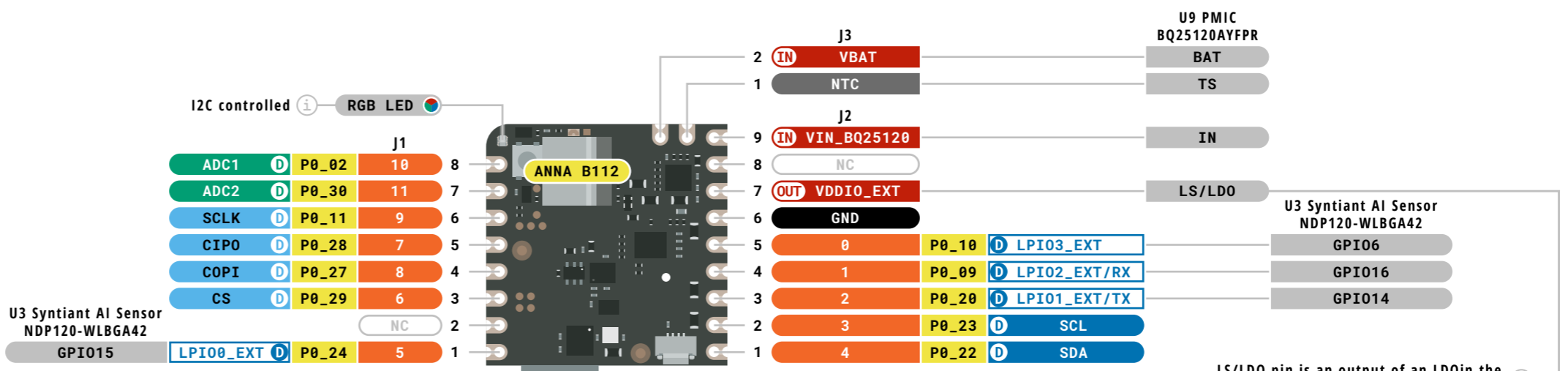
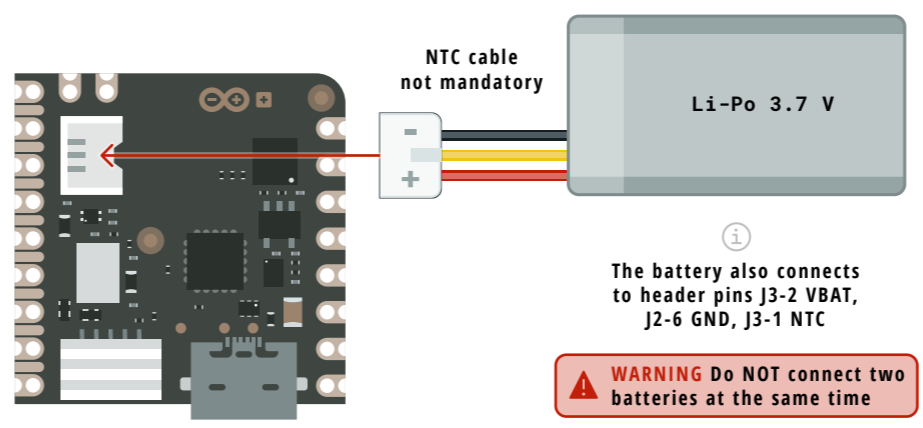


*i* The battery also connects with the Battery Connector J4 on the bottom of the board

