

FUNDAMENTALS



**GRIDMASTER®
INTELLIGENT
POWER CONTROLLER**



**PROGRAMMABLE LOGIC
CONTROLLER (PLC)**



**CLOUD-BASED
CONTROLLER**

DESIGNED FOR



MICROGRIDS

Software and hardware system is built specifically for secure microgrid applications.



INDUSTRIAL AUTOMATION

Repurposed system originally was designed for a wide variety of repetitive automation processes.



DATA STORAGE

Remote, server-based control system was inspired by common data storage functions.

PROGRAMMING



EVOLVING CODE

Flexible control algorithms evolve and accommodate updates with no changes to core code.



LINEAR CODE

Specific instruction sequences require cumbersome custom engineering, making changes difficult.



REMOTE SOFTWARE

Open system requires uninterrupted wireless communication to local equipment for full functionality.

CYBERSECURITY



EMBEDDED CYBERSECURITY

Defense-in-Depth protection includes seven security layers built into the system.



SECURITY VULNERABILITY

PLCs originally were built with few or no security measures, and firewalls added later are vulnerable to penetration.



LARGE ATTACK SURFACE

Security is needed at every level, from local servers to remote devices, and there are many potential penetration vectors.

SYSTEM CONTROL



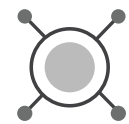
DISTRIBUTED CONTROL

Redundant architecture eliminates single points of failure and increases system resiliency.



PSEUDO-DISTRIBUTED CONTROL

PLCs typically are centralized. However, real-time automation controllers simulate a distributed architecture.



CENTRALIZED CONTROL

The centralized bus architecture with cloud-based control has a single point of failure, limiting resiliency.

