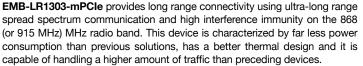
EMB-LR1303-mPCle

868/915 MHz mini PCI express multichannel LoRaWAN[®] card



EMB-LR1303-mPCIe is easier to be embedded in highly-integrated environment where power dissipation might be a challenge.

EMB-LR1303-mPCIe is designed around the Semtech SX1303 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 dBm making it the ideal device to use in LoRa® gateways applications.

EMB-LR1303-mPCIe embeds the capability to support two new spreading factors: SF5 and SF6. This enables users to reach higher data rate communication.

Moreover the $\ensuremath{\textit{EMB-LR1303-mPCle}}$ provides spectral scan and LBT functionalites.

Two versions of EMB-LR1303-mPCIe are available: 868MHz or 915MHz

EMB-LR1303-mPCle can be used in several applications where $LoRa^{\circledast}$ gateway is needed, such as:

- Internet of Things (IoT)
- Automated Meter Reading
- Smart Cities
- 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 MHzradio band
- Up to 8 LoRa[®] channels in the 868 MHz (or 915 MHz) frequency allowing it to receive up to 64 LoRa[®] packets simultaneously
- High sensitivity up to -141dBm and a RF output power up to +27 dBm making it the ideal device to use in LoRa[®] gateways applications
- Two new spreading factors: SF5 and SF6 to reach higher data rate communication



Technical Specifications

Chipset	Semtech SX1303, SX1250
Modulation	LoRa [®] Spread Spectrum, FSK, GFSK
External Antenna	U.FL connector
Operating Frequency	868MHz (EU) / 915 MHZ (US)
Frequency Range	860MHz to 1020MHz
Operating temperature	-40 °C to +85 °C
RF Output Power	Up to +27dBm
Operating Voltage	+3.3V/5V
Current consumption	Tx: Max. 148mA @ +14dBm; Rx: 49mA
Interfaces	Standard mPCle (USB)
Interfaces Sensitivity	Standard mPCle (USB) -140 dBm @ SF12 BW 125kHz
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Sensitivity	-140 dBm @ SF12 BW 125kHz



