

EMB-Fem2GW-O

femto LoRaWAN® Gateway

868/915 MHz



EMB-Fem2GW-O is a multi-protocol outdoor network platform, designed to meet IoT (Internet Of Things) and M2M (Machine-2-Machine) scenarios in smart city environment. It enables LoRaWAN® connectivity to the cloud, covering the role of fully compliant LoRaWAN® Gateway in the network and city infrastructure.

EMB-Fem2GW-O provides the LoRaWAN® packet forwarder functionality: the SX1301 radio will start to operate as a LoRaWAN® base station, receiving radio LoRa® packets and forwarding them to a LoRaWAN® network server. It has a TCP/IP connection through Ethernet, or via 4G connection, available through SIM card and 4G mini PCI express module, or via Wi-Fi. It has 802.11 b/g/n 2.4Ghz connectivity, which may make easier the installation in harsh environment. It includes GPS connectivity to locate the device.

The **EMB-Fem2GW-O** is based on the **EMBIT MiniPCI-express board** (compatible with both **EMB-LR1301-mPCIe** and **EMB-LR1308-mPCIe**). It manages 8 LoRa® channels in order to handle thousands of end-devices. The Embit RF design is studied to cover up to 15 km in the country side and up to 3 km in urban areas. It is available both for the EU region (868 MHz) and US one (915 MHz).

The OS system is Linux based, and customers can configure it according to their needs, with a complete root access. **The EMB-Fem2GW-O** provides a web interface to manage and configure the connectivity with the different network protocols.

It can be powered using a IEEE 802.3af Power-Over-Ethernet (PoE) or +12 VDC.

Technical Specifications

Processor	MCU Broadcom BCM2837B0, Cortex - A53 (ARMv8) 64-bit SoC @ 1.2 GHz
Ram Memory	RAM 1GB LPDDR2 SDRAM
Flash Memory	8 GB Emmc
LAN Connection	Ethernet RJ 45 10/100/1000
LoRaWAN® Connectivity	EMB-LR1301-mPCIe / EMB-LR1308-mPCIe both EU (863-870 MHz) and US (902-928) 8 LoRaWAN® Channels
Connectivity	GPS - 3G/LTE Wi-Fi IEEE 802.11 b/g/n
Optional Connectivity	IEEE 802.15.4™/ZigBee® Wireless M-Bus
Power Source	POE IEEE 802.3af / +12 VDC
Ports	Ethernet RJ 45 10/100/1000 N-Type Antenna Connector
Temperature Range	-40 °C +85 °C
Rx Sensitivity	up to -138 dBm
OS	Embedded Linux
Dimensions	L:165mm W:165mm H:53mm
Certifications	CE according to RED FCC pending



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