



MyPower S5820 Series Enhanced 10G Aggregation L3 Switch

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

All rights reserved. Printed in the People's Republic of China.

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise without the prior written consent of Maipu Communication Technology Co., Ltd.

Maipu makes no representations or warranties with respect to this document contents and specifically disclaims any implied warranties of merchantability or fitness for any specific purpose. Further, Maipu reserves the right to revise this document and to make changes from time to time in its content without being obligated to notify any person of such revisions or changes.

Maipu values and appreciates comments you may have concerning our products or this document. Please address comments to:

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

All other products or services mentioned herein may be registered trademarks, trademarks, or service marks of their respective manufacturers, companies, or organizations.

Contents

S5820 Series Switch	5
Key Features	6
Technical Specifications.....	8
Order Information	11

S5820 Series Switch

MyPower S5820 Series are 10GE routing switch with high-performance, high-security and multi-service. S5820 series has advanced hardware design with hot-swappable redundant power supply module and Fan module. It supports up to 48x10GE SFP+/Base-T ports and 4x40G QSFP ports. Advanced non-blocking array exchange and huge packet cache support smooth operation at the extreme circumstance. It is used for IP MAN aggregation, enterprise campus core network and Datacenter TOR application.



SM5820 10G TOR Switch Series

MyPower S5820 series includes SM5820-26F and SM5820-52F models:

SM5820-26F provides 24x10G SFP+ interfaces, 2x40G QSFP interfaces, five fan trays which supports N+1 redundant fans and dual power supply slots.

SM5820-52F provides 48x10G SFP+ interfaces, 4x40G QSFP interfaces, five fan trays which supports N+1 redundant fans and dual power supply slots.

SM5820-52XT provides 48x10G Base-T interfaces, 4x40G QSFP interfaces, five fan trays which supports N+1 redundant fans and dual power supply slots.

MyPower S5820 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 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. MyPower S5820 series L3 switch provides 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
- Perfect OAM
- Comprehensive network management
- Green-power design and lead-free ROHS design

● Complete L2/L3 protocols

S5820 series switch provides 802.1d/w/s spanning tree protocol; 802.1q, 802.1p, 802.3ad, 802.3x, GVRP, DHCP, and SNTP protocols; IGMP, DVMRP, and PIM multicast protocols; Static, RIPv1/2, OSPF, BGP, and VRRP routing protocols. S5820 supports 1K concurrent multicast data flow; IGMP snooping and IGMP fast-adding/leaving protocol.

● Perfect security policy

S5820 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

S5820 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 S5820 supports eight queues and the queue scheduling policies such as SP, RR and WRR; 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.

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

S5820 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. S5820 supports the BFD function, to meet the rapid detection of the link and 50ms fast switching requirements.

- **50ms service protection**

S5820 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**

S5820 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.

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

Adopting EEE chipset and intelligent variable speed fan, S5820 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. S5820 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

Product model		MyPower S5820	
Frame model		SM5820-26F/52F	SM5820-52XT
Product configurations			
Physical port	24*10G SFP/SFP+ interfaces, two 40G QSFP interfaces, five fan slots, two power supply slots	48*10G SFP/SFP+ interfaces, four 40G QSFP interfaces, five fan slots, two power supply slots	48*10G Base-T interfaces, four 40G QSFP interfaces, five fan slots, two power supply slots
RJ45 Console port			1
Out-of-Band management Ethernet interface			1
USB port			1
Power Module Slots			2
Fan trays			5
Intelligent Fans			Yes
Performance parameters			
Switching capability	0.64T/1.28Tbps		1.28Tbps
Throughput	476M/952Mpps		952Mpps
VLAN			4K
MAC address table size			128K
Routing table size			8K
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, 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
		FTP Server, FTP Client
Ping, Trace Route		
		IP Accounting, UDP Helper, NTP
Network security	Port	Port security, port isolation
	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
	Authentication	Local authentication, Radius, Tacacs, AAA
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
OAM	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 802.3ba(40G 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)	
Physical index			
	Dimension (W×D×H)	438mm×433.3mm×43.80mm	438mm×433.3mm×43.80mm
	Weight	8.5kg	8.0kg
Power supply			
	Input voltage (AC)	100-240VAC~2.8A-5.6A 50/60HZ	

Order Information

Series	Model	Description
MyPower S5820 Series		
MyPower S5820 Series	SM5820-52F	48 10G SFP/SFP+ interfaces, four 40G QSFP interfaces, one RJ45 console port, one Out-of-Band management Ethernet interface, five fan slots, two power supply slots
	SM5820-26F	24 10G SFP/SFP+ interfaces, two 40G QSFP interfaces, one RJ45 console port, one Out-of-Band management Ethernet interface, five fan slots, two power supply slots
	SM5820-52XT	48 10G Base-T interfaces, four 40G QSFP interfaces, one RJ45 console port, one Out-of-Band management Ethernet interface, five fan slots, two power supply slots
FAN Module		
FAN Module	SM58-FAN-A	S5820 series FAN module, five Fan modules are mandatory
Power Supply		
Power Module	AD460-1S005J	460W AC Power Supply Module, two power modules are mandatory
SFP+ Fiber Transceiver		
SFP+ Module	MP-S851X3-NCLM	10G SFP+ 850nm 300m LC DDM
	MP-S311X2-NCL10	10G SFP+ 1310nm 10Km LC DDM
	MP-S311X2-NCL40	10G SFP+ 1550nm 40Km LC DDM
QSFP Fiber Transceiver		
QSFP Module	MP-QSFP-SR4	QSFP+,40GBASE-SR4,40Gbps,Multi-mode, 850nm,12/8lane MPO Interface, 100m Distance
	MP-QSFP-LR4	QSFP+,40GBASE-LR4,40Gbps,Single-mode,1310nm,LC Interface,10Km Distance
QSFP Stacking Cable		
QSFP Stacking Cable	QSFP-STACK-10	QSFP+ Stacking Cable,40Gbps, Length 1.0m
	QSFP-STACK-30	QSFP+ Stacking Cable,40Gbps, Length 3.0m
	QSFP-STACK-50	QSFP+ Stacking Cable,40Gbps, Length 5.0m