



HUAWEI AR503 Series Agile Gateway Datasheet



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Product Overview

HUAWEI AR503 series agile gateway, is designed to work in harsh environments. It provides a rapidly deployable, highly available, reliable, and secure solution into the Internet of Things (IoT) applications for vehicles (bus, train, police car, and ambulance) scenarios.

The AR503 series is available in four models: AR503GW-LM7, AR503EDGW-Lc, AR503EQGW-L and AR503EW.

Model	Specification
  AR503GW-LM7	<ul style="list-style-type: none"> Fixed interfaces: 1 x GE, 1 USB HOST FDD/TDD LTE (1*LTE module, 2*SIM slots) Wi-Fi: dual-band AP, 2.4 GHz and 5 GHz, 2x2 MIMO, 802.11a/b/g/n GPS IP41, Waterproof and dustproof Dimensions (W x D x H): 200 mm x 160 mm x 44 mm
  AR503EDGW-Lc	<ul style="list-style-type: none"> Fixed interfaces: 4 x GE(M12), 1 USB HOST FDD/TDD LTE (2*LTE module, 4*SIM slots) Wi-Fi: dual-band AP, 2.4 GHz and 5 GHz, 3x3 MIMO, 802.11b/g/n + 802.11ac GPS IP54, Waterproof and dustproof Dimensions (W x D x H): 280 mm x 200 mm x 44 mm
  AR503EQGW-L	<ul style="list-style-type: none"> Fixed interfaces: 4 x GE(M12), 1 USB HOST FDD LTE (4*LTE module, 8*SIM slots) Wi-Fi: dual-band AP, 2.4 GHz and 5 GHz, 2x2 MIMO, 802.11b/g/n + 802.11ac GPS IP54, Waterproof and dustproof Dimensions (W x D x H): 280 mm x 200 mm x 44 mm
  AR503EW	<ul style="list-style-type: none"> Fixed interfaces: 4 x GE(M12), 1 USB HOST Wi-Fi: dual-band AP, 2.4 GHz and 5 GHz, 3x3 MIMO, 802.11b/g/n + 802.11ac IP54, Waterproof and dustproof Dimensions (W x D x H): 280 mm x 200 mm x 44 mm

Key Features and Values

Better Service Experience with an Industrial-Grade Design

- Delivers harsh environment adaptability with all industrial-grade components.
- Uses a fan-less design and up to IP54 protection (dust- and water-proof).
- Works in wide ranges of temperature and humidity.

Flexible Networking, Secure, Reliable Services with High Performance

- Up to four LTE links with a load balancing or link backup function
- Large-capacity SSD storage which can pre-store multimedia resources and support wireless content updates
- 2.4 GHz and 5 GHz Wi-Fi access supporting 802.11ac and 3x3 MIMO

Easy Deployment, Convenient O&M

- Service lines leading out from the front panel, achieving single-panel maintenance
- Plug-and-play with convenient deployment measures including using USB flash disks, scanning codes, and sending SMS messages
- Agile NMS for managing massive devices, realizing visualized O&M

Typical Application

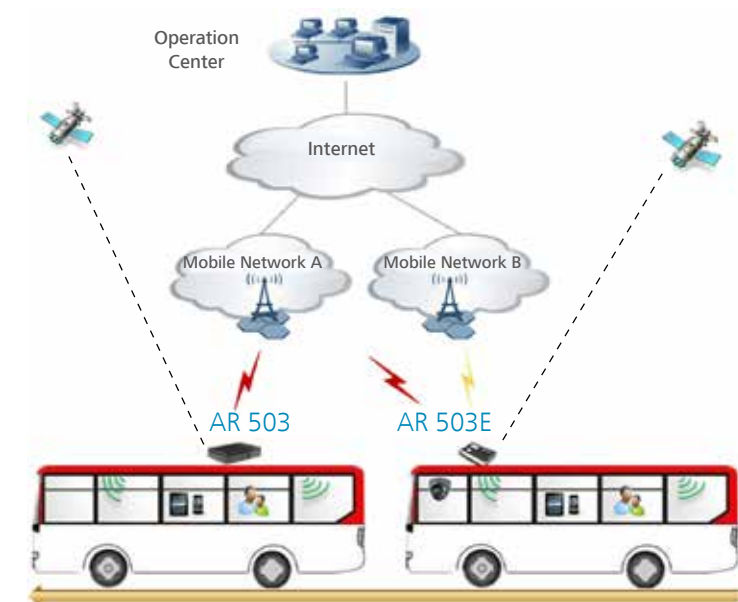
Intelligent Bus example

The AR503 can be deployed in a bus to provide a mobile interconnection solution. As the mobile gateway, the AR503 supports LTE/3G, and provides free Wi-Fi access so that users can enjoy Internet surfing anytime.

The AR503 has a high-capacity storage medium that can pre-store multimedia resources and update multimedia resources online.

