GRID MANAGEMENT

A UNIFIED SOLUTION FOR SYSTEM-WIDE AUTOMATION AND CONTROL

The emergence of low-cost sensor and control solutions as well as automation software is ushering in a new era of real-time grid management. This rapid proliferation of intelligent devices and applications promises to enable dynamic optimization at the grid edge, self-healing capabilities for rapid outage management, and perfect coordination of services from utilities and third party providers. Yet, with more frequent and destructive storms, more volatile, distributed generation sources, and rising customer expectations, many utilities are beginning to rethink the fundamental requirements of a modern, high-performance smart grid solution. In this environment, the traditional siloed approach will prove insufficient.

Utilities should demand a holistic smart grid solution that delivers on today's requirements while building a technology backbone to enable the next generation utility.

SilverLink™ Grid Management provides utilities with a unified platform for managing the ever increasing complexity of the smart grid. With SilverLink's open standards-based multi-application architecture, you can power a vast array of intelligent devices and software solutions that improve efficiencies, enhance system resilience and enable new services. SilverLink connects all of these systems seamlessly to your existing smart grid assets, empowering the modern utility with new capabilities while maximizing value to ratepayers.

Silver Spring®
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GRID MANAGEMENT

WHAT DOES THE FUTURE OF INTELLIGENT DISTRIBUTION LOOK LIKE?

Extensive deployments of communicating devices enable utilities to prevent, identify, and remedy grid related issues quickly and easily. These connected devices support advanced distribution network applications such as fault location, isolation and service restoration (FLISR), conservation voltage reduction (CVR) and integrated volt/VAR control (IVVC), and distributed energy resource management (DERM). The flexibility of the communications infrastructure empowers the utility to deploy hierarchical automation schemes supporting decision making at the grid edge with embedded compute and peer-to-peer nodes, at the substation with intelligent automation controllers, or at the control center with Advanced Distribution Management Systems (ADMS). With the SilverLink Grid Management solution, you can deploy a wide range of devices and sensors with reliable, high performance communications, leveraging proven technology to improve service quality and efficiency while building the foundation for the utility of the future.

WHAT IT IS

Real-time automation and control for critical assets: SilverLink provides best in class latency and throughput while maintaining high reliability and redundancy.
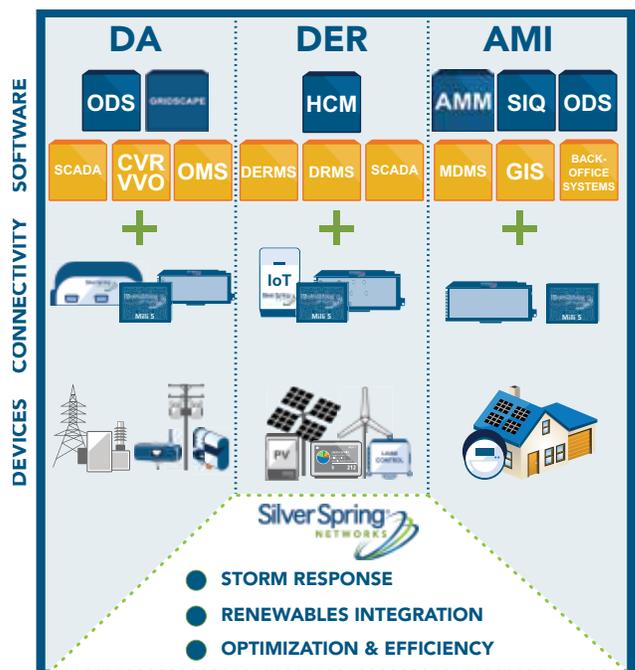
Convergence of IT/OT systems: Correlating data from AMI endpoints and automation services provides you with critical insight that leverages your entire smart grid to quickly identify anomalies and optimize grid operations in real time.

Embedded compute and peer-to-peer communications: Utilize intelligence at the grid edge and communications between automation endpoints to quickly identify and remedy localized problems.

Smart meters become intelligent grid sensors: SilverLink transforms your Smart Meter deployment into a highly utilized fleet of grid sensors.

Interfaces to enable transactive energy markets: Standards-based information interfaces connect multiple third party systems and data streams to a unified back-office or in peer-to-peer configurations.

Multi-application communications architecture: SilverLink provides a common network platform across AMI, Distributed Energy Resources and Distribution Automation solutions.

