



Smart Architecture of Espadana

Designing, Production, Customization and Consultant Service
in Network and Fiber Optic System



Technical Specification

SAE-ISW4000-DGFM

4x10/100/1000Mbps ports & 2xgigabit SFP fiber slot ports





Product Description

- Industrial design and Line speed forwarding mode is available in all 4 x 10/100 /1000 Mbps RJ45 Ports + 2xBase-X SFP Uplink Port and 1 console port.
- Total power: less than 10W
- Provide full duplex based on IEEE802.3x and half duplex based on Backpressure
- L2+Switching Functions such as 802.1Q VLAN, Mirroring, Port Isolation, IGMP Snooping, DHCP Snooping, LLDP , IP Protection, ARP and Access Control List are provided.
- Auto MDI/MDIX
- Compliant with IP40 Protection
- Support STP/RSTP/MSTP production tree protocol & G.8032 protocol

Full Description

This SAE-ISW4000-DGFM Industrial Gigabit switch designed to be utilized in harsh industrial environments. It has four 10/100/1000 Gigabit Ethernet RJ45 port and two 1000Base-X SFP slot. It provides the ideal combination of affordability and capabilities for entry level networking of industrial, enterprise application which demands industrial, surveillance, IP Phone, IP Camera or Wireless applications, thus helps you create a more efficient workforce.

SAE-ISW4000-DGFM can support L2+ network management function, supports IPV4/IPV6 management, and has industry-leading ring network technology, supports a variety of industrial-grade redundant ring network protocols, any port can be looped, supporting chain, star, the double star, ring, tangent ring, intersecting ring, coupling Ring, ring net self-healing within 20ms. SAE-ISW4000-DGFM made by high quality of components were rigorous screened, have superior performance in stability, environmental adaptability. The product planned in a way of better resistance and ability to corrosion and electromagnetic interference. Power input also made a suitable and reliable types of power, to get more powerful suitability to environment.



Applications

- Smart Monitoring of IP Camera in CCTV monitoring
- Industrial fields and manufactures
- Digital Radio in transmission systems
- IP telephony in telecom systems
- Intelligent transportation supervisory system
- Intelligent network Tele-Communication System
- Security protection system, TV medical treatment

Technical specification

Product	SAE-ISW4000-DGFM
Performance	
Buffer Memory	4M
Bandwidth	128Gbps
Forwarding Rate@64byte	8.93Mpps
MAC	4K
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meter) 100BASE-TX: Cat5 or later UTP (≤100 meter) 1000BASE-T: Cat5e or later UTP (≤100 meter)
Optical Cable(fiber)	Multi-mode: 850nm 0 ~ 550M, single-mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.
Power supply	DC 12-48 V
LED	Power indicator: PWR (green); System indicator : (green); Network indicator: Link (yellow); SFP indicator: L/A (green);
Power Supply Pin	Only support 1/2 (+), 3/6 (-)
Interface	
ports	4x10/100/1000Mbps RJ45 ports 2x100/1000Mbps SFP fiber slot ports 1x RS232 console port
SFP ports	Gigabit SFP optical fiber interface multi-mode, single fiber / double fiber optical module.
Protocol	
Network protocol	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX; IEEE802.3ab 1000Base-T; IEEE802.3z 1000Base-X; IEEE802.3ae 10GBase-LR/SR IEEE802.3x IEEE802.3af/at (PoE standard)



Layer2 Switching	
Spanning Tree Protocol (STP)	STP (IEEE802.1d) RSTP (IEEE802.1w)
Aggregation	Provide LACP Provide static polymerization Provide the largest 8 aggregation groups, each aggregation group
VLAN	Support up to 4K VLANs simultaneously (out of 4096 VLAN IDs) 4K VLAN based on IEEE802.1Q
QoS	Support Diff-Serv QoS Each port can handle 8 output queues 802.1p/DSCP priority mapping queue scheduling mechanism (SP, WRR, SP+WRR), priority tag Mark/Remark stream based packet filtering stream based redirection Support flow-based speed limit
Multicast	Provide IGMP Snooping V1/V2 and Provide 1024 multicast groups at most. Provide the user's quick departure mechanism Provide MLD Snooping V1/V2 Provide multicast VLAN
Industrial Ring Network Protocol	Provide G.8032 (ERPS), <50ms ring protection for industrial high reliable application 1024 devices per ring.
DHCP	DHCP Client Support DHCP Snooping DHCP Serve DHCP Relay
Mirror	Bi-directional traffic mirroring supporting the basic port

