

AR1200-S Series Enterprise Routers Brochure





AR1200-S Series Enterprise Routers
Brochure

AR1200-S Series Enterprise Routers

Huawei AR1200-S series enterprise routers (AR1200-S for short) are next-generation enterprise-class routers based on the Huawei proprietary Versatile Routing Platform (VRP), which take advantage of Huawei long-term accumulation in data communication, wireless and access network fields. The AR1200-S integrates routing, switching, 3G, WLAN and security functions. It uses the multi-core CPU and non-blocking switching structure and provides industry-leading system performance and extensibility, meeting service development requirements in the future. The AR1200-S provides an integrated solution for enterprise networks, speeds up multi-service provision, and protects customers' investments.

Product Overview

The AR1200-S uses the embedded hardware encryption technique. It supports firewall functions and various application programs. The AR1200-S supports various wired and wireless access modes, such as E1/T1, xDSL, WiFi, 3G, etc. The AR1220W-S provides the PoE function by using fixed 100M Ethernet interfaces.

The AR1200-S provides two models: AR1220-S and AR1220W-S.

AR1220-S



- Forwarding capacity: 350 Kpps
- WAN speed with services: 25Mbps
- Fixed port: 8*FE, 2*GE
- Slot: 2*SIC
- Dimensions (WxDxH): 390 mm x 220 mm x 44.5mm

AR1220W-S



- Forwarding capacity: 350 Kpps
- WAN speed with services: 25Mbps
- Fixed port: 8*FE (four FE ports support PoE), 2*GE
- PoE: compliance with IEEE 802.3af and 802.3at
- Slot: 2*SIC
- WiFi: compliance with 802.11b/g/n
- Dimensions (WxDxH): 390 mm x 220 mm x 44.5mm

The AR1200-S supports various interface cards, including Ethernet interface cards, E1/T1/PRI/VE1/VT1 interface cards, synchronous/asynchronous interface cards, ADSL2+/G.SHDSL interface cards and ISDN interface cards. These cards are classified into SIC (Smart Interface Card) cards and WSIC (Double-Width SIC) cards depending on slot type. The following are the appearances and description of main interface cards.

SIC card



Channelized E1/T1/PRI/VE1/VT1 multifunctional interface card

- Sends, receives, and processes E1/T1 data traffic.
- Provides channelized E1/T1 access, and groups and binds channels.
- Provides the VoIP function over the E1/T1 line.
- Provides the ISDN PRI function.
- Provides the local and remote loopback functions for test and troubleshooting.

SIC card



Sync/Async Serial Port Interface Card

- A synchronous serial interface can function as a DCE or DTE. It supports multiple physical layer protocols, such as V.24, V.35, and X.21, but does not support X.21 DCE. The interface provides a maximum transmission rate of 2.048 Mbit/s.
- An asynchronous serial interface supports the RS232 protocol and provides a maximum transmission rate of 115.2 kbit/s.
- Provides in-service upgrade by using system management channels.
- The system powers on or off the 1SA/2SA and monitors the current of the 1SA/2SA; the backplane provides 12 V voltage for the 1SA/2SA.

SIC card



GE Combo WAN Interface Card

- Provides one GE optical and electrical Combo interface to implement data access and line-speed switching.
- The Combo interface sends, receives, and processes GE data traffic.
- The electrical interface works at 10/100/1000 Mbit/s in auto-sensing mode.
- The optical interface works at 100/1000 Mbit/s in auto-sensing mode.

Features and Benefits

1 3rd Generation AR with Industry-Leading Performance

The AR1200-S uses the multi-core CPU and non-blocking switching structure and provides industry-leading system performance, meeting network extension requirements and service development requirements of enterprises.

- Multi-core CPU
The multi-core CPU improves the speed of concurrent processing of services, which makes it possible to deploy a large number of services.
- Non-blocking switching
- Independent protocol management, service processing, and data switching, ensuring high performance and improving service reliability

- Integrated routing and switching functions
- This feature improves the data switching efficiency between interface cards and simplifies device configurations and maintenance.
- Hot swappable interface cards and redundant components such as fan modules, ensuring service reliability and stability

2 Dual-Mode Network, Supporting Flexible Access

1) Wireless Mode

Access Mode	Description
WLAN	<ul style="list-style-type: none"> • Compliance with 802.11n and compatible with 802.11b/g, saving investment • Multiple-input and multiple-output (MIMO), increasing bandwidth and improving user experience • Authentication technologies such as WEP, WPA/WPA2, WAPI and 802.1x, ensuring security
3G	<ul style="list-style-type: none"> • Compliance with 3G standards, including CDMA2000 EV-DO, WCDMA, and TD-SCDMA, providing flexible network access • NQA, monitoring the link real-time status and ensuring SLA • Link backup for enterprise services, improving reliability • Security VPN over 3G links, ensuring reliable service transmission
LTE	<ul style="list-style-type: none"> • Switching from 3G networks to LTE networks supported in future, protecting customers' investments

