

catalog

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Intel Ice Lake U

Title:AX1E

Version : V1.02

Drawing by : Roxin

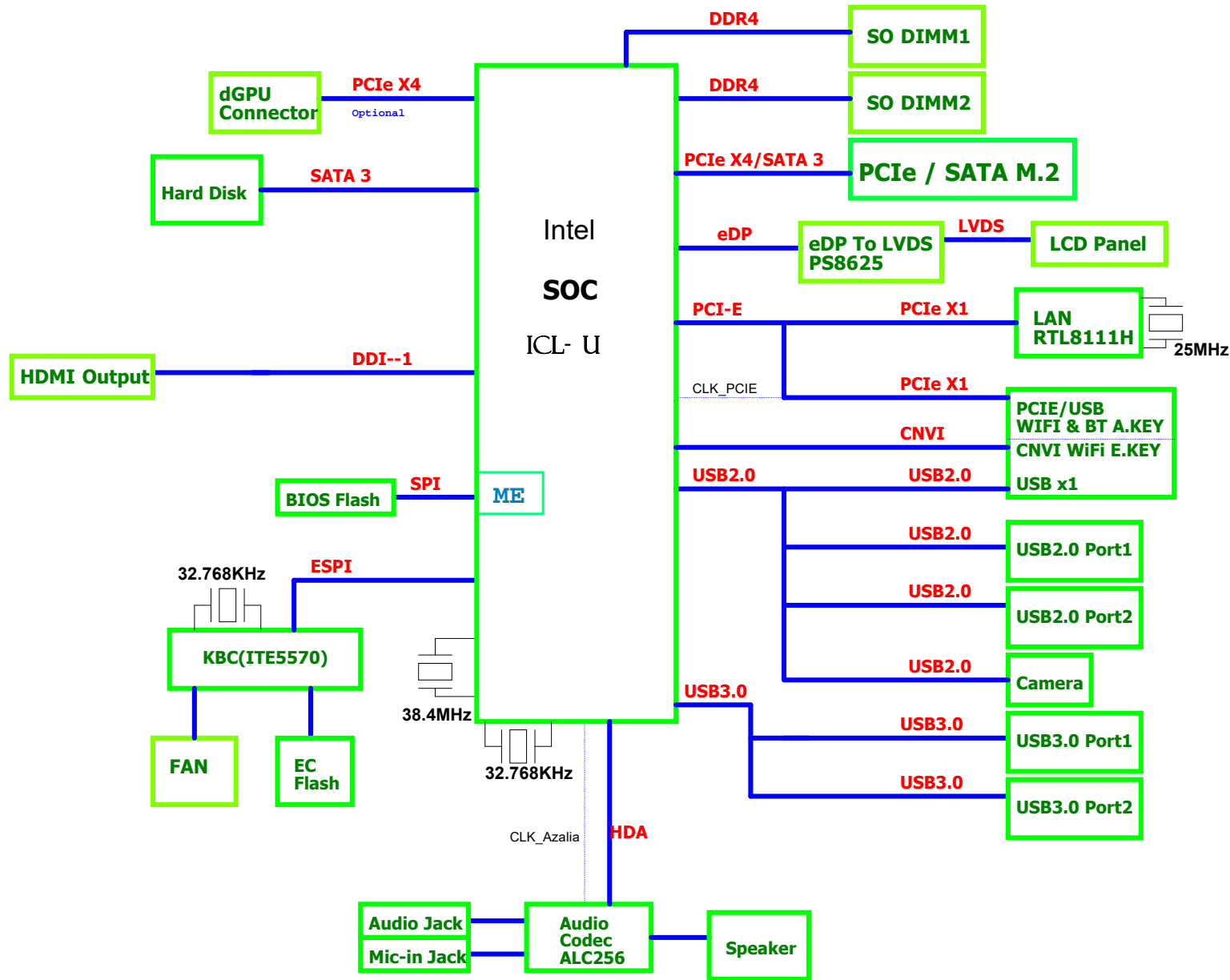
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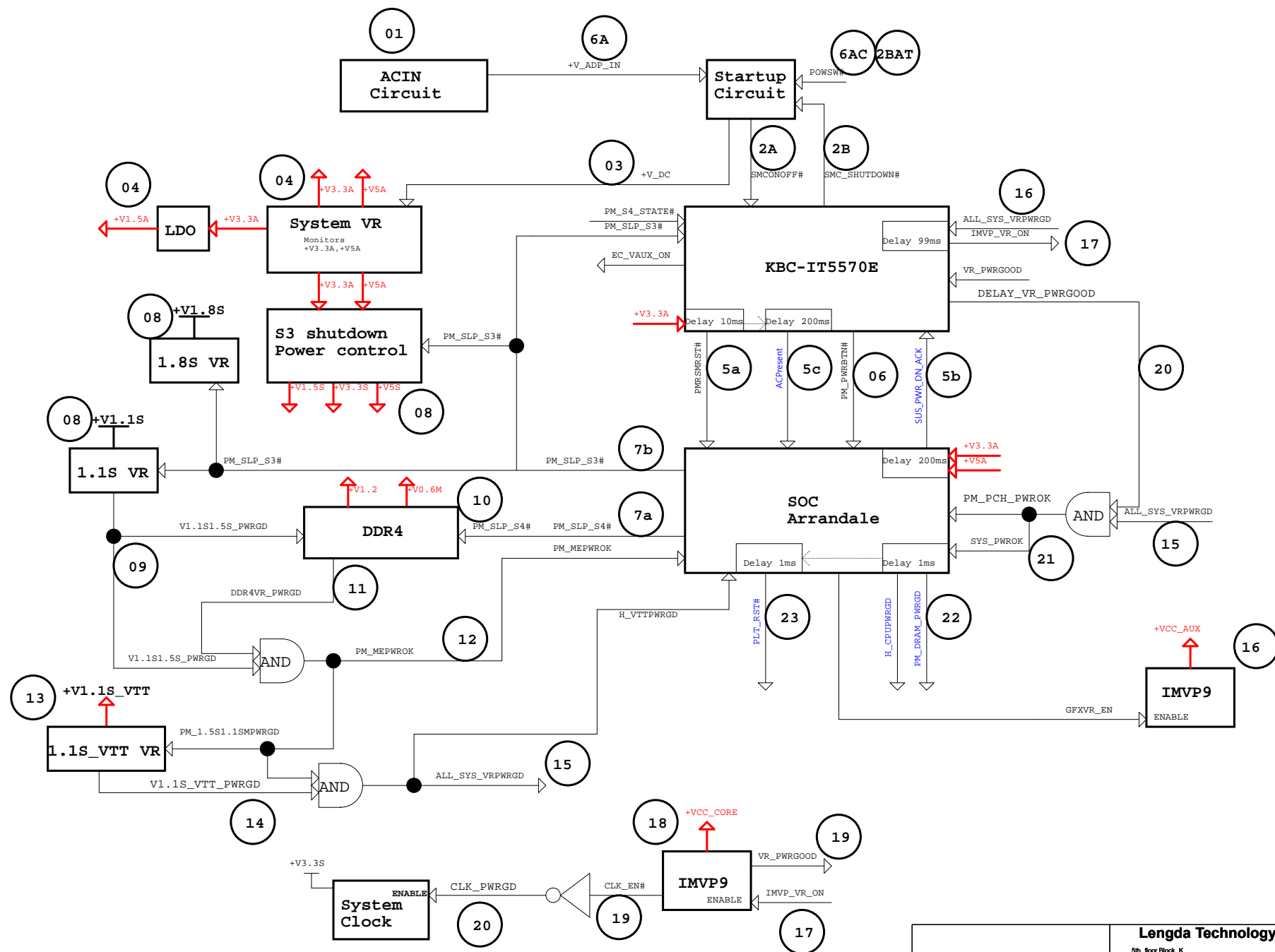
Net Value suffix : "#" means Low Active

		Lengda Technology Ltd.	
		5th floor Block K, Xiamen Export Processing Zone, Haicang District,Xiamen,China,361026	
Title		AX1E	
Size	Sheet	Rev	
C	Name	A	
ENGINEER: Roxin		Date:	
		Sheet 1 of 34	

