

Watch-DevKit-HW

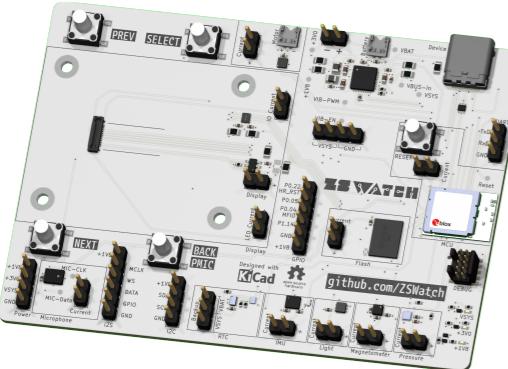
Variant: RELEASED

2025-12-31

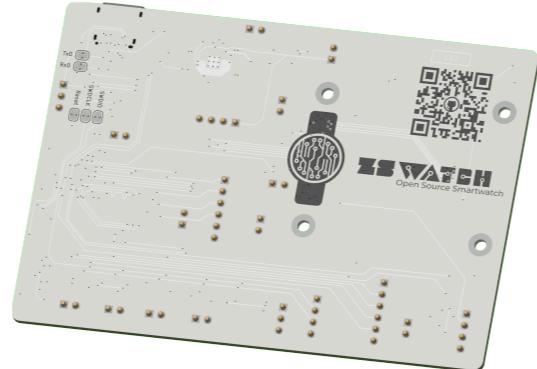
Rev 1.2.2

Page	Index	Page	Index	Page	Index	Page	Index
1	Cover Page	11	21	31
2	Block Diagram	12	22	32
3	Project Architecture	13	23	33
4	Power Management	14	24	34
5	Peripherals	15	25	35
6	MCU	16	26	36
7	Revision History	17	27	37
8	18	28	38
9	19	29	39
10	20	30	40

TOP VIEW



BOTTOM VIEW



NOTES

Comment

Not fitted components are marked as

DRAFT - Very early stage of schematic, ignore details.

PRELIMINARY - Close to final schematic.

CHECKED - There shouldn't be any mistakes. Contact the engineer if you find any.

RELEASED - A board with this schematic has been sent to production.

Date: 31-Dec-2025

DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational design notes.

DESIGN NOTE:
Example text for debug notes.

