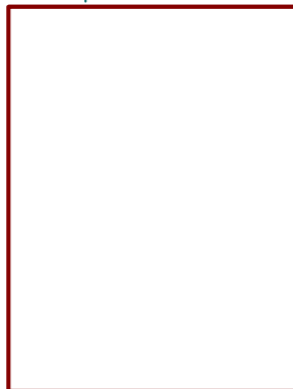
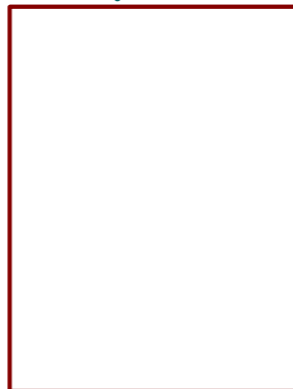


01 Descriptions



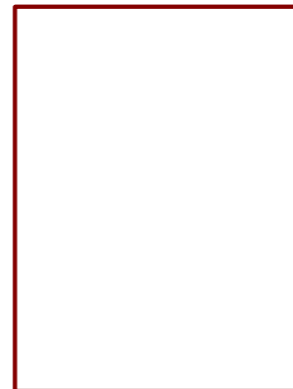
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02 Block Diagram



文件: 02 Block Diagram.kicad\_sch

03 Power



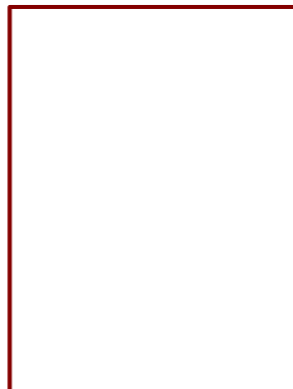
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04 Debug & XIAO Header



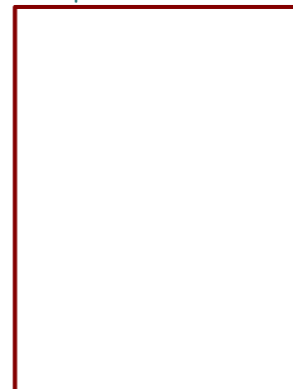
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05 nRF54LM20A



文件: 05 nRF54LM20A.kicad\_sch

06 Peripherals



文件: 06 Peripherals.kicad\_sch

seeed studio

Sheet: /  
File: XIAO nRF54LM20A.kicad\_sch

**Title: XIAO nRF54LM20A**

Size: A3 Date: 2026-04-09  
KiCad E.D.A. 10.0.0-19-g65df3ab11c

Rev: V1.0  
Id: 1/7

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Version	Descriptions	Data	Name
V1.0	First Release	12/18/2025	

