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ROACH 2 Chassis Thermal Analysis for everything on:

Following was used throughout unless change stated in scenario:

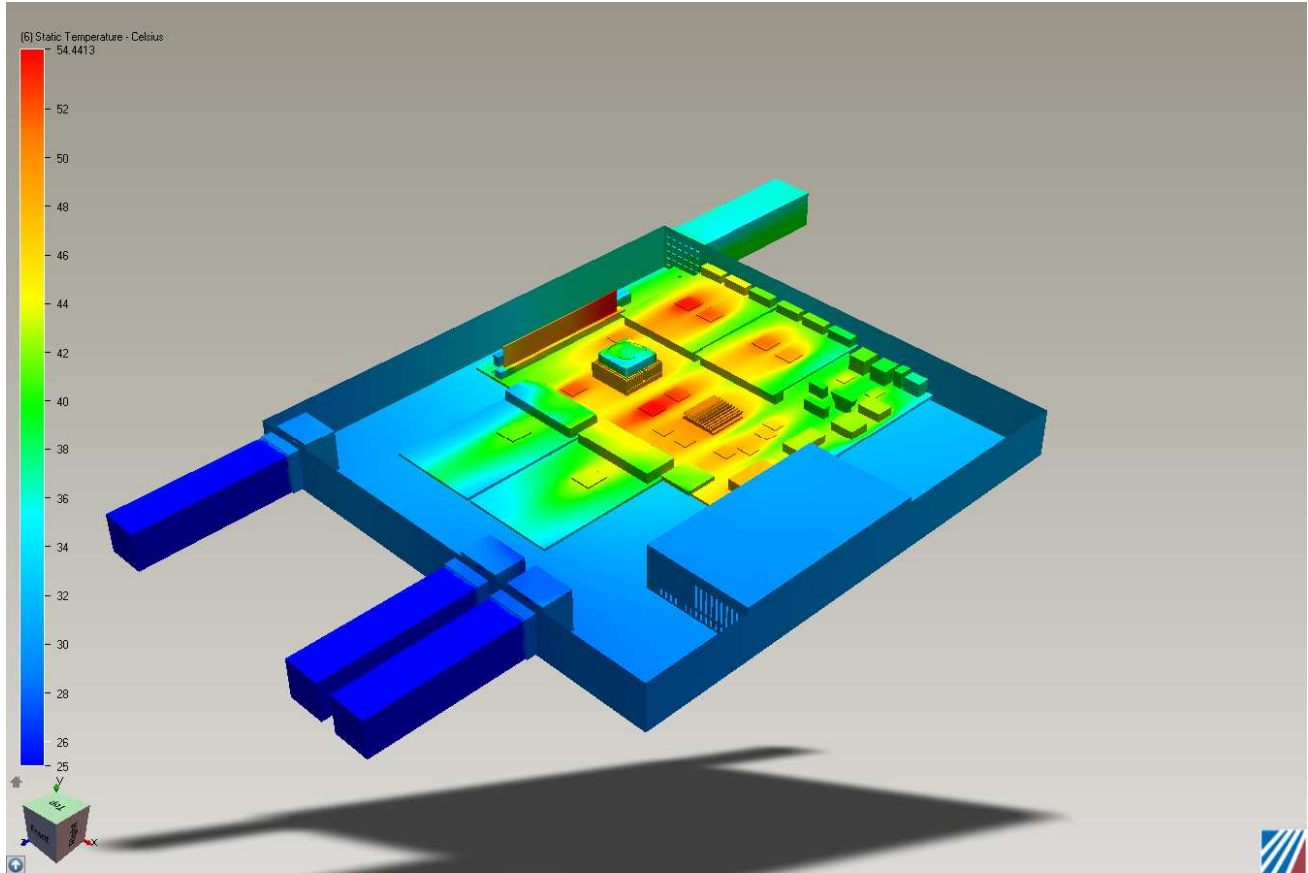
Inlet Pressure	0Pa Gauge
Inlet Temperature	25 Degrees Celsius
Outlet Pressure	0Pa Gauge

