4 Port PoE Full Gigabit Managed Industrial Switch
IS104GPS-2F

Product brochure

Product introduction

IS104GPS-2F is a 4-port POE full gigabit managed industrial switch, providing 4 gigabit POE ports and 2 gigabit optical ports. Each POE port can provide up to 30W of power, which is suitable for IEEE802.3af /at compliant Powered Devices (PDs), especially suitable for application scenarios where it is difficult to provide AC power and the cost of wiring is high. EMC industrial level 4 protection performance; corrugated high-strength aluminum profile shell, IP40 grade, low power consumption design, anti-vibration guide rail installation, working temperature of -40℃-75℃, can work in harsh environments; IS104GPS-2F can also Support rich network management functions: RUN-Ring (self-healing time <10ms), RSTP, VLAN, QoS, SNMPv1/v2c/v3, IEEE802.1X, SSH/SSL, port mirroring, port aggregation and other rich redundancy, switching and security Management features make it a reliable solution for intelligent transportation, video surveillance and other harsh industrial environments.

Main features

Port 6KV lightning protection

• All ports support 6KV lightning protection, PSE short circuit protection, PoE overload, power supply over temperature protection, over voltage protection, surge current protection and other protection features.

AI DIP Switch

• AI Loop Protect: Using the fast loop network RUN-Ring technology, when the main link of network transmission fails, the system automatically switches to the backup link, and the fault recovery time can reach as fast as 10ms.
• AI PoE: Automatically detect the power receiving port, find a dead device, and restart the device after power off.
• AI VLAN: Isolate ports 1-4 from each other, which can effectively suppress network storms and improve network performance.
• AI Extend: 1-4 ports support long-distance power supply of 250 meters (recommended to use a super network cable above 5).

Powerful processing capabilities

• Support 802.1Q VLAN, MAC VLAN, IP VLAN, users can flexibly divide VLAN as needed.
• Support QoS, 8 port queues, support port priority, 802.1P priority, DSCP priority, support SP, WRR, SP+WRR, WFQ priority scheduling algorithm.
• Support ACL, support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function, provide flexible and secure access control policy.
• Support IGMP v1/v2/v3 Snooping, MLD v1/v2 Snooping, to meet the requirements of multi-terminal HD video surveillance or video conference.
• Supports the fast leave mechanism and querier of Layer 2 multicast, supports Layer 2 IPv4 static multicast and Layer 2 IPv6 static multicast.

Perfect security mechanism

• Complete security authentication mechanism: It supports IEEE 802.1x, Radius, Tacacs+, etc., and can provide users with a complete security authentication mechanism.
• The perfect loop detection mechanism can ensure the stable operation of the network for a long time.
• Provide port isolation in the same VLAN, and security features such as DHCP-Snooping, IP+MAC+port binding, etc., to further ensure user data security.
• Support ARP protection, IP source protection, DoS protection.
• Support to restrict user access based on port number, IP address, and MAC address.

Diverse reliability protection

• Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols to eliminate Layer 2 loops and implement link backup.
• Supports loop protection, root bridge protection, TC protection, BPDU protection, and BPDU filtering.
• Support relay alarm output functions such as power failure, port disconnection, and PoE power supply abnormality.
• Industrial level 4 protection and anti-jamming capability

Perfect POE power supply function

• Support 802.3af/at standard, built-in high-power power supply, meet the needs of POE scenarios such as security monitoring, wireless coverage, and IP telephony.
• Support PoE power limit and set PoE port priority. When the power exceeds the limit, the power supply of the high-priority port will be given priority.
• Support setting PoE power supply time period, users can control the time period of PoE power supply according to their own needs.
• Support PoE chip status check, users can view the PoE chip temperature, output power and other parameters in real time through the web page.

Flexible and convenient management and maintenanceF

• Supports various management methods such as Console, Telnet, and SSH.
• Support WEB network management (HTTP, HTTPS, SSL V3), which is simpler and more efficient, and is convenient for users to install and debug.
• Supports file upload and download management in TFTP mode.
• Support SNMP V1/V2/V3 to facilitate device management through the network management platform.
• Support one-stop management and maintenance of Fengrunda Apollo cloud platform, which can realize all-round remote operation and maintenance such as automatic device discovery, network topology management, and remote configuration management of devices

Industry Standard

EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A
EMS:
IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air)
IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)
IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV
IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±6kV
IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)
IEC60068-2-6 (Vibration)
IEC60068-2-27 (Shock)
IEC60068-2-32 (Free Fall)

