// ZPC-2X, ZDI-2X

Wireless Digital Signal Sensor

// Introduction

EpiSensor's digital signal sensor is used to count pulses produced by mechanical or electrical meters. These pulses typically represent a volume of liquid, water, gas, oil, heat or electricity consumed.

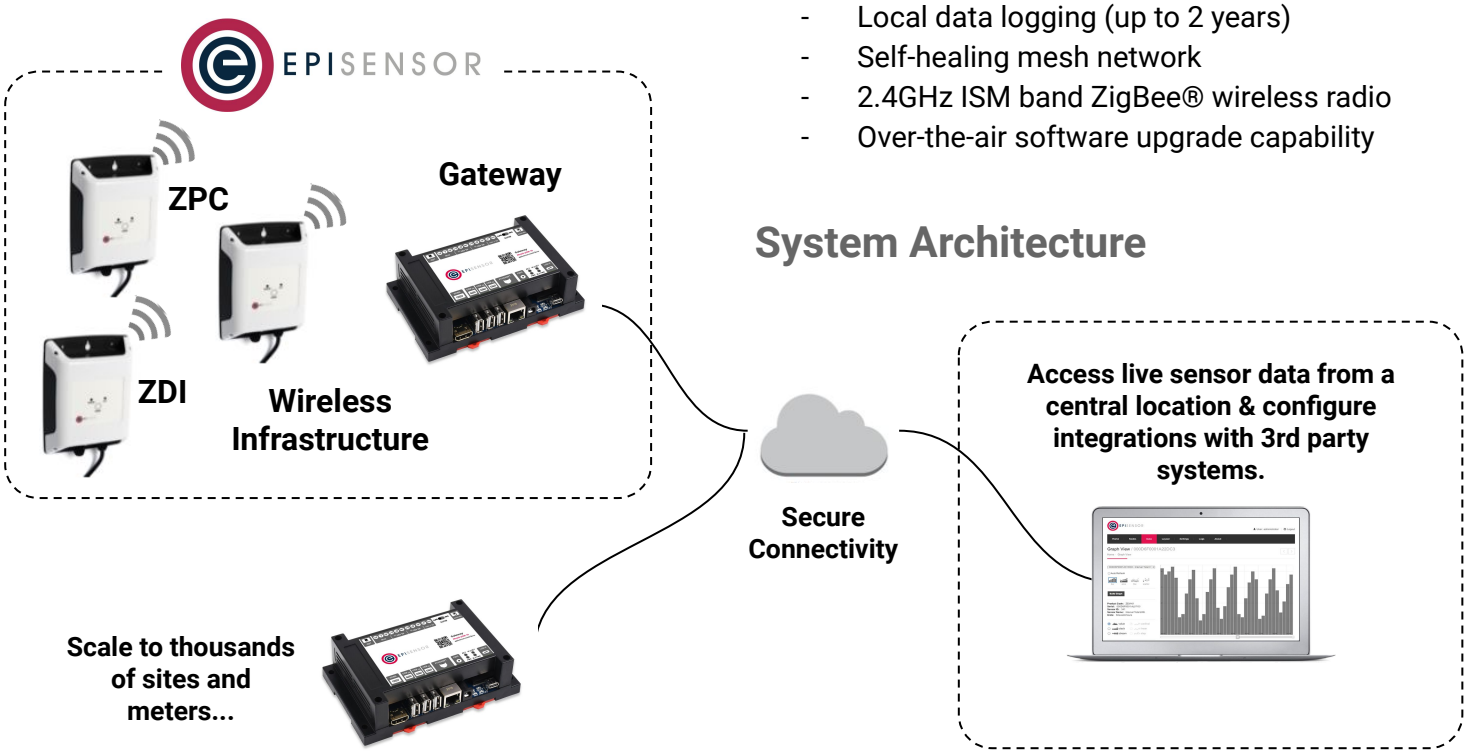
The number of pulses counted (or the digital state for ZDI products) is recorded and transferred securely over a wireless mesh network to a central EpiSensor Gateway where it can be exported to a variety of 3rd party systems for storage, visualisation and analysis to improve energy efficiency and reduce cost.

