InHand ER815-NRQ3-WLAN

Quick Installation Guide

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InHand Networks
Global Leader in Industrial IoT
www.inhandnetworks.com

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1.Overview

This manual is for the installation and operation of the ER815-NRQ3-WLAN of InHand Networks. Before installation, please confirm the product model and accessories in the package and purchase a SIM card from the operator that supports the local network. Please refer to the actual product for specific operations.

1.Packing List

Part Name	Quantity	Description
ER815-NRQ3-WLAN	1	Edge Router 815-NRQ3-WLAN
Ethernet Cable	1	1 m Ethernet Cable
LTE Antenna	2	4G model
	N/A	5G model
5G Antenna	N/A	4G model
	4	5G model
Wi-Fi Antenna	2	Magnetic antenna, can change to stick antenna optionally
Power Adaptor	1	Power adaptor with power cable
Panel Mounting Lug	4	2 hangers and 2 wall mounting lugs
SIM card ejector	1	Used to remove the SIM tray

2. Panel Introduction

Fig. 2 Device panel

- Power IN: The ER815-NRQ3-WLAN supports a 12V voltage input.
- SIM cards slot
- USB: USB Type-A with USB2.0 protocol.
- WAN1/LAN1: Ethernet port that supports WAN/LAN switch.
- WAN2/LAN2: Ethernet port that supports WAN/LAN switch.
- LAN3: Ethernet port.
- LAN4: Ethernet port.
- LAN5: Ethernet port.
- Reset: Pinhole reset button

3. Equipment Installation

Precautions for installation.

- Power Supply: Please use the power adapter included in the package. ER815-NRQ3-WLAN supports a voltage range of 9¬48V. Please pay attention to the voltage level.
- Environmental Requirements: Working temperature:0 ℃ ~50 ℃ , Storage temperature: -40℃~85℃.
- Avoid direct sunlight and keep away from heat sources or strong electromagnetic interference. Confirm that the installation position is strong enough to support the

weight of the equipment and its installation accessories.

3.1 Insert SIM Card

ER815 supports dual nano SIM cards. You can use the SIM card ejector tool included in the package to insert it into the small hole to release the SIM card tray. After installing the SIM card on the tray, insert the tray back into the slot.

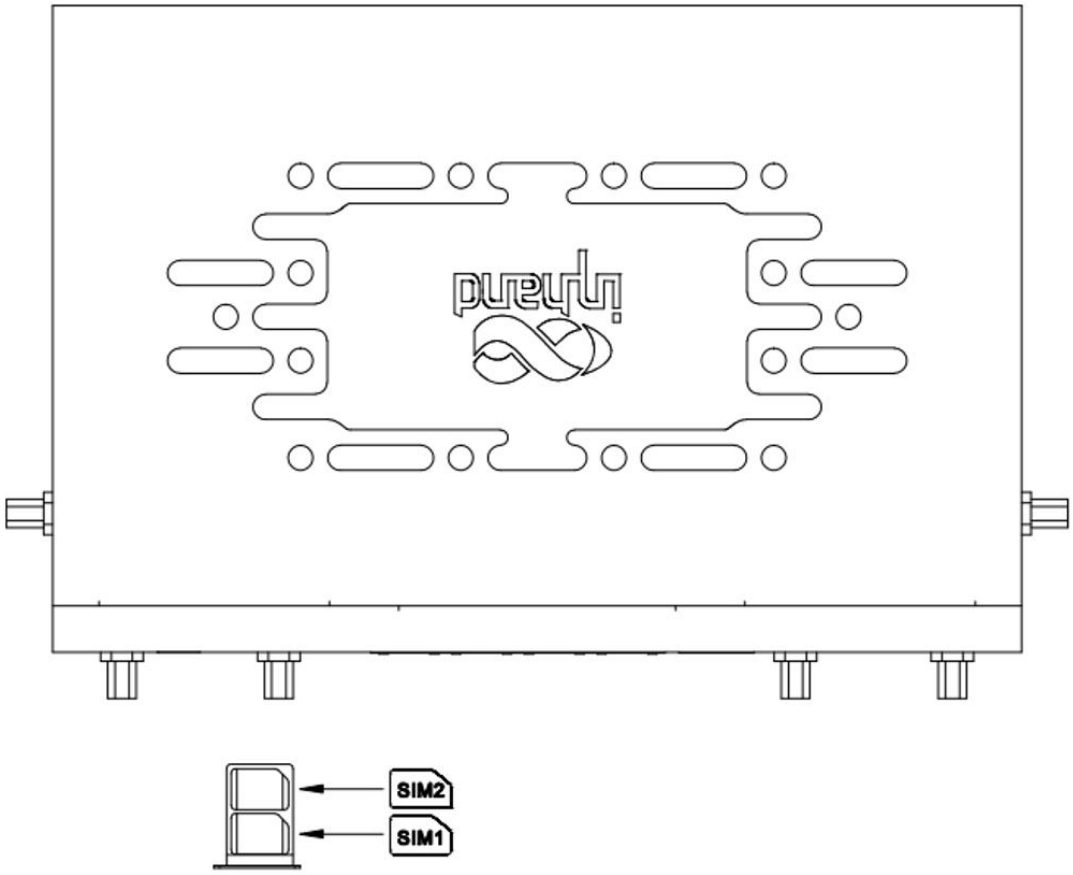
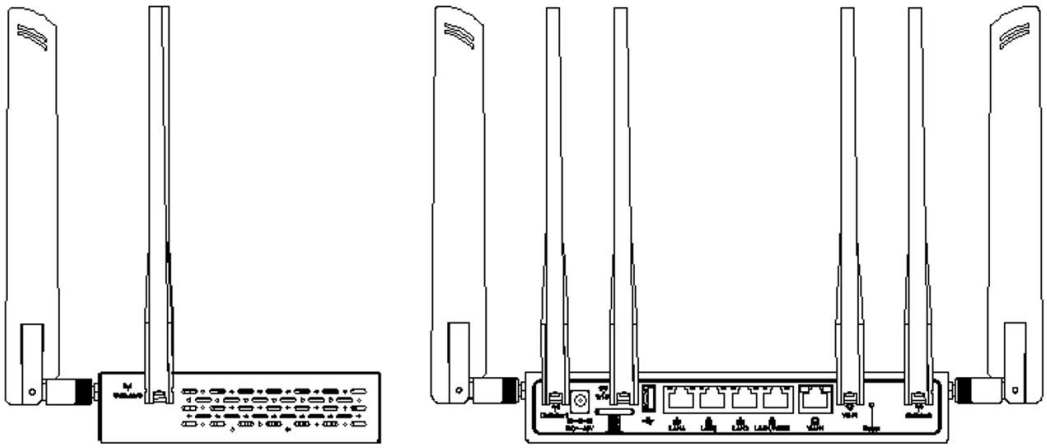


Fig. 3-1 Install SIM cards

3.2 Attach Antennas

Attach the antennas to the SMA connectors.