FPGA	x1	40W
PowerPC	x1	5W
ADC	x2	1W
ROACH PHY	x2	1W
ROACH PCB	x1	1W
CPLD	x1	0.3W
Flash	x1	0.3W
RAMDIMM	x1	4.4W
QDR	x4	1.8W
Power Modules	x3	2W
SFP PHY	x4	2W
DDR2	x4	0.8W
1v0	x1	4W
Power Supply	x1	1.2W





Scenario 1 FPGA 20W:



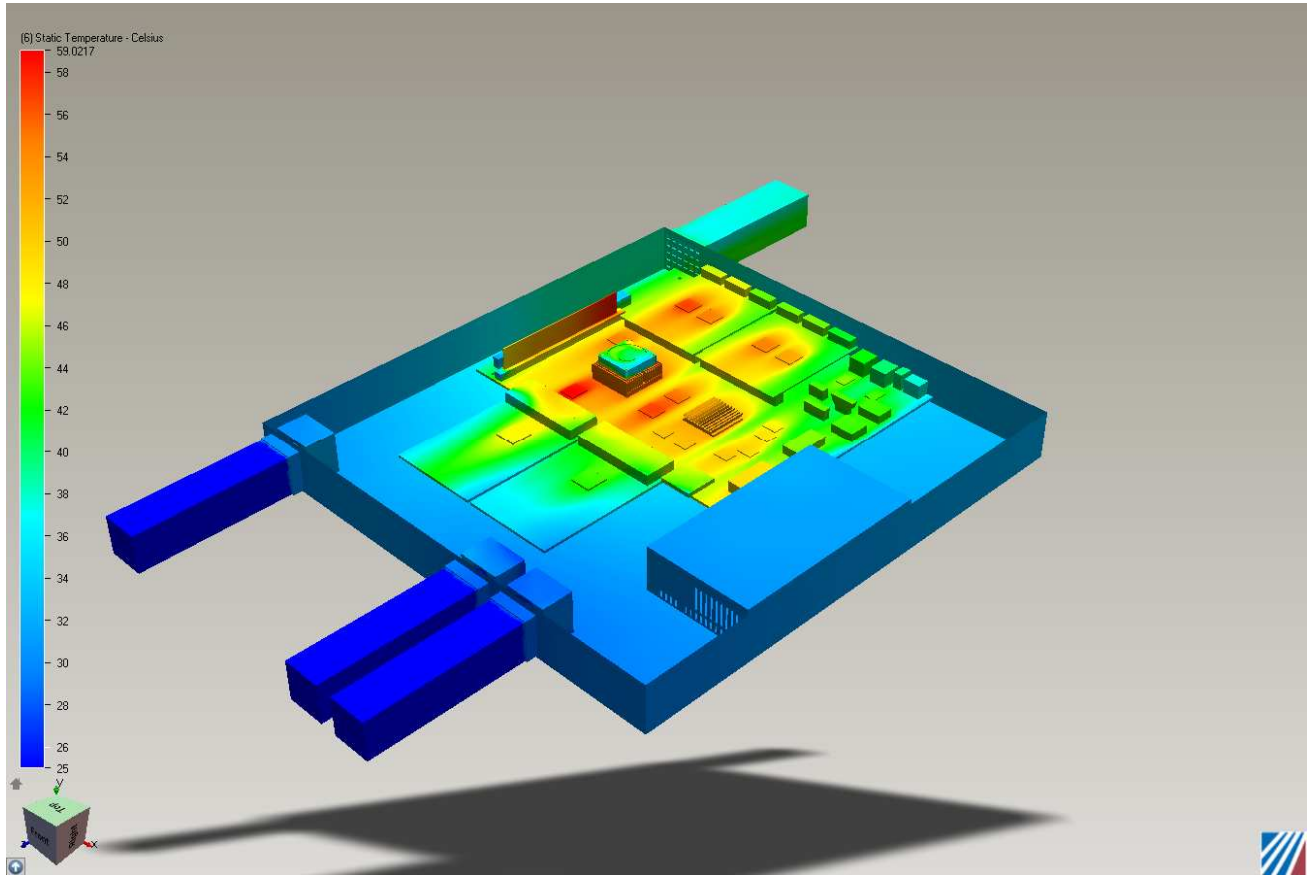
S O U T H   A F R I C A   S Q U A R E   K I L O M E T R E   A R R A Y

