

Huawei AR G3 Series Enterprise Routers Channel Sales Guide

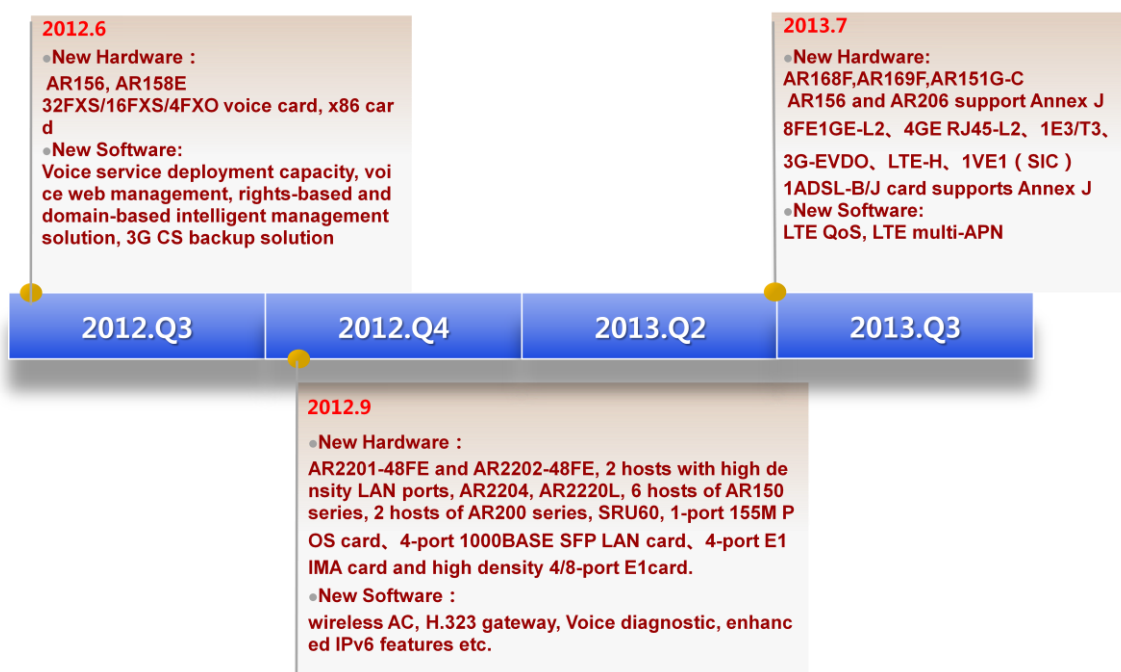
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1 Launch Product

1.1 AR G3 Go-to-Market Map



- AR150&200 series hosts are the important models of AR V2R2 version, which corresponding to Cisco ISR800 series in oversea market.
- AR200 with 3G function and 3G SIC card has been released at 2012.6 to advance wireless capability. Meanwhile, AR1220-L host is corresponding to ISR1921. AR1220 has been promoted the position for corresponding to ISR1941 by higher performance and built-in 8FE interfaces.
- AR V2R3 version has launched a variety of AR150&AR200 Wi-Fi models to advance Wi-Fi capability. Meanwhile, 2 new models of AR2201-48FE and AR2202-48FE have been promoted the position for corresponding to MSR3011E and MSR3011F. Wireless AC feature has been released formally. Cooperated with enterprise network AP, which can assist enterprise customers to deploy low cost WLAN network.
- AR V2R5 version will launch 3 models AR168F, AR169F and AR151G-C. Besides AR168F and AR169F supports GE LAN access ports.

1.1.1 The New Hardware and Features in V2R2

- **11 types hosts are newly added in AR V2R2 as follows:**

AR150&200 series:

AR201, AR206, AR207, AR207V, AR207V-P, AR208E, AR151, AR156, AR157, AR158E

AR1220 series:

AR1220-D

- **Newly added cards as follows:**

1. 1-port GPON/EPON dual-mode SIC interface card
2. 2-port CE1/T1/ PRI/VE1 WSIC interface card
3. 2-port ISDN S/T voice WSIC interface card
4. 1-port VDSL2+ interface card
5. 1-port 3G HSPA+7 interface card
6. 4-port GE RJ45 WAN interface card
7. 4-port GE SFP WAN interface card
8. 32-port FXS voice interface card
9. 16-port FXS voice interface card
10. 4-port FXO voice interface card
11. X86 card

