



QUICK FACTS

- Excellent Hub - Node range (up to 14 km in open country).
- Ultra-low quiescent power. RSTAR Nodes powered by a single lithium cell which provides years of battery life.
- Simple star routing - no mesh overhead.
- Up to 255 L900 Nodes per flexDAQ.
- Simple network setup: add node serial number to RSTAR Hub, deploy.
- Based on proven flexDAQ experience and technology.
- Multiple telemetry options (cell modem, LAN, radio, satellite, etc. - see diagram).
- Data can be accessed at multiple locations via internet browser.
- Data is protected at all stages by encrypted, error-corrected transmission and storage.
- Fully compatible with RST GeoViewer Software.

Fully Automated **L900 SYSTEM** WIRELESS DATA COLLECTION

for Geotechnical, Structural and Environmental Monitoring Instrumentation

The RSTAR Array Radio Series uses wireless technology to provide automated data acquisition. A complete RSTAR L900 System uses Nodes at the sensor level, deployed in a star topology from a continuously active Hub, which consists of an L900 RTU interfaced to a flexDAQ Datalogger.

FEATURES

- 900 MHz, 868 MHz and 2.4 GHz spread spectrum band (country dependent) with extensive open-country range through use of simple dipole or directional antenna.
- Nodes comprised of sensors and compatible "DT Series" Data Loggers which can accommodate: vibrating wire sensors, potentiometers, MEMS tilt sensors, strain gauge (full bridge) sensors, digitally bussed (DT-BUS) sensors, 4-20 mA sensors, and thermistors.
- The nodes wake from low power and collect data from their attached sensors. This data, which includes the node serial number, data and diagnostics, is then sent wirelessly as a packet to the L900 RTU.
- The L900 RTU stores the data in a temporary register set which is overwritten as new data is received; there is an intermediate data logging function in the RSTAR L900 Node. The datalogger within the flexDAQ has ultimate responsibility for logging data.
- Power requirements for a single RSTAR L900 node is one lithium standard cell.
- The flexDAQ Datalogger can be powered by a solar panel, batteries or AC power.



A flexDAQ enclosure shown with an open lid to reveal an installed RSTAR L900 RTU (on DIN rail), datalogger, radio and power supply.



DT
SERIES
DATA LOGGERS



The "DT Series" Data Loggers from RST accommodate the RSTAR Data Collection System and use a single lithium standard cell which provides years of battery life (model dependent). The DT Series provides reliable, unattended monitoring of various sensor types: vibrating wire sensors, potentiometers, MEMS tilt sensors, strain gauge (full bridge) sensors, digitally bussed (DT-BUS) sensors, 4-20 mA sensors, and thermistors. More details can be found at www.rstinstruments.com

