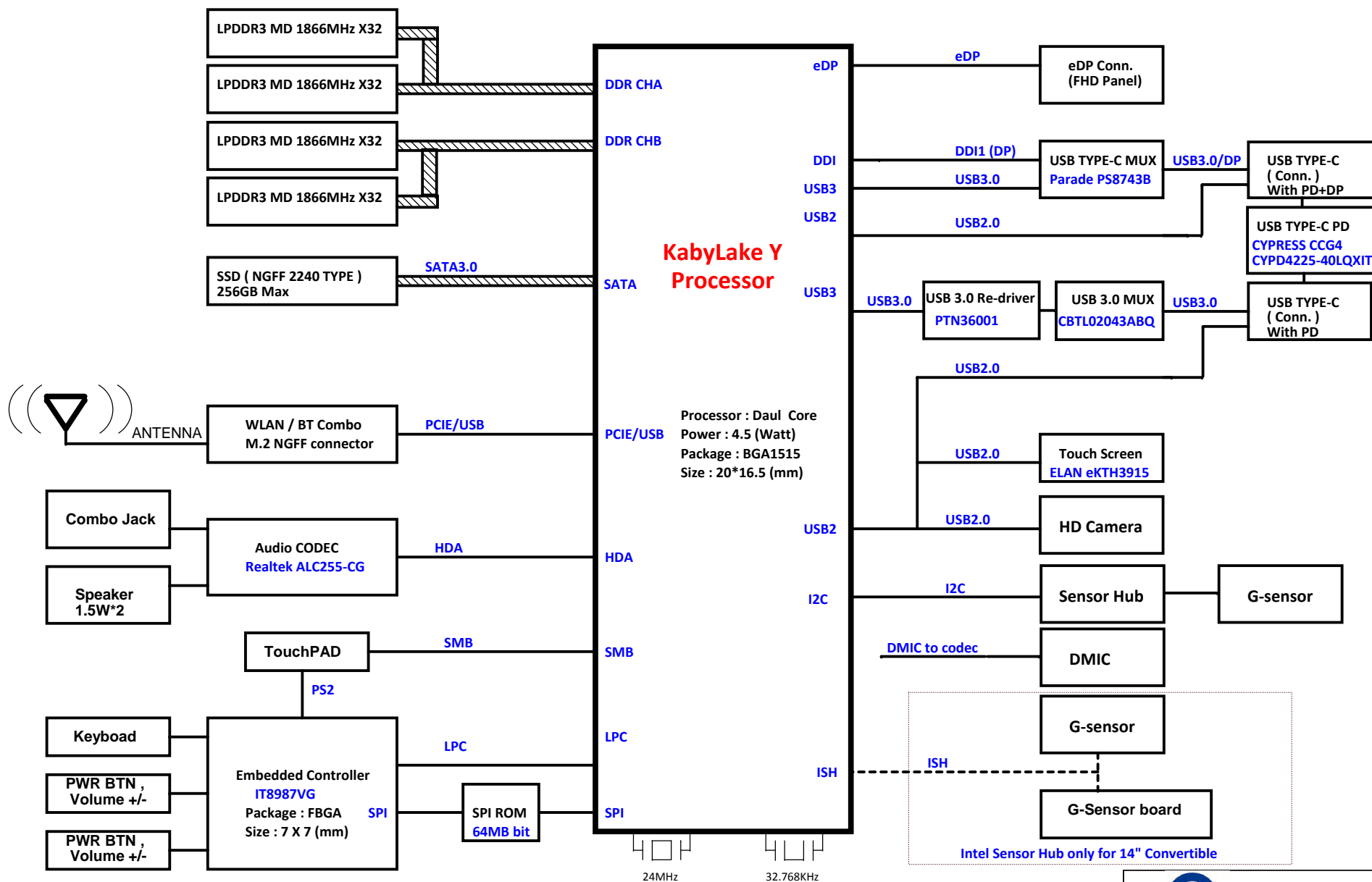
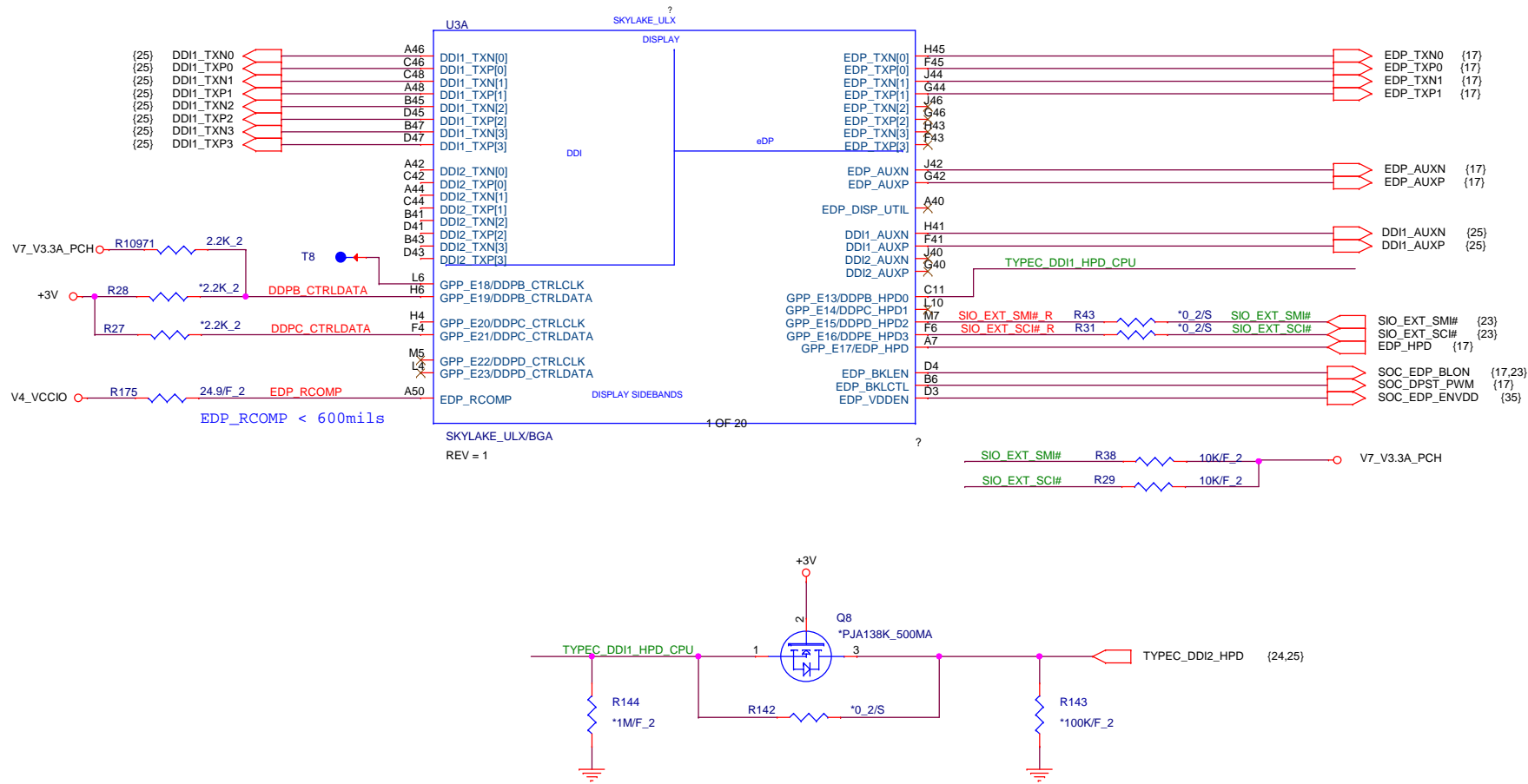
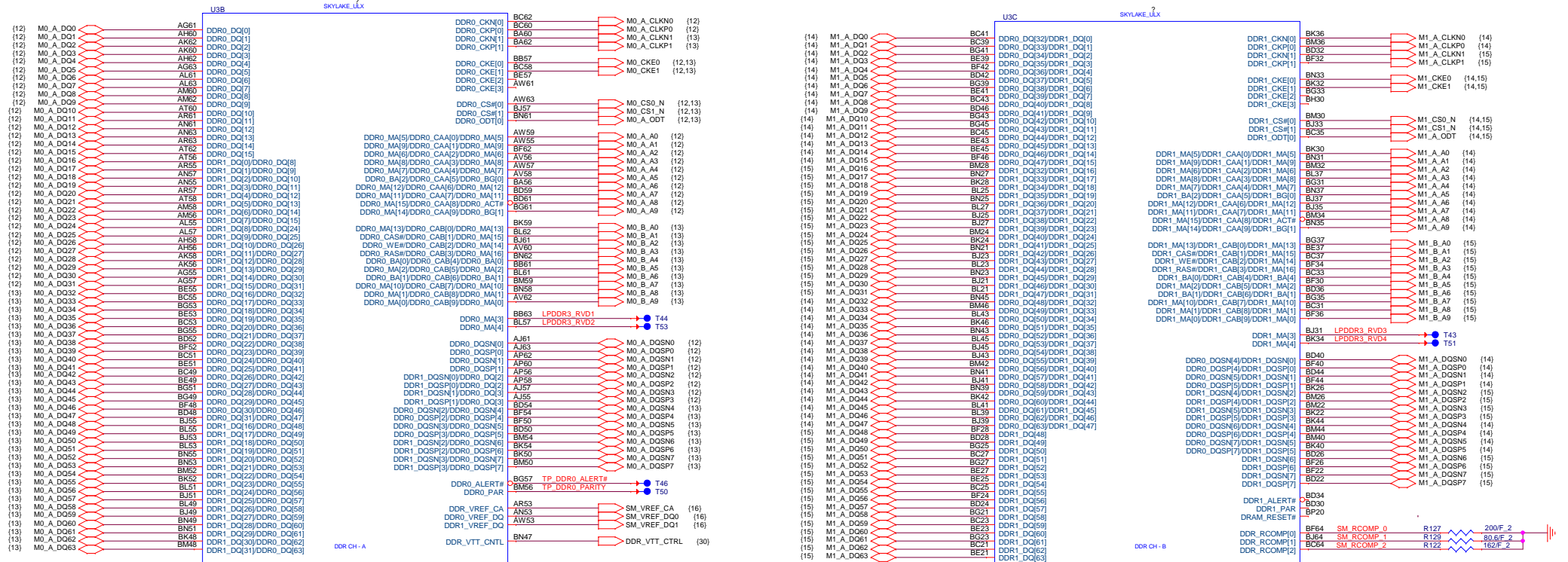
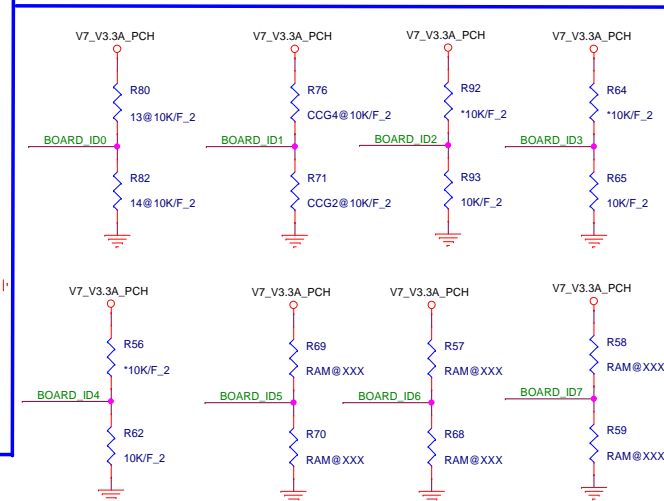
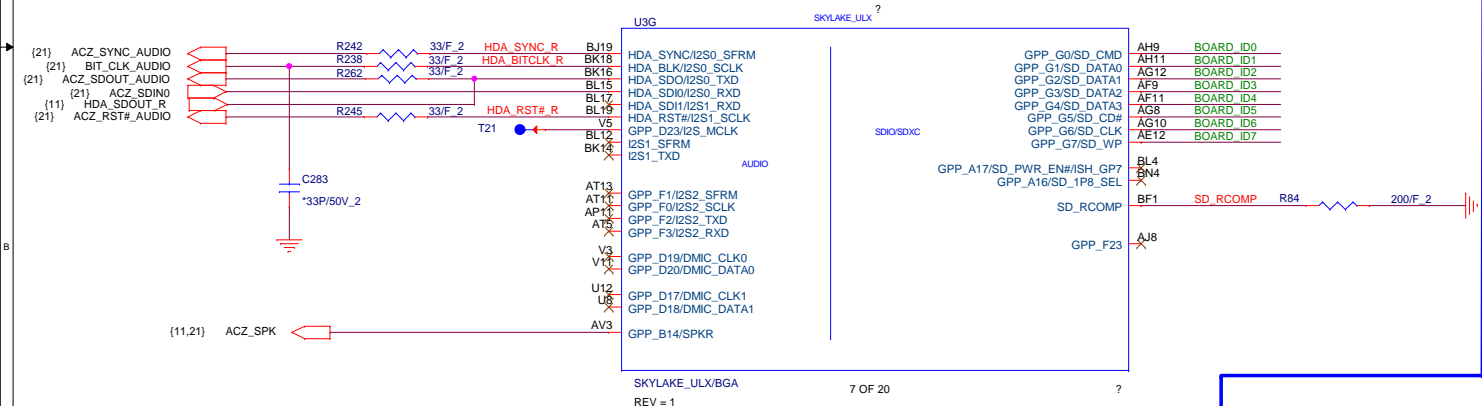


Block Diagram



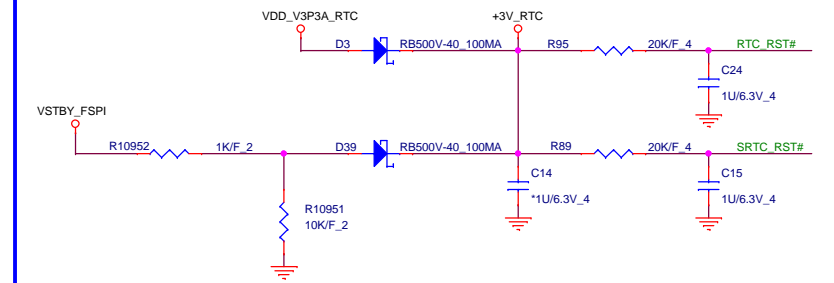
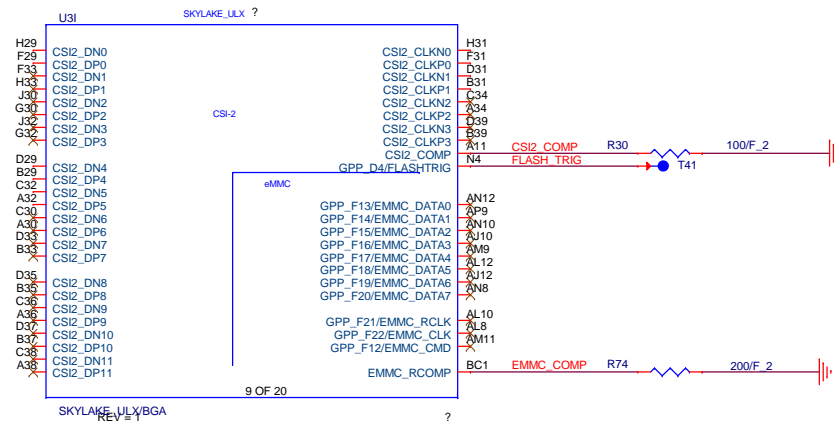




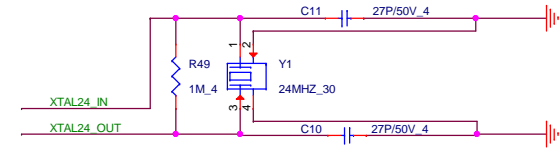


Board ID Reserve	ID5	ID6	ID7
HYNIX _H9CCNNBLTBLAR-NUD_8GB	0	0	0
HYNIX _H9CCNN8JTBLLAR-NUD_4GB	0	0	1
SAMSUNG_K4E6E304EB-EGCF_8GB	0	1	0
SAMSUNG_K4E8E324EB-EGCF_4GB	0	1	1
HYNIX _H9CCNNBJTMLAR-NUD_8GB	1	0	0

