Case Study

Portable Medical Equipment

Why Change

> 180-day lead-time reduced to one day

> Only one solution to meet ten different customer requirements

Application Background

This company specializes in embedded industrial and medical designs. They make portable power solutions for medical devices and their innovative intelligent battery system has won international awards.

Challenges

To respond quickly to different requirements of the market the target was to have a system that could be configured from distributor inventory, rather than at the factory, reducing end-customer lead-times from months to days. By avoiding configuration at the factory this customer achieved further cost and cash-flow benefits through shipping higher volumes of standard product to their customers and distributors.

Why Vicor?

Space Savings:

> Small size (10 x 14mm) and low profile (2.6mm)

> Smaller heat sink due to high efficiency (>98%)

> Complete power supply fits into the mobile charger station

Cost Savings:

> One box instead of two (one for the charger station and one for the power supply)

> Only one single solution, to be configured at the distributor

One single part number (PI3749 ZVS Buck-Boost Regulator) for all configurations:

> Operation from different batteries due to wide 2:1 input voltage range

> Easy configuration of different output voltages due to wide output voltage trim (30-100% of nominal, increased range with I^2C)

Link to Whiteboard »

Power Supply Specifications	
Input	16 – 28 V_{DC}
Outputs	12V, 19V, 24V, at up to 150W
Load	A wide variety of different battery chargers