

// ZMB-30, ZMB-31, ZMB-33

Wireless Modbus Interface



// Introduction

EpiSensor's ZMB makes it easy to collect data from wired Modbus-enabled equipment.

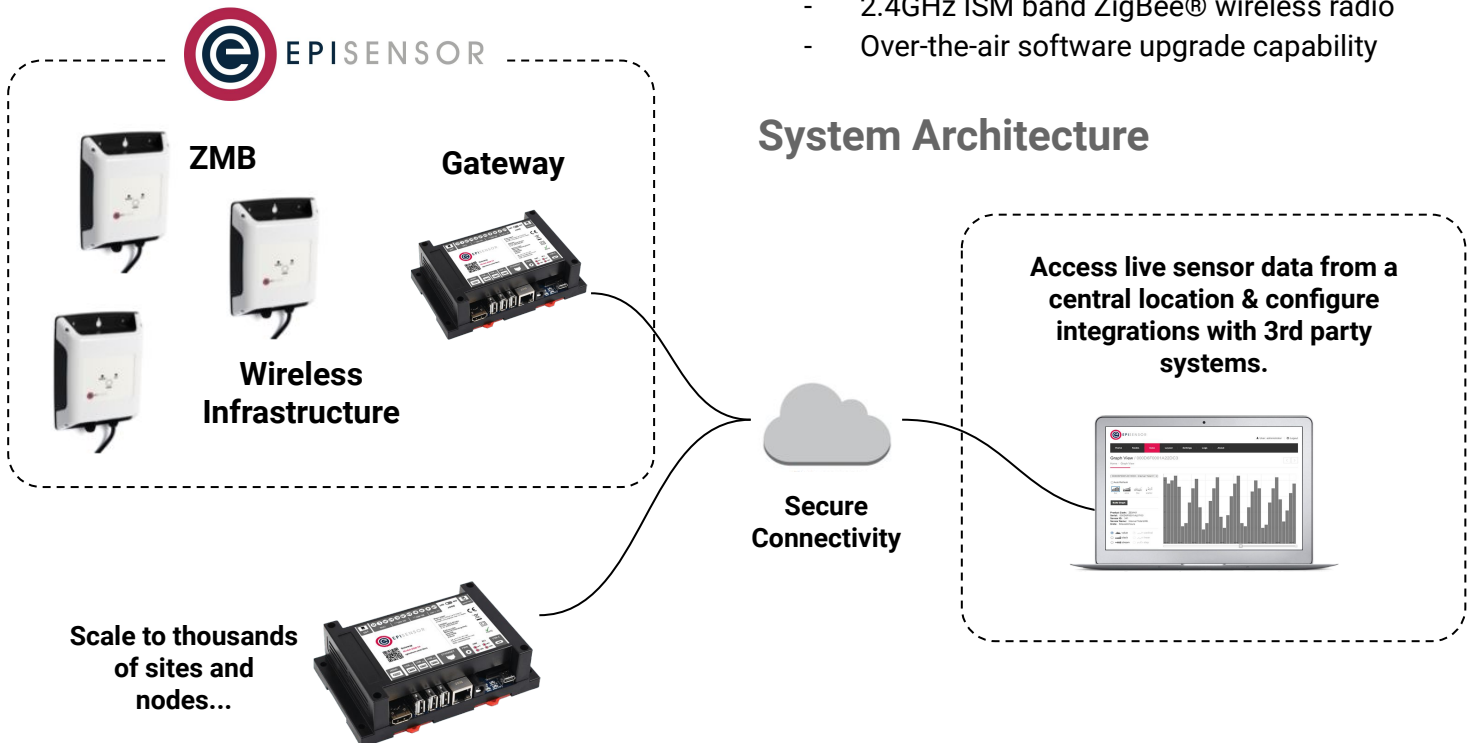
Data is transferred securely over a wireless network to a central Gateway, where it is stored and exported to a variety of 3rd party platforms for storage, visualisation and analysis.

// Key Features

- Security from edge to cloud
- Read/Write up to 30 registers per ZMB
- Integrated temperature probes
- On-board mains power supply
- 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

For more information, contact:
sales@episensor.com

visit <http://episensor.com> or call +353 61 512 500



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 Cable length | 2 metres |

// 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 |
| Serial | Physical Network | RS-485, RS232 (TTL) |
| | Protocol | Modbus RTU |
| | Baud Rate(s) | 300 to 115200 |
| | Function Codes Supported | 1, 2, 3, 4, 5, 6, 15, 16 |
| | Register Types Supported | Coil, Discreet, Input, Holding |
| | Max Connected Meters | up to 30 (see order codes) |
| | Max Cable Length | 1000m |
| | Pass Through | No |

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 | ISO-8601 |
| | 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 |
|--------|---|
| ZMB-30 | Mains powered, single 2.5m waterproof temperature probe, max 4 Modbus registers, live stream mode |
| ZMB-31 | Mains powered, no temperature probes, max 30 Modbus registers |
| ZMB-33 | Mains powered, no temperature probes, max 4 Modbus registers, live stream mode |

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

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Manufactured in an ISO 9001 / ISO 14001 certified facility.

Designed and
manufactured
in Ireland

