Setup Guide

Read this to connect and configure the product

Speed Wi-Fi HOME 5G L12

Technically Certified

Preface

Thank you for buying the Speed Wi-Fi HOME 5G L12 (simply called the "product" from here on).
Before using the product, be sure to read the "Setup Guide" (this manual) to ensure correct use.

List of Packaged Items

Before you start using the product, make sure that you have all the following items packaged with the product.

☐ Speed Wi-Fi HOME 5G L12 main unit　　☐ Speed Wi-Fi HOME 5G L12 AC adapter

☐ つなぎかたガイド（保証書）"Setup Guide"(with warranty)（Japanese）

* Keep the packaged items, including the warranty, in a safe place.
* Ethernet cable is not included. Use one that is commercially available.
* The illustrations of the product used in this manual are simulated images. They may differ from the actual product.

About the Instruction Manual

"Setup Guide" (this manual): Explains information you need before using the product for the first time and just the main functions, operations, and settings of the product.
「取扱説明書 詳細版」(Full Instruction Manual) (Japanese): Explains various functions, operations, and settings in detail.
• In this manual, the "Setup Guide" (this manual) and「取扱説明書 詳細版」(Full Instruction Manual) (Japanese) are collectively referred to as the "Instruction Manual".
• The newest PDF versions of the "Instruction Manual" can be downloaded from the WiMAX Support Information website.
https://www.necplatforms.co.jp/support/wimax/l12/index.html (in Japanese only)
• Can be downloaded from the au website.
https://www.au.com/support/service/mobile/guide/manual/ (in Japanese only)

About the Notations in This Manual

■ Notes on Illustrations / Screenshots
• In this manual, the "au Nano IC Card 04 LE" (for au contracts) and the "au Nano IC Card 04 LE U" (for contracts with WiMAX operators other than au) are referred to as a "SIM card".
• In this manual, both au and WiMAX operators other than au are referred to as a "telecommunications carriers", unless specifically mentioned otherwise.
• The explanations, such as screenshots and methods of operation in this manual, are those when a SIM card is inserted, unless specifically mentioned otherwise.
• The illustrations and screenshots in this manual are simplified and may look different from the actual illustrations and screens. Also, a part of a screen may be omitted.
• In this manual, the "Speed Wi-Fi HOME 5G L12 AC adapter" is referred to as an "AC adapter".
• Company names and product names referred to in this manual are trademarks or registered trademarks of their respective companies. TM and the ® mark may be omitted in this manual.

■ Before using the product

About Communication Modes

The product can transmit data to a wireless base station by using the 5G system, LTE system, and WiMAX 2+ system.
You can select from the following communication modes to use this.
• For an explanation of how to select and set the communication modes, see "Button Operations" in this manual or "4-2 通信モードを切り替える(Switching Communication Modes)" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).
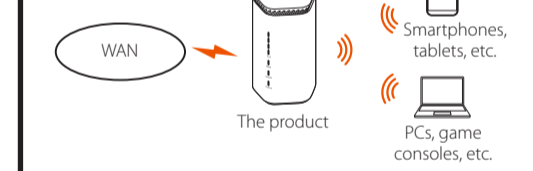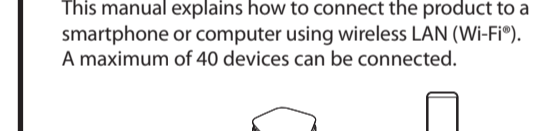
Standard Mode	Connect via the 5G, LTE, or WiMAX 2+ network.
Plus Area Mode	Connect via the 5G, LTE, or WiMAX 2+ network. Communication is possible in a wider area than in "Standard Mode".

* The 初期設定 default setting is "Standard Mode". Note that an additional charge, depending on your billing plan, may be incurred when you switch to using "Plus Area Mode".

Possible Uses for the Speed Wi-Fi HOME 5G L12

■ Connect via Wireless LAN (Wi-Fi®)
This manual explains how to connect the product to a smartphone or computer using wireless LAN (Wi-Fi®).
A maximum of 40 devices can be connected.

■ Connect Using an Ethernet Cable (Commercially Available)
Refer to "3-2 Ethernetケーブル(市販品)で接続する(Connecting Using an Ethernet Cable (Commercially Available))" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).
*You can use both wireless LAN (Wi-Fi®) and wired LAN simultaneously. By using both, a maximum of 42 devices can be connected.

*Depending on the ambient reception environment, the number of connected devices may not reach the maximum.
*Depending on the connection environment, communication speeds may not reach the maximum. Furthermore, depending on the connected devices or games, some online competitive games may not operate normally.
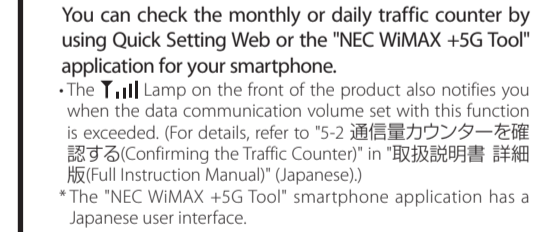
<Main useful functions>

■ Traffic Counter
You can check the monthly or daily traffic counter by using Quick Setting Web or the "NEC WiMAX +5G Tool" application for your smartphone.
• The T..ll Lamp on the front of the product also notifies you when the data communication volume set with this function is exceeded. (For details, refer to "5-2 通信量カウンターを確認する(Confirming the Traffic Counter)" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).)
• The "NEC WiMAX +5G Tool" smartphone application has a Japanese user interface.

Traffic counter

Main screen of smartphone application

■ Wi-Fi Frequency Band Automatic Setting (Band Steering)
The product supports a band steering function that identifies signal conditions, such as the signal strength of wireless LAN (Wi-Fi®) devices, and automatically switches to the appropriate frequency band, either 2.4GHz or 5GHz, for the wireless LAN (Wi-Fi®) devices that are connected to the product. (Default setting: "ON")
This helps to maintain optimal high-speed transmissions.
(For details, refer to "5-3 Wi-Fi周波数自動設定(バンドステアリング機能)を使う(Using Wi-Fi Frequency Band Automatic Setting (Band Steering))" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).)
*Some wireless LAN (Wi-Fi®) devices do not switch frequency bands.

■ Guest SSID
You can use a guest SSID to create a temporary internet environment, such as for guests to use.
A guest SSID cannot be used with the product's default settings. Open Quick Setting Web and go to "Wi-Fi Settings" - [Wi-Fi Settings (Guest SSID)] - "Wi-Fi Access Point Settings", and set "Wireless Function" to "ON".
You can also set the times that the guest SSID is enabled.
(Refer to "Wi-Fi設定(ゲストSSID)(Wi-Fi Settings (Guest SSID))" in "8-4 Wi-Fi設定(Wi-Fi Settings)")

How to Read This Manual

When you want to connect the product to a smartphone or PC using Wi-Fi®
⇒ Refer to **STEP 1** to **3**

How to optimize usage

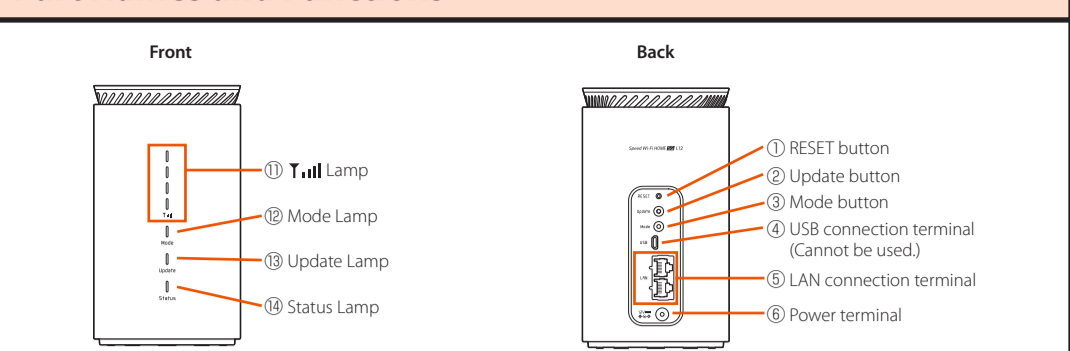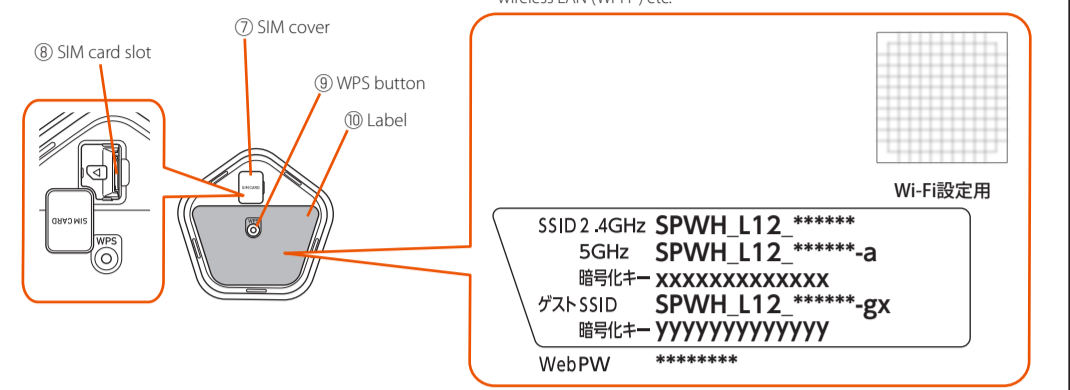|	
Placing the product for good signals ⇒ Refer to **POINT1**	Changing the initial password to improve security ⇒ Refer to **POINT2**
Useful things to know Things you can do with smartphone applications ⇒ Refer to **POINT3**	

What are these?

Learn about lamps ⇒ Refer to **CHECK 2**	Learn about button operations ⇒ Refer to **CHECK 2**

Part Names and Functions

Front

① T..ll Lamp
② Mode Lamp
③ Update Lamp
⑭ Status Lamp

Back

① RESET button
② Update button
③ Mode button
④ USB connection terminal (Cannot be used.)
⑤ LAN connection terminal
⑥ Power terminal

Bottom

⑧ SIM card slot
⑦ SIM cover
⑨ WPS button
⑩ Label

This label lists the following information, which is used to connect to wireless LAN (Wi-Fi®) etc.

