Smart Architecture of Espadana

Designing, Production,Customization and Consultant Service

in Network and Fiber Optic System

Technical Specification

SAE-IPE8900BT-QTIM3

8x 10/100/1000Mbps PoE+ (IEEE 802.3bt) Ethernet ports Industrial Managed Layer 3 Switch + 4x 1/10G SFP fiber slot Uplink ports (700W Max output power)

Product Description

- 8× 10/100/1000/2500 Mbps PoE++ Ethernet (RJ45) Ports + 4× 1/10G SFP+ Fiber Uplink Ports, with Ports 1–8 supporting IEEE 802.3af/at/bt
- Fully compliant with IEEE 802.3, 802.3u, 802.3ab, 802.3bz Ethernet standards
- Supports Smart PoE with automatic AF/AT/BT detection, delivering 30W standard power and up to 90W maximum per port(TOTAL MAX POWER:700 W)
- Features AI Watchdog, self-healing port mechanism, VLAN, Extend mode (up to 300 meters), auto-negotiation, and port prioritization
- Supports a wide range of devices such as wireless APs, PTZ IP cameras, industrial sensors, PoE lighting systems, and high-power PoE equipment
- Provides up to 700W total PoE power budget (depending on power supply used)
- L3 management system

Full Description

The **SAE-IPE8900BT-QTIM3** is a fully managed industrial-grade **2.5G PoE++ switch** designed to deliver high-bandwidth data and high-power PoE from a single unified platform. This model integrates **8 multi-rate 10/100/1000/2500Base-T RJ45 ports** with **4×1/10G SFP+ uplink fiber ports**, enabling flexible deployment in modern industrial and smart-city infrastructures.

Ports 1–8 support **IEEE 802.3af/at/bt** standards, delivering up to **90W per port** to power advanced devices such as high-power wireless access points, PTZ dome cameras, industrial controllers, smart lighting, and other PoE terminals. With its intelligent sensing mechanism, the **SAE-IPE8900BT-QTIM3** automatically detects standard-compliant PD devices and ensures safe power delivery while protecting non-PoE equipment.

This switch supports a full **Layer-3 management suite**, including IPv4/IPv6 routing, VLAN configuration, ACL security policies, and advanced QoS scheduling. It also supports ring network redundancy through **ERPS (ITU-T G.8032 <20ms)** and **STP/RSTP/MSTP (<50ms)** for guaranteed uptime in mission-critical environments.

Comprehensive monitoring features—such as CPU and memory usage, cable diagnostics, link monitoring, and traffic statistics—make the SAE-IPE8900F-QTIM2 highly suitable for large-scale deployments. It supports secure management via **Web GUI, CLI, Telnet, and SNMP (V1/V2C/V3)**, along with encryption technologies such as HTTPS, SSH, and SSL.

With its aluminum alloy housing, industrial-grade components, and excellent thermal design, the **SAE-IPE8900BT-QTIM3** provides long-term stability, corrosion resistance, and reliability—even in harsh environments such as transportation systems, energy grids, mining sites, and industrial automation networks.

Application

- IP camera surveillance and monitoring systems
- Wireless Access Point (AP) networks and data transmission
- IP telephony, VoIP systems, and virtual PABX deployments
- Medical video monitoring systems
- Schools, campuses, and smart-building monitoring
- Industrial automation, sensors, and remote-control systems
- Long-distance PoE powering for outdoor and high-power devices

Technical Specification

Model	SAE-IPE8900F-QTIM2
Interface Characteristics	
Fixed Port	Power failure alarm switch port (FAULT) 1*Console RS232 port (115200, N, 8,1) 4*1/10G uplink SFP+ fiber ports (Data) 8*10/100/1000/2500Base-T bt PoE ports (Data/ Power) 2 set V+, V- redundant DC power ports (6P industrial Phoenix terminal)
Ethernet Port	Port 1-8 can support 10/100/1000/2500Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e or later UTP(≤100 meters) 2500BASE-T: Cat6a or later UTP(≤100 meters)
Optical Fiber Port	Default no include optical module (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km
Chip Parameter	
Network Management	L3

