



**InBox710**

**User Manual**

InHand Networks

[www.inhandnetworks.com](http://www.inhandnetworks.com)

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## Preface

Thanks for choosing InBox710 Embedded Computer! This user manual will guide you in detail on how to configure InBox710.

## Readers

This manual is mainly intended for the following engineers:

- Network planners
- On-site technical support and maintenance personnel
- Network administrators responsible for network configuration and maintenance

## Conventions in the Manual

1. Format Conventions on Command Line



Format	Significance
Bold	Keywords of command line (the part that should be remained unchanged in command and be entered as it is) are expressed with <b>bold</b> font.
<i>Italic</i>	The parameters of command line (the part that must be replaced with the actual value in command) are expressed in <i>italic</i> .
[ ]	Indicating that the part in “[ ]” is optional in command configuration.
{ x   y   ... }	Indicating to select one from multiple options.
[ x   y   ... ]	Indicating to select one or not to select from multiple options.
{ x   y   ... } *	Indicating to select at least one from multiple options.
[ x   y   ... ] *	Indicating to select one or more or not to select from multiple options.
&<1-n>	Indicating that the parameter in front of the symbol & can be repeatedly entered for 1~n times.
#	The lines starting from no. “#” are comment lines.

## 2. Format Conventions on Graphic Interface

<b>Format</b>	<b>Significance</b>
<>	The content in angle brackets "<>" indicates button name, e.g. "click <OK> button."
[]	The content in square brackets "[]" indicates window name, menu name or data sheet, e.g. "pop-up the [New User] window".
/	Multi-level menu is separated by "/". For example, the multi-level menu [File / New / Folder] indicates the menu item [Folder] under the submenu [New] under the menu [File].

## 3. Various Signs

The manual also uses a variety of eye-catching signs to indicate the places to which special attention should be paid in operation. The significances of these signs are as follows:

 <b>Attention</b>	It indicates matters to be noted. Improper operation may cause data loss or damage to the device.
 <b>Instruction</b>	The necessary complement or description on the contents of operation.

## Technical Support

E-mail: [support@inhandnetworks.com](mailto:support@inhandnetworks.com)

[www.inhandnetworks.com](http://www.inhandnetworks.com)

## Information Feedback

If you have any question on product information in use, you can feed back through the following ways:

E-mail : [info@inhandnetworks.com](mailto:info@inhandnetworks.com)

Thanks for your feedback to let us do better!

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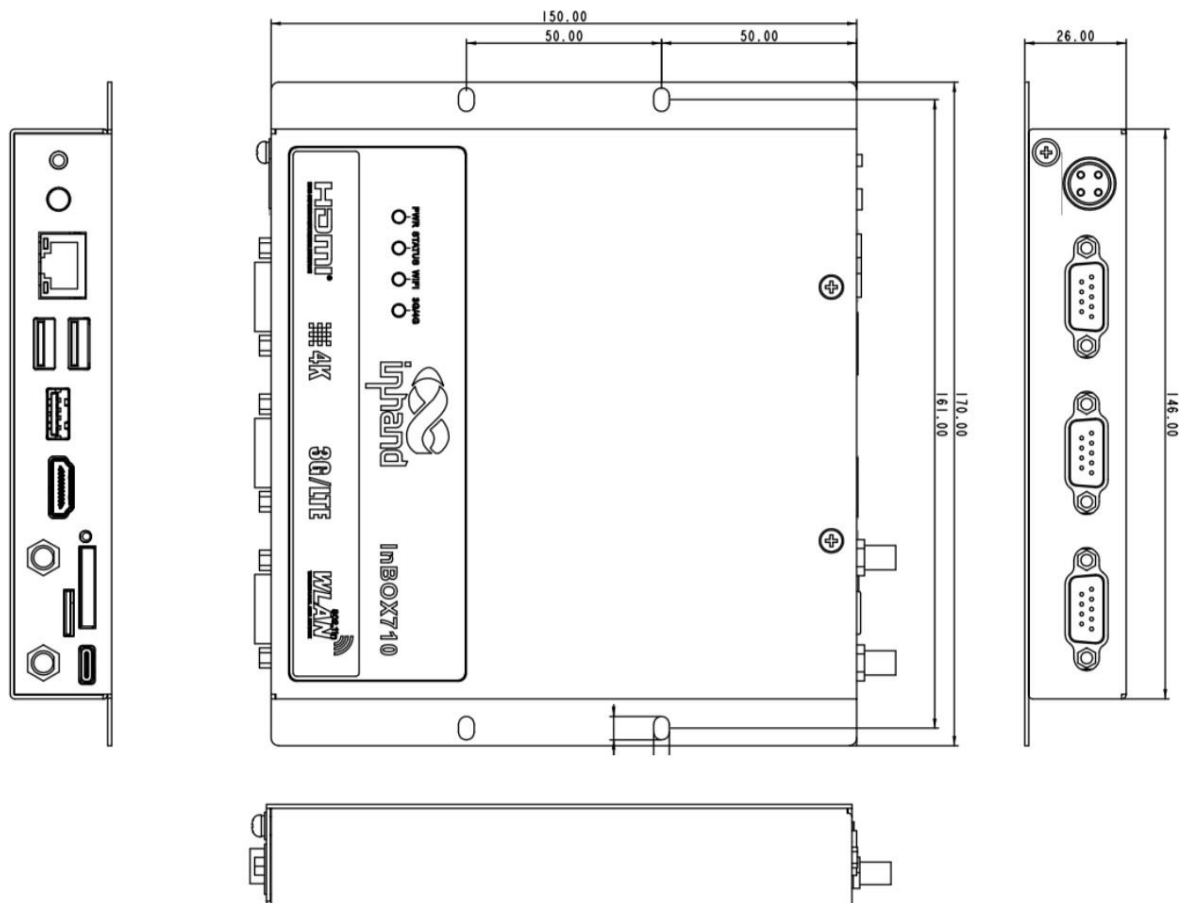
# Main Text

## I. InBox710 Introduction

### 1.1 Overview

The InBOX710 series is an industrial-grade edge computer powered by a high-performance ARM processor integrating dual-core Cortex-A72, quad-core Cortex-A53 and Mali T860 MP4 GPU, which enables artificial intelligence at the edge. Featuring 4K Ultra HD on HDMI, touch screen interface, advanced peripherals on USB & serial ports, and high-speed LTE connectivity, the InBOX710 is the engine of unattended retail solutions including Digital Signage, Self-service Kiosks, Mirco Market, and Smart Vending.

### 1.2. Dimensions



Dimensions of InBox710

## II. Function Description

### 2.1 Developer Options

Click the "settings" application and then click "About tablet", successively click "Android security patch level" twice, "Baseband version " 3 times, "Android security patch level" 4 times, and then keep clicking the "Build number" until "You are now a developer" is indicated. Then users can find "Developer options" in the "settings" application.

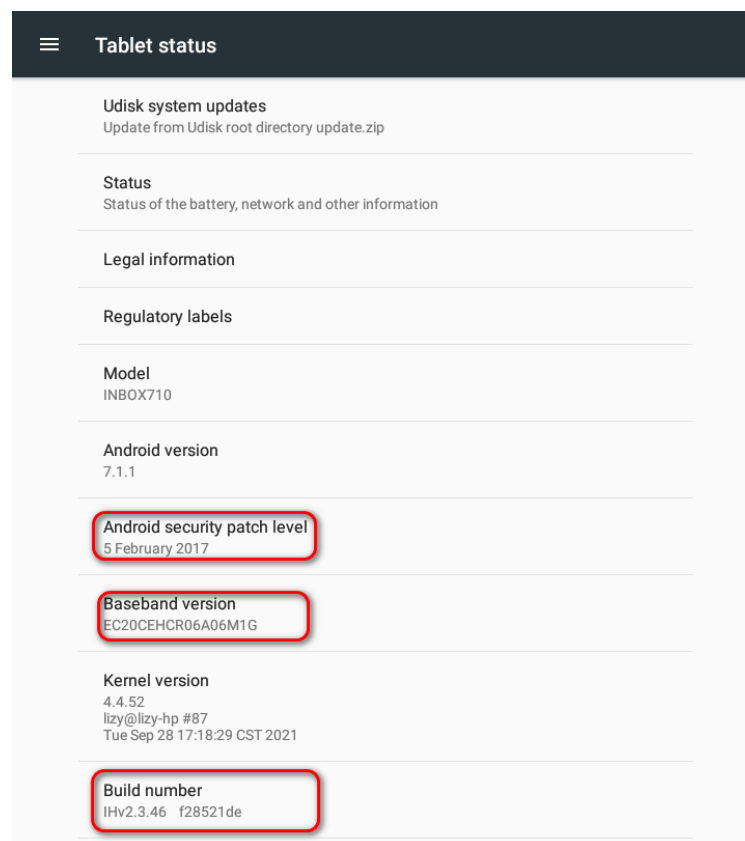


Fig. 2-1-1

In "Developer options", users can find these options:

USB debugging. After the option is enabled, the user can use ADB tool to access the device through typec interface.

Logging. After the option is enabled, the OS will log to the "/data/logger" directory.

Hardware Watchdog. After the option is enabled, a reboot is required. Otherwise it will not take effect.

## 2.2 System Upgrade

Users can upgrade in Android system and recovery mode through U disk, or send broadcast command to upgrade through ADB.

### Method 1: Upgrade with U disk in Android system

Rename the upgrade file as "update.zip" and copy it to a U disk, then plug the U disk into inbox710. Click "About tablet >> Udisk system updates in the "settings" application, as shown in figure 2-2-1, and the system will automatically install the update and restart.