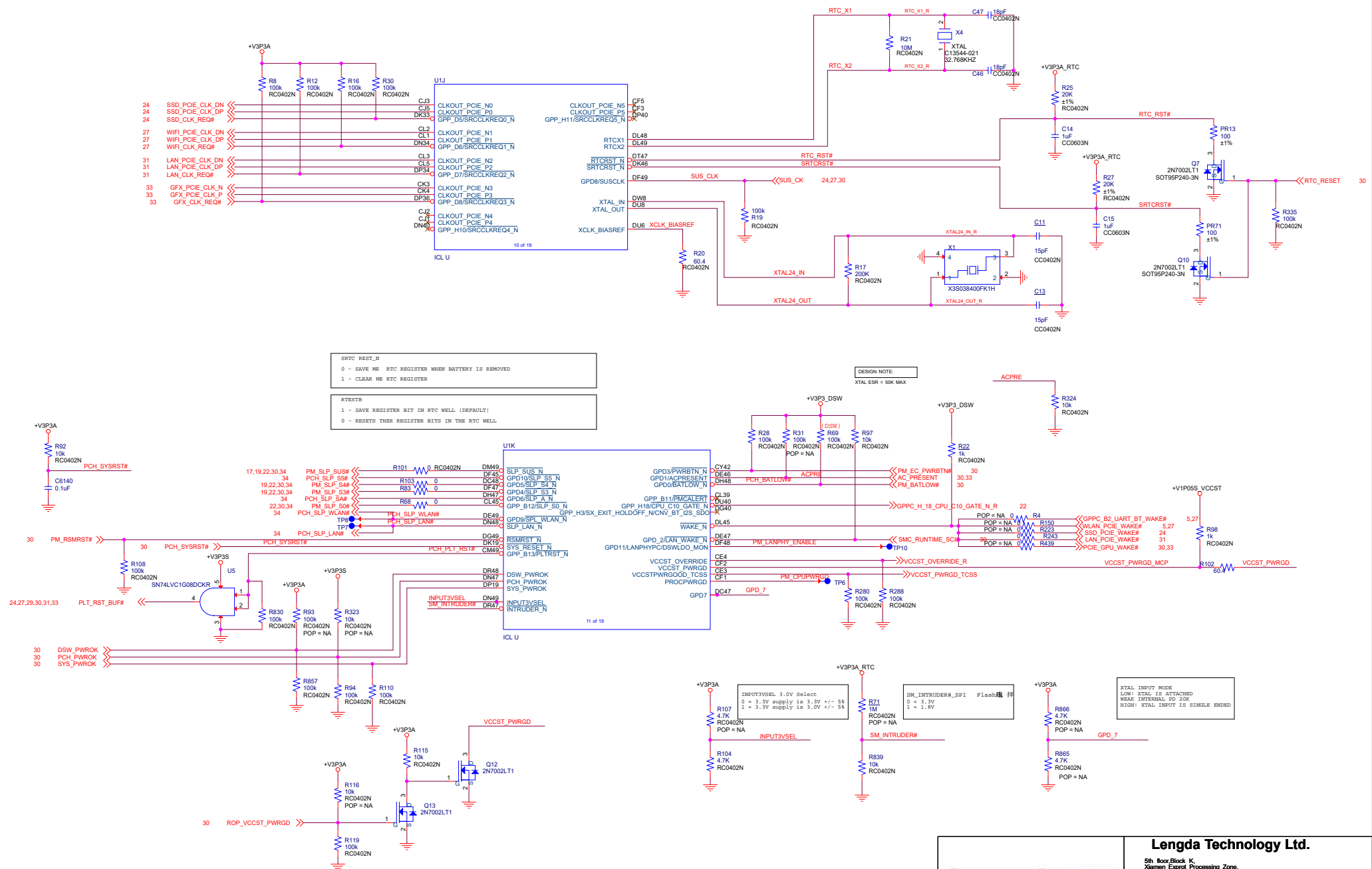
Intel Ice Lake U Block Diagram



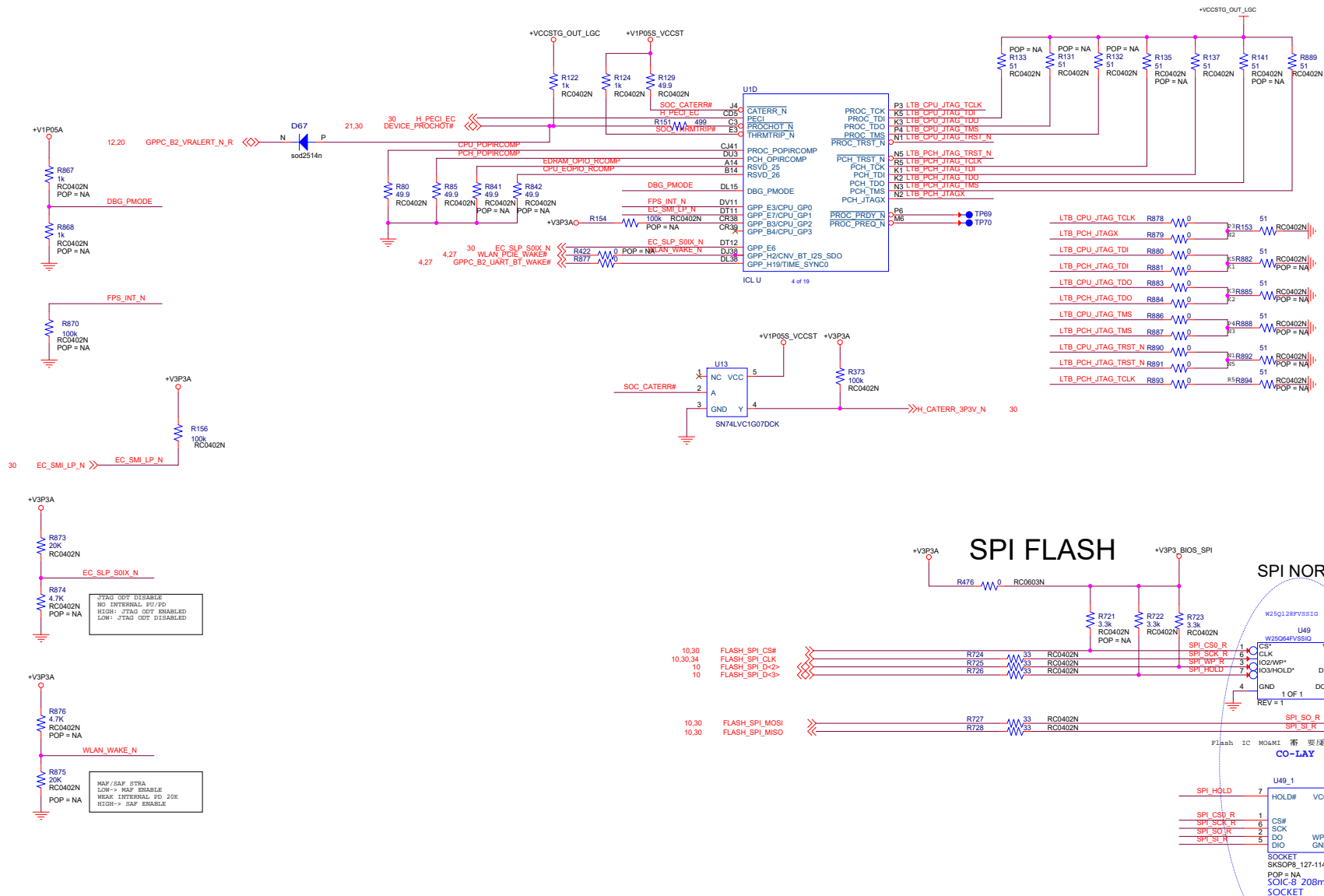
POWER ON SEQUENCE



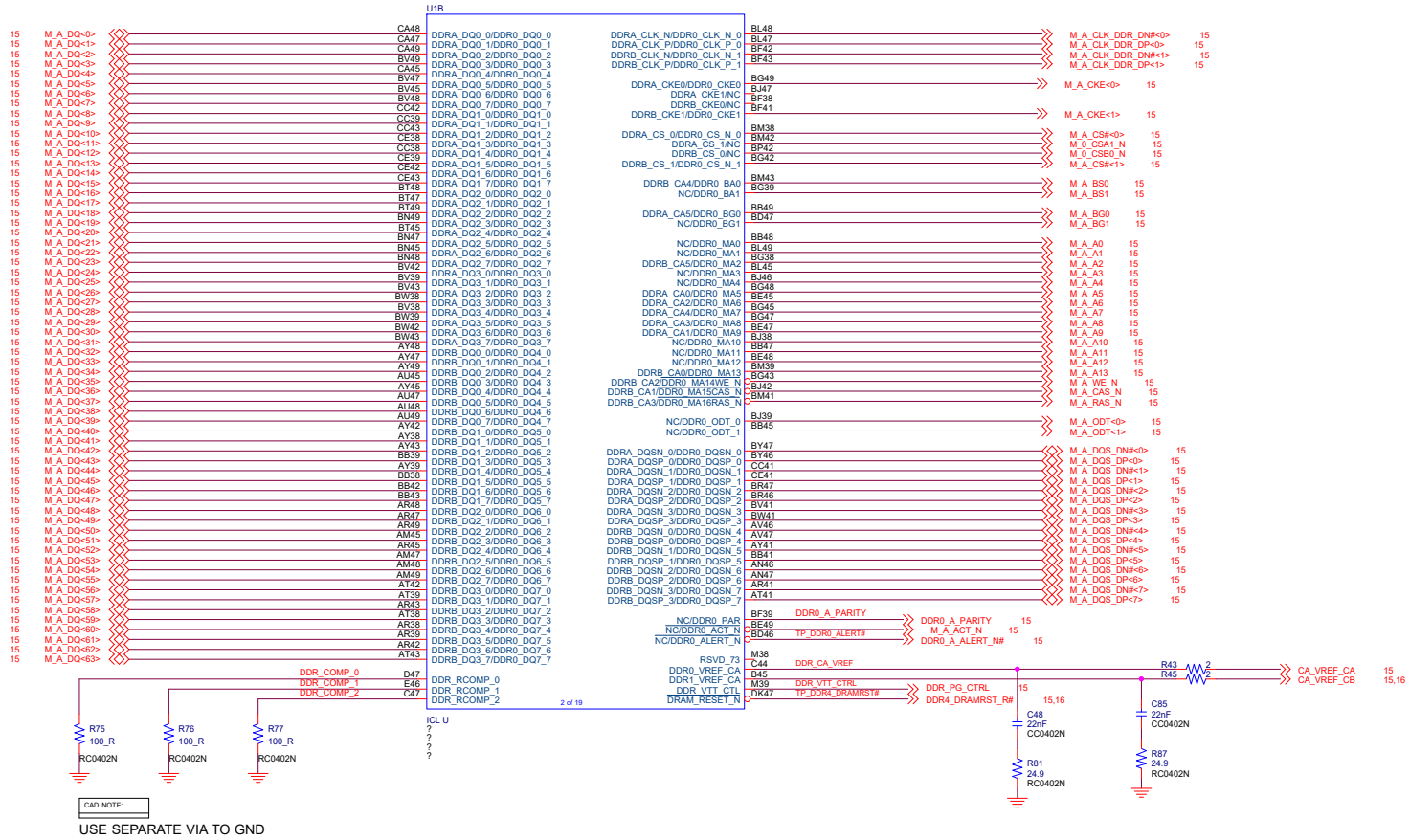
Ice ULT -SYSTEM CTL



Ice ULT - DEBUG

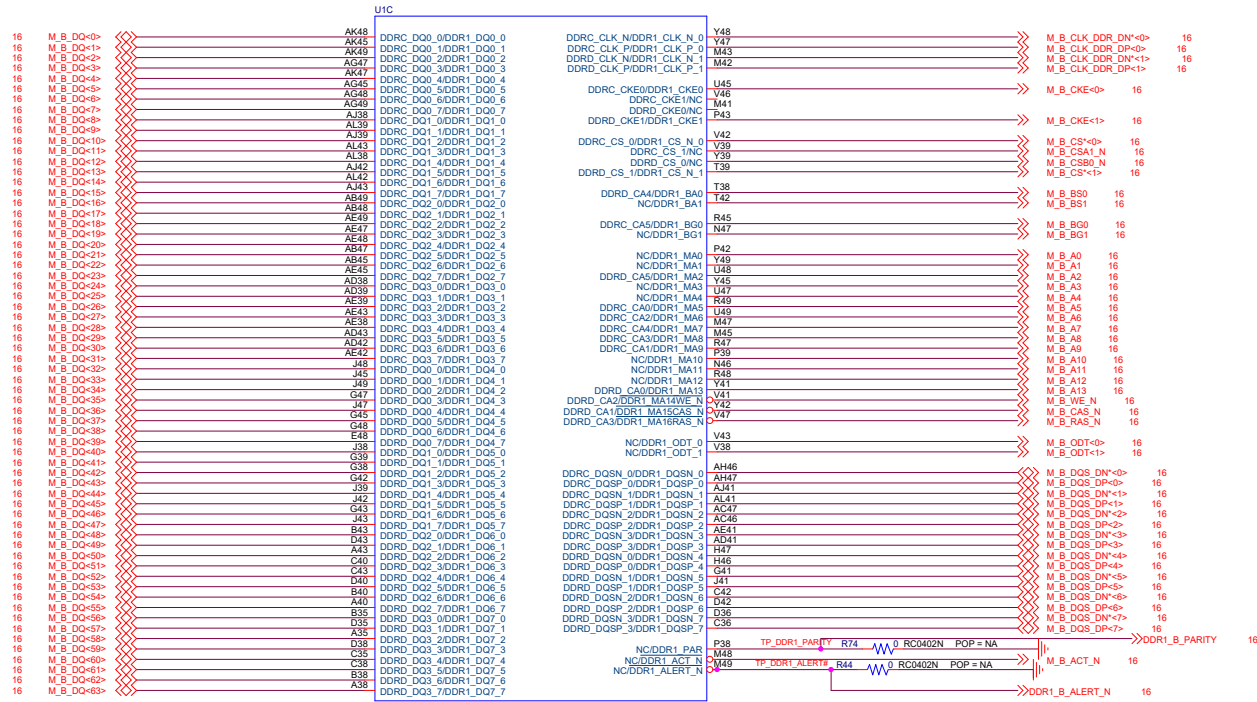


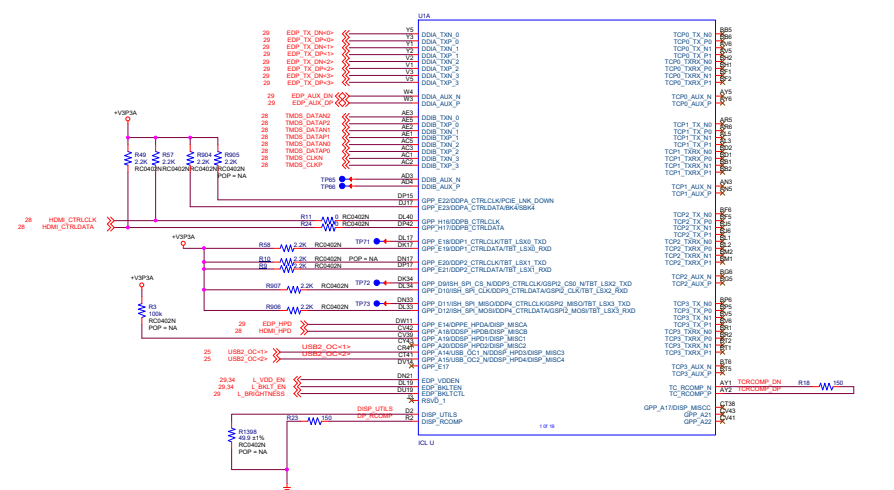
Ice ULT - DDR CHANNEL A



USE SEPARATE VIA TO GND

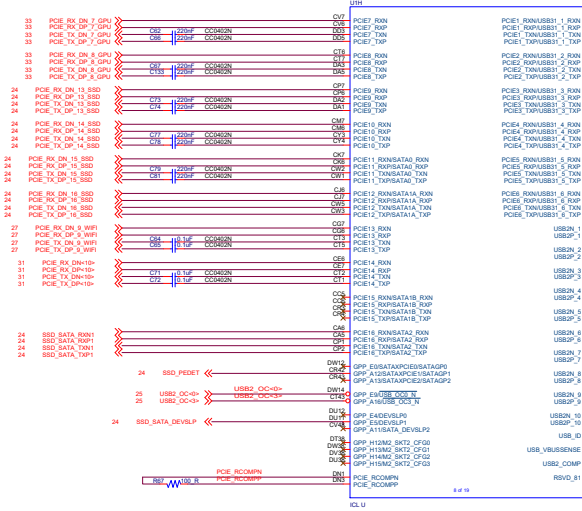
Ice ULT - DDR CHANNEL B



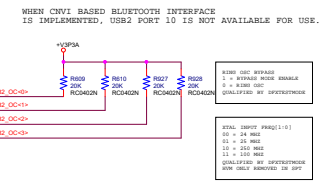


USB2_PORT	USB2_PORT	ASSIGNMENT
1	2	1
2	3	2
3	4	3
4	5	4
5	6	5
6	7	6

- MX130 GPU
- M.2
- WLAN
- LAN
- 2.5" HDD



- USB3.0 PORT1
- USB3.0 PORT2