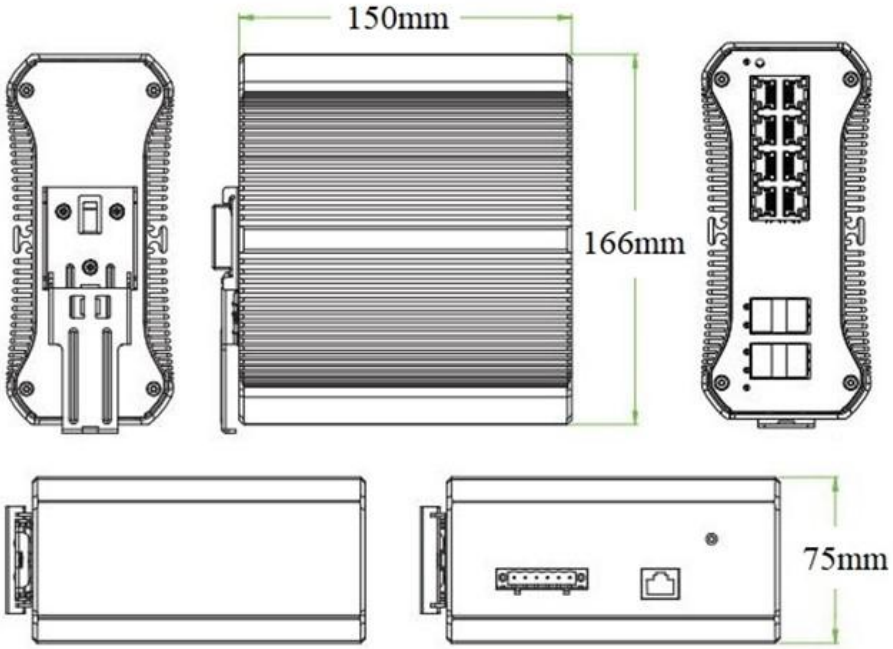
Type	
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3be 2.5GBase-T, IEEE802.3ae 10GBase-SR/LR, IEEE802.3x
Forwarding Mode	Store and forward (Full wire speed)
Switching Capacity	96Gbps (non-blocking)
Forwarding Rate@64byte	89.28Mpps
CPU(Hz)	Dual Core 1G
DRAM	2G
FLASH	256M
MAC	32K
Buffer Memory	16M
Jumbo Frame	12K
LED Indicator	Power/ System: SYS (Green), Rate: 100/1000 (Green), Network: Link (Yellow), PoE: PoE (Green), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
PoE& Power Supply	
PoE Port	Port 1- 8
PoE Management	Port PoE real-time load power display, Port PoE output on/off, PoE work and time scheduling
Power Supply Pin	1/2/4/5(+),3/6/7/8(-)
Max Power Per Port	90W, IEEE802.3 af/at/bt
Power Consumption	Standby<13W, full load af<120W, at<240W, bt<480W
Input Voltage/ Interface	DC48-57V, 6P industrial Phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/120W or 48V/240W or 48V/480W industrial power supply
Physical Parameter	
Operation Temp/ Humidity	-40°C~75°C, 5%~90% RH non condensing
Storage Temp/ Humidity	-40°C~85°C, 5%~95% RH non condensing
Dimension (L*W*H)	166*150*75mm
Net /Gross Weight	1.8kg/ 2.1kg
Installation	Desktop, 35mm DIN Rail

