SECURE, SCALABLE WIRELESS SENSORS FOR LONG RANGE IOT APPLICATIONS

Laird's Sentrius™ RS1xx External Series is a **battery powered, long range sensor platform** leveraging the benefits of LoRaWAN and Bluetooth Low Energy (BLE) connectivity. Its small, rugged form factor contains superior RF performance and flexibility with **wide ranging external temperature probe**. At its core, the RS1xx External Series utilizes Laird's field-proven and reliable RS1xx Series hardware, providing **LoRaWAN** options in **868 and 915MHz** frequencies, plus **BLE** for local data display, configuration and troubleshooting. Based on the **Semtech SX1272** and **Nordic nRF51 silicon**, it offers a **LoRa range up to 10 miles** with a local 2.4 GHz connectivity option to smartphones and tablets. The RS1xx External Series works with Laird's Sentrius™ RG1xx Series of LoRa/multi-wireless gateways for simple out-of-the-box integration and is compatible with 3rd party Cloud and LoRa network ecosystem partners.

- **Multi-wireless**: LoRaWAN (868/915 MHz) and Bluetooth v4.2 (Central/Peripheral) with fully integrated high-performance antennas
- **External Sensor Probe:** wide ranging temperature sensor on cabled IP67 probe
- **Fully certified** for FCC/IC/CE and Bluetooth SIG
- **Simple wireless configuration** using mobile application and BLE.
- **Harsh Environments:** Robust IP65 enclosure to serve many varied installation needs
- **Integrated out of the box networks:** Default configuration with Laird RG1xx gateways for simple, out-of-the-box cloud connectivity

FEATURES AT A GLANCE

YOUR WIRELESS NETWORK
Develop a fully-owned private LoRa network to capture, route, and process IoT data for your application - choose from RM1xx modules, RS1xx finished sensors or RG1xx Gateways

RUGGED DURABILITY WITH A BROAD SENSOR ARRAY
Robust enclosures provide a robust and resilient platform for recording and delivering sensor data from a range of harsh environments

COMPREHENSIVE SECURITY AND RELIABILITY
Robust multi-layer security at each interface to safeguard your network at every level

BROAD CERTIFICATION AND APPROVALS
FCC, IC, CE and Bluetooth SIG listing

PLATFORM FOR BUILDING ACTIONABLE IOT INTELLIGENCE
Route sensor data to the Cloud with Laird's simplified wireless connectivity deployment

PERSONAL SUPPORT FOR YOUR IMPLEMENTATION
Support works with Laird engineering to help configure and deploy your application

APPLICATION AREAS

Cold Chain Management and Food Safety

Agricultural Humidity and Environmental Monitoring

Industrial Heating and Cooling

Contact Sales - Americas: +1 262 375 4400   Korea: +82 10 2622 3935
                 Europe: +44 1628 940 ext. 958 Hong Kong: +852 2923 0610

For documentation, software, sample apps and more visit:
www.lairdtech.com/rs1xx-lora-sensors

KEY SPECIFICATIONS

CATEGORY	FEATURE	SPECIFICATION
Chipset	LoRa®	Semtech SX1272
	Bluetooth®	Nordic nRF51822 – 256k / 32k
	LoRa Frequencies	863 – 870 MHz (EU), 902 – 928 MHz (US)
Temperature Probe	Temperature Accuracy Ranges	-10° to 85°C (+/-0.5°C) -55° to +125°C (+/-0.9°C)
	Dimensions	Overall Length 1520mm. Stainless Steel end tube – 6.35mm DIA x 200mm Long
Antenna	Integrated	Custom Laird antenna for 868 or 915MHz Ceramic chip antenna for 2.4GHz
Power	Battery	2 x AA - replaceable
Software	Mobile Application	Android & iOS – Remote sensor display and/or configuration + Firmware Update
	Data logging	10,000 measurements (256k of flash memory available)
Storage	Status	3 – BLE and LoRa status
LED	User Input	Multi-use – default BLE Pairing
Button	Dimensions	116 x 91 x 34 mm
Physical	Operating Temp.	-25° to +50°C (Note external probe capable of -55 to 125°C
Environmental	Storage Temperature	-40° to +50°C
Regulatory	Approvals	FCC, IC, CE, Bluetooth SIG
Warranty		1-Year Warranty

The Sentrius™ RS1xx External Series LoRa/BLE sensor features integrated antennas, external temperature probe and rugged IP65 enclosures.

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
455-0013	Sentrius™ RS1xx External Sensor - 868MHz External Temperature Probe inc. LoRa & BLE
455-0010	Sentrius™ RS1xx External Sensor - 868MHz External Temperature Probe inc. LoRa & BLE – Bulk
455-0012	Sentrius™ RS1xx External Sensor - 915MHz External Temperature Probe inc. LoRa & BLE
455-0009	Sentrius™ RS1xx External Sensor - 915MHz External Temperature Probe inc. LoRa & BLE - Bulk
455-0011	External Temperature Probe Only (Single)