Synology RT6600ax WiFi 6 Router Installation Guide

Synology RT6600ax WiFi 6 Router

Contents

Chapter 1: 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

Synology RT6600ax at a Glance

1 **2** **3** **4** **5 6 7**

10

Synology

8 **9 11**

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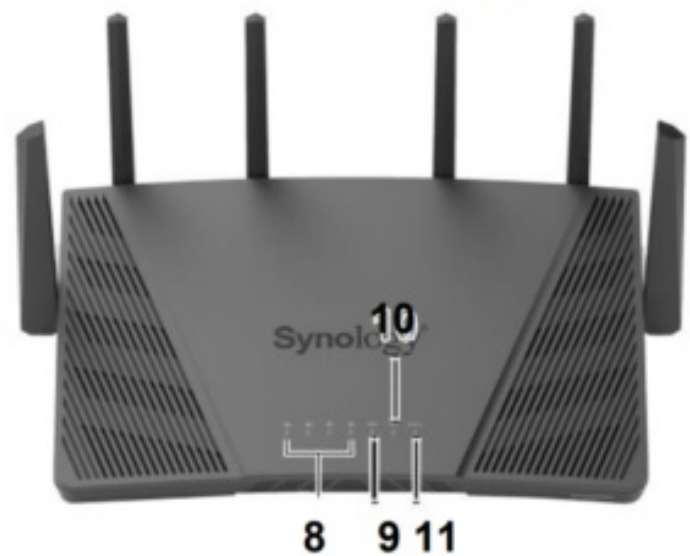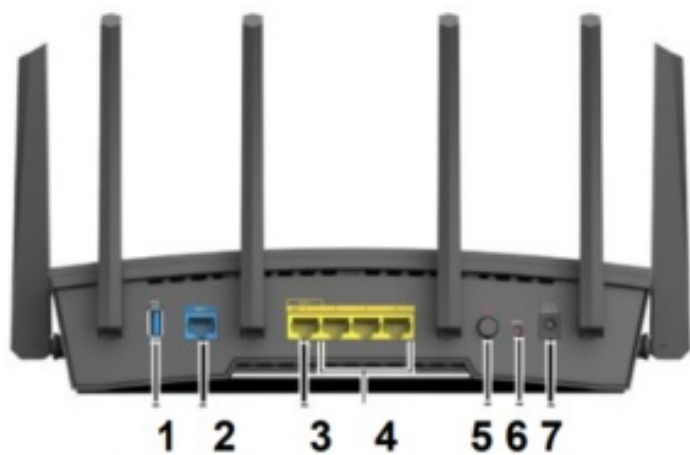
No.	Article Name	Location	Description
1	USB 3.0 Port	Rear Panel	Connect an external drive, USB printer, or other types of USB devices here.
2	WAN Port		Connect a network cable from the ISP modem into this port to establish WAN connection.
3	2.5G WAN/ LAN Port		1. Connect a network cable from the ISP 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 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 (**Reset Instructions**)
		Blinking	Restoring settings (Soft Reset)/Mesh network disconnected
	Green/Orange	Blinking	Searching device
	Off		Powered off
Wi-Fi	Green	Static	Wi-Fi active
		Blinking	WPS connecting
	Off		No Wi-Fi
WAN	Green	Static	Network connected
		Blinking	Data transmitting
	Off		Network disconnected
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		No network
LAN 2-4	Green	Static	Gigabit connection
		Blinking	Gigabit data transmitting
	Orange	Static	10/100 Mbps connection
		Blinking	10/100 Mbps data transmitting
	Off		No network

Hardware Specification
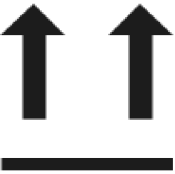
Item	RT6600ax
External Ports	USB 3.0 x 1

WAN Port	• Gigabit WAN x 1 • Gigabit WAN x 1 and 2.5G WAN x 1 (Dual WAN)
LAN Ports	• Gigabit LAN x 3 and 2.5G LAN x 1 • Gigabit LAN x 3 (Dual WAN)
Size (H x W x D) (mm)	65 x 280 x 180 (without antennas)
Weight (kg)	0.9 kg
Supported Clients (for SRM management)	• Windows 7 onwards • Mac OS 10. 12 onwards
File Systems	External: EXT4, EXT3, FAT, NTFS, HFS+
Wireless Standards	• 2.4GHz: 802.11 b/g/n/ax • 5GHz: 802.11 a/n/ac/ax
Operating Frequency Range	• 802.11ax (2.4GHz): Up to 600 Mbps • 802.11ax (5GHz-1): Up to 1200 Mbps • 802.11ax (5GHz-2): Up to 4800 Mbps
Wireless Operation Modes	• Wireless Router • Wireless AP (Access Point)
Wireless Security	• 64/128-bit WEP • WPS support • WPA2-Personal • WPA/WPA2-Personal • WPA2-Enterprise • WPA/WPA2-Enterprise • Opportunistic Wireless Encryption (OWE) • WPA3-Personal • WPA3-Enterprise • WPA2/WPA3-Personal

