

Wi-Fi / 4G Camera

WA08 User Manual

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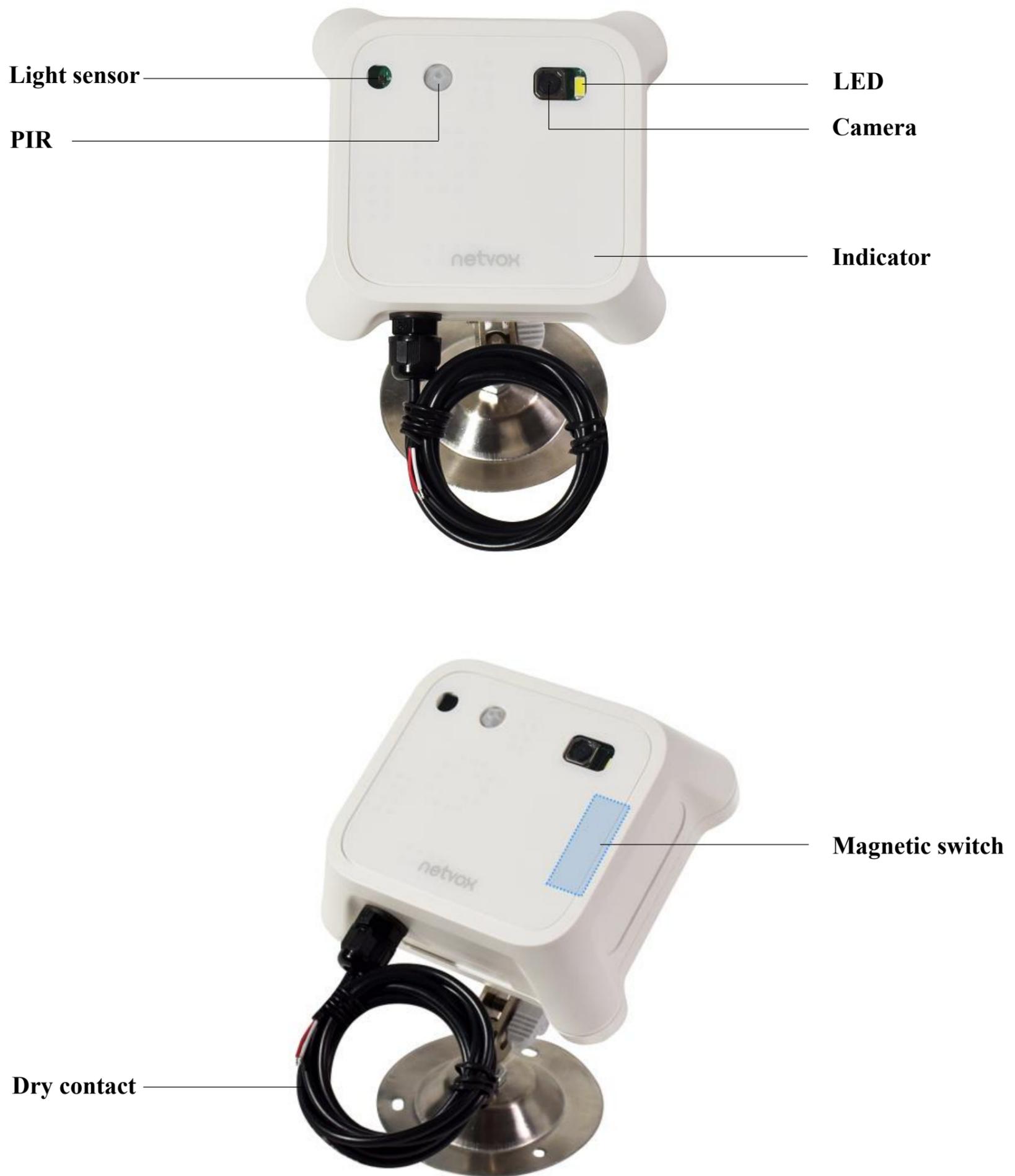
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1. Introduction

WA08 is a Wi-Fi / 4G Camera that helps monitor your business or property remotely. Equipped with PIR, vibration sensors, and dry contact, WA08 takes photos on a schedule or when triggered. With support for both 4G and Wi-Fi networks, it keeps you updated as an emergency occurs. No matter where you are, WA08 captures every detail and sees everything for you.