SSID 2.4GHz　SPWH_L12_******
　　　5GHz　　SPWH_L12_******-a
暗号化キー xxxxxxxxxxxxxxx
ゲスト SSID　SPWH_L12_******-gx
暗号化キー yyyyyyyyyyyyyy
WebPW　　********

Wi-Fi設定用

Name	Function
① RESET button	Returns the settings to their factory settings.
② Update button	Use to update the firmware.
③ Mode button	Use to switch communication modes.
④ USB connection terminal	Cannot be used. Do not connect this.
⑤ LAN connection terminal	Connect computers and other devices to this terminal using an Ethernet cable (commercially available).
⑥ Power terminal	Connect the AC adapter to this terminal.
⑦ SIM cover	Open the SIM cover to access the SIM card slot. This cover is normally closed during use.
⑧ SIM card slot	Insert the SIM card into this slot.
⑨ WPS button	Use to connect WPS compatible devices to wireless LAN (Wi-Fi®).
⑩ Label	You can check the SSID (network names), 暗号化キー "Encryption key" (Password), Web PW, QR Code for Wi-Fi Settings, etc. Do not remove this label.

* For lamp displays ① to ⑭ and how to use the buttons, refer to **CHECK 2** Lamp Displays and Button Operations" on the next page.

■ Setting up the product

STEP 1 Inserting a SIM Card

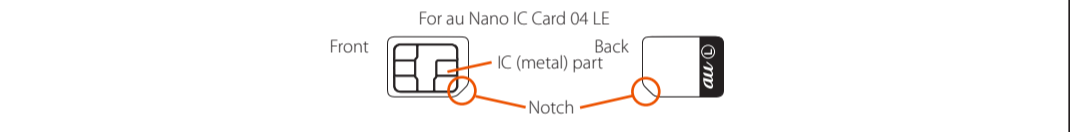For au Nano IC Card 04 LE
Front / Back
IC (metal) part
Notch

1 Confirm that the product is turned off.
Also, disconnect the Ethernet cable, if one is connected to the product.

2 Open the SIM cover on the bottom of the product.
Use your finger (or fingernail, etc.) to hook the concave part along the right side of the SIM cover and pull it open.

3 Hold the SIM card so the notch is facing downward, and then insert it straight into the SIM card slot until you hear a click.
• Face the IC (metal) part of the SIM card to the right when you insert it.
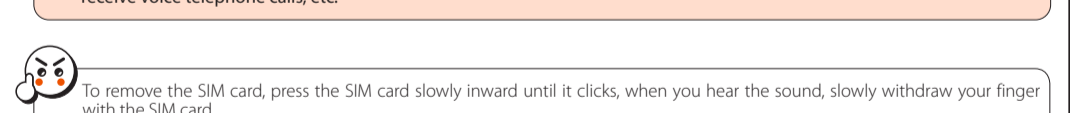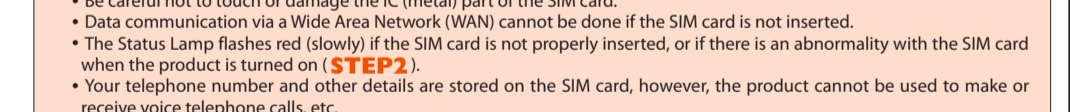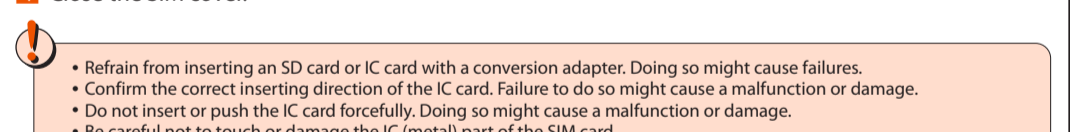• The SIM card locks.

concave part
SIM CARD
SIM cover
SIM card slot
IC (metal) part
Notch
WPS

4 Close the SIM cover.

• Refrain from inserting an SD card or IC card with a conversion adapter. Doing so might cause failures.
• Confirm the correct inserting direction of the IC card. Failure to do so might cause a malfunction or damage.
• Do not insert or push the IC card forcefully. Doing so might cause a malfunction or damage.
• Be careful not to touch or damage the IC (metal) part of the SIM card.
• Data communication via a Wide Area Network (WAN) cannot be done if the SIM card is not inserted.
• The Status Lamp flashes red (slowly) if the SIM card is not properly inserted, or if there is an abnormality with the SIM card when the product is turned on (**STEP2**).
• Your telephone number and other details are stored on the SIM card, however, the product cannot be used to make or receive voice telephone calls, etc.
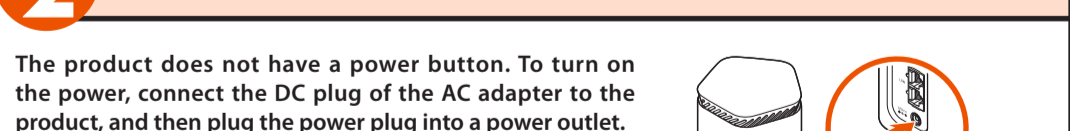
To remove the SIM card, press the SIM card slowly inward until it clicks, when you hear the sound, slowly withdraw your finger with the SIM card.
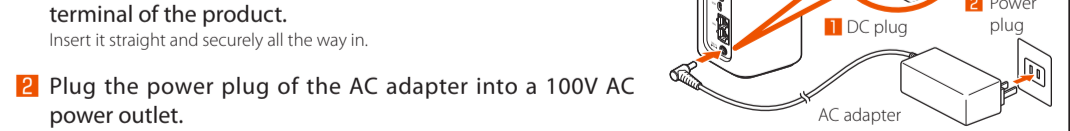
STEP 2 Turn the Power On

The product does not have a power button. To turn on the power, connect the DC plug of the AC adapter to the product, and then plug the power plug into a power outlet.
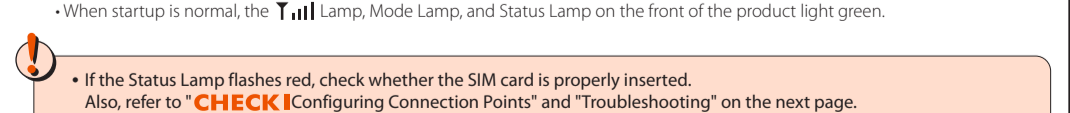
1 Connect the DC plug of the AC adapter to the power terminal of the product.
Insert it straight and securely all the way in.

2 Plug the power plug of the AC adapter into a 100V AC power outlet.
• During startup, the Status Lamp lights orange, and then changes to flashing orange (slowly). (Startup takes about 75 seconds.)
• When startup is normal, the T..ll Lamp, Mode Lamp, and Status Lamp on the front of the product light green.

1 DC plug
2 Power plug
AC adapter

• If the Status Lamp flashes red, check whether the SIM card is properly inserted.
Also, refer to **CHECK 1** Configuring Connection Points" and "Troubleshooting" on the next page.
• The latest firmware is available when the Update Lamp lights orange. Update the firmware. (Refer to "Button Operations" on the next page.)

To turn off the power, pull the AC adapter's power plug out of the power outlet, and then pull the AC adapter's DC plug out of the product.

STEP 3 Connecting to Wireless LAN (Wi-Fi®)

There are four connection methods, as shown below. Connect using one of these methods.

○ Copy the settings of the router that the product has used in the past (settings of wireless LAN (Wi-Fi®) device do not need to be changed)
　(a) Wi-Fi Settings Moving
○ Separately set connections from each wireless LAN (Wi-Fi®) device
　(b) Manual connection
　(c) QR Code for Wi-Fi Settings[1]
　(d) WPS function[1]

Types of wireless LAN (Wi-Fi®) devices (examples)	(b) Manual connection	(c) QR Code for Wi-Fi Settings[1]	(d) WPS function[1]
Smartphones/tablets (Android™ devices)	○	○ [1]	○ [1]
iPad/iPhone/iPod touch (iOS/iPadOS devices)	○	○ [2]	—
PC (Windows OS)/game consoles	○	—	○
PC (macOS)	○	—	—

*1 Supported on Android 10 and later.
*2 Supported on iOS 11 and later, and iPadOS 13 and later.
*3 WPS function is not available on some Android devices.

[1] Refer to "**POINT3** Useful Things to Know about Smartphone Applications" for how to connect to a wireless LAN (Wi-Fi®) by using a QR Code for Wi-Fi Settings.
[1] For the procedure to connect to wireless LAN (Wi-Fi®) using the WPS function, refer to "3-1 無線LAN (Wi-Fi®)で接続する(Connecting via Wireless LAN (Wi-Fi®))" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).

(a) Using the Wi-Fi Settings Moving Function

• The initial setting for the product's SSID is the same SSID for both the 2.4GHz band and the 5GHz band. (Band Steering function)
If you used the Wi-Fi Settings Moving function to move each of the SSIDs for the 2.4GHz band and 5GHz band from the router when you were using previously, the Quick Setting Web "Wi-Fi Settings" - [Wi-Fi Frequency Band Settings] - "Automatic Setting" changes to "OFF", and the SSID of the 2.4GHz band and the SSID of the 5GHz band are carried over separately.

Router you were using previously
*Content to be carried over "SSID" "Encryption mode" "Encryption key"
The product

• The router you have used in the past needs to have supported WPS. In addition, some of the wireless LAN (Wi-Fi®) settings may not carry over, depending on the functions and settings (such as unusable text or encryption mode) of the router you were using in the past.
For details, refer to "5-4 Wi-Fi 設定お引越し機能を使う(Using the Wi-Fi Settings Moving Function)" in「取扱説明書」(Full Instruction Manual) (Japanese).

1 Turn the product off.
Pull the DC plug of the AC adapter straight out of the power terminal on the back of the main unit.

2 Press the WPS button on the bottom of the main unit as you turn on the power to the product, and keep pressing the WPS button (for about 25 seconds).

WPS +

When the Mode Lamp on the front of the main unit flashes green (slowly), release the WPS button.
Wait until the Status Lamp lights green.

Mode Off / Mode Flashes green (Release the WPS button)

3 Decide the frequency band (2.4GHz band or 5GHz band) for Wi-Fi Settings Moving.
• The Wi-Fi Settings Moving function moves the SSID and encryption keys for each of the 2.4GHz band and the 5GHz band frequencies of the wireless LAN (Wi-Fi®).

