

PRODUCT DATA SHEET

G-Link-200-R: ASTM F2137 Compliant Wireless Accelerometer Node

The G-Link-200-R is specifically designed to monitor the dynamic characteristics of amusement rides and roller coasters. The wireless sensor is ASTM F2137-18 compliant. An onboard triaxial accelerometer reports high-resolution waveform data with extremely low noise and drift.

The MicroStrain 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, 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

- ASTM F2137-18 Compliant
- ± 20 g triaxial measurement range
- Extremely low noise on all axes: $80 \mu\text{g}/\sqrt{\text{Hz}}$
- On-board temperature sensor
- Configurable low-pass filter for CFC10, CFC21, or CFC60



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RUGGED AND WATERPROOF

- IP-67 weatherproof enclosure
- -40 to +85°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

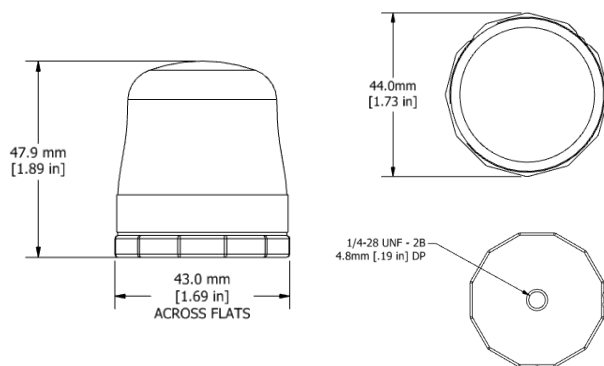
- 128-1024 Hz sampling
- Transmit data real-time and/or save to onboard memory

APPLICATIONS

- Acceleration and Vibration monitoring
- Standardized Amusement Ride Characterization Test (SARC Test)
- Impact and event monitoring
- Condition Based Maintenance (CBM)

MICROSTRAIN G-LINK-200-R SPECIFICATIONS

| Analog Input Channels | |
|----------------------------------|---|
| Measurement Range | ±20 g |
| Noise Density | 80 µg/√Hz |
| 0 g offset | ±50 mg |
| 0 g offset vs temperature | ±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 | User configurable, CFC10, CFC21, CFC60 |
| Sampling | |
| Sampling modes | Continuous, event triggered |
| Sampling rates | 128 to 1024Hz |
| 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) |



| Integrated Temperature Control | |
|--|---|
| Measurement range | -40°C to 85°C |
| Accuracy | ±0.25°C (over full range) |
| 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 | |
| Dimensions | 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), ASTM F2137-18 |

* Actual range varies with conditions.

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

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