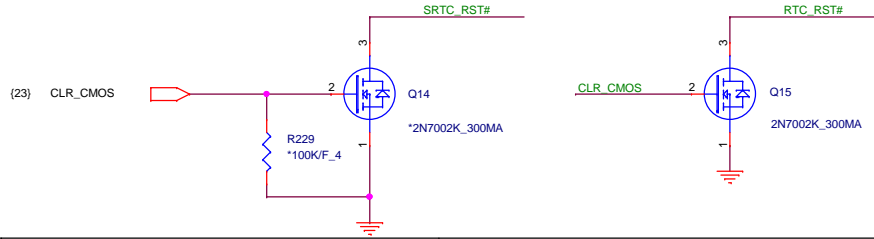
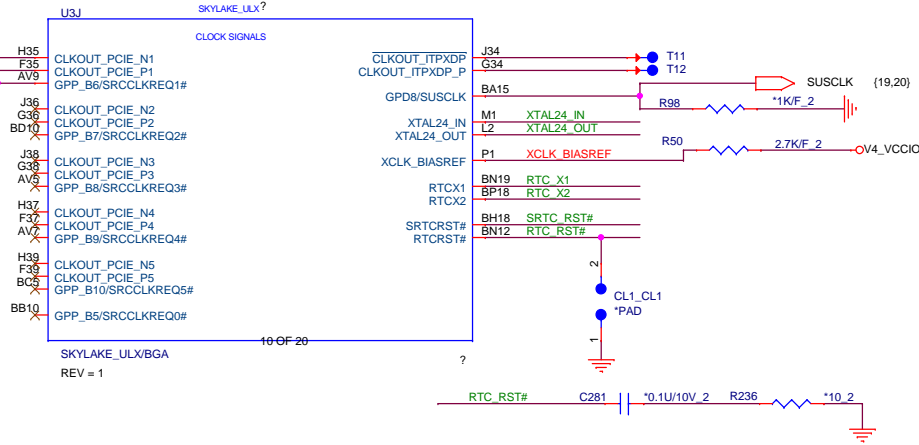
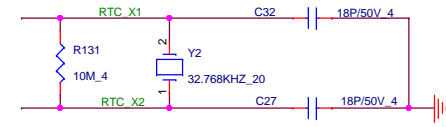




PCH Crystal (CLG)



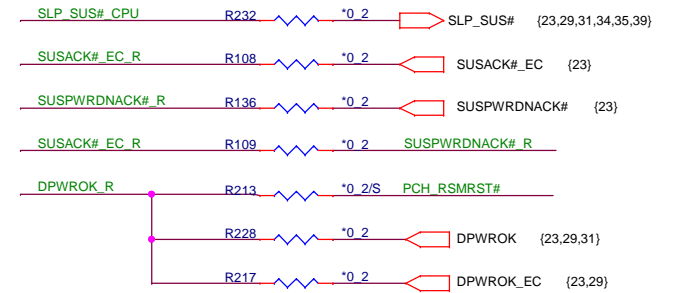
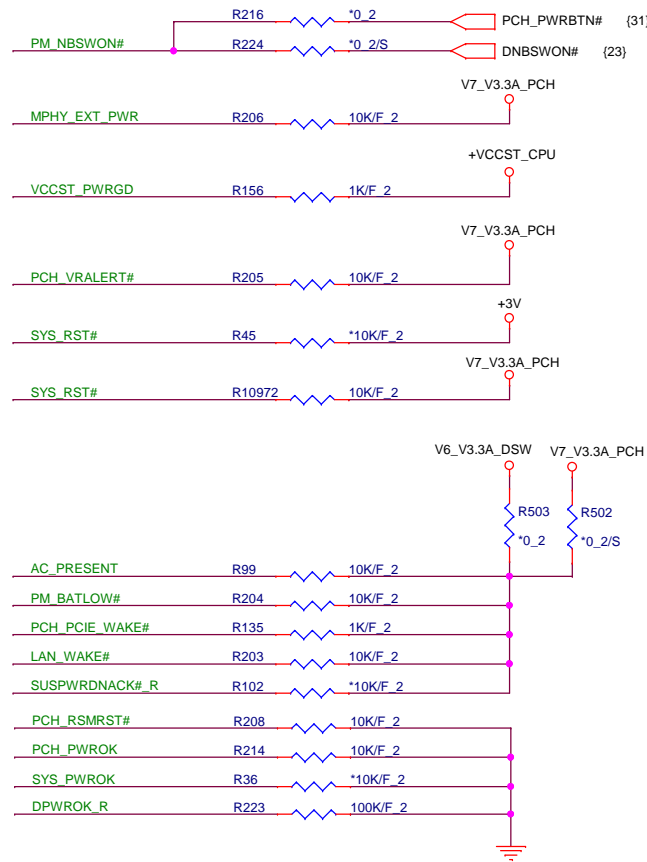
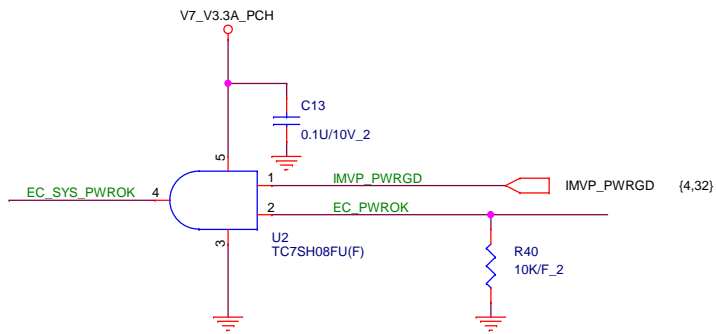
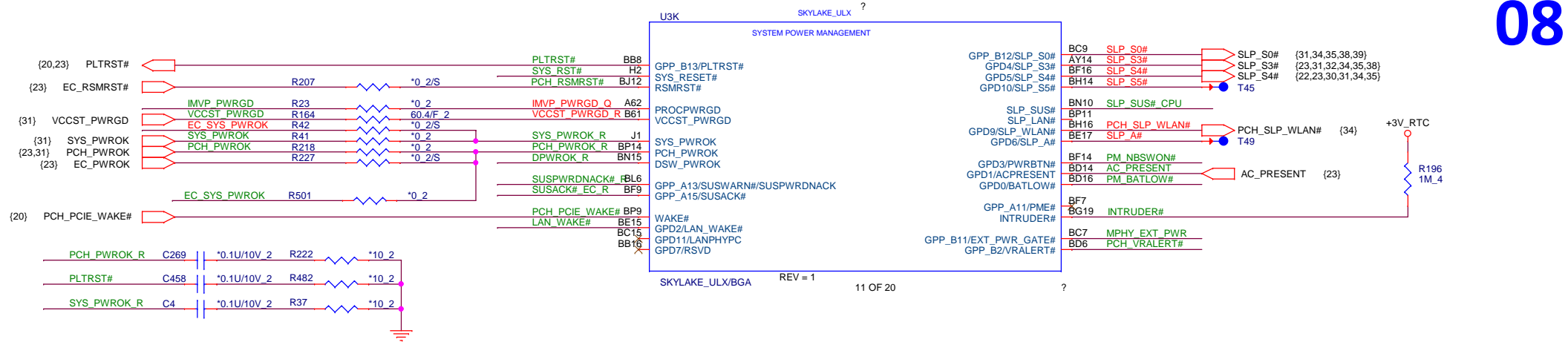
RTC Crystal (CLG)



Quanta Computer Inc.

PROJECT : ZDS/ZSV

Size	Document Number	Rev
	SKL-Y CPU (CSI2/RTC/CLK)	1A
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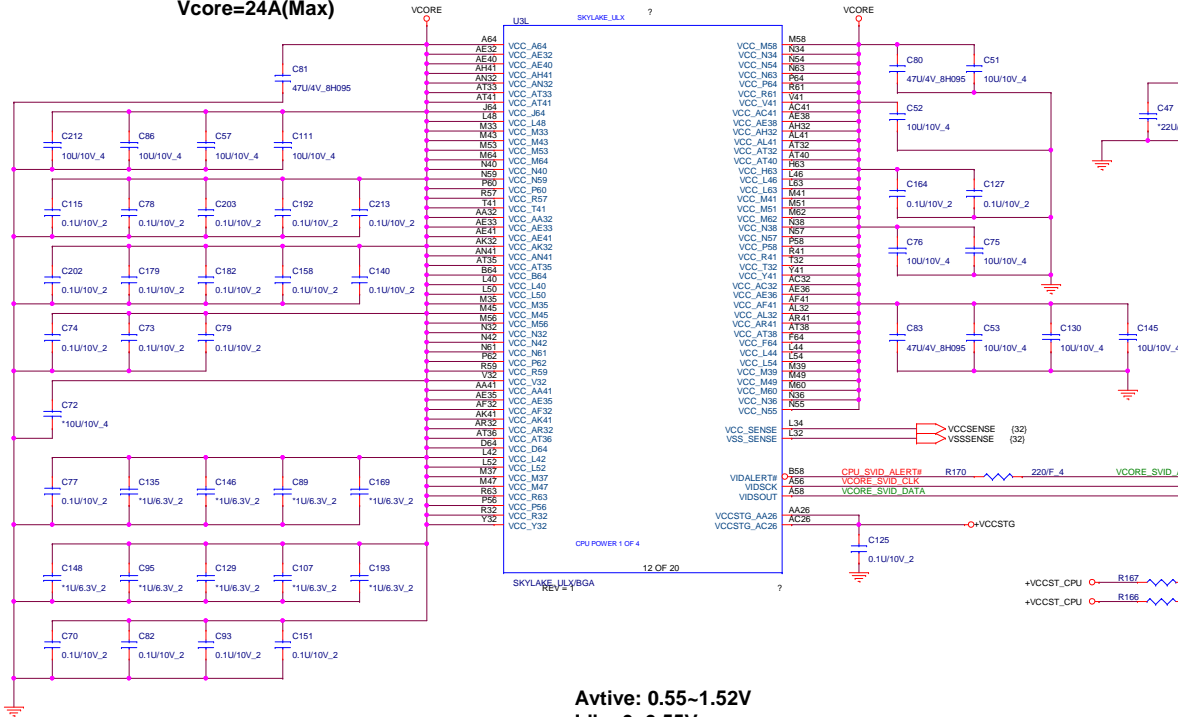


Quanta Computer Inc.

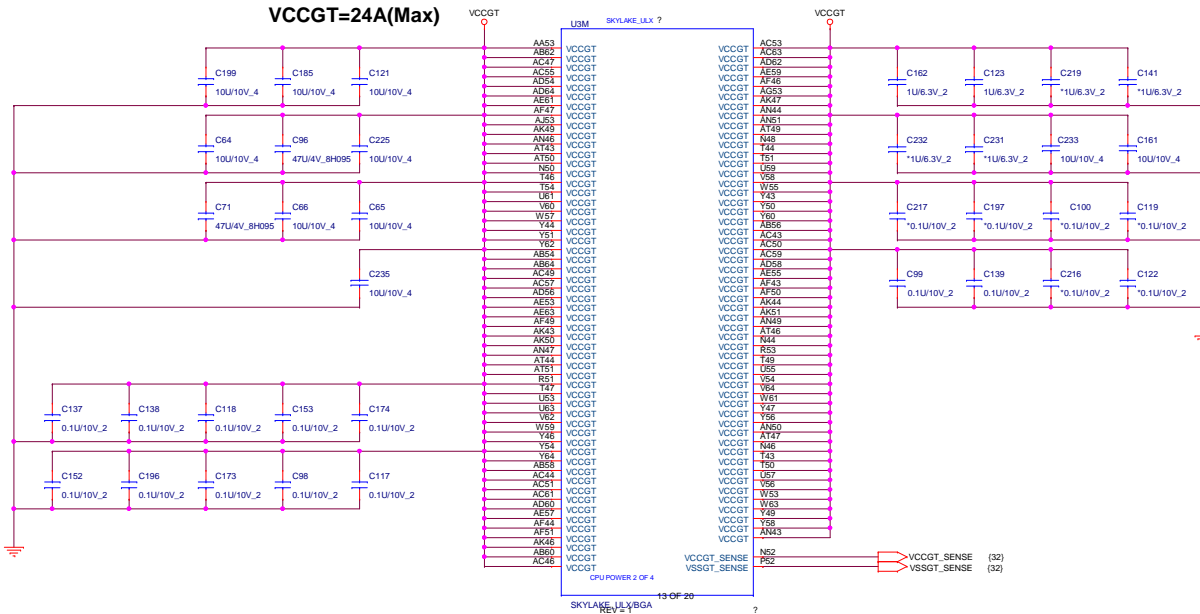
PROJECT : ZDS/ZSV

Size	Document Number	Rev
	SKL-Y CPU (PWR MANAGE)	1A
Date:	Sunday, September 11, 2016	Sheet 8 of 42

Vcore=24A(Max)

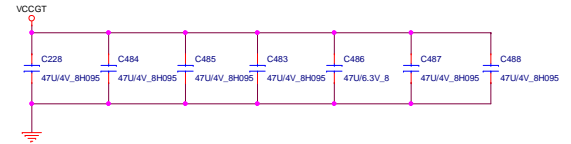
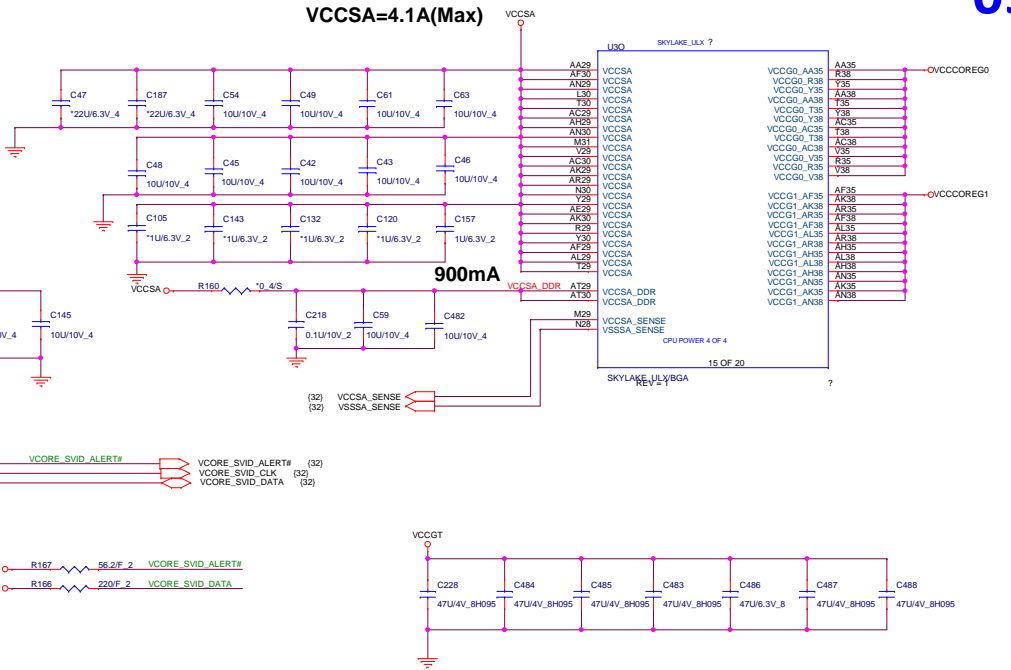
Active: 0.55~1.52V
Idle: 0~0.55VActive: 0.55~1.52V
Idle: 0~0.55V

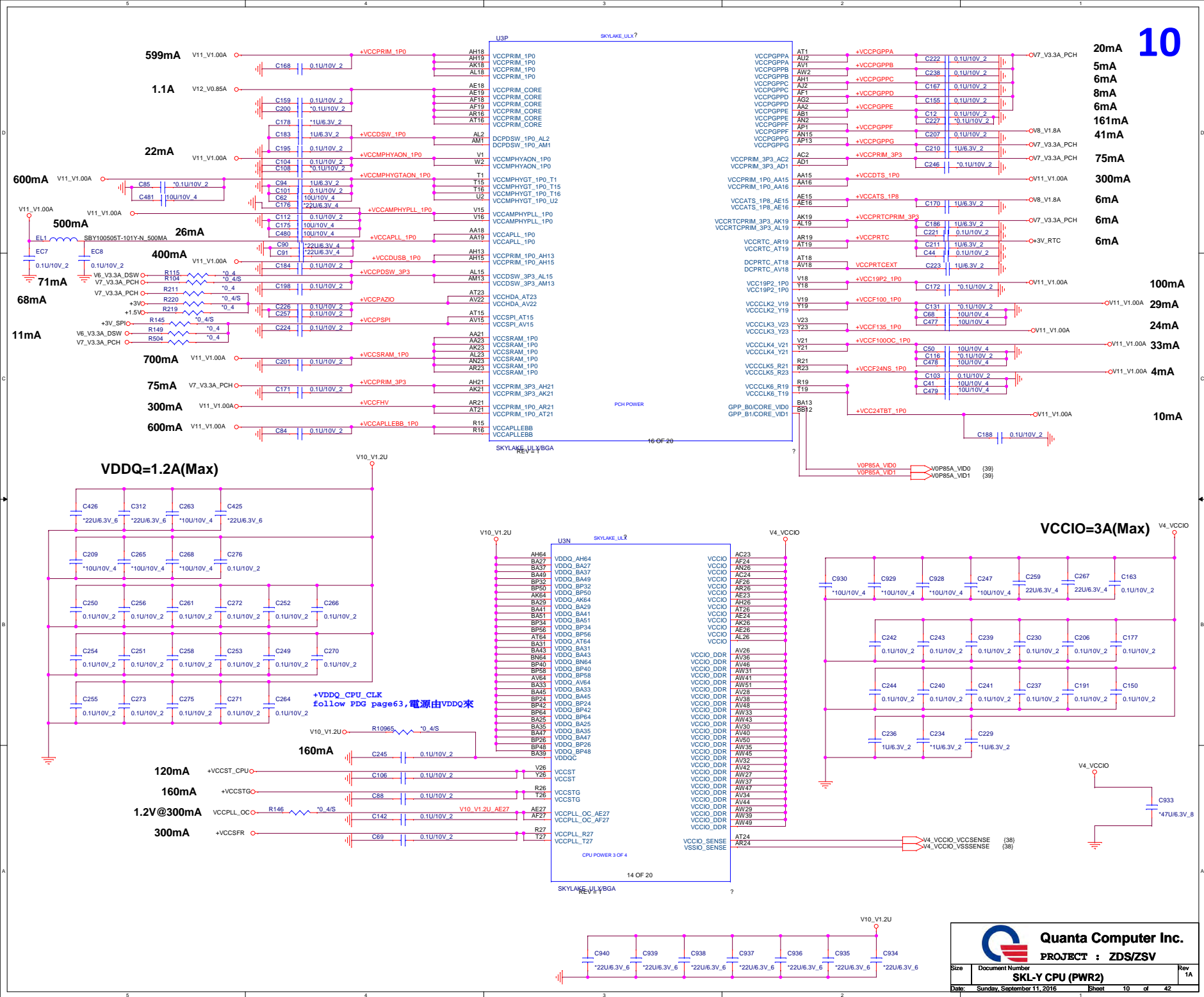
VCCGT=24A(Max)



