

# Watch-DevKit-HW

Variant: PRELIMINARY

2025-12-31

Rev 1.2.2+ (Unreleased)

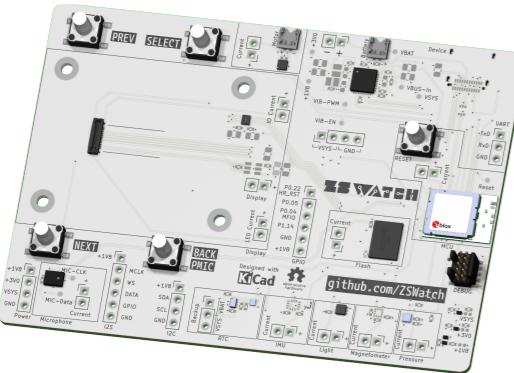
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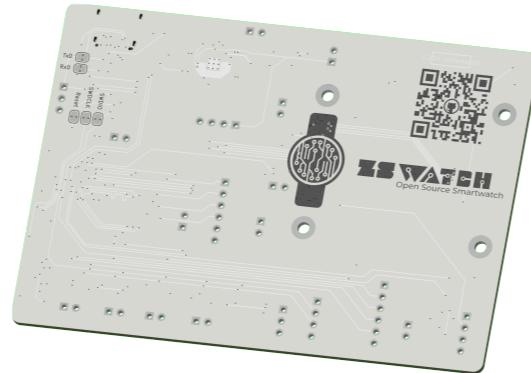
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## TOP VIEW



## 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.

Date: 31-Dec-2025

## DESIGN CONSIDERATIONS

DESIGN NOTE:  
Example text for informational design notes.

DESIGN NOTE:  
Example text for debug notes.

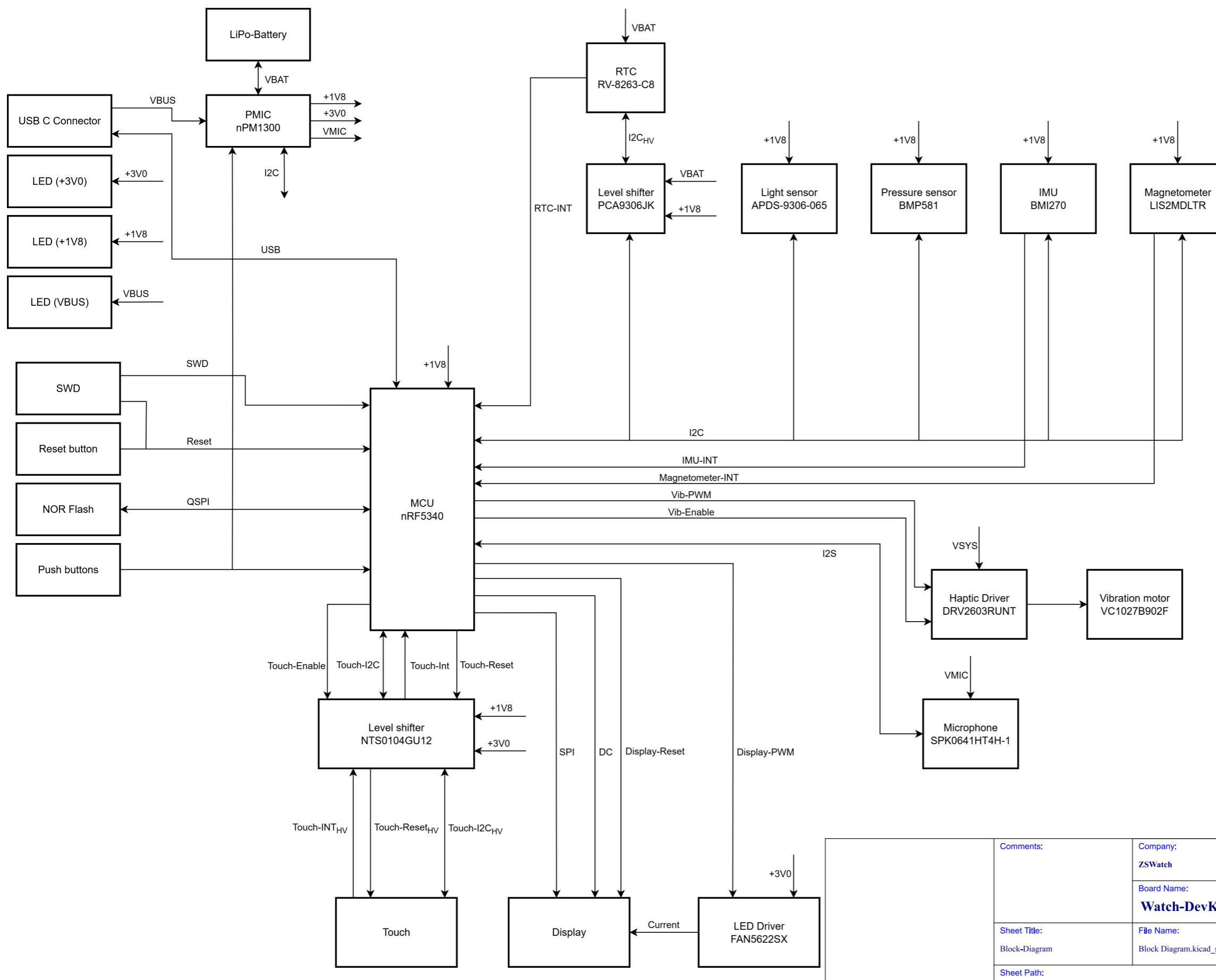
DESIGN NOTE:  
Example text for cautionary design notes.