Antennas	• 2T2R Omni-directional high-gain dipole (2.4GHz/5GHz-1) • 4T4R Omni-directional high-gain dipole (5GHz-2)
Buttons & Switches	• Power • WPS • Wi-Fi On/Off • Reset (**Reset Instructions**)
Language Localization	• English • Deutsch • Français • Italiano • Español • Dansk • Norsk • Svensk • Nederlands • Русский • Polski • Magyar • Português do Brasil • Português Europeu • Türkçe • Český • 日本語 • 한국어 • 繁體中文 • 简体中文
Environment Requirements	• Line voltage: 100V to 240V AC • Frequency: 50/60Hz • Operating Temperature: 40 to 104˚F (5 to 40˚C) • Storage Temperature: -5 to 140˚F (-20 to 60˚C) • Relative Humidity: 5% to 95% RH

Note: Model specifications are subject to change without notice. Please refer to **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.
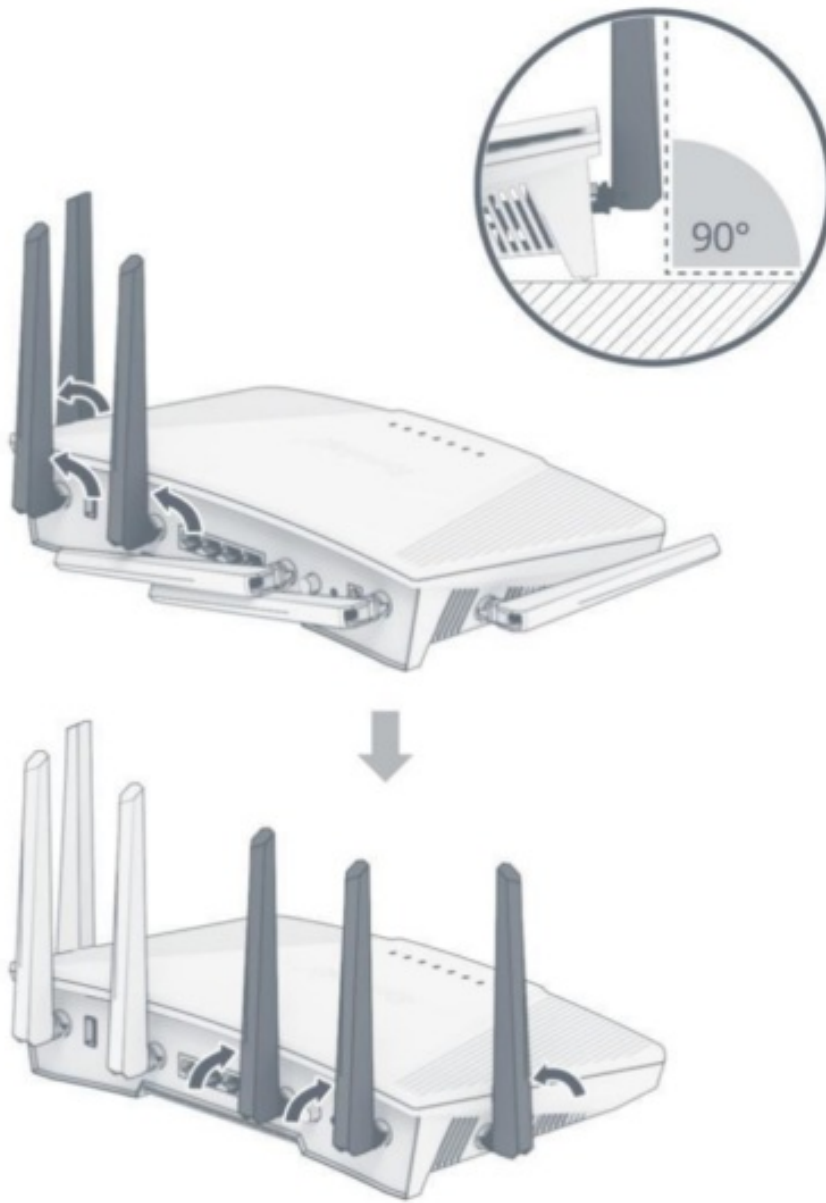
Position Your RT6600ax

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.

Place Flat on a Surface

Simply place your RT6600ax flat on a horizontal, stable surface.