Active: 0.55~1.52V

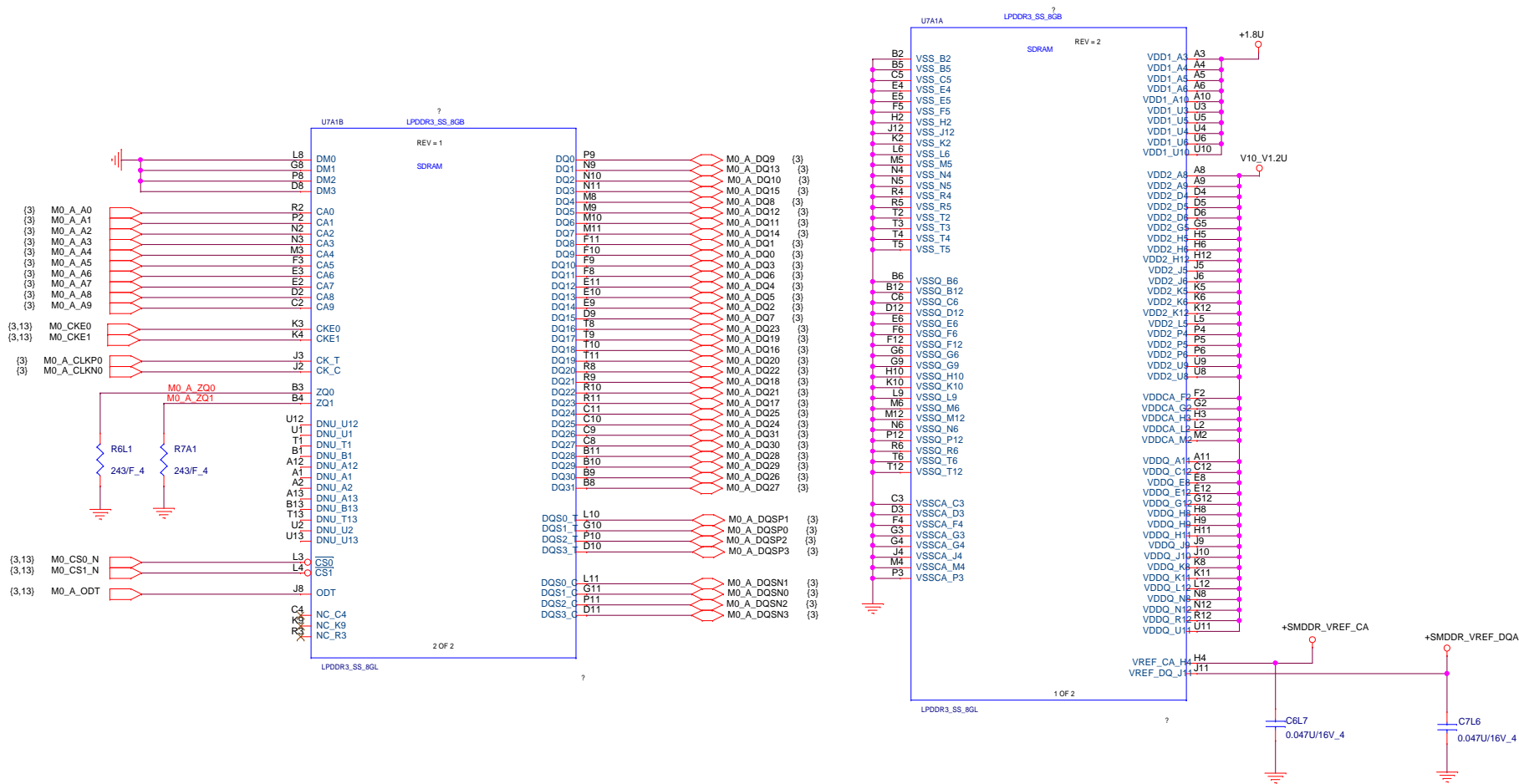
VCCSA=4.1A(Max)



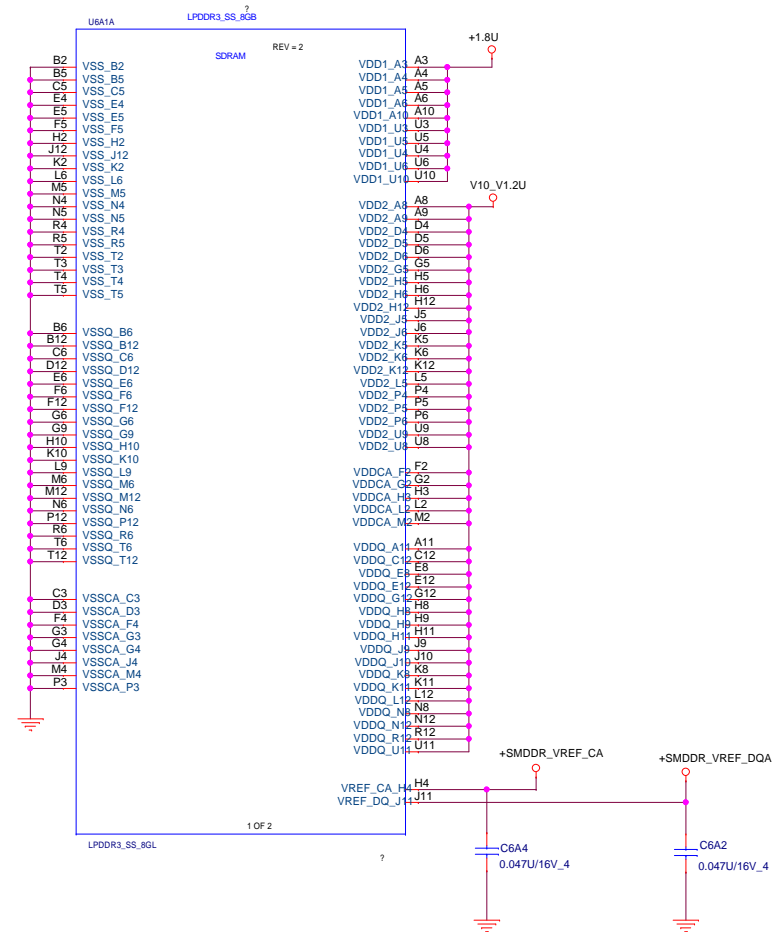
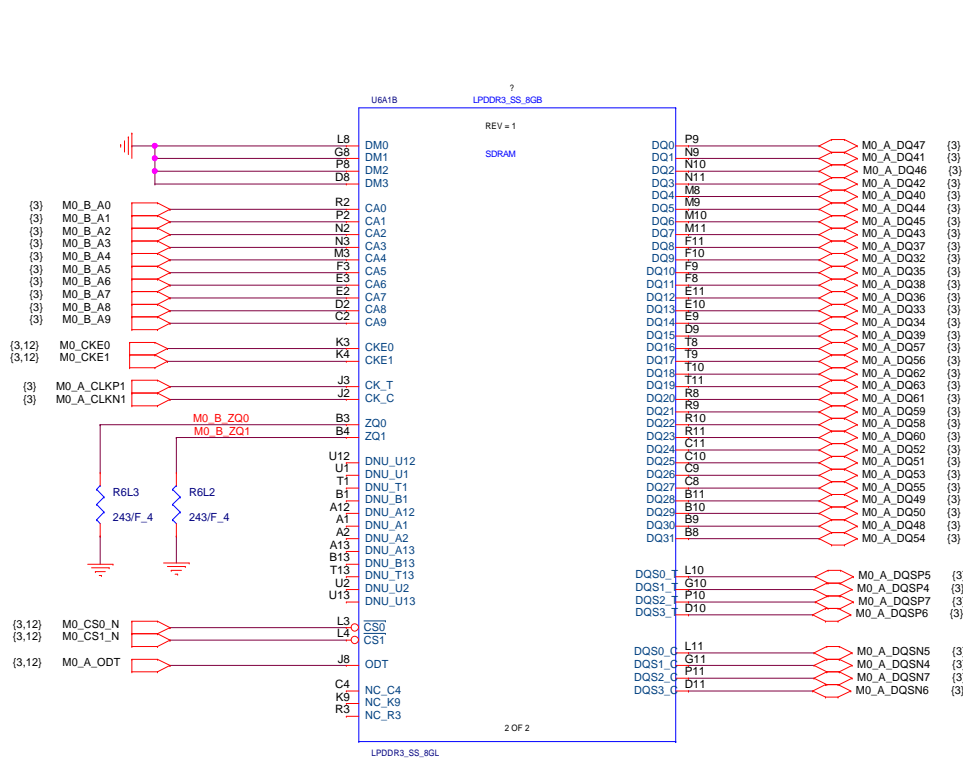


LPDDR3 MEMORY CHANNEL A-1

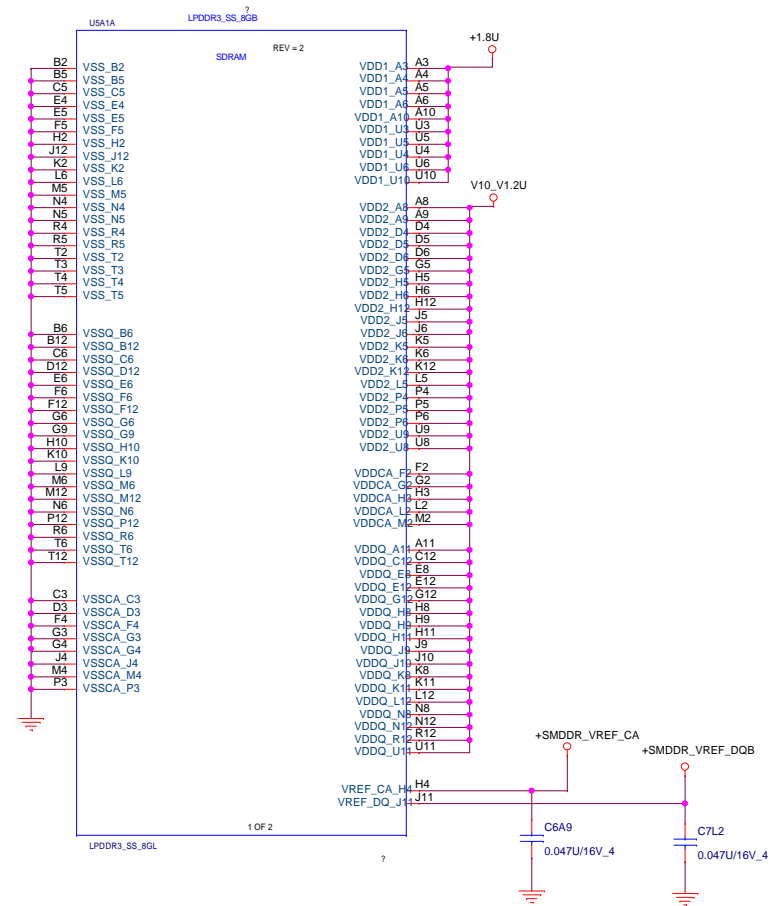
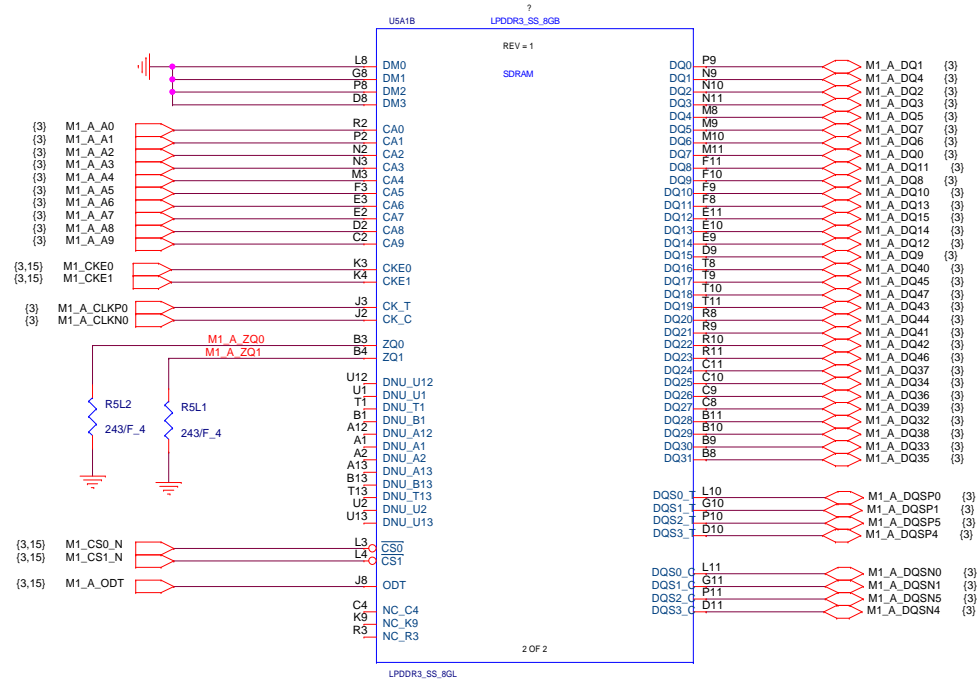
12



LPDDR3 MEMORY CHANNEL A-2



LPDDR3 MEMORY CHANNEL B-1



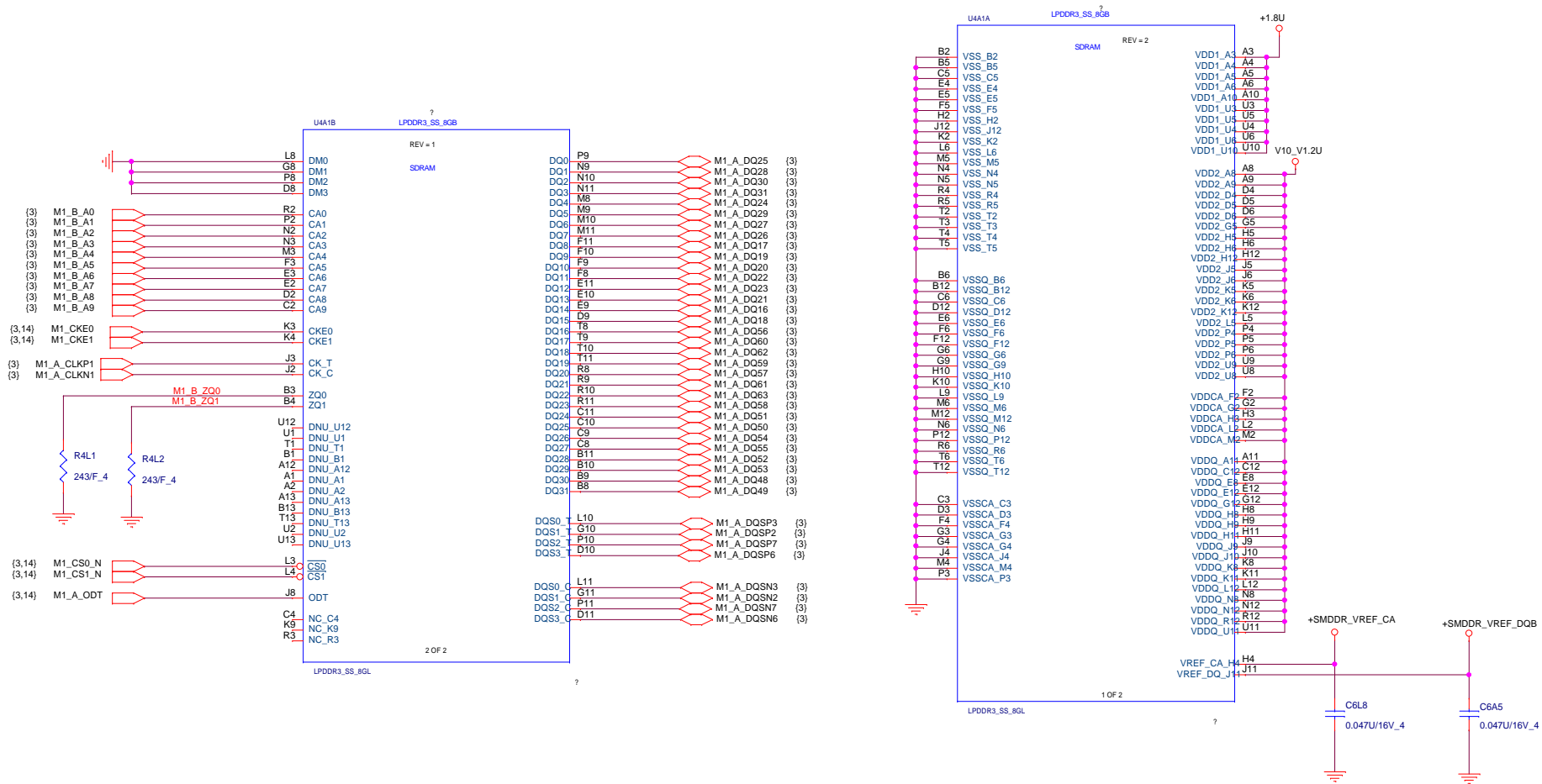
Quanta Computer Inc.

