

MLB-Z1001 Serial to 900 MHz RF Modem



MLB-Z1001

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MLiS MLB-Z1001 is a 900 MHz RF modem designed for RS232/422/485 communication via any readily available ZigBee networks. Overall, it offers a more cost effective and time to market solution for bridging remote machine to machine over diverse locations without first having to invest and engineer a huge complex network.

MLB-Z1001 modem uses the DB9 & Terminal block connector to provide data communication interface and the DC jack to provide power input. LEDs are used to indicate the status of the modem.

MLB-Z1001 modem can be used to provide wireless communication link for many applications, including warehouse, AGV, and street light applications.

**Strong
Penetration**

-40 ~ +75°C

**AutoMesh
Network**

Features

- 900 MHz RF signal
- Automatically build up Mesh Network (Auto-Mesh)
- Longer distance to 2000ft (610m)
- RF data rate up to 200 Kbps
- Configuration utility

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General Features

Frequency Band	902~928 MHz, software selectable channel mask for interference immunity
Power Input	5~32VDC
Operating Temperature	-40~+75°C
ESD Protection	15KV
Dimension (L) x (W) x (H)	86 x 76 x 25mm (excluding connectors)
Power Consumption	Normal mode: 32mA
Humidity	5~95% (non-condensing).
Weight	212g (without antenna)
Casing Material	Metal

Data Transmission

RF Data Rate	10 Kbps or 200 Kbps
Indoor/Urban Range	Up to 2000ft (610m)
Outdoor/Line-of-Sight Range	Up to 9 miles (14km) w/ dipole antenna; Up to 28 miles (45km) w/ high-gain antenna
Transmit Power	Up to 24 dBm (250 mW) software selectable
Receiver Sensitivity	-101 dBm @ 200 Kbps -110 dBm @ 10 Kbps
Power Level	+7 dBm (5 mW) +15 dBm (32 mW) +18 dBm (63 mW) +21 dBm (125 mW) +24 dBm (250 mW)

Special Features

Networking Topologies	Mesh, Repeater, Point-to-Point, Point-to-Multipoint, Peer-to-Peer
Number of Channels, User Selectable Channels	64 channels available
Encryption	128 bit AES
Configuration tool	Yes
Spread Spectrum	FHSS (Software Selectable Channels)

Interfaces

RF Antenna Socket	50ohm SMA
Power Connector	DC jack connector
Serial Interface	DB9 connector for RS-232 (female) Terminal block for RS422/485
LED	1 x Power 1 x Tx 1 x Indicator
Reset	HW Reset

Reliability

MTBF	2,073,734hrs
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Approval

Certification	EMC EN55022/24
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