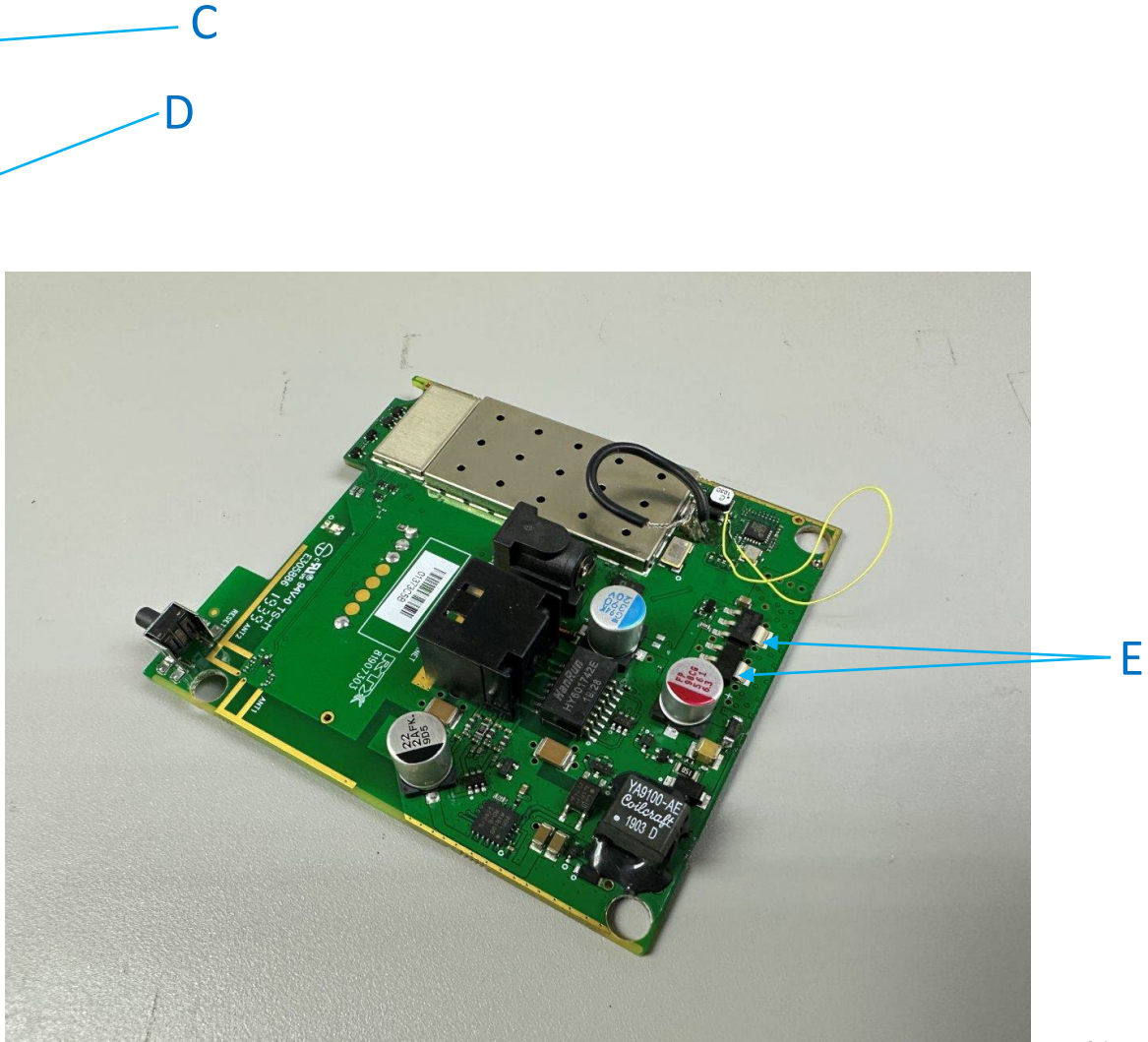
