MicroStrain Sensing Product Datasheet

V-Link®-200
Wireless 8 Channel Analog Input Sensor Node

The V-Link-200 is a versatile wireless sensor with 4 differential and 4 single-ended analog input channels. It includes onboard PGA's, filtering, and a high-resolution ADC for precise measurement of a large range of sensor types, including strain gages, load cells, pressure transducers, and accelerometers.

Lord wireless sensor networks eliminate the time and complexity of running long sensor wires. They are fast to deploy and provide reliable, lossless data throughput. These networks have been proven to work in demanding industries where reliable data acquisition is critical.

SensorConnect software can be used for device configuration, live data monitoring, and data analysis. SensorCloud is Lord's optional cloud-based platform that optimizes data aggregation, analysis, and alerts for sensor data collected from remote networks.

INPUT SENSORS   WIRELESS NODES   GATEWAYS   SOFTWARE

{MSCL}

HIGH PERFORMANCE SENSING

- 4 differential input channels (+/- 156mV)
- 4 single-ended input channels (+/- 10.24V)
- Onboard temperature sensor
- Configurable gain and anti-aliasing filter
- Low noise
- Onboard shunt calibration for strain gages.
- Onboard bridge offset balancing
- Factory installed bridge completion available

RELIABLE DATA COLLECTION

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

CONFIGURABLE FOR MANY APPLICATIONS

- Report mV or calibrated engineering units
- Continuous, periodic, or event-triggered operation
- Transmit data real-time and/or save to onboard memory
- Up to 4KHz continuous sampling
- Up to 8KHz data logging periodic, or event-triggered sampling

RUGGED

- Polycarbonate enclosure
- Bolt down or DIN rail mounting
- -40C to +85C operating temperature
- 4kV ESD protection

APPLICATIONS

- Strain, load, force, pressure, acceleration, vibration, displacement, or torque sensing
- Condition-based monitoring (CBM)
- Structural load and stress monitoring
- Test and measurement
- Strain gage rosettes

ENGINEERING YOUR SUCCESS.

Wireless 8 Channel Analog Input Sensor Node

Specifications

Analog Input Channels	
Sensor input channels	4 differential 4 single-ended
Integrated sensors	1 temperature sensor
Sensor excitation	4.096V (up to 150 mA)
ADC Resolution	18 bit
Accuracy	± 0.1 % full scale typical
Noise	± 0.02 % full scale
Temperature stability	< 0.1 % full scale over temperature range
Sensor Input bandwidth	DC to 4KHz

Differential Input Channels	
Adjustable Gain	16 to 2048
Sensor Input Range	+/- 1.22 mV to 156 mV
Anti-aliasing Filter	128 Hz to 4 KHz, 2nd order Butterworth
Strain Calibration	Onboard shunt resistor used for deriving linear strain calibration coefficients
Shunt Calibration	499k Ohm (+/- 0.1%)

Single-ended Input Channels	
Sensor Input Ranges	±2.56Vdc, ± 5.12Vdc, ±10.24Vdc, 0-5.12Vdc, 0-10.24Vdc
Anti-aliasing filter	-3dB @ 15KHz
Input Impedance	1M Ohm

Integrated Temperature Sensor	
Anti-aliasing filter	-3dB, 15KHz
Resolution	0.10 deg. C

Sampling	
Output Options	mV, ADC counts, or calibrated engineering units
Sampling Modes	Continuous, periodic, and event triggered
Sampling Rates	Continuous sampling: 1 sample/hr to 4 KHz Periodic burst sampling: 32 Hz to 8 kHz Event triggered: 32 Hz to 8 kHz
Network capacity	Up to 128 nodes per gateway LXRS: 4096 Samples/second per gateway LXRS+: 16k Samples/second per gateway https://www.microstrain.com/configure-your-system
Data Storage Capacity	16MB (5M data points with 18 bit data type)
Node Sync	± 50 uSec

Operating Parameters	
Battery Power	+6.0 to +18.9Vdc. Recommend 4x 3.6Vdc, 2.4Ah Lithium
External Power	+7.5 to +36 Vdc
Battery Lifetime	https://www.microstrain.com/wireless/v-link-200
Wireless Range	External antenna: 1.5km max, 800m typical. Indoor/obstructed: 100m typical
Radio Frequency Transceiver Carrier	2.405 to 2.480 GHz, 16 channels, license-free
RF Transmit Power	User-settable: 0dBm to 20dBm (regional restrictions may apply)
Operating Temp Range	-40 to +85°C

ESD Withstand	4kV
Mechanical Shock Limit	250g/1.5mS with batteries; 500g/1.5mS without batteries installed

Physical Specifications	
Dimensions	129 mm x 117.6 mm x 31 mm (including antenna)
Weight	283 grams (with batteries), 217 grams (without batteries)
Interface	Screw terminal

Integration	
Compatible gateways	All WSDA gateways
Software	SensorCloud, SensorConnect, Windows 7, 8, or 10
(SDK) Software development kit	https://www.microstrain.com/software/mscl
Regulatory compliance	FCC (U.S.), IC (Canada), MIC(Japan), CE (European Union), ROHS, IMDA (Singapore)
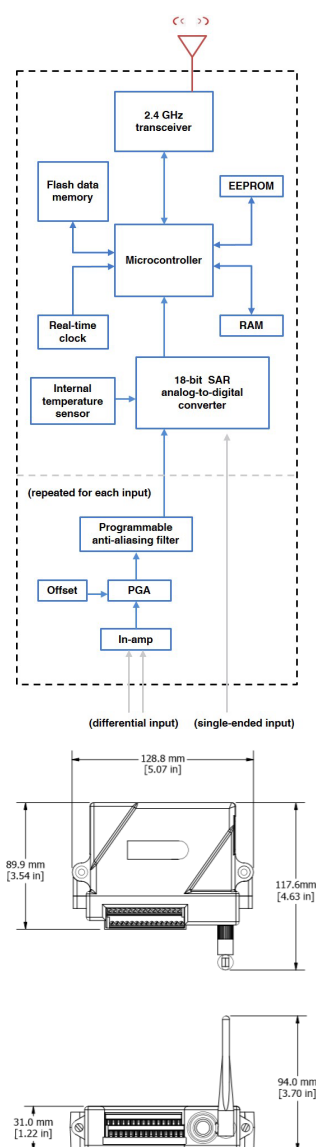
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