3.3 Install the ER815-NRQ3-WLAN

3.3.1 Desktop Installation

1. Ensure the selected desktop area is free from obstructions to provide adequate space for the device.
2. Install the foot pad in the corresponding position of the housing under the device.
3. Verify the correct installation of the SIM card(s), antennas, and power cable.
4. Place the device steadily on the tabletop.

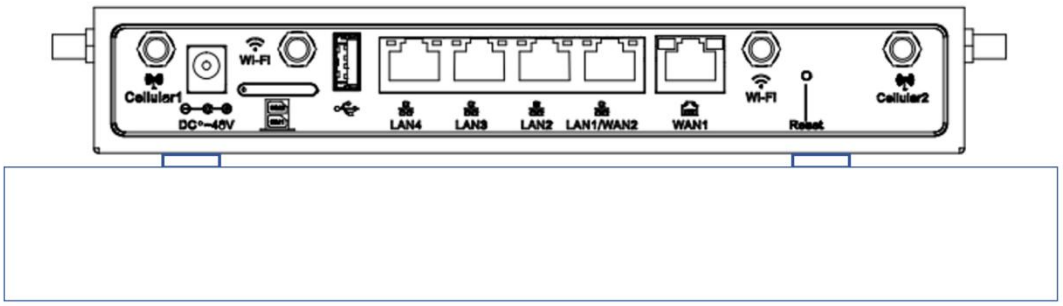


Fig. 3-3-1 Installation on desktop

3.3.2 Wall-mounted Installation

i. Ear-Hanging:

1. Install the hanging ears included with the package at the cutouts on both sides of the device.
2. Install two screws on the wall where the equipment needs to be mounted,

note that the distance between the two screws needs to be consistent with the hole distance between the hanging ears of the equipment.

3. Hang the device in the predetermined position and push down to confirm that the device is installed stably and will not fall.

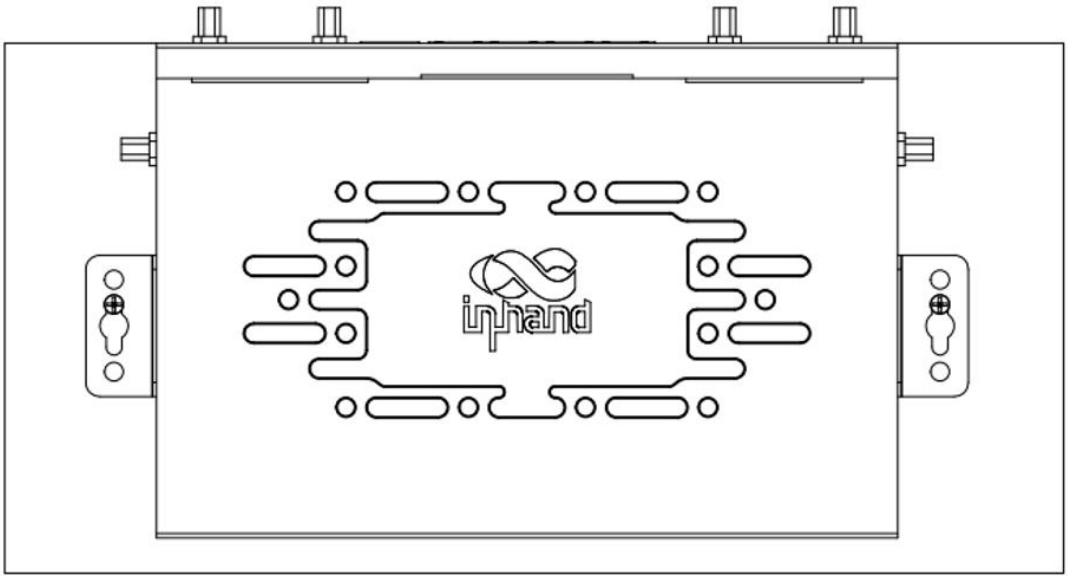


Fig. 3-3-2-a Install with panel mounting lug

ii. Wall-mounting:

1. Drill holes in the wall at predetermined installation positions and install two expansion screws, the distance between the two screws needs to be consistent with the mounting hole position on the bottom of the equipment.
2. After mounting, push the device down to ensure that the device is installed firmly and does not fall.

Note: The device operating in the 5150-5250 MHz band and it is for indoor use only.

