



20 Ports Gigabit Managed Industrial PoE Switch IS1016GPS-4F

Product brochure

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Product Introduction

IS1016GPS-4F is a 20-port gigabit managed industrial Ethernet switch with 16 gigabit PoE RJ45 ports and 4 gigabit optical SFP ports. Each POE port can provide up to 30W of power and can be used for the Powered Devices (PDs) which is compatible with IEEE802.3af/at. It is especially suitable for application scenarios which it is difficult to provide AC power and want to save the wiring costs . EMC Class 4 protection performance; corrugated high- strength aluminum profile shell, IP40 grade, low power consumption design, anti - vibration DIN-rail installation, operating temperature of -40℃ -75℃, can work in harsh environments. IS1016GPS-4F can also support various network management functions: RUN-Ring (self-healing time <10ms), RSTP, VLAN, QoS, SNMPv1/v2c/v3, IEEE802.1X, SSH/SSL, port mirror, port aggregation,etc. The IS1016GPS-4F is a reliable solution for intelligent transportation, video surveillance and other harsh industrial environments by its rich redundancy, switching and security management features.



Highlights

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 smart button

- AI Loop Protect: Using the RUN-Ring technology, when the main link of the network transmission fails, the system automatically switches to the backup link, and the fault recovery time can reach as fast as 10ms.
- AI PoE: Detection of PD port and reboot the device automatically when device crash.
- AI VLAN: Isolating ports 1-16 from each other, so that can suppress network storms effectively and improve network performance.
- AI Extend: 1-16 ports support 250 meters long-distance power supply (CAT 5e network cable is suggested).

Powerful application capabilities

- Support 802.1Q VLAN, MAC VLAN, IP VLAN, users can divide VLAN flexibly 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.
- Supports IGMP v1/v2/v3 Snooping and MLD v1/v2 Snooping to meet the requirements of multi-terminal HD video surveillance or video conferencing.
- It supports the fast leave mechanism and querier of Layer 2 multicast, and supports Layer 2 IPv4 static multicast and Layer 2 IPv6 static multicast.

Full security mechanism

- Completed security authentication mechanism: It supports IEEE 802.1x, Radius, Tacacs+, etc.
- The loop detection mechanism can ensure the stable operation of the network for a long time.
- High security features such as port isolation in VLAN, DHCP-Snooping and IP+MAC+port binding, etc., to further ensure user data security.
- Support multi protections like ARP, IP source and DoS.
- Support declining user access by the port numbers, 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.
- Supports relay alarm output functions such as power failure, port disconnection, and PoE power supply abnormality.
- EMC Class4 and anti-jamming capability.

Powerful POE

- Support the 802.3af/at standard and has a built-in high-power power supply to meet the needs of POE scenarios such as CCTV, wireless coverage, and IP telephony.
- Support PoE power limit, and set the priority of PoE ports. When the power exceeds the limit, the high-priority ports have priority.
- Support setting the time period of PoE power supply, and users can adjust it according to the real needs.
- Support to check the status of PoE chip like temperature, output power and other parameters in real time through the web page.

Flexible and convenient management and maintenance

- Support various management methods such as Console, Telnet, and SSH.
- Support simple and efficient WEB management (HTTP, HTTPS, SSL V3)
- Support TFTP mode to upload and download files.
- Support SNMP V1/V2/V3
- Support Hored 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.

Compliance

EMI: FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:

IEC61000-4-2 (ESD): $\pm 8\text{kV}$ (contact), $\pm 15\text{kV}$ (air)

IEC61000-4-3 (RS): 10V/m (80MHz-2GHz)

IEC61000-4-4 (EFT): Power Port: $\pm 4\text{kV}$; Data Port: $\pm 2\text{kV}$

IEC61000-4-5 (Surge): Power Port: $\pm 2\text{kV/DM}$, $\pm 4\text{kV/CM}$; Data Port: $\pm 6\text{kV}$

IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)

IEC60068-2-6 (Vibration)

IEC60068-2-27 (Shock)

IEC60068-2-32 (Free Fall)

