

Case Study

Project: Seismic Rated Rack with Acoustic Damping

Sector: Original Equipment Manufacturer



Background:

A global telecommunications equipment manufacturer was preparing to launch a state-of-the-art high throughput optical switch. However, cooling requirements demanded such a high airflow rate that it was creating unacceptable acoustic noise. An actively cooled rack solution was sought that could be sold worldwide, so seismic considerations were also key for certain markets.

The Challenge:

Managing the acoustic noise when high airflow is necessary to cool hot running equipment, especially when dense fibre counts is blocking complex airpaths, is no mean feat. Add to that the need to meet seismic mitigation standards (NEBS GR-63-CORE Zone 4 was required) and the customer found that there simply were no 'off the shelf' products available to meet their needs.

Our Approach:

We took a collaborative approach with the customer's US team, to understand their constraints and goals. Using 3D CAD for digital prototyping prior to building physical models saved time throughout a highly iterative process and allowed thermal analysis as well as fit and function to be fully evaluated.

Rainford Solutions has completed almost 4,000 customer projects to date, which gives us a huge library of building blocks from previous designs and experience to draw upon. It means that unique designs do not begin from a completely blank piece of paper, so development costs and crucially time to market are not inhibitors to a highly tailored solution.

The Solution:

A rack solution was created that perfectly met the customer's challenging thermal, acoustic and seismic specifications, fully tested and independently certified.

Customer Outcome:

The customer combines their tech packed solution with the Rainford rack as a ready to install unit for their worldwide customer base, in a universal format that meets international standards.

For further information on this project or to discuss your project requirements please visit www.rainfordsolutions.com or email sales@rainfordsolutions.com