**seeed studio**

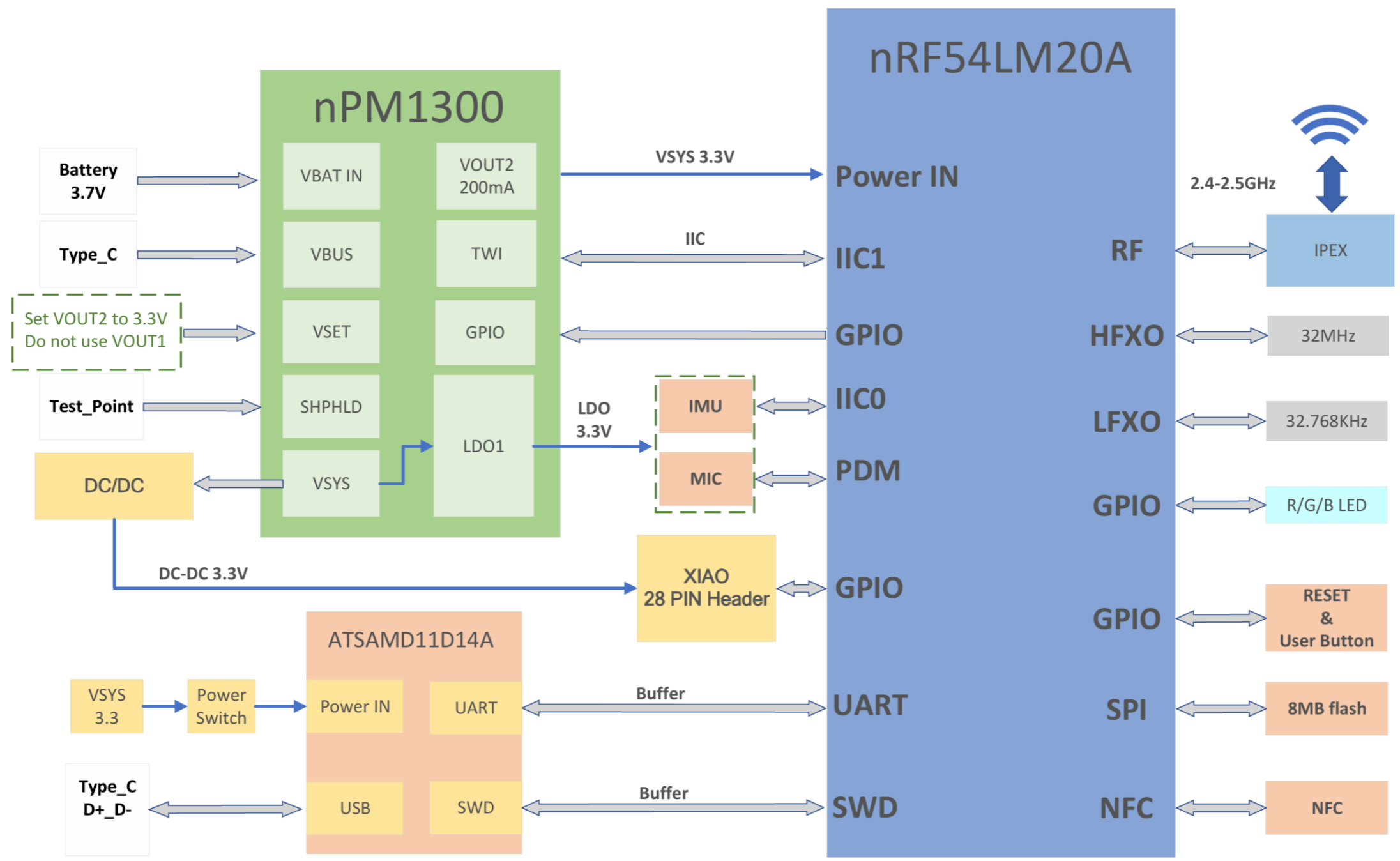
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File: 01 Descriptions.kicad\_sch

