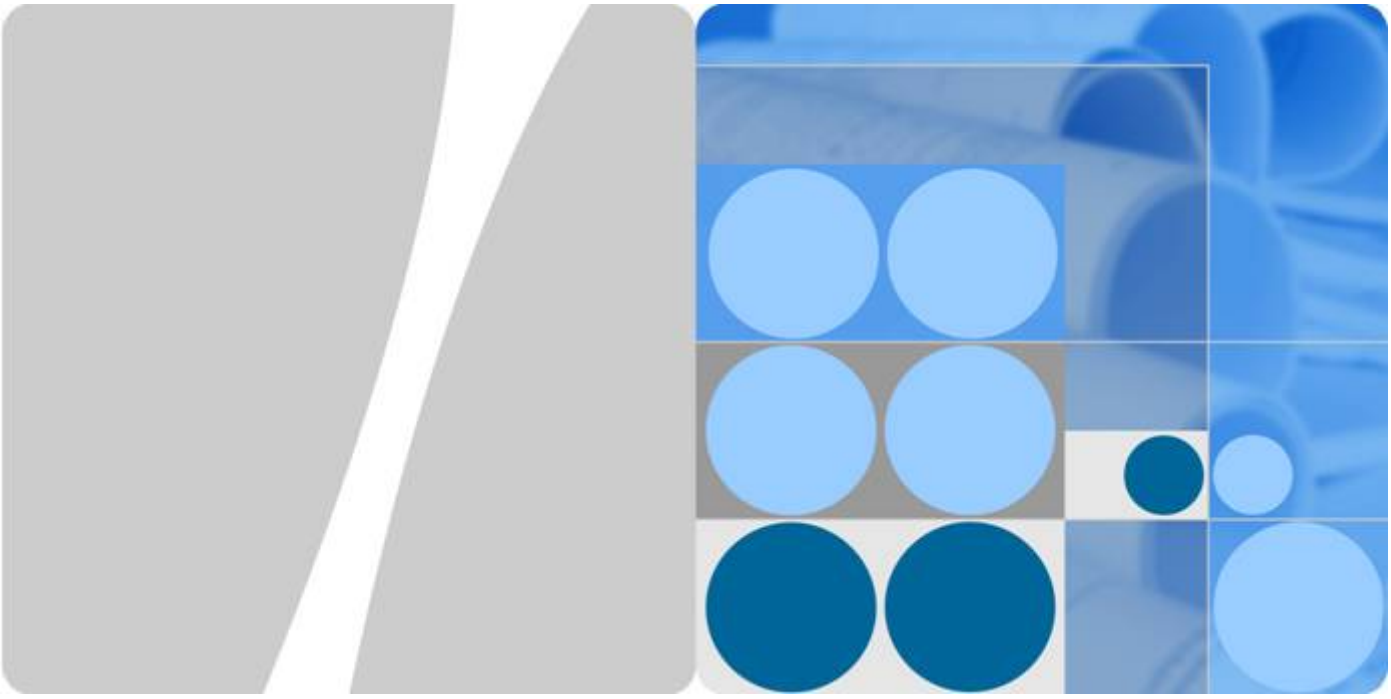

Huawei AR120&AR150&AR160&AR200&AR500&AR510&AR1200&AR2200&AR3200&AR3600 Series Enterprise Routers

V200R007

Product Description

Issue 05

Date 2016-06-15

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About This Document

Intended Audience

This document helps you understand the characteristics and features of the AR.

This document is intended for:

- Network planning engineers
- Hardware installation engineers
- Commissioning engineer
- Data configuration engineers
- On-site maintenance engineers
- Network monitoring engineers
- System maintenance engineers

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.

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Symbol	Description
NOTE	Calls attention to important information, best practices and tips. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Security Conventions

- Password setting
  - When configuring a password, the cipher text is recommended. To ensure device security, change the password periodically.
  - When you configure a password in plain text that starts and ends with %@%@, @%@%, %#%#, or %^%# (the password can be decrypted by the device), the password is displayed in the same manner as the configured one in the configuration file. Do not use this setting.
  - When you configure a password in cipher text, different features cannot use the same cipher-text password. For example, the cipher-text password set for the AAA feature cannot be used for other features.
- Encryption algorithm

  Currently, the device uses the following encryption algorithms: 3DES, AES, RSA, SHA1, SHA2, and MD5. 3DES, RSA and AES are reversible, while SHA1, SHA2, and MD5 are irreversible. The encryption algorithms DES/3DES/RSA (RSA-1024 or lower)/MD5 (in digital signature scenarios and password encryption)/SHA1 (in digital signature scenarios) have a low security, which may bring security risks. If protocols allowed, using more secure encryption algorithms, such as AES/RSA (RSA-2048 or higher)/SHA2/HMAC-SHA2, is recommended. The encryption algorithm depends on actual networking. The irreversible encryption algorithm must be used for the administrator password, SHA2 is recommended.
- Personal data

  Some personal data may be obtained or used during operation or fault location of your purchased products, services, features, so you have an obligation to make privacy policies and take measures according to the applicable law of the country to protect personal data.
- The terms mirrored port, port mirroring, traffic mirroring, and mirroing in this manual are mentioned only to describe the product's function of communication error or failure detection, and do not involve collection or processing of any personal information or communication data of users.

Mappings Between Product Software Versions and NMS Versions

The mappings between product software versions and NMS versions are as follows.

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AR120&AR150&AR160&AR200&AR500&AR510&AR1200&AR2200&AR3200&AR3600 Product Software Version	eSight	iManager U2000
V200R007C00&V200R007C01&V200R007C02	V300R005C00	V200R015C60

Change History

Changes between document issues are cumulative. Therefore, the latest document version contains all updates made to previous versions.

Changes in Issue 05 (2016-06-15)

This version has the following updates:

The following information is modified:

- **3.1 Feature List**
- **4 Appearance**

Changes in Issue 04 (2016-04-25)

This version has the following updates:

The following information is modified:

- **3.1 Feature List**

Changes in Issue 03 (2016-02-05)

This version has the following updates:

The following information is modified:

- **2.6 OSP Application**
- **4 Appearance**

Changes in Issue 02 (2015-11-13)

This version has the following updates:

The following information is modified:

- **3.1 Feature List**

Changes in Issue 01 (2015-08-30)

Initial commercial release.

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1 Product Positioning and Characteristics

About This Chapter

1.1 Product Positioning

1.2 Product Characteristics

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1.1 Product Positioning

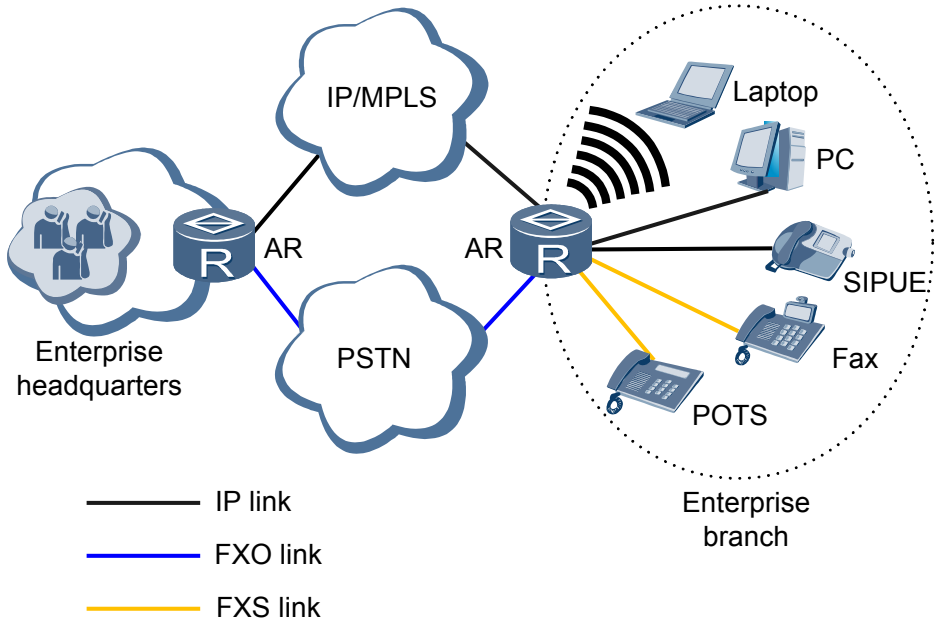
NOTICE

AR Series Enterprise Routers are class A products. Customers should take preventative measures as the operating devices may cause radio interference.

AR series enterprise routers (ARs) include AR120, AR150, AR160, AR200, AR500, AR510, AR1200, AR2200, AR3200, and AR3600. They are the next-generation routing and gateway devices, which provide the routing, switching, wireless, voice, and security functions.

As shown in **Figure 1-1**, the ARs are located between an enterprise network and a public network, functioning as the only ingress and egress for data transmitted between the two networks. The deployment of various network services over the ARs reduces operation & maintenance (O&M) costs as well as those associated with establishing an enterprise network. You can select ARs of different specifications as egress gateways based on the user quantity of an enterprise.

Figure 1-1 ARs on the network



1.2 Product Characteristics

The ARs use leading hardware platforms and software architectures. The ARs provide integrated network solutions to enterprise customers with minimum investment costs; therefore, they can meet the many facets of future business expansion and IT industry developments.

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1.2.1 Carrier-Class Reliability

- The boards are hot swappable and guarantee carrier-class reliability.
- The ARs are designed to provide quality service and comply with telecommunication standards.
- The ARs protect networks against attacks.
- The ARs support in-service patching so that the system software can be upgraded during system operation.
- The AR2240, AR2240C, AR3670, and AR3260 support redundant power supply units. If one power supply unit is faulty, the AR2240 and AR3260 will still be able to operate.
- The AR3260 provides dual SRUs in redundancy mode. When a fault occurs on the control, forwarding, or switching plane, services can be smoothly switched to the standby SRU.

1.2.2 Service Integration Capability

The AR series routers integrate various services of routers, switches, and wireless devices, including voice, firewall, WLAN, 3G/LTE, and VPN.

1.2.3 Hardware Extensibility

The ARs provide the highest port density in the industry and flexible slot combination, allowing enterprise customers to connect to LAN, WAN, or wireless networks. The ARs provide the most economical enterprise network solutions.

The ARs support flexible slot combination. For example, two SIC slots can be combined into a wide SIC (WSIC) slot, two SIC slots and one WSIC slot below can be combined into one XSIC slot by removing guide rails, and two multiple-function slots (MFSs) can be combined into an SRU slots by removing the guide rail between them.

NOTE

- AR120&AR150&160&200 series, AR510 series, AR2201-48FE and AR2202-48FE do not support subcards.
- The WSIC card can be installed in the WSIC or XSIC slot.

1.2.4 Remote Maintenance Capability

In addition to one-stop deployment, plug and play capability, and remote commissioning functions, the ARs manage the customer premises equipment (CPE) remotely. The remote maintenance function improves efficiency and greatly reduces maintenance costs.

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2 Network Applications

About This Chapter

2.1 WAN Access
2.2 VPN Access
2.3 Application of Enterprise Intranet Security
2.4 Voice Application
2.5 FTTx
2.6 OSP Application
2.7 Intelligent Bus Application

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2.1 WAN Access

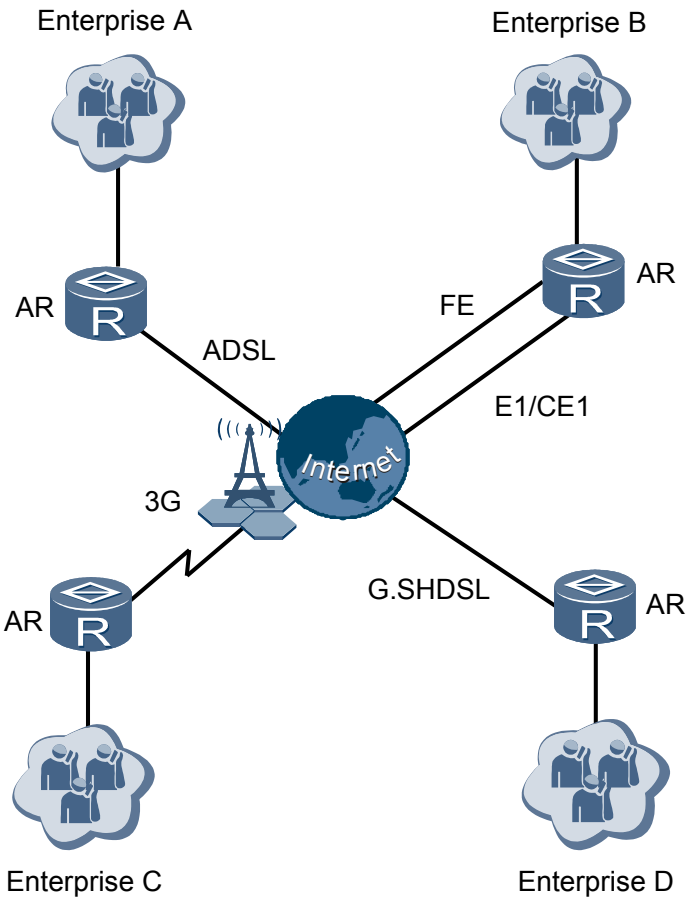
Depending on the network environment provided by carriers, users can access the network by using interfaces including FE/GE/10GE interfaces, synchronous/asynchronous serial interface, Async interface, CE1/CT1 PRI interfaces, E1-F interfaces, T1-F interfaces, 3G/LTE cellular interfaces, Integrated Services Digital Network BRI interfaces, PoS interfaces, CPoS interfaces, ADSL interfaces, VDSL interfaces, G.SHDSL interfaces, E1-IMA interfaces, CE3 interfaces, E&M interfaces, and xPON interfaces. The AR provides dual uplinks to implement interface backup and ensure service reliability.

NOTE

WAN interfaces depend on the device model and the boards installed.

As shown in **Figure 2-1**, enterprise A accesses the Internet using ADSL; enterprise B accesses the Internet using FE and E1/CE1 dual-uplink (E1/CE1 link functions as the backup link of the FE link); enterprise C accesses the Internet using G.SHDSL; enterprise D accesses the Internet using 3G. This setting achieves WAN interconnection.

Figure 2-1 WAN access



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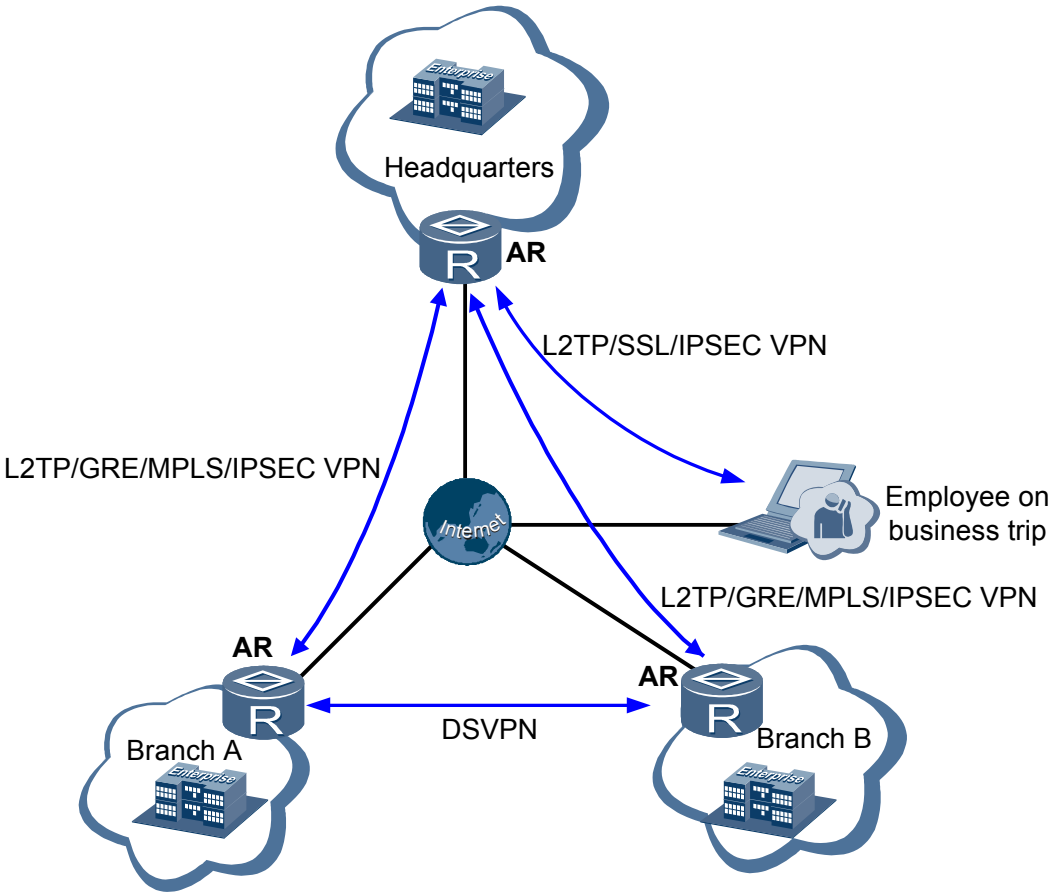
2.2 VPN Access

The headquarters and branches use the ARs to connect to the Internet, establish a VPN, and use VPN tunnels to secure data.

As shown in **Figure 2-2**, the headquarters is connected to the Internet through the AR2200&AR3200&AR3600. LANs of branches connect to the Internet through the AR150&160&200&1200&2200. The headquarters and branches use L2TP/GRE/MPLS/IPSec VPN tunnels, and the headquarters and traveling employees use L2TP/SSL/IPSec VPN tunnels to secure data. After branches and headquarters establish VPN tunnels, branches can communicate with each other through the headquarters. You can also deploy DSVPN to dynamically establish tunnels between branches. This method improves forwarding performance and efficiency, and reduces resource usage of the headquarters.

Figure 2-2 VPN access



2.3 Application of Enterprise Intranet Security

The AR located between the enterprise intranet and external networks, ensures information security on the entire intranet and intranet LANs.

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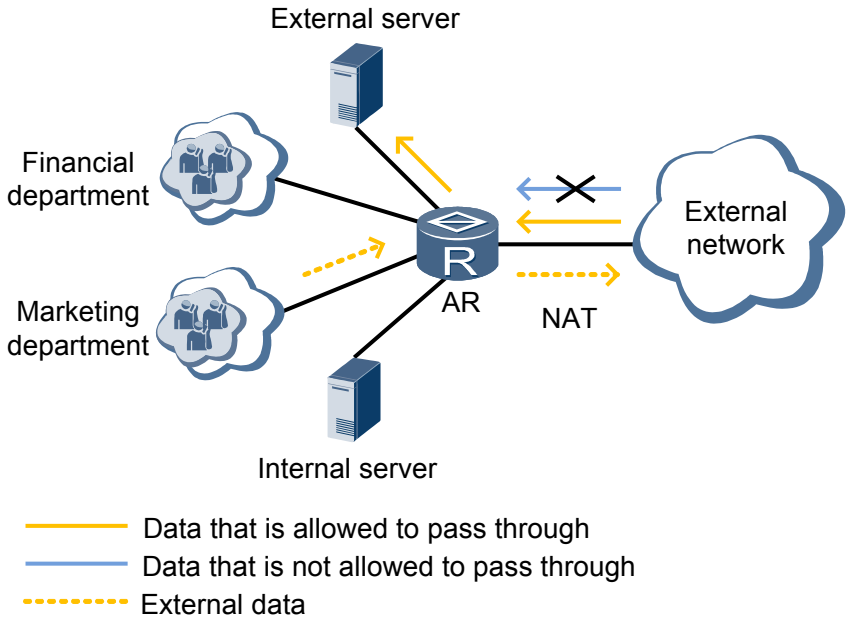
As shown in **Figure 2-3**, the enterprise intranet is connected to the external network through the AR. The AR can prevent external users from accessing the enterprise intranet. For example, external users can access the enterprise external server but cannot access the enterprise internal server. The financial department and marketing department have individual LANs on the intranet. To allow the users on the intranet to access the external network, configure network address translation (NAT) on the intranet.

The AR ensures information security on the enterprise intranet in the following modes:

- Enabling packet filtering or stateful firewall on the AR to isolate the enterprise intranet from external networks. This prevents unauthorized external users from accessing the intranet.
- The AR provides network access control (NAC) to restrict the access permissions of internal users. This ensures that only authorized users can access the intranet.
- IPS and URL filtering defend against attacks, provide secure environments for enterprise networks, and accurately manage network resources.
- IPS defends against attacks, provides secure environments for enterprise networks, and accurately manages network resources.

Figure 2-3 Application of enterprise intranet security



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2.4 Voice Application

NOTE

- Among the AR150 series routers, only the AR157VWs and AR158EVWs support the voice features. Among the AR160 series routers, only the AR169FVWs and AR169FGVW-Ls support the voice features. Among the AR200 series routers, only the AR201VW-Ps, AR207Vs, AR207VWs, and AR207V-Ps support the voice features. Among the AR1200 series routers, only the AR1220V, AR1220VW, AR1220EV and AR1220EVW support the voice features. Among the AR2200 series routers, only the AR2204s, AR2220s, AR2240Cs andAR2240s support the voice features. AR3200 series routers support the voice features. To use the voice feature on the AR2200 and AR3200 series routers, you must install the DSP module.
- To provide voice services for POTS users on the AR1200, AR2200, and AR3200 series routers, 4FXS1FXO, 16FXS or 32FXS card is required. The AR1200 series routers do not support 32FXS board.
- To provide voice services for ISDN users on the AR1200, AR2200, and AR3200 series routers, 2BST card is required.

An enterprise can build a voice communication system over the IP network, reducing operating expenses (OPEX).

Within the voice communication system, an AR can function as an IP PBX or SIP access gateway (AG). The AR connects to POTS users (analog phones or fax machines) and SIP user equipment (UE) users (IP phones or PC software terminals) through FXS or Ethernet interfaces. The AR connects to the PSTN through FXO or E1 interfaces or to the IP network through Ethernet interfaces.

Based on branch locations, the centralized or distributed call control model can be used. If all branches within an enterprise use the same number segment, the centralized call control model is recommended. If an enterprise has many branches that use different number segments, the distributed call control model is recommended.

As shown in **Figure 2-4**, the enterprise headquarters and branch A use different number segments. The ARs working in IP PBX mode are deployed at the enterprise headquarters and branch A as egress routers. Voice users in the enterprise headquarters are registered with the AR in the enterprise headquarters, and voice users in each branch are registered with the AR in the branch. Voice traffic is transmitted between the enterprise headquarters and branches over voice routes. The AR of the enterprise headquarters provides voice routes to branches so that users in different branches can call each other.

Branch B and the enterprise headquarters are connected through the MAN. An AR working in IP PBX mode is deployed at the enterprise headquarters and an AR working in SIP AG mode is deployed at branch B. All voice users at the enterprise headquarters and branches are registered with the AR at the enterprise headquarters. The AR in the enterprise headquarters provides call control services for all users in the enterprise.

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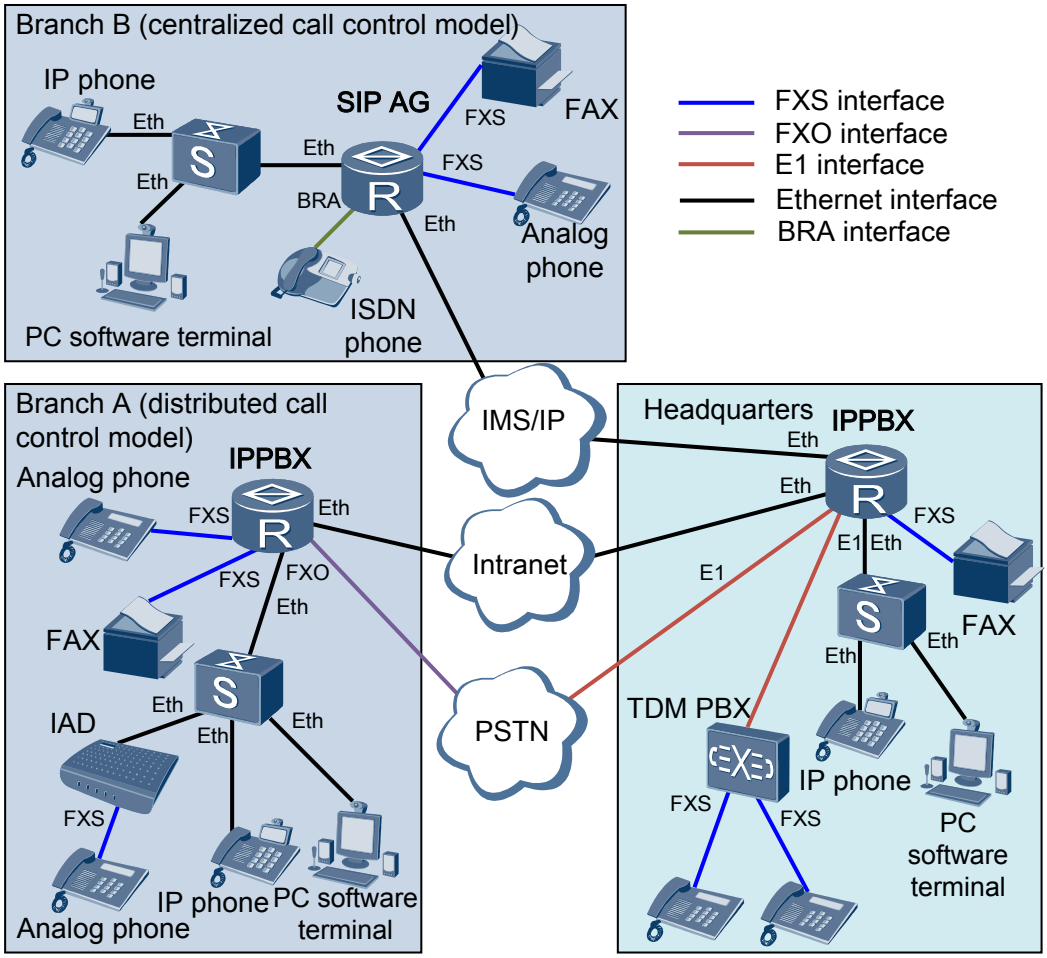
Figure 2-4 Voice application



2.5 FTTx

By working with the optical line terminal (OLT), the ARs function as optical network unit (ONU) to provide fiber access to the enterprise. As shown in **Figure 2-5**, the ARs are connected to upstream devices through a passive optical network (PON), and provide fiber-to-the-home, fiber-to-the-building, and fiber-to-the-enterprise services.

The ARs provide the fiber-to-the-x (FTTx) service by connecting to upstream PON devices. This provides higher bandwidth than twisted-pair cable and guarantees the development of future high-speed services.

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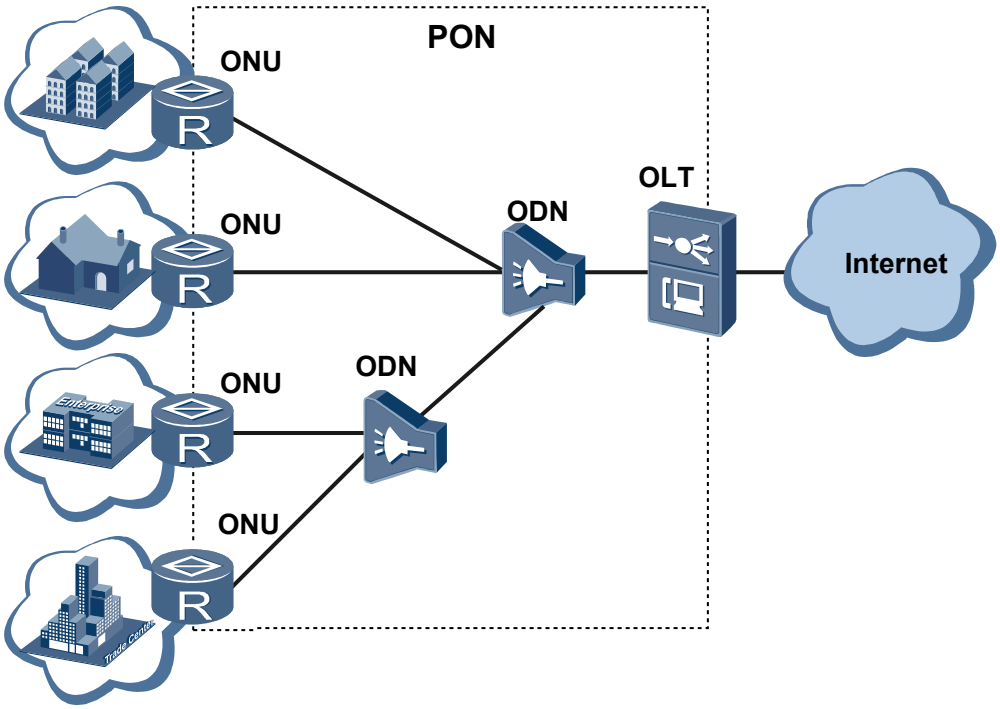
Figure 2-5 FTTx



2.6 OSP Application

The AR router provides the open service platform (OSP) and unified hardware and software interfaces, which makes it easy for users to develop services. The OSP allows different vendors' software to be integrated. Customized services can be directly installed on the AR OSP, which saves fees for purchasing servers. In addition, service are uniformly managed by the OSP.

As shown in **Figure 2-6**, the OSP is installed on the SAE board. Similar to an x86 server, the SAE board has independent CPU, hard disk, and memory, and provides external USB interface, Ethernet interfaces, console interfaces, and VGA interfaces. After the SAE board is installed, the router provides power for the board, manages the board, and implements data communication. After installing VMware, Linux or Windows on the SAE board, you can develop or install third-party software applications.

On the AR161FW-P-M5, the OSP is installed in the OSP card, as shown in **Figure 2-8**. The OSP card is integrated in the AR. It has independent CPU and memory, provides external USB interface, audio interface, HDMI interface, and bluetooth interface, and supports the Android open platform that allows third-party applications to be integrated.

On the AR169-P-M9, AR169W-P-M9 and AR169RW-P-M9, the OSP is installed in the OSP card, as shown in **Figure 2-8**. The OSP card is integrated in the AR. It has independent CPU and memory, provides external USB interface, audio interface, HDMI interface, and bluetooth interface. After installing VMware, Linux or Windows on the OSP card, you can develop or install third-party software applications.

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Figure 2-6 OSP architecture (AR1200&2200&3200)

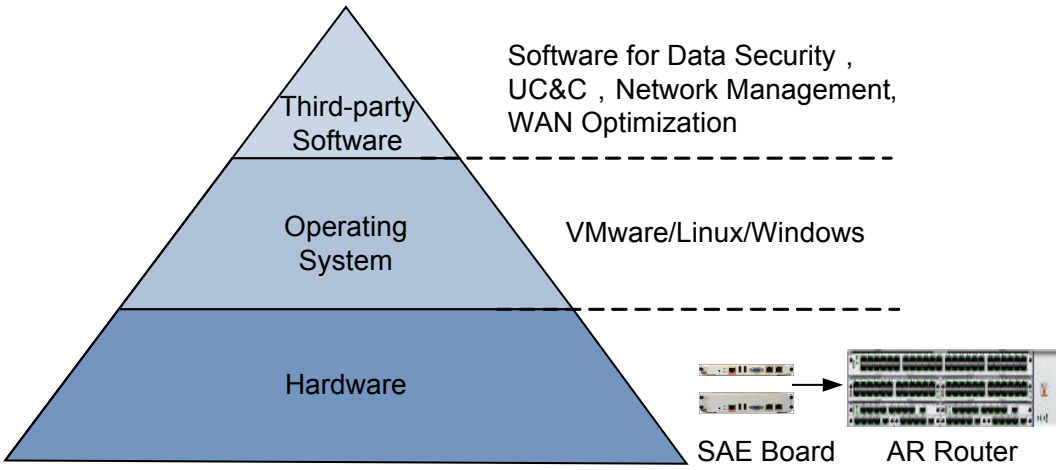


Figure 2-7 OSP architecture (AR161FW-P-M5)

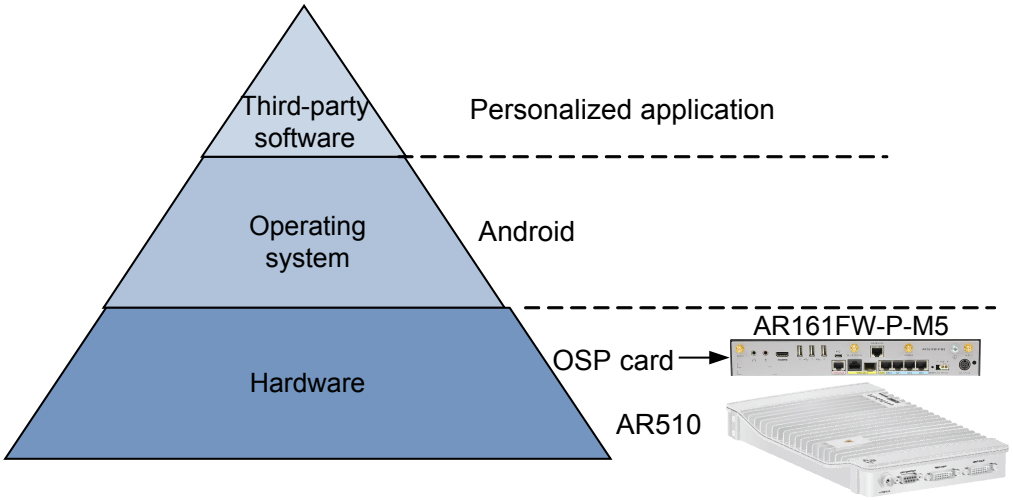
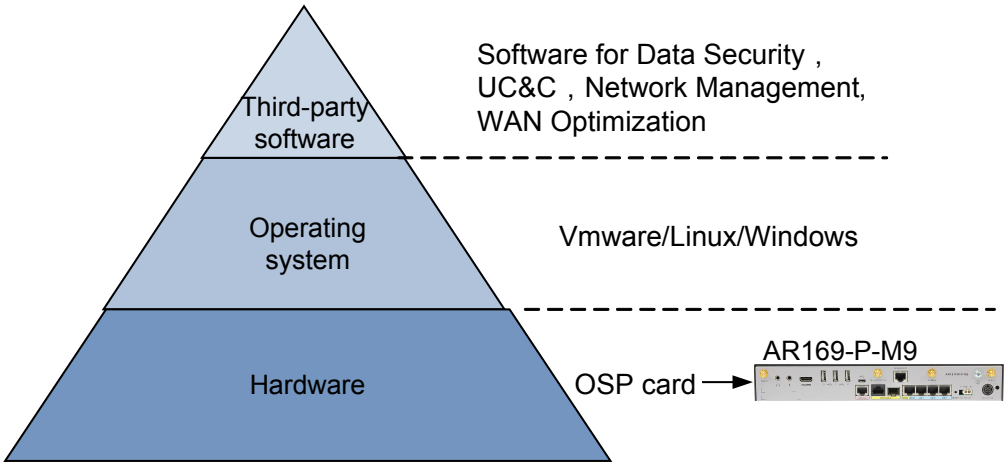


Figure 2-8 OSP architecture (AR169-P-M9&AR169W-P-M9&AR169RW-P-M9)



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NOTE

SAE boards have two modules: SAE220 (WSIC) and SAE550 (XSIC). Different devices can be equipped with SAE boards of different quantities and models.

Table 2-1 Support for SAE boards

Model	SAE220	SAE550
AR150&160&200 series	0	0
AR1200 series	1	0
AR2201-48FE	0	0
AR2202-48FE	0	0
AR2204-27GE	0	0
AR2204-27GE-P	0	0
AR2204-51GE-P	0	0
AR2204E	0	0
AR2204	2	0
AR2220	4	2
AR2220E	4	2
AR2240	4	4
AR2240C	4	4
AR3260	4	6
AR3670	0	0

2.7 Intelligent Bus Application

As shown in **Figure 2-9**, the AR510 series can be deployed in the bus, bus stop, and advertising board. It can connect to the WLAN through 3G/LTE and provide Wi-Fi access. The AR510 provides the following services in the intelligent bus:

- Wi-Fi access charging: provides Wi-Fi access, allows passengers to use mobile terminals to connect to Wi-Fi and performs charging.
- Audio and video service: provides one-channel audio output and audio services by connecting to the station reporter or audio equipment; provides two-channel video output; supports HDMI, YPbPr, and CVBS; provides video services by connecting to the monitor.
- Unified authentication and Portal page pushing: provides Portal authentication for access users, pushes customized media information through the Portal page, and implements uniform access control and accurate advertisement pushing.
- Android open platform: provides the Android open platform that allows third-party applications to be integrated.

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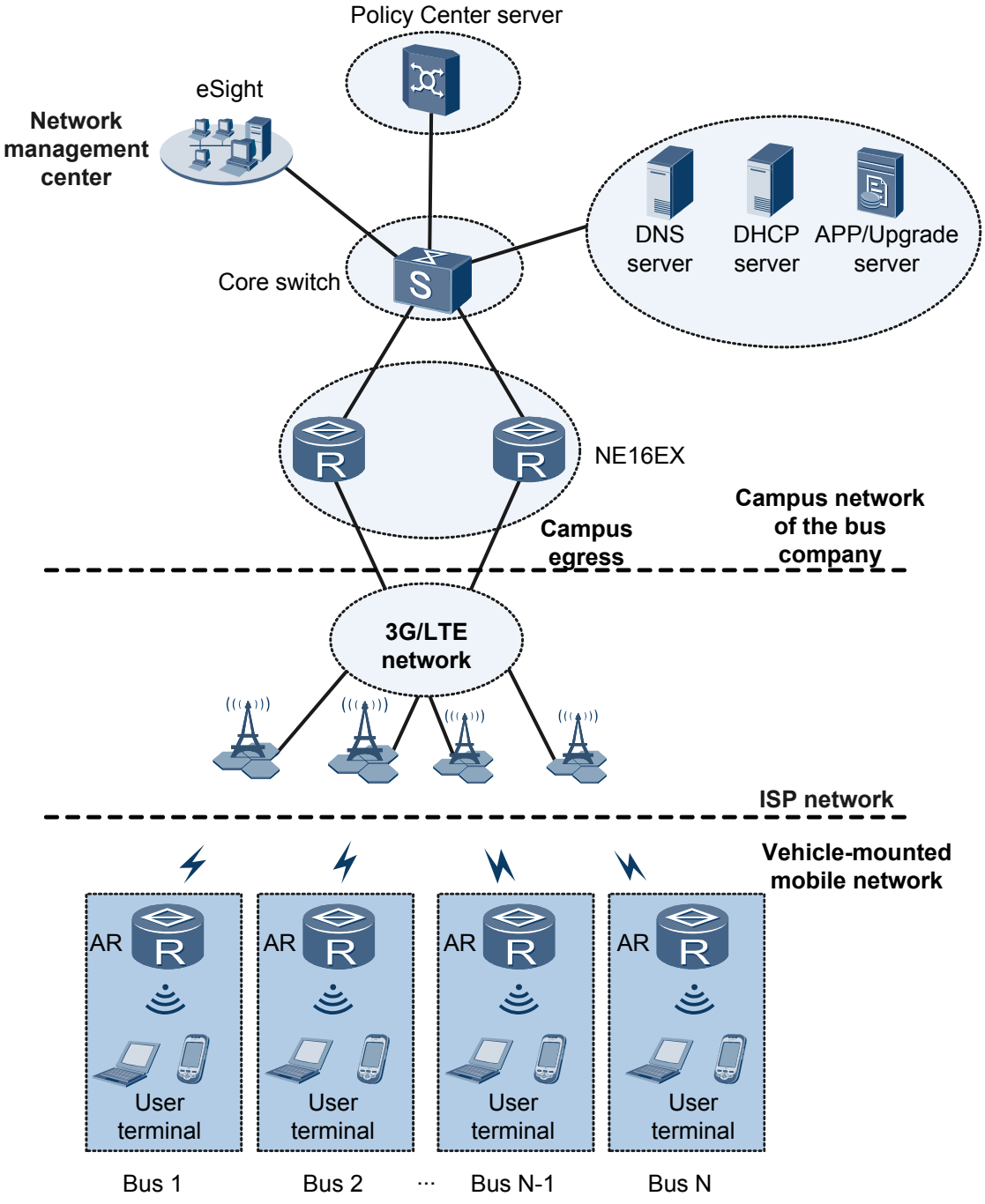
- Simplified deployment and upgrade: supports USB-based deployment. You can insert the USB flash drive into the USB interface on the AR510 and power on the device. After being started, the device automatically upgrades software. The AR510 supports automatic upgrade of the SD card and built-in app.
- Remote management: supports eSight. eSight provides visualized management interface and implements remote management.

Figure 2-9 Intelligent bus application



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3 Product Characteristics

About This Chapter

3.1 Feature List

3.2 Key Features

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3.1 Feature List

Table 3-1 and Table 3-2 list the main features supported by the AR.

Table 3-1 Features supported by the AR120&AR150&AR160&AR200&AR500&AR1200&AR2200&AR3200&AR3600

Feature	Sub-feature	Description	Difference
LAN	VLAN	VLAN services including basic VLAN, super VLAN, MUX VLAN, and voice VLAN; dynamic VLAN learning using Generic Attribute Registration Protocol (GVRP)	Only the AR2220, AR2220E, AR3600 series, AR2240, AR2240C, and AR3200 series support MUX VLAN.The AR169-P-M9, AR169W-P-M9, AR169RW-P-M9 and AR161FW-P-M5 do not support Super VLAN, Voice VLAN, or GVRP.
	MAC	Dynamic MAC address learning and static MAC address configuration; MAC address learning limit, blackhole MAC entries, sticky MAC entries, and anti-MAC flapping	None
	STP	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), and STP security	None
	SEP	Ring network protocol applied to the link layer of an Ethernet network that provides open ring, closed ring, single ring, and multi-ring, and implements link redundancy in these topologies	None
	Link aggregation	Static link aggregation and Link Aggregation Control Protocol (LACP)-based aggregation	None
	LLDP	Neighboring device discovery	None

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Feature	Sub-feature	Description	Difference
	QinQ	QinQ technology expands the VLAN space by encapsulating a packet that carries an 802.1Q tag in another 802.1Q tag.	Only the AR120&AR150&AR160&AR200&AR500 support QinQ.
	WLAN	Wireless access to LANs and AC integration	Only the AR121W, AR129W, AR121GW-L, AR129GW-L, AR151W-P, AR156W, AR157W, AR157VW, AR158EVW, AR161W, AR161FGW-L, AR169W, AR161FW-P-M5, AR161FGW-La, AR169FVW, AR169FGVW-L, AR169FGW-L, AR169W-P-M9, AR169RW-P-M9, AR201VW-P, AR207VW, AR510 series, AR503GW-LM7, AR503GW-LcM7, AR1220W, AR1220EVW and AR1220VW support WLAN-FAT AP features.
WAN	WAN interface	WAN interfaces: FE/GE/10GE interfaces, synchronous and asynchronous serial interfaces, Async interfaces, CE1/CT1 PRI interfaces, CE3 interfaces, E1T1-F interfaces, 3G/LTE cellular interfaces, ISDN BRI interfaces, POS interfaces, CPOS interfaces, ADSL interfaces, VDSL interfaces, G.SHDSL interfaces, E&M interfaces E1-IMA interfaces, and xPON interfaces	WAN interfaces depend on the device model and the boards installed.

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Feature	Sub-feature	Description	Difference
	Link layer protocol	Link layer protocols such as Point-to-Point Protocol/ Multilink Protocol (PPP/ MP), Frame Relay/Multilink Frame Relay (FR/MFR), High-Level Data Link Control (HDLC), LAPB and X.25, and ATM, and Operation, Administration, and Maintenance (OAM) mechanisms complying with link layer protocols Multi-Chassis Multilink PPP and PPP compression FR compression and FR over IP IPv4 PPPoE Server, IPv4 PPPoE Client, and IPv6 PPPoE Client	The following physical interfaces support PPP: ● Synchronous/Asynchronous serial interfaces that work in synchronous mode. The interface name is **Serial**. ● Async interfaces working in protocol mode. ● Interfaces formed by CE1/PRI and CT1/PRI interfaces (including ISDN PRI interfaces). The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by CE3 and CT3 interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1-F and T1-F interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1/T1 interfaces that are channelized from CPOS interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Cellular interfaces. ● ISDN BRI interfaces. ● POS interfaces. The following interfaces support HDLC: ● Synchronous/asynchronous serial interfaces that work in synchronous mode. The interface name is Serial.

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Feature	Sub-feature	Description	Difference
			● Interfaces formed by CE1/PRI and CT1/PRI interfaces (except ISDN PRI interfaces). The interface name is Serial and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by CE3 interfaces. The interface name is Serial and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1-F and T1-F interfaces. The interface name is Serial and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1/T1 interfaces that are channelized from CPOS interfaces. The interface name is Serial and the interface logic is the same as that of synchronous serial interfaces. ● POS interfaces. The following physical interfaces support FR: ● Synchronous/Asynchronous serial interfaces that work in synchronous mode. The interface name is **Serial**. ● Interfaces formed by CE1/PRI and CT1/PRI interfaces (including ISDN PRI interfaces). The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by CE3 interfaces. The interface name is **Serial** and the interface logic is the same as

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Feature	Sub-feature	Description	Difference
			that of synchronous serial interfaces. ● Interfaces formed by E1-F and T1-F interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1/T1 interfaces that are channelized from CPOS interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● ISDN BRI interfaces. ● POS interfaces. The following interfaces support LAPB and X.25: ● Synchronous/Asynchronous serial interfaces that work in synchronous mode. The interface name is **Serial**. ● Interfaces formed by CE1/PRI interfaces (excluding ISDN PRI interfaces). The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces. ● Interfaces formed by E1-F and T1-F interfaces. The interface name is **Serial** and the interface logic is the same as that of synchronous serial interfaces.
	Dialing	Dial control center (DCC) function and logical interfaces that transmit the dialing service	None

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Feature	Sub-feature	Description	Difference
	PON	EPON and GPON working modes, and connection with an OLT	The 1PON interface card supports PON interfaces. For the mapping between the device and interface card, see 1PON (1-Port GPON/EPON Dual-Mode Interface Card) in the *Huawei AR120&AR150&AR160&AR200&AR500&AR510&AR1200&AR2200&AR3200&AR3600 Series Enterprise Routers Get to Know the Product-Hardware Description-Cards-xDSL/xPON Interface Card*.
	Network bridge	Bridge between Ethernet interfaces and WAN interfaces	None
	Terminal access	HDLC over TCP	The RTC function is used with a license. To use the RTC function, apply for and purchase the following license from the agent: ● AR2200 series: AR2200 ATC(Air Traffic Control) License ● AR3200 series: AR3200 ATC(Air Traffic Control) License
	3G/LTE	3G/LTE uplink, allowing access to 3G/LTE networks using the DCC function (the AR provides the 3G/LTE data card and 3G/LTE SIC card)	None
IP application	ARP	The Address Resolution Protocol (ARP) maps IP addresses into MAC addresses.	None
	IPv4/IPv6	IPv4 and Ipv6 address management, TCP/UDP socket, ICMP, ping and tracert, and UDP helper	None
	IP FRR	IP FRR	None

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Feature	Sub-feature	Description	Difference
	IPv6 transition technology	IPv6 over IPv4 tunnels and IPv4 over IPv6 tunnels	None
	DNS	DNS client(IPv4/IPv6), DNS proxy(IPv4/IPv6), and dynamic DNS (DDNS) client(IPv4)	None
	DHCP	DHCP client(IPv4/IPv6), DHCP relay(IPv4/IPv6), and DHCP server(IPv4/IPv6), and DHCP security	None
	NAT	NAT, port address translation (PAT), port application mapping (PAM), Easy NAT, and NAT server, providing application layer gateways (ALG) for each application	None
IP routing	IPv4 and IPv6 static route	Basic routing functions	None
	RIP and RIPng	Routing protocol	None
	OSPFv2 and OSPFv3	Routing protocol	None
	ISIS and ISISv6	Routing protocol	None
	BGP and BGP4+	Routing protocol	None
	Routing policy	Basic routing policy functions	None
	Policy-Based Routing (PBR)	IP unicast PBR (IPv4/IPv6), including local PBR, interface PBR, and smart policy routing (SPR)	None
Multicast	IGMP	IGMP basic function, IGMP snooping, and IGMP proxy	Only the AR2200 series, AR3600 series, and AR3200 series support IGMP snooping.
	MLD	Basic MLD functions and MLD snooping	Only the AR2200 series, AR3600 series, and AR3200 series support MLD snooping.

