Synology®

Tri-band Wi-Fi 6 Router
RT6600ax

Ultra-fast and Secure Wireless Router for Homes and Small Office

Built around the new Wi-Fi 6 standard, the RT6600ax tri-band router can deliver up to 6.6 Gbps in combined wireless throughput.[1] The three radios work in tandem with the configurable 2.5GbE WAN/LAN port to ensure the maximum connection speed for each device. Powered by our constantly evolving Synology Router Manager operating system, the RT6600ax is designed to make securing and managing your network simple.

Highlights

- **Supercharged Performance**
  Expanded 5.9 GHz spectrum support enables additional high-speed 80 and 160 MHz channels[2]
- **Built for Fast Networking**
  2.5GbE port enables support for the fastest ISPs and can optionally be configured as a LAN port
- **Secure Network Foundation**
  Create and define up to 5 separate networks to segregate and contain vulnerable devices
- **Granular Management Tools**
  Parental controls, web filtering, traffic control, and threat prevention put you in control over your network
- **Simple Remote Access**
  Comprehensive VPN server solution with remote desktop and site-to-site tunneling provides flexible and secure remote connectivity

DATASHEET | Router **RT6600ax**

WiFi 6 CERTIFIED™

What makes Wi-Fi 6 better?

Wi-Fi 6 features higher top speeds, but that is not all. A great amount of emphasis was placed on improving overall "capacity" — the combined speed of the entire network. Better data encoding, beamforming, scheduling, signal isolation, and more contribute to a faster, more reliable, and ultimately better wireless experience.

Home → IOT Guest
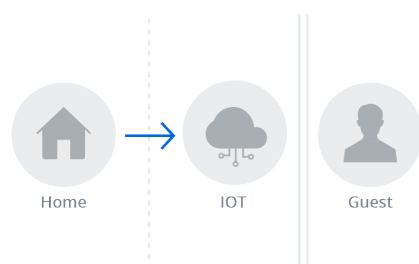
Divide and Secure

Configure your networks based on how you need to segment devices or groups of users. Then define rules to bridge your networks, keep them isolated, or allow only one-way traffic — for example, to keep vulnerable IoT devices tucked away from the rest of your devices.

Connectivity for the Internet of Tomorrow

The RT6600ax is engineered to deliver state-of-the-art performance for both wireless and wired devices.

- The **quad-core 1.8 GHz processor** ensures everything stays fast even when more devices are connected and additional filtering plus management features are fully utilized
- **Tri-band Wi-Fi (2.4 + 5 + 5 GHz)** provides more bandwidth for different devices, especially when combined with Smart Connect to automatically optimize each device's connection for range or speed
- Expanded **5.9 GHz band** support provides additional interference-free 80 and 160 MHz channel support to support higher connection speeds[2]
- A **flexible 2.5GbE port** can be configured for WAN or LAN use for high-speed ISP plans, or connecting high-speed desktops or NAS

A Solid Network Foundation to Support All Your Devices

Powered by the **Synology Router Manager (SRM)** operating system, the RT6600ax and other Synology routers are built with the same security and reliability focus as our NAS/SAN systems. SRM's suite of management solutions is designed from the ground up to help admins harden their networks.

- Create up to 5 separate networks to group and separate devices based on their role and purpose, and map up to 15 wireless SSIDs[3] to each network
- Define individual networks and the devices on them with network-wide or independent sets of firewall rules, access policies, **traffic control**, parental controls, web filtering, and more
- Each configurable network supports VLAN tagging and fits into any existing 802.1q compliant network across all usage modes — router, AP, and in a mesh setup (with multiple Wi-Fi points connected)
- Advanced network administrators can configure the **Threat Prevention** engine to perform network inspection at the packet level to find and drop potentially malicious traffic

WAN

Network

Device | Device
App | App | App | App
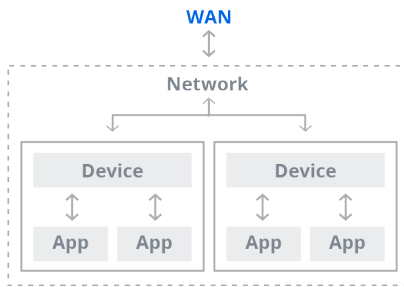
Bandwidth Management Made Easy

Traffic Control allows you to set guaranteed and maximum allocated bandwidth for each device or service. Fine-tune your network using real-time and historical data.

