Itron Expands Distributed Intelligence Platform to Accelerate Energy Transition

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Game-Changing DI NIC Brings Computing Power and Control to Third-Party Devices at the Grid Edge, Enables New Applications for Low-Voltage Network and Distributed Energy Management

LIBERTY LAKE, Wash.--(BUSINESS WIRE)--Jan. 31, 2023-- As the pioneer in distributed intelligence (DI), Itron, Inc. (NASDAQ: ITRI) announced it is extending its groundbreaking DI platform to enable intelligence in any device, accelerating the energy transition. **The company unveiled its new DI network interface card (NIC) that enables edge computing in third-party devices**, moving grid analysis, decision-making and control to the grid's edge, resulting in a significant improvement in time to action, greatly improved situational awareness, more accurate analysis and advanced event detection. The first-of-its-kind DI NIC will be pivotal in creating new applications for the integration of distributed energy resources, such as electric vehicles and solar, into the low-voltage network.

With this groundbreaking technology, Itron and third-party technology companies, including energy retailers, aggregators or distribution companies, are accelerating innovation. When available, these devices can leverage Itron's existing industrial IoT network infrastructure, which is proven at scale with more than 200 million connected endpoints deployed globally. **Utilities and cities can then seamlessly add DI-enabled third-party devices to existing or new Itron networks**, extending the capabilities of the solution and tapping into Itron's growing DI ecosystem.

Itron's innovative DI NIC paves the path for a wider range of host devices to deliver distributed intelligence , extending the reach of Itron's DI platform beyond advanced metering infrastructure (AMI) to in-home smart electrical panels, load control switches, electric vehicle charging (EV) management, smart solar inverters, grid sensors and more. Initial applications will link the low-voltage network with home energy management. This will allow utilities to offer an end-to-end solution from home energy management to low-voltage network management using Itron's single, real-time platform, thereby increasing consumer satisfaction, reducing expensive infrastructure upgrades, improving resilience and helping utilities meet their carbon reduction goals.

As part of the launch, **Itron is collaborating with Lumin to enable edge intelligence in the companies' smart electrical panels.** DI-enabled smart panels will help utilities manage load throughout the distribution network, including down to specific circuits within a home in strict coordination with distributed energy resources behind the meter. This allows utilities to implement summer and winter demand response programs without deploying additional hardware. Pre-integrated solutions like this are a cost-efficient way for flexible demand management programs to reduce peak power and put the consumer in charge of their energy management real-time.

Partner Enablement

Itron's partner enablement program provides a framework for third-party companies to integrate the DI NIC into their hardware devices. Partners have access to developer tools and resources to optimize, improve and extend their service offering, and all partner technologies undergo Itron's rigorous integration process to ensure compatibility and security. This is complementary to Itron's DI Software Development Kits, which enable third parties to develop their own apps for the Itron DI platform. Existing and new Itron partners are invited to bring their technology to Itron to expand the edge intelligence platform, helping deliver value to customers.

Use Cases

With Itron's DI NIC, third parties can enable a multitude of use cases, such as:

Customer and Employee Safety

- Improving employee safety through the detection of high temperature events (micro arcing), high impedance, meter bypass and other problems at the metering endpoint

Consumer Engagement

- Helping consumers better manage their energy usage by providing them with insight into their energy usage and the associated contributing loads

Grid Operations and Optimization

- Renewables monitoring and control which helps manage their potential impacts to grid operations
- Detection of electric vehicle (EV) and photovoltaic (PV) technology which supports utility outreach programs and a better management of those resources in the grid
- Active transformer load management to help preserve transformers lifetime and reduce unplanned outages
- Grid sensors to provide utilities with up-to-date assets location within the distribution network topology
- Detection of power quality issues such as harmonics, voltage swell, voltage sag, voltage

spikes that cause capacity and equipment issues.
- Augmented voltage monitoring capabilities to monitor, manage and optimize grid operations
- Enhanced demand response programs by means of more granular and near-real-time load shedding
- Improving disaster restoration times through sophisticated fault-detection algorithms that can determine the fault location and type

Quotes

"With the launch of our DI NIC, we are extending Itron's IoT platform leadership, enabled by distributed intelligence, to new applications. This marks a significant milestone in enabling intelligence and control at the grid edge, helping our customers achieve a new level of distribution system visibility and resilience," said Don Reeves, senior vice president of Outcomes at Itron. "With more than 5 million DI-enabled smart endpoints shipped, Itron is a true expert in delivering distributed intelligence. We are bringing this capability to third-party devices to accelerate the energy transition, helping integrate more distributed energy resources in the low voltage network. We are excited to collaborate with other technology companies, like Lumin, to integrate this groundbreaking technology into their devices."

"Lumin helps homeowners control their home's microgrid to enhance and protect their solar and energy storage investment, participate in demand response programs, and manage their energy in real-time to avoid costly service upgrades and electric panel replacements, which is needed when adding EV chargers or switching to electric appliances. The new DI NIC allows Lumin to use the existing network infrastructure connecting millions of homes as the foundation to integrate distributed microgrids into the larger grid," said Alex Bazhinov, President and Founder of Lumin. "Transitioning to a clean, renewable energy future and electrifying homes requires rapid deployment of new infrastructure to help the grid accommodate and manage behind-the-meter resources. Itron's technology enables us to get there faster while ensuring communications reliability for utilities and customers that rely on Lumin's load management and real-time data capabilities to balance the grid and provide critical demand response. And most importantly, this integration is a significant stepping stone to supporting affordable, reliable, and carbon-free electricity for our customers."

Availability

Itron is working with partners now to deliver DI capabilities within their products in early 2024. To learn more and get involved, visit developer.itron.com or contact us via email at itronpartnernetwork@itron.com. To see a DI demonstration, visit Itron Booth 2514 at DISTRIBUTECH, Feb. 7-9, 2023.

About Itron

Itron enables utilities and cities to safely, securely and reliably deliver critical infrastructure solutions to communities in more than 100 countries. Our portfolio of smart networks, software, services, meters and sensors helps our customers better manage electricity, gas and water resources for the people they serve. By working with our customers to ensure their success, we help improve the quality of life, ensure the safety and promote the well-being of millions of people around the globe. Itron is dedicated to creating a more resourceful world. Join us: www.itron.com.

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