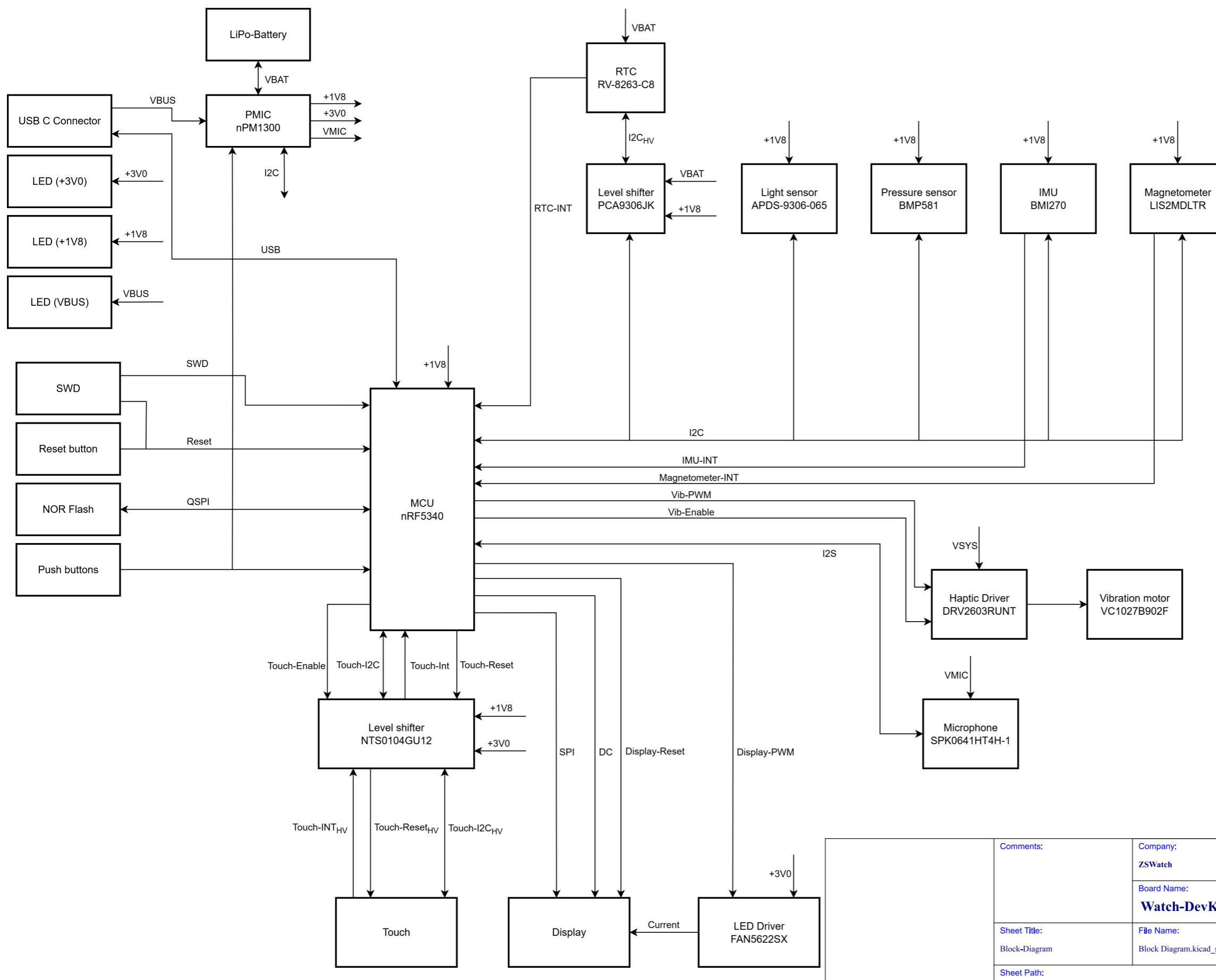
DESIGN NOTE:
Example text for cautionary design notes.

DESIGN NOTE:
Example text for critical design notes.

LAYOUT NOTE:
Example text for critical layout guidelines.

	Comments:	Company: ZSWatch	Variant: RELEASED	Git Hash: dbc49fa
	Board Name: Watch-DevKit-HW	Project Name: ZSWatch Watch-DevKit		
	Sheet Title: ZSWatch-Watch-DevKit	File Name: ZSWatch-Watch-DevKit.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13 Revision: 1.2.2
	Sheet Path: /	Reviewer:	Size: A3	Sheet: 1 of 7

