

# **Lora concentrator product manual**

# Directory

1. Product Overview.....	1
1.1 Basic parameters.....	1
1.2 Hardware description.....	1
2. Concentrator operation.....	1
2.1 Add / remove devices.....	1
3. Wan communication.....	2
3.1 MQTTBrief introduction to the agreement.....	2
3.1.1 Topic list.....	2
4. Functions and settings.....	2
4.1 Indicator Status.....	2
4.2 Antenna.....	3
4.3 LANmouth.....	3
5. Usage.....	3

# 1. Product Overview

## 1.1 Basic parameters

project		describe
Network port	Wired LAN port	LAN*1
WiFi	WiFi WLAN	Supports 802.11b/g/n
	antenna	2.4G rod antenna (frequency: 2412-2462MHZ)
indicator light	Working status indication	Power supply, data transmission, signal strength, server connection
power supply	power waste	DC5-24v (12v, 1A)
Key	Set	One click Reset

## 1.2 Hardware description

name	remarks
DC power supply	Power supply range 5-24 V
Can communication	Reserved channel
SET	Reset button
LAN port	Wired / wireless network interface
indicator light	4Road indicator
Wifi antenna	2.4G rod antenna

# 2. Concentrator operation

## 2.1 Add / remove devices

Add device establishes Bluetooth connection with the device through the mobile phone app, obtains the node ID of the device, and at the same time informs the concentrator ID bound to the device. At the same time, it sends the information of the terminal device to be added to the corresponding concentrator. The concentrator adds the device to the database and immediately calls the added device. The server device was added successfully.

## 3. Wan communication

### 3.1 MQTTBrief introduction to the agreement

When a topic is subscribed by a subscriber, all the messages published on the topic will be received by the subscriber. This is the basic message model of mqtt, the "subscribe publish" model.

Lora concentrator and WAN realize data exchange through mqtt protocol. When the app or application server pushes messages to the topics subscribed to by the concentrator, the concentrator can receive the messages sent by the app or application server. When the concentrator pushes messages to the app or application server, the app or application server can receive the messages sent by the concentrator.

#### 3.1.1 Topic list

Subject name	purpose	Subscription role	Push role
client/{client_id}	App or PC client sends control or query commands to the device_ID is the concentrator ID	Lora concentrator	App / PC client
app/{ user_id }	concentratorReturn data to app or PC client.	App / PC client	Lora concentrator
dev2servicelora/report	The concentrator sends sensor data to the server	application server	Lora concentrator
dev2servicelora	Concentrator sends online and offline data to the service		
	The server sends add device data to the concentrator		

## 4. Functions and settings

### 4.1 Indicator Status

There are 4 indicator lights, and the specific instructions are as follows:

name	explain
Sign	According to the flashing frequency of the indicator light, the signal strength is judged
Link	The connection server is always on
Work	Data interaction
PWR	Always on when power on

## 4.2 Antenna

WiFi module uses 2.4G rod antenna to transmit and receive transfer information through antenna.

## 4.3 LANmouth

Local area network connection, full duplex mode, 100m.

# 5. Usage

After the Lora concentrator is powered on, it will automatically self check, connect to the server, select the WiFi to be connected, click the distribution network, configure the network parameters, and then the Lora concentrator will handle the command sent by the server to the Lora concentrator.

### FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and

This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.