



# Synology Router RT6600ax

## Hardware Installation Guide

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# Before You Start

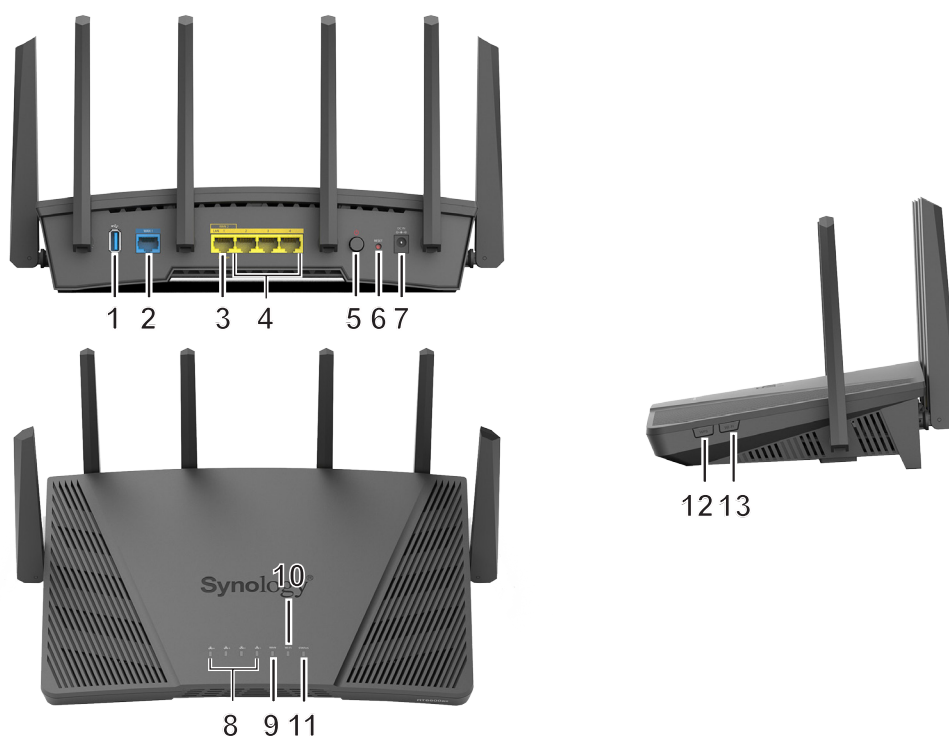
Thank you for purchasing this Synology product! Before setting up your new expansion unit, please check the package contents to verify that you have received the items below. Also, make sure to read the safety instructions carefully to avoid harming yourself or damaging your expansion unit.

**Note:** All images below are for illustrative purposes only, and may differ from the actual product.

## Package Contents

Main unit x 1	AC power adapter x 1
	
	<p data-bbox="1082 898 1321 925">RJ-45 LAN cable x 1</p> 

## Synology RT6600ax at a Glance



No.	Article Name	Location	Description
1	USB 3.2 Gen 1 (Type-A) Port	Rear Panel	Connect an external drive, USB printer, or other types of USB devices here.
2	WAN Port		Connect a network cable from the ISP modem into this port to establish WAN connection.
3	2.5G WAN/LAN Port		1. Connect a network cable from the ISP modem into this port to establish WAN connection. 2. Connect network cables into these ports to establish LAN connection.
4	LAN Port		Connect network cables into these ports to establish LAN connection.
5	Power Button		Press to power on/off the Synology Router.
6	RESET Button		Press and hold for four seconds (Soft Reset) or for ten seconds (Hard Reset).
7	Power Port		Connect the AC power adapter here.
8	LAN Indicator	Front Panel	Displays the status of LAN connection.
9	WAN Indicator		Displays the status of WAN connection.
10	Wi-Fi Indicator		Displays the status of Wi-Fi connection.
11	STATUS Indicator		Displays the status of the system.
12	WPS Button	Right Panel	Press to start WPS.
13	Wi-Fi Button		Press for three seconds to turn on/off the Wi-Fi network.

