

MicroStrain Sensing Product Datasheet

G-Link-200

Ruggedized Wireless 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.

HIGH PERFORMANCE SENSING

- On-board triaxial accelerometer with ± 2 to ± 40 g measurement range
- Extremely low noise on all axes $25 \mu\text{g}/\sqrt{\text{Hz}}$ or $80 \mu\text{g}/\sqrt{\text{Hz}}$
- User-configurable low and high pass filters
- On-board temperature sensor
- Standard Amusement Ride Characterization Test version available.

RUGGED AND WEATHERPROOF

- IP-67 weatherproof enclosure
- -40 to $+85^\circ\text{C}$ operating temperature
- Stainless steel base
- Bolt or magnetic mount

RELIABLE DATA COLLECTION

- Lossless, synchronized, and scalable networks using LXRS or LXRS+ protocol
- Remotely configure nodes and view sensor data with SensorConnect (PC), SensorCloud (web), or MSCL (API library)

CONFIGURE FOR MANY APPLICATIONS

- Output raw acceleration waveform data, tilt, or derived vibration parameters (Velocity, Amplitude, Crest Factor)
- Up to 4096 Hz sampling
- Continuous, periodic, or event-triggered operation
- Transmit data real-time and/or save to onboard memory

APPLICATIONS

- Vibration monitoring
- Condition based maintenance (CBM)
- Impact and event monitoring
- Health monitoring of rotating components, aircraft, structures, and vehicles
- Standardized Amusement Ride Characterization Test (SARC Test): Model G-Link,-200-R
- ASTM F2137-18 Compliant model: G-Link-200-R



Ruggedized Wireless Triaxial Accelerometer Node

Specifications

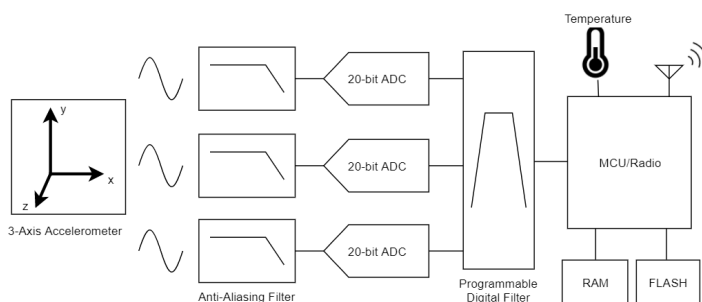
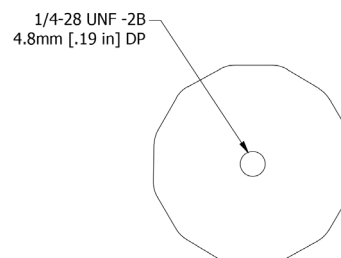
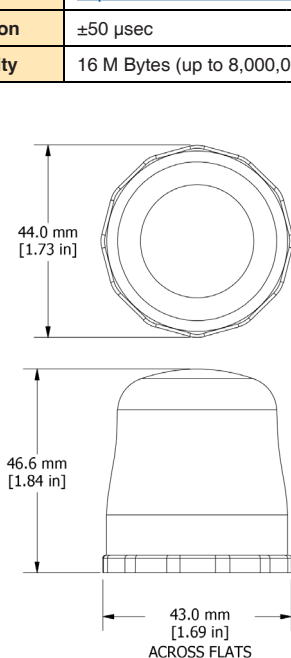
Analog Input Channels		
Measurement range	8 g	40 g
	±2 g, ±4 g, or ±8 g configurable	±10 g, ±20 g, or ±40 g configurable
Noise density	25 µg/√ Hz	80 µg/√ Hz
0 g offset	±25 mg (±2 g)	±50 mg (±10 g)
0 g offset vs temperature	±.1 mg/°C (typical), ±.15 mg/°C (maximum)	±0.5 mg/°C (typical), ±0.75 mg/°C (maximum)
Integrated Sensors	Triaxial MEMS accelerometer, 3 channels	
Accelerometer bandwidth	DC to 1 kHz	
Resolution	20 bit	
Scale factor error	< 1%	
Cross axis sensitivity	1% typical	
Sensitivity change (temperature)	±0.01%/°C typical	
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	±0.25°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 Hz	
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
Battery lifetime	https://microstrain.com/wireless/G-link-200
Operating temperature	-40°C to +85°C
Mechanical Shock Limit	1000g/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 or magnet purchased separately.
Weight	batteries installed: 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), MIC (Japan), IMDA (Singapore).

* Actual range varies with conditions.

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

*** Repeated exposure to > 2x full scale can result in permanent damage. See manual for details.



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