2. Appearance



3. Features

- Powered by 4* 1.5V AA Alkaline battery in series-parallel connection
- Support Wi-Fi or 4G Cat1 communication
- Set a time or interval to take pictures
- Take pictures when dry contact input/PIR/vibration sensor is triggered
- Different resolution settings: 640 x 480 (300,000 pixels) / 1280 x1024 (1,000,000 pixels) / 1920 x1080 (2,000,000 pixels) / 2048 x1536 (3,000,000 pixels) / 2560 x1920 (5,000,000 pixels)
- Equipped with fill light to take pictures in low-light environments
- Configure parameters on the web server
- Easily connected to third-party MQTT platform

4. Setup Instructions

On / Off

Turn on	<ol style="list-style-type: none"> 1. Insert 4* 1.5V AA Alkaline batteries 2. Press and hold the function key or take magnet close to the magnetic switch for 3 seconds. 3. The blue indicator flashes one time.
Turn off and factory reset	<ol style="list-style-type: none"> 1. Press the function key or take magnet close to the magnetic switch. 2. The blue indicator remains on. 3. Press and hold the function key for 5 seconds. 4. The blue indicator flashes 20 times. WA08 is factory reset and off.
Power off	Remove the battery.

Function key / Magnetic switch

Take picture(s) and report data to MQTT. (snapType = 1)	<ol style="list-style-type: none"> 1. Press the function key or move the magnet close to the switch and remove it. 2. The blue indicator flashes once. <p>Note: Devices connected to 4G need to exit from the configuration page first.</p>
Switch to picture-taking mode (only support 4G devices)	<ol style="list-style-type: none"> 1. Press and hold the function key or move the magnet close to the switch for 2 seconds and remove it. 2. The blue indicator flashes 2 times and remains on. 3. Device exits the configuration page and switches to picture-take mode. <p>Note: If the voltage is lower than 2.7V, device will be in sleep mode.</p>
Sleep mode	<ol style="list-style-type: none"> 1. Press and hold the function key or move the magnet close to the switch for 3 seconds and remove it. 2. The blue indicator flashes 2 times. 3. WA08 enters sleep mode.
Wake WA08	<ol style="list-style-type: none"> 1. Press the function key or move the magnet close to the switch and remove it. 2. The blue indicator remains on. <p>Note: a. If device is not connected to a network in 1 minute, or it is connected but no configuration is made in 3 minutes, it enters sleep mode automatically. b. Please make sure WA08 is awake before starting any operation.</p>

5. Data Report

After WA08 is on and connected to MQTT, it will send a data packet (snapType = 0).

If no configuration is done, the device sends data based on the default settings.

Sensors can only be triggered when WA08 enters sleep mode.

(1) Dry contact

When the dry contact status changes, WA08 takes picture(s) and reports data (snapType = 4).

(2) PIR

When PIR is triggered, WA08 takes picture(s) and reports data (snapType = 2).

PIR can only be triggered again after IRDectionTime (60s).

IRDectionTime = 60 seconds (default)

0 (PIR off.)

(3) ShockAlarm

When sensor detects data exceeds the threshold, WA08 takes picture(s) and reports data (snapType = 3).

Reporting interval: 60s (Vibration sensor reports another data at least 60 seconds after the last one is sent)

ShockAlarm Level: 1 to 3 (default)

0 (ShockAlarm off.)

Example of data packet:

```
{
  "FW_version": "V0A",
  "HW_version": "V01",
  "FW_date": "2025-02-17",
  "values": {
    "devName": "Netvox WA08",
    "devEui": "00137a111111",
    "battery": 30,
    "snapType": 0,
    "ts": 1740536417,
    "localtime": "Wed Feb 26 10:20:17 2025",
    "pixel": "1920*1080",
    "imageSize": 74101,
    "image": "/9j/4AAQSk...(Image code)"
  }
}
```

SnapType can be 0 to 6. Each number represents different status or operation of device. For example, when snapType = 0, it means device is on.