4 Start up the WPS function of the router you were using previously.
*Refer to the user manual, of the router you have been using so far, for the method to start up the WPS function.

5 Press and hold the WPS button on the product again (select the frequency band by how long you press the button).
Release the button when the Status Lamp starts flashing green (fast) or flashing green (slowly).

WPS

Frequency band	How long to press the WPS button	Status Lamp display
2.4GHz band	At least 2 seconds	Flashes green (fast) ●○○○●
5GHz band	At least 5 seconds	Flashes green (slow) ●○○○●

6 Confirm that the Status Lamp lights green.

Status Lights green

7 Wi-Fi Settings Moving for the other frequency band.
Refer to step **4** to step **6**
The product automatically restarts after about 5 seconds when you finish Wi-Fi Settings Moving for 2 frequency bands.
Step **7** is not necessary if you are doing Wi-Fi Settings Moving for 1 of the frequency bands for both the 2.4GHz and 5GHz band.

8 Turn off the power to the router you were using previously.

• Make a note of the SSID and the encryption key that you moved using the Wi-Fi Settings Moving function. Initializing the product returns the settings to the initial settings.

(Memo)

Frequency band	SSID	Encryption key
2.4GHz band		
5GHz band		

• Wi-Fi Settings Moving has failed if the Status Lamp flashes orange (fast) for about 5 seconds in step **6**. If you do the settings again and they still fail, the WPS function, which is used for Wi-Fi Settings Moving, may not be compatible, so connect the wireless LAN (Wi-Fi®) manually.
• You can confirm if the SSID is the SSID of the router you have used until now, by opening Quick Setting Web and going to "Wi-Fi Settings" - [Wi-Fi Settings (2.4GHz)] or [Wi-Fi Settings (5GHz)] - "Wi-Fi Access Point Settings" - "Network Name (SSID)".

(b) Connecting manually

Refer to the user manual, etc, for your wireless LAN (Wi-Fi®) device for how to connect your wireless LAN (Wi-Fi®) device. When you do this, refer to the following to select the SSID (network names) of the product, and then enter the 暗号化キー "Encryption key" (Password).
*The factory set SSID (network names) and 暗号化キー "Encryption key"(Password) for the product are on the label on the bottom of the product.

SSID 2.4GHz　SPWH_L12_******
　　　5GHz　　SPWH_L12_******-a
暗号化キー xxxxxxxxxxxxxxx
ゲスト SSID　SPWH_L12_******-gx
暗号化キー yyyyyyyyyyyyyy

Label on the bottom of the product

■ SSID (network names)
The network name of the product that is selected from the wireless LAN (Wi-Fi®) device you are using.

■ 暗号化キー "Encryption key"(Password)
The password used for connections may also be called a security key, pass phrase, or network key.
Enter the 暗号化キー "Encryption key"(Password) that is being used for the selected SSID (network names). The factory default value is 13 characters using single-byte alphanumerics (0-9, a-f).
* All of the letters used in the factory set 暗号化キー "Encryption key" are lowercase (abcdef). The letters "G", "I" (uppercase i), "l" (lowercase L), "O", and "o" are not used.
*When you change the initial encryption key, enter the changed value.

Connecting to wireless LAN (Wi-Fi®) is complete.

Open a web browser on a device that is connected to the product by wireless LAN (Wi-Fi®) and open a website to verify connection to the internet.
If you want to change the administrator password in Quick Setting Web, go to **POINT2**.

■ How to get optimal usage

POINT 1 About the Installation Location

• Install the product in a location where there is nothing, such as walls or other devices, within 5 cm of the front, back, right, or left, or within 5 cm of the top of the product.
* Install the product so it is possible to see the state of the T..ll Lamp, Mode Lamp, Update Lamp, and Status Lamp on the front of the product.
• Locations in which all 4 of the T..ll Lamps light green (reception level: strength 4) are locations that have high signal reception strength. (Refer to "NEC WiMAX +5G Tool" below on the bottom of the product.)
• The product is for use in an upright orientation only. Do not lay it on its side to use it.
• WPS button is on the bottom. Install the product in a level location to prevent malfunctions.

We recommend installing the product in a location that has the highest signal reception strength for good communication.

T..ll Lamp
5 cm / 5 cm / 5 cm / 5 cm / 5 cm

POINT 2 Changing the Initial Password to Improve Security

Doing Initial Settings from Quick Setting Web

To ensure security, change the initial password (administrator password and encryption key) that had been set at time of purchase.
(Initial setting: The "Web PW" and 暗号化キー "Encryption key" on the label on the bottom of the product)

Administrator Password	You are requested to input to log in to Quick Setting Web and to use the "NEC WiMAX +5G Tool" application for your smartphone. (The "Web PW" is noted on the label on the bottom of the product.)
暗号化キー "Encryption key" (Password)	Password to use with SSID when connecting to wireless LAN (Wi-Fi®).

1 Open the web browser on the wireless LAN (Wi-Fi®) device (such as a smartphone) connected to the product in STEP3.

2 Open Quick Setting Web for the product.
Type "http://192.168.179.1/" into the address bar in the web browser and either tap 実行 (Execute) or 開く (Open), or press the Enter key on the keyboard.

http://192.168.179.1/

<< Example of Microsoft Edge's screen for PCs >>

3 In the Login screen, tap or click [English] to use English as the display language.

English

4 In the Login screen, enter the administrator password (Web PW)(*), in "Password", and then tap or click [Login].
* For the "Web PW", refer to the label on the bottom of the product.

Quick Setting Web
Speed Wi-Fi HOME 5G
Login
Password
Login

5 Change the administrator password.
Enter the current administrator password in the "初期パスワード (Initial Password)" field, and enter the new administrator password (*) in the "新しいパスワード (New Password)" and "新しいパスワード再入力 (Re-Enter)" fields, and tap or click [変更] (Set).
* Numbers 0 - 9, letters a - z and A - Z, hyphens (-) and underscores (_) may be used in the password. A password must be from 8 to 64 single-byte characters.
This password will be required every time you open "Quick Setting Web" for the product. Make sure that you do not lose this password.

Administrator Password Memo:

* Write it down in the location described in the enclosed つなぎかたガイド "Setup Guide" (Japanese).

管理者パスワードの変更 (Initial Settings for Administrator Password)
変更(Set) / スキップ(Skip)

6 If you agree to the request in "本製品をご利用にあたってのお願い (We kindly ask for your cooperation)", tap or click [はい(Yes)].

7 Change the network name (SSID) and encryption key (password).
In the Wi-Fi設定(Wi-Fi Settings) screen, enter a new network name (SSID) (*1) and new encryption key (*2), and then tap or click [変更(Set)].
*1 Network name (SSID): Input a maximum of 32 single-byte half-width alphanumerics, - (hyphens), or _ (underscores).
*2 Encryption key (Password): Enter 8 to 63 alphanumeric digits (0-9, a-z, A-Z, and symbols), or enter 64 hexadecimal digits (0-9, a-z, A-Z). * If "WPA3-SAE(AES)" or "WPA2-PSK/WPA3-SAE(AES)" is set for Encryption Mode, then 64 digits of hexadecimal cannot be input.
• For details, refer to "8-4 Wi-Fi設定(Wi-Fi Settings)" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).
* Make a note of the changed network name (SSID) and encryption key (password), so you do not forget them.

Network Name (SSID) Memo:

Encryption Key Memo:

* Write the items down in the location described in the enclosed つなぎかたガイド "Setup Guide" (Japanese).

Wi-Fi設定 (Wi-Fi Settings)
Wi-Fiアクセスポイント設定(親機) (Wi-Fi Access Point Settings)
変更(Set) / スキップ(Skip)

8 The Wi-Fi® connection is cut off, so refer to " STEP3 Connecting to Wireless LAN (Wi-Fi®)" and connect to wireless LAN (Wi-Fi®) again.
* Note that you cannot connect to wireless LAN (Wi-Fi®) with the network name (SSID) and encryption key (password) from the label on the bottom of the product.
* When doing the manual connection procedure, use the network name (SSID) and encryption key (password) you changed in step **7**.

POINT 3 Useful Things to Know about Smartphone Applications

■ Things you can do with applications
• You can do the following things with the "NEC WiMAX +5G Tool", which is an application designed especially for this product.
　• Check signal strength of 5G/WiMAX 2+/LTE connections
　• Switch communication modes
　• Check firmware version
　• Check contracted phone number
　• Check traffic counter
　• Restart the product
　• Launch Quick Setting Web
　(For details, refer to "5-1 スマートフォンアプリを使う(Using Smartphone Applications)" in「取扱説明書 詳細版」(Full Instruction Manual) (Japanese).)
• The "NEC WiMAX +5G Tool" smartphone application has a Japanese user interface.

■ Downloading the "NEC WiMAX +5G Tool" application for your smartphone
• Download "NEC WiMAX +5G Tool" from the Google Play Store or the App Store.

<Google Play Store> / <App Store>

(As of December, 2021)

■ Check traffic counter
• Main screen
Display this month's usage "月間" and 3 days data usage "3日間" numerically and in a graph (donut chart).

NEC WiMAX +5G Tool

Tapping [月間(1 month)] totals and displays in a bar graph the month's communication volumes for every day from the starting date to the current date.

Tapping [3日間(3 days)] displays in a bar graph the communication volumes for the last three days.

• The message -月次(または3日間)通信量 設定データ通信量超過(Monthly (or 3 days) communication volume exceeded set data communication volume)" appears when the data communication volume that was set (initial value: 3 days: 15 GB) is exceeded.
(You can change the settings from Quick Setting Web.)

■ Switching communication modes, restarting, etc.
• To change communication modes, in the main screen, tap ⚙ 設定(Settings) - [ネットワーク設定(Network Settings)], in communication mode select "①:スタンダードモード(Standard mode)" or "②:プラスエリアモード(Plus Area mode)", and then tap 設定適用(Apply settings).

ネットワーク設定
通信モード
スタンダードモード
プラスエリアモード
設定適用

Connection is complete when the Wi-Fi® icon appears in the status bar of the wireless LAN (Wi-Fi®) device.

• To confirm the contracted phone number, in the main screen, tap 📋 (情報)(Information).
• To restart, tap main screen - ⚙ 設定(Settings) - [メンテナンス(Maintenance)] - [再起動(Restart)].