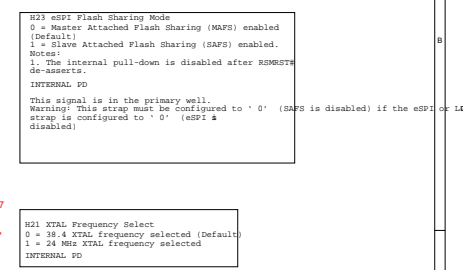


- MX130 GPU

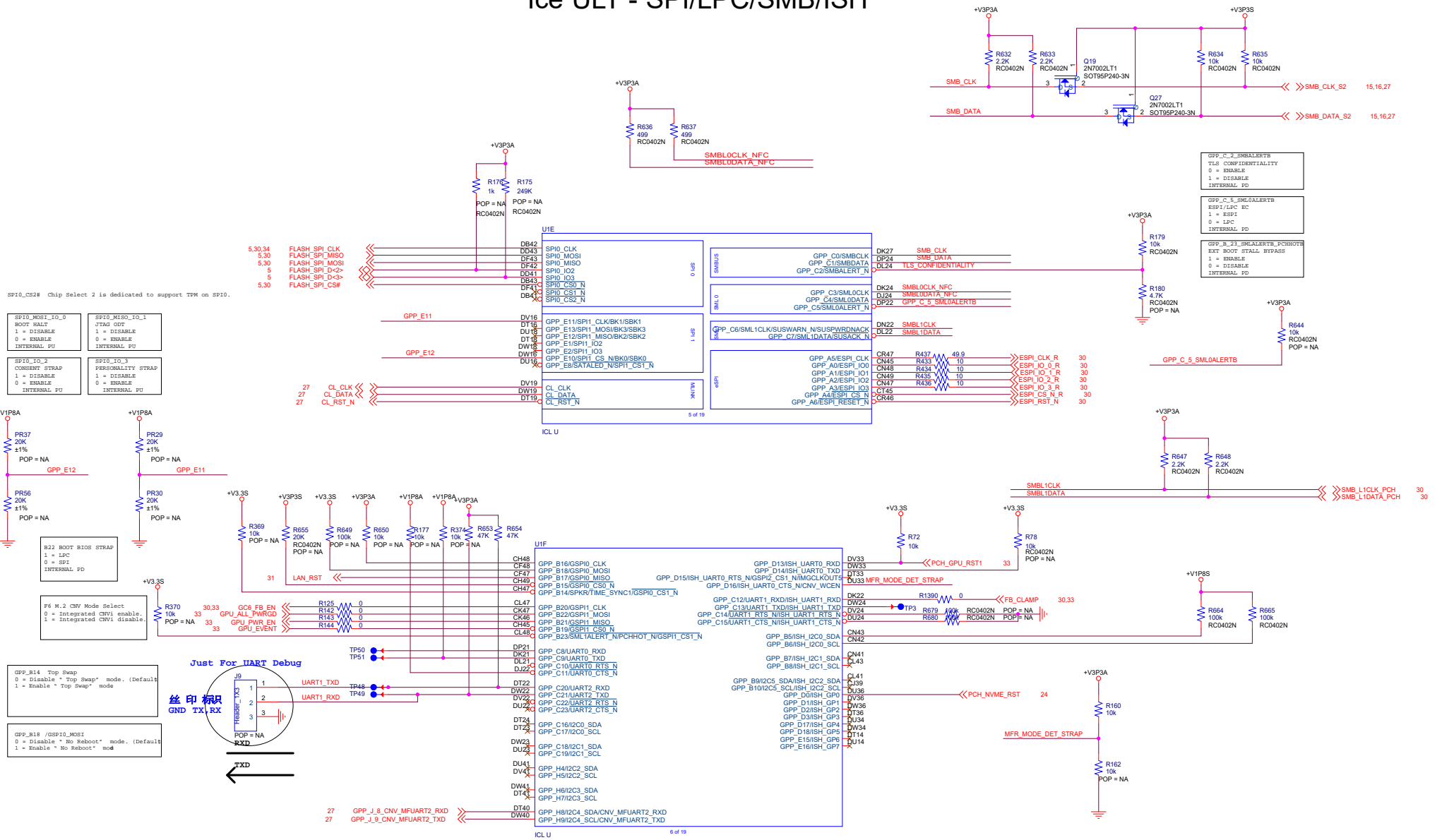
- USB3.0 PORT1 USB2.0
- BLUETOOTH
- USB2.0 PORT1
- CAMERA
- USB3.0 PORT2 USB2.0
- USB2.0 PORT2

PCI4	SATA	ASSIGNMENT
1-4	---	---
5	---	---
6	---	---


```
SECURITY MEASURES  STRAP OPTION
1 = FLASH DESCRIPTOR IS OVERRIDE
0 = DEFAULT
```



Ice ULT - SPI/LPC/SMB/ISH



I2C PORT	ASSIGNMENT	LEVEL
0		
1		
2		
3		
4		

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Title AX1E

Size C

Sheet Name CML ULT (SPI/LPC/SMB/ISH)

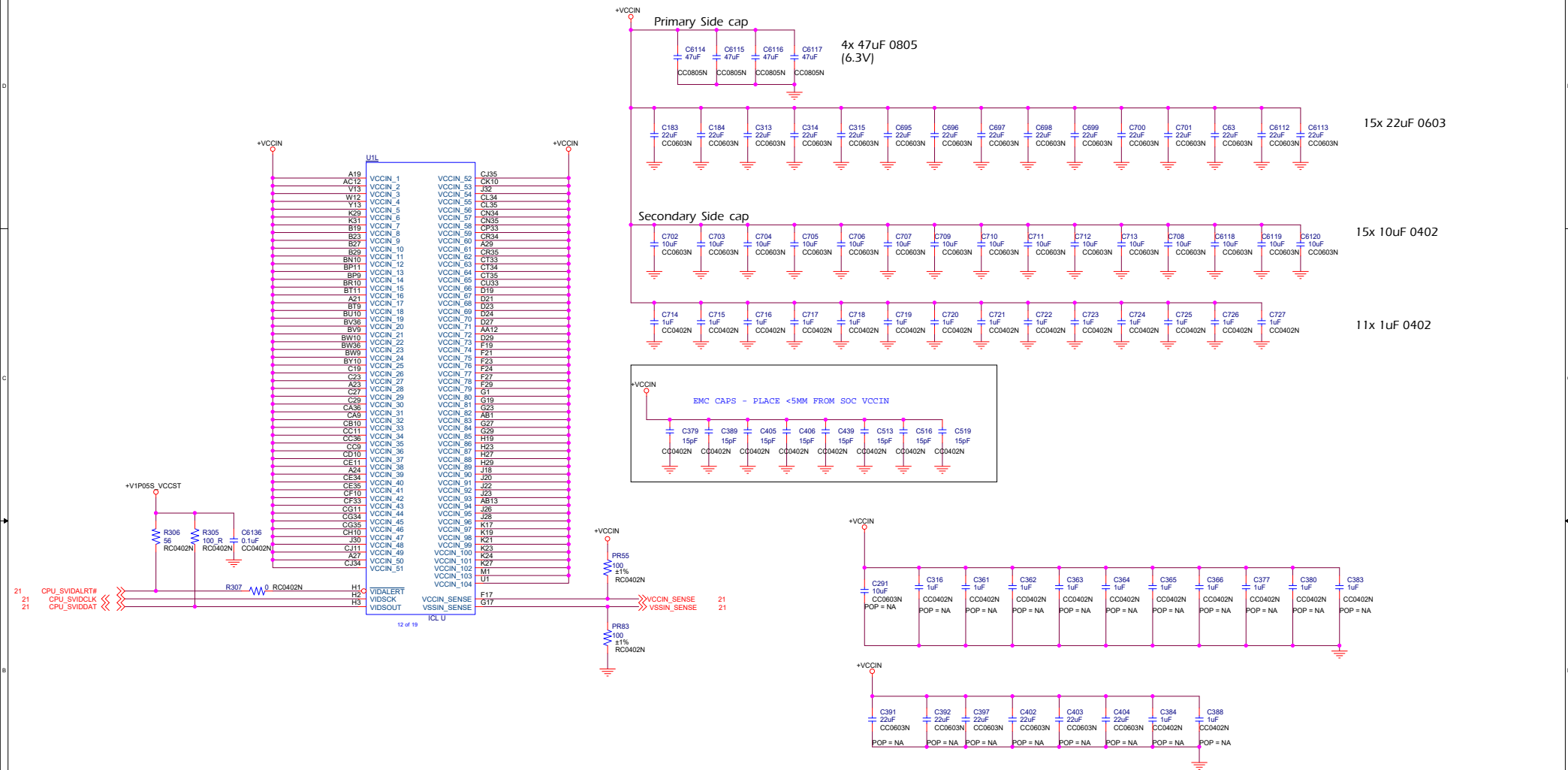
Rev A

ENGINEER: Roxin

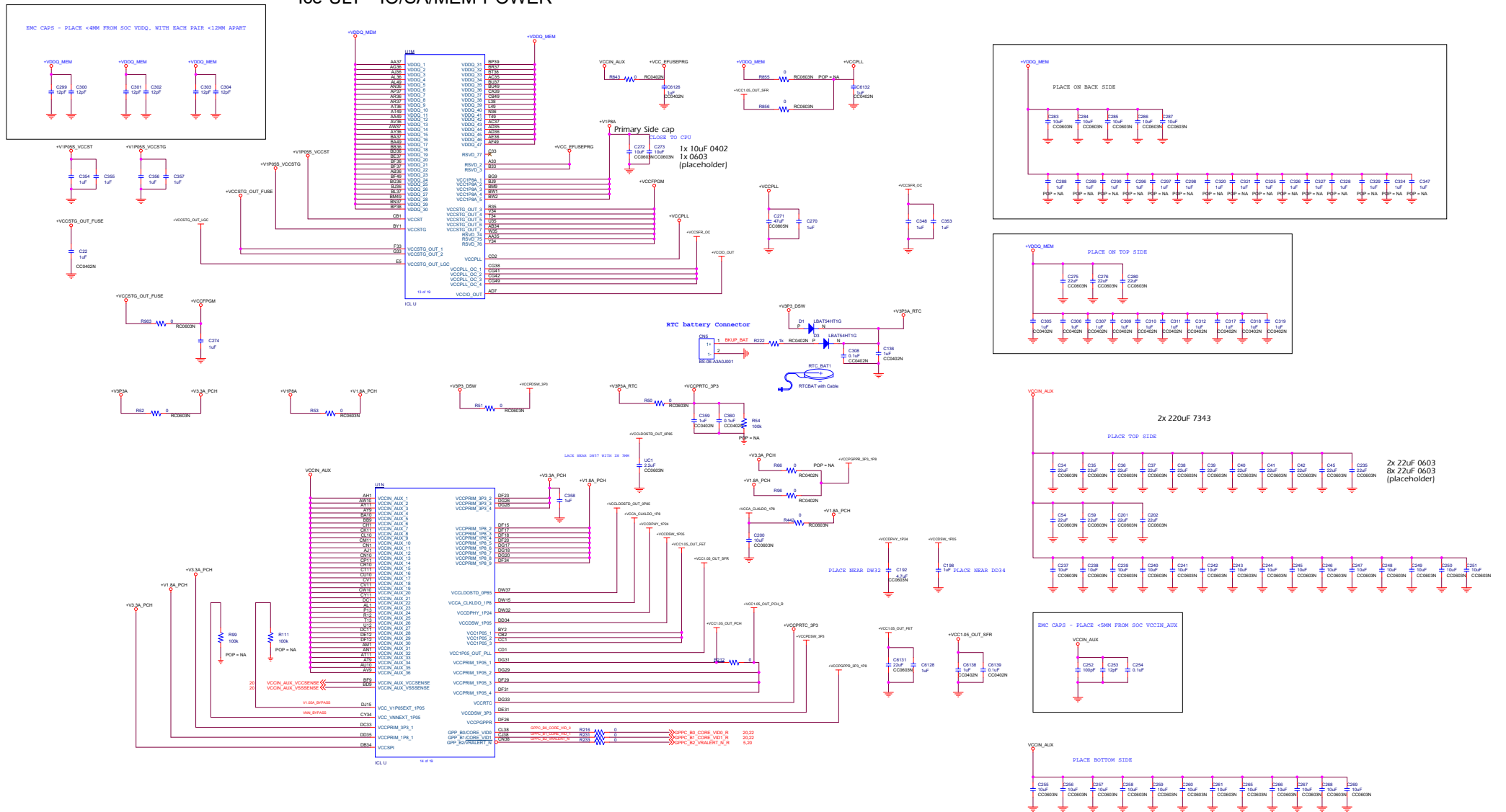
Date:

