

Dell

Edge devices are hot for IoT

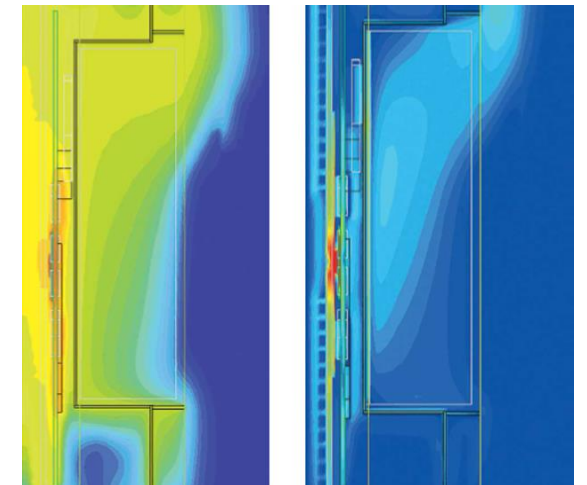
SIEMENS
Ingenuity for Life



**Simcenter Flotherm enables
Dell to optimize enclosure for
heat dissipation**



**The Edge Gateway
withstands
temperatures
from
 -30°C to
 $+70^{\circ}\text{C}$**



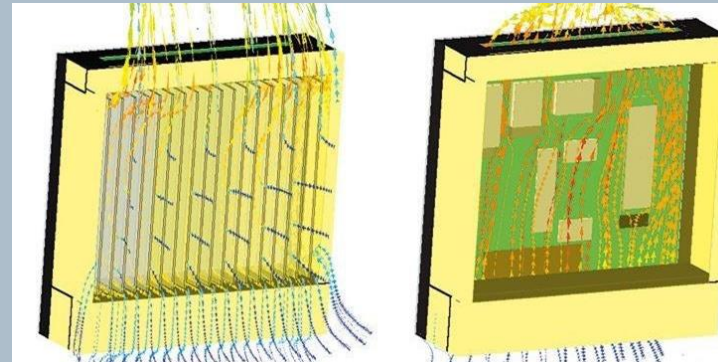
Dell

Edge devices are hot for IoT

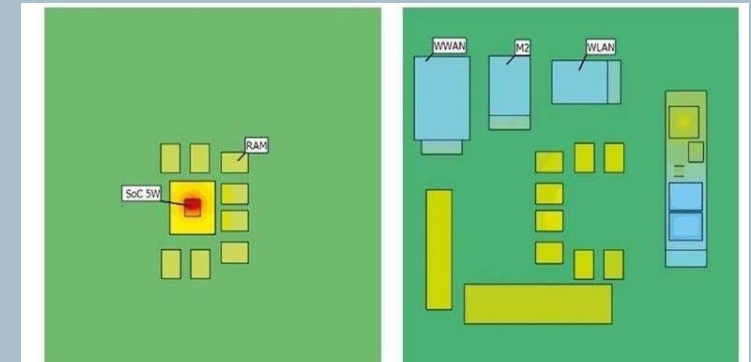


- The latest model is expected to operate in an industrial environment and cannot employ a fan for cooling to ensure reliability

Edge Gateway thermal design



Airflow cooling heatsink (left) and cooling motherboard, MB (right)



Surface temperature of components on top side (left) and bottom side (right) on MB

- Simcenter Flotherm Command Center was used to study the sensitivity of thermal design to different parameters using a response surface optimization (RSO) algorithm

“We have taken full advantage of the parametric objects in Simcenter Flotherm to very quickly create a detailed thermal model and further study various design tradeoffs. This helps avoid expensive late design changes.”

Chris Helberg, Systems Architect, Dell.