

## Product Datasheet

# 10-port Full Gigabit Bypass Managed Industrial PoE Switch

(ONV-IPS33010PFM-BY)



## OVERVIEW

ONV-IPS33010PFM-BY is a full Gigabit bypass managed industrial PoE fiber switch independently developed by ONV. It has 8\*10/100/1000M PoE ports and 2\*100/1000M SFP fiber ports. Port 1-8 can support IEEE802.3af/at PoE standard. Single-port POE power up to 30W. 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, IP camera, network telephone, industrial sensor and so on, to meet the demand for high density PoE power supply network environment. The switch integrates the Bypass optical switching module. When the power supply of the switch is interrupted, the optical fiber is automatically switched to the bypass-through state to avoid communication interruption due to switch failure and ensure the reliability of network transmission. 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 ONV-IPS33010PFM-BY has L2+ network management function, support IPV4 static route 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.

## FEATURE

### ■ Gigabit access, SFP fiber port uplink, Integrated Bypass function

- ◇ Support non-blocking wire-speed forwarding.
- ◇ Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.
- ◇ Support Gigabit Ethernet port and Gigabit SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.
- ◇ Support physical single-mode single fiber optical path(Bypass) function, pure hardware switching, short switching time, does not affect the data transmission rate and improves the stability of the network system.

### ■ Intelligent PoE power supply

- ◇ IEEE802.3af/at PoE standard, without damaging non-PoE devices.
- ◇ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ◇ 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.

- ◇ 8\*10/100/1000Base-T RJ45 port support PoE, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

### ■ PoE network management and fast Ring function

- ◇ STP/RSTP/MSTP.
- ◇ Static and dynamic aggregation.
- ◇ IEEE802.1Q VLAN, flexible VLAN division, Access, Trunk and Hybrid.
- ◇ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.
- ◇ IGMP Snooping V1/V2/V3 meets multi-terminal high-definition video surveillance and video conference access requirements.
- ◇ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.

### ■ Security

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

### ■ Stable and reliable

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

### ■ One-stop remote control and management

- ◇ HTTPS, SSLV3, and SSHV1/V2.
- ◇ RMON, system log, LLDP, and port traffic statistics.
- ◇ CPU monitoring, memory monitoring, Ping test, and cable diagnose.

- ◇ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

## TECHNICAL SPECIFICATION

Model	ONV-IPS33010PFM-BY
<b>Interface Characteristics</b>	
Fixed Port	2 set of bypass optical fiber ports 1*RS232 console port(115200,N,8,1) 2*100/1000Base-X uplink SFP ports (Data) 8*10/100/1000Base-T PoE ports (Data/Power) 2 set of V+, V- redundant DC power ports (5 Pin Phoenix terminal)
Bypass Optical Port	Power ON: P1— P4 intercommunication, P2—P3 intercommunication Power OFF: P1— P3 Pass-through
Ethernet Port	Port 1-8 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 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e or later UTP(≤100 meters)
SFP Slot Port	Gigabit SFP optical fiber interface, default no include optical modules (Only supports single-mode single fiber optical module. LC)
Optical Cable/ Distance	Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.
<b>Chip Parameter</b>	
Network Management Type	L2+
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)

Switching Capacity	128Gbps
Forwarding Rate@64byte	14.88Mpps
CPU(Hz)	500M
DRAM	1G
Flash	128M
MAC	8K
Buffer Memory	4.1M
Jumbo Frame	10K
LED Indicator	Power/System: SYS(Green), Network: Link (Yellow), PoE: PoE (Green), Fiber port: L/A (Green)
Reset Switch	Yes. Press and hold the reset switch for 10 seconds and release it to restore factory settings
<b>PoE &amp; Power Supply</b>	
PoE Port	Port 1 to port 8
PoE Management	PoE working status display, Port PoE on/off
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	DC48-57V, 5P industrial phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 48V/120W or 48V/240W industrial power supply
<b>Physical Parameter</b>	
Operation TEMP / Humidity	-40~+75°C, 5%~90% RH Non condensing
Storage TEMP /	-40~+85°C, 5%~95% RH Non condensing

