

R3000LG-OG robustOS

IP67 Outdoor LoRaWAN Gateway
Cost-effective 8 channel Gateway
with advanced features



INTRODUCTION

Robustel R3000 LG-OG is an IP67 outdoor LoRaWAN gateway with a myriad of advanced features not usually found on such devices. Unique features include:

Smart Roaming – Unique network selection algorithm for intelligent network selection when using 3G/4G backhaul with roaming SIMs – gives highest possible resilience

RobustVPN – make easy inbound connections to Robustel Gateways on ANY SIM or on any broadband connection. No fixed IP or DynDNS services required

Built-in LNS – Optional built-in LoRaWAN Network Server for applications that require local processing of network data – minimizes network traffic

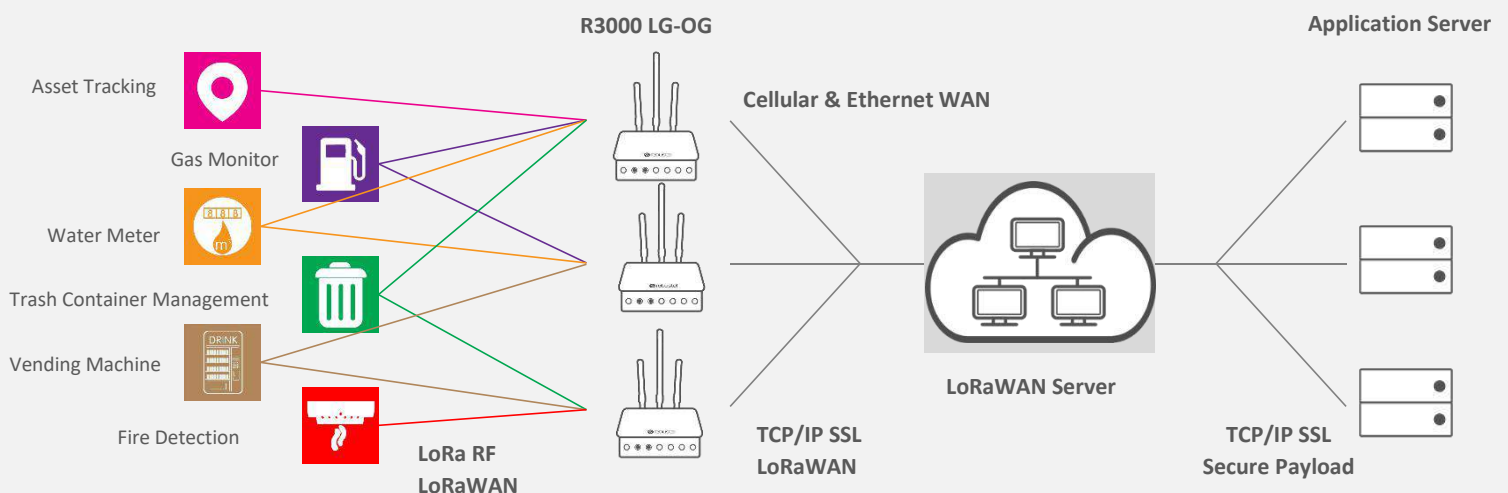
The R3000LG-OG is based on Robustel's best-selling router, the R3000. With many tens of thousands being sold annually, Robustel can achieve economies of scale on the R3000 series as a whole that many peers in the IoT market cannot reach. For this reason, Robustel can offer a very stable, industrial designed outdoor LoRa gateway at very attractive prices.

All of the latest models support Global LTE (4G) communications by virtue of the adoption of the latest Global cellular module technology.

KEY FEATURES

- Supports global LoRaWAN ISM frequency bands
- Compatible with LoRaWAN and private protocols
- Compatible with any LoRaWAN Network Server
- IP67 ingress protection withstanding water, dust and other extreme weather conditions
- Up to 8 channels supports receive data simultaneously
- RobustOS Operating System with extensive SDK
- Backhaul option supports 3G, 4G and Ethernet
- Supports dual SIM + Smart Roaming for high availability cellular Comms
- PoE power – single cable installation
- Easy wall or pole mounting options

APPLICATION EXAMPLE



SPECIFICATIONS (R3000-LG Included)

LoRa	
Number of antennas	1
Connector	M16, female
Standards	863-870 MHz (Europe) 915-927 MHz (Australia) 902-928 MHz (North America) 920-928 MHz (Japan)
Max transmitted power	+24.5 dBm
Max sensitivity	-142 dBm
Reception capacity	Supports 8 channels, and each channel can receive data simultaneously Supports 1 MHz bandwidth demodulation
Communication range	15 km
LoRaWAN protocols	V1.0 Class A/Class C and V1.0.2 Class A/Class C

Cellular Interface

Number of antennas	2 (MAIN + AUX)
Connector	M16, female
SIM	2 x Mini SIM
Standards	2G/3G/4G

Ethernet Interface

Number of ports	2 x 10/100 Mbps
Connector	M12, 8-pin

GPS (Internal)

Number of antennas	1
Connector	SMA-K with 50 ohms impedance (inside)
Acquisition sensitivity	GPS: greater than -148 dBm
Horizontal position accuracy	GPS: 5 m

App Center (Available Apps for RobustOS)

Apps*	Im_csq, Preferred PLMN, RCMS, LoRiot, L2TP, PPTP, DMVPN, VRRP, QoS, SNMP, Language
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*Request on demand. For more Apps please visit www.robustel.com.