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Feature	Sub-feature	Description	Difference
	Multicast routing	Multicast route management, multicast route load balancing, and multicast NSR	None Only the AR3200 series support multicast NSR.
	PIM (IPv4/IPv6)	PIM-DM (IPv4/IPv6), PIM-SM (IPv4/IPv6), and PIM SSM (IPv4/IPv6)	None
	MSDP	Inter-domain (PIM-SM domain) multicast routing	None
QoS	MQC	Modular traffic classification	None
	Priority mapping	Mapping between local priorities, 802.1p priorities, DSCP priorities, and EXP priorities	Only the AR2201-48FE, AR2204-27GE, AR2204-27GE-P, AR2204-51GE-P, AR2204E, AR2202-48FE, AR2220, AR2240C, AR2240 and AR3200&AR3600 series support the mapping from 802.1p priorities, DSCP priorities, or EXP priorities to local priorities.
	Traffic policing	Single-rate-two-bucket and two-rate-two bucket policy based on traffic classifiers, permanent virtual circuits (PVCs)/VLANs/data link connection identifiers (DLCIs), and interfaces	None
	Traffic shaping	Traffic shaping based on traffic classifiers, PVCs/VLANs/DLCIs, and ports, traffic shaping adaptation, and three-level traffic shaping	None
	Congestion management	Congestion management based on traffic classifiers, PVCs/VLANs/DLCIs, and ports; queue mechanisms including PQ, WRR, DRR, WFQ, PQ+WRR/PQ +DRR/PQ+WFQ, and CBQ	None
	Congestion avoidance	Priority-based weighted random early detection (WRED) and tail drop	None

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Feature	Sub-feature	Description	Difference
	HQoS	Hierarchical Quality of Service (HQoS) implements hierarchical scheduling based on queues and differentiates services and users.	None
	Smart Application Control (SAC)	The device provides SAC-based traffic classifiers to detect and identify Layer 4 to Layer 7 information in packets and packets of dynamic protocols such as HTTP, FTP, and RTP, and implements fine-grained QoS according to the classification result.	None
Security	AAA	AAA for administrators and access users, including local, RADIUS, and TACACS AAA	None
	Firewall	DMZ firewall, packet filtering firewall, stateful firewall, blacklist and whitelist, and attack detection	None
	Traffic suppression	Traffic suppression based on ports	None
	Access security	802.1x authentication, MAC address authentication, MAC address bypass authentication, and direct MAC address authentication based on users and ports; portal authentication and guest VLAN for access users	None
	Local attack defense	Device protection measures, including CPU attack defense and attack source tracing.	None

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Feature	Sub-feature	Description	Difference
	ARP security	Suppression of ARP packets from the user side and network side, ARP anti-spoofing, ARP gateway attack inspection, and dynamic ARP inspection (DAI)	None
	IP security	ICMP anti-attack, URPF, IP source guard and DHCP snooping	None
	PKI	Certificate request, update, and verification	None
	HTTPS	HTTPS server function, ensuring transmission security between users and devices using SSL features such as data encryption and identity verification	None
	ACL	Traffic classification based on physical ports, Layer 2 information, IP protocols, and TCP/UDP ports.	None
	IPS	Defense against application-layer attacks, such as worms, viruses, Trojan horses, DoS attacks, and code attacks	The following models support IPS: ● AR160 series: AR169BF, AR169FGW-L, AR169FGVW-L, and AR169FVW ● AR1200 series: AR1220E, AR1220EV, and AR1220EVW ● AR2200 series: models except AR2201-48FE, AR2202-48FE, AR2204, AR2204-27GE, AR2204-27GE-P, AR2204-51GE-P, and AR2204E ● All models of AR3200 and AR3600 series

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Feature	Sub-feature	Description	Difference
	URL filtering	Regulating online behaviors by controlling which URLs users can access	The following models support URL filtering: ● All models of AR120&AR150&AR160&AR200&AR500 series ● AR1200 series: AR1220C, AR1220E, AR1220EV, and AR1220EVW ● AR2200 series: all models except AR2201-48FE, AR2202-48FE, and AR2204 ● AR3200 series
Reliability	Interface backup	Backup between WAN interfaces, ensuring service reliability Association between interface backup and NQA/BFD/routing	None
	Interface monitoring group	In a dual-device backup scenario, when a specific proportion of network-side interfaces goes down, the user-side interface status goes Down. Then traffic is switched between the master and backup links.	None
	NSR	NSR provides smooth switching between master and slave MPUs. During the switchover, the neighbor relationship is not terminated.	Only the AR3200 supports NSR.
	HSB	Backup of firewall services	None
	BFD	Single-hop and multi-hop BFD, BFD for VRRP, BFD for a routing protocol	None
	VRRP	Redundancy backup mechanism for IP services, including IPv4/IPv6 VRRP	None
	ETHOAM	P2P Ethernet fault management defined in IEEE 802.3ah	None

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Feature	Sub-feature	Description	Difference
Device management	Information center monitoring	Managing boards, power supply units, fans, and e-labels	None
	Version management	In-service upgrade, rollback, and patch installation	None
	Mirroring	Port- and flow-based mirroring	None
	Remote PoE power supply	LAN-side remote power supply	● Model: AR207V-P, AR201VW-P; Supporting interface: Ethernet0/0/0–Ethernet0/0/7 ● Model: AR151W-P; Supporting interface: Ethernet0/0/0–Ethernet0/0/3 ● Model: AR1220V, AR1220W, and AR1220VW; Supporting interface: Ethernet0/0/4–Ethernet0/0/7 ● Model: AR1220EV, AR1220EVW; Supporting interface: GigabitEthernet0/0/4–GigabitEthernet0/0/7 ● Model: AR169-P-M9, AR161FW-P-M5 , AR509GW-L-D-H and AR509G-L-D-H; Supporting interface: GigabitEthernet0/0/0–GigabitEthernet0/0/3 ● Model: AR2204-27GE-P; Supporting interface: GigabitEthernet0/0/3–GigabitEthernet0/0/10
	Web-based network management system	Internal web management system, providing GUI to manage and maintain devices	None

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Feature	Sub-feature	Description	Difference
	Deployment	Automatic deployment using a universal serial bus (USB) flash drive; Auto-Config function for the entire network	● Only Layer 3 Ethernet interfaces support the Auto-Config function. ● The AR503GW-LM7, AR511GW-L-B3, AR3670, or AR511GW-LM7 has only one Layer 3 interface, which is used for factory settings and does not support the Auto-Config function. ● AR120 series (except AR129 and AR129GW-L), AR150 series (except AR156, AR157, AR157W, AR157VW, AR157G-HSPA+7, AR158EVW AR156W), AR160 series (except AR169 and AR169G-L), AR200 series (except AR206, AR207, AR207V, AR207V-P, AR208E, AR207G-HSPA+7 and AR207VW), AR500 series (except AR503GW-LM7 and AR503GW-LcM7), AR510 series (except AR511GW-LM7 and AR511GW-L-B3), AR1200&AR2200&AR3200 series support Auto-Config function. ● The management interfaces of the AR1200, AR2200, and AR3200 series do not support the Auto-Config function. ● The AR510 series do not support the Auto-Config function in V200R007C02.

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Feature	Sub-feature	Description	Difference
	Energy saving management	Automatic and manual fan speed adjustment Automatic laser shutdown (ALS) Energy Efficient Ethernet (EEE)	● The AR150&160&200&AR500 series , and AR510 series do not support manual fan speed adjustment. ● Ethernet electrical interfaces on AR160 series (except AR161, AR161W, AR161G-L, AR161G-U, AR169, AR169W, AR169G-L, and AR169-P-M), AR513W-V3M8, AR1220E, AR1220EV, AR1220EVW, AR1220F, AR1220C, AR2201-48FE, AR2204-27GE, AR2204-27GE-P, AR2204-51GE-P, AR2204E, AR2240C, , and AR2204 support the EEE function. ● Ethernet electrical interfaces on SRU400 of AR2240 and AR3260 support the EEE function. ● GE electrical interfaces on the 4ES2G-S board support the EEE function.
	Active/ Standby switchover	Active/Standby switchover	Only the AR3260 provides the active/standby switchover of dual SRUs.
Network management	SNMP	SNMP agent, fault management (FM), and trap switch control (TSC)	None
	Ping and Tracert	Network connectivity detection	None
	NTP	Time synchronization for traditional IP networks	None
	RMON	Monitoring and traffic statistics for traffic on a network segment	None
	CWMP	CWMP for remotely managing AR devices	None

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Feature	Sub-feature	Description	Difference
	NetStream	Fixed packet sampling and packet statistics collection, with flow output in V5, V8, V9, or V10 format	None
	Network Quality Analysis (NQA)	Detecting the performance of protocols running on the network	None
	IP accounting	Information statistics: ● Collecting statistics on all IPv4 data flows passing the device ● Collecting statistics on the IPv4 data flows with specified attributes ● Collecting statistics on all IPv4 data flows passing the device based on IP precedence	None
MPLS	Basic MPLS functions	Static label switched path (LSP) and penultimate hop popping (PHP)	● The AR120&AR150&AR160&AR200&AR500&AR510 does not support MPLS.
	MPLS LDP	MPLS LDP	
	MPLS TE	MPLS TE	
	MPLS FRR	LDP FRR, TE FRR, and VPN FRR	
	MPLS over GRE	MPLS LDP over GRE, L2VPN over GRE, and L3VPN over GRE	
VPN	L2TP	Functioning as the LAC or LNS and allowing concurrent user access on multiple channels	None
	GRE	GRE tunnel for interconnecting the headquarters and branches Used together with IPSec. IPSec cannot protect multicast data, but GRE VPN can protect multicast data	None

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Feature	Sub-feature	Description	Difference
	DSVPN	Dynamic setup of a data forwarding channel between hubs	None
	IPSec	Interconnecting headquarters and branches using IKE V1/V2 IPSec tunnels; hardware-based MD5 and SHA algorithms; AES, DES, and 3DES algorithms	None
	SSL VPN	Virtual gateway for management of SSL VPN users and SSL VPN services	None
	L3VPN	BGP L3VPN	None
	MCE IPv6	A multi-VPN-instance CE (MCE) device uses routing multi-instance to isolate services or users of IPv6	None
	MPLS L2VPN	VLL and PWE3	AR120&AR150&AR160&AR200&AR500&AR510 do not support VLL or PWE3.
	A2A VPN	A VPN solution which manages keys and GDOI policies in a centralized manner.	None
	SVPN	IVPN binds multiple WAN access lines to provide high-bandwidth and reliable Internet access.	None
Voice	Line configuration	Foreign exchange station (FXS), foreign exchange office (FXO), VE1, ISDN, BRI and PRI line access and configuration	Only the AR157VW, AR158EVW, AR169W, AR169FVW, AR169FGVW-L, AR201VW-P, AR207V, AR207VW, AR207V-P, AR1220V, AR1220VW, AR1220EV, AR1220EVW, AR2220E AR2204, AR2220, AR2240, AR2240C, and AR3200 support voice features.

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Feature	Sub-feature	Description	Difference
	SIP AG	The upper-layer device such as soft switch performs call control and management. The AR communicates with the soft switch by using the SIP protocol. The AR provides the Branch Exchange for Survivable Telephony (BEST) function. The AR provides SIP over TLS.	
	H.248AG	The upper-layer device such as soft switch performs call control and management. The AR communicates with the soft switch by using the H.248 protocol.	
	PBX	Voice mailbox Foreign exchange station (FXS) access and configuration SIP signaling Call Waiting	

Table 3-2 Features supported by the AR510

Feature	Sub-feature	Description	Difference
Android open platform	Android open platform	External USB interface, audio interface, HDMI/YPbPr/CVBS interface, GPS interface, and bluetooth interface Support for integration of third-party applications	None
LAN	VLAN	Basic VLAN	None
	MAC	Dynamic MAC address learning and static MAC address configuration; MAC address learning limit, blackhole MAC entries, sticky MAC entries, and anti-MAC flapping	None

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Feature	Sub-feature	Description	Difference
	Link aggregation	Static link aggregation and Link Aggregation Control Protocol (LACP)-based aggregation	None
	LLDP	Neighboring device discovery	None
	WLAN	Wireless access to LANs and AC integration Device as the STA to connect to the WLAN	None
WAN	WAN interface	WAN interfaces: GE interface, 3G/LTE cellular interfaces	None
	Link layer protocol	Link layer protocols such as Point-to-Point Protocol. IPv4 PPPoE Server and IPv4 PPPoE Client	None
	Dialing	Dial control center (DCC) function and logical interfaces that transmit the dialing service	None
	Network bridge	Bridge between Ethernet interfaces and WAN interfaces	None
	3G/LTE	3G/LTE uplink, allowing access to 3G/LTE networks using the DCC function	None
IP application	ARP	The Address Resolution Protocol (ARP) maps IP addresses into MAC addresses.	None
	IPv4/IPv6	IPv4/IPv6 address management, TCP/UDP socket, ICMP, ping and tracert, and UDP helper	None
	IP FRR	IP FRR	None
	DNS	DNS client(IPv4/IPv6), DNS proxy(IPv4/IPv6), and dynamic DNS (DDNS) client(IPv4)	None
	DHCP	DHCP client(IPv4/IPv6), DHCP relay(IPv4/IPv6), and DHCP server(IPv4), and DHCP security	None

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Feature	Sub-feature	Description	Difference
	NAT	NAT, port address translation (PAT), port application mapping (PAM), Easy NAT, and NAT server, providing application layer gateways (ALG) for each application	None
IP routing	IPv4 Static route	Basic routing functions	None
	RIP	Routing protocol	None
	OSPFv2	Routing protocol	None
	ISIS	Routing protocol	None
	BGP	Routing protocol	None
	Routing policy	Basic routing policy functions	None
	Policy-Based Routing (PBR)	IP unicast PBR (IPv4), including local PBR, interface PBR, and smart policy routing (SPR)	None
Multicast	IGMP	IGMP basic function, and IGMP proxy	None
	Multicast routing	Multicast route management, multicast route load balancing, and source-specific multicast (SSM) mapping	None
	PIM(IPv4)	PIM-DM (IPv4), PIM-SM (IPv4), and PIM SSM (IPv4)	None
	MSDP	Inter-domain (PIM-SM domain) multicast routing	None
QoS	MQC	Modular traffic classification	None
	Priority mapping	Mapping between local priorities, 802.1p priorities, DSCP priorities, and EXP priorities	None
	Traffic policing	Single-rate-two-bucket and two-rate-two bucket policy based on traffic classifiers, permanent virtual circuits (PVCs)/ VLANs/data link connection identifiers (DLCIs), and interfaces	None

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Feature	Sub-feature	Description	Difference
	Traffic shaping	Traffic shaping based on traffic classifiers, PVCs/VLANs/DLCIs, and ports, traffic shaping adaptation, and three-level traffic shaping	None
	Congestion management	Congestion management based on traffic classifiers, PVCs/VLANs/DLCIs, and ports; queue mechanisms including PQ, WRR, DRR, WFQ, PQ+WRR/PQ+DRR/PQ+WFQ, and CBQ	None
	Congestion avoidance	Priority-based weighted random early detection (WRED) and tail drop	None
	HQoS	Hierarchical Quality of Service (HQoS) implements hierarchical scheduling based on queues and differentiates services and users.	None
Security	AAA	AAA for administrators and access users, including local, RADIUS, and TACACS AAA	None
	Firewall	DMZ firewall, packet filtering firewall, stateful firewall, blacklist and whitelist, and attack detection	None
	Access security	802.1x authentication, MAC address authentication, MAC address bypass authentication, and direct MAC address authentication based on users and ports; portal authentication and guest VLAN for access users	None
	Local attack defense	Device protection measures, including CPU attack defense and attack source tracing.	None
	ARP security	Suppression of ARP packets from the user side and network side, and ARP anti-spoofing	None
	IP security	ICMP anti-attack, and URPF	None
	PKI	Certificate request, update, and verification	None

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Feature	Sub-feature	Description	Difference
	HTTPS	HTTPS server function, ensuring transmission security between users and devices using SSL features such as data encryption and identity verification	None
	ACL	Traffic classification based on physical ports, Layer 2 information, IP protocols, and TCP/UDP ports.	None
Reliability	Interface backup	Backup between WAN interfaces, ensuring service reliability Association between interface backup and NQA/BFD/routing	None
	Interface monitoring group	In a dual-device backup scenario, when a specific proportion of network-side interfaces goes down, the user-side interface status goes Down. Then traffic is switched between the master and backup links.	None
	HSB	Backup of firewall services	None
	BFD	Single-hop and multi-hop BFD, BFD for VRRP, BFD for a routing protocol	None
	VRRP	Redundancy backup mechanism for IP services, IPv4 VRRP supported only.	None
Device management	Information center monitoring	Managing boards, power supply units, fans, and e-labels	None
	Version management	In-service upgrade, rollback, and patch installation	None
	Mirroring	Port- and flow-based mirroring	None
	Web-based network management system	Internal web management system, providing GUI to manage and maintain devices	None

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Feature	Sub-feature	Description	Difference
	Deployment	Automatic deployment using a universal serial bus (USB) flash drive; Auto-Config function for the entire network	The AR511GW-L-B3, AR511GW-LM7 has only one Layer 3 interface, which is used for factory settings and does not support the Auto-Config function.
Network management	SNMP	SNMP agent, fault management (FM), and trap switch control (TSC)	None
	Ping and Tracert	Network connectivity detection	None
	CWMP	CWMP for remotely managing AR devices	None
	NQA	Detecting the performance of protocols running on the network	None
VPN	L2TP	Functioning as the LAC or LNS and allowing concurrent user access on multiple channels	None
	GRE	GRE tunnel for interconnecting the headquarters and branches	None
	DSVPN	Dynamic setup of a data forwarding channel between hubs	None
	SSL VPN	Virtual gateway for management of SSL VPN users and SSL VPN services	None
	IPSec	Efficient VPN supported only	None

3.2 Key Features

3.2.1 Voice

In addition to broadband services, such as video on demand (VOD) and live data and video, the AR provides high-quality voice service for terminal users.

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NOTE

- Among the AR150 series routers, only the AR157VWs and AR158EVWs support the voice features. Among the AR160 series routers, only the AR169FVWs and AR169FGVW-Ls support the voice features. Among the AR200 series routers, only the AR201VW-Ps, AR207Vs, AR207VWs and AR207V-Ps support the voice features. Among the AR1200 series routers, only the AR1220Vs, AR1220VWs, AR1220EV and AR1220EVW support the voice features. Among the AR2200 series routers, only the AR2204s, AR2220s, AR2240Cs, AR2240s support the voice features. To use the voice feature on the AR2200 and AR3200 series routers, you are advised to install the DSP module.
- To provide voice services for POTS users on AR1200, AR2200 ,and AR3200 series routers, 4FXS1FXO, 16FXS or 32FXS board is required. Thereinto, the AR1200 series routers does not support 32FXS board.
- To provide voice services for ISDN users on AR1200, AR2200 ,and AR3200 series routers, 2BST board is required.

SIP AG

Access gateway (AG) devices provide various access modes and convert various services into a uniform format that can be transmitted. The AG communicates with the soft switch by using the SIP protocol. SIP-based AGs are called SIP AGs.

When an AR functions as the SIP AG, the upper-layer devices such as soft switch control and manage calls. The AR supports the following services.

Service Type	Introduction	Configured on the SIP AG or Not
Basic voice service	The basic voice service is the basic call connection function, including intra-office calls, local calls, national toll calls, international toll calls, and transit calls.	Yes
Three-party service	The third-party service allows a calling party or called party in a conversation to call a third party without ending the current conversation. Then the calling party or original called party can implement a three-party conversation or talk to the other two parties.	Yes
Call waiting service	When UserA is talking with UserB over the phone and at this moment UserC is calling UserA, UserA hears a call waiting tone, indicating that there is a call waiting for UserA.	Yes
MWI service	The message waiting indicator (MWI) service allows a user to read unread messages or leave messages. When the called user is busy, the MWI is on, indicating that there are leave messages.	Yes
Malicious call identification (MCID) service	The user that registers the MCID service with the carrier can query the phone number of the attacker that initiates malicious calls after performing relevant operations.	Yes

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Service Type	Introduction	Configured on the SIP AG or Not
Call transfer service	The call transfer service allows the called party to transfer an incoming call to a third party by pressing the hookflash so that the calling party establishes a connection with a new called party.	Yes
Call conference service	The call conference service allows more than three parties to communicate together.	Yes
Calling line identification presentation (CLIP) service	The CLIP service displays the calling number in onhook state or offhook state (for call waiting). The displayed information includes the phone number, name, date, and time.	No
Calling line identification restriction (CLIR) service	The CLIR service displays the phone number of a calling party on the terminal of a called party.	No
Distinctive ringing service	The distinctive ringing service plays different ring tones for incoming calls.	No
Differentiated ringback tone service	The differentiated ringback tone service enables the SIP AG to play different ring tones for ringback tones.	No
Advice of charge (AoC) service	The AoC service enables the SIP AG to display the charge rate, fee notification during a call, and the total fee of the call.	No
Urgent call process	If the SIP AG finds an urgent call, the SIP AG inserts the urgent call flag into the SIP message.	No
Completion of Calls to Busy Subscriber (CCBS) service	When the called number is busy, the CCBS service enables the SIP AG to monitor the called party status. When the called party is idle, the SIP AG notifies the calling party and determines whether to make a call according to the status of the calling and called parties.	No
Multiple MSN numbers on a POTS interface	Multiple MSN numbers can be configured on a POTS interface.	No

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Service Type	Introduction	Configured on the SIP AG or Not
Hotline service	● Instant hotline service: After a user picks up a phone, the SIP AG dials the hotline number for the user. ● No dialing within a long time after picking up the phone: If a user does not dial any number within the specified period of time after picking up the phone, the SIP AG dials the hotline number for the user.	Yes
Anonymous call service	The anonymous call service enables the called party not to view information about incoming calls.	No

H.248AG

H.248 is a media gateway control protocol through which the media gateway controller (MGC) controls the media gateway (MG) so that interoperability is implemented between different media.

The H.248 AG supports the basic voice service and developed services such as the three-party service and call waiting service. These services need to be configured on the softswitch.

Service Type	Introduction
Basic voice service	The basic voice service provides call connections, including intra-office calls, local calls, national long-distance calls, international long-distance calls, and transit calls.
Three-party service	The third-party service allows a calling party or called party in a conversation to call a third party without ending the current conversation. Then the calling party or original called party can make a three-party conversation or talk to the other two parties separately.
Call waiting	If user C calls user A when user A is talking with user B, user A hears a call waiting tone indicating that there is an incoming call.
MWI service	The message waiting indicator (MWI) service allows a user to read unread or leave messages. When the called user is busy, the MWI is on indicating that there are messages.
Malicious call identification (MCID) service	The MCID service allows users to perform certain operations to find the phone number of an attacker that initiates malicious calls.
Call transfer service	The call transfer service allows the called party to transfer an incoming call to a third party by pressing the hookflash so that the calling party establishes a connection with a new called party.

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Service Type	Introduction
Call conference service	The call conference service allows more than three parties to talk to each other.
Calling line identification presentation (CLIP) service	The CLIP service displays the calling number in onhook state or offhook state (for call waiting). The displayed information includes the phone number, name, date, and time.
Calling line identification restriction (CLIR) service	The CLIR service shields the calling number on the terminal of a called party.
Distinctive ringing service	The distinctive ringing service plays different ring tones for incoming calls from different calling parties.
Differentiated ringback tone service	The differentiated ringback tone service plays different ringback tones for different users.
Advice of charge (AoC) service	The AoC service displays the charge rate, fee notification during a call, and total fee of the call.
Emergency call process	If the H.248 AG detects an emergency call, it inserts an emergency call flag into the H.248 message.
Completion of Calls to Busy Subscriber (CCBS) service	The CCBS service enables the H.248 AG to monitor the called party status when the called party is busy. When the called party is idle, the H.248 AG notifies the calling party so that the calling party can determine whether to make a call to the called party again.
Multiple MSN numbers on a POTS interface	Multiple MSN numbers can be configured on a POTS interface.
Hotline service	The hotline service is classified into: ● Instant hotline service: After a user picks up a phone, the H.248 AG dials the hotline number for the user. ● Delayed hotline service: If a user does not dial any number within the specified period of time after picking up a phone, the H.248 AG dials the hotline number for the user.
Anonymous call service	The anonymous call service prevents the called party from viewing information about incoming calls.

For details about voice features, see Voice Configuration Guide.

PBX

PBXs are widely used in enterprises. They manage incoming and outgoing calls of enterprises.

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For details about voice features, see Voice Configuration Guide.

3.2.2 WAN

WAN uses the interfaces such as Ethernet, E1-F, T1-F, CE1/CT1, ADSL, VDSL, G.SHDSL, CPOS, POS, 3G, CE3, LTE, and synchronous/asynchronous serial interfaces. The following link layer protocols are supported: FR, PPP, PPPoE, ATM, HDLC, LAPB and X.25, and ISDN.

Frame Relay

Working at the data link layer of the Open System Interconnection (OSI) model, Frame Relay (FR) uses simple methods to transmit and exchange data. On a frame relay (FR) network, virtual circuits connect two FR devices. A physical line on the FR network provides multiple VCs. A VC defines an FR channel by using the data link connection identifier (DLCI), and detects and maintains the VC status by using the local management interface (LMI).

Multilink frame relay (MFR) is a cost-effective solution provided for FR users. MFR (FRF. 16) implements the multilink frame relay function on the user-to-network interfaces (UNIs).

The FR compression technologies compress FR packets to save network bandwidth, reduce network load, and improve data forwarding on the FR network. The AR supports FRF.9 (FRF. 9 stac) and FRF.20 (FRF.20 IPHC).

PPP

The point-to-point protocol (PPP) is used at the data link layer of the OSI model as well as at the link layer of TCP/IP. PPP transmits data from one point to another through synchronous links and asynchronous links that support full duplex.

PPP provides a complete authentication mechanism. To set up a PPP connection, users must pass authentication, ensuring a secured connection.

Multilink PPP (MP) is a technique that bundles multiple PPP links together to increase bandwidth. It can be applied to the interfaces that support PPP, such as serial interfaces and low-speed Packet over SDH (POS) interfaces.

PPP links support VJHC, IPHC, and STAC-LZS compression that compress the TCP/IP packet header, TCP/IP/RTP/UDP/IP packet header, and packet payload respectively, improving the transmission efficiency.

PPPoE

A Point-to-Point Protocol over Ethernet (PPPoE) network consists of an Ethernet containing many hosts. It accesses the Internet through a remote access device.

An AR can create a PPP session with the remote end by using PPPoE, and implement access control and accounting.

An AR can function as the PPPoE server to connect to different types of PPPoE clients on the Ethernet or function as a dial-up PPPoE client.

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ATM

ATM is connection-oriented. Each VC is identified by a Virtual Path Identifier (VPI) and a Virtual Channel Identifier (VCI). One pair of VPI/VCI values is useful only on a link segment between ATM nodes. If a connection is broken, the relevant VPI/VCI values are released.

The Asymmetric Digital Subscriber Line (ADSL) , VDSL, E1-IMA and G.Single-pair High Speed Digital Subscriber Line (G.SHDSL) interfaces of the ARs support the Asynchronous Transfer Mode (ATM).

HDLC

The High-level Data Link Control (HDLC) is a typical bit-oriented synchronization data control protocol. It adopts the full-duplex mode and CRC check. Its transmission control function is independent of the processing function, and it features control capabilities and can be flexibly used.

In HDLC, Keepalive packets are used to detect the link status. On the AR, you can set the interval for sending Keepalive packets by setting the polling interval.

ISDN

The ISDN protocol references the Open Systems Interconnection (OSI) model and implements functions of the physical layer, data link layer, and network layer on UNI interfaces.

ISDN physical interfaces are classified into ISDN BRI and ISDN PRI interfaces.When the AR accesses an ISDN network by using an ISDN PRI interface, the AR is directly connected to an ISDN network-side device. When the AR accesses an ISDN network by using an ISDN BRI interface, the AR connects to an NT1 device, and the NT1 device connects to an ISDN network-side device.

LAPB and X.25

LAPB is a bit-oriented data link layer that defines the process of exchanging frames between the data terminal equipment (DTE) and data circuit-terminating equipment (DCE). It ensures that frames are transmitted in the right sequence without errors.

The X.25 protocol stack defines the interfaces between the DTE and DCE on public data networks (PDNs). The protocol stack has three layers, physical layer, data link layer, and packet layer. LAPB is used on the data link layer.

In addition to the second layer of X.25, LAPB can function as an independent data link layer protocol to transmit non-X.25 data of upper-layer protocols. LAPB can be configured on synchronous serial interfaces for simple local data transmission.

An X.25 network is deployed on a WAN that allows for low transmission costs and does not have high requirements for the remote transmission speed or delay. Currently, X.25 networks are still used as dedicated networks in some countries or regions. As IP networks are widely applied, X.25 data is transmitted on IP networks. X.25 over TCP (XOT) technology is introduced to connect X.25 networks over IP networks. This technology encapsulates X.25 packets in TCP packets to transmit X.25 packets across an IP network.

For details about WAN features, see WAN Configuration Guide.

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3.2.3 VPN

The ARs support IP Security Virtual Private Network (IPSec VPN) and provide an IP security (IPSec) mechanism to ensure high quality, interoperable, and cryptology-based security for communication processes. The two parties in communication can encrypt data and authenticate the data source at the IP layer to ensure the confidentiality and integrity of the data and prevent replay on the network.

IPSec implements these functions by using two security protocols: Authentication Header (AH) protocol and Encapsulating Security Payload (ESP). Internet Key Exchange (IKE) provides the automatic key negotiation, SA establishment, and SA maintenance functions to simplify IPSec use and management.

In addition, the ARs use Generic Routing Encapsulation (GRE) and Layer 2 Tunneling Protocol (L2TP) to support VPN services except IPSec VPN.

The VPN services supported by the ARs are listed as follows:

- GRE VPN
- IPSec VPN
- BGP/MPLS IP VPN
- VLL
- SSL VPN
- L2TP VPN
- DSVPN
- GRE over IPSec VPN
- L2TP over IPSec VPN
- IPSec over L2TP VPN
- SVPN
- A2A VPN
- IPSec over GRE
- PWE3

For details about VPN features, see VPN Configuration Guide.

3.2.4 Security

ACL

An access control list (ACL) defines a series of filtering rules based on certain policy, the ACL permits or forbids the passage of data packets.

The ARs can use ACL rules to filter packets.

NAC

Network Admission Control (NAC) is an end-to-end access security framework and includes 802.1x authentication, MAC address authentication, and Portal authentication.

Traditional network security technologies focus on threats from external computers, but typically neglect threats from internal computers. In addition, current network devices cannot prevent attacks initiated by devices on internal networks.

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The NAC security framework was developed to ensure the security of network communication services. The NAC security framework improves internal network security by focusing on user terminals, and implement security control over access users to provide end-to-end security.

Firewall

- ACL-based packet filtering

  ACL-based packet filtering is used to analyze the information of the packets to be forwarded, including source/destination IP addresses, source/destination port numbers, and IP protocol numbers. The ARs compare the packet information with the ACL rules and determine whether to forward or discard the packets.

  In addition, the ARs can filter the fragmented IP packets to prevent the non-initial fragment attack.

- ASPF

  Application Specific Packet Filter (ASPF) filters packets of the application layer based on packet status. ASPF, used for security policies, detects the session information of the application layer protocol packets, which attempt to pass the AR and prevent the unsatisfied packets.

- Attack defense

  With the attack defense feature, the ARs can detect various network attacks and protect the internal network against attacks.

  Network attacks are classified into three types: DoS attacks, scanning and snooping attacks, and malformed packet attacks.

  - DoS attack

    The DoS attack is an attack to a system by using a large number of data packets. This prevents the system from receiving requests from authorized users or suspends the host. DoS attacks include SYN Flood attacks and Fraggle attacks. DoS attacks are different from other attacks because DoS attackers do not search for the ingress of a network, but prevent authorized users from accessing resources or routers.

  - Scanning and snooping attack

    The scanning and snooping attack is to identify the existing systems on a network by using ping scanning (including ICMP and TCP scanning), and then find out potential targets. By using TCP scanning, attackers can identify the operating system and the potential services. By scanning and snooping, an attacker can know the service type and security vulnerability of the system and prepare for further intrusion to the system.

  - Malformed packet attack

    The malformed packet attack is to send malformed packets to the system. If such an attack occurs, the system breaks down when processing the malformed IP packets. Malformed packet attacks include Ping of Death and Teardrop.

ARP Security

There are various ARP attacks on networks, including attacks targeting hosts and gateways, address spoofing attacks and violent attacks, virus attacks, and malicious software attacks.

The ARs ensure ARP security by discarding untrusted ARP packets, suppressing ARP packets by using timestamps, discarding invalid ARP packets, and performing dynamic CAR

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on the packets sent to the CPU. In addition to preventing ARP protocol attacks, the ARs also prevent ARP-based network scanning attacks.

IP Source Guard

Some attacks on networks aim at source IP addresses by accessing and using network resources through spoofing IP addresses, stealing users' information or blocking authorized users from accessing networks.

The ARs support IP Source Guard (IPSG) and Unicast Reverse Path Forwarding (URPF).

- IPSG prevents source address spoof attacks, so attackers cannot access network resources and authorized users' rights are protected.
- URPF blocks packets sent from bogus source addresses.

Local Attack Defense

The Internet technology and size develop quickly and various network applications emerge. Many enterprises try to boost their own development by using their networks. They are concerned about how to protect confidential data and resources in an open network environment. Some unconscious operations may attack network devices and degrade device performance or even cause device failure.

A large number of packets including valid packets and malicious attack packets on a network must be processed by devices' CPUs. The malicious attack packets affect services and may even cause a system breakdown. In addition, excessive normal packets can also lead to high CPU usage, which degrades the CPUs' performance and interrupts services. Therefore, protecting the CPU is a necessary and important factor for processing services and system response.

The local attack defense and source tracing functions protect the ARs against attacks. When an attack occurs, these functions ensure non-stop service transmission and minimize the impact of the attack on network services.

PKI

The public key infrastructure (PKI) is a system that generates public keys and digital certificates, and verifies identities of certificate subjects to ensure information security. PKI issues digital certificates that bind public keys to respective user identities by means of a certificate authority (CA).

AAA

The ARs support Authentication, Authorization, and Accounting (AAA).

- Authentication

  Verifies users' identities.
- Authorization

  Grants different rights for different users to authorize the services that can be used by users.
- Accounting

  Records information about network service usage of users, including service type, start time, and traffic volume.

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IPS

IPS accurately analyzes and determines network attack behaviors, blocks malicious traffic from vulnerability attacks, and provides virtual patches for enterprise networks. It can detect web security threats such as SQL injection attacks, XSS attacks, and webpage linked to Trojan attacks, providing web security defense for enterprises. It can malicious attacks such as Trojan horses, worms, Botnet network attacks, and spy software, cleaning malicious traffic and providing anti-spy capability.

3.2.5 QoS

Traffic Policing

Traffic policing discards excess traffic to limit the traffic within a specified range and to protect network resources as well as the carriers' interests.

The device uses committed access rate (CAR) to perform traffic policing. They support dual-rate-three-color markers and precise bandwidth management.

Traffic Shaping

When the rate of an interface on a downstream device is slower than that of an interface on an upstream device or burst traffic occurs, traffic congestion may occur on the downstream device interface. Traffic shaping can be configured on the interface of an upstream device so that outgoing traffic is sent at even rates and congestion is avoided.

The device supports traffic shaping adaptation and level-3 traffic shaping. Three-level shapers include the flow queue shaper, subscriber queue shaper, and port queue shaper.

Congestion Management

If a network transmitting both delay-sensitive and delay-insensitive services is congested intermittently, congestion management is required. However, if a network is always congested, bandwidth needs to be increased. Congestion management sends packet flows by using queuing and scheduling.

An interface on AR has four or eight default queues for outgoing packets. LAN-side interfaces support the scheduling modes of priority queuing (PQ), deficit round robin (DRR), weighted round robin (WRR), PQ+DRR, and PQ+WRR. The fixed LAN-side interfaces of AR150&200&1200 series routers do not support the DRR mode. WAN-side interfaces support the scheduling modes of PQ, WFQ, PQ+WFQ, and class-based WFQ (CBQ). Each scheduling algorithm schedules specific types of traffic, and affects bandwidth allocation, delay, and jitter.

Congestion Avoidance

Congestion avoidance is a flow control mechanism. A system configured with congestion avoidance monitors network resource usage such as queues and memory buffers. When congestion occurs or aggravates, the system discards packets.

The device supports tail drop and WRED.

- Tail drop

  When the queue length reaches the upper limit, the excess packets (buffered at the queue tail) are discarded.

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- WRED

  WRED sets the upper and lower drop thresholds and the maximum drop probability for each queue. When the queue length is smaller than the lower threshold, no packets are discarded. When the length of the queue exceeds the upper threshold, all packets are discarded. When the queue length is between the lower threshold and the upper threshold, incoming packets are discarded randomly. The drop probability cannot be greater than the maximum drop probability.

  The device uses the WRED based on queue profiles or traffic policies.

  NOTE

  LAN-side subcards do not suuport WRED.

For details about QoS features, see QoS Configuration Guide.

3.2.6 WLAN

A wireless local area network (WLAN) connects two or more computers or devices and enables the devices to communicate by using the wireless telecommunication technology. WLAN uses the wireless technology to implement fast Ethernet access. The primary advantage of WLAN is that terminals, such as computers, can access a network through a wireless medium rather than a physical cable. This facilitates network construction and allows users to move around without interrupting communication. WLAN is more flexible than traditional wired access.

WLAN is widely used in public areas such as on campuses, business centers, and airports. The WLAN uses cables at the backbone layer, and users access the WLAN through one or more access points (APs) using radio waves. The transmission distance of an AP is tens of meters.

IEEE 802.11 is widely used by WLANs. The device can function as an access controller (AC) or a Fat access point (FAT AP). The device as the AC or Fat AP supports 802.11a, 802.11b, 802.11g, 802.11an, and 802.11n.

NOTE

Only AR121W, AR129W, AR121GW-L, AR129GW-L, AR151W-P, AR156W, AR157W, AR157VW, AR158EVW, AR161W, AR161FGW-L, AR169W, AR161FW-P-M5, AR161FGW-La, AR169FVW, AR169FGVW-L, AR169FGW-L, AR169W-P-M9, AR169RW-P-M9, AR201VW-P, AR207VW, AR510 series, AR503GW-LM7, AR503GW-LcM7, AR1220W, AR1220EVW and AR1220VW support WLAN-FAT AP.

The device supports the following WLAN features:

- WLAN user management
  - Dot1X access authentication
  - MAC address authentication
  - Pre-share-key (PSK) authentication
  - EAPOL-Key negotiation
  - User access control
  - AAA for WLAN users
- Radio frequency (RF) management
  - Country code
  - RF type

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  - Setting radio transmission rate
  - Setting radio transmission power
  - Setting radio working channels
  - Monitoring and eliminating radio interference
  - Configurable wireless MAC layer parameters
  - Configuring and querying radio attributes
  - Collecting and querying performance statistics of radio frequency interfaces
- WLAN security
  - WEP Open-System link authentication and encryption
  - WEP Share-Key link authentication and encryption
  - WPA PSK authentication and encryption
  - WPA Dot1X authentication and encryption
  - WPA2 PSK authentication and encryption
  - WPA2 Dot1X authentication and encryption
  - WAPI authentication and encryption
  - TKIP/CCMP encryption
  - HMAC-MD5 algorithm
  - User blacklist and whitelist
- WLAN QoS
  - WMM (802.11e)
  - Mapping wireless-side priority to the wired-side priority
  - Bandwidth limit based on users
  - Bandwidth limit based on SSIDs

For details about WLAN features, see WLAN-AC Configuration Guide and WLAN-FAT AP Configuration Guide.

3.2.7 IPv6

The AR provides the IPv6 host function, which maximizes customers' return on investment (ROI) and prevents repeated investment during network upgrade.

The AR supports the following IPv6 functions:

- IPv6 ND
- IPv6 PMTU
- TCP6, UDP6, RawIP6, Ping IPv6, and Tracert IPv6
- ICMP6 and Socket6
- IPv6 unicast routing protocols: RIPng, OSPFv3, IS-IS, BGP, and IPv6 static route
- IPv6 multicast protocols: MLD, PIM-DM, PIM-SM, and PIM-SSM
- TFTP IPv6 client, FTP IPv6 client, FTP IPv6 server, Telnet IPv6 client, and Telnet IPv6 server
- IPv6 over IPv4 manual tunnel, IPv6 over IPv4 GRE tunnel, IPv6 over IPv4 automatic tunnel, 6to4 tunnel, ISATAP tunnel, and IPv4 over IPv6 tunnel

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- DHCPv6 client, DHCPv6 server, DHCPv6 relay, DHCPv6 snooping, and DHCPv6 PD
- MLD snooping

For details about IPv6 functions, see Configuration Guide - IP Service and IP Unicast Routing Configuration Guide.

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4 Appearance

About This Chapter

4.1 AR120 Series
4.2 AR150 Series
4.3 AR160 series
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4.7 AR1200 Series
4.8 AR2200 Series
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4.10 AR3600 Series

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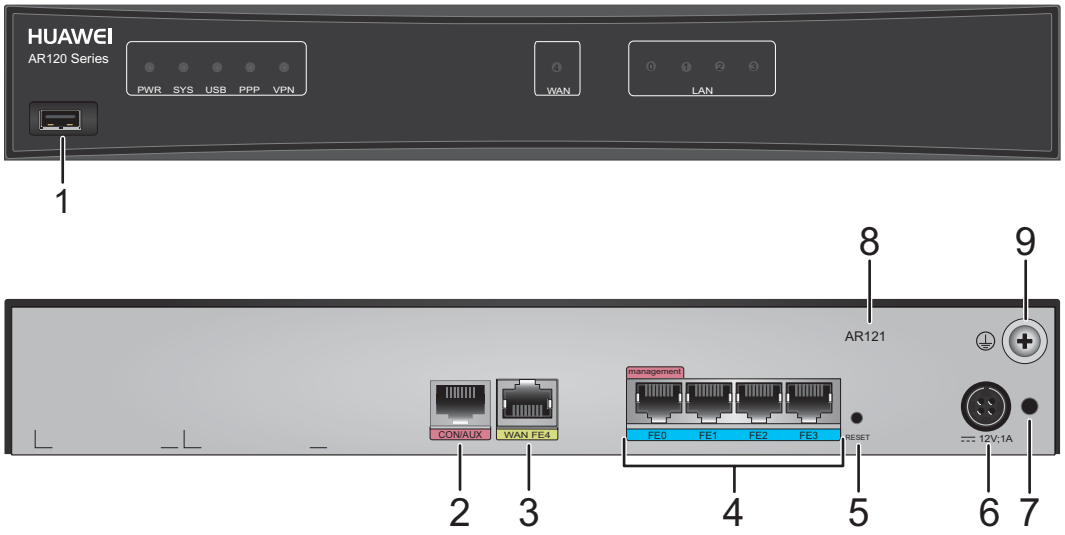
4.1 AR120 Series

4.1.1 AR121

Appearance

Figure 4-1 shows the appearance of the AR121 router.

Figure 4-1 AR121 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR121 does not support AUX login.
3	WAN interface: FE electrical interface	4	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.

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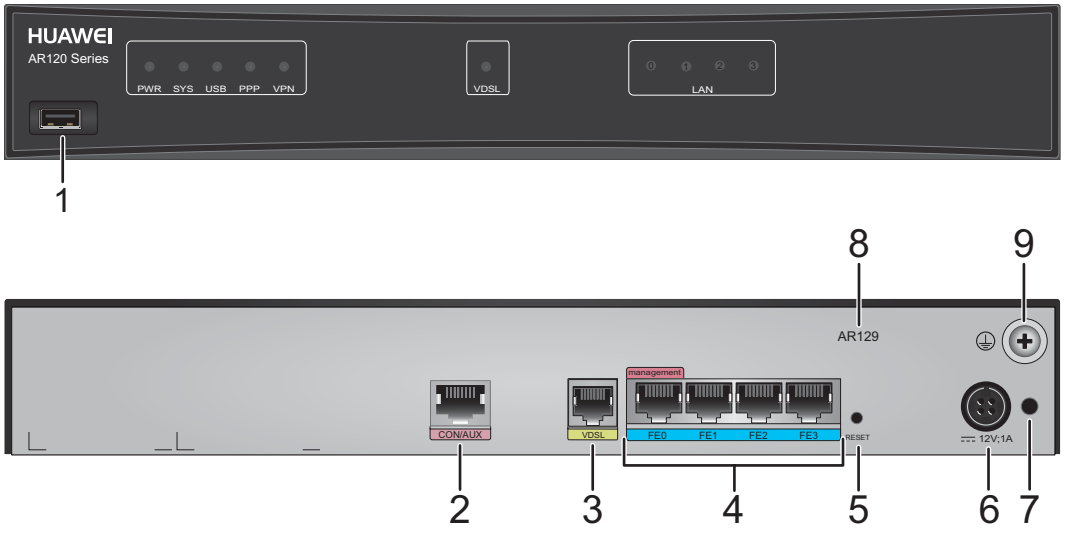
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.1.2 AR129

Appearance

Figure 4-2 shows the appearance of the AR129 router.

Figure 4-2 AR129 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR129 does not support AUX login.
3	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.

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5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.1.3 AR121W

Appearance

Figure 4-3 shows the appearance of the AR121W router.

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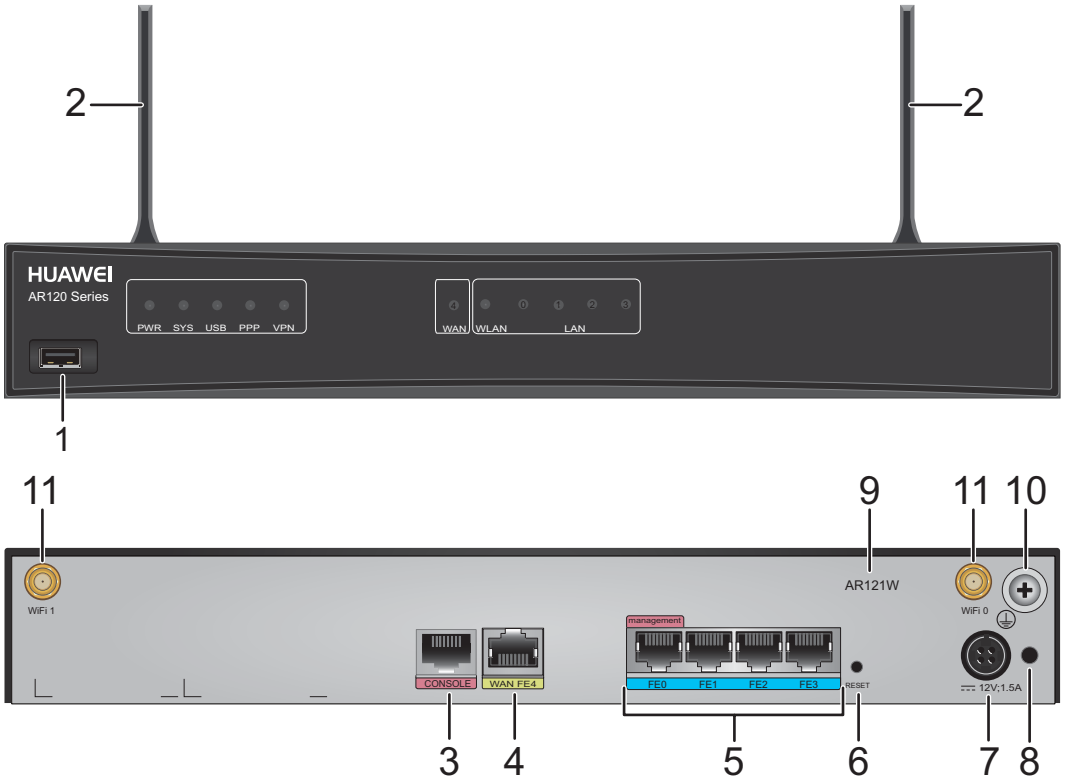
Figure 4-3 AR121W appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CONSOLE interface	4	WAN interface: FE electrical interface
5	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

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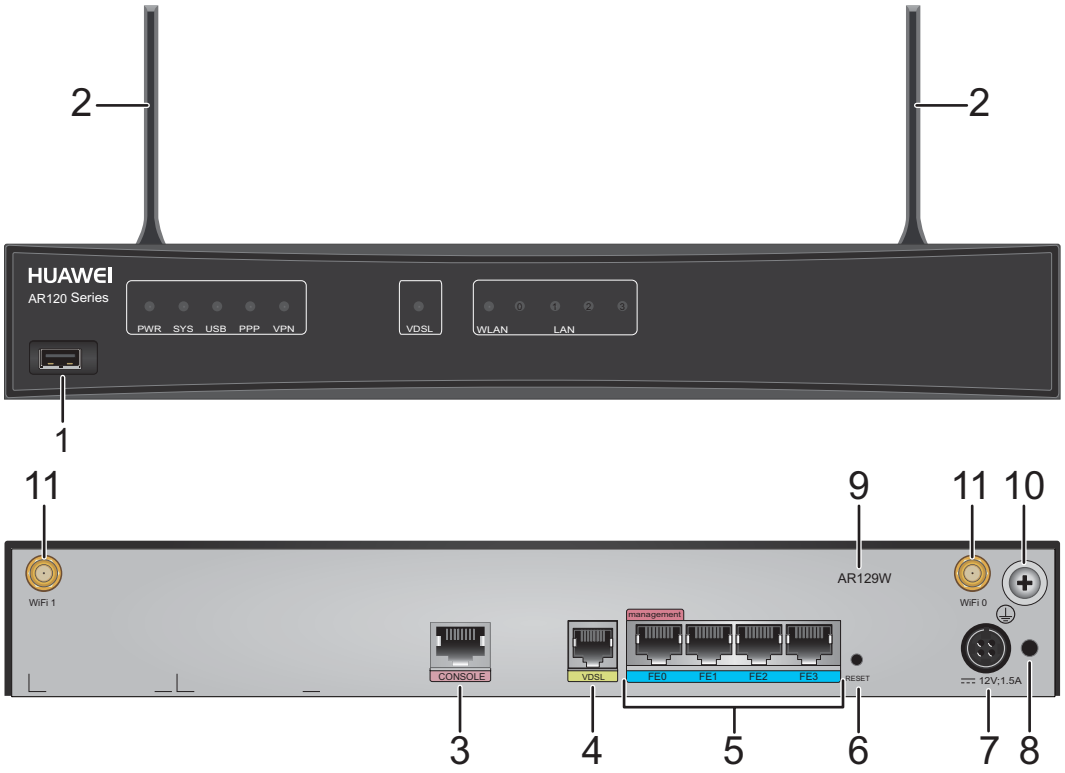
11	Two Wi-Fi antenna interfaces	-	-

4.1.4 AR129W

Appearance

Figure 4-4 shows the appearance of the AR129W router.

Figure 4-4 AR129W appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CONSOLE interface	4	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.

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5	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	Two Wi-Fi antenna interfaces	-	-

4.1.5 AR121GW-L

Appearance

Figure 4-5 shows the appearance of the AR121GW-L.

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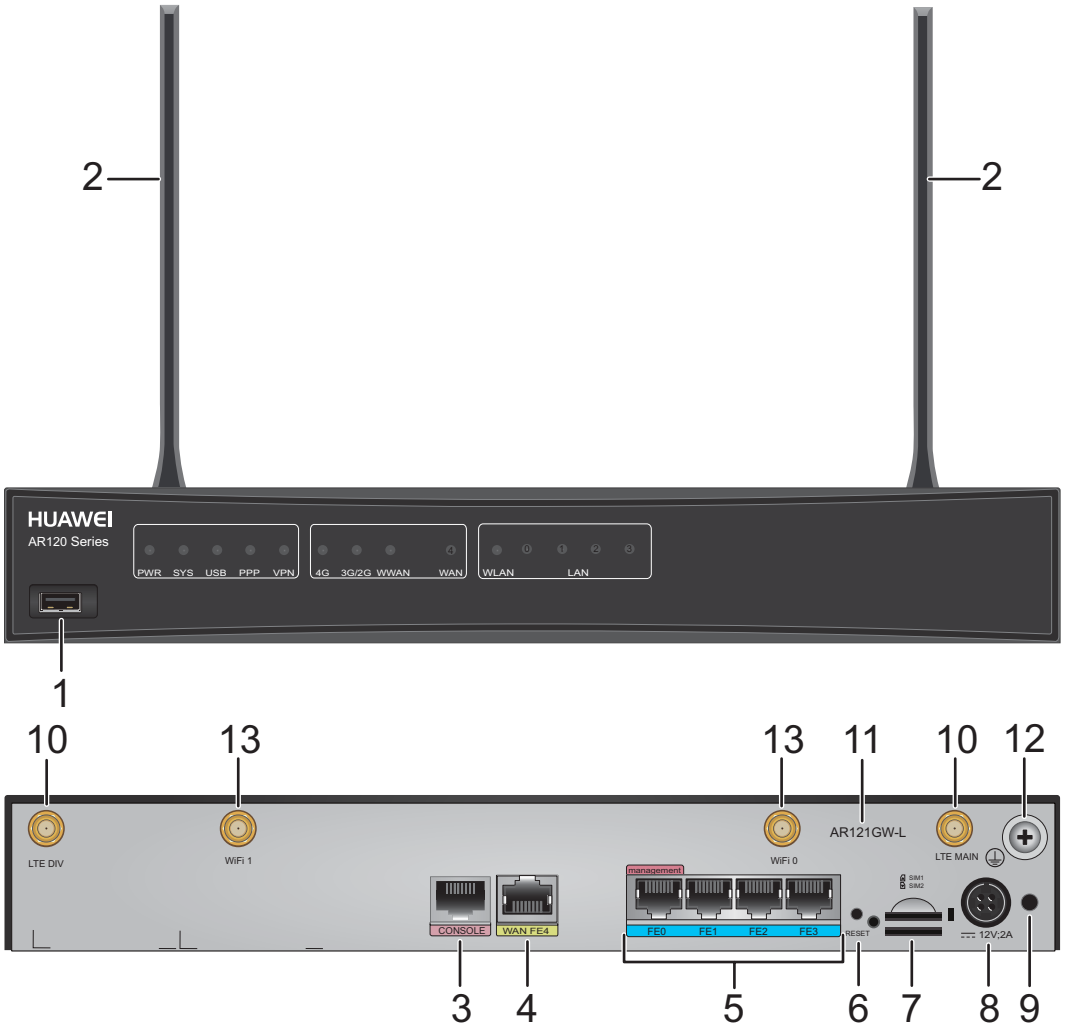
Figure 4-5 AR121GW-L appearance



1	USB interface (host)	2	Two LTE antennas
3	CONSOLE interface	4	WAN interface: FE electrical interface
5	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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7	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
13	Two Wi-Fi antenna interfaces	-	-

4.1.6 AR129GW-L

Appearance

Figure 4-6 shows the appearance of the AR129GW-L.