- By now, the main mid-range device of other vendors cannot support GPON/EPON dual-mode service card. The PON card can act as one the highlights of AR G3, which advance the market opportunity of PON gateway.
- The 2-port WSIC cards can be installed in WSIC slots of AR2200/3200 series hosts to promote density of E1/ISDN voice ports.
- **Newly added software features:**
 - Release IPv4/IPv6 dual stack, IPv6routing protocols, 6over4tunnel, 4over6 tunnel and etc. IPv6 functions.
 - The AR routers competitiveness of the leased-line scenarios is promoted by the new DSVPN, SSL VPN, L2TP VPN features.
 - Release SIP AG BEST、 H.323 voice gateway functions to high reliable solution and H.323 protocol transition , protecting customers' investment.

1.1.2 The New Hardware and Features in V2R3

- **12types hosts are newly added in AR V2R3 as follows:**

AR150&200 series:

AR151W-P, AR151G-HSPA+7, AR157VW, AR157G-HSPA+7, AR157W, AR158EVW, AR201VW-P, AR207VW,

AR2200 series:

AR2204, AR2201-48FE, AR2202-48FE.

- **Newly added cards as follows:**

1. 8E1-F interface card
 2. 8CE1 interface card
 3. 4E1-IMA interface card
 4. 4E1-F interface card
 5. 4CE1 interface card
 6. 1CPOS-155M interface card(WSIC)
 7. 1POS-155M interface card
 8. 1POS-622M interface card
 9. 4GE SFP LAN interface card
 10. SRU60 main control unit
- **Newly added software features:**
 - Wireless AC feature has been released formally. Cooperated with enterprise network AP, which can assist enterprise customers to deploy low cost WLAN network.
 - Enhanced the IPv6 deployment capabilities and overall operation and maintenance capacity, improve the WAN interconnection of the domestic industry, branch access and the industry voice competitiveness. Focus on the customers of electricity, finance and other industries, the demand of POS boards and financial models, and focus on 3G、WLAN market opportunities continually, promote network build and expansion.

1.1.3 The New Hardware and Features in V2R5

- **3 types hosts are newly added in AR V2R5 as follows:**

AR150&160&200 series:
AR168F, AR169F, AR151G-C
AR156 and AR206 newly support Annex J
- **Newly added cards as follows:**
 1. 8FE1GE-L2 interface card
 2. 4GE RJ45-L2 interface card
 3. 1E3/T3 interface card
 4. 3G-EVDO interface card
 5. LTE-H interface card
 6. 1VE1 interface card(SIC)
 7. 1 ADSL-B/J newly support Annex J
- **Newly added software features:**
 - Release LTE multi-APN and LTE QOS etc. LTE related features to adapt the development of 4G wireless technology.
- **Selling Restrictions**
 - The LTE interface card is not allowed to sell in America.
 - AR2204 is controlled sales.

- AR voice license will change to UC architecture, the UC Express version is planned to be ready in October 2013. If you want to purchase the voice function before October 2013, we recommend the software version AR V2R3C01. If the voice license is ready, we will notice you at the first time. (Notice: V2R3C01 cannot support the new hardware and software in V2R5C00, the new interface cards including AR-1EVDO-S, AR-1LTE-H-S, AR-4ES2G-S, AR-9ES2-W, AR-9ES2-W, AR-1VE1-S, AR-1E3T3M-W) If you have any questions please contact the interface of your area. (Italy VDF voice demand is unaffected)

1.2 Position

1.2.1 Positions of Each Model

AR G3 Model	Target Market
AR3260	Competes with Cisco ISR G2 3900 and H3C MSR50. AR3260 is located at the egress of a middle- or large-scale campus network, the branch of a large enterprise, or the headquarters of a middle- or large-scale enterprise network. AR3260 supports Internet access, leased line access, wireless access, PBX, and unified communication.
AR2240/2220	Competes with Cisco ISR G2 2900 and H3C MSR30/50. AR2240/2220 are located at the headquarters of a medium-scale enterprise or the branch of a large enterprise. AR2240/2220 support Internet access, leased line access, wireless access, and PBX.
AR1220	Competes with Cisco ISR G2 1900 and H3C MSR20/MSR301x. AR1220 is located at a small- or medium-scale office or the branches of a small or large enterprise. It supports Internet access, leased line access, wireless access, and PBX.
AR150&160 &200	Competes with Cisco ISR 800 and H3C MSR900. It is located at a small office or a small branch. It supports Internet access, wireless access, VPN access, and voice access.