Specifications

Hardware	
Network Interface	<ul style="list-style-type: none"> • 6-Port 10/100/1000Mbps RJ45 • 4-Port 10/100/1000Mbps SFP module • Console ports x1
Network Protocol	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Switching capacity:40Gbps (Non-Block) • Forwarding ratet: 29.8Mpps • Packet buffer: 4.1Mb • Forwarding model: Store and forward
LED Indicator	<ul style="list-style-type: none"> • Power Indicator: P1,P2 • System Indicator: SYS • Alarm Indicator: ALM • SFP Port Indicator: Link&Act F1~F2 • RJ45 Port Indicator: POE&Link&Act 1~8
POE Pin	<ul style="list-style-type: none"> • 1/2 (+) , 3/6/(-)
Power Supply	<ul style="list-style-type: none"> • Input voltage: 48-56V DC • Input port: Pluggable 5 pin terminals block, 5.08mm pitch (support dual DC power source backup, built-in overcurrent protection, support anti-reverse connection) • No-load power: 6W@52V DC • Full load power: 486W@52V DC (POE full load output) • Max. power for single port: 30W
Physical Parameter	<ul style="list-style-type: none"> • Casing: Corrugated high-strength metal housing, IP40 • Installation: DIN-Rail • Dimension (LxWxH) : 164mm×130mm×78.8mm
Environmental Condition	<ul style="list-style-type: none"> • Operating Temperature: -40~75°C • Storage Temperature: -40~85°C • Operating Humidity: 5%~95% RH (non-condensing) • Storage Humidity: 0%~95% RH (non-condensing)
Certification	<ul style="list-style-type: none"> • CE/ROHS/FCC

Software	
Protocol	<p>IEEE 802.3: Ethernet Media Access Control (MAC) protocol</p> <p>IEEE 802.3i: 10BASE-T Ethernet</p> <p>IEEE 802.3u: 100BASE-TX fast Ethernet</p> <p>IEEE 802.3ab: 1000BASE-T gigabit Ethernet</p> <p>IEEE 802.3z: 1000BASE-X gigabit Ethernet(fiber)</p> <p>IEEE 802.3ad: Comply link aggregation standard</p> <p>IEEE 802.3x: Flow control</p> <p>IEEE 802.1p: About the traffic priority of the second layer of Qos / Cos protocol (multicast filtering)</p> <p>IEEE 802.1q: VLAN Bridge operation</p> <p>IEEE 802.1d: STP spanning tree</p> <p>IEEE 802.1s: MSTP spanning tree</p> <p>IEEE 802.1w: RSTP spanning tree</p> <p>IEEE 802.3af</p> <p>IEEE 802.3at</p>
AI Button	<p>AI Loop Protect</p> <p>AI PoE</p> <p>AI VLAN</p> <p>AI Extend</p>
DHCP	DHCP Snooping
VLAN	<p>4K VLAN</p> <p>802.1Q VLAN,MAC VLAN ,IP VLAN</p> <p>Voice VLAN</p>
MAC Table	<p>IEEE 802.1d</p> <p>Support MAC address automatic learning and aging</p> <p>Support static, dynamic, filtering address table</p>
Security	<p>Password protection</p> <p>Decline user access by port number, IP address and MAC address</p> <p>HTTPS,SSL V3,TLS V1,SSH V1/V2</p> <p>Support IP-MAC-PORT ternary binding</p> <p>ARP Protection,IP source Protection,DoS Protection</p> <p>Support DHCP Snooping and DHCP attack protection</p> <p>Support 802.1X authentication, AAA</p> <p>Support port security, port isolation</p> <p>Support CPU protection</p>

Software	
PoE Management	Support PoE total power limit Support PoE chip status view Support PoE port priority setting Support PoE power time period setting
ACL	Support L2 (Layer 2) ~ L4 (Layer 4) packet filtering function Support port mirroring, port redirection, flow rate limit, QoS remarking
QoS	Support 16 port queues Support port priority, 802.1P priority, DSCP priority Support SP, RR, WRR, priority scheduling algorithm
Spanning Tree	Support STP(IEEE 802.1d) , RSTP(IEEE 802.1w) and MSTP(IEEE 802.1s) Support loop protection, root bridge protection, TC protection, BPDU protection, BPDU filtering
Multicast	Support IGMP v1/v2 Snooping Support multicast VLAN Supports multicast filtering, packet statistics, and unknown multicast discards
Storm Suppression	Multicast suppression Broadcast suppression Unknown unicast suppression
Link Aggregation	Static aggregation Dynamic aggregation Support IP, MAC, and hybrid load balancing modes Up to 32 aggregation groups
IPv6	IPv6 Ping,IPv6 Tracert,IPv6 Telnet IPv6 SSH ,IPv6 SSL
Management and Maintenance	WEB management (HTTP,HTTPS,SSL V3) CLI (Telnet, SSH V1/V2, Local serial port) SNMP V1/V2/V3 LLDP,RMON ARP protection, IP source protection, DoS protection CPU monitoring, memory monitoring System log, grading warning Support Ping, Tracert detection, cable detection