0	Turn on
1	Press function key
2	PIR trigger
3	ShockAlarm trigger
4	Dry contact trigger
5	Take picture at given time
6	Take picture at a set interval

6. Login

- ① Make sure WA08 is on and awake.
- ② Open Settings on your phone or computer and tap Wi-Fi.
Find and connect the wi-fi named Netvox_WA08_XXXX.
- ③ Open a browser and enter <http://192.168.6.1> to the configuration page.

SSID: Netvox_WA08_XXXX

→ The last 4 digits of MAC address. Please check the sticker on the device.

Password: Netvox_WA08

Default IP: 192.168.6.1

Note:

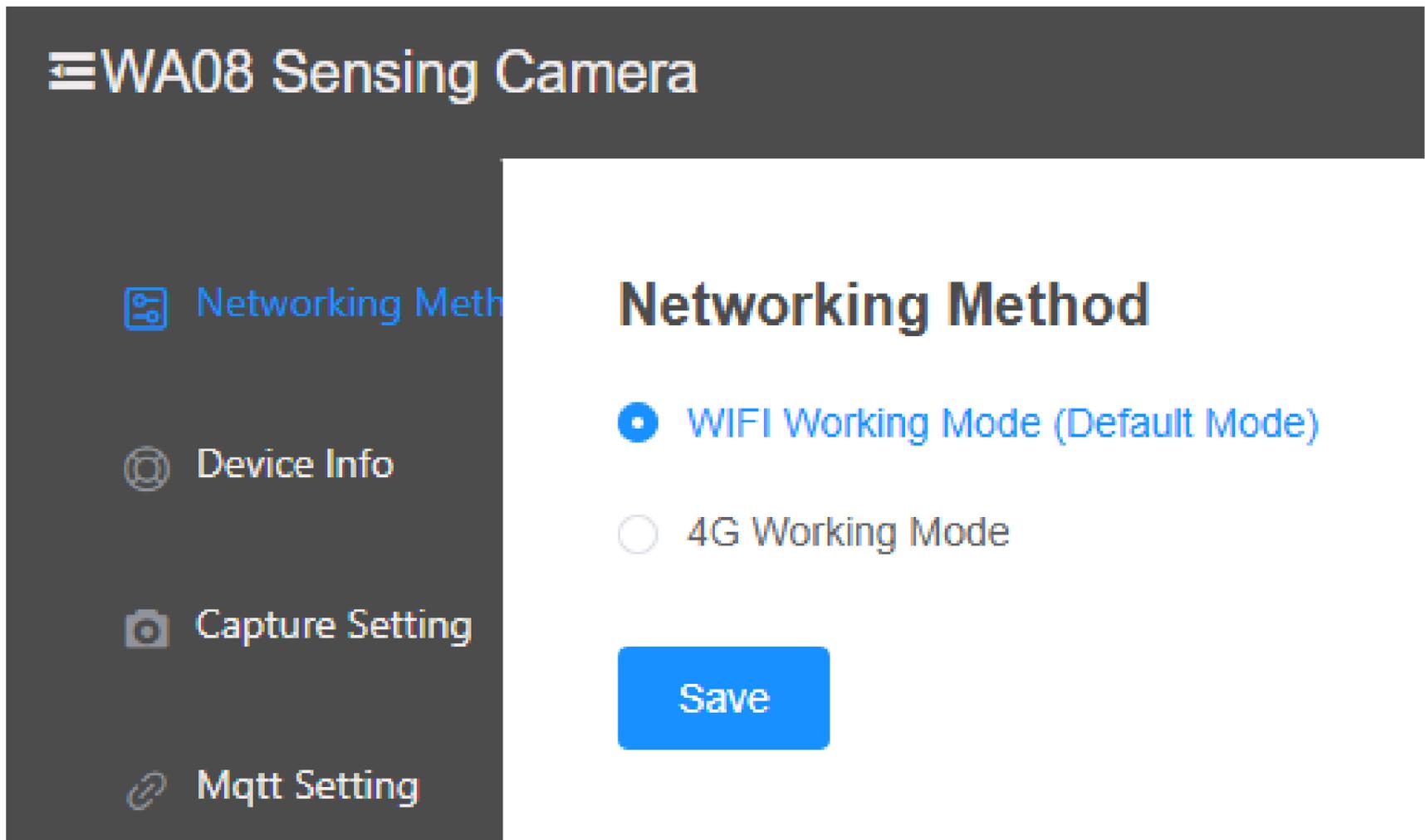
- a. If no configuration is made in 3 minutes, WA08 will be in sleep mode. Press the function key to wake device and search for Wi-Fi.
- b. If more than one device needs to be configured, please clear browser cache every time a device is configured, or log into with an incognito window.

