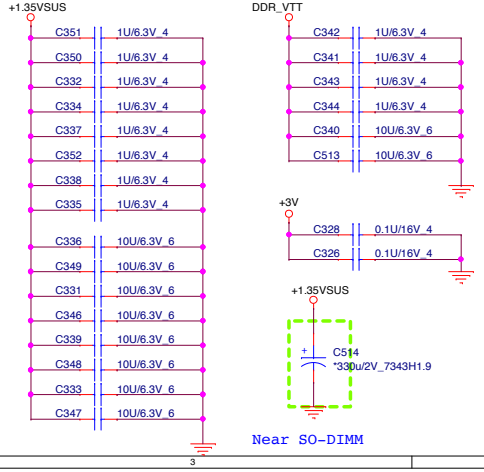
DDR3 Thermal Sensor

Main:AL001412003 EMC1412-1-ACZL-TR(98h)

2nd:AL000431014 TMP431ADGKR(98h)

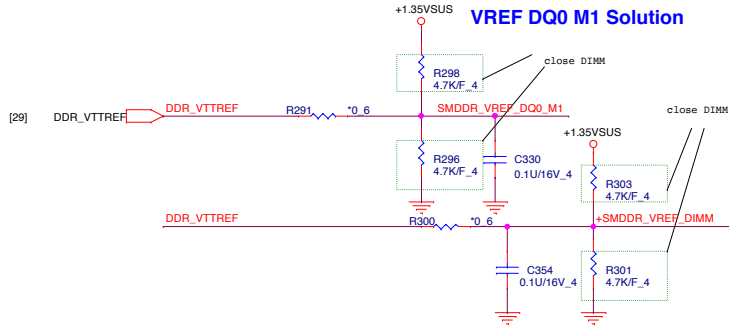
Place these Caps near So-Dimm0.

1uF/10uF 4pcs on each side of connector



Near SO-DIMM

VREF DQ0 M1 Solution



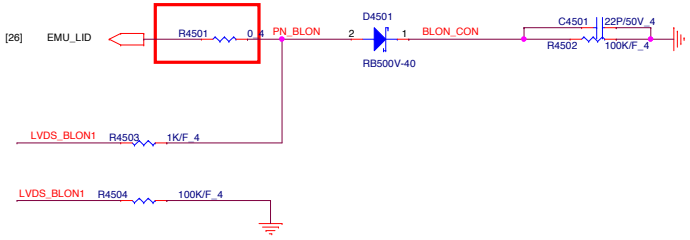
PROJECT : G72D

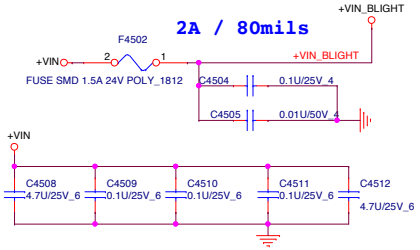
Quanta Computer Inc.

Size	Document Number	Rev
Custom	DDR3 DIMM0-STD(4.0H)	1A
Date: Tuesday, January 24, 2017	Sheet 14 of 35	

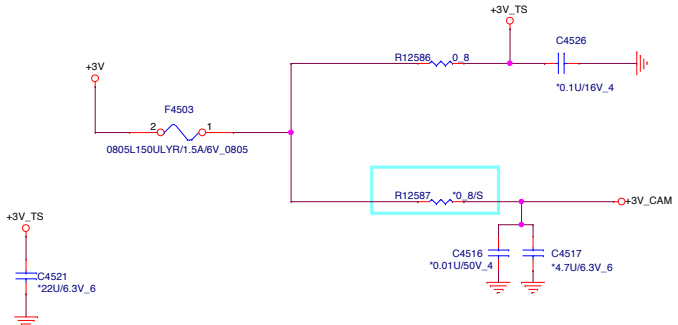
LID Switch

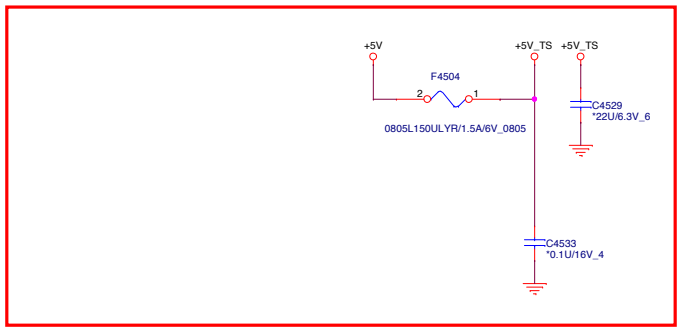
R4501 can't change to shortpad



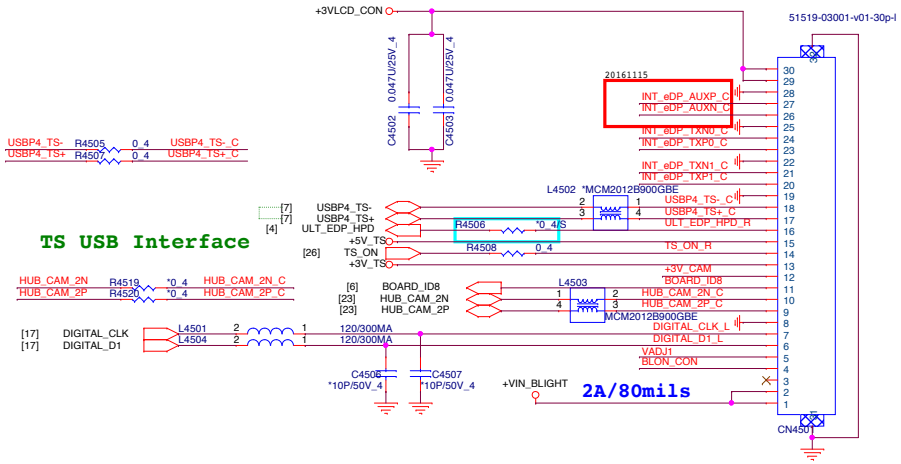


Touch screen



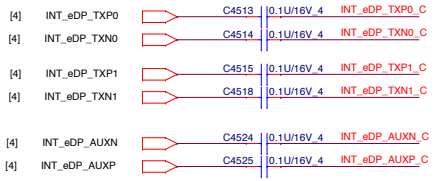


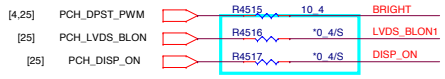
eDP Conn.

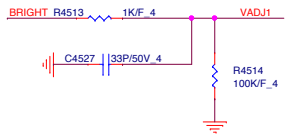


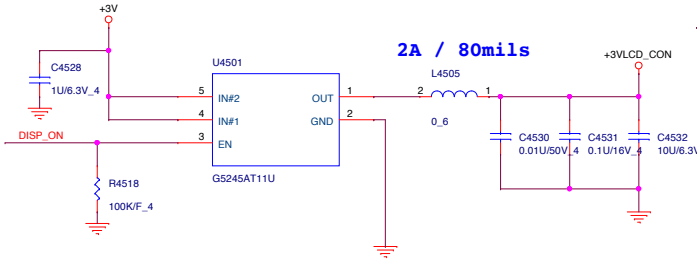
TS USB Interface

20161018 FP/PN check ok









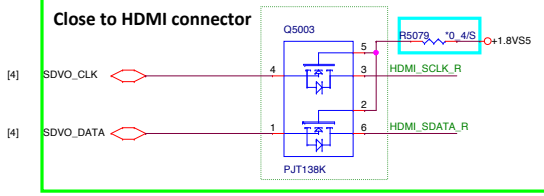
PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	eDP CONN/LID/CAM/D-MIC/TS	1A
Date: Tuesday, January 24, 2017	Sheet 15 of 35	

