



Meter Data Management

Itron Enterprise Edition™

IEE MDM Market Presence

- » MDM is the most widely 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 MDM 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.
- » 'Top Leader' in the Navigant Research Leaderboard Report on Meter Data Management Systems (MDMS). According to the Navigant report published in Q4 2015, Itron surfaced as "the company to beat, as it is firmly entrenched in the MDMS market and has big plans for the future."



Energy and water data drives your business and with smart networks, deploying a robust meter data management solution is essential to your success. Providing secure, accurate and reliable data to a wide array of utility billing and analysis systems delivers operational efficiency, and revolutionizes and accelerates how business value is delivered.

Too often, utilities rely on multiple systems and data stores maintained in isolation. The volumes of interval data produced by an advanced metering infrastructure (AMI) system are integral to offering your customers advanced rates like Time-of-Use, Critical Peak Pricing and Peak Time Rebate. This requires that AMI systems work in close concert with CIS/billing systems and, in order to bridge the gap between the two systems, utilities rely on meter data management. The ideal solution is a single system of record where consistent, secure and auditable processes are enforced, and where all users can access accurate and reliable meter data.

Itron Enterprise Edition (IEE) Meter Data Management (MDM) is an industry-leading MDM solution and is a highly scalable enterprise application to centralize the collection, processing, storage, and complex analysis of meter and other utility-related data.

Itron's cloud-based MDM solution offers reliable processes and interfaces regardless of the meter data's source or destination. This simplified environment significantly reduces the likelihood of errors when utilizing meter data. IEE MDM also allows a you to change

how and when you collect data, and deploy the most cost-effective meter reading technologies without affecting infrastructure. In addition, a cloud-based platform provides you with faster implementation and innovation, lower total cost of ownership, instant scalability and enhanced security. With Itron data management services, we gather, host and analyze terabytes of data from your network—and then leverage it to get better results. By combining data with business intelligence, you can make the most of your energy and water resources.

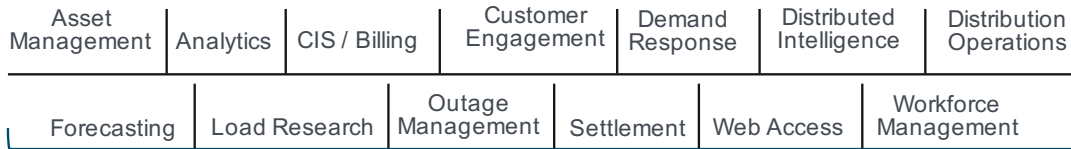
IEE MDM provides consistent, meaningful data to upstream utility applications and is a critical component to smart metering, especially when implemented prior to a large-scale residential rollout. IEE MDM eases IT integration of AMI and facilitates the distribution of meter data across the utility enterprise by framing the volumes of interval data retrieved from the field into manageable and familiar information. Additionally, by consolidating reading data from multiple collection systems into IEE MDM, you can set consistent validation routines to truly evaluate the performance of your AMI systems.

IEE MDM provides the critical capabilities your company needs to help execute and realize the full benefits of a smart metering deployment including:

- » Improved demand response through dynamic pricing programs such as Critical Peak Pricing, Time-of-Use, Peak Time Rebate, and other demand response rate programs



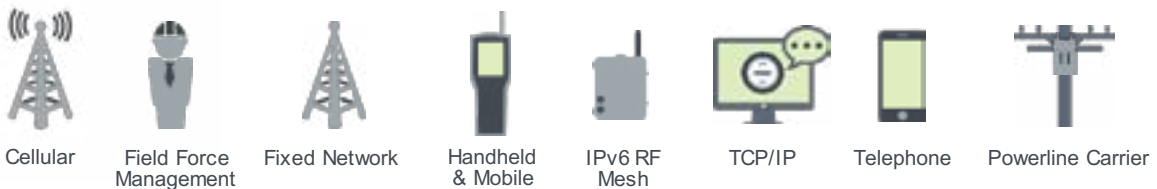
METER DATA DEPENDENT APPLICATIONS



ITRON ENTERPRISE EDITION METER DATA MANAGEMENT SYSTEM



DATA COLLECTION



IEE System Architecture

- » Reduced field service costs through centrally brokered two-way remote connect and disconnect and on-demand read capabilities
- » Support for simpler, faster and less expensive rollout of advanced metering technologies gained by reducing the number of maintained interfaces between collection and billing 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 AMI systems and utility back-office systems
- » Improved data reliability with consistent and enforceable processes
- » Reduced manual intervention on your residential meter population 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 MDM provides both file-based and robust asynchronous and synchronous Web Service APIs for two-way integration with AMI 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

- » Out-of-the-box integration with Itron's OpenWay® Riva IoT platform, Itron Analytics and production-proven integration with other third party AMI technology providers

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 MDM 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 scenarios

Scalability

- » High-volume AMI processing supports millions of interval meters to meet the needs of even the largest AMI 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 as well as packaged integration to SAP ERP
- » Itron MDUS (Meter Data Unification and Synchronization) 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

Flexible role-based security provisions

- » Users require no access to the database or to system directories. All Web Services interfaces in IEE MDM are developed using Microsoft's Windows Communication Foundation (WCF) to take full advantage of the run-time configurable aspect of security. IEE MDM 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 logging, security logging and large-scale device event routing

SPECIFICATIONS

- » Database Platforms: Oracle® 11g and 12c on any Oracle-certified OS/hardware platform, or Microsoft® SQL Server® 2008 R2, 2012, 2014
- » Operating Systems: Windows Server 2008 and 2012 R2 for Server side application. Windows 7 and 10 for IEE MDM client application .NET 4.5 and 4.6 frameworks for both application server and client application
- » VMWare: Application Servers are supported on VMware vSphere 5.x and 6.x environments in production as long as those VMs are appropriately sized.
- » Tested for up to 9.6 million meters set to hourly data collection

For more information on our cloud-based offerings, visit our [cloud services webpage](#).



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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