## PRODUCT DESCRIPTION

IPS-M4GTX-2SFP is a full Gigabit managed industrial PoE switch. it has 4*10/100/1000MPoE ports and 2*100/1000M SFP fiber ports. Port 1-4 can support IEEE802.3af/atstandard POE, single port POE power up to 30W, and the maximum POE output power is 60W (at-120W). As a POE power supply device.it can automatically detect and identify the electrical equipment that meets the standard and supply power through the cable. It can supply the POE terminal equipment, such as wireless AP, network camera, networktelephone, industrial sensor and so on, to meet the demand for high density PoE powersupply network environment. It is suitable for intelligent transportation, rail transit, electric power, mining, metallurgy and green energy. Industrial scenes such as construction set up a cost-effective and stable communication network.

The IPS-M4GTX-2SFP has L2+ network management function, support IPV4 management, static route full line rate forwarding, security protection mechanism, ACL/QoS policy and VLAN, and is easy to manage and maintain. Support multiple network redundancy protocols STP/RSTP/MSTP (<50ms) to improve link backup and network reliability. When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as PoE power management, port traffic control, VLAN division, and SNMP through the Web network management mode.

DIMENSION
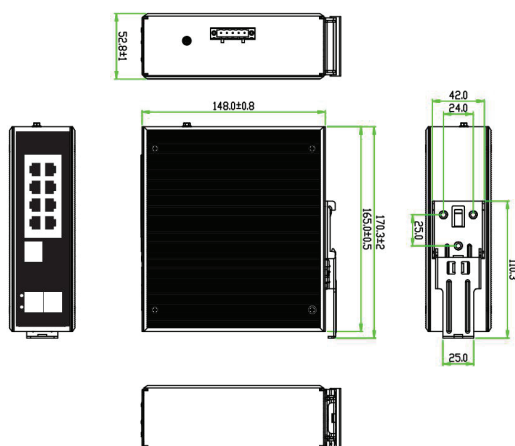
APPLICATION
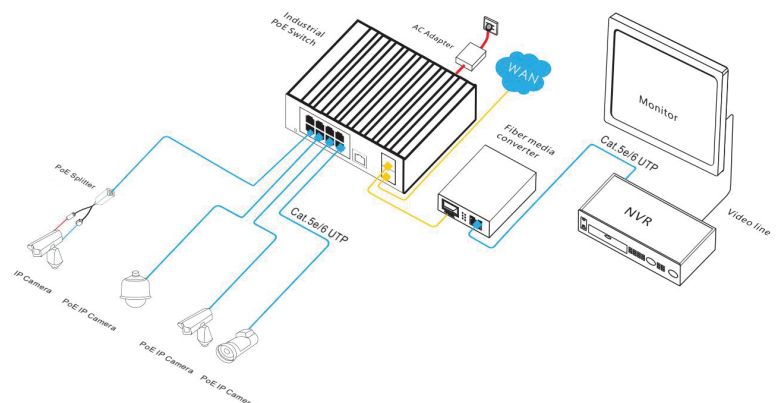
ISO 9001　ISO 14001　OHSAS 18001　UL

FEATURE

Gigabit access, SFP fiber port uplink

- Support Gigabit Ethernet port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.
- Support non-blocking wire-speed forwarding.
- Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.

Powerful port lightning protection, ultra-wide voltage input

- Contact discharge 8KV, air discharge 15KV, port lightning protection common-mode 4KV, differential mode 2KV
- Industrial dual power input
- DC INPUT: 48V-57V

Intelligent PoE power supply

- 4*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring,teleconferencing system, wireless coverage, and other scenarios.
- IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.
- PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

PoE network management and fast Ring function

- IEEE802.1Q VLAN, flexible VLAN division and QinQ configuration.
- QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.
- ALC, filter data packet through configuring matching rules, processing operation &time permission, and provide flexible and safe access control.
- IGMP V1/V2 and IGMP Snooping.
- STP/RSTP/MSTP.
- Static and dynamic aggregation.

Security

- 802.1X authentication.
- Port isolation,Storm control.
- IP-MAC-VLAN-Port binding.

Stable and reliable

- Low power consumption, aluminum shell. No fan.
- CCC, CE, FCC, RoHS.
- The user-friendly panel, it can show the device status through the LED indicator ofPWR,SYS, Link, L/A, PoE.

One-stop remote control and management

- Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).
- HTTPS, SSLV3, and SSHV1/V2.
- RMON, system log, LLDP, and port traffic statistics.
- CPU monitoring, memory monitoring, Ping test, and cable diagnose.