PROJECT : ZDS/ZSV

Size	Document Number	Rev
	LPDDR3 (CHB)-1	1A
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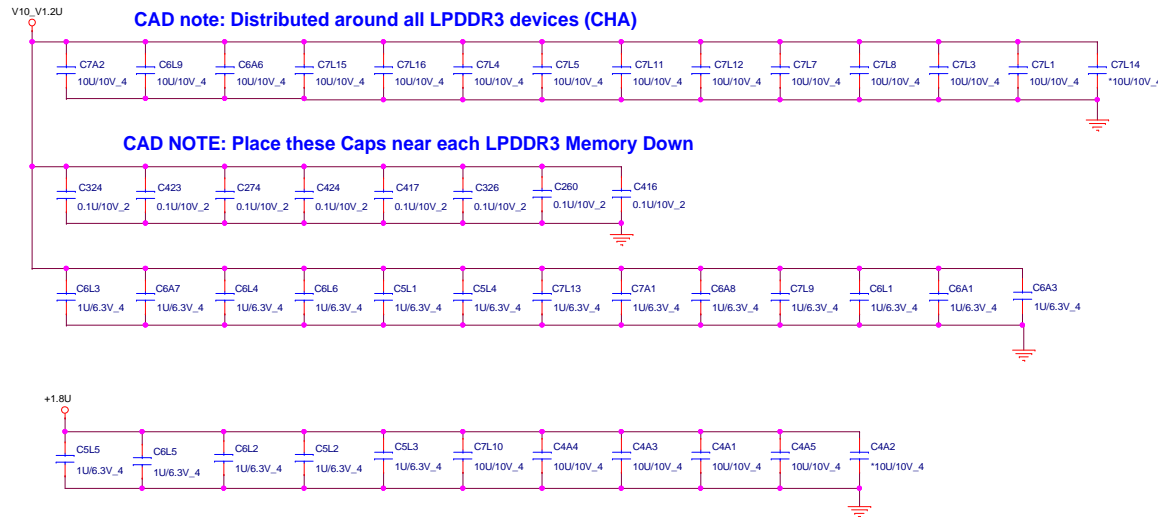
LPDDR3 MEMORY CHANNEL B-1

15

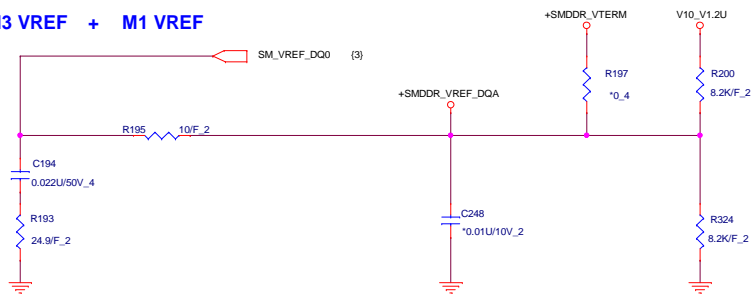


DE-CAPS FOR MEMORY CHANNEL A/B

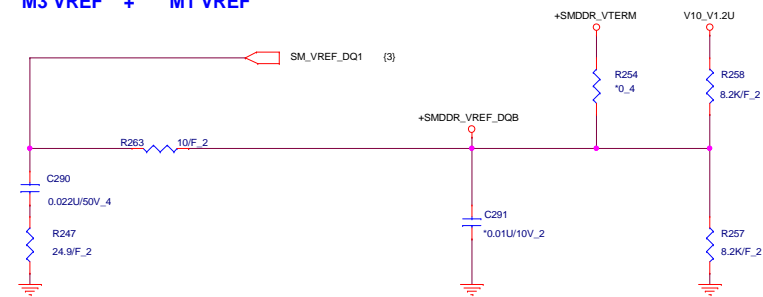
16



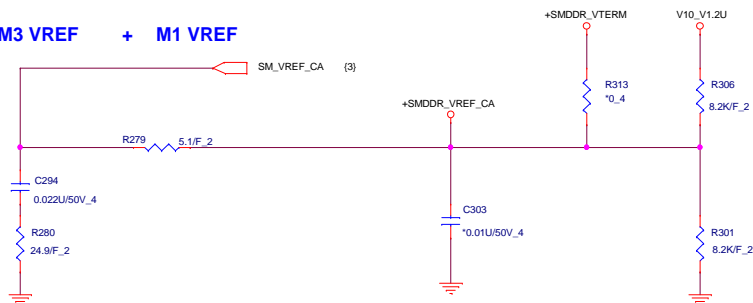
M3 VREF + M1 VREF



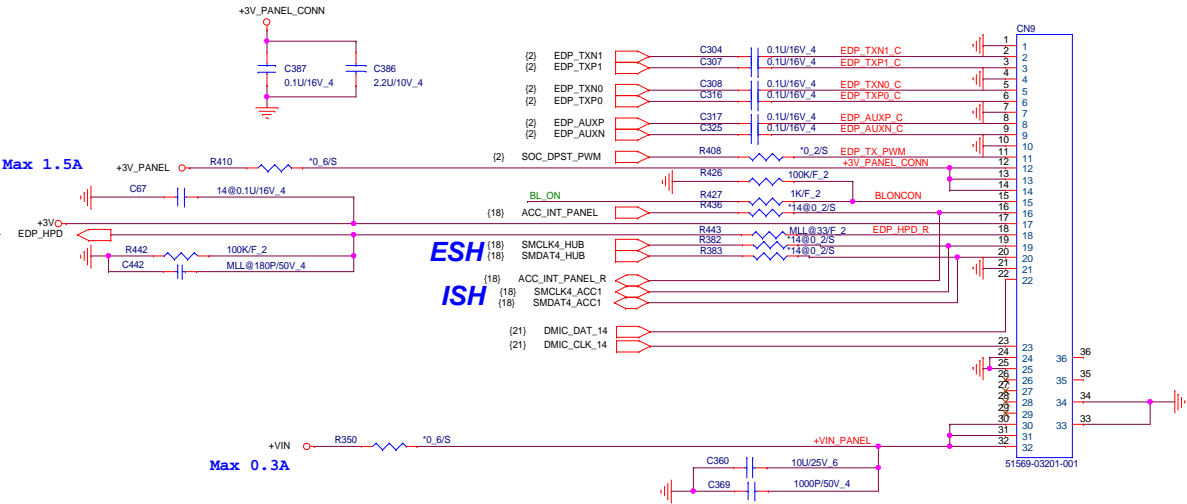
M3 VREF + M1 VREF



M3 VREF + M1 VREF

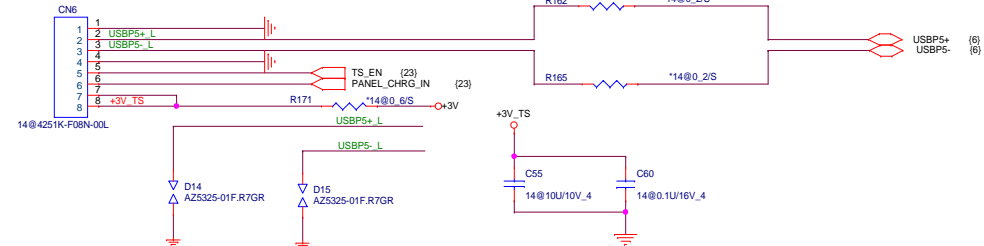


eDP/Camera Panel Conn.

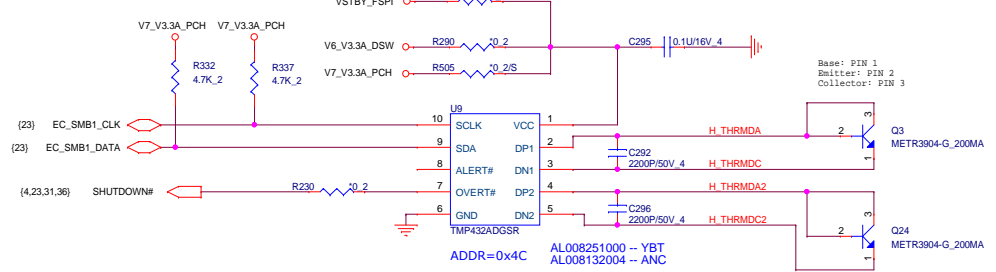


Touch Screen on DB

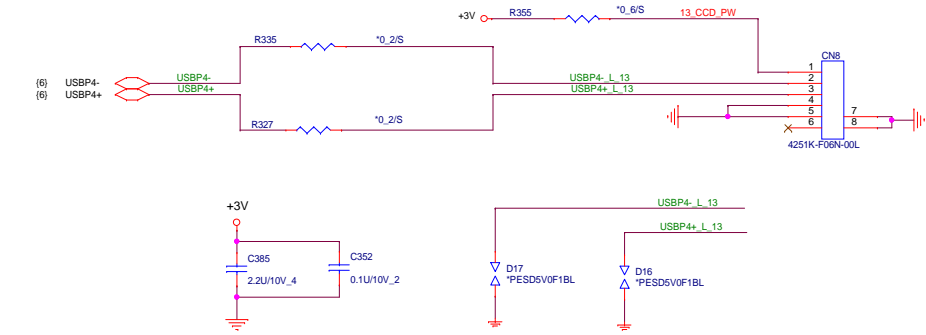
17



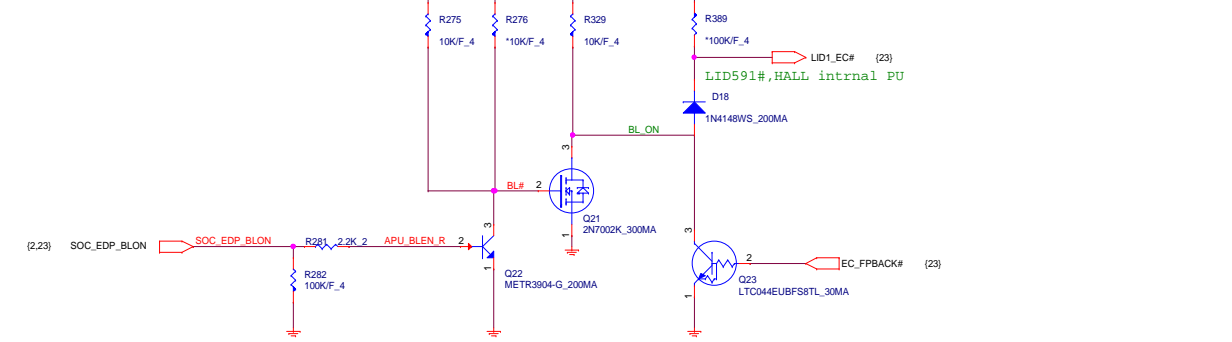
Thermal Sensor (THM)



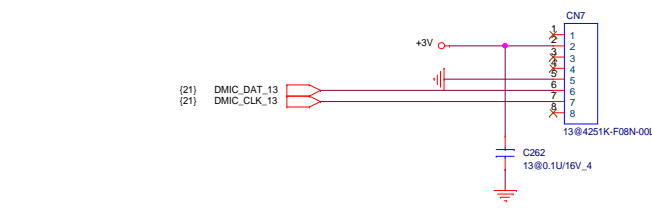
CCD



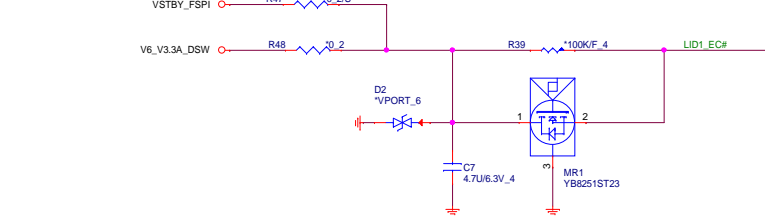
Backlight Control (LDS)



