



MyPower S4120 Series Intelligent L3 Switch Datasheet

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Overview



MyPower S4120 series carrier-class intelligent L3 switch

MyPower S4120 series intelligent L3 switch is the new-generation multi-service Ethernet switch developed by Maipu. It provides perfect solutions for multi-service capability, reliability, security, management, and maintenance. It is the ideal Ethernet network aggregation and access device for carries and enterprise customers. The system provides L2 and L3 VPN functions, such as flexible QinQ and MCE, supporting multi-service access. The safety design, such as 802.1X and ARP detection, can efficiently prevent various network attack and virus, and is more applicable to the network visited by large-scale, multi-service, and complex traffic. The switch supports powerful QoS and multicast capability, which can meet the real-time requirements of enterprise network videos, audios, and other high-priority services.

MyPower S4120 series intelligent L3 switch is applicable to the enterprise network requiring VLAN isolation and high-speed data forwarding between VLANs in the current enterprise network. MyPower S4120 series can provide the low-cost, high-performance, high expansibility, and easy-management access and aggregation solutions for the enterprise network center, IP MAN, and district network access.

Key Features

- High-density 100M access, meeting network aggregation requirement
- Supporting L2 and L3 protocols
- Perfect security policy, preventing various attacks
- Rich QoS mechanism, achieving bandwidth guarantee for different service data
- Supporting Ethernet ring technology, achieving 50ms link switchover
- Comprehensive environmental protection and energy-saving design

- **High-density 100M access, meeting network aggregation requirement**

S4120 series switch provides 24/48 100M interface access and supports 4 1000M uplink interfaces. It can realize full wire-speed L2 and L3 data forwarding and can be applied to 100M aggregation and 1000M uplink deployment mode in building LAN aggregation, enterprise network center LAN, MAN cell aggregation, and WLAN network aggregation.

- **Supporting L2 and L3 protocols**

S4120 series switch comprehensively supports L2 and L3 protocols, supports 802.1d/w/s spanning tree protocol, supports protocols such as 802.1q, 802.1p, 802.3ad, 802.3x, GVRP, DHCP, and SNTP, supports complete multicast protocols such as IGMP, DVMRP, and PIM, and supports router protocols such as RIPv1/2 and OSPF. It can be applied to complicated network.

- **Perfect security policy, preventing various attacks**

S4120 series switch can classify the data flow according to the source/destination IP address, IP protocol type, TCP/UDP, source/destination port number, IP priority (DSCP, TOS, and Precedence), time domain, and TOS and realizes powerful access control capability by different policies. It has perfect security defence

function and supports security policies such as user-based SNMP V3, MAC+IP+VLAN binding and 802.1X authentication, and supports security technologies such as anti network storm attack, anti DOS/DDOS attack, anti ARP attack and anti network protocol packet attack. In this way, the attacks and virus can be prevented efficiently and it is more suitable for large-scale, multi-service and complicated-traffic networks.

- **Rich QoS mechanism, achieving bandwidth guarantee for different service data**

Each port of S4120 series switch provides 8 priority queues. The queue bandwidth can be set, respectively. It supports scheduling modes, such as WRR/SP/SP+WRR. The port can be configured with the trusted CoS, DSCP, IP priority, and port priority and modify the DSCP and COS value of the data package. The traffic can be classified by port, VLAN, DSCP, and IP priority, and ACL table and modify the DSCP and IP priority of the data package and specify different bandwidths to meet the customer's requirement of data processing priority.

- **Supporting Ethernet ring technology, achieving 50ms link switchover**

S4120 series switch adopts Ethernet ring protection technology, which can realize 50ms network protection in single-ring, dual-ring/multi-ring, tangent-ring, and crossover-ring networking environments. In this way, it can ensure the data service continuity and improve the network stability to satisfy the deployment requirement of switch MAN direct connection in large-scale networks.

- **Comprehensive environmental protection and energy-saving design**

The advanced switch chip power management mechanism can conduct the power reducing for the Ethernet port in the standby state. This can further save the entire device power consumption.

The perfect power management function can conduct power-off management for the idle boards and meanwhile reduce the corresponding fan rotation speed or stop it.

The temperature monitoring, fan rotation speed auto adjustment, and fan partition speed adjustment can efficiently reduce the environment noise and

prolongs the hardware lifespan.

S4120 series switch supports 240 V high-voltage DC technology and reduces over 18% power consumption, which can satisfy the customer's green and energy-saving need.

Technical Specifications

Hardware Specifications			
Product Model	SM4120-28TC-A C SM4120-28TC-D C48	SM4120-28TP-AC SM4120-28TP-DC 48	SM4120-52TC-A C SM4120-52TC-D C48
Product configurations			
Physical port	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces, 2 SFP 1000M combo interfaces, 2 SFP 1000M interfaces	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces, 2 SFP 1000M combo interfaces, 2 SFP 1000M interfaces	48 10/100M electric interfaces, 2 10/100/1000M electric interfaces, 2 SFP 1000M combo interfaces, 2 SFP 1000M interfaces
Switching capability	12.8Gbps	12.8Gbps	17.6Gbps
Packet forwarding rate	19Mpps	19Mpps	26Mpps
POE function	---	AC model POE power: 720 W DC model POE power: 370 W	---
VLAN	4K		
Mean free error time	80,000 hours		
Dimension (mm) (W×D×H)	440mm x 220mm x 44.2mm	440mm x 320mm x 44.2mm	440mm x 320mm x 44.2mm
Input voltage (AC)	100 to 240V 50/60Hz		
Input voltage (DC)	-40 to -57V		
Power	Single AC/DC power	Single AC/DC power	Dual AC power/Single DC power
Power consumption	25W	861W (AC)/463 (DC)	40W
Long-term work temperature	0 to 45°C		

Short-term work temperature		-5°C to 55°C	
Work humidity		10–90% no condensate	
Software Features			
Link layer protocol and technology	LAN	Support MAC address learning quantity 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	
		Support VLAN based on port, MAC, protocol, IP subnet	
		Support VLAN Mapping, support Voice VLAN, support GVRP	
		QinQ, flexible QinQ	
		STP/RSTP/MSTP; support BPDU TUNNEL;	
		IGMP Snooping, GVRP	
		IEEE802.3ad LACP L2 aggregation	
Network protocol	Routing protocol	Static route	
		RIP v1/v2	
		OSPF	
		BGP	
		Equivalent route, route policy	
	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	Port	Port security, port isolation

security	ARP	ARP Guard, DAI, static ARP binding, ARP Proxy, free ARP
	ACL	Standard IP ACL, extended IP ACL, standard MAC ACL, reflexive 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
	Authentication	Local authentication, Radius, Tacacs, AAA
802.1x authentication		
MPLS	MCE	Support
QoS	Traffic 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		
OAM	Device management	Port line detection (VCT), UDLD
	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
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Order Information

Product Model	Description
MyPower S4120	
SM4120-28TC-AC	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interfaces, AC power
SM4120-28TC-DC48	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interfaces, DC power
SM4120-28TP-AC	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interfaces, supporting POE function, AC power
SM4120-28TP-DC48	24 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interfaces, supporting POE function, DC power
SM4120-52TC-AC	48 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interfaces, dual AC power
SM4120-52TC-DC48	48 10/100M electric interfaces, 2 10/100/1000M electric interfaces and 2 SFP 1000M Combo interfaces, 2 SFP 1000M interface, DC power