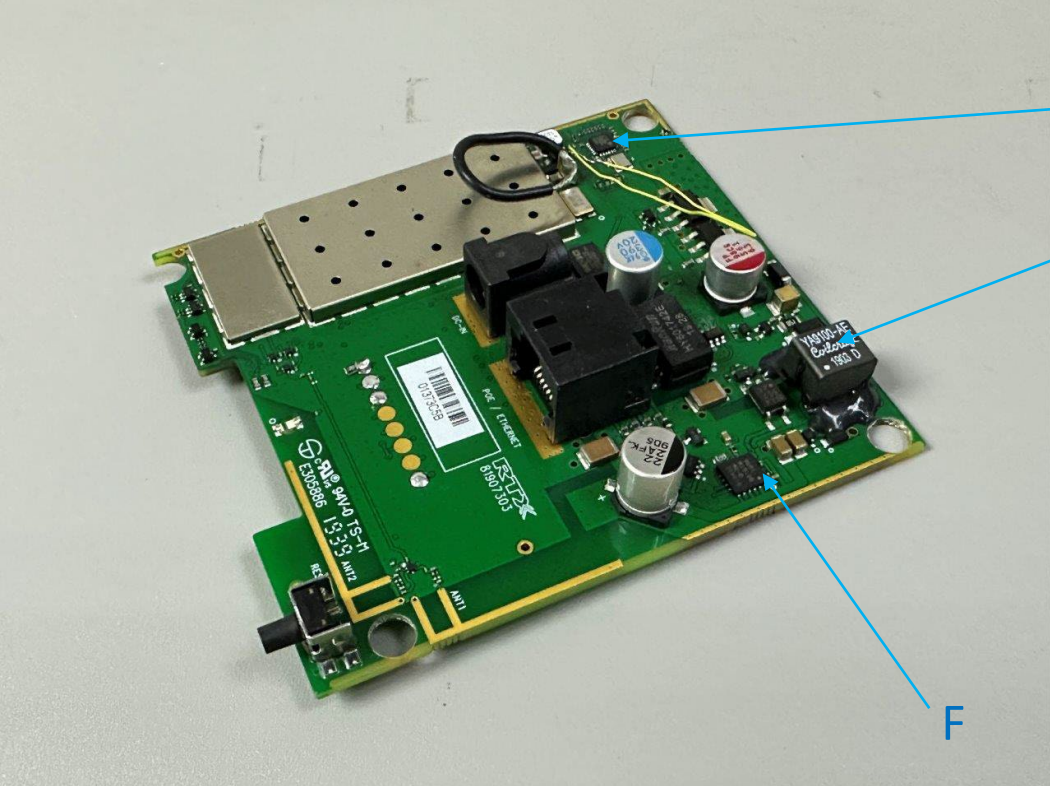
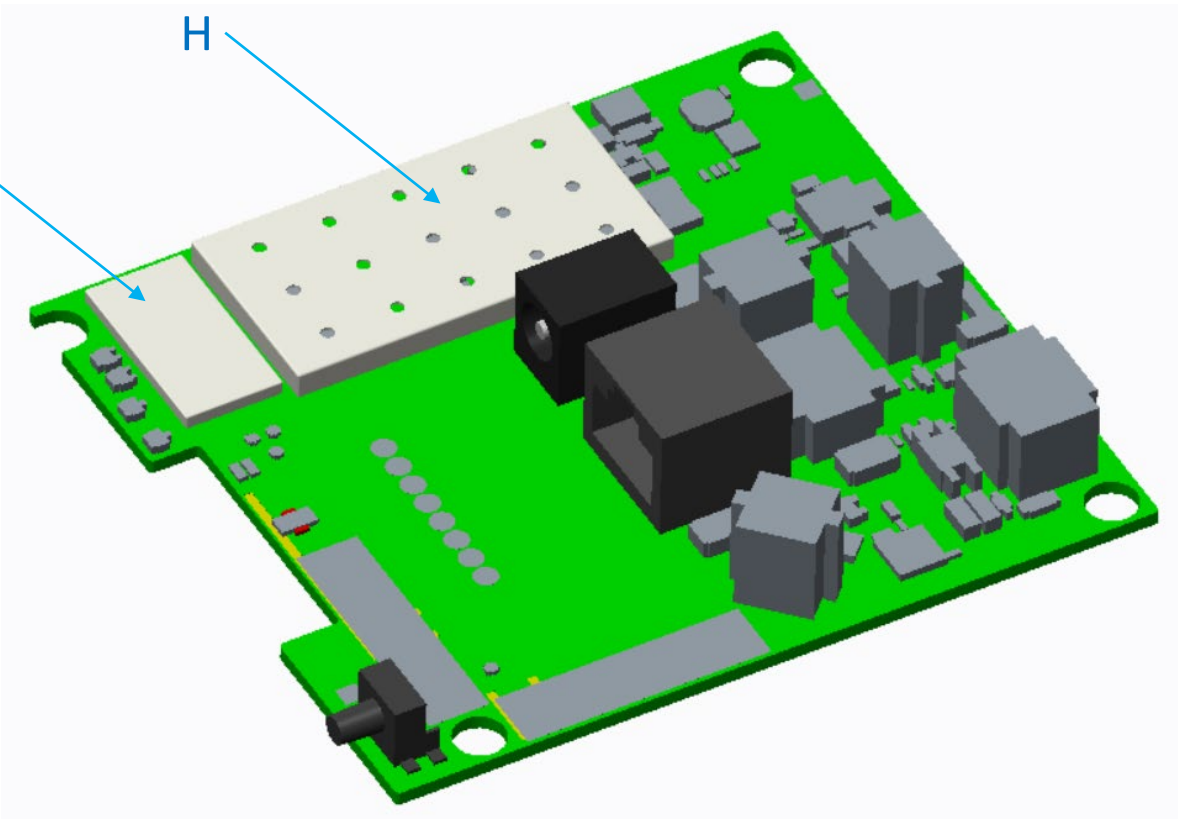