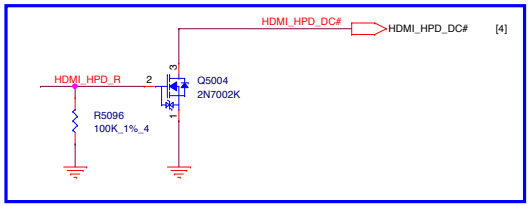
20161018 FP/PN check ok

HDMI SMBus isolation

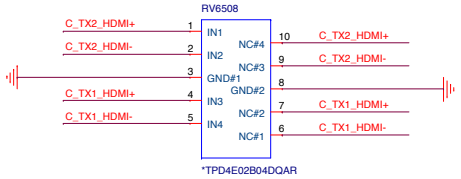
Close to HDMI connector



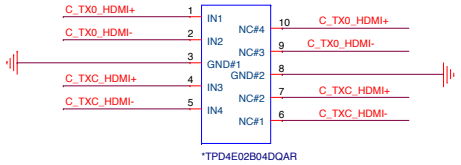
For From CPU use



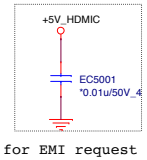
HDMI ESD

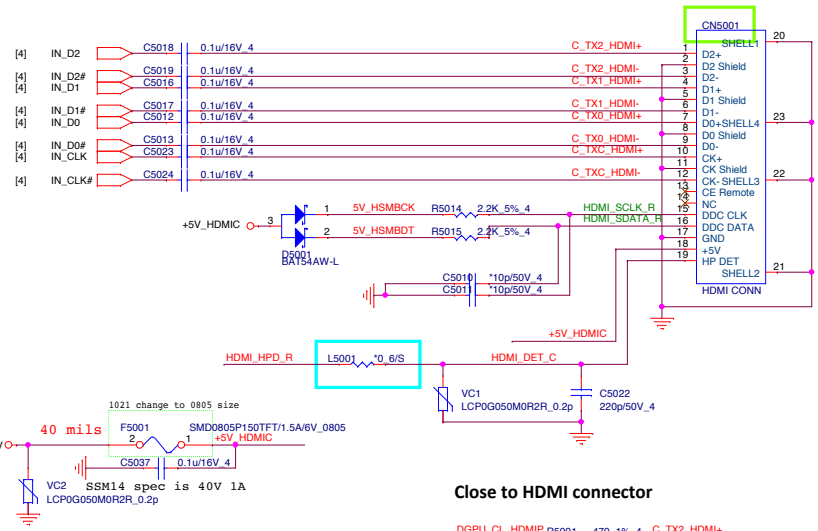


HDMI ESD

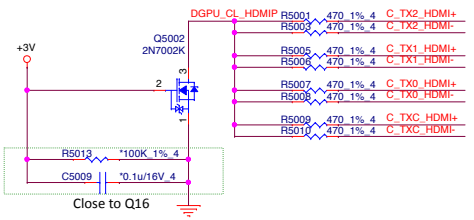


Intel EMI Solution



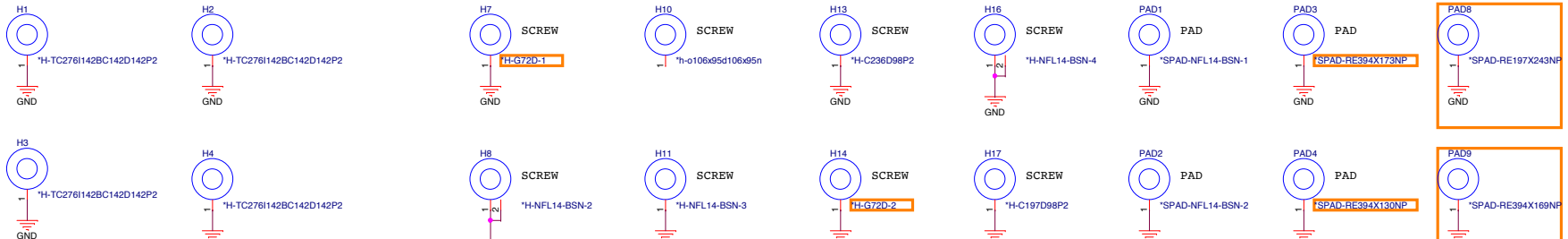


Close to HDMI connector

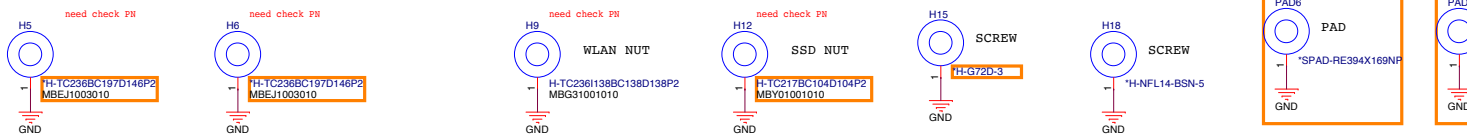


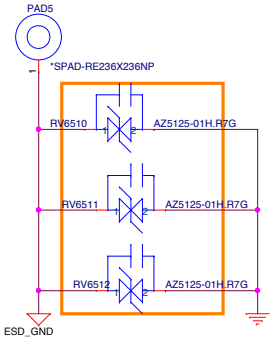
HOLE

CPU BKT



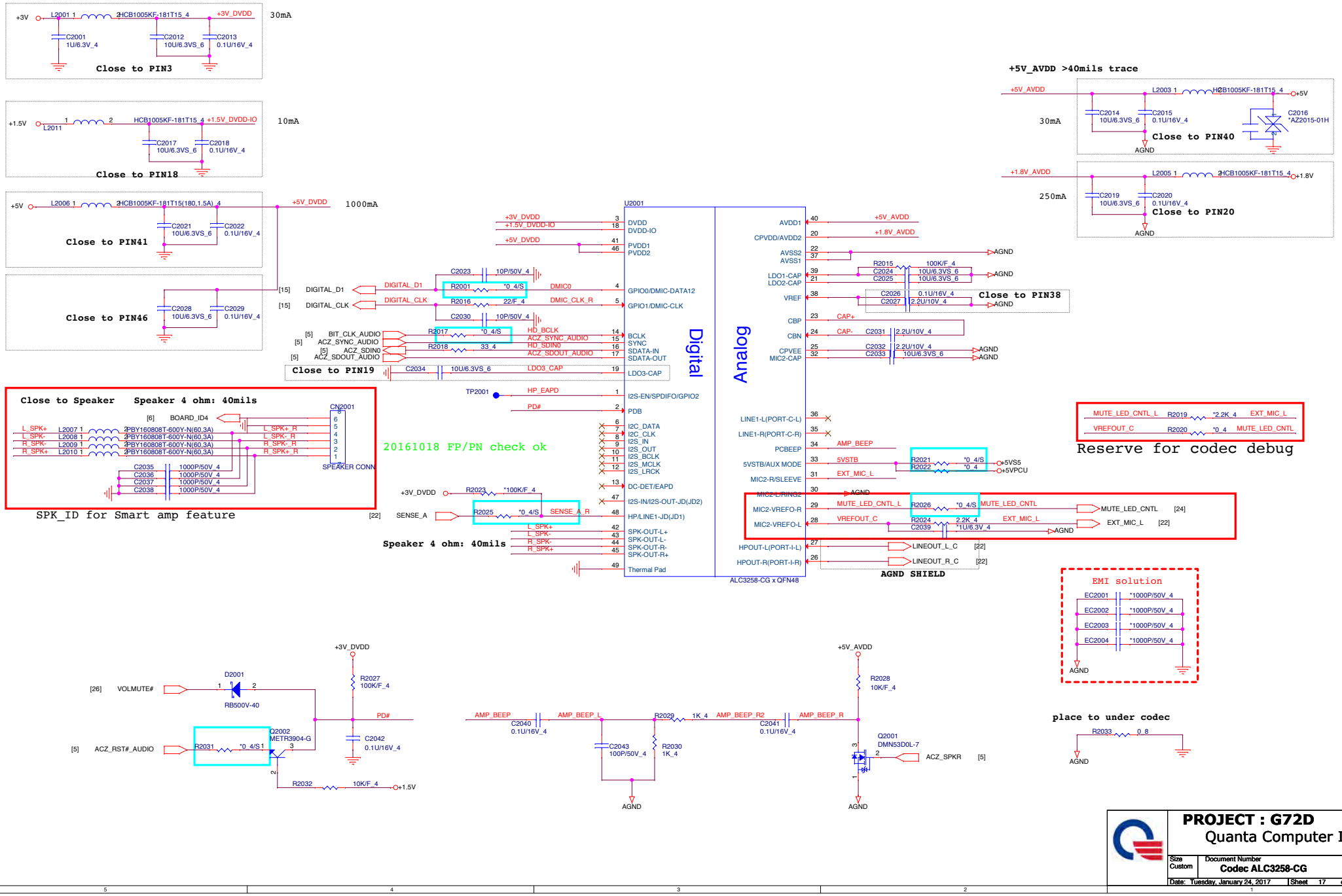
VGA NUT



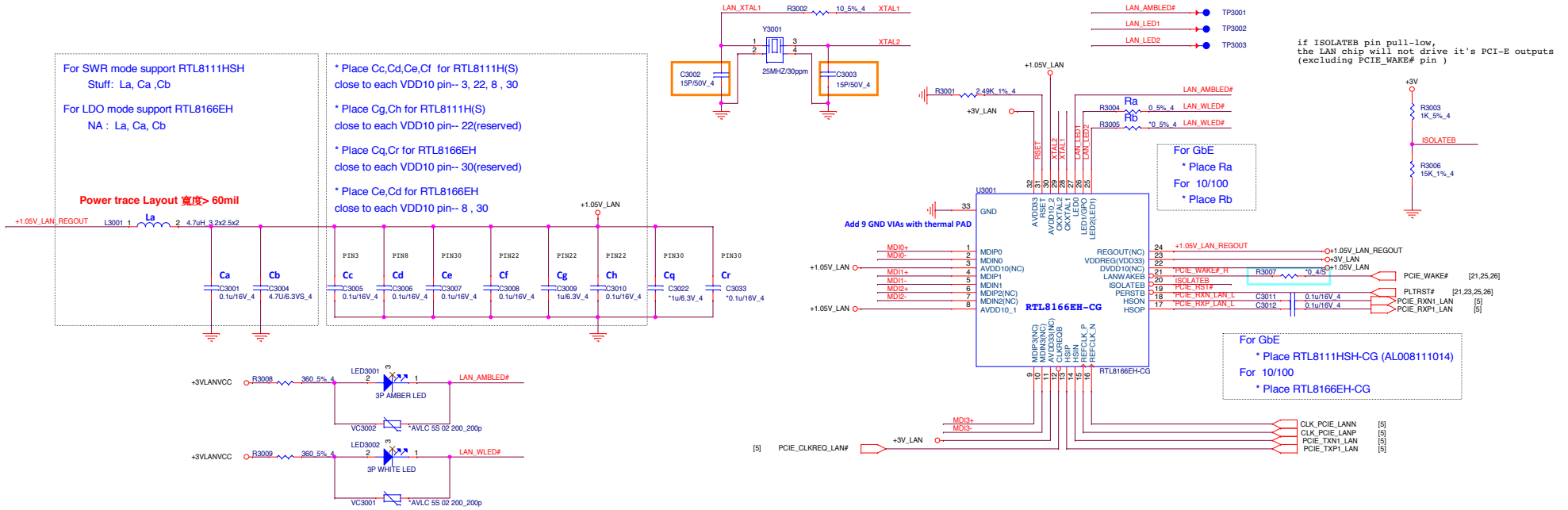


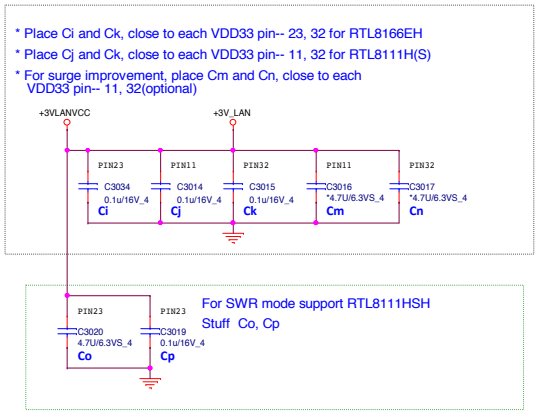
PROJECT : G72D
Quanta Computer Inc.

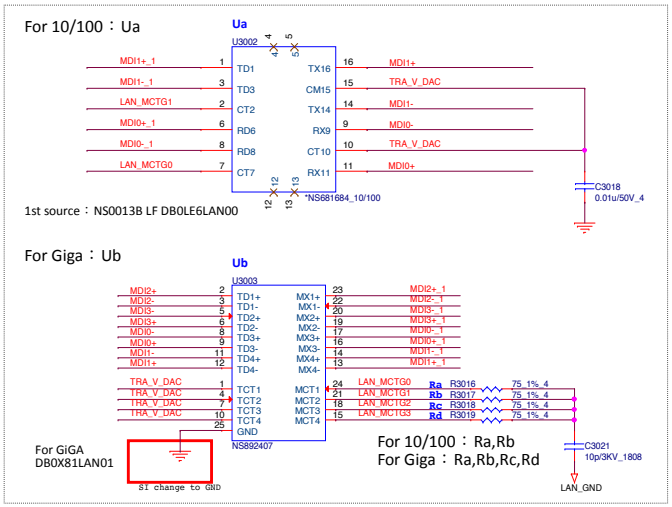
Size	Document Number	Rev
Custom	HDMI/CONN	1A
Date: Wednesday, January 25, 2017	Sheet 16 of 35	

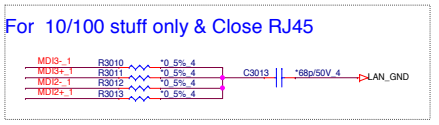

+3V
L2001 1
HCB1005KF-181T15_4
+3V_DVDD
30mA
C2001 1U/6.3V_4
C2012 10U/6.3VS_6
C2013 0.1U/16V_4
Close to PIN3
+1.5V
L2011
HCB1005KF-181T15_4
+1.5V_DVDD-IO
10mA
C2017 10U/6.3VS_6
C2018 0.1U/16V_4
Close to PIN18
+5V
L2006 1
HCB1005KF-181T15(180,1.5A)_4
+5V_DVDD
1000mA
C2021 10U/6.3VS_6
C2022 0.1U/16V_4
Close to PIN41
C2028 10U/6.3VS_6
C2029 0.1U/16V_4
Close to PIN46
+5V_AVDD >40mils trace
+5V_AVDD
L2003 1
HCB1005KF-181T15_4
+5V
30mA
C2014 10U/6.3VS_6
C2015 0.1U/16V_4
C2016 *AZ2015-01H
Close to PIN40
AGND
+1.8V_AVDD
L2005 1
HCB1005KF-181T15_4
+1.8V
250mA
C2019 10U/6.3VS_6
C2020 0.1U/16V_4
Close to PIN20
AGND
U2001
Digital
Analog
DVDD
DVDD-IO
PVDD1
PVDD2
GPIO0/DMIC-DATA12
GPIO1/DMIC-CLK
BCLK
SYNC
SDATA-IN
SDATA-OUT
LDO3-CAP
I2S-EN/SPDIFO/GPIO2
PDB
I2C_DATA
I2C_CLK
I2S_IN
I2S_OUT
I2S_BCLK
I2S_MCLK
I2S_LRCK
DC-DET/EAPD
I2S-IN/I2S-OUT-JD(JD2)
HP/LINE1-JD(JD1)
SPK-OUT-L+
SPK-OUT-L-
SPK-OUT-R-
SPK-OUT-R+
Thermal Pad
AVDD1
CPVDD/AVDD2
AVSS2
AVSS1
LDO1-CAP
LDO2-CAP
VREF
CBP
CBN
CPVEE
MIC2-CAP
LINE1-L(PORT-C-L)
LINE1-R(PORT-C-R)
PCBEEP
5VSTB/AUX MODE
MIC2-R/SLEEVE
MIC2-L/RING2
MIC2-VREFO-R
MIC2-VREFO-L
HPOUT-L(PORT-I-L)
HPOUT-R(PORT-I-R)
ALC3258-CG x QFN48
Close to PIN19
Close to PIN38
AGND SHIELD
Close to Speaker
Speaker 4 ohm: 40mils
SPEAKER CONN
SPK_ID for Smart amp feature
20161018 FP/PN check ok
Speaker 4 ohm: 40mils
Reserve for codec debug
EMI solution
place to under codec
D2001
RB500V-40
Q2002
METR3904-G
Q2001
DMN53D0L-7
ACZ_SPKR
ACZ_RST#_AUDIO
VOLMUTE#
BOARD_ID4
PD#
AMP_BEEP
AMP_BEEP_L
AMP_BEEP_R
SENSE_A
DIGITAL_D1
DIGITAL_CLK
BIT_CLK_AUDIO
ACZ_SYNC_AUDIO
ACZ_SDIN0
ACZ_SDOUT_AUDIO
HP_EAPD
MUTE_LED_CNTL_L
MUTE_LED_CNTL
VREFOUT_C
EXT_MIC_L
LINEOUT_L_C
LINEOUT_R_C
5VSTB
+5VS5
+5VPCU
PROJECT : G72D
Quanta Computer Inc.
Codec ALC3258-CG
Size Custom
Rev 1A
Date: Tuesday, January 24, 2017
Sheet 17 of 35

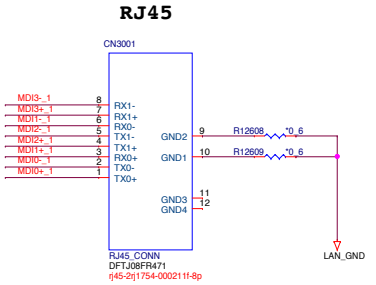
LAN RTL8166EH/RTL8111HSH









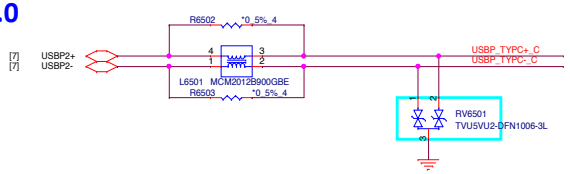


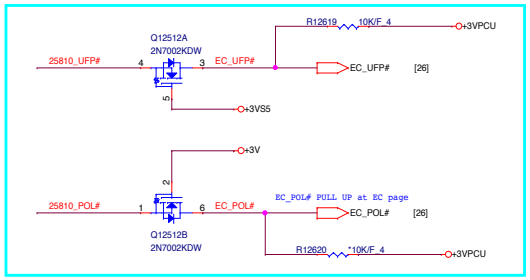
20161027 FP/PN check ok

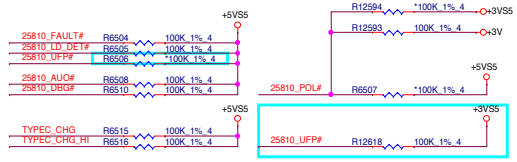
PROJECT : G72D		
Quanta Computer Inc.		
Size: C	Document Number: LAN RTL8166EH/RTL8111HSH	Rev: 1A
Date: Tuesday, January 24, 2017	Sheet 18 of 35	