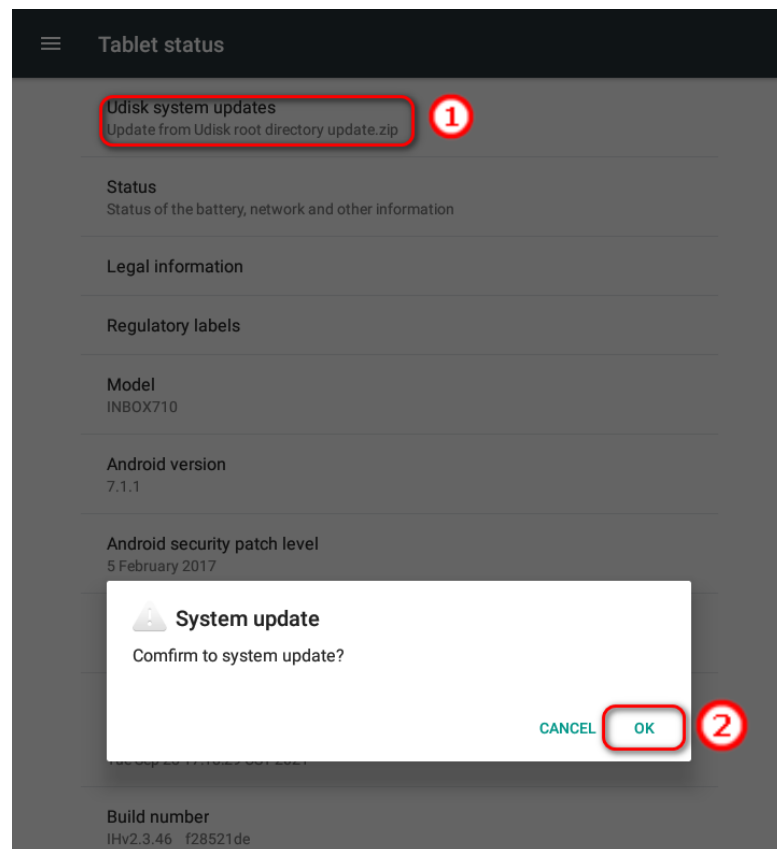


Fig. 2-2-1

### Method 2: Upgrade with U disk in Recovery mode

Rename the upgrade file as "update.zip" and copy it to a U disk, then plug the U disk into inbox710. Press and hold the mode key , then power on the inbox710 to enter the recovery mode. Select "apply update from udisk" and confirm (press the mode key to switch the options, and press the on / off key to confirm the options), then select the upgrade file and confirm, and the system will install the upgrade automatically. After the installation is completed, select "reboot system now" to complete the installation. As shown in Figure 2-2-2.



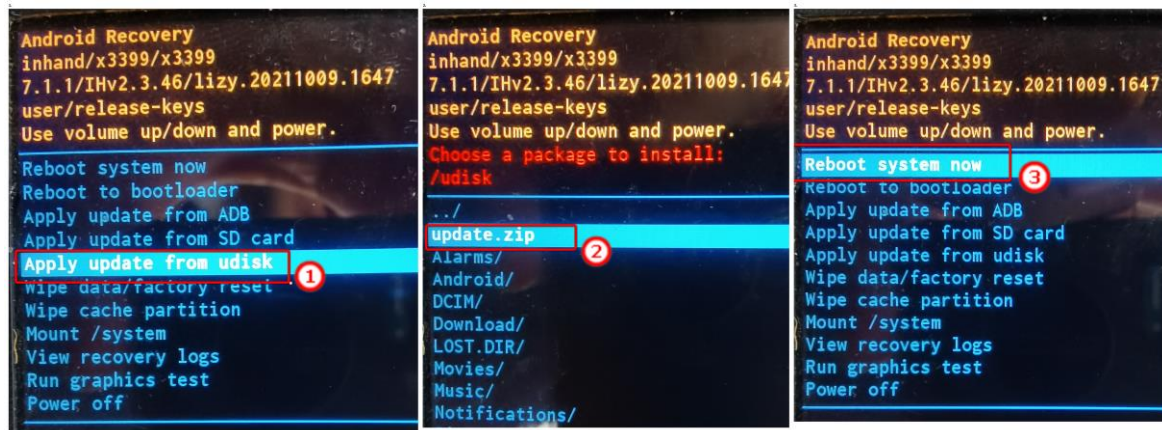


Fig. 2-2-2

### Method 3: Upgrade with broadcast command

Rename the upgrade file as " update.zip" and copy it to "/sdcard" directory.Enable "USB debugging" in "Developer options".Send broadcast command " adb shell am broadcast -a com.ubox.upgraderom --include-stopped-packages " through ADB tool. Then InBox710 will automatically install the update and restart.



#### Instruction

Method 3 can be used for FOTA of inbox710. Download the upgrade file to " / sdcard "directory and rename it as " update.zip ".Then execute broadcast command " am broadcast -a com.ubox.upgraderom --include-stopped-packages ".

## 2.3 Display Settings

### 2.3.1 Full Screen Display

Click the "settings" application and then click "Display".Then enable "Full Screen".

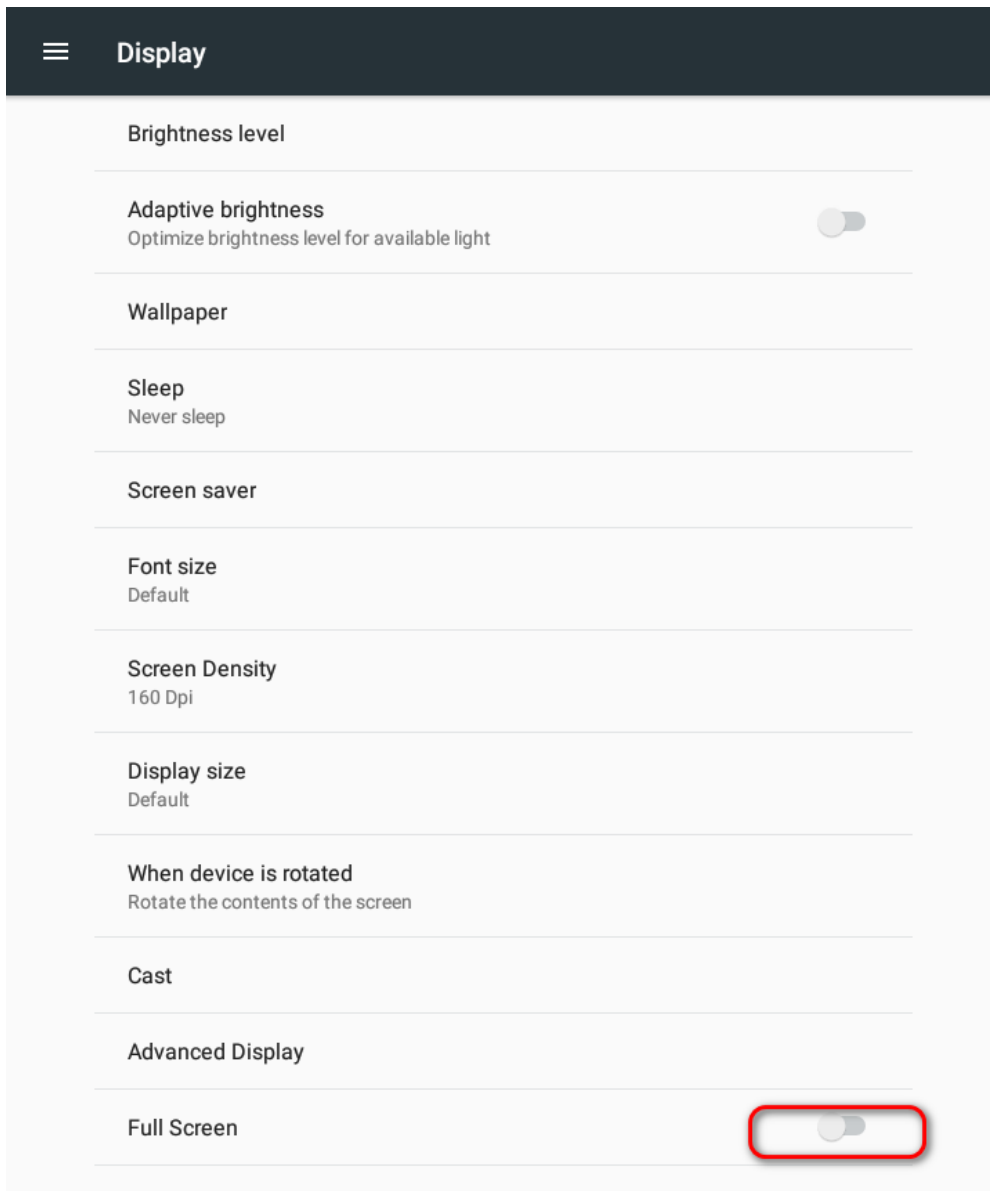


Fig. 2-3-1

After the prompt box of "Reboot to take effect" appears, click OK. As shown in Fig. 2-3-2

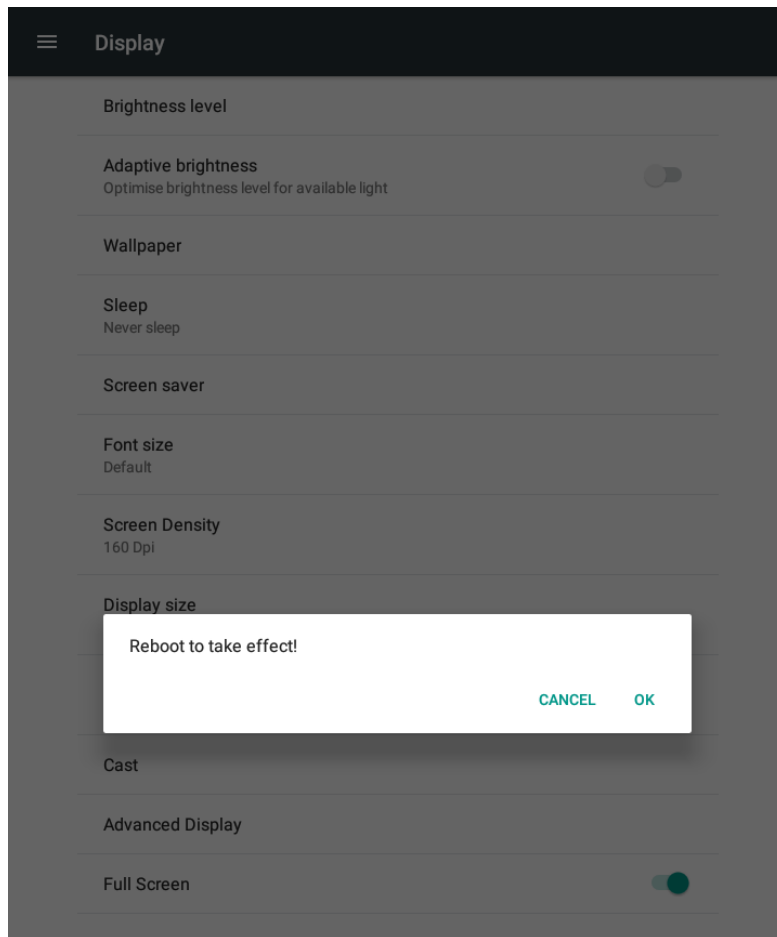


Fig. 2-3-2

### 2.3.2 Resolution Setting

Click "Settings >> display >> advanced display", select "Display Mode" to open the resolution setting dialog box, and select the resolution according to your screen, as shown in Figure 2-3-3.

