The Solution

A complete solution was developed, with the PFM Isolated AC-DC Converter (9.4 mm high) and its companion AIM taking the universal AC mains voltage and converting it directly to a 24V hub powering three rails. Two of the rails used a ZVS Buck Switching Regulator (2.56 mm high), one to provide a regulated 24V, the other a regulated 5V. The third rail utilized a PRM Regulator to regulate the voltage to 48V, with a VTM Current Multiplier (both 6.73 mm high) providing the isolation to the load.

The Results

All five modules used provided the industry's highest density, lowest profile power components, enabling the thin, low visibility solution required. High efficiency, particularly of the PRM/VTM and ZVS Regulators reduced requirements for conduction cooling, further minimizing the form factor. The complete portfolio of scalable power components, from the source to the point of load, provides upgrade capability to the antenna, without the need for an expensive redesign.