



# MyPower S4320 Series L3 Gigabit Aggregation Switch

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## Datasheet

*Maipu Communication Technology Co., Ltd*  
No. 16, Jiuxing Avenue  
Hi-tech Park  
Chengdu, Sichuan Province  
People's Republic of China - 610041  
**Tel:** (86) 28-85148850, 85148041  
**Fax:** (86) 28-85148948  
**URL:** [http:// www.maipu.com](http://www.maipu.com)  
**Email:** [overseas@maipu.com](mailto:overseas@maipu.com)

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*Maipu Communication Technology Co., Ltd*  
No. 16, Jiuxing Avenue  
Hi-tech Park  
Chengdu, Sichuan Province  
People's Republic of China - 610041  
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**Fax:** (86) 28-85148948  
**URL:** [http:// www.maipu.com](http://www.maipu.com)  
**Email:** [overseas@maipu.com](mailto:overseas@maipu.com)

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# S4320 Series Switch

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MyPower S4320 is a high-performance aggregation Gigabit routing switch developed by Maipu. It is applied in enterprise network center LAN and aggregation of IP MAN. It can forward L3 Ethernet data frames with line rate, and has rich QoS and multicast capability. It can perform the L2-L7 ACL filtering on packets according to user definitions and combine with 802.1x authentication protocol to meet the security requirements of users.

MyPower S4320 series includes SM4320-28TC, SM4320-52TC, SM4320-28TP, SM4320-52TP, SM4320-28FC models.

SM4320-28TC Provides 24 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots, Dual Power Slots.

SM4320-28TP Provides 24 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots, Dual Power Slots, POE&POE+ Supports.

SM4320-52TC Provides 48 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots, Dual Power Slots.

SM4320-52TP Provides 48 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots, Dual Power Slots, POE&POE+ Supports.

SM4320-28FC Provides 24 1000M SFP interfaces, 12 10/100/1000M electric (combo) interfaces, two 10G Extension Slots, Dual Power Slots.

SM4320-52FC Provides 48 1000M SFP interfaces, 4 10/100/1000M electric (combo) interface, two 10G Extension Slots, Dual Power Slots.



MyPower S4320 Gigabit Aggregation L3 Switch

MyPower S4320 series switch provides the perfect solutions in the aspects of multi-service capability, security, reliability, management and maintenance. It is the ideal aggregation device of the industry users and carriers. The system provides the security features, such as 802.1X access authentication and ARP anti-attack, which can prevent the virus and vicious attacks and is suitable for the networks with large scale, multiple services and complicated traffic. It has powerful multicast and QoS capability, meeting the real-time requirements of the enterprise network video, audio data and other high-priority services. Besides, S4320 supports QinQ, VLAN Mapping, and multi-service access capabilities. MyPower S4320 series gigabit L3 switch can provide the low-cost, high-performance, and easy-management solutions for the enterprise network center, IP MAN and district network aggregation.

# Key Features

- Complete L2/L3 protocols
- Perfect security policy
- Powerful access control capability
- Advanced QoS
- VRRP/VBRP, BFD supports
- 50ms service protection
- Comprehensive network management
- Horizontal and vertical virtualization technology
- Green-power design and lead-free ROHS design

## ● Complete L2/L3 protocols

S4320 series switch provides 802.1d/w/s spanning tree protocol; 802.1q, 802.1p, 802.3ad, 802.3x, GVRP, DHCP, and STP protocols; IGMP, DVMRP, and PIM multicast protocols; Static, RIPv1/2, OSPF, BGP, and VRRP routing protocols. S4320 supports 1K concurrent multicast data flow; IGMP snooping and IGMP fast-adding/leaving protocol; L3 PIM and PIM-DM/SM protocol to meet the requirement of customers for multicast protocol.

## ● Perfect security policy

S4320 series switch provides various security policies such as user authority/identity authentication, port security, port rate limitation, port monitoring, address filtering, loopback check, and 802.1X authentication; provides various protect mechanisms for user access and network security. It has perfect security function design and supports user-based SNMP V3, MAC+IP+VLAN binding and 802.1X authentication security policies, and anti network storm attack, anti DOS/DDOS attack, anti ARP attack, and anti network protocol packet attack security technologies. In this way, the attacks and virus can be prevented and it is more suitable for large-scale, multi-service and complicated-traffic networks.

## ● Powerful access control capability

S4320 series switch supports L2-L7 ACL access control. It can classify data flow according to source destination MAC address, source destination IP address, UDP/TCP port number, and IP protocol type, set access control rules according to data classification, that is, set permit or deny, and then apply the rules to VLANs or physical ports.

