A wireless data collection system to quickly get you connected to your data.

Minimum per channel cost. Extra long battery life. Long distance data transmission.
The RSTAR Array Radio Series uses wireless technology to provide automated data acquisition. A complete RSTAR L900 System uses L900 RSTAR Nodes at the sensor level, deployed in a star topology from a continuously active L900 RSTAR Hub, which consists of an L900/R2T RTU interfaced to a FlexDAQ datalogger or THREAD Gateway. The RSTAR Array Radio Series is based on the 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.

A complete RSTAR L900 System is packet-oriented, and consists of slave RSTAR 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. RSTAR also uses a L900 Radio and Antenna kit and a L900 RTU (master) which is a DIN-rail mounted module in the FlexDAQ enclosure or R2T RTU (master) connected to a THREAD Gateway. The RSTAR L900 nodes wake from low power and collect data from their attached sensors. This data, which includes RTU node address, address, node serial number, diagnostics, data, and CRC check, is then sent wirelessly as a packet to the L900/R2T RTU. Upon reception to the flexDAQ or THREAD Gateway, the L900/R2T RTU will issue an ACK signal which may include clock synchronization and rate data.

The L900/R2T 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 or the Cloud Software for the THREAD Gateway stores data.

Power requirements for a single RSTAR/THREAD L900 node is one lithium ‘D’ cell. The flexDAQ or THREAD Gateway can be powered by a solar panel, batteries or AC power.
The "DT Series" Data Loggers from RST accommodate the RSTAR Data Collection System and use a single lithium ‘D’ cell which provides up to 10 years of power (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/DT-Series-Data-Loggers.html
L900 SYSTEM
GENERAL SPECIFICATIONS
Operating Frequency (country dependent) 900 MHz, 868 MHz, 2.4 GHz
Access Frequency 24 hours
Outdoor Range Up to 14 km in open country depending on antenna
Maximum Nodes 255
Communication See diagram on inside

L900 NODE
SPECIFICATIONS
Memory 4 MB
Time Format Month / day / year Hour / minute / second
Power Source 1 lithium 'D' cell
Additional Quiescent Current 15 μA
Battery Life up to 10 years
Temperature Range -40°C to 60°C (-40° to 140°F)
Enclosure dimensions will vary according to chosen data logger.

ORDERING INFO
L900 COMPATIBLE DATA LOGGERS
DATA LOGGER DESCRIPTION
DT2011B* Single Channel Vibrating Wire Data Logger
DT2040* 20/40 Channel Vibrating Wire/Thermistor Data Logger
DT2055B* 5/10 Channel Vibrating Wire/Thermistor Data Logger
DT2306* Potentiometer Data Logger
DT2350* 2 Channel Load Cell Data Logger
DT2485* Digital Bus (DT-BUS) Data Logger
DT4205* 5/10 Channel 4-20mA Transmitter Data Logger
DTL201B* Uni-axial Tilt Data Logger
DTL202B* Bi-axial Tilt Data Logger
ELGL1430* FlexDAQ Data Logger 300 (RSTAR Hub)
ELGL1206* FlexDAQ Data Logger CR6 (RSTAR Hub)

sensemetrics | THREAD
THREAD GATEWAYS
MODEL PART #
THREAD XC ELTHREAD-XC
THREAD X ELTHREAD-X
THREAD EC ELTHREAD-EC
THREAD E ELTHREAD-E
RSTAR to THREAD RTU R2T

L900 RSTAR RADIO & ANTENNA KIT
Please specify frequency based on location.
FREQUENCY LOCATION
900 MHz North America
2.4 GHz Worldwide
868 MHz EU Countries/Europe
900 MHz Australia
900 MHz Brazil
900 MHz Chile
900 MHz Singapore

GeoViewer* Software (see at right)
* See brochure at www.rstinstruments.com

RST Instruments Ltd.
11545 Kingston St., Maple Ridge, BC, Canada V2X 0Z5
Tel: 604-540-1100 • Fax: 604-540-1005
Toll Free (North America): 1-800-665-5599
www.rstinstruments.com • info@rstinstruments.com