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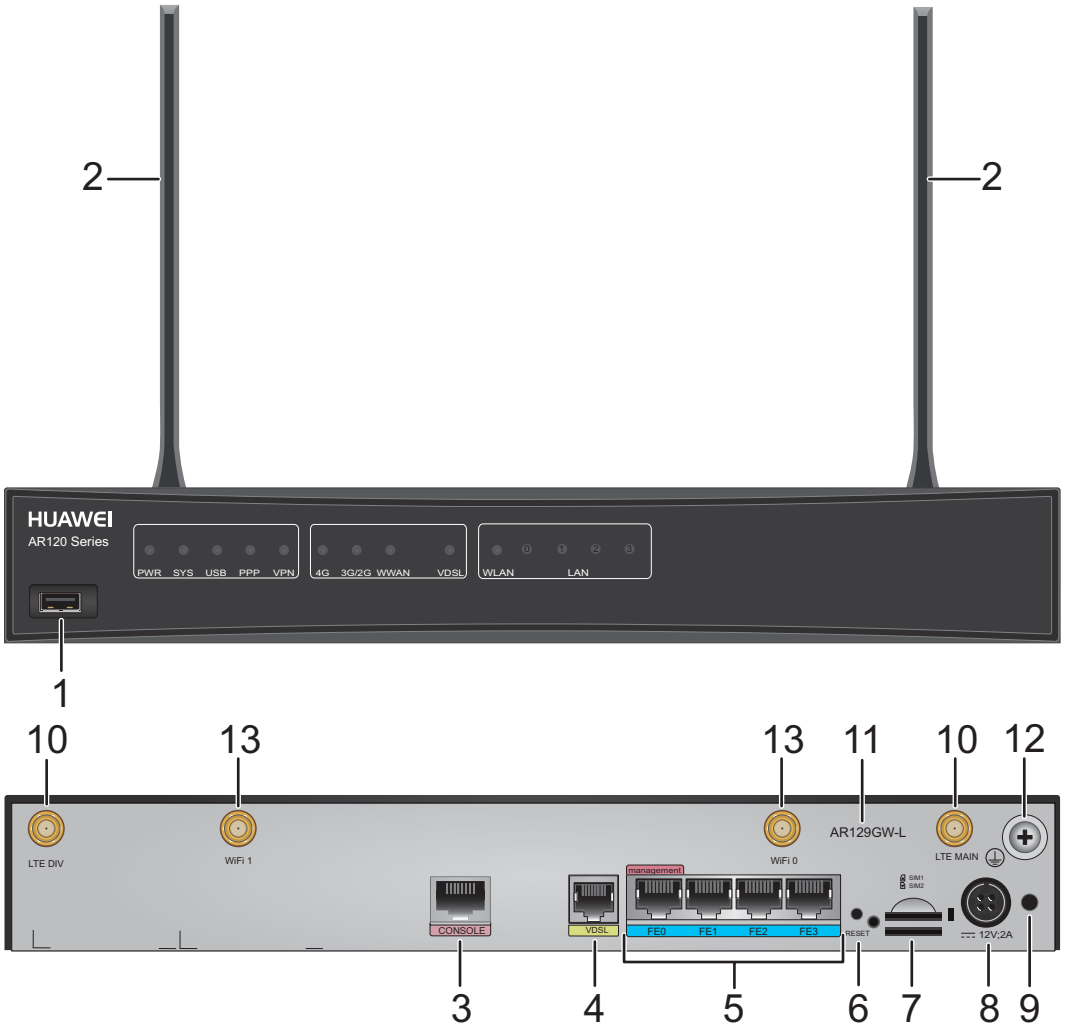
Figure 4-6 AR129GW-L appearance



1	USB interface (host)	2	Two LTE antennas
3	CONSOLE interface	4	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.
5	LAN interfaces: four FE electrical interfaces **NOTE** FE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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7	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
13	Two Wi-Fi antenna interfaces	-	-

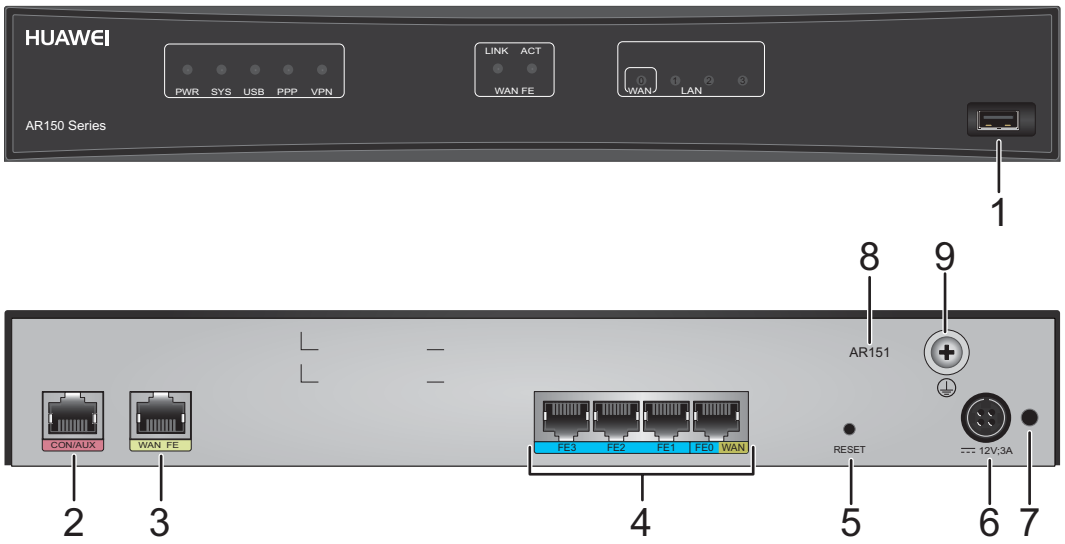
4.2 AR150 Series

4.2.1 AR151

Appearance

Figure 4-7 shows the appearance of the AR151 router.

Figure 4-7 AR151 appearance



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1	USB interface (host)	2	CON/AUX interface **NOTE** The AR151 does not support AUX login.
3	WAN interface: FE electrical interface	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.2 AR157

Appearance

Figure 4-8 shows the appearance of the AR157 router.

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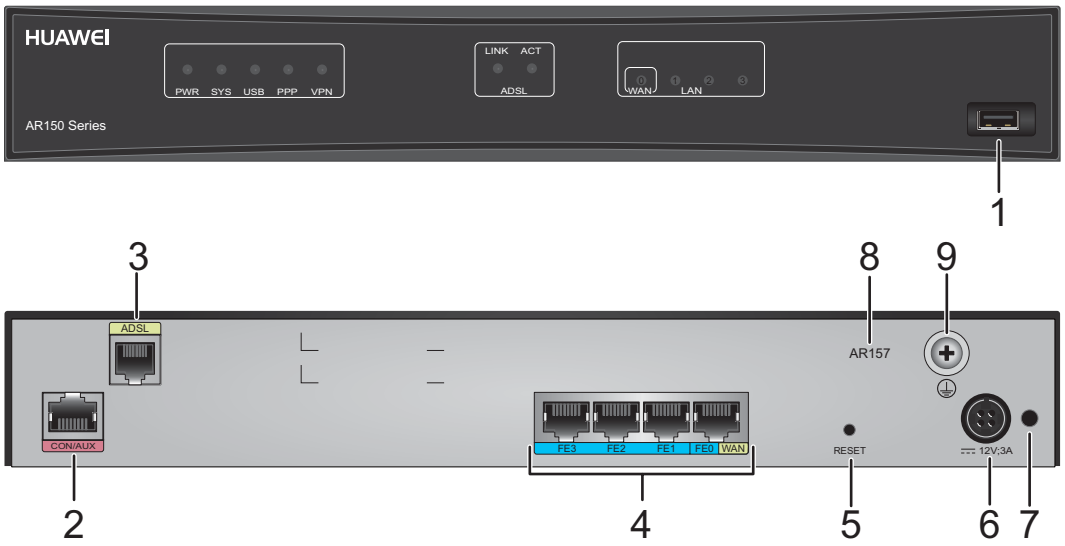
Figure 4-8 AR157 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR157 does not support AUX login.
3	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

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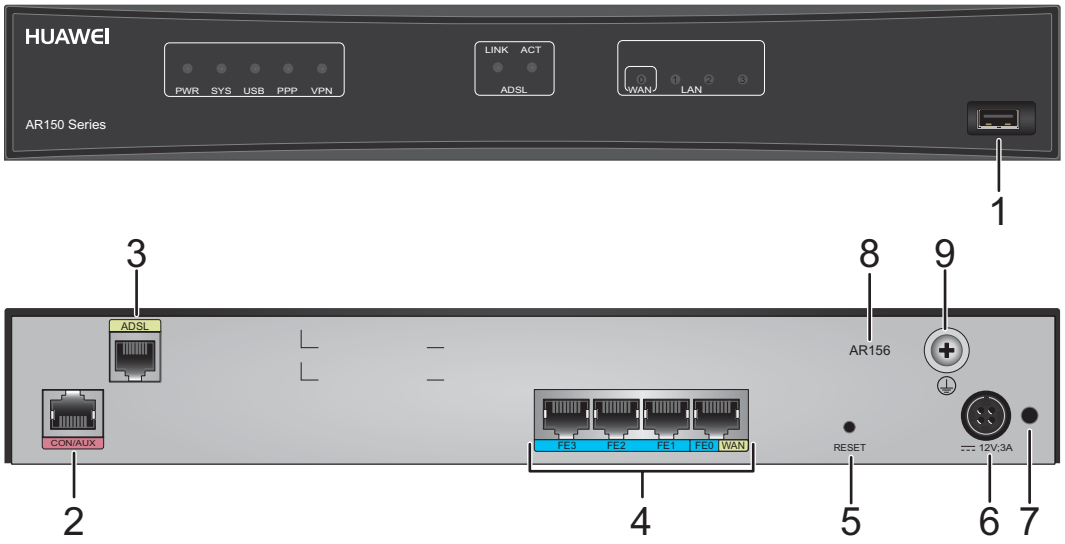
4.2.3 AR156

Appearance

Figure 4-9 shows the appearance of the AR156 router.

Figure 4-9 AR156 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR156 does not support AUX login.
3	WAN interface: ADSL-B/J interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.

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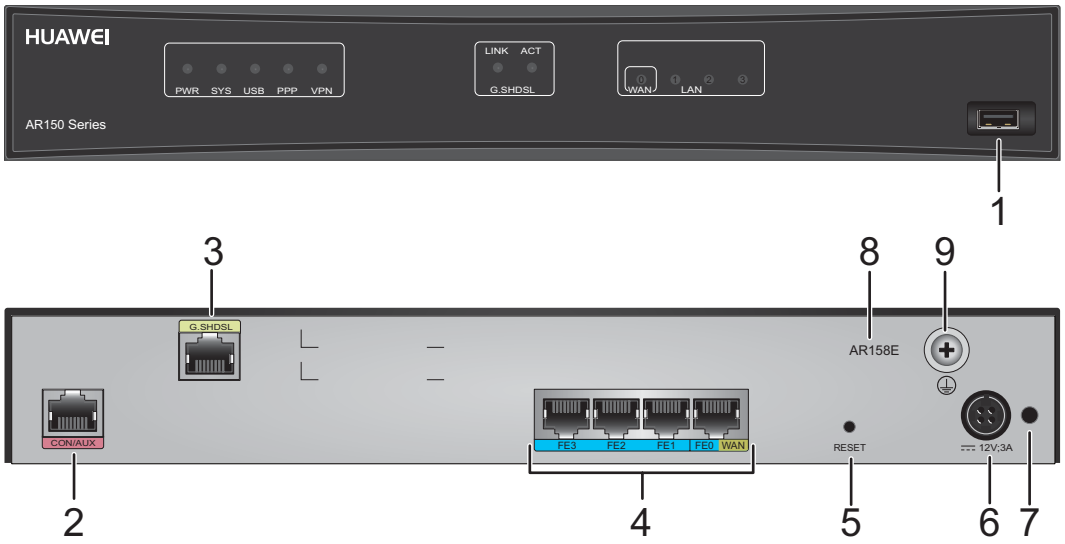
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.4 AR158E

Appearance

Figure 4-10 shows the appearance of the AR158E router.

Figure 4-10 AR158E appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR158E does not support AUX login.
3	WAN interface: G.SHDSL interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.

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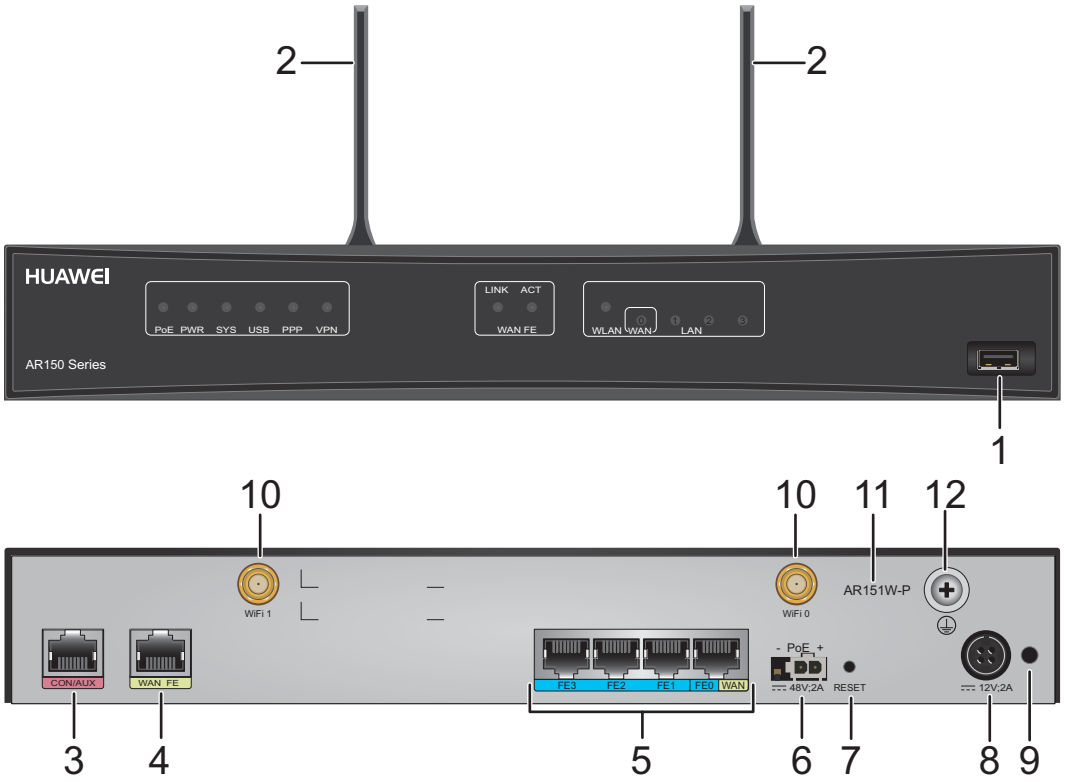
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.5 AR151W-P

Appearance

Figure 4-11 shows the appearance of the AR151W-P router.

Figure 4-11 AR151W-P appearance



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1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR151W-P does not support AUX login.	4	WAN interface: FE electrical interface
5	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.	6	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	Two Wi-Fi antenna interfaces
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.2.6 AR151G-HSPA+7

Appearance

Figure 4-12 shows the appearance of the AR151G-HSPA+7 router.

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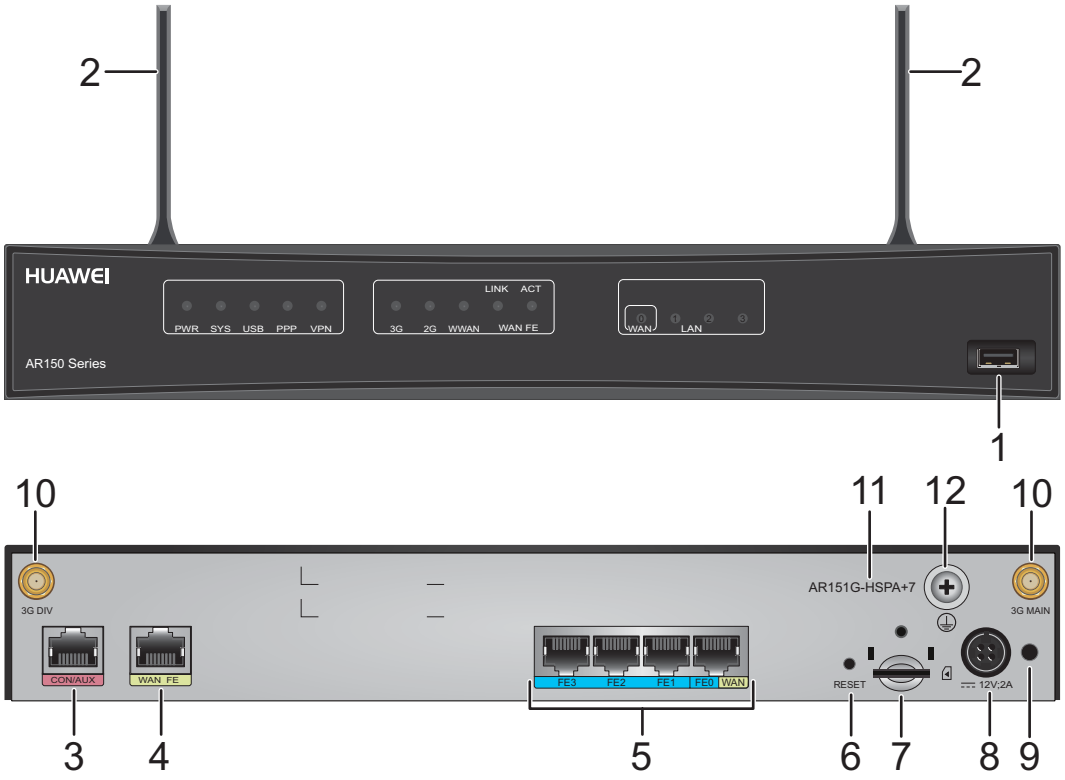
Figure 4-12 AR151G-HSPA+7 appearance



1	USB interface (host)	2	Two 3G antennas
3	CON/AUX interface **NOTE** The AR151G-HSPA+7 does not support AUX login.	4	WAN interface: FE electrical interface
5	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	SIM card slot **NOTE** The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.

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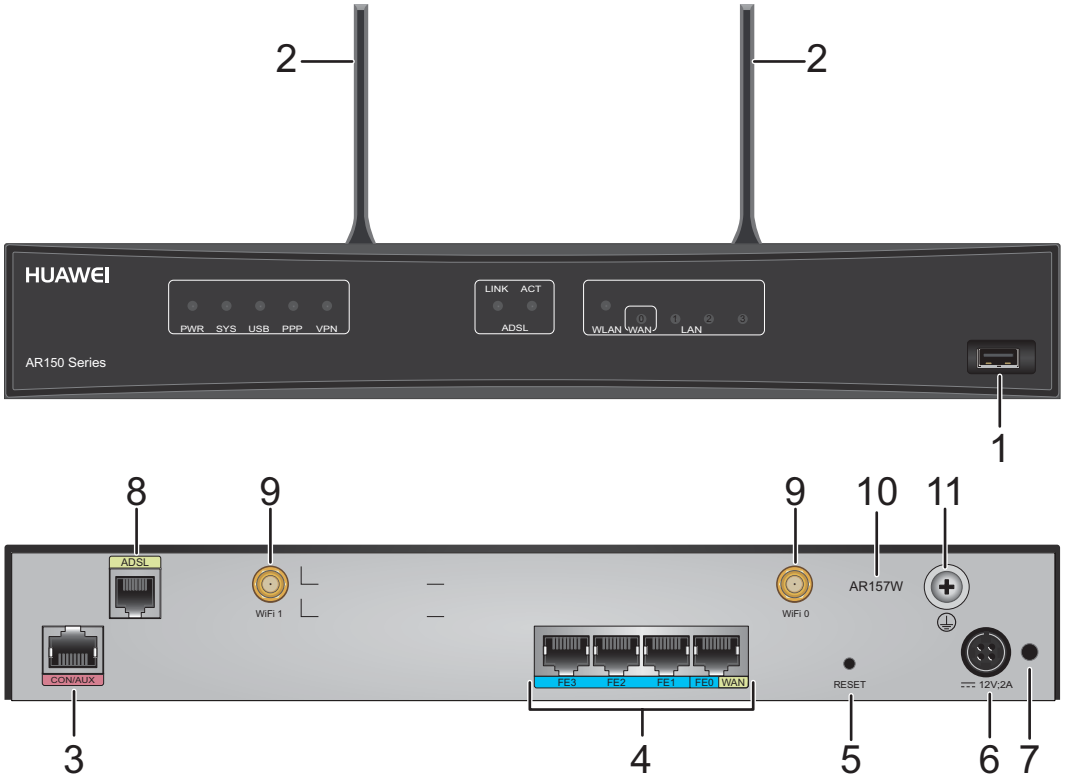
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	3G-HSPA+7 antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.2.7 AR157W

Appearance

Figure 4-13 shows the appearance of the AR157W router.

Figure 4-13 AR157W appearance



1	USB interface (host)	2	Two Wi-Fi antennas

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3	CON/AUX interface **NOTE** The AR157W does not support AUX login.	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.
9	Two Wi-Fi antenna interfaces	10	Product model silkscreen
11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.8 AR157VW

Appearance

Figure 4-14 shows the appearance of the AR157VW router.

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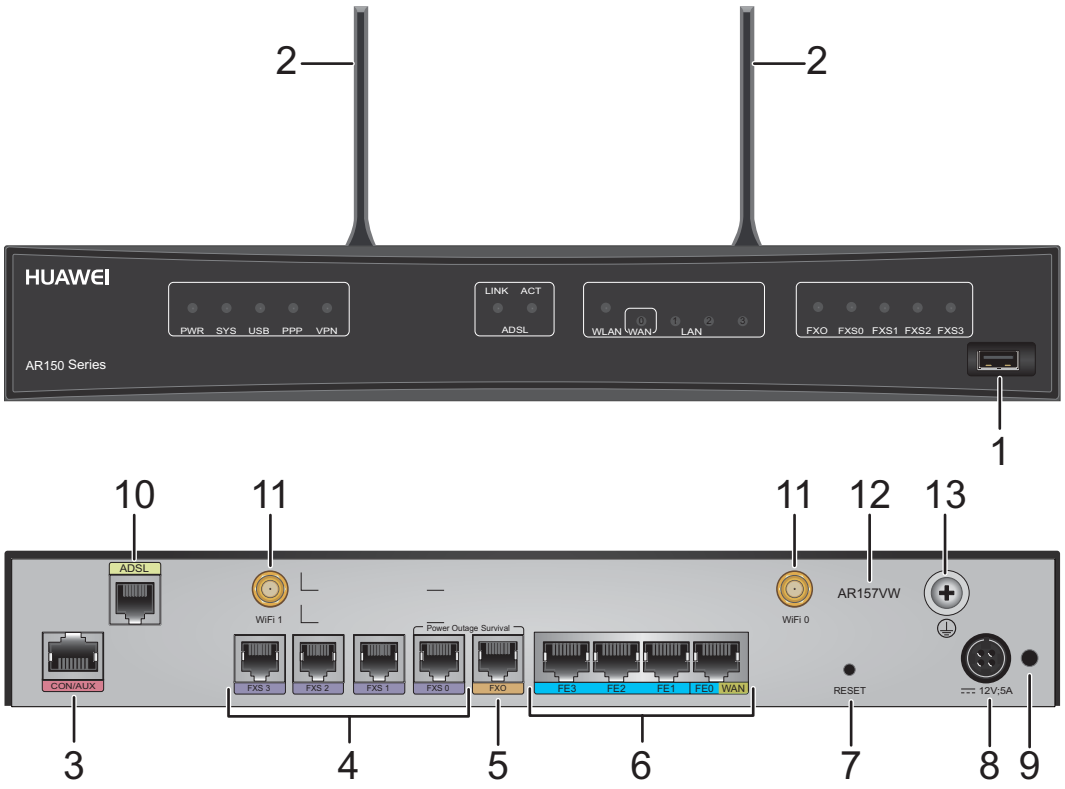
Figure 4-14 AR157VW appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR157VW does not support AUX login.	4	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
5	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	6	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.

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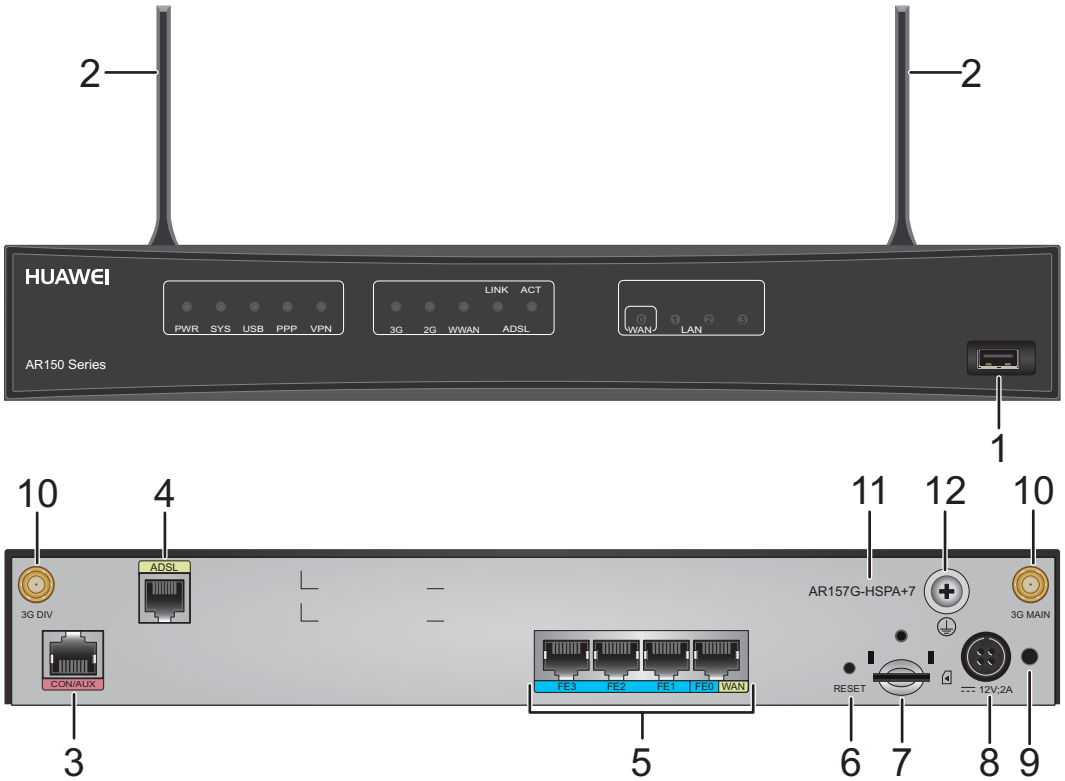
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.
11	Two Wi-Fi antenna interfaces	12	Product model silkscreen
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.9 AR157G-HSPA+7

Appearance

Figure 4-15 shows the appearance of the AR157G-HSPA+7.

Figure 4-15 AR157G-HSPA+7 appearance



1	USB interface (host)	2	Two 3G antennas

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3	CON/AUX interface **NOTE** The AR157G-HSPA+7 does not support AUX login.	4	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.
5	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	SIM card slot **NOTE** The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	3G-HSPA+7 antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.2.10 AR158EVW

Appearance

Figure 4-16 shows the appearance of the AR158EVW.

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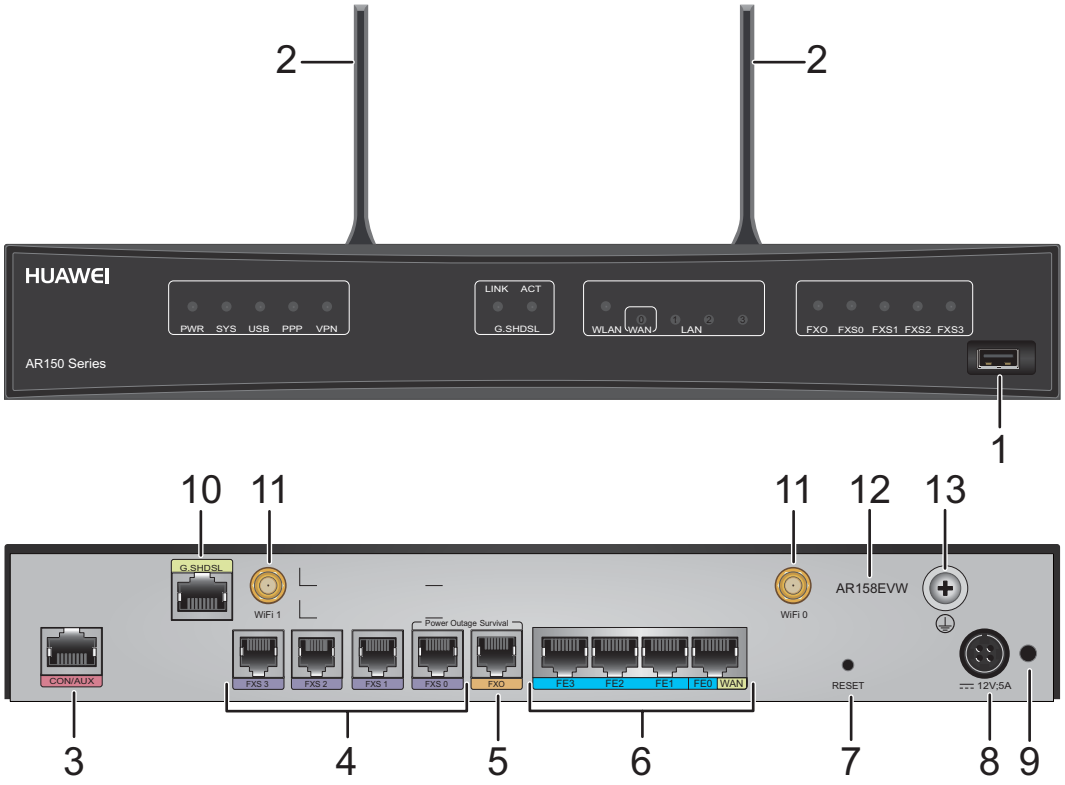
Figure 4-16 AR158EVW appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR158EVW does not support AUX login.	4	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
5	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	6	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.

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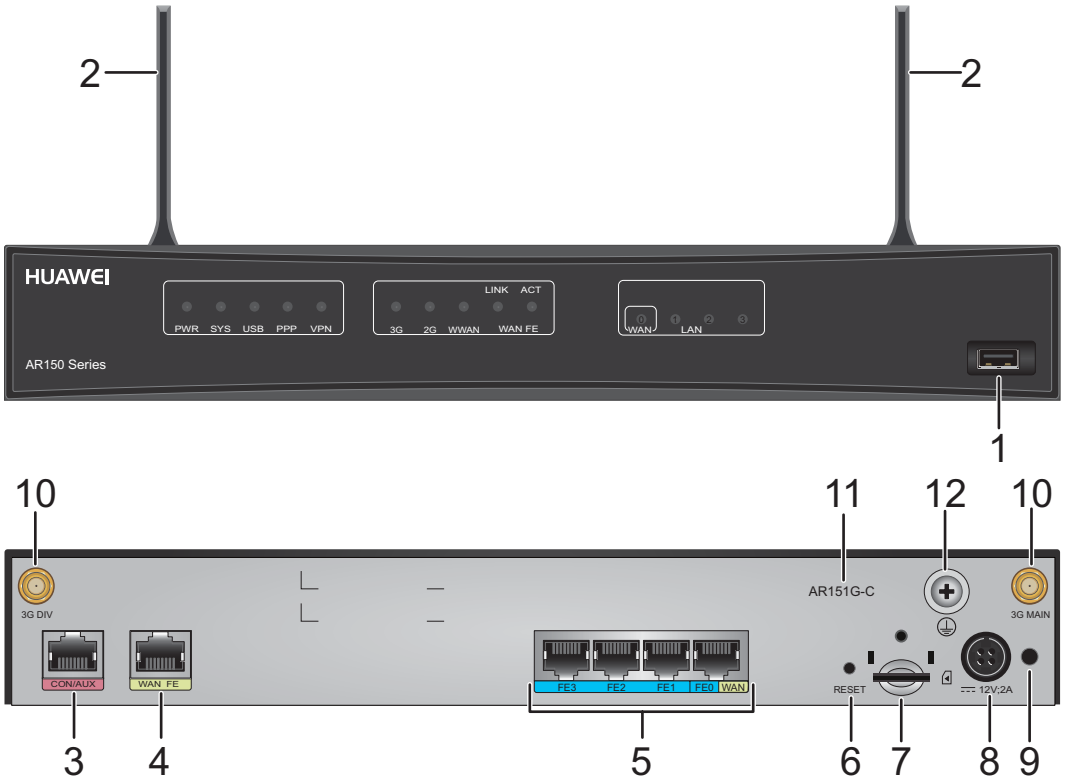
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	WAN interface: G.SHDSL interface **NOTE** This interface supports the dying gasp function.
11	Two Wi-Fi antenna interfaces	12	Product model silkscreen
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.2.11 AR151G-C

Appearance

Figure 4-17 shows the appearance of the AR151G-C.

Figure 4-17 AR151G-C appearance



1	USB interface (host)	2	Two 3G antennas

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3	CON/AUX interface **NOTE** The AR151G-C does not support AUX login.	4	WAN interface: FE electrical interface
5	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	SIM card slot **NOTE** The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	3G-EVDO antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.2.12 AR156W

Appearance

Figure 4-18 shows the appearance of the AR156W.

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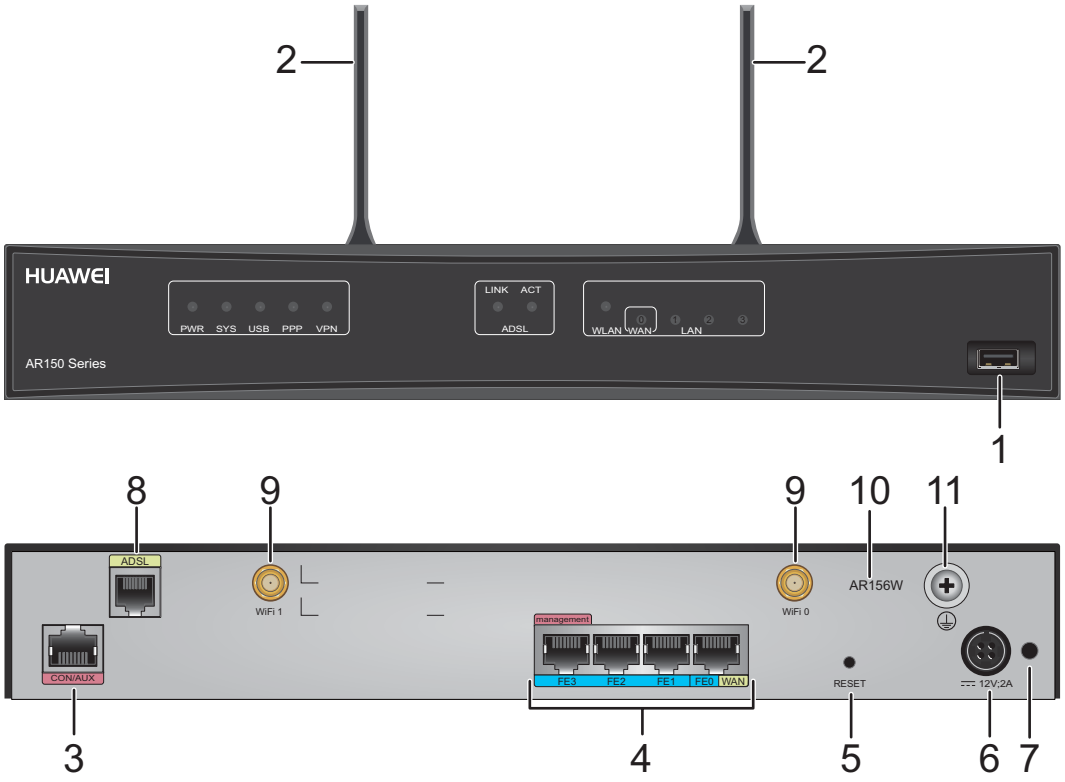
Figure 4-18 AR156W appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR156W does not support AUX login.	4	LAN interfaces: four FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE3 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: ADSL-B/J interface **NOTE** This interface supports the dying gasp function.

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9	Two Wi-Fi antenna interfaces	10	Product model silkscreen
11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

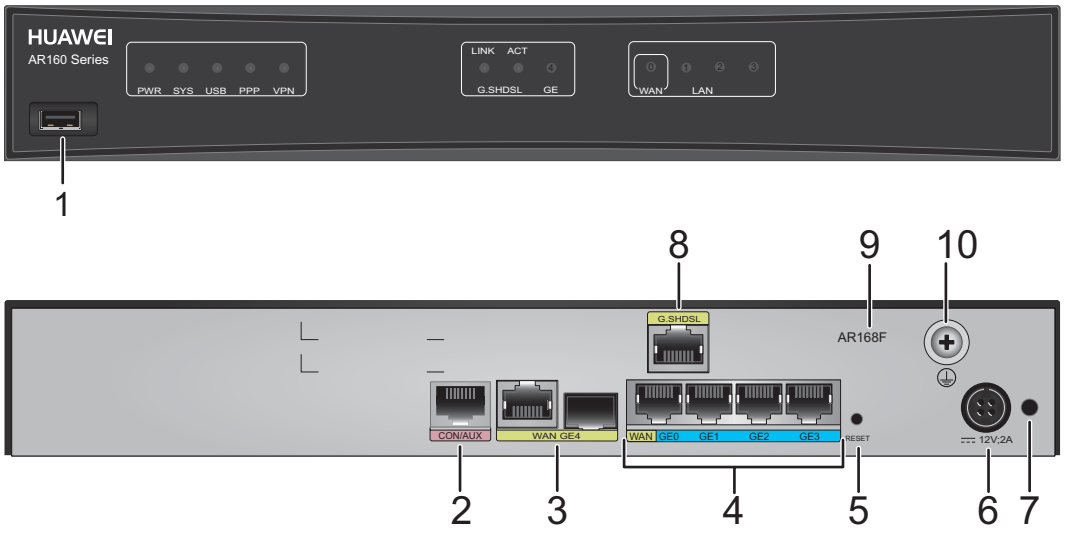
4.3 AR160 series

4.3.1 AR168F

Appearance

Figure 4-19 shows the appearance of the AR168F.

Figure 4-19 AR168F appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR168F does not support AUX login.
3	WAN interface: GE combo interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.

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5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: G.SHDSL interface **NOTE** This interface supports the dying gasp function.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.3.2 AR169F/AR169BF

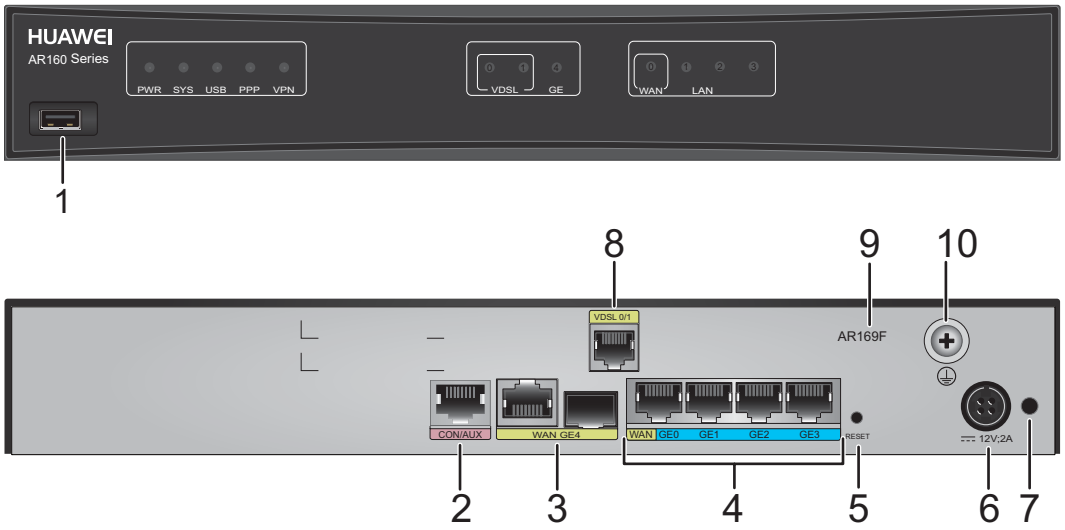
Appearance

NOTE

The AR169F and AR169BF have the same appearance but different silkscreens. The AR169F is used as an example here.

Figure 4-20 shows the appearance of the AR169F/AR169BF.

Figure 4-20 AR169F/AR169BF appearance



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1	USB interface (host)	2	CON/AUX interface **NOTE** The AR169F/AR169BF does not support AUX login.
3	WAN interface: GE combo interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.3.3 AR161FG-L

Appearance

Figure 4-21 shows the appearance of the AR161FG-L.

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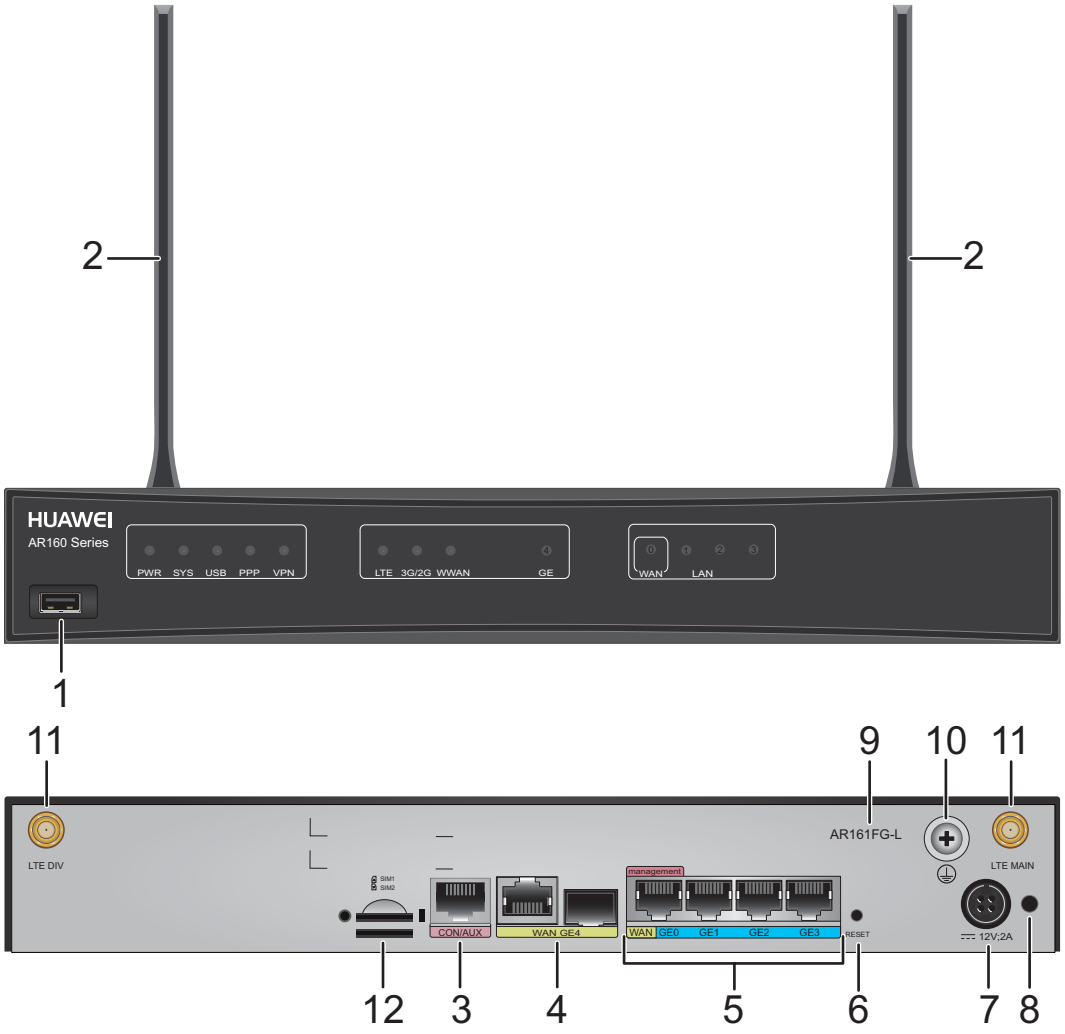
Figure 4-21 AR161FG-L appearance



1	USB interface (host)	2	Two LTE antennas
3	CON/AUX interface **NOTE** The AR161FG-L does not support AUX login.	4	WAN interface: GE combo interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	LTE antenna interface	12	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.

4.3.4 AR161FGW-L/AR161FGW-La

Appearance

Figure 4-22 shows the appearance of the AR161FGW-L.

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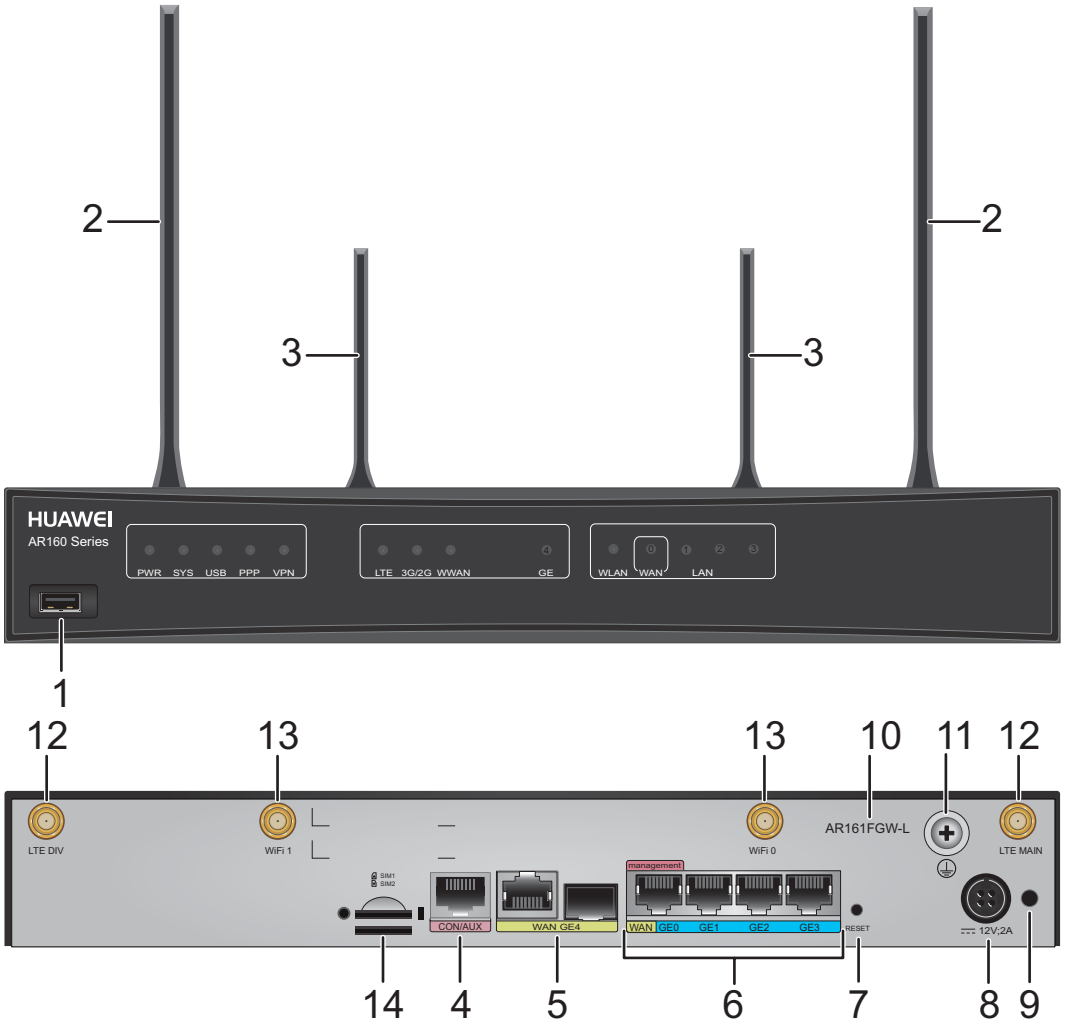
Figure 4-22 AR161FGW-L appearance



1	USB interface (host)	2	Two LTE antennas
3	Two Wi-Fi antennas	4	CON/AUX interface **NOTE** The AR161FGW-L does not support AUX login.
5	WAN interface: GE combo interface	6	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.

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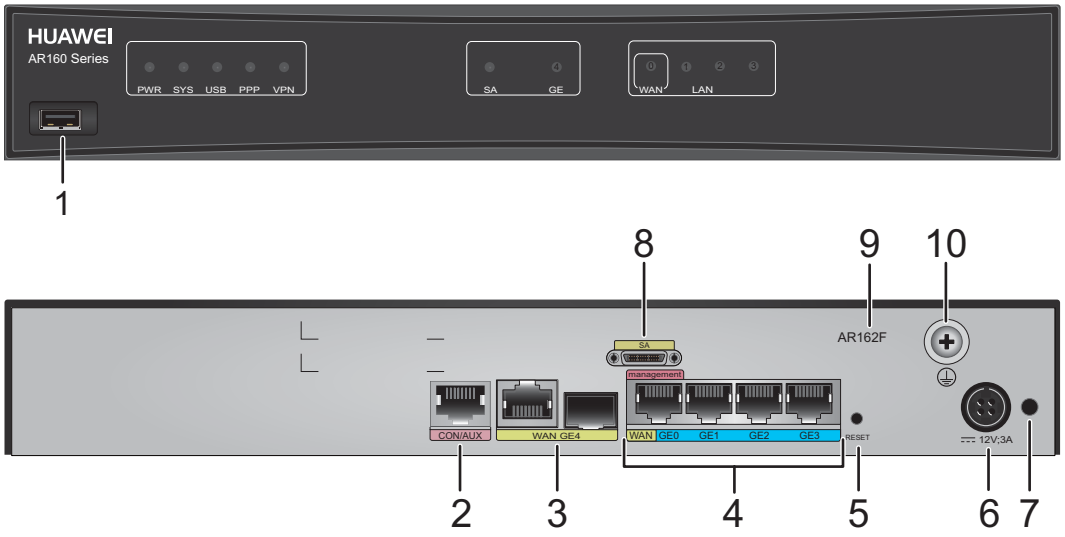
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	Product model silkscreen
11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	12	LTE antenna interface
13	Two Wi-Fi antenna interfaces	14	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.

4.3.5 AR162F

Appearance

Figure 4-23 shows the appearance of the AR162F.

