

Centrica Business Solutions Gen 4+ Bridge



Overview and technical specifications

Our Energy Insight solution provides organisations with unparalleled visibility into their entire energy estate by delivering a wide range of granular and actionable energy intelligence in real-time. The solution consists of Centrica Business Solutions Wireless Sensors that are easily attached to circuits. The sensors – in combination with integrated 3rd party meters for gas, heat, air and water – transmit data to the Centrica Business Solutions Gen 4+ Bridge. The Gen 4+ Bridge makes this collected energy intelligence available for visualisation and analysis in PowerRadar™, our cloud-based energy management platform. Customers retain the flexibility to use the software of their choice by using the Modbus TCP interface to export and manage the data locally – directly from the Gen 4+ Bridge. A selection of hardware is available to meet organisational requirements.

Gen 4+ Bridge



Technical specifications

Physical dimensions (without antennas)	111 x 87 x 35 mm / 4.4 x 3.4 x 1.4 inch
Weight (with antennas)	150 gr/0.33 lb
Power adapter (included)	Input: 100-240 VAC 50-60Hz, Output: 5 VDC
Power consumption	5 W max
Sensor receiver frequency	915 MHz (PAN-2-H-3G-US, PAN-2-H-US) 434 MHz (PAN-2-H-3G-EU) 923 MHz (PAN-2-H-JP)
Sensor reception sensitivity	-105 dBm
Cellular bands (MHz) ¹	US: B2(1900) / B4(AWS1700) / B5(850) / B12/13(700) (4G), 850/1900 (3G) EU: B1(2100) / B3(1800) / B7(2600) / B8(900) / B20(800) (4G), 900/1800 (2G) JP: B1(2100) / B19(850) / B21(1500) (4G)
Wi-Fi protocol	802.11 b/g/n
Wi-Fi security protocol	WEP64, WEP128, WPA, WPA2, WPA2-Enterprise
Compression	Sensor messages are collected and sent once every 10 seconds to reduce bandwidth
Authentication	CHAP protocol used by the server to verify connected bridge's identity

Key features

- Plug-and-play installation
- Flexible mounting options
- Wi-Fi/Ethernet connectivity
- Cellular (LTE) connectivity¹
- Store capability in case of network loss
- Field-upgradable firmware
- Initial configuration (built-in web interface)
- Easily integrated with PowerRadar, our cloud-based energy management platform, and 3rd party software using Modbus TCP
- Over-the-air upgrades can be enabled to receive latest bridge firmware automatically from PowerRadar cloud



Technical specifications

Pulse interface	2x KY inputs (5 V open voltage, 0.9 mA max current, 5 ms minimum pulse width, 100 Hz maximum pulse rate)
Certification ²	<p>USA and Canada</p> <p>Safety: UL 61010-1, UL 61010-2-030 CAN/CSA-C22.2 No. 61010-1, 61010-2-030 (ETL listed) EMC: FCC Part 15 Subpart B, ICES-003 PTCRB listed</p> <p>Europe</p> <p>Safety: EN 61010-1, EN 61010-2-030 (CE) EMC: EN ETSI 301 489-1, 301 489-3, 301 489-17, 613 326-1, 301 489-52, 61000-3-2, 61000-3-3 Radio: EN ETSI 300 220-1, 300 220-2, 300 328</p> <p>CB certification IEC 61010-1, IEC 61010-2-030 by Intertek Testing Services</p>
Flammability rating (enclosure)	UL94 V-0
Ingress protection (IP) rating	IP5X
Operating temperature	-25 – 60°C / -13 – 140°F
Operating humidity range	5% – 95% non-condensing
Storage temperature	-25 – 65°C / -13 – 149°F

The Gen 4+ Bridge is available in two variants:

- **Gen 4+ Bridge (LTE):** This version supports Ethernet, Wi-Fi, and LTE network connectivity (with 3G fallback in the US model, and 2G fallback in the EU model).
- **Gen 4+ Bridge (LAN):** This version supports Ethernet and Wi-Fi connectivity.

The table below shows the model number by territory:

Regions and countries ²	Gen 4+ Bridge (LAN)	Gen 4+ Bridge (LTE)
North America & Mexico	PAN-2-H-US V4+ (LAN)	PAN-2-H-3G-US V4+ (LTE)
Brazil	PAN-2-H-US V4+ (LAN)	NA
Japan	NA	PAN-2-H-3G-JP V4+ (LTE)
United Kingdom, Ireland, European Union, Russia, Australia, New Zealand, Israel	PAN-2-H-EU V4+ (LAN)	PAN-2-H-3G-EU V4+ (LTE)