Unsurpassed Energy Resiliency & Security

- Best-in-class microgrid controls tested and field-proven at military & commercial sites
- Industry-leading cybersecurity accredited by the US Department of Defense, exceeding Risk Management Framework (RMF) standards
- Distributed peer-to-peer communications eliminate the single points of failure common in outdated master-slave designs
- Redundant controls architecture provides unparalleled resiliency
- Automatic, intelligent optimization of generation and load assets
- Provides rapid re-integration of lost assets through self-healing
- Readily scalable to adapt to changing microgrid configurations
- Automatic demand response using internal algorithms or external signal
- Works with new and legacy power generation equipment
- Compatible with all common industrial communications protocols, including Modbus and CAN
- Wired or wireless encrypted control communications

GridMaster® System at a Glance

The GridMaster® is a community of Intelligent Power Controllers (IPC) networked in a distributed architecture. The GridMaster® operates as a hive concept, where each IPC represents a specific piece or group of equipment. All of the IPCs are in constant peer-to-peer communication with each other. The combined computer processing capabilities enable complex optimization algorithms and provide intelligent load balancing and prioritized microgrid operations.

The distributed design and construction ensures all electrical demand is satisfied while maximizing efficiency and eliminating single points of failure. Ultimately, the GridMaster® is an economical and effective way to achieve maximum energy independence, providing:

- Reduced energy costs
- Reduced fuel consumption and CO2 emissions
- Reduced maintenance
- Optimal integration of renewable energy and energy storage assets
Accredited Cybersecurity Expertise

IPERC’s GridMaster® makes advanced microgrid cybersecurity cost-effective and practical. Built-in cybersecurity minimizes the up-front and long-term costs of maintaining security, and removes the need for costly third-party cybersecurity solutions.

Advantages of integral controls cybersecurity include:

- A complete set of modern protections and countermeasures; no legacy weaknesses
- Avoidance of conflicts between system functionality and security
- Automatic quarantine of compromised components without disrupting the broader system
- Simple and quick patch management and system restoration

GridMaster’s wide array of security features has been successfully validated & accredited by the US Department of Defense with formal Approval to Operate (ATO) issued at multiple sites. GridMaster’s defense-in-depth approach incorporates security features at every level, including:

- Policies & Awareness
- Physical Security
- Perimeter Protection
- Monitoring & Forensics
- Encryption
- Host-based Security
- Access Control
- Patching & Recovery

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GridMaster® Intelligent Power Controllers (IPCs) include a single-board computer, software, cybersecurity features, and standard communications interface modules. Optional modules for advanced communication are available. For custom configurations, please contact the factory.