The AR503 design fully takes into consideration vehicle motion and vibration, and the AR503 is highly reliable with environmental features such as dustproof, waterproof, shockproof, and high-temperature resistant.

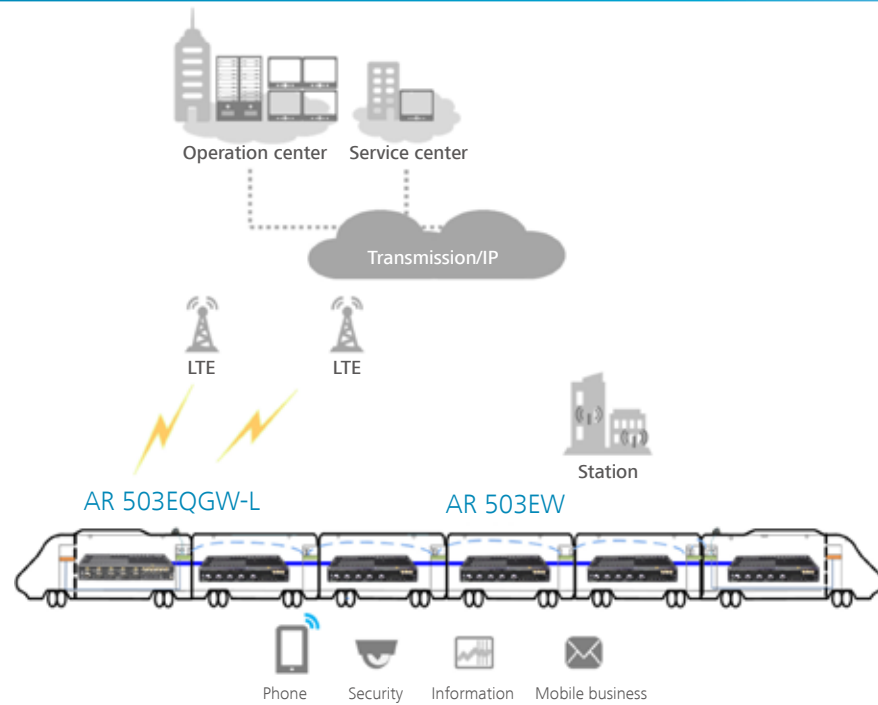
The intelligent bus system uniformly schedules and manages multiple vehicle-mounted gateways through the Operation center, and can periodically maintain or update applications such as video, games, and software applications.



When at a bus station, the AR503 automatically switches from the AP mode to the station mode to connect to the station's wireless access points. Then it accesses the Internet through wired networks. The AR503 obtains resources (such as videos and games) from the operation center or uploads the surveillance videos saved on hard disks to the operation center over the Wi-Fi. This communication mode significantly reduces LTE/3G traffic fees and cuts overall operation costs.



Digital Train



Deploy the AR503E on the train to provide a comprehensive solution for vehicle-ground communication, vehicle-mounted communication, and vehicle-mounted Wi-Fi coverage. Deploy the AR503EQGW-L on the front of the train to perform vehicle-ground communication through LTE links, and deploy the AR503EW on the train carriages to provide vehicle-mounted communication and Wi-Fi access.

The AR503EQGW-L supports up to four LTE modules with a load balancing or link backup function, and offers bidirectional communication that is large-capacity, secure, continuous, and reliable to vehicle-mounted devices and ground devices.

The AR503EW provides the following functions:

- A strong access capability by supporting dual-band Wi-Fi access and integrating four M12 Ethernet interfaces
- Highly shockproof performance
- PoE, external APs, and Wi-Fi coverage expansion
- Large-capacity storage which can pre-store multimedia resources and provide a full range of multimedia services

