AQCTRL-A01 EVT1: CO2 + temperature/humidity + isolated RS485 + dual EC fan outputs.
18..30V DC, external isolated supply. Commissioning and calibration required.
Hardware permit independently disables relays; AO contacts ground when OFF.
140x178mm bench layout; native routing/DRC pass. Manufacturing HOLD: physical fan/EMC validation pending.

power

File: power.kicad_sch

control

File: control.kicad_sch

sensors

File: sensors.kicad_sch

communications

File: communications.kicad_sch

outputs

File: outputs.kicad_sch

inputs

File: inputs.kicad_sch

display

File: display.kicad_sch

testpoints

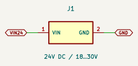
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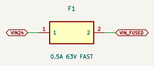
EVT CANDIDATE — PHYSICAL VERIFICATION REQUIRED

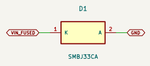
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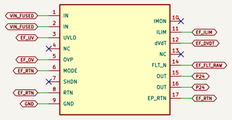
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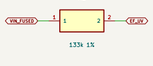
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KiCad E.D.A. 10.0.6		Id: 1/9

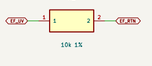


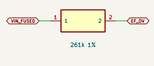


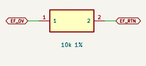


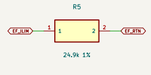


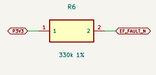


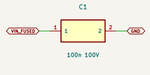


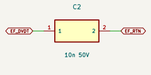


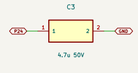


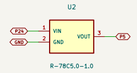


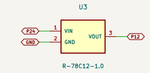




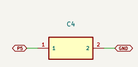


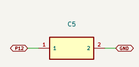


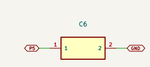


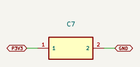


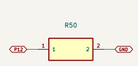


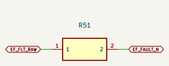












RTN / EP / MODE / R3 / R4 / R5 / C2: EF_RTN ONLY. NEVER SHORT TO SYSTEM GND.
FLT: R51 33k series, R6 330k pullup: MCU PA1 internal pullup OFF.
D1 is bidirectional SMBJ33CA. Reverse-power and thermal tests NOT RUN.







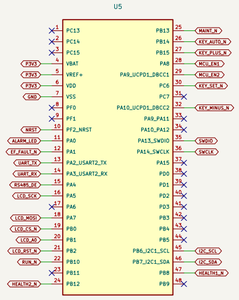


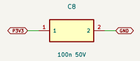
EVT CANDIDATE — PHYSICAL VERIFICATION REQUIRED

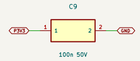
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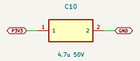
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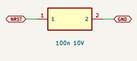
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KiCad E.D.A. 10.0.6		Id: 2/9

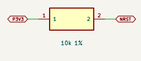


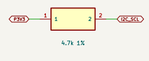


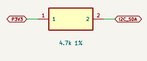


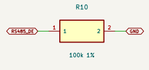


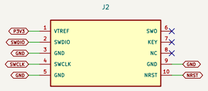




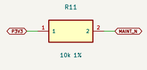


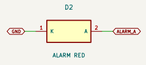


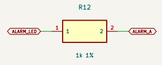










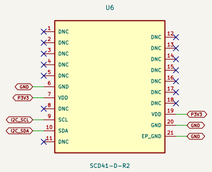


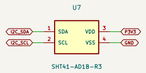
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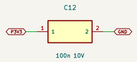
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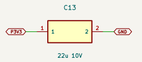
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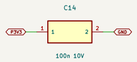
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KiCad E.D.A. 10.0.6		Id: 3/9

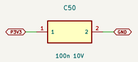










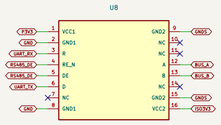


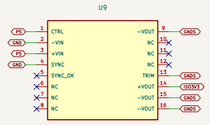
EVT CANDIDATE – PHYSICAL VERIFICATION REQUIRED

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Title: Air quality controller – sensors

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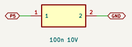






















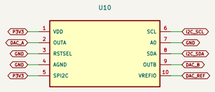


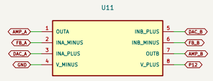
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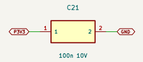
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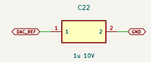
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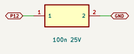
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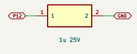














