



Riva[®] Electricity Meter

Next-generation capabilities—**at the Grid Edge.**



EXTENDING INTELLIGENCE & CONTROL TO THE EDGE

As an electric utility, you face unprecedented distribution challenges: integrating distributed energy resources (DERs), managing aging assets and meeting customer expectations for greater energy control and transparency. The revolutionary Itron Riva electricity meter is more than just an electricity meter, it is a high-frequency sensor, an analytics engine and a taker of action on the side of every home and business. With an integrated compute platform, it enables game-changing capabilities where they matter most—at the grid edge.

METER AS AN INTELLIGENT GRID SENSOR

As consumers adopt electric vehicles, smart appliances, rooftop solar, and other distributed energy resources (DERs), utilities face increasing complexity on the low voltage network. Riva meters act as intelligent grid edge sensors, providing precise, timely visibility into energy usage, DER generation, asset conditions, and behind the meter activity. This granular, real time insight enables demand response programs and innovative rate designs that improve customer experience while strengthening network performance and reliability.

Grid Edge Intelligence™ and AMI Evolution

The Riva meter is the foundation in the evolution from traditional advanced metering infrastructure (AMI) to AMI 2.0 which supports the orchestration of distributed intelligence applications and edge analytics at scale. The Riva meter delivers core measurement values for assured meter-to-cash transactions; plus, it combines high-frequency sensing and innovative firmware to give insight and control at the far reaches of the grid.

Resiliency by Design

Developed for a global market with a unified design platform that leverages common supply chain components across Itron's global portfolio, the Riva meter helps ensure supply chain resiliency for critical infrastructure. Its curated modular architecture simplifies upgrades and maintenance, and IEC meter models support hot swappable communications modules to minimize service disruption. Secure over the air (OTA) firmware updates and meter configurations are deployed and managed remotely through UtilityIQ® (UIQ™) as the universal head end system (HES).

Intelligent for a Reason

Built with an embedded computing platform, the Riva meter enables utilities to securely deploy distributed intelligence (DI) applications from the Itron Enterprise Application

Center to devices in the field—unlocking new functionality and value over time. These applications support diverse use cases, including revenue assurance, enhanced asset management, transformer load monitoring, and EV detection. Backed by a strong partner ecosystem and the Itron DI Developer Program, new and future DI applications can be developed, deployed, and updated easily on Riva meters.

Connectivity for Everything

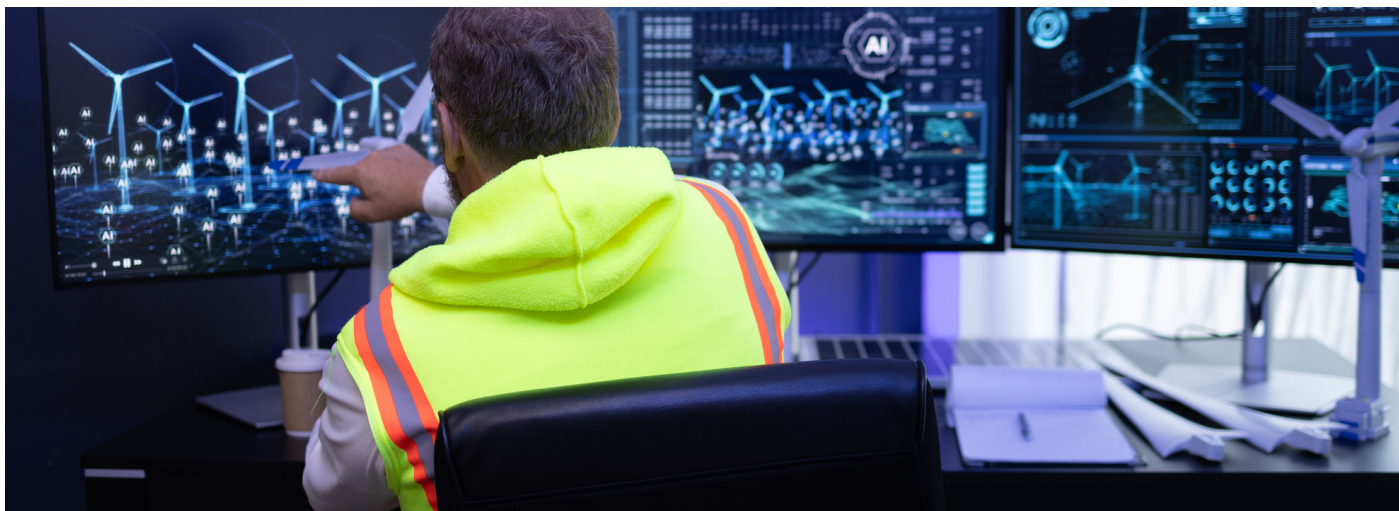
The Riva meter supports the Gen6 communication platform, giving utilities flexibility to deploy the optimal network for any use case. Using industry standard IEEE 2030.5 with Wi-Fi and peer to peer communications over power line communication (PLC) the Riva meter enables efficient data exchange—offloading traffic from the primary field area network (FAN), supporting transformer level coordination, and enabling one to many messaging. Built in Wi-Fi also provides secure local connectivity to premise level devices such as home energy management systems (HEMS) and in home displays, helping enable demand response programs and deliver detailed energy insights.