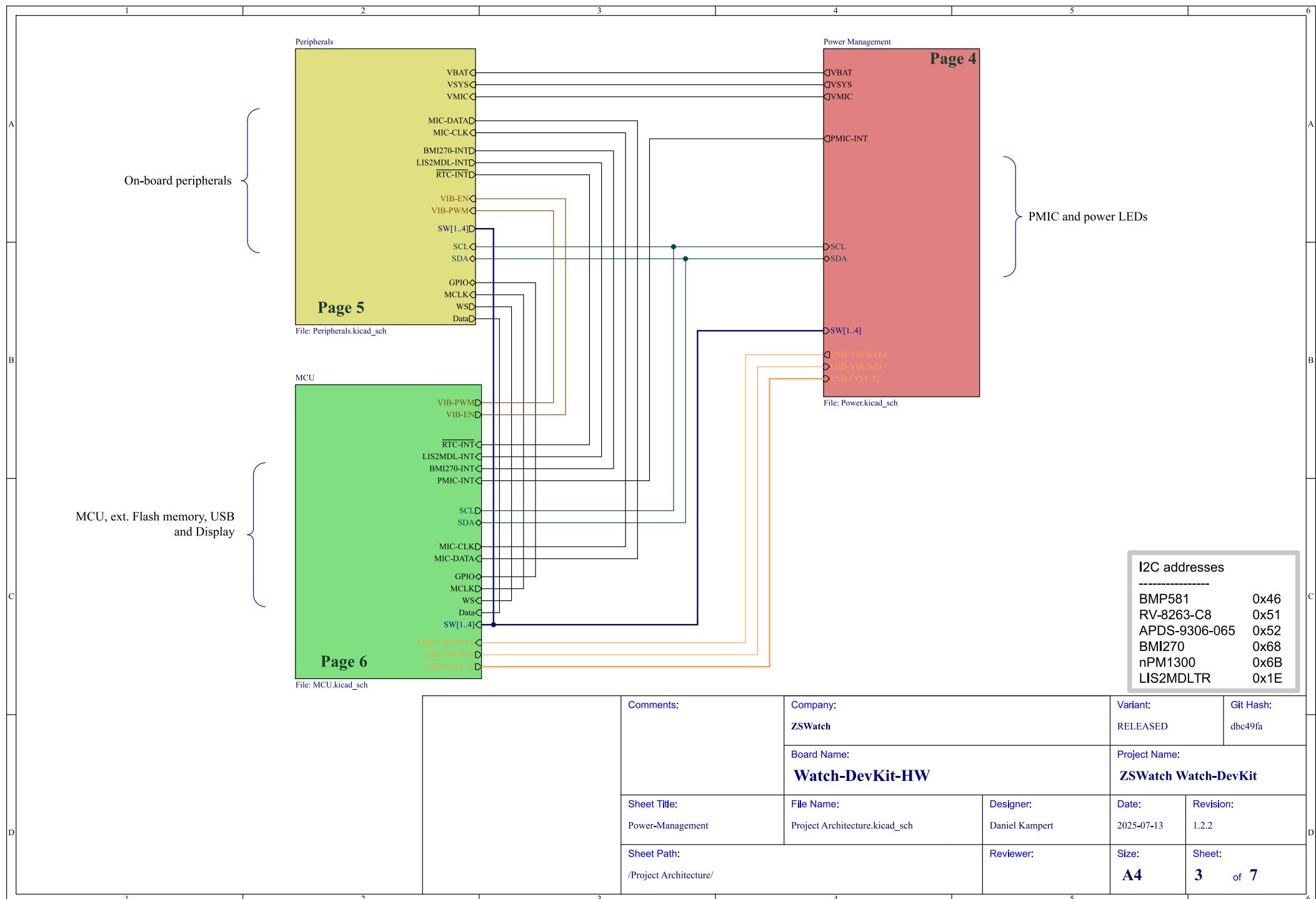
[2] Block-Diagram

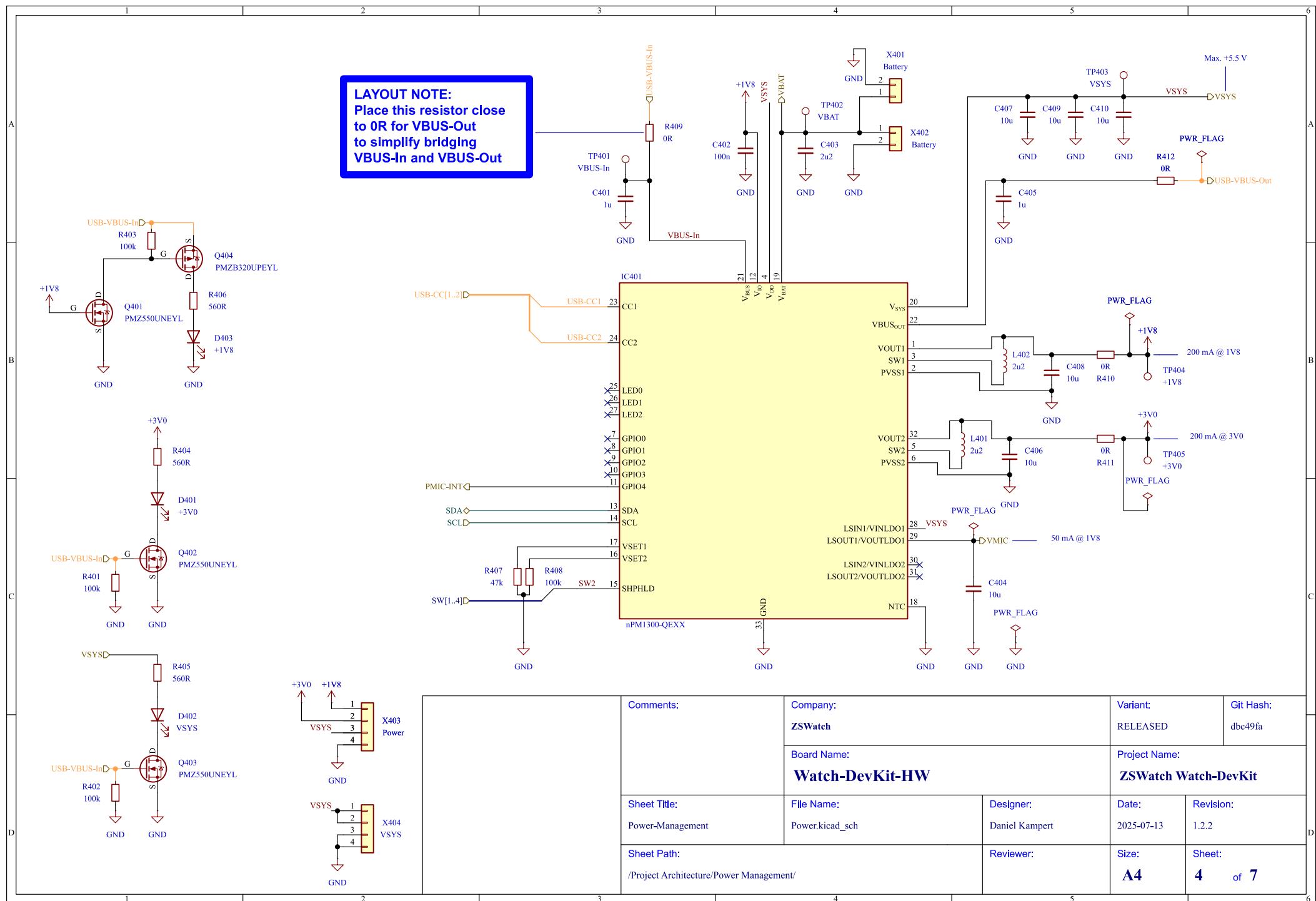


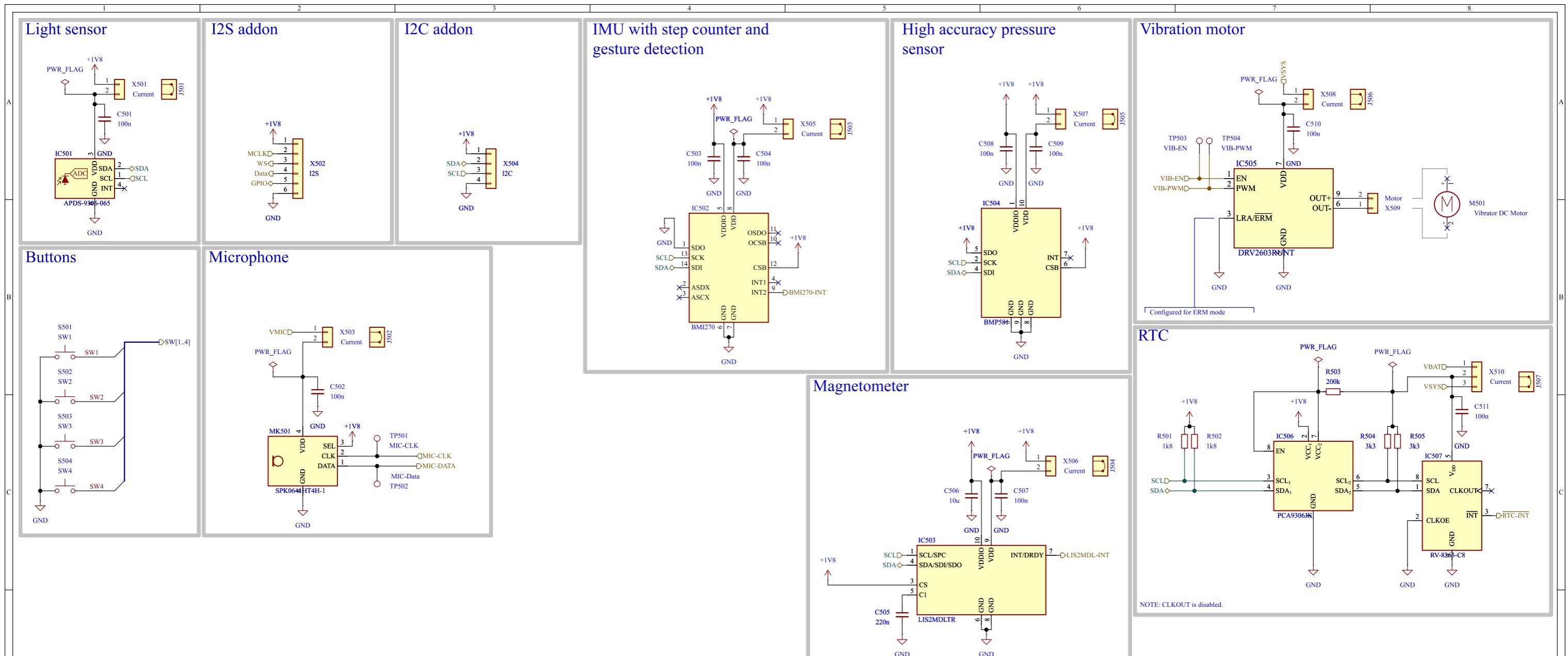
Target specifications:

Input voltage:	5 V ± 5%
Battery voltage	3.2 V to 4.2 V
Spec 3	??
Spec 4	??

Comments:	Company: ZSWatch	Variant: RELEASED	Git Hash: dbc49fa
Board Name: Watch-DevKit-HW	Project Name: ZSWatch Watch-DevKit		
Sheet Title: Block-Diagram	File Name: Block Diagram.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13
Sheet Path: /Block Diagram/	Reviewer:	Size: A3	Revision: 1.2.2
		Sheet: 2 of 7	