**WARNING** Do NOT connect two batteries at the same time



TOP VIEW



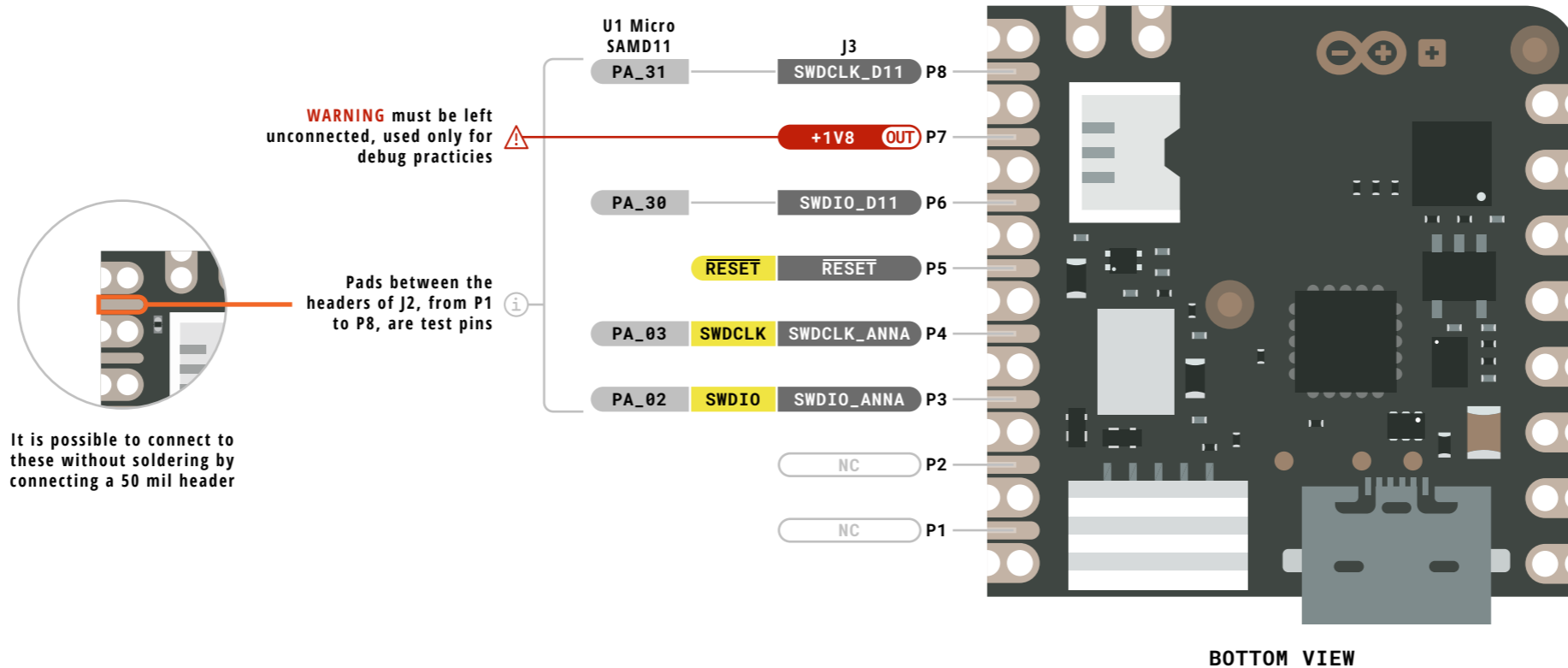
BOTTOM VIEW

*i* LS/LDO pin is an output of an LDO in the PMIC, it is enabled by default at 3.3V

*i* If LS/LDO pin is enabled, it is possible to configure the Nicla to work at 3.3V or 1.8V; depending on the configuration the maximum input voltage can be 3.3V or 1.8V

*i* Disabling the LS/LDO pin output of the PMIC it is possible to power the level translators with the VDDIO\_EXT pin at a different voltage rather than 3.3V

