

Vayu

A Smart Heat Recovery Ventilation System

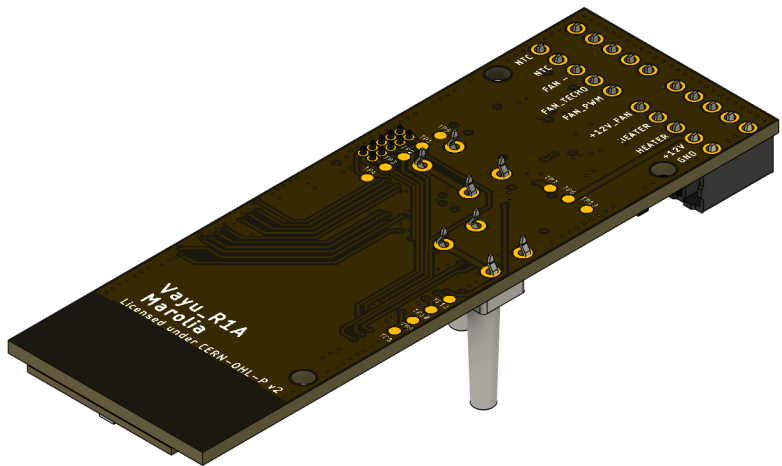
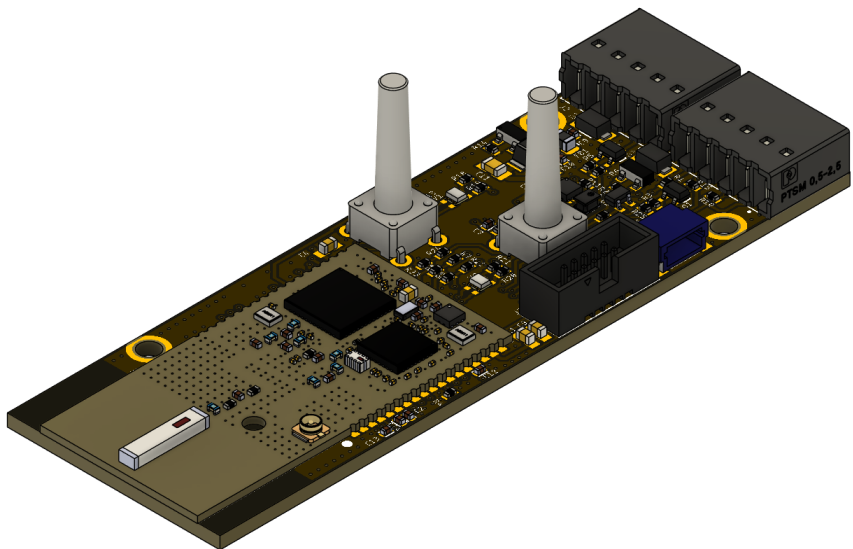
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Functional