USB TYPE-C - TPS25810

USB2.0







CHG	CHG_HI	CC Capability Broadcast	Current Limit	Load Detect Threshold
0	0	STD	1.67 A	NA
0	1	STD	1.67 A	NA
1	0	1.5 A	1.67 A	NA
1	1	3.0 A	3.34 A	1.77 A

PV add To judge the usb typeC port for factory

USB Type-C re driver

to Type C SW

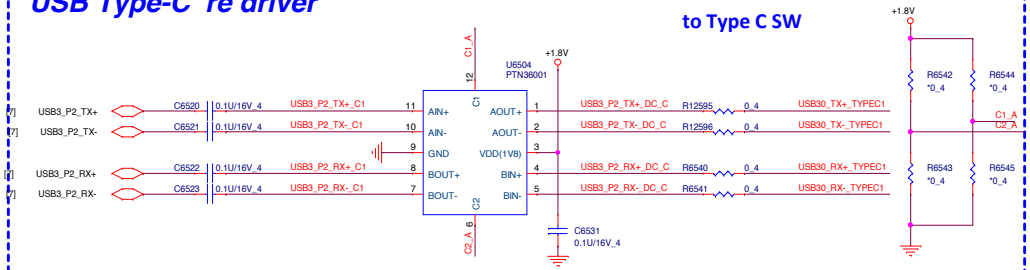
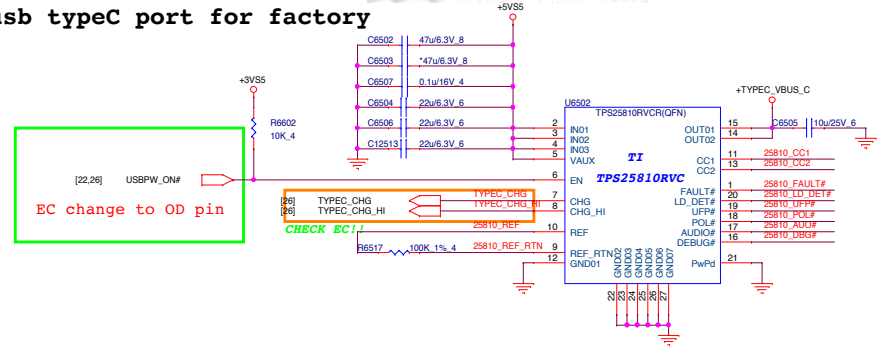


Table 4. C1 pin controls long/medium/short traces

State	Channel type	Pin C1 state	Channel B	Channel A	
			EQ[1]	DE[2]	OS[2]
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

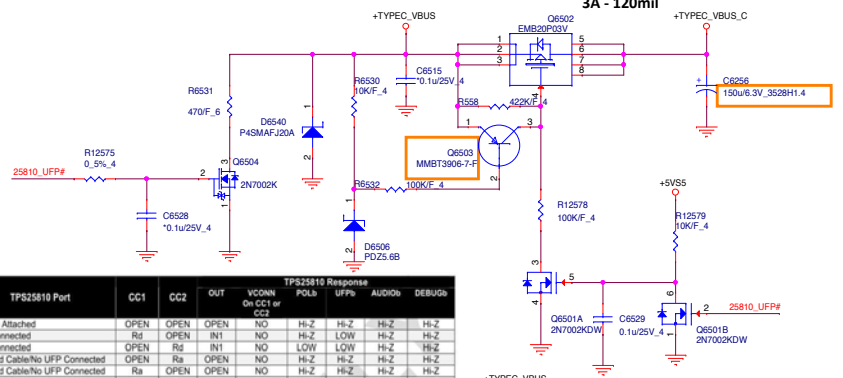
Table 5. C2 pin controls long/medium/short traces

State	Channel type	Pin C2 state	Channel A	Channel B	
			EQ[1]	DE[2]	OS[2]
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



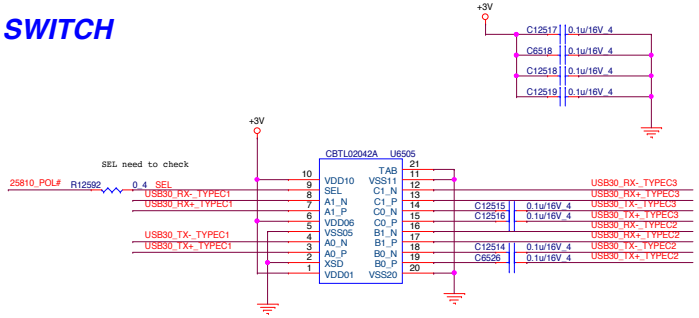
3A - 120mil

3A - 120mil



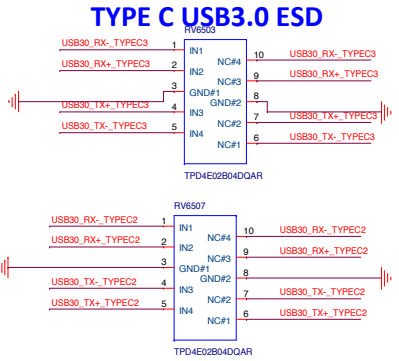
TPS25810 Port	CC1	CC2	TPS25810 Response OUT	VCONN On CC1 or CC2	POLb	UFPb	AUDIOb	DEBUGb
Nothing Attached	OPEN	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
UFP Connected	Rd	OPEN	IN1	NO	Hi-Z	LOW	Hi-Z	Hi-Z
UFP Connected	OPEN	Rd	IN1	NO	LOW	LOW	Hi-Z	Hi-Z
Powered Cable/No UFP Connected	OPEN	Ra	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
Powered Cable/No UFP Connected	Ra	OPEN	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	Hi-Z
Powered Cable/UFP Connected	Rd	Ra	IN1	CC2	Hi-Z	LOW	Hi-Z	Hi-Z
Powered Cable/UFP Connected	Ra	Rd	IN1	CC1	LOW	LOW	Hi-Z	Hi-Z
Debug Accessory Connected	Rd	Rd	OPEN	NO	Hi-Z	Hi-Z	Hi-Z	LOW
Audio Adapter Accessory Connected	Ra	Ra	OPEN	NO	Hi-Z	Hi-Z	LOW	Hi-Z

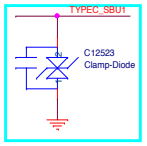
USB SWITCH

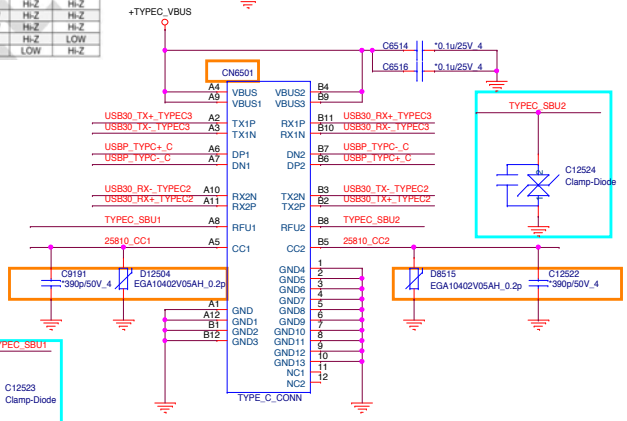


SEL = CMOS single-ended input operation mode select
SEL = LOW: A <---> B
SEL = HIGH: A <---> C

TYPE C USB3.0 ESD







PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
	TYPE-C+TPS25810	1A

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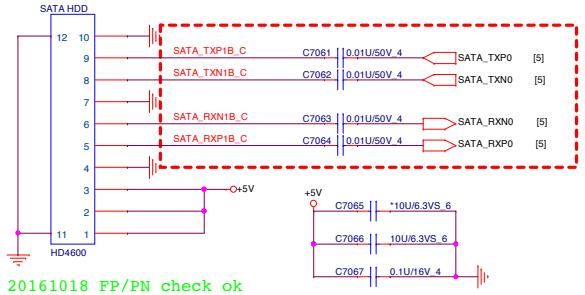
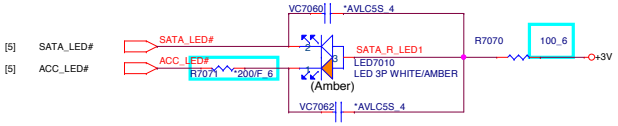
HDD

SATA HDD

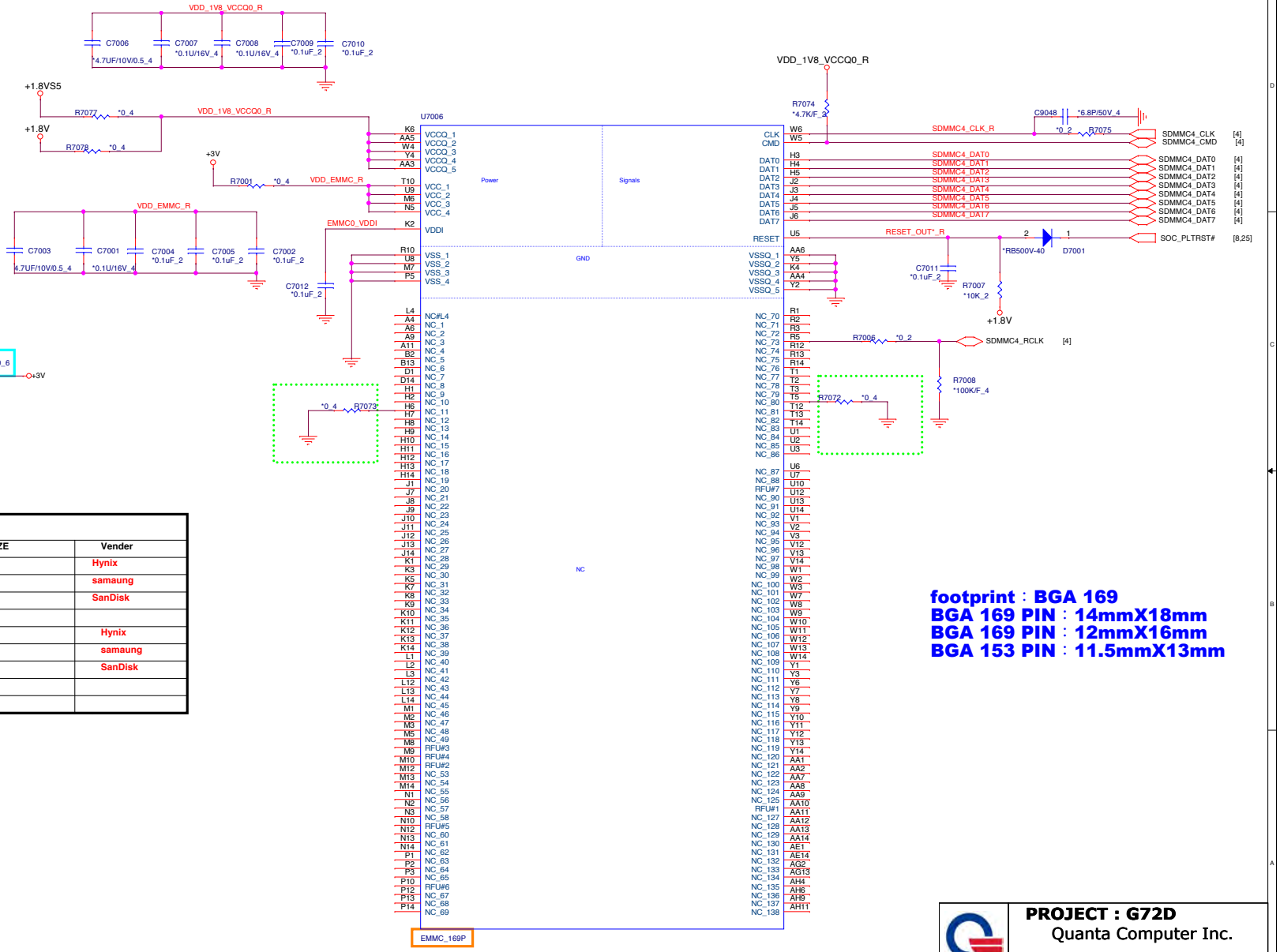


20161018 FP/PN check ok

SATA LED



eMMC



iNAND (eMMC) V4.51

TOPBSQ	QBCON	Description	SIZE	Vender
AKE3SZ-TW01	AKE3SZ-TW02	IC FLASH(153P)H26M64103EMR(FBGA)	32G	Hynix
AKE5SZ0T511	AKE5SZ0T512	IC FLASH(153)KLMBG4GEND-B031(FBGA)	32G	samaung
AKE3SFUT000	AKE3SFUT001	IC FLASH(153P)SDIN9DW4-32G(FBGA)	32G	SanDisk
AKE3TG-TW01	AKE3TG-TW02	IC FLASH(153P)H26M78103CCR(FBGA)	64G	Hynix
AKE3TZPT521	AKE3TZPT520	IC FLASH(153)KLMCG8GEND-B031(FBGA)	64G	samaung
AKE3TFUT101	AKE3TFUT102	IC FLASH(153P)SDIN9DW4-64G(FBGA)	64G	SanDisk

footprint : BGA 169
BGA 169 PIN : 14mmX18mm
BGA 169 PIN : 12mmX16mm
BGA 153 PIN : 11.5mmX13mm

PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	HDD/EMMC	1A

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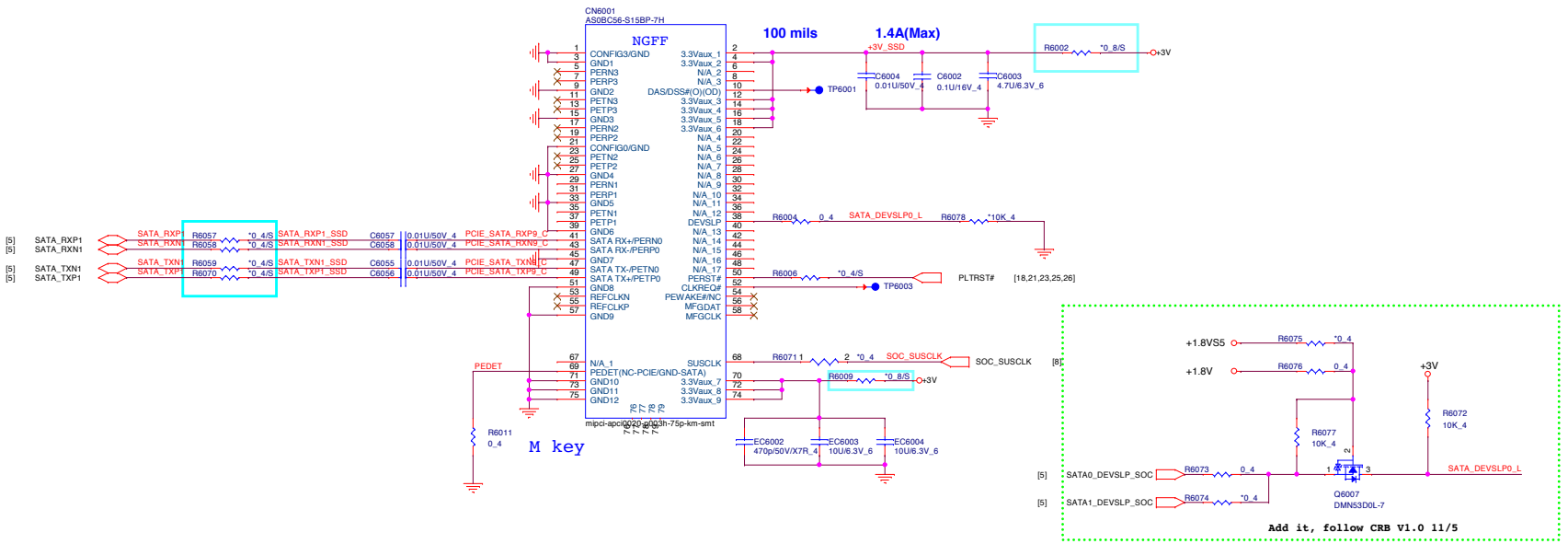
SATA SSD

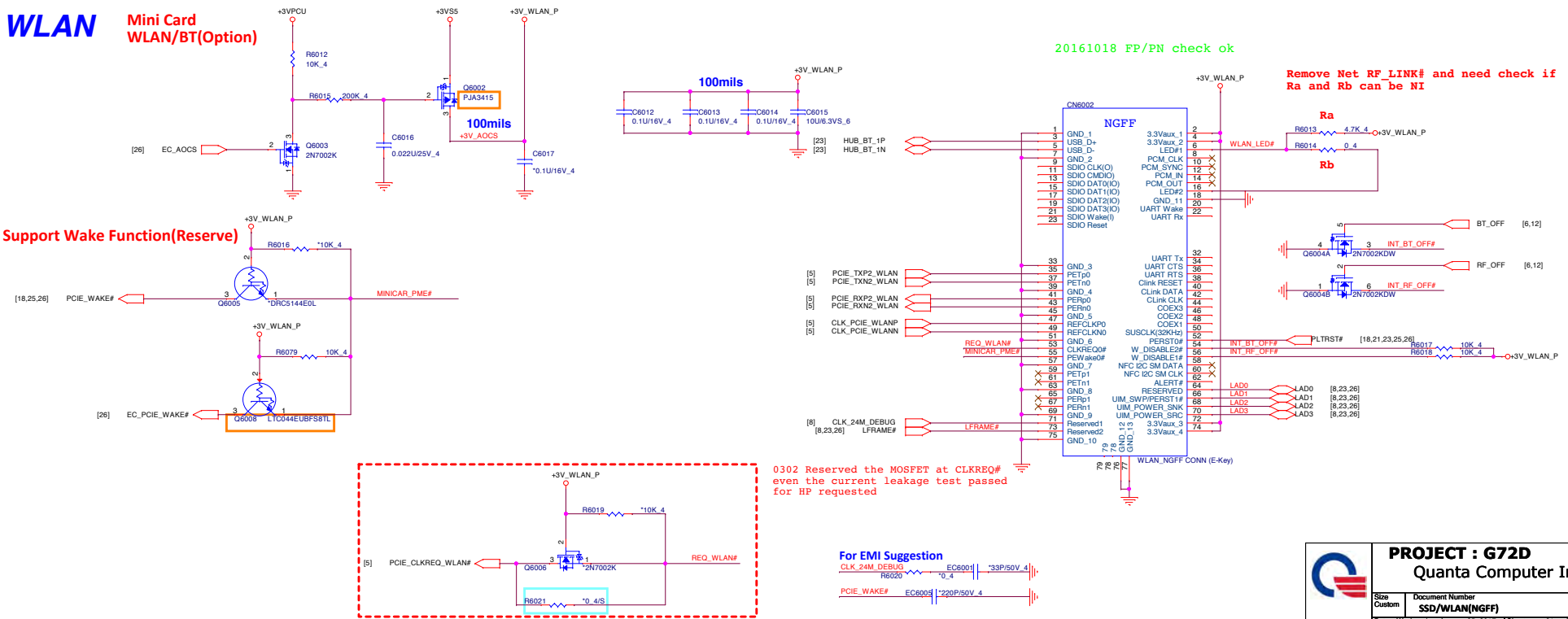
20161018 FP/PN check ok



WLAN

Mini Card
WLAN/BT(Option)

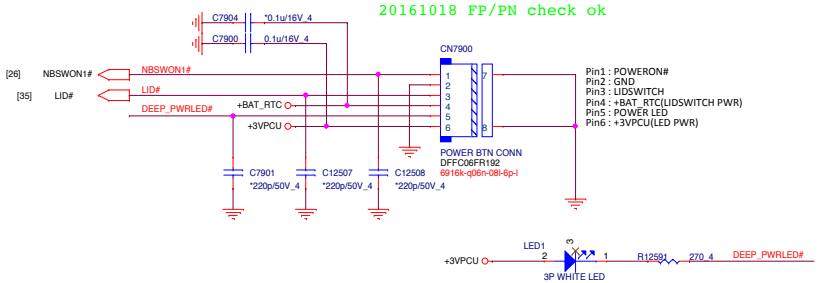
20161018 FP/PN check ok



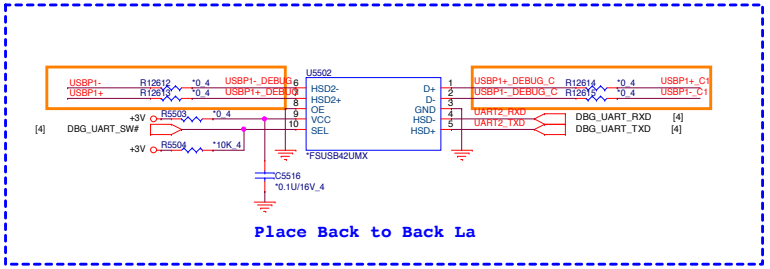
PROJECT : G72D
Quanta Computer Inc.
Size: Custom | Document Number: SSD/WLAN(NGFF) | Rev: 1A
Date: Wednesday, January 25, 2017 | Sheet 21 of 35

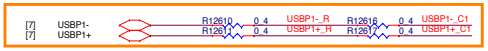
Power Botton Connector

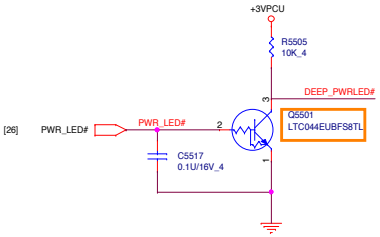
20161018 FP/PN check ok



UART for Win7 WHQL DEBUG

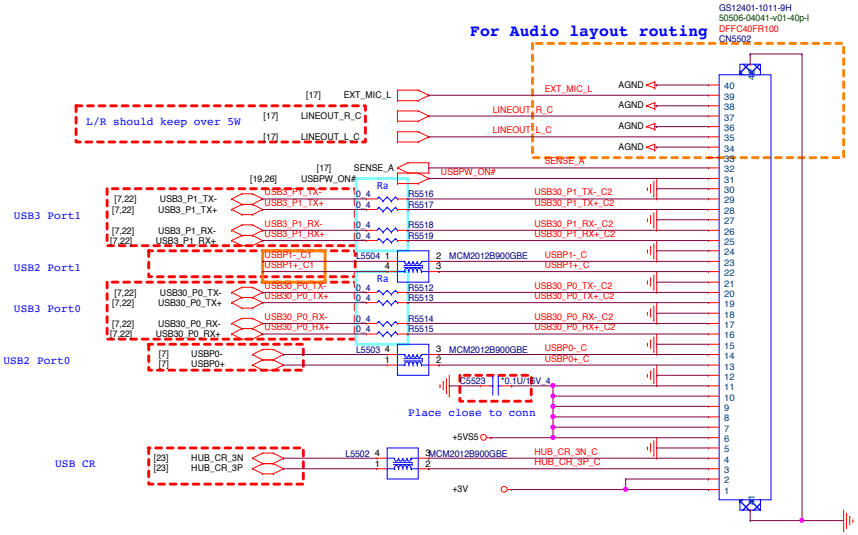






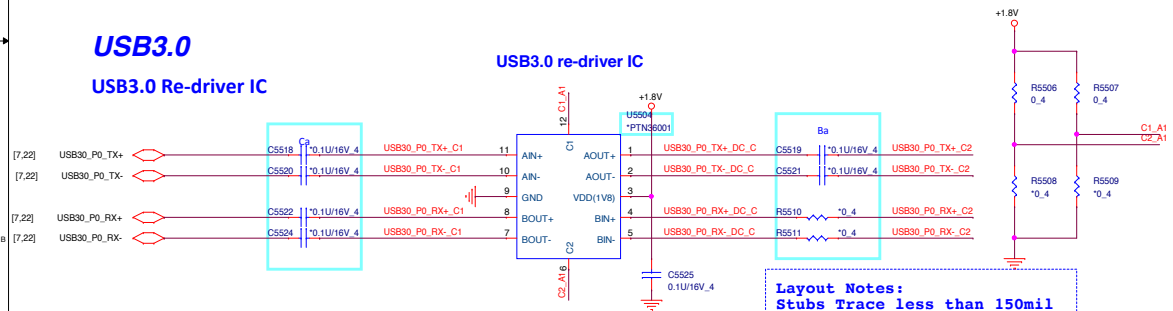
20161026 FP/PN check ok

Daughter Board



USB3.0

USB3.0 Re-driver IC

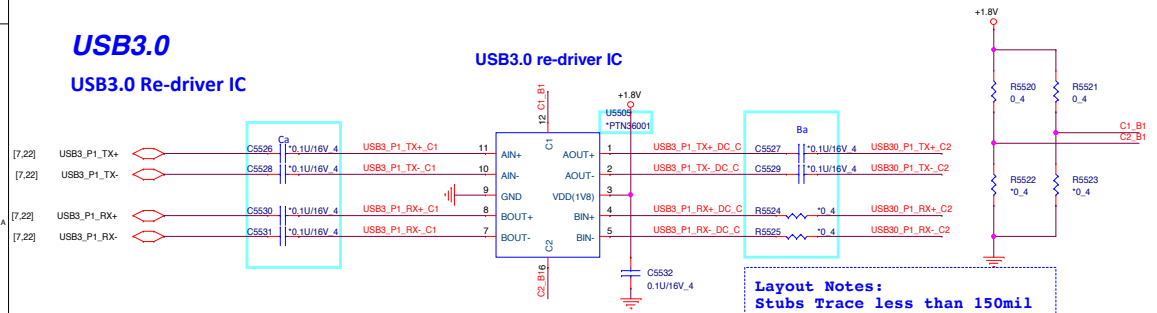


SOC to CON--> Stuff Ra, remove Ca,Ba

SOC to re-driver to conn--> Stuff Ca,Ba, remove Ra

USB3.0

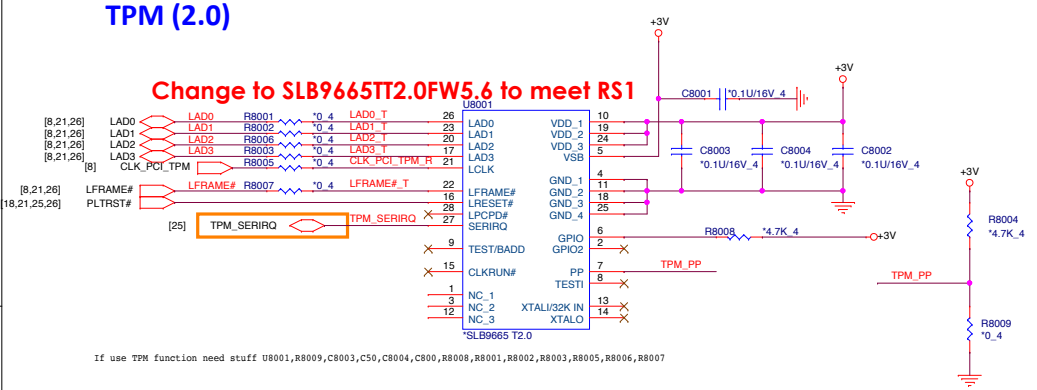
USB3.0 Re-driver IC



PROJECT : G72D Quanta Computer Inc.		
Size: C	Document Number: USB3.0/DB	Rev: 1A
Date: Wednesday, January 25, 2017	Sheet 22 of 35	

