

## Parameters

Electrical Parameters:	
Working power	12~30VDC
Communication	RJ45,HDL Buspro,RF
Wireless transmit power	+10dbm
Wireless receive sensitivity	-90dbm
Indoor communication distance	<=30m (barrier free)
Wireless remote signal receiving	RF433M
RSSI receive signal intensity	>-80dbm
Factory frequency	Band, PSK (Suggestion: your setting should not be same as the factory setting.)
Working mode	Mesh mode, bridge mode
BUS Terminal	Wago 252,0.75-0.85mm diameter single core
Wireless central frequency	
(China) WPAN	780MHz-786MHz
(Europe) SRD	864MHz-870MHz
(North America) ISM	904MHz-928MHz
Environmental Conditions:	
Working Temperature	-5°C~45°C
Working relative Humidity	Up to 90%
Storage Temperature	-20°C~+60°C
Storage relative Humidity	Up to 93%
Approved:	
CE	
RoHS	
Product Information:	
Dimension	107×99.5×27 ( mm )
Weight	212g
Housing material	ABS
Installation	Desk or wall mounted
Protection Degree	IP20

## HDL Buspro Definition for Cable

HDL Buspro	HDL Buspro/KNX
DC24V	Red
COM	Black
DATA-	White
DATA+	Yellow

## Installation Steps

- Try to install to the barrier free position.
- Connect to HDL Buspro cable.
- Connect to RJ45
- Connect to DC24V power supply (if you have connected with HDL Buspro cable, no need to connect it)

## Overview



HDL MCIP-RF02.10 is a gateway based on IEEE802.15.4 standard MESH technology. Mesh Wireless Gateway has three communication interfaces: RJ45, HDL Buspro, RF, which can interconnect different media platforms (RS485, Ethernet, RF) of HDL intelligent devices .

At the same time, this device can also be configured as transparent transmission (bridge) mode. RS485 and Ethernet data in multiple gateways can be transmitted from RF, which effectively extends the communication distance. In the inconvenient of layout application environment, subnets can interconnect with wireless (RF).

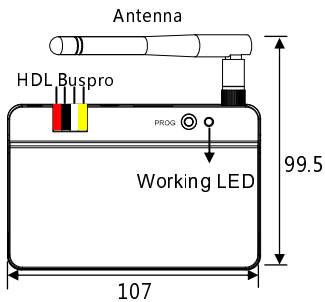
## Functions

- Can be configured as Mesh mode.
- Can be configured as Bridge (transparent transmission) mode.
- The wireless data is encryption transmission.

## Important Notes

- Check the HDL Buspro connection, avoid any mistakes
- In MESH mode, different RF channels must be different for each gateway, each gateway manages a wireless network with same SubNet ID. In Bridge mode, RF channel must be the same as each gateway.
- In Mesh mode, subnet ID of Gateway in RF port must be the same as RF devices which is managed by the gateway, and port ID is unique in RS485 port
- Two or more devices Ethernet (RJ45) can not be connected with RS485 port , otherwise loop connection will block communication
- Must select free RF frequency for different countries, user can set new wireless transmission password before installation.
- Reliable transmission distance is 30m, obstacles will reduce the transmission distance, the distance will decrease 20m if the wall stops it. So it is better to install Mesh wireless devices in empty place and forbid to install near large area of metal objects. To ensure good communication quality, it is suggested not to install this device in electric box. If you have to, please add an external antenna to the device.
- Support 433M wireless connection, can work in conjunction with HDL remote controller.

## Layout and Wiring



**PROG:** programming button

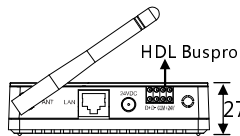
Pressing it for 3 times continuously. Red LED gateway will be switched to set channel for Parameter settings, user can program wireless devices by HDL Buspro Setup Tool.

Long press for 3 seconds to change ID by HDL Buspro Setup Tool,

Long press for 10 seconds to default factory IP(192.168.10.250)

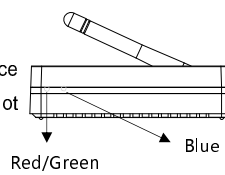
**Antenna:** Receives and transmits wireless signal.