<b>Legend:</b> <span style="color:red">■</span> Power <span style="color:red">■</span> IN Power Input <span style="color:red">■</span> OUT Power Output <span style="background-color:black">■</span> Ground		<span style="color:orange">■</span> GPIO Digital External <span style="color:yellow">■</span> Analog External <span style="color:lightblue">■</span> Main Part <span style="color:darkblue">■</span> Secondary Part <span style="color:grey">■</span> Internal Component <span style="color:grey">■</span> Other Pins (Reset, System Control, Debugging)		<span style="color:blue">■</span> I2C <span style="color:blue">■</span> SPI <span style="color:purple">■</span> UART/USART <span style="border: 1px solid blue; padding: 2px;">  </span> Other SERIAL Communication <span style="color:green">■</span> Analog <span style="border: 1px solid green; padding: 2px;">  </span> PWM/Timer		<span style="color:red">■</span> LED <span style="color:red">■</span> RGB LED <span style="border: 1px solid black; padding: 2px;">  </span> Other		<p><b>MAXIMUM</b> LPI0s are driven by bidirectional translators powered by VDDIO_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details. VDDIO_EXT is software programmable between 1.8 and 3.3V</p> <p><i>i</i> CIPO/COPI have previously been referred to as MISO/MOSI</p>	<p><b>NICLA VOICE</b> <b>ARDUINO</b></p> <p>SKU code: ABX00061 Full Pinout - Page 1 of 7 Last update: 27 Feb, 2024</p> <p><b>DOCS.ARDUINO.CC</b></p> <p>This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <a href="http://creativecommons.org/licenses/by-sa/4.0/">http://creativecommons.org/licenses/by-sa/4.0/</a> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.</p>
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BOTTOM VIEW

Legend:

- Power
- IN Power Input
- OUT Power Output
- Ground
- GPIO Digital External
- Analog External
- Main Part
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)
- LED LED
- RGB LED RGB LED
- Other

**⚠** **MAXIMUM** LPIOs are driven by bidirectional translators powered by VDDIO\_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details.  
 VDDIO\_EXT is software programmable between 1.8 and 3.3V


