Vayu
A Smart Heat Recovery Ventilation System

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

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Schematic guidelines, notes and requirements

Component guidelines

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.

Schematic guidelines

General

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.

Graphic symbol description

- Digital ground
- Voltage connection
- Test point (default size)

Rules

Test points must be placed on the Secondary (bottom) side with a minimum 2.54mm spacing unless otherwise noted.

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).

Keep ground plane(s) away from the radio section of the wireless module.

The 868/915 MHz radio on the wireless module uses external antenna that
must be encapulated inside the product case while avoiding proximity to any ground planes.

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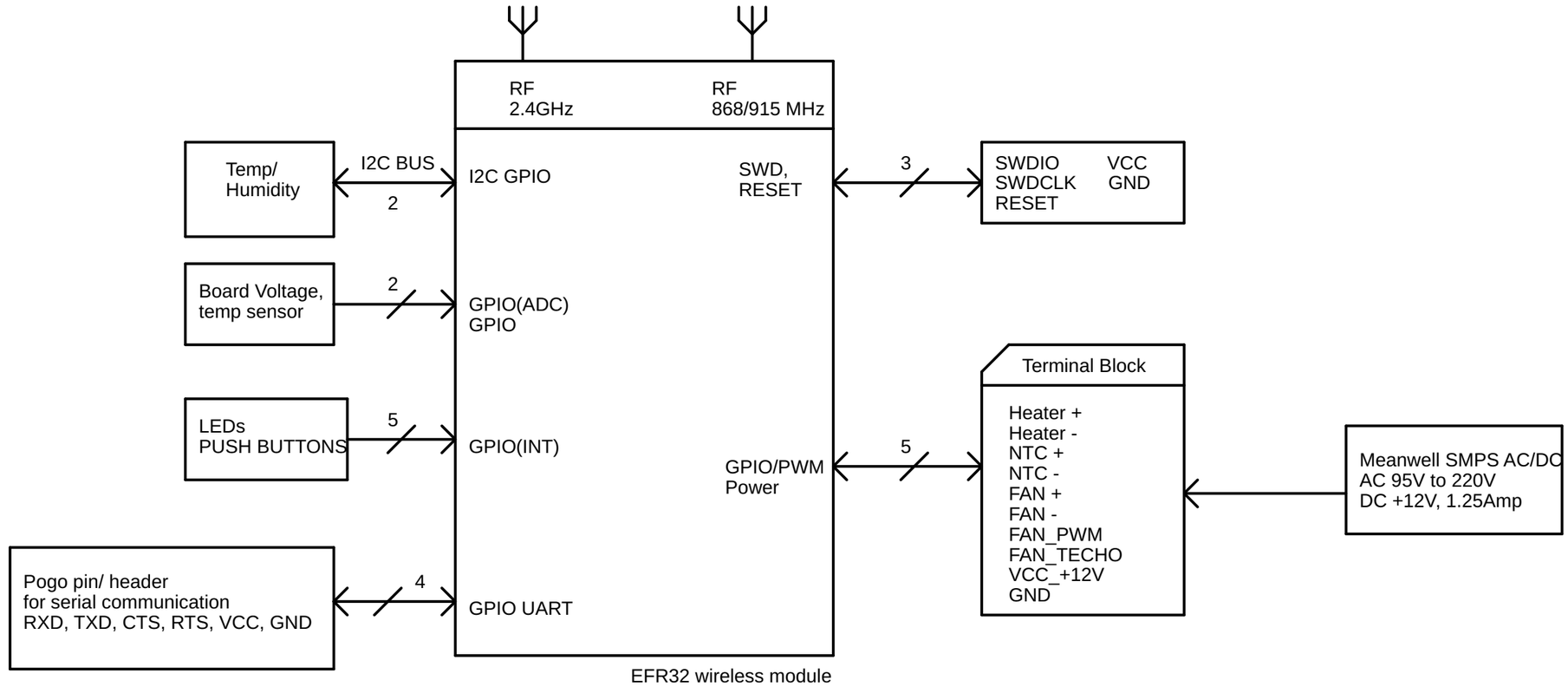
Block Diagram



