AR120, AR 150, AR 160 and AR 200 Series Enterprise Routers Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

AR120, AR150, AR160 and AR200 Series Enterprise Routers

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Huawei's next-generation routers, the AR120, AR 150, AR160 and AR 200 series are designed for enterprise branch offices and small businesses, delivering a comprehensive set of services, including routing, switching, voice, security, and wireless access.

Product Overview

The AR120, AR150, AR160 and AR200 series are fixed interface routers that provide a comprehensive platform for a variety of network topologies, including IMS, NGN, WAN and PSTN. The AR120, AR 150, AR160 and AR 200 also employ embedded hardware encryption for security as well as a voice Digital Signal Processor (DSP) for voice services.

The AR120, AR150, AR160 and AR200 series are mature, stable and quiet routers that offer high performance functionality for small networks, enabling small businesses to greatly increase productivity at a lower cost.

AR120s, AR150s, AR160s and AR200s are easy to deploy, configure and customize, greatly reducing cost of deployment and maintenance, while offering maximum value to customers. These models allow network administrators to expand their networks easily and quickly, saving time and costs. Both models support firewalls, call processing, and application program functionalities.

The AR120, AR150, AR160 and AR200 series includes the following models:

- AR121, AR121W, AR129, AR129W

- AR151, AR151G-HSPA+7, AR151G-C, AR151W-P, AR156,AR156W, AR157, AR157G-HSPA+7, AR157VW, AR157W, AR158E, AR158EVW

- AR161, AR161F, AR161FG-L, AR161FGW-L, AR161FW, AR161G-L, AR161W, AR161FV-1P, AR162F,AR168F, AR169, AR169F, AR169FVW,AR169FGW-L, AR169FGVW-L, AR169G-L, AR169W

- AR201, AR207,AR207G-HSPA+7, AR207V, AR207V-P and AR208E

The specifications for these models are shown in the following table.

Table 1: AR120 Models

AR121	
	• WAN speed with services (IMIX): 100 Mbps
	• Fixed ports: 4 x FE LAN, 1 x FE WAN
	• Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR121W	
	• WAN speed with services (IMIX): 100 Mbps
	• Fixed ports: 4 x FE LAN, 1 x FE WAN, 802.11 b/g/n
	• Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR129

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x VDSL2 WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR129W

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x VDSL2 WAN, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

Table2: AR150 Models

AR151

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x FE WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR151G-HSPA+7

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x FE WAN, WCDMA HSPA+7
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR151W-P

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN(PoE), 1 x FE WAN, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR156

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex J
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR156W

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex J, , 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR157

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex A/M
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR157G-HSPA+7

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex A/M, WCDMA HSPA+7
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR157VW

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex A/M, 802.11 b/g/n
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR157W

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x ADSL2+ Annex A/M, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR158E

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x G.SHDSL 8-wire,
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR158EVW

- WAN speed with services (IMIX): 100 Mbps
- Fixed ports: 4 x FE LAN, 1 x G.SHDSL 8-wire, 802.11 b/g/n
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

Table3: AR160 Models

AR161

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161F

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161FW

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161FG-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, FDD LTE
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161FGW-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, FDD LTE, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161G-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE WAN, FDD LTE
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161W

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE WAN, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR161FV-1P

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN
- Fixed Voice ports: 1 x VE1
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR162F

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, 1 x SA
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR168F

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x G.SHDSL 8-wire, 1 x GE Combo WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x VDSL2 compatible with ADSL2+ Annex A/M
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169F

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x VDSL2 compatible with ADSL2+ Annex A/M, 1 x GE Combo WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169FVW

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, 1 x VDSL2 2-pairs , 802.11 b/g/n
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169FGW-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, 1 x VDSL2 2-pairs , LTE FDD, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169FGVW-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x GE Combo WAN, 1 x VDSL2 2-pairs , LTE FDD, 802.11 b/g/n
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169G-L

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x VDSL2, , FDD LTE
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR169W

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 4 x GE LAN, 1 x VDSL2, 802.11 b/g/n
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

Table4: AR200 Models

AR201

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 8 x FE LAN, 1 x FE WAN
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR207

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 8 x FE LAN, 1 x ADSL2+ Annex A/M
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR207V

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 8 x FE LAN, 1 x ADSL2+ Annex A/M
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR207V-P

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 8 x FE LAN(PoE), 1 x ADSL2+ Annex A/M
- Fixed Voice ports: 4 x FXS, 1 x FXO
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

AR208E

- WAN speed with services (IMIX): 150 Mbps
- Fixed ports: 8 x FE LAN, 1 x G.SHDSL 8-wire
- Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

- l WAN speed with services (IMIX): 150 Mbps
- l Fixed ports: 8 x FE LAN, WCDMA HSPA+7, 1 x ADSL2+ Annex A/M
- l Dimensions (H x W x D): 44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)

Product Features and Benefits

① Small Size and High Performance

- More applications: Huawei series routers use the dual-core processor that isolates the control plane from the forwarding plane and processes more enterprise applications. Huawei series routers improve user experience for multimedia service when streams overlap.

- Higher performance: The AR120s, AR150s, AR160s and AR 200s can process various enterprise applications, and its service processing capability is four times that in the industry.

- Greater potential: Huawei series routers provide the capability to migrate services to the 3G and LTE networks.

