



HIGH VOLTAGE DC-DC CONVERTERS

ULTRA-LIGHT WEIGHT SOLUTIONS

A new family of highly efficient, robust DC-DC converters for safety-critical applications in aerospace and defence. The core 1kW, 800VDCin - 28VDCout unit has been designed to scale to ~10kW and be tailored for a wide spectrum of input and output voltages. Efficiency of up to 96%, achievable using modern, broadband switching technology.

Increasingly electric aircraft platforms require more electric systems, and **TT Electronics is here to help you fulfil your most challenging needs.**



Designed to meet
DO-160G and MIL-STD-1399

Flexible, Scalable DC-DC Converters

- Power range: 100W to 10kW
- Input Voltages: 270-400-540-800VDC
- Output Voltages: 20-28-48V DC
- Up to 1500V Isolation input and output
- Single or multiple output options
- Electrical modules can be connected to extend the power rating
- Status monitoring, with short circuit and over voltage protection
- Custom packaging available
- Various cooling options available to suit application

Compliant to D0160G:

- Conducted and radiated susceptibility
- Conducted and Radiated emissions
- Lightning and Induced susceptibility

Modular Electrical Design

At its core, this new DC-DC converter uses an advanced, zero-volt switching topology and the latest technology switching devices to optimise the overall size, weight and power losses.

The highly modular and scalable design allows flexibility for a wide variety of power ratings, and input/output voltages, with rapid tailoring, reducing cost and time for deployment to a specific application.

The converter module interface directly to the High Voltage DC Bus on the Aircraft and provide high-quality localised 28V power suitable for onboard ancillary equipment.

Built-in internal filtering, screening and protection ensure compliance to latest DO160 RF emissions, RF susceptibility and lightning standards.

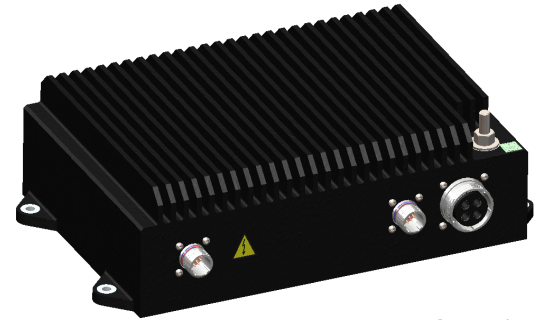


Image Configuration:
Convectively cooled,
1kW 800Vdc unit

Launch Unit

- Input: 800Vdc nominal
- Output: 28Vdc nominal
- Power: 1kW
- 96% efficiency

Performance Summary:

Key Characteristics	
Input Voltage	800 Vdc
Output Voltage	28 Vdc \pm 2%
Output Ripple Voltage	<1.0V
Maximum Current	36 Amps
Output Power	1kW
Efficiency	96% at full load
Operating environment Temperature	-40 °C to +70 °C
Over Voltage Limit	Configurable
Over Current Limit	Configurable
EMI Filter	DO-160, Section 21, Cat. M
Cooling Method	Convection
Environmental Protections	DO-160G