

ISM8120G-4GF-16GT

20-Port Layer 3 Gigabit Managed Embedded Switch Module



- Support 4 Gigabit fiber ports, 16 Gigabit copper ports, providing users with flexible networking methods
- Support the ring network redundancy protocols such as MW-Ring, EAPS, ERPS and STP/RSTP/MSTP to improve the network reliability
- Support static routing, RIPv1/v2, OSPF dynamic routing protocols, enabling route selection and packet forwarding
- Compact structure and size, convenient for installation, maintenance, and PCB board making
- Support DC12V power input
- -40 °C to +70 °C working temperature





Product Description

ISM8120G-4GF-16GT is a layer 3 gigabit managed embedded switch module with 4 Gigabit fiber ports and 16 Gigabit copper ports. This switch adopts a storage and forward mechanism, with powerful bandwidth processing capabilities, automatically troubleshooting data packet errors, reducing transmission failures, and ensuring stable, reliable, and efficient data transmission. The hardware is a low-power, wide temperature, and modular design, with a compact structure and small size, which is easy to install and maintain. It uses industrial grade components, operating at a wide temperature range of -40 °C to +70 °C, embedded installation method, able to adapt to various harsh working environments.

The ISM8120G-4GF-16GT follows the main communication standards in the industrial field, meeting technical requests of real-time communication and network security. It provides multiple ways to manage switches, such as accessing the switch command line (CLI) through the CONSOLE port or TELNET/SSH protocol, accessing the switch web interface through HTTP/HTTPS, and accessing the device MIB through the SNMP protocol. It supports multiple network protocols and industry standards, such as RIP, OSPF, VRRP, PIM, EAPS, ERPS, STP/RSTP/MSTP, VLAN, QoS, LACP, IGMP, IGMP Snooping, GMRP, LLDP, 802.1X, ACL, DHCP, SNTP, port mirroring, Ping, Tracert, etc. It supports system management such as uploading and downloading configuration files, and upgrading image files online. The product is widely applicable in fields such as comprehensive energy, smart cities, rail transit, intelligent transportation, smart factories, and industrial automation.



Features and Benefits

- Support rate limits for broadcast, multicast, and unknown unicast messages, detect broadcast and multicast packet storms, and prevent broadcast storms
- Support link static aggregation and dynamic aggregation LACP, which can increase transmission bandwidth, improve link reliability and realize network load balance
- Support 802.1Q VLAN, provide Access, Trunk, Hybrid interface easy to divide multiple broadcast domain, enhance the security of the network
- Support VLAN division based on port, MAC, protocol, IP subnetwork, etc., which can be applied to networks in different environments
- Support GVRP protocol, realize dynamic distribution, registration and propagation of VLAN attributes, and maintain dynamic VLAN
- Support the MAC address table and the aging time limit, and the static unicast/multicast MAC address is bound with the interface, to ensure the use of legitimate users
- Support PIM, IGMP, GMRP, IGMP Snooping, GMRP multicast protocol, reduce multicast data broadcasting in the network, and save network resources
- Support LLDP link layer discovery protocol, obtains LLDP neighbor device information, monitors link status, facilitates topology management and fault localization
- Support ERPS Ethernet multi ring protection technology, provide multi ring networking, perform link backup, achieve fast convergence, and improve network stability
- Support EAPS loop protection protocol and MW-RingV2 private loop network protocol, enhance the reliability of system communication
- Support STP, RSTP, MSTP generating tree protocol, which can eliminate network loop and improve network reliability
- Support VRRP virtual routing redundancy protocol, forming multiple routing devices into a virtual router to realize redundant backup
- Support IPv4 static routing configuration, RIPv1/v2, OSPF dynamic routing protocol, realize routing and message forwarding
- Support HTTP, HTTPS, TELNET, SSH network access mode, SSH can provide a secure remote login
- Support SNMPv1/v2c/v3, information query, information modification and troubleshooting through the MIB network management system, to achieve centralized management
- Support QoS service quality, give priority to voice, video and important data in network devices, and solve network congestion
- Support ACL access control list, filtering TCP/UDP/ICMP/IGMP messages based on source/destination IP and MAC address
- Support 802.1X port authentication, authentication and access control for access users
- Support DHCPv4 server, centralized dynamic management and configuration of user IP addresses



