

EMB-LR1280-mPCIe-4x

2.4 GHz mini PCI express
multichannel LoRa® card



Technical Specifications

EMB-LR1280-mPCIe-4x provides long range connectivity and high interference immunity exploiting spread spectrum modulation over the 2.4 GHz ISM band. It can operate worldwide being fully compliant with 2.4 GHz frequency band regulation.

EMB-LR1280-mPCIe-4x exploits 4 Semtech SX1280 radio transceivers to offer 3 dedicated channels for reception and 1 for transmission. It allows simultaneous reception of 3 LoRa® channels with programmable data rate and it is able to achieve a sensitivity up to -129 dBm. One Semtech SX1280 is dedicated to transmission, capable of achieving RF output power of +12 dBm. Thanks to the intrinsic resilience of LoRa® modulation, the EMB-LR1280-mPCIe can operate in hostile RF environments coexisting with other widespread technologies like Wi-Fi and Bluetooth®.

EMB-LR1280-mPCIe-4x acts as Gateway in every star topology network which uses LoRa® 2.4 GHz modulation, deploying connectivity and services. The LoRa® modulation properties and 2.4 GHz regulation make the **EMB-LR1280-mPCIe-4x** the perfect solution for numerous worldwide applications that require a LoRa® Gateway such as:

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

Highlights:

- Long range connectivity using ultra-long range spread spectrum communication and high interference immunity on the 868/915 MHz radio band;
- 3 LoRa® simultaneous channels in the 2.4 GHz frequency
- High sensitivity up to -129 dBm and a RF output power up to +12 dBm

Chipset	Semtech SX1280
External Antenna	U.FL connector
Modulation	LoRa® Spread Spectrum
Operating Frequency	2.4 GHz ISM band
Frequency Range	2400 ÷ 2500 MHz
Operating temperature	-40°C to +85°C
RF Output Power	Up to 12 dBm
Operating Voltage	+3.3V
Current consumption	Tx: Max. 84mA @ +12dBm; Rx: 30mA
Interfaces	Standard mPCIe connector
Sensitivity	-129 dBm @ SF12 BW 812.5kHz
Dimension	50.95×30×1 mm
Features	3 LoRa® Rx Channels + 1 LoRa® Tx Channel
Part Numbers	EMB-LR1280-mPCIe-4x



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