

# NB8609 V4.0 DDR4&SO-DIMM

## Intel Gemini Lake Platform

01--COVER PAGE  
02--BLOCK DIAGRAM  
03--POWER BLOCK DIAGRAM  
04--SYSTEM LIST  
05--GLK\_SOC\_MEM(CHA)  
06--GLK\_SOC\_MEM(CHB)  
07--GLK\_SOC (EMMC/SPI/LPC/AUD/PMU)  
08--GLK\_SOC(DDI/DSI)  
09--GLK\_SOC(I2C/CNV/LPSS/SPI/UART)  
10--GLK\_SOC(PCIE/SATA/USB)  
11--GLK\_SOC(JTAG/GPIO)  
12--GLK\_SOC(PWR)  
13--GLK\_SOC(GND)  
14--GLK\_SOC(DECAP)  
15--GLK\_SOC(STRAP)  
16--MEM\_SODIMM  
17--MEM\_DDR4\_CHA0  
18--MEM\_DDR4\_CHA1  
19--DDR4\_TERMINATIONS  
20--MEM\_DECAPS  
21--SYSTEM\_SPI\_FLASH  
22--HDMI  
23--EDP  
24--EMMC  
25--SSD

26--G\_SENSORS&HALL  
27--RTC  
28--AUDIO  
29--WLAN  
30--USB3.0  
31--EC ITE8987  
32--EC ROM &THERMAL SENSOR  
33--HDD  
34--Reserve\_FP  
35--KeyBoard&TouchPad&FAN  
36--IO BOARD CONN  
37--TPM  
38--LAN  
39--DCIN&DEBUG CONN  
40--HYBRID CHARGE  
41--POWER DELIVERY 3P3V  
42--POWER DELIVERY 5P5V  
43--PMIC RT5077\_1  
44--PMIC RT5077\_2  
45--POWER DELIVERY VDDQ  
46--LOAD SWITCH  
47--AC POWER ON SQUENCE 1  
48--DC POWER ON SQUENCE 2  
49--POWER DELIVERY\_Backlight  
50--HOLE&BOSS  
51--CHANGE LIST



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TITLE <OrigAddit>  
PAGE DETAIL <Doc>

HQNB  
ID  
Date

NB8609

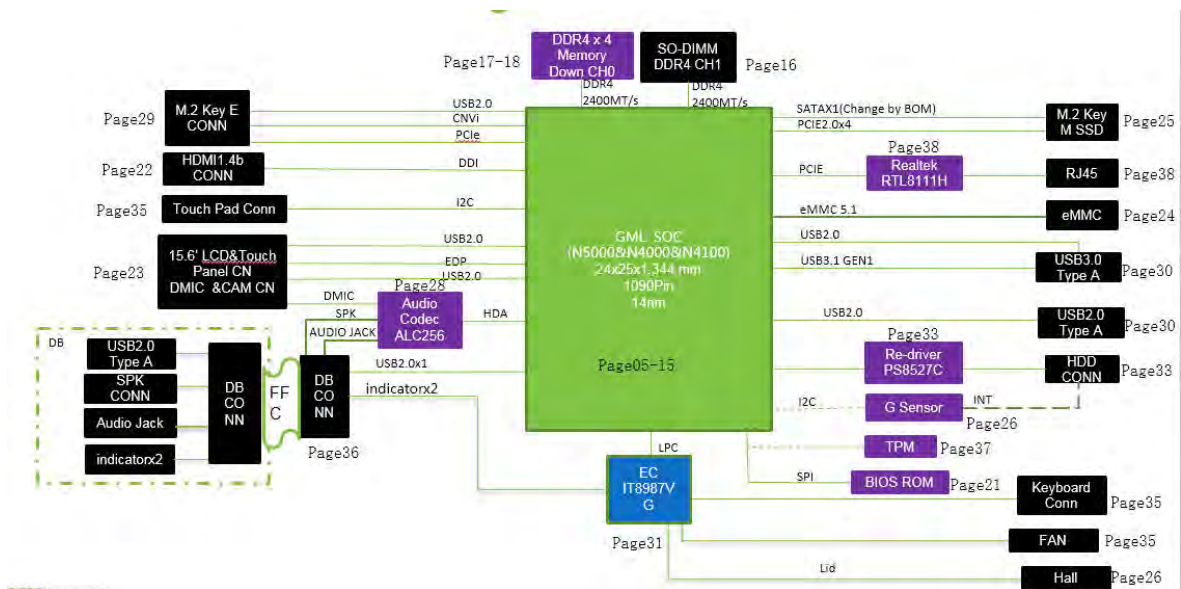
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Thursday, March 28, 2019

Rev V1.0

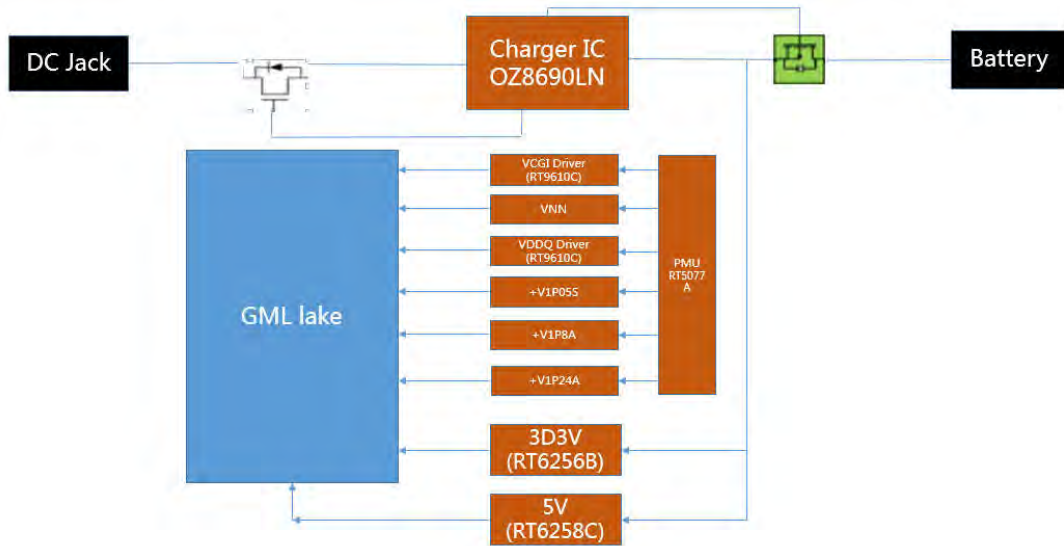
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Sheet 1 of 51



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TITLE	<OrgAddit>	HQNB	NB8809	Rev	V1.0
PAGE DETAIL	<Doc>	ID	<OrgAddit3>	Size	B
		Date	Thursday, March 28, 2019	Sheet	2 of 51



Huaqin Telecom Technology Com.,Ltd.

TITLE	<OrgAddr4>	HQNBD	NB8609	Rev	V1.0
PAGE DETAIL	<Doc>	ID	<OrgAddr3>	Size	B
		Date	Thursday, March 28, 2019	Sheet	3 of 51

Power States(Adapter)

Signal	SLP_S0#	SLP_S3#	SLP_S4#	+V5P0A	+V3P3A	VNN	V1P8A	V1P2A	VCGI	V1P05S	+V1P2U_VDDQ	+3P3SX	+1P8SX	+5P0SX	+V3P3SL_CNS
S0(Full On)	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
S3(STM)	LOW	LOW	HIGH	ON	ON	OFF	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON/OFF <sup>2</sup>
S4(STD)	LOW	LOW	LOW	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON/OFF <sup>2</sup>
S5(SoftOff)	LOW	LOW	LOW	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON/OFF <sup>2</sup>

Notel:CNVi moudle on,Pcie moudle off

Power States(Battery)

Signal	SLP_S0#	SLP_S3#	SLP_S4#	+V5P0A	+V3P3A	VNN	V1P8A	V1P2A	VCGI	+V1P05S	+V1P2U_VDDQ	+3P3SX	+1P8SX	+5P0SX	+V3P3SL_CNS
S0(Full On)	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
S3(STM)	LOW	LOW	HIGH	ON	ON	OFF	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	ON/OFF <sup>2</sup>
S4(STD)	LOW	LOW	LOW	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON/OFF <sup>2</sup>
S5(SoftOff)	LOW	LOW	LOW	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON/OFF <sup>2</sup>

Notel:CNVi moudle on,Pcie moudle off

MEM ID

MEM_ID2	MEM_ID1	MEM_ID0	
0	0	0	4x HYNIX 1GB (H5AN8G6NCJR-VXC)
0	0	1	4x Micron 1GB (MT40A512M16LY-075:E)
0	1	0	4x Micron 1GB (MT40A512M16TB-062E:J)
0	1	1	xxx
1	0	0	xxx
1	0	1	xxx

MB ID

			HW_ID6	HW_ID5	HW_ID2	HW_ID1	HW_ID0
	EVT		X	X	1	1	1
NB8609	DVT						
NB8612	DVT						

PCIe Port

Port	Device
0-3	SSD
4	LAN
5	WLAN

SATA Port

Port	Device
0	HDD
1	SSD

USB2.0 Port

Port	Device
0	USB2.0 Type-A
1	USB3.0 Type-A
2	USB2.0 Type-A(DB)
4	BT
5	Touch screen
6	Camera