② Low Investment with High Returns

- Easy to construct: The AR120s, AR150s, AR160s and AR 200s supports plug-and-play, intelligent configuration, and deployment using the USB flash drive. It can function immediately after being installed. Users do not need to configure an IP address manually. The PPP and VPN indicators show the status of corresponding services. The AR120s, AR150s, AR160s and AR 200s helps to quickly construct an enterprise IT network.

- Simplified solution: Huawei provides an all-around solution that integrates the routing, switching, voice, security, and wireless services. Customers can customize solutions as required.

- Easy to expand: Huawei series routers have four/eight FE/GE ports, can access more employee for small enterprises. The two uplink WAN ports implement load balancing and link protection, maximizing the return on investments.

③ Small footprint on a Comprehensive Platform

- Maturity and Stableness: The AR120s, AR150s, AR160s and AR 200s uses the Huawei VRP operating system and VSP voice platform. In addition, the AR120s, AR150s, AR160s and AR 200s uses modularized hardware design, which brings good user experience.

- Low-noise office: Huawei series routers have no fan, which brings low noise and good user experience.

- Secure environment: The lightning failure rate of AR120s, AR150s, AR160s and AR 200s is only 3% of industry average. The AR120s, AR150s, AR160s and AR 200s can be applied in the harsh environment.
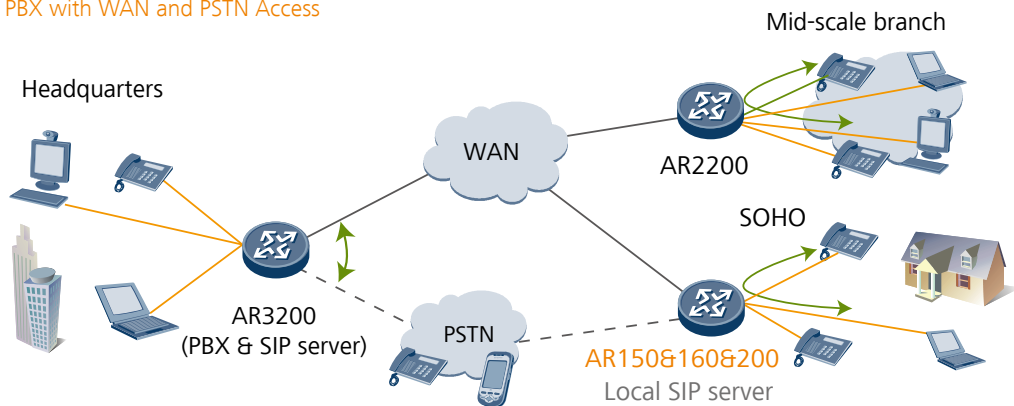
Sample Deployments

WAN Access

Example deployment in branch networks for WAN access. In this example, the AR120s, AR150s , AR160s and AR200s function as the egress routers on enterprise branch networks and provide multiple access methods, including Ethernet, xDSL, 3G, LTE and WLAN.
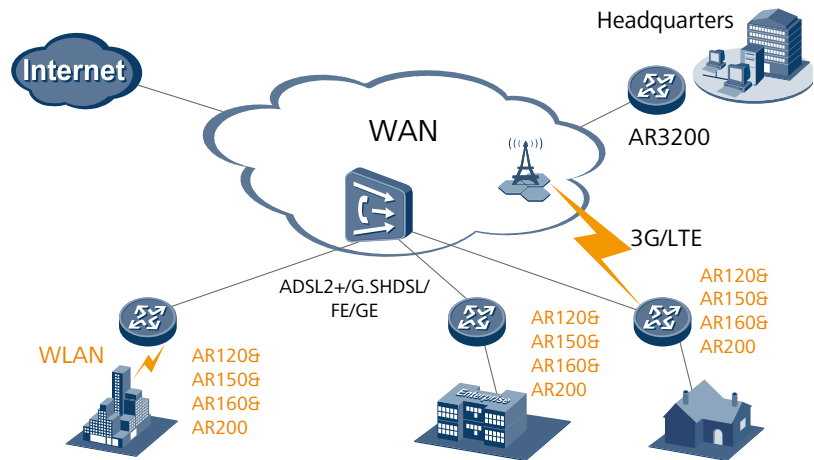
Enterprise Voice Services Deployment

IP PBX with WAN and PSTN Access

This illustration shows an AR150, AR160 and AR200 series router deployed at an enterprise branch with access to a WAN and a PSTN. If a fault occurs on the WAN, the PSTN acts as a backup to the WAN and ensures that call services remain uninterrupted. AR 150s, AR160s and AR 200s are deployed at enterprise branch offices to provide intelligent, integrated dialing across the network. When deployed as voice service gateways, AR 150s, AR160s and AR 200s can function as IP PBX boxes and SIP access gateways.

IP PBX. AR 150s, AR160s and AR 200s have a built-in PBX, which supports the enterprise main number, interactive voice response (IVR), and billing query functions. These features help enhance the corporate image of small businesses by allowing them to look more professional to their customers, while simultaneously improving the efficiency of their enterprise communications.

