

Netvox Technology Co., Ltd

Netvox M2 IoT Total Solution

IoT Environment Control & Monitoring System



<http://www.netvox.com.tw/>

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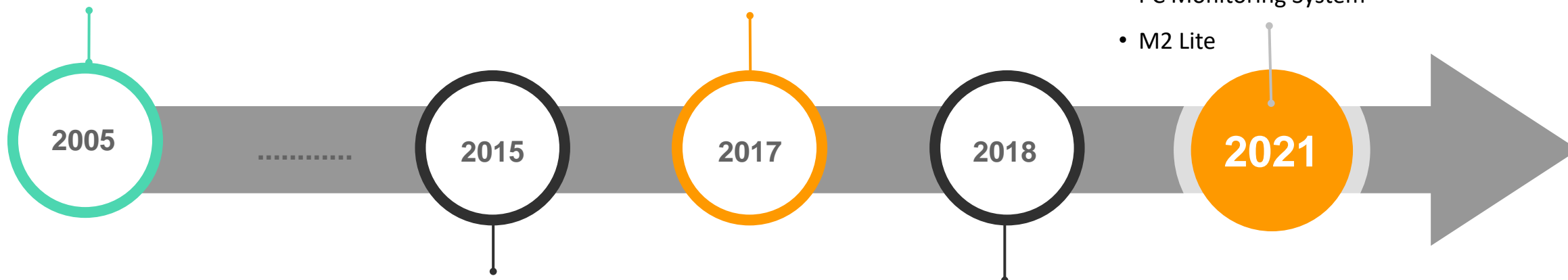
04 What Can Netvox do for You

• Netvox IOT Development Milestones

Netvox has invested in IOT products and applications since 2005.
Netvox is currently leading the world in the development and manufacturing.

Complete M2 IoT System

- ZigBee & LoRa & WiFi
- Multi-gateway Monitoring
- APP Graphical Condition
- Linkage Setting
- 450 Devices
- PC Monitoring System
- M2 Lite



Complete V1 IoT System

- ZigBee 250 Devices
- Home Automation
- Intelligent Environment Monitoring System (IES)

ZigBee & LoRa
IoT System
450 Devices
Launched the M2 IoT system

1.1 • M2 IoT System Features

In 2018, Netvox launched the M2 IoT system, an intelligent Internet environment monitoring system for Internet of Things which features

01

Multi-gateway Management

02

Multi-network compatibility
(ZigBee & LoRa&WiFi)

03

Control More than 450 Netvox
Multi-function Devices

04

Flexiable to Support 3rd party Cloud

05

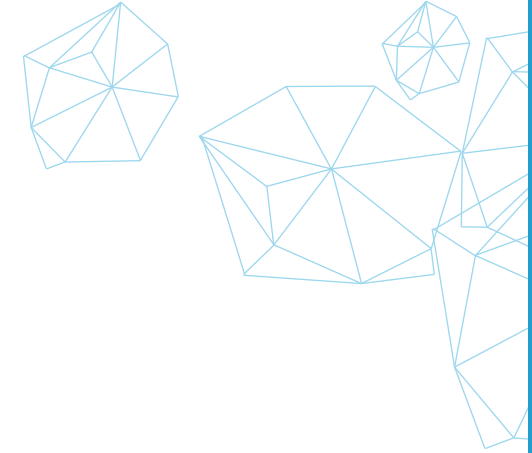
Friendly APP Linkage Setting

06

Friendly APP/PC interface

07

Stability & Compatibility
Communication



● M2 IoT System Architecture and Feature

6. Friendly APP/PC interface

1. Multi-gateway Management

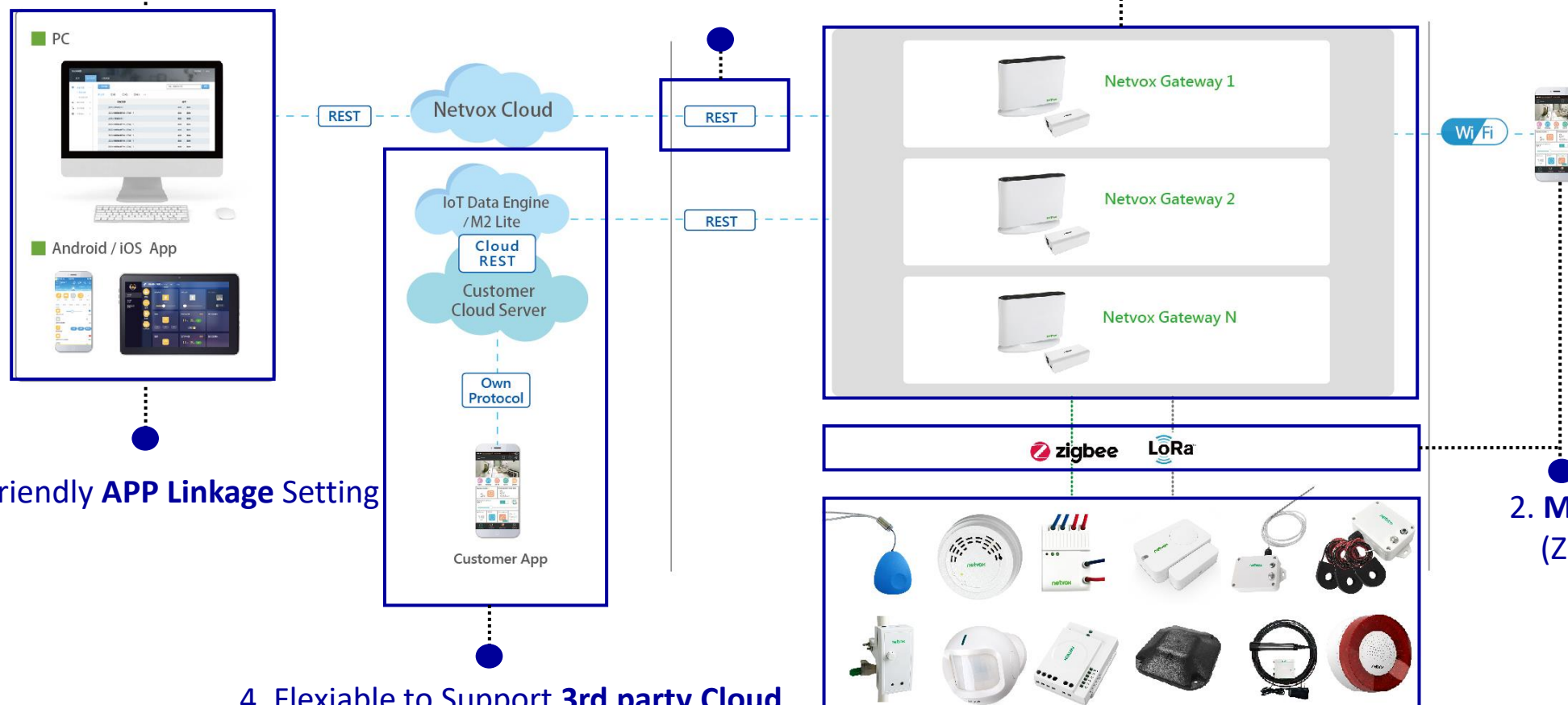
7. Stability & Compatibility Communication

5. Friendly APP Linkage Setting

2. Multi-network Compatibility (ZigBee & LoRa & Wi-fi)

4. Flexiable to Support 3rd party Cloud

3. Control More than 450 Netvox Multi-function Devices



2.1 • Multi-gateway Management

(1) The same account can control multiple gateways.

Users can switch between different regions or gateways under the same account.

(2) The alarm message will not be missed.

The user will not miss any important alarm message and notification even if switching the region.

Restaurant 1



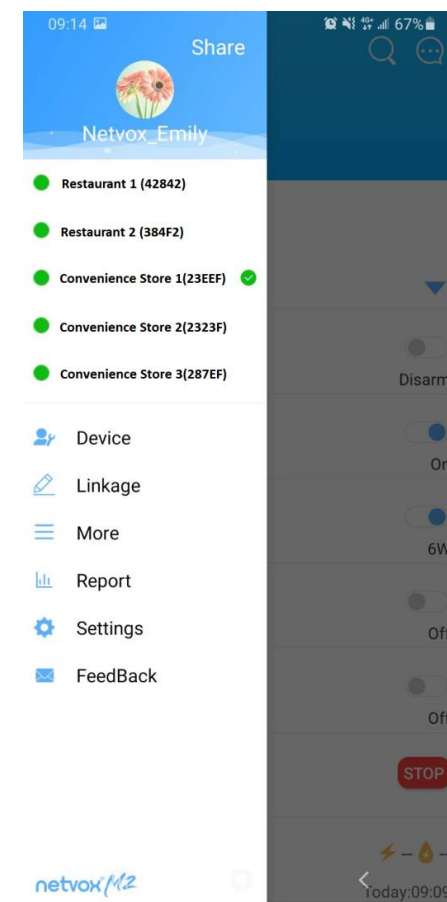
Convenience Store 1



Restaurant 2



Convenience Store 2

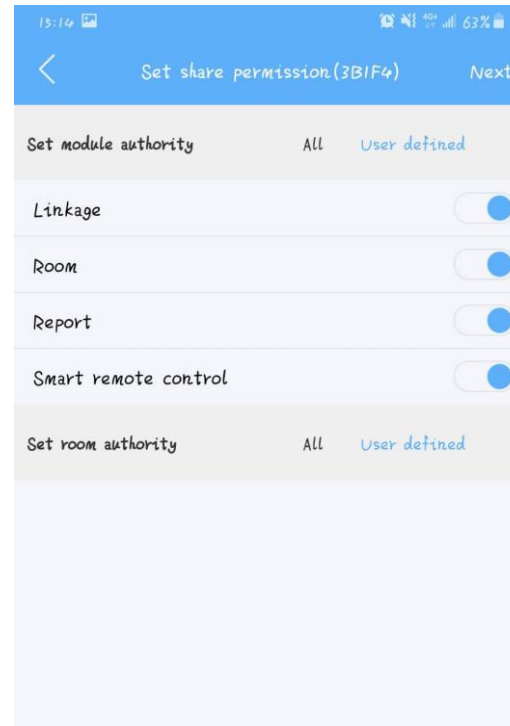
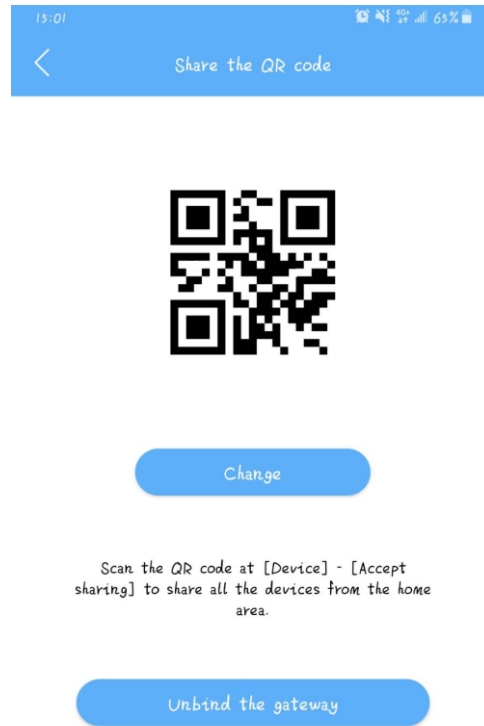


(3) Account sharing

Smart devices are shared by the whole group member.