**i** CIP0/COPI have previously been referred to as MISO/MOSI



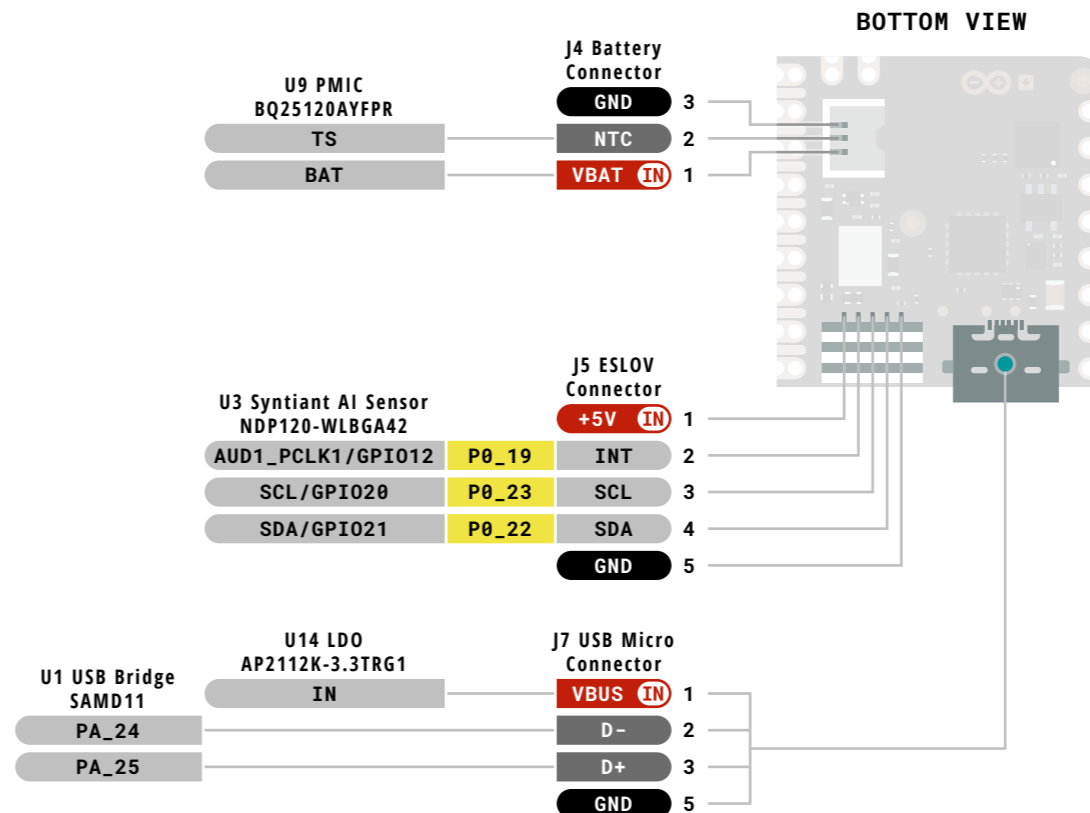
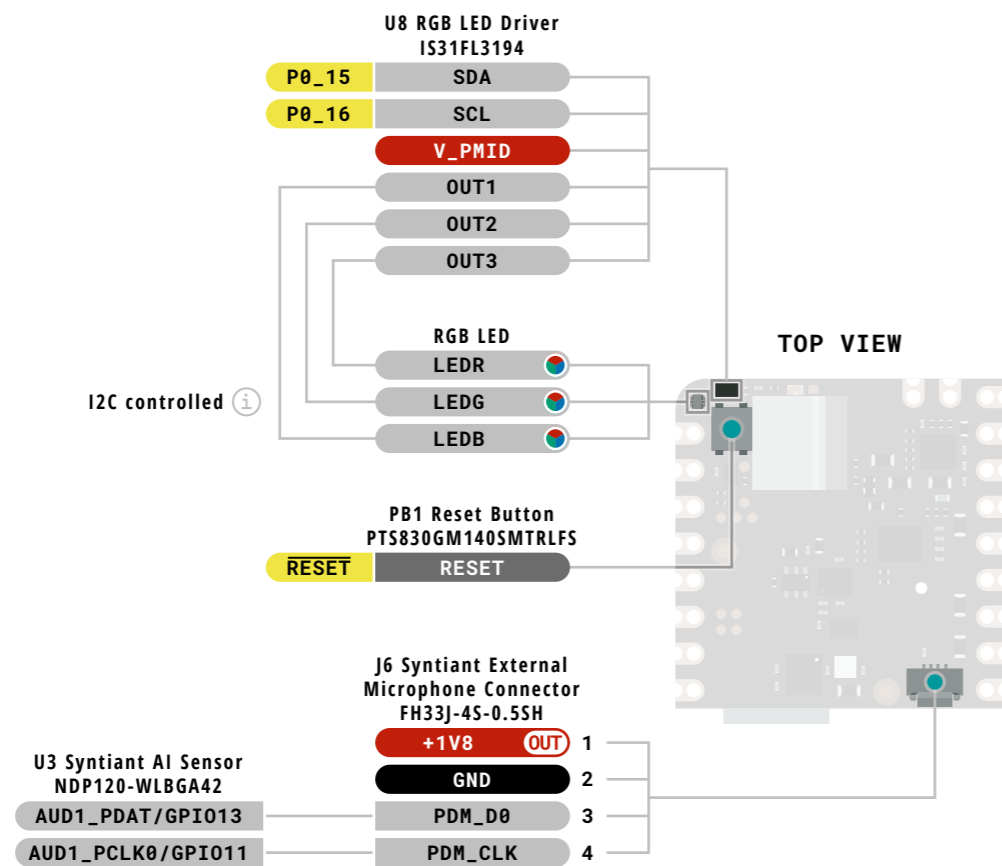
**NICLA VOICE**  
**ARDUINO**

SKU code: ABX00061  
 Full Pinout - Page 2 of 7  
 Last update: 27 Feb, 2024

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**Legend:**

- Power
- Ground
- IN Power Input
- OUT Power Output
- GPIO Digital External
- Analog External
- Main Part
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)
- LED
- RGB LED
- Other

**!** **MAXIMUM** LPIOs are driven by bidirectional translators powered by VDDIO\_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details.  
 VDDIO\_EXT is software programmable between 1.8 and 3.3V

