# High Isolation RS485 to LoRaWAN Data Forward Unit

## DESCRIPTION

DFU (Data Forward Unit) RHF3M485 is a transparent transmission device from high isolation RS485 and RS232 to LoRaWAN transceiver.

The DFU RHF3M485 includes a high isolation RS485 transceiver which make it could be used in complex industrial environment. And a LoRaWAN transceiver is integrated which support global LoRaWAN protocol, like CN470, EU433, EU868, US915, AS923, AU915, KR920 and so on. Furthermore, with its automatic packet segment function, automatic packet assembly function and packet buffer function, customer could insert this device and deploy it in the already existed system easily and quickly. This will help customer to update the traditional wired system to the smart wireless LoRaWAN system.

The application of DFU RHF3M485 is targeted to industrial automatic equipment, industrial control, smart meter, smart home and all the update from traditional wired RS485 device to wireless LoRaWAN transceiver.

## APPLICATIONS

- Traditional RS485 application update
- AMR
- Smart home
- HVAC air condition control
- Intelligent manufacturing
- Industrial automatic device
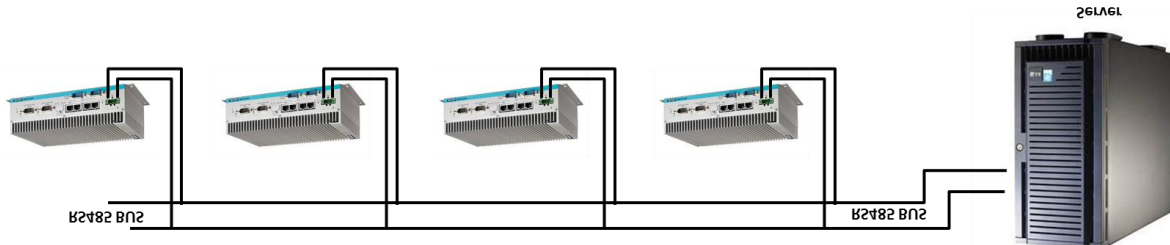- Wireless monitor and control
- Smart city
- Industry 4.0

## FEATURES

- Compliance to EIA RS485, EIA RS232 and global LoRaWAN
- Compliance to Modbus protocol
- Support RS485 and RS232 communciation (alternately)
- Automatic Global LoRaWAN, automatic data forward from RS485 to wireless LoRaWAN
- High isolation RS485 interface, isolation voltage 1.5kVRMS
- Wide input power supply from DC 6 ~48V and AC 6~42V
- Support EU433/CN470/EU868/US915/AU915/AS923/KR920 LoRaWAN protocol
- Support LoRaWAN Class A and Class C
- Support ISM sub-GHz, 433/470/868/915MHz
- Tx output power 20dBm@434/470MHz, 14dBm@868/915MHz
- Sensitivity -140dBm
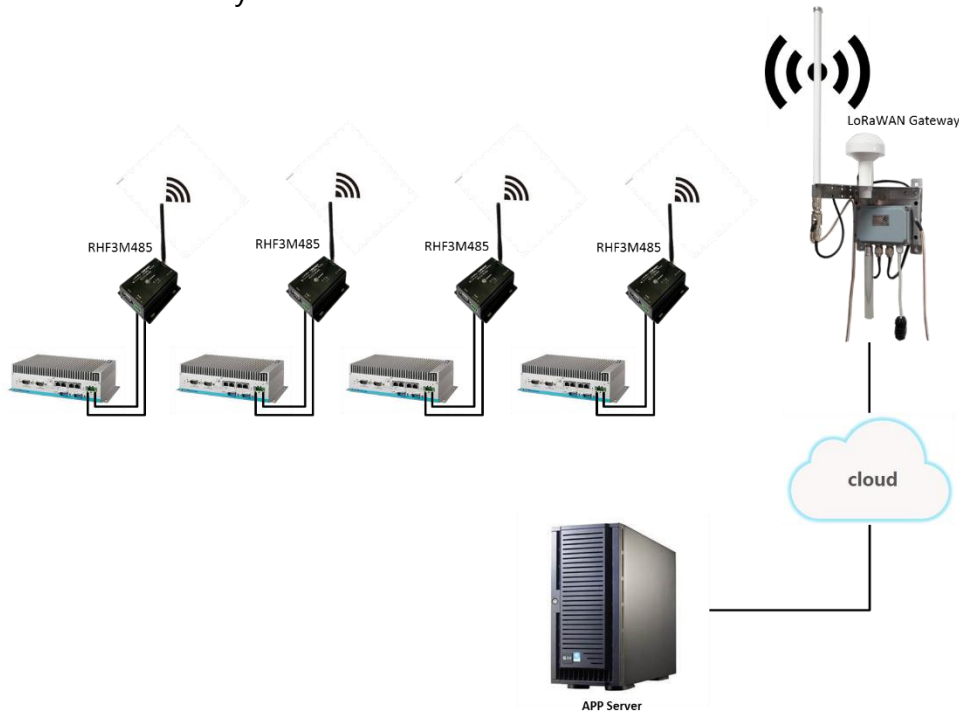- Range achieve to 5km
- Adapative data rate

- Parameter configurable via UART
- RS485/RS232 BR configurable from 600bps~38.4kbps
- Support baud rate – data bit: 7bit/8bit, parity bit: None/Odd/Even
- Internal 2KB packet buffer, automatic packet segment and packet assembly

## COMPARISON WITH TRADITIONAL RS485 SYSTEM

Traditional wired RS485 system:



Update wireless LoRaWAN system:



## ORDERING INFORMATION

| Part Number | Frequency Band | AT Modem |
|---|---|---|
| RHF3M485-434 | 434MHz @20dBm | Yes |
| RHF3M485-470 | 470MHz @20dBm | Yes |
| RHF3M485-868/915 | 868 / 915MHz @14dBm | Yes |

## CONTACT

E-mail salesww@risinghf.com for ordering information.