USB3.0 Port

Port	Device
0	USB3.0 Type-A
1	NA

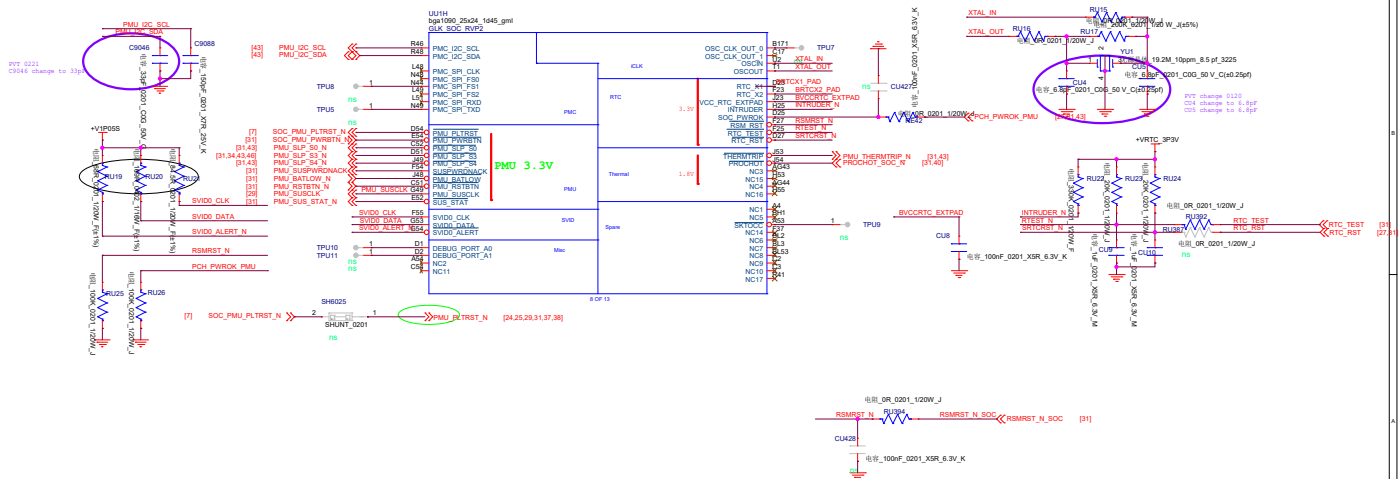


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TITLE	<OrgAddr4>	HQNB	NB8609	Rev	V1.0
PAGE DETAIL	<Doc>	ID	<OrgAddr3>	Size	B
		Date	Thursday, March 28, 2019	Sheet	4 of 51





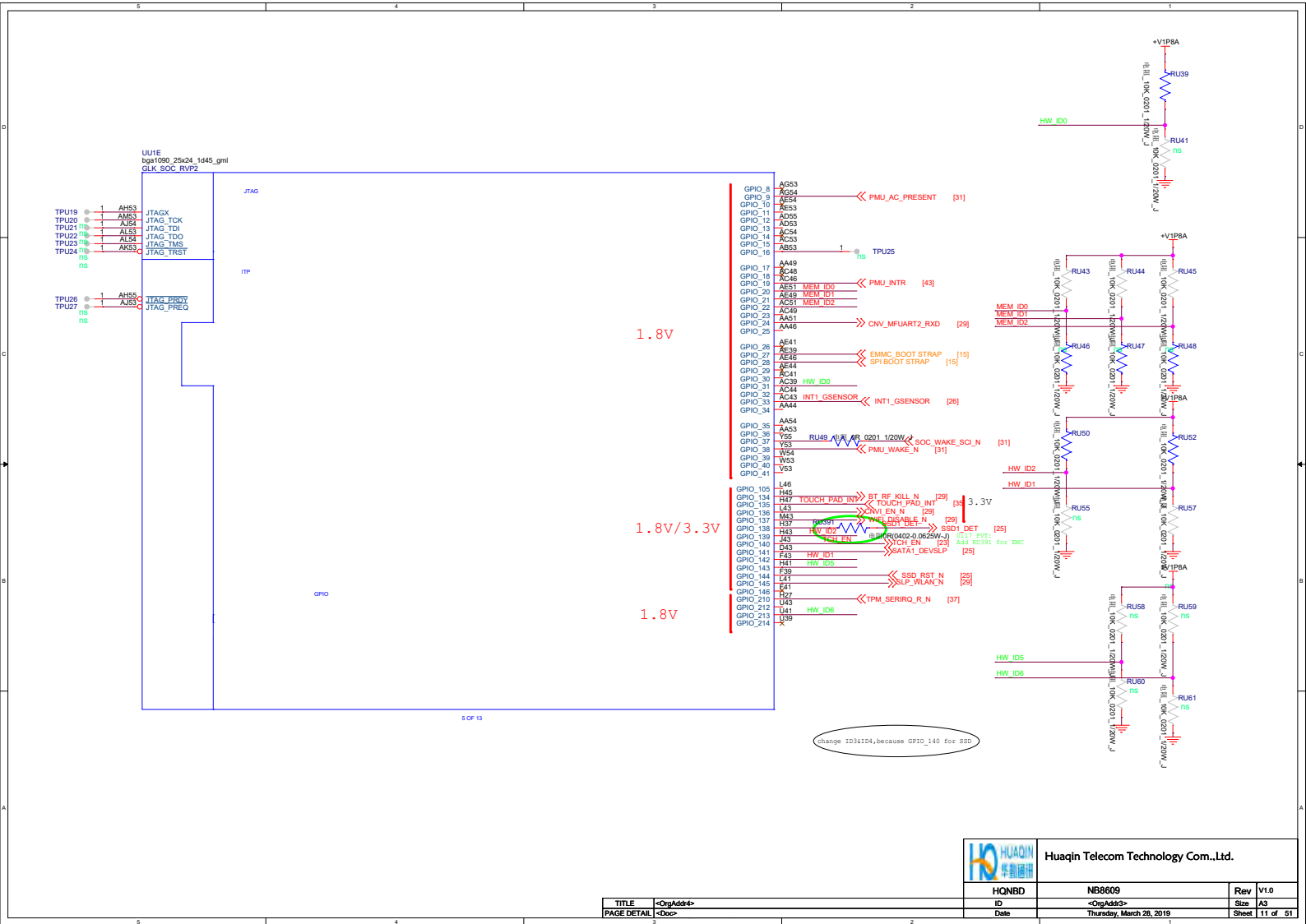











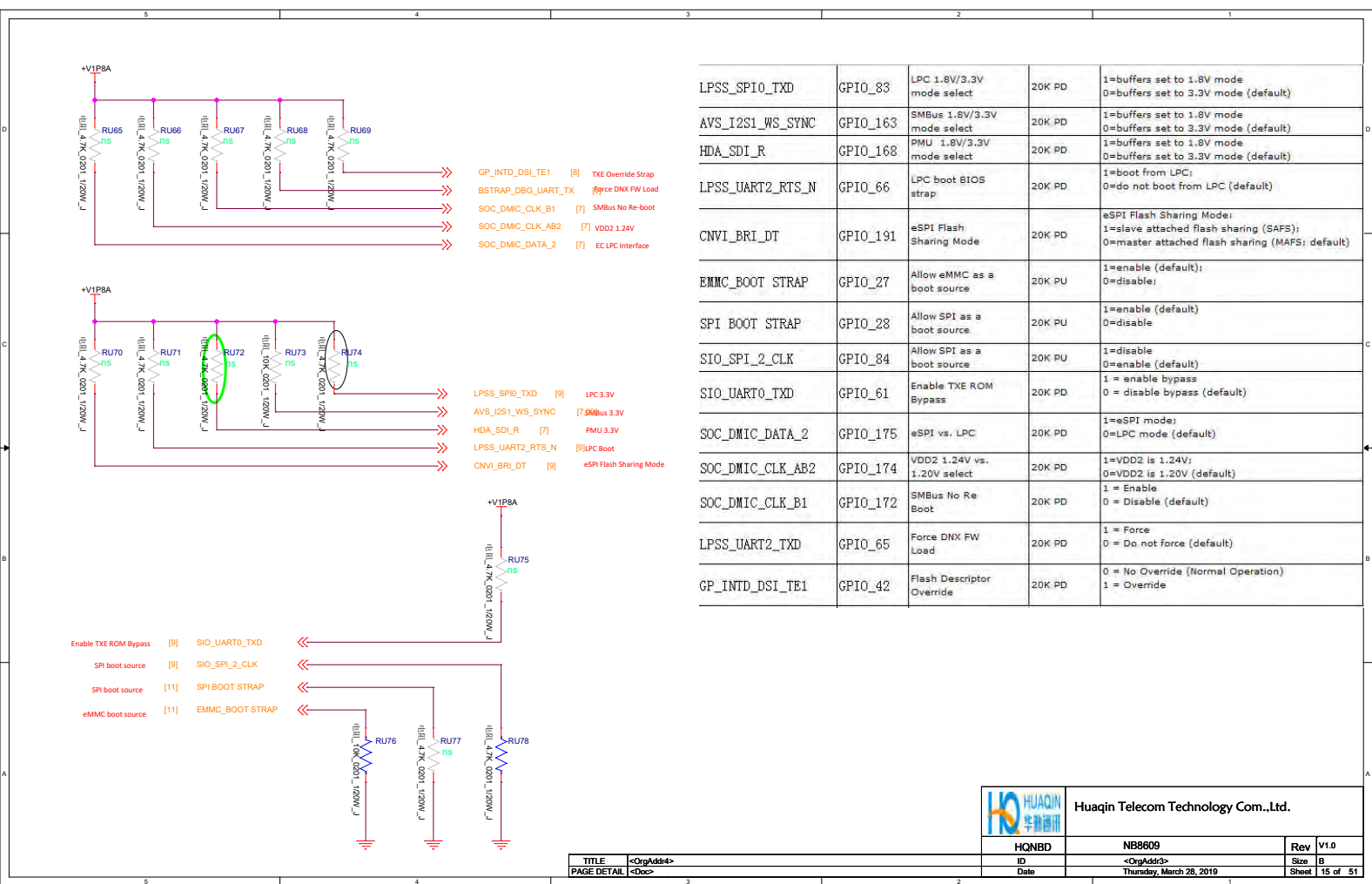


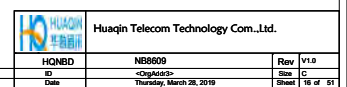
 Huaqin Telecom Technology Co., Ltd.		Rev	V1.0
HQNBD		NB8609	
ID	<OrigAddr>	Size	A3
Date	Thursday, March 28, 2019	Sheet	11 of 51