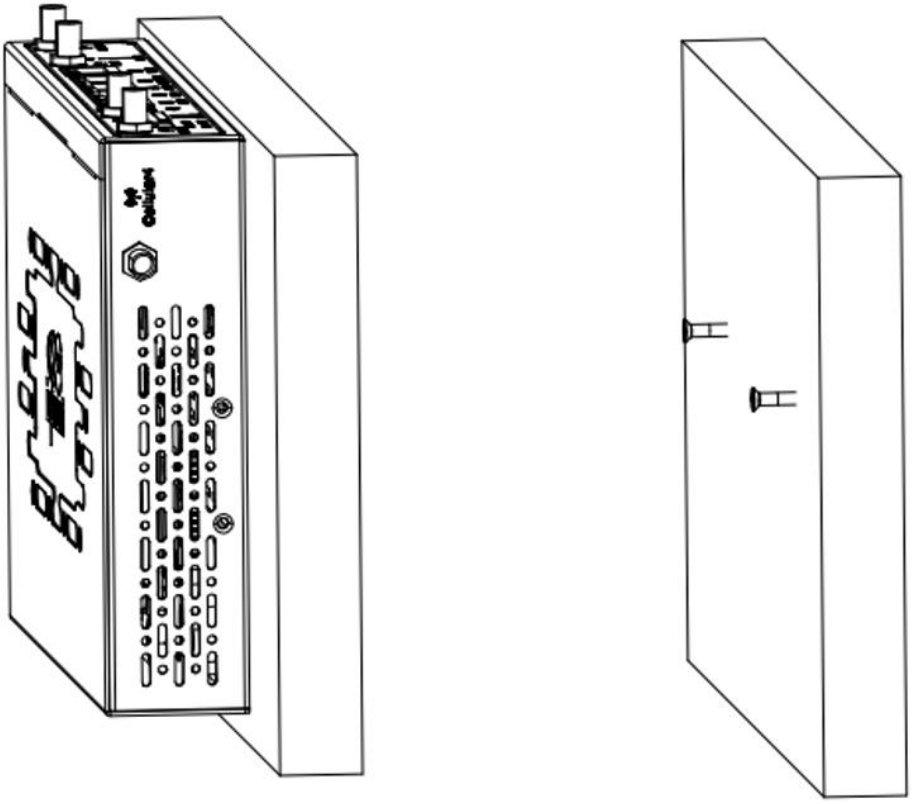


Fig. 3-3-2-b Installation on wall

3.4 Power Cable Installation

Insert one end of the power adapter into the power outlet and the other end into the device's power interface.

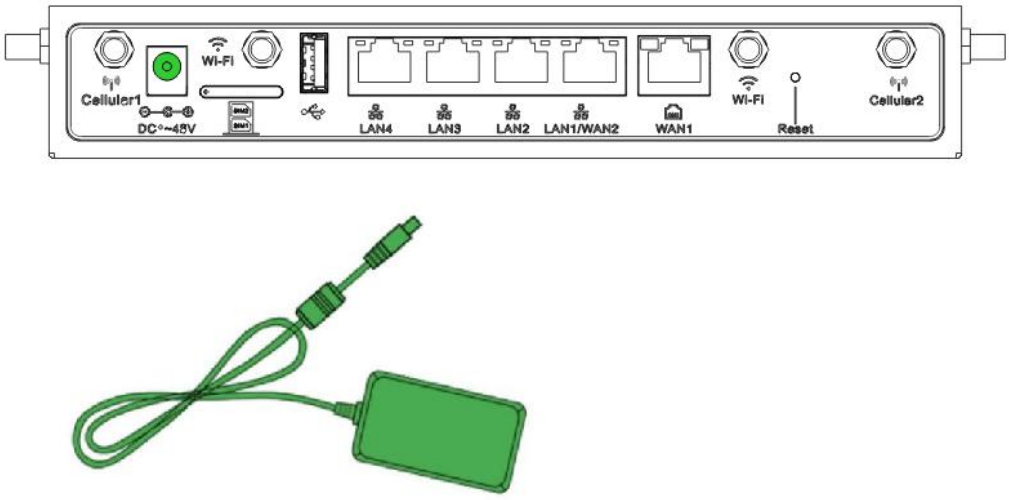


Fig. 3-4 Install the power cable

3.5 Inspection after Installation

3.5.1 Check the Device Installation

- Desktop Installation: Ensure that the device won’t fall due to cable d ragging.
- Wall-mounting Installation: Make sure it is securely mounted.

3.5.2 Check the Power Supply

Confirm that the power cord is in good contact and meets safety requirements. Ensure that the device can work properly after powering on.

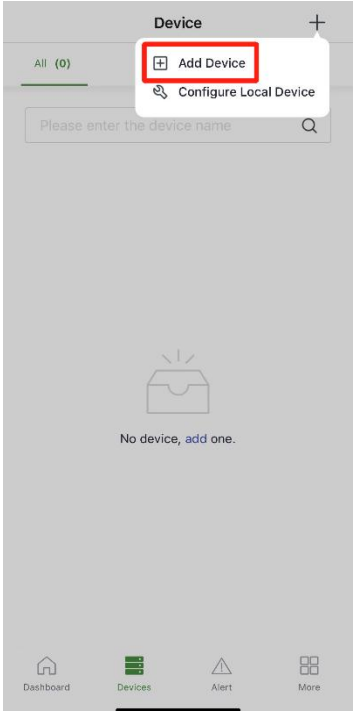
4. Access to the Internet

ER815 supports two ways of accessing the Internet: cellular and wired.

4.1 SIM Card Dial-up

4.1.1 Connect via APP

1. Insert the SIM card while the device is powered off, connect the antennas to the device, and log in to the InCloud APP.
2. Navigate to the "Device" section below to access the [Device] page, then click the menu button in the upper right corner and select [Add Device]. Then scan the QR Code on the ER815-NRQ3-WLAN to add a device.



3. Once the QR code is successfully scanned, proceed to configure the device's name, serial number, and description information.
4. If the device fails to connect to the network after adding it, you can click "Configure local device" to set up the device for cloud connectivity. The ER815-NRQ3-WLAN is configured with default HTTP access and Wi-Fi AP functionality.

4.1.2 Connect via PC

1. Power off the device, insert the SIM card into the card slot, connect the antenna to the device, and establish a wired connection between the ER815 and your PC using an Ethernet cable.
2. Open a web browser and type the device's default address, 192.168.2.1, into the browser's address bar. After entering the default username and password (adm/123456), you will access the device's web management interface. If your browser displays a security warning, navigate to hidden or advanced options and select "Proceed to website."

