



# Huawei AR160 Series Enterprise Routers Datasheet

Huawei's next-generation routers, the AR160 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 AR160 series are fixed interface routers that provide a comprehensive platform for a variety of network topologies, including IMS, NGN, WAN and PSTN. The AR160s also employ embedded hardware encryption for security.





The AR160 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.



AR160s 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. The routers support firewalls, call processing, and application program functionalities.

The AR160 series include the following models:

- AR161, AR161G-L, AR161W, AR169, AR169G-L, AR169W

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

 <p>AR161</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x GE WAN</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>
 <p>AR161G-L</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x GE WAN, FDD LTE</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>
 <p>AR161W</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x GE WAN, 802.11 b/g/n</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>
 <p>AR169</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x VDSL2</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>

 <p>AR169G-L</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x VDSL2, FDD LTE</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>
 <p>AR169W</p>	<ul style="list-style-type: none"> <li>• WAN speed with services (IMIX): 300 Mbps</li> <li>• Fixed ports: 4 x GE LAN(can be configured as WAN interfaces), 1 x VDSL2, 802.11 b/g/n</li> <li>• Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)</li> </ul>

## Product Features and Benefits

### 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 AR160s 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.

### Low Investment with High Returns

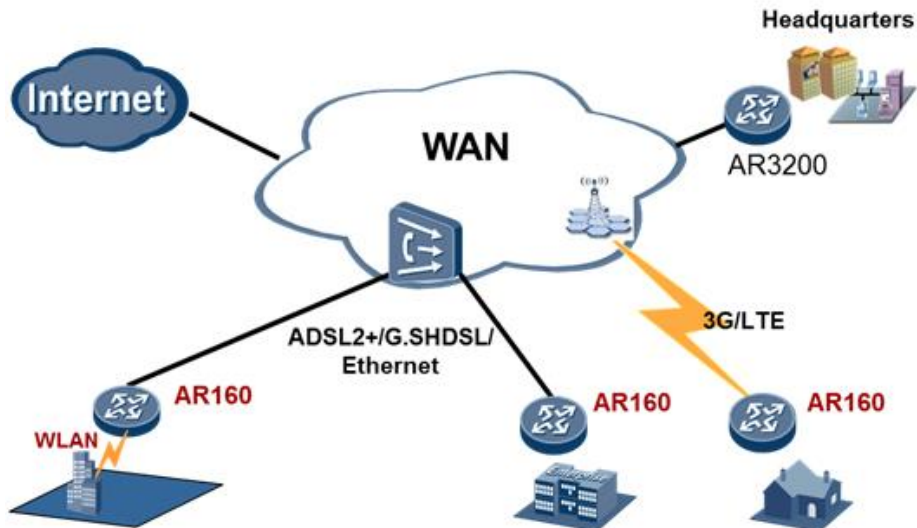
- Easy to construct: The AR160s supports plug-and-play, intelligent configuration, and deployment using the USB flash drive. It can function immediately after being installed. Users do not need to configure an IP address manually. The PPP and VPN indicators show the status of corresponding services.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

### Small footprint on a Comprehensive Platform

- Maturity and Stableness: The AR160s uses the Huawei VRP operating system and VSP voice platform. In addition, the AR160s 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 AR160s is only 3% of industry average. The AR160s can be applied in the harsh environment.

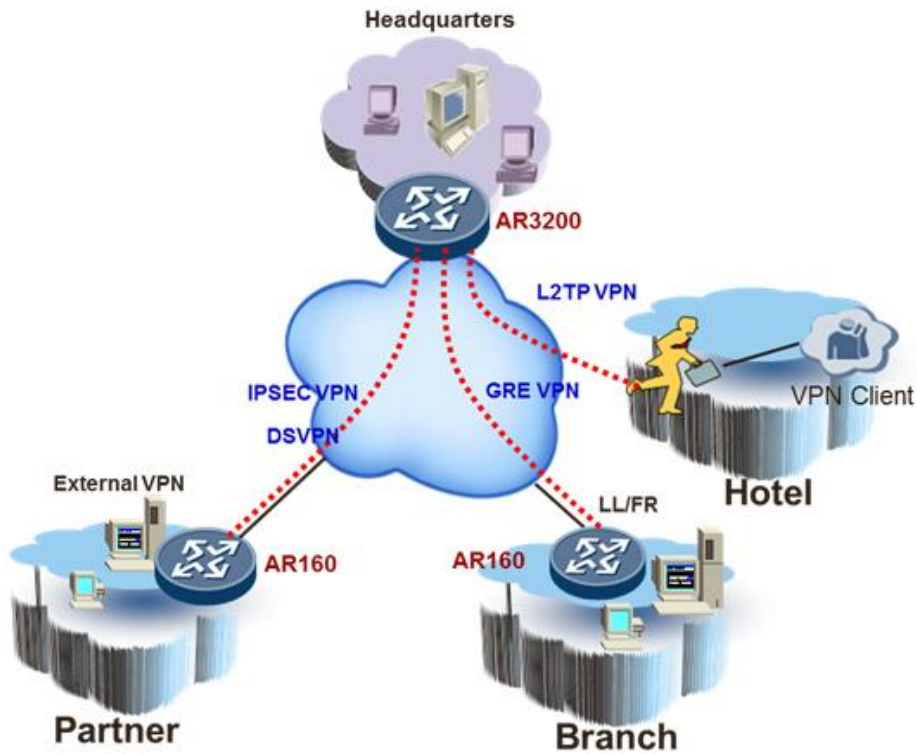
## Sample Deployments

### WAN Access



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

### VPN Deployment for Secure Enterprise Communications



### VPNs Connecting Branches and Partners to Headquarters

This illustration shows how to deploy AR160s using VPNs to connect branches and partners to headquarters.