メンテナンス
再起動
設定適用

■ Wireless LAN (Wi-Fi®) connections
Tap ⚙ (Menu) - 設定(Settings) - Tap 設定(設定を開く(Open Settings)).

設定ウィザード
Wi-Fi接続を確認してください。

* Depending on the version of your smartphone's OS, [QR コードを読む(Read the QR code)] may appear. If this happens, tap [QRコードを読む(Read the QR code)] to activate your smartphone's camera.

Tap [詳細(Detail)]. / Tap [QR].

In the Camera View screen, read the "Wi-Fi設定用(For Wi-Fi Settings)" [QR Code] on the label on the bottom of the product.

WPS
Wi-Fi設定用

Input the administrator password in step 2.
Tap [次へ(Next)].

パスワードを入力
管理者パスワードを入力してから次へボタンを押してください。
管理者パスワード
次へ

Change the administrator password, network name (SSID), and encryption key in step 3 and step 4.
(Changing these can be skipped)

In the 設定完了 [setting completed] screen, confirm the SSID and PASS (encryption key), and then tap 終了 [Exit].

設定ウィザードが完了です。
SSID xxxxxxxxxxxxxx
PASS xxxxxxxxxxxxx
終了

• If you connected the product to wireless LAN (Wi-Fi®) in **STEP3** then you need to input a password the first time you start the "NEC WiMAX +5G Tool" application.
* The "NEC WiMAX +5G Tool" smartphone application has a Japanese user interface.
In the ⚙ (Menu) - 設定ウィザード(Setup Wizard)], input an administrator password, and then tap [次へ(Next)].
(Skip steps after step 3 in the 設定ウィザード(Setup Wizard).)

パスワードを入力
管理者パスワードを入力して次へボタンを押してください。
管理者パスワード
次へ

• If you changed the administrator password in Quick Setting Web, the "装置情報の取得に失敗しました(Failed to acquire device information)" screen appears.
In the ≡ (Menu) - [ログイン管理(Login Management)], input a new administrator password, and then tap [保存(Save)].

ログイン管理
管理者パスワード
保存

■Check This Out

CHECK 1 — Configuring Connection Points

■ Connecting to Wide Area Network (WAN)

You can use the profile (profile name "Internet") preset on the product to connect to the internet.

<When creating a new profile>

Follow the procedures below to add a profile when you are creating a new profile or when information required for internet connection (user name, password etc.) is specified by the WiMAX operator, other than au, to whom you are subscribed.

1. Launch a web browser, and open the product's Quick Setting Web (refer to **POINT2**), and then tap or click "Network Settings" - [Profile Settings].

2. After selecting [no setup] in the "Profile List", enter the setup information such as the APN of the WiMAX operator to whom you are subscribed, and tap or click [Apply].
 * The displayed content may be grayed out.
 * If you have any problems, please check with the WiMAX operator to whom you are subscribed.

3. Tap or click "Network Settings" - [Connection Settings].

4. In the "Profile Selection", select the profile which you set in step 2, and tap or click [Apply].

Try opening a website to verify the connection.

CHECK 2 — Lamp Displays and Button Operations

■ Main LED Lamp Displays

The LED lamps light in different colors and patterns to notify you of the state of the product. The main LED lamp displays are described below. Regarding other indicators, refer to "本体のLEDランプ表示の見かた(Understanding LED Displays on the Main Unit)" in "1-2 各部の名称と機能(Part Names and Functions)" in "取扱説明書 詳細版(Full Instruction Manual)" (Japanese).
*For the numbers, refer to "Part Names and Functions" on the previous page.

Lamp	Color and lighting pattern	Explanation
① Tᴵ‖ Lamp	Lights green (strength 1 to 4)	Indicates the signal reception strength of 5G/LTE/WiMAX 2+ in 4 levels.
	Off	Indicates the product is outside the service area or that 5G/LTE/WiMAX 2+ is not connected.
	Lights orange	Indicates excessive data communication volume.*¹
② Mode Lamp	Lights green	When in "Standard Mode".
	Lights orange	When in "Plus Area Mode".*²
③ Update Lamp	Lights orange	Indicates the latest firmware is available.
	Off	Indicates the latest firmware has been installed.
④ Status Lamp	Lights green	Indicates normal startup.
	Lights orange / Flashes orange (slowly)	Indicates the product is starting up. (Changes from lit to flashing orange.)
	Lights red	Indicates that 5G/LTE/WiMAX 2+ is outside the service area.
	Flashes red (slowly)	Indicates an SIM card is not inserted or the APN settings are incorrect.

*¹ Regarding settings for the data communication volume, refer to "通信量カウンター (Traffic Counter)" in "8-3 ネットワーク設定 (Network Settings)" in "取扱説明書 詳細版(Full Instruction Manual)" (Japanese).
*² Note that an additional charge, depending on your billing plan, may be incurred when you switch to using "Plus Area Mode".

■ Button Operations

The buttons on the product are used to switch communication modes, update firmware, and do other operations.
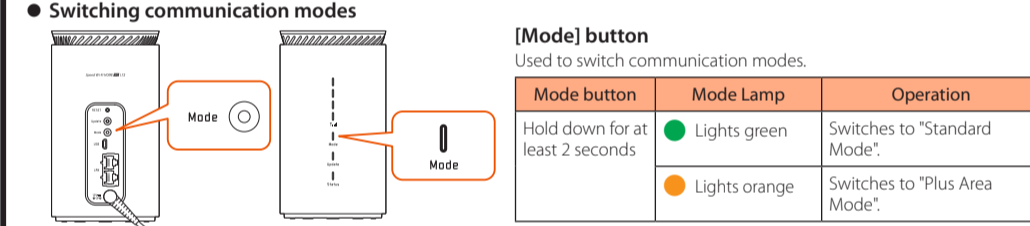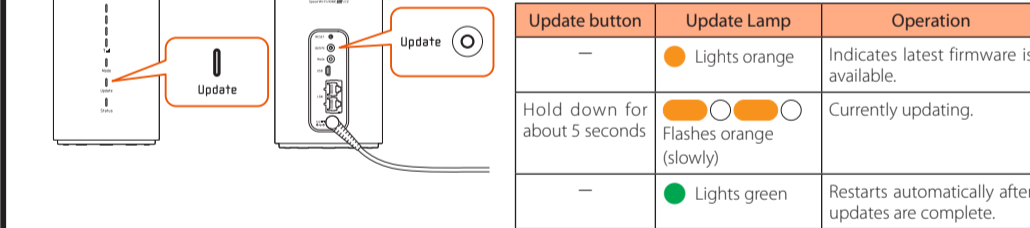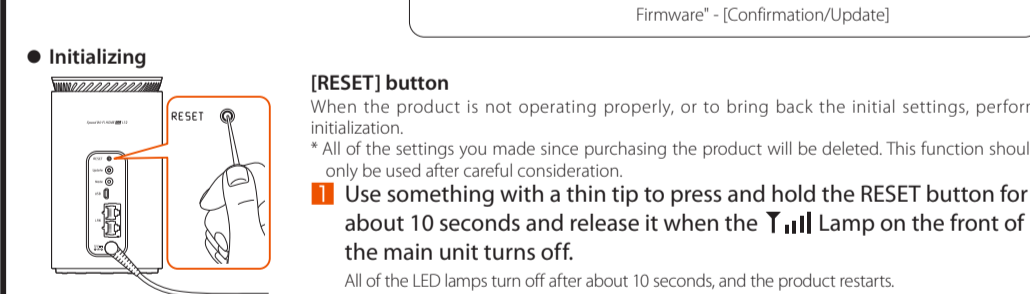
● Switching communication modes

	[Mode] button — Used to switch communication modes.	
Mode button	Mode Lamp	Operation
Hold down for at least 2 seconds	Lights green	Switches to "Standard Mode".
	Lights orange	Switches to "Plus Area Mode".*²

* Approximately 5 seconds after the Mode Lamp changes, the Tᴵ‖ Lamp lights.
* Note that an additional charge, depending on your billing plan, may be incurred when you switch to using "Plus Area Mode".

● Updating the Firmware

Starts updates when the latest firmware is available.

	[Update] button	
Update button	Update Lamp	Operation
	Lights orange	Indicates latest firmware is available.
Hold down for about 3 seconds	Flashes orange (slowly)	Currently updating.
	Lights green	Restarts automatically after updates are complete.

You can also update firmware from Quick Setting Web.
• Operating procedure: "Maintenance" - [Update Firmware] - "Update Firmware" - [Confirmation/Update]

● Initializing

[RESET] button

When the product is not operating properly, or to bring back the initial settings, perform initialization.
• All of the settings you made since purchasing the product will be deleted. This function should only be used after careful consideration.
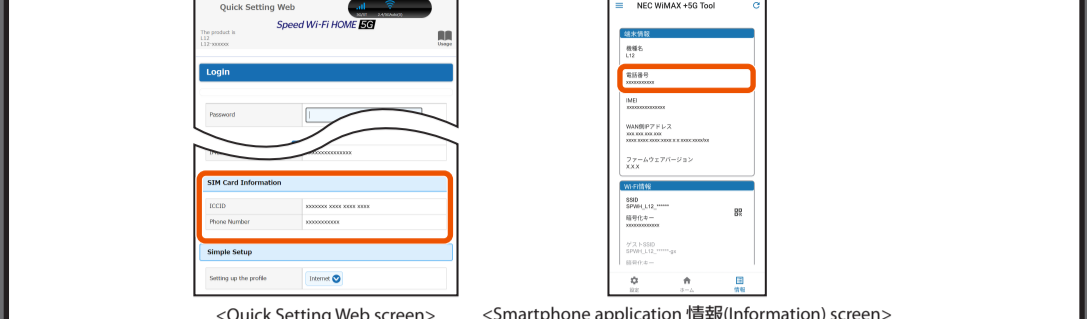
Use something with a thin tip to press and hold the RESET button for about 10 seconds and release it when the Tᴵ‖ Lamp on the front of the main unit turns off.

All of the LED lamps turn off after about 10 seconds, and the product restarts.

