

## FLEXIBLE MULTI WIRELESS GATEWAY FOR BRIDGING YOUR LORAWAN DEVICES TO THE CLOUD



Laird Connectivity's **Sentrius™ RG191+LTE Series** LoRaWAN-enabled gateway is the ultimate in secure, scalable, robust LoRaWAN solution for end-to-end control of your LoRaWAN network. Leveraging our field-proven, reliable WB50NBT wireless bridge certified module, it also offers enterprise **dual-band Wi-Fi and wired Ethernet** for complete design freedom. Based on the **Semtech SX1301/SX1257 chipset designs**, it offers a **LoRaWAN range up to 10 miles** and pre-loaded **LoRa Packet Forwarder software**, perfect for highly scalable, flexible IoT networks. The Sentrius RG191 + LTE and associated IP67 variant gateways **works with our RM1xx certified modules and RS1xx Series sensors** for simple out-of-the-box integration.

It is compatible with third-party Cloud and LoRa partners, as well as any LoRaWAN certified client devices. In addition to the existing LoRaWAN US902-928 support, the Sentrius RG191+LTE Series now also supports **LTE CAT 1 connectivity**. This delivers regulatory compliant, multi-protocol connectivity in long-distance IoT sensors and devices, for actionable IoT intelligence.

LTE is perfect for use cases or physical deployments where no local ethernet or Wi-Fi network is present to bridge the remote LoraWAN data to Cloud services.

- **LTE CAT 1 M.2 card** – 3GPP Release 11, Bands B2/4/5/12/13 supported – North America Region
- **Full Linux operating system** – Kernel v4.x running on Atmel A5 Core @ 536 MHz
- **Multiple interfaces** such as LTE CAT 1, LoRaWAN, Wi-Fi 802.11a/b/g/n and Ethernet
- **8-Channel LoRaWAN support** with up to +27 dBm max TX power
- **Comprehensive Certifications** for FCC, IC & PTCRB and co-located radio certification
- **Industrial temperature range** (-30° to +70° C)
- **Advanced deployment tools** including intuitive web-based configuration and integrated presets for multiple external LoRa Network Server vendors
- **Enterprise-grade security** built on our years of experience in wireless
- **Industry-leading support** works directly with our engineers to help deploy your design

## FEATURES AT A GLANCE



### PLATFORM FOR BUILDING ACTIONABLE IoT INTELLIGENCE

Route sensor data to the Cloud with integrated LoRa Packet Forwarders from TTN, Senet, Chirpstack and Semtech for simple application deployment



### AGGREGATE AND UTILIZE IoT DATA

Utilise a LoRaWAN network to capture, route, and process IoT data for your application.



### MULTIPLE INTERFACE OPTIONS FOR ULTIMATE DESIGN CHOICE

Wide variety of connectivity interfaces: LoRaWAN, Dual Band Wi-Fi (2.4 and 5 GHz), Ethernet and Cellular LTE CAT 1 support



### COMPREHENSIVE SECURITY AND RELIABILITY

Robust multi-layer security at each interface to safeguard your network at every level.



### BROAD CERTIFICATION AND APPROVALS

Fully certified for FCC, IC, and PTCRB. Carrier support for AT&T and Verizon (all pending)



### PERSONAL SUPPORT FOR YOUR IMPLEMENTATION

Partner with Laird Connectivity's Tier 2 support and engineering to help configure and deploy your application.



