

Environmental Monitoring

Precise measuring and reporting of climatological conditions

Why monitor environmental conditions?

- Establish environmental baselines
- Optimize cultivation and harvesting
- Track and record atmospheric fluctuations
- Facilitate climactic research
- Assist in solar and wind surveying



Wireless environmental monitoring:

- Eliminates reliance on hardwired options
- Is easy to install and integrate
- Uses unobtrusive, lightweight hardware
- Samples continuously at high rate
- Is designed for harsh climates

LORD MicroStrain's ENV-Link™-Mini-LXRS®

is an environmental monitoring node that acquires data regarding:

**Temperature · Soil Moisture · Leaf Wetness · Light · Rainfall Amount
Wind Speed/Direction · Water Level · Barometric Pressure... and more.**



ENV-Link™-Mini-LXRS®

- Accommodates one relative humidity/temperature sensor plus three 0-5V dc sensors
- Allows deployment up to 2 kilometers from wireless base station
- Samples data at rates from 2 Hz to 1 sample every hour
- Performs in harsh conditions: IP67-rated, operating temperatures from -40 to 60° C
- Runs on low-power, replaceable lithium ion cells or conventional alkaline batteries
- Stores data locally or forwards to SensorCloud™ server, when integrated with network

Real-world application: Carbon flux monitoring in Canadian Boreal

Beginning in fall 2012 the University of Alberta's Centre for Earth Observation Sciences (CEOS) used an array of thirty LORD MicroStrain's ENV-Link™-Mini-LXRS® wireless nodes to monitor carbon flux in the Peace River region of Canada's Boreal Forest. Researchers then examined the data to create a baseline measure, which in turn enabled further study of the impact of climate change in the Boreal Forest ecosystem.

The remote monitoring capability of the ENV-Link's wireless node system was instrumental in the project's success, allowing the scientists to gather and analyze data without having to endure lengthy travel through harsh conditions to the research site. Plus, the node's real-time monitoring of temperature, photosynthetic radiation, and humidity provided CEOS with the most timely data possible.



Photos and information courtesy of Dr. Arturo Sanchez-Azofeifa, PEng SM IEE, and Cassidy Rankine, PhD candidate, CEOS.

**All solutions are backed by LORD MicroStrain's world-recognized Support Staff.
For pricing and ordering information, contact LORD MicroStrain Sales: 800.449.3878**