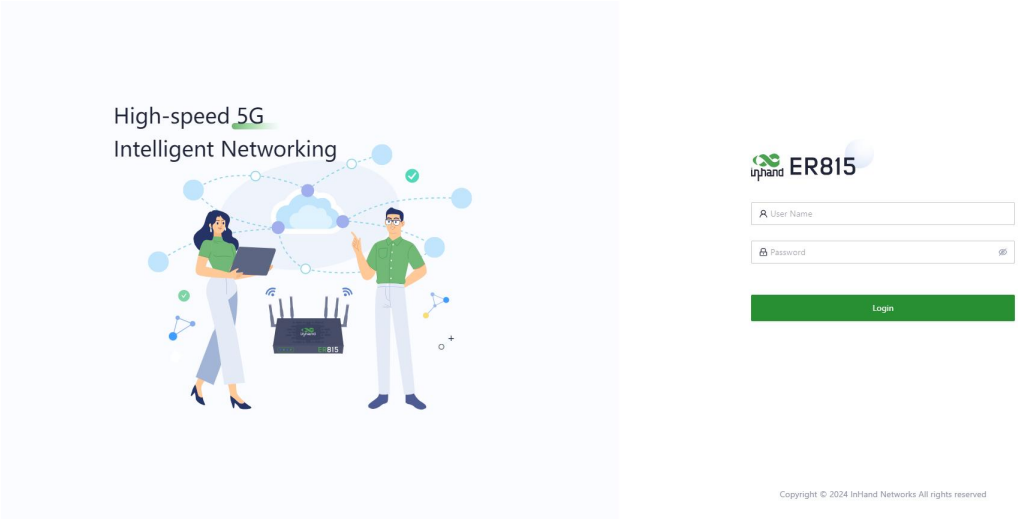


Fig. 4-1-2-a Web Login

3. Go to the "Internet" section in the left navigation bar. Click the "Edit" button next to the "Cellular" option to configure the dial-up parameters. The device comes with the dial-up function enabled by default. If it doesn't establish a connection within a few minutes, re-enable the dial-up option.

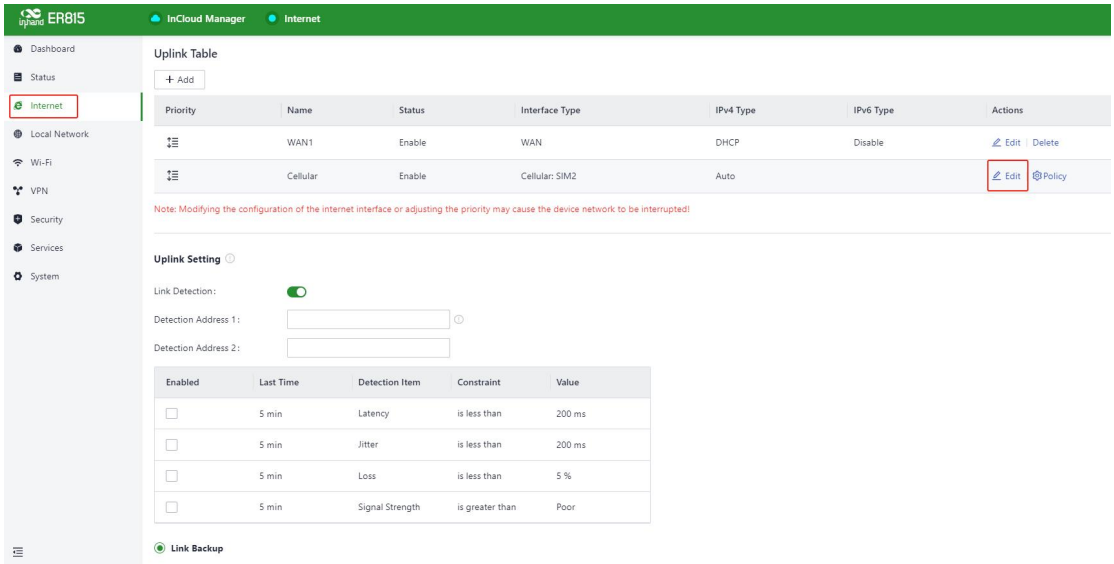


Fig. 4-1-2-b Uplink table

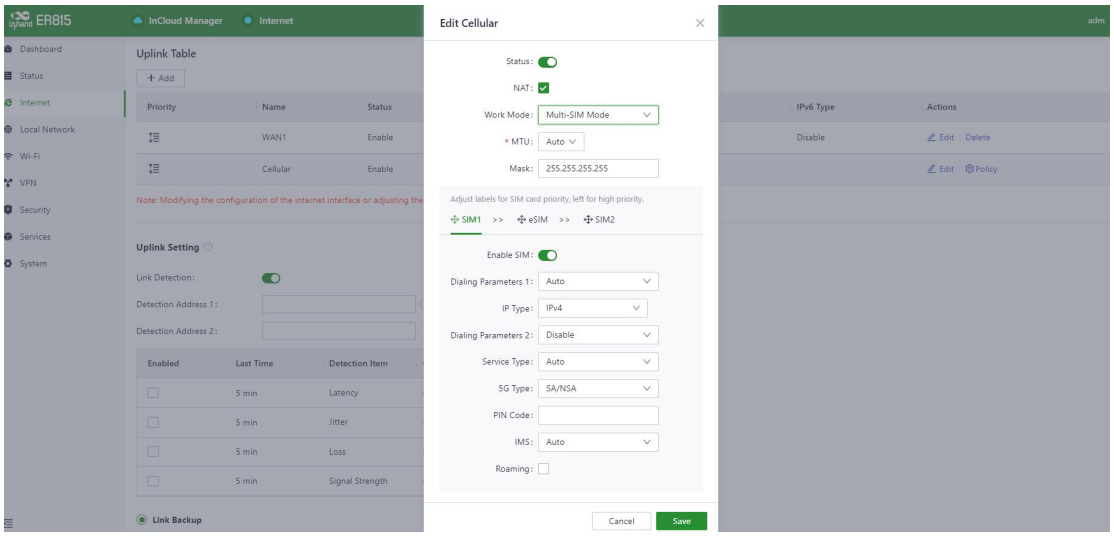


Fig. 4-1-2-c Set the APN parameters

4. To verify the dial-up status, go to the "Interface Status" section located in the "Dashboard." The device has successfully connected to the Internet when the "Cellular" icon turns green. You can click on the "Cellular" icon to access information like signal strength, IP address, and data usage.