## LED Indicator Table


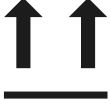



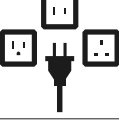





LED Indicator	Color	Status	Description
Status Indicator	Green	Static	Powered on
		Blinking	System Ready
	Orange	Static	System booting/Rebooting/Hard Reset
		Blinking	Mesh network disconnected
	Green/Orange	Blinking	Searching device
Off			Powered off
Wi-Fi	Green	Static	Wi-Fi active
		Blinking	WPS connecting
	Off		
WAN	Green	Static	Network connected
		Blinking	Data transmitting
	Off		
LAN 1	Green	Static	Gigabit/2.5G connection
		Blinking	Gigabit/2.5G data transmitting
	Orange	Static	10/100 Mbps connection
		Blinking	10/100 Mbps data transmitting
	Off		
LAN 2-4	Green	Static	Gigabit connection
		Blinking	Gigabit data transmitting
	Orange	Static	10/100 Mbps connection
		Blinking	10/100 Mbps data transmitting
	Off		

## Hardware Specification

Item	RT6600ax
External Ports	USB 3.2 Gen 1 (Type-A) x 1
WAN Port	<ul style="list-style-type: none"> <li>• Gigabit WAN x 1</li> <li>• Gigabit WAN x 1 and 2.5G WAN x 1 (Dual WAN)</li> </ul>
LAN Ports	<ul style="list-style-type: none"> <li>• Gigabit LAN x 3 and 2.5G LAN x 1</li> <li>• Gigabit LAN x 3 (Dual WAN)</li> </ul>
Size (H x W x D) (mm)	175 x 320 x 200 (antennas in upright position)
Weight (kg)	1.6 kg
Supported Clients (for SRM management)	<ul style="list-style-type: none"> <li>• Windows 7 onwards</li> <li>• Mac OS 10.12 onwards</li> </ul>
File Systems	External: EXT4, EXT3, FAT, NTFS, HFS+
Wireless Standards	<ul style="list-style-type: none"> <li>• 2.4GHz: 802.11 b/g/n/ax</li> <li>• 5GHz: 802.11 a/n/ac/ax</li> </ul>
Operating Frequency Range	<ul style="list-style-type: none"> <li>• 802.11ax (2.4GHz): Up to 600 Mbps</li> <li>• 802.11ax (5GHz-1): Up to 4800 Mbps</li> <li>• 802.11ax (5GHz-2): Up to 1200 Mbps</li> </ul>
Wireless Operation Modes	<ul style="list-style-type: none"> <li>• Wireless Router</li> <li>• Wireless AP (Access Point)</li> </ul>
Wireless Security	<ul style="list-style-type: none"> <li>• 64/128-bit WEP • WPS support</li> <li>• WPA2-Personal • WPA/WPA2-Personal</li> <li>• WPA2-Enterprise • WPA/WPA2-Enterprise</li> <li>• Opportunistic Wireless Encryption (OWE)</li> <li>• WPA3-Personal • WPA3-Enterprise</li> <li>• WPA2/WPA3-Personal</li> </ul>
Antennas	<ul style="list-style-type: none"> <li>• 2T2R Omni-directional high-gain dipole (2.4GHz/5GHz-2)</li> <li>• 4T4R Omni-directional high-gain dipole (5GHz-1)</li> </ul>
Buttons & Switches	• Power • WPS • Wi-Fi On/Off • Reset
Language Localization	<ul style="list-style-type: none"> <li>• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk</li> <li>• Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu</li> <li>• Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文</li> </ul>
Environment Requirements	<ul style="list-style-type: none"> <li>• Line voltage: 100V to 240V AC</li> <li>• Frequency: 50/60Hz</li> <li>• Operating Temperature: 40 to 104°F (5 to 40°C)</li> <li>• Storage Temperature: -5 to 140°F (-20 to 60°C)</li> <li>• Relative Humidity: 5% to 95% RH</li> </ul>

**Note:** Model specifications are subject to change without notice. Please refer to [www.synology.com](http://www.synology.com) for the latest information.