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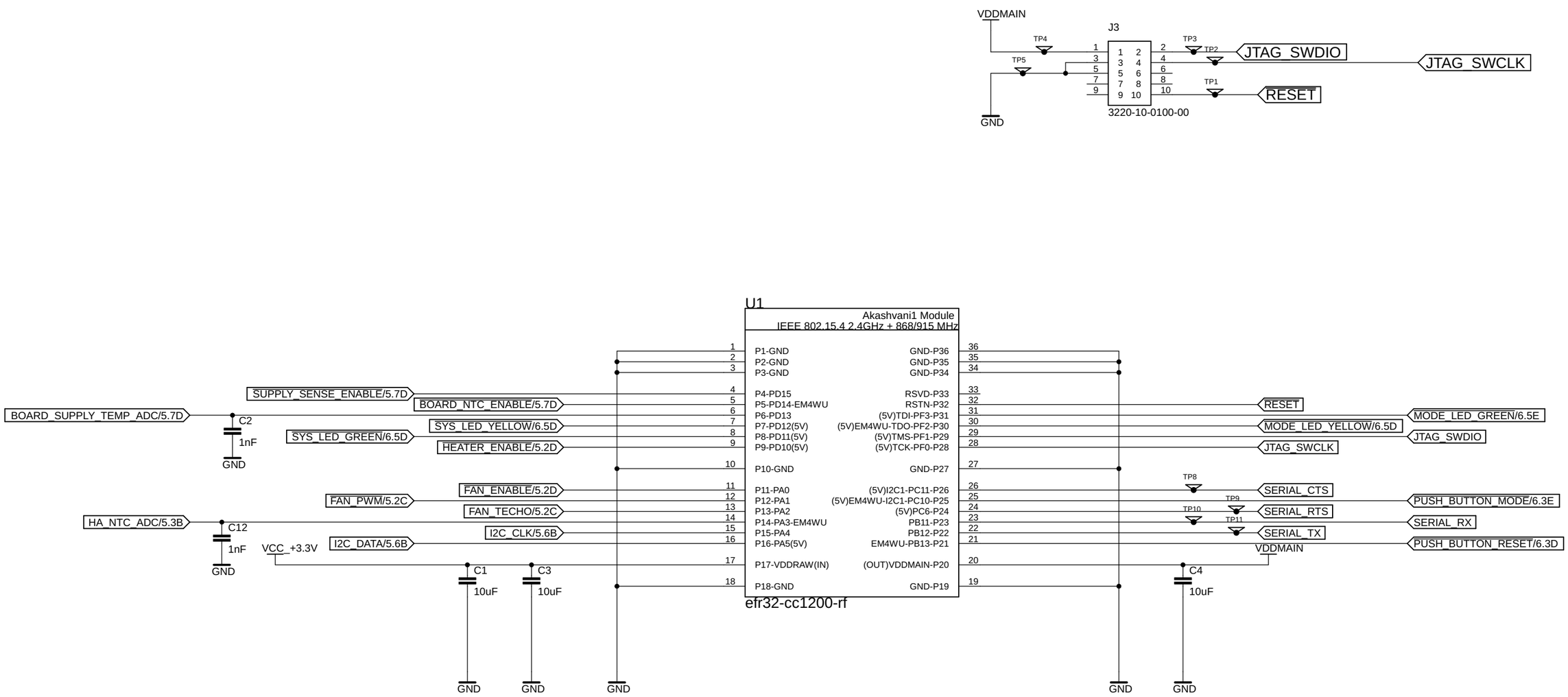
Wireless Module