SIP Server. AR 150s, AR160s and AR 200s have a built-in SIP server that ensures reliability of voice services. If the SIP server at the headquarters office becomes unreachable, the local built-in SIP server at the branch office ensures that communication remains uninterrupted between branch offices and the PSTN network.
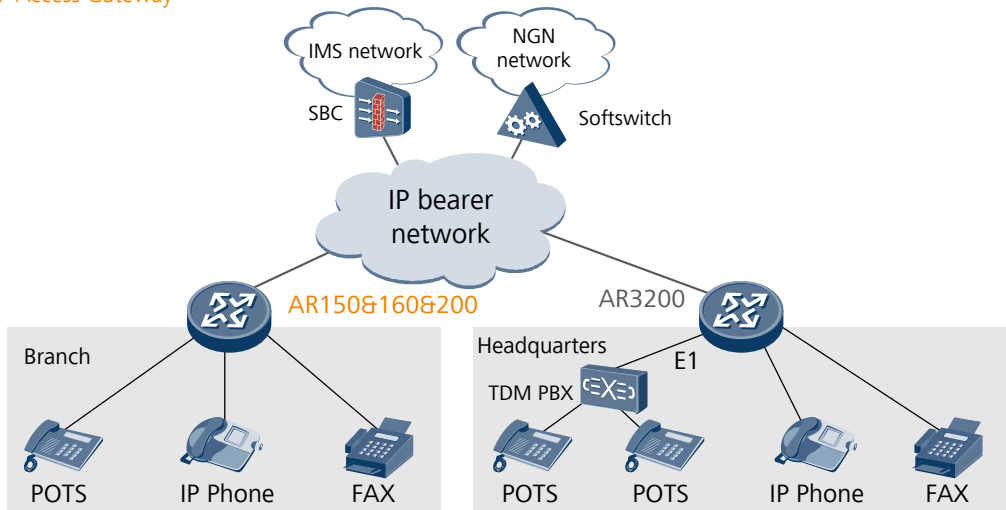
The AR 150, AR160 and AR200 series routers provide integrated voice, fax, and IP services. The AR150s, AR160s and AR200s can function as SIP access gateways for enterprise branch offices that transform traditional phone signals into Voice over IP (VoIP). Typically, AR150s, AR160s and AR200s are connected upstream from the IMS and NGN networks to enable anytime voice communication on any media, such as phones, handsets, and computers.

VPN Deployment for Secure Enterprise Communications
VPNs Connecting Branches and Partners to Headquarters

This illustration shows how to deploy AR120s, AR150s, AR 160s and AR 200s using VPNs to connect branches and partners to headquarters.

AR120s, AR150s, AR160s and AR200s provide various VPN tunnel protocols to ensure secure communications between:

- Enterprise branches and other branch offices
- Enterprise branches and headquarters
- Partners and enterprise resources

AR120s, AR150s, AR 160s and AR 200s support the following VPN tunnel protocols:

- GRE VPN
- IPSEC VPN
- DSVPN
- L2TP VPN

AR120s, AR150s, AR 160s and AR 200s support fast tunnel set-up and authentication.
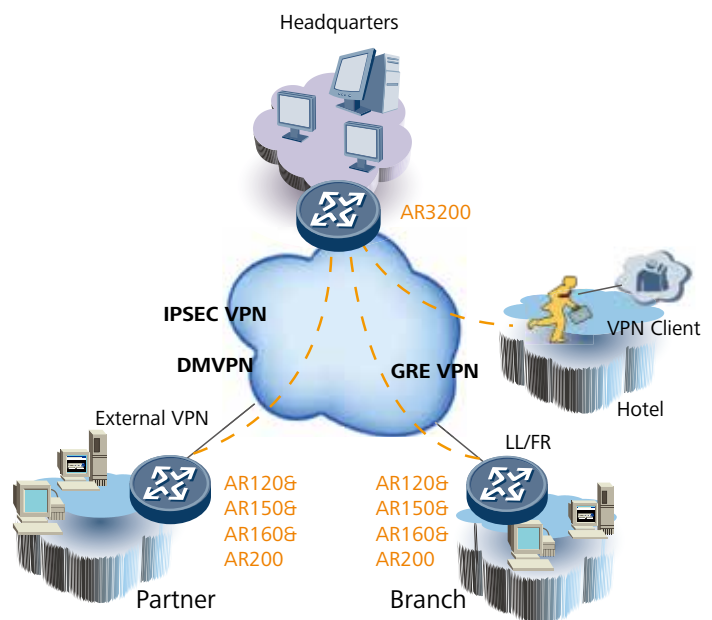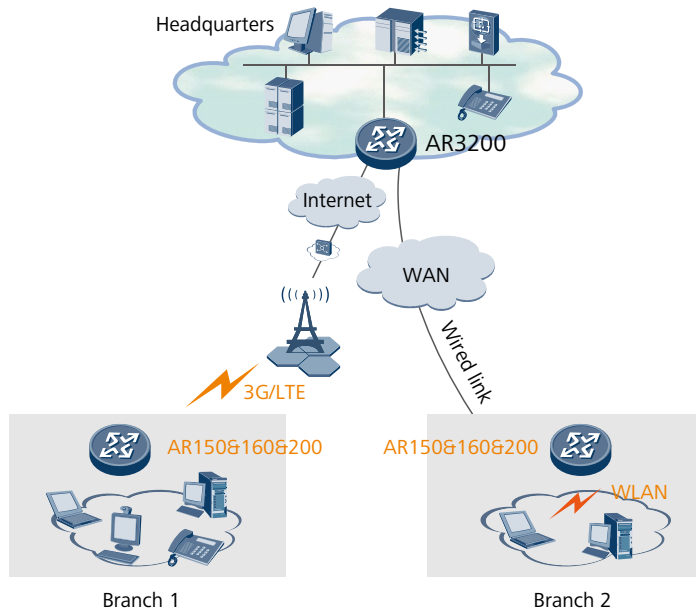
Wireless Access and Management in Branch

3G/LTE and Wi-Fi Wireless Access application

The AR 150s, AR160s and AR200s routers complied with 3G and LTE standards including HSPA+ and FDD LTE, meeting the wireless communication requirements between branches and the headquarters. In addition, the 3G or LTE data link can be used as a backup for wired link to protect the xDSL, FE/GE, and ISDN uplinks. The backup link improves network stability and reduces network construction costs.

