

G-Link-200-8G

Wireless Accelerometer Node



G-Link-200-8G - ruggedized high-speed triaxial accelerometer node with ± 2 to ± 8 g measurement range

LORD Sensing LXRS Wireless Sensor Networks enable simultaneous, high-speed sensing and data aggregation from scalable sensor networks. Our wireless sensing systems are ideal for test and measurement, remote monitoring, system performance analysis, and embedded applications.

The G-Link-200-8G includes an on-board triaxial accelerometer that allows high-resolution data acquisition with extremely low noise and drift. Additionally, derived vibration parameters allow for long-term monitoring of key performance indicators while maximizing battery life.

Users can easily program nodes for continuous, periodic burst, or event-triggered sampling with the SensorConnect software. The optional web-based SensorCloud interface optimizes data aggregation, analysis, presentation, and alerts for sensor data from remote networks.

Product Highlights

- On-board triaxial accelerometer with +/- 2, +/- 4, or +/- 8 g measurement range
- Continuous, periodic burst, and event-triggered sampling
- Output acceleration or derived vibration parameters (Vrms, Arms, App, Crest Factor)
- LXRS protocol allows lossless data collection, scalable networks, and node synchronization of ± 50 μ s.
- 1 Sample per hour to 4096 Samples per second
- Ruggedized IP-67 rated enclosure

Features and Benefits

High Performance

- User-configurable low and high pass filters
- Extremely low noise on all axis $25 \mu g/\sqrt{Hz}$
- High accuracy temperature sensor ± 0.1 $^{\circ}C$
- Wireless range up to 2 km (800 m typical)
- Datalog up to 8 million data points

Ease of Use

- End-to-End wireless sensing solution reduces development and deployment time
- Remote configuration, acquisition, and display of sensor data with SensorConnect
- Optional web-based SensorCloud platform optimizes data storage, viewing, alerts, and analysis.
- Easy custom integration with open-source, comprehensive communications and command library (API)

Applications

- Vibration monitoring
- Condition based maintenance (CBM)
- Impact and event monitoring
- Health monitoring of rotating components, aircraft, structures, and vehicles

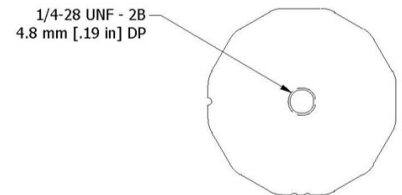
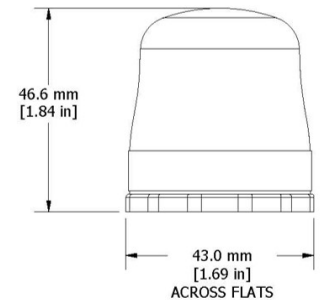
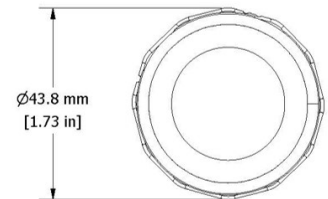
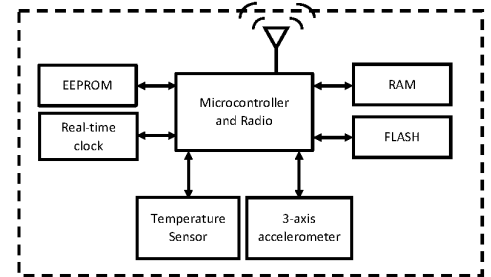


Specifications

Accelerometer Channels	
Integrated Sensors	Triaxial MEMS accelerometer, 3 channels
Measurement range	$\pm 2 g$, $\pm 4 g$, or $\pm 8 g$ - configurable
Accelerometer bandwidth	DC to 1 kHz
Resolution	20-bit
Noise density ($\pm 2 g$)	25 $\mu g/\sqrt{Hz}$
Non-linearity	.1% full-scale
0 g offset ($\pm 2 g$)	$\pm 25 mg$
0 g offset vs temperature ($\pm 2 g$)	$\pm 1 mg/^\circ C$ (typical), $\pm 15 mg/^\circ C$ (maximum)
Anti-aliasing filter	1.5 kHz (-6 dB attenuation)
Low-pass digital filter	26 to 800 Hz - configurable
High-pass digital filter	Off to 2.5 Hz - configurable
Integrated Temperature Channel	
Measurement range	-40 $^\circ C$ to 85 $^\circ C$
Accuracy	$\pm 0.1 ^\circ C$ (over full range)
Sampling	
Sampling modes	Continuous, periodic burst, event triggered
Output options	Acceleration, derived channels (Vrms, Arms, App, crest factor)
Sampling rates	1 sample/hour to 4096 samples/second
Sample rate stability	$\pm 3 ppm$
Network capacity	Up to 128 nodes per RF channel depending on number of active channels and sampling settings. See bandwidth calculator: http://www.microstrain.com/configure-your-system
Synchronization between nodes	$\pm 50 \mu sec$
Data storage capacity	16 M Bytes (up to 8,000,000 data points)
Operating Parameters	
Wireless communication range	Outdoor/line-of-sight: 2 km (ideal)*, 800 m (typical)**, Indoor/obstructions: 50 m (typical)**
Radio	License-free 2.4 GHz, 14 channels (IEEE 802.15.4)
Radio Power	0 dBm to 20 dBm; limited to 10 dBm outside of USA
Power source	3 x 3.6 V, 1/2 AA batteries (Saft LS 14250 recommended)
Battery input range	0.8 V to 5.5 V
Operating temperature	-40 $^\circ C$ to +85 $^\circ C$
Physical Specifications	
Dimensions	46.6 mm x 43 mm x 44 mm
Mounting	1/4 - 28 UNF - 2B 4.8 mm [1.19 in] DP.
Weight	Node with 3 batteries: 122 grams
Environmental rating	IP67
Enclosure material	300 series stainless steel bottom plate, polycarbonate cover
Integration	
Compatible gateways	All WSDA base stations and gateways
Software	SensorCloud, SensorConnect, WSDA-101 Data Downloader, Live Connect, Windows Vista/7 compatible
Software development kit (SDK)	Data communications protocol available with EEPROM maps and sample code (OS and computing platform independent) http://www.microstrain.com/software/mscl

*Measured with antennas elevated, no obstructions, and no RF interferers.

**Actual range varies with conditions such as obstructions, RF interference, antenna height & orientation.



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