IoT Display

DS7610

User Guide

Safety Precautions

Milesight will not shoulder responsibility for any loss or damage resulting from not following the instructions of this operating guide.

❖ The device must not be disassembled or remodeled in any way.

❖ Do not place the device outdoors where the temperature is below/above operating range. Do not place the device close to objects with naked flames, heat source (oven or sunlight), cold source, liquid and extreme temperature changes.

❖ The device must never be subjected to shocks or impacts.

❖ Do not power off the device when it is upgrading or formatting, or it will cause operation system error.

❖ Do not clean the device with detergents or solvents such as benzene or alcohol. To clean the device, wipe with a soft moistened cloth. Use another soft, dry cloth to wipe dry.

Declaration of Conformity

DS7610 is in conformity with the essential requirements and other relevant provisions of the CE and FCC.

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Get Help
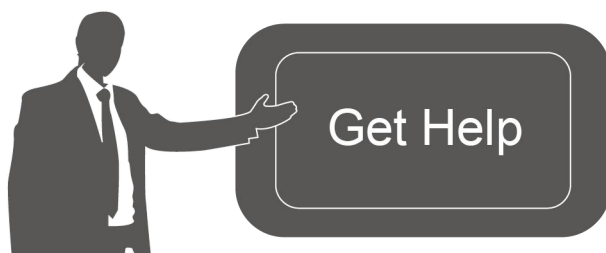
For assistance, please contact
Milesight technical support:
Email: iot.support@milesight.com
Support Portal: support.milesight-iot.com
Tel: 86-592-5085280
Fax: 86-592-5023065
Address: Building C09, Software Park III, Xiamen 361024, China

Revision History

Date	Doc Version	Description
Nov. 30, 2022	V 1.0	Initial version

Contents

1. Product Introduction

1.1 Overview

DS7610 IoT Display brings customers simplicity and a user-friendly experience in managing spatial conditions in rooms, offices, and buildings with just one single tap. As an advanced IoT solution, DS7610 has a built-in LoRaWAN® gateway and NFC to manage Milesight LoRaWAN® sensors and display intuitive data and the status on the screen.

More significantly, the 10.1-inch capacitive touchscreen display allows users to see and customize the user interface with easy settings and smooth screen switching. Customizable stepless adjusted RGB LED indicators of DS7610 can show the real-time spatial availability instantly even from a long distance.

DS7610 also supports the 3rd-Party Android applications, allowing users to install applications as needed, such as Meeting Room Booking System, Visitor Appointment Systems, Smart Restroom Management Systems, and more.
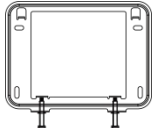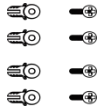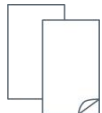
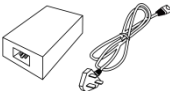## 1.2 Features

- Quad-core industrial processor with great memory
- Straightforward user interfaces presented on 10.1-inch capacitive touch screen with customizable stepless adjusted RGB LED indicators on the sides
- Plug-and-play PoE, DC power, or Type-C power supply available
- Provide easy installation, flexible mounting options, and specialized design to hide wires
- Equipped with NFC for Milesight LoRaWAN® nodes configurations, ID identifications, contactless meeting check-in, etc.
- Support extra DI/DO/RS485 industrial serial ports via optional docking station
- Built-in one-channel SX1262 LoRaWAN® gateway module is well-qualified to manage end nodes indoors, showcase intuitive status, streamline management, and simplify control and maintenance
- Provide SDKs to develop and install 3rd-Party Android applications and allows to customize systems
- Provide application customization services including Meeting Room Booking Systems, Visitors Appointment Systems, Smart Restrooms Management System and more

● Built-in ambient light sensor and proximity sensor automatically adjust the screen's brightness according to external light conditions for saving energy
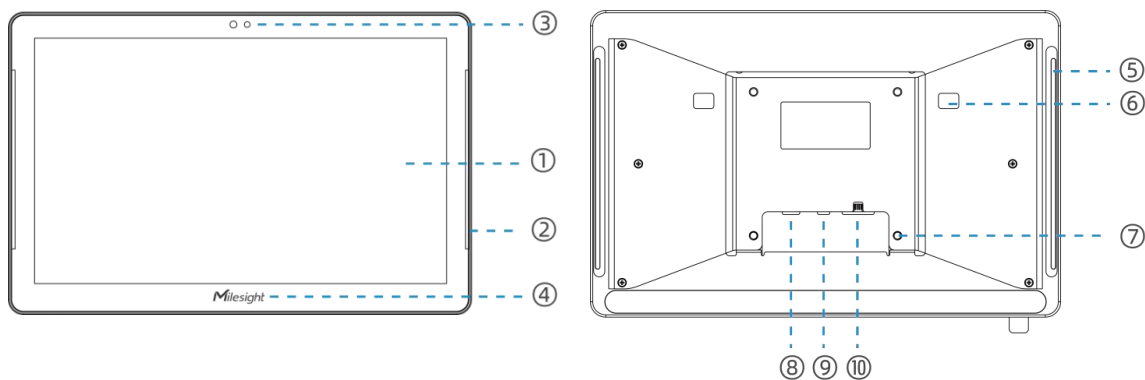
2. Hardware Introduction

2.1 Packing List

1 × DS7610 Device	1 × Wall Mount Bracket	4 × Wall Mount Screw Kits	4 × VESA Mount Screws	2 × Adhesive Tapes
1 × Adhesive Tape Instruction	1 × PoE Injector (Optional)	1 × Quick Installation Guide	1 × Warranty Card	

⚠ **If any of the above items is missing or damaged, please contact your sales Representative.**

2.2 Hardware Overview

No.	Description
①	Touch screen
②	Front LED light strip
③	Light sensor & distance sensor

| ④	NFC area
⑤	Back LED light strip
⑥	Wall mount hole
⑦	VESA 75*75mm
⑧	Type-C port
⑨	DC power jack
⑩	Ethernet port (PoE PD)

Note:

1) To use the back LED light strip, please remove the blackout tape.

2) DS7610 does not support inserting micro SD card since micro SD slot is inside the device, please contact Milesight to preinstall the micro SD card before shipment.