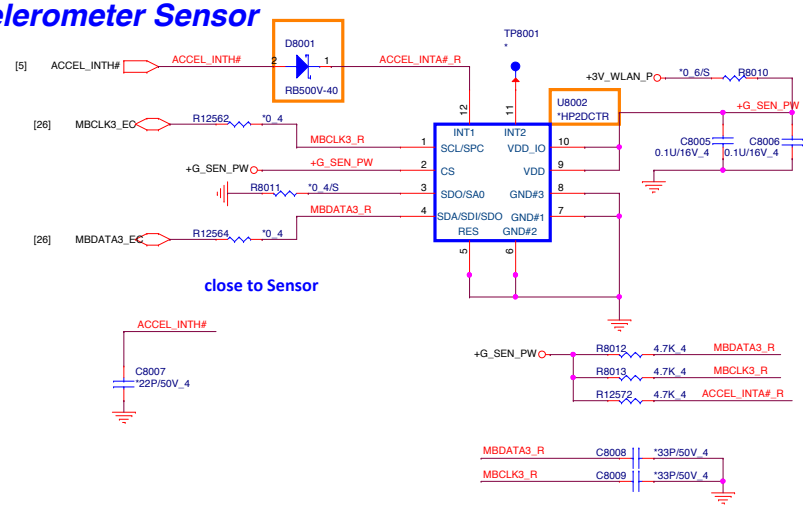
TPM (2.0)

Change to SLB9665TT2.0FW5.6 to meet RS1

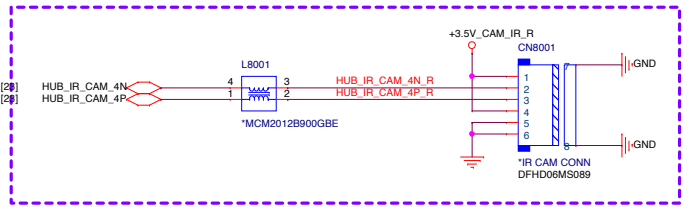


If use TPM function need stuff U8001,R8009,C8003,C50,C8004,C800,R8008,R8001,R8002,R8003,R8005,R8006,R8007

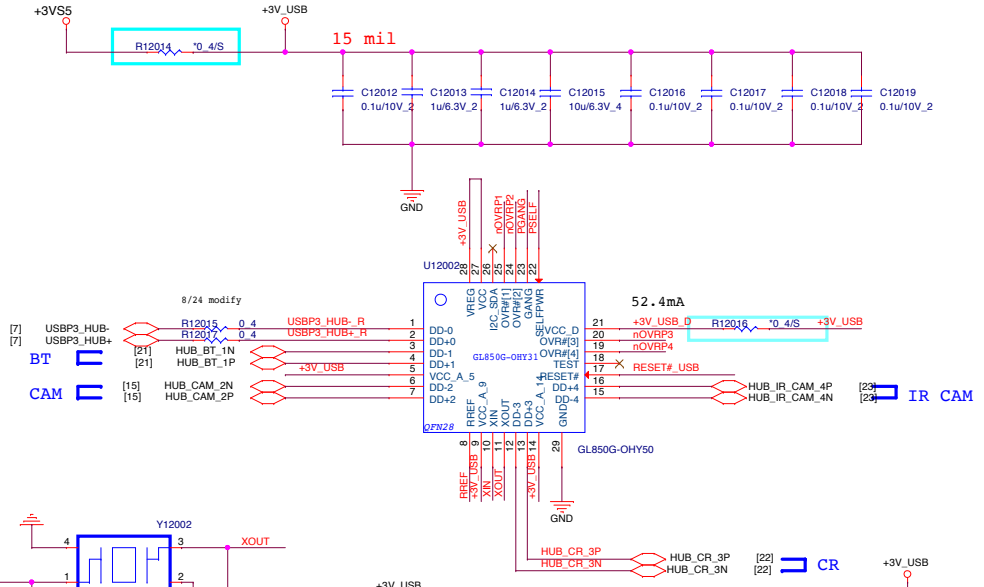
Accelerometer Sensor

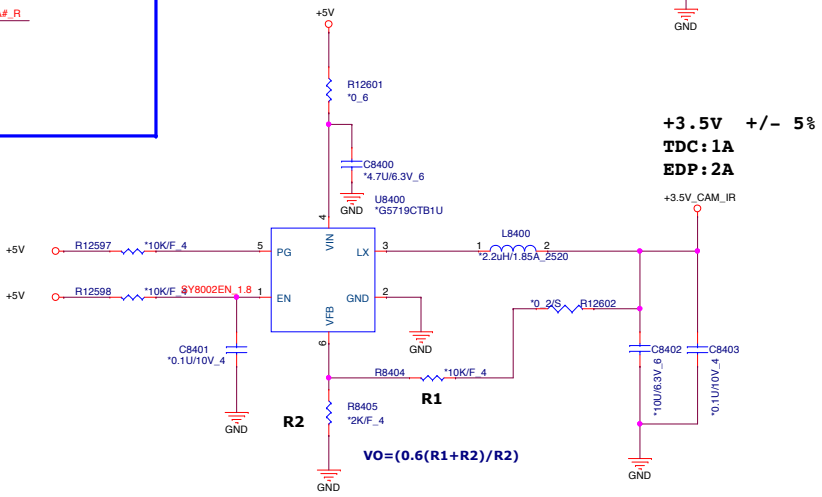


IR CAM



USB HUB





PROJECT : G72D		
Quanta Computer Inc.		
Size: Custom	Document Number: TPM/G-Sensor/IR CAM/HUB	Rev: 1A
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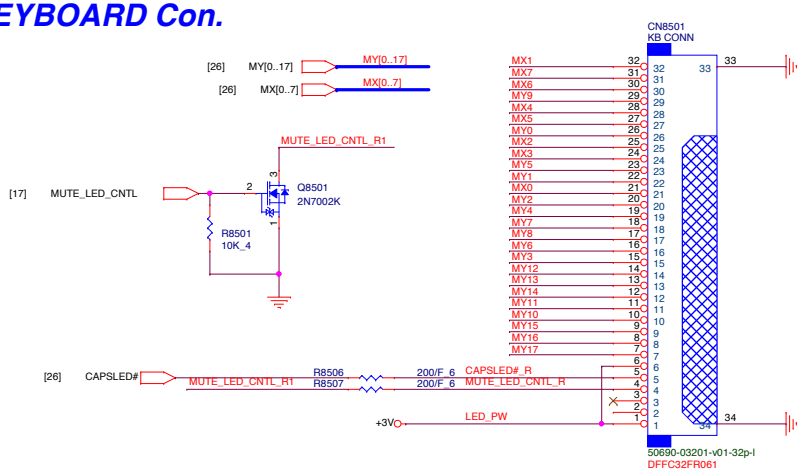
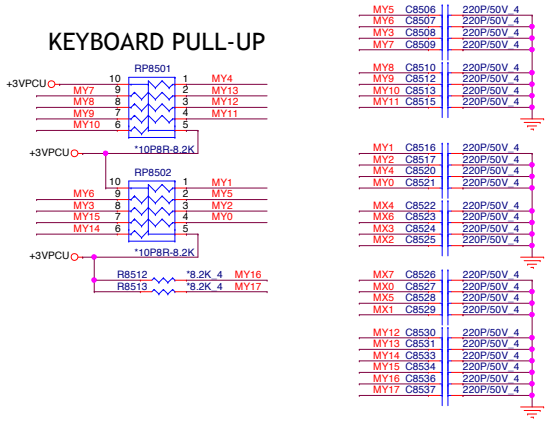
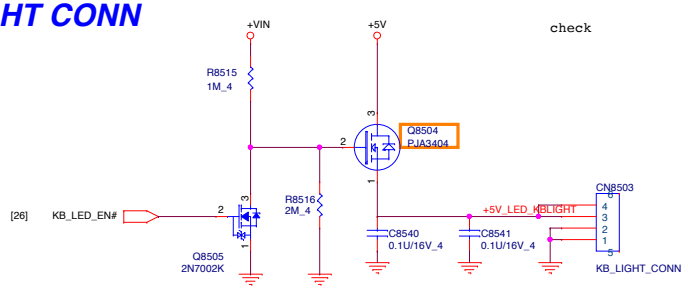
KEYBOARD Con.



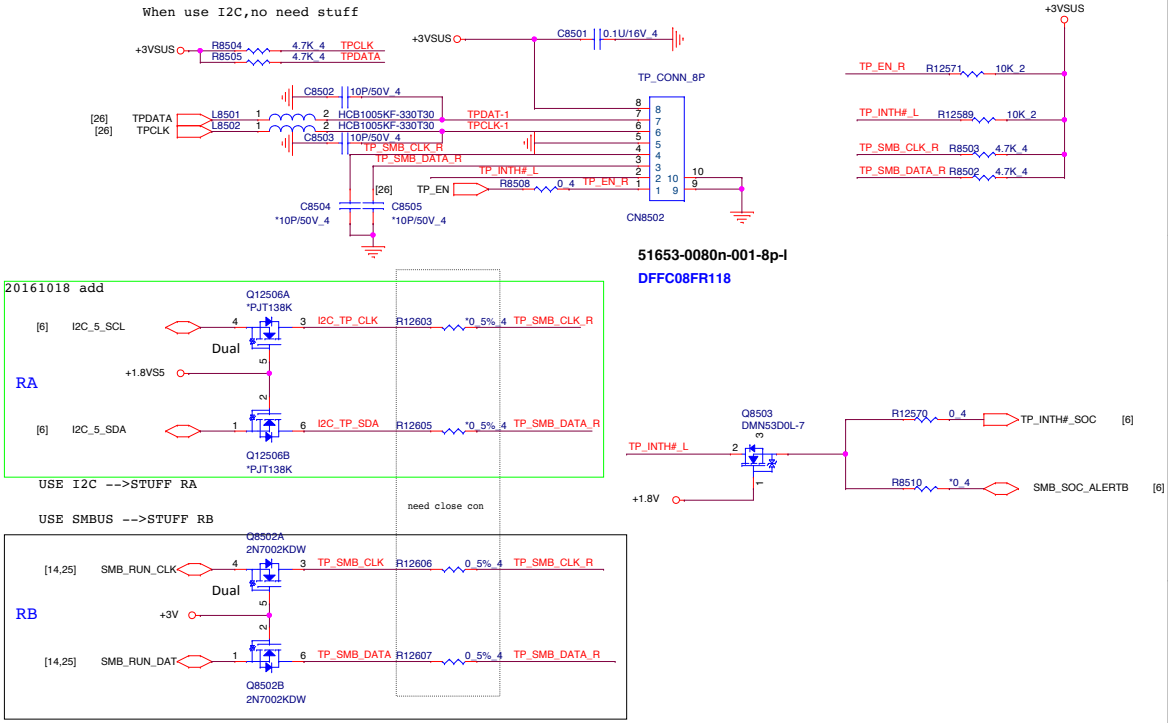
KEYBOARD PULL-UP



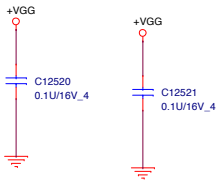
KB LIGHT CONN



Touch Pad Connector



Cap



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	KB/TP/FAN	1A

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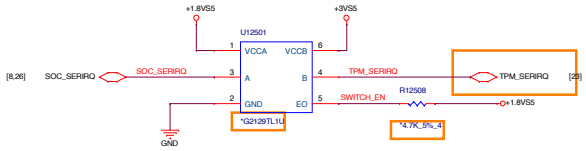
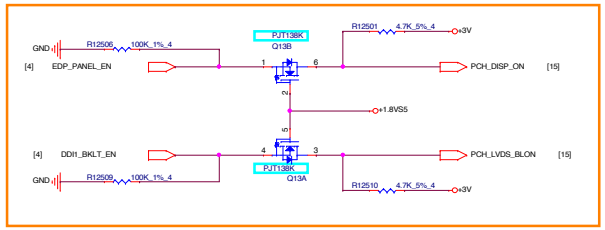
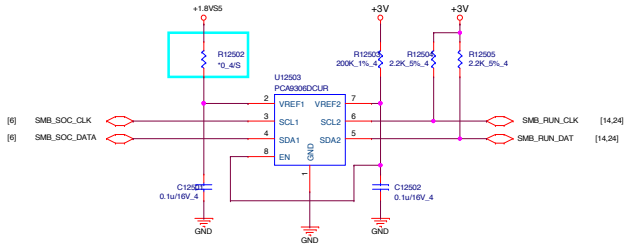
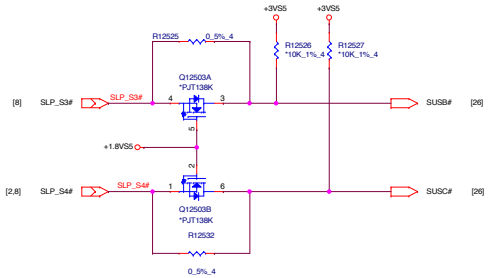
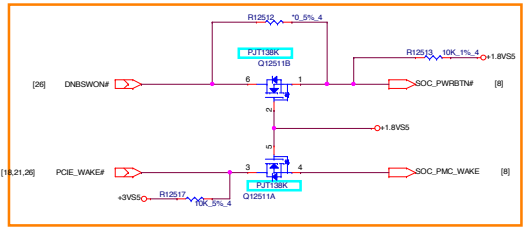
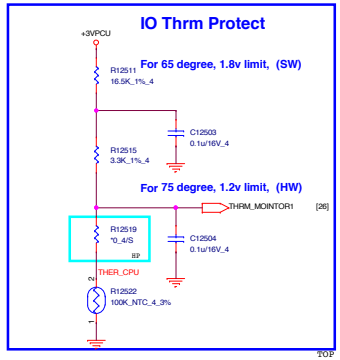


