

R1320LGe



Industrial LoRaWAN Gateway

2 x Ethernet + 1 x SIM + 1 x eSIM + 1 x LoRa + 1 x Wi-Fi



INTRODUCTION

The R1320LGe is a compact LoRaWAN gateway designed to collect data from downstream LoRaWAN end devices and forward it to the ChirpStack platform. It supports multiple uplink options, including 4G LTE Cat 4, Fast Ethernet, and 2.4 GHz Wi-Fi, enabling flexible deployment across different network environments.

The R1320LGe is suitable for applications across multiple industry sectors, including:

- **Smart Utilities & Metering:** Water/gas/heat meter reading, community-level data collection, and remote reporting to ChirpStack.
- **Smart City & Municipal IoT:** Streetlight controllers, manhole and waterlogging sensors, trash-bin level sensors, and parking sensors, with district-wide LoRaWAN coverage and cellular backhaul.
- **Smart Building & Property Management:** Elevator rooms, pump rooms, fire system monitoring, and energy management sensor backhaul.

The **Robustel Cloud Manager Service (RCMS)** is a unified cloud-based platform designed for real-time monitoring and centralized management of industrial IoT devices. Fully compatible with Robustel routers and gateways, RCMS delivers an interactive geospatial dashboard that enables users to visualize device locations and track critical metrics such as data usage, signal strength, and network status. To ensure seamless operations, the platform facilitates over-the-air (OTA) updates for firmware, configurations, and applications, minimizing downtime while optimizing system performance. For more information or to get started with RCMS, visit: <https://rcms-cloud.robustel.net>



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RCMS CLOUD

KEY FEATURES

Cost-Effective LoRaWAN Forwarding Gateway

- Built on a rugged hardware platform with 4G LTE Cat 4, Fast Ethernet, and 2.4 GHz Wi-Fi uplink options, it provides cost-effective backhaul for LoRaWAN deployments.

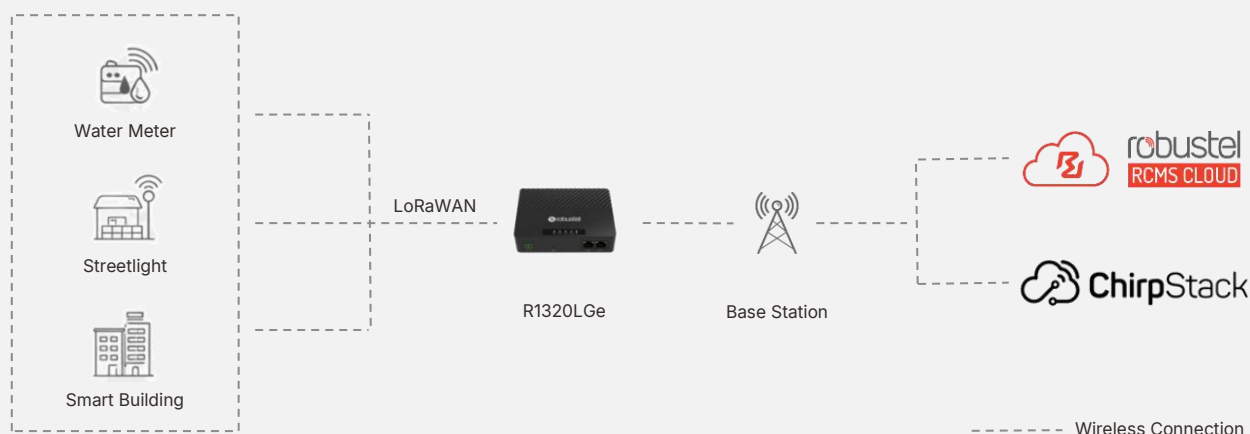
LoRaWAN-to-ChirpStack Forwarding

- Collects LoRaWAN end-device data and forwards it to ChirpStack for centralized management and data aggregation.
- Optimized for continuous uplink connectivity to support reliable data delivery.

Cloud-Based Centralized Operations and Maintenance

- Enables real-time monitoring of network status, device location, and traffic statistics to support rapid anomaly detection and troubleshooting.
- Provides RobustVPN access for remote device operation and maintenance, improving service efficiency for technical teams.

