



# MyPower S4100 Series Carrier-class Switch Datasheet

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# MyPower S4100 Series Carrier-class Switch

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MyPower S4100 series intelligent L3 switch is a new multi-service Ethernet switch launched by Maipu for enterprise network aggregation, MAN and community network aggregation and high-quality access. Moreover, S4100 provides the stable, reliable and secure high-performance L2/L3 switching services for NGN.

S4100 provides the perfect solutions in the aspects of multi-service capability, security, reliability, management and maintenance. It is the perfect aggregation and access device of the industry users and carriers. The system provides the L2/L3 VPN functions such as selective QinQ and MCE and supports the multi-service access capability. The 802.1X and ARP can prevent the attack and virus efficiently, more suitable for the large-scale network with multiple services and complicated traffic. S4100 supports powerful QoS and multicast capabilities and can meet the real-time requirement of the video, audio data and other high-priority services of the enterprise networks. It can adapt the typical application of the enterprise network that VLANs are separated from each other and data can be forwarded with high speed between VLANs. It provides low-cost, high-performance, high-expansibility and simple-management access and aggregation solutions for enterprise network center, IP MAN, district network aggregation.

MyPower S4100 series intelligent L3 switch includes the following models:

- SM4100-28TC provide 24 10/100M electric ports and four 1000M combo interfaces;
- SM4100-28FC provides 24 10/100M optical ports and four 1000M combo interfaces;
- SM4100-52TF provides 48 10/100M electric ports and four 1000M optical interfaces;
- SM4100-52TC provides 48 10/100M electric ports and four-port 1000M combo interface module;



Mypower S4100 series Metro Access routing switch

# Key Features

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- Powerful wire-speed forwarding capability
- Support dynamic routing protocol completely
- The hardware supports IPv4/IPv6
- Support multiple services
- Carrier-class reliability
- Perfect security policy
- Rich QoS mechanism
- Cluster management and virtual stacking

# Product Features

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- **Powerful wire-speed capability**

Powerful L2/L3 forwarding capability; full-byte wire-speed forwarding of 48 100M and four 1000M ports at most; when configured with the ACL and port security policies, the switch still has the wire-speed forwarding capability;

- **Support dynamic routing protocol completely**

S4100 supports multiple routing protocols, including ISIS and BGP, IPv4 and IPv6 policy routing and load balance, and GR of the routing protocol to realize the uninterrupted forwarding of data;

- **The hardware supports IPv4/IPv6**

The hardware supports IPv4/IPv6, gets the most authoritative IPv6 Ready2 authentication, reaches the IPv6 commercial standard, realizes the smooth upgrade from IPv4 to IPv6 and protects user investments;

- **Support multiple services**

S4100 provides various L2/L3 VPN capabilities, supports selective QinQ and MCE functions and provides the selective solutions for the multi-service separation of industry users and the MAN services of carriers.

S4100 supports the Voice VLAN technology, can identify the VoIP flow and provides the QoS policy to ensure the call quality. Besides, it supports multicast VLAN+ technology to reduce the work of copying data on the upstream devices and realize the L3 multicast forwarding.

- **Carrier-class reliability**

The AC/DC dual-power redundancy design realizes the flexibility and reparability of power backup based on the traditional dual-power device.

S4100 supports Ethernet OAM technology, realizing the quality monitoring of the end-to-end physical link and the link quality checking of the last

kilometer access lines, helping users manage the network more efficiently and more validly, and reducing the operation costs.

- **Perfect security policy**

S4100 supports selective 802.1X function. It cooperates with Maipu's terminal access control system (TAC) system and integrates terminal access, authorization, security control, online configuration, management and monitoring functions to realize the centralized access device management and centralized access policy delivering. It supports the URPF detection, and can check and take measures for the DDOS attacks such as LAND attack, SYN Flood attack, Smurf attack.

The dynamic ARP detection can prevent ARP spoof attack validly; IP Source Guard can filter and control the packets forwarded by the ports.

Based on the security policy of user hierarchical management and password protection, the network security and control access are ensured.

- **Flexible access control capability**

S4100 supports L2-L7 ACL access control and can classify the data flow according to source/destination MAC address, source/destination IP address, UDP/TCP port number, and protocol type. Meanwhile, S4100 supports the ACL based on time domain and VLAN-based ACL and realizes various access controls flexibly.

- **Rich QoS mechanism**

S4100 provides eight QoS queues, supports 802.1P/DSCP/TOS priority tags and mutual mapping, and provides various priority queue scheduling algorithms such as SP, SRR, WRR, WFQ, and mixed scheduling. It can realize the port speed restriction and traffic shaping QoS functions, which meets the requirements of user networks for data processing priority.

- **Cluster management and virtual stacking**

S4100 supports the cluster management of up to 128 member switches and realizes the plug &play and single IP management.