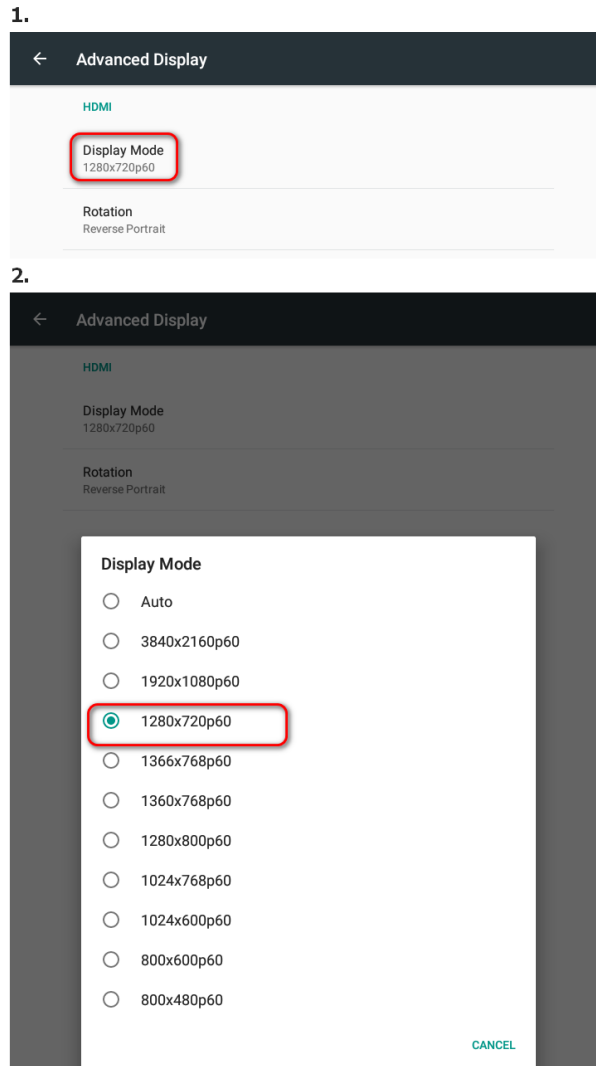


Fig. 2-3-3

After selecting the resolution, click OK in the pop-up dialog box of "Configuration Change, Need reboot", and it will reboot and take effect then, as shown in Figure 2-3-4.

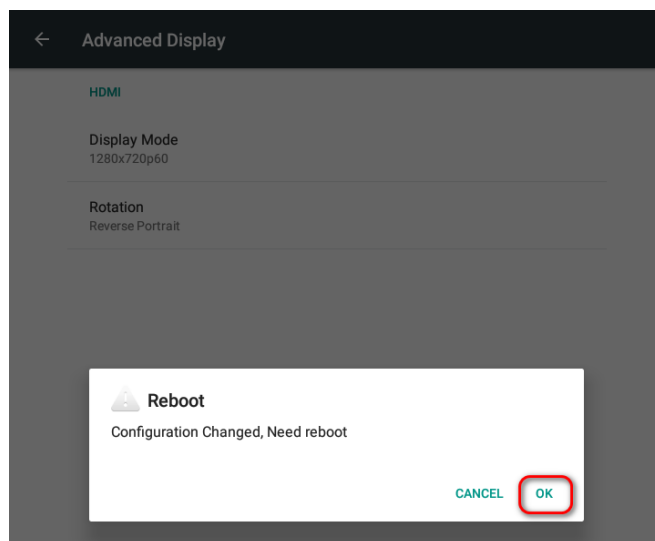


Fig. 2-3-4

### 2.3.3 Screen Rotation Settings

Click "Settings >> Display >>Advanced Display", select "Rotation" to open the Rotation setting dialog box, and select the required rotation direction, as shown in Figure 2-3-5.

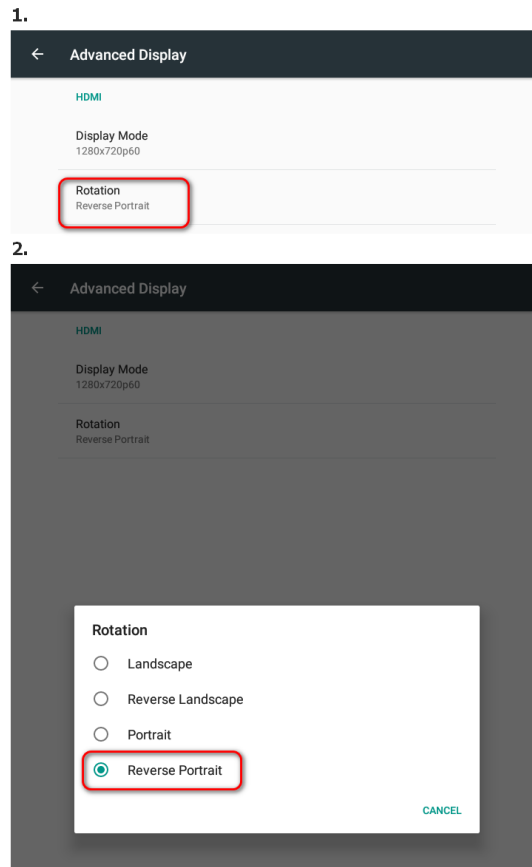


Fig. 2-3-5

After selecting the rotation, click OK in the pop-up dialog box of "Configuration Change, Need reboot", and it will reboot and take effect then, as shown in Figure 2-3-6.

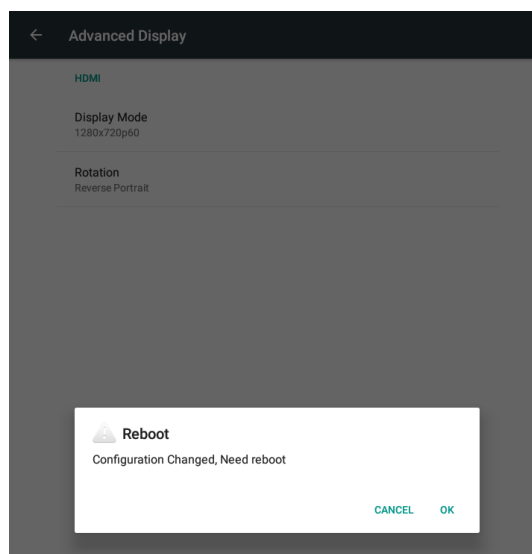


Fig. 2-3-6

## 2.4 Ethernet Settings

The Ethernet port of inbox710 can be used as WAN port or LAN port. It is disabled by default. As shown in Figure 2-4-1.

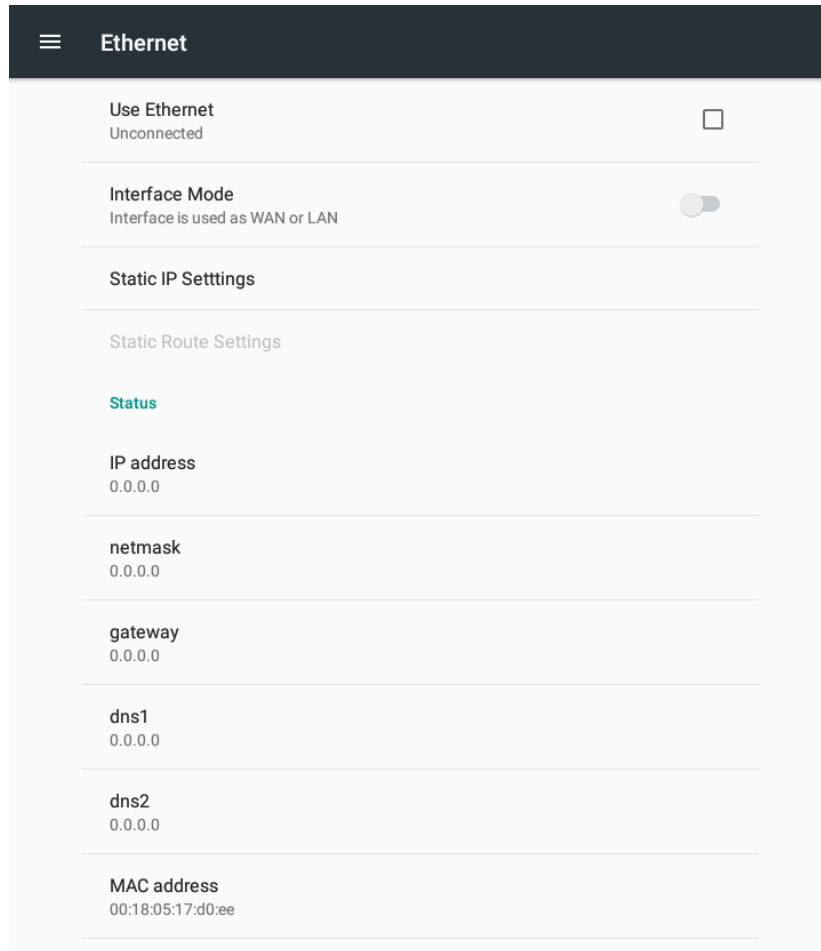


Fig. 2-4-1

### 2.4.1 Used As WAN Interface

Click "Settings >> Ethernet". Click "Use Ethernet" to enable the Ethernet port. When enabled, the Ethernet is used as WAN interface by default. The WAN interface obtains ip address through DHCP by default. After successfully obtaining the address, the system will display the obtained WAN port IP address, netmask, default gateway, DNS server and other interface information, as well as routing information. As shown in Figure 2-4-2.

