

Industry: Telecommunications Application: Rack Mounting System









Design Case Study

Introduction

 The client of Aavid, Thermal division of Boyd Corporation, manufactures mobile telecom equipment that serves rural areas while completely operating on solar power independent of the power grid. Due to the unique application and physical environment Aavid's support played a crucial part in the cellular transmissions success.

The Challenge

- The client's Rack Mounting Equipment was beginning to experience airflow issues and inconsistent performance with their boards:
 - Internal Recirculation
 - Hot Spot Build Ups
 - · Pre-Heating from one PSU source to another
 - Improper Ventilation
 - Fan Failure

The Solution

- The Aavid team evaluated all elements that may be an issue for airflow due to this unique application.
- Aavid discovered that proper fan selection was needed to maintain less than 10°C average air temperature rise across the highest temperature board within the product.
- Design analysis showed there was inadequate ventilation to provide uniform airflow distribution over the suspect areas of failure.

The Deliverables/Results

- Aavid delivered a full board and system level thermal design analysis and recommendations for the next generation product.
- With proper uniformed airflow due to change in board layout has avoided risk of failure for this critical application.
- The client has expanded by utilizing their dependable equipment globally. Today the client reaches some of the most remote places in the world to help connect those who haven't been able to before.

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