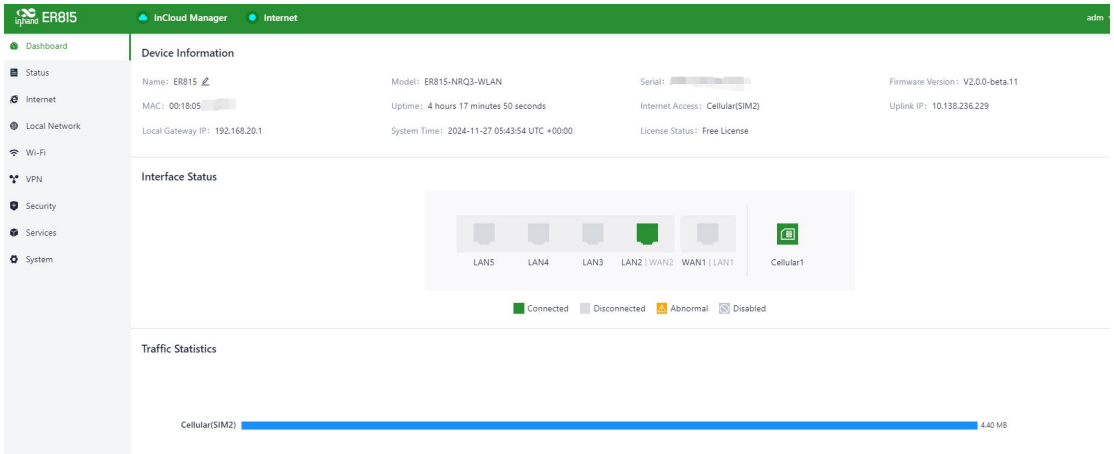


Fig. 4-1-2-d Check the cellular interface

Wired Network

4.2.1 Connect via APP

1. Insert the SIM card while the device is powered off, connect the antennas to the device, and log in to the InCloud APP.
2. Navigate to the "Device" section below to access the [Device] page, then click the menu button in the upper right corner and select [Add Device]. Then scan the

QR Code on the ER815-NRQ3-WLAN to add the device.

Fig. 4-2-1 Scan the QR Code to add a device

3. Once the QR code is successfully scanned, proceed to configure the device's name, serial number, and description information.
4. If the device fails to connect to the network after adding it, you can click "Configure local device" to set up the device for cloud connectivity. The ER815-NRQ3-WLAN is configured with default HTTP access and Wi-Fi AP functionality.
5. Scan the QR code on the unit's nameplate, and the app will establish a Wi-Fi connection with the ODU automatically.
6. Once the connection is established, the app will log in to the device, and you will be directed to the network configuration interface. Confirm the information and click 'Submit.'

4.2.2 Connect via PC

After powering on the device, connect your PC to the device's LAN port using an Ethernet cable, and perform the following steps on your PC.

The device's LAN port has DHCP Server functionality enabled by default. Once the

PC has automatically obtained an IP address, please ensure that your PC and ER815-NRQ3-WLAN are in the same address range.

If your PC fails to obtain an IP address automatically, please configure it with a static IP address and the following parameters:

- IP Address: 192.168.2.x (Choose an available address within the range of 192.168.2.2 to 192.168.2.254).
- Subnet Mask: 255.255.255.0.
- Default Gateway: 192.168.2.1.
- DNS Servers: 8.8.8.8 (or your ISP's DNS server address)

2. Enter the default device address 192.168.2.1, in the browser's address bar. After entering the username and password (adm/123456), access the device's web management interface. If the page shows a security warning, click on the "Hide" or "Advanced" button and select "Proceed" to continue.

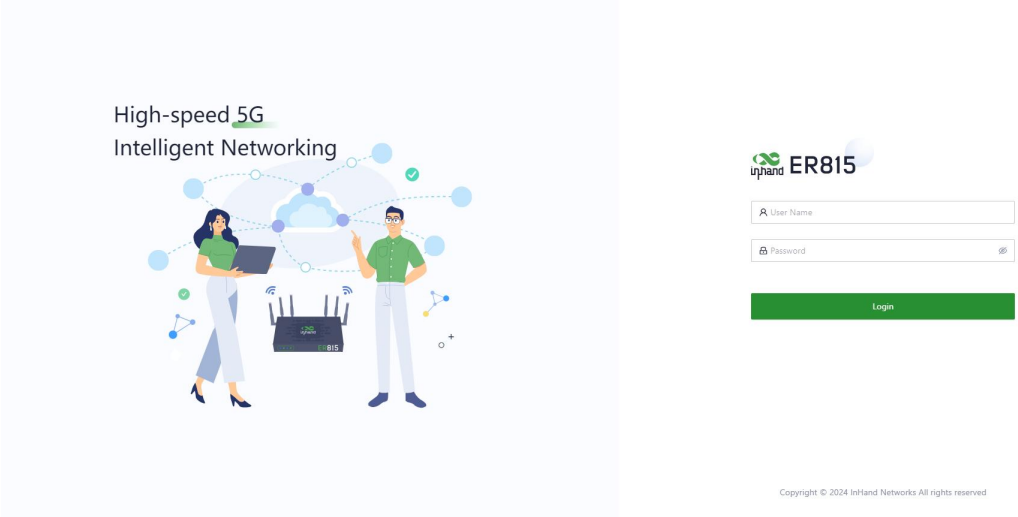


Fig. 4-2-2-a Login the web page

3. Check the network in the “Dashboard〉Interface Status”. The device connects to the Internet successfully if the “Cellular” or “WAN” icon turns green. Click the corresponding icon to view interface information such as signal strength, IP address and traffic consumption.
4. If this device cannot connect to a network, click “Internet〉Uplink Table〉Edit ” to set up network parameters. The device enables the dial-up function and WAN by default, please wait for a few minutes to go online, and re-enable the dial-up if it is not dialed.