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**Title: XIAO nRF54LM20A**

Size: A3 Date: 2026-04-09  
KiCad E.D.A. 10.0.0-19-g65df3ab11c

Rev: V1.0  
Id: 2/7

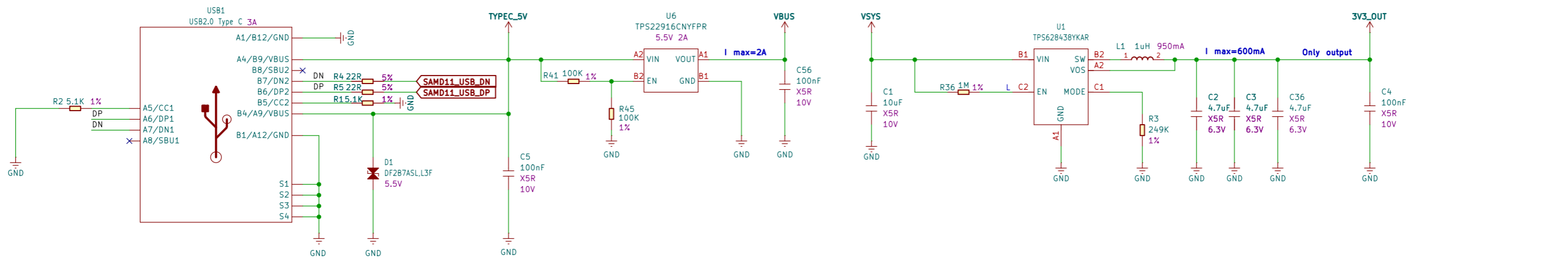


seeed studio

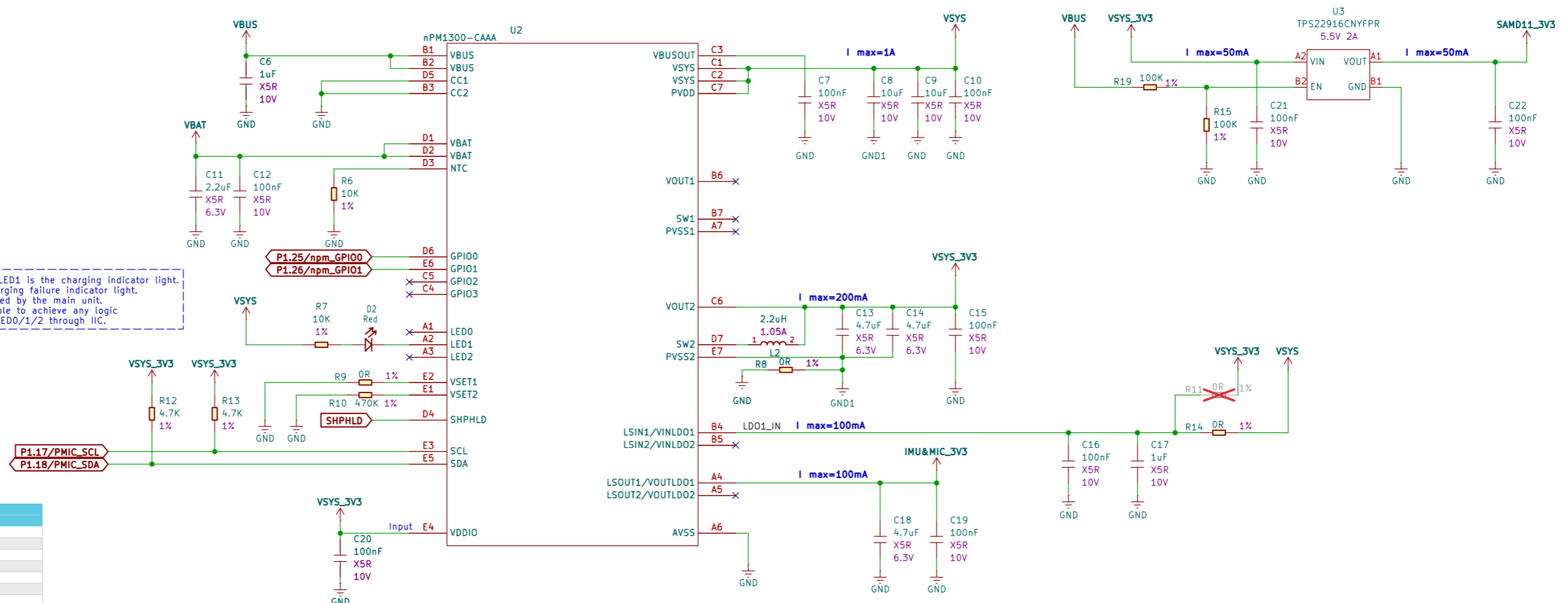
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<b>Title: XIAO nRF54LM20A</b>		
Size: A3	Date: 2026-04-09	Rev: V1.0
KiCad E.D.A. 10.0.0-19-g65df3ab11c		Id: 3/7

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## TYPE C input/output:



After resetting, LED1 is the charging indicator light.  
LED0 is the charging failure indicator light.  
LED3 is controlled by the main unit.  
It is also possible to achieve any logic  
by configuring LED0/1/2 through IIC.



