

Industrial IoT Gateway



For more information, contact:
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// Introduction

EpiSensor's Industrial IoT Gateway manages networks of EpiSensor wireless nodes and provides users with an intuitive web interface to quickly and easily build complete Industrial IoT solutions. From this interface, the Gateway can be configured to push sensor data to software applications for archiving, and analysis and visualisation.

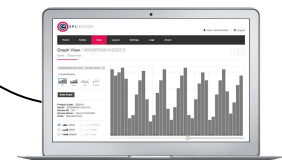
// Key Features

- Security from edge to cloud
- 128-bit AES data encryption
- Powerful ARM® Cortex-A8 Processor
- RESTful API for bi-directional communication
- Connect up to 50 nodes / 200 sensors
- Self-healing mesh network
- 2.4GHz ISM band ZigBee® wireless radio
- Over-the-air software upgrade capability
- Data export via HTTP(S), FTP(S), MQTT & more



System Architecture

Access live sensor data from a central location & configure integrations with 3rd party systems.



Scale to thousands of sites and assets...



Technical Specification

// System

Category	Parameter	Value
Computer	Processor	ARM® Cortex-A8 1GHz
	RAM	512MB DDR3
	Operating System	Ubuntu Linux (embedded)
Data Export	Transport Protocols	HTTP(S), FTP(S), MQTT & more
	Data Formats	JSON, CSV & more
	Software Integrations	50+ (see EpiSensor website)

// Electrical

Category	Parameter	Value
Power Supply	Input Voltage Range	100 - 240 V AC
	Input Frequency Range	50 or 60 Hz
	Output Voltage	5V DC / 2.5A max
	Power Consumption	Max. 5 W
	Cable length	1 metre

// Communications

Category	Parameter	Value
WAN	Ethernet	10/100 (RJ-45)
	Cellular	optional (via USB)
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
	Timestamp Format	ISO-8601
	Timestamp Resolution	1 second
Data Logging	Storage Type	Non-volatile flash (eMMC)
	Capacity	4GB
Security	Sensor Network Encryption	AES 128-bit
	Server Communications	TLS v1.2 / various

// Operating Conditions

Category	Parameter	Value
Operating Conditions	Operating Temperature	0°C to 55°C (32°F to 131°F)
	Storage Temperature	-40°C to 70°C (-40°F to 158°F)
	Operating Humidity Range	up to 80% (non-condensing)
Physical	Weight	0.22 kg
	Dimensions (W x H x D)	62 x 115 x 25mm

// 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
NGR-30-3	Ethernet communications, incl. 1yr EpiSensor Gateway software license, up to 50 nodes/200 sensors

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

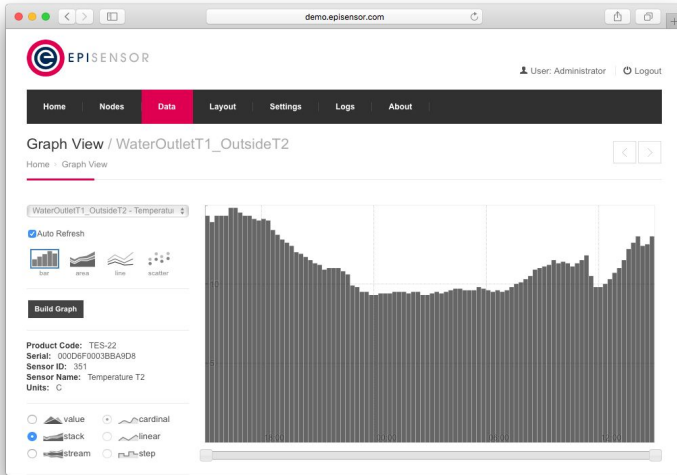
Address: EpiSensor Ltd. Georges Quay House, Georges Quay, Limerick, V94 YW9T, Ireland

Manufactured in an ISO 9001 / ISO 14001 certified facility.

Designed and
manufactured
in Ireland



Screenshots



// Graph View

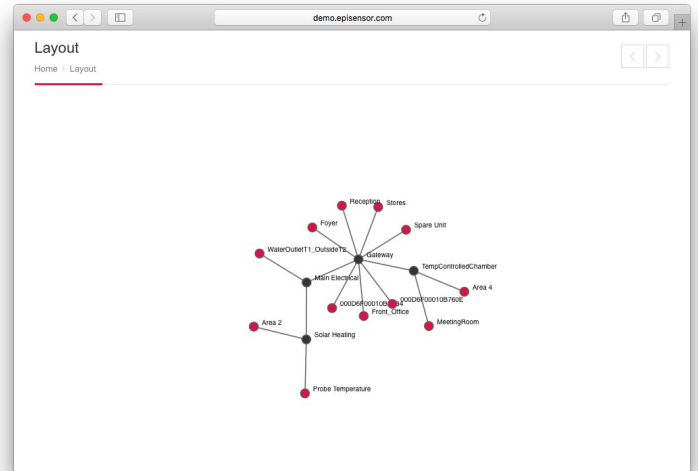


From the Graph view on EpiSensor's Industrial IoT Gateway, users can view live sensor data from any browser or mobile device. Up to 24 hours of live data is available from each sensor, which is intended to assist installers with confirming that the sensors joined to the Gateway are reporting data as expected, so they can leave site with confidence that the system is working.

// Layout View



EpiSensor wireless nodes form a mesh network using the ZigBee® Pro wireless communications standard. Mains-powered nodes will route data for other nodes close by, so wireless coverage can be extended by up to 10 'hops' covering very large areas. The Layout View shows the path that nodes are using within the mesh network to communicate with the Gateway.



// Nodes List



Every aspect of how a node communicates and sends data is configurable from the Nodes List page on the Gateway. Users can easily drill-down into the settings of a specific node or sensor, and get an overview of the firmware version, status, and configuration, and make changes to how data should be produced and exported. This can also be automated using the Gateway's API.

Name	Product	Serial	Last Data	Export	In-Sync	Status	Firmware	Action
000D6F00010B52B4	TES-11	000D6F00010B52B4	13 minutes ago	✓	✓	✓	3.00	Action
000D6F00010B760E	TES-11	000D6F00010B760E	13 minutes ago	✓	✓	✓	3.00	Action
Area 2	TES-11	000D6F00010B75D0	57 seconds ago	✓	✓	✓	3.00	Action
Area 4	TES-11	000D6F00010B7377	13 minutes ago	✓	✓	✓	3.00	Action
Foyer	TES-11	000D6F00010B7564	13 minutes ago	✓	✓	✓	2.66	Action
Front Office	TES-11	000D6F0007FE318	13 minutes ago	✓	✓	✓	3.00	Action
Main Electrical	ZEM-61	000D6F0001A310AE	57 seconds ago	✓	✓	✓	2.60	Action
MeetingRoom	TES-11	000D6F00010B73C3	13 minutes ago	✓	✓	✓	3.00	Action
Probe Temperature	TES-22	000D6F0001A30F78	3 minutes ago	✓	✓	✓	3.00	Action