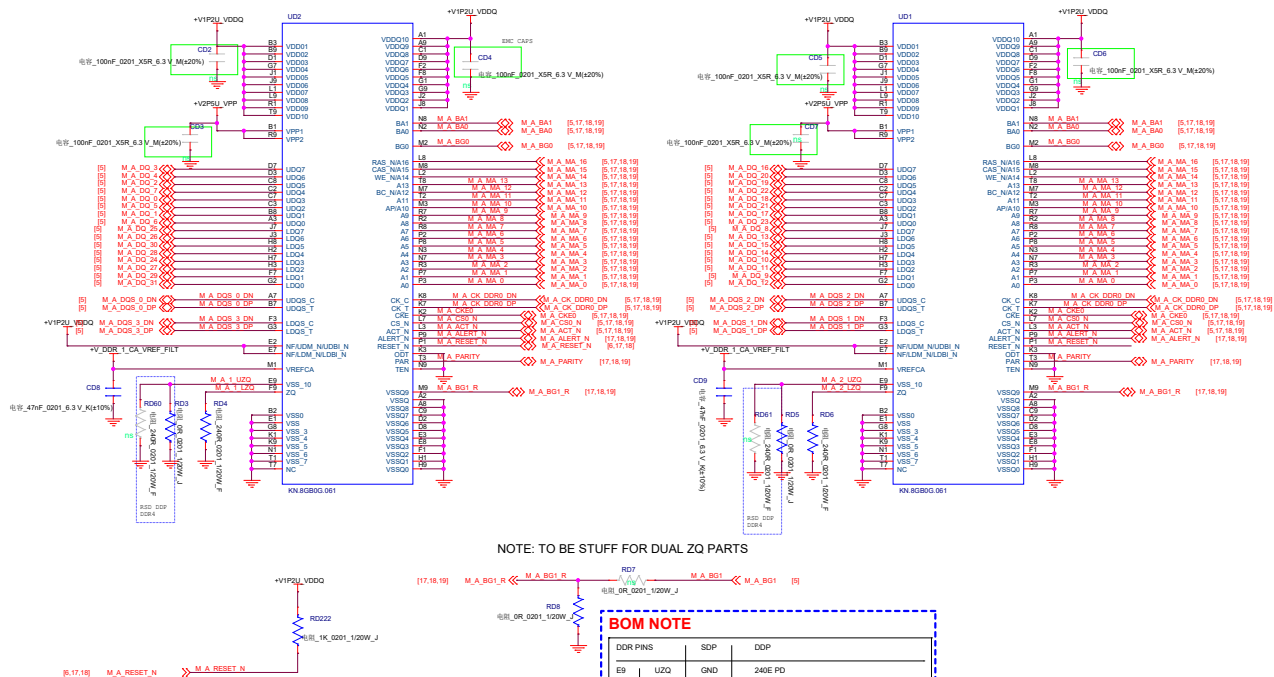


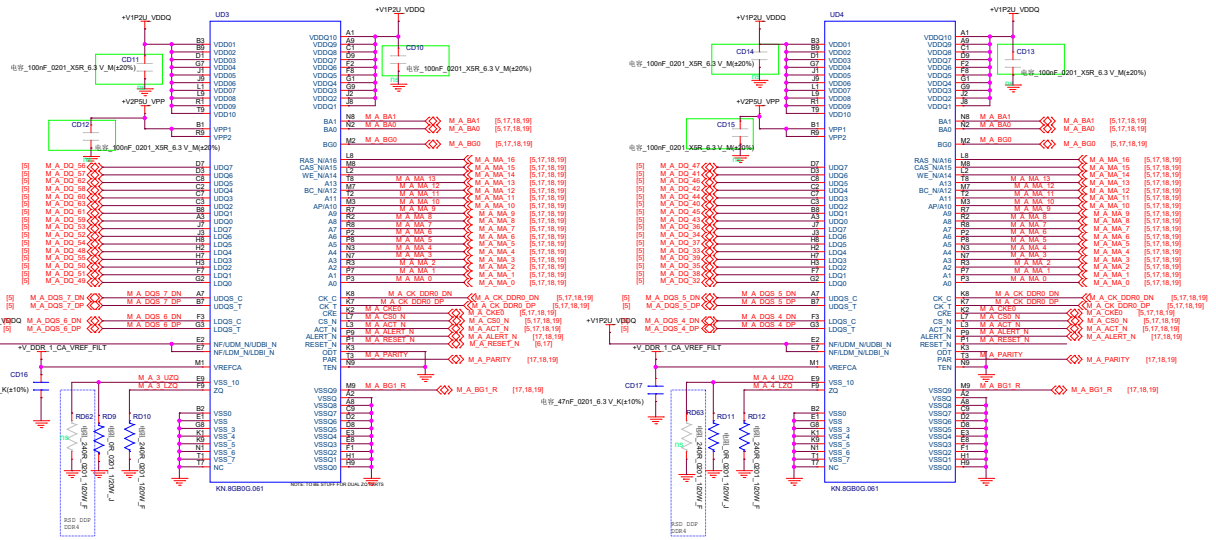






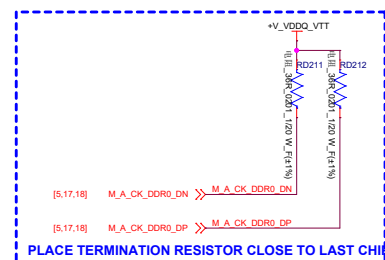
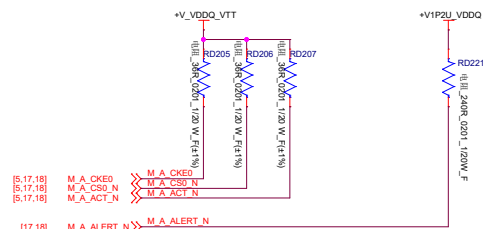
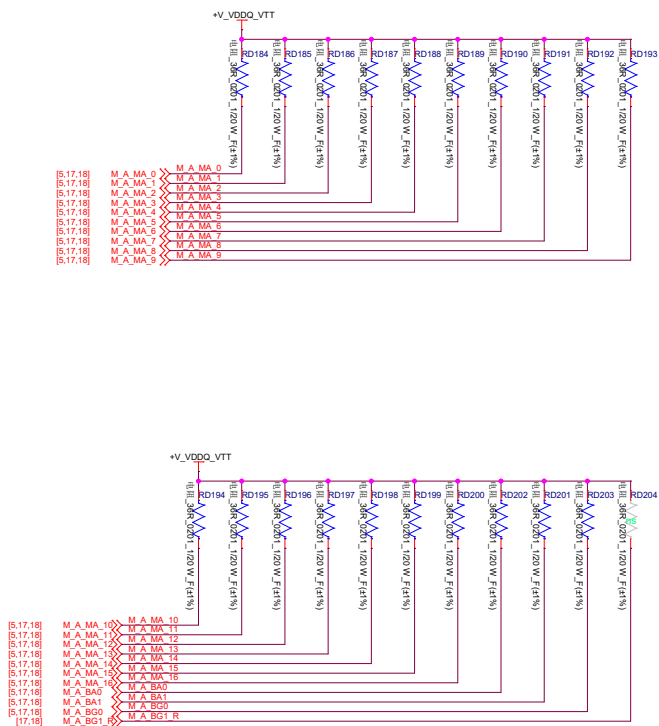




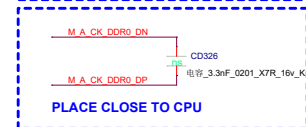


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ID		Doc	C
Date		Thursday, March 28, 2019	Sheet 18 of 51

