

Watch-DevKit-HW

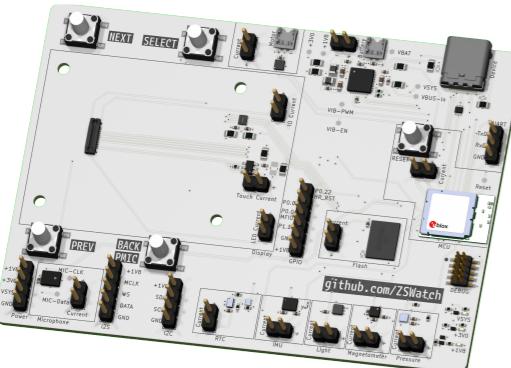
Variant: RELEASED

2025-09-26

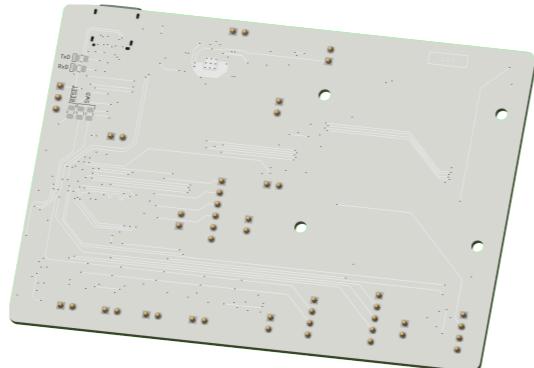
Rev 1.2.1

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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.

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.

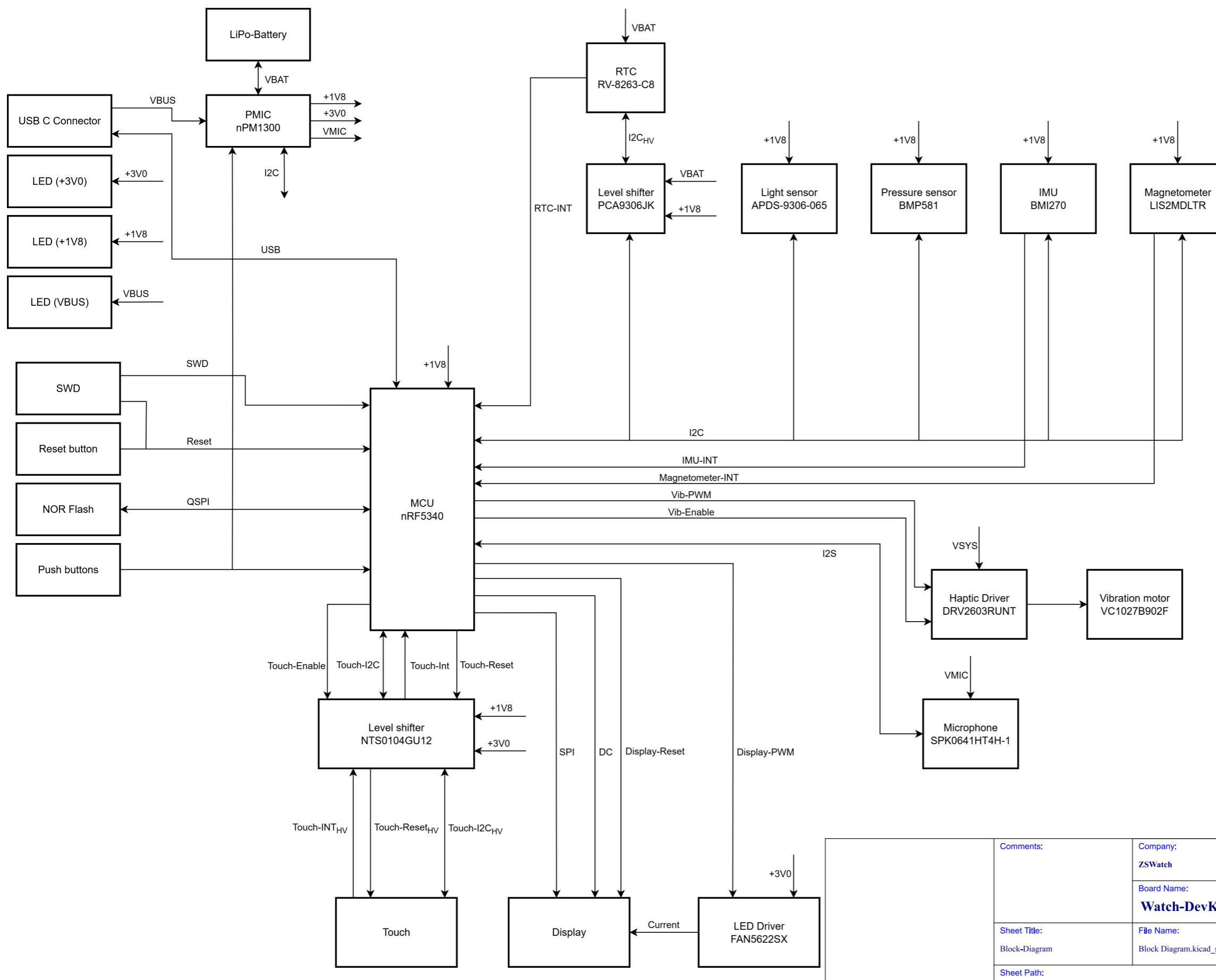
DESIGN NOTE: Example text for critical design notes.