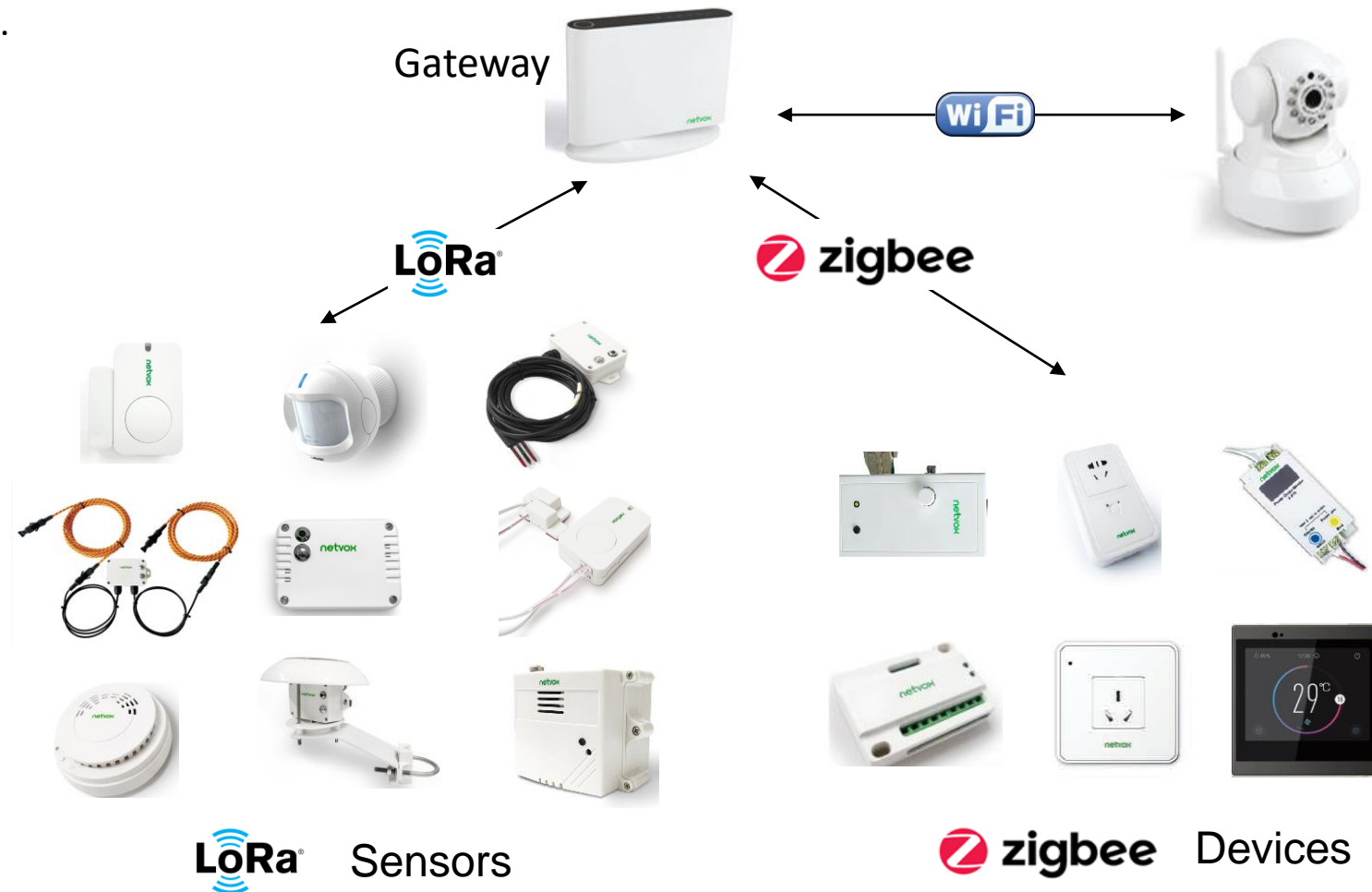
(4) Permission control

Managers can set the rights of controlling different functions for different users.



2.2 • Multi-network Compatibility (ZigBee & LoRa & Wi-Fi)

NETVOX IoT gateway (R206A) supports the devices of LoRa, ZigBee, and Wi-Fi, including various sensors such as switch panels, security equipment, lamps, curtains, air quality monitoring, temperature, humidity, peephole door cameras, NVR, and IP cameras.



• Control More than 450 Netvox Multi-function Devices

The devices include various types.

- Gas/ Smoke detector
- Water leakage detector
- Door and window reed switch detector
- Infrared detector
- Emergency button
- Doorbell button
- Dry contact
- RS485/ RS232 serial port
- Siren
- Illumination detector
- PIR detector

- Switch
- Power plug
- Curtain control
- Switch panel
- Door lock
- IP Camera
- Valve keeper
- AC current detector
- Vibration detector
- Tilt detector
- Ultrasonic detector



The products can be used in various aspects, including **home, agriculture, industry, office environment**, etc.

NETVOX provides various devices for the users to apply in different fields.



Security System

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ZB01D/J Occupancy Sensor.....	11
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Gateway

R206	Wireless IoT Controller
R206A	Wireless Dual-Mode IoT Controller
R206C	Wireless IoT Controller with External Antenna
R207	Wireless IoT Controller
R207C	Wireless IoT Controller with External Antenna

Security

R311A	Wireless Door/Window Sensor
R311D	Wireless Asset Sensor
R312	Wireless Door Bell Button
R312A	Wireless Emergency Button
R718F	Wireless Reed Switch Open/Close Detection Sensor
R718F2	Wireless 2-Gang Reed Switch Open/Close Detection Sensor
R311G	Wireless Light Sensor
R311W	Wireless Water Leak Detector
R313A	Wireless Door/Window Sensor
R313MA	Wireless Emergency Button
RB11E	Wireless Occupancy & Temperature & Light Sensor
RA02A	Wireless Smoke Detector
RA02C	Wireless CO Detector
RB02I	Wireless Emergency Push Button
R602A	Wireless Siren
R311DA	Wireless Vibration Sensor, Rolling Ball Type
R311DB	Wireless Vibration Sensor, Spring Type
R718DA	Wireless Vibration Sensor, Rolling Ball Type
R718DA2	Wireless 2-Gang Vibration Sensor Rolling Ball Type
R718DB	Wireless Vibration Sensor, Spring Type
R718DB2	Wireless 2-Gang Vibration Sensor, Spring Type
R718T	Wireless Push Button Interface
R718T2	Wireless 2-Input Push Button Interface

Environmental Monitoring

R311B	Wireless Light Sensor
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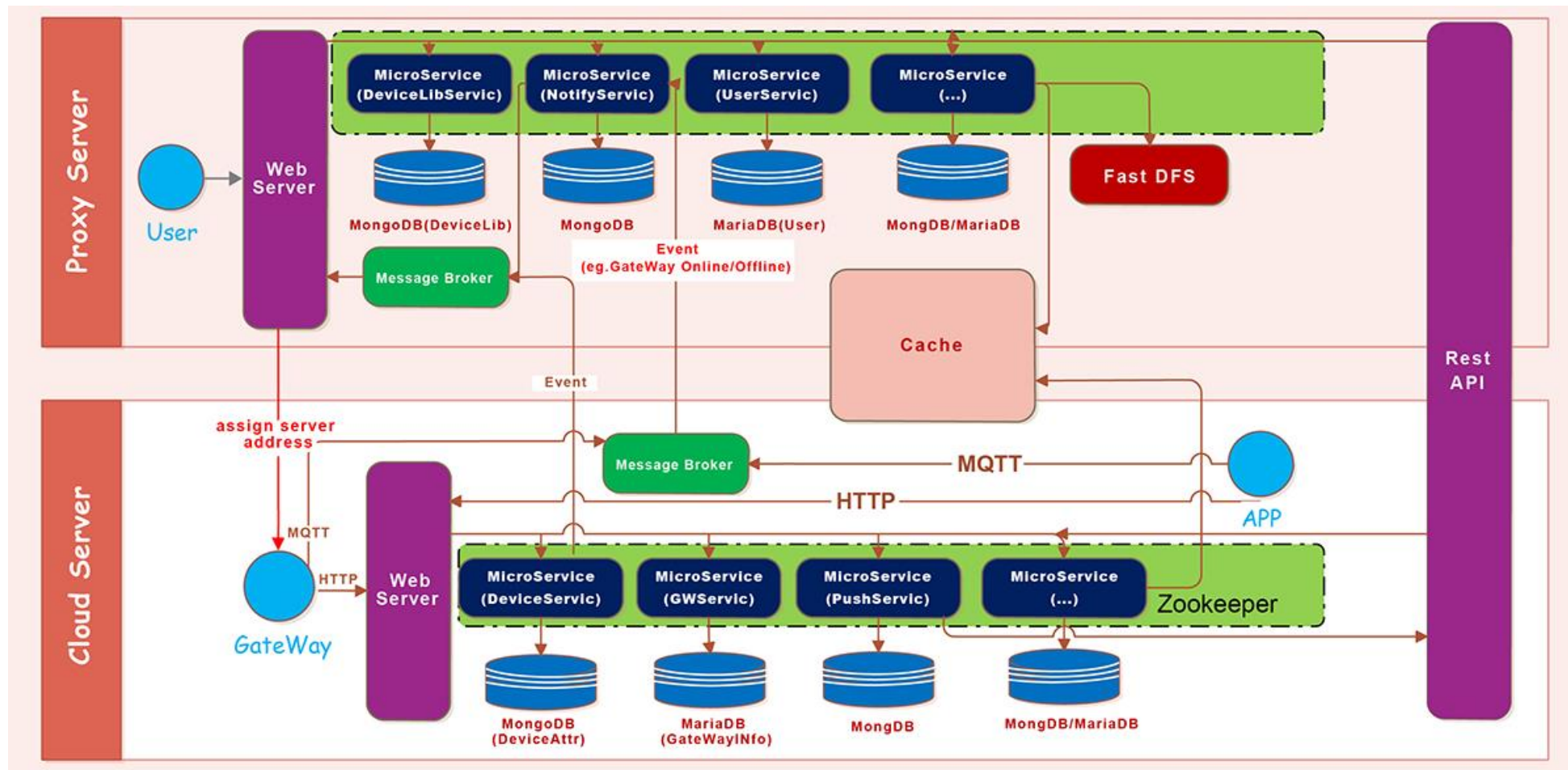
R311CA	Wireless Dry Contact Sensor
R311CB	Wireless Window Sensor with Glass Break Detector
R311CC	Wireless 2-Gang Door/Window Sensor
R311K	Wireless Tilt Sensor
R311LA	Wireless Infrared Proximity Sensor
R311WA	Wireless Seat Occupancy Sensor
R313B	Wireless Light Sensor
R313CA	Wireless Dry Contact Sensor
R313LA	Wireless Infrared Proximity Sensor
R313G	Wireless Light Sensor
R313K	Wireless Tilt Sensor
R313W	Wireless Water Leak Detector
R313WA	Wireless Seat Occupancy Sensor
R718PQ	Wireless Short-Range Occupancy Sensor
R718PQA	Wireless Toilet Occupancy Sensor
R718VA	Wireless Flush Toilet /Washing Liquid Bottle/Toilet Paper
R718VB	Wireless Flush Toilet /Washing Liquid Bottle/Toilet Paper/Non-metallic pipe
R718X	Wireless Ultrasonic Distance Sensor
R719A	Wireless Surface-Mounted Parking Sensor
R711	Wireless Temperature and Humidity Sensor
R711A	Wireless Temperature Sensor
R712	Wireless Outdoor Temperature and Humidity Sensor
R718A	Wireless Temperature and Humidity Sensor For Low Temperature Environment
R718AB	Wireless Temperature and Humidity Sensor
R718AD	Wireless Temperature Sensor
R718B	Wireless Resistance Temperature Detector
R718B2	Wireless 2-Gang Resistance Temperature Detector
R718CK	Wireless Thermocouple Sensor - Type K
R718CK2	Wireless 2-Gang Thermocouple Sensor - Type K
R718CN	Wireless Thermocouple Sensor - Type N
R718CN2	Wireless 2-Gang Thermocouple Sensor - Type N

2.4 • Flexiable to Support 3rd party Cloud

When IoT Data Engine is installed in 3rd party cloud, users can use it flexibly and diversely.

