

# R850 Mobile Hotspot

## User Guide



*UG \_ temp version*

*[Version 1.3.1]*

*[Sprint\_Franklin\_Wireless\_R850\_english\_113015\_v1.3.1]*

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# Introduction

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The following topics describe the basics of using this guide and your new mobile broadband device.

## Before You Begin

Thank you for purchasing your new R850 Mobile Hotspot. The following topics explain how best to use this guide to get the most out of your mobile broadband device.

### Before Using Your Device

Read [Safety and Notices](#) thoroughly for proper usage.

Accessible services may be limited by subscription contract conditions.

### Guide Usage Notes

Note that most descriptions in this guide are based on your device's default settings at the time of purchase.

### Screenshots and Key Labels

Screenshots and Key labels are provided for reference only. Actual windows, menus, etc. may differ in appearance.

### Other Notations

In the user guide, the mobile broadband device may be referred to either as "mobile broadband device," "hotspot," "device," or "Wi-Fi router." A microSD™ or microSDHC™ card is referred to as an "SD Card" or a "memory card."

# Compatible Operating Systems (OS)

The table below outlines the compatible operating systems (OS) for your device. Use outside these environments may affect performance. Additional factors (hardware, connected peripherals, installed applications, etc.) may also affect performance.

- For computer support, OS version upgrade information, etc., see the corresponding manufacturer's product support documentation.
- [\[Feb. 20`5\]](#). Check [\[Compatible OS\]](#) for the latest information in regards to operating environment.

Item	Description
Compatible operating systems (OS)	Windows 7, 8, 10 MacOS 10.5 or later Android 2.1 or later
Compatible browsers	Chrome 36.0 or later Internet Explorer 8.0 or later Firefox 3.1 or later Safari 5.0 or later

# Package Contents

See below for details on everything you will find in the box for your R850.

- R850 Mobile Hotspot
- Battery Cover
- Rechargeable Battery
- AC Adapter
- Get Started Guide
- Important Information Booklet

# SSID and Security Key

Before connecting Wi-Fi devices to your R850, you will need to confirm the WiFi Name and WiFi Password.

- Once your device is completely powered on, press the menu button 1 time for the WiFi Name and twice to obtain WiFi Password specific to your device
- ❖ You will see the WiFi Name (SprintWiFi-XXXXXX) and WiFi Password.

## Additional Information

The following list describes additional information useful to know before you begin using your R850.

- Your mobile broadband device accommodates software updates. Always use the latest software.
- Note that connection speeds may drop or connections may be disabled depending on line traffic or connection environments.
- When using WLAN overseas, change the settings according to the laws of those countries.

# Get Started

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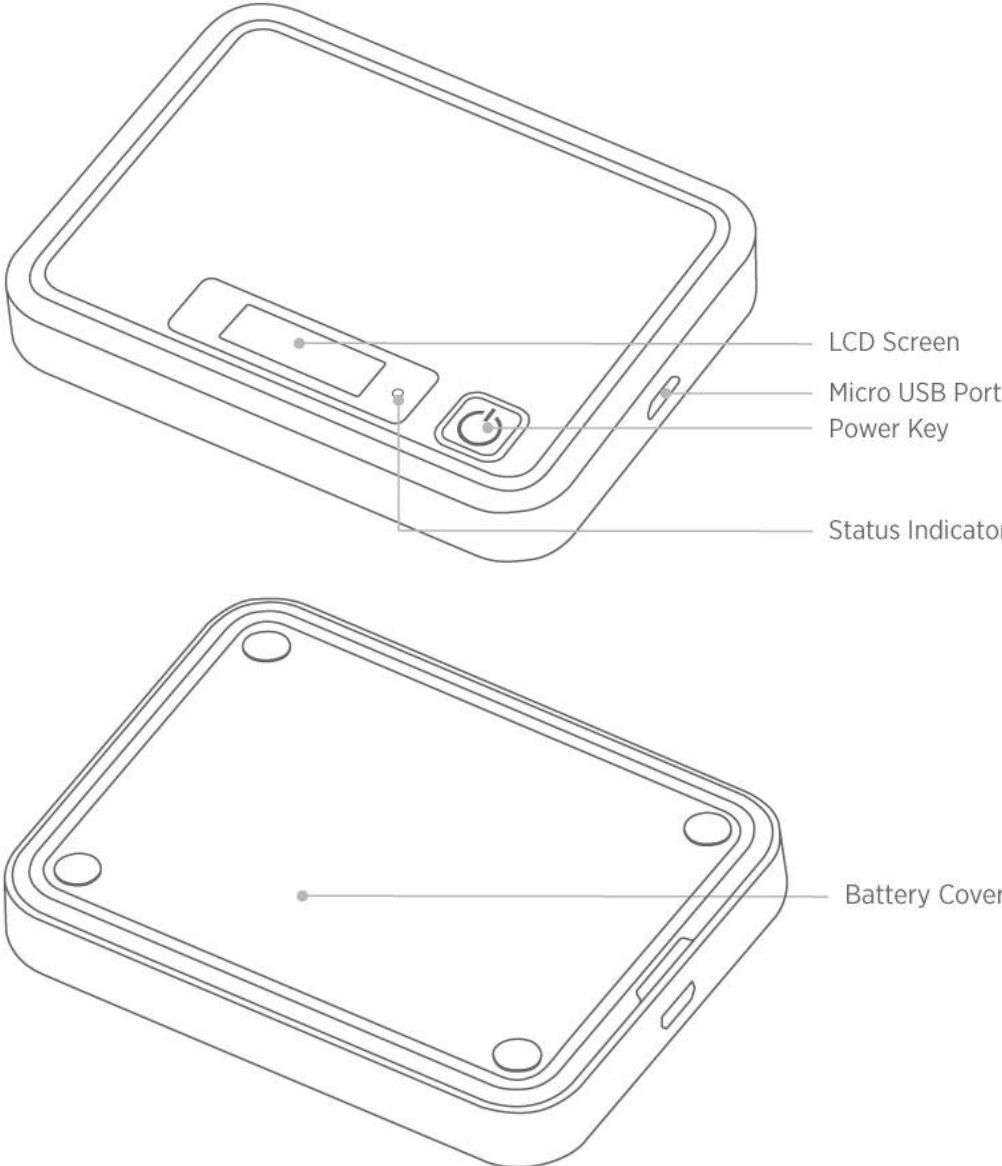
The following topics give you all the information you need to set up your device and wireless service the first time.

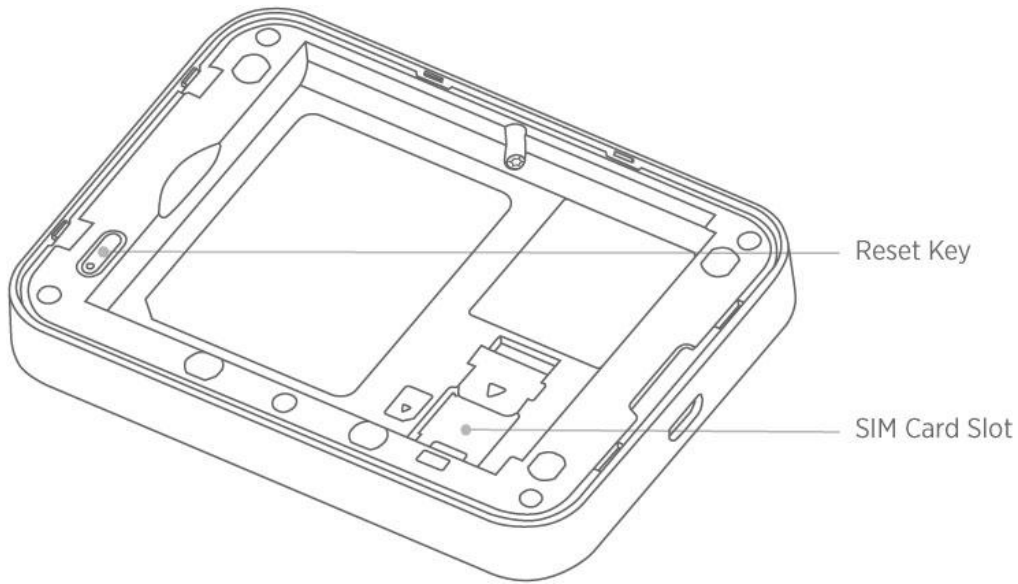
## Parts and Functions


Learn your device's primary parts and functions.

### Device Layout

The following illustration outlines your device's primary external features and buttons.





Part	Description
LCD Screen	View device status.
SIM card slot	Install the SIM card.
Charging Port	Connect the micro USB cable for charging.
Battery cover	Remove the battery cover to remove or insert the battery or SIM card.
Reset key	Press to reset your device to its default settings.
Power key 	Toggle power on or off.

## Home Screen

The following topics describe the details of your device's home screen layout, icons, touchscreen usage, and text entry.

### Home Screen Layout

Explore your device's home screen layout.










Part	Description
------	-------------



Part	Description
Status bar	Displays status indicators including connection status, signal strength, devices connected, battery level, and more.

## Status Bar Icons

The home screen's status bar may feature the following icons, depending on current status.

Icon	Description
	Mobile networks connected
	Out of service area
	Appears when roaming
	Connected WLAN devices
	Battery full
	Battery low
	No battery (charging required)

## Data Transfer Volume and Transfer Speed

Wireless Mode	Maximum Downlink Speed	Typical Downlink Speed
4G LTE	150 Mbps	50 Mbps

**Note:** Actual speeds depend on several factors, including network conditions.

## SIM Card

The SIM card is an IC card containing your device's phone number and other customer information.

**Note:** Your device's SIM card is preinstalled.

## Handling a SIM Card

Keep the following in mind when handling a SIM card.

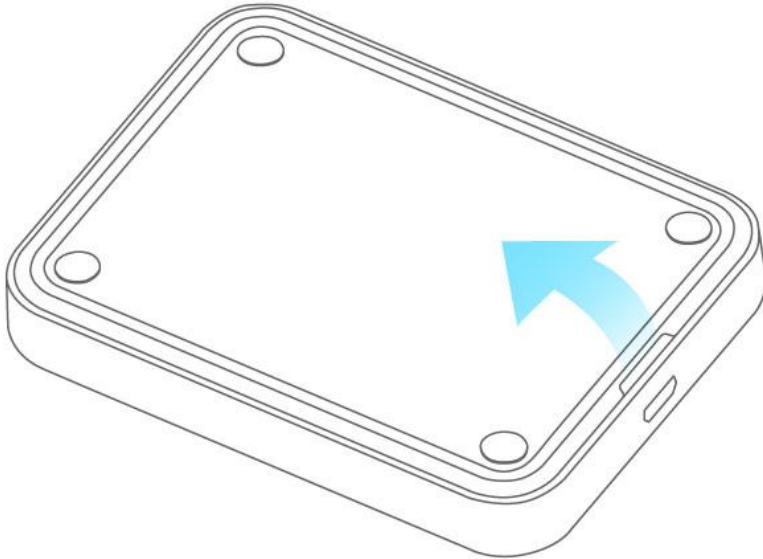
- Customer is responsible for any damage caused by inserting the SIM card in another-brand IC card reader, etc. The company is not responsible in such case.
- Always keep the IC chip clean.
- Wipe clean with a dry, soft cloth.
- Avoid applying labels. May damage the SIM card.
- See instructions included with the SIM card for handling.
- The SIM card is the property of the company.
- The SIM card is replaceable (at cost) in case of loss/damage.
- Return the SIM card to the company when cancelling subscription.
- Returned SIM cards are recycled for environmental purposes.
- Note that SIM card specifications and performance may change without notice.
- It is recommended that you keep a separate copy of information that is stored on the SIM card. The company is not responsible for damages from stored information that is lost.
- Always follow emergency procedures to suspend service if your SIM card or device (SIM card inserted) is lost or stolen. For details, contact Customer Service.
- Always power off the mobile broadband device before inserting or removing the SIM card.

## Insert a SIM Card

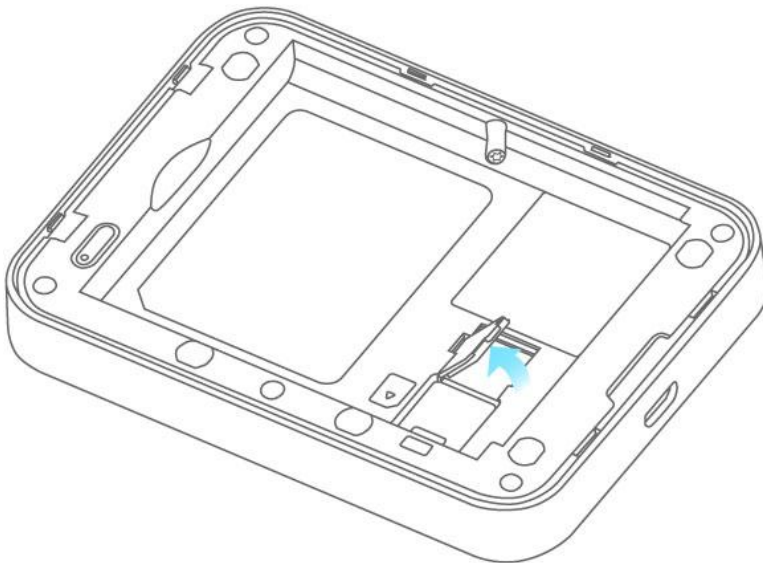
Follow these instructions to insert a SIM card. Remember to power off your device before inserting a SIM card.

**Note:** Your device's SIM card is preinstalled. These instructions are for reference only.

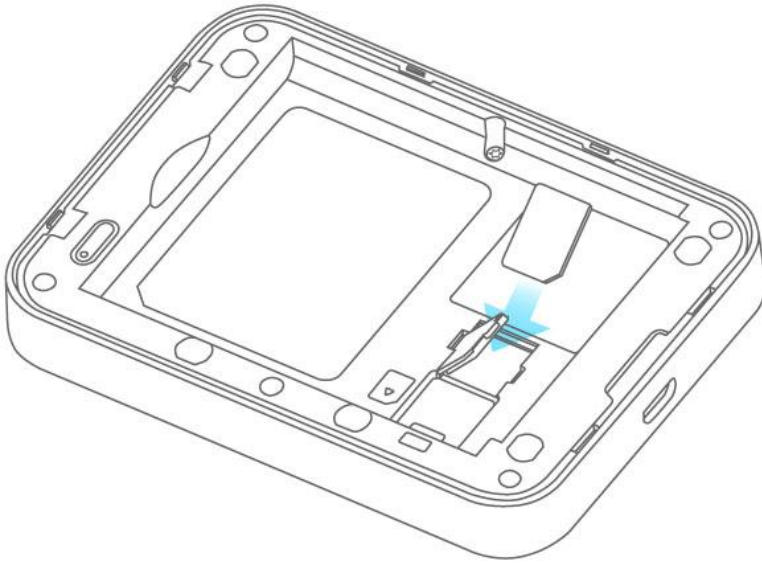
1. Remove the battery cover.



2. Remove the battery.
3. Open the SIM card cover.



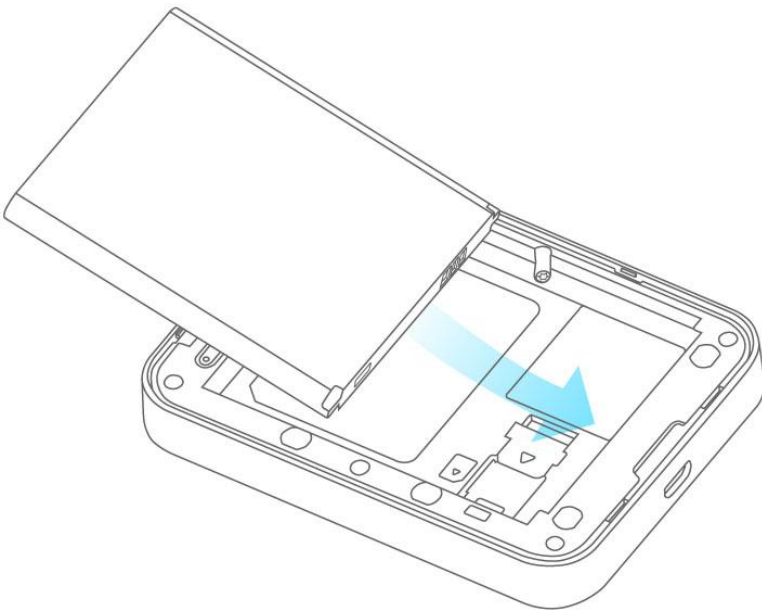
4. Insert the SIM card.



- Insert gently with gold IC chip facing downward.

5. Close the SIM card cover.

6. Insert the battery.




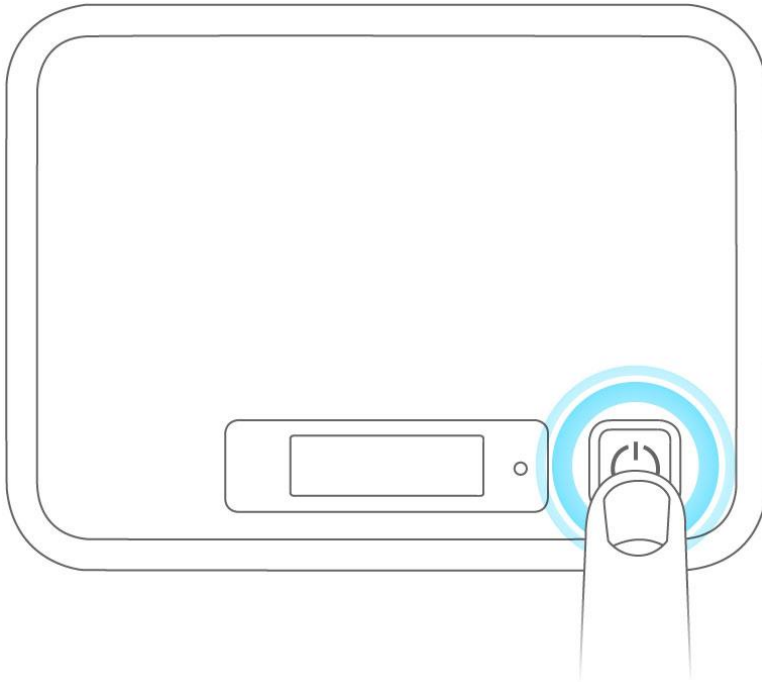
- Align the contacts of the battery with the contacts in the device.