3) There is a recovery button next to the type-C port, please do not press and hold it. If there is any device problems, please contact Milesight technical support before using this button.

## 2.3 Dimensions(mm)
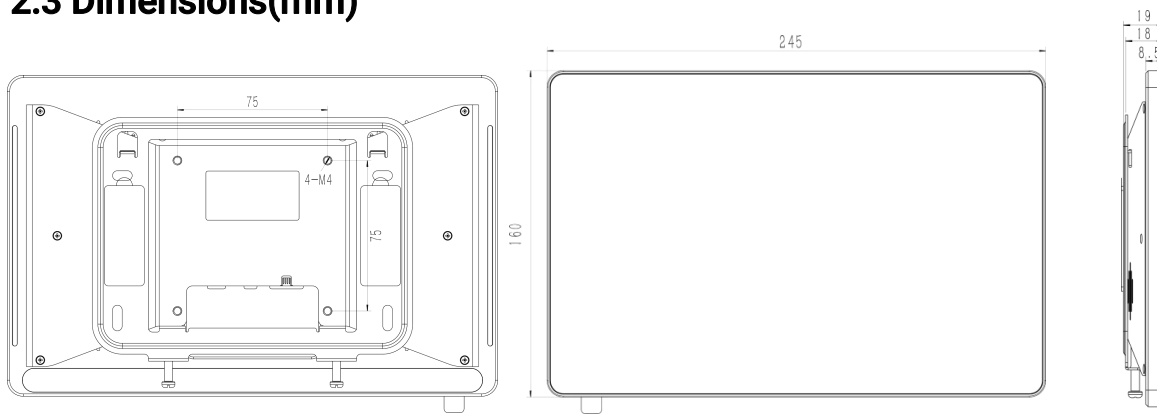
3. Power Supply

Milesight IoT Display DS7610 can be powered via a PoE injector, PoE switch, Type-C port or a DC power adapter. Choose one of the following methods to power up the IoT Display.
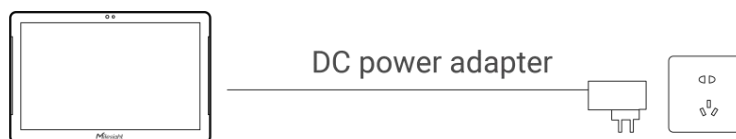
● **Powered by a PoE injector**
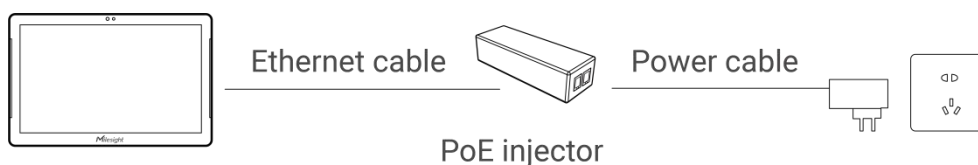
Connect the Ethernet cable of the IoT Display to the Data&Power port of the PoE injector. Plug the power cable from PoE injector to a power outlet.
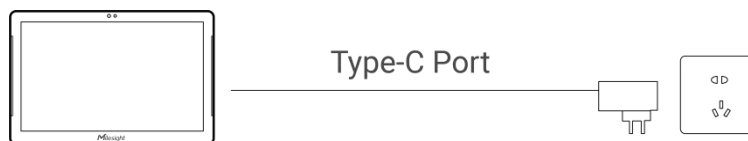
- **Powered by a PoE switch**
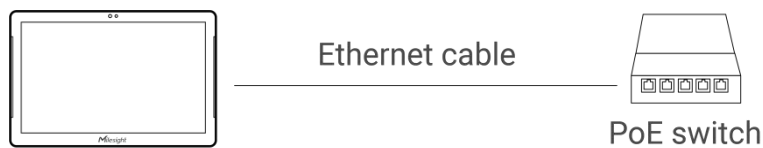
Connect the Ethernet cable of the IoT Display to a PoE switch.

- **Powered by a DC power adapter**

Connect the DC power jack of the IoT Display and the power outlet with a DC power adapter (3.5 * 1.3mm plug).

- **Powered by a Type-C port**

Connect the Type-C port of the IoT Display and the power outlet with a Type-C cable.

4. Software Guide

4.1 Basic Screen Description

Home Screen

In the home screen, you can swipe up from the bottom to bring up the Application page. Besides, you can add the shortcut of apps here and remove or uninstall the apps by long-pressing and dragging them to the **Remove** or **Uninstall** button at the top of the screen.

Application

In the Application page, you can check and install applications and open them as necessary. You can also create a shortcut by long-pressing the app icon and dragging it to the home screen.
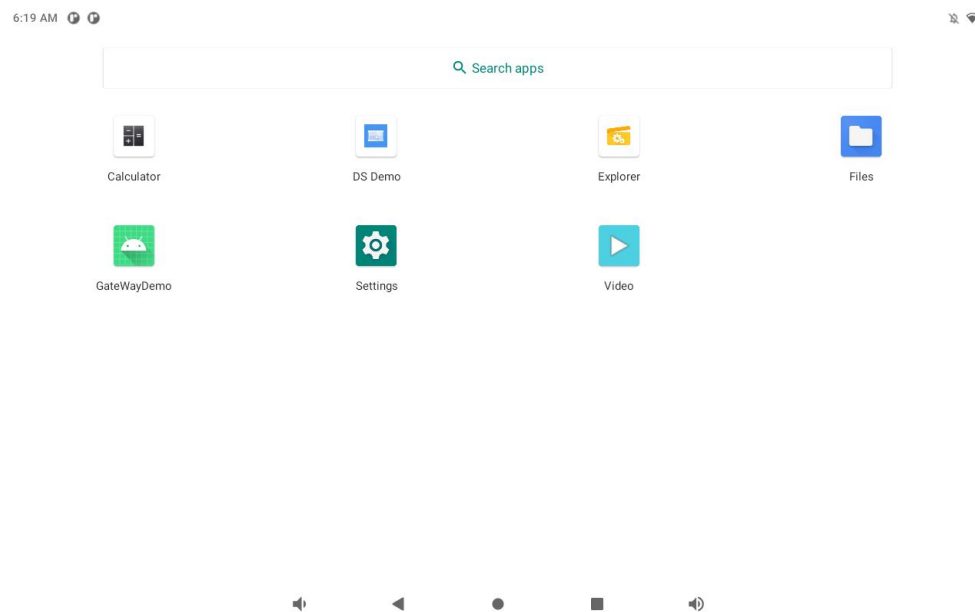
Status Bar

- **Volume-:** Decrease the system volume.
- **Back:** Return to the previous page.
- **Home:** Return to the home page.