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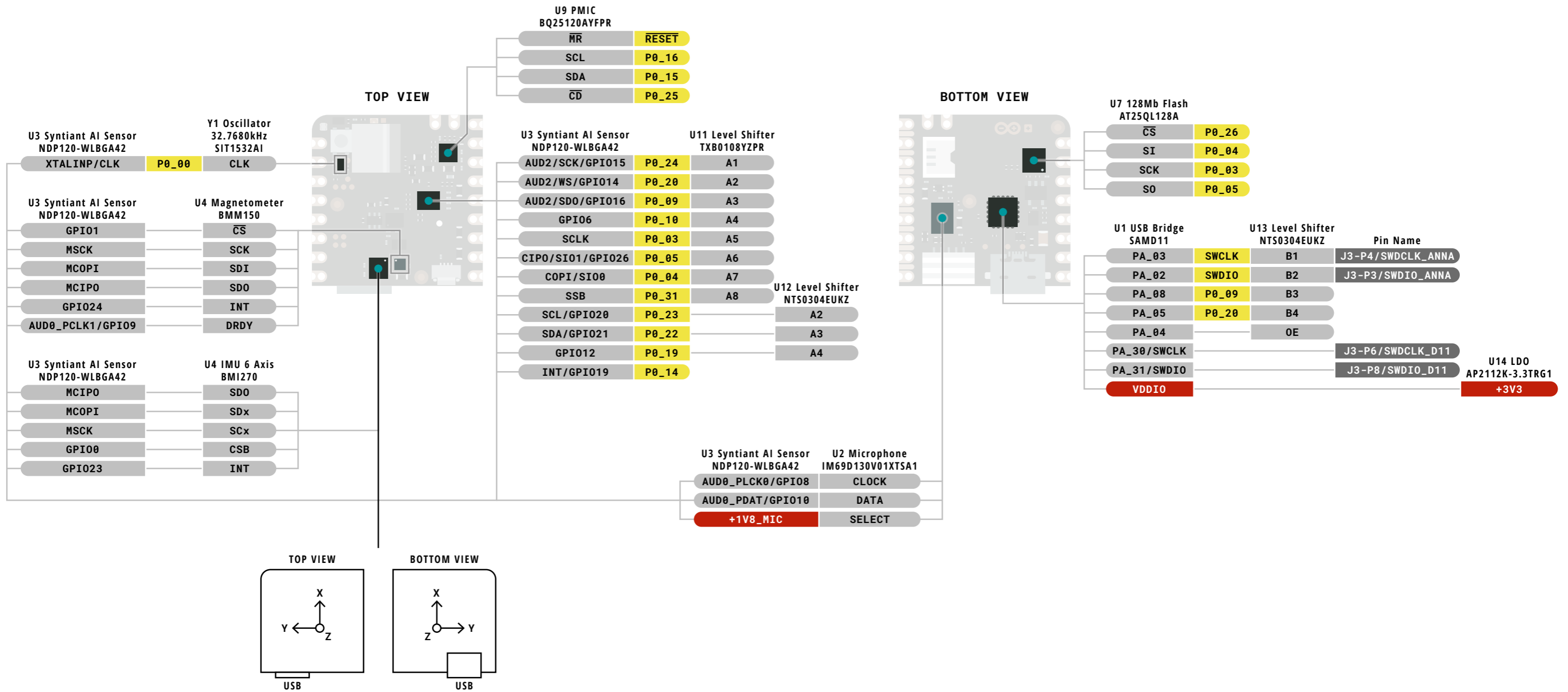
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WARNING!

