Huawei AR1200 Series
Enterprise Routers Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

AR1200 Series Enterprise Routers

Huawei AR1200 Series routers are designed to provide secure and scalable unified voice and data communications for small enterprises or large enterprise branch offices.

Product Overview

Huawei AR1200 series enterprise routers are next-generation enterprise-class routers based on the Huawei proprietary Versatile Routing Platform (VRP). They build on Huawei's record of leadership in data communication and networking to provide industry-leading system performance and scalability to meet current and future business needs.

The AR1200 series integrates routing, switching, 3G service, Wireless LAN (WLAN), voice, and security functions. The AR1200 uses an embedded hardware encryption technique and supports a voice-optimized Digital Signal Processor (DSP). The router supports firewall security, call processing, voice mail, and other applications. It supports wired and wireless access modes, including E1/T1, xDSL, xPON, WiFi, 3G, and more. The AR1220EV and AR1220EVW models provide Power over Ethernet (PoE) on fixed 100M/1G Ethernet interfaces.

The AR1220 series has been qualified with Microsoft Lync server, and can be seamlessly integrated into Microsoft unified communications solutions.

Table 1: AR1200 Models

AR1220C	
	• WAN speed with services(IMIX): 200Mbps • Fixed port: 8xGE(can be configured as WAN interfaces), 4xGE + 1xGE SFP • Slot: 2xSIC • Dimensions (H x W x D): 44.5mm x 390 mm x 220mm(1.8 in. x 15.4 in. x 8.7 in)
AR1220E	
	• WAN speed with services(IMIX): 400Mbps • Fixed port: 8xGE(can be configured as WAN interfaces), 2xGE Combo • Slot: 2xSIC • Dimensions (H x W x D): 44.5mm x 390 mm x 220 mm(1.8 in. x 15.4 in. x 8.7 in)

AR1220F

- WAN speed with services(IMIX): 400Mbps
- Fixed port：8*FE(can be configured as WAN interfaces)，2*GE(1*Combo)
- Slot：2xSIC
- Dimensions (H x W x D):44.5mm x 390mm x 220mm(1.8 in. ×15.4 in. × 8.7 in)

AR1220EV

- WAN speed with services(IMIX): 400Mbps
- Fixed port: 8xGE(four GE ports support PoE) (can be configured as WAN interfaces), 2XGE combo
- PoE: compliance with IEEE 802.3af and 802.3at
- DSP: 32 channels supported
- Slot: 2xSIC
- Dimensions (H x W x D): 44.5mm x 390 mm x 220 mm(1.8 in. × 15.4 in. × 8.7 in)

AR1220EVW

- WAN speed with services(IMIX): 400Mbps
- Fixed port: 8xGE(four GE ports support PoE) (can be configured as WAN interfaces), 2XGE combo
- PoE: compliance with IEEE 802.3af and 802.3at
- DSP: 32 channels supported
- Slot: 2xSIC
- WiFi: compliance with 802.11b/g/n
- Dimensions (H x W x D):44.5mm x 390 mm x 220 mm(1.8 in. × 15.4 in. × 8.7 in)

AR1220-D

- WAN speed with services(IMIX): 200Mbps
- Fixed port: 8xFE(can be configured as WAN interfaces), 2xGE
- Slot: 2xSIC
- Embedded DC power supply
- Dimensions (H x W x D): 44.5mm x 390 mm x 220 mm(1.8 in. × 15.4 in. × 8.7 in)

The AR1200 supports optional interface cards, including; Ethernet, E1/T1/PRI/VE, synchronous/asynchronous, ADSL2+, G.SHDSL, and VDSL, FXS and FXO, ISDN, EPON and GPON, 3G, LTE and E&M interface cards. These cards are classified into SIC (Smart Interface Card) cards and WSIC (Double-Width SIC) cards depending on slot type. The primary interface cards are shown and described in the table below.

Note: For more information about interface cards, please refer to Ordering Guide.

Features and Benefits

Applications in one box, Reduce TCO

The AR1200 reduces equipment and deployment costs via the integration of routing, switching, 3G service, wireless LAN (WLAN), voice, and security functions in a single device. At the same time, The AR1200 realizes enterprises flexible access with rich interfaces adapting to a variety of terminals.

Industry-Leading Voice Quality and User Experience

Enterprise-class voice communication is flexible and efficient, thanks to the AR1200 voice features that can easily be integrated within new or existing data networks.