LAYOUT NOTE

Example text for critical layout guidelines.

	Comments: ZSWatch	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
		Sheet Path: /	Reviewer:	Size: A3 Sheet: 1 of 7

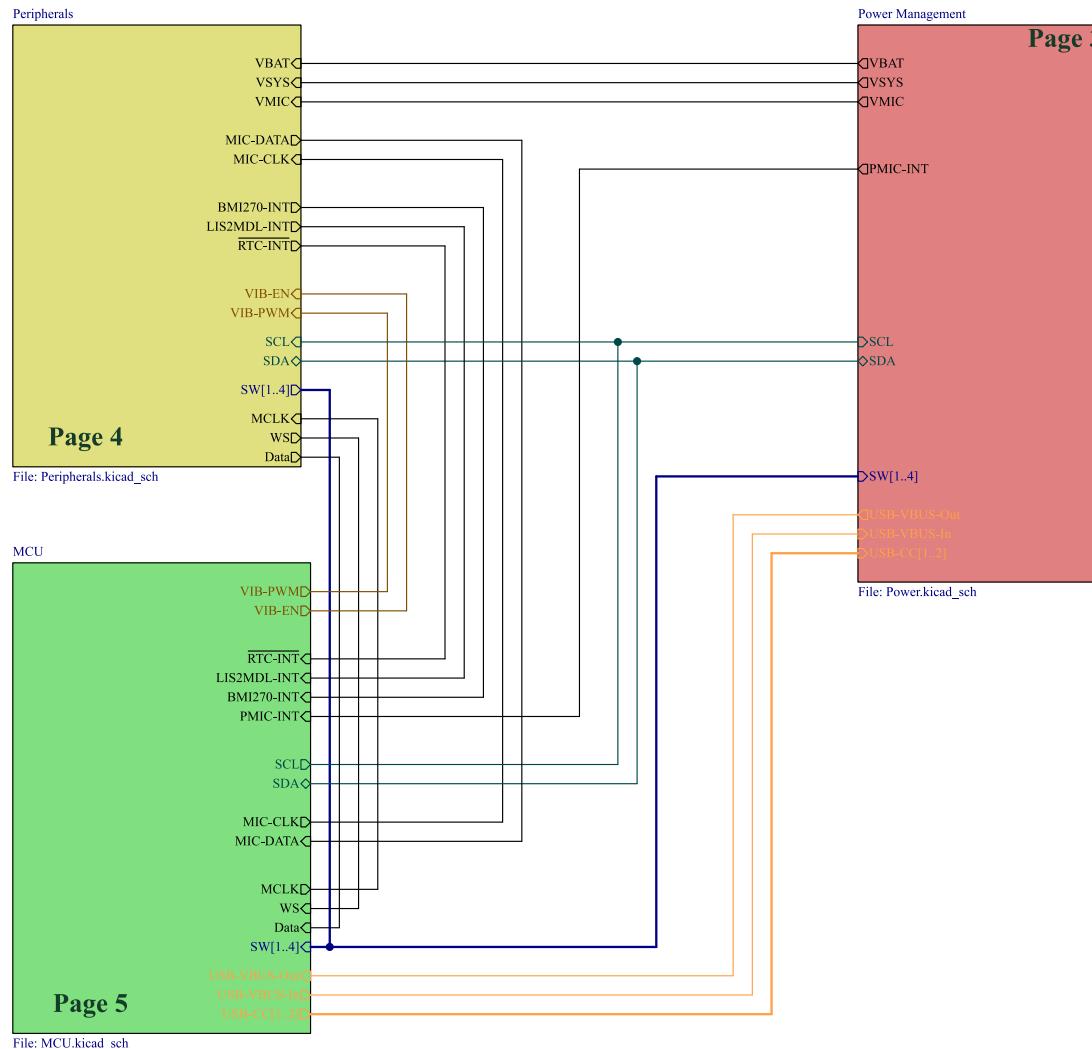
[2] Block-Diagram



