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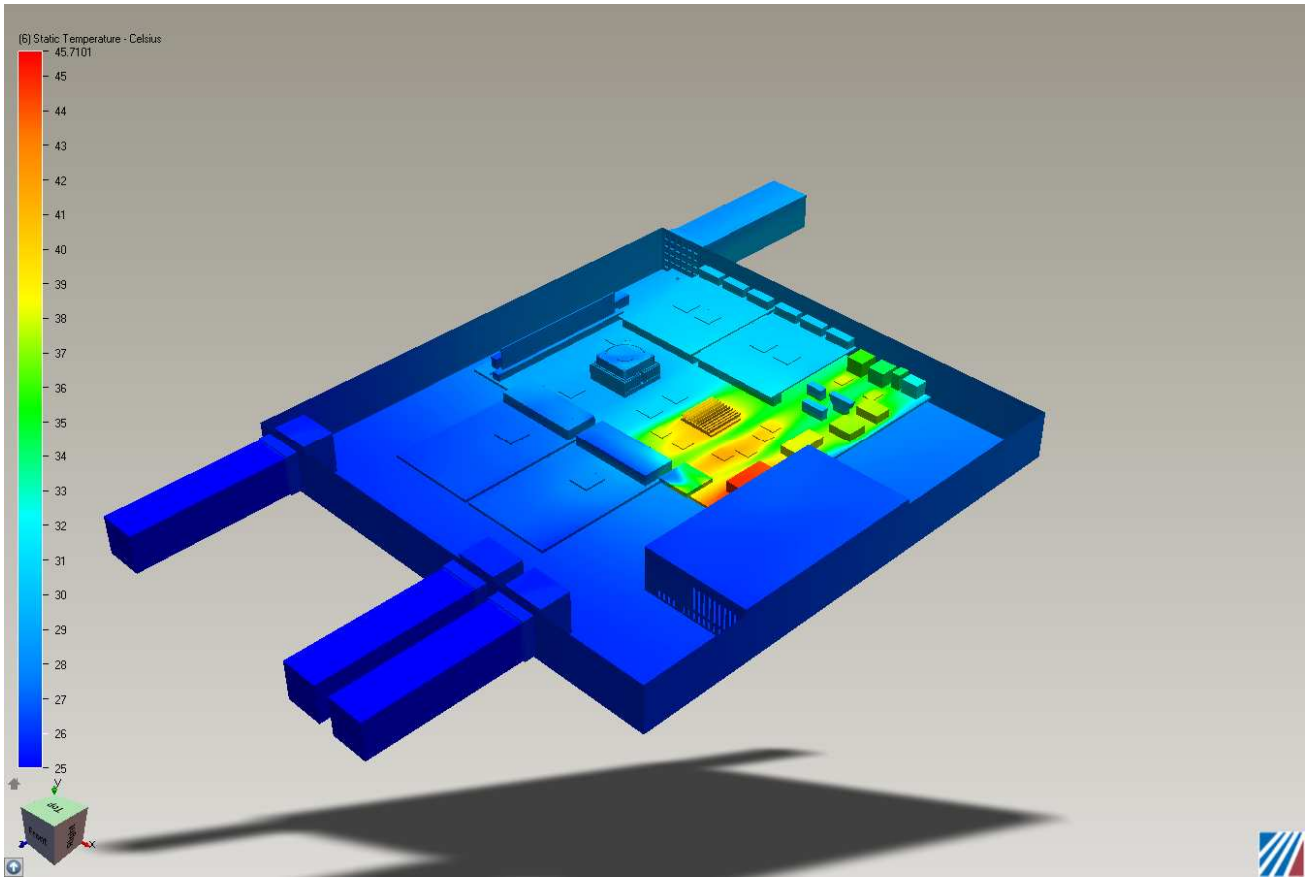
ROACH 2 Chassis Thermal Analysis for everything on:

Following was used throughout unless change stated in scenario:

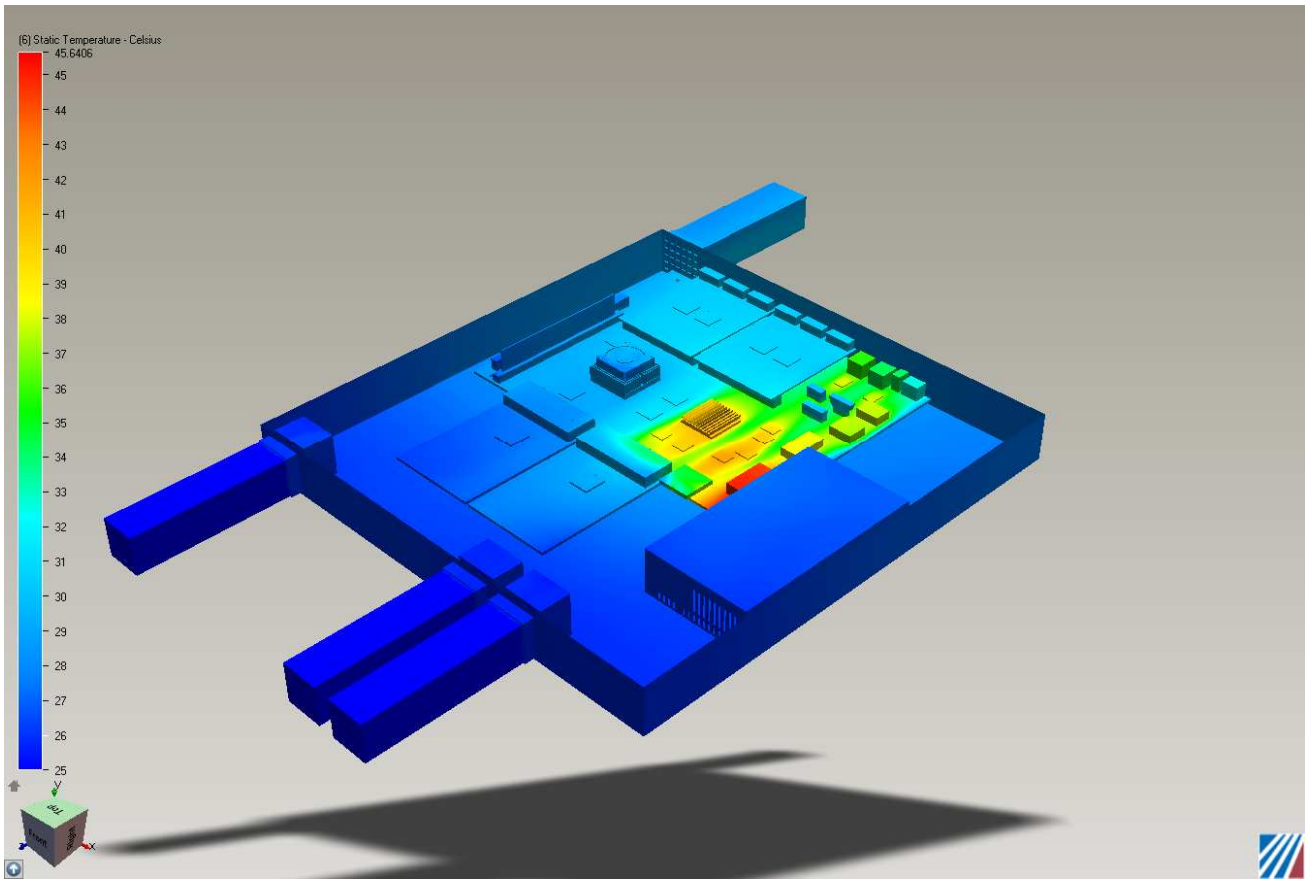
Inlet Pressure	0Pa Gauge
Inlet Temperature	25 Degrees Celsius