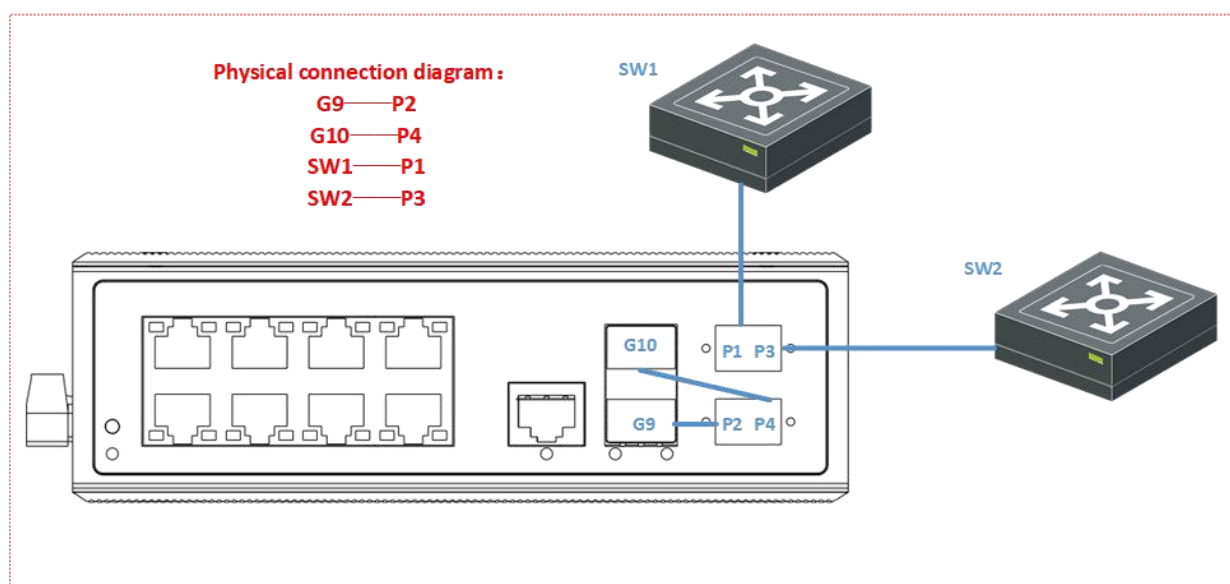
Humidity	
Dimension (L*W*H)	165*148*54mm
Net /Gross Weight	<0.8kg / <1.2kg
Installation	Desktop, DIN rail
<b>Certification &amp; Warranty</b>	
Lightning Protection	<p>Lightning protection: 6KV 8/20us, Protection level: IP40</p> <p>IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge</p> <p>IEC61000-4-3(RS):10V/m(80~1000MHz)</p> <p>IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV</p> <p>IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV</p> <p>IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)</p> <p>IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s</p> <p>IEC61000-4-9(pulsed magnet field):1000A/m</p> <p>IEC61000-4-10(damped oscillation):30A/m 1MHz</p> <p>IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV</p> <p>IEC61000-4-16(common-mode transmission):30V; 300V,1s</p> <p>FCC Part 15/CISPR22(EN55022):Class B</p> <p>IEC61000-6-2(Common Industrial Standard)</p>
Mechanical Properties	<p>IEC60068-2-6 (anti vibration), IEC60068-2-27 (anti shock)</p> <p>IEC60068-2-32 (free fall)</p>
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	5 years, lifelong maintenance.
<b>Network Management Features</b>	
Interface	<p>IEEE802.3x flow control (full duplex)</p> <p>Port real-time traffic management (Flow Interval)</p> <p>Broadcast storm suppression based on port rate</p> <p>Limit the rate of packet traffic on the ingress and egress ports. The</p>

	minimum granularity is 16Kbps and the maximum is 1Gbps
Layer 3 Features	L2+ network management, IPV4 static route/default route@128 pcs, APR@1024 pcs
VLAN	Port configuration of Access, Trunk, Hybrid 4K VLAN based on port, IEEE802.1q, VLAN based on the protocol
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)
Multicast	Multicast VLAN, Fast log out IGMP Snooping v1/v2, Max 1024 multicast groups
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

DHCP	DHCP Client, DHCP Snooping, DHCP Server
Management	SNMP V1/V2C/V3, LLDP Web Management (HTTPS) NTP, System work log, Ping Test CPU instant utilization status view Cable Diagnose, One-key recovery Console/AUX Modem/Telnet/SSH2.0 CLI ONV NMS platform cluster management (LLDP+SNMP) Download & Management on FTP, TFTP, Xmodem, SFTP
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer 10 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

## DIMENSION

## APPLICATION



## ORDERING INFORMATION

Model	Description	Recommended Power Supply
ONV-IPS33010PFM-BY	L2+ managed Bypass industrial PoE fiber switch with 8*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. Port 1-8 can support IEEE802.3af/at PoE standard. It can support dual DC power supply input and DIN rail mounting.	120W/240W
<b>Note:</b> The industrial PoE switch not included SFP optical module and power supply. and needs to be purchased separately.		

## PACKING LIST

Packing List	Content	Qty	Unit
	10-port full gigabit bypass managed industrial PoE switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC

## OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Optical Module	2612-T-G	Industrial SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2613-R-G	Industrial SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

## POWER SUPPLY

Product	Model	Description	Unit
130W Desktop Power Adaptor	GWS-AP130-52	Desktop 130W single set of output power adapter Input Voltage: AC 100V-240V 50-60Hz, 2.3A Output Voltage: DC 52V 2.5A Operation Temperature:-20℃ to 65℃	PC

250W Desktop Power Adaptor	GWS-AP250-52	Desktop 250W single set of output power adapter Input Voltage: AC 100V-240V 50-60Hz. 5.0A Output Voltage: DC 52V 4.8A Operation Temperature:-20℃ to 65℃	PC
120W DIN Rail Industrial Power Supply	GWS-DP120-48	Din Rail 120W single set of output power supply Input Voltage: AC 100V-240V 50-60Hz, 1.5A Output Voltage: DC 48V 2.5A Operation Temperature:-40℃ to 70℃	PC
240W DIN Rail Industrial Power Supply	GWS-DP240-48	Din Rail 240W single set of output power supply Input Voltage: AC 100V-240V 50-60Hz, 3.0A Output Voltage: DC 48V 5.0A Operation Temperature:-40℃ to 70℃	PC

## RELATED PRODUCT

Model	Description
ONV-IPS33006PFM-B Y	L2+ managed Bypass industrial PoE fiber switch with 4*10/100/1000M RJ45 ports and 2*100/1000M SFP ports. Port 1-4 can support IEEE802.3af/at PoE standard. It can support dual DC power supply input and DIN rail mounting.

## CONTACT US



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