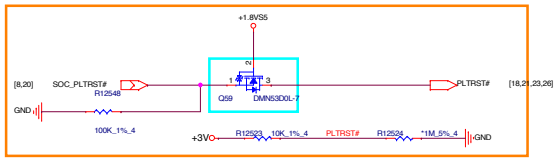


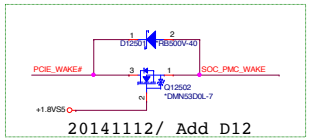




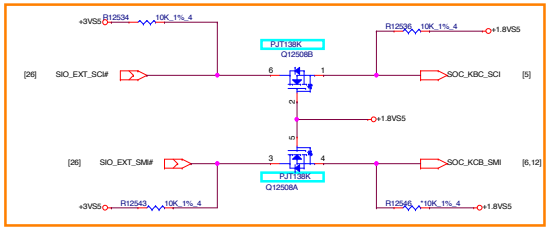


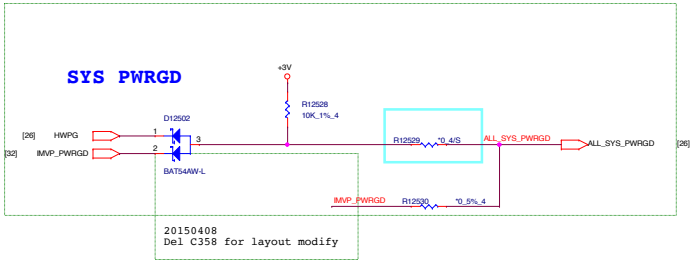




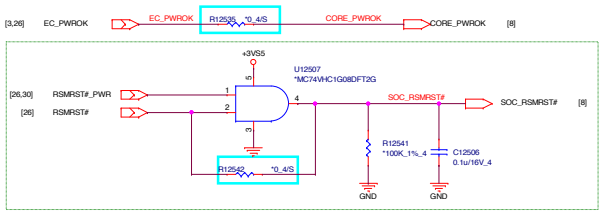


20141112/ Add D12





20150408
Del C358 for layout modify

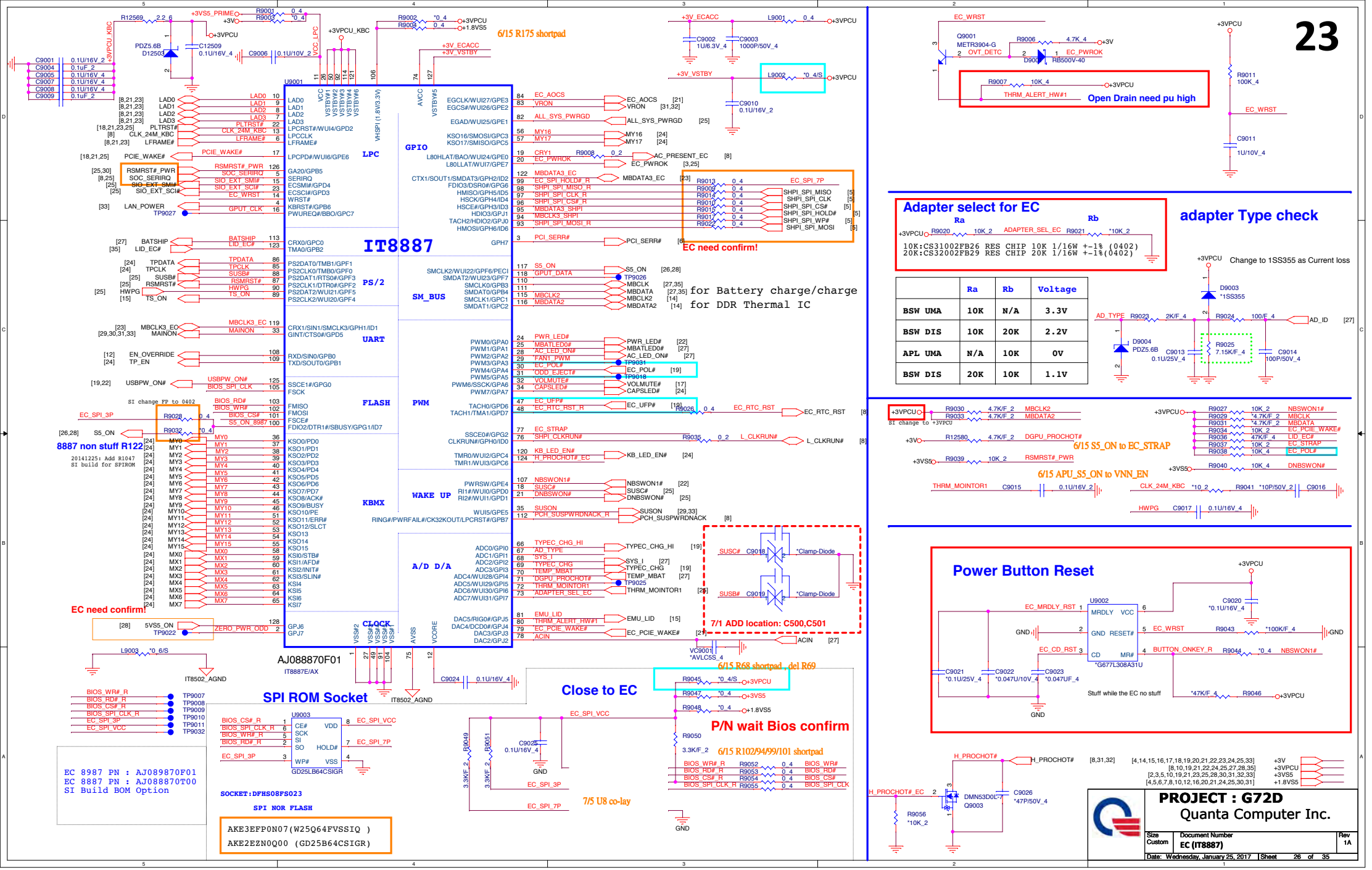


11/5 Add AND gate

PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
	Level shift/Thermistor	1A

Date: Wednesday, January 25, 2017 Sheet 25 of 35



	Ra	Rb	Voltage
BSW UMA	10K	N/A	3.3V
BSW DIS	10K	20K	2.2V
APL UMA	N/A	10K	0V
BSW DIS	20K	10K	1.1V

+3VPCU [8,10,19,21,22,24,25,26,27,28,35]
+5VPCU [17,28,30,33]
+BAT_RTC [8,22,35]
+VIN [15,24,28,29,30,31,32,34]
+3VPCU [8,10,19,21,22,24,25,26,27,28,35]

ADP=65W

3S1P 41Whr

CN1 51483-00801-V01_Header

PL2 *Short_0805 +VA

PQ2 AP0203GMT-HF

PQ3 EMB20N03V **N-channel**

PQ1 AON6414AL +BATCHG

PL1 *Short_0805

PL3 *Short_0805

CN2 BBP28BC-B401Q-9H

PC5 0.1u/25V_4

PL4 *Short_0805

PC6 0.1u/25V_4

PD1 P4SMAFJ20A

PC8 2200p/50V_4

PC9 0.1u/50V_6

PR3 3M_5%_4

PR4 1M_5%_4

PQ4 2N7002K

PR5 4.02K_1%_4

PC7 0.01u/50V_4

PC3 0.1u/25V_4

PC4 0.1u/25V_4

PR6 330_5%_4

PR7 330_5%_4

PC10 *100p/50V_4

PC11 *100p/50V_4

PD3 *PDZ5.6B

PD4 *PDZ5.6B

PR1 200K_5%_4

PR2 1K_1%_4

PC1 0.01u/50V_4

PC2 0.01u/50V_4

PR8 0.01_1%_12

PD2 *P4SMAFJ20A

PR9 *Short_0201

PR10 *Short_0201

PR11 4.02K_1%_4

PR12 4.02K_1%_4

PC12 0.1u/25V_4

PC13 0.1u/25V_4

PC14 0.1u/25V_4

PC15 1u/16V_4

PU1 **BQ24728HRGRR**

CMSRC ACP ACN REGN HIDRV BTST PHASE LODRV GND#1 GND#2 ACDRV ACPRES VCC SDA SCL ACDET ILIM IOUT SRP SRN BATDRV

PR13 2.43K_1%_6

PQ5 METR3904-G

PR15 75K_1%_4

PR16 *100K_1%_4

PC20 0.1u/25V_4

PR21 2.43K_1%_6

PQ8 METR3904-G

PR26 75K_1%_4

PR29 *100K_1%_4

PC26 0.1u/25V_4

PR18 100K_1%_4

PR20 100K_1%_4

PD40 BAS316

PD41 BAS316

PR23 22_5%_8

PC27 0.47u/25V_6

PR17 1_5%_6

PD6 RB500V-40

PC21 0.047u/25V_4

PQ6 EMB20N03V

PQ7 EMB20N03V

PC16 4.7u/25V_8

PC17 0.1u/25V_4

PC18 2200p/50V_4

PL5 4.7uH_7x7x3

PR19 0.01_1%_12

PR22 *2.2_5%_6

PC25 *2200p/50V_4

PR24 *Short_0201

PR25 *Short_0201

PC22 10u/25V_8

PC23 10u/25V_8

PC24 0.1u/25V_4

PD7 *RB500V-40

PC28 0.1u/25V_4

PR28 10_1%_6

PC29 0.1u/25V_4

PR31 5.6_1%_6

PC30 0.1u/25V_4

PR27 *Short_0402

PR30 *Short_0402

PR32 430K_1%_4

PR34 69.8K_1%_4

PR35 88.7K_1%_4

PC31 *0.1u/50V_6

PR38 100K_1%_4

PR41 43.2K_1%_4

PR36 300_5%_4

PC32 100p/50V_4

PC33 2200p/50V_4

PR37 470_5%_8

PQ10 2N7002K

PR39 1M_5%_4

PR42 1M_5%_4

PQ9 2N7002K

PR44 75K_1%_4

PR45 3.9K_1%_4

PQ11 METR3904-G

VIN>22.5V (AC OVP)
VIN>17.2V (Enable Charging)
VIN>15.2V (AC present)