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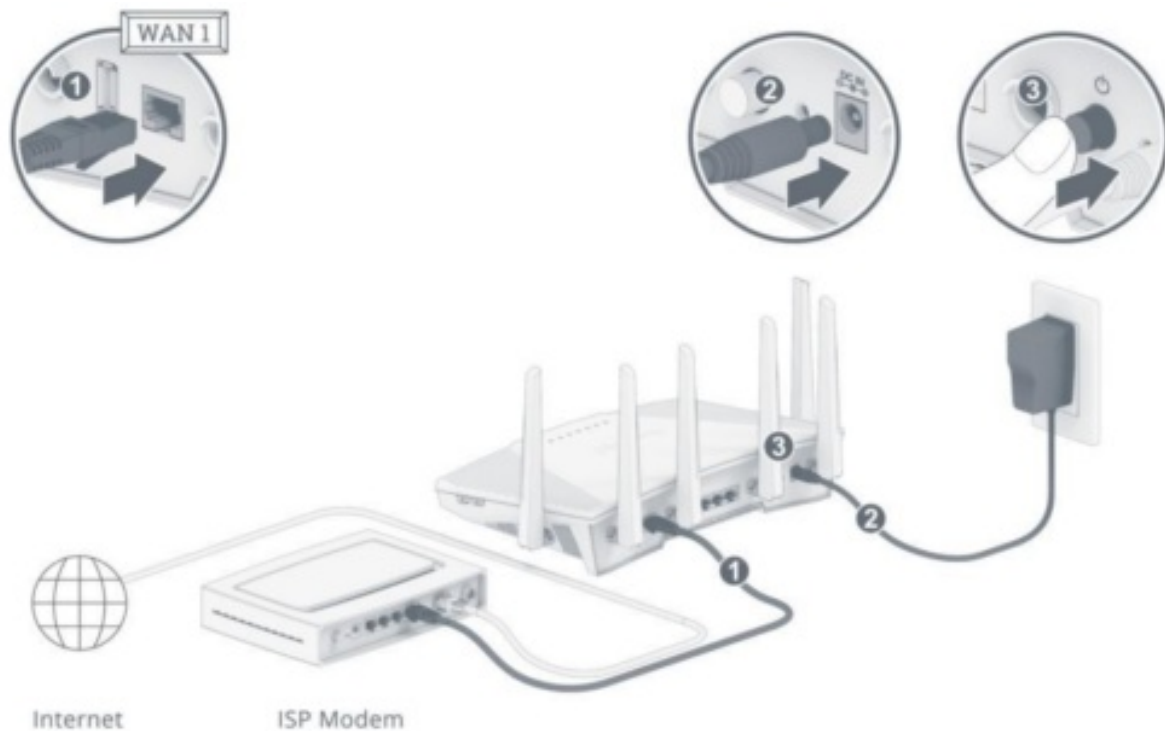
2. Connect wireless client devices to your RT6600ax. When the Wi-Fi indicator has turned static green, RT6600ax is ready to connect with other devices. Use your wireless device to scan and join the Wi-Fi network created by your RT6600ax.