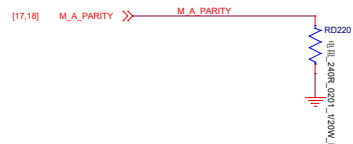
## MEMORY TERMINATIONS MD CHANNEL A



PLACE TERMINATION RESISTOR CLOSE TO LAST CHIP



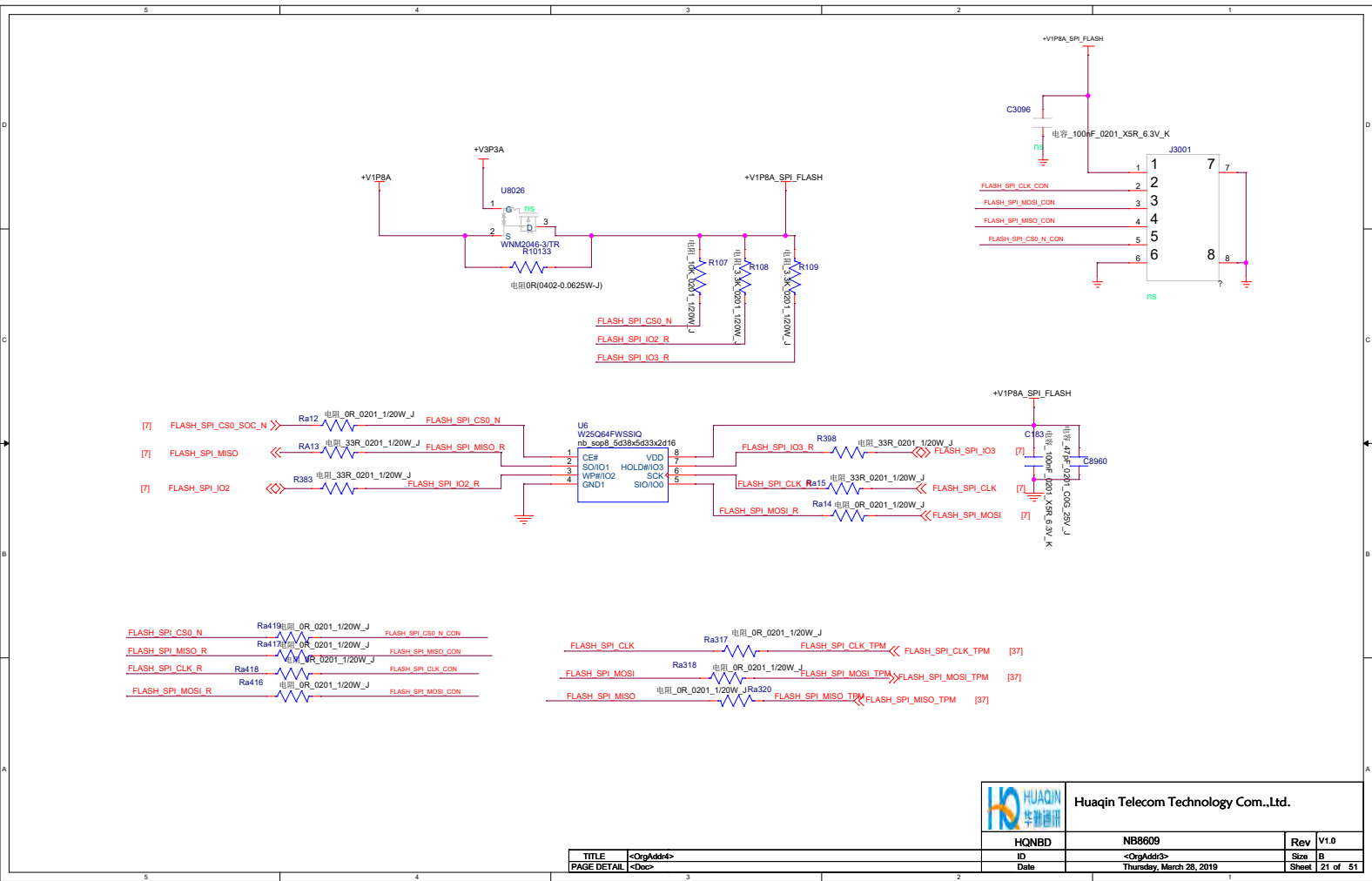
PLACE CLOSE TO CPU




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HQNB0	NB8609	Rev	V1.0
ID	<OrigAddr>	Size	A3
Date	Thursday, March 28, 2019	Sheet	18 of 51

TITLE	<OrigAddr>
PAGE DETAIL	<Doc>

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		Huaqin Telecom Technology Com.,Ltd.	
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ID		<OrgAddr3>	Size B
Date		Thursday, March 28, 2018	Sheet 21 of 51

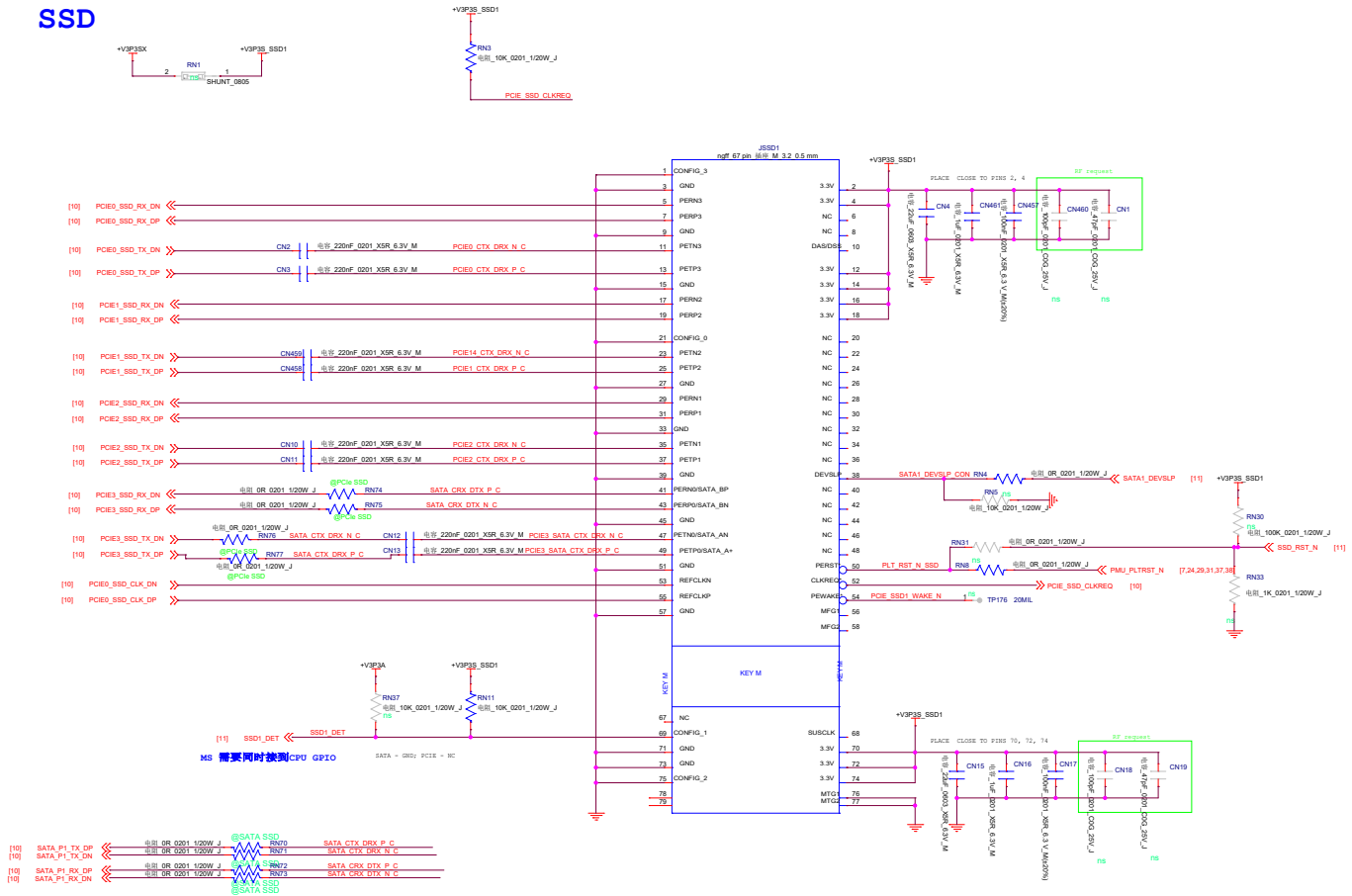









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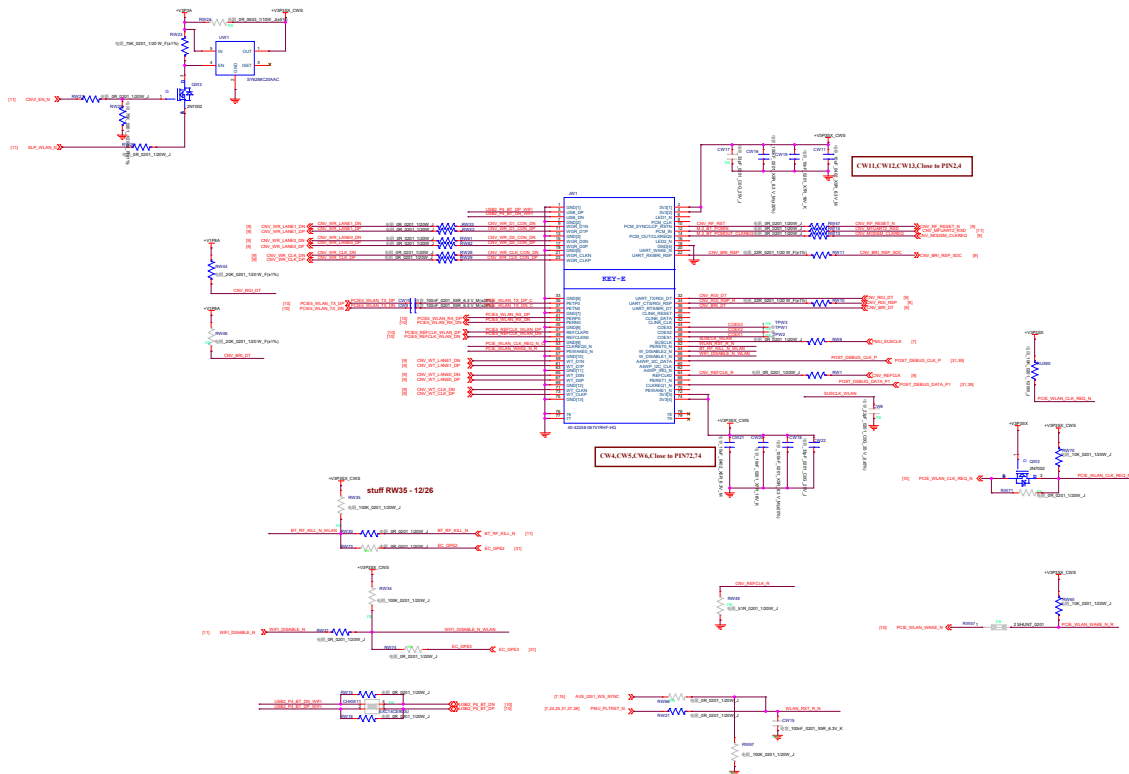