DESIGN NOTE:  
Example text for critical design notes.

LAYOUT NOTE:  
Example text for critical layout guidelines.

Comments:	Company: <b>ZSWatch</b>	Variant: <b>PRELIMINARY</b>	Git Hash: <b>dbc49fa</b>
Board Name: <b>Watch-DevKit-HW</b>	Project Name: <b>ZSWatch Watch-DevKit</b>		
Sheet Title: <b>ZSWatch-Watch-DevKit</b>	File Name: <b>ZSWatch-Watch-DevKit.kicad_sch</b>	Designer: <b>Daniel Kampert</b>	Date: <b>2025-07-13</b>
Sheet Path: <b>/</b>	Reviewer:	Size: <b>A3</b>	Revision: <b>1.2.2+ (Unreleased)</b>

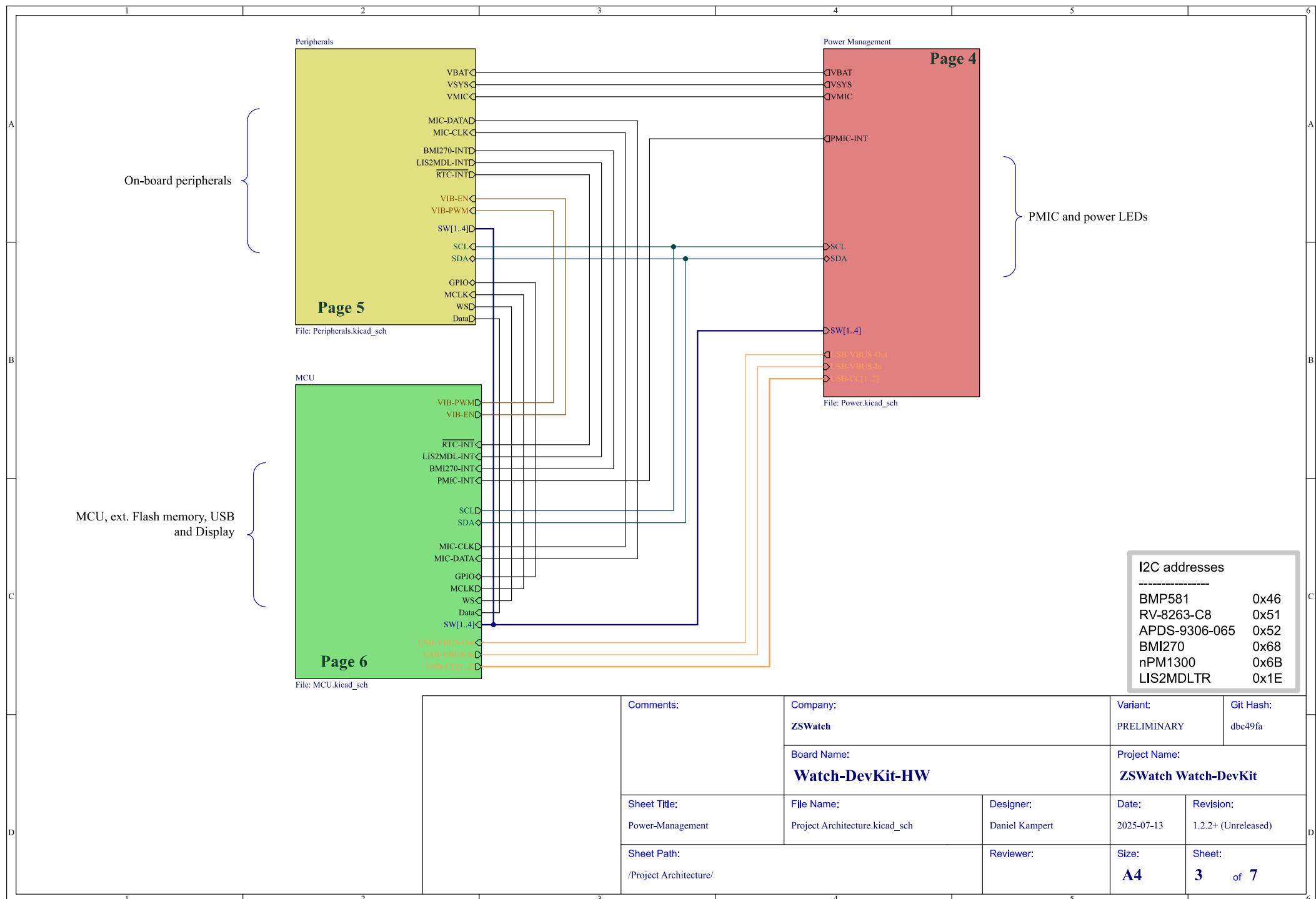
## [2] Block-Diagram

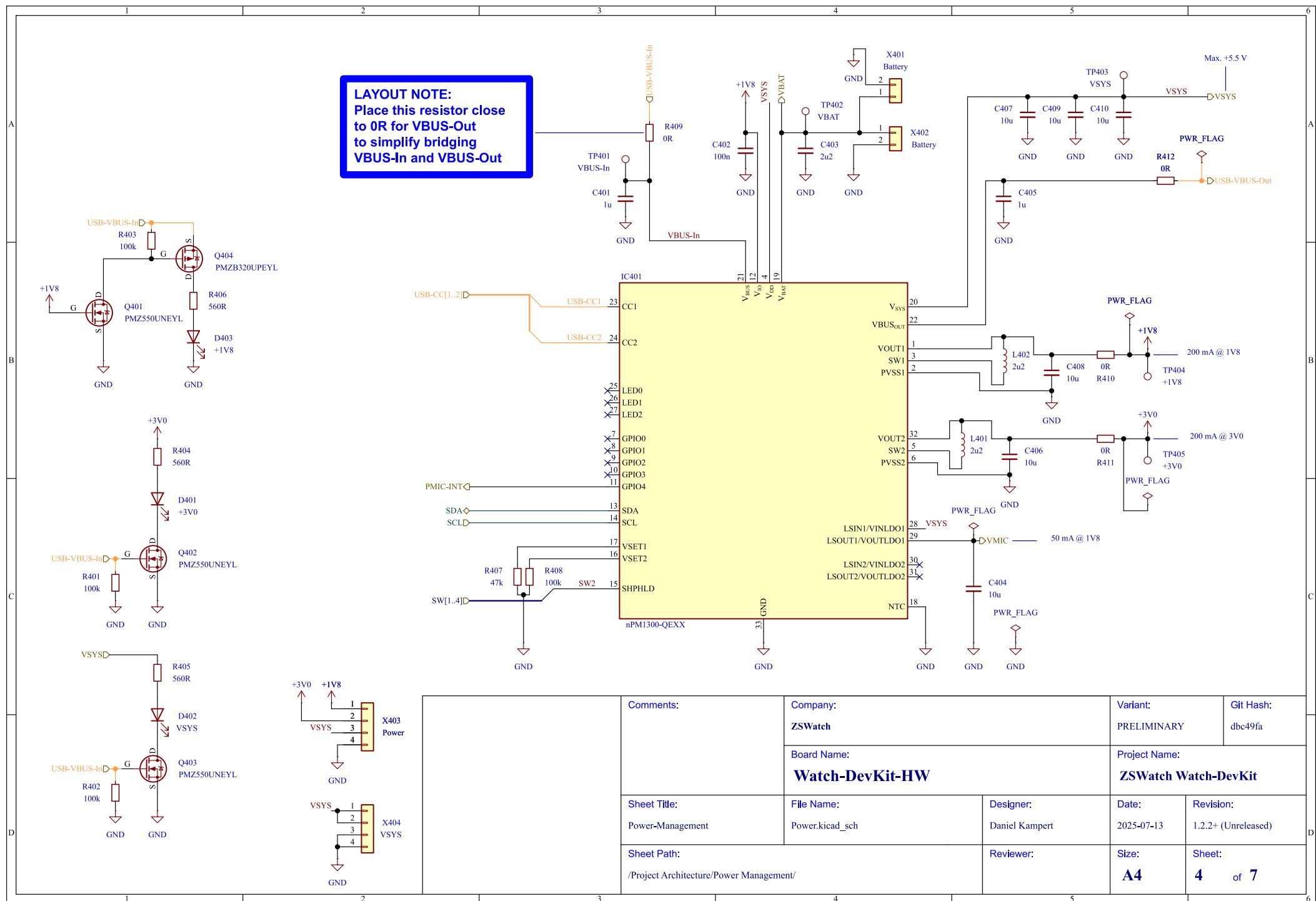


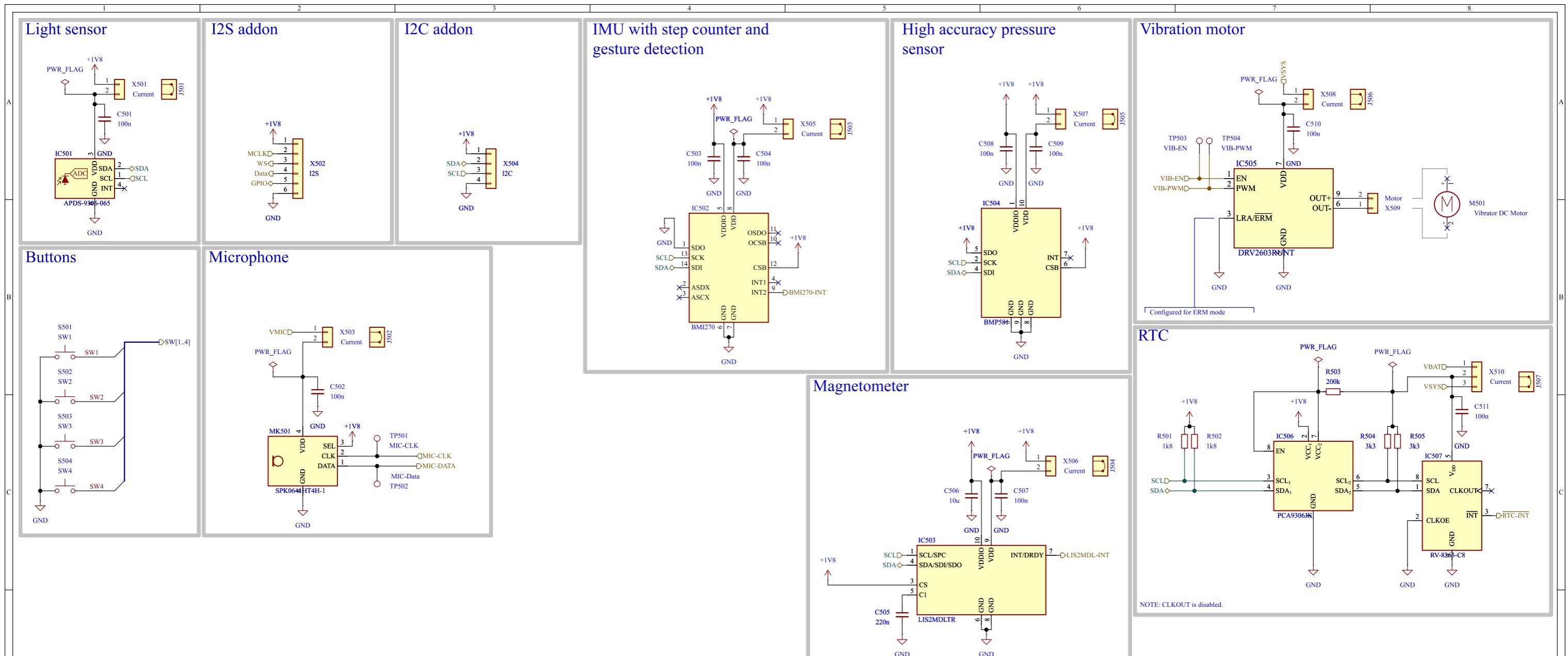
### Target specifications:

<b>Input voltage:</b>	5 V ± 5%
<b>Battery voltage</b>	3.2 V to 4.2 V
<b>Spec 3</b>	??
<b>Spec 4</b>	??