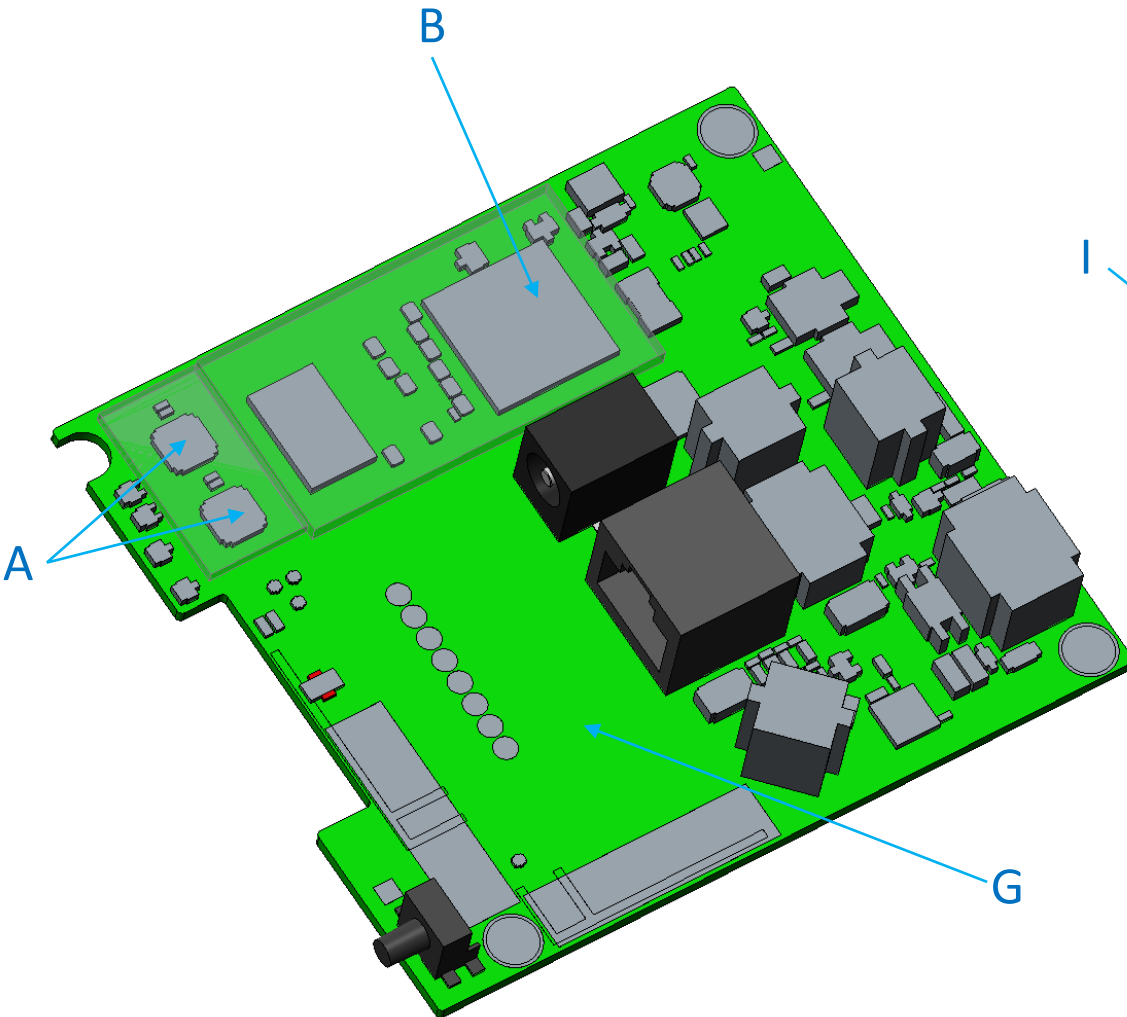


RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE



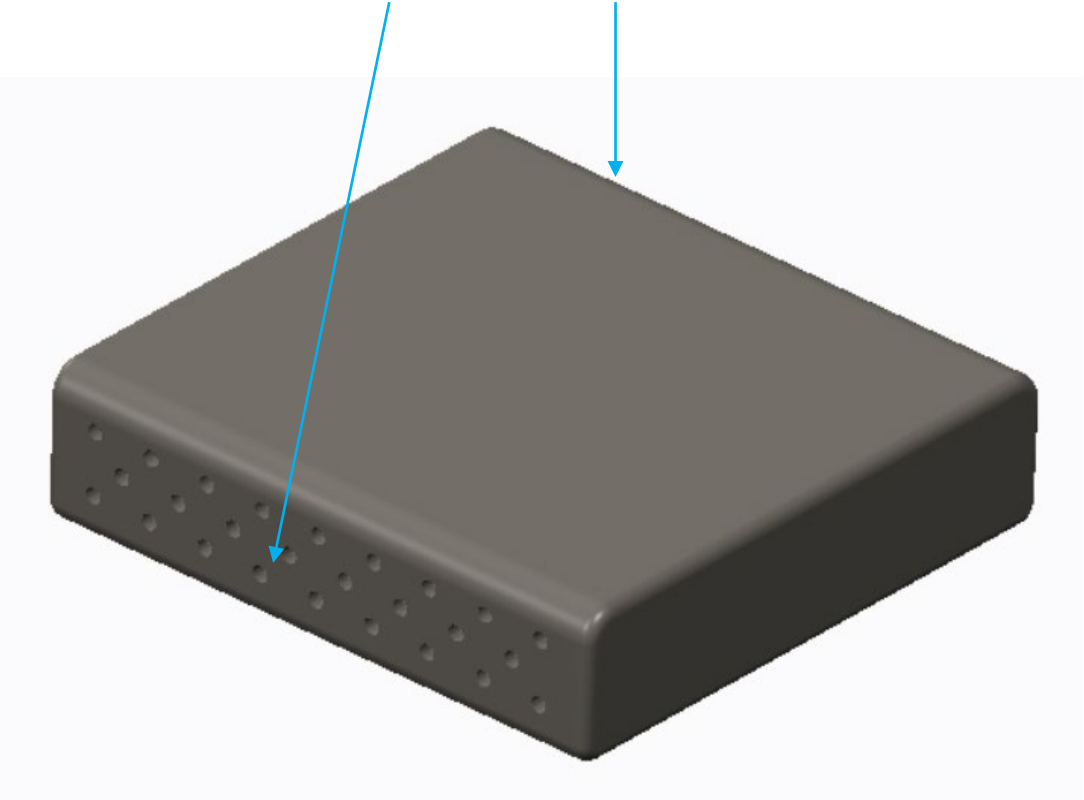
RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE



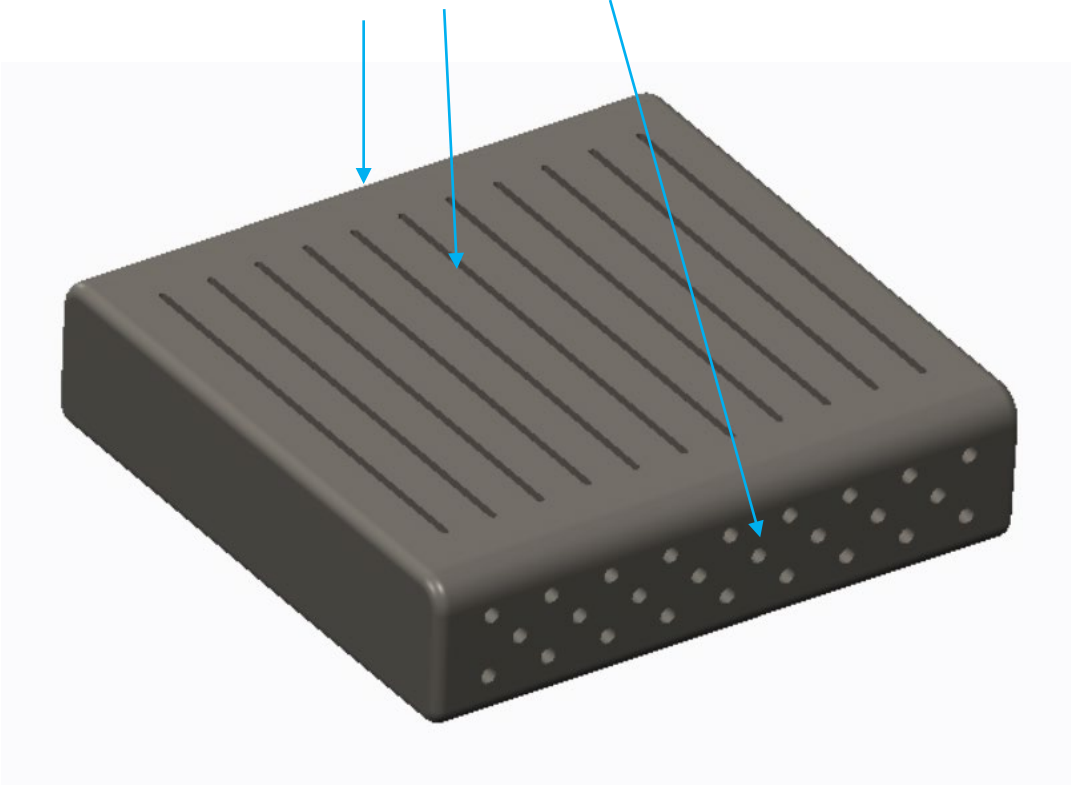
RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE

Housing boundaries with 2 types of ventilation holes:

