VICOR

Case study: Aircraft radar



# High reliability VITA 62 supply that handles unique current requirements

## Customer's challenge

Aircraft radar systems have unique power and current requirements driven by the need for high-peak power, rapid scanning, and strict environmental constraints (weight, space, and altitude). Modern airborne radars require sophisticated power management to handle rapid, high-current pulses for transmitter modules while operating within the stringent limits of aircraft electrical systems. The key goals were:

- Need a high reliable power converter used in harsh conditions
- Meet the power and current requirements
- Reduce time to market

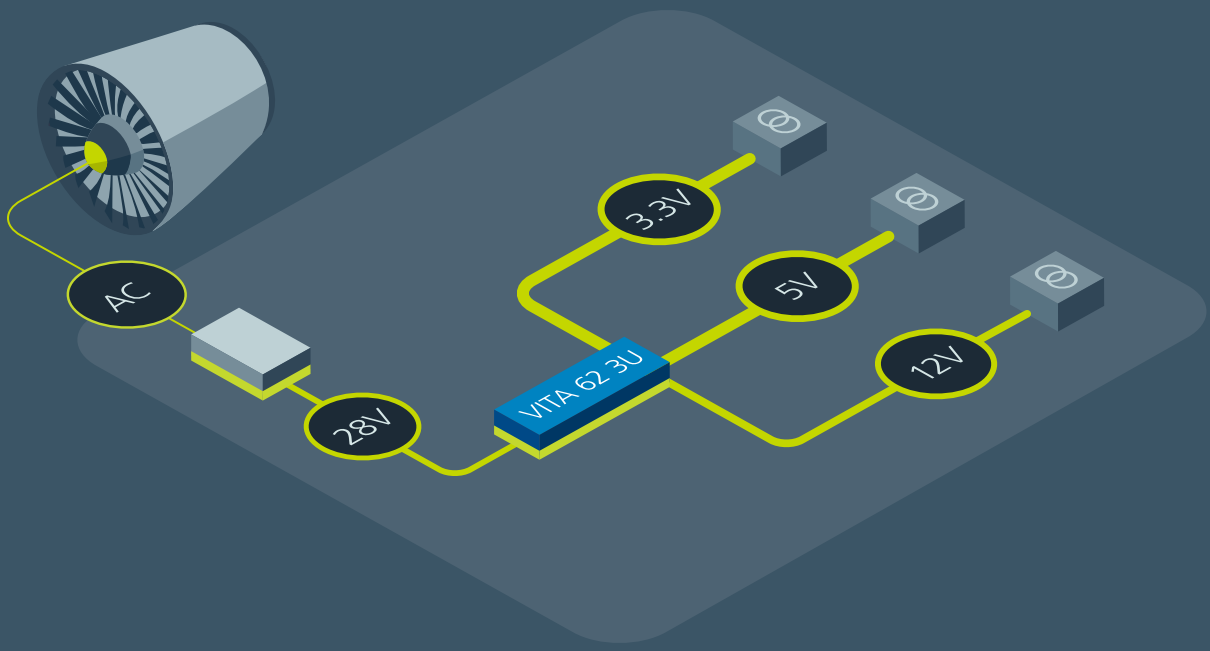
## The Vicor solution

Vicor VITA 62 power supplies are based on Vicor high performance Vicor DC-DC converter technology. The high power and current delivery, strong thermal performance, and reliability of Vicor VPX products ensure longer mission times and superior system endurance to support crucial missions. Key benefits were:

- Over 40 years of heritage powering aerospace and defense applications
- Highly rugged, conduction-cooled supply
- Quicker prototyping and time-to-market

## 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. Employing high efficiency, two-sided conduction-cooled modules, the Vicor VITA 62 converter meets the 85°C operational temperature (at the card edge) 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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