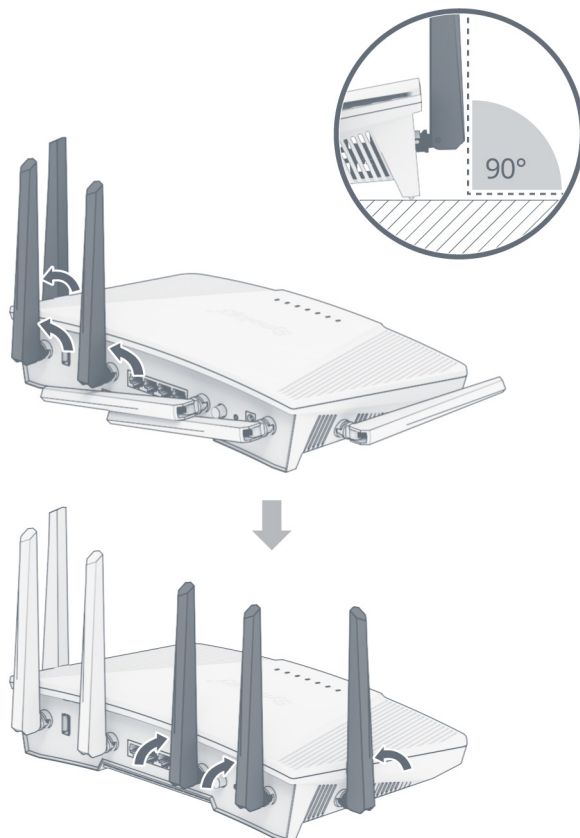
## Safety Instructions

	Keep away from direct sunlight and away from chemicals. Ensure a stable environment with no abrupt changes in temperature or humidity.
	Place the unit right side up at all times.
	Keep the unit away from liquids.
	Before cleaning, unplug the power cord. Do not use chemical or aerosol cleaners. Wipe with damp paper towels.
	To prevent the unit from falling over, do not place it on carts or any unstable surfaces.
	The power cord must plug into the correct supply voltage. Ensure the supplied AC voltage is correct and stable.
	Warning, electric shock hazard. To remove all electrical current from the device, ensure that all power cords are disconnected from the power source.
	Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries appropriately.
	Power cord must be plugged into a socket-outlet with earthing connection.
	Keep body parts away from moving fan.
	This product must be installed by qualified personnel in a restricted access location (like dedicated equipment rooms, service closets).

# Hardware Setup

## Adjust Antennas

For optimal Wi-Fi performance, tilt the antennas so that they are at a 90 degree angle to the surface.