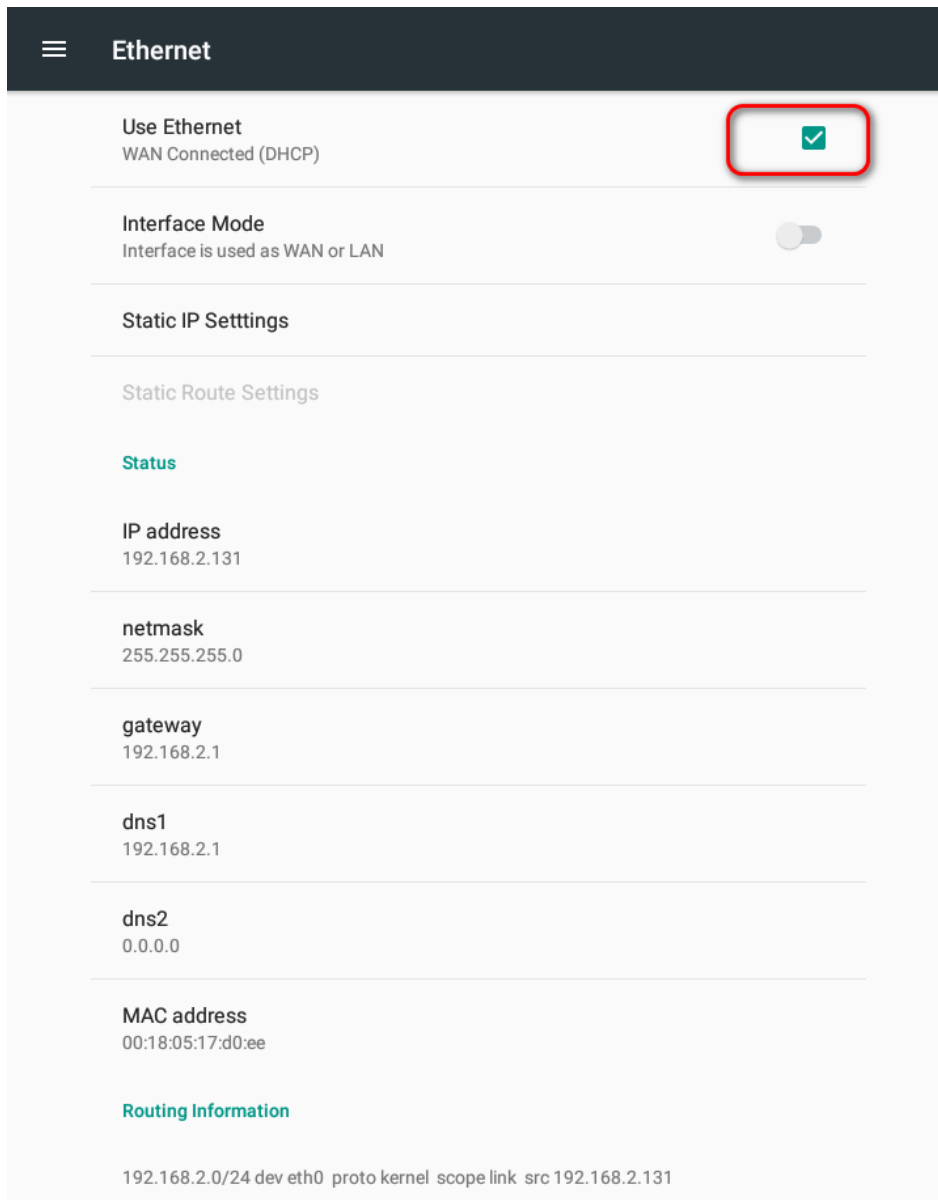
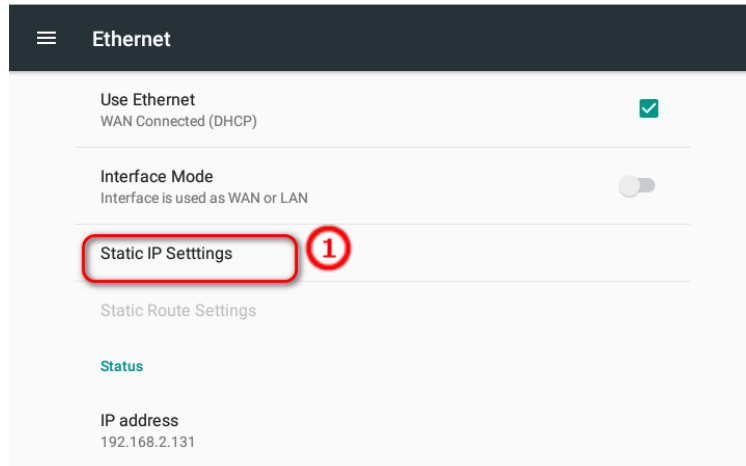


Fig. 2-4-2

The WAN interface can set a static IP address. Click "Static IP Settings". On the "static IP address" page, click "Use static IP " to set the IP address, netmask, default gateway, preferred DNS server and alternative DNS server of the WAN interface. Click save in the upper right corner to save the configuration. As shown in figure 2-4-3.

1.



2.

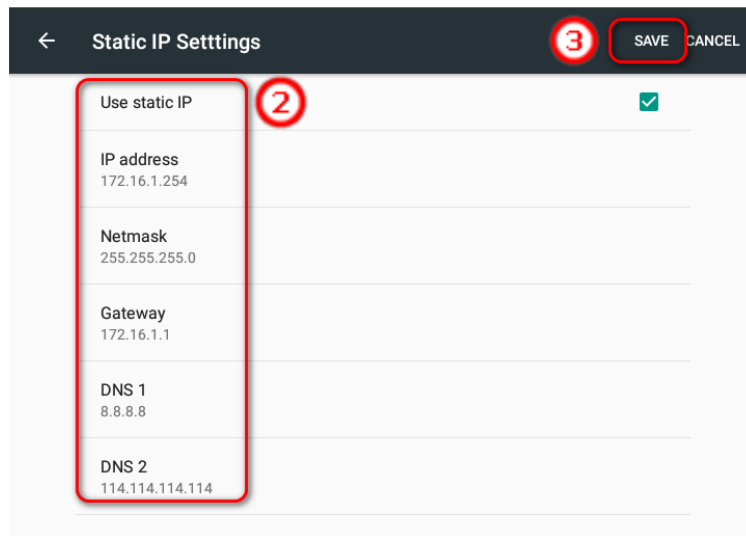


Fig. 2-4-3

on the Ethernet page ,users can see the IP address, netmask, default gateway, DNS server and other information of the WAN in, as well as the generated routing information. As shown in Figure 2-4-4.



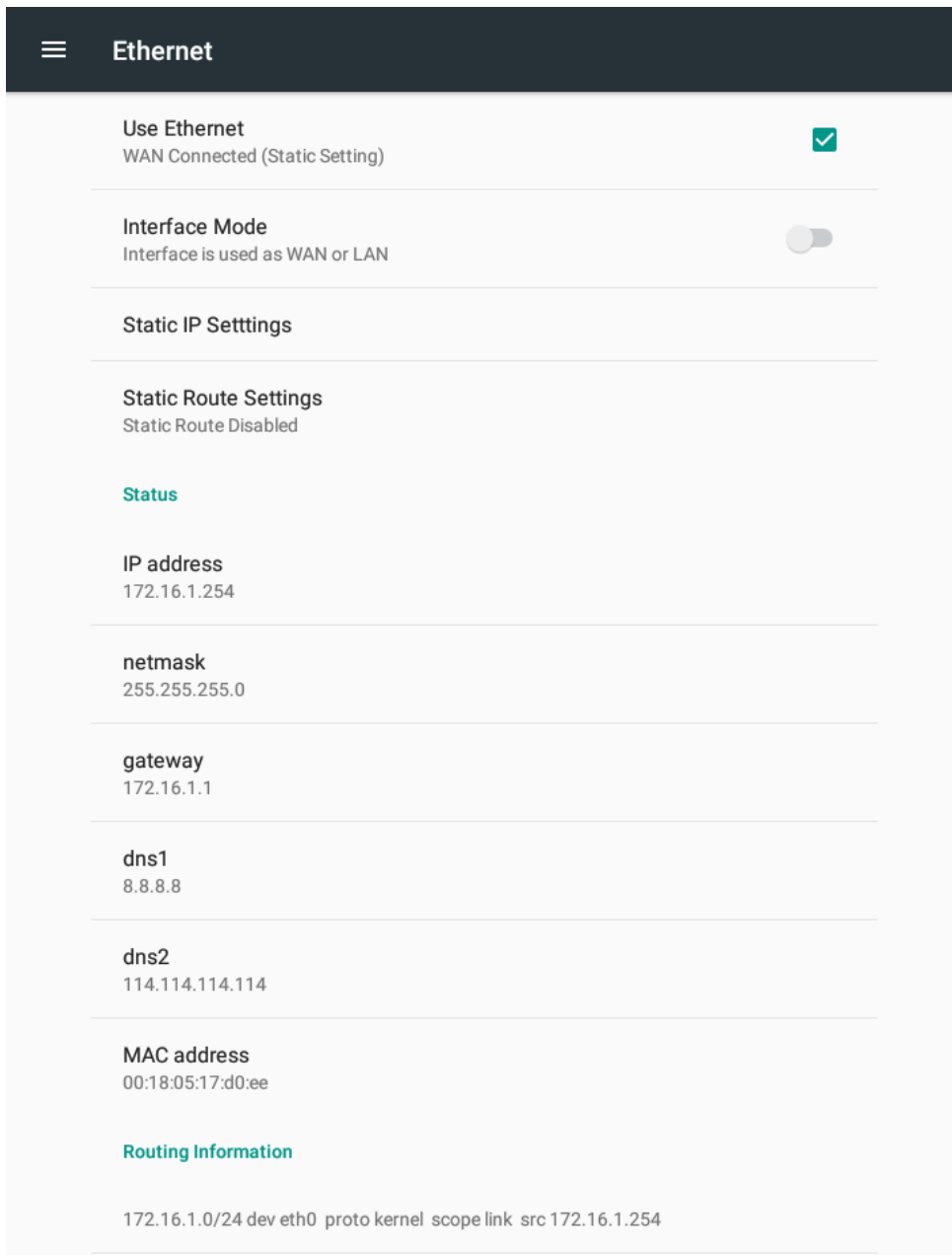


Fig. 2-4-4

## 2.4.2 Used As LAN Interface

On the "Ethernet" page, click "Use Ethernet" to enable Ethernet, Click "interface mode", and the Ethernet will be used as a LAN interface. The default ip address of LAN interface is 192.168.1.100 and the mask is 255.255.255.0. As shown in Figure 2-4-5.