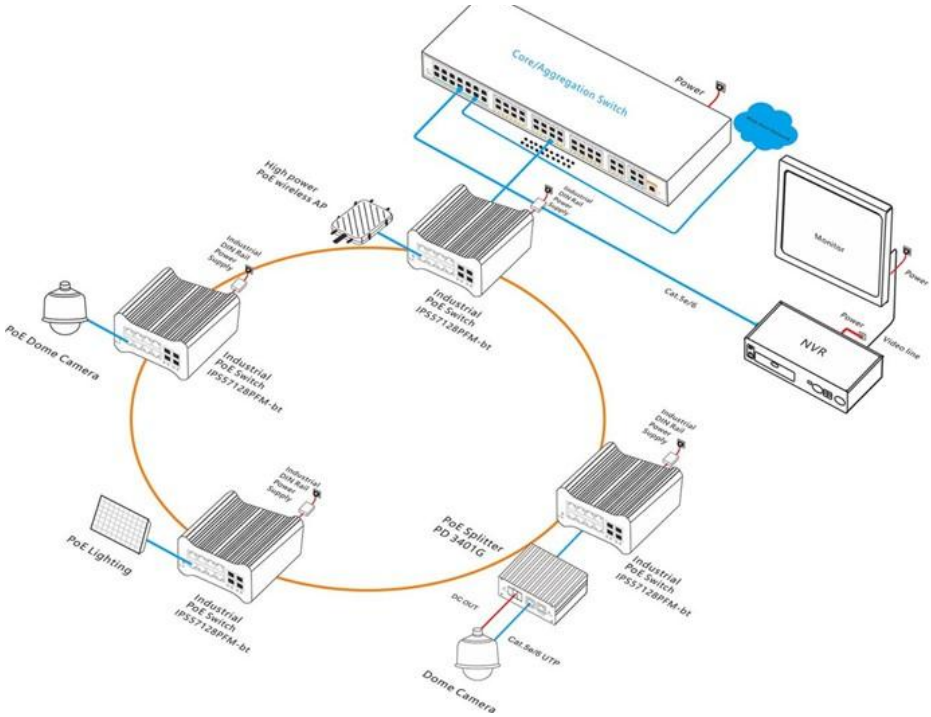
Certification& Warranty	
Lightning Protection	IEC61000-4-3 (RS):10V/m (80-1000MHz) FCC Part 15/CISPR22 (EN55022): Class A IEC61000-6-2 (Common Industrial Standard) IEC61000-4-9 (Pulsed magnet field): 1000A/m IEC61000-4-10 (Damped oscillation): 30A/m 1MHz IEC61000-4-12/18 (Shockwave): CM2.5kV, DM1kV Protection level: IP40, Lightning protection: 6KV 8/20us IEC61000-4-4(EFT): Power cable: ±4kV, data cable: ±2kV IEC61000-4-16 (Common-mode transmission): 30V, 300V, 1s IEC61000-4-2 (ESD): ±8kV contact discharge, ±15kV air discharge IEC61000-4-6 (Radio frequency transmission): 10V(150kHz~80MHz) IEC61000-4-8 (Power frequency magnetic field): 100A/m, 1000A/m, 1s-3s IEC61000-4-5 (Surge): Power cable: CM±4kV/ DM±2kV, data cable: ±4kV
Mechanical Properties	IEC60068-2-6 (Anti Vibration), IEC60068-2-27 (Anti Shock), IEC60068-2-32 (Free Fall)
Certification	CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class A, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Interface	Port real-time flow management (Flow Interval) Broadcast storm suppression based on port rate SFP optical module DDMI real-time digital diagnosis Port EEE Green Ethernet Energy-Saving configuration and status view IEEE802.3x flow control (Full duplex), Port exception protection mechanism Limit the rate of packet traffic on incoming and outgoing ports, the mini granularity is 16Kbps and max 1Gbps
L3 Feature	Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6 VLANIF interfaces for IPV4/IPV6, up to 64 entries IPV4/IPV6 static routing/default routing, up to 64 entries NG protocol max 1000 entries, ARP protocol max 1000 entries IPV4 equal cost routing, VRRP for IPV4/IPV6, up to 255 entries IPV4 dynamic routing, RIPv1/v2, OSPFv2, routing 2000 entries L3 network management function, IPV4/ IPV6 dual-stack management

	L3 routing and forwarding, support communication between different network segments and different VLAN
VLAN	Port configuration of Access, Trunk, Hybrid, IEEE 802.1q Voice VLAN, GVRP VLAN protocol, Port-based VLAN (4K) Protocol-based VLAN, MAC address-based VLAN, QinQ configuration
Port Aggregation	LACP dynamic aggregation, Static aggregation, Max 6 aggregation groups and max 8 ports per group.
Spanning Tree	STP BPDU Guard, BPDU filtering and BPDU forwarding STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
ERPS Ring Network	ERPS ring network, Recovery time less than 20ms, ITU-T G.8032
Multicast	Multicast VLAN, User quick log out, MLD Snooping, MVR (Multicast VLAN Registration), IGMP Snooping v1/v2/v3 and 1024 multicast groups at most
Mirroring	Bidirectional traffic mirroring for basic ports one-to-multiple mirroring, supports up to 4 port sessions
QoS	Flow-based Rate Limiting, Flow-based redirection Queue Scheduling Algorithm (SP, WRR, SP+WRR) Flow-based Packet Filtering, 8*Output queues of each port 802.1p/DSCP priority mapping, Diff-Serv QoS, Priority Mark/Remark
ACL	ACL is issued based on port and VLAN L2-L4 packet filtering function can match the first 80 bytes of the message and provide ACL definition based on source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port range, VLAN, etc.
Security	Port based IEEE802.1X authentication Port isolation, IP Source Guard function SSL guarantees data transmission security Quad binding function of IP+MAC+VLAN+ports MAC address learning limit, MAC address black hole Anti DoS attack, Port broadcast message suppression Hierarchical user management and password protection SSH 2.0 provides a secure encrypted channel for user login Host data backup mechanism, ARP intrusion detection function IP source address protection, ARP message speed limit function

	Support AAA, RADIUS, TACACS+ authentication (only supports authentication, not authorization and accounting)
DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	System work log, Link Layer Discovery Protocol NMS platform cluster management (LLDP+SNMP) NTP clock, Cable length detection, SNMP V1/V2/V3 Ping detection, Web network management (HTTPS) HTTP, TFTP file upload and download management Console/ SSH/ Telnet/ CLI command line configuration One click recovery, View CPU real-time utilization status
System	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

Product Display





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