- Basic voice functions are provided by the built-in PBX, SIP server, and SIP access gateway.
- Value-added voice services include multi-party communication, IVR automatic connection, ring-back-tone, parallel ringing, sequential ringing, "one number link to you" (ONLY), billing and subscriber management.
- Intelligent call routing means exceptional voice service reliability.
- Interconnection with the NGN/IMS/PBX/terminal of mainstream vendors
- The Quality of Experience (QoE) feature monitors voice service quality in real time.
- Jitter buffer, echo cancellation, and packet loss compensation all improve the user experience.

Secure Service Access Protects Networks and Users

While delivering enterprise-class network services, the AR1200 router provides robust network security. The complete security solution includes user access control, packet detection, and active attack defense.

- The built-in firewall is the first line of defense.
- Port authentication technologies include 802.1x authentication and MAC address authentication
- Device authentication methods include RADIUS, and HWTACACS
- VPN technologies include IPSec VPN, GRE VPN, DSVPN，L2TP VPN

Integration of wireless and wired Functions

Table 3: Wireless Access Modes

Access Mode	Description
WLAN	Compliance with 802.11n and compatible with 802.11b/g reduces equipment costs. Multiple-input and multiple-output (MIMO) increases bandwidth and improves the user experience. Authentication technologies such as WEP, WPA/WPA2, WAPI and 802.1x provide robust security. Built-in AC function, establish WLAN campus flexibly
3G	Compliance with 3G standards, including CDMA2000 EV-DO, and WCDMA, means flexible network access. Network Quality Analyzer (NQA) monitors the link real-time status to meet Service Level Agreements (SLAs). Security VPN over 3G links ensures reliable service transmission.
LTE	100M LTE enterprise access solutions, high bandwidth experience Support for transition from 3G networks to LTE networks protects customer investment.

Table 4: Wired Access Modes

Access Mode	Description
Fiber	Gigabit Ethernet optical interfaces allow flexible network access. 10Gbps bandwidth meets the transmission requirements of bandwidth-intensive services, for instance, voice services. EPON and GPON interface cards are supported.
Copper cable	Support for various interfaces, including xDSL interfaces, E1/T1 interfaces, serial ports, and ISDN interfaces, protects customer investment. Choice of uplink access rates from 64 kbps to 1 Gbps. PoE support on Ethernet interfaces facilitates installation of powered devices by providing power over twisted pair cables.

Better Experience, Business Continuity

Multi-cores architecture, Industry-Leading performance

The AR1200 uses a multi-core CPU and non-blocking switching structure to provide industry-leading system performance, meeting enterprise requirements for network expansion and service deployment.

- The multi-core CPU speeds up concurrent data and voice service processing so customers can deploy a large number of services.
- Achieves maximum traffic throughput with non-blocking switching.
- Delivers high performance and service reliability through independent protocol management, service processing, and data switching.
- Simplifies device configuration and maintenance by integrating routing and switching functions, improving data switching efficiency between interface cards.

Low cost, High reliability

To guarantee the reliability of the equipment layer and network layer, the AR1200 series support hot-swap technology, a series of fault detection and judgment mechanisms, which can shorten the service interruption time.

- Assure service reliability and network stability with hot-swappable interface cards and redundant components, such as fan modules.
- Link backup for enterprise services improves reliability.
- MS level Fault detection mechanisms, shorten the service interruption time
- Local survival, improve the voice reliability of branch network

Intelligent Service Deployment

As the enterprise grows, requirements for new service deployments increase. To meet the demands of a growing enterprise, the AR1200 provides convenient configuration options:

- Use the mini-USB port to configure the devices using a GUI.
- Use a USB drive to configure devices for plug-and-play.
- Use the auto-config feature to automatically distribute configurations to devices.

Cooperation platform, On Demand applications

Open Service Platform, Enterprise-level APP

The AR1200 provides a unified communication solution for enterprise customers. It uses the Open Service Platform (OSP) to interconnect with third-party IT systems. Customers, agents, third-party vendors, and manufacturers can develop and use the AR1200 as required.

- Integrate and customize services quickly.
- Reduces costs and simplifies management as service integration does not require dedicated servers.
- Services are synchronized with cloud-side services, and local services processed locally, which improves service quality and efficiency.

### Standard MIB provided by VRP, Simplified Network and Device Management

The AR1200 makes network and device management simple:

- Manage devices easily with the Huawei eSight network management system.
- Monitor links in real time using the NQA feature.
- View traffic characteristics and statistics to maintain peak network performance using the NetStream feature.