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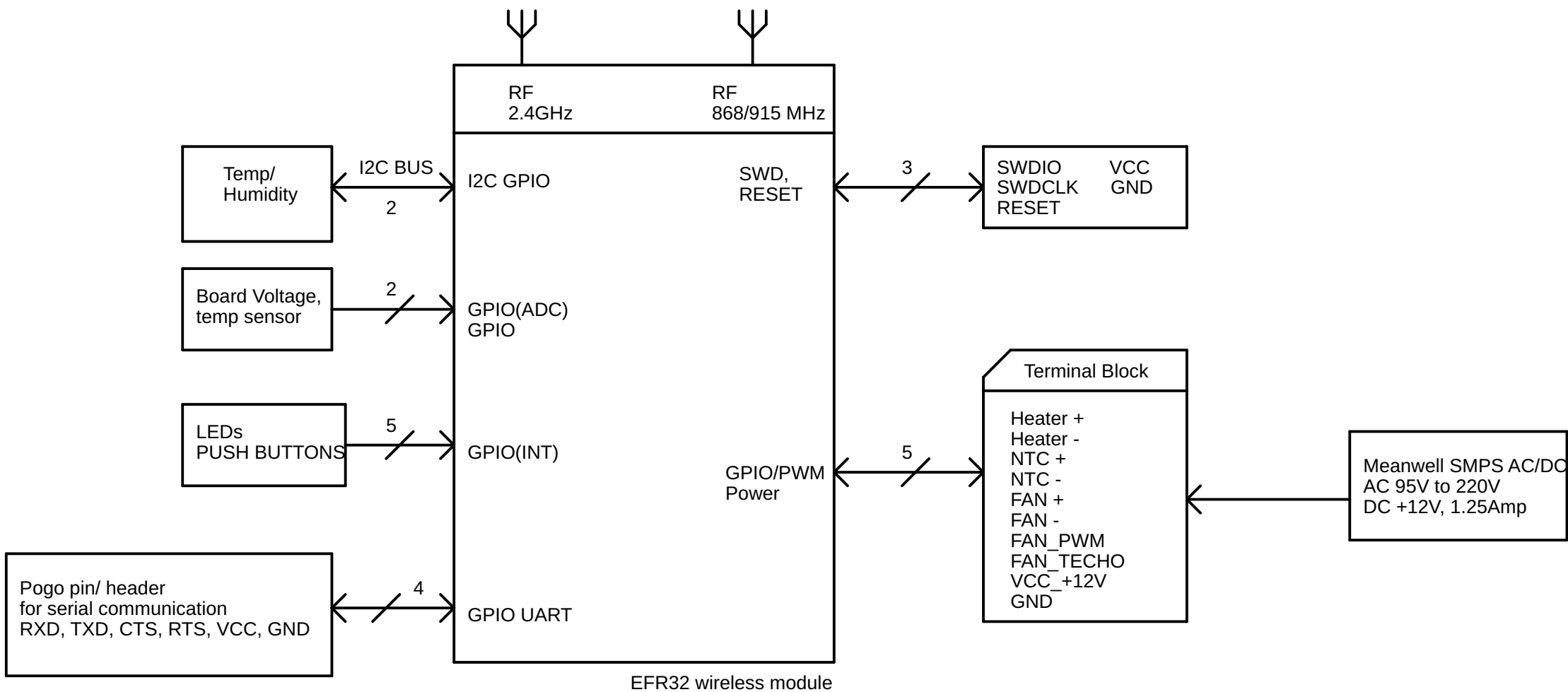
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REVISIONS				
ECO NO:	REV	DESCRIPTION	DATE	APPR.
	A	Smart Heat recovery ventilation system	01-Oct-2024	

Title: Smart Heat Recovery Ventilation System				
Engineer:Varun M.	Doc No: Vayu_sch	Rev: A	Date/Time3/14/2025 1:18 AM	
ApprovedVarun M.	Project: Vayu	Size: A3	Sheet: 1/6	