## ● Advanced QoS

Each port of S4320 supports eight queues and the queue scheduling policies such as SP, RR, WRR, and WDRR; rich priority mappings including 802.1p→802.1p, 802.1p→COS, DSCP→802.1p, and DSCP→DSCP; 64Kbps-based port traffic rate restriction and carriers can limit the rate according to the time period; Tail Drop and sRED packet loss algorithm. S4320 supports single-rate three-color mode (srTCM) and dual-rate three-color mode (trTCM) to meet the SLA requirements of operators, including CIR, CBS and PIR.

- **Supports VRRP/VBRP, BFD Protocols**

S4320 series switch supports VRRP/VBRP route redundant protocols which can realize the backup of the switch, it can be compatible with HSRP protocol which can satisfy the requirements of network expansion. S4320 supports the BFD function, to meet the rapid detection of the link and 50ms fast switching requirements.

- **50ms service protection**

S4320 series switch adopts Ethernet ring protection technology of Maipu, which can realize 50ms network protection in single-ring, dual-ring/multi-ring, tangent-ring and crossover-ring networking environments. In this way, the service continuity of carriers is ensured and customer satisfaction is improved.

- **Comprehensive network management**

S4320 series switch provides SHELL, TELNET, WEB, SNMP management, third-party software to realize across-platform and large-scale network management and friendly man-machine interface, and provide powerful support for users to manage devices and control network status.

- **Horizontal and vertical virtualization technology**

S4320 series switch supports horizontal virtualization VST (Virtual Switching Technology), multiple switches can be virtualized into one switch, with unified management and data forwarding. VST can realize link aggregation across device, 0 second failover while link malfunction, can highly enhance network stability and bandwidth utilization.

S4320 series switch supports vertical management virtualization technology, S4320 series switch can connect to core switch via Gigabit ports, maximum 128 device can be virtualized into one logical switch for unified management, highly reduce workload for deployment and maintenance, simplify network structure.

- **Green-power design and lead-free ROHS design**

Adopting EEE chipset and intelligent variable speed fan, S4320 is excellent in energy saving. According to 10 °C rule, the reliability and life of semiconductor chip are related with working temperature. The working temperature increases 10 °C and the reliability of semiconductor reduces a half, while the working temperature and power consumption are in direct proportion. S4320 series switch improves the product life and stable running of high-end devices, saves the running energy consumption of devices, and meets the green environmental protection requirements.



# Technical Specifications

<b>Product model</b>	<b>MyPower S4320</b>		
<b>Frame model</b>	<b>SM4320-28TC</b> <b>SM4320-52TC</b>	<b>SM4320-28TP</b> <b>SM4320-52TP</b>	<b>SM4320-28FC</b> <b>SM4320-52FC</b>
<b>Product configurations</b>			
Device structure	Desktop		
Physical port	24/48 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots	24/48 10/100/1000M electric interfaces, four 1000M SFP(combo) interfaces, two 10G Extension Slots, POE&POE+ Supports	24/48 1000M SFP interfaces, 12/4 10/100/1000M electric (combo) interfaces, two 10G Extension Slots
RJ45 Console port	1	1	1
USB Console port	1	1	1
Reset Button	1	1	1
10G Extension Slots	2	2	2
Power Module Slots	2	2	2
Intelligent Fans	Yes	Yes	Yes
<b>Performance parameters</b>			
Switching capability	128Gbps 176Gbps	128Gbps 176Gbps	128Gbps 176Gbps
Throughput	95.2Mpps 131Mpps	95.2Mpps 131Mpps	95.2Mpps 131Mpps
Jumbo	13K	13K	13K
VLAN Entry	4K		
MAC Entry	32K		
Routing Table	12K		
Anti-static	Yes		
Anti-lightning	Yes		
MTBF	>80000 hours		

Software Features		
L2 protocol	LAN	Support MAC address learning quality limitation; static MAC configuration; blackhole MAC
		Dynamic and static ARP, proxy ARP, free ARP
		Ethernet, Ethernet II, VLAN, 802.3x, 802.1p, 802.1q, 802.1x, 802.3az
		Support VLAN based on port, MAC, protocol, IP subnet
		Support VLAN Mapping, support Voice VLAN, support GVRP
		QinQ, selective QinQ
		STP/RSTP/MSTP; support BPDU TUNNEL;
		IGMP Snooping, GVRP
		IEEE802.3ad LACP L2 aggregation
Multiple-to-one port mirror, remote port mirror RSPAN, flow mirror		
L3 protocol	Routing protocol	Static route, RIP v1/v2, OSPF, BGP, Equivalent route, policy routing
	IPv6	IPv6 Dual stack, Neighbor discovery, Static routes, RIPng, OSPFv3, BGP4+
	Multicast protocol	IGMP v1/v2/v3
		IGMP Snooping
		PIM-DM, PIM-SM, PIM-SDM, PIM-SSM
	IP application	DHCP Server, DHCP Client, DHCP Relay, DHCP Snooping, Option 82
		DNS, DDNS
		FTP Server, FTP Client
		Ping, Trace
		IP Accounting, UDP Helper, NTP
Network security	Port	Port security, port isolation, IP+MAC+Port binding
	ARP	ARP Guard, DAI, static ARP binding, ARP Proxy, free ARP
	ACL	Standard IP ACL, extended IP ACL, standard MAC ACL, self-reserve ACL, advanced ACL
	Security defending	Control plane protection, URPF
	DDOS anti-attack	ICMP Flood intercepting, Smurf attack intercepting, Fraggle attack intercepting, LAND attack intercepting, SYN Flood attack intercepting
	Authenticatio	Local authentication, Radius, Tacacs+, AAA