Specification

Software	
Switching	<p>Support port configuration, port speed limit, storm suppression, storm detection, static port trunk, LACP</p> <p>Support 802.1Q VLAN, port/MAC/subnet / protocol based VLAN division, GVRP, port isolation</p> <p>Support MAC address aging, static MAC address forwarding and filtering, MAC address binding and learning restrictions</p>
Redundancy	<p>Support MW-RingV2 private ring network technology</p> <p>Support EAPS, ERPS</p> <p>Support STP/RSTP/MSTP</p>
Multicast	<p>Support IGMPv1/v2/v3, and IGMP Snooping</p> <p>Support the static multicast GMRP</p> <p>Support PIM-DM, PIM-SM</p>
Routing	<p>Support static routing</p> <p>Support RIPv1/ v2, OSPF dynamic routing</p> <p>Support VRRP</p>
Security Management	<p>Support HTTP, HTTPS, TELNET, and SSH access mode</p> <p>Support ACL and filtering data on the L2-L4 layer</p> <p>Support 802.1X port authentication and MAC address authentication</p> <p>Support ring detection and alarm</p>
Management and Maintenance	<p>Support DHCP Client/Server/Relay/Snooping</p> <p>Support QoS,SNMP v1/v2c/v3,SNMPv1/v2c Trap,LLDP</p> <p>Support port mirror, Ping, Tracert</p> <p>Support user rights management, system logs, local time setting synchronization, and SNTP network time synchronization</p> <p>Support online restart, factory reset, system upgrade, configuration file upload / download</p> <p>Support unified upper-level computer software management</p>
Switch Capability	
Processing Type	Store-and-Forward
Backplane Bandwidth	128Gbps
Buffer Size	12Mbit



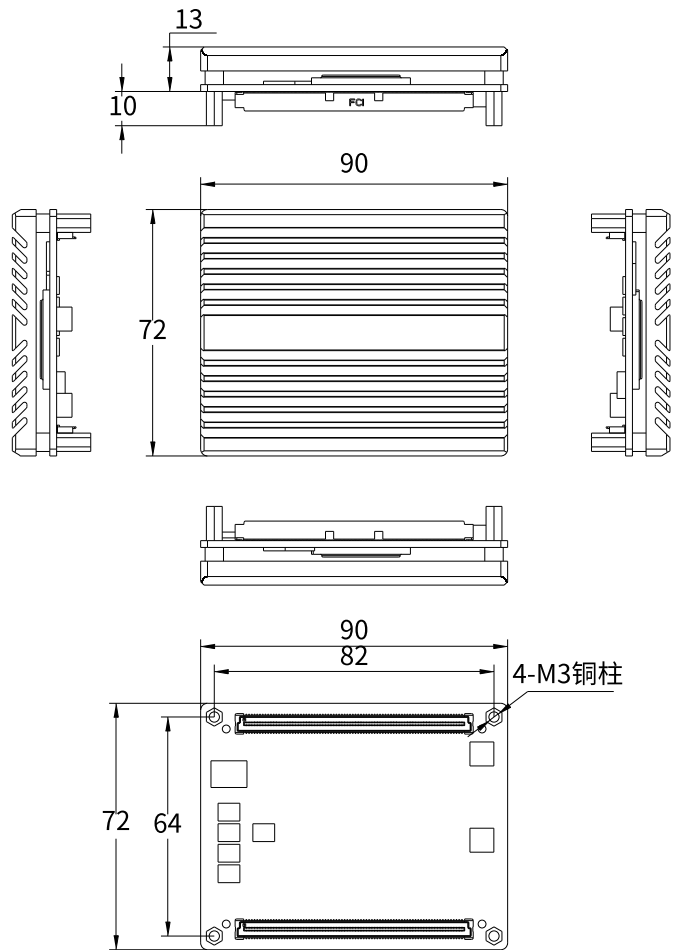
Specification

MAC Table Size	16K
Interface	
Gigabit Fiber port	4x1000Base-X Gigabit fiber port, suitable for SFP
Gigabit Copper port	16x10/100/1000Base-T(X) auto-sensing copper ports, of which 8 ports are QSGMII and can be used as fiber or copper ports
I/O Alarm	1 alarm output for relay alarms, 2 alarm input for power outage warning
CONSOLE	1 TTL UART for equipment debugging and command line configuration
Status LED	Support indicator LED for PWR, RUN, and ARM
Power Supply	
Input Voltage	DC12V(±3%)
Power Consumption	<12W@DC12V
Physical Characteristics	
Dimensions	90×72×15mm
Installations	Embedded installation
Weight	About 0.4kg
Working Environment	
Operating Temperature	-40℃~+70℃
Storage Temperature	-40℃~+85℃
Relative Humidity	5%~95% (non-condensing)
Industrial Standard	
Certification	CE, FCC, RoHS



Dimensions

Unit: mm





Ordering Information

Standard Model	Gigabit Fiber port	Gigabit Copper port	Input Voltage
ISM8120G-4GF-16GT	4	16	DC12V



Contact Us

Wuhan Maiwe Communication Co., Ltd

Address: No.52 Liufang Avenue, East lake High-tech Development Zone, Wuhan, China.

Tel: 027-87170217

Mail: enquiry@maiwe.com

Official site: www.maiwe.com

Copyright © Maiwe Communication All rights reserved