Huawei AR G3 Enterprise Routers Full Ordering Guide V1.01

HUAWEI TECHNOLOGIES CO., LTD.

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1 Introduction to Huawei AR G3 Routers

Huawei third-generation AR series are the next-generation enterprise routers that are backed up by the Huawei's proprietary Versatile Routing Platform (VRP) and rich experience in data communications, wireless network, access network, and core network. The AR G3 uses the multi-core CPU non-blocking switching architecture. By providing integrated solutions and industry-leading system performance and scalability, the AR G3 can meet service development requirements in the future, speed up multi-service provisioning, and maximize customers' return of investment.

The AR G3 adopts modular hardware design and supports hot-swap boards to simplify the system upgrade and maintenance. Note that, if only one main processing unit board is configured, it cannot be removed when the router is running. The AR G3 supports three types of interface cards, namely, SIC, WSIC, and XSIC. By removing the guide rail between slots, two SIC slots can be combined into one WSIC slot, and two WSIC slots can be combined into one XSIC slot.

The AR3200 and AR2240 support pluggable main processing units (MPUs) for easy maintenance and upgrade. The AR3200 provides two slots for the MPUs, which in future will enable the hot-backup function to ensure system reliability. The AR G3 includes the AR3200, AR2200, and AR1200 series. From AR1220 to AR3260, the AR G3 routers have been greatly improved in terms of performance, functions, slots, and interface types and can meet the requirements of various service scenarios.

2 Ordering the AR3200 Series

2.1 AR3200 Overview

The AR3200 provides the highest service performance and riches interfaces among the AR G3 series. As the AR3200 provides wired and wireless Internet access, private line access, private branch exchange (PBX), converged communication, and information security functions, it is widely deployed in large- and/ medium-sized campuses, and the headquarters and branches of large- and medium-sized enterprises.

2.2 AR3200 Models

The AR3260 is the main product in the AR3200 series.

The AR3260 is 3 Rack Unit (RU) high. The forwarding capability and switching capacity of the AR3260 vary according to the MPU applied in the specific product model. (For details, see Table 2-1). The AR3260 can provide a maximum of 3.5 Mpps forwarding capability without ongoing services and over 1000 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 160 Gbit/s. The AR3260 has four SIC slots, two WSIC slots, and four XSIC slots. By combining SIC slots into WSIC slots, the AR3260 can provide a maximum of four WSIC slots. By combining WSIC slots into XSIC slots, the system can provide a maximum of six XSIC slots.

The AR3260 has two MPU slots and two slots for power modules, which enable the hot-backup of the MPUs and the power modules. The dual MPUs hot-backup will be supported in later versions. The AR3260 can use alternating current (AC) or direct current (DC) power modules. Note, the AC and DC power modules cannot be used in one device at the same time.

The AR3260 includes four specific models, as listed in Table 2-1.

Table 2-1 AR3260 product models

Part Number	Product Model	Power supply	MPU model	Performance	Configuration
02352937	**AR0M0036BA00**	AC	AR0MSRU80A00	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces (support 3G USB data cards)

				• Memory: 2 GB DRAM	• 2 GB Micro SD cards • 3 on-Board DSP slots • 4 SIC slots • 2 WSIC slots • 4 XSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • No AC Power Cable
02353543	**AR0M0036SA00**	AC	AR0MSRU40A00	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	
02353544	**AR0M0036BD00**	DC	AR0MSRU80A00	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores • Memory: 2 GB DRAM	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces (support 3G USB data cards) • 2 GB Micro SD cards • Three on-Board DSP slots • 4 SIC slots • 2 WSIC slots • 4 XSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • DC Power Cable contained
02353545	**AR0M0036SD00**	DC	AR0MSRU40A00	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	

2.3 AR3200 Boards

AR3200 series support the following types of boards:

- MPUs: implementing the device control and management, running for main services.
- Interface Cards: connecting to external components providing for various links and services.

MPUs

AR3200 series have two MPU slots and will support dual MPUs hot-backup in later versions. As shown in Table 2-1, each model of AR3260 routers is configured with an MPU by default. You can configure another same MPU as the standby MPU for the router. You can also upgrade the current MPU of AR3260 series as required.

AR3200 series support two types of MPUs: SRU80 with high performance and SRU40 with average performance. Table 2-2 lists the product model, main parameters, and basic configurations of SRU80 and SRU40.

Table 2-2 MPUs of the AR3200

Part Number	Product Model	Performance	Configuration
03020RTC	**AR0MSRU80A00**	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores • Memory: 2 GB DRAM	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces • 1 Micro SD interface • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port)
03020MXL	**AR0MSRU40A00**	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	

Interface Cards

AR3200 series can expand their services through various types of interface cards. You can select specific ones as shown in Table 2-3 by referring to the number of each type of slots provided by each model of AR3200 routers (see Table 2-1).

