

Automated Water Meter Reading



Around the world, water has become a valuable commodity. It is common for utility management authorities to experience water losses of 10-30% from day-to-day operations. The ability to identify leaks and service interruptions in real time is the first step to improving resource conservation.

BENEFITS

- ❖ Improves water conservation
- ❖ Reduces operating costs: eliminates manual reading, improves operational efficiency
- ❖ Improves customer service
- ❖ Faster response to incidents
- ❖ Allows implementation of flexible, usage-based charging
- ❖ Allows real time and long term demand planning
- ❖ Reduces the community's carbon footprint

Automated Meter Reading (AMR)

AMR for water meters leverages a real time wireless communication network to tie together digital water meters with a centralized management system. Digital water meters are highly accurate, often utilizing ultrasonic measurement technology with no moving parts. With an always-on wireless broadband network, digital water meters, and a centralized water management system, hundreds of thousands of water meters can be monitored accurately and frequently enough to quickly detect leaks and pinpoint their location. Imagine being able to spot serious service disruptions immediately, the ability to notify customers as soon as a leak occurs, accurately plan peak demand, and even provide customers with daily visibility into their personal water usage.

Key Benefits of Automated Water Meter Reading over a Wireless Broadband Network:

- ❖ Improved meter reading efficiency: Centralized monitoring increases frequency and accuracy of meter reads plus lowers operational expenses
- ❖ Faster leak detection: Faster identification of a leak can reduce water loss and potential damage
- ❖ Improved billing accuracy: Eliminates estimated meter reading, improving revenue collection and avoiding unpleasant bill surprises for customers
- ❖ Increased efficiencies of field workers: The ability to access schedules, GIS data, and other critical information reduces trips to the central office and speeds repair time
- ❖ Improved customer service: Customer portals into the usage data allow customer monitoring of real time usage and consumption trends, encouraging water use awareness and conservation

"Tropos was chosen because it offered the most robust and scalable broadband wireless mesh solution."

Tom Amburgey
CIO, Village of Wellington



Tropos MetroMesh Solution Partners

- ❖ Aclara
- ❖ BadgerMeter
- ❖ Hydrometer, GmbH
- ❖ Itron
- ❖ Neptune Technologies

Tropos Technology Differentiators

- ❖ Performance – The world’s highest throughput, greatest capacity mesh technology
- ❖ Security – Layered, military-grade encryption throughout the mesh; full VPN support
- ❖ Best-of-breed radios – Maximum power, best receive sensitivity
- ❖ Scalability – From a few to thousands of radios
- ❖ Superior Mobility – Seamless session roaming - across entire cities
- ❖ Management – Most network analysis and management tools

Multi-use Network

Tropos’ unique MetroMesh IP network solutions deliver scalability and flexibility to securely support multiple simultaneous applications on the same broadband infrastructure. In addition to the primary water meter application, a single network can also support a range of municipal services.

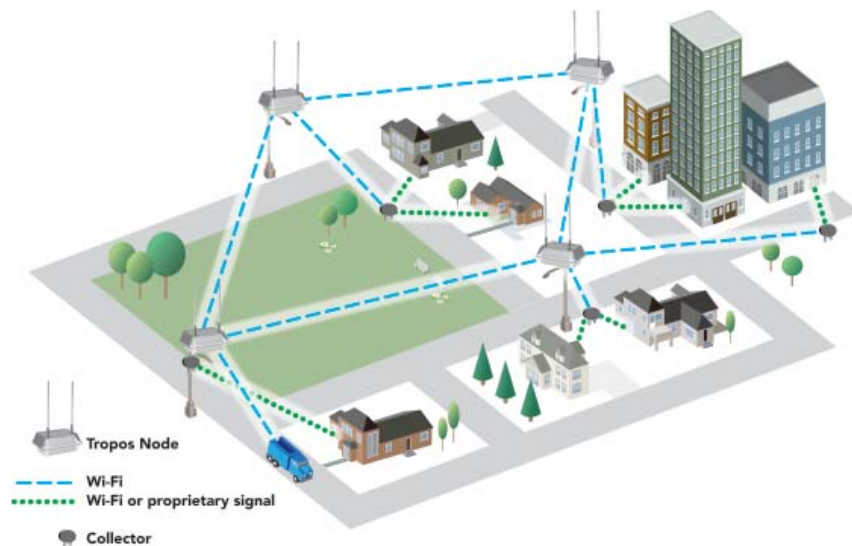
- ❖ Electricity and gas utilities — Similar benefits for water AMR are applicable to gas and electric utilities and can be used for smart meters and many other applications
- ❖ Mobile public safety — Enables police, fire and emergency service personnel to effectively communicate and obtain information from the field, including live surveillance and traffic video
- ❖ Intelligent transportation system management — Traffic light controllers can be economically connected for city-wide optimization and integrated with traffic video monitoring, red light cameras, and other applications replacing expensive lease lines

Water AMR Building Blocks

Tropos’ unique MetroMesh community-wide wireless infrastructure provides the core communications to link together hundreds of thousands of water meters with a central water management system. The Tropos networks also delivers broadband communication with mobile maintenance crews, facilitating mobile meter reading, dispatch and workflow field applications.

Customers using Tropos MetroMesh networks today for water AMR include: Corpus Christi, TX; Village of Wellington, FL; Anderson, IN; Rockhill, SC.

Tropos Metro-Scale Automated Water Meter Reading Network



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