

## Wireless Measurement Ltd – ZigBee sensors form a dependable link in the Cold Chain



**Wireless Measurement Ltd. ZigBee temperature sensors make up a family of four products offering a range of functionality between them and covering all the requirements of end users operating in the cold chain industry.**

The sensors either measure temperature only or they can perform the dual function of monitoring both temperature and humidity. Both sensor versions can offer an LCD option to allow for visual checking as well as radio reporting of temperature and humidity levels.

The sensors come with a line of sight range of 100m and there is also a parallel range of power amplified sensors with a line of sight range of 700m. Networks of sensors can obviously be further augmented using their core ZigBee mesh networking technology.



Wireless Measurement Ltd has further rounded out the offering with USB, Ethernet, Compact Flash, RS232 and GSM/GPRS receivers with which to complete a fully comprehensive monitoring solution.

The sensors can form a standalone monitoring system complete with a back-end data storage and analysis system created by Wireless Measurement Ltd or they can be integrated into existing legacy set-ups to provide a state of the art upgrade of existing wired sensor networks.

## Customer Profile

Wireless Measurement Ltd is expert in designing wireless sensor networks - IEEE 802.15.4, ZigBee, WiMAX. The company offers world class expertise in the field of low power wireless mesh networks for sensing and control applications.

Wireless Measurement Ltd specialises in designing systems that require virtually no setup and commissioning -- think "plug and play" without the plugs!

## Telegesis Products

- Ember ZigBee Mesh Networking
- ETRX2 modules

## Technology Solution

A range of rugged ZigBee sensors designed for harsh environments such as cold chain monitoring, transport and storage. Boasting a wide range of features and suitable for prolonged periods of outdoor use these innovative ZigBee sensors are adaptable to many applications.



Housed in tamper proof cases and with temperature resolution of better than 0.1°C these ZigBee sensors are capable of operating between -20°C to +85°C and are ideal for use in the most demanding cold chain applications – including prepared and raw food storage, transport and display environments. These sensors are also suitable for use in the pharmaceutical industry.

Data monitoring and storage capability is excellent. The reporting intervals are programmable between 6s and 18h and the sensors store up to six weeks of logged data when out of range of the host data centre.

The sensors also report calibration and service dates as well as device description, serial number and part number.

The non volatile memory retains all data permanently.

Reporting at 10 minute intervals Wireless Measurement ZigBee sensors have a battery life of over 2 years.

“We looked at all the radio technologies available to us and ZigBee was the only one that offered everything that we needed,” said Wireless Measurement MD – James Wilson. “By building our sensor offering around ZigBee mesh networking technology we found that we could offer a flexible and comprehensive package that met all the demands of our customer base in this demanding environment”.

Wireless Measurement Ltd has used Ember ZigBee technology and ETRX2 module technology from Telegesis in building their ZigBee solution.