Some models of AR160s routers are dual SIM devices, providing dual SIM standby. The customers can switch the SIM card manually according to 3G/LTE network standards. In addition, the device can switch to the backup SIM card when signal is weak to avoid link interruption

The AR 150s, AR160s and AR 200s routers integrated WLAN wireless access capabilities, support 802.11a/b/g/n standard communication, Built-in AC function make the deployment and management more conveniently. Its wireless features can meet users' demand for wireless access, and help enterprises to build a branch network flexibly.

Wireless AC Management application

The AR120s, AR150s, AR160s and AR200s routers integrated AC (Access Controller, a wireless controller) functionality, which can manage the wireless AP (Access Point, Access Point) in wireless LAN. AR supported rich certification and flexible user access control, which can provide security access guarantee for Wi-Fi users. The rich wireless capabilities integrated in one device, this can realize centralized management of wired and wireless network, meet the customers' requirements of building different scale enterprises networks.
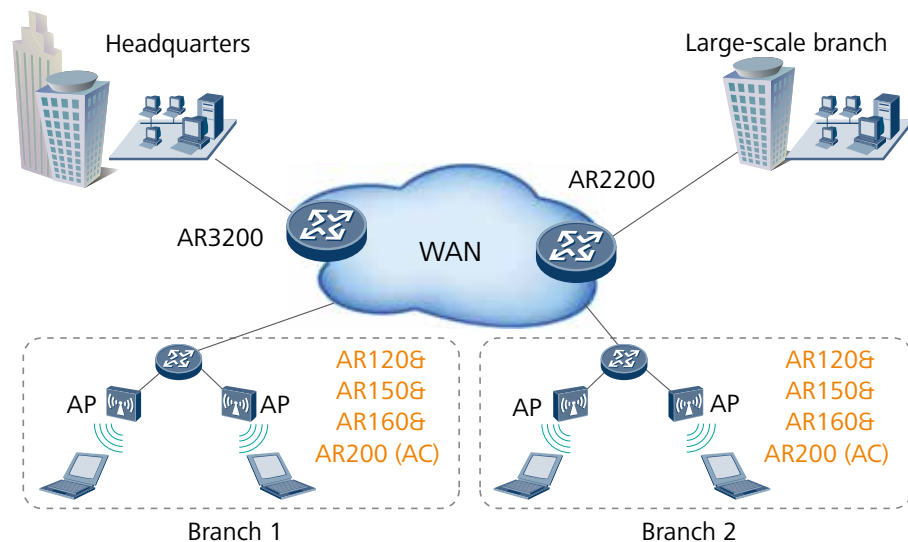
Copper and Fiber integration Access Solution

Huawei new generation AR160 routers integrated 4 GE LAN and 1 GE WAN ports, some models support VDSL2 access, which can provide 100M access bandwidth (800 meters). This new box device can bring a high bandwidth experience to the enterprise and carrier customers.

In the future, if the customers have optical access requirements, they don't need to replace the devices. As the GE WAN port supports Combo switch. The one box solution can meet the customers' requirements perfectly, thereby protect their investments.

Headquarters

WAN

GE Combo   GE Combo

VDSL2/G.SHDSL

AR160   AR160

Desktop office   Desktop office

4xGE   4xGE

Branch1   Branch2
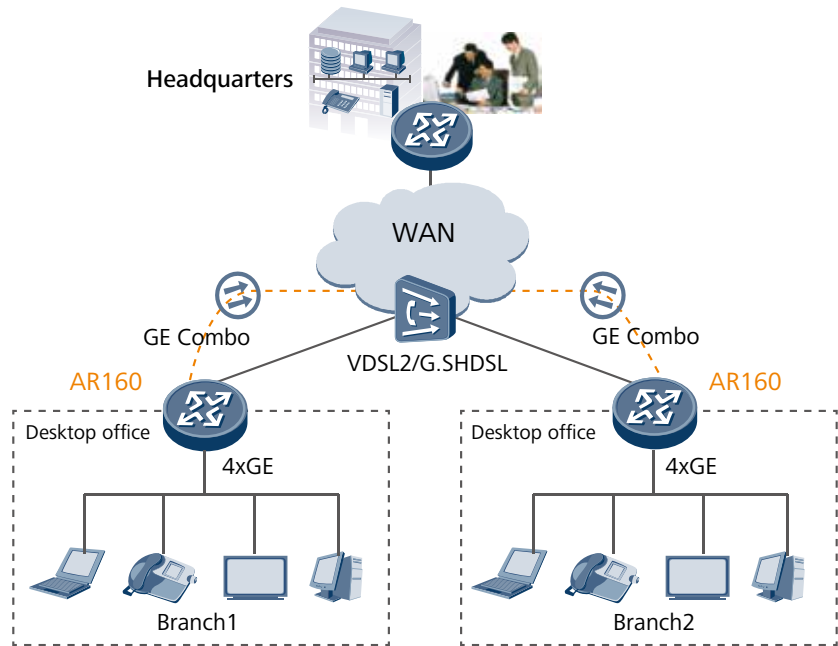
Technical Specifications