TECHNICAL SPECIFICATION

Interface Characteristics	
Fixed Port	4*10/100/1000Base-T PoE ports (Data/Power)
	2*100/1000Base-X uplink SFP slot ports (Data)
	1 * RS232 console port(115200,N,8,1)
	2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal)
Ethernet Port	Port 1-4 support 10/100/1000Base-T,auto-sensing,Full/half duplex
	MDI/MDI-X self-adaption
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)
SFP Slot Port	Gigabit SFP optical fiber interface, default matching optical modules
	(optional order single-mode / multi-mode, single fiber / dual fiber optical
	module. LC)"
Optical Cable/	Multi-mode: 850nm/0 ~ 550M, single-mode: 1310nm/0 ~ 40KM,
Distance	1550nm/0 ~ 120KM.
Chip Parameter	
Network Management Type	L2+
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX
	IEEE802.3ab 1000Base-TX, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	64Gbps
Forwarding Rate@64byte	8.93Mpps
MAC	8K
Buffer Memory	4.1M
Forwarding delay	<10us
Jumbo Frame	10K
CPU(Hz)	500M
DRAM	1G
Flash	128M
LED Indicator	Power: PWR (Green), System: SYS (Green), Network: Link (Yellow),
	Fiber port: L/A (Green), PoE: PoE (Green)
Reset Switch	Yes. Press and hold the reset switch for 10 seconds and release it to
	restore factory settings
PoE & Power Supply	
PoE Port	Port 1 to port 4
PoE Management	PoE working status
	Delay start of power supply
	PoE output priority configuration
	Scheduling of PoE operation and time
	Total power limit of PoE power supply
	PoE output power allocation, off& af &at
Power Supply Pin	1/2 (+), 3/6 (-)
Max Power Per Port	30W, IEEE802.3af/at
Total Power/ Input Voltage	120W/48VDC
Power Consumption	Standby<8W, Full load<120W
Input Voltage/ Interface	48-57VDC
Power Supply	No, optional 48V/60W or 48V/120W industrial power supply

Physical Parameter	
Operation TEMP / Humidity	-40~+75°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+85°C, 5%~95% RH Non condensing
Dimension (L*W*H)	145*134.5*47.5mm
Net /Gross Weight	<0.6kg / <0.8kg
Installation	Desktop, DIN rail
Certification & Warranty	
Lightning Protection/ Protection Level	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 B
	IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock)
	IEC60068-2-32 (free fall)
Certification	CCC,CE mark, commercial, CE/LVD EN60950, FCC Part 15 Class B; RoHS
Warranty	3 years
Network Management Features	
Interface	IEEE802.3X (Full-duplex)
	Port temperature protection setting
	Port green Ethernet Energy-saving setting
	Broadcast storm control based on port speed
	The speed limit of the message flow in the access port.
	The minimum particle size is 64Kbps.
Layer 3 Features	L2+ network management ,IPV4 management
	Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	4K VLAN based on port, IEEE802.1q
	VLAN based on the protocol, VLAN based on MAC
	QinQ configuration, Port configuration of Access, Trunk, Hybrid
Port Aggregation	LACP, Static aggregation, Max 5 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	250 Ring at most, Max 250 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN
	IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port

QoS	Flow-based Rate Limiting
	Flow-based Packet Filtering
	8*Output queues of each port
	802.1p/DSCP priority mapping
	Diff-Serv QoS,Priority Mark/Remark
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL,ACL based on port and VLAN
	L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding
	ARP inspection,Anti-DoS attack
	AAA & RADIUS,MAC learning limit
	Mac black holes,IP source protection
	IEEE802.1X & MAC address authentication
	Broadcast storm control,Backup for host datum
	SSH 2.0,SSL,Port isolation,ARP message speed limit
	User hierarchical management and password protection
DHC	DHCP Client,DHCP Snooping,DHCP Server,DHCP Relay
Management	One-key recovery
	Cable Diagnose,LLDP
	Web Management (HTTPS)
	NTP,System work log,Ping Test
	CPU instant utilization status view
	Console/AUX Modem/Telnet/SSH2.0 CLI
	Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3
	NMS - smart network management system platform(LLDP+SNMP)
System	Category 5 Ethernet network cable
	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;
	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

ORDER INFOMATION

PRODUCT	PART NUMBER
L2+ Life Management industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP ports.	IPS-M4GTX-2SFP