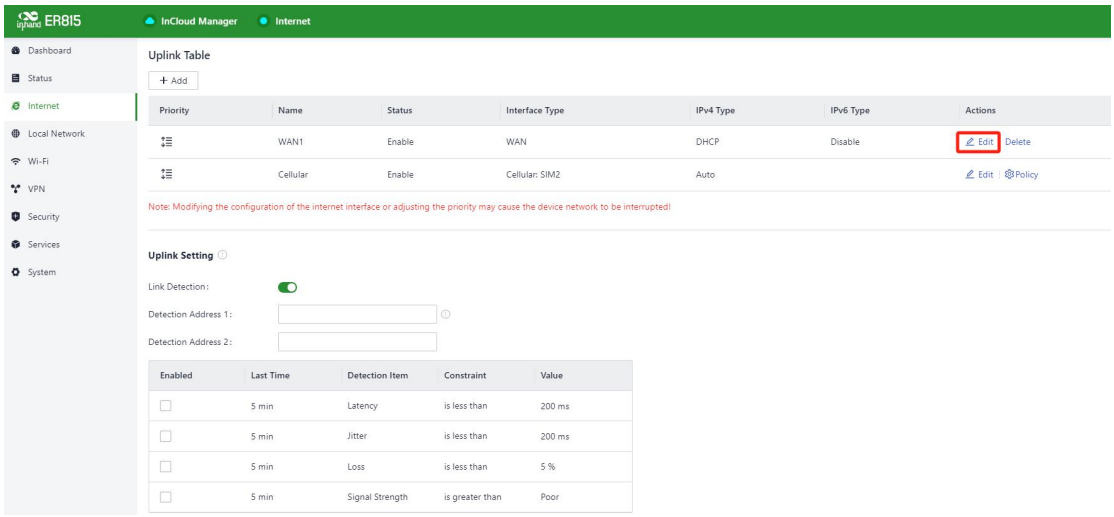


Fig. 4-2-2-b Edit the WAN interface

- **DHCP:** The DHCP service is enabled on the WAN port by default which means this device cannot connect to the Internet immediately if the upstream device connected to the WAN port does not have the DHCP server enabled.
- **Static IP**: Users can assign a static IP address obtained from the ISP or upstream network device manually.
- **PPPoE**: Users can set the PPPoE service on the WAN port and then this device can dial up to the Internet through the broadband service.

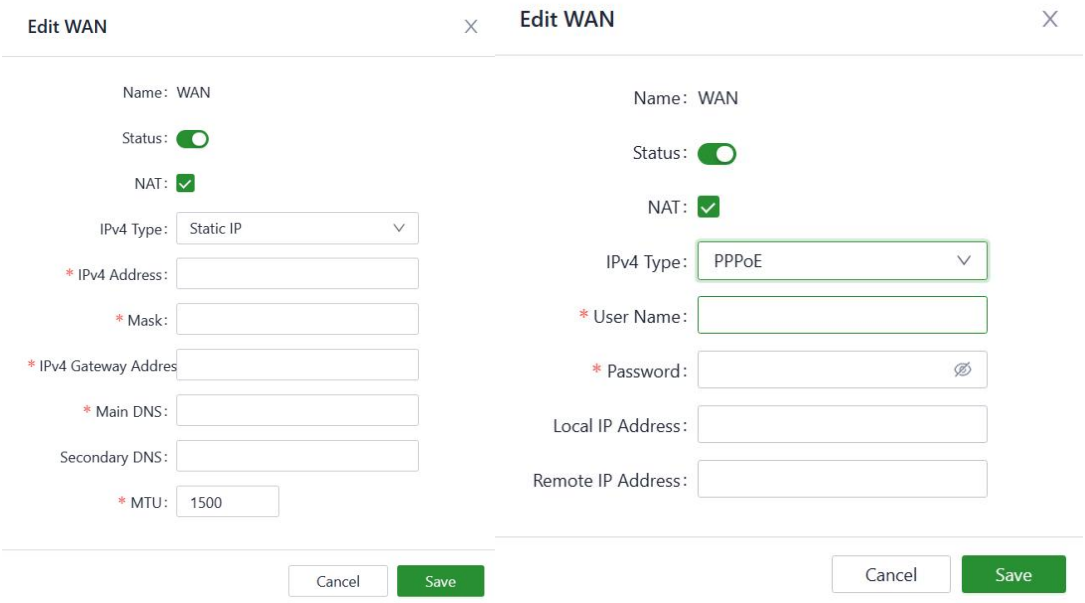


Fig. 4-2-2-c Configure the Uplink interface

5. Verify network connectivity Via the Ping tool on the System/ Tools page.

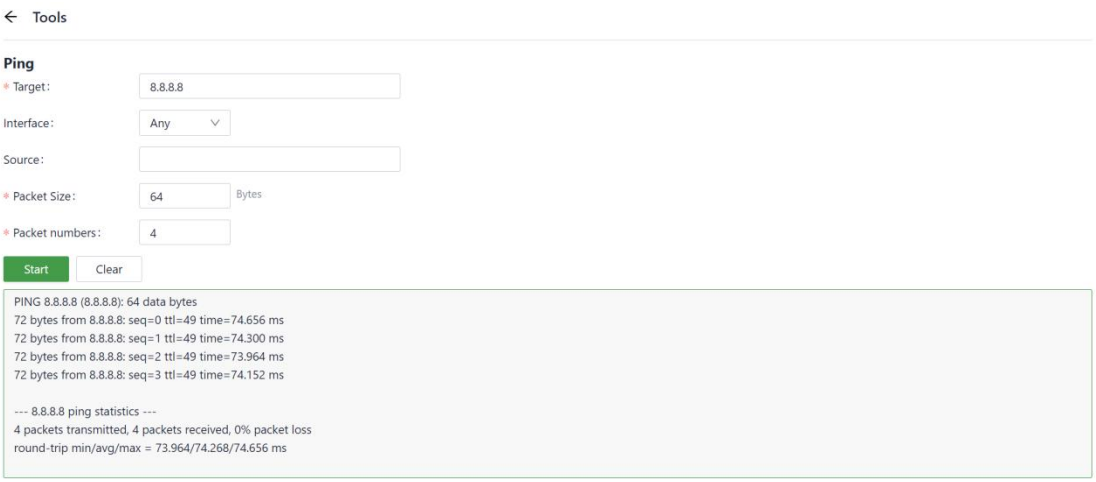


Fig. 4-2-2-d Check the network connectivity

6. Remote Manage Platform

6.1 InCloud Manager

6.1.1 Register/Login the InCloud Manager

1. Open your web browser and visit InCloud at the following address: https://star.inhandcloud.com/. This will take you to the InCloud registration and login page. (We recommend using Chrome.)