Resistor value	Output voltage	Output voltage
< 100 Ω (grounded)	0 V (OFF)	0 V (OFF)
4.7 kΩ	1.0 V	1.8 V
10 kΩ	1.2 V	2.0 V
22 kΩ	1.5 V	2.2 V
47 kΩ	1.8 V (RESET1)	2.4 V
68 kΩ	2.0 V	2.5 V
100 kΩ	2.2 V	2.7 V
150 kΩ	2.5 V	3.0 V (RESET2)
250 kΩ to 500 kΩ	2.7 V	3.3 V

Pin	Pin name	Default indication mode
1	LED0	ERR (error)
2	LED1	CHG (charging)
3	LED2	HOST (host activity)
4	GND	N/A (ground)

Part	Parameter controlled (PMIC)	Function
SW1	SHPHLD/RESET	PMIC RESET / Exit Ship mode / Exit Hibernation mode
SW2	GP100	PMIC GPIO0
SW3	GP101	PMIC GPIO1
SW4	GP102	PMIC GPIO2

seed studio

Sheet: /03 Power/  
File: 03 Power.kicad\_sch

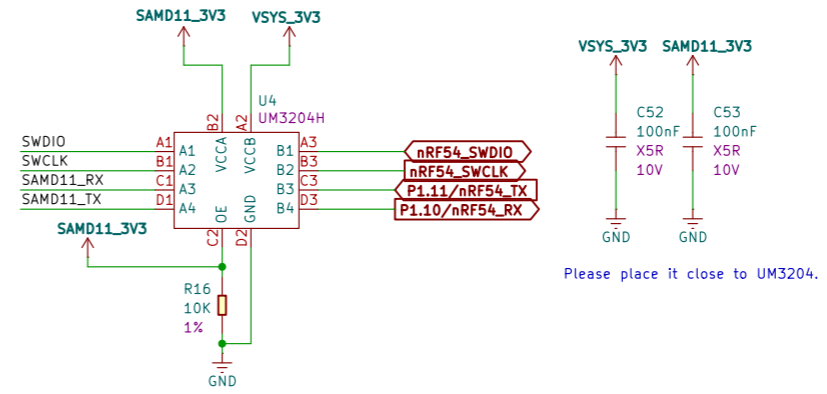
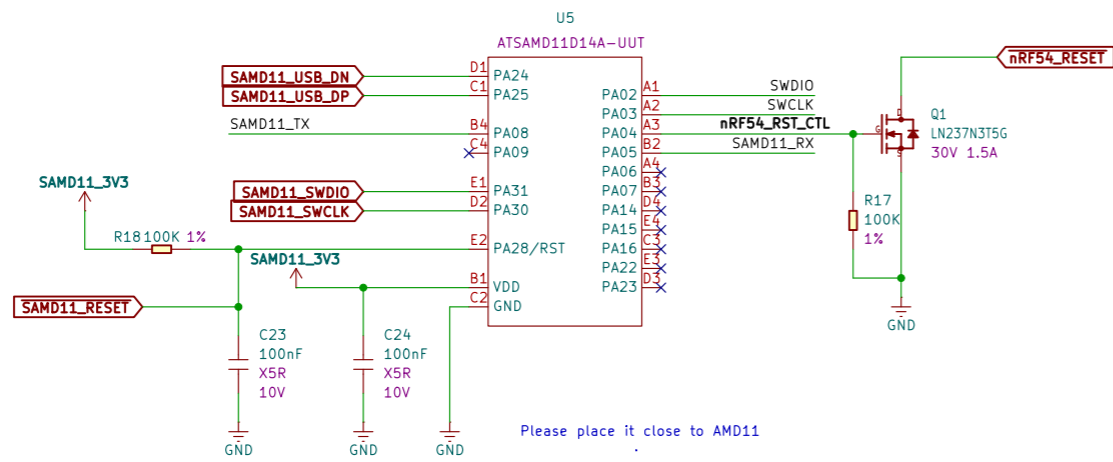
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Size: A3 Date: 2026-04-09  
KiCad E.D.A. 10.0.0-19-g65df3ab11c