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	Sheet: 2 of 7

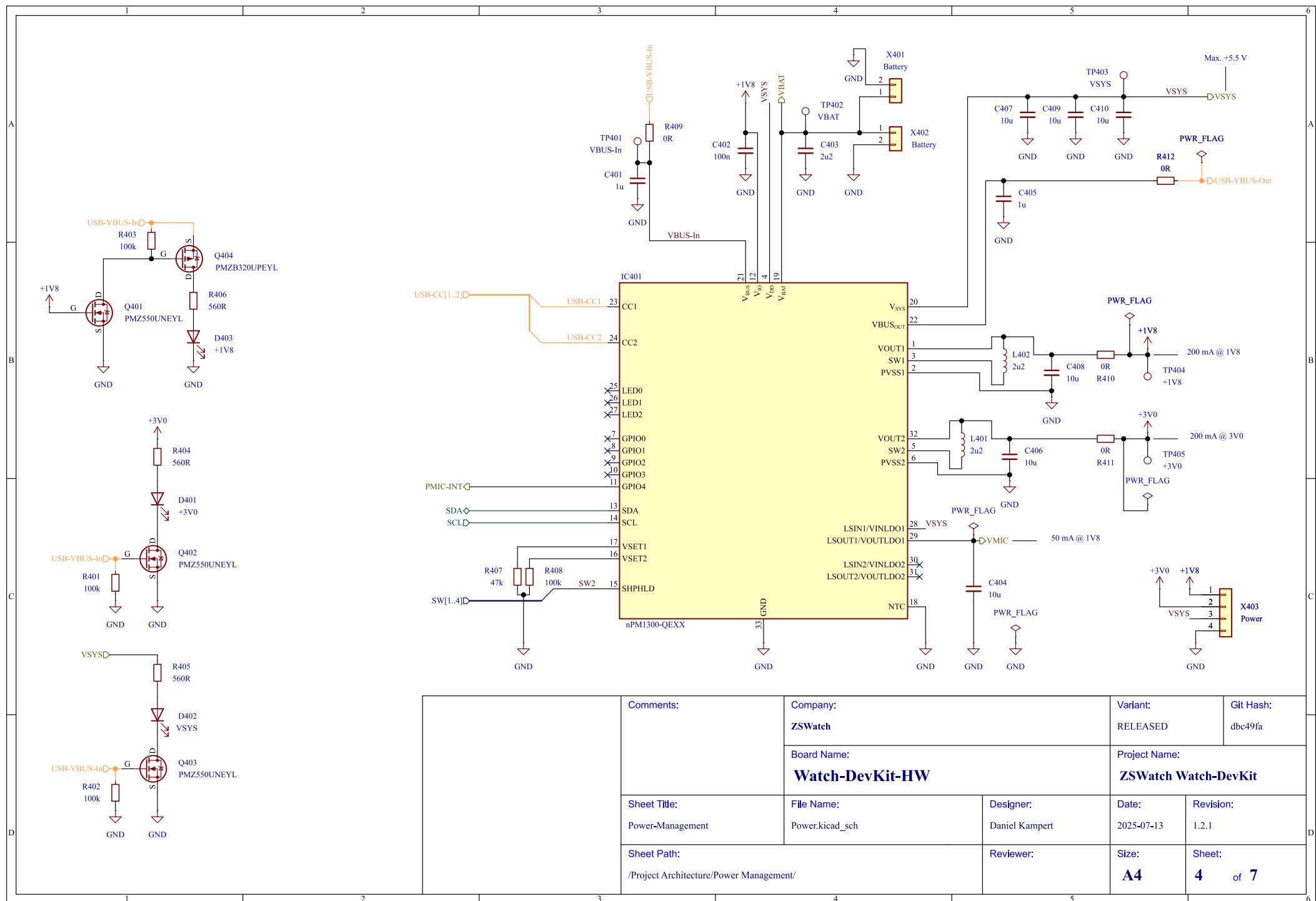


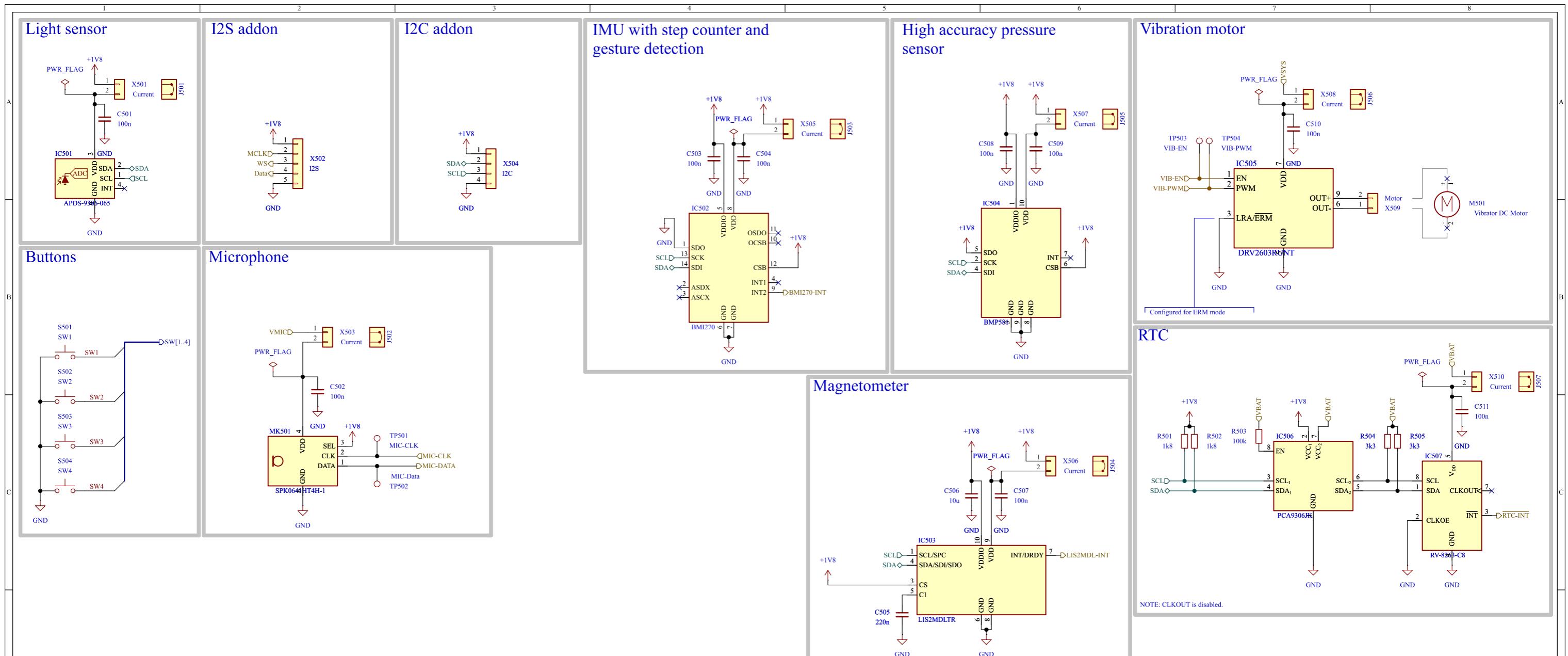
I2C addresses	

BMP581	0x46
RV-8263-C8	0x51
APDS-9306-065	0x52
BMI270	0x68
nPM1300	0x6B
LIS2MDLTR	0x1E

[7] Revision-History

