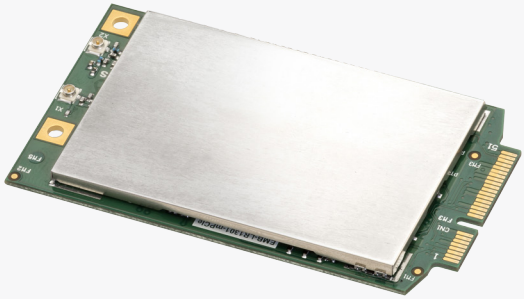
EMB-LR1301-mPCIe

868/915 MHz
mini PCI express multichannel LoRaWAN board



Technical Specifications

EMB-LR1301-mPCIe provides long range connectivity using ultra-long range spread spectrum communication and high interference immunity on the 868/915 MHz radio bands. It increases operational capacity keeping the gateway cost low.

EMB-LR1301-mPCIe is deigned around the Semtech SX1301 digital baseband chip. It offers up to 8 LoRa Channels in the 868Mhz (or 915MHz) frequency allowing it to receive up to 8 LoRa packets simultaneously and it is able to achieve a sensitivity of **-137dBm** and a RF output power of **+27dBm** making it the ideal device to use in LoRa gateways applications.

EMB-LR1301-mPCIe has also the **Listen Before Talk (LBT)** capability that allows many users to use the same radio channel without pre-coordination. When enabled, the device monitors all the channels continuously and it transmits only if the channel is free. It includes as well a GPS module.

EMB-LR1301-mPCIe can be used in several applications where LoRa gateway is needed, such as:
- 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

Operating Voltage	+5V
Current Consumption	TX: max. 815mA@+27dBm RX: 600mA
Chipset	Semtech SX1301,SX1257
External Antenna	2 x u.FL connectors
Modulation	LoRa® Spread Spectrum, FSK, GFSK
Operating Frequency	868MHz (EU) / 915MHz (US)
Frequency Range	860MHz to 1020MHz
Operating Temperature	-40°C to +85°C
RF Output Power	Up to +27dBm
Interfaces	mPCIe (SPI /I2C/UART/GPIOs)
Sensitivity	Up to -137dBm
Dimension	71x40x1 mm
Weight	
Part Numbers	EMB-LR1301-mPCIe-G (GPS included) EMB-LR1301-mPCIe
Features	Listen Before Talk (LBT) Capability GPS (optional) On-board uFL antenna connector 8 LoRA channels FPGA version supports LoRA Spectral Scan

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