VICOR

Case study: Long range surface mapping radar

A configurable VITA 62 supply that mitigates engineering efforts

Customer's challenge

To further advance the radar's capabilities to detect maritime targets, identify weather concerns, and support search and rescue efforts, a configurable system – unlike a discrete solution – needs to be multi-sourced and mitigate engineering efforts to bring the product to market sooner. Reducing overall weight would also benefit the host vehicles now equipped with more technology and functionality. The key goals were:

- Meet specific output voltage requirements
- Reduce time to market and lower non-recurring engineering costs
- Reduce weight

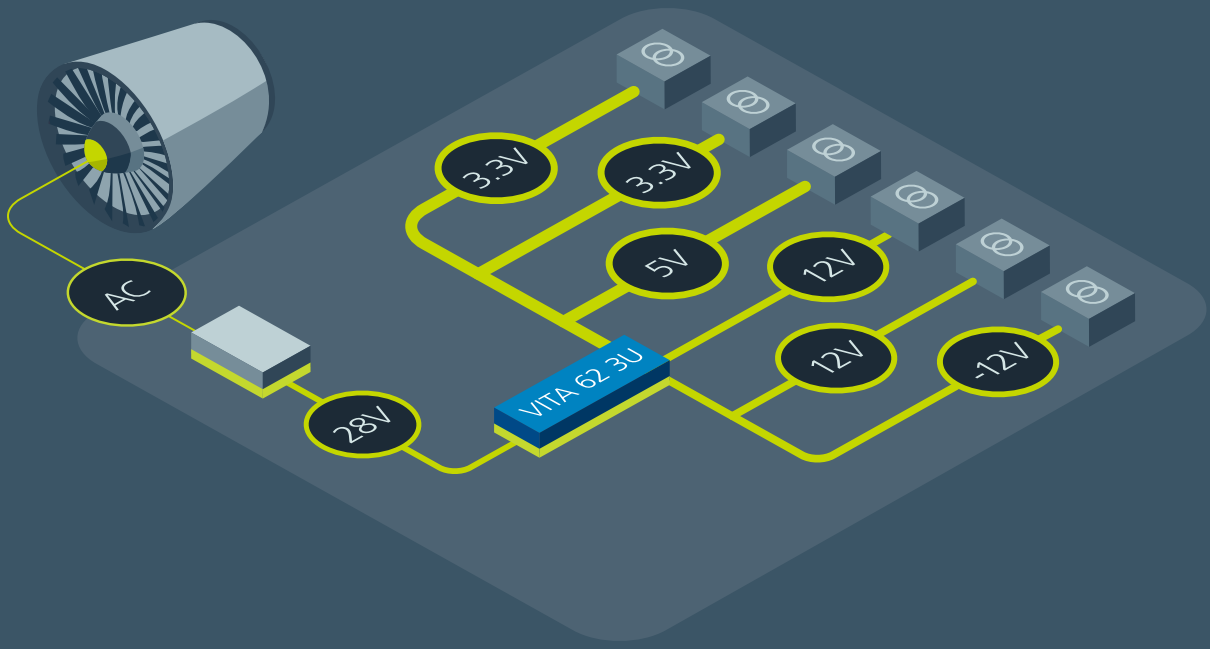
The Vicor solution

Vicor VITA 62 compliant power converters address the challenge of evolving power demands and migrating to a standard unit power supply. They are based on Vicor high performance power modules and efficiently deliver the power and voltages required within the standard footprint. The VPX power supplies are configurable, rugged, and meet MIL-STDs. Key benefits were:

- Supporting multiple output voltages
- Configurable register settings to ensure interoperability
- Significant weight reduction

The power delivery network

The 600W Vicor VITA 62-compliant 3U power supply is based on low-noise Vicor DCM™ DC-DC converter technology, which provides superior density in a low-profile package. Employing high efficiency, two-sided conduction-cooled modules, the Vicor VITA 62 and considerably improves the overall thermal management while 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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