



Smart Architecture of Espadana

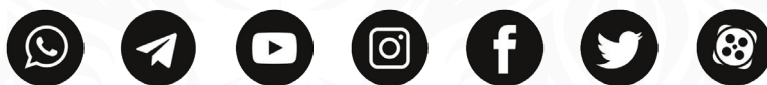
Designing, Production, Customization and Consultant Service
in Network and Fiber Optic System



Technical Specification

SAE-ISW12000-QTGSM

12x10/100/1000Mbps RJ45 ports & 4x1/10G SFP fiber slot ports





Product Description

- Industrial design and Line speed forwarding mode is available in all 12 x 10/100 /1000 Mbps RJ45 Ports + 4xBase-X SFP Uplink Port and 1 console port.
- Total power: 36W
- Provide full duplex based on IEEE802.3x and half duplex based on Backpressure
- L3 Switching Functions such as 802.1Q VLAN, Mirroring, Port Isolation, IGMP Snooping, DHCP Snooping, LLDP, IP Protection, ARP and Access Control List are provided.
- Spanning tree STP (802.1D), RSTP (802.1W) and MSTP ability
- Up to 9.6K kilobytes Jumbo frames is supported Enhanced management ability through WEB, CLI, TELNET, SSH, SNMP
- Support STP/RSTP/MSTP production tree protocol & G.8032 protocol

Full Description

This SAE-ISW12000-QTGSM is a powerful cutting edge managed switch which can prepare telecommunication between fiber optic uplink ports to the server port as well as other fiber optic devices. Its fan less and engineered design leads to minimum power consumption. It is also compliant with Looped Network Redundancy. 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.

The SAE-ISW12000-QTGSM switch provides a network point for data transmission on any managed features that designers require to control their networks. It is capable of VLAN division, port speed limiting. It also provides broadcast storm suppression & flow control. It let the users to manage the network through a variety of interfaces such as the WEB, CLI and SNMP etc.

SAE-ISW12000-QTGSM is made with high quality of rigorous screened components, which have superior performance in stability, environmental adaptability. It can work normally in very cold environment to very hot from -40°C to +75°C. The product is planned in a way to have better resistance against corrosion and electromagnetic interference. Power input also made a suitable and reliable types of power, to get more powerful suitability to environment.



Applications

- Safe and high performance PC or Laptop connections
- Safe and High Quality wireless connections
- Unified communications with open standards

Technical specification

Product	SAE-ISW12000-QTGSM
Performance	
Buffer Memory	32M
Bandwidth	598Gbps
Forwarding Rate@64byte	77.38Mpps
MAC	32K
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/ out put	DC 12-48 V/ 36W
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	12x10/100/1000Mbps RJ45 ports 4x1/10G SFP fiber slot ports 1xconsole 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	
Layer 3 Function	Support L2+Layer 3 soft routing forwarding, non-linear speed Support static routing/ default routing 128, 1024 ARP software forwarding
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
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 Protocol based VLAN Access, Trunk, Hybrid three types of port configuration, Q in Q configuration
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

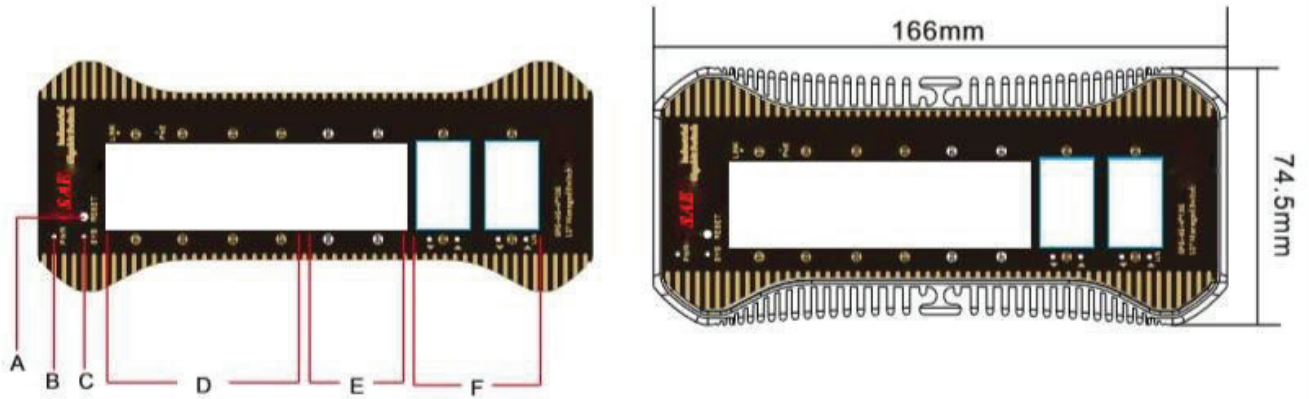


<p>Industrial Ring Network Protocol</p>	<p>G.8032 (ERPS), 255 loops are supported on maximum, and a maximum of 1024 devices per ring. <20ms self-healing time of the ring network</p>
<p>DHCP</p>	<p>DHCP Client Support DHCP Snooping DHCP Serve DHCP Relay</p>
<p>Mirror</p>	<p>Bi-directional traffic mirroring supporting the basic port</p>
<p>Protection</p>	
<p>Lightning protection / protection level</p>	<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) IEC61000-4-4(EFT): power cable: ±4kV; data-cable: ±2kV IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m, 1s to 3s IEC61000-4-9(pulsed magnet field):1000A/m IEC61000-4-10(damped oscillation):30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV, DM 1kV IEC61000-4-16(common-mode transmission):30V; 300V, 1s FCC Part 15/CISPR22(EN55022): Class A IEC61000-6-2(Common Industrial Standard)</p>
<p>Safety Characteristics</p>	<p>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</p>



ACLs	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
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 IEEE 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 ➤ 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	166*149*74.5mm

Product Size Display



- | | |
|--------------------------------|-----------------------|
| A. Reset LED Indicator | B. Power indicator |
| C. System work indicator light | D. 8* PoE Port |
| E. 4* Gigabit Uplink ports | F. 4* 1/10G SFP+ Port |

Product Application Display

