Huawei AR160-M Series Agile Enterprise Gateway Datasheet

HUAWEI TECHNOLOGIES CO., LTD.

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The Huawei AR160-M series Agile Enterprise Gateway integrates a comprehensive set of services, including routing, switching, security, and wireless access. With an open service platform, the AR160-M can provide computing, storage and network connection functions in one device. The AR160-M is designed to provide ICT solutions for enterprise branch offices and small businesses, which enables customers to launch new applications and solutions quickly.

Product Overview

The AR160-M has three models: AR161FW-P-M5, AR169W-P-M9 and AR169RW-P-M9. The specifications for these models are shown in the following table.

Table 1: AR160-M Models

AR161FW-P-M5	
	• WAN speed with services (IMIX): 150 Mbps
	• Fixed ports: 4 x GE LAN (PoE, can be configured as WAN interfaces)
	1 x GE Combo WAN
	1 x RS485/RS232/RS422
	1 x USB OTG + 3 x USB 2.0 HOST
	1 x HDMI
	1 x 3.5mm Audio Output (Earphone)
	1 x 3.5mm Audio input(MIC)
	1 x Bluetooth
	1 x Zigbee
	• 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.)

AR169W-P-M9	
	• WAN speed with services (IMIX): 150Mbps
	• Fixed ports：4 x GE LAN (PoE, can be configured as WAN interfaces)
	1 x GE WAN,1 x VDSL2
	1 x RS485/RS232/RS422
	4 x USB
	1 x HDMI, 1 x VGA
	1 x 3.5mm Audio Output (Earphone)
	1 x 3.5mm Audio input(MIC)
	1 x Bluetooth
	• 802.11 b/g/n + 802.11ac
	• 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.)

AR169RW-P-M9

- WAN speed with services (IMIX): 150Mbps
- Fixed ports: 4 x GE LAN (PoE, can be configured as WAN interfaces)
  1 x GE WAN,1 x VDSL2
  1 x RS485/RS232/RS422
  4 x USB
  1 x HDMI, 1 x VGA
  1 x 3.5mm Audio Output (Earphone)
  1 x 3.5mm Audio input(MIC)
  1 x Bluetooth
  1 x Zigbee
- 802.11 b/g/n + 802.11ac
- 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

❶ ICT Deep Integration, Reducing the TCO

- Integrates routing, switching, voice, security, WLAN, and VPN, meeting diversified requirements of enterprises and maximizing the return on investment (ROI).
- Huawei series routers have four GE ports, can access more employee for small enterprises ; rich IoT ports, can fit a variety of flexible terminals access.
- Provides a computing and large-capacity storage system, and allows various applications to be dynamically loaded, without the need to deploy servers independently. This saves investments and facilitates management.

❷ Innovative Architecture, Implementing Value-added Services

- Uses innovative dual-core and dual-system architecture hardware design, provides powerful hardware and software support
- Uses the SDN&NFV architecture for the first time in industry, and implements lifecycle management of ICT resources such as the application deployment, monitoring, and deletion through the Agile Controller.
- Supports virtualization technology, provides a flexible and scalable application integration capability, shortens service deployment, and implements value-added services.

❸ One-Click Deployment, Simplifying O&M

- Uses a mobile phone to scan the device ESN, delivers the configuration to the devices by one click, and implements batch device zero-touch configuration deployment.
- Manages massive devices in a centralized manner, greatly simplifying branch service deployment and lowering network maintenance costs.

Sample Deployments

Enterprise Branch ICT Integrated Gateway

The AR160-Ms integrate routing, switching, security, wireless in one box, which can provide not only wired and wireless flexible way, but also security protection for the network access and data transmission. The AR160-Ms can help the customers construct a safe and stable communication network.

