

Wavesense

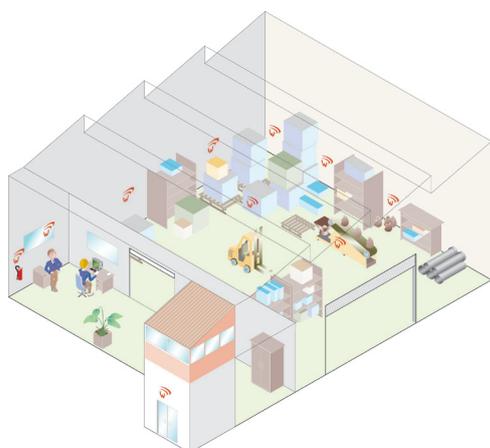
Product summary



Monitoring solutions for wireless sensor networks

Wavesense is a wireless module that lets you monitor and control electronic sensors in a variety of today's emerging smart environments, including industrial, domestic, medical and transportation applications. Data and sensor readings can now be distributed easily to your own back-end management applications and value added services through wireless networks with an unlimited number of nodes.

Compatible with a vast array of sensors offering 0-5V or 4-20mA analog interfaces, Wavesense makes it easy for you to establish two-way communications with remote sensors from any location and to build innovative smart environments. Wavesense uses Wavenis wireless technology to offer unprecedented battery life, long-range, and reliable machine-to-machine connections for connections to sensors installed in remote, hard-to-reach places.



Create wireless sensor networks using common industrial sensors and Wavesense transceivers



Easy connections for software tools

With compatible Wavenis-powered network accessories, you'll be able to build cost-effective wireless sensor networks that fit any environment perfectly, indoor or out door.



- Supports any 0-5V or 4-20 mA standard sensor (the module does not power the sensor)
- Ideal for gas, humidity, differential pressure sensors, health monitoring, home comfort and more
- Automated process control systems
- Remote data monitoring
- Programmable alarm functions
- Operates in 433, 868 or 915MHz license-free ISM bands

Product Specifications

- 2 versions: 0-5V or 4-20mA
- Complex-Wakeup enabled (save battery life in dense network and fast reading)
- The module does not power to the sensor
- ATEX certification⁽³⁾ II2G (on demand) 

Wavenis Properties Overview

- Operates in license-free ISM 433, 866, 868, or 915MHz
- EN300-220 / FCC15.247 certified & compliant
- Typical rate:
 - 9.6kbps (433, 866 & 868MHz)
 - 19.2kbps (915MHz)
 - more on demand
- Frequency Hopping Spread Spectrum (FHSS)
- GFSK modulation
- Single channel operation for narrowband applications (alarms)
- Data interleaving, Forward Error Correction BCH (31,21)
- Automatic Frequency Control (AFC) for optimal performances over operating lifetime
- Quality of Service management (RSSI) and output power control
- Point-to-Point, Point-to-Multipoint (broadcast, polling) modes, and native repeater (up to 3 hops)
- Tree and star network topologies
- Designed for reliability, power savings, network coexistence
- Access hard-to-reach devices with link budget of 124dBm (25mW)
 - Line-of-sight range up to 1km (25mW/+14dBm and 10mW/+10dBm)
 - Line-of-sight range up to 4km (500mW / +27dBm)
 - Sensitivity: -110dBm @ 9.6kbps

General features

- Autonomous battery powered unit (supports 1 sensor)
- 25mW (868/915MHz) and 10 mW (433MHz) versions
- Sensor data logging for all types of sensors with voltage (0-5V) or current (4-20mA) analog interface
- On-demand reading of instantaneous or logged values
- Data monitoring and remote control via Wavenis wireless network
- Programmable logging, transmission, alerts, threshold signals, and error management
- Programmable Datalogging: store up to 4,500 readings
- Multi-year battery life depending on use
- Input impedance (voltage products): 20 K Ohm
- 12-bit ADC voltage interface
- Memory zone accessible in read and write mode via radio command (32 bytes)
- Interface: ground, sensor output signal
 - 2 wires per sensor
 - External sensor supply

Physical description

- IP68 protection (for ready-to-use version)
- Operating Temperature: -20° to +70°C
- Battery size (for finished product): 3.6V 3.6Ah
- Dimensions and weight:
 - OEM (without battery): 65 x 23 x 14mm ; 10g
 - Ready-to-use: 98 x 47 x 35mm; 140g

Product Codes

	0 - 5V		4 - 20mA	
	OEM	Finished Product	OEM	Finished Product
433MHz	WSE433-OEM-10-5V-A	WSE433-FP-10-5V	WSE433-OEM-10-20M-A	WSE433-FP-10-20M
868MHz			WSE868-OEM-25-20M-A	WSE868-FP-25-20M
868MHz ATEX	WSE868-OEM-25-5V-A-AT	WSE868-FP-25-5V-AT		
915MHz	WSE915-OEM-25-5V-A	WSE915-FP-25-5V	WSE915-OEM-25-20M-A	WSE915-FP-25-20M



© 2015 by Elster Water Metering. All rights reserved.
The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice.

support.montpellier@elster.com
www.elstermetering.com