VICOR

Case study: Ground mobile radar



Adjusting one of the VITA supply voltage outputs easily and quickly

Customer's challenge

Recent battlefield experiences demand the rapid introduction of new protection systems for armored vehicles capable of detecting incoming threats: drones, micro-drone, projectiles and guide countermeasures. Time-to-market as well as a modern, open system architecture were essential to meet the market demands: the customer needed a VITA 62 compliant power supply but also customized outputs as well a quick development time and cost-effective NRE. The key goals were:

- Reduced time to market
- Customized outputs to meet specs
- Perform in the harsh conditions of battle

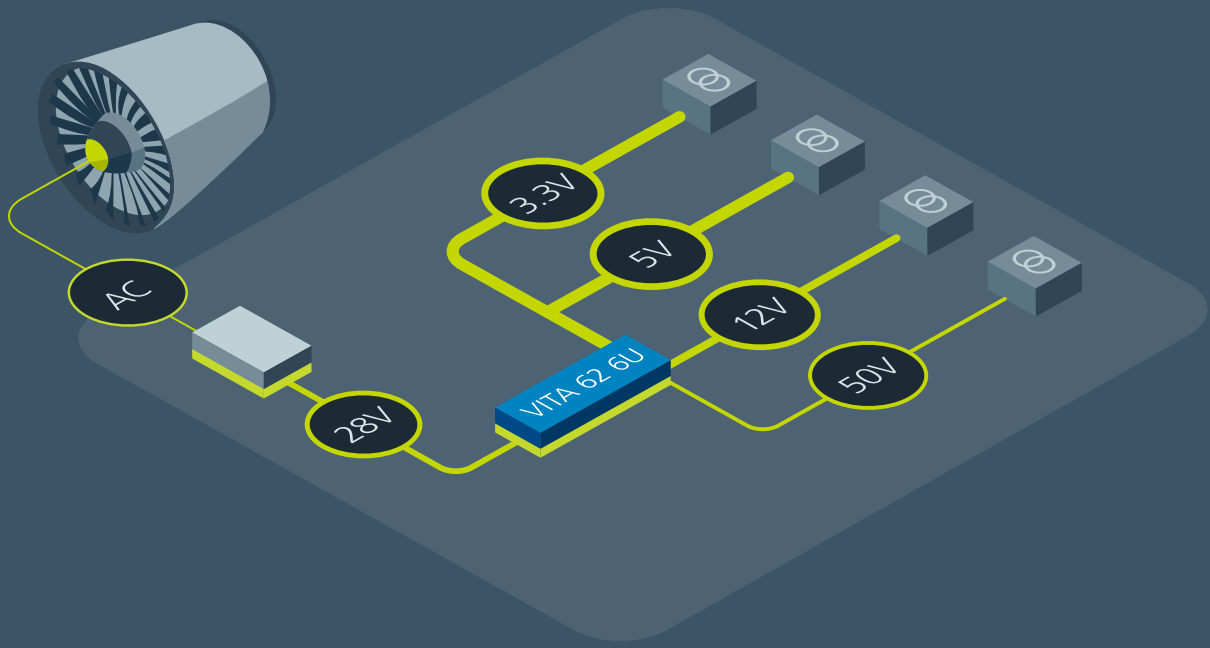
The Vicor solution

Vicor VPX solutions are time- and cost-efficient but also eliminate the need for re-engineering and trouble-shooting complex discrete component designs. In-depth tests verified system robustness in the demanding environment of modern armored vehicles. The supply was configured to provide the specific output required for radar main power supply, while maintaining VITA 62 compliance. Key benefits were:

- Reduce time to market and lower non-recurring engineering
- A customized output voltage for the radar power supply
- Rugged, reliable power supply

The power delivery network

Vicor rugged, VITA 62 SOSA compliant OpenVPX Power Supplies, based on Vicor DCM™ DC-DC converters provide not only unrivaled power density and reliability but are also easily configurable. This solution can provide up to 800W within the 3U package and employs high efficiency, two-sided conduction-cooled modules. Up to four power supplies can be paralleled to increase output power capability with proprietary wireless current sharing.





VITA 62 power supply

VPX systems

Input: 18 – 42V, 18 – 45V, 220 – 320V

Output: 28, 12, 5, 3.3, –12V

Power: 3U 750W, 6U 1000W

Full power to 85°C (at card edge)

As small as 3.9 x 6.6 x 0.95in

vicorpower.com/vita-62

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