You can also do initialization from Quick Setting Web.
• Operating procedure: "Maintenance" - [Initialization] - [Initialization] - [OK]

CHECK 3 — Check Contracted Phone Number

In the Quick Setting Web screen or your Smartphone application's "情報 (Information)" screen, you can confirm contracted phone number that are in the SIM card.
How to open Quick Setting Web: Refer to "Doing Initial Settings from Quick Setting Web: **POINT2**", on the previous page.
How to open smartphone applications: Refer to " Switching communication modes, restarting, etc.: **POINT3**".

<Quick Setting Web screen>   <Smartphone application 情報(Information) screen>

Troubleshooting

If you experience difficulty setting up an internet connection even when the instructions in the "Setup Guide" (this manual) and the "取扱説明書 詳細版(Full Instruction Manual)" (Japanese) are followed, please check the following.

Unable to connect to the internet	• The incoming signal strength may be low. Install the product in a location with a higher incoming signal strength, and try the connection again. • The connection point might be congested during some time periods, wait a short time and try again. • If the Tᴵ‖ Lamp on the front of the main unit does not light, the Quick Setting Web to check that internet connections have been properly set up. (Refer to "**CHECK1** Configuring Connection Points")
Communication is easily disrupted	• The incoming signal strength may be low. Check the reception level and change the installation location to one with a higher incoming signal strength. • Check to see if the product is properly connected to a PC, or the like, on a wireless LAN (Wi-Fi) or by Ethernet cable (commercially available). • If the product is connected to a wireless LAN (Wi-Fi) device via a wireless LAN (Wi-Fi), restart the product. • If the product is connected to a computer, or similar device, by an Ethernet cable (commercially available), disconnect the product from the device and connect it again. If you cannot connect even after doing this operation, disconnect the product and restart the device, and then connect it again. • If there is radio interference from other networks, such as multiple access points having been set up in the vicinity, radio reception may be improved by changing "Channels" for the product. (Refer to "8-4 Wi-Fi設定 (Wi-Fi Settings)" in "取扱説明書 詳細版(Full Instruction Manual)" (Japanese).)
Communication seems slow	• The incoming signal strength may be low. Check the Tᴵ‖ Lamp on the front of the main unit to confirm the reception level and change the installation location to one with a higher incoming signal strength. • The connection point might be congested. Waiting a while may improve the situation.
Cannot connect to wireless LAN (Wi-Fi)?	• From Quick Setting Web, go to "Wi-Fi Settings" - [Wi-Fi Settings (2.4GHz)] or "Wi-Fi Settings (5GHz)" - "Encryption" and change "Encryption Mode" to "WPA2-PSK(AES)" or to "WPA/WPA2-PSK(TKIP/AES)", and then go to "Advanced Setup" to set "Protected Management Frame Function" to "OFF", then connection may be possible. (2.4GHz band and 5GHz band have different settings.)

Notes on usage

About Using this Product

• Before using the product, read the "Safety Precautions (Observe Strictly)" in this manual to ensure correct use.
• Before assuming the product is malfunctioning, check the symptoms in "Troubleshooting" in this manual.
• Also, see "10-2 故障ときに考えられるとき (Troubleshooting)" in the "取扱説明書 詳細版(Full Instruction Manual)" (Japanese) on the WiMAX Support Information website.
https://www.necplatforms.co.jp/support/wimax/l12/index.html (in Japanese only)
"取扱説明書 詳細版(Full Instruction Manual)" (Japanese) can be downloaded from the website.
https://www.au.com/support/service/mobile/guide/manual/ (in Japanese only)
• When you communicate using this product, keep it at least 20 cm away from your body, with no intervening metallic objects.
• Communication is not possible even in the service area in places where the signal does not reach (e.g. tunnels and basements). Also, communication is sometimes not possible in poor reception areas. Communication is sometimes interrupted if you move into a poor reception area during communications.
• Since this product uses radio waves, the possibility of communication interception by third parties cannot be eliminated. (The 5G, LTE, and WiMAX 2+ systems, however, offer secure communication encryption and secrecy functions.)
• This product is designed for use in Japan only. It cannot be used outdoors.
• Since this product is a radio base station under the Radio Law, you may be asked to temporarily submit the product for inspection in accordance with the Radio Law.
• The IMEI information of the product that you are using is automatically transmitted to your telecommunications carrier for "product maintenance" and for "understanding usage conditions".
• The Company is not liable for any damages arising from earthquakes, lightning, storms, floods or other natural disasters, as well as fires, actions by third parties, other accidents, intentional or mistaken operation by the customer, or use under other unusual conditions outside the responsibility of the Company.
• The Company is not liable for any incidental damages (change/disappearance of recorded content, loss of business income, disruption of business, etc.) arising from the use of or inability to use the product.
• The Company is not liable for any damages arising from failure to observe the recorded content of the "Instruction Manual".
• The Company is not liable for any damages arising, for example, from malfunction caused by combination with connected devices or software not related to the Company.
• The settings and other stored data may sometimes be altered or lost due to faults, repair or other handling of the product. The Company is not liable for any damage or lost income resulting from the loss of data.
• It is recommended you keep a copy of important data on your PC's hard disk, etc. Whatever the cause of the defect or malfunction may be, the Company assumes no responsibility for alteration or loss of saved data.
• Contents saved in this product might be altered or lost due to accidents, faults, repair, or mishandling.
 Be sure to keep a copy of important contents. Note that The Company assumes no responsibility for any damages or lost profits resulting from altered or lost contents.
• Do not discard the product together with regular trash. Please cooperate in the collection of the product, when it is no longer needed, to protect the environment and effectively use resources. The products are collected at au shops/au Style, and other places.
• The term "the Company", as used in this manual, indicates the telecommunications carrier to whom you are contracted and the manufacturer (NEC Platforms, Ltd).
① Unauthorized reproduction of this manual in whole or in part is prohibited.
② The contents of this manual are subject to change without notice.
③ Some functions may become unusable due to changes to the OS specifications of services or functions are changed or ended.
● While every effort has been made regarding the contents of the "Instruction Manual", please contact us if you have questions or notice omissions.

Safety Precautions (Observe Strictly)

■ Before using this product, thoroughly read these safety precautions for proper use.
■ The safety precautions shown here contain information to prevent damage to property and/or injury to the user or other people and must be observed.
■ The symbols in the following categories indicate the level of damage or injury that may occur due to incorrect usage or if the information provided is not observed.

⚠DANGER	This symbol indicates the potential and imminent danger of death or serious injury*¹ to a person from improper use.
⚠WARNING	This symbol indicates the possibility of death or serious injury*¹ to a person from improper use.
⚠CAUTION	This symbol indicates the possibility of minor injury*² to a person or physical damage*³ to a person's property.

*¹ Serious injury: This refers to loss of sight, injury, burns (high- and low-temperature), electric shock, broken bones, injuries with residual aftereffects from poisoning, etc. and injuries requiring hospital admission for treatment or long-term hospital attendance as an outpatient.
*² Minor injury: This refers to injuries, burns (high- and low-temperature), electric shock, etc. that do not require hospital admission for treatment or long-term hospital attendance as an outpatient.
*³ Physical damage: This refers to extended damage to buildings, furniture, livestock, or pets, etc.

Explanation of icons used in this manual that indicate prohibitions and restrictions

⃠ Indicates an action that is not allowed.	🚫 Indicates that handling with wet hands is not allowed.
🚫 Indicates that disassembly is not allowed.	🚫 Indicates restrictions on actions according to instructions (actions that must be observed).
🚫 Indicates that use in a place where the product is likely to get wet or allowing the product to get wet is not allowed.	✋ Indicates that the power plug must be removed from the power outlet.

■ Precautions common to the main unit, AC adapter, SIM card, and Ethernet cable (commercially available)

⚠ DANGER

🚫 Do not use, store, or leave the product in locations subject to high temperatures or accumulation of heat (e.g. by the fire, near a heater, under a heated kotatsu or bedding, in direct sunlight, or in a car in the hot sun).
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not place the product in or near microwave ovens, cooking appliances, such as IH cooking heaters, or high pressure containers, such as pressure cookers.
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not splash sand, soil or mud on the product, or do not directly place the product on them. Also, do not touch the product with hands with sand etc. adhered.
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not use the product if it is wet with liquid, such as water (drinking water, sweat, seawater, urine of pet animals, etc.). Also, do not use the product in locations exposed to water, such as a bathroom.
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not disassemble or modify the product.
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not let the product get wet with liquids such as water (drinking water, sweat, seawater, urine of pet animals, etc.).
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not allow liquids, such as water (drinking water, sweat, seawater, urine of pet animals, etc.), to get inside the product terminal, LAN connection terminal, or USB connection terminal.
 Doing so might cause fire, burns, injury or electric shock.

⚠ WARNING

🚫 Do not subject the product to strong force, impacts, or vibration, such as letting it fall, stepping on it, or throwing it.
 Doing so might cause fire, burns, injury or electric shock.
🚫 Do not allow dust to get inside or conductive materials (such as metal objects and pencil lead) to contact the power terminal, LAN connection terminal, or USB connection terminal.
 Doing so might cause fire, burns, injury or electric shock. If a foreign object accidentally gets into the product, unplug the product from the power outlet, and then contact the telecommunications carrier to whom you are subscribed.
🚫 Do not cover or wrap the product with a cloth or bedding while using it.
 Doing so might cause fire or burns.

If you notice anything unusual about the product, such as an unusual odor, abnormal noise, smoke generation, overheating, discoloration, or deformation during operation or storage, perform the following measures with care and caution.
• Remove the power plug from the power outlet.
• Turn off external devices.
 Failure to do so measures above might cause fire, burns, injury or electric shock. Please contact the telecommunications carrier to whom you are subscribed.

⚠ CAUTION

🚫 Do not use the product while it is damaged.
 Doing so might cause fire, burns or injury.
🚫 Do not place the product on an unstable or inclined platform.
 Doing so might cause the product to fall etc. and cause injury.
🚫 Do not use or keep the product in a place that is very humid, dusty, or subject to high temperatures.
 Doing so might cause fire, burns, or electric shock.
🚫 If children use the product, parents or guardians should give them proper instructions and do not allow them to use the product in the wrong way.
 Failure to do so might result in injury or electric shock.
🚫 Keep the product out of the reach of babies and infants.
 Failure to do so might result in injury or electric shock.
⚠ Be careful, the product may become very warm when it is used continuously. Also, be careful not to unintentionally touch it continuously, such as if you were to fall asleep.
 The product and AC adapter might become very warm when used continuously, while transmitting data. If you are directly in contact with a warmed part for a long time, it might cause a redness of skin, itch, rash, low-temperature burn etc. depending on your physical constitution.

