

# SWMD-H-16TG-4GSF-4SFP+

## LAYER-3 MANAGED 10G INDUSTRIAL SWITCH

IP40 PROTECTION  
6KV LIGHTNING  
PROTECTION

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VARIED SERVICE  
CHARACTERISTICS  
VERSATILE IPV6 SO-  
LUTION COMPLETE  
SECURITY ME-  
CHANISM

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ADVANCED HARD-  
WARE ARCHITEC-  
TURE AND IN-  
DUSTRY-LEADING  
PORT DENSITY  
MODEL

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WIDE-RANGE  
WORKING TEMPE-  
RATURE 800,000  
HOURS MTBF

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### Description

SWMD-H-16TG-4GSF-4SFP+ is based on the brand-new high-performance hardware and OS software system of independent intellectual property rights, supports rich Layer-2/Layer-3 routing and industrial ring network protocols. SWMD-H-16TG-4GSF-4SFP+ adopts die-casting aluminium shell and standard 19-inch rack-mounted installation, and provides redundant wide-voltage industrial power supplies. With the reliable industrial Ethernet ring technology, its hardware-based algorithm can ensure node self-healing time less than 5 milliseconds, and the ring network self-healing time less than 50 milliseconds (typical value).

SWMD-H-16TG-4GSF-4SFP+ with fanless design, low power consumption, wide temperature and wide voltage in compliance with strict industry standards, can adapt to harsh environment requirements for EMC, anti-vibration and shock-proof capabilities, IP40 protection level. SWMD-H-16TG-4GSF-4SFP+ can be widely used in energy, transportation, industrial production, environmental protection, military industry.

### Product Characteristics

Lightning protection level: 6KV. IP40 protection, industrial fanless thermal conduction.

Supports dual power input AC or DC. Business ports, management ports, power input terminals, and relay alarm output are located on the front panel, complying with industrial operation specifications.

Supports STP/EAPS/ERPS, Supports node self-healing time less than 5 milliseconds, and ring network self-healing time less than 50 milliseconds (typical value). Supports layer-3 static routing, dynamic routing (RIP, OSPF), Virtual Router Redundancy Protocol (VRRP). Supports virtual stacking.

Supports to form a self-healing ring between any two ports, and supports multiple independent self-healing rings. Provides Data Leakage Prevention (DLP), to quickly recover from network failures.

Supports simple network management protocol (SNMP) and cloud-based operating platform (Pallas). The mean time between failures (MTBF): more than 800,000 hours.

## Product Specifications

Item		SWMD-H-16TG-4GSF-4SFP+
Gigabit Interface	RJ45	16
	SFP	4
10G/GE	SFP+	4
Console (RJ45)		1
Backplane (Gbps)		128
Forwarding rate (Mpps with 64 bytes)		90
Chassis	Dimensions	170*140*100 (W*D*H) (mm)
	Weight	2.2 (KG) (empty)
Package	Dimensions	300*195*145 (W*D*H) (mm)
	Weight	2.4 (KG)
Power consumption	No-load	13.5W
	Full-load	31W
Power supply		Dual AC (100~240VAC) or Dual DC (36~72VDC)
Total output BTU (1000BTU/H=293W)		105.8
MTBF (H)		>800.000
Forwarding mode		Store-forward
Flash (MB)		16
DRAM (MB)		256
MAC		16K
Buffer size (Mb)		12
Jumbo frame		9K
Total SVI		64

## Features

<b>VLAN</b>	<ul style="list-style-type: none"> <li>• 4K VLAN entries</li> <li>• GVRP</li> <li>• QinQ</li> <li>• Private VLAN</li> <li>• Voice VLAN</li> </ul>
<b>Spanning Tree</b>	<ul style="list-style-type: none"> <li>• 802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)</li> <li>• BPDU guard, root guard and loopback guard</li> </ul>
<b>Multicast</b>	<ul style="list-style-type: none"> <li>• IGMP v1/v2/v3</li> <li>• MVR</li> <li>• IGMP Snooping</li> <li>• IGMP Fast Leave</li> <li>• IGMP filter</li> </ul>
<b>IP</b>	<ul style="list-style-type: none"> <li>• Static route</li> <li>• RIP, OSPF</li> <li>• IPv4/v6 dual stack</li> </ul>
<b>IPv6</b>	<ul style="list-style-type: none"> <li>• ICMPv6, DHCPv6, ACLv6 and Telnet</li> <li>• IPv6 neighbor discovery, Path MTU discovery</li> <li>• MLDV1, MLD snooping</li> <li>• IPv6 Static Routing, RIPng, OSPFv3</li> <li>• Manual tunnel, ISATAP tunnel, 6 to 4 tunnel</li> </ul>
<b>QoS</b>	<ul style="list-style-type: none"> <li>• CAR, HQoS, MAC/IP/TCP/UDP/VLAN/ COS/ DSCP/ TOS based QoS, 802.1P/ DSCP priority relabeling, SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky</li> <li>• DAI &amp; IP source guard, PPPoE+,</li> <li>• IEEE 802.1x, AAA, Radius and BDTacacs+</li> <li>• L2/L3/L4 ACL flow identification and</li> <li>• Port security, IP+MAC+port binding filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc.</li> <li>• Broadcast/multicast/unknown unicast storm-control</li> <li>• MD5, SHA-256, RSA-1024, AES256, etc.</li> </ul>
<b>DHCP</b>	<ul style="list-style-type: none"> <li>• DHCP Server/Client/Relay</li> <li>• DHCP Snooping/Option82</li> </ul>
<b>Reliability</b>	<ul style="list-style-type: none"> <li>• Static/LACP link aggregation, Interface backup</li> <li>• EAPS and ERPS</li> <li>• ISSU uninterrupted system upgrade</li> <li>• BVSS, up to 16-units per stack</li> <li>• VRRP</li> <li>• UDLD</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMPv1/v2/v3, RMON</li> <li>• TFTP, FTP, SFTP</li> <li>• NTP</li> <li>• ZTP</li> <li>• SPAN, RSPAN</li> </ul>
<b>Virtualization</b>	<ul style="list-style-type: none"> <li>• Support Virtual Stacking System ,up to 16 stacking units</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Operating temperature/humidity: -40~85 °C ,10%-90% non-condensing</li> <li>• Storage temperature/humidity: -40~85 °C , 5%-95% non-condensing</li> </ul>
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Power cord, rackmount kits, console cable</li> </ul>

## Ordering Informations

Reference	Description
<b>SWMD-H-16TG-4GSF-4SFP+</b>	Hardened Layer 3 manageable switch, 16-Port Gigabit RJ45 + 4-Port Gigabit SFP + 4-port 10G/GE SFP+ Managed Industrial Switch (AC100-240V or DC36-72V) redundant dual power operating temperature: -40~85 °C; lightning protection level of 6KV; IP40; DIN-rail installation)



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