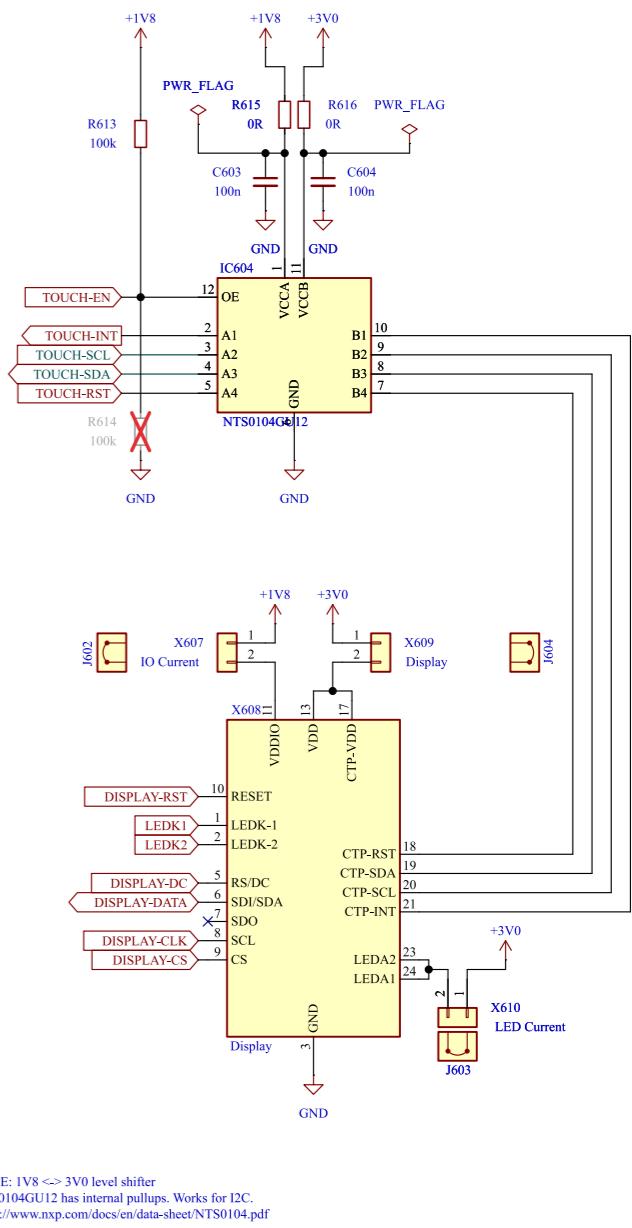


	Comments: ZSWatch	Company: ZSWatch	Variant: RELEASED	Git Hash: dbc49fa
	Board Name: Watch-DevKit-HW			Project Name: ZSWatch Watch-DevKit
	Sheet Title: Peripherals	File Name: Peripherals.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13
	Sheet Path: /Project Architecture/Peripherals/		Reviewer:	Size: A3
				Sheet: 5 of 7

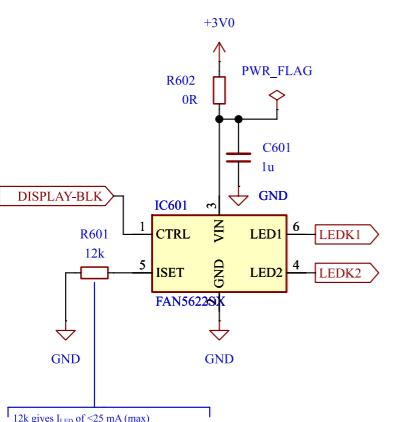
Microcontroller (NORA-B106/nRF5340)



