Upgrade Traditional Modbus by Transparent LoRa Converter

EN110

Industrial Modbus LoRa Converter

EN110 is the new private LoRa converter to replace traditional serial cable with wireless Lora at the device end for kilometer level wireless coverage. For the data transmission, EN110 supports Modbus Master-Slave mode with 1 master to 40 slaves polling within 1 minute. EN110 is a convenient LoRa end node converter to upgrade the Modbus communication in factory automation applications.

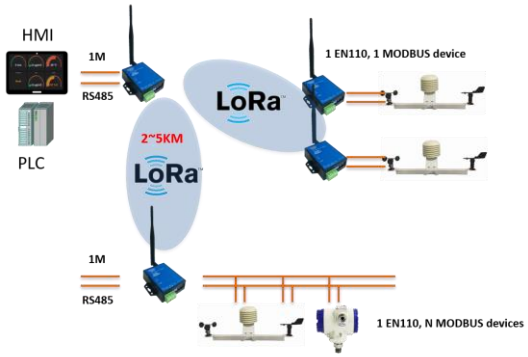
Features & Benefits

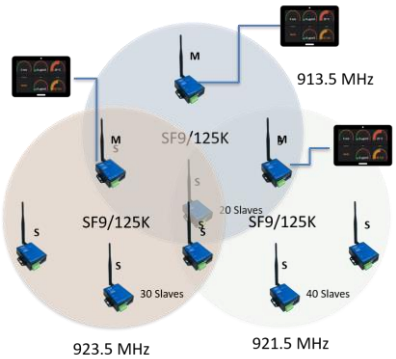
Long Range Wireless Communication

- Kilometer level wireless communication
- Excellent penetration, even in basement
- Communication by broadcast, no need pairing
- Small architecture, no gateway & network server required
- TX power up to 20dBm, RX sensitivity down to -137dBm
- Max packet size 255 bytes for Modbus data

Plug and Use, Minimized Configuration

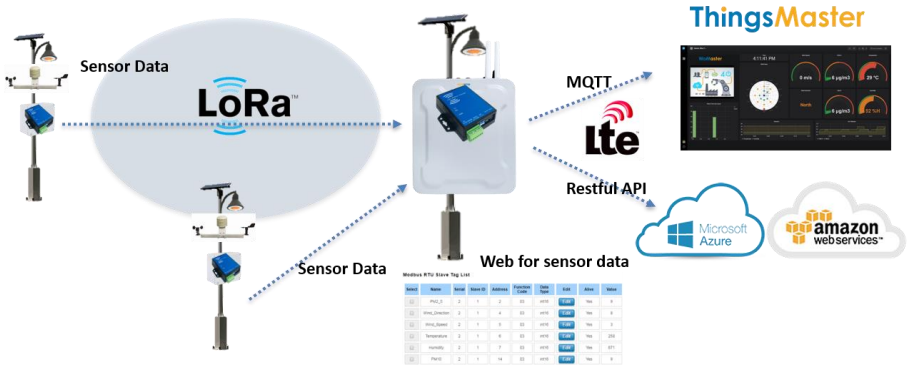
- Transparent replacement of RS485 cabling
- 1x RS232+ 1x RS485 for serial communication
- Easy frequency selection through DIP switch
- Easy devices grouping through broadcast domains
- Configuration utility for advance settings
- Support 5~24 DC input & USB 5V





LoRa to ease cable management

Broadcast domain grouping



Smart city LoRa communication

Interfaces

System LED
- 1 x Power input
- 1 x Tx
- 1 x Rx

SMA Antenna Socket
- 1 x SMA

Reset Button
- System Reboot

Wall Mount Clip
- Also used for DIN rail mounting with bracket (DIN bracket not Included)