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A	<h1>Schematic guidelines, notes and requirements</h1>																															
	<h2>Component guidelines</h2> <p>0 ohm resistors are 0402, 1A, unless otherwise noted. Capacitors are 0402, 10%, 50V unless otherwise noted. 0.047uF capacitors are 0402, 10%, 25V unless otherwise noted. 0.1uF, 0.22uF, 0.47uF and 1uF capacitors are 0402, 10%, 16V unless otherwise noted. 4.7uF, 10uF, and 22uF bulk capacitors are 0603, 6.3V/10V unless otherwise noted. Test point diameter is 1.2mm unless otherwise noted.</p>																															
B	<h2>Schematic guidelines</h2> <h3>General</h3> <p>IC pins that are internally pulled up or pulled down are indicated with the text PU or PD. All power nets normally starts with capital VDD* or VCC*. These nets should have planes by default.</p>																															
	<h2>Graphic symbol description</h2> <div><div></div><div>Digital ground</div><div></div><div>Voltage connection</div><div></div><div>Test point (default size)</div></div>																															
	<h2>Rules</h2> <p>Test points must be placed on the Secondary (bottom) side with a minimum 2.54mm spacing unless otherwise noted.</p> <p>Surface mount components on secondary side if any must be at least 4mm from thru hole pins. Not applicable for test pins and debug headers (manually assembled when needed).</p> <p>Keep ground plane(s) away from the radio section of the wireless module.</p> <p>The 868/915 MHz radio on the wireless module uses external antenna that must be encapsulated inside the product case while avoiding proximity to any ground planes.</p>																															
E	<p>Copyright CERN 2020.</p> <p>This source describes Open Hardware and is licensed under the CERN-OHL-P v2 You may redistribute and modify this documentation and make products using it under the terms of the CERN-OHL-P v2 (https://cern.ch/cern-ohl). This documentation is distributed WITHOUT ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING OF MERCHANTABILITY, SATISFACTORY QUALITY AND FITNESS FOR A PARTICULAR PURPOSE. Please see the CERN-OHL-P v2 for applicable conditions</p> <table><tr><td colspan="8">Title: Schematic guidelines, notes and requirements</td></tr><tr><td>Engineer:Varun M.</td><td>Doc No: Vayu_sch</td><td>Rev: A</td><td colspan="5">Date/Time3/14/2025 1:18 AM</td></tr><tr><td>Approved: Varun M.</td><td>Project: Vayu</td><td>Size: A3</td><td>Sheet: 2/6</td><td colspan="4"></td></tr></table>								Title: Schematic guidelines, notes and requirements								Engineer:Varun M.	Doc No: Vayu_sch	Rev: A	Date/Time3/14/2025 1:18 AM					Approved: Varun M.	Project: Vayu	Size: A3	Sheet: 2/6				
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Block Diagram