Figure 4-23 AR162F appearance



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1	USB interface (host)	2	CON/AUX interface **NOTE** The AR162F does not support AUX login.
3	WAN interface: GE combo interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: SA interface
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.3.6 AR161FW

Appearance

Figure 4-24 shows the appearance of the AR161FW.

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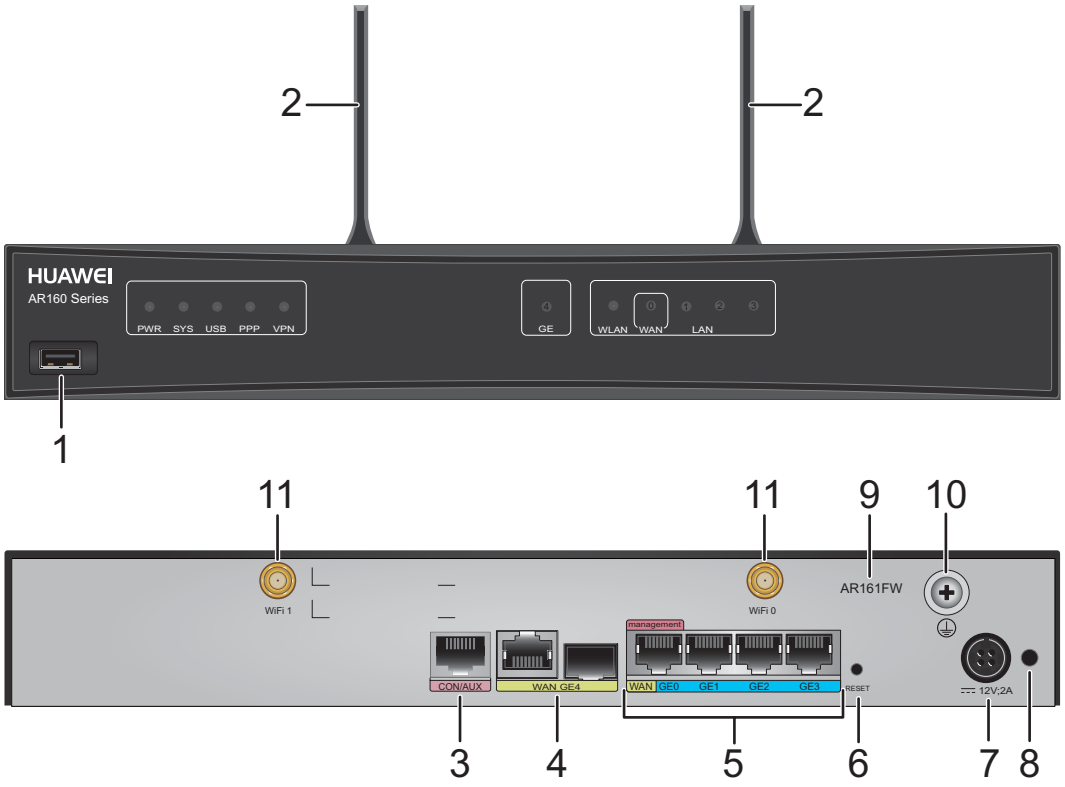
Figure 4-24 AR161FW appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR161FW does not support AUX login.	4	WAN interface: GE combo interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

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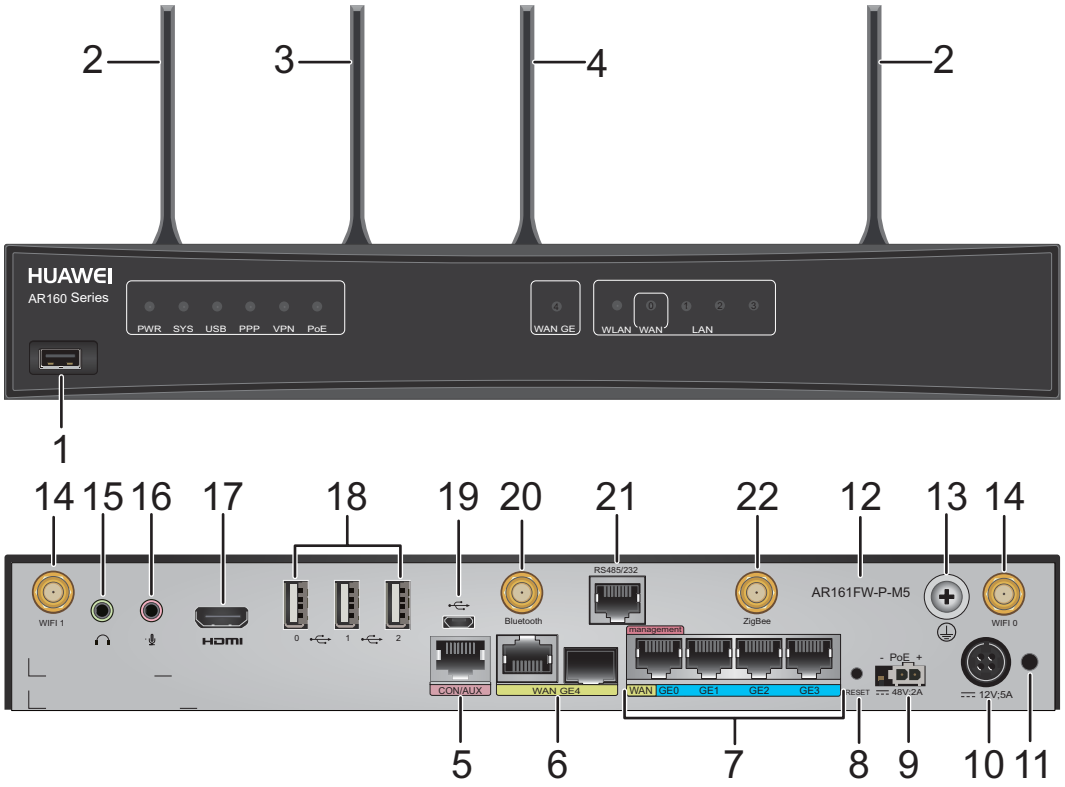
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	Two Wi-Fi antenna interfaces	-	-

4.3.7 AR161FW-P-M5

Appearance

Figure 4-25 shows the appearance of the AR161FW-P-M5.

Figure 4-25 AR161FW-P-M5 appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	ZigBee antenna	4	Bluetooth antenna
5	CON/AUX interface **NOTE** The AR161FW-P-M5 does not support AUX login.	6	WAN interface: GE combo interface

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7	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.	8	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
9	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.	10	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.
11	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	12	Product model silkscreen
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	14	Two Wi-Fi antenna interfaces
15	Earphone jack	16	Microphone jack
17	HDMI video interface	18	Three USB interfaces (host)
19	USB interface (OTG)	20	Bluetooth antenna interface
21	RS485/232 interface	22	ZigBee antenna interface

4.3.8 AR169FVW

Appearance

Figure 4-26 shows the appearance of the AR169FVW router.

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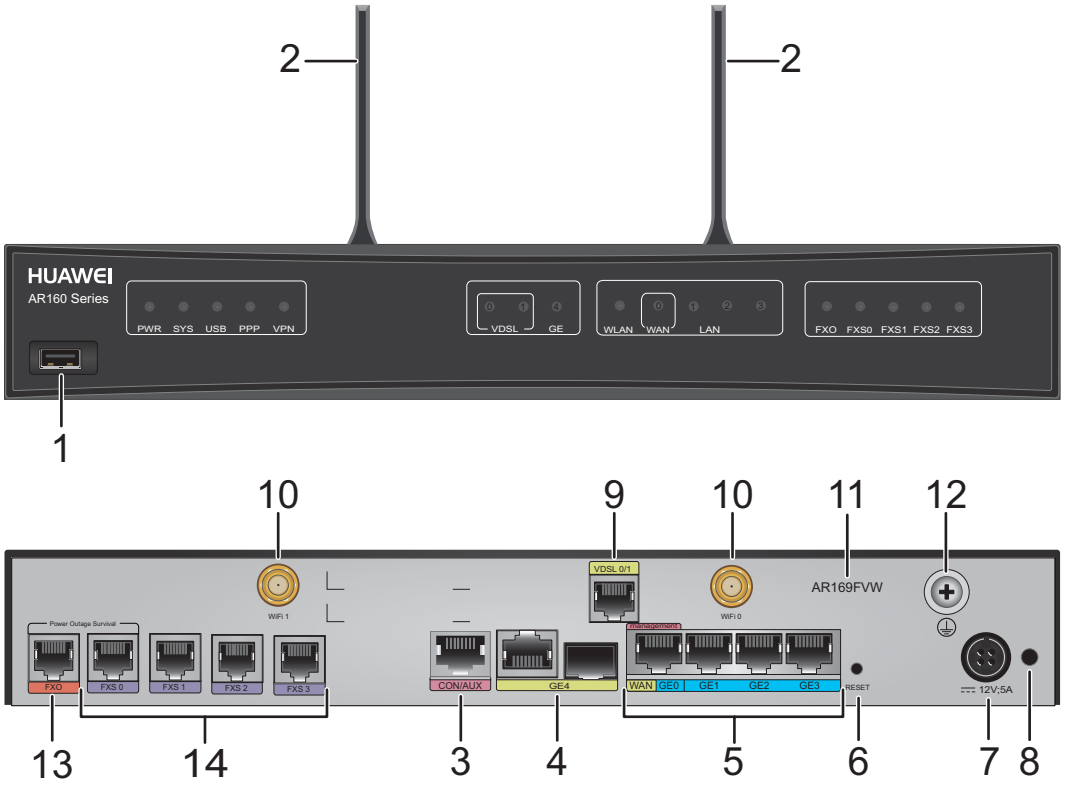
Figure 4-26 AR169FVW appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR169FVW does not support AUX login.	4	WAN interface: GE combo interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

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9	WAN interface: VDSL interface **NOTE** The VDSL0 and VDSL1 interfaces must be used together as two VDSL bonding interfaces.	10	Two Wi-Fi antenna interfaces
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
13	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	14	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.

4.3.9 AR169FGVW-L

Appearance

Figure 4-27 shows the appearance of the AR169FGVW-L router.

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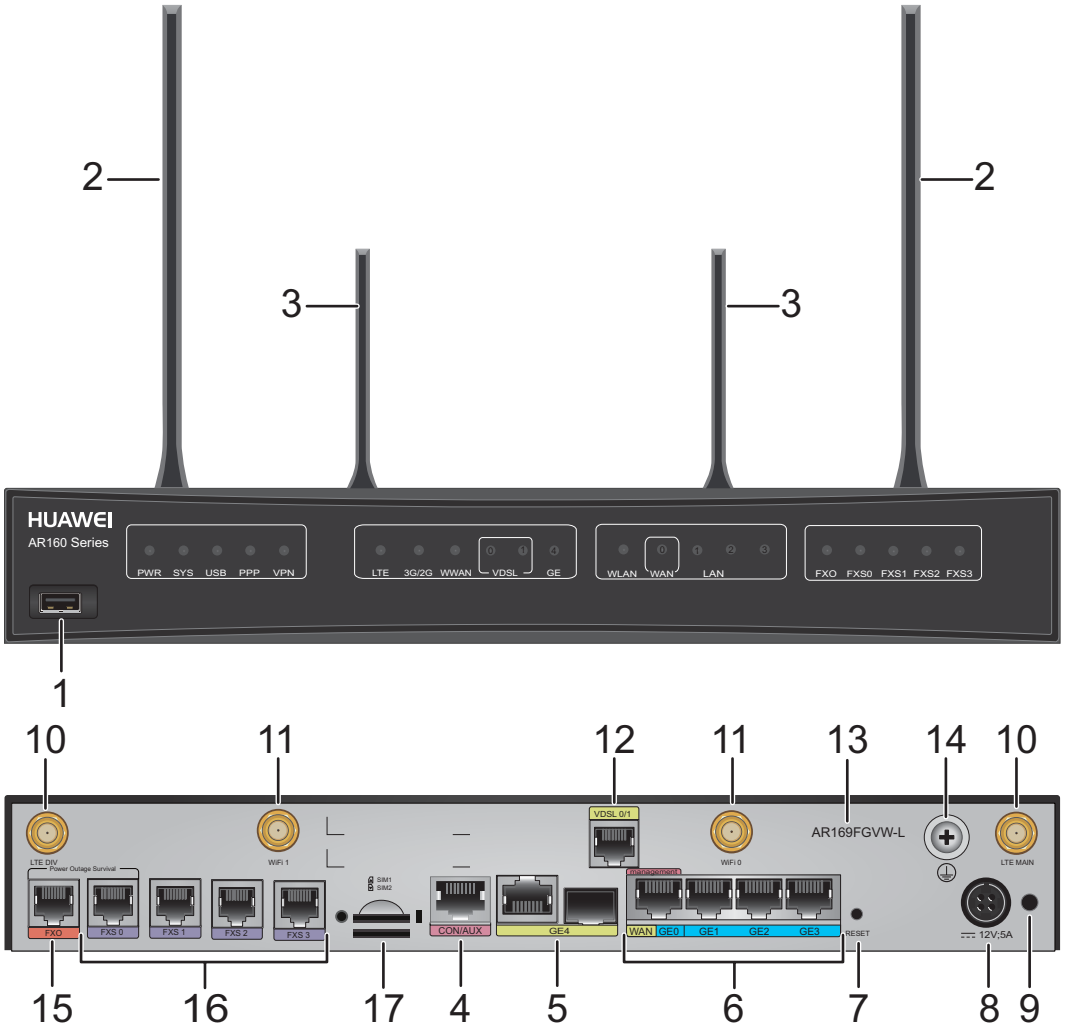
Figure 4-27 AR169FGVW-L appearance



1	USB interface (host)	2	Two LTE antennas
3	Two Wi-Fi antennas	4	CON/AUX interface **NOTE** The AR169FGVW-L does not support AUX login.
5	WAN interface: GE combo interface	6	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.

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7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Two Wi-Fi antenna interfaces	12	WAN interface: VDSL interface **NOTE** The VDSL0 and VDSL1 interfaces must be used together as two VDSL bonding interfaces.
13	Product model silkscreen	14	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
15	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	16	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
17	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	-	-

4.3.10 AR161F

Appearance

Figure 4-28 shows the appearance of the AR161F router.

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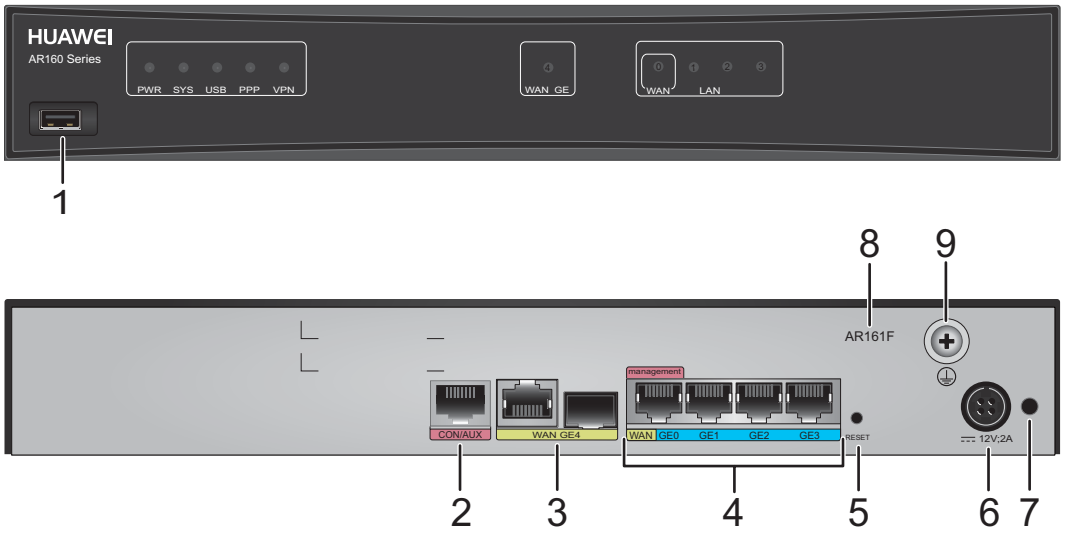
Figure 4-28 AR161F appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR161F does not support AUX login.
3	WAN interface: GE combo interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

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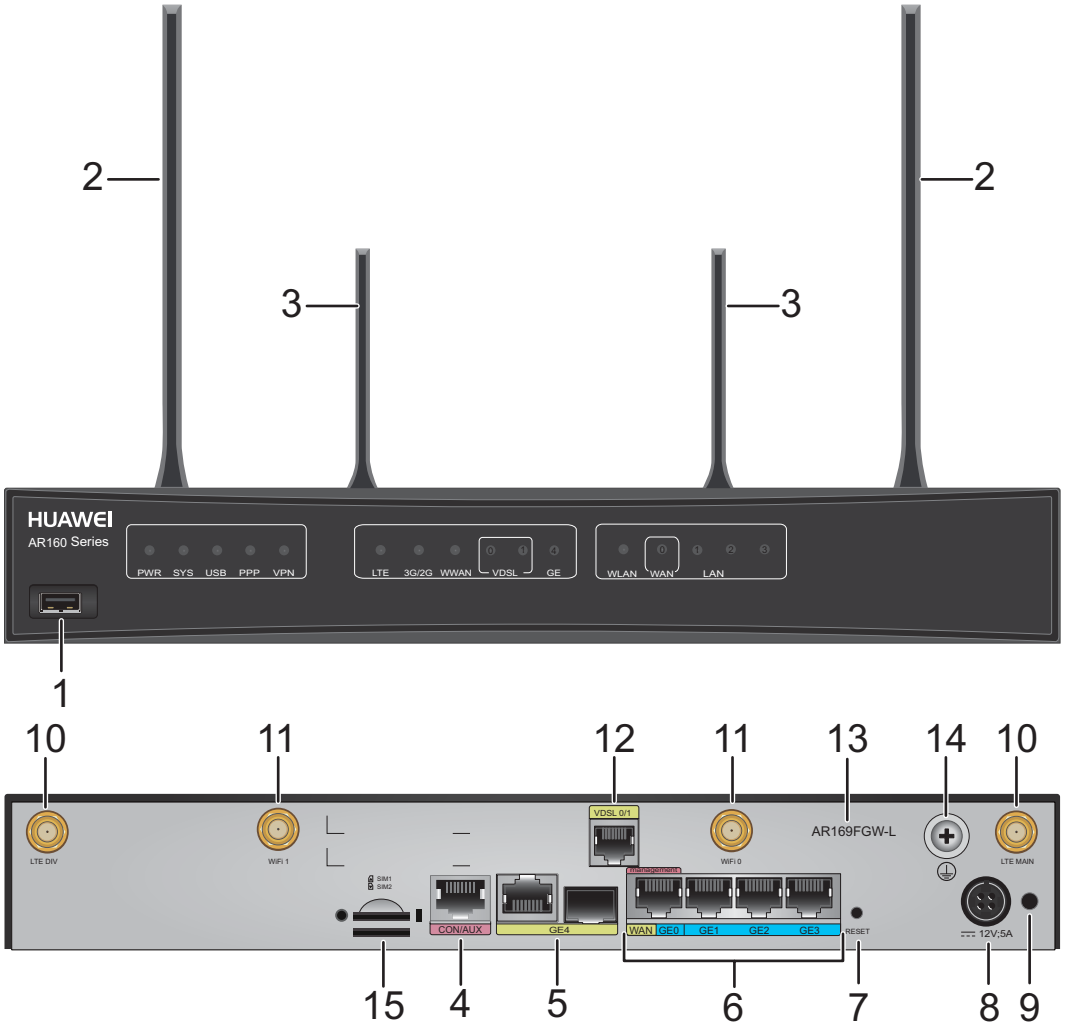
4.3.11 AR169FGW-L

Appearance

Figure 4-29 shows the appearance of the AR169FGW-L router.

Figure 4-29 AR169FGW-L appearance



1	USB interface (host)	2	Two LTE antennas
3	Two Wi-Fi antennas	4	CON/AUX interface **NOTE** The AR169FGW-L does not support AUX login.

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5	WAN interface: GE combo interface	6	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Two Wi-Fi antenna interfaces	12	WAN interface: VDSL interface **NOTE** The VDSL0 and VDSL1 interfaces must be used together as two VDSL bonding interfaces.
13	Product model silkscreen	14	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
15	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	-	-

4.3.12 AR161

Appearance

Figure 4-30 shows the appearance of the AR161 router.

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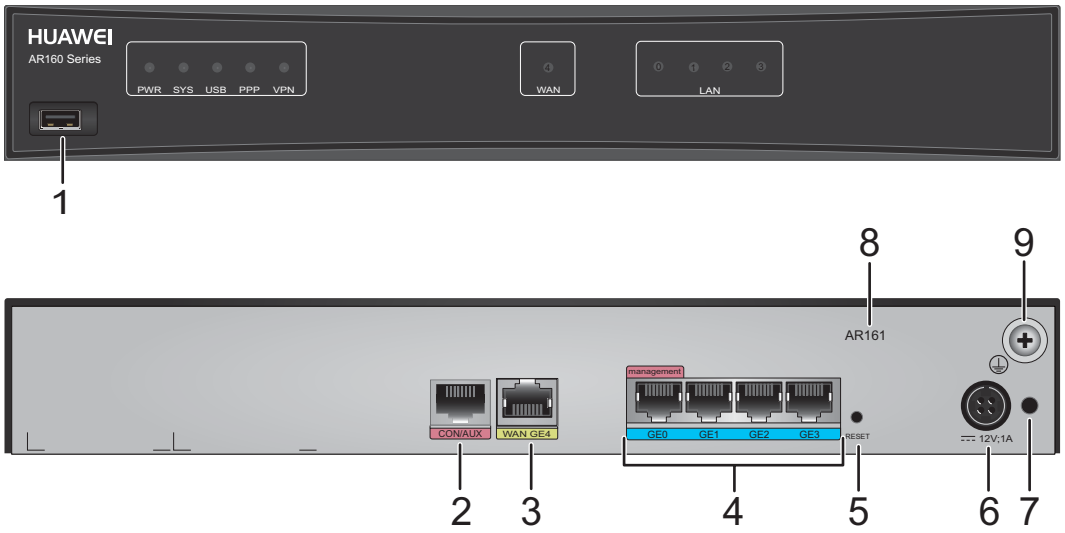
Figure 4-30 AR161 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR161 does not support AUX login.
3	WAN interface: GE electrical interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

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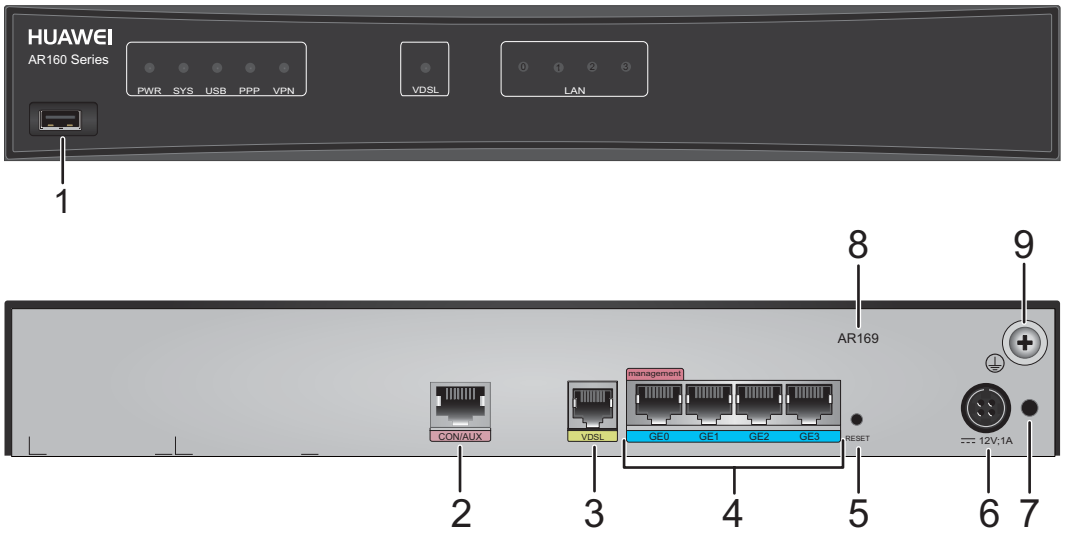
4.3.13 AR169

Appearance

Figure 4-31 shows the appearance of the AR169 router.

Figure 4-31 AR169 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR169 does not support AUX login.
3	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen

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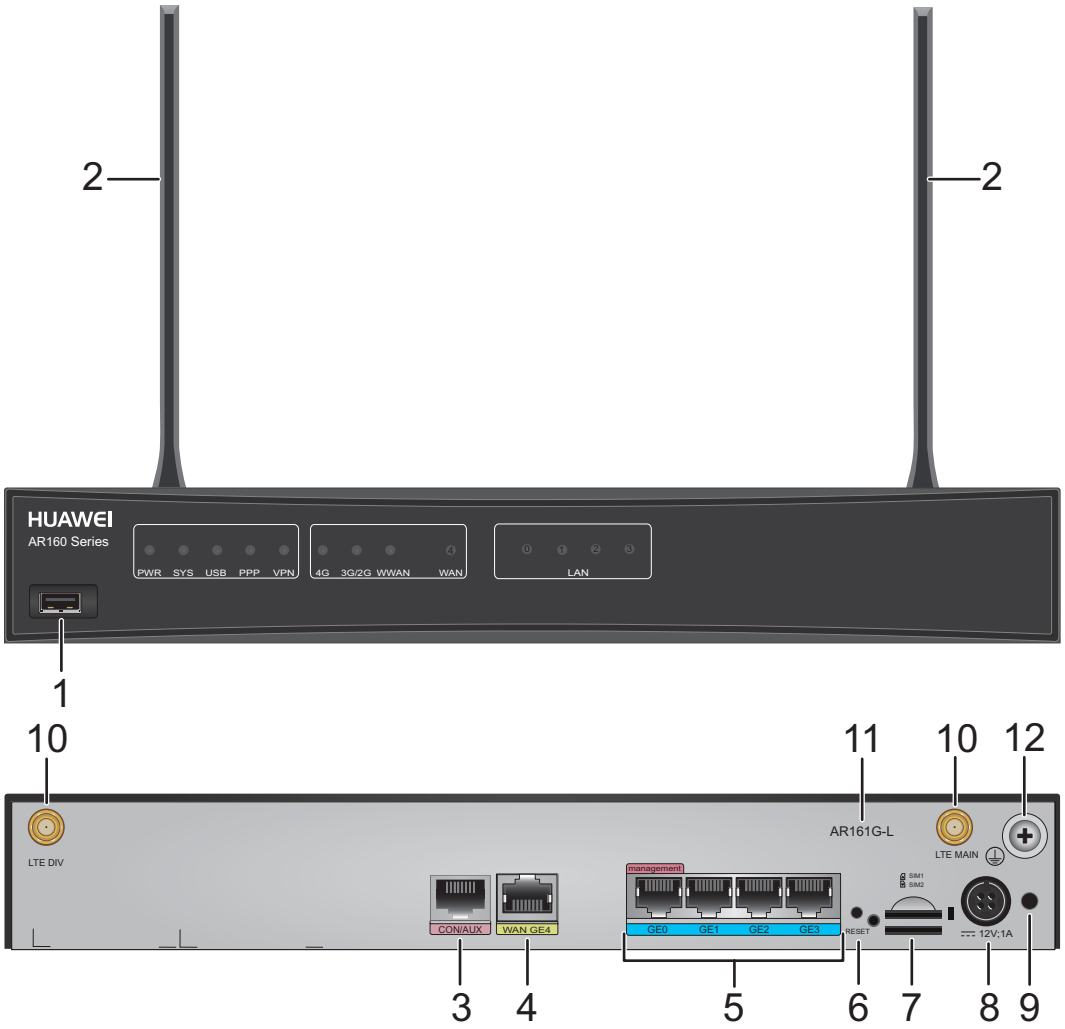
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.3.14 AR161G-L

Appearance

Figure 4-32 shows the appearance of the AR161G-L router.

Figure 4-32 AR161G-L appearance



1	USB interface (host)	2	Two LTE antennas

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3	CON/AUX interface **NOTE** The AR161G-L does not support AUX login.	4	WAN interface: GE electrical interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.3.15 AR169G-L

Appearance

Figure 4-33 shows the appearance of the AR169G-L router.

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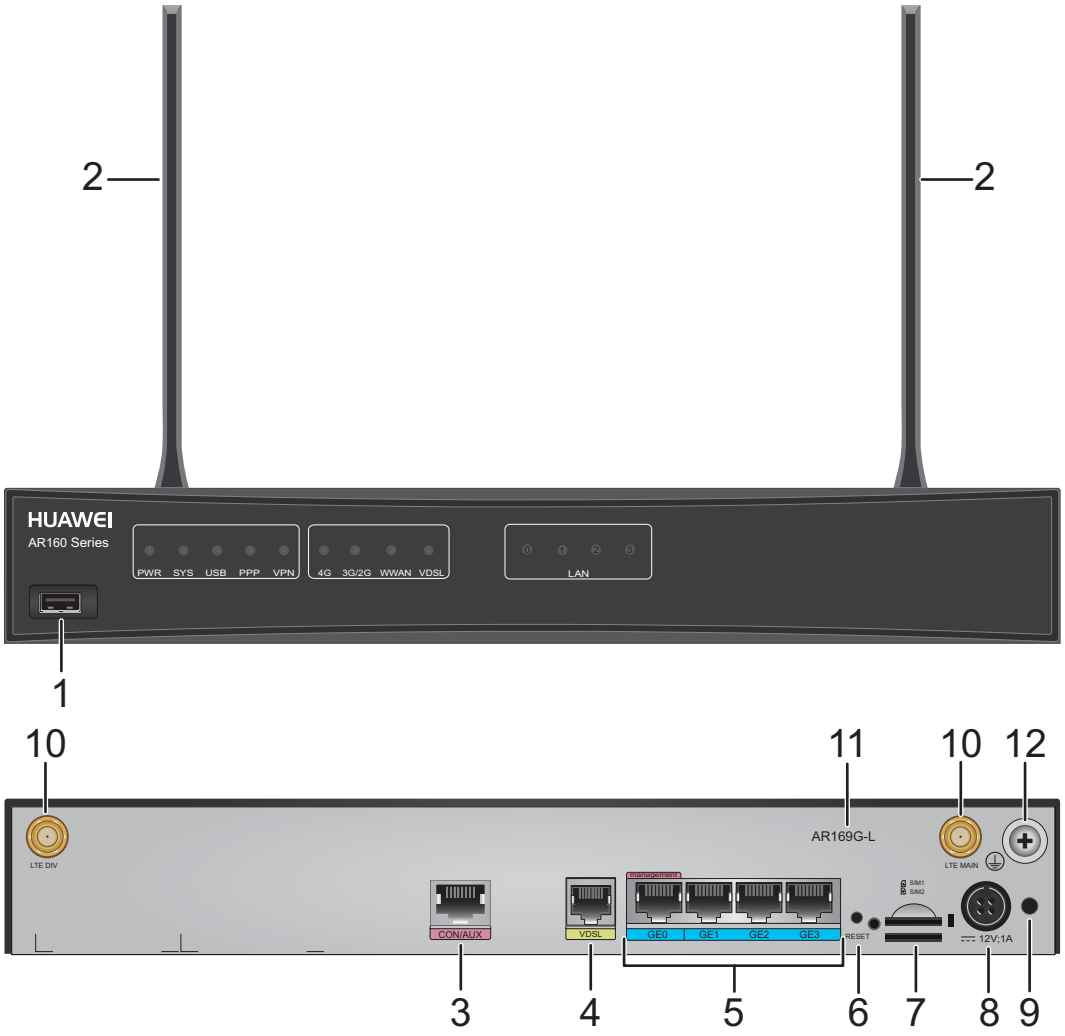
Figure 4-33 AR169G-L appearance



1	USB interface (host)	2	Two LTE antennas
3	CON/AUX interface **NOTE** The AR169G-L does not support AUX login.	4	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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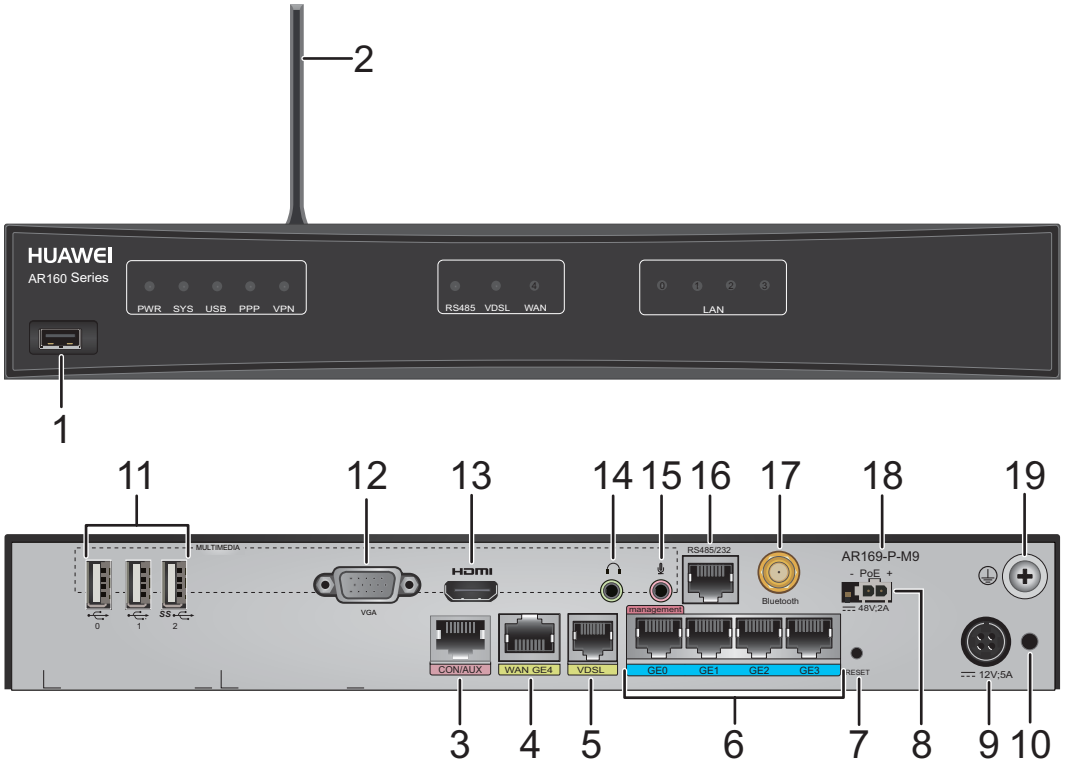
7	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	LTE antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.3.16 AR169-P-M9

Appearance

Figure 4-34 shows the appearance of the AR169-P-M9 router.

Figure 4-34 AR169-P-M9 appearance



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1	USB interface (host)	2	Bluetooth antenna
3	CON/AUX interface **NOTE** The AR169-P-M9 does not support AUX login.	4	WAN interface: GE electrical interface
5	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.	6	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
7	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	8	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.
9	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.	10	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
11	Three USB interfaces (host)	12	VGA interface
13	HDMI video interface	14	Earphone jack
15	Microphone jack	16	RS485/232 interface
17	Bluetooth antenna interface	18	Product model silkscreen
19	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.3.17 AR161W

Appearance

Figure 4-35 shows the appearance of the AR161W router.

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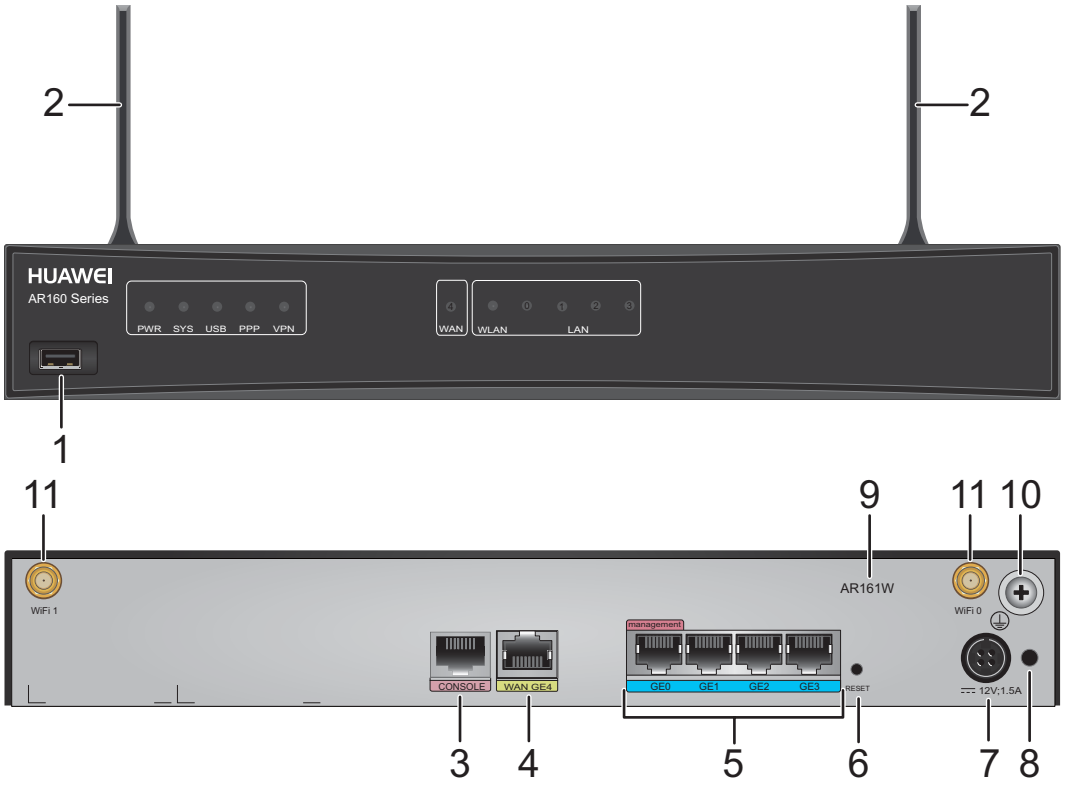
Figure 4-35 AR161W appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CONSOLE interface	4	WAN interface: GE electrical interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

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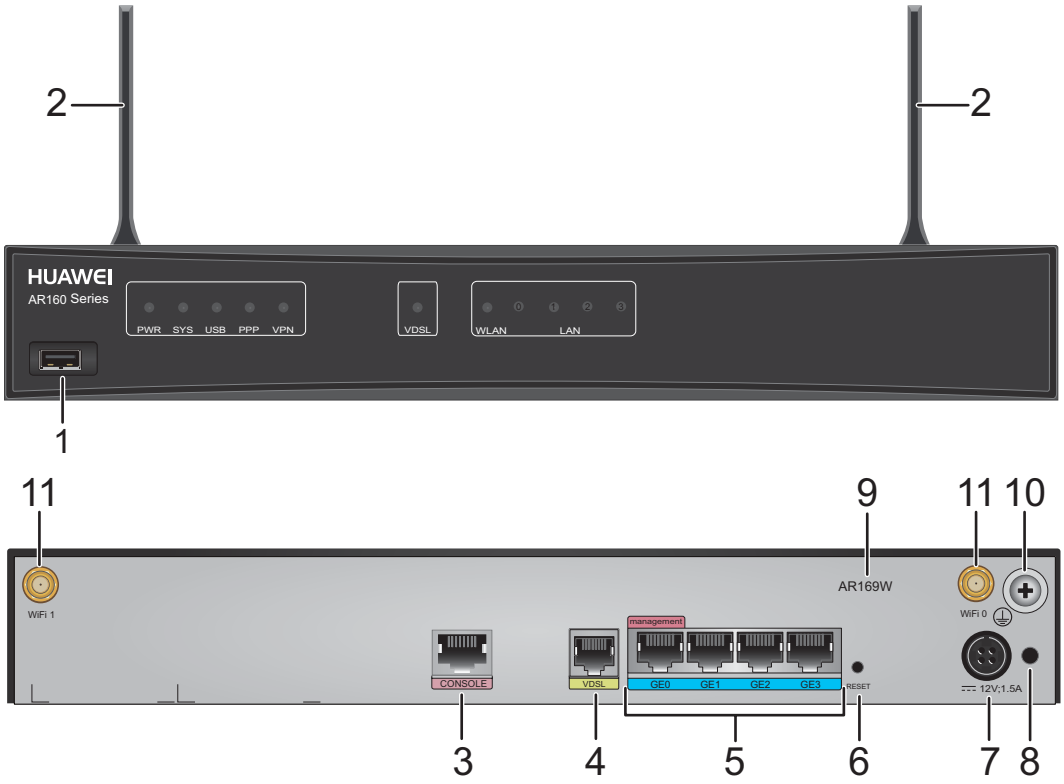
11	Two Wi-Fi antenna interfaces	-	-

4.3.18 AR169W

Appearance

Figure 4-36 shows the appearance of the AR169W router.

Figure 4-36 AR169W appearance



1	USB interface (host)	2	Two Wi-Fi antennas
3	CONSOLE interface	4	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.

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5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	Two Wi-Fi antenna interfaces	-	-

4.3.19 AR169W-P-M9

Appearance

Figure 4-37 shows the appearance of the AR169W-P-M9.

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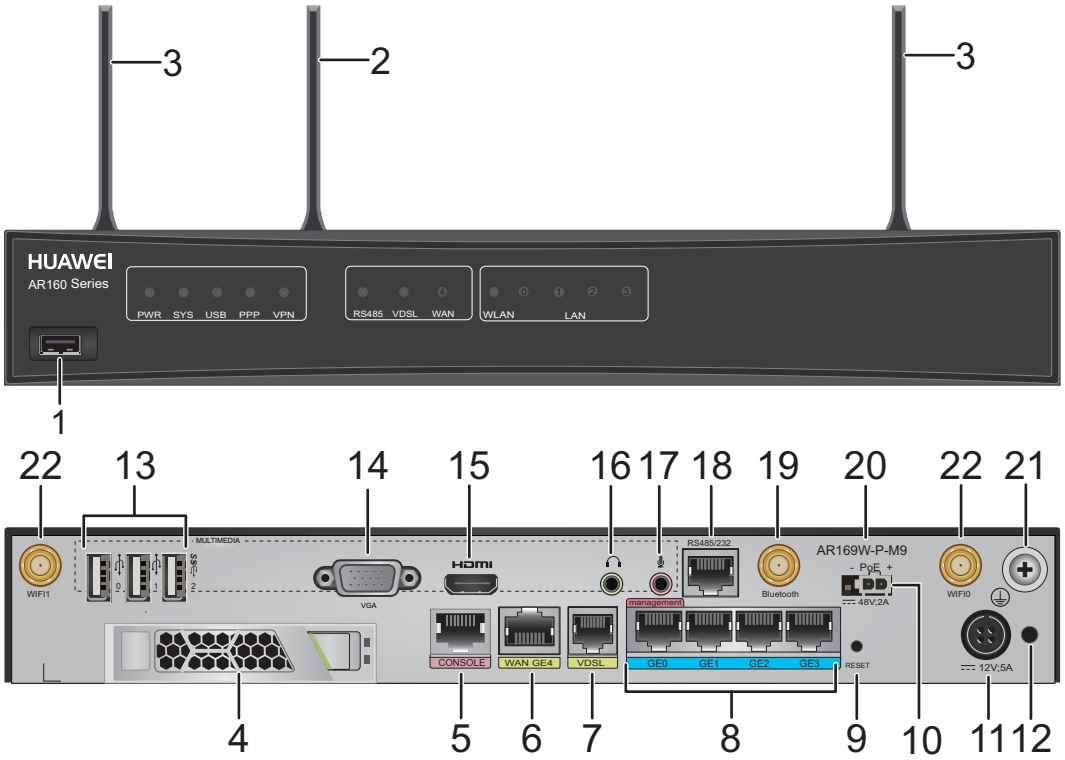
Figure 4-37 AR169W-P-M9 appearance



1	USB interface (host)	2	Bluetooth antenna
3	Two Wi-Fi antennas	4	Hard disk drive interface
5	CONSOLE interface	6	WAN interface: GE electrical interface
7	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.	8	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
9	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	10	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.
11	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.	12	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

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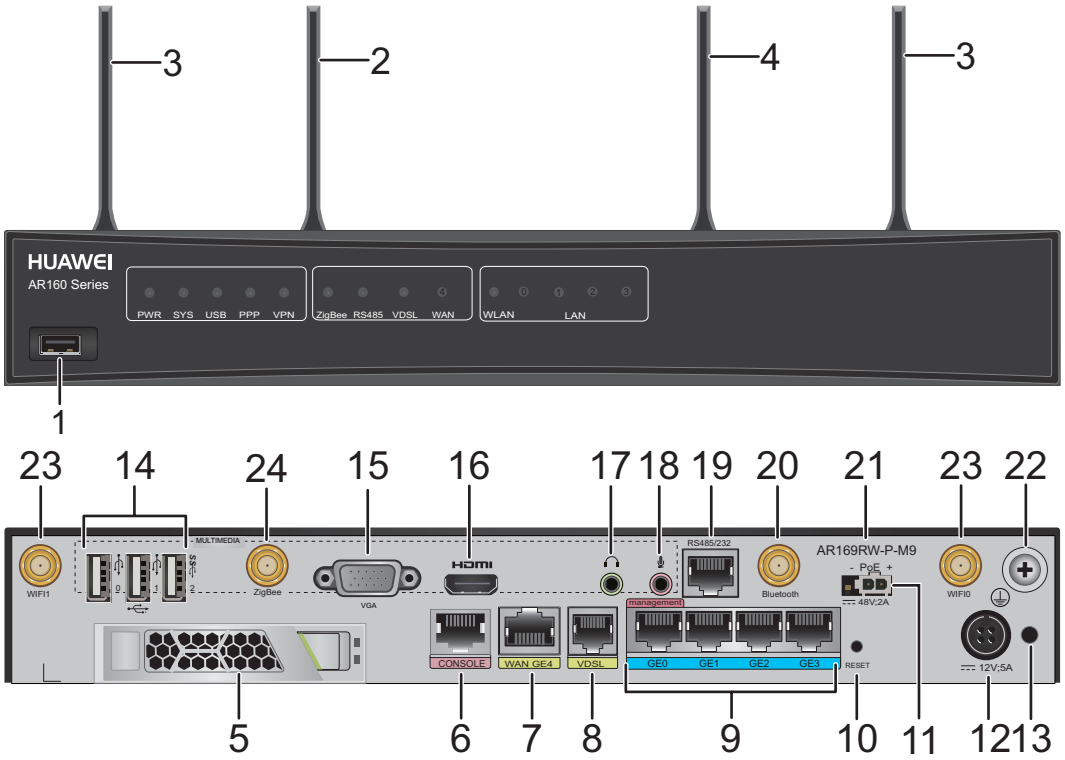
13	Three USB interfaces (host) **NOTE** The output power of the USB interface is 5 W. When a USB CD-ROM driver with high power consumption is connected to the USB interface, it must be powered by an independent external power source.	14	VGA interface
15	HDMI video interface	16	Earphone jack
17	Microphone jack	18	RS485/232 interface
19	Bluetooth antenna interface	20	Product model silkscreen
21	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	22	Two Wi-Fi antenna interfaces

4.3.20 AR169RW-P-M9

Appearance

Figure 4-38 shows the appearance of the AR169RW-P-M9.

Figure 4-38 AR169RW-P-M9 appearance



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1	USB interface (host)	2	Bluetooth antenna
3	Two Wi-Fi antennas	4	ZigBee antenna
5	Hard disk drive interface	6	CONSOLE interface
7	WAN interface: GE electrical interface	8	WAN interface: VDSL interface **NOTE** This interface supports the dying gasp function.
9	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	10	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
11	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.	12	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.
13	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	14	Three USB interfaces (host) **NOTE** The output power of the USB interface is 5 W. When a USB CD-ROM driver with high power consumption is connected to the USB interface, it must be powered by an independent external power source.
15	VGA interface	16	HDMI video interface
17	Earphone jack	18	Microphone jack
19	RS485/232 interface	20	Bluetooth antenna interface
21	Product model silkscreen	22	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
23	Two Wi-Fi antenna interfaces	24	ZigBee antenna interface

4.3.21 AR161FV-1P

Appearance

Figure 4-39 shows the appearance of the AR161FV-1P.

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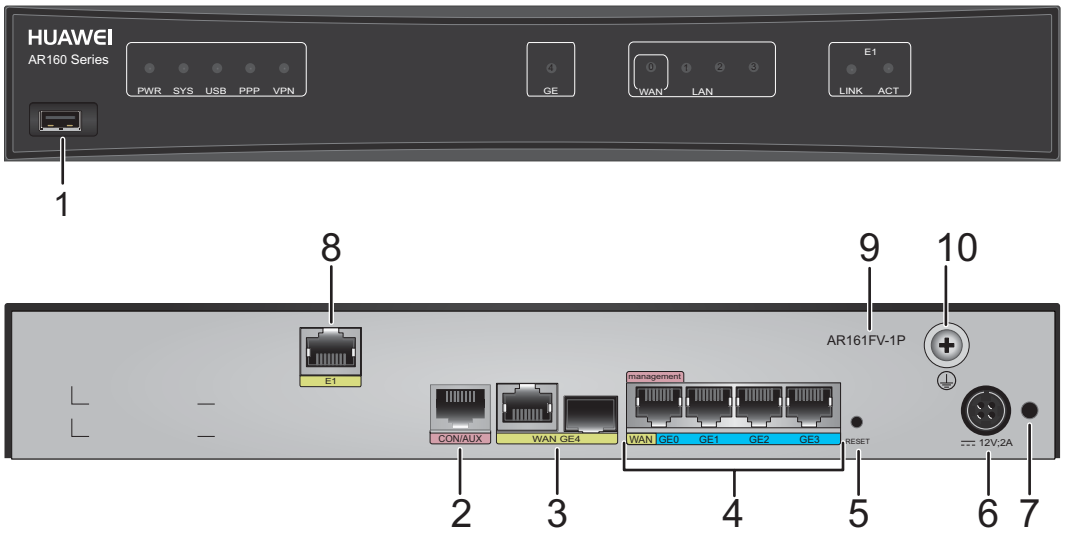
Figure 4-39 AR161FV-1P appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR161FV-1P does not support AUX login.
3	WAN interface: GE combo interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router. It can be configured as a WAN interface.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	WAN interface: VE1 interface **NOTE** This interface can be connected to a wide area network using an E1/T1 cable.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

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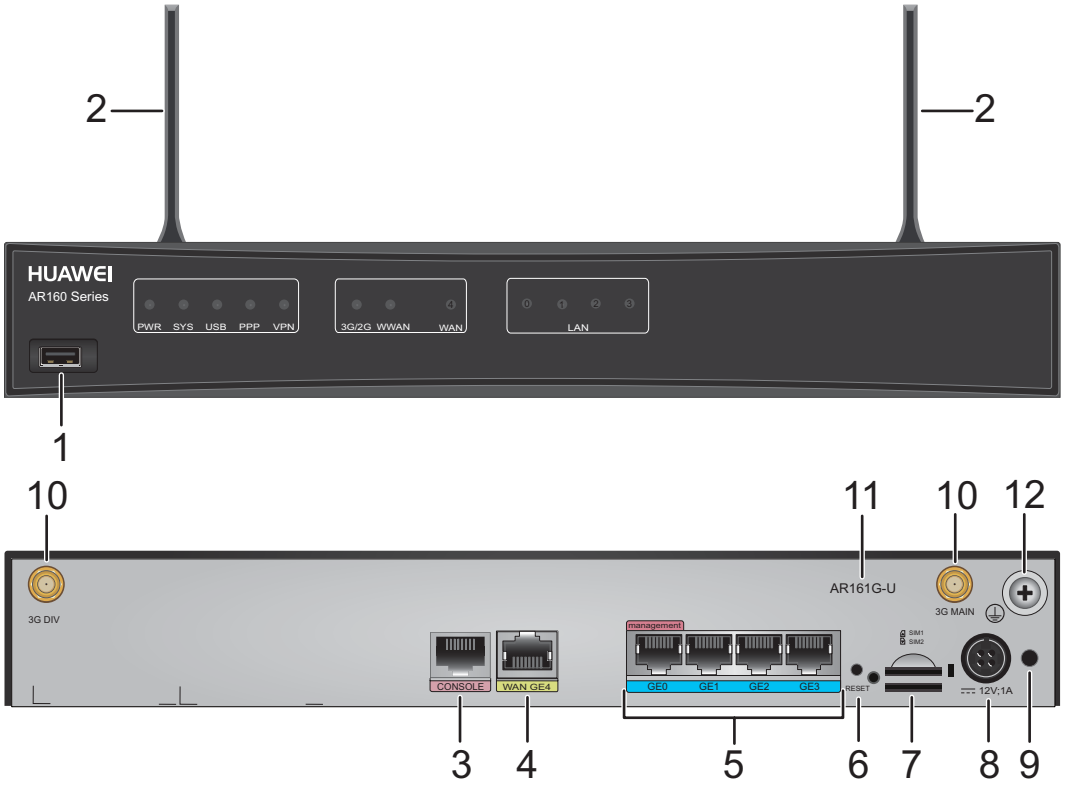
4.3.22 AR161G-U

Appearance

Figure 4-40 shows the appearance of the AR161G-U.