The data is uploaded to the user's cloud via the cloud REST API.

IoT Data Engine is installed in the host provide by the user; therefore, it can ensure data security.



2.5 • Friendly APP Linkage Setting

(1) Graphical editor

The user can directly edit the operation interface and set the linkage function easily.

(2) The linkage function supports single condition or multiple conditions

The linkage function can set the device operation via “If ” and “Then”.
For example, users can control many devices at the same time.

(3) Multi function

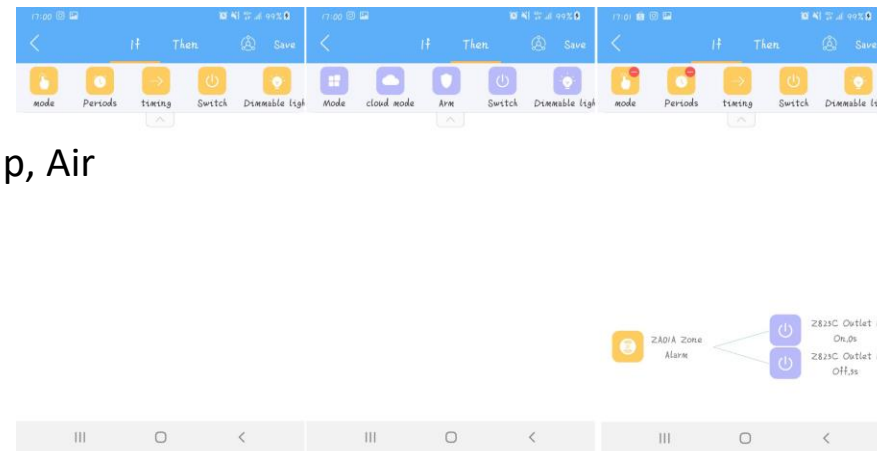
It provides multi functions.

【 If 】

Mode, Periods, Timing, Switch, Dimmable Light, Arm, Light, PIR Sensor, Binding Switch, Curtain, Humidity, Temperature, Detect, Door Lock, Energy, Other Sensor, Lora Device, And, Or

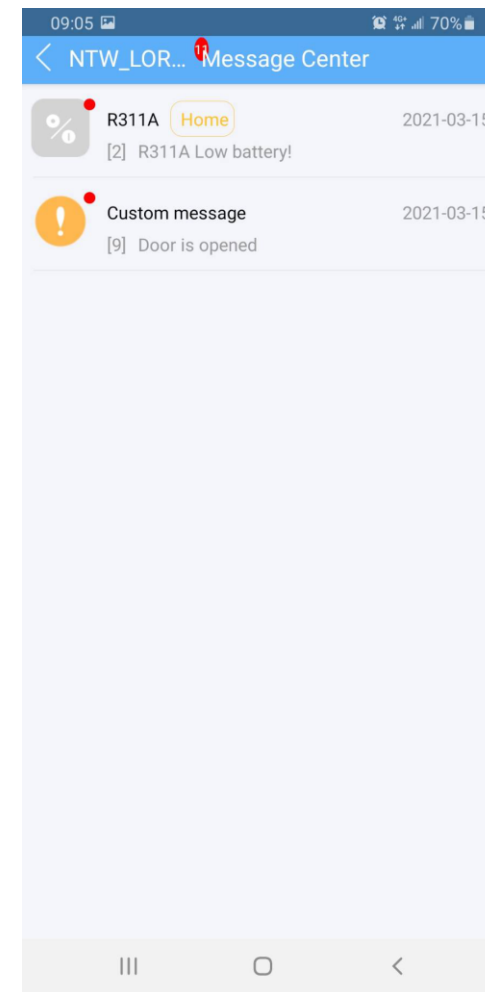
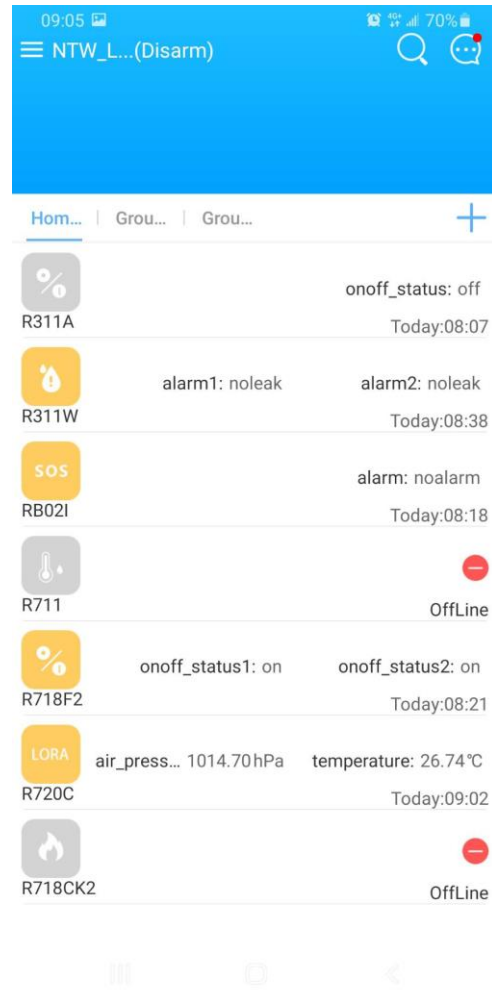
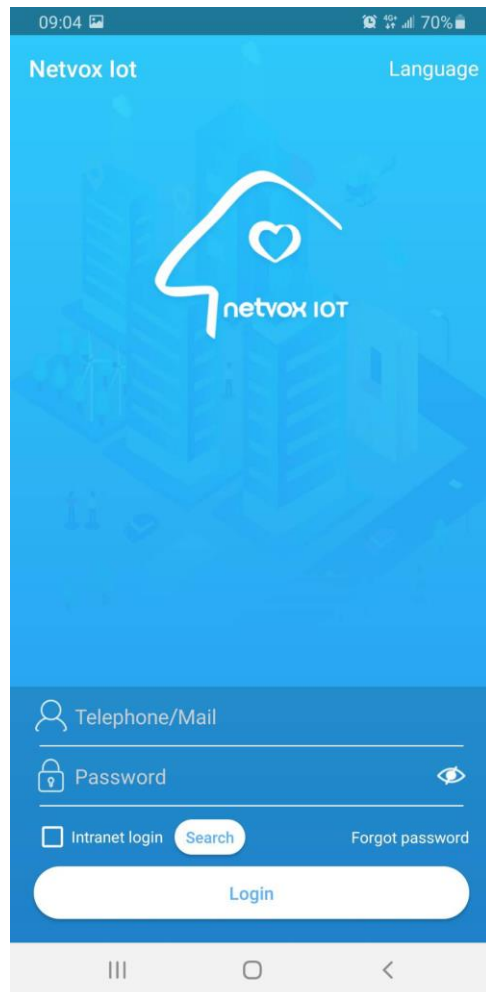
【 Then 】

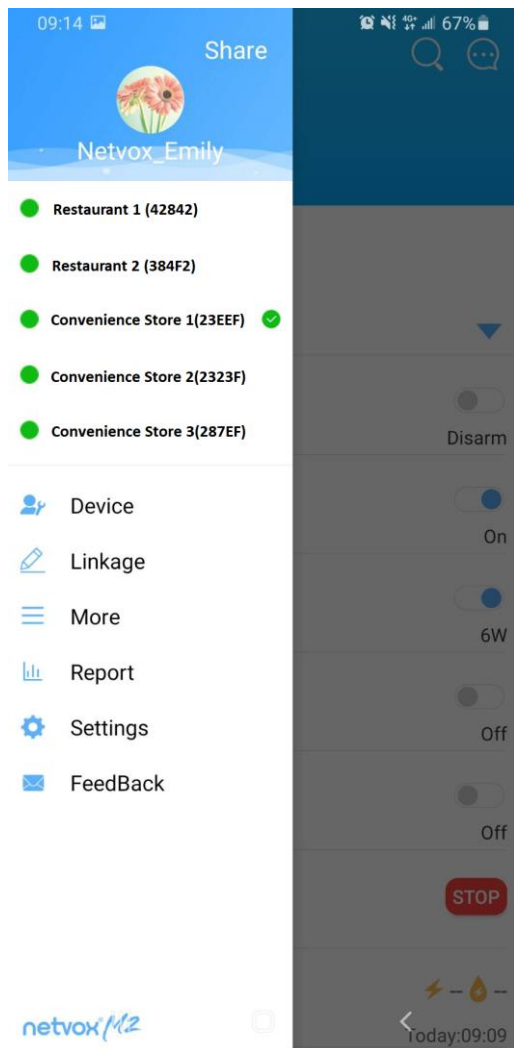
Mode, Cloud Mode, Arm, Switch, Dimmable Light, Acousto optic, Send IR, Group, Air Purifier, Thermostat, Curtain, Music, Serial Port, News, Video capture



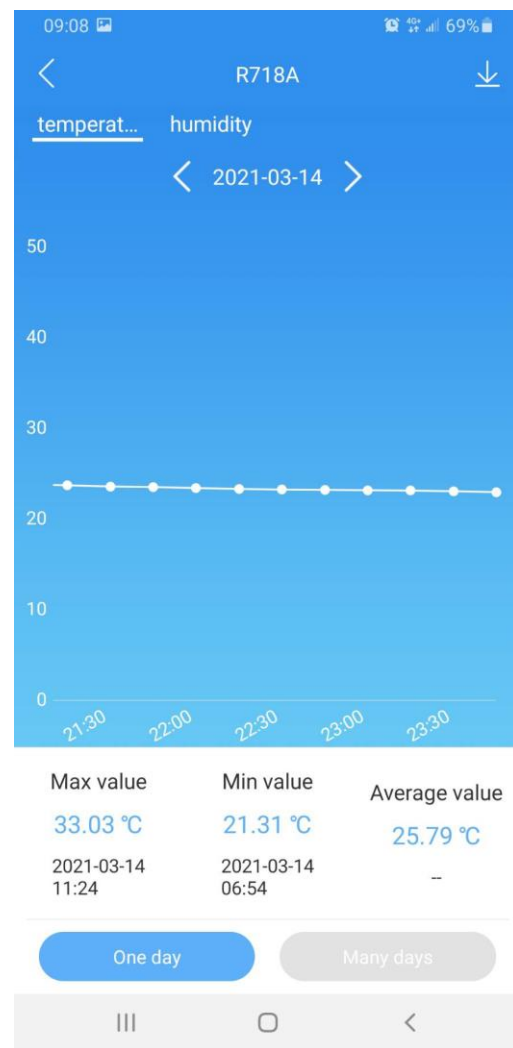
2.6 • Friendly APP/PC Interface

Some complex functions are simplified to meet the needs of the user to view the status and control.