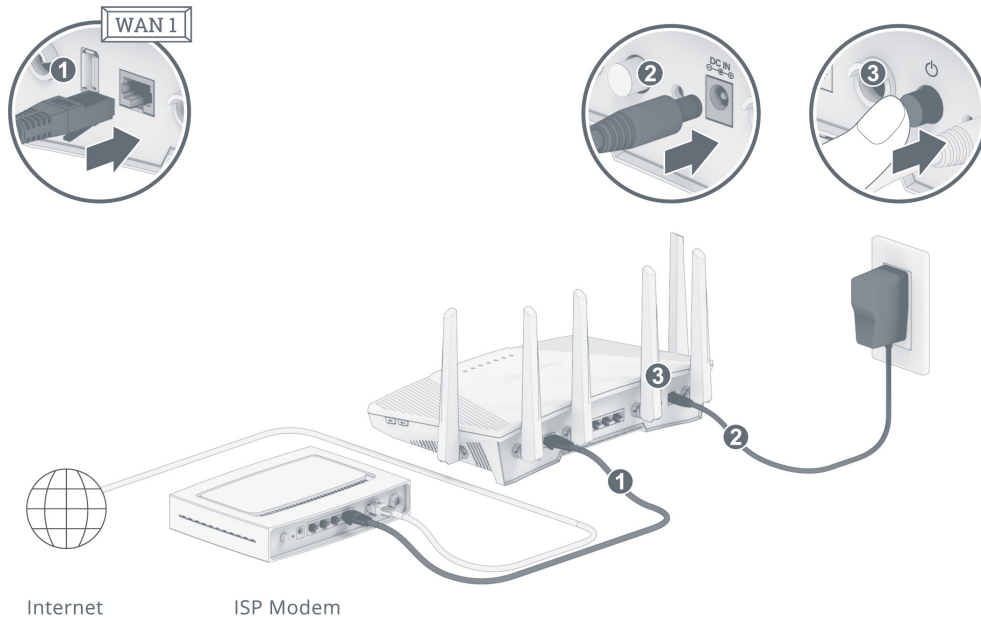
## Position Your RT6600ax

For optimal performance, it is recommended to position your RT6600ax as advised below:

- On a stable surface (e.g. an elevated shelf) away from any possible physical interruptions.
- Close to the center of the area where the wired/wireless client devices are placed, and within a visible distance from the wireless devices.
- In a position where few walls and ceilings are between your RT6600ax and its client devices.
- Away from any potential electrical signal sources, such as other Wi-Fi routers, 3G/4G bases, and microwave ovens.
- Away from large expanses of metal or other materials, such as metal doors, glass panels, and concrete.

## Connect to Your RT6600ax

- 1 Use the included network cable to connect your RT6600ax (at the WAN1 port) to the ISP modem. Connect one end of the power adapter to the power port on your RT6600ax, and the other end to the power outlet. Press the power button to power on your RT6600ax. Wait for up to two minutes until the STATUS and WAN LED indicators turn green.

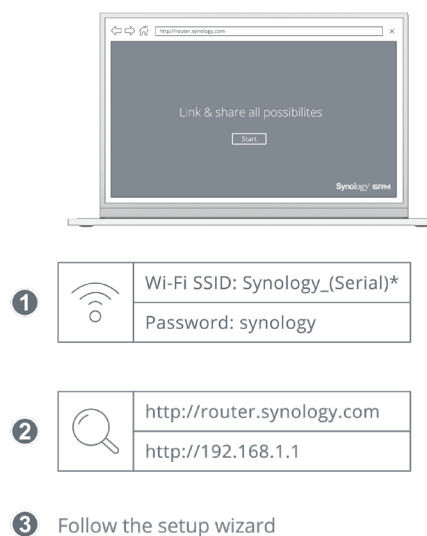


- 2 Connect wireless client devices to your RT6600ax. When the Wi-Fi indicator has turned static green, RT6600ax is ready to connect with other devices. Use your wireless device to scan and join the Wi-Fi network created by your RT6600ax.

From mobile device



From laptop



\*(Serial) is the last 6 digits of your Synology Router's serial number.

### Note:

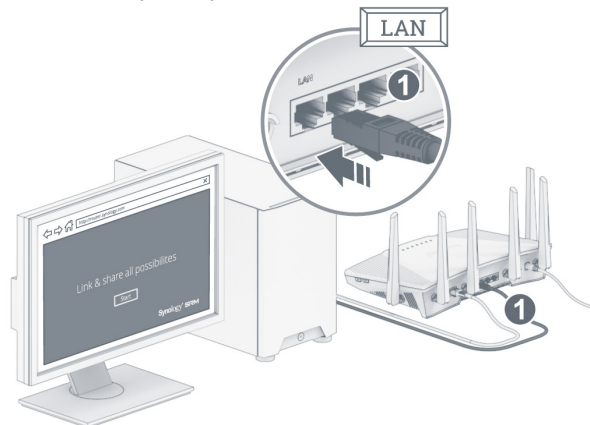
The default credentials for the Wi-Fi network:

- Wi-Fi SSID: **Synology\_(Serial)**
- Password: **synology**

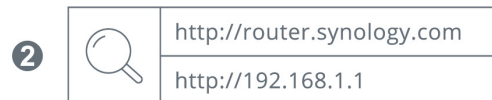
You can change it during the initial SRM setup.