Safe Access to the Net

Define user and network profiles to ensure all devices (even newly added devices) receive the same level of security and filtering.

SSTP | OpenVPN

L2TP over IPSec | Synology SSL VPN
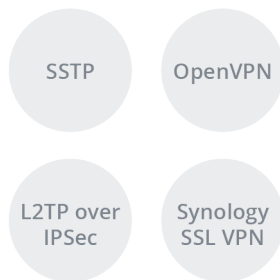
Comprehensive Protocol Support

In addition to Synology SSL VPN, WebVPN, and Remote Desktop, VPN Plus also supports commonly used VPN protocols, making integration with your network environment easier than ever.

Granular Access Controls and Web Filtering

SRM features powerful access and content administration capabilities that enable parents or network admins to set up clear access rules and define allowed or blocked content.

- **Access and web filters** can be defined by profiles that can be applied to all devices by default or only to specific devices
- Set browsing schedules and maximum daily internet access time, configurable per individual user and day of the week
- Set web filtering based on 18 common categories of websites for each user profile and optionally add separate allow or blocklists. Web filtering can also be activated on a scheduled basis
- Set up safe search filtering per profile with integrated support for YouTube, Google, and Bing platforms
- Enable network-wide automatic blocking of known malicious traffic using the constantly updated **DNS/IP Threat Intelligence Database**
- Keep track of different user profiles' browsing habits to analyse network use or protect your environment and children

Secure Remote Access for Hybrid or Remote Work

RT6600ax includes powerful VPN server capabilities to enable simple, but secure remote access into your network. The free Synology **VPN Plus** solution includes comprehensive connectivity options to fit different needs.

- Synology SSL VPN is a high-performance option leveraging dedicated clients for PC, mac, and mobile platforms that enables the broadest support for any protocol, such as file access over SMB, iSCSI, Windows RDP, SSH, and more
- WebVPN is a lightweight client-free option that provides direct access to internal websites directly from the browser
- Remote Desktop enables easy remote access to Windows, macOS, and RDP or VNC compatible devices on your network directly through your browser
- Site-to-Site VPN bridges remote locations together to enable easier collaboration without requiring each client device to initiate their own VPN connections
- Set per-user permissions, or connect to existing Active Directory or LDAP directory services to simplify deployment and setup

Hardware Overview

Front
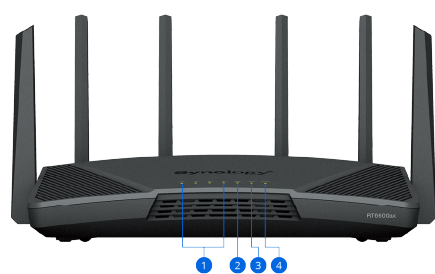
Rear

Right

1	LAN indicators	2	WAN indicator	3	Wi-Fi indicator	4	Status indicator
5	USB 3.2 Gen 1 Port	6	Gigabit WAN Port	7	2.5GbE WAN/LAN Port	8	Gigabit LAN Ports
9	Power Switch	10	Reset button	11	Power port	12	WPS button
13	Wi-Fi button						

Technical Specifications

Hardware

CPU	Quad-core 1.8 GHz
Hardware L7 engine	Yes
Memory	DDR3 1 GB
Antenna type	2T2R + 4T4R omnidirectional high-gain dipole (2.4 GHz/5 GHz)
RJ-45 ports	• 1 x Gigabit WAN • 1 x 2.5GbE configurable WAN/LAN • 3 x Gigabit LAN
External ports	1 x USB 3.2 Gen 1 (Type-A)
Size (HxWxD)	175 mm x 320 mm x 200 mm (antennas in upright position)
AC adapter input voltage	100 V to 240 V AC
Power frequency	50 to 60 Hz, single phase
Operating environment	• 5°C to 40°C (40°F to 104°F) • 8% to 80% RH
Storage environment	• -20°C to 60°C (-5°F to 140°F) • 5% to 95% RH
Maximum operating altitude	5,000 m (16,400 ft)

Wireless

Wireless standards	• IEEE 802.11 a/n/ac/ax simultaneous tri-band • 802.11k/v/r roaming support
Max. data rate	• 2.4 GHz: Up to 600 Mbps • 5 GHz-1: Up to 4800 Mbps • 5 GHz-2: Up to 1200 Mbps
Wireless security	WPA/WPA2-Personal, WPA/WPA2-Enterprise, WPA2/WPA3-Personal, WPA3-Personal/Enterprise, Wi-Fi Enhanced Open (OWE), Wi-Fi Protected Setup (WPS) 2.0
Other wireless functions	Smart Connect for automatic band steering, independent Wi-Fi schedule ON/OFF, guest network