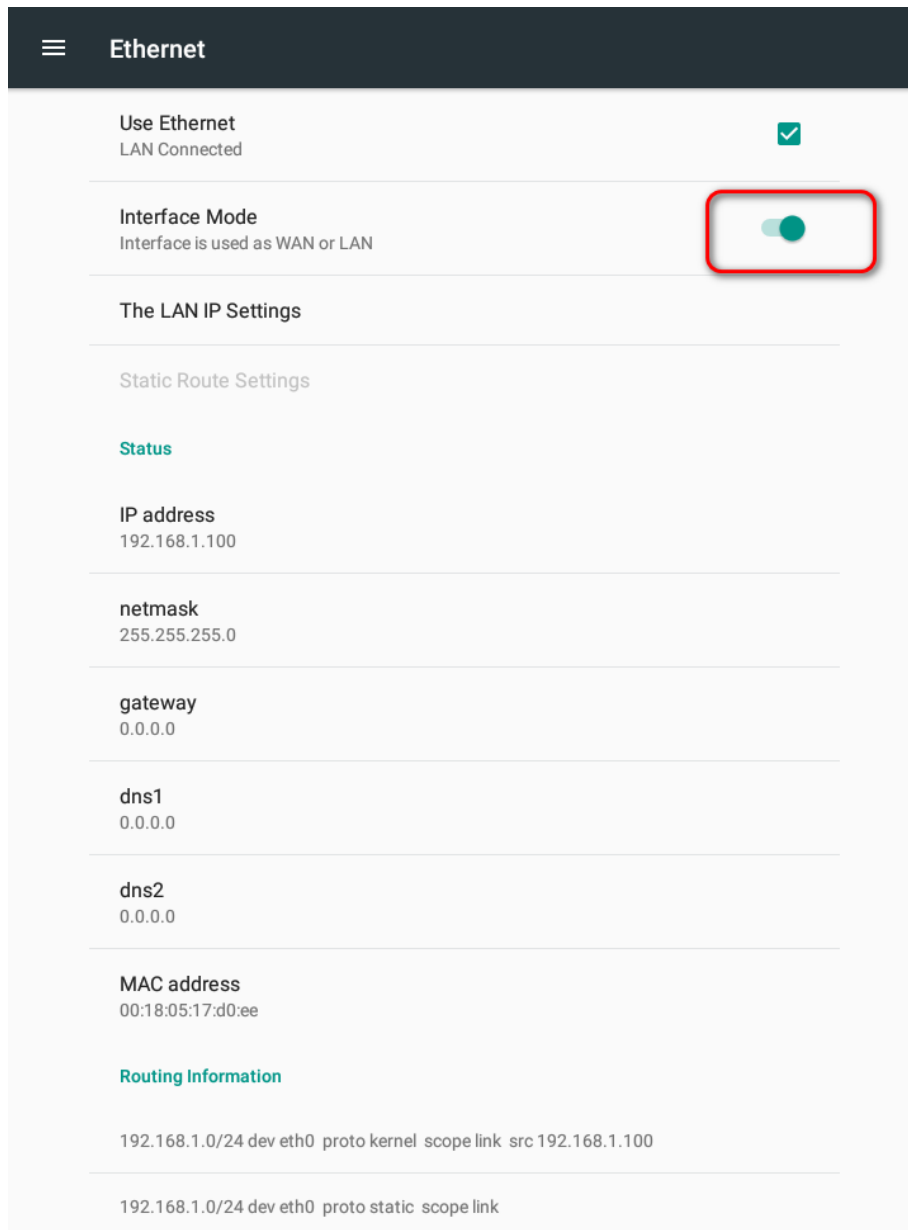
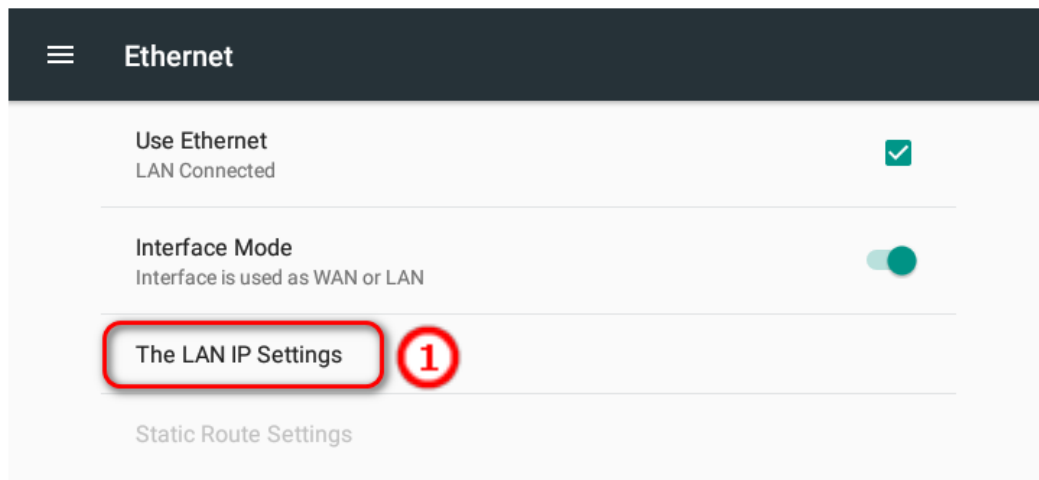


Fig. 2-4-5

On the "Ethernet" page, click "The LAN IP Settings". Users can customize LAN interface IP settings. On the "The LAN IP Settings" page, modify the IP address and netmask, and click "SAVE" to save the configuration. As shown in Figure 2-4-6.

1.



2.

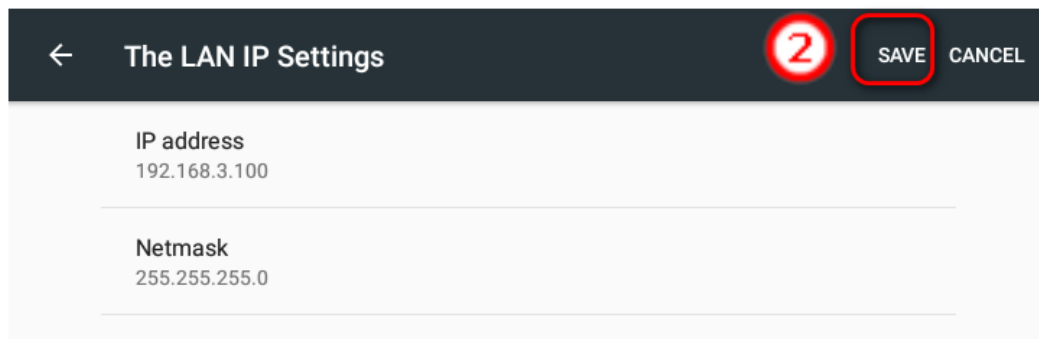


Fig. 2-4-6

Then on the "Ethernet" page, users can see information of LAN interface. As shown in Figure 2-4-7.