For more information, contact:
sales@episensor.com
visit http://episensor.com or call +353 61 512 500

// Key Features

- Security from edge to cloud
- Water and dust-proof polycarbonate enclosure
- Local data logging (up to 2 years)
- Self-healing mesh network
- 2.4GHz ISM band ZigBee® wireless radio
- Over-the-air software upgrade capability

System Architecture



Technical Specification

// Electrical

Category	Parameter	Value
Mains Power Supply	Input Voltage Range	85 - 264 V AC
	Input Frequency Range	50 / 60 Hz
	Power Consumption	Max. 5 W
	Mains Connection	Soldered wire-to-board

// Inputs

Category	Parameter	Value
Pulse Inputs (ZPC)	Minimum pulse width	10ms
	Min length between pulses	10ms
	Max Pulse Rate	40Hz
	Allocation to reporting period	+/- 1% @ 60 min intervals
	Max voltage	35 V DC
Digital Inputs (ZDI)	Min time for state change	10ms
	Max Voltage	35 V DC

// Communications

Category	Parameter	Value
Wireless Sensor Network	Radio Technology	ZigBee Pro
	Radio Frequency	2.4 GHz ISM band
	Network Topology	Mesh
	Channels	16 (802.15.4 Channels 11 to 26)
	Max Tx Power	+8dBm
	Tx modulation	O-QPSK
	Rx Sensitivity	-101dBm
	Max Data Rate	256kbit/s
	Wireless Range	up to 50m indoor / 300m outdoor

Technical Specification

// Software & Security

Category	Parameter	Value
Real Time Clock & Sync	Real Time Clock Backup	Capacitor
	Hold-up time	up to 72 hours
	Synchronisation	NTP time server via Gateway
	Timestamp Format(s)	ISO-8601, Unix Epoch
	Timestamp Resolution	1 second
Data Logging	Storage Type	Non-volatile flash
	Capacity	up to 70,000 data points
Security	Sensor Network Encryption	AES 128-bit
	Server Communications	TLS v1.2 / various

// Operating Conditions

Category	Parameter	Value
Operating Conditions	Operating Temperature	−25°C to 55°C (−22°F to 131°F)
	Storage Temperature	−40°C to 70°C (−40°F to 158°F)
	Operating Humidity Range	up to 100%
Physical	Weight	0.35 kg
	Dimensions (W x H x D)	144 x 112 x 45mm
	IP degree of protection	IP67 (IEC 60529)

// Certifications

Category	Parameter	Value
Certifications	Safety	CE
	Environmental	RoHS, WEEE
	EMC/RF	Contains FCC ID: S4GEM35XB
		Contains IC ID: 8735A-EM35XB

EpiSensor products are not suitable or specifically designed, manufactured or licensed for use in military, aviation, powerplant, medical or in other inherently dangerous or safety critical applications.

Technical Specification

// Order Codes

SKU	Description
ZPC-20	Pulse counter, single channel, 40Hz max, mains powered
ZPC-22	Pulse counter, dual channel, 40Hz max, mains powered
ZDI-20	Digital input for door/window/magnetic switches, single channel, mains powered
ZDI-22	Digital input for door/window/magnetic switches, dual channel, mains powered

// Accessories

SKU	Description
ZDI-MAG-SWITCH	Magnetic reed switch to detect open/closed state of doors and windows

Installation & Safety Notes

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- ➔ EpiSensor equipment should be installed, operated, serviced and maintained only by qualified personnel. EpiSensor does not assume any responsibility for any consequences arising out of the use of this equipment.
- ➔ For detailed installation and safety information, consult the Install Sheet.

// Contact

For technical support, please contact **support@episensor.com** or phone +353 61 512 500

Address: EpiSensor Ltd. Georges Quay House, Georges Quay, Limerick, V94 YW9T, Ireland

Manufactured in an ISO 9001 / ISO 14001 certified facility.

Designed and manufactured in Ireland