7. Attach the battery cover.

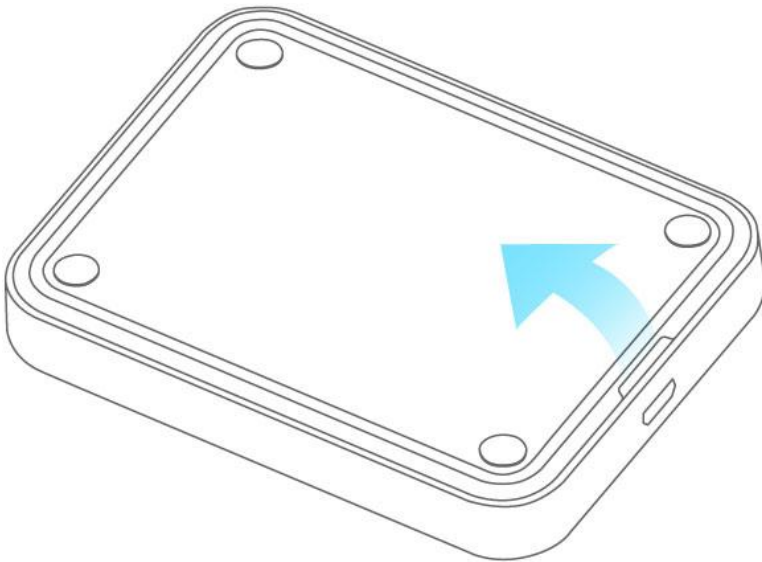
## Remove the SIM Card

Follow these instructions to remove the device's SIM card.

1. Press and hold the **Power** key  to turn off the device before removing the SIM card.

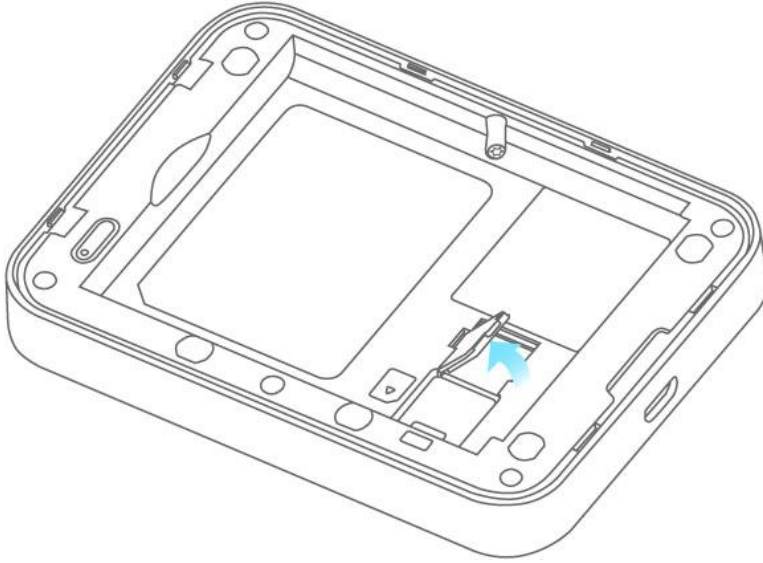


2. Remove the battery cover.

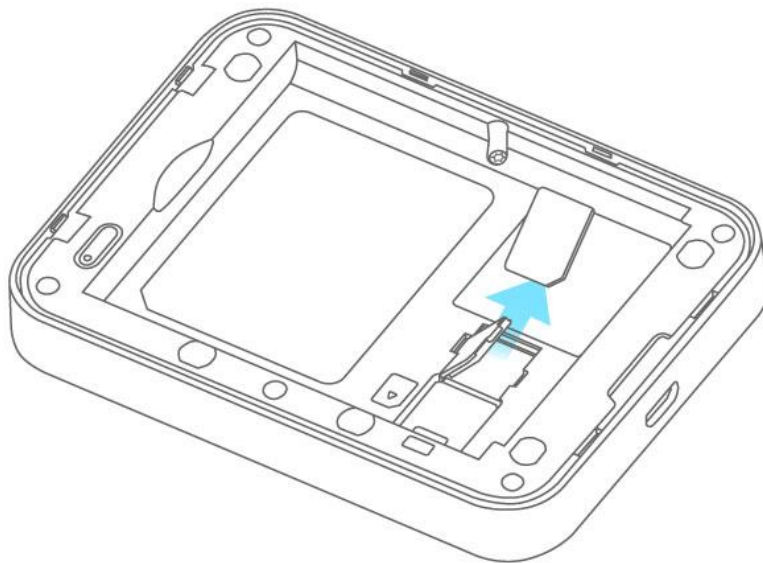


3. Remove the battery.

4. Open the SIM card cover.

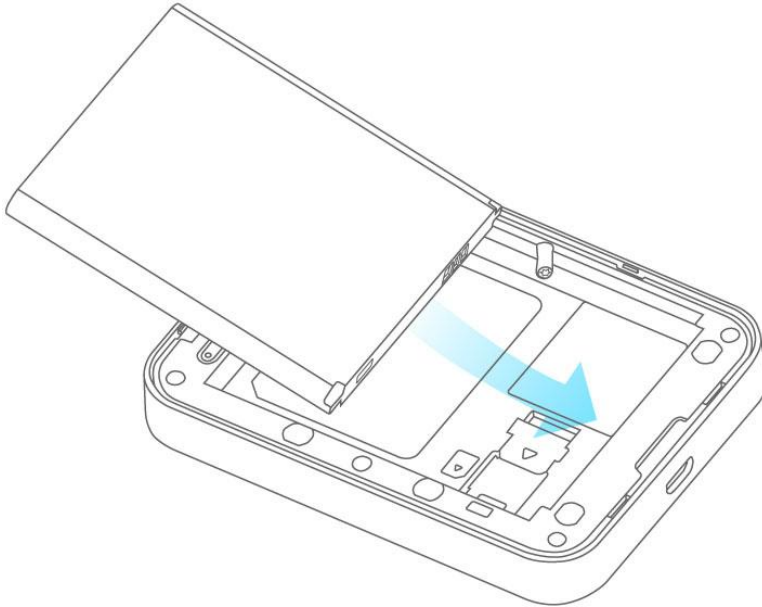


5. Remove the SIM card.



6. Close the SIM card cover.

7. Insert the battery.



- Align the contacts of the battery with the contacts in the device.

8. Attach the battery cover.

## Battery Use

The following topics explain how to insert and remove your device's battery.

### Battery Cautions

**Storage:** Avoid storing or leaving the battery with no charge remaining. Saved information and settings may become lost or changed, or battery may become unusable. Charge once every six months before storing or leaving unused for a long period.

**Bulges:** Depending on use, bulges may appear near end of battery life. This does not affect safety.

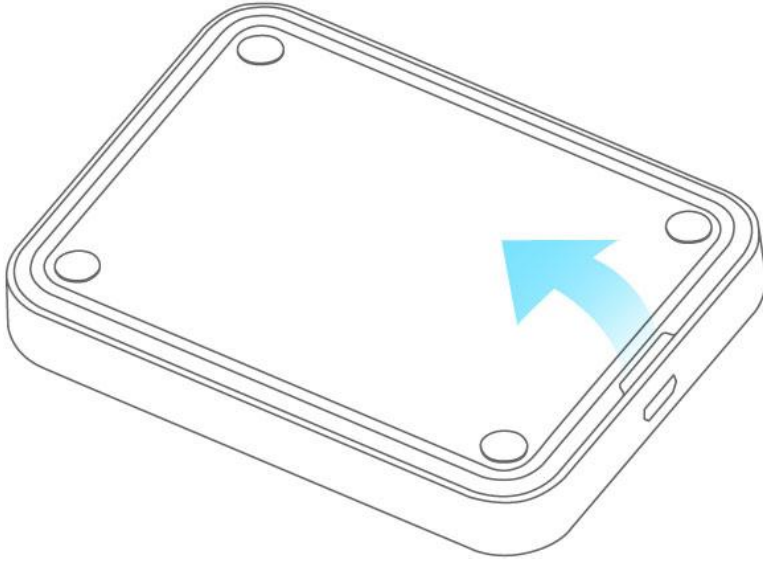
**Replacing the Battery:** The battery is a consumable item. It needs to be replaced if operating time shortens noticeably. Purchase a new battery.

**Cleaning:** Clean soiled terminals between battery and device with a clean, dry cotton swab. Soiled terminals can result in a poor connection and prevent charging, etc.

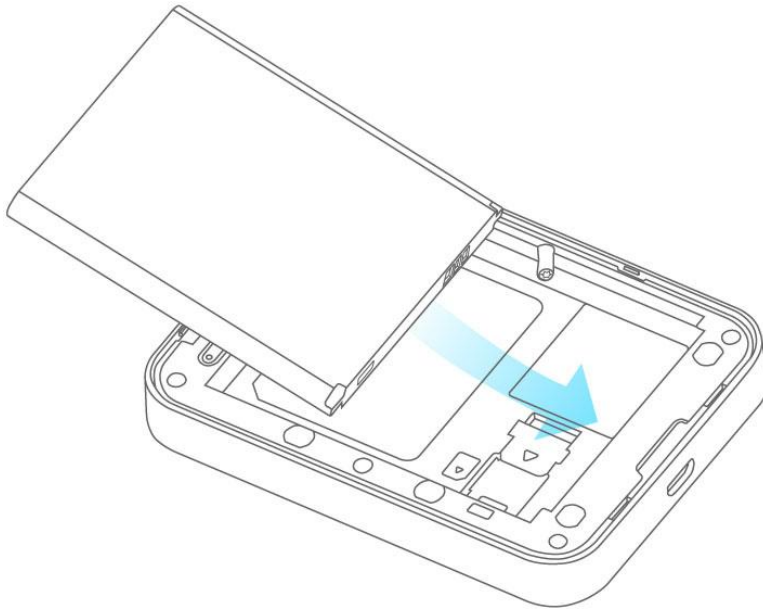
## Insert the Battery

Follow these instructions to insert your device's battery safely and properly. Make sure the device is turned off before

1. Remove the battery cover.



2. Insert the battery.



- Align the contacts of the battery with the contacts in the device.

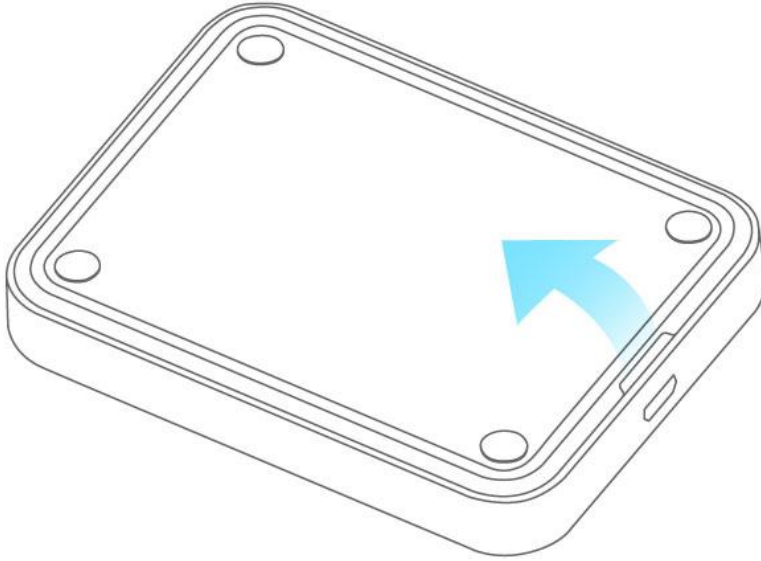
3. Replace the battery cover.

## Remove the Battery

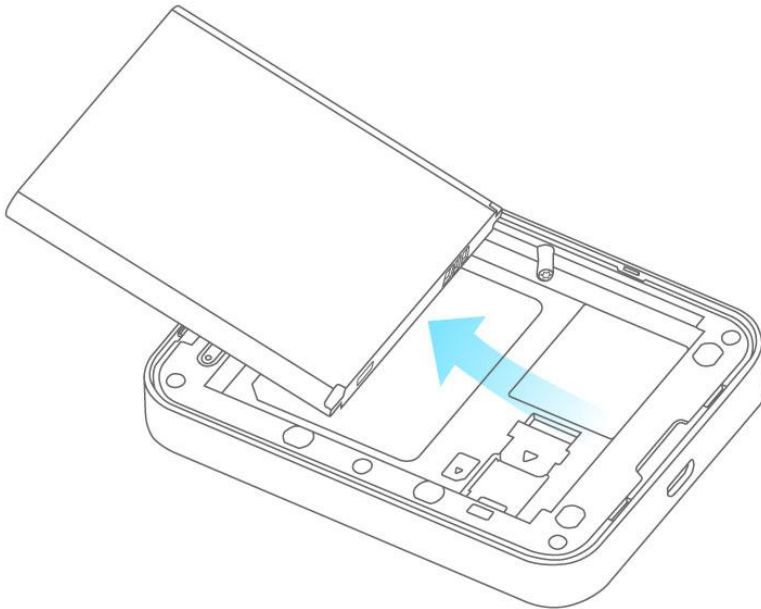
Follow these instructions to remove your device's battery. Always power the device off before removing the battery.



1. Remove the battery cover.



2. Remove the battery.



3. Replace the battery cover

## **Charge the Battery**

Follow these instructions to charge your device's battery using either the included AC adapter or via a USB connection on your computer.

## Battery Charging Cautions

**Charging Conditions:** Under low temperatures charging performance decreases. Charge in temperatures between 5°C – 35°C. Do not charge in places where there is high humidity. USB charging may be unavailable depending on Wi-Fi router temperature.

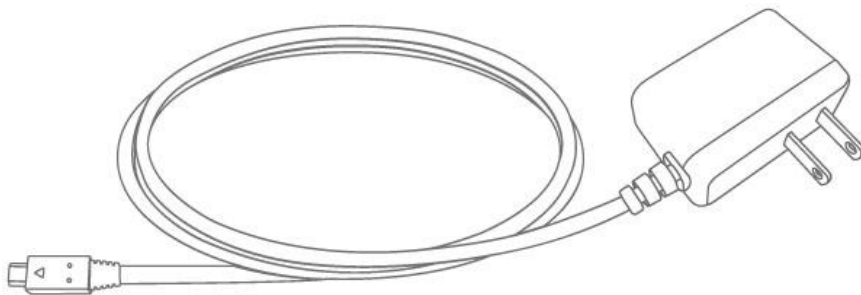
**Use Supplied Accessories:** Always use the supplied AC adapter or micro USB cable.

**Precaution for Extended Use:** Your device may become hot when used for a long time or while charging, especially in high temperatures. Prolonged contact with skin may cause low-temperature burn injuries.

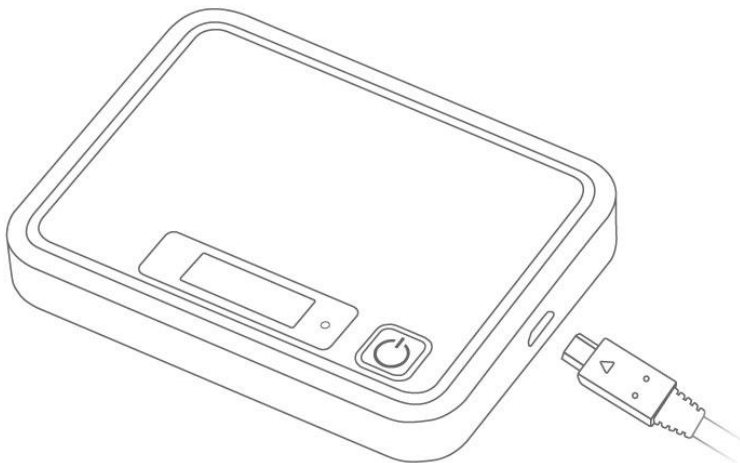
**The R850 and AC Adapter Becoming Warm or Hot:** Your device and the AC adapter may become warm while charging. This is not a malfunction. However, stop using them immediately if they become extremely hot; this could indicate a malfunction.

## Charge Using the AC Adapter

Use the supplied AC adapter.




1. Plug the AC adapter into an electrical outlet.
  - ❖ The indicator light illuminates when charging starts. The light turns green when the battery is fully charged. Fully charging a battery may take up to three hours.
2. After charging, disconnect the device from the charger.