(1) Ventilation holes at left and right sides



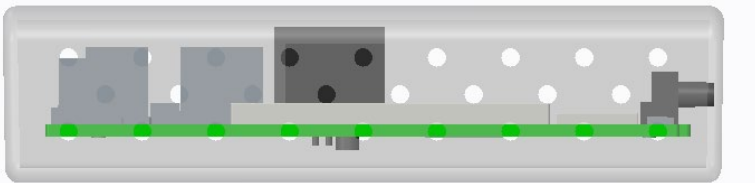
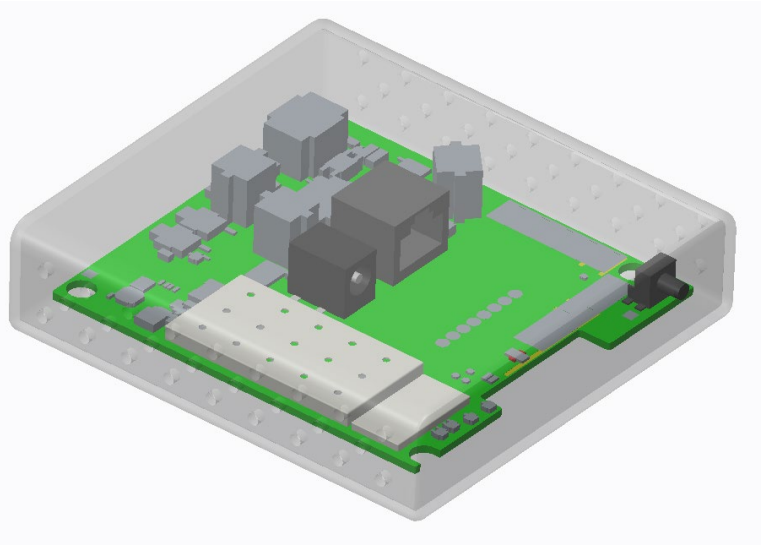
(2) Ventilation holes at front, left and right sides



RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE

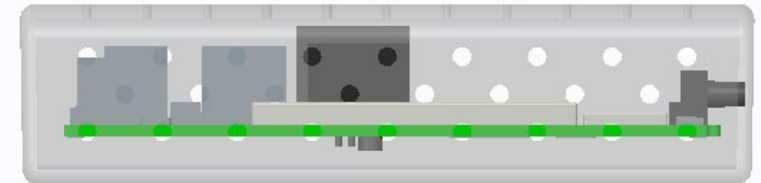
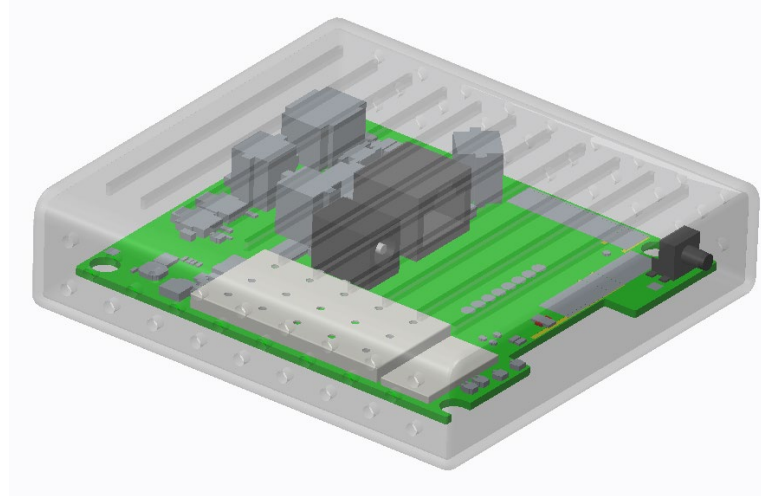
Ventilation scenarios cases:

Case #1: Ventilation holes at left and right sides. Unit is placed horizontally.