- 3 Connect wired client devices to your RT6600ax. Use network cables to connect devices to the LAN ports. The corresponding LAN LED indicators should turn orange/green to indicate successful connection.

From desktop computer



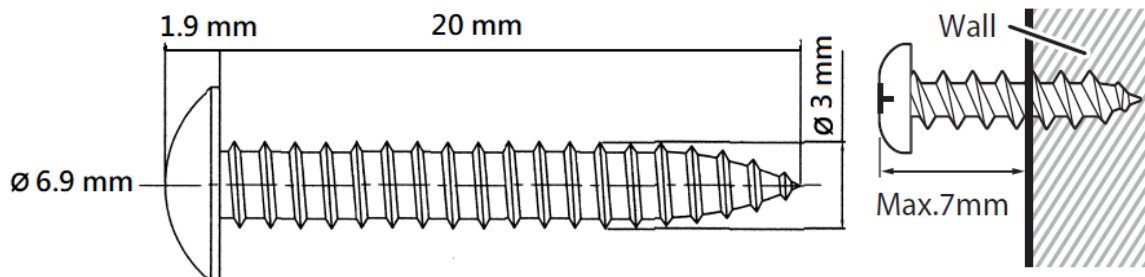
- 1 Connect computer to the router



- 3 Follow the setup wizard

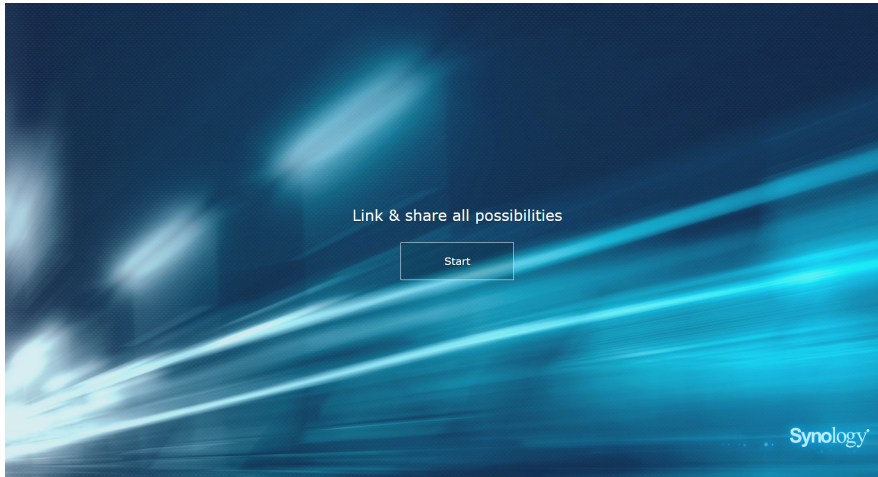
## Mount Your RT6600ax

- Do not install the device in an unstable location, such as on an unsteady table or an inclined surface.
- Do not place another hub or object that generates heat on top of this unit.
- Please route all cables properly to prevent people from tripping over them.
- Ensure the air vents on the product are not blocked by other equipment or walls.
- Only use the power cable included with the product. Using other power cables may result in damage or fire.
- Use 2 screws (not included) with the dimensions shown below.
- The screw head should project out from the wall at 7mm.

