



## Smart Architecture of Espadana

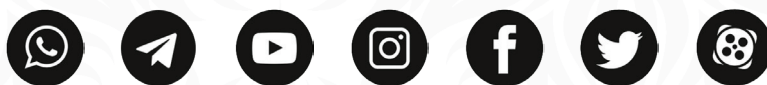
Designing, Production, Customization and Consultant Service  
in Network and Fiber Optic System



### Technical Specification

**SAE-IPE161600F-DGFIM**

16 PoE 10/100/1000Mbps ports & 2xgigabit SFP fiber slot ports





### Product Description

- Industrial design, 16 × 10/100/1000Mbps Ethernet RJ45 ports with Auto Uplink™, and 2 × gigabit SFP fiber slot and 1 console port.
- Max PoE Power Per Port: 15.4W (IEEE802.3af) /30W (IEEE802.3at)
- total power output: 250W
- L2+ Switching Functions such as 802.1Q VLAN, Mirroring, Port Isolation, IGMP Snooping, DHCP Snooping, LLDP, PoE+ Management, IP Protection, ARP and Access Control List are provided
- Up to 9.6K kilobytes Jumbo frames is supported
- Enhanced management ability through WEB, CLI, TELNET, SSH, SNMP
- Spanning tree STP (802.1D), RSTP (802.1W) and MSTP ability

### Full Description

This SAE-IPE161600F-DGFIM 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-IPE161600F-DGFIM 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-IPE161600F-DGFIM 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

<b>Product</b>	<b>SAE-IPE161600F-DGFIM</b>
<b>Performance</b>	
<b>Buffer Memory</b>	6M
<b>Bandwidth</b>	256Gbps
<b>Forwarding Rate@64byte</b>	26.78Mpps
<b>MAC</b>	8K
<b>Twisted Pair Transmission</b>	10BASE-T: Cat3,4,5 UTP (≤100 meter) 100BASE-TX: Cat5 or later UTP (≤100 meter) 1000BASE-T: Cat5e or later UTP (≤100 meter)
<b>Optical Cable</b>	Multi-mode: 850nm 0 ~ 550M, single-mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.
<b>Interface</b>	
<b>ports</b>	16×10/100/1000Base-T PoE ports (Data/Power) 2×100/1000Base-X uplink SFP fiber slot ports (Data) 1×RS232 console port
<b>Protocol</b>	
<b>Network protocol</b>	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)
<b>Layer2 Switching</b>	
<b>Spanning Tree Protocol (STP)</b>	STP (IEEE802.1d) RSTP (IEEE802.1w)
<b>Aggregation</b>	Provide LACP Provide static polymerization Provide the largest 7 aggregation groups, each aggregation group



<b>VLAN</b>	Support up to 4K VLANs simultaneously (out of 4096 VLAN IDs) 4K VLAN based on IEEE802.1Q
<b>QoS</b>	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
<b>Multicast</b>	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
<b>Industrial Ring Network Protocol</b>	Provide G.8032 (ERPS), <50ms ring protection for industrial high reliable application 1024 devices per ring.
<b>PoE Management</b>	Total power limit of PoE power supply PoE output power allocation per port, close/af/at PoE output priority configuration for each port PoE working state display per port Power delay start PoE work and time scheduling
<b>DHCP</b>	DHCP Client Support DHCP Snooping DHCP Serve DHCP Relay
<b>Mirror</b>	Bi-directional traffic mirroring supporting the basic port
<b>Protection</b>	
<b>Lightning protection / protection level</b>	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