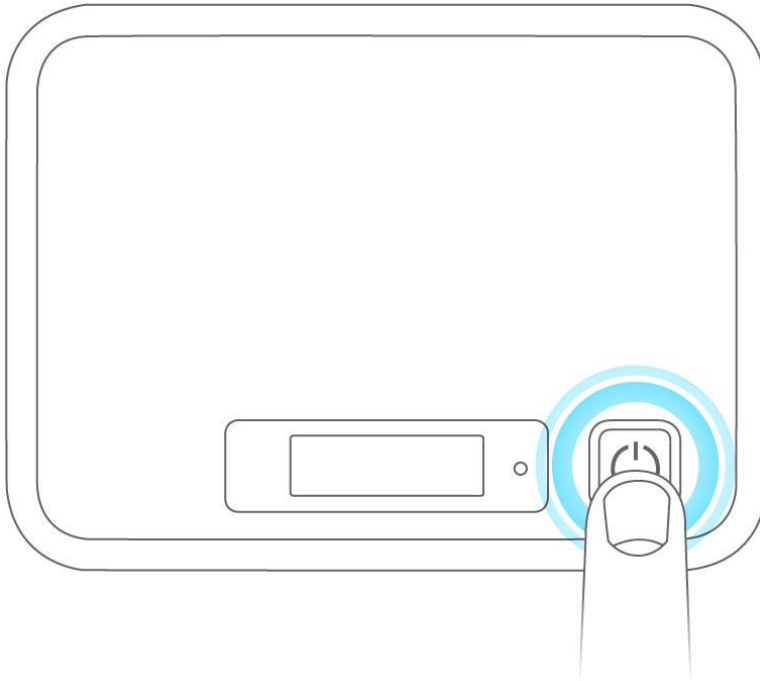
- Unplug the AC adapter from the outlet, and remove the AC adapter from the device.

## Turn Your Device On and Off

The instructions below explain how to turn your device on and off, or to restart your device if it cannot be powered on and off using the **Power** key .


### Turn Your Device On

- Press and hold the **Power** key .



- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.

### Turn Your Device Off

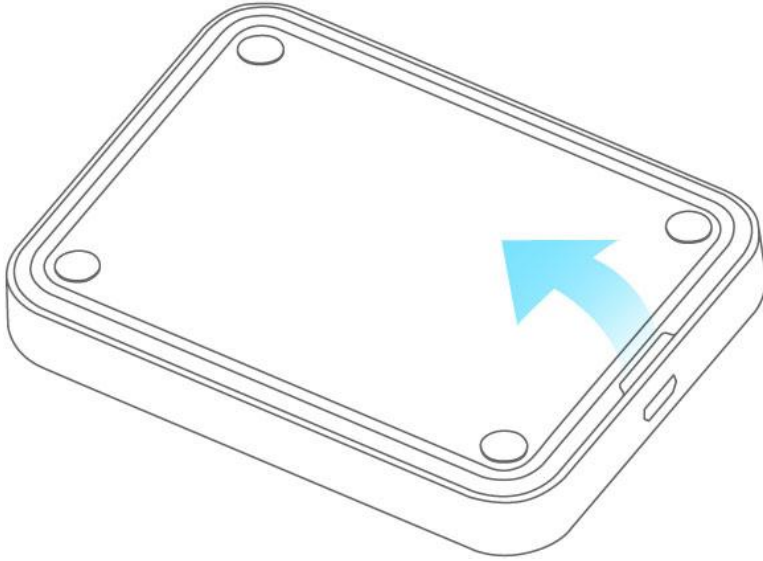
- Press and hold the **Power** key .
- ❖ Your device will power off.

Your screen remains blank while your device is off.

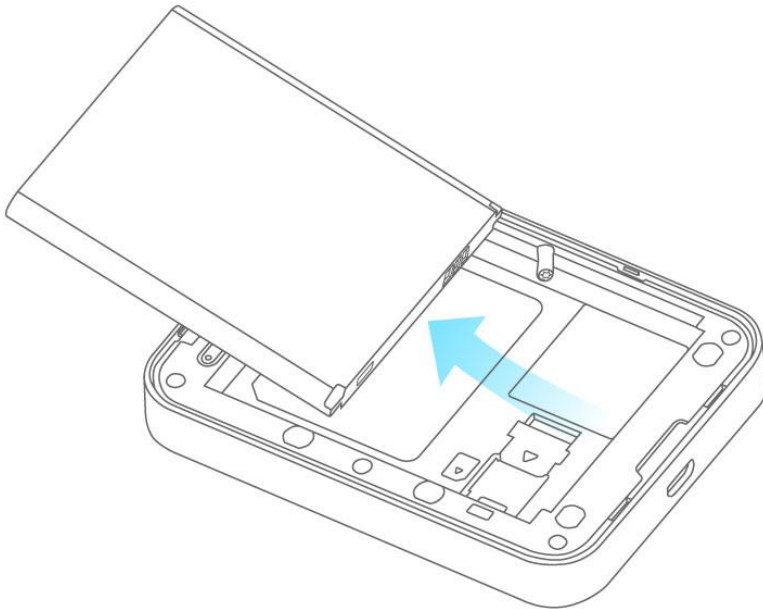
### Restart Your Device

If your device will not turn on or off using the **Power** key, use the action below to restart it.


1. Remove the battery cover.

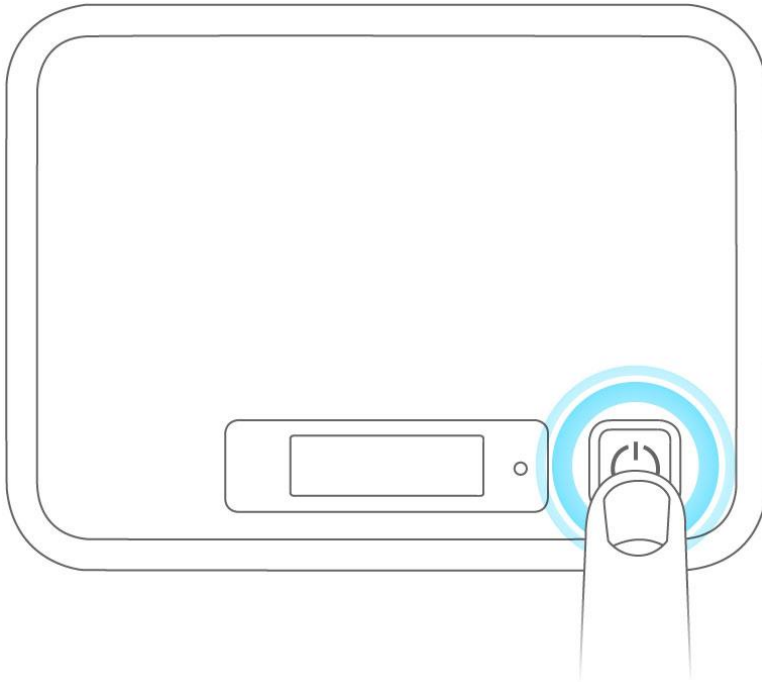


2. Remove the battery.



3. Replace the battery cover

4. Press and hold the **Power** key .



**Note:** Restarting your device does not reset the device settings.

# Connect with Wi-Fi (WLAN)

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The following topics outline basic features and operations of your device's Wi-Fi (WLAN) connections, including connecting with various OS and device types.

## Wi-Fi (WLAN) Overview

Below are some basics of your device's Wi-Fi (WLAN) function.

### Wi-Fi (WLAN) Information

- **Advanced Settings:** Change your device's Wi-Fi (WLAN) settings as required. See [Wi-Fi Advanced Settings](#)
- **Simultaneous Connection:** Use your device to connect up to 10 Wi-Fi devices simultaneously. When Internet Wi-Fi is active, connect up to *10* devices.
- **Automatic Updates for Optimizing Wi-Fi Connection:** When connected by Wi-Fi, connection optimizing settings may be automatically received and updated.

### Wi-Fi (WLAN) Usage Cautions


For added security, it is recommended that you change the default network name (SSID) and security key (WPA) after setting up your device.

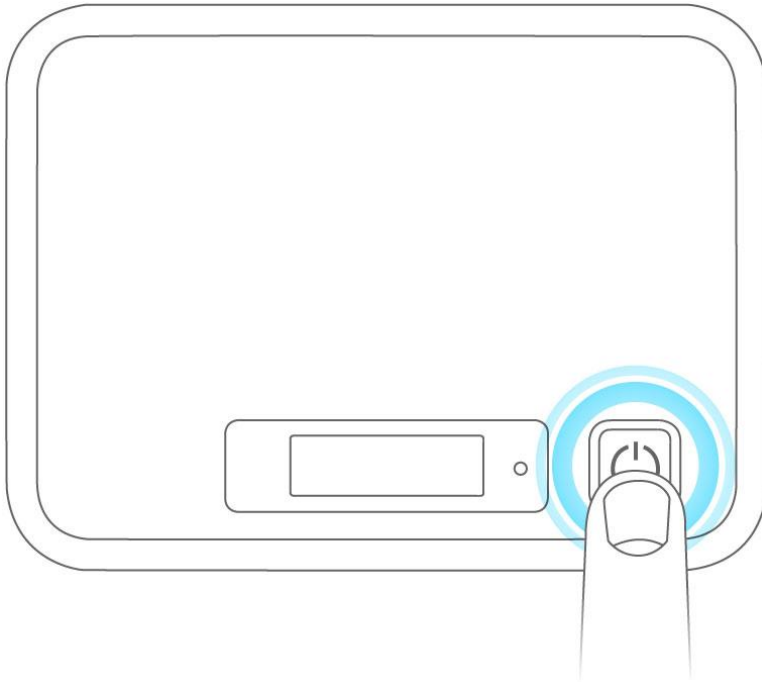
### Wi-Fi (WLAN) Overview

- Your device supports IEEE 802.11 b/g/n standards. Connect Wi-Fi devices (PC, game console, etc.) via Wi-Fi for wireless data transfers.
- Your device supports Wi-Fi Protected Setup (WPS), which allows Wi-Fi connection settings to be easily configured on any WPS-compliant device.
- Enter Wi-Fi router's SSID and WPA keys to connect non-WPS-compliant Wi-Fi devices.
  - These settings should be performed when the device is connected the first time to another Wi-Fi device. Thereafter, simply activate Wi-Fi (WLAN) to automatically connect your mobile broadband device to the Wi-Fi (WLAN) device.

## Activate Wi-Fi (WLAN) Function

Follow the instructions below to activate your device's Wi-Fi function and connect to the Internet via an available 4G LTE connection. Your device searches for and makes a connection automatically upon powering up. Use the Web UI to select a network.

- Press and hold the **Power** key .



- Your device's Wi-Fi function activates and automatically connects to the Internet.

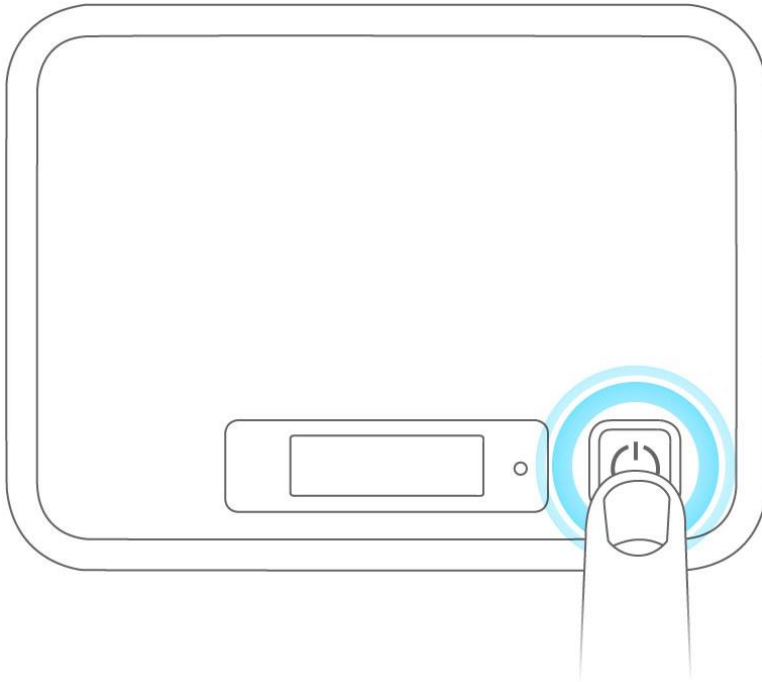
## **Connect Windows PCs with Wi-Fi**



The following topics describe how to connect your device with various versions of Windows PCs via Wi-Fi.

### **Windows 8**

Connect Windows 8 PCs to your device with Wi-Fi.

1. Press and hold the **Power** key .

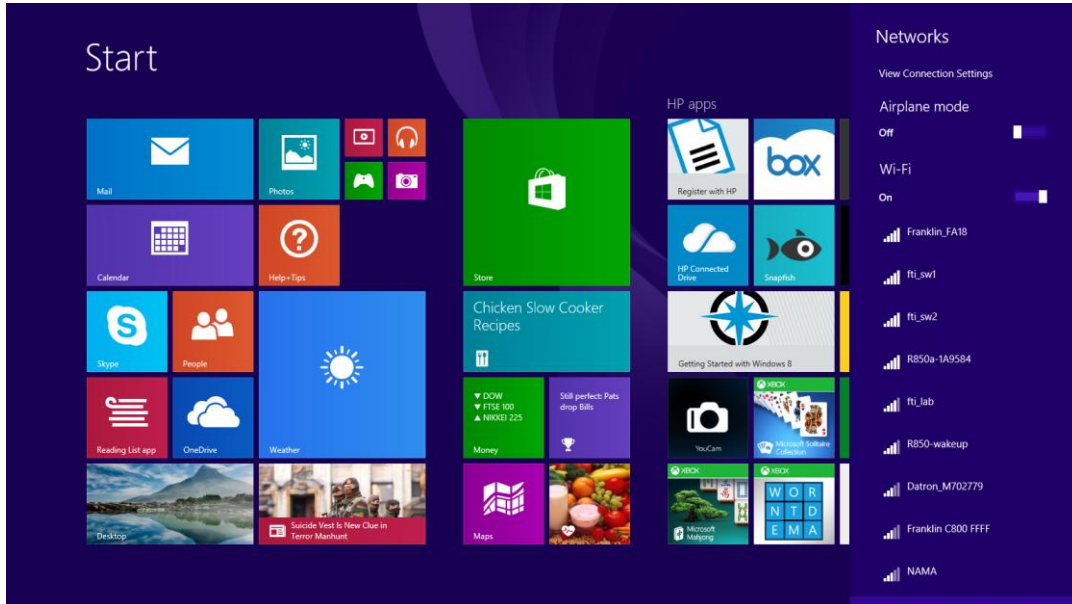


- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.
2. Activate your PC's Wi-Fi function.
    - Consult your PC's operation manual for details on activating Wi-Fi.
  3. On your PC, move the cursor to the upper-right or lower-right corner (or swipe from the right side on a touchscreen PC) and select  > **Network** .

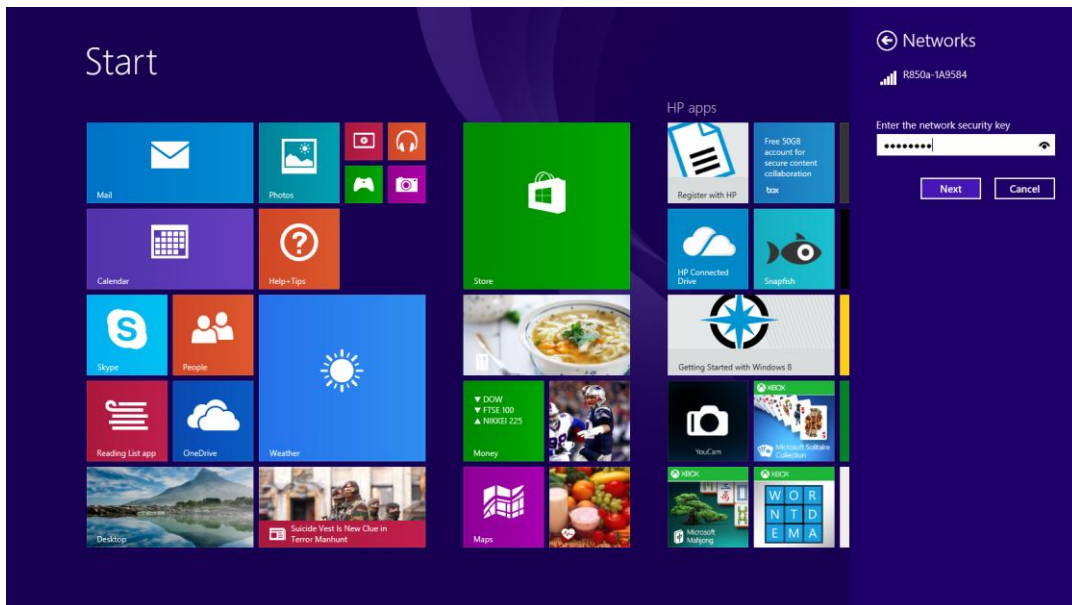
*[illustration]*



4. Select your device's SSID from the list, and click **Connect**.




5. Enter the security key (WPA) and then click **Next**.

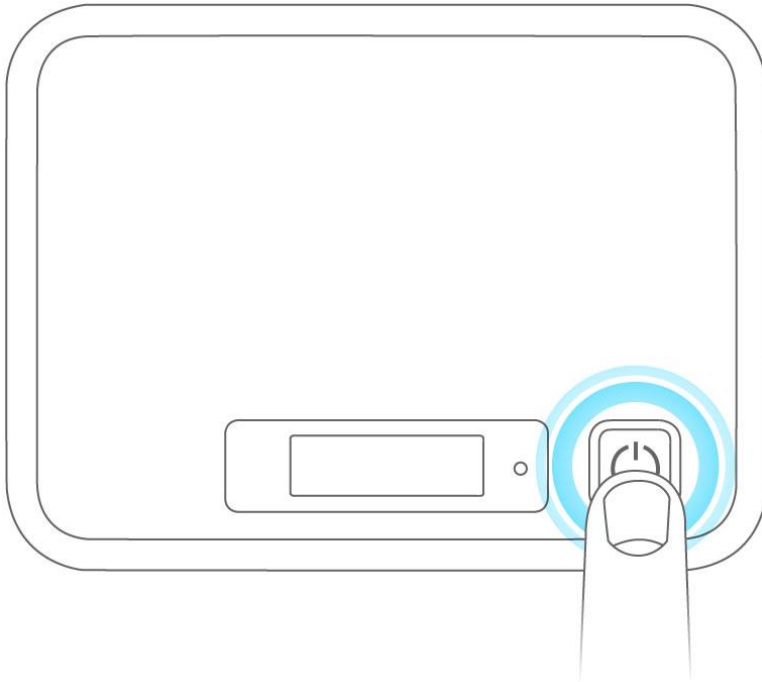



- ❖ The PC connects to your device. The connected status icon on your device will show an additional device has been connected.