2) Wired Mode

Access Mode	Description
Fiber	<ul style="list-style-type: none"> • Support for GigabitEthernet optical interfaces, allowing flexible network access • 1 Gbit/s bandwidth or higher bandwidth, meeting transmission requirements of bandwidth-thirsty services.
Copper cable	<ul style="list-style-type: none"> • Support for various interfaces, including xDSL interfaces, E1/T1 interfaces, serial ports, and ISDN interfaces, to protect customers' investments • Uplink access rates ranging from 64 kbit/s to 1 Gbit/s, which can be selected by customers • PoE support on Ethernet interfaces, providing power for powered devices over twisted pair cables and facilitating installation of powered devices

3 Services Integrated on One Router

The AR1200-S integrates routing, switching, 3G, WLAN and security functions.

Open Service Platform

The AR1200-S interconnects with the third-party IT systems by using the Open Service Platform (OSP) to provide a unified communication solution for enterprise users. The customers, agents, third-party vendors, and manufacturers can develop and use the AR1200-S as required.

- Fast service integration and customization, meeting customized requirements
- Service integration without deploying dedicated servers, saving investments and simplifying management
- Services synchronized with cloud-side services, and local services processed locally, which improves service quality and efficiency.

Secure Service Access

During service provision, the AR1200-S ensures security of enterprise networks. It provides a complete security protection mechanism including user access control, packet detection, and active attack defense. This mechanism protects customers' investments.

- Built-in firewall
- Authentication technologies on ports, such as 802.1x authentication and MAC address authentication
- Authentication methods, including RADIUS and HWTACACS
- VPN technologies, including IPSec VPN and GRE VPN

Intelligent Service Deployment

As the enterprise scale increases, enterprise users have high requirements on service deployment. The AR1200-S provides the following service deployment functions:

- The AR1200-S provides a mini-USB port. By using the mini-USB, users can configure the devices through GUI.
- Users can use the USB disk to deploy devices, and the devices are plug-and-play.
- The AR1200-S supports the auto-config function. The auto-config function enables the AR1200-S to automatically obtain configurations.

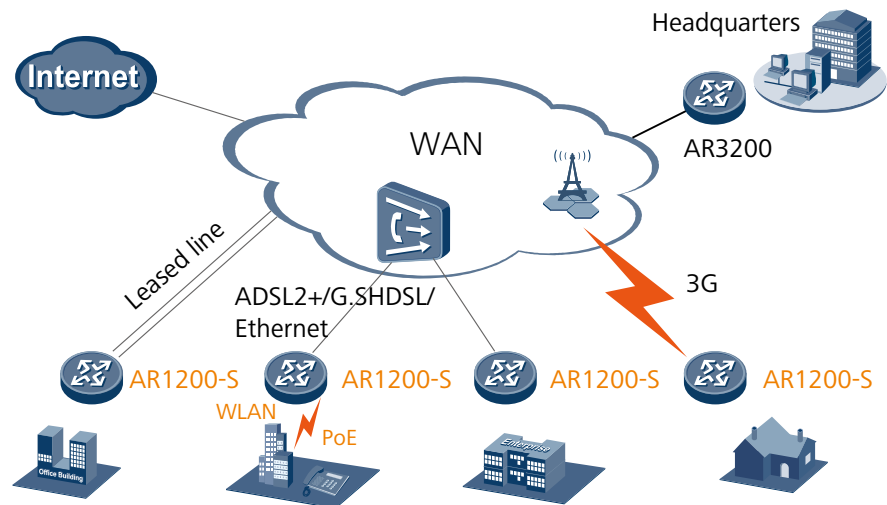
Simplified Service Management

Enterprise users require simply service management. The AR1200-S provides the following functions to simplify service management:

- The AR1200-S works with the eSight network management system to simplify device management.
- The AR1200-S provides the NQA function to monitor links in real time.
- By using the NetStream function provided by the AR1200-S, users can view traffic characteristics and statistics clearly, which is basis for network optimization.