Table 2-3 Interface Cards of the AR3200

Part Number	Product Model	Slot Type	Description	Remarks
03020XTR	**AR0MSEG1CA00**	SIC	1-port GE Combo WAN interface card	
03020XTQ	**AR0MSEF2TA00**	SIC	2-port FE WAN interface card	
03020YNU	**AR0MSDME1A00**	SIC	1-port channelized E1/T1/PRI/VE1 multi-functional interface card	To implement VE1 functions, the DSP module must be pre-mounted (see Table 2-4).
03020YNT	**AR0MSDE11A00**	SIC	1-port-fractional channelized E1/T1 WAN interface card	
03020YNR	**AR0MSDME2A00**	SIC	2-port channelized E1/T1/PRI/VE1 multi-functional interface card	To implement VE1 functions, the DSP module must be pre-mounted (see Table 2-4).
03020UDU	**AR0MSDE12A00**	SIC	2-port-fractional channelized E1/T1 WAN interface card	

03020YNB	**AR0MSDSA1A00**	SIC	1-port synchronous/asynchronous serial interface card	
03020SAY	**AR0MSDSA2A00**	SIC	2-port synchronous/asynchronous serial interface card	
03020XBH	**AR0MWDAS8A01**	WSIC	8-port asynchronous serial interface card	
03020RMY	**AR0MSVA4B1A0**	SIC	4-port FXS + 1-port FXO voice interface card	The DSP module must be pre-mounted (see Table 2-4).
02310GAX	**AR0MSLA1XA01**	SIC	1-port ADSL2 + ANNEX A/M WAN interface card	
02310GBA	**AR0MSLB1XA01**	SIC	1-port ADSL2 + ANNEX B WAN interface card	
02310DRN	**AR0MSLS1XA00**	SIC	1-port-4G.SHDSL WAN interface card	
03020YKE	**AR0MSDS1XA00**	SIC	1-port ISDN S/T WAN card	
02310FVM	**AR0MSVS2XA00**	SIC	2-port ISDN S/T voice interface card	The DSP module must be pre-mounted (see Table 2-4).
03021AQU	**AR0MSPC31A00**	SIC	1-port 155M CPOS channelized optical interface card	
03020XTN	**AR0MWMF9TT00**	WSIC	8-port 100M (RJ45) and 1-port 1000M (RJ45)-L2/L3 Ethernet interface card	
03020MNS	**AR0MXEGFTA00**	XSIC	24-port 1000M (RJ45)-L2/L3 Ethernet interface card	

2.4 AR3200 Modules and Accessories

To implement specific service functions, the AR3200 support to integrate with these modules and accessories: DSP modules, power modules, optical modules, storage medium, 3G data cards, and software license. You can select specific ones based on your service requirements.

Note: The introduction and description of host cables (except for the ones configured before delivery) and accessory cables are not included in this document. If you need, please contact Huawei local representative offices.

DSP Modules

AR3200 series support four voice DSP modules. Table 2-4 lists the four DSP modules and their features.

Table 2-4 Voice DSP modules of the AR3200

Part Number	Product Model	Description
03021HWQ	**AR0MDD016A00**	16-channel voice DSP module
03021HWT	**AR0MDD032A00**	32-channel voice DSP module

03021HWU	**AR0MDD064A00**	64-channel voice DSP module
03020XPK	**AR0MDD128A00**	128-channel voice DSP module

Power Modules

AR3200 series support AC power modules and DC power modules. AR3200 series have two independent slots for active/standby power modules. Note, an AC power module and a DC power module cannot be used in one AR3200 host at the same time. Each of the AR3260 product models contains only one power module by default, which varies according to the specific model as shown in Table 2-1. The power modules supported by AR3200 series are shown in Table 2-5.

Table 2-5 Power modules of the AR3200

Part Number	Product Model	Description
02310CWN	**AR0MPSAP3500**	350W AC power module
02310FGS	**AR0MPSDP3500**	350W DC power module

Optical Modules

Table 2-6 lists the optical modules and their configurations.