Table 1: AR120s Technical Specifications

Item	AR121	AR121W	AR129	AR129W
Hardware				
WAN speed with services (IMIX)	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Fixed WAN ports	1 x FE	1 x FE	1 x VDSL2	1 x VDSL2
Fixed Ethernet switching ports	4 x FE	4 x FE	4 x FE	4 x FE
Fixed voice ports	—	—	—	—
WiFi	—	802.11 b/g/n	—	802.11 b/g/n
USB 2.0 ports	1	1	1	1
Serial auxiliary/ console ports	1	1	1	1
Memory size	256 MB	256 MB	256 MB	256 MB
Flash memory	256 MB	256 MB	256 MB	256 MB
PoE power	—	—	—	—
Maximum power	24 W	24 W	24 W	24 W
Power supply (AC)	100 V to 240 V	100 V to 240 V	100 V to 240 V	100 V to 240 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Dimensions (H x W x D)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)
Operating temperature	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃	0℃ to 45℃
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)
Software				
Basic features	ARP , PBR, DNS, DHCP, NAT			
WLAN(AC)	AP management(AC discovery/AP access/AP management),CAPWAP,WLAN user management , WLAN radio management（802.11a/b/g/n）,WLAN QoS（WMM), WLAN security（WEP/WPA/WPA2/Key management）			
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC address management, MSTP, etc.			
IPv4routing	static route, RIP, BGP			
IPv6 routing	static route, RIPng, BGP4+			

Item	AR121	AR121W	AR129	AR129W
Multicast	IGMP version1/2/3,MLD,			
VPN	IPSec VPN, GRE VPN, L2TP VPN,			
QoS	MQC, priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance (based on IP precedence/DSCP WRED), congestion management (LAN interface: SP/WRR/SP+WRR; WAN interface: PQ/CBWFQ), MQC (traffic classification, traffic behavior, and traffic policy),			
Security	ACL, firewall, 802.1x authentication, AAA authentication, RADIUS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, blacklist, IP source tracing, PKI, HTTPS,			
Management and maintenance	Upgrade management, device management, web-based GUI, RMON, NTP, Auto-Config, site deployment using USB disk, CLI			

Table 2: AR150&200 Technical Specifications

Item	AR201/ AR151	AR156/ AR156W	AR207/ AR157	AR207V	AR207V-P	AR207G-HSPA+7/ AR157G-HSPA+7	AR208E/ AR158E
Hardware							
WAN speed with services (IMIX)	150 Mbps/ 100 Mbps	100 Mbps	150 Mbps/ 100 Mbps	150 Mbps	150 Mbps	150 Mbps/ 100 Mbps	150 Mbps/ 100 Mbps
Fixed WAN ports	1 x FE	1 x ADSL2+ Annex J	1 x ADSL2+ Annex A/M	1 x ADSL2+ Annex A/M	1 x ADSL2+ Annex A/M	1 x ADSL2+ Annex A/M	1 x G.SHDSL 8-wire
Fixed Ethernet switching ports	8 x FE/ 4 x FE	4 x FE	8 x FE/ 4 x FE	8 x FE	8 x FE (PoE)	8 x FE/ 4 x FE	8 x FE/ 4 x FE
Fixed voice ports	—	—	—	4 x FXS, 1 x FXO	4 x FXS, 1 x FXO	—	—
Integrated 3G	—	—	—	—	—	WCDMA HSPA+7	—
USB 2.0 ports	1	1	1	1	1	1	1
Serial auxiliary/ console ports	1	1	1	1	1	1	1
Memory size	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
Flash memory	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
PoE power	—	—	—	—	External 100	—	—
Maximum power	36 W / 24 W	24W	36 W / 24 W	60 W	60 W	36 W / 24 W	36 W / 24 W
Power supply (AC)	100 V to 240 V	100V to 240V	100V to 240V	100V to 240V	100 V to 240 V	100V to 240V	100V to 240V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60Hz	50/60Hz	50/60 Hz

Item	AR201/ AR151	AR156/ AR156W	AR207/ AR157	AR207V	AR207V-P	AR207G-HSPA+7/ AR157G-HSPA+7	AR208E/ AR158E
Dimensions (H x W x D)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)
Operating temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)

Software

Basic features	DHCP server/client, PPPoE server/client, PPPoA server/client, PPPoEoA server/client, NAT, Sub interface management
Voice	RTP, SIP, SIP AG, IP PBX/TDM PBX, FXO/FXS, VoIP, BEST, DISA, SBC (Only voice models support voice features)
WLAN(AP)	AP management, WLAN QoS, WLAN security, WLAN radio management, WLAN user management(Only WLAN models support WLAN AP features)
WLAN(AC)	AP management(AC discovery/AP access/AP management),CAPWAP,WLAN user management , WLAN radio management(802.11a/b/g/n),WLAN QoS(WMM), WLAN security(WEP/WPA/WPA2/Key management)
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC address management, MSTP, etc.
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS, BGP
IPv6 unicast routing	Routing policy, static route, RIPng, OSPFv3, IS-ISv6, BGP4+
Multicast	IGMP version1/2/3, PIM SM, PIM DM, MSDP
VPN	IPSec VPN, GRE VPN, DSVPN, L2TP VPN, Smart VPN
QoS	Diffserv mode, Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance (based on IP precedence/DSCP WRED), congestion management (LAN interface: SP/WRR/SP+WRR; WAN interface: PQ/CBWFQ), MQC (traffic classification, traffic behavior, and traffic policy), Hierarchical QoS, Smart Application Control (SAC)
Security	ACL, firewall, 802.1x authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, IP source tracing, PKI
Management and maintenance	Upgrade management, device management, web-based GUI, GTL, SNMP(v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, site deployment using USB disk, NetConf, CLI