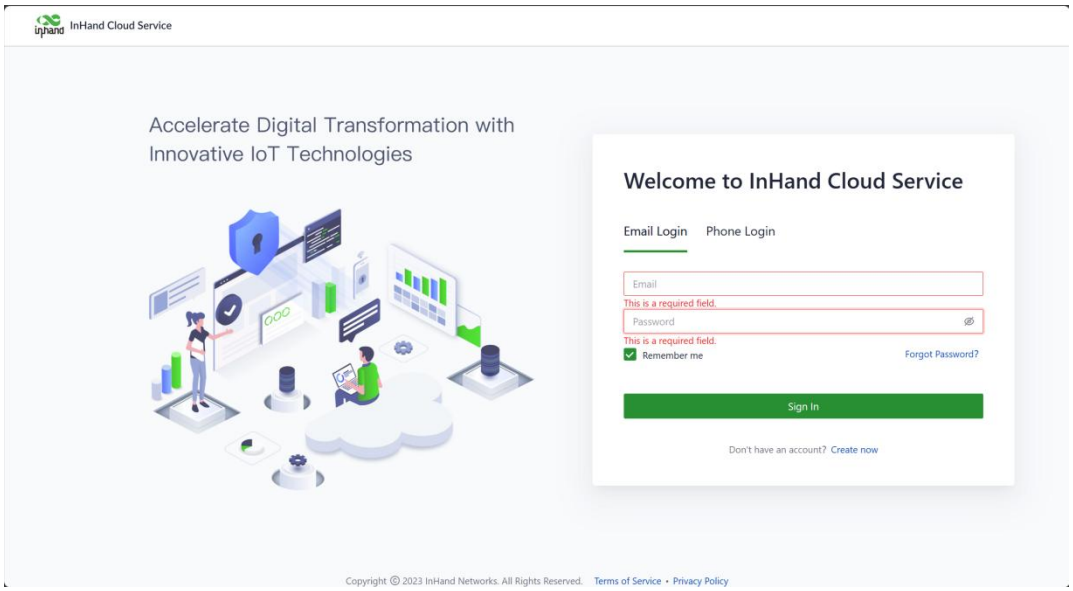


Fig. 5-1-1-a InCloud Manager Login Page

2. After registering, log in to the cloud platform using your registered email. Navigate to the "Security Settings" page where you can change your password and

link your mobile phone number. Once your phone number is linked, you can use it for future logins to the cloud platform.

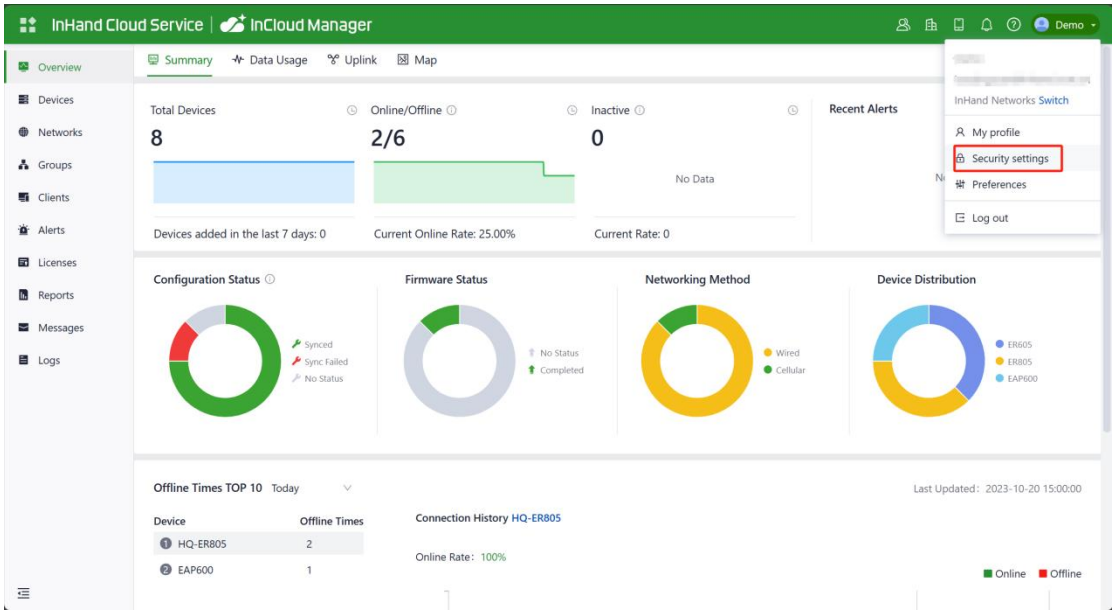


Fig. 5-1-1-b Bind a Mobile Phone Number

5.1.2 Adding Devices to the Platform

Log in to the InCloud Manager platform, then go to "Device" and click "Add" in the navigation menu. Fill in the device's serial number and MAC address to add it.

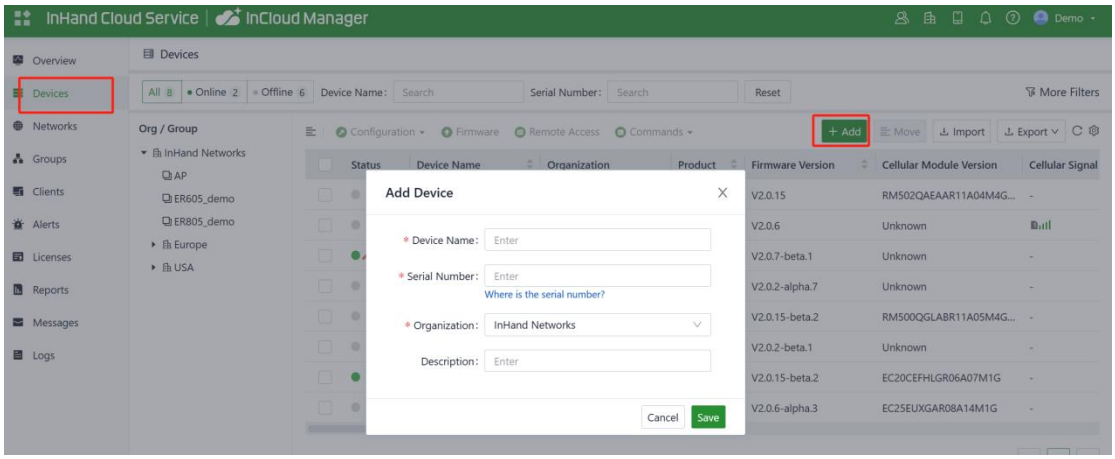


Fig. 5-1-2 Add a Device

7.6. Quick User Guide

6.1 Restore to Default Settings

6.1.1 Reset/Restore Remotely

Log in to the InCloud Manager platform, navigate to "Device," and select "Command" from the menu. Click the "Restore to Factory" button, confirm the action, and the device will reboot and revert to its default settings.