■ Main unit

⚠ DANGER

🚫 Do not heat the product or throw it into a fire.
 It may ignite and might cause fire, burns or injury.
🚫 Do not apply excessive force, such as sticking a sharp object (a nail, etc.) into the product, hitting it with a hard object (a hammer, etc.), or stepping on it.
 Doing so might cause fire, burns, injury or electric shock.
⚠ If the substances inside the product get into your eyes or mouth, promptly rinse them with clean water and then immediately consult a doctor.
 Failure to do so might cause blindness, medical problems, etc. due to the effects of the substances in the product.

⚠ WARNING

🚫 Do not allow liquids, such as water (drinking water, sweat, seawater, urine of pet animals, etc.), metal pieces, burnable items, and other foreign objects to get inside the SIM card slot. Also, do not insert the SIM card into the wrong slot, or insert it in the wrong orientation.
 Doing so might cause fire, burns, injury or electric shock. If a foreign object accidentally gets into the product, unplug the product from the power outlet, and then contact the telecommunications carrier to whom you are subscribed.
⚠ Follow the instructions of medical institutions regarding the use of mobile devices on their premises.
 Do not use the product in places where its use is prohibited.
 The radio waves may adversely affect electronic devices or electronic medical equipment.
⚠ If you are wearing any electronic medical equipment, contact the manufacturer or retailer of the electronic medical equipment for information about the possible effects of radio waves.
 The radio waves from the product might have harmful effects on electronic medical equipment.
⚠ Do not use the product near electronic devices or equipment using high precision controls or weak signals.
 The radio waves may adversely affect the operation of electronic devices.
 *The product might be affected. Should you be careful of:
 Hearing aids, implantable cardiac pacemakers, implantable cardioverter defibrillators, other electronic medical equipment, and other automatically controlled devices or equipment. If you use an implantable cardiac pacemaker, implantable cardioverter defibrillator, or other electronic medical equipment, check with the electronic medical equipment manufacturer or retailer whether the operation can be affected by radio waves.
⚠ Be careful not to be bitten by your pet.
 Overheating might cause fire, burns or injury.

⚠ CAUTION

🚫 Do not discard the product together with regular trash.
 Doing so might cause fire, burns or injury. Also, it might cause environmental destruction. When you no longer need the product, recycle it at an au shop, au Style, or place, or recycle it according to the regulations of your local government.
🚫 If skin problems develop from using the product, immediately stop using it and consult a doctor.
 The use of the product might cause itching, rashes, eczema, or other symptoms depending on the user's physical constitution.
 For an explanation of the materials used for various parts of the product, see "List of materials".

■ About the AC adapter and the Ethernet cable (commercially available)

⚠ WARNING

🚫 Do not use the AC adapter or cables if their cables become damaged.
 Doing so might cause fire, burns, or electric shock.
🚫 Do not use the AC adapter or cables in extremely humid places, such as a bathroom.
 Doing so might cause fire, burns, or electric shock.
🚫 Use only the AC adapter included in the product's package. Also, do not use the AC adapter included in the product's package with any other device.
 Doing so might cause fire, burns, injury or electric shock.
⚠ If you hear thunder, do not touch the AC adapter or cables.
 Doing so might cause an electric shock.
🚫 Do not short-circuit the DC plug while it is connected to a power outlet, also do not short-circuit the connection terminal while it is connected to the product or a computer. Also, do not allow the DC plug or connection terminal to touch your hands, fingers, or any part of your body.
 Doing so might cause fire, burns, or electric shock.
🚫 Do not place heavy objects on the cable of the AC adapter or cables, and do not apply excessive force to the cables, such as by pulling them.
 Doing so might cause fire, burns, or electric shock.
✋ When you insert or remove the power plug to or from a power outlet, or when you insert or remove the cables to or from the product or a computer, do not contact any type of metal, such as metal accessories.
 Doing so might cause fire, burns, or electric shock.
🚫 Do not use a voltage converter (such as an overseas travel power converter) with the AC adapter.
 Doing so might cause fire, overheating, or electric shock.
⚠ Do not apply excessive force to connectors when the product is connected to the AC adapter or when the product is connected to a computer.
 Doing so might cause fire, burns, or electric shock.
✋ Do not touch the cord of the AC adapter, DC plug, power plug, cables, or terminals with wet hands.
 Doing so might cause fire, burns, or electric shock.
⚠ Use the specified power supply and voltage.
 Using the wrong power supply or voltage might cause fire, burns, or electric shock.
 AC adapter: 100 VAC (connect only to a household AC power supply)
🚫 Do not subject the AC adapter to strong impact, extreme force, or twisting while it is plugged into a power outlet, and insert the plug and pull it out straight. Be careful to not apply excessive force, particularly when inserting or removing the plug to or from rotating lock type power outlets.
 Doing so might damage the AC adapter and cause fire, burns, electric shock, or malfunctions.
⚠ Wipe off dust that is stuck to the power plug and terminals.
 Using it while it is dusty might cause fire, burns, or electric shock.
✋ When you insert the power plug into a power outlet or insert a cable into the product, insert it firmly.
 Insecure inserting might cause fire, burns, or electric shock.
✋ When you remove the power plug from the power outlet, or remove a cable from the product or a computer, do not apply excessive force by pulling on the cord of the AC adapter or the cord of the cable; hold the connector or plug of the AC adapter when pulling them out.
 Pulling on the cord of the AC adapter or the cord of the cable might damage the cord and cause fire, burns, or electric shock.
✋ When you insert or remove the AC adapter or cable into/from the product, insert or remove them straight into/from the connection terminal without applying excessive force, such as by pulling on them.
 Removing them incorrectly might cause fire, burns, or electric shock.
🚫 If the connectors of the AC adapter or cables are deformed, such as by being bent, stop using them immediately. Do not use them with the deformation restored.
 Doing so might short-circuit the power terminal or LAN connection terminal and cause fire, burns, injury or electric shock.
✋ Always remove the power plug from the power outlet, and the cables from the product and computer when not using them.
 Not doing so might cause deterioration of the power plug connected to the power outlet might cause fire, burns, or electric shock.
✋ Immediately remove the power plug from the power outlet and the cables from the product and the computer if any liquid, such as water (drinking water, sweat, seawater, urine of pet animals, etc.) gets on the product.
 Whatever gets on it may cause a short-circuit resulting in a fire, burns, or electric shock.
✋ Remove the power plug from the power outlet and the cables from the product and computer when not using them.
 Doing so might cause fire, burns or electric shock.

⚠ CAUTION

🚫 Do not touch the AC adapter continuously while it is connected to the power outlet.
 Doing so might cause burns, etc.
🚫 If skin problems develop from using the AC adapter, immediately stop using it and consult a doctor.
 The use of the product might cause itching, rashes, eczema, or other symptoms depending on the user's physical constitution.
 For an explanation of the materials used for various parts of the product, see "List of materials".

■ About the SIM card

⚠ CAUTION

⚠ Be careful of the cut edge, so you do not injure your fingers or other body parts, when handling the SIM card.
 The cut edge may be sharp and cause an injury.

■ Using the product near medical equipment or in medical institutions

⚠ WARNING

⚠ If you have electronic medical equipment such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, use the product 15 cm or more away from the implant at all times.
 The radio waves from the product might have harmful effects on the operation of electronic medical equipment.
⚠ If you need to use electronic medical equipment other than implantable cardiac pacemakers or implantable cardioverter-defibrillators outside medical institutions such as treating in home, consult the relevant electronic medical equipment manufacturer for effects on the equipment by radio waves.
 The radio waves from the product might have harmful effects on the operation of electronic medical equipment.
⚠ If there is any chance that the distance between the product and a person using an electronic medical device may become less than 15 cm, such as if they cannot freely move around, set the product in advance not to emit radio waves (such as by turning off the power, etc.).
 A person in close proximity may be equipped with electronic medical equipment such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. The radio waves from the product might have harmful effects on the operation of electronic medical equipment such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator.
⚠ Follow the instructions given by the respective medical institution regarding the use of the product on their premises.
 The radio waves from the product might have harmful effects on the operation of electronic medical equipment.

List of materials

Location used	Material / Surface treatment
<Speed Wi-Fi HOME 5G L12 main unit>	
Exterior case	PC resin / printing
Top plate	PC resin
Update button	PC resin
Mode button	PA resin
WPS button	PC resin
Bottom cover	PC resin
SIM cover	TPC resin
Exterior case (inside SIM cover)	PC resin
USB connection terminal	LCP resin, stainless steel / tin plating
LAN connection terminal	PBT resin, phosphor bronze / gold plating
Power terminal	ABS resin, PBT resin, phosphor bronze / silver plating, copper-titanium alloy / silver plating
<Speed Wi-Fi HOME 5G L12 AC adapter>	
AC adapter casing	PC resin
Power plug (base)	Brass / nickel plating
Cable	PVC
DC plug (resin part)	PVC
DC plug (terminal)	Brass / nickel plating, PBT

Handling Precautions

These precautions are provided to prevent a fault and ensure that performance can be fully demonstrated. Thoroughly read these precautions to ensure correct use.

