

PWR1100 Series

Integrated AC/DC Power Conversion, UPS & Distribution

Designed strictly as an integrated, high-capacity AC/DC conversion and online double-conversion UPS platform for primary node power resilience. It is the ideal fit for mobile command centers and tactical shelters—such as containerized headquarters or tactical data centers—where seamless 0 ms battery transition and maximum downstream device distribution are required within a standard 2U chassis profile.

Key Features

Primary Power Role

Power Distribution

Power Isolation

Seamless Backup

Remote Management

Central High-Density Power & UPS Node

Up to 9 regulated DC outputs, eliminating extra PDUs

Double-Conversion UPS for clean, continuous power

0 ms transfer to battery with extended runtime

Secure SNMPv3 monitoring and control

Capabilities

The PWR1100 Series is a high-density, mission-critical AC/DC power conversion and UPS hub designed for tactical command posts and shelters. Operating on an online double-conversion topology, it delivers regulated 28 VDC distribution without voltage sags, ensuring ultra-low noise power across large server networks.

The platform features secure network management via SNMPv3 and a true 0 ms seamless transition to battery power. Power security is enforced via hardware-level circuit isolation and transient filters. It includes a high-density layout with up to 9 output channels.

The capabilities of the PWR1100 series include:

- **Clean Power Generation:** Continuous AC-to-DC rectification that scrubs generator harmonics and frequency shifts.
- **Galvanic Load Isolation:** Total electrical separation between the input grid and connected tactical servers.
- **High Output Scalability:** Supports multi-device server racks by maintaining peak wattage across all 9 ports simultaneously.
- **Encrypted Power Management** Full SNMPv3 cryptographic authentication protecting telemetry data from interception.
- **Extended Bridge Window:** Battery runtime optimized to keep core networks active during standard generator refuel cycles.

Form factors

The PWR1100 series offers different form factors depending on best fit for a particular use case.

Standard 19"/2 form factor	Customized form factor
	
▪ Form, fit and function over multiple generations ▪ Long-term roadmaps	▪ Project driven form factor

MilDef 19"/2 modular design

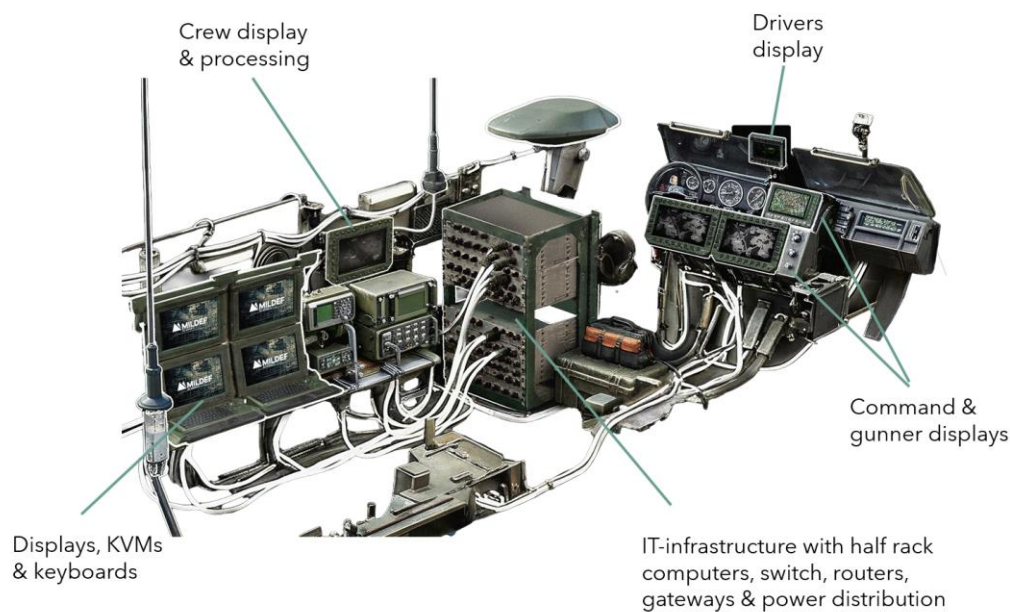
The MilDef 19"/2® addresses the requirements for small, high performance IT hardware. The modular design and broad product offering (computer, network, power and peripherals) enables the use of 19"/2® units as building blocks for creating built to purpose solution. Same form factor over multiple generations enable reuse of cable, mounting solution etc for midlife upgrades along the system life cycle.