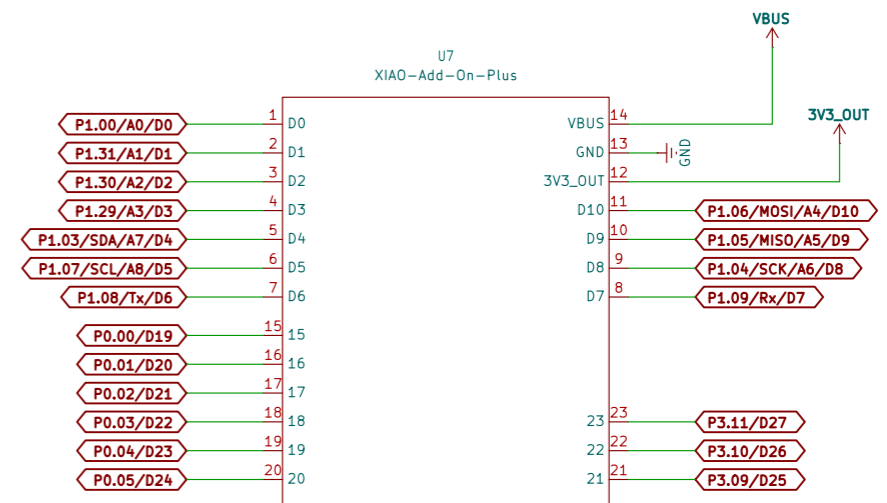
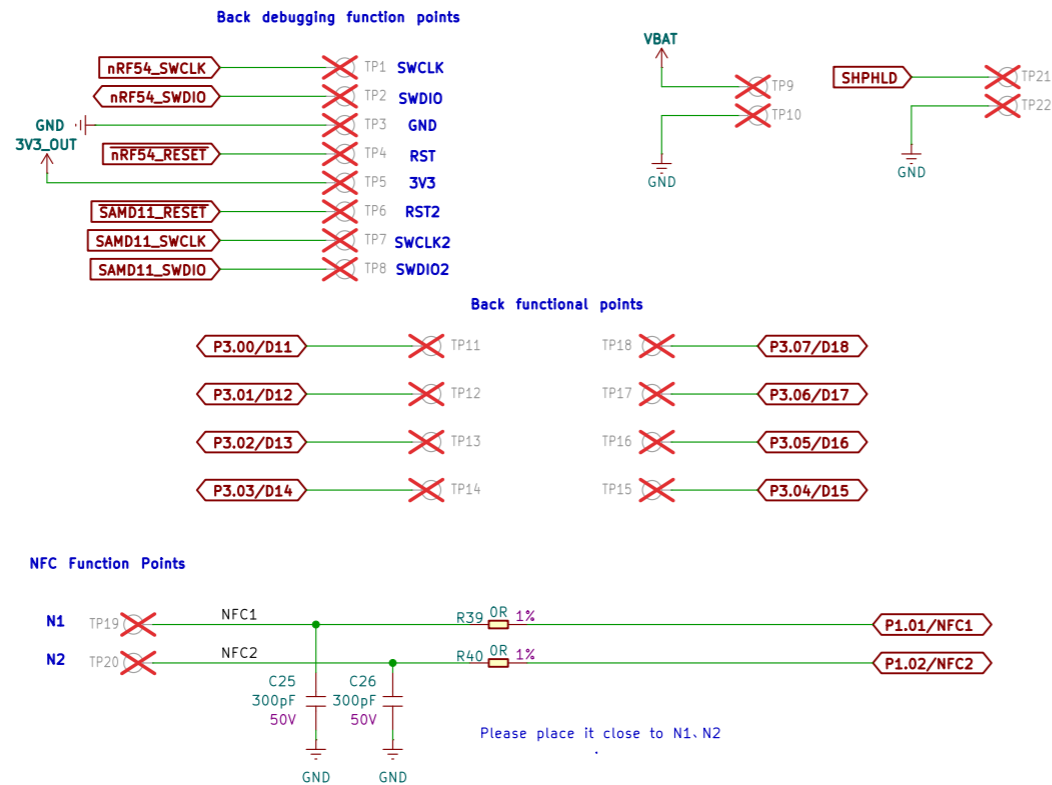
Rev: V1.0  
Id: 4/7

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## SWD Debug IC (ATSAMD11D14A)