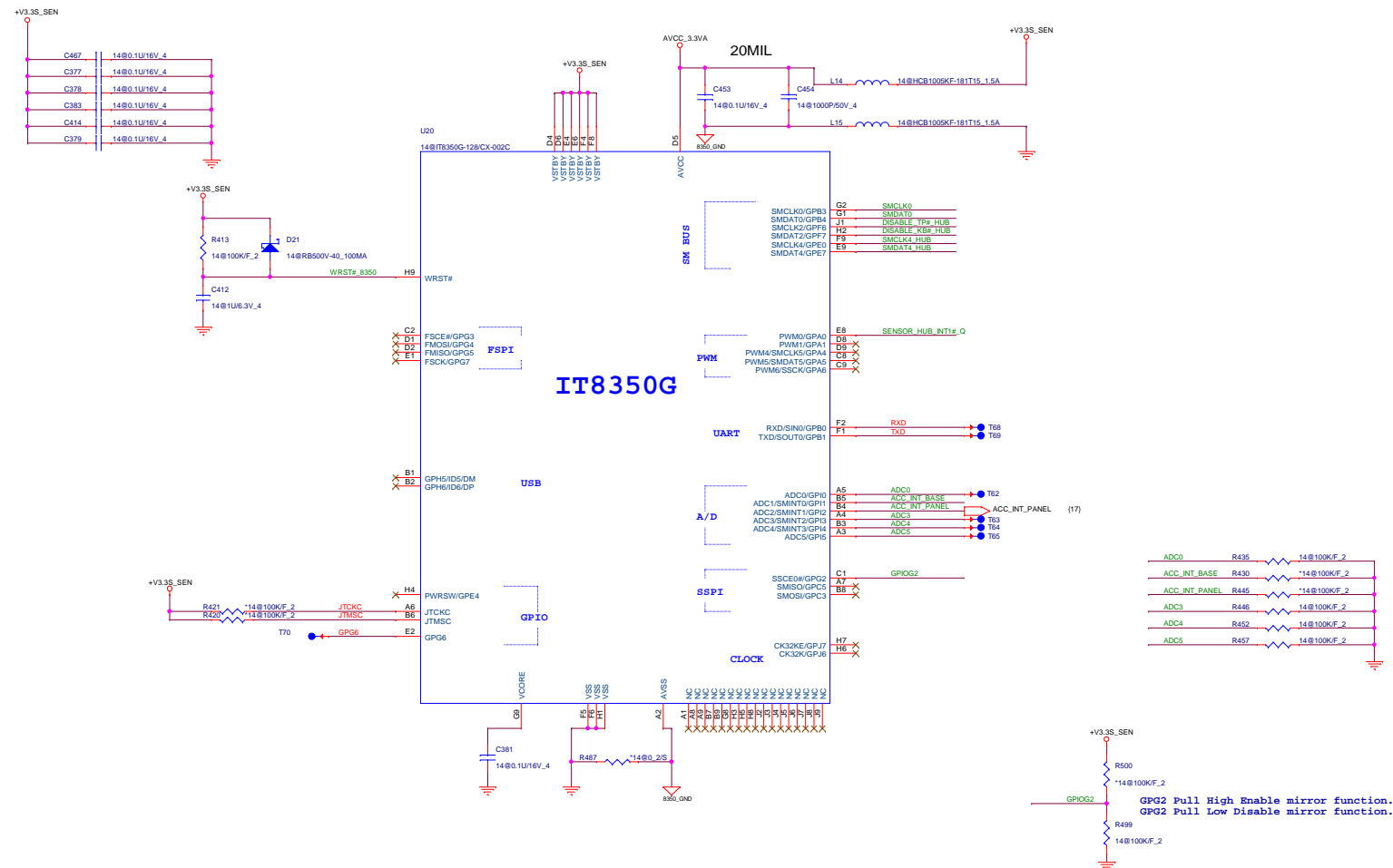
13" Daul MIC



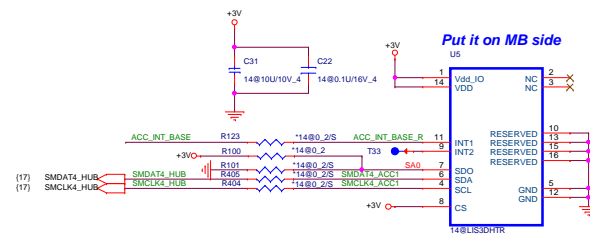
LID1 SENSOR



Sensor Hub



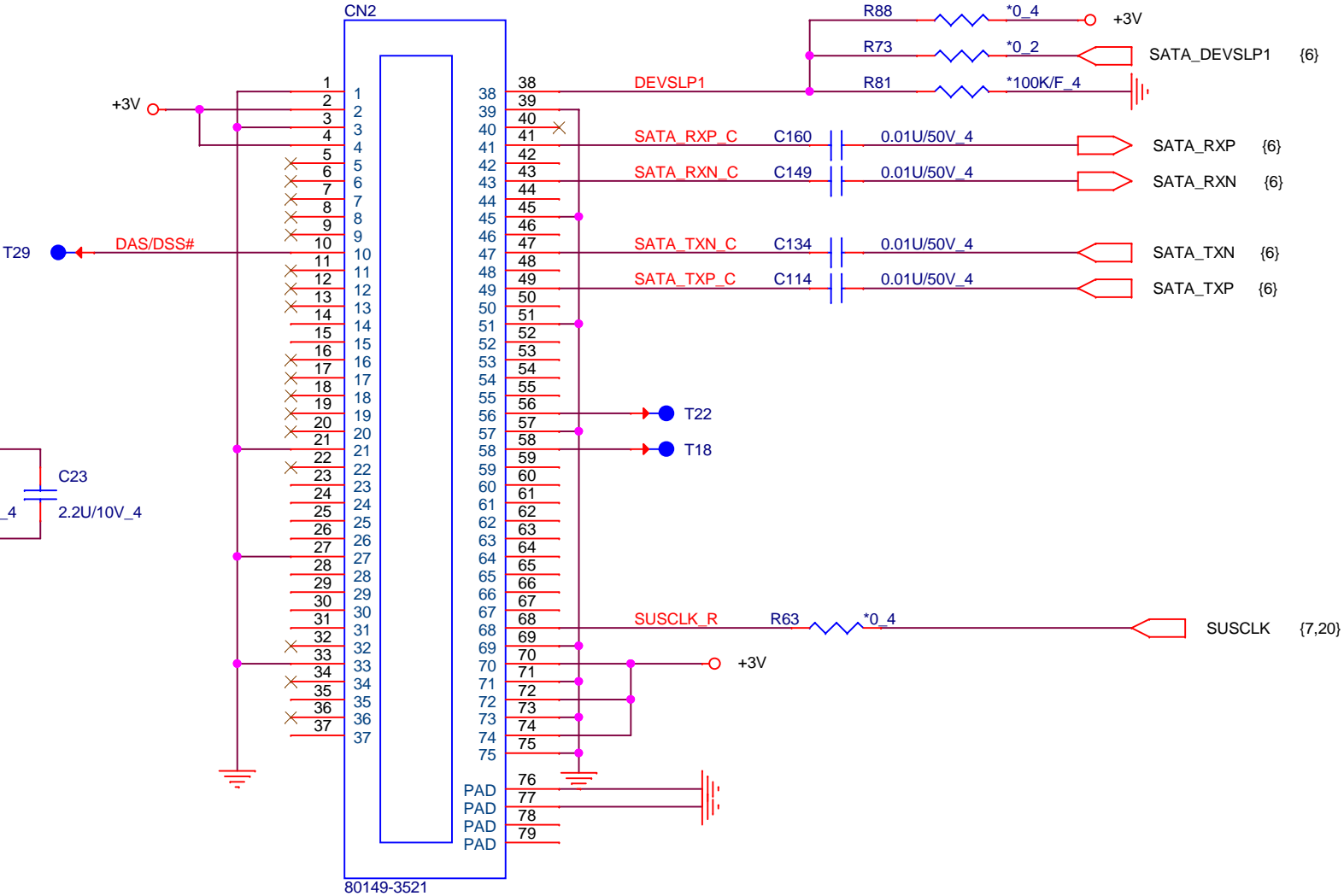
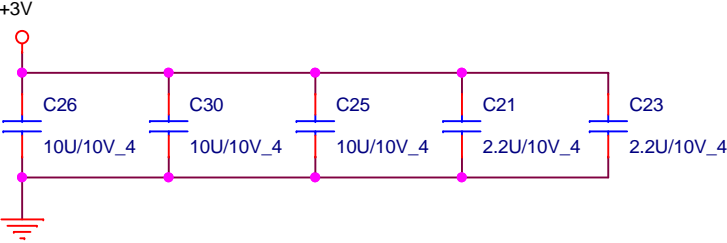
Accelerometer Sensor on MB




CONN: B KEY
MODULE: B KEY

Func.	CPU TX	CPU RX
PCIE2	0.1uF	0ohm
PCIE3	0.22uF	0ohm
SATA	0.01uF	0.01uF
PCIE2/SATA	0.1uF	0ohm
PCIE3/SATA	0.22uF	0ohm

2.8A(Max)



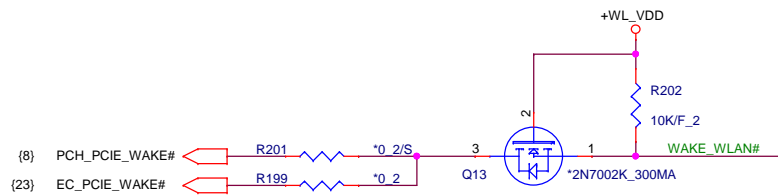
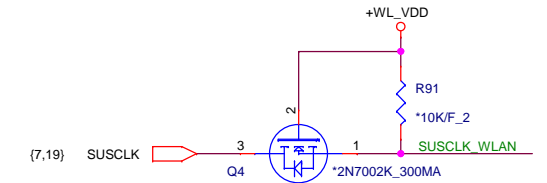
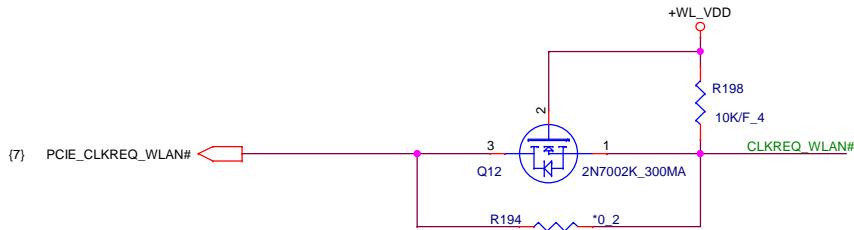
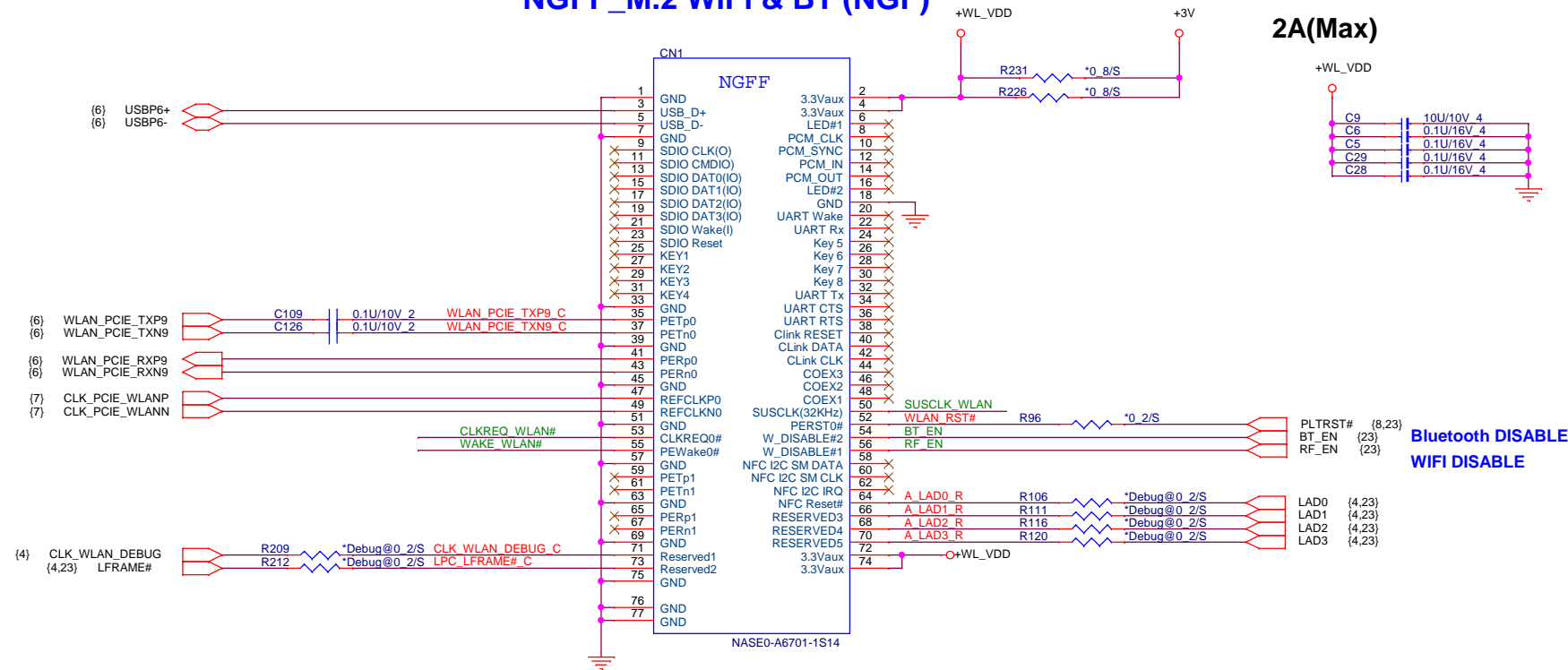


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Size	Document Number	Rev
	SSD (NGFF CONN)	1A
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NGFF_M.2 WiFi & BT (NGF)

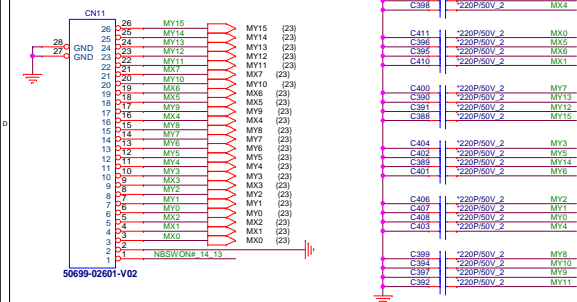
20



Quanta Computer Inc. PROJECT : ZDS/ZSV		
Size	Document Number	Rev 1A
WIFI/BT		
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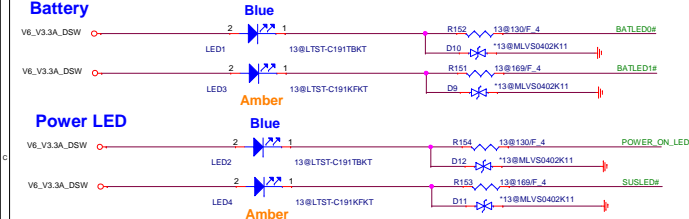
Keyboard Connector

Close to KB conn



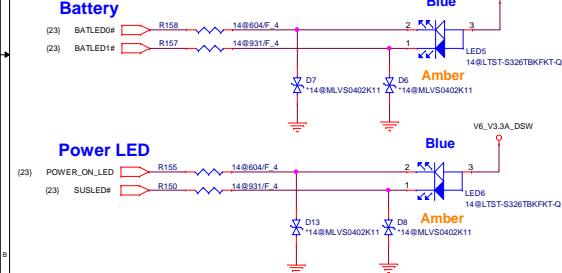
13" LED

Battery

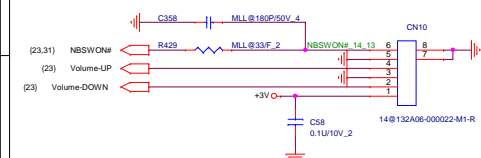


14" LED

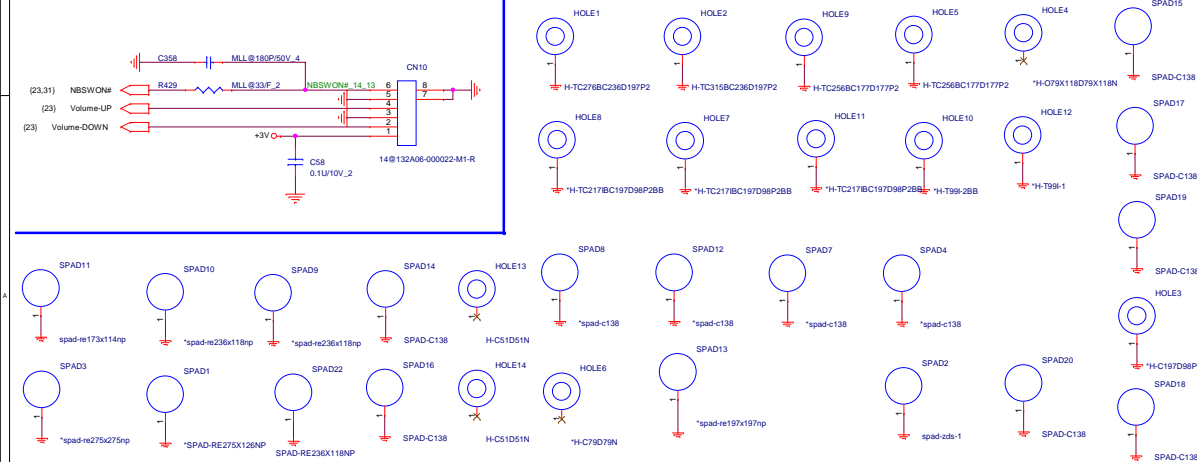
Battery

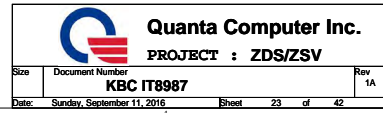


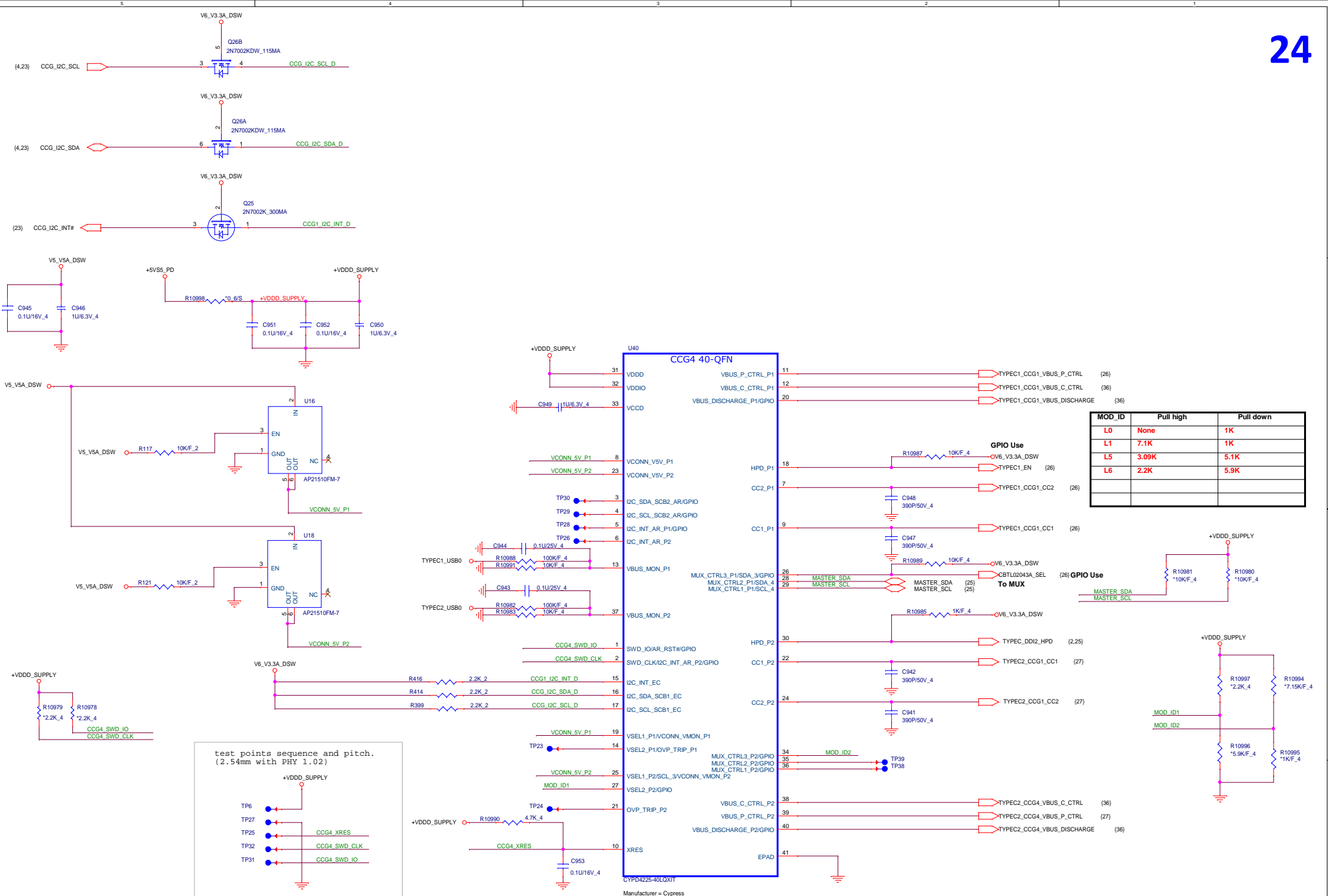
Switch Board Connector



HOLE

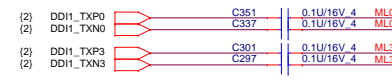




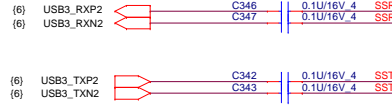


3 Level Input:
L: LOW, internal pull down
H: HIGH, external pull up
M: VDD33/2, both external pull-up and pull-down

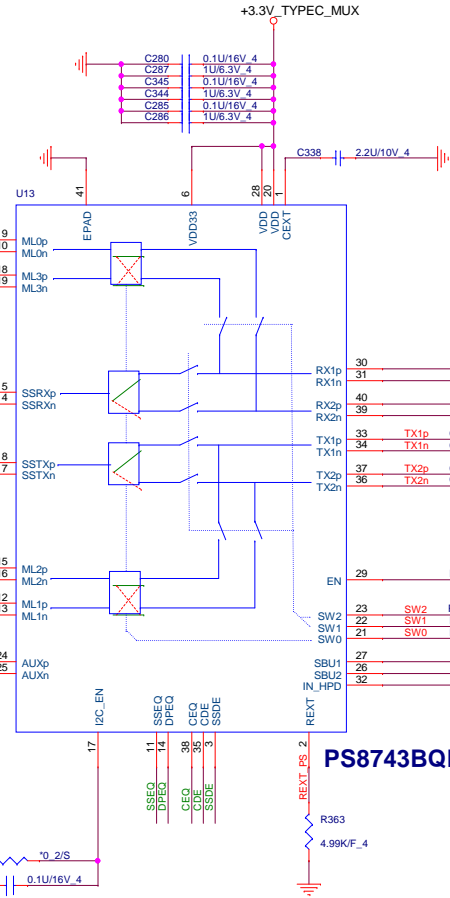
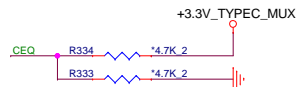
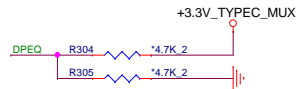
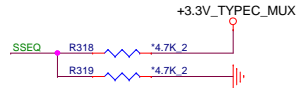
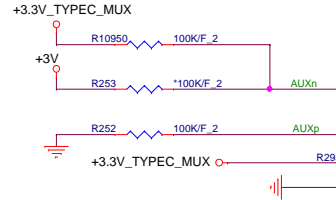
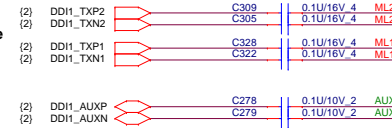
DP Source