Features

Operation modes	
DHCP	Server/client mode, client list, MAC address reservation
Port forwarding	DMZ, UPnP, VPN pass-through (PPTP, IPSec, L2TP, SIP)
Parental control	Per-device configurable internet schedule, allow/block list, DNS-based web filter with built-in database, YouTube, Google, and Bing search integration, supports Google Safe Browsing
Traffic control	• Per-device custom speed, traffic monitoring, per-application limits, and advanced usage reporting • Application Layer (Layer 7) monitoring and management
Network tools	Ping, Traceroute, WoL over Synology QuickConnect integration
Security	• Denial of service (DoS) protection and IP auto block mechanism • SSL certificates with Let's Encrypt integration • Synology Security Advisor • Two-factor authentication
Network separation	Max. number of VLANs: 5
VPN clients	PPTP, OpenVPN™, L2TP over IPSec
IPv6 support	IPv6 DHCP server / client, DS-Lite, 6in4, 6to4, 6rd, Dual-Stack, DHCPv6-PD, IPv6 Relay, FLET's IPv6
Backup solutions	Back up & restore SRM configuration, Time Machine support (with attached USB storage device)
Notifications	Email, SMS, push service (via DS router)
File service	SMB, AFP, FTP/FTPS, WebDAV
FTP server	Bandwidth control for TCP connections, custom FTP passive port range, anonymous FTP, FTP SSL/TLS and SFTP protocols, transfer logs
iOS/Android™ applications	DS router, VPN Plus, DS cloud, DS file, DS get (Android™)
Anywhere access	Synology QuickConnect, Dynamic DNS (DDNS)
Printer support	• Max. number of printers: 1 • Printing protocols: LPR, CIFS, IPP
Advanced functions	Smart WAN — Dual WAN load balancing and failover, policy route, static route, network address translation (NAT), SNMP, SSH, LAN/WLAN IGMP snooping, PPPoE relay
Supported browsers	Google Chrome®, Firefox®, Microsoft Edge®, Safari® 13 and later, and Safari (iOS 13.0 and later) on iPad, Chrome (Android™ 11.0 and later) on tablets
Interface languages	English, Deutsch, Français, Italiano, Español, Dansk, Norsk, Svensk, Nederlands, Русский, Polski, Magyar, Português do Brasil, Português Europeu, Türkçe, Český, ภาษาไทย, 日本語, 한국어, 繁體中文, 简体中文

Add-on Packages

VPN Plus Server[4]	Turn your Synology Router into a powerful VPN server. VPN Plus Server allows secure VPN access through web browsers and clients, with support for various VPN services — WebVPN, Synology SSL VPN, SSTP, OpenVPN, L2TP over IPSec, and PPTP. Multiple management tools are available to network administrators to regulate and monitor VPN traffic
Threat Prevention	Greatly enhance the security of your router with IDS and IPS systems, designed to safeguard your network against internet threats
Cloud Station Server	Sync data from multiple platforms, centralizing it on the router while easily keeping historical versions of important files
RADIUS Server	Provides centralized authentication, authorization, and accounting for wireless network access
DNS Server	An address server for your local network
Download Station	• Supported download protocols: BT/HTTP/FTP/NZB/eMule • Max. number of concurrent download tasks: 50
Media Server	Stream multimedia directly from your router

Certifications and Packaging

Certification	Wi-Fi Certified, CE, UKCA, TELEC, VCCI, iDA, BSMI, JATE, FCC, NCC, RCM
Environmental safety	RoHS Compliant
Package content	• RT6600ax main unit • AC power adapter • RJ-45 LAN cable • Quick Installation Guide
Warranty[5]	2 years

Note: Model specifications are subject to change without notice. Please refer to **www.synology.com** for the latest information.

1. Performance figures are obtained through internal testing by Synology. Actual performance may vary depending on the testing environment, usage, and configuration.
2. Dependent on local wireless regulations.
3. Each network can be matched with one Smart Connect SSID. With Smart Connect turned off, up to 3 SSIDs (one per radio) can be created for each network for a maximum of 15 (3 SSIDs x 5 networks).
4. VPN Plus can be activated for free from within SRM.
5. The warranty period starts from the date of purchase as stated on your receipt. **Learn more** about our limited product warranty policy.