

# 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 and operates as a LoRaWAN® base station, receiving radio LoRa® packets and forwarding them to a LoRaWAN® network server. It has backhaul connection through Ethernet, or via 4G connection, available through SIM card and 4G mini PCI-express module. It includes GPS connectivity to locate the device.

The **EMB-Fem2GW-O** is based on the EMBIT miniPCI-express board, compatible with EMB-LR130x-mPCIe card. It manages simultaneous 8 LoRa® channels in order to handle thousands of end-devices. Thanks to a well-studied and meticulous RF design, the device is able to reach up to 15 km in rural areas and up to 3 km in urban areas. It is available both for the EU region (868 MHz) and US (915 MHz).

The OS system is based on Linux. Complete root access is provided allowing full customization of the software. The **EMB-Fem2GW-O** connectivity to the available network protocols is configurable and can be managed through a web interface.

## 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-LR1302-mPCIe/ EMB-LR1303-mPCIe both EU (863-870 MHz) and US (902-928) 8 LoRaWAN® Channels
Connectivity	GPS - 3G/LTE
Ports	Ethernet RJ 45 10/100/1000 N-Type Antenna Connector
Temperature Range	-40 °C +85 °C
Rx Sensitivity	up to -140 dBm
OS	Embedded Linux
Power Source	+12/+24 VDC (optional IEEE 802.3af PoE)
Chassis Type	IP 67 rated
Dimensions	L:165mm W:165mm H:53mm
Certifications	CE according to RED FCC pending



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