



## SMG-5000-C48GT6XS

19 inch 1U rack mounted installation

Three layer Ethernet switch

- Support STP/RSTP/MSTP protocol, support redundant protection mechanisms such as ERPS protocol
- Supports static routing, RIP, OSPF,BGP, VRRP routing protocols
- Advanced hardware architecture design, hardware implementation for hierarchical scheduling and protection of messages, support for preventing attacks on devices such as DoS, TCP SYN Flood, UDP Flood, broadcast storm, and high traffic
- Supports input voltage of 100-240VAC
- Supports working temperatures of -10~50 °C

# Introduction

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The SMG-5000-C48GT6XS product adopts an advanced hardware architecture in the industry. On the basis of providing high-performance L2/L3/L4 line speed switching services, it further integrates various network services such as IPv6 and network security, and combines various high reliability technologies such as uninterrupted upgrade, link detection, and redundancy protection to ensure the longest uninterrupted communication capability of the network. It can be widely used in safe cities, intelligent transportation, high-speed tunnels and other fields.

## Features and Benefits

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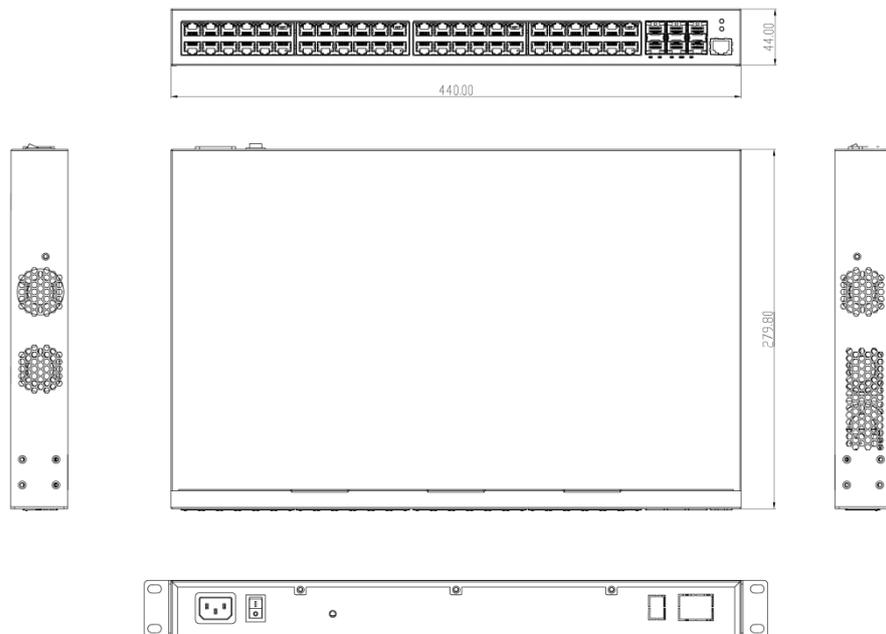
- ⦿ Supports stacking, up to 16 devices can be stacked simultaneously. Simplifying the management of network devices and topology greatly improves network operational efficiency, thereby effectively reducing operational and maintenance costs.
- ⦿ Support ERPS ring network protection protocol, with protection switching time<50ms; At the same time, it supports STP/RSTP/MSTP protocol, LACP link aggregation and other simple and efficient redundancy protection mechanisms to meet the requirements of high reliability.
- ⦿ Powerful ACL function, supporting access and control of L2 to L7 layer data based on physical ports, VLANs, MAC, IP, protocol port numbers, etc., providing users with flexible and diverse policy control methods.
- ⦿ Support uninterrupted system upgrades to ensure uninterrupted forwarding of user data during system upgrades.
- ⦿ Support rich Layer 2 multicast functions, including IGMP Snooping, user quick leave mechanism, and cross VLAN multicast replication function.
- ⦿ It supports three-layer routing protocols, static routing protocols, RIP, OSPF, and VRRP routing protocols, meets the needs of various types of internetworking, and can build super large campus networks, enterprise networks, and industrial user private networks.
- ⦿ Support the classification function of complex flows based on VLAN, MAC, source address, destination address, IP protocol, priority, etc., and support the re labeling of priority, providing reliable and effective means for users to optimize their business.
- ⦿ Provide flexible bandwidth control strategies, support port based or stream based speed limiting functions, ensure the line speed forwarding of each port, and effectively ensure the quality of high-quality network services such as voice, video, and data.
- ⦿ Each port supports 8 priority queues and supports various queue scheduling algorithms such as SP, WRR, or SP+WRR.
- ⦿ Support IPv6 based Ping, Traceroute, Telnet, SSH, ACL, IPv6 neighbor discovery, etc., to meet the needs of pure IPv6 network device management and business control.
- ⦿ Device level security protection: Advanced hardware architecture design, hardware implementation for hierarchical scheduling and protection of messages, support for preventing attacks on devices such as DoS and TCP SYN Flood, UDP Flood,

broadcast storm, and high traffic; Support command line hierarchical protection, with different levels of users having different management permissions.

- ⦿ Supports IEEE 802.1x, radius, and more, providing users with a comprehensive security authentication mechanism.
- ⦿ Support the suppression function for broadcast, multicast, and unknown unicast messages, ensuring the normal operation of devices under harsh network conditions.
- ⦿ Providing security features such as port isolation, DHCP Snooping, IP+MAC+port binding within the same VLAN further ensures user data security.
- ⦿ Support multiple management methods such as Console, Telnet, SSH, SNMP, WEB, etc., making it easy for engineering and maintenance personnel to install and debug.
- ⦿ Supporting energy efficient Ethernet functionality, following the international standard IEEE 802.3az, effectively reducing energy consumption.
- ⦿ Intelligent fan design supports automatic speed regulation, effectively reducing speed and noise, while extending the service life of the fan.
- ⦿ Adopting advanced power system architecture design, achieving efficient power conversion, unique power monitoring, slow start and other functions, real-time monitoring of the overall operation status, intelligent adjustment, and deep energy-saving.