Table 3: AR150&200 Technical Specifications

Item	AR151G-HSPA+7	AR151W-P	AR157VW	AR157W	AR158EVW
			Hardware		
WAN speed with services (IMIX)	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Fixed WAN ports	1 x FE	1 x FE	1 x ADSL2+ Annex A/M	1 x ADSL2+ Annex A/M	1 x G.SHDSL 8-wire
Fixed Ethernet switching ports	4 x FE	4 x FE	4 x FE	4 x FE	4 x FE
Fixed voice ports	—	—	4 x FXS, 1 x FXO	—	4 x FXS, 1 x FXO
Integrated 3G	WCDMA HSPA+7	—	—	—	—
USB 2.0 ports	1	1	1	1	1
Serial auxiliary/ console ports	1	1	1	1	1
Memory size	512 MB	512 MB	512 MB	512 MB	512 MB
Flash memory	512 MB	512 MB	512 MB	512 MB	512 MB
PoE power	—	External 100	—	—	—
Maximum power	24 W	24 W	60 W	24 W	60 W
Power supply (AC)	100V to 240V	100V to 240V	100V to 240V	100V to 240V	100V to 240V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60Hz
Dimensions (H x W x D)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)
Operating temperature	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C	0°C to 45°C
Relative humidity	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)	5% to 95% (non-condensing)

Item	AR151G-HSPA+7	AR151W-P	AR157VW	AR157W	AR158EVW
			Software		
Basic features	DHCP server/client, PPPoE server/client, PPPoA server/client, PPPoEoA server/client, NAT, Sub interface management				
Voice	RTP, SIP, SIP AG, IP PBX/TDM PBX, FXO/FXS, VoIP, BEST, DISA, SBC(Only voice models support voice features)				
WLAN(AP)	AP management, WLAN QoS, WLAN security, WLAN radio management, WLAN user management (Only WLAN models support WLAN AP features)				
WLAN(AC)	AP management(AC discovery/AP access/AP management),CAPWAP,WLAN user management , WLAN radio management（802.11a/b/g/n）,WLAN QoS（WMM), WLAN security（WEP/WPA/WPA2/Key management）				
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC address management, MSTP, etc.				
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS, BGP				
IPv6 unicast routing	Routing policy, static route, RIPng, OSPFv3, IS-ISv6, BGP4+				
Multicast	IGMP version1/2/3, PIM SM, PIM DM, MSDP				
VPN	IPSec VPN, GRE VPN, DSVPN, L2TP VPN, Smart VPN				
QoS	Diffserv mode, Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance (based on IP precedence/DSCP WRED), congestion management (LAN interface: SP/WRR/SP+WRR; WAN interface: PQ/CBWFQ), MQC (traffic classification, traffic behavior, and traffic policy), Hierarchical QoS, Smart Application Control (SAC)				
Security	ACL, firewall, 802.1x authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, IP source tracing, PKI				
Management and maintenance	Upgrade management, device management, web-based GUI, GTL, SNMP(v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, site deployment using USB disk, NetConf, CLI				

Table 4: AR160s Technical Specifications

Item	AR161	AR161F	AR161FW	AR161FG-L	AR161G-L	AR161FGW-L	AR161W	AR161FV-1P	AR162F
					Hardware				
WAN speed with services (IMIX)	150 Mbps	150 Mbps	150 Mbps	150 Mbps	150Mbps	150 Mbps	150Mbps	150 Mbps	150 Mbps
Fixed WAN ports	1 x GE	1x GE Combo	1x GE Combo	1x GE Combo	1 x GE	1x GE Combo	1 x GE	1x GE Combo	1 x SA 1x GE Combo
Fixed Ethernet switching ports	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE
Fixed voice ports	—	—	—	—	—	—	—	1VE1	—
Integrated LTE	—	—	—	FDD LTE	FDD LTE	FDD LTE	—	—	—
Wi-Fi	—	—	802.11 b/g/n	—	—	802.11 b/g/n	802.11 b/g/n	—	—

Item	AR161	AR161F	AR161FW	AR161FG-L	AR161G-L	AR161FGW-L	AR161W	AR161FV-1P	AR162F
USB 2.0 ports	1	1	1	1	1	1	1	1	1
Serial auxiliary/ console ports	1	1	1	1	1	1	1	1	1
Memory size	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
Flash memory	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
PoE power	—	—	—	—	—	—	—	—	—
Maximum power	24W	24W	24W	24W	24W	24W	24W	24W	36 W
Power supply (AC)	100 V to 240 V								
Frequency	50/60 Hz								
Dimensions (H x W x D)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)								
Operating temperature	0°C to 45°C								
Relative humidity	5% to 95% (noncondensing)								