 Huaqin Telecom Technology Com.,Ltd.			
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Date	Thursday, March 28, 2019	Sheet	25 of 51

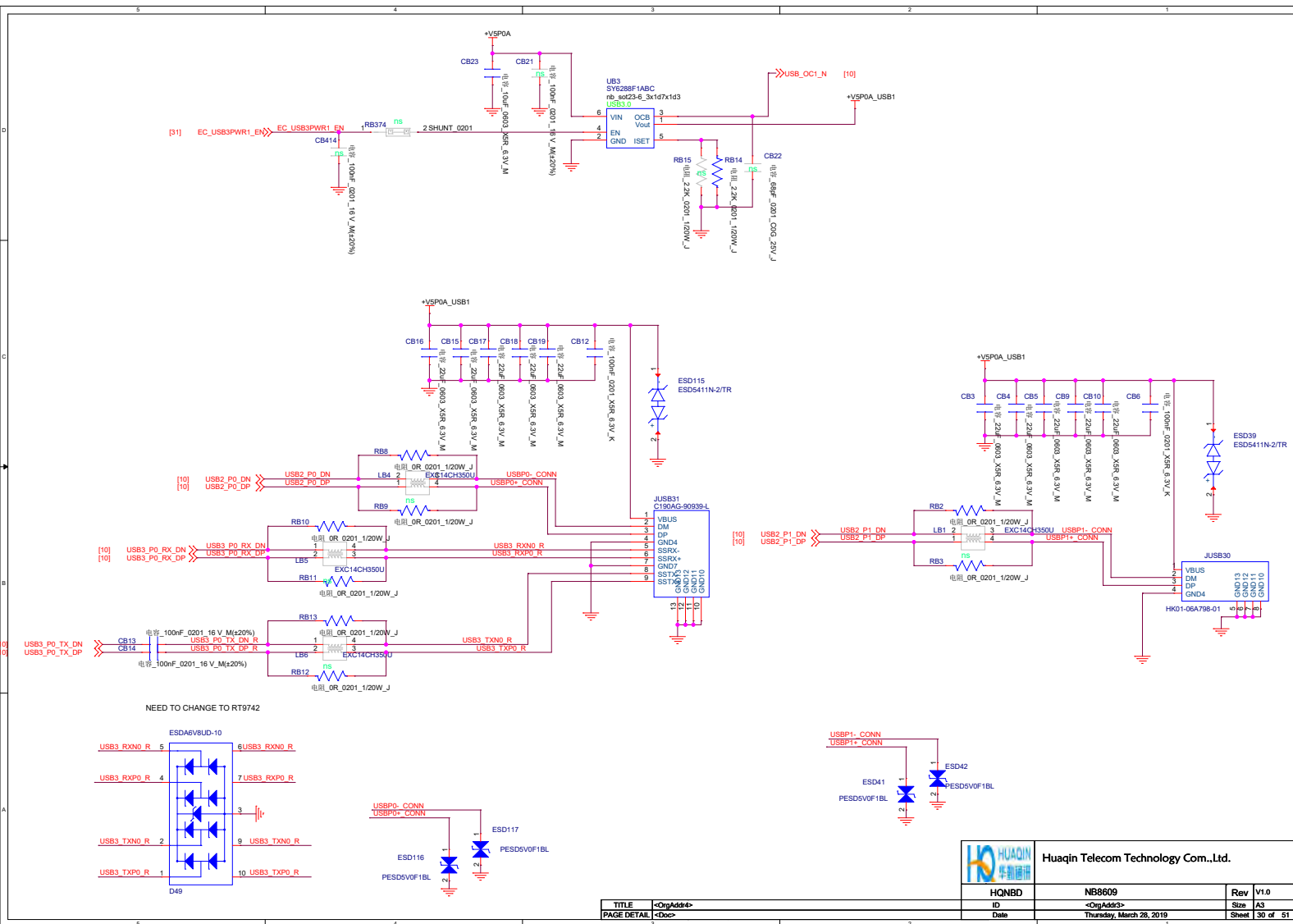


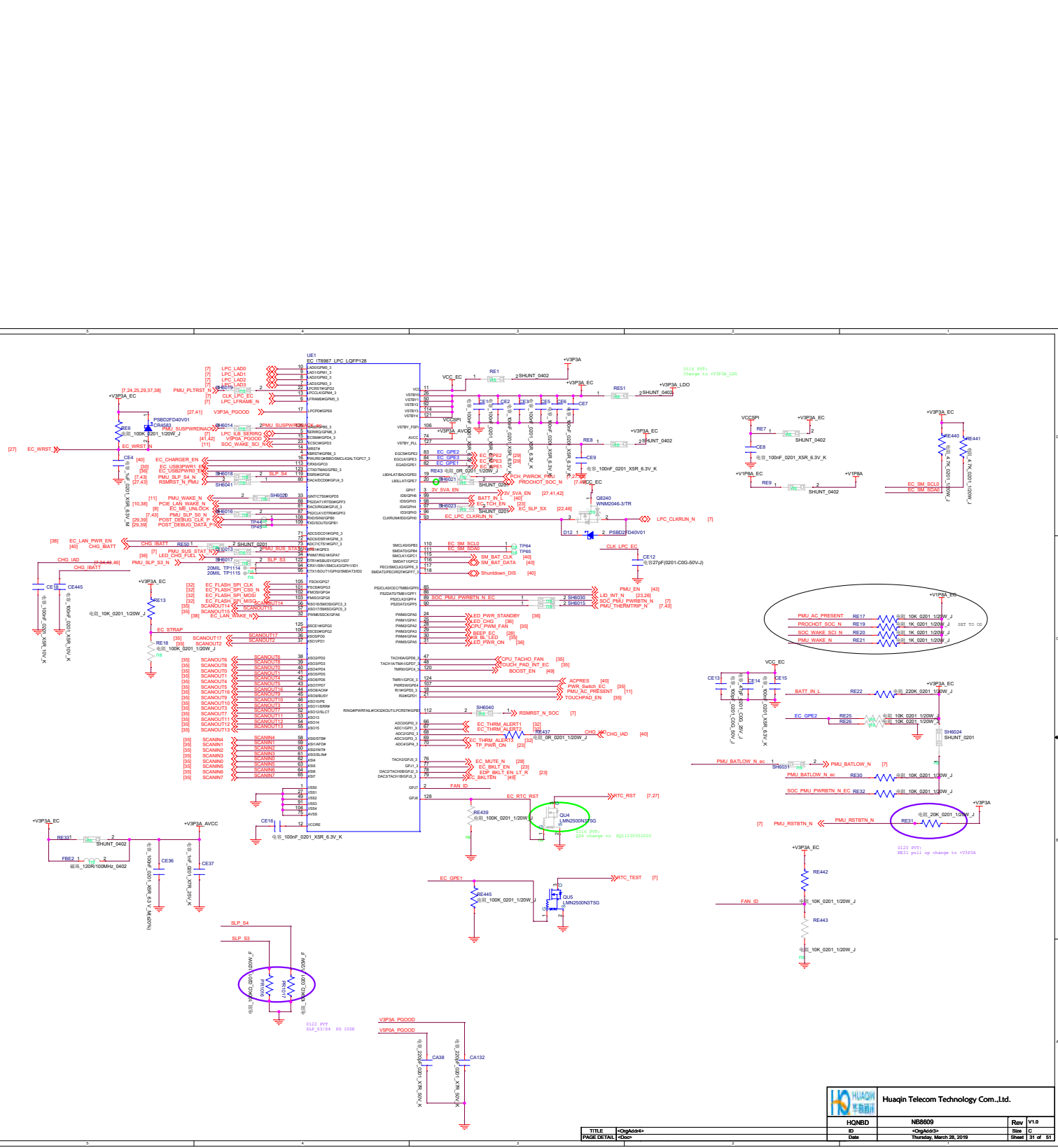




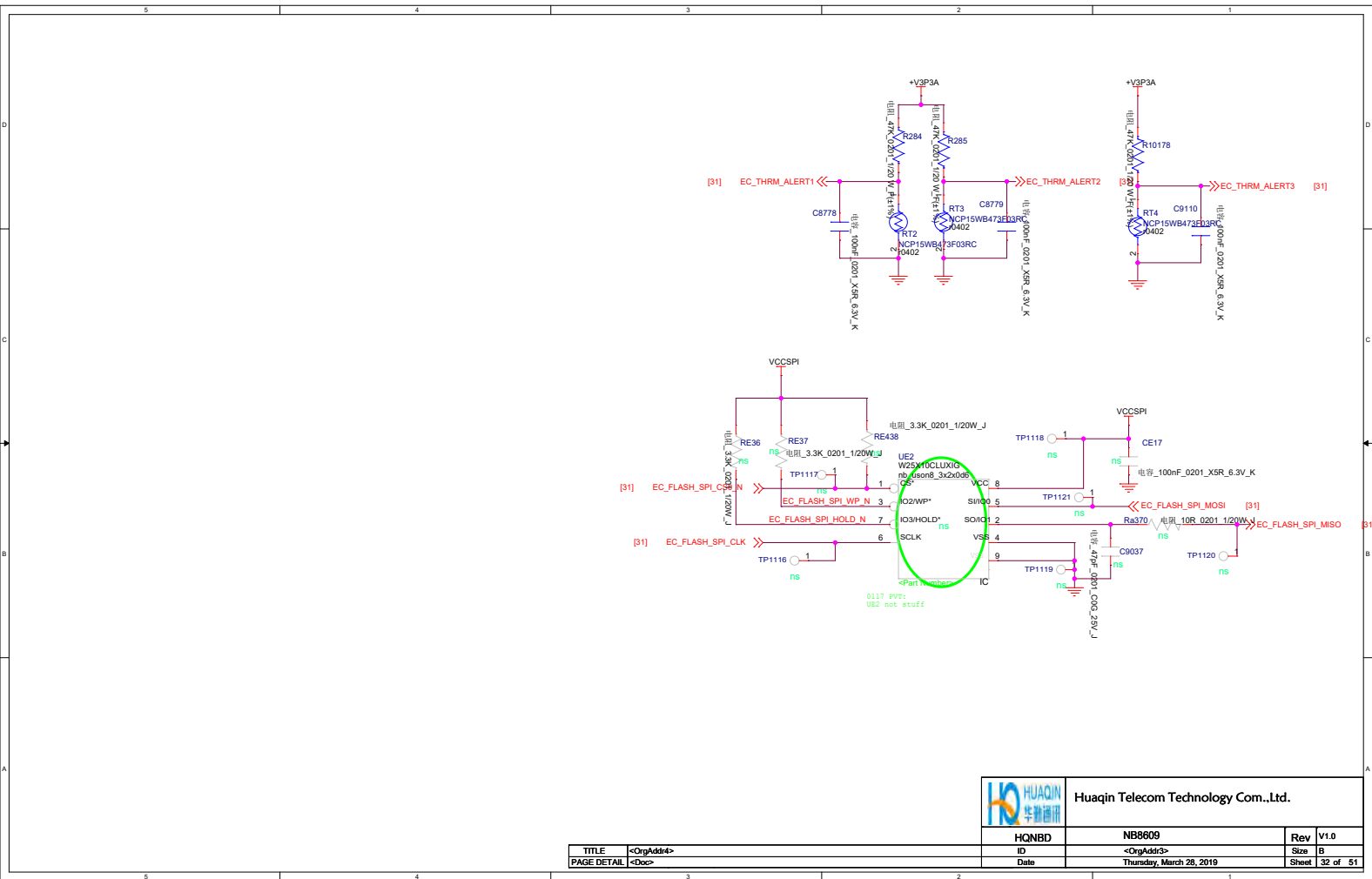


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ID		<Optional>	Rev	C
Date		Thursday, March 28, 2019	Sheet	51 of 51







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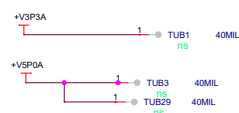
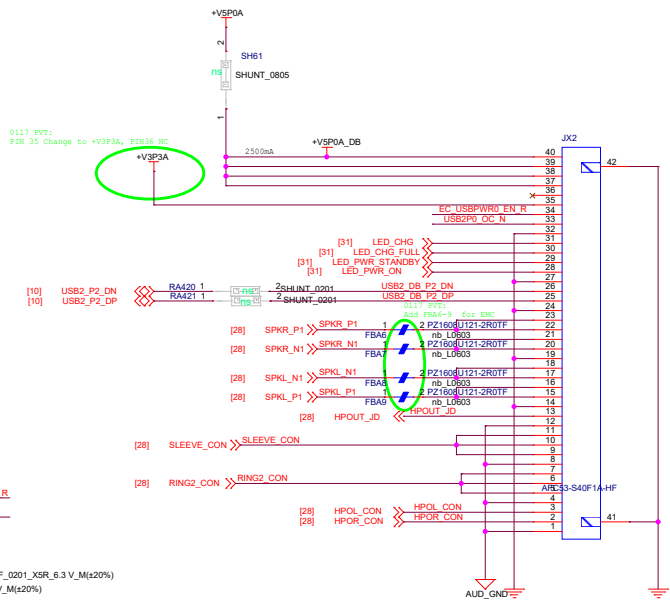
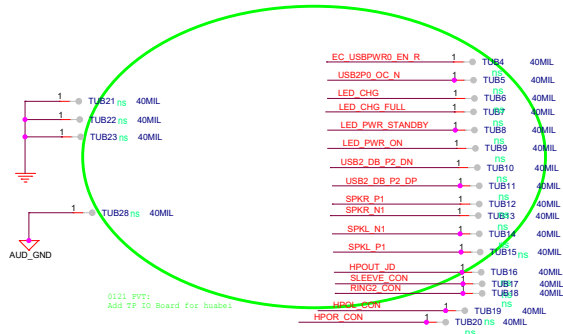
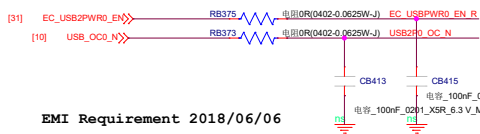
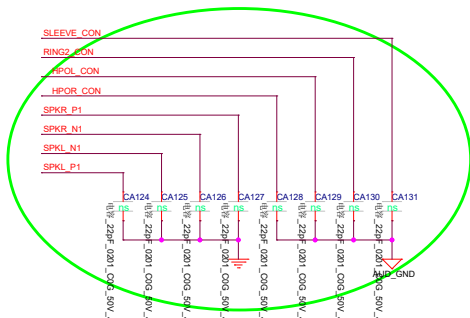


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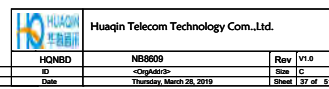
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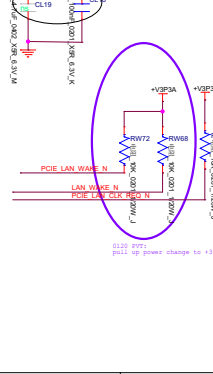