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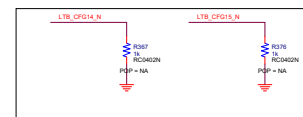
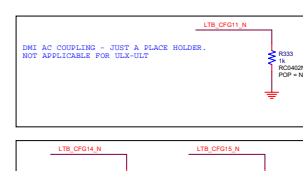
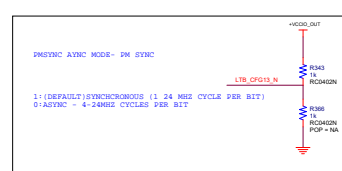
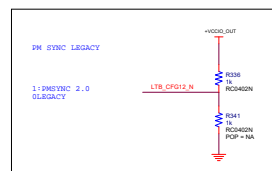
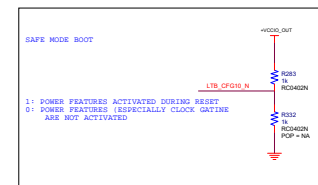
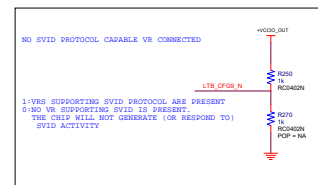
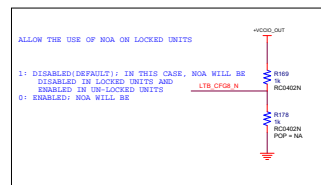
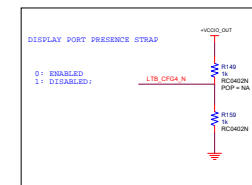
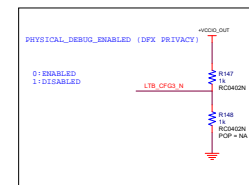
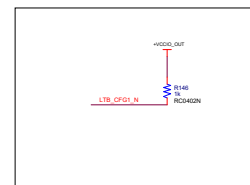
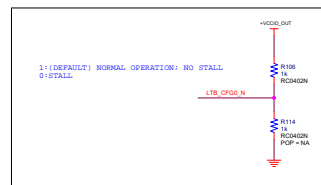
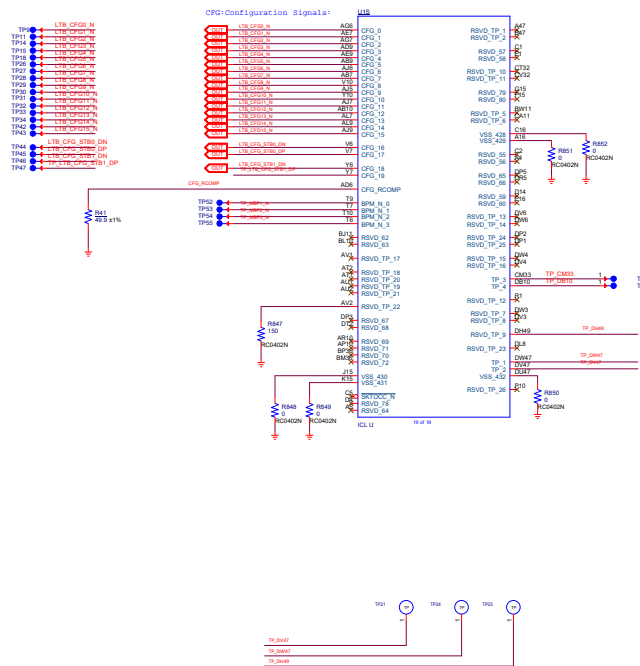
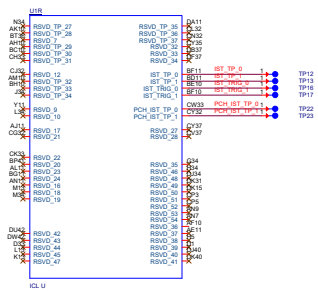
Ice ULT - POWER GRAPHICS



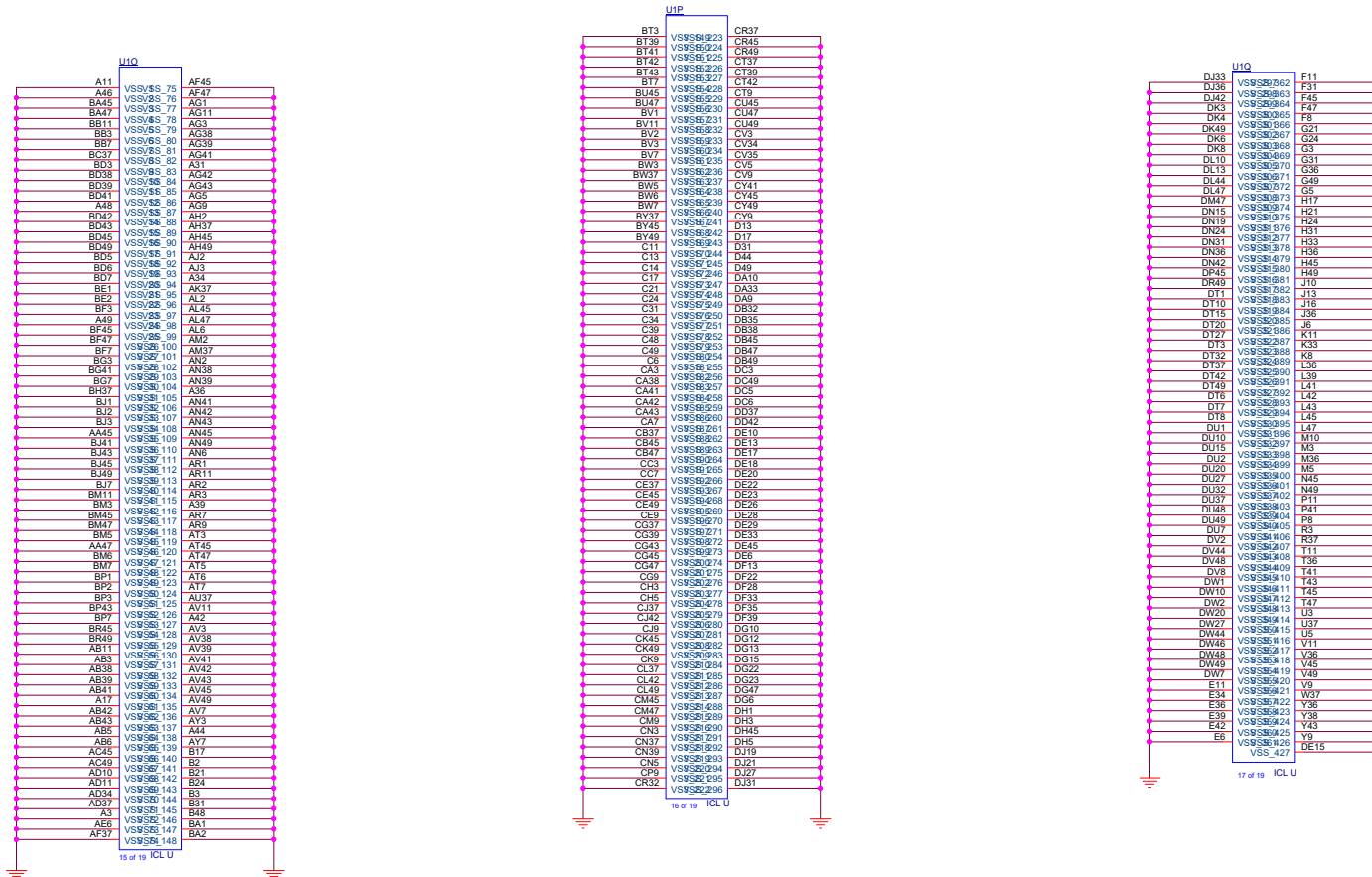
Ice ULT - IO/SA/MEM POWER



Ice ULT - RESERVED



Ice ULT - GND



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Title AX1E

Size C **Sheet** Name CML ULT (GND)

Date: **Sheet** 14 of 34

ENGINEER: Rozin

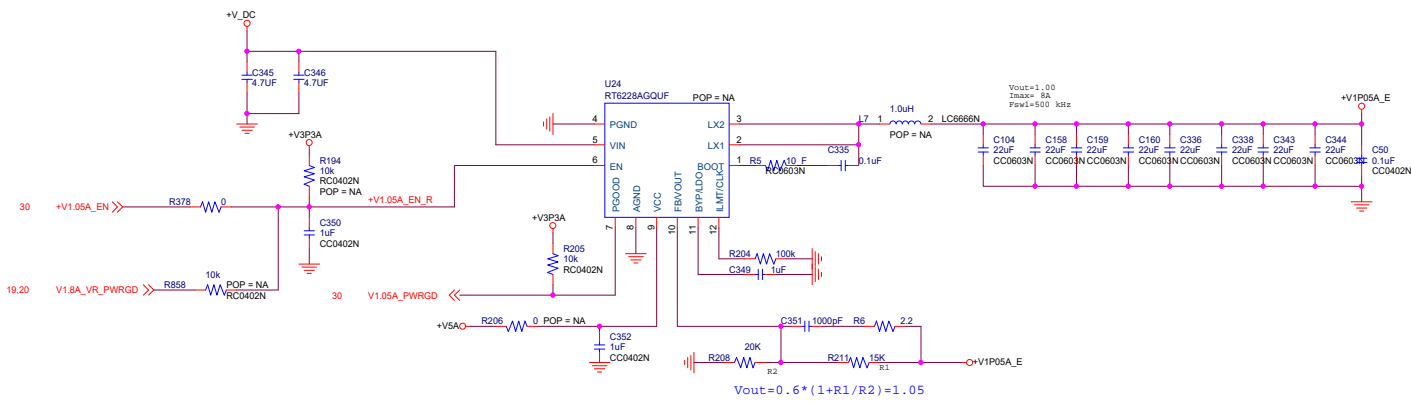
Rev A

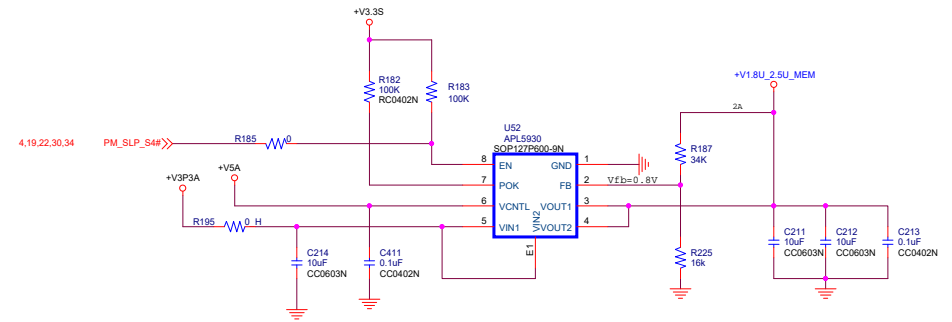
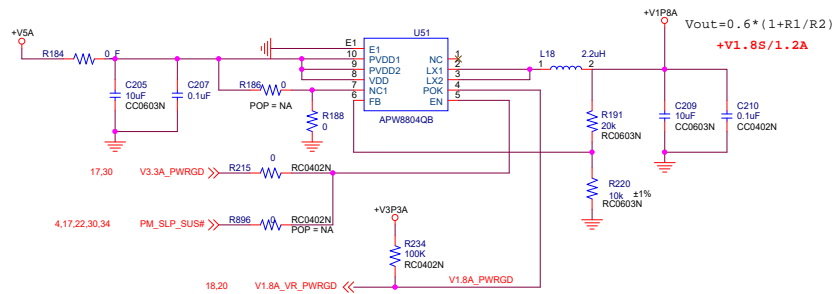
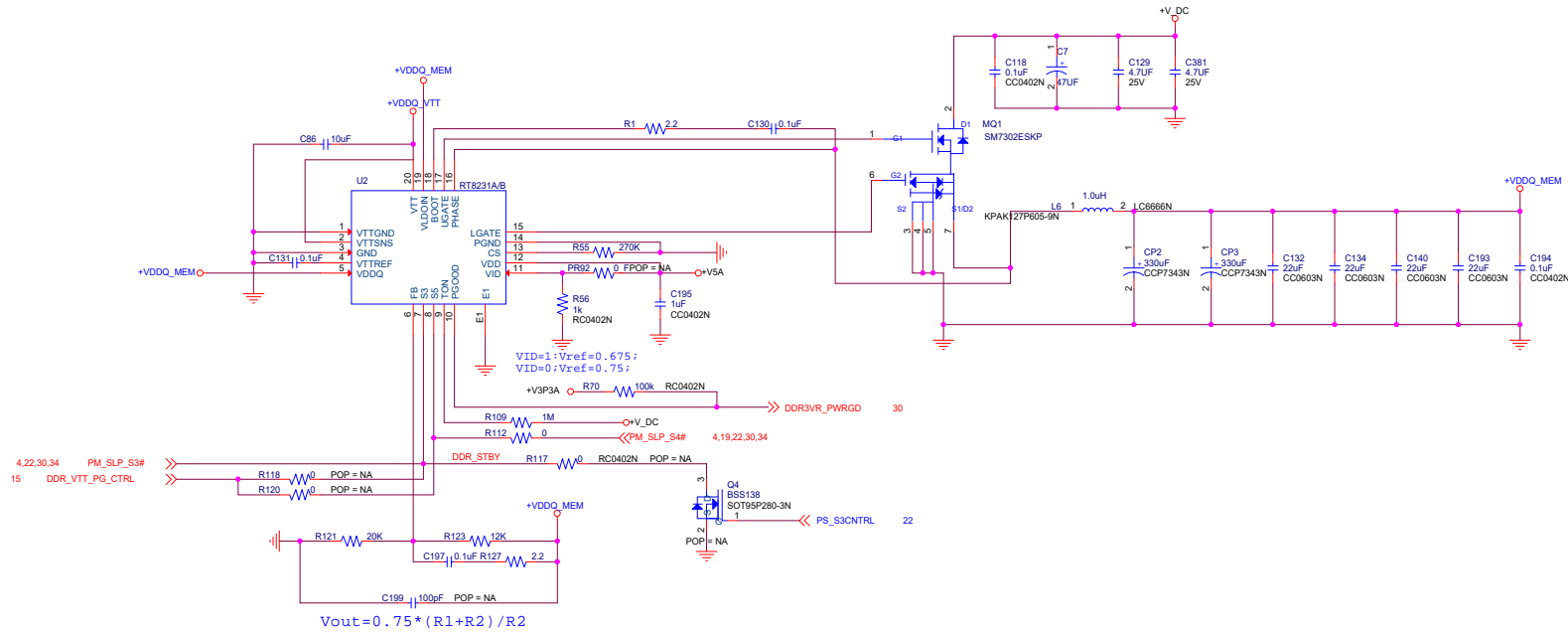
The schematic diagram illustrates the power and ground connections for the ASAB21-E8S80-7H board. Key components and connections include:

- Power Supplies:**
 - +V1.8U_2.5U_MEM:** Connected to pins C49 (10uF), C87 (10uF), C137 (1uF), C138 (1uF), C139 (100nF), and C141 (2.2uF).
 - +VDDQ_VTT:** Connected to pins VTT, VPP2, VPP1, VDDSPD, and VDD19.
 - +VDDQ_MEM:** Connected to pins VDD19, VDD18, VDD17, VDD16, VDD15, VDD14, VDD13, VDD12, VDD11, VDD10, VDD9, VDD8, VDD7, VDD6, VDD5, VDD4, VDD3, VDD2, VDD1, VSS81, VSS80, VSS79, VSS78, VSS77, VSS76, VSS75, VSS74, VSS73, VSS72, VSS71, VSS70, VSS69, VSS68, VSS67, VSS66, VSS65, VSS64, VSS63, VSS62, VSS61, VSS60, VSS59, VSS58, VSS57, VSS56, VSS55, VSS54, VSS53, VSS52, VSS51, VSS50, VSS49, VSS48, VSS47, VSS46, VSS45, VSS44, VSS43, VSS42, VSS41, VSS40, VSS39, VSS38, VSS37, VSS36, VSS35, VSS34, VSS33, VSS32, VSS31, VSS30, VSS29, VSS28, VSS27, VSS26, VSS25, VSS24, VSS23, VSS22, VSS21, VSS20, VSS19, VSS18, VSS17, VSS16, VSS15, VSS14, VSS13, VSS12, VSS11, VSS10, VSS9, VSS8, VSS7, VSS6, VSS5, VSS4, VSS3, VSS2, VSS1, VSS0, VSS94, VSS93, VSS92, VSS91, VSS90, VSS89, VSS88, VSS87, VSS86, VSS85, VSS84, VSS83, VSS82, VSS81, VSS80, VSS79, VSS78, VSS77, VSS76, VSS75, VSS74, VSS73, VSS72, VSS71, VSS70, VSS69, VSS68, VSS67, VSS66, VSS65, VSS64, VSS63, VSS62, VSS61, VSS60, VSS59, VSS58, VSS57, VSS56, VSS55, VSS54, VSS53, VSS52, VSS51, VSS50, VSS49, VSS48, VSS47, VSS46, VSS45, VSS44, VSS43, VSS42, VSS41, VSS40, VSS39, VSS38, VSS37, VSS36, VSS35, VSS34, VSS33, VSS32, VSS31, VSS30, VSS29, VSS28, VSS27, VSS26, VSS25, VSS24, VSS23, VSS22, VSS21, VSS20, VSS19, VSS18, VSS17, VSS16, VSS15, VSS14, VSS13, VSS12, VSS11, VSS10, VSS9, VSS8, VSS7, VSS6, VSS5, VSS4, VSS3, VSS2, VSS1, VSS0.
- Capacitors:**
 - C49: 10uF
 - C87: 10uF
 - C137: 1uF
 - C138: 1uF
 - C139: 100nF
 - C141: 2.2uF
 - C161: 10uF
 - C162: 10uF
 - C163: 10uF
 - C164: 10uF
 - C165: 10uF
 - C166: 10uF
 - C167: 10uF
 - C168: 10uF
 - C169: 10uF
 - C170: 10uF
 - C171: 10uF
 - C172: 1uF
 - C173: 1uF
 - C174: 1uF
 - C175: 1uF
 - C176: 1uF
- Board Label:** ASAB21-E8S80-7H

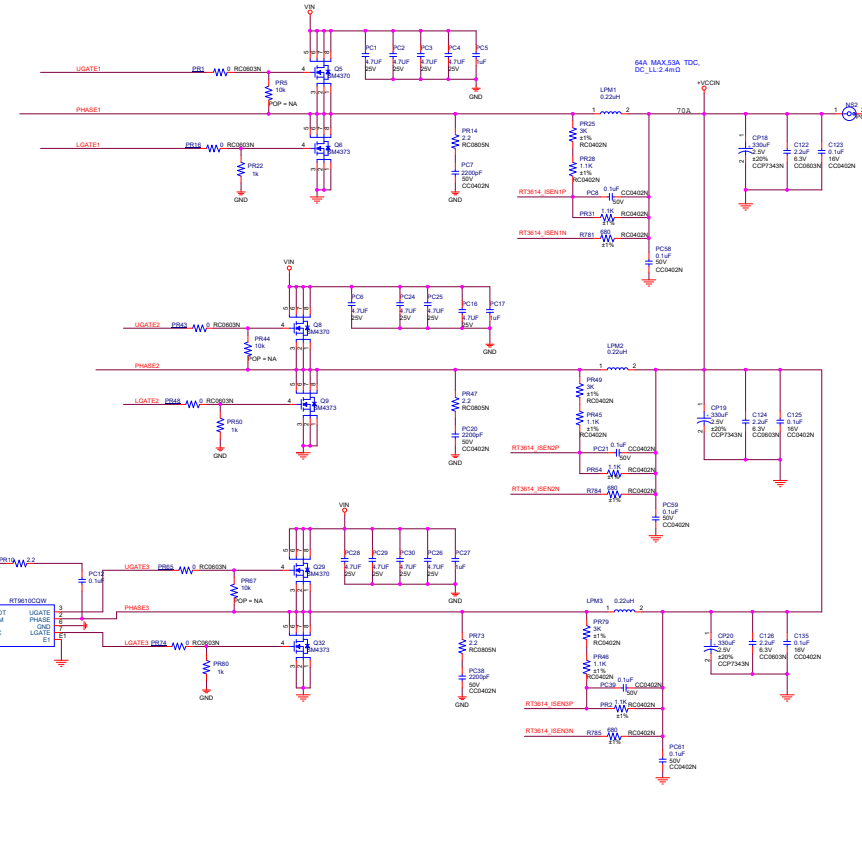
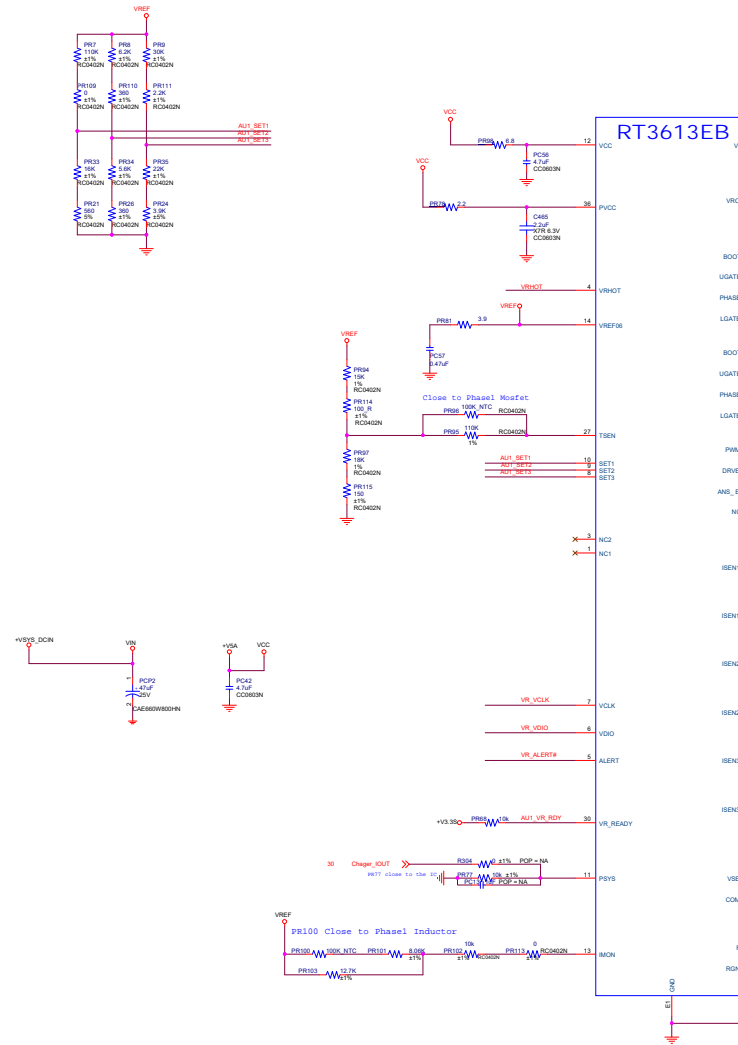
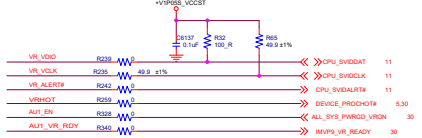
Note:
Layout Place See Document 425302 PG19

	Lengda Technology Ltd. 5th floor Block K, Xiamen Export Processing Zone, Haicang District, Xiamen, China, 361026		
	Title AX1E		
	Size C	Sheet Name	Rev A
	ENGINEER: Roxin		MEMORY - DDR4 Block B
Page:		Sheet 16 of 34	

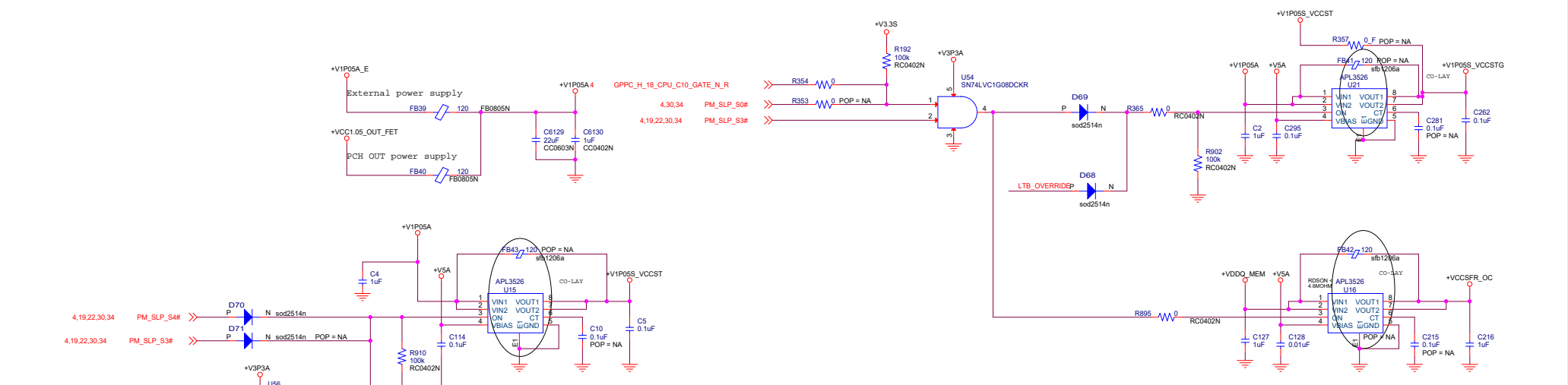
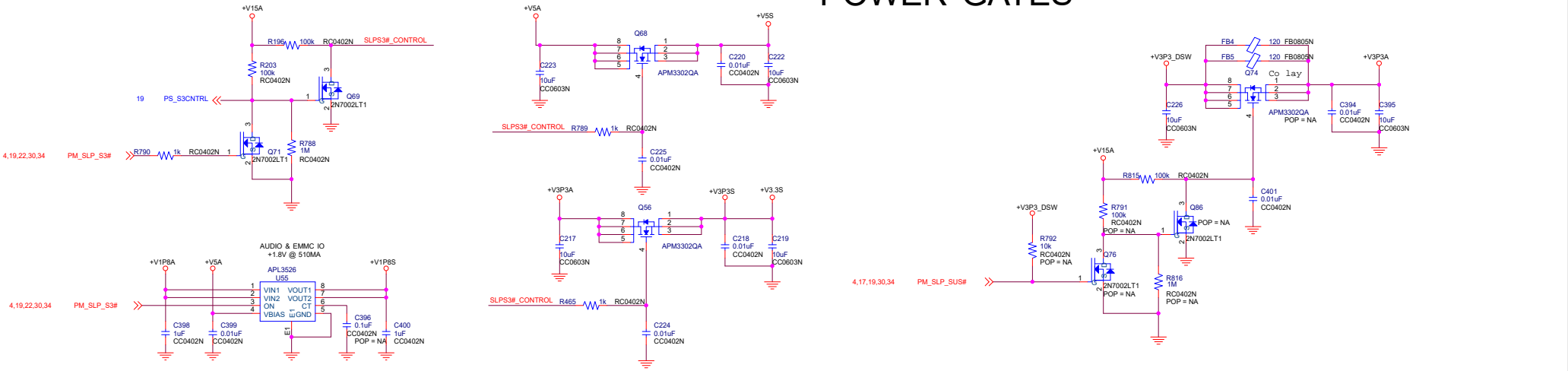