Sample Deployments
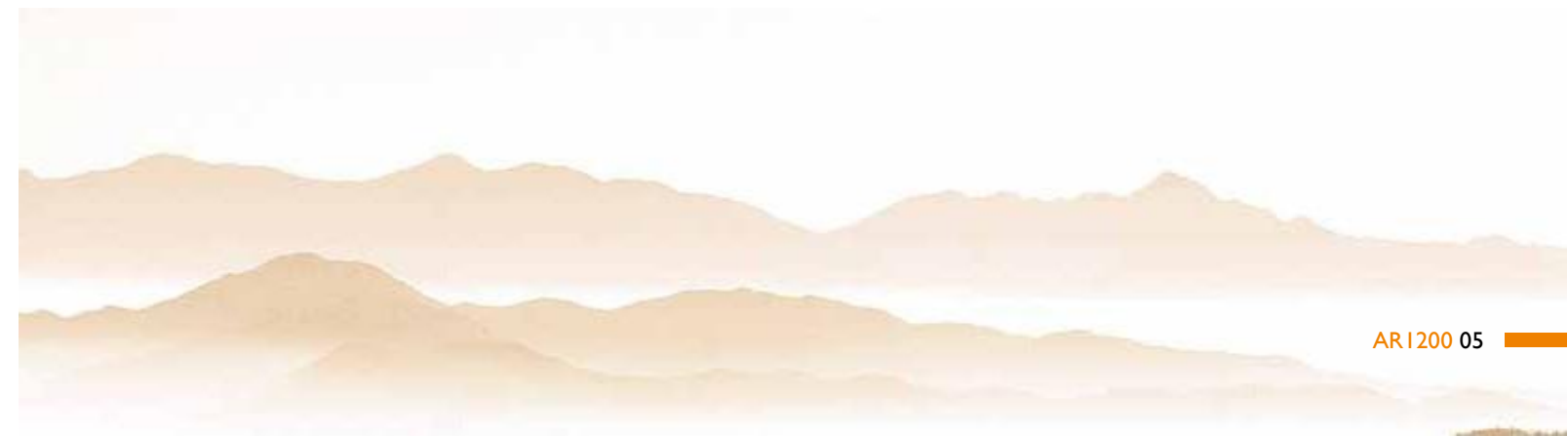
WAN Access

Sample Deployments
WAN Access
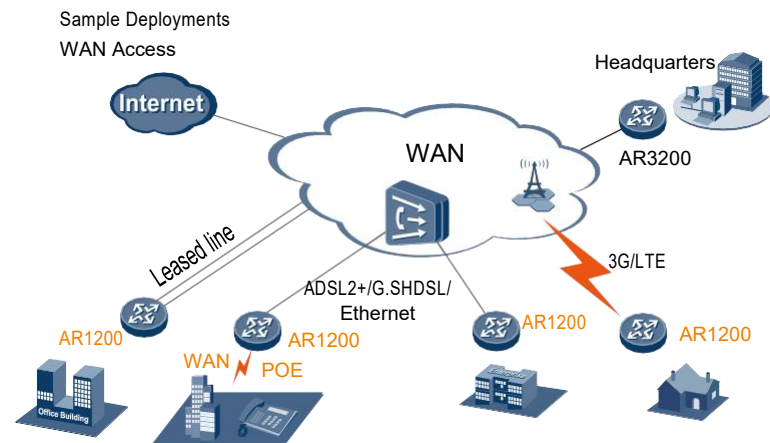
AR1200 routers deployed at the edge of enterprise branches provide flexible access to remote network connections. They meet most access requirements, including leased line, Ethernet, xDSL, LTE, 3G service, and WLAN. This flexibility adds compelling value to customers by reducing deployment and maintenance costs. Router models with fixed 100 M Ethernet interfaces support PoE and PoE+, and can provide power for powered devices (PDs), such as IP phones. Each PoE+ interface provides more than 30 W of power to support high-power PDs.

AR routers support LTE which can increase the wireless speed greatly and improve the spectral efficiency. The end-to-end LTE QoS mechanism and the AR routers' bandwidth monitoring and dynamic adjustment of QOS policy can guarantee high priority services.

High-Quality Voice Service

The AR1200 can function as an IP PBX or SIP gateway for enterprise networks.