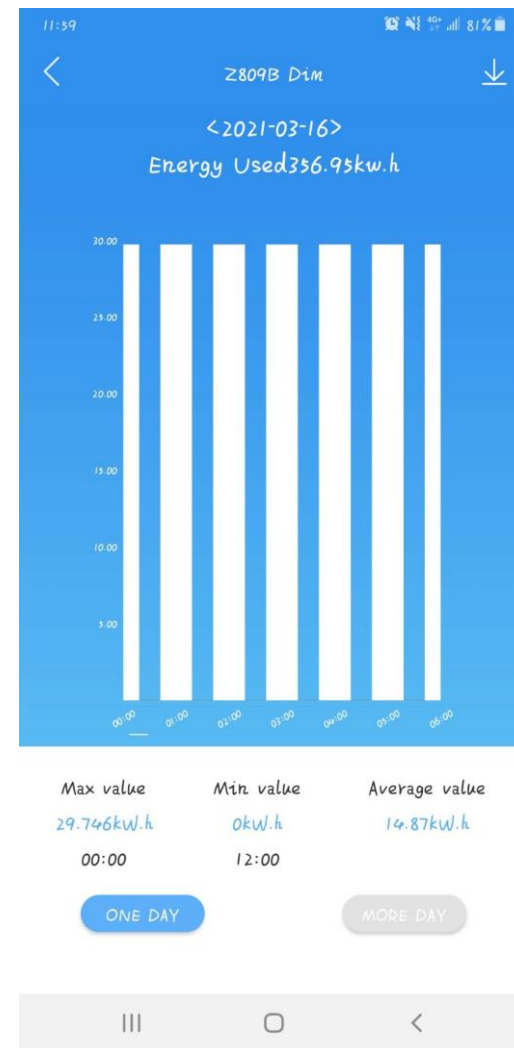




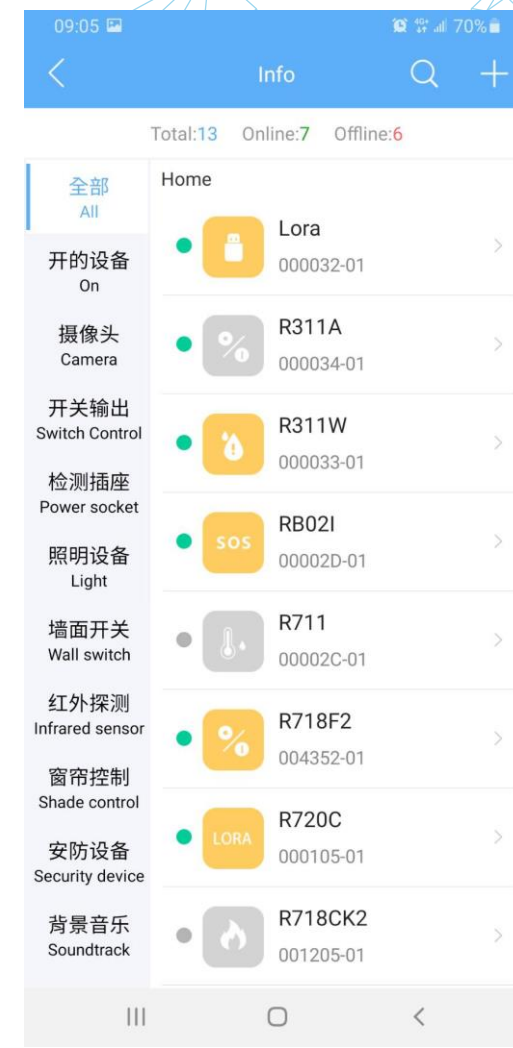
The same account can switch multiple gateways.



It provides exportable environment reports includes different values.



Energy data provides histogram.



Device list can be classified and easily searched.

[illegible]

2.7 • Stability & Compatibility Communication

(1) LoRa protocol, network stability

LoRa protocol is low power consumption, high reliability, and high security.

(2) Data optimization

To reducing server pressure and risk, optimize the transmitted data content, and reduce data congestion, packet loss, etc.

(3) Save data locally

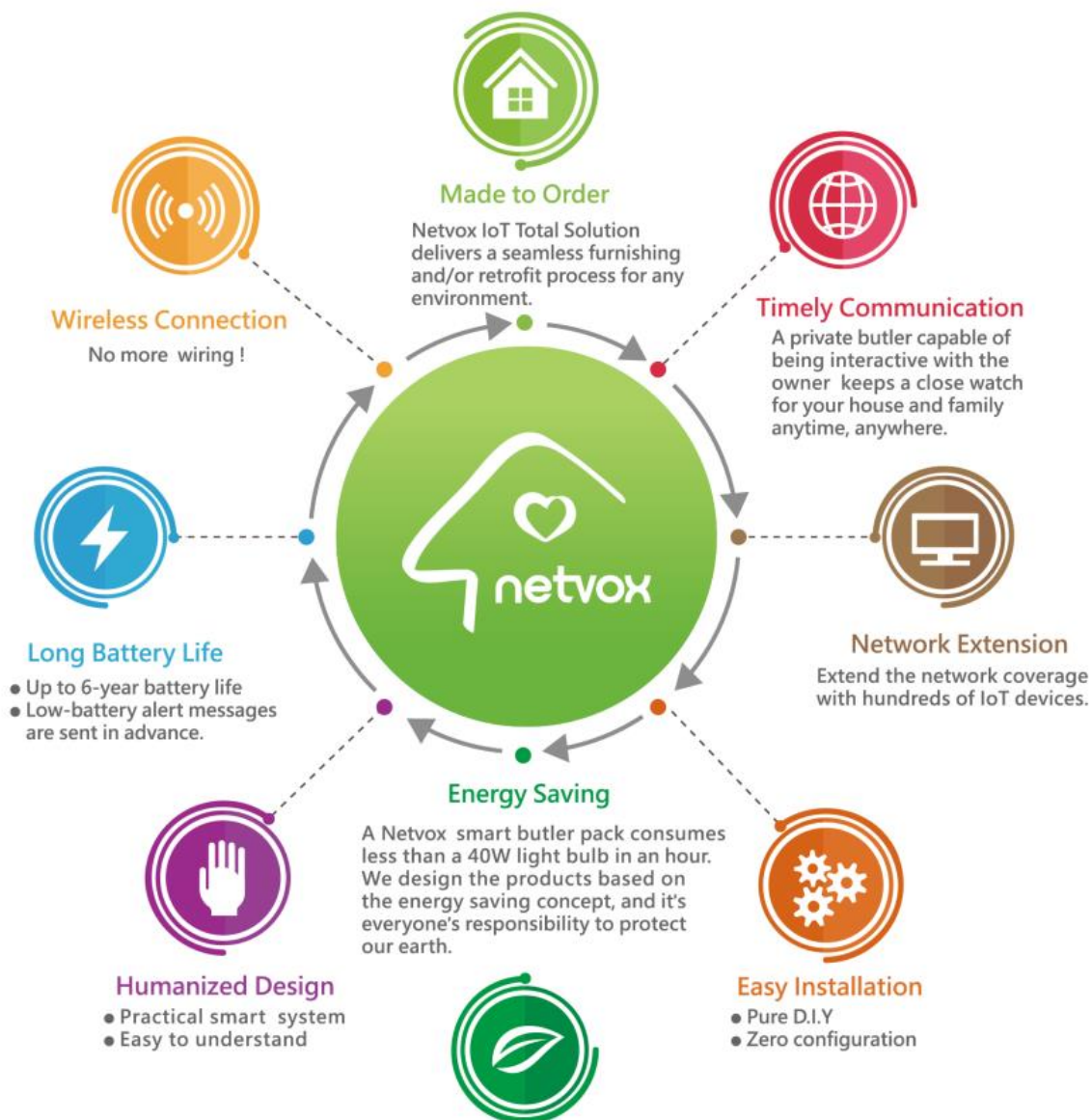
The operation can be processed locally and do not be uploaded to the cloud. So, it can reduce the sever loading.

(4) Automatically/ Manually Backup

The gateway has a cloud backup to ensure that the data safety. It can restore the data periodically to prevent from losing the data. Otherwise, user can manually restore the data according to the personal needs.

(5) Retransmission mechanism

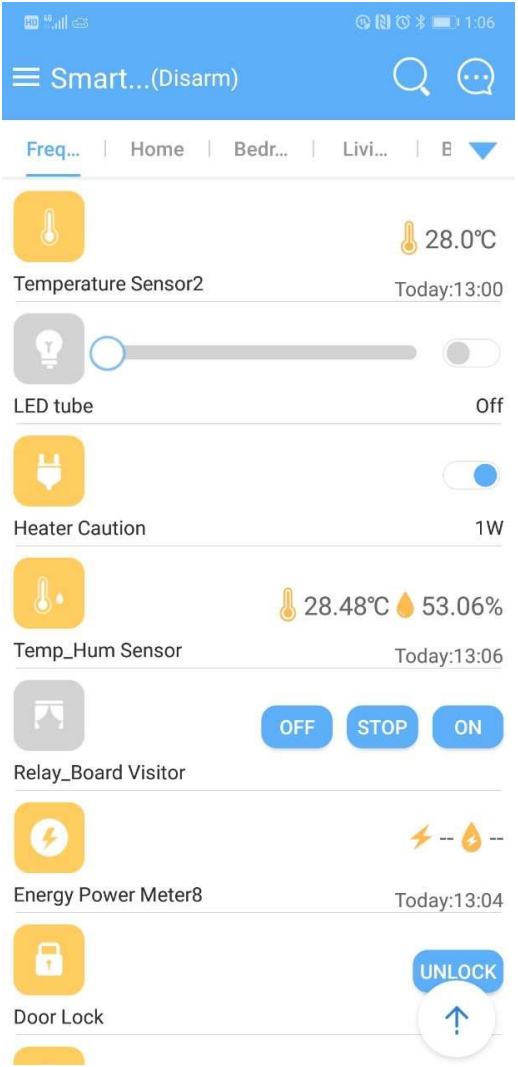
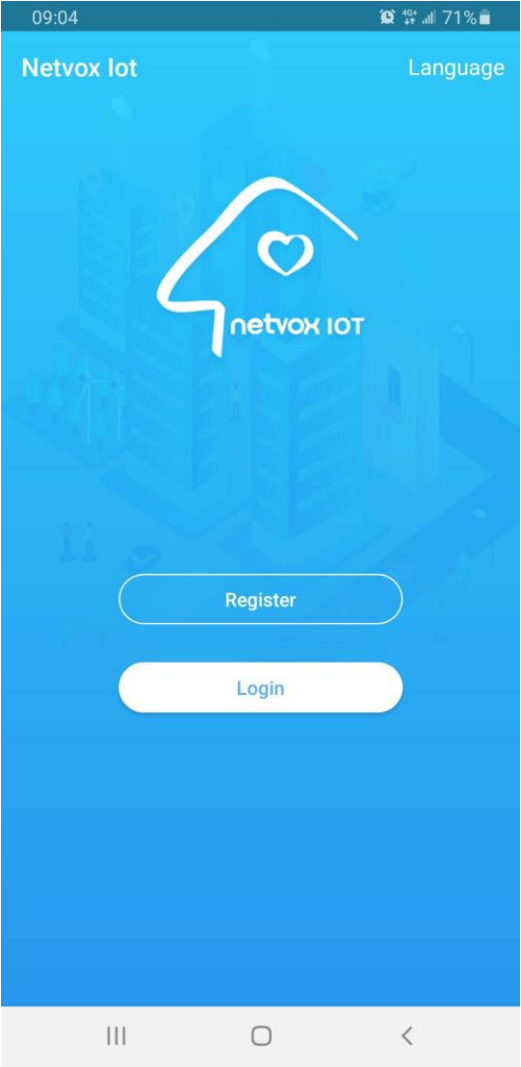
When the packet lost, the device will enable the retransmission mechanism to ensure the operation must be normally.