## Windows 7

Connect Windows 7 PCs to your device with Wi-Fi.

1. Press and hold the **Power** key .



- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.
2. Activate your PC's Wi-Fi function.
    - Consult your PC's operation manual for details on activating Wi-Fi.
  3. On your PC, click **Start**  > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.

*[illustration]*

4. Click **Connect to a network**.

*[illustration]*

5. Select your device's SSID from the list, and click **Connect**.

*[illustration]*

6. Enter the security key (WPA) and then click **OK**.

*[illustration]*

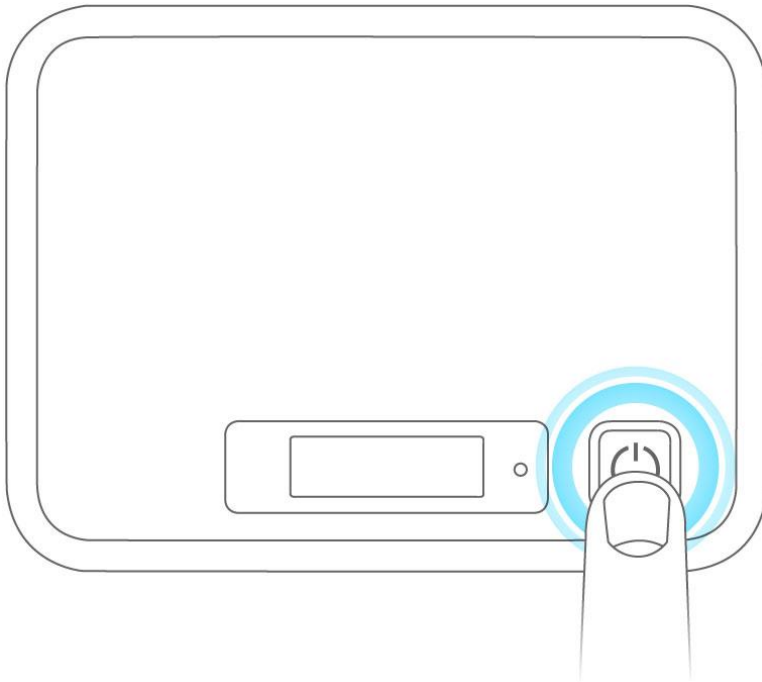
- ❖ The PC connects to your device. The connected status icon on your device will show an additional device has been connected.

# Connect Mac Computers with Wi-Fi

Follow the instructions below to connect a Mac computer to your device via Wi-Fi.

**Note:** The operations depicted are based on Mac OS X 10.xx, with Wi-Fi security set to [xxx].

1. Press and hold the **Power** key .



- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.
2. On your Mac, in the Apple menu, click **System Preferences...** > **Network**.  
*[illustration]*
  3. Click **Wi-Fi** > **Turn Wi-Fi On**.  
*[illustration]*
  - ❖ Your computer's Wi-Fi function activates.
  4. Select your device's SSID from the Network Name pulldown list.  
*[illustration]*
  5. Enter the security key (WPA) in the Password field, check **Remember this network**, and then click **Join**.  
*[illustration]*

- ❖ The computer connects to your device. The connected status icon on your device will show an additional device has been connected.

## Connect iPhone/iPod Touch/iPad

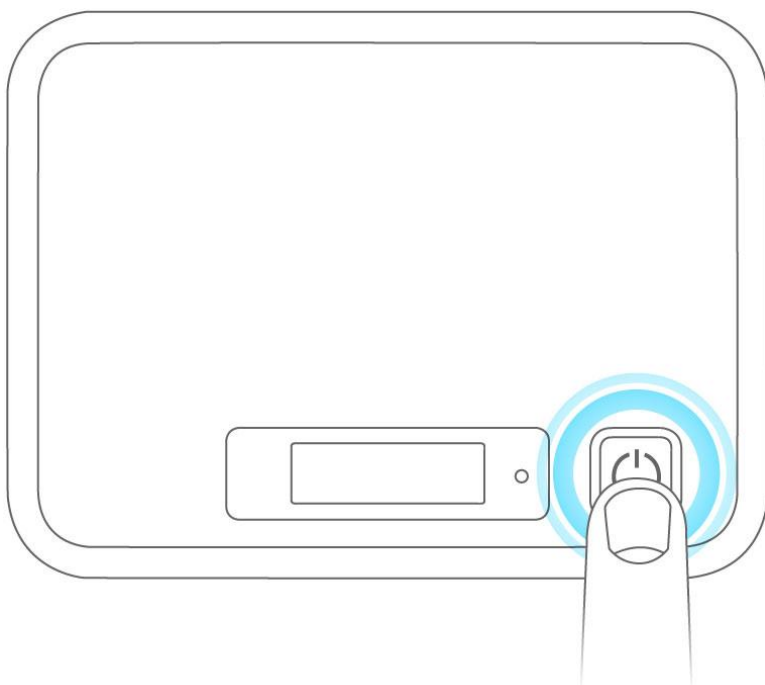
The following topics outline how to connect your iPhone, iPod Touch, or iPad to your device via Wi-Fi.

### Connect an iPhone or an iPod Touch

Follow the instructions to connect your iPhone or iPod Touch to your device using Wi-Fi.

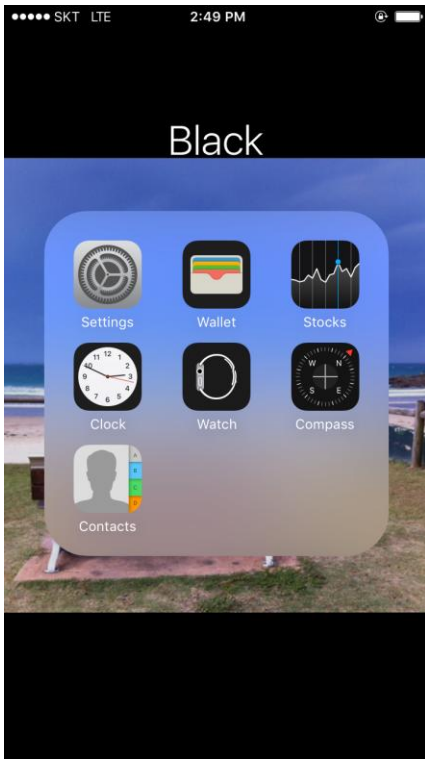
**Note:** The operations below are based on your iPhone or iPod Touch Wi-Fi security set to [xxx].

1. Press and hold the **Power** key .

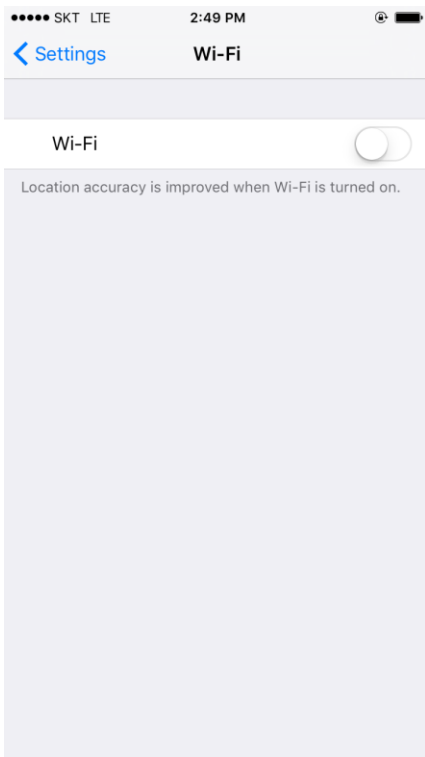


- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.

2. Select **Settings > Wi-Fi**.

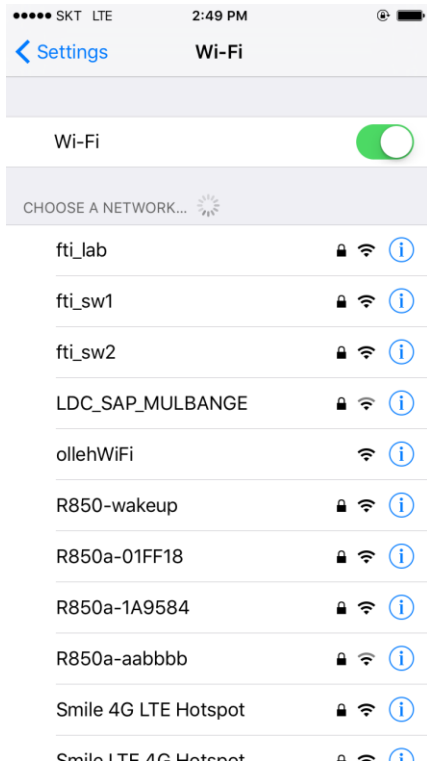


3. Select **Turn on Wi-Fi**.

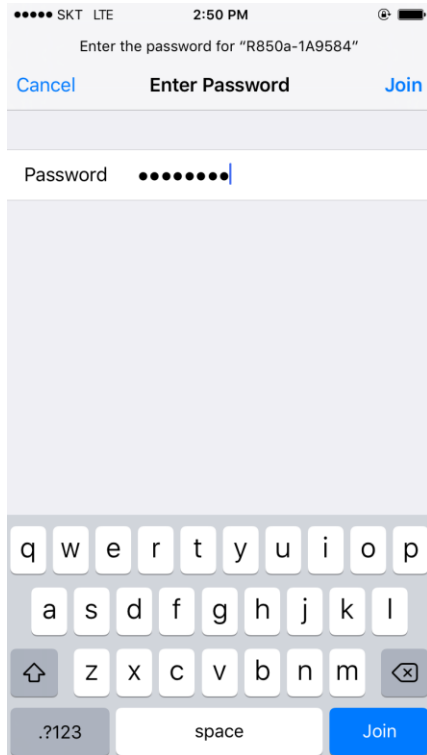


❖ The iPhone or iPod Touch's Wi-Fi function activates.

4. In the Choose a Network list, tap the device's SSID.



5. Enter the security key (WPA) and then tap **Join**.




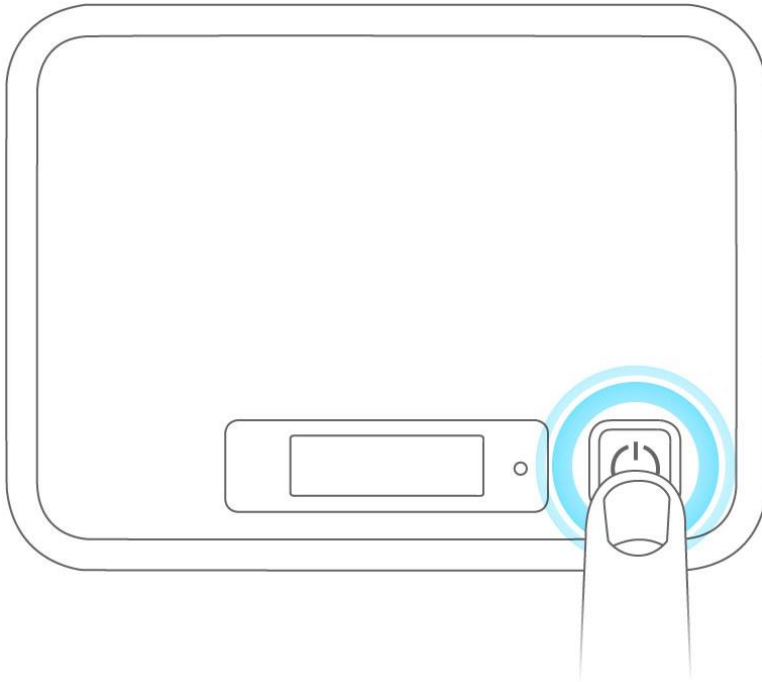
- ❖ The iPhone or iPod Touch connects to your device. The connected status icon on your device will show an additional device has been connected.

## Connect an iPad

Follow the instruction to connect your iPad to your device using Wi-Fi.

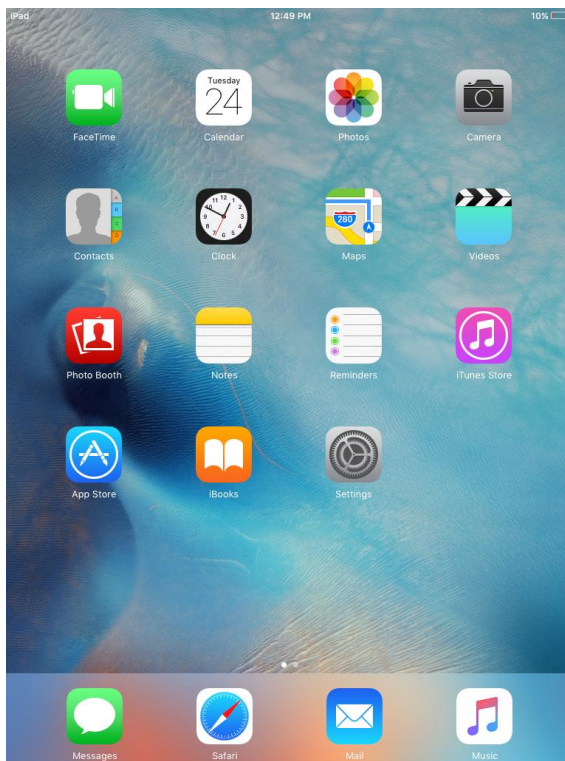
**Note:** The operations below are based on your iPad Wi-Fi security set to [\[xxx\]](#).

1. Press and hold the **Power** key .



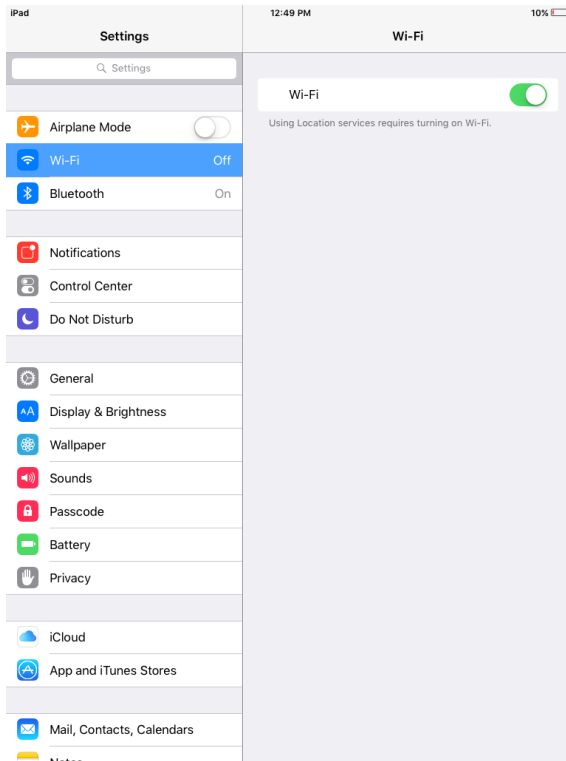
❖ Your device's Wi-Fi function activates and automatically connects to the Internet.