7. Configure WA08 Parameters

- 1 Select Wi-Fi or 4G mode based on the network that your device supports.

WA08 (for Wi-Fi) can only select Wi-Fi working mode.

WA08A/B (for 4G network) supports Wi-Fi and 4G.



2 Adjust camera settings to ensure the quality of pictures.

The screenshot displays the 'Param Setting' interface for the WA08 Sensing Camera. On the left is a dark sidebar with navigation options: Networking Method, Device Info, Capture Setting, Mqtt Setting, Param Setting (highlighted in blue), and WiFi Info. The main area features a live camera feed at the top. Below the feed are several adjustable parameters:

- LED:** A dropdown menu currently set to 'Automatic'.
- Light Threshold:** A slider set to 50, with minus and plus buttons on the right.
- Lightness:** A slider set to 0, with minus and plus buttons on the right.
- Contrast Ratio:** A slider set to 0, with minus and plus buttons on the right.
- Saturation:** A slider set to 0, with minus and plus buttons on the right.
- Resolution Ratio:** A dropdown menu currently set to '500 Ten Thousand'.
- Flip Horizontal:** A green toggle switch that is turned on.
- Flip Vertical:** A red toggle switch that is turned off.

At the bottom right of the settings area are two buttons: a blue 'Update' button and a grey 'Restore' button.

● **LED**

Automatic: LED is on when WA08 takes picture(s) and illuminance < Light threshold.

Always on: LED is on when WA08 takes picture(s).

Always off: LED remains off.

- **Light Threshold**

Adjust light threshold to turn on/off LED when it enters automatic mode.

Range: 0 – 100 (default: 50)

Illuminance < Light threshold LED: Automatic

Illuminance \geq Light threshold LED: Off

- **Lightness**

Adjust picture's brightness

Range: -2 – 2 (default: 0)

- **Contrast Ratio**

Range: -2 – 2 (default: 0)

- **Saturation**

Range: -2 – 2 (default: 0)

- **Resolution Ratio**

300,000 / 1,000,000 / 2,000,000 / 3,000,000 / 5,000,000 pixels
(default)

Note: Power consumption could increase when the resolution is 5,000,000 pixels.