Power Supply and Consumption

Input voltage	PoE IEEE 802.3af/at Class A/B, 36V ~ 48V
Power consumption	Idle: 4W Data link: 12W (peak)

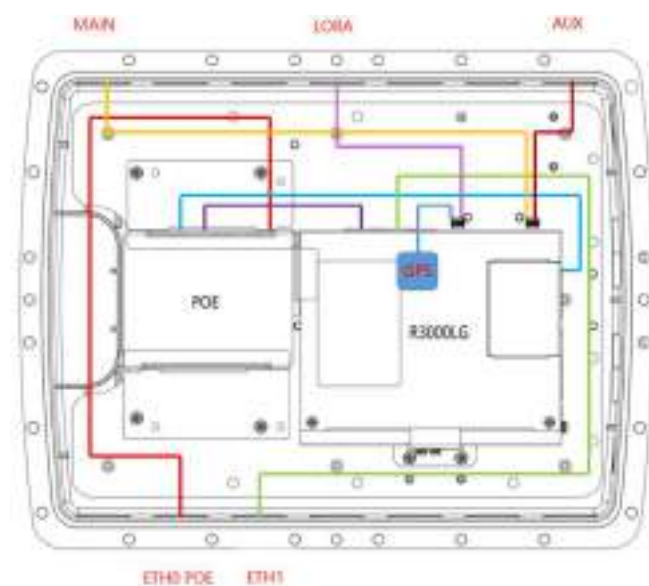
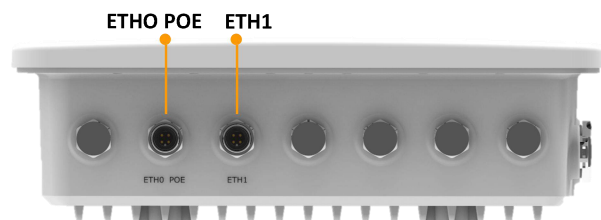
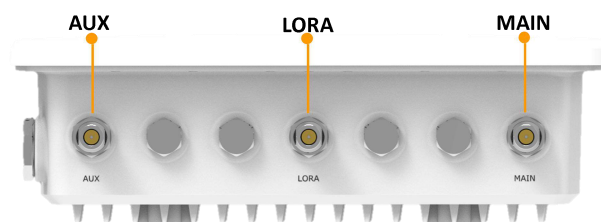
Physical Characteristics

Ingress protection	IP67
Housing & Weight	Plastic, 3070 g
Dimensions	310 x 245 x 93.4 mm
Installations	Wall mounting and pole mounting
Operating temperature	-40 ~ +75 °C
Storage temperature	-40 ~ +85 °C
Relative humidity	5 ~ 95% RH

Regulatory and Type Approvals

Environmental

RoHS2.0, WEEE



ORDERING INFORMATION

Model & PN	Matched Model	LoRaWAN Network	Frequency Bands*
R3000LG-OG (B021011)	R3000-LG4LA (B028716) Or R3000-LG4LB (B028717)	868 MHz	4G: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 3G: WCDMA: B1/B2/B4/B5/B6/B8/B19 2G: GSM: B2/B3/B5/B8
	R3000-LG4LA (B028718) Or R3000-LG4LB (B028719)	915 MHz	

*For more information about 4G frequency bands in different countries, please contact your Robustel sales representative.

Note: R3000LG-OG and R3000-LG4LA or LG4LB should be ordered together. Robustel will install R3000LG-OG and R3000-LG4LA or LG4LB in advance for shipment.

PN	Accessory Name	Specifications
E003100	Fiberglass-reinforced Cellular Antenna	200mm, 800-2700MHz, 3/4.5dBi
E003187	N-male fiberglass-reinforced plastic lora antenna(868/915)	Length: 360mm, Frequency Range: 860-930MHz, Gain:2.5dBi
E005079	M12 4-PIN power supply connector	Plastic material, female head plug, 4-PIN, IP67, for making power cable
E005007	8-PIN M12 to RJ45 Ethernet Cable	Length: 2 meters, Black, Wire diameter: 0.5mm, for POE
E005151	M12-8PIN male Connector	Plastic material, male head plug, 8-PIN, IP67, for making poe ethernet cable
S002001	Wall Mounting Plate	Dimensions: 240*175*1.5 mm, Material: Aluminum Plate
S002002	50~120 mm Pole Mounting Kit	50~120 mm Diameter Adjustable, 0.6 mm Thickness, 12 mm Width, Material: Stainless Steel
S002003	100~230 mm Pole Mounting Kit	100~230 mm Diameter Adjustable, 0.6 mm Thickness, 12 mm Width, Material: Stainless Steel
S002004	200~300 mm Pole Mounting Kit	200~300 mm Diameter Adjustable, 0.6 mm Thickness, 12 mm Width, Material: Stainless Steel