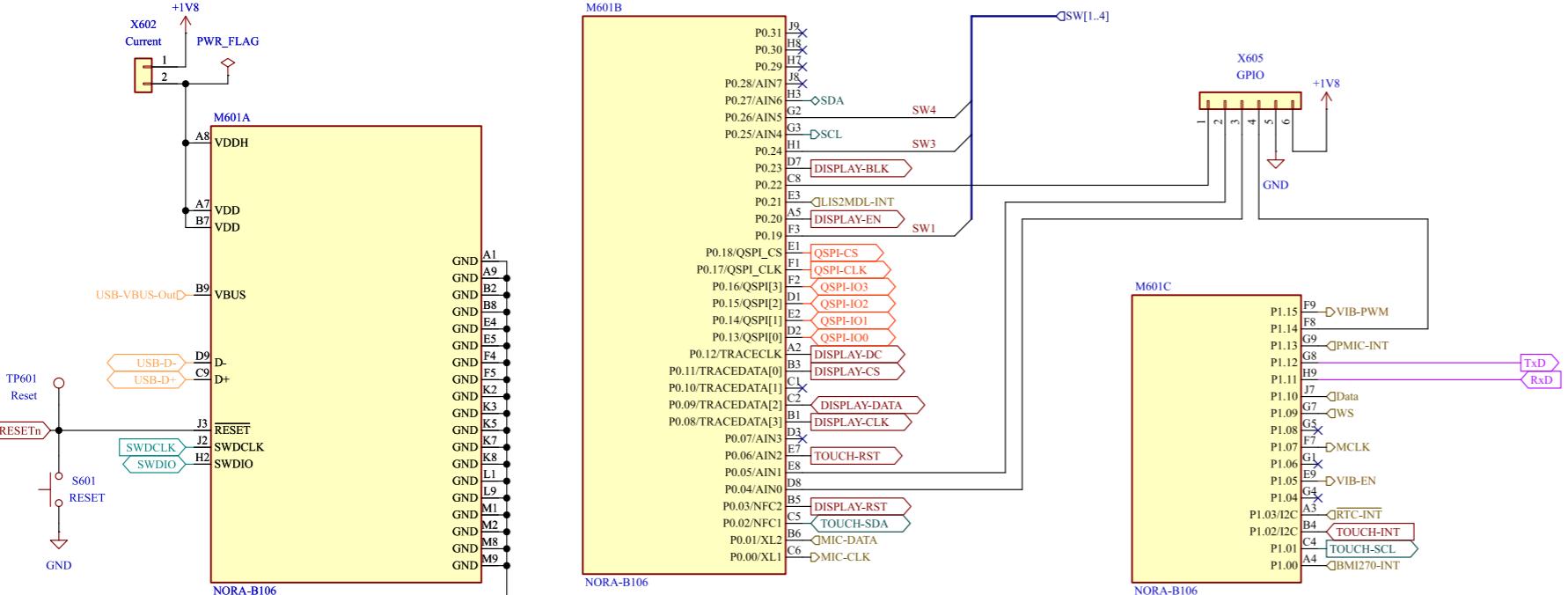
A	Version 1.2.0 - 2025-09-07	Version 1.2.1 - 2025-09-26	 \${RELEASE_TITLE_...} \${RELEASE_BODY_...}	 \${RELEASE_TITLE_...} \${RELEASE_BODY_...}	A
B	<p>Fixed</p> <ul style="list-style-type: none"> - Fix wrong orientation for SWD header (#117) <hr/> <p>Added</p> <ul style="list-style-type: none"> - Add 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: 1.2.1</p> <p>Sheet Path: /Revision History/</p> <p>Reviewer:</p> <p>Size: A4</p> <p>Sheet: 7 of 7</p>		D