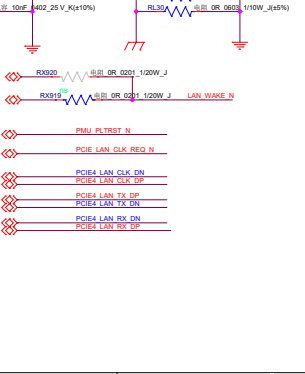
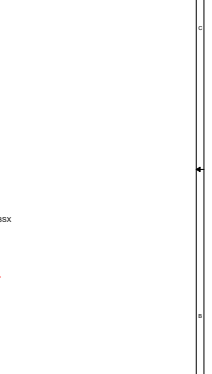
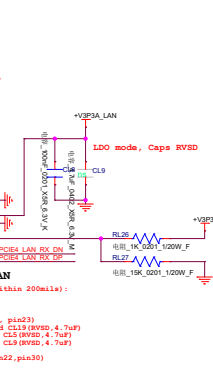
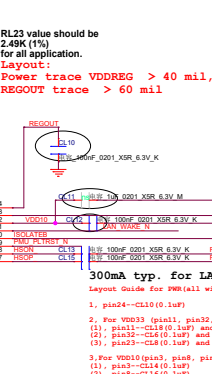
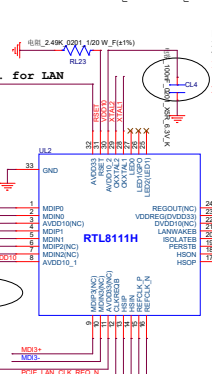
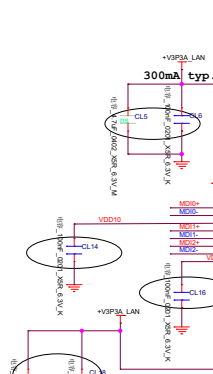
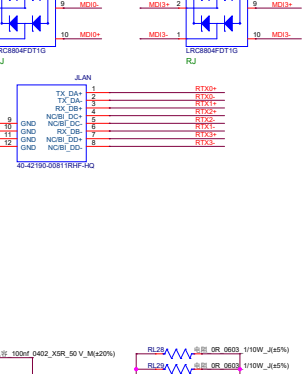
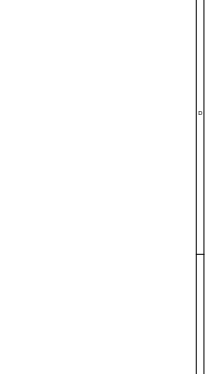
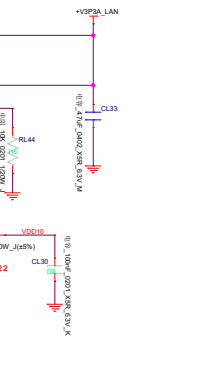
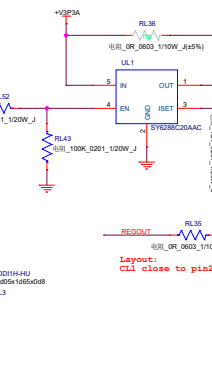
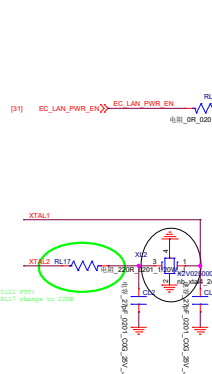
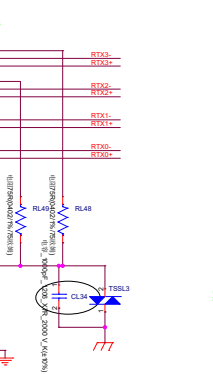
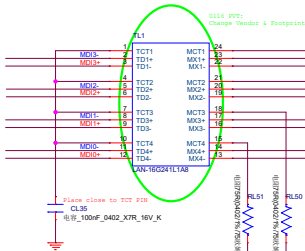




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ID	<OrigAdd3>	Size	A3
Date	Thursday, March 28, 2019	Sheet	36 of 51

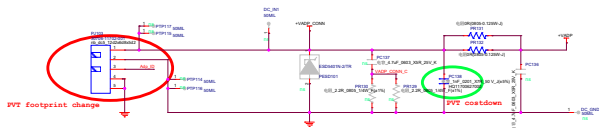
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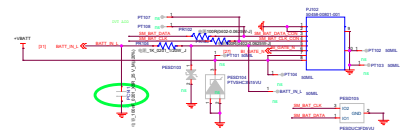