IP PBX Application
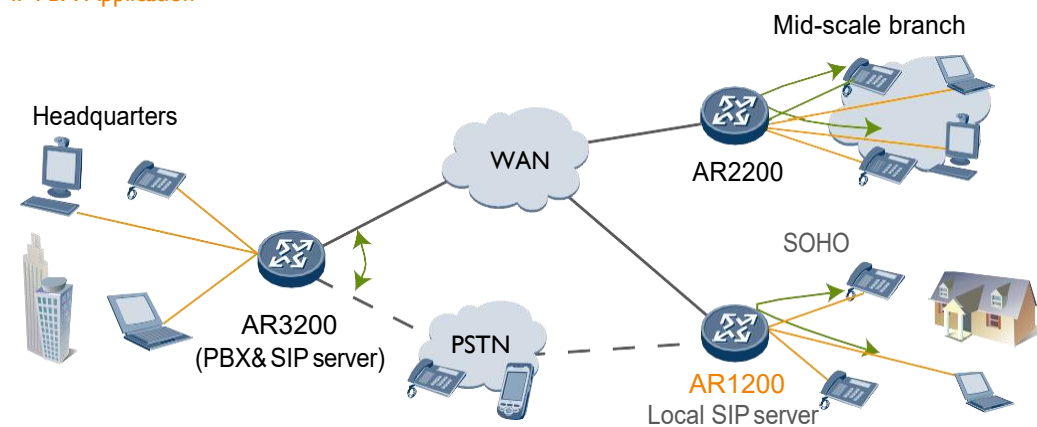
To enhance the corporate image and improve communication efficiency, all AR routers include a built-in PBX. This feature supports the enterprise main number, Interactive Voice Response (IVR), and bill query functions. The AR1200 can also be located in a branch office to provide intelligent dialing.

SIP Gateway Application
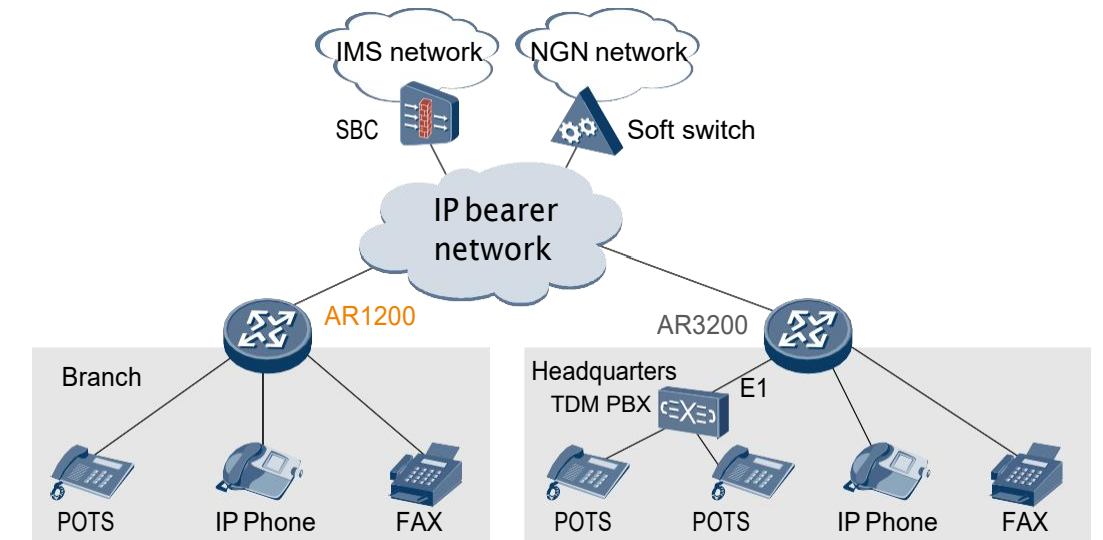
The AR1200 integrates voice, fax, and IP services. For enterprise users, the AR1200 serves as the SIP access gateway for a branch office, transforming phone signals into VoIP signals. The AR1200 uplink interfaces connect to the IP Multimedia Subsystem (IMS) or Next Generation Network (NGN) to allow any media, including phones, handsets, and computers, to communicate at any time.

Wireless Access and Management in a Branch Office

3G/LTE Wireless Access Application

The AR1200 complies with 3G/LTE function, 3G standards including CDMA2000 EV-DO, and WCDMA, LTE supporting FDD LTE, meeting the requirements for wireless communication between enterprise branch offices and headquarters. AR1200 supports 3G and LTE interfaces cards. In addition, the 3G/LTE data link can be used to back up a wired link to protect the xDSL, FE/GE, and ISDN uplinks. The backup link improves network stability and reduces network construction costs. The Network Quality Analyzer (NQA) monitors 3G/LTE link quality, ensuring the network meets Service Level Agreements (SLAs).