AR160s provide various VPN tunnel protocols to ensure secure communications between:

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

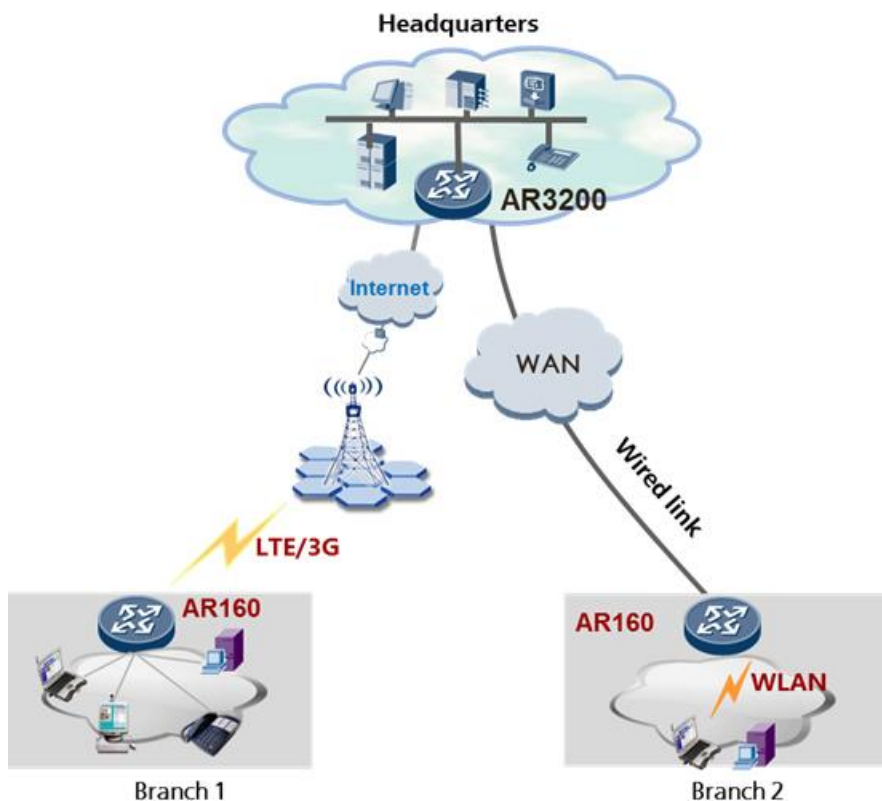
AR160s support the following VPN tunnel protocols:

- GRE VPN

- IPSEC VPN
- DSVPN
- L2TP VPN

AR160s support fast tunnel set-up and authentication.

### Wireless Access and Management in Branch

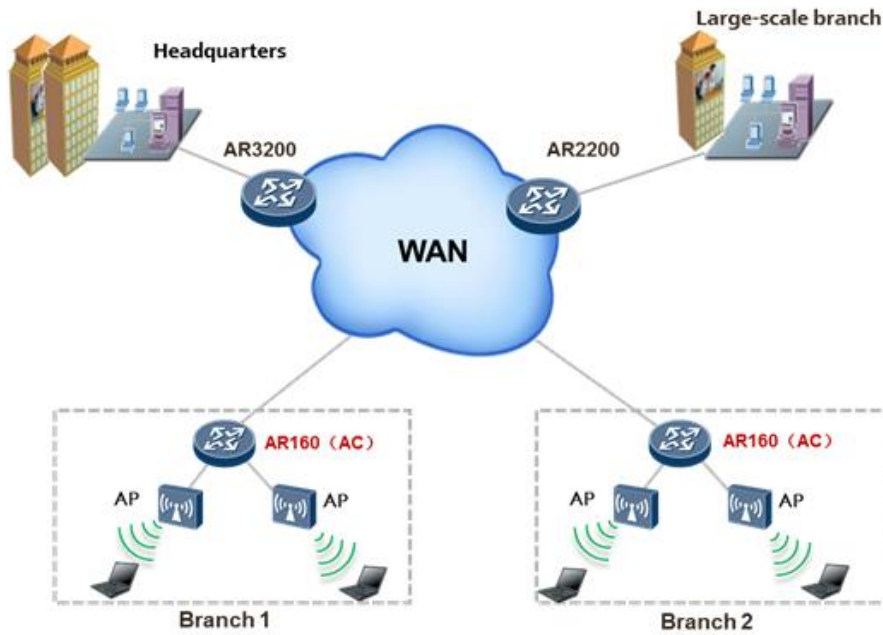


#### 3G/LTE and Wi-Fi Wireless Access application

The AR160s 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.