1.3 Highlights

1.3.1 AR G3 Key Message

Application in one, Reduce TCO

- Flexible access supporting dual-mode wireless and wired mode
- Converged Services with Data/Voice/security/WAN Acceleration, integrated in one box

Better Experience, Business Continuity

- Industry-Leading performance, cloud ready architecture, hardware-based HQoS
- Service reliability and Network stability with hot-swappable boards and fault recovery<50ms

Cooperation platform, On Demand applications

- Customized services using OSP (Open Service Platform) with Linux/Windows/VM
- Easy network management using standard MIBs , on Huawei VRP platform, callable by 3rd party SNMP application

1.3.2 AR150&160&200 new highlights

- **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 customers when streams overlap.
- **Higher performance:** The 150&160&200 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 AR150&160&200 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 AR150&160&200 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 provide FE/GE ports that connect small enterprises. The two uplink WAN ports implement load balancing and link protection, maximizing the return on investments.
- **Small Product on a Comprehensive Platform**

- **Maturity and Stableness:** The AR150&160&200 uses the Huawei VRP operating system and VSP voice platform. In addition, the AR150&160&200 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 AR150&160&200 is only 3% of industry average.

2 Sales Strategy

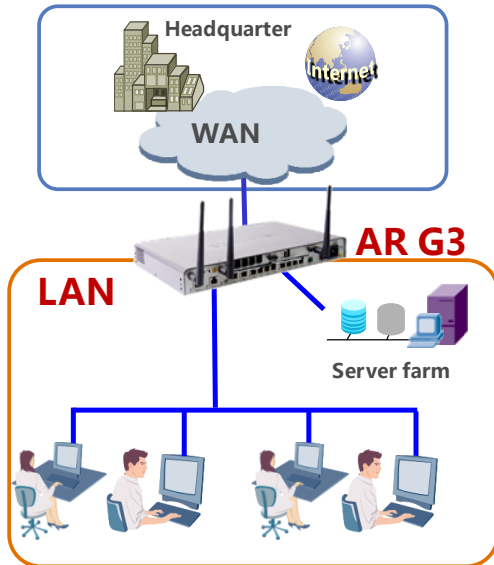
2.1 AR G3 Sale Scenarios Overview

【Glance】

AR G3 series enterprise routers consist of AR3200, AR2200, AR1200, AR150&160&200 to provide an unified network platform for data, voice, video, security. AR G3 targets to government, bank, energy, transportation, enterprise, carrier, SMB.

【7 typical application scenarios】

- Scenario 1, LAN egress gateway



Selling points:

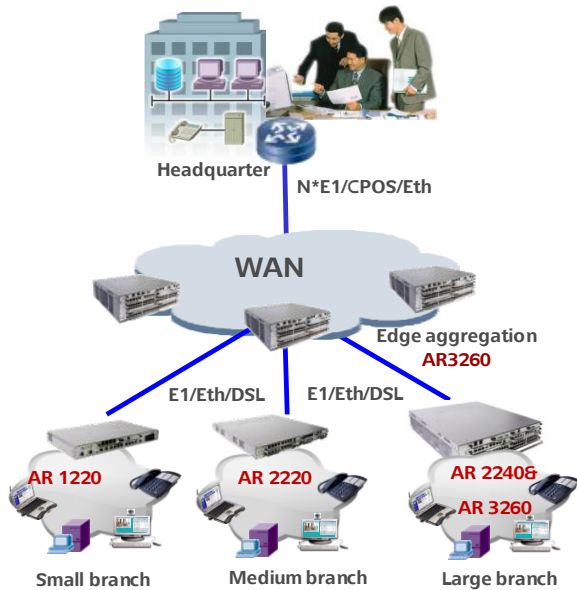
- Leading performance, twice of the Cisco.
- Built-in firewall, anti-attack, security log, P2P limitation.
- All-in-One, integrates switch, PBX, wireless, simplify networking.
- Simplified Management, support Web and eSight management system

Recommended products:

- SMB:** AR200(embedded 8*100M ports , rich models , two uplink FE ports , ADSL, G.SHDSL, 3G).
- Small branch:** AR1200(embedded 2*1000M ports, 8*100M ports, 2*slots).
- Medium branch:** AR2200(embedded 3*1000M ports, 6 or 8* slots), 24*1000 ports interface card. AR220X-48FE.
- Large branch:** AR3200(embedded 3*1000M ports, 10*slots), 24*1000 ports interface card .