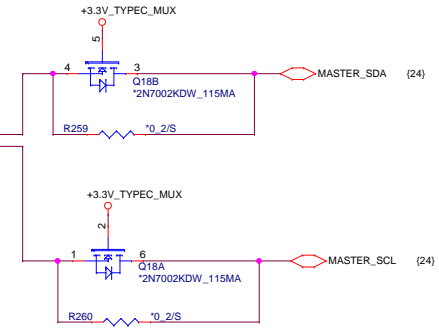
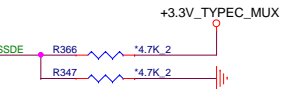
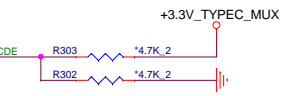
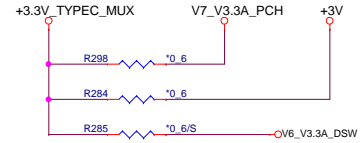
USB3.0 HOST



DP Source



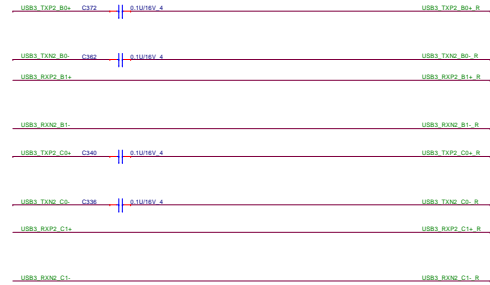
PS8743BQFN40GTR-B0



USB2.0 ESD

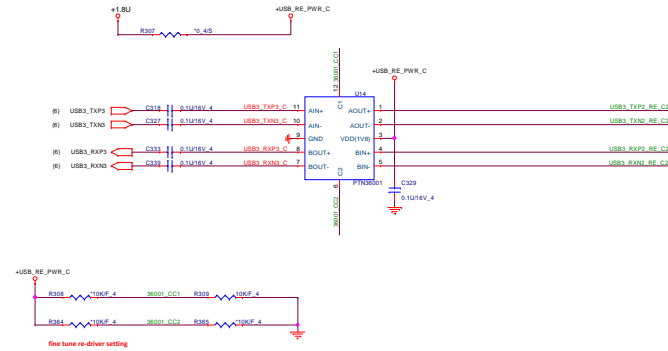


Type C1_HSIO_ESD

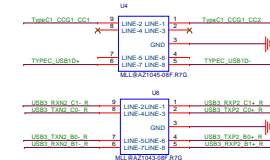
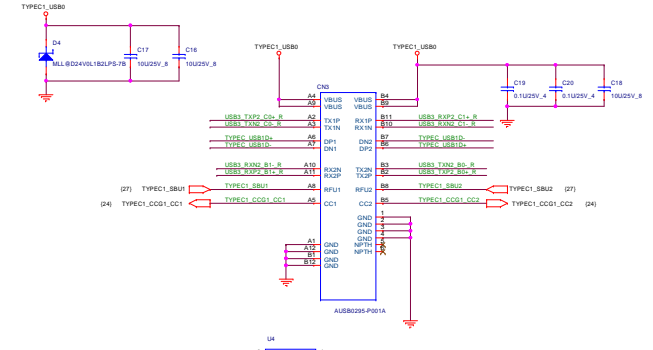
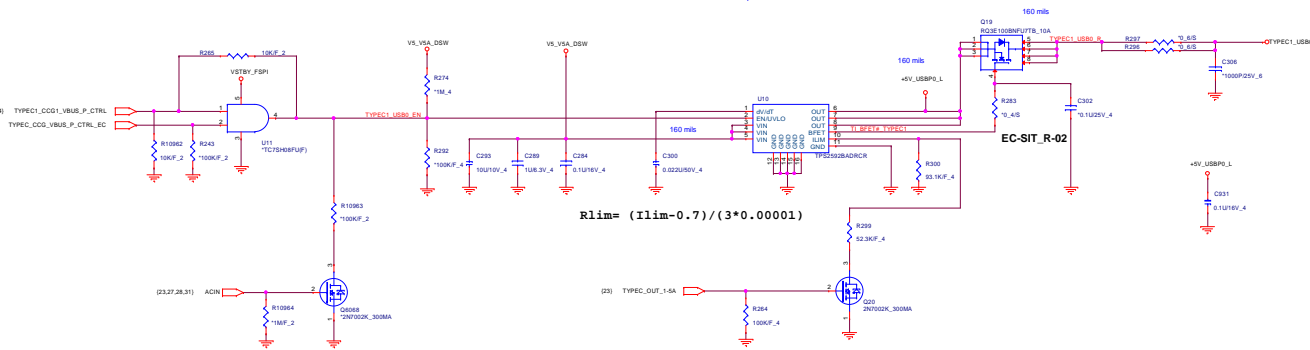
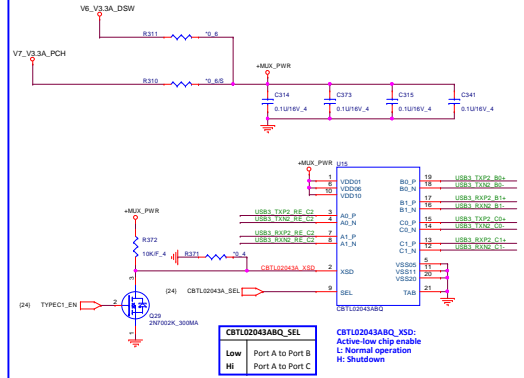


USB Type C (UTC)

USB 3.0 redriver



Type-C MUX

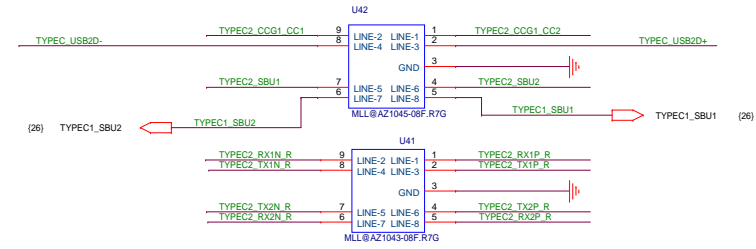
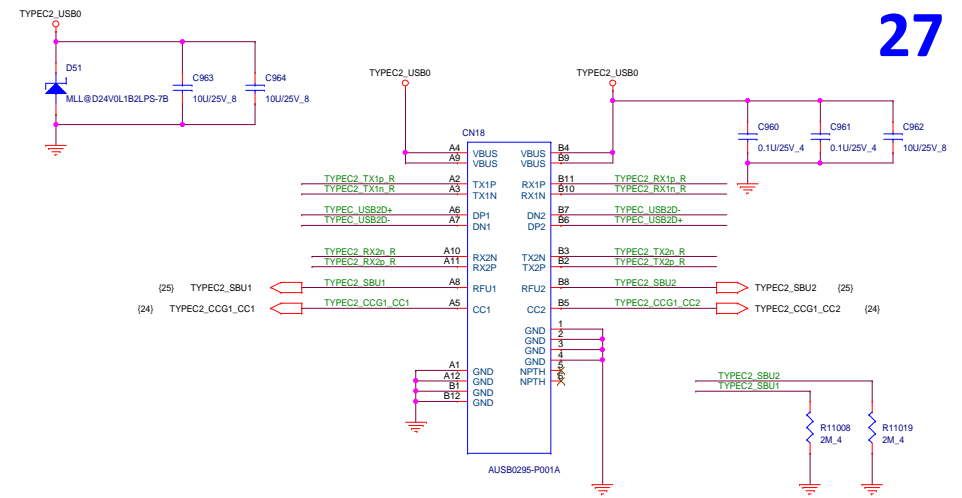


Close to Type-C Conn

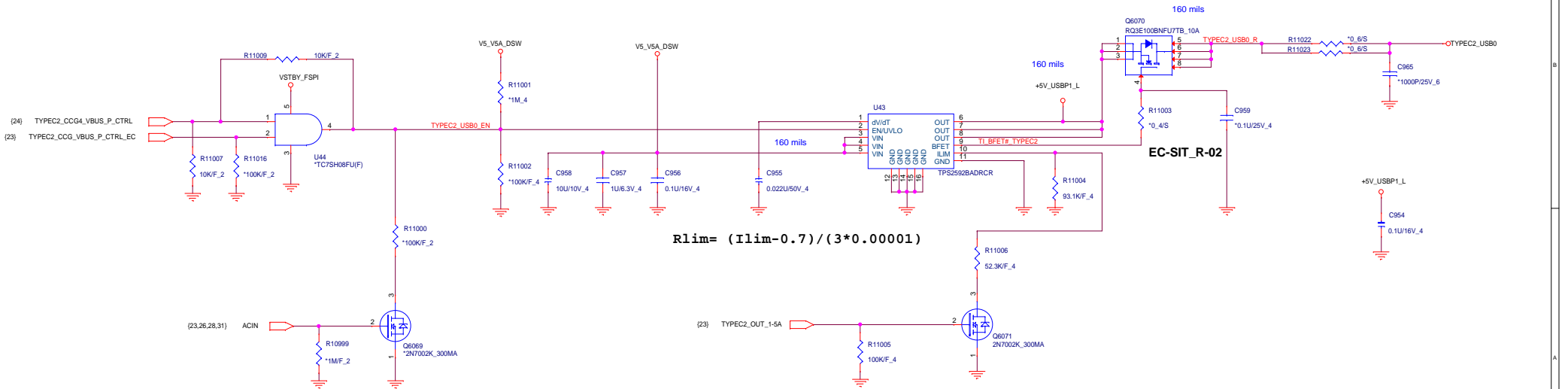
USB2.0 ESD



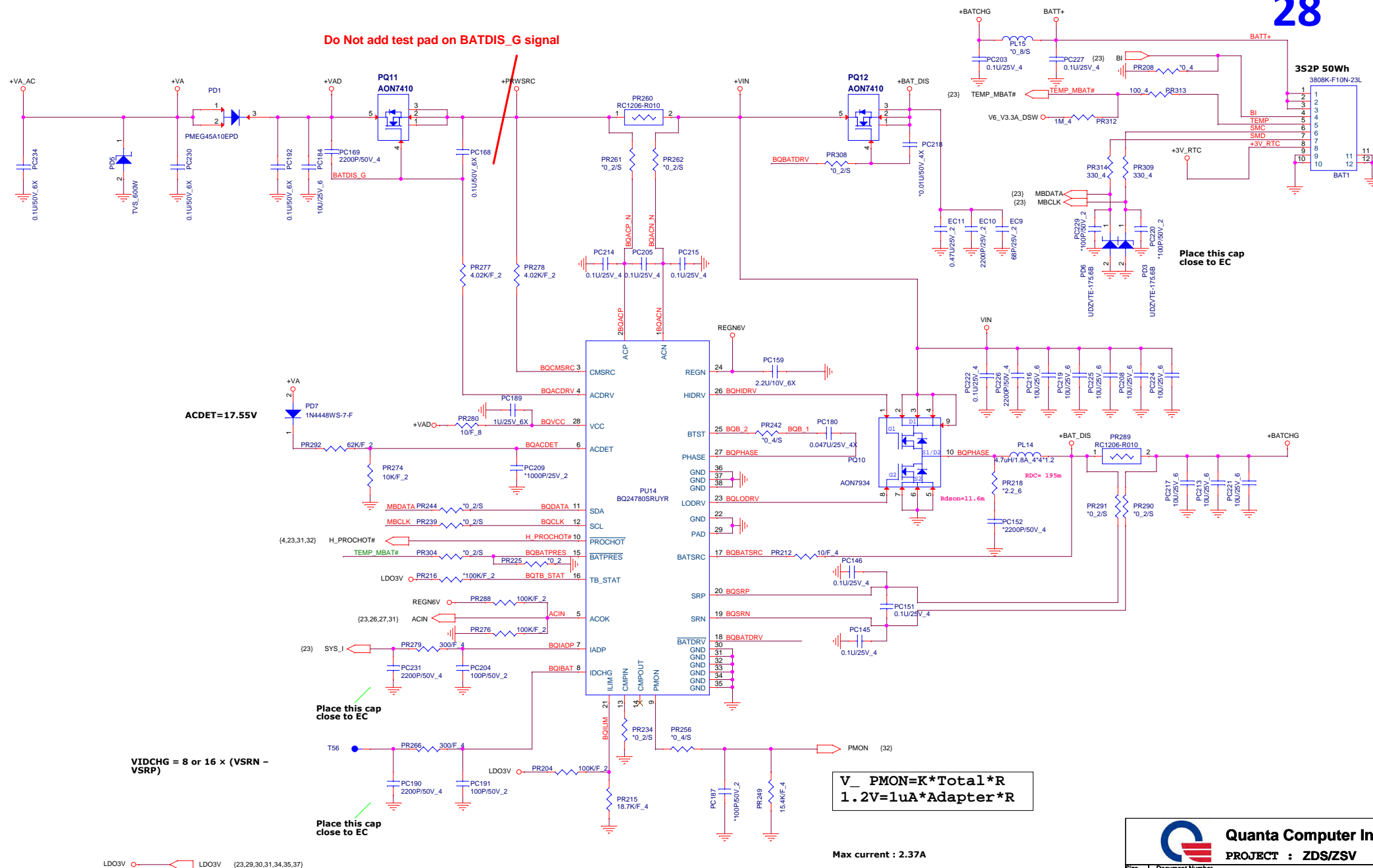
TYPE-C_HSIO_ESD



Close to Type-C Conn



Do Not add test pad on BATDIS_G signal



$$\begin{aligned} V_{PMON} &= K * Total * R \\ 1.2V &= 1\mu A * Adapter * R \end{aligned}$$