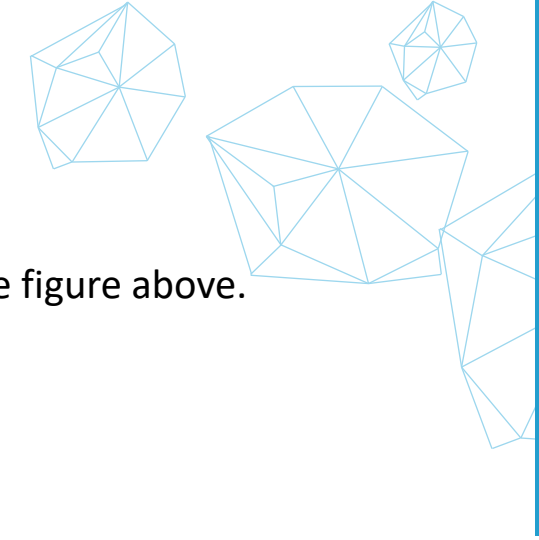
3 • M2 APP Demonstration



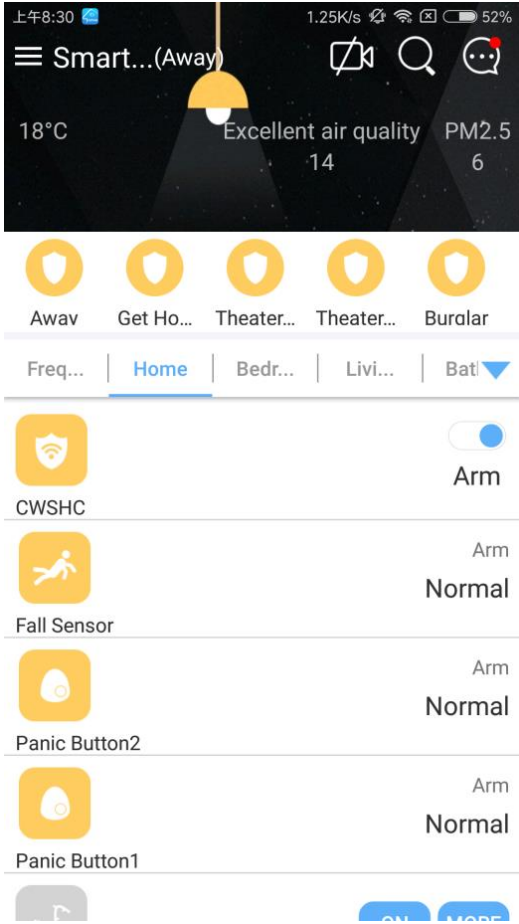
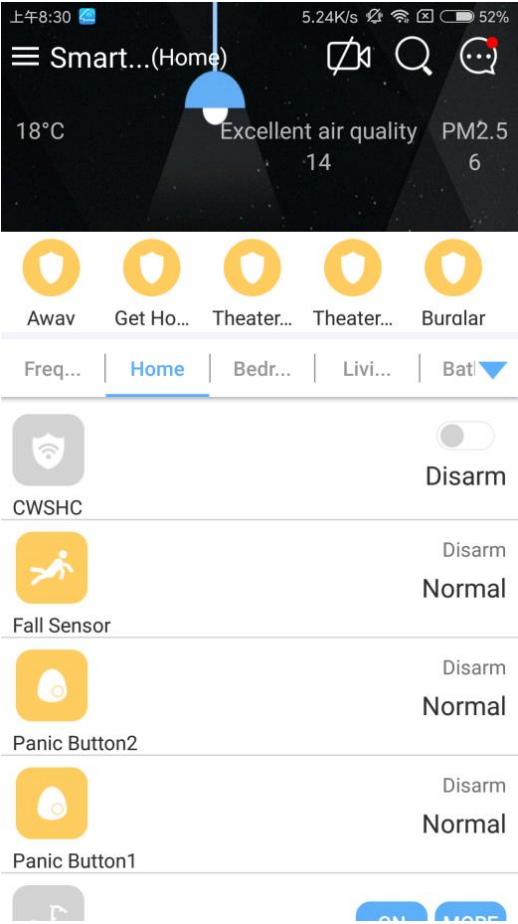
Netvox IoT M2



3.1 • M2 APP Demonstration_Home Page



When the user enters the homepage, the default interface will show the added device such as the figure above.