Target customers: vertical industry, large-medium enterprise, SMB

● **Scenario 2, WAN access& edge aggregation**



Selling points:

- Abundant interface types, support E1, Eth, xDSL, SA, CPOS
- Auto-config, U disk deployment, to reduce deployment cost
- High availability, all interface cards support hot-swappable, key component redundant design.
- Leading performance, twice of the Cisco.

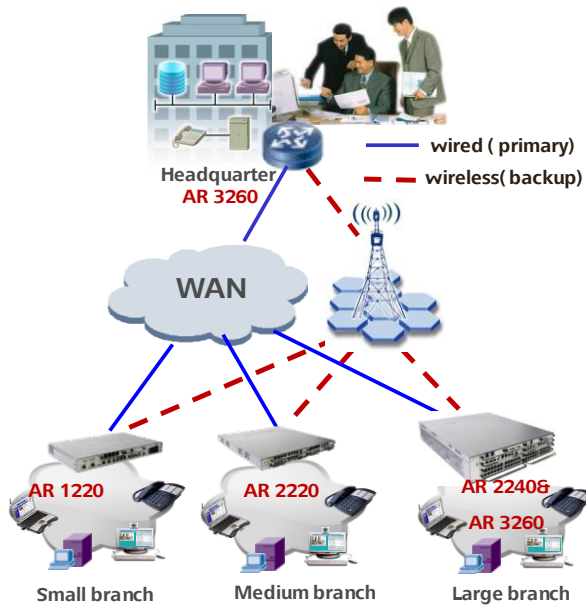
Recommended products:

- WAN access: AR200, AR1220, AR2220, AR2240, AR3260
- Edge aggregation: AR3260

Remark: please choose E1/Eth/CPOS/DSL interface card depends on the link type.

Target customers: vertical industry, large-medium enterprise

● **Scenario 3, 3G/LTE backup**



Selling points:

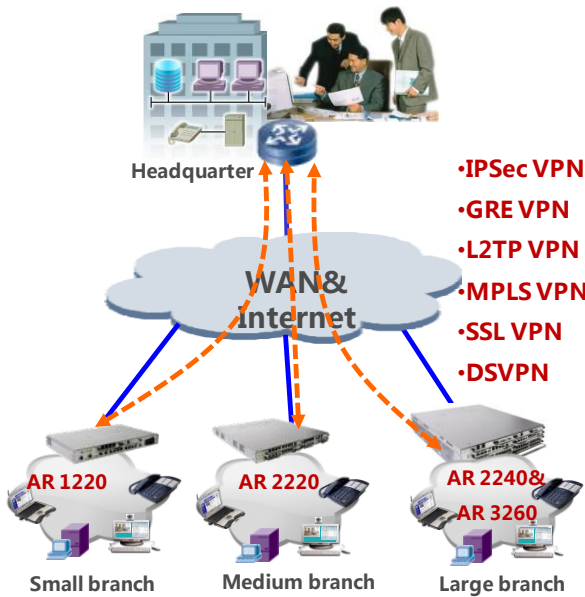
- Wireless market NO.2, provides professional wireless access solution.
- Support HSPA+, EVDO, FDD-LTE
- Future-oriented, smooth evolution to 4G.