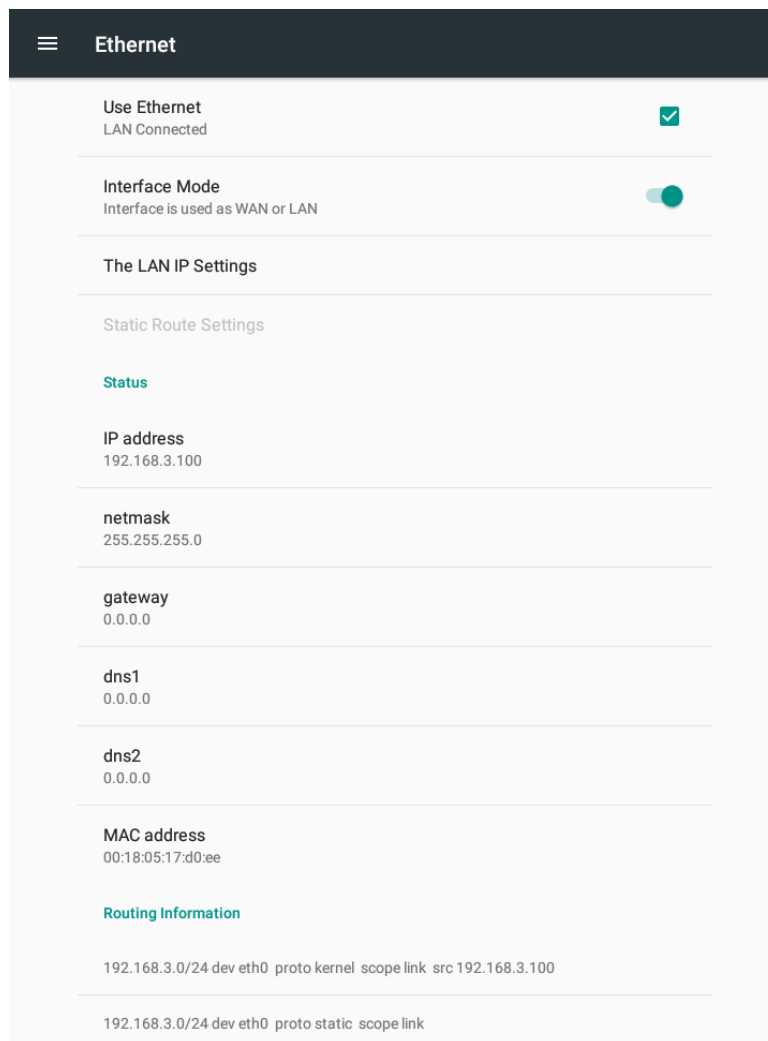


Fig. 2-4-7

## 2.5 WiFi Settings



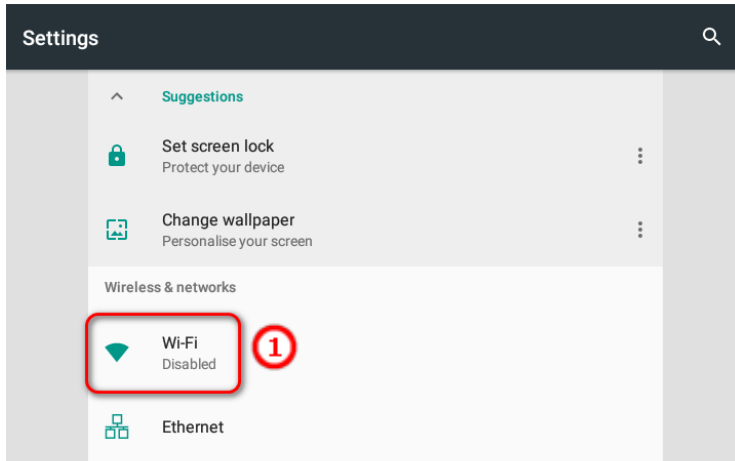
### Attention

Make sure the WiFi antenna is connected before enabling WLAN interface.

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Click "Settings >> Wi-Fi". Click the switch symbol in the upper right corner to turn on WiFi. As shown in Figure 2-5-1.

1.



2.

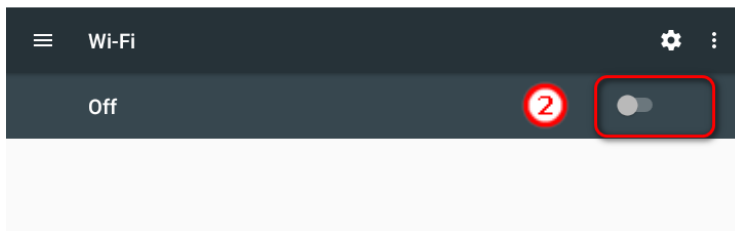


Fig. 2-5-1

In the WiFi networks list, the SSID and security settings (open network or WPA / WPA2 protection) of the surrounding WiFi networks will be automatically scanned. Select one of the WiFi networks to connect. When the encrypted network is selected, the enter password dialog box will pop up automatically. Enter the password and click "CONNECT". As shown in figure 2-5-2.

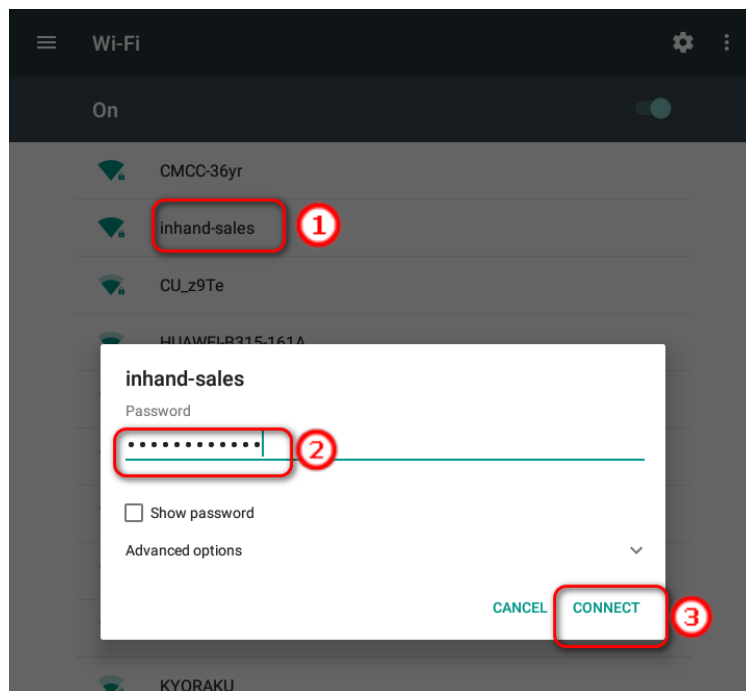


Fig. 2-5-2

If the connection is successful, the connected will be displayed in the network list. When connected, click the connected network to display the status information, signal strength, connection speed, security and frequency of the current network, as shown in Figure 2-5-3.

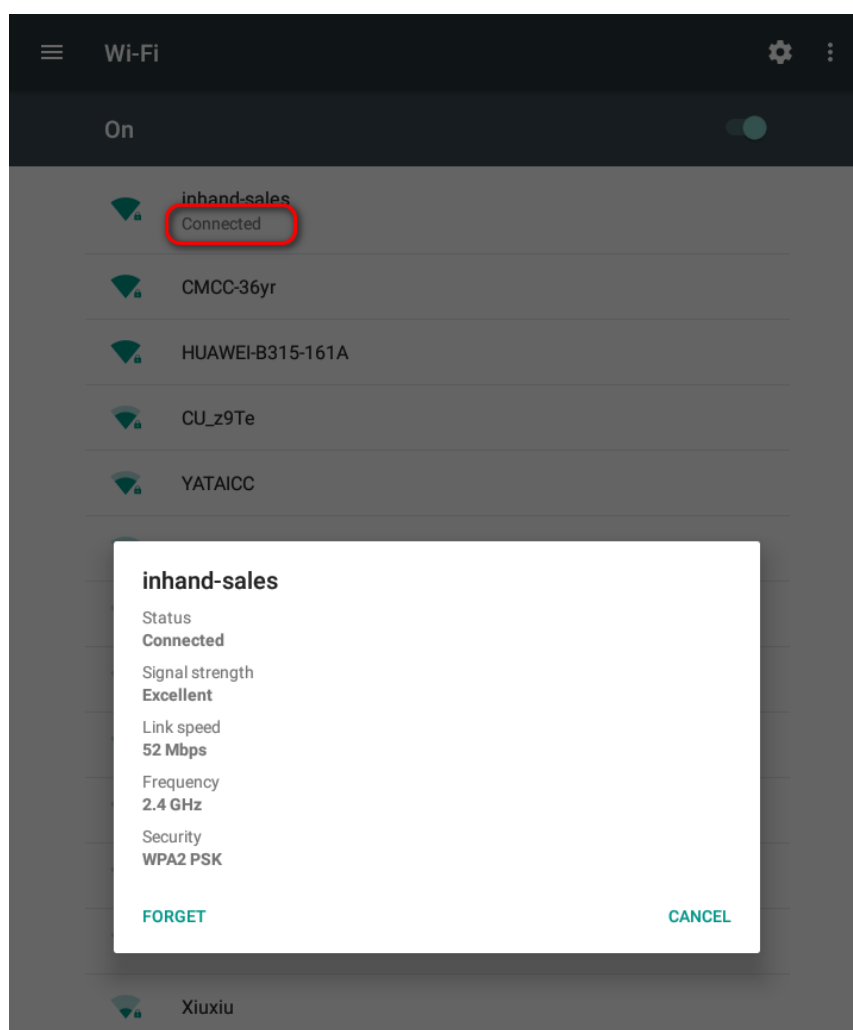
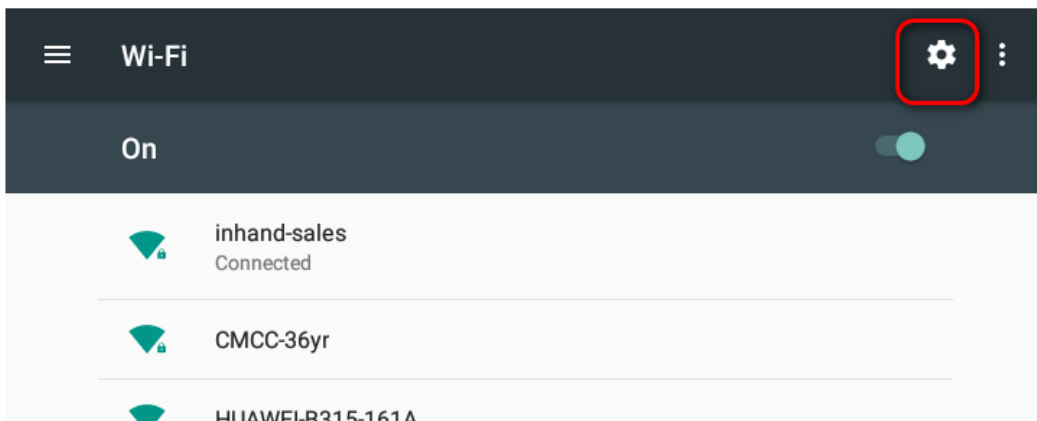


Fig. 2-5-3

When Users need to remove the current network, select "FORGET" in the current network information dialog box. When you need to connect next time, you need to re-enter the password for authentication.

Click the setting symbol in the upper right corner , Users can see the MAC address and IP address of the WiFi interface. As shown in figure 2-5-4.

1.



2.