The AR160-Ms have a built-in open service platform, which can meet enterprise customers' requirements of developing all kinds of IT applications dynamically, such as office applications, unified communications, Windows or other software applications. With AR160-Ms, the enterprises can design a open network platform and create add-value services.
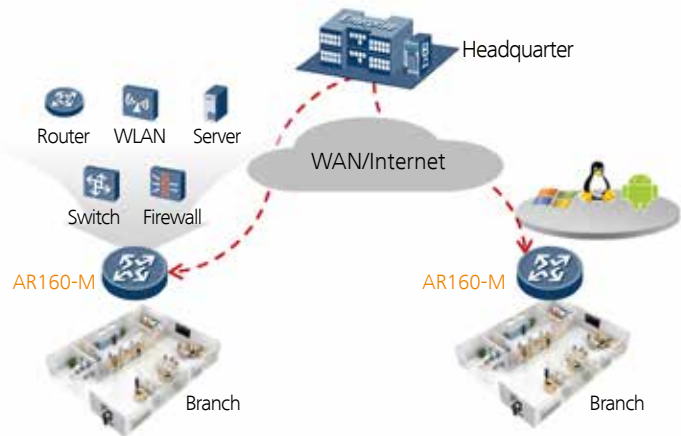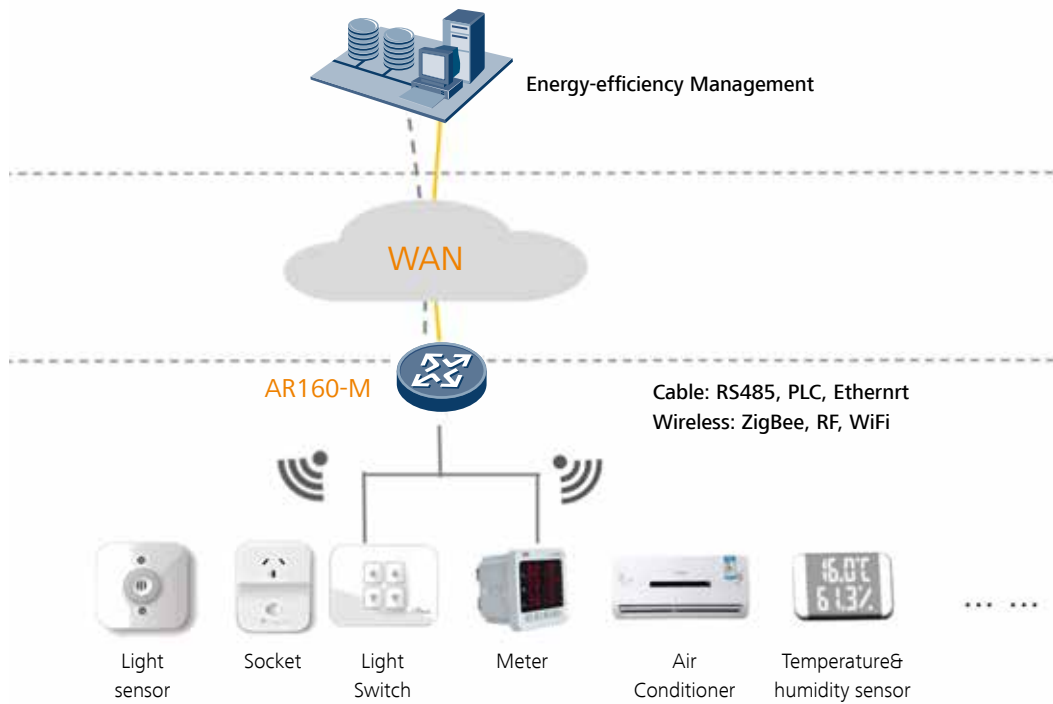

iClassroom(intelligent Classroom)Solution
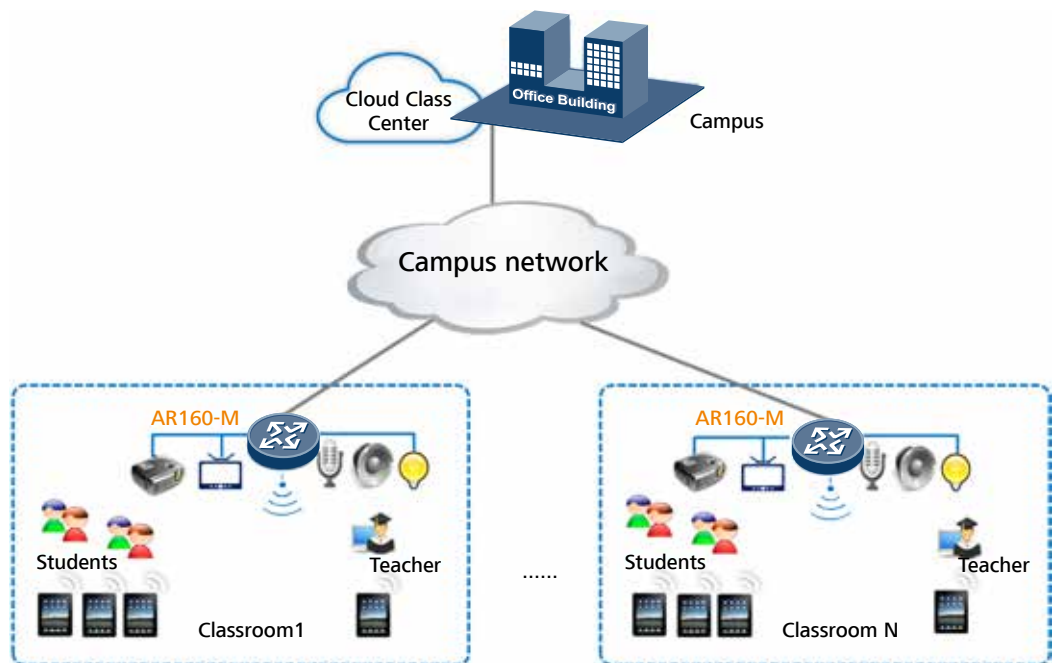
This illustration shows that the AR160-Ms can be deployed as CCE (Classroom Cloud Edge, the classroom cloud boundary) devices, to realize unified connection, centralized management, security accessing and intelligent controlling equipment in the classrooms, the AR160-Ms can support remote teaching, immediate feedback and other teaching applications.

