Sentrius™ RS1xx External Series

External Temperature Probe with LoRa® / BLE

SECURE, SCALABLE WIRELESS SENSORS FOR LONG RANGE IOT APPLICATIONS



Laird Connectivity'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 a **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, 915, and 923 MHz** 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 third-party cloud and LoRa network ecosystem partners.

- **Multi-wireless**: LoRaWAN (868/915/923 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/ASNZS/NCC 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, ASNZS, NCC, 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
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Hong Kong: +852 2923 0610

For documentation, software, sample apps and more visit:
https://www.lairdconnect.com/wireless-modules/lorawan-solutions/sentrius-rs1xx-lora-enabled-sensors

KEY SPECIFICATIONS

CATEGORY	FEATURE	SPECIFICATION
Chipset	LoRa®	Semtech SX1272
	Bluetooth®	Nordic nRF51822 – 256 k/32 k
LoRa	Frequencies	863 – 870 MHz (EU), 902 – 928 MHz (US), 915 – 928 MHz (AU + AS923)
Temperature Probe	Accuracy Ranges	-10° to 85°C (+/-0.5°C) -55° to +125°C (+/-0.9°C)
	Dimensions	Overall Length 1520 mm stainless steel end tube – 6.0 mm (dia.) x 213 mm (length)
Antenna	Integrated	Custom Laird antenna for 868, 915, or 923 MHz Ceramic chip antenna for 2.4 GHz
Power	Battery	2 x AA - replaceable
Software	Mobile Application	Android and iOS – Remote sensor display and/or configuration + firmware update
Storage	Data logging	10,000 measurements (256 k of flash memory available)
LED	Status	3 – BLE and LoRa status
Button	User Input	Multi-use – default BLE Pairing
Physical	Dimensions	116 mm x 91 mm x 34 mm
Environmental	Operating Temp.	-25° to +50°C (Note: External probe capable of -55 to 125°C)
	Storage Temperature	-40° to +50°C
Regulatory	Approvals	FCC, IC, CE, ASNZS, NCC, and Bluetooth SIG
Warranty		One-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
455-00070	Sentrius™ RS1xx External Sensor – 915MHz External Temperature Probe inc. LoRa and BLE – North America
455-00069	Sentrius™ RS1xx External Sensor – 868MHz External Temperature Probe inc. LoRa and BLE – Europe
455-00064	Sentrius™ RS1xx External Sensor – 923MHz External Temperature Probe inc. LoRa and BLE – Taiwan
455-00065	Sentrius™ RS1xx External Sensor – 923MHz External Temperature Probe inc. LoRa and BLE – New Zealand
455-00066	Sentrius™ RS1xx External Sensor – 923MHz External Temperature Probe inc. LoRa and BLE – Hong Kong
455-00067	Sentrius™ RS1xx External Sensor – 915MHz External Temperature Probe inc. LoRa and BLE – Australia (AU915)
455-00068	Sentrius™ RS1xx External Sensor – 923MHz External Temperature Probe inc. LoRa and BLE – Australia (AS923)
455-00036	External Temperature Probe Only (Single)
455-00036B	External Temperature Probe Only (BULK – Carton Quantity: 50 pcs.)

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