// RTO-23

Wireless Range Extender

// Introduction

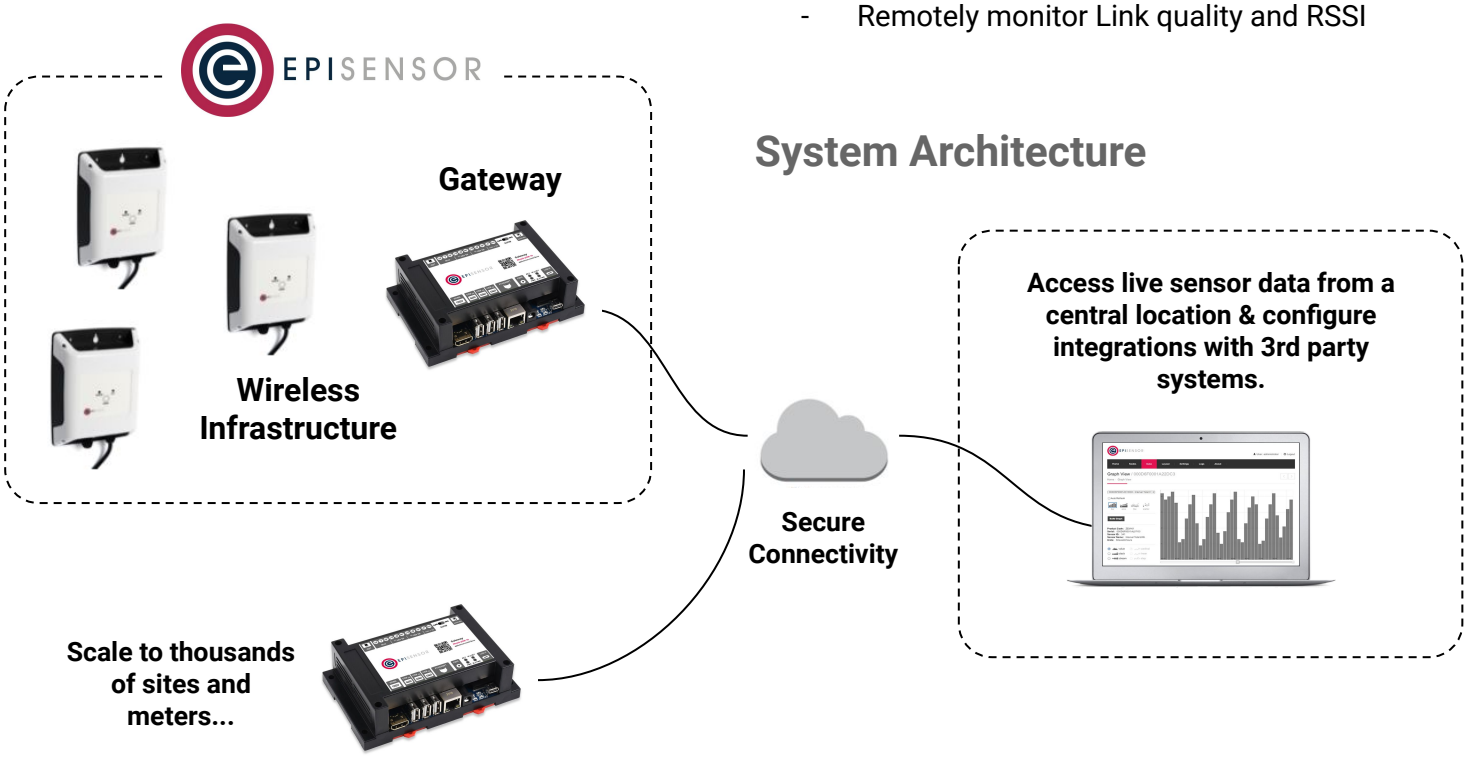
EpiSensor's RTO product range can extend wireless coverage of an EpiSensor system by up to 300m. Built on EpiSensor's hardened Industrial IoT platform, it meets the highest standards of reliability and security, with a consumer-class user interface making it easy to install, configure and maintain.

// Key Features

- Security from edge to cloud
- 128-bit AES data encryption
- Integrated mains power supply
- Water and dust-proof polycarbonate enclosure
- Up to 32 'child' nodes
- Self-healing mesh network
- 2.4GHz ISM band ZigBee® wireless radio
- Over-the-air software upgrade capability
- Remotely monitor Link quality and RSSI

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

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 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 / +20dBm (with power amp)
	Tx modulation	O-QPSK
	Rx Sensitivity	-106dBm
	Max Data Rate	256kbit/s
	Wireless Range	up to 50m indoor / 300m outdoor

// 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

Technical Specification

// Operating Conditions

Category	Parameter	Value
Operating Conditions	Operating Temperature	−30°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
RTO-23-2m	High gain, omnidirectional, mains powered, 2m mains cable length

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