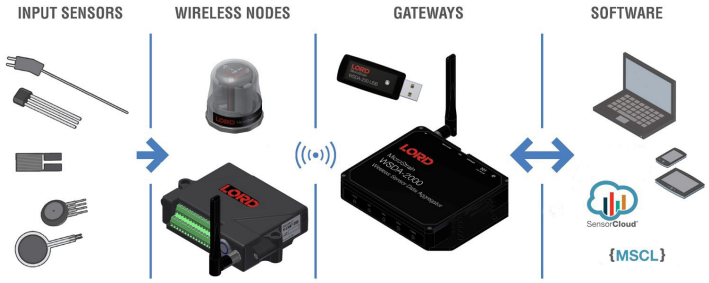
G-Link®-200
Wireless Accelerometer Node

G-Link®-200 *– Ruggedized high-speed triaxial accelerometer node*

The G-Link-200 has an onboard triaxial accelerometer allowing high-resolution data acquisition with extremely low noise and drift. Derived vibration parameters allow for long-term monitoring of key performance indicators while maximizing battery life.

LORD Sensing 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.

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 to ±40 g measurement range
- Continuous, periodic burst, and event-triggered sampling
- Output raw acceleration waveform data or derived vibration parameters (Velocity, Amplitude, Crest Factor)
- LXRS protocol allows lossless data collection, scalable networks, and node synchronization of ±50 µs
- 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 µg/√Hz or 80 µg/√Hz
- High accuracy temperature sensor ±0.1°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 communications and command library (API)

APPLICATIONS

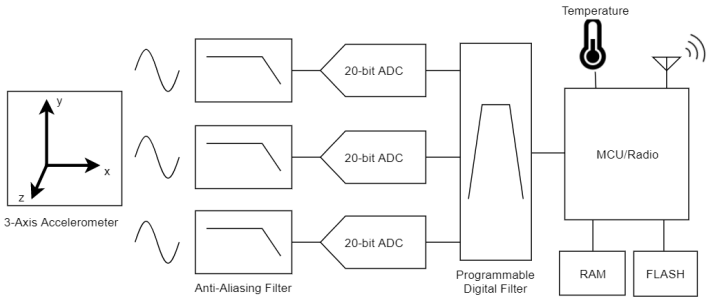
- Vibration monitoring
- Condition based maintenance (CBM)
- Impact and event monitoring
- Health monitoring of rotating components, aircraft, structures, and vehicles

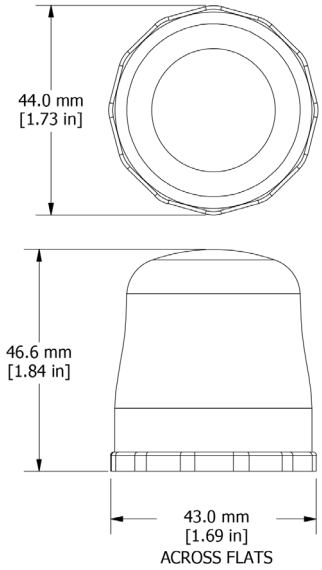
G-Link®-200 Wireless Accelerometer Node

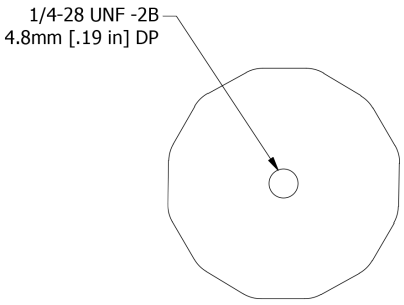
Specifications

Analog Input Channels		
Measurement range	8 *g*	40 *g*
	±2 *g*, ±4 *g*, or ±8 *g* configurable	±10 *g*, ±20 *g*, or ±40 *g* configurable
Noise density	25 µ*g*/√ Hz	80 µ*g*/√ Hz
0 *g* offset	±25 mg (±2 *g*)	±50 mg (±10 *g*)
0 *g* offset vs temperature	±.1 mg/°C (typical), ±.15 mg/°C (maximum)	±0.5 mg/°C (typical), ±0.75 mg/°C (maximum)
Integrated Sensors	Triaxial MEMS accelerometer, 3 channels	
Accelerometer bandwidth	DC to 1 kHz	
Resolution	20-bit	
Scale factor error	< 1% full-scale	
Cross axis sensitivity	1%	
Sensitivity change (temperature)	±0.01%/°C	
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°C to 85°C	
Accuracy	±0.1°C (over full range)	
Sampling		
Sampling modes	Continuous, periodic burst, event triggered	
Output options	Acceleration, Tilt, and Derived channels: Velocity (IPSrms), Amplitude (Grms and Gpk-pk) and Crest Factor	
Sampling rates	1 sample/hour to 4096 samples/second	
Sample rate stability	±5 ppm	
Network capacity	Up to 128 nodes per RF channel (bandwidth calculator) http://www.microstrain.com/configure-your-system	
Node synchronization	±50 µsec	
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 frequency (RF) transceiver carrier	License-free 2.405 to 2.480 GHz with 16 channels	
RF transmit power	Adjustable from 0 dBm to 20 dBm. Power output restricted regionally to operate within legal limits	
Power source	3 x 3.6 V, ½ AA batteries Saft LS 14250 recommended	
Battery input range	0.8 V to 5.5 V	
Operating temperature	-40°C to +85°C	
Mechanical Shock Limit	1000*g*/1.5ms	
Physical Specifications		
Dimensions	46.6 mm x 43 mm x 44 mm	
Mounting	¼ - 28 UNF - 2B 4.8 mm [.19 in] DP.	
Weight	Node with 3 batteries: 122 grams	
Environmental rating	IP67	
Enclosure material	300 series stainless steel with polycarbonate cover	

Integration	
Compatible gateways	All WSDA gateways
Software	SensorCloud, SensorConnect, Windows 7, 8 & 10 compatible
Software development kit	http://www.microstrain.com/software/mscl
Regulatory compliance	FCC (USA), IC (Canada), CE (European Union, includes RoHS), JET (Japan), IMDA (Singapore).







* Actual range varies with conditions
** Measured with antennas elevated, no obstructions, no RF interferers.

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