

LRA-900

RS-232/RS-485 to LoRa Radio Modem

Features

- LoRa (Long Range) transmission technology
- Transparent transmission mode
- 32 RF channels (Frequency band : 864~ 871.5MHz, 915~ 922.5MHz)
- 7 RF baud rates (10,000 ~ 250 bps)
- Provides baud rates from 1200 to 115200 bps for both the RS-232 and RS-485 interfaces
- ESD protection: Contact +/-4 kV
- Isolation: 3000 VDC for DC-to-DC, 2500 Vrms using a photocoupler
- DIN-Rail mountable
- Operating temperature, -25 °C ~ +75 °C

Introduction

The LRA-900 is a RS-232/RS-485 to radio device designed for remote communication operating in a transparent way and exploiting the physical layer of LoRa (Long Range) transmission technology. The LRA-900 provides a maximum line of sight (LOS) transmission distance of 1500 meters at an RF bit rate less than 1000 bps. In order to overcome the interference that may be encountered in harsh environments, the LRA-900 allows the RF transmission bit rate to be configured to a minimum of 250 bps, enhancing the capability of the modem to resist noise and other interference. Additionally, the RF channels and Group IDs are adjustable, which is helpful to avoid interference encountered when two LRA-900 networks are adjacent. The RF channels and the Group IDs can be configured in order to distinguish and control the different LRA-900 networks.

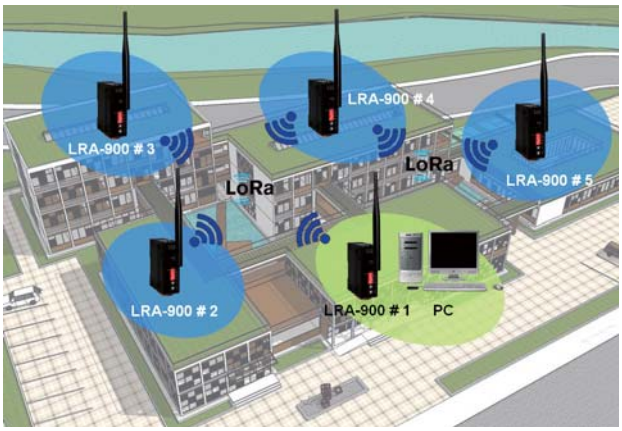
Specifications

RF Interface	
Radio Frequency	864~ 871.5MHz, 915~ 922.5MHz (channel: 32, recommend using 868 +/- 4 MHz)
Baud Rate	10,000 ~ 250 bps
Transmission Power	15 dBm (Max.)
Antenna	2 dBi Omnidirectional Antenna
Transmission Distance	up to 1500 m (with 1000 baud, in free field conditions)
Group ID	0~255
Protocols	Transparent transmit
Temporary Buffer Size	200 bytes
Configuration	**Dip /Rotary switch or Utility tool**
COM Port Interface	
COM Port	RS-232 x 1, RS-485 x 1
Baud Rate (bps)	1200 ~ 115200
LED Indicators	
Red / Green / Yellow	Power / RF Tx / RF Rx Status
Power	
Required Supply Voltage	+10 VDC ~ +30 VDC
Power Consumption	1 W (Max.)
Mechanical	
Dimensions (W x L x H)	108 mm x 84 mm x 33 mm (not include antenna)
Installation	DIN-Rail
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +80 °C
Relative Humidity	10 ~ 90% RH, Non-condensing

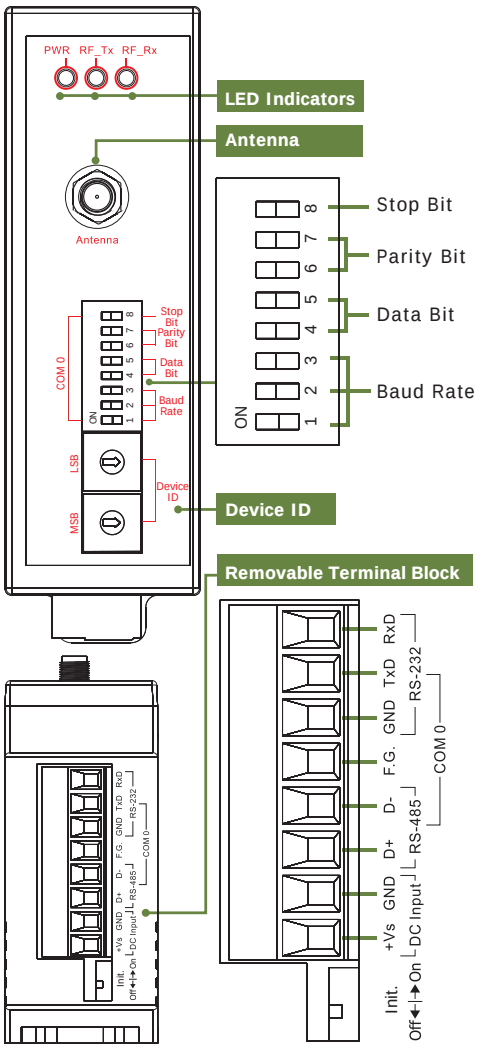
Applications



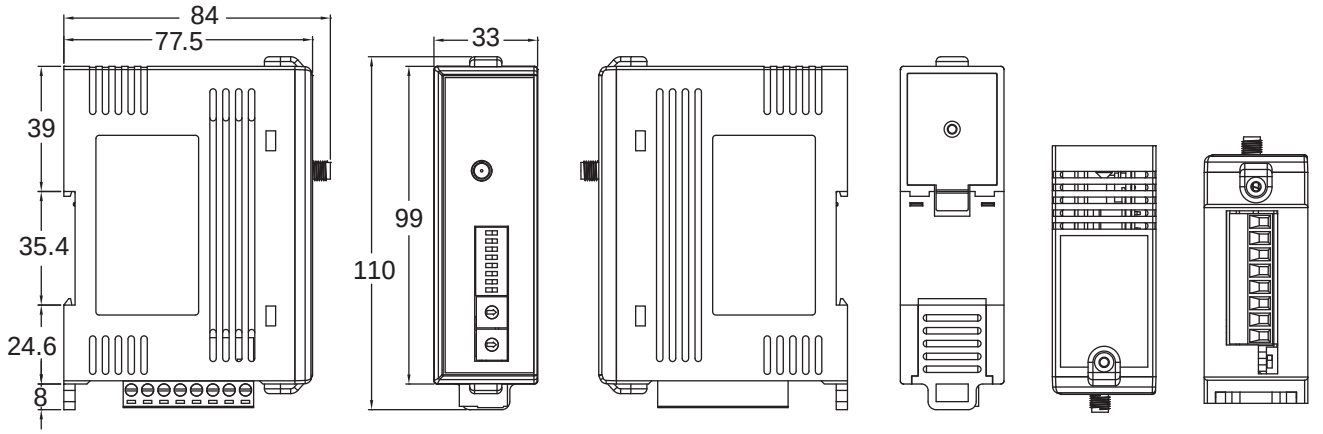




Appearance



Dimensions (Units: mm)



Left Side View | Front View | Right Side View | Rear View | Bottom View | Top View

Ordering Information

LRA-900 CR	RS-232 / RS-485 to LoRa Radio Modem (RoHS)

Accessories

ANT-109-01	2 dBi, 824 ~ 960 MHz External Antenna