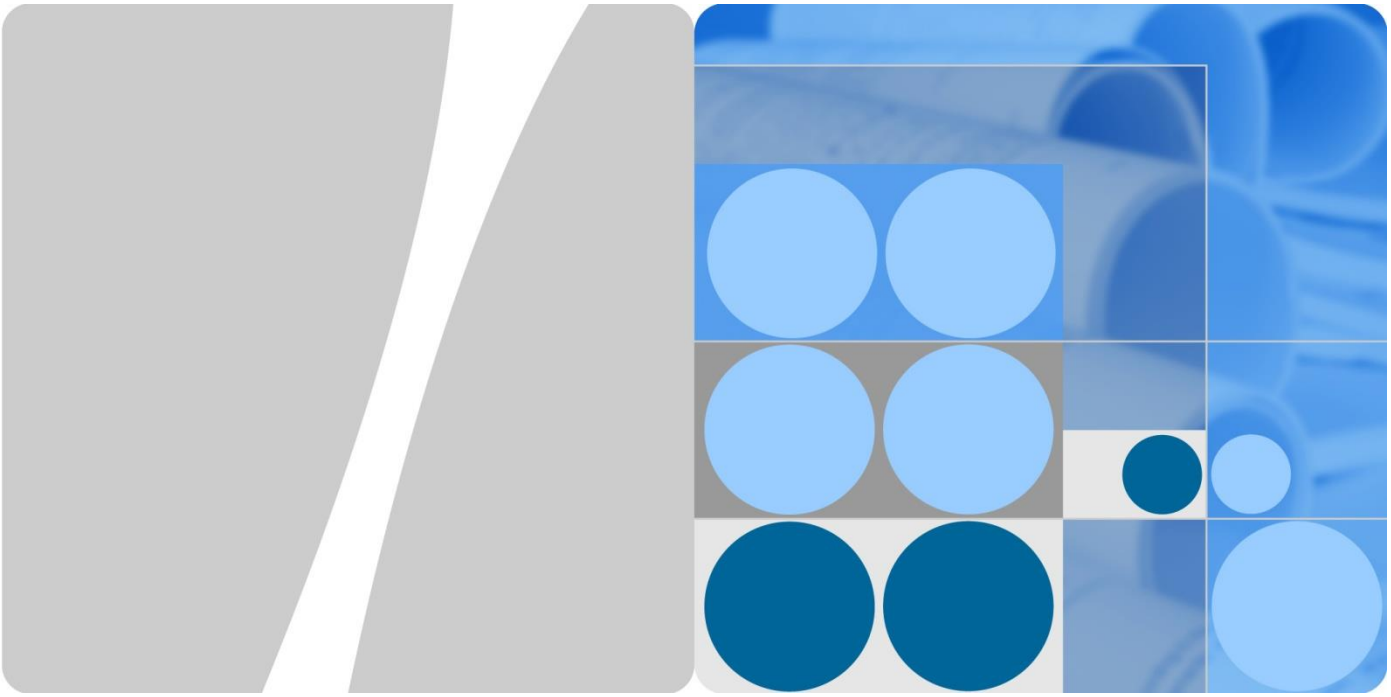
Part Number: XXXXXX



HUAWEI WiFi AX3S
Product Description

Issue	Draft
Date	2023-5-30

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HUAWEI

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1 Overview

1.1 Introduction

Figure 1-1 Appearance

NOTE

Images are provided for reference only. The actual product may vary.

