

# evo™ Radio Transceiver Module (RTM)

**Elster AMCO Water's evolution system offers 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 near real-time meter reading, extremely long battery life, and unique wireless networking features, evolution offers a secure and reliable means for implementing AMR/AMI networks in mobile and fixed-network reading.

evolution's Wavenis-based RTMs, range extenders and gateways can extend fixed networks to meet any topology requirements, from sprawling rural areas to extremely dense city dwellings and industrial installations.

#### Features and benefits

- Fast wireless access with battery life up to 20 years and backed by 20 year warranty
- Programmable events, thresholds, and profiles
- Automatically transmits critical alerts in 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

# All evolution RTMs are fully migrateable from a mobile AMR configuration to a fully functional fixed network AMI system.

## General features

- Intervention-free 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, fully submersible
- Dimensions  
5 x 2 x 2 in (12.7 x 5 x 5 cm)
- Weight  
approx. 8 oz
- Datalogging
  - fixed network: 2100 readings
  - mobile: 36 daily readings
  - intervals programmable
- Compatible with all major meter manufacturers in North America
- Multi-port input configurations
- Smart leak detection - extreme or residual
- Battery warning indicator

- Cut cable and communications error flags
- Backflow detection (encoder only)
- Integral TOU - up to 6 time intervals (fixed network only)
- Transmissions on demand (in fixed network)
- Automatically transmits critical alerts (in fixed network)

## 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 m line of sight
- Resistant to RF interference - sophisticated FHSS, data interleaving, FEC
- Build flexible easily scalable wireless mesh networks of any size
- Programming via direct wireless or remote network connection
- RTM is able to repeat other nearby RTMs to extend range
- Tree, star, and mesh network topologies

- Frequency
  - 902-928 MHz ISM Bands (fixed network)
  - 952 or 956 MHz (wake up) and 902-928 MHz (response in mobile)
- FCC15-249, and FCC 15-247 compliant
- 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

## Optional features

- Easy install inline connector
- evoTrak in home display (fixed network)
- evoValve remote shut off (fixed network)

- 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 pit lids
- 6 Optional direct mount interface (mobile)



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