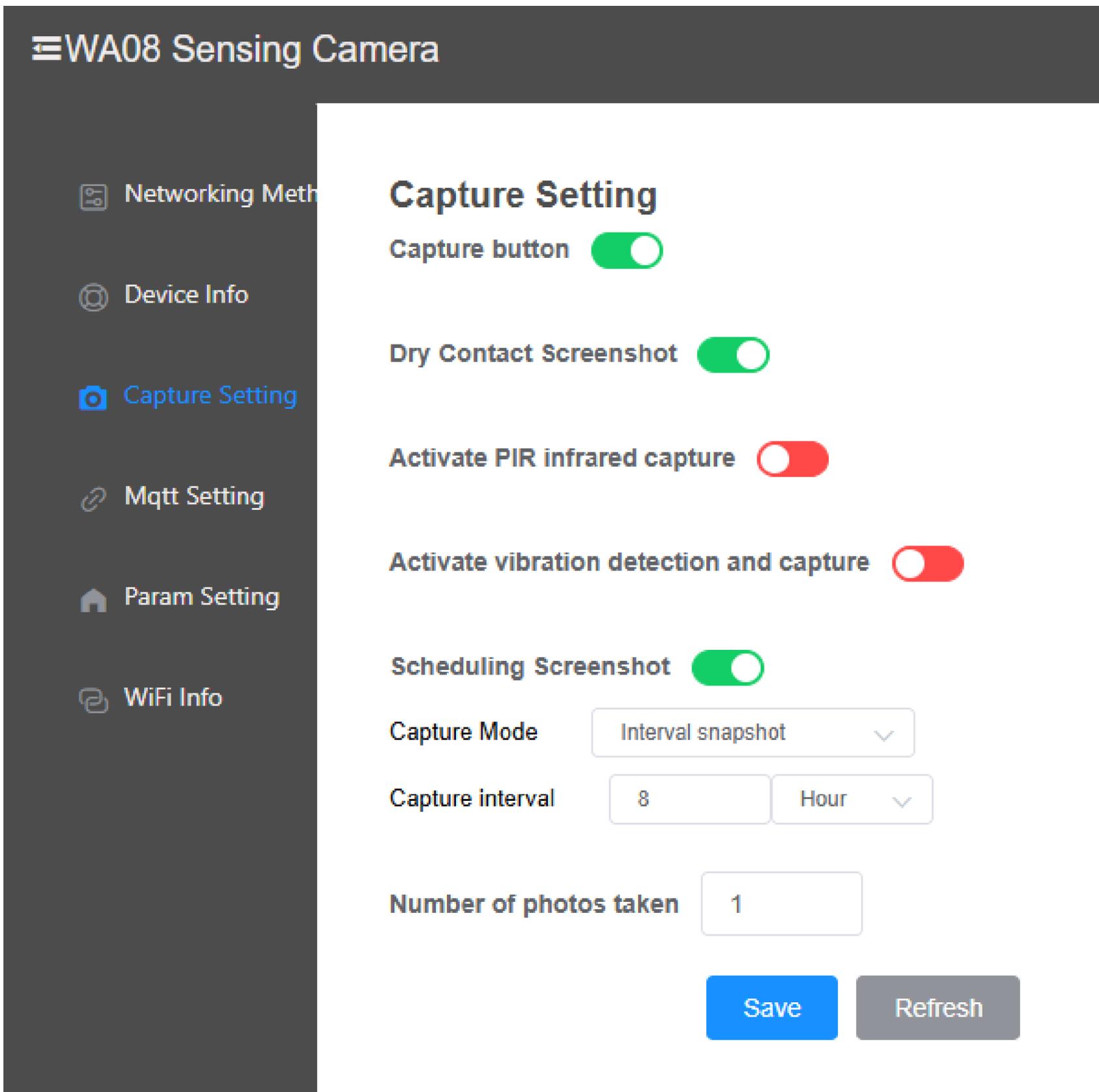
- **Flip Horizontal / Vertical**

Flip the photo horizontally or vertically.

- **Restore**

Undo the changes.

3 Adjust Capture Settings

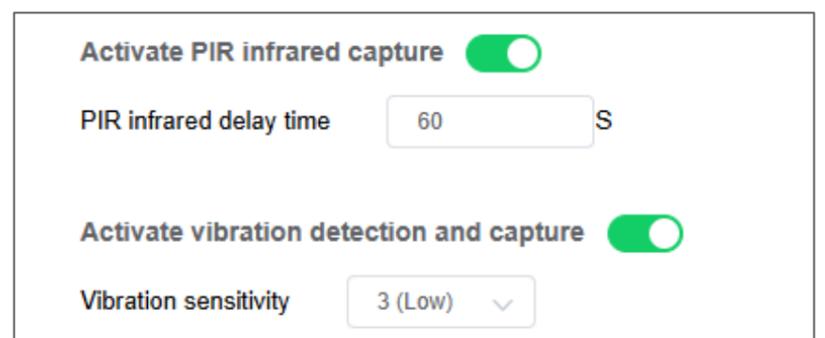


- Capture button (snapType = 1)
Press the function key to take a picture.
Note: When device is in sleep mode, please press the function key to wake device first.

- Dry Contact Screenshot (snapType = 4)
Take picture(s) when voltage changes are detected during sleep mode.

- Activate PIR infrared capture (snapType = 2)
Turn on set IRDectionTime.
Device takes photo(s) and reports data when PIR is triggered.