## Advanced Section

The following information is for advanced use only and may not be officially supported by Arduino software





**Legend:**

- Power
- IN Power Input
- OUT Power Output
- Ground
- GPIO Digital External
- Analog External
- Main Part
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)
- LED
- RGB LED
- Other

**⚠ MAXIMUM** LPIOs are driven by bidirectional translators powered by VDDIO\_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details.  
 VDDIO\_EXT is software programmable between 1.8 and 3.3V

**i** CIP0/COPI have previously been referred to as MISO/MOSI

**NICLA VOICE**

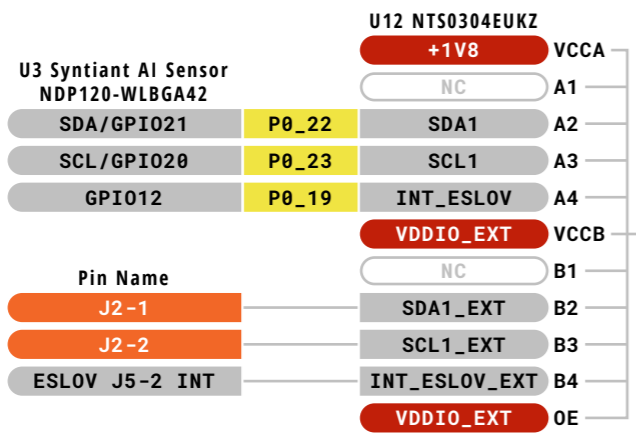
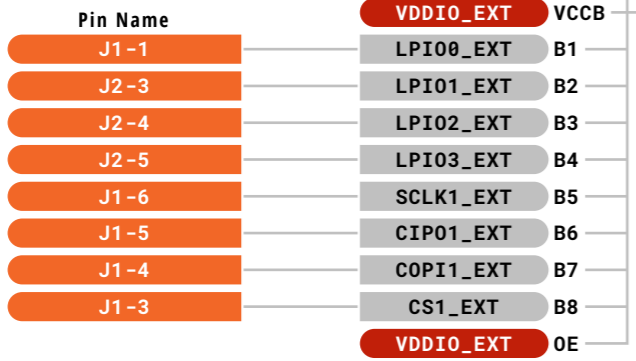
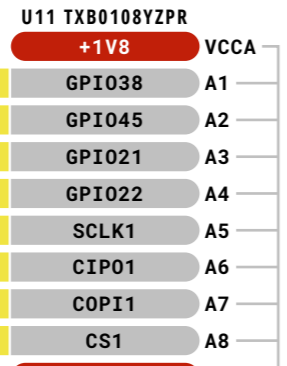
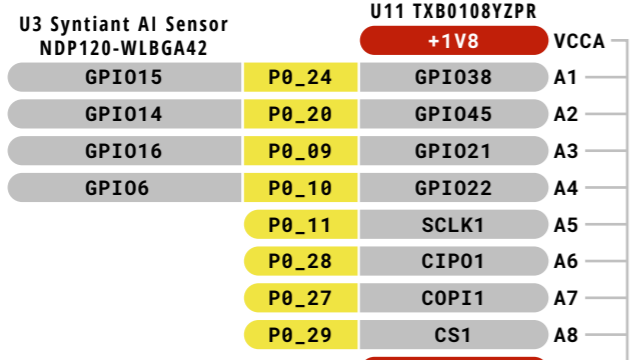
**ARDUINO**

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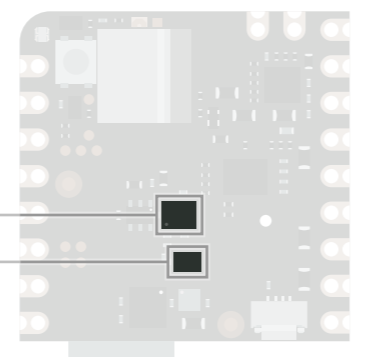
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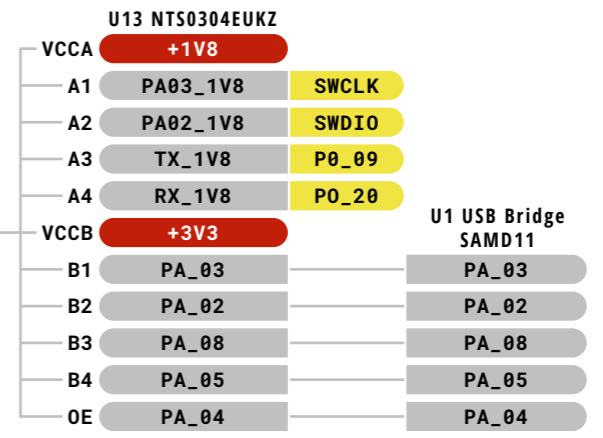
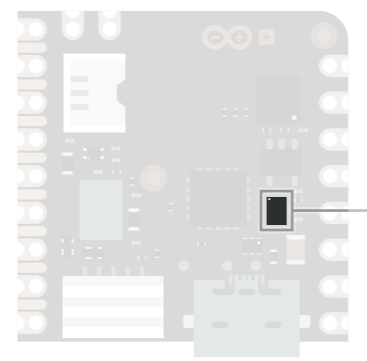
LEVEL SHIFTERS