- **Recents:** Switch between recently used applications, or take screenshot of the applications. You can also close an application by pulling up it.
- **Volume+:** Increase the system volume.

Status Notifications

Status notification bar displays system status such as time, Wi-Fi, USB connections, etc.

You can drop down the notification bar to open the shortcut window and check the details of notifications.
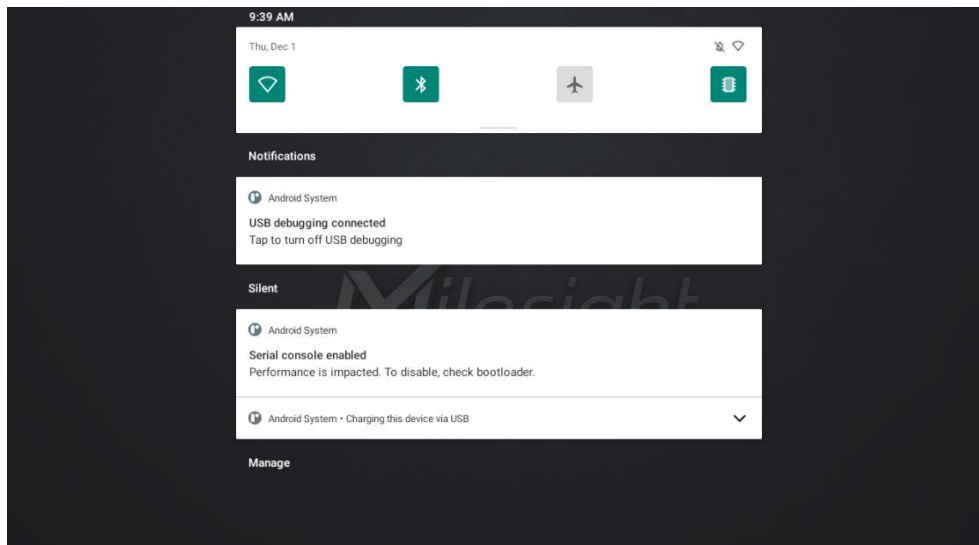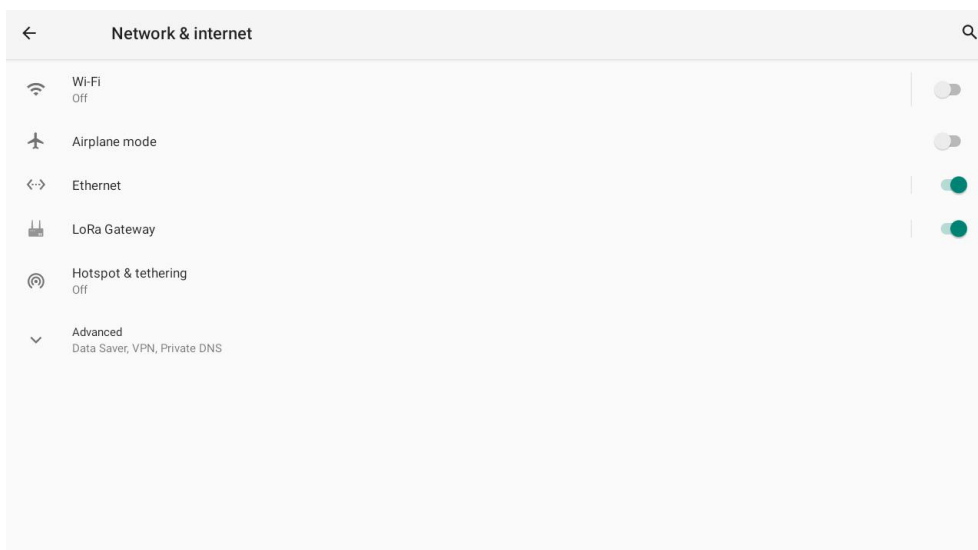