1.2 Button/Ports

Figure 1-2 Button/Ports

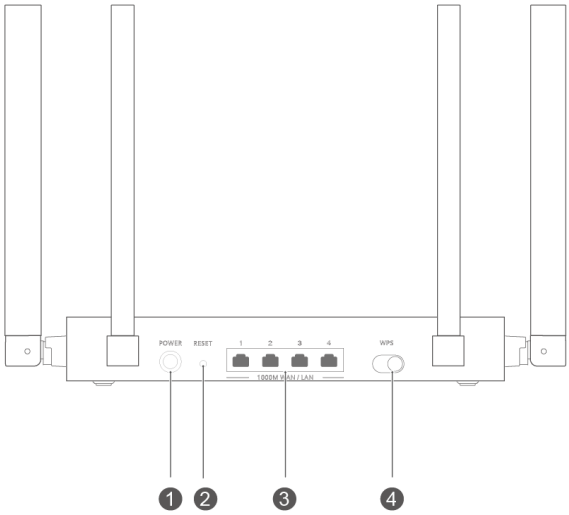


Table 1-1 Buttons and ports

No.	Button/Port	Description
1	Power port	Connect the power adapter to this port.
2	RESET hole	When the router is powered on, you can use a pointed object to press and hold the RESET hole for more than two seconds until the indicator turns off. The router should now be restored to factory settings.
3	WAN/LAN auto-adaptation port	Connect to the Internet (such as a broadband modem or an optical modem) and network devices such as a computer or TV box. Supports WAN/LAN auto-adaptation. Connect the drop network cable to any one of the ports to access the Internet.
4	WPS button	The indicator will flash when the router discovers a device that supports HarmonyOS Mesh+. You can press the WPS button to connect the device to the router's Wi-Fi. By pressing the WPS button, you can also enable WPS to connect a WPS device to the router. **NOTE** *Devices that support HarmonyOS Mesh+ include: HUAWEI routers, etc.*

1.3 Indicator

Figure 1-3 Indicator

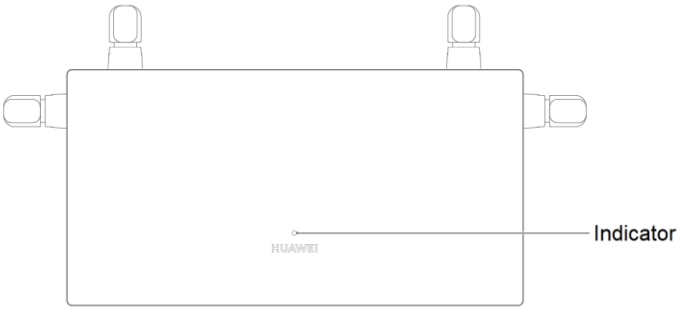
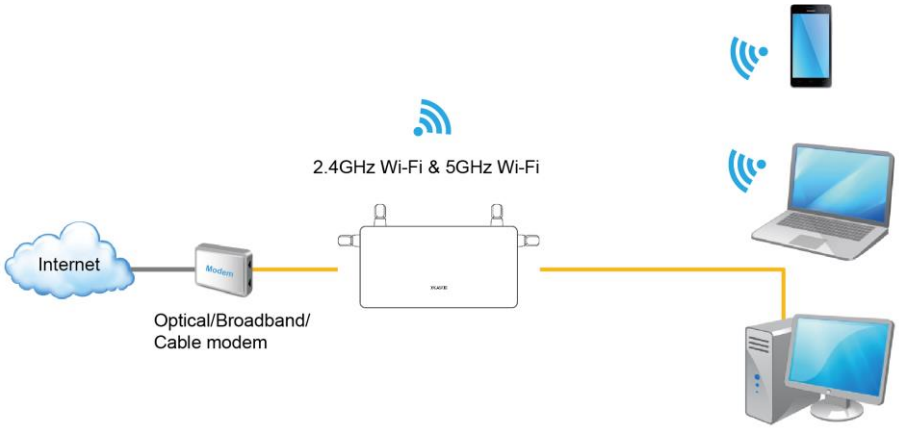


Table 1-2 Indicator and ports

Router Status	Indicator Status	Description
Powering on	Steady red	The router is starting up.
Connecting to the Internet	Steady green	The router is connected to the Internet.
	Steady red	The router is not connected to the Internet.
Connecting through HarmonyOS Mesh+ or WPS	Slowly flashing	The router has discovered a device that supports HarmonyOS Mesh+.
	Quickly flashing	The router is pairing with the device that supports HarmonyOS Mesh+ or WPS.
	Quickly flashing and turning to steady green or red	HarmonyOS Mesh+ or WPS pairing is successful. Steady green: the router is connected to the Internet. Steady red: the router is not connected to the Internet.
	Slowly flashing	HarmonyOS Mesh+ or WPS pairing failed. The router rediscovered the device.
Upgrade in progress	Quickly flashing green	The router is being updated.