Figure 4-40 AR161G-U appearance



1	USB interface (host)	2	Two 3G antennas
3	CONSOLE interface	4	WAN interface: GE electrical interface
5	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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7	Two SIM card slots **NOTE** The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.	8	Power jack **NOTE** Use a 24 W power adapter to connect the router to a power source.
9	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	10	3G-U antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

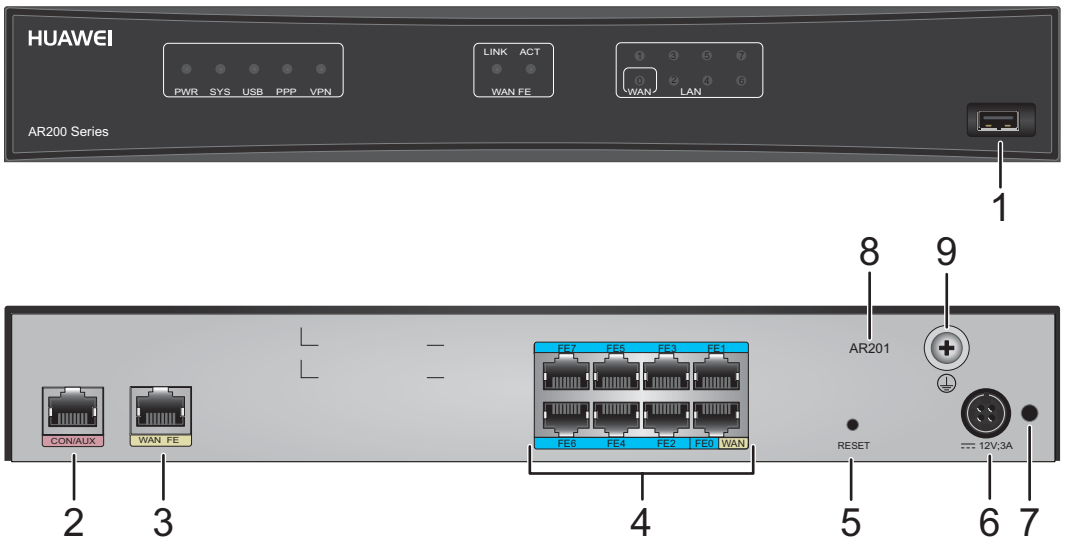
4.4 AR200 Series

4.4.1 AR201

Appearance

Figure 4-41 shows the appearance of the AR201 router.

Figure 4-41 AR201 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR201 does not support AUX login.

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3	WAN interface: FE electrical interface	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.4.2 AR206

Appearance

Figure 4-42 shows the appearance of the AR206 router.

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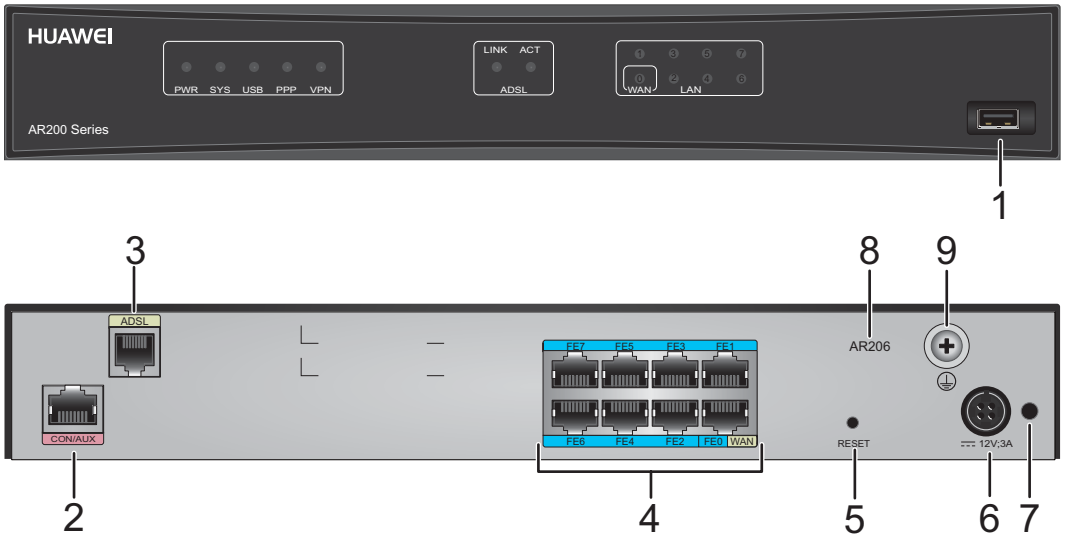
Figure 4-42 AR206 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR206 does not support AUX login.
3	WAN interface: ADSL-B/J interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

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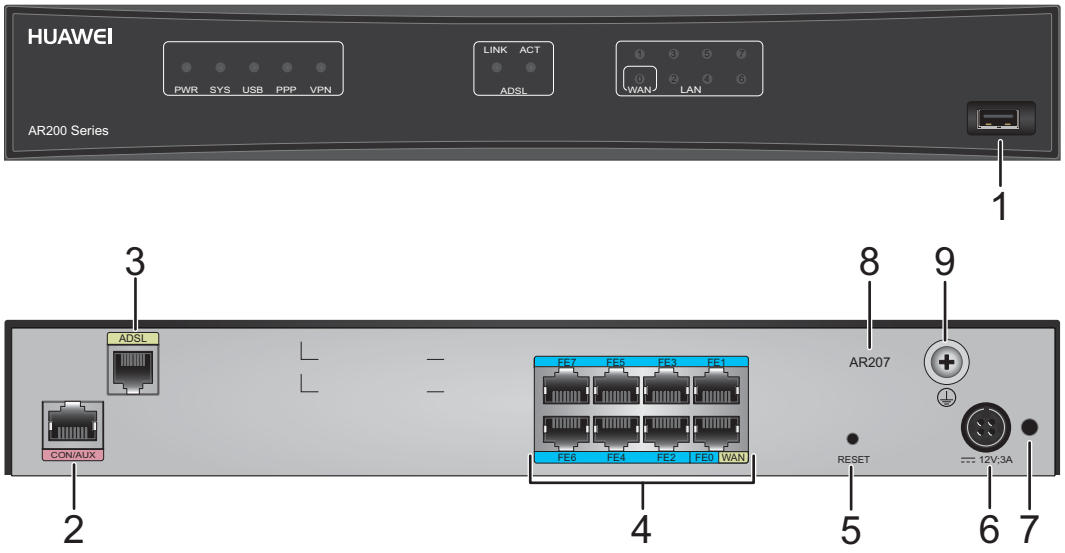
4.4.3 AR207

Appearance

Figure 4-43 shows the appearance of the AR207 router.

Figure 4-43 AR207 appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR207 does not support AUX login.
3	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.

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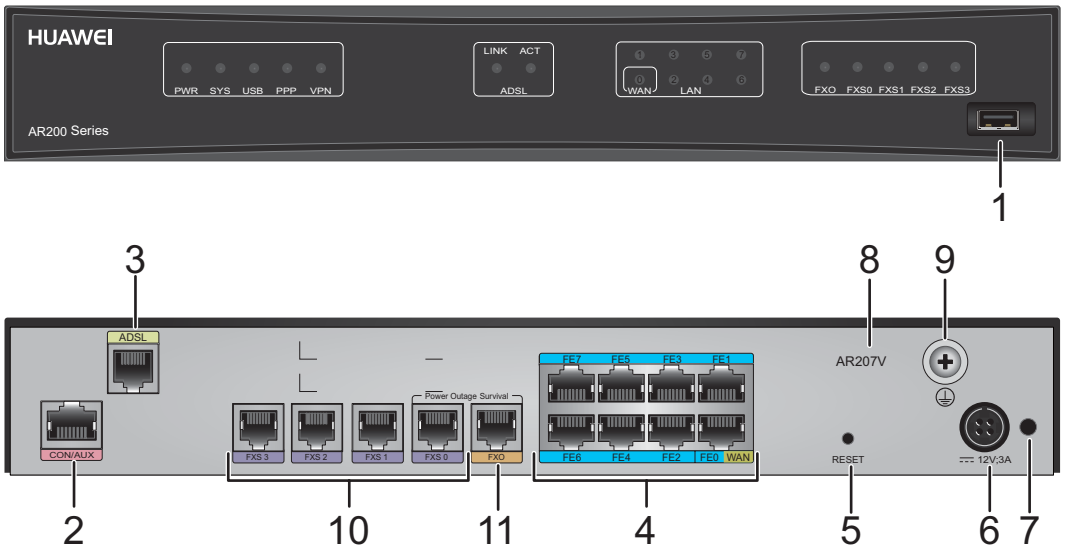
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.4.4 AR207V

Appearance

Figure 4-44 shows the appearance of the AR207V router.

Figure 4-44 AR207V appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR207V does not support AUX login.
3	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.

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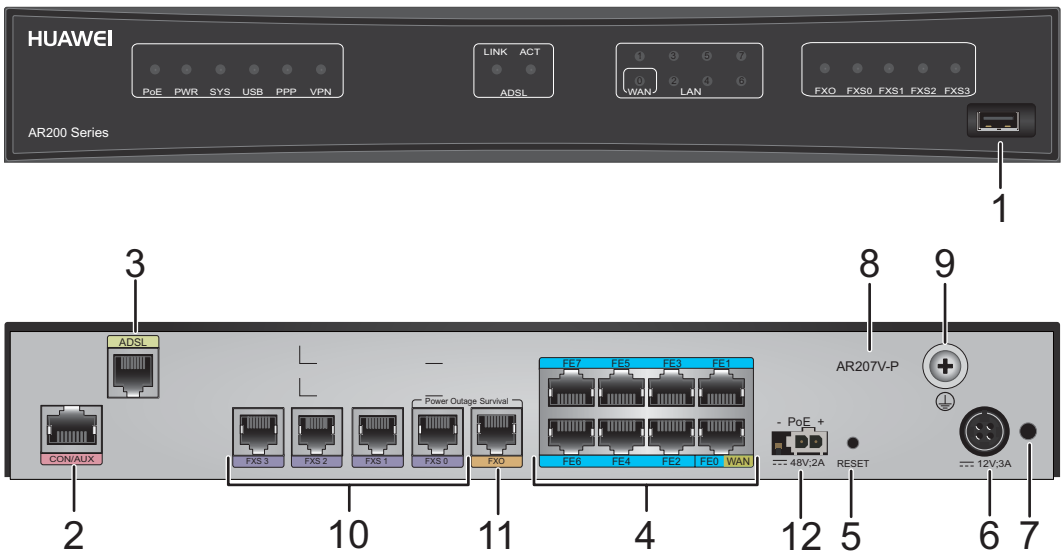
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	10	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
11	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	-	-

4.4.5 AR207V-P

Appearance

Figure 4-45 shows the appearance of the AR207V-P router.

Figure 4-45 AR207V-P appearance



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1	USB interface (host)	2	CON/AUX interface **NOTE** The AR207V-P does not support AUX login.
3	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	10	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
11	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	12	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.

4.4.6 AR208E

Appearance

Figure 4-46 shows the appearance of the AR208E router.

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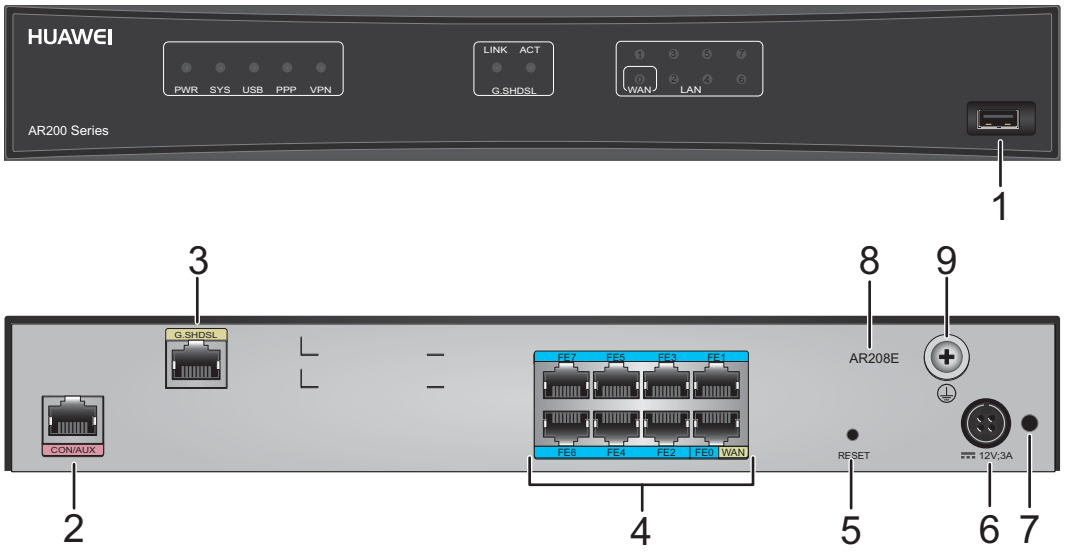
Figure 4-46 AR208E appearance



1	USB interface (host)	2	CON/AUX interface **NOTE** The AR208E does not support AUX login.
3	WAN interface: G.SHDSL interface **NOTE** This interface supports the dying gasp function.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Product model silkscreen

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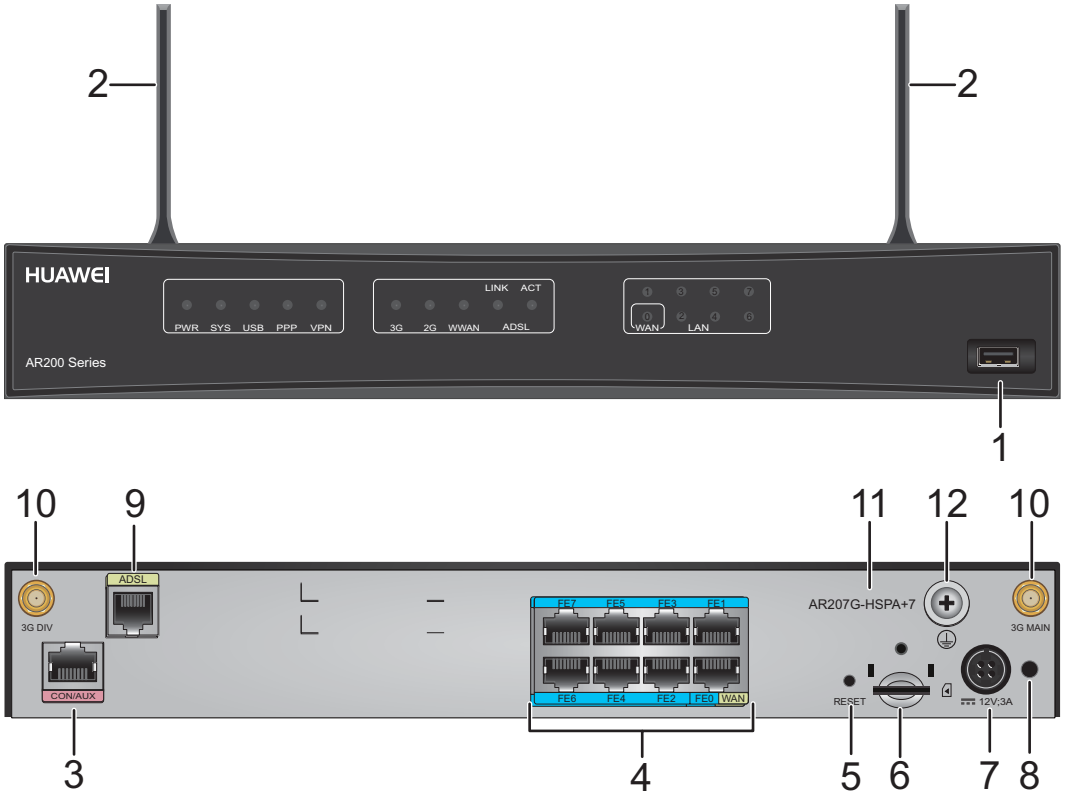
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.4.7 AR207G-HSPA+7

Appearance

Figure 4-47 shows the appearance of the AR207G-HSPA+7 router.

Figure 4-47 AR207G-HSPA+7 appearance



1	USB interface (host)	2	Two 3G antennas
3	CON/AUX interface **NOTE** The AR207G-HSPA+7 does not support AUX login.	4	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.

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5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	SIM card slot **NOTE** The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
7	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.	10	3G-HSPA+7 antenna interface
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.4.8 AR201VW-P

Appearance

Figure 4-48 shows the appearance of the AR201VW-P router.

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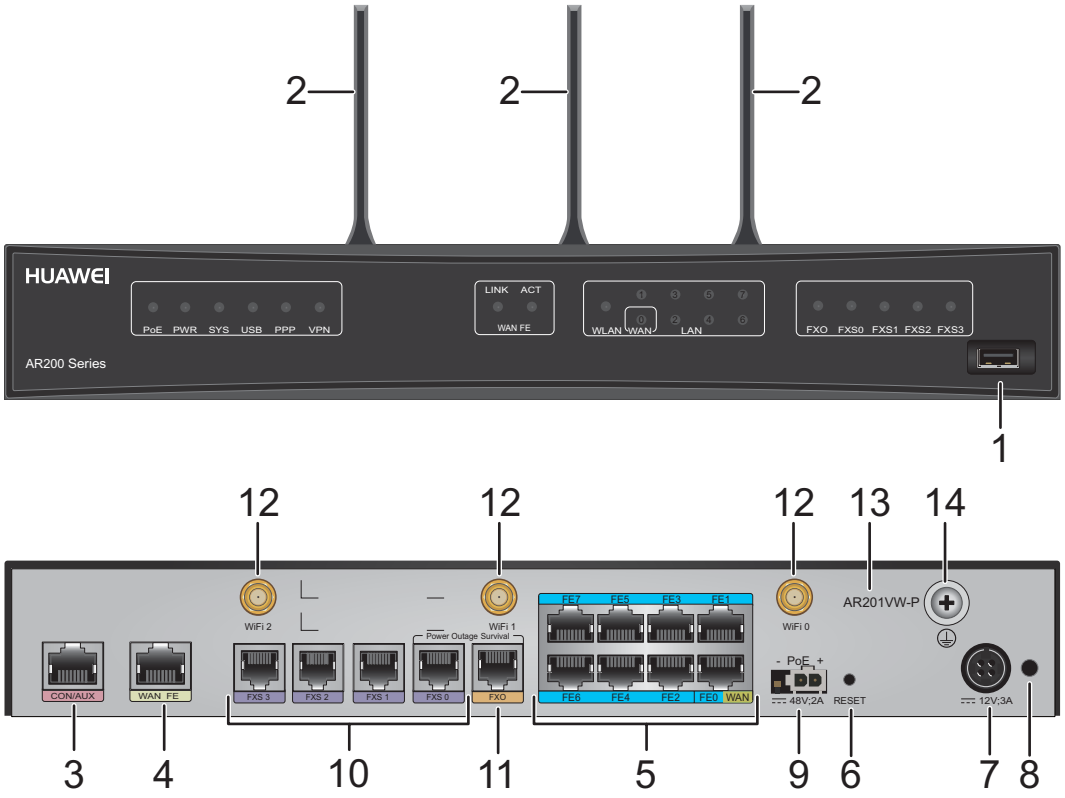
Figure 4-48 AR201VW-P appearance



1	USB interface (host)	2	Three Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR201VW-P does not support AUX login.	4	WAN interface: FE electrical interface
5	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 36 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

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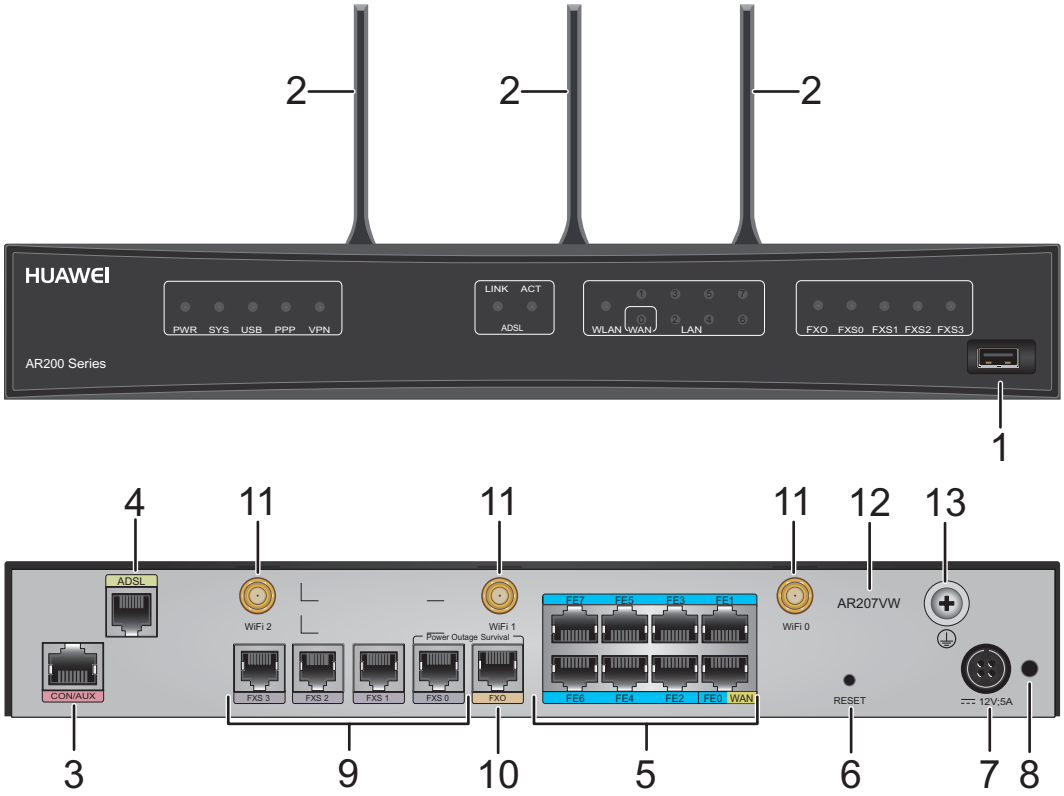
9	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.	10	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.
11	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.	12	Three Wi-Fi antenna interfaces
13	Product model silkscreen	14	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

4.4.9 AR207VW

Appearance

Figure 4-49 shows the appearance of the AR207VW router.

Figure 4-49 AR207VW appearance



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1	USB interface (host)	2	Three Wi-Fi antennas
3	CON/AUX interface **NOTE** The AR207VW does not support AUX login.	4	WAN interface: ADSL-A/M interface **NOTE** This interface supports the dying gasp function.
5	LAN interfaces: eight FE electrical interfaces **NOTE** ● LAN interface FE0 can be configured as a WAN interface. ● FE6 is a management interface and is used to upgrade the router.	6	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.
7	Power jack **NOTE** Use a 60 W power adapter to connect the router to a power source.	8	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
9	Four FXS interfaces **NOTE** The FXS interfaces can be connected to analog telephones using standard telephone cables.	10	One FXO interface **NOTE** The FXO interface can be connected to a public switched telephone network (PSTN) using a standard telephone cable.
11	Three Wi-Fi antenna interfaces	12	Product model silkscreen
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

4.5 AR500 Series

4.5.1 AR503GW-LM7

Appearance

Figure 4-50 shows the appearance of the AR503GW-LM7 router.

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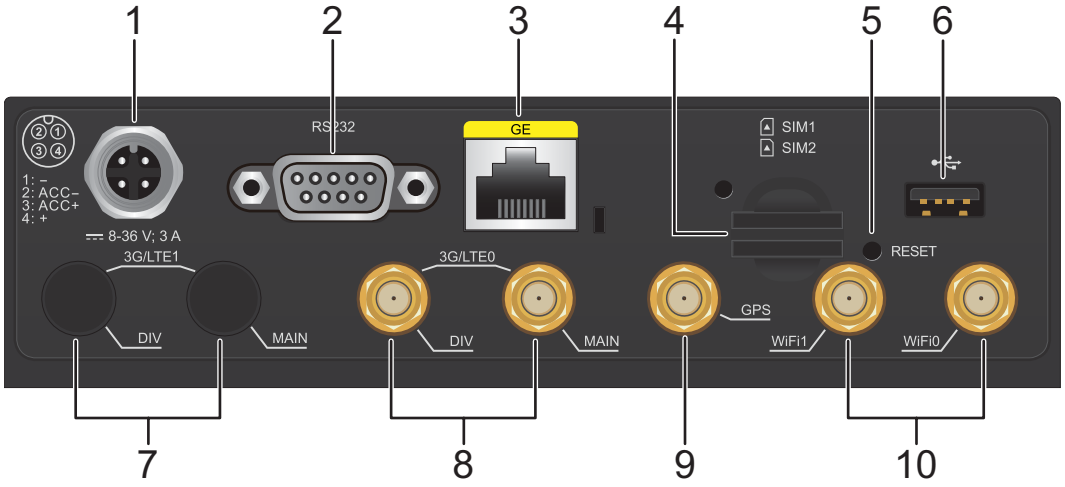
Figure 4-50 AR503GW-LM7 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	RS232 interface **NOTE** The RS232 interface can be used as a console interface to configure the router.
3	WAN interface: GE electrical interface	4	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	USB interface (host)
7	Reserved 3G/LTE antenna interface	8	3G/LTE antenna interface
9	GPS antenna interface	10	Two Wi-Fi antenna interfaces

4.5.2 AR503GW-LcM7

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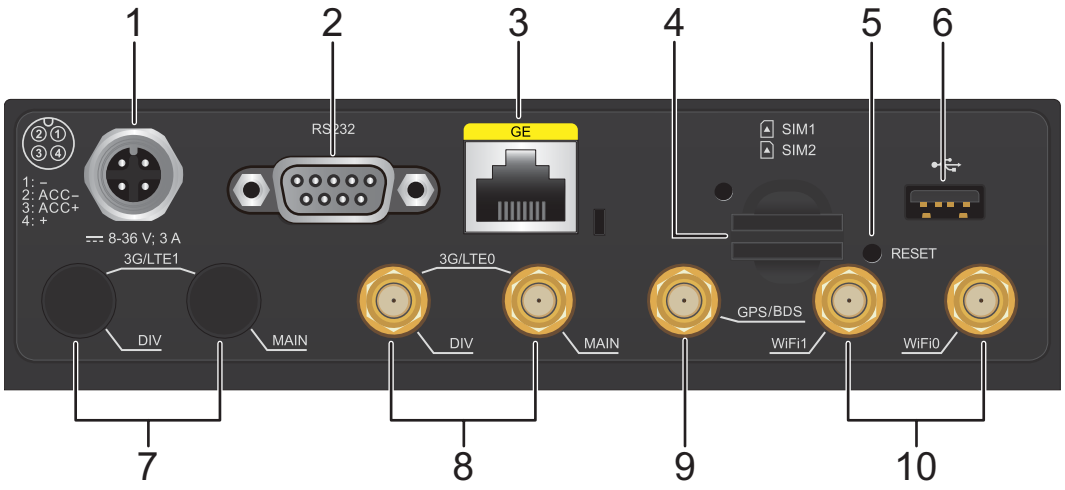
Appearance

Figure 4-51 shows the appearance of the AR503GW-LcM7 router.

Figure 4-51 AR503GW-LcM7 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	RS232 interface **NOTE** The RS232 interface can be used as a console interface to configure the router.
3	WAN interface: GE electrical interface	4	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
5	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	USB interface (host)
7	Reserved 3G/LTE antenna interface	8	3G/LTE antenna interface
9	GPS/BDS antenna interface	10	Two Wi-Fi antenna interfaces

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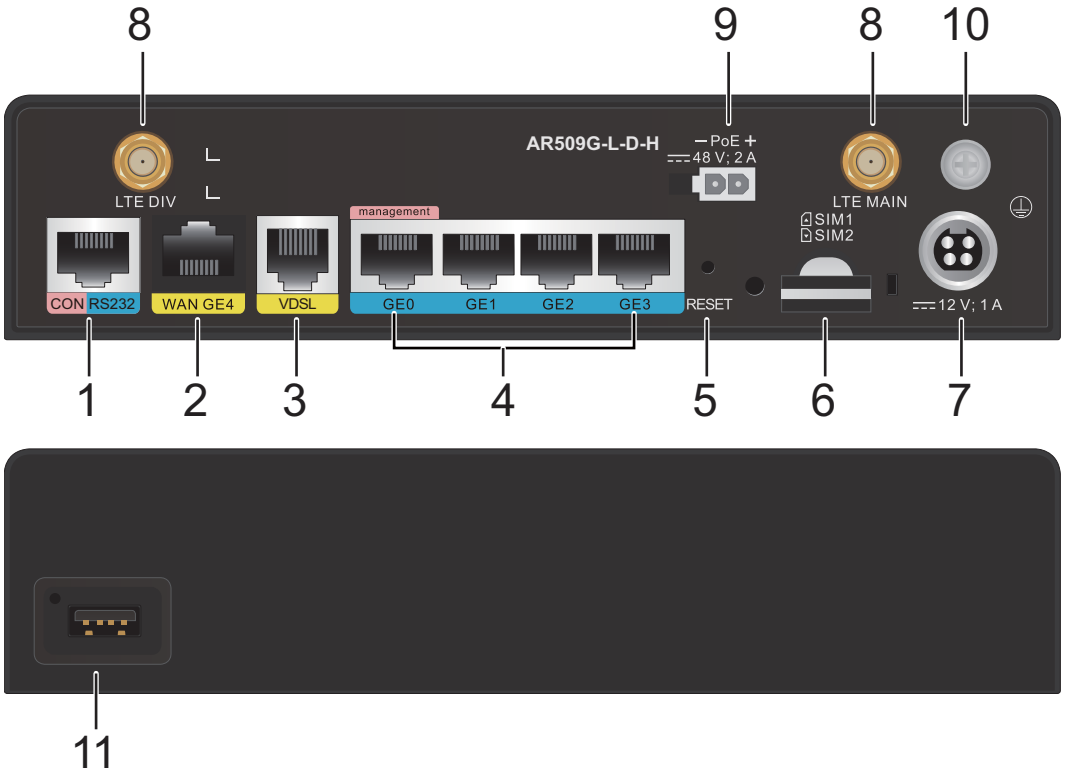
4.5.3 AR509G-L-D-H

Appearance

Figure 4-52 shows the appearance of the AR509G-L-D-H router.

Figure 4-52 AR509G-L-D-H appearance



1	CON/RS232 interface	2	WAN interface: GE electrical interface
3	WAN interface: VDSL interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.

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5	RST button **NOTE** This button is used to reset the router. ● To reset the system, press the button. ● To restore the factory settings, hold down the button for a period longer than 3 seconds and shorter than 10 seconds. ● To enable the RS232 function, hold down the button for 10 seconds or longer. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.
7	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	8	LTE antenna interface
9	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	USB interface (host)	-	-

4.5.4 AR509GW-L-D-H

Appearance

Figure 4-53 shows the appearance of the AR509GW-L-D-H router.

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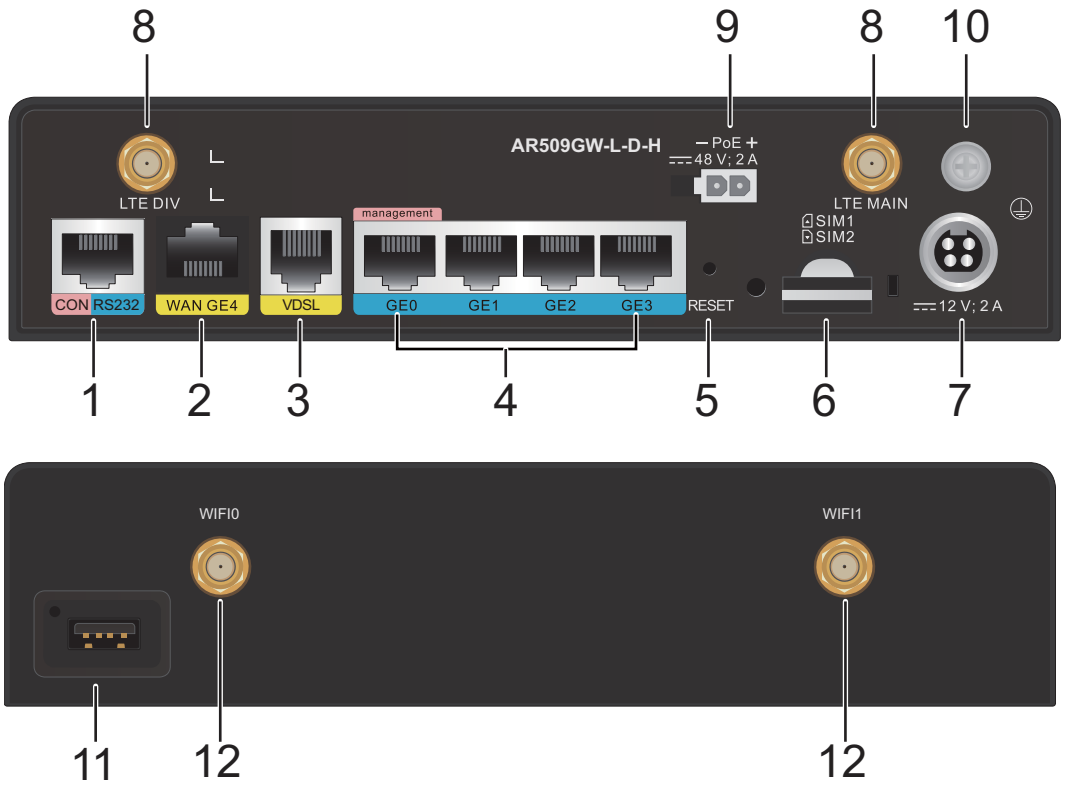
Figure 4-53 AR509GW-L-D-H appearance



1	CON/RS232 interface	2	WAN interface: GE electrical interface
3	WAN interface: VDSL interface	4	LAN interfaces: four GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
5	RST button **NOTE** This button is used to reset the router. ● To reset the system, press the button. ● To restore the factory settings, hold down the button for a period longer than 3 seconds and shorter than 10 seconds. ● To enable the RS232 function, hold down the button for 10 seconds or longer. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	6	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting holes at two sides of the SIM card slots are used to fix the SIM card cover with screws.
7	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	8	LTE antenna interface

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9	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	USB interface (host)	12	Two Wi-Fi antenna interfaces

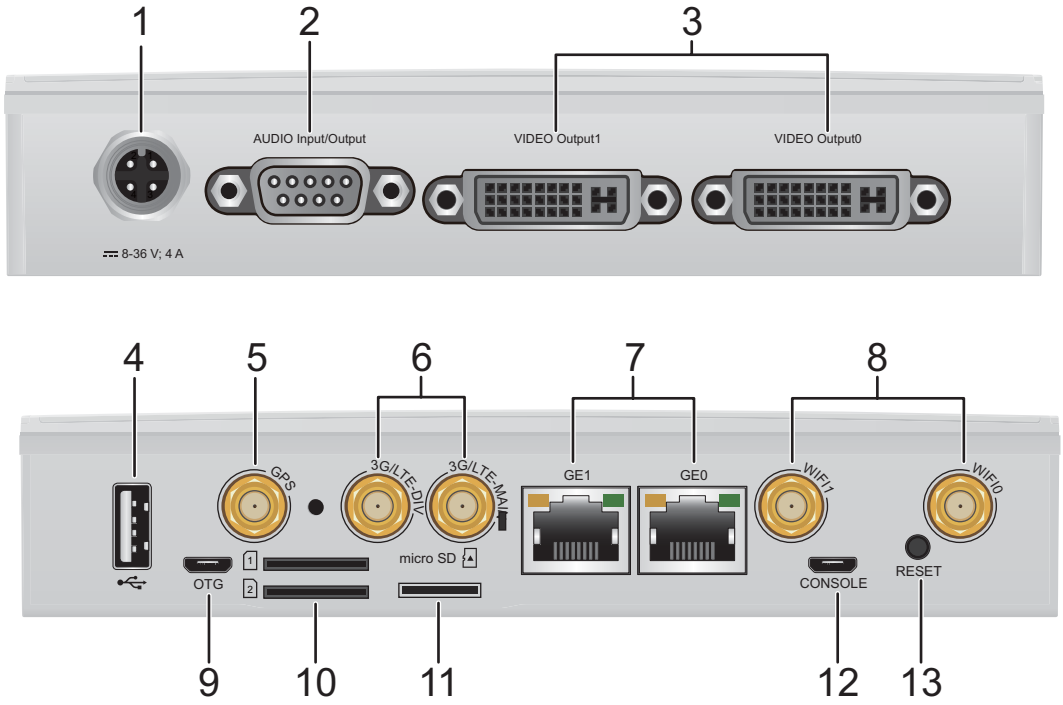
4.6 AR510 Series

4.6.1 AR511GW-LAV2M3

Appearance

Figure 4-54 shows the appearance of the AR511GW-LAV2M3 router.

Figure 4-54 AR511GW-LAV2M3 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	Audio interface
3	Two video interfaces	4	USB interface (host)

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5	GPS antenna interface	6	3G/LTE antenna interface
7	WAN interfaces: two GE electrical interfaces	8	Two Wi-Fi antenna interfaces
9	USB interface (OTG)	10	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
11	Micro SD card slot	12	CONSOLE interface
13	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	-	-

4.6.2 AR511CGW-LAV2M3

Appearance

Figure 4-55 shows the appearance of the AR511CGW-LAV2M3 router.

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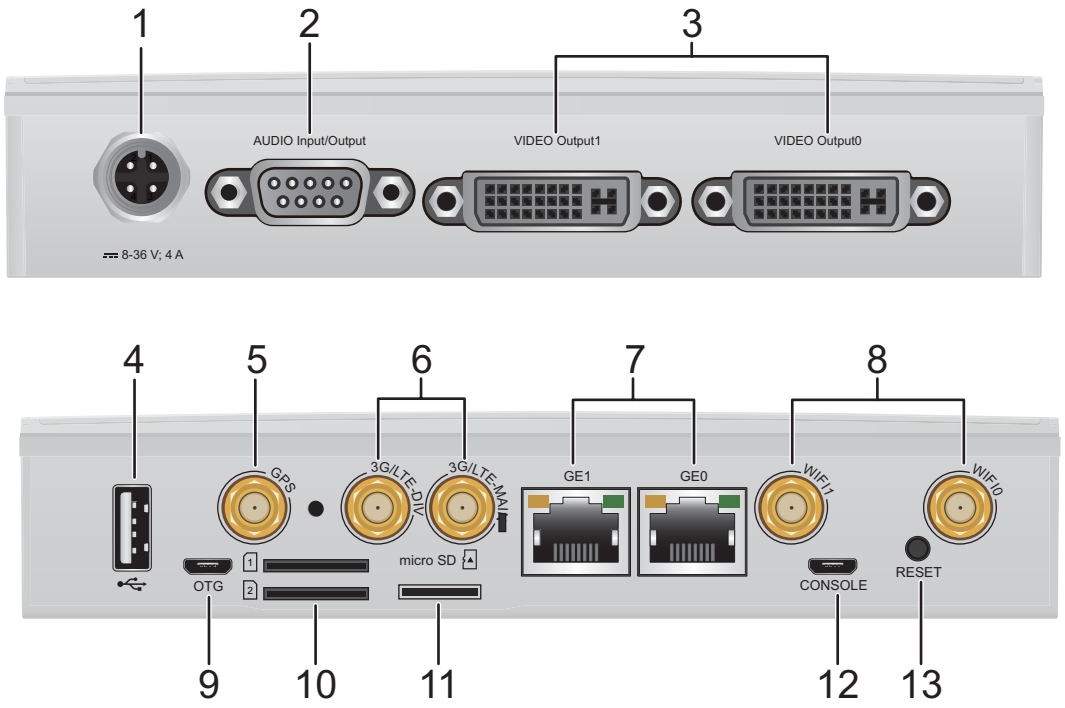
Figure 4-55 AR511CGW-LAV2M3 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	Audio interface
3	Two video interfaces	4	USB interface (host)
5	GPS antenna interface	6	3G/LTE antenna interface
7	WAN interfaces: two GE electrical interfaces	8	Two Wi-Fi antenna interfaces
9	USB interface (OTG)	10	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
11	Micro SD card slot	12	CONSOLE interface

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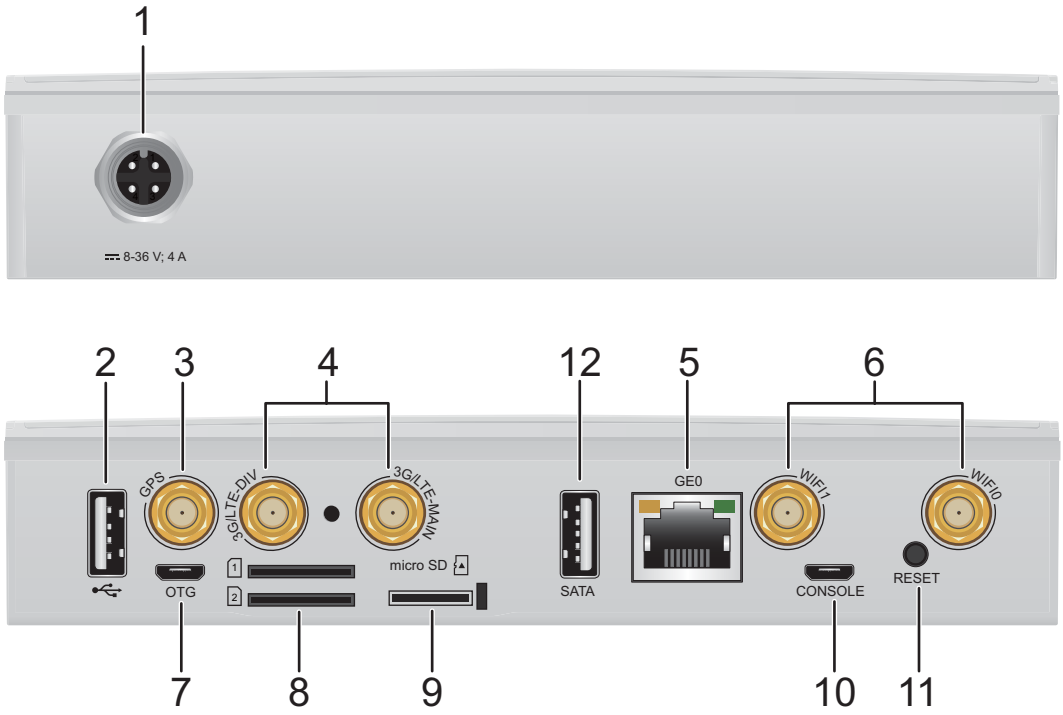
13	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	-	-

4.6.3 AR511GW-LM7

Appearance

Figure 4-56 shows the appearance of the AR511GW-LM7 router.

Figure 4-56 AR511GW-LM7 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	USB interface (host)
3	GPS antenna interface	4	3G/LTE antenna interface

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5	WAN interface: one GE electrical interface	6	Two Wi-Fi antenna interfaces
7	USB interface (OTG)	8	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
9	Micro SD card slot	10	CONSOLE interface
11	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	12	mSATA Interface **NOTE** This interface can have a mini SATA (mSATA) hard disk connected but the mSATA hard disk is not hot swappable.

4.6.4 AR511GW-L-B3

Appearance

Figure 4-57 shows the appearance of the AR511GW-L-B3 router.

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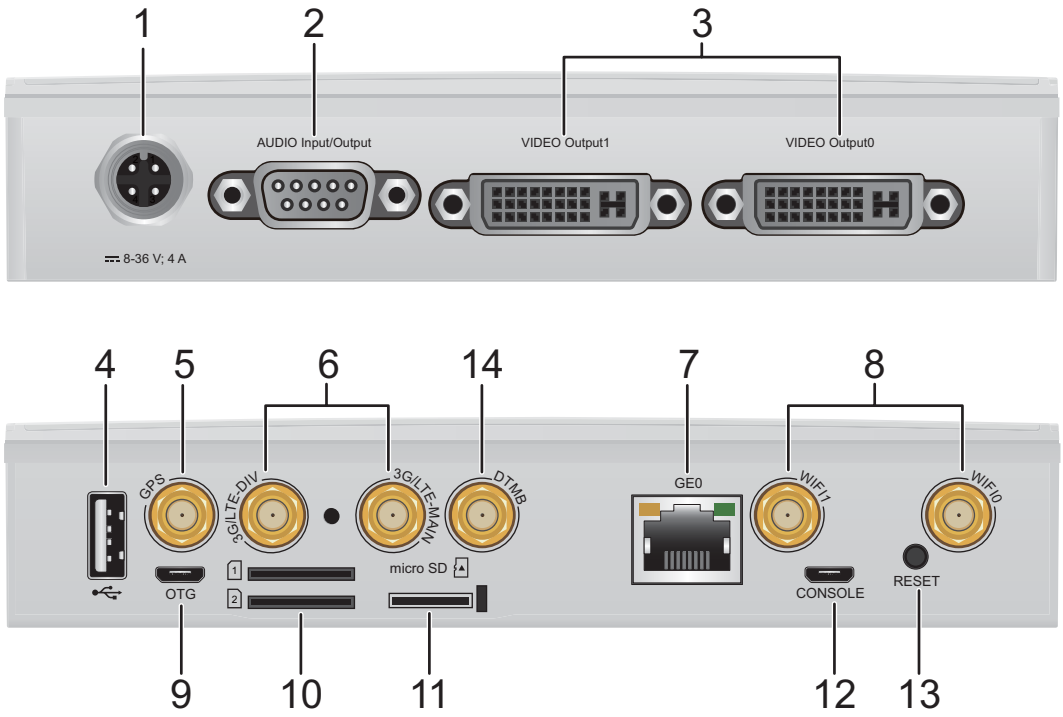
Figure 4-57 AR511GW-L-B3 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	Audio interface
3	Two video interfaces	4	USB interface (host)
5	GPS antenna interface	6	3G/LTE antenna interface
7	WAN interface: one GE electrical interface	8	Two Wi-Fi antenna interfaces
9	USB interface (OTG)	10	Two SIM card slots **NOTE** ● The SIM card slots support double-card single-standby. ● Industrial SIM cards are recommended for the router. ● The mounting hole above the SIM card slots is used to fix the SIM card cover with a screw.
11	Micro SD card slot	12	CONSOLE interface

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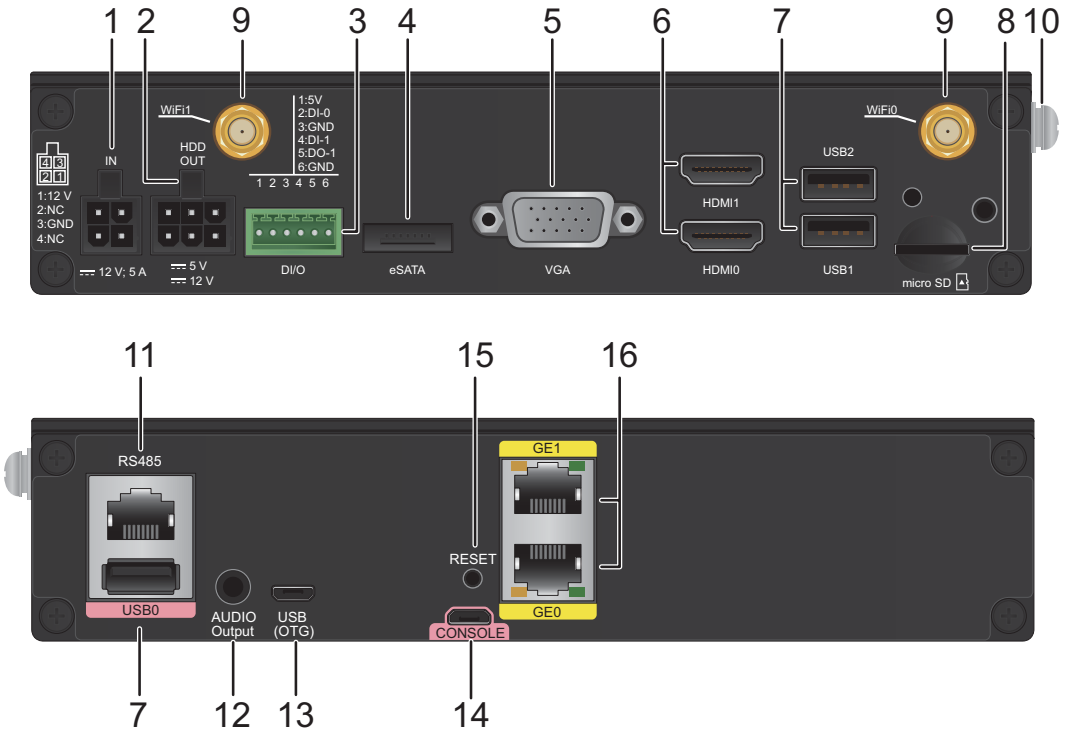
13	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	14	DTMB interface

4.6.5 AR513W-V3M8

Appearance

Figure 4-58 shows the appearance of the AR513W-V3M8 router.

Figure 4-58 AR513W-V3M8 appearance



1	Power jack **NOTE** Use a DC power cable to connect the router to a power source.	2	SATA hard disk power jack

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3	DI/O interface **NOTE** Connect cables according to the signal types identified above the DI/O interfaces.	4	eSATA interface **NOTE** This interface can have an external SATA (eSATA) hard disk connected. The eSATA hard disk and its data cable and power cable are hot swappable.
5	VGA interface	6	HDMI video interface
7	Three USB interfaces (host)	8	Micro SD card slot
9	Two Wi-Fi antenna interfaces	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	RS485 interface **NOTE** The router does not support RS485 serial interface functions. This interface is reserved for future use.	12	Audio interface (output)
13	USB interface (OTG)	14	CONSOLE interface
15	RST button **NOTE** This button is used to reset the router. ● To restore the factory settings, hold down the button for at least 5 seconds. ● To reset the system, press the button. Resetting the router will interrupt services. Exercise caution when deciding to press this button.	16	WAN interfaces: two GE electrical interfaces

4.7 AR1200 Series

4.7.1 AR1220-AC

Appearance

Figure 4-59 shows the appearance of the AR1220-AC router.

