EMB-Fem2GW-O-2G4

femto LoRa® Gateway
2.4GHz

Technical Specifications

EMB-Fem2GW-O-2G4 is a multi-protocol outdoor network platform. It enables LoRa® 2.4GHz connectivity to the cloud, being fully compliant with LoRa® 2.4GHz Semtech protocol specification.

EMB-Fem2GW-O-2G4 provides the LoRa® 2.4GHz packet forwarder functionality. It has a TCP/IP connection through Ethernet, or via 4G connection, available through SIM card and 4G mini PCI-express module. 2.4GHz is a global ISM band, allowing this product to be easily deployed all over the world. The gateway includes GPS connectivity to locate the device.

EMB-Fem2GW-O-2G4 is based on the EMBIT mini PCI-express board **EMB-LR1280-mPCIe-4x.** It manages 3 LoRa® 2.4GHz channels in Rx and 1 LoRa® 2.4GHz channel in Tx. It covers up to 10 km in the country side and up to 1 km in urban areas. In indoor scenario, it has high immunity interference to other wireless technologies, such as Wi-Fi or Bluetooth®. 2.4GHz ISM Band does not have any kind of duty cycle restrictions and the Gateway can transmit data continuously.

The OS system is based on a Linux distribution. **EMB-Fem2GW-O-2G4** provides a web interface to manage and configure the connectivity with the different network protocols.

EMB-Fem2GW-O-2G4 is the perfect solution for numerous worldwide applications. It opens up new scenarios that cannot be adapted using the conventional Sub-1 GHz band, due to Duty-Cycle restrictions.

Typical Applications:

- Logistic and Supply Chain
- Industrial Monitoring and Control
- Factory Automation
- Home and Building Automation
- Wireless Alarm and Security System

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
LoRa® Connectivity	EMB-LR1280-mPCIe-4x, 3 LoRa® 2.4GHz Rx Channels, 1 LoRa® 2.4GHz Tx Channel
Connectivity	GPS - 3G/LTE
Ports	Ethernet RJ 45 10/100/1000 N-Type Antenna Connector
Temperature Range	-40 °C +85 °C
Rx Sensitivity	down to -129 dBm @ SF12 BW 812.5kHz
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