Precautions common to the main unit, AC adapter, SIM card, and Ethernet cable (commercially available)

• Do not apply excessive force to the product during use. Be sure not to put the product into a tightly packed bag or place a heavy object on the product in a bag.
 Also, keeping a cable connected to the power terminal or the LAN connection terminal might damage the connector resulting in a malfunction. Such damage and malfunction are not covered by the warranty, even if there is no external damage.
• Do not use the product in extremely hot, cold or humid places.
 (Use within an ambient temperature range of 0°C to 40°C and humidity range of 10% to 90%.)
• Do not use in places subject to lots of dust or vibration. Doing so might cause a malfunction.
• Clean the power terminal and LAN connection terminal with dry cotton swabs, etc., every now and then. Soiled terminals might cause poor connection. Do not apply strong force when cleaning the connection terminal to prevent deformation.
• Clean the product with a soft dry cloth (such as the type used for eyeglasses). Forceful rubbing with a dry cloth may scratch the main unit. The main unit may be stained if splashes or smears are left on the surface. Wiping the product with alcohol, thinner, benzene, detergent, etc., may also erase the printing on the outer casing or cause failures.
• Wiping the product with disinfectant, antibacterial sheets, etc., may also erase the printing on the outer casing or cause failures.
• Use as far away as possible from landline phones, TVs and radios. Use nearby might affect them.
• The product may become warm during data communication etc., depending on the situation, but this is not abnormal.
• Do not place near corrosive chemicals or in places where corrosive gas is generated. Doing so might cause a malfunction.
• Do not use the product if you can hear thunder outside. Doing so might risk lightning strikes and electric shock.
• Be sure to use only the specified AC adapter. Use of a non-specified AC adapter might cause a malfunction.
• Do not put the product in a cooking appliance, such as a microwave oven or a pressure vessel. Doing so might cause a malfunction.
• The customer is not allowed to disassemble, modify or repair the product. Doing so might cause a malfunction. Modification of the product is in violation of the Radio Law and Telecommunications Business Act.
• Do not allow any part of your body, such as your fingers, or conductive foreign objects (metal fragments, pencil leads, etc.) to come into contact with or get inside of the power terminal, the LAN connection terminal, or USB connection terminal, to avoid a short-circuit. Doing so might cause a malfunction. If a foreign object accidentally gets into the product, please contact the telecommunications carrier to whom you are subscribed.
• Do not splash liquid such as water on the product. Also, never use in humid places such as bath areas, or use with wet hands. Doing so might cause a malfunction due to short-circuit or corrosion of electronic circuits.
• Malfunctions caused by wetting with water or humidity are not covered by the warranty and charges will be incurred for repairs. Please contact the telecommunications carrier to whom you are subscribed.
• In the event that the product gets wet while in use, immediately remove the power plug of the AC adapter.
• Using the product while it is covered with bedding might cause a malfunction.
• When connecting the AC adapter or a computer, insert/remove the plug or connector straight to/from the terminal. Make sure of the orientation of the connector is correct. Unless it's correct, it might cause a malfunction.
• Do not store the product in places subject to direct sunlight (e.g. in a car), places that get hot, places that get extremely cold, and in humid or dusty places. Doing so might cause a malfunction.
• Do not place the product on an unstable or inclined platform. Dropping the product might cause a malfunction.
• Do not subject the product to strong impact or wiping device when using the product, for example, by plugging too many lines into one power outlet.

■ Main unit

• Do not forcefully press, hit or intentionally subject the product to strong impact. Doing so might cause scratching or damage.
• Do not forcefully press your fingernails, sharp objects or hard objects against the buttons. Doing so might cause scratching or damage.
• Do not remove the label on the bottom of the product, on which is printed the IMEI and shows the "Technical Conformity Mark ⓜ" that proves that the product and the communication module that you are using conform to the Radio Law/Telecommunications Business Act.
• Never use this product when it has been modified. Use of a modified device violates the Radio Law and Telecommunications Business Act. The product has received a technical standards conformity certification for specified wireless equipment based on the Radio Law and a technical standards conformity approval based on the Telecommunications Business Act, and as proof, you can check the "Technical Conformity Mark ⓜ" which is shown on the label on the bottom of the product.
 If the screws of the product are removed and modifications are made to the internal components, the certification of conformity with technical regulations will become invalid. Never use the product without the valid certification. Doing so violates the Radio Law and Telecommunications Business Act.
• Take care not to place magnetized items such as magnetic cards, speakers and TVs sets near the product, as it might cause malfunction. Putting a strong magnetic field close to the product might cause false operation.
• Do not place magnetic cards, such as cash cards, credit cards, and prepaid cards near the product. Doing so might erase the registered information.
• When suddenly brought into a warm place from a cold place, or when in a humid location, or when used where temperature suddenly changes (e.g. near the air conditioner, or in an air conditioner), water droplets (i.e. condensation) sometimes are formed inside the product. Note that when used under conditions such as this, the humidity might cause corrosion or a fault.
• Note that applying excessive force to the LAN connection terminal while connected to an external device may cause damage.
• Normally, close the SIM cover of the SIM card slot while the product is used. Using the product while the SIM cover of the SIM card slot is not closed might allow dust, water, or other foreign objects to get inside and cause a fault. If a foreign object accidentally gets into the product, unplug the power plug from the power outlet, and then contact the telecommunications carrier to whom you are subscribed.
• Do not allow liquids, metal objects, or other foreign objects to get inside the SIM card slot on the product. Doing so might cause a malfunction. If a foreign object accidentally gets into the product, unplug the power plug from the power outlet, and then contact the telecommunications carrier to whom you are subscribed.
• Do not subject the product to strong impact, such as by dropping it, throwing it, or stepping on it. Doing so might cause a malfunction.
• Do not place the product directly on a sandy beach, etc. Sand etc. might get inside the product causing a malfunction. If a foreign object accidentally gets into the product, unplug the power plug from the power outlet, and then contact the telecommunications carrier to whom you are subscribed.

■ About the AC adapter

• Do not wrap the cord of the AC adapter around the AC adapter itself. Also, do not forcibly bend the connection part of the AC adapter's plug and cord. Do not place heavy objects on the cords of the adapter, and do not apply excessive force, such as by pulling them. Doing so might cause failures.
• Hold the power plug of the AC adapter when removing the power plug from an outlet. If you pull the cable, the cable might be damaged.
• Plug the AC adapter into a power outlet in a location where you can easily unplug the power plug so that you can immediately turn off the power if anything abnormal occurs.
• Be aware of the surroundings when installing the product. Be careful that the AC adapter and cables do not catch on your furnishings (eyeglasses, glasses, etc.) when you move the product.
• When you install the product, do not stretch the cable of the AC adapter so it is very tight. Doing so might result in injury if you or your pets trip on the cable. Also, if the cables are pulled out of the product or the power outlet, the product might overturn or fall and cause a malfunction.

■ About the Ethernet cable (commercially available)

• Do not forcibly bend the connection part of the cable's plugs and the product or the computer. Furthermore, do not place heavy objects on the cable's cord, and do not apply excessive force, such as by pulling it. Doing so might cause a malfunction.
• Hold the plugs when unplugging them from the product or computer. If you pull the cable, the cable might be damaged.

■ About the SIM card

• Do not forcibly bend the connection part of the cable's plugs and the product or the computer. Be careful not to apply excessive force when inserting the card into the product you are using.
• You are responsible for any damage caused by inserting the SIM card into some other IC card reader/writer, etc.
• Always keep the IC part of the SIM card clean.
• Clean the SIM card with a soft, dry cloth (such as the type used for eyeglasses).
• Do not insert a SIM card that is in a conversion adapter. Doing so might cause a fault.
• Do not damage the SIM card by using it in a hot place, dropping it into fire, contacting the metal parts with foreign objects, subjecting it to impact, bending, loads, or liquids, etc. Doing so might cause loss of data or a malfunction.

■ Copyrights and rights of portrait

• You are not allowed, without the copyright holder's permission, to copy, distribute, publish, or modify the whole or parts of data acquired using this product, such as by internet download, when that data is protected by third-party copyright, except for copying or quoting for personal use as recognized by copyright law. In addition, do not use or modify portraits or names of other individuals without their consent, as it might infringe on rights of portrait.

■ Backup content that is in the product

• Please back up important content recorded or downloaded on the product to an outside source. Content recorded to memory on the product sometimes disappears or is altered by unexpected factors, such as static electricity or a fault, repair, mishandling, etc.

About Wireless LAN (Wi-Fi) Functions

• The wireless LAN (Wi-Fi) function of the product conforms to domestic wireless standards in Japan, and has been certified.
• The 2.4GHz band used by wireless LAN (Wi-Fi) devices is used by various other devices. For this reason, the communication speed and connectable range may be decreased, or disconnection may occur, due to interference from other devices.
• Do not use this product in places where electromagnetic waves are generated or near electric products, AV and OA equipment, or other magnetized devices.
• Subjecting this product to magnetic or electrical noise might increase noise and prevent it from performing communications. (This product is particularly susceptible to noise when it is used near a microwave oven.)
• Using this product near a TV, radio or similar appliance might cause reception interference and disrupt TV images.
• Searching might not be successful if there are multiple wireless LAN (Wi-Fi) access points near the product or if the same channel is being used.
• The communication speed and connectable range vary depending on the distance between communication devices, obstacles and the devices that are connected.

■ 2.4GHz band precautions

Wireless LAN (Wi-Fi) function of this product uses 2.4GHz band. In this frequency band, other similar wireless stations, in-plant wireless stations for mobile unit identification that require a license to use, such as factory production lines, specific small power wireless stations that do not require license, amateur wireless stations (collectively called "other wireless stations" from here on) are operated in addition to home electrical appliances such as microwave ovens, devices for industrial, scientific and medical devices.
1. Before using this product, make sure that "other wireless stations" are not in operation nearby.
2. In the event that instances of radio wave interference have occurred between this product and "other wireless stations", immediately either relocate this product or stop operation of the device (stop the emission of radio waves).
3. If you are unclear on any points or are troubled by anything, contact the telecommunications carrier to whom you are subscribed.
 ① The connections between this product and all other wireless LAN (Wi-Fi) devices have not been confirmed.
 Therefore, connections with all wireless LAN (Wi-Fi) devices are not guaranteed.
 ② Although the product's security function, there is a measure of security during wireless communicating conform to the standard specifications of wireless LAN (Wi-Fi), they may not offer enough security, depending on the usage environment and settings. Be careful when doing data communication using the wireless LAN (Wi-Fi) function.
 ③ Wireless LAN (Wi-Fi) has the advantage that it can be freely connected anywhere within the radio wave range, as it uses radio waves for exchanging information. At the same time, there is a risk that a malicious third party may obtain unauthorized access if security settings have not been configured. You are recommended to configure security settings before using wireless LAN at your discretion and responsibility.
 ④ The Company assumes no responsibility for data or information that may occur during wireless LAN (Wi-Fi) communication.

