CORE COMMUNICATIONS

4G Rugged Gateway

The 4G Rugged Gateway is a key component of Worldsensing's narrowband networks, enabling continuous data flow for geotechnical and structural monitoring—even in remote areas without internet access. It provides reliable LoRa/LoRaWAN connectivity, allowing you to deploy robust private networks, connect large volumes of edge devices, and manage millions of bidirectional messages every day.

To match different network architectures, the gateway comes in three variants to support single-network configurations managed locally through CMT Edge, and CMT Cloud-compatible gateway to enable redundant, multi-network deployments with centralized cloud-based management.

4G Gateway Cloud
GW-4G-CLOUD

4G Gateway Edge
GW-4G-EDGE

4G Gateway Edge 915R
GW-4G-EDGE-915R

BEST IN CLASS RADIO PERFORMANCE

Strong signal strength, excellent interference mitigation and enhanced radio performance, anywhere anytime.

Worldwide LoRa coverage

- Supported unlicensed bands: 863–874.4 MHz (EMEA, India), 902–928 MHz (North America), 915–928 MHz (APAC, Latin America).
- 8ch RX (125 kHz, multi Spreading Factor).

4G Module

- 4G worldwide module with 3G/2G fallback.

Network Load

- Up to 30 messages per minute on a single-gateway deployment using a 4G Gateway Edge.
- Up to 200 messages per minute on multi-gateway deployment using a 4G Gateway Cloud.

BUILT TO LAST

Wireless radio performance, purpose-built IP67 ruggedized enclosure and flexible modularity.

Accesibility

- External waterproof connectors (RJ45, USB Type C) eliminating the need to open the casing during installation.
- USB Type C connector for direct PC connection using USB cable.

Antenna

- Integrated internal antenna for GPS, 4G and LoRa (peak gain=2,6 dBi).
- Optional external LoRa antenna 3 dBi or 6 dBi available.

Multiple Power Options

- Powered by PoE (Injector, switch), both Mode A and Mode B (802.3af specifications), ±48 Vdc through RJ45 (isolated power), USB Type C.

TECHNICAL SPECIFICATIONS

RADIO AND NETWORK SPECIFICATIONS

Radio Band	ISM Sub GHz
Sensitivity	Down to –137 dBm (SF11)
Antenna[1]	Integrated internal antennas GPS, 4G, LoRa (peak gain=2.6 dBi)

SUPPORTED UNLICENSED RADIO BANDS

ISM frequencies	Region	Rx	Tx
863–874.4 MHz	EMEA, India	863–873 MHz	863–873 MHz
902–928 MHz	North America	902–915 MHz	922–928 MHz
915–928 MHz	APAC, Latin America	915–928 MHz	915–928 MHz

NETWORK INTERFACES

Ethernet	10/100 Ethernet WAN (RJ45 PoE).
WWAN	Integrated 4G modem & antenna with worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage.

WWAN CAPABILITIES

Technologies	Band	Data rate
LTE	Band 1 (2100) Band 2 (1900 PCS) Band 3 (1800+) Band 4 (1700/2100 AWS-1) Band 5 (850) Band 7 (2600) Band 8 (900) Band 12 (700 ac) Band 13 (700 c) Band 18 (800 lower) Band 19 (800 upper) Band 20 (800 DD) Band 25 (1900+) Band 26 (850+) Band 28 (700 APT) Band 38 (TD 2600) Band 39 (TD 1900+) Band 40 (TD 2300) Band 41 (TD 2600+	LTE FDD: • Max 150Mbps (DL) • Max 50Mbps (UL) LTE TDD: • Max 130Mbps (DL) • Max 35Mbps (UL)
WCDMA	Band 1 (2100) Band 2 (1900 PCS) Band 4 (1700/2100 AWS-1) Band 5 (850) Band 6 (850 Japan) Band 8 (900) Band 19 (800 upper)	DC-HSDPA: Max 42Mbps (DL) HSUPA: Max 5.7Mbps (UL) WCDMA: • Max 384Kbps (DL) • Max 384Kbps (UL)
GSM	82 (1900 PCS) 83 (1800 des) 85 (850) 88 (900)	EDGE: • Max 296Kbps (DL) • Max 236.8Kbps (UL) GPRS: • Max 107Kbps (DL) • Max 85.6Kbps (UL)

DEVICE INTERFACES

LEDs	GREEN – power RED – system status
Connector	UBS Type C Port
SIM Card	Mini-SIM card slot
Buttons	Multifunction button for On/Off/Reset