4.2 Communication

4.2.1 Wi-Fi Connection

On Application page, go to **Settings > Network & Internet,** enable **Wi-Fi** and select one WiFi AP to connect the device to wireless network. Note that if both Wi-Fi and Ethernet connection work, Ethernet will be used in priority.
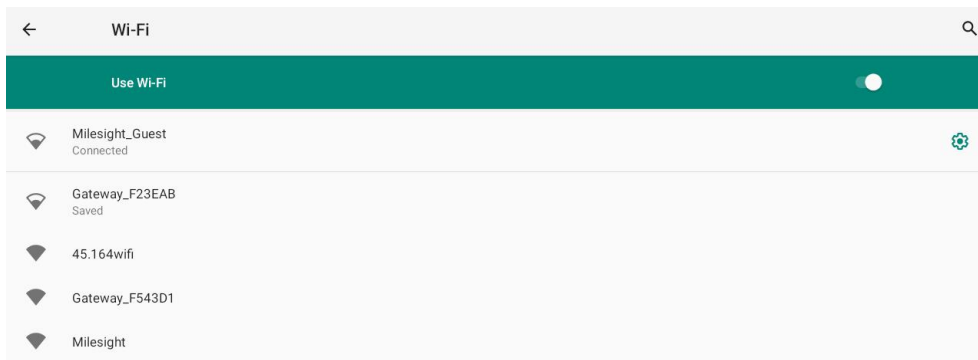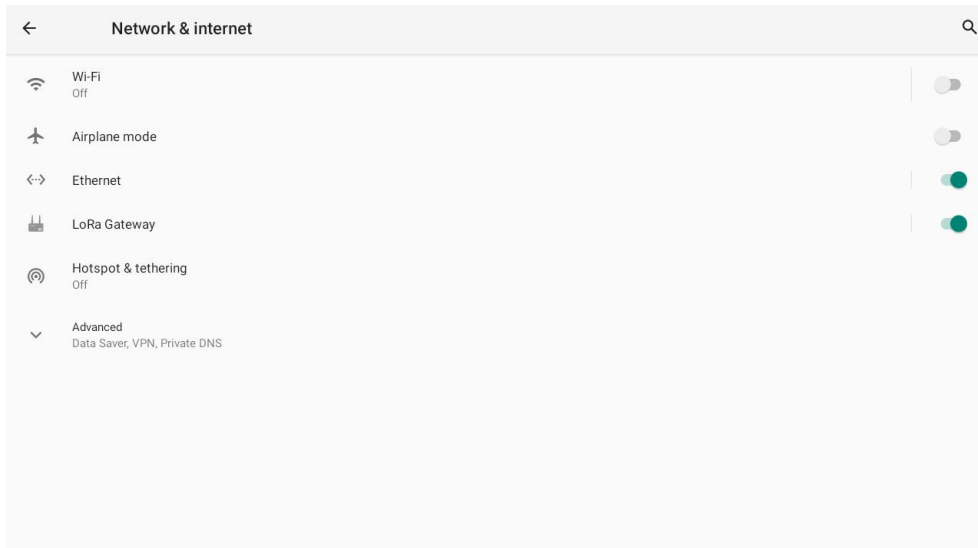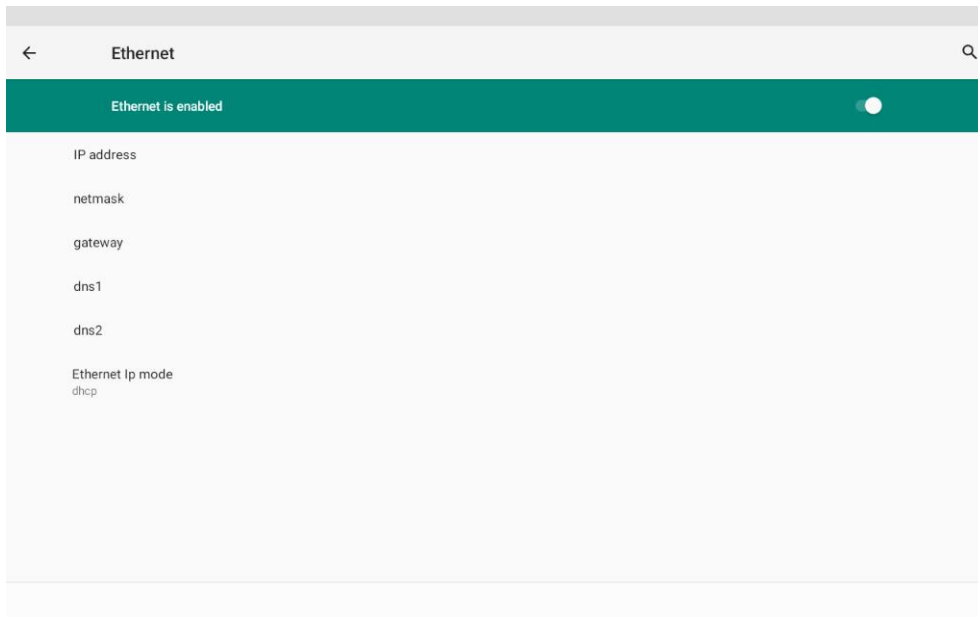
4.2.2 Ethernet Connection

On Application page, go to **Settings > Network & Internet,** enable **Ethernet**.
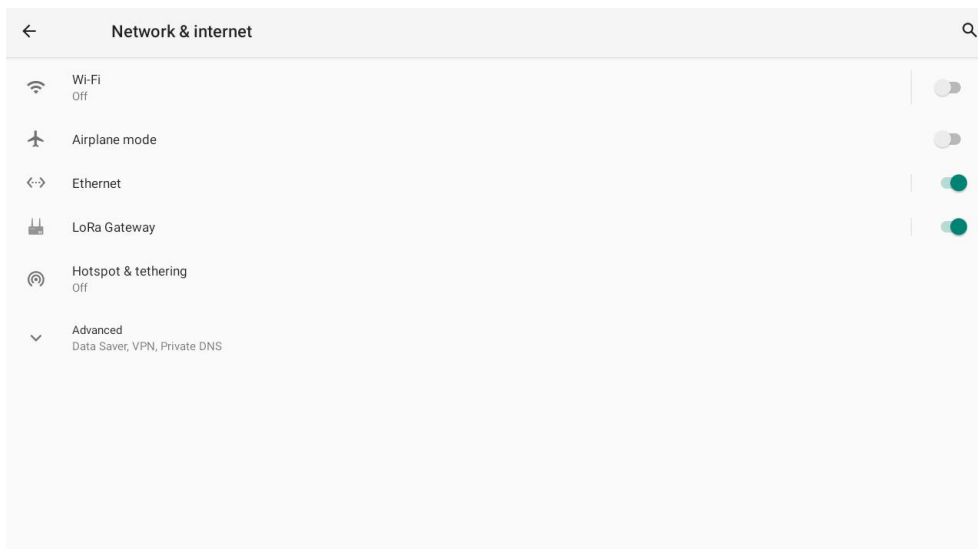

Select Ethernet IP mode as **static** or **dhcp** and plug the Ethernet cable to Ethernet port of device to access the network.
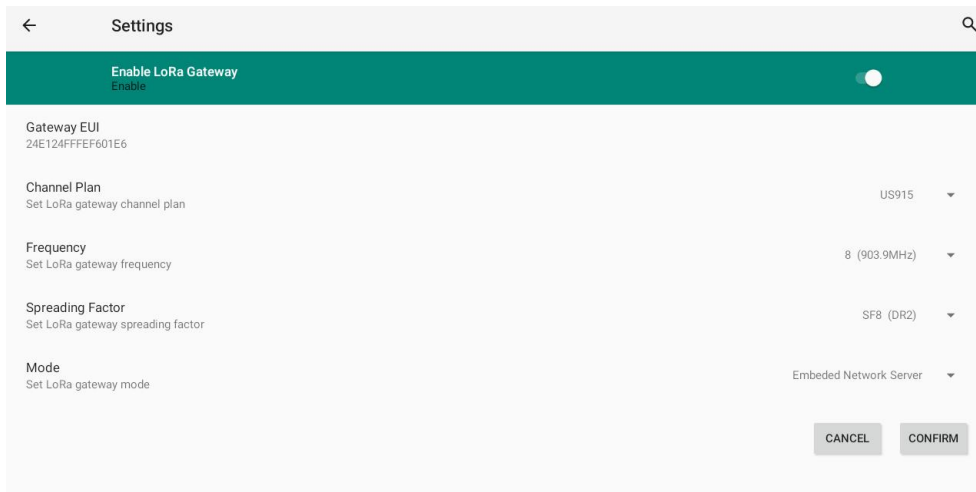
4.2.3 LoRaWAN® Gateway

DS7610 has a built-in one-channel LoRaWAN® gateway to manage Milesight LoRaWAN® end devices. On Application page, go to **Settings > Network & Internet,** enable **Lora Gateway**.