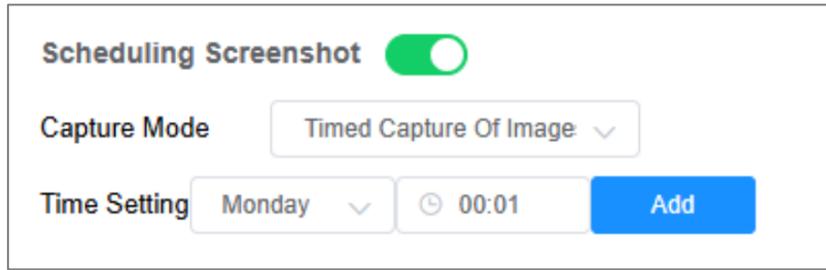
- Activate vibration detection and capture (snapType = 3)
Set vibration sensitivity.
Device takes photo(s) and reports data when vibration is detected.



- Schedule Screenshot

Timed Capture of Image (snapType = 5):

set device to take photo(s) at a given time



Scheduling Screenshot

Capture Mode Timed Capture Of Image ▾

Time Setting Monday ▾ 00:01 Add

Interval snapshot (snapType = 6):

device takes photo(s) at a set interval



Capture Mode Interval snapshot ▾

Capture interval 8 Hour ▾

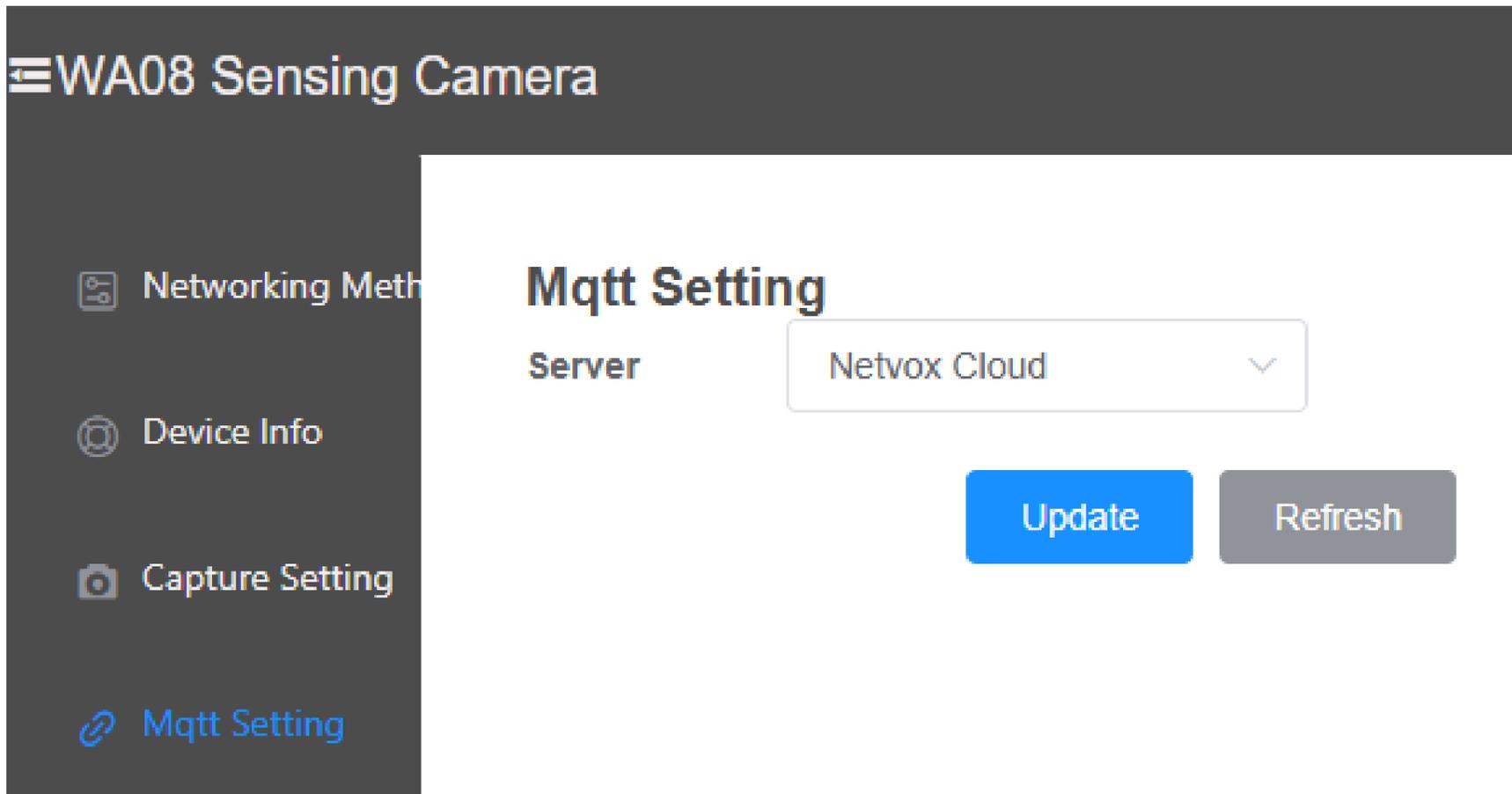
- Number of photos taken

The number of photos you want to take at a time.

Range: 1 – 10

4 Adjust MQTT Settings

Complying with MQTT protocol, WA08 sends photos to Netvox platform or third-party server.



- Server

Netvox Cloud

Check photos on Netvox AIoT app.

Customize

Select Customize if you use a third-party server.

-  Networking Method
-  Device Info
-  Capture Setting
-  MQTT Setting
-  Param Setting
-  WiFi Info

Mqtt Setting

Server	<input type="text" value="Customize"/>
Host	<input type="text" value="broker.emqx.io"/>
Mqtt Port	<input type="text" value="1883"/>
Topic	<input type="text" value="topic"/>
Client ID	<input type="text" value="mqtx_80e12da4"/>
Qos	<input type="text" value="QoS 0"/>
Username	<input type="text" value="username"/>
Password	<input type="text" value="password"/>

- **Host**
Enter the MQTT address.
- **MQTT Port**
Enter the MQTT port.
- **Topic**
Give the photo collection a name.
- **Client ID**
Enter the Client ID.
- **QoS**
Select QoS 0, 1, or 2.
- **Username & Password**
Set your username and password to connect to MQTT.

5 Device Info

View device info or check if an upgrade is available.

The screenshot shows the web interface for a WA08 Sensing Camera. The title bar at the top reads "WA08 Sensing Camera". On the left is a dark sidebar with navigation options: "Networking Method", "Device Info" (highlighted in blue), "Capture Setting", "Mqtt Setting", "Param Setting", and "WiFi Info". The main content area is titled "Device Info" and includes a "Restore factory settings" button in the top right. Below the title, several device attributes are listed in a table-like format:

Device Name	Netvox WA08
MAC Address	00137a100101
Battery	3.0v
Hardware Version	v0.3
Software Version	v1.0