# Technical Specifications

Product Feature	SM4100-28TC	SM4100-28FC	SM4100-52TF	SM4100-52TC
<b>Product configuration</b>				
Device structure	Desk-top			
Fixed ports	24x10/100 Base-T 4x1000M Combo	24x10/100 SFP 4x1000M Combo	48x10/100 Base-T 4x1000M SFP	48x10/100 Base-T 1 Slot
Optional modules				4x1000M Combo
<b>Performance parameters</b>				
Hardware	128MByte RAM, 32MByte FLASH			
Switching backplane	48G			
Switching capacity	12.8Gbps		17.6Gbps	
Throughput	9.52Mpps		13.1Mpps	
Items in MAC table	16K			
VLAN	4K			
The number of aggregation groups	16			
The number of multicast groups	1024			
Route table	8K			
VRF quantity	32			
<b>Standards and protocols</b>				
L2 protocol	VLAN, GVRP, PVLAN, Voice VLAN, QinQ, selective QinQ, VLAN Mapping MSTP, BPDU Tunnel, BPDU guard Port mirroring, RSPAN, link aggregation, L2TP, LLDP Flow control, broadcast storm suppression (based on port rate percentage/based on pps), Jumbo Frame, port circuit detection (VCT)			
L3 protocol	Static route, RIPv1/v2, OSPF, ISIS, BGP, MBGP, VRRP ICMPv6, IPv6 static route , OSPFv3			
Multicast	IGMP, IGMP Snooping, IGMP fast leave, PIM-SM, PIM-DM, MSDP, MBGP MVR, multicast VLAN+, multicast ACL, controllable multicast			

QoS	Each port supports eight queues; Support tag flow 802.1p/TOS-PRI/DSCP priority and mutual mapping; Traffic shaping: srTCM and trTCM; Ingress/Egress port speed restriction; 64Kbps granularity, the policy speed restriction based on time period; Queue scheduling: SP, RR, WRR, WDRR Congestion avoidance: Tail Drop, sRED, WRED SLA: CIR, PIR, CBS			
Application protocol	FTP, TFTP, HTTP, NTP, DNS DHCP Client, DHCP Relay, DHCP Server, DHCP Snooping, Option82			
Security mechanism	Selective 802.1X; Port separation and port security; Standard ACL and extended ACL, ACL based on time domain, VACL Dynamic ARP detection, ARP packet speed restriction; Support IP Source Guard; Support CPU protection; Prevent DDOS attacks			
Management	SHELL, WEB, TELNET, SSH, SNMP V1/V2/V3 User hierarchical management and password protection System log Support AAA, RADIUS, TACACS+ Ipfix traffic statistics Ethernet OAM 802.1ag and 802.3ah RMON 1/2/3/9 Cluster management			
System	Real-time clock and dual monitor backup			
IEEE standards	IEEE 802.3 (10BASE-T)      IEEE 802.3u (100BASE-T) IEEE 802.3z (1000BASE-X)      IEEE 802.3ab (1000BASE-T) IEEE 802.1ad (Q in Q) IEEE 802.3ad (Link Aggregation)      IEEE 802.3x (Flow Control) IEEE 802.1d (STP)      IEEE 802.1Q (Virtual LAN) IEEE 802.1w (RSTP)      IEEE 802.1s (MSTP) IEEE 802.1p (Cos priority)      IEEE 802.1x (port authentication)			
Physical index				
Demission (W×D× H)	444×380×43.8mm	444*380×43.8mm	444*380×43.8mm	444×380×43.8mm
Power supply				
Input voltage	AC: 100–240V, 50–60Hz DC: -40–57V (common -48V working power)			
Power consumption (MAX)	29.5W	48W	38.5W	48W
Environment parameter				
Working temperature	0–50℃			
Working humidity	10–90%, no-condensing			

# Order Information

Product Model	Description
<b>SM4100-28TC Ethernet switch host</b>	
SM4100-28TC-AC	24 10/100M electric ports, 4 1000M Combo interfaces, one console port, one fixed AC power
SM4100-28TC-DC48	24 10/100M electric ports, 4 1000M Combo interfaces, one console port, one fixed DC power
SM4100-28TC	24 10/100M electric ports, 4 1000M Combo interfaces, one console port, fixed AC/DC dual power
<b>SM4100-28FC Ethernet switch host</b>	
SM4100-28FC-AC	24 10/100M optical ports, 4 1000M Combo interfaces, one console port, one fixed AC power
SM4100-28FC-DC48	24 10/100M optical ports, 4 1000M Combo interfaces, one console port, one fixed DC power
SM4100-28FC	24 10/100M optical ports, 4 1000M Combo interfaces, one console port, fixed AC/DC dual power
<b>SM4100-52TF Ethernet switch host</b>	
SM4100-52TF-AC	48 10/100M electric ports, four 1000M optical ports, one console port, one fixed AC power
SM4100-52TF-DC48	48 10/100M electric ports, four 1000M optical ports, one console port, one fixed DC power
SM4100-52TF	48 10/100M electric ports, four 1000M optical ports, one console port, fixed AC/DC dual power
<b>SM4100-52TC Ethernet switch host</b>	
SM4100-52TC-AC	48 10/100M electric ports, one console port, one extended slot, one fixed AC power
SM4100-52TC-DC48	48 10/100M electric ports, one console port, one extended slot, one fixed DC power
SM4100-52TC	48 10/100M electric ports, one console port, one extended slot, fixed AC/DC dual power
SM4100-52TC-4GE	4-port 1000M combo interface module, suitable for MyPower S4100-52TC