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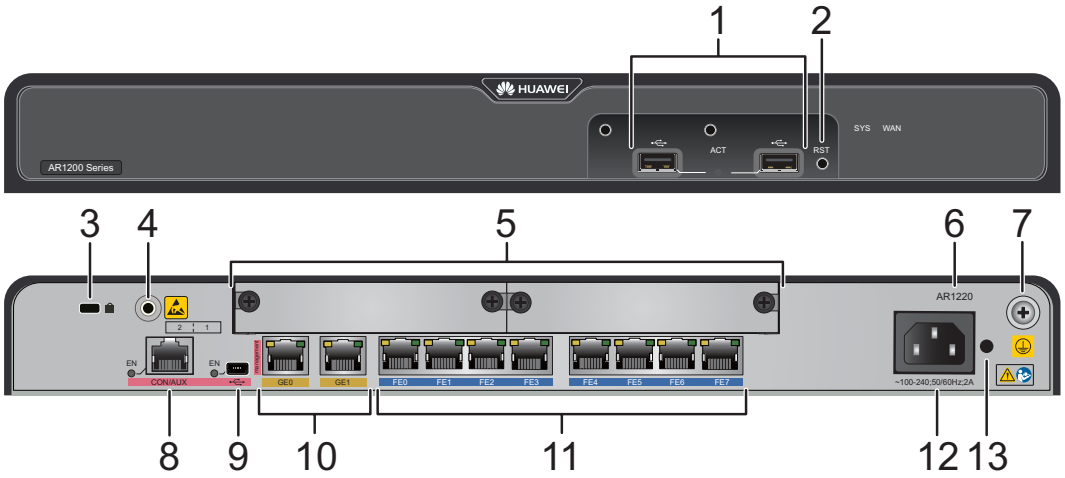
Figure 4-59 AR1220-AC appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Security lock	4	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
5	Two SIC slots	6	Product model silkscreen
7	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	8	CON/AUX interface **NOTE** The AR1220-AC does not support AUX login.
9	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	10	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.

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11	LAN interfaces: eight FE electrical interfaces	12	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
13	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-60 shows the slots layout on the AR1220-AC router.

Figure 4-60 Slot distribution of the AR1220-AC router

Device Model		Slot Distribution	Slot Combination
AR1220-AC	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.2 AR1220V

Appearance

Figure 4-61 shows the appearance of the AR1220V router.

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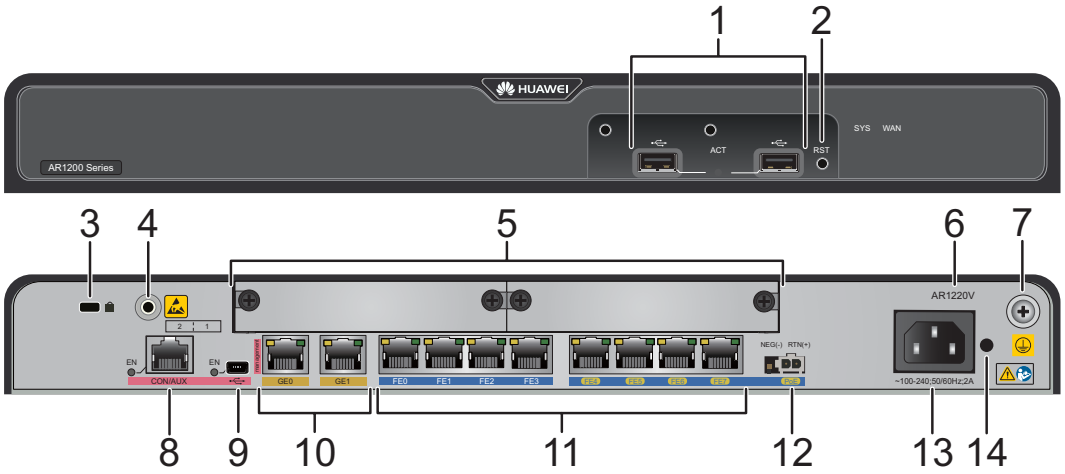
Figure 4-61 AR1220V appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Security lock	4	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
5	Two SIC slots	6	Product model silkscreen
7	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	8	CON/AUX interface **NOTE** The AR1220V does not support AUX login.
9	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	10	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.

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11	LAN interfaces: eight FE electrical interfaces	12	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.
13	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.	14	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-62 shows the slot distribution of the AR1220V router.

Figure 4-62 Slot distribution of the AR1220V router

Device Model		Slot Distribution	Slot Combination
AR1220V	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.3 AR1220-DC

Appearance

Figure 4-63 shows the appearance of the AR1220-DC router.

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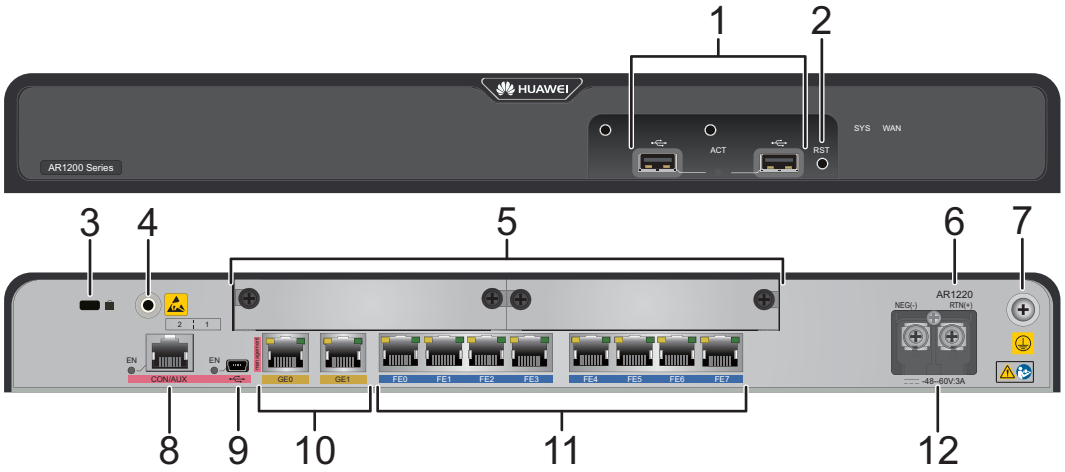
Figure 4-63 AR1220-DC appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Security lock	4	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
5	Two SIC slots	6	Product model silkscreen
7	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	8	CON/AUX interface **NOTE** The AR1220-DC does not support AUX login.
9	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	10	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.

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11	LAN interfaces: eight FE electrical interfaces	12	DC power terminals **NOTE** Use DC power cables to connect the router to an external power source.

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-64 shows the slot distribution of the AR1220-DC router.

Figure 4-64 Slot distribution of the AR1220-DC router

Device Model		Slot Distribution	Slot Combination
AR1220-DC	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.4 AR1220W

Appearance

Figure 4-65 shows the appearance of the AR1220W router.

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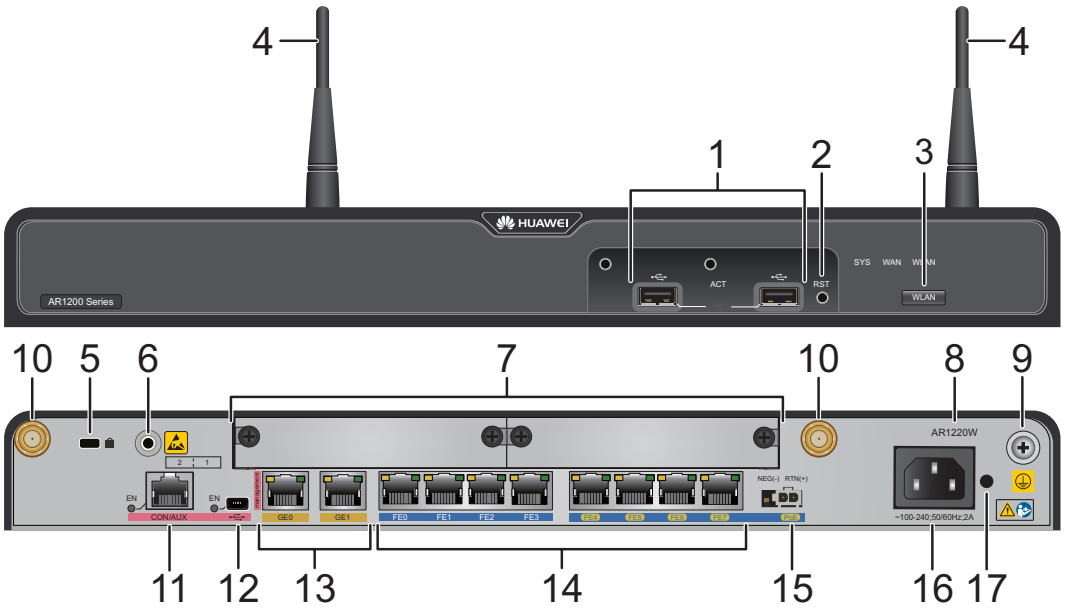
Figure 4-65 AR1220W appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	WLAN button **NOTE** This button is used to enable and disable the WLAN function.	4	Two Wi-Fi antennas
5	Security lock	6	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
7	Two SIC slots	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	10	Two Wi-Fi antenna interfaces

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11	CON/AUX interface **NOTE** The AR1220W does not support AUX login.	12	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
13	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	14	LAN interfaces: eight FE electrical interfaces
15	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.	16	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
17	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-66 shows the slot distribution of the AR1220W router.

Figure 4-66 Slot distribution of the AR1220W router

Device Model		Slot Distribution	Slot Combination
AR1220W	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.5 AR1220VW

Appearance

Figure 4-67 shows the appearance of the AR1220VW router.

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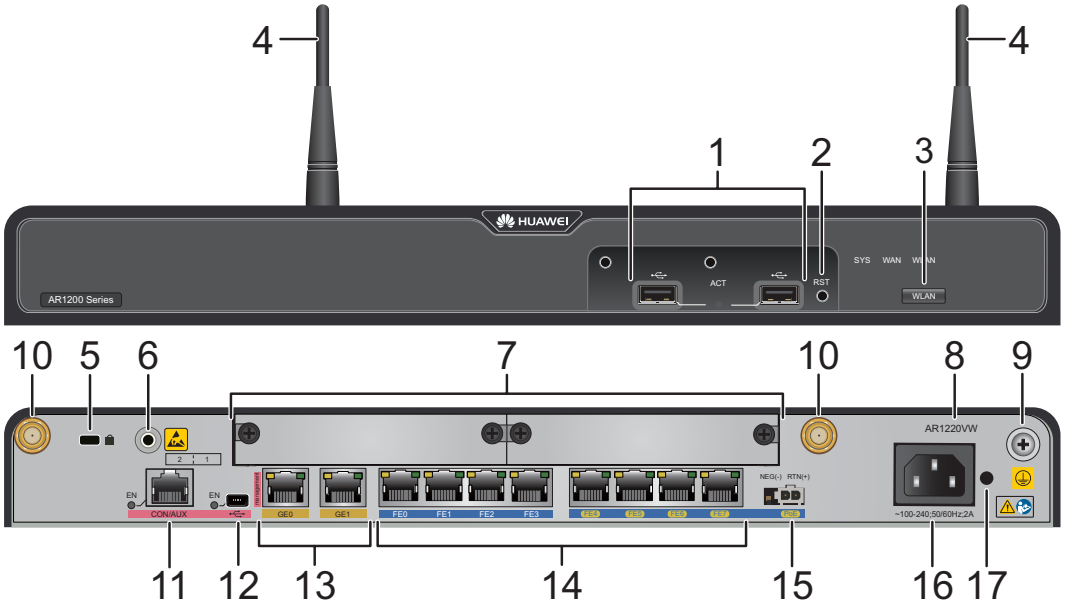
Figure 4-67 AR1220VW appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	WLAN button **NOTE** This button is used to enable and disable the WLAN function.	4	Two Wi-Fi antennas
5	Security lock	6	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
7	Two SIC slots	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	10	Two Wi-Fi antenna interfaces

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11	CON/AUX interface **NOTE** The AR1220VW does not support AUX login.	12	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
13	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	14	LAN interfaces: eight FE electrical interfaces
15	PoE power jack **NOTE** The PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to FE interfaces of the router.	16	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
17	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-68 shows the slot distribution of the AR1220VW router.

Figure 4-68 Slot distribution of the AR1220VW router

Device Model		Slot Distribution	Slot Combination
AR1220VW	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.6 AR1220F

Appearance

Figure 4-69 shows the appearance of the AR1220F router.

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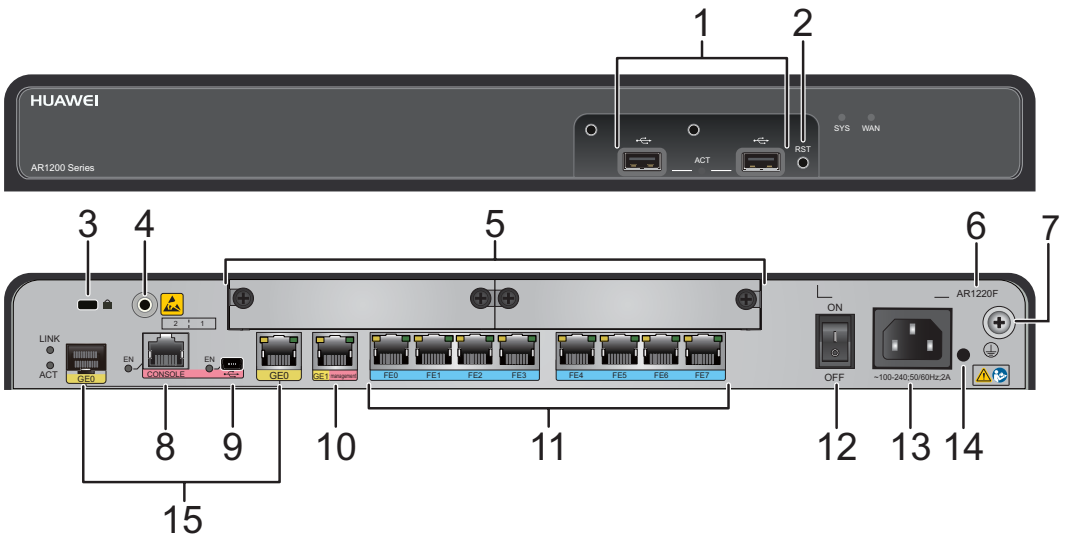
Figure 4-69 AR1220F appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Security lock	4	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
5	Two SIC slots	6	Product model silkscreen
7	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	8	CONSOLE interface
9	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	10	WAN interface: one GE electrical interface

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11	LAN interfaces: eight FE electrical interfaces	12	Power switch
13	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.	14	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
15	WAN interface: GE combo interface	-	-

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-70 shows the slot distribution of the AR1220F router.

Figure 4-70 Slot distribution of the AR1220F router

Device Model		Slot Distribution	Slot Combination
AR1220F	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.7.7 AR1220E

Appearance

Figure 4-71 shows the appearance of the AR1220E router.

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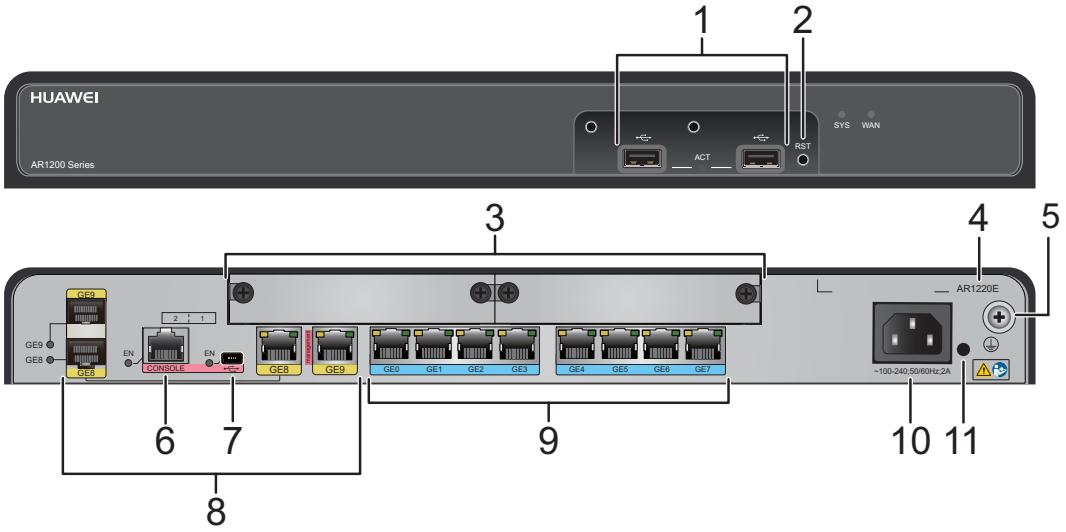
Figure 4-71 AR1220E appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Two SIC slots	4	Product model silkscreen
5	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	6	CONSOLE interface
7	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	8	WAN interface: GE combo interface
9	LAN interfaces: eight GE electrical interfaces	10	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.

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11	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-72 shows the slot distribution of the AR1220E.

Figure 4-72 Slot distribution of the AR1220E router

Device Model		Slot Distribution	Slot Combination
AR1220E	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

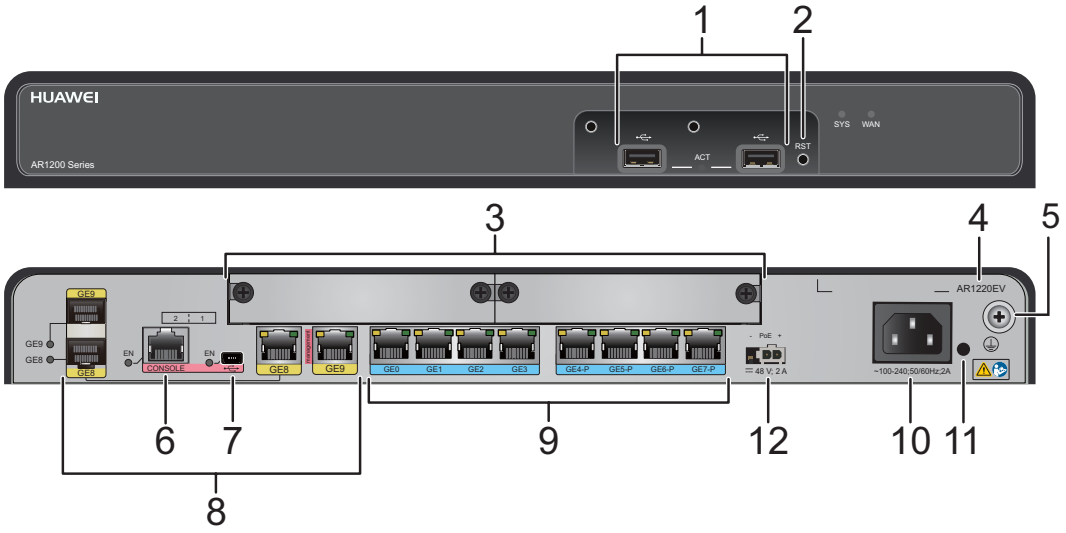
- Slot 1 and slot 2 are combined into new slot 2.

4.7.8 AR1220EV

Appearance

Figure 4-73 shows the appearance of the AR1220EV router.

Figure 4-73 AR1220EV appearance



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1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Two SIC slots	4	Product model silkscreen
5	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	6	CONSOLE interface
7	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	8	WAN interface: GE combo interface
9	LAN interfaces: eight GE electrical interfaces	10	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
11	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	12	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-74 shows the slot distribution of the AR1220EV.

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Figure 4-74 Slot distribution of the AR1220EV router

Device Model		Slot Distribution	Slot Combination
AR1220EV	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

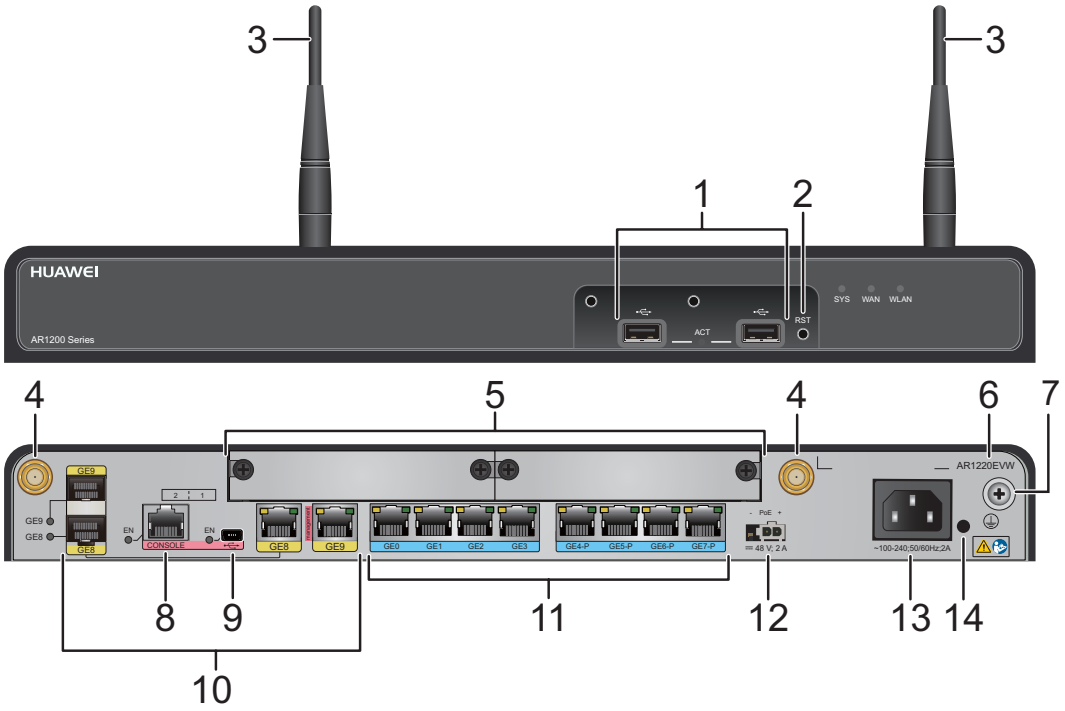
- Slot 1 and slot 2 are combined into new slot 2.

4.7.9 AR1220EVW

Appearance

Figure 4-75 shows the appearance of the AR1220EVW router.

Figure 4-75 AR1220EVW appearance



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1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
3	Two Wi-Fi antennas	4	Two Wi-Fi antenna interfaces
5	Two SIC slots	6	Product model silkscreen
7	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	8	CONSOLE interface
9	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	10	WAN interface: GE combo interface
11	LAN interfaces: eight GE electrical interfaces	12	PoE power jack **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.
13	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.	14	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-76 shows the slot distribution of the AR1220EVW router.

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Figure 4-76 Slot distribution of the AR1220EVW router

Device Model		Slot Distribution	Slot Combination
AR1220EVW	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

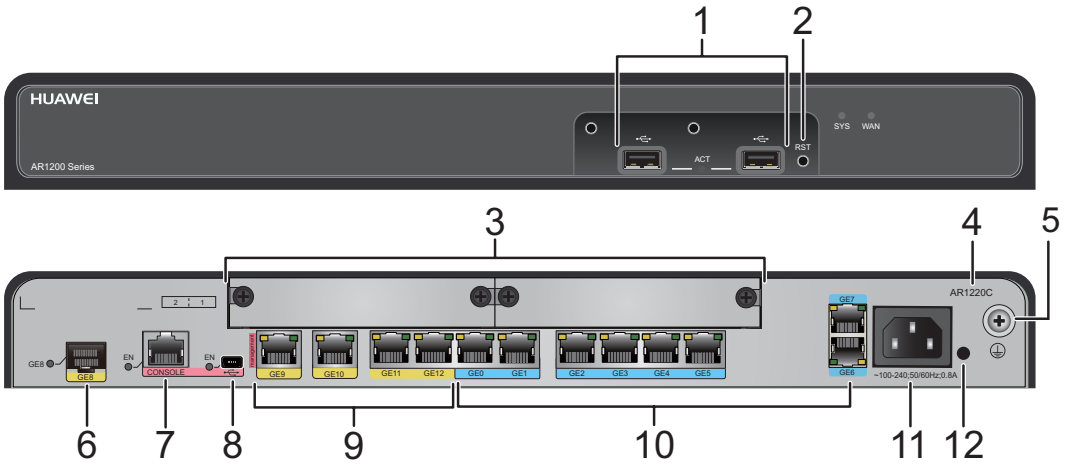
- Slot 1 and slot 2 are combined into new slot 2.

4.7.10 AR1220C

Appearance

Figure 4-77 shows the appearance of the AR1220C router.

Figure 4-77 AR1220C appearance



1	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	2	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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3	Two SIC slots	4	Product model silkscreen
5	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	6	WAN interface: GE optical interface
7	CONSOLE interface	8	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
9	WAN interface: GE electrical interface	10	LAN interfaces: eight GE electrical interfaces
11	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.	12	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-78 shows the slot layout on the AR1220C.

Figure 4-78 Slot distribution of the AR1220C router

Device Model		Slot Distribution	Slot Combination
AR1220C	Front view	NA	NA
	Rear view	2(SIC) 1(SIC)	Two SIC slots are combined into one WSIC slot 2(WSIC)

- Slot 1 and slot 2 are combined into new slot 2.

4.8 AR2200 Series

4.8.1 AR2220-AC

Appearance

Figure 4-79 shows the appearance of the AR2220-AC router.

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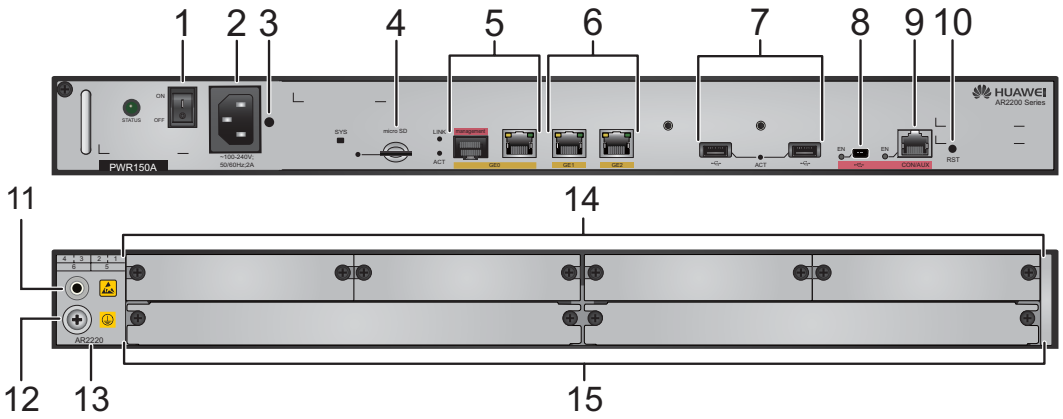
Figure 4-79 AR2220-AC appearance



1	Power switch	2	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
3	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	4	Micro SD card slot
5	WAN interface: GE combo interface	6	WAN interfaces: two GE electrical interfaces
7	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	8	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
9	CON/AUX interface **NOTE** The AR2220-AC does not support AUX login.	10	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.

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11	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
13	Product model silkscreen	14	Four SIC slots
15	Two WSIC slots	-	-

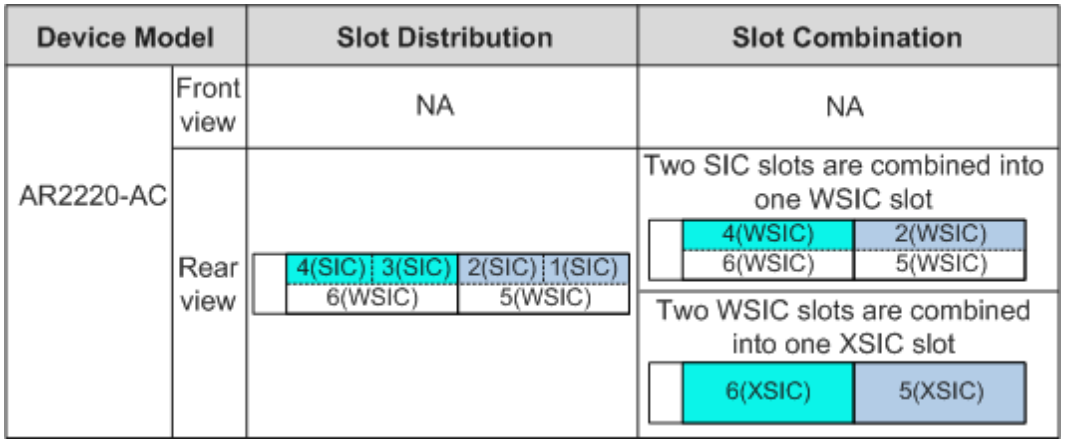
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-80 shows slot distribution of AR2220-AC routers.

Figure 4-80 Slot distribution of the AR2220-AC routers



- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.

4.8.2 AR2240

Appearance

Figure 4-81 shows the appearance of the AR2240 router.

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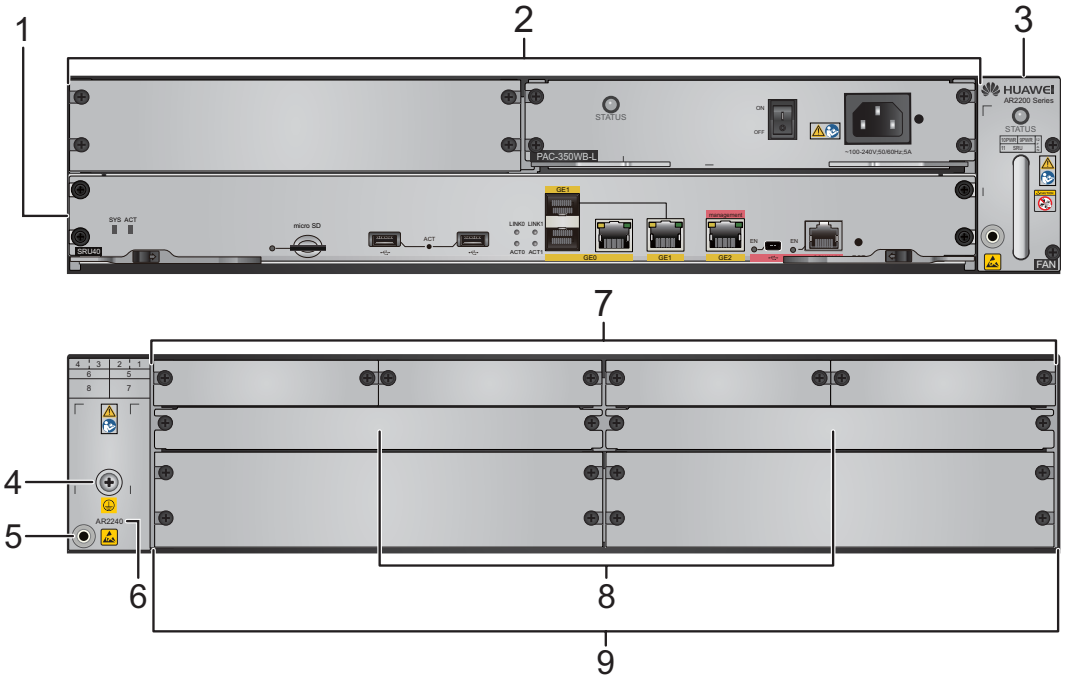
Figure 4-81 AR2240 appearance



1	SRU slots	2	Two power module slots Applicable power modules: ● 350 W AC Power Module ● 350 W DC Power Module ● 850 W AC PoE Power Module **NOTE** AC and DC power modules cannot be used together in a router.
3	Fan module slot Applicable fan module: Fan Module	4	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
5	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.	6	Product model silkscreen
7	Four SIC slots	8	Two WSIC slots
9	Two XSIC slots	-	-

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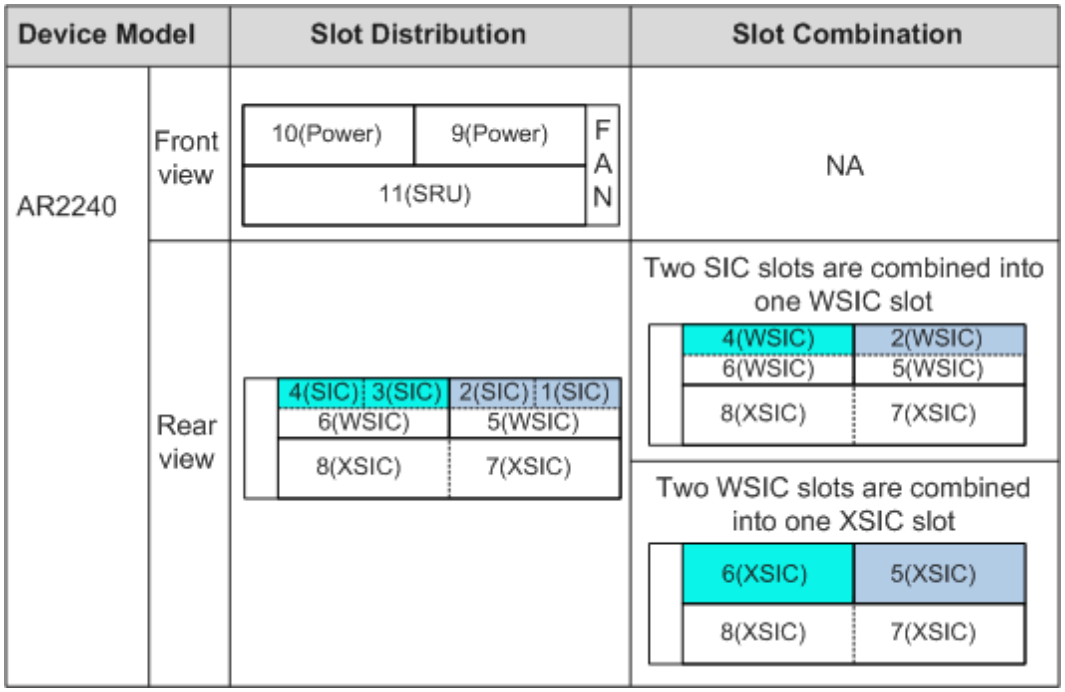
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.
- In V200R002C00 and later versions, a WSIC card can be inserted into an XSIC slot with a special component. The WSIC card is in the lower part of the slot and uses the XSIC slot ID as its own slot ID.

Figure 4-82 shows the slot distribution on the AR2240.

Figure 4-82 AR2240 slot distribution



- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.

4.8.3 AR2220-DC

Appearance

Figure 4-83 shows the appearance of the AR2220-DC router.

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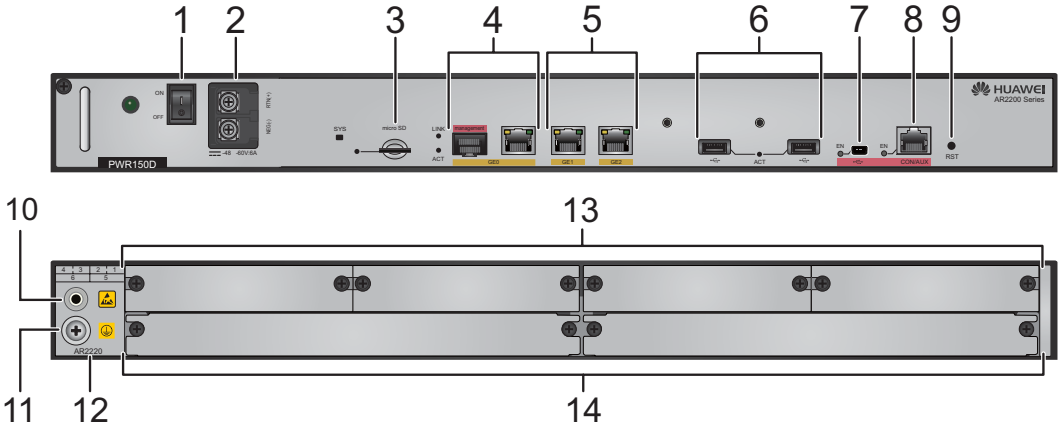
Figure 4-83 AR2220-DC appearance



1	Power switch	2	DC power terminals **NOTE** Use DC power cables to connect the router to an external power source.
3	Micro SD card slot	4	WAN interface: GE combo interface
5	WAN interfaces: two GE electrical interfaces	6	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap.
7	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	8	CON/AUX interface **NOTE** The AR2220-DC does not support AUX login.
9	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.	10	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.

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11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	12	Product model silkscreen
13	Four SIC slots	14	Two WSIC slots

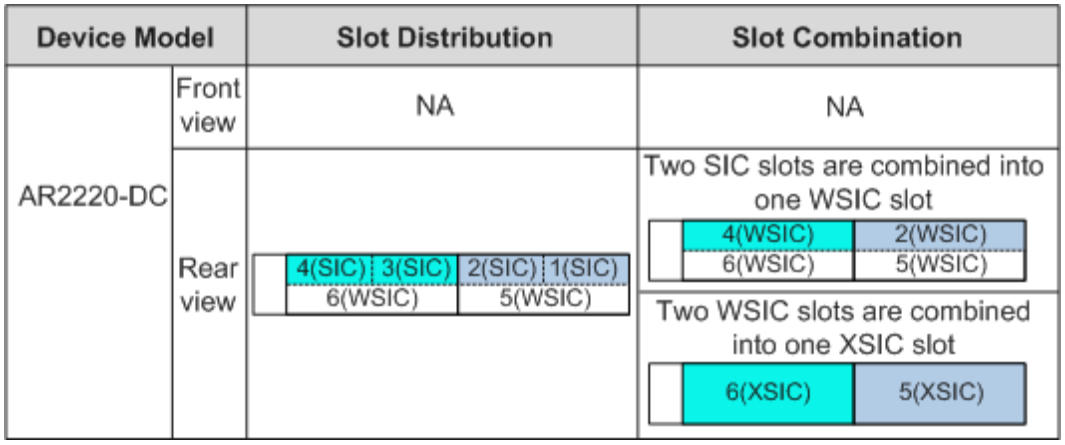
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-84 shows the slot layout on the AR2220-DC.

Figure 4-84 Slot distribution of the AR2220-DC



- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.

4.8.4 AR2201-48FE

Appearance

Figure 4-85 shows the appearance of the AR2201-48FE router.

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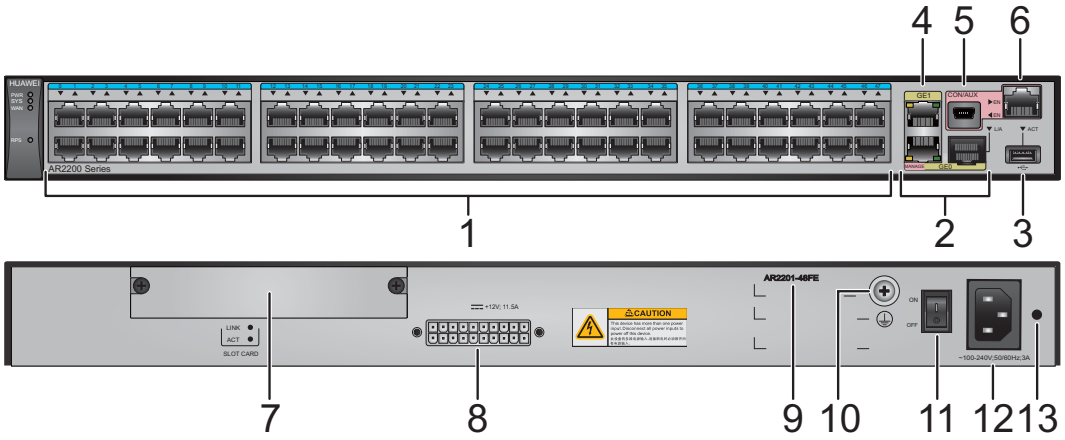
Figure 4-85 AR2201-48FE appearance



1	LAN interfaces: forty-eight FE electrical interfaces	2	WAN interface: GE combo interface
3	One USB interface (host)	4	WAN interface: one GE electrical interface
5	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	6	CON/AUX interface **NOTE** The AR2201-48FE does not support AUX login.
7	Extended card slot **NOTE** The slot is reserved, and no extended card is supported currently.	8	RPS power socket **NOTE** Use an RPS150 power and communication cable to connect the router to a 150 W RPS power supply system.
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
11	Power switch	12	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
13	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

4.8.5 AR2202-48FE

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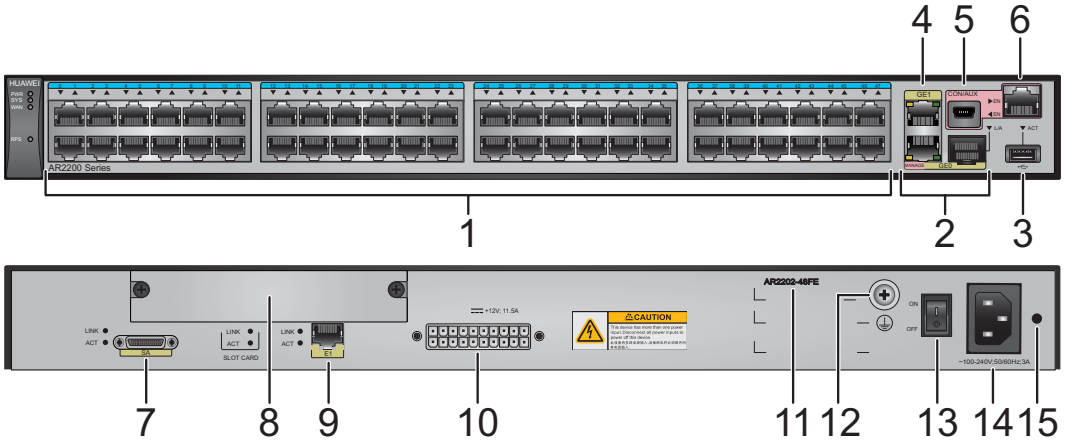
Appearance

Figure 4-86 shows the appearance of the AR2202-48FE router.

Figure 4-86 AR2202-48FE appearance



1	LAN interfaces: forty-eight FE electrical interfaces	2	WAN interface: GE combo interface
3	One USB interface (host)	4	WAN interface: one GE electrical interface
5	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.	6	CON/AUX interface **NOTE** The AR2202-48FE does not support AUX login.
7	WAN interface: SA interface **NOTE** This interface can be connected to a wide area network using an SA cable.	8	Extended card slot **NOTE** The slot is reserved, and no extended card is supported currently.
9	WAN interface: E1 interface **NOTE** This interface can be connected to a wide area network using an E1/T1 cable.	10	RPS power socket **NOTE** Use an RPS150 power and communication cable to connect the router to a 150 W RPS power supply system.
11	Product model silkscreen	12	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
13	Power switch	14	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.

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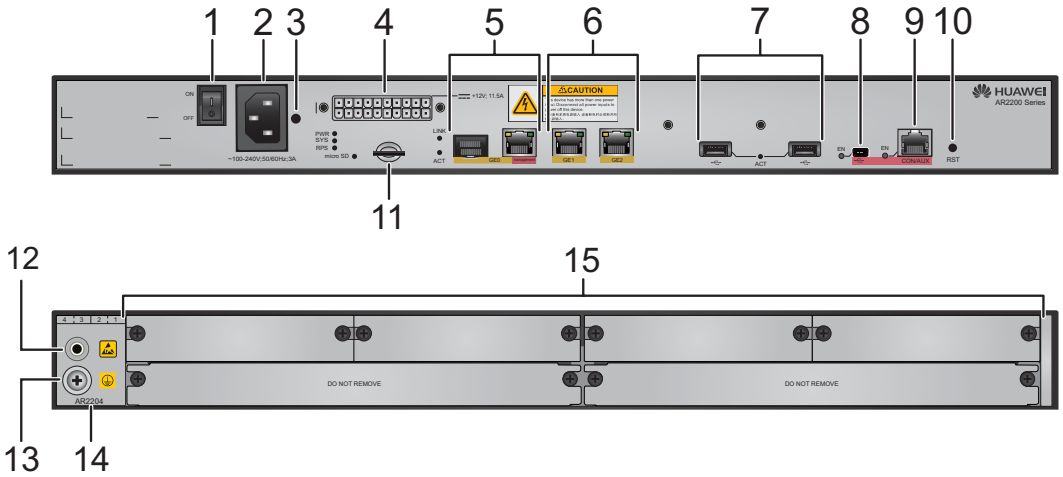
15	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	-	-

4.8.6 AR2204

Appearance

Figure 4-87 shows the appearance of the AR2204 router.

Figure 4-87 AR2204 appearance



1	Power switch	2	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
3	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	4	RPS power socket **NOTE** Use an RPS150 power and communication cable to connect the router to a 150 W RPS power supply system.
5	WAN interface: GE combo interface	6	WAN interfaces: two GE electrical interfaces

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7	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	8	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
9	CON/AUX interface **NOTE** The AR2204 does not support AUX login.	10	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
11	Micro SD card slot	12	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	14	Product model silkscreen
15	Four SIC slots	-	-

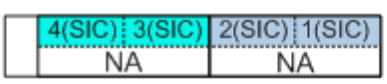
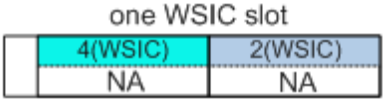
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-88 shows slot distribution of the AR2204 routers.

Figure 4-88 Slot distribution of the AR2204 routers

Device Model		Slot Distribution	Slot Combination
AR2204	Front view	NA	NA
	Rear view		Two SIC slots are combined into one WSIC slot 

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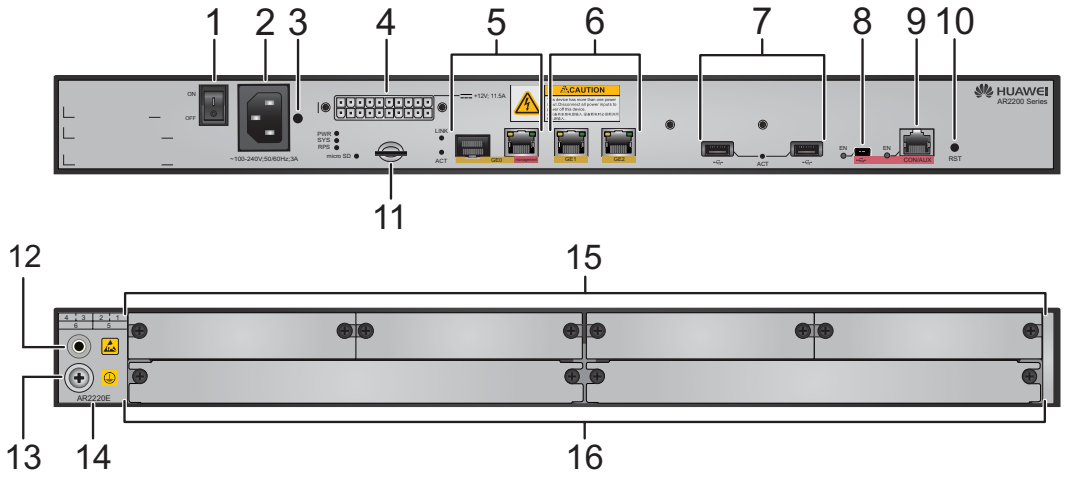
- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.

4.8.7 AR2220E

Appearance

Figure 4-89 shows the appearance of the AR2220E router.

Figure 4-89 AR2220E appearance



1	Power switch	2	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.
3	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	4	RPS power socket **NOTE** Use an RPS150 power and communication cable to connect the router to a 150 W RPS power supply system.
5	WAN interface: GE combo interface	6	WAN interfaces: two GE electrical interfaces

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7	Two USB interfaces (host) **NOTE** After a 3G USB modem is inserted, you are advised to install a plastic USB protection cap (optional) on it. There are two tapped holes above a USB interface. Insert screws in the tapped holes to fix the plastic protection cap. The following figure shows a plastic USB protection cap. 	8	Mini USB interface **NOTE** The Mini USB interface and console interface cannot be used at the same time.
9	CON/AUX interface **NOTE** The AR2220E does not support AUX login.	10	RST button **NOTICE** ● This button is used to reset the router. ● Resetting the router will interrupt services. Exercise caution when deciding to press this button.
11	Micro SD card slot	12	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.
13	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	14	Product model silkscreen
15	Four SIC slots	16	Two WSIC slots

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.

Figure 4-90 shows slot distribution of the AR2220E routers.

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Figure 4-90 Slot distribution of the AR2220E routers

Device Model		Slot Distribution	Slot Combination
AR2220E	Front view	NA	NA
	Rear view	4(SIC) 3(SIC) 2(SIC) 1(SIC) 6(WSIC) 5(WSIC)	Two SIC slots are combined into one WSIC slot 4(WSIC) 2(WSIC) 6(WSIC) 5(WSIC) Two WSIC slots are combined into one XSIC slot 6(XSIC) 5(XSIC)

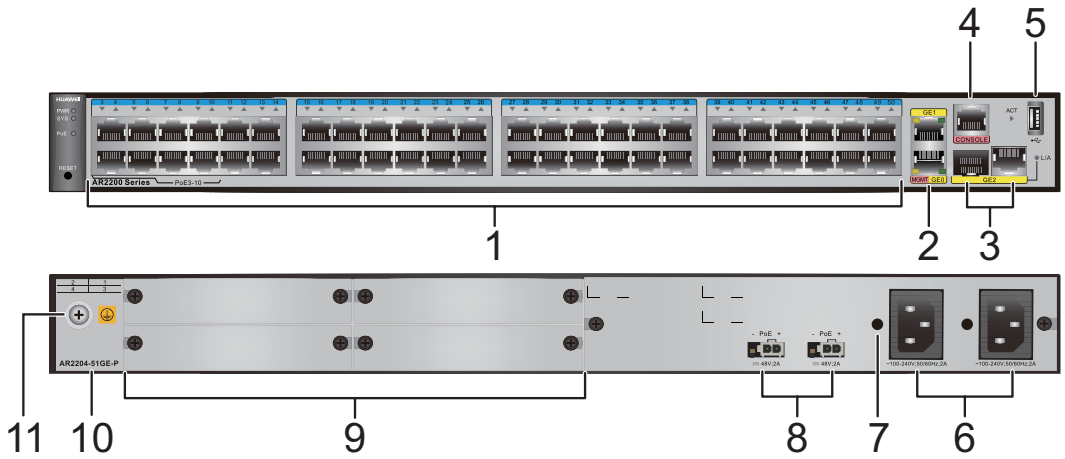
- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.

4.8.8 AR2204-51GE-P

Appearance

Figure 4-91 shows the appearance of the AR2204-51GE-P router.

Figure 4-91 AR2204-51GE-P appearance



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1	LAN interfaces: forty-eight GE electrical interfaces	2	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
3	WAN interface: GE combo interface	4	CONSOLE interface
5	One USB interface (host)	6	Two AC power jacks **NOTE** Use an AC power cable to connect the router to an external power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Two PoE power jacks **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.
9	Four SIC slots	10	Product model silkscreen
11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

Slot Distribution

Figure 4-92 shows the appearance of the AR2204-51GE-P router.