APPLICATION EXAMPLE



SPECIFICATIONS

Hardware

Hardware System

CPU	MIPS, 580 MHz
RAM	128 MB
Flash	32 MB

Cellular Interface

Number of antennas	1
Connector	SMA-K
Network	LTE FDD, LTE TDD
Standard	Cat 4
SIM	1 x Mini SIM (2FF)
eSIM	1 x eSIM (MFF2); GSMA SGP.22 compliant; supports profile download/removal and typically up to 8 eSIM profiles

Ethernet Port

Number of ports	2 x 10/100 Mbps, 2 x LAN or 1 x WAN + 1 x LAN
PoE-PD	Supports IEEE 802.3at PD on ETH0

LoRa Interface

Number of antennas	1
Connector	RP-SMA-K
Frequency	US915 AU915 AS923 EU868
Max transmit power	+25 dBm
Max sensitivity	-140 dBm
Channel capacity	Supports up to 8 channels receiving data simultaneously

Wi-Fi Interface

Connector	Built-in
Standards	802.11 b/g/n; supports AP and client modes
Frequency bands	2.412–2.472 GHz (2.4 GHz ISM band)
Data rate	Up to 300 Mbps, 2 x 2 MIMO
Security	WEP, WPA, WPA2, WPA3
Encryption	AES, TKIP

Others

Reset button	1 x RST
LED indicators	1 x RUN, 1 x MDM, 1 x RSSI, 1 x LoRa, and 1 x USR
microSD	1 x microSD
Watchdog	External

Power Supply and Consumption

Connector	4-pin Micro-fit
Input voltage	12/24 VDC, 9–36 VDC 42.5–57.0 V (PoE-PD) Reverse polarity protection, surge protection
Power consumption	Idle: 1.5 W@12 V Max: 7.5 W@12 V
Rec. power supply	12 VDC/1.0 A power adapter

Physical Characteristics

Ingress protection	IP30
Housing and Weight	Plastic, <230 g
Dimensions	31 x 98 x 129 mm
Installation	Desktop, wall mounting & 35 mm DIN rail mounting
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +85 °C
Relative humidity	5–95% RH (non-condensing)

Regulatory and Type Approvals

Environmental	RoHS2.0
EMI	EN 55032 Conducted Emission Class B EN 55032 Radiated Emission Class B
EMS	EN 61000-4-2 (ESD) Contact Level 2, Air Level 3 EN 61000-4-3 (RS) Level 2 EN 61000-4-4 (EFT) Level 2 EN 61000-4-5 (Surge) Level 3, AC Mains Power Port Level 3, Signal Ports EN 61000-4-6 (CS) Level 2

Software

RobustOS Network Functions

Network protocols	PPP, PPPoE, ARP, VLAN, ICMP, NAT, TCP, UDP, DHCP, DNS, DDNS, NTP, HTTP, HTTPS, Telnet, SSH2, SMTP, etc.
Network expansion	Link Management, eSIM Management

RobustOS Network Security

VPN tunnels	IPsec, OpenVPN, GRE, WireGuard
Firewalls	DMZ, anti-DoS, Filtering (IP/Domain name/MAC address), Port Mapping, Access Control
Security management	User Management, Role Management

RobustOS Device Management

Remote management	Web, CLI, SMS, RCMS
Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2)

SDK

Programming languages	C, C++
Available Flash for SDK	16 MB
Available RAM for SDK	64 MB

App Center* (Available Apps for RobustOS)

Data reporting	RCMS, third-party platforms supporting MQTT
VPN	L2TP, PPTP, DMVPN
Network protocols	SNMP, Dynamic Routing
Others	Language

*Request on demand. For more Apps please visit www.robustel.com.

Cloud Platform

Robustel Cloud Manager Service (RCMS)	RobustLink, RobustVPN, Operation Console
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ORDERING INFORMATION

Model	Order Code	LoRa Frequency	Frequency Bands	Region	Certifications	Package Contents
R1320LGe-BAZB-4L-A12EU	A015900001	EU868	4G: LTE FDD: B1/3/5/7/8/20/28 LTE TDD: B38/40/41 3G: WCDMA: B1/5/8 2G: GSM: B3/8	Europe	CE, UKCA	1 x Gateway (B Code: B015900001) 1 x Cellular Antenna 1 x LoRa Antenna 1 x Power Adapter 1 x Wall Mounting Kit
R1320LGe-CAZB-4L-A35GL	A015900002	AU915	4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: B2/3/5/8	ANZ	RCM*	1 x Gateway (B Code: B015900002) 1 x Cellular Antenna 1 x LoRa Antenna 1 x Power Adapter 1 x Wall Mounting Kit
R1320LGe-DAZB-4L-A35GL	A015900003	US915	4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: B2/3/5/8	North America LATAM	FCC*, IC*	1 x Gateway (B Code: B015900003) 1 x Cellular Antenna 1 x LoRa Antenna 1 x Power Adapter 1 x Wall Mounting Kit
R1320LGe-EAZB-4L-A35GL	A015900004	AS923	4G: LTE FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28/66 LTE TDD: B38/39/40/41 3G: WCDMA: B1/2/4/5/6/8/19 2G: GSM: B2/3/5/8	SEA	CE*	1 x Gateway (B Code: B015900004) 1 x Cellular Antenna 1 x LoRa Antenna 1 x Power Adapter 1 x Wall Mounting Kit

- NOTE:**
- 1. For more information about regional and carrier-specific variants, please contact us.
 - 2. * Denotes certification in progress.