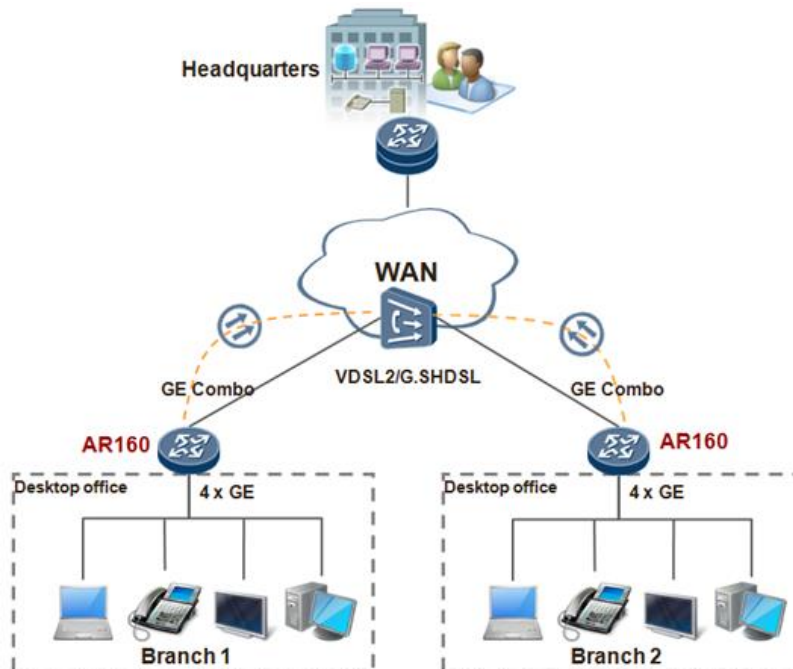
The AR160s routers integrated WLAN wireless access capabilities, support 802.11a/b/g/n standard communication, Built-in AC function make the deployment and management more conveniently. Its wireless features can meet users' demand for wireless access, and help enterprises to build a branch network flexibly.



### Wireless AC Management application

The AR160s 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.

## Technical Specifications

### AR160s Technical Specifications

Item	AR161	AR161W	AR161G-L	AR169	AR169W	AR169G-L
<b>Hardware</b>						
WAN speed with services* (IMIX)	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps
Number of recommended users	50	50	50	50	50	50
Fixed WAN ports	1 x GE	1 x GE	1 x GE	1 x VDSL2(compatible with ADSL2+ Annex A/M, Annex B/J. Support Vectoring)	1 x VDSL2(compatible with ADSL2+ Annex A/M, Annex B/J. Support Vectoring)	1 x VDSL2(compatible with ADSL2+ Annex A/M, Annex B/J. Support Vectoring)
Fixed Ethernet switching ports	4 x GE(can be configured as WAN interfaces)	4 x GE(can be configured as WAN interfaces)	4 x GE(can be configured as WAN interfaces)	4 x GE(can be configured as WAN interfaces)	4 x GE(can be configured as WAN interfaces)	4 x GE(can be configured as WAN interfaces)
Integrated LTE	—	—	FDD LTE	—	—	FDD LTE
Wi-Fi	—	802.11 b/g/n	—	—	802.11 b/g/n	—
USB 2.0 ports	1	1	1	1	1	1
Console ports	1	1	1	1	1	1
Memory size	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
Maximum power	24W	24W	24W	24W	24W	24W
Power supply (AC)	100 V to 240 V					
Frequency	50/60 Hz					
Dimensions (H x W x D)	44.0 mm x 300.0 mm x 216.4 mm (1.73 in. x 11.8 in. x 8.5 in.)					
Operating temperature	0° C to 45° C					
Relative humidity	5% to 95% (non-condensing)					
<b>Software</b>						
Basic features	DHCP server/client, PPPoE server/client, PPPoA server/client, PPPoEoA server/client, NAT, Sub interface management					
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					

Item	AR161	AR161W	AR161G-L	AR169	AR169W	AR169G-L
	(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, MBGP					
VPN	IPSec VPN, GRE VPN, DSVPN, L2TP 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, URP, 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, SSH (v1/v2)					

## How to Configure the Modular AR160 Routers

The AR160 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, and security. The software license configuration modules provide additional functions such as AC.

## Ordering Information

The AR160 series routers are configured by selecting and installing the appropriate configuration module. The configuration module ordering information and descriptions are shown in the following tables.

**Table 1: Chassis Options**


Chassis Configuration	Description
AR161	AR161,1GE WAN,4GE LAN
AR161G-L	AR161G-L,1GE WAN,4GE LAN,LTE
AR161W	AR161W,1GE WAN,4GE LAN,WIFI 2.4G
AR169	AR169,1VDSL WAN,4GE LAN
AR169G-L	AR169G-L,1VDSL WAN,4GE LAN,LTE
AR169W	AR169W,1VDSL WAN,4GE LAN,WIFI 2.4G

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