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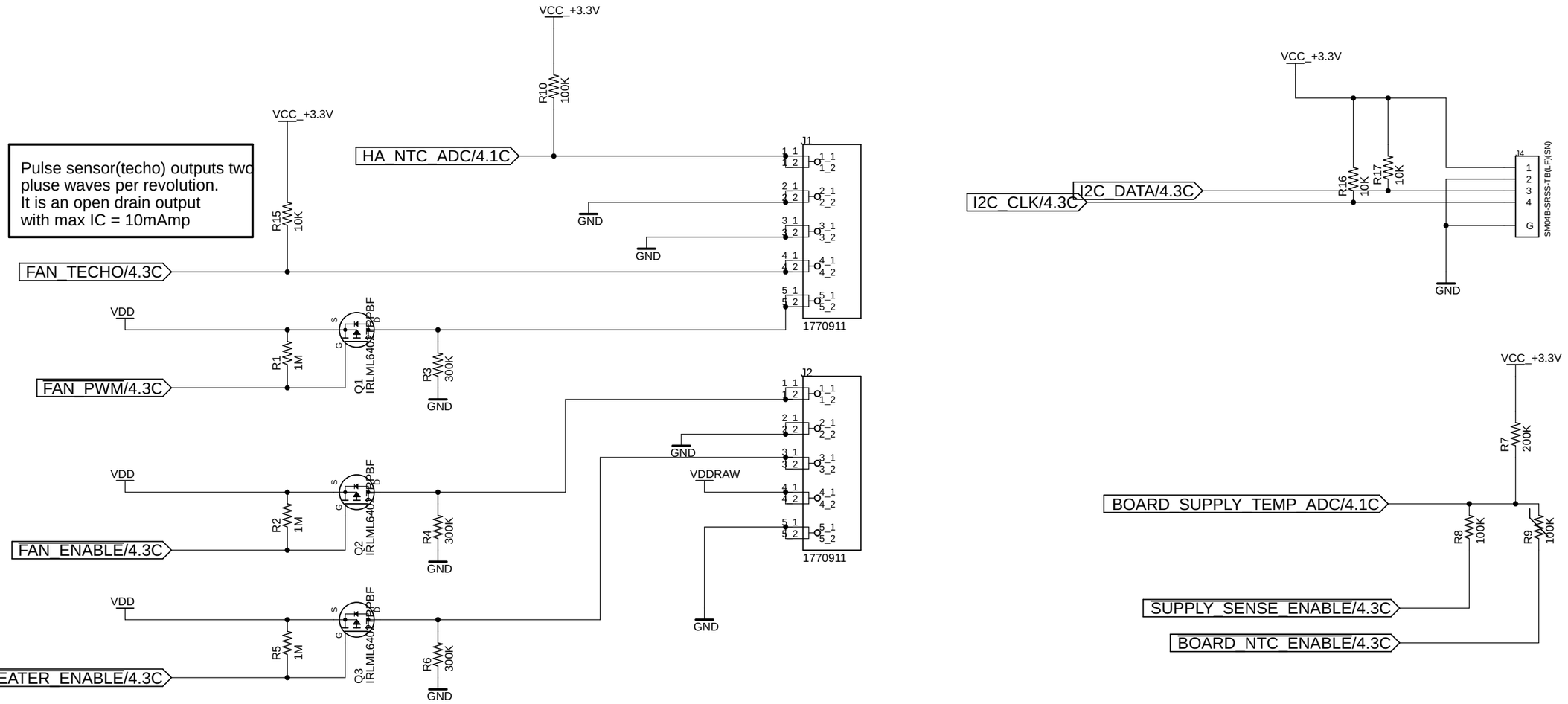
Sensors, Heater and Fan