TOP VIEW



BOTTOM VIEW



Legend:

- Power
- GPIO Digital External
- LED
- Power Input
- IN Power Input
- Analog External
- RGB LED
- Power Output
- OUT Power Output
- Main Part
- Other
- Ground
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)

**⚠ MAXIMUM** LPIOs are driven by bidirectional translators powered by VDDIO\_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details. VDDIO\_EXT is software programmable between 1.8 and 3.3V

**i** CIP0/COPI have previously been referred to as MISO/MOSI

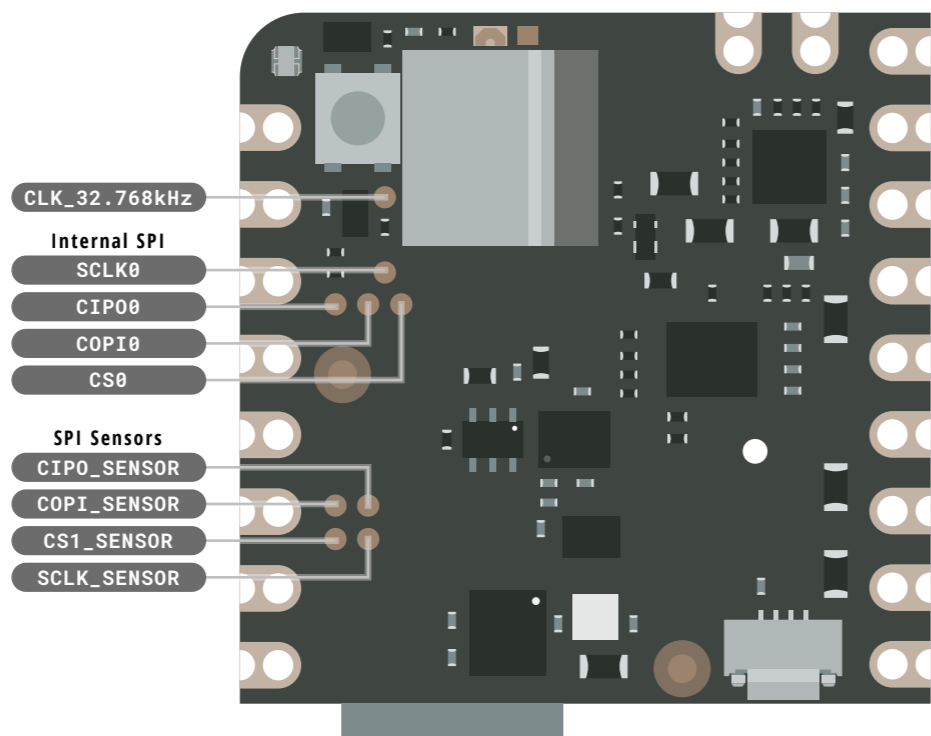


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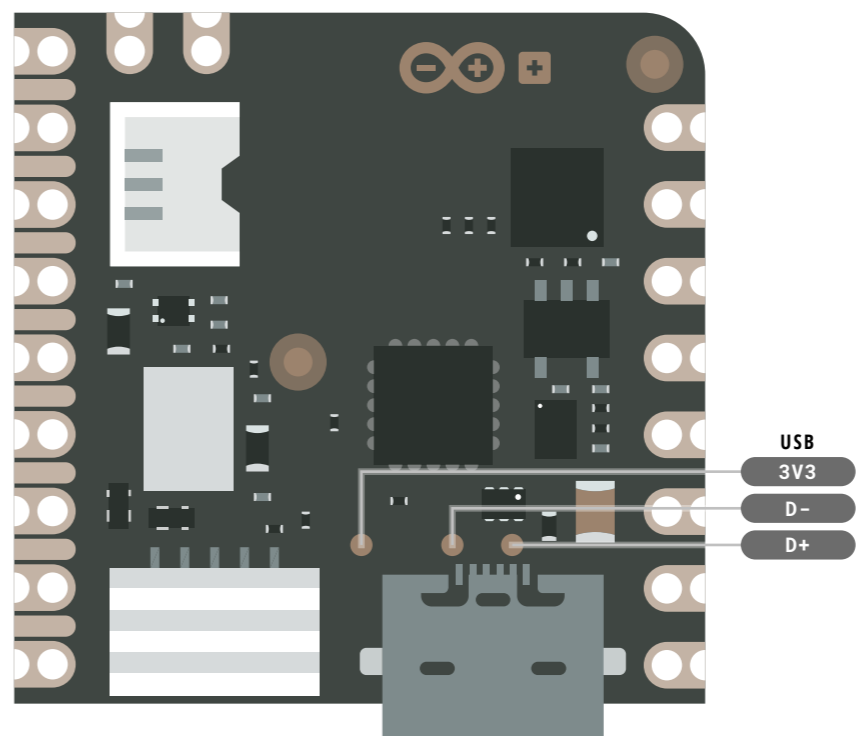
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# Test Points



TOP VIEW



BOTTOM VIEW

<b>Legend:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"> <p><span style="color: red;">■</span> Power</p> <p><span style="border: 1px solid red; padding: 0 2px;">IN</span> Power Input</p> <p><span style="border: 1px solid red; padding: 0 2px;">OUT</span> Power Output</p> <p><span style="background-color: black; color: white;">■</span> Ground</p> </div> <div style="width: 20%;"> <p><span style="background-color: orange;">■</span> GPIO Digital External</p> <p><span style="border: 1px solid orange;">□</span> Analog External</p> <p><span style="background-color: yellow;">■</span> Main Part</p> <p><span style="background-color: gold;">■</span> Secondary Part</p> <p><span style="background-color: gray;">■</span> Internal Component</p> <p><span style="background-color: darkgray;">■</span> Other Pins (Reset, System Control, Debugging)</p> </div> <div style="width: 20%;"> <p><span style="border: 1px solid red; border-radius: 50%; padding: 0 2px;">A</span> LED</p> <p><span style="border: 1px solid blue; border-radius: 50%; padding: 0 2px;">RGB</span> RGB LED</p> <p><span style="border: 1px solid gray; padding: 0 2px;">□</span> Other</p> </div> <div style="width: 20%;"></div> </div>				<p><b>⚠</b> <b>MAXIMUM</b> LPIOs are driven by bidirectional translators powered by VDDIO_EXT. These translators are meant for low power and can only drive very limited current. Please check translator datasheet for details. VDDIO_EXT is software programmable between 1.8 and 3.3V</p> <p><b>i</b> CIP0/COPI have previously been referred to as MISO/MOSI</p>	<p><b>∞+</b> <b>NICLA VOICE</b> <b>ARDUINO</b></p> <p>SKU code: ABX00061 Full Pinout - Page 7 of 7 Last update: 27 Feb, 2024</p> <p><b>DOCS . ARDUINO . CC</b></p> <p>This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <a href="http://creativecommons.org/licenses/by-sa/4.0/">http://creativecommons.org/licenses/by-sa/4.0/</a> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.</p>
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