   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 connecti

From desktop computer

LAN
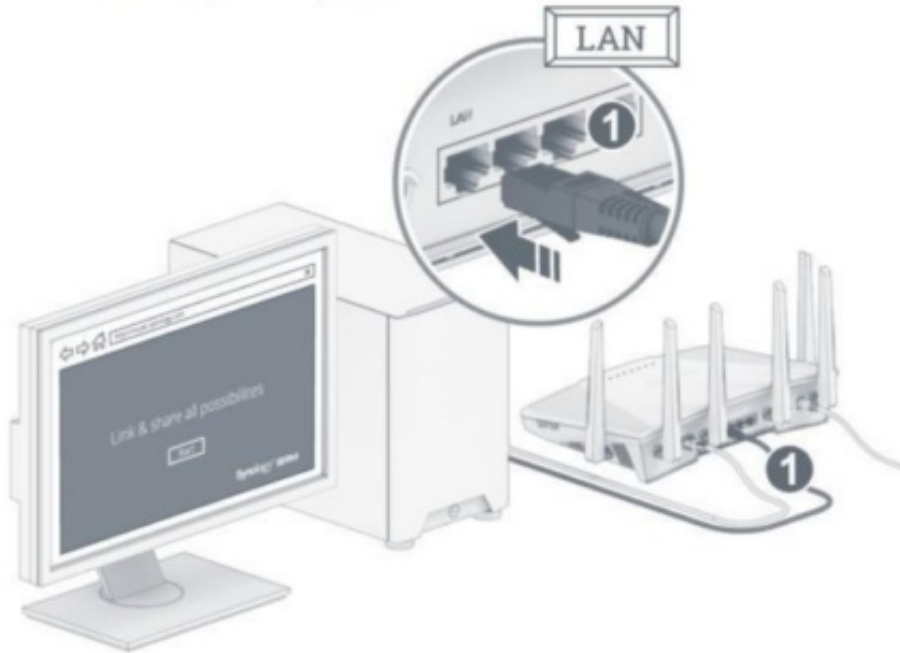
1 Connect computer to the router

2 http://router.synology.com
http://192.168.1.1

3 Follow the setup wizard

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.
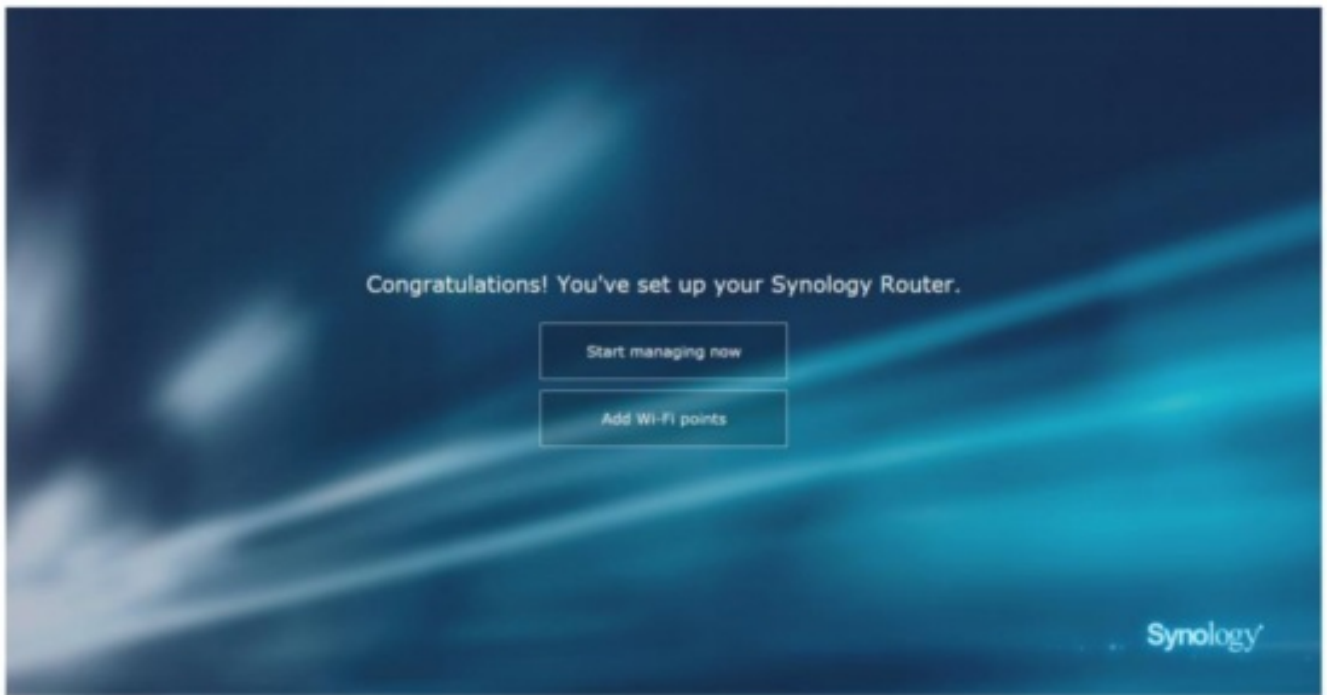
Note:

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 21cm 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

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.

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) for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
(iii) for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate;
(iv) 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.

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

<u>DETACHABLE ANTENNA USAGE</u>

This radio transmitter [IC: 20954-RT6600ax] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Manufacturer	Model	Antenna Type	Max Gain (dBi)	Impedance (Ω)
LYNwave	ALX21X-221031-00	Dipole	2412-2462MHz: 2.00 5180-5320MHz: 3.00	50
LYNwave	ALX21X-221032-00	Dipole	2412-2462MHz: 2.00 5180-5320MHz: 3.00	50
LYNwave	ALX21X-221033-00	Dipole	5500-5825MHz: 3.00 5845-5885MHz: 3.30	50
LYNwave	ALX21X-221034-00	Dipole	5500-5825MHz: 3.00 5845-5885MHz: 3.30	50
LYNwave	ALX21X-221035-00	Dipole	5500-5825MHz: 3.00 5845-5885MHz: 3.30	50
LYNwave	ALX21X-221036-00	Dipole	5500-5825MHz: 3.00 5845-5885MHz: 3.30	50

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Documents / Resources

Synology RT6600ax WiFi 6 Router [pdf] Installation Guide
RT6600AX, YOR-RT6600AX, YORRT6600AX, RT6600ax WiFi 6 Router, WiFi 6 Router