**Working LED:** Green LED flashes during normal operation and last for seconds each time.



**24VDC:** Power supply, if the device connects to the HDL Buspro, it need not connect to DC power

**RJ45:** Ethernet port RJ45



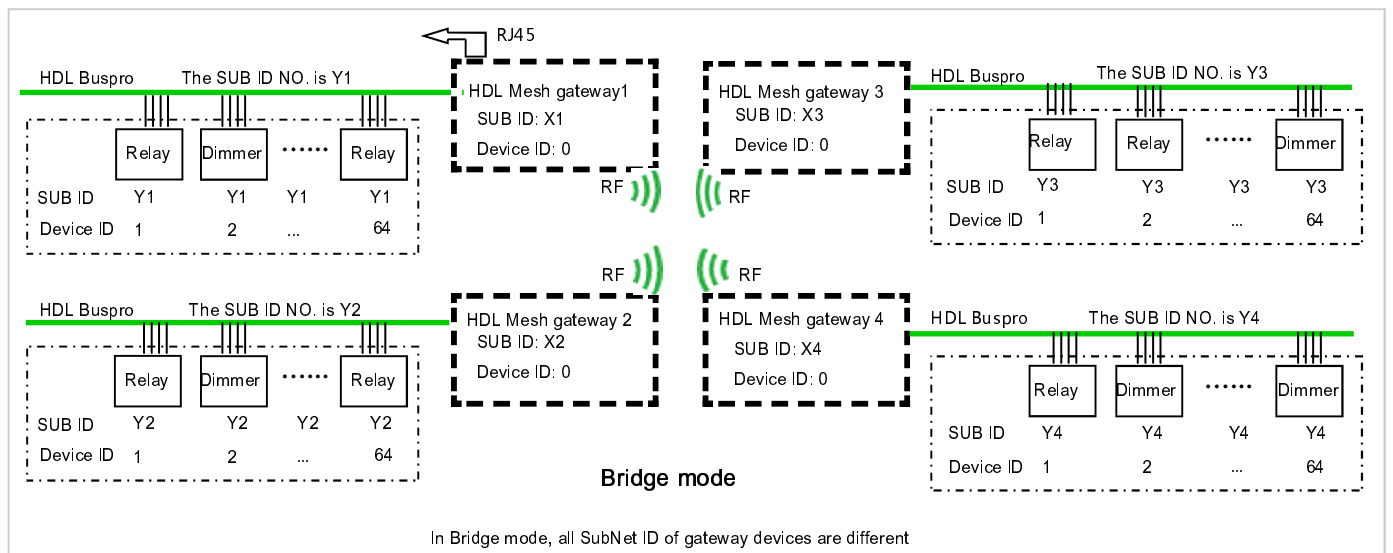
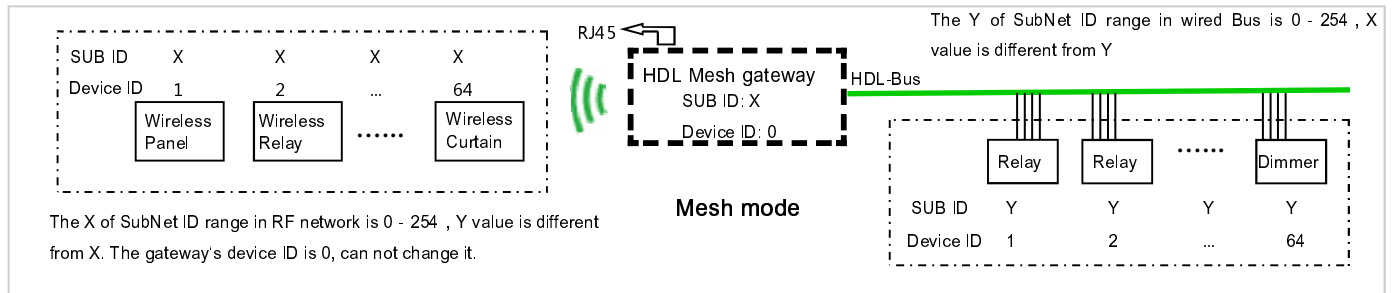
**LED Indicator:**

Red LED flashes quickly when it is programming.

Green LED flashes when the network jams.

Blue LED flashes when it receives or transmits wireless signal.

When the red and blue LED are on, the device will be reset to factory setting.



## Safety Precautions

- Do not make wrong connection on Bus interface, it will damage the Bus interface of this module.
- Never let liquids get into the module, it will damage this device.
- Do not get AC240V voltage into Bus wire , it will damage all devices in the system.
- Ensure good ventilation.

## Packing List

- HDL-MCIP-RF02.10 \*1 / Datasheet \*1