## XIAO Header



seed studio

Sheet: /04 Debug & XIAO Header/  
File: 04 Debug & XIAO Header.kicad\_sch

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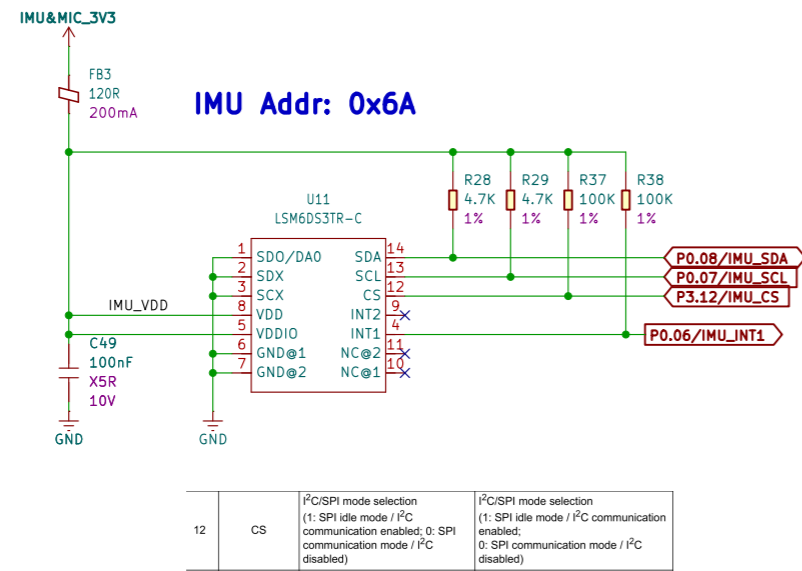
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Size: A3 Date: 2026-04-09  
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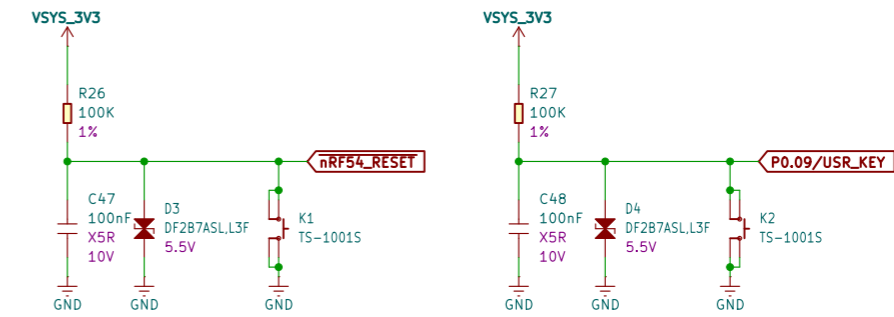
Rev: V1.0  
Id: 5/7



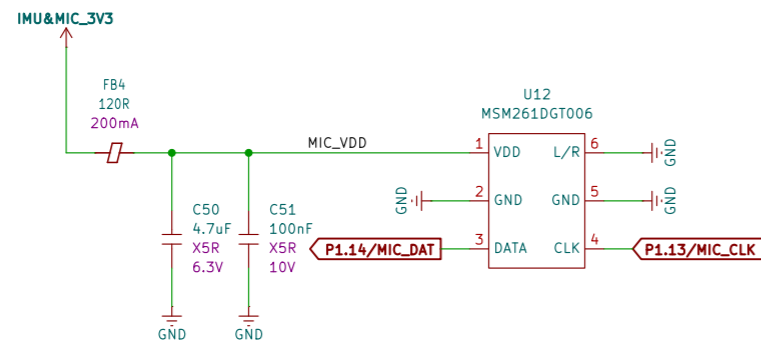
### IMU



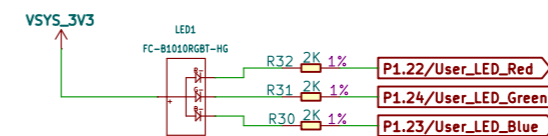
### KEY



### MIC



### LED-R/G/B



**seed studio**

Sheet: /06 Peripherals/  
File: 06 Peripherals.kicad\_sch

**Title: XIAO nRF54LM20A**

Size: A3 Date: 2026-04-09  
KiCad E.D.A. 10.0.0-19-g65df3ab11c

Rev: V1.0  
Id: 7/7

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