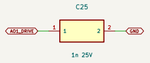


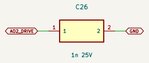




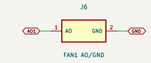


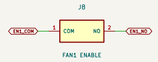




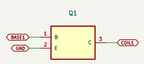




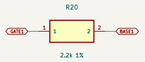


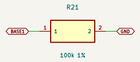


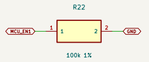


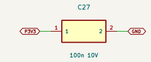


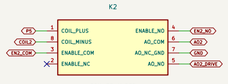


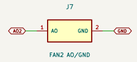


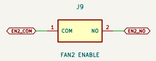




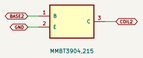


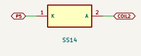


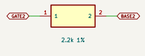


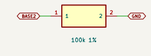


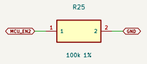


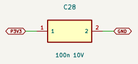


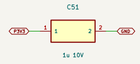












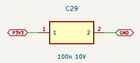
EVT CANDIDATE — PHYSICAL VERIFICATION REQUIRED

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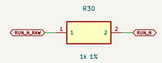
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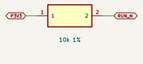
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KiCad E.D.A. 10.0.6		Id: 6/9

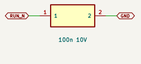


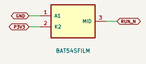




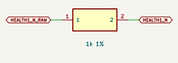


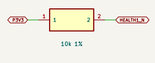


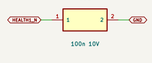


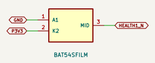




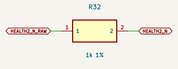


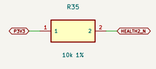


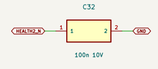


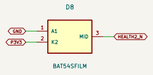










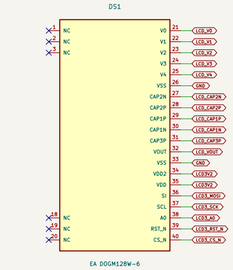


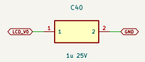
EVT CANDIDATE — PHYSICAL VERIFICATION REQUIRED

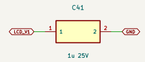
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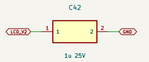
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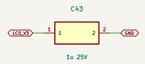
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KiCad E.D.A. 10.0.6		Id: 7/9

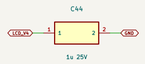


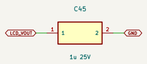


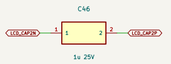


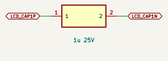


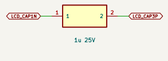


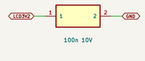


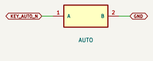


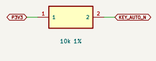


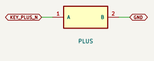


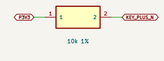


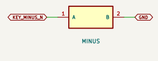


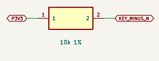


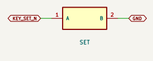


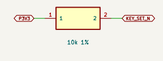




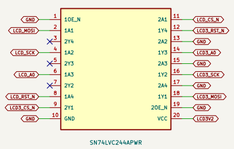


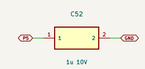


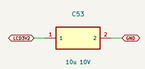


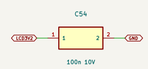


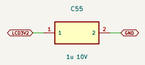


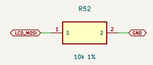


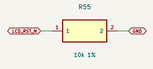


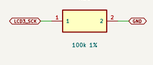


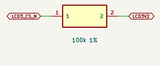


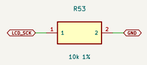


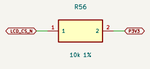


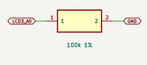


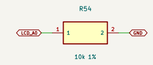


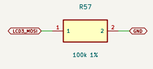


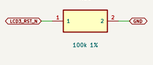


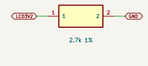










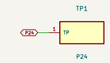


EVT CANDIDATE – PHYSICAL VERIFICATION REQUIRED

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Title: Air quality controller – display

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KiCad E.D.A. 10.0.6		Id: 8/9







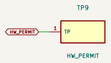


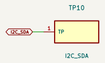


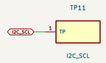












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