

PWR2100 Series

Compact AC/DC Power Conversion, UPS & Distribution

Designed strictly as a space-optimized, highly mobile AC/DC conversion and online double-conversion UPS platform for space-constrained deployments. It is the ideal fit for compact shelters, vehicle platforms, and mobile communications fly-away kits—where critical computing networks require absolute power protection and seamless battery transition within a slim 1U chassis profile.

Key Features

Primary Power Role

Power Distribution

Power Isolation

Seamless Backup

Remote Management

Chassis Form Factor

Compact SWaP-Optimized Power & UPS Node

Up to 4 regulated DC outputs for tactical equipment

Double-Conversion UPS for clean, conditioned power

0 ms transfer to internal Lithium-Ion battery

SNMPv3 monitoring, switching, and diagnostics

Ultra-low profile 1U rackmount for vehicles and transit cases

Capabilities

The PWR2100 Series is a compact, highly reliable AC/DC power conversion and UPS platform engineered for SWaP-constrained environments. By leveraging an online double-conversion architecture, it ensures a constant, ripple-free 28 VDC feed to mission-critical infrastructure while occupying minimal rack space.

The unit balances internal energy storage with rapid thermal dissipation through passive cooling. It integrates deep remote monitoring capabilities alongside rugged mechanical isolation, featuring remote load isolation and automated power conditioning tailored for highly mobile deployment units.

The capabilities of the PWR2100 series include:

- **Harmonic Noise Suppression:** Filters and conditions fluctuating input power from tactical fields and mobile generators.
- **Space-Efficient Protection:** Delivers full UPS battery backup capabilities without exceeding a 1U rack footprint.
- **Localized Grid Autonomy:** Keeps local tactical switches, routers, and edge computers alive during short-term source dropouts.
- **Secure Remote Administration:** Supports encrypted SNMPv3 protocols to safely report battery health and runtime analytics.
- **Instant Load Shedding:** Allows remote operators to isolate specific outputs during power crisis or zeroization routines.
- **Passive Thermal Management:** Operates silently without cooling fans, preventing dust or moisture ingress in harsh field environments

Form factors

The PWR2100 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

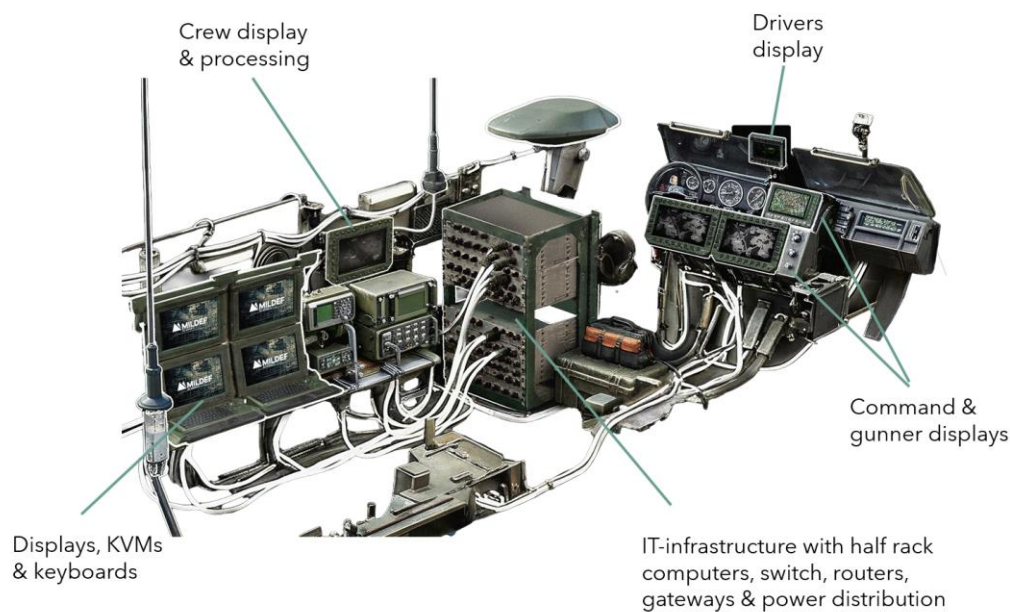
The MilDef 19"/2® addresses the requirements for small, high performance IT hardware. The modular design and broad product offering (computer, network, power and peripherals) enables the use of 19"/2® units as building blocks for creating built to purpose solution. Same form factor over multiple generations 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 PWR2100 series is a core component of many tactical platform designs. Some use case examples are:

- **Fly-Away & Transit Case Kits:** Provides built-in UPS and AC/DC conversion inside mobile communication cases for rapid-response forces.
- **Compact Communications Vehicles:** Fits shallow racks inside small vehicles, supplying regulated power to tactical routers and modems.
- **FOB Command Nodes:** Acts as a localized power shield for small edge-computing stacks against unpredictable camp grids.
- **Mobile SIGINT Stations:** Safeguards delicate interception gear from ripples while maintaining an ultra-low noise floor.



Specifications

System & Interfaces			
Platform Positioning & Architecture Type	Compact AC/DC Power Conversion, UPS and Power Distribution Platform	Primary Input Type	AC Utility / Generator / Shore Power
Distribution Capacity	Medium-Density Power Distribution	Input Voltage Range	Wide-Range AC Input
Power Class & Performance	Medium-Capacity Regulated Output	Power Function	AC/DC Conversion & Distribution
Chassis Form Factor	Fixed 1U	Power Outputs	Up to 4 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 4 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	Space-Constrained Communications and Networking Systems
Power Resilience Features	Integrated battery backup and uninterrupted operation during source failure		
Deployment & Architecture			
Primary Mission Use Case	Compact Power Node for Space-Constrained Deployments	Cooling Concept	Passive Conduction and Convection Cooling
Typical Deployment	Compact Shelters, Vehicle Platforms, Mobile Communication Systems	Network Position	Compact 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		Ground vehicles - ground mobile tracked
	Operation/Air Carriage 15,000 ft		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