Case Study

Small Cell Base Station

Why Change

> Simplify installation through size and weight reduction

> Future-proofed design can be adapted for different requirements

Application Background

Customer builds small cell base stations and repeaters for global telcom suppliers and system integrators. Installation up poles and in extreme environments meant size, weight and temperature range were all critical.

Challenges

Customer needed to save system space, ideally by integrating the power supply onto the system board. EMI and transient immunity were important considerations as the product needed to be sold worldwide.

Why Vicor?

Using the Vicor PFM in a VIA package for the dual rail 200W AC-DC supply enabled the customer to reduce size by 60% compared to competing discrete solutions. Conduction cooling of the PSU to the case improved thermal performance. The Vicor applications team demonstrated a reference design and supplied documentation on EMI performance, they also assisted with advice on transient immunity.

Link to Whiteboard »

Power Supply Specifications	
Input	85 – 265 VAC 50/60 Hz
Outputs	30V 120W RF
Load	5V 80W Digital + Processor