AP110-LORA-MODBUS Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.

AVCOMM Technologies, Inc

www.avcomm.us

Email: info@avcomm.us

Phone: (713) 933-4534

Address: 333 West Loop North, Suite 460
Houston, TX 77024
United States

Upgrade Traditional Modbus by Transparent LoRa Converter

AP110-LORA-MODBUS

Industrial Modbus LoRa Converter

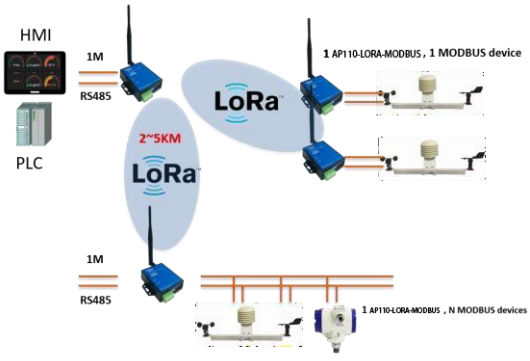
AP110-LORA-MODBUS is the new private LoRa converter to replace traditional serial cable with wireless Lora at the device end for kilometer level wireless coverage. For the data transmission, AP110-LORA-MODBUS supports Modbus Master-Slave mode with 1 master to 40 slaves polling within 1 minute. AP110-LORA-MODBUS is a convenient LoRa end node converter to upgrade the Modbus communication in factory automation applications.

Long Range Wireless Communication

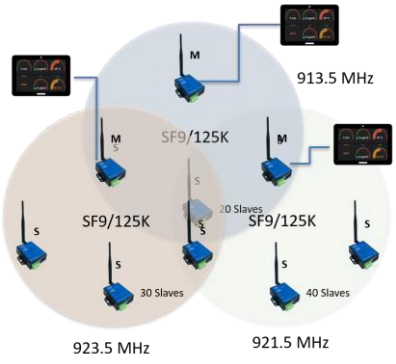
- Kilometer level wireless communication
- Excellent penetration, even in basement
- Communication by broadcast, no need pairing
- Small architecture, no gateway & network server required
- TX power up to 20dBm, RX sensitivity down to -137dBm
- Max packet size 255 bytes for Modbus data

Plug and Use, Minimized Configuration

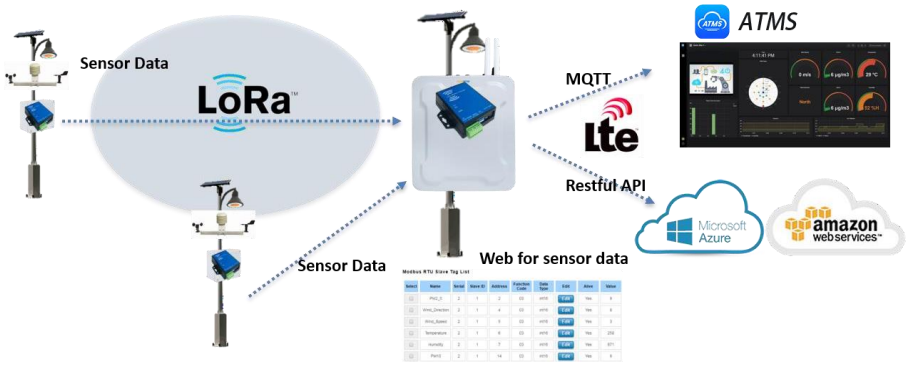
- Transparent replacement of RS485 cabling
- 1x RS232+ 1x RS485 for serial communication
- Easy frequency selection through DIP switch
- Easy devices grouping through broadcast domains
- Configuration utility for advance settings
- Support 5~24 DC input & USB 5V



LoRa to ease cable management



Broadcast domain grouping



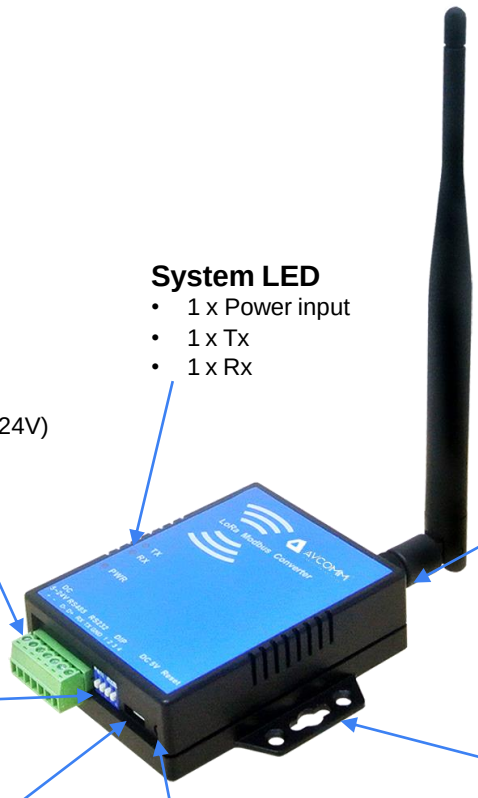
Smart city LoRa communication

Ordering Information

Model Name	Description
AP110-LORA-MODBUS	Industrial Modbus Serial to Lora Converter (Must work with AP110-LORA-MODBUS in pair)

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	5 years

Function interface



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

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

SMA Antenna Socket
- 1 x SMA

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

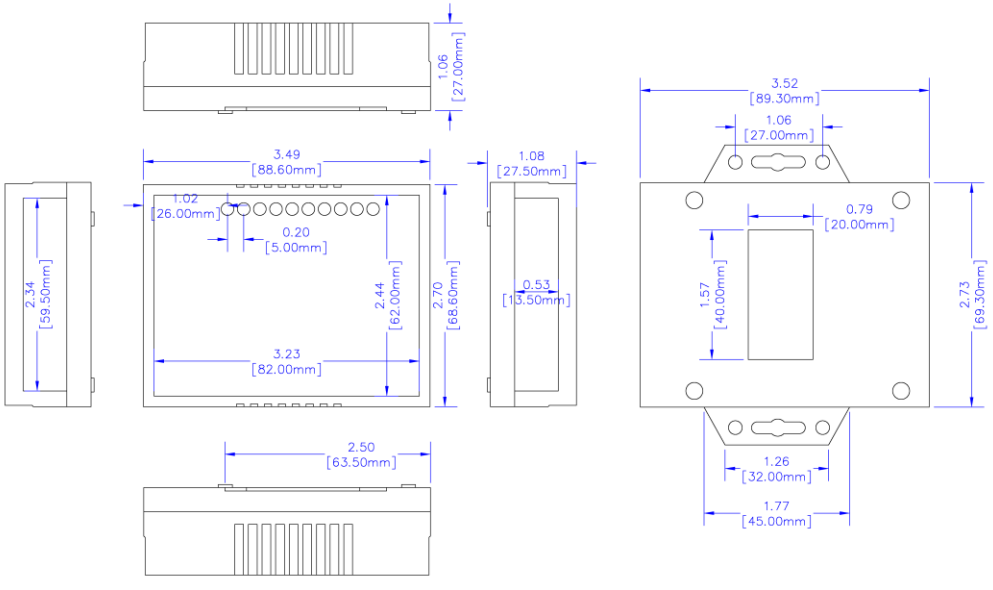
Wall Mount Clip
- Also used for DIN rail mounting with bracket (DIN bracket not Included)

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

Reset Button
- System Reboot

Installation dimensions

Unit: inch ±0.040 / [mm] ±1.00



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