Recommended products:

- Host: AR1220, AR2220, AR2240, AR3260, AR200, AR160, AR150
- 3G USB dongle
- LTE USB dongle
- 3G SIC Card: HSPA+, EVDO
- LTE SIC Card: FDD-LTE

Target customers: vertical industry, large-medium enterprise

● Scenario 4, enterprise VPN gateway



Selling points:

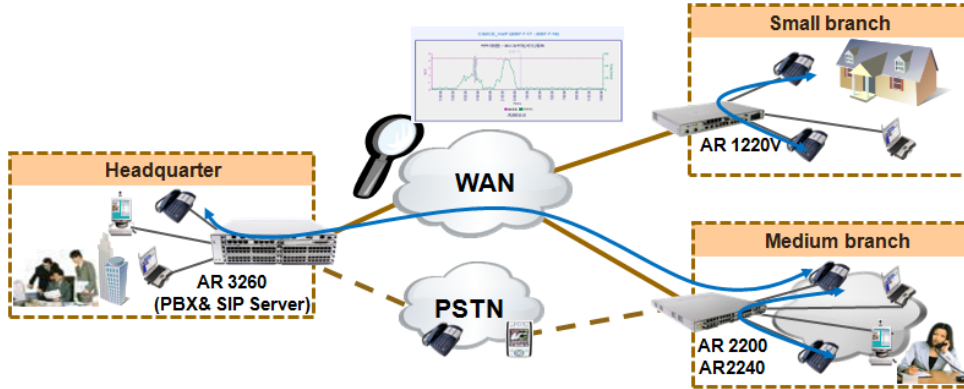
- Support a variety of VPN technology.
- Embedded hardware encryption as default, no need additional hardware payment.
- 2Gbps encryption performance, leading industry.

Recommended products:

- SMB: AR200, IPsec VPN performance 100Mbps.
- Small branch: AR1220, IPsec VPN performance 200Mbps.
- Medium branch: AR2220, IPsec VPN performance 500Mbps.
- Large branch: AR2240/3260 with SRU40, IPsec VPN performance 1000M; AR2240/3260 with SRU80, IPsec VPN performance 2000M

Target customers: vertical industry, large-medium enterprise

● Scenario 5, enterprise voice gateway



Scenarios	Recommended products	Selling points
Small branch	AR1220V (embedded 32-channel DSP as default), AR200	<ul style="list-style-type: none"> •Abundant voice features, built-in PBX, IVR, multi-conference, etc. •Perfect experience, leading performance, HQoS, intelligent call routing backup. •Easy maintenance, user emulation test, analysis test statistic. •High reliability, support BEST, Local Server, FXO Power Failover
Medium branch	AR2220 (includes 1 DSP slot); AR2240(includes 3 DSP slots)	
Headquarter	AR3260 (includes 3 DSP slots)	
Remark: customer need to pay for PBX feature additionally. AR2200 and AR3200 need to buy 16/32/64/128 channel DSP.		
Target customers: vertical industry, large- medium enterprise		

2.2 Competition Analysis

AR mainly functions as the managed CPE in carriers' network market outside China.

Carrier resale means that carriers sell Huawei equipment and service to enterprise users. The equipment is usually located at the enterprise network side. Managed CPE means that carriers provide enterprise network gateway (CPE router or switch) for enterprises. The router or switch carries enterprise services, including VoIP, leased line, and broadband. End users pay for access service, so the CPE is bought and operated by carriers. Generally, the enterprise service department of carriers is responsible for buying routers or switches. Huawei already has say in carriers' market. Cisco has occupied the largest share in carriers' market and exploited carriers' profits. Therefore, carriers hope that Huawei becomes the secondary vendor of managed CPE. The market space of managed CPE is about 200 million dollars.

2.2.1 Product Corresponding List with Cisco

Cisco ISR G2	Huawei AR G3
CISCO 3945E	AR3260+SRU80/SRU60
CISCO 3945	AR3260+SRU40
CISCO 3925E	AR2240+SRU80
CISCO 3925	AR2240+SRU60

CISCO 2951	AR2240+SRU40
CISCO 2921	AR2220
CISCO 2911	AR2220
CISCO 2901	AR2220
CISCO 1941W	AR1220W/AR1220VW
CISCO 1941	AR1220/AR1220V
CISCO 921	AR1220
CISCO 881	AR151
CISCO 886	AR156
CISCO 887	AR157
CISCO 888E	AR158E
CISCO 891	AR201
CISCO 892	AR201
C896VA	AR206
C897VA	AR207/ AR169F
C898EA	AR208E/ AR168F