1.4 Network Architecture

Figure 1-4 Network architecture



NOTE

Optical fiber (or telephone line/Ethernet cable)

Ethernet cable

2 Functions and Features

2.1 Automatically identifying Internet access mode

The router can automatically identify your Internet access mode (PPPoE/DHCP). No manual operation is required.

NOTE

PPPoE, DHCP, static IP, and bridge are the most commonly used Internet access modes and are all supported by HUAWEI WiFi AX3S.

2.2 Multi-router network distribution

- Supports network expansion by connecting multiple HarmonyOS Mesh+ routers using the WPS button.
- Supports network expansion by connecting multiple HarmonyOS Mesh+ routers using Ethernet cables.
- Supports the auto-sync of your router's Wi-Fi configurations: If the Wi-Fi name, password, or router management password is changed on your primary router, the configuration will automatically sync to the others HarmonyOS Mesh+ routers.
- If there are multiple routers in your home, your Wi-Fi device will be automatically switched to a better-performing router.

2.3 Connecting to your old router (through wired bridge or wireless repeater mode) to form a network

- You can use an Ethernet cable to cascade HUAWEI WiFi AX3S to an old router and form a network. In this case, HUAWEI WiFi AX3S works as the secondary router.
- HUAWEI WiFi AX3S can also connect to your old router's Wi-Fi as a wireless repeater. When it functions as a wireless repeater, it has the same Wi-Fi name and password as your old router. There will be only one Wi-Fi network in your home.

NOTE

If you have two HUAWEI routers that support HarmonyOS Mesh+*, using* HarmonyOS Mesh+ *to connect the two routers will be more convenient.*

2.4 Ensuring privacy with multiple security mechanisms

- HUAWEI WiFi AX3S controls Wi-Fi access and disconnects unwanted devices to prevent unauthorized access.
- It supports guest Wi-Fi. You can set up a dedicated Wi-Fi network for your guests. Guests have access to the guest Wi-Fi but cannot manage the router or access other devices on the home network. This allows you to protect the security and privacy of your home network.
- You can hide your Wi-Fi name to improve network security. If a Wi-Fi name is hidden, wireless devices (like PCs and mobile phones) cannot search for the Wi-Fi name. To connect a wireless device to a hidden Wi-Fi network, you must enter the correct Wi-Fi name.
- The built-in firewall can protect you from DoS/ARP attacks by scanning all data communication between the Internet and your home network.
- It supports DMZ feature that allows you to expose the DMZ host to the Internet, while other devices are protected by the firewall. For example, when setting up a server, you can set the computer connected to the external network as the DMZ host to allow it to provide Internet services while ensuring the security of other devices on your home network.

2.5 Power-saving features

- The router supports three different power modes: Max, Middle, and Low to cater to your different needs at different time of the day and in different environments.
- Wi-Fi timer allows you to disable Wi-Fi during specific time periods (such as after midnight or when you're at work) in order to reduce power consumption.

2.6 Parental control

The parental control feature allows you to set Internet access time limits and restrict access to certain websites to keep your family members (especially minors) protected.

2.7 Router management

You can access your router's web-based management page from your computer, mobile phone or tablet. Alternatively, you can download and install HUAWEI AI Life on your mobile phone or tablet for faster configuration.

2.8 Supporting VPN passthrough

Supports VPN pass through (requires VPN dialing from LAN device).

2.9 WPS

Supports the Wi-Fi device connect to the router network conveniently through the WPS function.

NOTE

This feature is available on Wi-Fi devices that support WPS.

2.10 Other supported features

- NAT and NAPT (RFC 1631, RFC 2663, RFC 2766, and RFC 3022)
- Supports access to the Ipv6 network.
- DHCP server and clients
- DNS proxy

  Proxy for DNS queries from its connected devices to speed up DNS responses.
- Universal Plug and Play (UPnP)

  Computers in the LAN can request the router to automatically switch the port. This allows computers connected to the Internet to access the resources on any LAN computers when needed, allowing you to enjoy a more stable network while playing computer games or using apps to download files.