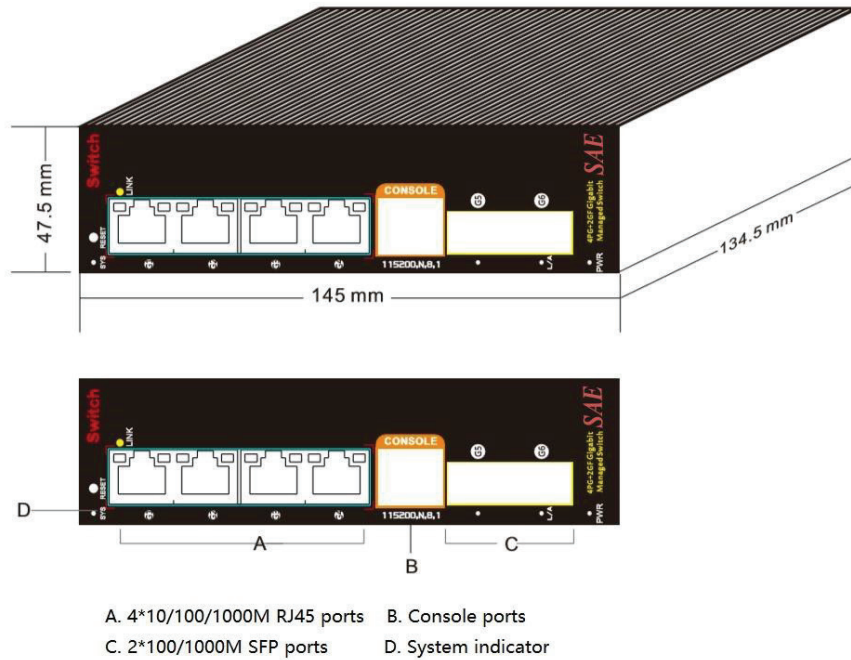


Protection	
Lightning protection / protection level	<p>Lightning protection: 6KV 8/20us; Protection level: IP40 IEC61000-4-2(ESD): ±8kV contact discharge, ±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz)</p> <p>IEC61000-4-4(EFT): power cable: ±4kV; data-cable: ±2kV</p> <p>IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV</p> <p>IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)</p> <p>IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m, 1s to 3s</p> <p>IEC61000-4-9(pulsed magnet field):1000A/m</p> <p>IEC61000-4-10(damped oscillation):30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV, DM 1kV</p> <p>IEC61000-4-16(common-mode transmission):30V; 300V, 1s FCC Part 15/CISPR22(EN55022): Class A</p> <p>IEC61000-6-2(Common Industrial Standard</p>
Safety Features	
safety parts	<ul style="list-style-type: none"> ➤ User grading management and password protection ➤ IEEE802.1X authentication / centralized MAC address authentication ➤ AAA&RADIUS authentication ➤ The number of MAC address learning restrictions ➤ MAC address black hole ➤ SSH 2 to provide secure passwords for user login. Support SSL to ensure data ➤ Secure transmission ➤ Port isolation ➤ The speed limit function of ARP message ➤ IP source address protection ➤ ARP intrusion detection function Support against DoS attacks ➤ Port broadcast message suppression ➤ Host data backup mechanism
ACLs	<p>L2 to L4 packet filtering function, It is able to match the first 80 bytes of the message, provide based on the source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN and other definition ACL. Support ACL based on port and VLAN</p>
Business features (only restricted management function models)	
Port	<ul style="list-style-type: none"> ➤ Compliant with IEEE802.3x flow control (full duplex) ➤ Broadcast storm suppression based on port rate is available ➤ Speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps is available. ➤ Support port temperature protection settings Compliant with port EEE green Ethernet energy saving configuration



Management	
Maintenance and Web Interface	<ul style="list-style-type: none">➤ Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration➤ WEB network management (HTTPS)➤ FTP, TFTP, X-modem, SFTP file download management Support SNMP V1/V2C/V3➤ One bond reduction Support NTP clock➤ System work log Support Ping detection Cable state detection➤ CPU instant utilization status view Support link layer discovery protocol LLDP➤ ONV NMS intelligent management center
Requirements	
System requirement	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer 10 or later; Cat5e or later Ethernet cable; TCP/ IP, network adapter and network operating system (Microsoft Windows, Linux or Mac) installed on every computer in the network.
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for cables shorter.
Environmental aspects	
Working Environment	Operating Temperature: -40°c ~ 80°c Storage Temperature: -40°c ~ 85°c Operating humidity 5% to 90%
Dimension	145x134.5x47.5mm

Product Size Display



Product Application Display