<div align="center">Software</div>

Basic features	DHCP server/client, PPPoE server/client, PPPoA server/client, PPPoEoA server/client, NAT, Sub interface management
Voice	RTP, SIP, SIP AG, IP PBX/TDM PBX, FXO/FXS, VoIP, BEST, DISA, SBC (Only voice models support voice features)
WLAN(AP)	AP management, WLAN QoS, WLAN security, WLAN radio management, WLAN user management(Only WLAN models support WLAN AP features)
WLAN(AC)	AP management(AC discovery/AP access/AP management),CAPWAP,WLAN user management , WLAN radio management（802.11a/b/g/n）,WLAN QoS（WMM), WLAN security（WEP/WPA/WPA2/Key management）
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC address management, MSTP, etc.
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS, BGP
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS, BGP
IPv6 unicast routing	Routing policy, static route, RIPng, OSPFv3, IS-ISv6, BGP4+
Multicast	IGMP version1/2/3, PIM SM, PIM DM, MSDP
VPN	IPSec VPN, GRE VPN, DSVPN, L2TP VPN, Smart VPN
QoS	Diffserv mode, Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance (based on IP precedence/DSCP WRED), congestion management (LAN interface: SP/WRR/SP+WRR; WAN interface: PQ/CBWFQ), MQC (traffic classification, traffic behavior, and traffic policy), Hierarchical QoS, Smart Application Control (SAC)
Security	ACL, firewall, 802.1x authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, IP source tracing, PKI,
Management and maintenance	Upgrade management, device management, web-based GUI, GTL, SNMP(v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, site deployment using USB disk, CLI

Item	AR168F	AR169	AR169F	AR169FVW	AR169FGW-L	AR169FGVW-L	AR169G-L	AR169W
Hardware								
WAN speed with services (IMIX)	150 Mbps	150 Mbps	150 Mbps	150 Mbps	150 Mbps	150 Mbps	150 Mbps	150 Mbps
Fixed WAN ports	1 x G.SHDSL 8-wire, 1x GE Combo	1 x VDSL2	1 x VDSL2 1x GE Combo	1 x VDSL2 1x GE Combo	1 x VDSL2 2-pairs, 1x GE Combo	1 x VDSL2 2-pairs, 1x GE Combo	1 x VDSL2	1 x VDSL2
Fixed Ethernet switching ports	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE	4 x GE
Fixed voice ports	—	—	—	4 x FXS, 1 x FXO	—	4 x FXS, 1 x FXO	—	—
Integrated 3G/LTE	—	—	—	—	FDD LTE	FDD LTE	FDD LTE	—
Wi-Fi	—	—	—	802.11b/g/n	802.11b/g/n	802.11b/g/n	—	802.11b/g/n
USB 2.0 ports	1	1	1	1	1	1	1	1
Serial auxiliary/console ports	1	1	1	1	1	1	1	1
Memory size	512 MB	512 MB	512 MB	1GB	1GB	1GB	512 MB	512 MB
Flash memory	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
PoE power	—	—	—	—	—	—	—	—
Maximum power	24 W	24 W	24 W	24W	24 W	24 W	24 W	24 W
Power supply (AC)	100 V to 240 V							
Frequency	50/60 Hz							
Dimensions (H x W x D)	44.5 mm x 300 mm x 220 mm (1.75 in. x 11.8 in. x 8.66 in.)							
Operating temperature	0°C to 45°C							
Relative humidity	5% to 95% (noncondensing)							
Software								
Basic features	DHCP server/client, PPPoE server/client, PPPoA server/client, PPPoEoA server/client, NAT, Sub interface management							
Voice	RTP, SIP, SIP AG, IP PBX/TDM PBX, FXO/FXS, VoIP, BEST, DISA, SBC(Only voice models support voice features)							

Item	AR168F	AR169	AR169F	AR169FVW	AR169FGW-L	AR169FGVW-L	AR169G-L	AR169W
WLAN(AP)	AP management, WLAN QoS, WLAN security, WLAN radio management, WLAN user management(Only WLAN models support WLAN AP features)							
WLAN(AC)	AP management(AC discovery/AP access/AP management),CAPWAP,WLAN user management , WLAN radio management（802.11a/b/g/n）,WLAN QoS（WMM), WLAN security（WEP/WPA/WPA2/Key management）							
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC address management, MSTP, etc.							
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS, BGP							
IPv6 unicast routing	Routing policy, static route, RIPng, OSPFv3, IS-ISv6, BGP4+							
Multicast	IGMP version1/2/3, PIM SM, PIM DM, MSDP							
VPN	IPSec VPN, GRE VPN, DSVPN, L2TP VPN, Smart VPN							
QoS	Diffserv mode, Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance (based on IP precedence/DSCP WRED), congestion management (LAN interface: SP/WRR/SP+WRR; WAN interface: PQ/CBWFQ), MQC (traffic classification, traffic behavior, and traffic policy), Hierarchical QoS, Smart Application Control (SAC)							
Security	ACL, firewall, 802.1x authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, IP source tracing, PKI,							
Management and maintenance	Upgrade management, device management, web-based GUI, GTL, SNMP(v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, site deployment using USB disk, CLI							

How to Configure the Modular AR120, AR150, AR 160 and AR200 Routers

The AR120, AR150, AR160 and AR 200 series routers require 2 types of configuration modules:

• Basic software configuration

• Software license configuration

The basic software configuration modules provide functions such as routing, switching, voice, and security. The software license configuration modules provide additional functions such as AC.

Ordering Information

The AR120, AR 150, AR 160 and AR 200 series routers are configured by selecting and installing the appropriate configuration module. The configuration module ordering information and descriptions are shown in the following table 6-9.

