

# Aclara STAR<sup>®</sup> Network for Water Utilities



Proven results for water utilities.

The critical challenges confronting water utilities today extend beyond the limits of traditional meter reading. Utilities must plan for high-visibility disruptions caused by aging infrastructure, manage service-delivery requirements that push the limits of available capacity, balance conservation measures with increasing operating costs, and meet customer demands for improved service. Aclara's two-way, fixed-network automated metering infrastructure (AMI) coupled with in-depth analyses of the data collected by these systems can help utilities cost-effectively meet these challenges.



Create Your Intelligent Infrastructure<sup>™</sup>

Aclara represents the industry's leading technologies for providing device networking, data-value management, and customer communications for utilities worldwide.

Aclara integrates the strengths of the industry's most proven advanced-metering infrastructure water solutions with the Aclara STAR<sup>®</sup> Network system, Aclara meter-data-management and smart consumer-engagement solutions to meet the needs of our water utility clients.

Aclara solutions will help you enhance your communications, increase customer satisfaction, and create a unique vision for your utility. Beyond AMI technologies, our solutions include the tools to implement strategies for utility networking, distribution management, and energy efficiency.

Look to Aclara for the tools, the innovation, and the knowledge to make the most of your gas utility systems, realizing the power of data and a true communication network.



## Integrated Solutions

Aclara's product suite – its flexible and scalable STAR Network system, its consumer engagement and analytics software, and its STAR ZoneScan leak detection system – can meet even the most exacting requirements of water utilities seeking to improve customer service, effect operating efficiencies, or enhance conservation efforts. Our suite of products includes three primary components:

- Fixed-network AMI – Aclara's STAR Network system offers robust, two-way communications that effectively provides timely data to facilitate superior customer service and maximize operational efficiencies.
- Software solutions – Aclara's consumer-engagement solution presents usage data directly to the customer, encouraging them to take action to lower costs and conserve. For utilities that want to improve operational efficiencies, Aclara offers both basic and advanced analytics that unlock the power of AMI data.
- Leak detection – Utilities battle unaccounted-for water with Aclara solutions. Utilities can analyze hourly meter readings collected by the AMI system to look for premise leaks and proactively notify customers of potential problems. In addition, Aclara's STAR ZoneScan system, developed in conjunction with Gutermann International, one of industry's leading vendors of leak-detection technology, works on the fixed network and allows the utility to identify underground leaks before they cause big problems.

## Benefits of the STAR Network

Over 100 water utilities have chosen the STAR® Network, and for good reason. Utility executives value Aclara's integrated solution suite, which can take the utility from meter reading to customer service to analytics and beyond. Meter-shop managers and information technologists appreciate the STAR Network's flexible and elegant design. The system hardware consists of meter transmission units (MTUs) that send hourly data on a regular schedule to data collectors that transmit the meter readings on a regular schedule to the utility.

Strategic placement of data collectors makes the STAR Network system infinitely scalable – as appropriate for small utilities serving a few hundred customers as it is for large municipalities servicing hundreds of thousands of water accounts. The STAR Network system also works with all types of water meters, allowing customers to use existing meter infrastructure and allowing for upgrades to new meters without compatibility concerns.

What's more, MTUs are sealed against the elements and can be placed in harsh environments such as basements and meter pits. Use of licensed 450-470 MHz frequencies allows each MTU to transmit interference – free from any location over distances of about one mile, depending on topology. Plus, low-power MTUs transmit only about two minutes a year – ensuring that the batteries in MTUs will last 20 years under normal operating conditions.

## Redundancy

Utilities never miss a reading with the STAR Network system. DCUs provide a certain amount of physical redundancy – transmissions from individual MTUs are usually picked up by more than one DCU. Plus, the messages are transmitted redundantly, with the six individual, hourly readings at the end of a transmission and being sent again at the beginning of the next transmission.



## Two-Way Network

Two-way communications provides for hourly reads and allows the utility to perform a synchronized system read that can help determine if all the water being pumped into the system is being properly metered. In addition, a two-way network can accommodate customer- and utility-side leak detection and will allow for configuration of MTUs from the utility office.

## Software

Aclara's multi-level software solutions guarantee that utilities get exactly the support they need to meet their data-mining requirements. The AMI system's Network Control Computer (NCC) provides the utility with the capability to organize meter data and get it into a customer information system (CIS) for billing. The NCC also provides the basic tools that customer service representatives need to answer consumers' billing and usage questions quickly and effectively.

For those utilities that want to expand their understanding and use of meter data, Aclara provides an industry-leading consumer engagement application to present usage data and additional information such as conservation tips directly to customers. Plus, we extend the meter data management capabilities of the NCC by offering additional analytics that allow the utility to clean up the meter data and use it when developing advanced applications like value-added rates.





Aclara integrates advanced, proven AMI technologies to capture, analyze, and apply utility data to meet the demands of today—and tomorrow.

**Reduce distribution costs** with scalable and automated meter reading, distribution management, and service quality.

**Enhance consumer engagement** with the immediate data that provides customers the information they need to understand and make energy decisions.

**Lower operating costs** with tools to plan and optimize investments in maintenance and capital upgrades.

**Create a data-driven solution** to develop and expand the utility's ability to serve customers.

**Support sustainability efforts** to protect our environment and conserve our natural resources.



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