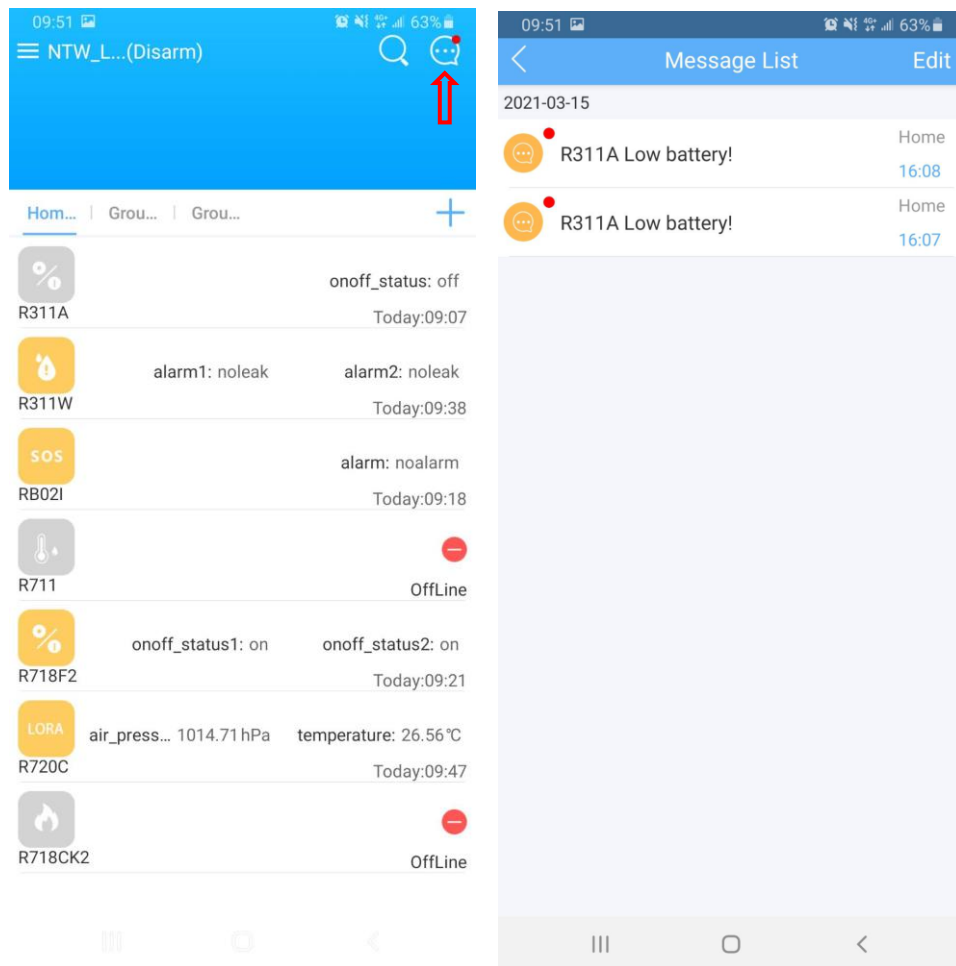


3.2

• M2 APP Demonstration_ Message & Video Monitor

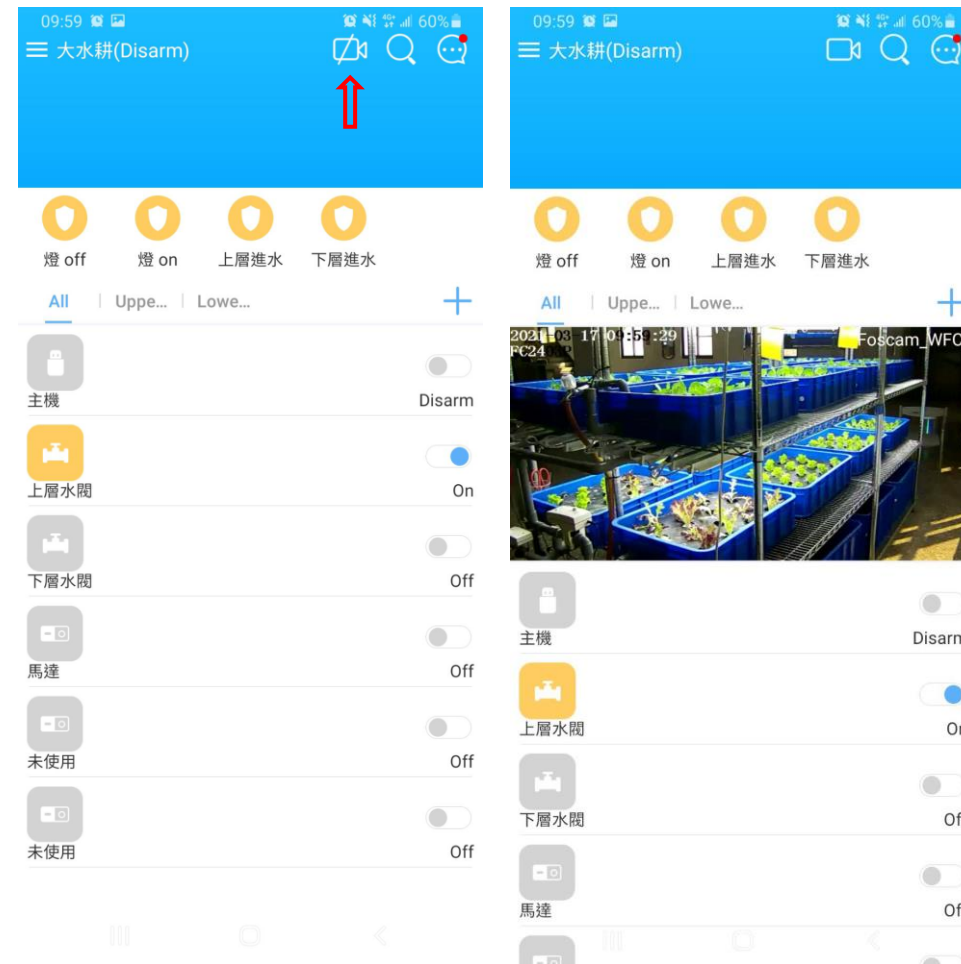
Click the message icon 

Users can check the messages



Click the video icon 

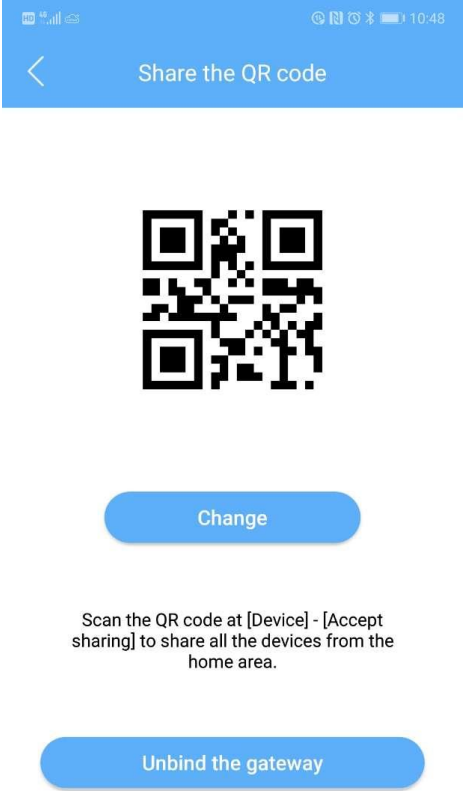
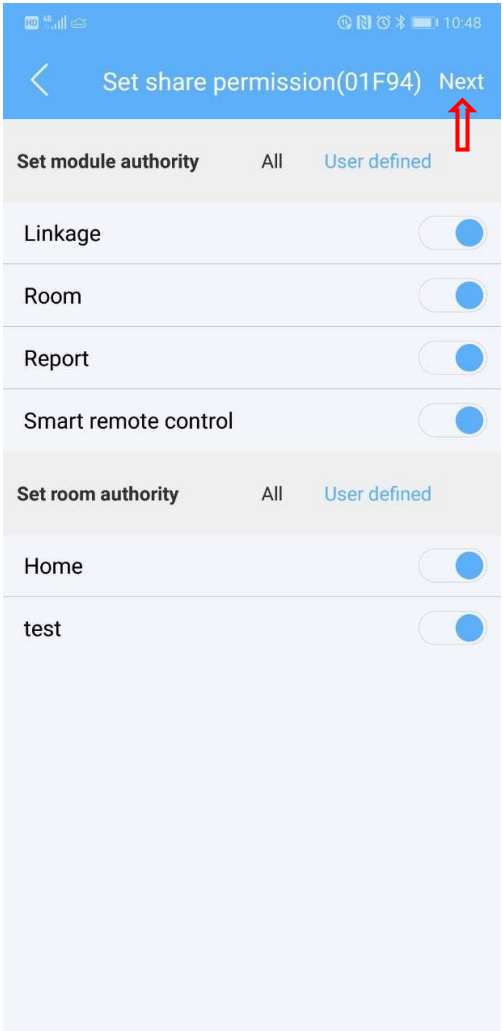
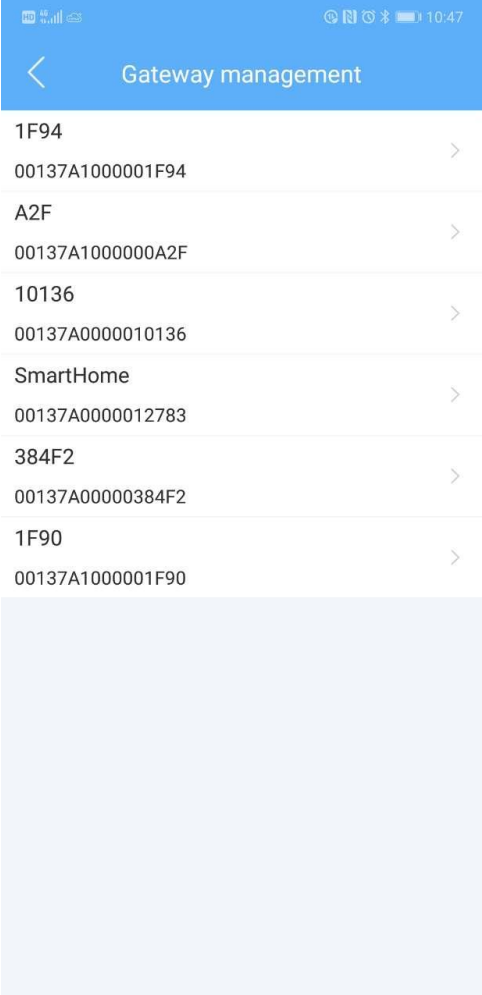
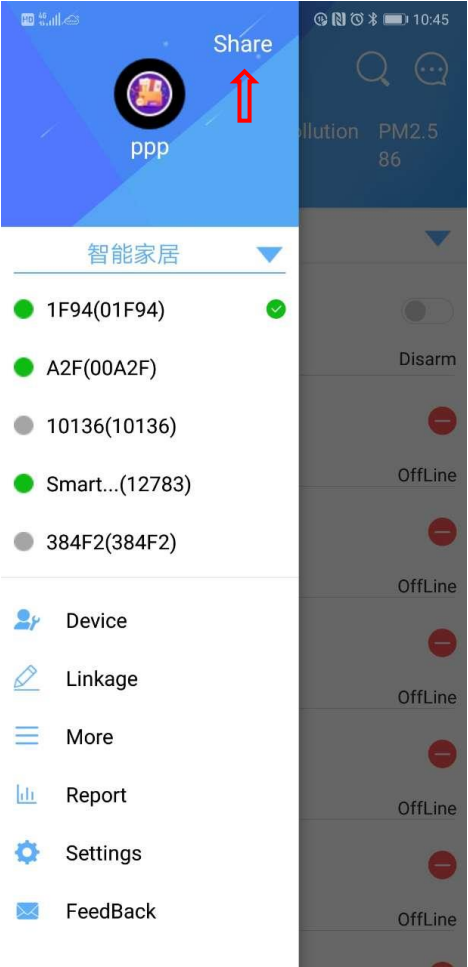
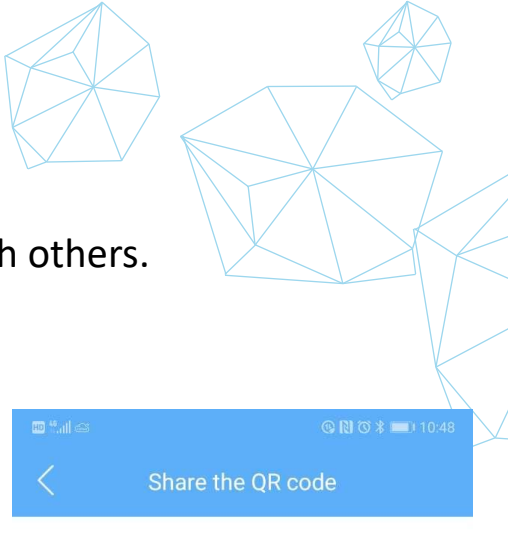
It will appear the real-time video monitoring window on the home page.



3.3

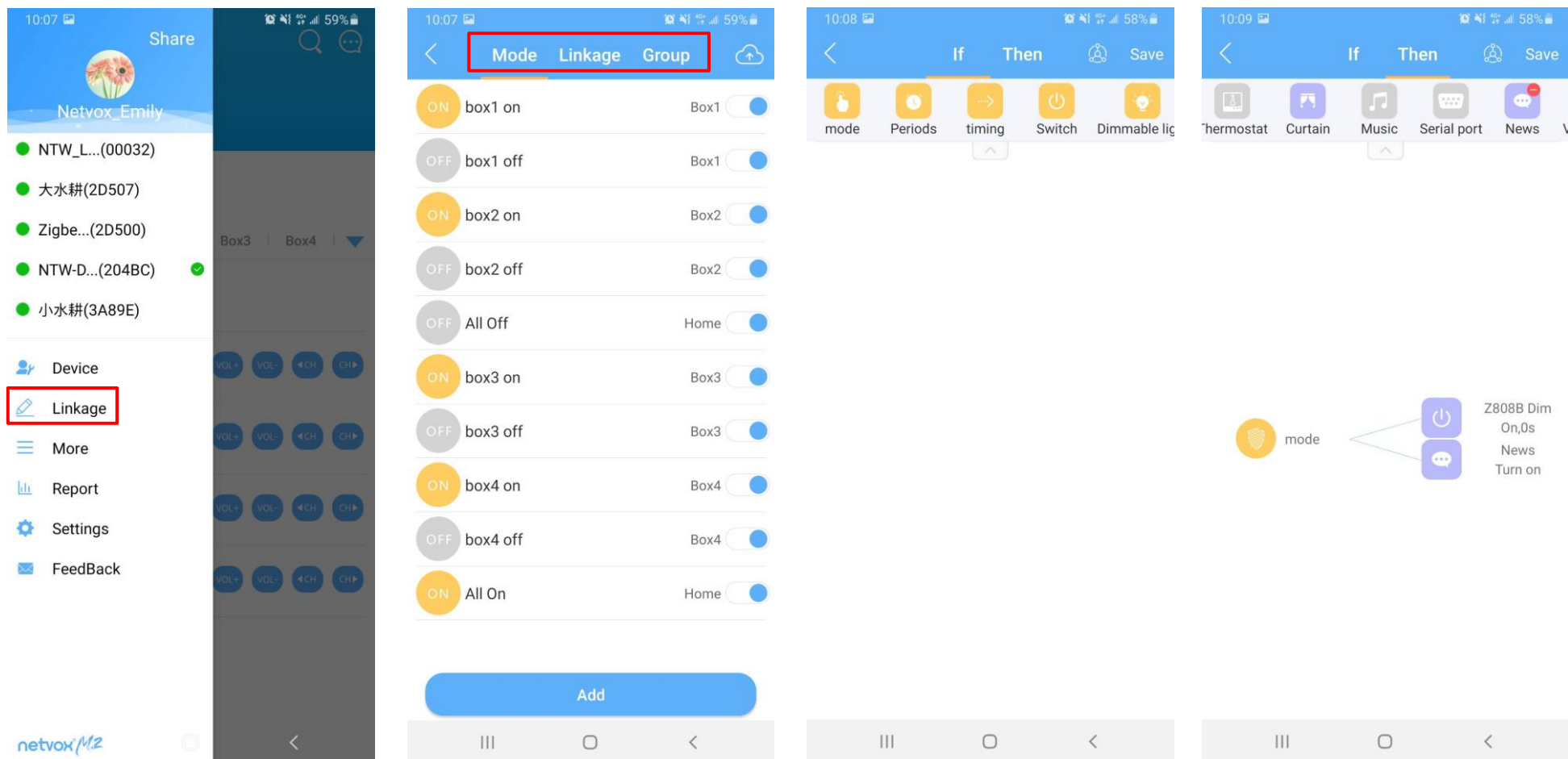
• M2 APP Demonstration_Sharing Gateway

Click “Share” to enter the gateway management interface. Select a gateway to be shared with others. Click “Next” to enter the QR code interface and other users can scan the QR code. When the other users accept the sharing successfully, they can obtain the sharer’s list.