Vacdet=2.4V

Ra

MIN. BATV=7.2V

Place this ZVS close to DCIN CONN

Do Not add test pad on BATDIS_G signal

Place this ZVS close to Far-Far away +VIN

Place this cap close to EC

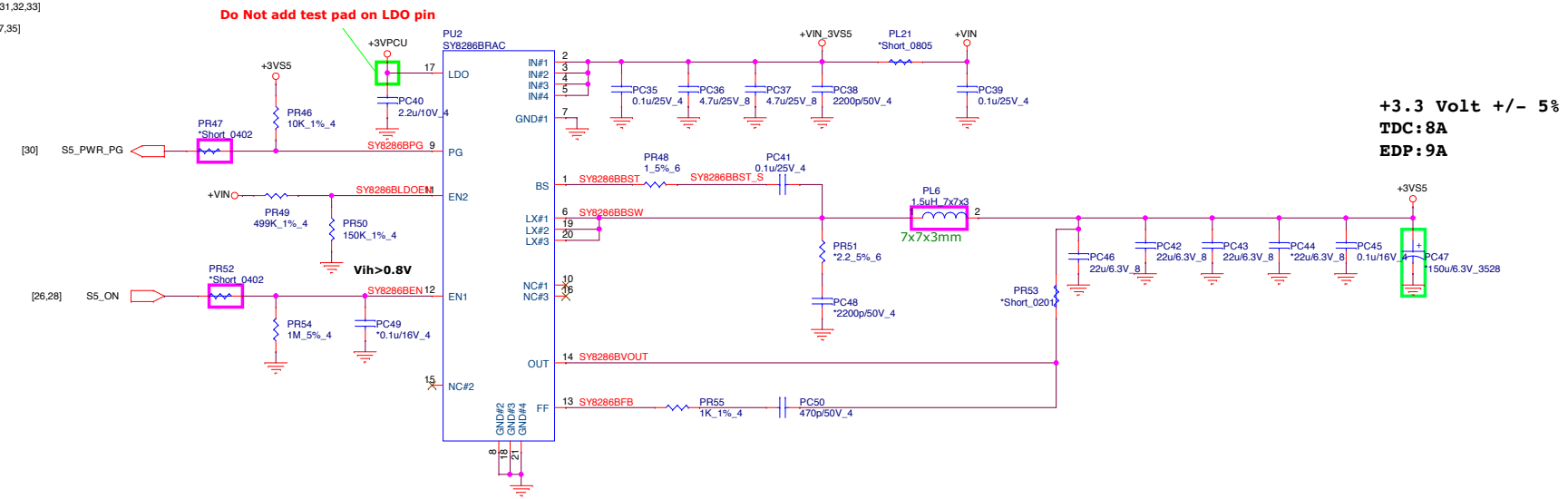
Place this R&C close to EC

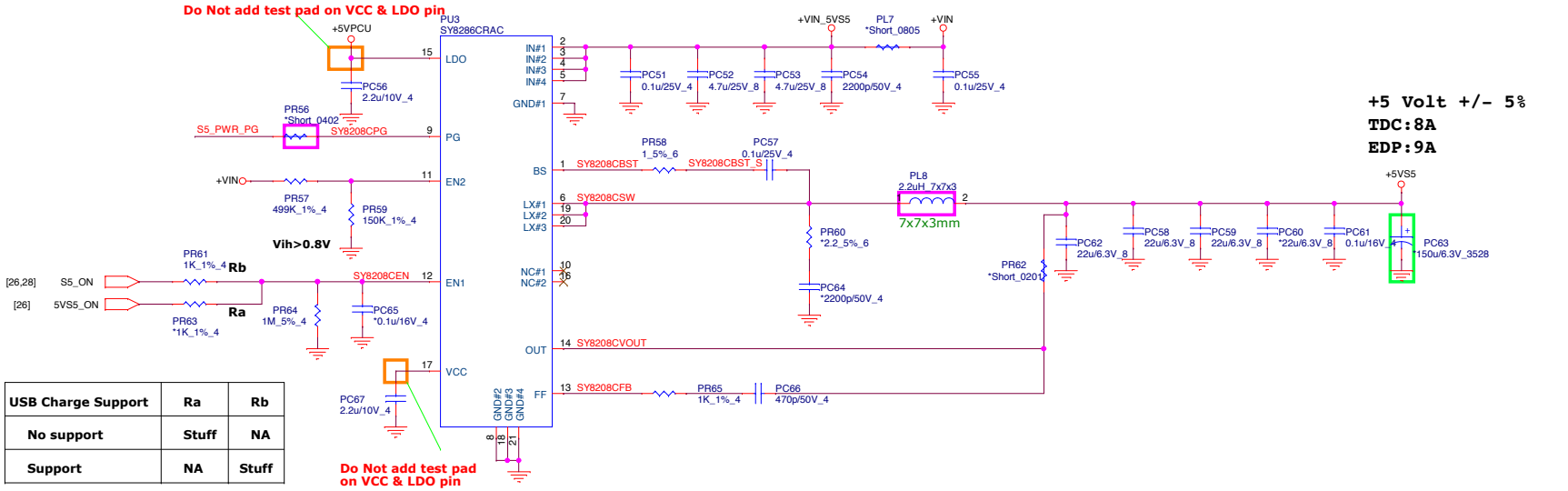
Size: Custom	Document Number: Charger (BQ24738H)	Rev: 1A
Date: Wednesday, January 25, 2017	Sheet 27 of 35	

PROJECT : G72D
Quanta Computer Inc.

DC/DC +3VS5/+5VS5

+VIN [15,24,27,29,30,31,32,34]
+3VS5 [2,3,5,10,19,21,23,25,26,30,31,32,33]
+5VS5 [17,19,22,29,30,31,32,33]
+3VPCU [8,10,19,21,22,24,25,26,27,35]
+5VPCU [17,27,30,33]



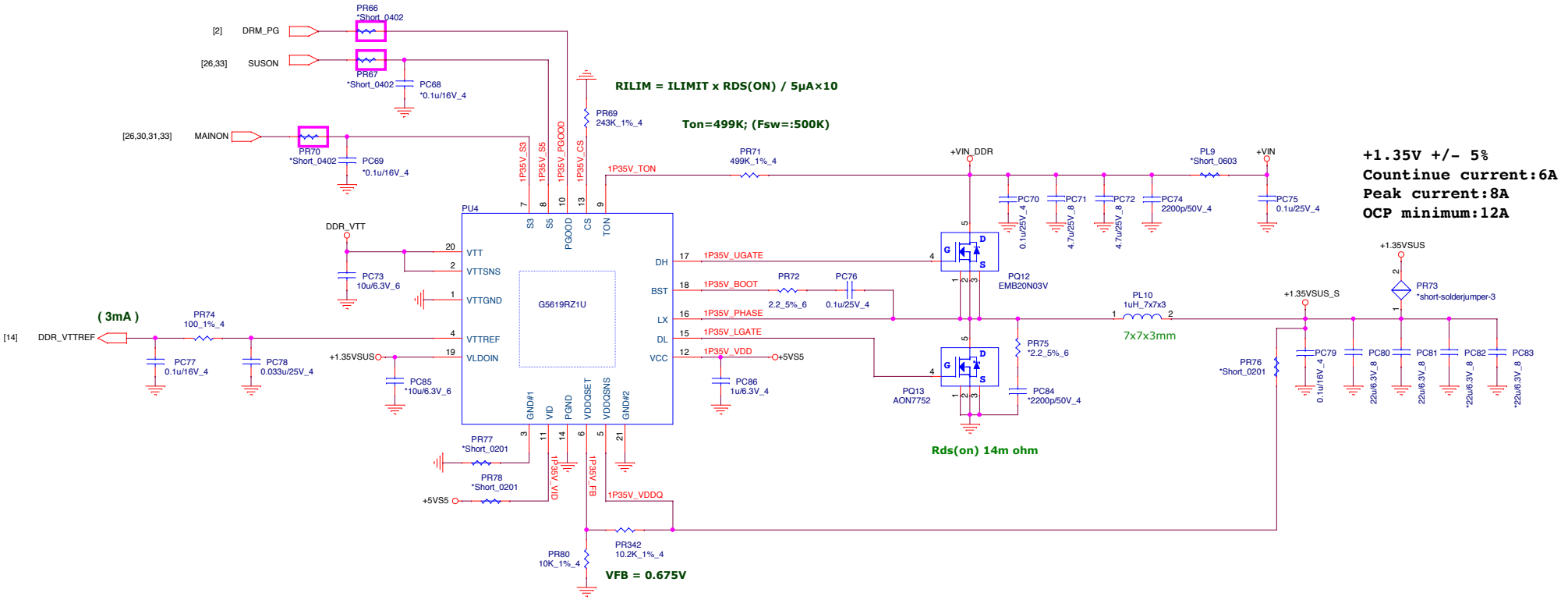


USB Charge Support	Ra	Rb
No support	Stuff	NA
Support	NA	Stuff

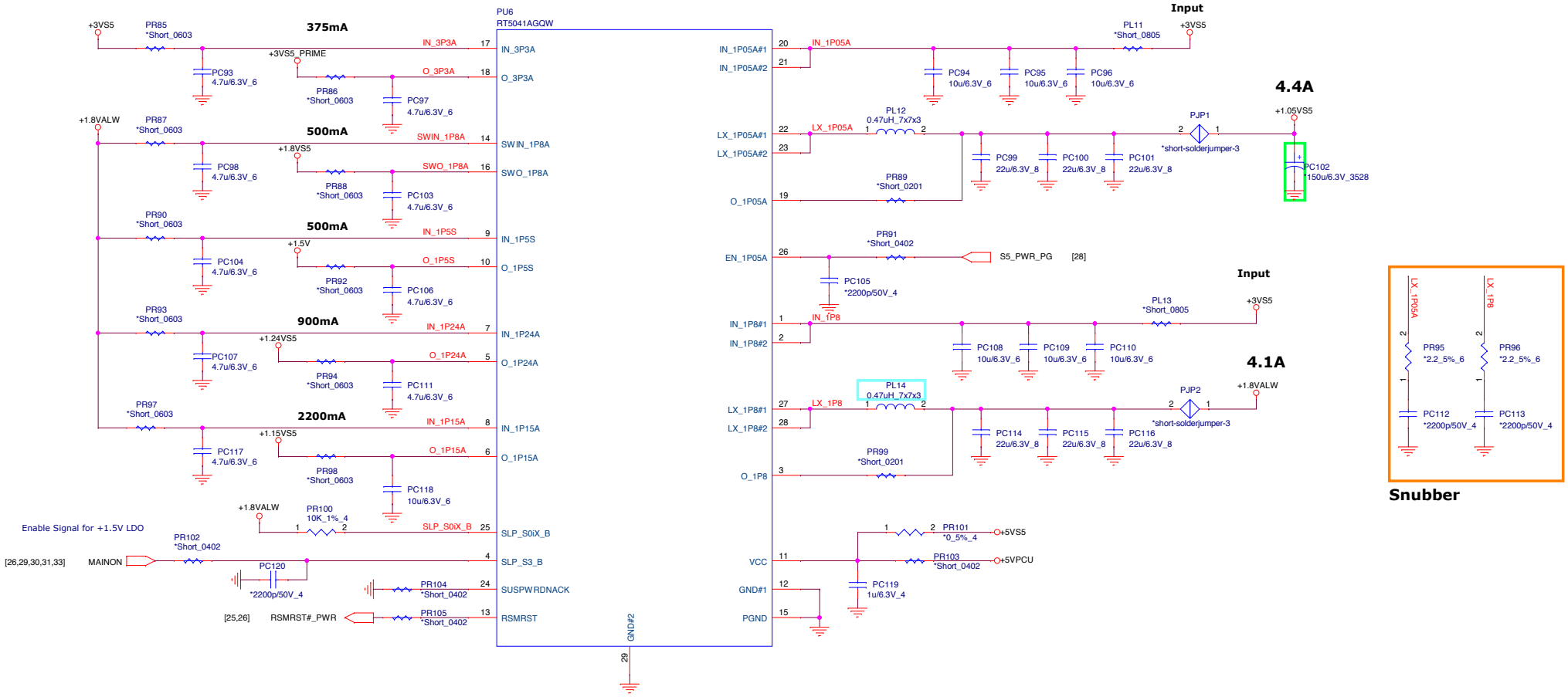
PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	3/5VS5 (SY8208B/SY8208C)	1A
Date: Tuesday, January 24, 2017	Sheet 28 of 35	

+VIN [15,24,27,28,30,31,32,34]
+5VS5 [17,19,22,28,30,31,32,33]
+1.35VSUS [2,3,10,14]
DDR_VTT [14]



PROJECT : G72D		
Quanta Computer Inc.		
Size: Custom	Document Number: DDR4 (G5619RZ1U)	Rev: 1A
Date: Tuesday, January 24, 2017	Sheet 29 of 35	



PROJECT : G72D Quanta Computer Inc.			
Size: Custom	Document Number: 1.05VS5/1.8VS5/1.24VS5		Rev: 1A
Date: Tuesday, January 24, 2017	Sheet 30 of 35		

+3VS5 [2,3,5,10,19,21,23,25,26,28,30,32,33]
+1.05VS5 [8,9,30,32]
+5VS5 [17,19,22,28,29,30,32,33]
+VGG [9,24]
+1.8VS5 [4,5,6,7,8,10,12,16,20,21,24,25,26,30]
+VIN [15,24,27,28,29,30,32,34]

+1.05VS5
PR112 301_1%_4
PR113 *200_1%_4
PR114 200_1%_4
PC125 *0.1u/16V_4
VR_SVID_DATA
VR_SVID_ALERT#
VR_SVID_CLK

+5VS5 PR115 2.2_5%_6 8171VCC2
PC126 1u/6.3V_4
PVCC2 PR116 2.2_5%_6 +5VS5
PC127 2.2u/6.3V_6
Fsw=:600KHz

PU7 RT8175AGQW
VCC PVCC
TONSET PR119 1M_1%_4 PR117 2.2_5%_4 PR121 1_5%_6 PC135 0.1u/25V_4
UGATE UGATE_VGG
BOOT BOOT_VGG PC137 0.1u/25V_4
PHASE PHASE_VGG
LGATE LGATE_VGG
NC
ISENP ISEN1P_VGG
ISENN ISEN1N_VGG
IMON
VREF
VSEN
COMP COMP_VGG
FB FB_VGG
RGND GND_VGG
TSEN TSEN_VGG
DRV_EN#1
DRV_EN#2
VBOOTSEL
PGND GND IBIAS
VR_READY VR_READY_VGG
EN VRON_VGG
VR_HOT
VCLK VCLK_VGG
ALERT ALERT#_VGG
VDIO VDIO_VGG
SETGND
SET1 SET1_VGG
SET2 SET2_VGG
SET3 SET3_VGG