Table 2-6 Optical modules of the AR3200

Part Number	Product Model	Description	Configuration
02315204	**eSFP-GE-SX-MM850**	eSFP, GE, multi-mode module (850 nm, 0.5 km, LC)	GE-SFP optical module for short and medium distance
02315200	**SFP-GE-LX-SM1310**	eSFP, GE, single-mode module (1310 nm, 10 km, LC)	
02317346	**S-SFP-GE-LH40-SM1310**	eSFP, GE, single-mode module (1310 nm, 40 km, LC)	GE-SFP optical module for long distance
02317347	**S-SFP-GE-LH40-SM1550**	eSFP, GE, single-mode module (1550 nm, 40 km, LC)	
02317348	**S-SFP-GE-LH80-SM1550**	eSFP, GE, single-mode module (1550 nm, 80 km, LC)	
02315206	**eSFP-GE-ZX100-SM1550**	eSFP, GE, single-mode module (1550 nm, 100 km, LC)	
02315233	**SFP-FE-SX-MM1310**	SFP, 100 M/155 M, multi-mode module (1310 nm, 2 km, LC)	FE/STM-1-SFP optical module for short and medium distance
02315205	**eSFP-FE-LX-SM1310**	eSFP, 100 M/155 M, single-mode module (1310 nm, 15 km, LC)	
02317344	**S-SFP-FE-LH40-SM1310**	eSFP, FE, single-mode module (1310 nm, 40 km, LC)	FE/STM-1-SFP optical module for long distance
02317345	**S-SFP-FE-LH80-SM1550**	eSFP, FE, single-mode module (1550 nm, 80 km, LC)	
02315286	**SFP-GE-LX-SM1490-BIDI**	eSFP, GE, BIDI, single-mode module (TX1490/RX1310, 10 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair.
02315285	**SFP-GE-LX-SM1310-BIDI**	eSFP, GE, BIDI, single-mode module (TX1310/RX1490, 10 km, LC)	

02315203	**SFP-FE-LX-SM1310-BIDI**	eSFP, FE, BIDI, single-mode module (TX1310/RX1550, 15 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair.
02315202	**SFP-FE-LX-SM1550-BIDI**	eSFP, FE, BIDI, single-mode module (TX1550/RX1310, 15 km, LC)	

Storage Medium

AR3200 series provide one Micro SD card slot and two USB slots. Table 2-7 lists the Micro SD cards and USB cards. Each AR3260 router is configured with one 2 GB Micro SD card.

Table 2-7 Storage medium of the AR3200

Part Number	Product Model	Description
06010202	**N0MSD2G00**	Micro SD Card, 2 GB, 2.7–3.6 V, SD 1.1 interface, 11mm*15mm*1mm (L*W*T), without adapter and bar code.
06010203	**N0MSD4G01**	Micro SD card, 4 GB, 2.7 V–3.6 V, Compatible with SD Specification Version 2.0, 11 mm*15 mm*1 mm (L*W*T), without adapter and bar code.
06010171	**NUSBDSK01**	Storage USB stick, 4 GB, USB 2.0.

3G Data Card

AR3200 series can access to the data interface using 3G data card. Table 2-8 lists the 3G data cards for AR3200. For detailed information of them, please contact Huawei local representative offices.

Table 2-8 3G data cards of the AR3200

Part Number	Product Model	Description
51074704	**E352**	HSPA wireless data card, and support for WCDMA.
51073431	**E367**	HSPA wireless data card, and support for WCDMA.
51074382	**K4605**	HSPA wireless data card, and support for WCDMA.
51075427	**EC1261-2**	CDMA2000 wireless data card.

Software License

AR3200 series provide rich services by purchasing software license. Table 2-9 lists the available license.

Table 2-9 Software license for the AR3200

Part Number	Product Model	Description
81400263	**AR0S000PBX00**	To enable the PBX function

3 Ordering the AR2200 Series

3.1 AR2200 Overview

Huawei AR2200 series enterprise routers are designed for the headquarters of medium-sized enterprises and the branches of the large- and medium-sized enterprises, which mainly are in the needs of broadband connection, private line access, voice, and information security scenarios. With high service performance and rich interface types, Huawei AR2200 can satisfy various enterprise customers' requirements.

3.2 AR2200 Models

The AR2240 and AR2220 are the main products in the AR2200 series.

AR2240

The AR2240 is 2 RU high. The forwarding capability and switching capacity of the AR2240 vary according to the MPU applied in the specific product model. The AR2240 can provide a maximum of 3.5 Mpps forwarding capability without ongoing services and over 1000 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 160 Gbit/s. The AR2240 has four SIC slots, two WSIC slots, and two XSIC slots. By combining SIC slots into WSIC slots, the AR2240 can provide a maximum of four WSIC slots. By combining WSIC slots into XSIC slots, the system can provide a maximum of four XSIC slots.

AR2240 routers have an MPU slot that supports the pluggable MPU. The AR2240 has two slots for power modules, which enable the hot-backup of the power modules. The AR2240 can use AC or DC power modules, but cannot use AC and DC power modules at the same time in one host.

The AR2240 includes four specific product models, as listed in Table 3-1.