Table 6: Chassis Options

Chassis Configuration	Description
AR121	AR121,1FE WAN,4FE LAN
AR121W	AR121W,1FE WAN,4FE LAN,WIFI 2.4G
AR129	AR129,1VDSL WAN,4FE LAN
AR129W	AR129W,1VDSL WAN,4FE LAN,WIFI 2.4G
AR0M0001BA00	AR201,1FE WAN,8FE LAN,1USB
AR0M0007BA00	AR207,ADSL2+ ANNEX A/M WAN,8FE LAN,1USB
AR0M2074BA	AR207G-HSPA+7,WCDMA HSPA+7,ADSL2+ ANNEX A/M WAN,8FE LAN,1USB
AR0M007VBA00	AR207V,ADSL2+ ANNEX A/M WAN,8FE LAN,4FXS+1FXO,1USB
AR0M2073BA	AR207V-P,ADSL2+ ANNEX A/M WAN,8FE LAN(POE),4FXS+1FXO,1USB,PoE Power Adapter
AR0M008EBA00	AR208E,4 copper pair G.SHDSL WAN,8FE LAN,1USB
AR0M1510BA00	AR151,1FE WAN,4FE LAN,1USB
AR0M1513BA00	AR151G-HSPA+7,1FE WAN,WCDMA HSPA+7,4FE LAN,1 USB
AR0M1515BA00	AR151W-P,1FE WAN,4FE LAN(PoE),802.11b/g/n AP,1 USB
AR0M1560BA	AR156,ADSL2+ ANNEX J WAN,4FE LAN,1USB
AR156W	AR156W,ADSL2+ ANNEX B/J WAN,4FE LAN,802.11b/g/n AP,1 USB
AR0M1570BA00	AR157,ADSL2+ ANNEX A/M WAN,4FE LAN,1USB
AR0M1576BA00	AR157W,ADSL2+ ANNEX A/M WAN,4FE LAN,802.11b/g/n AP,1 USB
AR0M1577BA00	AR157VW,ADSL2+ ANNEX A/M WAN,4FE LAN,802.11b/g/n AP,4FXS+1FXO,1 USB
AR0M1574BA00	AR157G-HSPA+7,ADSL2+ ANNEX A/M WAN,WCDMA HSPA+7,4FE LAN,1 USB
AR0M1580BA	AR158E,4 copper pair G.SHDSL WAN,4FE LAN,1USB
AR0M1582BA00	AR158EVW,4 copper pair G.SHDSL WAN,4FE LAN,802.11b/g/n AP,4FXS+1FXO,1 USB
AR161	AR161,1GE WAN,4GE LAN
AR161F	AR161F,1GE COMB WAN,4GE LAN,1 USB
AR161FG-L	AR161FG-L,1GE COMB WAN,LTE FDD,4GE LAN,1 USB
AR161FGW-L	AR161FGW-L,1GE COMB WAN,LTE FDD,4GE LAN,802.11b/g/n AP,1 USB
AR161FW	AR161FW,1GE COMBO WAN,4GE LAN,1 USB,1 WLAN
AR161G-L	AR161G-L,1GE WAN,4GE LAN,LTE
AR161W	AR161W,1GE WAN,4GE LAN,WIFI 2.4G
AR161FV-1P	AR161FV-1P,1GE COMBO WAN,4GE LAN,1 USB,1 VE1
AR162F	AR162F,1SA,1GE COMBO WAN,4GE LAN,1 USB
AR168F	AR168F,4 copper pair G.SHDSL WAN,1GE COMB WAN,4GE LAN,1 USB
AR169	AR169,1VDSL WAN,4GE LAN
AR169F	AR169F,VDSL over POTS with bonding WAN,1GE COMB WAN,4GE LAN,1 USB
AR169FVW	AR169FVW,1GE COMBO WAN,4GE LAN,1 USB,4 FXS,1FXO,1 WLAN

Chassis Configuration	Description
AR169FGW-L	AR169FGW-L,1GE COMBO WAN,4GE LAN,1 USB,4 1 WLAN
AR169FGVW-L	AR169FGVW-L,1GE COMBO WAN,4GE LAN,1 USB,4 FXS,1FXO,1 WLAN
AR169G-L	AR169G-L,1VDSL WAN,4GE LAN,LTE
AR169W	AR169W,1VDSL WAN,4GE LAN,WIFI 2.4G

Table 7: Chassis Options

Power Module	Description
AR0MPSAP1000	100W POE Power Module
W0ACPSE03	Adapter,0degC,40degC,90V,264V,12V/3A,C8/4pin

Table 8: License Options

License	Description
LAR0DATAE01	AR150&160&200 Value-Added Data Package
LAR0AC01	AR150&160&200 AC Express License
LAR0VOICEE01	AR150&200 Value-Added Voice Package
LAR0CMBEST01	AR CM&BEST License-5 telephones
LAR0CMBEST02	AR CM&BEST License-25 telephones
LAR0CT01	AR CT(Call Trunk) License-5 sessions
LAR0CT02	AR CT(Call Trunk) License-25 sessions
LAR0IVR01	AR IVR(Interactive Voice Response) License-1 session
LAR0SECE01	AR150&160&200 Value-Added Security Package
LAR0DSVPN01	AR150&160&200 DSVPN(Dynamic Smart VPN) Function

Table 9: SD Card and USB Disk Options

SD Cards & USB Disks	Description
NUSBDSK01	Storage USB DISK,4GB,USB 2.0

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Company Addendum

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