

# LoRaWAN To Modbus Gateway

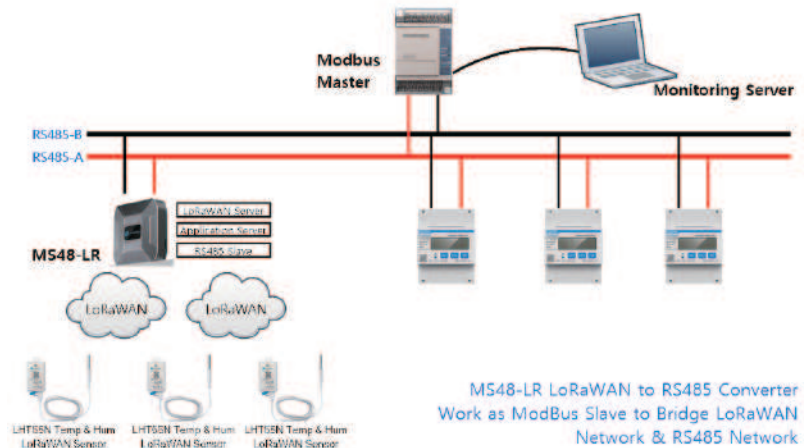


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## OVERVIEW:

The MS48-LR is an **open-source LoRaWAN To Modbus Gateway**. It lets you bridge LoRa wireless network to an IP network via **WiFi, Ethernet or Cellular Network** (via Optional 4G module). The LoRa wireless allows users to send data and reach extremely long ranges at low data rates.

The MS48-LR is fully compatible with LoRaWAN protocol. MS48-LR includes a **built-in LoRaWAN Server and IoT server**, User can connect various LoRaWAN devices to MS48-LR, and use PLC to access these devices via Modbus network.

Different countries use different LoRaWAN frequency bands. MS48-LR has these bands pre-configured. Users can also customize the frequency bands to use in their own LoRa network.

MS48-LR supports **remote management**. System Integrator can easily remote monitor the gateway and maintain it.

## Features:

- Open Source Debian system
- Managed by Web GUI, SSH via LAN or WiFi
- 10 programmable parallel demodulation paths
- Pre-configured to support different LoRaWAN regional settings.
- Allow customizing LoRaWAN regional parameters.
- Different kinds of LoRaWAN Connections such as:
  - \* Semtech UDP Packet Forwarder
  - \* LoRaWAN Basic Station
  - \* ChirpStack-Gateway-Bridge (MQTT)
- Remote Monitoring
- Auto-provisioning for batch deployment and management
- LoRaWAN Gateway
- Built-in ChirpStack local LoRaWAN server
- Built-in Node-Red local Application server
- Act as Modbus Slave mode
- Power Input: 12V, 2A, DC
- Operating Temperature: -20~70°C

## Specifications:

### Hardware System:

- CPU: Quad-core Cortex-A7 1.2Ghz
- RAM: 512MB
- eMMC: 4GB

### Interface:

- 10M/100M RJ45 Ports x 1
- Multi-Channel LoRaWAN Wireless
- WiFi 802.11 b/g/n
- USB 2.0 host connector x 1
- Mini-PCI E connector x 1
- RS485 Interface x 1
- RS232 Interface x 1

## Part Number: MS48-LR-XX-YY

### XX: Frequency Band

- XX: options: EU868, IN865, RU864, KR920, AS923, AU915, US915

### YY: 4G Cellular Option

- **EC25-E**: EMEA, Korea, Thailand, India
- **EC25-AFX**: America:Verizon, AT&T(FirstNet), U.S.Cellular; Canada:Telus
- **EC25-AUX**: Latin America, New Zealand, Taiwan
- **EC25-J**: Japan, DOCOMO, SoftBank, KDDI



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