Table 3-1 AR2240 product models

Part Number	Product Model	Power supply	MPU model	Performance	Configuration
02353547	**AR0M0024EA00**	AC	AR0MSRU80A00	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces (support 3G USB data cards)

				• Memory: 2 GB DRAM	• 2 GB Micro SD cards • 3 on-Board DSP slots • 4 SIC slots • 2 WSIC slots • 2 XSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • No AC Power Cable
02352935	**AR0M0024BA00**	AC	AR0MSRU40A00	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	
02353546	**AR0M0024ED00**	DC	AR0MSRU80A00	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores • Memory: 2 GB DRAM	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces (support 3G USB data cards) • 2 GB Micro SD cards • 3 on-Board DSP slots • 4 SIC slots • 2 WSIC slots • 2 XSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • DC Power Cable contained
02353474	**AR0M0024DC00**	DC	AR0MSRU40A00	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	

AR2220

The AR2220 is 2 RU high. It provides a maximum of 1 Mpps forwarding capability without ongoing services and over 75 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 32 Gbit/s. The AR2220 has four SIC slots and two WSIC slots. By combining SIC slots into WSIC slots, the AR2220 can provide a maximum of four WSIC slots. By combining WSIC slots into XSIC slots, the system can provide a maximum of two XSIC slots.

The AR2220 does not have any MPU slot. The AR2220 has a slot for the pluggable power module so that the power module can be easily maintained and upgraded. The AR2220 requires different power supply modules which are different to AR2240. For details, see Table 3-6.

AR2220 support AC and DC power modules, based on which the AR2220 has two specific models. Table 3-2 lists the models, parameters and configurations of them.

Table 3-2 AR2220 product models

Part Number	Product Model	Power supply	Performance	Configuration
02352934	**AR0M0022BA00**	AC	• Switching capacity: 32 Gbit/s • Forwarding capability without ongoing services: 1 Mpps • Forwarding capability with ongoing services: >75 Mbit/s • Processor: 600 MHz*4 cores • Memory: 2 GB DRAM	• 2 GE WAN interfaces • 1 GE Combo WAN interface • 2 USB interfaces (support 3G USB data cards) • 2 GB Micro SD cards • 1 on-Board DSP slot • 4 SIC slots • 2 WSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • No AC Power Cable
02353540	**AR0M0022BD00**	DC	• Switching capacity: 32 Gbit/s • Forwarding capability without ongoing services: 1 Mpps • Forwarding capability with ongoing services: >75 Mbit/s • Processor: 600 MHz*4 cores • Memory: 2 GB DRAM	• 2 GE WAN interfaces • 1 GE Combo WAN interface • 2 USB interfaces (support 3G USB data cards) • 2 GB Micro SD cards • 1 on-Board DSP slot • 4 SIC slots • 2 WSIC slots • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • DC Power Cable contained

3.3 AR2200 Boards

AR2200 series support the following types of boards:

- MPUs: implementing the device control and management, running for main services.
- Interface Cards: connecting to external components providing for various links and services.

MPUs

AR2240 series have one MPU slot which supports pluggable MPUs. As shown in Table 3-1, each AR2240 router is configured with one MPU by default based on a specific product model. You can also upgrade current MPUs of AR2240 series to meet your needs. Because AR2220 series have no MPU slots, they do not support pluggable MPUs.

AR2200 series support two types of MPUs: SRU80 of high performance and SRU40 of average performance. Table 3-3 lists the product model, main parameters, and basic configurations of SRU80 and SRU40.

Table 3-3 MPUs of the AR2200

Part Number	Product Model	Performance	Configuration
03020RTC	**AR0MSRU80A00**	• Switching capacity: 160 Gbit/s • Forwarding capability without ongoing services: 3.5 Mpps • Forwarding capability with ongoing services: >1000 Mbit/s • Processor: 750 MHz*12 cores • Memory: 2 GB DRAM	• 1 GE WAN interface • 2 GE Combo WAN interfaces • 2 USB interfaces • 1 Micro SD interface • 1 Mini-USB Console interface • 1 Serial Console interface (shared with the auxiliary port) • Applicable for AR2240, but is not applicable for AR2220
03020MXL	**AR0MSRU40A00**	• Switching capacity: 80 Gbit/s • Forwarding capability without ongoing services: 2 Mpps • Forwarding capability with ongoing services: >150 Mbit/s • Processor: 600 MHz*8 cores • Memory: 2 GB DRAM	

Interface Cards

AR2200 series can expand their services through various types of interface cards. You can select a specific ones as shown in Table 3-4 by referring to the number of slots provided by each model of AR2200 routers (see Table Table 3-1 and Table 3-2).

Table 3-4 Interface Cards of the AR2200

Part Number	Product Model	Slot Type	Description	Remarks
03020XTR	**AR0MSEG1CA00**	SIC	1-port GE Combo WAN interface card	
03020XTQ	**AR0MSEF2TA00**	SIC	2-port FE WAN interface card	
03020YNU	**AR0MSDME1A00**	SIC	1-port channelized E1/T1/PRI/VE1 multi-functional interface card	To implement VE1 functions, the DSP module must be pre-mounted (see Table 3-5).
03020YNT	**AR0MSDE11A00**	SIC	1-port-fractional channelized E1/T1 WAN interface card	
03020YNR	**AR0MSDME2A00**	SIC	2-port channelized E1/T1/PRI/VE1 multi-functional interface card	To implement VE1 functions, the DSP module must be pre-mounted (see Table 3-5).
03020UDU	**AR0MSDE12A00**	SIC	2-port-fractional channelized E1/T1 WAN interface card	
03020YNB	**AR0MSDSA1A00**	SIC	1-port synchronous/asynchronous serial interface card	
03020SAY	**AR0MSDSA2A00**	SIC	2-port synchronous/asynchronous serial interface card	

