RTcom™ SMART Log: Data Logging AMR Endpoint

Applications

With ever increasing pressures on energy and water resources more and more utility companies are looking to AMR as a means of limiting both growth in demand, reducing customer complaints, eliminating estimated bills, detecting and mitigating leakage and ultimately reducing wastage. In the past this required 24/7 monitoring and control only offered by fixed network AMR systems. The RTcom™ Smart Log provides a real alternative without the need to invest in fixed network infrastructure or where a fixed network exist the Smart Log can be used to extend the coverage into outlying locations beyond the economic reach of the fixed network.

Technical data

Radio technology	869 MHz
Approvals	CE, R&TTE Directive
Data format	Secure encrypted protocol
Operating mode	Chirp Transmission and requested download
Modulation	Wide Band FM
Operating distance	Up to 100m
Operating temp.	-10ºC to +40ºC
Battery life	10 years
Antenna	Magnetic coupling to mounting plate in lid
Warranty	3 years from manufacture

Mechanical data

Dimensions	50 x 80 x 115mm
Weight	360g
Sealing	IP68
Mounting	magnetic mount

In summary, unlike a conventional walk-by or drive-by AMR device the Smart Log can be used to emulate the characteristics of a fixed network and hence to monitor and control consumption of water, monitor for leakage, be used to enforce drought restrictions, be used to apply rising block tariffs, be used to apply seasonal tariffs, reduce utility costs due to change of occupancy, plus detect and record the time and duration of customer meter fraud.

Key features

Cost Effective	Low cost alternative to fixed network
Installation	Not limited by the availability of infrastructure or cell phone coverage
Capacity	1-year's capacity at 30-minute samples
Data Download	Fast, 2-way secure, frequency agile wireless data link
Mechanically	Tough can be submersed
Meters	Supports reed switch, electronic pulse encoders and flow turbines
Safety	Eliminates operator RSI through lifting covers
In reader compatible	Emits a regular chirp for operation of in-readers (Smart View)
Protection	Data fully check-sum protected and 100% secure

Operational Overview

In simple terms the Smart Log is a low cost, micro-power data logger designed to capture meter readings or flow rates at 5-minute to hourly intervals but with the ability to be de-briefed remotely via a secure wireless link over distances of 100m even from below ground, in for example a meter pit or boundary box!

In operation the Smart Log simply accumulates and stores the pulses or flow rate from a meter or turbine against time. The Smart Log also generates a regular "chirps" containing the Smart Log ID, tamper, leakage status and the running total. This permits the Smart Log to work with walk-by and drive-by AMR systems as well as in house readers.

Data download is fast – with typically 6 months data (at say 30 minute sampling) download taking less than 15 seconds. Combining this with a read range of approximately 100m means that the Smart Log can be downloaded from a vehicle moving at 20mph. If the amount of data is reduced for example 1 month, a drive by speed faster can be achieved.

Associated Hardware & Software

- RTcom™ SMART Patrol AMR Data Management & Meter Reading Software
- RTcom™ SMART View wireless in-house reader; commercially available July 2008
- RTcom™ SMART USB Rx vehicle based receiver
- Vehicle Magnetic Mount Antenna

Associated Accessories – Pulse Generators

Actaris	Sappel	Sensus	Elster

Description	Part Number
SMART Log AMR Endpoint with flying leads	549-003
SMART Log AMR Endpoint with pulse generator; type must be specified	549-00X