Product Specifications

Hardware Specifications	
Network Interface	● 4 10/100/1000Mbps RJ45 port ● 2 Gigabit SFP port ● 1 Console port
Network Protocol	● IEEE802.3、IEEE802.3i、IEEE802.3u、IEEE802.3ab、IEEE802.3z、IEEE802.3ad、IEEE802.3x、IEEE802.3af/at、IEEE802.1p、IEEE802.1q、IEEE802.1w、IEEE802.1d、IEEE802.1s
Performance Specifications	● Backplane bandwidth: 12Gbps (non-blocking) ● Packet forwarding rate: 8.9Mpps ● MAC address table: 8K ● Port cache: 4.1Mb ● Forwarding mode: store and forward
LED Indicator	● Power indicator: P1, P2 ● System indicator: SYS ● Alarm indicator: ALM ● Optical port indicator: Link&Act F1~F2 ● Ethernet port indicator: POE&Link&Act 1~4
POE Pin	● 1/2（＋），3/6/(-)；
Power Supply Support	● Input voltage: 48-56V DC ● Input method: plug-in 5-core 5.08mm pitch terminal block (support dual DC power source backup, built-in overcurrent protection, support anti-reverse connection) ● No-load power: 6W@52V DC ● Full load power: 126W@52V DC (POE full load output) ● Single-port PoE maximum output power: 30W
Physical Specifications	● Casing: IP40 grade protection, corrugated high-strength metal shell ● Installation: DIN rail installation ● Dimensions (LxWxH): 163mm×110mm×46.5mm
Environmental Specifications	● Operating temperature: -40~75℃ ● Storage temperature: -40~85℃ ● Working humidity: 5%~95% RH without condensation ● Storage humidity: 0%~95% RH without condensation
Safety Standard	● CE/ROHS/FCC

Software Specifications	
Protocol standard	IEEE 802.3: Ethernet Media Access Control (MAC) Protocol
	IEEE 802.3i: 10BASE-T Ethernet
	IEEE 802.3u:100BASE-TX Fast Ethernet
	IEEE 802.3ab: 1000BASE-T Gigabit Ethernet
	IEEE 802.3z: 1000BASE-X Gigabit Ethernet (optical)
	IEEE 802.3ad: Standard method for performing link aggregation
	IEEE 802.3x: Flow Control
	IEEE 802.1p: LAN Layer 2 QoS/Cos protocol for traffic prioritization (multicast filtering function)
	IEEE 802.1q: VLAN Bridge Operation
	IEEE 802.1d: STP Spanning Tree
	IEEE 802.1s: MSTP Spanning Tree
	IEEE 802.1w:RSTP Spanning Tree
	IEEE 802.3af
	IEEE 802.3at
One-click shortcut function	AI Loop Protect
	AI PoE
	AI VLAN
	AI Extend
DHCP	Support DHCP Snooping
VLAN	Support 4K VLANs
	Support 802.1Q VLAN, MAC VLAN, IP VLAN
	Voice VLAN
MAC Address Table	Comply with IEEE 802.1d standard
	Support MAC address automatic learning and aging
	Support static, dynamic, filtering address table
Safety Features	password protection
	Support to restrict user access based on port number, IP address, MAC address
	Support HTTPS, SSL V3, TLS V1, SSH V1/V2
	Support IP-MAC-PORT binding
	Support ARP protection, IP source protection, DoS protection
	Support DHCP Snooping, DHCP attack protection
	Support 802.1X authentication, AAA
	Support port security and port isolation
	Support CPU protection function

Software Specifications	
PoE management	Support PoE total power limit
	Support PoE chip status check
	Support PoE port priority setting
	Support setting PoE power supply time period
Access control(ACL)	Support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function
	Support port mirroring, port redirection, flow rate limit, QoS remarking
Quality of Service(QoS)	Supports 8 port queues
	Support port priority, 802.1P priority, DSCP priority
	Support SP, WRR, WFQ priority scheduling algorithm
Spanning tree	Support STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) protocols
	Support loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering
Multicast	Support IGMP v1/v2 Snooping
	Support multicast VLAN
	Support multicast filtering, packet statistics, unknown multicast discard
Storm suppression	Support multicast suppression
	Support broadcast suppression
	Support unknown unicast suppression
Link aggregation	Support static aggregation
	Support dynamic aggregation
	Support based on IP, MAC, mixed load balancing mode
	A maximum of 32 aggregation groups are supported
IPv6	Support IPv6 Ping, IPv6 Tracert, IPv6 Telnet
	Support IPv6 SSH, IPv6 SSL
Management and maintenance	Support WEB network management (HTTP, HTTPS, SSL V3)
	Support CLI (Telnet, SSH V1/V2, local serial port)
	Support SNMP V1/V2/V3
	Support LLDP, RMON
	Support ARP protection, IP source protection, DoS protection
	Support CPU monitoring, memory monitoring
	Support system log, graded warning
	Support Ping, Tracert detection, cable detection