



AI / EDGE COMPUTING

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## APPLICATION GUIDE

*Power Solutions Across Every Industry*

## INDUSTRY OVERVIEW

AI workloads and edge computing deployments represent the fastest-growing segment of IT infrastructure, pushing power density requirements to unprecedented levels. GPU-accelerated servers, inference appliances, and IoT gateways demand more watts per rack unit than traditional compute — and they demand it with zero tolerance for power interruptions.

Edge computing adds physical distribution challenges. Micro data centers, 5G MEC nodes, and AI inference points are deployed in retail locations, factory floors, cell towers, and autonomous vehicle infrastructure — locations where power quality is variable, space is constrained, and remote management is essential because on-site IT staff don't exist.

## WHY INSTALL POWER PROTECTION FOR AI & EDGE?

### GPU Workload Protection

AI training and inference jobs running on GPU clusters can take hours or days. A brief power event can corrupt model weights, lose training progress, and require full restart.

### Power Density

GPU servers draw 2–4x more power than traditional servers. High-density UPS solutions must deliver maximum wattage in minimum rack space.

### Edge Site Reliability

Edge deployments in unmanned locations need autonomous power protection with remote management — there's no IT team on-site to handle power events.

### Data Pipeline Integrity

Real-time AI inference, sensor fusion, and autonomous systems require uninterrupted data pipelines. Power events at edge nodes cascade through the entire processing chain.



*This application guide helps infrastructure architects, edge computing operators, and IT directors select power solutions for AI inference servers, GPU clusters, and distributed compute deployments.*

## EQUIPMENT PROTECTED

- GPU Inference Servers
- AI Training Clusters
- Edge AI Appliances (NVIDIA Jetson, etc.)
- IoT Gateway Aggregators
- 5G MEC Compute Nodes
- Autonomous Vehicle Infrastructure
- Real-time Sensor Fusion Platforms
- Edge Storage & Caching Servers

## RECOMMENDED MINUTEMAN SOLUTIONS

### Endurance® Lithium-Ion Online UPS

- LiFePO4 — ideal for high-density GPU rack rows
- Double-conversion, zero transfer time
- [SNMP](#) card slot
- 10-year battery design life — lower TCO
- Lightweight for edge site deployment
- Reduced service cycles in remote locations

### Endeavor® 5–10kVA Online

- 5–10kVA for GPU server clusters
- High power factor (>0.9)
- Efficiency up to 96% — critical for always-on AI
- Handles high inrush current from GPU power supplies
- [SNMP](#) card slot
- Extended Battery Modules “EBMs” for extended runtime

### Encompass® RTX Online UPS (1–3kVA)

- TAA Compliant for government edge sites
- Compact double-conversion
- [SNMP](#) card slot
- Rack/Tower for space-constrained edge locations
- Extended runtime ready with EBMs

### Power Cabinet (24U / 42U)

- Integrated rack + UPS for edge micro data centers
- Locking cabinet for unmanned sites
- 42U and 24U configurations
- Organized cable management and ventilation
- Plug and play ready for ease of IT deployment

### EXR® Series Line Interactive UPS (750VA–3kVA)

- True sine wave output for ML accelerator cards
- Rack/Tower for micro data centers
- Extended runtime via EBMs
- [SNMP](#) ready for NOC integration

## OE SERIES POWER DISTRIBUTION UNITS (PDU)

### OE Series Basic PDU — Rack-Mount Power Distribution

OE Series PDUs are critical for high-density AI/edge racks — distributing UPS-protected power to GPU servers, switches, and storage devices. Multiple outlet configurations support dense rack layouts.

- Horizontal rack-mount form factor — 1U or 0U vertical configurations
- Multiple outlet counts (6, 8, 10, 12, 14, 16, 20) to match any deployment
- 15A and 20A circuit breaker options for standard and high-power loads
- Cost-effective clean power distribution delivered to every device in the rack

## ACCESSORIES, SOFTWARE & SUPPORT

### RPM® Remote Power Managers

Remote reboot of edge nodes — eliminate truck rolls. Per-outlet energy monitoring for OpEx tracking. [SNMP](#)/web integration with AI operations monitoring stacks.

### SNMP Monitoring Cards

Integration with AI infrastructure monitoring platforms. Real-time power metrics for capacity planning and GPU cluster power management.

### SentryHD Software

Automated graceful shutdown of edge inference servers. Coordinated VM and container shutdown to protect AI workloads during extended outages.

### Service Programs

Extended warranty and preventive maintenance for remote edge sites. Battery replacement programs ensure runtime readiness at unmanned locations.

### Free Online Tools

[www.sizemyups.com](http://www.sizemyups.com)

[www.sizemypdu.com](http://www.sizemypdu.com)

[www.comparemyups.com](http://www.comparemyups.com)