03020XBH	**AR0MWDAS8A01**	WSIC	8-port asynchronous serial interface card	
03020RMY	**AR0MSVA4B1A0**	SIC	4-port FXS + 1-port FXO voice interface card	The DSP module must be pre-mounted (see Table 3-5).
02310GAX	**AR0MSLA1XA01**	SIC	1-port ADSL2 + ANNEX A/M WAN interface card	
02310GBA	**AR0MSLB1XA01**	SIC	1-port ADSL2 + ANNEX B WAN interface card	
02310DRN	**AR0MSLS1XA00**	SIC	1-port-4G.SHDSL WAN interface card	
03020YKE	**AR0MSDS1XA00**	SIC	1-port ISDN S/T WAN card	
02310FVM	**AR0MSVS2XA00**	SIC	2-port ISDN S/T voice interface card	The DSP module must be pre-mounted (see Table 3-5).
03021AQU	**AR0MSPC31A00**	SIC	1-port 155M CPOS channelized optical interface card	
03020XTN	**AR0MWMF9TT00**	WSIC	8-port 100M (RJ45) and 1-port 1000M (RJ45)-L2/L3 Ethernet interface card	
03020MNS	**AR0MXEGFTA00**	XSIC	24-port 1000M (RJ45)-L2/L3 Ethernet interface card	

3.4 AR2200 Modules and Accessories

To implement specific service functions, the AR2200 support to integrate with these modules and accessories: DSP modules, power modules, optical modules, storage medium, 3G data cards, and software license. You can select specific ones based on your service requirements.

Note: The introduction and description of host cables (except for the ones configured before delivery) and accessory cables are not included in this document. If you need, please contact Huawei local representative offices.

DSP Modules

AR2200 series support four voice DSP modules. Table 3-5 lists the four DSP modules and their features.

Table 3-5 Voice DSP modules of the AR2200

Part Number	Product Model	Description
03021HWQ	**AR0MDD016A00**	16-channel voice DSP module
03021HWT	**AR0MDD032A00**	32-channel voice DSP module
03021HWU	**AR0MDD064A00**	64-channel voice DSP module
03020XPK	**AR0MDD128A00**	128-channel voice DSP module

Power Modules

AR2240 routers and AR2220 routers use different power modules, while both AC power modules and DC power modules are supported. AR2240 routers have two independent slots for active/standby power modules. Note, an AC power module and a DC power module cannot be used in one AR2240 host at the same time. The AR2220 has only one slot for power module. Each of the AR2240 and AR2220 product models contains only one power module by default, which varies according to the specific model as shown in Table 3-1 and Table 3-2. The power modules supported by AR2200 series are shown in Table 3-6.

Table 3-6 Power modules of the AR2200

Part Number	Product Model	Description
02310CWN	**AR0MPSAP3500**	350W AC power module; applicable for AR2240, not for AR2220.
02310FGS	**AR0MPSDP3500**	350W DC power module; applicable for AR2240, not for AR2220.
02310CVG	**AR0MPSAP1500**	150W AC power module; applicable for AR2220, not for AR2240.
02310FUN	**AR0MPSDP1500**	150W DC power module; applicable for AR2220, not for AR2240.

Optical Modules

Table 3-7 lists the optical modules of the AR2200 and their configurations.

Table 3-7 Optical modules of the AR2200

Part Number	Product Model	Description	Configuration
02315204	**eSFP-GE-SX-MM850**	eSFP-GE-multi-mode module (850 nm, 0.5 km, LC)	GE-SFP optical module for short and medium distance
02315200	**SFP-GE-LX-SM1310**	eSFP, GE, single-mode module (1310 nm, 10 km, LC)	
02317346	**S-SFP-GE-LH40-SM1310**	eSFP, GE, single-mode module (1310 nm, 40 km, LC)	GE-SFP optical module for long distance
02317347	**S-SFP-GE-LH40-SM1550**	eSFP, GE, single-mode module (1550 nm, 40 km, LC)	
02317348	**S-SFP-GE-LH80-SM1550**	eSFP, GE, single-mode module (1550 nm, 80 km, LC)	
02315206	**eSFP-GE-ZX100-SM1550**	eSFP, GE, single-mode module (1550 nm, 100 km, LC)	
02315233	**SFP-FE-SX-MM1310**	SFP, 100 M/155 M, multi-mode module (1310 nm, 2 km, LC)	FE/STM-1-SFP optical module for short and medium distance
02315205	**eSFP-FE-LX-SM1310**	eSFP, 100 M/155 M, single-mode module (1310 nm, 15 km, LC)	
02317344	**S-SFP-FE-LH40-SM1310**	eSFP, FE, single-mode module (1310 nm, 40 km, LC)	FE/STM-1-SFP optical module for long distance
02317345	**S-SFP-FE-LH80-SM1550**	eSFP, FE, single-mode module (1550 nm, 80 km, LC)	
02315286	**SFP-GE-LX-SM1490-BIDI**	eSFP, GE, BIDI, single-mode module (TX1490/RX1310, 10 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair
02315285	**SFP-GE-LX-SM1310-BIDI**	eSFP, GE, BIDI, single-mode module (TX1310/RX1490, 10 km, LC)	

