







Wireless Data Acquisition System

High-speed data acquisition for condition based monitoring of machines, health monitoring of structures and industrial test and measurement applications.

Features and Benefits:

- IEEE 802.15.4 DSSS nodes compatible worldwide
- Streaming rates up to 4KHz from multiple nodes
- Datalogging rates up to 2048 Hz
- On-board memory stores 1,000,000 measurements
- Excitation and signal conditioning for up to 4 differential and 3 single ended inputs
- Line-of-sight range 70m standard, 300m optional (TC-Link® 100m optional)
- Low power consumption for extended use
- Internal rechargeable battery



Specifications						
Model	V-LINK®	SG-LINK®	SG-LINK® OEM	G-LINK®	TC-LINK®	TC-LINK® -1CH
Input channels	4 full differential, 350 Ω or higher (with optional bridge completion), 3 single ended inputs (0-3 volts max.) and internal temperature sensor	1 full differential, 350 Ω resistance or higher (optional bridge completion), 1 single ended input (0-3 volts) and internal temperature sensor	1 full differential, 350 Ω resistance or higher (optional bridge completion), 1 single ended input (0-3 volts) and internal temperature sensor	triaxial MEMs accelerometers, Analog Devices AD22293 (2 g) or ADXL210 (10 g)	software selectable: type J, K, N, R, S, T, E, B six input channels, one ambient CJC channel, optional internal relative humidity sensor	software selectable: one, type-J, K, N, R, S, T, E, or B, input channel, one ambient CJC channel
Measurement accuracy	± 0.1% full scale typical	± 0.1% full scale typical	± 0.1% full scale typical	10 mg	± 0.1% full scale or ± 2 °C, whichever is greater	
Resolution	1 bit: 0.024%, 1 microstrain typical for 3 wire full bridge strain gauge (when used in accordance with MicroStrain® recommendations)			1.5 mg RMS (2 g), 9 mg RMS (10 g)	0.0625 °C	
Temperature sensor	-40 °C to 70 °C range, typical accuracy ± 2 °C (at 25 °C)				cold junction comp -20 °C to 85 °C	
DC bridge excitation	+3 volts DC at 50 mA maximum (pulsed to sensors for sample rates of 100 Hz and below to conserve power)				N/A	
Software programmable gain	on differential channels from 210 to 4844 (can be reduced with hardware resistor change)	on differential channels from 104 to 1800 (can be reduced with hardware resistor)	on differential channels from 20 to 2560 (can be reduced with hardware resistor)	N/A		
Programmable offset	software programmable				N/A	
A/D converter	successive approximation type, 12 bit resolution				24 bit Delta-Sigma A/D	
Data logging mode	log up to 1,000,000 data points (from 100 to 65,500 samples or continuous) at 32 Hz to 2048 Hz				log up to 90,000 data sets (630,000 data points)	log up to 90,000 data points
Real-time streaming mode	transmit real time data from node to PC - rate depends on number of active channels: 1 channel - 4 KHz, 2 channels - 2 KHz, 3 channels - 1.33 KHz, 4 channels - 1 KHz, 5 channels - 800 Hz, 6 channels - 666 Hz, 7 channels - 570 Hz, 8 channels -				N/A	
Low duty-cycle mode	supports multiple nodes on single RF channel, from 1 sample per hour to 250 Hz				N/A	
Synchronization between nodes	datalogging ±4 µsec ± 50 ppm LDC mode time stamped at PC				N/A	
Sample rate stability	± 25 ppm for sample rates > 1 Hz, ±10% for sample rates ≤ 1 Hz				datalogging and LDC ± 25 ppm	
Wireless shunt calibration	internal shunt calibration resistor 499 KΩ				N/A	
RF transceiver carrier/ RF data packet standard	2.4 GHz direct sequence spread spectrum, license free worldwide (2.405 to 2.480 GHz) - 16 channels, radiated power 0 dBm (1 mW)/ IEEE 802.15.4, open communication architecture					
Range for bi-directional RF link	70 m line-of-sight, up to 300 m with optional high gain antennas				70 m line-of-sight, 100 m with optional high gain antenna	
Internal Li-Ion battery	3.7 volt 740 mAh (rechargeable)	3.7 volt 250 mAh (rechargeable)	N/A	3.7 volt 250 mAh (rechargeable)	3.7 volt 740 mAh (rechargeable)	550 mAh (non-rechargeable)
3.2 to 9 volts external power	Optional		Standard	Optional		N/A
Power consumption	node only: streaming - 25 mA, datalogging - 25 mA, sleeping - 0.1 mA External sensors: 350 Ω strain gauge - 8 mA, 1000 Ω strain gauge - 3 mA (to calculate total power consumption, add sensor consumption to above)			streaming - 25 mA, datalogging - 25 mA, sleeping - 0.1 mA	2 samples per second - 0.8 mA 1 sample per second - 0.48 mA 3 samples per minute - 0.1 mA 1 sample per minute - 0.09 mA	
Operating life (LDC mode, 1Hz)	55 days, sampling at 1 Hz w/four 1000 Ω strain gauges	95 days, sampling at 1 Hz w/one 1000 Ω strain gauge	N/A	30 days, sampling at 1 Hz w/three active channels	60 days, sampling at 1 Hz w/six active channels	1.5 months, sampling at 1 Hz w/one active channel
Operating temperature	all electronics rated from -40 °C to +85 °C; -20 °C to +60 °C with standard internal battery and enclosure, extended range optional with custom battery and enclosure					
Dimensions	88 mm x 72 mm x 26 mm (no antenna) 76 mm x 65 mm x 12 mm (board only)	58 mm x 50 mm x 26 mm (no antenna) 46 mm x 36 mm x 16 mm (board only)	33 mm x 30 mm x 5 mm (w/tabs) 31 mm x 21 mm x 5 mm (w/out tabs)	58 mm x 43 mm x 26 mm (no antenna) 36 mm x 36 mm x 24 mm (board only)	111 mm x 62 mm x 28 mm (no antenna) 77 mm x 68 mm x 18 mm (board only)	55 mm x 30 mm x 16 mm (with enclosure), 51 mm x 26 mm x 6 mm (board only)
Weight	97 grams	50 grams	3 grams	47 grams	116 grams	30 grams

Call 800.449.3878 or visit us online at www.microstrain.com