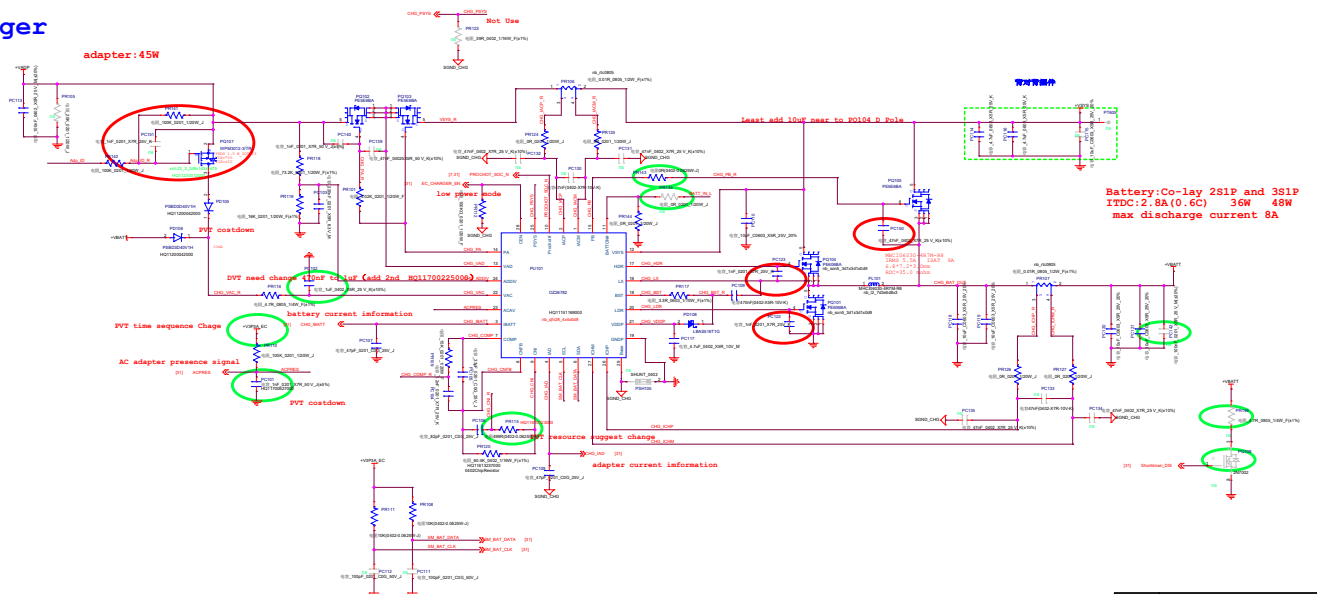
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## Battery CONN



## Charger

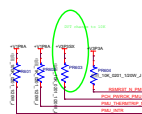


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Doc	Adapter	Rev	1.0
Doc	Adapter	Rev	1.0



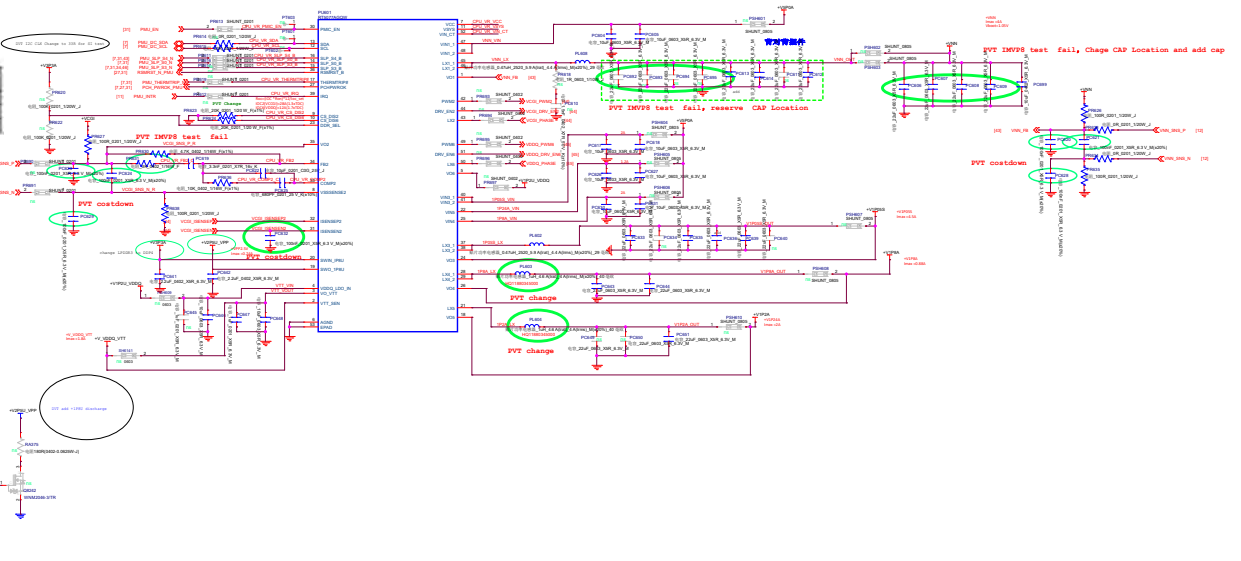


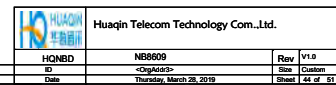




**Table 2. Buck1 (DDR) Voltage Selection**

DDR_SEL Pin State	Buck1 Nominal Output Voltage	DDR Technology
0	1.2V	LPDDR3
Floating	1.2V	DDR4 (optional)
1	1.1V	LPDDR4







V3P3SX V5P0SX V1P8SX

ITDC:1000mA

ID=6A, RDS (ON) =17mΩ

IMAX:3.72A

PVT costdown

IMAX:2.75A

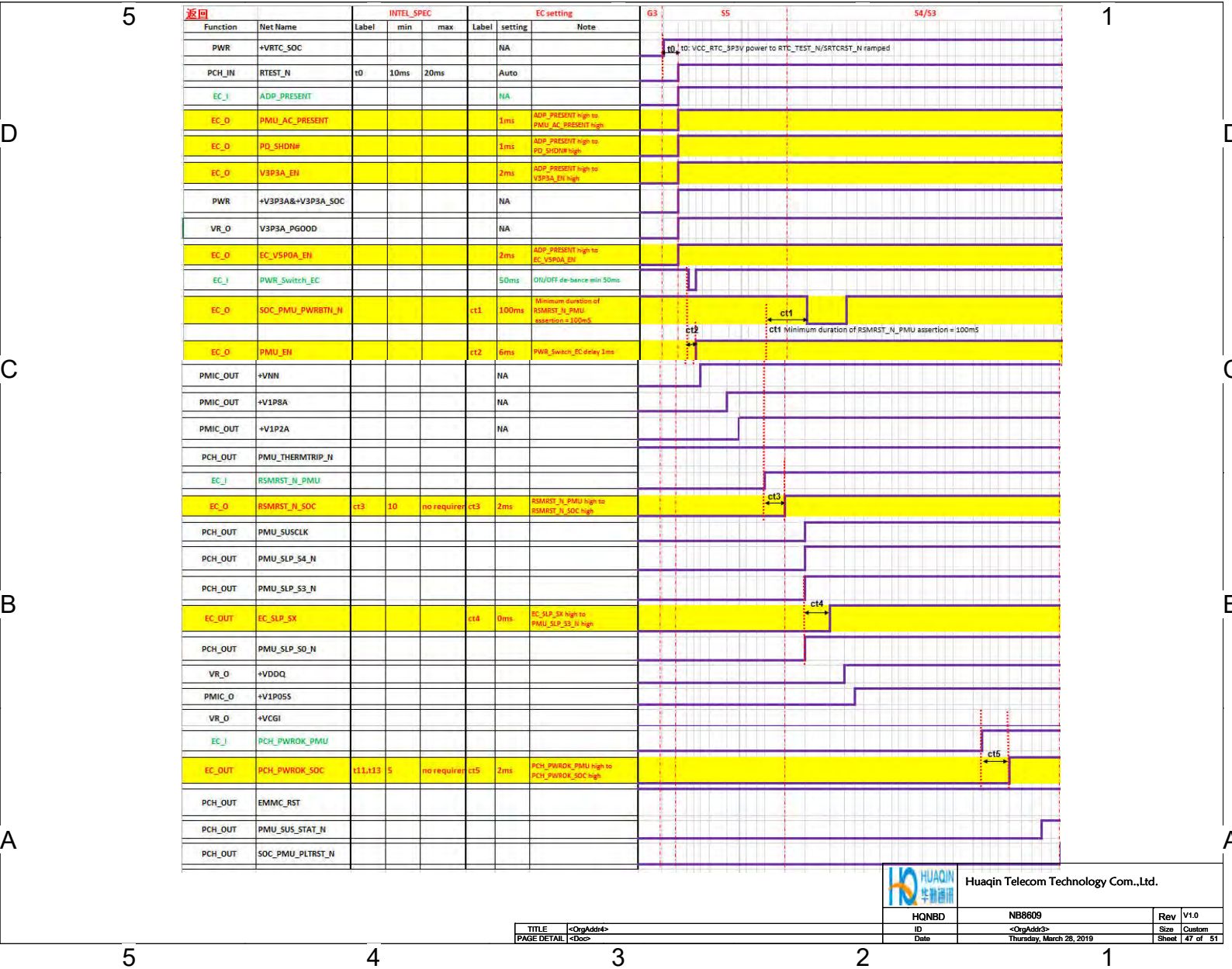
PVT costdown

PVT costdown



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TITLE	<OrgAddr4>	HQNBD	NB8609	Rev	V1.0
PAGE DETAIL	<Doc>	ID	<OrgAddr3>	Size	B
		Date	Thursday, March 28, 2019	Sheet	46 of 51



