

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
- Excites and conditions up to 4 differential and 3 single ended inputs
- Line-of-sight range 70m standard, 300m optional
- Low power consumption for extended use
- Internal rechargeable battery



Specifications	V-LINK®	SG-LINK®	G-LINK®	TC-LINK®
Model	V-LINK®	SG-LINK®	G-LINK®	TC-LINK®
Input channels	4 full differential, 350 Ω or higher (optional bridge completion), 3 single ended inputs (0-3 volts) and internal temperature sensor	1 full differential, 350 Ω or higher (optional bridge completion), 1 single ended input (0-3 volts) and internal temperature sensor	triaxial MEMs accelerometers ± 2 g or ±10 g, and internal temperature sensor	six thermocouple inputs, type J, K, R, S, T, E, B and one CJC channel. Optional relative humidity sensor. Single channel unit on request
Measurement Accuracy	± 0.1% typical	± 0.1% typical	10 mg	± 0.1% full scale or 0.5°C typical
Resolution	1 bit (0.024%)	1 bit (0.024%)	~3 mg	0.0625° C
Temperature sensor	-25°C to 70°C range, typical accuracy ± 0.5 °C (at 25°C)			cold junction comp -20 to 85°C
DC bridge excitation	regulated 3 volts – supports pulsed excitation for sample rates up to 100 Hz to conserve power (50 mA total available for sensor excitation)		N/A	N/A
Software programmable gain	on differential channels from 208-4844 (can be reduced with hardware resistor change)	on differential channels from 104-1803	N/A	N/A
Programmable offset	software programmable , maximum allowable input offset is ±1.5 volts		N/A	N/A
A/D converter	successive approximation type, 12 bit resolution			24 bit delta-sigma
Synchronization between nodes	datalogging 100 μsec ± 50 ppm LDC mode time stamped at PC			datalogging 100 μsec ± 50 ppm LDC mode <± 1 sec
Sample rate stability	datalogging ± 25 ppm; LDC mode (2 Hz to 500 Hz) ± 25 ppm (90 msec/hr) LDC mode (1 Hz to 2 samples per hour) ± 10%			± 25 ppm (90 msec/hr)
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) at sample rates from 2 samples/sec to 1 sample/17 min
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 - 500 Hz			N/A
Low duty-cycle mode	supports multiple nodes on single RF channel, total update bandwidth of 500 Hz divided by number of nodes			
Wireless shunt calibration	differential channels - internal shunt calibration resistor 499 KΩ		N/A	
RF transceiver carrier	2.4 GHz direct sequence spread spectrum, license free worldwide (2.405 to 2.480 GHz) - 16 channels. IEEE 802.15.4, open communication architecture			
RF range	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 (rechargeable) 600 mAh	3.7 volt (rechargeable) 200 mAh		3.7 volt (rechargeable) 600 mAh
External power	Customer may supply external power from 3.2 to 9 volts			
Power consumption	node only: streaming - 25 mA, datalogging - 25 mA, sleeping - 0.5 mA External sensors: 350 Ω strain gauge - 8 mA, 1000 Ω strain gauge - 3 mA (add sensor consumption to above to calculate total power consumption)		streaming - 25 mA, datalogging - 25 mA, sleeping - 0.5 mA	node with six TCs, 0.8 mA at 2Hz, 0.48 mA at 1Hz, 0.1 mA at 3/min 0.09 mA at 1/min
Operating life (LDC mode, 1Hz)	55 days (w/four 1000 Ω strain gauges)	95 days (w/one 1000 Ω strain gauge)	30 days (w/three active channels)	60 days (w/six active channels)
Operating temperature	-20 to +60°C with standard internal battery and enclosure, extended range optional with custom battery and enclosure. -40 to +85°C for electronics only			
Dimensions	88 mm x 72 mm x 26 mm 72 mm x 65 mm x 24 mm board only	58 mm x 49 mm x 26 mm 47 mm x 36 mm x 24 mm board only	58 mm x 43 mm x 26 mm 36 mm x 36 mm x 24 mm board only	110 mm x 62 mm x 28 mm 76 mm x 58 mm x 23 mm board only
Weight	97 grams	46 grams	46 grams	116 grams

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