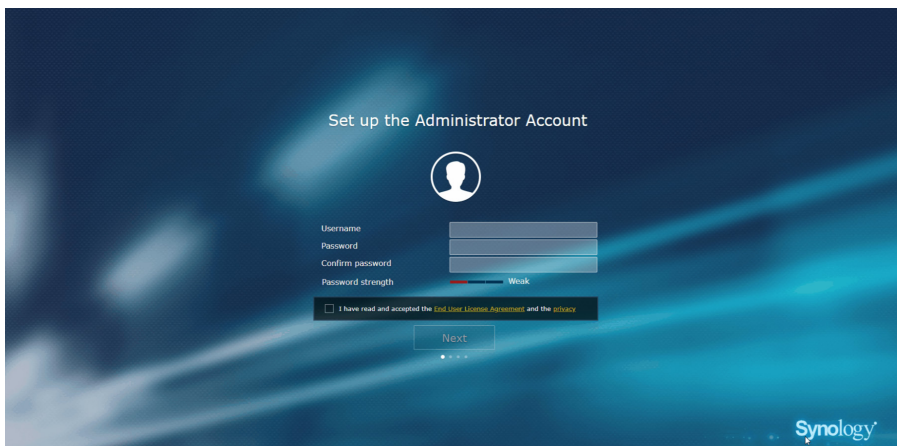


## Set up Synology Router Manager (SRM)

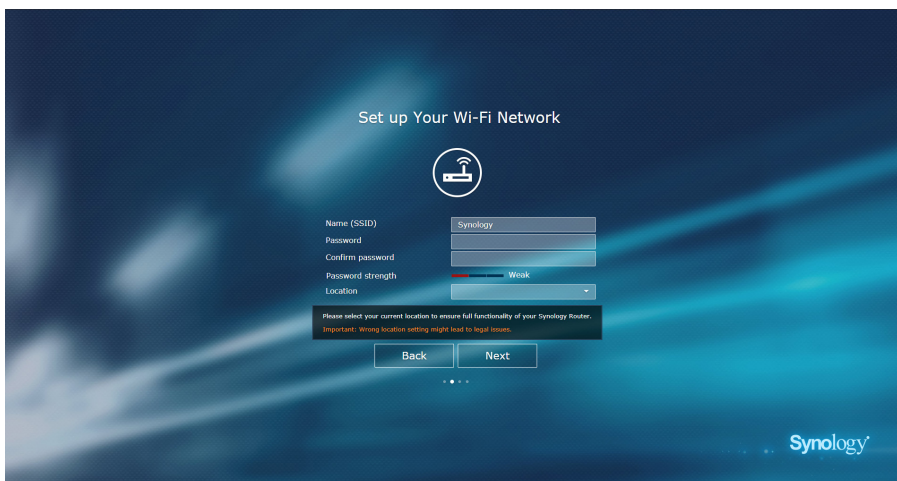
- 1 Use a computer or wireless device connected to your RT6600ax's local network. If you use a wireless device, scan and join the Wi-Fi network (SSID: **Synology\_(Serial)**; Password: **synology**).
- 2 Open a web browser, and enter either URL into the address bar:
  - <http://router.synology.com>
  - <http://192.168.1.1:8000>
- 3 Once connected, click **Start** to launch the SRM Setup Wizard.



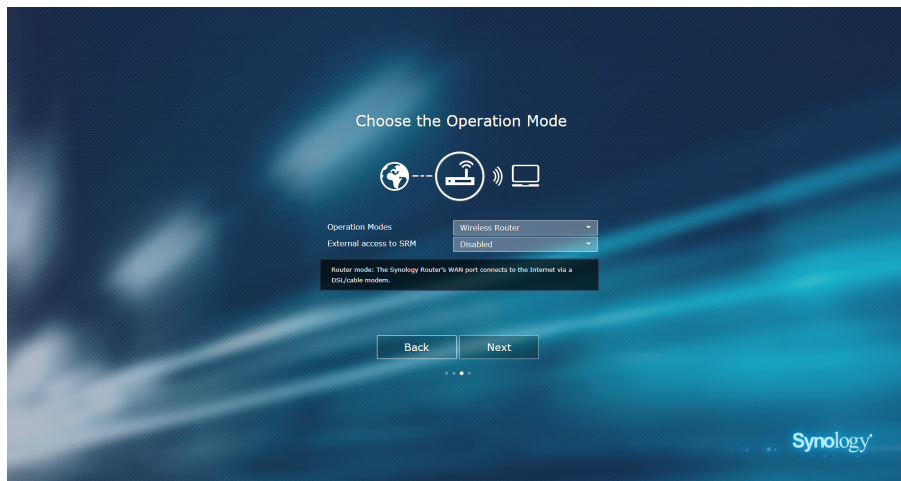
- 4 Fill in the information to set up the administrator account. Click **Next** to continue.