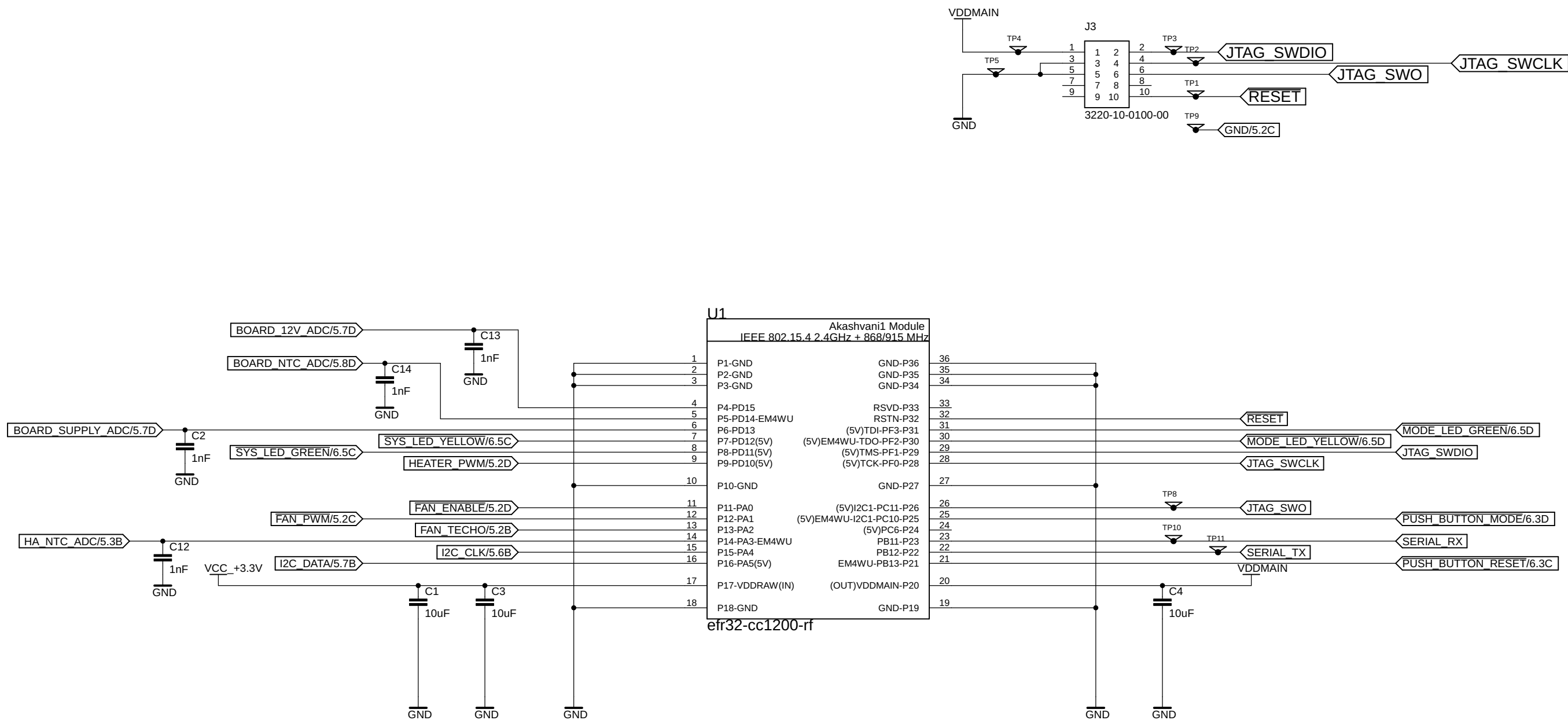


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Wireless Module

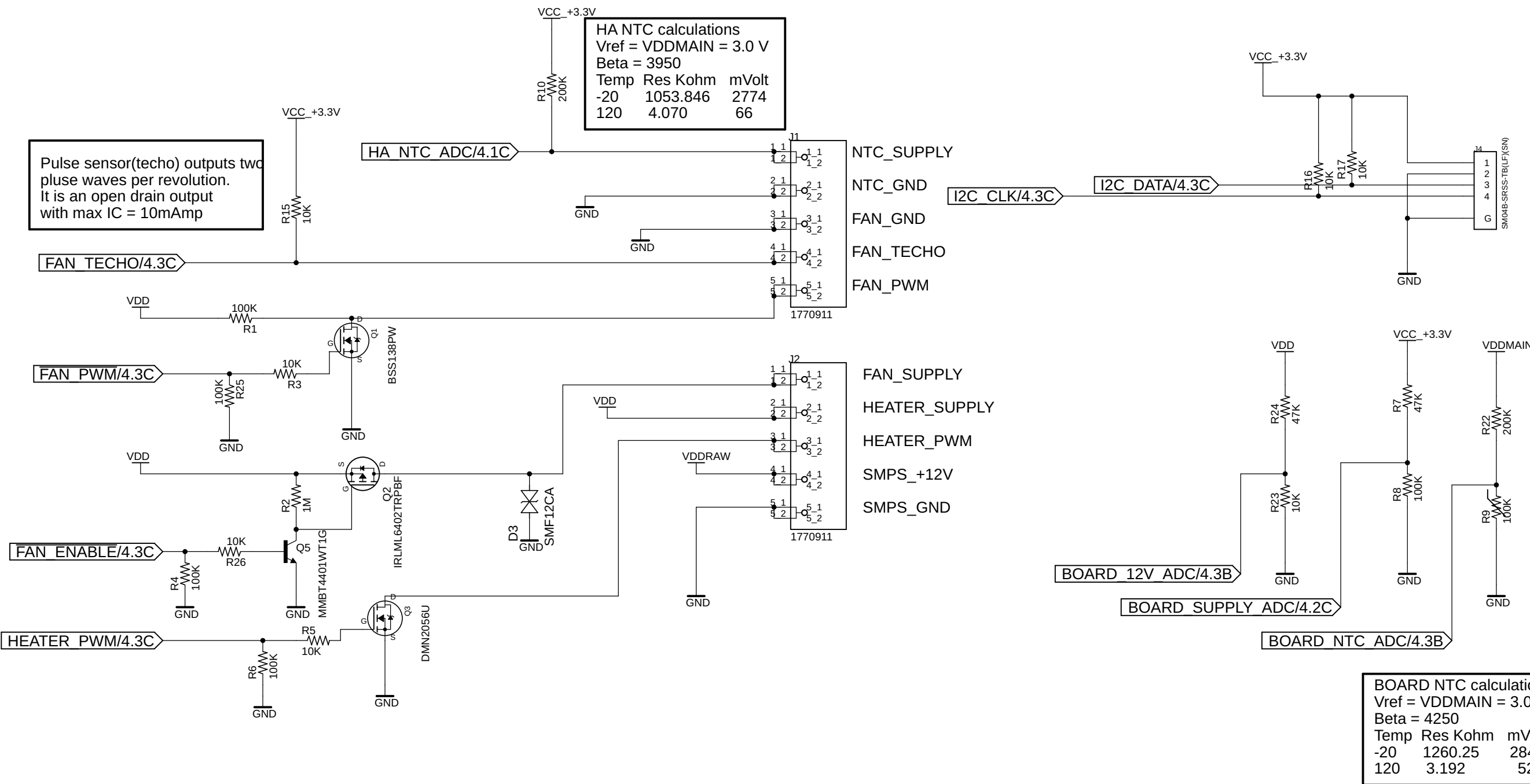


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Sensors, Heater and Fan

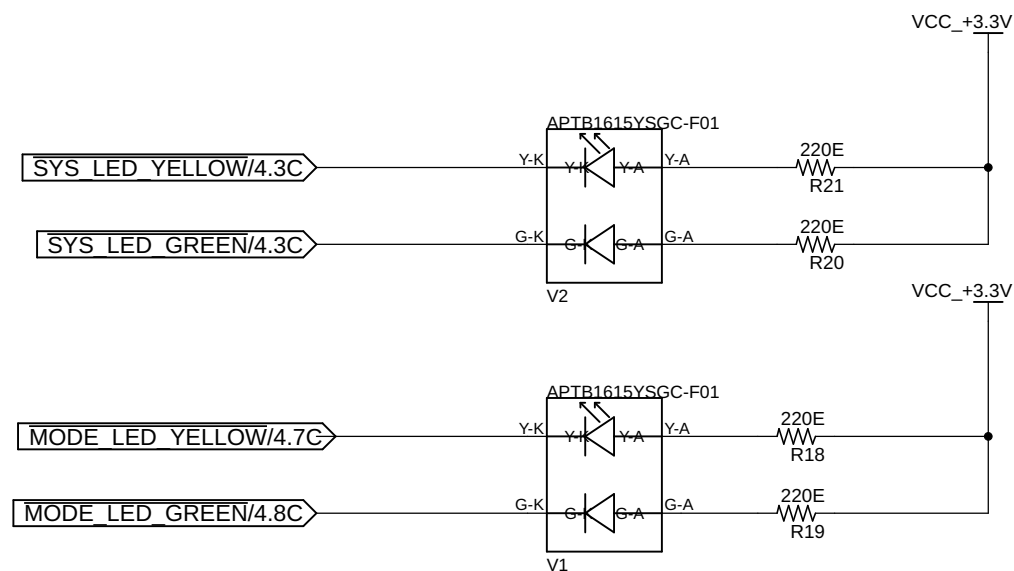