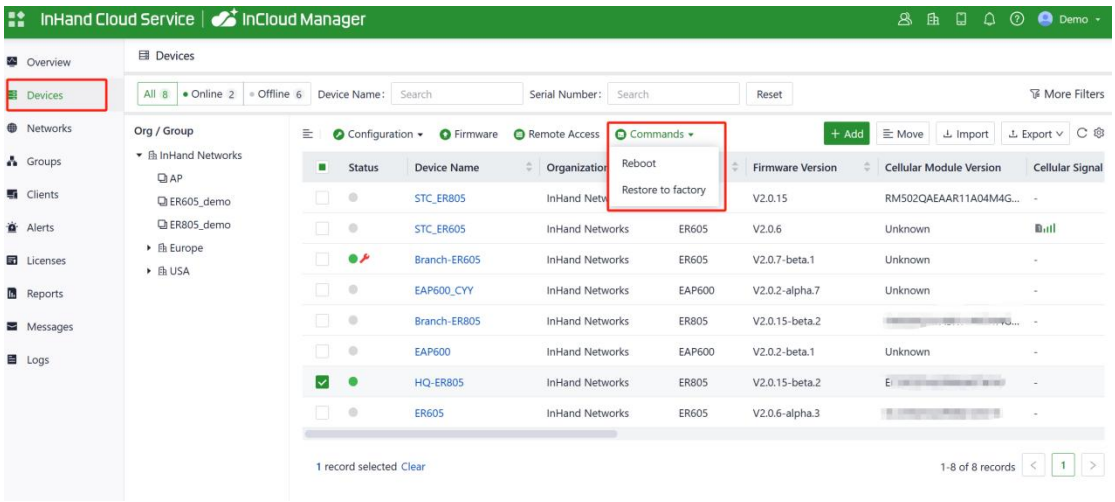


Fig. 6-1-1 Set the Device to Default Settings

6 .1.2 Hardware Restore

Step 1: After powering on the device, immediately press and hold the Reset button.

Step 2: After holding it for a while, the power indicator light will start flashing. Approximately half a minute later, the power indicator light will stay on steadily.

Step 3: Release the Reset button, and the power indicator light will flash again. Then, press and hold the Reset button once more.

Step 4: The power indicator light will flash slowly. Release the Reset button, and the factory reset will be successful. The device will restart normally.

6.2 Log and Diagnostic Data

Login to InCloud Manager, navigate to "Device," select "Device Details," and

click on the "Tools" menu in the navigation bar. Then, click the corresponding button to initiate the download of logs and diagnostic data.

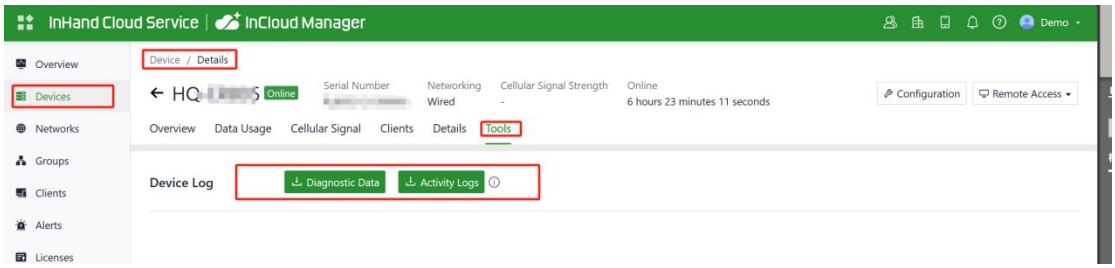


Fig. 6-2 Download the Logs

7.LED Indicators

Indicators	Status and Description
System	Off --- Power Off Blink in blue --- System booting in progress. Steady in blue --- The system is running smoothly. Blink in red --- System malfunction detected. Blink in green --- System upgrading in progress.
Network	Blink in red --- Network disconnected. Blink in green --- Cellular network connecting. Steady in green --- Cellular network connected. Blink in blue --- Wired network connecting. Steady in blue --- Wired network connected.
Wi-Fi 2.4G	Off --- 2.4G Wi-Fi disabled. Steady in blue --- Starting up. Blink in blue --- On working
Wi-Fi 5G	Off --- 5 G Wi-Fi disabled. Steady in green --- Starting up. Blink in green --- On working.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two
conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause
undesired operation.
NOTE 1: 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, 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party

responsible for compliance could void the user's authority to operate the equipment.

RF Exposure

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled

environment. This device should be installed and operated with minimum distance 20cm

between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or

transmitter. The availability of some specific channels and/or operational frequency bands is

country dependent and firmware programmed at the factory to match the intended destination.

The firmware setting is not accessible by the end user.

IC STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s): Operation is
subject to the following Two conditions:
(1) this device may not cause interference, and
(2) This device must accept any interference, including interference that may cause undesired operation
of the device.
Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio
exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareildoit accepter tout brouillage radioélectrique subi, même si le
brouillage est
susceptible d'en compromettre le fonctionnement.
CAN ICES-3 (B)
Avis d’Industrie Canada
Le présent appareil est conforme aux CNR d'industrie Canada applicables aux appareils radio
exem pts de licence L'exploitation est autorisée aux deux conditions suivantes:
1) I'appareil ne doit pas produire de brouillage; et
2) I'utillsateur de I'appareil doit accepterbrouillage radioélectrique subi meme si le brouillage
est susceptible d'encompromettre le fonctionnement. mauvais fonctionnement de I'appareil.
Cet appareil numériquie de la classe B est conforme à la norme NMB-003 du Canada.
CAN NMB-3 (B)
Radiation Exposure Statement:

This equipment complies with IC 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.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un
environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de
20cm de distance entre la source de rayonnement et votre corps.