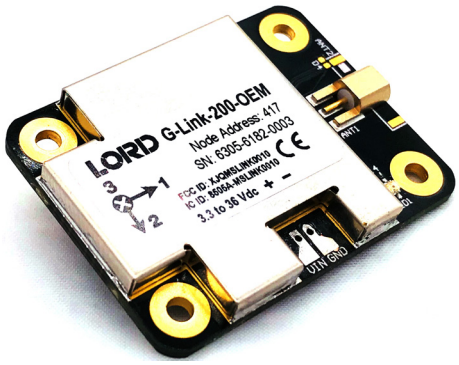
MicroStrain Sensing Product Datasheet

G-Link®-200-OEM

Embeddable Wireless Accelerometer Node



The **G-Link-200-OEM** has 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.

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 µg/√Hz or 80 µg/√Hz
- User-configurable low and high pass filters)
- On-board temperature sensor

EASY TO INTEGRATE

- Small, thin form factor
- Power from 3.3 to 36 VDC
- -40 to +85°C operating temperature
- On-board, U.FL, or MMCX antenna options

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

Parker LORD

ENGINEERING YOUR SUCCESS.

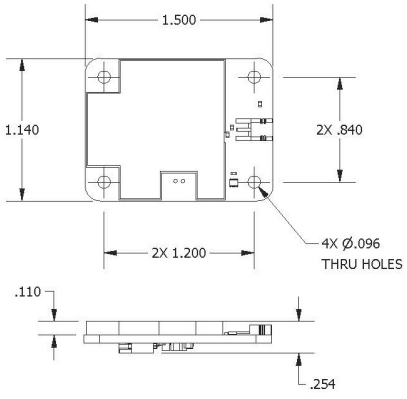
Embeddable Wireless Accelerometer Node

Specifications

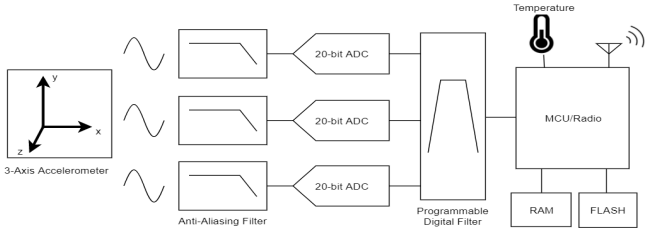
Analog Input Channels		
Measurement range	**8 g**	**40 g**
	±2 *g*, ±4 *g*, or ±8 *g* configurable	±10 *g*, ±20 *g*, or ±40 *g* configurable
Noise density	25 µg/√ Hz	80 µg/√ Hz
0 *g* offset	±25 mg (±2 *g*)	±50 mg (±10 *g*)
0 *g* offset vs temperature	±.1 mg/ °C (typical) ±.15 mg/ °C (max)	±0.5 mg/ °C (typical) ±0.75 mg/ °C (max)
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)	

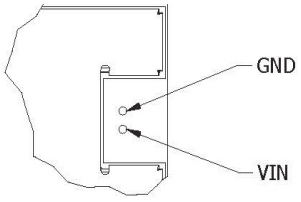
Operating Parameters				
Wireless communication range	Outdoor/line-of-sight: 2 km (ideal)*, 800 m (typical)** Onboard antenna: 1 km (ideal)*, 400 (typical)** Indoor/obstructions: 50 m (typical)**			
Antenna	Surface mount or External through MMCX or U.FL connector			
Radio frequency (RF) transceiver carrier	License-free 2.405 to 2.480 GHz with 16 channels			
RF transmit power	User-adjustable 0 dBm to 20 dBm. Restricted regionally			
Power source	3.3 V dc to 36 V dc to solder pads			
Pulse Current* **	**Tx Power**	**VIN = 3.6 V**	**VIN = 5.0 V**	**VIN = 12 V**
	+20 dBm	135 mA	100 mA	45 mA
	+16 dBm or less	100 mA	70 mA	32 mA
ESD	±4000 V (Applies to VIN, GND, Antenna, and shield)			
Operating temperature	-40°C to +85°C			
Mechanical Shock Limit ****	1000*g*/1.5ms			
Physical Specifications				
Dimensions	1.5 "x 1.14 "x .254" (38.1 x 29.0 x 6.5 mm)			
Mounting	(4) 2- 56 UNC Chassis purchased separately			
Weight	8.17 grams			
Conformal coating	Humiseal 1B31			
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, RoHS (EU), MIC (Japan)			

* Actual range varies with conditions
** Measured with antennas elevated, no obstructions, no RF interferers.
*** Power source must supply short duration pulse currents as determined by the transmit power setting and the supply voltage.
**** Repeated exposure to > 2x full scale can result in permanent damage. See manual for details.



Typical Mounting





Pinout

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