

IEE Market Presence

- » IEE is the most globally deployed meter data management system in the world. Our installed base comprises 91 customers across six continents with more than 39 million meters in production.
- "Leader' in Gartner Inc.'s Magic Quadrant for Meter Data Management (MDM) Products. IEE has been positioned by Gartner, Inc. in the Leaders quadrant of the Magic Quadrant for Meter Data Management Products six consecutive times from 2013-2018.
- » Tested for up to 10 million meters set to hourly data collection



With smart networks collecting volumes of information from your residential and commercial electric, water and gas meters, and IoT sensors, deploying a robust data management solution is essential for your success. Providing secure, accurate and reliable data to your upstream systems delivers operational efficiency that revolutionizes and accelerates how business value is delivered.

Relying on multiple systems and databases maintained in isolation can create bottlenecks, data errors and IT headaches that do not optimize your resources and employees' efforts. The volumes of data produced by a network of smart meters and devices are integral to your ability to offer customers more innovative and advanced rate structures. Building new customer offerings or tracking regulatory requirements requires that smart devices and systems work in close concert with CIS/billing systems. Improving grid reliability, operations and customer satisfaction means collecting, validating, analyzing and acting on quality smart device data securely maintained in your data management system.

To make these business activities function seamlessly, utilities rely on a data management system. Data management systems provide an ideal remedy that creates a system of record where consistent, secure and auditable processes are enforced, and where all users and external systems can access accurate and reliable data from smart meters and sensors.

Itron Enterprise Edition (IEE) Meter Data Management System (MDMS) is an industry-leading data management solution for residential gas, water and electric meters, C&I meters and IoT sensors. It is a highly scalable enterprise application to centralize the collection, processing, storage and complex analysis of smart device data, device events and alarms.

Our IEE MDMS solution offers time-tested, reliable processes and interfaces regardless of the meter data's source or destination. This simplified environment significantly reduces the likelihood of errors when utilizing data from smart devices. IEE allows you to change how and when you collect data and then deploy the most cost-effective, smart device-reading technologies without affecting network latency or infrastructure. In addition, IEE's cloud-hosted offering provides you with faster implementation and innovation, lower total cost of ownership and enhanced security. With Itron data management services, we gather, host and analyze terabytes of data from your network—and then leverage it to improve your grid operations. By combining data with business intelligence, you can make the most of your energy, water and IoT resources.

IEE provides consistent, meaningful data to upstream utility applications and is a critical component to optimizing your smart device network. IEE is especially effective when implemented prior to a large-scale residential rollout. IEE eases IT integration of smart network meters and sensors while facilitating the distribution of meter and sensor data across the utility enterprise. By framing the volumes of interval data retrieved from the field into manageable and familiar information, IEE MDMS provides meaningful data to CIS, outage and engineering systems. Additionally, by consolidating key data from multiple collection systems into IEE, you can set consistent validation routines to truly evaluate the performance of your smart network.

IEE provides the critical capabilities your company needs to help execute and realize the full benefits of a networked smart meter and sensor deployment. With IEE MDMS you can improve demand response using dynamic pricing programs such as Critical Peak Pricing, Time-of-Use, Peak Time Rebate and other demand response rate programs for energy and water networks.

IEE MDMS MANAGES

- » AMR, AMI, complex C&I meter and IoT device data
- » Load profiles, registers, events and alarms
- » Commercial, industrial and residential data
- » Electric, gas, water and IoT service types



Collection

- » Multiple headends
- » High volume
- » Near real-time
- » Complex C&I



Quality

- » 39 validation rules
- » 10 estimation routines
- » 18 editing algorithms
- » Universal Calculation Engine
- » Versioned data storage



Calculations

- » Baselines
- » Critical peak pricing
- » Demand
- » Energy
- » Netting
- » Peak-time rebates
- » Seasonal TOU/CVR



Distribution

- » Request/response APIs
- » High-volume data exports
- » High-volume synchronization
- » Integration with multiple CIS systems

METER DATA MANAGEMENT BENEFITS

- » Reduced field service costs through centrally brokered twoway remote connect and disconnect and on-demand read capabilities
- » Support for simpler, faster and less expensive rollout of smart metering and IoT technologies gained by reducing the number of maintained interfaces between collection, billing, outage, engineering and work management systems
- » Increased quality of data from operating a single, central repository, instead of separate, inconsistently managed systems
- » Reduced IT implementation and maintenance costs from improving the interoperability of applications with centralized interfaces to third-party AMI systems and utility back-office systems
- » Improved data reliability with consistent and enforceable processes
- » Reduced manual intervention on your residential customers to focus attention on your largest, most demanding customers
- » Improved security and accountability through consistent auditing and versioning of all data
- » Improved customer service by providing agents with more granular and timely information to resolve customer inquiries quickly

KEY FEATURES

Robust integration using service-oriented architecture

» IEE provides both file-based and robust asynchronous and synchronous Web Service APIs for two-way integration with data collection systems, an enterprise service bus and utility back office systems such as billing, work management and outage management.

- » Flexible integration options reduce total cost of ownership as utilities can leverage their investment in existing software, wrapping those interfaces in APIs that can communicate with IEE
- » Itron Meter Data Unification and Synchronization (MDUS) is an SAP-qualified business solution. Itron MDUS ensures the compatibility between Itron software and SAP solutions to provide a seamless, end-to-end business process which reduces implementation time and risk and lowers the total cost of ownership.

Data collection integration

» Store, secure and version control all of your residential and C&I data in one data repository

Robust validation, estimation and editing (VEE)

» IEE has extensive VEE rules and a robust calculation engine for interval and register data to supply billing quality information fully capable of meeting rigorous governmental financial standards worldwide and simultaneously support different VEE rules for non-billing and data-quality scenarios

Scalability

» High-volume processing supports millions of interval meters and IoT devices to meet the needs of even the largest networked deployment

Broad set of AMI interaction and controls

» Two-way integration with AMI systems to broker and execute key AMI functions such as on-demand reads, meter reprograms and remote connect/disconnect

Flexible role-based security provisions

» IEE implements a comprehensive security structure that includes auditing and tracking of critical business data, as well as logging for operational tasks and modifications of reading data via manual editing, estimation or validation

Integrated Microsoft queuing technology

» Workflows are provided for both application and security logging, and large-scale device event routing IEE is offered in two packages: on-premise and cloud-hosted. For more information on our cloud-hosted offerings, visit our <u>services webpage</u>.



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CORPORATE HQ

2111 North Molter Road Liberty Lake, WA 99019 USA

Phone: 1.800.635.5461 **Fax:** 1.509.891.3355