

ELA-MA



Main Features

- Serial to LoRa convertor
- Easy to setup and maintain
- Long distance (up to 2,000 meters)
- Up to 255 Bytes per packet
- Receiving sensitivity: -137 dBm
- 5 ~ 24 V & 5V Micro USB power supply (alternative).
- Broadcast mode (no pairing required)
- Secured AES encryption in wireless communication

Product Overview

Cable deployment is always costly for deployment and maintenance. Longer distance introduces much higher overall cost. ELA-MA is a reliable and cost effect solution to cable replacement in RS232/485 transmission. ELA-MA can achieve very good wireless performance in 2 Km distance with 90% successful transmission rate. For data transmission, ELA-MA uses LoRa 862~932 MHz to convert RS232/485 serial data among devices with LoRa wireless technology. ELA-MA is designed for easy setup and maintenance. Multi-end points can form a broadcast network, with the same frequency and encryption the end points can communicate without pairing in advance. Thus, effectively reduce the effort in deployment and maintenance.

Specifications

Main Chip

- LoRa Transmission : Semtech SX1272
- Soc : Cortex®-M0
- Memory: Flash 128K

Wireless Interface

- Modulation: LoRa
- Frequency: 862 ~ 932MHz
- Frequency Accuracy: ± 10 KHz
- Data Rate: 0.244 ~ 18.2Kbps(LoRa)
- Antenna Impedance: 50ohm

RF Output Power :

- 2 ~ 20dBm

Receive sensitivity :

- -137dBm

LoRa Communication Distance:

- 2 ~ 5Km

Baud Rate

- RS232/RS485:
 - Half Duplex of RS232
 - ◆ Baud Rate to 9600、19200、38400、57600、115200bps
 - Half Duplex of RS485
 - ◆ Baud Rate to 9600、19200、38400、57600、115200bps

Power Source

- Supply Voltage: 5 ~ 24VDC Terminal Block
- 5V Micro USB (alternative)

Power Consumption

- Standby:
 - 5V: 15mA
 - 12V: 7mA
 - 24V: 4mA
- Transmission:
 - 5V: 115mA
 - 12V: 44mA
 - 24V: 23mA

Environment

- Operating Temperature: 0°C ~ 50°C

Mechanism

- Dimensions: W*H*D: 27*89*68 (mm)
- Weight: 82± 5g

Physical and Power

- Supply Voltage: +5 ~ 24VDC Terminal Block
- +5V Micro USB (alternative)

Certification

- FCC, CE

System Management

- Com port support system firmware upgrade

ELA-MA

Dimension drawing