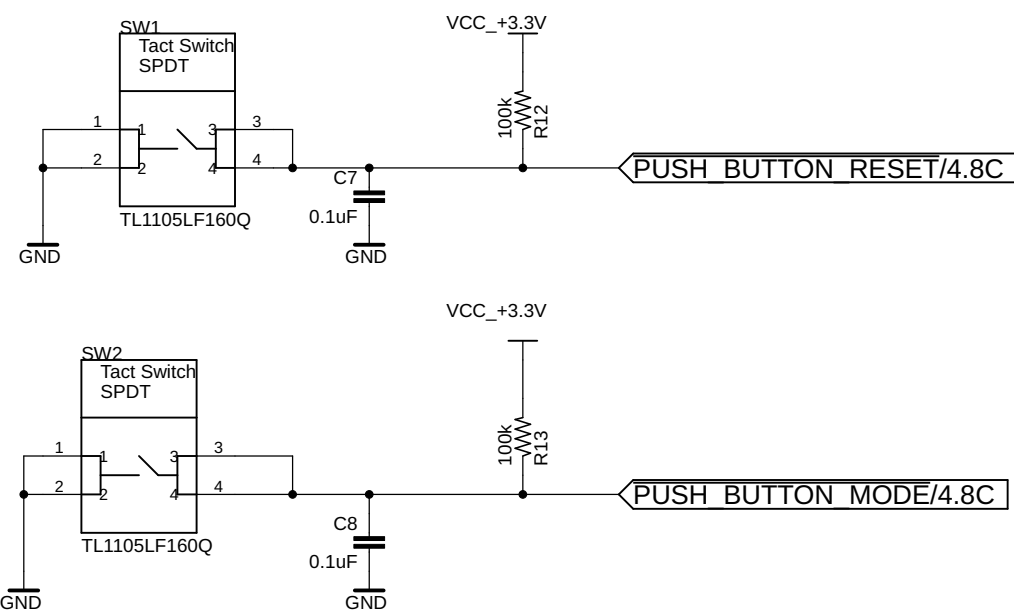
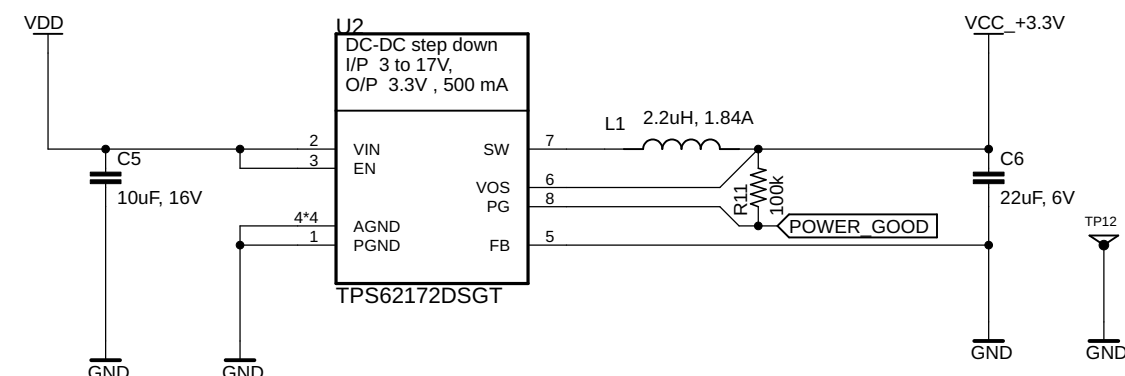
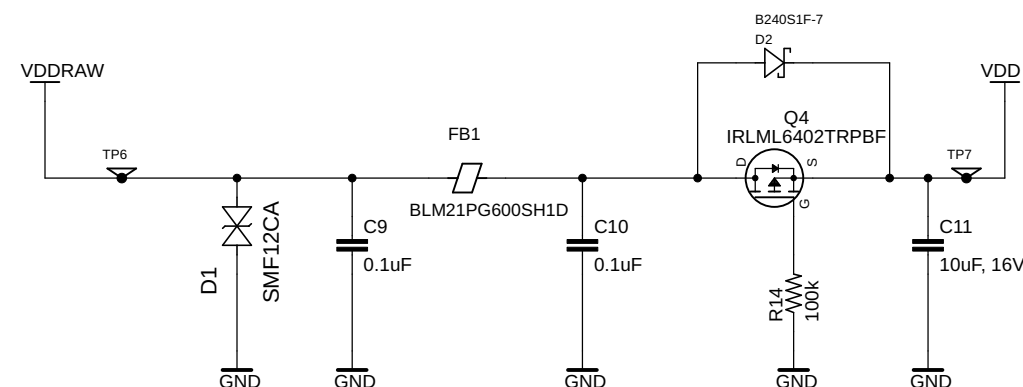


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Title: Sensors, Heater and Fan			
Engineer: Varun M.	Doc No: Vayu_sch	Rev: A	Date/Time 3/14/2025 1:18 AM
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HMI and power supply



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Title: HMI and power supply

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