V.05/24

MULTITECH®

LoRaWAN®

LoRaWAN® Wireless Movement Sensors

Acceleration, Tilt & Motion

Radio Bridge LoRaWAN® Wireless Movement Sensors use an internal accelerometer to detect movement of a critical asset. When movement is detected that exceeds a certain threshold, an alert is sent over the wireless network. Tilt sensors detect transitions between horizontal and vertical orientation, as well as reporting the angle of the tilt. The thresholds for triggering an event are configurable over the air.

These wireless movement sensors have a built-in radio that connects directly to a LoRaWAN® network. Models available for both indoor or outdoor applications. The outdoor sensors come with an enclosure tamper detection. Browse the products below or reach out to our team to discuss the best solution for your specific application.

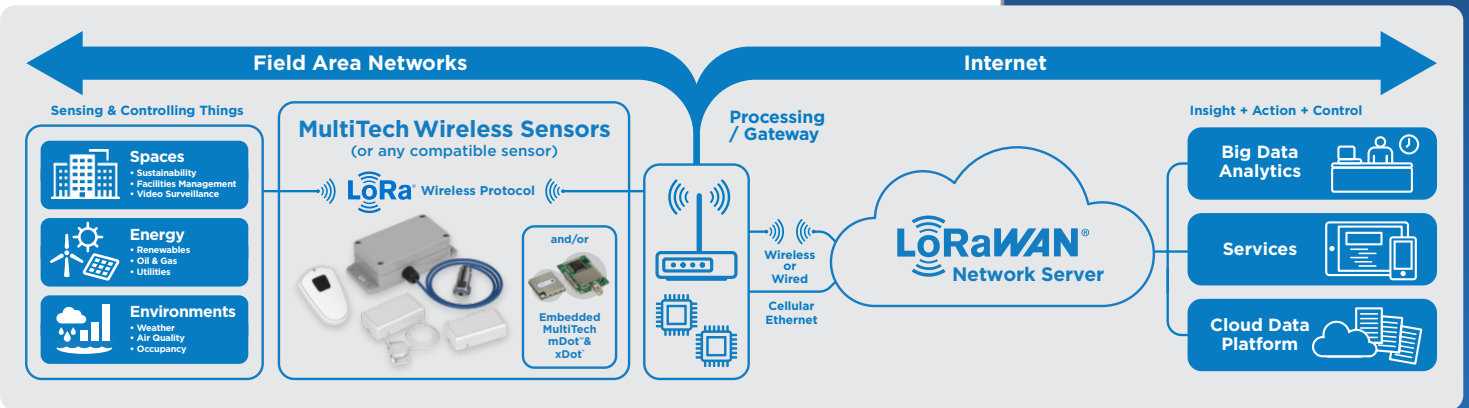
LoRaWAN wireless sensors make it easy to connect sensor data to your applications. Best in class RF performance enables sensors to work in environments where others fail. Advanced power management provides maximum battery life. Sensors can be configured over the air, enabling them to be optimized, before and after installation, for the most optimum reporting intervals or thresholds to provide the data that is important to your application, when you need it.

BENEFITS

- Open architecture for flexible integration with any LoRaWAN network
- Also available is an optional web-based service for provisioning, monitoring, and configuration of sensors in the field
- Seamlessly integrate with any LoRaWAN gateway in addition to the MultiTech portfolio of LoRaWAN gateways

FEATURES

- Based on LoRaWAN wireless technology
- Optimized Radio performance by balancing performance with long battery life and excellent network performance
- Very long range, up to several miles
- Excellent wireless penetration through structures such as walls and floors
- Automatic error reporting through supervisory messages
- Over the air configuration
- Seamless integration into any cloud service. BACnet integration through MultiTech Gateways.

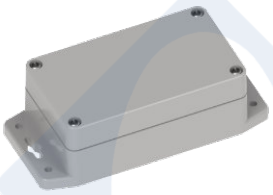


Alcom electronics
Singel 3 | B-2550 Kontich | Belgium | Tel. +32 (0)3 458 30 33 | info@alcom.be | www.alcom.be
Rivium 1e straat 52 | 2909 LE Capelle aan den Ijssel | The Netherlands | Tel. +31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl

LoRaWAN® Wireless IoT Sensors

Long-range wireless sensors for the Internet of Things (IoT)

Radio Bridge LoRaWAN® wireless sensors, utilize the LoRaWAN wireless standard and are all engineered for long-range, low cost, and extended battery life applications. These sensors deliver critical asset information so you understand what's happening and can react quickly when needed.

Sensor / Item	Description	Applications
	**LoRaWAN Acceleration-based Movement Sensor for Indoor Use** The acceleration-based movement sensor uses an internal accelerometer to detect movement of an asset and is designed for internal use. Applications include asset monitoring, building security, shock sensing and movement detection.	**Acceleration-Based:** • Asset Monitoring • Building Security • Shock Sensing • Movement Detection
	**LoRaWAN Acceleration-based Movement Sensor for Outdoor/Industrial Use** The acceleration-based movement sensor uses an internal accelerometer to detect movement of an asset and is designed for outdoor/industrial use. Applications include asset monitoring, building security, shock sensing and movement detection.	**Tilt & Motion:** • Inclination Monitoring • Garage Door • Pole Lean Detection • Loading Gates • Bay Door Orientation
	**LoRaWAN Tilt Sensor (Low Precision) for Indoor Use** The indoor tilt sensor uses an accelerometer to detect transitions between horizontal and vertical orientation, as well as reporting the angle of tilt. When the sensor is rotated from horizontal to vertical or visa versa, an alert is sent to the wireless network. The thresholds for triggering a tilt event are configurable over the air. Applications include inclination monitoring, garage doors, pole lean detection, loading gates, and bay door orientation.	
	**LoRaWAN High Precision Tilt Sensor for Outdoor/Industrial Use** The high-precision tilt sensor uses an accelerometer to measure angle of tilt between 0-180 degrees with precision of 0.1 degrees. The outdoor/industrial enclosure makes the sensor suitable for outdoor and industrial use. Applications include inclination monitoring, garage doors, pole lean detection, loading gates, and bay door orientation.	