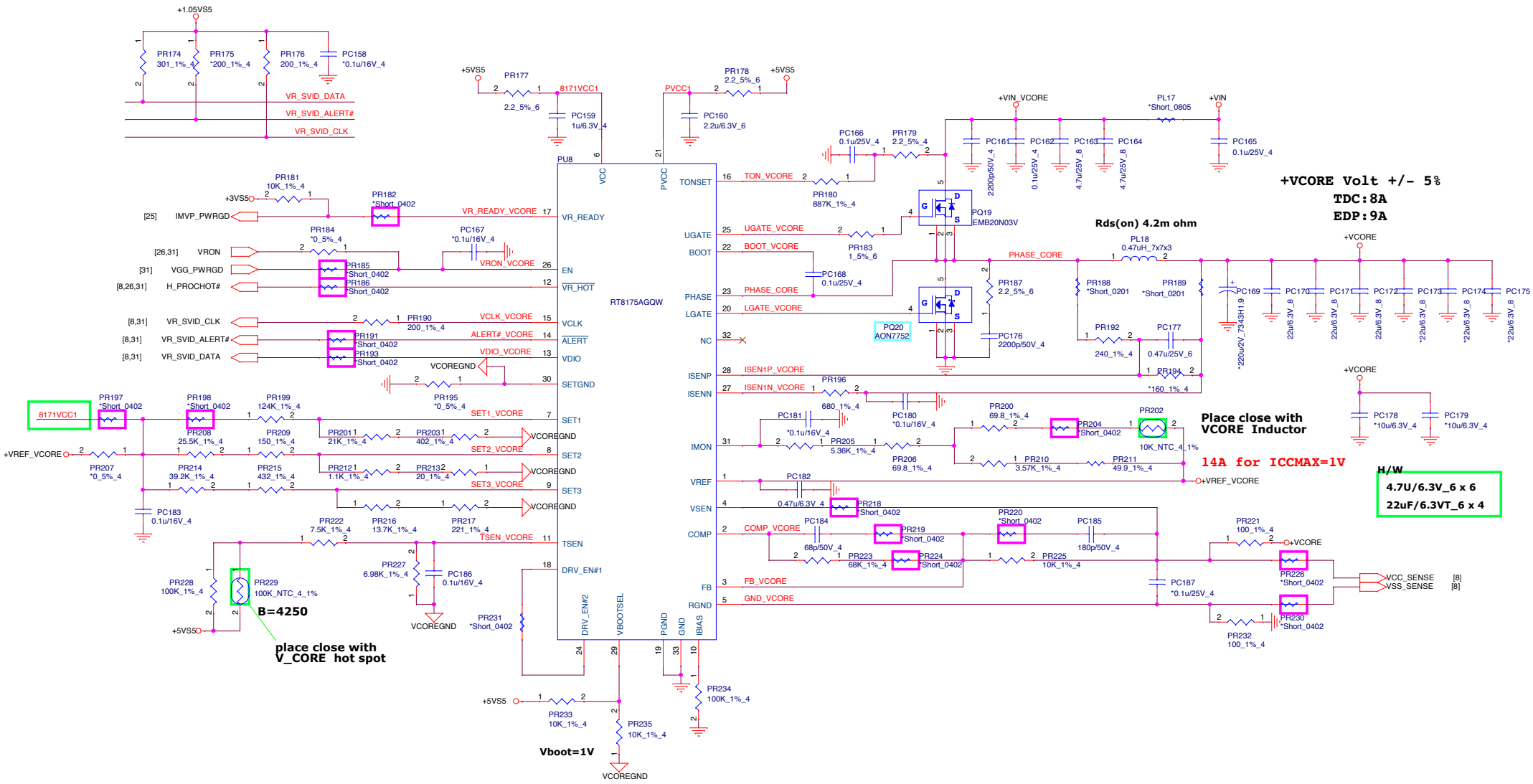
[32] VGG_PWRGD PR118 10K_1%_4 +3VS5 PR120 *Short_0402 VR_READY_VGG
[26,32] VRON PR122 *0_5%_4 PC136 *0.1u/16V_4 VRON_VGG
[26,29,30,33] MAINON PR123 *Short_0402 +1.8VS5 PR124 20K_1%_4
[8,26,32] H_PROCHOT#
[8,32] VR_SVID_CLK PR128 200_1%_4 VCLK_VGG
[8,32] VR_SVID_ALERT# PR129 *Short_0402 ALERT#_VGG
[8,32] VR_SVID_DATA PR131 *Short_0402 VDIO_VGG
VGGGND PR1342 *0_5%_4

8171VCC2 PR135 *Short_0402
PR136 127K_1%_4 PR137 1.3K_1%_4
PR146 13.7K_1%_4 PR147 274_1%_4
+VREF_VGG PR145 *0_5%_4
PR152 976_1%_4 PR153 1_1%_4
PC153 0.1u/16V_4
PR1401 22K_1%_4 PR141 200_1%_4
PR1501 1.1K_1%_4 PR151 64.9_1%_4
PR155 16_1%_4
PR160 7.5K_1%_4 PR154 402_1%_4
PR165 100K_1%_4 B=4250 PR166 100K_NTC_4_1%
PR164 6.98K_1%_4 PC157 0.1u/16V_4
+5VS5
place close with VGG hot spot
PR169 *Short_0402
PR171 10K_1%_4 PR173 10K_1%_4
Vboot=1V
PR172 100K_1%_4
VGGGND

+VIN_VGG PL15 *Short_0805 +VIN For Acoustic
PC128 2200p/50V_4 PC129 0.1u/25V_4 PC130 4.7u/25V_8 PC131 4.7u/25V_8
PC132 0.1u/25V_4 PC133 *15u/25V_D6.3H4.4 PC134 *15u/25V_D6.3H4.4
+VGG Volt +/- 5%
TDC:15A
EDP:20A
Rds(on) 4.2m ohm
PQ18 FDMS3669S
PL16 0.47uH_7x7x3
PR125 2.2_5%_6 PC146 2200p/50V_4
PR126 *Short_0201 PR127 *Short_0201 PC147 0.47u/25V_6
PR130 240_1%_4 PR132 *160_1%_4
PC138 *220u/2V_7343H1.9 PC139 330U/2.5V_6X4.5ESR12
PC140 PC141 PC142 PC143 PC144 PC145 *22u/6.3V_8
PC149 PC150 *10u/6.3V_4
H/W
47U/6.3VS_8 x 3
220u/2V_7343 x 2

PC151 680_1%_4 PC148 *0.1u/16V_4 PR142
PR138 *Short_0402 PR139 1.05K_1%_4 10K_NTC_4_1%
PR143 88.7_1%_4 PR144 2.1K_1%_4 PR148 30_1%_4 PR149 2.61K_1%_4
Place close with VCORE Inductor B=4250
14A for ICCMAX=1V
Vref=0.6V
PC152 0.47u/6.3V_4 +VREF_VGG
PR156 *Short_0402
PR158 *Short_0402 PR159 *Short_0402 PC154 390p/50V_4
PC155 100p/50V_4
PR161 68K_1%_4 PR162 *Short_0402 PR163 10K_1%_4
PC156 *0.1u/25V_4
+VGG
PR157 100_1%_4 PR167 *Short_0402 PR168 *Short_0402 PR170 100_1%_4
VGG_SENSE [8]
VGGSS_SENSE [8]

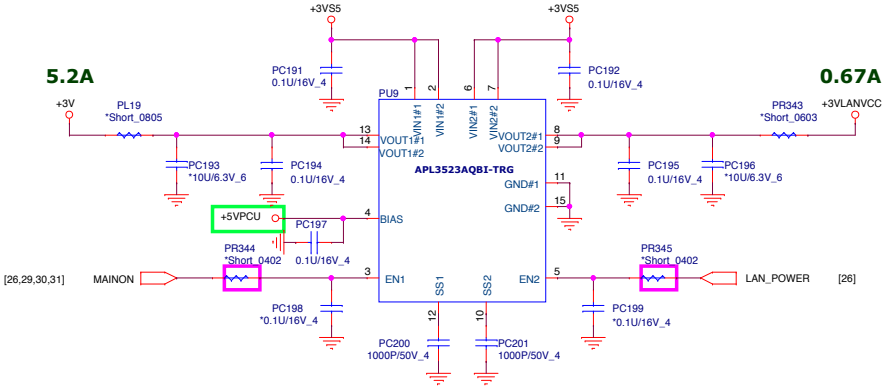
PROJECT : G72D
Quanta Computer Inc.
Size Custom | Document Number +VGG CORE (RT8171A) | Rev 1A
Date: Tuesday, January 24, 2017 | Sheet 31 of 35

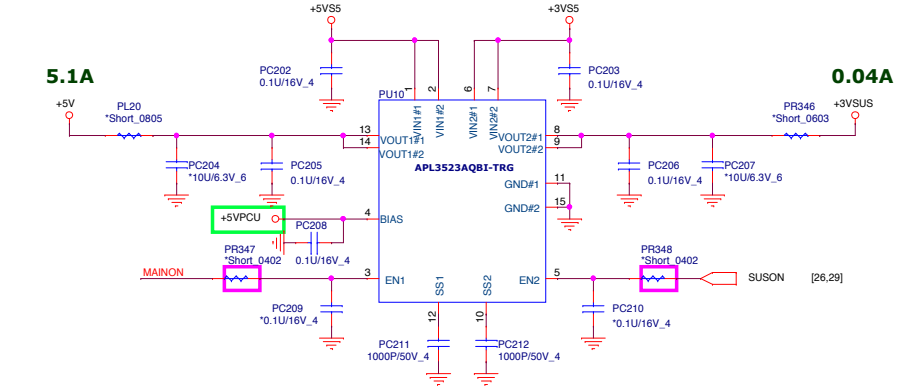


PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	+VCC CORE (RT8171A)	1A
Date: Tuesday, January 24, 2017	Sheet 32 of 35	

+3V [4,14,15,16,17,18,19,20,21,22,23,24,25,26]
+5V [15,16,17,20,23,24]
+VIN [15,24,27,28,29,30,31,32,34]
+3VS5 [2,3,5,10,19,21,23,25,26,28,30,31,32]
+5VS5 [17,19,22,28,29,30,31,32]
+3VSUS [24]
+5VPCU [17,27,28,30]
+3VLANVCC [18]

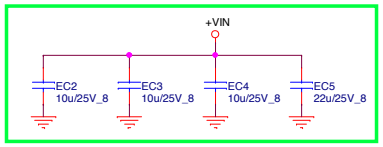




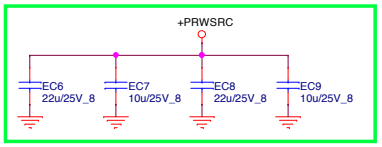
PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	Load switch IC (APL3523A)	1A
Date: Tuesday, January 24, 2017	Sheet 33 of 35	

EMI request for ISN



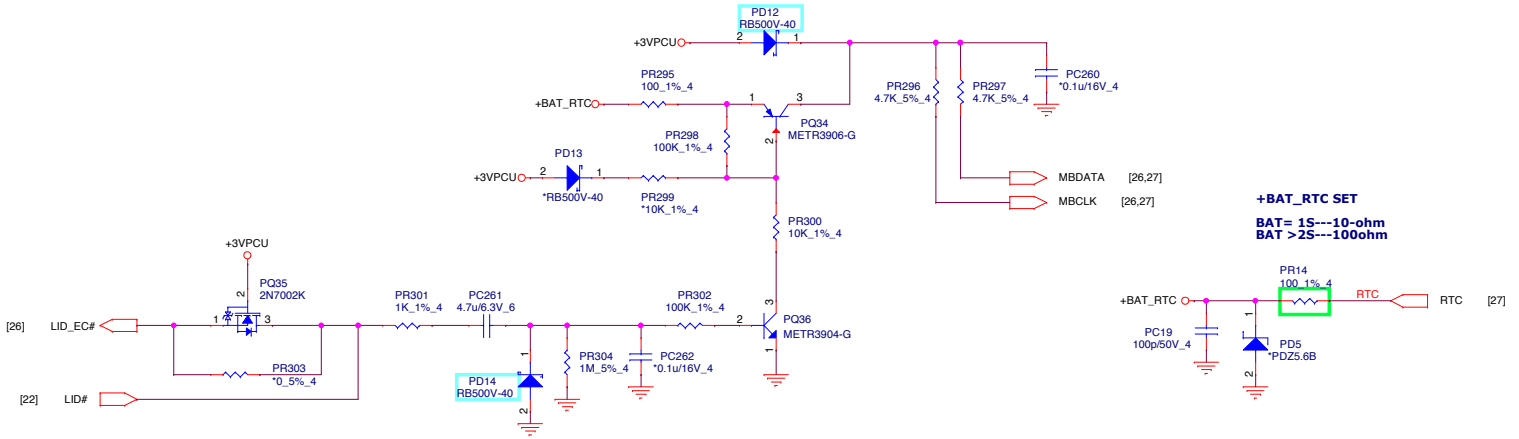
EMI request for ISN



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	EMI solution	1A
Date: Tuesday, January 24, 2017	Sheet 34 of 35	

+3VPCU [8,10,19,21,22,24,25,26,27,28]
+BAT_RTC [8,22]



PROJECT : G72D
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LID SW for storage mode	1A
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