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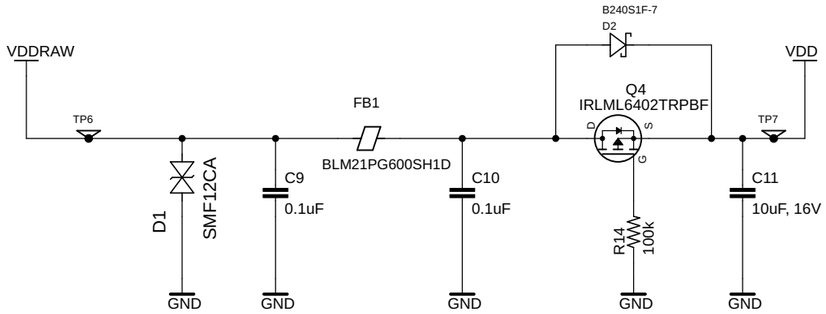
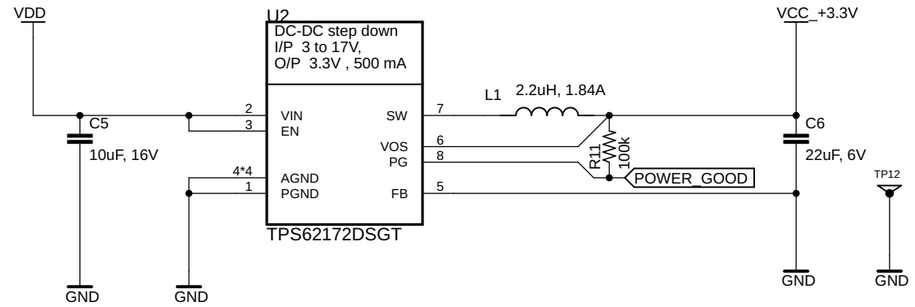
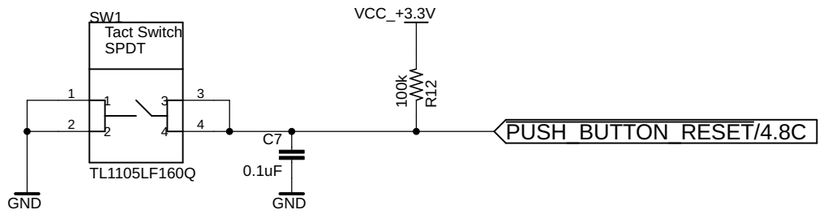
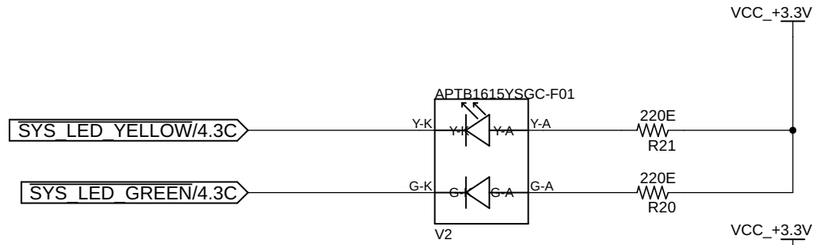
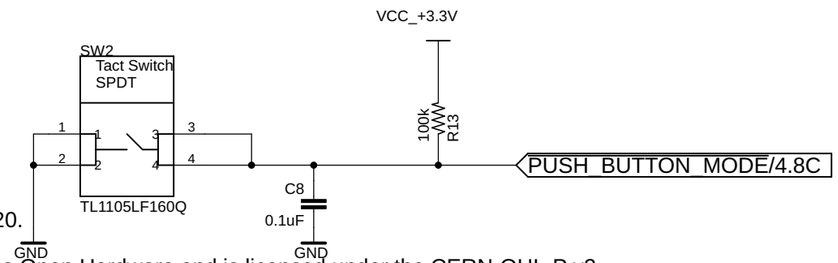
HMI and power supply

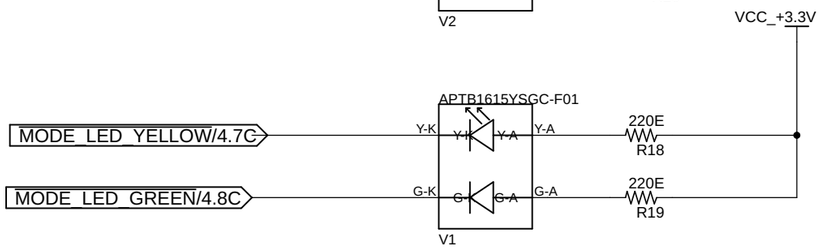












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