2.2.2 Product Corresponding List with HP

HP MSR	Huawei AR G3
HP A-MSR50-60 with MPU-G2	AR3260+SRU80/AR3260 + SRU60
HP A-MSR50-60 with MPUF	AR3260+SRU40
HP A-MSR50-40 with MPU-G2	AR2240+SRU80/AR2240 + SRU60
HP A-MSR50-40 with MPUF	AR2240+SRU40/AR2220
MSR3060	AR3260 + SRU40/AR2240+SRU40
MSR3040	AR2240+SRU40

MSR3020	AR2220
MSR3016	AR2220
MSR3011	AR2204(controlled sale)+1SA
MSR3011E	AR2201-48FE/AR2202-48FE
MSR3011F	AR2201-48FE/AR2202-48FE
MSR3010	AR1220
MSR2040	AR1220
MSR2020	AR1220
MSR2021	AR1220
MSR2010	AR201/AR1220
MSR2010W	AR151W-P/AR1220W
MSR2011	AR1220+1SA
MSR2012	AR1220+1E1
MSR2012W	AR1220W+1E1
MSR900	AR151
MSR900W	AR151W-P
MSR920	AR201
MSR920W	AR151W-P
MSR930	AR151
MSR931	AR1220+1SA

2.2.3 AR G3 Competition Guide

Advantage	Competitor	Competition Guide
Powerful forwarding performance (300 Kpps to 5 Mpps), which is 1.5-2 times that of similar devices of other vendors	Cisco: 100 Kpps-2.9 Mpps H3C: 160 Kpps-2 Mpps	<ul style="list-style-type: none"> • Huawei AR G3 uses multi-core and high-speed switching structure. Packets are forwarded by the switching fabric automatically, which saves CPU resources. The forwarding performance is two times that of the other vendors' devices. The service experiences and performance are improved. • The integrated bus structure of H3C consumes a lot of CPU resources and the processing performance of multi-service is low. • Cisco uses the structure combining switching fabric structure and bus structure. The low-speed interface cards are in the bus structure, which occupies a lot of CPU resources and affects service processing performance.
Leading IPSec Performance (300Mbps-4000Mbps)	Cisco: 35Mbp—670Mbps H3C: 30Mbps-600Mbps	<ul style="list-style-type: none"> • Huawei AR G3 relies on multi-core processors, high-performance without additional hardware boards. • Cisco default uses the built-in encryption engine, and requires additional hardware boards to improve performance. • H3C MSR default uses the CPU software encryption and decryption, and requires additional hardware boards to improve performance.
Integrated routing and switching	Cisco: The Ethernet interface cards and the routing system use separated operating systems. The interface cards support Layer 3 routing. H3C: The Ethernet interface cards and the routing system share the same platform. All packets transmitted between interface cards are sent to the CPU. The forwarding performance is low.	<ul style="list-style-type: none"> • Huawei AR G3: The Ethernet interface cards and the routing system use the same VRP operating system. The interface cards support Layer 3 routing. • Cisco Ethernet interface cards and the routing system use different operating systems, so a device consists of two systems. The Layer 2 switching crossing interface cards is complex, which is implemented based on IP or VLAN connections. Device operation and maintenance are complex. One physical device is maintained but operated as two separated logical devices. • The interface cards of H3C do not support Layer 3 routing. All routing packets are sent to the CPU, so a lot of CPU resources are used and service processing is affected.

Advantage	Competitor	Competition Guide
All interface cards are hot swappable	Cisco: The EHWIC series boards are not hot swappable. Only the SM boards of 3900 are hot swappable. H3C: Only the interface cards of MSR5040/5060 are hot swappable.	<ul style="list-style-type: none"> When a hot swappable interface card is inserted or removed, the device does not need to be powered off; therefore, services on the device are not affected. When an interface card that is not hot swappable is inserted or removed, the device needs to be powered off. All services on the device are interrupted. After the device is powered on, all services need to be reconfigured. The service interruption time is long and services are difficult to recover.
Flexible Interface Cards	Cisco: Cards don't have slot restrictions H3C: Some cards have slot restrictions.	<ul style="list-style-type: none"> Huawei AR G3 full series cards are universal, don't have slot restrictions. Cisco cards don't have slot restrictions. H3C cards have slot restrictions: The SIC or DSIC cards can only be inserted in the given slots. The MIM cards and FIC cards are not universal.
EPON/GPON adaptive	Cisco: EPON or GPON is not supported. H3C: Only EPON is supported.	<ul style="list-style-type: none"> Currently, more and more FTTH networks use PON access. Compared with leased line access, PON access is more secure and supports longer distance. EPON technology supports only the Ethernet service, while GPON supports Ethernet, TDM, and ATM, meeting service integration requirements of customers. Huawei PON devices are leading in the global market. They are compatible with carriers' networks.
Build-in AC	Cisco: ISR G2 requires X86 boards to support AC function. H3C: AC function is not supported.	<ul style="list-style-type: none"> Huawei AR G3 built-in AC can support more wireless access, saving the cost of network. Cisco requires X86 boards to support AC function. It will increase the cost of network and is not flexible enough to configure hardware board.