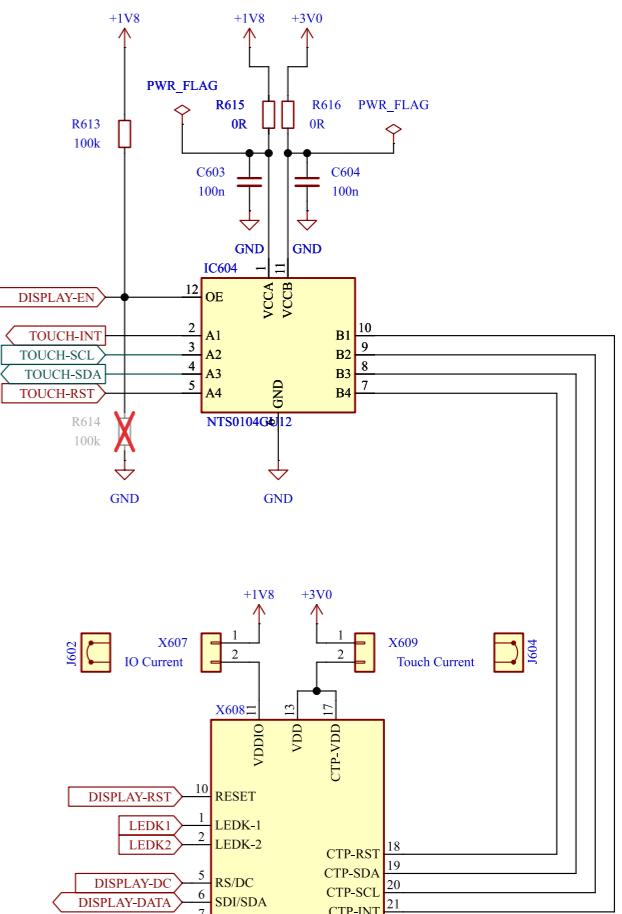


	Comments: ZSWatch	Company: ZSWatch	Variant: RELEASED	Git Hash: dbc49fa
	Board Name: Watch-DevKit-HW	Project Name: ZSWatch Watch-DevKit		
	Sheet Title: Peripherals	File Name: Peripherals.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13 Revision: 1.2.1
	Sheet Path: /Project Architecture/Peripherals/		Reviewer:	Size: A3 Sheet: 5 of 7