## Dimension

Unit:mm



# Specification

Standards and protocols	10Base-T, following IEEE 802.3 100Base-TX, following IEEE 802.3u 1000Base-T, following IEEE 802.3ab 1000Base X, following IEEE 802.3z 10GBase X, following IEEE802.3ae Spanning tree, following IEEE 802.1D Fast spanning tree, following IEEE 802.1w Multiple spanning trees, following IEEE 802.1s Service, following IEEE 802.1p VLAN, following IEEE 802.1Q Flow control, following IEEE 802.3x Asymmetric flow control, following IEEE 802.3z Link aggregation, following IEEE 802.3ad
MAC exchange	Supports static configuration and dynamic learning of MAC addresses Support for viewing and clearing MAC addresses MAC address aging time configurable Support MAC address learning quantity limit Support MAC address filtering function Support IEEE 802.1AE MacSec security control
VLAN	Supports 4K VLAN table entries Support GVRP Support for QinQ function Support for Private VLAN Support for voice valn
Ring network protection	Supports 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) Supports BPDU protection, root protection, and loop protection Support EAPS Ethernet link automatic protection protocol Supports ERPS Ethernet ring network protection protocol
Multicast	Supports IGMP v1/v2/v3 Supports IGMP Snooping Supports IGMP Fast Leave Support multicast group policies and limit the number of multicast groups Support multicast traffic replication across VLANs
IP Routing	Supports ipv4/ipv6 dual stack protocol Supports static routing Supports RIP v1/v2, OSPF,BGP, IS-IS, and BEIGRP dynamic routing Support VRRP virtual routing

IPv6	<ul style="list-style-type: none"> <li>Supports ICMPv6, DHCPv6, ACLv6, IPv6 Telnet</li> <li>Supports IPv6 neighbor discovery</li> <li>Support for Path MTU discovery</li> <li>Supports MLD v1/v2</li> <li>Support for MLD Snooping</li> </ul>
DHCP	<ul style="list-style-type: none"> <li>Support for DHCP Server</li> <li>Supports DHCP Relay</li> <li>Supports DHCP Client</li> <li>Supports DHCP Snooping</li> </ul>
ACL	<ul style="list-style-type: none"> <li>Supports second, third, and fourth layer ACLs</li> <li>Supports IPv4 and IPv6 ACLs</li> <li>Support VLAN ACL</li> </ul>
QoS	<ul style="list-style-type: none"> <li>Support traffic classification based on L2/L3/L4 protocol header fields</li> <li>Support CAR traffic restriction</li> <li>Support 802.1P/DSCP priority re labeling</li> <li>Support queue scheduling methods such as SP, WRR, SP+WRR, etc</li> <li>Supports congestion avoidance mechanisms such as Tail-Drop and WRED</li> <li>Support traffic supervision and traffic shaping</li> </ul>
Virtualization	<ul style="list-style-type: none"> <li>Support for VSS virtualization</li> </ul>
Safety characteristics	<ul style="list-style-type: none"> <li>Support ACL flow recognition and filtering security mechanism based on L2/L3/L4</li> <li>Support anti DDoS attacks, TCP SYN Flood attacks, UDP Flood attacks, etc</li> <li>Supports suppression of multicast, broadcast, and unknown unicast messages</li> <li>Supports port isolation</li> <li>Supports port security, IP+MAC+port binding</li> <li>Supports DHCP sourcing, DHCP option82</li> <li>Supports IEEE 802.1x authentication</li> <li>Support for Radius, Tacacs+certification</li> <li>Support for command line hierarchical protection</li> </ul>

<b>Reliability</b>	<ul style="list-style-type: none"> <li>Support static/LACP link aggregation</li> <li>Supports UDLD one-way link detection</li> <li>Supports Ethernet OAM</li> <li>Support uninterrupted system upgrade for ISSU business</li> </ul>
<b>Management maintenance</b>	<ul style="list-style-type: none"> <li>Support for Console, Telnet, SSH 2.0</li> <li>Support ZTP zero contact configuration activation (Zero Touch Provisioning)</li> <li>Support browser based WEB management</li> <li>Supports SNMP v1/v2/v3</li> <li>Support TFTP file upload and download management</li> <li>Support for RMON event history</li> </ul>
<b>Green and energy-saving</b>	Supports IEEE 802.3az Green Energy Efficient Ethernet
<b>Power Supply</b>	100~240VAC, 50Hz±10%
<b>Work environment</b>	<ul style="list-style-type: none"> <li>Working temperature/humidity: -10~50 °C, 10%~90% (without condensation)</li> <li>Storage temperature/humidity: -20~70 °C, 5% -95% (without condensation)</li> </ul>
<b>Mechanical structure</b>	<ul style="list-style-type: none"> <li>Shell: Metal shell, IP20 protection level</li> <li>Installation: 19 inch 1U rack mounted</li> </ul>
<b>Authentication</b>	CE、FCC、RoHS
<b>Warranty</b>	3 years

## Ordering Information

Model	Exchange Capacity	Packet forwarding rate	MAC capacity	Port Description	Size	Full load power consumption
SMG-5000-C 48GT6XS	336Gbps	178Mpps	32K	48 Gigabit ports 6 10 Gigabit optical ports	four hundred and forty × two hundred and eighty × forty-four	<40W