3.4 • M2 APP Demonstration_ Linkage Setting

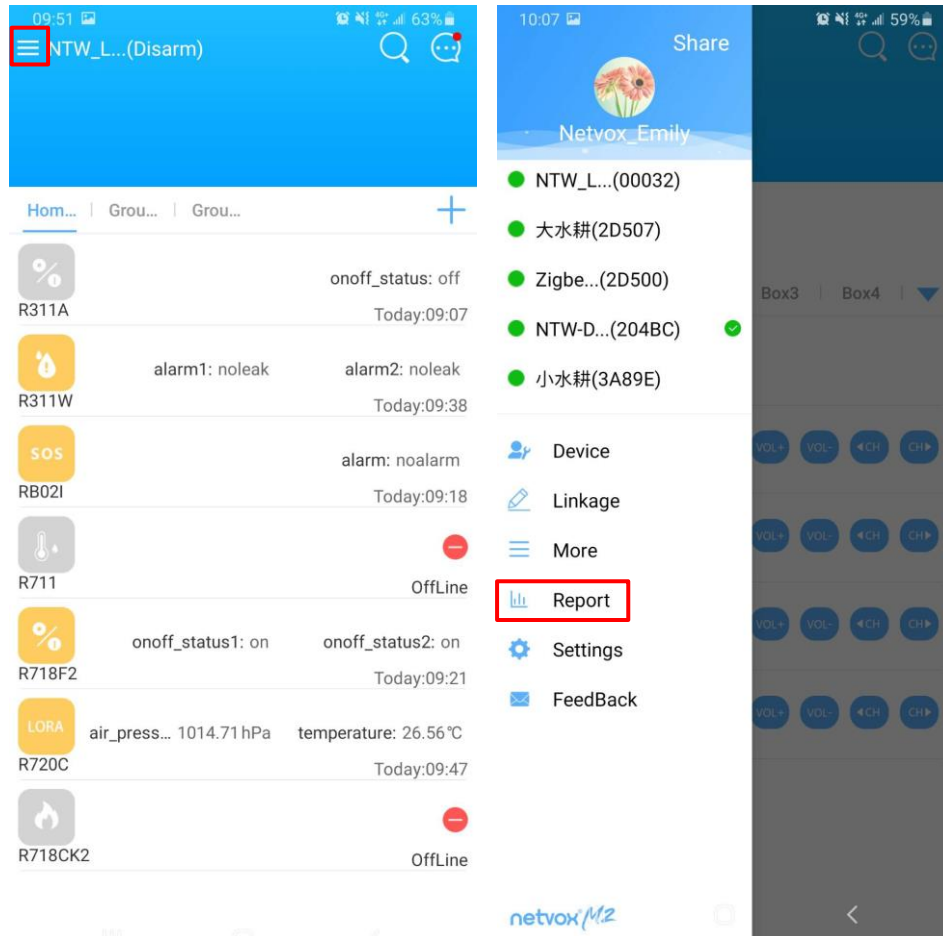
The editable content is mainly divided into three types - Mode, Linkage, and Group which can be clicked to switch to the respective interface.



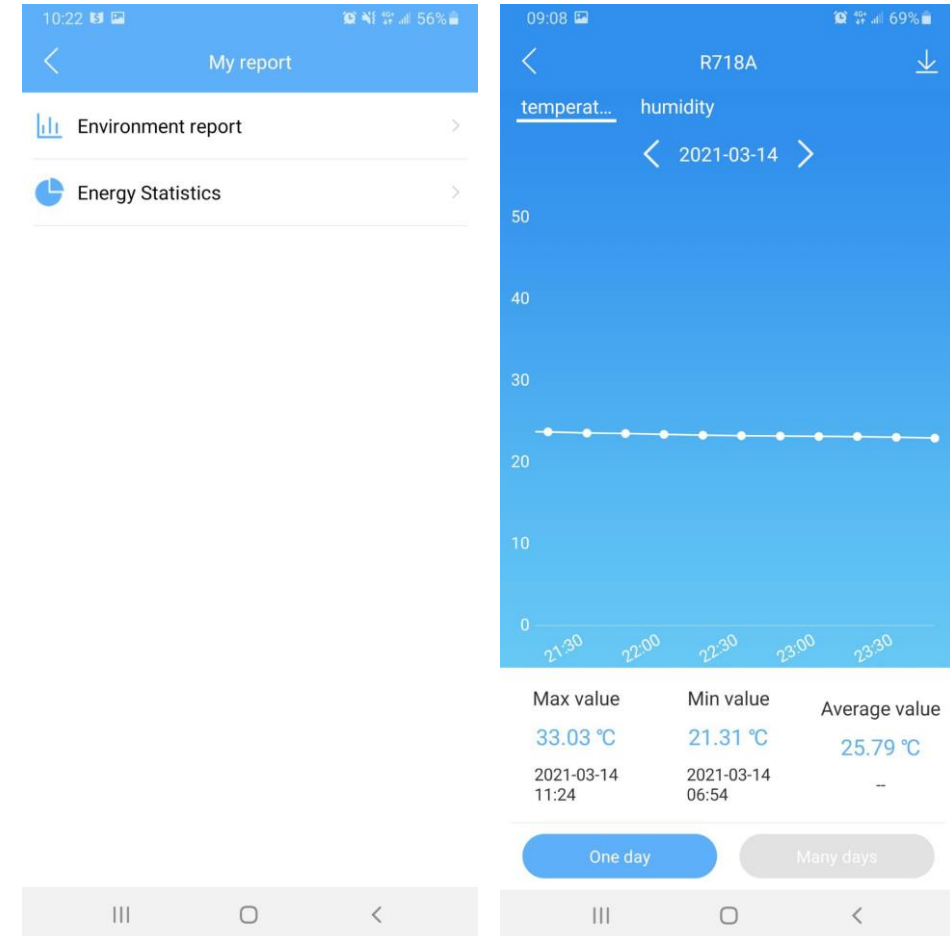
3.5 • M2 APP Demonstration_Report

Click the icon on left side of the homepage

Click “Report” to enter the setting.



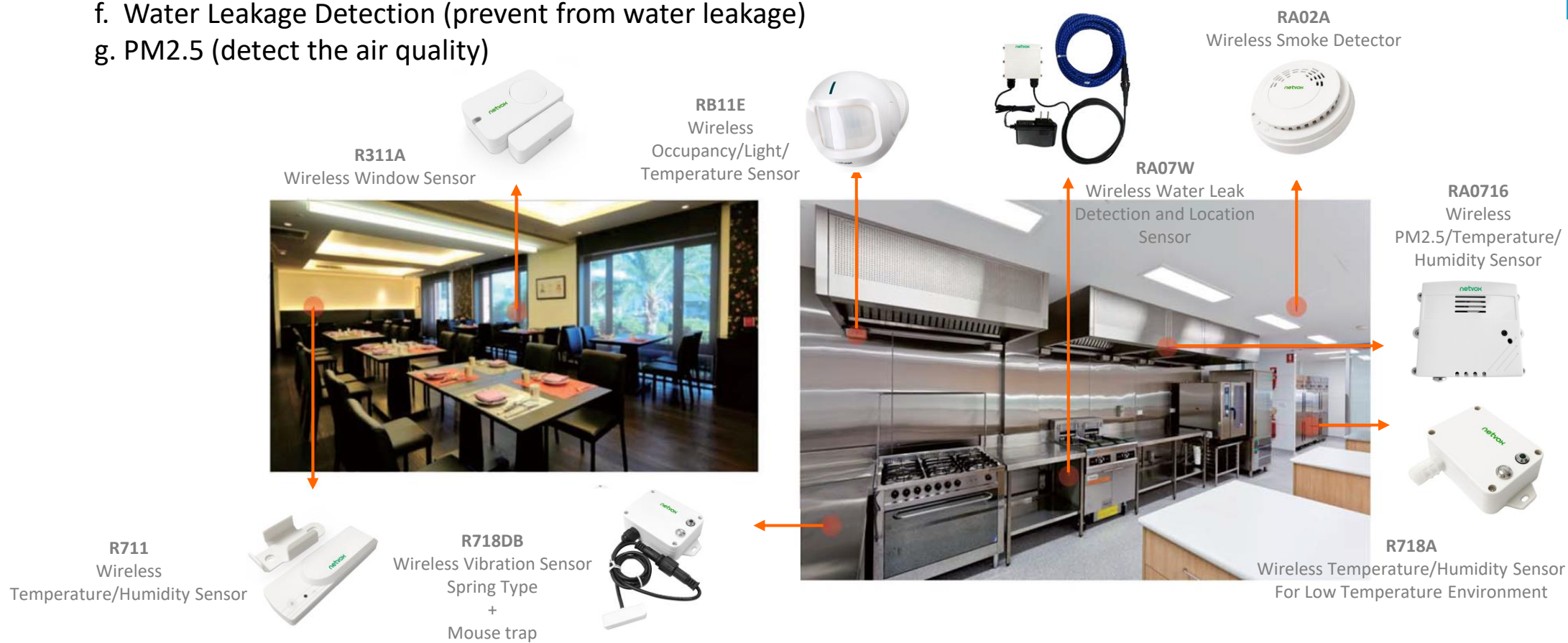
Reports are divided into environmental reports and energy analysis
Click “Environment report” to enter the environment report interface.