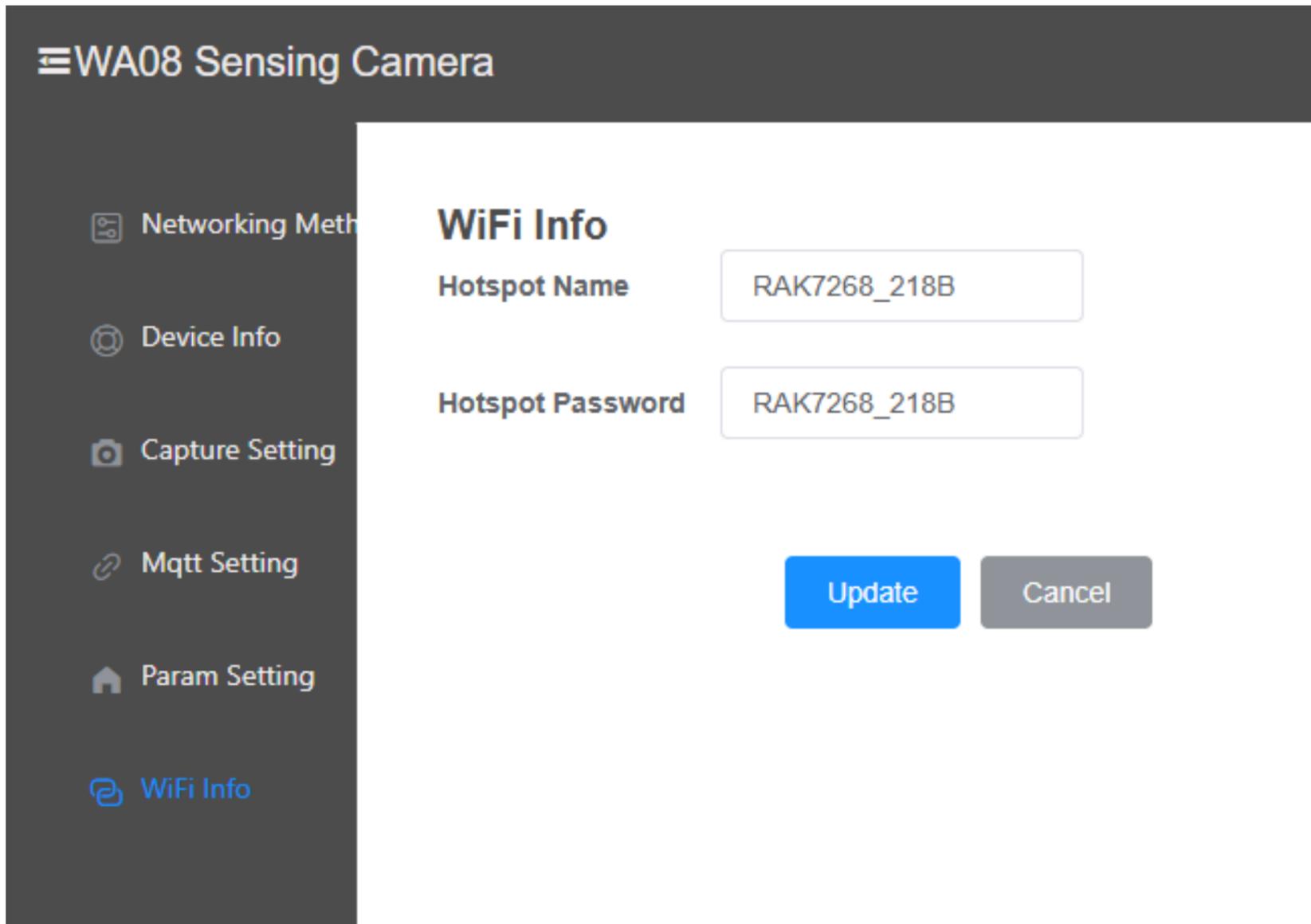
At the bottom of the main area, there is an "Upgrade files" section with two buttons: "Select file" and "Start upgrading".

If upgrade is available, please click Select file to download firmware first and start upgrading.

Please do not turn off the device or perform other tasks during upgrading. Device will reboot when upgrade is completed.

⑥ WLAN (for Wi-Fi connection only)

Check and edit Wi-Fi name and password.



7 Cellular (for 4G connection only)

WA08 Sensing Camera

Cellular

Status: Not Connected

IMEI: 866346065310286

Access Point: orange.m2m.spec

Username: 4g_user

Password:

PIN Code:

Update **Cancel**

- Status
Show the connection status of 4G network
- IMEI
Show the IMEI of this device
- Access Point
Enter your cellular APN.
- Username
Enter your APN username.
- Password
Enter your APN password.
- PIN Code
Enter your SIM PIN (4 – 8 digits).

8. Important Maintenance Instructions

Kindly pay attention to the following to achieve the best maintenance of the product:

- Keep the device dry. Rain, moisture, or any liquid might contain minerals and thus corrode electronic circuits. If the device gets wet, please dry it completely.
- Do not use or store the device in a dusty or dirty environment. It might damage its detachable parts and electronic components.
- Do not store the device under extremely hot conditions. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store the device in places that are too cold. Otherwise, when the temperature rises, moisture that forms inside the device will damage the board.
- Do not throw, knock, or shake the device. Rough handling of equipment can destroy internal circuit boards and delicate structures.
- Do not clean the device with strong chemicals, detergents, or strong detergents.
- Do not apply the device with paint. Smudges might block the device and affect the operation.
- Do not throw the battery into the fire, or the battery will explode. Damaged batteries may also explode.

All of the above applies to your device, battery, and accessories. If any device is not operating properly, please take it to the nearest authorized service facility for repair.