# ASSURED
SYSTEMS

**MLB-Z1001    Serial to 900 MHz RF Modem**

# MLB-Z1001

## Serial to 900 MHz RF Modem

**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

## MLB-Z1001   Serial to 900 MHz RF Modem

### 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<br>-110 dBm @ 10 Kbps |
| Power Level | +7 dBm (5 mW)<br>+15 dBm (32 mW)<br>+18 dBm (63 mW)<br>+21 dBm (125 mW)<br>+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<br>1 x Tx<br>1 x Indicator |
| Reset | HW Reset |

### Reliability

| | |
|---|---|
| MTBF | 2,073,734hrs |

### Approval

| | |
|---|---|
| Certification | EMC<br>EN55022/24 |

# Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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