MECHANICAL SPECIFICATIONS

Size	265 x 165 x 100 mm (without external LoRa antenna)
Weight	1.4 kg (including mounting kit)
Weather protection	IP67
Material	Aluminum (back), polycarbonate (front), Stainless steel (mounting kit)
Operating range	–40 °C to 60 °C

POWER REQUIREMENTS

Power source	• PoE both mode A and mode B (802.3af specifications) • 5 V through USB-C
Mean power consumption[1]	4.5W[2]

FOR AUTONOMOUS POWER SOURCES

Recommended input	5.1 Vdc, 1.2 A max	
Power consumption		
Load	Low Load	High Load
Transmission frequency	2 radio messages/min	30 radio messages/min
USB-C[4]	3.9 W	4.3 W
PoE[5]	SW	5.5 W

[1] Considering good cellular reception levels. Bad cellular reception , data access and adverse environmental conditions can increase the power consumption. Consumption varies depending on the data access used and environmental conditions.

[2] Power consumption measured directly in the GW.

[3] Power consumption includes DC/DC converters.

[4] Using Worldsensing USB Kit accessory LS-ACC-USBCGW

[5] Using Worldsensing PoE converter accessory LS-ACC-SC1248

PRODUCT VARIANTS[6]

4G RUGGED GATEWAY CLOUD	
Description	Enables redundant multi-gateway networks, automatically rerouting data if one gateway fails, with all networks and devices managed centrally in CMT Cloud.
Product Codes	• GW-4G-CLOUD-868 • GW-4G-CLOUD-915 • GW-4G-CLOUD-923
Gateway Firmware	CMT Cloud Link
Management Software	CMT Cloud
Network Configuration	Multi-net using CMT Cloud
4G RUGGED GATEWAY EDGE	
Description	Operate networks, devices, and data locally via Ethernet or 4G with embedded CMT Edge, and extend radio range using the K20 Edge Repeater (863–874.4 MHz EMEA/India, 915–928 MHz APAC/LATAM).
Product Codes	• GW-4G-EDGE-868 • GW-4G-EDGE-915 • GW-4G-EDGE-923
Gateway Firmware	CMT Edge
Management Software	NA
Network Configuration	• Single Net, standalone networks • Multi-net, redundant networks via LoRa Manager Ad-On in CMT Cloud
4G RUGGED GATEWAY 915R	
Description	Operate networks, devices, and data locally via Ethernet or 4G with embedded CMT Edge, and extend radio range using the K20 Edge Repeater 915R in the 902–928 MHz North America band.
Product Code	• GW-4G-EDGE-915R
Gateway Firmware	CMT Edge
Management Software	NA
Network Configuration	• Single Net, standalone networks • Multi-net, redundant networks via LoRa Manager Ad-On in CMT Cloud

[6] All references include 2x dust cover, 1 cable gland, 1 ground cable and 1 mounting bracket, 1 PoE indoor injector, 1 adapter USB to Ethernet.

ACCESSORIES

EXTERNAL ANTENNAS (RECOMMENDED)	
LS-ACC-SUPGW-01	Optional vertical omni-directional outdoor antenna kit, 3 dBi, 868 MHz, 30 cm length
LS-ACC-SUPGW-03	Optional vertical omni-directional outdoor antenna kit, 3 dBi, 915/923 MHz, 30 cm length
LS-ACC-SUPGW-02	Optional vertical omni-directional outdoor antenna kit, 6 dBi, 915/923 MHz, 110 cm length
LS-ACC-ANTGW-01	Vertical omni-directional outdoor antenna, 3 dBi, 868 MHz, 30 cm length
LS-ACC-ANTGW-03	Vertical omni-directional outdoor antenna, 3 dBi, 915/923 MHz, 30 cm length
SURGE PROTECTION	
LS-ACC-LPANT-2	Loadsensing gateway lightning antenna protection Coaxial surge protector
LS-ACC-LPETH	Loadsensing gateway lightning Ethernet protection PoE surge protector
POWER SUPPLIES	
LS-ACC-USBCGW	Converter kit to power the K20 GW through USB-C directly from a photovoltaic system (12 V IN ->5 V OUT). Includes a USB cable A male to C male, length: 3 m, a cable gland and an indoor DC/DC converter (IN:9–36 Vdc, OUT:5.1 Vdc)
FILTERS	
LS-ACC-CFIN	Band pass cavity filter 865–867 MHz for India.

FOR MORE INFORMATION

Scan to access the user guide for this device.

NEED MORE SUPPORT?

Get in touch with our Customer Success team

support@worldsensing.com

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