KEY BENEFITS

Deliver visibility and control from the control center to the grid edge: SilverLink offers a range of integration options with solutions for continuously powered, power harvesting and battery-backed devices.

Optimize operations in real time: SilverLink provides industry-leading bandwidth of up to 2.4 Mbps, 10 millisecond latency and distributed intelligence to support the most advanced smart utility applications available today.

Enhance quality of service: Grid edge intelligence, real-time data and peer-to-peer automation allow you to detect outages and resolve system anomalies faster.

Accelerate integration of distributed energy resources: Real-time awareness of distributed generation flows enable you to manage power quality and protect the network under all conditions.

Improve asset management and planning: Enhanced visibility helps you pinpoint problem areas to reduce the cost of maintenance and improve planning for distribution system upgrades.

Maximize choice, prevent vendor lock in and support long term innovation: SilverLink leverages widely adopted standards such as Internet Protocol Version 6 (IPv6) and Wi-SUN to maximize solution flexibility.

Industry leading security: SilverLink protects each device and application connected to your automation network with comprehensive security and data encryption at all levels.

Create a foundation to enable the utility of the future: A common communications solution reduces the cost and complexity of integrating third party services on your distribution network.
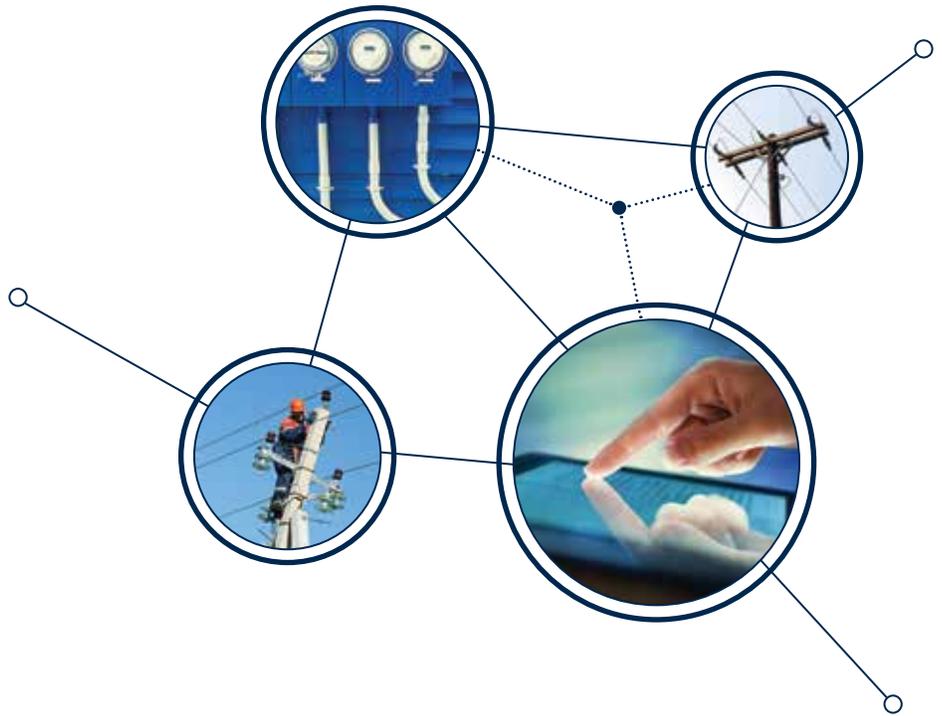
A HOLISTIC APPROACH TO GRID MANAGEMENT

The SilverLink Grid Management solution provides a unified platform, connecting multiple applications and device types across your distribution network. This unified approach, enables you to leverage granular data and intelligence from devices to optimize real time grid operations and improve asset management and planning.

» **Accelerate storm response** by combining automation devices with real time analysis of last gasp and restoration alerts, fault and current data.

» **Ease renewables integration** by leveraging complex power flow and load data to provide a granular view of the real-time state of the network.

» **Optimize grid operations** with high fidelity data from meters and line sensors to reduce losses, balance load, and improve power quality.

"By leveraging distribution automation on Silver Spring's unified standards-based network, ComEd has enhanced the self-healing capability of our electric grid, which allows us to resolve issues before customers might even be aware of them."

– Joe Svachula,
VP of Smart Grid and Technology,
ComEd

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Silver Spring Networks • 230 W Tasman Drive • San Jose, California 95134 • contact@ssni.com • + 1 669 770 4000

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