SKA South Africa Project Office



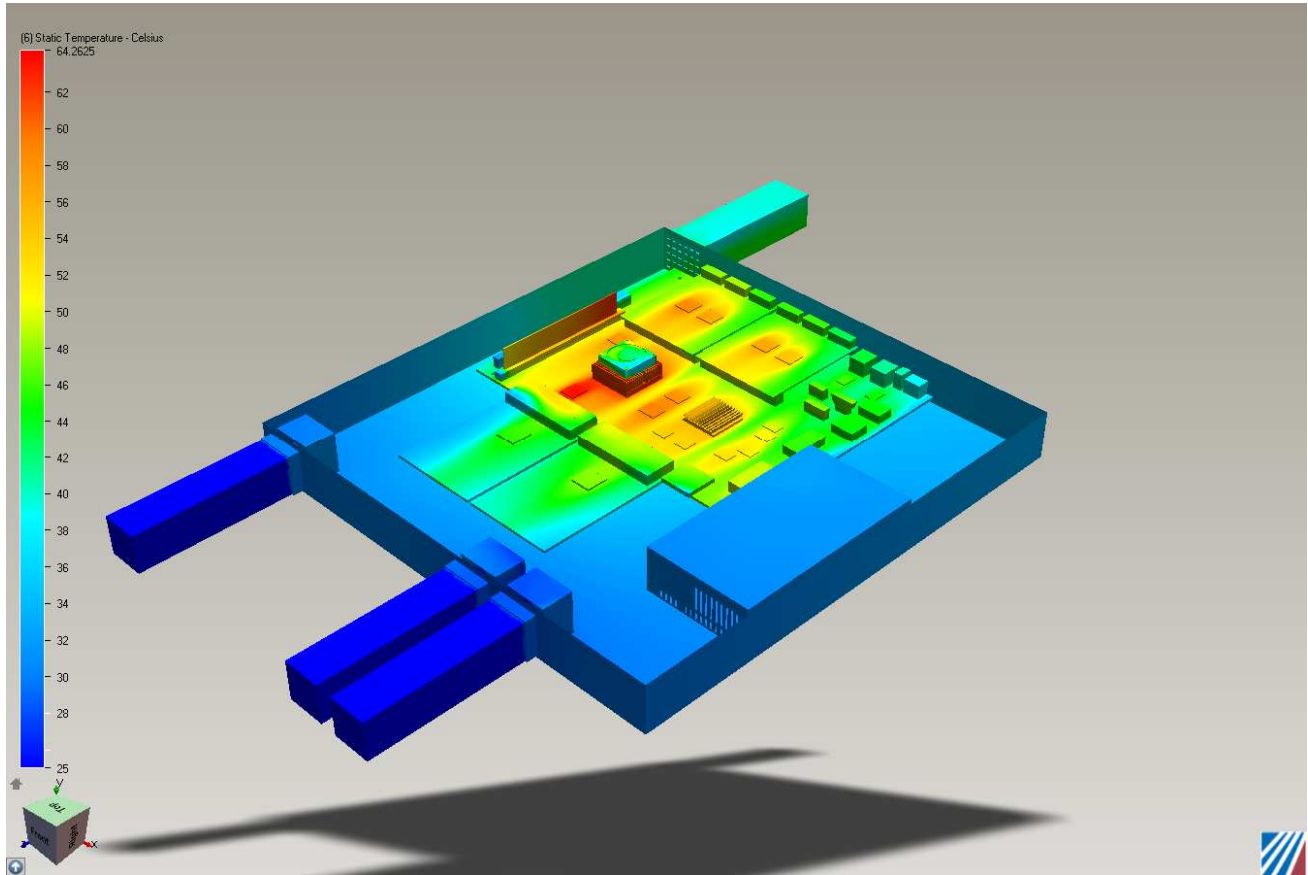


## Scenario 2 FPGA 30W:





### Scenario 3 FPGA 40W:





#### Conclusion:

The added heat from the SFP coupled with being forced to decrease the outlet sizing by manufacturing has resulted in the 40 degree scenario failing. Plan is to try and change the outlet back to previous size if AllFab can handle the tolerances.