02315203	**SFP-FE-LX-SM1310-BIDI**	eSFP, FE, BIDI, single-mode module (TX1310/RX1550, 15 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair
02315202	**SFP-FE-LX-SM1550-BIDI**	eSFP, FE, BIDI, single-mode module (TX1550/RX1310, 15 km, LC)	

Storage Medium

AR2200 series provide one Micro SD card slot and two USB slots. Table 3-8 lists the Micro SD cards and USB cards. Each AR2200 router is configured with one 2 GB Micro SD card by default.

Table 3-8 Storage medium of the AR2200

Part Number	Product Model	Description
06010202	**N0MSD2G00**	Micro SD Card, 2 GB, 2.7–3.6V, SD 1.1 interface, 11mm*15mm*1mm (L*W*T), no adapter and bar code.
06010203	**N0MSD4G01**	Micro SD card, 4 GB, 2.7 V–3.6 V, Compatible with SD Specification Version 2.0, 11mm*15mm*1mm (L*W*T), without adapter and bar code.
06010171	**NUSBDSK01**	Storage USB stick, 4 GB, USB 2.0.

3G Data Card

AR2200 series can access to the data interface using 3G data card. Table 3-9 lists the 3G data cards. For detailed information of them, please contact Huawei local representative offices.

Table 3-9 3G data cards of the AR2200

Part Number	Product Model	Description
51074704	**E352**	HSPA wireless data card, and support for WCDMA.
51073431	**E367**	HSPA wireless data card, and support for WCDMA.
51074382	**K4605**	HSPA wireless data card, and support for WCDMA.
51075427	**EC1261-2**	CDMA2000

Software License

AR2200 series provide rich services by purchasing software license. Table 3-10 lists the available license.

Table 3-10 Software license for the AR2200

Part Number	Product Model	Description
81400263	**AR0S000PBX00**	To enable the PBX Function

4 Ordering the AR1200 Series

4.1 AR1200 Overview

Huawei AR1200 series are enterprise routers designed for medium- and small-sized offices and branches of medium- and small-sized enterprises. The AR1200 provides multiple types of interfaces including Ethernet, WLAN, xDSL, SA, E1, 3G, and voice interfaces to meet various service requirements.

4.2 AR1200 Models

AR1200 series consist of the AR1220VW, AR1220V, AR1220W, AR1220, AR1220W-S, and AR1220-S.

AR1220VW

The AR1220VW is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220VW has two SIC slots, which can be combined into one WSIC slot.

The AR1220VW does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220VW is not pluggable. The AR1220VW supports power over Ethernet (POE) technology, 32-channel voice (by default), and IEEE 802.11b/g/n.

Table 4-1 lists the models, parameters and configurations of AR1220VW.

Table 4-1 AR1220VW product models

Part Number	Product Model	Power supply	Performance	Configuration
02353528	**AR0M12VWBA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services: 350 Kpps • Forwarding capability with ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 32-channel voice DSP • 802.11b/g/n AP • 2 GE WAN interfaces • 8 FE LAN interfaces • 2 USB interfaces (support 3G USB data cards) • 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port)

				• External power supply port for POE • No AC Power Cable

AR1220V

The AR1220V is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220V has two SIC slots, which can be combined into one WSIC slot.

The AR1220V does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220V is not pluggable. AR1220V support POE technology and 32-channel voice (by default). The AR1220V does not support WLAN.

Table 4-2 lists the models, parameters and configurations of AR1220V.

Table 4-2 AR1220V product models

Part Number	Product Model	Power supply	Performance	Configuration
02352933	**AR0M012VBA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services: 350 Kpps • Forwarding capability with ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 32-channel voice DSP • 2 GE WAN interfaces • 8 FE LAN interfaces • 2 USB interfaces (support 3G USB cards) • 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port) • External power supply port for POE • No AC Power Cable

AR1220W

The AR1220W is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220W has two SIC slots, which can be combined into one WSIC slot.

The AR1220W does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220W is not pluggable. AR1220W support POE technology and IEEE 802.11b/g/n (by default). AR1220W does not support the voice function.

Table 4-3 lists the models, parameters and configurations of AR1220W.

