

The Itron logo is located in the top left corner. It consists of the word "Itron" in a white, sans-serif font, with a small yellow lightning bolt icon above the letter 'o'. The logo is set against a red rectangular background.

Itron

Grid Management

A Unified Solution for System-wide Automation and Control

SOLUTION OVERVIEW

We are entering a new era of real-time grid management. With more frequent and destructive storms, increasing penetration of 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. These changes have driven the development of low-cost sensor and finer-grained control solutions as well as more advanced automation software. The 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. In this environment, the traditional siloed communications approach proves 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.

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

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); 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 communications. These capabilities can be deployed at the substation with intelligent automation controllers, or at the control center with Advanced Distribution Management Systems (ADMS). Itron's Grid Management Solution enables you to 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: Deliver best in class latency and throughput while maintaining high reliability and redundancy.

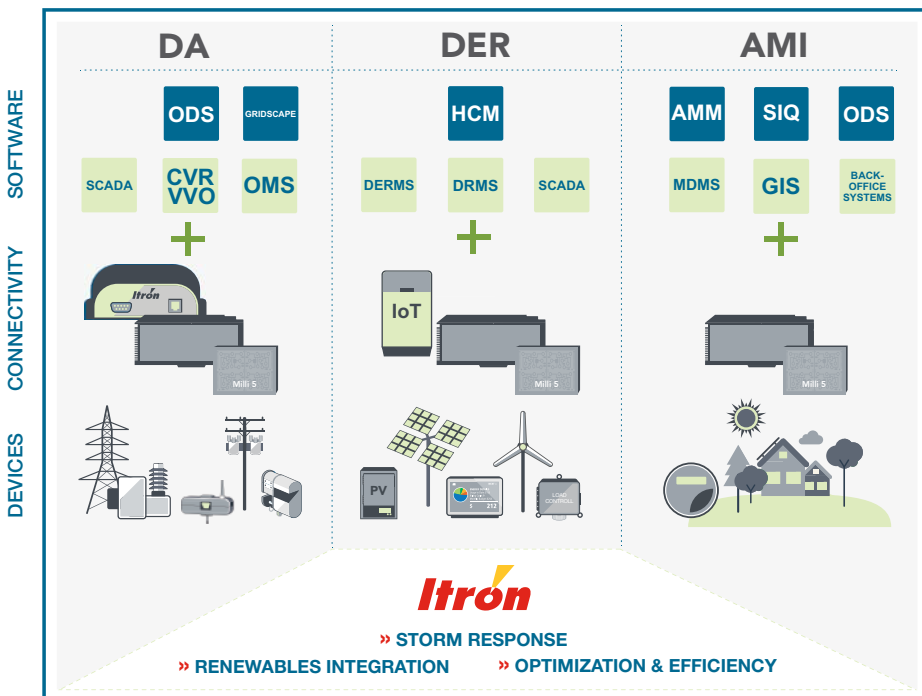
Convergence of IT/OT systems: Correlating data from AMI endpoints and automation services provides you with critical insight that leverages your entire smart grid to quickly identify anomalies and optimize grid operations in real time.

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: Transform 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: Leverage a common network platform across AMI, Distributed Energy Resources and Distribution Automation solutions.





“By leveraging distribution automation on Itron’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

KEY BENEFITS

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

Optimize operations in real time: Itron’s Gen5 network provides industry-leading bandwidth of up to 2.4 Mbps, 10 millisecond latency.

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:

Our technology is built on widely adopted standards such as Internet Protocol Version 6 (IPv6) and Wi-SUN to give you increased flexibility to choose among solutions from a variety of vendors.

Industry leading security: Our grid management solution 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 Itron 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.

ENSURE VENDOR FLEXIBILITY & AVOID LOCK-IN

Solutions work better when you enjoy a diversity of options for devices, network connectivity and value-added software. Our vision is to cultivate a vibrant and growing ecosystem of solutions developed in partnership with the best-of-breed providers. That's why we build our offerings around widely adopted industry standards. With one platform supporting a multitude of services and a wide variety of affordable, flexible devices, we provide the flexibility you demand with a solution built to work for decades.

VALUE-ADDED SOFTWARE



BACK-OFFICE SYSTEMS

SCADA

DMS

OMS

SMS

AMI

NETWORK DEVICES



PLATFORM PROVIDER



INTEGRATION TOOL KIT



END DEVICES



Join us in creating a more **resourceful world**.
To learn more visit **itron.com**

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