WiMEx
Energy Autonomous Water Meter

WiMEx provides water utility companies with an automatic remote water meter reading solution to increase company competitiveness and customer satisfaction.

It addresses the special needs of home utilities by providing a remote metering solution independent from the electricity infrastructure, both in terms of data communication and in terms of power supply.

The WiMEx ARM system provides a cost-effective solution that suits existing and emerging industry requirements by using wireless technology combined with a novel hardware and software approach. This approach overcomes important limitations associated with the state-of-the-art where access and the use of an electrical grid for power and/or data transmission is costly and where the alternative battery powered wireless network approach is associated with regular maintenance.

Energy Harvesting:
A rotational, radial-flux energy harvester incorporating a three-phase generation principle converts energy from water flow in domestic water pipelines. The energy harvester together with a power management circuit and energy storage is used to power the smart metering system installed underground making it independent from external power supplies or depleting batteries.

The design of the radial-flux energy harvester is adapted to the housing of a conventional mechanical water flow meter enabling the use of standard components such as housing and impeller. The energy harvester is able to generate up to 720 mW when using a flow rate of 20 l/min (fully opened water tab). A minimum flow rate of 3 l/min is required to get the harvester started. In this case a power output of 2 mW is achievable.

See more at: www.wimbex.com

Key features
- Frequency bands: 169 MHz or 868 MHz
- Up to 5 Km range (LOS)
- Wireless M-Bus EN13757 part 4
- RF output power 14 dBm
- Ultra Low Power Consumption
- Integrated Energy Harvesting power supply

Additional services
- Upgradable and configurable Over-the-Air
- Active inspection service
- AES128 data encryption
- Security Suite
- Maintenance Services with sniffer tools
- Network Simulation Tool