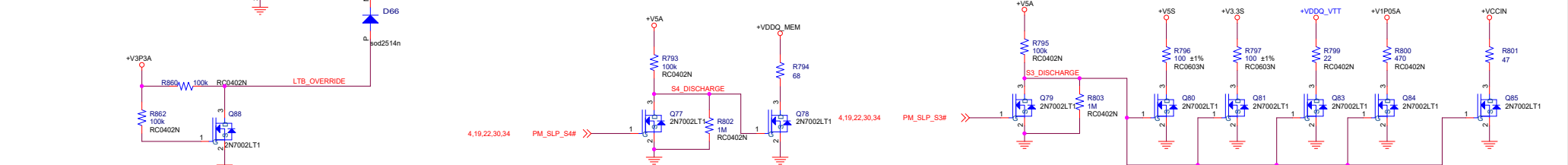
IMVP9 VCCCORE/GT



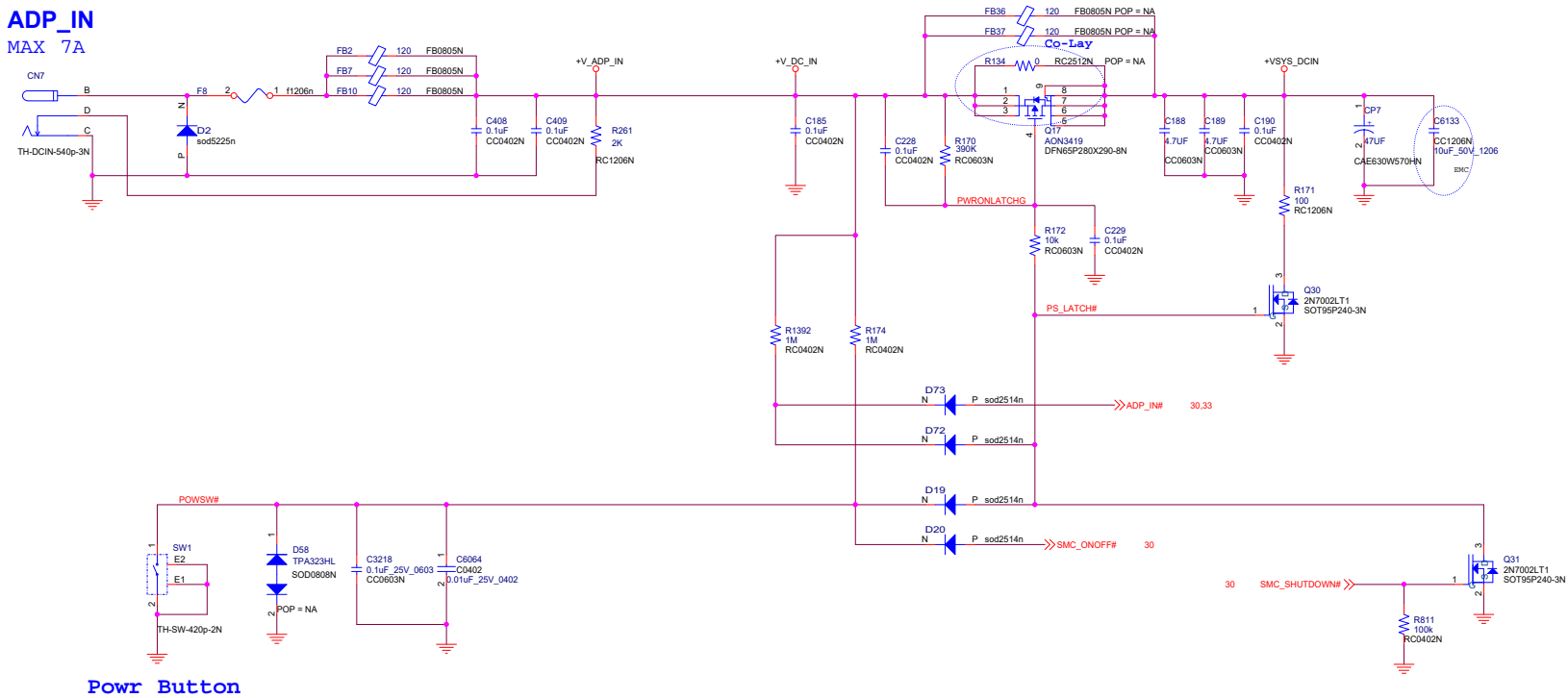
POWER GATES



Power Discharge Circuit



ADP_IN
MAX 7A



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5th floor,Block K,
Xiamen Exprot Processing Zone,
Haicang District,Xiamen,China,361026

Title	AX1E
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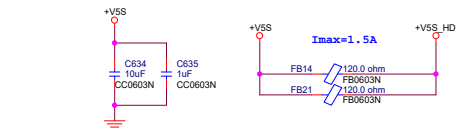
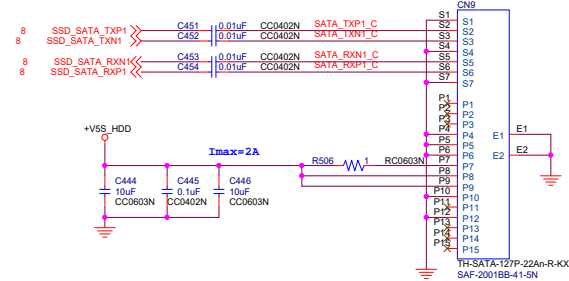
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C	Name	

Rev
A

ENGINEER: Roxin

C	Name	Management
Date:	Sheet	23 of 34

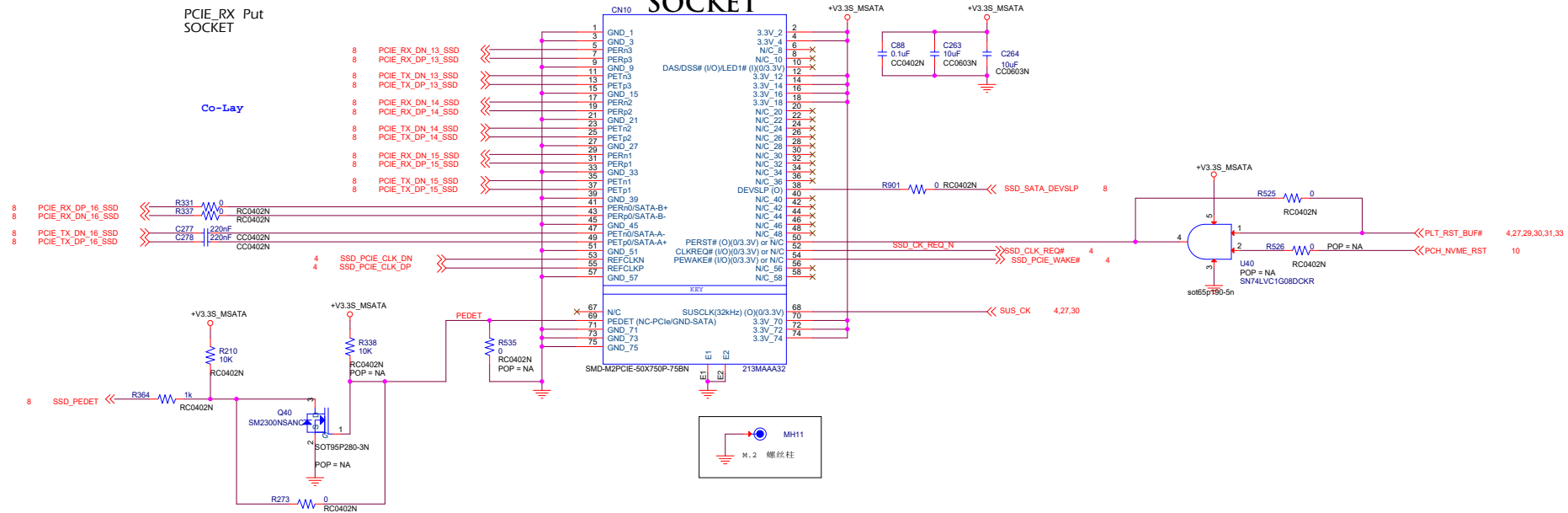
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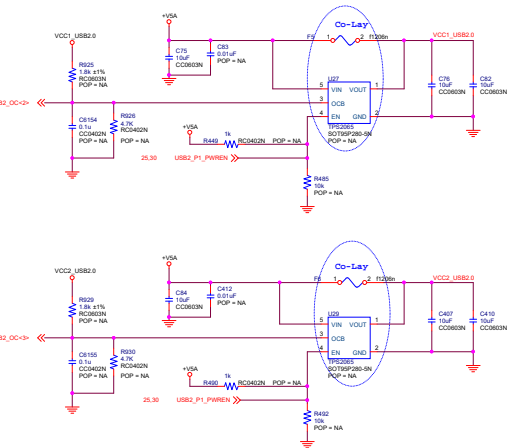
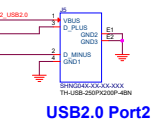
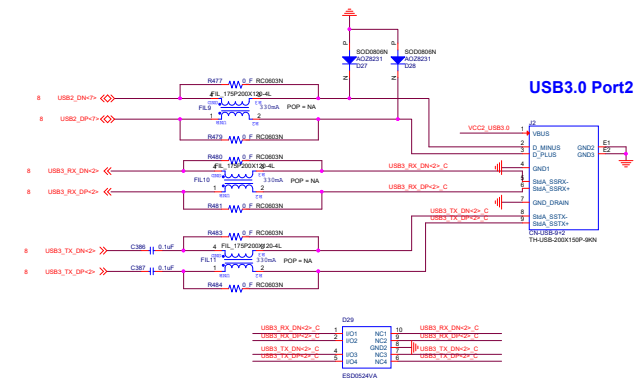
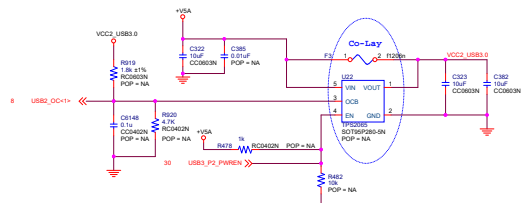