Select corresponding parameters to communicate with LoRaWAN® end devices.

| Parameters	Description
Gateway EUI	Unique identifier of the device, it's fixed and not allow to change.
Channel Plan	Select the LoRaWAN® frequency plan used for the upstream and downlink frequencies and data rates. Available channel plans depend on the gateway's model.
Frequency	Select the frequency to receive uplinks and send downlinks.
Spreading Factor	Select the spreading factor to send downlinks.
Mode	It's fixed as Embedded Network Server mode.

4.2.4 Bluetooth

On Application page, go to **Settings > Connected devices > Connection preferences** to enable **Bluetooth** feature and check or rename device name, then go back to **Connected devices** to pair your device with DS7610. You can use Bluetooth to transfer files, communicate with accessories, etc.


4.2.5 NFC

On Application page, go to **Settings > Connected devices > Connection preferences** to enable

NFC feature, then attach NFC devices to the NFC area of DS7610 to exchange the data. You can use NFC to achieve Milesight LoRaWAN® nodes configurations, ID identifications, contactless meeting check-in, etc.
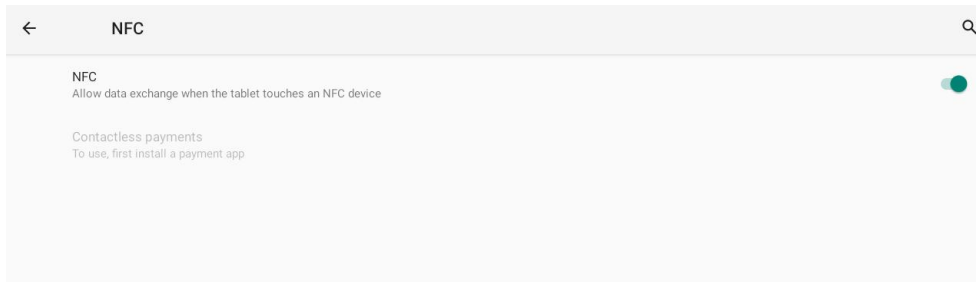

4.2.6 USB

Plug the USB Type-C port of DS7610 to your USB devices. On Application page, go to **Settings > Connected devices > USB** to select the USB usage as your requirement. USB can be used to connect to computer, USB drive, USB microphone, etc.
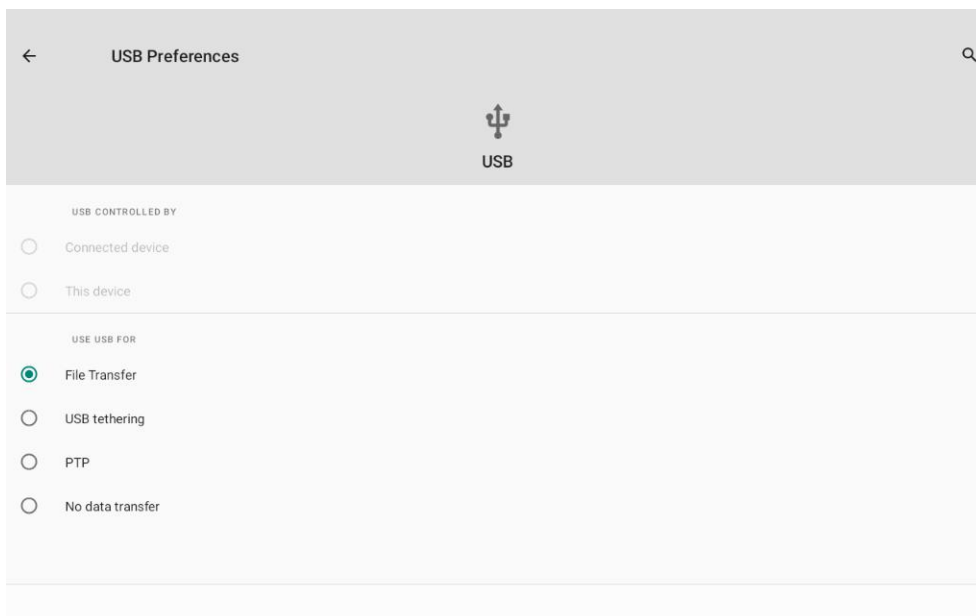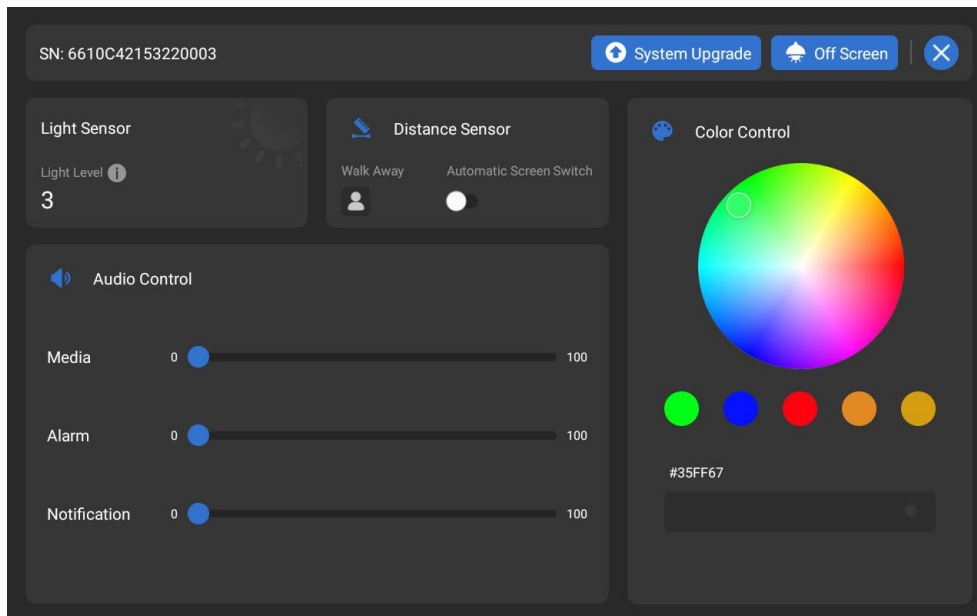

Note:

1) The default USB mode of device is OTG. If you need to switch to Host mode, please refer to developer API document.