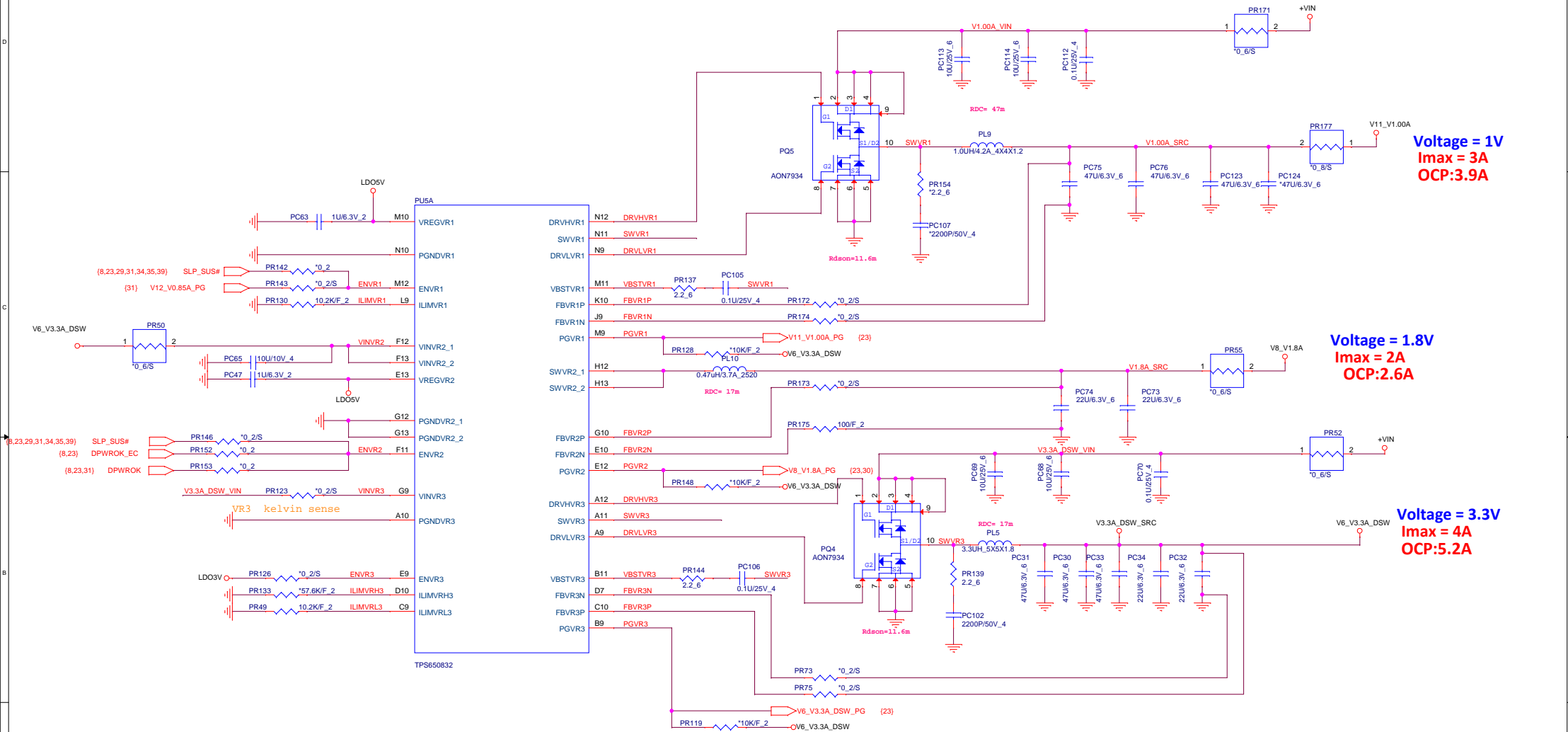
Max current : 2.37A



Quanta Computer Inc.
PROJECT : ZDS/ZSV

Charger (BQ24780S)

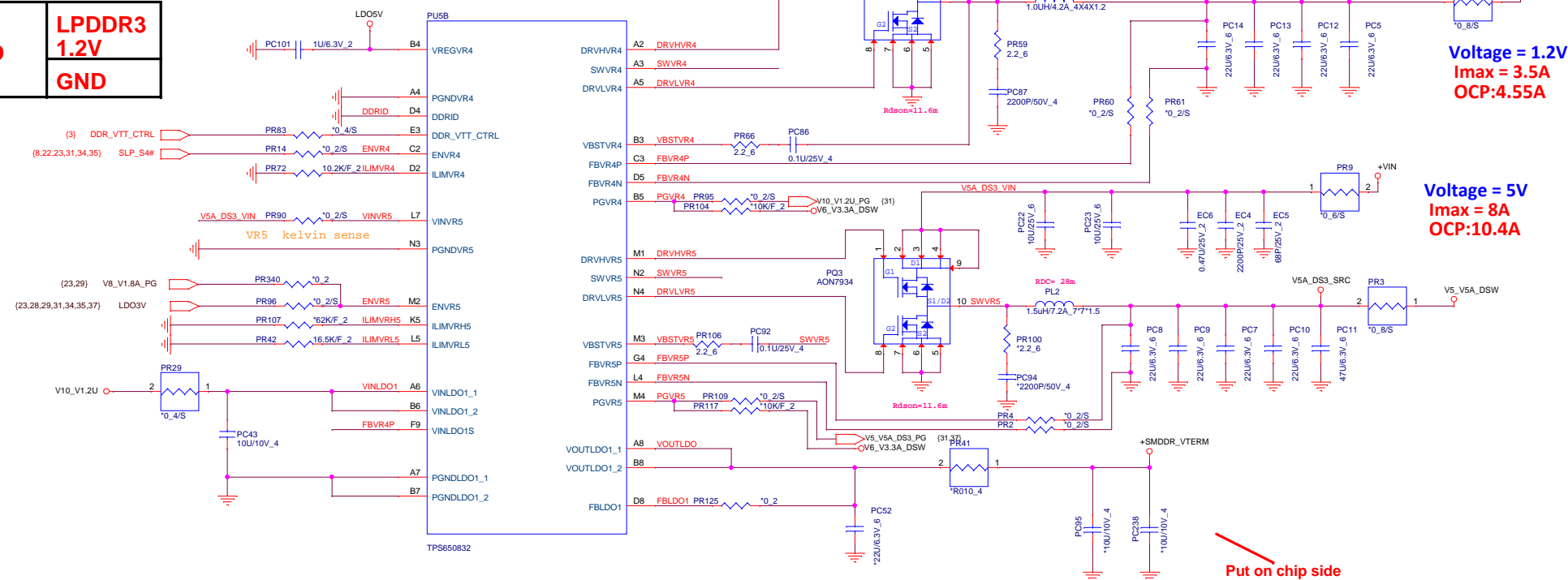
Size	Document Number	Rev
	Charger (BQ24780S)	1A
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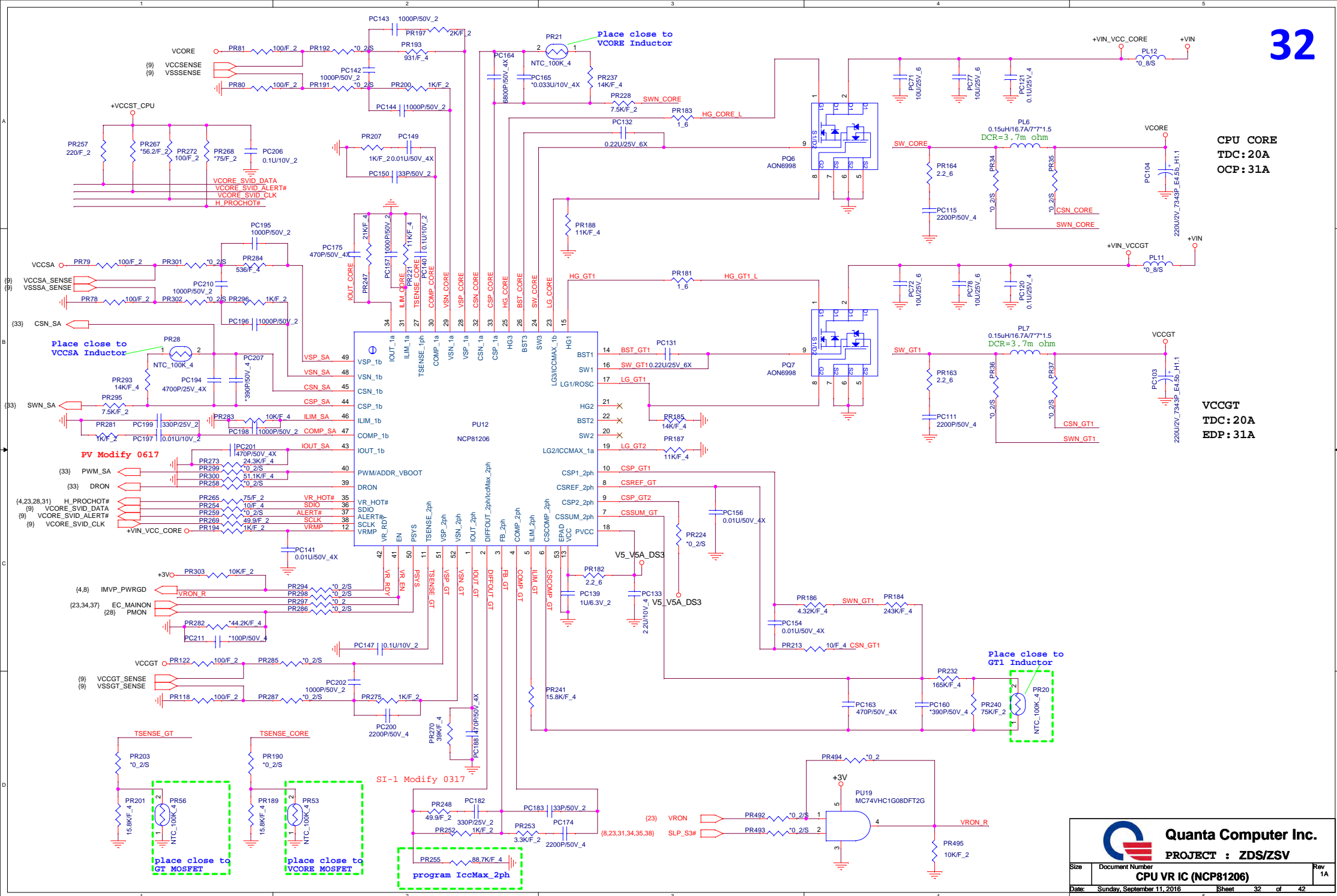
- V6_V3.3A_DSW (4,8,10,17,21,22,24,25,26,28,30,31,34,35,37,38,39)
- V11_V1.00A (10,11,31,34,35)
- V8_V1.8A (10,31,34)

DDRID

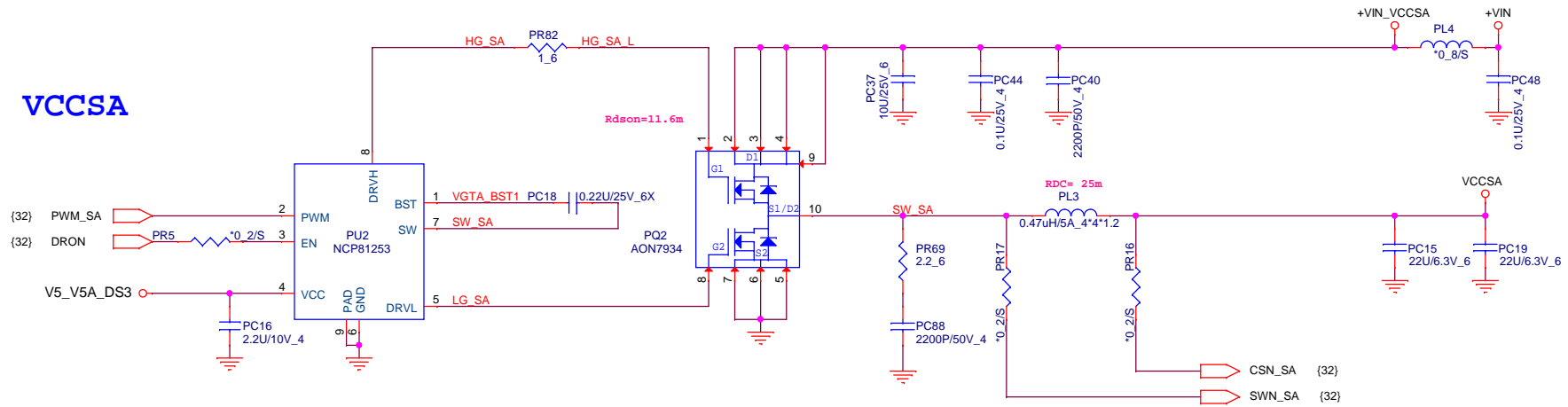
LPDDR3
1.2V
GND



V10_V1.2U {10,12,13,14,15,16,34}
 +SMDDR_VTERM {16}



VCCSA



VCCSA
TDC: 4A
EDP: 5.2A

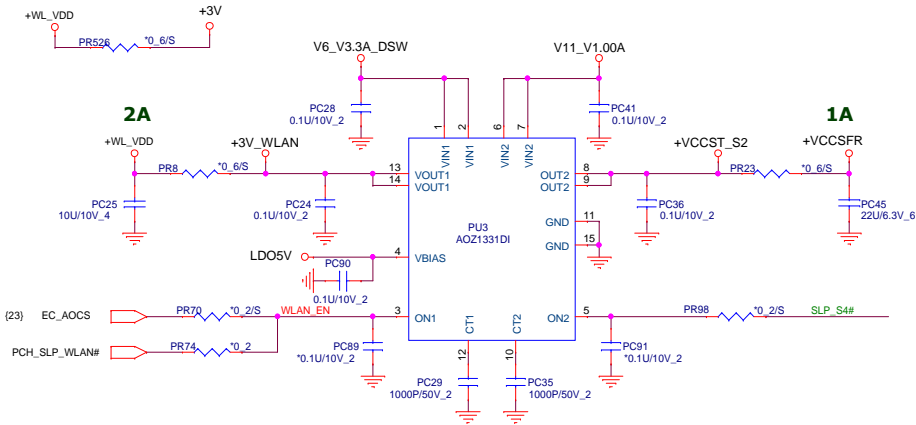
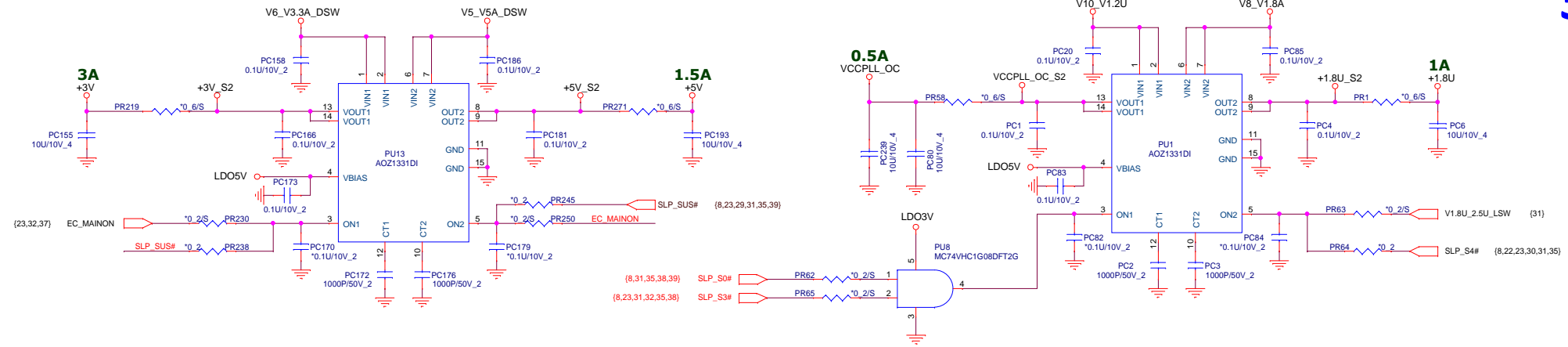


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	+VCCSA (NCP81253)	1A

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+WL_VDD (20)

+3V (2,4,5,6,7,8,10,11,17,18,19,20,21,22,23,25,31,32)

+5V (21)

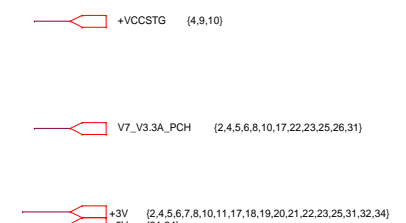


Quanta Computer Inc.