2. Select **Settings > Wi-Fi**.



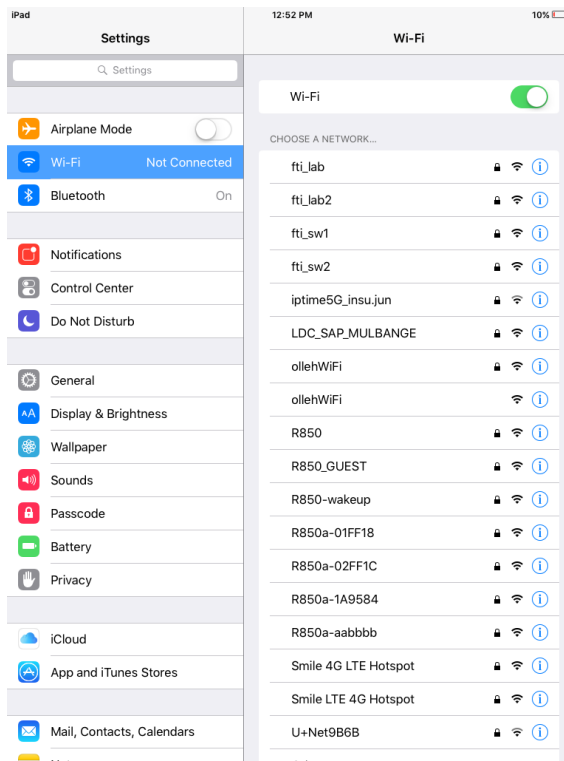


### 3. Select Turn on Wi-Fi.

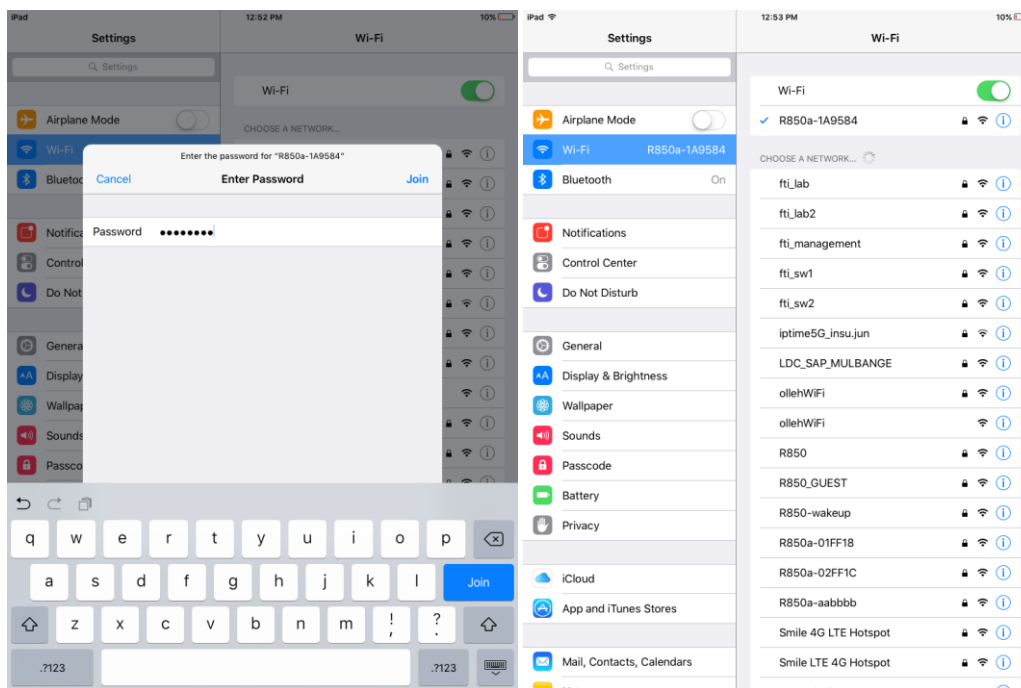


- ❖ The iPhone or iPod Touch's Wi-Fi function activates.

4. In the Choose a Network list, tap the device's SSID.



5. Enter the security key (WPA) and then tap **Join**.




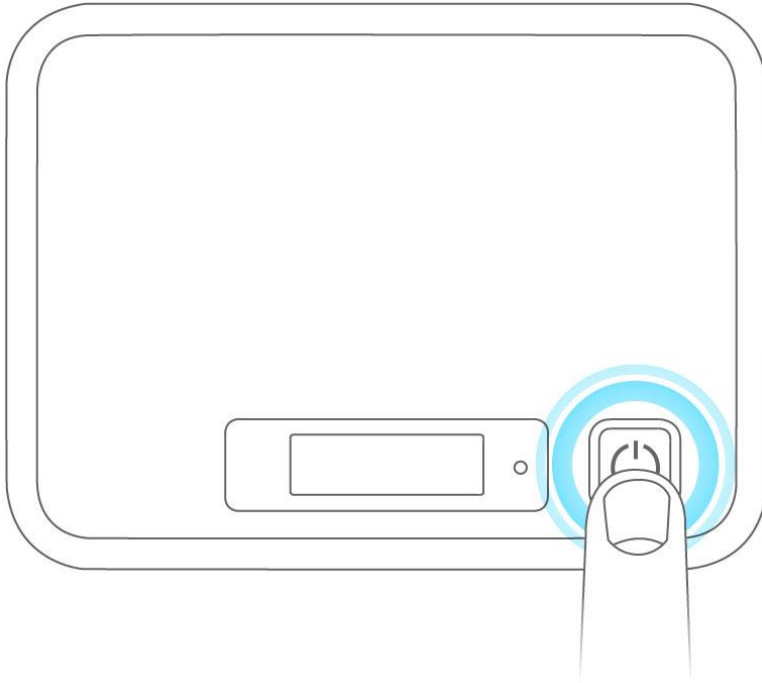
- ❖ The iPad connects to your device. The connected status icon on your device will show an additional device has been connected.

# Connect an Android™ Device

You can share your device's connection with compatible Android devices, such as wireless phones, tablets, and Chromebook computers.

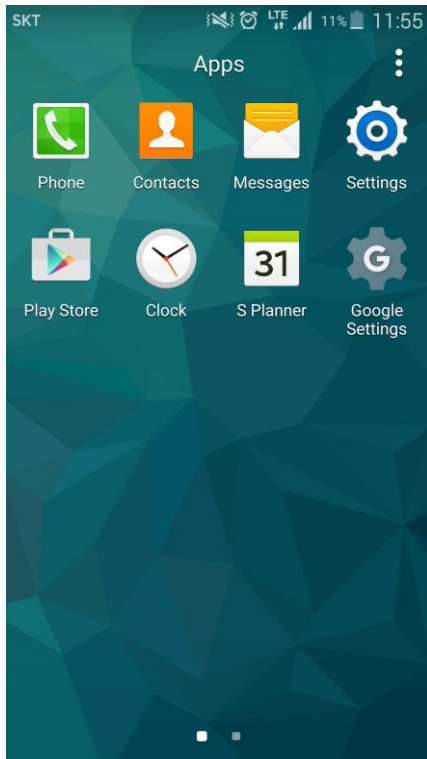
**Note:** The operations below are based on generic Android devices with Wi-Fi security set to [xxx]. Operation may vary depending on Android device type. See your Android device user guide for details.

1. Press and hold the **Power** key .

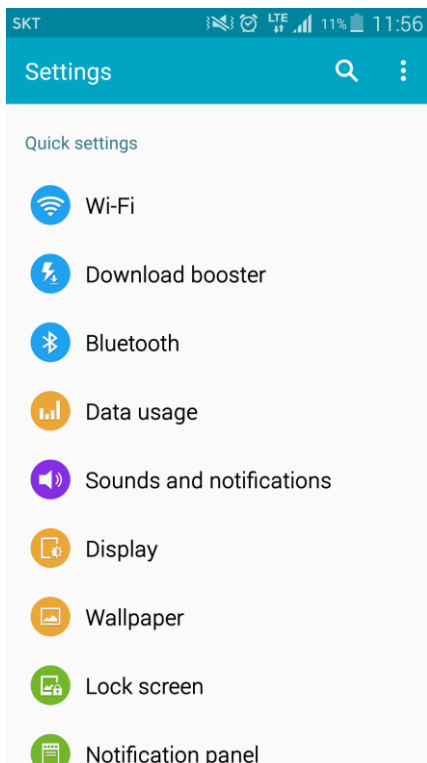


- ❖ Your device's Wi-Fi function activates and automatically connects to the Internet.

2. On your Android device, from home, select **Menu > Settings**.

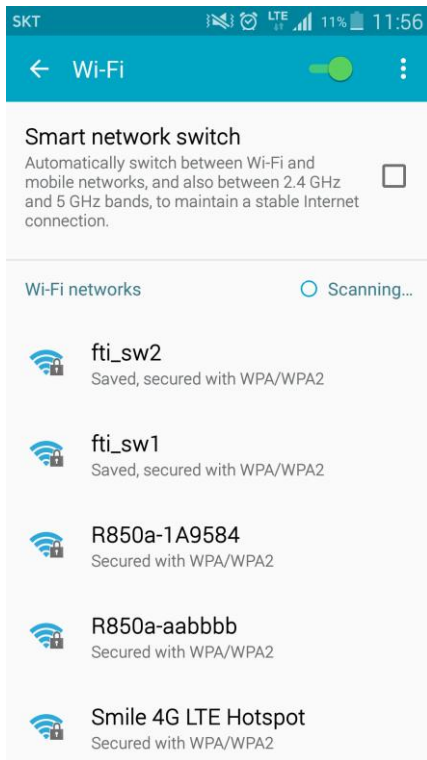


3. Tap or click **Wi-Fi**.



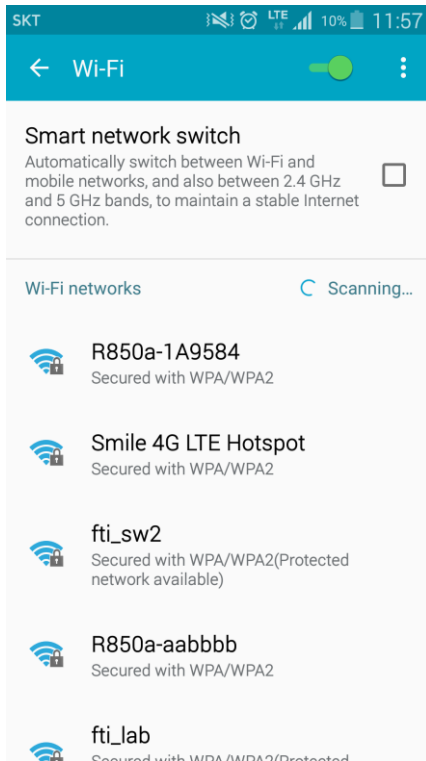
❖ The Wi-Fi settings menu appears.

4. Tap or click the Wi-Fi slider to turn Wi-Fi on.

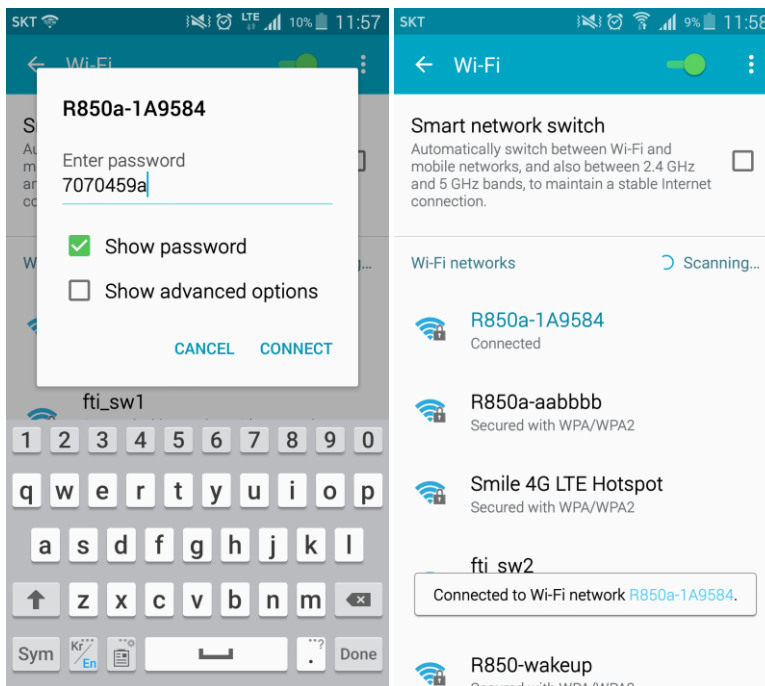


❖ Wi-Fi is enabled on the Android device.

5. Tap or click your device's SSID from the list, and tap **Connect**.



6. Enter the security key (WPA) and then tap or click **Connect**.



- ❖ The Android device connects to your mobile broadband device. The connected status icon on your device will show an additional device has been connected.

# Settings

The following topics provide an overview of items you can change using the device **setting** menu accessed through the Web UI.

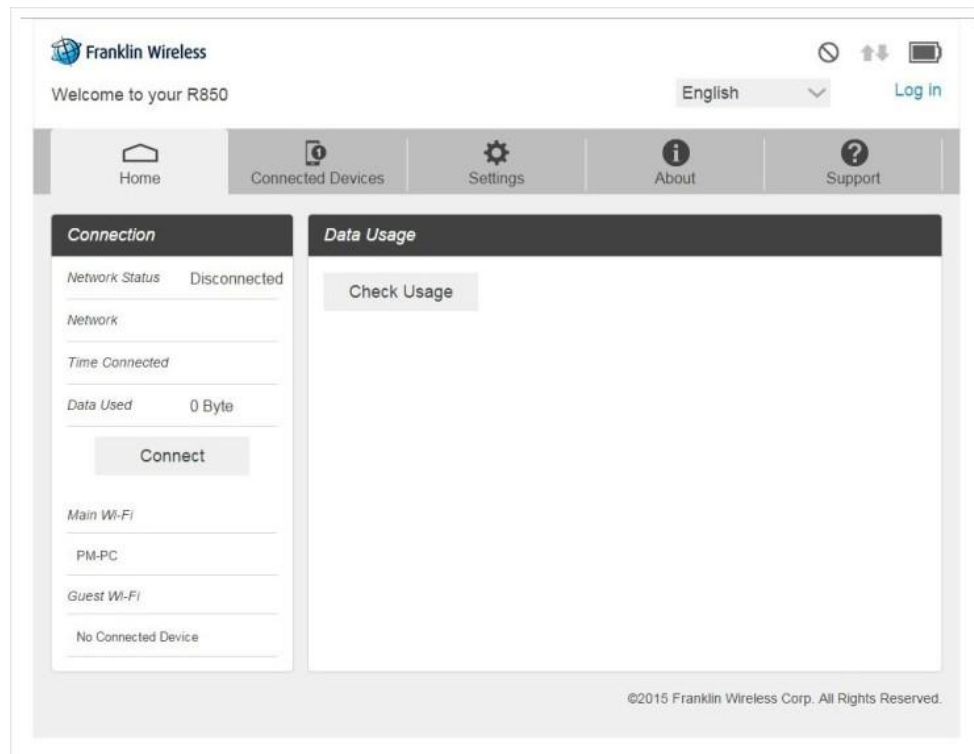
## Web UI Overview

Use the device Web UI in a browser to check or change your mobile broadband device settings from a device connected via Wi-Fi.

## Web UI Window

Explore the options available through the device's Web UI window.

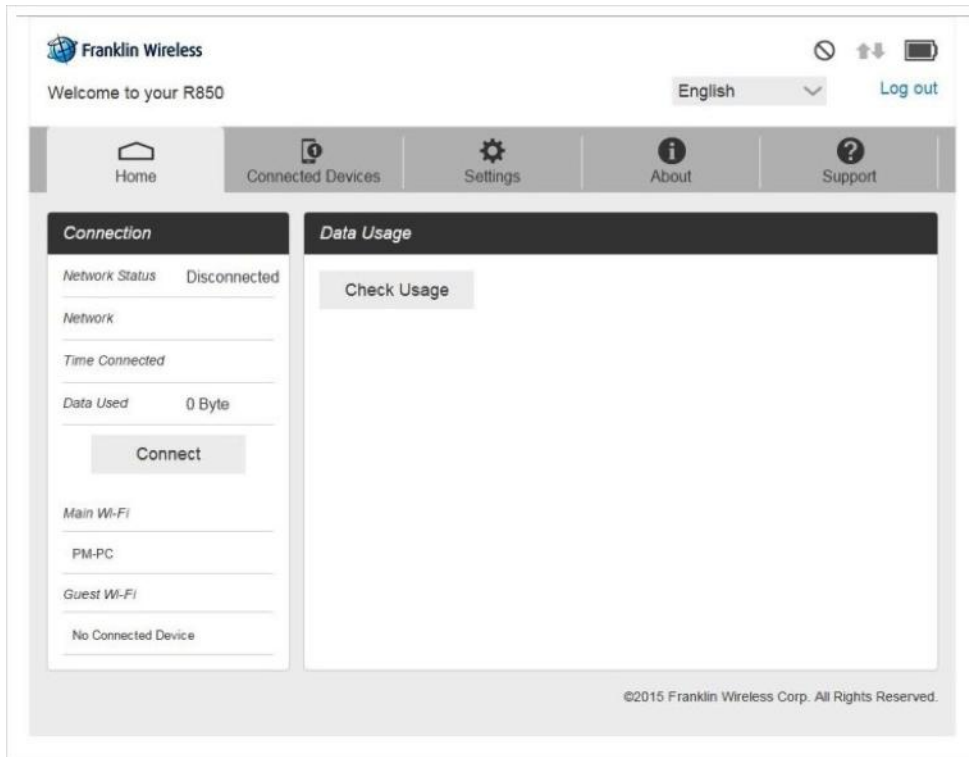
1. Connect your mobile broadband device to an external device via a Wi-Fi connection.
2. Launch a browser and access the Web UI via <http://myhotspot> or <http://192.168.128.1> .
  - ❖ The Web UI launches and displays the main window.



# Home

Check current status of network connection and data usage on the Home page.

- From the Web UI, click the **Home** tab. (For connection information, see [Web UI Overview](#).)



## Connected Devices

The Connected Devices tab lets you confirm the names and MAC addresses of devices currently connected to your device and set access permissions.

### Check the Connected Devices

- From the Web UI, click **Connected Devices > Connected** to display the list of connected devices.

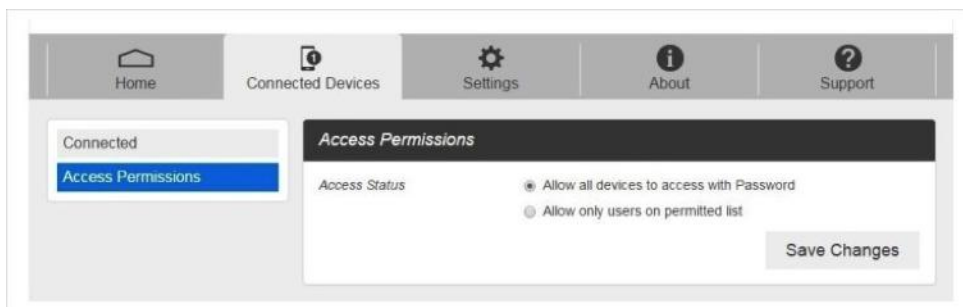




## Set Access Permissions

Control user's ability to access main or guest Wi-Fi. Changing this status will immediately update the status of devices listed ability to access Wi-Fi from this device, even if they have the password.