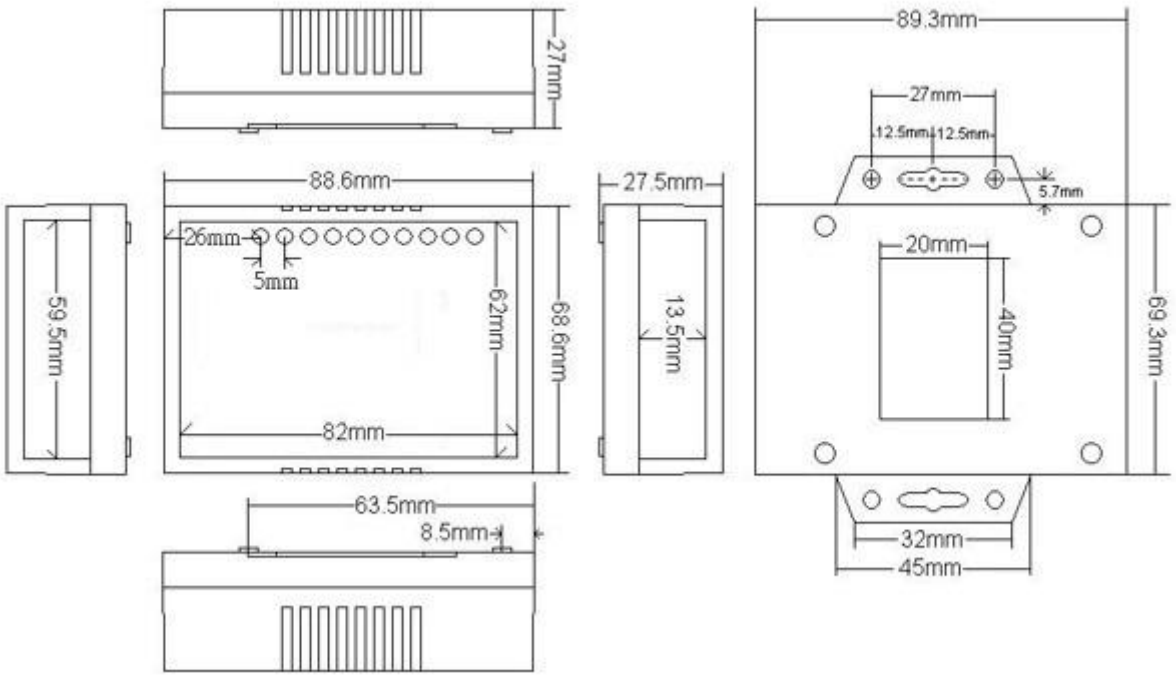
Micro USB Power
- 1 x Micro USB 5V power input

Integrated Connector
- 1 x 7-pin terminal block
  2 Pins for power input(5~24V)
  3 Pins for RS232
  2 Pins for RS485

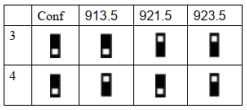
DIP Switch
- 1 x Terminal Resistance Setting
- 1 x Setting Mode
- 2 x Frequency Setting (913.5/921.5/923.5 MHz)

Dimensions

(mm)



Specifications

Interface	
System LED	1 x Power: Red On 1 x Tx : Yellow blinking when transmitting 1 x Rx : Blue blinking when receiving
Reset	System reboot
SMA Connector	1 x SMA Female for LoRa
DIP Switch	1: Terminal Resistance Setting (120Ω) 2: Configuration Mode (Frequency configuration or pre-defined frequency) 3/4: Frequency Selection (913.5/921.5/923.5 MHz) 
Power Input, Serial	1 x Micro USB Type B for 5V Power Input (alternative) 1 x 7-Pin Removable Terminal Block Connector 2 Pin for Power Input 3 Pin for RS232 2 Pin for RS485 ***Do not use USB and DC power at the same time**
LoRa	
Data Rate	0.244~18.2Kbps
Frequency	862~932MHz
Frequency Accuracy	± 10KHz
Transmit Power	2~+20dBm
High Sensitivity	Down to -137dBm
Communication Distance	2Km
Antenna Impedance	50ohm
Serial Port	
RS232/485	Half Duplex of RS232/RS485 Baud Rate to 9600、19200、38400、57600、115200bps
Power Requirement	
Input Voltage	5V Micro USB or 24VDC (5~24VDC) ***Do not use USB and DC power at the same time**
Power Consumption	Max 3W@24VDC
Mechanical	
Installation	Wall mount/DIN
Enclosure Material	Plastic
Dimension	27 x 89 x 68 mm(H x D x W)
Ingress Protection	IP30
Weight	82 ± 5g (without package)
Environmental	
Operating Temperature & Humidity	0°C~60°C , 10%~95% Non- Condensing
Storage Temperature	0°C~60°C
Warranty	2 years

Ordering Information

Model Name	Description
EN110	Industrial Modbus LoRa Converter
	Package List
	1 x Product Unit
	1 x 7-pin Removable Terminal Connector
	Default Enclosed Antenna 1x LoRa Antenna, Black
	1 x Quick Installation Guide