Outlet Pressure	0Pa Gauge

FPGA	x1	0W
PowerPC	x1	5W
ADC	x2	0W
ROACH PHY	x2	1W
ROACH PCB	x1	1W
CPLD	x1	0.3W
Flash	x1	0.3W
RAMDIMM	x1	0W
QDR	x4	0W
Power Modules	x3	2W
SFP PHY	x4	0W
DDR2	x4	0.8W
1v0	x1	4W
Power Supply	x1	1.2W

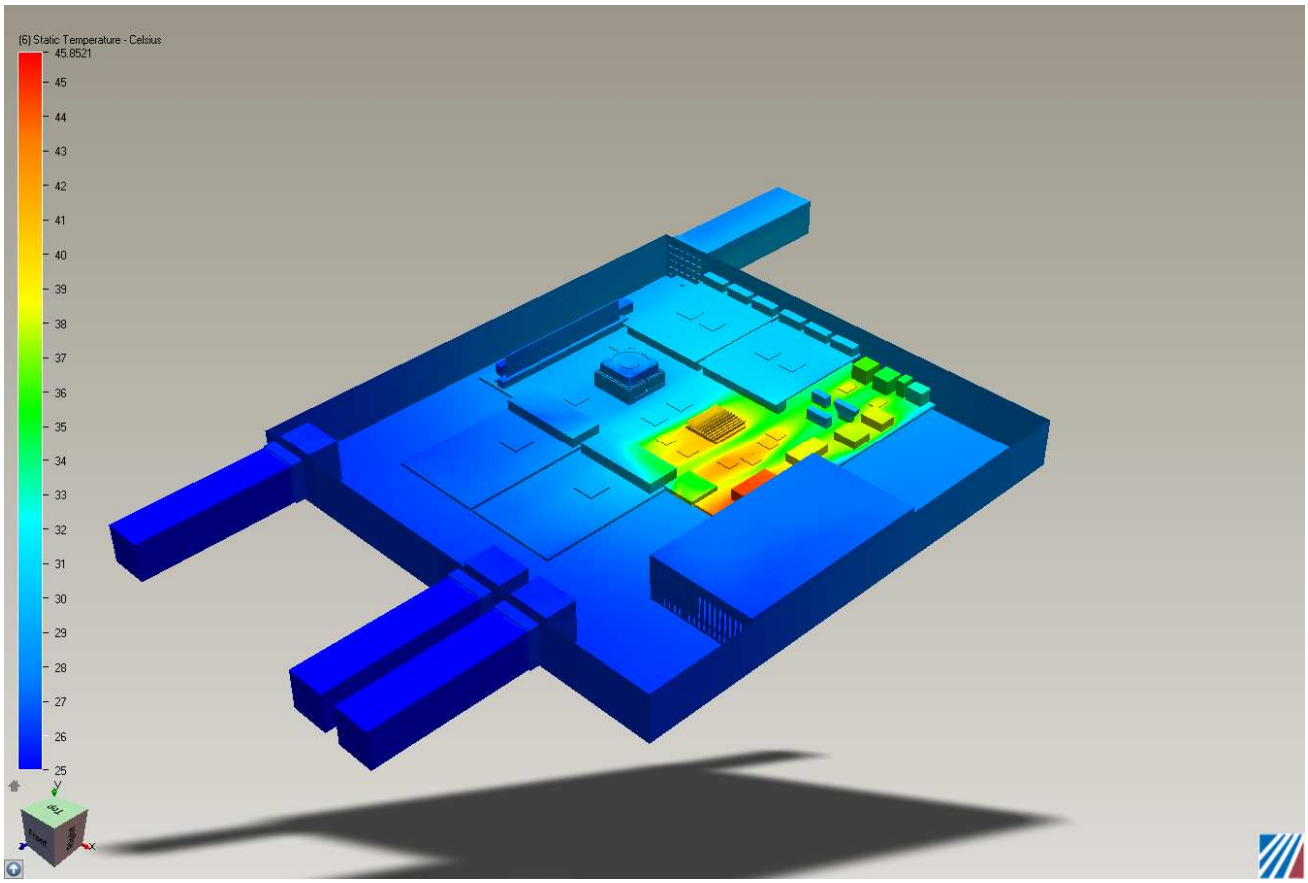
Scenario 1 Fans 5000 RPM:



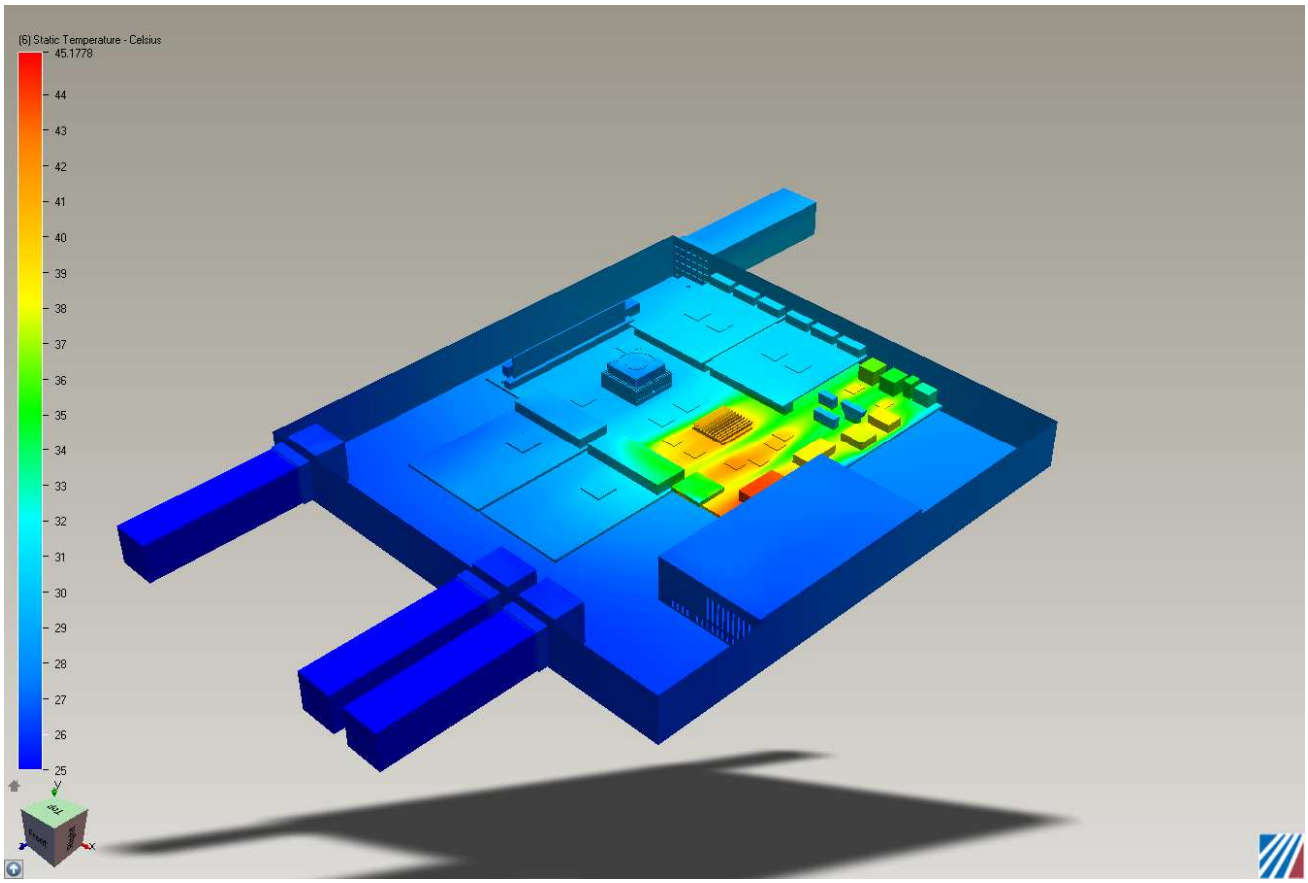