1. From the Web UI, click **Connected Devices > Access Permissions**.

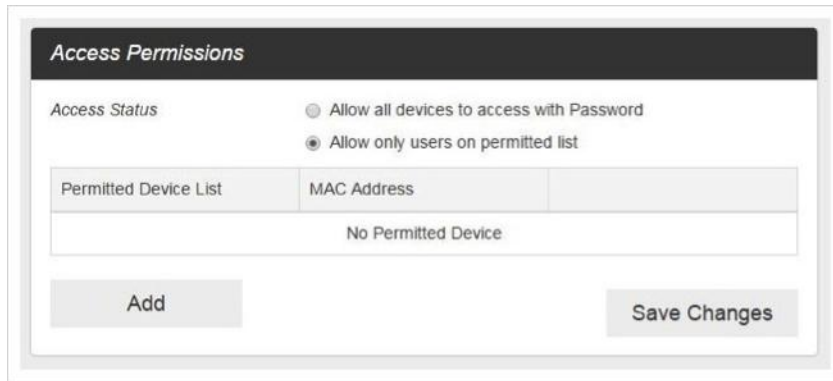


2. Select an access status and then click **Save Changes**.

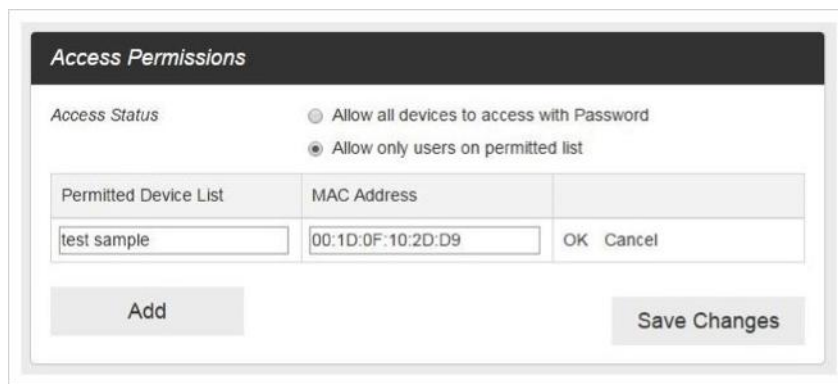
## Add Permitted Devices

The Access Permissions menu allows you to restrict access only to specific users, instead of anyone who enters the password. To restrict access in this manner, you need to add permitted users from the menu.

1. From the Access Permissions menu, select **Allow only users on Permitted list**.
  - ❖ The Add Devices option will appear onscreen.



2. Click > next to **Add Devices** to open the Add Devices menu, and then click **Add More**.
3. Enter a Friendly Name (optional) and the MAC address of the permitted device.
  - A sample MAC address might be 00:1D:0F:10:2D:D9.



4. Click **Add More** to add more permitted devices.
5. When you are finished adding permitted devices, click **Save Changes**.
  - ❖ Access to your device will be restricted to the devices in your list.

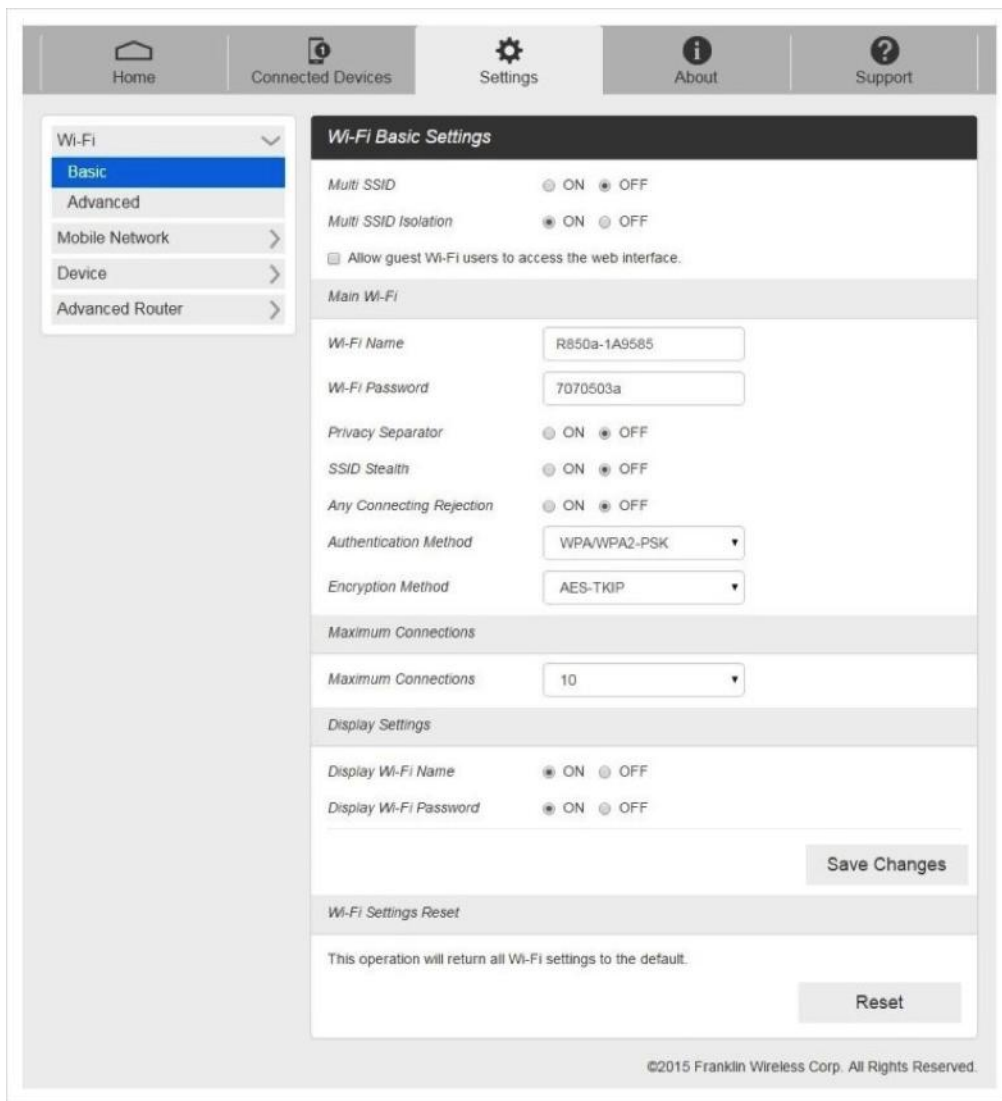
## Settings Tab

Set your device options, including Wi-Fi, Mobile Network, Device and Advance Router.

### Wi-Fi Basic Settings

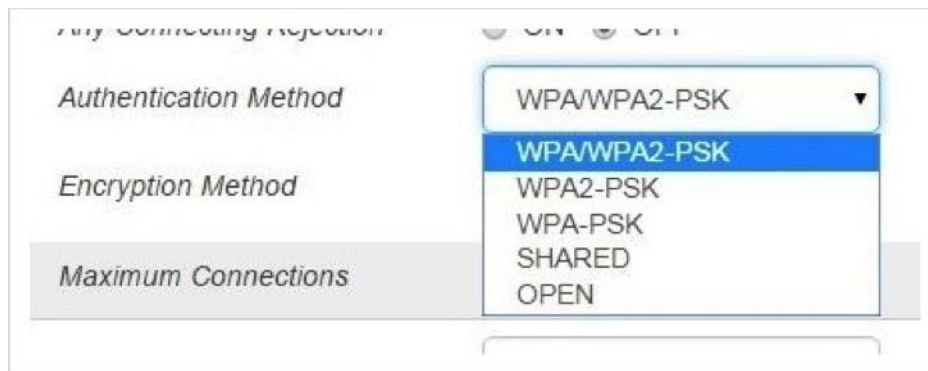
Set the basic Wi-Fi settings for your device.

1. From the Web UI, click **Settings > Wi-Fi > Basic** to display the basic wireless network parameters.



- **Wi-Fi Broadcast Isolation:** Enable or disable this function. If On is selected, it will prevent your device from communicating across the different Wi-Fi's.
- **Wi-Fi Name:** Service Set Identifier (SSID). Enter a string less than 32 characters as the name for your wireless local area network (WLAN).
- **Wi-Fi Password:** Enter the Wi-Fi password.
- **Display Wi-Fi Name:** Enable or disable this function. If On is selected, your device's name will be displayed on the device.
- **Display Wi-Fi Password:** Enable or disable this function. If On is selected, your device's password will be displayed on the device.
- **Hide SSID:** Enable or disable this function. If Off is selected, your device's name will be broadcast.

- **Authentication Method:** The authentication methods are described below.



Mode	Description
<b>OPEN</b>	Authentication and encryption won't be performed. There are risks that private info will be intercepted or network will be used by unauthorized individuals.
<b>SHARED</b>	Authentication via Shared Key protocol.
<b>WPA2-PSK</b>	WPA-PSK is the securer version of WPA with implementation of the 802.11i standard.
<b>WPA-PSK/WPA2-PSK</b>	Apply both the WPA-PSK and WPA2-PSK scheme.

- **Encryption Method:** Select an encryption method from the drop-down list.



- **Guest Mode:** Enable or disable this function. If On is selected, the wireless devices connected to your device will be unable to communicate with each other.



- **Maximum Connections:** Choose the maximum number of the devices which connect to your device simultaneously. You can also click the right or left arrow to distribute the maximum number of the connected devices between the Main Wi-Fi and the Guest Wi-Fi.

- **Wi-Fi Settings Reset:** Click the **Reset** button to reset all Wi-Fi settings to the default.
2. Click **Save Changes** to save your settings.

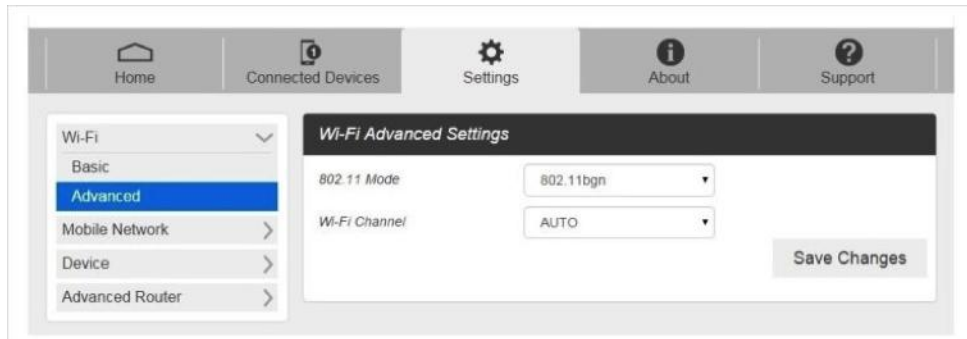
## Wi-Fi Advanced Settings

Configure your device's advanced Wi-Fi settings.

## Caution for Using Wi-Fi Advanced Settings

These advanced settings should only be changed for specific circumstances.

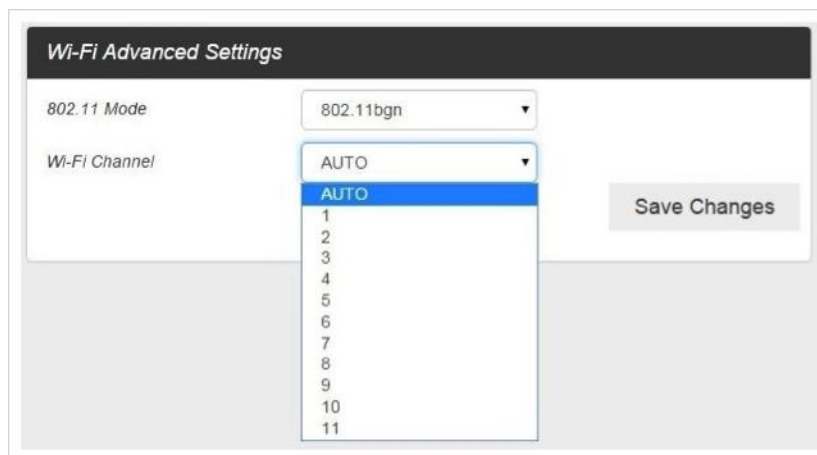
1. From the Web UI, click **Settings > Wi-Fi > Advanced** to view the wireless network advanced parameters and the WPS settings shown in the following figure.



- **802.11 Mode:** Select an 802.11 mode from the drop-down list.



- **Wi-Fi Channel:** Select a Wi-Fi channel from the drop-down list.



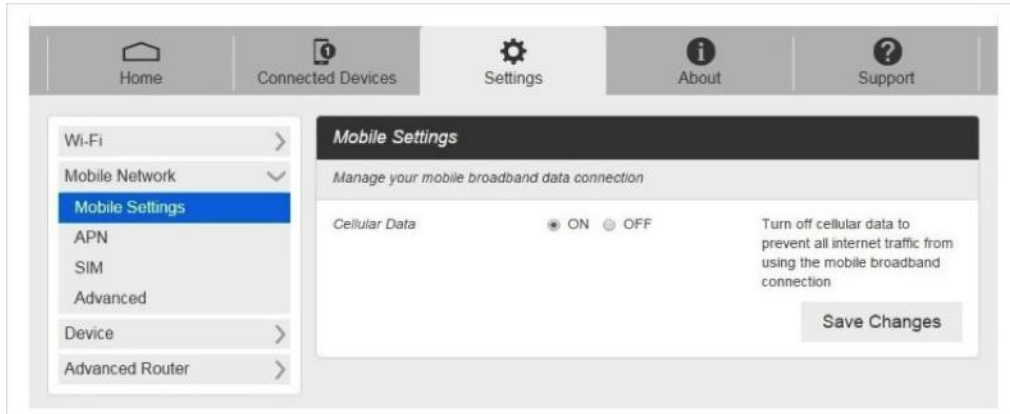
2. Click **Save Changes** to save your settings.

## Mobile Network Settings

Manage your mobile network settings.

## Mobile Settings

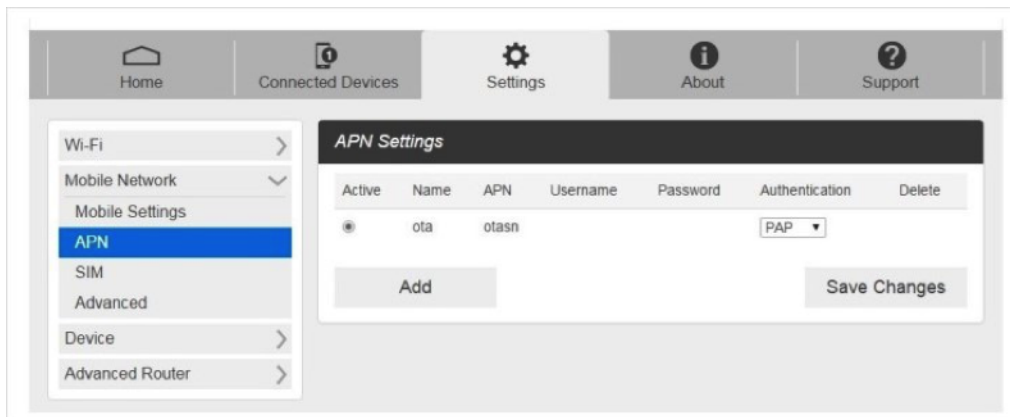
1. From the Web UI, click **Settings** > **Mobile Network** > **Mobile Settings**. The Mobile Settings page is shown in the following figure.



- **Cellular data:** Turn Cellular data on or off. Turn it off to prevent all Internet traffic from using the mobile broadband connection.
2. Click **Save Changes** to save your settings.

## APN

- From the Web UI, click **Settings** > **Mobile Network** > **APN**. The default APN parameters are shown in the following figure. You can use the default APN to connect to the Internet. You can also add new APNs.



To add a new APN, follow the steps below:

1. Click **Add** to access the following page.

Active	Name	APN	Username	Password	Authentication	Delete
<input checked="" type="radio"/>	ota	otasn			PAP	
<input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	PAP PAP CHAP	OK Cancel

Buttons: Add, Save Changes

- Enter the related parameters as described in the following table.

Parameters	Description
<b>Name</b>	Type the profile name.
<b>APN</b>	Type the APN string.
<b>User name</b>	User name is used to obtain authentication from the ISP when the connection is established.
<b>Password</b>	Password is used to obtain authentication from the ISP when the connection is established.
<b>Authentication</b>	Password Authentication Protocol (PAP) provides a simple method without encryption for the peer to establish its identity using a 2-way handshake. Challenge-Handshake Authentication Protocol (CHAP) is used to periodically verify the identity of the peer using a 3-way handshake.

- Click **Save** to add the new APN.

#### Additional APN Options

- To activate the new APN, check the circle in front of it and then click **Save Changes**.
- To edit the new APN, click **Edit**, change the settings, and then click **Save**.
- To delete the new APN, click **Delete**.