BEMS(Building Energy/Efficiency Management System)Solution

Energy-efficiency Management

WAN

AR160-M

Cable: RS485, PLC, Ethernrt
Wireless: ZigBee, RF, WiFi

Light sensor | Socket | Light Switch | Meter | Air Conditioner | Temperature& humidity sensor | ... ...

As IoT Gateways, this illustration shows that the AR160-Ms can connect many kinds of intelligent terminal equipments, such as lighting, air conditioning system meter device, sensor, controller meter in the buildings, to implement unified access, intelligent control and centralized management. The customers can experience intelligence building lighting, air conditioning environment and save energy cost.

Technical Specifications

Item	AR161FW-P-M5	AR169W-P-M9	AR169RW-P-M9
Hardware			
WAN speed with services (IMIX)	150 Mbps	150 Mbps	150 Mbps
Fixed WAN ports	1x GE Combo	1x GE, 1 x VDSL2	1x GE, 1 x VDSL2
Fixed Ethernet switching ports	4 x GE(PoE, can be configured as WAN interfaces)	4 x GE(PoE, can be configured as WAN interfaces)	4 x GE(PoE, can be configured as WAN interfaces)
Serial auxiliary/ console ports	1	1	1
Video ports	1 x HDMI	1 x HDMI,1 x VGA	1 x HDMI,1 x VGA
Audio ports	1 x 3.5mm audio output (Earphone), 1 x 3.5mm audio input (MIC)	1 x 3.5mm audio output (Earphone), 1 x 3.5mm audio input (MIC)	1 x 3.5mm audio output (Earphone), 1 x 3.5mm audio input (MIC)
Bluetooth ports	1	1	1
Serial ports	1 x RS485/RS232/RS422	1 x RS485/RS232/RS422	1 x RS485/RS232/RS422
ZigBee ports	ZigBee 2.4 GHz	-	ZigBee 2.4 GHz
Wi-Fi	802.11 b/g/n	802.11b/g/n + 802.11ac	802.11b/g/n + 802.11ac
USB ports	4	4	4
Memory size (Main control system)	512 MB	512 MB	512 MB
Flash memory	512 MB	512 MB	512 MB
OS	Android	Support 2 VMs, the customers can install Windows OS based on VMs. Support native operation system like Linux, Windows etc.	Support 2 VMs, the customers can install Windows OS based on VMs. Support native operation system like Linux, Windows etc.
Memory size (OSP System)	4GB	8GB	8GB
Flash (OSP System)	2GB	-	-
Hard Disk (OSP System) (Built-in/External)	32GB	64GB/2TB	64GB/2TB

Item	AR161FW-P-M5	AR169W-P-M9	AR169RW-P-M9
Virtual Machine**	-	2	2
PoE power	External 100	External 100	External 100
Maximum power	60W	60W	60W
Power supply (AC)	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
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.)
Operating temperature	0°C to 40°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)

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

Basic features	ARP, DHCP, 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（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

* Service performance depending on specific feature configuration.

How to Configure the Modular AR160-Ms

The AR160-Ms 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 AR160-Ms are configured by selecting and installing the appropriate configuration module. The configuration module ordering information and descriptions are shown in the following table3-6.

Table 3: Chassis Options

Chassis Configuration	Description
AR161FW-P-M5	AR161FW-P-M5,Multimedia Card,1GE COMB WAN,4GE LAN,1 USB
AR169W-P-M9	AR169W-P-M9,1VDSL WAN,1GE WAN,4GE LAN(POE+),1RS485/RS232/RS422,Multimedia Card,4 USB,WIFI 2.4G+5G
AR169RW-P-M9	AR169RW-P-M9,1VDSL WAN,1GE WAN,4GE LAN(POE+),1RS485/RS232/RS422,Multimedia Card,4 USB,WIFI 2.4G+5G,1 ZIGBEE

Table 4: Power Module Options

Power Module	Description
AR0MPSAP1000	100W POE Power Module

Table 5: License Options

License	Description
LAR0DATAE01	AR150&160&200 Value-Added Data Package
LAR0AC01	AR150&160&200 AC Express License
LAR0SECE01	AR150&160&200 Value-Added Security Package
LAR0DSVPN01	AR150&160&200 DSVPN(Dynamic Smart VPN) Function

Table 6: SD Card and USB Disk Options

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

For more information, visit http://enterprise.huawei.com/en/ or contact the Huawei local sales office.