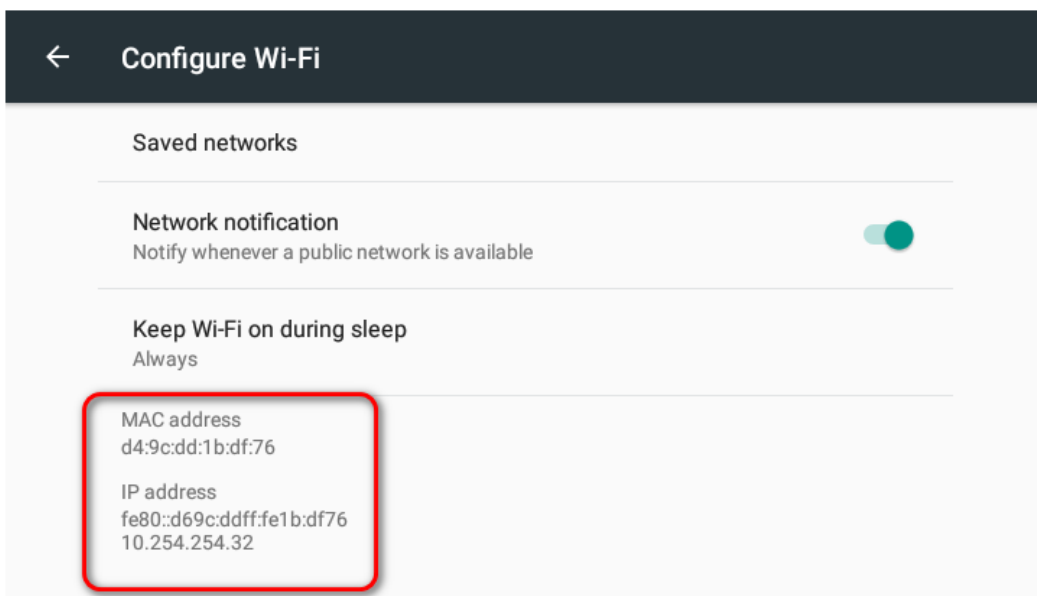


Fig. 2-5-4

## 2.6 4G Settings

Inbox710 series can install different network modules to meet customers' needs for different 4G Mobile Communication System.

### 2.6.1 APN Settings

For SIM cards with special APN, the APN of the card needs to be set. Click "Settings >> wireless and networks >> more >> Cellular networks >> Access Point Names ", click the add symbol in the upper right corner, fill in the name and APN, and click the upper right corner to save. As shown in Figure 2-6-1.

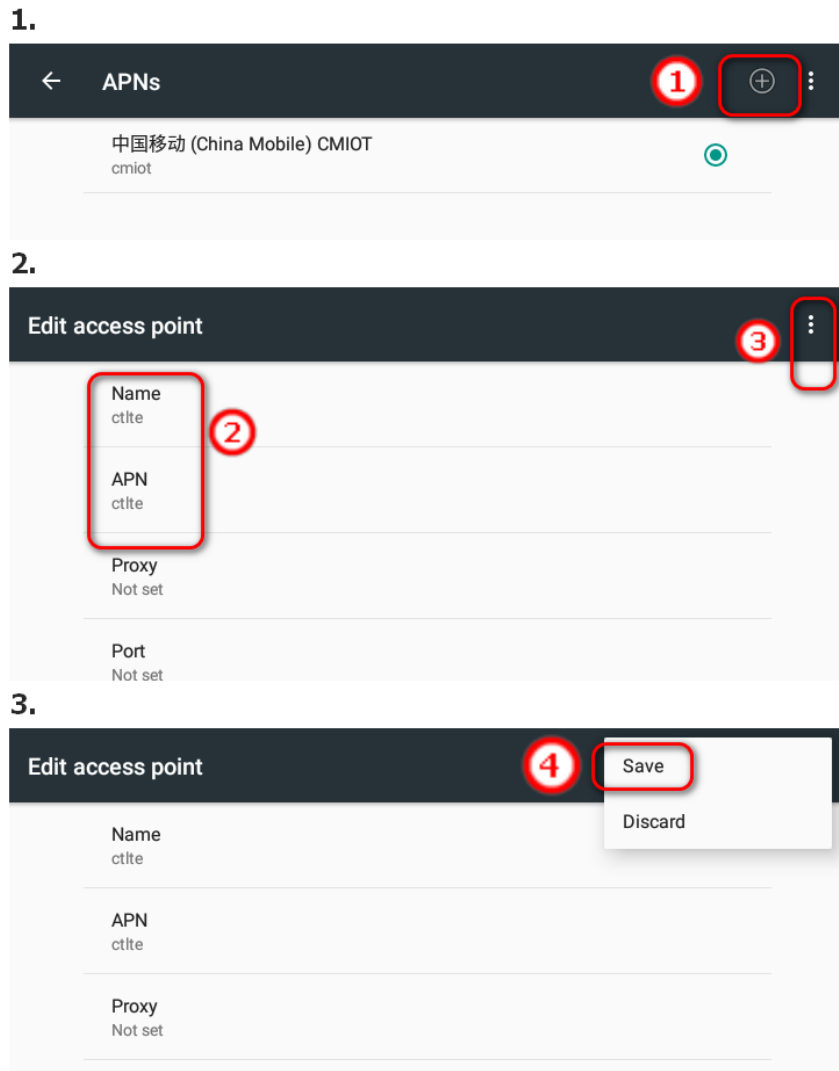


Figure 2-6-1

In the APN list, select the added APN. As shown in Figure 2-6-2.

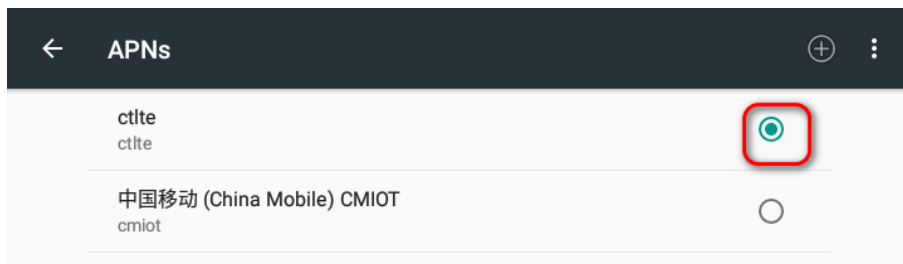


Figure 2-6-2

### 2.6.2 ICMP Detection

Inbox710 supports network detection and automatically detects the current network connectivity. If the detection fails, inbox710 will automatically redial. Click "Settings >> Wireless and networks >> more >> ICMP detection" to the ICMP detection page. ICMP detection is enabled by default. Click "Configure ICMP detail", in the pop-up dialog box, set parameters such as detection



server, and then click save. As shown in Figure 2-6-3.

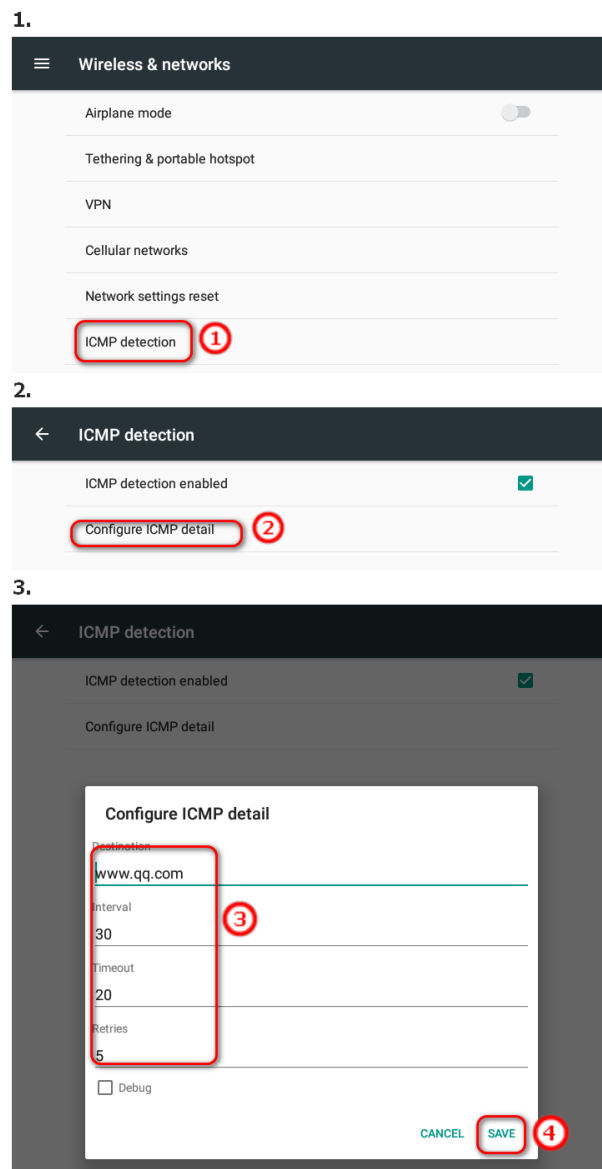


Figure 2-6-3

## 2.7 File Management

Select the "File Explorer" application to view the files and folders of the system. Users can also view external storage. File path of built in SD card is : / MNT / sdcard .File path of external SD card path is: / MNT / external1.

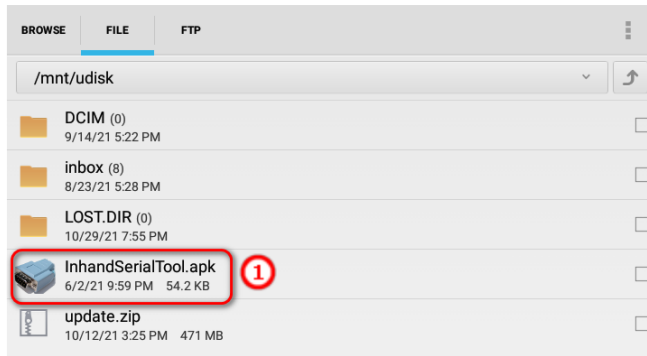
## 2.8 Application Installation and Uninstallation

### 2.8.1 Application Installation

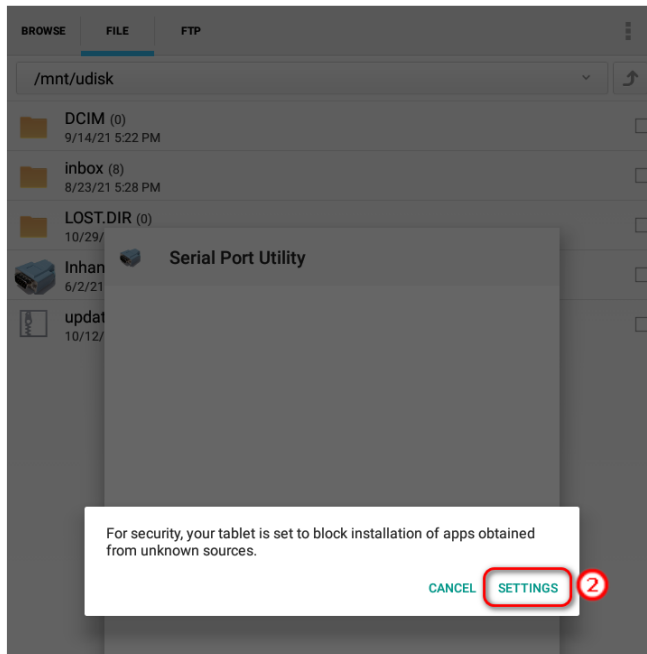
Select the "File Explorer" application, find the installation file (. APK file) in the "File" tab and click it. The installation prohibition dialog box will pop up for the first installation. Click "SETTINGS" to enable "Unknown source" in the "security" interface, as shown in Figure 2-8-1.