Table 4-3 AR1220W product models

Part Number	Product Model	Power supply	Performance	Configuration
02353527	**AR0M012WBA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services: 350 Kpps • Forwarding capability with	• 802.11b/g/n AP • 2 GE WAN interfaces • 8 FE LAN interfaces • 2 USB interfaces (support 3G USB cards)

			ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port) • External power supply port for POE • No AC Power Cable

AR1220

The AR1220 is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220 has two SIC slots, which can be combined into one WSIC slot.

The AR1220 does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220 is not pluggable. AR1220 do not support POE, voice function or WLAN.

Table 4-4 lists the models, parameters and configurations of AR1220.

Table 4-4 AR1220 product models

Part Number	Product Model	Power supply	Performance	Configuration
02352932	**AR0M0012BA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services: 350 Kpps • Forwarding capability with ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 2 GE WAN interfaces • 8 FE LAN interfaces • 2 USB interfaces (support 3G USB cards) • 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port) • No AC Power Cable

AR1220W-S

The AR1220W-S is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220W-S has two SIC slots, which can be combined into one WSIC slot.

The AR1220W-S does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220W-S router is not pluggable. AR1220W-S supports power over Ethernet (POE) technology and IEEE 802.11b/g/n (by default). AR1220W-S does not support the voice function, the multi protocol label switching (MPLS) technology, or border gateway protocol (BGP).

Table 4-5 lists the models, parameters and configurations of AR1220W-S.

Table 4-5 AR1220W-S product models

Part Number	Product Model	Power supply	Performance	Configuration
02353524	**AR0M12WSBA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services:	• 802.11b/g/n AP • 2 GE WAN interfaces • 8 FE LAN interfaces

			350 Kpps • Forwarding capability with ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 2 USB interfaces (support 3G USB cards) • 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port) • External power supply port for POE • Not supporting MPLS • Not supporting BGP • No AC Power Cable

AR1220-S

The AR1220-S is 1 RU high. It provides a maximum of 350 Kpps forwarding capability without ongoing services and over 25 Mbit/s forwarding capability with ongoing services. Its switching capacity can reach 8 Gbit/s. The AR1220-S has two SIC slots, which can be combined into one WSIC slot.

The AR1220-S does not have any MPU slot, and then does not support pluggable MPUs. The power module of AR1220-S is not pluggable. AR1220-S does not support POE, voice function, WLAN, MPLS, or BGP.

Table 4-6 lists the models, parameters and configurations of AR1220-S.

Table 4-6 AR1220-S product models

Part Number	Product Model	Power supply	Performance	Configuration
02353523	**AR0M012SBA00**	AC	• Switching capacity: 8 Gbit/s • Forwarding capability without ongoing services: 350 Kpps • Forwarding capability with ongoing services: >25 Mbit/s • Processor: 500 MHz*2 cores • Memory: 512 MB DRAM	• 2 GE WAN interfaces • 8 FE LAN interfaces • 2 USB interfaces (support 3G USB cards) • 2 SIC slots • 1 Mini-USB Console • 1 Serial Console interface (shared with the auxiliary port) • Not supporting MPLS • Not supporting BGP • No AC Power Cable

4.3 AR1200 Boards

AR1200 series support two types of service interface cards: SIC and WSIC. You can select a specific interface card for AR1200 series to enrich management and service functions based on the router model. Table 4-7 lists the SICs supported by AR1200 series.

Table 4-7 SICs of the AR1200

Part Number	Product Model	Slot	Description	Remarks
03020XTR	**AR0MSEG1CA00**	SIC	1-port GE Combo WAN interface card	
03020XTQ	**AR0MSEF2TA00**	SIC	2-port FE WAN interface card	
03020YNU	**AR0MSDME1A00**	SIC	1-port channelized E1/T1/PRI/VE1 multi-functional interface card	VE1 functions, only for AR1220V or AR1220VW.
03020YNT	**AR0MSDE11A00**	SIC	1-port-fractional channelized E1/T1 WAN interface card	
03020YNR	**AR0MSDME2A00**	SIC	2-port channelized E1/T1/PRI/VE1 multi-functional interface card	VE1 functions, only for AR1220V or AR1220VW.
03020UDU	**AR0MSDE12A00**	SIC	2-port-fractional channelized E1/T1 WAN interface card	
03020YNB	**AR0MSDSA1A00**	SIC	1-port synchronous/asynchronous serial interface card	
03020SAY	**AR0MSDSA2A00**	SIC	2-port synchronous/asynchronous serial interface card	
03020XBH	**AR0MWDAS8A01**	WSIC	8-port asynchronous serial interface card	
03020RMY	**AR0MSVA4B1A0**	SIC	4-port FXS + 1-port FXO voice interface card	Only for AR1220V or AR1220VW.
02310GAX	**AR0MSLA1XA01**	SIC	1-port ADSL2 + ANNEX A/M WAN interface card	
02310GBA	**AR0MSLB1XA01**	SIC	1-port ADSL2 + ANNEX B WAN interface card	
02310DRN	**AR0MSLS1XA00**	SIC	1-port-4G.SHDSL WAN interface card	
03020YKE	**AR0MSDS1XA00**	SIC	1-port ISDN S/T WAN card	
02310FVM	**AR0MSVS2XA00**	SIC	2-port ISDN S/T voice interface card	Only for AR1220V or AR1220VW.
03020XTN	**AR0MWMF9TT00**	WSIC	8-port 100M (RJ45) and 1-port 1000M (RJ45)-L2/L3 Ethernet interface card	