Figure 4-92 Slot distribution of the AR2204-51GE-P

Device Model		Slot Distribution	Slot Combination
AR2204-51GE-P	Front view	NA	NA
	Rear view	2(SIC) 1(SIC) 4(SIC) 3(SIC) NA	NA

4.8.9 AR2204-27GE-P

Appearance

Figure 4-93 shows the appearance of the AR2204-27GE-P router.

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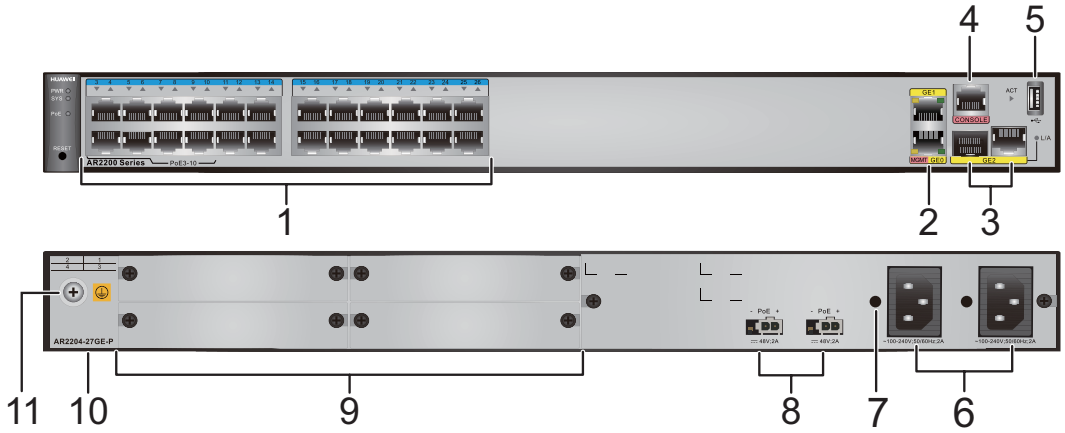
Figure 4-93 AR2204-27GE-P appearance



1	LAN interfaces: twenty-four GE electrical interfaces	2	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
3	WAN interface: GE combo interface	4	CONSOLE interface
5	One USB interface (host)	6	Two AC power jacks **NOTE** Use an AC power cable to connect the router to an external power source.
7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Two PoE power jacks **NOTE** A PoE power jack connects to a 100 W AC PoE power module to provide power for PDs (such as IP phones, WLAN APs, and cameras) connected to GE interfaces of the router.
9	Four SIC slots	10	Product model silkscreen
11	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

Slot Distribution

Figure 4-94 shows the appearance of the AR2204-27GE-P router.

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Figure 4-94 Slot distribution of the AR2204-27GE-P

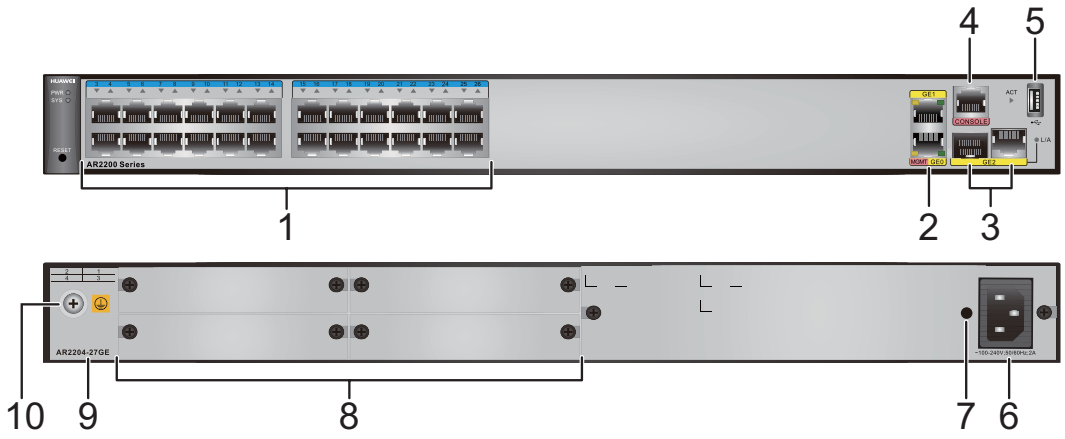
Device Model		Slot Distribution	Slot Combination
AR2204-27GE-P	Front view	NA	NA
	Rear view	2(SIC) 1(SIC) 4(SIC) 3(SIC) NA	NA

4.8.10 AR2204-27GE

Appearance

Figure 4-95 shows the appearance of the AR2204-27GE router.

Figure 4-95 AR2204-27GE appearance



1	LAN interfaces: twenty-four GE electrical interfaces	2	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.
3	WAN interface: GE combo interface	4	CONSOLE interface
5	One USB interface (host)	6	AC power jack **NOTE** Use an AC power cable to connect the router to an external power source.

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7	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.	8	Four SIC slots
9	Product model silkscreen	10	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

Slot Distribution

Figure 4-96 shows the appearance of the AR2204-27GE router.

Figure 4-96 Slot distribution of the AR2204-27GE

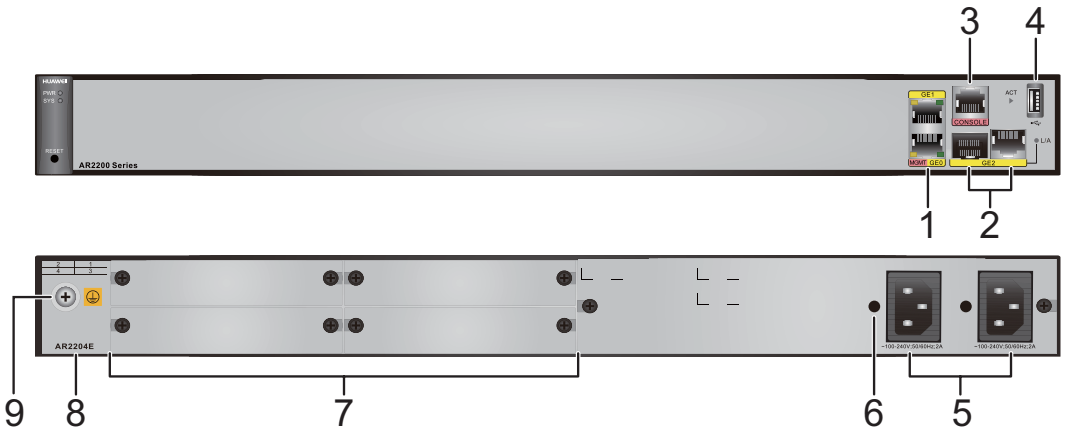
Device Model		Slot Distribution	Slot Combination
AR2204-27GE	Front view	NA	NA
	Rear view	2(SIC) 1(SIC) 4(SIC) 3(SIC) NA	NA

4.8.11 AR2204E

Appearance

Figure 4-97 shows the appearance of the AR2204E router.

Figure 4-97 AR2204E appearance



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1	WAN interfaces: two GE electrical interfaces **NOTE** GE0 is a management interface and is used to upgrade the router.	2	WAN interface: GE combo interface
3	CONSOLE interface	4	One USB interface (host)
5	Two AC power jacks **NOTE** Use an AC power cable to connect the router to an external power source.	6	Jack for power cable locking strap **NOTICE** Insert a power cable locking strap in this jack to secure the power cable.
7	Four SIC slots	8	Product model silkscreen
9	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.	-	-

Slot Distribution

Figure 4-98 shows the slot distribution of the AR2204E.

Figure 4-98 Slot distribution of the AR2204E

Device Model		Slot Distribution	Slot Combination
AR2204E	Front view	NA	NA
	Rear view	2(SIC) 1(SIC) 4(SIC) 3(SIC) NA	NA

4.8.12 AR2240C

Appearance

Figure 4-99 shows the appearance of the AR2240C router.

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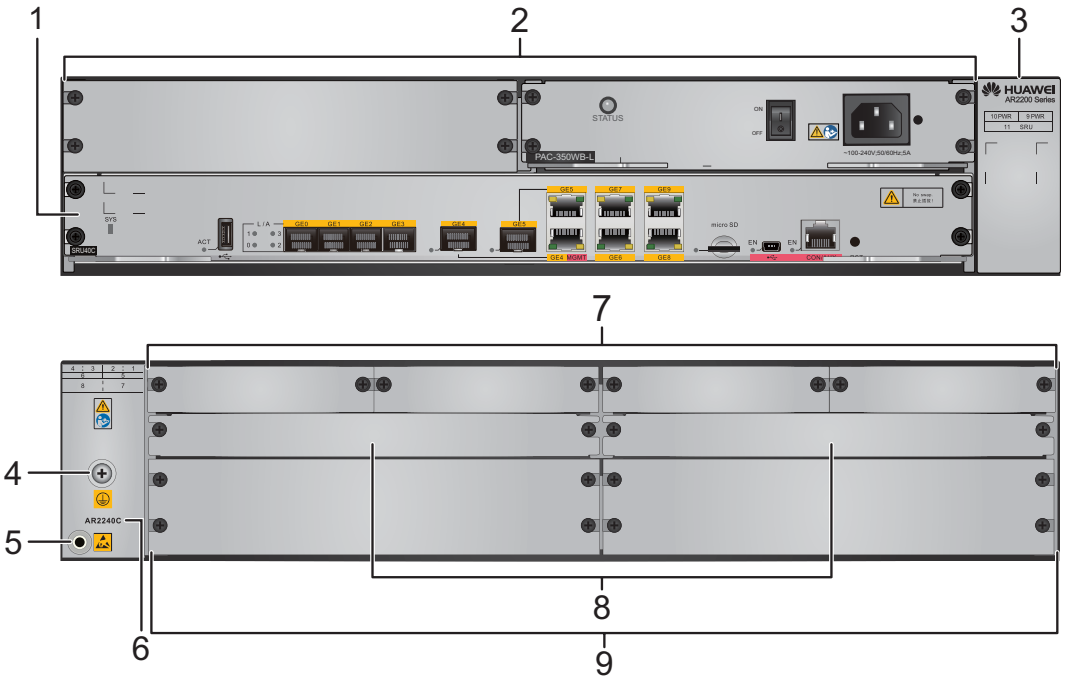
Figure 4-99 AR2240C appearance



1	SRU slots	2	Two power module slots Applicable power modules: ● 350 W AC Power Module ● 350 W DC Power Module ● 850 W AC PoE Power Module **NOTE** AC and DC power modules cannot be used together in a router.
3	Built-in fan module	4	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
5	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.	6	Product model silkscreen
7	Four SIC slots	8	Two WSIC slots
9	Two XSIC slots	-	-

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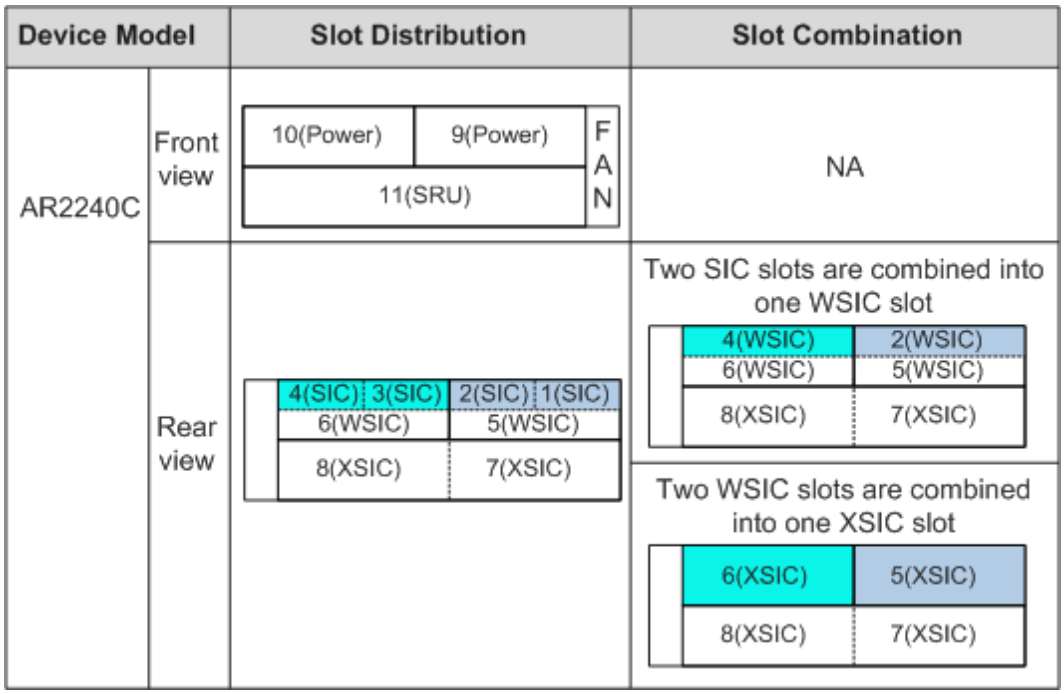
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.
- In V200R002C00 and later versions, a WSIC card can be inserted into an XSIC slot with a special component. The WSIC card is in the lower part of the slot and uses the XSIC slot ID as its own slot ID.

Figure 4-100 shows the slot distribution of the AR2240C.

Figure 4-100 Slot distribution of the AR2240C



- Slot 1 and slot 2 are combined into new slot 2.
- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.

4.9 AR3200 Series

4.9.1 AR3260

Appearance

Figure 4-101 shows the appearance of the AR3260 router.

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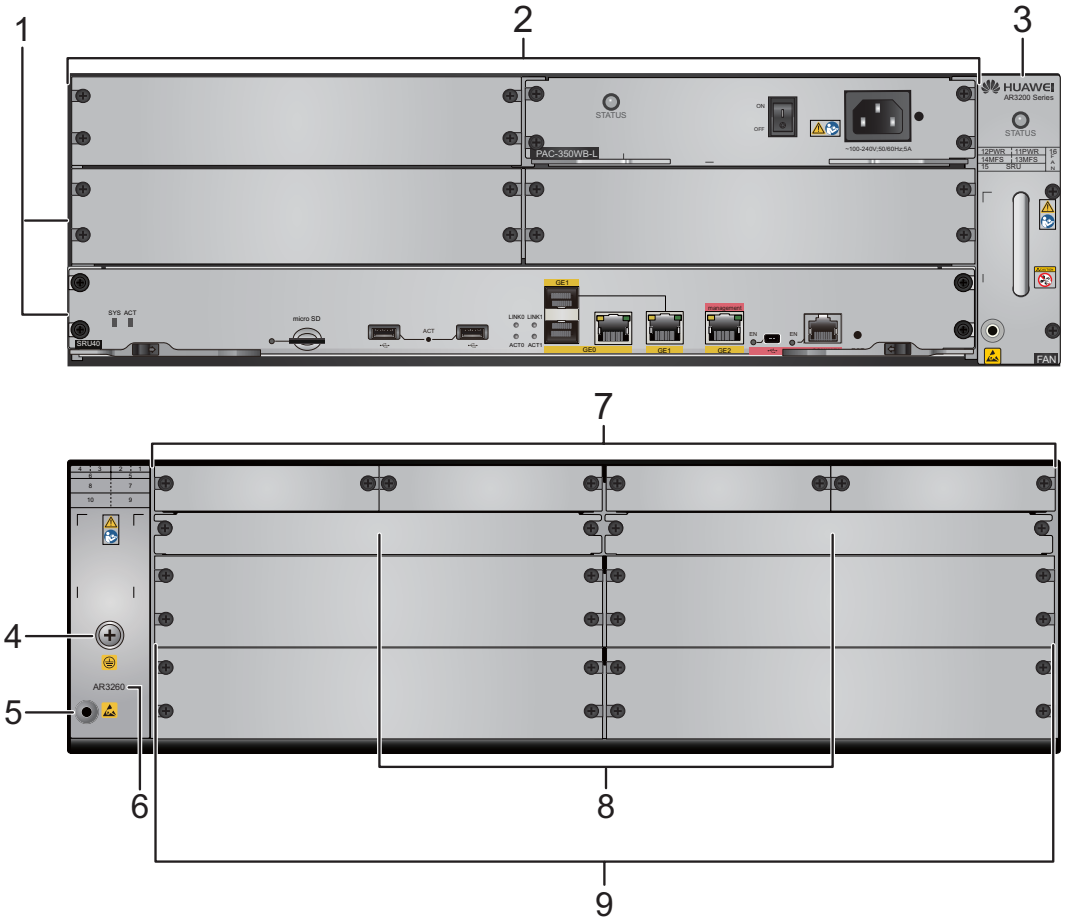
Figure 4-101 AR3260 appearance



1	Two SRU slots **NOTE** ● Versions earlier than V200R005C00: support a single SRU and reserve the capability to support double SRUs. ● V200R005C00 and later versions: support double SRUs working in hot standby mode.	2	Two power module slots Applicable power modules: ● 350 W AC Power Module ● 350 W DC Power Module ● 850 W AC PoE Power Module **NOTE** AC and DC power modules cannot be used together in a router.
3	Fan module slot Applicable fan module: Fan Module	4	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.

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5	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.	6	Product model silkscreen
7	Four SIC slots	8	Two WSIC slots
9	Four XSIC slots	-	-

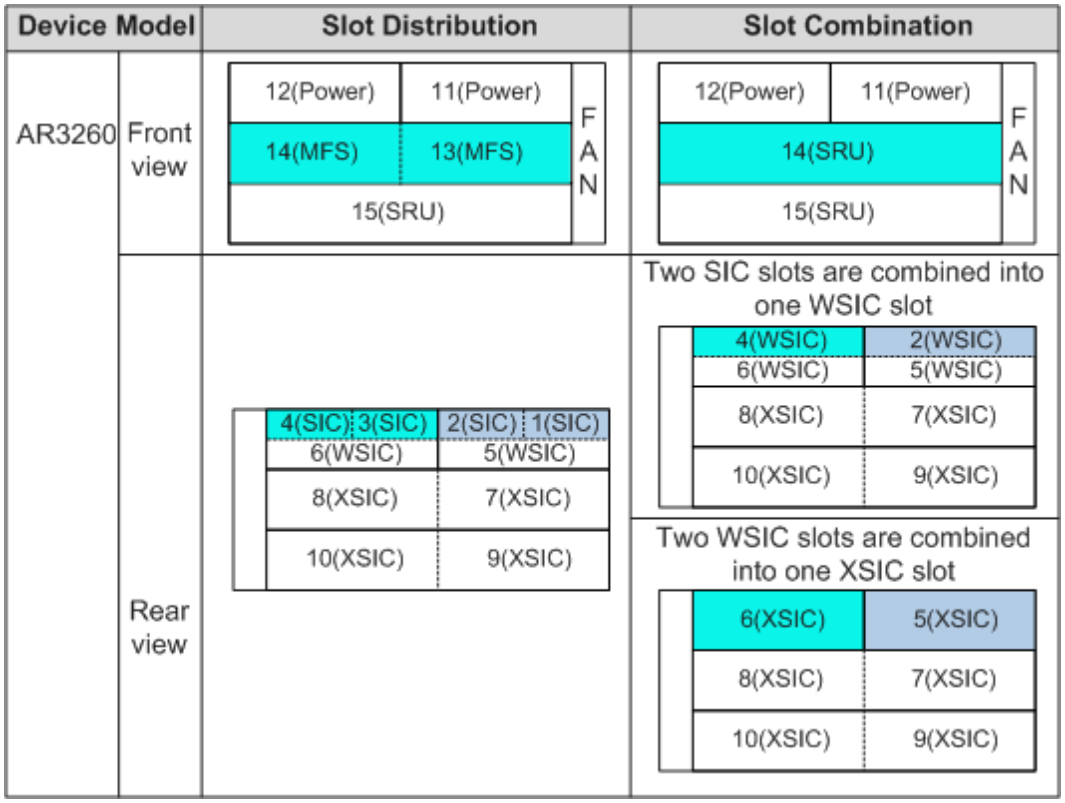
Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.
- In V200R002C00 and later versions, a WSIC card can be inserted into an XSIC slot with a special component. The WSIC card is in the lower part of the slot and uses the XSIC slot ID as its own slot ID.

Figure 4-102 shows the slot distribution of the AR3260.

Figure 4-102 AR3260 slot distribution



- Slot 1 and slot 2 are combined into new slot 2.

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- Slot 3 and slot 4 are combined into new slot 4.
- New slot 2 and slot 5 are combined into new slot 5.
- New slot 4 and slot 6 are combined into new slot 6.
- New slot 13 and slot 14 are combined into new slot 14 to function as the standby MPU slot.

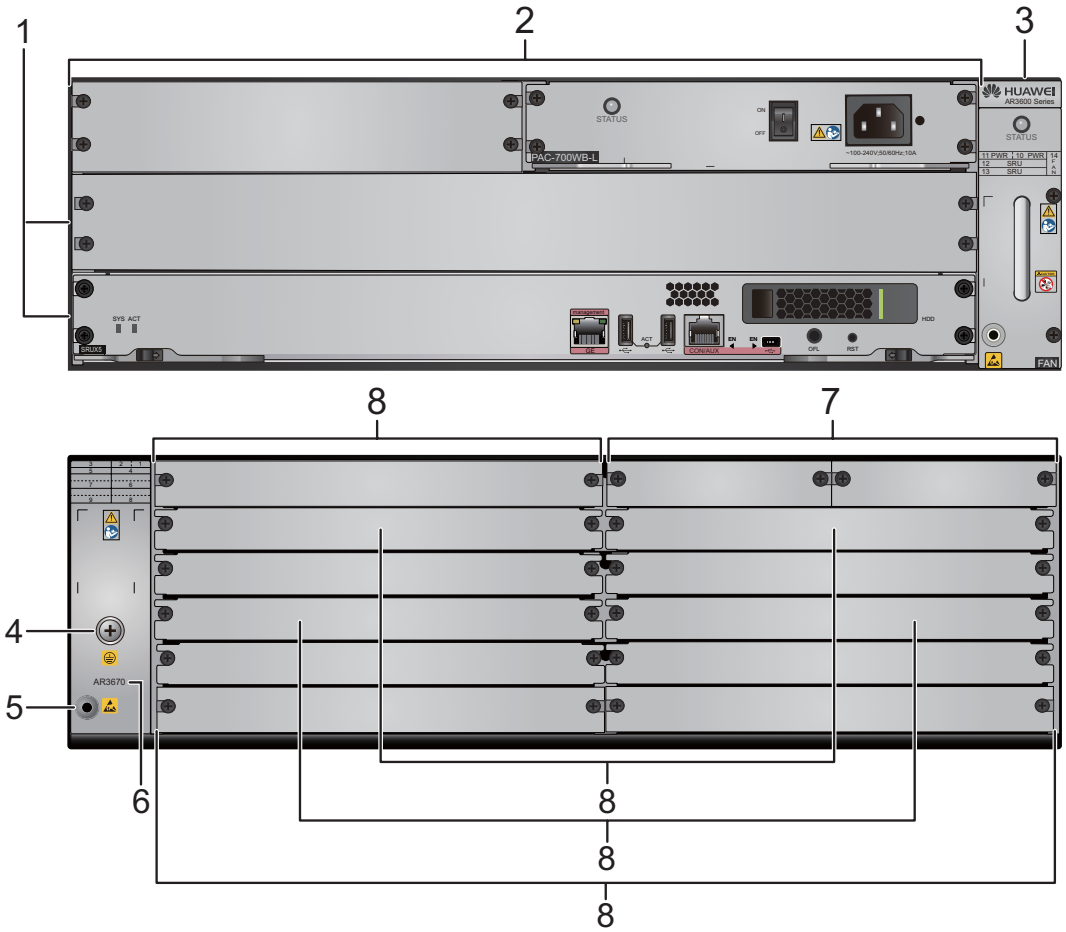
4.10 AR3600 Series

4.10.1 AR3670

Appearance

Figure 4-103 shows the appearance of the AR3670 router.

Figure 4-103 AR3670 appearance



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1	Two SRU slots	2	Two power module slots Applicable power module: ● 700 W AC Power Module ● 850 W AC PoE Power Module
3	3G/LTE antenna interface Applicable fan module: Fan Module	4	Ground point **NOTE** Reliably ground the router by connecting a ground cable to the ground point to protect the router against lightning and interference.
5	ESD jack **NOTE** When maintaining the router, wear an ESD wrist strap and insert the other end of the ESD wrist strap in the ESD jack.	6	Product model silkscreen
7	Two SIC slots	8	Seven WSIC slots

Slot Distribution

NOTE

- Two SIC slots can be combined into one WSIC slot by removing the guide rail.
- Two SIC slots and the WSIC slot below them can be combined into one XSIC slot by removing the guide rails.
- After two slots are combined into one, the slot ID is the larger one between the original two slots.
- In V200R002C00 and later versions, a WSIC card can be inserted into an XSIC slot with a special component. The WSIC card is in the lower part of the slot and uses the XSIC slot ID as its own slot ID.

Figure 4-104 shows the slot distribution of the AR3670.

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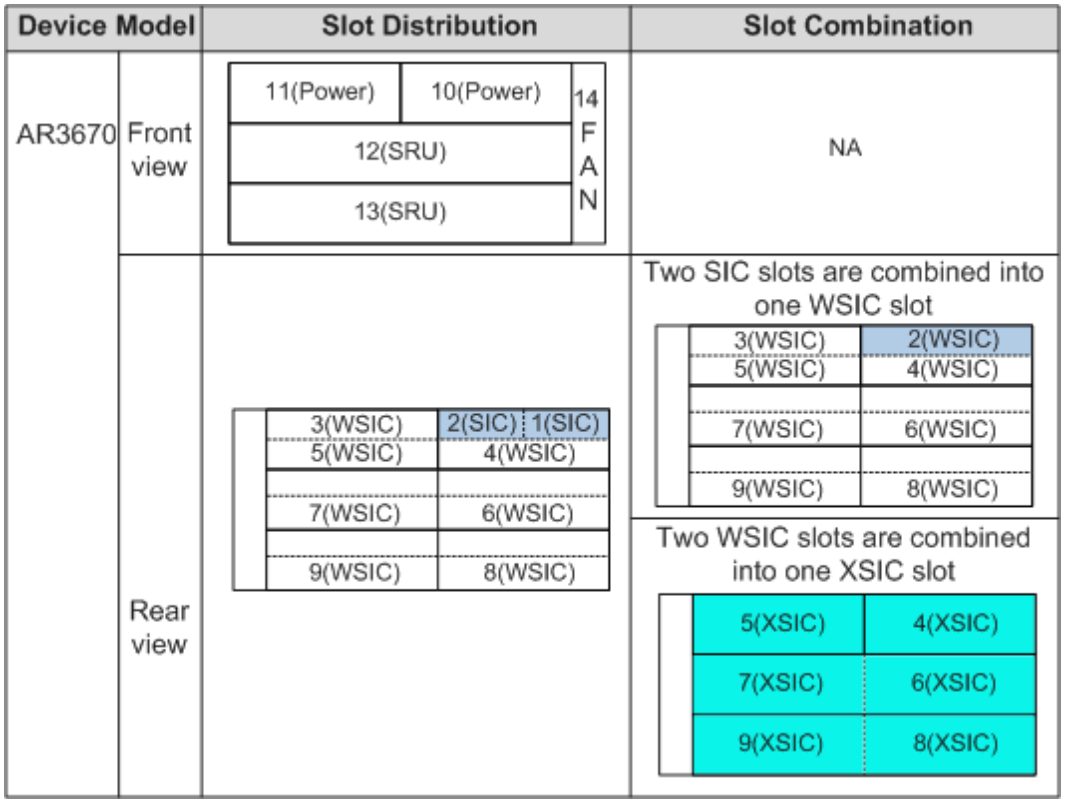
Figure 4-104 AR3670 slot distribution



- Slot 1 and slot 2 are combined into new slot 2.
- New slot 2 and slot 4 are combined into new slot 4.
- Slot 3 and slot 5 are combined into new slot 5.
- Slot 6 and the vacant slot above it are combined into new slot 6.
- Slot 7 and the vacant slot above it are combined into new slot 7.
- Slot 8 and the vacant slot above it are combined into new slot 8.
- Slot 9 and the vacant slot above it are combined into new slot 9.

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5 Operation and Maintenance

About This Chapter

5.1 Various Maintenance Methods

5.2 Fault Location

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5.1 Various Maintenance Methods

The device supports various local and remote maintenance methods.

5.1.1 Command Line Maintenance

The ARs provide the command line mode for local or remote maintenance:

- Local maintenance using the console interface
- Local or remote maintenance using Telnet
- Secure shell (SSH) maintenance: guarantees security and provides authentication for login users on an insecure network, and defends against various attacks, including IP address spoofing, plain text password interception, and denial of service (DoS).

5.1.2 Web-based Network Management System

The device supports the web-based network management system, which provides GUI for device configuration and management.

Users can use the web-based system to manage network devices on the GUI. A junior engineer can use the GUI easily.

5.1.3 CWMP Maintenance

The CPE WAN Management Protocol (CWMP) is drafted by the Digital Subscriber's Line (DSL) forum. It is also called TR-069 standard. CWMP standardizes the communication between customer premises equipment (CPE) and auto-configuration server (ACS).

There are a lot of user devices separated on the access network. They are difficult to manage and maintain. TheARs are the CPE deployed at the user network side. The ACS uses CWMP to remotely manage the CPE. This reduces maintenance cost and improves troubleshooting efficiency.

5.1.4 Remote Deployment and Maintenance Using USB

As the network expands, more and more network devices are used and software commissioning costs increase. USB-based deployment does not require software commissioning, which reduces deployment costs.

Before using a USB flash drive to configure the device, store software package and configuration files on the USB flash drive. Software engineers do not need to commission devices onsite. After installing the device, hardware engineers will insert the USB flash drive into the USB interface on the device and power on it. After being started, the device automatically loads and upgrades the software.

5.1.5 SNMP-based Maintenance

The device supports the Simple Network Management Protocol (SNMP) v1/v2c/v3 and the Client/Server model. The ARs can be managed by the network management system (NMS), such as iManager U2000 and eSight.

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5.2 Fault Location

5.2.1 Device Fault Location

The ARs support the following functions to locate device faults:

- Log

  After detecting a device error or recovery event, the AR logs the event and sends the information to the background server.
- Fast information collection

  A system administrator can use **display diagnostic-information** to collect device fault information.
- Device monitoring

  The AR can monitor all the key indexes and components such as voltage, temperature, fan, power supply unit and board. In addition, the AR can send a trap if an error occurs.

5.2.2 Service Fault Location

The ARs support the following functions to locate service faults:

- Locating Ethernet interface faults

  The ARs support interface status display, line tests, and loopback tests on interfaces. The ARs test packet sending and receiving on interfaces and collect packet statistics, assisting administrators to locate network faults and Ethernet interface connection faults.
- Network-side interface faults

  The ARs support WAN interface tests, which collect traffic statistics and event statistics on WAN interfaces and perform tests such as ATM OAM, and interface loopback.
- Port mirroring and traffic mirroring

  The ARs support packet mirroring on Ethernet interfaces, mirroring of packets from a network-side interface to a user-side Ethernet interface, and mirroring of protocol packets sent to the CPU.
- Connection fault

  The ARs test connections and display connection status on network-side interfaces, and collect connection statistics.
- Voice signal fault

  The ARs record the entire signal interaction process and test signal online. In addition, the ARs test the quality of VoIP services and locate dialing and service faults.

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6 Technical Specifications

About This Chapter

6.1 AR120 series
6.2 AR150 series
6.3 AR160 series
6.4 AR200 series
6.5 AR500 series
6.6 AR510 series
6.7 AR1200 series
6.8 AR2200 series
6.9 AR3200 series
6.10 AR3600 series

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6.1 AR120 series

6.1.1 AR121

Table 6-1 lists technical specifications of the AR121 series routers.

Table 6-1 AR121 series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	9.3 W

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Item	Specification
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one FE electrical interface LAN interfaces: four FE electrical interfaces
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.1.2 AR129

Table 6-2 lists technical specifications of the AR129 router.

Table 6-2 AR129 technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	9.7 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one VDSL interface LAN interfaces: four FE electrical interfaces

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Item	Specification
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.1.3 AR121W

Table 6-3 lists technical specifications of the AR121W series routers.

Table 6-3 AR121W series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz

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Item	Specification
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	11.32 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one FE electrical interface LAN interfaces: four FE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.1.4 AR129W

Table 6-4 lists technical specifications of the AR129W series routers.

Table 6-4 AR129W series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	11.5 W
Heat dissipation	
Fan module	None

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Item	Specification
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one VDSL interface LAN interfaces: four FE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.1.5 AR121GW-L

Table 6-5 lists technical specifications of the AR121GW-L.

Table 6-5 Technical specifications of the AR121GW-L

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None

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Item	Specification
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	13.26 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one FE electrical interface, and two LTE antenna interfaces LAN interfaces: four FE electrical interfaces, and two Wi-Fi antenna interfaces

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Item	Specification
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.1.6 AR129GW-L

Table 6-6 lists technical specifications of the AR129GW-L.

Table 6-6 Technical specifications of the AR129GW-L

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz

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Item	Specification
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	12.95 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one VDSL interface, and two LTE antenna interfaces LAN interfaces: four FE electrical interfaces, and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.2 AR150 series

6.2.1 AR151

Table 6-7 lists technical specifications of the AR151 series routers.

Table 6-7 AR151 series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	11.6 W

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Item	Specification
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one FE electrical interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface.
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.2 AR157

Table 6-8 lists technical specifications of the AR157 series routers.

Table 6-8 AR157 series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB

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Item	Specification
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	15.2 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1

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Item	Specification
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.3 AR156

Table 6-9 lists technical specifications of the AR156 series routers.

Table 6-9 AR156 series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	

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Item	Specification
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	16.1 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one ADSL-B/J interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface.
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing

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Item	Specification
Operating altitude	< 5000 m (16404 ft.)

6.2.4 AR158E

Table 6-10 lists technical specifications of the AR158E series routers.

Table 6-10 AR158E series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS	Not supported
PoE	Not supported
Power consumption	

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Item	Specification
Maximum power consumption	14.7 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one G.SHDSL interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface.
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.5 AR151W-P

Table 6-11 lists technical specifications of the AR151W-P series routers.

Table 6-11 AR151W-P series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz

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Item	Specification
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Supported (FE0-FE3)
Power consumption	
Maximum power consumption	10.4 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1

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Item	Specification
Service interfaces (standard configuration)	WAN interface: one FE electrical interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface, and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.6 AR151G-HSPA+7

Table 6-12 lists technical specifications of the AR151G-HSPA+7 series routers.

Table 6-12 AR151G-HSPA+7 series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)

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Item	Specification
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	12.4 W
Heat dissipation	
Fan	Built-in fan, which is not pluggable
Airflow (facing the front panel)	Cold air flows into the router from the left side and is exhausted from the right side.
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interfaces: one FE electrical interface, two 3G-HSPA+7 antenna interfaces LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface.
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.7 AR157W

Table 6-13 lists technical specifications of the AR157W series routers.

Table 6-13 AR157W series routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS	Not supported
PoE	Not supported

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Item	Specification
Power consumption	
Maximum power consumption	16.7 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface, and two Wi-Fi antenna interfaces.
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.8 AR157VW

Table 6-14 lists technical specifications of the AR157VW series routers.

Table 6-14 AR157VW series routers technical specifications

Item	Specification
System parameters	

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Item	Specification
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (sd1 by default)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With rack-mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS	Not supported
PoE	Not supported
Power consumption	
Maximum power consumption	20.8 W
Heat dissipation	
Fan	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)

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Item	Specification
USB 2.0	1
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: four FE electrical interfaces, in which FE0 LAN interface can be switched to a WAN interface, and two Wi-Fi antenna interfaces Voice interfaces: four FXS interfaces, one FXO interface
Extended slots	Not supported
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.9 AR157G-HSPA+7

Table 6-15 lists technical specifications of the AR157G-HSPA+7.

Table 6-15 Technical specifications of the AR157G-HSPA+7

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)

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Item	Specification
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	16.9 W
Heat dissipation	
Fan module	Built-in fan module, unpluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one ADSL-A/M interface and two 3G-HSPA+7 antenna interfaces LAN interfaces: four FE electrical interfaces. LAN interface FE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.

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Item	Specification
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.10 AR158EVW

Table 6-16 lists technical specifications of the AR158EVW.

Table 6-16 Technical specifications of the AR158EVW

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported

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Item	Specification
PoE power supply	Not supported
Power consumption	
Maximum power consumption	19.9 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one G.SHDSL interface LAN interfaces: four FE electrical interfaces, LAN interface FE0 can be configured as a WAN interface, and two Wi-Fi antenna interfaces. Voice interfaces: four FXS interfaces, and one FXO interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.11 AR151G-C

Table 6-17 lists technical specifications of the AR151G-C.

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Table 6-17 Technical specifications of the AR151G-C

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	12.4 W
Heat dissipation	
Fan module	Built-in fan module, unpluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)

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Item	Specification
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one FE electrical interface, and two 3G-EVDO antenna interfaces LAN interfaces: four FE electrical interfaces. LAN interface FE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.2.12 AR156W

Table 6-18 lists technical specifications of the AR156W.

Table 6-18 Technical specifications of the AR156W

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	16.7 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one ADSL-B/J interface LAN interfaces: four FE electrical interfaces, LAN interface FE0 can be configured as a WAN interface, and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	

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Item	Specification
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3 AR160 series

6.3.1 AR168F

Table 6-19 lists technical specifications of the AR168F router.

Table 6-19 Technical specifications of the AR168F

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz

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Item	Specification
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	17.8 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one G.SHDSL interface, and one GE combo interface. LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.3.2 AR169F/AR169BF

Table 6-20 lists technical specifications of the AR169F/AR169BF.

Table 6-20 Technical specifications of the AR169F/AR169BF

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	● AR169F: 512 MB ● AR169BF: 1 GB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	● AR169F: 17.8 W ● AR169BF: 17.0 W
Heat dissipation	

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Item	Specification
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one VDSL interface, and one GE combo interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.3 AR161FG-L

Table 6-21 lists technical specifications of the AR161FG-L.

Table 6-21 Technical specifications of the AR161FG-L

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	17 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1

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Item	Specification
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.4 AR161FGW-L/AR161FGW-La

Table 6-22 lists technical specifications of the AR161FGW-L.

Table 6-22 Technical specifications of the AR161FGW-L

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)

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Item	Specification
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	18.8 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface, and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.

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Item	Specification
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.5 AR162F

Table 6-23 lists technical specifications of the AR162F.

Table 6-23 Technical specifications of the AR162F

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported

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Item	Specification
PoE power supply	Not supported
Power consumption	
Maximum power consumption	11.1 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one SA interface, and one GE combo interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.6 AR161FW

Table 6-24 lists technical specifications of the AR161FW router.

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Table 6-24 Technical specifications of the AR161FW

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	1 GB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	15.2 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)

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Item	Specification
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one GE combo interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface, and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.7 AR161FW-P-M5

Table 6-25 lists technical specifications of the AR161FW-P-M5.

Table 6-25 Technical specifications of the AR161FW-P-M5

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE0-GE3)
Power consumption	
Maximum power consumption	32.4 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	4
Service interfaces (standard configuration)	WAN interface: one GE combo interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface, two Wi-Fi antenna interfaces, one Bluetooth antenna interface, and one ZigBee antenna interface Multimedia service interfaces: one headset jack, one microphone jack, and one HDMI video interface

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Item	Specification
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 40°C (32°F to 104°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.8 AR169FVW

Table 6-26 lists technical specifications of the AR169FVW routers.

Table 6-26 AR169FVW routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz

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Item	Specification
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	25.3 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and one VDSL interface LAN interfaces: two Wi-Fi antenna interfaces and four GE electrical interfaces, in which LAN interface GE0 can be used as a WAN interface Voice interfaces: four FXS interfaces and one FX0 interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing

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Item	Specification
Operating altitude	< 5000 m (16404 ft.)

6.3.9 AR169FGVW-L

Table 6-27 lists technical specifications of the AR169FGVW-L routers.

Table 6-27 AR169FGVW-L routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	

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Item	Specification
Maximum power consumption	28.9 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, one VDSL interface and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be used as a WAN interface, and two Wi-Fi antenna interfaces Voice interfaces: four FXS interfaces and one FX0 interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.10 AR161F

Table 6-28 lists technical specifications of the AR161F routers.

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Table 6-28 AR161F routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	17.8 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)

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Item	Specification
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one GE combo interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.11 AR169FGW-L

Table 6-29 lists technical specifications of the AR169FGW-L routers.

Table 6-29 AR169FGW-L routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	22 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, one VDSL interface and two LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces and four GE electrical interfaces, in which LAN interface GE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	

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Item	Specification
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.12 AR161

Table 6-30 lists technical specifications of the AR169 routers.

Table 6-30 AR169 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A

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Item	Specification
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	9.7 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one VDSL interface LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.13 AR169

Table 6-31 lists technical specifications of the AR169 routers.

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Table 6-31 AR169 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	9.7 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)

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Item	Specification
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one VDSL interface LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.14 AR161G-L

Table 6-32 lists technical specifications of the AR161G-L routers.

Table 6-32 AR161G-L routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)

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Item	Specification
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	11.9 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.15 AR169G-L

Table 6-33 lists technical specifications of the AR169G-L routers.

Table 6-33 AR169G-L routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption	
Maximum power consumption	11.5 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one VDSL interface and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.16 AR169-P-M9

Table 6-34 lists technical specifications of the AR169-P-M9 routers.

Table 6-34 AR169-P-M9 routers technical specifications

Item	Specification
System parameters	

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Item	Specification
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE0-GE3)
Power consumption	
Maximum power consumption	30.2 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)

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Item	Specification
USB 2.0 interfaces	4
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and one VDSL interface LAN interfaces: four GE electrical interfaces and one Bluetooth antenna interface Multimedia service interfaces: one headset jack, one microphone jack, one HDMI video interface, and one VGA interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.17 AR161W

Table 6-35 lists technical specifications of the AR161W routers.

Table 6-35 AR161W routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)

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Item	Specification
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	11.3 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one GE electrical interface LAN interfaces: four GE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.18 AR169W

Table 6-36 lists technical specifications of the AR169W routers.

Table 6-36 AR169W routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption	
Maximum power consumption	11.5 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one VDSL interface LAN interfaces: four GE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.3.19 AR169W-P-M9

Table 6-37 lists technical specifications of the AR169W-P-M9.

Table 6-37 Technical specifications of the AR169W-P-M9

Item	Specification
System parameters	

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Item	Specification
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE0-GE3)
Power consumption	
Maximum power consumption	41 W
Heat dissipation	
Fan module	Built-in fan module, unpluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)

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Item	Specification
USB 2.0 interfaces	4
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface, and one VDSL interface LAN interfaces: four GE electrical interfaces, one Bluetooth antenna interface, and two Wi-Fi antenna interfaces Multimedia service interfaces: one headset jack, one microphone jack, one HDMI video interface, and one VGA interface
Extended slots	Not supported
Environment parameters	
Operating temperature	● With a hard disk installed: 5°C to 40°C (32°F to 104°F) ● With no hard disk installed: 0°C to 40°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	● With a hard disk installed: < 3000 m (9843 ft.) ● With no hard disk installed: < 5000 m (16404 ft.)

6.3.20 AR169RW-P-M9

Table 6-38 lists technical specifications of the AR169RW-P-M9.

Table 6-38 Technical specifications of the AR169RW-P-M9

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Supported
Physical specifications	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE0-GE3)
Power consumption	
Maximum power consumption	42 W
Heat dissipation	
Fan module	Built-in fan module, unpluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	4
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface, and one VDSL interface LAN interfaces: four GE electrical interfaces, one Bluetooth antenna interface, two Wi-Fi antenna interfaces, and one ZigBee antenna interface Multimedia service interfaces: one headset jack, one microphone jack, one HDMI video interface, and one VGA interface
Extended slots	Not supported

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Item	Specification
Environment parameters	
Operating temperature	● With a hard disk installed: 5°C to 40°C (32°F to 104°F) ● With no hard disk installed: 0°C to 40°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	● With a hard disk installed: < 3000 m (9843 ft.) ● With no hard disk installed: < 5000 m (16404 ft.)

6.3.21 AR161FV-1P

Table 6-39 lists technical specifications of the AR161FV-1P.

Table 6-39 Technical specifications of the AR161FV-1P

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz

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Item	Specification
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	17 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, and one E1 interface LAN interfaces: four GE electrical interfaces, in which LAN interface GE0 can be configured as a WAN interface.
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.3.22 AR161G-U

Table 6-40 lists technical specifications of the AR161G-U.

Table 6-40 Technical specifications of the AR161G-U

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash Memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Physical specifications	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	2 A
Maximum output power	24 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	11.5 W
Heat dissipation	
Fan module	None

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Item	Specification
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface, and two 3G antenna interfaces LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4 AR200 series

6.4.1 AR201

Table 6-41 lists technical specifications of the AR201 routers.

Table 6-41 AR201 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	12.3 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1

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Item	Specification
Service interfaces (standard configuration)	WAN interface: one FE electrical interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.2 AR206

Table 6-42 lists technical specifications of the AR206 routers.

Table 6-42 AR206 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	

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Item	Specification
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	16.1 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one ADSL-B/J interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing

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Item	Specification
Operating altitude	< 5000 m (16404 ft.)

6.4.3 AR207

Table 6-43 lists technical specifications of the AR207 routers.

Table 6-43 AR207 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	

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Item	Specification
Maximum power consumption	16.1 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.4 AR207V

Table 6-44 lists technical specifications of the AR207V routers.

Table 6-44 AR207V routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz

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Item	Specification
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	22.8 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1

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Item	Specification
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface Voice interfaces: four FXS interfaces and one FX0 interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.5 AR207V-P

Table 6-45 lists technical specifications of the AR207V-P routers.

Table 6-45 AR207V-P routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg

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Item	Specification
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Supported (FE0-FE7)
Power consumption	
Maximum power consumption	22.6 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface Voice interfaces: four FXS interfaces and one FX0 interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.6 AR208E

Table 6-46 lists technical specifications of the AR208E routers.

Table 6-46 AR208E routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption	
Maximum power consumption	14.7 W
Heat dissipation	
Fan module	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one G.SHDSL interface LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.7 AR207G-HSPA+7

Table 6-47 lists technical specifications of the AR207G-HSPA+7 routers.

Table 6-47 AR207G-HSPA+7 routers technical specifications

Item	Specification
System parameters	

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Item	Specification
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	17.1 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)

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Item	Specification
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one ADSL-A/M interface and two 3G-HSPA+7 antenna interfaces LAN interfaces: eight FE electrical interfaces, in which LAN interface FE0 can be used as a WAN interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.8 AR201VW-P

Table 6-48 lists technical specifications of the AR201VW-P router.

Table 6-48 AR201VW-P technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)

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Item	Specification
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	3 A
Maximum output power	36 W
RPS power supply	Not supported
PoE power supply	Supported (FE0-FE7)
Power consumption	
Maximum power consumption	23 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: 1 FE electrical interface LAN interfaces: eight FE electrical interfaces, in which FE0 can be configured as a WAN interface and three Wi-Fi antenna interfaces Voice interfaces: four FXS interfaces and one FXO interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.

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Item	Specification
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.4.9 AR207VW

Table 6-49 lists technical specifications of the AR207VW router.

Table 6-49 AR207VW technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 300.0 mm x 216.4 mm x 44.0 mm (11.81 in. x 8.52 in. x 1.73 in.) ● With mounting brackets installed: 482.6 mm x 216.4 mm x 44.0 mm (19.0 in. x 8.52 in. x 1.73 in.)
Weight	2.8 kg (6.17 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum output current	5 A
Maximum output power	60
RPS power supply	Not supported

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Item	Specification
PoE power supply	Not supported
Power consumption	
Maximum power consumption	20.7 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interface: one ADSL-A/M interface LAN interfaces: eight FE electrical interfaces, in which FE0 can be configured as a WAN interface and three Wi-Fi antenna interfaces Voice interfaces: four FXS interfaces and one FXO interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.5 AR500 series

6.5.1 AR503GW-LM7

Table 6-50 lists technical specifications of the AR503GW-LM7 router.

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Table 6-50 AR503GW-LM7 technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	1 GB
Flash memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	mSATA hard disk supported
Dimensions and weight	
Dimensions (W x D x H)	200 mm x 160 mm x 44 mm (7.87 in. x 6.30 in. x 1.73 in.)
Weight	1.4 kg (3.09 lb)
Power specifications	
Rated input voltage (DC)	12 V/24 V
Maximum input voltage (DC)	8 V to 36 V
Maximum output current	3 A
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	13 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
RS232 interfaces	1 (DB9)
USB 2.0 interfaces	1

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Item	Specification
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interface: one GPS antenna interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to +50°C (32°F to 122°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.5.2 AR503GW-LcM7

Table 6-51 lists technical specifications of the AR503GW-LcM7 router.

Table 6-51 AR503GW-LcM7 technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	1 GB
Flash memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	mSATA hard disk supported
Dimensions and weight	
Dimensions (W x D x H)	200 mm x 160 mm x 44 mm (7.87 in. x 6.30 in. x 1.73 in.)
Weight	1.4 kg (3.09 lb)
Power specifications	

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Item	Specification
Rated input voltage (DC)	12 V/24 V
Maximum input voltage (DC)	8 V to 36 V
Maximum output current	3 A
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	13 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
RS232 interfaces	1 (DB9)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interface: one GPS/BDS antenna interface
Extended slots	Not supported
Environment parameters	
Operating temperature	0°C to +50°C (32°F to 122°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.5.3 AR509G-L-D-H

Table 6-52 lists technical specifications of the AR509G-L-D-H router.

Table 6-52 AR509G-L-D-H technical specification

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	190 mm x 220 mm x 44 mm (7.5 in. x 8.7 in. x 1.73 in.)
Weight	1.52 kg (3.35 lb)
Power specifications	
Rated input voltage (DC)	12 V
Maximum input voltage (DC)	10.8 V to 13.2 V
Maximum output current	1 A
RPS power supply	Not supported
PoE power supply	Supported
Power consumption	
Maximum power consumption	12 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)

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Item	Specification
CON/RS232 Interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface, one VDSL interface and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	● PoE power supply used: 0°C to +40°C (32°F to 104°F) ● PoE power supply not used: -25°C to +60°C (-13°F to +140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.5.4 AR509GW-L-D-H

Table 6-53 lists technical specifications of the AR509GW-L-D-H router.

Table 6-53 AR509GW-L-D-H technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	190 mm x 220 mm x 44 mm (7.5 in. x 8.7 in. x 1.7 in.)

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Item	Specification
Weight	1.52 kg (3.35 lb)
Power specifications	
Rated input voltage (DC)	12 V
Maximum input voltage (DC)	10.8 V to 13.2 V
Maximum output current	2 A
RPS power supply	Not supported
PoE power supply	Supported
Power consumption	
Maximum power consumption	12 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/RS232 interfaces	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces	WAN interfaces: one GE electrical interface, one VDSL interface, and two LTE antenna interfaces LAN interfaces: four GE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	Not supported
Environment parameters	
Operating environment temperature	● PoE power supply used: 0°C to +40°C (32°F to 104°F) ● PoE power supply not used: -25°C to +60°C (-13°F to +140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to 185°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.6 AR510 series

6.6.1 AR511GW-LAV2M3

Table 6-54 lists technical specifications of the AR511GW-LAV2M3 router.