Radio Bridge Console

The Radio Bridge Console is an optional web-based fully integrated solution that provides sensor configuration, LoRaWAN Network Server management, configurable alerts and notifications. Sensor visualization enables you to deploy and validate your sensor-to-cloud solution immediately, without spending weeks or months on system integration efforts.

LEARN MORE: radiobridge.com/software/device-management-console

SENSOR SPECIFICATIONS OVERVIEW

Item / Type	Description					
LoRaWAN® Region	US/Canada	Europe/ United Kingdom	US/Canada	Europe/ United Kingdom	US/Canada	US/Canada
Sensor Type	LoRaWAN® Acceleration-based (Indoor Use)	LoRaWAN® Acceleration-based (Indoor Use)	LoRaWAN® Tilt Low Precision (Indoor Use)	LoRaWAN® Tilt Low Precision (Indoor Use)	LoRaWAN® Acceleration-based (Outdoor/ Industrial Use)	LoRaWAN® High Precision Tilt (Outdoor/ Industrial Use)
Part Number	RBS3010 NA08BN00	RBS3010 EU08BN00	RBS3010 NA09BN00	RBS3010 EU09BN00	RBS306-ABM-US	RBS306-TILT-HP-US
LoRa® Wireless						
Frequency Band (MHz)	902-928	863-870	902-928	863-870	902-928	902-928
Channel Plan	US915	EU868	US915	EU868	US915	US915
Protocol	LoRaWAN® compliant					
Antenna Peak (typical) Antenna Gain	0.8dBi	0.0dBi	0.8dBi	0.8dBi	1.3dBi	1.3dBi
Power						
Battery Powered	Yes					
Battery Type/Qty	CR123A x 1				CR123A x 2	
User Replaceable	Yes					
Battery Life	Optimized solution: up to 10 years battery life. (https://radiobridge.com/documents/Sensor%20Battery%20Estimator.xlsx)					
Physical Description						
Sensor Type	Acceleration-based Movement		Tilt		Acceleration-based Movement	Tilt
Physical Dimensions (LxWxH)	2.81" x 1.46" x 0.75" (71.37mm x 37.08mm x 19.05mm)				5.709" x 2.592" x 1.575" (145mm x 65.8mm x 40mm)	
Physical Weight	34g				188g base weight	
Enclosure Type	ABS Plastic, IP30, indoor rated				ABS Plastic, IP54, outdoor rated	
Mounting	Double Sided Tape or Screw				Screw	
Range	User-selectable scales +/-2g, Threshold units 0.016g +/-4g, Threshold units 0.032g +/-8g, Threshold units 0.064g +/-16g,Threshold units 0.186g		-90° to +90° Single Axis (X or Y)	-90° to +90° Single Axis (X or Y)	User-selectable scales +/-2g, Threshold units 0.016g +/-4g, Threshold units 0.032g +/-8g, Threshold units 0.064g +/-16g, Threshold units 0.186g	-90° to +90° Single Axis (X or Y)
Resolution	See selectable scale		1°	1°	N/A	1°
Accuracy	Gross movement only		+/-10°	+/-10°	Gross movement only	+/-2°
Environmental						
Operating Temperature	-40° to +50°C				-40 to +70°C	
Operating Humidity	10 - 90% (non-condensing)					
Storage Temperature	-40° to +45°C					
Certifications						
Compliance	FCC/IC, REACH, ROHS	CE, RED, UKCA, REACH, ROHS	FCC/IC, REACH, ROHS	CE, RED, UKCA, REACH, ROHS	FCC/IC, REACH, ROHS	
Warranty	2-Years / www.multitech.com/legal/warranty					

See user guide for more information.

ORDERING INFORMATION

MultiTech Sensors

Model	Description	Region
RBS3010NA08BN00	LoRaWAN Acceleration-based Movement Sensor for Indoor Use (1 Pk)	US/Canada
RBS3010EU08BN00	LoRaWAN Acceleration-based Movement Sensor for Indoor Use (1 Pk)	EU & UK
RBS306-ABM-US	LoRaWAN Acceleration-based Movement Sensor for Outdoor/Industrial Use (1 Pk)	US/Canada
RBS3010NA09BN00	LoRaWAN Tilt Sensor (Low Precision) for Indoor Use (1 Pk)	US/Canada
RBS3010EU09BN00	LoRaWAN Tilt Sensor (Low Precision) for Indoor Use (1 Pk)	EU & UK
RBS306-TILT-HP-US	LoRaWAN High Precision Tilt Sensor for Outdoor/Industrial Use (1 Pk)	US/Canada

Features and specifications are subject to change without notice.

2024-03 • 86002277 •

Services & Warranty

MultiTech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations.

Technical Support Services

At MultiTech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your MultiTech representative or visit www.multitech.com/support.go

World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112 U.S.A.
Tel: 763-785-3500
Email: sales@multitech.com
www.multitech.com

MULTITECH