

## YOUR PRIVATE INDUSTRIAL IOT PLATFORM. CLOUD-READY ON DAY ONE.



New: [IP67 certified enclosures](#) with mounting hardware available!

Laird Connectivity's **Sentrius™ RG1xx Series** LoRaWAN-enabled gateway is the ultimate in secure, scalable, robust LoRaWAN solutions for end-to-end control of your private LoRaWAN network. Leveraging our field-proven, reliable WB50NBT wireless bridge certified module, it also offers enterprise **dual-band Wi-Fi, BT v4.0 (BLE and Classic) 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 RG1xx Gateway **works with our RM1xx certified modules and RS1xx Series sensors** for simple out-of-the-box integration. It is compatible with 3rd party Cloud and LoRa partners, as well as any LoRaWAN certified client devices. Laird Connectivity's Sentrius RG1xx Series Gateway gives you multi-protocol connectivity to your long-distance IoT sensors and devices to create actionable IoT intelligence.

- **Full Linux operating system** – Kernel v4.x running on Atmel A5 Core @ 536 MHz
- **Multiple interfaces** such as LoRaWAN, 802.11a/b/g/n, Bluetooth v4.0, and Ethernet
- **8-Channel LoRaWAN support** with up to +27dBm max transmit power
- **Comprehensive Certifications** for FCC / IC / CE
- **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



### AGGREGATE AND UTILIZE IoT DATA

Develop a fully-owned private 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 & 5GHz), Ethernet and BT v4.0 (BLE and Classic – not implemented in GA1).



### 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 CE, and Bluetooth SIG listing.



### PLATFORM FOR BUILDING ACTIONABLE IoT INTELLIGENCE

Route sensor data to the Cloud with our integrated LoRa Packet Forwarder software for simple application deployment



### 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



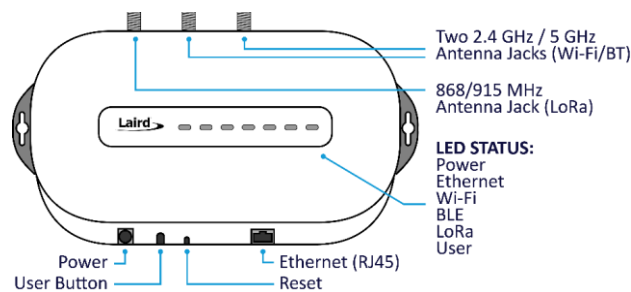
Agricultural and Rural IoT / M2M Applications

## Shared Specifications

Category	Feature	Specification
<b>Chipset</b>	LoRa®	Semtech SX1301/1257
	Bluetooth®	Cambridge Silicon Radio CSR8811 A08
	Wi-Fi	Qualcomm Atheros QCA6004
<b>Wireless Characteristics</b>	Wi-Fi Spatial Streams	2x2 MIMO
	Wi-Fi Frequencies	2.4 and 5GHz Operation
	LoRa Frequencies	863 – 870 MHz (EU), 902 – 928 MHz (US)
<b>Interfaces</b>	Wired	Ethernet - RJ45 Connector
	Wireless	LoRaWAN, Wi-Fi 2.4 / 5GHz, Bluetooth v4.0 (BLE and Classic)
<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-MSCHAPv2, PEAP-TLS, LEAP
<b>Software</b>	Operating System	Embedded Linux, 4.x Kernel
	LoRa	Packet Network Forwarder with default support for The Things Network, Stream Communications, Loriot
	Configuration	Web-based interface via Ethernet / Wi-Fi
<b>Physical</b>	Dimensions	133 x 275 x 30 mm
<b>Environmental</b>	Operating Temp.	-30° to +70°C
<b>Regulatory</b>	Approvals	FCC, IC, CE
<b>Accessories</b>	Included	One 868 MHz or 915 MHz antenna, two 2.4 / 5 GHz antennas, External DC Power Adapter, Ethernet cable
<b>Enclosure</b>	Standard	Moulded Plastic Housing
	Option - IP67 Enclosure	Optional 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 RG1XX)



## ORDERING INFORMATION

Part	Description
<b>RG191</b>	Intelligent LoRaWAN 915MHz Gateway including Wi-Fi, BT, and Ethernet – US Accessory Kit
<b>RG186</b>	Intelligent LoRaWAN 868MHz Gateway including Wi-Fi, BT, and Ethernet – EU Accessory Kit
<b>455-00028</b>	Intelligent LoRaWAN 868MHz Gateway including Wi-Fi, BT, and Ethernet – UK Accessory Kit
<b>450-0190</b>	Sentrius™ RG186 Gateway including LoRaWAN, Wi-Fi, Bluetooth & Ethernet - IP67
<b>450-0191</b>	Sentrius™ RG191 Gateway including LoRaWAN, Wi-Fi, Bluetooth & Ethernet - IP67
<b>690-1002</b>	Pole Mount Bracket - Accessory for 450-0190 or 450-0191
<b>690-1003</b>	Wall Mount Bracket - Accessory for 450-0190 or 450-0191