Typical Application

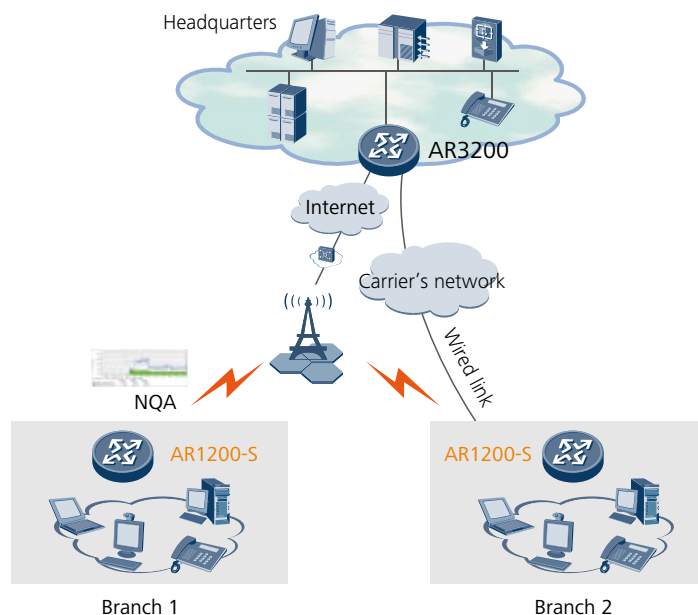
1. WAN Access



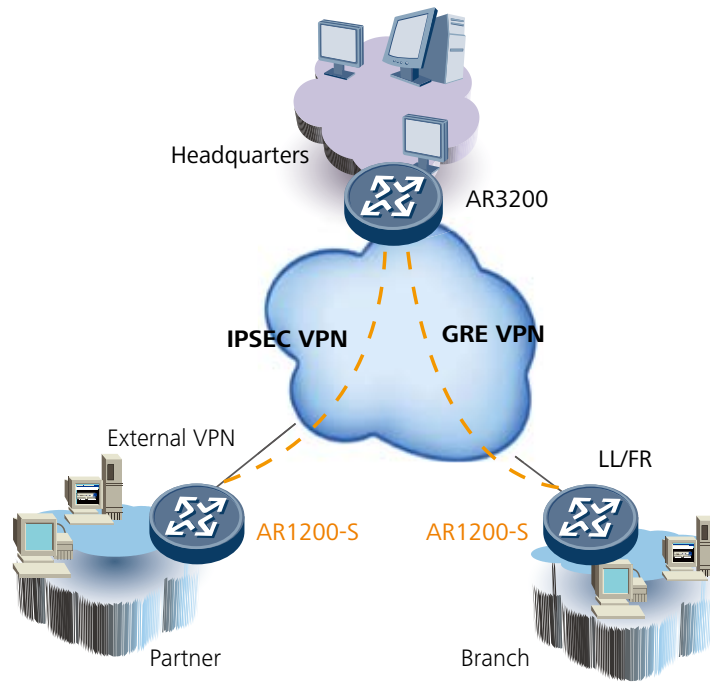
The AR1200-S functions as the egress routers of enterprise branches and provide flexible access methods to support remote network connections. AR1200-S meets various access requirements, including leased line, Ethernet, xDSL, 3G, and WLAN. This saves deployment and maintenance costs and provides a large value to customers. The fixed 100M Ethernet interfaces of AR1220W-S supports the PoE function in compliance with IEEE 802.3af and 802.3at; therefore, the AR1220W-S can provide power for powered devices (PDs), such as IP phones. An 802.3at interface provides more than 30 W power, ensuring power for large-power PDs.

2. 3G Wireless Access in Branch

The AR1200-S complies with 3G standards including CDMA2000 EV-DO, WCDMA, and TD-SCDMA, meeting the wireless communication requirements between branches and the headquarters. Users can use a 3G USB disk to deploy 3G services on the AR1200-S, saving service card slots. In addition, the 3G 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. The AR1200-S provides the NQA function to detect 3G link quality, ensuring the SLA.



3. VPN in Branch



The AR1200-S provides various secure access functions to implement communication between enterprise branches and between branches and the headquarters, and to enable partners to access enterprise resources. Tunnels such as GRE VPN and IPSEC VPN are set up between the headquarters and branches to implement secure data access and transmission. The AR1200-S implements fast tunnel deployment and authentication for branches. Using a tunnel, partners can access and share enterprise resources.

Technical Specifications

Item	AR1220-S	AR1220W-S
Hardware		
Forwarding capacity	350 Kpps	350 Kpps
WAN speed with services	25 Mbps	25 Mbps
Device switching capacity	8 Gbps	8 Gbps
Slot switching bandwidth	SIC & WSIC slots 2 Gbps	
Fixed WAN ports	2 * GE	2 * GE
Fixed LAN ports	8 * FE	8 * FE
SIC slots	2	2
WSIC slots (default/max)	0/1	0/1
WiFi	-	802.11 b/g/n
USB 2.0 ports	2	2
Mini-USB ports	1	1
Serial auxiliary/console port	1	1
Memory	512 MB	512 MB
Flash	256 MB	256 MB
Max. power	54 W	54 W
PoE power	-	External 100 W
AC power	100 V-240 V	100 V-240 V
Frequency	50 Hz/60 Hz	50 Hz/60 Hz
Dimensions (width x depth x height)	390 mm x 220 mm x 44.5 mm	390 mm x 220 mm x 44.5 mm