Comments:	Company: ZSWatch	Variant: PRELIMINARY	Git Hash: dbc49fa
Board Name: <b>Watch-DevKit-HW</b>	Project Name: <b>ZSWatch Watch-DevKit</b>		
Sheet Title: Block-Diagram	File Name: Block Diagram.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13
Sheet Path: /Block Diagram/	Reviewer:	Size: <b>A3</b>	Revision: 1.2.2+ (Unreleased)

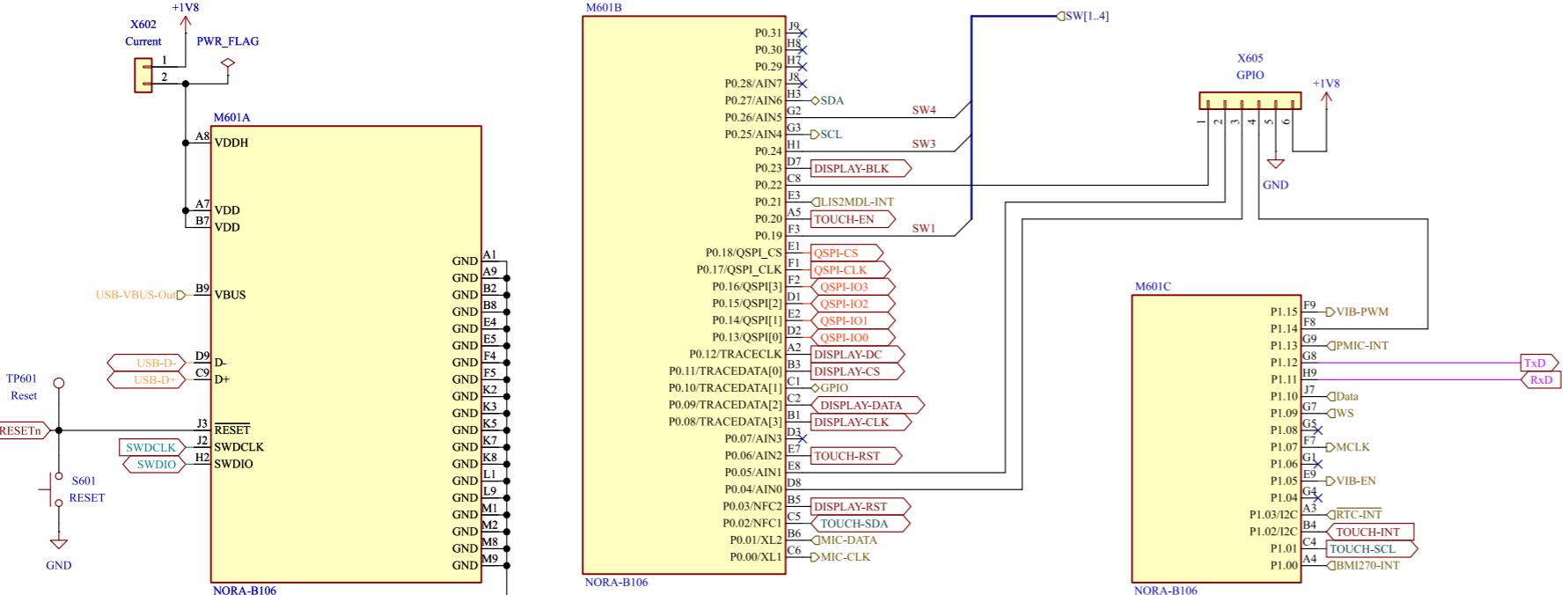




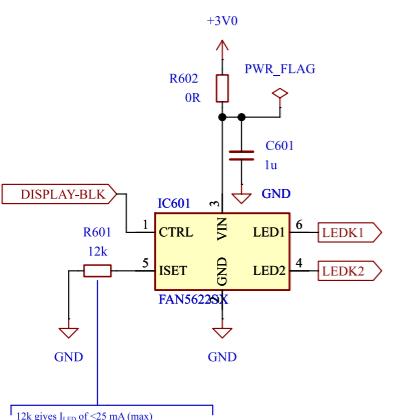


	Comments: <b>ZSWatch</b>	Company: <b>ZSWatch</b>	Variant: <b>PRELIMINARY</b>	Git Hash: <b>dbc49fa</b>
	Board Name: <b>Watch-DevKit-HW</b>	Project Name: <b>ZSWatch Watch-DevKit</b>		
	Sheet Title: Peripherals	File Name: Peripherals.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13
	Sheet Path: /Project Architecture/Peripherals/		Reviewer:	Revision: 1.2.2+ (Unreleased)