Wireless LAN (Wi-Fi) function of this product uses 2.4GHz frequency band.
• Wireless LAN (Wi-Fi) function: 2.4DS/OF4
This product uses the 2.4GHz band. DS-SS, OFDM, and OFDMA are used as the modulation schemes. The interference distance is about 40 m or less.

```
2.4 DS/OF 4
IEEE802.11b/g/n/ax
```

2.4 : Indicates a wireless device that use the 2.4GHz band.
DS/OF : Indicates the DS-SS, OFDM, and OFDMA modulation schemes.
4 : Indicates the expected interference distance is 40 m or less.
 This means that the product uses all frequency bands and is capable of avoiding the frequency band for mobile device identification equipment.

• If you are using this product in the 2.4GHz band, you are recommended to set the channel setting to either CH1, CH6, or CH11 to mitigate interference and increase frequency use efficiency.
 This does not apply when you must use a setting other than the recommended CH1, CH6, or CH11 to avoid system interference other than wireless LAN (Wi-Fi).
 (Refer to "8-4 Wi-Fi設定(Wi-Fi Settings)" in "取扱説明書 詳細版(Full Instruction Manual)" (Japanese) for how to set user channels.)

■ 5GHz band precautions

Wireless LAN (Wi-Fi) function of this product uses 5GHz band. Using the 5.2 GHz band outdoors is prohibited by the Radio Law (this product is for indoor use only).
The channels used on the product are as follows.

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IEEE802.11a/n/ac/ax
J52 W52 W53 W56
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W52 (5.2 GHz band) / 36, 40, 44, 48 ch
W53 (5.3 GHz band) / 52, 56, 60, 64 ch
W56 (5.6 GHz band) / 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144 ch

About the Voluntary Control for Interference of Radio Wave

This device is a class B device. This device is intended for use in domestic environments, but it may interfere with reception if it is used near a radio or television receiver.
Read the instruction manual to use the device correctly.
VCCI-B

About Harmonic Current Regulations

The product complies with the Harmonic Current Regulations JIS C 61000-3-2.
* Compliant because power consumption is less than 75 W.

About the PIN code

■ PIN code
• To prevent unauthorized use of the SIM card by a third party, you can set the product to require a PIN code entry every time the power is turned on.
• You can enter a PIN code when setting whether the PIN code entry is required.
• If the PIN code is incorrectly entered three times consecutively, the PIN code will be locked. You can unlock the PIN code using a PIN lock cancellation code (PUK code).
 * The PIN code is "1234" and every is set to "Disable" at the time of purchase. You can change the PIN code to any four-to-eight-digit number, and set entry to "Enable" as necessary.
 If you set the PIN code to "Enable", be sure to change the PIN code to your own number before using the product.

■ PIN lock cancellation code (PUK code)
• In case the PIN code is locked, you can unlock it by entering the PIN lock cancellation code (PUK code).
 • The PIN lock cancellation code (PUK code) is an eight-digit number preset at the time of purchase, which is printed on the back side of the plastic card on which your SIM card is attached.
 • After entering the PIN lock cancellation code (PUK code), you need to set a new PIN code.
 • If the PIN lock cancellation code (PUK code) is incorrectly entered ten times consecutively, contact the telecommunications carrier to whom you are subscribed.
 * The PIN code is not used to reinstall the product.

Precautions on data communication costs

• Because the product is designed to be constantly connected to the internet, it may communicate data automatically sometimes.
• If various settings are done on the product, communications are done via internet connections, which require a fee for data communications.

Product Specifications

■ Main unit

Physical dimensions	Approx. 101 (W) × 179 (H) × 99 (D) mm
Weight	Approx. 446 g
LAN connection terminal	100BASE-TX, 1000BASE-T
Power supply	100 VAC 50/60 Hz 12 VDC (using AC adapter included in package)
Energy consumption	Maximum is about 20 W
Operating environment	Operating temperature range: 0°C to 40°C Operating humidity range: 10% to 90% (with no condensation)

■ WAN

Communication methods	5G, LTE, WiMAX 2+

■ LAN

Communication methods	Wi-Fi (compliant with IEEE802.11a/b/g/n/ac/ax)
Supported frequencies	2.4GHz/5GHz
Wi-Fi security methods	WPA/WPA2-PSK (TKIP/AES) WPA2-PSK (AES) WPA3-SAE(AES) WPA2-PSK/WPA3-SAE(AES)
Maximum number of simultaneous connections	Wireless LAN: Maximum 30 devices* /wired LAN: Maximum 2 devices

* 20 devices in 2.4GHz band and 20 devices in 5GHz band.

■ AC adapter

Input	100 VAC 50/60 Hz 1.0 A
Output	12 VDC 2.5 A
Physical dimensions	Approx. 38 (W) × 58 (H) × 92 (D) mm (cable is approximately 2 m long)
Weight	Approx. 150 g
Operating environment	Operating temperature range: 0°C to 40°C Operating humidity range: 10% to 90% (with no condensation)

This product can be used on OSs, such as Windows®, Mac, and Linux, that comply with the TCP/IP protocol stack (some settings may not work depending on the OS).
However, the following OSs are supported during Ethernet versions of the OS):
Windows® 10, Windows® 8.1 (SP1 and later) Japanese version, 32 bit (x86) version and/or 64 bit (x64) version, and macOS 11 (Intel), 10.15 (Intel), 10.14 (Intel), 10.13 (Intel), 10.12 (Intel), OS X 10.11 (Intel), 10.10 (Intel), 10.9 (Intel) Japanese versions. The following web browsers are available when performing settings in Quick Setting Web.
Also, the supported products include the following OSs pre-installed products, products which are guaranteed by manufacturers to use with the following OSs. (Self-made computers are not supported.) (As of December, 2021)

Windows® 10 supporting:
• Microsoft Edge
• Internet Explorer 11.0
Windows® 8.1 supporting:
• Microsoft Edge
• Internet Explorer 11.0
macOS 11/10.15/10.14/10.13/10.12/OS X 10.11/10.10/10.9 supporting:
• Safari
Android (11/10/9/8.0/7.1/7.0/6.0/5.1/5.0) supporting:
• Safari
• Google Chrome
iOS (14/13.2/13.1/13.0/12.4/12.3/12.2/12.1/12/11.4/11.3/11.2/11.1/11.0) supporting:
• Safari
iPadOS (14.x/13.x) supporting:
• Safari

After-sales Service

■ To request repairs (for au contracts)
Contact the Repair and Delivery Support Center regarding repairs.

Under warranty	Repairs done based on the Company's free repair regulations.
Not under warranty	If repairs are possible, the customer may choose to have repairs done for a fee.

* The warranty period is one year from the date a customer purchases a new product.
• Keep a backup of the content of the memory, because it may be lost during repairs. The Company bears no responsibility for any damages or lost profits resulting from altered or lost contents.
• Re-used parts that meet the Company's quality standards may be used to make repairs.
• The au device you have being using, which is returned through the replacement mobile phone delivery service, is reused as a replacement device after being repaired. Also, device parts replaced by the au After Service are collected and recycled by the Company. Because of this, they cannot be returned to the customer.
• If this product is manipulated, modified, or incorporated (including software modification, analysis (including rooting, etc.), reverse engineering, reverse compiling, or reverse assembly) or repaired outside of the Company's officially authorized repair centers, then it may no longer be covered by warranty and repairs may be refused.
• The internal battery of a consumable part so it is not covered by warranty.
• Accessories, which are separate from the product's main unit, are not covered by warranty for free repairs.

■ Performance parts for repair
The Company will retain performance parts for repair of the Speed Wi-Fi HOME 5G L12 main unit and Speed Wi-Fi HOME 5G L12 AC adapter for 4 years after discontinuation of production. "Performance parts for repair" refers to parts required for maintaining the functions of the product.

■ Repair and Delivery Support (for au contracts)
A monthly membership in an after service system "Repair and Delivery Support" is available to ensure long-term reliable use of au devices. This service provides expanded coverage for various troubles, such as malfunction, theft, or loss.
See the au website for details on these services and monthly fees.
https://www.au.com/mobile/service/kosho-funshitsu/ (in Japanese only)
• Membership applications are accepted only when purchasing an au device.
• A cancelled membership cannot be renewed until you purchase another au device.
• If you change models or purchase more devices, then only the most recently purchased au device is covered by this service.
• If ownership of an au device is transferred or inherited, then membership status in Repair and Delivery Support passes to the transferee.
• If you purchase a new au device, such as by changing models or purchasing more devices, then membership in Repair and Delivery Support is automatically cancelled for the au devices you used previously.
• These services may change without advance notice.

■ Warranty card
At the store of purchase, thoroughly check and read the name of the store of purchase, date of purchase and other necessary details filled in on the warranty card, and be sure to keep it in a safe place.

Software Used in the Product

This product includes software licensed under GNU General Public License (GPL) and/or GNU Lesser General Public License (LGPL). The user can obtain the source code of such software, and copy, distribute and modify the software according to the GPL, LGPL, and/or Eclipse Public License (EPL). Refer to the WiMAX Support Information website for details.
https://www.necplatforms.co.jp/support/wimax/l12/index.html (in Japanese only)

Export Administration Regulations

The product and packaged items may be subject to the application of the Foreign Exchange and Foreign Trade Act and other related laws and regulations in Japan. In addition, the Export Administration Regulations (EAR) of the United States may be applicable. In cases of exporting or re-exporting the product and packaged items, customers are requested to follow the necessary procedures at their own responsibility and cost. Please contact the Ministry of Economy, Trade and Industry of Japan or Department of Commerce of the United States for details about procedures.

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• "QR Code" is a registered trademark of DENSO WAVE INCORPORATED.
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Contact

For au contracts

■ Customer Center (open year round/toll free calls)

	From au mobile phones	From other than au mobile phones/landline phones	If the number on the left does not connect
General information (9:00 to 20:00)	No prefix 157	📞 0077-7-111	📞 0120-977-033
Theft, loss, and malfunction information (24 hours)	No prefix 113	📞 0077-7-113	📞 0120-925-314

■ Repair and Delivery Support Center (open year round/toll free)
(Services for members of Repair and Delivery Support)

	From au mobile phones/other than au mobile phones/landline phones
Advice on malfunctions and replacement phone delivery services (9:00 to 20:00)	📞 0120-925-919

For contracts with WiMAX operators other than au
Please contact the WiMAX operator to whom you are subscribed.

Mobile phone and PHS business operators collect and recycle unused telephones and battery chargers at stores bearing the mobile recycle network logo ♻ regardless of brand and manufacturer to protect the environment and reuse valuable resources.