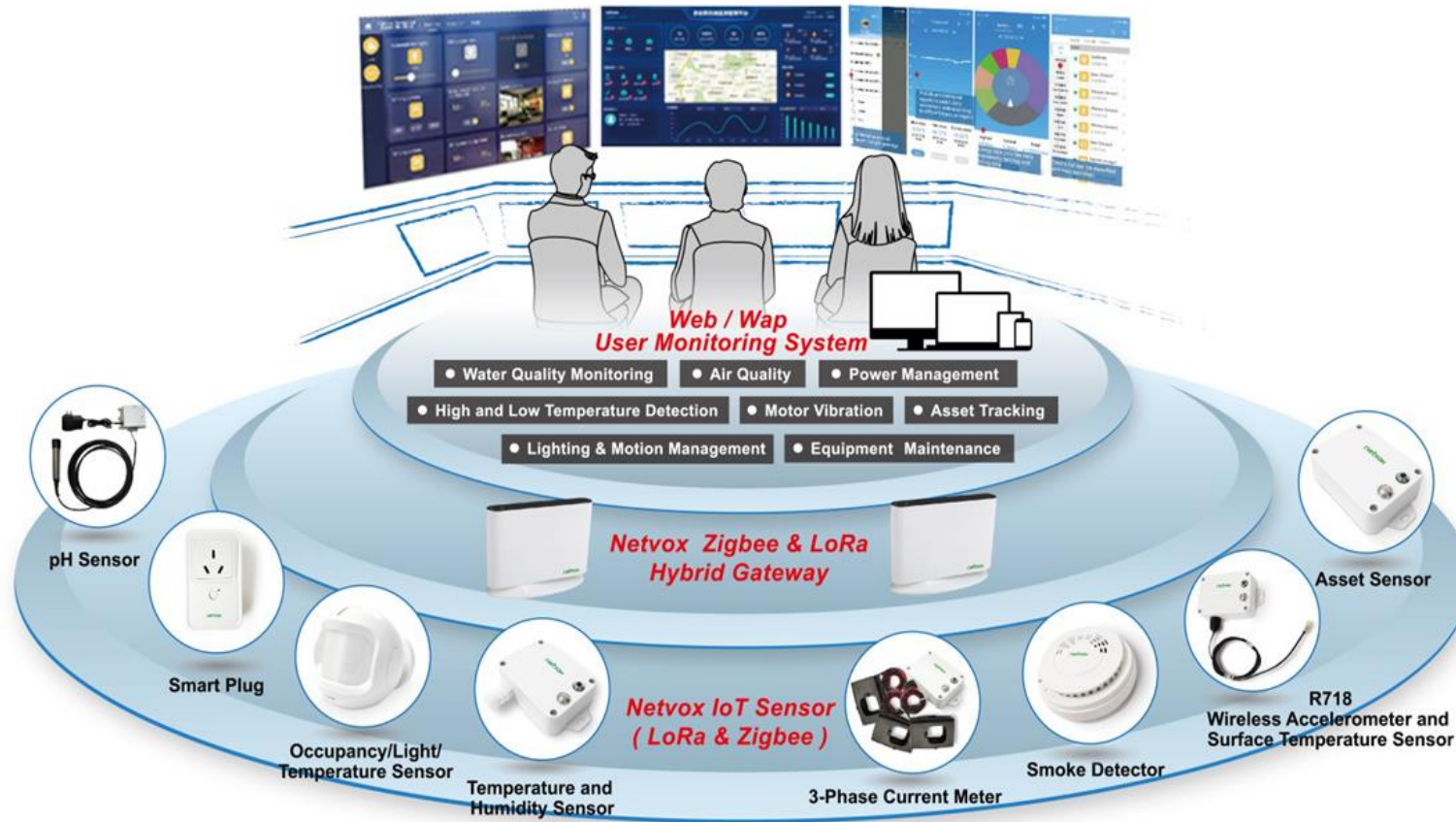
● What can Netvox do for you_Restaurant

With Netvox LoRa Sensors, owners get the detected data, such as

- a. Ambient temperature and humidity (indoor environment)
- b. Low temperature and humidity (freezer)
- c. Vibration detection (mouse trap vibration)
- d. Occupancy detection (detect if there is people)
- e. Window Sensor (prevent the door and window from destroying)
- f. Water Leakage Detection (prevent from water leakage)
- g. PM2.5 (detect the air quality)



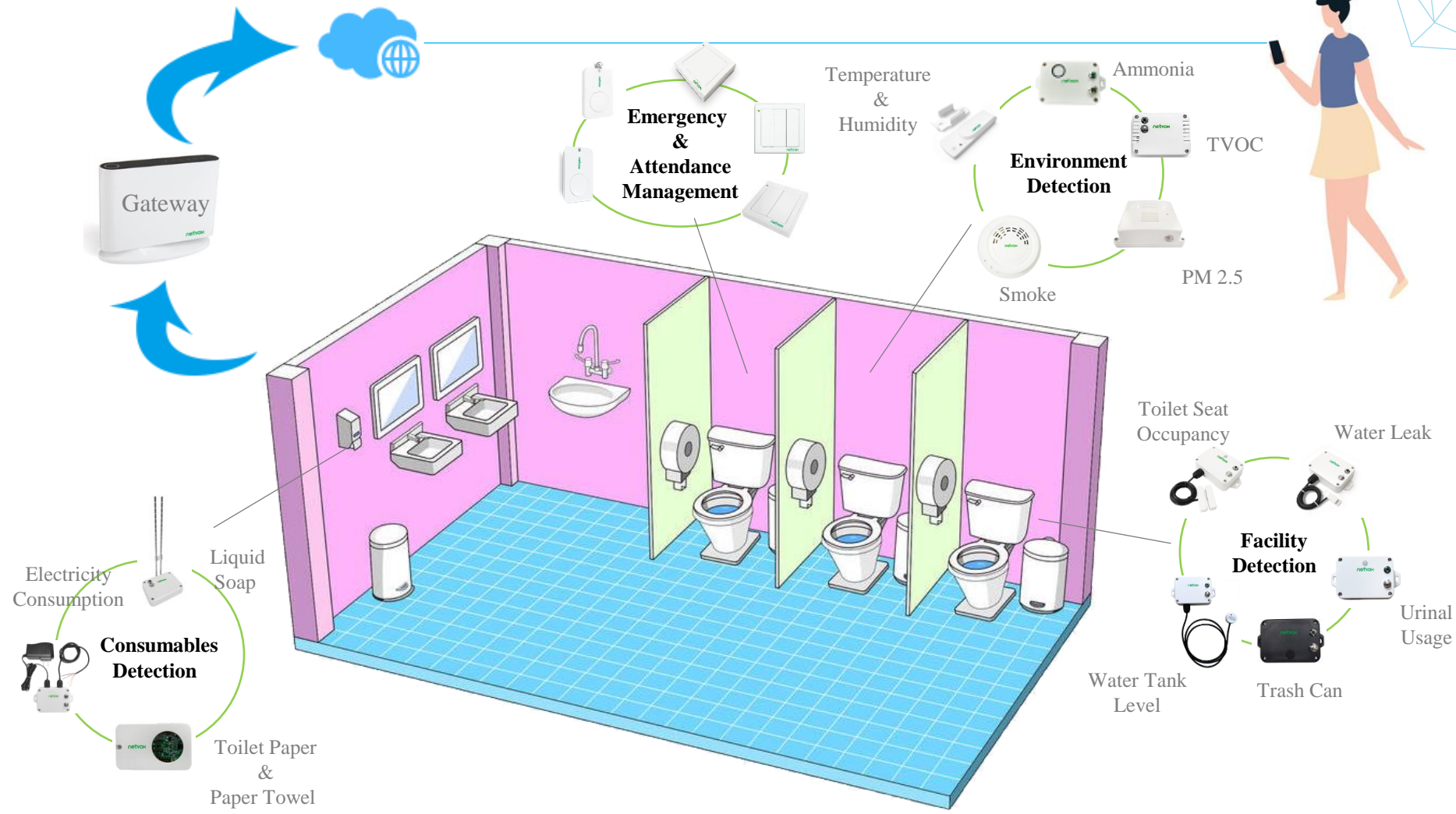
● What can Netvox do for you_Factory



Smart factory solution:

1. Water Quality Monitoring
2. Power Management
3. Air Quality Monitoring
4. Predictive Maintenance
5. Extreme Temperature Measurement
6. Security
7. User Diversity
8. Diversity of Alert Message

● What can Netvox do for you_Smart Toilet



● What can Netvox do for you_Smart Parking

Each parking space in the parking lot is equipped with a parking sensor. When the car parks in the parking space, it reports that it is occupied. When the car leaves the parking space, it reports that it is empty.



● What can Netvox do for you_Garbage Overflow Monitoring



● What can Netvox do for you_Others

- Clean room dust detection system
- Beijing car dealers air filter
- Security system
- Environmental monitoring system for orchid farm
- NCKU IoT experience house
- Hsinchu Cathay General Hospital asset tracking solution



- Automatic detection of kitchen temperature
Prevent the elderly from forgetting to turn off the burner and trigger a fire alarm



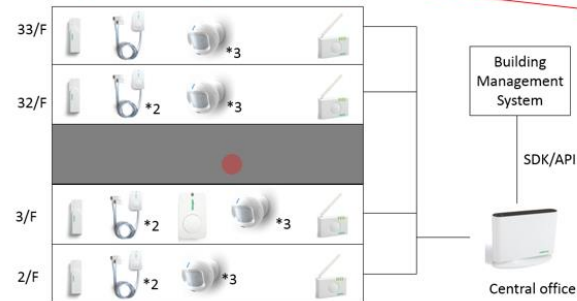
- Automatically detection of water level at the location
Reduce the possibility of flooding in the kitchen and washroom



- Install sensors in different locations in the home
Detect and track the activities and living habits of the elderly at home

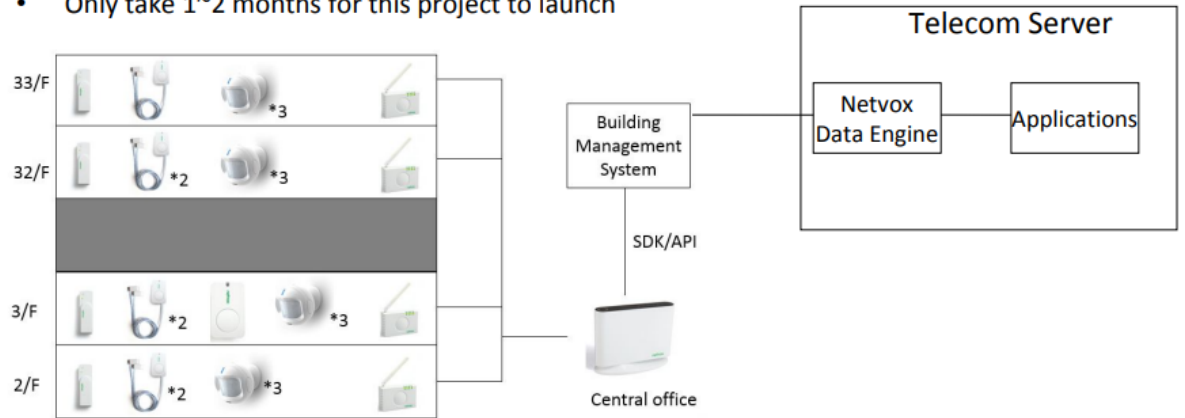


- When an abnormal situation is detected, the system will immediately issue an alarm
Notify the relevant caregiver



- Tracking of the elderly, especially to prevent the loss due to dementia

- An elder caring project for more than 1000 apartments
- Using multiple sensors from Netvox to capture life style of elder residents who live alone
- Using Netvox IoT Data Engine as data collecting engine, customer designs their own algorithm to find if the pattern of life style changes
- Netvox only provide turn-key solution, all data are owned by customer; and customer maintains the IoT server
- Only take 1~2 months for this project to launch





END