Table 6-54 AR511GW-LAV2M3 technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1.2 GHz
Memory	2 GB
Nand flash memory	2 GB
EMMC flash memory	4 GB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	275.0 mm x 160.0 mm x 30.0 mm (10.8 in. x 6.3 in. x 1.2 in.)
Weight	1.3 kg (2.87 lb)
Power specifications	
Rated input voltage (DC)	12 V/24 V **NOTE** The router has two power terminals for DC power supply and supports power supply control using a power key.
Maximum input voltage (DC)	8 V DC to 36 V DC
Maximum output current	4A

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Item	Specification
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	30 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
Console interfaces	1 (Micro USB)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interfaces: one GPS antenna interface, one audio interface, and two video interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	-10°C to +60°C (14°F to 140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.6.2 AR511CGW-LAV2M3

Table 6-55 lists technical specifications of the AR511CGW-LAV2M3 router.

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Table 6-55 AR511CGW-LAV2M3 technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1.2 GHz
Memory	2 GB
Nand flash memory	1 GB
EMMC flash memory	4 GB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	275.0 mm x 160.0 mm x 30.0 mm (10.8 in. x 6.3 in. x 1.2 in.)
Weight	1.3 kg (2.87 lb)
Power specifications	
Rated input voltage (DC)	12 V/24 V **NOTE** The router has two power terminals for DC power supply and supports power supply control using a power key.
Maximum input voltage (DC)	8 V DC to 36 V DC
Maximum output current	4A
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	30 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	

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Item	Specification
Management interfaces	None
Console interfaces	1 (Micro USB)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interfaces: one GPS antenna interface, one audio interface, and two video interfaces
Extended slots	Not supported
Environment parameters	
Operating temperature	-10°C to +60°C (14°F to 140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.6.3 AR511GW-LM7

Table 6-56 lists technical specifications of the AR511GW-LM7 router.

Table 6-56 AR511GW-LM7 technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1.2 GHz
Memory	2 GB
Nand flash memory	2 GB
EMMC flash memory	4 GB
Micro SD card (default: sd1)	None

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Item	Specification
Hard disk	Supported
Dimensions and weight	
Dimensions (W x D x H)	275.0 mm x 160.0 mm x 30.0 mm (10.8 in. x 6.3 in. x 1.2 in.)
Weight	1.3 kg (2.87 lb)
Power specifications	
Rated input voltage (DC)	12 V/24 V **NOTE** The router has two power terminals for DC power supply and supports power supply control using a power key.
Maximum input voltage (DC)	8 V DC to 36 V DC
Maximum output current	4 A
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	25 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
Console interfaces	1 (Micro USB)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia interface: mSATA interface
Extended slots	Not supported
Environment parameters	

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Item	Specification
Operating temperature	0°C to +50°C (32°F to 122°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.6.4 AR511GW-L-B3

Table 6-57 lists technical specifications of the AR511GW-L-B3 router.

Table 6-57 AR511GW-L-B3 technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1.2 GHz
Memory	2 GB
Nand flash memory	1 GB
EMMC flash memory	4 GB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	275.0 mm x 160.0 mm x 30.0 mm (10.8 in. x 6.3 in. x 1.2 in.)
Weight	1.3 kg (2.87 lb)
Power specifications	
Rated input voltage (DC)	12 V/24 V **NOTE** The router has two power terminals for DC power supply and supports power supply control using a power key.

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Item	Specification
Maximum input voltage (DC)	8 V DC to 36 V DC
Maximum output current	4 A
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	30 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
Console interfaces	1 (Micro USB)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and two 3G/LTE antenna interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interfaces: one GPS antenna interface, one audio interface, two video interfaces, and one DTMB interface
Extended slots	Not supported
Environment parameters	
Operating temperature	-10°C to +60°C (14°F to 140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.6.5 AR513W-V3M8

Table 6-58 lists technical specifications of the AR513W-V3M8 router.

Table 6-58 AR513W-V3M8 technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1.2 GHz
Memory	2 GB
Nand flash memory	1 GB
EMMC flash memory	4 GB
Micro SD card (default: sd1)	None
Hard disk	Supported
Dimensions and weight	
Dimensions (W x D x H)	275.0 mm x 180.0 mm x 40.0 mm (10.9 in. x 7.1 in. x 1.6 in.)
Weight	2.3 kg (5.07 lb)
Power specifications	
Rated input voltage (DC)	12 V
Maximum input voltage (DC)	11.4 V DC to 12.6 V DC
Maximum output current	5 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption	
Maximum power consumption	30 W
Heat dissipation	
Fans	None

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Item	Specification
Airflow (facing the front panel)	None
Interface density	
Management interfaces	None
Console interfaces	1 (Micro USB)
USB 2.0 interfaces	3
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: two Wi-Fi antenna interfaces Multimedia service interfaces: one DI/O interface, one VGA interface, two HDMI interfaces, and one eSATA hard disk interface
Extended slots	Not supported
Environment parameters	
Operating temperature	-10°C to +60°C (14°F to 140°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7 AR1200 series

6.7.1 AR1220-AC

Table 6-59 lists technical specifications of the AR1220-AC router.

Table 6-59 AR1220-AC technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 500 MHz
Memory	512 MB
Flash memory	256 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	27 W
Maximum power consumption	32 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2

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Item	Specification
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: eight FE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.2 AR1220V

Table 6-60 lists technical specifications of the AR1220V router.

Table 6-60 AR1220V technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 500 MHz
Memory	512 MB
Flash Memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	

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Item	Specification
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (interfaces FE4 to FE7)
Power consumption (empty chassis)	
Typical power consumption	29 W
Maximum power consumption	34 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: eight FE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.3 AR1220-DC

Table 6-61 lists technical specifications of the AR1220-DC router.

Table 6-61 AR1220-DC technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 500 MHz
Memory	512 MB
Flash memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (DC)	-48 V DC to -60 V DC
Maximum input voltage (DC)	-38.4 V DC to -72 V DC
Maximum input current	3 A
Maximum output power	54 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption (empty chassis)	
Typical power consumption	27 W
Maximum power consumption	32 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: eight FE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.4 AR1220W

Table 6-62 lists technical specifications of the AR1220W router.

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Table 6-62 AR1220W technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 500 MHz
Memory	512 MB
Flash memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (interfaces FE4 to FE7)
Power consumption (empty chassis)	
Typical power consumption	36 W
Maximum power consumption	42 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	

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Item	Specification
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: eight FE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.5 AR1220VW

Table 6-63 lists technical specifications of the AR1220VW router.

Table 6-63 AR1220VW technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 500 MHz
Memory	512 MB
Flash Memory	256 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (interfaces FE4 to FE7)
Power consumption (empty chassis)	
Typical power consumption	37 W
Maximum power consumption	42 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces LAN interfaces: eight FE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	2xSIC

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Item	Specification
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.6 AR1220F

Table 6-64 lists technical specifications of the AR1220F router.

Table 6-64 AR1220F technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz

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Item	Specification
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	20 W
Maximum power consumption	25 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: one GE electrical interface and one GE combo interface LAN interfaces: eight FE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.7.7 AR1220E

Table 6-65 lists technical specifications of the AR1220E router.

Table 6-65 AR1220E technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	18 W
Maximum power consumption	20 W
Heat dissipation	

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Item	Specification
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE combo interfaces LAN interfaces: eight GE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.8 AR1220EV

Table 6-66 lists technical specifications of the AR1220EV router.

Table 6-66 AR1220EV technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	1 GB
Flash memory	512 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (interfaces GE4 to GE7)
Power consumption (empty chassis)	
Typical power consumption	21 W
Maximum power consumption	22 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2

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Item	Specification
Service interfaces (standard configuration)	WAN interfaces: two GE combo interfaces LAN interfaces: eight GE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.9 AR1220EVW

Table 6-67 lists technical specifications of the AR1220EVW router.

Table 6-67 AR1220EVW technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	

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Item	Specification
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (interfaces GE4 to GE7)
Power consumption (empty chassis)	
Typical power consumption	22 W
Maximum power consumption	25 W
Heat dissipation	
Fans	Built-in fans, not pluggable
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: two GE combo interfaces LAN interfaces: eight GE electrical interfaces and two Wi-Fi antenna interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.7.10 AR1220C

Table 6-68 lists technical specifications of the AR1220C router.

Table 6-68 AR1220C technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 390.0 mm x 232.5 mm x 44.5 mm (15.35 in. x 9.2 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 232.5 mm x 44.5 mm (19.0 in. x 9.2 in. x 1.75 in.)
Weight	2.9 kg (6.39 lb)
Power specifications	
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	0.8 A
Maximum output power	25 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption (empty chassis)	
Typical power consumption	14 W
Maximum power consumption	15 W
Heat dissipation	
Fans	None
Airflow (facing the front panel)	None
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: four GE electrical interfaces and one GE optical interface LAN interfaces: eight GE electrical interfaces
Extended slots	2xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8 AR2200 series

6.8.1 AR2220-AC

Table 6-69 lists technical specifications of the AR2220-AC routers.

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Table 6-69 AR2220-AC routers technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 600 MHz
Memory	2 GB
Flash memory	16 MB
Micro SD card (default: sd1)	2 GB
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	7 kg
Power specifications	
Rated AC input voltage	100 V AC to 240 V AC, 50 Hz or 60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	150 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	47 W
Maximum power consumption	65 W
Heat dissipation	
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	

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Item	Specification
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and two GE electrical interfaces
Extended slots	● 4xSIC ● 2xWSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.2 AR2240

Table 6-70 lists technical specifications of the AR2240 series routers.

Table 6-70 AR2240 series routers technical specifications

Item	Specification
System parameters	
Processor	● SRU40: 8-core, 600 MHz ● SRU60: 8-core, 600 MHz ● SRU80: 12-core, 750 MHz ● SRU100: 12-core, 750 MHz ● SRU200/SRU400: 32-core, 1.2 GHz ● SRU100E/SRU200E: 12-core, 1.2 GHz

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Item	Specification
Memory	● SRU40: 2 GB ● SRU60: 2 GB ● SRU80: 2 GB ● SRU100: 2 GB ● SRU200/SRU400: 4 GB ● SRU100E/SRU200E: 4 GB
Flash Memory	16 MB
Micro SD card (sd1 by default)	2 GB
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● Without rack-mounting bracket installed: 442.0 mm x 470.0 mm x 88.1 mm (17.40 in. x 18.50 in. x 3.47 in.) ● With rack-mounting brackets installed: 482.6 mm x 470.0 mm x 88.1 mm (19.0 in. x 18.50 in. x 3.47 in.)
Weight	8.85 kg
Power	
AC chassis model (350 W AC Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	5 A
Maximum output power	350 W
RPS	Not supported
PoE	Not supported
AC PoE chassis model (850 W AC PoE Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz

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Item	Specification
Maximum input current	10 A
Maximum output power	850 W
RPS	Not supported
PoE	Supported
DC chassis model (350 W DC Power)	Support double hot-swappable power modules
Rated input voltage (DC)	-48 V DC to -60 V DC
Maximum input voltage (DC)	-38.4 V DC to -72 V DC
Maximum input current	6 A
Maximum output power	350 W
RPS	Not supported
PoE	Not supported
Power consumption (empty chassis)	
Typical power consumption	● SRU40: 67 W ● SRU60: 67 W ● SRU80: 100 W ● SRU100: 100 W ● SRU200/SRU400: 130 W ● SRU100E/SRU200E: 62 W
Maximum power consumption	● SRU40: 97 W ● SRU60: 97 W ● SRU80: 129 W ● SRU100: 129 W ● SRU200/SRU400: 185 W ● SRU100E/SRU200E: 92 W
Heat dissipation	
Fan module	Independent pluggable fan modules
Airflow (facing the front panel)	Cold air flows into the router from the left side and is exhausted from the right side.

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Item	Specification
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interfaces	1 (RJ45)
USB 2.0 interfaces	● SRU40: 2 ● SRU60: 2 ● SRU80: 2 ● SRU100: 2 ● SRU200: 1 ● SRU400: 1 ● SRU100E: 1 ● SRU200E: 1
Service interfaces (standard configuration)	● SRU40: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU60: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU80: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU100: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU200: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN). ● SRU400: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN). ● SRU100E: Four GE Combo interfaces (WAN) and two GE optical interfaces (WAN). ● SRU200E: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN).
Extended slots	● 4xSIC ● 2xWSIC ● 2xXSIC
Environment	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the operating temperature reduces 1°C every time the altitude increases 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.3 AR2220-DC

Table 6-71 lists technical specifications of the AR2220-DC routers.

Table 6-71 AR2220-DC routers technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 600 MHz
Memory	2 GB
Flash memory	16 MB
Micro SD card (default: sd1)	2 GB
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	7 kg (15.43 lb)
Power specifications	
Rated input voltage (DC)	-48 V DC to -60 V DC
Maximum DC input voltage	-38.4 V DC to -72 V DC
Maximum input current	6 A
Maximum output power	150 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption (empty chassis)	
Typical power consumption	47 W
Maximum power consumption	65 W
Heat dissipation	
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and two GE electrical interfaces
Extended slots	● 4xSIC ● 2xWSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.4 AR2201-48FE

Table 6-72 lists technical specifications of the AR2201-48FE routers.

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Table 6-72 AR2201-48FE routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 314.9 mm x 43.6 mm (17.4 in. x 12.4 in. x 1.72 in.) ● With mounting brackets installed: 482.6 mm x 314.9 mm x 43.6 mm (19.0 in. x 12.4 in. x 1.72 in.)
Weight	4.5 kg (9.92 lb)
Power specifications	
Rated AC input voltage	100 V AC to 240 V AC, 50 Hz or 60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output power	60 W
RPS power supply	Supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	35 W
Maximum power consumption	40 W
Heat dissipation	
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	

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Item	Specification
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and one GE electrical interface LAN interfaces: 48 FE electrical interfaces
Extended slots	None
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.5 AR2202-48FE

Table 6-73 lists technical specifications of the AR2202-48FE routers.

Table 6-73 AR2202-48FE routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 533 MHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 314.9 mm x 43.6 mm (17.4 in. x 12.4 in. x 1.72 in.) ● With mounting brackets installed: 482.6 mm x 314.9 mm x 43.6 mm (19.0 in. x 12.4 in. x 1.72 in.)
Weight	4.5 kg (9.92 lb)
Power specifications	
Rated AC input voltage	100 V AC to 240 V AC, 50 Hz or 60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output power	60 W
RPS power supply	Supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	35 W
Maximum power consumption	40 W
Heat dissipation	
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface, one GE electrical interface, one SA interface, and one E1 interface LAN interfaces: 48 FE electrical interfaces
Extended slots	None

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Item	Specification
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.6 AR2204

Table 6-74 lists technical specifications of the AR2204 routers.

Table 6-74 AR2204 routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 800 MHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	6 kg (13.23 lb)
Power specifications	
Rated AC input voltage	100 V AC to 240 V AC, 50 Hz or 60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz

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Item	Specification
Maximum input current	3 A
Maximum output power	150 W
RPS power supply	Supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	35 W
Maximum power consumption	55 W
Heat dissipation	
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and two GE electrical interfaces
Extended slots	4xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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6.8.7 AR2220E

Table 6-75 lists technical specifications of the AR2220E routers.

Table 6-75 AR2220E routers technical specifications

Item	Specification
System parameters	
Processor	Quad-core, 1 GHz
Memory	1 GB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	6 kg (13.23 lb)
Power specifications	
Rated AC input voltage	100 V AC to 240 V AC, 50 Hz or 60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output power	150 W
RPS power supply	Supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	27 W
Maximum power consumption	29 W
Heat dissipation	

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Item	Specification
Fan module	Built-in fan module, not swappable
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	WAN interfaces: one GE combo interface and two GE electrical interfaces
Extended slots	● 4xSIC ● 2xWSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.8 AR2204-51GE-P

Table 6-76 lists technical specifications of the AR2204-51GE-P routers.

Table 6-76 AR2204-51GE-P routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB

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Item	Specification
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	5 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE3 to GE10)
Power consumption (empty chassis)	
Typical power consumption	25 W
Maximum power consumption	35 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
Console interface	1 (RJ45)
USB 2.0 interfaces	1

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Item	Specification
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and one GE combo interface LAN interfaces: 48 GE electrical interfaces
Extended slots	4xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.9 AR2204-27GE-P

Table 6-77 lists technical specifications of the AR2204-27GE-P routers.

Table 6-77 AR2204-27GE-P routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	5 kg
Power specifications	

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Item	Specification
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Supported (GE3 to GE10)
Power consumption (empty chassis)	
Typical power consumption	25 W
Maximum power consumption	30 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
Console interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and one GE combo interface LAN interfaces: 24 GE electrical interfaces
Extended slots	4×SIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

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Item	Specification
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.10 AR2204-27GE

Table 6-78 lists technical specifications of the AR2204-27GE routers.

Table 6-78 AR2204-27GE routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	5 kg
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption (empty chassis)	
Typical power consumption	25 W
Maximum power consumption	30 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
Console interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and one GE combo interface LAN interfaces: 24 GE electrical interfaces
Extended slots	4×SIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.11 AR2204E

Table 6-79 lists technical specifications of the AR2204E routers.

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Table 6-79 AR2204E routers technical specifications

Item	Specification
System parameters	
Processor	Dual-core, 1 GHz
Memory	512 MB
Flash memory	512 MB
Micro SD card (default: sd1)	None
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 420.0 mm x 44.5 mm (17.4 in. x 16.5 in. x 1.75 in.) ● With mounting brackets installed: 482.6 mm x 420.0 mm x 44.5 mm (19.0 in. x 16.5 in. x 1.75 in.)
Weight	5 kg (11.02 lb)
Power specifications	
Rated input voltage (AC)	100 V AC to 240 V AC, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output power	60 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	25 W
Maximum power consumption	30 W
Heat dissipation	
Fan module	Built-in, unpluggable fans
Airflow (facing the front panel)	Left-to-right
Interface density	

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Item	Specification
Management interfaces	1 (RJ45)
Console interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: two GE electrical interfaces and one GE combo interface
Extended slots	4xSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.8.12 AR2240C

Table 6-80 lists technical specifications of the AR2240C routers.

Table 6-80 AR2240C routers technical specifications

Item	Specification
System parameters	
Processor	6-core, 1.2 GHz
Memory	2 GB
Flash memory	32 MB
Micro SD card (default: sd1)	2 GB
Hard disk	Not supported
Dimensions and weight	

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Item	Specification
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 470.0 mm x 88.1 mm (17.4 in. x 18.5 in. x 3.47 in.) ● With mounting brackets installed: 482.6 mm x 470.0 mm x 88.1 mm (19.0 in. x 18.5 in. x 3.47 in.)
Weight	8.85 kg
Power specifications	
AC chassis model (350 W AC Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	5 A
Maximum output power	350 W
RPS	Not supported
PoE	Not supported
AC PoE chassis model (850 W AC PoE Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	10 A
Maximum output power	850 W
RPS	Not supported
PoE	Supported
DC chassis model (350 W DC Power)	Support double hot-swappable power modules
Rated input voltage (DC)	-48 V DC to -60 V DC
Maximum input voltage (DC)	-38.4 V DC to -72 V DC

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Item	Specification
Maximum input current	6 A
Maximum output power	350 W
RPS power supply	Not supported
PoE power supply	Not supported
Power consumption (empty chassis)	
Typical power consumption	110 W
Maximum power consumption	125 W
Heat dissipation	
Fans	Built-in, unpluggable fans
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	1
Service interfaces (standard configuration)	WAN interfaces: four GE electrical interfaces, two GE combo interfaces, and four GE optical interfaces
Extended slotss	● 4×SIC ● 2×WSIC ● 2×XSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing

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Item	Specification
Operating altitude	< 5000 m (16404 ft.)

6.9 AR3200 series

6.9.1 AR3260

Table 6-81 lists technical specifications of the AR3260 routers.

Table 6-81 AR3260 routers technical specifications

Item	Specification
System parameters	
Processor	● SRU40: 8-core 600 MHz ● SRU60: 8-core 600 MHz ● SRU80: 12-core 750 MHz ● SRU100: 12-core 750 MHz ● SRU200/SRU400: 32-core 1.2 GHz ● SRU100E/SRU200E: 12-core, 1.2 GHz
Memory	● SRU40: 2 GB ● SRU60: 2 GB ● SRU80: 2 GB ● SRU100: 2 GB ● SRU200/SRU400: 4 GB ● SRU100E/SRU200E: 4 GB
Flash memory	16 MB
Micro SD card (default: sd1)	2 GB
Hard disk	Not supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 470.0 mm x 130.5 mm (17.4 in. x 18.5 in. x 5.14 in.) ● With mounting brackets installed: 482.6 mm x 470.0 mm x 130.5 mm (19.0 in. x 18.5 in. x 5.14 in.)
Weight	11 kg
Power specifications	

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Item	Specification
AC chassis model (350 W AC Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	5 A
Maximum output power	350 W
RPS	Not supported
PoE	Not supported
AC PoE chassis model (850 W AC PoE Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	10 A
Maximum output power	850 W
RPS	Not supported
PoE	Supported
DC chassis model (350 W DC Power)	Support double hot-swappable power modules
Rated input voltage (DC)	-48 V DC to -60 V DC
Maximum input voltage (DC)	-38.4 V DC to -72 V DC
Maximum input current	6 A
Maximum output power	350 W
RPS power supply	Not supported
PoE power supply	Not supported

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Item	Specification
Power consumption (empty chassis)	
Typical power consumption	● SRU40: 67 W ● SRU60: 67 W ● SRU80: 104 W ● SRU100: 104 W ● SRU200/SRU400: 140 W ● SRU100E/SRU200E: 62 W
Maximum power consumption	● SRU40: 97 W ● SRU60: 97 W ● SRU80: 179 W ● SRU100: 179 W ● SRU200/SRU400: 210 W ● SRU100E/SRU200E: 92 W
Heat dissipation	
Fans	Independent pluggable fan modules
Airflow (facing the front panel)	Left to right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	● SRU40: Two ● SRU60: Two ● SRU80: Two ● SRU100: Two ● SRU200: 1 ● SRU400: 1 ● SRU100E: 1 ● SRU200E: 1

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Item	Specification
Service interfaces (standard configuration)	● SRU40: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU60: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU80: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU100: Two GE Combo interface (WAN) and one GE electrical interface (WAN). ● SRU200: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN). ● SRU400: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN). ● SRU100E: Four GE Combo interfaces (WAN) and two GE optical interfaces (WAN). ● SRU200E: Four GE Combo interfaces (WAN) and two 10 GE optical interfaces (WAN).
Extended slotss	● 4×SIC ● 2×WSIC ● 4×XSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

6.10 AR3600 series

6.10.1 AR3670

Table 6-82 lists technical specifications of the AR3670 routers.

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Table 6-82 AR3670 routers technical specifications

Item	Specification
System parameters	
Processor	6-core 2.2 GHz
Memory (default)	8 GB
Flash memory	8 GB
Micro SD card (default: sd1)	Not supported
Hard disk	Supported
Dimensions and weight	
Dimensions (W x D x H)	● With no mounting bracket installed: 442.0 mm x 470.0 mm x 130.5 mm (17.4 in. x 18.5 in. x 5.14 in.) ● With mounting brackets installed: 482.6 mm x 470.0 mm x 130.5 mm (19.0 in. x 18.5 in. x 5.14 in.)
Weight	11 kg
Power specifications	
AC chassis model (700 W AC Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	10 A
Maximum output power	700 W
RPS power supply	Not supported
PoE power supply	Not supported
AC PoE chassis model (850 W AC PoE Power)	Support double hot-swappable power modules
Rated input voltage (AC)	100 V to 240 V, 50 Hz/60 Hz
Maximum input voltage (AC)	90 V to 264 V, 47 Hz to 63 Hz
Maximum input current	10 A

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Item	Specification
Maximum output power	850 W
RPS power supply	Not supported
PoE power supply	Supported
Power consumption (empty chassis)	
Typical power consumption	128 W
Maximum power consumption	184 W
Heat dissipation	
Fan module	Independent pluggable fan modules
Airflow (facing the front panel)	Left-to-right
Interface density	
Management interfaces	1 (RJ45)
CON/AUX interface	1 (RJ45)
USB 2.0 interfaces	2
Service interfaces (standard configuration)	None
Extended slotss	● 2×SIC ● 7×WSIC
Environment parameters	
Operating temperature	0°C to 45°C (32°F to 113°F) **NOTE** When the altitude is between 1800 m and 5000 m, the highest operating temperature reduces by 1°C every time the altitude increases by 220 m.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating relative humidity	5% to 95%, noncondensing
Operating altitude	< 5000 m (16404 ft.)

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7 Component Selection Guide

About This Chapter

7.1 Router Purchase List

7.2 Board Purchase List

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7.1 Router Purchase List

Table 7-1 Purchase list of AR120 series

Component	Typical Configuration	Remarks
AR121	AR121, 1FE WAN, 4FE LAN	Mandatory
AR121W	AR121W, 1FE WAN, 4FE LAN, 802.11b/g/n AP, 1USB	Mandatory
AR121GW-L	AR121GW-L, 1FE WAN, 4FE LAN, 802.1b/g/n AP, LTE, 1USB	Mandatory
AR129	AR129, 1VDSL WAN, 4FE LAN	Mandatory
AR129W	AR129W, 1VDSL WAN, 4FE LAN, 802.11b/g/n AP, 1USB	Mandatory
AR129GW-L	AR129GW-L, 1VDSL WAN, 4FE LAN, 802.1b/g/n AP, LTE, 1USB	Mandatory

Table 7-2 Purchase list of AR150 series

Component	Typical Configuration	Remarks
AR151	AR151, 1FE WAN, 4FE LAN, 1USB	Mandatory
AR151W-P	AR151W-P, 1FE WAN, 4FE LAN(PoE), 802.11b/g/n AP, 1 USB	Mandatory
AR151G-HSPA+7	AR151G-HSPA+7, 1FE WAN, WCDMA HSPA+7, 4FE LAN, 1 USB	Mandatory
AR151G-C	AR151G-C, 1FE WAN, CDMA2000 EVDO, 4FE LAN, 1 USB	Mandatory
AR156	AR156, ADSL2+ ANNEX B WAN, 4FE LAN, 1USB	Mandatory
AR156W	AR156W, ADSL2+ ANNEX B WAN, 4FE LAN, 802.11b/g/n AP, 1USB	Mandatory
AR157	AR157, ADSL2+ ANNEX A/M WAN, 4FE LAN, 1USB	Mandatory
AR157W	AR157W, ADSL2+ ANNEX A/M WAN, 4FE LAN, 802.11b/g/n AP, 1 USB	Mandatory

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Component	Typical Configuration	Remarks
AR157VW	AR157VW, ADSL2+ ANNEX A/M WAN, 4FE LAN, 802.11b/g/n AP, 4FXS+1FXO, 1 USB	Mandatory
AR157G-HSPA+7	AR157G-HSPA+7, ADSL2+ ANNEX A/M WAN, WCDMA HSPA+7, 4FE LAN, 1 USB	Mandatory
AR158E	AR158E, 4 copper pair G.SHDSL WAN, 4FE LAN, 1USB	Mandatory
AR158EVW	AR158EVW, 4 copper pair G.SHDSL WAN, 4FE LAN, 802.11b/g/n AP, 4FXS+1FXO, 1 USB	Mandatory
PoE power supply unit	100 W PoE power supply adapter module	Optional **NOTE** Only applied to AR151W-P.
3G extended antenna	Omni antenna	Optional **NOTE** Only the AR151G-HSPA+7, AR151G-C, and AR157G-HSPA+7 can be configured with the Omni antenna.

Table 7-3 Purchase list of AR160 series

Component	Typical Configuration	Remarks
AR161	AR161, 1GE WAN, 4GE LAN	Mandatory
AR161W	AR161W, 1GE WAN, 4GE LAN, 802.11b/g/n AP	Mandatory
AR161G-L	AR161G-L, 1GE WAN, 4GE LAN, LTE	Mandatory
AR161G-U	AR161G-U, 1GE WAN, 4GE LAN, WCDMA HSPA	Mandatory
AR169	AR169, 1VDSL WAN, 4GE LAN	Mandatory
AR169W	AR169W, 1VDSL WAN, 4GE LAN, 802.11b/g/n AP	Mandatory
AR169G-L	AR169G-L, 1VDSL WAN, 4GE LAN, LTE	Mandatory

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Component	Typical Configuration	Remarks
AR169-P-M9	AR169-P-M9, 1VDSL WAN, 1GE WAN, 4GE LAN(POE), 1RS485/ RS232, Multimedia Card, 3 USB	Mandatory
AR169W-P-M9	AR169W-P-M9, 1 VDSL, 1GE WAN, 4GE LAN(POE), 1*RS485/ RS232, Multimedia Card, 4 USB, 1 WLAN	Mandatory
AR169RW-P-M9	AR169RW-P-M9, 1 VDSL, 1GE WAN, 4GE LAN(POE), 1*RS485/ RS232, Multimedia Card, 4 USB, 1 WLAN, 1 zigbee antenna interface	Mandatory
AR168F	AR168F, 4 copper pair G.SHDSL WAN, 1GE COMB WAN, 4GE LAN, 1 USB	Mandatory
AR169F	AR169F, VDSL over POTS with bonding WAN, 1GE COMB WAN, 4GE LAN, 1 USB	Mandatory
AR161FG-L	AR161FG-L, 1GE COMB WAN, 4GE LAN, 1 USB, 1 FDD LTE	Mandatory
AR161FV-1P	AR161FV-1P, 1GE COMB WAN, 4GE LAN, 1 USB, 1 VE1	Mandatory
AR161FGW-L	AR161FGW-L, 1GE COMB WAN, 4GE LAN, 1 USB, 1 FDD LTE, 1 WLAN	Mandatory
AR161FGW-La	AR161FGW-La, 1GE COMB WAN, 4GE LAN, 1 USB, 1 FDD LTE, 1 WLAN	Mandatory
AR161FW-P-M5	AR161FW-P-M5, Multimedia Card, 1GE COMB WAN, 4GE LAN, 1 USB	Mandatory
AR162F	AR162F, 1SA, 1GE COMB WAN, 4GE LAN, 1 USB	Mandatory

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Component	Typical Configuration	Remarks
AR169FVW	AR169FVW, 1GE COMBO WAN, 4GE LAN, 1 USB, 4 FXS, 1FXO, 1 WLAN	Mandatory
AR169FGVW-L	AR169FGVW-L, 1GE COMBO WAN, 4GE LAN, 1 USB, 4 FXS, 1FXO, 1 WLAN	Mandatory
AR169FGW-L	AR169FGW-L, 1GE COMBO WAN, 4GE LAN, 1 USB, 1 WLAN	Mandatory
LTE indoor remote antenna	Omni antenna	Optional **NOTE** Only the AR161G-L, AR169G-L, AR161FG-L, AR161FGW-L, AR161FGW-La, AR169FGW-L, and AR169FGVW-L can be configured with the Omni antenna.
PoE power supply unit	100 W PoE power supply adapter module	Optional **NOTE** Only applied to AR161FV-1P, AR169-P-M9 and AR161FW-P-M5.

Table 7-4 Purchase list of AR200 series

Component	Typical Configuration	Remarks
AR201	AR201, 1FE WAN, 8FE LAN, 1USB	Mandatory
AR201VW-P	AR201VW-P, 1FE WAN, 8FE LAN(PoE), 802.11a/b/g/n AP, 4FXS+1FXO, 1 USB	Mandatory
AR206	AR206, ADSL2+ ANNEX B WAN, 8FE LAN, 1USB	Mandatory
AR207	AR207, ADSL2+ ANNEX A/M WAN, 8FE LAN, 1USB	Mandatory
AR207V	AR207V, ADSL2+ ANNEX A/M WAN, 8FE LAN, 4FXS+1FXO, 1USB	Mandatory
AR207VW	AR207VW, ADSL2+ ANNEX A/M WAN, 8FE LAN, 802.11a/b/g/n AP, 4FXS+1FXO, 1 USB	Mandatory
AR207V-P	AR207V-P, ADSL2+ ANNEX A/M WAN, 8FE LAN(PoE), 4FXS+1FXO, 1USB	Mandatory

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Component	Typical Configuration	Remarks
AR207G-HSPA+7	AR207G-HSPA+7, WCDMA HSPA+7, ADSL2+ ANNEX A/M WAN, 8FE LAN, 1USB	Mandatory
AR208E	AR208E, 4 copper pair G.SHDSL WAN, 8FE LAN, 1USB	Mandatory
PoE power supply unit	100 W PoE power supply adapter module	Optional **NOTE** Only applied to AR201VW-P and AR207V-P.
3G extended antenna	Omni antenna	Optional **NOTE** Only the AR207G-HSPA+7 can be configured with the Omni antenna.

Table 7-5 Purchase list of AR500 series

Component	Typical Configuration	Remarks
AR503GW-LM7	AR503GW-LM7, 1*GE, Wi-Fi 2.4G+5G, LTE, 1*USB2.0, 1*mSATA, DC Input(8-36V)	Mandatory
AR503GW-LcM7	AR503GW-LcM7, 1*GE, Wi-Fi 2.4G+5G, LTE, 1*USB2.0, 1*mSATA, DC Input(8-36V)	Mandatory
AR509G-L-D-H	AR509G-L-D-H, 1GE WAN, 1VDSL WAN, 4GE LAN(POE+), LTE	Mandatory
AR509GW-L-D-H	AR509GW-L-D-H, 1GE WAN, Wi-Fi 2.4G+5G, 1VDSL WAN, 4GE LAN(POE+), LTE	Mandatory

Table 7-6 Purchase list of AR510 series

Component	Typical Configuration	Remarks
AR511GW-LAV2M3	AR511GW-LAV2M3, 2*GE, Wi-Fi 2.4G+5G, LTE, 2*Video Output(HDMI/CVBS/YPbPr), 2*Audio Output +1*Audio Input, 2*USB2.0, 2*DC Input(8-36V)	Mandatory

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Component	Typical Configuration	Remarks
AR511CGW-LAV2M3	AR511CGW-LAV2M3, 2*GE, Wi-Fi 2.4G+5G, LTE, 2*Video Output(HDMI/CVBS/YPbPr), 2*Audio Output +1*Audio Input, 2*USB2.0, 2*DC Input(8-36V)	Mandatory
AR511GW-LM7	AR511GW-LM7, 1*GE, Wi-Fi 2.4G+5G, WCDMA, 2*USB2.0, 1*sata, 2*DC Input(8-36V)	Mandatory
AR511GW-L-B3	AR511GW-L-B3, 1*GE, Wi-Fi 2.4G+5G, LTE, DTMB, 2*Video Output(HDMI/CVBS/YPbPr), 2*Audio Output +1*Audio Input, 2*USB2.0, 2*DC Input(8-36V)	Mandatory
AR513W-V3M8	AR513W-V3M8, 2*GE, 2*2 MIMO Wi-Fi(2.4G/5G supported), 3*Video Output(2*HDMI+1*VGA), 1*Audio Output, 1*eSATA, 1*DI/O, 3*USB+1*USB OTG, DC 12V Input	Mandatory
LTE/GPS cable	LTE/GPS cable	Optional
AR510 Box Mount Angle	AR510 Box Mount Angle	Optional
AR510 Protection support	AR510 Protection support	Optional
GPS+LTE Antenna	GPS+LTE Antenna	Optional
Wi-Fi cable	3m Wi-Fi cable	Optional
Wi-Fi cable	0.5m Wi-Fi cable	Optional

Table 7-7 Purchase list of AR1200 series

Component	Typical Configuration	Remarks
AR1220	● AR1220, 2GE WAN, 8FE LAN, 2 USB, 2 SIC ● AR1220, 2GE WAN, 8FE LAN, 2 USB, 2 SIC, DC -48V	Mandatory
AR1220V	AR1220V, 2GE WAN, 8FE LAN, 2 USB, 2 SIC, build-in 32-channel DSP	Mandatory

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Component	Typical Configuration	Remarks
AR1220E	AR1220E, 2GE COMBO, 8GE LAN, 2 USB, 2 SIC	Mandatory
AR1220EV	AR1220EV, 2GE COMBO, 8GE LAN, 2 USB, 2 SIC, build-in 32-channel DSP, PoE Power Adapter	Mandatory
AR1220EVW	AR1220EVW, 2GE COMBO, 8GE LAN, 802.11b/g/n AP, 2 USB, 2 SIC, build-in 32-channel DSP, PoE Power Adapter	Mandatory
AR1220W	AR1220W, 2GE WAN, 8FE LAN, 802.11b/g/n AP, 2 USB, 2 SIC	Mandatory
AR1220VW	AR1220VW, 2GE WAN, 8FE LAN, 802.11b/g/n AP, 2 USB, 2 SIC, build-in 32-channel DSP	Mandatory
AR1220L	AR1220L, 2GE WAN, 2 USB, 2 SIC	Mandatory
AR1220F	AR1220F, 1GE WAN, 1GE COMBO, 8FE LAN, 2 USB, 2 SIC	Mandatory
AR1220C	AR1220C, 5GE WAN, 8GE LAN, 2 USB(3G/LTE data card not supported), 2 SIC	Mandatory
PoE power supply unit	100 W PoE power supply adapter module	Optional **NOTE** Only applied to AR1220V, AR1220VW, and AR1220W.

Table 7-8 Purchase list of AR2201

Component	Typical Configuration	Remarks
AR2201-48FE	AR2201-48FE, 2GE WAN(1GE Combo), 1 USB, 48FE LAN, 60W AC Power	Mandatory

Table 7-9 Purchase list of AR2202

Component	Typical Configuration	Remarks
AR2202-48FE	AR2202-48FE, 2GE WAN(1GE Combo), 1 E1, 1 SA, 1 USB, 48FE LAN, 60W AC Power	Mandatory

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Table 7-10 Purchase list of AR2204

Component	Typical Configuration	Remarks
AR2204	AR2204, 3GE WAN(1GE Combo), 2 USB, 4 SIC, 2 DSP DIMM, 150W AC Power	Mandatory
DSP module	16/32/64/128-channel voice DSP module	Optional

Table 7-11 Purchase list of AR2204E

Component	Typical Configuration	Remarks
AR2204E	AR2204E, 3GE WAN(1GE Combo), 1 USB, 4 SIC (cannot combine into WSIC), 2 150W AC Power	Optional

Table 7-12 Purchase list of AR2204-27GE

Component	Typical Configuration	Remarks
AR2204-27GE	AR2204-27GE, 3GE WAN(1GE Combo), 24GE LAN, 1 USB (3G/LTE data card not supported), 4 SIC (cannot combine into WSIC), 2 60W AC Power	Mandatory

Table 7-13 Purchase list of AR2204-27GE-P

Component	Typical Configuration	Remarks
AR2204-27GE-P	AR2204-27GE-P, 3GE WAN(1GE Combo), 24GE LAN (PoE on 8 ports), 1 USB (3G/LTE data card not supported), 4 SIC (cannot combine into WSIC), 2 60W AC Power	Mandatory
PoE power supply unit	100 W PoE power supply adapter	Mandatory

Table 7-14 Purchase list of AR2204-51GE-P

Component	Typical Configuration	Remarks
AR2204-51GE-P	AR2204-51GE-P, 3GE WAN(1GE Combo), 48GE LAN (PoE on 8 ports), 1 USB (3G/LTE data card not supported), 4 SIC (cannot combine into WSIC), 2 60W AC Power	Mandatory
PoE power supply unit	100 W PoE power supply adapter	Optional

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Table 7-15 Purchase list of AR2220

Component	Typical Configuration	Remarks
AR2220	AR2220, 3GE WAN(1GE Combo), 2 USB, 4 SIC, 2 WSIC, 1 DSP Slot, 150W AC Power AR2220, 3GE WAN(1GE Combo), 2 USB, 4 SIC, 2 WSIC, 1 DSP Slot, 150W DC Power	Mandatory
DSP module	16/32/64/128-channel voice DSP module	Optional

Table 7-16 Purchase list of AR2220E

Component	Typical Configuration	Remarks
AR2220E	AR2220E, 3GE WAN(1GE Combo), 2 USB, 4 SIC, 2 WSIC, 1 DSP DIMM, 150W AC Power	Mandatory
DSP module	16/32/64/128-channel voice DSP module	Optional

Table 7-17 Purchase list of AR2240

Component	Typical Configuration	Remarks
AR2240	● AR2240, Service and Router Unit 40, 4 SIC, 2 WSIC, 2 XSIC, 350W AC Power ● AR2240, Service and Router Unit 40, 4 SIC, 2 WSIC, 2 XSIC, 350W DC Power ● AR2240, Service and Router Unit 60, 4 SIC, 2 WSIC, 2 XSIC, 350W AC Power ● AR2240, Service and Router Unit 60, 4 SIC, 2 WSIC, 2 XSIC, 350W DC Power ● AR2240, Service and Router Unit 80, 4 SIC, 2 WSIC, 2 XSIC, 350W AC Power ● AR2240, Service and Router Unit 80, 4 SIC, 2 WSIC, 2 XSIC, 350W DC Power	Mandatory
Fan	AR2240 fan module	Mandatory
AC power supply unit	350 W AC power supply unit	By default, an AC model has one AC power supply unit. Two AC power supply units can be installed for load balancing.

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Component	Typical Configuration	Remarks
DC power supply unit	350 W DC power supply unit	Optional. By default, a DC model has one DC power supply unit. Two DC power supply units can be installed for load balancing.
DSP module	16/32/64/128-channel voice DSP module	Optional

Table 7-18 Purchase list of AR2240C

Component	Typical Configuration	Remarks
AR2240C	● AR2240, SRU40C, 4 SIC, 2 WSIC, 2 XSIC, 350W AC Power ● AR2240, SRU40C, 4 SIC, 2 WSIC, 2 XSIC, 350W DC Power	Mandatory
Fan	AR2240 fan module	Mandatory
AC power supply unit	350 W AC power supply unit	Optional. By default, an AC model has one AC power supply unit. Two AC power supply units can be installed for load balancing.
DC power supply unit	350 W DC power supply unit	Optional. By default, a DC model has one DC power supply unit. Two DC power supply units can be installed for load balancing.

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Table 7-19 Purchase list of AR3260

Component	Typical Configuration	Remarks
AR3260	● AR3260, Service and Router Unit 40, 4 SIC, 2 WSIC, 4 XSIC, 350W AC Power ● AR3260, Service and Router Unit 40, 4 SIC, 2 WSIC, 4 XSIC, 350W DC Power ● AR3260, Service and Router Unit 60, 4 SIC, 2 WSIC, 4 XSIC, 350W AC Power ● AR3260, Service and Router Unit 60, 4 SIC, 2 WSIC, 4 XSIC, 350W DC Power ● AR3260, Service and Router Unit 80, 4 SIC, 2 WSIC, 4 XSIC, 350W AC Power ● AR3260, Service and Router Unit 80, 4 SIC, 2 WSIC, 4 XSIC, 350W DC Power	Mandatory
Fan	AR3260 fan module	Mandatory
AC power supply unit	350 W AC power supply unit	Optional. By default, an AC model has one AC power supply unit. Two AC power supply units can be installed for load balancing.
DC power supply unit	350 W DC power supply unit	Optional. By default, a DC model has one DC power supply unit. Two DC power supply units can be installed for load balancing.
DSP module	16/32/64/128-channel voice DSP module	Optional

Table 7-20 Purchase list of AR3670

Component	Typical Configuration	Remarks
AR3670	AR3670, SRUX5 Service and Router Unit, 2 SIC, 2 WSIC, 700W AC Power	Mandatory
Fan	AR3670 fan module	Mandatory

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Component	Typical Configuration	Remarks
AC power supply unit	700 W AC power supply unit	Optional. By default, an AC model has one AC power supply unit. Two AC power supply units can be installed for load balancing.

7.2 Board Purchase List

Table 7-21 describes the cards supports by the AR series router.

Table 7-21 cards supports by the AR series router

Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
MPU	SRU40	Service and Router Unit 40	66.9 W	2.1 kg (4.63 lb)
	SRU60	Service and Router Unit 60	66.9 W	2.1 kg (4.63 lb)
	SRU80	Service and Router Unit 80	96.2 W	2.1 kg (4.63 lb)
	SRU200	Service and Router Unit 200	123 W	2.3 kg (5.07 lb)
	SRU400	Service and Router Unit 400	123 W	2.3 kg (5.07 lb)
	SRUX5	Service and Router Unit X5	130 W	2.0 kg (4.4 lb)
	SRU40C	Service and Router Unit 40C	83 W	2.3 kg (5.07 lb)
	SRU100E	Service and Router Unit 100E	62 W	2.3 kg (5.07 lb)
	SRU200E	Service and Router Unit 200E	62 W	2.3 kg (5.07 lb)

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Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
Ethernet LAN interface card	8FE1GE	8-port 100M-RJ45+1-port 1000M-RJ45-L2/L3 Ethernet electrical interface card	11.2 W	0.6 kg (1.33 lb)
	9ES2	8 Port 100BASE-RJ45 and 1 Port 1000BASE-RJ45 L2 Ethernet Interface Card	7.6 W	0.6 kg (1.33 lb)
	24GE	24-port 1000M-RJ45-L2/L3 Ethernet electrical interface card	25.7 W	0.85 kg (1.88 lb)
	24ES2GP	24-Port 1000BASE-RJ45 L2 with PoE Ethernet Interface Card	30 W	0.85 kg (1.88 lb)
	4GE-2S	4-Port 1000BASE-SFP-L2 Ethernet Interface Card	8 W	0.3 kg (0.66 lb)
	4ES2G-S	4-Port 1000BASE-RJ45 L2 Ethernet Interface Card	6.7 W	0.3 kg (0.66 lb)
	4ES2GP-S	4-Port 1000BASE-RJ45 L2 with PoE Ethernet Interface Card	6.7 W	0.3 kg (0.66 lb)
WAN interface card	1GEC	1-port-GE combo WAN interface card	3.2 W	0.25 kg (0.55 lb)

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Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
	4GECS	4-port-GE combo WAN interface card	14 W	0.6 kg (1.33 lb)
	2FE	2-port-FE WAN interface card	3.1 W	0.3 kg (0.66 lb)
	2X10GL	2-Port 10GE Optical Ports Interface Card	22.1 W	0.5 kg (1.1 lb)
	1E1/T1-M/2E1/T1-M/4E1/T1-M/8E1/T1-M **NOTE** 2E1/T1-M-W will be replaced by 2E1/T1-M after December 31, 2013.	1/2/4/8-port-channelized E1/T1/PRI/VE1 multifunctional interface card	● 1E1/T1-M: 4.7 W ● 2E1/T1-M : 4.8 W ● 2E1/T1-M-W: 4.8 W ● 4E1/T1-M: 11 W ● 8E1/T1-M: 12 W	● 1E1/T1-M/2E1/T1-M/2E1/T1-M-W: 0.3 kg (0.66 lb) ● 4E1/T1-M/8E1/T1-M: 0.6 kg (1.33 lb)
	1E1/T1-F/2E1/T1-F/4E1/T1-F/8E1/T1-F	1/2/4/8-port-fractional channelized E1/T1 WAN interface card	● 1E1/T1-F: 4.7 W ● 2E1/T1-F: 4.8 W ● 4E1/T1-F: 11 W ● 8E1/T1-F: 12 W	● 1E1/T1-F/2E1/T1-F: 0.3 kg (0.66 lb) ● 4E1/T1-F/8E1/T1-F: 0.6 kg (1.33 lb)
	1E3/CE3/T3/CT3	1-Port Channelized/ Unchannelized E3/T3 WAN Interface Card	11.2 W	0.6 kg (1.33 lb)
	1SA/2SA	1/2-port-synchronous/ asynchronous WAN interface card	● 1SA: 5.5 W ● 2SA: 6.2 W	0.3 kg (0.66 lb)
	8SA	8-Port Synchronous/ Asynchronous WAN Interface Card	25 W	0.6 kg (1.33 lb)

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Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
	6E&M	6-Port E&M-RJ45 Analog Trunk Interface Card	21 W	0.6 kg (1.33 lb)
	8AS	8-port-asynchronous WAN interface card	4.7 W	0.6 kg (1.33 lb)
	1BST	1-port ISDN S/T WAN interface card	7.4 W	0.3 kg (0.66 lb)
	1CPOS-155M **NOTE** This card will be replaced by 1CPOS-155M-W after June 30, 2014.	1-port CPOS interface card	12 W	0.3 kg (0.66 lb)
	1CPOS-155M-W **NOTE** This card will replace 1CPOS-155M after June 30, 2014.	1-port CPOS interface card	12 W	0.3 kg (0.66 lb)
	3G-HSPA+7	3G interface card	6.5 W	0.2 kg (0.44 lb)
	3G-EVDO	3G CDMA2000 EVDO Interface Card	7 W	0.2 kg (0.44 lb)
	1LTE-H 1LTE-L 1LTE-LV	WCDMA LTE Data Card	7 W	0.2 kg (0.44 lb)
	1LTEC	TDD LTE/FDD LTE/HSPA+/TD-SCDMA/GSM Data Card	10.1 W	0.2 kg (0.44 lb)
	4GEW-T	4-port-GE electrical WAN interface card	10.2 W	0.3 kg (0.66 lb)

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Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
	4GEW-S	4-port-GE optical WAN interface card	8 W	0.3 kg (0.66 lb)
	1STM1/1STM4	1-Port-155M/622M POS Optical Interface Card	12 W	0.6 kg (1.33 lb)
	4STM1	4-Port 155M Packet over SDH/SONET Optical Interface Card	16.6 W	0.6 kg (1.33 lb)
	4E1-IMA	4-port-E1 ATM IMA interface card	12 W	0.6 kg (1.33 lb)
Voice interface card	2BST **NOTE** This card will replace 2BST-W after December 31, 2013.	2-port-ISDN S/T voice interface card	14.2 W	0.3 kg (0.66 lb)
	2BST-W **NOTE** This card will be replaced by 2BST after December 31, 2013.	2-port-ISDN S/T voice interface card	14.2 W	0.3 kg (0.66 lb)
	4FXS1FXO	4-port FXS + 1-port FXO voice interface card	12.78 W	0.3 kg (0.66 lb)
	16/32/64/128-channel DSP module	DSP module	2.89 W	0.05 kg (0.11 lb)
	16/32FXS	16/32-port-FXS voice interface card	● 16FXS: 29 W ● 32FXS: 37.24 W	0.6 kg (1.33 lb)
	4FXO	4-port-FXO voice interface card	6.6 W	0.1 kg (0.22 lb)

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Card Type	Card Name	Card Description	Maximum Power Consumption	Weight
	1VE1	1-Port Voice E1 Interface Card	4.7 W	0.3 kg (0.66 lb)
xDSL/xPON interface card	1ADSL-A/M and 1ADSL-B/J	1-port-ADSL2+ ANNEX A/M and B/J WAN interface card	● 1ADSL-A/M:5.5 W ● 1ADSL-B/J: 5.5 W	● 1ADSL-A/M:0.3 kg (0.66 lb) ● 1ADSL-B/J: 0.3 kg (0.66 lb)
	4G.SHDSL	1-port-4G.SHDSL WAN interface card	8.2 W	0.35 kg (0.77 lb)
	1GBIS4W	1-Port 4 Pair G.SHDSL WAN Interface Card (WSIC)	7.8 W	0.35 kg (0.77 lb)
	1PON	1-port-EPON/GPON interface card	8.72 W	0.3 kg (0.66 lb)
	VDSL2	1-port-VDSL2 over POTS WAN interface card	9.5 W	0.2 kg (0.44 lb)

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