VICOR

Case study: Display control unit for armored vehicles

A rugged, plug and play solution that satisfies multiple voltages in a single package

Customer's challenge

Displaying mission-critical data, sensor feeds, and navigation in extreme environments requires a rugged power supply that is reliable in the harshest of conditions. These units function over wide operating temperature ranges and the power supply must adhere to MIL-STD. Using a standardized VPX power supply would gain efficiencies in engineering efforts and cost. The key goals were:

- Standardization of the power supply
- Need for high reliability in harsh conditions
- A cost-effective solution

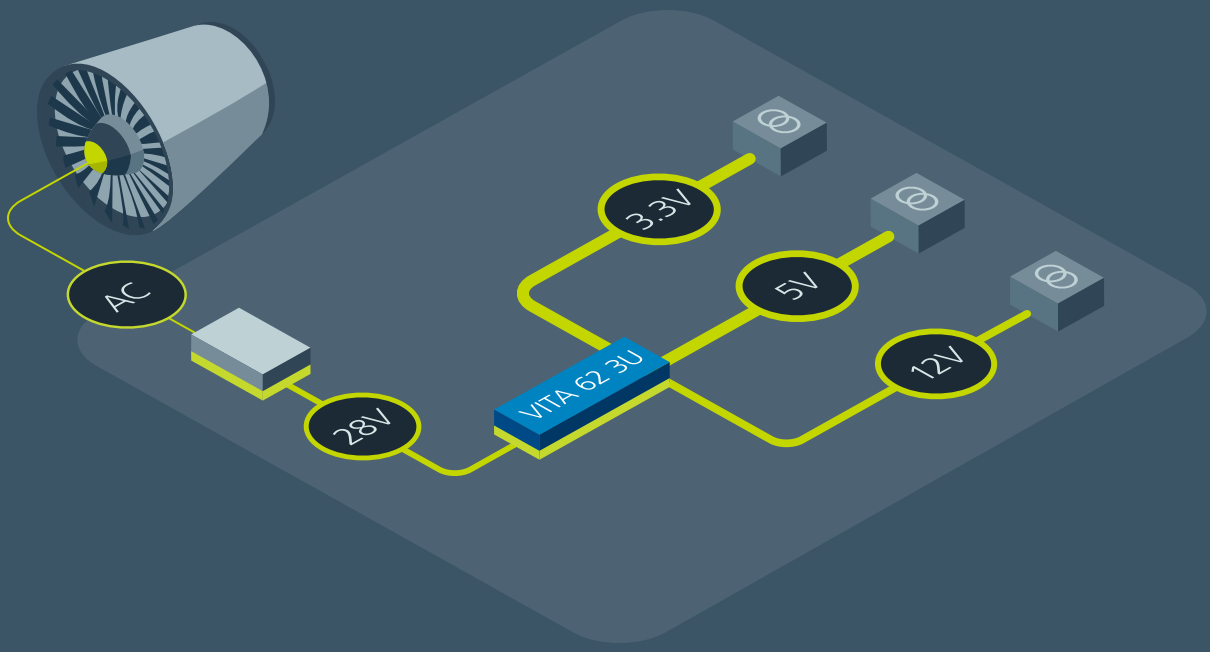
The Vicor solution

Vicor VITA 62 power supplies are based on high performance Vicor power modules. The high power and current delivery, strong thermal performance, and reliability of Vicor products ensure longer mission times and superior system endurance. These VPX power supplies are configurable, rugged, and meet MIL-STD. Key benefits were:

- VITA 62-compliant 3U solution
- Rugged, reliable power supply for harsh conditions
- Applying over 40 years of experience in aerospace and defense applications

The power delivery network

The Vicor VITA 62-compliant 3U power supply is based on Vicor DCM™ DC-DC converter technology, which provides superior density in a low-profile package. This solution can provide up to 600W within the 3U package. Thermally adept packaging ensures high performance under harsh conditions, efficiency powering the downstream loads.



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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