D

C

B

A

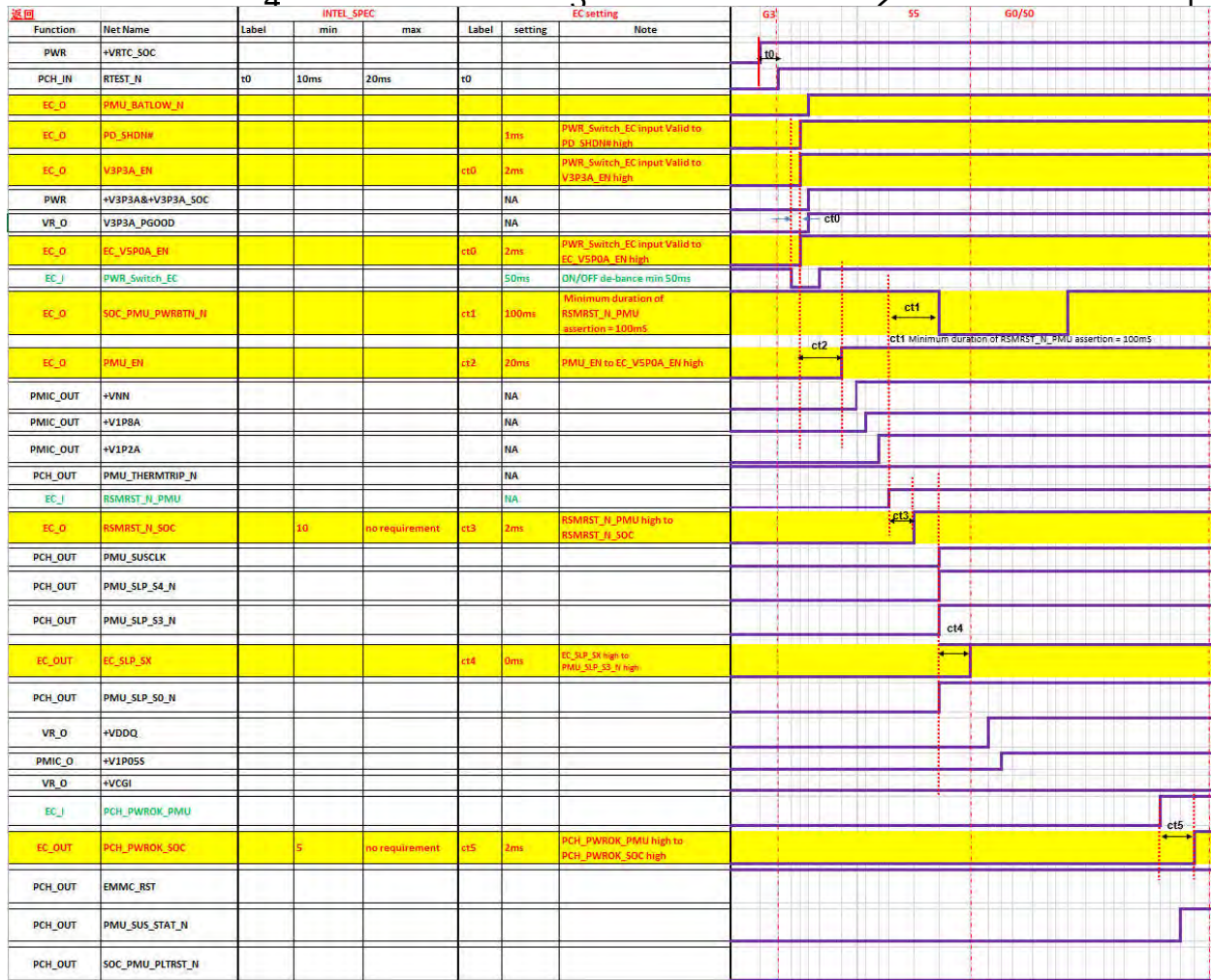
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Huaqin Telecom Technology Com.,Ltd.

TITLE <OrgAddId>  
PAGE DETAIL <Doc>HQNBD  
ID  
DateNB8609  
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Thursday, March 28, 2019Rev V1.0  
Size Custom  
Sheet 48 of 51

5

4

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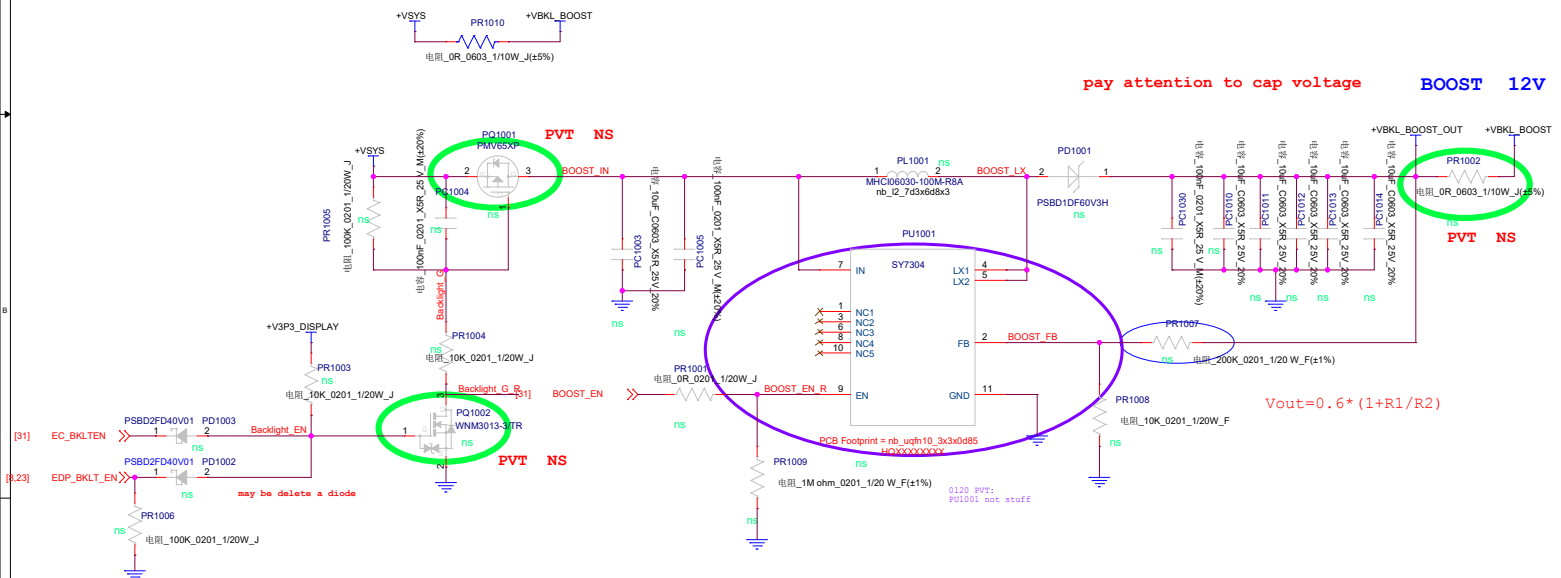


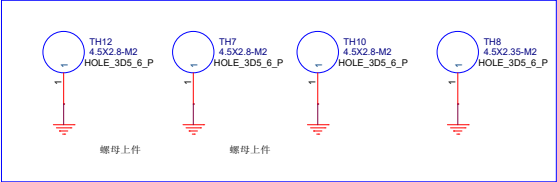
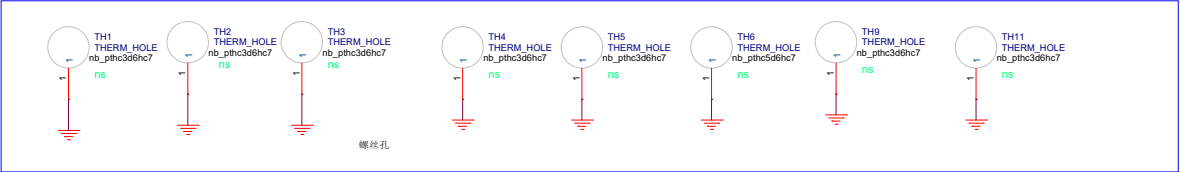
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		Min	Typ	Max		
LED Power Input Voltage	V <sub>LED</sub>	6.0	12.0	21.0	V	1
LED Power Input Current	I <sub>LED</sub>	-	TBD	TBD	mA	2
LED Power Consumption	P <sub>LED</sub>	-	TBD	TBD	W	
LED Power Inrush Current	I <sub>LED_P</sub>	-	-	1.5	A	3
PWM Duty Ratio		5	-	100	%	4


battery 2S need add

pay attention to cap voltage

BOOST 12V





		Huaqin Telecom Technology Com.,Ltd.	
HQNB	NB8609	Rev	V1.0
ID	<OrgAddr3>	Size	B
Date	Thursday, March 28, 2019	Sheet	50 of 51

TITLE	<OrgAddr4>
PAGE DETAIL	<Doc>

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2.JHD01 PIN4&PIN5 NC.----20180131  
3.Memory ID table order from ID0,ID1,ID2 to ID2,ID1,ID0--20180202



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TITLE	<OrgAddr4>	HQNBD	NB8609	Rev	V1.0
PAGE DETAIL	<Doc>	ID	<OrgAddr3>	Size	B
		Date	Thursday, March 28, 2019	Sheet	51 of 51