Then you can return to the File Explorer and click the installation file to complete installation.

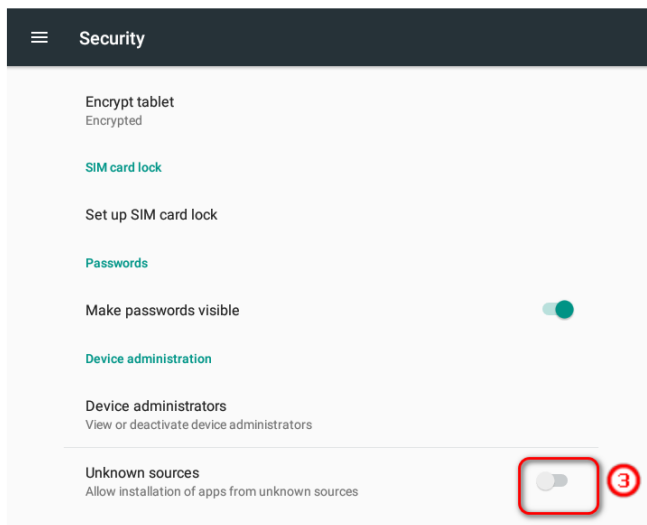
1.



2.



3.



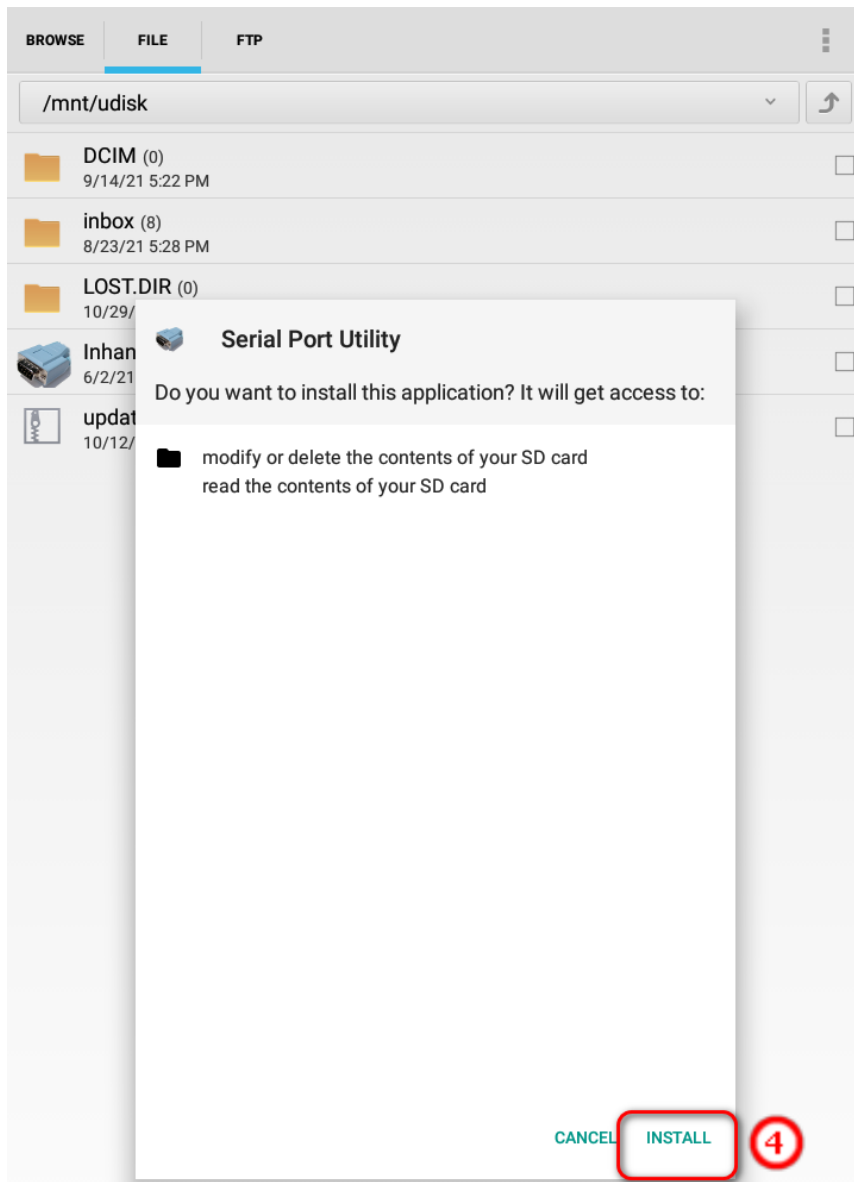
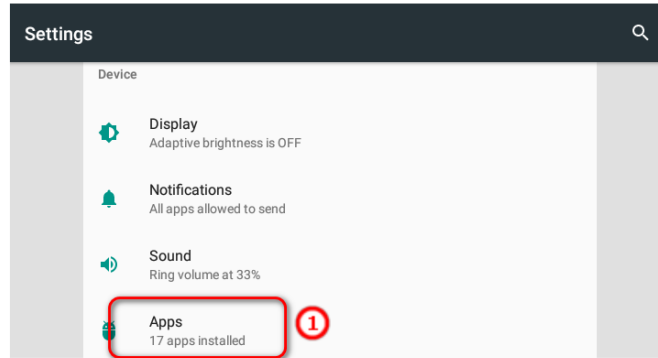


Figure 2-8-1

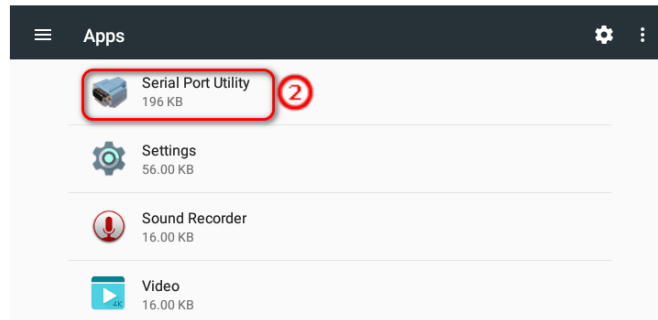
## 2.8.2 Application Uninstallation

Click "Settings > > Apps", click the application to be uninstalled in the application list, click "UNINSTALL", and click "OK" in the application information dialog box to uninstall the application.

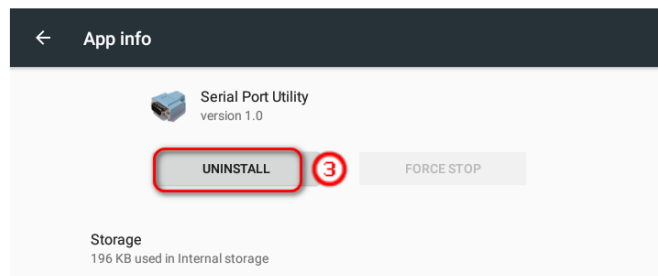
1.



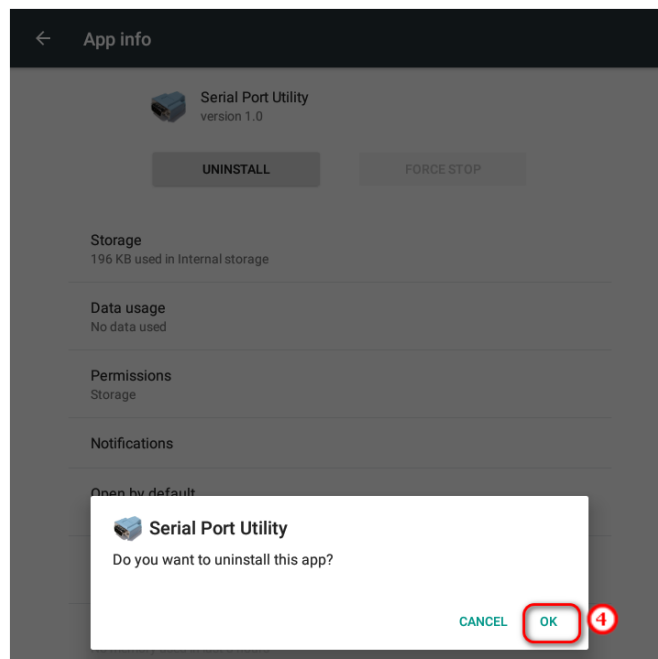
2.



3.



4.



## 2.9 Backup and Reset

Click "Settings >> Backup & reset >> Factory data reset >> RESET TABLET". Please use this function with caution. After selecting the factory setting, all data on the product will be clear.

## **2.10 On/off Key**

Press the key to switch the machine on and off. Short press this key to enter the sleep mode or wake up from the sleep mode. Long press it for more than 1 second, Users can choose to power off or restart the InBox710.

## **2.11 Mode Key**

Mode key can be programmed to realize some special functions.

## 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 présent 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'appareil doit accepter tout brouillage radio électrique 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 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'appareil doit accepter brouillage radio électrique subi même si le brouillage est susceptible d'en compromettre le fonctionnement. mauvais fonctionnement de l'appareil.

Cet appareil numérique 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.