**Note:** The default APN cannot be edited or deleted.

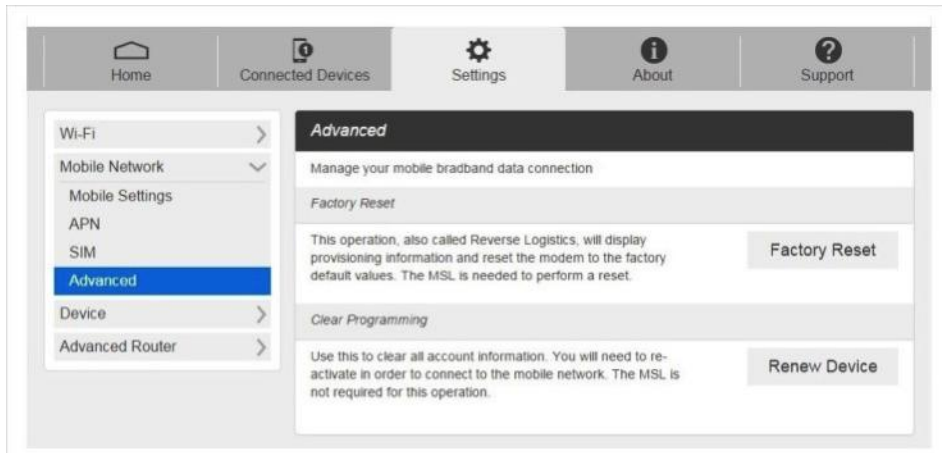


## Advanced Mobile Network Settings

### ! Caution for Using Advanced Mobile Network Settings

Advanced Mobile Network Settings should only be used as directed by Sprint Customer Service personnel. Certain advanced options will reset your device's connections and programming and will require reactivation.

- From the Web UI, click **Settings** > **Mobile Network** > **Advanced** to set the mobile network advanced settings on this interface.



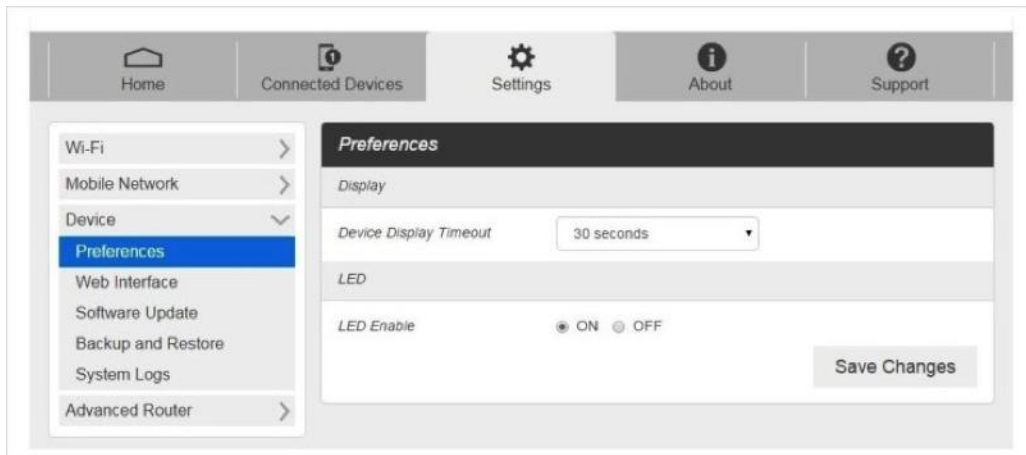
- **Factory Reset:** Click **Factory Reset** to reset the modem to the factory default value.
- **Clear Programming:** Click **Renew Device** to clear all account information.

## Device Settings

The Device settings menu lets you set display brightness, manage account password, update software, back up, restore and check system log.

### Preferences

1. From the Web UI, click **Settings** > **Device** > **Preferences**. You can set the display timeout on this page.

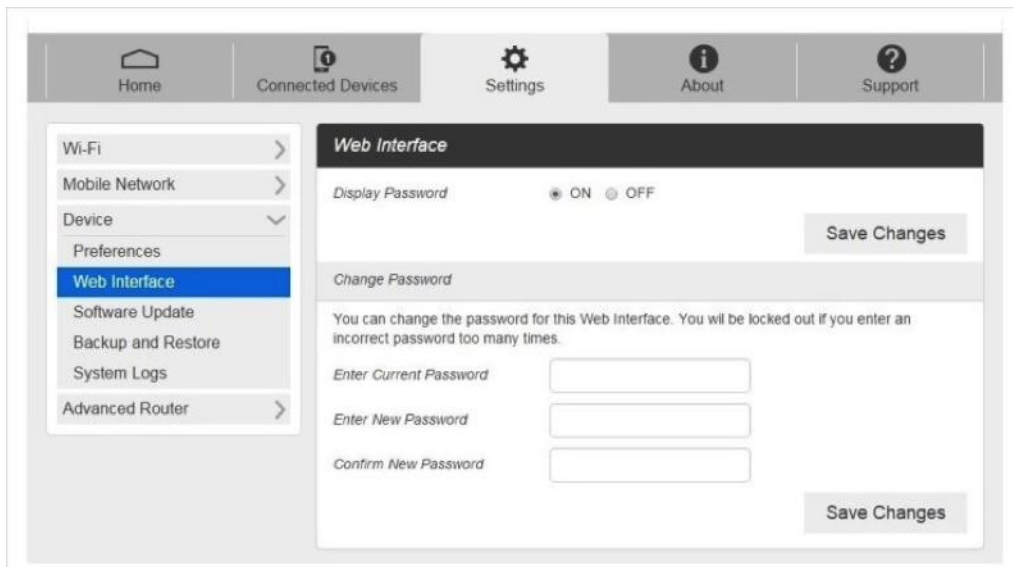


- **Display Timeout:** Select a timeout time from the drop-down list.

2. Click **Save Changes** to save your settings.

## Web Interface

1. From the Web UI, click **Settings > Device > Web Interface**. You can manage your account password on this page.

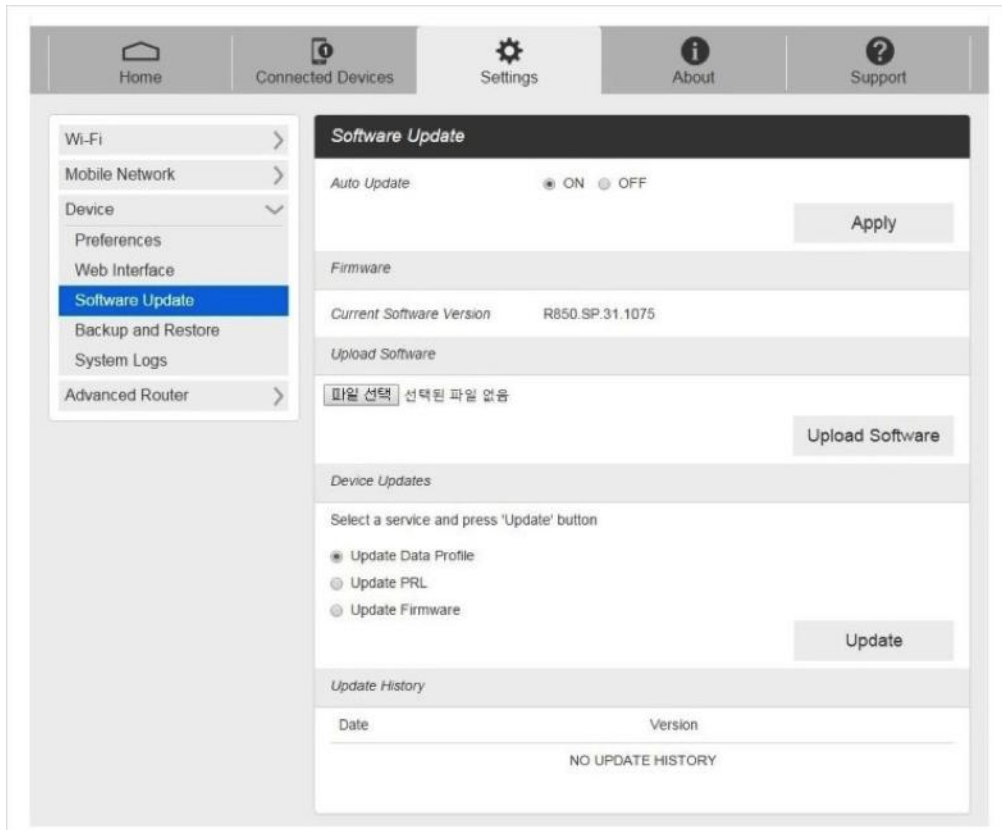


- **Current Password:** Enter the current password.
- **New Password:** Enter the new password.
- **Confirm New Password:** Enter the new password again.

2. Click **Save Changes** to save your settings.

## Software Update

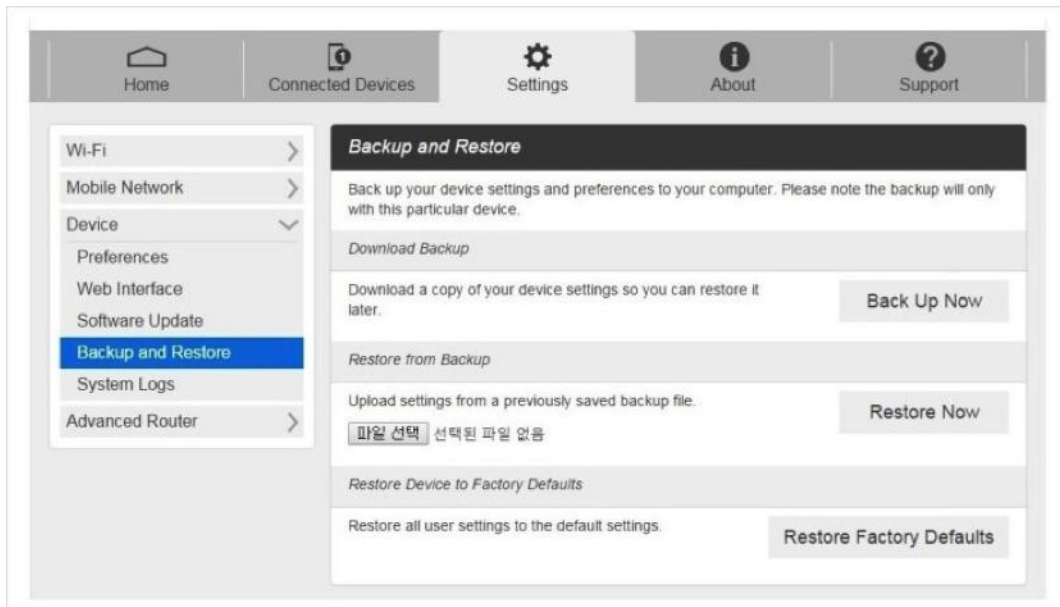
1. From the Web UI, click **Settings** > **Device** > **Software Update**. You can update the software on this page.



2. Read the onscreen options and click the update you would like to initiate. For example, to update your device's firmware (software version), click **Update Firmware**.

## Back up and Restore

- From the Web UI, click **Settings** > **Device** > **Back up and Restore** to access menus to back up your device settings to your computer, restore from the backup and restore your device to its factory default settings.



To back up your device settings to your computer, follow the steps below:

1. Click **Back up now**.
2. Click **Save** on the pop-up window.
3. Choose a location on your computer to save the backup file.
4. Click **Save**.

To restore from the backup, follow the steps below:

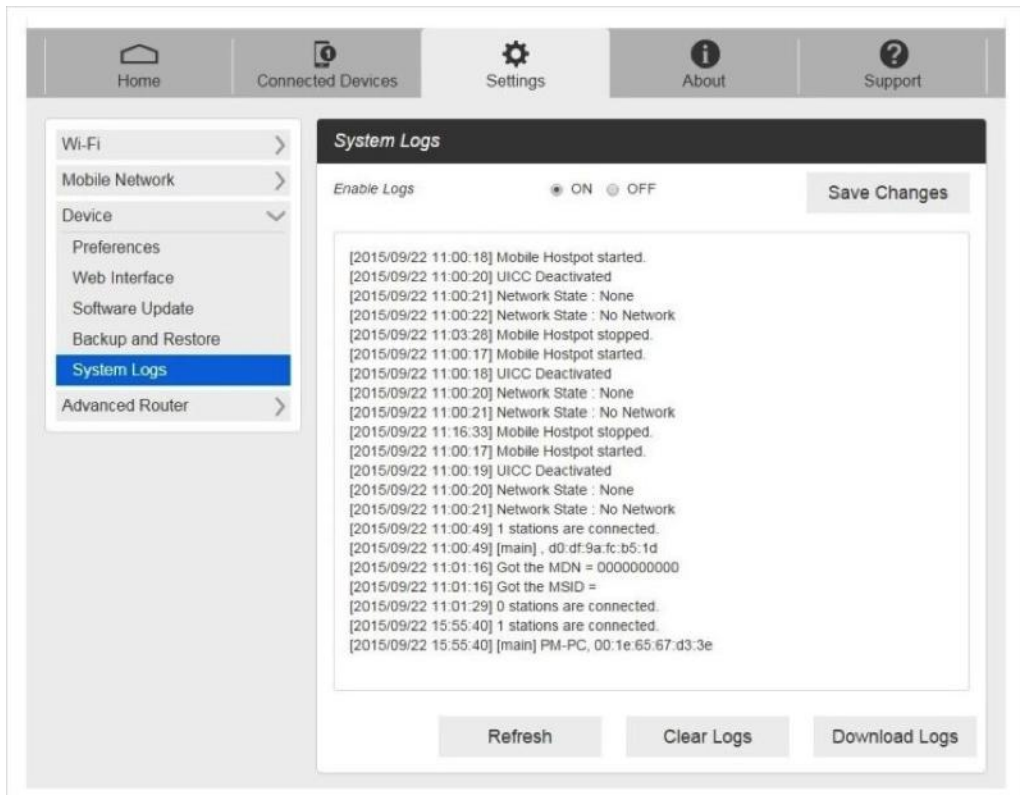
1. Click **Select File** to select the backup file in your computer.
2. Click **Restore now**.

To restore your device to its factory default settings, follow the steps below:

1. Click **Restore factory default**.
2. Click **Yes** to confirm the command.

## System Logs

- From the Web UI, click **Settings > Device > System logs**, and then click **Download logs** to download the system logs on this page.

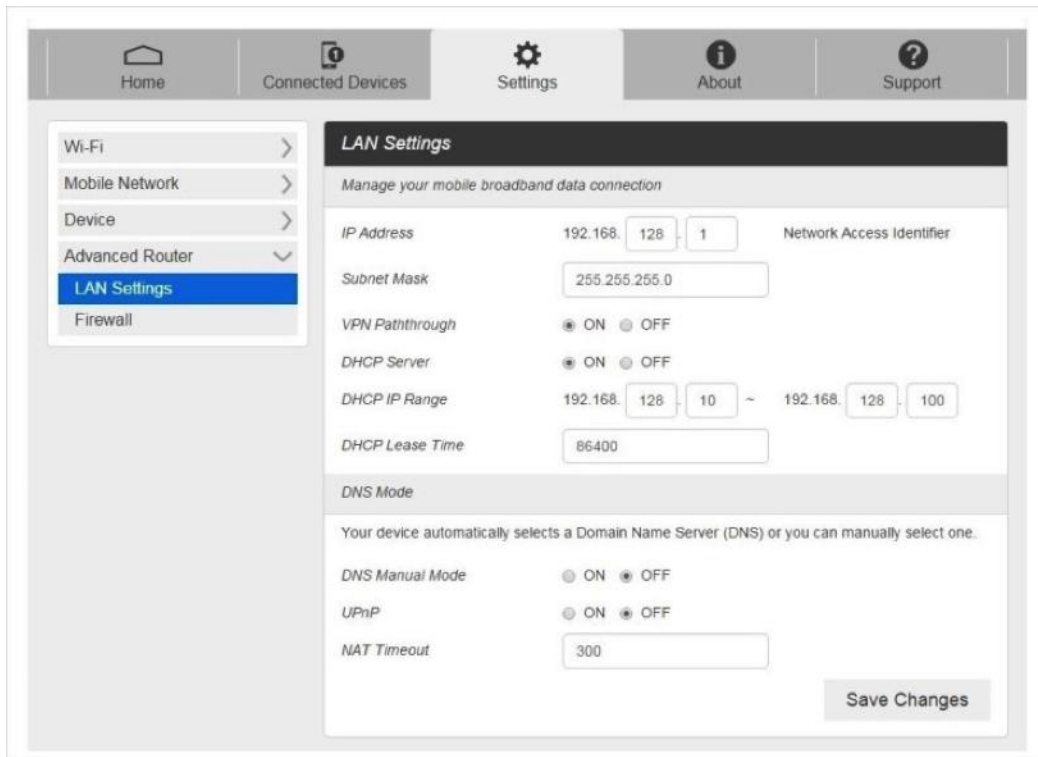


## Advanced Router Settings

Set LAN settings, Firewall and Customization.

### LAN Settings

1. From the Web UI, click **Settings** > **Advanced Router** > **LAN Settings** to display the router information shown in the following figure.