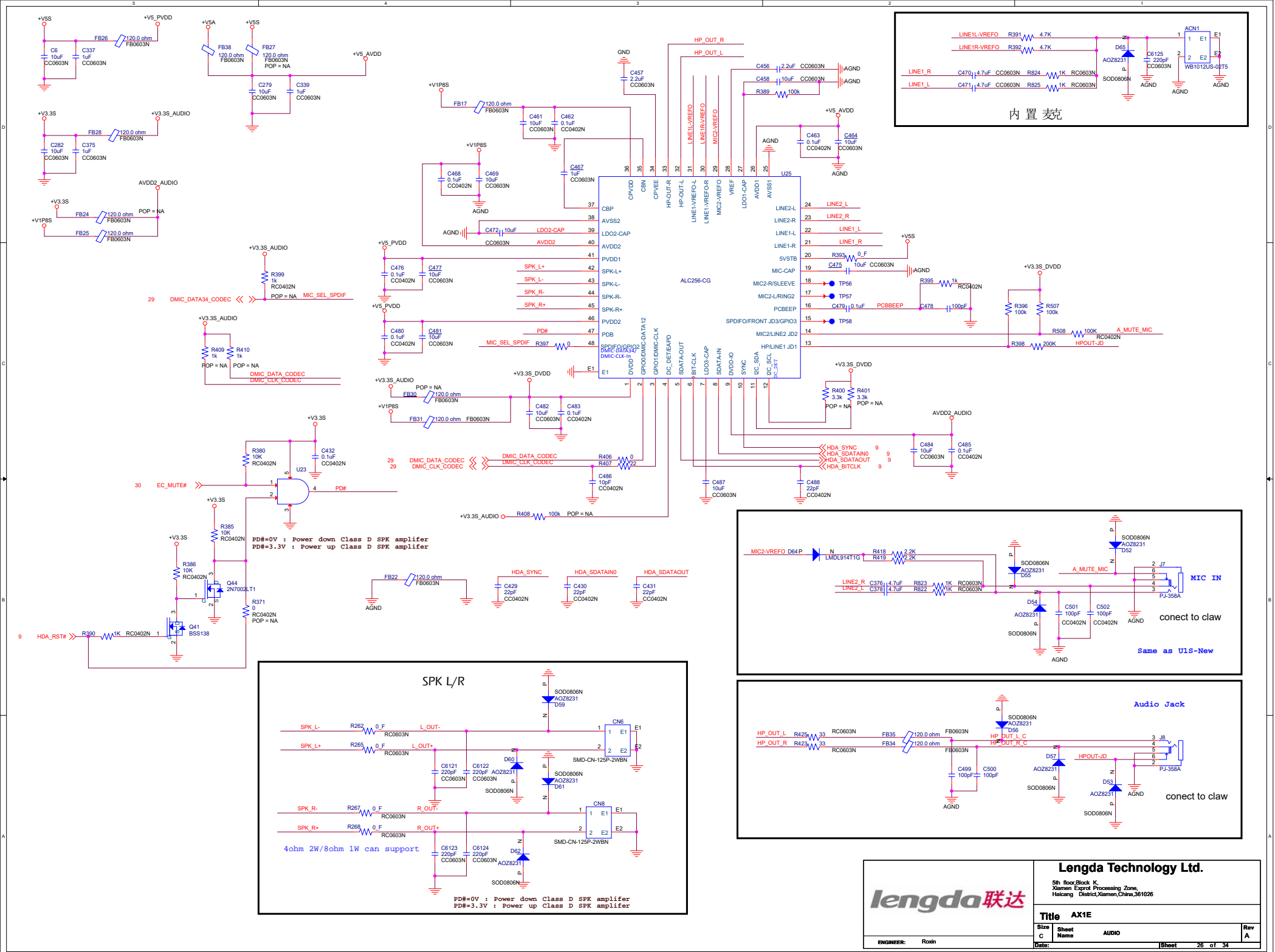
M.2 SSD SOCKET

PCIE_RX Put
SOCKET

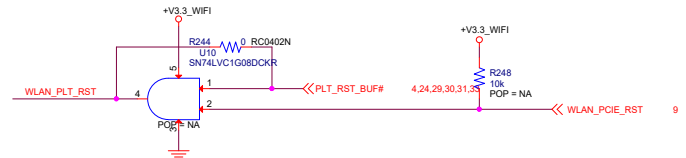
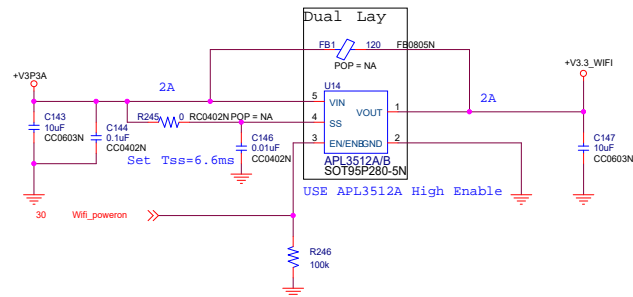
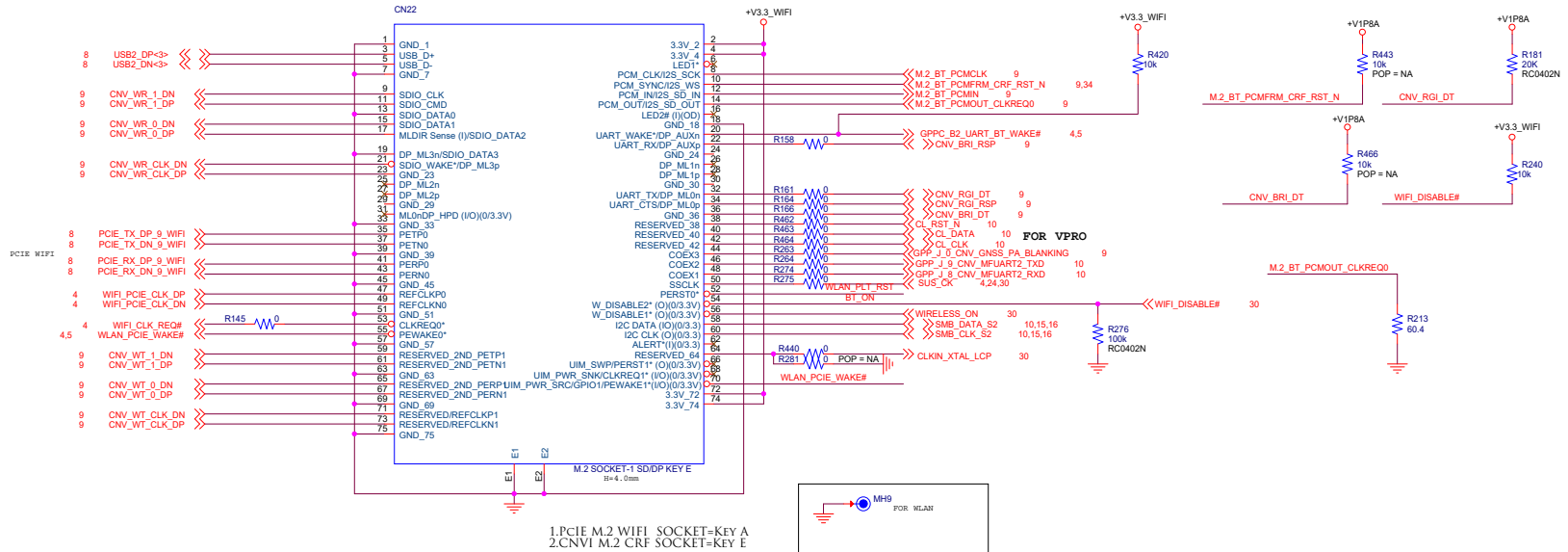
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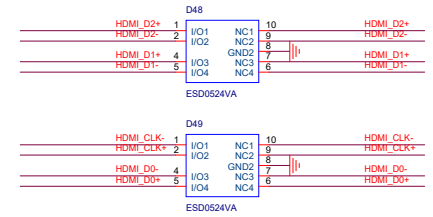
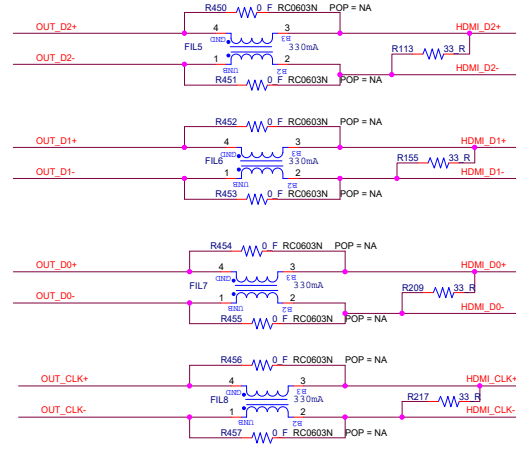
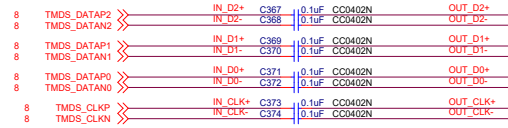




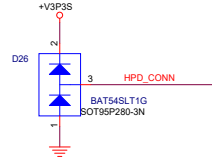
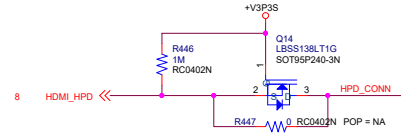
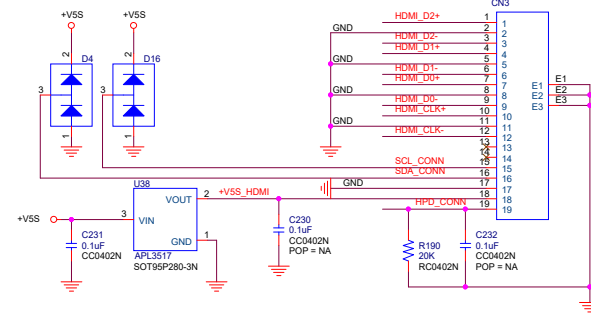
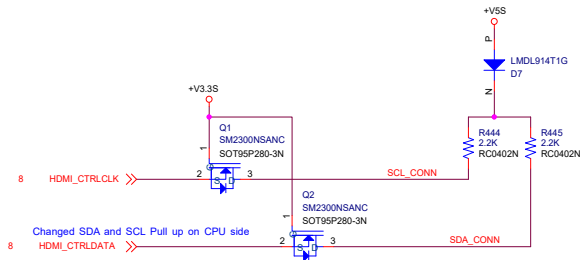
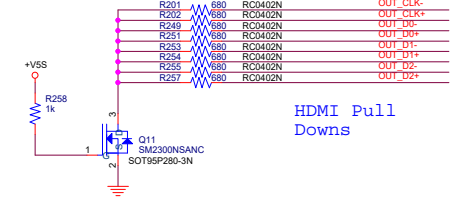


M.2 WIFI SOCKET





Layout Note: Place these Resistors close to HDMI CONN



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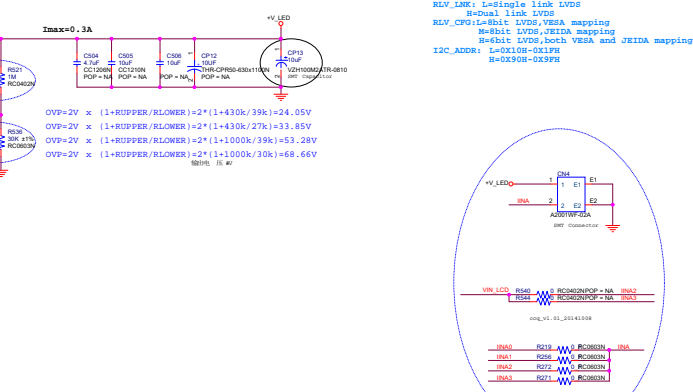
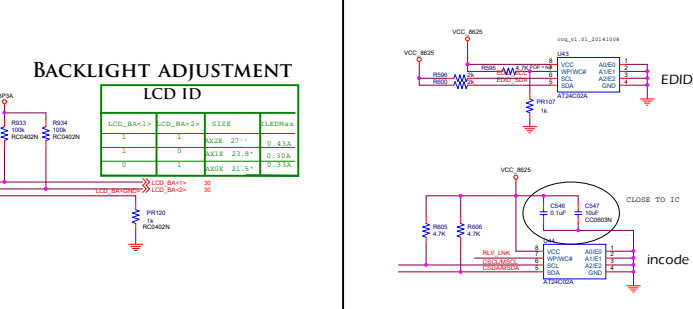
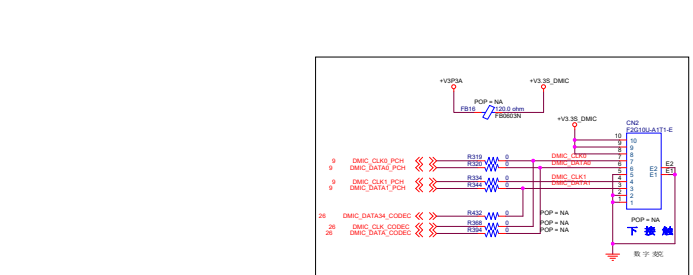
5th floor Block K,
Xiamen Export Processing Zone,
Haicang District, Xiamen, China, 361026