	n	802.1x authentication	
QoS	Flow classification	Based on port, MAC address, IP address, IP priority, DSCP priority, TCP/UDP port number, protocol type and so on	
	Traffic monitoring	CAR	
	Congestion management	SP, WRR, SP+WRR	
	Congestion avoidance	RED, WRED	
	Link reliability		Support BFD for BGP/IS-IS/OSPF/RSVP/VPLS PW/VRRP and so on
		Support Keepalive Gateway	
		Support VRRP	
Virtual switching technology	Virtual switching technology	Support VST (Virtual Switching Technology), maximum 8 device in one stacking group via Gigabit ports	
		Support vertical management virtualization, with the coordination of core switch, maximum 128 device can be virtualized into one logical switch for unified management	
Management	Device management	Port line detection (VCT), UDLD	
	Reliability	EIPS (Ethernet Intelligent Protection Switching)	
	Network management	SNMP v1/v2/v3, MIB, RMON, SYSLOG	
	System management	Console port login management, Telnet (VTY) remote management, SSH management, WEB management	
	Network quality guarantee (SLA)		ICMPECHO, ICMP-PATH-ECHO, ICMP-PATH-JITTER, JITTER, UDPECHO, FLOW-STATISTICS, MAC SLA and other protocol test
			Support the network delay, jitter, and packet loss test
	Sflow	Support the sFlow traffic analysis	
IEEE		IEEE 802.3 (10BASE-T) IEEE 802.3u (100BASE-T) IEEE 802.3z (1000BASE-X) IEEE 802.3ab (1000BASE-T) IEEE 802.3ae (10G BASE) IEEE 802.1x (port authentication) IEEE 802.3ad (Link Aggregation) IEEE 802.3x (Flow Control) IEEE802.3az (Energy Efficient Ethernet) IEEE 802.1d (STP) IEEE 802.1Q (Virtual LAN) IEEE 802.1w (RSTP) IEEE 802.1s (MSTP) IEEE 802.1p (Cos priority)	
<b>Physical index</b>			
Dimension (W×D×H)		440mm x 420mm x 44.2mm	

<b>Power supply</b>	
Input voltage (AC)	100-240V, 50-60Hz
Input voltage (DC)	-48V
Power consumption (MAX)	120W
POE Power Consumption(MAX)	760W(380W*2)
<b>Environment</b>	
Temperature	0~45°C
Humidity	10~90%, non-condensing

# Order Information

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Series	Model	Description
<b>MyPower S4320 Series</b>		
MyPower S4320 Series	SM4320-28TC	24 10/100/1000M electric interfaces, four 1000M SFP (combo) interfaces, two 10G Extension Slots, Dual Power Slots.
	SM4320-52TC	48 10/100/1000M electric interfaces, four 1000M SFP (combo) interfaces, two 10G Extension Slots, Dual Power Slots.
	SM4320-28TP	24 10/100/1000M electric interfaces, four 1000M SFP (combo) interfaces, two 10G Extension Slots, Dual Power Slots, POE&POE+ Supports.
	SM4320-52TP	48 10/100/1000M electric interfaces, four 1000M SFP (combo) interfaces, two 10G Extension Slots, Dual Power Slots, POE&POE+ Supports.
	SM4320-28FC	24 1000M SFP interfaces, 12 10/100/1000M electric (combo) interfaces, two 10G Extension Slots, Dual Power Slots.
	SM4320-52FC	48 1000M SFP interfaces, 4 10/100/1000M electric (combo) interfaces, two 10G Extension Slots, Dual Power Slots.
<b>Extension Module</b>		
Extension Module	SM4A-2GEF	2-Port SFP 1G Card for Uplink
	SM4A-2XGEF	2-Port SFP+10G Card for Uplink
	SM4A-2CX4	Stacking Module, two CX4 interfaces, need configure with CX4 cables
	CX4-STACK-5	CX4 Stacking Cable, L=0.5m
	CX4-STACK-10	CX4 Stacking Cable, L=1.0m
	CX4-STACK-30	CX4 Stacking Cable, L=3.0m
<b>Power Supply</b>		
Power Module	AD120-1S005E	120W AC Power Supply Module
	AD250-1S005E	250W AC Power Supply Module
	AD500-1D005E	500W AC Power Supply Module
	DD5001D005E	500W AC Power Supply Module