- 5 Fill in the information to set up the Wi-Fi network. Click **Next** to continue.

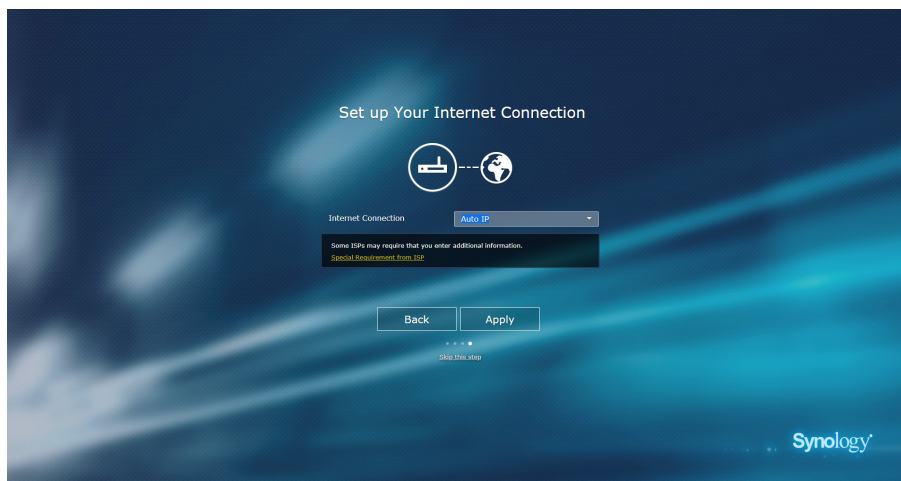


- 6 Set up the operation mode. When choosing the **Wireless Router** mode, you can also enable **External access to SRM** so that only external access via the HTTP(S) port (e.g. 8000/8001) can reach SRM.

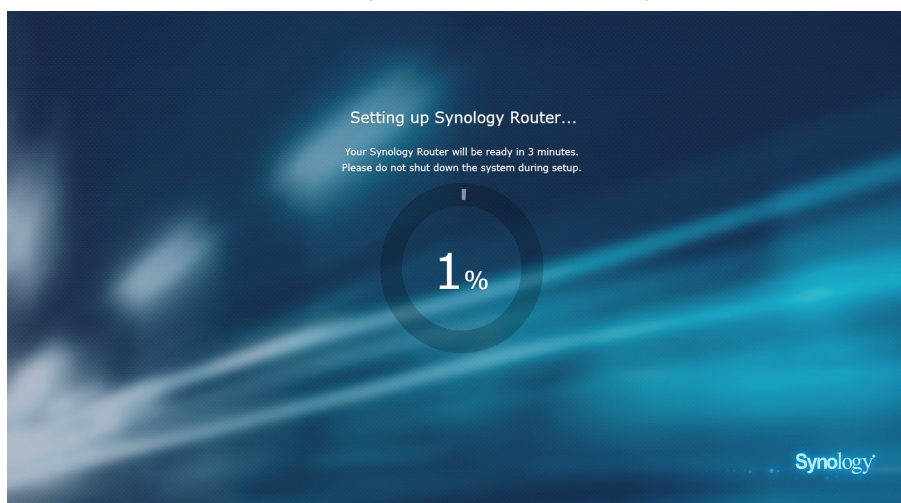


- 7 Choose an Internet connection type:

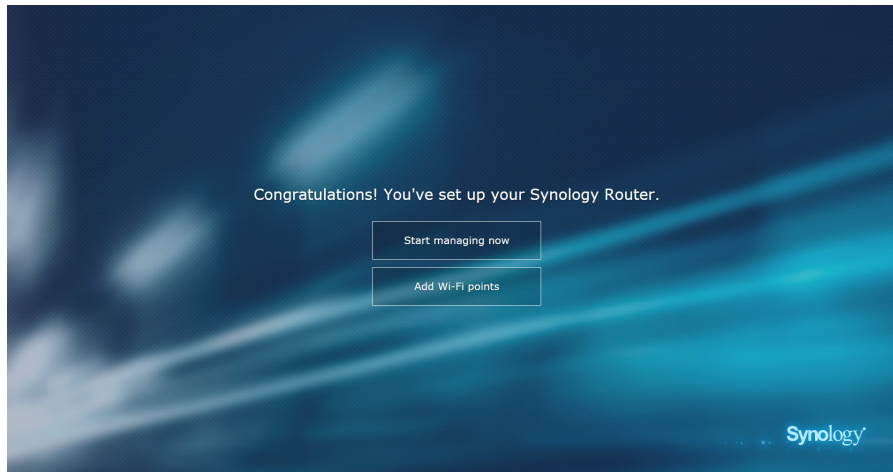
- **PPPoE**: Choose this option if you have obtained PPPoE credentials from the ISP.
- **Manual IP**: Choose this option if you have obtained an available IP address for use.
- **Auto IP**: Choose this option if you rely on an ISP modem for automatic IP assignment.



- 8 The wizard will continue to set up your RT6600ax, and it may take up to three minutes to complete the setup.



9 After the setup is complete, click **Start managing now** to enjoy SRM and its various features.



**Note:**

1. Above is a general demonstration of the SRM setup steps. The steps and available options may somewhat vary depending on your device type (e.g. PC or wireless device), access type (LAN, WAN, or Wireless LAN), and chosen operation mode (Wireless Router or Wireless AP).
2. If the setup is to be completed with a wireless device, remember to download DS router to manage your RT6600ax from anywhere.

## **Federal Communication Commission Interference Statement**

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

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 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.

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

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

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

### **Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 23cm between the radiator & your body.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

FCC regulations restrict the operation of this device to indoor use only.

### **Industry Canada statement:**

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

### **Caution :**

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

### **Avertissement:**

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

### **Radiation Exposure Statement:**

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body.

### **Déclaration d'exposition aux radiations:**

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作。

「本產品電磁波曝露量(MPE)標準值 $1\text{mW}/\text{cm}^2$ ，送測產品實測值為  $0.358\text{ mW}/\text{cm}^2$ ，建議使用時至少距離人體 21 cm」

設備名稱：802.11ax無線路由器，型號（型式）：RT6600ax Equipment name Type designation (Type)						
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead <sup>+</sup> (Pb)	汞 Mercury <sup>+</sup> (Hg)	鎘 Cadmium <sup>+</sup> (Cd)	六價鉻 Hexavalent chromium <sup>+</sup> (Cr <sup>+6</sup> )	多溴聯苯 Polybrominated biphenyls <sup>+</sup> (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
上下蓋	○	○	○	○	○	○
印刷電路板及電子組件	—	○	○	○	○	○
天線	○	○	○	○	○	○
電源供應器	—	○	○	○	○	○
備考1. “超出0.1 wt %” 及 “超出0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。 Note 1 : “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition. 備考2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2 : “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence. 備考3. “—” 係指該項限用物質為排除項目。 Note 3 : The “—” indicates that the restricted substance corresponds to the exemption...						

### RED Compliance Statement

#### Compliance with 2014/53/EU Radio Equipment Directive (RED)

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following table provides information on the frequency bands used and the maximum RF transmit power of the product for sale in the EU:

Frequency Range (MHz)	Max. Transmit Power (dBm) EIRP
2412 ~ 2472	19.86 dBm
5180 ~ 5240	22.80 dBm
5250 ~ 5320	22.94 dBm
5500 ~ 5700	29.87 dBm

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

	AT	BE	BG	HR	CY	CZ	DK	
	EE	FI	FR	DE	EL	HU	IE	
	IT	LV	LT	LU	MT	NL	PL	
	PT	RO	SK	SI	ES	SE	UK	UK(NI)

This device is restricted to indoor use