Title AX1E

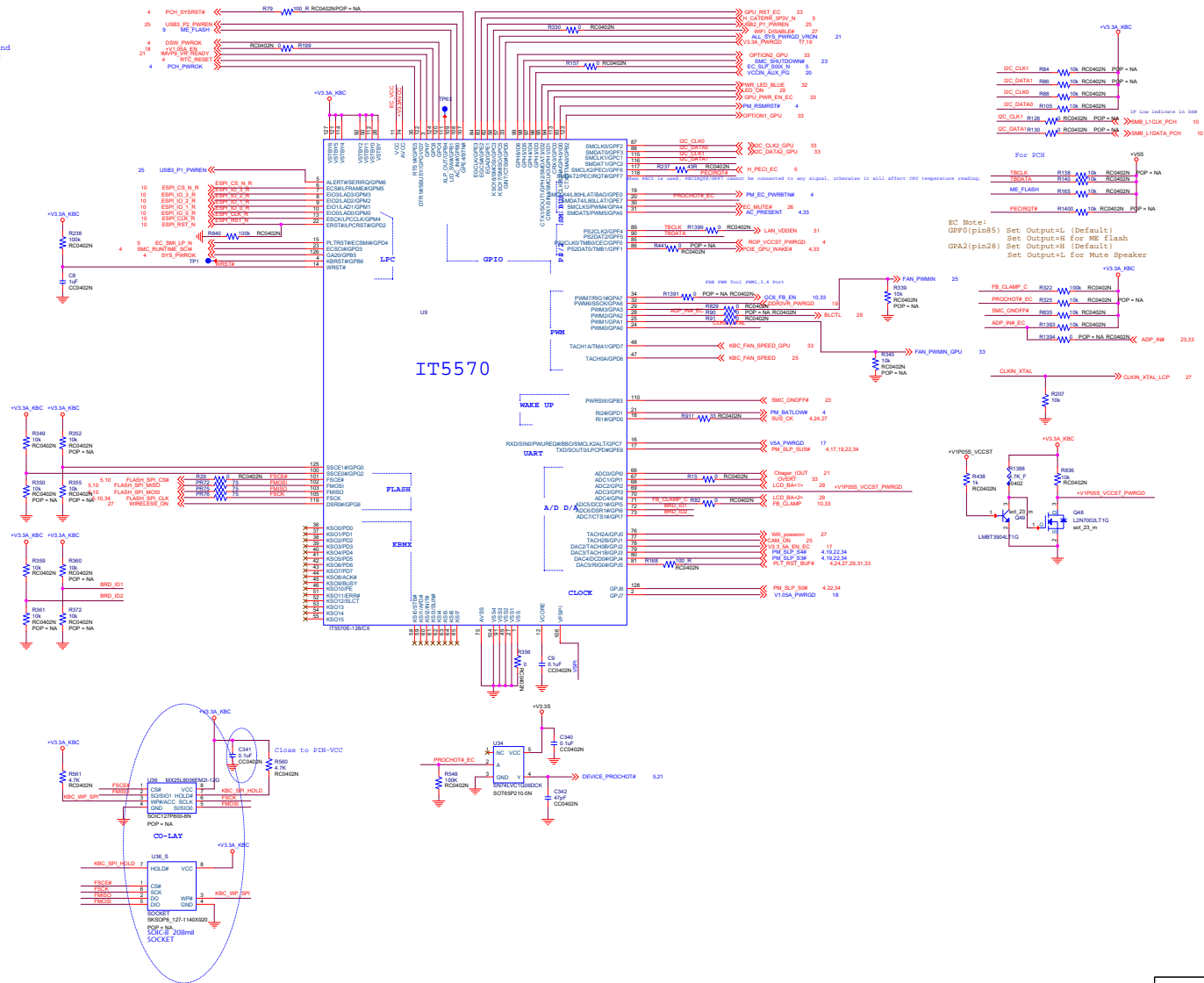
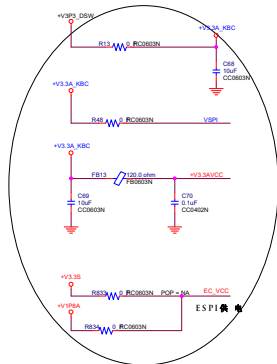
Size C Sheet Name HDMI Port Rev A

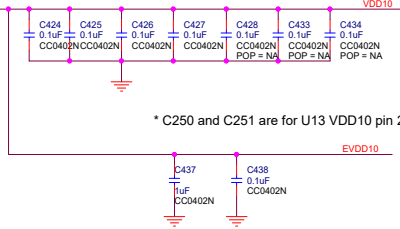
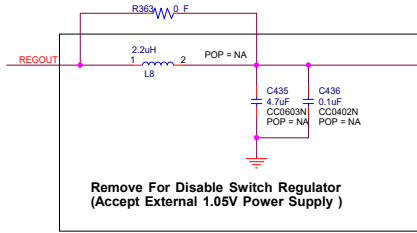
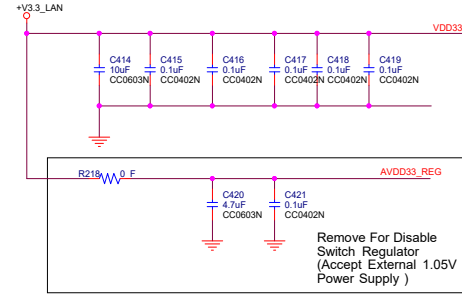
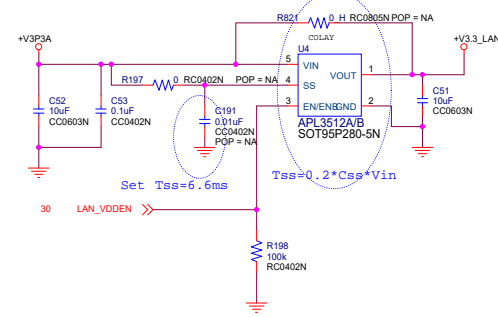
ENGINEER: Roxin

Date: 28 of 34

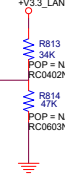
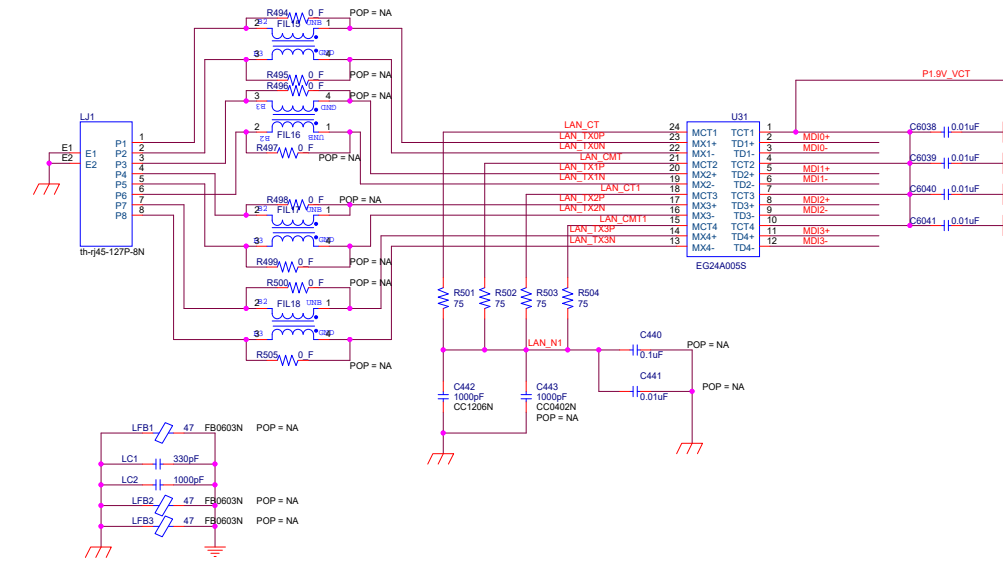
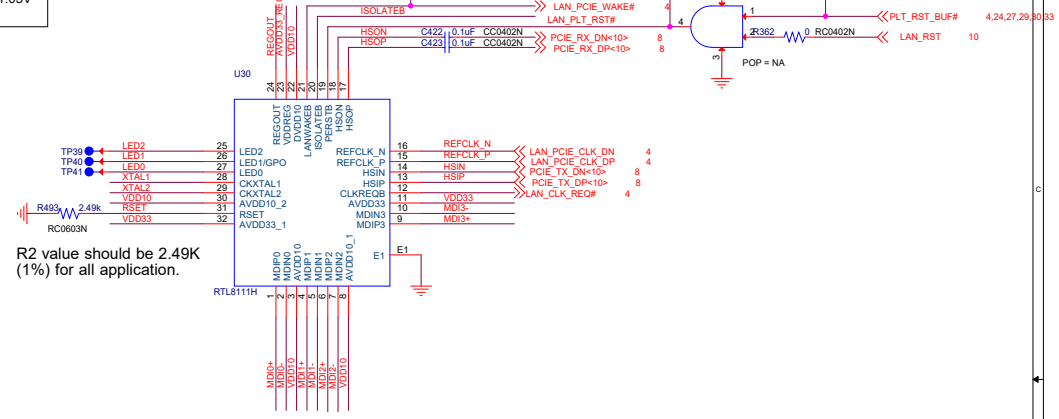
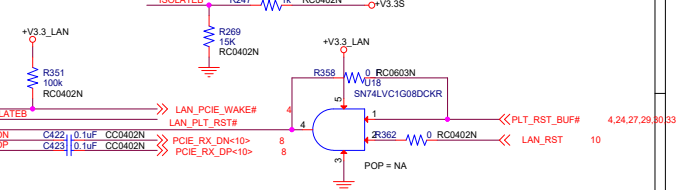
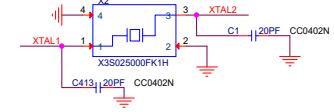


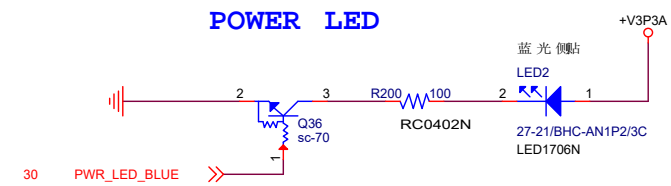
IT5570



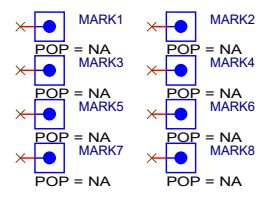


R2 value should be 2.49K (1%) for all application.

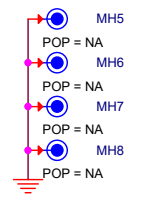




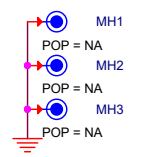
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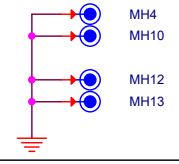
CPU_支架



ME HOLE



主板螺丝孔



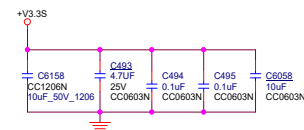
Lengda Technology Ltd.

5th floor,Block K,
Xiamen Export Processing Zone,
Haicang District,Xiamen,China,361026

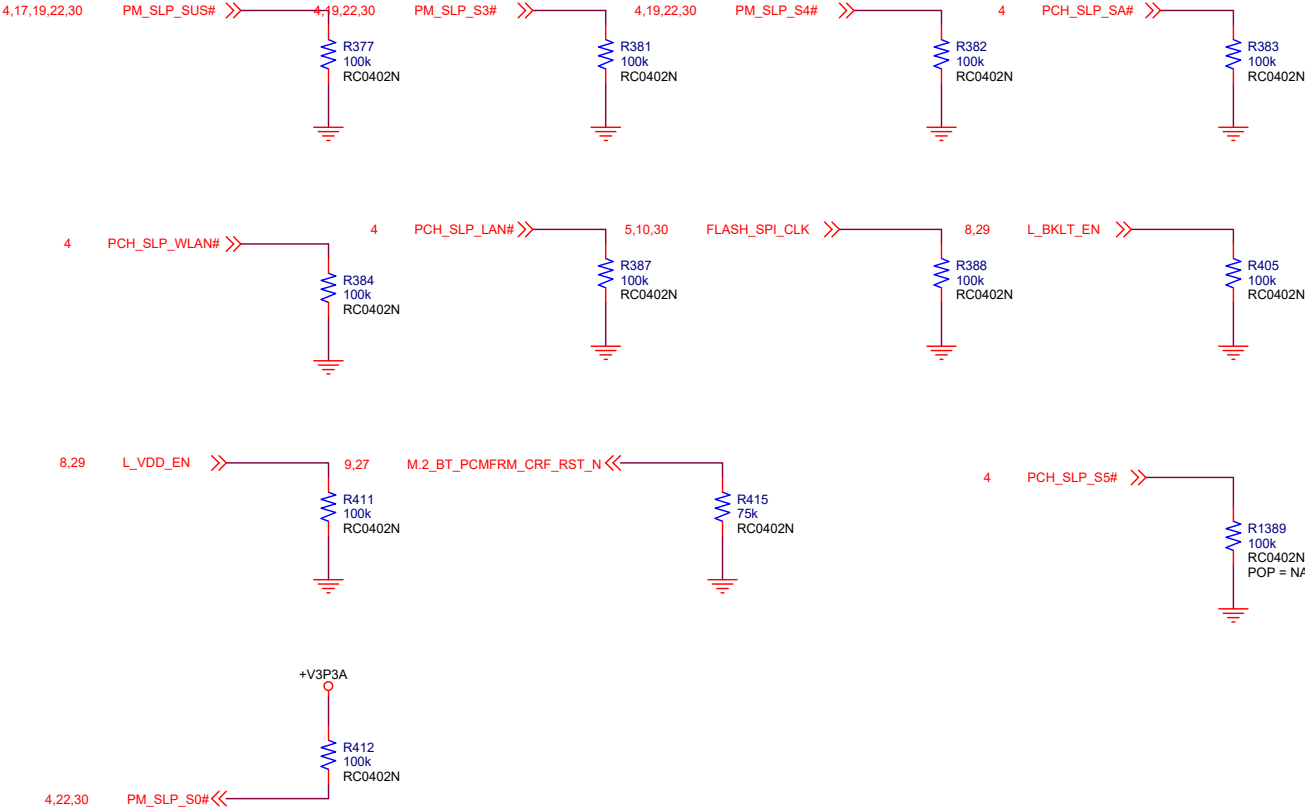
Title AX1E


Size B	Sheet Name	Rev A
	LED Status & ME Hole	

ENGINEER: Roxin



PCH GLITCH ISSUE MITIGATION





Lengda Technology Ltd.

5th floor,Block K,
Xiamen Export Processing Zone,
Haicang District,Xiamen,China,361026

Title AX1E

Size B	Sheet Name	MEMORY - DDR4 CHANNEL A	Rev A
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Date: 1 **Sheet** 34 of 34