Scenario 2 Fans 6000 RPM:



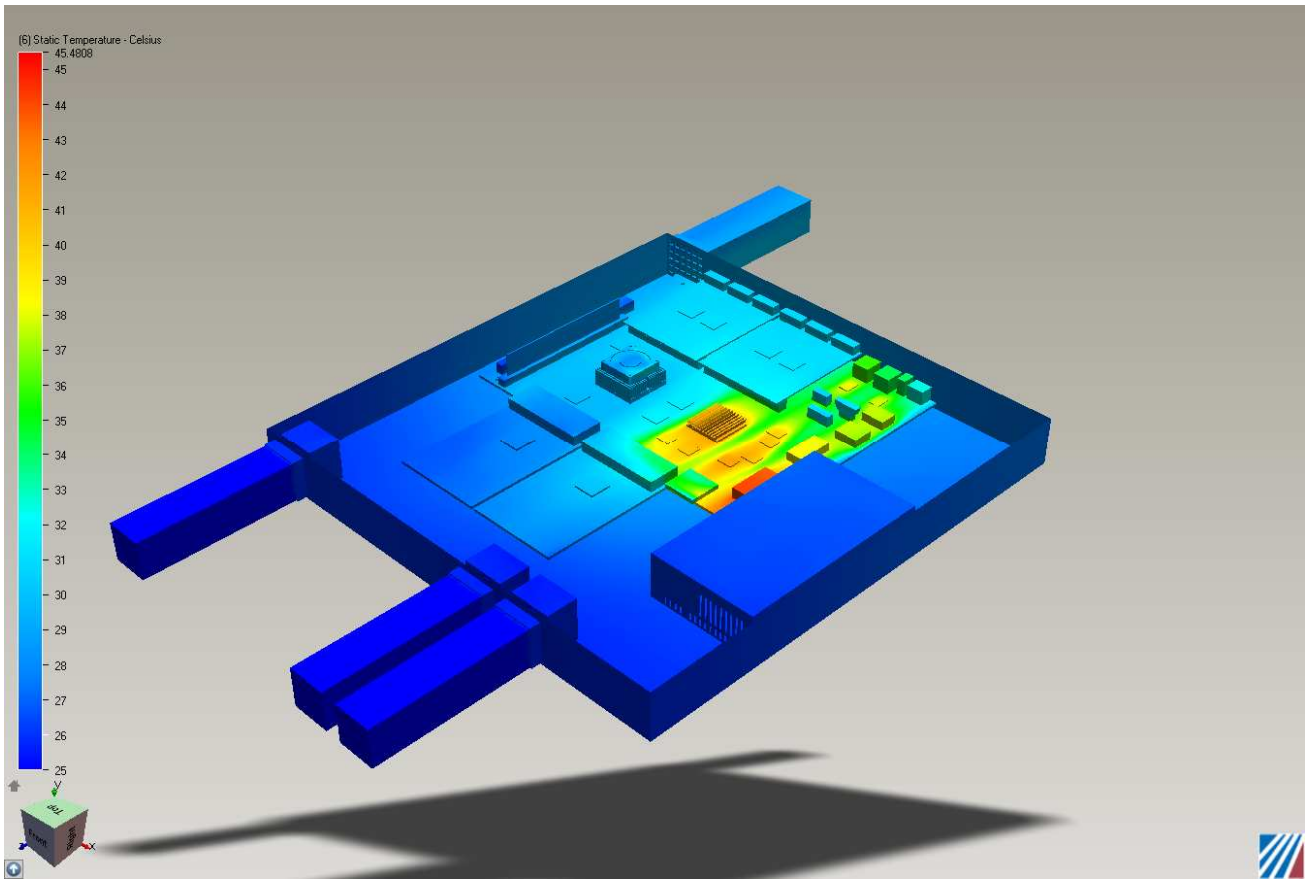
Scenario 3 Fans 7000 RPM:



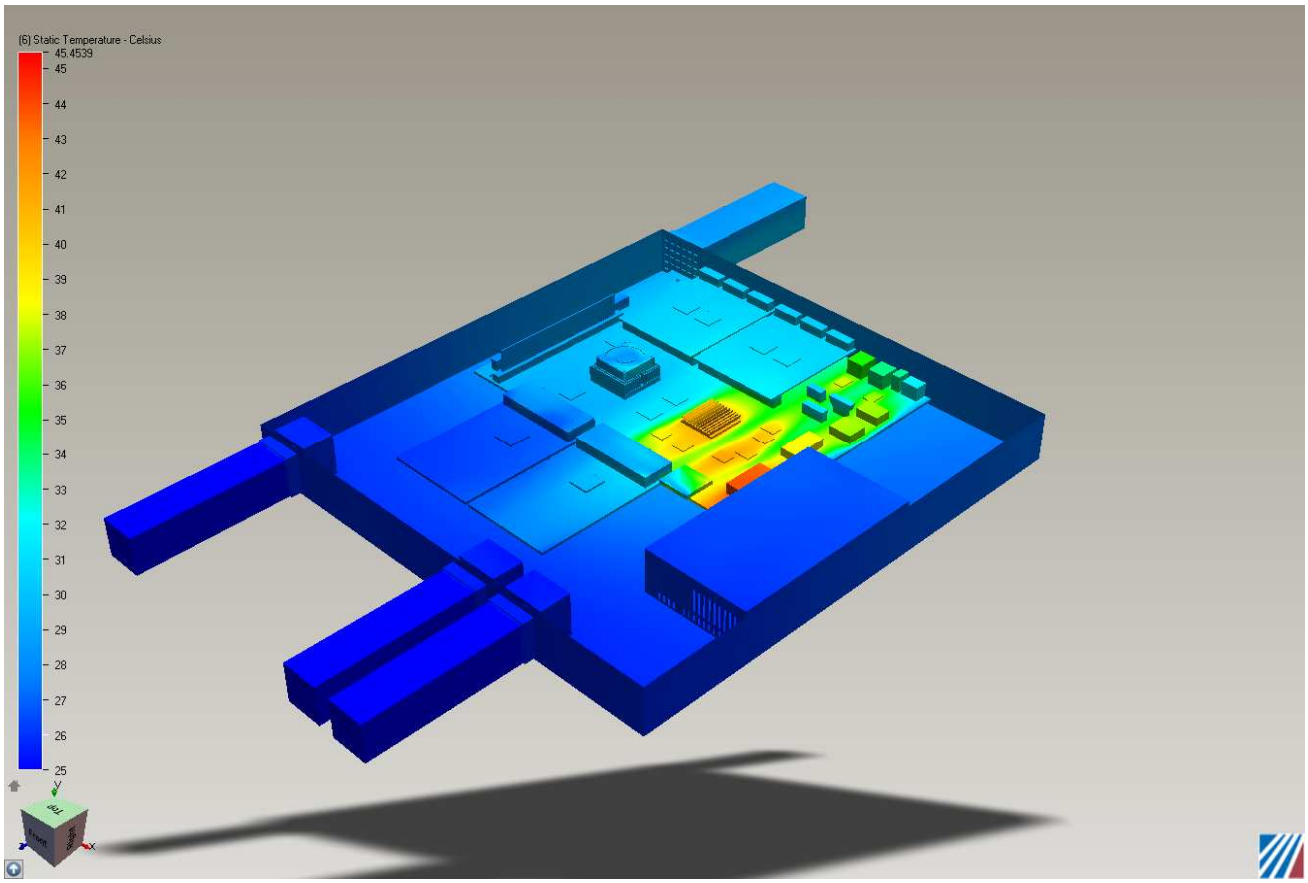