## APPLICATION AREAS



Smart Metering and Remote Sensing



Industrial Automation/Monitoring and Control



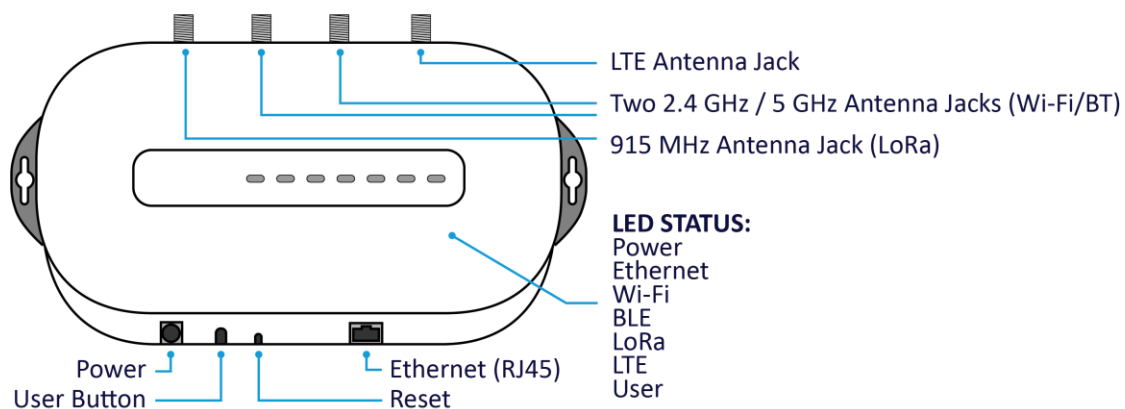
Agricultural and Rural IoT/M2M Applications

## Shared Specifications

Category	Feature	Specification
<b>Chipset</b>	LoRa®	Semtech SX1301/1257
	LTE CAT 1	Quectel EG91-NA
	Wi-Fi	Qualcomm Atheros QCA6004
<b>Wireless Characteristics</b>	Wi-Fi Spatial Streams	2x2 MIMO
	Wi-Fi Frequencies	2.4 and 5 GHz Operation
	LoRaWAN Regions	US 902–928 MHz
	LTE CAT 1 Band Support	North America - Bands B2/4/5/12/13
<b>Interfaces</b>	Wired	Ethernet - RJ45 Connector
	Wireless	LoRaWAN, Wi-Fi 2.4/5 GHz, LTE CAT 1
<b>Power</b>	Supply Voltage	12V/1A
	Power Adapter	External DC Power Supply with regional plug adapter
<b>Security</b>	Wi-Fi	Standards - WEP, WPA, WPA2. Encryption – WEP, TKIP, AES
		EAP Types - EAP-FAST, EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAP, PEAP-SCHAPv2, PEAP-TLS, LEAP
<b>Software</b>	Operating System	Embedded Linux, 4.x Kernel
	LoRa	Packet Network Forwarder with default support for the following: <ul style="list-style-type: none"> <li>Semtech UDP forwarder</li> <li>The Things Network (TTN) with Semtech Basic Station or UDP forwarder</li> <li>ChirpStack with Semtech UDP forwarder or Semtech Basic Station</li> <li>Senet through legacy Semtech UDP or proprietary Senet forwarder</li> </ul>
	Configuration	Web-based interface via Ethernet/Wi-Fi/LoRaWAN/Cellular LTE TR-069 Remote Management functionality
<b>Physical</b>	Dimensions	133 x 275 x 30 mm
<b>Environmental</b>	Operating Temp.	-30° to +70°C
<b>Approvals</b>	Regulatory	FCC, IC,
	Cellular / Carriers	PTCRB, AT&T, Verizon (all pending)
<b>Accessories</b>	Included	915 MHz, 2x 2.4 / 5 GHz, and LTE antennas (4 total), External DC Adapter, Ethernet cable
<b>Enclosure</b>	Standard	Moulded plastic housing (blue)
	IP67 Enclosure	IP67-rated external enclosure housing for main gateway PCB
<b>Warranty</b>		1-Year warranty

For full specifications on RG1xx Gateways, please see the RG1xx User Guide.

## CONNECTOR DIAGRAM (STANDARD RG191+LTE)



## ORDERING INFORMATION

Part	Description
450-00107-K1	Sentrius™ RG191 US (US902-928) 915 MHz Gateway – LTE, LoRaWAN, Wi-Fi & Ethernet – US Power Adapter
450-00109-K1	Sentrius™ RG191 US (US902-928) 915 MHz Gateway – LTE, LoRaWAN, Wi-Fi & Ethernet - IP67 housing
690-1002	Pole Mount Bracket - Accessory for 450-00109-K1
690-1003	Wall Mount Bracket - Accessory for 450-00109-K1