AIMnetworks **S2-48G-4M-P**

48-Port GE Layer 3 Managed Access Switch with PoE+, Uplink 4 x 1GE/2.5GE/10GE SFP+ ports.

Description

The AIMnetworks S2-48G-4M-P, a Layer 3 managed switch, is characterized by security, high efficiency, intelligence, and energy saving to fully meet network requirements in the following scenarios:

- Full 1000M access to a local area network (LAN) in a large-scale institution or enterprise campus, such as the government building, university, and manufacturing/energy/metallurgy unit
- 1000M access to a commercial system such as the healthcare, library, exhibition center, and website
- Access for IP telephones, WLAN access points (APs), and HD cameras
- 1000M access for server groups and high-bandwidth GE or 10GE uplink
- Flexible and diverse security control policies are needed to prevent and control network viruses and attacks, ensuring user access security

Features

- Multiple port types — full gigabit access and flexible, extensible GE or 10GE uplink, PoE/PoE+ power supply, faster speed, and experience enhancement.
- Supports VSU, delivering flexible networking.
- Layer 3 access switch that supports Layer 3 protocols, and SDN.
- Provides multiple network management methods, achieving simple and easy network maintenance.
- Resistance to harsh environments and excellent anti-corrosion performance.
- 10 kV surge protection on an interface, 6 kV surge protection for PoE power, 6 kV surge protection for non-PoE power, higher performance, and greater anti-interference capability.

Specifications

Item	Description
Hardware	
Fixed Port	48 x 10/100/1000BASE-T ports, supporting PoE/PoE+ 4 x 1GE/2.5GE/10GE SFP+ ports 1 x RJ45 console port 1 x USB 2.0 port
Real-time clock (RTC)	Supported
Input Voltage	100V～240V AC，50/60Hz
Power Consumption	52 W (without PoE load), 460 W (full PoE load)
CPU	Dual-core CPU, clock speed of 1.0 GHz per core
DDR	1GB DDR3
Flash Memory	512 MB
Operating Temperature	0℃～45℃
Storage Temperature	-40℃～70℃
Relative Humidity	5%～95% (non-condensing)
Thermal Methods	1 x fixed fan module
Switching	
Switching Capacity	211 Gbps
Switch Buffer	4 MB
System Packet Forwarding	158 Mpps
PoE	
PoE Port	Ports 1 to 48 support PoE/PoE+ (IEEE802.3af/at)
PoE output power	Each PoE port provides up to 30 W of power. The maximum power is 405 W.
PoE power cable pairs	Mode A (1-2, 3-6 pairs)
Environment & Reliability	
MTBF	200,253 hours (about 22 years)
Heat dissipation	Front-to-right and left-to-right airflow
Altitude	Operating altitude: -500 m to +5,000 m Storage altitude: -500 m to +5,000 m
Acoustic noise	27℃(80.6°F): 35 dB
Fan monitoring	PID-based multi-level speed adjustment Fan speed control, fan failure alarming
Temperature monitoring	Supported
ESD	ESD contact/air discharge: 6 kV/8 kV ESD susceptibility contact/air discharge: 8 kV/15 kV
Surge protection	Service port: common mode 10 kV Power port: common mode 6 kV, differential 6 kV
Dimensions & Weight	
Unit dimensions (W x D x H)	442 mm x 220 mm x 43.6mm
Ship. dimensions (W x D x H)	540 mm x 338 mm x 154 mm
Rack height	1 RU
Unit weight	4.0 kg

Standards & Protocol	
IETF	RFC 768 User Datagram Protocol (UDP) RFC 783 TFTP Protocol (revision 2) RFC 792 Internet Control Message Protocol (ICMP) RFC 793 Transmission Control Protocol (TCP) RFC 813 Window and Acknowledgement Strategy in TCP RFC 815 IP datagram reassembly algorithms RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol RFC 959 File Transfer Protocol (FTP) RFC 1058 Routing Information Protocol (RIP) RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1583 OSPF Version 2 RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB RFC 1757 Remote Network Monitoring (RMON) RFC 1812 Requirements for IP Version 4 Router RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 1918 Address Allocation for Private Internet RFC 1981 Path MTU Discovery for IP version 6 RFC 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2460 Internet Protocol, Version 6 (IPv6) RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 2571 SNMP Management Frameworks RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2863 The Interfaces Group MIB RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2925 Def. of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only)

IETF (page 2)	RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3046 DHCP Option82 RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6 RFC 3973 PIM Dense Mode RFC 4022 MIB for TCP RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4940 IANA Considerations for OSPF RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6
IEEE	IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control