Solution provider

MilDef offers solution and integration delivering seamless, end-to-end solutions by integrating hardware and software into complete systems that meet customer requirements. Managing integration projects/programs to ensure alignment with mission objectives/business strategy and technological capabilities.

Hardware ECO-system

Our hardware offering including all the building blocks for complete IT infrastructure for the tactical edge, such as displays, network products, power products, docking stations, mounting solutions etc.



Use case

The PWR1100 series is a core component of many tactical platform designs. Some use case examples are:

- **Mobile Command Posts & Headquarters:** Serves as the central power node, scrubbing generator anomalies and providing battery backup during refuel cycles.
- **Tactical Data Centers:** Feeds large rack installations with isolated, regulated 28 VDC to protect high-density blade servers and switches.
- **Containerized C2 Shelters:** Integrates into rapid-deployment shelters to ensure continuous uptime for battle management systems during grid failures.
- **Strategic Communications Gateways:** Protects satellite terminals, transceivers, and cryptographic gear from fatal power transients and grid sags.



Specifications

System & Interfaces			
Platform Positioning & Architecture Type	Integrated AC/DC Power Conversion, UPS and Power Distribution Platform	Primary Input Type	AC Utility / Generator / Shore Power
Distribution Capacity	High-Density Power Distribution	Input Voltage Range	Wide-Range AC Input
Power Class & Performance	High-Capacity Regulated Output	Power Function	AC/DC Conversion & Distribution
Chassis Form Factor	Fixed 2U	Power Outputs	Up to 9 x DC Outputs
Core Capabilities			
Power Conversion Capability	AC to regulated 28 VDC conversion with integrated UPS functionality	Peak Power Handling	Supports high startup and inrush current loads
UPS Topology	Online Double-Conversion UPS	Power Transition Performance	Seamless transfer to battery operation
Energy Storage (UPS)	Integrated Lithium-Ion Battery, typical battery capacity 10.8 Ah	Zeroization	Yes
Hold-Up Capability	Extended hold-up time for power interruptions and transients	Expansion Capability	Standalone Power Node
Tactical & Mission Services			
Power Protection	UPS protection, surge protection, transient suppression, and regulated output	Typical Load Types	Servers, Networking Equipment, Communications Systems
Power Resilience Features	Integrated battery backup and uninterrupted operation during source failure		
Deployment & Architecture			
Primary Mission Use Case	Central Power Node for Tactical Shelters and Command Posts	Cooling Concept	Passive Conduction and Convection Cooling
Typical Deployment	Command Posts, Communications Shelters, Tactical Data Centers	Network Position	Primary Power Layer
Environmental			
MIL-STD-810			
Shock operating	Functional Shock. 40G/11ms	Noise level	Max noise level of 40 dB SPL 1 m (3.3 ft)
Temp. operating	-40 to 65°C (-40 to 149 °F)*	Salt fog	5 ± 1%
Temp. storage	-40 to 71°C (-40 to 160 °F)*	Temp. shock	55 °C (131 °F) / -40 °C (-40 °F)*
Humidity	Aggravated, 95 ± 4% RH	Vibration	Rotary wing aircraft - helicopter
IP Class	IP65*		Truck/trailer - loose cargo
Low air pressure	Rapid Decompression 8000 ft / 40000 ft Operation/Air Carriage 15,000 ft		Ground vehicles - ground mobile tracked
			Ground vehicles - ground mobile wheeled
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
EMC			
MIL-STD-461			
EMI/EMS	Ground Army	ESD	CS118
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
Power			
Vehicle Power	MIL-STD-1275		
Optional standards			
VG, DEFSTAN, MIL-STD, etc can be included on request.			

*Higher available on request