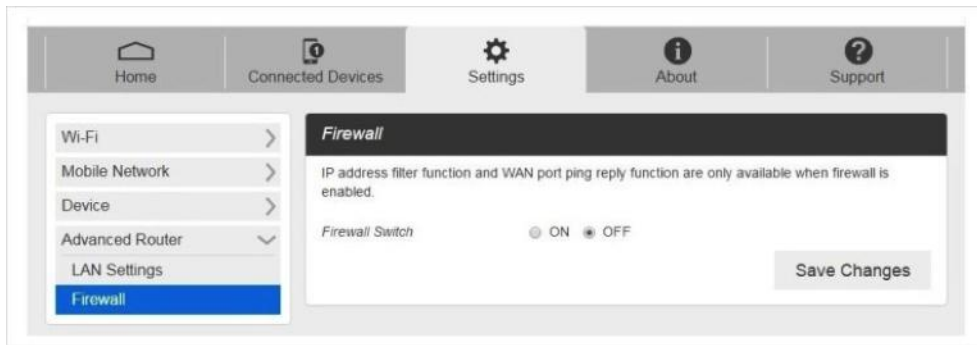


- **IP Address:** IP address for LAN interface.
- **Subnet Mask:** Subnet mask for the IP address.
- **VPN passthrough:** VPN passthrough must be enabled if you want to allow VPN tunnels to pass through your device's firewall.
- **DHCP Server:** Enable or disable DHCP Server function.
- **DHCP IP Range:** Allocate begin and end IP address for IP Range.
- **DHCP Lease Time:** Define how long the leased IP address will be expired. The new IP address will be relocated after the IP address is expired.
- **DNS manual mode:** Turn DNS manual mode on or off.
- **NAT Timer:** Set TCP NAT time.

2. Click **Save Changes** to save your settings.

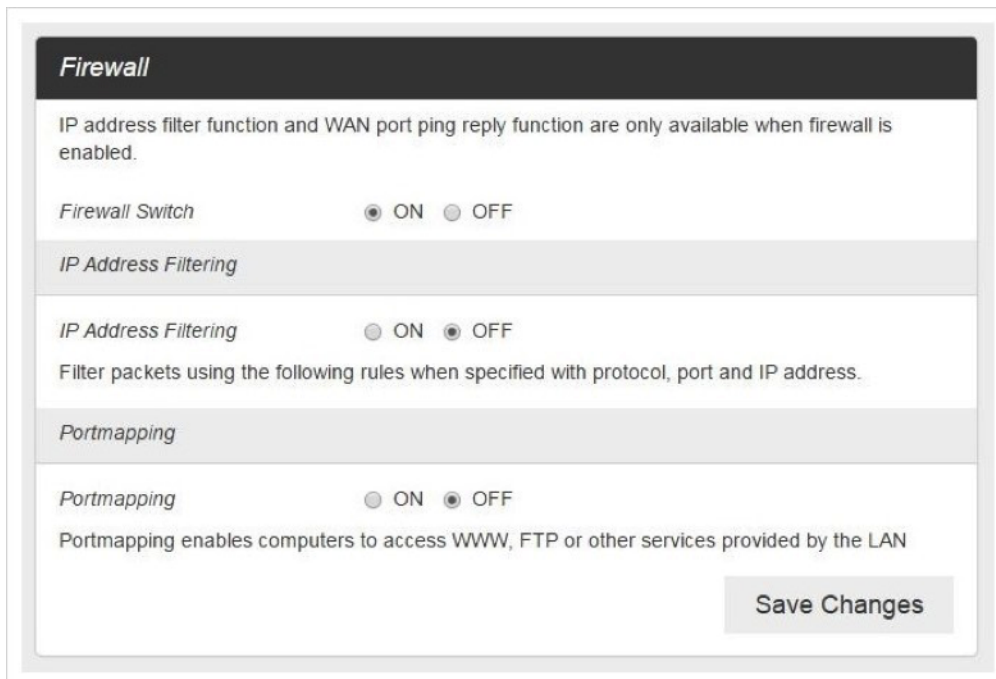
## Firewall

- From the Web UI, click **Settings > Advanced Router > Firewall**. You may set up firewall rules to protect your network from virus and malicious activity on the Internet.



## IP Address Filtering

To set IP Address Filtering rules, follow the steps below:



1. Turn on the IP Address Filtering.

2. Click **Add**.

3. Enter the related parameters as described in the following table.

Parameters	Description
<b>LAN IP address</b>	Enter the LAN IP address.
<b>LAN port</b>	Set the LAN port.
<b>WAN IP address</b>	Enter the WAN IP address.
<b>WAN port</b>	Set the WAN port.
<b>Protocol</b>	Set which protocol will be used for filtering.
<b>Status</b>	Set how to handle the packet if it matches with the rule.

4. Click **Save Changes** to add the new filtering rule.

## Portmapping

To set portmapping rules, follow the steps below:



1. Turn on Portmapping.

*Portmapping*

*Portmapping*  ON  OFF

Portmapping enables computers to access WWW, FTP or other services provided by the LAN

- IP Address: Specify LAN address. Packets which match the specified conditions will be forwarded to this address.
- LAN/WAN port: Port of the computer providing services. It is a single port with value range of 1 ~ 165535.
- Protocol: Protocols applied by services.
- Settings not enabled until applied.

Name	WAN Port	LAN IP Address	LAN Port	Protocol	Status	Options
No Item						

**Add**

**Save Changes**

2. Click **Add**.

3. Enter the related parameters as described in the following table.

Parameters	Description
<b>Name</b>	Enter a name for the rule.
<b>WAN port</b>	Set the WAN port.
<b>LAN IP address</b>	Enter the LAN IP address.
<b>LAN port</b>	Set the LAN port.
<b>Protocol</b>	Set which protocol will be used for filtering.
<b>Status</b>	Set how to handle the packet if it matches with the rule.

4. Click **Save Changes** to add the new portmapping rule.

# About

Show your device's connection information, firmware information, WWAN information, Wi-Fi details and device information.

1. Launch the Web UI on your connected device. See [Web UI Overview](#) for details.
2. Click the **About** tab to view the available information.

The screenshot displays the 'About' page of a web UI. At the top, there is a navigation bar with five tabs: Home, Connected Devices, Settings, About (selected), and Support. The main content area is divided into several sections:

- Account**: My Number, MSID, MEID (99000095707050), ICGID, IMSI, and IMEI (990000957070503).
- Device**: Model (Franklin R850), Manager (http://myhotspot), Hardware Revision (P2), Power State (Online), Current Temperature (24°C), Current Voltage (4.32V), Battery Charge Level (100%), and Battery Status (Charged).
- Wi-Fi Details**: Wi-Fi Name (R850a-1A9585), Wi-Fi Password (7070503a), MAC Address (F4:63:49:1A:95:85), Encryption (WPAWPA2 AESTKIP), Wi-Fi Devices (1), Max Wi-Fi Devices (10), Max Guest Wi-Fi Devices (0), and Broadcast Network Name (Show).
- Firmware**: Firmware Version (0.2.67.0), Build Date (Nov 14 2015), Web App Version (R850.SP.31.1075), and Bootloader Version (0.26.986).
- WWAN Info**: Activation Date, Refurbish Date (09/22/2015 11:03:21), IP Address, LTE APN NI, and Lifetime Transferred (0 Byte).

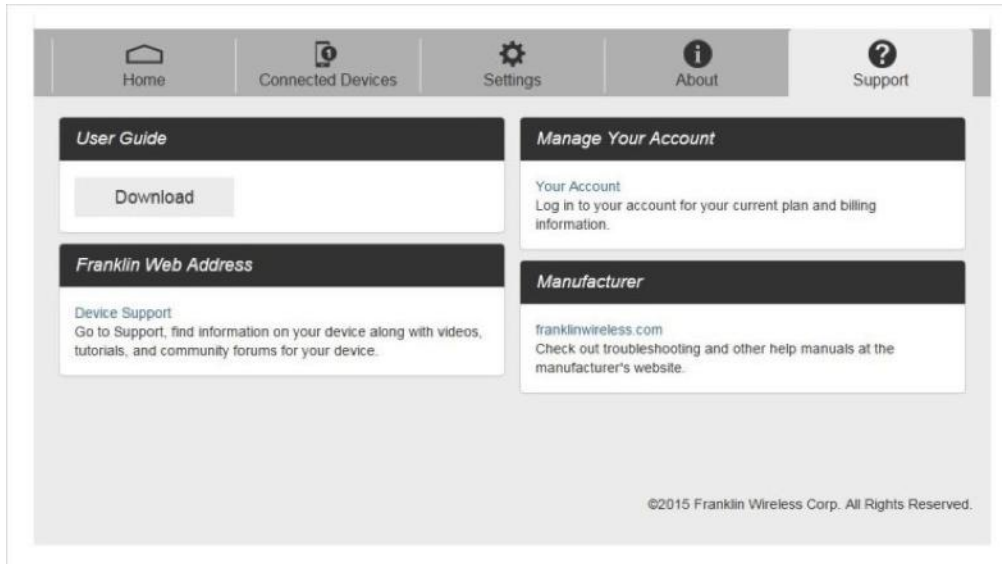
At the bottom right of the main content area, there is a 'Save to File' button. Below the main content, there is a 'Debug Info' section with a 'Debug' button and the text 'View detailed diagnostic information about your device.' The footer of the page contains the copyright notice: '©2015 Franklin Wireless Corp. All Rights Reserved.'

**Note:** You can also save this information to your computer by clicking Save to file.

# Support Tab

Obtain support information on this interface.

1. Launch the Web UI on your connected device. See [Web UI Overview](#) for details.
2. Click the **Support** tab to view the available options.



# Appendix

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The following topics cover items such as troubleshooting, device specifications, applicable warranty and service information, customer service contacts, and applicable trademark and copyright notices.

## Troubleshooting

Check the questions and answers below for troubleshooting solutions for common device issues.

### Check Here First

**Question:** Unable to connect via Wi-Fi (WLAN)

**Answer 1:** Check whether the mobile broadband device is properly connected to the computer or other external device.

**Answer 2:** If OPEN WEP is the security method being used, check whether the correct WEP key is entered. If the WEP key is unknown, see [Wi-Fi basic settings](#) to reset the WEP key and reconnect the device.

**Answer 3:** Check whether the correct WPA key is set. If the WPA key is unknown, see [Wi-Fi basic settings](#) to reset the mobile broadband device or see the WLAN Initialization Sticker to reset the WPA key, and then reconnect the device. WPA/WPA2 security may not be supported depending on the Wi-Fi device. See the Wi-Fi device user guide for information.

**Question:** Internet connection fails.

**Answer 1:** Make sure that you are within the service area.

**Answer 2:** If signal reception is poor, move to where signal reception is good and then reconnect.

**Answer 3:** The access point might be busy depending on the time of day. Wait a little and then reconnect.

**Answer 4:** Activate the Web UI and make sure that network settings are correct.

**Question:** Forgot PIN / Unknown PIN Unblocking Key (PUK) / SIM card is locked.

**Answer:** Contact Customer Service.

**Question:** SIM card is not recognized.

**Answer 1:** Check whether the SIM card is properly installed. For details, see [Insert a SIM Card](#).

**Answer 2:** Check the SIM card for damage.


**Answer 3:** Check the SIM card IC chip for scratches/corrosion.

**Answer 4:** Dirty SIM card (particularly IC chip) may prevent recognition. Clean gently with a soft cloth.

**Answer 5:** Contact Customer Service.

**Question:** Unsure if logged on as an Administrator.

**Answer 1:** For Windows 8, follow these steps to check.

- Move the pointer into the upper-right or lower-right corner and then click or tap  > **Control Panel**. Click **Change your account type** in User Accounts, and then check that the type of account currently logged on to is "Administrator".

**Answer 2:** For Windows 7, check by following these steps.

- Click **Start** menu > **Control Panel** > **User Account and Family Safety** > **User Account**, and then check that the type of account currently logged on to is "Administrator".

## Specifications

The following tables list the specifications for the mobile broadband device, the AC charger, the micro USB cable, and the materials.

### Device Specifications

Item	Description
Model name	R850 Mobile Hotspot
Dimensions <sup>1</sup>	12.5mm (H) x 90.1mm (W) x 67mm (D)
Weight	97g
Interface	Web UI
Power consumption	Normal state: 1.26 Watts Max state : 2.52 Watts
Operating system	Linux OS

Item	Description
<b>Frequency</b>	LTE B2 DL: 1930 ~ 1990 MHz UL: 1850 ~ 1910 MHz LTE B4 DL: 2110 ~ 2155 MHz UL: 1710 ~ 1755 MHz LTE B5 DL: 869 ~ 894 MHz UL: 824 ~ 849 MHz LTE B12 DL: 729 ~ 746 MHz UL: 699 ~ 716 MHz LTE B25 DL: 1930 ~ 1995 MHz UL: 1850 ~ 1915 MHz LTE B26 DL: 859 ~ 894 MHz UL: 814 ~ 849 MHz LTE B41 DL: 2496 ~ 2690 MHz UL: 2496 ~ 2690 MHz WIFI(B/G/N) 2412MHz ~ 2462MHz
<b>Compatible networks</b>	LTE category 4 / Wi-Fi IEEE802.11 b/g/n
<b>Charging time<sup>2</sup></b>	3 hours 40 minute
<b>Continuous standby time<sup>3</sup></b>	41 hours
<b>Continuous communication time<sup>3</sup></b>	8 hours
<b>Communication speed</b>	LTE category 4 DL : 150Mbps UP : 50Mbps

<sup>1</sup> Approximate values

<sup>2</sup> Varies by ambient temperature, battery usage, etc.

<sup>3</sup> Varies by environment, signal conditions, etc.

## AC Charger Specifications

Item	Description
Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Nominal dc output voltage	+5.0V ( $\pm 5\%$ )
Rating load current	1.0A

## Materials Specifications

Parts	Materials/Finishing
A cover	PC(Black),SF coating
B cover	PC(Black)
Battery cover	PC(Black),SF coating
A deco	PC(Black),UV(Gloss 80%)
Power key	PC(Milky White),Spray(Black),UV(Gloss 80%)
LCD Bracket	PC(Black)
Rubber feet	Silicon(Black)

# Warranty and Service

The following topics outline your device's warranty and service information.

## Warranty

Your device purchase includes Warranty.

- Confirm shop name and purchase date.
- Read contents of Warranty and keep it in a safe place.



- Check warranty period in the Warranty.

## Services

Before submitting your device for repairs, contact Customer Service or General Information; be prepared to describe problem in detail.

- During the warranty period, repairs will be made under the terms and conditions described in the Warranty.
- After the warranty period, repairs will be upon request; if said repairs can be made, you will be charged for them.

## Customer Service

For mobile broadband device or service information, call general information. For repairs, call customer assistance.

### Sprint Customer Service

You can reach Sprint Customer Service online or by calling toll-free.

- Sign in to your account at [sprint.com/mysprint](http://sprint.com/mysprint).
- Call toll-free at 1-888-788-4727 (business use) or 1-888-211-4727 (personal use).

### Virgin Mobile Customer Service

You can reach Virgin Mobile Customer Service online or by calling toll-free.

- Log in to your account at [virginmobileusa.com](http://virginmobileusa.com).
- Call us toll-free at 1-877-877-8443.

### Boost Mobile Customer Service

You can reach Boost Mobile Customer Service online or by calling toll-free.

- Log in to your account at [boostmobile.com](http://boostmobile.com).
- Call us toll-free at 1-866-402-7366

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# Safety and Notices

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The following topics address important safety precautions, general notes, and required RF exposure information for your mobile broadband device.

## Safety Precautions

The following topics outline important safety precautions that must be observed when using your device.

### Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sprint Pocket Wi-Fi are used in a normal manner with a well-constructed network, your device should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sprint accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using your device, or for failure of your device to transmit or receive such data.

### Safety and Hazards

Do not operate your device under the following conditions.

- In areas where blasting is in progress
- Where explosive atmospheres may be present
- Near medical equipment
- Near life support equipment, or any equipment that may be susceptible to any form of radio interference.

In such areas, your device **MUST BE POWERED OFF**. Your device can transmit signals that could interfere with this equipment.

Do not operate your device in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, your device **MUST BE POWERED OFF**. When operating, your device can transmit signals that could interfere with various onboard systems.

**Note:** Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Your device may be used at this time.

The driver or operator of any vehicle should not operate the device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some jurisdictions, operating such communications devices while in control of a vehicle is an offense.

## Proper Battery Use and Disposal

Follow these guidelines to ensure safe and responsible battery use.

- Do not open, disassemble, puncture, crush, bend, or shred.
- Do not expose to water or other liquids, fire, explosion, or other hazards.
- Use the battery only in the Sprint Pocket Wi-Fi.
- If using with a charger, use only the AC charger supplied with your device.
- Do not short circuit the battery.
- When replacing a battery, use the same model of battery that was supplied with your device.
- Follow local regulations when disposing of a used battery.
- Avoid dropping your device or the battery. If dropped and you suspect damage, take it to a service center for inspection.

**Note:** Improper battery use may result in a fire, explosion, or other hazard.

## FCC Compliance

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:** Any changes of modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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, 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.

# **RF Exposure Information and Specific Absorption Rate (SAR) Information**

The following topics detail the specific absorption rate (SAR) information, electromagnetic safety information, and radiofrequency (RF) exposure information for this device.

This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the United States.

During SAR testing, this device is set to transmit at its highest certified power level in all tested frequency bands, and placed in positions that simulate RF exposure in usage against, and near the body with the separation of 10 mm. Although the SAR is determined at the highest certified power level, the actual SAR level of the while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Safety and Notices 90

The exposure standard for wireless employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.

**Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands.**

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of <http://fcc.gov/oet/ea/fccid> after searching on **FCC ID: XHG-R850**

More information on the device's SAR can be found from the following FCC website:  
<http://fcc.gov/oet/ea/fccid>.

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

SAR compliance for body operation is based on a separation distance of 10 mm between the unit and the human body. Carry this device, at least 10 mm away from your body to ensure RF exposure level compliant or lower to the reported level. To support body operation, choose the belt clips or holsters, which do not contain metallic components, to maintain a separation of 10 mm between this and your body.

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