3 Technical Specifications

3.1 Product Specifications

3.1.1 RAM and Flash Memory

- RAM: 256Mbytes DDR3
- Flash memory: 128MB Nand FLASH

3.1.2 Wi-Fi

- Supports 802.11b/g/n/ax (2.4 GHz, wireless rates up to 574 Mbps).
- Supports 802.11a/n/ac/ax (5 GHz, wireless rates up to 2402 Mbps).
- Supports simultaneous dual-band (11ax 2.4 GHz 574 Mbps and 11ax 5 GHz 2402 Mbps Wi-Fi, wireless rates up to 2976 Mbps).

  NOTE

  The data rates shown are theoretical in nature. Actual data rates may vary depending on operating environment, wireless device, and other factors. Data rate comparisons (if any) are for the purpose of scientific explanation, and should be used for reference only.
- Adopts Huawei's unique external 2.4 GHz and 5 GHz High Gain antennas for better Wi-Fi coverage.
- Supports simultaneous Wi-Fi access on the 2.4 GHz and 5 GHz bands, and supports up to 128 devices on dual bands.
- Supports AES and TKIP encryption.
- Supports WPA/WPA2-PSK and WPA2-PSK/WPA3-SAE.
- Supports 5 GHz Wi-Fi prioritization. Your devices that support 802.11v will automatically connect to the faster Wi-Fi.
- Supported 5 GHz channels: channels 36–64, 100-144 and 149–165 in Brazil using the ANATEL standards.

  NOTE

- *Relationship between 5 GHz channels and frequency bands: Channels 36–48 correspond to band 1 (5.15–5.25 GHz). Channels 52–64 correspond to band 2 (5.25–5.35 GHz) DFS. Channels 100–144 corresponds to band 3 (5.47–5.730 GHz) DFS. Channels 149–165 correspond to band 4 (5.725–5.85 GHz).*

3.2 Ports

10/100/1000 Mbit/s WAN/LAN auto-adaptation Ethernet port: 4

3.3 Power Supply Specification

- Power supply: 12V DC, 1 A
- Power consumption: < 12W
- Input voltage: 100 - 240V AC
- Input voltage frequency: 50 – 60 Hz

3.4 Physical Specifications

- **Dimensions (Height x Width x Depth):**
  The product with folded external antennas: 40.3 mm x 258.6 mm x 203.3 mm
  The product with vertical external antennas: 173.5 x 258.6 mm x 133.3 mm
  The packaging of ANATEL version: 46 x 273 mm x 220 mm
- **Weight:**
  The product without packaging: about 321g
  The ANATEL version weight: about 611g
- Operating temperature: 0°C to 40°C (32°F to 104°F)
- Storage temperature: -40°C to +70°C (-40°F to +158°F)
- Operating humidity: 5% to 95% RH (non-condensing)
- Storage humidity: 5% to 95%, non-condensing

3.5 Accessories

- Power adapter x 1
- Network cable x 1
- Quick Start Guide and Safety Information x 1

3.6 Name Mapping

Certified Model	PSDN-AX30
Product Marketing Name	HUAWEI WiFi AX3S

4 Abbreviations

Table 4-1 Abbreviations

Abbreviation	Formal Name
AC	Alternating current
AES	Advanced Encryption Standard
ARP	Address Resolution Protocol
CPU	Central processing unit
CHAP	Challenge Handshake Authentication Protocol
DC	Direct current
DDNS	Dynamic Domain Name Server
DDR	Double Data Rate
DHCP	Dynamic Host Configuration Protocol
DMZ	Demilitarized Zone
DNS	Domain Name System
DoS	Denial of Service
IP	Internet Protocol
LAN	Local Area Network
L2TP	Layer 2 Tunneling Protocol
MAC	Media Access Control
NAT	Network Address Translation
NAPT	Network Address and Port Translation
PAP	Password Authentication Protocol
PPPoE	Point to Point Protocol over Ethernet
PPTP	Point to Point Tunneling Protocol

Abbreviation	Formal Name
PSK	Pre-Shared key
QoS	Quality of Service
TKIP	Temporal Key Integrity Protocol
UPnP	Universal Plug and Play
VPN	Virtual Private Network
WAN	Wide Area Network
WPA	Wireless Fidelity Protected Access