## ZigBee WIRELESS SYSTEMS AND SENSORS

- Supports ZigBee Wireless Protocol
- Use of unlicensed 2.4 GHz Radio Band
- Ultra-low Power Consumption
- Easy to add and remove sensor nodes
- High Security 128 bit encryption plus Access Control lists available
- Flexible network Topology
- Up to 250 kbps Data Rate
- Low Cost and no Cabling!







## Introduction

The range of Wireless Sensors and Systems designed and manufactured by Industrial Interface is based primarily around the ZigBee protocol working on the world-wide IEEE 802.15.4 wireless hardware standard.

The benefits of using the ZigBee protocol are highlighted in the bullet points above.

Of course the main benefit of wireless technology is the flexibility and cost savings obtained through not having to lay cables between sensors and control systems. It also allows for easy add-ons to existing wired systems.

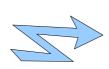
These features, together with the wide range of sensors I/O modules and the Z-Port Ethernet Gateway enable complete data acquisition and control systems to be realised.

In addition using our Web server system allows these networks to be monitored from anywhere in the world using any standard internet browser.

Some typical uses are outlined below and in the following pages.

Example One: Simple Cable replacement system.



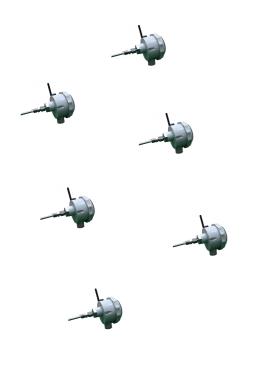




Transmitter accepts any standard process input and transmits value to receiver unit

Receiver gets values from transmitter and outputs value in analogue 4-20mA, 0-10V or similar format.

## Example Two: Typical ZigBee Sensor Network.





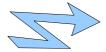


Ethernet TCP/IP or RS232/485 Communications or Web server

Multiple battery powered sensors transmit data at programmable intervals to a Z-PORT Network Coordinator which can transfer the data onto an Ethernet or RS232/485 network, Data from up to 256 nodes can be stored on one Z-PORT module and up to 16 networks can co-exist together. Several different topologies are possible including Mesh self-healing wireless networks

## Example Three: Wireless Trip Ampifier







A ZigBee wireless transmitter sends an OK message every 10 minutes unless an alarm condition is met. On reaching an alarm state the transmitter immediately sends an alarm message to the Z-200 receiver which can switch up to two relay outputs per channel.

Because Industrial Interface design and manufacture these components in the UK these examples are a tiny proportion of what is possible.

Please contact us with your particular requirements and I'm sure we'll be able to come up with a wireless solution that meets your specification.