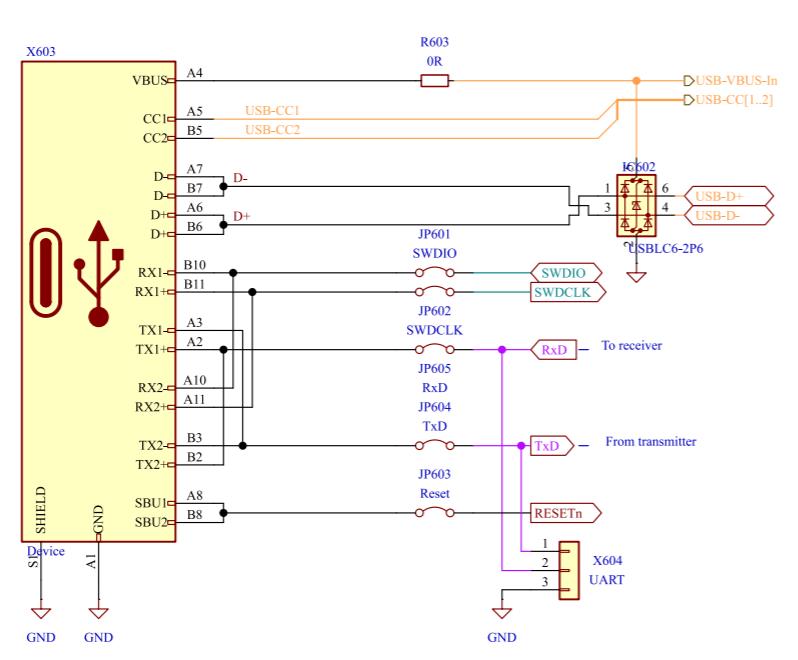
Display



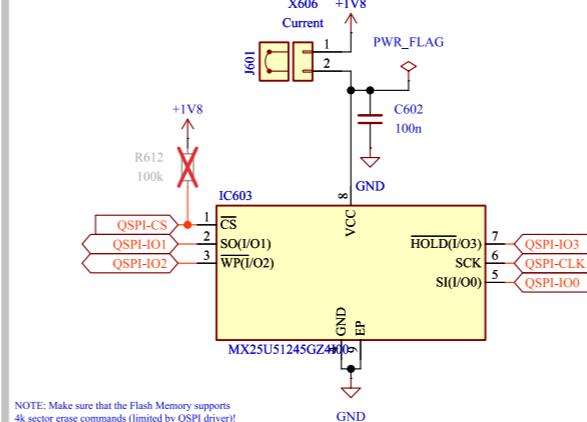
Display backlight



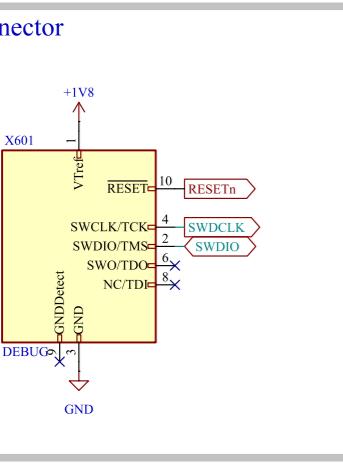
USB



External Flash



Debug connector



Comments:	Company:	Variant:	Git Hash:
ZSWatch	RELEASED	dbc49fa	
Board Name:	ZSWatch Watch-DevKit		
Sheet Title:	File Name:	Designer:	Date:
MCU	MCU.kicad_sch	Daniel Kampert	2025-07-13
Sheet Path:	/Project Architecture/MCU/		
Reviewer:	Size:	Sheet:	A3
			6 of 7

NOTE: 1V8 <-> 3V0 level shifter
NTS0104GU12 has internal pullups. Works for I2C.
<https://www.nxp.com/docs/en/data-sheet/NTS0104.pdf>

[7] Revision-History

A	Version 1.2.0 - 2025-09-07	Version 1.2.1 - 2025-09-26	 \${RELEASE_TITLE_...} \${RELEASE_BODY_...}	 \${RELEASE_TITLE_...} \${RELEASE_BODY_...}	A
B	<p>Fixed</p> <ul style="list-style-type: none"> - Fix wrong orientation for SWD header (#117) <hr/> <p>Added</p> <ul style="list-style-type: none"> - Add pull-up resistor for display enable signal. Can be disabled via GPIO. (#123) - Add new KiBot template (#116) - Add orientation marker for IMU (#124) - Add power LEDs (#128) - Add reset button (#131) - Add testpoints for microphone I2S (#145) <hr/> <p>Changed</p> <ul style="list-style-type: none"> - Shrink down the PCB to save costs (#115) - Replace pin headers with THT to make them more robust (#121) - Rename "Power" jumpers to "Current" (#129) - Replace level shifter for RTC with PCA9306GF (#133) - Switch back to old LED driver (#134) - Power microphone from PMIC (#145) <hr/> <p>Removed</p> <ul style="list-style-type: none"> - Remove APDS-9306 interrupt (#122) 	<p>Added</p> <ul style="list-style-type: none"> - Add missing pull-ups for I2C lines (#158) <hr/> <p>Fixed</p> <ul style="list-style-type: none"> - Fix wrong ship mode button (#155) <hr/> <p>Changed</p> <ul style="list-style-type: none"> - Change part number for SWD connector to 62201021121 (#157) - Set pull-up for Flash CS to NA (#158) - Center the mounting holes for the display (#159) 			B
C					C
D			<p>Comments:</p> <p>Company: ZSWatch</p> <p>Board Name: Watch-DevKit-HW</p> <p>Sheet Title: Revision-History</p> <p>File Name: Revision History.kicad_sch</p> <p>Designer: Daniel Kampert</p> <p>Date: 2025-07-13</p> <p>Revision: 1.2.2</p> <p>Sheet Path: /Revision History/</p> <p>Reviewer:</p> <p>Size: A4</p> <p>Sheet: 7 of 7</p>		D