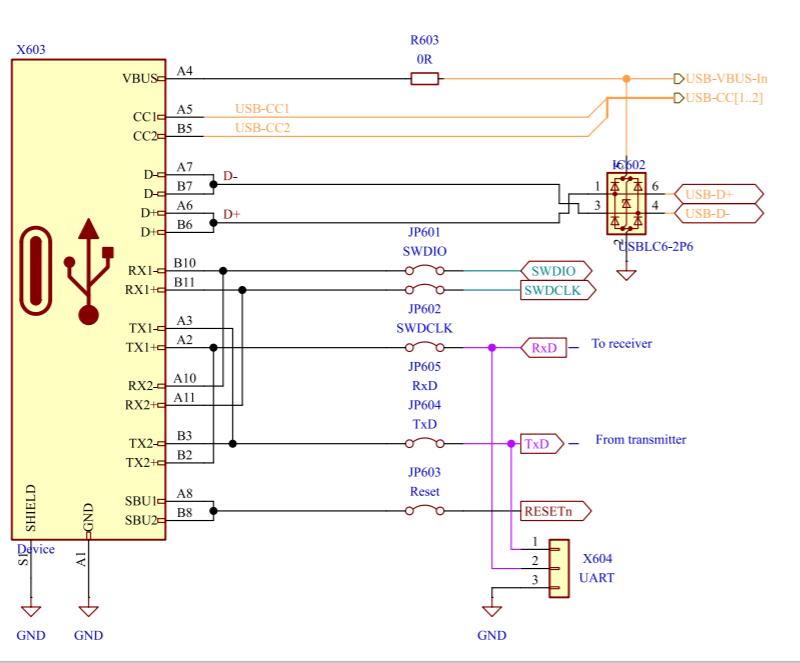
## Microcontroller (NORA-B106/nRF5340)