INTELLIGENT OPERATIONS

Itron Riva electricity meters combine real-time data with the computing power of distributed intelligence (DI) to enable increasing levels of awareness and control.

High-Frequency sensor

High frequency sampling allows the Riva meter to quickly detect voltage events, accelerated load changes, and power quality conditions—supporting DI applications for asset management, power quality analytics, and improved rooftop solar and electric vehicle (EV) awareness. By balancing data resolution with signal fidelity, processing capability, and energy efficiency, the Riva meter enables fast event detection, accurate fault diagnostics, and advanced edge intelligence in bi-directional grids.



PROVEN PERFORMANCE

The Itron Riva electricity meter combines revolutionary intelligence with proven reliability. The meter leverages almost a decade of Itron innovation in grid edge intelligence technology.

Secure and Protected Metrology

Designed with secure isolation of core metrology functions, the Riva meter protects primary measurement values to ensure trusted, accurate meter to cash transactions—even as new capabilities are deployed through system updates. Each meter is rigorously tested to validate security, performance, and reliability prior to deployment, supported by resilient factory processes that safeguard device integrity. Signed firmware ensures that only trusted, authenticated software can be installed, maintaining a secure foundation throughout the meter lifecycle.

Energy Management Excellence

- » Continuously calculates 168 energy values
- » Configurable demand measurement with up to 24 registers
- » 8 time-of-use (TOU) rates with 25-year DST calendar
- » 54-channel profiling across 3 configurable profiles
- » Power quality measurement and reporting

Advanced and High-Resolution Metrology

- » Voltage and current waveforms for detailed analysis
- » Sub-second RMS voltages and currents
- » Per-second directional per-phase Wh measurement
- » THD/TDD support up to 32nd harmonic

Smart Control Features

- » Integrated Service / Remote Disconnect Switch
- » Load control and service limiting capabilities
- » Real-time automated alarms and event retrieval
- » Tamper detection with multiple security levels

COMPLETE SOLUTIONS. FROM THE GRID EDGE.

The Itron Riva electricity meter functions as both a grid sensor and a distributed intelligence-enabled endpoint within the Grid Edge Intelligence (GEI) portfolio, delivering enhanced visibility and control at the grid edge. It enables distributed intelligence (DI) applications that improve planning, load forecasting, and voltage optimization, while providing deeper insight into asset connectivity, phase identification, and feeder mapping—driving greater operational efficiency and faster, more effective outage response.



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We create a more resourceful world

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