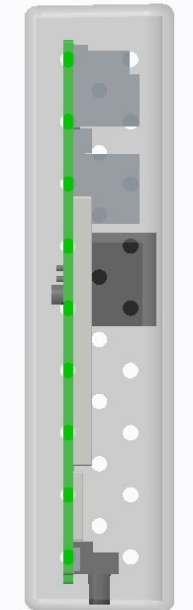
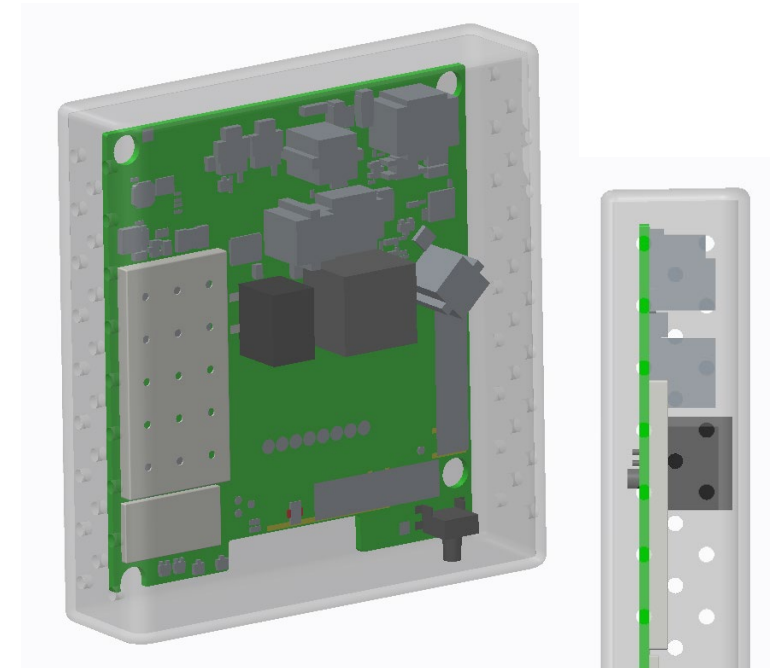
Desk

Case #2: Ventilation holes at front, left and right sides. Unit is placed horizontally.



Desk

Case #3: Ventilation holes at left and right sides. Unit is placed vertically.



Desk

RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE

| | Input | | | | | | |
|--------------|------------|-----------------|---|------------------|----------------------|---------------|---------|
| | Components | | | | | | |
| | Code | Desc | Power (Heat flow) | Heat flux (W/m2) | Material specific | | |
| | | | | | Thermal conductivity | Specific heat | Density |
| Heat sources | A | RF chip LMX4181 | 0.6W | RTX EE input? | | | |
| | B | | 1.6W | RTX EE input? | | | |
| | C | | 0.3W | RTX EE input? | | | |
| | D | | 0.4W | RTX EE input? | | | |
| | E | LDO | Not dissipating if D and F are dissipating. | RTX EE input? | | | |
| | F | POE | | 0.6W | RTX EE input? | | |
| | G | PCB | 4 layer, 1.6mm Kp = 16 W/(mK) Kn = 0.6 W/(mK) | | Library available? | | |
| | H | Shield 1 | | | Library available? | | |
| | I | Shield 2 | | | Library available? | | |

RTX9431 THERMAL SIMULATION-PREPARATION FOR TRIAL CASE

Boundaries internal

Mode:

Ambient temp

Air flow at the boundaries

Pressure at the boundaries

Input

Steady state convection

23 deg C

Library value available?

Library value available?

Boundaries

Boundaries dims

Outer dimension: 98 x 93 x 24 mm

Inner dimension: 94 x 89 x 20 mm

Wall thickness: 2 mm

Wall condition (plastic)

Material library available?

Ventilation holes

2 types of Ventilation holes. Refer to Page 4.

Output

Temperature locations to be measured?

Component case surface temperature (A, B, C, D, E, F, G, H, I)

Ventilation scenarios cases inputs

3 scenarios: Case #1, #2 and #3 as show in Page 5.

Case #1 & #3 use 3D file: "thermal_simulation_case_1_and_3.stp"

Case #2 uses 3D file: "thermal_simulation_case_2.stp"