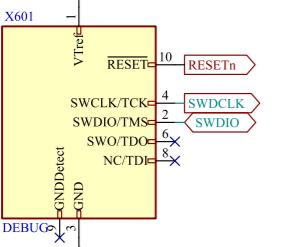
## Display backlight



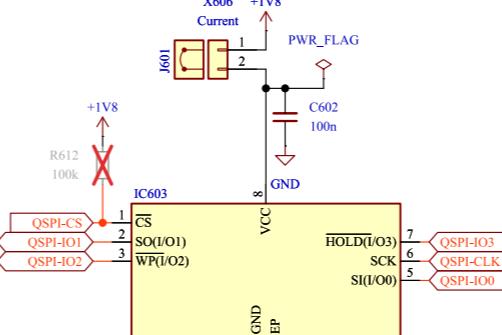
## USB



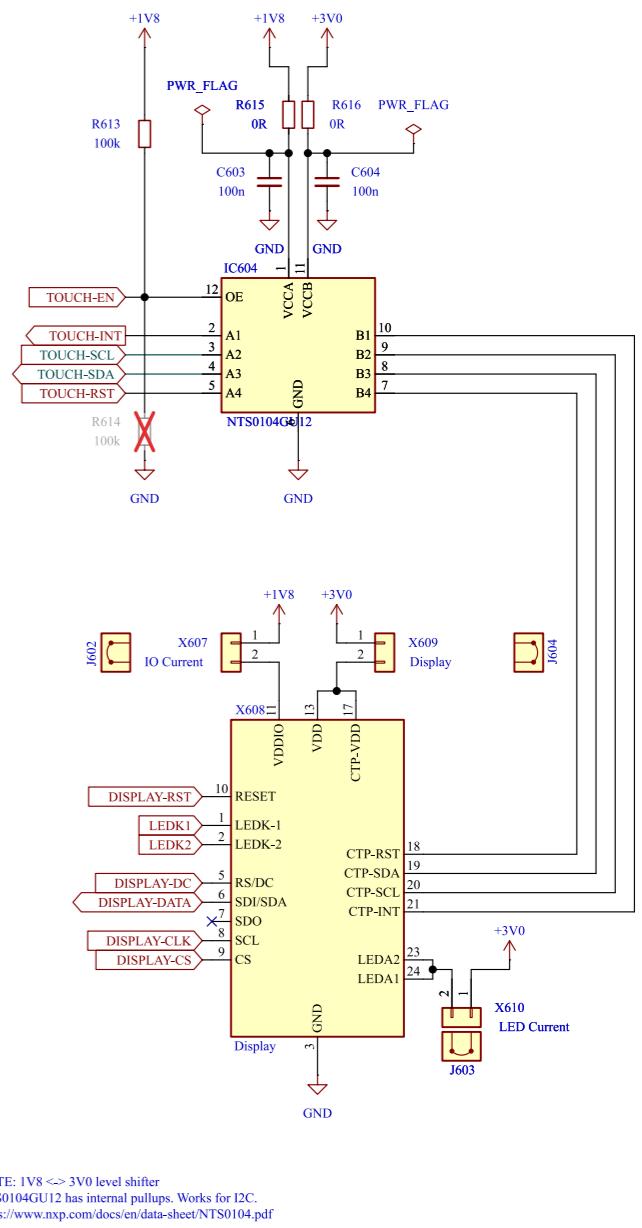
## Debug connector



## External Flash



## Display



Comments:	Company:	Variant:	Git Hash:
ZSWatch	ZSWatch	PRELIMINARY	dbc49fa
Board Name:	Project Name:		
<b>Watch-DevKit-HW</b>	<b>ZSWatch Watch-DevKit</b>		
Sheet Title:	File Name:	Designer:	Date:
MCU	MCU.kicad_sch	Daniel Kampert	2025-07-13
Sheet Path:	Reviewer:		
/Project Architecture/MCU/			
Size:	Sheet:		
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# [7] Revision-History

A	<b>Version 1.2.0 - 2025-09-07</b>	<b>Version 1.2.1 - 2025-09-26</b>	<b> \${RELEASE_TITLE_...}</b> \${RELEASE_BODY_...}	<b> \${RELEASE_TITLE_...}</b> \${RELEASE_BODY_...}
B	<p>Fixed</p> <ul style="list-style-type: none"> <li>- Fix wrong orientation for SWD header (#117)</li> </ul> <hr/> <p>Added</p> <ul style="list-style-type: none"> <li>- Add pull-up resistor for display enable signal. Can be disabled via GPIO. (#123)</li> <li>- Add new KiBot template (#116)</li> <li>- Add orientation marker for IMU (#124)</li> <li>- Add power LEDs (#128)</li> <li>- Add reset button (#131)</li> <li>- Add testpoints for microphone I2S (#145)</li> </ul> <hr/> <p>Changed</p> <ul style="list-style-type: none"> <li>- Shrink down the PCB to save costs (#115)</li> <li>- Replace pin headers with THT to make them more robust (#121)</li> <li>- Rename "Power" jumpers to "Current" (#129)</li> <li>- Replace level shifter for RTC with PCA9306GF (#133)</li> <li>- Switch back to old LED driver (#134)</li> <li>- Power microphone from PMIC (#145)</li> </ul> <hr/> <p>Removed</p> <ul style="list-style-type: none"> <li>- Remove APDS-9306 interrupt (#122)</li> </ul>	<p>Added</p> <ul style="list-style-type: none"> <li>- Add missing pull-ups for I2C lines (#158)</li> </ul> <hr/> <p>Fixed</p> <ul style="list-style-type: none"> <li>- Fix wrong ship mode button (#155)</li> </ul> <hr/> <p>Changed</p> <ul style="list-style-type: none"> <li>- Change part number for SWD connector to 62201021121 (#157)</li> <li>- Set pull-up for Flash CS to NA (#158)</li> <li>- Center the mounting holes for the display (#159)</li> </ul>		
C				
D		<p>Comments:</p> <p>Sheet Title: Revision-History</p> <p>Sheet Path: /Revision History/</p>	<p>Company: <b>ZSWatch</b></p> <p>Board Name: <b>Watch-DevKit-HW</b></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+ (Unreleased)</p> <p>Reviewer:</p>	<p>Variant: PRELIMINARY</p> <p>Git Hash: dbc49fa</p> <p>Project Name: <b>ZSWatch Watch-DevKit</b></p> <p>Size: A4</p> <p>Sheet: 7 of 7</p>