Product Specifications

Specification	AR503GW-LM7	AR503EDGW-Lc	AR503EQGW-L	AR503EW
Hardware Specifications				
Fixed Ethernet interface	1 x GE	4 x GE (M12 interface)	4 x GE (M12 interface)	4 x GE (M12 interface)
LTE	FDD LTE: B1/B2/B3/B4/B5/B7/B8/20 UMTS: B1/B2/B5/B8 GSM/GPRS/EDGE: 850 MHz/900 MHz/1800 MHz/1900 MHz	2 x LTE modules supporting 4 SIM cards FDD LTE: B1/B3/B8 TDD LTE: B38/B39/B40/B41 UMTS: B1/B5/B8/B9 TD-SCDMA: B34/B39 GSM/GPRS/EDGE: 1800 MHz/900 MHz	4 x LTE modules supporting 8 SIM cards FDD LTE: B1/B2/B3/B4/B5/B7/B8/20 UMTS: B1/B2/B5/B8 GSM/GPRS/EDGE: 850 MHz/900 MHz/1800 MHz/1900 MHz	-
Wi-Fi	Dual-band AP (2.4 GHz and 5 GHz), 2x2 MIMO 802.11a/b/g/n	Dual-Band APs including both 2.4 GHz and 5 GHz access; 3x3 MIMO 802.11ac and 802.11b/g/n	Dual-Band APs including both 2.4 GHz and 5 GHz access; 2x2 MIMO 802.11ac and 802.11b/g/n	Dual-Band APs including both 2.4 GHz and 5 GHz access; 3x3 MIMO 802.11ac and 802.11b/g/n
GPS	Supported	Supported	Supported	-
Console interface	1	1	1	1
USB	1 USB2.0	1 USB2.0	1 USB2.0	1 USB2.0
Memory	1GB	1 GB	1 GB	1 GB
Storage	Built-in Flash 512MB (expand storage through mSATA interface)	Built-in Flash 512MB and mSATA SSD 128GB	-	Built-in Flash 512MB and mSATA SSD 128GB
PoE	-	Supported GE0-GE3 support PoE, Max 20W	Supported GE0-GE3 support PoE and PoE+, Max 30W	Supported GE0-GE3 support PoE and PoE+, Max 30W
Power supply	DC inputs: 8V to 36V	DC inputs: 9V to 36V ACC check supported	100VDC/110VDC	100VDC/110VDC
Maximum Power	24W	30W (PoE disabled) 60W (PoE enabled)	30W (PoE disabled) 60W (PoE enabled)	25W (PoE disabled) 55W (PoE enabled)
Dimensions (W x D x H)	200 mm x 160 mm x 44 mm	280 mm x 200 mm x 44 mm	280 mm x 200 mm x 44 mm	280 mm x 200 mm x 44 mm
Weight	1.4Kg	2.6 kg	2.6 kg	2.6 kg
Operating temperature	-10°C to +50°C	-10°C to +70°C (PoE disabled) -10°C to +60°C (PoE enabled)	-10°C to +70°C (PoE disabled) -10°C to +65°C (PoE enabled)	-10°C to +70°C (PoE disabled) -10°C to +65°C (PoE enabled)

Specification	AR503GW-LM7	AR503EDGW-Lc	AR503EQGW-L	AR503EW
Storage temperature	-40°C to +85°C	-40°C to +85°C		
Operating humidity	5% RH to 95% RH (non-condensing)	5% to 95% relative humidity (non-condensing)		
IP protection Rating	IP41	IP54 (optional protective caps available for unused ports)		
Installation method	Wall-mounted or horizontally	Wall-mounting or horizontal		
Shock and vibration standards	QC/T 413-2002, ISO 16750-3:2007	EN50155/ EN61373 QC/T 413-2002 SAE J1455 Category 3		
Software Specifications				
Basic features	DHCP server/client/relay, DNS client/proxy/relay, NAT, ARP, Port management			
WLAN	WLAN QoS, WLAN Security, WLAN radio management, WLAN VAP management, WLAN user management, WLAN anti-attack			
IPv4 unicast routing	Unicast routing management, routing policies, static routes, RIP, OSPF, IS-IS, BGP, MBGP			
Multicast	IGMPv1/v2/v3, PIM SM, PIM DM, PIM-SSM, MSDP			
VPN	L2TP VPN, GRE VPN, Efficient VPN, IPSec VPN			
QoS	ACL, QoS, MQC, SAC			
Security	Firewall, AAA authentication, RADIUS authentication, HWTACACS authentication, ICMP attack defense, Unicast Reverse Path Forwarding (URPF), CPCAR, blacklist, Public Key Infrastructure (PKI)			
Management and maintenance	Web Management, System management, Upgrade management, Device management, SNMPv1/v2c/v3, USB-based deployment			

Device Selection

Device model

Select the device model based on the interface type and service requirements.

Accessories

Configure the types and quantity of the industrial power adapters based on site environments.

Ordering Information

Ordering Information
Device model
AR503GW-LM7, 1*GE, WIFI 2.4G+5G, LTE, 1*USB2.0, 1*mSATA, DC Input(8-36V)
AR503EDGW-Lc, 4*GE(M12), 3*3 MIMO Wifi(2.4G/5G Supported), 1*USB, 2*LTE(Dual SIM Card Switch Supported), 1*GPS, DC Power Input(9~36V)
AR503EQGW-L, 4*GE(M12), 2*2 MIMO Wifi(2.4G/5G Supported), 1*USB, 4*LTE(Dual SIM Card Switch Supported), 1*GPS/BDS, DC Power Input(100V-110V)
AR503EW, 4*GE(M12), 3*3 MIMO Wifi(2.4G/5G Supported), 1*USB, DC Power Input(100V-110V)
Accessories-installation kit
LTE extended antenna
Accessories-storage device
USB flash drive (4 GB, USB 2.0)

For more information, visit <http://e.huawei.com/en> or contact your local Huawei sales office.