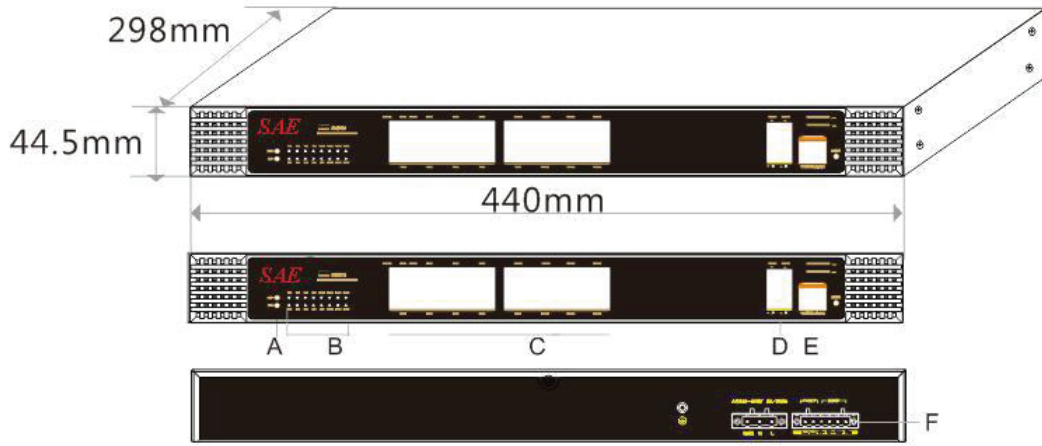


<b>safety parts</b>	
<b>safety parts</b>	<ul style="list-style-type: none"> <li>➤ User grading management and password protection</li> <li>➤ IEEE802.1X authentication / centralized MAC address authentication</li> <li>➤ AAA&amp;RADIUS authentication</li> <li>➤ The number of MAC address learning restrictions</li> <li>➤ MAC address black hole</li> <li>➤ SSH 2 to provide secure passwords for user login. Support SSL to ensure data</li> <li>➤ Secure transmission</li> <li>➤ Port isolation</li> <li>➤ The speed limit function of ARP message</li> <li>➤ IP source address protection</li> <li>➤ ARP intrusion detection function Support against DoS attacks</li> <li>➤ Port broadcast message suppression</li> <li>➤ Host data backup mechanism</li> </ul>
<b>ACLs</b>	<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>
<b>Business features (only restricted management function models)</b>	
<b>Port</b>	<ul style="list-style-type: none"> <li>➤ Compliant with IEEE802.3x flow control (full duplex)</li> <li>➤ Broadcast storm suppression based on port rate is available</li> <li>➤ Speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps is available.</li> <li>➤ Support port temperature protection settings Compliant with port IEEE green Ethernet energy saving configuration</li> </ul>
<b>Management</b>	
<b>Maintenance and Web Interface</b>	<ul style="list-style-type: none"> <li>➤ Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration</li> <li>➤ WEB network management (HTTPS)</li> <li>➤ FTP, TFTP, X-modem, SFTP file download management Support SNMP V1/V2C/V3</li> <li>➤ One bond reduction Support NTP clock</li> <li>➤ System work log Support Ping detection Cable state detection</li> <li>➤ CPU instant utilization status view Support link layer discovery protocol LLDP</li> <li>➤ ONV NMS intelligent management center</li> </ul>



<b>Requirements</b>	
<b>System requirement</b>	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.
<b>Cable length detection</b>	Adjusts the signal strength based on the cable length. Reduces the power consumption for cables shorter.
<b>PoE</b>	
<b>PoE Standard</b>	IEEE802.3af/IEEE802.3at
<b>Max / Average Power Per Port</b>	15.4W (IEEE 802.3af) / 30W (IEEE 802.3at)
<b>Total PWR / Input Voltage</b>	120W / 48(VDC)
<b>Environmental aspects</b>	
<b>Working Environment</b>	Operating Temperature: -20°C ~ 75°C Storage Temperature: -40°C ~ 80°C Operating humidity 5% to 90%
<b>Dimension</b>	440*298*44.5mm

Product Size Display



A. Working indicator  
C. 16\* PoE ports  
E. Console port

B. PoE Working indicator  
D. 2\*Gigabit SFP ports  
F. AC/DC dual input port

Product Application Display