2) If you need to enable debug mode, please go to **Settings > About tablet** to click **Build number** 7 times to enable the developer options, then go to **Settings > System > Advanced > Developer options** to enable **USB Debugging**.
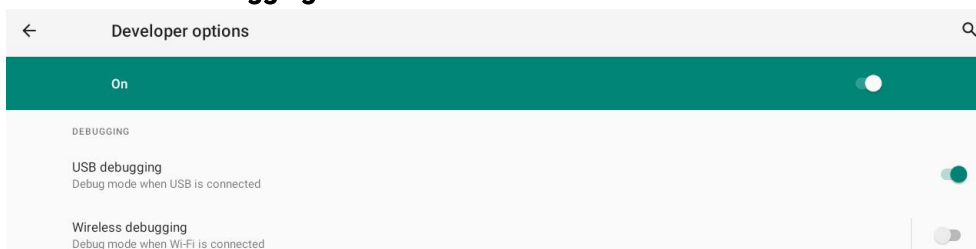
4.3 DS Demo App

DS Demo App supports the configuration of basic parameters of device and it can't be uninstalled.


| Parameter	Description
SN	Show the SN of this device.
Light Level	Show the environment brightness level between 1 to 5 in real time. The light sensor can be used to adjust the brightness of screen on **Settings > Display > Adaptive brightness**.
Distance Sensor	Detect if there is any object approaching the screen.
Automatic Screen Switch	Switch on or off the screen automatically by distance sensor status. If the status is **Walk Away**, the screen will be switched off; if the status is **Approach**, the screen will be switched on.
Audio Control	Configure the volume of media/alarm/notification.
Color Control	Configure the color and light level of front and back LED indicator strips. You can adjust the color by clicking the palette or fill in the RGB value.
Micro SD Card Status	If the status is Unformatted, click to format. If the status is Formatted, the storage information will be displayed on the screen directly and it also support to be formatting. This only shows when micro SD card is preinstalled.
System Upgrade	Upgrade the firmware of this device, see Upgrade.
Off Screen	Switch off the screen.
✕	Close DS Demo App.

4.4 Install & Uninstall Apps

Install Apps

1. Select USB mode as **File Transfer**, then import your app(.apk) to the device via USB port. Note that DS7610 only supports 32-bit App.

2. On Application page, go to **Files** to find the apk file and click it to install the App.
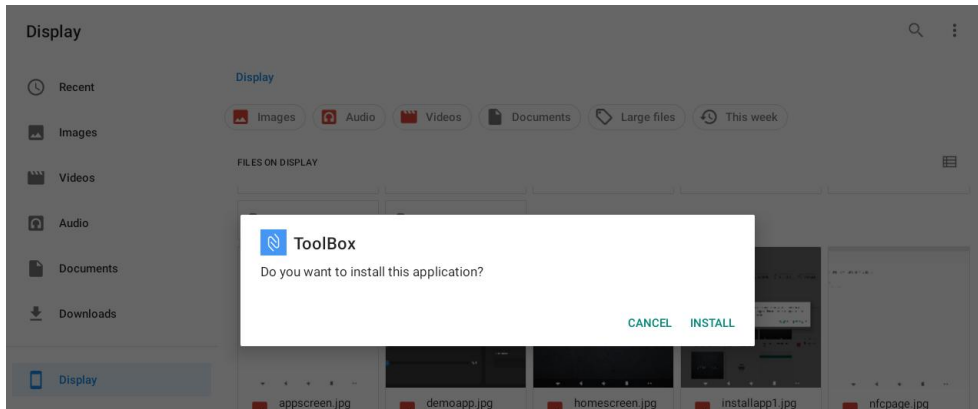
3. After install, you can find the app on Application page.

Uninstall Apps

On Application page, go to **Settings > Apps & Notifications** to find the app file in the app list and click it to check app info and uninstall the App. Note that default system apps can't be uninstalled.
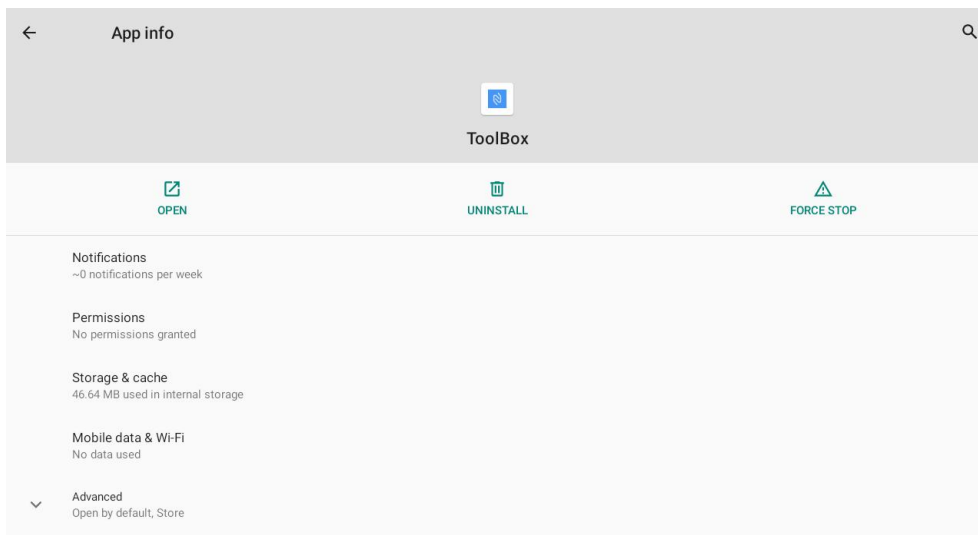
4.5 Upgrade

1. Download device firmware from www.milesight-iot.com , then import the firmware to device (see Install Apps to import files).