Scenario 4 Fans 8000 RPM:



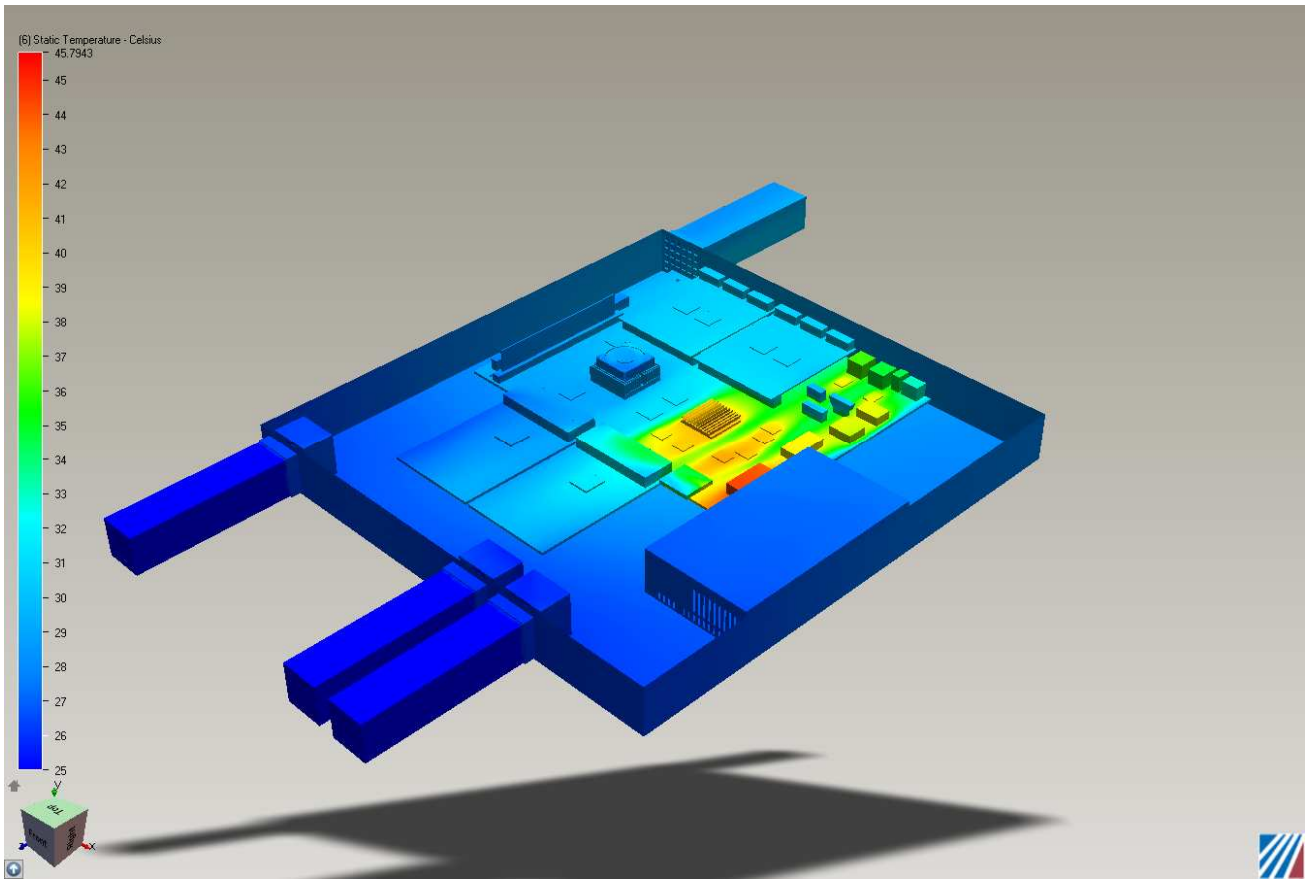
Scenario 5 Fans 9000 RPM:



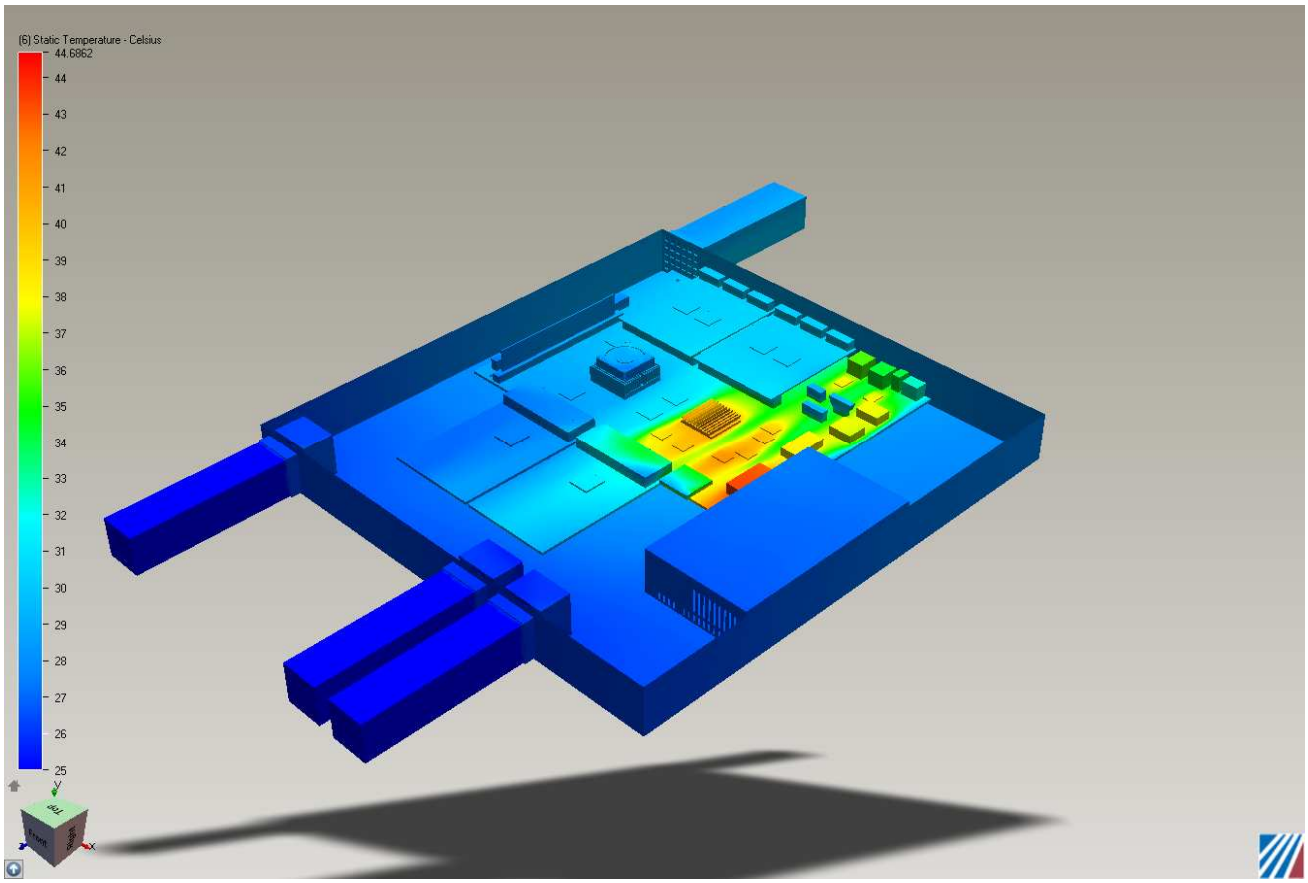
Scenario 6 Fans 10000 RPM:



Scenario 7 Fans 11000 RPM:



Scenario 8 Fans 12000 RPM:



Comments:

The fan speed doesn't seem to be making too much difference to the cooling at this level. I shall run more sims taking the speed down further. I am speculating that the fan curve is the reason for the slight discrepancies in the temperature.