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

Laird's **Sentrius™ RG1xx Series** LoRa-enabled gateway is the ultimate in secure, scalable, robust LoRa solutions for end-to-end control of your private LoRaWAN network. Leveraging Laird's field-proven and reliable 50 Series "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 **LoRa 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 Laird's **RM1xx Series** LoRa+BLE certified modules for simple out-of-the-box integration, and is compatible with 3rd party Cloud and LoRa partners, as well as any LoRaWAN certified client devices. Laird'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 Laird's years of experience in wireless
- **Industry-leading support** works directly with Laird 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 Laird's integrated LoRa Packet Forwarder software for simple application deployment

PERSONAL SUPPORT FOR YOUR IMPLEMENTATION
Partner with Laird 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

Specifications

Category	Feature	Specification
Chipset	LoRa®	Semtech SX1301/1257
	Bluetooth®	Cambridge Silicon Radio CSR8811 A08
	Wi-Fi	Qualcomm Atheros QCA6004
Wireless Characteristics	Wi-Fi Spatial Streams	2x2 MIMO
	Wi-Fi Frequencies	2.4 and 5GHz Operation
	LoRa Frequencies	863 – 870 MHz (EU), 902 – 928 MHz (US)
Interfaces	Wired	Ethernet - RJ45 Connector
	Wireless	LoRaWAN, Wi-Fi 2.4 / 5GHz, Bluetooth v4.0 (BLE and Classic)
Power	Supply Voltage	12V / 1A
	Power Adapter	External DC Power Supply with regional plug adapter
Security	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
Software	Operating System	Embedded Linux, 4.x Kernel
	LoRa	Packet Network Forwarder Default support for The Things Network, Stream Communications, Loriot
	Configuration	Web-based interface via Ethernet / Wi-Fi
Physical	Dimensions	133 x 275 x 30 mm
Environmental	Operating Temp.	-30° to +70°C
Regulatory	Approvals	FCC, IC, CE
Accessories	Included	One 868 MHz or 915 MHz antenna, two 2.4 /5 GHz antennas, External DC Power Adapter, Ethernet cable
Enclosure	Standard	Moulded Plastic Housing
	Option - IP67 Enclosure	Optional IP67-rated external enclosure housing for main gateway PCB
Warranty		1-Year Warranty

Connector Diagram

Two 2.4 GHz / 5 GHz Antenna Jacks (Wi-Fi/BT)

868/915 MHz Antenna Jack (LoRa)

LED STATUS:
Power
Ethernet
Wi-Fi
BLE
LoRa
User

Power
User Button
Ethernet (RJ45)
Reset
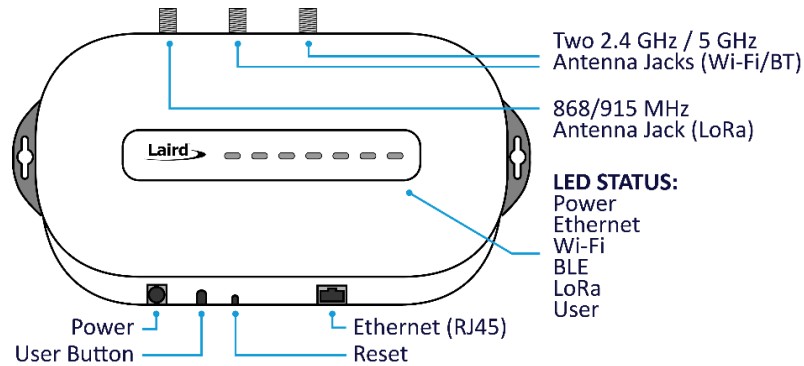
Ordering Information

Part Number	Description
RG186	Intelligent LoRaWAN 915MHz Gateway including Wi-Fi, BT and Ethernet – US Accessory Kit
RG191	Intelligent LoRaWAN 915MHz Gateway including Wi-Fi, BT and Ethernet – US Accessory Kit
450-0190	Sentrius™ RG186 Gateway – IP67 Enclosure Variant
450-0191	Sentrius™ RG191 Gateway – IP67 Enclosure Variant

Did You Know?

LSR, a Laird Business, is a leader in Wireless Product Development, offering true end-to-end solutions through its array of services & technical expertise

LSR a Laird Business

Design Services
- RF Hardware & Antenna Design
- Software/Firmware Development
- Mobile App / Cloud Development
- Industrial Design
- Mechanical Engineering

EMC Testing & Certification
- On-Site FCC/IC/CE/Giteki/RCM EMC Certification
- Wireless & Antenna Testing
- EMC Emissions Testing
- International Testing Services

sales@lsr.com
262.375.5500
www.lsr.com