4.4 AR1200 Modules and Accessories

To implement specific service functions, the AR1200 support to integrate with these modules and accessories: DSP modules, power modules, optical modules, storage medium, 3G data cards, and software license. You can select specific ones based on your service requirements.

Note: The introduction and description of host cables (except for the ones configured before delivery) and accessory cables are not included in this document. If you need, please contact Huawei local representative offices.

Power Modules

AR1200 series are integrated with a power module and does not support pluggable power modules.

The AR1200VW, AR1200V, AR1200W, and AR1200W-S support external POE power module, as shown in Table 4-8.

Table 4-8 POE power module of the AR1200

Part Number	Product Model	Description
02220119	**AR0MPSAP1000**	External POE power module; applicable for AR1200VW, AR1200V, AR1200W, and AR1200W-S, not for AR1220 or AR1220-S.

Optical Modules

Table 4-9 lists the optical modules and their configurations.

Table 4-9 Optical modules of the AR1200

Part Number	Product Model	Description	Configuration
02315204	**eSFP-GE-SX-MM850**	eSFP-GE-multi-mode module (850 nm, 0.5 km, LC)	GE-SFP optical module for short and medium distance configuration
02315200	**SFP-GE-LX-SM1310**	eSFP, GE, single-mode module (1310 nm, 10 km, LC)	
02317346	**S-SFP-GE-LH40-SM1310**	eSFP, GE, single-mode module (1310 nm, 40 km, LC)	GE-SFP optical module for long distance
02317347	**S-SFP-GE-LH40-SM1550**	eSFP, GE, single-mode module (1550 nm, 40 km, LC)	
02317348	**S-SFP-GE-LH80-SM1550**	eSFP, GE, single-mode module (1550 nm, 80 km, LC)	
02315206	**eSFP-GE-ZX100-SM1550**	eSFP, GE, single-mode module (1550 nm, 100 km, LC)	
02315233	**SFP-FE-SX-MM1310**	SFP, 100 M/155 M, multi-mode module (1310 nm, 2 km, LC)	FE/STM-1-SFP optical module for short and medium distance
02315205	**eSFP-FE-LX-SM1310**	eSFP, 100 M/155 M, single-mode module (1310 nm, 15 km, LC)	
02317344	**S-SFP-FE-LH40-SM1310**	eSFP, FE, single-mode module (1310 nm, 40 km, LC)	FE/STM-1-SFP optical module for long distance
02317345	**S-SFP-FE-LH80-SM1550**	eSFP, FE, single-mode module (1550 nm, 80 km, LC)	
02315286	**SFP-GE-LX-SM1490-BIDI**	eSFP, GE, BIDI, single-mode module (TX1490/RX1310, 10 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair.
02315285	**SFP-GE-LX-SM1310-BIDI**	eSFP, GE, BIDI, single-mode module (TX1310/RX1490, 10 km, LC)	
02315203	**SFP-FE-LX-SM1310-BIDI**	eSFP, FE, BIDI, single-mode module (TX1310/RX1550, 15 km, LC)	BIDI-SFP optical module for bidirectional transmission. The two optical modules must be used in pair.
02315202	**SFP-FE-LX-SM1550-BIDI**	eSFP, FE, BIDI, single-mode module (TX1550/RX1310, 15 km, LC)	

Storage Medium

AR1200 series provide two USB slots. Table 4-10 lists the USB model.

Table 4-10 Storage medium of the AR1200

Part Number	Product Model	Description
06010171	**NUSBDSK01**	Storage USB stick, 4 GB, USB 2.0

3G Data Card

AR1200 series can access to the data interface using 3G data card. Table 4-11 lists the 3G data cards. For detailed information of them, please contact Huawei local representative offices.

Table 4-11 3G data cards of the AR1200

Part Number	Product Model	Description
51074704	**E352**	HSPA wireless data card, and support for WCDMA.
51073431	**E367**	HSPA wireless data card, and support for WCDMA.
51074382	**K4605**	HSPA wireless data card, and support for WCDMA.
51075427	**EC1261-2**	CDMA2000

Software License

AR1200 series provide rich services by purchasing software license. Table 4-12 lists the available license.

Table 4-12 Software license for the AR1200

Part Number	Product Model	Description
81400263	**AR0S000PBX00**	To enable the PBX Function