2. Go to DS Demo App, click **System Upgrade** button to enter upgrading page.

3. Click **Plus** symbol to select the target firmware from **Files**, then click **Upgrade** button to upgrade the firmware.
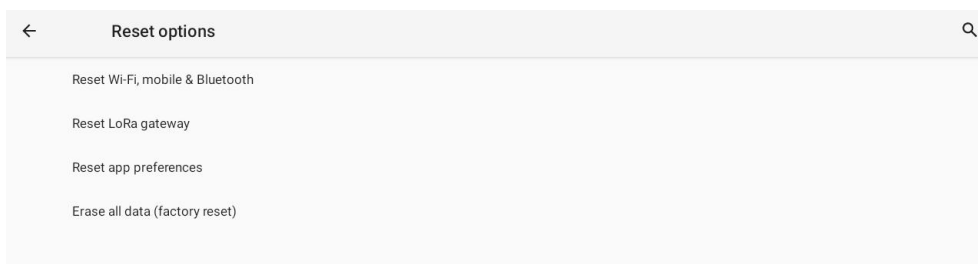
Note:

1) Do not power off the device during the upgrade process, as this will result in operating system errors.

2) DS Demo App does not support system downgrade. If you need to downgrade, please contact Milesight technical support .
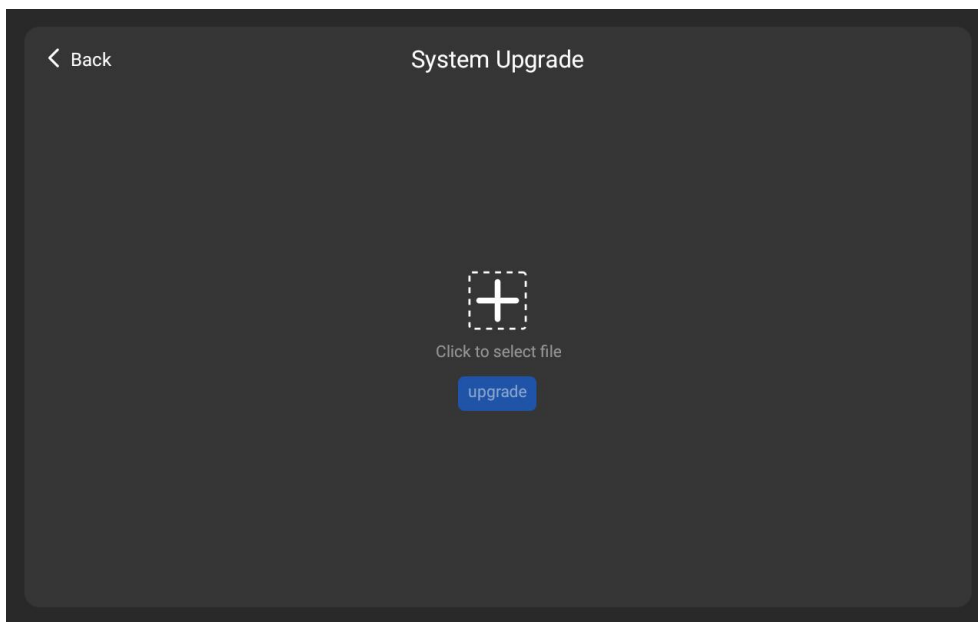

4.6 Reset to Factory Default

On Application page, go to **Settings > System > Advanced** to select **Reset options** to reset as your requests.

4.7 System Info

On Application page, go to **Settings > About tablet** to check basic information including Device name, MAC addresses, firmware version (builder number), etc. You can also click **Model** to check serial number and hardware version.
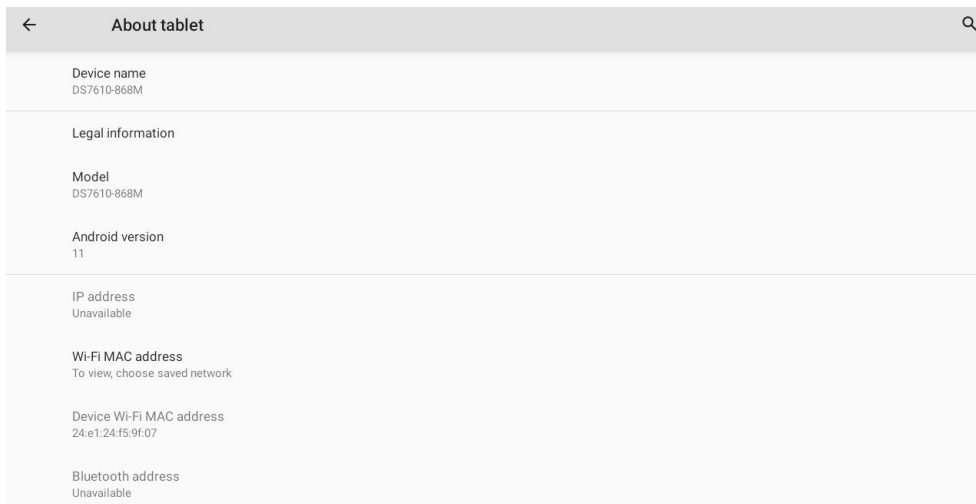
4.8 App Development

DS7610 is based on Android 11 system and please refer to Android official developer guide to complete the development: https://developer.android.com/guide

Besides, Milesight also provides SDK and Developer API Documentations relating LoRaWAN® gateway feature, NFC feature relating Milesight LoRaWAN® Device management: https://github.com/Milesight-IoT/DS7610-SDK
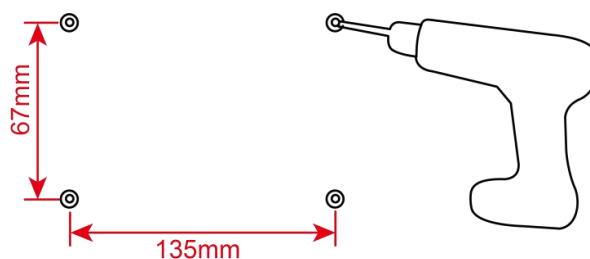
For more info please contact Milesight technical support: https://support.milesight-iot.com