2.3 Business Model

2.3.1 Quotation Model

- The quotation model of AR G3 is host/ bundle, service card, functional license and accessories.
- There are 4 kinds of license of AR G3: basic routing package, value-added service package, feature and counted license. Basic routing package License will be active by default.

Please purchase value-added services package before you buy the feature and counted license.

Feature	Counted	Feature
<ul style="list-style-type: none"> AC Express 	<ul style="list-style-type: none"> CM or BEST (C) CT (C) IVR (C) 	<ul style="list-style-type: none"> DSVPN
Data service package	Voice service package	Counted
<ul style="list-style-type: none"> SPR MPLS L2VPN 	<ul style="list-style-type: none"> POTS, ISDN Terminal Access SIP AG TDM PBX VE1 Access 	<ul style="list-style-type: none"> SSL VPN (C)
Security service package	Basic data package	
<ul style="list-style-type: none"> EVPN SSL VPN(Demo) SAC 	AAA, Route Protocol, Multicast, IGMP, DHCP, HTTP, QoS, ACL, GRE, ARP, NTP, PPP, PPPoA, PPPoE, RADIUS, TACACS, STP, RSTP, MSTP, VLAN, ISDN, ADSL over ISDN, NAT, LDP, RSVP, Firewall, IPsec, PKI, HTTPS, L2TP, IPv6, NQA	

2.3.2 Quotation Strategy

AR G3 Bundle

Some router and card bundles are sold by using independent SBOMs to ensure high price of the routers and cards.

Bundle	Component
AR0M0036BA00	AR3260 Basic Configuration(Includes AR3260 Chassis,350WAC Power,Service and Router Unit 80,with Basic Software and Document),1GE WAN,2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots,4 XSIC Slots
AR0M0036SA00	AR3260 Basic Configuration(Includes AR3260 Chassis,350WAC Power,Service and Router Unit 40,with Basic Software and Document), 1GE WAN, 2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots, 4XSIC Slots
AR0M0036BD00	AR3260 Basic Configuration(Includes AR3260 Chassis,350WDC Power,Service and Router Unit 80,with Basic Software and Document), 1GE WAN, 2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots, 4XSIC Slots
AR0M0036SD00	AR3260 Basic Configuration(Includes AR3260 Chassis,350WDC Power,Service and Router Unit 40,with Basic Software and Document), 1GE WAN, 2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots, 4XSIC Slots
AR0M0024EA00	AR2240 Basic Configuration(Includes AR2240 Chassis,350WAC Power,Service and Router Unit 80,with Basic Software and Document), 1GE WAN,2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots,2 XSIC Slots
AR0M0024BA00	AR2240 Basic Configuration(Includes AR2240 Chassis,350WAC Power,Service and Router Unit 40,with Basic Software and Document),1GE WAN,2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots,2 XSIC Slots
AR0M0024ED00	AR2240 Basic Configuration(Includes AR2240 Chassis,350WDC Power,Service and Router Unit 80,with Basic Software and Document), 1GE WAN,2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots,2 XSIC Slots
AR0M0024DC00	AR2240 Basic Configuration(Includes AR2240 Chassis,350WDC Power,Service and Router Unit 40,with Basic Software and Document), 1GE WAN,2GE Combo WAN,2 USB Interfaces,2GB MircoSD Card,4 SIC Slots,2 WSIC Slots,2 XSIC Slots
AR0M012ABA00	AR1220 Basic Configuration bundle with ADSL2+ interface(Includes AR1220 Chassis,with Basic Software and Document), 2GE WAN,8FE LAN, 1 ADSL2+ Card, 2 USB Interfaces,2 SIC Slots

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