

EMB-LR-PICOCELL

Picocell LoRaWAN
Indoor Gateway



Technical Specifications

EMB-LR-Picocell gives you the chance to have a compact indoor LoRaWAN® gateway. It provides LoRa® long range connectivity using ultra-long range spread spectrum communication and high interference immunity on the 868/915 MHz radio bands.

EMB-LR-Picocell is the ideal gateway to enable you to create in a very short time LoRaWAN® applications, with up to 8 LoRa Channels in the 868MHz (or 915MHz) frequency, a sensitivity of -140dBm and a RF output power up to $+27\text{dBm}$.

EMB-LR1302-mPCIe is designed around the Semtech SX1302 which is a new generation of digital baseband LoRa® chip for gateways. It offers 8 simultaneous LoRa® channels in the 868 MHz (or 915 MHz) frequency allowing it to receive up to 64 LoRa® packets simultaneously. It is able to achieve a sensitivity of -140 dBm and a RF output power of $+27\text{ dBm}$ making it the ideal device to use in LoRa® gateways applications.

EMB-LR1302-mPCIe is easier to be embedded in highly-integrated environment where power dissipation might be a challenge.

EMB-LR1302-mPCIe embeds the capability to support two new spreading factors: SF5 and SF6. This enables users to reach higher data rate communication. Two versions of **EMB-LR1302-mPCIe** are available: 868MHz or 915MHz.

Applications: Internet Of Things (IOT), Automated Meter Reading, Smart Cities, Home and Building Automation, Wireless Alarm and Security System, Machine to Machine (M2M), Industrial Monitoring and Control, Long Range Irrigation System

EMB-LR-Picocell contains:

- EMB-LR1302-mPCIe
- EMB-RasPI-130x-Cape
- Raspberry PI
- **9W Average Power Consumption**
- Plastic Enclosure
- 868 MHz External Antenna
- SD Card
- U.FL to SMA pigtail

Outdoor	NO
LoRaWAN® Connectivity	EMB-LR1302-mPCIe (EU 863-870 MHz) – 8 LoRaWAN® Channels
Backhaul connectivity	Wi-Fi IEEE 802.11 b/g/n/ac
Bluetooth	Bluetooth 5.0
OS	Embedded Linux
Crypto Unit	ECC608A
RF Output Power	Up to $+27\text{dBm}$
Power Supply	5.1V/3.0A DC supply
Antenna	SMA Connector
Operating frequency	868 MHz (EU), 915 MHz (US)
Sensibility	-140 dBm @ SF12 BW 125kHz
Features	8 LoRa Channels, On-board uFL antenna connector
LoRa Channels	8
Based on	Raspberry PI 4: MCU Broadcom BCM2711Quad-Core, ARM Cortex-A72 64-bit SoC @ 1.5 GHz
Dimensions	100x100x35mm
Part Number	EMB-LR-PICOCELL



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