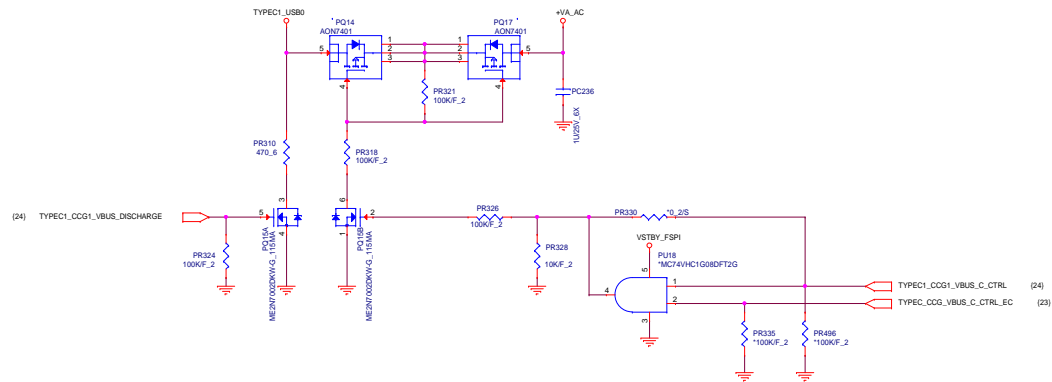
PROJECT : ZDS/ZSV

Size	Document Number	Rev
		1A
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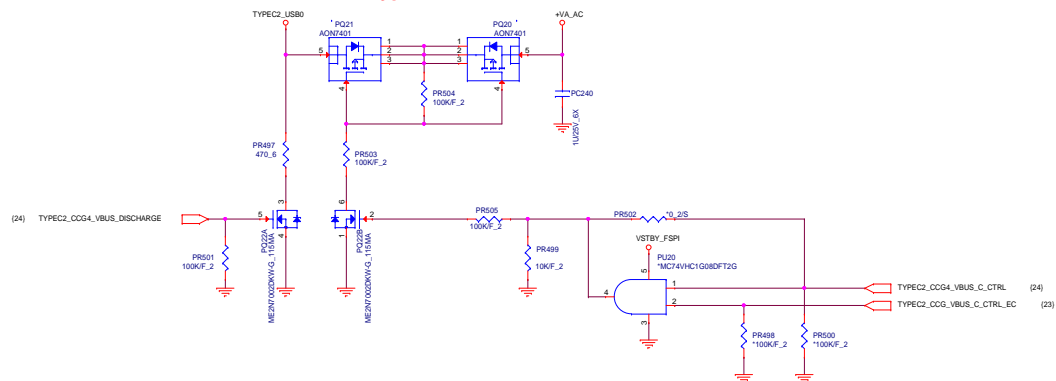
Load switch IC (APL3523A)



For TypeC PORT1



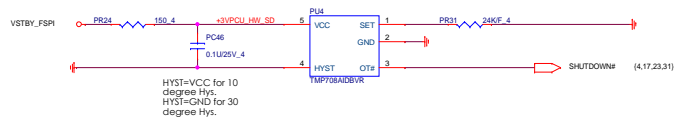
For TypeC PORT2

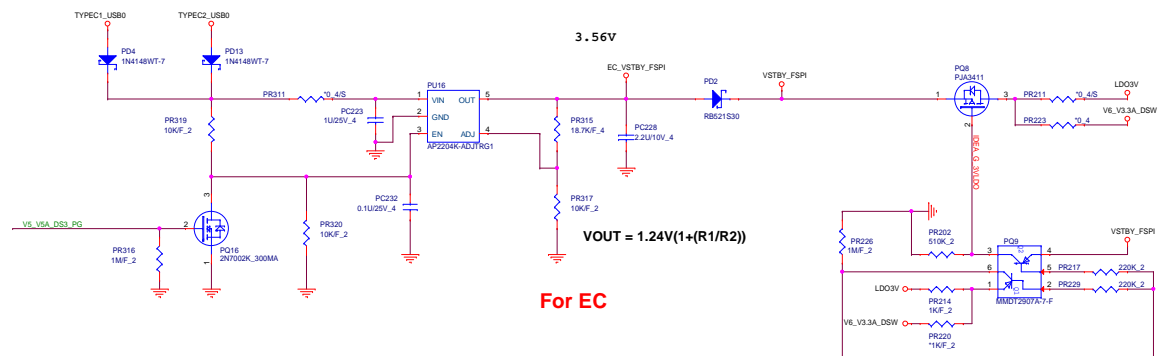
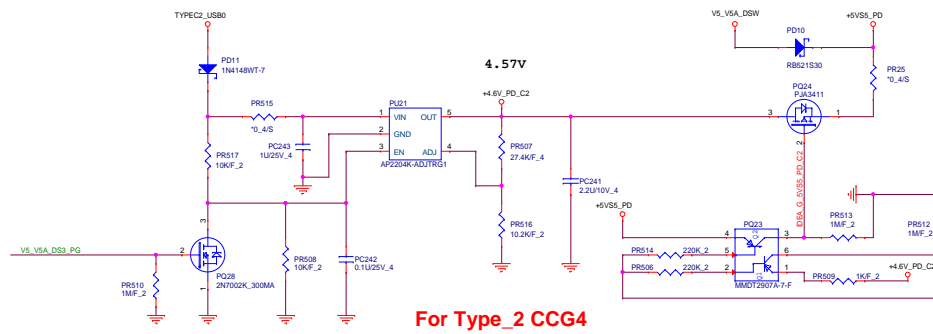
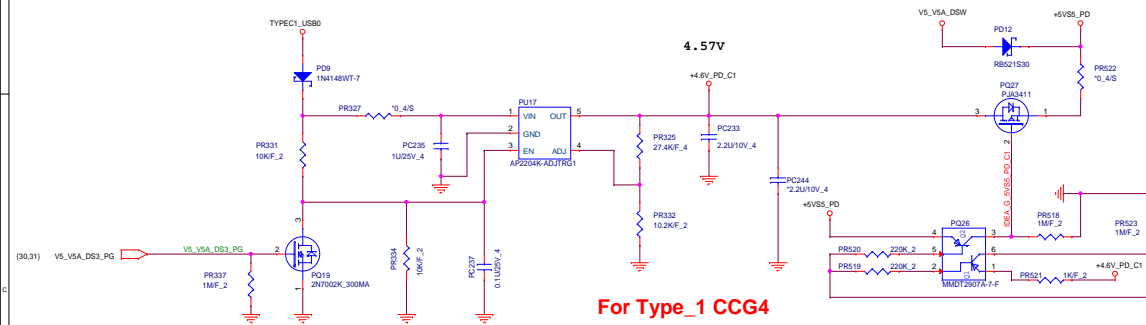
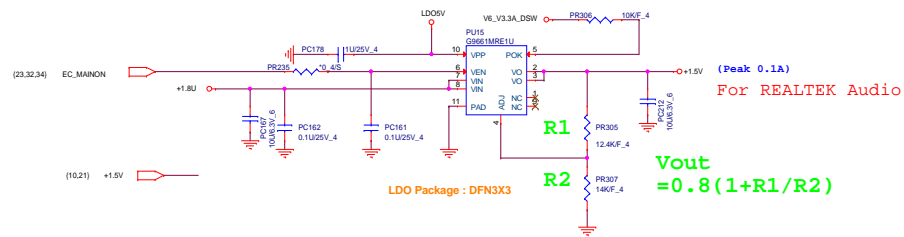


Thermal protection

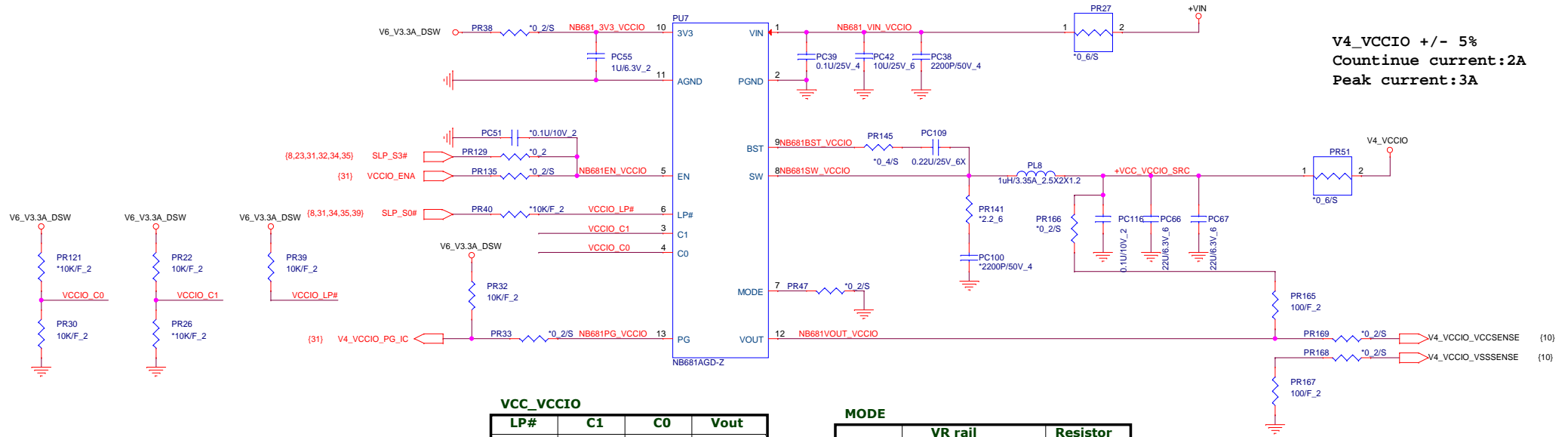
For thermal protect point
Note placement position
TEMP=85C

$$R_{set}(Kohm)=0.0012T^2-0.9308T+96.147$$





{17,21,28,29,30,31,32,33,39} +VIN
{2,7,10,31} V4_VCCIO



VCC_VCCIO

LP#	C1	C0	Vout
0	X	X	0
1	0	0	0.85
1	0	1	0.875
1	1	0	0.95
1	1	1	0.975

MODE

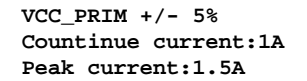
	VR rail	Resistor
M1	VCCIO	0
M2	PRIMCORE	Float
M3	EDRAM/EOPIO	100K
M4	other	150K



Quanta Computer Inc.

PROJECT : ZDS/ZSV

Size	Document Number	Rev
	+VCC_VCCIO (NB681)	1A
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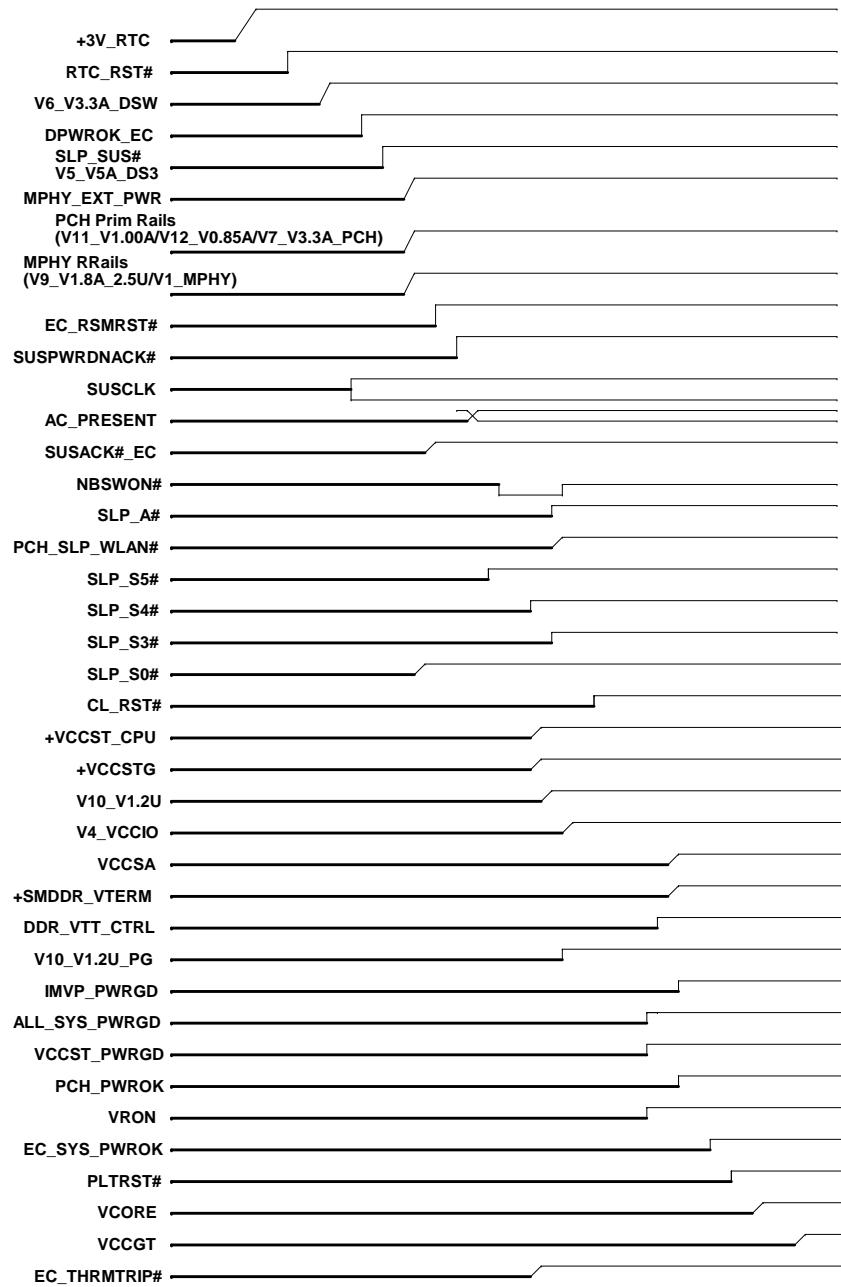


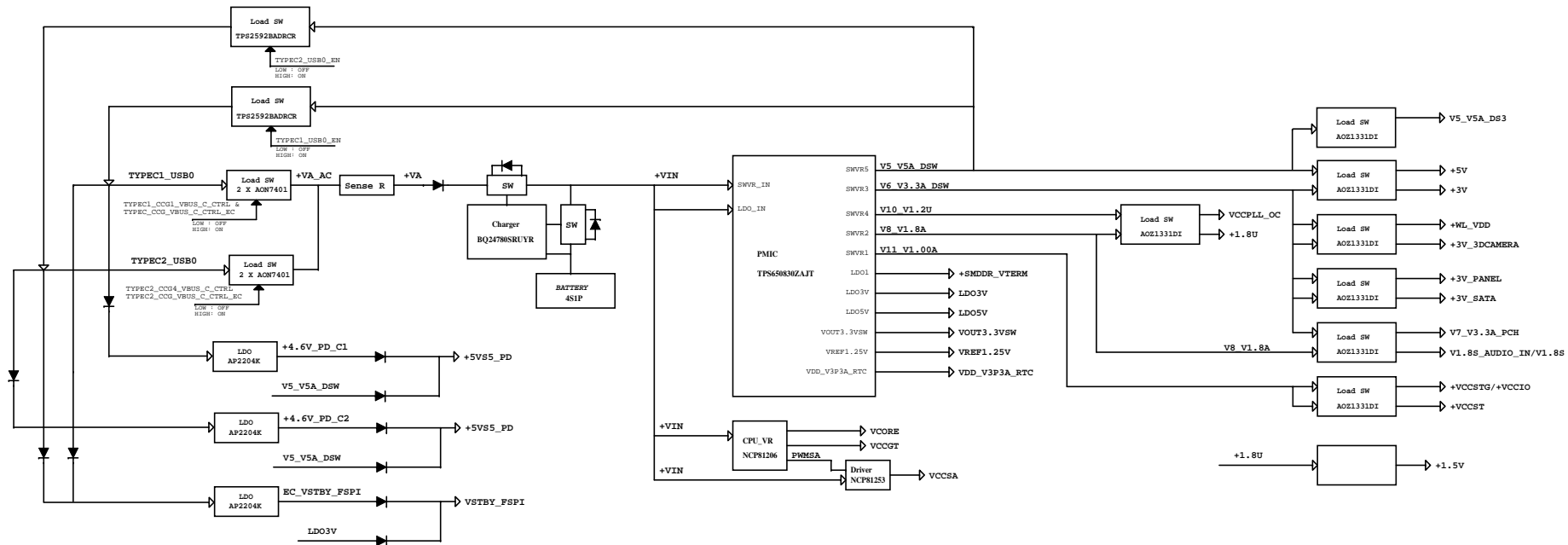
LP#	C1	C0	Vout
0	X	X	0.7
1	0	0	0.85
1	0	1	0.9
1	1	0	0.95
1	1	1	1.00

	VR rail	Resistor
M1	VCCIO	0
M2	PRIMCORE	Float
M3	EDRAM/EOPIO	100K
M4	other	150K

Power up sequence

40





Model	Date	CHANGE LIST
ZDS/ZDV REV:A	4/27	1. FIRST RELEASED
ZDS/ZDV REV:B	6/1	1. Change PR284/PR193/PR247/PR283/PR273/PR187/PR240 Value for CPU transient and load line 2. Add PR492/PR493/PU19/PR495 for sequence 3. Add Q6064 for EC read PCH temperature 4. Change R52/R54 Value from 4.7K to 1K ohm for Touch pad 5. Add R10592/R10591/D39 for RTC voltage 6. Change R291/R47 PU netname from VSTBY_FSP to VSTBY_FSPI for netname wrong 7. Add R10953/R10954/R10955/R10956 for separate Boxster and Dino MIC signals 8. Stuff R309 for USB RX
ZDS/ZDV REV:C1	7/10	1. Remove R28 / Add R10971 to link V7_V3.3A_PCH for leakage current issue 2. Remove R133,R130,R128,R124,R67,R61 and Add R10967,R10966,R10968 to link V7_V3.3A_PCH for leakage current issue 3. Reverse POA/PBA circuit for customer requirement 4. Remove R32,R113 and Add R10970 to link V7_V3.3A_PCH for leakage current issue 5. Change C81/C80/C83//C96/C228/C484/C485/C483/C487/C488 Value to 47U/4V_8H095 for ID height-Z limitation 6. Add C51/C52/C53/C121/C185/C199/C225/C64//C65/C66/C235/C161/C233 for VCCGT voltage stable 7. Add C259/C267 for V4_VCCIO voltage stable 8. Add C940/C939/C938/C937/C936/C935/C934/C312/C425/C426 for V10_V1.2U voltage stable 9. Change 13" ZDS Dual MIC connector from 4pin to 8 pin for FA issue 10. Add D14/D15 for ESD fail 11. Remove R391/R455/R489 and mount Q33/Q27/R390/R456/R488 for leakage current issue 12 Change Audio Jack CN5 from 5 pin to 7 pin for noise issue 13. Change R151/R152/R153/R154/R150/R155/R157/R158 Value for LED brightness issue 14. Change PR292/PR274 Value for ACDet 15. Change PL5 from 1UH to 3.3UH for Noise issue
ZDS/ZDV REV:C2	7/27	1. Change PD circuit from CCG2 to CCG4 for support PD*2
ZDS/ZDV REV:C3	8/10	1. Del R330,R314,R323,R341,R291 and add Q6072,R332,R337,R505 to V7_V3.3A_PCH for S5 leakage current issue 2. Change R150,R151,R152,R153,R154,R157 PN to fine tune LED brightness for ME ID Len change Lens color issue 3. Del R10980,R10981,R298,Q18,R311 and add R285,R273,R266,R259,R260,R295,R310,C282 and change Change U16,U18,R117,R121 to V5_V5A_DSW for S4 resume TYPE C device detect detect issue
ZDS/ZDV REV: Ramp	8/22	1. Change 0 ohm to shortpad