5. Installation

Wall Mounting

1. Drill four holes with a 6 mm diameter drill bit at the desired height on the wall to a depth of 30 mm.
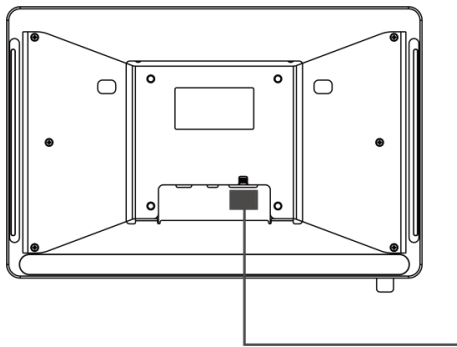

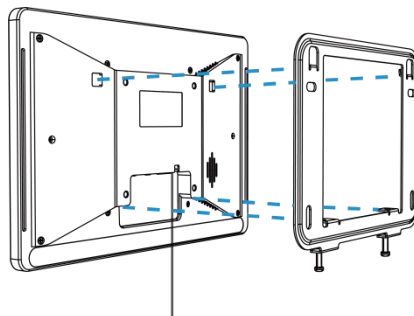2. Hammer the wall plugs into the holes respectively.
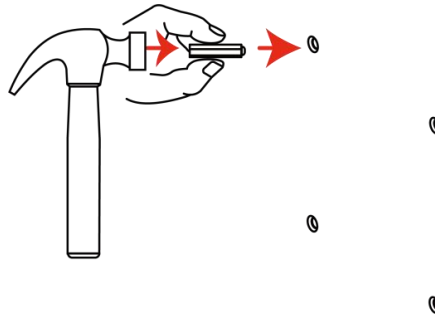
3. Press the bracket on the wall with the TOP logo side facing up and align its holes with the wall plugs, then fix the screws into the wall plugs.
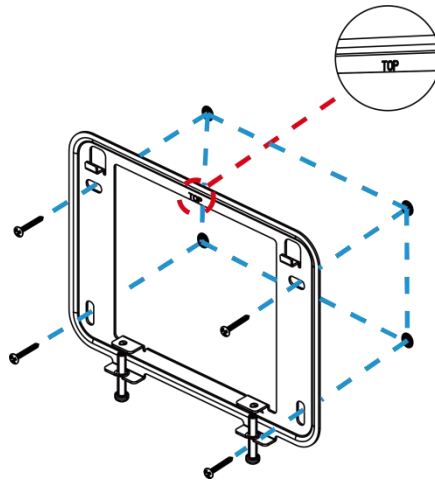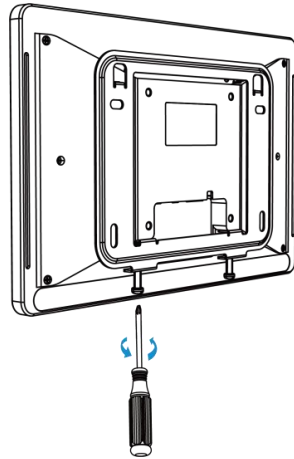

4. Plug an Ethernet cable into the Ethernet port of the IoT Display.

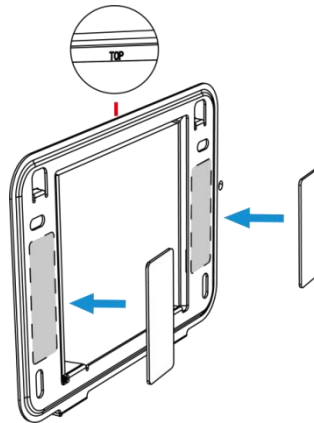5. Mount the IoT Display on the Wall Mount Bracket.

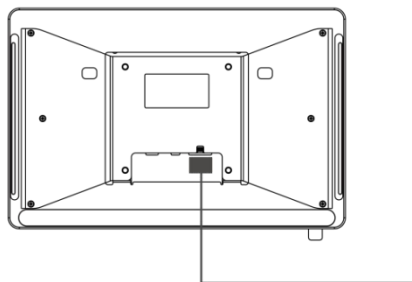6. Fix the IoT Display to the bracket by tightening the 2 screws at the bottom of the bracket.
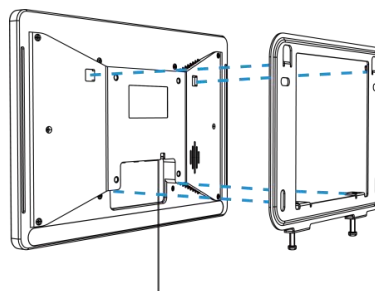
Glass Mounting

1. Attach the tape on the back of the Wall Mount Bracket, and attach the bracket at the desired height on the glass with the TOP logo side facing up.
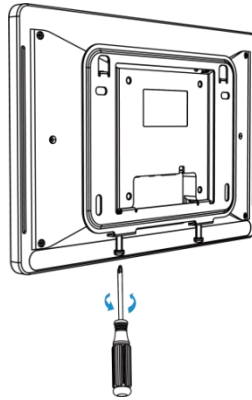

2. Plug an Ethernet cable into the Ethernet port of the IoT Display.

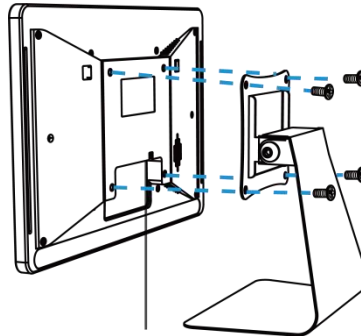3. Mount the IoT Display on the Wall Mount Bracket.

4. Fix the IoT Display to the bracket by tightening the 2 screws at the bottom of the bracket.
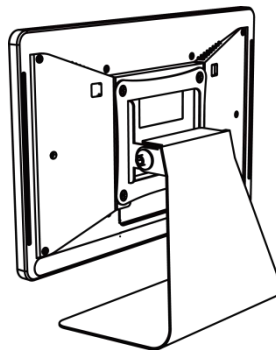

VESA Desktop Stand Mounting

1. Plug an Ethernet cable into the Ethernet port of the IoT Display, then lift the IoT Display and align its VESA holes with the VESA desktop stand.

2. Fix the IoT Display to the VESA desktop stand by tightening the screws.

-END-