

WSDA® -Base-102 -LXRS™

Wireless RS-232 Base Station

LORD MicroStrain®'s RS-232 Base Station provides seamless communication between wireless nodes and a host PC, single board computer or microcontroller. Connectivity between the WSDA-Base-102-LXRS™ and host computer is supported via RS-232 cable.



Features & Benefits

Wireless Simplicity, Hardwired Reliability

- Dependable data with 100% throughput under most operating conditions
- Scalable, extended range wireless sensor communication
- Collects high-speed, synchronized data

Ease of Use

- Quick deployment with RS-232 host computer interface connection
- Accepts all LORD MicroStrain® LXRS™ and legacy sensor nodes

Cost Effective

- Manage thousands of wireless sensors on a single gateway
- System solutions support rapid time to market
- Aggressive volume discount schedule

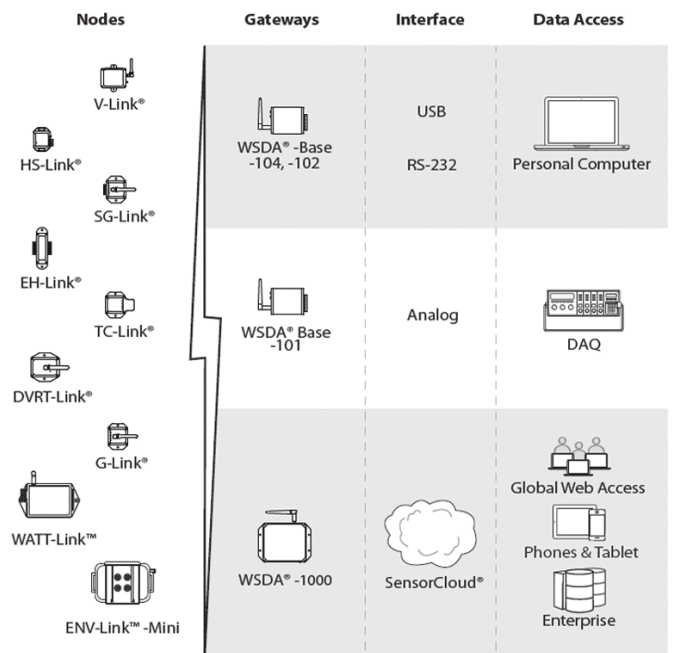
Applications

- Health Monitoring of Vehicles & Structures
- Condition-Based Monitoring of Machines
- Rotating Component Health
- Experimental Test and Measurement
- System Control

System Overview

WSDA® gateways are the heart of the LORD MicroStrain® wireless sensing system. The WSDA® coordinates and maintains wireless transmissions across networks of distributed sensor nodes. Each WSDA® is configured with LORD MicroStrain®'s LXRS™ wireless communication protocol. As such, WSDA® gateways support high-speed sampling, thousands of wireless sensor nodes, ± 32 microsecond node-to-node synchronization, user-programmable range up to 2 kilometers, and up to 100% data throughput.

Users can easily program each node on the scalable network for simultaneous, periodic, burst, or data logging mode sampling with our Node Commander® software, which automatically configures radio communication to maximize the aggregate sample rate.



Wireless Sensor Network (WSN)

Specifications

Node support	V-Link®-LXRS™, SG-Link®-LXRS™, G-Link®-LXRS™, DVRT-Link™-LXRS™, TC-Link®-6CH-LXRS™, TC-Link®-1CH-LXRS™, EH-Link®, SG-Link®-OEM-LS, SG-Link®-OEM-LXRS™, HS-Link®-S-100 kHz, TC-Link® OEM, ENV-Link™-Mini-LXRS™, all legacy 2.4 GHz wireless nodes
Host communication interface	RS-232 @ 115,200 (except synchronized sampling) and 921,600 bps
Communication cable	pin terminal to DB9
Power	auxiliary @ 3.6 to 13.0 volts DC
Power consumption	62.6 mA - 8 active node channels operating at 256 Hz Synchronized Sampling; 45.7 mA - Idle
Radio frequency (RF) transceiver carrier	2.4 GHz direct sequence spread spectrum, license free worldwide (2.405 to 2.480 GHz) – 16 channels, radiated power programmable from 0 dBm (1 mW) to 16 dBm (39 mW); European models limited to 10 dBm (10 mW)
RF data packet standard	IEEE 802.15.4, open communication architecture
Range for bi-directional RF link	programmable communication range from 70 meters to 2 kilometers
Node synchronization	1 Hz beacon provides ± 32 μ sec node to node synchronization
Status LED	multi-color LED signals activity status
Operating temperature	-40 °C to +85 °C electronics only; -30 °C to +70 ° with standard enclosure
Dimensions	97 mm x 70 mm x 20 mm without antenna
Weight	131 grams
Enclosure material	black anodized aluminum
Software	Node Commander® (Windows XP/Vista/7 compatible)
Software development kit (SDK)	includes data communications protocol, EEPROM maps and sample code (OS and computing platform independent)
FCC ID	XJQMSLINK0001
IC ID	8505A-MSLINK0001

