

evolution™ Radio Transceiver Module (evoRTM™)



Elster AMCO Water's evolution systems offer the latest in affordable ultra-low power consumption and long-life AMR/AMI, plus optimized wireless network functionality for building networks of any size.

Based on Wavenis® technology, evolution offers significant advantages to providers and customers alike, including fast access to current consumption data, and automatic warnings about leaks, tampering, consumption profiles, low batteries, and more. With on-demand meter reading in mobile systems, on-demand and scheduled meter reading in fixed networks, extremely long battery life, and unique wireless networking features, evolution systems offer security and reliability for mobile AMR and evoNet™ AMI solutions.

evoRTM Endpoints, evoHop™ Range Extenders and evoGate™ Central Collectors can extend fixed networks to meet any topology requirements from sprawling rural areas to extremely dense city dwellings and industrial installations.

evoRTM Features and benefits

- Fast wireless access with battery life up to 20 years
- Programmable events, thresholds, and profiles
- Automatically transmits critical alerts in near real time
- Compatible with a wide range of meters
- Long range and resistance to obstacles for use in hard-to-reach places
- 2-way end-to-end communication for full remote system administration
- Cost-effective solution for small or large deployment



evoRTM Endpoints form a common core for all evolution systems, making it a natural step to evolve a mobile AMR system to evoNet AMI.

General features

- Both pulse and encoder versions
- Operation up to 20 years with available 20 year warranty
- Programmable, internal data logging, measurement period, and threshold alarms
- 2-way communications
- Easy plug and play installation with evolution software suite
- Functional temperature range -40° to 158°F (-40° to 70°C)
- IP68 rated
- Dimensions 5 x 2 x 2 in (12.7 x 5 x 5 cm)
- Weight approx. 8 oz
- Datalogging
 - o fixed network: 2100 readings
 - o mobile: 36 daily readings
 - o intervals programmable
- Multiport input configurations
- Smart leak detection - extreme or residual
- Low-battery warning indicator
- Cut cable and encoder communications error flags

- Backflow detection (encoder only)
- Transmissions on demand in evoNet AMI
- Automatically transmits critical alerts in evoNet AMI

Wireless features

- Optimized Wavenis wireless technology for applications requiring ultra low-power consumption, long range, and reliability in hard-to-reach places
- Range up to 1 to 1.5 miles line of sight
- Resistant to RF interference with sophisticated FHSS, data interleaving, FEC
- Build flexible, scalable wireless networks
- Programming via direct wireless or remote network connection
- RTM is able to repeat other nearby RTMs to extend range
- Tree, star, and modified-mesh network topologies
- Frequency
 - o 902-928 MHz ISM Bands (fixed network)
 - o 952 or 956 MHz (evoDrive wake up) and 902-928 MHz (response)
- FCC 15-249, and FCC 15-247compliant
- FCC part 101

Mechanical features

- Single module, interchangeable for remote, pit, or integral register mount installations
- Compatible with pit mount interface (PMI) for optimum RF propagation in a pit environment for fixed network

Planned releases for 2010

- Integral TOU - up to 6 time intervals (fixed network only)
- Compatible with major meter manufacturers in North America
- evoTrak™ in home display for evoNet AMI
- evoValve™ remote shut off for evoNet AMI



Elster AMCO Water, Inc.
1100 SW 38th Avenue
Ocala, FL 34474 USA

T +1 800 874 0890 (US)
T +1 866 703 7582 (Canada)
T +1 787 872 2006 (Caribbean)
F +1 352 368 1950

evolution@us.elster.com
www.elsteramcowater.com

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The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice.

- 1 Pegs used to secure into pit mount interface
- 2 Bracket and guide to affix RTM to a surface using zip ties or plastic mounting bracket
- 3 Holes for mounting on wall
- 4 Molded guide allows RTM to be mounted to a round surface, such as a pipe
- 5 Optional pit mount interface (PMI) for cast iron or concrete pit lids
- 6 Optional direct mount interface (mobile)