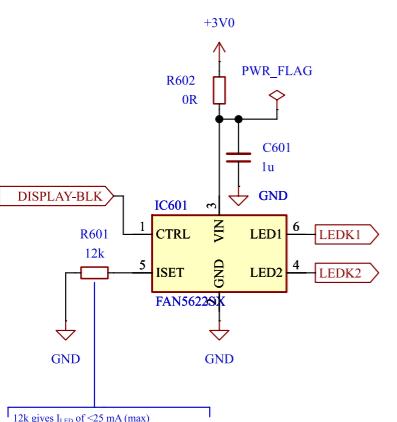
Microcontroller (NORA-B106/nRF5340)



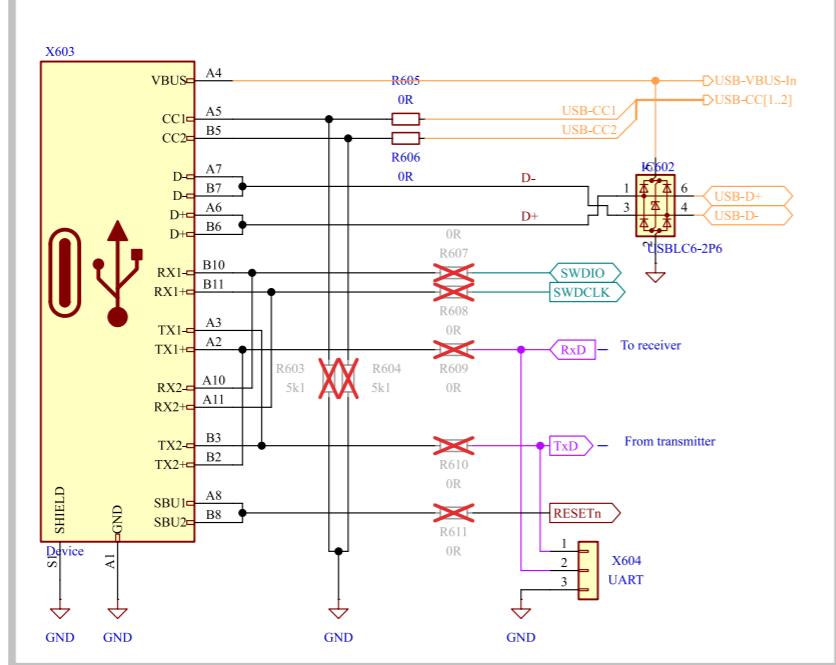
Display



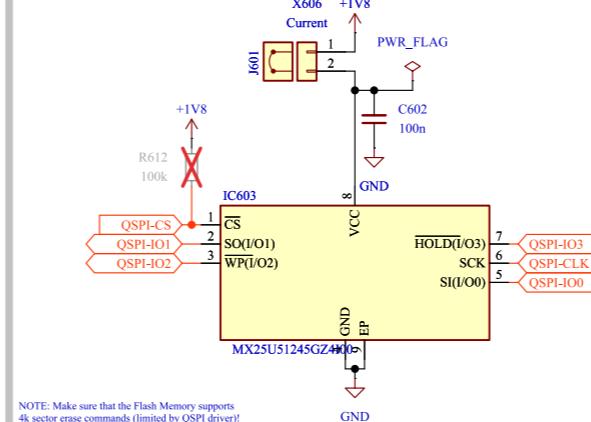
Display backlight



USB

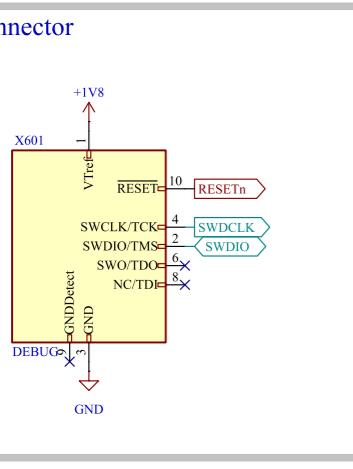


External Flash



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

Debug connector



Comments:	Company:	Variant:	Git Hash:
ZSWatch	RELEASED	RELEAS	dbc49fa
Board Name:	Project Name:		
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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