Weight	2.9 KG (without interface cards)	2.9 KG (without interface cards)
Ambient temperature	0°C-40°C	0°C-40°C
Relative humidity	5-90% (non-condensing)	5-90% (non-condensing)

Software

WLAN	AP management, WLAN QoS (WMM), WLAN security (WEP/WPA/WPA2/key management), WLAN radio management (802.11b/g/n), WLAN user management
3G	CDMA 2000 EV-DO Rev A, WCDMA, TD-SCDMA, individual 3G uplink/backup link
LAN	IEEE 802.1, IEEE 802.3, VLAN management, MAC address management, MSTP
IPv4 unicast routing	Routing policy, static route, RIP, OSPF, IS-IS
Multicast	IGMP V1/V2/V3, IGMP-Snooping V1/V2/V3, PIM SM, PIM DM, MSDP
VPN	IPSec VPN, GRE VPN
QoS	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 classifier, traffic behavior, and traffic policy), H-QoS, WLAN QoS, FR QoS
Security	ACL, firewall, 802.1x authentication, MAC address authentication, Web authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, broadcast storm suppression, ARP security, ICMP attack defense, URPF, IP Source Guard, DHCP snooping, CPCAR, blacklist, IP source tracing
Management and maintenance	Upgrade management, device management, Web network management system, GTL, SNMP, NTP, CWMP, Auto-Config, deployment using USB disk, NetConf

**Note: The maximum number of slots includes the number of combined slots.

How to Configure

Before choosing an AR1200-S, determine the device model and interface cards.

- Device model

The device model is determined by the slot quantity and forwarding capacity that you require.

- Interface card

The interface cards, including SIC cards and WSIC cards, are inserted into service card slots. Two SIC slots can be combined into one WSIC slot by removing the guide rail.

Ordering Information

Model	Description
Host Configuration	
AROM012SBA00	AR1220-S Basic Configuration(Includes AR1220-S Chassis,with Basic Software and Document),2GE WAN,8FE LAN,2 USB Interfaces,2 SIC Slots
AROM12WSBA00	AR1220W-S Basic Configuration(Includes AR1220W-S Chassis,802.11b/g/n AP ETSI Compliant,with Basic Software and Document),2GE WAN,8FE LAN,2 USB Interfaces,2 SIC Slots
SIC Interface Module	
AROMSEG1CA00	1-Port GE Combo WAN Interface Card
AROMSEF2TA00	2-Port FE WAN Interface Card
AROMSDME1A00	1-Port Channelized E1/T1/PRI/VE1 Multiflex Trunk Interface Card
AROMSDME11A00	1-Port Fractional Channelized E1/T1 WAN Interface Card
AROMSDME2A00	2-Port Channelized E1/T1/PRI/VE1 Multiflex Trunk Interface Card
AROMSDME12A00	2-Port Fractional Channelized E1/T1 WAN Interface Card
AROMSDSA1A00	1-Port Sync/Async Serial Port Interface Card
AROMSDSA2A00	2-Port Sync/Async Serial Port Interface Card
AROMSLA1XA01	1-Port ADSL2+ ANNEX A/M WAN Interface Module
AROMSLB1XA01	1-Port ADSL2+ ANNEX B WAN Interface Module
AROMSLS1XA00	1-Port 4 Pair G.SHDSL WAN Interface Module
AROMSDS1XA00	1-Port ISDN S/T WAN Interface Card
WSIC Interface Module	
AROMWMF9TT00	8-Port 10/100BASE(RJ45) and 1-Port 10/100/1000BASE(RJ45)-L2/L3 Ethernet Interface Card
AROMWDAS8A01	8-Port Async Serial Port Interface Card
SD Card & USB Disk	
NUSBDSK01	Storage USB DISK,4GB,USB 2.0
Power Module	
AROMPSAP1000	Adapter,0degC,40degC,90V,264V,+48V/2.08A,



For more information, visit <http://www.huawei.com/enterprise/> or contact Huawei local sales office.



Copyright © Huawei Technologies Co., Ltd. 2011. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademark Notice

 , HUAWEI,  and are trademarks or registered trademarks of Huawei Technologies Co., Ltd. Other trademarks, product, service and company names mentioned are the property of their respective owners.

General Disclaimer

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

HUAWEI TECHNOLOGIES CO.,LTD.
Huawei Industrial Base
Bantian Longgang
Shenzhen 518129,P.R.China
Tel: +86 755 28780808

www.huawei.com/enterprise/