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DC-DC Power Solutions For Mission-Critical Applications Are Highly Scalable

VPT's FLX series configurable dc-dc converter power solutions are engineered for mission-critical applications requiring robust, turnkey power conversion. The converters integrates VPT's proven dc-dc converters and EMI filters (MIL-STD-461) into a rugged, scalable housing designed for the harshest environments. This configurable framework enables engineers to accelerate system integration by consolidating multiple converter modules into a single, qualified assembly.

"The new FLX series is highly scalable, optimizes SWaP, and delivers exactly the power and voltages a customer's system needs," said Kevin Seaton, advising engineer at VPT. "We designed this series for rugged environments and favorable lead times, each assembly is prequalified to military standards and offers configurable output rails through preferred connector interfaces for streamlined power integration." See the figure.

The FLX series is built to perform in demanding conditions including high shock, vibration, and wide temperature ranges. Units operate continuously from -55°C to as high as +110°C with no power derating, making them suitable for airborne, ground, and space platforms. For space applications, radiation capabilities range from radiation tolerant (30 krad(Si) and 42 MeV) to radiation hardened (100 krad(Si) and 85 MeV), depending on the selected converter model series.

Other features include three mechanical configurations (vertical, horizontal, and stacked); current limit and short-circuit protection, remote sensing, load sharing and undervoltage lockout. Units also offer the benefits of fixed frequency operation, no optocouplers and configurations meeting MIL-STD-461, MIL-STD-704, MIL-STD-1275, and DO-160. Additional features are available.

The FLX series dc-dc converters are manufactured in facilities certified to SAE AS9100, J-STD-001 (Space Addendum), and IPC-A-610.

The FLX series is available now. To learn more about this product, see the product [page](#), contact a local [VPT distributor](#), or connect with the company at an [upcoming event](#). Also see VPT's webinar, "[Powering NewSpace Missions Faster: Integration Solutions That Reduce Design Risk](#)" for example product configurations created with this series.

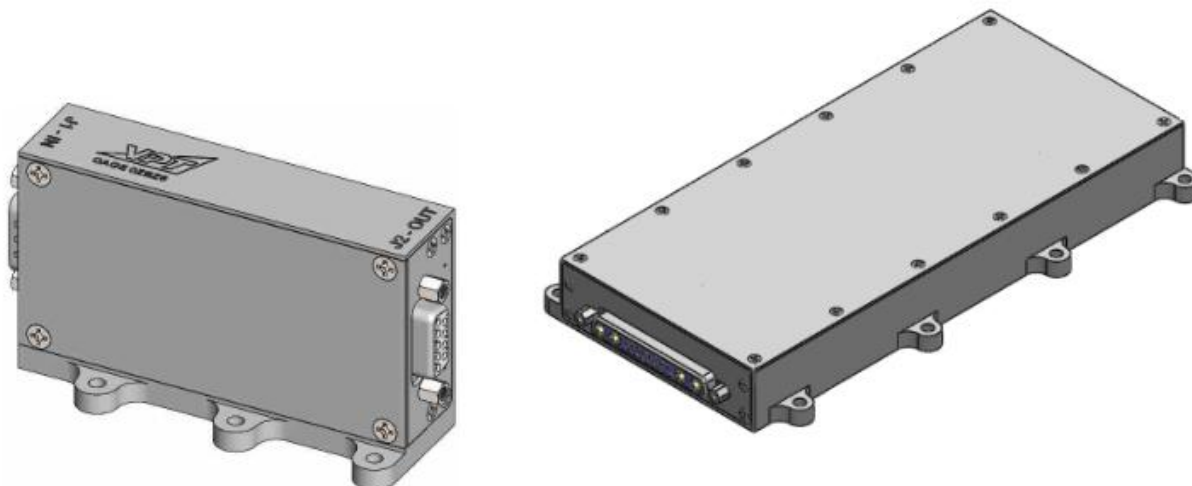


Figure. Supporting standard 28-V, 50-V, and 270-V bus voltages, the FLX series delivers 1 W to 5,000 W of output power with efficiencies up to 90%. Each unit is configurable with multiple outputs, enabling engineers to consolidate multiple converter modules into a single, qualified assembly that simplifies system integration, saves engineering time, and ultimately reduces design risk.